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Helmets, headtorches, med-packs, spine-care & stretchers are in **PPE & CasEvac**

Underwater Search Cameras & Water rescue PPE are in **Water Rescue Equipment**

Chainsaws and chainsaw PPE are in **Arborist Equipment**

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GREY=COMING Q2 2025

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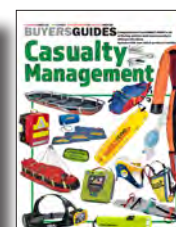
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- 454 Area Lighting
- 502 Pro Batteries
- TBA Battery&Gas Generators

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# RTC Rescue (Extrication) Manuals

**W**e all have our department's own policies and procedures when it comes to working on roadways and undertaking casualty centred rescues at Road Traffic Collisions – RTC's ( Motor Vehicles Collisions -MVC's), but where do we go to get much needed supplemental information?

Your authors cut their teeth on Len Watson's seminal 'RTA Persons Trapped', way back in 1990. This beat Kidd and Czajkowski's 'VEHICLE EXTRICATION A Training Manual' to the punch by six months and together they were the first of the fifteen – soon to be sixteen – manuals that are now available on the subject of rescue at RTC/ MVA's. Not only do I have all of these titles, I've also co-written two manuals, the first of which was never published having been pipped to the post by the Lukas manual. But, excellent as this manual is, the fact that we then felt that ours would only reinvent the wheel highlighted an obvious omission in virtually all the manuals and something that we as instructors had been majoring on for some time. So before we detail what's available in the way of manuals, let's first consider what's in a name.

Of the fifteen manuals currently available, nine of these have the word 'extrication' in their titles and yet ironically if you look at their full titles and related contents, you'll see that at no point are any vehicles extricated or rescued. Unfortunately, but specifically to the point, neither are any casualties/patients. In the case of rescue at RTC's, extrication is freeing someone - a casualty (patient) - from the constraint of a crashed vehicle. This is important because people buying these books not unreasonably expect that they 'do what it says on the tin' – that there is an element of actual casualty extrication in these books, egress solutions for differing entrapments – just as these books all demonstrate to a greater or lesser extent differing space creation options for various situations. And although there are often excellent sections on casualty care, there are no detailed and illustrated casualty extrications from vehicles. In principle, it's perhaps a bit like finding a book called 'Brick Laying', then opening the book up and discovering that there's excellent in-depth coverage of all the major elements of building construction. Except for how to Lay Bricks. So, in a shameless plug for the authors' own forthcoming book, it should be noted that this one deals exclusively with the

extrication of casualties – there are twenty separate casualty circumstances catered for - and a truly multi-agency approach is detailed for achieving these. But more of this later...

Of the manuals that are currently available, perhaps the first tranche – published between 1990 and 2004 – are showing their age. They contain a lot of dated information, have no colour diagrams or photos and can be very heavy with dense text, the latter not being something that aids comprehension, especially for uber-practical rescuers.

However it is still worth tracking down copies of these – even as 'previously-loved' purchases – for the still relevant and very valuable tips and alternative perspectives that can be gleaned from their pages.

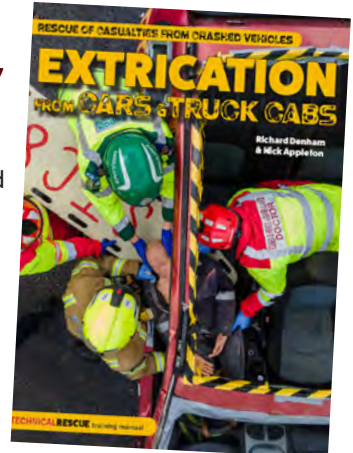
The next selection comprises the four books published between 2005 and 2012. These do feature colour photos and diagrams and also benefit from a less 'wordy' approach and also start to make use of text boxes, etc. to break up the flow of words and make the concepts being explained more easily understood.

Also more contemporary

**Oxford English Dictionary Definition: -  
Extrication (noun) : Free (someone or something) from a constraint or difficulty**

than their predecessors, these are again worthy of your attention and for the same reasons.

Finally there is the period from 2014 to the present day, perhaps initially most easily recognisable by one of their focuses being on electric (and other fuel) vehicles. These books also move on a step further in terms of their graphic presentations of concepts and techniques and are much easier to read and digest as exemplified by Holmatro's handy little A5 manual- a true pocket guide.



These later manuals also contain the author's personal favourites, and our criteria for giving five stars to an RTC Rescue Manual :

- Is it easy to read and understand?
- Is it based on contemporary information?
- Does it have a good practical section on all aspects of safety ?
- Does the book contain contemporary information ?
- Does it have a comprehensive space creation section ?
- Does it have an RTC related Casualty Care element, especially with regard to multi-agency integration ?

In direct relation to these points, we gave three 5 star ratings :





Overall we preferred the international approach of Ian Dunbar's comprehensive 'VEHICLE EXTRICATION : The Next Generation'.

The ongoing and well worked theme throughout was integrating both the fire and medical services in training and pre-planning for rescue at RTC's and this really is the future. But in an acknowledgement of the fact that of all fifteen currently available manuals, they originate in either the UK (6, some arguably shared with the Netherlands ) or the USA (9) we suggest that a UK and European audience would be well served by the orientation of the second Ian Dunbar book, 'VEHICLE EXTRICATION TECHNIQUES' and that in the USA and Canada, that the 'PRINCIPLES OF VEHICLE EXTRICATION' is very well suited to that environment.

However, note that all of the books listed here are - in their own context - excellent manuals dealing with safety, procedures, vehicle anatomy, casualty care, in some cases differing vehicle fuels and especially the vital art of space creation, and should be assessed and selected by you on their own merits. They are invaluable texts in terms of what they do and do well. And incidentally, those who will look at our guide will likely notice that we only gave our book four stars, our reasoning being that this buyers guide relates to manuals dealing with the full scope of casualty rescue from RTC's and ours focuses only – although admittedly in some depth – on casualty extrication. It will be however the only one of its kind, founded on evidence based medical research and decades of practical experience, so ultimately you can decide what rating it warrants. In conclusion RTC's are an ever evolving and demanding challenge and rescuers like you are the perfect proof of that, in as much as you are reading this magazine and specifically this article to better equip yourselves for those challenges. You will also realise that continuous

## EXTRICATION MANUALS

personal development isn't something that is done just as a hoop-jumping exercise at work, but that it has a very real value for you, your knowledge and skills acquisition and maintenance and the people that you serve. And incidentally, no one wants to screw-up at a rescue... So pick one of these books, buy a copy and read it in small chunks and with a pencil in your hand to make notes in the margin. The result WILL improve the outcome for casualties that have yet to be.....altogether now...

In the following tables a black outlined white square indicates that the subject is covered but not in any great depth. TBD= To be Determined  
5 star recommendations are shown in gold


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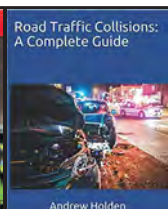



Cross ramming to work inside a vehicle, creating a rescue opening in a truck cab or tearing away the vehicle pillars can be carried out with ease thanks to the large stroke and exceptional power of the CR 522 CROSSRAM.

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| IMAGES not to SCALE    |   |  |  |   |  |   |   |
|------------------------|---|--|--|---|--|---|---|
|                        |    |   |   |   |   |    |    |
| TITLE                  | RTA PERSONS TRAPPED   | VEHICLE EXTRICATION A Training Manual/Study Guide  | ADVANCED VEHICLE ENTRAPMENT RESCUE   | VEHICLE RESCUE  | VEHICLE RESCUE & EXTRICATION   | VEHICLE EXTRICATION   | HOLMATRO's VEHICLE EXTRICATION TECHNIQUES   |
| COST                   | £21   | n/a  | n/a  | £31   | n/a  | \$83  | Free  |
| EDITORIAL FOCUS        | Casualty centred space creation   | Casualty centred space creation  | Casualty centred space creation  | US procedural & access techniques   | Accessing vehicle entrapments  | US procedural & access techniques   | Space creation  |
| VEHICLE CONSTRUCTION   | ■   | ■  | ■  | □   | ■  | ■   | ■   |
| TRUCKS/HGVs/ELECTRIC   | □   | -  | ■  | -   | ■  | □   | ■ ■   |
| TOOLS & PPE            | □   | ■  | ■  | □   | ■  | □   | ■   |
| STABILISATION          | ■   | □  | ■  | ■   | ■  | ■   | □   |
| GLASS MANAGEMENT       | ■   | □  | ■  | ■   | ■  | ■   | □   |
| SPACE CREATION         | ■   | ■  | ■  | ■   | ■  | ■   | ■   |
| CASUALTY CARE          | □   | ■  | ■  | ■   | □  | □   | -   |
| CASUALTY EXTRICATION   | -   | -  | -  | □   | -  | -   | -   |
| AUTHOR(s)              | Len Watson  | Kidd & Czajkowski  | Len Watson   | Harvey Grant James Gargan   | Ronald E Moore   | Brian G Anderson  | Brendan Morris  |
| PUBLISHER              | Greenwave   | Fire Engineering /Penwell  | Holmatro   | Brady/ Prentice Hall  | Mosby Jems   | Fire Engineering /Penwell   | Holmatro  |
| ISBN                   | 0-95168600-3  | 9780878149155  | 0951686011   | 9780835983747   | 0-323-01833-5  | 1-59370-021-0   | 2-910725-34-0   |
| PUBLISHED              | 1990  | 1991   | 1994   | 1997  | 2003   | 2004  | 2005  |
| FIRST PUBLISHED        | 1990  | 1991   | 1994   | 1996  | 1991   | 2004  | 2005  |
| SOFT/HARD BACK         | ■   | ■  | ■  | ■   | ■  | ■   | ■   |
| B&W / COLOUR           | ■   | ■  | ■  | ■ ■   | ■  | ■   | ■ ■   |
| PHOTOS/DIAGRAMS        | ■   | ■ ■  | ■  | ■   | ■  | ■   | ■ ■   |
| FORMAT & PAGES         | EUA4 374  | USA4 253   | USA4 255   | USA4 352  | USA4 414   | USA4 573  | A5 98   |
| KEY CHAPTERS           | <ul style="list-style-type: none"> <li>•Space Creation</li> <li>•Training</li> <li>•Immediate Care and Medical</li> <li>•Appreciation (broad perspectives, some dated)</li> </ul> | <ul style="list-style-type: none"> <li>•Vehicle structure</li> <li>•Hand tools</li> <li>•Patient considerations &amp; Packaging</li> <li>• Training</li> </ul> | <ul style="list-style-type: none"> <li>• Scene &amp; vehicle stabilization</li> <li>•Space Creation, various postures</li> <li>•Casualty release theory</li> </ul> | <ul style="list-style-type: none"> <li>•Eqpt &amp; Training</li> <li>•Managing the incident scene</li> <li>•Hazards</li> <li>•Gaining access</li> <li>•Disentangling</li> <li>•Patient packaging</li> </ul> | <ul style="list-style-type: none"> <li>•New Technology</li> <li>•Electric/Hybrids</li> <li>•Rescue Life-Cycle /Golden hour</li> <li>•Vehicle, Rescuer &amp; Scene Safety</li> <li>•Incident Command</li> <li>•Casualty Care</li> <li>•Tools &amp; Eqpt</li> <li>•Rescue Evolutions</li> <li>•Glossary</li> </ul> | <ul style="list-style-type: none"> <li>•Tools &amp; Rigs</li> <li>•Stabilization</li> <li>•Door/Side/Roof &amp; Interior procedures</li> <li>•Entrapment beneath/between</li> <li>•Empalement</li> <li>•Trucks/Trailers</li> <li>•Buses</li> <li>•Sport vehicles</li> </ul> | <ul style="list-style-type: none"> <li>•Vehicle Design inc. Hybrids</li> <li>•Equipment</li> <li>•Scene Safety &amp; crew organization</li> <li>•Techniques</li> <li>•Heavy Vehicles</li> </ul> |
| BREADTH of COVERAGE    | ■ ■   | ■ ■ ■ ■  | ■ ■ ■ ■  | ■ ■ ■ ■   | ■ ■ ■ ■ ■  | ■ ■ ■ ■   | ■ ■ ■ ■   |
| IMAGE QUALITY/CLARITY  | ■   | ■ ■  | ■ ■ ■  | ■   | ■ ■  | ■ ■ ■   | ■ ■ ■ ■   |
| QUALITY of TEXT        | ■ ■ ■   | ■ ■ ■  | ■ ■  | ■ ■   | ■ ■ ■  | ■ ■ ■   | ■ ■ ■ ■   |
| QUALITY of PAPER STOCK | ■ ■   | ■ ■ ■  | ■ ■ ■  | ■ ■   | ■ ■ ■  | ■ ■ ■   | ■ ■ ■   |
| VALUE for MONEY        | ■   | ■ ■  | ■ ■  | ■   | ■ ■  | ■ ■   | ■ ■ ■ ■ ■   |
| COMMENT                | The original car rescue manual led the way  | Comprehensive but very dated   | 'Updated' and condensed version of RTA Persons Trapped   | Detailed but very text heavy few photos and no diagrams   | Detailed but dated in parts. Too much text, few photos and no diagrams   | Also detailed but dated in parts. Too much text, few photos and no diagrams   | Essentially a Holmatro catalogue but with excellent space creation sequences  |
| OVERALL MARK out of 5  | ■ ■   | ■  | ■ ■  | ■   | ■ ■  | ■ ■   | ■ ■ ■   |



|                |    |    |   |   |   |    |    |    |
|---|---|---|--|--|--|--|---|---|
| FIRE SERVICE MANUAL Vol 2<br>Incidents involving rescue from road vehicles                    | VEHICLE RESCUE 1-2-3  | HOLMATRO's VEHICLE EXTRICATION TECHNIQUES   | PRINCIPLES OF VEHICLE EXTRICATION 4th ED   | VEHICLE RESCUE & EXTRICATION 2nd ED  | ROAD TRAFFIC COLLISIONS a Complete Guide   | VEHICLE EXTRICATION the Next Generation  | BUMPER TO BUMPER EXTRICATION  | EXTRICATION Rescue of Casualties from Crashed Vehicles  |
| £28   | \$35  | \$20/€15  | \$75   | \$130  | £28  | €35  | \$35  | TBA   |
| UK procedural   | Car safety & space creation   | Accessing vehicle entrapments with holmatro kit   | All aspects of entrapment rescue   | All aspects of entrapment rescue   | Mostly procedural  | All aspects of entrapment rescue   | Pre-rescue new vehicle technology   | Casualty handling/ Casualty extrication   |
| ■   | □   | ■   | ■  | ■  | ■  | ■  | ■   | -   |
| -   | □   | ■ ■   | ■ ■  | ■ ■  | ■ ■  | ■ ■  | ■   | ■   |
| ■   | □   | ■   | ■  | ■  | ■  | ■  | -   | -   |
| ■   | ■   | ■   | ■  | ■  | ■  | ■  | -   | -   |
| ■   | ■   | ■   | ■  | ■  | ■  | ■  | -   | -   |
| ■   | ■   | ■   | ■  | ■  | ■  | ■  | -   | -   |
| ■   | □   | □   | □  | ■  | ■  | ■  | -   | ■   |
| -   | -   | □   | □  | □  | -  | -  | -   | ■   |
| HM Fire Service Inspectorate  | Ronald E Moore  | Ian Dunbar  | Peters & Smith   | David Sweet  | Andrew Holden  | Ian Dunbar   | Michael Smith   | R Denham, N Appleton  |
| HMSO  | University of Extrication   | Holmatro  | Ifsta/Fire Protection Publications   | IAFC/NFPA Jones&Bartlett   | Self-Published   | Lukas Rescue   | Boron Extrication Training  | Technical Rescue Ltd  |
| 780113413058  | 9780983845003   | 9789081279604   | 9780879395971  | 9781284042177  | -  | 9783000653063  | 9798830659352   | TBA   |
| 2007  | 2011  | 2014  | 2017   | 2018   | 2019   | 2021   | 2022  | 2025  |
| 2007  | 2011  | 2014  | '98,'00,'10  | 2012*  | 2019   | 2021   | 2022  | 2025  |
| ■   | ■   | ■   | ■  | ■  | ■  | ■  | ■   | ■   |
| ■ ■   | ■ ■   | ■ ■   | ■ ■  | ■ ■  | ■ ■  | ■ ■  | ■ ■   | ■ ■   |
| ■ ■   | ■   | ■ ■   | ■ ■  | ■ ■  | ■ ■  | ■ ■  | ■ ■   | ■ ■   |
| EUA4 204  | USA4 230  | Custom 256  | USA4 522   | USA4 442   | EUA4 205   | EUA4 293   | USA4 94   | UKA4 220+   |
| Vehicle Design<br>Dealing with Incidents<br>Safety and Operational procedures<br>Medical care | <ul style="list-style-type: none"> <li>Space Creation</li> <li>Hybrid vehicles</li> <li>Internal space creation</li> <li>Underride extrication</li> </ul> | <ul style="list-style-type: none"> <li>Safety</li> <li>Vehicle Technology</li> <li>Tools&amp;Eqpt</li> <li>Team Approach</li> <li>At the scene</li> </ul> | <ul style="list-style-type: none"> <li>Passenger vehicles</li> <li>Commercial Vehicles</li> <li>Heavy vehicles</li> <li>Special circumstances</li> </ul> | <ul style="list-style-type: none"> <li>Incident command</li> <li>Kinetics/ construction</li> <li>Electric/Hybrids</li> <li>SRS/Airbags</li> <li>Tools/Eqpt</li> <li>Site Ops/Stabilization</li> <li>Casualty handling</li> <li>Trucks/Tractors</li> <li>Alt Techniques</li> <li>Wrapping up</li> </ul> | <ul style="list-style-type: none"> <li>Vehicles in water</li> <li>The collision</li> <li>Traffic management</li> <li>Debriefing</li> </ul> | <ul style="list-style-type: none"> <li>Extrication planning</li> <li>Medical considerations</li> <li>Technical processes and evolutions</li> </ul> | <ul style="list-style-type: none"> <li>Accident statistics</li> <li>Vehicle structure</li> <li>Electric</li> <li>Glass</li> <li>Airbags</li> <li>Restraints</li> <li>Battery</li> </ul> | <ul style="list-style-type: none"> <li>Multi-agency approach</li> <li>Self &amp; assisted extrication</li> <li>20 detailed car &amp; cab extrication sequences</li> <li>Air ambulance &amp; Trauma Care approved</li> </ul> |
| ■ ■ ■   | ■ ■ ■ ■   | ■ ■ ■   | ■ ■ ■ ■ ■  | ■ ■ ■ ■ ■  | ■ ■ ■ ■  | ■ ■ ■ ■ ■  | ■ ■ ■ ■   | ■ ■ ■   |
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| ■ ■ ■   | ■ ■ ■ ■   | ■ ■ ■ ■ ■   | ■ ■ ■ ■  | ■ ■ ■ ■  | ■ ■ ■ ■  | ■ ■ ■ ■ ■  | ■ ■ ■ ■   | TBD   |
| Free download. Uses Holmatro's space creation information and diagrams                        | Techniques, six photos per page, good sequence detail   | Comprehensive selection of sequential space creation evolutions.  | Comprehensive MVA information resource, primarily for North America  | *Originally just 'Vehicle Extrication'. Very comprehensive 2021 update is E-book only  | Shows space creation sequences as a numbered sequence on a vehicle frame   | Comprehensive hardback, especially good on integrating Fire and Medical rescue services  | Full background to vehicle technology   | The first and only manual to concentrate wholly on the casualty's needs & removal   |
| ■ ■ ■   | ■ ■ ■ ■   | ■ ■ ■ ■   | ■ ■ ■ ■ ■  | ■ ■ ■ ■ ■  | ■ ■ ■ ■  | ■ ■ ■ ■ ■  | ■ ■ ■ ■   | ■ ■ ■ ■   |

# 'hydraulic' HAND-POWERED SELF-CONTAINED RESCUE TOOLS

Having a manual option available to get you out of trouble when the battery runs out and can't be recharged or the fuel runs out or the generator won't start is a must. All powered hydraulic tools can be run from a hand pump or a foot pump and could therefore be deemed 'hand powered' but with a hose-attached hand pump they tend to be cumbersome.

This Guide is concerned with self contained systems that operate ONLY via an integral

handle and pump, not a hose-connected hand-pump. Consequently there are not very many at all. Surprising really because they are the ultimate get-out-of-jail tool - literally. We have two basic types of tool - **Combi-tools** with a cutting and spreading

jaw and **Wedge spreaders** which provide a spreading/lifting capability over a much smaller distance. For **combi-tools** we only have Holmatro, Hurst, Libervit and Weber with self-contained hand-hydraulics. Since there are less toes to tread on we have included the Chinese brand *Alolai* because they have an easily accessible website and answer emails, we've checked out and occasionally included their more unique looking rescue tools in our other guides. For **wedges** there is a much more industrial feel to things because these are used to separate pipe flanges etc. in the oil and gas industry and there are a number of manufacturers so we have only included the key brands that do, or did, have rescue products including Enerpac and Petrol. *Eder Maschinenbau* from the forestry sector has winches and battery powered ascenders so is crossing nicely into rescue but their two wedges are mechanical rather than hydraulic and none of these devices are purpose-designed for rescue as Holmatro, Libervit and Weber's battery and hose models are but they will all perform a useful gap-expansion role.

In all cases, instead of a battery or petrol generator doing the work to pressurise the hydraulic fluid, you have to do it by pumping a handle back and forth. In some hydraulic cases the handle is telescopic and allows 2-stage pumping - in other words you start out pumping with little or no resistance and the jaws move quite quickly but when the material you're cutting begins to resist your efforts, the handle suddenly becomes easier as the second stage kicks in but closure is a lot slower - it's exactly the same as any gearing mechanism - when the hill gets steeper your peddling gets easier but faster. Tools like the *Holmatro* and *Libervit* have a handle that rotates 360 degrees to allow pumping in any position. This is very important because in a wrecked vehicle you often don't have the luxury of choosing where the head is positioned. The *Weber/Genesis* tool is slightly different since it has a handle on each side - either one of which can be used to provide power depending on accessibility or use them both in a 'bellows' action.



The **ADVANTAGES** of a self-contained, hand-powered hydraulic rescue tool are fairly obvious:

- Lightweight (relative to powered hydraulics)
- Low Bulk - easy to stow on rescue vehicle/boat
- Never runs out of fuel/electricity
- Virtually no noise
- No exhaust fumes
- No trailing hoses or cables
- Simple to use - no hoses to connect or switches to throw!
- Intrinsically safe (aside from accidental metal to metal contact in which case, *Enerpac* has an ATEX version of their wedge).
- Can operate under water, in/under grain/silo product etc.

The **DISADVANTAGES** are also reasonably obvious:

- Slow action compare to powered tools
  - Smaller tools so less able to deal with large & hard metals
  - Combi-tools can be bulky due to integral handle and pump.
- Just to qualify that last statement it should be remembered that any discussion of self-contained hand-powered hydraulics being smaller and lighter only refers to the whole powered package including the hoses and petrol/gas generator. The rescuer actually using the tool wouldn't care if the gennie was a miniature whisper pump or a giant industrial model able to power a small city as long as the tool is manoeuvrable and copes well with its task. But taken as a whole, the full size hydraulic tool, hoses and generator represent considerably more weight, bulk and cost than the hand powered alternatives. There are exceptions of course. The diminutive electric-powered *Ogura* tools for instance are almost as light, faster and more powerful than hand tools and therefore represent an excellent alternative to full-size packages. However, they still have the problem of running out of battery power and not operating under water! Hand-powered hydraulic tools have always been a distinctly



# SELF-CONTAINED HAND HYDRAULIC TOOLS

under-used resource primarily because, under normal circumstances, battery is a much quicker option with greater capabilities and a huge range of tools. But when it all goes wrong, disasters are where they come into their own. They can be shipped easily to any part of the world because there is no fuel needed. When you unload them after months of (dry!) storage, they'll still work as well as the day they were packed and if you need to be working in a monsoon or in floods or a sandstorm they'll continue to do their job well. Combi-tools offer cutting, spreading and lifting in building collapses, floods, gaining entry, on-board ships & aircraft, in confined spaces and on rapid response vehicles arriving at a scene ahead of the better equipped trucks. The *Holmatro HCT5114* which we used operationally with great success, the veteran *Hurst Unitool*, the rarely seen *Libervit Multitool28* and the *Weber Vario* are extremely capable tools and highly recommended for disaster response teams and first responders. Since all of the hand-operated combi-tools are much smaller than their dedicated battery/hose brethren, the C and/or D pillars on a vehicle, with much larger cross-sections can tax the smaller rescue tools so we're really talking about fast-attack access rather than a full vehicle dismantling.

Wedge tools are superb for door-busting and getting into very tight gaps and initiating a lift or spread that can subsequently be taken over by a bigger combi,

spreader, airbag or jack (see separate GUIDES). Some use a socket wrench handle which has to be rotated rather than pumped and this can feel even slower than a handle with less leverage to assist you but wedges are only opening a short distance compared to a combi-spreader. *Eder's* forestry sector wedges are used to initiate a directional felling and *Enerpac* are an automotive/industrial company more used to separating flanges and joints than spreading car door hinges but we did see them in rescue back in the 80's and 90's and these more 'industrial' tools remain remarkably small, simple and robust. With so many remote/wilderness rescue teams getting involved in road rescue (if not already the primary agency in some areas) there is much to be said for considering hand-powered hydraulics from both a cost and maintenance point of view.

## CONCLUSIONS

The downside of course is speed of action. It takes frustratingly long to pump or wind that handle to open and to close. Never has the saying 'a watched pot/kettle never boils' been so apt. But that's the price you pay for absolute reliability in any weather under any conditions - no electrics to fry, no hoses to drag, no noise, no fumes in a confined space, no battery to decompose and catch fire and virtually no maintenance.



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|   |                        |   |   |   |   |
|---|------------------------|---|---|---|---|
| <p>IMAGES NOT TO SCALE</p> <p>£\$€ = Currency Conversion Only-excludes duty, taxes, shipping etc.</p> <p>● = Partial Feature/OK but not ideal</p> <p>□ = Option</p> <p>N/A = info Not Available/not given</p> <p>Str-Curve= Straight section ahead of curve</p> |                        |    |   |  |  |
| DIMS  | COMPANY                | EDER  | EDER  | ENERPAC   | ENERPAC   |
|   | MODEL                  | Titan 50  | Titan 90  | SWi5TI-S  | SWi2025TISTDEX  |
|   | TYPE                   | WEDGE SPREADER  | WEDGE SPREADER  | WEDGE SPREADER  | WEDGE SPREADER  |
|   | ORIGIN                 |    |    |  |  |
|   | COST inc tax /VAT      | £ \$ €  | £ \$ €  | £ \$2579 €  | £ \$4587 5887 €   |
|   | WEIGHT Basic Tool      | 1.6kg / 3.5lb   | 5.6kg / 12.3lb  | 10.5kg / 23.1lb   | 9.2517.6kg / 20.4 39lb  |
|   | HANDLE TYPE            | Socket Handle*  | Socket Handle*  | Lever   | Lever   |
|   | LENGTH                 | 240-340mm 9.4-13.4"   | 410-570mm 16.1-22.4"  | 404mm 15.9"   | 464mm 18.3"   |
|   | WIDTH                  | 118mm 4.6"  | 170mm 6.7"  | 163mm 6.4"  | 152mm 6"  |
|   | DEPTH                  | 72mm 2.8"   | 90mm 3.5"   | 00mm 00"  | 00mm 00"  |
|   | LIFT CAPACITY t=US Ton | 147Kn 16.5Ust   | 245Kn 27.5Ust   | 77Kn 8.7Ust   | 240Kn 26.9Ust   |
|   | INSERTION HEIGHT       | 20mm 0.8"   | 20mm 0.8"   | 6mm 0.24"   | 6mm 0.24"   |
|   | SPREAD HEIGHT          | 50mm 2"   | 80mm 3.15"  | 100mm 4"  | 104mm 4.1"  |
|   | WORKING PRESSURE       | Mechanical  | Mechanical  | 700 Bar 10K psi   | 700 Bar 10K psi   |
|   | ROTATE HEAD/HANDLE     | - 360°  | - 360°  | - 360°  | -360°   |
|   | IN-WATER USE           | ●*  | ●*  | ■   | ■   |
|   | NOTES                  | Dimensions excluding handle.<br>* 3/8 or 1/2" impact wrench - Can also be operated via battery driver.<br>*Lubricate after being wet. | Dimensions excluding handle.<br>* 3/8 or 1/2" impact wrench - Can also be operated via battery driver.<br>*Lubricate after being wet. |   |   |
|   | WEBSITE                | eder-maschinenbau.de  | eder-maschinenbau.de  | enerpac.com   | enerpac.com   |

## KEYTO TABLES

As with all cutting and spreading tools, the largest or highest figures are not necessarily the best for the job. Cutting and spreading strengths vary radically from the tips to nearer the fulcrum or union. The cutting codes for CE and NFPA certification given below are by far the BEST way to gauge the true abilities of a tool.

**All force figures are given in KiloNewtons and US (short)tons**

Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square ■■■■

If it's an option it is shown as an outline square □□□□

A circle ●● in the 'USE' columns indicates that the feature is only partially present and/or is OK but not ideal.

A model variant is shown in cyan and any features or specifications that differ from the standard are also in cyan.

**ORIGIN:** The company's home country, not necessarily the country of manufacture which is indicated by an inset flag or two equally sized flags if the tool is made in both countries as is the case with *Holmatro* and *Weber*.

**COST:** As usual, for the overt rescue manufacturers, this is clearly an official secret within the industry. This is because the cost of one tool is vastly different to the cost of multiples

that they sell to entire fire services. But this is the same situation for virtually every piece of equipment we ever have in **TECHNICALRESCUE** where we always quote the single item cost on the understanding that any bulk purchase will of course be a lower figure. The prices that are shown are a rough guide only & include local taxes/VAT. They vary with exchange rates, extra taxes etc. We usually round up to the nearest Pound£/US Dollar\$/Euro€. Cost is for basic model with included accessories indicated by a solid square in the appropriate column (optional extras being an outline square). In the case of *TNT* the cost includes two batteries and a charger but tools are normally costed without batteries and chargers.

**DIMENSIONS:** The Length of tool ready to work x by the width which is usually dictated by the union of the head but sometimes by the handle x the height which is the height off the ground if you lay the tool down and is usually dictated by either the handle or the battery if it is top-mounted.

**CUT FORCE:** Is the maximum *theoretical* force possible but not quoted by all because the EN and/or NFPA classifications cover this more accurately. Indeed, one or two manufacturers flat-out refuse to quote it because they feel it is a misleading figure. Our figures are in kN (KiloNewtons) and US (Short) Ton. There are



|   |   |   |   |   |
|---|---|---|---|---|
|     |    |    |     |    |
| <b>ENERPAC</b>  | <b>PETOL (GEARENCH)</b>   | <b>PETOL (GEARENCH)</b>   | <b>RENQUIP</b>  | <b>RENQUIP</b>  |
| <b>FSC14</b>  | <b>'POP-IT' P95-525</b>   | <b>'POP-IT' PHD0535</b>   | <b>FSW9</b>   | <b>WJ19P</b>  |
| <b>WEDGE SPREADER</b>   | <b>WEDGE JACK</b>   | <b>WEDGE JACK</b>   | <b>WEDGE SPREADER</b>   | <b>WEDGE JACK</b>   |
|    |    |    |    |    |
| £ \$ €  | £ \$1390 €  | £ \$3000 €  | £ \$ €  | £ \$ €  |
| 9kg / 19.8lb  | 5kg / 11lb  | 15kg / 33lb   | 5.5kg / 12.1lb  | 9.5kg / 20.9lb  |
| Lever   | Lever   | Lever   | Socket Handle   | Lever   |
| 468-508mm 18.4-20"  | 289mm 11.39"  | 00mm 00"  | 290mm 11.4"   | 450mm 17.7"   |
| 00mm 00"  | 249mm 9.8"  | 00mm 00"  | 160mm 6.3"  | 135mm 5.3"  |
| 74mm 3"   | 94mm 3.7"   | 00mm 00"  | 80mm 3.1"   | 105mm 4.1"  |
| 118Kn 14Ust   | 44Kn 5Ust   | *133Kn 15Ust  | *94Kn 10.5Ust   | 183Kn 20.5Ust   |
| 6mm 0.24"   | 1.5mm 0.06"   | 12.7mm 0.5"   | 6mm 0.24"   | 9.5mm 0.37"   |
| 80mm 3.16"  | 133mm 5.25"   | *12.7-216mm 0.5-8.5"  | 81mm 3.19"  | 67.5mm 2.66"  |
| 700 Bar 10K psi   | Mechanical  | Mechanical  | Mechanical  | 700 Bar 10K psi   |
| - 360°  | - 360°  | - 360°  | - 360°  | - 360°  |
|  |  |  |  |  |

strike plate on rear to 'force' a gap

\*Greater lift weight decreases the available lift height

Also available as a hydraulic version as per the WJ19P

|             |           |           |             |             |
|-------------|-----------|-----------|-------------|-------------|
| enerpac.com | petol.com | petol.com | renquip.com | renquip.com |
|-------------|-----------|-----------|-------------|-------------|

1.10 US short tons to a UK ton and to the metric ton (or tonne).

**CUT OPENING:** The maximum distance the cutter blades will open but don't forget that this does not equate to the material that can be cut as the max opening provides the least power. Check out the round bar cutting figure for more accurate interpretation of cutting prowess.

**ROUND BAR:** According to NFPA (and/or EN cut classifications) (see table on page 33) this is the max size of round bar that can be cut as a prescribed material with a specified Rockwell Hardness so that all tests are comparable.

**INSERTION HEIGHT:** The minimum clearance required to get the tool in and initiate a lift/push. The *Eder Titans* will fit a few mm gap but quote 20mm to initiate a full power lift.

**MAX SPREAD FORCE:** Is the maximum *theoretical* force possible but only near the fulcrum not the tips at the opposite end. The closer the tips you start the spread/lift the lower the available force. This is not quoted by all because the EN and/or NFPA classifications cover this more accurately. Indeed, one or two manufacturers like *Weber-Rescue* flat-out refuse to quote it because they feel it is a misleading figure which is a fair point. Some of the max figures quoted may therefore be the same as the upper range limit but *in theory only* they could lift/spread a


much higher amount. Our figures are in kN (KiloNewtons) and **US (Short) Tons**. There are 1.10 US short tons to a UK/metric ton (or more accurately tonne).


**MAX PULL FORCE & DISTANCE:** Holes near the ends of the jaws can have a chain fitted - one to an anchor and one to the item to be pulled. As the jaws are closed a pull force is exerted and the object can be moved. This used to be common with a dash-roll or displacement but not so much these days. Due to leverage forces, the longer the jaw the lower the pull force.


**SPREAD DISTANCE:** The maximum distance the jaws will open but don't forget that the closest to the tips provides the least power.

**FEATURES: TIPS:** may describe the type of tip integral to the tool or the options for detachable tips

**ROTATE HEAD/HANDLE:** Either the *blade* or the handle can rotate for better access to the cut or the handle will extend around the tool by 180, 270 or 360° to allow it to be used in any position.






**IN-WATER-CAPABLE=**  The tool/battery can be used underwater - it is not just water resistant to heavy rain.

 The tool will work but will need post-use maintenance.

|  |  |   |  |   |   |
|--|--|---|--|---|---|
| <p>IMAGES NOT TO SCALE</p> <p>OTHER TOOLS IN RANGE:</p> <p>■ = Combi ■ = Cutter ■ = Ram</p> <p>■ = Special Tools</p> <p>● = Partial Feature/OK but not ideal</p> <p>□ = Option</p> <p>N/A = info Not Available/not given</p> <p>Str-Curve= Straight section ahead of curve</p> |  |  |  |  |  |
| DIMS   | COMPANY  | AOLAI   | AOLAI  | HOLMATRO  | HOLMATRO  |
|  | MODEL  | GYJK-31-33/20-10  | GYJK-72-30/22-B  | HCT 5114 ST   | HCT 5111  |
|  | TYPE   | COMBI-TOOL  | COMBI-TOOL   | COMBI-TOOL  | COMBI-TOOL  |
|  | ORIGIN   | 🇨🇳  | 🇨🇳   | 🇮🇹 🇺🇸   | 🇮🇹 🇺🇸   |
|  | COST inc tax / VAT exc Battery                     | N/A   | N/A  | N/A   | N/A   |
|  | WEIGHT Basic Tool                                  | 10.2kg<br>22.5lb  | 11.8kg<br>26lb   | 9.2kg<br>20.3lb   | 8.8kg<br>19.4lb   |
|  | HANDLE TYPE  | Lever   | Lever  | Telescopic Lever  | Telescopic Lever  |
|  | LENGTH   | 735mm 29"   | 810mm 31.9"  | 583mm 23"   | 529mm 20.8"   |
|  | WIDTH  | 212mm 8.3"  | 205mm 8"   | 276mm 10.9"   | 275mm 10.8"   |
|  | DEPTH  | 146mm 5.7"  | 176mm 6.9"   | 193mm 7.6"  | 192mm 7.6"  |
| CUT  | EN 13204 CLASS                                     | -   | -  | BK33/362-E-9.2  | BK48/281-E-8.8  |
|  | EN CUT CLASSIFICATIONS                             | -   | -  |   | 1E 2E 3E 4E 5E  |
|  | NFPA CUT CLASS                                     | -   | -  | A5 B5 C5 D6 E4 F3   | A5 B5 C5 D6 E4 F3   |
|  | CUT FORCE  | -   | -  | 268kN 30.1Ust   | 268kN 30.1Ust   |
|  | CUT OPENING  | -   | -  | 277mm 10.9"   | 196mm 7.7"  |
|  | ROUND BAR  | 20mm 0.8"   | 24mm 0.9"  |   | 24mm 0.9"   |
| SPREAD   | EN SPREAD CLASSIFICATION                           | -   | -  | -   | -   |
|  | NFPA SPREAD CLASS                                  | -   | -  | -   | -   |
|  | EN SPREAD FORCE RANGE<br>t=US Ton                  | -   | -  | 33-1350kN<br>3.7-152 Ust  | 48-1350kN<br>5.4-152 Ust  |
|  | NFPA FORCE RANGE<br>t=US Ton (at/near tips)        | -   | -  | -   | 40-52kN<br>4.5-5.8 Ust  |
|  | MAX SPREAD FORCE<br>(Theoretical) t=US ton         | -   | -  | 1350kN / 152 Ust  | 1350kN / 152 Ust  |
|  | SPREAD DISTANCE                                    | 160mm<br>6.3"   | 255mm<br>10"   | 362mm<br>14.25"   | 281mm<br>11"  |
| PULL   | PULL FORCE RANGE/MAX<br>(THEORETICAL MAX) t=US ton | -   | -  | -   | -   |
|  | MAX PULL DISTANCE                                  | -   | -  | -   | -   |
| FEATURES   | MAX SQUEEZE FORCE<br>t=US ton                      | -   | -  | 34kN<br>00 Ust  | 44kN<br>00 Ust  |
|  | WORKING PRESSURE/2-stage                           | ? 000 Bar / 00K psi   | ? 000 Bar / 00K psi  | 720 Bar / 10.4K psi   | 720 Bar / 10.4K psi   |
|  | TIPS   | FIXED   | FIXED  | FIXED   | FIXED   |
|  | ROTATE HEAD/HANDLE                                 | 360° -  | 360° -   | - 360°  | - 360°  |
|  | LED LIGHTS   | -   | -  | 6 x6  | 6   |
|  | IN-WATER USE                                       | ■   | ■  | ■   | ■   |
|  | NOTES  | Extreme grip spreader tips.<br>On-tool charging.<br>Stepless speed maximisation   | Extreme grip spreader tips.<br>On-tool charging.<br>Stepless speed maximisation    | Extreme grip spreader tips.<br>On-tool charging.<br>Stepless speed maximisation     | Extreme grip spreader tips.<br>On-tool charging.<br>Stepless speed maximisation     |
| WEBSITE  |  | aolai.com   | aolai.com  | holmatro.com  | holmatro.com  |



# HAND HYDRAULIC COMBITOOLS

|  |   |   |   |   |
|--|---|---|---|---|
|                                      |  |  |   |  |
| <b>HURST/LUKAS<br/>(IDEX)</b>  | <b>HYDRAM</b>   | <b>LIBERVIT</b>   | <b>WEBER</b>  | <b>WEBER/GENSIS</b>   |
| <b>Unitool SC 250M<br/>COMBI-TOOL</b>  | <b>CHECM 275<br/>COMBI-TOOL</b>   | <b>Multitool 28<br/>COMBI-TOOL</b>  | <b>HandVario RIT-Tool<br/>COMBI-TOOL</b>  | <b>HandVario SPS270H<br/>COMBI-TOOL</b>   |
|                                     |  |  |  |  |
| N/A  | N/A   | N/A   | N/A   | N/A   |
| 11.9kg<br>26.2lb   | 11.9kg<br>26.2lb  | 10kg<br>22lb  | 11.1kg*<br>24.4lb   | 9.8kg<br>52lb   |
| Lever  | Articulating Lever  | Telescopic Lever  | 'Bellows' handles   | 'Bellows' handles   |
| 850mm 33.47"   | 750mm 00"   | 630mm 25"   | 695mm 27.3"   | 682mm 26.8"   |
| 190mm 7.49"  | 210mm 00"   | 230mm 9"  | 192mm 7.6"  | 192mm 7.6"  |
| 158mm 6.23"  | 185mm 00"   | 190mm 8"  | 161mm 6.3"  | 152mm 6"  |
| -  | -   | -   | G BK25/280G-11.1  | G BK26/270G-9.8   |
| -  | -   | -   | 1H 2G 3G 4H 5G  | 1H 2G 3G 4H 5G  |
| A6 B6 C6 D7 E7   | -   | -   | A6 B7 C6 D7 E7 F3   | A6 B7 C6 D7 E7 F3   |
| 261kN / 29.3Ust  | 237.8kN / 26.7Ust   | 280kN / 31.4Ust   | -   | -   |
| 26mm 1"  | 25mm 1"   | -   | 215mm   | 221mm / 8.7"  |
| -  | -   | -   | 28mm / 1.1"   | 28mm / 1.1"   |
| -  | -   | -   | -   | -   |
| 34-405kN<br>3.8-45.5 Ust   | -   | -   | 25-1175kN<br>2.8-132 Ust  | 26-534kN<br>2.9-60 Ust  |
| 23.5-28kN<br>■ 2.6-3.15 Ust  | -   | -   | -   | -   |
| 34kN / 3.8 Ust   | 51kN / 5.7 Ust  | 41kN / 4.6 Ust  | 1175kN / 132 Ust  | 534kN / 60 Ust  |
| 308mm<br>12.1"   | 275mm<br>0"   | 200mm<br>8"   | 280-380*mm<br>11-15"  | 270mm<br>10.6"  |
| -  | -   | -   | 40kN<br>4.5 Ust   | 32 kN<br>3.6 Ust  |
| -  | -   | -   | 320mm<br>12.6"  | 380mm<br>15"  |
| -  | -   | -   | -   | -   |
| ■ 700 Bar / 10.1K psi  | ■ 700 Bar / 10.1K psi   | ? 000 Bar / 00K psi   | ■ 700 Bar / 10.1K psi   | ■ 700 Bar / 10.1K psi   |
| FIXED  | FIXED   | DETACHABLE  | DETACHABLE x4*  | FIXED   |
| - 360°   | -   | 360° 360°   | 360° -  | 360° -  |
| ■  | -   | -   | -   | -   |
| ■  | ■ 100m/328ft  | ■   | ■ 25m/82ft  | -   |
| Hurst E3 range is waterproof & can use EWXT IP68 battery. 5Ah battery reduces length by 20mm. 'Hero' graphics option | -   | Comes with transport bag & sling  | *Wt inc spreader tips.<br>*Door opening, spreader, long and pulling tips            | -   |
| lukas.com jawsoflife.com   | hydrum.com  | libervit.com  | weber-rescue.com  | weber-rescue.com genesisrescue.com  |

UPDATED Nov '24

SEE page 502 for a complete Guide to Batteries and battery power

DeWalt Dual voltage  
& Milwaukee  
M18 Batteries

es.com

# 'hydraulic' BATTERY-POWERED RESCUE TOOLS

Holmatro Battery

Lukas  
Saltwater  
battery

We continue to use the generic term 'hydraulic' for these types of vehicle extrication tools because the vast majority use electricity to power a hydraulic pump but some do not. However, since that direct electric drive function hasn't really caught on beyond the P-16/P4 models we're safe to continue using the term.

We will discuss some of the history on the next pages, for now, we can accept that battery power has come of age and been accepted by most to be the way of the present and future as we see hose-fed hydraulics, but more specifically, liquid-fuel generators, start to take a back seat. Indeed *Amkus* in the US have ditched hose-fed hydraulics altogether and now sell ONLY battery tools. Initially, battery power was met with the same scepticism given to our ambulance service colleagues in the UK's Lake District who experimented in 2023 with a jet pack for rapid response - that's jet-packs as in flying humans and it really works but I bet it doesn't take 20 years for this to become the norm. It's more likely to be personnel-carrying drones but one-or-two person flying at any rate. With battery technology having only now reached the stage that quite small units can offer significant amp-hours/watt-hours, most designs use an on-board detachable battery.

## WATERPROOF

All are water resistant to a degree but some are water proof and can be used underwater - the *Holmatro*, *Lukas/Hurst* models can be used under fresh and saltwater as can *Weber* with the addition of a small battery case (pic left). *Weber/Genesis* even have an add-on dive bag with pressure-relief valve (pic right) that makes any battery tool waterproof and usable under water.

## BESPOKE & TRADE BATTERIES

Something we haven't seen quite so much is integrated on-board rechargeable because it's quicker in the field

to simply swap out batteries mid-job and carry on (though some, like *Holmatro*, offer on-tool charging while the tool is not being used). Some also offer backpack batteries which takes weight off the tool-in-hand and is usually a higher capacity than smaller on-board batteries. We've seen chainsaws and other such cutting equipment go further down this high-capacity backpack road to provide increased duration when you're in a tricky environment (like up a tree or part way down a cliff) so it certainly has merit for rescue. Only the original stalwart *Powerhawk* with it's 12v, *Libervit* with its hard and soft-pack options housing a 48v battery system and *ResQtec* with their similarly designed hardpack have





made the leap and in the case of the latter, did so in addition to a handy on-board battery option.

The trade tools that dominate the battery market also pioneered other features of use in rescue tools, not least LED lighting of the immediate

work area. Screwdrivers and drills had been doing it for a while so it was an obvious next step when *Holmatro* introduced it first into their hose-fed hydraulic range and now have six sets of LEDs in their forward handle. The *Genesis/Weber* model below shows four sets of LEDs at the front of the rear handle while others like *ResQtec* and *Lukas* entry tools, opted to follow the firearms market and place a rail-style detachable LED on the rear handle.

### SIZE MATTERS

Perhaps the most surprising thing about battery tool development is that our original concerns about the *Beaver* and *Gorilla* tools being too long to be easily manoeuvred within the confines of a crashed vehicle obviously weren't shared by the manufacturers (although dedicated peddle cutters later addressed at least part of this problem). The ability to swivel the head or the handle gives at least some options in manoeuvrability but on the whole, tools have got larger and bulkier rather than smaller. This is partly because that's what is required to produce a tool powerful enough to compete with hose-fed hydraulics and partly because the handle and the battery have simply got to go somewhere. *Holmatro* have addressed this by slim-lining their entire tool and producing a bespoke curved battery to match that slim profile though it too remains quite a long tool while the *TNT-Rescue* model increased duration (and bulk) by having batteries mounted on both side of the motor housing. That's quite a wide profile at the back end. We thought the *P16/P4* or the *Ogura* style hand-drill models might have caught on more but clearly the performance requirements have taken the standard battery tools down the more conventional size route although Malkita's powerful backpack battery could address endurance issues?

### POWERHAWK, JUNKERS & OGURA LED THE WAY IN THE 90s

In the days before on-board batteries were powerful enough to do the job, two companies pioneered battery rescue tools: - *Curtiss-Wright* in the US, better known for making flight control systems for fighter jets and *Junkers* in Germany, also better known for their aircraft. *Curtiss-Wright* introduced the *Powerhawk P-16* and *Junkers* introduced the *Beaver* cutter and the *Gorilla* spreader. They both used power leads from the tool to a battery - *Powerhawk* with it's quite bulky umbilical to a heavy 12v car battery in a

back pack (or indeed, any car battery that's in the vicinity) and *Junkers* with a much smaller motorcycle battery to its *Beaver* and *Gorilla* dedicated cutter and spreader.

*Junkers* used electricity to drive a hydraulic action so is perhaps more indicative of what was to come while the *Powerhawk* used what was effectively an aileron from an F16 fighter to provide an all-electric drive with no hydraulics. This was and still is, a short stocky tool with a unique replaceable jaws system so we had a parrot beak cutter, a spreader and a combi blade that could be switched in and within seconds, maybe a minute if the locking pins were stiff. It also came with a ram that had part of the cylinder exposed so that you could put spreaders under the lifting core and 'drive' it up as if it were a hydraulic ram with a locking collar to capture the progress. The *P-16* is still sold under the *Power Hawk Technologies, Inc.* name (now owned by *Snap-on, Inc.*), and have since introduced the *P-16X* - which still uses the same F16 fighter jet, replaceable jaw technology but has an on-board battery as well as the option of connecting to outside 12V DC vehicle batteries. *Power Hawk* previously collaborated with Dutch company *ResQtec* (who used to be *Zumro* under the brilliant helm of the original hydraulic tools innovator Axel Maarschalk) to produce the *P4*, with *Power Hawk's* actuator technology and *ResQtec's* on-board battery (or optional backpack). *ResQtec* also introduced the equally non-hydraulic but more conventional looking *EDD-FX* series (right) which is the same

electric-only, rather than hydraulic pump, concept but a little slicker. We used both the *P16* and *Junkers* kit operationally for many years at a time when their competition was the hose-fed hydraulic systems from generators creating a lot of noise, tool-travel restriction and fumes. Battery tools were largely dismissed as 'toys' despite their obvious advantages and capabilities so hose-fed tools were unopposed in the market for far longer than we expected. Some would argue (rightly) that if they want to maintain the 'grunt' of a hose fed tool they can simply switch to a battery generator and this is a fair compromise but hoses and sheer size of tool can still be a problem. Enter another battery tool we started using in '97 which really 'miniaturised' rescue tools - the



excellent *Ogura* system from Japan. *Ogura* were the first to use readily available 'trade' batteries; in this case a 12v *Makita* hand-drill powering a hydraulic pump to feed a miniature 4 tonne cutter, spreader or re-bar cutter via a short hydraulic hose. Only this morning, I used a long retired set from 25 years ago to lift a quarter tonne slab. It is little changed today except using 18v *Makita* batteries and with heads directly attaching to the drill/pump. Their *HRS* still has the option of an extension hose which is very useful in getting the smallest spaces. The longevity of the *Ogura* and *Powerhawk* are testament to just how good these first battery tools were. *Junkers* suffered from being too long for easy manoeuvring inside vehicles and confined spaces because it had a fixed head and handle while the *P-16* could rotate it's head to get into tight spaces and this is something taken on board by the latest battery tools where either the handle or the head or both can rotate for easier access. Nevertheless, most tools retained the longer body of the *Junkers* which evolved into the *Lukas* (or *Weber*?) range of tools. Because *Junkers*, *Ogura* and *Powerhawk* were seen as quirks of the industry rather than a portent of things to come, it wasn't until the turn of the century when *Holmatro* introduced their short-bodied, doodle-bug style model (pic left) powered by a readily available *DeWalt* 24v battery that we really began to see some progress in the rescue industry as the ability to use a common power source caught on. Even then it has taken another 20 years for fire departments to truly be considering them as 'instead of' conventional tools rather than 'in addition to'.

## SMART/APP CONNECTIVITY

It is already the case with battery tools that you get far more visual indicators of performance and function change than the old days - this may just be the battery charge status with green or red LEDs, usually on the battery but can extend to a dashboard style array of indicators like the WiFi enabled *Lukas/Hurst E3* panel on the right and *Weber's* above that, to help you better control your cut/spread/pull placement and remaining work time. Pretty soon you'll be confronted with a fighter pilot-style array of lights and pictograms. This one includes a water icon to show that you've actually got a saltwater-proof battery attached and a temperature gauge. On from this, *Lukas* and *Hurst* and latterly *Weber* and *Genesis* have adopted a mobile or app-driven feature that allows their tools

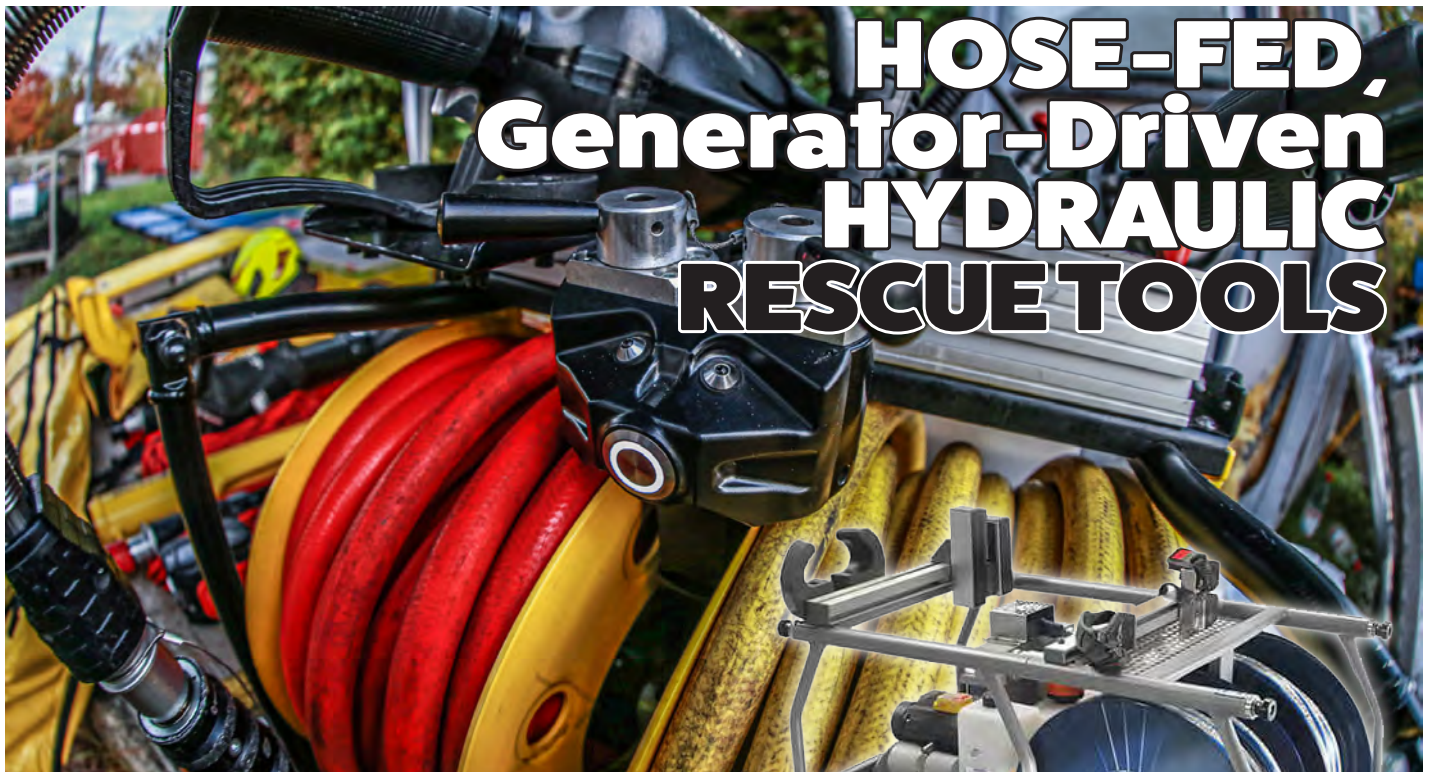
to be individually monitored for status, performance and inventory. *Libervit's* giant wrist watch style monitoring system on the right is another useful innovation. This won't be everyone's cup of tea, particularly on the front line where any technological advance is greeted with scepticism but from a maintenance and management point of view and hopefully continuity of charging and readiness to perform, these will be a real bonus. On the downside, if you've seen the *Terminator* films you'll know that this is how the machines ultimately take over the world so make sure your online security systems are up to date and able to resist hacking. Talking of battery management, remember that modern Lithium ion batteries DO NOT have an infinite life, they will all provide somewhere between 100 discharges/recharges to over 500 and perhaps much more for the highest quality but whatever it is, there is limit and if you fail to manage the storage and charging of batteries they will decline in performance sooner rather than later. It is worth seeking maintenance and likely discharge and cycling information when choosing a tool range and if there is a management tool available, invest in that too.

## CROSSOVER FROM THE ARB INDUSTRY

We've already mentioned the Makita multi-battery series pack and their 40v pack servicing two external batteries but two specialist companies known to rescuers are *Husqvarna* and *Stihl* which many rescue agencies use for reciprocating and quick-cut/circular saws as well as chainsaws. They not only have their own bespoke battery systems they also have excellent backpacks. Some of these battery platforms are crossing over into other relevant rescue products - *Husqvarna* for instance can now be used in *Skylotec/Actsafes* powered ascenders so watch this space in terms of crossover into 'hydraulic' rescue tools. *Stihl* too are the power source for powered ascenders from *Eder Machinbau*. The downside of all of these bespoke systems is the increased cost and availability compared to off-the-shelf batteries but there is no doubting their high quality and fitness for specific purposes. The rescue sector can be rightly proud to have led the way in underwater battery tools. We will see more long-duration back-pack options in the coming years like *Libervit's* BAS on the right and there will be a time when submersible, direct-connect batteries will be the norm.







**B**efore battery there was hydraulic fluid being pumped into the tool's cylinder via a petrol/gas driven generator. There still is! Despite this magazine's 40 year crusade towards battery power, the fact remains that the majority of our own editors and contributors continue to use hose-fed hydraulics in some form or other - often alongside battery alternatives and increasingly, instead of. But for the most part - the hose - fed hydraulics remain a stalwart of many a fire 7 rescue service/dept. In some cases there's a fusion of battery powered generator pushing the hydraulic fluid through hoses so that the noise and fumes of a generator are negated while retaining the power and longevity of traditional hose-fed hydraulics. Take that element away though and there is little to no difference between the two types of tool. Indeed, next year sometime we intend to combine the two sets of tools into common tables containing both battery and hose-fed tools in the same tables for each class of tool. But for now, we'll keep them separate hoping that, by the time we get to it, other manufacturers may follow the lead of *Amkus* and put all their eggs into the battery basket. That's quite a bold move for a name synonymous in the US with hose-fed hydraulic rescue tools.

There will be a separate Guide to petrol and battery powered generators in which we can cover the generics of using hose-fed hydraulic tools. Here, we need only mention the logistics of handling tools that are connected to quite substantial hoses - there have always been two hoses - one to push hydraulic fluid into the tool and the return hose drawing it back but some like *Holmatro* run the second hose INSIDE the larger first hose - they call it *Core* and it reduces the sheer mass, the drag and the



'snaggability' of a double hose system but of course, there's a financial implication for these smarter, more convenient systems. Hose management is an important colleague skill - the tool operator should never have to manage his/her own hose lines and when they move to a new position they expect to do so unhindered. We have traditionally been able to say that hose fed systems offer much greater power and the longevity to see you through an entire, complex and convoluted vehicle rescue when batteries would have long ago given the ghost - either ran out of power or didn't have the grunt in the first place. That's no longer so much of an argument as battery power increases and durations see you through just about everything you will encounter in a normal working day. So what's driving the decision of so many to stick with hose-fed hydraulics? It's simple - 1) the sheer cost of swapping all those existing, perfectly functional tools for battery systems and 2) the simplicity of and existing training towards the generator and hose systems. You might think that battery is simple but there is a significant maintenance issue with battery charging and inventory that can be mitigated by a smart charging system and app-driven inventory but that is again an added cost. At a time when stations and even whole fire departments in the US are closing due to budget caps anything that costs you money or conversely, saves you money has to be considered. There will come a time in the not too distant future when battery become the cheaper option but that is not quite yet.





**UPDATED Nov '24**

# Hydraulic & Mechanical Hose-fed & Battery COMBI-TOOLS



## COMBINATION CUTTING & SPREADING

What sets a combi tool apart from dedicated cutters and spreaders? A combi is a combination cutter and spreader on the same set of blades - almost always this is a straight cutting blade with serrated edges operating in a scissor action

with flattened ends that perform the spreading or squeezing function. Some major on the spreading with cutting as a secondary function - you'll know from the blade design. Some will have the means to add specialist or larger tips to the end via push-pins. Most dedicated cutters have a parrot-beak design that grasps the material being cut whereas straight blades like combis can squeeze harder materials along the blade before they're severed causing you to re-site for a second bite. There is no question that a combi-tool rarely, if ever, performs either cutting or spreading as well as the best dedicated tools but for that entire first ¾'s of performance bandwidth, combi-tools can hold their own and are most often the tool of choice simply because you only need the one. They fit easily into the smallest of response vehicles or even response drones..... you'll see.

## BLADE/JAW DESIGNS

Combi tool blades are almost all straight blade, scissor action cutters with a spreader tip at the end



of each blade. But not all. A few variances are the entry tools like the blue *Lukas/Hurst* tool on the right which we'll come to later and the *Scorpe* tool below it in green/black which has a US-style curved cutting blade (parrot-beak) as does the Dutch *ResQtec G4*. These have two quite small spreader tips set towards the back edge of the blade. It has to be that far back to allow the parrot beak to close fully due to the curve. This parrot beak is generally preferred in the specialist cutter blades



Left: Weber's hose-fed and battery systems are uniquely interchangeable - you can use the same head on either generator attached hoses or a battery. That's versatility!

because it grabs and holds difficult to cut, harder bar material rather than spit it out as straight blades can. Straight blades overcome this to some extent by having a serrated or scalloped blade rather than perfectly straight shear blades and this helps to grip hard bar materials. We don't see quite so much of the pivot-point notch design that

we see in handheld pliers and multitools where the strongest part of the jaw, deep into the mouth of the tool, has a notch for cutting harder wires. Some appear to have an obvious rebate or curve near the blade union but some are more indicative of the blade's design requirement to rotate around a wide hub than a hard-bar cutting notch. Nevertheless, as with all blades, the highest strength is closest to this union with strengths for cutting and spreading dropping off significantly as you get towards the tips. You would therefore always try to cut hard materials within the first quarter of the blades length. Some tools have the spreader tips as a 'bolt-on' or detachable feature which gives the cutting blade better access to make a deeper cut like the *Amkus 716* on the opposite and some are additional spreading length to an integral spreader tip like the *Holmatro Pentheon* above. Virtually all of the regular straight blade combi tools have attachment holes for pulling chains or stabilising

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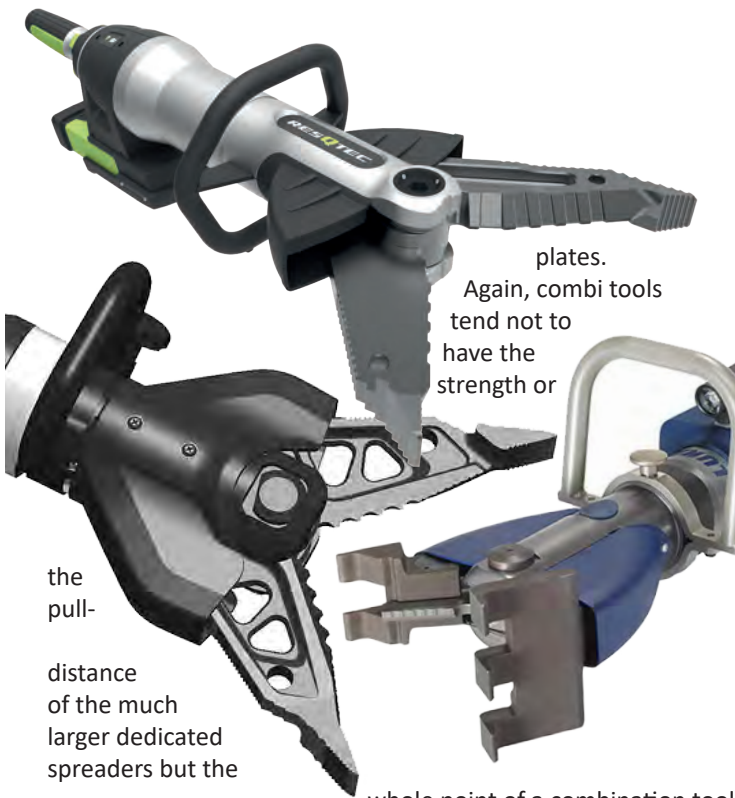


## COMBI-TOOLS

the blades and reduce weight in others. Those like the *Weber/Genesis* blades that have complete cut-away shapes are lighter and, possibly as a coincidence, can give you a slightly improved view of the area beneath the section of bar or material you are cutting/spreading.

### ENTRY TOOLS

Many brands have an entry tool intended for law enforcement and military applications but are just as applicable to a medical team trying to get to an incapacitated casualty in their home. Often called RIT for Rapid Entry Tool we cover these in SPECIAL TOOLS on page -- but like hand-hydraulics, most are combi-tools rather than dedicated cutters or spreaders. The tips are designed to be door-busters where one half of the blades stays anchored to a surface/wall while the upturned blade edge tries to get into the best gap it can fit and force the door away from its lock(s) or in some cases the hinges which can be significantly weaker (held just by screws) than a lock designed specifically to resist being forced. Regular spreaders are too large but some combi-tools can be used if they can take specialist tips like the *Lukas 358 Combi-tool* below which otherwise have tips that won't easily fit a door gap. Regular spreaders tend to push the door against its hinge/lock rather than forcing the door outwards away from the jam. Entry tools are not intended for vehicle extrication but with a cutting surface as well as modified spreading they can achieve far more than a hand tool or no tool at all. We have a separate Guide for Special Tools.



the pull-

distance of the much larger dedicated spreaders but the

plates.  
Again, combi tools tend not to have the strength or

whole point of a combination tool

is to give you a bit of both capabilities and while it is often the spreading that lags a little behind dedicated tool capabilities it is the cutting blades that tend to be taxed more by modern car capabilities. Spreading and pulling requirements have remained reasonably constant while cutting requirements continue to increase with harder and harder materials and construction. The various indents and cut-aways that you see with some blades is simply a means to concentrate strength in certain areas of



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**UPDATED Nov '24****IN THE FOLLOWING TABLES.....****COMMON TO ALL COMBIS, CUTTERS, SPREADERS, RAMS & SPECIALS.....**

The tool length, width or height and weight are all **WORKING** spec so they **include the battery**. Many companies quote figures without the battery so at first glance seem lighter but when added, it has a significant affect on both the physical size and weight of a tool when in use. As with all cutting and spreading tools, the largest or highest figures are not necessarily the best for the job. Cutting and spreading strengths vary radically from the tips to nearer the fulcrum or union. The cutting codes for CE and NFPA certification given below are by far the **BEST** way to gauge the true abilities of a tool.

**All force figures are given in KiloNewtons and US (short)tons**

Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square ■■■■■

If it's an option it is shown as an outline square □□□□□

A circle ● in the 'USE' columns indicates that this feature is only partially present and/or is OK for that purpose but not ideal.

A model variant is shown in cyan and any features or specifications that differ from the standard are also in cyan.

**TOOLS-IN-RANGE:** refers to the other types of tool available in this specific series of tools using this specific battery type.

■ = Combi ■ = Cutter ■ = Spreader ■ = Ram ■ = Special Tools

**ORIGIN:** The company's home country, not necessarily the country of manufacture which is indicated by an inset flag or two equally sized flags if the tool is made in both countries as is the case with *Holmatro's Pentheon*.

**COST:** As usual, this is clearly an official secret within the industry. This is because the cost of one tool is vastly different to the cost of multiples that they sell to entire fire services. But this is the same situation for virtually every piece of equipment we ever have in **TECHNICALRESCUE** where we always quote the single item cost on the understanding that any bulk purchase will of course be a lower figure. So, only TNT in the US have the confidence to quote a price and those will give you a very rough idea of where battery powered rescue tools sit in the price hierarchy.....not cheap! And the batteries are an expensive consumable as well - eg. a *Milwaukee M18* 5Ah battery can cost you £/\$/€200-300 though individuals could purchase through Amazon etc. and save a packet! The prices that are shown are a rough guide only & include local taxes/VAT. They vary with exchange rates, extra taxes etc. We usually round up to the nearest Pound£/US Dollar\$/Euro€. Cost is for basic model with included accessories indicated by a solid square in the appropriate column (optional extras being an outline square). In the case of *TNT* the cost includes two batteries and a charger but tools are normally costed without batteries and chargers.

**WEIGHT IN HAND:** Refers to the operational weight that the rescuer experiences in using the tool so it includes any on-board batteries but not necessarily any extras like clip-on lighting or different tips.

**WEIGHT of BATTERY:** is for the default battery supplied or preferred by the manufacturer. Those that use 'off-the-shelf' brands like *Milwaukee* and *DeWalt* may well be able to use either higher Ah models for greater capacity/duration or lower Ah for decreased cost and perhaps weight but less duration.

**BATTERY DURATION & RECHARGE TIME:** Work-time or duration is much trickier as it depends on the resistance of the material being cut/spread/squeezed, the temperature, the age of the

battery and even how meticulously you follow the recharge guidelines. Consequently some won't quote a figure at all and others are generous to say the least - consider most to be the absolute maximum with minimal workload. Tools last much longer carrying out hundreds of short duration cuts like the Genesis figure of <45mins compared to a few really long and hard cuts like *Holmatro's* minimum 11minute figure in like-for-like cutting/spreading their battery will match the highest time given by others cutting smaller and lighter materials. **Recharge time** can be more specific though it varies wildly between basic and high speed chargers. The time shown is for the charger supplied or preferred by the manufacturer.

**DIMENSIONS:** The Length of tool ready to work x by the width which is usually dictated by the union of the head but sometimes by the handle x the height which is the height off the ground if you lay the tool down and is usually dictated by either the handle or the battery if it is top-mounted.

**IN-WATER-CAPABLE=** ■ The tool/battery can be used underwater - it is not just water resistant to heavy rain.

● The tool/battery can be in heavy rain but not necessarily under water - refers mostly to hose-fed tools.

**TOOL/BATTERY IP.** Ingress protection for dust (first number) & water (second number) - IP54 resists water splashes, IP57 & 67 withstand inundation to 1metre, IP58&68 deeper than 1metre. Trade batteries like Milwaukee are not waterproof and tend not to quote an IP number because they are dependant on the tool to create an effective seal. Specialist batteries like Holmatro and Lukas are watertight (IP68) but you can safely assume that regular trade batteries are no more than IP54 so they are splashproof but certainly not submersible.

**WiFi DIAGNOSTICS:** ■ The tool and/or battery are linked to a mobile device to manage functions, servicing and inventory or ■ =can be hardwired to a laptop etc. for diagnostic analysis

**(T) CUT/SPREAD/PULL/SQUEEZE FORCE:** Is a range or the maximum force possible with the (T) standing for theoretical as all of these figures are to some extent unless verified by a CE and/or NFPA cut and spread test figure. Pull force is only possible if the tips can accept a chain or adapter tip. Combi-tools that are primarily cutters may not be designed to squeeze.

**DISTANCE:** Some give a range from minimum to maximum spread distance but don't forget that max distance provides only minimum force.

**REMOVABLE TIPS:** Increase the distance or the grip type

**ROTATE HEAD/HANDLE:** Can improve access if the tool has a large handle or bulky head and/or battery or simply too long.

**LED LIGHTS:** ■ Integral lighting from the handle or housing to illuminate the area being cut/spread.

**Wifi/ Bluetooth-CAPABLE:** The tool and/or battery are linked to a mobile device via Wifi &/or Bluetooth to manage functions, servicing and inventory. This category is listed twice.













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OTHER TOOLS IN RANGE:  
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 = Special Tools  = Hose-Fed Tools  
 = Partial feature or OK, but not ideal  
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N/A = info Not Available/not given  
 (cyan border) WiFi is present on the model variant shown in cyan

| IMAGES NOT TO SCALE<br>OTHER TOOLS IN RANGE:<br> = Cutter  = Spreader  = Ram<br> = Special Tools  = Hose-Fed Tools<br> = Partial feature or OK, but not ideal<br> = Option<br>N/A = info Not Available/not given<br> (cyan border) WiFi is present on the model variant shown in cyan | MODEL<br>SERIES<br>VARIANT<br>Product Code<br>VOLTAGE | COMPANY                   | TOOLS IN RANGE  | ORIGIN  | COST<br>inc tax / VAT | WEIGHT IN HAND<br>inc BATTERY(IES) | WEIGHT<br>DEFAULT BATTERY    | BATTERY<br>Ah<br>OPTIONS<br>TYPE           | BATTERY<br>DURATION<br>RECHARGE<br>TIME | LENGTH<br>w/TIP                  |
|---|---|---------------------------|---|---|-----------------------|------------------------------------|------------------------------|--|---|----------------------------------|
|    | <b>ION ict614</b><br>54/60V                           | <b>AMKUS</b>              |    |    | N/A                   | 22.3kg<br>49lb                     | 1.2kg<br>2.6 lb              | DeWalt<br>FlexVolt<br>6Ah 9,12Ah<br>Li-ion | 10-30mins<br>60mins                     | 889mm<br>35"                     |
|    | <b>ION ict516<br/>Compact</b><br>54/60V               | <b>AMKUS</b>              |    |    | N/A                   | 23kg<br>50.6 lb                    | 1.2kg<br>2.6 lb              | DeWalt<br>FlexVolt<br>6Ah 9,12Ah<br>Li-ion | 10-30mins<br>60mins                     | 861mm<br>33.9"                   |
|    | <b>ION ict716</b><br>54/60V                           | <b>AMKUS</b>              |    |    | N/A                   | 26.3kg<br>58lb                     | 1.2kg<br>2.6 lb              | DeWalt<br>FlexVolt<br>6Ah 9,12Ah<br>Li-ion | 10-30mins<br>60mins                     | 885mm<br>34.8"<br>917mm<br>36.1" |
|    | <b>MDC300 T30 BO</b><br>54/60V                        | <b>EDILGRAPPA</b>         |    |    | N/A                   | 15.7kg<br>34.5lb                   | 1.4kg<br>3lb                 | DeWalt<br>FlexVolt<br>9Ah<br>Li-ion        | 10-30mins<br>60mins                     | 731mm<br>28.8"                   |
|    | <b>MDC390N-E</b><br>54/60V                            | <b>EDILGRAPPA</b>         |  |  | N/A                   | 23.6kg<br>52lb                     | 1.4kg<br>3lb                 | DeWalt<br>FlexVolt<br>9Ah<br>Li-ion        | 10-30mins<br>60mins                     | 861mm<br>33.9"                   |
|    | <b>MDC300 T30</b><br>18/20V                           | <b>EDILGRAPPA</b>         |  |  | N/A                   | 13.1kg<br>28.8lb                   | 0.6kg<br>1.3lb               | DeWalt<br>FlexVolt<br>5Ah<br>Li-ion        | 12-20mins<br>30-75mins                  | 748mm<br>29.5"                   |
|    | <b>11C RIT3<br/>E-Force</b><br>28V                    | <b>GENESIS<br/>RESCUE</b> |  |  | N/A                   | 14.9kg<br>32.8"                    | 1.4/<br>1kg<br>3.2/<br>2.3lb | Genesis/<br>Milwaukee<br>5Ah*<br>Li-ion    | <45min<br>90mins                        | 824mm<br>32.4"                   |
|    | <b>11C SL3<br/>E-Force</b> 28V                        | <b>GENESIS<br/>RESCUE</b> |  |  | N/A                   | 13.6kg<br>30 lb                    | 1.4/<br>1kg<br>3.2/<br>2.3lb | Genesis/<br>Milwaukee<br>5Ah*<br>Li-ion    | <45min<br>90mins                        | 811mm<br>31.9"                   |
|    | <b>14C SL3<br/>E-Force</b><br>28V                     | <b>GENESIS<br/>RESCUE</b> |  |  | N/A                   | 18.8kg<br>41.4lb                   | 1.4/<br>1kg<br>3.2/<br>2.3lb | Genesis/<br>Milwaukee<br>5Ah*<br>Li-ion    | <45min<br>90mins                        | 927mm<br>36.5"                   |
|    | <b>15C SL3<br/>E-Force</b><br>28V                     | <b>GENESIS<br/>RESCUE</b> |  |  | N/A                   | 20kg<br>44.1lb                     | 1.4/<br>1kg<br>3.2/<br>2.3lb | Genesis/<br>Milwaukee<br>5Ah*<br>Li-ion    | <45min<br>90mins                        | 933mm<br>36.7"                   |
|    | <b>17C SL3<br/>E-Force</b><br>28V                     | <b>GENESIS<br/>RESCUE</b> |  |  | N/A                   | 21kg<br>46.3lb                     | 1.4/<br>1kg<br>3.2/<br>2.3lb | Genesis/<br>Milwaukee<br>5Ah*<br>Li-ion    | <45min<br>90mins                        | 969mm<br>38.1"                   |















| TH<br>PS | WIDTH          | HT/<br>DEPTH   | CUT CLASSES<br>EN CLASSIFICATION<br>EN CUT CAPACITY<br>NFPA CLASS | CUT (T)<br>FORCE<br>OPENING<br>ROUND BAR | SPREAD (T)<br>FORCE<br>DISTANCE         | PULL (T)<br>FORCE<br>DISTANCE<br>(T) SQUEEZE<br>FORCE | OPERATING PRESSURE         | REMOVABLE TIPS | ROTATE HEAD/HANDLE | LED LIGHTS | WIFI /<br>CAPABLE | IN-WATER-CAPABLE<br>TOOL/BATTERY IP | NOTES   | WWW.              |
|----------|----------------|----------------|---|--|---|---|----------------------------|----------------|--------------------|------------|-------------------|-------------------------------------|---|-------------------|
| mm<br>"  | 235mm<br>9.25" | 305mm<br>12"   | -<br>-<br>-<br>A6, B8, C6, D8, E7                                 | -<br>185mm<br>7.3"<br>25.4mm<br>1"       | <35.7kN<br><4t<br>353mm<br>13.9"        | -<br>-<br>-   | 700<br>Bar<br>10.2K<br>psi | ■              | ■                  | ■          | -                 | -                                   | Replaces ict516   | amkus.com         |
| mm<br>"  | 241mm<br>9.5"  | 241mm<br>9.5"  | -<br>-<br>-<br>A6, B7, C6, D7, E7                                 | -<br>185mm<br>7.3"<br>-                  | 29-39.7kN<br>3.3-4.5t<br>394mm<br>15.5" | -<br>-<br>-   | 700<br>Bar<br>10.2K<br>psi | -              | ■                  | ■          | -                 | -                                   | DISCONTINUED<br>replaced by ict614                                    | amkus.com         |
| mm<br>"  | 221mm<br>8.7"  | 295mm<br>11.6" | -<br>-<br>-<br>UL-Certified<br>A7/B8/C7/D9/E8/F5                  | -<br>351mm<br>13.8"<br>-                 | 29-36.7kN<br>3.3-4.1t<br>396mm<br>15.6" | 218kN<br>24.5t  | 700<br>Bar<br>10.2K<br>psi | ■              | ■                  | ■          | -                 | -                                   | Weight inc tips=<br>27.9kg<br>61.4lb                                  | amkus.com         |
| mm<br>"  | 245mm<br>9.7"  | 236mm<br>9.3"  | -<br>BK46/302-F-13<br>-<br>-                                      | 375kN<br>42.2t<br>-<br>-                 | 45-134kN<br>5-13.7t<br>302mm<br>11.9"   | 45kN<br>5t<br>64kN<br>7.2t                            | 700<br>Bar<br>10.2K<br>psi | -              | ■                  | ■          | -                 | -                                   |   | edilgrappa.com    |
| mm<br>"  | 274mm<br>10.8" | 241mm<br>9.5"  | -<br>BK30/390-H-22<br>A6/B7/C6/D7/E7                              | -<br>185mm<br>7.3"<br>-                  | 29-39.7kN<br>3.3-4.5t<br>394mm<br>15.5" | -<br>-<br>-   | 700<br>Bar<br>10.2K<br>psi | -              | -                  | ■          | -                 | -                                   |   | edilgrappa.com    |
| mm<br>"  | 245mm<br>9.7"  | 339mm<br>13.3" | -<br>BK46/302-F-13<br>-<br>-                                      | 375kN<br>42.2t<br>-                      | 46-134kN<br>4.7-13.7t<br>302mm<br>11.9" | 45kN<br>4.6t<br>64kN<br>6.5t                          | 700<br>Bar<br>10.2K<br>psi | -              | ■                  | ■          | -                 | -                                   |   | edilgrappa.com    |
| mm<br>"  | 192mm<br>7.6"  | 241mm<br>9.5"  | -<br>-<br>-<br>A6 B7 C6 D7 E7                                     | 285mm<br>11.2"<br>28mm<br>1.1"           | 26-30kN<br>2.9-3.4t<br>215mm<br>8.5"    | 36-41kN<br>4-4.6t<br>276mm<br>10.9"                   | 700<br>Bar<br>10.2K<br>psi | ■              | ■                  | -          | -                 | 54                                  | *15Ah powerpack<br>also available.<br>Optional USAR<br>carry-Backpack | genesisrescue.com |
| mm<br>"  | 192mm<br>7.6"  | 241mm<br>9.5"  | -<br>-<br>-<br>A7 B7 C6 D7 E7                                     | 221mm<br>8.7"<br>28mm<br>1.1"            | 24-32kN<br>2.7-3.6t<br>270mm<br>7.6"    | 34-45kN<br>3.8-4.6t<br>352mm<br>13.9"                 | 700<br>Bar<br>10.2K<br>psi | -              | ■                  | -          | -                 | 54                                  | *15Ah powerpack<br>also available                                     | genesisrescue.com |
| mm<br>"  | 236mm<br>9.3"  | 241mm<br>9.5"  | -<br>-<br>-<br>A7 B8 C6 D8 E8 F5                                  | 285mm<br>11.2"<br>32mm<br>1.25"          | 28-40kN<br>3.1-4.5t<br>360mm<br>14.2"   | 39-56kN<br>4.4-6.3t<br>380mm<br>15"                   | 700<br>Bar<br>10.2K<br>psi | -              | ■                  | ■          | 4                 | 54                                  | *15Ah powerpack<br>also available                                     | genesisrescue.com |
| mm<br>"  | 236mm<br>9.3"  | 241mm<br>9.5"  | -<br>-<br>-<br>A7 B8 C6 D8 E8 F5                                  | 295mm<br>11.5"<br>32mm<br>1.25"          | 28-39kN<br>3.1-4.4t<br>370mm<br>14.6"   | 39-54kN<br>4.4-6t<br>360mm<br>14.2"                   | 700<br>Bar<br>10.2K<br>psi | ■              | ■                  | ■          | 4                 | 54                                  | *15Ah powerpack<br>also available                                     | genesisrescue.com |
| mm<br>"  | 236mm<br>9.3"  | 241mm<br>9.5"  | -<br>-<br>-<br>A7 B9 C7 D9 E9 F6                                  | 342mm<br>13.5"<br>32mm<br>1.25"          | 29-40kN<br>3.3-4.5t<br>405mm<br>15.9"   | 36-57kN<br>4-6.4t<br>406mm<br>16"                     | 700<br>Bar<br>10.2K<br>psi | ■              | ■                  | ■          | 4                 | 54                                  | *15Ah powerpack<br>also available                                     | genesisrescue.com |



| IMAGES NOT TO SCALE<br>OTHER TOOLS IN RANGE:<br><div> <div></div> = Cutter <div></div> = Spreader <div></div> = Ram </div> <div> <div></div> = Special Tools <div></div> = Hose-Fed Tools </div> <div> <div></div> = Partial feature or OK, but not ideal <div></div> = Option </div> <div> N/A = info Not Available/not given<br/> <div></div> (cyan border) WiFi is present on the model variant shown in cyan </div> |  | MODEL<br>SERIES<br>VARIANT<br>Product Code<br>VOLTAGE | COMPANY               | TOOLS IN RANGE | ORIGIN | COST<br>inc tax /<br>VAT<br>exc battery | WEIGHT IN HAND<br>inc BATTERY(IES) | WEIGHT<br>DEFAULT BATTERY | BATTERY<br>Ah<br>OPTIONS<br>TYPE     | BATTERY<br>DURATION<br>RECHARGE<br>TIME | LENGTH<br>w/TIP |
|---|--|---|-----------------------|----------------|--------|---|------------------------------------|---------------------------|--------------------------------------|---|-----------------|
|   |  | PENTHEON<br>PCT60<br>28V                              | HOLMATRO              | <div></div>    |        | N/A                                     | 23.4kg<br>51.6"                    | 1.5kg<br>3.3lb            | Holmatro<br>PBPA287<br>8Ah<br>Li-ion | >11mins<br>60mins                       | 1011m<br>39.8'  |
|   |  | PENTHEON<br>PCT5<br>28V                               | HOLMATRO              | <div></div>    |        | N/A                                     | 20.3kg<br>44.8lb                   | 1.5kg<br>3.3lb            | Holmatro<br>PBPA287<br>8Ah<br>Li-ion | >11mins<br>60mins                       | 898m<br>35.4'   |
|   |  | PENTHEON<br>PCT14<br>28V                              | HOLMATRO              | <div></div>    |        | N/A                                     | 14.2kg<br>31.3lb                   | 1.5kg<br>3.3lb            | Holmatro<br>PBPA287<br>8Ah<br>Li-ion | >11mins<br>60mins                       | 731m<br>28.8'   |
|   |  | PENTHEON<br>PCT11<br>28V                              | HOLMATRO              | <div></div>    |        | N/A                                     | 13.8kg<br>30.4lb                   | 1.5kg<br>3.3lb            | Holmatro<br>PBPA287<br>8Ah<br>Li-ion | >11mins<br>60mins                       | 677m<br>26.7'   |
|   |  | SC758<br>E2<br>25.2V                                  | HURST<br>JAWS of LIFE | <div></div>    |        | N/A                                     | 25.5kg<br>56.1lb                   | 0.9kg<br>2lb              | Lukas<br>5Ah<br>Li-ion               | <30mins<br>75mins                       | 1065m<br>41.9'  |
|   |  | SC358<br>E2<br>25.2V                                  | HURST<br>JAWS of LIFE | <div></div>    |        | N/A                                     | 19.7kg<br>43.3lb                   | 0.9kg<br>2lb              | Lukas<br>5Ah<br>Li-ion               | <30mins<br>75mins                       | 956m<br>37.7'   |
|   |  | SC258<br>E2<br>25.2V                                  | HURST<br>JAWS of LIFE | <div></div>    |        | \$12,415                                | 15.8kg<br>34.7lb                   | 0.9kg<br>2lb              | Lukas<br>5Ah<br>Li-ion               | <30mins<br>75mins                       | 874m<br>34.4'   |
|   |  | SC758<br>E3connect<br>25.2V                           | HURST<br>JAWS of LIFE | <div></div>    |        | \$13,290                                | 26kg<br>57.2lb                     | 1.6kg<br>3.5lb            | Lukas<br>9 5Ah<br>Li-ion             | <60mins                                 | 980m<br>38.6'   |
|   |  | SC358<br>E3connect<br>25.2V                           | HURST<br>JAWS of LIFE | <div></div>    |        | N/A                                     | 20kg<br>44lb                       | 1.6kg<br>3.5lb            | Lukas<br>9 5Ah<br>Li-ion             | <60mins                                 | 876m<br>34.5'   |
|   |  | SC258<br>E3connect<br>25.2V                           | HURST<br>JAWS of LIFE | <div></div>    |        | N/A                                     | 16kg<br>35.2lb                     | 1.6kg<br>3.5lb            | Lukas<br>9 5Ah<br>Li-ion             | <60mins                                 | 792m<br>31.2'   |
|   |  |   |                       |                |        |   |                                    |                           |                                      |   |                 |

| TH PS   | WIDTH          | HT/ DEPTH      | CUT CLASSES<br>EN CLASSIFICATION<br>EN CUT CAPACITY<br>NFPA CLASS | CUT (T)<br>FORCE<br>OPENING<br>ROUND BAR          | SPREAD (T)<br>FORCE<br>DISTANCE           | PULL (T)<br>FORCE<br>DISTANCE<br>(T) SQUEEZE<br>FORCE | OPERATING PRESSURE         | REMOVABLE TIPS | ROTATE HEAD/HANDLE | LED LIGHTS | WIFI / CAPABLE | IN-WATER-CAPABLE<br>TOOL/BATTERY IP | NOTES  | WWW.           |
|---------|----------------|----------------|---|---|---|---|----------------------------|----------------|--------------------|------------|----------------|-------------------------------------|--|----------------|
| mm<br>" | 270mm<br>10.6" | 275mm<br>10.7" | -<br>CK45/468-J-23.4<br>1J 2J 3K 4K 5K<br>A8 B9 C8 D9 E9 F4       | 370kN<br>41.6t<br>394mm<br>15.5"<br>40mm<br>1.6"  | 44.6-1860kN<br>5-209t<br>468mm<br>18.4"   | 105kN<br>11.8t<br>87.9kN<br>7.2t                      | 720<br>Bar<br>00.4K<br>psi | ■              | ■                  | ■          | ■              | ■<br>57<br>57                       |  | holmatro.com   |
| mm<br>" | 268mm<br>10.6" | 273mm<br>10.7" | -<br>CK43/380J-20.3<br>1J 2J 3K 4K 5K<br>A7 B8 C8 D8 E8 F3        | 370kN<br>41.6t<br>320mm<br>12.6"<br>36mm<br>1.4"  | 43-1860kN<br>4.8-209t<br>380mm<br>15"     | 104kN<br>11.7t<br>87kN<br>9.8t                        | 720<br>Bar<br>00.4K<br>psi | ■              | -                  | ■          | ■              | ■<br>57<br>57                       |  | holmatro.com   |
| mm<br>" | 270mm<br>10.6" | 275mm<br>10.8" | -<br>BK33/362-E-14.2<br>1E 2E 3E 4E 5E<br>A5 B5 C5 D6 E4 F3       | 268kN<br>277mm<br>10.9"<br>24mm<br>0.9"           | 33-1350kN<br>3.7-151.7t<br>362mm<br>14.3" | -<br>34kN<br>3.8t                                     | 720<br>Bar<br>00.4K<br>psi | -              | -                  | ■          | ■              | ■<br>57<br>57                       |  | holmatro.com   |
| mm<br>" | 270mm<br>10.6" | 275mm<br>10.8" | -<br>BK48/281-E-13.8<br>1E 2E 3E 4E 5E<br>A5 B5 C5 D6 E4 F3       | 268kN<br>196mm<br>7.7"<br>24mm<br>0.9"            | 48-1350kN<br>5.4-151.7t<br>281mm<br>11.1" | -<br>44kN<br>4.9t                                     | 720<br>Bar<br>00.4K<br>psi | -              | -                  | ■          | ■              | ■<br>57<br>57                       |  | holmatro.com   |
| mm<br>" | 275mm<br>10.8" | 284mm<br>11.2" | -<br>-<br>-<br>A8 B9 C9 D9 E9 F5                                  | 885kN<br>99.5t<br>408mm<br>16.1"<br>40mm<br>1.57" | 43-1500kN<br>4.8-168.6t<br>475mm<br>18.7" | <94kN<br><10.6t<br>340mm<br>13.4"                     | 700<br>Bar<br>10.1K<br>psi | ■              | -                  | -          | -              | -<br>54                             | DISCONTINUED   | jawsoflife.com |
| mm<br>" | 237mm<br>9.3"  | 278mm<br>10.9" | -<br>-<br>-<br>A7 B8 C7 D8 E7 F4                                  | 492kN<br>55.3t<br>309mm<br>12.2"<br>35mm<br>1.4"  | 38-1500kN<br>4.3-168.6t<br>368mm<br>14.5" | <61kN<br><6.9t<br>382mm<br>15"                        | 700<br>Bar<br>10.1K<br>psi | ■              | -                  | -          | -              | -<br>54                             | DISCONTINUED   | jawsoflife.com |
| mm<br>" | 215mm<br>8.5"  | 281mm<br>11.1" | -<br>-<br>-<br>A6 B6 C6 D7 E7                                     | 280kN<br>31.5t<br>233mm<br>9.2"<br>26mm<br>1"     | 32-700kN<br>3.6-78.7t<br>321mm<br>12.6"   | <34kN<br><3.8t<br>330mm<br>13.4"                      | 700<br>Bar<br>10.1K<br>psi | -              | -                  | -          | -              | -<br>54                             | DISCONTINUED   | jawsoflife.com |
| mm<br>" | 266mm<br>10.5" | 253mm<br>10"   | -<br>-<br>-<br>A8 B9 C9 D9 E9 F5                                  | 885kN<br>99.5t<br>400mm<br>15.7"<br>40mm<br>1.57" | 43-1500kN<br>4.8-168.6t<br>475mm<br>18.7" | <94kN<br><10.6t<br>340mm<br>13.4"                     | 700<br>Bar<br>10.1K<br>psi | ■              | -                  | ■          | ■              | ■<br>58                             | Can use IP68<br>battery                                | jawsoflife.com |
| mm<br>" | 235mm<br>9.25" | 253mm<br>10"   | -<br>-<br>-<br>A7 B8 C7 D8 E7 F4                                  | 492kN<br>55.3t<br>309mm<br>12.2"<br>35mm<br>1.4"  | 38-1500kN<br>4.3-168.6t<br>368mm<br>14.5" | <61kN<br><6.9t<br>382mm<br>15"                        | 700<br>Bar<br>10.1K<br>psi | ■              | -                  | ■          | ■              | ■<br>58                             | Can use IP68<br>battery.<br>EWXT range<br>discontinued | jawsoflife.com |
| mm<br>" | 210mm<br>8.3"  | 253mm<br>10"   | -<br>-<br>-<br>A6 B6 C6 D7 E7                                     | 280kN<br>31.5t<br>233mm<br>9.2"<br>26mm<br>1"     | 24-700kN<br>2.7-78.7t<br>321mm<br>12.6"   | <34kN<br><3.8t<br>330mm<br>13.4"                      | 700<br>Bar<br>10.1K<br>psi | -              | -                  | ■          | ■              | ■<br>58                             | Can use IP68<br>battery.<br>EWXT range<br>discontinued | jawsoflife.com |
|         |                |                |   |   |   |   |                            |                |                    |            |                |                                     |  | expansion row  |



| IMAGES NOT TO SCALE<br>OTHER TOOLS IN RANGE:<br> = Cutter  = Spreader  = Ram<br> = Special Tools  = Hose-Fed Tools<br> = Partial feature or OK, but not ideal<br> = Option<br>N/A = info Not Available/not given<br> (cyan border) WiFi is present on the model variant shown in cyan |  |                                     |                |   |                       |                                    |                           |                                     |   |                             |
|---|--|-------------------------------------|----------------|---|-----------------------|------------------------------------|---------------------------|-------------------------------------|---|-----------------------------|
|   | MODEL<br>SERIES<br>VARIANT<br>Product Code<br>VOLTAGE    | COMPANY                             | TOOLS IN RANGE | ORIGIN  | COST<br>inc tax / VAT | WEIGHT IN HAND<br>inc BATTERY(IES) | WEIGHT<br>DEFAULT BATTERY | BATTERY<br>Ah OPTIONS<br>TYPE       | BATTERY<br>DURATION<br>RECHARGE<br>TIME | LENGTH<br>w/TIE             |
|    | <b>E100</b><br><b>StrongArm</b><br>25.2V                 | <b>HURST</b><br><b>JAWS of LIFE</b> |                |  | N/A                   | 11-<br>11.7kg<br>24.25-<br>25.8lb  | 1.2kg<br>2.7lb            | Lukas<br>273100610<br>4Ah<br>Li-ion |   | 775<br>796m<br>30.5<br>31.3 |
|    | <b>LE100</b><br><b>StrongArm</b><br>25.2V                | <b>HURST</b><br><b>JAWS of LIFE</b> |                |  | N/A                   | 11-<br>11.7kg<br>24.25-<br>25.8lb  | 1.2kg<br>2.7lb            | Lukas<br>273100610<br>4Ah<br>Li-ion |   | 775<br>796m<br>30.5<br>31.3 |
|   |  |                                     |                |   |                       |                                    |                           |                                     |   |                             |
|    | <b>Combitool</b><br><b>Underwater</b><br>CHEBM120<br>28V | <b>HYDRAM</b>                       |                |  | N/A                   | 28.75kg<br>63.25lb                 | 00kg<br>00lb              | 5Ah<br>Li-ion                       | 00mins<br>66mins                        | 900m<br>00"                 |



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| TH PS            | WIDTH         | HT/ DEPTH      | CUT CLASSES<br>EN CLASSIFICATION<br>EN CUT CAPACITY<br>NFPA CLASS | CUT (T)<br>FORCE<br>OPENING<br>ROUND BAR          | SPREAD (T)<br>FORCE<br>DISTANCE                | PULL (T)<br>FORCE<br>DISTANCE<br>(T) SQUEEZE<br>FORCE | OPERATING PRESSURE         | REMOVABLE TIPS | ROTATE HEAD/HANDLE | LED LIGHTS | WIFI CAPABLE | IN-WATER-CAPABLE<br>TOOL/BATTERY IP | NOTES  | WWW.           |
|------------------|---------------|----------------|---|---|--|---|----------------------------|----------------|--------------------|------------|--------------|-------------------------------------|--|----------------|
| -<br>m<br>-<br>" | 195mm<br>7.7" | 210mm<br>8.3"  | -<br>-<br>-<br>A5 B3 C5 D6 E6                                     | 155kN<br>17.4t<br>207mm<br>8.1"<br>22.2mm<br>0.9" | 28-700kN<br>3.2-78.7t<br>184-215mm<br>7.2-8.5" | -<br>-<br>-   | 700<br>Bar<br>10.1K<br>psi | ■              | -                  | -          | -            | 54<br>54                            | Fire Rescue version<br>with push-button<br>release combi and<br>door opening tips                | jawsoflife.com |
| -<br>m<br>-<br>" | 195mm<br>7.7" | 210mm<br>8.3"  | -<br>-<br>-<br>A5 B3 C5 D6 E6                                     | 155kN<br>17.4t<br>207mm<br>8.1"<br>22.2mm<br>0.9" | 28-700kN<br>3.2-78.7t<br>184-215mm<br>7.2-8.5" | -<br>-<br>-   | 700<br>Bar<br>10.1K<br>psi | ■              | -                  | -          | -            | 54<br>54                            | Military version<br>with push-button<br>release combi and<br>door opening tips<br>Picatinny rail | jawsoflife.com |
|                  |               |                |   |   |  |   |                            |                |                    |            |              |                                     |  |                |
| -<br>m<br>-      | 205mm<br>8.1" | 325mm<br>12.8" | -<br>-<br>-<br>-  | 210mm<br>8.27"<br>00mm<br>00"                     |  | -<br>-<br>-   | 700<br>Bar<br>10.1K<br>psi | -              | -                  | 2*         | -            | 68<br>68                            | Waterproof to<br>120.9m/398ft<br>*300-3000 lumen   | hydram.com     |

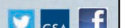
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











| IMAGES NOT TO SCALE<br>OTHER TOOLS IN RANGE:<br>■= Cutter ■= Spreader ■=Ram<br>■= Special Tools ■= Hose-Fed Tools<br>●○= Partial feature or OK, but not ideal<br>□= Option<br>N/A = info Not Available/not given<br>■= (cyan border) WiFi is present on the model variant 'shown in cyan |                             | MODEL<br>SERIES<br>VARIANT<br>Product Code<br>VOLTAGE | COMPANY   | TOOLS IN RANGE  | ORIGIN | COST<br>inc tax / VAT | WEIGHT IN HAND<br>inc BATTERY(IES) | WEIGHT<br>DEFAULT BATTERY           | BATTERY<br>Ah<br>OPTIONS<br>TYPE | BATTERY<br>DURATION<br>RECHARGE<br>TIME | LENGTH<br>w/TIP |
|--|-----------------------------|---|---|---|--------|-----------------------|------------------------------------|-------------------------------------|----------------------------------|---|-----------------|
|   | SC758<br>E2<br>25.2V        | LUKAS   |  |    | N/A    | 25.5kg<br>56.1lb      | 0.9kg<br>2lb                       | Lukas<br>5Ah<br>Li-ion              | <30mins<br>75mins                | 1065mm<br>41.9"                         |                 |
|   | SC358<br>E2<br>25.2V        | LUKAS   |   |    | N/A    | 19.7kg<br>43.3lb      | 0.9kg<br>2lb                       | Lukas<br>5Ah<br>Li-ion              | <30mins<br>75mins                | 956mm<br>37.7"                          |                 |
|   | SC258<br>E2<br>25.2V        | LUKAS   |   |    | N/A    | 15.8kg<br>34.7lb      | 0.9kg<br>2lb                       | Lukas<br>5Ah<br>Li-ion              | <30mins<br>75mins                | 874mm<br>34.4"                          |                 |
|   | SC758<br>E3connect<br>25.2V | LUKAS   |   |    | N/A    | 25.6kg<br>56.3lb      | 1.6kg<br>3.5lb                     | Lukas<br>9 5Ah<br>Li-ion            | <60mins                          | 987mm<br>38.8"                          |                 |
|    | SC358<br>E3connect<br>25.2V | LUKAS   |   |  | N/A    | 20kg<br>44lb          | 1.6kg<br>3.5lb                     | Lukas<br>9 5Ah<br>Li-ion            | <60mins                          | 876mm<br>34.5"                          |                 |
|   | SC258<br>E3connect<br>25.2V | LUKAS   |   |  | N/A    | 16kg<br>35.2lb        | 1.6kg<br>3.5lb                     | Lukas<br>9 5Ah<br>Li-ion            | <60mins                          | 792mm<br>31.2"                          |                 |
|   | SC758<br>eWCT<br>25.2V      | LUKAS   |   |  | N/A    | 26kg<br>57.3lb        | 1.6kg<br>3.5lb                     | Lukas<br>9 5Ah<br>Li-ion            | <60mins                          | 987mm<br>38.8"                          |                 |
|   | SC358<br>eWCT<br>25.2V      | LUKAS   |   |  | N/A    | 20kg<br>44lb          | 1.6kg<br>3.5lb                     | Lukas<br>9 5Ah<br>Li-ion            | <60mins                          | 876mm<br>34.5"                          |                 |
|   | SC258<br>eWCT<br>25.2V      | LUKAS   |   |  | N/A    | 16kg<br>35.2lb        | 1.6kg<br>3.5lb                     | Lukas<br>9 5Ah<br>Li-ion            | <60mins                          | 792mm<br>31.2"                          |                 |
|   | E100<br>StrongArm<br>25.2V  | LUKAS   |   |  | N/A    | 11.1-<br>11.8kg       | 1.3kg<br>2.9lb                     | Lukas<br>273100610<br>4Ah<br>Li-ion | ?                                | 775mm<br>796mm<br>30.5"<br>31.3"        |                 |
|   | LE100<br>StrongArm<br>25.2V | LUKAS   |   |  | N/A    | 11.1-<br>11.8kg       | 1.3kg<br>2.9lb                     | Lukas<br>273100610<br>4Ah<br>Li-ion | ?                                | 775mm<br>796mm<br>30.5"<br>31.3"        |                 |

| TH PS   | WIDTH          | HT/ DEPTH      | CUT CLASSES<br>EN CLASSIFICATION<br>EN CUT CAPACITY<br>NFPA CLASS | CUT (T)<br>FORCE<br>OPENING<br>ROUND BAR          | SPREAD (T)<br>FORCE<br>DISTANCE                | PULL (T)<br>FORCE<br>DISTANCE<br>(T) SQUEEZE<br>FORCE | OPERATING PRESSURE         | REMOVABLE TIPS | ROTATE HEAD/HANDLE | LED LIGHTS | WIFI / X-CAPABLE | IN-WATER-CAPABLE<br>TOOL/BATTERY IP | NOTES   | WWW.      |
|---------|----------------|----------------|---|---|--|---|----------------------------|----------------|--------------------|------------|------------------|-------------------------------------|---|-----------|
| mm<br>" | 275mm<br>10.8" | 284mm<br>11.2" | J<br>CK 43/475-J-25,5<br>1J-2K-3K-4K-5K<br>A8 B9 C9 D9 E9         | 885kN<br>99.5t<br>408mm<br>16.1"<br>40mm<br>1.57" | 43-1500kN<br>4.8-168.6t<br>475mm<br>18.7"      | <94kN<br><10.6t<br>340mm<br>13.4"                     | 700<br>Bar<br>10.1K<br>psi | ■              | -                  | -          | -                | -<br>54                             | DISCONTINUED  | lukas.com |
| mm<br>" | 237mm<br>9.3"  | 278mm<br>10.9" | I<br>CK 38/368-I-19,7<br>1I-2J-3I-4J-5J<br>A7 B8 C7 D8 E7         | 492kN<br>309mm<br>12.2"<br>35mm<br>1.4"           | 38-1500kN<br>4.3-168.6t<br>368mm<br>14.5"      | <61kN<br><6.9t<br>382mm<br>15"                        | 700<br>Bar<br>10.1K<br>psi | ■              | -                  | -          | -                | -<br>54                             | DISCONTINUED  | lukas.com |
| mm<br>" | 215mm<br>8.5"  | 281mm<br>11.1" | F<br>BK 32/320-F-15.8<br>1G-2F-3F-4F-5G<br>A6 B6 C6 D7 E7         | 280kN<br>31.5t<br>233mm<br>9.2"<br>26mm<br>1"     | 32-700kN<br>3.6-78.7t<br>321mm<br>12.6"        | <34kN<br><3.8t<br>330mm<br>13.4"                      | 700<br>Bar<br>10.1K<br>psi | -              | -                  | -          | -                | -<br>54                             | DISCONTINUED  | lukas.com |
| mm<br>" | 266mm<br>10.5" | 253mm<br>10"   | J<br>-<br>1J-2K-3K-4K-5K<br>A8 B9 C9 D9 E9 F5                     | 885kN<br>99.5t<br>408mm<br>16.1"<br>40mm<br>1.57" | 43-1500kN<br>4.8-168.6t<br>475mm<br>18.7"      | <94kN<br><10.6t<br>340mm<br>13.4"                     | 700<br>Bar<br>10.1K<br>psi | ■              | -                  | ■          | ■                | ■<br>68<br>58                       | Tips options set<br>to include Door<br>Opening tips           | lukas.com |
| mm<br>" | 235mm<br>9.25" | 253mm<br>10"   | I<br>-<br>1I-2J-3I-4J-5J<br>A7 B8 C7 D8 E7 F4                     | 492kN<br>309mm<br>12.2"<br>35mm<br>1.4"           | 38-1500kN<br>4.3-168.6t<br>368mm<br>14.5"      | <61kN<br><6.9t<br>382mm<br>15"                        | 700<br>Bar<br>10.1K<br>psi | ■              | -                  | ■          | ■                | ■<br>68<br>58                       | Tips options set<br>to include Door<br>Opening tips           | lukas.com |
| mm<br>" | 210mm<br>8.3"  | 253mm<br>10"   | F<br>-<br>1G-2F-3F-4F-5G<br>A6 B6 C6 D7 E7 F4                     | 280kN<br>31.5t<br>233mm<br>9.2"<br>26mm<br>1"     | 32-700kN<br>3.6-78.7t<br>321mm<br>12.6"        | <34kN<br><3.8t<br>330mm<br>13.4"                      | 700<br>Bar<br>10.1K<br>psi | -              | -                  | ■          | ■                | ■<br>68<br>58                       |   | lukas.com |
| mm<br>" | 266mm<br>10.5" | 253mm<br>10"   | J<br>-<br>1J-2K-3K-4K-5K<br>A8 B9 C9 D9 E9 F5                     | 885kN<br>99.5t<br>400mm<br>15.7"<br>26mm<br>1"    | 43-1500kN<br>4.8-168.6t<br>475mm<br>18.7"      | <94kN<br><10.6t<br>340mm<br>13.4"                     | 700<br>Bar<br>10.1K<br>psi | ■              | -                  | ■          | -                | ■<br>68<br>68                       | DISCONTINUED  | lukas.com |
| mm<br>" | 235mm<br>9.25" | 253mm<br>10"   | I<br>CK 38/368-I-19,6<br>1I-2J-3I-4J-5J<br>A7 B8 C7 D8 E7 F4      | 492kN<br>309mm<br>12.2"<br>35mm<br>1.4"           | 38-1500kN<br>4.3-168.6t<br>368mm<br>14.5"      | <61kN<br><6.9t<br>382mm<br>15"                        | 700<br>Bar<br>10.1K<br>psi | ■              | -                  | ■          | -                | ■<br>68<br>68                       | DISCONTINUED  | lukas.com |
| mm<br>" | 210mm<br>8.27" | 253mm<br>10"   | F<br>BK 32/320-F-15.6<br>1G-2F-3F-4F-5G<br>A6 B6 C6 D7 E7         | 280kN<br>31.5t<br>233mm<br>9.2"<br>26mm<br>1"     | 32-700kN<br>3.6-78.7t<br>321mm<br>12.6"        | <34kN<br><3.8t<br>330mm<br>13.4"                      | 700<br>Bar<br>10.1K<br>psi | -              | -                  | ■          | -                | ■<br>68<br>68                       | DISCONTINUED  | lukas.com |
| mm<br>" | 195mm<br>7.7"  | 210mm<br>8.3"  | -<br>-<br>-<br>A5 B3 C5 D6 E6                                     | 155kN<br>17.4t<br>207mm<br>8.1"<br>22.2mm<br>0.9" | 28-700kN<br>3.2-78.7t<br>184-215mm<br>7.2-8.5" | -<br>-<br>-   | 700<br>Bar<br>10.1K<br>psi | ■              | -                  | -          | -                | 54<br>54                            | Fire Rescue<br>version<br>with combi and<br>door opening tips | lukas.com |
| mm<br>" | 195mm<br>7.7"  | 210mm<br>8.3"  | -<br>-<br>-<br>A5 B3 C5 D6 E6                                     | 155kN<br>17.4t<br>207mm<br>8.1"<br>22.2mm<br>0.9" | 28-700kN<br>3.2-78.7t<br>184-215mm<br>7.2-8.5" | -<br>-<br>-   | 700<br>Bar<br>10.1K<br>psi | ■              | -                  | -          | -                | 54<br>54                            | Military/Law<br>Enforcement<br>version in black               | lukas.com |

IMAGES NOT TO SCALE









OTHER TOOLS IN RANGE:

 = Cutter 
  = Spreader 
  = Ram  
 = Special Tools 
  = Hose-Fed Tools  
 = Partial feature or OK, but not ideal  
 = Option  
 N/A = info Not Available/not given  
 (cyan border) WiFi is present on the model variant shown in cyan





























| IMAGES NOT TO SCALE<br>OTHER TOOLS IN RANGE:<br> = Cutter  = Spreader  = Ram<br> = Special Tools  = Hose-Fed Tools<br> = Partial feature or OK, but not ideal<br> = Option<br>N/A = info Not Available/not given<br> (cyan border) WiFi is present on the model variant shown in cyan | MODEL<br>SERIES<br>VARIANT<br>Product Code<br>VOLTAGE | COMPANY                               | TOOLS IN RANGE  | ORIGIN  | COST<br>inc tax / VAT | WEIGHT IN HAND<br>inc BATTERY(IES)  | WEIGHT<br>DEFAULT BATTERY          | BATTERY<br>Ah OPTIONS<br>TYPE                                  | BATTERY<br>DURATION<br>RECHARGE<br>TIME | LENGTH<br>w/TIP                    |
|---|---|---------------------------------------|---|---|-----------------------|-------------------------------------|------------------------------------|--|---|------------------------------------|
|    | BC-300BL<br>18V                                       | OGURA                                 |    |    | N/A                   | 14.5kg<br>32lb                      | 1/<br>1.36kg<br>2,2/<br>3lb        | Makita<br>5/6Ah*<br>Li-ion                                     | <12mins<br>55-120mins                   | 703mm<br>27.7"                     |
|    | BC-300X<br>18V  | OGURA                                 |    |    | N/A                   | 14kg<br>30.9lb                      | 1/<br>1.36kg<br>2,2/<br>3lb        | Makita<br>5/6Ah*<br>Li-ion                                     | <12mins<br>55-120mins                   | 754mm<br>29.7"                     |
|    | RP-V250<br>18v  | OGURA                                 |    |    | N/A                   | 14kg<br>30.9 lb                     | 1/<br>1.36kg<br>2,2/<br>3lb        | Makita<br>5/6Ah*<br>Li-ion                                     | <12mins<br>55-120mins                   | 558mm<br>22"                       |
|    | HRS931/<br>HRS-932<br>Shear Head<br>18v               | OGURA                                 |    |    | N/A                   | 3.9kg<br>8.6lb<br>+6.2kg<br>+13.7lb | 1/<br>1.36kg<br>2,2/<br>3lb        | Makita<br>5/6Ah*<br>Li-ion                                     | <12mins<br>55-120mins                   | 303mm<br>11.9"<br>+382mm<br>+15"   |
|    | HRS941/<br>HRS-934<br>Spreader<br>18v                 | OGURA                                 |   |  | N/A                   | 4.2kg<br>9.3lb<br>5.4kg<br>11.9lb   | 1/<br>1.36kg<br>2,2/<br>3lb        | Makita<br>5/6Ah*<br>Li-ion                                     | <12mins<br>55-120mins                   | 328mm<br>12.9"<br>+352mm<br>+13.9" |
|   | P16 Legacy<br>PowerBlade<br>12v 16v LiHT              | POWERHAWK<br>TECHNOLOGIES             |  |  | N/A                   | *21.4kg<br>47lb                     | *4.5kg<br>9.9lb<br>15.9kg<br>*35lb | Powerhawk<br>12.4Ah LiHT<br>33Ah Li-ion<br>12v Lead Acid       | <120mins<br><15hr                       | 659mm<br>27"                       |
|    | P-16X<br>PowerBlade<br>12v                            | POWERHAWK<br>TECHNOLOGIES             |  |  | N/A                   | 21.6kg<br>47.5lb                    | 1.36kg<br>3lb                      | Powerhawk<br>7.5Ah Li-ion<br>or any 12v<br>Lead Acid<br>source | <120mins                                | 659mm<br>27"                       |
|    | Frontliner<br>P4FX EDD<br>43.2V                       | POWERHAWK<br>TECHNOLOGIES<br>/RESQTEC |  |  | N/A                   | 21.8kg<br>48lb                      | 1kg<br>2.2lb                       | Resqtec<br>2.6Ah<br>Li-ion                                     | <45mins<br>90mins                       | 765mm<br>30.1"                     |
|    | FX4-FJ<br>EDD<br>43.2V                                | RESQTEC                               |  |  | N/A                   | 17.1kg<br>37.6lb                    | 1kg<br>2.2lb                       | Resqtec<br>2.6Ah<br>Li-ion                                     | <45mins<br>90mins                       | 856mm<br>33.7"                     |
|    | FX6-DJ<br>EDD<br>43.2V                                | RESQTEC                               |  |  | N/A                   | 21.3kg<br>46.8lb                    | 1kg<br>2.2lb                       | Resqtec<br>2.6Ah<br>Li-ion                                     | <45mins<br>90mins                       | 950mm<br>37.4"                     |
|    | G4-WX<br>Frontliner<br>EDD<br>43.2V                   | RESQTEC                               |  |  | N/A                   | 17.1kg<br>37.6lb                    | 1kg<br>2.2lb                       | Resqtec<br>2.6Ah<br>Li-ion                                     | <45mins<br>90mins                       | 827mm<br>32.6"                     |



| TH PS                          | WIDTH                           | HT/ DEPTH   | CUT CLASSES<br>EN CLASSIFICATION<br>EN CUT CAPACITY<br>NFPA CLASS | CUT (T)<br>FORCE<br>OPENING<br>ROUND BAR  | SPREAD (T)<br>FORCE<br>DISTANCE                                     | PULL (T)<br>FORCE<br>DISTANCE<br>(T) SQUEEZE<br>FORCE | OPERATING PRESSURE | REMOVABLE TIPS | ROTATE HEAD/HANDLE | LED LIGHTS | WIFI / CAPABLE | IN-WATER-CAPABLE<br>TOOL/BATTERY IP | NOTES  | WWW.                                |
|--------------------------------|---------------------------------|---|---|---|---|---|--------------------|----------------|--------------------|------------|----------------|-------------------------------------|--|-------------------------------------|
| 154mm<br>6.1"                  | 288mm<br>11.3"                  | -<br>-<br>-<br>-  | 36-549kN<br>4-61.7t<br>197mm<br>7.76"<br>25mm<br>1"               | 145-392kN<br>16.3-44t<br>300mm<br>11.8"   | -<br>-<br>74.5kN  | n/a   | -                  | ■              | ■                  | -          | -              | -                                   | *EU uses 5Ah, US tends to use 6Ah  | ogurarescuertools.com               |
| 154mm<br>6"                    | 293mm<br>11.5"                  | -<br>-<br>-<br>-  | 145-392.3kN<br>16.3-44t<br>197mm<br>7.76"<br>-                    | 36-567kN<br>4-63.7t<br>300mm<br>11.8"     | -<br>-<br>74.5kN  | n/a   | -                  | ■              | ■                  | -          | -              | -                                   |  | ogurarescuertools.com               |
| 250mm<br>9.8"                  | 180mm<br>7.1"                   | -<br>-<br>-<br>-  | 600kN<br>67.4t<br>197mm<br>7.76"<br>-                             | 32-699kN<br>3.6-78.7t<br>250mm<br>9.8"    | -<br>-<br>119.6kN   | n/a   | -                  | ■              | ■                  | -          | -              | -                                   |  | ogurarescuertools.com               |
| 111mm<br>4.4"<br>186mm<br>7.3" | 272mm<br>10.7"<br>104mm<br>4.1" | -<br>-<br>-<br>-  | 98kN<br>11t<br>100mm<br>3.9"<br>-                                 | -<br>-                                    | -<br>-<br>-   | n/a   | -                  | ■              | -                  | -          | -              | -                                   | Heads swap out in seconds. Cutter, Spreader etc. attach via short hose or direct to the powerhead.   | ogurarescuertools.com               |
| 111mm<br>4.4"<br>121mm<br>4.8" | 273mm<br>10.7"<br>78mm<br>3.1"  | -<br>-<br>-<br>-  | -<br>-<br>-   | 39.3kN<br>4.4t<br>158mm<br>6.2"           | -<br>-<br>-   | n/a   | -                  | ■              | -                  | -          | -              | -                                   | 941 for US market. All heads interchangeable between power units   | ogurarescuertools.com               |
| 254mm<br>10"                   | 279mm<br>11"                    | -<br>-<br>-<br>-  | A3 B6 C3 D5 E6  | 93.4-200kN<br>10.5t<br>254mm<br>10"<br>-  | 44.5-80.1kN<br>5-9t<br>254mm<br>10"                                 | -<br>-<br>-   | None               | ■              | ■                  | -          | -              | -                                   | interchangeable Cutter, spreader and combi heads. *Weight-in-Hand does NOT include Battery pack. Both P16&P16X can use a regular 12v car battery. *Wt = battery+controller | powerhawk.com                       |
| 254mm<br>10"                   | 279mm<br>11"                    | -<br>-<br>-<br>-  | PENDING   | 93.4-200kN<br>10.5t<br>254mm<br>10"<br>-  | 44.5-80.1kN<br>5-9t<br>254mm<br>10"                                 | -<br>-<br>-   | None               | ■              | ■                  | -          | -              | -                                   |  | powerhawk.com                       |
| 271mm<br>10.7"                 | 274mm<br>10.8"                  | F<br>-<br>1H 2F 3F 4H 5H<br>A6 B6 C5 D6 E6                | 321kN<br>36t<br>236mm<br>9.3"<br>-                                | 43.7-107kN<br>4.9-12t<br>319mm<br>12.6"   | -<br>96mm<br>3.8"<br>-  | None  | ■                  | ■              | □                  | -          | -              | -                                   | interchangeable Cutter, spreader and combi heads*10Ah powerpack also available   | powerhawk.com<br>rescue.resqtec.com |
| 236mm<br>9.3"                  | 228mm<br>9"                     | H<br>CK36.3-350H-17.0<br>1H 2H 3H 4J 5I<br>A6 B7 C6 D7 E6 | <720kN<br><80.9t<br>283mm<br>11.1"<br>-                           | 29-286kN<br>3.3-32.1t<br>350mm<br>13.8"   | 52.9-62.9kN<br>6--7.1t<br>271mm<br>10.7"<br>38.5-43.3kN<br>4.3-4.9t | n/a   | ■                  | ■              | □                  | -          | -              | -                                   | *10Ah powerpack also available   | rescue.resqtec.com                  |
| 268mm<br>10.5"                 | 235mm<br>9.25"                  | J<br>CK44.8-432J-21.4<br>1J 2J 3J 4K 5K<br>A7 B8 C7 D9 E7 | 1200kN<br>135t<br>358mm<br>14.1"<br>-                             | 44.8-1570kN<br>5-176.5t<br>432mm<br>17"   | 66.5-80.1kN<br>7.5-9t<br>327mm<br>12.9"<br>51.5-60.3kN<br>5.8-6.8t  | n/a   | -                  | -              | □                  | -          | -              | -                                   | *10Ah powerpack also available   | rescue.resqtec.com                  |
| 236mm<br>9.3"                  | 228mm<br>9"                     | F<br>BK33.8-369F-17<br>1H 2F 3G 4F 5G<br>A6 B6 C6 D7 E6   | <554kN<br><62.3t<br>156mm<br>6.1"<br>-                            | 33.8-485kN<br>3.8-54.5t<br>369mm<br>14.5" | -<br>-<br>36.8-42.3kN<br>4.2-4.7t                                   | n/a   | ■                  | ■              | □                  | -          | -              | -                                   | *10Ah powerpack also available   | rescue.resqtec.com                  |

IMAGES NOT TO SCALE  
OTHER TOOLS IN RANGE:  
 = Cutter  = Spreader  = Ram  
 = Special Tools  = Hose-Fed Tools  
 = Partial feature or OK, but not ideal  
 = Option  
N/A = info Not Available/not given  
 (cyan border) WiFi is present on the model variant shown in cyan

| IMAGES NOT TO SCALE<br>OTHER TOOLS IN RANGE:<br> = Cutter  = Spreader  = Ram<br> = Special Tools  = Hose-Fed Tools<br> = Partial feature or OK, but not ideal<br> = Option<br>N/A = info Not Available/not given<br> (cyan border) WiFi is present on the model variant shown in cyan | MODEL<br>SERIES<br>VARIANT<br>Product Code<br>VOLTAGE | COMPANY         | TOOLS IN RANGE  | ORIGIN  | COST<br>inc tax / VAT | WEIGHT IN HAND<br>inc BATTERY(IES) | WEIGHT<br>DEFAULT BATTERY | BATTERY<br>Ah OPTIONS<br>TYPE                                       | BATTERY<br>DURATION<br>RECHARGE<br>TIME | LENGTH<br>w/TIP |
|---|---|-----------------|---|---|-----------------------|------------------------------------|---------------------------|---|---|-----------------|
|    | Combi MK<br>28v                                       | SCORPE          |    |    | N/A                   | 19.3kg<br>42.2lb                   | 1kg<br>2.2lb              | Milwaukee<br>5Ah<br>Li-ion  | <45mins<br>90mins                       | 974mm<br>38.3"  |
|    | Combi SK<br>28v                                       | SCORPE          |    |    | N/A                   | 15.1kg<br>33.2lb                   | 1kg<br>2.2lb              | Milwaukee<br>5Ah<br>Li-ion  | <45mins<br>90mins                       | 858mm<br>33.8"  |
|    | EBFCC-28<br>E-Force3<br>18V                           | TNT RESCUE      |          |    | N/A                   | 25.1kg<br>55lb                     | 1.1kg<br>2.4lb            | 8/9Ah<br>MilwaukeeM18<br>DeWalt FlexVolt<br>or Makita 18v<br>Li-ion | 87mins                                  | 920mm<br>36.2"  |
|    | SPS270 mk2<br>E-Force3/<br>Smart<br>18/28V            | WEBER<br>RESCUE |          |    | N/A                   | 13.6kg<br>30 lb                    | 1kg<br>2.2lb              | Milwaukee<br>5Ah M28M18<br>Li-ion                                   | <45mins<br>90mins                       | 811mm<br>31.9"  |
|   | SPS360 mk2<br>E-Force3/<br>Smart<br>18/28V            | WEBER<br>RESCUE |       |  | N/A                   | 18.1kg<br>39.8lb                   | 1kg<br>2.2lb              | Milwaukee<br>5Ah M28M18<br>Li-ion                                   | <45mins<br>90mins                       | 927mm<br>36.5"  |
|    | SPS370 mk2<br>E-Force3/<br>Smart<br>18/28V            | WEBER<br>RESCUE |    |  | N/A                   | 19.2kg<br>42.2lb                   | 1kg<br>2.2lb              | Milwaukee<br>5Ah M28M18<br>Li-ion                                   | <45mins<br>90mins                       | 933mm<br>36.7"  |
|    | SPS400 mk2<br>E-Force3/<br>Smart<br>18/28V            | WEBER<br>RESCUE |    |  | N/A                   | 21kg<br>46.3lb                     | 1kg<br>2.2lb              | Milwaukee<br>5Ah M28M18<br>Li-ion                                   | <45mins<br>90mins                       | 969mm<br>38.1"  |
|    | SPS480 mk2<br>E-Force3/<br>Smart<br>18/28V            | WEBER<br>RESCUE |    |  | N/A                   | 24.7kg<br>54.5lb                   | 1kg<br>2.2lb              | Milwaukee<br>5Ah M28M18<br>Li-ion                                   | <45mins<br>90mins                       | 1062mm<br>41.8" |
|    | Rit Tool<br>E-Force3/<br>Smart<br>18/28V              | WEBER<br>RESCUE |    |  | N/A                   | 13.3kg<br>29.3lb                   | 1kg<br>2.2lb              | Milwaukee<br>5Ah M28M18<br>Li-ion                                   | <45mins<br>90mins                       | 773mm<br>30.4"  |
|   |   |                 |   |   |                       |                                    |                           |   |   |                 |
|   |   |                 |   |   |                       |                                    |                           |   |   |                 |

| TH PS          | WIDTH          | HT/ DEPTH  | CUT CLASSES<br>EN CLASSIFICATION<br>EN CUT CAPACITY<br>NFPA CLASS | CUT (T)<br>FORCE<br>OPENING<br>ROUND BAR    | SPREAD (T)<br>FORCE<br>DISTANCE  | PULL (T)<br>FORCE<br>DISTANCE<br>(T) SQUEEZE<br>FORCE | OPERATING PRESSURE  | REMOVABLE TIPS  | ROTATE HEAD/HANDLE  | LED LIGHTS | WiFi / CAPABLE  | IN-WATER-CAPABLE<br>TOOL/BATTERY IP | NOTES  | WWW.  |
|----------------|----------------|--|---|---|----------------------------------|---|---|---|---|------------|---|-------------------------------------|--|---|
| 222mm<br>8.7"  | 248mm<br>9.8"  | -<br>CK37/360 H 19.3<br>-<br>-                             | 491kN<br>55.2t<br>-<br>30mm<br>1.2"                               | 45-783kN<br>5-88t<br>360mm<br>14.2"         | -<br>60kN<br>6.7t<br>-           | 700<br>Bar<br>10.2K<br>psi                            |    |    |    | -          | -   | -                                   |  | scorpe.net  |
| 195mm<br>7.7"  | 248mm<br>9.8"  | -<br>BK30/265 E 15.1<br>-<br>-                             | 324kN<br>36.4t<br>120mm<br>4.7"<br>25mm<br>1"                     | 35-691kN<br>3.9-77.7t<br>270mm<br>10.6"     | -<br>-<br>-                      | 700<br>Bar<br>10.2K<br>psi                            | -   | -   |    | 4          | -   | -                                   |  | scorpe.net  |
| 267mm<br>10.5" | 298mm<br>11.7" | -<br>-<br>-<br>A8 B9 C8 D8 E9 F4                           | 694kN<br>78t<br>343mm<br>13.5"<br>38mm<br>1.5"                    | 106-1272kN<br>11.9-143t<br>422.7mm<br>16.6" | -<br>-<br>-                      | 722<br>Bar<br>10.5K<br>psi                            |    | -   |    | 4          | -   | 54                                  | Option of 3 battery ranges. TNT prices include 2 batteries & Dual Rapid charger. ESLCC twin battery DISCONTINUED | tntrescue.com                                     |
| 236mm<br>9.3"  | 241mm<br>9.5"  | -<br>BK31/270G-13.6<br>1H-2G-3G-4H-5G<br>A6 B7 C6 D7 E7 F3 | 221mm<br>8.7"<br>28mm<br>1.1"                                     | 31-591kN<br>3.5-66.4t<br>270mm<br>10.6"     | <36kN<br>4t<br>395mm<br><52kN    | 700<br>Bar<br>10.2K<br>psi                            | -   |    |    | 4          |    | -                                   | 68   | weber.com   |
| 236mm<br>9.3"  | 241mm<br>9.5"  | -<br>CK36/360I-18.1<br>1I-2K-3J-4K-5J<br>A7 B8 C7 D9 E8 F5 | 285mm<br>11.2"<br>32mm<br>1.25"                                   | 36-783kN<br>4-88t<br>360mm<br>14.1"         | <53kN<br>6t<br>440mm<br><70kN    | 700<br>Bar<br>10.2K<br>psi                            | -   |   |   | 4          |   | -                                   | 68   | All E-Force tools can covert to hose<br>weber.com |
| 236mm<br>9.3"  | 241mm<br>9.5"  | -<br>CK35/370H-19.2<br>1I-2J-3H-4J-5I<br>A7 B8 C7 D8 E8 F5 | 295mm<br>11.6"<br>32mm<br>1.25"                                   | 35-783kN<br>3.9-88t<br>370mm<br>14.6"       | <57kN<br>6.4t<br>405mm<br><72kN  | 700<br>Bar<br>10.2K<br>psi                            |  |  |  | 4          |  | -                                   | 68   | weber.com   |
| 236mm<br>9.3"  | 241mm<br>9.5"  | -<br>CK35/405I-21.0<br>1I-2K-3J-4K-5J<br>A7 B9 C7 D9 E9 F6 | 343mm<br>13.5"<br>32mm<br>1.25"                                   | 35-1071kN<br>3.9-120.4t<br>405mm<br>15.9"   | <58kN<br>6.5t<br>450mm           | 700<br>Bar<br>10.2K<br>psi                            |  |  |  | 4          |  | -                                   | 68   | weber.com   |
| 263mm<br>10.4" | 241mm<br>9.5"  | -<br>CK45/480K-24.7<br>1K-2K-3K-4K-5K<br>A8-B9-C9-D9-E9-F7 | 402mm<br>15.8"<br>32mm<br>1.25"                                   | 45-1600kN<br>5-180t<br>480mm<br>18.9"       | <78kN<br>8.76t<br>525mm<br>107kN | 700<br>Bar<br>10.2K<br>psi                            |  |  |  | 4          |  | -                                   | 68   | weber.com   |
| 192mm<br>7.6"  | 241mm<br>9.5"  | -<br>AC140H-13,3<br>1H-2H-3H-4H-5H<br>A6 B7 C6 D7 E7 F3    | 324kN<br>36.4t<br>241mm<br>9.5"<br>28mm<br>1.1"                   | 30-1305kN<br>3.4-146.7t<br>380mm<br>15"     | 35-47kN<br>3.9-5.3t              | 700<br>Bar<br>10.2K<br>psi                            |  |  |  | 4          |  | -                                   | 68   | weber.com   |
|                |                |  |   |   |                                  |   |   |   |   |            |   |                                     |  | expansion row                                     |
|                |                |  |   |   |                                  |   |   |   |   |            |   |                                     |  | expansion row                                     |





# BATTERY DRIVEN RAPID INTERV

Cutting, spreading, pressing  
Replaceable tips for breaking doors and v  
lifting of loads, pulling obstacle



# WEBERRESCUE

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## SYSTEMS

## NEW COMBI TOOL FOR EXTRICATION TEAMS

...ing and pulling with one device.  
...windows, cutting steel and security sections,  
...s or opening vehicles (extrication).



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[www.weber-rescue.com](http://www.weber-rescue.com)








Discover more!



|   |  |  |  |  |  |   |
|---|--|--|--|--|--|---|
| <p>IMAGES NOT TO SCALE</p> <p>OTHER TOOLS IN RANGE:</p> <p>■ = BATTERY TOOLS</p> <p>■ = Cutter</p> <p>■ = Spreader</p> <p>■ = Ram</p> <p>■ = Special Tools</p> <p>● = PARTIAL or OK but not ideal</p> <p>□ = Option</p> <p>N/A = info Not Available/not given</p> |  |  |  |  |  |   |
|   |  |  |  |  |  |   |
| <b>SERIES MODEL VARIANT</b><br>Product Code   | <b>MDC360</b>  | <b>11C SL2</b>   | <b>14C Vario</b>   | <b>15C Vario</b>   | <b>17C Brute Vario</b>                                   | <b>CORE CT 5111</b>                               |
| <b>COMPANY</b>  | <b>EDILGRAPPA</b>  | <b>GENESIS RESCUE</b>                                    | <b>GENESIS RESCUE</b>                                    | <b>GENESIS RESCUE</b>                                    | <b>GENESIS RESCUE</b>                                    | <b>HOLMATO</b>                                    |
| <b>TOOLS IN RANGE</b>   | ■ ■ ■ ■ ■  | ■ ■ ■ ■ ■  | ■ ■ ■ ■ ■  | ■ ■ ■ ■ ■  | ■ ■ ■ ■ ■  | ■ ■ ■ ■ ■   |
| <b>ORIGIN</b>   | ■ ■  | ■ ■ ■  | ■ ■ ■  | ■ ■ ■  | ■ ■ ■  | ■ ■ ■ ■   |
| <b>COST</b> inc tax / VAT   | N/A  | N/A  | N/A  | N/A  | N/A  | N/A   |
| <b>WEIGHT</b> exc hose  | 00kg<br>00lb   | 23.8kg<br>10.8lb   | 14.9kg<br>32.8lb   | 16kg<br>35.3lb   | 18.3kg<br>40.3 lb  |   |
| <b>LENGTH</b>   | 00mm<br>00"  | 649mm<br>25.6"   | 765mm<br>30.1"   | 771mm<br>30.5"   | 807mm<br>31.8"   | 677mm<br>26.7"                                    |
| <b>WIDTH</b>  | 00mm<br>00"  | 190mm<br>7.5"  | 236mm<br>9.3"  | 236mm<br>9.3"  | 236mm<br>9.3"  | 270mm<br>10.6"                                    |
| <b>DEPTH</b>  | 00mm<br>00"  | 196mm<br>7.7"  | 241mm<br>9.5"  | 206mm<br>8.1"  | 206mm<br>8.1"  | 275mm<br>10.8"                                    |
| <b>CUT</b><br>EN CLASS<br>EN CUT CLASSIFICATION<br>NFPA CLASS   | -<br>-<br>-<br>A0 B0 C0 D0 E0  | -<br>-<br>-<br>A6 B5 C6 D6 E7                            | -<br>-<br>-<br>A6 B8 C6 D8 E7                            | -<br>-<br>-<br>A6 B6 C6 D8 E7                            | -<br>-<br>-<br>A7 B9 C7 D9 E9                            | -<br>BK48/281-E-<br>1E 2E 3E 4E<br>A5 B5 C5 D6 E7 |
| <b>CUTTER</b> <b>FORCE</b><br><b>OPENING</b><br><b>ROUND BAR</b>  | ??<br>0mm / 0"<br>-  | ??<br>342mm / 13.5"<br>-                                 | ??<br>257mm / 10.1"<br>-                                 | ??<br>295mm / 11.6"<br>-                                 | ??<br>340mm / 13.4"<br>-                                 | 268kN / 30<br>196mm / 7.7<br>24mm / 0.9           |
| <b>SPREAD</b> <b>FORCE</b><br><b>DISTANCE</b>   | 0-0kN<br>00Ust<br>0mm / 0"   | 32-40.5kN<br>3.5-4.4Ust<br>265mm / 10.4"                 | 38.5-42.5kN<br>4.3-4.7Ust<br>370mm / 14.6"               | 36-44kN<br>4-4.9Ust<br>365mm / 14.4"                     | 34.9-43.4kN<br>3.9-3.7Ust<br>425mm / 16.7"               | 48-1350kN<br>5.4-151.7Ust<br>281mm / 11.1"        |
| <b>PULL</b> <b>FORCE</b><br><b>SQUEEZE</b> <b>DISTANCE</b><br><b>FORCE</b>  | 0-0kN<br>00Ust<br>0mm / 0"<br>-  | 26-37kN<br>2.9-4.1Ust<br>406mm / 16"<br>-                | 39-48.5kN<br>4.3-5.4Ust<br>396mm / 15.6"<br>-            | 40.4-59kN<br>4.5-6.6Ust<br>346mm / 13.6"<br>-            | 36.6-57kN<br>4.1-6.4Ust<br>402mm / 15.8"<br>-            | -<br>-<br>-<br>44kN / 4.9                         |
| <b>OPERATING PRESSURE</b>   | 700Bar/10.1K psi   | 700Bar/10.1K psi   | 700Bar/10.1K psi   | 700Bar/10.1K psi   | 700Bar/10.1K psi   |   |
| <b>REMOVABLE TIPS</b>   | -  | -  | -  | ■  | -  | -   |
| <b>ROTATE HEAD/HANDLE</b>   | -  | ■ 360°   | ■ 360°   | ■ 360°   | ■ 360°   | -   |
| <b>OPERATING TEMP</b>   | ?  | ?  | ?  | ?  | ?  | ?   |
| <b>LED LIGHTS</b>   | -  | -  | -  | -  | -  | 6   |
| <b>IN-WATER-CAPABLE IP#</b>   | ??   | ??   | ??   | ??   | ??   | ● 57  |
| <b>NOTES</b>  |  |  |  |  |  |   |
| <b>WEBSITE</b>  | <a href="http://edilgrappa.com">edilgrappa.com</a>                                 | <a href="http://genesisrescue.com">genesisrescue.com</a> | <a href="http://genesisrescue.com">genesisrescue.com</a> | <a href="http://genesisrescue.com">genesisrescue.com</a> | <a href="http://genesisrescue.com">genesisrescue.com</a> | <a href="http://holmatro.com">holmatro.com</a>    |

# HOSE-FED COMBI-TOOLS

|                     |  |   |  |   |  |  |   |
|---------------------|--|---|--|---|--|--|---|
|                     |  |   |  |   |  |  |   |
| CORE<br>CT 5114 ST  | CORE<br>CT 5150  | CORE<br>CT 5160                                       | SC357  | CHU2010 CX                                      | CHU290 CX                                | CHU2900 CX   |   |
| HOLMATRO            | HOLMATRO   | HOLMATRO  | HURST<br>JAWS of LIFE                                  | HYDRAM  | HYDRAM                                   | HYDRAM   |   |
|                     |  |   |  |   |  |  |   |
|                     |  |   |  |   |  |  |   |
| N/A                 | N/A  | N/A   | N/A  | N/A   | N/A                                      | N/A  |   |
|                     |  |   |  | 12.6kg<br>27.7lb                                | 13.38kg<br>44.7lb                        | 14.88kg<br>32.8lb                                      |   |
|                     | 731mm<br>28.8"   | 898mm<br>35.4"  | 1011mm<br>39.8"  | 774mm<br>30.5"                                  | 685mm<br>26.9"                           | 747mm<br>29.4"   | 758mm<br>29.8"                            |
|                     | 270mm<br>10.6"   | 268mm<br>10.6"  | 270mm<br>10.6"   | 228mm<br>9"                                     | 240mm<br>9.4"                            | 249mm<br>9.8"  | 249mm<br>9.8"                             |
|                     | 275mm<br>10.8"   | 273mm<br>10.7"  | 275mm<br>10.7"   | 172mm<br>6.8"                                   | 175mm<br>6.8"                            | 202mm<br>7.9"  | 202mm<br>7.9"                             |
| 13.8<br>5E<br>E4 F3 | BK33/362-E-14.2<br>1E 2E 3E 4E 5E<br>A5 B5 C5 D6 E4 F3 | CK43/380J-20.3<br>1J 2J 3K 4K 5K<br>A7 B8 C8 D8 E8 F3 | CK45/468-J-23.4<br>1J 2J 3K 4K 5K<br>A8 B9 C8 D9 E9 F4 | -<br>-<br>A7 B8 C7 D8 E7 F4                     | F<br>CC145-F-12.6<br>-<br>A7 B8 C6 D7 E9 | H<br>CC103-H-13.38<br>1I 2J 3I 4J 5J<br>A7 B8 C7 D7 E8 | H<br>CC103-H-14.88<br>-<br>A7 B8 C6 D7 E9 |
| UST<br>7"<br>9"     | 268kN / 30UST<br>277mm / 10.9"<br>24mm / 0.9"          | 370kN / 41.6UST<br>320mm / 12.6"<br>36mm / 1.4"       | 370kN / 41.6UST<br>394mm / 15.5"<br>40mm / 1.6"        | 492kN / 55.3UST<br>309mm / 12.2"<br>35mm / 1.4" | 375kN / 42.1UST<br>210mm / 8.2"<br>?     | 6594kN / 741UST<br>290mm / 11.4"<br>33mm / 1.3"        | 375kN / 42.1UST<br>290mm / 11.4"<br>?     |
| N<br>UST<br>1.1"    | 33-1350kN<br>3.7-151.7UST<br>362mm / 14.3"             | 43-1860kN<br>4.8-209UST<br>380mm / 15"                | 44.6-1860kN<br>5-209UST<br>468mm / 8.4"                | 38-1500kN<br>4.3-168.6UST<br>368mm / 14.5"      | 122kN<br>13.7UST<br>?mm / ?"             | 122kN<br>13.7UST<br>?mm / ?"                           | 163kN<br>13.7UST<br>?mm / ?"              |
|                     | -<br>-<br>34kN / 3.8t                                  | 104kN<br>11.7UST<br>87kN / 9.8t                       | 105kN<br>11.8UST<br>87.9kN / 7.2t                      | <61kN<br><6.9UST<br>382mm / 15"<br>-            | -<br>-<br>-<br>-                         | -<br>-<br>-<br>-                                       | -<br>-<br>-<br>-                          |
|                     |  |   |  |   | 700Bar/10.1K psi                         | 700Bar/10.1K psi                                       | 700Bar/10.1K psi                          |
|                     | -  | ■   | ■  | ■   | - -                                      | - -  | - -                                       |
|                     | -  | -   | ■  | -   | -  | -  | -   |
|                     | ?  | ?   | ?  | ?   | ?  | ?  | ?   |
|                     | 6  | 6   | 6  | -   | -  | -  | -   |
|                     | 57   | 57  | 57   | 54  | ??                                       | ??   | ??  |
|                     |  |   |  |   | Cut reach/depth =<br>150mm               | Cut reach/depth =<br>149mm                             | Cut reach/depth =<br>149mm                |
| om                  | holmatro.com   | holmatro.com  | holmatro.com   | jawsoflife.com                                  | hyDRAM.com                               | hyDRAM.com   | hyDRAM.com                                |

|  |   |   |  |   |   |       |
|--|---|---|--|---|---|-------|
| <p>IMAGES NOT TO SCALE</p> <p>OTHER TOOLS IN RANGE:</p> <p>■=BATTERY TOOLS</p> <p>■= Cutter</p> <p>■= Spreader</p> <p>■=Ram</p> <p>■= Special Tools</p> <p>●= PARTIAL or OK but not ideal</p> <p>□= Option</p> <p>N/A = info Not Available/not given</p> <p>Str-Curve= Straight section ahead of curve</p> |  |  |  |  |  |       |
|  | <b>SERIES</b> <b>MODEL</b> <b>VARIANT</b>   | CHEC300 CX  | CHEC360 CX   | CHEC3600 CX   | SC358   | SC758 |
|  | Product Code  |   |  |   |   |       |
|  | <b>COMPANY</b>  | HYDRAM  | HYDRAM   | HYDRAM  | LUKAS   | LUKAS |
|  | <b>TOOLS IN RANGE</b>   | <div>■ ■ ■ ■</div>  |  |   | <div>■ ■ ■ ■ ■</div>  |       |
| <b>ORIGIN</b>  | <div>■ ■ ■</div>  | <div>■ ■ ■</div>  | <div>■ ■ ■</div>   | <div>■ ■ ■</div>  | <div>■ ■ ■</div>  |       |
| <b>COST</b> inc tax / VAT  | N/A   | N/A   | N/A  | N/A   | N/A   |       |
| <b>WEIGHT</b> exc hose   | 14.68kg<br>32lb   | 14.88kg<br>44.7lb   | 16.68kg<br>36.7lb  | 14.8kg<br>32.6lb  | 20.7kg<br>45.6lb  |       |
| <b>LENGTH</b>  | 802mm<br>31.5"  | 802mm<br>31.5"  | 812mm<br>31.9"   | 774mm<br>30.5"  | 876mm<br>34.4"  |       |
| <b>WIDTH</b>   | 249mm<br>9.8"   | 249mm<br>9.8"   | 249mm<br>9.8"  | 228mm<br>9"   | 301mm<br>11.8"  |       |
| <b>DEPTH</b>   | 202mm<br>7.9"   | 202mm<br>7.9"   | 202mm<br>7.0"  | 172mm<br>6.8"   | 206mm<br>8.1"   |       |
| <b>CUT</b>   | H   | H   | H  | I   | J   |       |
| <b>EN CLASS</b>  | BK25-365-H-14.68  | CC103-H-13.38   | CK40-365-H-16.68   | CK 38/368-I-14.8  | CK 43/475-J-20.7  |       |
| <b>EN CUT CLASSIFICATION</b>   | -   | -   | -  | 11-2J-3I-4J-5J  | 1J-2K-3K-4K-5K  |       |
| <b>NFPA CLASS</b>  | A? B? C? D? E?  | A7 B8 C6 D7 E9  | A7 B8 C6 D7 E9   | A7 B8 C7 D8 E7  | A8 B9 C9 D9 E9  |       |
| <b>CUTTER</b>  | <b>FORCE</b>  | 694kN / 78Ust   | 694kN / 78Ust  | 950kN / 106.8Ust  | 885kN / 99.5Ust   |       |
|  | <b>OPENING</b>  | 300mm / 11.81"  | 365mm / 14.3"  | 365mm / 14.3"   | 408mm / 16.1"   |       |
|  | <b>ROUND BAR</b>  | ?   | 33mm / 1.3"  | ?   | 40mm / 1.57"  |       |
| <b>SPREAD</b>  | <b>FORCE</b>  | 54kN  | 70kN   | 80kN  | 38-1500kN   |       |
|  | <b>DISTANCE</b>   | 6Ust  | 7.8Ust   | 9Ust  | 4.3-168.6Ust  |       |
|  |   | ?mm / ?"  | ?mm / ?"   | ?mm / ?"  | 368mm / 14.5"   |       |
| <b>PULL</b>  | <b>FORCE</b>  | -   | -  | -   | <61kN   |       |
|  | <b>DISTANCE</b>   | -   | -  | -   | <6.9Ust   |       |
| <b>SQUEEZE</b>   | <b>FORCE</b>  | -   | -  | -   | 382mm / 15"   |       |
|  |   | -   | -  | -   | 340mm / 13.4"   |       |
| <b>OPERATING PRESSURE</b>  |   | 700Bar/10.1Kpsi   | 700Bar/10.1Kpsi  | 700Bar/10.1Kpsi   | 700Bar/10.1Kpsi   |       |
| <b>REMOVABLE TIPS</b>  |   | - -   | - -  | - -   | ■   |       |
| <b>ROTATE HEAD/HANDLE</b>  |   | -   | -  | -   | -   |       |
| <b>OPERATING TEMP</b>  |   | ?   | ?  | ?   | ?   |       |
| <b>LED LIGHTS</b>  |   | -   | -  | -   | -   |       |
| <b>IN-WATER-CAPABLE</b> IP#  |   | ??  | ??   | ??  | ● 54  |       |
| <b>NOTES</b>   |   | Cut reach/depth = 110mm   | Cut reach/depth = 110mm  | Cut reach/depth = 110mm   | 'Shark tooth' tips for enhanced grip  |       |
| <b>WEBSITE</b>   |   | hydrum.com  | hydrum.com   | hydrum.com  | lukas.com/rescue  |       |



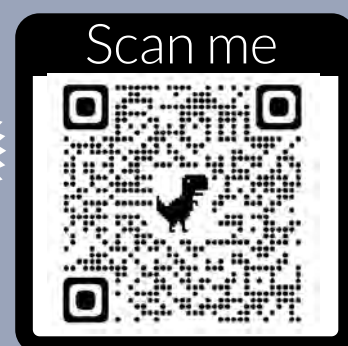
# RESCUER



## PRE-HOSPITAL EMS



Fast Pack Sack



# FAST DEPLOYING EMERGENCY SHELTER

1. CARRY



2. INFLATE



3. OPERATE



### Removable floor

Place shelter over casualty. 3 points of access.  
Multi use floor.

### Lone Responder deployable

Carry, inflate, operate and repack.

### Structured for hands free operation

Strong and durable. Fits a stretcher. Reusable.

### Protect from exposure

Privacy & dignity. Ripstop shell waterproof  
8000mm HH. Operating range from -50°C to  
+60°C and SPF 30. Mosquito nets. Air flow  
controls.

### Operational in ~ 1 minute

With time of the essence, medics need to  
quickly control the environment.

### CARRY SIZE

H 60cm | 23.6"  
W 30cm | 11.81"  
D 20cm | 7.87"

### CARRY WEIGHT

#### Shelter & Fast Pack Sack

7kg | 15.5lbs

#### Backpack & Pump

3.2kg | 7.05 lbs

### OPERATING ROOM

H 1.2m | 3.93ft  
W 1.6m | 5.24ft  
D 2.6m | 8.53ft







### DESIGNED TO TREAT

- Reusable
- Inflates in < 1 minute
- Exposure Protection
- Removable Floor










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## A NEW APPROACH TO CASUALTY CARE

|  |   |   |  |   |   |   |                                |
|--|---|---|--|---|---|---|--------------------------------|
| <p>IMAGES NOT TO SCALE</p> <p>OTHER TOOLS IN RANGE:</p> <p>■=BATTERY TOOLS</p> <p>■= Cutter</p> <p>■= Spreader</p> <p>■=Ram</p> <p>■= Special Tools</p> <p>●= PARTIAL or OK but not ideal</p> <p>□= Option</p> <p>N/A = info Not Available/not given</p> <p>Str-Curve= Straight section ahead of curve</p> |  |  |  |  |  |  |                                |
|  | <b>SERIES MODEL VARIANT</b><br>Product Code                                       | <b>G4-WX</b><br><b>Frontliner</b>   | <b>FX4-DJ</b><br><b>Frontliner</b>   | <b>FX6-DJ</b><br><b>Frontliner</b>  | <b>SLCC-20</b><br><b>Legacy</b>   | <b>BFCC-28</b><br><b>Legacy</b>   | <b>SLCC-3</b><br><b>Legacy</b> |
|  | <b>COMPANY</b>  | <b>RESQTEC</b>  | <b>RESQTEC</b>   | <b>RESQTEC</b>  | <b>TNT RESCUE</b>   | <b>TNT RESCUE</b>   | <b>TNT RESCUE</b>              |
|  | <b>TOOLS IN RANGE</b>   | <div>■ ■ ■ ■ ■</div>  |  |   |   | <div>■ ■ ■ ■ ■</div>  |                                |
|  | <b>ORIGIN</b>   | <div>■ ■</div>  | <div>■ ■</div>   | <div>■ ■</div>  | <div>■ ■ ■ ■</div>  | <div>■ ■ ■ ■</div>  | <div>■ ■ ■ ■</div>             |
| <b>COST</b> inc tax / VAT  | N/A   | N/A   | N/A  | N/A   | N/A   | N/A   |                                |
| <b>WEIGHT</b> exc hose   | 11.3kg<br>24.9lb  | 11.8kg<br>26lb  | 15.8kg<br>34.8lb   | 00kg<br>00lb  | 00kg<br>00lb  | 00kg<br>00lb  |                                |
| <b>LENGTH</b>  | 827mm<br>32.6"  | 856mm<br>33.7"  | 950mm<br>37.4"   | 920mm<br>36.2"  | 920mm<br>36.2"  | 920mm<br>36.2"  |                                |
| <b>WIDTH</b>   | 236mm<br>9.3"   | 236mm<br>9.3"   | 268mm<br>10.5"   | 267mm<br>10.5"  | 267mm<br>10.5"  | 267mm<br>10.5"  |                                |
| <b>DEPTH</b>   | 228mm<br>9"   | 228mm<br>9"   | 235mm<br>9.25"   | 298mm<br>11.7"  | 298mm<br>11.7"  | 298mm<br>11.7"  |                                |
| <b>CUT</b><br><b>EN CLASS</b><br><b>EN CUT CLASSIFICATION</b><br><b>NFPA CLASS</b>   | F<br>BK33.8-369F-17<br>1H 2F 3G 4F 5G<br>A6 B6 C6 D7 E6                           | H<br>CK36.3-350H-17.0<br>1H 2H 3H 4J 5I<br>A6 B7 C6 D7 E6                         | J<br>CK44.8-434J-15.8<br>1J 2J 3J 4K 5K<br>A7 B8 C7 D9 E7                          | -<br>-<br>-   | -<br>-<br>-   | -<br>-<br>-   |                                |
| <b>CUTTER</b><br><b>FORCE</b><br><b>OPENING</b><br><b>ROUND BAR</b>  | <554kN / <62.3Ust<br>156mm / 6.1"<br>00mm / 00"                                   | <720kN / <80.9Ust<br>283mm / 11.1"<br>00mm / 00"                                  | 1035kN / 135Ust<br>358mm / 14.1"<br>40mm / 1.6"                                    | 694kN / 78Ust<br>343mm / 13.5"<br>38mm / 1.5"                                       | 694kN / 78Ust<br>343mm / 13.5"<br>38mm / 1.5"                                       | 694kN / 78Ust<br>343mm / 13.5"<br>38mm / 1.5"                                       |                                |
| <b>SPREAD</b><br><b>FORCE</b><br><b>DISTANCE</b>   | 33.8-485kN<br>3.8-54.5Ust<br>369mm / 14.5"  | 29-286kN<br>3.3-32.1Ust<br>350mm / 13.8"  | 131-1570kN<br>14.7-176.5Ust<br>434mm / 17"   | 106-1272kN<br>11.9-143Ust<br>422.7mm / 16.6"  | 106-1272kN<br>11.9-143Ust<br>422.7mm / 16.6"  | 106-1272kN<br>11.9-143Ust<br>422.7mm / 16.6"  |                                |
| <b>PULL</b><br><b>FORCE</b><br><b>SQUEEZE</b><br><b>DISTANCE</b><br><b>FORCE</b>   | -<br>-<br>-<br>37-42kN/4.2-4.7Ust   | 52.9-62.9kN<br>6--7.1Ust<br>271mm / 10.7"<br>38-43kN/4.3-4.9Ust                   | 66.5-80.1kN<br>7.5-9Ust<br>327mm / 12.9"<br>51-60kN/5.8-6.8Ust                     | -<br>-<br>-<br>-  | -<br>-<br>-<br>-  | -<br>-<br>-<br>-  |                                |
| <b>OPERATING PRESSURE</b>  |   |   |  | 700Bar / 10.2K psi  | 700Bar / 10.2K psi  | 700Bar / 10.2K psi  |                                |
| <b>REMOVABLE TIPS</b>  | ■   | ■   | -  | -   | -   | -   |                                |
| <b>ROTATE HEAD/HANDLE</b>  | ■   | ■   | -  | -   | -   | -   |                                |
| <b>OPERATING TEMP</b>  | ?   | ?   | ?  | ?   | ?   | ?   |                                |
| <b>LED LIGHTS</b>  |   |   |  | -   | -   | -   |                                |
| <b>IN-WATER-CAPABLE</b> IP#  | ? ?   | ? ?   | ? ?  | ■ 64  | ■ 64  | ■ 64  |                                |
| <b>NOTES</b>   |   |   |  |   |   | Chain pack available for pulling  |                                |
| <b>WEBSITE</b>   | rescue.resqtec.com  | rescue.resqtec.com  | rescue.resqtec.com   | tntrescue.com   | tntrescue.com   | tntrescue.com   |                                |

## HOSE-FED COMBI-TOOLS

|  |  |   |   |   |  |   |  |
|--|--|---|---|---|--|---|--|
|  |  |  |  |  |  |  |  |
|  |  | <b>SPS270 mk2</b>   | <b>SPS360 mk2</b>   | <b>SPS370 mk2</b>   | <b>SPS400 mk2</b>  | <b>SPS480 mk2</b>   |  |
|  |  | <b>WEBER<br/>RESCUE</b>   | <b>WEBER<br/>RESCUE</b>   | <b>WEBER<br/>RESCUE</b>   | <b>WEBER<br/>RESCUE</b>  | <b>WEBER<br/>RESCUE</b>   |  |
|  |  |   |   |   |  |   |  |
|  |  |  |  |  |  |  |  |
|  |  | N/A   | N/A   | N/A   | N/A  | N/A   |  |
|  |  | 9.7kg<br>21lb   | 14.2kg<br>31lb  | 15.4kg<br>33.9lb  | 17kg<br>37.5lb   | 21kg<br>46lb  |  |
|  |  | 649mm<br>25.5"  | 765mm<br>30.1"  | 771mm<br>30.3"  | 807mm<br>31.7"   | 1062mm<br>41.8"   |  |
|  |  | 236mm<br>9.3"   | 236mm<br>9.3"   | 236mm<br>9.3"   | 236mm<br>9.3"  | 263mm<br>10.4"  |  |
|  |  | 152mm<br>5.9"   | 158mm<br>6.2"   | 158mm<br>6.2"   | 161mm<br>6.3"  | 241mm<br>9.5"   |  |
|  |  | -<br><b>BK31/270G-9.7</b><br>1H-2G-3G-4H-5G<br>A6 B7 C6 D7 E7 F3                  | -<br><b>CK36/360I-14.2</b><br>1I-2K-3J-4K-5J<br>A7 B8 C7 D9 E8 F5                 | -<br><b>CK35/370I-15.4</b><br>1I-2K-3J-4K-5J<br>A7 B8 C7 D8 E8 F5                 | -<br><b>CK35/405I-17</b><br>1I-2K-3J-4K-5J<br>A7 B9 C7 D9 E9 F6                    | -<br><b>CK45/480K-21</b><br>1K-2K-3K-4K-5K<br>A8 B9 C9 D9 E9 F7                     |  |
|  |  | -<br>221mm / 8.7"<br>28mm / 1.1"  | -<br>285mm / 11.2"<br>32mm / 1.25"  | -<br>285mm / 11.2"<br>32mm / 1.25"  | -<br>343mm / 13.5"<br>32mm / 1.25"   | -<br>402mm / 15.8"<br>32mm / 1.25"  |  |
|  |  | 31-591kN<br>3.5-66.4Ust<br>270mm / 10.6"  | 36-783kN<br>4-88Ust<br>360mm / 14.1"  | 35-783kN<br>4-88Ust<br>370mm / 14.5"  | 35-1071kN<br>3.9-120.4Ust<br>405mm / 15.9"   | 45-1600kN<br>5-180Ust<br>480mm / 18.9"  |  |
|  |  | <36kN<br>4Ust<br>395mm/15.5"<br><52kN / 5.8Ust                                    | <53kN<br>6Ust<br>440mm/17.3"<br><70kN / 00Ust                                     | <57kN<br>0Ust<br>410mm/16.1"<br><70kN / 7.8Ust                                    | <58kN<br>6.5t<br>450mm/17.7"<br><00kN / 00Ust                                      | <78kN<br>8.76Ust<br>525mm/20.6"<br>107kN / 12Ust                                    |  |
|  |  | 700Bar / 10.2K psi  | 700Bar / 10.2K psi  | 700Bar / 10.2K psi  | 700Bar / 10.2K psi   | 700Bar / 10.2K psi  |  |
|  |  | -   | -   | ■   | ■  | ■   |  |
|  |  | ■360°   | ■360°   | ■360°   | ■360°  | ■   |  |
|  |  | ?   | ?   | ?   | ?  | ?   |  |
|  |  | 4   | 4   | 4   | 4  | 4   |  |
|  |  | ? ?   | ? ?   | ? ?   | ? ?  | ? ?   |  |
|  |  | All Genesis battery tools can convert to hose and vice-versa                      | All Genesis battery tools can convert to hose and vice-versa                      | All Genesis battery tools can convert to hose and vice-versa                      | All Genesis battery tools can convert to hose and vice-versa                       | All Genesis battery tools can convert to hose and vice-versa                        |  |
|  |  | weber.com   | weber.com   | weber.com   | weber.com  | weber.com   |  |





# 'hydraulic' BATTERY DEDICATED CUTTERS

Our title picture shows a great demonstration of how versatile some battery tools have become, in this case the *Holmatro Pentheon* series with full underwater cutting capability. It's not quite so good as a water safety promotion with a fine example of what NOT to wear when working in or near water, a non-buoyant firefighting tunic that probably weighs a ton and a half when wet. Even waist-deep water is a hazard if this firefighter suffers a medical event or is incapacitated in some way. For the purposes of this article we're going to pretend that this tunic is one of a new generation with integrated self-inflating life jacket that only inflates upon full immersion not when doused by a fire hose.

Dedicated cutters are perhaps the core tool of any rescue range - there tend to be more of them and it seems that more time and effort is spent on their design and performance than the others. The previous section was on combination tools and those are all cutters as well as spreaders so you should also refer to that selection of battery tools in considering what you need of your cutter and whether the versatility of the combi-tool is more advantageous than the generally greater cutting performance of a dedicated tool. If you include the previous 50 combi-tools in your shopping list of potential cutting tools you have over 120 models to choose from. These are all direct-connect battery systems. Although we have mentioned *Libervit's* batteries and underwater prowess, their tools have not been included in the battery tools guides because they are regular hose-fed hydraulics that operate from a battery driven pump. Bear in mind that most hose-fed hydraulic tools can be run from hoses to a battery-powered hydraulic pump rather than a fossil-fuel generator and some, like the entire *Weber* range can

convert between being hose-fed or integral battery-driven. For battery Tools, refer to the introduction to the batteries guide on page 12 and to the battery tool introduction on page 34. Some data/features headers differ between each type of tool.

## BLADE DESIGN

A fully curved parrot beak blade is now a rare beast indeed but there was a time when it was the only game in town for cutter blades. Now, they may look like a full curve but they all have a straight section like the *Edilgrappa* model below. This parrot beak was generally preferred in the specialist cutter blades because it grabs and holds difficult to cut, harder bar material rather than spit it out as a scissor-straight blade might.

However, straight blades quickly edged into the market alongside parrot-beak blades partly because combi-tools mostly need to be straight blades to accommodate spreading tips and partly because a serrated or scalloped blade was introduced to help grip hard bar materials rather than perfectly straight shearing blades. We don't see quite so much of the pivot-point notch design that we see in handheld pliers and multitools where the strongest part of the jaw, deep into the mouth of the tool, has a notch for cutting harder wires but they are an obvious presence on TNT's models which we have listed as a straight blade. Some appear to have an obvious rebate or curve near the blade union but this can be more indicative of the blade's design requirement to rotate around a wide hub than a hard-bar cutting notch. Nevertheless, as with all blades, the highest strength is closest to this union with strengths for





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cutting dropping off significantly as you get towards the tips. You would therefore always try to cut hard materials within the first quarter of the blades length. Again, don't forget that many combi tools have detachable spreader tips and can therefore be used as dedicated cutters so it is worth reviewing those models to determine if your operational needs can be met by a combi-tool. But we mentioned last time that modern car materials are taxing cutters more than spreaders and this will be a prime reason for choosing a dedicated cutter over a combi- the sheer grunt to be able to cut the toughest of materials.

Unlike combi tools with spread extensions, cutting blades tend to be a solid forged lump of hardened steel so, though smaller in size than a spreader, they're not necessarily lighter. *Weber/Genesis* blades are unusual in having cut-away holes in their cast blades which does make them lighter and may, as we surmised last time, improve visibility of the materials around the cut.

*Holmatro* were the first to evolve the curve blade, first by extending the curve rather than being semi-circular and then by mimicking a spanner head and extending the front part of the curve into a straight, shearing section - this enables 'pre-cutting' of the section, especially sheet metal to ease the resistance once the material is pulled further into the high strength curve section. We now see blades that look more like a straight front section feeding into a straight rear section rather than curved. The angled junction of the

two straighter blade sections still acts to capture the material being cut and force it deeper into the stronger section of blade. Because the difference between a straight-curve blade and a straight blade with less curve is mostly quite subtle we've described all such two-shaped blades as **Str-Curve** in our tables and these are now the norm across most product ranges. The traditional full curve parrot beak is still evident in 'legacy' models and in some smaller hand-drill style cutters but very much a minority design and most of those listed in our table as 'Curve' like the *TNT Rescue* models, are actually a much elongated curve

rather than semi-circle. *Weber* have introduced blade 'inserts' with their 'Plus' range allowing you to swap out the most abused sections of blade - this may provide significant savings and is something we will likely see more of. *Holmatro* further describe their own jaw design as 'inclined' because most of their tools have cutting jaws that are angled downwards by 30 degree. This



is a useful feature even though it has yet to be adopted by others, because it allows the tool to rotate further without 'trapping' the operator and gives increased access options where the body of the tool might otherwise inhibit placement of the cutting head. Which brings us to.....

## ROTATE HEAD and/or HANDLE

This incline in the *Holmatro* tool is their permanently configured answer to improved access while their handle wraps around entirely allowing 360° use. Some have fixed handles that don't go all the way round but give about 270° of access like the *Power Hawk* above right which does have a 360° rear handle but the front handle uses two handle bars to add versatility rather than a full 360° wrap. Others have addressed access problems by allowing the handle to be rotated so that it doesn't get in the way of a specific cut as with *Scorpe*, *Weber* and *Amkus* models or by having the jaws rotate as with the *Power Hawk P16X* and *Resqtec PW4*. Another original proponent of the rotating head is the *Ogura* tool with its electric drill power-unit. The original variant, the *HRS* had a hose (now direct connection to the powerhead) that allows 360° rotation of the head but the later *RP* models (pic above) are fixed to the power unit and have a rotating front handle.

## LED lighting

## LED LIGHTS

Even though all helmets can have a headlamp attached and many have a light as an integral feature, they are often situation so that cutting in restricted spaces puts the cutting area into shade rather than illuminating it. The first to introduce LEDs into their rescue tools was *Holmatro*, with most manufacturers now following suit. Some, like the *Amkus* on the left have embedded LEDs into the handle while others like the *Weber* are embedded in the rear housing. If your tool doesn't have on board lighting you could simply retrofit a small LED torch/flashlight to the handle or barrel with a strap or zip-tie.

## SIZE MATTERS

We mentioned in part one that contrary to our expectations and preferences when battery tools first arrived that the length and bulk would be reduced, they weren't. One or two models that started down the 'stubby' versus 'long' route like the *Power Hawk* and subsequent *P4 Resqtec* continued to evolve that line of tools to provide a modern option and the hand-drill design has continued as a separate branch but for the most part, all of the conventional cutting, spreading and combi-tools went on to be a very





# BATTERY CUTTERS

similar size and look as the hose-fed versions except with a battery stuck on somewhere. *Holmatro's* new mini-cutter which has a similar cutting head to most peddle cutters shows how a battery can create a very useful self-contained tool that can go anywhere although peddle cutters have long been run from short extensions without any problems because they were only ever operating in the footwell. This new model can be used in any area of a vehicle or for building entry or railing cutting etc. It's a high-cutting power option that can virtually be carried in a vehicle glove-box.....if you had a really, really big glove-box.

## NOISE

Something we didn't elaborate on in part 1 was the noise generated by battery tools. We said and often say, that there is very little noise associated with battery tools as compared to a petrol engine or, in the case of hydraulics, a petrol/gas generator. When a battery tool is NOT being used there is virtually no noise, no background tick-over or the continuous quite loud noise of a fuel-driven generator, even the so called whisper-pumps. But when the tool is operating there is a noise, often a high-pitch whirr that increases with workload. As an example, *Libervit's* large backpack battery with hydraulic pump generates 48 dB, the *Lukas/Hurst 799* = 69 to 74 Decibels and *Holmatro's MiniCutter* =74. Those aren't bad - compared to a 32cc chainsaw at around 80 to 103dB and of course, the petrol chainsaw continues to generate a relatively high noise even on tick-over.

## WiFi & BLUETOOTH DIAGNOSTICS

Most modern tool batteries already show charge status - usually with a line of green LEDs but many do much more. Some like *Holmatro* have a hard-wired diagnostics capability where the tool is linked to a laptop to assess work hours, maintenance and performance as well as Bluetooth. This can be done in the field but is generally a post-incident task undertaken back on-station. Others use a mobile app on WiFi or Bluetooth to connect remotely to a 'Smart' phone, device or wrist-monitor. *Weber's* range of *E-Force* models has a *Smart-Force* variant which uses app-management. *Lukas/Hurst E-Connect* variants have mobile connectivity that allows their tools to be monitored for status, performance and inventory but they have also taken things a step further with an integrated dashboard on the handle to give real time information and *Libervit* have a wrist-mounted screen for tool monitoring.



LEFT: The Weber Smart-Force range uses a battery cover on the rear to keep its Milwaukee 18v battery waterproof

IN THE FOLLOWING TABLES.....  
REFER TO COMMON DATA ON PAGE36/38 PLUS THIS

UNIQUE CUTTERS KEY....

**CUT FORCE:** Is the maximum *theoretical* force possible but not quoted by all because the EN and/or NFPA classifications cover this more accurately. Indeed, one or two manufacturers flat-out refuse to quote it because they feel it is a misleading figure. Our figures are in kN (KiloNewtons) and US (Short) Ton. There are 1.10 US short tons to a UK ton and to the metric ton (or tonne).  
**CUT OPENING:** The maximum distance the cutter blades will

open but don't forget that this does not equate to the material that can be cut as the max opening provides the least power. Check out the round bar cutting figure for more accurate interpretation of cutting prowess.

**ROUND BAR:** According to NFPA (and/or EN cut classifications) (see table on page 33) this is the max size of round bar that can be cut as a prescribed material with a specified Rockwell Hardness so that all tests are comparable.

**ROTATE HEAD/HANDLE:** Either the *blade* or the handle can rotate for better access to the cut or the handle will extend around the tool by 180, 270 or 360° to allow it to be used in any position.





The Lukas & Hurst E3, E3-Connect and Holmatro Pentheon series of tools are all fully sealed against water immersion with batteries that can be changed under water. The Lukas/Hurst E3 & E3 Connect can even use a salt water battery that can be swapped under fresh and salt water. On the illuminated 'dashboard' present on E3 and E3 connect models (pics above) a wavy sea symbol indicates when the saltwater battery is on board. Note the EWWT model shown in the main picture has now been discontinued in favour of the E3/E3 Connect which have the full 'dashboard'. Weber's Smart range uses a waterproof cover on their 18v Milwaukee battery and top-right is their on-board dash. Libervit have used battery tools in sea water for years and even have full WiFi management including this handy Wrist-mounted monitor with 30m range, but their tools require a remote battery/hydraulic pump backpack attached via lead rather than a battery attached directly to the tool.











| IMAGES NOT TO SCALE<br>OTHER TOOLS IN RANGE:<br>■ = Combi ■ = Spreader ■ = Ram<br>■ = Special Tools<br>● = PARTIAL FEATURE<br>■ = Option<br>N/A = info Not Available/not given<br>Str-Curve= Straight section ahead of curve<br>■ (cyan border) WiFi is present on the model variant shown in cyan |  | MODEL<br>SERIES<br>VARIANT<br>Product Code<br>VOLTAGE | COMPANY    | TOOLS IN RANGE | ORIGIN | COST<br>inc tax / VAT | WEIGHT IN HAND<br>inc BATTERY(IES) | WEIGHT<br>DEFAULT BATTERY | BATTERY<br>Ah<br>OPTIONS                    | BATTERY<br>DURATION<br>RECHARGE<br>TIME |
|--|--|---|------------|----------------|--------|-----------------------|------------------------------------|---------------------------|---|---|
|  |  | ION ic650<br>Mid-Size<br>Compact<br>54/60V            | AMKUS      |                |        | N/A                   | 23.7kg<br>52.3lb                   | 1.2kg<br>2.6 lb           | DeWalt<br>FlexVolt<br>6Ah 9, 12Ah<br>Li-ion | 10-15mins<br>60mins                     |
|  |  | ION ic700<br>Short Blade<br>54/60V                    | AMKUS      |                |        | N/A                   | 25.6kg<br>56.6lb                   | 1.2kg<br>2.6 lb           | DeWalt<br>FlexVolt<br>6Ah 9, 12Ah<br>Li-ion | 10-15mins-<br>60mins                    |
|  |  | ION ic750<br>Large Blade<br>54/60V                    | AMKUS      |                |        | N/A                   | 26kg<br>57.3 lb                    | 1.2kg<br>2.6 lb           | DeWalt<br>FlexVolt<br>6Ah 9, 12Ah<br>Li-ion | 10-15mins<br>60mins                     |
|  |  | F180-2P BO<br>54/60V                                  | EDILGRAPPA |                |        | N/A                   | 22.5kg<br>10.2lb                   | 1.4kg<br>3lb              | DeWalt<br>FlexVolt<br>9Ah<br>Li-ion         | 10-25mins<br>60mins                     |
|  |  | F150N-E<br>54/60V                                     | EDILGRAPPA |                |        | N/A                   | 22.3kg<br>10.1lb                   | 1.4kg<br>3lb              | DeWalt<br>FlexVolt<br>9Ah<br>Li-ion         | 10-25mins<br>60mins                     |
|  |  | F130-N-T30<br>18/20V                                  | EDILGRAPPA |                |        | N/A                   | 13.1kg<br>28.8lb                   | 0.6kg<br>1.3lb            | DeWalt<br>FlexVolt<br>5Ah<br>Li-ion         | 10-15mins<br>60mins                     |

| NFPA Cutting Codes | A               | B                 | C                        |                     | D                          | E                            |
|--------------------|-----------------|-------------------|--------------------------|---------------------|----------------------------|------------------------------|
| MATERIAL CATEGORY  | ROUND BAR       | FLAT BAR          | ROUND PIPE               |                     | SQUARE TUBE                | ANGLE IRON                   |
| MATERIAL           | A-36 Hot-rolled | A-36              | Schedule 40 A-53 Grade B |                     | A-500 Grade B              | A-36                         |
|                    | Diameter        | Thickness x Width | Nominal Size             | OD x Wall Thickness | Dimension x Wall Thickness | Square Dimension x Thickness |
| PERFORMANCE LEVEL  | (in.)           | (in. x in.)       | (in.)                    | (in. x in.)         | (in. x in.)                | (in. x in.)                  |
| 1                  | 3/8             | 1/4 x 1/2         | 3/8                      | 0.68 x 0.09         | 1/2 x 0.06                 | 1/2 x 1/8                    |
| 2                  | 1/2             | 1/4 x 1           | 3/4                      | 1.05 x 0.11         | 1 3/4 x 0.06               | 1 x 1/8                      |
| 3                  | 5/8             | 1/4 x 2           | 1                        | 1.32 x 0.13         | 1 x 0.08                   | 1 1/4 x 3/16                 |
| 4                  | 3/4             | 1/4 x 3           | 1 1/4                    | 1.66 x 0.14         | 1 1/4 x 0.12               | 1 1/2 x 3/16                 |
| 5                  | 7/8             | 1/4 x 4           | 1 1/2                    | 1.90 x 0.15         | 1 1/2 x 0.12               | 1 1/2 x 1/4                  |
| 6                  | 1               | 3/8 x 3           | 2                        | 2.38 x 0.15         | 1 3/4 x 0.12               | 1 3/4 x 1/4                  |
| 7                  | 1 1/4           | 3/8 x 4           | 2 1/2                    | 2.88 x 0.20         | 2 x 0.15                   | 1 1/2 x 3/8                  |
| 8                  | 1 1/2           | 3/8 x 5           | 3                        | 3.50 x 0.22         | 2 1/2 x 0.19               | 2 x 3/8                      |
| 9                  | 1 3/4           | 3/8 x 6           | 3 1/2                    | 4.00 x 0.23         | 3 x 0.19                   | 2 1/2 x 3/8                  |

| STORED LENGTH   | DIMENSIONS<br>WIDTH inc battery<br>DEPTH | CUT CLASSES<br>EN CLASSIFICATION<br>EN CUT CAPACITY<br>NFPA CLASS | THEORETICAL<br>CUT FORCE<br>t= US short ton | CUT OPENING<br>ROUND BAR | WORKING (HYDRAULIC) PRESSURE       | BLADE TYPE           | ROTATE HEAD/HANDLE | LED LIGHTS | WIFI CAPABLE | IN-WATER-CAPABLE TOOL/BATTERY IP | NOTES           | WWW.           |
|-----------------|--|---|---|--------------------------|------------------------------------|----------------------|--------------------|------------|--------------|----------------------------------|-----------------|----------------|
| 863mm<br>34"    | 221mm<br>8.7"                            | 241mm<br>9.5"   | -<br>-<br>-<br>A6 B8 C6 D8 E7               | 0kN<br>0t                | 147.3mm<br>5.8"<br>25mm*<br>1"     | 700 Bar<br>10.2K psi | Str-Curve          | - 360°     | ■            | -<br>n/a                         | *as per NFPA A6 | amkus.com      |
| 829mm<br>32.7"  | 221mm<br>8.7"                            | 294mm<br>11.6"  | -<br>-<br>-<br>A7 B8 C7 D9 E8 F4            | 0kN<br>0t                | 147mm<br>5.8"<br>31.75mm*<br>1.25" | 700 Bar<br>10.2K psi | Str-Curve          | - 360°     | ■            | -<br>n/a                         | *as per NFPA A7 | amkus.com      |
| 856mm<br>33.7"  | 221mm<br>8.7"                            | 294mm<br>11.6"  | -<br>-<br>-<br>A8 B9 C7 D9 E9 F4            | 0kN<br>0t                | 178mm<br>7"<br>38.1mm*<br>1.5"     | 700 Bar<br>10.2K psi | Straight           | - 360°     | ■            | -<br>n/a                         | *as per NFPA A8 | amkus.com      |
| 832mm<br>32.75" | 262mm<br>10.3"                           | 300mm<br>11.8"  | J<br>BC180-J-22.5<br>-<br>-                 | 871kN<br>98t             | 185mm<br>7.3"<br>24mm<br>0.95"     | 700 Bar<br>10.2K psi | Str-Curve          | - 360°     | ■            | -<br>n/a                         |                 | edilgrappa.com |
| 777mm<br>30.6"  | 274mm<br>10.8"                           | 244mm<br>9.6"   | H<br>BC150-H-20<br>A6 B5 C6 D7 E7           | 394kN<br>44.3t           | 147mm<br>5.8"<br>30mm<br>1.2"      | 700 Bar<br>10.2K psi | Str-Curve          | - 270°     | ■            | -<br>n/a                         |                 | edilgrappa.com |
| 679mm<br>33.9"  | 245mm<br>10.8"                           | 388mm<br>15.3"  | F<br>AC130-F-13<br>-                        | 330kN<br>37.1t           | 130mm<br>5.1"<br>24mm<br>0.95"     | 550 Bar<br>8K psi    | Curve              | - 180°     | ■            | -<br>n/a                         |                 | edilgrappa.com |



| IMAGES NOT TO SCALE<br>OTHER TOOLS IN RANGE:<br> = Combi  = Spreader  = Ram<br> = Special Tools<br> = PARTIAL FEATURE<br> = Option<br>N/A = info Not Available/not given<br>Str-Curve= Straight section ahead of curve<br> = (cyan border) WiFi is present on the model variant shown in cyan |   |                   |   |   |                       |                                    |                                |   |   |  |
|--|---|-------------------|---|---|-----------------------|------------------------------------|--------------------------------|---|---|--|
|  | MODEL<br>SERIES<br>VARIANT<br>Product Code<br>VOLTAGE | COMPANY           | TOOLS IN RANGE  | ORIGIN  | COST<br>inc tax / VAT | WEIGHT IN HAND<br>inc BATTERY(IES) | WEIGHT<br>DEFAULT BATTERY      | BATTERY<br>Ah<br>OPTIONS<br>TYPE        | BATTERY<br>DURATION<br>RECHARGE<br>TIME |  |
|   | TP10<br>18/20V  | EDILGRAPPA        |       |    | N/A                   | 8.5kg<br>18.7lb                    | 0.6kg<br>1.3lb                 | DeWalt<br>FlexVolt<br>5Ah<br>Li-ion     | 10-15mins<br>60mins                     |  |
|   | ALL9<br>E-Force<br>28V                                | GENESIS<br>RESCUE |    |    | N/A                   | 26.3kg<br>58lb                     | 1.4kg<br>3.2lb<br>1kg<br>2.3lb | Genesis/<br>Milwaukee<br>5Ah*<br>Li-ion | <45mins<br>90mins                       |  |
|   | C195 SL3-NXTGEN<br>E-Force<br>28V                     | GENESIS<br>RESCUE |    |    | N/A                   | 20.6kg<br>45.4lb                   | 1.4kg<br>3.2lb<br>1kg<br>2.3lb | Genesis/<br>Milwaukee<br>5Ah*<br>Li-ion | <45mins<br>90mins                       |  |
|   | 236 SL3 NXTGEN<br>E-Force<br>28V                      | GENESIS<br>RESCUE |    |    | N/A                   | 23.5kg<br>51.8lb                   | 1.4kg<br>3.2lb<br>1kg<br>2.3lb | Genesis/<br>Milwaukee<br>5Ah*<br>Li-ion | <45mins<br>90mins                       |  |
|    | Mass Transit Cutter<br>109.104.0<br>E-Force<br>28V    | GENESIS<br>RESCUE |    |  | N/A                   | 23.4kg<br>51.5lb                   | 1.4kg<br>3.2lb<br>1kg<br>2.3lb | Genesis/<br>Milwaukee<br>5Ah*<br>Li-ion | <45mins<br>90mins                       |  |
|   | PENTHEON<br>PCU60<br>28V                              | HOLMATRO          |   |  | N/A                   | 25kg<br>55.1lb                     | 1.5kg<br>3.3lb                 | Holmatro<br>PBPA287<br>8Ah<br>Li-ion    | >11mins<br>60mins                       |  |
|   | PENTHEON<br>PCU50<br>28V                              | HOLMATRO          |   |  | N/A                   | 21.5kg<br>47.4lb                   | 1.5kg<br>3.3lb                 | Holmatro<br>PBPA287<br>8Ah<br>Li-ion    | >11mins<br>60mins                       |  |
|   | PENTHEON<br>PCU40<br>28V                              | HOLMATRO          |   |  | N/A                   | 19kg<br>41.9lb                     | 1.5kg<br>3.3lb                 | Holmatro<br>PBPA287<br>8Ah<br>Li-ion    | >11mins<br>60mins                       |  |
|   | PENTHEON<br>PCU30CL<br>28V                            | HOLMATRO          |   |  | N/A                   | 15.3kg<br>33.7lb                   | 1.5kg<br>3.3lb                 | Holmatro<br>PBPA287<br>8Ah<br>Li-ion    | >11mins<br>60mins                       |  |
|   | MIni-Cutter<br>18V                                    | HOLMATRO          |    |  | N/A*                  | 4.9kg<br>10.8lb                    | 0.4kg<br>0.9lb                 | Holmatro<br>CAS<br>2Ah<br>Li-ion        | <70 cuts<br>30mins                      |  |
|   | S 799<br>E2<br>25.2V                                  | HURST<br>(IDEX)   |   |  | \$13,900              | 26.2kg                             | 1kg<br>2.1lb                   | Hurst<br>5Ah<br>Li-ion                  | 30-60mins<br>90mins                     |  |





| STORED LENGTH   | DIMENSIONS<br>WIDTH inc battery | DEPTH          | CUT CLASSES<br>EN CLASSIFICATION<br>EN CUT CAPACITY<br>NFPA CLASS | THEORETICAL CUT FORCE<br>t= US short ton | CUT OPENING<br>ROUND<br>BAR     | WORKING (HYDRAULIC) PRESSURE | BLADE TYPE | ROTATE HEAD/HANDLE | LED LIGHTS   | WiFi /  CAPABLE | IN-WATER-CAPABLE TOOL/BATTERY IP  | NOTES  | WWW.              |
|-----------------|---------------------------------|----------------|---|--|---------------------------------|------------------------------|------------|--------------------|--|--|---|--|-------------------|
| 1034mm<br>40.7" | 264mm<br>10.4"                  | 143mm<br>5.6"  | -<br>-<br>-   | 233kN<br>26.2t                           | 52mm<br>2"<br>n/a               | 550 Bar<br>8K psi            | Straight   | 360° -             |  | -  | -<br>n/a  |  | edilgrappa.com    |
| 1029mm<br>40.5" | 298mm<br>11.7"                  | 241mm<br>9.5"  | -<br>-<br>-<br>A9 B9 C9 D9 E9                                     | 0kN<br>0t                                | 260mm<br>10.2"<br>45mm<br>1.75" | 700 Bar<br>10.2K psi         | Str-Curve  | - 360°             | -  | -  | -<br>54   | *15Ah powerpack also available                 | genesisrescue.com |
| 898mm<br>35.4"  | 236mm<br>9.3"                   | 241mm<br>9.5"  | -<br>-<br>-<br>A8 B9 C7 D9 E9 F4                                  | 0kN<br>0t                                | 185mm<br>7.3"<br>38mm<br>1.5"   | 700 Bar<br>10.2K psi         | Str-Curve  | - 360°             | 4  | -  | -<br>54   | *15Ah powerpack also available                 | genesisrescue.com |
| 994mm<br>39.1"  | 260mm<br>10.2"                  | 241mm<br>9.5"  | -<br>-<br>-<br>A7 B8 C6 D8 E8 F5                                  | 0kN<br>0t                                | 210mm<br>8.3"<br>32mm<br>1.25"  | 700 Bar<br>10.2K psi         | Str-Curve  | - 360°             | 4  | -  | -<br>54   | *15Ah powerpack also available                 | genesisrescue.com |
| 743mm<br>29.3"  | 205mm<br>8"                     | 241mm<br>9.5"  | -<br>-<br>-<br>A4 B3 C5 D6 E6                                     | 0kN<br>0t                                | 120mm<br>7.3"<br>19mm<br>0.75"  | 700 Bar<br>10.2K psi         | Straight   | - 360°             | 4  | -  | -<br>54   | *15Ah powerpack also available                 | genesisrescue.com |
| 969mm<br>38.1"  | 236mm<br>9.3"                   | 241mm<br>9.5"  | K<br>CC205-K-25<br>1K 2K 3K 4K 5K<br>A9 B9 C9 D9 E9 F4            | 1765kN<br>198.4t                         | 205mm<br>8.1"<br>47mm<br>1.9"   | 720 Bar<br>10.4K psi         | Str-Curve  | - 360°             | 6  |               | <br>57<br>57 | Inclined blade angle. Stepless speed increase  | holmatro.com      |
| 892mm<br>35.1"  | 270mm<br>10.6"                  | 274mm<br>10.8" | K<br>BC165-K-21.5<br>1K 2K 3K 4K 5K<br>A8 B8 C7 D9 E9 F4          | 1389kN<br>156.2t                         | 182mm<br>7.2"<br>41mm<br>1.6"   | 720 Bar<br>10.4K psi         | Str-Curve  | - 360°             | 6  |               | <br>57<br>57 | Inclined blade angle. Stepless speed increase  | holmatro.com      |
| 832mm<br>32.8"  | 270mm<br>10.6"                  | 300mm<br>11.7" | I<br>BC165-I-19<br>1I 2I 3I 4I 5I<br>A7 B7 C6 D7 E8 F3            | 764kN<br>85.9t                           | 170mm<br>6.7"<br>36mm<br>1.4"   | 720 Bar<br>10.4K psi         | Str-Curve  | - 360°             | 6  |               | <br>57<br>57 | Inclined blade angle. Step less speed increase | holmatro.com      |
| 811mm<br>31.9"  | 270mm<br>10.6"                  | 288mm<br>10.8" | G<br>BC150-F-15.3<br>1H 2G 3G 4F 5G<br>A5 B5 C5 D6 E4 F3          | 0kN<br>0t                                | 170mm<br>6.7"<br>36mm<br>1.4"   | 720 Bar<br>10.4K psi         | Str-Curve  | - 360°             | 6  |               | <br>57<br>57 | Inclined blade angle. Step less speed increase | holmatro.com      |
| 554mm<br>21.8"  | 154mm<br>6.1"                   | 92mm<br>3.6"   | B<br>AC59-B-4.9<br>1D 2D 3C<br>A4 B3 C2 D4 E4                     | 220kN<br>24.7t                           | 59mm<br>2.3"<br>22mm<br>0.9"    | 720 Bar<br>10.4K psi         | Straight   | - 360°             | 1  | -  | 20<br>54  | Inclined blade angle. *Battery included        | holmatro.com      |
| 1025mm<br>40.4" | 281mm<br>11.1"                  | 269mm<br>10.6" | K<br>CC 200 K-26,2<br>1K-2K-3K-4K-5K<br>A9 B9 C9 D9 E9 F5         | 1310kN<br>147.25t                        | 204mm<br>8"<br>45mm<br>1.8"     | 700 Bar<br>10.1K psi         | Str-Curve  | - 360°             | 2  | -  | -<br>54   | DISCONTINUED                                   | jawsoflife.com    |

| IMAGES NOT TO SCALE<br>OTHER TOOLS IN RANGE:<br>■ = Combi ■ = Spreader ■ = Ram<br>■ = Special Tools<br>● = PARTIAL FEATURE<br>□ □ = Option<br>N/A = info Not Available/not given<br>Str-Curve= Straight section ahead of curve<br>■ = (cyan border) WiFi is present on the model 'variant' shown in cyan |   | MODEL<br>SERIES<br>VARIANT<br>Product Code<br>VOLTAGE | COMPANY  | TOOLS IN RANGE  | ORIGIN   | COST<br>inc tax / VAT | WEIGHT IN HAND<br>inc BATTERY(IES) | WEIGHT<br>DEFAULT BATTERY  | BATTERY<br>Ah<br>OPTIONS<br>TYPE | BATTERY<br>DURATION<br>RECHARGE<br>TIME |
|--|---|---|--|---|----------|-----------------------|------------------------------------|----------------------------|----------------------------------|---|
|   | S 799<br>E3connect<br>25.2V                   | HURST<br>(IDEX)                                       | <br><br>  | <br>  | N/A      | 26.5kg<br>58.3lb      | 1.6kg<br>3.5lb                     | Hurst<br>9Ah 5Ah<br>Li-ion | <60mins<br>150-100mins           |   |
|   | S 789<br>E3connect<br>25.2V                   | HURST<br>(IDEX)                                       |  | <br>  | N/A      | 24kg<br>52.8lb        | 1.6kg<br>3.5lb                     | Hurst<br>9Ah 5Ah<br>Li-ion | <60mins<br>150-100mins           |   |
|   | S 378<br>E3connect<br>25.2V                   | HURST<br>(IDEX)                                       |  | <br>  | \$11,240 | 20kg<br>44lb          | 1.6kg<br>3.5lb                     | Hurst<br>9Ah 5Ah<br>Li-ion | <60mins<br>150-100mins           |   |
|   | Cutter100<br>Underwater<br>CHCBM100<br>28V    | HYDRAM  | <br><br>   |    | N/A      | 27.8kg<br>61.2lb      | 00kg<br>00lb                       | 5Ah<br>Li-ion              | 00mins<br>66mins                 |   |
|    | Cutter150<br>Underwater<br>CHCBM150<br>28V    | HYDRAM  |  | <br><br> | N/A      | 28.3kg<br>62.3lb      | 00kg<br>00lb                       | 5Ah<br>Li-ion              | 00mins<br>66mins                 |   |
|   | Cable Cutter<br>Underwater<br>CHCBM100<br>28V | HYDRAM  |  |    | N/A      | 26.75kg<br>59lb       | 00kg<br>00lb                       | 5Ah<br>Li-ion              | 00mins<br>66mins                 |   |
|   | S 799-Beast<br>E2<br>25.2V                    | LUKAS<br>(IDEX)                                       | <br><br><br> | <br>  | N/A      | 26.5kg<br>58.3lb      | 1.2kg<br>2.7lb                     | Lukas<br>9Ah 5Ah<br>Li-ion | 30-60mins<br>75-150mins          |   |
|   | S 788<br>E2<br>25.2V                          | LUKAS<br>(IDEX)                                       |  | <br>  | N/A      | 23.8kg<br>52.4lb      | 1.6kg<br>3.5lb                     | Lukas<br>9Ah 5Ah<br>Li-ion | 30-60mins<br>75-150mins          |   |
|   | S 377<br>E2<br>25.2V                          | LUKAS<br>(IDEX)                                       |  | <br>  | N/A      | 20.5kg<br>45.1lb      | 1.2kg<br>2.7lb                     | Lukas<br>9Ah 5Ah<br>Li-ion | 30-60mins<br>75-150mins          |   |
|   | S 312<br>E2<br>25.2V                          | LUKAS<br>(IDEX)                                       |  | <br>  | N/A      | 20kg<br>44lb          | 1.2kg<br>2.7lb                     | Lukas<br>9Ah 5Ah<br>Li-ion | 30-60mins<br>75-150mins          |   |



| STORED LENGTH   | DIMENSIONS<br>WIDTH inc battery<br>DEPTH | CUT CLASSES<br>EN CLASSIFICATION<br>EN CUT CAPACITY<br>NFPA CLASS | THEORETICAL<br>CUT FORCE<br>t= US short ton               | CUT OPENING<br>ROUND<br>BAR | WORKING (HYDRAULIC)<br>PRESSURE | BLADE TYPE           | ROTATE HEAD/HANDLE | LED LIGHTS | WIFI / X-CAPABLE | IN-WATER-CAPABLE<br>TOOL/BATTERY IP | NOTES  | WWW.           |
|-----------------|--|---|---|-----------------------------|---------------------------------|----------------------|--------------------|------------|------------------|-------------------------------------|--|----------------|
| 963mm<br>37.9"  | 265mm<br>10.4"                           | 253mm<br>10"  | K<br>-<br>1K-2K-3K-4K-5K<br>A9 B9 C9 D9 E9 F5             | 1310kN<br>147.25t           | 204mm<br>8"<br>45mm<br>1.8"     | 700 Bar<br>10.1K psi | Str-Curve          | - 360°     | 2                | 68<br>58                            | 5Ah battery reduces length by 20mm   | jawsoflife.com |
| 939mm<br>37"    | 266mm<br>10.5"                           | 253mm<br>10"  | K<br>-<br>1K-2K-3K-4K-5K<br>A8 B9 C8 D9 E9 F5             | 1100kN<br>123.6t            | 205mm<br>8"<br>42mm<br>1.6"     | 700 Bar<br>10.1K psi | Str-Curve          | - 360°     | 2                | 68<br>58                            | 5Ah battery reduces length by 20mm   | jawsoflife.com |
| 880mm<br>34.6"  | 235mm<br>9.25"                           | 253mm<br>10"  | I<br>-<br>1I-2J-3K-4J-5J<br>A7 B8 C7 D8 E8 F4             | 760kN<br>85.4t              | 202mm<br>7.9"<br>33mm<br>1.3"   | 700 Bar<br>10.1K psi | Curve              | - 360°     | 2                | 68<br>58                            | 5Ah battery reduces length by 20mm   | jawsoflife.com |
| 820mm<br>00"    | 205mm<br>00"                             | 325mm<br>00"  | -   | 490kN<br>00t                | 00mm<br>00mm                    | 700 Bar<br>10.1K psi | Curve              | -          | 2*               | -                                   | Waterproof to 120.9m/398ft<br>*300-3000 lumen                                | hydram.com     |
| 850mm<br>00"    | 205mm<br>00"                             | 325mm<br>00"  | -   | 490kN<br>00t                | 00mm<br>00mm                    | 700 Bar<br>10.1K psi | Curve              | -          | 2*               | -                                   | Waterproof to 120.9m/398ft<br>*300-3000 lumen                                | hydram.com     |
| 815mm<br>00"    | 205mm<br>00"                             | 325mm<br>00"  | -   | 000kN<br>00t                | 20mm<br>15mm                    | 700 Bar<br>10.1K psi | Curve              | -          | 2*               | -                                   | MOVE to SPECIAL TOOLS GUIDE<br>Waterproof to 120.9m/398ft<br>*300-3000 lumen | hydram.com     |
| 1025mm<br>40.4" | 281mm<br>11.1"                           | 269mm<br>10.6"  | K<br>CC 200 K-26,2<br>1K-2K-3K-4K-5K<br>A9 B9 C9 D9 E9 F5 | 1376kN<br>155.7t            | 204mm<br>8"<br>45mm<br>1.8"     | 700 Bar<br>10.1K psi | Str-Curve          | - 360°     | 2                | -                                   | E2 range<br>DISCONTINUED   | lukas.com      |
| 1000mm<br>39.4" | 266mm<br>10.5"                           | 281mm<br>10.1"  | K<br>-<br>1K-2K-3K-4K-5K<br>A8 B9 C8 D9 E9 F4             | 1100kN<br>123.6t            | 200mm<br>7.7"<br>42mm<br>1.6"   | 700 Bar<br>10.1K psi | Curve              | - 360°     | 2                | -                                   | E2 range<br>DISCONTINUED   | lukas.com      |
| 934mm<br>36.8"  | 237mm<br>9.3"                            | 281mm<br>10.1"  | I<br>-<br>1I-2J-3I-4J-5J<br>A7 B8 C7 D7 E8                | 650kN<br>73t                | 206mm<br>8.1"<br>33mm<br>1.3"   | 700 Bar<br>10.1K psi | Curve              | - 360°     | 2                | -                                   | E2 range<br>DISCONTINUED   | lukas.com      |
| 917mm<br>36.1"  | 237mm<br>9.3"                            | 281mm<br>11.1"  | I<br>BC 160 I - 19,3<br>1I-2J-3I-4J-5J<br>A7 B8 C7 D7 E7  | 680kN<br>76.4t              | 160mm<br>6.3"<br>35mm<br>1.4"   | 700 Bar<br>10.1K psi | Curve              | - 360°     | 2                | -                                   | E2 range<br>DISCONTINUED   | lukas.com      |








| IMAGES NOT TO SCALE<br>OTHER TOOLS IN RANGE:<br> = Combi  = Spreader  = Ram<br> = Special Tools<br> = PARTIAL FEATURE<br> = Option<br>N/A = info Not Available/not given<br>Str-Curve= Straight section ahead of curve<br> = (cyan border) WiFi is present on the model variant shown in cyan |  | MODEL<br>SERIES<br>VARIANT<br>Product Code<br>VOLTAGE | COMPANY                   | TOOLS IN RANGE  | ORIGIN  | COST<br>inc tax / VAT | WEIGHT IN HAND<br>inc BATTERY(IES)  | WEIGHT<br>DEFAULT BATTERY          | BATTERY<br>Ah OPTIONS<br>TYPE                                  | BATTERY<br>DURATION<br>RECHARGE<br>TIME |
|--|--|---|---------------------------|---|---|-----------------------|-------------------------------------|------------------------------------|--|---|
|   |  | S 799<br>E3/E3connect<br>25.2V                        | LUKAS<br>(IDEX)           | <br><br>   |    | N/A                   | 26.5kg<br>58.3lb                    | 1.6kg<br>3.5lb                     | Lukas<br>9Ah 5Ah<br>Li-ion                                     | <60mins<br>150-100mins                  |
|   |  | S 789<br>E3/E3connect<br>25.2V                        | LUKAS<br>(IDEX)           | <br><br>   |    | N/A                   | 24kg<br>53lb                        | 1.6kg<br>3.5lb                     | Lukas<br>9Ah 5Ah<br>Li-ion                                     | <60mins<br>150-100mins                  |
|   |  | S 378<br>E3/<br>E3connect<br>25.2V                    | LUKAS<br>(IDEX)           | <br><br>   |    | N/A                   | 20kg<br>44lb                        | 1.6kg<br>3.5lb                     | Lukas<br>9Ah 5Ah<br>Li-ion                                     | <60mins<br>150-100mins                  |
|   |  | RP-C160<br>18v  | OGURA                     | <br><br>   |    | N/A                   | 14.7kg<br>32.4 lb                   | 1/<br>1.36kg<br>2.2-<br>3lb        | Makita<br>5/6Ah*<br>Li-ion                                     | <12mins<br>55-120mins                   |
|    |  | HRS931/<br>HRS-932<br>Shear Head<br>18v               | OGURA                     | <br><br>   |  | N/A                   | 3.9kg<br>8.6lb<br>+6.2kg<br>+13.7lb | 1/<br>1.36kg<br>2.2-<br>3lb        | Makita<br>5/6Ah*<br>Li-ion                                     | <12mins<br>55-120mins                   |
|   |  | HRS941/<br>HRS-932S<br>'Stubby' Shear<br>Head<br>18v  | OGURA                     | <br><br>   |  | N/A                   | 4.2kg<br>9.3lb<br>+5.7kg<br>+12.5lb | 1/<br>1.36kg<br>2.2-<br>3lb        | Makita<br>5/6Ah*<br>Li-ion                                     | <12mins<br>55-120mins                   |
|   |  | P16 Legacy<br>12v 16v LiGHT                           | POWERHAWK<br>TECHNOLOGIES | <br><br><br> |  | N/A                   | *21.4kg<br>47lb                     | *4.5kg<br>9.9lb<br>15.9kg<br>*35lb | Powerhawk<br>12.4Ah LiGHT<br>33Ah Li-ion<br>12v Lead Acid      | ?<br><120mins<br><15hr                  |
|   |  | P-16X<br>PowerBlade<br>1602L<br>7.5/12v               | POWERHAWK<br>TECHNOLOGIES | <br><br><br> |  | N/A                   | 22.1kg<br>48.7lb                    | 1.36kg<br>3lb                      | Powerhawk<br>7.5Ah Li-ion<br>or any 12v<br>Lead Acid<br>source | ?<br><120mins                           |
|   |  | P-16X<br>Shredder Blade<br>C1604<br>7.5/12v           | POWERHAWK<br>TECHNOLOGIES | <br><br><br> |  | N/A                   | 21.1kg<br>46.5lb                    | 1.36kg<br>3lb                      | Powerhawk<br>7.5Ah Li-ion<br>or any 12v<br>Lead Acid<br>source | ?<br><120mins                           |
|   |  | P-16X<br>Curved Blade<br>C-1601<br>7.5/12v            | POWERHAWK<br>TECHNOLOGIES | <br><br><br> |  | N/A                   | 21.6kg<br>47.5lb                    | 1.36kg<br>3lb                      | Powerhawk<br>7.5Ah Li-ion<br>or any 12v<br>Lead Acid<br>source | ?<br><120mins                           |
|   |  | P-16X<br>Hatchet Blade<br>C1603<br>7.5/12v            | POWERHAWK<br>TECHNOLOGIES | <br><br><br> |  | N/A                   | 20.5kg<br>45lb                      | 1.36kg<br>3lb                      | Powerhawk<br>7.5Ah Li-ion<br>or any 12v<br>Lead Acid<br>source | ?<br><120mins                           |

| STORED LENGTH                      | DIMENSIONS<br>WIDTH inc battery DEPTH |                                 | CUT CLASSES<br>EN CLASSIFICATION<br>EN CUT CAPACITY<br>NFA CLASS | THEORETICAL CUT FORCE<br>t= US short ton | CUT OPENING<br>ROUND BAR       | WORKING (HYDRAULIC) PRESSURE | BLADE TYPE | ROTATE HEAD/HANDLE | LED LIGHTS   | WIFI / CAPABLE  | IN-WATER-CAPABLE TOOL/BATTERY IP | NOTES   | WWW.                  |
|------------------------------------|---------------------------------------|---------------------------------|--|--|--------------------------------|------------------------------|------------|--------------------|--|---|----------------------------------|---|-----------------------|
| 963mm<br>37.4"                     | 265mm<br>10.4"                        | 253mm<br>10"                    | K<br>-<br>1K-2K-3K-4K-5K<br>A9 B9 C9 D9 E9 F5                    | 1376kN<br>155.7t                         | 204mm<br>8"<br>45mm<br>1.7"    | 700 Bar<br>10.1K psi         | Curve      | - 360°             | 2  |  | 68<br>58                         | All Can use IP68 battery.<br>EWXT Tools Discontinued  | lukas.com             |
| 939mm<br>37"                       | 266mm<br>10.5"                        | 253mm<br>10"                    | K<br>-<br>1K-2K-3K-4K-5K<br>A8 B9 C8 D9 E9 F5                    | 1100kN<br>123.6t                         | 205mm<br>8.1"<br>42mm<br>1.6"  | 700 Bar<br>10.1K psi         | Str-Curve  | - 360°             | 2  |  | 68<br>58                         | All Can use IP68 battery.<br>EWXT Tools Discontinued  | lukas.com             |
| 880mm<br>34.6"                     | 235mm<br>9.25"                        | 266mm<br>10.5"                  | I<br>-<br>1I-2J-3K-4J-5J<br>A7 B8 C7 D8 E8 F4                    | 760kN<br>85.4t                           | 202mm<br>8"<br>33mm<br>1.3"    | 700 Bar<br>10.1K psi         | Str-Curve  | - 360°             | 2  |  | 68<br>58                         |   | lukas.com             |
| 591mm<br>23.3"                     | 256mm<br>10.1"                        | 182mm<br>7.2"                   | -<br>-<br>1I 2D 3F 4F 5G   | 738kN<br>83t                             | 160mm<br>6.3"<br>32mm<br>1.26" | N/A                          | Str-Curve  | 360°/360°          |  | -   | -                                | *EU uses 5Ah, US tends to use 6Ah   | ogurarescuertools.com |
| 303mm<br>11.9"<br>+382mm<br>+15"   | 111mm<br>4.4"<br>186mm<br>7.3"        | 272mm<br>10.7"<br>104mm<br>4.1" | -<br>-<br>-  | 98kN<br>11t                              | 100mm<br>3.9"<br>32mm<br>1.26" | N/A                          | Curve      | 360°               | -  | -   | -                                | Heads swap out in seconds. Cutter, Spreader etc. attach via short hose or direct to the powerhead. 941 for US market.       | ogurarescuertools.com |
| 328mm<br>12.9"<br>+328mm<br>+12.9" | 111mm<br>4.4"<br>130mm<br>5.1"        | 273mm<br>10.7"<br>104mm<br>4.1" | -<br>-<br>-  | 78.4kN<br>8.8t                           | 26mm<br>1"<br>32mm<br>1.26"    | N/A                          | Curve      | 360°/270°          | -  | -   | -                                | All heads interchangeable between power units   | ogurarescuertools.com |
| 659mm<br>27"                       | 254mm<br>10"                          | 279mm<br>11"                    | -<br>-<br>A3 B6 C3 D5 E6   | 93.4 to 200kN<br>10.5-22.5t              | 250mm<br>10"<br>25mm<br>1"     | No Hydraulics                | Straight   | 70°/270°           | -  | -   | -                                | Original version. Only in support of existing purchases. Accepts all blades as per P-16X below<br>*Wt = battery+ controller | powerhawk.com         |
| 659mm<br>27"                       | 254mm<br>10"                          | 279mm<br>11"                    | -<br>-<br>PENDING  | 93.4 to 200kN<br>10.5-22.5t              | 250mm<br>10"<br>25mm<br>1"     | No Hydraulics                | Straight   | 70°/270°           | -  | -   | -                                |   | powerhawk.com         |
| 635mm<br>25"                       | 254mm<br>10"                          | 279mm<br>11"                    | -<br>-<br>PENDING  | >311T kN<br>35t                          | 108mm<br>4.25"<br>PENDING      | No Hydraulics                | Straight   | 70°/270°           | -  | -   | -                                | interchangeable Cutter, spreader and combi heads.   | powerhawk.com         |
| 610mm<br>24"                       | 254mm<br>10"                          | 279mm<br>11"                    | -<br>-<br>PENDING  | 133.4T kN<br>15t                         | 125mm<br>5"<br>PENDING         | No Hydraulics                | Straight   | 70°/270°           | -  | -   | -                                | *Both P16&P16X can use a regular 12v car battery or any 12v power source with relevant adapter.                             | powerhawk.com         |
| 559mm<br>22"                       | 254mm<br>10"                          | 279mm<br>11"                    | -<br>-<br>PENDING  | 200.2kN<br>22.5t                         | 76mm<br>3"<br>PENDING          | No Hydraulics                | Straight   | 70°/270°           | -  | -   | -                                |   | powerhawk.com         |



| IMAGES NOT TO SCALE<br>OTHER TOOLS IN RANGE:<br> = Combi  = Spreader  = Ram<br> = Special Tools<br> = PARTIAL FEATURE<br> = Option<br>N/A = info Not Available/not given<br>Str-Curve= Straight section ahead of curve<br> (cyan border) W= is present on the model variant shown |  | MODEL<br>SERIES<br>VARIANT<br>Product Code<br>VOLTAGE | COMPANY    | TOOLS IN RANGE  | ORIGIN  | COST<br>inc tax / VAT | WEIGHT IN HAND<br>inc BATTERY(IES)     | WEIGHT<br>DEFAULT BATTERY        | BATTERY<br>Ah <b>OPTIONS</b><br>TYPE                         | BATTERY<br>DURATION<br>RECHARGE<br>TIME |
|--|--|---|------------|---|---|-----------------------|--|----------------------------------|--|---|
|   |  | P-4W<br>EDD<br>43.2V                                  | RESQTEC    |    |    | N/A                   | 20.6kg<br>45.3lb                       | 1kg<br>2.2lb                     | Resqtec<br>2.6Ah<br>Li-ion                                   | <45mins<br>60mins                       |
|   |  | G4W<br>EDD<br>43.2V                                   | RESQTEC    |    |    | N/A                   | 15.9kg<br>6lb                          | 1kg<br>2.2lb                     | Resqtec<br>2.6Ah<br>Li-ion                                   | <45mins<br>60mins*                      |
|   |  | G6C<br>EDD<br>43.2V                                   | RESQTEC    |    |    | N/A                   | 20.3kg<br>44.8lb                       | 1kg<br>2.2lb                     | Resqtec<br>2.6Ah<br>Li-ion                                   | <45mins<br>60mins*                      |
|   |  | G6W<br>EDD<br>43.2V                                   | RESQTEC    |    |    | N/A                   | 20kg<br>44lb                           | 1kg<br>2.2lb                     | Resqtec<br>2.6Ah<br>Li-ion                                   | <45mins<br>60mins*                      |
|    |  | Cutter SC<br>28v                                      | SCORPE     |   |   | N/A                   | 18.9kg<br>41.6lb                       | 1kg<br>2.2lb                     | Milwaukee<br>5Ah M28<br>Li-ion                               | <45mins<br>90mins                       |
|   |  | Cutter MC<br>28v                                      | SCORPE     |  |  | N/A                   | 21.6kg<br>47.5lb                       | 1kg<br>2.2lb                     | Milwaukee<br>5Ah M28<br>Li-ion                               | <45mins<br>90mins                       |
|   |  | ESLC-29<br>Storm Surge<br>18V/20v                     | TNT RESCUE |  |  | N/A                   | 24.4kg<br>53.75lb<br>24.76kg<br>54.6lb | 1.1kg<br>2.4lb<br>0.6kg<br>1.3lb | Milwaukee<br>8/9Ah M18<br>DeWalt<br>9Ah FlexVolt20<br>Li-ion | 87mins<br>10-15mins<br>60mins           |
|   |  | EBFC-320<br>Storm Surge<br>18V/20v                    | TNT RESCUE |  |  | N/A                   | 28.8kg<br>63.6lb<br>29kg<br>63.9lb     | 1.1kg<br>2.4lb<br>0.6kg<br>1.3lb | Milwaukee<br>8/9Ah M18<br>DeWalt<br>9Ah FlexVolt20<br>Li-ion | 87mins<br>10-15mins<br>60mins           |
|   |  | ESLC-24D<br>Storm2<br>28v                             | TNT RESCUE |  |  | N/A                   | 21.5kg<br>47.5lb                       | 2x<br>1kg<br>2.2lb               | Milwaukee<br>2x 5Ah M28<br>Li-ion                            | <90mins<br>60mins                       |
|   |  | ESLC-27D<br>Storm2<br>28v                             | TNT RESCUE |  |  | N/A                   | 22.5kg<br>49.7lb                       | 2x<br>1kg<br>2.2lb               | Milwaukee<br>2x 5Ah M28<br>Li-ion                            | <90mins<br>60mins                       |
|   |  | ESLC-29D<br>Storm2<br>28v                             | TNT RESCUE |  |  | N/A                   | 24.4kg<br>53.8lb                       | 2x<br>1kg<br>2.2lb               | Milwaukee<br>2x 5Ah M28<br>Li-ion                            | <90mins<br>60mins                       |
|   |  | EBFC-320D<br>Storm2<br>28v                            | TNT RESCUE |  |  | N/A                   | 28.6kg<br>63.1lb                       | 2x<br>1kg<br>2.2lb               | Milwaukee<br>2x 5Ah M28<br>Li-ion                            | <90mins<br>60mins                       |







| STORED LENGTH    | DIMENSIONS<br>WIDTH inc battery | DEPTH          | CUT CLASSES<br>EN CLASSIFICATION<br>EN CUT CAPACITY<br>NFPA CLASS | THEORETICAL CUT FORCE<br>t= US short ton | CUT OPENING<br>ROUND BAR         | WORKING (HYDRAULIC) PRESSURE | BLADE TYPE | ROTATE HEAD/HANDLE | LED LIGHTS | WiFi / CAPABLE | IN-WATER-CAPABLE TOOL/BATTERY IP | NOTES  | WWW.               |
|------------------|---------------------------------|----------------|---|--|----------------------------------|------------------------------|------------|--------------------|------------|----------------|----------------------------------|--|--------------------|
| 705mm<br>27.75"  | 271mm<br>10.7"                  | 274mm<br>10.8" | E<br>BC153E-20.6<br>1G 2E 3F 4F 5H<br>A6 B5 C5 D6 E6              | 506kN<br>56.9t                           | 153mm<br>6"<br>26mm<br>1"        | No Hydraulics                | Straight   | 61° -              | □          | -              | - 54                             | 3x interchangeable heads/blades. Rear handle option. *Also 28Ah powerpack. Jaw recess (reach)= 118mm | rescue.resqtec.com |
| 767mm<br>30.2"   | 236mm<br>9.3"                   | 228mm<br>9"    | F<br>BC156F-15.9<br>1H 2F 3G 4F 5G<br>A6 B6 C6 D7 E6              | 554kN<br>62.3t                           | 156mm<br>6.1"<br>30mm<br>1.2"    | N/A                          | Curve      | - 360°             | □          | -              | - 54                             | *Also 28Ah powerpack. Jaw recess (reach) = 128mm. *Charger has been enhanced from pt1                | rescue.resqtec.com |
| 868mm<br>34.2"   | 251mm<br>9.9"                   | 235mm<br>9.25" | H<br>CC200H-20.3<br>1I 2J 3H 4H 5J<br>A6 B7 C6 D7 E7              | 1102kN<br>124t                           | 203mm<br>8"<br>34mm<br>1.3"      | N/A                          | Curve      | - 360°             | □          | -              | - 54                             | *Also 28Ah powerpack. Jaw recess (Reach) =150mm. *Charger has been enhanced from pt1                 | rescue.resqtec.com |
| 854mm<br>33.6"   | 268mm<br>10.5"                  | 235mm<br>9.25" | H<br>BC185H-19.9<br>1I 2J 3H 4J 5J<br>A6 B7 C6 D7 E9              | 1052kN<br>118t                           | 185mm<br>7.3"<br>34mm<br>1.3"    | N/A                          | Curve      | - 360°             | □          | -              | - 54                             | *Also 10Ah powerpack. Jaw recess (Reach) = 150mm *Charger has been enhanced from pt1                 | rescue.resqtec.com |
| 925mm<br>36.4"   | 222mm<br>8.7"                   | 248mm<br>9.8"  | G<br>BC/160-G-18.9<br>-<br>-                                      | 493kN<br>55.4t                           | 160mm<br>6.3"<br>32mm<br>1.26"   | 700 Bar<br>10.2K psi         | Curve      | - 360°             | 4          | -              | - 54                             |  | scorpe.net         |
| 944mm<br>37.2"   | 232mm<br>9.1"                   | 248mm<br>9.8"  | I<br>BC-185-I-21.6<br>-<br>-                                      | 781kN<br>87.8t                           | 180mm<br>7.1"<br>35mm<br>1.4"    | 700bar<br>10.2K psi          | Curve      | - 360°             | 4          | -              | - 54                             |  | scorpe.net         |
| 838mm<br>33"     | 267mm<br>10.5"                  | 297mm<br>11.7" | -<br>-<br>-<br>A8 B9 C9 D9 E9 F5                                  | 1256.4kN<br>141.2t                       | 178mm<br>7"<br>38mm<br>1.5"      | 722 Bar<br>10.5K psi         | Curve      | -                  | 4          | -              | - 54                             | TNT prices include 2 batteries and Dual Rapid charger. Cut Reach 129mm/ 5"                           | tntrescue.com      |
| 909.7mm<br>35.8" | 267mm<br>10.5"                  | 300mm<br>11.8" | -<br>-<br>-<br>A9 B9 C9 D9 E9 F6                                  | 1424kN<br>160t                           | 257mm<br>10.12"<br>45mm<br>1.75" | 722 Bar<br>10.5K psi         | Curve      | -                  | 4          | -              | - 54                             | TNT prices include 2 batteries and Dual Rapid charger. 5.5" cut reach                                | tntrescue.com      |
| 798mm<br>31.4"   | 267mm<br>10.5"                  | 241mm<br>9.5"  | -<br>-<br>-<br>A6 B5 C7 D7 E6                                     | 528.4kN<br>59.4t                         | 127mm<br>5"<br>0mm<br>0"         | 722 Bar<br>10.5K psi         | Curve      | -                  | 2          | -              | - 54                             | ALL Spec is for 2 batteries but Can operate on one. Cut Reach 82.4mm/ 3.24"                          | tntrescue.com      |
| 815mm<br>32.1"   | 267mm<br>10.5"                  | 241mm<br>9.5"  | -<br>-<br>-<br>A6 B7 C7 D7 E7                                     | 528.4kN<br>59.4t                         | 193mm<br>7.6"<br>0mm<br>0"       | 722 Bar<br>10.5K psi         | Curve      | -                  | 2          | -              | - 54                             | ALL Spec is for 2 batteries but Can operate on one. Cut Reach 100.6mm/ 3.96"                         | tntrescue.com      |
| 826mm<br>32.5"   | 267mm<br>10.5"                  | 241mm<br>9.5"  | -<br>-<br>-<br>A8 B9 C9 D9 E9 F4                                  | 1256.4kN<br>141.2t                       | 177.8mm<br>8"<br>38mm<br>1.5"    | 722 Bar<br>10.5K psi         | Curve      | -                  | 2          | -              | - 54                             | ALL Spec is for 2 batteries but Can operate on one. Cut Reach 129mm/ 5"                              | tntrescue.com      |
| 879mm<br>34.6"   | 273mm*<br>10.75"                | 178mm<br>7"    | -<br>-<br>-<br>A9 B9 C9 D9 E9 F6                                  | 1424kN<br>160t                           | 228.6mm<br>8.6"<br>45mm<br>1.75" | 722 Bar<br>10.5K psi         | Curve      | -                  | 2          | -              | - 54                             | ALL Spec is for 2 batteries but Can operate on one. Cut Reach 140.4mm/ 5.53"                         | tntrescue.com      |

IMAGES NOT TO SCALE  
OTHER TOOLS IN RANGE:  
 = Combi  = Spreader  = Ram  
 = Special Tools  
 = PARTIAL FEATURE  
 = Option  
N/A = info Not Available/not given  
Str-Curve= Straight section ahead of curve  
 (cyan border) WiFi is present on the model variant shown in cyan

|   | MODEL<br>SERIES<br>VARIANT<br>Product Code<br>VOLTAGE   | COMPANY                       | TOOLS IN RANGE   | ORIGIN  | COST<br>inc tax / VAT | WEIGHT IN HAND<br>inc BATTERY(IES) | WEIGHT<br>DEFAULT BATTERY | BATTERY<br>Ah OPTIONS<br>TYPE          | BATTERY<br>DURATION<br>RECHARGE<br>TIME |
|---|---|-------------------------------|--|---|-----------------------|------------------------------------|---------------------------|--|---|
|    | <b>RSC 170</b><br><b>E-Force3</b><br>1102148<br>28V     | <b>WEBER</b><br><b>RESCUE</b> |  |    | N/A                   | 18.1kg<br>39.8lb                   | 1kg<br>2.2lb              | Milwaukee<br>5Ah M28<br>Li-ion         | <45-80mins<br>60mins                    |
|    | <b>RSC170+</b><br><b>E-Force3</b><br>1102149<br>28V     | <b>WEBER</b><br><b>RESCUE</b> |  |    | N/A                   | 19.2kg<br>42.2lb                   | 1kg<br>2.2lb              | Milwaukee<br>5Ah M28<br>Li-ion         | <45-80min<br>60mins                     |
|    | <b>RSC 190</b><br><b>E-Force3</b><br>1102150/<br>28V    | <b>WEBER</b><br><b>RESCUE</b> |  |    | N/A                   | 20.6kg<br>45.3lb                   | 1kg<br>2.2lb              | Milwaukee<br>5Ah M28<br>Li-ion         | <45-80mins<br>60mins                    |
|    | <b>RSC 190+</b><br><b>E-Force3</b><br>1102150<br>28V    | <b>WEBER</b><br><b>RESCUE</b> |  |    | N/A                   | 21kg<br>46.2lb                     | 1kg<br>2.2lb              | Milwaukee<br>5Ah M28<br>Li-ion         | <45-80min<br>60mins                     |
|   | <b>RSC200</b><br><b>E-Force3</b><br>1102152<br>28V      | <b>WEBER</b><br><b>RESCUE</b> |  |   | N/A                   | 24.8kg<br>54.6lb                   | 1kg<br>2.2lb              | Milwaukee<br>5Ah M28<br>Li-ion         | <45-80mins<br>60mins                    |
|  | <b>RSC F7</b><br><b>E-Force3</b><br>1102153<br>28V      | <b>WEBER</b><br><b>RESCUE</b> |  |  | N/A                   | 26.9kg<br>59.1lb                   | 1kg<br>2.2lb              | Milwaukee<br>5Ah M28<br>Li-ion         | <45-80min<br>60mins                     |
|  | <b>RSC 170</b><br><b>Smart-Force</b><br>1101547<br>28V  | <b>WEBER</b><br><b>RESCUE</b> |  |  | N/A                   | 19.1kg<br>42lb                     | 1.1kg<br>2.33lb           | Milwaukee<br>8Ah/12Ah<br>M18<br>Li-ion | 60/90mins<br>45-83mins                  |
|  | <b>RSC170+</b><br><b>Smart-Force</b><br>1101548<br>28V  | <b>WEBER</b><br><b>RESCUE</b> |  |  | N/A                   | 20.1kg<br>44.2lb                   | 1.1kg<br>2.33lb           | Milwaukee<br>8Ah/12Ah<br>M18<br>Li-ion | 60/90mins<br>45-83mins                  |
|  | <b>RSC 190</b><br><b>Smart-Force</b><br>1101549<br>28V  | <b>WEBER</b><br><b>RESCUE</b> |  |  | N/A                   | 21.7kg<br>47.7lb                   | 1.1kg<br>2.33lb           | Milwaukee<br>8Ah/12Ah<br>M18<br>Li-ion | 60/90mins<br>45-83mins                  |
|  | <b>RSC 190+</b><br><b>Smart-Force</b><br>1101550<br>28V | <b>WEBER</b><br><b>RESCUE</b> |  |  | N/A                   | 22.8kg<br>50.1lb                   | 1.1kg<br>2.33lb           | Milwaukee<br>8Ah/12Ah<br>M18<br>Li-ion | 60/90mins<br>45-83mins                  |
|  | <b>RSC200</b><br><b>Smart-Force</b><br>1101551<br>28V   | <b>WEBER</b><br><b>RESCUE</b> |  |  | N/A                   | 25.7kg<br>56.5lb                   | 1.1kg<br>2.33lb           | Milwaukee<br>8Ah/12Ah<br>M18<br>Li-ion | 60/90mins<br>45-83mins                  |
|  | <b>RSC F7</b><br><b>Smart-Force</b><br>1101553<br>28V   | <b>WEBER</b><br><b>RESCUE</b> |  |  | N/A                   | 27.7kg<br>60.9lb                   | 1.1kg<br>2.33lb           | Milwaukee<br>8Ah/12Ah<br>M18<br>Li-ion | 60/90mins<br>45-83mins                  |





















| STORED LENGTH   | DIMENSIONS<br>WIDTH inc battery<br>DEPTH | CUT CLASSES<br>EN CLASSIFICATION<br>EN CUT CAPACITY<br>NFPA CLASS | THEORETICAL<br>CUT FORCE<br>t= US short ton                | CUT OPENING<br>ROUND<br>BAR | WORKING (HYDRAULIC) PRESSURE     | BLADE TYPE           | ROTATE HEAD/HANDLE  | LED LIGHTS | WIFI / CAPABLE | IN-WATER-CAPABLE TOOL/BATTERY IP | NOTES  | WWW.      |
|-----------------|--|---|--|-----------------------------|----------------------------------|----------------------|---------------------|------------|----------------|----------------------------------|--|-----------|
| 889mm<br>35"    | 236mm<br>9.3"                            | 241mm<br>9.5"   | I<br>BC166I-18.1<br>1J 2K 3I 4J 5J<br>A7 B8 C6 D8 E9 F4    | N/A                         | 175mm<br>6.9"<br>32mm<br>1.25"   | 700 Bar<br>10.2K psi | Str-Curve<br>- 360° | 4          | -              | - 54                             | All E-Force tools can convert to hose  | weber.com |
| 889mm<br>35"    | 236mm<br>9.3"                            | 241mm<br>9.5"   | I<br>BC166I-19,2<br>1J 2K 3I 4J 5J<br>A7 B8 C6 D8 E9 F4    | N/A                         | 175mm<br>6.9"<br>32mm<br>1.25"   | 700 Bar<br>10.2K psi | Str-Curve<br>- 360° | 4          | -              | - 54                             | All E-Force tools can convert to hose. Plus version has enhanced blade inserts | weber.com |
| 920mm<br>00"    | 236mm<br>9.3"                            | 241mm<br>9.5"   | K<br>BC187K-20,6<br>1K 2K 3K 4K 5K<br>A8 B9 C7 D9 E9 F4    | N/A                         | 185mm<br>7.3"<br>38.1mm*<br>1.5" | 700 Bar<br>10.2K psi | Str-Curve<br>- 360° | 4          | -              | - 54                             | All E-Force tools can convert to hose  | weber.com |
| 969mm<br>36.2"  | 236mm<br>9.3"                            | 241mm<br>9.5"   | K<br>BC187K-20,6<br>1K 2K 3K 4K 5K<br>A8 B9 C7 D9 E9 F4    | N/A                         | 187mm<br>7.4"<br>38.1mm*<br>1.5" | 700 Bar<br>10.2K psi | Str-Curve<br>- 360° | 4          | -              | - 54                             | All E-Force tools can convert to hose. Plus version has enhanced blade inserts | weber.com |
| 987mm<br>38.9"  | 300mm<br>11.8"                           | 241mm<br>9.5"   | K<br>CC201K-24.8<br>1K 2K 3K 4K 5K<br>A9 B9 C9 D9 E9 F5    | N/A                         | 200mm<br>7.8"<br>45mm<br>1.75"   | 700 Bar<br>10.2K psi | Str-Curve<br>- 360° | 4          | -              | - 54                             | All E-Force tools can convert to hose  | weber.com |
| 1049mm<br>41.3" | 295mm<br>11.6"                           | 241mm<br>9.5"   | K<br>CC268K-26.9<br>1K 2K 3K 4K 5K<br>A9 B9 C9 D9 E9 F7    | N/A                         | 300mm<br>11.8"<br>45mm<br>1.75"  | 700 Bar<br>10.2K psi | Str-Curve<br>- 360° | 4          | -              | - 54                             | All E-Force tools can convert to hose  | weber.com |
| 889mm<br>35"    | 236mm<br>9.3"                            | 228mm<br>9"   | I<br>BC166I-18.1<br>1J 2K 3I 4J 5J<br>A7 B8 C6 D8 E9 F4    | N/A                         | 175mm<br>6.9"<br>32mm<br>1.25"   | 700 Bar<br>10.2K psi | Str-Curve<br>- 360° | 4          | ■              | 68<br>68                         | All E-Force tools can convert to hose  | weber.com |
| 889mm<br>35"    | 236mm<br>9.3"                            | 228mm<br>9"   | I<br>BC166I-19,2<br>1J 2K 3I 4J 5J<br>A7 B8 C6 D8 E9 F4    | N/A                         | 175mm<br>6.9"<br>32mm<br>1.25"   | 700 Bar<br>10.2K psi | Str-Curve<br>- 360° | 4          | ■              | 68<br>68                         | All E-Force tools can convert to hose. Plus version has enhanced blade inserts | weber.com |
| 936mm<br>36.8"  | 236mm<br>9.3"                            | 228mm<br>9"   | K<br>BC187K-21,7<br>1K 2K 3K 4K 5K<br>A8 B9 C7 D9 E9 F4    | N/A                         | 185mm<br>7.3"<br>38.1mm*<br>1.5" | 700 Bar<br>10.2K psi | Str-Curve<br>- 360° | 4          | ■              | 68<br>68                         | All E-Force tools can convert to hose  | weber.com |
| 936mm<br>36.8"  | 236mm<br>9.3"                            | 228mm<br>9"   | K<br>BC187K-22.8<br>1K 2K 3K 4K 5K<br>A8 B9 C7 D9 E9 F4    | N/A                         | 187mm<br>7.4"<br>38.1mm*<br>1.5" | 700 Bar<br>10.2K psi | Str-Curve<br>- 360° | 4          | ■              | 68<br>68                         | All E-Force tools can convert to hose, Plus version has enhanced blade inserts | weber.com |
| 1003mm<br>39.5" | 297mm<br>11.7"                           | 228mm<br>9"   | K<br>CC201K-25.7<br>1K 2K 3K 4K 5K<br>A9 B9 C9 D9 E9 F5 F3 | N/A                         | 200mm<br>7.8"<br>45mm<br>1.75"   | 700 Bar<br>10.2K psi | Str-Curve<br>- 360° | 4          | ■              | 68<br>68                         | All E-Force tools can convert to hose  | weber.com |
| 1064mm<br>41.9" | 297mm<br>11.7"                           | 241mm<br>9.5"   | K<br>CC268K-27.7<br>1K 2K 3K 4K 5K<br>A9 B9 C9 D9 E9 F7    | N/A                         | 300mm<br>11.8"<br>45mm<br>1.75"  | 700 Bar<br>10.2K psi | Str-Curve<br>- 360° | 4          | ■              | 68<br>68                         | All E-Force tools can convert to hose  | weber.com |







|   |   |   |  |  |   |   |
|---|---|---|--|--|---|---|
| <p>IMAGES NOT TO SCALE</p> <p>OTHER TOOLS IN RANGE:</p> <ul style="list-style-type: none"> <li>■ = BATTERY TOOLS</li> <li>■ = Combi</li> <li>■ = Spreader</li> <li>■ = Ram</li> <li>■ = Special Tools</li> </ul> <p>● = PARTIAL or OK but not ideal</p> <p>□ = Option</p> <p>N/A = info Not Available/not given</p> |  |  |  |   |  |  |
| <b>SERIES MODEL VARIANT</b><br>Product Code   | F180  | C165  | SC198-SL3  | SC198-SL3<br>NextGen   | C195<br>Next Gen  | SC240-SL3   |
| <b>COMPANY</b>  | EDILGRAPPA  | GENESIS<br>RESCUE   | GENESIS<br>RESCUE  | GENESIS<br>RESCUE  | GENESIS<br>RESCUE   | GENESIS<br>RESCUE   |
| <b>TOOLS IN RANGE</b>   | ■ ■ ■ ■ ■   | ■ ■ ■ ■ ■   |  |  |   |   |
| <b>ORIGIN</b>   | ■ ■ ■   | ■ ■ ■   | ■ ■ ■  | ■ ■ ■  | ■ ■ ■   | ■ ■ ■   |
| <b>COST</b><br>inc tax / VAT  | N/A   | N/A   | N/A  | N/A  | N/A   | N/A   |
| <b>WEIGHT (exc hose)</b>  | 19.5kg<br>43lb  | 16.3kg<br>36lb  | 14.3kg<br>31.5lb   | 15.4kg<br>33.9lb   | 16.9kg<br>37.25lb   | 16.9kg<br>37.25lb   |
| <b>LENGTH</b>   | 774mm<br>30.5"  | 711mm<br>28"  | 727mm<br>28.6"   | 732mm<br>28.8"   | 736mm<br>28.9"  | 758mm<br>29.8"  |
| <b>WIDTH</b>  | 264mm<br>10.4"  | 225mm<br>8.9"   | 236mm<br>9.3"  | 236mm<br>9.3"  | 212mm<br>8.3"   | 236mm<br>9.3"   |
| <b>DEPTH</b>  | 186mm<br>7.3"   | 202mm<br>8"   | 164mm<br>6.5"  | 164mm<br>6.5"  | 212mm<br>8.3"   | 164mm<br>6.5"   |
| <b>CUT</b><br>EN CLASS<br>EN CUT CLASSIFICATION<br>NFPA CLASS   | K<br>BC181-K-19.5<br>-<br>-   | -<br>-<br>-<br>A8 B6 C6 D7 E9   | -<br>-<br>-<br>A7 B8 C6 D8 E9 F4   | -<br>-<br>-<br>A7 B8 C6 D8 E9 F4   | -<br>-<br>-<br>A8 B9 C7 D9 E9   | -<br>-<br>-<br>A8 B9 C7 D9 E9   |
| <b>THEORETICAL CUT FORCE</b><br>t= US short ton   | 941kN<br>105.8USton   | N/A   | N/A  | N/A  | N/A   | N/A   |
| <b>CUTTER OPENING</b><br>ROUND BAR  | 181mm<br>7.1"<br>32mm<br>1.25"  | 150mm<br>5.9"<br>25mm<br>1"   | 175mm<br>6.9"<br>32mm<br>1.25"   | 175mm<br>6.9"<br>32mm<br>1.25"   | 180mm<br>7.1"<br>35mm<br>1.5"   | 187mm<br>7.4"<br>38.1mm*<br>1.5"  |
| <b>WORKING PRESSURE</b>   | 700Bar / 10.2Kpsi   | 700Bar / 10.2Kpsi   | 700Bar / 10.2Kpsi  | 700Bar / 10.2Kpsi  | 700Bar / 10.2Kpsi   | 700Bar / 10.2Kpsi   |
| <b>ROTATE HEAD/HANDLE</b>   | - -   | - -   | - 360°   | - 360°   | - -   | - 360°  |
| <b>LED LIGHTS</b>   | -   | -   | -  | -  | -   | -   |
| <b>OPERATING TEMP</b>   | ?   | ?   | ?  | ?  | ?   | ?   |
| <b>IN-WATER-CAPABLE</b> IP#   | ??  | ■ 68  | ■ 68   | ■ 68   | ■ 68  | ■ 68  |
| <b>NOTES</b>  |   |   | All Genesis battery tools can convert to hose and vice-versa                       | NextGen version has detachable blade inserts for boron/UHSS. All Genesis battery tools can convert to hose and vice-versa. | NextGen version has detachable blade inserts for boron/UHSS.                        | All Genesis battery tools can convert to hose and vice-versa.                       |
| <b>WEBSITE</b>  | edilgrappa.com  | genesissrescue.com  | genesissrescue.com   | genesissrescue.com   | genesissrescue.com  | genesissrescue.com  |

|   |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|
|     |   |       |       |       |      |       |  |
| 3   | SC240-SL3<br>NextGen   | C236-SL2<br>Next Gen   | SC385-SL3  | C365   | All-9  | F7-SL3   |  |
| S<br>E  | GENESIS<br>RESCUE  | GENESIS<br>RESCUE  | GENESIS<br>RESCUE  | GENESIS<br>RESCUE  | GENESIS<br>RESCUE  | GENESIS<br>RESCUE  |  |
|  |  |  |  |  |  |  |  |
|   |   |       |       |       |      |       |  |
|   | N/A  | N/A  | N/A  | N/A  | N/A  | N/A  |  |
|   | 18kg<br>39.7b  | 19.6kg<br>43.2lb   | 21kg<br>46.3lb   | 22kg<br>48.5lb   | 22.5kg<br>49.6lb   | 23.3kg<br>51.7lb   |  |
|   | 758mm<br>29.8"   | 833mm<br>33"   | 827mm<br>32.6"   | 811mm<br>31.9"   | 855mm<br>33.7"   | 886mm<br>34.9"   |  |
|   | 236mm<br>9.3"  | 260mm<br>10.2"   | 300mm<br>11.8"   | 298mm<br>11.7"   | 298mm<br>11.7"   | 295mm<br>11.6"   |  |
|   | 164mm<br>6.5"  | 221mm<br>8.7"  | 177mm<br>7"  | 221mm<br>8.7"  | 223mm<br>8.8"  | 179mm<br>7.1"  |  |
|   | -<br>-<br>-  | -<br>-<br>-  | -<br>-<br>-  | -<br>-<br>-  | -<br>-<br>-  | -<br>-<br>-  |  |
| E9 F4   | A8 B9 C7 D9 E9 F4  | A8 B9 C8 D9 E9   | A9 B9 C9 D9 E9 F5  | A8 B9 C8 D9 E9   | A9 B9 C9 D9 E9   | A9 B9 C9 D9 E9 F7  |  |
|   | N/A  | N/A  | N/A  | N/A  | N/A  | N/A  |  |
|   | 187mm<br>7.4"<br>38.1mm*<br>1.5"   | 210mm<br>8.2"<br>45mm<br>1.75"   | 202mm<br>7.8"<br>45mm<br>1.75"   | 170mm<br>6.7"<br>30mm<br>1.25"   | 180mm<br>7.1"<br>35mm<br>1.5"  | 300mm<br>11.8"<br>45mm<br>1.75"  |  |
| 2Kpsi   | 700Bar / 10.2Kpsi  | 700Bar / 10.2Kpsi  | 700Bar / 10.2Kpsi  | 700Bar / 10.2Kpsi  | 700Bar / 10.2Kpsi  | 700Bar / 10.2Kpsi  |  |
|   | - 360°   | --   | - 360°   | --   | --   | - 360°   |  |
|   | -  | -  | -  |     |    | -  |  |
|   | ?  | ?  | ?  | ?  | ?  | ?  |  |
|   |  68   |  68 |  68 |  68 |  68 |  68 |  |
| attery<br>vert to<br>versa  | NextGen version<br>has detachable<br>blade inserts for<br>boron/UHSS. All<br>Genesis battery<br>tools can convert to<br>hose and vice-versa. | NextGen version<br>has detachable<br>blade inserts for<br>boron/UHSS.                  | All Genesis battery<br>tools can convert to<br>hose and vice-versa.                    |  |  | All Genesis battery<br>tools can convert to<br>hose and vice-versa                       |  |
| .com  | genesisrescue.com  | genesisrescue.com  | genesisrescue.com  | genesisrescue.com  | genesisrescue.com  | genesisrescue.com  |  |















|  |  |   |   |   |   |   |   |
|--|--|---|---|---|---|---|---|
| <div>IMAGES NOT TO SCALE</div> <div>OTHER TOOLS IN RANGE:</div> <div><div></div>=BATTERY TOOLS</div> <div><div></div>=Combi</div> <div><div></div>=Spreader</div> <div><div></div>=Ram</div> <div><div></div>=Special Tools</div> <div><div></div><div></div>= PARTIAL or OK but not ideal</div> <div><div></div><div></div>= Option</div> <div>N/A = info Not Available/not given</div> |  |   |   |   |   |   |   |
|  | <div>SERIES MODEL VARIANT</div> <div>Product Code</div>                            | CORE<br>CU5030  | CORE<br>CU5030i CL  | CORE<br>CU5040  | CORE<br>CU5040i CL  | CORE<br>CU5050  | CORE<br>CU5050i   |
|  | COMPANY  | HOLMATRO  | HOLMATRO  | HOLMATRO  | HOLMATRO  | HOLMATRO  | HOLMATRO  |
|  | TOOLS IN RANGE   | <div><div></div><div></div><div></div><div></div><div></div><div></div></div>     |   |   |   |   |   |
|  | ORIGIN   |  |  |  |  |  |  |
| COST<br>inc tax / VAT  | N/A  | N/A   | N/A   | N/A   | N/A   | N/A   |   |
| WEIGHT (exc hose)  | 9.5kg<br>20.9lb  | 9.5kg<br>20.9lb   | 13.1kg<br>28.9lb  | 13.2kg<br>29.1b   | 15.7kg<br>34.6lb  | 15.9kg<br>35.1lb  |   |
| LENGTH   | 674mm<br>26.5"   | 685mm<br>27"  | 692mm<br>27.2"  | 706mm<br>27.8"  | 752mm<br>29.6"  | 762mm<br>30"  |   |
| WIDTH  | 270mm<br>10.6"   | 275mm<br>10.8"  | 271mm<br>10.7"  | 300mm<br>11.8"  | 278mm<br>10.9"  | 306mm<br>12"  |   |
| DEPTH  | 188mm<br>7.4"  | 253mm<br>10"  | 190mm<br>7.5"   | 268mm<br>10.6"  | 200mm<br>7.9"   | 268mm<br>10.6"  |   |
| CUT<br>EN CLASS<br>EN CUT CLASSIFICATION<br>NFPA CLASS   | F<br>BC 150f-9.5<br>1H 2G 3G 4F 5G<br>A6 B5 C6 D6 E6 F2                            | F<br>BC150F-9.5<br>1H 2G 3G 4F 5G<br>A6 B5 C6 D6 E6 F2                            | I<br>BC165I-13.1<br>1I 2I 3I 4J 5J<br>A7 B7 C6 D7 E8 F3                           | I<br>BC165I-13.2<br>1I 2I 3I 4J 5J<br>A7 B7 C6 D7 E8 F3                           | K<br>BC165K-15.9<br>1K 2K 3K 4K 5K<br>A8 B8 C7 D9 E9 F4                             | K<br>BC165K-15.9<br>1K 2K 3K 4K 5K<br>A8 B8 C7 D9 E9 F4                             |   |
| THEORETICAL<br>CUT FORCE<br>t= US short ton  | 579kN<br>65Uston   | 549kN<br>61.7Uston  | 794kN<br>89.2Uston  | 764kN<br>85.8Uston  | 1412kN<br>158.7Uston  | 1389kN<br>156.3Uston  |   |
| CUTTER OPENING<br>ROUND BAR  | 170mm<br>6.7"<br>31mm<br>1.2"  | 170mm<br>6.7"<br>31mm<br>1.2"   | 170mm<br>6.7"<br>36mm<br>1.4"   | 170mm<br>6.7"<br>36mm<br>1.4"   | 182mm<br>7.2"<br>41mm<br>1.6"   | 182mm<br>7.2"<br>41mm<br>1.6"   |   |
| WORKING PRESSURE   | 720Bar / 10.4Kpsi  | 720Bar / 10.4Kpsi   | 720Bar / 10.4Kpsi   | 720Bar / 10.4Kpsi   | 720Bar / 10.4Kpsi   | 720Bar / 10.4Kpsi   |   |
| ROTATE HEAD/HANDLE   | --   | --  | --  | --  | --  | --  |   |
| LED LIGHTS   | ?  | ?   | ?   | ?   | ?   | ?   |   |
| OPERATING TEMP   | ?  | ?   | ?   | ?   | ?   | ?   |   |
| IN-WATER-CAPABLE IP#   | <div></div> 68   | <div></div> 68  | <div></div> 68  | <div></div> 68  | <div></div> 68  | <div></div> 68  |   |
| NOTES  | Stepless speed increase  | Inclined blade angle.<br>Stepless speed increase                                  | Stepless speed increase   | Inclined blade angle.<br>Stepless speed increase                                  | Stepless speed increase   | Inclined blade angle.<br>Stepless speed increase                                    |   |
| WEBSITE  | holmatro.com   | holmatro.com  | holmatro.com  | holmatro.com  | holmatro.com  | holmatro.com  |   |

|  |   |   |   |  |  |  |   |
|--|---|---|---|--|--|--|---|
|  |   |  |  |   |  |                                       |  |
| CL   | CORE<br>CU5060  | CORE<br>CU5060i CL  | S 799E2   | MCHE100  | MCHE140  | MCHC60   | MCHC70  |
| RO   | HOLMATRO  | HOLMATRO  | HURST<br>(IDEX)   | HYDRAM   | HYDRAM   | HYDRAM   | HYDRAM  |
|  |  |  |  |   |  |                                       |  |
|  | N/A   | N/A   | \$10,265  | N/A  | N/A  | N/A  | N/A   |
|  | 19.6kg<br>43.2lb  | 19.8kg<br>43.7lb  | 23.6kg<br>57.6lb  | 14.4kg<br>31.7lb   | 16.7kg<br>36.8lb   | 14.4kg<br>31.7lb   | 16.7kg<br>36.8lb  |
|  | 807mm<br>31.8"  | 820mm<br>32.3"  | 1000mm<br>39.4"   | 744mm<br>29.3"   | 756mm<br>29.7"   | 744mm<br>29.3"   | 756mm<br>29.7"  |
|  | 321mm<br>12.6"  | 342mm<br>13.5"  | 266mm<br>10.5"  | 224mm<br>8.8"  | 224mm<br>8.8"  | 224mm<br>8.8"  | 224mm<br>8.8"   |
|  | 200mm<br>7.9"   | 285mm<br>11.2"  | 281mm<br>11.1"  | 177mm<br>7"  | 177mm<br>7"  | 177mm<br>7"  | 177mm<br>7"   |
| 5.7<br>K 5K<br>E9 F4   | K<br>CC205K-19.6<br>1K 2K 3K 4K 5K<br>A9 B9 C9 D9 E9 F4                           | K<br>CC205K-19.8<br>1K 2K 3K 4K 5K<br>A9 B9 C9 D9 E9 F4                           | K<br>-<br>1K-2K-3K-4K-5K<br>A8 B9 C8 D9 E9 F4                                     | I<br>CC130-H-14.4<br>??<br>A7 B8 C6 D7 E9  | I<br>CC130-H-16.7<br>??<br>A7 B8 C6 D7 E9  | I<br>CC130-H-14.4<br>??<br>A7 B8 C6 D7 E9  | I<br>CC130-H-16.7<br>??<br>A7 B8 C6 D7 E9   |
| on   | 1793kN<br>201.5Uston  | 1765kN<br>198.4Uston  | 1100kN<br>123.6Uston  | 694kN<br>73Uston   | 950kN<br>73Uston   | 694kN<br>73Uston   | 950kN<br>73Uston  |
|  | 205mm<br>8.1"<br>47mm<br>1.9"   | 205mm<br>8.1"<br>47mm<br>1.9"   | 200mm<br>7.8"<br>42mm<br>1.6"   | 154mm<br>6"<br>??mm<br>??"   | 154mm<br>6"<br>??mm<br>??"   | 154mm<br>6"<br>??mm<br>??"   | 154mm<br>6"<br>??mm<br>??"  |
| 4Kpsi  | 720Bar / 10.4Kpsi   | 720Bar / 10.4Kpsi   | 700Bar / 10.1Kpsi   | 700Bar / 10.1Kpsi  | 700Bar / 10.1Kpsi  | 700Bar / 10.1Kpsi  | 700Bar / 10.1Kpsi   |
|  | --  | --  | - 360°  | --   | --   | --   | --  |
|  | ?   | ?   | 2   | -  | -  | -  | -   |
|  | ?   | ?   | -   | ?  | ?  | ?  | ?   |
|  | 68  | 68  | 68  | 68   | 68   | 68   | 68  |
| de<br>eed  | Stepless speed<br>increase  | Inclined blade<br>angle.<br>Stepless speed<br>increase                            |   | Cut reach/depth =<br>154mm<br>See also 3x<br>CHU models in<br>combitools - these<br>are closer to cutters<br>than combis | Cut reach/depth =<br>154mm   | Cut reach/depth =<br>154mm<br>See also 3x<br>CHU models in<br>combitools - these<br>are closer to cutters<br>than combis | Cut reach/depth =<br>154mm  |
| om   | holmatro.com  | holmatro.com  | jawsoflife.com  | hyDRAM.com   | hyDRAM.com   | hyDRAM.com   | hyDRAM.com  |

|   |   |   |  |   |   |   |
|---|---|---|--|---|---|---|
| <p>IMAGES NOT TO SCALE</p> <p>OTHER TOOLS IN RANGE:</p> <ul style="list-style-type: none"> <li>■ = BATTERY TOOLS</li> <li>■ = Combi</li> <li>■ = Spreader</li> <li>■ = Ram</li> <li>■ = Special Tools</li> </ul> <p>● = PARTIAL or OK but not ideal</p> <p>□ = Option</p> <p>N/A = info Not Available/not given</p> |                          |  |  |  |  |  |
| <b>SERIES MODEL VARIANT</b><br>Product Code   | CHM275 CX   | CHM2750 CX  | CHU1500  | CHU1800   | CHU2020   | LD2   |
| <b>COMPANY</b>  | HYDRAM  | HYDRAM  | HYDRAM   | HYDRAM  | HYDRAM  | LIBERVIT  |
| <b>TOOLS IN RANGE</b>   | ■ ■ ■ ■   |   | ■ ■ ■ ■  |   |   |   |
| <b>ORIGIN</b>   | ■ ■ ■   | ■ ■ ■   | ■ ■ ■  | ■ ■ ■   | ■ ■ ■   | ■ ■ ■   |
| <b>COST</b><br>inc tax / VAT  | N/A   | N/A   | N/A  | N/A   | N/A   | N/A   |
| <b>WEIGHT (exc hose)</b>  | 14.4kg<br>31.7lb  | 16.7kg<br>36.8lb  | 15.88kg<br>35lb  | 16.08kg<br>35.45lb  | 17.6kg<br>38.8lb  | 20.3kg<br>44.7lb  |
| <b>LENGTH</b>   | 744mm<br>29.3"  | 756mm<br>29.6"  | 711mm<br>00"   | 744mm<br>29.3"  | 00mm<br>00"   | 934mm<br>36.8"  |
| <b>WIDTH</b>  | 224mm<br>8.8"   | 224mm<br>8.8"   | 224mm<br>8.8"  | 224mm<br>8.8"   | 00mm<br>00"   | 237mm<br>9.3"   |
| <b>DEPTH</b>  | 177mm<br>7"   | 177mm<br>7"   | 177mm<br>7"  | 177mm<br>7"   | 00mm<br>00"   | 281mm<br>11.1"  |
| <b>CUT</b><br>EN CLASS<br>EN CUT CLASSIFICATION<br>NFPA CLASS   | I<br>CC130-H-14.4<br>??<br>A7 B8 C6 D7 E9   | I<br>CC130-H-16.7<br>??<br>A7 B8 C6 D7 E9   | G<br>BC150-G-15.88<br>??<br>A? B? C? D? E?   | H<br>BC180-H-17.2<br>??<br>A7 B8 C6 D7 E9   | H<br>BC180-H-17.2<br>??<br>A? B? C? D? E?   | I<br>-<br>11-2J-3I-4J<br>A7 B8 C7 D?  |
| <b>THEORETICAL CUT FORCE</b><br>t= US short ton   | 694kN<br>78Uston  | 950kN<br>106Uston   | 950kN<br>106Uston  | 950kN<br>106Uston   | 1040kN<br>116.9Uston  | 650kN<br>73Uston  |
| <b>CUTTER OPENING</b><br>ROUND BAR  | 154mm<br>6"<br>??mm<br>??   | 154mm<br>6"<br>??mm<br>??   | 150mm<br>5.9"<br>??mm<br>??  | 180mm<br>7.1"<br>??mm<br>??   | 202mm<br>7.9"<br>??mm<br>??   | 206mm<br>8.1"<br>33mm<br>1.3"   |
| <b>WORKING PRESSURE</b>   | 700Bar / 10.1Kpsi   | 700Bar / 10.1Kpsi   | 700Bar / 10.1Kpsi  | 700Bar / 10.1Kpsi   | 700Bar / 10.1Kpsi   | 700Bar / 10.1Kpsi   |
| <b>ROTATE HEAD/HANDLE</b>   | - -   | - -   | - -  | - -   | - -   | - 360°  |
| <b>LED LIGHTS</b>   | -   | -   | -  | -   | -   | 2   |
| <b>OPERATING TEMP</b>   | ?   | ?   | ?  | ?   | ?   | ?   |
| <b>IN-WATER-CAPABLE IP#</b>   | ■ 68  | ■ 68  | ● 54   | ● 54  | ● 54  | ■ 68  |
| <b>NOTES</b>  | Cut reach/depth = 154mm<br>See also 3x CHU models in combitools - these are closer to cutters than combis |   | Cut reach/depth = 154mm  |   |   |   |
| <b>WEBSITE</b>  | hydrum.com  | hydrum.com  | hydrum.com   | hydrum.com  | hydrum.com  | libervit.com  |



|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |        |       |       |       |  |
|  | LD2C   | BP2  | BP2C   | U400   |  |
|  | LIBERVIT   | LIBERVIT   | LIBERVIT   | LIBERVIT   |  |
|  |       |       |       |       |  |
|  | N/A  | N/A  | N/A  | N/A  |  |
|  | 26.5kg<br>58.3lb   | 24kg<br>52.8lb   | 20kg<br>44lb   | 26.5kg<br>58.4lb   |  |
|  | 963mm<br>37.9"   | 939mm<br>37"   | 880mm<br>34.6"   | 1025mm<br>40.4"  |  |
|  | 265mm<br>10.4"   | 266mm<br>10.5"   | 235mm<br>9.25"   | 281mm<br>11.1"   |  |
|  | 253mm<br>10"   | 253mm<br>10"   | 253mm<br>10"   | 269mm<br>10.6"   |  |
|  | K<br>-<br>1K-2K-3K-4K-5K<br>A9 B9 C9 D9 E9 F5  | K<br>-<br>1K-2K-3K-4K-5K<br>A8 B9 C8 D9 E9 F5  | I<br>-<br>1I-2J-3K-4J-5J<br>A7 B8 C7 D8 E8 F4  | K<br>CC 200 K-26,2<br>1K-2K-3K-4K-5K<br>A9 B9 C9 D9 E9 F5                              |  |
|  | 1310kN<br>147.25USton  | 1100kN<br>123.6USton   | 760kN<br>85.4USton   | 1376kN<br>155.7USton   |  |
|  | 204mm<br>8"<br>45mm<br>1.8"  | 205mm<br>8"<br>42mm<br>1.6"  | 202mm<br>7.9"<br>33mm<br>1.3"  | 204mm<br>8"<br>45mm<br>1.8"  |  |
|  | 700Bar / 10.1Kpsi  | 700Bar / 10.1Kpsi  | 700Bar / 10.1Kpsi  | 700Bar / 10.1Kpsi  |  |
|  | - 360°   | - 360°   | - 360°   | - 360°   |  |
|  | 2  | 2  | 2  | 2  |  |
|  | ?  | ?  | ?  | ?  |  |
|  |  68 |  68 |  68 |  68 |  |
|  | libervit.com   | libervit.com   | libervit.com   | libervit.com   |  |


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|---|---|---|--|---|--|---|
| <p>IMAGES NOT TO SCALE</p> <p>OTHER TOOLS IN RANGE:</p> <ul style="list-style-type: none"> <li>■ = BATTERY TOOLS</li> <li>■ = Combi</li> <li>■ = Spreader</li> <li>■ = Ram</li> <li>■ = Special Tools</li> </ul> <p>● = PARTIAL or OK but not ideal</p> <p>□ = Option</p> <p>N/A = info Not Available/not given</p> |        |  |  |  |  |  |
| <b>SERIES MODEL VARIANT</b><br>Product Code   | S312  | S378  | S789   | S799  |  | G4A   |
| <b>COMPANY</b>  | LUKAS<br>(IDEX)   | LUKAS<br>(IDEX)   | LUKAS<br>(IDEX)  | LUKAS<br>(IDEX)   |  | RESQTEC   |
| <b>TOOLS IN RANGE</b>   | <div> <span>■</span> <span>■</span> <span>■</span> <span>■</span> <span>■</span> </div> |   |  |   |  |   |
| <b>ORIGIN</b>   |        |  |   |  |  |  |
| <b>COST</b><br>inc tax / VAT  | N/A   | N/A   | N/A  | N/A   |  | N/A   |
| <b>WEIGHT (exc hose)</b>  | 14.5kg<br>32lb  | 14.8kg<br>32.6lb  | 18.8kg<br>41.4lb   | 21.3kg<br>47lb  |  | 20.6kg<br>45.3lb  |
| <b>LENGTH</b>   | 1000mm<br>39.4"   | 742mm<br>29.2"  | 801mm<br>31.5"   | 828mm<br>32.6"  |  | 705mm<br>27.75"   |
| <b>WIDTH</b>  | 266mm<br>10.5"  | 228mm<br>9"   | 279mm<br>11"   | 291mm<br>11.5"  |  | 271mm<br>10.7"  |
| <b>DEPTH</b>  | 281mm<br>10.1"  | 172mm<br>6.8"   | 187mm<br>7.4"  | 188mm<br>7.4"   |  | 274mm<br>10.8"  |
| <b>CUT</b><br>EN CLASS<br>EN CUT CLASSIFICATION<br>NFPA CLASS   | K<br>BC 1601-14.5<br>1I-2J-3I-4J-5J<br>A7 B8 C7 D7 E7                                   | I<br>BC 1801-14.8<br>1I-2J-3I-4J-5J<br>A7 B8 C7 D7 E8                             | I<br>CC 205 K - 18.8<br>1K-2K-3K-4K-5K<br>A8 B9 C8 D9 E9 F5                        | K<br>CC 200 K-21.3<br>1K-2K-3K-4K-5K<br>A9 B9 C9 D9 E9 F5                           |  | E<br>BC153E-20<br>1G 2E 3F 4F<br>A6 B5 C5 D6  |
| <b>THEORETICAL CUT FORCE</b><br>t= US short ton   | 680kN<br>76.4t  | 760kN<br>85.4t  | 1100kN<br>1234.6t  | 1376kN<br>155t  |  | 506kN<br>56.9t  |
| <b>CUTTER OPENING</b><br>ROUND BAR  | 160mm<br>00"<br>35mm<br>00"   | 202mm<br>00"<br>35mm<br>00"   | 205mm<br>8"<br>42mm<br>00"   | 204mm<br>8"<br>45mm<br>1.7"   |  | 153mm<br>6"<br>26mm<br>1"   |
| <b>WORKING PRESSURE</b>   | 700Bar/10.1Kpsi   | 700Bar/10.1Kpsi   | 700Bar/10.1Kpsi  | 700Bar/10.1Kpsi   |  | N/A   |
| <b>ROTATE HEAD/HANDLE</b>   | - 360°  | - 360°  | - 360°   | - 360°  |  | 61° -   |
| <b>LED LIGHTS</b>   | 2   | 2   | 2  | 2   |  | □   |
| <b>OPERATING TEMP</b>   | -20to 55  | -20to 55  | -20to 55   | -20to 55  |  | ?   |
| <b>IN-WATER-CAPABLE</b> IP#   | ■ 68  | ■ 68  | ■ 68   | ■ 68  |  | ??  |
| <b>NOTES</b>  |   |   |  |   |  | 3x interchangeable heads/blades<br>Rear handle open<br>Jaw recess (rear)<br>118mm   |
| <b>WEBSITE</b>  | lukas.com   | lukas.com   | lukas.com  | lukas.com   |  | rescue.resqtec.com  |

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|---|---|---|---|---|--|---|---|
|   |  |  |  |  |  |  |  |
|   | <b>G4W</b>  | <b>G6A</b>  | <b>G6C</b>  | <b>G6W</b>  | <b>G6W-FR</b>  | <b>G8C</b>  | <b>G8W</b>  |
| <b>RESQTEC</b>  | <b>RESQTEC</b>  | <b>RESQTEC</b>  | <b>RESQTEC</b>  | <b>RESQTEC</b>  | <b>RESQTEC</b>   | <b>RESQTEC</b>  | <b>RESQTEC</b>  |
|  |   |   |   |   |  |   |   |
|   |  |  |  |  |  |  |  |
|   | N/A   | N/A   | N/A   | N/A   | N/A  | N/A   | N/A   |
|   | 20.3kg<br>44.8lb  | 15.9kg<br>6lb   | 20.3kg<br>44.8lb  | 20kg<br>44lb  | 20kg<br>44lb   | 20kg<br>44lb  | 20.3kg<br>44.8lb  |
|   | 868mm<br>34.2"  | 767mm<br>30.2"  | 868mm<br>34.2"  | 854mm<br>33.6"  | 854mm<br>33.6"   | 854mm<br>33.6"  | 868mm<br>34.2"  |
|   | 251mm<br>9.9"   | 236mm<br>9.3"   | 251mm<br>9.9"   | 268mm<br>10.5"  | 268mm<br>10.5"   | 268mm<br>10.5"  | 251mm<br>9.9"   |
|   | 235mm<br>9.25"  | 228mm<br>9"   | 235mm<br>9.25"  | 235mm<br>9.25"  | 235mm<br>9.25"   | 235mm<br>9.25"  | 235mm<br>9.25"  |
| 0.6<br>5H<br>5 E6   | <b>H</b><br><b>CC200H-20.3</b><br>1I 2J 3H 4H 5J<br><b>A6 B7 C6 D7 E7</b>         | <b>F</b><br><b>BC156F-15.9</b><br>1H 2F 3G 4F 5G<br><b>A6 B6 C6 D7 E6</b>         | <b>H</b><br><b>CC200H-20.3</b><br>1I 2J 3H 4H 5J<br><b>A6 B7 C6 D7 E7</b>         | <b>H</b><br><b>BC185H-19.9</b><br>1I 2J 3H 4J 5J<br><b>A6 B7 C6 D7 E9</b>         | <b>H</b><br><b>BC185H-19.9</b><br>1I 2J 3H 4J 5J<br><b>A6 B7 C6 D7 E9</b>          | <b>H</b><br><b>BC185H-19.9</b><br>1I 2J 3H 4J 5J<br><b>A6 B7 C6 D7 E9</b>           | <b>H</b><br><b>CC200H-20.3</b><br>1I 2J 3H 4H 5J<br><b>A6 B7 C6 D7 E7</b>           |
|   | 1102kN<br>124t  | 554kN<br>62.3t  | 1102kN<br>124t  | 1052kN<br>118t  | 1052kN<br>118t   | 1052kN<br>118t  | 1102kN<br>124t  |
|   | 203mm<br>8"<br><b>34mm</b><br><b>1.3"</b>   | 156mm<br>6.1"<br><b>30mm</b><br><b>1.2"</b>                                       | 203mm<br>8"<br><b>34mm</b><br><b>1.3"</b>   | 185mm<br>7.3"<br><b>34mm</b><br><b>1.3"</b>                                       | 185mm<br>7.3"<br><b>34mm</b><br><b>1.3"</b>  | 185mm<br>7.3"<br><b>34mm</b><br><b>1.3"</b>   | 203mm<br>8"<br><b>34mm</b><br><b>1.3"</b>   |
|   | N/A   | N/A   | N/A   | N/A   | N/A  | N/A   | N/A   |
|   | - 360°  | - 360°  | - 360°  | - 360°  | - 360°   | - 360°  | - 360°  |
|   | □   | □   | □   | □   | □  | □   | □   |
|   | ?   | ?   | ?   | ?   | ?  | ?   | ?   |
|   | ??  | ??  | ??  | ??  | ??   | ??  | ??  |
| able<br>es.<br>otion.<br>ach)=  | Jaw recess (Reach)<br>=150mm.   | Jaw recess (Reach)<br>=150mm.   | Jaw recess (Reach)<br>=150mm.   | Jaw recess (Reach)<br>=150mm.   | Jaw recess (Reach)<br>=150mm.  | Jaw recess (Reach)<br>=150mm.   | Jaw recess (Reach)<br>=150mm.   |
| .com  | rescue.resqtec.com  | rescue.resqtec.com  | rescue.resqtec.com  | rescue.resqtec.com  | rescue.resqtec.com   | rescue.resqtec.com  | rescue.resqtec.com  |



|   |   |   |  |   |   |    |
|---|---|---|--|---|---|----|
| <p>IMAGES NOT TO SCALE</p> <p>OTHER TOOLS IN RANGE:</p> <ul style="list-style-type: none"> <li>■ = BATTERY TOOLS</li> <li>■ = Combi</li> <li>■ = Spreader</li> <li>■ = Ram</li> <li>■ = Special Tools</li> </ul> <p>● = PARTIAL or OK but not ideal</p> <p>□ = Option</p> <p>N/A = info Not Available/not given</p> |  |  |  |  |  |    |
| <b>SERIES MODEL VARIANT</b><br>Product Code   | <b>SLC-24</b>   | <b>SLC-27</b>   | <b>SLC-28</b>  | <b>SLC-29</b>   | <b>BFC-320</b>  |    |
| <b>COMPANY</b>  | <b>TNT RESCUE</b>   | <b>TNT RESCUE</b>   | <b>TNT RESCUE</b>  | <b>TNT RESCUE</b>   | <b>TNT RESCUE</b>   |    |
| <b>TOOLS IN RANGE</b>   | ■ ■ ■ ■ ■   |   |  |   |   |    |
| <b>ORIGIN</b>   | ■   | ■   | ■  | ■   | ■   |    |
| <b>COST</b><br>inc tax / VAT  | N/A   | N/A   | N/A  | N/A   | N/A   |    |
| <b>WEIGHT (exc hose)</b>  | 15.3kg<br>33.7lb  | 16.1kg<br>35.5lb  | 18kg<br>39.6lb   | 18.2kg<br>40lb  | 28.8kg<br>63.6lb  |    |
| <b>LENGTH</b>   | 723mm<br>28.5"  | 723mm<br>28.5"  | 736.6mm<br>29"   | 726.4mm<br>28.6"  | 762mm<br>30"  |    |
| <b>WIDTH</b>  | 228.6mm<br>9"   | 285mm<br>11.25"   | 285mm<br>11.25"  | 285mm<br>11.25"   | 273.1mm<br>10.75"   |    |
| <b>DEPTH</b>  | 177.8mm<br>7"   | 177.8mm<br>7"   | 177.8mm<br>7"  | 177.8mm<br>7"   | 177.8mm<br>7"   |    |
| <b>CUT</b><br>EN CLASS<br>EN CUT CLASSIFICATION<br>NFPA CLASS   | -<br>-<br>-<br>A6 B5 C7 D7 E6   | -<br>1F-2F-3F-4F-5F<br>-<br>A6 B7 C7 D7 E7  | -<br>-<br>-<br>A7 B7 C7 D7 E7  | -<br>1J-2J-3J-4K-5K<br>-<br>A8 B9 C9 D9 E9 F4                                       | -<br>1K-2K-3K-4K-5K<br>-<br>A9 B9 C9 D9 E9 F5                                       |    |
| <b>THEORETICAL CUT FORCE</b><br>t= US short ton   | 528kN<br>59.3t  | 528kN<br>59.3t  | 694kN<br>78t   | 1256kN<br>141t  | 1424kN<br>160t  |    |
| <b>CUTTER OPENING</b><br>ROUND BAR  | 127mm<br>5"<br>00mm<br>00"  | 193mm<br>7.6"<br>00mm<br>00"  | 193mm<br>7.6"<br>00mm<br>00"   | 203mm<br>8"<br>00mm<br>00"  | 218.4mm<br>8.6"<br>00mm<br>00"  |    |
| <b>WORKING PRESSURE</b>   | 722Bar / 10.5Kpsi   | 722Bar / 10.5Kpsi   | 722Bar / 10.5Kpsi  | 722Bar / 10.5Kpsi   | 722Bar / 10.5Kpsi   |    |
| <b>ROTATE HEAD/HANDLE</b>   | --  | --  | --   | --  | --  | -- |
| <b>LED LIGHTS</b>   | -   | -   | -  | -   | -   | -  |
| <b>OPERATING TEMP</b>   | ?   | ?   | ?  | ?   | ?   |    |
| <b>IN-WATER-CAPABLE</b> IP#   | ■ 64  | ■ 64  | ■ 64   | ■ 64  | ■ 64  |    |
| <b>NOTES</b>  | Cut Reach<br>82.4mm/ 3.24"  | Cut Reach<br>100.6mm/ 4"  | Cut Reach<br>101.6mm/ 4"   | Cut Reach<br>113.6mm/ 4.47"   | Cut Reach<br>140.5mm/ 5.5"  |    |
| <b>WEBSITE</b>  | tntrescue.com   | tntrescue.com   | tntrescue.com  | tntrescue.com   | tntrescue.com   |    |

|  |   |  |   |  |  |  |
|--|---|--|---|--|--|--|
|       |                                        |       |                                        |      |       |  |
| <b>RSC 170</b>   | <b>RSC 170+</b>   | <b>RSC 190</b>   | <b>RSC 190+</b>   | <b>RSC 200</b>   | <b>RSC F7</b>  |  |
| <b>WEBER<br/>RESCUE</b>  | <b>WEBER<br/>RESCUE</b>   | <b>WEBER<br/>RESCUE</b>  | <b>WEBER<br/>RESCUE</b>   | <b>WEBER<br/>RESCUE</b>  | <b>WEBER<br/>RESCUE</b>  |  |
|       |   |  |   |  |  |  |
|       |                                        |       |                                        |      |       |  |
| N/A  | N/A   | N/A  | N/A   | N/A  | N/A  |  |
| 14.3kg<br>31.5lb   | 15.4kg<br>33.9lb  | 16.9kg<br>37.2lb   | 18kg<br>39.7lb  | 21kg<br>46.3lb   | 23.3kg<br>51.7lb   |  |
| 727mm<br>28.6"   | 732mm<br>28.8"  | 758mm<br>29.8"   | 758mm<br>29.8"  | 827mm<br>32.6"   | 886mm<br>34.9"   |  |
| 236mm<br>9.3"  | 236mm<br>9.3"   | 236mm<br>9.3"  | 236mm<br>9.3"   | 300mm<br>11.8"   | 295mm<br>11.6"   |  |
| 164mm<br>6.5"  | 164mm<br>6.5"   | 164mm<br>6.5"  | 164mm<br>6.5"   | 177mm<br>7"  | 179mm<br>7.1"  |  |
| I<br><b>BC166I-14.3</b><br>1J 2K 3I 4J 5J<br>A7 B8 C6 D8 E9 F4                         | I<br><b>BC166I-15.4</b><br>1J 2K 3I 4J 5J<br>A7 B8 C6 D8 E9 F4  | K<br><b>BC187K-16.9</b><br>1K 2K 3K 4K 5K<br>A8 B9 C7 D9 E9 F4                         | K<br><b>BC187K-20,6</b><br>1K 2K 3K 4K 5K<br>A8 B9 C7 D9 E9 F4  | K<br><b>CC202K-21</b><br>1K 2K 3K 4K 5K<br>A9 B9 C9 D9 E9 F5                           | K<br><b>CC268K-23.3</b><br>1K 2K 3K 4K 5K<br>A9 B9 C9 D9 E9 F7                           |  |
| N/A  | N/A   | N/A  | N/A   | N/A  | N/A  |  |
| 175mm<br>6.9"<br>32mm<br>1.25"   | 175mm<br>6.9"<br>32mm<br>1.25"  | 187mm<br>7.4"<br>38.1mm*<br>1.5"   | 187mm<br>7.4"<br>38.1mm*<br>1.5"  | 202mm<br>7.8"<br>45mm<br>1.75"   | 300mm<br>11.8"<br>45mm<br>1.75"  |  |
| 700Bar / 10.2Kpsi  | 700Bar / 10.2Kpsi   | 700Bar / 10.2Kpsi  | 700Bar / 10.2Kpsi   | 700Bar / 10.2Kpsi  | 700Bar / 10.2Kpsi  |  |
| - 360°   | - 360°  | - 360°   | - 360°  | - 360°   | - 360°   |  |
| -  | -   | -  | -   | -  | -  |  |
| ?  | ?   | ?  | ?   | ?  | ?  |  |
|  68 |  68                                  |  68 |  68                                  |  68 |  68 |  |
| All E-Force battery tools can convert to hose and vice-versa.                          | Plus version has detachable blade inserts for boron/UHSS. All E-Force battery tools can convert to hose and vice-versa. | All E-Force battery tools can convert to hose and vice-versa.                          | Plus version has detachable blade inserts for boron/UHSS. All E-Force battery tools can convert to hose and vice-versa. | All E-Force battery tools can convert to hose and vice-versa.                          | All E-Force battery tools can convert to hose and vice-versa.                            |  |
| weber.com  | weber.com   | weber.com  | weber.com   | weber.com  | weber.com  |  |

Weber Smart Force series can operate in and under water with the addition of a bespoke IP68 battery cover.

# 'hydraulic' BATTERY DEDICATED SPREADERS



These next two intro paragraphs are mostly straight out of the previous section on cutters with the word 'spreader' instead of 'cutter'.

It is again the case that combination tools are all spreaders as well as cutters so you should also refer to that selection of battery tools in considering what you need of your spreader and whether the versatility of the combi-tool is more advantageous than the always greater spreading performance of a dedicated tool. If you include the 50 combi-tools in your shopping list of potential spreading tools you have around 98 models to choose from. These are all direct-connect battery systems. Although we have previously mentioned *Libervit's* batteries and underwater prowess, their tools have not been included because they are regular hose-fed hydraulics that operate from a battery driven pump and there are a number of others similar systems. Bear in mind that most hose-fed hydraulic tools can be run from hoses to a battery-powered hydraulic pump but that's a whole different GUIDE!

## 'JAW' DESIGN

Hurst coined the term 'Jaws-of-Life' with their original extrication tools and made it into a generic term for all such tools in the US and Canada but most electro-hydraulic rescue tools are manufactured in Europe where the term 'Jaws-of-Life' is not used. Nevertheless, 'Jaws' is as appropriate a name as any to describe the gaping chasm created by an open set of spreaders. Some of the larger models in this Guide are almost a metre/3+feet wide at full width but the trade-off is that this will be the weakest point at which you could load a spreader either pulling or spreading apart. As with cutters, the strongest a spreader ever gets is with a lift or pull-point closer to the

fulcrum or jaws-union pivot pin. In terms of pulling this is rarely possible as most have a dedicated pin hole for attaching pulling chains up near the tip as can be seen in the *Lukas* model on the right but some, like the Weber model above, have additional holes that can be press-ganged into use for pulling at the stronger mid-points. However, you will need to check the individual tool's capability because such holes are often a weight-saving cut-out rather than an element designed for loading.

The holes engineered into most spreader jaws may be a weight saving measure but are usually for attachment of pulling chains but where the tips are detachable like the *Holmatro Pentheon* opposite and the *Amkus* below, the pin-attachment point for the tips may also be the chain-set attachment point and this would be preferable because A) the hole is usually a larger (stronger) bore than higher up because it has more material to work with like the *Amkus* left and B) more often than not, it is lower down the jaw and therefore provides greater pulling force.

Whether the tips are detachable or fixed they will first and foremost be adorned with a gripping surface on the inside and the outside so that the jaws can get a solid purchase on the material being spread or squeezed/crushed. There was a time when the only game in town was simple ridges like a set of pliers but this has evolved into more complex forward and rear-







One of the three market leaders to fully embrace underwater and smart/diagnostics capabilities is Holmatro's Pentheon series



## BATTERY SPREADERS

profile but the price you pay is that this needs to be unlocked in order to reposition and use the tool in a different orientation. As it happens, the vast majority of most spreading actions take place within the top and side orientation (270°). In our tables, we have not differentiated between fixed and rotating handles, only that they allow either 360 or 270° positioning - you only have to look at most images to figure out it is a fixed frame

### LED LIGHTS, WiFi & DIAGNOSTICS - SEE PAGE 34

### SIZE STILL MATTERS

Unlike dedicated cutters, combi-tools and to some extent rams, spreaders cannot physically get much smaller, at least not in the head/jaws unless they invent some form of telescopic jaw. If you want to spread the maximum distance you will need the longest jaws. Consequently, the largest tools are around a metre/3.28ft long and set to stay that way for a while yet.

### NOISE

Covered in the previous parts of this series but worth reiterating that electric tools are silent when not in use so there is no tick-over noise as you get with a petrol engine tool or a generator driven, hose-fed hydraulic system. But there is still noise when the tool is doing its work and this can vary from a hum to a high pitched whirr that gets louder as the tool works harder. So they are not 'silent' but certainly far less noise pollution than a traditional petrol engine/gennie based system.



Lukas E3 & E3 Connect tools can operate in and under water even in salt water with their special saltwater battery.

facing ridges and 'dog-tooth' grips like the *Holmatro* tip top-right. In engineering terms, having removable tips can create a weak point compared to a single-piece construction but removable tips enable you to replace damaged components and to use either an alternate design or future enhanced designs. Most of the tips in this GUIDE are regular spreading/squeezing tips, albeit in a range of different grip configurations but there are door-opening tips angled to force the available gap.

### ROTATE HEAD and/or HANDLE

There are broadly two types of forward positioning handles on these tools - Fixed or rotating. Fixed handles may provide a full 360° wrap like the *Holmatro* and *Lukas* models or it may give about 270° of access (top and sides) like the *TNT Surge2* model opposite. Rotating handles like *Weber's* decrease the bulk of the tool with a much smaller handle





**UPDATED May '25**

IMAGES NOT TO  
SCALE

www.rescuemagazines.com

IN THE FOLLOWING TABLES..... REFER TO COMMON DATA ON  
PAGE14/15 PLUS THIS UNIQUE SPREADERS KEY....

**MAX SPREAD FORCE:** Is the maximum *theoretical* force possible but only near the fulcrum not the tops at the opposite end. The closer the tips you start the spread/lift the lower the available force. This is not quoted by all because the EN and/or NFPA classifications cover this more accurately. Indeed, one or two manufacturers like Weber-Rescue flat-out refuse to quote it because they feel it is a misleading figure which is a fair point. Some of the max figures quoted may therefore be the same as the upper range limit but *in theory only* they could lift/spread a much higher amount. Our figures are in kN (KiloNewtons) and **US (Short) Tons**. There are 1.10 US short tons to a UK/metric ton (or more accurately tonne).

**MAX PULL FORCE & DISTANCE:**

Holes near the ends of the jaws can have a chain fitted - one to an anchor

and one to the item to be pulled. As the jaws are closed a pull force is exerted and the object can be moved. This used to be common with a dash-roll or displacement but not so much these days. Due to leverage forces, the longer the jaw the lower the pull force.

**SPREAD DISTANCE:** The maximum distance the jaws will open but don't forget that the closest to the tips provides the least power.

**ROTATE HEAD/HANDLE:** Either the **Jaws** or the handle can rotate for better access to the cut or the handle will extend around the tool

by 180, 270 or 360° to allow it to be used in any position.

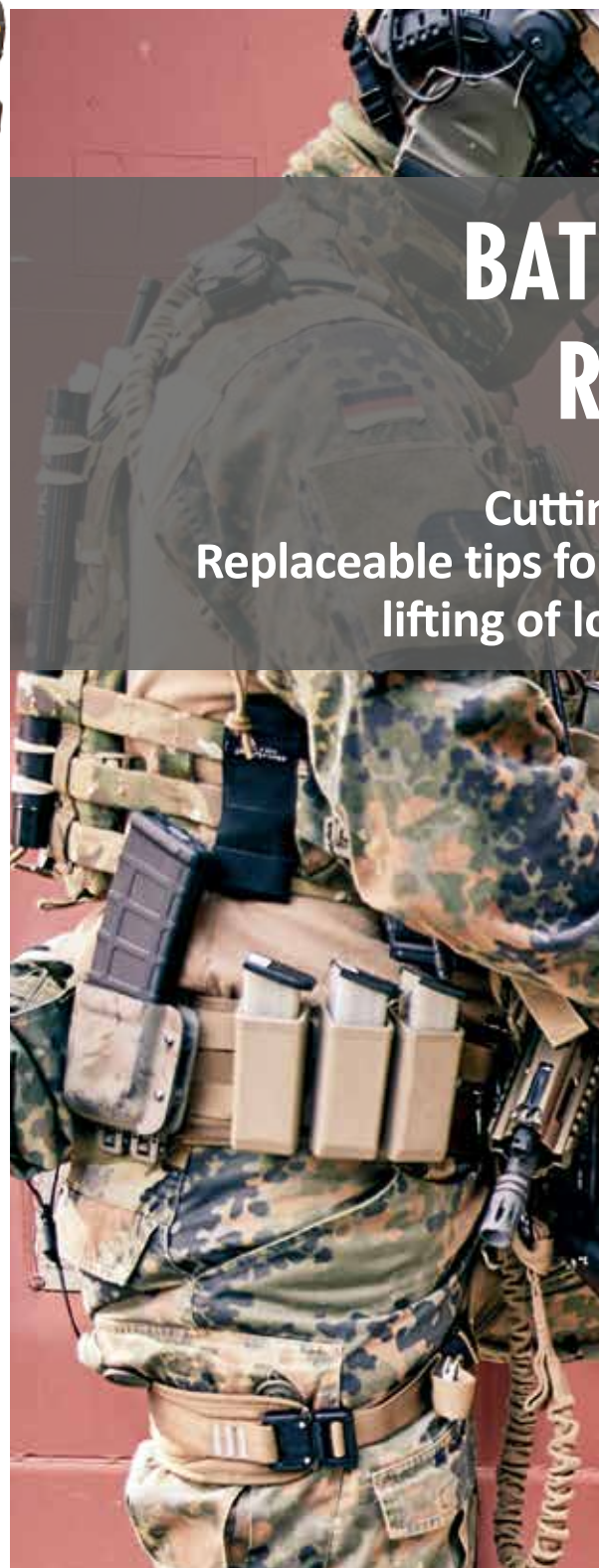
**LED LIGHTS:** Integral lighting from the handle or housing to illuminate the area being cut/spread.

**WiFi/Bluetooth-CAPABLE:** The tool and/or battery are linked to a mobile device via **WiFi** and/or **Bluetooth** to manage functions, servicing and inventory. This category is listed twice.

**IN-WATER-CAPABLE:** The tool/battery can be used underwater

**TOOL/BATTERY IP.** Ingress protection for dust (first number) & water (second number) - IP54 resists water splashes, IP57 & 67 withstand inundation to 1metre, IP58&68 deeper than 1metre. Trade batteries like *Milwaukee* are **not** waterproof and tend not to quote an IP number because they are dependant on the tool to create an effective seal. Specialist batteries like *Holmatro* and *Lukas* are watertight (IP68) but you can safely assume that regular trade batteries are no more than IP54 so they are splashproof but certainly not submersible.

Below: The Weber Smart-Force range uses a battery cover on the rear to keep its Milwaukee 18v battery waterproof



**BAT  
R**

**Cutting  
Replaceable tips for  
lifting of loads**



**CHINESE & RUSSIAN TOOLS:** As at 2023/24 Russia has become a North Korea style pariah state so we don't have to consider Russian tools yet even if they were good enough. China, however, continues to vex. They produce quality products for big name companies around the world but there are two problems. The first is their propensity for copyright infringement via blatant copying of design and imagery, as an example, we have included *Aolai Rescue* because their battery tools are their own badged products but they have *Paratech* looking struts that even have dark green and yellow livery. If they could only shy away from this continual plagiarism of well known products and concentrate on their own considerable design skills the world would be a fairer and happier place!



# WEBERRESCUE

## BATTERY DRIVEN COMBI TOOL FOR RAPID INTERVENTION TEAMS

ng, spreading, pressing and pulling with one device.  
r breaking doors and windows, cutting round steel and chains,  
oads, pulling obstacles or opening vehicles (extrication).





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|   |   |   |   |   |   |            |
|---|---|---|---|---|---|------------|
| <div>IMAGES NOT TO SCALE</div> <div>OTHER TOOLS IN RANGE:</div> <div><div>■ = Combi</div><div>■ = Cutter</div><div>■ = Ram</div><div>■ = Special Tools</div><div>● = PARTIAL FEATURE</div><div><div>■</div><div>■</div><div>■</div> = Option</div><div>N/A = info Not Available/not given</div><div><div>■</div> = (cyan border) feature that is present on the model variant</div></div> |  |  |   |  |  |            |
|   | COMPANY   | AMKUS   | AMKUS   | AOLAI RESCUE  | AOLAI RESCUE  | EDILGRAPPA |
|   | MODEL   | ION iS320   | ION iS290   | ESP-650   | GYKZD-46~97/740   | DE625N     |
|   | SERIES  | Compact   | -   | GYKZD-A   | -   | -          |
|   | VOLTAGE   | 54/60v  | 54/60v  | 28v   | 28v   | 54/60v     |
| TOOLS IN RANGE  | <div>■ ■ ■ ■</div>  |   | <div>■ ■ ■</div>  |   | <div>■ ■ ■ ■</div>  |            |
| ORIGIN  |  |  |  |  |  |            |
| COST inc tax / VAT  | N/A   | N/A   | \$4500 per 2 tools FOB  | N/A   | N/A   |            |
| WEIGHT IN HAND<br>inc BATTERY(IES) & TIPS   | 25.8kg<br>56.9lb  | 22.5kg<br>49.6lb  | 24.5kg<br>54lb  | 26kg<br>57.2lb  | 22.7kg<br>50lb  |            |
| WEIGHT<br>DEFAULT BATTERY   | 1.2kg<br>2.6 lb   | 1.2kg<br>2.6 lb   | 0.9kg<br>2 lb   | 0.9kg<br>2 lb   | 1.2kg<br>2.6 lb   |            |
| BATTERY<br>Ah <span>OPTIONS</span>  | DeWalt<br>FlexVolt<br>6Ah 9, 12Ah   | DeWalt<br>FlexVolt<br>6Ah 9, 12Ah   | 5Ah   | 5Ah   | DeWalt<br>FlexVolt<br>9Ah   |            |
| BATTERY DURATION<br><span>RECHARGE TIME</span>  | 10-15mins<br>60mins   | 10-15mins<br>60mins   | 45-60mins<br>90mins   | 45-60mins<br>90mins   | 10-25mins<br>85mins   |            |
| LENGTH  | 968mm<br>38.1"  | 889mm<br>35"  | 905mm<br>35.6"  | 1194mm<br>47"   | 787mm<br>30.9"  |            |
| WIDTH   | 282mm<br>11.1"  | 246mm<br>9.7"   | 350mm<br>13.77"   | 320mm<br>12.6"  | 282mm<br>11.1"  |            |
| DEPTH   | 294mm<br>11.6"  | 287mm<br>11.3"  | 279mm<br>10.9"  | 265mm<br>10.4"  | 244mm<br>9.6"   |            |
| EN <span>■</span> CLASSIFICATION  | -   | -   | <span>■</span>  | <span>■</span>  | <span>■</span> AS45/625-  |            |
| EN SPREAD FORCE RANGE<br>t=US Ton   | -   | -   | 47-124kN<br>5.7-13.9 Ust  | 52-562kN<br>5.8-63 Ust  | <131kN<br>14.7 Ust  |            |
| NFPA <span>■</span> FORCE RANGE<br>t=US Ton (at/near tips)  | 46.9-67.2kN<br><span>■</span> 5.3-7.5 Ust   | 27.5-43.7kN<br><span>■</span> 3-4.6 Ust   | -   | -   | 32.9-60.6kN<br><span>■</span> 3.6-6.8 Ust   |            |
| MAX SPREAD FORCE<br>(Theoretical) t=US ton  | 175.7kN<br>19.7 Ust   | 43.7kN<br>4.4 Ust   | -   | -   | 174kN<br>19.5 Ust   |            |
| SPREAD DISTANCE   | 810mm<br>31.9"*   | 940mm<br>37"*   | 650mm<br>25.6"  | 820mm<br>32.2"  | 625mm<br>24.6"  |            |
| PULL FORCE RANGE/MAX<br>(THEORETICAL MAX) t=US ton  | 33.7-51.1kN<br>3.8-5.7 Ust  | 17.9-28.9kN<br>2-3.2 Ust  | (68)kN<br>(7.6) Ust   | (73)kN<br>(8.2) Ust   | (<46)kN<br>(<5.2) Ust   |            |
| MAX PULL DISTANCE   | approx 675mm<br>26.5"   | approx 785mm<br>31"   | 520mm<br>20.5"  | 716mm<br>28"  | 482.5mm<br>19"  |            |
| MAX SQUEEZE FORCE<br>t=US ton   | N/A   | N/A   | 69kN<br>7.7 Ust   | 140kN<br>15.8 Ust   | 69kN<br>7.7 Ust   |            |
| WORKING PRESSURE (HYDRAULIC)  | 700 Bar<br>10.2K psi  | 700 Bar<br>10.2K psi  | 720 Bar<br>10.4K psi  | 720 Bar<br>10.4K psi  | 700 Bar<br>10.2K psi  |            |
| WiFi/Bluetooth <span>■</span> capable   | - -   | - -   | - -   | - -   | - -   |            |
| REMOVABLE DOOR OPENING TIPS   | <span>■</span>  | -   | -   | -   | -   |            |
| ROTATE HEAD/HANDLE  | - 360°  | - 360°  | - -   | - -   | - 270°  |            |
| LED LIGHTS  | -   | -   | 2   | 2   | -   |            |
| IN-WATER USE BATTERY/TOOL IP  | 54 54   | 54 54   | 54 54   | 54 54   | 54 54   |            |
| NOTES   | *39.1" with ERT Extended Reach Tips   | *37" with ERT Extended Reach Tips. Replaced is281                                 | Cutting tips option and pulling chains  | Cutting tips option and pulling chains  |   |            |
| WEBSITE   | amkus.com   | amkus.com   | aolairescue.com   | aolairescue.com   | edilgrappa.com  |            |



















|    |   |   |   |   |   |   |
|----|---|---|---|---|---|---|
|    |  |  |  |  |  |  |
|    | <b>GENESIS<br/>RESCUE</b>   | <b>GENESIS<br/>RESCUE</b>   | <b>GENESIS<br/>RESCUE</b>   | <b>GENESIS<br/>RESCUE</b>   | <b>GENESIS<br/>RESCUE</b>   | <b>GENESIS<br/>RESCUE</b>   |
|    | <b>S44 SL3</b>  | <b>S49 SL3</b>  | <b>S54 SL3</b>  | <b>S44 SLi</b>  | <b>S49 SLi</b>  | <b>S54 SLi</b>  |
|    | <b>E-Force</b>  | <b>E-Force</b>  | <b>E-Force</b>  | <b>E-Force</b>  | <b>E-Force</b>  | <b>E-Force</b>  |
|    | <b>28v</b>  | <b>28v</b>  | <b>28v</b>  | <b>18v</b>  | <b>18v</b>  | <b>18v</b>  |
|    |  |  |  |  |  |  |
|    | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   |
|    | 17.3kg<br>38lb  | 20.7kg<br>45.5lb  | 20.9kg<br>45.5lb  | 18.2kg<br>40lb  | 21.6kg<br>47.5lb  | 21.8kg<br>48lb  |
|    | 1.4kg/1kg<br>3.2lb/2.3lb  | 1.4kg/1kg<br>3.2lb/2.3lb  | 1.4kg/1kg<br>3.2lb/2.3lb  | 1.1kg<br>2.33lb   | 1.1kg<br>2.33lb   | 1.1kg<br>2.33lb   |
|    | Genesis/<br>Milwaukee<br>5Ah*   | Genesis/<br>Milwaukee<br>5Ah*   | Genesis/<br>Milwaukee<br>5Ah*   | Milwaukee M18<br>8Ah/12Ah   | Milwaukee M18<br>8Ah/12Ah   | Milwaukee M18<br>8Ah/12Ah   |
|    | <45mins<br>90mins   | <45mins<br>90mins   | <45mins<br>90mins   | 60/90mins<br>45-83mins  | 60/90mins<br>45-83mins  | 60/90mins<br>45-83mins  |
|    | 877mm<br>34.5"  | 982mm<br>38.7"  | 1015mm<br>40"   | 893mm<br>35.2"  | 999mm<br>39.30"   | 1032mm<br>40.6"   |
|    | 239mm<br>9.4"   | 282mm<br>11.1"  | 282mm<br>11.1"  | 239mm<br>9.4"   | 282mm<br>11.1"  | 282mm<br>11.1"  |
|    | 241mm<br>9.5"   | 241mm<br>9.5"   | 241mm<br>9.5"   | 228mm<br>9.5"   | 228mm<br>9.5"   | 228mm<br>9.5"   |
| 19 | -   | -   | -   | ■ AS44/610-18.2   | ■ AS55/735-20.7   | ■ BS50/805-21.8   |
|    | -   | -   | -   | 44-857kN<br>5-96.3 USt  | 50-501kN<br>5.6-56.3 USt  | 50-501kN<br>5.6-56.3 USt  |
| st | ■ 41-52kN<br>4.6-5.8 USt  | ■ 51-76kN<br>5.7-8.5 USt  | ■ 46-68kN<br>5.2-7.6 USt  | -   | -   | -   |
|    | -   | -   | -   | -   | -   | -   |
|    | 610mm<br>24"  | 735mm<br>28.9"  | 805mm<br>31.7"  | 610mm<br>24"  | 735mm<br>28.9"  | 805mm<br>31.7"  |
|    | 21-42kN<br>2.36-4.7 USt   | 30-54kN<br>3.4-6 USt  | 26-52kN<br>2.9-5.8 USt  | 68kN<br>7.6 USt   | 70kN<br>7.9 USt   | 67kN<br>7.5 USt   |
|    | 388mm<br>15.3"  | 558mm<br>22"  | 618mm<br>24.3"  | 465mm<br>18.3"  | 620mm<br>24.4"  | 680mm<br>26.80"   |
|    | 149kN<br>16.9 USt   | 144kN<br>16.2 USt   | 144kN<br>16.2 USt   | 149kN<br>16.9 USt   | 144kN<br>16.2 USt   | 144kN<br>16.2 USt   |
|    | 700 Bar<br>10.2K psi  | 700 Bar<br>10.2K psi  | 700 Bar<br>10.2K psi  | 700 Bar<br>10.2K psi  | 700 Bar<br>10.2K psi  | 700 Bar<br>10.2K psi  |
|    | --  | --  | --  | ■   | ■   | ■   |
|    | ■   | ■   | ■   | ■   | ■ ■   | ■ ■   |
|    | - 360°  | - 360°  | - 360°  | - 360°  | - 360°  | - 360°  |
|    | 4   | 4   | 4   | 4   | 4   | 4   |
|    | 54 54   | 54 54   | 54 54   | ■ 54/68* 68   | ■ 54/68* 68   | ■ 54/68* 68   |
|    | *15Ah powerpack also<br>available   | *15Ah powerpack also<br>available   | *15Ah powerpack also<br>available   | All E-Force tools can<br>convert to hose.<br>* IP68 with waterproof cover         | All E-Force tools can<br>convert to hose.<br>* IP68 with waterproof cover           | All E-Force tools can<br>convert to hose.<br>* IP68 with waterproof cover           |
| m  | genesisrescue.com   | genesisrescue.com   | genesisrescue.com   | genesisrescue.com   | genesisrescue.com   | genesisrescue.com   |

|   |   |   |  |   |   |
|---|---|---|--|---|---|
| <p>IMAGES NOT TO SCALE</p> <p>OTHER TOOLS IN RANGE:</p> <p>■ = Combi ■ = Cutter ■ = Ram</p> <p>■ = Special Tools</p> <p>● = PARTIAL FEATURE</p> <p>■ ■ ■ = Option</p> <p>N/A = info Not Available/not given</p> <p>■ = (cyan border) WiFi is present on the model variant shown in cyan</p> |  |  |  |  |                              |
|   | <b>COMPANY</b>  | <b>HOLMATRO</b>   | <b>HOLMATRO</b>  | <b>HOLMATRO</b>   | <b>HURST (IDEX)</b>   |
|   | <b>MODEL</b>  | <b>PSP60</b>  | <b>PSP50</b>   | <b>PSP40</b>  | <b>SP 333</b>   |
|   | <b>SERIES</b>   | <b>PENTHEON</b>   | <b>PENTHEON</b>  | <b>PENTHEON</b>   | <b>E3/E3connect</b>   |
|   | <b>VOLTAGE</b>  | <b>28v</b>  | <b>28v</b>   | <b>28v</b>  | <b>25.2v</b>  |
| <b>TOOLS IN RANGE</b>   | <div> <span>■</span> <span>■</span> <span>■</span> <span>■</span> </div>          |   |  |   |   |
| <b>ORIGIN</b>   |  |  |  |  |                              |
| <b>COST inc tax / VAT</b>   | N/A   | N/A   | N/A  | N/A   | N/A   |
| <b>WEIGHT IN HAND inc BATTERY(IES) &amp; TIPS</b>   | 25kg<br>55.1lb  | 21kg<br>46.3lb  | 19.4kg<br>42.8lb   | 15.2kg<br>33.5lb  | 17.1kg<br>37.7lb  |
| <b>WEIGHT DEFAULT BATTERY</b>   | 1.5kg<br>3.3lb  | 1.5kg<br>3.3lb  | 1.5kg<br>3.3lb   | 1.5kg<br>3.3lb  | 1.4kg/1kg<br>3.2lb/2.3lb  |
| <b>BATTERY Ah OPTIONS</b>   | Holmatro<br>PBPA287<br>7Ah  | Holmatro<br>PBPA287<br>7Ah  | Holmatro<br>PBPA287<br>7Ah   | Holmatro<br>PBPA287<br>7Ah  | Lukas<br>9Ah 5Ah  |
| <b>BATTERY DURATION RECHARGE TIME</b>   | >11mins<br>60mins   | >11mins<br>60mins   | >11mins<br>60mins  | >11mins<br>60mins   | <60mins<br>150-100mins  |
| <b>LENGTH</b>   | 1052mm<br>41.4"   | 964mm<br>38"  | 956mm<br>37.6"   | 811mm<br>31.9"  | 823mm<br>32.4"  |
| <b>WIDTH</b>  | 319mm<br>12.6"  | 272mm<br>10.7"  | 270mm<br>10.6"   | 270mm<br>10.6"  | 256mm<br>10.1"  |
| <b>DEPTH</b>  | 274mm<br>10.8"  | 272mm<br>10.7"  | 276mm<br>10.9"   | 276mm<br>10.9"  | 253mm<br>9.96"  |
| <b>EN CLASSIFICATION</b>  | ■ BS62/820-25   | ■ AS54/725-21   | ■ AS43/725-19.4  | -   | -   |
| <b>EN SPREAD FORCE RANGE t=US Ton</b>   | 62-522kN<br>6.9-58.6 Ust  | 54-366kN<br>6.06-41.1 Ust   | 43-280kN<br>4.8-31.5 Ust   | 43-131kN<br>4.83-14.7 Ust   | -   |
| <b>NFPA FORCE RANGE t=US Ton (at/near tips)</b>   | 60-112kN<br>■ 6.7-12.6 Ust  | 50-93kN<br>■ 5.6-10.5 Ust   | 39.1-69.2kN<br>■ 4.4-7.8 Ust   | 39-53kN<br>■ 4.4-6 Ust  | 39-63kN<br>■ 4.4-7.1 Ust  |
| <b>MAX SPREAD FORCE (Theoretical) t=US ton</b>  | 875kN<br>98 Ust   | 875kN<br>98.3 Ust   | 875kN<br>98.4 Ust  | 875kN<br>98.32 Ust  | 836kN<br>94 Ust   |
| <b>SPREAD DISTANCE</b>  | 820mm<br>32.3"  | 725mm<br>28.5"  | 725mm<br>28.5"   | 510mm<br>20.1"  | 600mm<br>23.6"  |
| <b>PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton</b>  | 79kN<br>8.8 Ust   | 67kN<br>7.53 Ust  | 51.7kN<br>5.8 Ust  | 48kN<br>5.4 Ust   | 23-43 (56) kN<br>2.6-4.8 (6.3) Ust  |
| <b>MAX PULL DISTANCE</b>  | 700mm<br>27.6"  | 610mm<br>24"  | 613mm<br>24.1"   | 393mm<br>15.5"  | 440mm<br>17.3"  |
| <b>MAX SQUEEZE FORCE t=US ton</b>   | 127kN<br>14.2 Ust   | 135kN<br>15.17 Ust  | 59kN<br>6.6 Ust  | 47kN<br>5.28 Ust  | 144kN<br>16.2 Ust   |
| <b>WORKING PRESSURE (HYDRAULIC)</b>   | 720 Bar<br>10.4K psi  | 720 Bar<br>10.4K psi  | 720 Bar<br>10.4K psi   | 720 Bar<br>10.4K psi  | 700 Bar<br>10.1K psi  |
| <b>WiFi/Bluetooth capable</b>   | ■   | ■   | ■  | ■   | ■   |
| <b>REMOVABLE DOOR OPENING TIPS</b>  | ■   | ■   | ■  | ■   | ■   |
| <b>ROTATE HEAD/HANDLE</b>   | - 360°  | - 360°  | - 360°   | - 360°  | - 360°  |
| <b>LED LIGHTS</b>   | 6   | 6   | 6  | 6   | 4   |
| <b>IN-WATER USE BATTERY/TOOL IP</b>   | ■ 67 57   | ■ 67 57   | ■ 67 57  | ■ 67 57   | ■ 68 58   |
| <b>NOTES</b>  | Extreme grip spreader tips.<br>On-tool charging.<br>Stepless speed maximisation   | Extreme grip spreader tips.<br>On-tool charging.<br>Stepless speed maximisation   | Extreme grip spreader tips.<br>On-tool charging.<br>Stepless speed maximisation    | Extreme grip spreader tips.<br>On-tool charging.<br>Stepless speed maximisation     | Hurst E3 range is waterproof & can use IP68 battery. 5Ah battery reduces length by 20mm. 'Hero' graphics option |
| <b>WEBSITE</b>  | <a href="http://holmatro.com">holmatro.com</a>                                    | <a href="http://holmatro.com">holmatro.com</a>                                    | <a href="http://holmatro.com">holmatro.com</a>                                     | <a href="http://holmatro.com">holmatro.com</a>                                      | <a href="http://jawsoflife.com">jawsoflife.com</a>  |


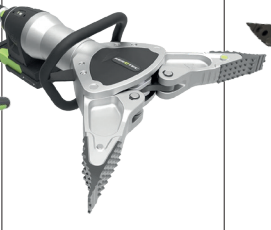




















|                       |   |  |  |  |  |  |
|-----------------------|---|--|--|--|--|--|
|                       |                                       |   |                                       |                                       |  |  |
| (K)                   | <b>HURST (IDEX)</b>   | <b>HURST (IDEX)</b>  | <b>HURST (IDEX)</b>  | <b>HYDRAM</b>  |  |  |
|                       | <b>SP 555</b>   | <b>SP 777</b>  | <b>M40-Mammoth</b>   | <b>Spreader</b>  |  |  |
| ect                   | <b>E3/E3connect</b>   | <b>E3/E3connect</b>  | <b>E3/E3connect</b>  | <b>Underwater</b>  |  |  |
|                       | <b>25.2v</b>  | <b>25.2v</b>   | <b>25.2v</b>   | <b>28V</b>   |  |  |
|                       |                                      |   |                                       |                                       |  |  |
|                       | <b>N/A</b>  | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   |  |  |
|                       | <b>19.9kg</b><br><b>43.9lb</b>  | <b>23.4kg</b><br><b>51.6lb</b>   | <b>24.9kg</b><br><b>54.9lb</b>   | <b>24.9kg</b><br><b>54.9lb</b>   |  |  |
|                       | <b>1.4kg/1kg</b><br><b>3.2lb/2.3lb</b>  | <b>1.6kg</b><br><b>3.5lb</b>   | <b>1.6kg</b><br><b>3.5lb</b>   | <b>1.6kg</b><br><b>3.5lb</b>   |  |  |
|                       | <b>Lukas</b><br><b>9Ah 5Ah</b>  | <b>Lukas</b><br><b>9Ah 5Ah</b>   | <b>Lukas</b><br><b>9Ah 5Ah</b>   | <b>Lukas</b><br><b>9Ah 5Ah</b>   |  |  |
|                       | <b>&lt;60mins</b><br><b>150-100mins</b>   | <b>&lt;60mins</b><br><b>150-100mins</b>  | <b>&lt;60mins</b><br><b>150-100mins</b>  | <b>&lt;60mins</b><br><b>150-100mins</b>  |  |  |
|                       | <b>923mm</b><br><b>36.3"</b>  | <b>997mm</b><br><b>39.3"</b>   | <b>1106mm</b><br><b>43.6"</b>  | <b>1106mm</b><br><b>43.6"</b>  |  |  |
|                       | <b>265mm</b><br><b>10.4"</b>  | <b>309mm</b><br><b>12.2"</b>   | <b>309mm</b><br><b>12.1"</b>   | <b>309mm</b><br><b>12.1"</b>   |  |  |
|                       | <b>253mm</b><br><b>9.96"</b>  | <b>253mm</b><br><b>9.96"</b>   | <b>253mm</b><br><b>9.96"</b>   | <b>253mm</b><br><b>9.96"</b>   |  |  |
|                       | <b>-</b>  | <b>-</b>   | <b>-</b>   | <b>-</b>   |  |  |
|                       | <b>-</b>  | <b>-</b>   | <b>-</b>   | <b>-</b>   |  |  |
| st                    | <b>49-72kN</b><br> <b>5.5-8 Ust</b> | <b>59-85kN</b><br> <b>6.6-9.6 Ust</b> | <b>45-72kN</b><br> <b>5-8.1 Ust</b> | <b>45-72kN</b><br> <b>5-8.1 Ust</b> |  |  |
|                       | <b>658kN</b><br><b>74 Ust</b>   | <b>600kN</b><br><b>67.4 Ust</b>  | <b>500kN</b><br><b>56.2 Ust</b>  | <b>500kN</b><br><b>56.2 Ust</b>  |  |  |
|                       | <b>730mm</b><br><b>28.7"</b>  | <b>813mm</b><br><b>32"</b>   | <b>1018mm</b><br><b>40.1"</b>  | <b>1018mm</b><br><b>40.1"</b>  |  |  |
| St                    | <b>28-46 (58) kN</b><br><b>3.2-5.2 (6.5) Ust</b>  | <b>30-49 (60) kN</b><br><b>3.4-5.5 (6.7) Ust</b>   | <b>23-42 (50) kN</b><br><b>2.6-4.7 (5.6) Ust</b>   | <b>23-42 (50) kN</b><br><b>2.6-4.7 (5.6) Ust</b>   |  |  |
|                       | <b>569mm</b><br><b>22.4"</b>  | <b>655mm</b><br><b>25.8"</b>   | <b>approx 848mm</b><br><b>33"</b>  | <b>approx 848mm</b><br><b>33"</b>  |  |  |
|                       | <b>115kN</b><br><b>12.9 Ust</b>   | <b>122kN</b><br><b>13.7 Ust</b>  | <b>N/A</b>   | <b>N/A</b>   |  |  |
|                       | <b>700 Bar</b><br><b>10.1K psi</b>  | <b>700 Bar</b><br><b>10.1K psi</b>   | <b>700 Bar</b><br><b>10.1K psi</b>   | <b>700 Bar</b><br><b>10.1K psi</b>   |  |  |
|                       |                                    |                                       |                                     |                                     |  |  |
|                       | <b>- 360°</b>   | <b>- 270°</b>  | <b>- 360°</b>  | <b>- 360°</b>  |  |  |
|                       | <b>4</b>  | <b>4</b>   | <b>4</b>   | <b>4</b>   |  |  |
|                       |  <b>68 58</b>                      |  <b>68 58</b>                         |  <b>68 58</b>                       |  <b>68 58</b>                       |  |  |
| Se T<br>length<br>ion | Hurst E3 range is waterproof & can use IP68 battery.<br>5Ah battery reduces length by 20mm.<br>'Hero' graphics option | Hurst E3 range is waterproof & can use IP68 battery.<br>5Ah battery reduces length by 20mm.<br>'Hero' graphics option    | Hurst E3 range is waterproof & can use IP68 battery.<br>5Ah battery reduces length by 20mm.<br>'Hero' graphics option  | Hurst E3 range is waterproof & can use IP68 battery.<br>5Ah battery reduces length by 20mm.<br>'Hero' graphics option  |  |  |
|                       | <a href="http://jawsoflife.com">jawsoflife.com</a>  | <a href="http://jawsoflife.com">jawsoflife.com</a>   | <a href="http://jawsoflife.com">jawsoflife.com</a>   | <a href="http://jawsoflife.com">jawsoflife.com</a>   |  |  |

|   |   |   |  |  |  |
|---|---|---|--|--|--|
| <p>IMAGES NOT TO SCALE</p> <p>OTHER TOOLS IN RANGE:</p> <p>■ = Combi ■ = Cutter ■ = Ram</p> <p>■ = Special Tools</p> <p>● = PARTIAL FEATURE</p> <p>□ = Option</p> <p>N/A = info Not Available/not given</p> <p>■ = (cyan border) feature that is present on the model variant</p> |  |  |  |       |       |
| COMPANY   | LUKAS (IDEX)  | LUKAS (IDEX)  | LUKAS (IDEX)   | LUKAS (IDEX)   | LUKAS (IDEX)   |
| MODEL   | SP 333  | SP 555  | SP 777   | SP 333   | SP 555   |
| SERIES  | E2  | E2  | E2   | E3/E3connect   | E3/E3connect   |
| VOLTAGE   | 25.2v   | 25.2v   | 25.2v  | 25.2v  | 25.2v  |
| TOOLS IN RANGE  |   | ■ ■ ■ ■   |  |  | ■ ■ ■ ■  |
| ORIGIN  | ■   | ■   | ■  | ■  | ■  |
| COST inc tax / VAT  | N/A   | N/A   | N/A  | N/A  | N/A  |
| WEIGHT IN HAND  | 17.3kg  | 20kg  | 23.6kg   | 17.1kg   | 15.2kg   |
| inc BATTERY(IES) & TIPS   | 38.1lb  | 44.1lb  | 52lb   | 37.7lb   | 33.5lb   |
| WEIGHT  | 1.2kg   | 1.2kg   | 1.2kg  | 1.4kg/1kg  | 1.6kg  |
| DEFAULT BATTERY   | 2.7lb   | 2.7lb   | 2.7lb  | 3.2lb/2.3lb  | 3.5lb  |
| BATTERY   | Lukas   | Lukas   | Lukas  | Lukas  | Lukas  |
| Ah OPTIONS  | 9Ah 5Ah   | 9Ah 5Ah   | 9Ah 5Ah  | 9Ah 5Ah  | 9Ah 5Ah  |
| BATTERY DURATION  | 30-60mins   | 30-60mins   | 30-60mins  | <60mins  | <60mins  |
| RECHARGE TIME   | 75-150mins  | 75-150mins  | 75-150mins   | 150-100mins  | 150-100mins  |
| LENGTH  | 905mm<br>35.6"  | 1002mm<br>39.4"   | 1080mm<br>42.5"  | 823mm<br>32.4"   | 1002mm<br>39.4"  |
| WIDTH   | 256mm<br>10.1"  | 265mm<br>10.4"  | 309mm<br>12.2"   | 256mm<br>10.1"   | 265mm<br>10.4"   |
| DEPTH   | 253mm<br>9.96"  | 280mm<br>11"  | 285mm<br>11.2"   | 253mm<br>9.96"   | 253mm<br>9.96"   |
| EN CLASSIFICATION   | ■ AS 42/600-18.3  | ■ AS 52/730-20.9  | ■ BS 63/813-24.5   | ■ AS 42/600-18.3   | ■ AC 52/730-21   |
| EN SPREAD FORCE RANGE   | 42-836kN  | 52-658kN  | 63-600kN   | 42-836kN   | 52-658kN   |
| t=US Ton  | 4.7-94 Ust  | 5.8-74 Ust  | 7.1-67.4 Ust   | 4.7-94 Ust   | 5.8-74 Ust   |
| NFPA FORCE RANGE  | -   | -   | -  | -  | -  |
| t=US Ton (at/near tips)   |   |   |  |  |  |
| MAX SPREAD FORCE  | 836kN   | 658kN   | 600kN  | 836kN  | 658kN  |
| (Theoretical) t=US ton  | 94 Ust  | 74 Ust  | 67.4 Ust   | 94 Ust   | 74 Ust   |
| SPREAD DISTANCE   | 600mm<br>23.6"  | 730mm<br>28.7"  | 813mm<br>32"   | 600mm<br>23.6"   | 730mm<br>28.7"   |
| PULL FORCE RANGE/MAX  | 23-43 (56) kN   | 28-46 (58) kN   | 30-49 (60) kN  | 23-43 (56) kN  | 28-46 (58) kN  |
| (THEORETICAL MAX) t=US ton  | 0 (0) Ust   | 3.2-5.2 (6.5) Ust   | 3.4-5.5 (6.7) Ust  | 2.6-4.8 (6.3) Ust  | 3.2-5.2 (6.5) Ust  |
| MAX PULL DISTANCE   | 440mm<br>17.3"  | 569mm<br>22.4"  | 655mm<br>25.8"   | 440mm<br>17.3"   | 569mm<br>22.4"   |
| MAX SQUEEZE FORCE   | 144kN   | 115kN   | 122kN  | 144kN  | 115kN  |
| t=US ton  | 5.7 Ust   | 12.9 Ust  | 13.7 Ust   | 16.2 Ust   | 12.9 Ust   |
| WORKING PRESSURE (HYDRAULIC)  | 700 Bar<br>10.1K psi  | 700 Bar<br>10.1K psi  | 700 Bar<br>10.1K psi   | 700 Bar<br>10.1K psi   | 700 Bar<br>10.1K psi   |
| WiFi/Bluetooth capable  | - -   | - -   | - -  | ■  | ■  |
| REMOVABLE DOOR OPENING TIPS   | ■   | ■   | ■  | ■  | ■  |
| ROTATE HEAD/HANDLE  | - 360°  | - 360°  | - 360°   | - 360°   | - 360°   |
| LED LIGHTS  | 6   | 6   | 4  | 2  | 6  |
| IN-WATER USE BATTERY/TOOL IP  | ■ 68 58   | ■ 68 58   | ■ 54 54  | ■ 54 54  | ■ 57 57  |
| NOTES   | DISCONTINUED  | DISCONTINUED  | DISCONTINUED   | All Can use IP68 battery.<br>EWXT without on board<br>dashboard has been<br>DISCONTINUED | All Can use IP68 battery.<br>EWXT without on board<br>dashboard has been<br>DISCONTINUED |
| WEBSITE   | lukas.com   | lukas.com   | lukas.com  | lukas.com  | lukas.com  |

|     |   |   |  |  |  |   |
|-----|---|---|--|--|--|---|
|     |          |    |   |  |   |                                        |
| (X) | LUKAS (IDEX)  | OGURA   | OGURA  | OGURA  | POWERHAWK TECHNOLOGIES   | POWERHAWK TECHNOLOGIES  |
|     | SP 777  | RPS-505   | HRS941/HRS-934   | HRS931/HRS-934   | P16 / S-1601   | P-16X / S-1601X   |
|     | E3/E3connect  | RP  | SpreaderHead   | SpreaderHead   | Legacy   | X   |
|     | 25.2v   | 18v   | 18v  | 18v  | 12v or 16v LiGHT   | 7.5/12v   |
|     |   |   |  |  |  |   |
|     |          |    |   |   |   |                                        |
|     | N/A   | N/A   | N/A  | N/A  | N/A  | N/A   |
|     | 23.4kg<br>51.5lb  | 14.2kg<br>31.3lb  | 4.2kg +5.4kg<br>9.3lb +11.9lb  | 3.9kg +5.4kg<br>8.6lb +11.9lb  | 22.3kg<br>49.3lb   | 19.5kg<br>43lb  |
|     | 1.6kg<br>3.5lb  | 1-1.36kg<br>2.2-3lb   | 1-1.36kg<br>2.2-3lb  | 1-1.36kg<br>2.2-3lb  | *4.5kg / 9.9lb<br>15.9kg / *35lb   | 1..36kg<br>3lb  |
|     | Lukas<br>9Ah 5Ah  | Makita<br>5-6Ah*  | Makita<br>5-6Ah*   | Makita<br>5-6Ah*   | Powerhawk<br>12.4Ah LiGHT<br>33Ah 12v  | Powerhawk<br>7.5Ah<br>or any 12v source   |
|     | <60mins<br>150-100mins  | <12mins<br>55-120mins   | <12mins<br>55-120mins  | <12mins<br>55-120mins  | >30 mins<br><120mins/<15hr   | >30mins<br><120mins   |
|     | 997mm<br>39.3"  | 600mm<br>23.6"  | 328mm +352mm<br>12.9"+13.9"  | 303mm +352mm<br>11.9"+13.9"  | 635mm<br>25"   | 635mm<br>25"  |
|     | 309mm<br>12.2"  | 206mm<br>8.1"   | 111mm +121mm<br>4.4"+4.8"  | 111mm +121mm<br>4.4"+4.8"  | 254mm<br>10"   | 254mm<br>10"  |
|     | 253mm<br>9.96"  | 101mm<br>7.1"   | 272mm +78mm<br>10.7"+3.1"  | 272mm +78mm<br>10.7"+3.1"  | 305mm<br>12"   | 279mm<br>11"  |
| L.1 | AS43/725-19.4   | -   | -  | -  | -  | -   |
|     | 63-600kN<br>7.1-67.4 USt  | -   | <39.3kN<br>4.4 USt   | <39.3kN<br>4.4 USt   | -  | -   |
|     | -   | -   | -  | -  | 35.6-48.9kN<br>4-5.4 USt   | 31.6-52.5kN<br>3.5-5.9 USt  |
|     | 600kN<br>67.4 USt   | 745kN<br>83 USt   | 39.3kN<br>4.4 USt  | 39.3kN<br>4.4 USt  | 201.2kN<br>22.6 USt  | 711.7kN<br>80 USt   |
|     | 813mm<br>32"  | 505mm<br>19.9"  | 158mm<br>6.2"  | 158mm<br>6.2"  | 356mm<br>14"   | 406.4mm<br>16"  |
| St  | 30-49 (60) kN<br>3.4-5.5 (6.7) USt  | N/A   | -  | -  | N/A  | N/A   |
|     | 655mm<br>25.8"  | N/A   | -  | -  | approx 270mm<br>11"  | approx 312mm<br>12.5"   |
|     | 122kN<br>13.7 USt   | 692.5kN<br>77.8 USt   | 69kN<br>7.7 USt  | 69kN<br>7.7 USt  | N/A  | N/A   |
|     | 700 Bar<br>10.1K psi  | N/A   | N/A  | N/A  | N/A  | N/A   |
|     |        | --  | --   | --   | --   | --  |
|     |        |  | -  | -  |   |                                      |
|     | - 360°  | 360° 360°   | 360° 270°  | 360° -   | 70° 270°   | 70° 270°  |
|     | 6   | -   | -  | -  | -  | -   |
|     |  68 58 | 54 54   | 54 54  | 54 54  | 54 54  | 54 54   |
|     | All Can use IP68 battery.<br>EWXT without on board<br>dashboard has been<br>DISCONTINUED  | *EU uses 5Ah, US tends to<br>use 6Ah  | Heads swap out in seconds. Cutter, Spreader etc. attach<br>via short hose or direct to the powerhead.<br>941 = US market.<br>All heads interchangeable between power units |  | Legacy only in support of<br>existing purchases. Accepts<br>all P-16X blades & can<br>be retrofitted to become<br>P-16X*Wt= battery+controller | interchangeable<br>Cutter,spreader &combi heads.<br>Both P16&P16X can use a 12v<br>car battery or any 12v power<br>source |
|     | lukas.com   | ogurarescuertools.com   | ogurarescuertools.com  | ogurarescuertools.com  | powerhawk.com  | powerhawk.com   |



|   |   |   |  |  |   |   |   |
|---|---|---|--|--|---|---|---|
| <p>IMAGES NOT TO SCALE<br/>OTHER TOOLS IN RANGE:<br/> <div> <div></div> = Combi <div></div> = Cutter <div></div> = Ram </div> <div> <div></div> = Special Tools </div> <div> <div></div> = PARTIAL FEATURE </div> <div> <div></div> = Option </div> N/A = info Not Available/not given<br/> <div></div> = (cyan border) feature that is present on the model variant </p> |                            |   |                 |                          |                        |                        |                        |
|   | COMPANY   | RESQTEC   | RESQTEC  | SCORPE   | TNT RESCUE  | TNT RESCUE  | TNT RESCUE  |
| MODEL   | P-4X  | X2  | Spreader MS  | ES100-32   | ES100-28  | ES100-28  | ES100-28  |
| SERIES  | EDD   | EDD   | GreenSpirit II   | Storm Surge  | Storm Surge   | Storm Surge   | Storm Surge   |
| VOLTAGE   | 43.2v   | 43.2v   | 18v/28v  | 18v/20v  | 18v/20v   | 18v/20v   | 18v/20v   |
| TOOLS IN RANGE  | <div><div></div><div></div><div></div><div></div></div>   | <div><div></div><div></div><div></div><div></div></div>                   | <div><div></div><div></div><div></div><div></div></div>  | <div><div></div><div></div><div></div><div></div></div>  | <div><div></div><div></div><div></div><div></div></div>   | <div><div></div><div></div><div></div><div></div></div>   | <div><div></div><div></div><div></div><div></div></div>   |
| ORIGIN  | <div><div></div><div></div><div></div></div>  | <div><div></div><div></div><div></div></div>                              | <div><div></div><div></div><div></div></div>   | <div><div></div><div></div><div></div></div>   | <div><div></div><div></div><div></div></div>  | <div><div></div><div></div><div></div></div>  | <div><div></div><div></div><div></div></div>  |
| COST inc tax / VAT  | N/A   | N/A   | N/A  | N/A  | N/A   | N/A   | N/A   |
| WEIGHT IN HAND inc BATTERY(IES) & TIPS  | 20kg<br>44lb  | 20.5kg<br>45.2lb  | 18.1kg<br>39.8lb   | 23.9-23.5kg<br>51.8-52.6lb   | 23.31-22.9kg<br>51.4-50.55lb  | 23.31-22.9kg<br>51.4-50.55lb  | 23.31-22.9kg<br>51.4-50.55lb  |
| WEIGHT DEFAULT BATTERY  | 1kg<br>2.2lb  | 1kg<br>2.2lb  | 1kg<br>2.2lb   | 1.1kg / 2.4lb<br>0.6kg / 1.3lb   | 1.1kg / 2.4lb<br>0.6kg / 1.3lb  | 1.1kg / 2.4lb<br>0.6kg / 1.3lb  | 1.1kg / 2.4lb<br>0.6kg / 1.3lb  |
| BATTERY Ah OPTIONS  | Resqtec 2.6Ah   | Resqtec 2.6Ah   | Milwaukee 8Ah M18<br>5Ah M28   | Milwaukee M18 8/9Ah. Makita 6Ah<br>DeWalt FlexVolt20 9Ah   | Milwaukee M18 8/9Ah. Makita 6Ah<br>DeWalt FlexVolt20 9Ah  | Milwaukee M18 8/9Ah. Makita 6Ah<br>DeWalt FlexVolt20 9Ah  | Milwaukee M18 8/9Ah. Makita 6Ah<br>DeWalt FlexVolt20 9Ah  |
| BATTERY DURATION RECHARGE TIME  | <45mins<br>60mins   | <45mins<br>60mins   | 60/80mins<br>45-90mins   | 10-15mins<br>87 / 60mins   | 10-15mins<br>87 / 60mins  | 10-15mins<br>87 / 60mins  | 10-15mins<br>87 / 60mins  |
| LENGTH  | 711mm<br>28"  | 823mm<br>32.4"  | 912mm<br>36"   | 944.2mm<br>37.2"   | 884mm<br>34.8"  | 884mm<br>34.8"  | 884mm<br>34.8"  |
| WIDTH   | 271mm<br>10.7"  | 273mm<br>10.7"  | 250mm<br>9.8"  | 283mm<br>11.15"  | 283mm<br>11.15"   | 283mm<br>11.15"   | 283mm<br>11.15"   |
| DEPTH   | 274mm<br>10.8"  | 235mm<br>9.25"  | 222mm<br>8.7"  | 345.4mm<br>13.6"   | 345.4mm<br>13.6"  | 345.4mm<br>13.6"  | 345.4mm<br>13.6"  |
| EN CLASSIFICATION   | -   | AS38.4/607-20.5   | AS44/610-18.1  | -  | -   | -   | -   |
| EN SPREAD FORCE RANGE t=US Ton  | -   | 38.4-83.2kN<br>4.3-9.3 Ust  | 44-857kN<br>5-96.3 Ust   | -  | -   | -   | -   |
| NFPA FORCE RANGE t=US Ton (at/near tips)  | 32.8-51kN<br>3.7-5.7 Ust  | 34.7-76.7kN<br>3.9-8.6 Ust  | -  | 225-895kN<br>25.3-100.56 Ust   | 249-1014kN<br>27.98-113.93Ust   | 249-1014kN<br>27.98-113.93Ust   | 249-1014kN<br>27.98-113.93Ust   |
| MAX SPREAD FORCE (Theoretical) t=US ton   | 374kN<br>42 Ust   | 342kN<br>38.4 Ust   | 171kN<br>19.2 Ust  | 895kN<br>100.56 Ust  | 1014kN<br>113.93 Ust  | 1014kN<br>113.93 Ust  | 1014kN<br>113.93 Ust  |
| SPREAD DISTANCE   | 401mm<br>15.8"  | 607mm<br>23.9"  | 610mm<br>24"   | 700.1mm<br>31.5"   | 698.5mm<br>27.5"  | 698.5mm<br>27.5"  | 698.5mm<br>27.5"  |
| PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton   | -   | 27.4-59.6kN<br>3.1-6.7 Ust  | 68kN<br>7.6 Ust  | 41.54kN<br>4.67 Ust  | 49.7kN<br>5.58 Ust  | 49.7kN<br>5.58 Ust  | 49.7kN<br>5.58 Ust  |
| MAX PULL DISTANCE   | -   | 426mm<br>16.8"  | 465mm<br>18.3"   | 565.2mm<br>22.25"  | 463.5mm<br>18.25"   | 463.5mm<br>18.25"   | 463.5mm<br>18.25"   |
| MAX SQUEEZE FORCE t=US ton  | 36.3-57.7kN<br>4-6.48 Ust   | 66.3-120.9kN<br>7.4-13.4 Ust  | 149kN<br>16.9 Ust  | N/A  | N/A   | N/A   | N/A   |
| WORKING PRESSURE (HYDRAULIC)  | 700 Bar<br>10.2K psi  | 720 Bar<br>10.4K psi  | 700 Bar<br>10.2K psi   | 722 Bar<br>10.5K psi   | 722 Bar<br>10.5K psi  | 722 Bar<br>10.5K psi  | 722 Bar<br>10.5K psi  |
| WiFi/Bluetooth capable  | --  |   | --   | --   | --  | --  | --  |
| REMOVABLE DOOR OPENING TIPS   |   |   | -  |  |   |   |   |
| ROTATE HEAD/HANDLE  | 61° 270°  | - 360°  | - 110°   | --   | --  | --  | --  |
| LED LIGHTS  |   | 6   | 4  | 4  | 4   | 4   | 4   |
| IN-WATER USE BATTERY/TOOL IP  | 54 54   | 57 57   | 54/68* 68  | 54 54  | 54 54   | 54 54   | 54 54   |
| NOTES   | 3x interchangeable heads/ blades. Rear handle option.<br>*Also 28Ah powerpack.<br>Jaw recess (reach)= 118mm | Cutting tips option. Auto high-temp shut-off.<br>Step less speed increase | Converter available for M28 & other batteries.<br>* IP68 with M18 & waterproof cover (not shown) | TNT prices include 2 batteries and Dual Rapid charger. Storm2 series DISCONTINUED<br>Mains adapter=option. | TNT prices include 2 batteries and Dual Rapid charger. Storm2 series DISCONTINUED<br>Mains adapter=option | TNT prices include 2 batteries and Dual Rapid charger. Storm2 series DISCONTINUED<br>Mains adapter=option | TNT prices include 2 batteries and Dual Rapid charger. Storm2 series DISCONTINUED<br>Mains adapter=option |
| WEBSITE   | rescue.resqtec.com  | rescue.resqtec.com  | scorpe.net   | tntrescue.com  | tntrescue.com   | tntrescue.com   | tntrescue.com   |

|   |   |   |   |  |   |   |
|---|---|---|---|--|---|---|
|                          |  |  |  |  |  |  |
| <b>NT RESCUE</b>  | <b>WEBER RESCUE</b>   | <b>WEBER RESCUE</b>   | <b>WEBER RESCUE</b>   | <b>WEBER RESCUE</b>  | <b>WEBER RESCUE</b>   | <b>WEBER RESCUE</b>   |
| <b>ES100-24</b>   | <b>SP 44 AS</b> 1093703   | <b>SP 54 AS</b> 1091736   | <b>SP 50 BS</b> 1091735   | <b>SP 44</b> 1101468   | <b>SP 54 AS</b> 1101469   | <b>SP 50 BS</b> 1101548   |
| <b>Storm Surge</b>  | <b>E-Force3</b>   | <b>E-Force3</b>   | <b>E-Force3</b>   | <b>Smart Force</b>   | <b>Smart Force</b>  | <b>Smart Force</b>  |
| <b>18v/20v</b>  | <b>28v</b>  | <b>28v</b>  | <b>28v</b>  | <b>18v</b>   | <b>18v</b>  | <b>18v</b>  |
|                          |  |  |  |   |  |  |
| N/A   | N/A   | N/A   | N/A   | N/A  | N/A   | N/A   |
| 2.31-22.7kg<br>49.2-50lb  | 17.3kg<br>38lb  | 20.7kg<br>45.5lb  | 20.9kg<br>46lb  | 18.2kg<br>40lb   | 21.6kg<br>47.5lb  | 21.8kg<br>48lb  |
| 1.1kg / 2.4lb<br>0.6kg / 1.3lb  | 1kg<br>2.2lb  | 1kg<br>2.2lb  | 1kg<br>2.2lb  | 1.1kg<br>2.33lb  | 1.1kg<br>2.33lb   | 1.1kg<br>2.33lb   |
| Milwaukee M18<br>Ah, Makita 6Ah<br>Valt FlexVolt20<br>9Ah   | Milwaukee M28<br>5Ah  | Milwaukee M28<br>5Ah  | Milwaukee M28<br>5Ah  | Milwaukee M18<br>8Ah/12Ah  | Milwaukee M18<br>8Ah/12Ah   | Milwaukee M18<br>8Ah/12Ah   |
| 10-15mins<br>87 / 60mins  | <45-80mins<br>60mins  | <45-80mins<br>60mins  | <45-80mins<br>60mins  | 60/90mins<br>45-83mins   | 60/90mins<br>45-83mins  | 60/90mins<br>45-83mins  |
| 823.77mm<br>32.43"  | 877mm<br>34.5"  | 982mm<br>38.7"  | 1015mm<br>40"   | 893mm<br>35.2"   | 999mm<br>39.30"   | 1032mm<br>40.6"   |
| 283mm<br>11.15"   | 239mm<br>9.4"   | 282mm<br>11.1"  | 282mm<br>11.1"  | 239mm<br>9.4"  | 282mm<br>11.1"  | 282mm<br>11.1"  |
| 344.9mm<br>13.58"   | 241mm<br>9.5"   | 241mm<br>9.5"   | 241mm<br>9.5"   | 228mm<br>9.5"  | 228mm<br>9.5"   | 228mm<br>9.5"   |
| -   | ■ AS44/610-17.3   | ■ AS55/735-20.7   | ■ BS50/805-20.9   | ■ AS44/610-18.2  | ■ AS55/735-20.7   | ■ BS50/805-21.8   |
| -   | 44-857kN<br>5-96.3 Ust  | 55-501kN<br>6.2-56.3 Ust  | 50-501kN<br>5.6-56.3 Ust  | 44-857kN<br>5-96.3 Ust   | 50-501kN<br>5.6-56.3 Ust  | 50-501kN<br>5.6-56.3 Ust  |
| 86-1078kN<br>32-121 Ust   | -   | -   | -   | -  | -   | -   |
| -   | -   | -   | -   | -  | -   | -   |
| 596.9mm<br>23.5"  | 610mm<br>24"  | 735mm<br>28.9"  | 805mm<br>31.7"  | 610mm<br>24"   | 735mm<br>28.9"  | 805mm<br>31.7"  |
| 63.9kN<br>7.2 Ust   | 68kN<br>7.6 Ust   | 70kN<br>7.9 Ust   | 67kN<br>7.5 Ust   | 68kN<br>7.6 Ust  | 70kN<br>7.9 Ust   | 67kN<br>7.5 Ust   |
| 463.5mm<br>18.2"  | 465mm<br>18.3"  | 620mm<br>24.4"  | 680mm<br>26.8"  | 465mm<br>18.3"   | 620mm<br>24.4"  | 680mm<br>26.80"   |
| N/A   | 149kN<br>16.9 Ust   | 144kN<br>16.2 Ust   | 144kN<br>16.2 Ust   | 149kN<br>16.9 Ust  | 144kN<br>16.2 Ust   | 144kN<br>16.2 Ust   |
| 722 Bar<br>10.5K psi  | 700 Bar<br>10.2K psi  | 700 Bar<br>10.2K psi  | 700 Bar<br>10.2K psi  | 700 Bar<br>10.2K psi   | 700 Bar<br>10.2K psi  | 700 Bar<br>10.2K psi  |
| --  | --  | --  | --  | ■  | ■   | ■   |
| ■   | ■ ■   | ■ ■   | ■ ■   | ■  | ■ ■   | ■ ■   |
| --  | - 360°  | - 360°  | - 360°  | - 360°   | - 360°  | - 360°  |
| 4   | 4   | 4   | 4   | 4  | 4   | 4   |
| 54 54   | 54 54   | 54 54   | 54 54   | ■ 54/68* 68  | ■ 54/68* 68   | ■ 54/68* 68   |
| Prices include 2<br>series and Dual Rapid<br>arger. Storm2 series<br>DISCONTINUED<br>ins adapter.option | All E-Force tools can<br>convert to hose  | All E-Force tools can<br>convert to hose  | All E-Force tools can<br>convert to hose  | All E-Force tools can<br>convert to hose.<br>* IP68 with waterproof<br>cover       | All E-Force tools can<br>convert to hose.<br>* IP68 with waterproof cover           | All E-Force tools can<br>convert to hose.<br>* IP68 with waterproof<br>cover        |
| rescue.com  | weber.com   | weber.com   | weber.com   | weber.com  | weber.com   | weber.com   |



# **POWER ASCENDERS – FOR PROFESSIONALS.**

ActSafe Power Ascenders are an ingenious combination of a high-capacity rope winch in a compact, lightweight and user-friendly design. They simply redefine the possibilities for working in vertical environments.

**skylotec.com**



More Information



## **ActSafe PMX**











- working load limit (WLL) of 250 kg
- 17 m / min at 100 kg
- suitable for 11 mm ropes











## ActSafe ACX







- simplifies and accelerates work on complex or difficult to access structures
- power-saving use
- remote control up to 150m

|  |   |   |  |   |   |   |
|--|---|---|--|---|---|---|
| <div>IMAGES NOT TO SCALE</div> <div>OTHER TOOLS IN RANGE:</div> <div><div>■</div>=BATTERY TOOLS</div> <div><div>■</div>= Combi</div> <div><div>■</div>= Cutter</div> <div><div>■</div>=Ram</div> <div><div>■</div>= Special Tools</div> <div><div>●</div>= PARTIAL or OK but not ideal</div> <div><div>□</div>= Option</div> <div>N/A = info Not Available/not given</div> |   |   |  |  |  |  |
| COMPANY  | AOLAI RESCUE  | AOLAI RESCUE  | EDILGRAPPA   | GENESIS RESCUE  | GENESIS RESCUE  | GENESIS RESCUE  |
| SERIES MODEL VARIANT   |   |   | DE700  | S44 SL  | S49 XL  | S53 XL  |
| Product Code   |   |   |  |   |   |   |
| TOOLS IN RANGE   | <div>■ ■ ■ ■ ■</div>  |   | <div>■ ■ ■ ■ ■</div>   | <div>■ ■ ■ ■ ■</div>  |   |   |
| ORIGIN   |  |  |   |  |  |  |
| COST inc tax / VAT   | \$4500 per 2 tools FOB  | N/A   | N/A  | N/A   | N/A   | N/A   |
| WEIGHT inc TIPS  | 24.5kg<br>54lb  | 26kg<br>57.2lb  | 15.5kg<br>00lb   | 17.3kg<br>38lb  | 19.9kg<br>43.9lb  | 20.3kg<br>44.7lb  |
| LENGTH   | 905mm<br>35.6"  | 1194mm<br>47"   | 775mm<br>00"   | 768mm<br>30.2"  | 766mm<br>30.2"  | 836mm<br>32.9"  |
| WIDTH  | 350mm<br>13.77"   | 320mm<br>12.6"  | 280mm<br>11"   | 250mm<br>9.8"   | 243mm<br>9.6"   | 299mm<br>11.8"  |
| DEPTH  | 279mm<br>10.9"  | 265mm<br>10.4"  | 190mm<br>7.5"  | 190mm<br>7.5"   | 199mm<br>7.8"   | 216mm<br>8.5"   |
| EN CLASSIFICATION  | -   | -   | AS105/710-15.5   | -   | -   | -   |
| EN SPREAD FORCE RANGE t=US Ton   | 47-124kN<br>5.7-13.9 Ust  | 52-562kN<br>5.8-63 Ust  | -<br>-   | -<br>-  | -<br>-  | -<br>-  |
| NFPA □ FORCE RANGE t=US Ton (at/near tips)   | -   | -   | 38-105kN<br>4.2-11.8 Ust   | 75-151kN<br>0-0 Ust   | 49-61kN<br>0-0 Ust  | 52.8-81.3<br>0-0 Ust  |
| MAX SPREAD FORCE (Theoretical) t=US ton  | -   | -   | 367kN<br>41.25 Ust   | -   | -   | -   |
| SPREAD DISTANCE  | 650mm<br>25.6"  | 820mm<br>32.2"  | 710mm<br>28"   | 610mm<br>24"  | 710mm<br>28"  | 800mm<br>31.5"  |
| PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton  | (68)kN<br>(7.6) Ust   | (73)kN<br>(8.2) Ust   | 63.7kN<br>7.1 Ust  | 30-44kN<br>0-0 Ust  | 38-48kN<br>0-0 Ust  | 38.6-66kN<br>0-0 Ust  |
| MAX PULL DISTANCE  | 520mm<br>20.5"  | 716mm<br>28"  | 595.5mm<br>00"   | ?<br>?  | 561mm<br>22"  | 645mm<br>25.4"  |
| MAX SQUEEZE FORCE t=US ton   | 69kN<br>7.7 Ust   | 140kN<br>15.8 Ust   | 49kN<br>5.5 Ust  | -<br>-  | -<br>-  | -<br>-  |
| WORKING PRESSURE)  | 720Bar / 10.4Kpsi   | 720Bar / 10.4Kpsi   | 700Bar / 10.2Kpsi  | 700Bar / 10.2Kpsi   | 700Bar / 10.2Kpsi   | 700Bar / 10.2Kpsi   |
| REMOVABLE DOOR OPENING TIPS  | -   | -   | ■  | ■   | ■   | ■   |
| ROTATE HEAD/HANDLE   | --  | --  | --   | --  | --  | --  |
| OPERATING TEMP   | ?   | ?   | ?  | ?   | ?   | ?   |
| LED LIGHTS   | 2   | 2   | -  | -   | -   | -   |
| IN-WATER USE IP  | 54  | 54  | 54   | 54  | 54  | 54  |
| NOTES  | Cutting tips option and pulling chains  | Cutting tips option and pulling chains  |  | All Genesis battery tools can convert to hose and vice-versa                        |   |   |
| WEBSITE  | aolairescue.com   | aolairescue.com   | edilgrappa.com   | genesiscrescue.com  | genesiscrescue.com  | genesiscrescue.com  |

# HOSE-FED SPREADERS







|   |   |   |   |  |   |   |
|---|---|---|---|--|---|---|
|   |  |   |  |  |  |  |
| <b>GENESIS<br/>RESCUE</b>   | <b>GENESIS<br/>RESCUE</b>   |   | <b>HOLMATRO</b>   | <b>HOLMATRO</b>  | <b>HOLMATRO</b>   | <b>HOLMATRO</b>   |
| <b>S60 XL</b>   | <b>S80 XL</b>   |   | <b>CORE<br/>SP5240CL</b>  | <b>CORE<br/>SP5240</b>   | <b>CORE<br/>SP5250</b>  | <b>CORE<br/>SP5260</b>  |
|  |  |   |  |  |  |  |
| N/A   | N/A   |   | N/A   | N/A  | N/A   | N/A   |
| 24.7kg<br>40lb  | 25.1kg<br>55.3lb  |   | 15.2kg<br>33.5lb  | 19.4kg<br>42.8lb   | 21kg<br>46.3lb  | 25kg<br>55.1lb  |
| 856mm<br>54.5"  | 749mm<br>29.5"  |   | 811mm<br>31.9"  | 956mm<br>37.6"   | 964mm<br>38"  | 1052mm<br>41.4"   |
| 329mm<br>13"  | 329mm<br>13"  |   | 270mm<br>10.6"  | 270mm<br>10.6"   | 272mm<br>10.7"  | 319mm<br>12.6"  |
| 213mm<br>8.4"   | 213mm<br>8.4"   |   | 276mm<br>10.9"  | 276mm<br>10.9"   | 272mm<br>10.7"  | 274mm<br>10.8"  |
| -   | -   |   | -<br>43-131kN<br>4.83-14.7 Ust  | AS43/725-19.4<br>43-280kN<br>4.8-31.5 Ust  | AS54/725-21<br>54-366kN<br>6.06-41.1 Ust  | BS62/820-25<br>62-522kN<br>6.9-58.6 Ust   |
| 63-84.7kN<br>0-0 Ust  | 87.7-115.5kN<br>0-0 Ust   |   | 39-53kN<br>4.4-6 Ust  | 39.1-69.2kN<br>4.4-7.8 Ust   | 50-93kN<br>5.6-10.5 Ust   | 60-112kN<br>6.7-12.6 Ust  |
| -   | -   |   | 875kN<br>98.32 Ust  | 875kN<br>98.4 Ust  | 875kN<br>98.3 Ust   | 875kN<br>98 Ust   |
| 810mm<br>31.9"  | 735mm<br>28.9"  |   | 510mm<br>20.1"  | 725mm<br>28.5"   | 725mm<br>28.5"  | 820mm<br>32.3"  |
| 45.2-63.5kN<br>0-0 Ust  | 60-95.8kN<br>0-0 Ust  |   | 48kN<br>5.4 Ust   | 51.7kN<br>5.8 Ust  | 67kN<br>7.53 Ust  | 79kN<br>8.8 Ust   |
| 643mm<br>25"  | 444mm<br>17.5"  |   | 393mm<br>15.5"  | 613mm<br>24.1"   | 610mm<br>24"  | 700mm<br>27.6"  |
| -   | 144kN<br>16.2 Ust   |   | 47kN<br>5.28 Ust  | 59kN<br>6.6 Ust  | 135kN<br>15.17 Ust  | 127kN<br>14.2 Ust   |
| 700Bar / 10.2Kpsi   | 700Bar / 10.2Kpsi   |   | 720Bar / 10.4Kpsi   | 720Bar / 10.4Kpsi  | 720Bar / 10.4Kpsi   | 720Bar / 10.4Kpsi   |
| ■   | ■   |   | ■   | ■  | ■   | ■   |
| - -   | - -   |   | - 360°  | - 360°   | - 360°  | - 360°  |
| ?   | ?   | ? | ?   | ?  | ?   | ?   |
| -   | -   |   | 6   | 6  | 6   | 6   |
| 54  | 54  |   | 57  | 57   | 57  | 57  |
|   |   |   | Extreme grip spreader tips.<br>On-tool charging.<br>Stepless speed maximisation   | Extreme grip spreader tips.<br>On-tool charging.<br>Stepless speed maximisation    | Extreme grip spreader tips.<br>On-tool charging.<br>Stepless speed maximisation     | Extreme grip spreader tips.<br>On-tool charging.<br>Stepless speed maximisation     |
| genesisrescue.com   | genesisrescue.com   |   | holmatro.com  | holmatro.com   | holmatro.com  | holmatro.com  |



|   |   |   |  |   |   |   |
|---|---|---|--|---|---|---|
| <p>IMAGES NOT TO SCALE</p> <p>OTHER TOOLS IN RANGE:</p> <ul style="list-style-type: none"> <li>■ = BATTERY TOOLS</li> <li>■ = Combi</li> <li>■ = Cutter</li> <li>■ = Ram</li> <li>■ = Special Tools</li> </ul> <p>● = PARTIAL or OK but not ideal</p> <p>□ = Option</p> <p>N/A = info Not Available/not given</p> |  |  |  |  |  |  |
|   | COMPANY   | HURST (IDEX)  | HYDRAM   | HYDRAM  | HYDRAM  | LIBERVIT  |
|   | SERIES MODEL VARIANT  | SP 555  | EHM750   | EHL800  | EHL620  | E300 ME   |
|   | Product Code  | 0000000   | 0000000  | 0000000   | 0000000   | 0000000   |
|   | TOOLS IN RANGE  | ■ ■ ■ ■ ■   | ■ ■ ■ ■ ■  | ■ ■ ■ ■ ■   | ■ ■ ■ ■ ■   | ■ ■ ■ ■ ■   |
| ORIGIN  |   | ■ ■ ■ ■ ■   | ■ ■ ■ ■ ■  | ■ ■ ■ ■ ■   | ■ ■ ■ ■ ■   | ■ ■ ■ ■ ■   |
| COST inc tax / VAT  |   | \$12,110.   | N/A  | N/A   | N/A   | N/A   |
| WEIGHT inc TIPS   |   | 20kg<br>44.1lb  | 18.48kg<br>00lb  | 26.18kg<br>00lb   | 23.88kg<br>00lb   | 31.48kg<br>00lb   |
| LENGTH  |   | 1002mm<br>39.4"   | 834mm<br>00"   | 885mm<br>00"  | 786mm<br>00"  | 936mm<br>00"  |
| WIDTH   |   | 265mm<br>10.4"  | 335mm<br>00"   | 385mm<br>00"  | 385mm<br>00"  | 395mm<br>00"  |
| DEPTH   |   | 280mm<br>11"  | 230mm<br>00"   | 225mm<br>00"  | 220mm<br>00"  | 269mm<br>00"  |
| EN CLASSIFICATION   |   | -   | AS41-750/18.48   | BS 63-800/26.18   | CS 88620/23.88  | CS 91-565/31.48   |
| EN SPREAD FORCE RANGE   |   | -   | 41-132kN   | 66-202kN  | 97-373kN  | 92-260kN  |
| t=US Ton  |   | -   | 00-00Ust   | 00-00Ust  | 00-00Ust  | 00-00Ust  |
| NFPA □ FORCE RANGE  |   | 49-72kN   | -  | -   | -   | -   |
| t=US Ton (at/near tips)   |   | 5.5-8 Ust   | -  | -   | -   | -   |
| MAX SPREAD FORCE  |   | 658kN   | 132kN  | 202kN   | 373kN   | 260kN   |
| (Theoretical) t=US ton  |   | 74 Ust  | 00 Ust   | 00 Ust  | 00 Ust  | 00 Ust  |
| SPREAD DISTANCE   |   | 730mm   | 750mm  | 800mm   | 620mm   | 565mm   |
|   |   | 28.7"   | 00"  | 00"   | 00"   | 00"   |
| PULL FORCE RANGE/MAX  |   | 28-46 (58) kN   | 41-49kN  | 51.2-128kN  | 82-138kN  | 62-114.2kN  |
| (THEORETICAL MAX) t=US ton  |   | 3.2-5.2 (6.5) Ust   | 00Ust  | 00Ust   | 00-00Ust  | 00-00Ust  |
| MAX PULL DISTANCE   |   | 569mm   | 502mm  | 565mm   | 378mm   | 431mm   |
|   |   | 22.4"   | 00"  | 00"   | 00"   | 00"   |
| MAX SQUEEZE FORCE   |   | 115kN   | -  | -   | -   | -   |
| t=US ton  |   | 12.9 Ust  | -  | -   | -   | -   |
| WORKING PRESSURE  |   | 700Bar / 10.1Kpsi   | 700Bar / 10.1Kpsi  | 700Bar / 10.1Kpsi   | 700Bar / 10.1Kpsi   | 700Bar / 10.1Kpsi   |
| REMOVABLE DOOR OPENING TIPS   |   | ■   |  |   |   |   |
| ROTATE HEAD/HANDLE  |   | - 360°  |  |   |   |   |
| OPERATING TEMP  |   | ?   | ?  | ?   | ?   | ?   |
| LED LIGHTS  |   | 2   |  |   |   |   |
| IN-WATER USE IP#  |   | ● 54  |  |   |   | ■ 80m/262   |
| NOTES   |   |   | Previous version 19.6kg  |   |   | ME4 is an under capable version E100  |
| WEBSITE   |   | jawsoflife.com  | hydrum.com   | hydrum.com  | hydrum.com  | hydrum.com  |

















# HOSE-FED SPREADERS

|  |   |   |  |   |   |   |   |
|--|---|---|--|---|---|---|---|
|  |   |   |  |   |   |   |   |
|  | <b>LIBERVIT</b>   | <b>LUKAS (IDEX)</b>   | <b>LUKAS (IDEX)</b>  | <b>LUKAS (IDEX)</b>   | <b>RESQTEC</b>  | <b>RESQTEC</b>  | <b>RESQTEC</b>  |
|  | <b>E500 ME5</b>   | <b>SP 333</b>   | <b>SP 555</b>  | <b>SP 777</b>   | <b>X2</b>   | <b>X4</b>   | <b>X6</b>   |
|  | 0000000   | 0000000   | 0000000  | 0000000   | 0000000   | 0000000   | 0000000   |
|  |    |  |  |  |  |   |   |
|  |  |  |   |    |   |  |  |
|  | N/A   | N/A   | N/A  | N/A   | N/A   | N/A   | N/A   |
|  | 16.7kg<br>36.7lb  | 17.3kg<br>38.1lb  | 20kg<br>44.1lb   | 23.6kg<br>52lb  | 13.2kg<br>00lb  | 16.5kg<br>00lb  | 24.9kg<br>00lb  |
|  | 589mm<br>23"  | 905mm<br>35.6"  | 1002mm<br>39.4"  | 1080mm<br>42.5"   | 711mm<br>28"  | 823mm<br>32.4"  | 823mm<br>32.4"  |
|  | 226mm<br>9"   | 256mm<br>10.1"  | 265mm<br>10.4"   | 309mm<br>12.2"  | 271mm<br>10.7"  | 273mm<br>10.7"  | 273mm<br>10.7"  |
|  | 228mm<br>9"   | 253mm<br>9.96"  | 280mm<br>11"   | 285mm<br>11.2"  | 274mm<br>10.8"  | 235mm<br>9.25"  | 235mm<br>9.25"  |
|  | -<br>00-00kN<br>00-00Ust  | AS 42/600-18.3<br>42-836kN<br>4.7-94 Ust  | AS 52/730-20.9<br>52-658kN<br>5.8-74 Ust   | BS 63/813-24.5<br>63-600kN<br>7.1-67.4 Ust  | AS40.3-616-13.2<br>40.3-347kN<br>4.5-39Ust  | AS52-700-16.5<br>52-3643kN<br>5.8-409Ust  | BS60.4-802-20.5<br>60.4-2273.8kN<br>6.8-255.6Ust                                    |
|  |   |   |  |   | ■   | ■   | ■   |
|  | 50kN<br>00Ust   | 836kN<br>94 Ust   | 658kN<br>74 Ust  | 600kN<br>67.4 Ust   | 347kN<br>39Ust  | 3643kN<br>409Ust  | 2273.8kN<br>255.6Ust  |
|  | 500mm<br>19.5"  | 600mm<br>23.6"  | 730mm<br>28.7"   | 813mm<br>32"  | 616mm<br>00"  | 670mm<br>00"  | 802mm<br>00"  |
|  | -   | 23-43 (56) kN<br>0 (0) Ust  | 28-46 (58) kN<br>3.2-5.2 (6.5) Ust   | 30-49 (60) kN<br>3.4-5.5 (6.7) Ust  | 45.4-100kN<br>5.1-11.2Ust   | 57.8-131.8kN<br>6.5-14.8Ust   | 27.4-59.6kN<br>00-00Ust   |
|  | 00mm<br>00"   | 440mm<br>17.3"  | 569mm<br>22.4"   | 655mm<br>25.8"  | -   | -   | -   |
|  | 00kN<br>00Ust   | 144kN<br>5.7 Ust  | 115kN<br>12.9 Ust  | 122kN<br>13.7 Ust   | 62.4-103kN<br>7-11.5Ust   | 80.1-197.3kN<br>9-22Ust   | 173-245kN<br>19.5-27.5 Ust  |
|  |   | 700Bar / 10.1Kpsi   | 700Bar / 10.1Kpsi  | 700Bar / 10.1Kpsi   | 700Bar / 10.1Kpsi   | 700Bar / 10.1Kpsi   | 700Bar / 10.1Kpsi   |
|  |   | ■   | ■  | ■   | ■ *   | ■ *   | ■ *   |
|  |   | - 360°  | - 360°   | - 360°  | 61° 270°  | - 360°  | - 360°  |
|  | ?   | ?   | ?  | ?   | ?   | ?   | ?   |
|  |   | 6   | 6  | 4   | □   | □   | □   |
| 2ft  | 80m/262ft   | 58  | 58   | 54  | 54  | 57  | 57  |
| water-<br>of the   |   | ME5 is an underwater-<br>capable version of the<br>E500                           |  |   | 138° jaw opening.<br>* Aircraft Jaws option.  | 149° jaw opening<br>* Aircraft Jaws option.   | 130° jaw opening.<br>* Aircraft Jaws option.  |
|  |   | lukas.com   | lukas.com  | lukas.com   | rescue.resqtec.com  | rescue.resqtec.com  | rescue.resqtec.com  |

|  |   |   |  |   |   |   |
|--|---|---|--|---|---|---|
| <p>IMAGES NOT TO SCALE</p> <p>OTHER TOOLS IN RANGE:</p> <p>■ = BATTERY TOOLS</p> <p>■ = Combi</p> <p>■ = Cutter</p> <p>■ = Ram</p> <p>■ = Special Tools</p> <p>● = PARTIAL or OK but not ideal</p> <p>□ = Option</p> <p>N/A = info Not Available/not given</p> |  |  |  |  |  |  |
| COMPANY  | TNT RESCUE  | TNT RESCUE  | TNT RESCUE   | TNT RESCUE  | TNT RESCUE  | TNT RESCUE  |
| SERIES MODEL VARIANT   | SL-24   | SL-28   | S-100-24   | S-100-28  | S-100-32  | S-200-24  |
| Product Code   | 0000000   | 0000000   | 0000000  | 0000000   | 0000000   | 0000000   |
| TOOLS IN RANGE   | ■ ■ ■ ■ ■ ■   |   |  |   |   |   |
| ORIGIN   | ■   | ■   | ■  | ■   | ■   | ■   |
| COST inc tax / VAT   | N/A   | N/A   | N/A  | N/A   | N/A   | N/A   |
| WEIGHT IN HAND inc BATTERY(IES) & TIPS   | 16.3kg<br>35.9lb  | 16.6kg<br>36.6lb  | 18.7kg<br>41.2lb   | 20.6kg<br>45.4lb  | 23.5kg<br>52.6lb  | 21.2kg<br>47lb  |
| LENGTH   | 723.9mm<br>28.5"  | 772.2mm<br>30.4"  | 774.7mm<br>30.5"   | 894.1mm<br>35.2"  | 944.2mm<br>37.2"  | 774.7mm<br>30.5"  |
| WIDTH  | 335.3mm<br>177.8"   | 335.3mm<br>177.8"   | 342.9mm<br>13.5"   | 342.9mm<br>13.5"  | 335.3mm<br>177.8"   | 342.9mm<br>13.5"  |
| DEPTH  | 177.8mm<br>7"   | 177.8mm<br>7"   | 165.1mm<br>6.5"  | 165.1mm<br>6.5"   | 345.4mm<br>13.6"  | 165.1mm<br>6.5"   |
| EN CLASSIFICATION  | AS39/609-17   | AS28/711-17   | AS47/609-19  | AS39/711-20   | AS35/812-21   | BS64/609-   |
| EN SPREAD FORCE RANGE t=US Ton   | -   | -   | -  | -   | -   | -   |
| NFPA FORCE RANGE t=US Ton (at/near tips)   | 155-857kN<br>00-00 USt  | 143-793kN<br>00-00USt   | 286-1078kN<br>32-121 USt   | 225-895kN<br>0-0USt   | 225-895kN<br>25.3-100.56 USt  | 453-1343kN<br>00-00USt  |
| MAX SPREAD FORCE (Theoretical) t=US ton  | 857kN<br>00USt  | 793kN<br>00 USt   | 1078kN<br>121 USt  | 1014kN<br>00 USt  | 895kN<br>00 USt   | -   |
| SPREAD DISTANCE  | 609.6mm<br>24"  | 711.2mm<br>28"  | 609.6mm<br>24"   | 711.2mm<br>28"  | 812.8mm<br>32"  | 609.6mm<br>24"  |
| PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton  | 131.2kN<br>00USt  | 119kN<br>00 USt   | 130kN<br>00 USt  | 102kN<br>00 USt   | 41.54kN<br>4.67 USt   | 205kN<br>USt  |
| MAX PULL DISTANCE  | ?mm<br>?"   | ?mm<br>?"   | ?mm<br>?"  | ?mm<br>?"   | ?mm<br>?"   | ?mm<br>?"   |
| MAX SQUEEZE FORCE t=US ton   | N/A   | N/A   | N/A  | N/A   | N/A   | N/A   |
| WORKING PRESSURE   | 724Bar / 10.5K psi  | 724Bar / 10.5K psi  | 724Bar / 10.5K psi   | 724Bar / 10.5K psi  | 724Bar / 10.5K psi  | 724Bar / 10.5K psi  |
| REMOVABLE DOOR OPENING TIPS  | ■   | ■   | ■  | ■   | ■   | ■   |
| ROTATE HEAD/HANDLE   | - -   | - -   | - -  | - -   | - -   | - -   |
| OPERATING TEMP   | ?   | ?   | ?  | ?   | ?   | ?   |
| LED LIGHTS   | -   | -   | -  | -   | 4   | 4   |
| IN-WATER USE TOOL IP   | 54  | 54  | 54   | 54  | 54  | 54  |
| NOTES  |   |   |  |   |   |   |
| WEBSITE  | tntrescue.com   | tntrescue.com   | tntrescue.com  | tntrescue.com   | tntrescue.com   | tntrescue.c   |



## HOSE-FED SPREADERS

|  |   |   |   |   |  |   |   |
|--|---|---|---|---|--|---|---|
|  |   |  |  |  |  |  |  |
| UE   | TNT RESCUE  | TNT RESCUE  | WEBER RESCUE  | WEBER RESCUE  | WEBER RESCUE   | WEBER RESCUE  | WEBER RESCUE  |
| 4  | S-200-28  | S-200-32  | SP 44 AS  | SP 50 BS  | SP 54 AS   | SP 64 BS  | SP 84 CS  |
|  | 0000000   | 0000000   | 0000000   | 0000000   | 0000000  | 0000000   | 1093904   |
|  |   |   |   |   |  |   |   |
|  |  |  |  |  |  |  |  |
|  | N/A   | N/A   | N/A   | N/A   | N/A  | N/A   | N/A   |
|  | 22.4kg<br>49.6lb  | 23.1kg<br>51.2lb  | 17.3kg<br>38lb  | 20.9kg<br>46lb  | 20.7kg<br>45.5lb   | 18.2kg<br>40lb  | 19.8kg<br>00lb  |
|  | 830.6mm<br>32.7"  | 894.1mm<br>35.2"  | 877mm<br>34.5"  | 1015mm<br>40"   | 982mm<br>38.7"   | 893mm<br>35.2"  | 790mm<br>00"  |
|  | 342.9mm<br>13.5"  | 335.3mm<br>177.8"   | 239mm<br>9.4"   | 282mm<br>11.1"  | 282mm<br>11.1"   | 239mm<br>9.4"   | 307mm<br>00"  |
|  | 165.1mm<br>6.5"   | 345.4mm<br>13.6"  | 241mm<br>9.5"   | 241mm<br>9.5"   | 241mm<br>9.5"  | 228mm<br>9.5"   | 210mm<br>00"  |
| 22   | BS54/711-23   | BS45/812-24   | AS44/610-17.3   | BS50/805-20.9   | AS55/735-20.7  | AS44/610-18.2   | CS82/660-19.8   |
|  | -   | -   | 44-857kN  | 50-501kN  | 55-501kN   | 44-857kN  | 82-680kN  |
|  | -   | -   | 5-96.3 Ust  | 5.6-56.3 Ust  | 6.2-56.3 Ust   | 5-96.3 Ust  | 00-00Ust  |
| kN   | 394-1199kN  | 356-1099kN  | -   | -   | -  | -   | -   |
|  | 00-00Ust  | 00-00 Ust   | -   | -   | -  | -   | -   |
|  | 1099kN  | 1099kN  | -   | -   | -  | -   | 680kN   |
|  | 00 Ust  | 00 Ust  | -   | -   | -  | -   | -   |
|  | 711.2mm<br>28"  | 812.8mm<br>32"  | 610mm<br>24"  | 805mm<br>31.7"  | 735mm<br>28.9"   | 610mm<br>24"  | 660mm<br>00"  |
|  | 49.7kN<br>5.58 Ust  | 161kN<br>00Ust  | 68kN<br>7.6 Ust   | 67kN<br>7.5 Ust   | 70kN<br>7.9 Ust  | 68kN<br>7.6 Ust   | 70kN<br>7.9 Ust   |
|  | ?mm<br>?"   | ?mm<br>?"   | 465mm<br>18.3"  | 680mm<br>26.8"  | 620mm<br>24.4"   | 465mm<br>18.3"  | 540mm<br>00"  |
|  | N/A   | N/A   | 149kN<br>16.9 Ust   | 144kN<br>16.2 Ust   | 144kN<br>16.2 Ust  | 149kN<br>16.9 Ust   | 129kN<br>00 Ust   |
| K psi  | 724Bar / 10.5K psi  | 724Bar / 10.5K psi  | 700Bar / 10.2Kpsi   | 700Bar / 10.2Kpsi   | 700Bar / 10.2Kpsi  | 700Bar / 10.2Kpsi   | 700Bar / 10.2Kpsi   |
|  | ■   | ■   | ■ ■   | ■ ■   | ■ ■  | ■   | ■ ■   |
|  | - -   | - -   | - 360°  | - 360°  | - 360°   | - 360°  | - 360°  |
|  | ?   | ?   | ?   | ?   | ?  | ?   | ?   |
|  | 4   | 4   | 4   | 4   | 4  | 4   | 4   |
|  | 54  | 54  | 54 54   | 54 54   | 54 54  | 54/68* 68   | 54/68* 68   |
|  |   |   | All Weber battery tools<br>can convert to hose and<br>vice-versa                  | All Weber battery tools<br>can convert to hose and<br>vice-versa                  | All Weber battery tools<br>can convert to hose and<br>vice-versa                   | All Weber battery tools<br>can convert to hose and<br>vice-versa                    | All Weber battery tools<br>can convert to hose and<br>vice-versa                    |
| om   | tntrescue.com   | tntrescue.com   | weber.com   | weber.com   | weber.com  | weber.com   | weber.com   |

# 'hydraulic' BATTERY RAMS



push point  
and ensure it is stronger than  
the structure to be moved.

- If adding an extension piece to the ram then this end must always be positioned against the push point

- If the structure is in contact with the entrapped casualty then always move the structure away first with the ram before cutting it. Cutting the structure first can cause further structural movement towards the casualty [ED: and alter the way it reacts to being pushed including the possibility of a cut-end 'springing' off the end of the ram.

When the structure is intact there are fewer jagged, loose ends to be concerned about].

- Casualty entrapment should be freed first before further space creation techniques are considered due to the requirement to have a viable emergency release plan in place should the casualties condition suddenly deteriorate
- When extricating from Electric Vehicles rescuers must ensure they do not ram from or into any high voltage battery components or any high voltage areas – refer to the Emergency Response Guide for the vehicle
- When carrying out a dash roll manoeuvre cut the dash tie down from centre console if more space is required to carry out the extrication
- Ensure the structure has been peeled and revealed so that the ram does not inadvertently push through any hidden hazards

The image above is not an environment you would normally think of for a hydraulic ram but I can think of many an incident in the dim and distant past where such a tool would have been a literal life saver. We had manually operated hydraulics of course and these are indeed a fantastically reliable option even now but these dedicated battery tools are infinitely faster and with far greater reach or more accurately for rams, stroke which is the distance that you can physically move your target. The specifics of battery tools together with their advantages and disadvantages are covered in the previous three parts to this series so before we look at some ram-specific features, our co-extrication editor Nick Appleton gives some useful training and operational usage pointers for battery rams, some of which is just as relevant to any ram no matter the power source.

## Top Tips from TR Extrication Co-Editor Nick Appleton:

*Training with rams should be carried out on previously prepared vehicles that have been deformed to simulate various accident damage scenarios e.g. roof pushed down, B pillars pushed inwards etc. Rescuers will only understand the importance of moving the metal all the way back or past the position that the metal was originally formed if the vehicle has been deformed in this way. They will realise that only partially ramming the structure will cause it to spring back once the rams are retracted.*

- Adding and extending a second ram with a longer extension piece placed adjacent to the first ram once the first ram is fully extended can help prevent the structure springing back to its original shape
- When extending the ram both ends of the ram should be continuously monitored to ensure that neither slips out of position
- Rescuers need to be 100% sure of the direction of travel before operating the ram as the consequences of housing the ram instead of extending it could bring the structure back onto the casualty
- A ram will always go towards the direction of the weaker end of the structure it's in contact with and so assess the

## Advantages of battery operated rams:

- No set up time so immediately deployable
- Quicker to get to work
- Quieter when operating
- No hoses so no trip hazard
- Less stowage space required on fire appliance
- No emissions or fumes so can be used in confined and enclosed spaces

## Disadvantages of battery operated rams:

- Dependent on good battery management
- Heavier because have own internal pump, oil reservoir and power source
- Bulky to get into restricted spaces
- Some cannot be used submerged under water – though they can all be used in wet weather.

## RAM DESIGN

A simple ram consists of a tube being hydraulically (or in some shoring cases, pneumatically), pushed out of a bombproof tubular casing that can take high internal pressure. With

traditional hose-fed rams, those tubes constitute a relatively small footprint with just the length of tube to contend with but battery power usually involves having the battery and motor on-board and this increases bulk considerably. Unlike cutters and spreaders where the battery doesn't add a huge amount to the bulk of the tool, rams do and therefore require more thought before purchasing. This is mitigated in most models by being able to rotate the motor assembly into free space or by having the ram tubes mounted at 90 degrees to the motor housing. So you'll still use them especially if you have other battery tools in the same series; not only for continuity of batteries but also because of the self-contained nature that we've discussed throughout this series of guides and Nick again mentions in the intro - minimal noise and no liquid fuel and exhaust fumes to contend with. In our tables we have two unpowered, stand-alone rams that don't quite fit the 'self-contained, battery-powered tool' description unless you introduce a spreader. We have included the *Powerhawk X* (& *P/X16*) compatible rams simply because they were the first to come up with an ingeniously simple alternative - a ram housing with a cutaway section that allows you to insert any spreader head that fits and do the pushing of tubes that way as a proxy power source. These things are not only a lot cheaper than a self-contained battery ram, you can set and leave them in situ. in complex extrication or USAR situations instead of tying up multiple battery units. The image on the left shows the legacy P16 that we used for many years and in fact the ram, although, long retired, is still going strong after more than 20 years.

### SIZE MAYNOT MATTER

Rams are infinitely more extendible than their cutter and spreader counterparts. Not all manufacturers bother of course because 1) a 2-stage telescoping ram offers a wide size range albeit that the strength at longer lengths is very much reduced and 2) there are useful regular lengths for rams that cover most eventualities. But some can take screw-on or clip-on extensions that might be over a metre long when the ram itself is only pushing 4 or 5 inches!

*Resqtec's V4* has an adapter that enables it use extensions plus all 5 shoring struts as extensions! It's often about the bridging distance between the sill or support point and the target to be moved than it is the distance it needs to be moved. Two of the original *Ogura* tools continue to provide perhaps the most accessible



## BATTERY RAMS

rams because their power source is a diminutive *Makita* drill connected by a short hose so you can get that into smaller spaces than virtually any other ram in our selection. That's not bad after over 30 years of development - you might have thought that by 2024 we would be taking a matchbox off the truck and deploying some microscopic nano-bots to do the heavy lifting.

**(LACK OF) NOISE:** Covered in the previous parts of this series and already reiterated in Nick's introduction - electric tools are silent when not in use so there is no tick-over noise as you get with a petrol engine tool or a generator driven, hose-fed hydraulic system. But there is still noise when the tool is doing its work and this can vary from a hum to a high pitched whirr that gets louder as the tool works harder. So they are not 'silent' but certainly far less noise pollution than a traditional petrol engine/generator-based system.

**LED LIGHTS:** Not so obvious as the cutters and spreaders but most of the battery rams have on-board LEDs for illuminating your immediate tool placement area. These are extremely useful because area lighting and even head and angled lighting can illuminate everything BUT the work area as a congested jumble of vehicle or building parts casts a dark shadow where you least want it. Having an LED that shines down the line of the tool negates this problem.

### WiFi & BLUETOOTH DIAGNOSTICS & BATTERY MANAGEMENT

*Holmatro*, *Lukas/Hurst* and *Weber/Genesis* have continued with on-board control panels discussed in the other tool guides but we haven't mentioned much about the importance of battery management. So important, we've listed it twice in our tables! For tools that use off-the shelf batteries from the likes of *Milwaukee*, *Makita* and *DeWalt* this is not so important but the more expensive bespoke systems from *Holmatro* and *Lukas* need to be looked after. Luckily their own charging and storage systems together with **WiFi** and/or **Bluetooth** diagnostics allows much easier and efficient management - *Holmatro's* on-vehicle multi-charger for instance will charge 6 to 18 batteries separately from a single power source or while on the tool and will prioritise on-tool charging over 'loose' batteries. That and the watertight batteries is why you pay the big bucks for the bespoke systems. Incidentally, *Lukas* and *Hurst E3* and *Wifi* capable *E3-Connect* series are the same tool aside from the extra cost of the *Wifi* version but the *Lukas* range was ratified with removal of the R421 E2, R520 E3/E3C and R522 E3/E3C models in mid 2024.

### CHINESE & RUSSIAN TOOLS

As at 2024 Russia has become a North Korea style pariah state so we still don't have to consider Russian tools even if they were good enough to include. China, however,



continues to produce quality products for big name companies around the world but there are two problems associated with including their products in our GUIDES. The first is their propensity for copyright infringement via blatant copying of design and imagery, as an example, we have included *Aolai Rescue* because their battery tools are their own badged products and they are the only one to quote a price but they have other rescue products that may be very good but are clearly copied from market leading models, their *Paratech* looking struts even have dark green and yellow livery while their *Arachnipod* looking Tripod/gantry frame has the same red and silver livery. If they could only shy away from this continual plagiarism of well known products and concentrate on their own considerable design skills the world would be a fairer and happier place!

## IN THE FOLLOWING TABLES.....

The tool length, width or height and weight are all **WORKING** spec so they **include the battery**. Many companies quote figures without the battery so at first glance seem lighter but when added has a significant affect on both the physical size and weight of a tool when in use. As with all cutting and spreading tools, the largest or highest figures are not necessarily the best for the job. Stroke power is highest at the shortest extension. **All force figures are given in KiloNewtons and US (short)tons**

Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square ■■■■■ If it's an option it is shown as an outline square □□□□□ A circle ● in the 'USE' columns indicates that this feature is only partially present and/or is OK for that purpose but not ideal. A model variant is shown in cyan blue and any features or specifications that differ from the standard are also in cyan or will have a cyan outline to a black or orange square ■■■.

**WiFi/Bluetooth-CAPABLE:** The tool and/or battery are linked to a mobile device via **Wifi** &/or **Bluetooth** to manage functions, servicing and inventory. This category is listed twice.

**TOOLS-IN-RANGE:** refers to the other types of tool available in this specific series of tools using this specific battery type.

■ = Cutter ■ = Spreader ■ = Combi ■ = Special Tools

**ORIGIN:** The company's home country, not necessarily the country of manufacture which is indicated by an inset flag or two equally sized flags if the tool is made in both countries.

**COST:** This is clearly an official secret within the industry. This is because the cost of one tool is huge and vastly different to the cost of multiples that they sell to entire fire services. But this is the same situation for virtually every piece of equipment we ever have in **TECHNICALRESCUE** where we always quote the single item cost on the understanding that any bulk purchase will of course be a lower figure. Chinese Manufacturer *Aolai* have been confident enough to quote a range of \$3500 to \$4700 exc shipping and import duty to give some idea of the minimum you are likely to pay for a battery ram. The batteries are an expensive consumable as well - eg. a *Milwaukee* M18 8Ah battery costs £/\$/€150-200 though individuals could purchase through *Amazon* etc. and save a packet!

**WEIGHT IN HAND:** Refers to the operational weight that the rescuer experiences in using the tool so it includes any on-board batteries but not backpack batteries and not necessarily any extras like clip-on lighting or different heads/feet.

**WEIGHT of BATTERY:** is for the default battery supplied or preferred by the manufacturer. Those that use 'off-the-shelf' brands like *Milwaukee* and *DeWalt* may well be able to use either higher Ah models for greater capacity/duration or lower Ah for decreased cost and perhaps weight but less duration.

**BATTERY DURATION & RECHARGE TIME:** Work-time or duration is much trickier as it depends on the resistance of the material being pushed/supported, the temperature, the age of the battery and even how meticulously you follow the recharge guidelines. Consequently some won't quote a figure at all and others are generous to say the least - consider most to be the absolute maximum with minimal workload. Tools last much longer carrying out hundreds of short duration cuts like the Genesis figure of <45mins compared to a *Homatro*'s minimum 11minute figure in like-for-like ramming their battery will match the highest time given by others.

Recharge time can be more specific though it varies wildly between basic and high speed chargers. The time shown is for the charger supplied or preferred by the manufacturer and may give a time-range if referring to different types of charger.

**DIMENSIONS:** The Length by width by depth/height of tool ready to store on the truck and/or ready to work. Rams are stored with the cylinders retracted so they are the least bulky of the 'hydraulic' rescue tools. Height is the 'thickness' of the tool off the ground if you lay the tool down and is usually dictated by either the handle or the battery if it is top-mounted.

**PUSH FORCE:** Is the maximum *theoretical* force that can be exerted and, like spreaders and cutters, is highest closest to the power unit. The strongest rams are the shortest, single-stage rams. Telescoping gives you much needed reach but the second stage is very much weaker than the first stage and this is extremely important to remember - you may have easily pushed your target material with the first stage but beware that you don't overwhelm it's capabilities when you extend into the second, telescoping stage. **It is also vital that you push in direct line with the power unit - if your target load starts to stray off-centre as it moves you could damage the ram's extending cylinders.** Our figures are in kN (KiloNewtons) and **US (Short) Tons**. There are 1.10 US short tons to a UK/metric ton (or more accurately tonne).

**STROKE RANGE:** If the ram has a telescoping section there will be two figures - the first, higher figure is for the first stage and the second, lower figure is for the telescoped section. If the ram is single-stage only this figure will be the same as the total stroke distance. Some rams can also pull using chains etc. in the same way as a spreader but this is not the norm and is written in the NOTES.

**TOTAL STROKE DISTANCE:** The maximum distance the target load can be pushed including any telescoping sections.

**ROTATE HEAD/HANDLE:** The handle can rotate around the cylinder for better access to in-line ramming of the target but most rams are relatively compact anyway.

**LED LIGHTS** ■: Integral lighting from the handle or housing to illuminate the area being cut/spread.

**IN-WATER-CAPABLE:** The tool/battery can be used underwater **TOOL/BATTERY IP.** Ingress protection for dust (first number) & water (second number) - IP54 resists water splashes, IP57 & 67 withstand inundation to 1metre, IP58&68 deeper than 1metre. Trade batteries like *Milwaukee* are **not** waterproof without a bespoke cover and tend not to quote an IP number because they are dependant on the tool to create an effective seal. Specialist batteries like *Holmatro* and *Lukas* are watertight (IP68) but regular trade batteries are no more than IP54 so they are splashproof but not submersible without a bespoke cover.

# LUKAS

## CROSSRAM

Long, Longer,  
CR 522 CROSSRAM!

Our new telescopic cylinder CR 522 e<sup>3</sup> / CONNECT CROSSRAM offers a wide range of applications due to its immense reach.

Cross ramming to work inside a vehicle, creating a rescue opening in a truck cab or tearing away the vehicle pillars can be carried out with ease thanks to the large stroke and exceptional power of the CR 522 CROSSRAM.

The LX Extension Set from LUKAS can provide an additional 27cm and thus can reach a total extended length of 180cm.



LUKAS.COM

A Trusted IDEX  
Fire & Safety Brand

**LUKAS**



Images not exactly to Scale  
but comparative within  
their own series of tools.

**OTHER TOOLS IN RANGE:**  
■ = Combi ■ = Spreader  
■ = Cutter ■ = Special Tools  
● = PARTIAL FEATURE  
    = Option  
**N/A** = info Not Available/  
not given



| COMPANY  | AMKUS   | AMKUS   | AOLAI RESCUE  | AOLAI RESCUE  | EDILGRAPPA  |
|--|---|---|---|---|---|
| MODEL VARIANT  | ITR230  | ION ITR500  | GYDD-A  | GYDD-171-388/576C   | MT730N-E  |
| SERIES   | ION   | Compact   | -   | -   | -   |
| VOLTAGE  | 54/60v  | 54/60v  | 28v   | 28v   | 54/60v  |
| TOOLS IN RANGE   | <span style="color: blue;">■</span> <span style="color: magenta;">■</span> <span style="color: green;">■</span> <span style="color: purple;">■</span> | <span style="color: blue;">■</span> <span style="color: magenta;">■</span> <span style="color: green;">■</span> <span style="color: purple;">■</span> | <span style="color: blue;">■</span> <span style="color: magenta;">■</span> <span style="color: green;">■</span> | <span style="color: blue;">■</span> <span style="color: magenta;">■</span> <span style="color: green;">■</span> | <span style="color: blue;">■</span> <span style="color: magenta;">■</span> <span style="color: green;">■</span> <span style="color: purple;">■</span> |
| ORIGIN   |   |   |   |   |   |
| COST inc tax / VAT   | N/A   | N/A   | \$3500-4500*  | \$3750-4700*  | N/A   |
| RAM TYPE   | 2-Stage Telescoping   | 2-Stage Telescoping   | 1-Stage   | 2-Stage Telescoping   | 2-Stage Telescoping   |
| WEIGHT IN HAND<br>inc BATTERY exc EXTENSION  | 17.9kg<br>39.4lb  | 15.8kg<br>56.9lb  | 19.8kg<br>43.6lb  | 20.4kg<br>45lb  | 17.9kg<br>39.4lb  |
| WEIGHT - DEFAULT BATTERY   | 1.2kg / 2.6 lb  | 1.2kg / 2.6 lb  | 0.9kg / 2 lb  | 0.9kg / 2 lb  | 1.2kg / 2.6 lb  |
| BATTERY<br>Ah OPTIONS  | DeWalt<br>FlexVolt<br>9Ah   | DeWalt<br>FlexVolt<br>6Ah 9, 12Ah   | 5Ah   | 5Ah   | DeWalt<br>FlexVolt<br>9Ah   |
| BATTERY DURATION<br>RECHARGE TIME  | 10-25mins<br>85mins   | 10-15mins<br>60mins   | 45-60mins<br>90mins   | 45-60mins<br>90mins   | 10-25mins<br>85mins   |
| LENGTH retracted/extended*   | 290mm/ 11.4"<br>574mm/22.6"   | 558mm/ 21.9"<br>1283mm/50.5"  | 560mm/ 22.3"<br>930mm/0"  | 565mm/ 22.2"<br>1355mm/53.3"  | 290mm/ 11.4"<br>574mm/22.6"   |
| HEIGHT/WIDTH   | 452mm / 17.8"   | N/A   | 300mm / 11.8"   | 400mm / 15.8"   | 452mm / 17.8"   |
| DEPTH (max diam)   | 185mm / 7.3"  | N/A   | 175mm / 6.9"  | 120mm / 4.7"  | 185mm / 7.3"  |
| EXTENSION(S) & OPTIONS   | 254mm/10"<br>457mm/18"<br>680mm/27"<br>-  | NO -  | NO -<br>-   | NO --   | 254mm/10"<br>457mm/18"<br>680mm/27"<br>-  |
| EN <span style="color: green;">■</span> NFPA <span style="border: 1px solid black; padding: 0 2px;"> </span> | <span style="color: green;">■</span> <span style="border: 1px solid black; padding: 0 2px;"> </span>  | <span style="border: 1px solid black; padding: 0 2px;"> </span>   | <span style="color: green;">■</span> *  | <span style="color: green;">■</span> * <span style="border: 1px solid black; padding: 0 2px;"> </span>          | <span style="color: green;">■</span> <span style="border: 1px solid black; padding: 0 2px;"> </span>  |
| EN CLASSIFICATION  | TR215/160-76.4/124-16.7   | -   | -   | -   | TR215/160-76.4/124-16.7   |
| PUSH FORCE(S for telescoping)<br>t=US Ton  | 215-76.4kN<br>24.2-8.6 Ust  | 206-96kN<br>23.2-10.8 Ust   | 120kN<br>13.5 Ust   | 145.7-75.5kN<br>16.4-8.5 Ust  | 215-76.4kN<br>24.2-8.6 Ust  |
| STROKE RANGE   | 160/124mm<br>6.3/4.9"   | 381/346mm<br>15/13.5"   | 370mm<br>14.6"  | 415/380mm<br>16.3/15"   | 160/124mm<br>6.3/4.9"   |
| TOTAL STROKE DISTANCE  | 284mm<br>11.2"  | 727mm<br>25.5"  | 370mm<br>14.6"  | 975mm<br>38.4"  | 284mm<br>11.2"  |
| WORKING PRESSURE (HYDRAULIC)   | 700 Bar<br>10.2K psi  | 700 Bar<br>10.2K psi  | 720 Bar<br>10.4K psi  | 720 Bar<br>10.4K psi  | 700 Bar<br>10.2K psi  |
| WiFi/Bluetooth capable   | -   | -   | -   | -   | -   |
| SPEED CONTROL ON-BOARD LED   | Rotating Star Grip -  | Rotating Star Grip -  | Rotating Star Grip <span style="color: yellow;">■</span>  | Rotating Star Grip <span style="color: yellow;">■</span>  | Rotating Star Grip <span style="color: yellow;">■</span>  |
| IN-WATER USE BATTERY/TOOL IP   | 54 54   | 54 54   | 54 54   | 54 54   | 54 54   |
| NOTES  | -   | Motor & valve assembly can rotate out of the way. Also some ION ITR230 still available - same spec as Edilgrappa MT730N-E                             | *CE is listed but you will need to verify this refers to the correct standard. *FOB China                       | *CE & NFPA is listed but you will need to verify this refers to the correct standard. *FOB China                | -   |
| WEBSITE  | amkus.com   | amkus.com   | aolairescue.com   | aolairescue.com   | edilgrappa.com  |




























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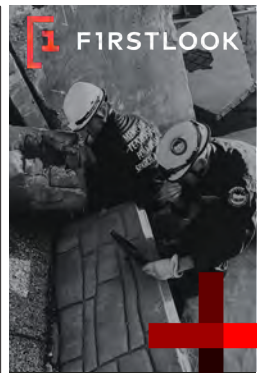
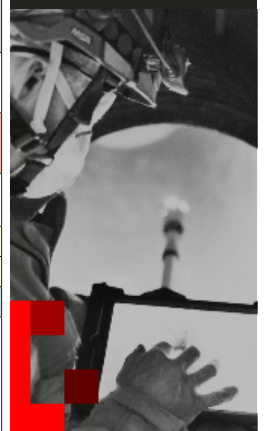
Images not exactly to Scale  
but comparative within  
their own series of tools.

**OTHER TOOLS IN RANGE:**  
■ = Combi ■ = Spreader  
■ = Cutter ■ = Special Tools  
● = PARTIAL FEATURE  
 = Option  
N/A = info Not Available/  
not given



| COMPANY   | GENESIS<br>RESCUE   | GENESIS<br>RESCUE   | HOLMATRO  | HOLMATRO  | HOLMATRO  |
|---|---|---|---|---|---|
| MODEL VARIANT   | 28-59   | 28-59   | PRA40   | PTR40   | PRA50   |
| SERIES  | E-Force SL3   | E-Force SLi   | PENTHEON  | PENTHEON  | PENTHEON  |
| VOLTAGE   | 28v   | 28v   | 28v   | 28v   | 28v   |
| TOOLS IN RANGE  | <span style="color: blue;">■</span> <span style="color: magenta;">■</span> <span style="color: green;">■</span> <span style="color: purple;">■</span> | <span style="color: blue;">■</span> <span style="color: magenta;">■</span> <span style="color: green;">■</span> <span style="color: purple;">■</span>         | <span style="color: blue;">■</span> <span style="color: magenta;">■</span> <span style="color: green;">■</span> <span style="color: purple;">■</span>         | <span style="color: blue;">■</span> <span style="color: magenta;">■</span> <span style="color: green;">■</span> <span style="color: purple;">■</span>         | <span style="color: blue;">■</span> <span style="color: magenta;">■</span> <span style="color: green;">■</span> <span style="color: purple;">■</span> |
| ORIGIN  |   |   |   |   |   |
| COST inc tax / VAT  | N/A   | N/A   | N/A   | N/A   | N/A   |
| RAM TYPE  | 2-Stage Telescoping   | 2-Stage Telescoping   | 1-Stage   | 2- Stage Telescoping  | 1-Stage   |
| WEIGHT IN HAND<br>inc BATTERY exc EXTENSION   | 21.7kg<br>47.8lb  | 22.7kg<br>50lb  | 14.1kg<br>31.1lb  | 15.5kg<br>34.2lb  | 18.2kg<br>40.1lb  |
| WEIGHT - DEFAULT BATTERY  | 1.4kg/1kg<br>3.2lb/2.3lb  | 1.1/1.7kg<br>2.33/3.74lb  | 1.5kg / 3.3lb   | 1.5kg / 3.3lb   | 1.5kg / 3.3lb   |
| BATTERY<br>Ah OPTIONS   | Genesis/<br>Milwaukee<br>5Ah*   | Milwaukee M18<br>8Ah/12Ah*  | Holmatro<br>PBPA287<br>8Ah  | Holmatro<br>PBPA287<br>8Ah  | Holmatro<br>PBPA287<br>8Ah  |
| BATTERY DURATION<br>RECHARGE TIME   | <45mins<br>90mins   | 60/90mins<br>45-83mins  | 30-90mins*<br>60mins  | 30-90mins*<br>60mins  | 30-90mins*<br>60mins  |
| LENGTH retracted/extended*  | 700mm /27.6"<br>1500mm /59"   | 700mm /27.6"<br>1500mm /59"   | 385mm / 15.2"<br>600mm/23.6"  | 385mm/ 15.2"<br>792mm/31.2"   | 578mm/ 22.8"<br>985mm/38.8"   |
| HEIGHT/WIDTH  | 365mm / 14.4"   | 365mm / 14.4"   | 443mm / 17.4"   | 443mm / 17.4"   | 443mm / 17.4"   |
| DEPTH (max diam)  | 134mm / 5.3"  | 134mm / 5.3"  | 256mm / 10.1"   | 256mm / 10.1"   | 256mm / 10.1"   |
| EXTENSION(S) & OPTIONS  | NO  | NO  | 220mm/8.7"<br>(3.3kg/ 7.3lb)<br>440mm/17.3"<br>(4.6kg/10.1lb)   | 220mm/8.7"<br>(3.3kg/ 7.3lb)<br>440mm/17.3"<br>(4.6kg/10.1lb)   | 220mm/8.7"<br>(3.3kg/ 7.3lb)<br>440mm/17.3"<br>(4.6kg/10.1lb)   |
| EN <span style="color: green;">■</span> NFPA <span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> | <span style="color: black;">■</span>  | <span style="color: black;">■</span>  | <span style="color: green;">■</span> <span style="color: black;">■</span>   | <span style="color: green;">■</span> <span style="color: black;">■</span>   | <span style="color: green;">■</span> <span style="color: black;">■</span>   |
| EN CLASSIFICATION   | -   | -   | R136/215-14.1   | TR136/215-65/192-15.5   | R136/407-18.2   |
| PUSH FORCE(S for telescoping)<br>t=US Ton   | 108/62kN<br>0ust  | 108/62kN<br>0ust  | 136kN<br>15.3 Ust   | 65-136kN<br>7.3-15.3 Ust  | 136kN<br>15.3 Ust   |
| STROKE RANGE  | 428/372mm<br>16.8- 14.7"  | 428/372mm<br>16.8- 14.7"  | -   | 215/192mm<br>8.5/7.6"   | -   |
| TOTAL STROKE DISTANCE   | 800mm<br>31.5"  | 800mm<br>31.5"  | 215mm<br>8.5"   | 407mm<br>16"  | 407mm<br>16"  |
| WORKING PRESSURE (HYDRAULIC)  | 700 Bar<br>10.1K psi  | 700 Bar<br>10.1K psi  | 540 Bar<br>7.8K psi   | 540 Bar<br>7.8K psi   | 540 Bar<br>7.8K psi   |
| WiFi/Bluetooth capable  | --  | <span style="color: red;">■</span>  |   |   |   |
| SPEED CONTROL ON-BOARD LED  | Rocker switch <span style="color: yellow;">■</span>   | Rocker switch <span style="color: yellow;">■</span>   | 2speed throttle <span style="color: yellow;">■</span>   | 2speed throttle <span style="color: yellow;">■</span>   | 2speed throttle   |
| IN-WATER USE BATTERY/TOOL IP  | 54 54   | <span style="color: blue;">■</span> 68* 58  | <span style="color: blue;">■</span> 67 57   | <span style="color: blue;">■</span> 67 57   | <span style="color: blue;">■</span> 67 57   |
| NOTES   | All E-Force tools can<br>convert to hose.<br>Length remaining markers on<br>ram tube.   | All E-Force tools can<br>convert to hose.<br>Length remaining markers on<br>ram tube.<br><i>*IP68 only with battery cover.<br/>IP54 splash cover for 12Ah</i> | Push-button ram ext. do not<br>need original ram head to be<br>removed.On-tool charging.<br>tepleess speed maximisation.<br>*11mins at constant max<br>force. | Push-button ram ext. do not<br>need original ram head to be<br>removed.On-tool charging.<br>tepleess speed maximisation.<br>*11mins at constant max<br>force. | Push-button ram ext. do<br>need original ram head to<br>removed.On-tool charging.<br>tepleess speed maximisation.<br>*11mins at constant m<br>force.  |
| WEBSITE   | <a href="http://genesisrescue.com">genesisrescue.com</a>  | <a href="http://genesisrescue.com">genesisrescue.com</a>  | <a href="http://holmatro.com">holmatro.com</a>  | <a href="http://holmatro.com">holmatro.com</a>  | <a href="http://holmatro.com">holmatro.com</a>  |

|   |   |  |  |   |
|---|---|--|--|---|
|   |    |   |   |            |
| <b>HOLMATRO</b><br><b>PTR50</b>   | <b>HOLMATRO</b><br><b>PTR51</b>   | <b>HURST</b><br><b>(IDEX)</b><br><b>R320</b>   | <b>HURST</b><br><b>(IDEX)</b><br><b>R521</b>   | <b>HURST</b><br><b>(IDEX)</b><br><b>CR 522</b>  |
| <b>PENTHEON</b>   | <b>PENTHEON</b>   | <b>E3/E3connect</b>  | <b>E3/E3connect</b>  | <b>E3/E3connect</b>   |
| 28v   | 28v   | 25.2v  | 25.2v  | 25.2v   |
|   |    |   |   |            |
| N/A   | N/A   | N/A  | N/A  | N/A   |
| 2-Stage Telescoping   | 2-Stage Telescoping   | 2-Stage Telescoping  | 2-Stage Telescoping  | 2-Stage Telescoping   |
| 20.5kg<br>45.2lb  | 21.4kg<br>47.2lb  | 13.7kg<br>30.2lb   | 19.4kg<br>42.8lb   | 21.6kg<br>47.6lb  |
| 1.5kg / 3.3lb   | 1.5kg / 3.3lb   | 1.6 1.2kg / 3.5 2.7lb  | 1.6 1.2kg / 3.5 2.7lb  | 1.6 1.2kg / 3.5 2.7lb   |
| Holmatro<br>PBPA287<br>8Ah  | Holmatro<br>PBPA287<br>8Ah  | Lukas<br>9Ah 9AhSaltWater, 5Ah   | Lukas<br>9Ah 9AhSaltWater, 5Ah   | Lukas<br>9Ah 9AhSaltWater, 5Ah  |
| 30-90mins*<br>60mins  | 30-90mins*<br>60mins  | 30-60mins<br>75-150mins  | 30-60mins<br>75-150mins  | 30-60mins<br>75-150mins   |
| 578mm/ 22.8"<br>1365mm/53.7"  | 713mm/ 28.1"<br>1500mm/59.1"  | 340mm /13.4"<br>640mm /25.2"   | 579mm/22.8"<br>1359mm /53.5"   | 657mm /25.9"<br>1533mm /60.3"   |
| 443mm / 17.4"   | 443mm / 17.4"   | 326mm / 12.8"  | 327mm / 12.9"  | 327mm / 12.9"   |
| 256mm / 10.1"   | 256mm / 10.1"   | 200mm / 7.9"   | 140mm / 5.5"   | 140mm / 5.5"  |
| 220mm/8.7"<br>(3.3kg/ 7.3lb)<br>440mm/17.3"<br>(4.6kg/10.1lb)   | NO  | 50mm/2"<br>150mm/6"<br>270mm/10.6"   | NO   | 50mm/2"<br>150mm/6"<br>270mm/10.6"  |
|    |    |   |   |          |
| TR-136/405-65/382-20.5  | TR136/405-65/382-21.4   | -  | -  | -   |
| 65-136kN<br>7.3-15.3 Ust  | 65-136kN<br>7.3-15.3 Ust  | 60-127kN<br>6.74-14.27 Ust   | 60-127kN<br>6.74-14.27 Ust   | 60-127kN<br>6.74-14.27 Ust  |
| 405/382mm<br>15.9/15"   | 405/382mm<br>15.9/15"   | 164/136mm<br>6.5-5.4"  | 403/377mm<br>15.9-14.8"  | 451/425mm<br>17.75-16.7"  |
| 787mm<br>31"  | 787mm<br>31"  | 300mm<br>11.8"   | 780mm<br>30.7"   | 876mm<br>34.5"  |
| 540 Bar<br>7.8K psi   | 540 Bar<br>7.8K psi   | 500 Bar<br>7.2K psi  | 500 Bar<br>7.2K psi  | 500 Bar<br>7.2K psi   |
|    |    |   |   |          |
| 2speed throttle   | 2speed throttle   | Rotating Star Grip   | Rotating Star Grip   | Rotating Star Grip  |
|  67 57   |  67 57   |  68 58  |  68 58  |  68 58   |
| Push-button ram ext. do not need original ram head to be removed. On-tool charging. Stepless speed maximisation. *11mins at constant max force. | Push-button ram ext. do not need original ram head to be removed. On-tool charging. Stepless speed maximisation. *11mins at constant max force. | Can operate for 60min under water inc salt water with Saltwater battery. E3 Connect has WiFi connectivity. Side-mounted battery R421 E2 discontinued | Can operate for 60min under water inc salt water with Saltwater battery. E3 Connect has WiFi connectivity for tool management and remote status etc. | Can operate for 60min under water inc salt water with Saltwater battery. R421 E2 discontinued |
| holmatro.com  | holmatro.com  | jawsoflife.com   | jawsoflife.com   | jawsoflife.com  |


**360° SEARCH & RESCUE CAMERA**

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



Images not exactly to Scale  
but comparative within their  
own series of tools.

## OTHER TOOLS IN RANGE:








■ = Combi ■ = Spreader  
■ = Cutter ■ = Special Tools  
● = PARTIAL FEATURE  
 = Option  
N/A = info Not Available/  
not given










































| COMPANY                                     | LUKAS<br>(IDEX)   | LUKAS<br>(IDEX)  | LUKAS<br>(IDEX)  | OGURA  | OGURA  |
|---|---|--|--|--|--|
| MODEL VARIANT                               | R320  | R521   | CR 522 CrossRam  | RPR-370  | HRS941   |
| SERIES VARIANT                              | E3/ E3connect   | E3connect  | E3/ E3connect  | RP   | HR938 Ram  |
| VOLTAGE                                     | 25.2v   | 25.2v  | 25.2v  | 18v  | 18v  |
| TOOLS IN RANGE                              | <span style="color: blue;">■</span> <span style="color: magenta;">■</span> <span style="color: green;">■</span> <span style="color: purple;">■</span> | <span style="color: blue;">■</span> <span style="color: magenta;">■</span> <span style="color: green;">■</span> <span style="color: purple;">■</span>                  | <span style="color: blue;">■</span> <span style="color: magenta;">■</span> <span style="color: green;">■</span> <span style="color: purple;">■</span>                  | <span style="color: blue;">■</span> <span style="color: magenta;">■</span> <span style="color: yellow;">■</span> <span style="color: purple;">■</span> | <span style="color: blue;">■</span> <span style="color: magenta;">■</span> <span style="color: yellow;">■</span> <span style="color: purple;">■</span> |
| ORIGIN                                      |   |  |  |  |  |
| COST inc tax / VAT                          | N/A   | N/A  | N/A  | N/A  | N/A  |
| RAM TYPE                                    | 2-Stage Telescoping   | 2-Stage Telescoping  | 2-Stage Telescoping  | 1-Stage  | 1-Stage  |
| WEIGHT IN HAND<br>inc BATTERY exc EXTENSION | 13.7kg<br>30.2lb  | 19.4kg<br>42.8lb   | 21.6kg<br>47.6lb   | 14.1kg<br>31.1lb   | 4.2kg +3.1kg<br>9.3lb +6.8lb   |
| WEIGHT - DEFAULT BATTERY                    | 1.6 1.2kg /3.5 2.7lb  | 1.6 1.2kg /3.5 2.7lb   | 1.6 1.2kg /3.5 2.7lb   | 1-1.36kg<br>2.2-3lb  | 1-1.36kg<br>2.2-3lb  |
| BATTERY<br>Ah OPTIONS                       | Lukas<br>9Ah 9AhSaltWater, 5Ah  | Lukas<br>9Ah 9AhSaltWater, 5Ah   | Lukas<br>9Ah 9AhSaltWater, 5Ah   | Makita<br>5-6Ah*   | Makita<br>5-6Ah*   |
| BATTERY DURATION<br>RECHARGE TIME           | 30-60mins<br>75-150mins   | 30-60mins<br>75-150mins  | 30-60mins<br>75-150mins  | <12mins<br>55-120mins  | <12mins<br>55-120mins  |
| LENGTH retracted/extended*                  | 340mm /13.4"<br>640mm /25.2"  | 579mm /22.8"<br>1359mm /53.5"  | 657mm /25.9"<br>1533mm /60.3"  | 529mm /16"<br>899mm /27"   | *219mm /8.6"<br>319mm /12.6"   |
| HEIGHT/WIDTH                                | 326mm / 12.8"   | 327mm / 12.9"  | 327mm / 12.9"  | 290mm / 11.4"  | *290mm / 11.4"   |
| DEPTH (max diam)                            | 200mm / 7.9"  | 140mm / 5.5"   | 140mm / 5.5"   | 179mm / 7"   | *179mm / 7"  |
| EXTENSION(S) & OPTIONS                      | 50mm/2"<br>150mm/6"<br>270mm/10.6"<br>  | NO   | 50mm/2"<br>150mm/6"<br>270mm/10.6"<br>   | 200mm/7.9"<br>450mm/17.7"<br>Flat surface and claw<br>heads  | *  |
| EN  NFPA                                    |   |  |  | -  | -  |
| EN CLASSIFICATION                           | -   | -  | -  | -  | -  |
| PUSH FORCE(S for telescoping)<br>t=US Ton   | 127/60kN<br>14.27/ 6.74 Ust   | 127/60kN<br>14.27/ 6.74 Ust  | 127/60kN<br>14.27/ 6.74 Ust  | 66.6kN<br>0 Ust  | 36.6kN<br>4.1 Ust  |
| STROKE RANGE                                | 164/136mm<br>6.5-5.4"   | 403/377mm<br>15.9-14.8"  | 451/425mm<br>17.75-16.7"   | 370mm<br>14.6"   | 100mm<br>4"  |
| TOTAL STROKE DISTANCE                       | 300mm<br>11.8"  | 780mm<br>30.7"   | 876mm<br>34.5"   | 370mm<br>14.6"   | 100mm<br>4"  |
| WORKING PRESSURE (HYDRAULIC)                | 500 Bar<br>7.2K psi   | 500 Bar<br>7.2K psi  | 500 Bar<br>7.2K psi  | N/A  | N/A  |
| WiFi/Bluetooth  capable                     |   |  |  | --   | --   |
| SPEED CONTROL ON-BOARD LED                  | Rotating Star Grip  | Rotating Star Grip   | Rotating Star Grip   | Trigger  | Trigger  |
| IN-WATER USE BATTERY/TOOL IP                | 68 58   | 68 58  | 68 58  | 54 54  | 54 54  |
| NOTES                                       | Can operate for 60min<br>under water inc salt water<br>with Saltwater battery.<br>E3 Connect has WiFi<br>connectivity.<br>Side-mounted battery        | Can operate for 60min<br>under water inc salt<br>water with Saltwater<br>battery. E3 Connect has<br>WiFi connectivity for tool<br>management and remote<br>status etc. | Can operate for 60min<br>under water inc salt<br>water with Saltwater<br>battery. E3 Connect has<br>WiFi connectivity for tool<br>management and remote<br>status etc. | Head can be switched<br>between cutter, combi,<br>spreader ram etc.*EU uses<br>5Ah, US tends to use 6Ah  | *Ram dims only<br>*HRS941 Head can<br>switch between cu<br>combi, spreader ram   |
| WEBSITE                                     | lukas.com   | lukas.com  | lukas.com  | ogurarescuetools.com   | ogurarescuetools.c   |

|  |  |  |   |   |  |  |
|--|--|--|---|---|--|--|
|         |  |   |   |   |                         |   |
| <b>OGURA</b>   |  | <b>POWERHAWK TECHNOLOGIES</b>  | <b>POWERHAWK TECHNOLOGIES</b>   | <b>RESQTEC</b>  | <b>SCORPE</b>  | <b>SCORPE</b>  |
| <b>HRS931</b>  |  | <b>P25 (S-1601X)</b>   | <b>P40 (S-1601X)</b>  | <b>V4 V4x</b>   | <b>Ram SR</b>  | <b>Ram TR</b>  |
| <b>HR938 Ram</b>   |  | <b>X</b>   | <b>X</b>  | <b>EDD</b>  | <b>GreenSpirit II</b>  | <b>GreenSpirit II</b>  |
| <b>18v</b>   |  | <b>12v or 16v LIGHT</b>  | <b>7.5/12v</b>  | <b>43.2v</b>  | <b>28v</b>   | <b>18v/28v</b>   |
|        |  |   |    |    |                         |   |
| <b>N/A</b>   |  | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>   | <b>N/A</b>   |
| <b>1-Stage</b>   |  | <b>1-Stage+ hand-wind top section</b>  | <b>1-Stage+ hand-wind top section</b>   | <b>1-Stage</b>  | <b>1-Stage</b>   | <b>2-Stage Telescoping</b>   |
| <b>3.9kg +3.1kg<br/>8.6lb+6.8lb</b>  |  | <b>27kg<br/>0lb</b>  | <b>36kg<br/>0lb</b>   | <b>16.4kg<br/>36.1lb</b>  | <b>17.9kg</b>  | <b>21.1kg<br/>46.5lb</b>   |
| <b>1-1.36kg<br/>2.2-3lb</b>  |  | <b>1..36kg<br/>3lb</b>   | <b>1..36kg<br/>3lb</b>  | <b>1kg<br/>2.2lb</b>  | <b>1/1.1kg<br/>2.2/2.33lb</b>  | <b>1.1/1kg<br/>2.33/2.2lb</b>  |
| <b>Makita<br/>5-6Ah*</b>   |  | <b>Powerhawk<br/>7.5Ah<br/>or any 12v source</b>   | <b>Powerhawk<br/>7.5Ah<br/>or any 12v source</b>                                    | <b>*Resqtec<br/>2.6Ah</b>   | <b>Milwaukee<br/>5Ah M28<br/>8Ah M18</b>   | <b>Milwaukee<br/>8Ah M18<br/>5Ah M28</b>   |
| <b>&lt;12mins<br/>55-120mins</b>   |  | <b>&gt;30 mins<br/>&lt;120mins/&lt;15hr</b>  | <b>&gt;30 mins<br/>&lt;120mins/&lt;15hr</b>   | <b>&lt;45mins<br/>60mins</b>  | <b>60/80mins<br/>45-90mins</b>   | <b>60/80mins<br/>45-90mins</b>   |
| <b>303mm /16"<br/>899mm /27"</b>   |  | <b>0mm /16"<br/>0mm /27"</b>   | <b>0mm /23"<br/>0mm /41"</b>  | <b>636mm /25"<br/>936mm /37"</b>  | <b>540mm /21.3"<br/>908mm /35.7"</b>   | <b>587mm /23.1"<br/>1387mm /53"</b>  |
| <b>290mm / 11.4"</b>   |  | <b>178mm / 7"</b>  | <b>327mm / 12.9"</b>  | <b>355mm / 14"</b>  | <b>291mm / 11.5"</b>   | <b>365mm / 14.4"</b>   |
| <b>179mm / 7"</b>  |  | <b>100mm / 4"</b>  | <b>100mm / 4"</b>   | <b>133mm/ 5.2"</b>  | <b>167mm/ 6.6"</b>   | <b>167mm/ 6.6"</b>   |
| <b>*</b>   |  | <b>610mm/24"<br/>1220mm/48"</b>  | <b>610mm/24"<br/>1220mm/48"</b>   | <b>Multi-Adapter for...<br/>716mm / 28.2"<br/>586mm / 23"<br/>241.6mm / 9.5"<br/>151.6mm / 6"<br/>99.6mm / 4"<br/>Swivel &amp; Power Plates</b> | <b>250mm/10"<br/>350mm/14"<br/>450mm/18"<br/>100 &amp;180mm Heads<br/>Sill Support</b>                     | <b>250mm/10"<br/>350mm/14"<br/>450mm/18"<br/>100 &amp;180mm Heads<br/>Sill Support</b>                                       |
| <b>-</b>   |  |   |  |    |                       |   |
| <b>-</b>   |  | <b>-</b>   | <b>-</b>  | <b>-</b>  | <b>R111/368-17.9</b>   | <b>TR108/428-62/372-21.1</b>   |
| <b>36.6kN<br/>4.1 Ust</b>  |  | <b>31.6-52.5kN<br/>3.5-5.9 Ust</b>   | <b>31.6-52.5kN<br/>3.5-5.9 Ust</b>  | <b>89 /58.8kN<br/>10 /6.6 Ust</b>   | <b>111kN<br/>12.47 Ust</b>   | <b>108/62kN*<br/>12.1/7 Ust</b>  |
| <b>100mm<br/>4"</b>  |  | <b>127/152*mm<br/>5/6"</b>   | <b>305/152*mm<br/>12/6"</b>   | <b>300mm<br/>11.8"</b>  | <b>368mm<br/>14.5"</b>   | <b>428/372mm<br/>16.8- 14.7"</b>   |
| <b>100mm<br/>4"</b>  |  | <b>127mm (+152mm manual)<br/>5" (+6" manual)</b>   | <b>305mm(+152mm manual)<br/>12" (+6" manual)</b>                                    | <b>300mm<br/>11.8"</b>  | <b>368mm<br/>14.5"</b>   | <b>800mm<br/>31.5"</b>   |
| <b>N/A</b>   |  | <b>N/A mechanical</b>  | <b>N/A mechanical</b>   | <b>N/A mechanical</b>   | <b>700 Bar<br/>10.2K psi</b>   | <b>550 Bar<br/>7.9K psi</b>  |
| <b>--</b>  |  | <b>--</b>  | <b>--</b>   | <b>--</b>   | <b>--</b>  | <b>--</b>  |
| <b>Trigger</b>   |  | <b>Rotating Star Grip</b>  | <b>Rotating Star Grip</b>   |    | <b>Rocker switch </b> | <b>Rocker switch </b>                   |
| <b>54 54</b>   |  | <b>54 54</b>   | <b>54 54</b>  | <b>54 54</b>  | <b>54/68 54</b>  |  <b>54/68* 68</b>                       |
| *Ram dims only<br>*HRS941 Head can be switched between cutter, combi, spreader ram etc |  | RAMs can be joined with bespoke coupler and can be used with any spreader that fits 2.25"/58mm but is designed for the P16/P16X with spreader or combi heads. *Manually screwed telescoping top section adds 6"/152mm. Rams have locking nuts to follow the lift and hold without power unit. Both P16 (Legacy) & P16X can use a 12v car battery or any 12v power source |   | *10Ah powerpack also available.<br>Ram compatible with all Resqtec shoring struts if using the Multi-Adapter.                                   | Converter available for M28 & other batteries.<br>* IP68 with M18 & waterproof cover (not shown)           | * &36.9kN/4.1USt Pull force.<br>Converter available for M28 & other batteries.<br>* IP68 with M18 & waterproof cover (shown) |
| ogurarescuertools.com  |  | powerhawk.com  | powerhawk.com   | resqtec.com   | scorpe.net   | scorpe.net   |

Images not exactly to Scale  
but comparative within  
their own series of tools.

**OTHER TOOLS IN RANGE:**  
 = Combi  = Spreader  
 = Cutter  = Special Tools  
 = PARTIAL FEATURE  
  = Option  
**N/A** = info Not Available/  
not given



| COMPANY   | TNT RESCUE  | TNT RESCUE  | WEBER RESCUE  | WEBER RESCUE  | WEBER RESCUE  |
|---|---|---|---|---|---|
| MODEL VARIANT   | ER40  | ELS40   | RZ1-910 -   | RZ1-910 -   | RZT2-1170 -   |
| SERIES  | Storm Surge   | Storm Surge   | E-Force3  | Smart-Force   | E-Force3  |
| VOLTAGE   | 18v/20v   | 18v/20v   | 28v   | 18v   | 28v   |
| TOOLS IN RANGE  |    |    |     |     |     |
| ORIGIN  |    |    |   |    |    |
| COST inc tax / VAT  | N/A   | N/A   | N/A   | N/A   | N/A   |
| RAM TYPE  | 1-Stage   | 2-Stage Telescoping   | 1-Stage   | 1-Stage   | 2-Stage Telescoping   |
| WEIGHT IN HAND<br>inc BATTERY exc EXTENSION   | 19.77kg<br>43.6lb   | 18.64kg<br>41.1lb   | 17.3kg<br>38.1lb  | 18.4kg<br>40.6lb  | 20.9kg<br>46lb  |
| WEIGHT - DEFAULT BATTERY  | 1.1kg / 2.4lb<br>1.2[1.36]kg / 2.6[3]lb   | 1.1kg / 2.4lb<br>1.2[1.36]kg / 2.6[3]lb   | 1.4kg / 1kg<br>3.2lb / 2.3lb  | 1.1 / 1.7kg<br>2.33 / 3.74lb  | 1.4kg / 1kg<br>3.2lb / 2.3lb  |
| BATTERY<br>Ah OPTIONS   | Milwaukee M18<br>8/9Ah./[Makita6Ah]<br>DeWalt FlexV20 9Ah   | Milwaukee M18<br>8/9Ah./[Makita6Ah]<br>DeWalt FlexV20 9Ah   | Weber/<br>Milwaukee<br>5Ah*   | Milwaukee M18<br>8Ah/12Ah*  | Weber/<br>Milwaukee<br>5Ah*   |
| BATTERY DURATION<br>RECHARGE TIME   | 10-15mins<br>87 / 60mins  | 10-15mins<br>87 / 60mins  | <45mins<br>90mins   | 60/90mins<br>45-83mins  | <45mins<br>90mins   |
| LENGTH retracted/extended*  | 647.7mm / 25.5"<br>1041.4mm / 41"   | 546.1mm / 21.5"<br>1073.15mm / 42.25"   | 540mm / 21.3"<br>908mm / 35.7"  | 540mm / 21.3"<br>908mm / 35.7"  | 543mm / 21.4"<br>1170mm / 44.3"   |
| HEIGHT/WIDTH  | 273mm / 10.75"  | 273mm / 10.75"  | 340mm / 13.4"   | 340mm / 13.4"   | 351mm / 13.8"   |
| DEPTH (max diam)  | 205.7mm / 8.1"  | 205.7mm / 8.1"  | 134mm / 5.3"  | 134mm / 5.3"  | 134mm / 5.3"  |
| EXTENSION(S) & OPTIONS  | 150mm/6"<br>300mm/12"<br>450mm/18"  | 150mm/6"<br>300mm/12"<br>450mm/18"  | 175mm/7"<br>250mm/9.8"<br>320mm/12.6"   | 175mm/7"<br>250mm/9.8"<br>320mm/12.6"   | NO  |
| EN  NFPA  |    |    |     |     |    |
| EN CLASSIFICATION   | -   | -   | R111/368-17.3   | R111/368-18.4   | TR189/360-99/27020,9  |
| PUSH FORCE(S for telescoping)<br>t=US Ton   | 164.6kN<br>18.5 Ust   | 169.3/58.2kN<br>19/6.5 Ust  | 111kN<br>12.47 Ust  | 111kN<br>12.47 Ust  | 189-99kN<br>21.2/11.1 Ust   |
| STROKE RANGE  | 368mm<br>14.5"  | 329/221mm<br>12.95/8.7"   | 368mm<br>14.5"  | 368mm<br>14.5"  | 360/270mm<br>13.2-10.6"   |
| TOTAL STROKE DISTANCE   | 368mm<br>14.5"  | 527mm<br>20.75"   | 368mm<br>14.5"  | 368mm<br>14.5"  | 630mm<br>24.8"  |
| WORKING PRESSURE (HYDRAULIC)  | 722 Bar<br>10.5K psi  | 722 Bar<br>10.5K psi  | 700 Bar<br>10.1K psi  | 550 Bar<br>7.9K psi   | 700 Bar<br>10.1K psi  |
| WiFi/Bluetooth capable  | --  | --  | --  |    | --  |
| SPEED CONTROL ON-BOARD LED  | Rotating Star Grip   | Rotating Star Grip   | Rocker switch    | Rocker switch    | Rocker switch    |
| IN-WATER USE BATTERY/TOOL IP  | 54 54   | 54 54   | 54 54   |  68* 58  | 54 54   |
| NOTES   | TNT prices include 2 batteries<br>and Dual Rapid charger.<br>Storm2 series DISCONTINUED<br>Mains adapter=option.  | TNT prices include 2 batteries<br>and Dual Rapid charger.<br>Storm2 series DISCONTINUED<br>Mains adapter=option.  | All E-Force tools can<br>convert to hose.<br>Length remaining markers on<br>ram tube.   | All E-Force tools can<br>convert to hose.<br>Length remaining markers on<br>ram tube.<br>*IP68 only with battery cover.<br>IP54 splash cover for 12Ah   | All E-Force tools can<br>convert to hose.<br>Length remaining markers on<br>ram tube.   |
| WEBSITE   | tntrescue.com   | tntrescue.com   | weber.com   | weber.com   | weber.com   |



**PUSH IT  
TO THE LIMIT.**



**THE NEXT-GEN  
PENTHEON RAM.  
MILES AHEAD.**




For decades, first responders and patients alike have been able to count on us for life. To keep this promise we ceaselessly push the boundaries of technology and innovation. For the latest iteration of the Pentheon Rams, our engineers worked tirelessly to build tools that are miles ahead in terms of performance, usability, connectivity and serviceability. Ensuring that the path to a patient's safety is equally fast as it is controlled. Discover the next-gen Pentheon Rams.

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



 **holmatro**  
mastering power




























|  |  |  |   |   |  |   |               |
|--|--|--|---|---|--|---|---------------|
| <p>IMAGES NOT TO SCALE</p> <p>OTHER TOOLS IN RANGE:</p> <p>■ =BATTERY TOOLS</p> <p>■ = Combi</p> <p>■ = Cutter</p> <p>■ = Spreader</p> <p>■ = Special Tools</p> <p>● = PARTIAL or OK but not ideal</p> <p>□ = Option</p> <p>N/A = info Not Available/not given</p> <p>THROTTLE is a motorcycle-style rotating hand grip.</p> |            |  |   |   |  |   |               |
|  | COMPANY  | AOLAI RESCUE   |   | AOLAI RESCUE  | AOLAI RESCUE   | AOLAI RESCUE  | AOLAI RESCUE  |
|  | SERIES MODEL VARIANT   | Ram 1  | Ram 2   | Ram3  | Ram4   | Ram 5   | Ram6          |
|  | PRODUCT CODE   | GYCD-120/570-Q   | GYCD-63-110/525-A   | GYCD-120/860B   | GYCD-100/975   | GYCD-155/1240   | GYDD-171-388/ |
|  | TOOLS IN RANGE   | ■ ■ ■  | ■ ■ ■   | ■ ■ ■   | ■ ■ ■  | ■ ■ ■   | ■ ■ ■         |
| ORIGIN   | ■  | ■  | ■   | ■   | ■  | ■   |               |
| COST inc tax / VAT   | \$3500-4500*   | \$3500-4500*   | \$3750--4700*   | \$3750--4700*   | \$3500-4500*   | \$3750--4700*   |               |
| RAM TYPE   | 1-Stage  | 1-Stage  | 2-Stage Telescoping   | 2-Stage Telescoping   | Double Ended   | 2-Stage Telescoping   |               |
| WEIGHT inc Hose exc EXTENSIONS   | 9.4kg<br>20.7lb  | 10kg<br>22lb   | 20.4kg<br>45lb  | 13.7kg<br>45lb  | 10.9kg<br>24lb   | 18.5kg<br>40.7lb  |               |
| LENGTH retracted/extended*   | 350mm/ 00"<br>930mm/0"   | 350mm/ 00"<br>1080mm/0"  | 500mm/ 00"<br>1390mm/53.3"  | 460mm/ 00"<br>1060mm/53.3"  | 565mm/ 00"<br>975mm/00"  | 740mm/ 00"<br>1230mm/0"   |               |
| HEIGHT/WIDTH   | 180mm / 00"  | 260mm / 00"  | 400mm / 15.8"   | 200mm / 00"   | 320mm / 00"  | 200mm / 00"   |               |
| DEPTH (max diam)   | 90mm / 00"   | 90mm / 00"   | 120mm / 4.7"  | 110mm / 00"   | 120mm / 00"  | 110mm / 00"   |               |
| EXTENSION(S)/HEADS etc. (OPTIONAL EXTRA in GREEN)  | NO   | NO   | NO  | NO  | NO   | NO  |               |
| EN ■ NFPA □  | ■*   | ■*   | ■* ■  | ■* ■  | ■*   | ■* ■  |               |
| EN CLASSIFICATION  | -  | -  | -   | -   | -  | -   |               |
| PUSH FORCE(S for telescoping) t=US Ton   | 00kN<br>00 USt   | 00kN<br>00 USt   | 00-00kN<br>00-00 USt  | 00-00kN<br>00-00 USt  | 00kN<br>00 USt   | 00-00kN<br>00-00 USt  |               |
| STROKE RANGE   | -  | -  | -   | -   | -  | -   |               |
| TOTAL STROKE DISTANCE  | 220mm<br>00"   | 730mm<br>00"   | 890mm<br>00"  | 600mm<br>00"  | 410mm<br>00"   | 490mm<br>00"  |               |
| WORKING PRESSURE (HYDRAULIC)   | 720Bar / 10.4Kpsi  | 720Bar / 10.4Kpsi  | 720Bar / 10.4Kpsi   | 720Bar / 10.4Kpsi   | 720Bar / 10.4Kpsi  | 720Bar / 10.4Kpsi   |               |
| SPEED CONTROL  | Throttle   | Star Grip  | Star Grip   | Star Grip   | Star Grip  | Star Grip   |               |
| ROTATE HEAD/HANDLE   |  |  |   |   |  |   |               |
| LED LIGHTS   | ■  | ■  | ■   | ■   | ■  | ■   |               |
| IN-WATER USE TOOL IP   | 54   | 54   | 54  | 54  | 54   | 54  |               |
| NOTES  | *CE is listed but you will need to verify this refers to the correct standard.<br>*FOB China | *CE is listed but you will need to verify this refers to the correct standard.<br>*FOB China | *CE & NFPA is listed but you will need to verify this refers to the correct standard.<br>*FOB China | *CE & NFPA is listed but you will need to verify this refers to the correct standard.<br>*FOB China | *CE is listed but you will need to verify this refers to the correct standard.<br>*FOB China | *CE & NFPA is listed but you will need to verify this refers to the correct standard.<br>*FOB China |               |
| WEBSITE  | aolairescue.com  | aolairescue.com  | aolairescue.com   | aolairescue.com   | aolairescue.com  | aolairescue.com   |               |

|                             |                          |   |  |  |  |  |  |
|-----------------------------|--------------------------|---|--|--|--|--|--|
|                             |                          |   |  |  |  |  |  |
| CUE                         | EDILGRAPPA               | GENESIS RESCUE  | GENESIS RESCUE   | GENESIS RESCUE   | GENESIS RESCUE   | GENESIS RESCUE   | GENESIS RESCUE   |
|                             | 2S700                    | C-Ram 15-30   | C-Ram 19-51  | C-Ram 21-46  | C-Ram 26-59  | Push-Pull 31"  | Push-Pull 41"  |
| 576C                        | 150.02804                | 593.140.1   | 593.414.1  | 105.014.9  | 1005.004.1   | 031.900.1  | 041.900.1  |
|                             |                          |   |  |  |  |  |  |
|                             |                          |   |  |  |  |  |  |
| 0*                          | N/A                      | N/A   | N/A  | N/A  | N/A  | N/A  | N/A  |
| ng                          | 2-Stage Telescoping      | 2-Stage   | 3-Stage Telescoping  | 2-Stage Telescoping  | 2-Stage Telescoping  | 1-Stage  | 1-Stage  |
|                             | 17kg<br>00lb             | 17.3kg<br>38.1lb  | 17.2kg<br>38lb   | 15.2kg<br>21.3lb   | 18kg<br>39.6lb   | 13.6kg<br>30lb   | 16.2kg<br>35.7lb   |
| 0"<br>0"                    | 540mm/ 00"<br>1284mm/00" | 395mm/ 15.5"<br>775mm /30.5"  | 480mm /18.9"<br>1310mm /51.6"  | 540mm /21.3"<br>1170mm /49"  | 650mm /25.6"<br>1500mm /59"  | 521mm /20.5"<br>807mm /31.8"   | 646mm /25.4"<br>1054mm /41.5"  |
| 0"                          | 315mm / 00"              | 340mm / 13.4"   | 221mm / 8.7"   | 200mm / 7.9"   | 200mm / 7.9"   | 204mm / 8.4"   | 204mm / 8.4"   |
| 0"                          | 193mm / 00"              | 134mm/ 5.3"   | 109mm/ 4.3"  | 88mm / 3.5"  | 88mm / 3.5"  | 101mm / 4"   | 101mm / 4"   |
|                             | NO                       | 300mm/12"   | 76mm/3"<br>127mm/5"<br>254mm/10"<br>Angled V&X-head<br>Pull shackles, pins<br>& adapters   | 76mm/3"<br>127mm/5"<br>254mm/10"<br>Angled V&X-head<br>Pull shackles, pins<br>& adapters | 76mm/3"<br>127mm/5"<br>254mm/10"<br>Angled V&X-head<br>Pull shackles, pins<br>& adapters | 76mm/3"<br>127mm/5"<br>254mm/10"<br>Angled V&X-head<br>Pull shackles, pins<br>& adapters | 76mm/3"<br>127mm/5"<br>254mm/10"<br>Angled V&X-head<br>Pull shackles, pins<br>& adapters |
|                             | <br>TR218/385-77/360-17  |   |  |  |  |  |  |
|                             | 218-77kN<br>00-00 USt    | 189.4/99kN<br>0Ust  |  | 189.4/99kN<br>0Ust   | 189.4/99kN<br>0Ust   | 143.7-45.8 kN<br>16- USt   | 142-45.8 kN<br>16- USt   |
|                             | -                        | -   | -  | -  | -  | -  | -  |
|                             | 745.5mm<br>00"           | 380mm<br>15"  | 830mm<br>32.7"   | 630mm<br>24.8"   | 850mm<br>33.5"   | 286mm<br>11.3"   | 408mm<br>16.1"   |
| 4Kpsi                       | 700Bar / 10.2Kpsi        | 700Bar / 10.2Kpsi   | 700Bar / 10.2Kpsi  | 700 Bar 10.1K psi  | 700Bar / 10.2Kpsi  | 700Bar / 10.2Kpsi  | 700Bar / 10.2Kpsi  |
| o                           | Throttle                 | Throttle  | Throttle   | Throttle   | Throttle   | Throttle   | Throttle   |
|                             |                          |   |  |  | - 360°   |  |  |
|                             | -                        |   |  |  |  |  |  |
|                             | 54                       | 54  | 58   | 54   | 54   | 54   | 54   |
| ed but<br>verify<br>correct | -                        | All E-Force tools can<br>convert to hose.<br>Length remaining markers<br>on ram tube. | All E-Force tools can<br>convert to hose.<br>Length remaining markers<br>on ram tube.<br>*IP68 only with battery<br>cover. IP54 splash cover<br>for 12Ah | All E-Force tools can<br>convert to hose.<br>Length remaining markers<br>on ram tube.    |  | All E-Force tools can<br>convert to hose.<br>*=PULL-FORCE                                | All E-Force tools can<br>convert to hose.<br>*=PULL-FORCE                                |
| com                         | edilgrappa.com           | genesisrescue.com   | genesisrescue.com  | genesisrescue.com  | genesisrescue.com  | genesisrescue.com  | genesisrescue.com  |



| <p>IMAGES NOT TO SCALE</p> <p>OTHER TOOLS IN RANGE:</p> <p>■ = BATTERY TOOLS</p> <p>■ = Combi</p> <p>■ = Cutter</p> <p>■ = Spreader</p> <p>■ = Special Tools</p> <p>● = PARTIAL or OK but not ideal</p> <p>□ = Option</p> <p>N/A = info Not Available/not given</p> |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
|   |   |   |   |   |   |   |
| COMPANY   | HOLMATRO  | HOLMATRO  | HOLMATRO  | HOLMATRO  | HOLMATRO  | HOLMATRO  |
| SERIES MODEL VARIANT  | CORE 5000<br>TR 5340 LP   | CORE 5000<br>TR 5349 LP   | CORE 5000<br>TR 5350 LP   | CORE 5000<br>TR 5370 LP   | CORE 5000<br>RA 5315 CL   | CORE 5000<br>RA 5320 LP   |
| PRODUCT CODE  | 150.032.102   | 150.032.114   | 150.032.101   | 150.032.100   | 150.032.121   | 151.000.38  |
| TOOLS IN RANGE  |    |   |   |   |   |   |
| ORIGIN  |    |    |    |    |    |    |
| COST inc tax / VAT  | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   |
| RAM TYPE  | 2-Stage<br>Telescopic   | 2-Stage<br>Telescopic   | 2-Stage<br>Telescopic   | 2-Stage<br>Telescopic   | 1-Stage   | 1-Stage   |
| WEIGHT inc Hose<br>exc EXTENSIONS   | 9.2/10.4kg<br>20.3/22.9lb   | 14.2/15.6kg<br>31.3/34.4lb  | 14.6/15.8kg<br>32.2/34.8lb  | 16.9/18.1kg<br>437.3/39.9lb   | 9.8/11.1kg<br>21.6/24.5lb   | 10.7/12.1kg<br>23.6lb   |
| LENGTH retracted/extended*  | 335mm / 13.2"<br>610mm/24"  | 540mm/ 21.3"<br>1225mm/48.2"  | 560mm/ 22"<br>1285mm/50.6"  | 635mm/ 25"<br>1510mm/59.5"  | 567mm/ 22.3"<br>967mm/38.1"   | 515mm/ 20"<br>765mm/30"   |
| HEIGHT/WIDTH  | 280mm / 11"   | 280mm / 11"   | 280mm / 11"   | 281mm / 11.1"   | 256mm / 11"   | 280mm / 11"   |
| DEPTH (max diam)  | 105mm / 4.1"  | 105mm / 4.1"  | 105mm / 4.1"  | 109mm / 4.3"  | 100mm / 4"  | 105mm / 4"  |
| EXTENSION(S)/HEADS etc.<br>(OPTIONAL EXTRA in GREEN)  | 220mm/8.7"<br>(3.3kg/ 7.3lb)<br>440mm/17.3"<br>(4.6kg/10.1lb)<br>Cross Rams support<br>2x Sill Supports   | 220mm/8.7"<br>(3.3kg/ 7.3lb)<br>440mm/17.3"<br>(4.6kg/10.1lb)<br>Cross Rams support<br>2x Sill Supports   | 220mm/8.7"<br>(3.3kg/ 7.3lb)<br>440mm/17.3"<br>(4.6kg/10.1lb)<br>Cross Rams support<br>2x Sill Supports   | 220mm/8.7"<br>(3.3kg/ 7.3lb)<br>440mm/17.3"<br>(4.6kg/10.1lb)<br>Cross Rams support<br>2x Sill Supports   | 220mm/8.7"<br>(3.3kg/ 7.3lb)<br>440mm/17.3"<br>(4.6kg/10.1lb)<br>Cross Rams support<br>2x Sill Supports   | 330mm/11.8"<br>(3.5kg/ 7.7lb)<br>500mm/19.7"<br>(4.5kg/ 9.9lb)<br>Chains&hooks.<br>ram & 2x Sill Supports   |
| EN  NFPA    |   |   |   |   |   |   |
| EN CLASSIFICATION   | TR217/150-101/125-9.2   | TR217/375-101/350-14.6  | TR217/375-101/350-14.6  | TR231/450-111/425-16.9  | R100/400-9.8  | R150/250-1  |
| PUSH FORCE(S for telescoping)<br>t=US Ton   | 217/101kN<br>00-00 Ust  | 217/101kN<br>00-00 Ust  | 217/101kN<br>00-00 Ust  | 231/111kN<br>00-00 Ust  | 100kN<br>00 Ust   | 150kN<br>00ust  |
| STROKE RANGE  | 150-125mm<br>5.9-4.9"   | 335-330mm<br>14-13"   | 375-350mm<br>14.8-13.8"   | 450-425mm<br>17.7-16.7"   | -   | -   |
| TOTAL STROKE DISTANCE   | 275mm<br>10.8"  | 725mm<br>28.5"  | 725mm<br>28.5"  | 875mm<br>34.5"  | 400mm<br>15.7"  | 250mm<br>9.8"   |
| WORKING PRESSURE (HYDRAULIC)  | 720Bar / 10.4Kpsi   | 720Bar / 10.4Kpsi   | 720Bar / 10.4Kpsi   | 720Bar / 10.4Kpsi   | 720Bar / 10.4Kpsi   | 720Bar / 10.4Kpsi   |
| SPEED CONTROL   | rotating throttle   | rotating throttle   | rotating throttle   | rotating throttle   | rotating throttle   | rotating throttle   |
| ROTATE HEAD/HANDLE  | - -   | - -   | - -   | - -   | - -   | - 360°  |
| ON-BOARD LED  |  x6 + Laser  |  x6 + Laser  |  x6 + Laser  |  x6 + Laser  | -   |  x6 + Laser  |
| IN-WATER USE TOOL IP  | 54  | 54  | 54  | 54  | 54  |  57  |
| NOTES   | Plunger auto-extends to target when unloaded. Push-button ram ext. does not need original ram head to be removed.   | Plunger auto-extends to target when unloaded. Push-button ram ext. does not need original ram head to be removed.   | Plunger auto-extends to target when unloaded. Push-button ram ext. does not need original ram head to be removed.   | Plunger auto-extends to target when unloaded. Push-button ram ext. does not need original ram head to be removed.   | Plunger auto-extends to target when unloaded. Push-button ram ext. does not need original ram head to be removed.   | Plunger auto-extends to target when unloaded. Push-button ram ext. does not need original ram head to be removed.   |
| WEBSITE   | holmatro.com  | holmatro.com  | holmatro.com  | holmatro.com  | holmatro.com  | holmatro.com  |

## HOSE-FED RAMS






|   |   |   |   |  |   |   |                        |
|---|---|---|---|--|---|---|------------------------|
|    |    |   |   |  |   |   |                        |
| <b>HOLMATRO</b>   | <b>HOLMATRO</b>   | <b>HOLMATRO</b>   | <b>HURST (IDEX)</b>   | <b>HYDRAM</b>  | <b>HYDRAM</b>   | <b>HYDRAM</b>   | <b>HYDRAM</b>          |
| <b>CORE RA 5322</b>   | <b>CORE RA5331</b>  | <b>CORE RA5332</b>  | <b>R424</b>   | <b>VHE 150</b>   | <b>VHE 250</b>  | <b>VHE 425</b>  |                        |
| 151.000.388   | 151.000.391   |   |   |  |   |   |                        |
|    |    |    |    |  |  |  |                        |
| N/A   | N/A   | N/A   | N/A   |  |   |   |                        |
| Double-ended  | 1-Stage   | Double-ended  | 2-Stage Telescoping   | 1-Stage  | 1-Stage   | 1-stage Double Ended  |                        |
| 15.8/34.8kg<br>17.1/37.7lb  | 12.5/13.8kg<br>27.6/30.4lb  | 19.3/20.6kg<br>42.5/45.4lb  | 21.0kg<br>46.3lb  | 00kg<br>00lb   | 00kg<br>00lb  | 00kg<br>00lb  | 00kg<br>00lb           |
| 750mm/ 29.5"<br>1250mm/49.2"  | 615mm/ 24.2"<br>955mm/37.6"   | 950mm/ 37.4"<br>1630mm/64.2"  | 625mm /24.6"<br>1500mm /59.1"   | 00mm /00"<br>00mm /00"   | 00mm /00"<br>00mm /00"  | 00mm /00"<br>00mm /00"  | 00mm /00"<br>00mm /00" |
| 280mm / 11"   | 280mm / 11"   | 280mm / 11"   | 221mm / 8.7"  | 00mm / 00"   | 00mm / 00"  | 00mm / 00"  | 00mm / 00"             |
| 105mm / 4.1"  | 105mm / 4.1"  | 105mm / 4.1"  | 112mm / 4.41"   | 00mm / 00"   | 00mm / 00"  | 00mm / 00"  | 00mm / 00"             |
| Conical and wedge tips, base plate, Chains&hooks. Cross-ram & 2x Sill Supports  | 330mm/13" (3.5kg/ 7.7lb)<br>500mm/19.7" (4.5kg/ 9.9lb)<br>Chains&hooks. Cross-ram & 2x Sill Supports  | Conical and wedge tips, base plate, Chains&hooks. Cross-ram & 2x Sill Supports  | 2x Sill Supports<br>1x Multi-Support  |  |   |   |                        |
|   |   |   |   |  |   |   |                        |
| R150/500-15.8   | R150/340-12.5   | R150/680-19.3   | TR 269/445-134/430-21,0   |  |   |   |                        |
| 150??kN<br>00/00Ust   | 150kN<br>00Ust  | 150??kN<br>00/00Ust   | 269/134kN<br>00/00Ust   |  |   |   |                        |
| ??mm<br>?/?"  | -   | ??mm<br>?/?"  | 445/430mm<br>00-00"   |  |   |   |                        |
| 500mm<br>19.7"  | 340mm<br>31"  | 680mm<br>26.8"  | 875mm<br>34.5"  |  |   |   |                        |
| 720Bar / 10.4Kpsi   | 720Bar / 10.4Kpsi   | 720Bar / 10.4Kpsi   | 500Bar / 7.2K psi   | 700Bar / 10.2Kpsi  | 700Bar / 10.2Kpsi   | 700Bar / 10.2Kpsi   | 700Bar / 10.2Kpsi      |
| rotating throttle   | rotating throttle   | rotating throttle   | Star Grip   | throttle   | throttle  | throttle  | throttle               |
| - 360°  | - 360°  | - 360°  |   |  |   |   |                        |
|  x6 + Laser   |  x6 + Laser  |  x6 + Laser  |    | -  | -   | -   | -                      |
|  57  |  57  |  57  |  54  |  |   |   |                        |
| Push-button ram ext. do not need original ram head to be removed.   | Push-button ram ext. do not need original ram head to be removed.   | Push-button ram ext. do not need original ram head to be removed.   |   |  |   |   |                        |
| holmatro.com  | holmatro.com  | holmatro.com  | jawsoflife.com  | hydram.com   | hydram.com  | hydram.com  | hydram.com             |

| <p>IMAGES NOT TO SCALE</p> <p>OTHER TOOLS IN RANGE:</p> <p>■ = BATTERY TOOLS</p> <p>■ = Combi</p> <p>■ = Cutter</p> <p>■ = Spreader</p> <p>■ = Special Tools</p> <p>● = PARTIAL or OK but not ideal</p> <p>□ = Option</p> <p>N/A = info Not Available/not given</p> |                          |                          |                          |                          |                            |                            |
|---|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------|----------------------------|
| COMPANY   | HYDRAM                   | HYDRAM                   | HYDRAM                   | HYDRAM                   | HYDRAM                     | HYDRAM                     |
| SERIES MODEL VARIANT  | VHES 150                 | VHES 250                 | VHES 425                 | VHEM 150                 | VHEM 250                   | VHEM 350                   |
| PRODUCT CODE  |                          |                          |                          |                          |                            |                            |
| TOOLS IN RANGE  |                          |                          |                          | ■ ■ ■ ■                  | ■ ■ ■ ■                    |                            |
| ORIGIN  | ■ ■                      | ■ ■                      | ■ ■                      | ■ ■                      | ■ ■                        | ■ ■                        |
| COST inc tax / VAT  |                          |                          |                          | N/A                      | N/A                        | N/A                        |
| RAM TYPE  | 1-Stage                  | 1-Stage                  | 1-stage Double Ended     | 1-Stage                  | 1-Stage                    | 1-Stage                    |
| WEIGHT inc Hose exc EXTENSIONS  | 00kg<br>00lb             | 00kg<br>00lb             | 00kg<br>00lb             | 00kg<br>00lb             | 9.88kg<br>00lb             | 10.38kg<br>00lb            |
| LENGTH retracted/extended*  | 00mm / 00"<br>00mm / 00" | 00mm / 00"<br>00mm / 00" | 00mm / 00"<br>00mm / 00" | 00mm / 00"<br>00mm / 00" | 530mm / 00"<br>742mm / 00" | 633mm / 00"<br>942mm / 00" |
| HEIGHT/WIDTH  | 00mm / 00"               | 00mm / 00"               | 00mm / 00"               | 00mm / 00"               | 335mm / 00"                | 335mm / 00"                |
| DEPTH (max diam)  | 00mm / 00"               | 00mm / 00"               | 00mm / 00"               | 00mm / 00"               | 124mm / 00"                | 124mm / 00"                |
| EXTENSION(S)/HEADS etc.<br>(OPTIONAL EXTRA in GREEN)  |                          |                          |                          |                          |                            |                            |
| EN ■ NFPA □   |                          |                          |                          | ■                        | ■                          | ■                          |
| EN CLASSIFICATION   | R194/150-9.5             | R194/250-10.5            |                          | R 158 -250 -9.88         | R 158 -250 -9.88           | R 158 -350 -9.88           |
| PUSH FORCE(S for telescoping)<br>t=US Ton   |                          |                          |                          | 158/76kN<br>00/00Ust     | 158/76kN<br>00/00Ust       | 158/76kN<br>00/00Ust       |
| STROKE RANGE  |                          |                          |                          | -                        | -                          | -                          |
| TOTAL STROKE DISTANCE   |                          |                          |                          | 250mm<br>9.8"            | 250mm<br>9.8"              | 350mm<br>13.8"             |
| WORKING PRESSURE (HYDRAULIC)  | 700Bar / 10.2Kpsi        | 700Bar / 10.2Kpsi        | 700Bar / 10.2Kpsi        | 700Bar / 10.2Kpsi        | 700Bar / 10.2Kpsi          | 700Bar / 10.2Kpsi          |
| SPEED CONTROL   | throttle                 | throttle                 | throttle                 | throttle                 | throttle                   | throttle                   |
| ROTATE HEAD/HANDLE  |                          |                          |                          |                          |                            |                            |
| ON-BOARD LED  | -                        | -                        | -                        | -                        | -                          | -                          |
| IN-WATER USE TOOL IP  |                          |                          |                          |                          |                            |                            |
| NOTES   |                          |                          |                          |                          |                            |                            |
| WEBSITE   | hydram.com               | hydram.com               | hydram.com               | hydram.com               | hydram.com                 | hydram.com                 |








































|         | HYDRAM                        | HYDRAM                    | HYDRAM                   | HYDRAM                   | HYDRAM                   | HYDRAM                     | HYDRAM                     |
|---------|-------------------------------|---------------------------|--------------------------|--------------------------|--------------------------|----------------------------|----------------------------|
|         | VHEM 500                      | VHEM 700                  | VHET 259                 | VHET 619                 | VHETS 275                | VHETS 575                  | VHETS 700                  |
|         |                               |                           |                          |                          |                          |                            |                            |
|         | N/A                           | N/A                       |                          |                          |                          | N/A                        | N/A                        |
|         | 1-stage<br>Double Ended       | 1-stage<br>Double Ended   | 1-Stage                  | 1-stage<br>Double Ended  | 1-stage<br>Double Ended  | 1-Stage                    | 1-Stage                    |
|         | 12.58kg<br>00lb               | 17.58kg<br>00lb           | 00kg<br>00lb             | 00kg<br>00lb             | 00kg<br>00lb             | 9.88kg<br>00lb             | 9.88kg<br>00lb             |
| 0"      | 2x250mm / 00"<br>1224mm / 00" | 966mm / 00"<br>00mm / 00" | 00mm / 00"<br>00mm / 00" | 00mm / 00"<br>00mm / 00" | 00mm / 00"<br>00mm / 00" | 530mm / 00"<br>742mm / 00" | 530mm / 00"<br>742mm / 00" |
| 0"      | 335mm / 00"                   | 335mm / 00"               | 00mm / 00"               | 00mm / 00"               | 00mm / 00"               | 335mm / 00"                | 335mm / 00"                |
| 0"      | 124mm / 00"                   | 124mm / 00"               | 00mm / 00"               | 00mm / 00"               | 00mm / 00"               | 124mm / 00"                | 124mm / 00"                |
|         |                               |                           |                          |                          |                          |                            |                            |
| 10.38   | R 158 -500 -12.58             | R 158 -700 -17.58         | R194/250-10.5            |                          |                          | R 158 -250 -9.88           | R 158 -250 -9.88           |
| N<br>st | 158/76kN<br>00/00ust          | 158/76kN<br>00/00ust      |                          |                          |                          | 158/76kN<br>00/00ust       | 158/76kN<br>00/00ust       |
|         | 250/250mm<br>00-00"           | 350/350mm<br>00-00"       |                          |                          |                          | -                          | -                          |
|         | 500mm<br>19.6"                | 700mm<br>19.6"            |                          |                          |                          | 250mm<br>9.8"              | 250mm<br>9.8"              |
| 2Kpsi   | 700Bar / 10.2Kpsi             | 700Bar / 10.2Kpsi         | 700Bar / 10.2Kpsi        | 700Bar / 10.2Kpsi        | 700Bar / 10.2Kpsi        | 700Bar / 10.2Kpsi          | 700Bar / 10.2Kpsi          |
| e       | throttle                      | throttle                  | throttle                 | throttle                 | throttle                 | throttle                   | throttle                   |
|         | -                             | -                         | -                        | -                        | -                        | -                          | -                          |
| om      | hydram.com                    | hydram.com                | hydram.com               | hydram.com               | hydram.com               | hydram.com                 | hydram.com                 |

|   |                                   |   |   |   |   |   |              |
|---|-----------------------------------|---|---|---|---|---|--------------|
| <div>IMAGES NOT TO SCALE</div> <div>OTHER TOOLS IN RANGE:</div> <div><div></div>=BATTERY TOOLS</div> <div><div></div>= Combi</div> <div><div></div>= Cutter</div> <div><div></div>= Spreader</div> <div><div></div>= Special Tools</div> <div><div></div><div></div>= PARTIAL or OK but not ideal</div> <div><div></div><div></div>= Option</div> <div>N/A = info Not Available/not given</div> |                                   |  |  |  |  |  |              |
|   | COMPANY                           | HYDRAM  | LUKAS (IDEX)  | LUKAS (IDEX)  | LUKAS (IDEX)  | LUKAS (IDEX)  | LUKAS (IDEX) |
|   | SERIES MODEL VARIANT              | VHETS875  | R410  | R412  | R414  | R420  | R422         |
|   | PRODUCT CODE                      |   | 81-40-20  | 81-40-22  | 81-40-24  | 81-40-30  | 81-40-32     |
|   | TOOLS IN RANGE                    |   | <div><div></div><div></div><div></div><div></div><div></div></div>                |   |   |   |              |
| ORIGIN  | <div><div></div><div></div></div> | <div><div></div><div></div></div>   | <div><div></div><div></div></div>   | <div><div></div><div></div></div>   | <div><div></div><div></div></div>   | <div><div></div><div></div></div>   |              |
| COST inc tax / VAT  | N/A                               | N/A   | N/A   | N/A   | N/A   | N/A   |              |
| RAM TYPE  | 1-Stage                           | 1-Stage   | 1-Stage   | 1-Stage   | 2-Stage Telescoping   | 2-Stage Telescoping   |              |
| WEIGHT inc Hose exc EXTENSIONS  | 9.88kg 00lb                       | 13kg 00lb   | 17.7kg 00lb   | 24.2kg 00lb   | 16.8kg 00lb   | 18.8kg 00lb   |              |
| LENGTH retracted/extended*  | 530mm /00" 742mm /00"             | 450mm /00" 750mm /00"   | 680mm /00" 1180mm /00"  | 900mm /00" 1600mm /00"  | 480mm /00" 1055mm /00"  | 550mm /00" 1255mm /00"  |              |
| HEIGHT/WIDTH  | 335mm / 00"                       | 175mm /00"  | 175mm /00"  | 175mm /00"  | 221mm / 8.7"  | 221mm / 8.7"  |              |
| DEPTH (max diam)  | 124mm / 00"                       | 95mm / 00"  | 95mm / 00"  | 95mm / 00"  | 112mm / 4.41"   | 112mm / 4.41"   |              |
| EXTENSION(S)/HEADS etc. (OPTIONAL EXTRA in GREEN)   |                                   | 2x Sill Supports 1x Multi-Support   | 2x Sill Supports 1x Multi-Support   | 2x Sill Supports 1x Multi-Support   | 2x Sill Supports 1x Multi-Support   | 2x Sill Supports 1x Multi-Support   |              |
| EN <div><div></div></div> NFPA <div><div></div></div>   | <div><div></div></div>            | <div><div></div><div></div></div>   | <div><div></div><div></div></div>   | <div><div></div><div></div></div>   | <div><div></div><div></div></div>   | <div><div></div><div></div></div>   |              |
| EN CLASSIFICATION   | R 158 -250 -9.88                  | R 137/300-13,0  | R 137/500-17,7  | R 124/700-24,2  | TR 269/295-134/280-16,8   | TR 269/365-134/280-16,8   |              |
| PUSH FORCE(S for telescoping) t=US Ton  | 158/76kN 00/00Ust                 | 137kN 00Ust   | 137kN 00Ust   | 124kN 00Ust   | 269/134kN 00/00Ust  | 269/134kN 00/00Ust  |              |
| STROKE RANGE  | -                                 | -   | -   | -   | 295/280mm 00-00"  | 365/340mm 00-00"  |              |
| TOTAL STROKE DISTANCE   | 250mm 9.8"                        | 300mm 11.8"   | 500mm 00"   | 700mm 00"   | 575mm 00"   | 705mm 00"   |              |
| WORKING PRESSURE (HYDRAULIC)  | 700Bar / 10.2Kpsi                 | 500Bar / 7.2K psi   | 500Bar / 7.2K psi   | 500Bar / 7.2K psi   | 500Bar / 7.2K psi   | 500Bar / 7.2K psi   |              |
| SPEED CONTROL   | throttle                          | Star Grip   | Star Grip   | Star Grip   | Star Grip   | Star Grip   |              |
| ROTATE HEAD/HANDLE  |                                   |   |   |   |   |   |              |
| ON-BOARD LED  | -                                 | <div><div></div></div>  | <div><div></div></div>  | <div><div></div></div>  | <div><div></div></div>  | <div><div></div></div>  |              |
| IN-WATER USE TOOL IP  |                                   | 54  | 54  | 54  | 54  | 54  |              |
| NOTES   |                                   |   |   |   |   |   |              |
| WEBSITE   | hvdram.com                        | lukas.com   | lukas.com   | lukas.com   | lukas.com   | lukas.com   |              |

## HOSE-FED RAMS

|                 |   |   |   |   |  |   |   |
|-----------------|---|---|---|---|--|---|---|
|                 |   |   |    |    |    |    |    |
|                 | <b>LUKAS<br/>(IDEX)</b>   | <b>LUKAS<br/>(IDEX)</b>   | <b>RESQTEC</b>  | <b>RESQTEC</b>  | <b>RESQTEC</b>   | <b>RESQTEC</b>  | <b>RESQTEC</b>  |
|                 | <b>R424</b>   | <b>R430</b>   | <b>V2</b>   | <b>V3T</b>  | <b>V4</b>  | <b>V5T</b>  | <b>V6</b>   |
|                 | 81-40-34  | 81-40-40  |   |   |  |   |   |
|                 |    |    |    |    |    |    |    |
|                 | N/A   | N/A   | N/A   | N/A   | N/A  | N/A   | N/A   |
| ing             | 2-Stage<br>Telescoping  | 3-Stage<br>Telescoping  | 1-Stage   | 2-Stage<br>Telescoping  | 1-Stage  | 2-Stage<br>Telescoping  | 1-Stage   |
|                 | 21.0kg<br>46.3lb  | 17.7kg<br>00lb  | 10.6kg<br>00lb  | 12.4kg<br>00lb  | 14.3kg<br>00lb   | 18.7kg<br>00lb  | 17.6kg<br>00lb  |
| 00"             | 625mm / 24.6"   | 475mm / 00"   | 481mm / 00"   | 340mm / 00"   | 711mm / 00"  | 556mm / 00"   | 537mm / 00"   |
| 00"             | 1500mm / 59.1"  | 1295mm / 00"  | 788mm / 00"   | 622mm / 00"   | 1248mm / 00"   | 1270mm / 00"  | 1014mm / 37"  |
| .7"             | 221mm / 8.7"  | 221mm / 8.7"  | 205mm / 00"   | 205mm / 00"   | 205mm / 00"  | 205mm / 00"   | 205mm / 00"   |
| 41"             | 112mm / 4.41"   | 112mm / 4.41"   | 252mm / 00"   | 268mm / 00"   | 252mm / 00"  | 268mm / 00"   | 252mm / 00"   |
| ports<br>upport | 2x Sill Supports<br>1x Multi-Support  | 2x Sill Supports<br>1x Multi-Support  | Multi-Adapter for...<br>716mm / 28.2"<br>586mm / 23"<br>241.6mm / 9.5"<br>151.6mm / 6"<br>99.6mm / 4"<br>Swivel & Power Plates  | Multi-Adapter for...<br>716mm / 28.2"<br>586mm / 23"<br>241.6mm / 9.5"<br>151.6mm / 6"<br>99.6mm / 4"<br>Swivel & Power Plates  | Multi-Adapter for...<br>716mm / 28.2"<br>586mm / 23"<br>241.6mm / 9.5"<br>151.6mm / 6"<br>99.6mm / 4"<br>Swivel & Power Plates   | Multi-Adapter for...<br>716mm / 28.2"<br>586mm / 23"<br>241.6mm / 9.5"<br>151.6mm / 6"<br>99.6mm / 4"<br>Swivel & Power Plates  | Multi-Adapter for...<br>716mm / 28.2"<br>586mm / 23"<br>241.6mm / 9.5"<br>151.6mm / 6"<br>99.6mm / 4"<br>Swivel & Power Plates  |
|                 |   |   |   |   |   |   |   |
| 340-18,8        | TR 269/445-134/430-21,0   | -   | R112/307-10.6   | TR203/166-91/116-12.4   | R112/537-14.3  | TR203/382-91/332-18.7   | R112/537-17.6   |
| kN<br>St        | 269/134kN<br>00/00Ust   | 269/134/39kN<br>00/00Ust  | 112kN<br>00Ust  | 203/91kN<br>00Ust   | 112kN<br>00Ust   | 203/91kN<br>00Ust   | 112kN<br>00Ust  |
| mm              | 445/430mm<br>00-00"   | 295/280/245mm<br>00-00"   | -   | -   | -  | -   | -   |
|                 | 875mm<br>34.5"  | 820mm<br>00"  | 307mm<br>00"  | 282mm<br>00"  | 537mm<br>00"   | 718mm<br>00"  | 1548mm<br>00"   |
| K psi           | 500Bar / 7.2K psi   | 500Bar / 7.2K psi   | N/A   | N/A   | N/A  | N/A   | N/A   |
| p               | Star Grip   | Star Grip   |   |   |  |   |   |
|                 |    |    |    |    |    |    |    |
|                 | 54  | 54  | 54  | 54  | 54   | 54  | 54  |
| m               | lukas.com   | lukas.com   | resqtec.com   | resqtec.com   | resqtec.com  | resqtec.com   | resqtec.com   |
|                 |   |   | Ram compatible with all<br>Resqtec shoring struts if<br>using the Multi-Adapter.  | Ram compatible with all<br>Resqtec shoring struts if<br>using the Multi-Adapter.  | Ram compatible with all<br>Resqtec shoring struts if<br>using the Multi-Adapter.   | Ram compatible with all<br>Resqtec shoring struts if<br>using the Multi-Adapter.  | Ram compatible with all<br>Resqtec shoring struts if<br>using the Multi-Adapter.  |



IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:

■ = BATTERY TOOLS

■ = Combi

■ = Cutter

■ = Spreader

■ = Special Tools

● = PARTIAL or OK but not ideal












□ = Option

N/A = info Not Available/not given



| COMPANY   | TNT RESCUE                         | TNT RESCUE                         | TNT RESCUE                          | TNT RESCUE                          | TNT RESCUE                          | TNT RESCUE                         |
|---|------------------------------------|------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------------------------------------|
| SERIES MODEL VARIANT                              | R 20                               | R 30                               | R 40                                | R 50                                | R 60                                | TLS 250                            |
| PRODUCT CODE                                      |                                    |                                    |                                     |                                     |                                     |                                    |
| TOOLS IN RANGE                                    | ■ ■ ■                              | ■ ■ ■                              | ■ ■ ■                               | ■ ■ ■                               | ■ ■ ■                               | ■ ■ ■                              |
| ORIGIN  | ■                                  | ■                                  | ■                                   | ■                                   | ■                                   | ■                                  |
| COST inc tax / VAT                                | N/A                                | N/A                                | N/A                                 | N/A                                 | N/A                                 | N/A                                |
| RAM TYPE  | 1-Stage                            | 1-Stage                            | 1-Stage                             | 1-Stage                             | 1-Stage                             | 2-Stage Telescopic                 |
| WEIGHT inc Hose exc EXTENSIONS                    | 12.3kg<br>27lb                     | 14.5kg<br>32lb                     | 16.8kg<br>37lb                      | 18.6kg<br>41lb                      | 21.3kg<br>47lb                      | 18.2kg<br>40lb                     |
| LENGTH retracted/extended*                        | 462.3mm / 18.2"<br>629.9mm / 24.8" | 546.1mm / 21.5"<br>774.7mm / 30.5" | 673.1mm / 26.5"<br>1028.7mm / 40.5" | 802.6mm / 31.6"<br>1285.2mm / 50.6" | 927.1mm / 36.5"<br>1536.7mm / 60.5" | 425.5mm / 16.7"<br>831.9mm / 32.8" |
| HEIGHT/WIDTH                                      | 188mm / 7.4"                       | 188mm / 7.4"                       | 188mm / 7.4"                        | 188mm / 7.4"                        | 188mm / 7.4"                        | 215.9mm / 8.5"                     |
| DEPTH (max diam)                                  | 88.9mm / 3.5"                      | 88.9mm / 3.5"                      | 88.9mm / 3.5"                       | 88.9mm / 3.5"                       | 88.9mm / 3.5"                       | 114.3mm / 4.5"                     |
| EXTENSION(S)/HEADS etc. (OPTIONAL EXTRA in GREEN) |                                    |                                    |                                     |                                     |                                     |                                    |
| EN ■ NFPA □                                       | ■                                  | ■                                  | ■                                   | ■                                   | ■                                   | ■                                  |
| EN CLASSIFICATION                                 | -                                  | -                                  | -                                   | -                                   | -                                   | -                                  |
| PUSH FORCE(S for telescoping) t=US Ton            | 147kN<br>00 USt                    | 147kN<br>00 USt                    | 147kN<br>00 USt                     | 147kN<br>00 USt                     | 147kN<br>0 USt                      | 229/82.3kN<br>00 USt               |
| STROKE RANGE                                      | -                                  | -                                  | -                                   | -                                   | -                                   | 247/159mm<br>9.75/6.25"            |
| TOTAL STROKE DISTANCE                             | 167.6mm<br>6.6"                    | 229mm<br>9"                        | 336mm<br>14"                        | 482mm<br>19"                        | 609.6mm<br>24"                      | 406mm<br>16"                       |
| WORKING PRESSURE (HYDRAULIC)                      | 722 Bar<br>10.5K psi               | 722 Bar<br>10.5K psi               | 722 Bar<br>10.5K psi                | 722 Bar<br>10.5K psi                | 722 Bar<br>10.5K psi                | 722 Bar<br>10.5K psi               |
| SPEED CONTROL                                     | Rotating Star Grip                 | Rotating Star Grip                 | Rotating Star Grip                  | Rotating Star Grip                  | Rotating Star Grip                  | Rotating Star Grip                 |
| ROTATE HEAD/HANDLE                                |                                    |                                    |                                     |                                     |                                     |                                    |
| ON-BOARD LED                                      | ■                                  | ■                                  | ■                                   | ■                                   | ■                                   | ■                                  |
| IN-WATER USE TOOL IP                              | 54                                 | 54                                 | 54                                  | 54                                  | 54                                  | 54                                 |
| NOTES   | 79.6kN Pull                        | 79.6kN Pull                        | 79.6kN Pull                         | 79.6kN Pull                         | 79.6kN Pull                         | -                                  |
| WEBSITE   | tntrescue.com                      | tntrescue.com                      | tntrescue.com                       | tntrescue.com                       | tntrescue.com                       | tntrescue.com                      |

## HOSE-FED RAMS

|   |  |   |  |   |  |  |  |  |  |   |  |
|---|--|---|--|---|--|--|--|--|--|---|--|
|  |  |  |  |  |  |  |  |    |  |   |  |
| TNT RESCUE  |  | TNT RESCUE  |  | WEBER RESCUE  |  | WEBER RESCUE   |  | WEBER RESCUE   |  | WEBER RESCUE  |  |
| TLS 40  |  | TLS 50  |  | RZ1-850   |  | RZ1-1810 Crossrammer   |  | RZ2-1290   |  | RZ3-16540   |  |
|   |  |   |  | RZ1-850   |  | RZ1-1810   |  | RZ2-1290   |  | RZ3-16540   |  |
|  |  |  |  |  |  |  |  |   |  |  |  |
| N/A   |  | N/A   |  | N/A   |  | N/A  |  | N/A  |  | N/A   |  |
| 2-Stage Telescopic  |  | 2-Stage Telescopic  |  | 1-Stage   |  | 1-Stage  |  | 1-Stage  |  | 2-Stage Telescoping   |  |
| 12.3kg<br>27lb  |  | 20.4kg<br>45lb  |  | 17.3kg<br>38.1lb  |  | 17.3kg<br>38.1lb   |  | 18.4kg<br>40.6lb   |  | 20.9kg<br>46lb  |  |
| 501.7mm / 19.75"  |  | 546.1mm / 21.5"   |  | 540mm / 21.3"   |  | 540mm / 21.3"  |  | 540mm / 21.3"  |  | 543mm / 21.4"   |  |
| 1022.4mm / 40.25"   |  | 1278.1mm / 50.32"   |  | 908mm / 35.7"   |  | 908mm / 35.7"  |  | 908mm / 35.7"  |  | 1170mm / 44.3"  |  |
| 184.2mm / 7.25"   |  | 215.9mm / 8.5"  |  | 340mm / 13.4"   |  | 340mm / 13.4"  |  | 340mm / 13.4"  |  | 351mm / 13.8"   |  |
| 88.9mm / 3.5"   |  | 114.3mm / 4.5"  |  | 134mm / 5.3"  |  | 134mm / 5.3"   |  | 134mm / 5.3"   |  | 134mm / 5.3"  |  |
|   |  |   |  | 175mm / 7"<br>250mm / 9.8"<br>320mm / 12.6"                                       |  | 175mm / 7"<br>250mm / 9.8"<br>320mm / 12.6"  |  | 175mm / 7"<br>250mm / 9.8"<br>320mm / 12.6"  |  | NO  |  |
| -   |  | -   |  | R111/368-17.3   |  | R111/368-17.3  |  | R111/368-18.4  |  | TR189/360-99/27020,9  |  |
| 229/57.3kN<br>00 Ust  |  | 229/82.3kN<br>00 Ust  |  | 111kN<br>12.47 Ust  |  | 111kN<br>12.47 Ust   |  | 111kN<br>12.47 Ust   |  | 189-99kN<br>21.2/11.1 Ust   |  |
| 371/282mm<br>14.62/ 11.12"  |  | 411/320mm<br>16.2/12.6"   |  | 368mm<br>14.5"  |  | 368mm<br>14.5"   |  | 368mm<br>14.5"   |  | 360/270mm<br>13.2-10.6"   |  |
| 653mm<br>25.7"  |  | 731mm<br>28.8"  |  | 368mm<br>14.5"  |  | 368mm<br>14.5"   |  | 368mm<br>14.5"   |  | 630mm<br>24.8"  |  |
| 722 Bar<br>10.5K psi  |  | 722 Bar<br>10.5K psi  |  | 700 Bar<br>10.1K psi  |  | 700 Bar<br>10.1K psi   |  | 550 Bar<br>7.9K psi  |  | 700 Bar<br>10.1K psi  |  |
| Rotating Star Grip  |  | Rotating Star Grip  |  | Rocker switch   |  | Rocker switch  |  | Rocker switch  |  | Rocker switch   |  |
| 54  |  | 54  |  | 54  |  | 54   |  | 54   |  | 54  |  |
| -   |  | -   |  | All E-Force tools can convert to hose. Length remaining markers on ram tube.      |  | All E-Force tools can convert to hose. Length remaining markers on ram tube.       |  | All E-Force tools can convert to hose. Length remaining markers on ram tube. *IP68 only with battery cover. IP54 splash cover for 12Ah |  | All E-Force tools can convert to hose. Length remaining markers on ram tube.        |  |
| tntrescue.com   |  | tntrescue.com   |  | weber.com   |  | weber.com  |  | weber.com  |  | weber.com   |  |

# 'hydraulic' BATTERY SPECIAL TOOLS



*Holmatro's Door Ram uses their Greenline battery series has the widest selection of Special tools within its battery tools including its RIT tool's ability to function as a ram using the jaws to spread the telescoping section out 80 cm/31"*  
This is a handier-sized variation on an original design by Powerhawk where the spreader jaws are inserted into the a cut-out section on the barrel of a full-size, full strength ram.

This is not quite as all-encompassing a group of tools as you might expect and don't forget that many are still limited to hose-fed hydraulics rather than battery. - Holmatro for instance has power wedges, rebar/pedal cutters and concrete crushers but not in their battery range. In terms of professional battery hydraulics or 'hydraulic surrogates' we are really only talking about.....

- Tactical Combi/RIT entry tools for forced entry and chain or mesh cutting often with specialist tip options
- Special purpose cutters for pedals, rebar, sheet metal etc.
- Power wedges for opening a gap after insertion into an initially tight space
- Parallel jacking or separation like the Weber Door-Opener and the Holmatro Door Ram above for door busting, rail/mesh separation etc.

See our **Guide to Batteries** in the **USAR/EXTRICATION BUYERS GUIDE** for a complete list of rescue-relevant batteries.

## RIT/COMBI TOOLS

Since these are all hydraulic-electric tools as distinct from simply electro-mechanical, there is a degree of crossover between the combi-tools which are true multi-role and the dedicated specialist tools that have a spreading or forced opening capability. The Weber RIT tool (opposite) for instance has a telescopic ram attachment and some detachable tips for forced entry can be narrow enough to do the same job as a wedge. It is safe to say that you your agency had to choose only one tool with which to perform or try to perform, ALL rescues it

would be a RIT or Rapid Intervention Tool and if you were equipping a helicopter, motorcycle or small vehicle with a tool small enough to do meaningful work across a broad range of rescues it would be either a battery-powered RIT with it's bag of accessories or one of the Power-Drill tools like the Ogura but that's not really a single tool as all the head attachments are a quite significant size and weight. In fact, truth-be-told, we would possibly be looking at a hand-hydraulic combi if there was any chance of not having access to fresh batteries or recharging but for the most part, that's not an issue these days. So a RIT or mini-combitool has both spreading and cutting capabilities and with the addition of entry-tool tips it can force open doors, gates and roller shutters as well as acting as a powered wedge, which we will come to next. Their problem would be length of tool in the case of the key brands - Lukas/Hurst, Weber/Genesis and TNT. The heads may be smaller but the bodies are the same size as their full size Combi, cutter and spreader brethren. The overall tool weight however will be smaller and the jaws are designed to take the entry tips that make RIT combis so useful. The Lukas/Hurst StrongArm has tips that look so substantial they wouldn't look out of place on a JCB digger. The images above show the adaptability of a RIT







The *Hilti NRC-6-22* is a more specialised rebar cutter because it cuts flush to the ground or concrete substrate. In rescue this can be extremely useful in removing the sharp stubs that other tools leave as significant snag hazards.

from diminutive cutting to spreading-lifting and forced entry. and don't forget that both *Lukas* and *Weber* have versions that can be used underwater! Police and military are particularly keen on RITs for door busting - electricity is quiet, the tools can be easily self-contained and back-packed to the scene and the range of tips gives good options for lock or hinge attack in terms of how the door is actually opened. Wedges and jacks can also do this job depending on the type of hinge if they have clearance within the door jam to force the door upwards rather than outwards.

## POWERED WEDGE

A wedge is a long, triangle of material, metal in the case of rescue tools but there are extremely strong polymers that may end up being used. The wedge is forced forward by the hydraulics or mechanics of the tool forcing a narrow opening into a larger opening albeit over a short distance because it will only be to the height of the triangular wedge - usually just a few inches but this is then enough to get your air bags or spreaders/combi or whatever into the gap to continue lifting and finish the job. The rescue power wedges are quite narrow because they need to get into the smallest gap possible to initiate a lift or spread which is then propped while the tool is extracted and repositioned or a larger tool/bag inserted. Depending on what you are lifting and the subsequent actions, consider lubricating the wedge to ease its progress into small, high-friction gaps.



*Weber* has the widest selection of Special tools within its battery tools including its RIT tool's ability to function as a ram using the jaws to spread the telescoping section out \_\_\_\_ cm/". This is a handier-sized variation on an original design by *Powerhawk* where the spreader jaws are inserted into the a cut-out section on the barrel of a full-size, full strength ram.



The *Eder Titan 80 Remote* is one of three similar wedges by *Eder* aimed at the forestry industry but with numerous application in rescue - the *Titan 50* is powered by hand or by a *Milwaukee M18* impact driver but this larger self-contained remote version offers rescuers the chance to place and then move to a safe distance to activate it.

## REMOTE CONTROL

Our selection in the tables are almost all from the rescue sector but one, the *EDER Titan Pro* is from forestry and has a feature that is becoming more common in battery tools though not yet in rescue - remote control. We are currently looking at a cutter from *Milwaukee* that has remote control cutting and similarly, most powered ascenders and some winches also have remote control. It's surprising that this is not more common in rescue and USAR/structural collapse in particular where the risks of carrying out a forced lift or cut and causing more collapse is quite high. *Titan* is a felling wedge but it's similar in action to the *Holmatro* and *Weber* wedges albeit with a lower power capacity but it does have an 80m/260ft remote control that enables you to place the wedge and then stand well back while you perform the lift - perhaps with binoculars because there is a lot to be said for having sight and feel of your lifted medium during the operation.

## REBAR, BAR & PEDAL CUTTERS

While most of the tools we have included are unique to rescue there is a group of tools that we could have filled the entire magazine with - rebar cutters. These are designed to cut iron reinforcing bar used in concrete structures and have quite compact heads because they are only cutting an inch or so of bar (<25mm). These are most often an anvil-style



cutter where a straight blade is pushed forward (parallel with the body of the tool). The material being cut is caught by, and compressed against, a substantial hook- or square-shaped end and the blade pushes through the bar. Some rebar cutters have a blade that rotates or pivots onto and against a fixed 'anvil' (pic above) and one or two have the more familiar parrot beak with hardened blades often on a straight section within a material capturing curved end to ensure the material is not simply spat out as the jaws close. Construction and demolition use such



## UPDATED Dec

cutters to cut reinforcing bar hence the vast number of models available. Pretty much anyone that makes a battery powered trade tool has a rebar cutter but we have selected only those actively marketed for rescue and those using battery systems that you may already be using like the *Milwaukee M18*, *DeWalt FlexVolt* and *Makita XGT/LXT*. Vehicle rescue has traditionally used them as pedal-cutters able to cut through a vehicle's accelerator, brake and/or clutch pedal. There's no real distinction between the blade's capacity to cut metal bar because they will also cut head restraints and seat-backs etc, it is more about less front-end bulk and manoevrability that allows the tool to be used in the tight confines of a vehicle footwell. The *Edilgrappa* and *Ogura* models have a cutting head on the end of a short flexible hose with the controller able to be operated up to a metre away in the case of *Ogura's HRT*. While rebar and pedal cutters have smaller heads there is a rescue range from *Weber/Genesis* for much more substantial cutting and one from *Holmatro*, the *Mini-Cutter* (above) that is somewhere in between able to cut almost an inch (22mm) metal bar, so steering wheels, seat-backs and chains as well as rebar. The *Weber/TNT* model is called a Mass-Transit Cutter in the US because it is marketed towards train/tram/bus operators able to cut more substantial bar, rail and tube materials than the smaller rebar-style cutters. Its huge jaw can accommodate 120mm/almost 5" of material but that is not the same as cutting a 5" solid bar - it will cut a 20mm bar but it will also cut 14mm sheet steel and will run up the outer skin of a train or vehicle leaving a neat 20mm wide line instead of a wavy corned-beef tin style cut so it also falls into the sheet material cutter category below.

### SHEET MATERIAL SHEARS/CUTTERS

These are usually like a cross between secateurs and scissors with an action equivalent to a reciprocation saw where the trigger initiates the open and close cutting action. We mostly haven't included this class of tool because the rescue companies don't currently include them. Their uses are limited to some larger panel-sided vehicles and roller shutter entries and rescue agencies have other tools that will do this job. Nevertheless, if you already have the batteries and have got room on your truck they can be handy. We have however, included *Ogura's* sheet cutter not just because it is part of an existing range but because it will cut small diameter bar or heavy gauge wire as well as being a sheet material cutter.

### LIFTING JACKS

Similar in function to a ram but with a set of 'jaws' to insert into gaps and push or lift or spread apart. These are in-line rather than pivoting as you get with a spreader. Primary usage is on roller shutters, lift doors and doors that open outward so they get more use in Scandinavia than they do in the UK where front doors open inwards. However, as mentioned earlier some door



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SCALE

[www.rescuemagazines.com](http://www.rescuemagazines.com)

can be removed by lifting upwards rather than outwards. As with Power Wedges, the minimum insertion height is a key consideration. Jacks need more space corresponding to the physical width of the two halves of the jaw when fully closed for insertion. Power wedges are around 6-10mm whereas jacks are closer to 10-15mm.

### CONCRETE NIBBLERS/CRUSHERS

Not at all common in Rescue battery tools with some companies like *Holmatro* and *Edilgrappa* so far choosing to stick with hose-hydraulics but there is one from *Weber* (pic below) and a Chinese model that we're not familiar with. These function in the same way as a cutter or spreader jaw but with a meaty inward facing point on the end of each jaw. This exerts a precise point-load to slab concrete cracking away small sections (hence the term nibbler). It can generally only work from the outer edge of a slab so can work with up to 250mm wide sections at a time but it can often exploit a crack line and perpetuate that crack further into the slab to break off larger sections. The tips are replaceable and this is a very useful tool in structural collapse where extremely noisy disc cutters are often the only other option.



Weber Concrete Crusher Pic courtesy of Richard Wood

# THE FINAL CUT.



**THE FIRST CORDLESS MINI CUTTER  
TO COMPLETE ANY RESCUE SET.**



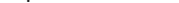
## IN THE FOLLOWING TABLES.....

The tool length, width or height and weight are all **WORKING** spec so they **include the battery**. See our comprehensive Guide to Batteries in the **USAR & Arborist BUYERSGUIDES** for full range of options. Many companies quote figures without the battery so at first glance seem lighter but when added has a significant affect on both the physical size and weight of a tool when in use. As with all cutting and spreading tools, the largest or highest figures are not necessarily the best for the job. Stroke power is highest at the shortest extension. **All force figures are given in KiloNewtons and US (short)tons**

Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square



If it's an option it is shown as an outline square



● this feature is only partially present and/or is OK but not ideal.

A model **variant** is shown in **cyan blue** and any features or specifications that differ from the standard version are also in **cyan** or will have a **cyan** outline to a black or **orange** square



**WiFi/BLE-CAPABLE:** The tool and/or battery are linked to a mobile device via **WiFi** and/or **Bluetooth** to manage functions, servicing and inventory.

**TOOLS-IN-RANGE:** refers to the other types of tool available in this specific series of tools using this specific battery.

■=Cutter ■=Spreader ■=Combi ■=Ram

**ORIGIN:** The company's home country, not necessarily the country of manufacture which is indicated by an inset flag or two equally sized flags if the tool is made in both countries.

**COST:** rarely quoted because these are usually bulk agency purchases. The batteries are an expensive consumable as well - eg. a *Milwaukee* M18 8Ah battery costs £/\$/€150-200 though individuals could purchase through *Amazon* etc. and save a packet! Any prices included are a rough guide only & **include** local taxes/VAT. They vary with exchange rates, extra taxes etc. We usually round up to the nearest Pound£/US Dollar\$/Euro€. Cost is for a basic model with included accessories indicated in the notes. Our **USAR/Extrication BUYERS GUIDE** may be able to include prices as we find them but don't hold your breath.

**WEIGHT IN HAND:** the operational weight that the rescuer experiences in using the tool so it includes any on-board batteries but not backpack batteries and

not necessarily any extras like clip-on lighting or tips.

**WEIGHT of BATTERY:** is for the default battery supplied or preferred by the manufacturer. Those that use 'off-the-shelf' brands like *Milwaukee* and *DeWalt* may well be able to use either higher Ah models for greater capacity/duration or lower Ah for decreased cost and perhaps weight but less duration. CAS is a battery coalition where several brands fit the same tools.

### BATTERY DURATION & RECHARGE

**TIME:** Work-time or duration is much trickier as it depends on the resistance of the material being cut/pushed/supported, the temperature, the age of the battery and even how meticulously you follow the recharge guidelines. Consequently some won't quote a figure at all and others are generous to say the least - consider most to be the absolute maximum with minimal workload. Tools last much longer carrying out hundreds of short duration cuts/spreads/lifts than one concerted high-load effort.

**Recharge time** can be more specific though it varies wildly between basic and high speed chargers. The time shown is for the charger supplied or preferred by the manufacturer and may give a time-range if referring to different types of charger.

**DIMENSIONS:** Length by width by depth/height of tool ready to store on the truck and/or ready to work.

**STANDARDS:** **CE** ■ **NFPA** ■ - This varies with the type of tool - combi/RIT, cutters and spreaders have ratings as rescue tools but wedges and rebar cutters may only be CE by virtue of a power tool standard. You will know the type of standard by any cut/spread ratings given.

**CUT/PUSH/SPREAD FORCE:** Is the maximum *theoretical* force that can be exerted and, like spreaders and cutters, is highest closest to the power unit. The strongest jacks are short and single-stage. Telescoping gives you much needed reach but the second stage is very much weaker than the first stage and this is extremely important to remember - you may have easily pushed your target material with the first stage but beware that you don't overwhelm it's capabilities when you extend into the second, telescoping stage. **It is also vital that you push in direct line with the power unit - if your target load starts to stray off-centre as it moves you could damage the**

**jack's cylinders.** Our figures are in kN (KiloNewtons) and **US (Short) Tons**. There are 1.10 US short tons to a UK/metric ton (or more accurately tonne).

**STROKE RANGE/DISTANCE:** The maximum distance the target load can be pushed/lifted.

**ROTATE HEAD/HANDLE:** The handle can

SMART  
FORCE  
MORE THAN A RESCUE

BAT

Replaceable tips for  
lifting



rotate around the cylinder for better access to the target.

**LED LIGHTS** ■: Integral lighting from the handle or housing to illuminate the area being cut/spread. Some may be add-on.

**IN-WATER-CAPABLE:** The tool/battery can be used underwater

**TOOL/BATTERY IP.** Ingress protection

for dust (first number) & water (second number) - IP54 resists water splashes, IP57 & 67 withstand inundation to 1metre, IP58&68 deeper than 1metre. Trade batteries like *Milwaukee* are not waterproof without a bespoke cover and tend not to quote an IP number because they are dependant on the tool to create

an effective seal. Specialist batteries like *Holmatro* and *Lukas* are watertight (IP68) but regular trade batteries are no more than IP54 so they are splashproof but not submersible without a bespoke cover.

## BATTERY SPECIAL TOOLS

# WEBERRESCUE

---

## SYSTEMS

CE  
CUE TOOL.

# BATTERY DRIVEN COMBI TOOL FOR RAPID INTERVENTION TEAMS

cutting, spreading, pressing and pulling with one device.  
for breaking doors and windows, cutting steel and security sections,  
of loads, pulling obstacles or opening vehicles (extrication).



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Essex CO9 2EX  
[rescue@weberuk.com](mailto:rescue@weberuk.com)



Genesis RESCUE SYSTEMS  
Kettering, OH 45429  
<https://genesisrescue.com>

[www.weber-rescue.com](http://www.weber-rescue.com)



Discover more!

## IMAGES NOT TO SCALE

### SERIES - VARIANT in CYAN BLUE

### OTHER TOOLS IN RANGE:

■ = Combi ■ = Spreader ■ = Ram

■ = Cutter

● = PARTIAL FEATURE

□ = Option

DIMENSIONS include battery






















~ = Approximately

N/A = info Not Available/not given



|                     | MODEL  | Titan 50   | Titan 80 Remote  | TP10  | Pro-Cut 12  |
|---------------------|--|--|--|---|---|
|                     | SERIES <span>WiFi</span> <span>capable</span>                                      | -  | -  | -   | -   |
|                     | VOLTAGE  | 18v  | 18v  | 18/20v  | 18/20v  |
|                     | COMPANY  | EDER   | EDER   | EDILGRAPPA  | EDILGRAPPA  |
|                     | TYPE OF TOOL   | WEDGE/ENTRY  | REMOTE WEDGE/ENTRY   | FLEXI-CUTTER  | BAR CUTTER  |
|                     | TOOLS IN RANGE   | -  | -  | ■ ■ ■ ■   | ■ ■ ■ ■   |
|                     | ORIGIN   | ■  | ■  | ■   | ■   |
|                     | COST inc tax / VAT   | £751 \$978 €895  | £1975 \$2567 €2350   | N/A   | £2530 \$3200 €3030  |
|                     | WEIGHT IN HAND<br>inc BATTERY exc ACCESSORIES                                      | 3.2kg*<br>7lb*   | 9.9kg<br>21.8lb  | 8.6kg<br>18.9lb   | 7.2kg<br>15.8lb   |
| BATTERY             | WEIGHT - DEFAULT BATTERY   | 1.1kg<br>2.4lb   | 1.1kg<br>2.4lb   | 0.7 <span>1</span> kg<br>1.5 <span>2</span> lb  | 0.7kg<br>1.5 lb   |
|                     | BATTERY<br>Ah <span>OPTIONS</span>   | Milwaukee<br>5Ah   | Milwaukee<br>5Ah   | DeWalt<br>FlexVolt<br>4 <span>6</span> Ah*  | DeWalt<br>FlexVolt<br>4 <span>6</span> Ah*  |
|                     | BATTERY DURATION<br><span>RECHARGE TIME</span>                                     | <45mins<br><span>60-105mins</span>   | <45mins<br><span>60-105mins</span>   | 10-15mins / ~100 cuts<br><span>40-90mins</span>   | 10-15mins / ~100 cuts<br><span>40-90mins</span>   |
| DIMENSIONS          | LENGTH retracted<br><span>with tips/extended</span>                                | 420mm / 16.5"<br><span>520mm / 20.5"</span>  | 620mm / 24.4"<br><span>780mm / 30.7"</span>  | 1034mm / 40.7"<br>-   | 494mm / 19.4"<br>-  |
|                     | HEIGHT/WIDTH   | *255mm / 10"   | 120mm / 4.7"   | *348mm / 13.7"  | *348mm / 13.7"  |
|                     | DEPTH (max diam)   | 118mm / 4.6"   | 180mm / 7"   | 143mm / 5.6"  | 184mm / 7.2"  |
| STANDARDS           | EXTENSION(S) & <span>OPTIONS</span><br>or<br>CUT/SPREAD <span>CE/NFPA</span> Class | -<br>-   | -<br>-   | -<br>-  | -<br>-  |
|                     | CE ■ NFPA □  | -  | ■  | ■ ■   | ■ ■   |
|                     | EN CLASSIFICATION  | -  | -  | -   | -   |
| FEATURES/CAPACITIES | CUT / <span>PUSH/SPREAD</span> FORCE<br>t=US Ton                                   | 147kN<br><span>16.5 USt</span>   | 245kN<br><span>27.5 USt</span>   | 232.4kN<br><span>26.1 USt</span>  | 120kN<br><span>13.4 USt</span>  |
|                     | CUT-MATERIAL/BAR Ø<br><span>STROKE/SPREAD RANGE</span>                             | 50mm / 2" lift height  | 80mm / 3.15"   |   | 12mm / 0.5"   |
|                     | JAW OPENING DISTANCE<br><span>INSERTION HEIGHT</span>                              | -<br>-   | -<br>-   | 52mm / 2"<br>-  | 15mm / 0.6"<br>-  |
|                     | WORKING PRESSURE (HYDRAULIC)   | -  | -  | 550 Bar / 8K psi  | 300 Bar / 4.4K psi  |
|                     | HEAD / <span>HANDLE</span> ROTATES   | ■  | -  | ■ ■   | ■ ■   |
|                     | SPEED CONTROL <span>ON-BOARD LED</span>  | Button+Lever   | Button+Lever   | Trigger   | Trigger   |
|                     | IN-WATER USE <span>BATTERY</span> /TOOL IP   | <span>54</span> <span>54</span>  | <span>54</span> <span>54</span>  | <span>54</span> <span>54</span>   | <span>54</span> <span>54</span>   |
|                     | NOTES  | These Eder wedges are electro-mechanical rather than hydraulic. *Dimensions will vary with impact wrench and battery type, we would recommend the 8Ah. | Designed for felling of large trees - inserted into the back-cut and activated from a safe distance <80m but will work for any incidents requiring forced-separation. 80Pro head can also fit drill as per the Titan50 | A flexible head cutter intended for manoeuvring into confined spaces like a vehicle footwell for peddle cutting. *6AH -add 50mm to height | Rotational Blade Multi-material/bar cutter. Anti-jamming release lever *6AH -add 50mm to height |
|                     | WEBSITE  | eder-maschinenbau.de   | eder-maschinenbau.de   | edilgrappa.com  | edilgrappa.com  |



|   |   |  |   |   |
|---|---|--|---|---|
|                            |    |   |   |                        |
| MU16-USAR   | SilverCut 20-USAR   | Mass-Transit Cutter  | Mass-Transit Cutter   | Mini-Cutter ccu10   |
| -   | -   | SLi  | E-Force 2.0   | CAS - Generic   |
| 18/20v  | 18/20v  | 18v  | 28v   | 28v   |
| <b>EDILGRAPPA</b>   | <b>EDILGRAPPA</b>   | <b>GENESIS RESCUE</b>  | <b>GENESIS RESCUE</b>   | <b>HOLMATRO</b>   |
| BAR CUTTER  | BAR CUTTER  | HD CUTTER  | HD CUTTER   | CUTTER  |
|                           |    |   |   |                        |
| £2700 \$3400 €3220  | £2530 \$3200 €3030  | N/A  | N/A   | £3400 \$4280 €4050  |
| 9.3kg<br>20.5lb   | 10kg<br>22lb  | 18.4kg<br>40.6lb   | 23kg<br>51lb  | 4.9kg<br>10.8lb   |
| 0.7kg<br>1.5 lb   | 0.7kg<br>1.5 lb   | 1.1/1.7kg<br>2.4/3.74lb  | 1.45/1.1kg<br>3.2/2.4lb   | 0.4kg<br>0.9lb  |
| DeWalt<br>FlexVolt<br>4 6Ah*  | DeWalt<br>FlexVolt<br>6Ah*  | Milwaukee<br>5-8Ah*  | Genesis/<br>Milwaukee<br>5Ah*   | Holmatro CAS (inc Milwk/<br>DeWalt) 2Ah   |
| 10-15mins / ~100 cuts<br>40-90mins  | 10-15mins / ~100 cuts<br>40-90mins  | 60/90mins<br>45-60-105mins   | <45mins<br>90 60-105mins  | <70 cuts<br>30mins  |
| 486mm / 19.1"   | 504mm / 19.8"   | 765mm / 30.1"  | 743mm / 29.3"   | 554mm / 21.8"   |
| -   | -   | -  | -   | -   |
| *348mm / 13.7"  | *348mm / 13.7"  | 188mm / 7.4"   | 205mm / 8.1"  | 154mm / 6.1"  |
| 184mm / 7.2"  | 176mm / 7.2"  | 230mm / 9"   | 241mm / 9.5"  | 92mm / 3.6"   |
| -   | -   | A4 B3 C5 D6 E6 F3  | A4 B3 C5 D6 E6  | B<br>1D 2D 3C<br>A4 B3 C2 D4 E4   |
|                         |    |   |    |                      |
| -   | -   | -  | -   | AC59-B-4.9  |
| 171kN<br>19.2 Ust   | 189kN<br>21.2 Ust   | 111kN<br>12.5 Ust  | 142 (47*) kN<br>16 (1.8*) Ust   | 220 kN<br>24.7 Ust  |
| 16mm / 0.9"   | 20mm / 0.8"   | 20mm / 0.8"  | ?   | 22mm / 0.9"   |
| 20mm / 0.8"   | 21mm / 0.8"   | 120mm / 4.7"   | 120mm / 4.7"  | 59mm / 2.3"   |
| -   | -   | -  | -   | -   |
| 550 Bar / 8K psi  | 550 Bar / 8K psi  | 700 Bar / 10.1K psi  | 700 Bar / 10.1K psi   | 720 Bar / 10.4K psi   |
|                         |    |   |    |                      |
| Trigger   | Trigger   | Rocker switch   | Rocker switch    | Rocker switch        |
| 54 54   | 54 54   |  68* 58   | 54 54   | 54 54   |
| Rotational Blade<br>Multi-material/bar cutter.<br>Anti-jamming release lever<br>*6AH - add 50mm to height | Anvil Blade<br>Also a 16mm version<br>Multi-material/bar cutter.<br>Anti-jamming release lever<br>*6AH - add 50mm to height | Designed for heavy duty cable/<br>bar cutting in rail and municipal<br>transport incidents<br>*IP68 only with battery cover shown.<br>IP54 splash cover for 12Ah | Designed for heavy duty cable/<br>bar cutting in rail and municipal<br>transport incidents* Also a 3Ah<br>option<br><br>All E-Force tools can<br>convert to hose. | Small hand-tool capable of getting<br>into tight spaces or being easily<br>carries in a response car/bike |
| edilgrappa.com  | edilgrappa.com  | genesiscut.com   | genesiscut.com  | holmatro.com  |

## IMAGES NOT TO SCALE

SERIES - VARIANT in CYAN BLUE

OTHER TOOLS IN RANGE:

■ = Combi ■ = Spreader ■ = Ram

■ = Cutter

● = PARTIAL FEATURE

□ = Option

DIMENSIONS include battery

~ = Approximately

N/A = info Not Available/not given



|                     | MODEL  | Door Ram GDR200EVO3   | LE 100 StrongArm  | HRS931/941   | 932S Stubby Shear                                       |
|---------------------|--|---|---|--|---|
|                     | SERIES   | Greenline EVO3  | -   | HRS  | HRS   |
|                     | VOLTAGE  | 28v   | 25.2v   | 18v  | 18v   |
|                     | COMPANY  | HOLMATRO  | HURST/LUKAS (IDEX)  | OGURA  | OGURA   |
|                     | TYPE OF TOOL                                       | ENTRY   | COMBI /ENTRY  | HRS POWER/MOTOR  | SHEETCUTTER   |
|                     | TOOLS IN RANGE                                     | ■ ■ ■ ■   | ■ ■ ■ ■   | ■ ■ ■ ■  | ■ ■ ■ ■   |
|                     | ORIGIN   | USA   | Germany   | Japan  | Japan   |
|                     | COST inc tax / VAT                                 | N/A   | N/A   | N/A  | N/A   |
|                     | WEIGHT IN HAND                                     | 13.4kg  | 11.1kg*   | 3.9/4.2kg  | +5.7kg  |
|                     | inc BATTERY exc ACCESSORIES                        | 29.5lb  | 24.4lb  | 8.6/9.3lb  | +12.6lb   |
| BATTERY             | WEIGHT - DEFAULT BATTERY                           | 1kg<br>2.3lb  | 1.3kg<br>2.9lb  | 1-1.36kg<br>2.2-3lb  | 1-1.36kg<br>2.2-3lb                                     |
|                     | BATTERY Ah OPTIONS                                 | Holmatro EVO3<br>5/6Ah*   | StrongArm<br>4Ah  | Makita<br>5-6Ah*   | Makita<br>5-6Ah*  |
|                     | BATTERY DURATION RECHARGE TIME                     | 0mins<br>90mins   | 30-60mins<br>75-150mins   | <12mins<br>55-120mins  | <12mins<br>55-120mins                                   |
| DIMENSIONS          | LENGTH retracted                                   | 728mm / 23.1"   | 775-796mm   | 303/328mm / 11.9/12.9"   | 328mm / 12.9"   |
|                     | with tips/extended                                 | 1028mm / 53"  | 30.5-31.3"  | -  | -   |
|                     | HEIGHT/WIDTH                                       | 365mm / 14.4"   | 195mm / 7.7"  | 272/273mm / 10.7/10.7"   | 130mm / 5.1"  |
| STANDARDS           | DEPTH (max diam)                                   | 134mm / 5.3"  | 210mm / 8.3"  | 111/111mm / 4.4/4.4"   | 104mm / 4.1"  |
|                     | EXTENSION(S) & OPTIONS or CUT/SPREAD CE/NFPA Class | -<br>-  | 1E-2D-3D-4D-5D<br>A5 B3 C5 D6 E6  | 1m Expansion Hose.<br>Cutter, Spreader, mini ram,<br>Stubby Shear, Pedal Cutter,<br>L&S Door Opener. | -   |
|                     | CE ■ NFPA □  | ■ ■   | ■ ■   | -  | -   |
| FEATURES/CAPACITIES | EN CLASSIFICATION                                  | -   | -   | -  | -   |
|                     | CUT / PUSH/SPREAD FORCE t=US Ton                   | 72 kN<br>8 USt  | 155/20-700kN<br>17.4/ 2.25-78 USt   | -  | 78.4kN<br>8.8 USt                                       |
|                     | CUT-MATERIAL/BAR Ø STROKE/SPREAD RANGE             | <300mm<br>11.8"   | 184-215mm<br>7.2-8.5"   | -  | 2/1.6mm sheet steel/StSt<br>0.08/0.06" sheet steel/StSt |
|                     | JAW OPENING DISTANCE INSERTION HEIGHT              | 800mm<br>31.5"  | 207mm<br>8.1"   | -  | 26mm<br>1"  |
|                     | WORKING PRESSURE (HYDRAULIC)                       | 720 Bar / 10.4K psi   | 700 Bar / 7K psi  | N/A  | N/A   |
|                     | HEAD / HANDLE ROTATES                              | -   | ■   | ■ ■  | ■   |
|                     | SPEED CONTROL ON-BOARD LED                         | Rocker switch ●   | Rotating Star Grip ●  | Trigger  | -   |
|                     | IN-WATER USE BATTERY/TOOL IP                       | 57 57   | ■ 68 58   | -  | 54 54   |
|                     | NOTES  | Effectively a powered jack that will lift doors/roller-shutters or separate railings or burst gate locks etc.<br>*6Ah replaced previous 5Ah | LE version =Tactical Black.<br>●LED Light is an option<br>* Add 700g for heaviest door-opening tips shown, Combi tips | FOR USE WITH OGURA HRS HEADS   | USE WITH HRS931 or 941<br><br>360° swivel head.         |
|                     | WEBSITE  | holmatro.com  | lukas.com   | ogurarescuertools.com  | ogurarescuertools.com                                   |

|   |   |   |   |   |
|---|---|---|---|---|
|     |    |    |                                     |    |
| 923 Pedal Cutter  | 936 Door Opener   | 946 8" Door Opener  | ESLCC   | RIT TOOL  |
| HRS   | HRS   | HRS   | Storm Surge   | E-Force/Smart-Force   |
| 18v   | 18v   | 18v   | 18v/20v   | 18v   |
| <b>OGURA</b>  | <b>OGURA</b>  | <b>OGURA</b>  | <b>TNT RESCUE</b>   | <b>WEBER RESCUE</b>   |
| PEDAL/BAR CUTTER  | ENTRY   | ENTRY   | COMBI /ENTRY  | COMBI /ENTRY  |
|    |    |    |                                     |    |
|    |    |    |                                    |    |
| N/A   | N/A   | N/A   | N/A   | N/A   |
| +5.4kg<br>+11.9lb   | +6kg<br>+13.2lb   | +8kg<br>+17.6lb   | 19.1-19.5kg<br>42.2-43lb  | 13.3 / 14.2kg<br>29.3 / 00lb  |
| 1-1.36kg<br>2.2-3lb   | 1-1.36kg<br>2.2-3lb   | 1-1.36kg<br>2.2-3lb   | 1.1kg / 2.4lb<br>1.2[1.36]kg / 2.6[3]lb   | 1.1 / 1.7kg<br>2.33 / 3.74lb  |
| Makita<br>5-6Ah*  | Makita<br>5-6Ah*  | Makita<br>5-6Ah*  | Milwaukee M18 8/9Ah<br>Makita [6Ah]<br>DeWalt FlexV20 9Ah   | Milwaukee M18<br>5/8Ah  |
| <12mins<br>55-120mins   | <12mins<br>55-120mins   | <12mins<br>55-120mins   | 10-15mins<br>87 / 60mins  | 60/90mins<br>45-83mins  |
| 240mm / 9.5"<br>-   | 255mm / 10"<br>325mm / 12.8"  | 338mm / 13.3"<br>544mm / 21.4"  | 791mm / 31.1"<br>-  | 540mm / 21.3"<br>908mm / 35.7"  |
| 105mm / 4.1"  | 155mm / 6.1"  | 152mm / 6"  | 299mm / 11.75"  | 340mm / 13.4"   |
| 84mm / 3.3"   | 110mm / 4.3"  | 142mm / 5.6"  | 268mm / 10.5"   | 134mm / 5.3"  |
| -   | -   | -   | A6 B5 C7 D7 E6  | Long, Spreader, Door,<br>jack/ram & pulling tips<br>1H-2H-3H-4H-5H<br>A6-B7-C6-D7-E7-F3   |
| -   | -   | -   |                                  |   |
| -   | -   | -   | -   | AC140H-13.314.2   |
| 70.6kN<br>7.9 USt   | 39.2kN<br>4.4 USt   | 34.3kN<br>3.8 USt   | 528/5.3kN<br>59.3/11.8 USt  | 111/30-1305kN<br>12.47/3.3-146 USt  |
| 16mm/5/8" rebar<br>38x6mm/1.5x0.23" bar   | 70mm<br>2.8"  | 206mm<br>8.1"   | 304.8mm<br>12"  | 285-380mm<br>11.2-15"   |
| 16mm<br>5/8"  | 00mm<br>0"  | 00mm<br>0"  | 231.77mm<br>9.12"   | 215mm<br>8.5"   |
| 5.8K-6.4K psi   | N/A   | N/A   | 722 Bar / 10.5K psi   | 550 Bar / 7.9K psi  |
|  |  |  |   |   |
| -   | -   | -   | Rotating Star Grip               | Rocker switch    |
| 54 54   | 54 54   | 54 54   | 54 54   |  * 54/68* 58   |
| USE WITH HRS931 or 941<br>360° swivel head  | USE WITH HRS931 or 941<br>360° swivel head  | USE WITH HRS931 or 941<br>360° swivel head  | -<br>TNT prices include 2 batteries and<br>Dual Rapid charger. Storm2 series<br>DISCONTINUED<br>Mains adapter=option. | All E-Force tools can<br>convert to hose.<br>Smart=WiFi Capable<br>*for SMART Version-IP68 only with<br>battery cover. IP54 splash cover for<br>12Ah                        |
| ogurarescuetools.com  | ogurarescuetools.com  | ogurarescuetools.com  | tntrescue.com   | weber-rescue.com  |



## IMAGES NOT TO SCALE

SERIES - **VARIANT** in CYAN BLUE  
OTHER TOOLS IN RANGE:

■ = Combi ■ = Spreader ■ = Ram

■ = Cutter

● = PARTIAL FEATURE

□ = Option

DIMENSIONS include battery

~ = Approximately

N/A = info Not Available/not given



|                     | MODEL   | BC250 Concrete Crusher   | SPK250 Power Wedge  | C120 Cutter  | DO140 Door Opener   |
|---------------------|---|--|---|--|---|
|                     | SERIES <b>WiFi/Bluetooth-capable</b>                      | E-Force/Smart-Force  | E-Force/Smart-Force   | E-Force/Smart-Force  | E-Force/Smart-Force   |
|                     | VOLTAGE   | 18v  | 18v   | 18v  | 18v   |
|                     | COMPANY   | WEBER RESCUE   | WEBER RESCUE  | WEBER RESCUE   | WEBER RESCUE  |
|                     | TYPE OF TOOL  | CONCRETE CRUSHER   | COMBI /ENTRY  | HD CUTTER  | ENTRY   |
|                     | TOOLS IN RANGE  | ■ ■ ■ ■  | ■ ■ ■ ■   | ■ ■ ■ ■  | ■ ■ ■ ■   |
|                     | ORIGIN  | ■ ■ ■  | ■ ■ ■   | ■ ■ ■  | ■ ■ ■   |
|                     | COST inc tax / VAT  | N/A  | N/A   | N/A  | N/A   |
|                     | WEIGHT IN HAND inc BATTERY exc ACCESSORIES                | 20.5/21.3kg<br>45.2/47lb   | 11.9/12.7kg<br>26.2/28lb  | 23.1/00kg<br>51/00lb   | 13.2/14.1kg<br>29.1/31lb  |
|                     | WEIGHT - DEFAULT BATTERY                                  | 1.1/1.7kg<br>2.33/3.74lb   | 1.1/1.7kg<br>2.33/3.74lb  | 1.1/1.7kg<br>2.33/3.74lb   | 1.1/1.7kg<br>2.33/3.74lb  |
| BATTERY             | BATTERY Ah <b>OPTIONS</b>                                 | Milwaukee M18 5/8Ah  | Milwaukee M18 5/8Ah   | Milwaukee M18 5/8Ah  | Milwaukee M18 5/8Ah   |
|                     | BATTERY DURATION RECHARGE TIME                            | 60/90mins<br>45-83mins   | 60/90mins<br>45-83mins  | 60/90mins<br>45-83mins   | 60/90mins<br>45-83mins  |
|                     | LENGTH retracted with tips/extended                       | -<br>890mm / 35"   | 770mm / 30.3"<br>831mm / 32.7"  | 745mm / 29.3"<br>-   | 619mm / 24.4"<br>759mm / 29.9"  |
| DIMENSIONS          | HEIGHT/WIDTH  | 380mm / 15"  | 241mm / 9.5"  | 238mm / 9.4"   | 228mm / 9"  |
|                     | DEPTH (max diam)  | 302mm/ 11.9"   | 150mm / 5.9"  | 188mm/ 7.4"  | 178mm/ 7"   |
|                     | EXTENSION(S) & OPTIONS or CUT/SPREAD <b>CE/NFPA</b> Class | -<br>-<br>-  | -<br>EN 13204<br>-  | 1H-2H-3H-4H-5H<br>A6-B7-C6-D7-E7-F3  | -<br>EN 13204<br>-  |
| STANDARDS           | CE ■ NFPA □   | - -  | ■ ■   | ■ ■  | ■ ■   |
|                     | EN CLASSIFICATION   | -  | -   | AC120D-23.1  | -   |
|                     | CUT / PUSH/SPREAD FORCE t=US Ton                          | 110kN<br>12.3 USt  | 248kN<br>27.8 USt   | 111/45kN<br>12.47/5 USt  | 101kN<br>11.3 USt   |
| FEATURES/CAPACITIES | CUT-MATERIAL/BAR Ø STROKE/SPREAD RANGE                    | -<br>-   | 61mm<br>2.4"  | -<br>-   | 140mm<br>5.5"   |
|                     | JAW OPENING DISTANCE INSERTION HEIGHT                     | 250mm<br>9.8"  | 8mm<br>0.3"   | 120mm<br>4.7"  | 12mm<br>0.5"  |
|                     | WORKING PRESSURE (HYDRAULIC)                              | 700 Bar / 7K psi   | 700 Bar / 7K psi  | 550 Bar / 7.9K psi   | 550 Bar / 7.9K psi  |
|                     | HEAD / HANDLE ROTATES                                     | ■  | -   | ■  | ■   |
|                     | SPEED CONTROL <b>ON-BOARD LED</b>                         | Rocker switch ■  | Rocker switch ■   | Rocker switch ■  | Rocker switch ■   |
|                     | IN-WATER USE BATTERY/TOOL IP                              | ■* 54/68* 58   | ■* 54/68* 58  | ■* 54/68* 58   | ■* 54/68* 58  |
| NOTES               | WEBSITE   | weber-rescue.com   | weber-rescue.com  | weber-rescue.com   | weber-rescue.com  |
|                     |   | Tips can be replaced when worn.<br>Smart=WiFi Capable<br>All E-Force tools can convert to hose.<br>*for SMART Version-IP68 only with battery cover. IP54 splash cover for 12Ah | Smart=WiFi Capable<br>All E-Force tools can convert to hose.<br>*for SMART Version-IP68 only with battery cover shown. IP54 splash cover for 12Ah | Smart=WiFi Capable. All E-Force tools can convert to hose.<br>*for SMART Version-IP68 only with battery cover shown. IP54 splash cover for 12Ah<br>Cuts sheet, bar and sandwiched cross-sections | Smart=WiFi Capable<br>All E-Force tools can convert to hose.<br>*for SMART Version-IP68 only with battery cover shown. IP54 splash cover for 12Ah |

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|--------------|-------------|-------|---------|--------|-----------|-------------|-------|---------|--------|
| ITEM         | DESCRIPTION | PRICE | COUNTRY | STATUS | ITEM      | DESCRIPTION | PRICE | COUNTRY | STATUS |
| Anchor Plate | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |
| Anchor Plate | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |
| Anchor Plate | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |
| Anchor Plate | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |
| Anchor Plate | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |
| Anchor Plate | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |
| Anchor Plate | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |
| Anchor Plate | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |
| Anchor Plate | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |
| Anchor Plate | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |



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Our **WATER RESCUE BUYERSGUIDE** is compiling now and will be out WINTER 2024/25 although some of these categories are so detailed and complex that some will still be compiling through 2025.

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- Dog PFDS
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- Inflatable Sleds
- Inflatable Rafts
- Inflatable & Solid Boards
- Inflatable & Solid Stretchers/Collars
- Lightweight PM Pulleys & Tandem Pulleys
- Mini Hauling Systems
- Water Rescue Rope
- Throwlines & Throwbags
- Water Rescue Knives
- Submersible lighting
- Water Rescue Manikins



| INFLATABLE PONTONS & PATHS |             |       |         |        |           |             |       |         |        |
|----------------------------|-------------|-------|---------|--------|-----------|-------------|-------|---------|--------|
| ITEM                       | DESCRIPTION | PRICE | COUNTRY | STATUS | ITEM      | DESCRIPTION | PRICE | COUNTRY | STATUS |
| Anchor Plate               | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |
| Anchor Plate               | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |
| Anchor Plate               | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |
| Anchor Plate               | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |
| Anchor Plate               | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |
| Anchor Plate               | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |
| Anchor Plate               | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |
| Anchor Plate               | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |
| Anchor Plate               | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |
| Anchor Plate               | 20000       | 500   | USA     | 270g   | Ballistic | 10000       | 500   | USA     | 270g   |



# Battery & Fuel DISC CUTTERS/ CUT-OFF MACHINE ROTARY CUTTERS

Large disc-cutters or off-cut machines along with concrete cutting chainsaws are just about the noisiest and messiest rescue tool in our arsenal especially if they are petrol/gas driven. They are very much a construction industry tool that rescuers co-opt and modify for specific uses but many are simply off-the-shelf tools doing the same job in rescue that they do on a construction site. Since they are required to cut through metal rebar and roller shutters, concrete and brickwork they are kicking up dust and/or sparks from the second they make contact and this can be a scary and dangerous ordeal for a casualty if they are in close proximity. Often used for long access-opening cuts, disc cutters are a heavy load with big engines creating a lot of torque. You can feel the gyroscope style motion when you hold one in free space and squeeze the trigger. They've also been used for decades by North American fire crews in particular to cut ventilation holes in roofs during fires to vent the smoke. European firefighters mostly deal with heavy masonry, slate, composite and metal tiles rather than wooden shingles.

## LUBRICATION/COOLING/DUST SUPPRESSION

Disc cutters produce a horrendous amount of dust when used for cutting concrete or brick and a tremendous amount of heat when cutting metal so there are a number of mitigating options which all involve water. Water can be applied to the rotating blade and/or the cutting area although water on the blade will migrate quickly to the cut-site anyway. This can be entrained via a standard 1/2"/25mm garden hose style adaptor - Hozelock in yellow and Gardena in orange are examples. This can be via a hose to a tap or a pressurised hand pump like the Stihl model above or a battery powered pump like the Husqvarna WT15i above.

## IN THE FOLLOWING TABLES.....

Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square ■■■■■■  
If it's an option it is shown as an outline square □□□□□□  
A circle ● in the 'USE' columns indicates that this feature is only partially present and/or is OK for that purpose but not ideal.  
A model variant is shown in cyan blue and any features or specifications that differ from the standard are also in cyan or will have a cyan outline to a black or orange square ■■■■.

**ORIGIN:** The company's home country, not necessarily the country of manufacture which is indicated by an inset flag or



two equally sized flags if the tool is made in both countries.

**COST:** Approximate and includes VAT/Local taxes. Any price in burnt orange £\$€ is a currency conversion only and will not include import duty, international shipping etc.

**WEIGHT:** Refers to the operational weight that the rescuer experiences in lifting the bag-only so it excludes attached hoses and controllers etc.

**DEFLATED DIMENSIONS:** For round bags this will be the diameter by the DEFLATED height shown in magenta because it is important to know the insertion height - ie. the gap into which you can get your bag before beginning the lift.

**INFLATED HEIGHT:** The all important- lift height that your bag can achieve.

**MAX AIR VOLUME:** This is not as straight-forward as it should be because there is a 'nominal volume' as well as a maximum volume. We're quoting maximum air volume but some manufacturers data may not make the distinction clear. Nominal air volume is the general amount of air needed to make the bag function properly, The maximum volume is that which should not be exceeded or you risk rupturing the seams or a contact point.

**LIFT CAPACITY:** Is the maximum load that should be applied to a single bag. Unlike solid, point-loading of a strut, it is much easier to share the load across two or three bags without one bag taking all the load and throwing out your calculations because you assumed each of, let's say three supports, would only be carrying a third of the







load. It is again vital that you push in direct line with the base of the bag- if your target load starts to stray off-centre as it moves, the bag(s) can be forced out sideways. Our figures are in kg (Kilogramss) and pounds (lbs) but where tons/tonnes are mentioned there are 1.10 US short tons to a UK/metric tonne (if we use the term 'ton' it will mean US Short Ton not a UK ton).

**TIME to MAX INFLATION:** This is not a figure given by manufacturers so most of these rows will be empty but it's a useful figure if only in very general terms and would refer to the fastest time that the bag could be fully inflated.

**MAX PRESSURE PRV:** The inflation pressure which in these bags will be around 0.5 and 1 bar but could be anywhere between 0 and 3 BAR or 0 to 15 PSi Pounds per square inch. **PRV= Pressure Relief Valve** which will exhaust air should the bag's internal air pressure approach a level which could rupture the seams.

**STACK/CONNECT REFLECT:** Unlike most high pressure bags/mats these much larger bags are not generally used in a stack or indeed required to be used in a stack given their huge lift heights. So the webbing loops you see on most bags are for lifting and shifting and/or to keep multiple bags in line. However, the flat-topped medium pressure bags (1BAR) can be stacked and then joined/**connected** via the web restraint loops that most have **but while these can take up to a tonne of load, these are not load bearing** connections in the same way as some of the metal connections and heavy duty straps found on high pressure bags. The web loops will, at best, just keep the bags in position as you inflate - if they come off-centre when under load these may tear out.

**REFLECT** =Reflective strips or decals to improve visibility in low light and at night.





IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:

■= Cutter ■= Spreader ■= Ram

■= Special Tools ■= Hose-Fed Tools

●= Partial feature or OK, but not ideal

WATER INPUT: ■= Hose ½" ■= HandPump

■= BatteryPump

□= Option










N/A = info Not Available/not given


|  | MODEL<br>SERIES VARIANT<br>VOLTAGE<br>FUEL | COMPANY | TOOLS IN RANGE   | ORIGIN  | COST<br>inc tax / VAT | WEIGHT<br>IN HAND<br>inc Battery<br>exc Fuel | WEIGHT<br>Default<br>BATTERY<br>Full FUEL<br>Tank | BATTERY<br>Ah<br>OPTIONS<br>FUEL<br>CAPACITY | PO<br>OU<br>(Cy |
|--|--|---------|--|---|-----------------------|--|---|--|-----------------|
|                        | DCS691X2<br>54v                            | DEWALT  |    |    | £850<br>\$<br>€       | 19.2kg<br>42.2lb                             | 1kg<br>2.2lb                                      | -  | 3<br>(1)        |
|    | DSH 600-X-12"<br>2 stroke                  | HILTI   |    |    | £1370<br>\$<br>€      | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 3<br>(630)      |
|   | DSH 700-X-14"<br>2 stroke                  | HILTI   |   |    | £1720<br>\$<br>€      | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 3<br>(700)      |
|  | DSH 900-X 14"<br>2 stroke                  | HILTI   |  |  | £1980<br>\$<br>€      | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 4<br>(870)      |
|  | DSH 900-X-16"<br>2 stroke                  | HILTI   |  |  | £000<br>\$<br>€       | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|                      | NURON<br>DSH600-22<br>2 stroke             | HILTI   |  |  | £1120<br>\$<br>€      | 12.2kg<br>lb                                 | 1.31kg<br>lb                                      | 22-170<br>22-255<br>li-ion<br>8ah            | 0<br>(0)        |
|                      | NURON<br>DSH700-22<br>2 stroke             | HILTI   |  |  | £0<br>\$<br>€         | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |

| POWER<br>OUTPUT<br>(CC<br>Cylinders) | DURATION<br>Default BATTERY<br>Full FUEL Tank | LENGTH<br>exc Disc | WIDTH          | HEIGHT         | BLADE<br>MAX DIAMETER<br>CUTTING DEPTH<br>ARBOR DIAMETER<br>BLADE THICKNESS | SOUND<br>POWER<br>PRESSURE | XTRA BLADE GUARD | WATER INPUT | ON-BOARD SCRECH | CARRY STRAP CART | LED LIGHTS | WiFi / CAPABLE | IN-WATER-CAPABLE<br>TOOL/BATTERY IP | NOTES             | WWW.      |
|--------------------------------------|---|--------------------|----------------|----------------|---|----------------------------|------------------|-------------|-----------------|------------------|------------|----------------|-------------------------------------|-------------------|-----------|
| .7kw<br>73.5cm³                      | -<br>00mins                                   | 933mm<br>36.7"     | 236mm<br>9.3"  | 241mm<br>9.5"  | 300mm / 000"<br>100mm / 000"<br>20mm / 000"<br>5mm / 000"                   |                            | ■                | ■           |                 | ■                | 4          | Wi<br>Fi       | -<br>68                             |                   | hilti.com |
| .2kw<br>(c) 00cm³                    | -<br>00mins                                   | 558mm<br>00"       | 326mm<br>00"   | 370mm<br>00"   | 300mm / 000"<br>120mm / 000"<br>20mm / 000"<br>5mm / 000"                   | 102db                      | -                | ■           |                 |                  |            |                |                                     | 2.5m/s2 vibration | hilti.com |
| .5kw<br>(c) 00cm³                    | -<br>00mins                                   | 808mm<br>00"       | 261mm<br>00"   | 434mm<br>00"   | 350mm / 000"<br>125mm / 000"<br>20mm / 000"<br>5mm / 000"                   | 96db                       | -                | ■           |                 |                  |            |                |                                     | 4.9m/s2           | hilti.com |
| .3kw<br>(c) 00cm³                    | -<br>00mins                                   | 856mm<br>00"       | 266mm<br>00"   | 466mm<br>00"   | 400mm / 000"<br>150mm / 000"<br>20mm / 000"<br>5mm / 000"                   | 102db                      | -                | ■           |                 |                  |            |                |                                     | 5.2 m/s2 vin      | hilti.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00"   | 00mm<br>00"    | 000mm / 000"<br>100mm / 000"<br>20mm / 000"<br>5mm / 000"                   |                            | -                | ■           |                 |                  |            |                |                                     |                   | hilti.com |
|                                      | <45mins<br>90mins                             | 660mm<br>25.9"     | 290mm<br>11.4" | 350mm<br>13.8" | 300mm / 000"<br>120mm / 000"<br>20mm / 000"<br>5mm / 000"                   | 108db                      | ■                | ■           |                 | ■                | 4          |                | -<br>68                             |                   | hilti.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00"   | 00mm<br>00"    | 000mm / 000"<br>100mm / 000"<br>20mm / 000"<br>5mm / 000"                   |                            | -                | ■           |                 |                  |            |                |                                     |                   | hilti.com |











































## IMAGES NOT TO SCALE

### OTHER TOOLS IN RANGE:

 = Cutter 
  = Spreader 
  = Ram  
 = Special Tools 
  = Hose-Fed Tools  
 = Partial feature or OK, but not ideal  
 WATER INPUT:  = Hose 1/2" 
  = Hand Pump  
 = Battery Pump

 = Option

N/A = info Not Available/not given

|  | MODEL<br>SERIES VARIANT<br>VOLTAGE<br>FUEL              | COMPANY   | TOOLS IN RANGE   | ORIGIN  | COST<br>inc tax / VAT | WEIGHT<br>IN HAND<br>inc Battery<br>exc Fuel | WEIGHT<br>Default<br>BATTERY<br>Full FUEL<br>Tank | BATTERY<br>Ah<br>OPTIONS<br>FUEL<br>CAPACITY | PO<br>OU<br>(Cy |
|--|---|-----------|--|---|-----------------------|--|---|--|-----------------|
|  |   |           |  |   |                       |  |   |  |                 |
|    | <b>K770</b><br>SmartGuard<br>RESCUE<br>2 stroke         | HUSQVARNA | <br><br><br><br>           |    | £850<br>\$<br>€       | 10kg<br>42.2lb                               | kg<br>lb  | -  | 3<br>(1)        |
|   | <b>K970</b><br>SmartGuard<br>RESCUE<br>Ring<br>2 stroke | HUSQVARNA | <br><br><br><br>        |   | £<br>\$<br>€          | 11kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 4<br>(1)        |
|  | <b>K1270</b><br>K1270 Rail<br>2 stroke                  | HUSQVARNA | <br><br><br><br> |  | £<br>\$<br>€          | 13.6kg<br>00lb                               | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 5<br>(1)        |
|  | <b>K7000 Chain</b><br>220v corded                       | HUSQVARNA | <br><br><br><br> |  | £<br>\$<br>€          | 9.1kg<br>00lb                                | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 5<br>(0)        |
|  | <b>K7000</b><br>220v corded                             | HUSQVARNA | <br><br><br><br> |  | £<br>\$<br>€          | 9.8kg<br>00lb                                | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 5<br>(0)        |
|  | <b>K4000</b><br>220v corded                             | HUSQVARNA | <br><br><br><br> |  | £<br>\$<br>€          | 7.6kg<br>42.2lb                              | 1kg<br>2.2lb                                      |  | 2<br>(0)        |



# BATTERY DISC/ROTARY CUTTERS

| POWER<br>OUTPUT<br>(CC<br>Cylinders) | DURATION<br>Default BATTERY<br>Full FUEL Tank | LENGTH<br>exc Disc | WIDTH         | HEIGHT         | BLADE<br>MAX DIAMETER<br>CUTTING DEPTH<br>ARBOR DIAMETER<br>BLADE THICKNESS | SOUND<br>POWER<br>PRESSURE | XTRA BLADE GUARD | WATER INPUT | ON-BOARD SCRECH | CARRY STRAP CART | LED LIGHTS | WiFi / CAPABLE | IN-WATER-CAPABLE<br>TOOL/BATTERY IP | NOTES   | WWW.          |
|--------------------------------------|---|--------------------|---------------|----------------|---|----------------------------|------------------|-------------|-----------------|------------------|------------|----------------|-------------------------------------|---------|---------------|
|                                      |   |                    |               |                |   |                            |                  |             |                 |                  |            |                |                                     |         |               |
| 7.7kW<br>73.5cm³                     | -<br>00mins                                   | 605mm<br>23.8"     | 225mm<br>8.9" | 391mm<br>15.4" | 300mm / 000"<br>100mm / 000"<br>20mm / 000"<br>5mm / 000"                   | 115dB<br>101dB             | ■                | ■<br>■<br>■ |                 | ■                | ■<br>4     |                | -                                   | 2.3m/s2 | husqvarna.com |
| 8.8kW<br>93.6cm³                     | -<br>00mins                                   | 661mm<br>00"       | 214mm<br>00"  | 444mm<br>00"   | 350mm / 000"<br>125mm / 000"<br>20mm / 000"<br>5mm / 000"                   | 115dB<br>104dB             | -                | ■<br>■<br>■ |                 |                  |            |                |                                     | 4.2m/s2 | husqvarna.com |
| 8.8kW<br>00cm³                       | -<br>00mins                                   | 730mm<br>00"       | 243mm<br>00"  | 434mm<br>00"   | 350mm / 000"<br>118mm / 000"<br>20mm / 000"<br>5mm / 000"                   | 117dB<br>104dB             | -                | ■<br>■<br>■ |                 |                  |            |                |                                     | 4.5m/s2 | husqvarna.com |
| 5.5kW<br>00cm³                       | -<br>00mins                                   | 443mm<br>00"       | 231mm<br>00"  | 378mm<br>00"   | 450mm / 000"<br>450mm / 000"<br>mm / 000"<br>mm / 000"                      | 112dB<br>102dB             | -                | ■<br>■<br>■ |                 |                  |            |                |                                     | 2.7m/s2 | husqvarna.com |
| 5.5kW<br>00cm³                       | -<br>00mins                                   | 681mm<br>00"       | 187mm<br>00"  | 476mm<br>00"   | 400mm / 000"<br>155mm / 000"<br>25.4mm / 000"<br>5mm / 000"                 | 111dB<br>96dB              | -                | ■<br>■<br>■ |                 |                  |            |                |                                     | 1.8m/s2 | husqvarna.com |
| 7.7kW<br>00cm³                       | <mins<br>mins                                 | 631mm<br>"         | 221mm<br>"    | 313mm<br>"     | 350mm / 000"<br>125mm / 000"<br>25.4mm / 000"<br>5.6mm / 000"               | 105dB<br>95dB              | ■                | ■<br>■<br>■ |                 | ■                | ■<br>4     |                | -                                   | 3.5m/s2 | husqvarna.com |

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:

■= Cutter ■= Spreader ■= Ram

■= Special Tools ■= Hose-Fed Tools

●= Partial feature or OK, but not ideal






















WATER INPUT: ■= Hose ½" ■= HandPump

■= BatteryPump

□□□= Option

N/A = info Not Available/not given

| IMAGES NOT TO SCALE<br>OTHER TOOLS IN RANGE:<br>■= Cutter ■= Spreader ■= Ram<br>■= Special Tools ■= Hose-Fed Tools<br>●= Partial feature or OK, but not ideal<br>WATER INPUT: ■= Hose ½" ■= HandPump<br>■= BatteryPump<br>□□□= Option<br>N/A = info Not Available/not given | MODEL<br>SERIES VARIANT<br>VOLTAGE<br>FUEL | COMPANY   | TOOLS IN RANGE        | ORIGIN                | COST<br>inc tax / VAT | WEIGHT<br>IN HAND<br>inc Battery<br>exc Fuel | WEIGHT<br>Default<br>BATTERY<br>Full FUEL<br>Tank | BATTERY<br>Ah<br>OPTIONS<br>FUEL<br>CAPACITY | PO<br>OU<br>(Cy |
|---|--|-----------|-----------------------|-----------------------|-----------------------|--|---|--|-----------------|
|   | K4000<br>Cut-n-Break<br>110v               | HUSQVARNA | ■<br>■<br>■<br>■<br>■ | ■<br>■<br>■<br>■<br>■ | £<br>\$<br>€          | 8.4kg<br>00lb                                | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 2<br>(0)        |
|   | K4000 mkII<br>220V                         | HUSQVARNA | ■<br>■<br>■<br>■<br>■ | ■<br>■<br>■<br>■<br>■ | £<br>\$<br>€          | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|   | K3600<br>Cut-n-Break<br>36V                | HUSQVARNA | ■<br>■<br>■<br>■<br>■ | ■<br>■<br>■<br>■<br>■ | £<br>\$<br>€          | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|   | K970 Chain<br>2 stroke                     | HUSQVARNA | ■<br>■<br>■<br>■<br>■ | ■<br>■<br>■<br>■<br>■ | £<br>\$<br>€          | 9.6kg<br>00lb                                | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 4<br>(0)        |
|   | K2500<br>Hydraulic                         | HUSQVARNA | ■<br>■<br>■<br>■<br>■ | ■<br>■<br>■<br>■<br>■ | £<br>\$<br>€          | 8.3kg<br>00lb                                | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 5<br>(0)        |
|   | K1 Pace<br>battery?                        | HUSQVARNA | ■<br>■<br>■<br>■<br>■ | ■<br>■<br>■<br>■<br>■ | £<br>\$<br>€          | 7.2kg<br>00lb                                | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|   | K540i<br>36v                               | HUSQVARNA | ■<br>■<br>■<br>■<br>■ | ■<br>■<br>■<br>■<br>■ | £<br>\$<br>€          | 4.2kg<br>00lb                                | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |

| POWER<br>OUTPUT<br>(CC<br>Cylinders) | DURATION<br>Default BATTERY<br>Full FUEL Tank | LENGTH<br>exc Disc | WIDTH        | HEIGHT       | BLADE<br>MAX DIAMETER<br>CUTTING DEPTH<br>ARBOR DIAMETER<br>BLADE THICKNESS | SOUND<br>POWER<br>PRESSURE | EXTRA BLADE GUARD | WATER INPUT   | ON-BOARD SCRECH | CARRY STRAP | LED LIGHTS | WiFi / CAPABLE | IN-WATER-CAPABLE<br>TOOL/BATTERY IP | NOTES                         | WWW.          |
|--------------------------------------|---|--------------------|--------------|--------------|---|----------------------------|-------------------|---|-----------------|-------------|------------|----------------|-------------------------------------|-------------------------------|---------------|
| 0.7kw<br>00cm³                       | -<br>00mins                                   | 867mm<br>00"       | 226mm<br>00" | 325mm<br>00" | 230mm / 000"<br>400mm / 000"<br>00mm / 000"<br>2.5mm / 000"                 | 109dB<br>95dB              | -                 | <br><br>       |                 |             |            |                |                                     | 3.4m/s2                       | husqvarna.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00"  | 000mm / 000"<br>000mm / 000"<br>00mm / 000"<br>0mm / 000"                   |                            | -                 | <br><br>       |                 |             |            |                |                                     | is this K3600?                | husqvarna.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00"  | 000mm / 000"<br>000mm / 000"<br>00mm / 000"<br>0mm / 000"                   |                            | -                 | <br><br>    |                 |             |            |                |                                     | is this k760??                | husqvarna.com |
| 0.8kw<br>00cm³                       | -<br>00mins                                   | 456mm<br>00"       | 294mm<br>00" | 380mm<br>00" | 450mm / 000"<br>450mm / 000"<br>00mm / 000"<br>0mm / 000"                   | 115dB<br>104dB             | -                 | <br><br> |                 |             |            |                |                                     | front 3.6m/s2<br>rear 4.7m/s2 | husqvarna.com |
| 0.2kw<br>00cm³                       | -<br>00mins                                   | 727mm<br>00"       | 260mm<br>00" | 462mm<br>00" | 400mm / 000"<br>145mm / 000"<br>25.4mm / 000"<br>5mm / 000"                 | 107dB<br>85dB              | -                 | <br><br> |                 |             |            |                |                                     | front 7.5m/s2<br>rear 5.2m/s2 | husqvarna.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 648mm<br>00"       | 233mm<br>00" | 400mm<br>00" | 314mm / 000"<br>121mm / 000"<br>25.4mm / 000"<br>1.8mm / 000"               | 102dB(A)                   | -                 | <br><br> |                 |             |            |                |                                     | front 2m/s2<br>rear 1.1m/s2   | husqvarna.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 558mm<br>00"       | 200mm<br>00" | 330mm<br>00" | 267mm / 000"<br>100mm / 000"<br>25.4mm / 000"<br>3mm / 000"                 | 112.7dB<br>101.5dB         | -                 | <br><br> |                 |             |            |                |                                     | front 3.7m/s2<br>rear 2.4m/s2 | husqvarna.com |



IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:

■= Cutter ■= Spreader ■= Ram

■= Special Tools ■= Hose-Fed Tools


●= Partial feature or OK, but not ideal

WATER INPUT: ■= Hose ½" ■= HandPump

■= BatteryPump

□= Option

N/A = info Not Available/not given

| IMAGE   | MODEL<br>SERIES VARIANT<br>VOLTAGE<br>FUEL | COMPANY | TOOLS IN RANGE        | ORIGIN | COST<br>inc tax / VAT | WEIGHT<br>IN HAND<br>inc Battery<br>exc Fuel | WEIGHT<br>Default<br>BATTERY<br>Full FUEL<br>Tank | BATTERY<br>Ah<br>OPTIONS<br>FUEL<br>CAPACITY | PO<br>OU<br>(Cy |
|---|--|---------|-----------------------|--------|-----------------------|--|---|--|-----------------|
|    | CE003GZ02<br>40v                           | MAKITA  | ■<br>■<br>■<br>■<br>■ | ●      | £370<br>\$<br>€       | 5.5kg<br>0lb<br>6.4-7.4kg                    | 1kg<br>2.2lb                                      | 2x4Ah<br>Li-on                               | 3<br>(1)        |
|    | DCE090ZX1<br>2x 18V                        | MAKITA  | ■<br>■<br>■<br>■<br>■ | ●      | £400<br>\$<br>€       | 4.9kg<br>00lb<br>6.3kg                       | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|   | CE004GZ<br>2x 18v                          | MAKITA  | ■<br>■<br>■<br>■<br>■ | ●      | £440<br>\$<br>€       | 5.8kg<br>00lb<br>6.7-7.7kg                   | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|  | CE001GZ01<br>2x 40v                        | MAKITA  | ■<br>■<br>■<br>■<br>■ | ●      | £1000<br>\$<br>€      | 11.1kg<br>00lb<br>13.5-<br>15.4kg            | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|  | TS 420<br>2x 18v                           | MAKITA  | ■<br>■<br>■<br>■<br>■ | ●      | £<br>\$<br>€          | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|  | EK6100<br>2 Stroke                         | MAKITA  | ■<br>■<br>■<br>■<br>■ | ●      | £1316<br>\$<br>€      | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|  | DPC8132<br>2 stroke                        | MAKITA  | ■<br>■<br>■<br>■<br>■ | ●      | £1290<br>\$<br>€      | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |

| POWER<br>OUTPUT<br>(CC<br>Cylinders) | DURATION<br>Default BATTERY<br>Full FUEL Tank | LENGTH<br>exc Disc | WIDTH        | HEIGHT       | BLADE<br>MAX DIAMETER<br>CUTTING DEPTH<br>ARBOR DIAMETER<br>BLADE THICKNESS | SOUND<br>POWER<br>PRESSURE | XTRA BLADE GUARD | WATER INPUT | ON-BOARD SCRECH | CARRY STRAP | LED LIGHTS | WiFi / CAPABLE | IN-WATER-CAPABLE<br>TOOL/BATTERY IP | NOTES   | WWW.       |
|--------------------------------------|---|--------------------|--------------|--------------|---|----------------------------|------------------|-------------|-----------------|-------------|------------|----------------|-------------------------------------|---------|------------|
| 0.7kw<br>73.5cm³                     | -<br>00mins                                   | 603mm<br>"         | 240mm<br>"   | 350mm<br>"   | 230mm / 9"<br>88mm / 3.5"<br>17mm / 000"<br>3mm / 000"                      | 116db<br>105db             | ■                | ■           |                 | ■           | ■<br>4     | Wi<br>Fi       | -<br>68                             |         | makita.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 554mm<br>00"       | 000mm<br>00" | 283mm<br>00" | 230mm / 000"<br>88mm / 000"<br>22.23mm / 000"<br>3mm / 000"                 | 114db<br>103db             | -                | ■           |                 |             |            |                |                                     | 5.9m/s2 | makita.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 663mm<br>00"       | 240mm<br>00" | 406mm<br>00" | 305mm / 000"<br>121mm / 000"<br>20mm / 000"<br>5mm / 000"                   | 110db<br>99db              | -                | ■           |                 |             |            |                |                                     | 3.8m/s2 | makita.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 825mm<br>00"       | 272mm<br>00" | 487mm<br>00" | 355mm / 000"<br>127mm / 000"<br>25.4mm / 000"<br>0mm / 000"                 | 120db<br>109db             | -                | ■           |                 |             |            |                |                                     | 2.5m/s2 | makita.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00"  | 000mm / 000"<br>100mm / 000"<br>20mm / 000"<br>5mm / 000"                   |                            | -                | ■           |                 |             |            |                |                                     |         | makita.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00"  | 000mm / 000"<br>000mm / 000"<br>00mm / 000"<br>0mm / 000"                   |                            | -                | ■           |                 |             |            |                |                                     |         | makita.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00"  | 000mm / 000"<br>100mm / 000"<br>20mm / 000"<br>5mm / 000"                   |                            | -                | ■           |                 |             |            |                |                                     |         | makita.com |

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:

■= Cutter ■= Spreader ■= Ram

■= Special Tools ■= Hose-Fed Tools






●= Partial feature or OK, but not ideal

WATER INPUT: ■= Hose ½" ■= HandPump






















■= BatteryPump

□□□= Option

N/A = info Not Available/not given

| IMAGES NOT TO SCALE<br>OTHER TOOLS IN RANGE:<br>■= Cutter ■= Spreader ■= Ram<br>■= Special Tools ■= Hose-Fed Tools<br>●= Partial feature or OK, but not ideal<br>WATER INPUT: ■= Hose ½" ■= HandPump<br>■= BatteryPump<br>□□□= Option<br>N/A = info Not Available/not given | MODEL<br>SERIES VARIANT<br>VOLTAGE<br>FUEL | COMPANY   | TOOLS IN RANGE   | ORIGIN | COST<br>inc tax / VAT | WEIGHT<br>IN HAND<br>inc Battery<br>exc Fuel | WEIGHT<br>Default<br>BATTERY<br>Full FUEL<br>Tank | BATTERY<br>Ah<br>OPTIONS<br>FUEL<br>CAPACITY | PO<br>OU<br>(Cy |
|---|--|-----------|------------------|--------|-----------------------|--|---|--|-----------------|
|    | EK7650H<br>2 Stroke                        | MAKITA    | ■<br>■<br>■<br>■ | ●      | £1217<br>\$<br>€      | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|    | DPC6430<br>2 stroke                        | MAKITA    | ■<br>■<br>■<br>■ | ●      | £616<br>\$<br>€       | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|   | M18 FUEL<br>18V                            | MILWAUKEE | ■<br>■<br>■<br>■ | ■      | £<br>\$<br>€          | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|    | MX FUEL<br>350MM<br>18V                    | MILWAUKEE | ■<br>■<br>■<br>■ | ■      | £<br>\$<br>€          | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|    | MX18<br>18V                                | MILWAUKEE | ■<br>■<br>■<br>■ | ■      | £<br>\$<br>€          | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|   | 2 stroke                                   | MILWAUKEE | ■<br>■<br>■<br>■ | ■      | £1290<br>\$<br>€      | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|   |  |           |                  |        |                       | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |



| POWER<br>OUTPUT<br>(CC<br>Cylinders) | DURATION<br>Default BATTERY<br>Full FUEL Tank | LENGTH<br>exc Disc | WIDTH        | HEIGHT      | BLADE<br>MAX DIAMETER<br>CUTTING DEPTH<br>ARBOR DIAMETER<br>BLADE THICKNESS | SOUND<br>POWER<br>PRESSURE | XTRA BLADE GUARD | WATER INPUT   | ON-BOARD SCRENC | CARRY STRAP | LED LIGHTS | WiFi / CAPABLE | IN-WATER-CAPABLE<br>TOOL/BATTERY IP | NOTES | WWW.          |
|--------------------------------------|---|--------------------|--------------|-------------|---|----------------------------|------------------|---|-----------------|-------------|------------|----------------|-------------------------------------|-------|---------------|
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>000mm / 000"<br>00mm / 000"<br>0mm / 000"                   |                            | -                | <br><br>       |                 |             |            |                |                                     |       | makita.com    |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>100mm / 000"<br>20mm / 000"<br>5mm / 000"                   |                            | -                | <br><br>       |                 |             |            |                |                                     |       | makita.com    |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>000mm / 000"<br>00mm / 000"<br>0mm / 000"                   |                            | -                | <br><br>    |                 |             |            |                |                                     |       | milwaukee.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>100mm / 000"<br>20mm / 000"<br>5mm / 000"                   |                            | -                | <br><br> |                 |             |            |                |                                     |       | milwaukee.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>000mm / 000"<br>00mm / 000"<br>0mm / 000"                   |                            | -                | <br><br> |                 |             |            |                |                                     |       | milwaukee.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>100mm / 000"<br>20mm / 000"<br>5mm / 000"                   |                            | -                | <br><br> |                 |             |            |                |                                     |       | milwaukee.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>100mm / 000"<br>20mm / 000"<br>5mm / 000"                   |                            | -                | <br><br> |                 |             |            |                |                                     |       |               |

## IMAGES NOT TO SCALE






















### OTHER TOOLS IN RANGE:

= Cutter 
 = Spreader 
 = Ram  
 = Special Tools 
 = Hose-Fed Tools  
 = Partial feature or OK, but not ideal  
 WATER INPUT: = Hose 1/2" 
 = HandPump  
 = BatteryPump

= Option

N/A = info Not Available/not given

| = Cutter                       = Spreader                       = Ram<br>= Special Tools                       = Hose-Fed Tools<br>= Partial feature or OK, but not ideal<br>WATER INPUT:  = Hose 1/2"                       = HandPump<br>= BatteryPump<br>= Option<br>N/A = info Not Available/not given | MODEL<br>SERIES VARIANT<br>VOLTAGE<br>FUEL | COMPANY | TOOLS IN RANGE | ORIGIN | COST<br>inc tax / VAT | WEIGHT<br>IN HAND<br>inc Battery<br>exc Fuel | WEIGHT<br>Default<br>BATTERY<br>Full FUEL<br>Tank | BATTERY<br>Ah<br>OPTIONS<br>FUEL<br>CAPACITY | PO<br>OU<br>(Cy |
|--|--|---------|----------------|--------|-----------------------|--|---|--|-----------------|
|  | TS 500i<br>2 stroke                        | STIHL   |                |        | £1290<br>\$<br>€      | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|  | TSA 230<br>36V                             | STIHL   |                |        | £500<br>\$<br>€       | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|  | TSA 300<br>36V                             | STIHL   |                |        | £850<br>\$<br>€       | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|  | TS 410<br>2 stroke                         | STIHL   |                |        | £1230<br>\$<br>€      | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|  | TS 420<br>2 stroke                         | STIHL   |                |        | £1240<br>\$<br>€      | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|  | TS 440<br>2 stroke                         | STIHL   |                |        | £1316<br>\$<br>€      | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |
|  | TS 480i<br>2 stroke                        | STIHL   |                |        | £1290<br>\$<br>€      | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)        |

| POWER<br>OUTPUT<br>(CC<br>Cylinders) | DURATION<br>Default BATTERY<br>Full FUEL Tank | LENGTH<br>exc Disc | WIDTH        | HEIGHT      | BLADE<br>MAX DIAMETER<br>CUTTING DEPTH<br>ARBOR DIAMETER<br>BLADE THICKNESS | SOUND<br>POWER<br>PRESSURE | XTRA BLADE GUARD | WATER INPUT   | ON-BOARD SCRECH | CARRY STRAP | LED LIGHTS | WiFi / CAPABLE | IN-WATER-CAPABLE<br>TOOL/BATTERY IP | NOTES | WWW.      |
|--------------------------------------|---|--------------------|--------------|-------------|---|----------------------------|------------------|---|-----------------|-------------|------------|----------------|-------------------------------------|-------|-----------|
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>000mm / 000"<br>00mm / 000"<br>0mm / 000"                   |                            | -                | <br><br>       |                 |             |            |                |                                     |       | stihl.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>000mm / 000"<br>00mm / 000"<br>0mm / 000"                   |                            | -                | <br><br>       |                 |             |            |                |                                     |       | stihl.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>000mm / 000"<br>00mm / 000"<br>0mm / 000"                   |                            | -                | <br><br>    |                 |             |            |                |                                     |       | stihl.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>000mm / 000"<br>00mm / 000"<br>0mm / 000"                   |                            | -                | <br><br> |                 |             |            |                |                                     |       | stihl.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>000mm / 000"<br>00mm / 000"<br>0mm / 000"                   |                            | -                | <br><br> |                 |             |            |                |                                     |       | stihl.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>000mm / 000"<br>00mm / 000"<br>0mm / 000"                   |                            | -                | <br><br> |                 |             |            |                |                                     |       | stihl.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>000mm / 000"<br>00mm / 000"<br>0mm / 000"                   |                            | -                | <br><br> |                 |             |            |                |                                     |       | stihl.com |



IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:

■ = Cutter ■ = Spreader ■ = Ram

■ = Special Tools ■ = Hose-Fed Tools





● = Partial feature or OK, but not ideal

WATER INPUT: ■ Hose ½" ■ HandPump

■ BatteryPump

□ □ □ = Option

N/A = info Not Available/not given

|   | MODEL<br>SERIES VARIANT<br>VOLTAGE<br>FUEL | COMPANY | TOOLS IN RANGE   | ORIGIN  | COST<br>inc tax / VAT | WEIGHT<br>IN HAND<br>inc Battery<br>exc Fuel | WEIGHT<br>Default<br>BATTERY<br>Full FUEL<br>Tank | BATTERY<br>Ah<br>OPTIONS<br>FUEL<br>CAPACITY | PO<br>O<br>(Cy |
|---|--|---------|------------------|---|-----------------------|--|---|--|----------------|
|  | TS 500i<br>2 stroke                        | STIHL   | ■<br>■<br>■<br>■ |  | £1290<br>\$<br>€      | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)       |
|  | TSA 910i<br>2 stroke                       | STIHL   | ■<br>■<br>■<br>■ |  | £500<br>\$<br>€       | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)       |
|   |  |         |                  |   |                       | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)       |
|   |  |         |                  |   |                       | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)       |
|   |  |         |                  |   |                       | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)       |
|   |  |         |                  |   |                       | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)       |
|   |  |         |                  |   |                       | 00kg<br>00lb                                 | 0kg<br>0lb<br>0kg<br>0lb                          | -<br>-                                       | 0<br>(0)       |

| POWER<br>OUTPUT<br>(CC<br>Cylinders) | DURATION<br>Default BATTERY<br>Full FUEL Tank | LENGTH<br>exc Disc | WIDTH        | HEIGHT      | BLADE<br>MAX DIAMETER<br>CUTTING DEPTH<br>ARBOR DIAMETER<br>BLADE THICKNESS | SOUND<br>POWER<br>PRESSURE | EXTRA BLADE GUARD | WATER INPUT   | ON-BOARD SCRECH | CARRY STRAP | LED LIGHTS | WiFi / CAPABLE | IN-WATER-CAPABLE<br>TOOL/BATTERY IP | NOTES | WWW.      |
|--------------------------------------|---|--------------------|--------------|-------------|---|----------------------------|-------------------|---|-----------------|-------------|------------|----------------|-------------------------------------|-------|-----------|
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>000mm / 000"<br>00mm / 000"<br>0mm / 000"                   |                            | -                 | <br><br>       |                 |             |            |                |                                     |       | stihl.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>100mm / 000"<br>20mm / 000"<br>5mm / 000"                   |                            | -                 | <br><br>       |                 |             |            |                |                                     |       | stihl.com |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>000mm / 000"<br>00mm / 000"<br>0mm / 000"                   |                            | -                 | <br><br>    |                 |             |            |                |                                     |       |           |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>100mm / 000"<br>20mm / 000"<br>5mm / 000"                   |                            | -                 | <br><br> |                 |             |            |                |                                     |       |           |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>100mm / 000"<br>20mm / 000"<br>5mm / 000"                   |                            | -                 | <br><br> |                 |             |            |                |                                     |       |           |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>100mm / 000"<br>20mm / 000"<br>5mm / 000"                   |                            | -                 | <br><br> |                 |             |            |                |                                     |       |           |
| 00kw<br>00cm³                        | -<br>00mins                                   | 000mm<br>00"       | 000mm<br>00" | 00mm<br>00" | 000mm / 000"<br>100mm / 000"<br>20mm / 000"<br>5mm / 000"                   |                            | -                 | <br><br> |                 |             |            |                |                                     |       |           |

# 'All-in-One' EXTRICATION/ STABILISATION STRUTS

Despite having been around since the last century it seemed to take Fire and rescue services a while to fully embrace all-in-one struts - that is a telescopic load bearing strut integrated with a webbing strap to create a very stable triangle of opposing vector forces to deal with a high centre of gravity combined with a small footprint on the ground. The principle being that while the top of the strut wedges against the high part of a vehicle (normally on its side as the most unstable of loads), the webbing pulls the head down and the bottom of the vehicle towards the base of the strut thus stopping it from slipping away. The struts make a wobbly load into a rock-solid structure that is safe for rescuers to work in. This GUIDE is *not* intended to be an instructional article on how to stabilise with struts as that is a complex subject with a lot of variables.

Originally car stabilisation was a haphazard affair, if indeed it was undertaken at all. Then came wooden blocks of various sizes and types and often painted, the ex-serviceman's 'whitewashing' mentality ensuring the shiny gloss painted blocks had little traction and so provided minimal stability when these were used under vehicle sills. They were subsequently replaced by plastic blocks with interlocking nodes and ridges but the principle was the same - to fill in the space between the vehicle and the ground and neutralise the suspension, so that the vehicle became the rescue scene equivalent of a stable operating theatre bed.

This worked fine on upright saloon cars - they already had a low centre of gravity and a wide footprint on the ground. However, block towers were not effective on the higher sills of sports utility vehicles (hence the evolution of sliding stair blocks) or LGV's/Big Rigs and certainly not with cars on their side.

So in these latter cases there was either no effective stabilisation or ladders and rope were pressed into service for cars on their side as were USAR shores, which, with their massive load support capacity could easily be utilised on LGV/truck cabs and chassis. In the picture at right (middle), Philadelphia FD have used the equipment they had available to



improvise a stabilisation. In this case a Paratech shore with a 'come-along' winch to provide tension. However, the problem with these improvised systems and especially the ladder set-up for a car on its side, is that they are slow to put in place and quite labour intensive, especially for the minimal crew available on the first attendance and early on at an incident. Also note that USAR shores would likely not be available on the first attendance and be delayed until the later arrival of a rescue unit. So a solution was required ... which was one that was easily and rapidly placed by one rescuer, took little space in the already congested locker storage of the first attendance and which didn't have a prohibitive price tag. Enter the all-in one strut..... Weber's *StabFast* (left & right) was one of the first to integrate strut and straps comprising an extendible strut held in place by a single reel mounted ratchet strap, which can either fix to the vehicle directly from the strut base or by a sliding hook where the strap feeds out from the base and is also locked in, at or near the head, creating a highly effective tensioned buttress against the vehicle it is stabilising. Both roving deployments can be employed on cars and on LGV/big Fire and rescue services currently use a variety of labour intensive and sometimes less than optimal methods to deal with stabilising vehicles where there is a high centre of gravity combined with a small footprint on the ground. So it's probably useful to look at the specifics of all in one struts and the different versions available. However, this GUIDE is *not* intended to be an instructional article on how to stabilise with struts as that is a complex subject with a lot of variables.

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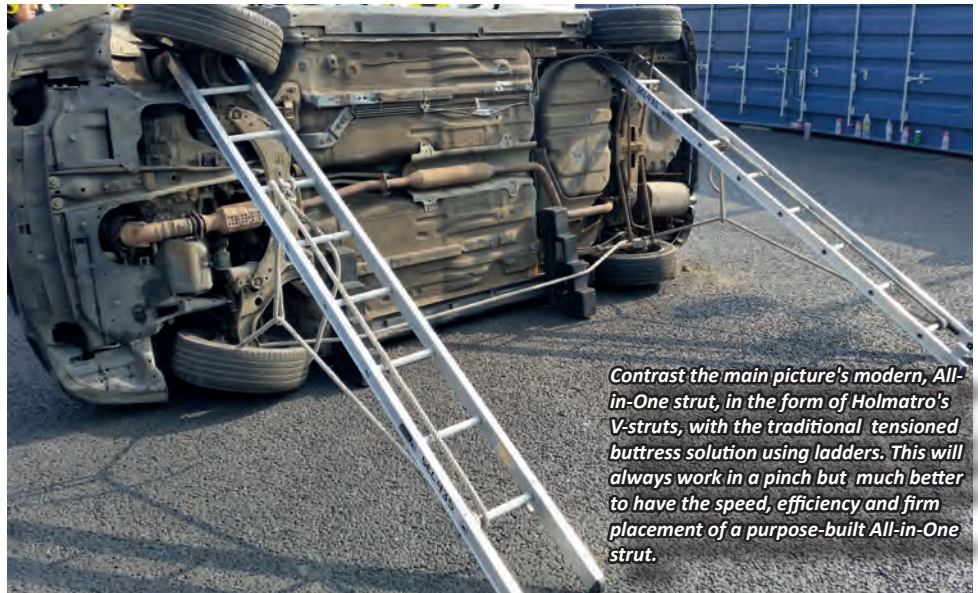
# ALL-in-ONE STABILISATION STRUTS

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So in these latter cases there was either no effective stabilisation or ladders and rope were pressed into service for cars on their side as were USAR shores, which, with their massive load support capacity could easily be utilised on LGV/ truck cabs and chassis. In the picture at right (middle), Philadelphia FD have used the equipment they had available to improvise a stabilisation. In this case a Paratech shore with a 'come-along' winch to provide tension. However, the problem with these improvised systems and especially the ladder set-up for a car on its side, is that they are slow to put in place and quite labour intensive, especially for the minimal crew available on the first attendance and early on at an incident. Also note that USAR shores would likely not be available on the first attendance and be delayed until the later arrival of a rescue unit. So a solution was required ...

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*Contrast the main picture's modern, All-in-One strut, in the form of Holmatro's V-struts, with the traditional tensioned buttress solution using ladders. This will always work in a pinch but much better to have the speed, efficiency and firm placement of a purpose-built All-in-One strut.*

*RIGHT: The next step from ad-hoc stabilisation with ladders or wood was to borrow USAR struts (see guide on p148) and create a tensioned buttress with ratchet straps or, as in this case from an incident in Philadelphia, a come-along pulley. However, while you can only work with what you're presented with, be very wary of tensioning outside of the line of the strut. Struts like this Paratech work well enough but they may not be on first attending vehicles so availability and sheer bulk may be against them. Companies like Airshore quickly came up with mini strut sets aimed specifically at vehicle rescue and these too were a step up unless the vehicle was very large and heavy. Something else was needed and Weber in Germany felt they had the answer ...*



highly effective tensioned buttress against the vehicle it is stabilising. Both roving deployments can be employed on cars and on LGV/ big rig cabs and chassis.

Note that all of these struts both increase the footprint of any vehicle on the ground and at the same time have a high insertion point with which to counteract a high centre of gravity. Weber were the first to push this concept with the StabFast (pictured overleaf in a tricky tunnel incident in Germany) and seemed to have the market to themselves for a few years before a number of specialist US strut manufacturers like Junkyard Dog, Rescue 42 and Res-Q-Jack introduced their own models followed by Holmatro with their V-Strut. Paratech didn't rest on their

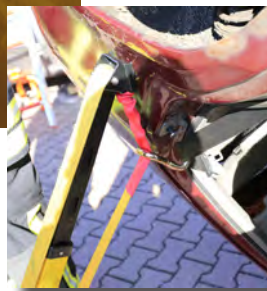






stabilisation AND lift, a job normally requiring struts and lifting bags.

Anchoring the corner of force triangulation is a sturdy, free-running hook on the webbing running from foot to head and this is connected to any structural point low down on the vehicle, often this is one of the many holes and shapes on an alloy or regular 'spoked' wheel but can also be a part of the sill or an opening or bracket on the undercarriage/chassis or, as in the Weber example above, attached to the seat belt webbing. The heads may be a simple V or channel or may be a custom-designed multi-head with two or three grip options on the one head. This can be something of a compromise over a selection of specialist heads but it does speed things up and there's never a chance you'll misplace one of the heads.



### IN THE FOLLOWING TABLES.....

we've included struts from Junkyard Dog, Genesis and Res-Q-Jack that technically aren't 'All-in-One' because the ratchet strap is not a complete and fixed element and others, like Amkus and Hurst could argue that they too could simply add a ratchet strap to their stand-alone struts. But these are sold as specific vehicle stabilisation struts or are part of a range that does include 'All-in-One' struts so they're close enough. Remember also that

laurels either coming up with an all-in-one variant of their screw-adjust shores to produce one of the stronger models on the market (pic left). While the ratchet strap is intended to provide the necessary mechanical advantage to securely tension the strut, they all have their own methods for extending the strut - the Paratech, JD Z-Strut and RSQ X models use a screw thread to provide finite adjustment while most of the rest use incremental placement using familiar holes and pins like the Rescue 42 model (right) and simply change the angle slightly to get a firm placement. In all cases there are security measures to ensure you can't lose the pins or the 'pin' may actually be more of a sprung, shaped button as with the Holmatro V-Strut.

By far the largest range in this Guide is from Res-Q-Jack who have taken a leaf out of Paratech's book with a screw adjustment on their X struts plus incorporation of a removable jack onto most of their struts that allows actual lifting of the load. Obviously this is a cardinal sin in delicate stabilisation processes but there are many incidents when the ability to lift using an integrated strut already in play is very useful. In the picture below, Res-Q-Jack struts are performing a coordinated



the range of adjustment for some, means that one strut will cover what might be two struts in another brand's range. The **Minimum** or retracted **LENGTH** in our tables is not the same as the stored length which might be lower once you take off a head and/or foot plate.

Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square ■■■■■. If it's an option it is shown as an outline square □□□□□. A circle ● in the 'USE' columns indicates that this feature is only partially present and/or is OK for that purpose but not ideal. A model variant is shown in cyan blue and any features or specifications that differ from the standard are also in cyan or will have a cyan outline to a black or orange square ■■■■.

**ORIGIN:** The company's home country, not necessarily the country of manufacture which is indicated by an inset flag or two equally sized flags if the tool is made in both countries. **ADJ RANGE** is the extension a plain strut can achieve.

**MAX WORK-LOAD @2:1** is effectively the WLL Working load limit with a 2:1 safety factor at **FULL\* & MINIMUM EXTENSION** (\*NOT including extension tubes and in tensile or columnar loading). Minimum Breaking Load would be double this figure.

**HD, STD, LD** refers to the type of vehicle load the strut can handle: **Heavy Duty** for all types of vehicles inc. trucks/trains/trams. **STandard** for all cars and most Large Goods Vehicles/trucks and **LightDuty** for cars, vans and light trucks.

**STAKE HOLES** is a hole, eye or a shackle etc. that allows an anchor stake to be driven in on certain types of ground or more precarious positioning but in an ideal world a correctly positioned strut and straps will vector forces so as not to allow the strut to slip.

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**IMAGES NOT to SCALE**

**HD. STD.LD** refers to the type of vehicle load the strut can handle: **Heavy Duty** for all types of vehicles inc. trucks/trains/trams. **STandard** for all cars and most Large Goods Vehicles/trucks and **LightDuty** for cars, vans and light trucks.

|   | MODEL              | COMPANY                       | ORIGIN  | 2022 COST<br>each | WEIGHT           | MIN<br>LENGTH    | MAX<br>LENGTH    |
|---|--------------------|-------------------------------|---|-------------------|------------------|------------------|------------------|
|    |                    | AOLAI                         |   |                   |                  |                  |                  |
|    | Stabilisation      | COVEX                         |    | €2000             | 8.9kg<br>19.6lb  | 1150mm<br>45.27" | 1950mm<br>76.77" |
|    | Basic              | COVEX                         |    | €1200             | 10.6kg<br>23.3lb | 1100mm<br>43"    | 1950mm<br>76.77" |
|    | Kodiak             | GENESIS                       |    | \$1000            | 4.8kg<br>10.5lb  | 686mm<br>27"     | 1067mm<br>42"    |
|    | V-Strut            | HOLMATRO                      |    | \$1050<br>€705    | 7.9kg<br>17.4lb  | 1080mm<br>42.5"  | 1800mm<br>70.9"  |
|   | X-Tend<br>Small    | JUNKYARD<br>DOG<br>INDUSTRIES |  | \$1350            | 8.6kg<br>19lb    | 686mm<br>27"     | 1067mm<br>42"    |
|  | X-Tend<br>Medium   | JUNKYARD<br>DOG<br>INDUSTRIES |  | \$1470            | 11.3kg<br>25lb   | 990mm<br>39"     | 1625mm<br>64"    |
|  | X-Tend<br>Large    | JUNKYARD<br>DOG<br>INDUSTRIES |  | \$1510            | 11.3kg<br>25lb   | 1295mm<br>51"    | 2057mm<br>81"    |
|  | Z-Strut<br>Small   | JUNKYARD<br>DOG<br>INDUSTRIES |  | \$2460            | 10.9kg<br>24lb   | 686mm<br>27"     | 1067mm<br>42"    |
|  | Z-Strut<br>Medium  | JUNKYARD<br>DOG<br>INDUSTRIES |  | \$2670            | 13.15kg<br>29lb  | 990mm<br>39"     | 1625mm<br>64"    |
|  | Z-Strut<br>Large   | JUNKYARD<br>DOG<br>INDUSTRIES |  | \$2880            | 14.5kg<br>32lb   | 1295mm<br>51"    | 2057mm<br>81"    |
|  | LVS10              | LEADER<br>GROUP/<br>PARATECH  |  |                   | 8.8kg<br>19.4lb  | 980mm<br>38.6"   | 1700mm<br>67"    |
|  | LQS/<br>QuickStrut | LUKAS /<br>HURST              |  | \$1000            | 16kg<br>35lb     | 1340mm<br>52.75" | 2000mm<br>78.7"  |

# ALL-in-ONE STABILISATION STRUTS

|  | ADJ RANGE       | MAX WORK LOAD @min2:1 extended | MAX WORK LOAD @min2:1 retracted | STRUT MATERIAL FEET/HEAD | STANDARDS | HD, STD, LD | USAR Capable | STAKE HOLES | ADJUSTMENT | HEAD OPTIONS & NOTES   | WWW.                   |
|--|-----------------|--------------------------------|---------------------------------|--------------------------|-----------|-------------|--------------|-------------|------------|--|------------------------|
|  |                 |                                |                                 |                          |           |             |              |             |            | WARNING - DIRECT, ILLEGAL COPY of HOLMATRO V-STRUT,  | aolairescue.com        |
|  | 800mm<br>31.5"  | 1500kg<br>3307lb               | 1500kg<br>3307lb                | Alloy                    | CE        | ■           | ■            | ■           | ■          |  | hobrand-algebra.nl     |
|  | 850mm<br>33.77" | 1500kg<br>3307lb               | 1500kg<br>3307lb                | Steel                    | CE        | ■           |              |             | □          |  | hobrand-algebra.nl     |
|  | 381mm<br>15"    | 4082kg<br>9000lb               | 9072kg<br>20000lb               | Alloy                    |           | ■           | ■            | ■           | □          | Pointed, V & Chain heads + Extensions tubes. Also by Geneisis, Grizzly strut minus integrated webbing/ ratchet   | genesiscrescue.com     |
|  | 720mm<br>28.4"  | 1632kg<br>3597lb               | 1632kg<br>3597lb                | Alloy                    | CE        | ■           |              | ■           | □          | Locking holes at very small intervals. Squeeze and push mechanism for quick release after use. Serrated head for grip. Exhaust protection sleeve on webbing. | holmatro.com           |
|  | 381mm<br>15"    | 2269kg<br>5000lb               | 2269kg<br>5000lb                | Steel                    |           | ■           |              | ■           | □          | Std, 90°, Pointed Heads. Comes with picket anchor and accessories bag. Adjusts in 6" increments. HD (no straps) also in range                                | jydind.com             |
|  | 635mm<br>25"    | 2269kg<br>5000lb               | 2269kg<br>5000lb                | Steel                    |           | ■           |              | ■           | □          | Std, 90°, Pointed Heads. Comes with picket anchor and accessories bag. Adjusts in 6" increments. HD (no straps) also in range                                | jydind.com             |
|  | 762mm<br>30"    | 2269kg<br>5000lb               | 2269kg<br>5000lb                | Steel                    |           | ■           |              | ■           | □          | Std, 90°, Pointed Heads. Adjusts in 6" increments. ALSO X-Tend HD minus integrated webbing/ratchet rated at 10,000lbWLL, weighs 37lb                         | jydind.com             |
|  | 381mm<br>15"    | 2269kg<br>5000lb               | 2269kg<br>5000lb                | Steel                    |           | ■           |              | ■           | ■          | Std, 90°, Pointed Heads. Comes with picket anchor and accessories bag.   | jydind.com             |
|  | 635mm<br>25"    | 2269kg<br>5000lb               | 2269kg<br>5000lb                | Steel                    |           | ■           |              | ■           | ■          | Std, 90°, Pointed Heads. Comes with picket anchor and accessories bag.   | jydind.com             |
|  | 762mm<br>30"    | 2269kg<br>5000lb               | 2269kg<br>5000lb                | Steel                    |           | ■           |              | ■           | ■          | Std, 90°, Pointed Heads. Comes with picket anchor and accessories bag.   | jydind.com             |
|  | 720mm<br>28.4"  | 4500kg<br>9921lb               | 4500kg<br>9921lb                | Alloy                    |           | ■           | ■            | ■           | ■          | Chain wedge, pike, convex surface grip with belt hook location all in one  | leadernorthamerica.com |
|  | 660mm<br>25.95" | 1000kg<br>2204.6lb             | 1000kg<br>2204.6lb              | Alloy                    | CE        | ■           |              |             | □          | Discontinued in USA  | lukas.com              |

## IMAGES NOT to SCALE

**HD, STD, LD** refers to the type of vehicle load the strut can handle: **Heavy Duty** for all types of vehicles inc. trucks/trains/ trams. **STandarD** for all cars and most Large Goods Vehicles/ trucks and **LightDuty** for cars, vans and light trucks.

|   | MODEL            | COMPANY    | ORIGIN  | 2022 COST each | WEIGHT (strut-only)     | MIN LENGTH       | MAX LENGTH        |
|---|------------------|------------|---|----------------|-------------------------|------------------|-------------------|
|    | Supporter X2     | PARATECH   |    | \$1300         | 15.9kg<br>35lb          | 1016mm<br>40"    | 1661mm<br>65.4"   |
|    | TeleCrib Jr      | RESCUE 42  |    | \$1542         | 13.6kg<br>30lb          | 1041mm<br>41"    | 1753mm<br>69"     |
|    | GreenLite Short  | RES-Q-JACK |    | \$745          | 14kg*<br>31lb*          | 1067mm<br>42"    | 1625.6mm<br>64"   |
|    | GreenLite Long   | RES-Q-JACK |    | \$745*         | 15.4kg*<br>34lb*        | 1372mm<br>54"    | 2222.5mm<br>87.5" |
|    | Aluminum X Short | RES-Q-JACK |    | \$2005*        | 18kg*<br>40lb*          | 1016mm<br>40"    | 1689mm<br>66.5"   |
|   | Aluminum X Long  | RES-Q-JACK |  | \$2005         | 20.1kg*<br>46lb*        | 1384mm<br>54.5"  | 2216 mm<br>87.25" |
|  | APEX Short       | RES-Q-JACK |  | \$2200*        | 15.4kg*<br>34lb*        | 1146mm<br>45.1"  | 1587mm<br>62.5"   |
|  | APEX Long        | RES-Q-JACK |  | \$2200         | 20kg*<br>44lb*          | 1492mm<br>58.75" | 2324mm<br>91.5"   |
|  | Auto X Short     | RES-Q-JACK |  | n/a            | 15.8kg*<br>35lb*        | 1118mm<br>44"    | 1695mm<br>66.75"  |
|   | Auto X Long      | RES-Q-JACK |  | n/a            | 17.8kg<br>38lb*         | 1384mm<br>54.5"  | 2216mm<br>87.25"  |
|  | Greenstab        | SCORPE     |  | n/a            | (7) 19kg*<br>(14.4)42lb | 1064mm<br>41.9"  | 1804mm<br>71"     |
|   |                  |            |   |                |                         |                  |                   |
|   |                  |            |   |                |                         |                  |                   |



# ALL-in-ONE STABILISATION STRUTS

|   | ADJ RANGE    | MAX WORK LOAD @min2:1 extended | MAX WORK LOAD @min2:1 retracted | STRUT MATERIAL FEET/HEAD | STANDARDS | HD, STD, LD | USAR Capable | STAKE HOLES | ADJUSTMENT | HEAD OPTIONS & NOTES  | WWW.           |
|---|--------------|--------------------------------|---------------------------------|--------------------------|-----------|-------------|--------------|-------------|------------|---|----------------|
|   | 330mm 13"    | 4536kg 10000lb                 | 4536kg 10000lb                  | Alloy                    |           | ■           | ■            | ■           | ■          | Lifting extensions inc HydroFusion and driver attachments converting screw-thread strut to lifting.<br>V, Cone & Chain Wedge heads. | paratech.com   |
|   | 712mm 28"    | 2269kg 5000lb                  | 2269kg 5000lb                   | Kevlar Composite         |           | ■           | ■            | ■           | ■          | Combi-Head  | rescue42.com   |
| m | 558mm 22"    | 1133kg 2500lb                  | 1133kg 2500lb                   | Steel                    |           | ■           | ■            | ■           | ■          | * Add 22lb for jack attachment. 1134kg/2500lb lift capacity. Ratchet strap <u>not</u> a fixed element. Swivel multi-head.           | res-q-jack.com |
| m | 850mm 33.5"  | 1133kg 2500lb                  | 1133kg 2500lb                   | Steel                    |           | ■           | ■            | ■           | ■          | * Add \$456/ 22lb for jack attachment shown in pics. 1134kg/2500lb lift capacity. Swivel multi-head.                                | res-q-jack.com |
|   | 673mm 26.5"  | 4399kg 9700lb                  | 4399kg 9700lb                   | Alloy                    |           | ■           | ■            | ■           | ■          | * Add \$828/ 30lb for jack attachment. 2722kg/6000lb lift capacity. Swivel multi-head.  | res-q-jack.com |
|   | 832mm 32.75" | 4399kg 9700lb                  | 4399kg 9700 lb                  | Alloy                    |           | ■           | ■            | ■           | ■          | * Add 30lb for jack attachment. 2722kg/6000lb lift capacity. Variant sold as 'Phoenix' Strut. Swivel multi-head.                    | res-q-jack.com |
|   | 441mm 17.4"  | 3129kg 5669lb                  | 6900kg 12500lb                  | Alloy                    |           | ■           | ■            | ■           | ■          | * Add \$975/27lb for jack attachment. 2722kg/6000lb lift capacity. Can add tubes to extend up to 74.5" Swivel multi-head.           | res-q-jack.com |
|   | 832mm 32.75" | 3129kg 5669lb                  | 6900kg 12500lb                  | Alloy                    |           | ■           | ■            | ■           | ■          | * Add 27lb for jack attachment shown in pic. 2722kg/6000lb lift capacity. Can add tubes to extend up to 103.5". Swivel multi-head.  | res-q-jack.com |
|   | 577mm 22.75" | 1474kg 3250lb                  | 1474kg 3250lb                   | Alloy                    |           | ■           | ■            | ■           | ■          | * Add 22lb for jack attachment. 1134kg/2500lb lift capacity. Swivel multi-head.   | res-q-jack.com |
|   | 832mm 32.75" | 1474kg 3250lb                  | 1474kg 3250lb                   | Alloy                    |           | ■           | ■            | ■           | ■          | * Add 22lb for jack attachment. 1134kg/2500lb lift capacity. Swivel multi-head.   | res-q-jack.com |
|   | 740mm 29.1"  | 2000kg 4409lb                  | 1814kg 4000lb                   | Alloy Steel              |           | ■           | ■            | ■           | ?          | Built-in spirit level.<br>* Wt from strut alone to kit inc webbing 5m Strap extension.Anchor plate for the foot + 20cm Connector    | scorpe.net     |
|   |              |                                |                                 |                          |           |             |              |             |            |   |                |
|   |              |                                |                                 |                          |           |             |              |             |            |   |                |

# STRUCTURAL SHORING STRUTS

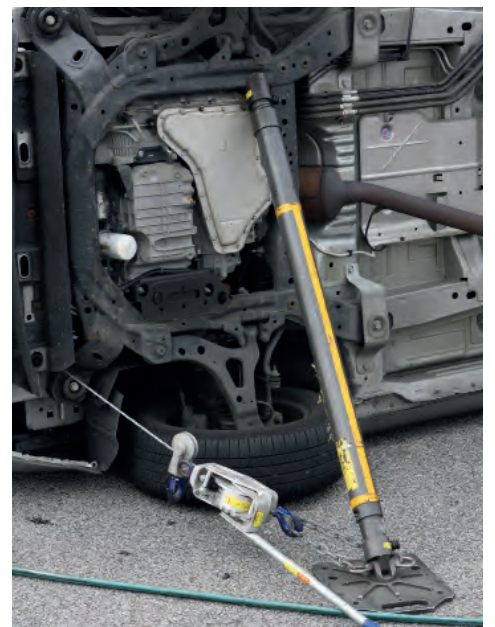
We've used the term 'structural' to differentiate these heavy duty struts intended to support quite massive loads from the lighter duty vehicle extrication struts. There is crossover of course and many vehicle stabilisation struts are easily tough enough to help shore a timber-structured house but they are 'light-duty' in terms of load support and instead designed for the relatively small weight of a leaning vehicle. In the image below right you can see a *Paratech* shoring strut capable of supporting a 22ton load being used as a vehicle stabilisation strut requiring a fraction of that load capacity. Shoring struts are great universal tools for everything from vehicle accidents, to downed trees, collapsed buildings and sagging trench walls as well as tripods/bipods/monopods for rope rescue and 'crane' style load support or lifting and shifting - this aspect is covered in the Tripods/High Directional Guide.

We can divide shoring strut capabilities into four categories:

- 1) **STABILISATION:** The load is primarily downwards into the ground rather than directly onto the strut which is instead resisting lateral movement. Examples of this would be a brick wall or a vehicle on its side as shown on the right.
- 2) **TOP LOAD SUPPORT:** Which can be the same thing as stabilisation except that the full or part-weight of a shored 'medium', which may be many tons over a protracted period, is applied to the strut either transversely as in columnar/vertical support or laterally as with a trench wall. In the case of vertical load support, a significant weight may be applied to the strut at the outset of installation or shortly afterwards and remain on that strut until the end of the incident or replacement by traditional timber or masonry shores. Lateral load support may change from locational input forces only (the forces applied to engage the strut and keep it in position), to very significant loads if there is a shift in the substrate like further collapse of a trench wall.
- 3) **UNDERSLUNG LOAD SUPPORT:** As a tripod, bipod/ A-frame, monopod or davit arm, with the use of specialised head and foot attachments struts can be used for regular rope rescue operations and lifting and shifting of very heavy loads like blocks of concrete, tree trunks or large animals
- 4) **LIFTING:** Pneumatically pressurised struts can impart such a high force that they not only extend into position without the need to manually extend them but can go on to lift/push the medium in the same way as an airbag. If an intentional spot-lift is required these struts can work incredibly well but as a stabilisation strut, the ability to exert a lifting force rather than simply firm placement, can be very dangerous in the hands of an inexperienced operator. A delicately balanced, unstable load requires a very intricate and delicate placement to ensure that the situation is not made worse.

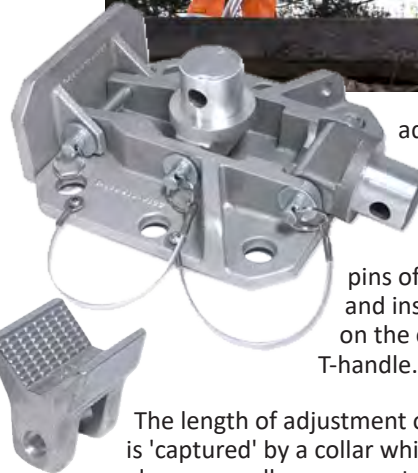


Structural shoring struts are almost all alloy/aluminium tubes around 100mm/4" in diameter. Adjustable struts, indeed all struts, are strongest at their shortest and with the least amount of extension. As the secondary cylinder extends out of the main tube the load support capability reduces. The load capability is actually a lot higher than the specifications suggest because they are always a ratio of the total load. We have listed a minimum of 2:1 normally applied to struts applying a direct lift and therefore a precise load from the outset but for stabilisation the load variance can be enormous so you would normally apply a safety ratio of around 4:1. There are still some old-school struts requiring manual extension and a large pin inserted into 4 or 6 correctly aligned holes in the telescoping tubes and these





# STRUCTURAL SHORING STRUTS



adjustment which can make the difference when trying to get a firm fit. Prospan (right) dispensed with the extraneous pins of their vehicle extrication range and instead have a sprung plunge pin on the collar with an easy-grip T-handle.

The length of adjustment on screw threaded tubes is 'captured' by a collar which will either be wound into place manually or may automatically follow the length of adjustment and lock it at the exact point to which you raise it. Raising of the telescoping section can be manual or use compressed air cylinders which is particularly useful when setting the struts remotely in dangerous situations like trench or structural collapse. The most dangerous time in shoring is on entry to the scene and setting the struts especially if the pressure settings enable your strut to impart a lift rather than simply engaging firmly - that's when your 'Jacks-Straws' of interlocking support members can come tumbling down! The now discontinued Vetter (Airshore) model below best shows the traditional features:- the two round red buttons are plunge pins for connecting foot and head attachments - this replaced the earlier models which had similar bolt/pins that you see

on the adjustment collar. The other red feature at the bottom is a dust-cap covered valve for compressed air pressurisation of the strut and next to that is a pressure release knob that allows you to release the strut from its fully loaded position or to set a pressure release level that doesn't allow the strut to impart a lift, just firm engagement. The Airshore struts ultimately disappeared after being dropped from the IDEX (Lukas/Hurst/Vetter) ranges which would have left the field open for the undisputed leader in this field, Paratech, had companies like Holmatro, Resqtec and ResqJack not stepped up with their own designs. Holmatro in particular were in the game early on with their Powershore range which was subsequently updated and improved with the OmniShore where only 5 shores are needed to cover a multitude of activities since they act as extension struts as well as telescoping and one attachment can impart lift. The attachments have been upgraded with angled, interlocking fingers that don't allow any rotation or misalignment.

remain pretty bombproof and affordable but these have largely transitioned into push-fit connections, sprung plunge-pin or push-button release.

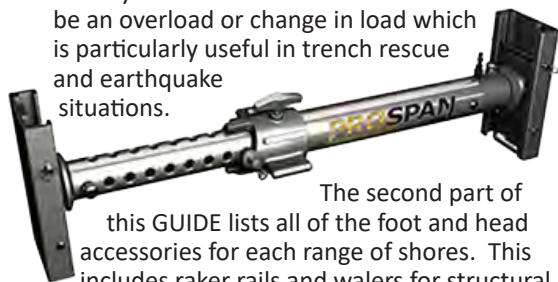
## BASIC STRUT DESIGN

The telescoping aluminium tube we mentioned earlier will either have a series of holes with which to adjust height to specific distances or a full length screw thread which allows finite length adjustment. Even the struts with holes spaced an inch or two inches apart like the Prospan range and the iconic red Airshore (shown far right in its later blue IDEX livery), may have additional adjustment on the collar via an angled top on which a pin will ride and allow an inch or two of more precise





These are very slick and at the 'Rolls-Royce' end of shoring with accessories like multiple strut powered load-monitoring and remote raising via electric pump and handheld controller plus smaller single strut remote raising unit (inset pic). *ResQtec* grew out of lifting airbag pioneer *Zumro* and also have a slick, push-button range with precisely locking heads while *Paratech* didn't rest on their laurels coming up with upgraded locking systems and accessories which still sees them as having the largest range of struts and options. This includes their load monitoring and alarm module *Rescue Guardian* (pic right) which can monitor up to 10 struts simultaneously and alarm audibly and via blue tooth to connected devices should there be an overload or change in load which is particularly useful in trench rescue and earthquake situations.



The second part of this GUIDE lists all of the foot and head accessories for each range of shores. This includes raker rails and walers for structural and trench shoring to spread the load and support across much larger areas. Spot-shoring where the relatively small area of strut head/foot engages directly with the load is not recommended for particulate structures like brick/breeze block and trench walls - these require much broader load support using boards, and rakers.

## IN THE FOLLOWING TABLES:....

**PNEUMATIC MANUAL PWR/POWER**

**CONNECT: PUSH-FIT PIN**

**AUTO LOCKING COLLAR**

**LIFT RATCHET ATTACHMENT:** the strut can either impart lift/raising (via pneumatics or a manual crank handle) ■ or can have an optional lift attachment added □

A **RATCHET ATTACHMENT** is used to convert a shoring strut into an All-in-One strut for vehicle extrication where the cranked raising of the strut creates a triangulation (vectorsing) of forces via webbing attached to the target load and the strut's base-plate.

**LOAD MONITOR**

**RAKER WALER**

**TRIPOD BIPOD MONOPOD**



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








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Patented innovations such as the Trident Coupler and OmniLock system allow you to build unlimited applications with less parts, experience a seamless setup with less handling and take full control with less manpower.

Learn more at [holmatro.com/omnishore](http://holmatro.com/omnishore)





































































































































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**IMAGES NOT to SCALE**  
 Ext = Fixed length Extension strut  
 = Option



























|   | COMPANY           | SERIES<br>MODEL<br>VARIANT             | ORIGIN  | COST<br>each    | WEIGHT            |
|---|-------------------|--|---|-----------------|-------------------|
|   | GENESIS<br>RESCUE | Tornado<br>B-Strut<br>151.002.166      |    | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|   | GENESIS<br>RESCUE | Tornado<br>E-457<br>151.002.166        |    | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|   | GENESIS<br>RESCUE | Tornado<br>Extension<br>151.002.166    |    | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|   | GENESIS<br>RESCUE | Kodiak<br>OO<br>OO                     |    | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|   | GENESIS<br>RESCUE | Kodiak<br>OO<br>OO                     |   | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|   | GENESIS<br>RESCUE | Kodiak<br>OO<br>OO                     |  | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|   | GENESIS<br>RESCUE | Kodiak<br>OO<br>OO                     |  | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|  | HOLMATRO          | Omnishore<br>M10<br>151.002.166        |  | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|  | HOLMATRO          | Omnishore<br>H20<br>151.002.166        |  | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|  | HOLMATRO          | Omnishore<br>P20-OL<br>151.002.166.166 |  | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|  | HOLMATRO          | Omnishore<br>P30-OL<br>151.002.166 166 |  | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|  | HOLMATRO          | Omnishore<br>P40-OL<br>151.002.166 166 |  | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|  | HOLMATRO          | Omnishore<br>P60-OL<br>151.002.166 166 |  | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |



# STRUCTURAL SHORING STRUTS

| HT     | MIN LENGTH  | MAX LENGTH  | ADJ RANGE/<br>STROKE | MAX WORK LOAD<br>@min2:1<br>EXTENDED | MAX WORK LOAD<br>@min2:1<br>RETRACTED | STRUT MATERIAL<br><br>OPERATING PRESSURE | STANDARDS | PNEUMATIC<br>MANUAL PWR   | PIN | CONNECT: PUSH-FIT | AUTO LOCKING COLLAR   | LIFT RATCHET ATTACHMENT   | OPTIONS<br>LOAD MONITOR<br>RAKER WALER<br>TRIPOD BIPOD MONOPOD  | HEAD/FOOT<br>OPTIONS<br>& NOTES                              | WWW.              |
|--------|-------------|-------------|----------------------|--------------------------------------|---------------------------------------|--|-----------|---|-----|-------------------|---|---|---|--|-------------------|
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | Alloy<br>720 BAR<br>10443 psi            | CE        | <br><br>       |     |                   | <br><br>       | <br><br>       | <br><br>       | oo   | genesisrescue.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | Alloy<br>720 BAR<br>10443 psi            | CE        | <br><br>       |     |                   | <br><br>       | <br><br>       | <br><br>       | oo   | genesisrescue.com |
| g<br>b | 00cm<br>18" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | Alloy<br>720 BAR<br>10443 psi            | CE        | <br><br>       |     |                   | <br><br>       | <br><br>       | <br><br>       | oo   | genesisrescue.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | Alloy<br>720 BAR<br>10443 psi            | CE        |   |     |                   | <br><br>       | <br><br>       | <br><br>       | Shown with optional<br>LockNut.<br>OL= add-on Locking collar | genesisrescue.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | Alloy<br>720 BAR<br>10443 psi            | CE        |   |     |                   | <br><br>    | <br><br>    | <br><br>    | OL= add-on Locking collar                                    | genesisrescue.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | Alloy<br>720 BAR<br>10443 psi            | CE        |   |     |                   | <br><br> | <br><br> | <br><br> | OL= add-on Locking collar                                    | genesisrescue.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | Alloy<br>720 BAR<br>10443 psi            | CE        | <br><br> |     |                   | <br><br> | <br><br> | <br><br> | oo   | genesisrescue.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | Alloy<br>720 BAR<br>10443 psi            | CE        | <br><br> |     |                   | <br><br> | <br><br> | <br><br> | oo   | genesisrescue.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | Alloy<br>720 BAR<br>10443 psi            | CE        |   |     |                   | <br><br> | <br><br> | <br><br> | 2-stage telescoping  | holmatro.com      |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | Alloy<br>720 BAR<br>10443 psi            | CE        |   |     |                   | <br><br> | <br><br> | <br><br> | OL= add-on Locking collar                                    | holmatro.com      |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | Alloy<br>720 BAR<br>10443 psi            | CE        |   |     |                   | <br><br> | <br><br> | <br><br> | Shown with optional<br>LockNut.<br>OL= add-on Locking collar | holmatro.com      |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | Alloy<br>720 BAR<br>10443 psi            | CE        |   |     |                   | <br><br> | <br><br> | <br><br> | OL= add-on Locking collar                                    | holmatro.com      |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | Alloy<br>720 BAR<br>10443 psi            | CE        |   |     |                   | <br><br> | <br><br> | <br><br> | OL= add-on Locking collar                                    | holmatro.com      |

**IMAGES NOT to SCALE**  
Ext = Fixed length Extension strut  
= Option



























|   | COMPANY  | SERIES<br>MODEL<br>VARIANT                 | ORIGIN  | COST<br>each    | WEIGHT      |
|---|----------|--|---|-----------------|-------------|
|    | PARATECH | Acme Thread<br>12-15"<br>22-796212         |    | £0<br>\$0<br>€0 | 00k<br>00lb |
|    | PARATECH | Acme Thread<br>19-25"<br>22-796212         |    | £0<br>\$0<br>€0 | 00k<br>00lb |
|    | PARATECH | Acme Thread<br>25-36"<br>22-796212         |    | £0<br>\$0<br>€0 | 00k<br>00lb |
|    | PARATECH | Acme Thread<br>37-58"<br>22-796212         |    | £0<br>\$0<br>€0 | 00k<br>00lb |
|    | PARATECH | Acme Thread<br>56-88"<br>22-796212         |    | £0<br>\$0<br>€0 | 00k<br>00lb |
|  | PARATECH | LockStroke<br>19-25"<br>22-796212          |  | £0<br>\$0<br>€0 | 00k<br>00lb |
|  | PARATECH | LockStroke<br>25-36"<br>22-796212          |  | £0<br>\$0<br>€0 | 00k<br>00lb |
|  | PARATECH | LockStroke<br>36-57"<br>22-796212          |  | £0<br>\$0<br>€0 | 00k<br>00lb |
|   | PARATECH | LockStroke<br>55-89"<br>22-796212          |  | £0<br>\$0<br>€0 | 00k<br>00lb |
|  | PARATECH | Lock/Acme<br>Extension<br>6"<br>22-796212  |  | £0<br>\$0<br>€0 | 00k<br>00lb |
|  | PARATECH | Lock/Acme<br>Extension<br>12"<br>22-796212 |  | £0<br>\$0<br>€0 | 00k<br>00lb |
|  | PARATECH | Lock/Acme<br>Extension<br>24"<br>22-796212 |  | £0<br>\$0<br>€0 | 00k<br>00lb |
|  | PARATECH | Lock/Acme<br>Extension<br>36"<br>22-796212 |  | £0<br>\$0<br>€0 | 00k<br>00lb |

# STRUCTURAL SHORING STRUTS

| HT     | MIN LENGTH  | MAX LENGTH  | ADJ RANGE/<br>STROKE | MAX WORK LOAD<br>@min2:1<br>EXTENDED | MAX WORK LOAD<br>@min2:1<br>RETRACTED | STRUT MATERIAL<br><br>OPERATING PRESSURE | STANDARDS | PNEUMATIC MANUAL PWR | CONNECT: PUSH-FIT | AUTO LOCKING COLLAR | LIFT RATCHET ATTACHMENT | LOAD MONITOR | RAKER WALER | TRIPOD BIPOD MONOPOD | HEAD/FOOT<br>OPTIONS<br>& NOTES                 | WWW.         |
|--------|-------------|-------------|----------------------|--------------------------------------|---------------------------------------|--|-----------|----------------------|-------------------|---------------------|-------------------------|--------------|-------------|----------------------|---|--------------|
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        |                      |                   |                     | ■                       |              | ■           | □                    | 00  | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        |                      |                   |                     | ■                       |              | ■           | □                    | 00  | paratech.com |
| g<br>b | 00cm<br>22" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        |                      |                   |                     | ■                       |              | ■           | □                    | 00  | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>26" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        |                      |                   |                     | ■                       |              | ■           | □                    | 00  | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>46" | 00cm<br>00"          | 00tonnes<br>00USton                  | 15tonnes<br>16.6USton                 | 0<br>00 BAR<br>00 psi                    | CE        |                      |                   |                     | ■                       |              | ■           | □                    | 00  | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>64" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        |                      |                   |                     | ■                       |              | ■           | □                    | 00  | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        |                      |                   |                     | ■                       |              | ■           | □                    | 00  | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        |                      |                   |                     | ■                       |              | ■           | □                    | 00  | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        | ■<br>■<br>■          |                   | ■                   |                         | ■            | □<br>□<br>□ | □                    | 00  | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 0                    | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        |                      |                   | ■                   |                         | ■            | □<br>□      | □                    | To fit Acme Thread AND/<br>OR LockStroke Struts | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 0                    | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        |                      |                   | ■                   |                         | ■            | □<br>□      | □                    | To fit Acme Thread AND/<br>OR LockStroke Struts | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 0                    | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        |                      |                   | ■                   |                         | ■            | □<br>□      | □                    | To fit Acme Thread AND/<br>OR LockStroke Struts | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 0                    | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        |                      |                   | ■                   |                         | ■            | □<br>□      | □                    | To fit Acme Thread AND/<br>OR LockStroke Struts | paratech.com |



**IMAGES NOT to SCALE**  
 Ext = Fixed length Extension strut  
 = Option

|   | COMPANY  | SERIES<br>MODEL<br>VARIANT                | ORIGIN  | COST<br>each    | WEIG       |
|---|----------|---|---|-----------------|------------|
|    | PARATECH | Lock/Acme<br>Converter<br>3"<br>22-796212 |    | £0<br>\$0<br>€0 | 00k<br>00i |
|    | PARATECH | LongShore<br>203<br>22-796212             |    | £0<br>\$0<br>€0 | 00k<br>00i |
|    | PARATECH | LongShore<br>304<br>22-796212             |    | £0<br>\$0<br>€0 | 00k<br>00i |
|    | PARATECH | LongShore<br>406<br>22-796212             |    | £0<br>\$0<br>€0 | 00k<br>00i |
|     | PARATECH | LongShore<br>610<br>22-796212             |    | £0<br>\$0<br>€0 | 00k<br>00i |
|   | PARATECH | LongShore<br>812<br>22-796212             |  | £0<br>\$0<br>€0 | 00k<br>00i |
|   | PARATECH | LongShore<br>1016<br>22-796212            |  | £0<br>\$0<br>€0 | 00k<br>00i |
|  | PARATECH | LongShore<br>Ext 135<br>22-796212         |  | £0<br>\$0<br>€0 | 00k<br>00i |
|  | PARATECH | LongShore<br>Ext 235<br>22-796212         |  | £0<br>\$0<br>€0 | 00k<br>00i |
|  | PARATECH | LongShore<br>Ext 435<br>22-796212         |  | £0<br>\$0<br>€0 | 00k<br>00i |
|   | PARATECH | LongShore<br>Ext 635<br>22-796212         |  | £0<br>\$0<br>€0 | 00k<br>00i |
|  | PARATECH | LongShore<br>Adj BraceB23<br>22-796212    |  | £0<br>\$0<br>€0 | 00k<br>00i |
|   | PARATECH | LongShore<br>Adj BraceB23<br>22-796212    |  | £0<br>\$0<br>€0 | 00k<br>00i |















# STRUCTURAL SHORING STRUTS

| HT     | MIN LENGTH  | MAX LENGTH  | ADJ RANGE/<br>STROKE | MAX WORK LOAD<br>@min2:1<br>EXTENDED | MAX WORK LOAD<br>@min2:1<br>RETRACTED | STRUT MATERIAL<br>OPERATING PRESSURE | STANDARDS | PNEUMATIC MANUAL PWR | CONNECT: PUSH-FIT | PIN | AUTO LOCKING COLLAR | LIFT RATCHET ATTACHMENT | OPTIONS<br>LOAD MONITOR<br>RAKER<br>WALER<br>TRIPOD BIPOD MONOPOD | HEAD/FOOT<br>OPTIONS<br>& NOTES   | WWW.         |
|--------|-------------|-------------|----------------------|--------------------------------------|---------------------------------------|--------------------------------------|-----------|----------------------|-------------------|-----|---------------------|-------------------------|---|---|--------------|
| g<br>b | 00cm<br>00" | 00cm<br>00" | 0                    | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                | CE        |                      |                   |     |                     |                         |   | Converts an extension to a stand-alone, fixed-length strut. To fit Acme Thread AND/OR LockStroke Struts | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 20tonnes<br>22USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                | CE        |                      |                   |     |                     |                         |   |   | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                | CE        |                      |                   |     |                     |                         |   | 00  | paratech.com |
| g<br>b | 00cm<br>22" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                | CE        |                      |                   |     |                     |                         |   | 00  | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>26" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                | CE        |                      |                   |     |                     |                         |   | 00  | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>46" | 00cm<br>00"          | 00tonnes<br>00USton                  | 15tonnes<br>16.6USton                 | 0<br>00 BAR<br>00 psi                | CE        |                      |                   |     |                     |                         |   | 00  | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>64" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                | CE        |                      |                   |     |                     |                         |   | 00  | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 0                    | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                | CE        |                      |                   |     |                     |                         |   | 00  | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 0                    | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                | CE        |                      |                   |     |                     |                         |   | 00  | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 0                    | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                | CE        |                      |                   |     |                     |                         |   | 00  | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 0                    | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                | CE        |                      |                   |     |                     |                         |   | 00  | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 0                    | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                | CE        |                      |                   |     |                     |                         |   | 00  | paratech.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 0                    | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                | CE        |                      |                   |     |                     |                         |   | 00  | paratech.com |

































































**DPS**  
**or 4 x Half page**  
**or 2 full page banners**









| <p><b>IMAGES NOT to SCALE</b><br/> Ext = Fixed length Extension strut<br/> = Option</p> |   | COMPANY  | SERIES<br>MODEL<br>VARIANT                         | ORIGIN  | COST<br>each    | WEIG         |
|---|---|----------|--|---|-----------------|--------------|
|        |   | PARATECH | LongShore<br>Converter<br>22-796212                |    | £0<br>\$0<br>€0 | 00k<br>00l   |
|   |   | PARATECH | Damage Control<br>Shore 03<br>22-798S03            |    | £0<br>\$0<br>€0 | 6.2k<br>13.7 |
|   |   | PARATECH | Damage Control<br>Shore 06<br>22-798S06            |    | £0<br>\$0<br>€0 | 11.8<br>26l  |
|   |   | PARATECH | Damage Control<br>Shore 10<br>22-798S10            |    | £0<br>\$0<br>€0 | 17.8<br>39.3 |
|   |   | PARATECH | Damage Control<br>Ext 01<br>22-798X01              |   | £0<br>\$0<br>€0 | 2.9k<br>6.3l |
|   |   | PARATECH | Damage Control<br>Ext 02<br>22-798X02              |  | £0<br>\$0<br>€0 | 4.3k<br>9.4l |
|   |   | PARATECH | Damage Control<br>Ext 04<br>22-798X04              |   | £0<br>\$0<br>€0 | 7kg<br>15.4  |
|   |   | PARATECH | Damage Control<br>Brace<br>22-798B01               |   | £0<br>\$0<br>€0 | 00k<br>00l   |
|   |  | PARATECH | HydraFusion<br>Strut 04<br>22-79HA04K              |  | £0<br>\$0<br>€0 | 00k<br>00l   |
|   |  | PARATECH | HydraFusion<br>Strut 10<br>22-79HA10K              |  | £0<br>\$0<br>€0 | 00k<br>00l   |
|      |   | PARATECH | HydraFusion<br>Strut 16<br>22-79HA16K              |  | £0<br>\$0<br>€0 | 00k<br>00l   |
|   |   | PARATECH | HydraFusion<br>Strut<br>Converter<br>22-79HA16K    |  | £0<br>\$0<br>€0 | 00k<br>00l   |
|   |   | PARATECH | HydraFusion<br>AcmeThread<br>Adapter<br>22-79HA16K |  | £0<br>\$0<br>€0 | 00k<br>00l   |

# STRUCTURAL SHORING STRUTS

| WT       | MIN LENGTH      | MAX LENGTH     | ADJ RANGE/<br>STROKE | MAX WORK LOAD<br>@min2:1<br>EXTENDED | MAX WORK LOAD<br>@min2:1<br>RETRACTED | STRUT MATERIAL<br><br>OPERATING PRESSURE | STANDARDS | PNEUMATIC<br>MANUAL PWR   | CONNECT: PUSH-FIT   | PIN | AUTO LOCKING COLLAR   | LIFT RATCHET ATTACHMENT  | OPTIONS   |   |                                 |              | HEAD/FOOT<br>OPTIONS<br><br>& NOTES | WWW. |
|----------|-----------------|----------------|----------------------|--------------------------------------|---------------------------------------|--|-----------|---|---|-----|---|--|---|---|---------------------------------|--------------|-------------------------------------|------|
| g<br>b   | 00cm<br>00"     | 00cm<br>00"    | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        | <br>  |   |     |    | <br><br> | <br><br> |   |                                 | 00           | paratech.com                        |      |
| kg<br>lb | 66cm<br>25"     | 91cm<br>36"    | 00cm<br>00"          | 20tonnes<br>22USton                  | 20tonnes<br>22USton                   | Anodized<br>Aircraft Alu<br>-            | CE        | <br>  | <br>          |     |    | -  | -   | <br><br>       | 00                              | paratech.com |                                     |      |
| kg<br>b  | 122cm<br>47"    | 185cm<br>6' 1" | 00cm<br>00"          | 20tonnes<br>22USton                  | 20tonnes<br>22USton                   | Anodized<br>Aircraft Alu<br>-            | CE        | <br>  | <br>          |     |    | -  | -   | <br><br>       | 00                              | paratech.com |                                     |      |
| kg<br>lb | 183cm<br>5' 11" | 295cm<br>9' 8" | 00cm<br>00"          | 20tonnes<br>22USton                  | 14.5tonnes<br>16USton                 | Anodized<br>Aircraft Alu<br>-            | CE        | <br>  | <br>          |     |    | -  | -   | <br><br>       | 00                              | paratech.com |                                     |      |
| kg<br>b  | 30.5cm<br>12"   | 30.5cm<br>12"  | 0                    | 20tonnes<br>22USton                  | 20tonnes<br>22USton                   | Anodized<br>Aircraft Alu<br>-            | CE        | -<br>-<br>-   |    |     | -   | -  | -   | <br><br>       | 00                              | paratech.com |                                     |      |
| kg<br>b  | 61cm<br>24"     | 61cm<br>24"    | 0                    | 20tonnes<br>22USton                  | 20tonnes<br>22USton                   | Anodized<br>Aircraft Alu<br>-            | CE        | -<br>-<br>-   |    |     | -   | -  | -   | <br><br> | 00                              | paratech.com |                                     |      |
| g<br>lb  | 122cm<br>48"    | 122cm<br>48"   | 0                    | 20tonnes<br>22USton                  | 20tonnes<br>22USton                   | Anodized<br>Aircraft Alu<br>-            | CE        | -<br>-<br>-   |    |     | -   | -  | -   | <br><br> | 00                              | ooo.com      |                                     |      |
| g<br>b   | 00cm<br>18"     | 00cm<br>22"    | 0                    | 20tonnes<br>22USton                  | 20tonnes<br>22USton                   | Anodized<br>Aircraft Alu<br>-            |           | -<br><br>   | -<br><br> |     |   |  |   |   | Add 4" for head and foot plates | ooo.com      |                                     |      |
| g<br>b   | 00cm<br>00"     | 00cm<br>00"    | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        | <br><br> |   |     |  |  |   | <br>  | 00                              | paratech.com |                                     |      |
| g<br>b   | 00cm<br>00"     | 00cm<br>00"    | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        |   |   |     |  |  |   | <br>  | 00                              | paratech.com |                                     |      |
| g<br>b   | 00cm<br>00"     | 00cm<br>00"    | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        |   |   |     |  |  |   | <br>  | 00                              | paratech.com |                                     |      |
| g<br>b   | 00cm<br>00"     | 00cm<br>00"    | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        |   |   |     |  |  |   | <br>  | 00                              | paratech.com |                                     |      |
















| <div>IMAGES NOT to SCALE</div> <div>Ext = Fixed length Extension strut</div> <div>= Option</div> |                          |                            |   |                 |            |
|--|--------------------------|----------------------------|---|-----------------|------------|
|  | COMPANY                  | SERIES<br>MODEL<br>VARIANT | ORIGIN  | COST<br>each    | WEIG       |
|  | PROSPAN<br>MANUFACTURING | Prospan<br>PR01            |  | £0<br>\$0<br>€0 | 00k<br>00l |
|  | PROSPAN<br>MANUFACTURING | Prospan<br>PR02            |  | £0<br>\$0<br>€0 | 00k<br>00l |
|  | PROSPAN<br>MANUFACTURING | Prospan<br>PR03            |  | £0<br>\$0<br>€0 | 00k<br>00l |
|  | PROSPAN<br>MANUFACTURING | Prospan<br>PR04            |  | £0<br>\$0<br>€0 | 00k<br>00l |
|  | PROSPAN<br>MANUFACTURING | Prospan<br>Ext 36"         |   | £0<br>\$0<br>€0 | 00k<br>00l |
|  | PROSPAN<br>MANUFACTURING | Prospan<br>Ext 48"         |   | £0<br>\$0<br>€0 | 00k<br>00l |
|  | PROSPAN<br>MANUFACTURING | Prospan<br>Ext 60"         |   | £0<br>\$0<br>€0 | 00k<br>00l |

| HT     | MIN LENGTH    | MAX LENGTH    | ADJ RANGE/<br>STROKE | MAX WORK LOAD<br>@min2:1<br>EXTENDED | MAX WORK LOAD<br>@min2:1<br>RETRACTED | STRUT MATERIAL<br><br>OPERATING PRESSURE          | STANDARDS | PNEUMATIC<br>MANUAL PWR | CONNECT: PUSH-FIT<br>PIN | AUTO LOCKING COLLAR | LIFT RATCHET ATTACHMENT | OPTIONS |   |   | HEAD/FOOT<br>OPTIONS<br>& NOTES | WWW.               |
|--------|---------------|---------------|----------------------|--------------------------------------|---------------------------------------|---|-----------|-------------------------|--------------------------|---------------------|-------------------------|---------|---|---|---------------------------------|--------------------|
| g<br>b | 00cm<br>21.5" | 00cm<br>26.5" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                             | CE        |                         |                          | ■                   |                         |         | ■ | □ | 00                              | prospanshoring.com |
| g<br>b | 00cm<br>29.5" | 00cm<br>41"   | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                             | CE        |                         |                          | ■                   |                         |         | ■ | □ | 00                              | prospanshoring.com |
| g<br>b | 00cm<br>42.5" | 00cm<br>67"   | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                             | CE        |                         |                          | ■                   |                         |         | ■ | □ | 00                              | rescue.resqtec.com |
| g<br>b | 00cm<br>67"   | 00cm<br>105"  | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                             | CE        |                         |                          | ■                   |                         |         | ■ | □ | 00                              | rescue.resqtec.com |
| g<br>b | 00cm<br>22"   | 00cm<br>00"   | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | Alloy<br>00 BAR<br>00 psi                         | CE        |                         |                          | ■                   |                         |         | ■ | □ | 00                              | ooo.com            |
| g<br>b | 00cm<br>18"   | 00cm<br>22"   | 00cm<br>4"           | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi<br>00 BAR |           | ■                       |                          |                     |                         |         |   |   | Add 4" for head and foot plates | ooo.com            |
| g<br>b | 00cm<br>22"   | 00cm<br>00"   | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | Alloy<br>00 BAR<br>00 psi                         | CE        |                         |                          | ■                   |                         |         | ■ | □ | 00                              | ooo.com            |

| <div>IMAGES NOT to SCALE</div> <div>Ext = Fixed length Extension strut</div> <div>= Option</div> |  |  |  |  | COMPANY    | SERIES<br>MODEL<br>VARIANT          | ORIGIN  | COST<br>each    | WEIG       |
|--|--|--|--|--|------------|-------------------------------------|---|-----------------|------------|
|                 |  |  |  |  | RES-Q-JACK | Super X<br>Trench 18<br>SPX-18ST    |    | £0<br>\$0<br>€0 | 00k<br>00i |
|                 |  |  |  |  | RES-Q-JACK | Super X<br>Trench 28<br>SPX-28ST    |    | £0<br>\$0<br>€0 | 00k<br>00i |
|                   |  |  |  |  | RES-Q-JACK | Super X<br>Trench 18<br>SPX-18ST    |    | £0<br>\$0<br>€0 | 00k<br>00i |
|                 |  |  |  |  | RES-Q-JACK | Super X<br>12"Extension<br>SPX-12EX |    | £0<br>\$0<br>€0 | 00k<br>00i |
|                |  |  |  |  | RES-Q-JACK | Super X<br>24"Extension<br>SPX-24EX |   | £0<br>\$0<br>€0 | 00k<br>00i |
|               |  |  |  |  | RES-Q-JACK | Super X<br>36"Extension<br>SPX-36EX |  | £0<br>\$0<br>€0 | 00k<br>00i |
|               |  |  |  |  | RES-Q-JACK | Super X<br>48"Extension<br>SPX-48EX |  | £0<br>\$0<br>€0 | 00k<br>00i |
|               |  |  |  |  | RESQTEC    | ProFix<br>PMX470                    |  | £0<br>\$0<br>€0 | 00k<br>00i |
|               |  |  |  |  | RESQTEC    | ProFix<br>PMX600                    |  | £0<br>\$0<br>€0 | 00k<br>00i |
|               |  |  |  |  | RESQTEC    | ProFix<br>PMX880                    |  | £0<br>\$0<br>€0 | 00k<br>00i |
|               |  |  |  |  | RESQTEC    | ProFix<br>PMX1400                   |  | £0<br>\$0<br>€0 | 00k<br>00i |
|  |  |  |  |  | RESQTEC    | ProFix<br>PMX2300                   |  | £0<br>\$0<br>€0 | 00k<br>00i |
|  |  |  |  |  |            |                                     |   |                 |            |
















| HT     | MIN LENGTH  | MAX LENGTH  | ADJ RANGE/<br>STROKE | MAX WORK LOAD<br>@min2:1<br>EXTENDED | MAX WORK LOAD<br>@min2:1<br>RETRACTED | STRUT MATERIAL<br><br>OPERATING PRESSURE | STANDARDS | PNEUMATIC MANUAL PWR | CONNECT: PUSH-FIT | PIN | AUTO LOCKING COLLAR | LIFT RATCHET ATTACHMENT | OPTIONS<br>LOAD MONITOR<br>RAKER<br>WALER<br>TRIPOD BIPOD MONOPOD | HEAD/FOOT<br>OPTIONS<br>& NOTES | WWW.               |
|--------|-------------|-------------|----------------------|--------------------------------------|---------------------------------------|--|-----------|----------------------|-------------------|-----|---------------------|-------------------------|---|---------------------------------|--------------------|
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■<br>■          |                   |     |                     |                         |   |                                 | resqjack.com       |
| g<br>b | 00cm<br>28" | 00cm<br>42" | 00cm<br>00"          | 00tonnes<br>00USton                  | 15tonnes<br>16.6USton                 | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■<br>■          |                   |     |                     |                         |   |                                 | resqjack.com       |
| g<br>b | 00cm<br>38" | 00cm<br>60" | 00cm<br>22"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■<br>■          |                   |     |                     |                         |   |                                 | resqjack.com       |
| g<br>b | 00cm<br>24" | 00cm<br>24" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>NO                |           | -<br>-<br>-          |                   |     |                     |                         |   |                                 | resqjack.com       |
| g<br>b | 00cm<br>24" | 00cm<br>24" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>NO                |           | -<br>-<br>-          |                   |     |                     |                         |   |                                 | resqjack.com       |
| g<br>b | 00cm<br>48" | 00cm<br>48" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>NO                |           | -<br>-<br>-          |                   |     |                     |                         |   |                                 | resqjack.com       |
| g<br>b | 00cm<br>48" | 00cm<br>48" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>NO                |           | -<br>-<br>-          |                   |     |                     |                         |   |                                 | resqjack.com       |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        |                      |                   | ■   |                     |                         | ■ □   | 00                              | rescue.resqtec.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        |                      |                   | ■   |                     |                         | ■ □   | 00                              | rescue.resqtec.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        |                      |                   | ■   |                     |                         | ■ □   | 00                              | rescue.resqtec.com |
| g<br>b | 00cm<br>00" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 0<br>00 BAR<br>00 psi                    | CE        |                      |                   | ■   |                     |                         | ■ □   | 00                              | rescue.resqtec.com |
| g<br>b | 00cm<br>22" | 00cm<br>00" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | Alloy<br>00 BAR<br>00 psi                | CE        |                      |                   | ■   |                     |                         | ■ □   | 00                              | rescue.resqtec.com |
|        |             |             |                      |                                      |                                       |  |           |                      |                   |     |                     |                         |   |                                 |                    |

| <p><b>IMAGES NOT to SCALE</b><br/> Ext = Fixed length Extension strut<br/> = Option</p> |                        |                               |   |                 |            |
|---|------------------------|-------------------------------|---|-----------------|------------|
|   | COMPANY                | SERIES<br>MODEL<br>VARIANT    | ORIGIN  | COST<br>each    | WEIG       |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>AA<br>-     |    | £0<br>\$0<br>€0 | 00k<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>A<br>-      |    | £0<br>\$0<br>€0 | 00k<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>B<br>-      |    | £0<br>\$0<br>€0 | 00k<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>C<br>-      |    | £0<br>\$0<br>€0 | 00k<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>D<br>-      |   | £0<br>\$0<br>€0 | 00k<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>E<br>-      |  | £0<br>\$0<br>€0 | 00k<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>F<br>-      |  | £0<br>\$0<br>€0 | 00k<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>FF<br>-     |  | £0<br>\$0<br>€0 | 00k<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>Ext 15<br>- |  | £0<br>\$0<br>€0 | 00k<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>Ext 15<br>- |  | £0<br>\$0<br>€0 | 00k<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>Ext 30<br>- |  | £0<br>\$0<br>€0 | 00k<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>Ext 46<br>- |  | £0<br>\$0<br>€0 | 00k<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>Ext 61<br>- |  | £0<br>\$0<br>€0 | 00k<br>00l |

| HT     | MIN LENGTH  | MAX LENGTH  | ADJ RANGE/<br>STROKE | MAX WORK LOAD<br>@min2:1<br>EXTENDED | MAX WORK LOAD<br>@min2:1<br>RETRACTED | STRUT MATERIAL<br><br>OPERATING PRESSURE | STANDARDS | PNEUMATIC MANUAL PWR | CONNECT: PUSH-FIT PIN | AUTO LOCKING COLLAR | LIFT RATCHET ATTACHMENT | OPTIONS      |       |       |                      | HEAD/FOOT<br>OPTIONS<br>& NOTES | WWW.       |
|--------|-------------|-------------|----------------------|--------------------------------------|---------------------------------------|--|-----------|----------------------|-----------------------|---------------------|-------------------------|--------------|-------|-------|----------------------|---------------------------------|------------|
|        |             |             |                      |                                      |                                       |  |           |                      |                       |                     |                         | LOAD MONITOR | RAKER | WALER | TRIPOD BIPOD MONOPOD |                                 |            |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■               |                       |                     |                         |              |       |       |                      |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■               |                       |                     |                         |              |       |       |                      |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■               |                       |                     |                         |              |       |       |                      |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■               |                       |                     |                         |              |       |       |                      |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■               |                       |                     |                         |              |       |       |                      |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■               |                       |                     |                         |              |       |       |                      |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■               |                       |                     |                         |              |       |       |                      |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■               |                       |                     |                         |              |       |       |                      |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■               |                       |                     |                         |              |       |       |                      |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■               |                       |                     |                         |              |       |       |                      |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■               |                       |                     |                         |              |       |       |                      |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■               |                       |                     |                         |              |       |       |                      |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■               |                       |                     |                         |              |       |       |                      |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■               |                       |                     |                         |              |       |       |                      |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■               |                       |                     |                         |              |       |       |                      |                                 | scorpe.net |



| <p><b>IMAGES NOT to SCALE</b><br/> Ext = Fixed length Extension strut<br/> = Option</p> |                        |                                |   |                 |                   |
|---|------------------------|--------------------------------|---|-----------------|-------------------|
|   | COMPANY                | SERIES<br>MODEL<br>VARIANT     | ORIGIN  | COST<br>each    | WEIGHT            |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>Ext ?<br>-   |    | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>Ext 76<br>-  |    | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>Ext 91<br>-  |    | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>Ext 183<br>- |    | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>D<br>-       |   | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>E<br>-       |  | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>F<br>-       |  | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>FF<br>-      |  | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>Ext 15<br>-  |  | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>Ext 15<br>-  |  | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>Ext 30<br>-  |  | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>Ext 46<br>-  |  | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |
|   | SCORPE<br>TECHNOLOGIES | Air Stabilizer<br>Ext 61<br>-  |  | £0<br>\$0<br>€0 | 00k<br>00l<br>00l |

| HT     | MIN LENGTH  | MAX LENGTH  | ADJ RANGE/<br>STROKE | MAX WORK LOAD<br>@min2:1<br>EXTENDED | MAX WORK LOAD<br>@min2:1<br>RETRACTED | STRUT MATERIAL<br><br>OPERATING PRESSURE | STANDARDS | PNEUMATIC<br>MANUAL PWR | CONNECT: PUSH-FIT<br>PIN | AUTO LOCKING COLLAR | LIFT RATCHET ATTACHMENT | OPTIONS |  |  |  | HEAD/FOOT<br>OPTIONS<br>& NOTES | WWW.       |
|--------|-------------|-------------|----------------------|--------------------------------------|---------------------------------------|--|-----------|-------------------------|--------------------------|---------------------|-------------------------|---------|--|--|--|---------------------------------|------------|
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■                  |                          |                     |                         |         |  |  |  |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■                  |                          |                     |                         |         |  |  |  |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■                  |                          |                     |                         |         |  |  |  |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■                  |                          |                     |                         |         |  |  |  |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■                  |                          |                     |                         |         |  |  |  |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■                  |                          |                     |                         |         |  |  |  |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■                  |                          |                     |                         |         |  |  |  |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■                  |                          |                     |                         |         |  |  |  |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■                  |                          |                     |                         |         |  |  |  |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■                  |                          |                     |                         |         |  |  |  |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■                  |                          |                     |                         |         |  |  |  |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■                  |                          |                     |                         |         |  |  |  |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■                  |                          |                     |                         |         |  |  |  |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■                  |                          |                     |                         |         |  |  |  |                                 | scorpe.net |
| g<br>b | 00cm<br>18" | 00cm<br>22" | 00cm<br>00"          | 00tonnes<br>00USton                  | 00tonnes<br>00USton                   | 6061-T6<br>aluminum<br>00 BAR<br>00 psi  |           | -<br>■                  |                          |                     |                         |         |  |  |  |                                 | scorpe.net |

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| COMPANY        | GENESIS RESCUE  | GENESIS RESCUE  | HOLMATRO        | HOLMATRO        | HOLMATRO        |
|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| MODEL          |                 |                 |                 |                 |                 |
| PRODUCT CODE   |                 |                 |                 |                 |                 |
| FITS to SERIES | 00              | 00              | 00              | 00              | 00              |
| ORIGIN         |                 |                 |                 |                 |                 |
| COST each      | £0<br>\$0<br>€0 | £0<br>\$0<br>€0 | £0<br>\$0<br>€0 | £0<br>\$0<br>€0 | £0<br>\$0<br>€0 |
| WEIGHT         | 00kg<br>00lb    | 00kg<br>00lb    | 00kg<br>00lb    | 00kg<br>00lb    | 00kg<br>00lb    |
| DIMENSIONS     | 00cm<br>00"     | 00cm<br>00"     | 00cm<br>00"     | 00cm<br>00"     | 00cm<br>00"     |
| NOTES          |                 |                 |                 |                 |                 |
| WWW.           | holmatro.com    | holmatro.com    | holmatro.com    | holmatro.com    | holmatro.com    |
|                |                 |                 |                 |                 |                 |
| COMPANY        | HOLMATRO        | HOLMATRO        | HOLMATRO        | HOLMATRO        | HOLMATRO        |
| MODEL          |                 |                 |                 |                 |                 |
| PRODUCT CODE   |                 |                 |                 |                 |                 |
| FITS to SERIES | 00              | 00              | 00              | 00              | 00              |
| ORIGIN         |                 |                 |                 |                 |                 |
| COST each      | £0<br>\$0<br>€0 | £0<br>\$0<br>€0 | £0<br>\$0<br>€0 | £0<br>\$0<br>€0 | £0<br>\$0<br>€0 |
| WEIGHT         | 00kg<br>00lb    | 00kg<br>00lb    | 00kg<br>00lb    | 00kg<br>00lb    | 00kg<br>00lb    |
| DIMENSIONS     | 00cm<br>00"     | 00cm<br>00"     | 00cm<br>00"     | 00cm<br>00"     | 00cm<br>00"     |
| NOTES          |                 |                 |                 |                 |                 |
| WWW.           | holmatro.com    | holmatro.com    | holmatro.com    | holmatro.com    | holmatro.com    |



SHORING STRUT HEADS FEET & ACCESSORIES



| HOLMATRO | HOLMATRO | HOLMATRO | HOLMATRO | HOLMATRO | HOLMATRO |
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|------|------|------|------|------|------|
| 00   | 00   | 00   | 00   | 00   | 00   |
| £0   | £0   | £0   | £0   | £0   | £0   |
| \$0  | \$0  | \$0  | \$0  | \$0  | \$0  |
| €0   | €0   | €0   | €0   | €0   | €0   |
| 00kg | 00kg | 00kg | 00kg | 00kg | 00kg |
| 00lb | 00lb | 00lb | 00lb | 00lb | 00lb |
| 00cm | 00cm | 00cm | 00cm | 00cm | 00cm |
| 00"  | 00"  | 00"  | 00"  | 00"  | 00"  |

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| €0   | €0   | €0   | €0   | €0   | €0   |
| 00kg | 00kg | 00kg | 00kg | 00kg | 00kg |
| 00lb | 00lb | 00lb | 00lb | 00lb | 00lb |
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| 00"  | 00"  | 00"  | 00"  | 00"  | 00"  |

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Extension strut  
= Option



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|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| COMPANY        | OO              | OO              | OO              | OO              | OO              |
| MODEL          |                 |                 |                 |                 |                 |
| PRODUCT CODE   |                 |                 |                 |                 |                 |
| FITS to SERIES | OO              | OO              | OO              | OO              | OO              |
| ORIGIN         |                 |                 |                 |                 |                 |
| COST each      | £0<br>\$0<br>€0 | £0<br>\$0<br>€0 | £0<br>\$0<br>€0 | £0<br>\$0<br>€0 | £0<br>\$0<br>€0 |
| WEIGHT         | 00kg<br>00lb    | 00kg<br>00lb    | 00kg<br>00lb    | 00kg<br>00lb    | 00kg<br>00lb    |
| DIMENSIONS     | 00cm<br>00"     | 00cm<br>00"     | 00cm<br>00"     | 00cm<br>00"     | 00cm<br>00"     |
| NOTES          |                 |                 |                 |                 |                 |
| WWW.           | OO.com          | OO.com          | OO.com          | OO.com          | OO.com          |

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SHORING STRUT HEADS FEET & ACCESSORIES

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| 0  | £0  | £0  | £0  | £0  | £0  |
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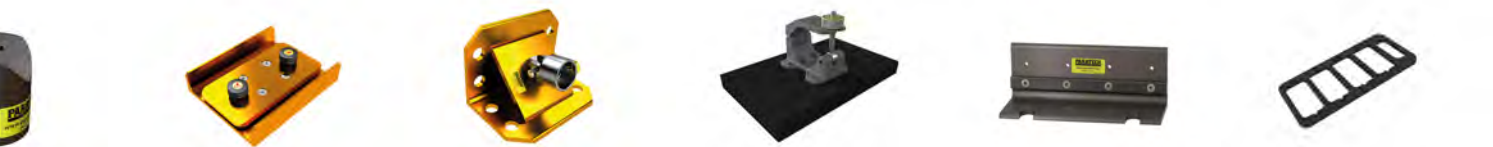
| COMPANY        | PARATECH        | PARATECH        | PARATECH        | PARATECH        | PARATECH        |
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| MODEL          |                 |                 |                 |                 |                 |
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| COST each      | £0<br>\$0<br>€0 | £0<br>\$0<br>€0 | £0<br>\$0<br>€0 | £0<br>\$0<br>€0 | £0<br>\$0<br>€0 |
| WEIGHT         | 00kg<br>00lb    | 00kg<br>00lb    | 00kg<br>00lb    | 00kg<br>00lb    | 00kg<br>00lb    |
| DIMENSIONS     | 00cm<br>00"     | 00cm<br>00"     | 00cm<br>00"     | 00cm<br>00"     | 00cm<br>00"     |
| NOTES          |                 |                 |                 |                 |                 |
| WWW.           | paratech.com    | paratech.com    | paratech.com    | paratech.com    | paratech.com    |
|                |                 |                 |                 |                 |                 |
| COMPANY        | PARATECH        | PARATECH        | PARATECH        | PARATECH        | PARATECH        |
| MODEL          |                 |                 |                 |                 |                 |
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| WEIGHT         | 00kg<br>00lb    | 00kg<br>00lb    | 00kg<br>00lb    | 00kg<br>00lb    | 00kg<br>00lb    |
| DIMENSIONS     | 00cm<br>00"     | 00cm<br>00"     | 00cm<br>00"     | 00cm<br>00"     | 00cm<br>00"     |
| NOTES          |                 |                 |                 |                 |                 |
| WWW.           | paratech.com    | paratech.com    | paratech.com    | paratech.com    | paratech.com    |

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| kg   | 00kg  | 00kg  | 00kg  | 00kg  | 00kg  |
| lb   | 00lb  | 00lb  | 00lb  | 00lb  | 00lb  |
| cm   | 00cm  | 00cm  | 00cm  | 00cm  | 00cm  |
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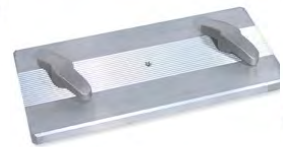
| COMPANY        | PARATECH           | PARATECH           | PARATECH           | PARATECH           | PARATECH           |
|----------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| MODEL          |                    |                    |                    |                    |                    |
| PRODUCT CODE   |                    |                    |                    |                    |                    |
| FITS to SERIES | 00                 | 00                 | 00                 | 00                 | 00                 |
| ORIGIN         |                    |                    |                    |                    |                    |
| COST each      | £0<br>\$0<br>€0    | £0<br>\$0<br>€0    | £0<br>\$0<br>€0    | £0<br>\$0<br>€0    | £0<br>\$0<br>€0    |
| WEIGHT         | 00kg<br>00lb       | 00kg<br>00lb       | 00kg<br>00lb       | 00kg<br>00lb       | 00kg<br>00lb       |
| DIMENSIONS     | 00cm<br>00"        | 00cm<br>00"        | 00cm<br>00"        | 00cm<br>00"        | 00cm<br>00"        |
| NOTES          |                    |                    |                    |                    |                    |
| WWW.           | paratech.com       | paratech.com       | paratech.com       | paratech.com       | paratech.com       |
|                |                    |                    |                    |                    |                    |
| COMPANY        | PROSPAN            | PROSPAN            | PROSPAN            | PROSPAN            | PROSPAN            |
| MODEL          |                    |                    |                    |                    |                    |
| PRODUCT CODE   |                    |                    |                    |                    |                    |
| FITS to SERIES | Prospan            | Prospan            | Prospan            | Prospan            | Prospan            |
| ORIGIN         |                    |                    |                    |                    |                    |
| COST each      | £0<br>\$0<br>€0    | £0<br>\$0<br>€0    | £0<br>\$0<br>€0    | £0<br>\$0<br>€0    | £0<br>\$0<br>€0    |
| WEIGHT         | 00kg<br>00lb       | 00kg<br>00lb       | 00kg<br>00lb       | 00kg<br>00lb       | 00kg<br>00lb       |
| DIMENSIONS     | 00cm<br>18"        | 00cm<br>18"        | 00cm<br>18"        | 00cm<br>18"        | 00cm<br>18"        |
| NOTES          |                    |                    |                    |                    |                    |
| WWW.           | prospanshoring.com | prospanshoring.com | prospanshoring.com | prospanshoring.com | prospanshoring.com |



SHORING STRUT HEADS FEET & ACCESSORIES

|  |   |   |   |   |   |
|--|---|---|---|---|---|
| <div></div> |   |   |   |   |   |
| TECH   | PARATECH  | PARATECH  | PARATECH  | PROSPAN   | PROSPAN   |
|  |   |   |   |   |   |
|  |   |   |   |   |   |
| 0  | 00  | 00  | 00  | Prospan   | Prospan   |
|    |    |    |    |    |    |
| 0  | £0  | £0  | £0  | £0  | £0  |
| 0  | \$0   | \$0   | \$0   | \$0   | \$0   |
| 0  | €0  | €0  | €0  | €0  | €0  |
| kg   | 00kg  | 00kg  | 00kg  | 00kg  | 00kg  |
| lb   | 00lb  | 00lb  | 00lb  | 00lb  | 00lb  |
| cm   | 00cm  | 00cm  | 00cm  | 00cm  | 00cm  |
| "  | 00"   | 00"   | 00"   | 18"   | 18"   |
| h.com  | paratech.com  | paratech.com  | paratech.com  | prospanshoring.com  | prospanshoring.com  |
|    |  |  |  |   |  |
| PAN  | PROSPAN   | PROSPAN   | PROSPAN   | PROSPAN   | PROSPAN   |
|  |   |   |   |   |   |
| pan  | Prospan   | Prospan   | Prospan   | Prospan   | Prospan   |
|    |  |  |  |  |  |
| 0  | £0  | £0  | £0  | £0  | £0  |
| 0  | \$0   | \$0   | \$0   | \$0   | \$0   |
| 0  | €0  | €0  | €0  | €0  | €0  |
| kg   | 00kg  | 00kg  | 00kg  | 00kg  | 00kg  |
| lb   | 00lb  | 00lb  | 00lb  | 00lb  | 00lb  |
| cm   | 00cm  | 00cm  | 00cm  | 00cm  | 00cm  |
| "  | 18"   | 18"   | 18"   | 18"   | 18"   |
| oring.com  | prospanshoring.com  | prospanshoring.com  | prospanshoring.com  | prospanshoring.com  | prospanshoring.com  |

IMAGES NOT to SCALE

Ext = Fixed length  
Extension strut  
= Option

COMPANY

PROSPAN

PROSPAN

PROSPAN

PROSPAN

RES-Q

MODEL

PRODUCT CODE

FITS to SERIES

Prospan

Prospan

Prospan

Prospan

Super

ORIGIN

COST  
each£0  
\$0  
€0£0  
\$0  
€0£0  
\$0  
€0£0  
\$0  
€0£0  
\$0  
€0

WEIGHT

00kg  
00lb00kg  
00lb00kg  
00lb00kg  
00lb00kg  
00lb

DIMENSIONS

00cm  
18"00cm  
18"00cm  
18"00cm  
18"00cm  
18"

NOTES

WWW.

prospanshoring.com

prospanshoring.com

prospanshoring.com

prospanshoring.com

resqjack.com

IMAGES NOT to SCALE

Ext = Fixed length  
Extension strut  
= Option

COMPANY

RES-Q-JACK

RESQTEC

RESQTEC

RESQTEC

SCORPION

MODEL

PRODUCT CODE

FITS to SERIES

SuperX

ProFix

ProFix

ProFix

Air Sta

ORIGIN

COST  
each£0  
\$0  
€0£0  
\$0  
€0£0  
\$0  
€0£0  
\$0  
€0£0  
\$0  
€0

WEIGHT

00kg  
00lb00kg  
00lb00kg  
00lb00kg  
00lb00kg  
00lb

DIMENSIONS

00cm  
18"00cm  
18"00cm  
18"00cm  
18"00cm  
18"

NOTES

WWW.

resqjack.com

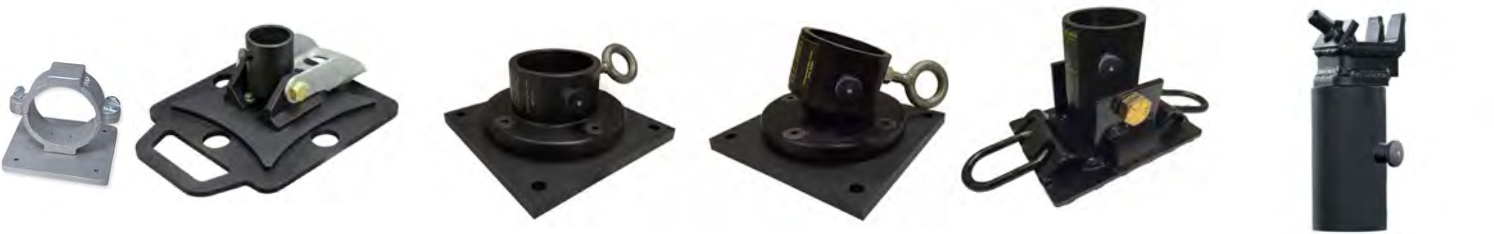
resqtec.com

resqtec.com

resqtec.com

scorpion.com

SHORING STRUT HEADS FEET & ACCESSORIES



|       |            |            |            |            |            |
|-------|------------|------------|------------|------------|------------|
| -JACK | RES-Q-JACK | RES-Q-JACK | RES-Q-JACK | RES-Q-JACK | RES-Q-JACK |
|       |            |            |            |            |            |
|       |            |            |            |            |            |

|     |        |        |        |        |        |
|-----|--------|--------|--------|--------|--------|
| erX | SuperX | SuperX | SuperX | SuperX | SuperX |
|     |        |        |        |        |        |
| 0   | £0     | £0     | £0     | £0     | £0     |
| 0   | \$0    | \$0    | \$0    | \$0    | \$0    |
| 0   | €0     | €0     | €0     | €0     | €0     |
| kg  | 00kg   | 00kg   | 00kg   | 00kg   | 00kg   |
| lb  | 00lb   | 00lb   | 00lb   | 00lb   | 00lb   |
| cm  | 00cm   | 00cm   | 00cm   | 00cm   | 00cm   |
| 8"  | 18"    | 18"    | 18"    | 18"    | 18"    |

|             |             |             |             |             |             |
|-------------|-------------|-------------|-------------|-------------|-------------|
| resjack.com | resjack.com | resjack.com | resjack.com | resjack.com | resjack.com |
|             |             |             |             |             |             |
|             |             |             |             |             |             |
|             |             |             |             |             |             |
|             |             |             |             |             |             |
|             |             |             |             |             |             |

|     |        |        |        |  |  |
|-----|--------|--------|--------|--|--|
| RPE | SCORPE | SCORPE | SCORPE |  |  |
|-----|--------|--------|--------|--|--|

|            |                |                |                |  |  |
|------------|----------------|----------------|----------------|--|--|
| Stabilizer | Air Stabilizer | Air Stabilizer | Air Stabilizer |  |  |
|            |                |                |                |  |  |
|            |                |                |                |  |  |
|            |                |                |                |  |  |
|            |                |                |                |  |  |
|            |                |                |                |  |  |
| scorpe.net | scorpe.net     | scorpe.net     | scorpe.net     |  |  |

# 'pneumatic' HIGH-PRESSURE AIRBAGS



It is vital to work within the stated capacities of the bags because unlike a hydraulic tool that will simply stop working adequately when overloaded, most high-pressure air bags do not have any form of pressure release that doesn't involve possible serious injury to those around it. Ironically, the low and medium pressure airbags at only 1Bar

or less often do have a pressure release valve but that is more to protect the bag than the operator. If in any doubt, use this imperial conversion formula to calculate the approximate lift capacity of any given bag, then err on the side of caution!:

$$L'' \times W'' \times \text{operating pressure (psi)} = \text{lift capacity in lbs}$$

$$\text{eg. } 26'' \times 26'' = 676$$

$$676 \times 116 \text{ (psi)} = 78416 \text{ bs} / 39.2 \text{ t(US)} / 35.5 \text{ tonne}$$

The main consideration in using an airbag is to differentiate between the **maximum lift capacity when the bag is at its lowest lift height** (when the maximum surface area of bag is in contact with the load) and that which is achievable when the bag is at maximum height. As the bag is inflated it forms the familiar dome shape and as less bag is in contact, less weight can be lifted. In fact at the highest point of the highest capacity bag listed here (the rather non-standard NT8) the amount that can be lifted is only about 6 tonnes compared to the 132 tonnes it can lift at only 70mm/3 inches inflation height.

Most bags have a Kevlar/Aramid mesh (used to be a steel mesh) interlace in their construction which resists intrusion of the load to some extent - the so-called 'sling-effect'.

Use of an intermediate protective metal plate is debatable as the rounded bag can easily destabilize and jettison a 'slippery' metal plate. The very first bag to overcome this was the *Zumro* (now *Resqtec*) NT bags with an integrated metal plate enabling inter-connection of bags and in some cases a single air feed to all 2, 3 or 4 bags in the stack though greater control and safety would be with separate hose attachments to each. The metal connecting plate also affords much greater protection and a guaranteed flat top and bottom surface offering good protection against a sharp surface. This concept is now used by other manufacturers like the *Vetter* bags on the left where you can

Outwardly, high pressure lifting bags, or more accurately, cushions, have changed little since their introduction in the 70s save for the incorporation of more technical and

robust fibres like the Kevlar derivatives. Otherwise you are looking at a robust and thickly walled rubber square or circle that is inflated using a compressed air cylinder. Placed beneath a vehicle or under a concrete plinth it has enough power to lift between 2 and >135 metric tonnes (150 US tons). But don't be fooled by the simplicity of a high pressure bag because placing and using them requires a wise hand. Like hydraulic tools they apply the least load at their greatest size and in the case of a bag, the point-load area diminishes as it inflates. What starts out as a broadly supported load across perhaps two thirds of the bag's width when it is less than half inflated can become only a few inches across at maximum inflation - this can lead to dangerously high loads on the target load, dangerously high loads on a small area of the bag and possibly dangerously unstable such that the load could shift or it could simply 'squeeze' the bags at an angle and eject them with great force - all three of these scenarios are why you should ALWAYS FOLLOW YOUR LIFT with cribbing/stabilisation of some form to capture the progress made should something go wrong. In the image above you can see another key consideration - that of synchronised lifting - you can have separate hoses running through a common cylinder(s) and valve and then to a multiple controller handled by one operator or separate hoses, valves and controls for each.





## HIGH PRESSURE AIRBAGS

see that, were they not strongly connected by a screw-on metal plate between each bag this 3-stack configuration would struggle to remain in place. In our tables we have listed such connecting bags as **CONNECT** but most simpler bags will **STACK** at least two up and hold well on the substantial grip patterns that are moulded into their upper and lower surfaces but only at the lower inflation pressures with plenty of surface area in contact with each other - inflate too much and the grip area minimises and it is like trying to balance two basketball on top of each other and then an elephant on top of that! Lift height requirements can be under-estimated because the maximum quoted height may involving a point load rather than broad surface lift and this may flatten under heavy load - reducing the actual lift height or the target load may have some flex and deflect/become concave thus requiring greater lift height to move the entire load. Most small to mid-size bags only lift a few inches. If the lift distances are great you may want to consider either a low pressure air bag or a hard metal jack or shore. The latter won't deflect or 'bounce', they provide some degree of auto-cribbing and negate the need to stack bags. Stacking is best avoided altogether. If you must stack to achieve your lift objective always place the largest bag on the base and inflate that fully first before inflating the next one up. Avoid using more than 2 bags except under exceptional circumstances that probably won't be covered by the bag manufacturer's warranty. Obvious exceptions to this advice are the hard-connect bags which are designed to be used two, three or even four bags high and the con-joined bags like *Paratech's MultiForce* above



which looks like two bags but is actually one, dual chambered bag. This model also features a hard-handled base with wheels to make it easier to place remotely with a push-pole. Note that the base bag inflates fully first to establish a firm base and grip on the target load before the top bag inflates to provide the lift.

Some bags have a surface pattern that not only provides increased traction but actively interlocks with a stacked bag making them more stable in a stack lift. Most bags have a pronounced dimpled surface or cross-hatch to increase purchase on the load and this will also provide some degree of interlock. Use cribbing or a load-bearing platform beneath Pneumatic airbags to perform lifts at height and be sure to follow up your lifts with cribbing or support struts in case of bag failure or to allow removal and relocation.

**50 Years**  
Reliable. Every time. Everywhere.

Emergency Pneumatics.



### Air CU\* deadman

The first controller to light up the night.



- ✓ **Good reasons:**
- › Made for use with Vetter lifting bags
  - › Increased convenience and new design
  - › Illuminated version on request
  - › Now with inlet pressure gauge
  - › Complies with EN 13731:2008

\*Air CU = Air Control Unit

Vetter GmbH  
A Unit of IDEX Corporation

Blatzheimer Str. 10-12  
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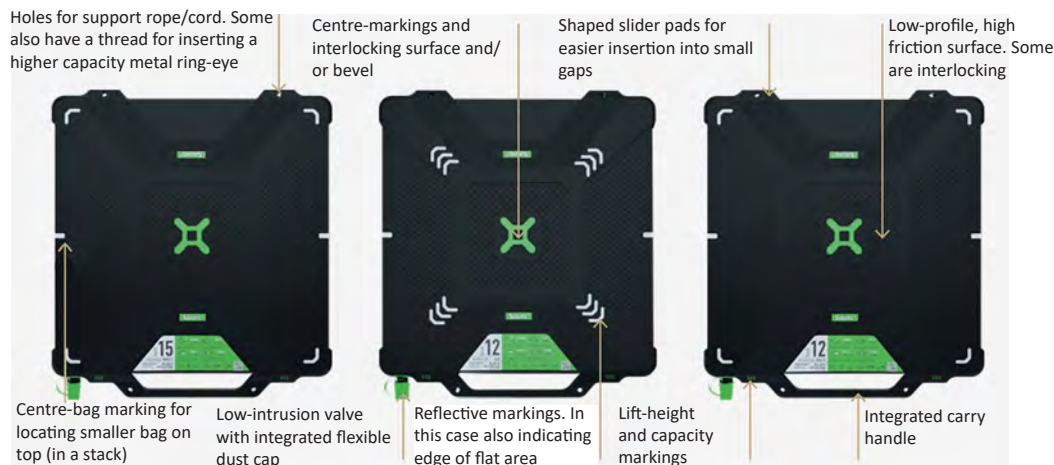
Tel.: +49 (0) 22 52 / 30 08-0  
Mail: [vetter.rescue@idexcorp.com](mailto:vetter.rescue@idexcorp.com)

For further information visit [www.vetter.de](http://www.vetter.de)

Whether your bags have a square edge profile, which some argue pushes dirt and debris away, or a round edge which pushes into spaces easier, you will need at least half an inch/2.5cm or more clearance in which to insert the bag so consider initial use of a wedge or spreaders to gain the necessary initial insertion height. This is such a key requirement of any lifting operation that we have highlighted the minimum insertion height for each bag at the end of the DIMENSIONS figures in **pink**.

In recent years we have seen some improvements in design and ergonomics of square high pressure bags leading to something of a two-tier option in many ranges - traditional (albeit enhanced) bags or cushions at the more affordable end and the more sophisticated and expensive bags with extra features like a carry handle, rigging eye (for rope/cord), enhanced markings giving lift capacities and heights etc. (markngs may also be on the side to identify in a stored stack) as on these *Holmatro* and *Paratech* bags, and an engineered surface that has greater traction and usually a flatter profile when inflated (hence the term 'flat bag'. The *Trelleborg/SAVA* images at the top detail these features but some features, like a profiled/textured surface and reflective markings are also present on the cheaper, traditional airbags. Note that the *Holmatro* airbags operate at both 8 and 12 bar pressures so have two sets of lift capacities depending on what pressure you use.

Finally, don't forget that lifting is only one of an airbag's capabilities it is equally, if not more, adept at sealing and stabilising by pushing against a restraint - in the case of the leaky tanker on the right, the bag pushes a seal-pad against



the hole and against two ratchet straps. In trench rescue they can often be used to provide support for emergency trench boards pushing against the back wall rather than having to backfill or place short shores because they are much easier to place remotely without exposing rescuers to the dangers of further collapse.

**As with rams it is vital to centralise the lift on the centre of the bag - if your target load starts to stray off-centre as it moves the bag could be squeezed out with some force and the load will collapse back down if you have not followed the lift with cribbing.**

## IN THE FOLLOWING TABLES.....

Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square ■■■■■ If it's an option it is shown as an outline square □□□□□

A circle ●●●● indicates that this feature is only partially present and/or is OK for that purpose but not ideal. A model variant is shown in **cyan blue** and any features or specifications that differ from the standard are also in **cyan** or will have a **cyan** outline to a black or **coloured** square ■■■■. **ORIGIN:** The company's home country, not necessarily the country of manufacture which is indicated by an inset flag or two equally sized flags if the tool is made in both countries. **WEIGHT:** Refers to the operational weight not including inflation equipment.


**DIMENSIONS:** The Length by width by **depth/height** of the bag ready to store on the truck and/or ready to work. The height figure is highlighted in **pink** because it is key to being able to insert the bag into any given space prior to initiating the lift.

**LIFT CAPACITY:** Our figures are in **Metric tonnes** and **US (Short) Tons**. There are 1.10 US short tons to a metric tonne.

**NB. LIFT CAPACITY** reduces as the bag reaches full inflation and full height. Max Lift Capacity figures are at minimum insertion height at the start of the lift, reducing by perhaps 50% as the bag reaches max height. Where we show 2 sets of figures the lowest number will be lift capacity at maximum height of the bag. For all others, assume that the max lift capacity is at the minimum lift height and will be considerably less when at maximum height.







## Holmatro Special Tactics equipment

Hydraulic breaching, cutting, spreading and lifting tools for your tactical operations.

Important features:

- Low visibility
- Silent operation
- Quick & easy use
- High forces
- Optimal portability

Watch the application videos on our website!





images not to Scale

● ● ● =OK but not ideal

SBR= Styrene-Butadiene Rubber

## NB: LIFT CAPACITY

Figures quoted may not be at maximum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height



| COMPANY  | AOLAI RESCUE                        | AOLAI RESCUE                    | AOLAI RESCUE                        | AOLAI RESCUE                        | AOLAI RESCUE                        |
|--|-------------------------------------|---------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| SERIES MODEL VARIANT   | 5T                                  | 10T                             | 15T                                 | 20T                                 | AOLAI RESCUE                        |
| CODE NUMBER VARIANT  | ALQD-5                              | ALQD-10                         | ALQD-15                             | ALQD-20                             | AOLAI RESCUE                        |
| ORIGIN   |                                     |                                 |                                     |                                     | AOLAI RESCUE                        |
| COST inc tax / VAT   | N/A                                 | N/A                             | N/A                                 | N/A                                 | AOLAI RESCUE                        |
| WEIGHT exc inflation eqpt  | 2.4kg / 5.3lb                       | 4.2kg / 9.3lb                   | 6kg / 13.2lb                        | 8.5kg / 18.7lb                      | 11.1kg / 24.5lb                     |
| DEFLATED DIMENSIONS (valve)<br>Length (+Valve)x Width x Height/depth | 30 x 30 x 2.5cm<br>11.8 x 11.8 x 1" | 38 x 38 x 2.5cm<br>15 x 15 x 1" | 45 x 45 x 2.5cm<br>17.7 x 17.7 x 1" | 55 x 55 x 2.5cm<br>21.6 x 21.6 x 1" | 61 x 61 x 2.5cm<br>24.0 x 24.0 x 1" |
| INFLATED HEIGHT  | 16cm / 6.3"                         | 21cm / 8.2"                     | 25cm / 10"                          | 30cm / 11.8"                        | 34cm / 13.4"                        |
| Max LIFT CAPACITY @min ht<br>@max height                             | 00 tonnes<br>6.1 USton              | 10.06 tonnes<br>11.1 USton      | 13.4 tonnes<br>14.9 USton           | 21.9 tonnes<br>24.2 USton           | 26.7 tonnes<br>29.4 USton           |
| MAX WORKBURST PRESSURE   | 8 32BAR / 116 464 psi               | 8 32BAR / 116 464 psi           | 8 32BAR / 116 464 psi               | 8 32BAR / 116 464 psi               | 8 32BAR / 116 464 psi               |
| AIR VOLUME   | 42L / 1.48cuft                      | 86L / 3cuft                     | 152L / 5.36cuft                     | 296L / 10.45cuft                    | 416L / 14.7cuft                     |
| STACK/CONNECT HI-VIZ   | 2x                                  | 2x                              | 2x                                  | 2x                                  | 2x                                  |
| MATERIAL REINFORCEMENT   | Rubber<br>Aramid                    | Rubber<br>Aramid                | Rubber<br>Aramid                    | Rubber<br>Aramid                    | Rubber<br>Aramid                    |
| NOTES  | EN13731                             | EN13731                         | EN13731                             | EN13731                             | EN13731                             |
| WEBSITE  | aolairescue.com                     | aolairescue.com                 | aolairescue.com                     | aolairescue.com                     | aolairescue.com                     |

images not to Scale

● ● ● =OK but not ideal

SBR= Styrene-Butadiene Rubber

## NB: LIFT CAPACITY

Figures quoted may not be at maximum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

| COMPANY  | AOLAI RESCUE                    | AOLAI RESCUE                    | AOLAI RESCUE                    | AOLAI RESCUE                    | AOLAI RESCUE                    |
|--|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| SERIES MODEL VARIANT   | 00                              | 00                              | 00                              | 00                              | AOLAI RESCUE                    |
| CODE NUMBER VARIANT  | 00                              | 00                              | 00                              | 00                              | AOLAI RESCUE                    |
| ORIGIN   |                                 |                                 |                                 |                                 | AOLAI RESCUE                    |
| COST inc tax / VAT   | N/A                             | N/A                             | N/A                             | N/A                             | AOLAI RESCUE                    |
| WEIGHT exc inflation eqpt  | 00kg / 00lb                     | 00kg / 00lb                     | 00kg / 00lb                     | 00kg / 00lb                     | 00kg / 00lb                     |
| DEFLATED DIMENSIONS (valve)<br>Length (+Valve)x Width x Height/depth | 00 x 00 x 2.5cm<br>00 x 00 x 1" | 00 x 00 x 2.5cm<br>00 x 00 x 1" | 00 x 00 x 2.5cm<br>00 x 00 x 1" | 00 x 00 x 2.5cm<br>00 x 00 x 1" | 00 x 00 x 2.5cm<br>00 x 00 x 1" |
| INFLATED HEIGHT  | 00cm / 00"                      | 00cm / 00"                      | 00cm / 00"                      | 00cm / 00"                      | 00cm / 00"                      |
| Max LIFT CAPACITY @min ht<br>@max height                             | 00 tonnes<br>00 USton           | 00 tonnes<br>00 USton           | 00 tonnes<br>00 USton           | 00 tonnes<br>00 USton           | 00 tonnes<br>00 USton           |
| MAX WORKBURST PRESSURE   | 8-12BAR / 00psi                 | 8-12BAR / 00psi                 | 8-12BAR / 00psi                 | 8-12BAR / 00psi                 | 8-12BAR / 00psi                 |
| AIR VOLUME   | 00L / 00cuft                    | 00L / 00cuft                    | 00L / 00cuft                    | 00L / 00cuft                    | 00L / 00cuft                    |
| STACK/CONNECT HI-VIZ   |                                 |                                 |                                 |                                 |                                 |
| MATERIAL REINFORCEMENT   | Rubber<br>Aramid                | Rubber<br>Aramid                | Rubber<br>Aramid                | Rubber<br>Aramid                | Rubber<br>Aramid                |
| NOTES  | EN13731                         | EN13731                         | EN13731                         | EN13731                         | EN13731                         |
| WEBSITE  | aolairescue.com                 | aolairescue.com                 | aolairescue.com                 | aolairescue.com                 | aolairescue.com                 |



|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |       |  |        |  |
| <b>AOLAI RESCUE</b>  | <b>AOLAI RESCUE</b>  | <b>AOLAI RESCUE</b>  | <b>AOLAI RESCUE</b>  | <b>AOLAI RESCUE</b>  | <b>AOLAI RESCUE</b>  |
| <b>30T</b>   | <b>40T</b>   | <b>50T</b>   | <b>70T</b>   | <b>00</b>  | <b>00</b>  |
| ALQD-30  | ALQD-40  | ALQD-50  | ALQD-70  | 00   | 00   |
|        |       |       |       |       |       |
| N/A  | N/A  | N/A  | N/A  | N/A  | N/A  |
| 5kg / 25lb   | 19.1kg / 42lb  | 23.9kg / 52.7lb  | 26.3kg / 58lb  | 00kg / 00lb  | 00kg / 00lb  |
| 61 x 2.5cm<br>x 24 x 1"  | 78 x 78 x 2.7cm<br>30.7 x 30.7 x 1.1"  | 87 x 87 x 2.7cm<br>34 x 34 x 1.1"  | 100 x 98 x 2.8cm<br>39 x 38.5 x 1.2"   | 00 x 00 x 2.5cm<br>00 x 00 x 1"  | 00 x 00 x 2.5cm<br>00 x 00 x 1"  |
| 4cm / 13"  | 42cm / 16.5"   | 47cm / 18.5"   | 49cm / 19.2"   | 00cm / 00"   | 00cm / 00"   |
| 0.9 tonnes<br>0.7 USton  | 44.5 tonnes<br>49.1 USton  | 54.9 tonnes<br>60.6 USton  | 64.9 tonnes<br>71.6 USton  | 00 tonnes<br>00 USton  | 00 tonnes<br>00 USton  |
| 8-116 464 psi  | 8-32BAR / 116 464 psi  | 8-32BAR / 116 464 psi  | 8-32BAR / 116 464 psi  | 8-12BAR / 00psi  | 8-12BAR / 00psi  |
| 0L / 14.7cuft  | 921L / 32.5cuft  | 1305L / 46cuft   | 1505L / 53.1cuft   | 00L / 00cuft   | 00L / 00cuft   |
| 2x    | 2x    | 2x    | 2x    | 3x    | 3x    |
| Rubber<br>Aramid   | Rubber<br>Aramid   | Rubber<br>Aramid   | Rubber<br>Aramid   | Rubber<br>Aramid   | Rubber<br>Aramid   |
| EN13731  | EN13731  | EN13731  | EN13731  | EN13731  | EN13731  |
| rescue.com   | aolairescue.com  | aolairescue.com  | aolairescue.com  | aolairescue.com  | aolairescue.com  |
|  |  |  |  |  |     |
| <b>AOLAI RESCUE</b>  | <b>AOLAI RESCUE</b>  | <b>AOLAI RESCUE</b>  | <b>AOLAI RESCUE</b>  | <b>AOLAI RESCUE</b>  | <b>ENERPAC</b>   |
| <b>00</b>  | <b>00</b>  | <b>00</b>  | <b>00</b>  | <b>00</b>  | <b>B1A</b>   |
| 00   | 00   | 00   | 00   | 00   | 350.321.002  |
|      |     |     |     |     |     |
| N/A  | N/A  | N/A  | N/A  | N/A  | £ \$ €   |
| 0kg / 00lb   | 00kg / 00lb  | 00kg / 00lb  | 00kg / 00lb  | 00kg / 00lb  | 00kg / 00lb  |
| 00 x 2.5cm<br>x 00 x 1"  | 00 x 00 x 2.5cm<br>00 x 00 x 1"  | 00 x 00 x 2.5cm<br>00 x 00 x 1"  | 00 x 00 x 2.5cm<br>00 x 00 x 1"  | 00 x 00 x 2.5cm<br>00 x 00 x 1"  | 00 x 00 x 2.5cm<br>00 x 00 x 1"  |
| 0cm / 00"  | 00cm / 00"   | 00cm / 00"   | 00cm / 00"   | 00cm / 00"   | 00cm / 00"   |
| 0 tonnes<br>0 USton  | 00 tonnes<br>00 USton  | 00 tonnes<br>00 USton  | 00 tonnes<br>00 USton  | 00 tonnes<br>00 USton  | 00 tonnes<br>00 USton  |
| 8-12BAR / 00psi  | 8-12BAR / 00psi  | 8-12BAR / 00psi  | 8-12BAR / 00psi  | 8-12BAR / 00psi  | 8-12BAR / 00psi  |
| 0L / 00cuft  | 00L / 00cuft   | 00L / 00cuft   | 00L / 00cuft   | 00L / 00cuft   | 00L / 00cuft   |
| 2x  | 2x  | 2x  | 2x  | 2x  | 2x  |
| Rubber<br>Aramid   | Rubber<br>Aramid   | Rubber<br>Aramid   | Rubber<br>Aramid   | Rubber<br>Aramid   | Rubber<br>Aramid   |
| EN13731  | EN13731  | EN13731  | EN13731  | EN13731  | EN13731  |
| rescue.com   | aolairescue.com  | aolairescue.com  | aolairescue.com  | aolairescue.com  | enerpac.com  |

images not to Scale

● ● ● =OK but not ideal

SBR= Styrene-Butadiene Rubber

### NB: LIFT CAPACITY

Figures quoted may not be at maximum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height



| COMPANY                                | ENERPAC             | ENERPAC             | ENERPAC             | ENERPAC             | ENERPAC             |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|
| SERIES MODEL VARIANT                   | B3A                 | B6A                 | B11A                | B14A                | B17A                |
| CODE NUMBER                            | 350.321.006         | 350.321.008         | 350.321.011         | 350.321.016         | 350.321.019         |
| ORIGIN                                 |                     |                     |                     |                     |                     |
| COST inc tax / VAT                     | £ \$895 €           | £ \$1408 €          | £ \$1736 €          | £ \$1970 €          | £ \$2295 €          |
| WEIGHT exc inflation eqpt              | 1.3kg / 2.8lb       | 2.4kg / 5.3lb       | 4kg / 8.8lb         | 5.3kg / 11.6lb      | 8.1kg / 17.9lb      |
| DEFLATED DIMENSIONS (valve)            | 22.9 x 22.9 x 2.8cm | 30.5 x 30.5 x 2.8cm | 38.1 x 38.1 x 2.8cm | 45.7 x 45.7 x 2.8cm | 55.9 x 55.9 x 2.8cm |
| Length (+Valve) x Width x Height/depth | 9 x 9 x 1.1"        | 12 x 12 x 1.1"      | 15 x 15 x 1.1"      | 18 x 18 x 1.1"      | 22 x 22 x 1.1"      |
| INFLATED HEIGHT                        | 12.9cm / 5.1"       | 15cm / 5.9"         | 17.8cm / 7"         | 21.8cm / 8.6"       | 26.9cm / 10.6"      |
| Max LIFT CAPACITY @min ht              | 2.81 tonnes         | 5.8tonnes           | 9.8 tonnes          | 12.9 tonnes         | 20.9 tonnes         |
| @max height                            | 3.1 USton           | 6.4 USton           | 10.8 USton          | 14.2 USton          | 22.9 USton          |
| MAX WORKBURST PRESSURE                 | 8-12BAR / 116psi    | 8-12BAR / 116psi    | 8-12BAR / 116psi    | 8-12BAR / 116psi    | 8-12BAR / 116psi    |
| AIR VOLUME                             | 15L / 0.53cuft      | 41.9L / 1.48cuft    | 86L / 3.04cuft      | 152L / 5.37cuft     | 295.9L / 10.47cuft  |
| STACK/CONNECT HI-VIZ                   | 2x - ●              | 2x - ●              | 2x - ●              | 2x - ●              | 2x - ●              |
| MATERIAL REINFORCEMENT                 | Rubber<br>Aramid    | Rubber<br>Aramid    | Rubber<br>Aramid    | Rubber<br>Aramid    | Rubber<br>Aramid    |
| NOTES                                  | EN13731             | EN13731             | EN13731             | EN13731             | EN13731             |
| WEBSITE                                | enerpac.com         | enerpac.com         | enerpac.com         | enerpac.com         | enerpac.com         |

images not to Scale

● ● ● =OK but not ideal























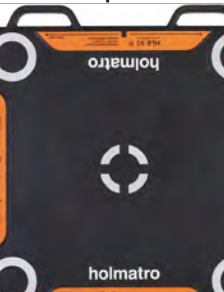
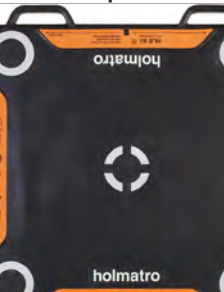












SBR= Styrene-Butadiene Rubber

### NB: LIFT CAPACITY

Figures quoted may not be at maximum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height



| COMPANY                                | HOLMATRO                             | HOLMATRO                             | HOLMATRO                             | HOLMATRO   | HOLMATRO   |
|--|--------------------------------------|--------------------------------------|--------------------------------------|--|--|
| SERIES MODEL VARIANT                   | HLB2                                 | HLB6                                 | HLB8                                 | HLB11  | HLB15  |
| CODE NUMBER                            | 350.321.002                          | 350.321.006                          | 350.321.008                          | 350.321.011  | 350.321.015  |
| ORIGIN                                 |                                      |                                      |                                      |  |  |
| COST inc tax / VAT                     | N/A                                  | N/A                                  | N/A                                  | N/A  | N/A  |
| WEIGHT exc inflation eqpt              | 0.7kg / 1.5lb                        | 1.6kg / 3.5lb                        | 2.1kg / 4.6lb                        | 3.2kg / 7lb  | 4.5kg / 9.9lb  |
| DEFLATED DIMENSIONS (valve)            | 16(+4) x 16 x 2.2cm                  | 24.5(+4) x 24.5 x 2.2cm              | 29.5(+4) x 29.5 x 2.2cm              | 40.3 x 32.5 x 2.5cm  | 46.7 x 38.1 x 2.5cm  |
| Length (+Valve) x Width x Height/depth | 7.9(+1.6) x 6.3 x 0.9"               | 9.65(+1.6) x 9.65 x 0.9"             | 11.6(+1.6) x 11.6 x 0.9"             | 15.87 x 12.8 x 0.9"  | 18.39 x 14.6 x 0.9"  |
| INFLATED HEIGHT                        | 9.4cm / 3.7"                         | 14.1cm / 5.55"                       | 17.9cm / 7.05"                       | 20.7cm / 8.15"   | 23.6cm / 9.3"  |
| Max LIFT CAPACITY @min ht              | *1.4-2.1 tonnes                      | *3.8-5.6 tonnes                      | *5.6-8.4 tonnes                      | *7.4-11.2 tonnes   | *10.5-15.2 tonnes  |
| @max height                            | 1.5-2.3 USton                        | 4.2-6.1 USton                        | 6.1-9.25 USton                       | 8.15-12.3 USton  | 11.5-17.4 USton  |
| MAX WORKBURST PRESSURE                 | *8-12BAR / 116-174psi                | *8-12BAR / 116-174psi                | *8-12BAR / 116-174psi                | *8-12BAR / 116-174psi                                      | *8-12BAR / 116-174psi                                      |
| AIR VOLUME                             | 0.8L / 0.03cuft                      | 2.2L / 0.06cuft                      | 3.3L / 0.12cuft                      | 5.4L / 0.19cuft  | 8.7L / 0.31cuft  |
| STACK/CONNECT HI-VIZ                   | 2x - ■                               | 2x - ■                               | 2x - ■                               | 2x - ■   | 2x - ■   |
| MATERIAL REINFORCEMENT                 | Nitrile Rubber<br>3 layer Aramid     | Nitrile Rubber<br>3 layer Aramid     | Nitrile Rubber<br>3 layer Aramid     | Nitrile Rubber<br>3 layer Aramid                           | Nitrile Rubber<br>3 layer Aramid                           |
| NOTES                                  | *Operates at both 8 & 12 bar EN13731 | *Operates at both 8 & 12 bar EN13731 | *Operates at both 8 & 12 bar EN13731 | *Operates at both 8 & 12 bar EN13731, cord-attachment eyes | *Operates at both 8 & 12 bar EN13731, cord-attachment eyes |
| WEBSITE                                | holmatro.com                         | holmatro.com                         | holmatro.com                         | holmatro.com   | holmatro.com   |

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|       |       |       |       |        |       |
| <b>ENERPAC</b>   | <b>ENERPAC</b>   | <b>ENERPAC</b>   | <b>ENERPAC</b>   | <b>ENERPAC</b>   | <b>ENERPAC</b>   |
| <b>B22A</b>  | <b>B28A</b>  | <b>B35A</b>  | <b>B46A</b>  | <b>B59A</b>  | <b>B77A</b>  |
| 350.321.021  | 350.321.031  | 350.321.038  | 350.321.053  | 350.321.063  | 350.321.063  |
|        |       |       |       |       |       |
| <b>\$2481 €</b>  | <b>£ \$3038 €</b>  | <b>£ \$3926 €</b>  | <b>£ \$4782 €</b>  | <b>£ \$5407 €</b>  | <b>£ \$6036 €</b>  |
| 11.2kg / 17.8lb  | 11.2kg / 24.6lb  | 13.6kg / 29.9lb  | 18.2kg / 40.1lb  | 22.5kg / 49.6lb  | 25.3kg / 44.8lb  |
| 55.9 x 2.8cm<br>22 x 1.1"  | 61 x 61 x 3cm<br>24 x 24 x 1.2"  | 68.6 x 68.6 x 3cm<br>27 x 27 x 1.2"  | 78.7 x 78.7 x 3cm<br>31 x 31 x 1.2"  | 88.9 x 88.9 x 3cm<br>35 x 35 x 1.2"  | 91.4 x 91.4 x 3cm<br>38 x 38 x 1.2"  |
| 29.9cm / 10.6"   | 29.9cm / 11.8"   | 35.8cm / 14.1"   | 41.9cm / 16.5"   | 44.9cm / 17.7"   | 50.8cm / 20.5"   |
| 25.1 tonnes<br>27.7 USton  | 25.1 tonnes<br>27.7 USton  | 32 tonnes<br>35.3 USton  | 42.1 tonnes<br>46.4 USton  | 53.3 tonnes<br>58.8 USton  | 67.2 tonnes<br>77 USton  |
| 8-12BAR / 116psi   | 8-12BAR / 116psi   | 8-12BAR / 116psi   | 8-12BAR / 116psi   | 8-12BAR / 116psi   | 8-12BAR / 116psi   |
| 416.25L / 10.45cuft  | 416.25L / 14.7cuft   | 620.1L / 21.9cuft  | 920.3L / 32.5cuft  | 1325.2L / 46.8cuft   | 1503.6L / 53.1cuft   |
| 2x    | 2x    | 2x    | 2x    | 2x    | 2x    |
| Rubber<br>Aramid   | Rubber<br>Aramid   | Rubber<br>Aramid   | Rubber<br>Aramid   | Rubber<br>Aramid   | Rubber<br>Aramid   |
| EN13731  | EN13731  | EN13731  | EN13731  | EN13731  | EN13731  |
| enerpac.com  | enerpac.com  | enerpac.com  | enerpac.com  | enerpac.com  | enerpac.com  |
|     |     |     |     |      |     |
| <b>HOLMATRO</b>  | <b>HOLMATRO</b>  | <b>HOLMATRO</b>  | <b>HOLMATRO</b>  | <b>HOLMATRO</b>  | <b>HOLMATRO</b>  |
| <b>HLB16</b>   | <b>HLB21</b>   | <b>HLB31</b>   | <b>HLB38</b>   | <b>HLB53</b>   | <b>HLB63</b>   |
| 350.321.016  | 350.321.021  | 350.321.031  | 350.321.038  | 350.321.053  | 350.321.063  |
|      |     |     |     |     |     |
| <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   |
| 5.6kg / 10lb   | 5.6kg / 12.3lb   | 8.6kg / 19lb   | 10kg / 22lb  | 15kg / 33lb  | 17kg / 37.5lb  |
| 51.7 x 44 x 2.5cm<br>20.35 x 17.32 x 1"  | 51.7 x 44 x 2.5cm<br>20.35 x 17.32 x 1"  | 66.2 x 53 x 2.7cm<br>26.06 x 20.8 x 00"  | 66.2 x 58.5 x 2.7cm<br>00 x 00 x 00"   | 76.7 x 69 x 2.7cm<br>30.2 x 27.17 x 00"  | 82.7 x 75 x 2.7cm<br>32.56 x 29.53 x 1.06"   |
| 26.6cm / 10.47"  | 26.6cm / 10.47"  | 32.1cm / 12.64"  | 35.2cm / 13.86"  | 41.1cm / 16.18"  | 45.6cm / 17.95"  |
| 15.8 tonnes<br>17.4 uston  | *13.6-21.4 tonnes<br>15-23.5 USton   | *20.8-31.2 tonnes<br>22.9-34.4 USton   | *25.2-37.7 tonnes<br>27.7-31.5 USton   | *35.4-53 tonnes<br>39-58.4 USton   | *42.1-63.2 tonnes<br>46.4-69.6 USton   |
| 8-12BAR / 116-174psi   | *8-12BAR / 116-174psi  | *8-12BAR / 116-174psi  | *8-12BAR / 116-174psi  | *8-12BAR / 116-174psi  | *8-12BAR / 116-174psi  |
| 13.4L / 0.31cuft   | 13.4L / 0.37cuft   | 24L / 0.85cuft   | 37L / 1.31cuft   | 58L / 2.05cuft   | 74L / 2.61cuft   |
| 2x  | 2x  | 2x  | 2x  | 2x  | 2x  |
| Nitrile Rubber<br>3 layer Aramid   | Nitrile Rubber<br>3 layer Aramid   | Nitrile Rubber<br>3 layer Aramid   | Nitrile Rubber<br>3 layer Aramid   | Nitrile Rubber<br>3 layer Aramid   | Nitrile Rubber<br>3 layer Aramid   |
| *Operates at both 8 & 12 bar<br>EN13731, cord-attachment<br>eyes                     | *Operates at both 8 & 12 bar<br>EN13731, cord-attachment<br>eyes                       | *Operates at both 8 & 12 bar<br>EN13731, cord-attachment<br>eyes                       | *Operates at both 8 & 12 bar<br>EN13731, cord-attachment<br>eyes                       | *Operates at both 8 & 12 bar<br>EN13731, cord-attachment<br>eyes                         | *Operates at both 8 & 12 bar<br>EN13731, cord-attachment<br>eyes                         |
| holmatro.com   | holmatro.com   | holmatro.com   | holmatro.com   | holmatro.com   | holmatro.com   |

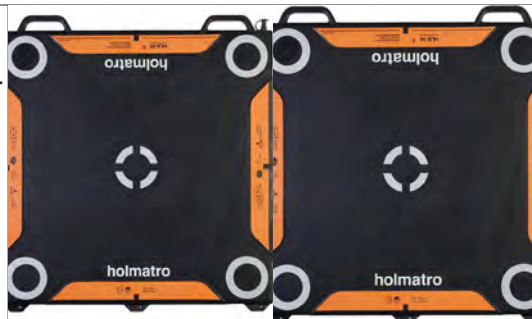
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● ● ● =OK but not ideal

SBR= Styrene-Butadiene Rubber

### NB: LIFT CAPACITY

Figures quoted may not be at maximum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height



| COMPANY                                | HOLMATRO   | HOLMATRO   | HOLMATRO                                  | HOLMATRO                                  | HOLMATRO                                  |
|--|--|--|---|---|---|
| SERIES MODEL VARIANT                   | HLB85  | HLB96  | Stack Bag HSB27                           | Stack Bag HSB40                           | Stack Bag HSB40                           |
| CODE NUMBER                            | 350.321.085  | 350.321.096  | 350.321.021                               | 350.321.021                               | 350.321.021                               |
| ORIGIN                                 |  |  |   |   |   |
| COST inc tax / VAT                     | N/A  | N/A  | N/A                                       | N/A                                       | N/A                                       |
| WEIGHT exc inflation eqpt              | 23kg / 50.7lb  | 25kg / 55.1lb  | 9.2kg / 20.3lb                            | 13kg / 28.6lb                             | 23.8kg / 52.5lb                           |
| DEFLATED DIMENSIONS (valve)            | 94.8 x 87 x 2.7cm  | 98.7 x 91 x 2.7cm  | 52 x 52 x 2.7cm                           | 62 x 62 x 2.7cm                           | 84 x 84 x 2.7cm                           |
| Length (+Valve) x Width x Height/depth | 37.3 x 34.3 x 1"   | 38.8 x 35.83 x 1"  | 20.5 x 20.5 x 1"                          | 24.4 x 24.4 x 1"                          | 33.1 x 33.1 x 1"                          |
| INFLATED HEIGHT                        | 55cm / 21.65"  | 56.5cm / 22.24"  | 17cm / 6.7"                               | 17cm / 6.7"                               | 17cm / 6.7"                               |
| Max LIFT CAPACITY @min ht              | *58.1-87.2 tonnes  | *63.9-95.9 tonnes  | *18-27 tonnes                             | *29.4-39.6 tonnes                         | *49.3-63.5 tonnes                         |
| @max height                            | 64-96.1 Uston  | 70.4-105.7 Uston   | 19.8-29.7 Uston                           | 32.4-43.6 Uston                           | 54.3-72.4 Uston                           |
| MAX WORKBURST PRESSURE                 | *8-12BAR / 116-174psi                                      | *8-12BAR / 116-174psi                                      | *8-12BAR / 116-174psi                     | *8-12BAR / 116-174psi                     | *8-12BAR / 116-174psi                     |
| AIR VOLUME                             | 118L / 4.17cuft  | 135L / 4.77cuft  | 170L / 6cuft                              | 266.2L / 9.4cuft                          | 555.1L / 19.6cuft                         |
| STACK/CONNECT HI-VIZ                   | 2x   | 2x   | 3x  | 3x  | 3x  |
| MATERIAL REINFORCEMENT                 | Nitrile Rubber<br>3 layer Aramid                           | Nitrile Rubber<br>3 layer Aramid                           | Nitrile Rubber<br>3 layer Aramid          | Nitrile Rubber<br>3 layer Aramid          | Nitrile Rubber<br>3 layer Aramid          |
| NOTES                                  | *Operates at both 8 & 12 bar EN13731, cord-attachment eyes | *Operates at both 8 & 12 bar EN13731, cord-attachment eyes | *Operates at both 8 & 12 bar EN13731/NFPA | *Operates at both 8 & 12 bar EN13731/NFPA | *Operates at both 8 & 12 bar EN13731/NFPA |
| WEBSITE                                | holmatro.com   | holmatro.com   | holmatro.com                              | holmatro.com                              | holmatro.com                              |

images not to Scale

● ● ● =OK but not ideal

SBR= Styrene-Butadiene Rubber

### NB: LIFT CAPACITY







Figures quoted may not be at maximum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height



| COMPANY                                | MATJACK                      | MATJACK                      | MATJACK                                  | MATJACK                                  | MATJACK                       |
|--|------------------------------|------------------------------|--|--|-------------------------------|
| SERIES MODEL VARIANT                   | 1.5t Air lifting Bag         | 3.3t Air lifting Bag         | 6t Air lifting Bag                       | 13t Air lifting Bag                      | 22t Air lifting Bag           |
| CODE NUMBER                            | 101K                         | 103K                         | 106K 106                                 | 113K 113                                 | 119K 119                      |
| ORIGIN                                 |                              |                              |  |  |                               |
| COST inc tax / VAT                     | £0 \$0 €0                    | £0 \$0 €0                    | £0 \$0 €0                                | £0 \$0 €0                                | £0 \$0 €0                     |
| WEIGHT exc inflation eqpt              | 0.9kg / 2lb                  | 1.4kg / 3lb                  | 1.6 2.7kg / 4 6lb                        | 5.4 6.8kg / 12 15lb                      | 10 12.5kg / 22 27.5lb         |
| DEFLATED DIMENSIONS (valve)            | 15.24 x 15.24 x 1.8cm        | 30.5 x 15.24 x 1.8cm         | 25 x 25 x 3.175cm                        | 37.5 x 37.5 x 3.17cm                     | 50 x 50 x 3.17cm              |
| Length (+Valve) x Width x Height/depth | 6 x 6 x 0.75"                | 12 x 6 x 0.75"               | 10 x 10 x 1.25"                          | 15 x 15 x 1.25"                          | 20 x 20 x 1.25"               |
| INFLATED HEIGHT                        | 6cm / 2.5"                   | 6cm / 2.5"                   | 11.25cm / 4.5"                           | 6cm / 2.5"                               | 25.4cm / 10"                  |
| Max LIFT CAPACITY @min ht              | 1.3 tonnes                   | 2.9 tonnes                   | 5.4 tonnes                               | 11.8 tonnes                              | 22.7 tonnes                   |
| @max height                            | 1.5 Uston                    | 3.3 Uston                    | 6 Uston                                  | 13 Uston                                 | 27.5 Uston                    |
| MAX WORKBURST PRESSURE                 | 8.2BAR / 120psi              | 8.2BAR / 120psi              | 8.2BAR / 120psi                          | 8.2BAR / 120psi                          | 8.2BAR / 120psi               |
| AIR VOLUME                             | 00L / 00cuft                 | 00L / 00cuft                 | 00L / 00cuft                             | 00L / 00cuft                             | 00L / 00cuft                  |
| STACK/CONNECT HI-VIZ                   | 2x                           | 2x                           | 2x                                       | 2x                                       | 2x                            |
| MATERIAL REINFORCEMENT                 | Nitrile Rubber<br>4LyrAramid | Nitrile Rubber<br>4LyrAramid | Nitrile Rubber<br>4Lyr Aramid 3Lyr Steel | Nitrile Rubber<br>4Lyr Aramid 3Lyr Steel | Nitrile Rubber<br>4Lyr Aramid |
| NOTES                                  |                              |                              |  |  |                               |
| WEBSITE                                | matjack.com                  | matjack.com                  | matjack.com                              | matjack.com                              | matjack.com                   |



# HIGH PRESSURE AIRBAGS

|   |  |  |
|---|--|--|
|    |     |  |
| <b>HOLMATRO</b>   | <b>HOLMATRO</b>  |  |
| Bag HSB74   | Stack Bag HSB92  |  |
| 0.321.021   | 350.321.021  |  |
|     |     |  |
| N/A   | N/A  |  |
| 28kg / 52.5lb   | 28kg / 61.7lb  |  |
| 84 x 2.7cm  | 92 x 92 x 2.7cm  |  |
| x 33 x 1"   | 36.2 x 36.2 x 1"   |  |
| cm / 6.7"   | 17cm / 6.7"  |  |
| -73.8 tonnes  | *61.5-92.2 tonnes  |  |
| -81.3 USton   | 67.8-101.6 USton   |  |
| 8-12BAR / 116-174psi  | *8-12BAR / 116-174psi  |  |
| 19.6cuft  | 691L / 24.4cuft  |  |
| 3x  | 3x  |  |
| Nitrile Rubber  | Nitrile Rubber   |  |
| 3 layer Aramid  | 3 layer Aramid   |  |
| Operates at both 8 & 12 bar   | *Operates at both 8 & 12 bar   |  |
| EN13731/NFPA  | EN13731/NFPA   |  |
| holmatro.com  | holmatro.com   |  |



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|   |  |  |  |  |  |
|---|--|--|--|--|--|
|    |     |     |     |      |     |
| <b>MATJACK</b>  | <b>MATJACK</b>   | <b>MATJACK</b>   | <b>MATJACK</b>   | <b>MATJACK</b>   | <b>MATJACK</b>   |
| 32t Air lifting Bag   | 32t Air lifting Bag  | 37t Air lifting Bag  | 50t Air lifting Bag  | 70t Air lifting Bag  | 86t Air lifting Bag  |
| 122K  | 132K   | 137K   | 150K   | 170K   | 186  |
|     |     |     |     |     |     |
| £0 \$0 €0   | £0 \$0 €0  | £0 \$0 €0  | £0 \$0 €0  | £0 \$0 €0  | £0 \$0 €0  |
| 7kg / 22 28lb   | 12.7 15.9kg / 28 35lb  | 15.4 19.5kg / 34 43lb  | 20.4 28kg / 45 62lb  | 29.5 36.8kg / 65 81lb  | 53.6kg / 118lb   |
| 50 x 3.17cm   | 62.5 x 52.5 x 3.2cm  | 105 x 40 x 3.2cm   | 73.7 x 73.7 x 3.2cm  | 86 x 86 x 3.2cm  | 106.7 x 106.7 x 3.2cm  |
| 20 x 1.25"  | 25 x 21 x 1.25"  | 42 x 16 x 1.25"  | 29 x 29 x 1.25"  | 34 x 34 x 1.25"  | 42 x 42 x 1.25"  |
| 4cm / 10"   | 27.6cm / 11"   | 22.5cm / 9"  | 38.1cm / 15"   | 45.7cm / 18"   | 60cm / 24"   |
| 0 tonnes  | 29 tonnes  | 33.6 tonnes  | 45.5 tonnes  | 63.6 tonnes  | 87.2 tonnes  |
| 2 USton   | 32 USton   | 37 USton   | 50 USton   | 70 USton   | 86 USton   |
| 8.2BAR / 120psi   | 8.2BAR / 120psi  | 8.2BAR / 120psi  | 8.2BAR / 120psi  | 8.2BAR / 120psi  | 8.2BAR / 120psi  |
| 00L / 00cuft  | 00L / 00cuft   | 00L / 00cuft   | 00L / 00cuft   | 00L / 00cuft   | 00L / 00cuft   |
| 2x  | 2x  | 2x  | 2x  | 2x  | 2x  |
| Nitrile Rubber  | Nitrile Rubber   | Nitrile Rubber   | Nitrile Rubber   | Nitrile Rubber   | Nitrile Rubber   |
| 3Lyr Steel  | 4Lyr Aramid 3Lyr Steel   | 4Lyr Aramid 3Lyr Steel   | 4Lyr Aramid 3Lyr Steel   | 4Lyr Aramid 3Lyr Steel   | 3Lyr Steel   |
| matjack.com   | matjack.com  | matjack.com  | matjack.com  | matjack.com  | matjack.com  |

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SBR= Styrene-Butadiene Rubber

### NB: LIFT CAPACITY

Figures quoted may not be at maximum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height



| COMPANY   | MFC INTERNATIONAL                        | MFC INTERNATIONAL                        | MFC INTERNATIONAL   | MFC INTERNATIONAL                        | MFC INTERNATIONAL                        |
|---|--|--|---|--|--|
| SERIES MODEL VARIANT  | Stakjack 8 KSM17                         | Stakjack 8 KSM25                         | Stakjack 8 KSM49  | Stakjack 8 KSM60                         | Stakjack 8 KSM100                        |
| CODE NUMBER   | KSM17/08                                 | KSM25/08                                 | KSM49/08  | KSM60/08                                 | KSM100/08                                |
| ORIGIN  |  |  |   |  |  |
| COST inc tax / VAT  | £780                                     | £995                                     | £1550   | £2365                                    | £3650                                    |
| WEIGHT exc inflation eqpt   | 8kg / 18lb                               | 12kg / 27lb                              | 20kg / 44lb   | 23kg / 51lb                              | 28kg / 62lb                              |
| DEFLATED DIMENSIONS (valve)<br>Length (+Valve) x Width x Height/depth | 52 x 52 x 2.5cm<br>20.4 x 20.4 x 1"      | 62 x 62 x 2.5cm<br>24.4 x 24.4 x 1"      | 84 x 84 x 2.5cm<br>33.1 x 33.1 x 1"                                   | 92 x 92 x 2.5cm<br>36.2 x 36.2 x 1"      | 100 x 100 x 2.5cm<br>39.4 x 39.4 x 1"    |
| INFLATED HEIGHT   | 17.5cm / 6.9"                            | 17.5cm / 6.9"                            | 17.5cm / 6.9"   | 17.5cm / 6.9"                            | 17.5cm / 6.9"                            |
| Max LIFT CAPACITY @min ht<br>@max height                              | 3.6 - 17.2tonnes<br>4 - 19USton          | 7.8-2.55tonnes<br>8.6 - 28.1USton        | 17.9-49.2tonnes<br>18.7-54.2USton                                     | 24.6-59.8 tonnes<br>27.1-65.9USton       | 5.4 - 24.2tonnes<br>6 - 28USton          |
| MAX WORKBURST PRESSURE  | 8BAR / 116psi                            | 8BAR / 116psi                            | 8BAR / 116psi   | 8BAR / 116psi                            | 12BAR / 174psi                           |
| AIR VOLUME  | 305L / 10.7cuft                          | 465L / 16.4cuft                          | 893L / 31.5cuft   | 1074L / 37.9cuft                         | 4790L / 170.7cuft                        |
| STACK/CONNECT HI-VIZ  | 3x                                       | 3x                                       | 3x  | 3x                                       | 3x                                       |
| MATERIAL REINFORCEMENT  | SBR Rubber<br>Kevlar Cord                | SBR Rubber<br>Kevlar Cord                | SBR Rubber<br>Kevlar Cord   | SBR Rubber<br>Kevlar Cord                | SBR Rubber<br>Kevlar Cord                |
| NOTES   | EN13731<br>Flat, not curved, top profile | EN13731<br>Flat, not curved, top profile | EN13731<br>Pic shows stack of 3 bags<br>Flat, not curved, top profile | EN13731<br>Flat, not curved, top profile | EN13731<br>Flat, not curved, top profile |
| WEBSITE   | mfc-international.com                    | mfc-international.com                    | mfc-international.com   | mfc-international.com                    | mfc-international.com                    |

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SBR= Styrene-Butadiene Rubber

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| COMPANY   | MFC INTERNATIONAL                   | MFC INTERNATIONAL               | MFC INTERNATIONAL                       | MFC INTERNATIONAL                   | MFC INTERNATIONAL                   |
|---|-------------------------------------|---------------------------------|---|-------------------------------------|-------------------------------------|
| SERIES MODEL VARIANT  | Powermat 8 KS5                      | Powermat 8 KS10                 | Powermat 8 KS12                         | Powermat 8 KS16                     | Powermat 8 KS100                    |
| CODE NUMBER   | KS05/08                             | KS10/08                         | KS12/08                                 | KS16/08                             | KS100/08                            |
| ORIGIN  |                                     |                                 |   |                                     |                                     |
| COST inc tax / VAT  | £295                                | £410                            | £480                                    | £570                                | £1050                               |
| WEIGHT exc inflation eqpt   | 1.8kg / 4lb                         | 3.6kg / 7.9lb                   | 4.1kg / 9lb                             | 5.1kg / 11.2lb                      | 8kg / 17.6lb                        |
| DEFLATED DIMENSIONS (valve)<br>Length (+Valve) x Width x Height/depth | 27 x 27 x 2.5cm<br>10.6 x 10.6 x 1" | 38 x 38 x 2.5cm<br>15 x 15 x 1" | 40.8 x 40.8 x 2.5cm<br>16.1 x 16.1 x 1" | 46 x 46 x 2.5cm<br>18.1 x 18.1 x 1" | 52 x 52 x 2.5cm<br>20.4 x 20.4 x 1" |
| INFLATED HEIGHT   | 15cm / 5.9"                         | 23cm / 8.9"                     | 23cm / 8.9"                             | 25cm / 9.8"                         | 32cm / 12.6"                        |
| Max LIFT CAPACITY @min ht<br>@max height                              | 4.2tonnes<br>4.6USton               | 10.5tonnes<br>11.5USton         | 10.2tonnes<br>11.2USton                 | 13.6tonnes<br>15USton               | 24.2tonnes<br>26.5USton             |
| MAX WORKBURST PRESSURE  | 8BAR / 116psi                       | 8BAR / 116psi                   | 8BAR / 116psi                           | 8BAR / 116psi                       | 8BAR / 116psi                       |
| AIR VOLUME  | 23L / 0.8cuft                       | 69L / 2.4cuft                   | 89L / 3.1cuft                           | 124L / 4.4cuft                      | 1860L / 66.1cuft                    |
| STACK/CONNECT HI-VIZ  | 2x                                  | 2x                              | 2x                                      | 2x                                  | 2x                                  |
| MATERIAL REINFORCEMENT  | SBR<br>Kevlar Cord                  | SBR<br>Kevlar Cord              | SBR<br>Kevlar Cord                      | SBR<br>Kevlar Cord                  | SBR<br>Kevlar Cord                  |
| NOTES   | EN13731                             | EN13731                         | EN13731                                 | EN13731                             | EN13731                             |
| WEBSITE   | mfc-international.com               | mfc-international.com           | mfc-international.com                   | mfc-international.com               | mfc-international.com               |

|   |  |  |  |  |  |
|---|--|--|--|--|--|
|      |       |       |       |        |       |
| <b>MFC INTERNATIONAL</b>  | <b>MFC INTERNATIONAL</b>   | <b>MFC INTERNATIONAL</b>   | <b>MFC INTERNATIONAL</b>   | <b>MFC INTERNATIONAL</b>   | <b>MFC INTERNATIONAL</b>   |
| <b>Stakjack 12 KSM26</b>  | <b>Stakjack 12 KSM38</b>   | <b>Stakjack 12 KSM74</b>   | <b>Stakjack 12 KSM90</b>   | <b>Powermat 8 KS1</b>  | <b>Powermat 8 KS3</b>  |
| KSM26/12  | KSM38/12   | KSM74/12   | KSM90/1  | KS01/08  | KS03/08  |
|       |       |       |       |       |       |
| N/A   | N/A  | N/A  | N/A  | £180   | £240   |
| 12kg / 18lb   | 12kg / 27lb  | 20kg / 44lb  | 23kg / 51lb  | 0.5kg / 1.1lb  | 1.3kg / 2.9lb  |
| 52 x 2.5cm<br>x 20.4 x 1"   | 62 x 62 x 2.5cm<br>24.4 x 24.4 x 1"  | 84 x 84 x 2.5cm<br>33.1 x 33.1 x 1"  | 92 x 92 x 2.5cm<br>36.2 x 36.2 x 1"  | 15 x 15 x 2.5cm<br>5.9 x 5.9 x 1"  | 22.5 x 22.5 x 2.5cm<br>8.6 x 8.6 x 1"  |
| 5cm / 6.9"  | 17.5cm / 6.9"  | 17.5cm / 6.9"  | 17.5cm / 6.9"  | 00cm / 00"   | 00cm / 00"   |
| 25.9 tonnes<br>28.5 USton   | 11.8 = 38.2 tonnes<br>13 - 42.1 USton  | 34.1 - 73.8 tonnes<br>37.6 - 81.4 USton  | 45.1 - 89.6 tonnes<br>49.7 - 98.8 USton  | 0.9 tonnes<br>1 USton  | 2.6 tonnes<br>2.9 USton  |
| 12BAR / 174psi  | 12BAR / 174psi   | 12BAR / 174psi   | 12BAR / 174psi   | 8BAR / 116psi  | 8BAR / 116psi  |
| 731L / 16.9cuft   | 731L / 25.8cuft  | 1403L / 49.5cuft   | 1687L / 59.6cuft   | 3L / 0.1cuft   | 12L / 0.0cuft  |
| 3x    | 3x    | 3x    | 3x    | 2x    | 2x    |
| <b>SBR Rubber Kevlar Cord</b>   | <b>SBR Rubber Kevlar Cord</b>  | <b>SBR Rubber Kevlar Cord</b>  | <b>SBR Rubber Kevlar Cord</b>  | <b>SBR Rubber Kevlar Cord</b>  | <b>SBR Rubber Kevlar Cord</b>  |
| EN13731   | EN13731  | EN13731  | EN13731  | EN13731  | EN13731  |
| Curved, top profile   | Flat, not curved, top profile  | Flat, not curved, top profile  | Flat, not curved, top profile  |  |  |
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|    |     |     |     |      |     |
| <b>MFC INTERNATIONAL</b>  | <b>MFC INTERNATIONAL</b>   | <b>MFC INTERNATIONAL</b>   | <b>MFC INTERNATIONAL</b>   | <b>MFC INTERNATIONAL</b>   | <b>MFC INTERNATIONAL</b>   |
| <b>Powermat 8 KS21</b>  | <b>Powermat 8 KS29</b>   | <b>Powermat 8 KS33</b>   | <b>Powermat 8 KS46</b>   | <b>Powermat 8 KS54</b>   | <b>Powermat 8 KS67</b>   |
| KS21/08   | KS29/08  | KS33/08  | KS46/08  | KS54/08  | KS67/08  |
|     |     |     |     |     |     |
| £655  | £885   | £1010  | £1200  | £1635  | £1980  |
| 12kg / 17.6lb   | 12kg / 27lb  | 13.5kg / 29.8lb  | 14.5kg / 32lb  | 20kg / 44.1lb  | 23kg / 50.7lb  |
| 52 x 2.5cm<br>x 20.4 x 1"   | 62 x 62 x 2.5cm<br>24.4 x 24.4 x 1"  | 65.8 x 65.8 x 2.5cm<br>25.9 x 25.9 x 1"  | 77.5 x 77.5 x 2.5cm<br>30.5 x 30.5 x 1"  | 84 x 84 x 2.5cm<br>33.1 x 33.1 x 1"  | 92 x 92 x 2.5cm<br>36.2 x 36.2 x 1"  |
| 12.6"   | 35cm / 13.8"   | 38cm / 14.8"   | 43cm / 16.7"   | 48cm / 18.7"   | 50cm / 19.7"   |
| 1.1 tonnes<br>1.4 USton   | 26.6 tonnes<br>29.3 USton  | 30.3 tonnes<br>33.4 USton  | 42.5 tonnes<br>46.8 USton  | 51.1 tonnes<br>56.3 USton  | 62.2 tonnes<br>68.6 USton  |
| 8BAR / 116psi   | 8BAR / 116psi  | 8BAR / 116psi  | 8BAR / 116psi  | 8BAR / 116psi  | 8BAR / 116psi  |
| 672L / 6.6cuft  | 311L / 11cuft  | 391L / 13.8cuft  | 672L / 22.1cuft  | 797L / 28.1cuft  | 1051L / 37.1cuft   |
| 2x  | 2x  | 2x  | 2x  | 2x  | 2x  |
| <b>SBR Rubber Kevlar Cord</b>   | <b>SBR Rubber Kevlar Cord</b>  | <b>SBR Rubber Kevlar Cord</b>  | <b>SBR Rubber Kevlar Cord</b>  | <b>SBR Rubber Kevlar Cord</b>  | <b>SBR Rubber Kevlar Cord</b>  |
| EN13731   | EN13731  | EN13731  | EN13731  | EN13731  | EN13731  |
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|   |   |   |   |   |   |
|---|---|---|---|---|---|
|   |  |  |  |  |  |
| COMPANY   | MFC INTERNATIONAL   | MFC INTERNATIONAL   | MFC INTERNATIONAL   | MFC INTERNATIONAL   | MFC INTERNATIONAL   |
| SERIES MODEL VARIANT  | Powermat 12 KS2   | Powermat 12 KS5   | Powermat 12 KS8   | Powermat 12 KS16  | Powermat 12 KS24  |
| CODE NUMBER   | KS02/12   | KS05/12   | KS08/12   | KS16/12   | KS24/12   |
| ORIGIN  |  |  |  |  |  |
| COST inc tax / VAT  | N/A   | N/A   | N/A   | N/A   | N/A   |
| WEIGHT exc inflation eqpt   | 0.5kg / 1.1lb   | 1.3kg / 2.9lb   | 1.8kg / 4lb   | 3.6kg / 7.9lb   | 4.0kg / 8.8lb   |
| DEFLATED DIMENSIONS (valve)<br>Length (+Valve) x Width x Height/depth | 15 x 15 x 2.5cm<br>5.9 x 5.9 x 1"   | 22.5 x 22.5 x 2.5cm<br>8.6 x 8.6 x 1"   | 27 x 27 x 2.5cm<br>10.6 x 10.6 x 1"   | 38 x 38 x 2.5cm<br>15 x 15 x 1"   | 40.8 x 40.8 x 2.5cm<br>16.1 x 16.1 x 1"   |
| INFLATED HEIGHT   | 8cm / 3.1"  | 13cm / 5.1"   | 16cm / 6.3"   | 23cm / 9"   | 25cm / 9.8"   |
| Max LIFT CAPACITY @min ht<br>@max height                              | 1.4 tonnes<br>1.5 USton   | 4.1 tonnes<br>4.5 USton   | 6.6 tonnes<br>7.3 USton   | 13.6 tonnes<br>15 USton   | 17.1 tonnes<br>18.8 USton   |
| MAX WORKBURST PRESSURE  | 12BAR / 174psi  | 12BAR / 174psi  | 12BAR / 174psi  | 12BAR / 174psi  | 12BAR / 174psi  |
| AIR VOLUME  | 4l / 0.1cuft  | 18L / 0.6cuft   | 34L / 1.2cuft   | 100L / 3.5cuft  | 128L / 4.5cuft  |
| STACK/CONNECT HI-VIZ  | 2x -  | 2x -  | 2x -  | 2x -  | 2x -  |
| MATERIAL REINFORCEMENT  | SBR<br>Kevlar Cord  | SBR<br>Kevlar Cord  | SBR<br>Kevlar Cord  | SBR<br>Kevlar Cord  | SBR<br>Kevlar Cord  |
| NOTES   | EN13731   | EN13731   | EN13731   | EN13731   | EN13731   |
| WEBSITE   | mfc-international.com   | mfc-international.com   | mfc-international.com   | mfc-international.com   | mfc-international.com   |

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| <b>INTERNATIONAL</b><br><b>Powermat 12 KS18</b>                                    | <b>MFC INTERNATIONAL</b><br><b>Powermat 12 KS23</b>                                  | <b>MFC INTERNATIONAL</b><br><b>Powermat 12 KS30</b>                                  | <b>MFC INTERNATIONAL</b><br><b>Powermat 12 KS43</b>                                  | <b>MFC INTERNATIONAL</b><br><b>Powermat 12 KS49</b>                                    | <b>MFC INTERNATIONAL</b><br><b>Powermat 12 KS68</b>                                    |
| KS18/12  | KS23/12  | KS30/12  | KS43/12  | KS49/12  | KS68/12  |
|      |     |     |     |     |     |
| N/A  | N/A  | N/A  | N/A  | N/A  | N/A  |
| 1kg / 9lb  | 5.1kg / 11.2lb   | 8kg / 17.6lb   | 12kg / 27lb  | 13.5kg / 29.8lb  | 14.5kg / 32lb  |
| 40.8 x 2.5cm<br>x 16.1 x 1"  | 46 x 46 x 2.5cm<br>18.1 x 18.1 x 1"  | 52 x 52 x 2.5cm<br>20.4 x 20.4 x 1"  | 62 x 62 x 2.5cm<br>24.4 x 24.4 x 1"  | 65.8 x 65.8 x 2.5cm<br>25.9 x 25.9 x 1"  | 77.5 x 77.5 x 2.5cm<br>30.5 x 30.5 x 1"  |
| cm / 9.8"  | 28cm / 11"   | 32cm / 12.6"   | 38cm / 15"   | 41cm / 16.1"   | 48cm / 18.9"   |
| 6 tonnes   | 20.9 tonnes  | 27.6 tonnes  | 40.6 tonnes  | 45.2 tonnes  | 63.8 tonnes  |
| 7.6 USton  | 23 USton   | 30.4 USton   | 44.8 USton   | 49.8 USton   | 70.3 USton   |
| 12BAR / 174psi   | 12BAR / 174psi   | 12BAR / 174psi   | 12BAR / 174psi   | 12BAR / 174psi   | 12BAR / 174psi   |
| 180L / 4.5cuft   | 180L / 4.5cuft   | 268L / 9.5cuft   | 449L / 15.8cuft  | 565L / 20cuft  | 906L / 32cuft  |
| 2x  | 2x  | 2x  | 2x  | 2x  | 2x  |
| <b>SBR</b><br><b>Kevlar Cord</b>   | <b>SBR</b><br><b>Kevlar Cord</b>   | <b>SBR</b><br><b>Kevlar Cord</b>   | <b>SBR</b><br><b>Kevlar Cord</b>   | <b>SBR</b><br><b>Kevlar Cord</b>   | <b>SBR</b><br><b>Kevlar Cord</b>   |
| EN13731  | EN13731  | EN13731  | EN13731  | EN13731  | EN13731  |
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## Water Rescue

[www.mfc-survival.com](http://www.mfc-survival.com)


## Vehicle Recovery

Tel: +44 (0) 1443 433 075



## Mountain Rescue

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SBR= Styrene-Butadiene Rubber

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| COMPANY   | MFC INTERNATIONAL                   | MFC INTERNATIONAL                   |  | PARATECH                            | PA            |
|---|-------------------------------------|-------------------------------------|--|-------------------------------------|---------------|
| SERIES MODEL VARIANT  | Powermat 12 KS81                    | Powermat 12 KS97                    |  | MaxiForce KPI-1                     | MaxiF         |
| CODE NUMBER VARIANT   | KS81/12                             | KS97/12                             |  | 22-888110G3                         | 22-           |
| ORIGIN  |                                     |                                     |  |                                     |               |
| COST inc tax / VAT  | N/A                                 | N/A                                 |  | N/A                                 |               |
| WEIGHT exc inflation eqpt   | 20kg / 44.1lb                       | 23kg / 50.7lb                       |  | 0.6kg / 1.2lb                       | 1.0           |
| DEFLATED DIMENSIONS (valve)<br>Length (+Valve) x Width x Height/depth | 84 x 84 x 2.5cm<br>33.1 x 33.1 x 1" | 92 x 92 x 2.5cm<br>36.2 x 36.2 x 1" |  | 15.2 x 15.2 x 1.9cm<br>6 x 6 x 3/4" | 15.2 x<br>6 x |
| INFLATED HEIGHT   | 52cm / 20.5"                        | 57cm / 22.4"                        |  | 7.6cm / 3"                          | 8.9           |
| Max LIFT CAPACITY @min ht<br>@max height                              | 75.5 tonnes<br>83.2 USton           | 93.2 tonnes<br>102.7 USton          |  | 1.3 tonnes<br>1.5 USton             | 3.<br>3       |
| MAX WORKBURST PRESSURE  | 12BAR / 174psi                      | 12BAR / 174psi                      |  | 12.4BAR / 180psi                    | 12.4          |
| AIR VOLUME  | 1151L / 40.6cuft                    | 1518L / 53.6cuft                    |  | 00L / 00cuft                        | 00            |
| STACK/CONNECT HI-VIZ  | 2x                                  | 2x                                  |  |                                     |               |
| MATERIAL REINFORCEMENT  | SBR<br>Kevlar Cord                  | SBR<br>Kevlar Cord                  |  | 3 layer Neoprene<br>Aramid          | 3 layer<br>A  |
| NOTES   | EN13731                             | EN13731                             |  | EN13731                             | E             |
| WEBSITE   | mfc-international.com               | mfc-international.com               |  | paratech.com                        | para          |

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## NB: LIFT CAPACITY































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| COMPANY   | PARATECH                              | PARATECH                            | PARATECH                            | PARATECH                               | PA           |
|---|---------------------------------------|-------------------------------------|-------------------------------------|--|--------------|
| SERIES MODEL VARIANT  | MaxiForce KPI-22                      | MaxiForce KPI-28                    | MaxiForce KPI-32                    | MaxiForce KPI-35L                      | MaxiF        |
| CODE NUMBER VARIANT   | 22-888160G3                           | 22-888165G3                         | 22-888170G3                         | 22-888180G3                            | 22-          |
| ORIGIN  |                                       |                                     |                                     |  |              |
| COST inc tax / VAT  | N/A                                   | N/A                                 | N/A                                 | N/A                                    |              |
| WEIGHT exc inflation eqpt   | 7.2kg / 15.9lb                        | 9.1kg / 20.1lb                      | 10kg / 22lb                         | 11.1kg / 24.5lb                        | 13.          |
| DEFLATED DIMENSIONS (valve)<br>Length (+Valve) x Width x Height/depth | 50.8 x 50.8 x 2.2cm<br>20 x 20 x 7/8" | 50.8 x 66 x 2.2cm<br>20 x 26 x 7/8" | 610 x 610 x 2.2cm<br>24 x 24 x 7/8" | 38.1 x 106.6 x 2.2cm<br>15 x 42 x 7/8" | 71.1 x<br>28 |
| INFLATED HEIGHT   | 27.4cm / 10.8"                        | 29.9cm / 11.8"                      | 33cm / 13"                          | 24.1cm / 9.5"                          | 38.8         |
| Max LIFT CAPACITY @min ht<br>@max height                              | 23.2 tonnes<br>25.6 USton             | 30.9 tonnes<br>34 USton             | 34.4 tonnes<br>38 USton             | 35.8 tonnes<br>39.5 USton              | 47<br>52     |
| MAX WORKBURST PRESSURE  | 12.4BAR / 180psi                      | 12.4BAR / 180psi                    | 12.4BAR / 180psi                    | 12.4BAR / 180psi                       | 12.4         |
| AIR VOLUME  | 00L / 00cuft                          | 00L / 00cuft                        | 00L / 00cuft                        | 00L / 00cuft                           | 00           |
| STACK/CONNECT HI-VIZ  |                                       |                                     |                                     |  |              |
| MATERIAL REINFORCEMENT  | 3 layer Neoprene<br>Aramid            | 3 layer Neoprene<br>Aramid          | 3 layer Neoprene<br>Aramid          | 3 layer Neoprene<br>Aramid             | 3 layer<br>A |
| NOTES   | EN13731                               | EN13731                             | EN13731                             | EN13731                                | E            |
| WEBSITE   | paratech.com                          | paratech.com                        | paratech.com                        | paratech.com                           | para         |



# HIGH PRESSURE AIRBAGS

|   |   |   |   |   |   |
|---|---|---|---|---|---|
|     |    |    |    |     |    |
| <b>PARATECH</b>   | <b>PARATECH</b>   | <b>PARATECH</b>   | <b>PARATECH</b>   | <b>PARATECH</b>   | <b>PARATECH</b>   |
| <b>Force KPI-3</b>  | <b>MaxiForce KPI-5</b>  | <b>MaxiForce KPI-8</b>  | <b>MaxiForce KPI-10</b>   | <b>MaxiForce KPI-12</b>   | <b>MaxiForce KPI-17</b>   |
| 22-888120G3   | 22-888130G3   | 22-888130G3   | 22-888138G3   | 22-888140G3   | 22-888150G3   |
|     |    |    |    |    |    |
| N/A   | N/A   | N/A   | N/A   | N/A   | N/A   |
| 0kg / 2.3lb   | 1.4kg / 3.1lb   | 2.5kg / 5.5lb   | 3.7kg / 8.3lb   | 4.0kg / 8.8lb   | 5.4kg / 12lb  |
| 30.5 x 1.9cm<br>x 12 x 3/4"   | 25.4 x 25.4 x 1.9cm<br>10 x 10 x 3/4"   | 30.5 x 30.5 x 2.2cm<br>12 x 12 x 7/8"   | 30.5 x 45.7 x 2.2cm<br>12 x 18 x 7/8"   | 38.1 x 38.1 x 2.2cm<br>15 x 15 x 7/8"   | 38.1 x 53.3 x 2.2cm<br>15 x 21 x 7/8"   |
| 0cm / 3.5"  | 13.7cm / 5.4"   | 16.3cm / 6.4"   | 18cm / 7.1"   | 20.6cm / 8.1"   | 22.6cm / 9"   |
| 2 tonnes  | 4.9 tonnes  | 7.5 tonnes  | 11.7 tonnes   | 12.4 tonnes   | 17.3 tonnes   |
| 0.5 USton   | 5.4 USton   | 8.2 USton   | 12.9 USton  | 13.7 USton  | 19 USton  |
| BAR / 180psi  | 12.4BAR / 180psi  | 12.4BAR / 180psi  | 12.4BAR / 180psi  | 12.4BAR / 180psi  | 12.4BAR / 180psi  |
| 0L / 00cuft   | 00L / 00cuft  | 00L / 00cuft  | 00L / 00cuft  | 00L / 00cuft  | 00L / 00cuft  |
|     |    |    |    |    |    |
| 3 layer Neoprene<br>Aramid  | 3 layer Neoprene<br>Aramid  | 3 layer Neoprene<br>Aramid  | 3 layer Neoprene<br>Aramid  | 3 layer Neoprene<br>Aramid  | 3 layer Neoprene<br>Aramid  |
| EN13731   | EN13731   | EN13731   | EN13731   | EN13731   | EN13731   |
| paratech.com  | paratech.com  | paratech.com  | paratech.com  | paratech.com  | paratech.com  |
|  |  |  |  |   |  |
| <b>PARATECH</b>   | <b>PARATECH</b>   | <b>PARATECH</b>   | <b>PARATECH</b>   | <b>PARATECH</b>   | <b>PARATECH</b>   |
| <b>Force KPI-44</b>   | <b>MaxiForce KPI-55</b>   | <b>MaxiForce KPI-74</b>   | <b>MultiForce Compact</b>   | <b>MultiForce Basic</b>   | <b>MultiForce Remote</b>  |
| 22-888190G3   | 22-888195G3   | 22-888200G3   | 22-88D025CG3  | 22-88D025BG3  | 22-88D025G3   |
|   |  |  |  |  |  |
| N/A   | N/A   | N/A   | N/A   | N/A   | N/A   |
| 6kg / 30lb  | 20.5kg / 45.2lb   | 26.3kg / 58lb   | 23.4kg / 51.6lb   | 24.6kg / 54.2lb   | 27.5kg / 60.6lb   |
| 71.1 x 2.2cm<br>x 28 x 3/8"   | 81.2 x 81.2 x 2.5cm<br>32 x 32 x 1"   | 93.9 x 93.9 x 2.5cm<br>37 x 37 x 1"   | 62.1 x 60 x 12.4cm<br>00 x 00 x 5"  | 73.2 x 71.1 x 12.4cm<br>28.8 x 28 x 5"  | 78 x 71.1 x 15.3cm<br>30.7 x 28 x 6"  |
| 3cm / 15.3"   | 43.2cm / 17"  | 50.8cm / 20"  | 66cm / 26"  | 66cm / 26"  | 66cm / 26"  |
| 8 tonnes  | 63.3 tonnes   | 80.9 tonnes   | 28 tonnes   | 28 tonnes   | 28 tonnes   |
| 2.7 USton   | 69.7 USton  | 89.2 USton  | 31 USton  | 31 USton  | 31 USton  |
| BAR / 180psi  | 12.4BAR / 180psi  | 12.4BAR / 180psi  | 10.3 20.6BAR/150 300psi   | 10.3 20.6BAR/150 300psi   | 10.3 20.6BAR/150 300psi   |
| 0L / 00cuft   | 00L / 00cuft  | 00L / 00cuft  | 888.3L / 31.4cuft   | 888.3L / 31.4cuft   | 888.3L / 31.4cuft   |
|   |  |  |  |  |  |
| 3 layer Neoprene<br>Aramid  | 3 layer Neoprene<br>Aramid  | 3 layer Neoprene<br>Aramid  | Neoprene<br>Aramid  | Neoprene<br>Aramid  | Neoprene<br>Aramid  |
| EN13731   | EN13731   | EN13731   | ** 2-'chambered' bag<br>Integrated trolley wheels.<br>EN13731/NFPA                  | ** 2-'chambered' bag<br>Integrated trolley wheels.<br>EN13731/NFPA                    | ** 2-'chambered' bag<br>Integrated trolley wheels.<br>EN13731/NFPA                    |
| paratech.com  | paratech.com  | paratech.com  | paratech.com  | paratech.com  | paratech.com  |

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SBR= Styrene-Butadiene Rubber

## NB: LIFT CAPACITY

Figures quoted may not be at maximum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height



| COMPANY  | RESQTEC                           | RESQTEC                               | RESQTEC                             | RESQTEC                              | RESQTEC                           |
|--|-----------------------------------|---------------------------------------|-------------------------------------|--------------------------------------|-----------------------------------|
| SERIES MODEL VARIANT   | SQ 1                              | SQ 3                                  | SQ 6                                | SQ 9L                                | SQ 12                             |
| CODE NUMBER  | -                                 | -                                     | -                                   | -                                    | -                                 |
| ORIGIN   |                                   |                                       |                                     |                                      |                                   |
| COST inc tax / VAT   | €335                              | €400                                  | €530                                | N/A                                  | N/A                               |
| WEIGHT exc inflation eqpt  | 0.55kg / 1.2lb                    | 1.25kg / 2.76lb                       | 2kg / 4.41lb                        | 3.3kg / 7.3lb                        | 3.5kg / 7.7lb                     |
| DEFLATED DIMENSIONS (valve)<br>Length (+Valve)x Width x Height/depth | 15 x 15 x 2.5cm<br>5.9 x 5.9 x 1" | 22.5 x 22.5 x 2.5cm<br>8.8 x 8.8 x 1" | 30 x 30 x 2.5cm<br>11.8 x 11.8 x 1" | 45 x 30 x 2.5cm<br>17.72 x 11.8 x 1" | 38 x 30 x 2.5cm<br>15 x 11.8 x 1" |
| INFLATED HEIGHT  | 8.0cm / 3.1"                      | 13cm / 5.1"                           | 16cm / 6.3"                         | 19cm / 7.5"                          | 21cm / 8.3"                       |
| Max LIFT CAPACITY @min ht<br>@max height                             | 1.1 tonnes<br>1.2 USton           | 2.7 tonnes<br>3 USton                 | 5.5 tonnes<br>6.1 USton             | 8.9 tonnes<br>9.8 USton              | 10 tonnes<br>11 USton             |
| MAX WORKBURST PRESSURE   | 8BAR / 116psi                     | 8BAR / 116psi                         | 8BAR / 116psi                       | 8BAR / 116psi                        | 8BAR / 116psi                     |
| AIR VOLUME   | 00L / 00cuft                      | 00L / 00cuft                          | 00L / 00cuft                        | 00L / 00cuft                         | 00L / 00cuft                      |
| STACK/CONNECT HI-VIZ   | ● - ●                             | ● - ●                                 | ● - ●                               | ● - ●                                | ● - ●                             |
| MATERIAL REINFORCEMENT   | Oo<br>Oo                          | Oo<br>Oo                              | Oo<br>Oo                            | Oo<br>Oo                             | Oo<br>Oo                          |
| NOTES  | EN13731                           | EN13731                               | EN13731                             | EN13731                              | EN13731                           |
| WEBSITE  | rescue.resqtec.com                | paratech.com                          | paratech.com                        | rescue.resqtec.com                   | rescue.resqtec.com                |

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SBR= Styrene-Butadiene Rubber

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| COMPANY  | RESQTEC                             | RESQTEC                         | RESQTEC                             | RESQTEC                             | RESQTEC                             |
|--|-------------------------------------|---------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| SERIES MODEL VARIANT   | SQ 21                               | SQ 25                           | SQ 33                               | SQ 45                               | SQ 55                               |
| CODE NUMBER  | -                                   | -                               | -                                   | -                                   | -                                   |
| ORIGIN   |                                     |                                 |                                     |                                     |                                     |
| COST inc tax / VAT   | €1055                               | €1185                           | €1340                               | €1920                               | €2400                               |
| WEIGHT exc inflation eqpt  | 7kg / 15.4lb                        | 9kg / 19.8lb                    | 11kg / 24lb                         | 14kg / 30.9lb                       | 18kg / 39.7lb                       |
| DEFLATED DIMENSIONS (valve)<br>Length (+Valve)x Width x Height/depth | 55 x 55 x 2.5cm<br>21.6 x 21.6 x 1" | 61 x 61 x 2.5cm<br>24 x 24 x 1" | 69 x 69 x 2.5cm<br>27.1 x 27.1 x 1" | 78 x 78 x 2.5cm<br>31.7 x 31.7 x 1" | 87 x 87 x 2.5cm<br>34.2 x 34.2 x 1" |
| INFLATED HEIGHT  | 30cm / 11.8"                        | 34cm / 13.4"                    | 38cm / 15"                          | 42cm / 16.5"                        | 47cm / 18.5"                        |
| Max LIFT CAPACITY @min ht<br>@max height                             | 21.1 tonnes<br>23.2 USton           | 25.2 tonnes<br>27.7 USton       | 33 tonnes<br>36.3 USton             | 44.6 tonnes<br>49.1 USton           | 55 tonnes<br>60.6 USton             |
| MAX WORKBURST PRESSURE   | 8BAR / 116psi                       | 8BAR / 116psi                   | 8BAR / 116psi                       | 8BAR / 116psi                       | 8BAR / 116psi                       |
| AIR VOLUME   | 00L / 00cuft                        | 00L / 00cuft                    | 00L / 00cuft                        | 00L / 00cuft                        | 00L / 00cuft                        |
| STACK/CONNECT HI-VIZ   | ● - ●                               | ● - ●                           | ● - ●                               | ● - ●                               | ● - ●                               |
| MATERIAL REINFORCEMENT   | Oo<br>Oo                            | Oo<br>Oo                        | Oo<br>Oo                            | Oo<br>Oo                            | Oo<br>Oo                            |
| NOTES  | EN13731                             | EN13731                         | EN13731                             | EN13731                             | EN13731                             |
| WEBSITE  | rescue.resqtec.com                  | rescue.resqtec.com              | rescue.resqtec.com                  | rescue.resqtec.com                  | rescue.resqtec.com                  |

|   |   |   |  |   |  |
|---|---|---|--|---|--|
|    |    |  |       |       |       |
| <b>RESQTEC</b><br><b>SQ 10</b>  | <b>RESQTEC</b><br><b>SQ 13L</b>   | <b>RESQTEC</b><br><b>SQ 13L</b>   | <b>RESQTEC</b><br><b>SQ 13L</b>  | <b>RESQTEC</b><br><b>SQ 14</b>  | <b>RESQTEC</b><br><b>SQ 20</b>   |
|    |    |  |       |       |       |
| €562  | €896  | N/A   | N/A  | €800  | €1105  |
| kg / 7.72lb   | 4.5kg / 9.9lb   | 6.5kg / 14.33lb   | 7.8kg / 17.2lb   | 5kg / 11lb  | 00kg / 00lb  |
| 38 x 2.5cm<br>x 15 x 1"   | 50 x 37.5 x 2.5cm<br>19.7 x 14.7 x 1"   | 75 x 37.5 x 2.5cm<br>029.5 x 14.7 x 1"  | 102 x 32 x 2.5cm<br>40.1 x 12.6 x 1"   | 45 x 45 x 2.5cm<br>17.72 x 17.72 x 1"   | 75 x 37.5 x 2.5cm<br>29.5 x 14.7 x 1"  |
| cm / 8.27"  | 23cm / 9"   | 23cm / 9"   | 20cm / 7.87"   | 25cm / 9.8"   | 00cm / 00"   |
| 1.1 tonnes  | 13.2 tonnes   | 20.2 tonnes   | 24 tonnes  | 13.1 tonnes   | 00 tonnes  |
| 1.1 USton   | 14.5 USton  | 22.2 USton  | 26.4 USton   | 14.9 USton  | 00 USton   |
| BAR / 116psi  | 8BAR / 116psi   | 8BAR / 116psi   | 8BAR / 116psi  | 8BAR / 116psi   | 8BAR / 116psi  |
| L / 00cuft  | 00L / 00cuft  | 00L / 00cuft  | 00L / 00cuft   | 00L / 00cuft  | 00L / 00cuft   |
|    |    |  |       |       |       |
| Oo<br>Oo  | Oo<br>Oo  | Oo<br>Oo  | Oo<br>Oo   | Oo<br>Oo  | Oo<br>Oo   |
| EN13731   | EN13731   | EN13731   | EN13731  | EN13731   | EN13731<br>DISCONTINUED?   |
| resqtec.com   | rescue.resqtec.com  | rescue.resqtec.com  | rescue.resqtec.com   | rescue.resqtec.com  | rescue.resqtec.com   |
|  |  |   |     |     |     |
| <b>RESQTEC</b><br><b>SQ 55</b>  | <b>RESQTEC</b><br><b>SQ 70</b>  |   | <b>RESQTEC</b><br><b>LT ONE S3</b>   | <b>RESQTEC</b><br><b>LT ONE S5</b>  | <b>RESQTEC</b><br><b>LT ONE S7</b>   |
|  |  |   |     |     |     |
| €2685   | €3200   |   | N/A  | N/A   | N/A  |
| kg / 39.7lb   | 22.5kg / 49.6lb   |   | 1.9kg / 00lb   | 4.4kg / 00lb  | 9.5kg / 00lb   |
| 87 x 2.5cm<br>x 34.2 x 1"   | 94.5 x 94.5 x 2.5cm<br>37.2 x 37.2 x 1"   |   | 36 x 31 x 2.1cm<br>00 x 00 x 0.8"  | 54 x 49 x 2.1cm<br>00 x 00 x 1"   | 74 x 68.8 x 2.3cm<br>00 x 00 x 0.9"  |
| cm / 18.5"  | 52cm / 20.47"   |   | 16cm / 6.3"  | 25cm / 9.8"   | 35cm / 13.8"   |
| 5 tonnes  | 70.4 tonnes   |   | 8.3 tonnes   | 21.5 tonnes   | 44 tonnes  |
| 0.5 USton   | 77.4 USton  |   | 9.1 USton  | 23.7 USton  | 48.5 USton   |
| BAR / 116psi  | 8BAR / 116psi   |   | 12BAR / 174psi   | 12BAR / 174psi  | 12BAR / 174psi   |
| L / 00cuft  | 00L / 00cuft  |   | 52L / 00cuft   | 221L / 00cuft   | 611L / 00cuft  |
|  |  |   | 2x  | 2x  | 2x  |
| Oo<br>Oo  | Oo<br>Oo  |   | Oo<br>Oo   | Oo<br>Oo  | Oo<br>Oo   |
| EN13731   | EN13731   |   | EN13731. Dimpled surface<br>interlocks with other LTs One<br>Bags & Resqtec cribbing   | EN13731. Dimpled surface<br>interlocks with other LTs One<br>Bags & Resqtec cribbing    | EN13731. Dimpled surface<br>interlocks with other LTs One<br>Bags & Resqtec cribbing     |
| resqtec.com   | rescue.resqtec.com  |   | rescue.resqtec.com   | rescue.resqtec.com  | rescue.resqtec.com   |



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| COMPANY   | RESQTEC                                     | RESQTEC                             | RESQTEC                             | SCORPE                               | SCORPE                               |
|---|---|-------------------------------------|-------------------------------------|--------------------------------------|--------------------------------------|
| SERIES MODEL VARIANT  | NT 2 Hybrid                                 | NT 4 Hybrid                         | NT 8 Hybrid                         | Air S 1.3T                           | Air S 1.3T                           |
| CODE NUMBER   | VARIANT                                     | VARIANT                             | VARIANT                             | VARIANT                              | VARIANT                              |
| ORIGIN  | FR  | FR                                  | FR                                  | FR                                   | FR                                   |
| COST inc tax / VAT  | N/A   | N/A                                 | N/A                                 | N/A                                  | N/A                                  |
| WEIGHT exc inflation eqpt   | 6.5kg / 14.3lb                              | 15.5kg / 34.1lb                     | 38kg / 84lb                         | 0.7kg / 1.54lb                       | 1.3kg / 2.87lb                       |
| DEFLATED DIMENSIONS (valve)<br>Length (+Valve) x Width x Height/depth | 60.9 x 60.9 x 2.5cm<br>24 x 24 x 1"         | 60.9 x 60.9 x 2.5cm<br>24 x 24 x 1" | 60.9 x 60.9 x 2.5cm<br>24 x 24 x 1" | 15 x 15 x 2.2cm<br>5.9 x 5.9 x 0.86" | 20 x 20 x 2.2cm<br>7.8 x 7.8 x 0.86" |
| INFLATED HEIGHT   | 00cm / 00"                                  | 00cm / 00"                          | 00cm / 00"                          | 9cm / 3.5"                           | 11cm / 4.3"                          |
| Max LIFT CAPACITY @min ht<br>@max height                              | 6.2 - 26 tonnes / USton<br>6.8 - 28.6 USton | 9.5 - 70 tonnes<br>10.4 - 77 USton  | 14 - 156 tonnes<br>15.4 - 172 USton | 1.3 tonnes<br>1.4 USton              | 4 tonnes<br>4.4 USton                |
| MAX WORKBURST PRESSURE  | 12BAR / 174psi                              | 12BAR / 174psi                      | 00BAR / 00psi                       | 10BAR / 145psi                       | 10BAR / 145psi                       |
| AIR VOLUME  | 00L / 00cuft                                | 00L / 00cuft                        | 00L / 00cuft                        | 5.4L / 0.2cuft                       | 9.1L / 0.3cuft                       |
| STACK/CONNECT HI-VIZ  | 3x ● ● ●                                    | 3x ● ● ●                            | 3x ● ● ●                            | 2x ● - ●                             | 2x ● - ●                             |
| MATERIAL REINFORCEMENT  | Aramid & Rubber<br>3D Aramid fibres         | Aramid & Rubber<br>3D Aramid fibres | Aramid & Rubber<br>3D Aramid fibres | SBR<br>3D Fibres                     | SBR<br>3D Fibres                     |
| NOTES   | EN13731                                     | EN13731                             | EN13731                             | EN13731                              | EN13731                              |
| WEBSITE   | rescue.resqtec.com                          | rescue.resqtec.com                  | rescue.resqtec.com                  | scorpe.net                           | scorpe.net                           |

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| COMPANY   | SCORPE                                 | SCORPE                                 | SCORPE                             | SCORPE                                 | SCORPE                             |
|---|--|--|------------------------------------|--|------------------------------------|
| SERIES MODEL VARIANT  | Air S 38T                              | Air S 54T                              | Air S 65T                          | Air S 81T                              | Air S 81T                          |
| CODE NUMBER   | VARIANT                                | VARIANT                                | VARIANT                            | VARIANT                                | VARIANT                            |
| ORIGIN  | FR                                     | FR                                     | FR                                 | FR                                     | FR                                 |
| COST inc tax / VAT  | N/A                                    | N/A                                    | N/A                                | N/A                                    | N/A                                |
| WEIGHT exc inflation eqpt   | 8.5kg / 18.7lb                         | 12.5kg / 27.5lb                        | 16.5kg / 36.4lb                    | 19.5kg / 23lb                          | 11kg / 24.2lb                      |
| DEFLATED DIMENSIONS (valve)<br>Length (+Valve) x Width x Height/depth | 62 x 62 x 2.2cm<br>24.4 x 24.4 x 0.86" | 75 x 75 x 2.2cm<br>29.5 x 29.5 x 0.86" | 84 x 84 x 2.2cm<br>33 x 33 x 0.86" | 92 x 92 x 2.2cm<br>36.2 x 36.2 x 0.86" | 56 x 56 x 2.2cm<br>22 x 22 x 0.86" |
| INFLATED HEIGHT   | 34.5cm / 13.5"                         | 41cm / 16"                             | 46.5cm / 18.31"                    | 51.5cm / 20.28"                        | 17cm / 6.69"                       |
| Max LIFT CAPACITY @min ht<br>@max height                              | 38 tonnes<br>41.9 USton                | 54 tonnes<br>59.5 USton                | 65 tonnes<br>71.6 USton            | 81 tonnes<br>69.3 USton                | 3 tonnes<br>3.3 USton              |
| MAX WORKBURST PRESSURE  | 10BAR / 145psi                         | 10BAR / 145psi                         | 10BAR / 145psi                     | 10BAR / 145psi                         | 10BAR / 145psi                     |
| AIR VOLUME  | 414L / 14.6cuft                        | 720L / 25.4cuft                        | 1044L / 36.8cuft                   | 1449L / 51.1cuft                       | 320L / 11.3cuft                    |
| STACK/CONNECT HI-VIZ  | 2x ● - ●                               | 2x ● - ●                               | 2x ● - ●                           | 2x ● - ●                               | 3x ● - ●                           |
| MATERIAL REINFORCEMENT  | SBR<br>3D Fibres                       | SBR<br>3D Fibres                       | SBR<br>3D Fibres                   | SBR<br>3D Fibres                       | SBR<br>3D Fibres                   |
| NOTES   | EN13731                                | EN13731                                | EN13731                            | EN13731                                | EN13731                            |
| WEBSITE   | scorpe.net                             | scorpe.net                             | scorpe.net                         | scorpe.net                             | scorpe.net                         |

# HIGH PRESSURE AIRBAGS

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|        |       |       |       |        |     |
| <b>SCORPE</b><br><b>Air S 4T</b>   | <b>SCORPE</b><br><b>Air S 8T</b>   | <b>SCORPE</b><br><b>Air S 13T</b>  | <b>SCORPE</b><br><b>Air S 18T</b>  | <b>SCORPE</b><br><b>Air S 24T</b>  | <b>SCORPE</b><br><b>Air S 30T L</b>  |
|        |       |       |       |       |     |
| N/A  | N/A  | N/A  | N/A  | N/A  | N/A  |
| 2.8kg / 2.8lb  | 2.2kg / 4.85lb   | 3.4kg / 7.5lb  | 4.1kg / 9lb  | 6kg / 13.2lb   | 7.5kg / 16.5lb   |
| 20 x 2.2cm<br>7.8 x 0.86"  | 30 x 30 x 2.2cm<br>11.8 x 11.8 x 0.86"   | 38 x 38 x 2.2cm<br>15 x 15 x 0.86"   | 42 x 42 x 2.2cm<br>16.5 x 16.5 x 0.86"   | 51 x 51 x 2.2cm<br>20 x 20 x 0.86"   | 100 x 32 x 2.2cm<br>39.4 x 12.6 x 0.86"  |
| 5cm / 4.5"   | 17.5cm / 6.9"  | 22cm / 8.66"   | 24.5cm / 9.65"   | 29.5cm / 11.6"   | 21.5cm / 8.5"  |
| 4 tonnes<br>4.4 USton  | 8 tonnes<br>8.8 USton  | 13 tonnes<br>14.3 USton  | 18 tonnes<br>19.8 USton  | 24 tonnes<br>26.5 USton  | 30 tonnes<br>33 USton  |
| 10BAR / 145psi<br>/ 0.3cuft  | 10BAR / 145psi<br>54L / 1.9cuft  | 10BAR / 145psi<br>99L / 3.5cuft  | 10BAR / 145psi<br>117L / 4.1cuft   | 10BAR / 145psi<br>225L / 7.9cuft   | 10BAR / 145psi<br>324L / 11.4cuft  |
| 2x    | 2x    | 2x    | 2x    | 2x    | 2x  |
| <b>SBR</b><br><b>3D Fibres</b>   | <b>SBR</b><br><b>3D Fibres</b>   | <b>SBR</b><br><b>3D Fibres</b>   | <b>SBR</b><br><b>3D Fibres</b>   | <b>SBR</b><br><b>3D Fibres</b>   | <b>SBR</b><br><b>3D Fibres</b>   |
| EN13731  | EN13731  | EN13731  | EN13731  | EN13731  | EN13731  |
| scorpe.net   | scorpe.net   | scorpe.net   | scorpe.net   | scorpe.net   | scorpe.net   |
|     |     |     |     |      |  |
| <b>SCORPE</b><br><b>Air 2S 33T</b>   | <b>SCORPE</b><br><b>Air 2S 40T</b>   | <b>SCORPE</b><br><b>Air 2S 60T</b>   | <b>SCORPE</b><br><b>Air 2S 75T</b>   | <b>SCORPE</b><br><b>Air 2S 90T</b>   |  |
|      |     |     |     |     |  |
| N/A  | N/A  | N/A  | N/A  | N/A  |  |
| 24.2kg / 24.2lb  | 12kg / 26.4lb  | 18kg / 39.6lb  | 22kg / 48.5lb  | 26kg / 57.3lb  |  |
| 56 x 2.5cm<br>x 22 x 1"  | 62 x 62 x 2.5cm<br>24.4 x 24.4 x 1"  | 75 x 75 x 2.5cm<br>29.5 x 29.5 x 1"  | 84 x 84 x 2.5cm<br>33 x 33 x 1"  | 92 x 92 x 2.5cm<br>36.2 x 36.2 x 1"  |  |
| cm / 6.7"  | 17cm / 6.7"  | 17cm / 6.7"  | 17cm / 6.7"  | 17cm / 6.7"  |  |
| 3 tonnes<br>5.4 USton  | 40 tonnes<br>44 USton  | 60 tonnes<br>66.1 USton  | 75 tonnes<br>82.6 USton  | 90 tonnes<br>99.2 USton  |  |
| 10BAR / 145psi<br>L / 11.3cuft   | 10BAR / 145psi<br>420L / 14.8cuft  | 10BAR / 145psi<br>680L / 24cuft  | 10BAR / 145psi<br>900L / 31.8cuft  | 10BAR / 145psi<br>1120L / 39.5cuft   |  |
| 3x  | 3x  | 3x  | 3x  | 3x  |  |
| <b>SBR</b><br><b>3D Fibres</b>   | <b>SBR</b><br><b>3D Fibres</b>   | <b>SBR</b><br><b>3D Fibres</b>   | <b>SBR</b><br><b>3D Fibres</b>   | <b>SBR</b><br><b>3D Fibres</b>   | <b>SBR</b><br><b>3D Fibres</b>   |
| EN13731  | EN13731  | EN13731  | EN13731  | EN13731  |  |
| scorpe.net   | scorpe.net   | scorpe.net   | scorpe.net   | scorpe.net   |  |

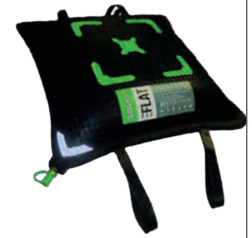
images not to Scale

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SBR= Styrene-Butadiene Rubber

## NB: LIFT CAPACITY

Figures quoted may not be at maximum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height



| COMPANY   | TRELLEBORG                      | TRELLEBORG                          | TRELLEBORG                        | TRELLEBORG                      | TRELLEBORG                      |
|---|---------------------------------|-------------------------------------|-----------------------------------|---------------------------------|---------------------------------|
| SERIES MODEL VARIANT  | SAVA SLK 1                      | SAVA SLK 3                          | SAVA SLK 5                        | SAVA SLK 6                      | SAVA SLK 7                      |
| CODE NUMBER   | 761.10.01                       | 761.10.03                           | 761.10.03                         | Discontinued                    | 761.10.04                       |
| ORIGIN  |                                 |                                     |                                   |                                 |                                 |
| COST inc tax / VAT  | N/A                             | N/A                                 | N/A                               | N/A                             | N/A                             |
| WEIGHT exc inflation eqpt   | 0.55kg / 1.2lb                  | 1.25kg / 3lb                        | 2kg / 4lb                         | 2kg / 4lb                       | 4kg / 9lb                       |
| DEFLATED DIMENSIONS (valve)<br>Length (+Valve) x Width x Height/depth | 15 x 15 x 2.2cm<br>6 x 6 x 0.8" | 22.5 x 22.5 x 2.2cm<br>9 x 9 x 0.8" | 27 x 27 x 2.2cm<br>11 x 11 x 0.8" | 30 x 30 x 2.5cm<br>12 x 12 x 1" | 38 x 38 x 2.5cm<br>15 x 15 x 1" |
| INFLATED HEIGHT   | 8cm / 3.1"                      | 13cm / 5.1"                         | 15cm / 6"                         | 16cm / 6.3"                     | 21cm / 8.3"                     |
| Max LIFT CAPACITY @min ht<br>@max height                              | 1.1 tonnes<br>1.2 USton         | 2.7 tonnes<br>3 USton               | 5.1 tonnes<br>5.6 USton           | 5.5 tonnes<br>6.1 USton         | 10 tonnes<br>11 USton           |
| MAX WORKBURST PRESSURE  | 8BAR / 116psi                   | 8BAR / 116psi                       | 8BAR / 116psi                     | 8BAR / 116psi                   | 8BAR / 116psi                   |
| AIR VOLUME  | 5L / 0.2cuft                    | 15L / 0.5cuft                       | 22.5L / 0.8cuft                   | 42L / 1.5cuft                   | 76.5L / 2.7cuft                 |
| STACK/CONNECT HI-VIZ  | ■ - ■                           | ■ - ■                               | ■ - ■                             | ■ - ■                           | ■ - ■                           |
| MATERIAL REINFORCEMENT  | Rubber<br>Aramid                | Rubber<br>Aramid                    | Rubber<br>Aramid                  | Rubber<br>Aramid                | Rubber<br>Aramid                |
| NOTES   | EN13731                         | EN13731                             | EN13731                           | EN13731<br>DISCONTINUED         | EN13731                         |
| WEBSITE   | trelleborg.com                  | trelleborg.com                      | trelleborg.com                    | trelleborg.com                  | trelleborg.com                  |

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## NB: LIFT CAPACITY

Figures quoted may not be at maximum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height



| COMPANY   | TRELLEBORG                          | TRELLEBORG                          | TRELLEBORG                      | TRELLEBORG                      | TRELLEBORG                          |
|---|-------------------------------------|-------------------------------------|---------------------------------|---------------------------------|-------------------------------------|
| SERIES MODEL VARIANT  | SAVA SLK 32                         | SAVA SLK 40                         | SAVA SLK 45                     | SAVA SLK 55                     | SAVA SLK 60                         |
| CODE NUMBER   | 761.10.06                           | 761.10.07                           | Discontinued                    | Discontinued                    | 761.10.08                           |
| ORIGIN  |                                     |                                     |                                 |                                 |                                     |
| COST inc tax / VAT  | N/A                                 | N/A                                 | N/A                             | N/A                             | N/A                                 |
| WEIGHT exc inflation eqpt   | 14kg / 31lb                         | 15kg / 33lb                         | 14kg / 31lb                     | 18kg / 40lb                     | 22kg / 49lb                         |
| DEFLATED DIMENSIONS (valve)<br>Length (+Valve) x Width x Height/depth | 65.8 x 65.8 x 2.5cm<br>26 x 26 x 1" | 70.8 x 70.8 x 2.5cm<br>28 x 28 x 1" | 78 x 78 x 2.5cm<br>31 x 31 x 1" | 87 x 87 x 2.5cm<br>34 x 34 x 1" | 90.8 x 90.8 x 2.5cm<br>36 x 36 x 1" |
| INFLATED HEIGHT   | 38cm / 15"                          | 40.5cm / 16"                        | 42cm / 16.5"                    | 47cm / 18.5"                    | 52cm / 20.5"                        |
| Max LIFT CAPACITY @min ht<br>@max height                              | 32.6 tonnes<br>36 USton             | 40.7 tonnes<br>45 USton             | 44.6 tonnes<br>49.1 USton       | 55 tonnes<br>60.5 USton         | 68 tonnes<br>75 USton               |
| MAX WORKBURST PRESSURE  | 8BAR / 116psi                       | 8BAR / 116psi                       | 8BAR / 116psi                   | 8BAR / 116psi                   | 8BAR / 116psi                       |
| AIR VOLUME  | 450L / 15.9cuft                     | 558L / 19.7cuft                     | 921L / 32.5cuft                 | 1305L / 46.1cuft                | 1206L / 42.7cuft                    |
| STACK/CONNECT HI-VIZ  | ■ - ■                               | ■ - ■                               | ■ - ■                           | ■ - ■                           | ■ - ■                               |
| MATERIAL REINFORCEMENT  | Rubber<br>Aramid                    | Rubber<br>Aramid                    | Rubber<br>Aramid                | Rubber<br>Aramid                | Rubber<br>Aramid                    |
| NOTES   | EN13731                             | EN13731                             | EN13731<br>DISCONTINUED         | EN13731<br>DISCONTINUED         | EN13731                             |
| WEBSITE   | trelleborg.com                      | trelleborg.com                      | trelleborg.com                  | trelleborg.com                  | trelleborg.com                      |



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|--|---|---|---|---|---|
|   |   |   |   |   |   |
| <b>TRELLEBORG</b>  | <b>TRELLEBORG</b>   | <b>TRELLEBORG</b>   | <b>TRELLEBORG</b>   | <b>TRELLEBORG</b>   | <b>TRELLEBORG</b>   |
| <b>SAVA SLK 10</b>   | <b>SAVA SLK 14</b>  | <b>SAVA SLK 20</b>  | <b>SAVA SLK 21</b>  | <b>SAVA SLK 25</b>  | <b>SAVA SLK 30</b>  |
| 61.10.04   | Discontinued  | 761.10.05   | Discontinued  | Discontinued  | Discontinued  |
|   |    |    |    |    |    |
| N/A  | N/A   | N/A   | N/A   | N/A   | N/A   |
| 5kg / 8.8lb  | 5kg / 11lb  | 7kg / 15lb  | 7kg / 15lb  | 9kg / 20lb  | 11kg / 24lb   |
| 38 x 2.5cm<br>x 15 x 1"  | 45 x 45 x 2.5cm<br>18 x 18 x 1"   | 50.8 x 50.8 x 2.5cm<br>20 x 20 x 1"   | 55 x 55 x 2.5cm<br>22 x 22 x 1"   | 61 x 61 x 2.5cm<br>24 x 24 x 1"   | 69 x 69 x 2.5cm<br>27 x 27 x 1"   |
| 15cm / 8.3"  | 25cm / 9.8"   | 30cm / 11.8"  | 30cm / 11.8"  | 34cm / 13.4"  | 38cm / 15"  |
| 0.2 tonne<br>0.2 USton   | 13.5 tonnes<br>14.9 USton   | 20.4 tonnes<br>22.4 USton   | 21.1 tonnes<br>23.2 USton   | 25.2 tonnes<br>27.7 USton   | 33 tonnes<br>36.3 USton   |
| 8BAR / 116psi  | 8BAR / 116psi   | 8BAR / 116psi   | 8BAR / 116psi   | 8BAR / 116psi   | 8BAR / 116psi   |
| 5L / 2.7cuft   | 152L / 5.4cuft  | 189L / 6.6cuft  | 296L / 10.5cuft   | 416L / 14.7cuft   | 621L / 21.9cuft   |
|   |    |    |    |    |    |
| Rubber<br>Aramid   | Rubber<br>Aramid  | Rubber<br>Aramid  | Rubber<br>Aramid  | Rubber<br>Aramid  | Rubber<br>Aramid  |
| EN13731  | EN13731<br>DISCONTINUED   | EN13731   | EN13731<br>DISCONTINUED   | EN13731<br>DISCONTINUED   | EN13731<br>DISCONTINUED   |
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|       |   |   |   |   |   |
| <b>TRELLEBORG</b>  | <b>TRELLEBORG</b>   | <b>TRELLEBORG</b>   | <b>TRELLEBORG</b>   | <b>TRELLEBORG</b>   | <b>TRELLEBORG</b>   |
| <b>SAVA SLK 67</b>   | <b>SAVA SLK 70</b>  | <b>VEGA 2</b>   | <b>VEGA 5</b>   | <b>VEGA 10</b>  | <b>VEGA 17</b>  |
| 61.10.08   | Discontinued  | 608046  | 608047  | 608049  | 608050  |
|   |  |  |  |  |  |
| N/A  | N/A   | N/A   | N/A   | N/A   | N/A   |
| 5kg / 50lb   | 22.5kg / 50lb   | 0.5kg / 1.2lb   | 1.2kg / 3lb   | 2.5kg / 5.5lb   | 4kg / 8.8lb   |
| 90.8 x 2.5cm<br>x 36 x 1"  | 94.5 x 94.5 x 2.5cm<br>37 x 37 x 1"   | 15 x 15 x 2.2cm<br>6 x 6 x 0.8"   | 23.5 x 23.5 x 2.2cm<br>9.2 x 9.2 x 0.8"   | 32 x 32 x 2.5cm<br>12.6 x 12.6 x 1"   | 40 x 40 x 2.5cm<br>15.7 x 15.7 x 1"   |
| 2cm / 20"  | 52cm / 20.5"  | 8cm / 3.1"  | 13cm / 5.1"   | 17cm / 6.9"   | 22cm / 8.5"   |
| 0.3 tonnes<br>0.3 USton  | 70.4 tonnes<br>77.4 USton   | 1.4 tonnes<br>1.5 USton   | 4.9 tonnes<br>5.4 USton   | 9.8 tonnes<br>10.8 USton  | 16.7 tonnes<br>18.4 USton   |
| 8BAR / 116psi  | 8BAR / 116psi   | 12BAR / 174psi  | 12BAR / 174psi  | 12BAR / 174psi  | 12BAR / 174psi  |
| 4L / 42.6cuft  | 1505L / 53.2cuft  | 4.5L / 0.16cuft   | 22.4L / 0.79cuft  | 63.4L / 2.24cuft  | 131.7L / 4.65cuft   |
|   |  |  |  |  |  |
| Rubber<br>Aramid   | Rubber<br>Aramid  | Rubber<br>Aramid  | Rubber<br>Aramid  | Rubber<br>Aramid  | Rubber<br>Aramid  |
| EN13731  | EN13731<br>DISCONTINUED   | EN13731   | EN13731   | EN13731   | EN13731   |
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SBR= Styrene-Butadiene Rubber

### NB: LIFT CAPACITY

Figures quoted may not be at maximum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height



| COMPANY   | TRELLEBORG                          | TRELLEBORG                      | TRELLEBORG                      | TRELLEBORG                          | TRELLEBORG                      |
|---|-------------------------------------|---------------------------------|---------------------------------|-------------------------------------|---------------------------------|
| SERIES MODEL VARIANT  | VEGA 25                             | VEGA 33                         | VEGA 41                         | VEGA 50                             | VEGA 60                         |
| CODE NUMBER   | 608051                              | 608052                          | 608053                          | 608054                              | 608055                          |
| ORIGIN  |                                     |                                 |                                 |                                     |                                 |
| COST inc tax / VAT  | N/A                                 | N/A                             | N/A                             | N/A                                 | N/A                             |
| WEIGHT exc inflation eqpt   | 5.7kg / 12.6lb                      | 7.5kg / 16.5lb                  | 9.3kg / 20.5lb                  | 11.2kg / 24.7lb                     | 15.5kg / 34.3lb                 |
| DEFLATED DIMENSIONS (valve)<br>Length (+Valve) x Width x Height/depth | 48 x 48 x 2.5cm<br>18.9 x 18.9 x 1" | 55 x 55 x 2.5cm<br>22 x 22 x 1" | 61 x 61 x 2.5cm<br>24 x 24 x 1" | 67 x 67 x 2.5cm<br>26.4 x 26.4 x 1" | 76 x 76 x 2.5cm<br>30 x 30 x 1" |
| INFLATED HEIGHT   | 26cm / 10.4"                        | 30cm / 11.9"                    | 34cm / 13.2"                    | 37cm / 14.4"                        | 41cm / 16.1"                    |
| Max LIFT CAPACITY @min ht<br>@max height                              | 25.1 tonnes<br>27.6 USton           | 33.2 tonnes<br>36.5 USton       | 41.2 tonnes<br>45.3 USton       | 50.2 tonnes<br>55.2 USton           | 65.2 tonnes<br>71.5 USton       |
| MAX WORKBURST PRESSURE  | 12BAR / 174psi                      | 12BAR / 174psi                  | 12BAR / 174psi                  | 12BAR / 174psi                      | 12BAR / 174psi                  |
| AIR VOLUME  | 236L / 8.33cuft                     | 365L / 12.89cuft                | 681L / 24.05cuft                | 897L / 31.68cuft                    | 1010L / 35.68cuft               |
| STACK/CONNECT HI-VIZ  | ● - ●                               | ● - ●                           | ● - ●                           | ● - ●                               | ● - ●                           |
| MATERIAL REINFORCEMENT  | Rubber<br>Aramid                    | Rubber<br>Aramid                | Rubber<br>Aramid                | Rubber<br>Aramid                    | Rubber<br>Aramid                |
| NOTES   | EN13731                             | EN13731                         | EN13731                         | EN13731                             | EN13731                         |
| WEBSITE   | trelleborg.com                      | trelleborg.com                  | trelleborg.com                  | trelleborg.com                      | trelleborg.com                  |

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| COMPANY   | TRELLEBORG                             | TRELLEBORG                             | TRELLEBORG                         | TRELLEBORG                         | TRELLEBORG                             |
|---|--|--|------------------------------------|------------------------------------|--|
| SERIES MODEL VARIANT  | NOVA 21                                | NOVA 31                                | NOVA 41                            | NOVA 51                            | NOVA 61                                |
| CODE NUMBER   | 608064                                 | 608065                                 | 608066                             | 608067                             | 608068                                 |
| ORIGIN  |  |  |                                    |                                    |  |
| COST inc tax / VAT  | N/A                                    | N/A                                    | N/A                                | N/A                                | N/A                                    |
| WEIGHT exc inflation eqpt   | 4kg / 8.8lb                            | 5.7kg / 12.6lb                         | 7.5kg / 16.5lb                     | 9.3kg / 20.5lb                     | 11.2kg / 24.7lb                        |
| DEFLATED DIMENSIONS (valve)<br>Length (+Valve) x Width x Height/depth | 40 x 40 x 2.2cm<br>15.7 x 15.7 x 0.87" | 48 x 48 x 2.2cm<br>18.9 x 18.9 x 0.87" | 55 x 55 x 2.2cm<br>22 x 22 x 0.87" | 61 x 61 x 2.2cm<br>24 x 24 x 0.87" | 67 x 67 x 2.2cm<br>26.4 x 26.4 x 0.87" |
| INFLATED HEIGHT   | 22cm / 8.5"                            | 26cm / 10.4"                           | 30cm / 11.9"                       | 34cm / 13.2"                       | 37cm / 14.4"                           |
| Max LIFT CAPACITY @min ht<br>@max height                              | 20.5 tonnes<br>22.6 USton              | 31.2 tonnes<br>34.3 USton              | 41.3 tonnes<br>45.4 USton          | 51.4 tonnes<br>56.5 USton          | 63.2 tonnes<br>69.5 USton              |
| MAX WORKBURST PRESSURE  | 15BAR / 218psi                         | 15BAR / 218psi                         | 15BAR / 218psi                     | 15BAR / 218psi                     | 15BAR / 218psi                         |
| AIR VOLUME  | 152L / 5.37cuft                        | 273.4L / 9.66cuft                      | 422L / 14.9cuft                    | 585L / 20.66cuft                   | 786L / 27.75cuft                       |
| STACK/CONNECT HI-VIZ  | ● - ●                                  | ● - ●                                  | ● - ●                              | ● - ●                              | ● - ●                                  |
| MATERIAL REINFORCEMENT  | Rubber<br>Aramid                       | Rubber<br>Aramid                       | Rubber<br>Aramid                   | Rubber<br>Aramid                   | Rubber<br>Aramid                       |
| NOTES   | EN13731                                | EN13731                                | EN13731                            | EN13731                            | EN13731                                |
| WEBSITE   | trelleborg.com                         | trelleborg.com                         | trelleborg.com                     | trelleborg.com                     | trelleborg.com                         |

# HIGH PRESSURE AIRBAGS

|  |   |   |   |   |   |
|--|---|---|---|---|---|
|   |    |    |    |   |    |
| <b>TRELLEBORG</b>  | <b>TRELLEBORG</b>   | <b>TRELLEBORG</b>   | <b>TRELLEBORG</b>   | <b>TRELLEBORG</b>   | <b>TRELLEBORG</b>   |
| <b>VEGA 65</b>   | <b>VEGA 80</b>  | <b>VEGA 100</b>   | <b>NOVA 2</b>   | <b>NOVA 6</b>   | <b>NOVA 13</b>  |
| 608055   | 608056  | 608057  | 608061  | 608062  | 608063  |
|    |    |    |    |    |    |
| N/A  | N/A   | N/A   | N/A   | N/A   | N/A   |
| 0.5kg / 34.2lb   | 19kg / 41.9lb   | 23.3kg / 51.4lb   | 0.5kg / 1.2lb   | 1.2kg / 3lb   | 2.5kg / 5.5lb   |
| 76 x 2.7cm<br>30 x 1.1"  | 84 x 84 x 2.7cm<br>33 x 33 x 1.1"   | 93 x 93 x 2.7cm<br>36.5 x 36.5 x 1.1"   | 15 x 15 x 2.2cm<br>6 x 6 x 0.9"   | 23.5 x 23.5 x 2.2cm<br>9.2 x 9.2 x 0.87"  | 32 x 32 x 2.2cm<br>12.6 x 12.6 x 0.87"  |
| 16.3"  | 46cm / 17.9"  | 51cm / 20.1"  | 8cm / 3"  | 13cm / 4.9"   | 17cm / 6.9"   |
| 1.2 tonnes<br>1.7 USton  | 80.2 tonnes<br>88.2 USton   | 100.2 tonnes<br>110.2 USton   | 1.7 tonnes<br>1.9 USton   | 6.2 tonnes<br>6.8 USton   | 12.3 tonnes<br>13.5 USton   |
| 12BAR / 174psi   | 12BAR / 174psi  | 12BAR / 174psi  | 15BAR / 218psi  | 15BAR / 218psi  | 15BAR / 218psi  |
| 35.67cuft  | 1381L / 48.77cuft   | 1895L / 66.92cuft   | 5.2L / 0.18cuft   | 25.8L / 0.91cuft  | 73.2L / 2.59cuft  |
|  -      |  -      |  -      |  -  |  -  |  -  |
| Rubber<br>Aramid   | Rubber<br>Aramid  | Rubber<br>Aramid  | Rubber<br>Aramid  | Rubber<br>Aramid  | Rubber<br>Aramid  |
| EN13731  | EN13731   | EN13731   | EN13731   | EN13731   | EN13731   |
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|   |    |    |   |   |   |
| <b>TRELLEBORG</b>  | <b>TRELLEBORG</b>   | <b>TRELLEBORG</b>   |   |   |   |
| <b>NOVA 63</b>   | <b>NOVA 81</b>  | <b>NOVA 100</b>   |   |   |   |
| 608068   | 608069  | 608070  |   |   |   |
|    |    |    |   |   |   |
| N/A  | N/A   | N/A   |   |   |   |
| 15kg / 24.7lb  | 15.5kg / 34.2lb   | 19kg / 41.9lb   |   |   |   |
| 76 x 2.2cm<br>26.4 x 0.87"   | 76 x 76 x 2.7cm<br>30 x 30 x 1.1"   | 84 x 84 x 2.7cm<br>33 x 33 x 1.1"   |   |   |   |
| 14.4"  | 41cm / 16.3"  | 46cm / 17.9"  |   |   |   |
| 1.2 tonnes<br>1.5 USton  | 81.5 tonnes<br>89.7 USton   | 100.3 tonnes<br>110.3 USton   |   |   |   |
| 15BAR / 218psi   | 15BAR / 218psi  | 15BAR / 218psi  |   |   |   |
| 27.76cuft  | 1167L / 41.21cuft   | 1595L / 56.33cuft   |   |   |   |
|  -  |  -  |  -  |   |   |   |
| Rubber<br>Aramid   | Rubber<br>Aramid  | Rubber<br>Aramid  |   |   |   |
| EN13731  | EN13731   | EN13731   |   |   |   |
| trelleborg.com   | trelleborg.com  | trelleborg.com  |   |   |   |



images not to Scale

● ● ● =OK but not ideal

SBR= Styrene-Butadiene Rubber

### NB: LIFT CAPACITY

Figures quoted may not be at maximum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height



| COMPANY   | VETTER                               | VETTER                                | VETTER                              | VETTER                                     | V            |
|---|--------------------------------------|---------------------------------------|-------------------------------------|--|--------------|
| SERIES MODEL VARIANT  | S.Tec12 V1                           | S.Tec12 V3                            | S.Tec12 V5                          | S.Tec12 V6V7                               | S.Te         |
| CODE NUMBER VARIANT   | 1314009300                           | 1314009500                            | 1314018200                          | 1314009600                                 | 13           |
| ORIGIN  |                                      |                                       |                                     |  |              |
| COST inc tax / VAT  | N/A                                  | N/A                                   | €526                                | €667                                       |              |
| WEIGHT exc inflation eqpt   | 0.5kg / 1.1lb                        | 1kg / 2.2lb                           | 1.4kg / 3.1lb                       | 1.9kg / 4.2lb                              | 3.3          |
| DEFLATED DIMENSIONS (valve)<br>Length (+Valve) x Width x Height/depth | 14 x 13 x 2.5cm<br>5.5 x 5.1 x 0.98" | 25.5 x 20 x 2.5cm<br>10 x 7.9 x 0.98" | 28 x 28 x 2.5cm<br>10 x 7.9 x 0.98" | 29.5 x 29.5 x 2.5cm<br>11.6 x 11.6 x 0.98" | 37 x<br>15 x |
| INFLATED HEIGHT   | 7.5cm / 2.9"                         | 12cm / 4.8"                           | 14.5cm / 5.7"                       | 16.5cm / 6.5"                              | 37           |
| Max LIFT CAPACITY @min ht<br>@max height                              | 1 tonne<br>1.1 USton                 | 3.26 tonne<br>3.6 USton               | 5.6 tonnes<br>6.2USton              | 6.3 tonnes<br>7 USton                      | 9.<br>10     |
| MAX WORKBURST PRESSURE  | 8 14BAR/116 203psi                   | 8 14BAR/116 203psi                    | 8 14BAR/116 203psi                  | 8 14BAR/116 203psi                         | 8 14BA       |
| AIR VOLUME  | 5.66L / 0.2cuft                      | 22.6L / 0.8cuft                       | 28.4L / 1cuft                       | 39.6L / 1.4cuft                            | 121.         |
| STACK/CONNECT HI-VIZ  | ■ - ■                                | ■ - ■                                 | ■ - ■                               | ■ - ■                                      |              |
| MATERIAL REINFORCEMENT  | Vulcanized Rubber<br>CR/Aramid       | Vulcanized Rubber<br>CR/Aramid        | Vulcanized Rubber<br>CR/Aramid      | Vulcanized Rubber<br>CR/Aramid             | Vulcan       |
| NOTES   | EN13731                              | EN13731                               | EN13731                             | EN13731                                    | E            |
| WEBSITE   | vetter-rescue.com                    | vetter-rescue.com                     | vetter-rescue.com                   | vetter-rescue.com                          | vetter       |

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SBR= Styrene-Butadiene Rubber

### NB: LIFT CAPACITY

Figures quoted may not be at maximum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height



| COMPANY   | VETTER                             | VETTER                              | VETTER                             | VETTER                                 | V              |
|---|------------------------------------|-------------------------------------|------------------------------------|--|----------------|
| SERIES MODEL VARIANT  | S.Tec12 V31V33                     | S.Tec12 V35L                        | S.Tec12 V40                        | S.Tec12 V50                            | S.Te           |
| CODE NUMBER VARIANT   | 1314002800                         | 1314008300                          | 1316003500                         | 1316001000                             | 13             |
| ORIGIN  |                                    |                                     |                                    |  |                |
| COST inc tax / VAT  | €1690 €1816                        | €1714                               | €2091                              | €2764                                  |                |
| WEIGHT exc inflation eqpt   | 10.1kg / 22.3lb                    | 10kg / 22.1lb                       | 9.3kg / 20.5lb                     | 11.8kg / 26.2lb                        | 13.8           |
| DEFLATED DIMENSIONS (valve)<br>Length (+Valve) x Width x Height/depth | 69 x 65 x 2.5cm<br>00 x 00 x 0.98" | 115 x 43 x 2.5cm<br>00 x 00 x 0.98" | 61 x 61 x 2.5cm<br>24 x 24 x 0.98" | 67 x 67 x 2.5cm<br>26.6 x 26.6 x 0.98" | 78 x<br>30.7 x |
| INFLATED HEIGHT   | 37cm / 14.6"                       | 31cm / 12.2"                        | 33.5cm / 13.2"                     | 37.6cm / 14.8"                         | 39             |
| Max LIFT CAPACITY @min ht<br>@max height                              | 31.3 tonnes<br>34.6 USton          | 35.8 tonnes<br>39.5 USton           | 40.3 tonnes<br>44.5 USton          | 50.07 tonnes<br>55.2 USton             | 59<br>65       |
| MAX WORKBURST PRESSURE  | 8 14BAR/116 203psi                 | 8 14BAR/116 203psi                  | 8 14BAR/116 203psi                 | 8 14BAR/116 203psi                     | 8 14BA         |
| AIR VOLUME  | 517.5L / 18cuft                    | 349.4L / 12.3cuft                   | 603.1L / 21.3cuft                  | 798.5L / 28.2cuft                      | 110            |
| STACK/CONNECT HI-VIZ  | ■ - ■                              | ■ - ■                               | ■ - ■                              | ■ - ■                                  |                |
| MATERIAL REINFORCEMENT  | Vulcanized Rubber<br>CR/Aramid     | Vulcanized Rubber<br>CR/Aramid      | Vulcanized Rubber<br>CR/Aramid     | Vulcanized Rubber<br>CR/Aramid         | Vulcan         |
| NOTES   | EN13731<br>V33 DISCONTINUED        | EN13731                             | EN13731                            | EN13731                                | E              |
| WEBSITE   | vetter-rescue.com                  | vetter-rescue.com                   | vetter-rescue.com                  | vetter-rescue.com                      | vetter         |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
|    |    |    |    |     |    |
| <b>VETTER</b>   | <b>VETTER</b>   | <b>VETTER</b>   | <b>VETTER</b>   | <b>VETTER</b>   | <b>VETTER</b>   |
| <b>S.Tec12 V10</b>  | <b>S.Tec12 V12</b>  | <b>S.Tec12 V18</b>  | <b>S.Tec12 V20</b>  | <b>S.Tec12 V24</b>  | <b>S.Tec12 V24L</b>   |
| 1314002200  | 1314002400  | 1314002500  | 1314011800  | 1314002600  | 1314002700  |
|     |    |    |    |    |    |
| €846  | €868  | N/A   | €1115   | N/A   | N/A   |
| 3.9kg / 7.3lb   | 3.9kg / 8.6lb   | 5.7kg / 12.6lb  | 7.2kg / 15.9lb  | 7.2kg / 15.9lb  | 6.8kg / 15lb  |
| 37 x 2.5cm<br>15 x 0.98"  | 52 x 35 x 2.5cm<br>20 x 13 x 0.98"  | 52 x 47 x 2.5cm<br>20 x 19 x 0.98"  | 58 x 48 x 2.5cm<br>23 x 19 x 0.98"  | 62 x 52 x 2.5cm<br>24 x 20 x 0.98"  | 60 x 60 x 2.5cm<br>24 x 20 x 0.98"  |
| 10.6 tonnes   | 10.8 tonnes   | 17.7 tonnes   | 19.4 tonnes   | 24 tonnes   | 24 kN   |
| 0.6 USton   | 13.1 USton  | 19.5 USton  | 21.4 USton  | 26.5 USton  | 26.5 USton  |
| 8 14BAR/116 203psi  | 8 14BAR/116 203psi  | 8 14BAR/116 203psi  | 8 14BAR/116 203psi  | 8 14BAR/116 203psi  | 8 14BAR/116 203psi  |
| 7L / 4.3cuft  | 192.5L / 6.8cuft  | 190.3L / 6.9cuft  | 224.1L / 7.9cuft  | 296.4L / 10.1cuft   | 211.5L / 7.5cuft  |
|     |    |    |    |    |    |
| Size 1 Rubber<br>CR/Aramid  | Vulcanized Rubber<br>CR/Aramid  | Vulcanized Rubber<br>CR/Aramid  | Vulcanized Rubber<br>CR/Aramid  | Vulcanized Rubber<br>CR/Aramid  | Vulcanized Rubber<br>CR/Aramid  |
| EN13731   | EN13731   | EN13731   | EN13731   | EN13731   | EN13731<br>V26 DISCONTINUED   |
| vetter-rescue.com   | vetter-rescue.com   | vetter-rescue.com   | vetter-rescue.com   | vetter-rescue.com   | vetter-rescue.com   |
|  |  |  |  |   |  |
| <b>VETTER</b>   | <b>VETTER</b>   | <b>VETTER</b>   | <b>VETTER</b>   | <b>VETTER</b>   | <b>VETTER</b>   |
| <b>S.Tec12 V59</b>  | <b>S.Tec12 V83</b>  | <b>S.Tec12 V102</b>   | <b>C.Tec12 VCB N30</b>  | <b>C.Tec12 VCB N 75</b>   | <b>C.Tec12 VCB172</b>   |
| 1316001100  | 1316001200  | 1316001300  | 1316004600  | 1316004700  | 1316003900  |
|   |  |  |  |  |  |
| €2981   | €3892   | €4534   | N/A   | N/A   | N/A   |
| 19kg / 30.6lb   | 19kg / 42.1lb   | 23.1kg / 50.9lb   | 12kg / 26.4lb   | 22.4kg / 49.4lb   | 58kg / 127.9lb  |
| 78 x 2.5cm<br>27.2 x 0.98"  | 86 x 86 x 2.5cm<br>33.9 x 33.9 x 0.98"  | 95 x 95 x 2.5cm<br>37.4 x 37.4 x 0.98"  | 56.5 x 56.5 x 7cm<br>22.2 x 22.2 x 2.8"   | 89 x 89 x 7cm<br>35 x 35 x 2.8"   | 135 x 135 x 7cm<br>53.2 x 53.2 x 2.8"   |
| 10.4 tonnes   | 82.6 tonnes   | 101.6 tonnes  | 7 - 30.1 tonnes   | 12 - 74.6 tonnes  | 15 - 171.7 tonnes   |
| 0.5 USton   | 91.1 USton  | 112 USton   | 7.7-33.2 USton  | 13.2 - 82.3 USton   | 16.5 - 189.3 USton  |
| 8 14BAR/116 203psi  | 8 14BAR/116 203psi  | 8 14BAR/116 203psi  | 12 48BAR/174 696psi   | 12 48BAR/174 696psi   | 12 48BAR/174 696psi   |
| 4L / 39cuft   | 1645.2L / 58.1cuft  | 2302L / 81.3cuft  | 328L / 11.6cuft   | 1269L / 44.8cuft  | 5048L / 178.3cuft   |
|   |  |  |  |  |  |
| Size 1 Rubber<br>CR/Aramid  | Vulcanized Rubber<br>CR/Aramid  | Vulcanized Rubber<br>CR/Aramid  | Vulcanized Rubber<br>CR/Aramid  | Vulcanized Rubber<br>CR/Aramid  | Vulcanized Rubber<br>CR/Aramid  |
| EN13731   | EN13731<br>DISCONTINUED   | EN13731<br>DISCONTINUED   | EN13731   | Image shows 3 bags<br>connected. EN13731  | EN13731   |
| vetter-rescue.com   | vetter-rescue.com   | vetter-rescue.com   | vetter-rescue.com   | vetter-rescue.com   | vetter-rescue.com   |

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SBR= Styrene-Butadiene Rubber

### NB: LIFT CAPACITY

Figures quoted may not be at maximum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height



| COMPANY   | WEBER RESCUE                  | WEBER RESCUE                    | WEBER RESCUE                          | WEBER RESCUE                    | W  |
|---|-------------------------------|---------------------------------|---------------------------------------|---------------------------------|----|
| SERIES MODEL VARIANT  | 8-BAR W3                      | 8-BAR W10                       | 8-BAR W20                             | 8-BAR W25                       | 8  |
| CODE NUMBER   | 8123357                       | 8123373                         | 8123390                               | 8123403                         | 8  |
| ORIGIN  |                               |                                 |                                       |                                 |    |
| COST inc tax / VAT  | N/A                           | N/A                             | N/A                                   | N/A                             |    |
| WEIGHT exc inflation eqpt   | 1.3kg / 2.9lb                 | 3.5kg / 7.7lb                   | 7kg / 15.4lb                          | 9kg / 19.8lb                    |    |
| DEFLATED DIMENSIONS (valve)<br>Length (+Valve) x Width x Height/depth | 23 x 23 x 2.5cm<br>9 x 9 x 1" | 38 x 38 x 2.5cm<br>15 x 15 x 1" | 55 x 55 x 2.5cm<br>21.65 x 21.65 x 1" | 61 x 61 x 2.5cm<br>24 x 24 x 1" | 7  |
| INFLATED HEIGHT   | 130cm / 51.2"                 | 210cm / 82.68"                  | 300cm / 118"                          | 340cm / 133"                    |    |
| Max LIFT CAPACITY @min ht<br>@max height                              | 2.7 tonnes<br>3 USton         | 10.1 tonnes<br>11.1 USton       | 21.1 kg<br>23.2 USton                 | 25.2 tonnes<br>27.8 USton       |    |
| MAX WORKBURST PRESSURE  | 8BAR / 116psi                 | 8BAR / 116psi                   | 8BAR / 116psi                         | 8BAR / 116psi                   |    |
| AIR VOLUME  | 15L / 0.53cuft                | 86L / 3cuft                     | 296L / 10.4cuft                       | 416L / 14.7cuft                 | 9  |
| STACK/CONNECT HI-VIZ  | 2x - ●                        | 2x - ●                          | 2x - ●                                | 2x - ●                          |    |
| MATERIAL REINFORCEMENT  | Rubber<br>Aramid              | Rubber<br>Aramid                | Rubber<br>Aramid                      | Rubber<br>Aramid                |    |
| NOTES   | EN13731                       | EN13731                         | EN13731                               | EN13731                         |    |
| WEBSITE   | Weber-rescue.com              | Weber-rescue.com                | Weber-rescue.com                      | Weber-rescue.com                | We |

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SBR= Styrene-Butadiene Rubber















### NB: LIFT CAPACITY

Figures quoted may not be at maximum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height



| COMPANY   | WEBER RESCUE                    | WEBER RESCUE                    | WEBER RESCUE                    | WEBER RESCUE                         | W   |
|---|---------------------------------|---------------------------------|---------------------------------|--------------------------------------|-----|
| SERIES MODEL VARIANT  | 8-BAR W-FB 5/17                 | 8-BAR W-FB 10/17                | 8-BAR W-FB 20/17                | 8-BAR W-FB 40/17                     | 8-B |
| CODE NUMBER   | 1104649                         | 1102509                         | 1102510                         | 1102511                              | 8   |
| ORIGIN  |                                 |                                 |                                 |                                      |     |
| COST inc tax / VAT  | N/A                             | N/A                             | N/A                             | N/A                                  |     |
| WEIGHT exc inflation eqpt   | 7.3kg / 16.1lb                  | 7.3kg / 16.1lb                  | 9.2kg / 20.3lb                  | 14.5kg / 32lb                        | 2   |
| DEFLATED DIMENSIONS (valve)<br>Length (+Valve) x Width x Height/depth | 48 x 48 x 2.5cm<br>21 x 21 x 1" | 55 x 55 x 2.5cm<br>21 x 21 x 1" | 61 x 61 x 2.5cm<br>24 x 24 x 1" | 78 x 78 x 2.5cm<br>30.71 x 30.7 x 1" | 9   |
| INFLATED HEIGHT   | 170cm / 66.9"                   | 170cm / 66.9"                   | 170cm / 66.9"                   | 170cm / 66.9"                        |     |
| Max LIFT CAPACITY @min ht<br>@max height                              | 21.1 tonnes<br>23.2 USton       | 21.1 tonnes<br>23.2 USton       | 25.2 tonnes<br>27.8 USton       | 44.6 tonnes<br>49.1 USton            |     |
| MAX WORKBURST PRESSURE  | 8BAR / 116psi                   | 8BAR / 116psi                   | 8BAR / 116psi                   | 8BAR / 116psi                        |     |
| AIR VOLUME  | 224L / 7.9cuft                  | 224L / 7.9cuft                  | 350L / 12.3cuft                 | 520L / 18.4cuft                      | 8   |
| STACK/CONNECT HI-VIZ  | 2x - ●                          | 2x - ●                          | 2x - ●                          | 2x - ●                               |     |
| MATERIAL REINFORCEMENT  | Rubber<br>Aramid                | Rubber<br>Aramid                | Rubber<br>Aramid                | Rubber<br>Aramid                     |     |
| NOTES   | EN13731<br>Stack up to 3 high   | EN13731<br>Stack up to 3 high   | EN13731<br>Stack up to 3 high   | EN13731<br>Stack up to 3 high        | S   |
| WEBSITE   | Weber-rescue.com                | Weber-rescue.com                | Weber-rescue.com                | Weber-rescue.com                     | We  |



|  |  |  |
|--|--|--|
|      |     |     |
| <b>WEBER RESCUE</b>  | <b>WEBER RESCUE</b>  | <b>WEBER RESCUE</b>  |
| <b>8-BAR W41</b>   | <b>8-BAR W52</b>   | <b>8-BAR W66</b>   |
| 8123438  | 8123446  | 8123454  |
|       |     |     |
| N/A  | N/A  | N/A  |
| 14kg / 30.9lb  | 18kg / 39.7lb  | 22.5kg / 49.6lb  |
| 8 x 78 x 2.5cm<br>0.7 x 30.7 x 1"  | 87 x 87 x 2.5cm<br>34.25 x 34.25 x 1"  | 95 x 95 x 2.5cm<br>37.4 x 37.4 x 1"  |
| 420cm / 165"   | 470cm / 185"   | 520cm / 204"   |
| 44.6 tonnes<br>49.1 USton  | 55 tonnes<br>60.6 USton  | 70.4 tonnes<br>77.6 USton  |
| 8BAR / 116psi  | 8BAR / 116psi  | 8BAR / 116psi  |
| 221L / 32.5cuft  | 1305L / 46cuft   | 1505L / 53.1cuft   |
| 2x    | 2x  | 2x  |
| Rubber<br>Aramid   | Rubber<br>Aramid   | Rubber<br>Aramid   |
| EN13731  | EN13731  | EN13731  |
| weber-rescue.com   | Weber-rescue.com   | Weber-rescue.com   |
|    |  |  |
| <b>WEBER RESCUE</b>  | <b>OO</b>  | <b>OO</b>  |
| <b>8-BAR W-F 50/17</b>   | <b>OO</b>  | <b>OO</b>  |
| 1102512  | OO   | OO   |
|     |  |  |
| N/A  | N/A  | N/A  |
| 20.6kg / 45.4lb  | 00kg / 00lb  | 00kg / 00lb  |
| 2 x 92 x 2.5cm<br>36 x 36 x 1"   | 00 x 00 x 00cm<br>00 x 00 x 00"  | 00 x 00 x 00cm<br>00 x 00 x 00"  |
| 170cm / 66.9"  | 00cm / 00"   | 00cm / 00"   |
| 64 tonnes<br>70.5 USton  | 00 tonnes<br>00 USton  | 00 tonnes<br>00 USton  |
| 8BAR / 116psi  | 00BAR / 00psi  | 00BAR / 00psi  |
| 110L / 28.6cuft  | 00L / 00cuft   | 00L / 00cuft   |
| 2x  |   |   |
| Rubber<br>Aramid   | O<br>O   | O<br>O   |
| EN13731  | EN13731  | EN13731  |
| Attach up to 3 high  |  |  |
| weber-rescue.com   | OO.com   | OO.com   |

# HIGH PRESSURE AIRBAGS





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# 'pneumatic' LOW / MED PRESSURE AIRBAGS

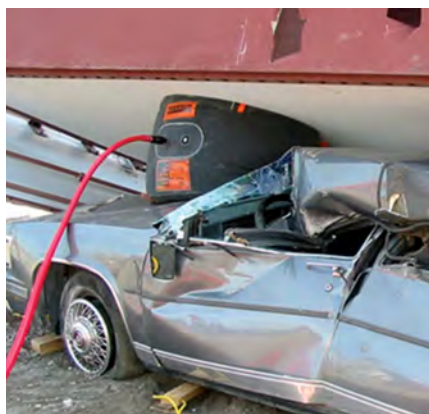
The previous Guide covered high pressure airbags which provide tremendous lift strength but a downside of operating at pressures of 8 to 12 BAR is that the risk of a burst over such a small area is significant and potentially hazardous to the rescuer

Another downside is that this small area of lift will deform and buckle the relatively soft skin of large surface area vehicles

like articulated lorries, tankers, train carriages, train engines and aircraft. Low and medium pressure bags spread their lift over a much larger surface area. We have

NOT including the dedicated aircraft lift bags manufactured by companies like Vetter (including a system specifically for the Airbus 380) and Eurocraft because they are virtually never used by fire and rescue agencies in dealing with road accidents. If only money was no object....! You will notice that the largest single, double and triple bag systems discussed here will also cope with smaller aircraft but are not precise enough or powerful enough to deal with standard long-haul aircraft. Very few companies provided 'Time to inflate' data so as a rough guide the Vetter 1/6 (610mm / 24") bag takes 20 seconds to inflate at 1 bar and the much bigger 1/23 (1200mm / 47") bag takes about three and a half minutes.

Some companies differentiate between Low Pressure and Medium pressure as 0.5 Bar/ 7-9 psi and 1 bar / 14-15 psi but we have always simply termed anything up to about 2 bar as a 'low-pressure' bag. There is some cross over in size between the smallest low-pressure bags and the largest high pressure bags but primarily we are dealing here with bags with a large surface area (or footprint) and less than 2bar pressure. This ensures that the lift pressure is distributed across a much larger area and indeed most tasks will require a multiple set of airbags in a coordinated lift. Some of the maximum lift capacity figures are ONLY quoted with a pair of bags and will therefore pose some inequalities in the data. Some bags like the MFC BR and HL1, Eurocraft Jumbo and Sc Inflatables Catchbag



are manufactured in a wedge shape to provide the maximum purchase on both the ground and a sloping vehicle side. In the case of the Catchbag this has been specifically designed to be inserted as a 'wedge' on a raised vehicle which is then deflated to bring the vehicle upright in a controlled manner. Some bags are large cylinders and these tend to be the most resilient but least conforming. The largest bags are giant cubes which inflate virtually to a sphere when not restricted by the lift object or . Lampe and Vetter provide low pressure bags that are exactly the same shape as the standard square high pressure mat. Paratech market a specific 'Trench Bag' for use in a trench collapse rescue and this is an excellent application for any of the equal-sided bags in this article where the low pressure 'squashy' bag can safely fill the void between shoring boards and trench wall.

There seems to have been a move away from low pressure bags in some services in recent times in favour of point loaded 'hard' shoring, for example certain Paratech models

and the hydraulic Holmatro Powershore which provides both the lift and the followup shoring in the one strut. There is, however, something very reassuring about the way leviathan-sized air bags cope with really large loads because there is much less danger of a point-load failure and with the angled bags in particular, virtually no danger of slippage. Remember that low pressure airbags are used in multiples (or pairs at the very least) and fed by hoses running from a multiplier so that they provide their own redundancy for a neighboring bag but larger stabilisation struts can be used to good effect as follow-up shoring on specific structural hard-points on the vehicle/coach.



# PRESSURE GUARD

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ABOVE: NOTE that there are some bags here that are not designed to LIFT, they are designed to CATCH. Just like a high-fall air bag they will exhaust air out of vents as a large vehicle is righted and 'hits' the catch bags to then be lowered under control to the ground. These bags are not generally symmetrical, the *SAVA Catch bag* (Savatech now owned by Trelleborg) for instance is trapezoidal with a 140cm square base and a 100cm more rounded top and can be inflated using an electric or gas/petrol blower.

## IN THE FOLLOWING TABLES.....

Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square ■■■■■■  
If it's an option it is shown as an outline square □□□□□□  
A circle ● in the 'USE' columns indicates that this feature is only partially present and/or is OK for that purpose but not ideal.  
A model variant is shown in cyan blue and any features or specifications that differ from the standard are also in cyan or will have a cyan outline to a black or orange square ■■■■.

**ORIGIN:** The company's home country, not necessarily the country of manufacture which is indicated by an inset flag or two equally sized flags if the tool is made in both countries.

**COST:** This remains an official secret within the industry. This is because the cost of one tool is huge and vastly different to the cost of multiples that they sell to entire fire services. But this is the same situation for virtually every piece of equipment we ever have in **TECHNICAL RESCUE** where we always quote the single item cost on the understanding that any bulk purchase will of course be a lower figure.

**WEIGHT:** Refers to the operational weight that the rescuer experiences in lifting the bag-only so it excludes attached hoses and controllers etc.

**DEFLATED DIMENSIONS:** For round bags this will be the diameter by the DEFLATED height shown in magenta because it is important to know the insertion height - ie. the gap into which you can get your bag before beginning the lift.

**INFLATED HEIGHT:** The all important- lift height that your bag can achieve.

**MAX AIR VOLUME:** This is not as straight-forward as it should be because there is a 'nominal volume' as well as a maximum

volume. We're quoting maximum air volume but some manufacturers data may not make the distinction clear. Nominal air volume is the general amount of air needed to make the bag function properly, The maximum volume is that which should not be exceeded or you risk rupturing the seams or a contact point.

**LIFT CAPACITY:** Is the maximum load that should be applied to a single bag. Unlike solid, point-loading of a strut, it is much easier to share the load across two or three bags without one bag taking all the load and throwing out your calculations because you assumed each of, let's say three supports, would only be carrying a third of the load. It is again vital that you push in direct line with the base of the bag- if your target load starts to stray off-centre as it moves, the bag(s) can be forced out sideways. Our figures are in kg (Kilogramms) and pounds (lbs) but where tons/tonnes are mentioned there are 1.10 US short tons to a UK/metric tonne (if we use the term 'ton' it will mean US Short Ton not a UK ton).

**TIME to MAX INFLATION:** This is not a figure given by manufacturers so most of these rows will be empty but it's a useful figure if only in very general terms and would refer to the fastest time that the bag could be fully inflated.

**MAX PRESSURE PRV:** The inflation pressure which in these bags will be around 0.5 and 1 bar but could be anywhere between 0 and 3 BAR or 0 to 15 PSI Pounds per square inch. **PRV= Pressure Relief Valve** which will exhaust air should the bag's internal air pressure approach a level which could rupture the seams.

**STACK/CONNECT REFLECT:** Unlike most high pressure bags/mats these much larger bags are not generally used in a stack or indeed required to be used in a stack given their huge lift heights. So the webbing loops you see on most bags are for lifting and shifting and/or to keep multiple bags in line. However, the flat-topped medium pressure bags (1BAR) can be stacked and then joined/**connected** via the web restraint loops that most have **but while these can take up to a tonne of load, these are not load bearing** connections in the same way as some of the metal connections and heavy duty straps found on high pressure bags. The web loops will, at best, just keep the bags in position as you inflate - if they come off-centre when under load these may tear out.

**REFLECT** = Reflective strips or decals to improve visibility in low light and at night.

## You can't prevent a jump, but safely cushion it.

When a building is on fire, you can't keep people from jumping. No matter the height. Fortunately, you can help. Because Vetter safety cushions also rescue people in places that are unreachable for ladder vehicles. Don't let inaccessible facades and cramped courtyards stop you. Easy to transport, quickly set up and individually tested: Our safety cushions are indispensable helpers for your rescue operations.

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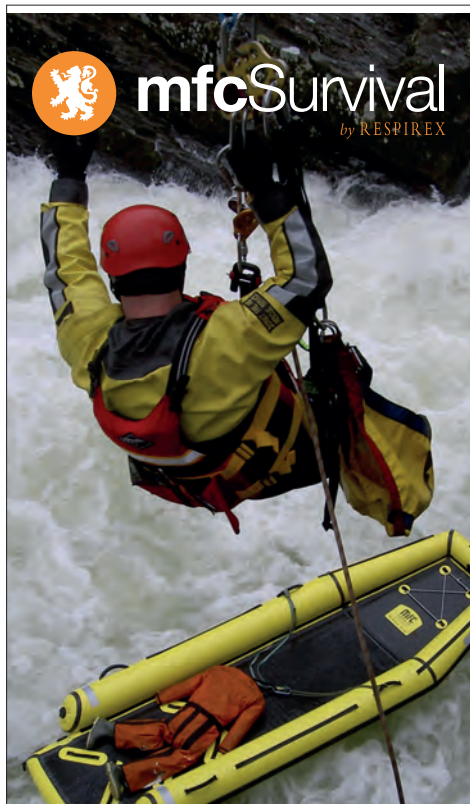
16 m / 5 floors



25 m / 8 floors



60 m / 20 floors



### Water Rescue

[www.mfc-survival.com](http://www.mfc-survival.com)



### Vehicle Recovery

Tel: +44 (0) 1443 433 075



### Mountain Rescue

[sales@mfc-survival.com](mailto:sales@mfc-survival.com)



Images not to Scale  
**FEATURES:** ● = PARTIAL  
**FEATURE** ■ ■ ■ = Option  
**N/A** = info Not Available/  
 not given



| COMPANY  | MATJACK                               | MATJACK                               | MATJACK                                   | MATJACK                                   | MATJACK                                 |
|--|---------------------------------------|---------------------------------------|---|---|---|
| MODEL  | 2.5t 2418 Cushion                     | 3.6t 3024 Cushion                     | 5.8t 3618 Cushion                         | 5.8t 3630 Cushion                         | 8t 4848 Cushion                         |
| CODE NUMBER  | L102 L102G                            | L103 L103G                            | L105 L105G                                | L107 L107G                                | L112 L112G                              |
| ORIGIN   |                                       |                                       |   |   |   |
| COST inc tax / VAT                                   | N/A                                   | N/A                                   | N/A                                       | N/A                                       | N/A                                     |
| WEIGHT exc inflation eqpt                            | 00kg / 00lb                           | 00kg / 00lb                           | 00kg / 00lb                               | 00kg / 00lb                               | 00kg / 00lb                             |
| DEFLATED DIMENSIONS<br>Length x Width x Height/depth | 61 x 61 x 2.5-7.6cm<br>24 x 24 x 1-3" | 76 x 76 x 2.5-7.6cm<br>30 x 30 x 1-3" | 91.4 x 91.4 x 2.5-7.6cm<br>36 x 36 x 1-3" | 91.4 x 91.4 x 2.5-7.6cm<br>36 x 36 x 1-3" | 122 x 122 x 2.5-7.6cm<br>48 x 48 x 1-3" |
| INFLATED HEIGHT                                      | 45.7cm / 18"                          | 61cm / 24"                            | 45.7cm / 18"                              | 76.2cm / 30"                              | 122cm / 48"                             |
| LIFT CAPACITY  | 2.2 tonnes / 2.5Uston                 | 3.26 tonnes / 3.6Uston                | 5.2 tonnes / 5.8Uston                     | 5.2 tonnes / 5.8Uston                     | 7.1 tonnes / 8Uston                     |
| MAX PRESSURE PRV                                     | 0.7BAR / 10psi                        | 0.7BAR / 10psi                        | 0.7BAR / 10psi                            | 0.7BAR / 10psi                            | 0.62BAR / 9psi                          |
| MAX AIR VOLUME                                       | 00L / 00cuft                          | 00L / 00cuft                          | 00L / 00cuft                              | 00L / 00cuft                              | 00L / 00cuft                            |
| HANDLES/EYES HI-VIZ                                  | - - -                                 | - - -                                 | - - -                                     | - - -                                     | - - -                                   |
| MATERIALS  | Hypalon/Neoprene                      | Hypalon/Neoprene                      | Hypalon/Neoprene                          | Hypalon/Neoprene                          | Hypalon/Neoprene                        |
| NOTES  | L102G=Grip top surface                | L103G=Grip top surface                | L105G=Grip top surface                    | L107G=Grip top surface                    | L112G=Grip top surface                  |
| WEBSITE  | matjack.com                           | matjack.com                           | matjack.com                               | matjack.com                               | matjack.com                             |


Images not to Scale  
**FEATURES:** ● = PARTIAL  
**FEATURE** ■ ■ ■ = Option  
**N/A** = info Not Available/  
 not given















| COMPANY  | MFC INTERNATIONAL      | MFC INTERNATIONAL      | MFC INTERNATIONAL       | MFC INTERNATIONAL     | MFC INTERNATIONAL     |
|--|------------------------|------------------------|-------------------------|-----------------------|-----------------------|
| MODEL  | BK- 1 Bar              | CK- 1 Bar              | DK- 1 Bar               | A- 0.5 Bar            | B- 0.5 Bar            |
| CODE NUMBER  | LB0020/003             | LB0021/003             | LB0022/003              | LB0015                | LB0016                |
| ORIGIN   |                        |                        |                         |                       |                       |
| COST inc tax / VAT                                   | N/A                    | N/A                    | N/A                     | N/A                   | N/A                   |
| WEIGHT exc inflation eqpt                            | 17kg / 37.5lb          | 22.5kg / 49.6lb        | 25kg / 55.1lb           | 15kg / 33lb           | 17kg / 37.5lb         |
| DEFLATED DIMENSIONS<br>Length x Width x Height/depth | 76 x 5cm<br>30 x 2"    | 91 x 5cm<br>36 x 2"    | 122 x 10cm<br>48 x 4"   | 61 x 5cm<br>24 x 2"   | 76 x 5cm<br>30 x 2"   |
| INFLATED HEIGHT                                      | 59cm / 23.2"           | 61cm / 61"             | 100cm / 39.3"           | 43cm / 17"            | 59cm / 23"            |
| LIFT CAPACITY  | 4.65 tonnes / 5.1Uston | 3347kg / 00lb          | 11.9 tonnes / 13.1Uston | 1.5 tonnes / 3280lb   | 2.32 tonnes / 5125lb  |
| MAX PRESSURE PRV                                     | 1BAR / 14.5psi ■       | 1BAR / 14.5psi ■       | 1BAR / 14.5psi ■        | 0.5BAR / 7.3psi ■     | 0.5BAR / 7.3psi ■     |
| MAX AIR VOLUME                                       | 620L / 22cuft          | 900L / 31.7cuft        | 3010L / 106cuft         | 222L / 7.8cuft        | 450L / 15.9cuft       |
| STACK/CONNECT HI-VIZ                                 | - 8 x ■ ■ ■            | - 8 x ■ ■ ■            | - 8 x ■ ■ ■             | - 8 x ■ ■ ■           | - 8 x ■ ■ ■           |
| MATERIALS  | Neoprene-coated Kevlar | Neoprene-coated Kevlar | Neoprene-coated Kevlar  | Hypalon-coated Nylon  | Hypalon-coated Nylon  |
| NOTES  | 8 web eyes             | 8 web eyes             | 8 web eyes              | Pressure Relief Valve | Pressure Relief Valve |
| WEBSITE  | mfc-international.com  | mfc-international.com  | mfc-international.com   | mfc-international.com | mfc-international.com |



# LOW/MED PRESSURE AIRBAGS

|   |   |   |  |   |   |
|---|---|---|--|---|---|
|   |  |  |  |  |  |
| <b>MATJACK</b>  | <b>MATJACK</b>  | <b>MATJACK</b>  | <b>MATJACK</b>   | <b>MATJACK</b>  | <b>MFC INTERNATIONAL</b>  |
| <b>10t Cushion</b>  | <b>8400 Med 1</b>   | <b>13000 Med 2</b>  | <b>18000 Med 3</b>   | <b>33600 Med 4</b>  | <b>AK- 1 Bar</b>  |
| L122G   | MJ8000  | MJ13000   | MJ18000  | L122G   | LB0019/003  |
|  |  |  |   |  |  |
| N/A   | N/A   | N/A   | N/A  | N/A   | N/A   |
| 00kg / 00lb   | 7.7kg / 17lb  | 12.25kg / 27lb  | 16.3kg / 36lb  | 31.75kg / 70lb  | 15kg / 33lb   |
| 122 x 122 x 2.5-7.6cm<br>48 x 48 x 1-3"   | 61 x 2.5-7.6cm<br>24 x 1-3"   | 75 x 2.5-7.6cm<br>30 x 1-3"   | 91.4 x 2.5-7.6cm<br>36 x 1-3"  | 122 x 10cm<br>48 x 4"   | 61 x 5cm<br>24 x 2"   |
| 212cm / 84"   | 43cm / 17"  | 61cm / 24"  | 61cm / 24"   | 93.5cm / 37"  | 43cm / 17"  |
| 9.1 tonnes / 10Uston  | 1.76 tonnes / 00Uston   | 5.9 tonnes / 6.5Uston   | 8.6 tonnes / 0Uston  | 15.25tonnes / 16.8Uston   | 2.9 tonnes / 3.2Uston   |
| 0.48BAR / 7psi  | 1BAR / 14.5psi  | 1BAR / 14.5psi  | 1BAR / 14.5psi   | 1BAR / 14.5psi  | 1BAR / 14.5psi  |
| 00L / 00cuft  | 290L / 00cuft   | 560L / 00cuft   | 00L / 00cuft   | 00L / 00cuft  | 295L / 10.4cuft   |
| - - -   | - 2 x   | - 2 x   | - 8 x  | - 4 x   | - 8 x   |
| Hypalon/Neoprene  | Aramid reinforced<br>Neoprene   | Aramid reinforced<br>Neoprene   | Aramid reinforced<br>Neoprene  | Aramid reinforced<br>Neoprene   | Neoprene-coated Kevlar  |
| Grip surface on top   | 8 web eyes  | 8 web eyes  | 8 web eyes   | 8 web eyes  | 8 web eyes  |
| matjack.com   | matjack.com   | matjack.com   | matjack.com  | matjack.com   | mfc-international.com   |

|   |   |   |  |   |   |
|---|---|---|--|---|---|
|   |  |  |  |  |  |
| <b>MFC INTERNATIONAL</b>  | <b>MFC INTERNATIONAL</b>  | <b>MFC INTERNATIONAL</b>  | <b>MFC INTERNATIONAL</b>   | <b>MFC INTERNATIONAL</b>  | <b>MFC INTERNATIONAL</b>  |
| <b>C- 0.5 Bar</b>   | <b>D- 0.5 Bar</b>   | <b>120- High Lift</b>   | <b>210 - High Lift</b>   | <b>2-Tier</b>   | <b>3-Tier</b>   |
| LB0017  | LB0018  | LB0077  | LB0078   | LB0067  | LB0068  |
|  |  |  |   |  |  |
| N/A   | N/A   | N/A   | N/A  | N/A   | N/A   |
| 22.5kg / 49.6lb   | 25kg / 49.6lb   | 38.5kg / 85lb   | 48.5kg / 107lb   | 10kg / 85lb   | 48.5kg / 107lb  |
| 91 x 5cm<br>36 x 2"   | 122 x 10cm<br>48 x 4"   | 135 x 10cm<br>53 x 4"   | 145 x 10cm<br>57 x 4"  | 55 x 45 x 5cm<br>21.7 x 17.7 x 2"   | 55 x 45 x 5cm<br>21.7 x 17.7 x 2"   |
| 61cm / 24"  | 100cm / 39"   | 120cm / 47"   | 210cm / 83"  | 40cm / 15.7"  | 60cm / 23.6"  |
| 3.34 tonnes / 7379lb  | 5.95 tonnes / 13120lb   | 7.2 tonnes / 15800lb  | 9 tonnes / 19800lb   | 2.1 tonnes / 0lb  | 1.8 tonnes / 00lb   |
| 0.5BAR / 7.3psi   | 0.5BAR / 7.3psi   | 0.5BAR / 7.3psi   | 0.5BAR / 7.3psi  | 1BAR / 14.5psi  | 1BAR / 14.5psi  |
| 673L / 23.8cuft   | 1900L / 67.1cuft  | 2500L / 88cuft  | 5200L / 184cuft  | 110L / 00cuft   | 150L / 00cuft   |
| - 8 x   | - 8 x   | - - -   | - - -  | * * *   | * * *   |
| Hypalon-coated Nylon  | Hypalon-coated Nylon  | Neoprene-coated Nylon   | Neoprene-coated Nylon  | Hypalon-coated Nylon  | Hypalon-coated Nylon  |
| Pressure Relief Valve   | Pressure Relief Valve   | 0.5 Bar Pressure Relief<br>Valve  | 0.5 Bar Pressure Relief<br>Valve   | * * Pre-connected/stacked<br>but individually inflated.                               | * * Pre-connected/stacked<br>but individually inflated.                               |
| mfc-international.com   | mfc-international.com   | mfc-international.com   | mfc-international.com  | mfc-international.com   | mfc-international.com   |

Images not to Scale

FEATURES: ● = PARTIAL  
FEATURE ■■■ = Option  
N/A = info Not Available/  
not given



| COMPANY  | PARATECH                                       | PARATECH                                       | PARATECH                                       | PARATECH                                       | SIT   |
|--|--|--|--|--|---|
| MODEL  | AK 3.3ton                                      | BK 5.1ton                                      | CK 7.4ton                                      | AK 13.7ton                                     | OO  |
| CODE NUMBER  | 22-887005K                                     | 22-887010K                                     | 22-887015K                                     | 22-887020K                                     | -   |
| ORIGIN   |  |  |  |  |   |
| COST inc tax / VAT                                   | N/A  | N/A  | N/A  | N/A  | N/A   |
| WEIGHT exc inflation eqpt                            | 15kg / 35lb                                    | 17kg / 38lb                                    | 22kg / 50lb                                    | 25kg / 56lb                                    | 00kg / 00lb   |
| DEFLATED DIMENSIONS<br>Length x Width x Height/depth | 61 x 5cm<br>24 x 2"                            | 76 x 5cm<br>30 x 2"                            | 91 x 5cm<br>36 x 2"                            | 122 x 10cm<br>48 x 4"                          | 00 x 00cm<br>0 x 00"  |
| INFLATED HEIGHT                                      | 43cm / 17"                                     | 59cm / 23"                                     | 61cm / 24"                                     | 100cm / 39.4"                                  | 00cm / 00"  |
| LIFT CAPACITY  | 3 tonnes / 6560lb                              | 4.6 tonnes / 10250lb                           | 6.7 tonnes / 14761lb                           | 11.9 tonnes / 26248lb                          | 00 tonnes / 00Uston   |
| MAX PRESSURE PRV                                     | 1BAR / 14.7psi ■                               | 1BAR / 14.7psi ■                               | 1BAR / 14.7psi ■                               | 1BAR / 14.7psi ■                               | 00BAR / 00psi   |
| MAX AIR VOLUME                                       | 295L / 10.4cuft                                | 620L / 22cuft                                  | 895L / 31.6cuft                                | 3002L / 106cuft                                | 00L / 00cuft  |
| HANDLES/EYES HI-VIZ                                  | - 8 x ■●                                       | - 8 x ■●                                       | - 8 x ■●                                       | - 4 x ■●                                       | 1 x ■ - ■   |
| MATERIALS  | Neoprene-coated<br>Aramid, Kevlar reinforced   | Neoprene-coated<br>Aramid, Kevlar reinforced   | Neoprene-coated<br>Aramid, Kevlar reinforced   | Neoprene-coated<br>Aramid, Kevlar reinforced   |   |
| NOTES  | 8x web eyes                                    | 8x web eyes                                    | 8x web eyes                                    | 8x web eyes                                    | NB: SIT Ltd make ma<br>bags for other compa<br>rather than selling dire<br>customers. |
| WEBSITE  | <a href="http://paratech.com">paratech.com</a> | <a href="http://paratech.com">paratech.com</a> | <a href="http://paratech.com">paratech.com</a> | <a href="http://paratech.com">paratech.com</a> | <a href="http://sitltd.com">sitltd.com</a>  |

















Images not to Scale

FEATURES: ● = PARTIAL  
FEATURE ■■■ = Option  
N/A = info Not Available/  
not given



| COMPANY  | TRELLEBORG   | TRELLEBORG   | TRELLEBORG   | TRELLEBORG   | TRELLEBORG   |
|--|--|--|--|--|--|
| MODEL  | Sava MS45 4.4ton                                   | Sava MS122 7.7ton                                  | Sava MS210 9.9ton                                  | Sava Catch Bag SCB1                                | Sava Catch Bag S                                   |
| CODE NUMBER  | 527296   | 527297   | 527298   | 574577   | 596823   |
| ORIGIN   |  |  |  |  |  |
| COST inc tax / VAT                                   | N/A  | N/A  | N/A  | N/A  | N/A  |
| WEIGHT exc inflation eqpt                            | 16kg / 35lb  | 30kg / 66lb  | 43kg / 95lb  | 22kg / 50lb  | 17kg / 37lb  |
| DEFLATED DIMENSIONS<br>Length x Width x Height/depth | 102 x 10cm<br>40 x 4"                              | 135 x 10cm<br>53 x 4"                              | 145 x 10cm<br>57 x 4"                              | 140/100 x 10cm<br>55/39 x 4"                       | 110/80 x 10cm<br>43/31 x 4"                        |
| INFLATED HEIGHT                                      | 45cm / 18"   | 122cm / 48"  | 210cm / 83"  | 00cm / 00"   | 00cm / 00"   |
| LIFT CAPACITY  | 4 tonnes / 00Uston                                 | 7 tonnes / 00Uston                                 | 9 tonnes / 00Uston                                 | 00 tonnes / 00Uston                                | 00 tonnes / 00Uston                                |
| MAX PRESSURE PRV                                     | 0.5BAR / 7.3psi ■                                  | 0.5BAR / 7.3psi ■                                  | 0.5BAR / 7.3psi ■                                  | <0.2BAR / 00psi                                    | <0.2BAR / 00psi                                    |
| MAX AIR VOLUME                                       | 551L / 20cuft                                      | 2618L / 93cuft                                     | 5199L / 184cuft                                    | 2000L / 71cuft                                     | 1320L / 46cuft                                     |
| STACK/CONNECT HI-VIZ                                 | - - -  | - - -  | - - -  | - 4 x ■■   | - 4 x ■■   |
| MATERIALS  |  |  |  |  |  |
| NOTES  | 1/2" female valve                                  | 3/4" Male Valve                                    | 3/4" Male Valve                                    | Can be inflated with an<br>electric/gas blower     | Can be inflated with<br>electric/gas blower        |
| WEBSITE  | <a href="http://trelleborg.com">trelleborg.com</a> | <a href="http://trelleborg.com">trelleborg.com</a> | <a href="http://trelleborg.com">trelleborg.com</a> | <a href="http://trelleborg.com">trelleborg.com</a> | <a href="http://trelleborg.com">trelleborg.com</a> |

# LOW/MED PRESSURE AIRBAGS

|   |   |   |   |   |   |
|---|---|---|---|---|---|
|                        |   |   |   |   |   |
| <b>SIT</b>  | <b>SIT</b>  | <b>TRELLEBORG</b>   | <b>TRELLEBORG</b>   | <b>TRELLEBORG</b>   | <b>TRELLEBORG</b>   |
| <b>00</b>   | <b>00</b>   | <b>Sava MA 3ton</b>   | <b>Sava MB 4.7ton</b>   | <b>Sava MC 6.7ton</b>   | <b>Sava MD 12ton</b>  |
| -   | -   | 521478  | 521479  | 521481  | 521482  |
|                      |                      |          |          |          |          |
| N/A   | N/A   | N/A   | N/A   | N/A   | N/A   |
| 00kg / 00lb   | 00kg / 00lb   | 7.5kg / 17lb  | 12kg / 27lb   | 15kg / 33lb   | 35kg / 77lb   |
| 00 x 00cm<br>0 x 00"  | 00 x 00cm<br>0 x 00"  | 61 x 5cm<br>24 x 2"   | 76 x 5cm<br>30 x 2"   | 91 x 5cm<br>36 x 2"   | 122 x 8cm<br>48 x 3"  |
| 00cm / 00"  | 00cm / 00"  | 43cm / 17"  | 59cm / 23"  | 61cm / 24"  | 100cm / 39"   |
| 00 tonnes / 00Uston   | 00 tonnes / 00Uston   | 3 tonnes / 10250lb  | 4.7 tonnes / 14761lb  | 6.7 tonnes / 00Uston  | 13.2 tonnes / 00Uston   |
| 00BAR / 00psi   | 00BAR / 00psi   | 1BAR / 14.5psi  | 1BAR / 14.5psi  | 1BAR / 14.5psi  | 1BAR / 14.5psi  |
| 00L / 00cuft  | 00L / 00cuft  | 251L / 9cuft  | 535L / 19cuft   | 793L / 28cuft   | 2337L / 83cuft  |
| 1 x                  | 1 x                  |          |          |          |          |
| NB: SIT Ltd make many bags for other companies rather than selling direct to customers.<br>sitltd.com | NB: SIT Ltd make many bags for other companies rather than selling direct to customers.<br>sitltd.com | 8x web eyes.<br>3/8" male valve<br>trelleborg.com   | 8x web eyes<br>trelleborg.com   | trelleborg.com  | trelleborg.com  |
|                     |   |      |   |   |   |
| <b>VETTER</b>   | <b>VETTER</b>   | <b>VETTER</b>   | <b>VETTER</b>   | <b>WEBER RESCUE</b>   | <b>WEBER RESCUE</b>   |
| <b>1/6</b>  | <b>1/9</b>  | <b>1/13</b>   | <b>1/23</b>   | <b>W6 1-Bar</b>   | <b>W13 1-Bar</b>  |
| -   | -   | -   | -   | -   | -   |
|                    |                    |        |        |        |        |
| N/A   | N/A   | N/A   | N/A   | N/A   | N/A   |
| 00kg / 00lb   | 00kg / 00lb   | 00kg / 00lb   | 00kg / 00lb   | 7.5kg / 00lb  | 15kg / 00lb   |
| 00 x 00cm<br>0 x 00"  | 00 x 00cm<br>0 x 00"  | 00 x 00cm<br>0 x 00"  | 00 x 00cm<br>0 x 00"  | 61 x 00cm<br>0 x 00"  | 91 x 00cm<br>0 x 00"  |
| 00cm / 00"  | 00cm / 00"  | 00cm / 00"  | 00cm / 00"  | 43cm / 00"  | 61cm / 00"  |
| 00 tonnes / 00Uston   | 00 tonnes / 00Uston   | 00 tonnes / 00Uston   | 00 tonnes / 00Uston   | 3 tonnes / 00Uston  | 6.7 tonnes / 00Uston  |
| 00BAR / 00psi   | 00BAR / 00psi   | 00BAR / 00psi   | 00BAR / 00psi   | 1BAR / 14.5psi  | 1BAR / 14.5psi  |
| 00L / 00cuft  | 00L / 00cuft  | 00L / 00cuft  | 00L / 00cuft  | 00L / 00cuft  | 00L / 00cuft  |
| - 8 x              | - 8 x              | - 8 x  | - 8 x  | - 8 x  | - 8 x  |
| vetter-rescue.com   | vetter-rescue.com   | vetter-rescue.com   | vetter-rescue.com   | weber-rescue.com  | weber-rescue.com  |



**UPDATED Feb '25**

# HEAVY DUTY, USAR-CAPABLE LIFTING FRAMES

Our **ROPE EQUIPMENT BUYERS GUIDE** contains a full list of Tripods/Quadpod and other AHDs (Artificial High Directionals) but we have modified that list for USAR to only those with minimum lift capacity of 400kg/just under half a US ton. This is because, in rope rescue, all tripods and frames are capable of lifting or lowering live-loads, whether that be a rescuer, a victim or a rescuer *and* victim in a stretcher rarely exceeding 300kg. Here we are concerned more with the ability to use a device to lift and shift collapse materials - concrete, metal, wooden beams etc. Airbags and hydraulics can of course be used to lift or spread very heavy objects but only a heavy duty AHD enables you to lift and shift to one side if only by a foot or two or to lift over large distances with a suitably strong pulley system or winch (see separate Guide on page 290). This is much easier with the gantry style frames but any tripod configuration will allow some lateral movement if you have guyed the top sufficient to counter any load moving outside of the prescribed footprint. If you were careful enough with your load monitoring you could use any tripod/AHD so our roughly half ton cut-off will be deemed to be too arbitrary by some but we have to draw the line somewhere in determining what constitutes 'Heavy Duty'. The *Skedco* and *Lyon Obelisk* models for instance could feel aggrieved that their tripods are just as strong as some we have included, they just choose to list a more conservative max load figure and there are others that may well be listing a load capacity that is misleading at best but we can only go with their stated figures. Consult the **ROPE EQUIPMENT** guide for a full list and for a more detailed background to rope-rescue AHDs.

There are 7 distinct types of stand-alone AHDs:

- 1) **MONOPOD** - single leg with anchor points on the head for back-stays as well as a main attachment for the lowering system. *TerrAdaptor* version shown left.
- 2) **BIPOD/A-FRAME** - two legs which can luff out beyond an edge if properly guyed.
- 3) Traditional **TRIPOD** with a fixed head and attached legs
- 4) Traditional **QUADPOD** with a fixed head and attached legs
- 5) **BEAM** where a gantry is created between two sets of legs to span much wider gaps or trenches.
- 6) **MULTIPOD** which is a modular system of detachable legs, head(s) and components capable of creating a tripod, and bipod and often a



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monopod depending on head-anchor configurations.  
7) **TETRAPOD/TETRAHEDRAL FRAME**; which used to be just the Australian Larkin Frame but there is now some competition. This is effectively a pyramidal shape (or two pyramids joined) with a rigid frame

connecting the three feet together and tipped over so that it pivots on the edge created between two legs - simple genius. This is a true luffing frame in that the load-head can be safely moved in-board of the edge for safe rigging by pulling down on the rear 'tail' of the frame. When ready that same tail is then lifted (under strict control) so that the head and load are luffed out beyond the edge so that all ropes clear the edge and edge negotiation is safe and simple.

## HEAVY-DUTY SHORING STRUT SYSTEMS

We could also have a 7th class for modular crossovers from USAR, but while these are radically different, the end product is still one of the previous 6 classes, just a lot, lot, lot stronger! These are structural shoring struts that can be combined with specialist heads and feet to create a gin-pole, bipod or tripod. The AHD guide in our **USAR/EXTRICATION BUYERS GUIDE** gives greater detail on their uses outside of rope rescue. *Airshore* pioneered the tripod adjunct and in fact the largest tripod we ever had was an enormous and very unwieldy beast made of *Airshore*'s two or three largest struts plus their largest extensions connecting to a solid machined head (and machined plates for feet) that were strong enough to support collapsed structures.

These were in fact, seen inside the Pentagon as columns supporting the ceilings following the 9.11 attacks. These also made great large animal rescue tripods able to support weights far in excess





# HEAVY DUTY LIFTING FRAMES



of regular tripods so we used it for cows and horses and In the image below from 2013, Cornwall Fire&Rescue service in the UK were still using the *Airshore* tripod to good effect. *Paratech* then took up the challenge with their version and latterly we have had perhaps the slickest offering from *Holmatro* with their *OmniShore* system (pic opp) . Unlike regular rope access and rescue tripods the modular shoring systems have two unique tricks up their sleeve

1) they are often pneumatic, hydraulic and electric extension as well as the more usual manual so they can actually be manipulated under load or at least under tension - you can adjust the length of one or more legs over short distances - we thought it worth a mention as we once found it very useful in freeing a piece of jammed hardware that was operating way outside of normal margins.

2) Load cell monitors are available (*Holmatro* has a bespoke system and *Paratech* uses the '*Guardian Angel*' system -pic above right) that can tell you exactly what loads are being applied. These kinds of tripod systems really are the shire-horses of the industry enabling you to attempt tasks that would otherwise be impossible or risky at best. They are of course, not light. The machined head alone on our old *Airshore* weighed as much as an entire mountain rescue tripod. Even today, slick though these things are, you can tell that they are geared more towards an Urban Search & Rescue environment than they are a remote gorge. Top-right is *Holmatro*'s sophisticated 8.7kg tripod head with an integral, rotating rigging plate for the main load lines, an integral pulley sheave and no less than 8 stainless

attachments are mounted bilaterally while the third is extended and rotates freely to be connected in a 'lazy-leg' configuration if required. More on this shortly. In monopod or gin pole configuration you can really see the difference in bulk - above is *Holmatro*'s 3.2kg/7.1lb monopod head while *Harken*/*SMC*'s rather more mountain orientated *Space Station* right it is around half the weight at 1.8kg/4lb and the *Arizona Vortex* head below-left is almost half the weight again at 1kg/2.2lb.

Right: One of two heavy-duty USAR tripod/bipods by vehicle rescue specialist Res-Q-Jack which can utilise their 'winch' used on all-in-one struts to effect a lift and/or extend the legs.



## LIGHT ALLOY MODULAR SYSTEMS

Light alloy, modular systems like TerrAdaptor and AZV are primarily for rope rescue and are lighter for a reason - they need to be transportable into remote areas via light, all-terrain vehicles or human/animal transport. The tripods/AHDs in this guide, on the other hand, are larger, longer and heavier and need to be transported by larger vehicles and fire trucks etc. Nevertheless, as mentioned in the opening paragraph, many of the lighter rope rescue models will easily perform lighter USAR tasks, particularly load support and stabilisation rather than heavy-lift so be sure to check the models in our **ROPE EQUIPMENT BUYERS GUIDE**.

## FIXED HEAD TRIPODS

Rather than attaching a modular head some have the legs and head permanently attached to each other and you simply fold everything inwards for storage and transportation in one bag. As with all lightweight AHDs the legs telescope and pin in place to give shorter or greater working height. The majority of tripods and certainly all square/rectangular section AHDs, will accept some kind of mount for a winch and this is most common in industrial 'con-space' tripods. There was a time when virtually all tripods used for industrial access and rescue were one-piece, fixed head tripods and these are still the cheapest option but they do have quite specific and limited applications - they are great for over-hole entries but can still help with stabilisation and lifting lumps of masonry or timber. It is best to use lighter fixed and modular head tripods within their footprint where their load capacity is highest directly beneath the head.

## FOOT RESTRAINTS

USAR tripods and tripod systems tend to have extremely strong foot attachments, far stronger than rope rescue tripods that tend to use a narrow profile swivel foot on a few inches wide. In contrast many USAR tripods have a big, load bearing footprint derived from their shoring and stabilisation uses and a range of different designs from wide swivels with multiple anchor points like this *Holmatro OmniShore* to smaller but no less strong (and heavy) feet around 4"/10cm square like this *Res-Q-Jack* model. Notwithstanding that some tripods may be erected with all legs at different lengths on a rubble pile, it is still the case that they all be linked with rope, web or chain to atop the risk of spreading. Some heads are spread-limiting but it is still a good habit to retain unless the restraints are getting your way. Most have eyes or larger attachment rings on the foot or at the base of the legs - these can have a rope threaded or simply clip in a carabiner and adjust the rope, webbing or chain to allow the required spread. On these heavier-duty tripods such rings/eyes are virtually always capable of full load bearing for hauling and progress capture.



## LAZY-LEG

In the image above of *Eyolf's Pythagorus* system you can see that the two forward legs are hard up against the edge, in this case at around 90 degrees to the vertical rather than angled forward like the *SAR Products Quadpod* below. The single leg at

the rear is a lazy-leg in that it takes very little of the load that is applied to the A-frame legs, in fact virtually none until or unless the load moves in-board of the edge. Instead, its function here is to offer stability and security to the two A-frame legs to restrict rearward movement. It can also be used to increase the footprint for spanning larger holes or gaps than an equilateral tripod/quadpod might offer and to bridge uneven height. Most lazy leg head attachments allow greater rotation and in the case of some round-tube models, can be adjusted through the head and locked to alter the length. All legs on the AZV and TerrAdaptor can extend through and beyond the head to be locked into place with pins.

**STANDARDS:** As usual, European CE are the most comprehensive and applicable across the work and rescue spectrum but there are several that apply from anchors and PPE fall restraint to Machinery Directive but EN795-B for mobile anchor devices is probably best. For rescue applications NFPA is always a good indication of a bombproof product but we are seeing a move away from large & heavy in rescue driven by the tactical and wilderness markets so NFPA may end up needing a category below 'T' for Technical.



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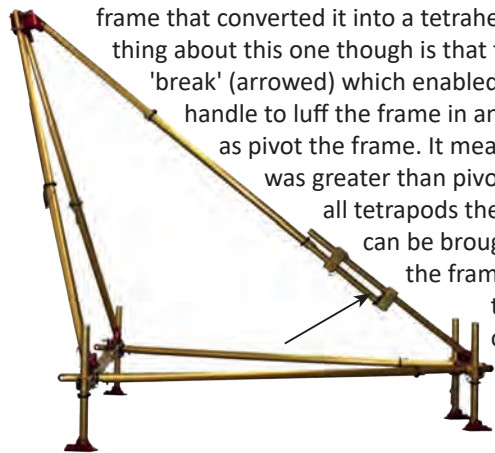
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## TETRAHEDRAL FRAMES (TETRAPODS)

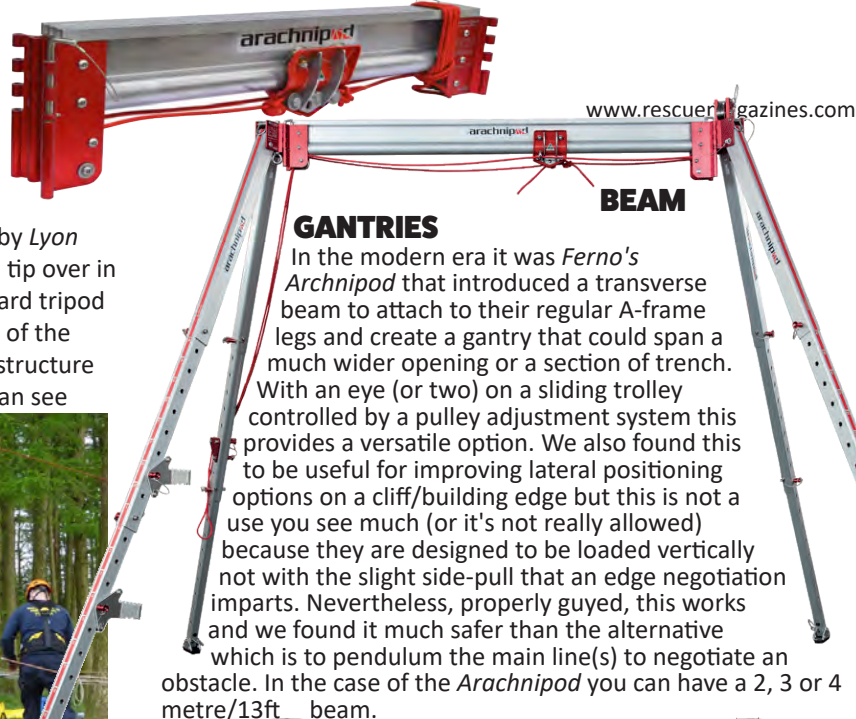
We're calling this a TETRAPOD. The iconic *Larkin Frame* from Australia (distributed outside Oz by *Lyon Equipment* in the UK) is an offset pyramid which you tip over in order to clear an edge or it can sit upright in a standard tripod configuration except with solid leg restraints instead of the usual webbing or rope! The *Larkin* is a simple, fixed structure but is nonetheless very versatile. In this image you can see



how guying and manoeuvring the 'tail' of the frame allows the head to clear an edge by quite a large margin. The frame pivots on two feet and there are pulleys on fixed eyes at the two top corners of the frame. We only know of two competitive designs to this, one is another of our old favourites - the *SRTe OzPod* which was taken over by *DB Sala's Rollgliss* and then *3M* and then disappeared along with all *SRTe* gear. The *Ozpod* was a modular system comprising a tripod (or A-Frame) and a base frame that converted it into a tetrahedral frame. The interesting thing about this one though is that the frame had a hinged 'break' (arrowed) which enabled you to pull back on a handle to luff the frame in and out under load as well as pivot the frame. It meant that edge clearance was greater than pivoting the frame alone. Like all tetrapods the rescuer and casualty can be brought inboard within (or on) the frame rather than close to the edge. The tripod part of this *Ozpod* still seems to be produced by or on behalf of *Skedco* in the US. A more recent version, though by

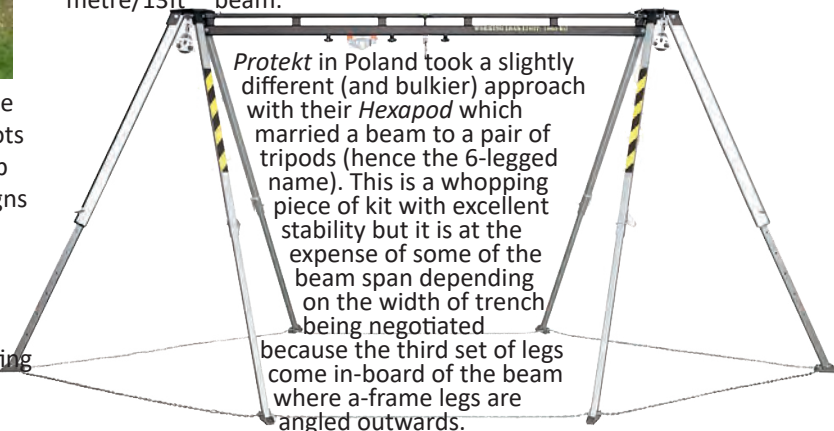


no means new, is *Kong's Grizzly*. This differs in having no rigid section between the two feet - what would be one of the edges of the pyramid. Like the *OzPod*, this is modular in that the legs or poles can be used to create a bespoke monopod (inset pic) and bipod. The components shackle together with the shackle then creating load bearing eyes at each corner. Multipods and tetrapods can take longer to set up than more basic tri/quadpods, we required a single rescue technician to set up the *Ozpod* as shown above within 5 minutes, no mean feat. In contrast a much simpler tri/quadpod will go up in a couple of minutes and a modular and tetrapod in 3-5 minutes. None of these times include attaching stays/rigging.



## GANTRIES

In the modern era it was *Ferno's Archnipod* that introduced a transverse beam to attach to their regular A-frame legs and create a gantry that could span a much wider opening or a section of trench. With an eye (or two) on a sliding trolley controlled by a pulley adjustment system this provides a versatile option. We also found this to be useful for improving lateral positioning options on a cliff/building edge but this is not a use you see much (or it's not really allowed) because they are designed to be loaded vertically not with the slight side-pull that an edge negotiation imparts. Nevertheless, properly guyed, this works and we found it much safer than the alternative which is to pendulum the main line(s) to negotiate an obstacle. In the case of the *Archnipod* you can have a 2, 3 or 4 metre/13ft beam.



Then there's the *Obelisk* from *Lyon Eqpt* in the UK. They came up with a true cross between a quadpod and a manageable sized beam gantry with a very slick trolley system that's about as bombproof as they come. Their stainless steel beam is only 40cm/15" wide but can take one or two sliding eyes that then fix into position with plunge-pins. *SAR Products*, also in the UK have a *Multipod* that also has moveable eyes albeit with fewer fix positions. Both of these give you some options when positioning the load. As a modular head there is scope for both *Lyon* and *SAR Products* to expand the beam options should demand require it. The *SAR Products* head is not as slick as *Lyon's* but it does offer a tripod option as well as a quadpod.

## VARIOUS OTHER FEATURES

There are often a number of variants of similar tripods and it is sometimes difficult to decide what constitutes a distinct model and what is too small a variation to warrant a separate entry, especially where industrial access is concerned. The rescue models tend to be more distinct as complete kits. *Mittelmann* for instance have 4 models but the *Mid* is simply a half height version of the *Uni* and the *Octopus* has fixed suction cup feet instead of either the regular round or swivelling feet. We've included the *Uni* with the *Mid* as a variant and the *Mini* with the *Octopus* as a variant. *Protekt* too have many variations on their models which you will need to explore yourself but we



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have included no less than 6 key models (and excluded their small wheeled model altogether!). The *Arachnipod* is a very complex system with numerous kit options for the tripod, quadpod and beam systems that we could not hope to list separately in this guide - there are 8 variations on the one tripod - so our prices give the most basic rescue model to the most complex but even that can be augmented with more optional extras. Above is the previously discussed *Obelisk* head made of stainless steel and this one small detail could make a lot of difference to your purchase if you operate in a marine/sea cliff environment where regular steel and aluminium alloys will degrade unless kept scrupulously clean and dry.

Very few models provide numbering on their adjustment holes and yet we have always contested that this is an incredibly useful (and simple) feature to ensure correct assembly when you're in a rush, in the dark in poor weather conditions. Of course industry drives much of the AHD development and they don't care so much - it's an extra cost they don't need. Lyon's *Obelisk* for instance is available with number for an additional charge. The *Arachnipod* remains the finest proponent of clear markings with numbers and letters on the top and bottom sections to really ensure there are no mix ups. Their standard feet above show just how clear their marking is, at least while the tripod is new. It's worth maintaining these markings with your own resin paint or marker. These feet also exhibit five features already covered -

1) a swivelling foot that is 2) detachable so that you swap in larger or more specialist feet. 3) A tactile/grippy base for

smooth, hard surfaces. 4) A hole for driving in a ground stake and 5) a pointed or spiky end that can dig into softer ground.



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Talking of feet, two or three models have suction cup feet intended to be used for tank and silo entry but only where you have a relatively clean, non-rusty surface. On site industrial rescue teams may opt for these as their dedicated feet but broad-spectrum teams would be better suited to a modular foot. Nevertheless, in the right situations these suction cup feet are excellent providing the best traction you will get on a shiny surface. They are basically glass cups using a vacuum lever to suck the cup onto the surface. The *Mittelmann's Octopus* above also has scaffolding style tubes around the frame which we suppose you could jerry-rig to any round-tube frame but these are bespoke sizing and powder-coating. They provide securing for leg restraint (above the metal surface of the tank), extra handholds for entry/egress extra and can also assist in wedging the frame against other surfaces/walls adjacent the entry point. Mittelmann also sell some 'right angles' that secure on the inside of tripod legs (with the base of the angle flush to the ground) to give hole-entrants something to hold onto as they go in or exit.



*Protekt* and *Ferno* have steps attached to the leg to aid in rigging or tending the head once erected and similarly

*Ferno* also offer a universal hardware attachment plate for connecting pretty much

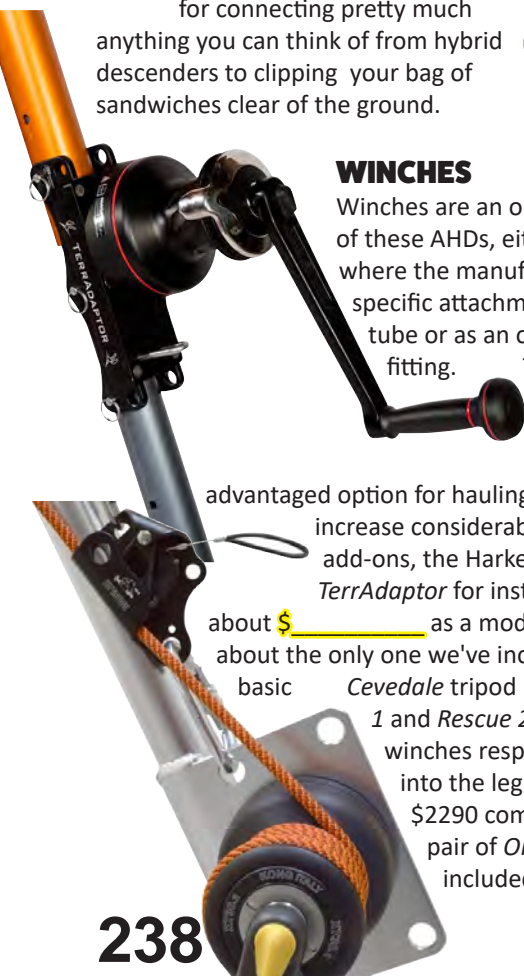
anything you can think of from hybrid descenders to clipping your bag of sandwiches clear of the ground.



## WINCHES

Winches are an option on virtually all of these AHDs, either as a bespoke item where the manufacturer can supply a specific attachment to fit the type of tube or as an off-the shelf universal fitting. This can then have a hand winch attached to a leg to provide a smoother, mechanically

advantaged option for hauling and lowering. Costs increase considerably for any of these add-ons, the *Harken* hand winch on this *TerrAdaptor* for instance will set you back about \$\_\_\_\_\_ as a modular option. *Kong* are about the only one we've included as a variant to the basic *Cevedale* tripod because their *Rescue 1* and *Rescue 2* models have 1 and 2 winches respectively integrated into the leg. The basic tripod is \$2290 compared to \$9000 when a pair of *Ortles* Hand winches are included.




## IN THE FOLLOWING TABLES:.....

**ORIGIN:** Is the parent company - an inset flat may indicate the manufacturer's country if different but we don't always know.

**COST:** Is for the most basic tripod configuration (not a monopod/bipod option). Some also have a price listed for a variant or the most expensive version or, in the case of *Aracnipo* TEMS, the best selling (3m) of their 3 most expensive versions. Prices are approximate, include VAT@20% &/or US State Sales Tax. We generally round up the cost. **£\$€ in orange is a currency conversion only.**


**MATERIALS- HEAD LEGS:** The head is the section that ties the legs together and provides the main attachment points. The true Tetrahedral frames typically don't have a 'head' instead just having load bearing eyes in the corners. Legs are all aluminium alloy but some of the 'alu' heads are cast rather than machined.

**TUBE PROFILE TELE-SECTIONS:** The cross section of material which will be either round tube, square or rectangular and the number of telescoping sections in each leg, usually 2 but some are 3 or even 1 which will not reduce further for transport.

**MARKED INCREMENTS:** The total number of length adjustments available on any given leg. Usually this will be some kind of independent pin that needs to be secured to the frame to prevent loss but some (like the heavy duty shoring struts) have an integrated sprung plunger or similar locking mechanism built into the leg. **MARKED=**  =the holes are numbered/lettered-much better for coordinating construction.

**LAZY-LEG WINCH ADAPTER:** Whether the system includes a Lazy-Leg (usually longer) and/or an adapter to the head that accepts a Lazy-Leg because it needs to be able to rotate up and down to a shallower angle than the side legs. **WINCH ADAPTER** allows a winch to be connected to a leg.

**WEIGHT:** for the basic tripod/quadpod unless sold as a complete kit. Excludes additional accessories: leg restraints and pulleys etc, unless integrated into the structure of the tripod.

**PACK(S) DIMENSIONS:** The number of carry bags/packs required to transport the AHD and the dimensions of the largest pack.  = bespoke bag(s) is an option not included in kit price.

**MIN / MAX WORKING HEIGHT:** The working height is the maximum clearance that you can expect beneath the main load connection point IT IS NOT the overall height of the AHD though there will no doubt be some in here that have supplied that info instead! The Minimum height is achieved by compressing the leg to it's minimum setting but will always be dictated by the length of the longest leg section.

**MAX FOOTPRINT:** The largest circular hole that the tripod or quadpod can span and remain functional. This can simply refer to the standard to which it adheres - NFPA= 70"/178cm & CE 78"/203cm - a lazy leg can increase the span width much more.

## TYPE OF DEVICE:

- **MONOPOD:** Single leg with load bearing head
- **BI-POD** Two-legged A-frame with load bearing head
- **TRIPOD:** Three legged frame with load bearing head
- **QUADPOD:** Four legged frame with load bearing head
- **BEAM:** Load-bearing gantry between two sets of legs.
- **TETRAPOD** Single or Double Tetrahedral frame
- **INDEPENDANT STRUTS:** Each leg=load-bearing/shoring strut

**MAXIMUM DEVICE LOAD:** As with the footprint, this figure can simply be the minimum required to meet a standard like 600lb in the US - they frequently hold much greater loads or quote a higher load for non-human weight. This max weight should be applied to the frame **only via the main load attachment point(s)**. This is akin to the Working Load Limit (NOT to the MBL/MBS) and will increase as height of AHD is decreased. NOT

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the max load that can be applied to the lateral (guy) eyes.

**TYPE OF HEAD MONO BIPOD:** Whether the head is readily detachable or fixed/bolted or is a beam. BEAM or gantry is an alternative form of head. It is a beam that spans between two pairs of legs and enables a wider work width and/or the main hard point to be moved. They allow a moving but lockable 'trolley' to be used as the load's attachment point. **MONOPOD** or **GIN** head mounts to a single pole. Many in this list are already capable of operating as a **BIPOD** head.

**CONNECTION:** is the type of load-bearing main attachment points at the head - for most this is a swivelling ring bolt to help negate unnecessary torque loads on your carabiner/connector but some have a fixed ring bolt, a shackle or in the case of the AZV a machined eye. The other commonest option is a drilled eye in a plate or multiple eyes in a rigging plate. The *TerrAdaptor* and AZV, have machined eyes with pins for connecting any type of hardware, usually a pulley or a lowering device (see ad-right).

**INTEGRATED PULLEYS:** pulley sheaves built into the structure of the AHD. Can also act as the main connection point carrying the load bearing rope(s) back to a separate anchor.

**LATERAL/REAR (GUY) EYES:** On or near the head. Some are fully load bearing but their orientation or position restricts use to anchor/stay attachment to keep the AHD stable and resist the direction of load. If none are shown, use main eye(s).

**FOOT HINGES BALL-JOINT DETACHES:** The foot can swivel upwards for storage or to change from flat to spike etc. like this *Obelisk* foot. **BALL JOINT** enables 360° rotation and lateral movement of the leg. **DETACHES** means it can be easily removed for change of foot type and/or storage



**ANCHOR EYES SPIKE GRIP:** holes that allow spikes or ground stakes to be driven through. **SPIKE:** the foot is, or incorporates, a spike to dig into ground for a solid purchase (like this *Obelisk*).

**GRIP for hard surfaces:** May be a tactile/grippy surface like rubber or studs (like this *Obelisk*) or plastic/metal ribbing for purchase on hard surfaces. At least one model has suction cups

**SIDE RESTRAINT ANCHOR EYES:** These are eyes or eye bolts to, or through which you connect the leg restraints. **ANCHOR** = rated for load-bearing deviation pulleys or hardware

**LEG RESTRAINTS LEGS LOCK:** Rope, webbing or chains used to stop legs from spreading. ■=Legs are/can be locked in place.

**VERTICAL EDGE:** Can operate at, up to or slightly over a cliff or building edge. Properly guyed quadpods offer more stable option than a tripod unless it has a lazy leg.

**LUFFING:** The frame head can be manoeuvred over and beyond the edge (not just by guying)

**HOLE/CON-SPACE:** Can be positioned over a hole/well/entry for confined space entry/ vertical entry/rescue.

**CONFINE: NOT to be CONFUSED with HOLE/CON-SPACE above where the entry is into a confined space but the AHD could be the size of a double decker bus! Here we mean that the device can be taken into, and operated within, a confined space - usually only devices with legs that can retract to allow a frame of less than 4ft in height.**

**SHORING:** Tripods etc. constructed from fully-load bearing shoring struts that could, individually, hold up a house.


**STANDARDS:** EN365=PPE against falls from height

EN1495=Mast climbing platforms

PD CEN/TS 16415= Personal Fall protection for max 2 persons.

EN795= PPE Anchor devices B= mobile, relates to all AHDs

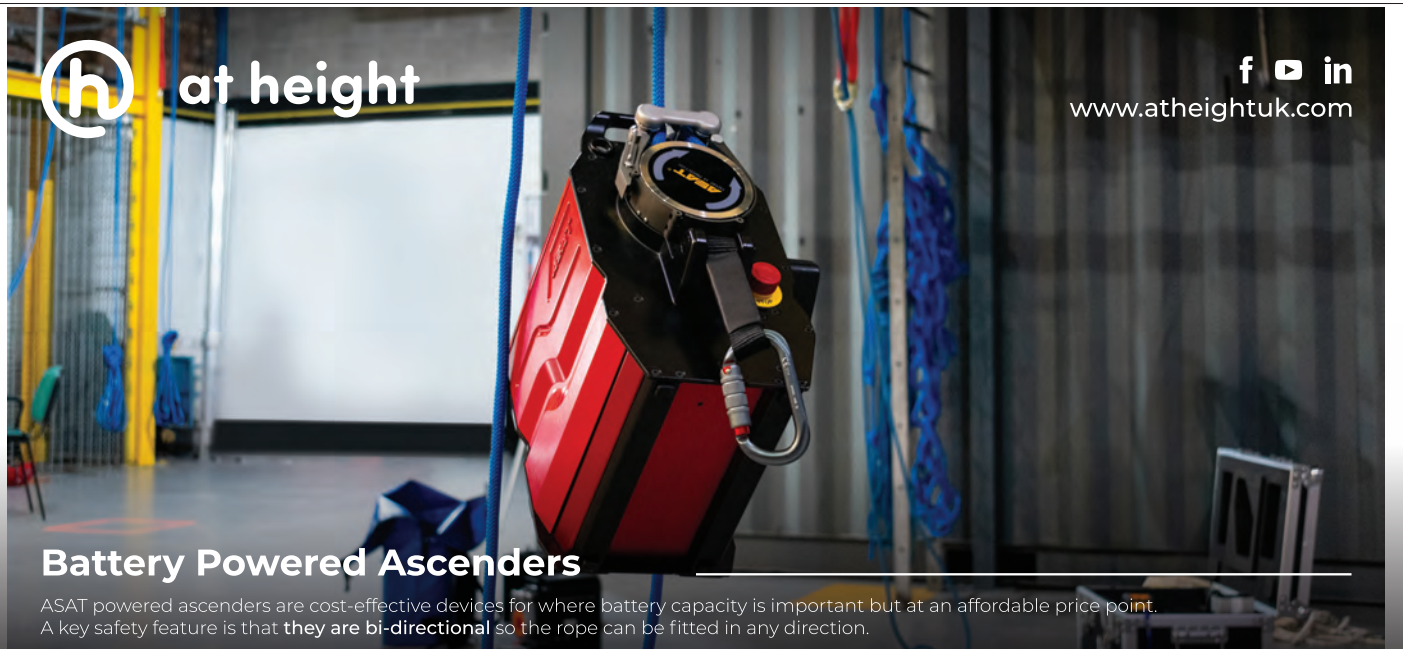
EN1808 =Suspended access equipment



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### Battery Powered Ascenders

ASAT powered ascenders are cost-effective devices for where battery capacity is important but at an affordable price point. A key safety feature is that they are bi-directional so the rope can be fitted in any direction.

#### ACE 22 Personal Device

ACE22 is a compact lightweight 'personal' device, weighing 11kg. It has an expected battery life of 350m general use @ 140kg load and a maximum rated load of 180kg. It features a remote control function including two-way communication.



#### ACE 24 Rescue / Rigging Device

ACE24 is a heavy duty 'rescue / rigging' device, weighing 18kg. It has an expected battery life of 700m general use @ 140kg load and a maximum rated load of 260kg. It features a remote control function.





**NOTES:** Images NOT to Scale  
Accessories shown may be an optional extra.

**COSTS:** £/\$€ shown in burnt orange are currency conversions only. Prices are approximate & include local tax/VAT

**TYPES OF DEVICE:**

■=MONOPOD ■ BI-POD

■ TRIPOD ■ QUADPOD

■ BEAM/GANTRY

■ TETRAPOD

■ INDEPENDANT STRUTS

**USES:** ●●●●= OK BUT NOT IDEAL

□□□□=Available as an Option



| MANUFACTURER   |                            | FERNO   | FERNO  | HOLMATRO   |
|----------------|----------------------------|---|--|--|
| MODEL VARIANT  |                            | Arachnipod Std <b>Advantage</b><br>APOD-STD APOD-ADV  | Arachnipod TEMS 2m 3/4m<br>APOD-TEMS APOD-TEMS3/APOD-TEMS4   | Omnishore<br>1x M10 1xP60 2xP60  |
| ORIGIN         |                            |   |  |  |
| COST           |                            | Base model<br>inc Tax/VAT   | Base model<br>inc Tax/VAT  | n/a  |
| TYPE of DEVICE |                            | ■ ■ ■   | ■ ■ ■ ■ ■  | ■ ■ ■ ■ ■  |
| STRUCTURE      | MATERIALS HEAD             | Alu   | Alu  | Alu  |
|                | LEGS                       | Alu   | Alu  | Alu  |
|                | TUBE PROFILE TELE-SECTIONS | Rectangular 3   | Rectangular 3  | Round 2*   |
|                | MARKED INCREMENTS          | ■ 20x 10cm/4"   | ■ 20x 10cm/4"  | - *finite over 2.4m  |
| SPECIFICATIONS | LAZY LEG WINCH ADAPTER     | ■ □   | ■ □  | ■ -  |
|                | WEIGHT (BASIC TRIPOD)      | 27 26kg<br>70 72.2lb  | >32kg<br>>70lb   | 36.3-79.5 133.5 kg<br>80-175lb 293lb 11oz  |
|                | PACK(S) DIMENSIONS         | ■ 1 210cm<br>82.7"  | ■ 3 210-400cm<br>82.7- x 157.5"  | □ 1-3  |
|                | MIN WORKING HEIGHT         | 170cm / 5ft 5"  | 170cm / 5ft 5"   | *38-164-326cm / 1- 5-10ft 3-4-8"   |
| HEAD           | MAX WORKING HEIGHT         | 267cm / 8ft 9"  | 269cm / 8ft 10"  | *56-267-523cm / 1-8-17ft 10-9-2"   |
|                | MAX FOOTPRINT              | 250cm / 8ft 3"  | 253-534*cm/ 11-17ft-5"   | 530cm / 17ft 0" (@60°)   |
|                | MAXIMUM DEVICE LOAD        | 220-400kg<br>484-880lb  | 175-400kg<br>385-880lb   | 2400kg<br>5291lb   |
|                | TYPE OF HEAD MONO BIPOD    | Detachable □ ■  | 2x Detachable □ ■ + Beam*  | Detachable ■ ■   |
| FEET           | MAIN LOAD EYES             | 2 Ring Bolts  | 4 Ring Bolts + Sliding/locking Eye   | 7 Rig Plate Eyes   |
|                | INTEGRATED PULLEY(S)       | 1 (Dbl sheave- 1 wire, 1 rope)  | 2 (each=Dbl sheave- 1 wire, 1 rope)  | 1  |
|                | LATERAL (GUY) EYES         | 3 (on top of each leg)  | 3 or 4 (top of each leg)   | 8 (on tripod head)   |
|                | LEG STEP LEG EYE           | □ □   | □ □  | - -  |
| USES           | HINGED BALL-JOINT DETACH   | ■ - ■   | ■ - ■  | ■ ■ ■  |
|                | ANCHOR HOLES SPIKE GRIP    | ■ ■ ■   | ■ ■ ■  | ■ - ■  |
|                | SIDE RESTRAINT ANCHOR EYES | ■ -   | ■ -  | ■ ■  |
|                | LEG RESTRAINTS LEGS LOCK   | Rope  | Rope   | Webbing with Ratchets  |
| STANDARDS      | VERTICAL EDGE LUFFING      | ■ ■   | ■ ■  | ■ ■  |
|                | HOLE CONFINE SHORING       | ■ ■   | ■ ■  | ■ ■ ■  |
| STANDARDS      |                            | EN795B,<br>CEN/TS 16415/B   | EN795B,<br>CEN/TS 16415/A  | Machinery Directive  |
| NOTES          |                            | Tripod can UPGRADE TO TEMS.<br>Alpha-numeric increment labels.<br>Option-Foot steps & anchor points for legs. | **2,3 or 4m Bridge options create the wider<br>footprint. Option-Foot steps & anchor<br>points for legs. | * theoretical min height with smallest adj<br>strut M10- *Max height using 2xP60 struts<br>(1sstrut shown) *Thread enables finite<br>adjustment. |
| WEBSITE        |                            | ferno.com.au  | ferno.com.au   | holmatro.com   |









# Obelisk

for Technical Rescue teams

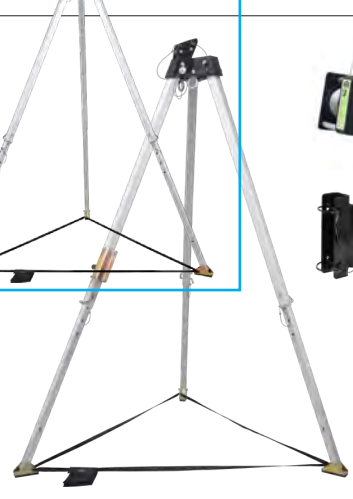




























































Designed and manufactured by Lyon Equipment specifically for emergency service work. Adjustable width cross-head with max height of 2200mm for a large, clear working area below the anchor points.







**LYON**  
WORK & RESCUE

|   |                                   |  |   |  |
|---|-----------------------------------|--|---|--|
| <p><b>NOTES:</b> Images NOT to Scale<br/>Accessories shown may be an optional extra.<br/>COSTS: £\$€ shown in burnt orange are currency conversions only.<br/>Prices are approximate &amp; include local tax/VAT</p> <p><b>TYPES OF DEVICE:</b><br/> <span style="color: black;">■</span> = MONOPOD <span style="color: gold;">■</span> = BI-POD<br/> <span style="color: orange;">■</span> = TRIPOD <span style="color: green;">■</span> = QUADPOD<br/> <span style="color: lightgreen;">■</span> = BEAM/GANTRY<br/> <span style="color: blue;">■</span> = TETRAPOD<br/> <span style="color: magenta;">■</span> = INDEPENDANT STRUTS</p> <p><b>USES:</b> ●●●● = OK BUT NOT IDEAL<br/> <span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> <span style="border: 1px solid blue; display: inline-block; width: 10px; height: 10px;"></span> <span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px;"></span> = Available as an Option</p> |                                   |   |                 |   |
| <b>MANUFACTURER</b>   |                                   | <b>IRUDEK</b>  | <b>JSP</b>  | <b>KONG</b>  |
| <b>MODEL VARIANT</b>  |                                   | Trip4<br>10020960000.8   | Confined Space Rescue Tripod<br>FAR1003   | Cevedale Rescue1 Rescue2<br>842020000KK 842010000KK 842000000KK  |
| <b>ORIGIN</b>   |                                   |   |                 |   |
| <b>COST</b> Base model<br>inc Tax/VAT Variant or Top model  |                                   | £860 \$1085 €1003<br>- - -   | £990 \$1400 €1300<br>- - -  | £1730 \$2290 €1710<br>£8670 \$9000 €7160   |
| <b>STRUCTURE</b>  | <b>TYPE of DEVICE</b>             | <span style="color: orange;">■</span>  | <span style="color: orange;">■</span>   | <span style="color: orange;">■</span>  |
|   | <b>MATERIALS</b> HEAD<br>LEGS     | Cast Alu<br>Alu  | Cast Alu<br>Alu   | -<br>Alu   |
|   | <b>TUBE PROFILE TELE-SECTIONS</b> | Square 2   | Rectangular 2   | Round 2  |
|   | <b>MARKED INCREMENTS</b>          | - 8/9 x 12/10cm/5/4"   | - 2x 50cm/20"   | - 3 6  |
|   | <b>LAZY LEG WINCH ADAPTER</b>     | - <span style="border: 1px solid blue; display: inline-block; width: 10px; height: 10px;"></span> <span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px;"></span> | - <span style="border: 1px solid blue; display: inline-block; width: 10px; height: 10px;"></span> | - <span style="border: 1px solid blue; display: inline-block; width: 10px; height: 10px;"></span> <span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px;"></span> |
| <b>SPECIFICATIONS</b>   | <b>WEIGHT (BASIC TRIPOD)</b>      | 12.1 23.6kg<br>26.6 52lb   | 13kg<br>28lb 10oz   | 14 20-25kg<br>30 44-55lb 13oz  |
|   | <b>PACK(S) DIMENSIONS</b>         | <span style="color: black;">■</span> 1   | <span style="border: 1px solid blue; display: inline-block; width: 10px; height: 10px;"></span> 1 | <span style="color: black;">■</span> 1 130 x 45 x 30cm<br>51.2 x 17.7 x 11.8"  |
|   | <b>MIN WORKING HEIGHT</b>         | 115 222cm / 3 7ft 9 3"   | 115cm / 3ft 9"  | 160 165cm / 5ft 3 5"   |
|   | <b>MAX WORKING HEIGHT</b>         | 215 314cm / 7 10ft 0 3"  | 215cm / 7ft 0"  | 254cm / 8ft 3"   |
|   | <b>MAX FOOTPRINT</b>              | 150 245cm / 4 8ft 11 0"  | 150cm / 4ft 11"   | 180cm / 0ft 0"   |
| <b>HEAD</b>   | <b>MAXIMUM DEVICE LOAD</b>        | 200/500kg<br>440lb   | 500kg<br>1100lb   | 1223kg<br>2697lb   |
|   | <b>TYPE OF HEAD MONO BIPOD</b>    | Fixed - -  | Fixed - -   | Fixed - -  |
|   | <b>MAIN LOAD EYES</b>             | 2 Ring Bolts   | 2 Ring Bolts  | 3 Ring Bolts   |
|   | <b>INTEGRATED PULLEY(S)</b>       | 1 2  | 1   | 0 (2 detachable supplied)  |
|   | <b>LATERAL (GUY) EYES</b>         | 0  | 0   | 3 (on tripod head)   |
| <b>FEET</b>   | <b>LEG STEP LEG EYE</b>           | - -  | - -   | - -  |
|   | <b>HINGED BALL-JOINT DETACH</b>   | <span style="color: black;">■</span> - -   | <span style="color: black;">■</span> - -  | <span style="border: 1px solid blue; display: inline-block; width: 10px; height: 10px;"></span> - <span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px;"></span> |
|   | <b>ANCHOR HOLES SPIKE GRIP</b>    | <span style="color: black;">■</span> - <span style="color: green;">■</span>  | - - -   | <span style="border: 1px solid blue; display: inline-block; width: 10px; height: 10px;"></span> - <span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px;"></span> |
|   | <b>SIDE RESTRAINT ANCHOR EYES</b> | <span style="color: black;">■</span> -   | <span style="color: black;">■</span> -  | <span style="color: black;">■</span> <span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px;"></span>  |
|   | <b>LEG RESTRAINTS LEGS LOCK</b>   | Webbing <span style="color: orange;">■</span>  | Webbing with cams   | Wire cable or Rope   |
| <b>USES</b>   | <b>VERTICAL EDGE LUFFING</b>      | ● -  | ● -   | ● -  |
|   | <b>HOLE CONFINE SHORING</b>       | <span style="color: black;">■</span> ● -   | <span style="color: black;">■</span> - -  | <span style="color: black;">■</span> ● -   |
| <b>STANDARDS</b>  |                                   | EN795B<br>ATEX II 2G Ex h II c T6  | EN795B,   | EN 795/B EN 1496/B<br>CEN/TS 16415/A   |
| <b>NOTES</b>  |                                   | Trip4 has two winch mounts on legs<br>may also be intermediate sizes Trip 2 & 3  |   | *Rescue versions Include 1 and/or 2<br>integrated rope winches. Kong also has a<br>stand-alone monopods - STELVIO and 4D.  |
| <b>WEBSITE</b>  |                                   | irudek.com   | jspsafety.com   | kong.it  |

# HEAVY DUTY LIFTING FRAMES

|   |   |   |   |
|---|---|---|---|
|    |    |   |    |
| <b>KRATOS</b>   | <b>KRATOS</b>   | <b>LYON/SPELEAN</b>   | <b>PARATECH</b>   |
| <b>Tripod</b><br>FA6000100 FA6000200  | <b>Quadpod</b><br>FA6010400   | <b>Larkin Frame</b>   | <b>Strut Tripod</b>   |
|    |    |    |    |
| £550 \$750 €650<br>£650 \$900 €750  | £900 \$1065 €985<br>- - -   | £5820 \$7300 €6790<br>- - -   | *head-kit: £3400 \$4300 €4100<br>*1x 55"strut £1334 \$1700 €1600  |
|    |    |    |    |
| Alu<br>Alu  | Alu<br>Alu  | Cast Alu<br>Alu   | Cast Alu<br>Alu   |
| Square 2  | Square 2  | Round 1   | Round 1,2 or 3  |
| - 6   | - 6   | Not applicable  | -   |
| -    | -    | - -   |  -   |
| 14.3 22.35kg<br>31lb 8oz  | 15.6kg<br>34lb 6oz  | 40kg<br>88lb 3oz  | 28.6* + 5.8-16.2kg (for 19-55"strut)<br>63* + 12.7-35.7lb (for 19-55"strut)   |
|    |    |  1 202 x 24 x 30cm<br>80 x 9.5 x 11.8"   |  1-3   |
| 115 190cm / 3 6ft 9 2"  | 121cm / 4ft   | 120cm / 4ft   | *94cm / 3ft 1"  |
| 215 290cm / 7 10ft  | 320cm / 10ft 6"   | 250cm / 8ft 2"  | 330cm / 11ft  |
| 162 205cm / 5 6ft 3 8"  | 175cm / 5ft 9"  | 120cm / 4ft   | 2.7m / 9ft  |
| 500kg<br>1100lb   | 500kg<br>1100lb   | 400kg<br>880lb  | 2358.7kg<br>5200lb  |
| Fixed - -   | Fixed - -   | Detachable -   | Detachable  -  |
| 2 Ring Bolts  | 1 Ring Bolt   | 2 Machined Eyes   | 1 Ring Bolt   |
| 2   | 2   | 0   | 0   |
| 6 or 8 (2 on each mid-leg & head)   | 6 or 8 (2 on each mid-leg & head)   | 0   | 3   |
|     |     | - -   | - -   |
|  - -   |  - -   |  -    | -     |
| - -    | - -    |    |  -    |
|  -   |  -   |     |     |
| Webbing   | Webbing   |    | Chain -   |
|  -   |  -   |     |  *   |
|   - |   - |   *   |    |
| EN795:2012 B, ATEX 2014/34/UE, Machinery Directive, EN 1808   | EN795:2012 B, ATEX 2014/34/UE, Machinery Directive, EN 1808   | EN795B, CEN/TS 16415/A  |   |
|   |   | Can be used as full or half sized.<br>*because it can be used as a half sized frame   | *minimum practical height but could use a 6" strut and be a foot high!<br>*Not designed to be used off-centre.<br>*Kit contains head, 3xbases, chain & case   |
| <a href="http://kratossafety.com">kratossafety.com</a>  | <a href="http://kratossafety.com">kratossafety.com</a>  | <a href="http://lyonequipment.com">lyonequipment.com</a>  | <a href="http://paratech.com">paratech.com</a>  |



|  |                                   |  |  |  |  |  |  |
|--|-----------------------------------|--|--|--|--|--|--|
| <p><b>NOTES:</b> Images NOT to Scale<br/>Accessories shown may be an optional extra.<br/>COSTS: £\$€ shown in burnt orange are currency conversions only.<br/>Prices are approximate &amp; include local tax/VAT</p> <p><b>TYPES OF DEVICE:</b><br/> <span style="color: black;">■</span> = MONOPOD <span style="color: brown;">■</span> = BI-POD<br/> <span style="color: orange;">■</span> = TRIPOD <span style="color: green;">■</span> = QUADPOD<br/> <span style="color: lightgreen;">■</span> = BEAM/GANTRY<br/> <span style="color: blue;">■</span> = TETRAPOD<br/> <span style="color: magenta;">■</span> = INDEPENDANT STRUTS</p> <p><b>USES:</b> ●●●● = OK BUT NOT IDEAL<br/> <span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> <span style="border: 1px solid orange; display: inline-block; width: 10px; height: 10px;"></span> <span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px;"></span> = Available as an Option</p> |                                   |    |  |    |  |   |  |
| <b>MANUFACTURER</b>  |                                   | PROTEKT  |  | PROTEKT  |  | PROTEKT  |  |
| <b>MODEL VARIANT</b>   |                                   | TM15 TM15-G<br>AT017 AT017G  |  | TM15 Mini<br>AT017 MINI  |  | TM16 Compact<br>TM16000  |  |
| <b>ORIGIN</b>  |                                   |   |  |    |  |   |  |
| <b>COST</b> Base model   |                                   | n/a  |  | £700 \$865 €792  |  | £1545 \$1960 €1805   |  |
| inc Tax/VAT Variant or Top model   |                                   | £645 \$820 €754  |  | - - -  |  | - - -  |  |
| <b>STRUCTURE</b>   | <b>TYPE of DEVICE</b>             | <span style="color: brown;">■</span>   |  | <span style="color: brown;">■</span>   |  | <span style="color: brown;">■</span>   |  |
|  | <b>MATERIALS</b> HEAD             | Alu  |  | Alu  |  | Alu  |  |
|  | LEGS                              | Alu  |  | Alu  |  | Alu  |  |
|  | <b>TUBE PROFILE</b> TELE-SECTIONS | Round 2  |  | Round 3  |  | Round 2  |  |
| <b>SPECIFICATIONS</b>  | <b>MARKED INCREMENTS</b>          | - 6x   |  | - 10x  |  | - 10x & 14x  |  |
|  | <b>LAZY LEG</b> WINCH ADAPTER     | - <span style="border: 1px solid orange; display: inline-block; width: 10px; height: 10px;"></span>  |  | - <span style="border: 1px solid orange; display: inline-block; width: 10px; height: 10px;"></span>  |  | <span style="color: black;">■</span> <span style="border: 1px solid orange; display: inline-block; width: 10px; height: 10px;"></span>   |  |
|  | <b>WEIGHT</b> (BASIC TRIPOD)      | 28.7kg<br>63lb   |  | 19kg<br>41lb 13oz  |  | 16.5kg<br>36.4lb   |  |
|  | <b>PACK(S)</b> DIMENSIONS         | <span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> 1 226 x 33 x 29cm<br>89 x 13x 11.4"   |  | <span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> 1 133 x 33 x 29cm<br>52.4 x 13 x 11.4"  |  | <span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> 1 117 x 33 x 29cm   |  |
| <b>HEAD</b>  | <b>MIN WORKING HEIGHT</b>         | 197cm / 6ft 5"   |  | 111cm / 0ft 0"   |  | 106cm / 0ft 0"   |  |
|  | <b>MAX WORKING HEIGHT</b>         | 313cm / 10ft 3"  |  | 227cm / 0ft 0"   |  | 166cm / 0ft 0"   |  |
|  | <b>MAX FOOTPRINT</b>              | 174cm / 50ft 8"  |  | 109cm / 0ft 0"   |  | 284cm / 0ft 0"   |  |
|  | <b>MAXIMUM DEVICE LOAD</b>        | 1000kg<br>2200lb   |  | 1000kg<br>2200lb   |  | 500kg<br>1100lb  |  |
| <b>FEET</b>  | <b>TYPE OF HEAD</b> MONO BIPOD    | Fixed - -  |  | Fixed - -  |  | Fixed - -  |  |
|  | <b>MAIN LOAD EYES</b>             | 3  |  | 3 Plate Eyes   |  | 3 Plate Eyes   |  |
|  | <b>INTEGRATED PULLEY(S)</b>       | 3  |  | 3  |  | 3  |  |
|  | <b>LATERAL/REAR (GUY) EYES</b>    | 3*   |  | 3*   |  | 3*   |  |
| <b>USES</b>  | <b>LEG STEP</b> LEG EYE           | <span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> <span style="border: 1px solid orange; display: inline-block; width: 10px; height: 10px;"></span> |  | <span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> <span style="border: 1px solid orange; display: inline-block; width: 10px; height: 10px;"></span> |  | <span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> <span style="border: 1px solid orange; display: inline-block; width: 10px; height: 10px;"></span> |  |
|  | <b>HINGED</b> BALL-JOINT DETACH   | <span style="color: black;">■</span> - -   |  | <span style="color: black;">■</span> - -   |  | <span style="color: black;">■</span> - <span style="color: brown;">■</span>  |  |
|  | <b>ANCHOR HOLES</b> SPIKE GRIP    | - <span style="color: brown;">■</span> <span style="color: green;">■</span>  |  | - <span style="color: brown;">■</span> <span style="color: green;">■</span>  |  | - - <span style="color: green;">■</span> (suction cups)  |  |
|  | <b>SIDE RESTRAINT</b> ANCHOR EYES | <span style="color: black;">■</span> -   |  | <span style="color: black;">■</span>   |  | <span style="color: black;">■</span>   |  |
| <b>STANDARDS</b>   | <b>LEG RESTRAINTS</b> LEGS LOCK   | Chain -  |  | - <span style="color: brown;">■</span>   |  | Chain -  |  |
|  | <b>VERTICAL EDGE</b> LUFFING      | ● -  |  | ● -  |  | ● -  |  |
|  | <b>HOLE</b> CONFINE SHORING       | <span style="color: black;">■</span> - -   |  | <span style="color: black;">■</span> <span style="color: green;">■</span> -  |  | <span style="color: black;">■</span> <span style="color: green;">■</span> -  |  |
|  | <b>STANDARDS</b>                  | EN795B,<br>CEN/TS 16415/A  |  | EN795B,<br>CEN/TS 16415/A  |  | EN795B,<br>CEN/TS 16415/B  |  |
| <b>NOTES</b>   |                                   | Comes with detachable footholds on legs.<br>G=most basic version, no anodizing or foot-step plates etc.  |  | *+3 Pulley Roller Guides that can also function as stay eyes.  |  | Intended for tank work/rescue - suction cup feet can be replaced with conventional foot  |  |
| <b>WEBSITE</b>   |                                   | protekt.pl   |  | protekt.pl   |  | protekt.pl   |  |

# HEAVY DUTY LIFTING FRAMES

|                          |   |                               |  |
|--------------------------|---|-------------------------------|--|
|                          |   |                               |  |
| <b>PROTEKT</b>           | <b>PROTEKT</b>  | <b>PROTEKT</b>                |  |
| <b>TM9-N</b><br>TM9-N    | <b>TM14ZSE</b> <b>TM14/TM7</b><br>AT016   | <b>TM12- Hexapod</b><br>TM12  |  |
| £455 \$575 €528<br>- - - | £675/385 \$860/490 €790/450<br>£1310 \$1665 €1530   | £820 \$1040 €955<br>- - -     |  |
| ■                        | ■ ■   | ■ ■                           |  |
| Steel<br>Alu             | Steel<br>Alu  | Steel heads/Alu beam<br>Alu   |  |
| Rectangular 2            | Rectangular 2   | Rectangular 2                 |  |
| - 5x                     | - 7x  | - 5x                          |  |
| - □                      | - □   | - □                           |  |
| 15.45kg<br>52.3lb        | 65kg<br>143lb   | 86kg<br>190lb                 |  |
| □ 1 176 x 26 x 23cm      | □ 1 228 x 32 x 30cm   | □ 3 251-280 x 36 x 31cm       |  |
| 180cm / 5ft 10"          | 179cm / 5ft 11"   | 139cm / 0ft 0"                |  |
| 209cm / 6ft 10"          | 289cm / 9ft 5"  | 221cm / 0ft 0"                |  |
| 149cm / 4ft 10"          | 271cm / 8ft 10"   | 223 x 983cm / 0ft 0"          |  |
| 500kg<br>1100lb          | 500kg<br>1100lb   | 1000kg<br>2200lb              |  |
| Fixed - -                | Detachable - ■  | 2xFixed + Beam - -            |  |
| 3 Plate Eyes             | 2 Plate Eyes  | 2 Ring Bolts + 1 Moveable Eye |  |
| 3                        | 1   | 0                             |  |
| 3*                       | Vehicle anchor Plate  | 3*                            |  |
| - -                      | - -   | - -                           |  |
| ■ - -                    | ■ - -   | ■ - -                         |  |
| ■ - ■                    | ■ - -   | ■ - ■                         |  |
| ■                        | -   | ■                             |  |
| Chain -                  | - ■   | Chain -                       |  |
| ● -                      | ■ ■   | ● -                           |  |
| ■ - -                    | ■ - -   | ■ - -                         |  |
| CEN/TS 16415/B           | EN795B&E,<br>CEN/TS 16415/B&E, EN 1496B   | CEN/TS 16415/B                |  |
|                          | ZSE is a modification of basic TM14 tripod.<br>TM7 is the same but cannot be ZSE configured | Central beam=2.8m wide        |  |
| protekt.pl               | protekt.pl  | protekt.pl                    |  |

**NOTES:** Images NOT to Scale  
Accessories shown may be an optional extra.

**COSTS:** £/\$€ shown in burnt orange are currency conversions only. Prices are approximate & include local tax/VAT

**TYPES OF DEVICE:**

■=MONOPOD ■ BI-POD

■ TRIPOD ■ QUADPOD

■ BEAM/GANTRY

■ TETRAPOD

■ INDEPENDANT STRUTS

**USES:** ●●●●= OK BUT NOT IDEAL

□□□□=Available as an Option



| MANUFACTURER                     |                            | RES-Q-JACK  | RES-Q-JACK             | SAR PRODUCTS  |
|----------------------------------|----------------------------|---|------------------------|---|
| MODEL VARIANT                    |                            | SteelX/RJ3 Tripod   | Super X                | Multipod QU005  |
| ORIGIN                           |                            |   |                        |   |
| COST Base model                  |                            | £6300 \$5279 €7558  | £1730 \$2165 €2023     | n/a*  |
| inc Tax/VAT Variant or Top model |                            | - - - *   | - - -                  | - - -   |
| STRUCTURE                        | TYPE of DEVICE             | ■ ■ ■ ■   | ■                      | ■ ■ ■   |
|                                  | MATERIALS HEAD             | Alu   | Stainless Steel        | Stainless Steel   |
|                                  | LEGS                       | Alu   | Alu                    | Alu   |
|                                  | TUBE PROFILE TELE-SECTIONS | Round 2   | Square 2               | Square 2  |
| SPECIFICATIONS                   | MARKED INCREMENTS          | - 6x 14cm/5.5"  | - 10x 10cm/4"          | - 10x 10cm/4"   |
|                                  | LAZY LEG WINCH ADAPTER     | ■ -   | - □                    | - □   |
|                                  | WEIGHT (BASIC TRIPOD)      | 33kg 72lb   | 13.2kg 29lb            | 17.5kg 38lb 8oz   |
|                                  | PACK(S) DIMENSIONS         | □ 4-6   | □ 1                    | ■ 1 120 x 17cm 47 x 7" or □ 2 bags                                  |
| HEAD                             | MIN WORKING HEIGHT         | 270cm / 9ft   | 150cm / 5ft            | 150cm / 5ft   |
|                                  | MAX WORKING HEIGHT         | 370cm / 12ft  | 200cm / 6ft 7"         | 200cm / 6ft 7"  |
|                                  | MAX FOOTPRINT              | 1.4-2.25m / 4ft 7" - 7ft 5"   | 125cm / 4ft 1"         | 125 x 175cm / 4ft-5ft 9"  |
|                                  | MAXIMUM DEVICE LOAD        | 272kg 600lb   | 300kg 660lb            | 300kg 660lb   |
| FEET                             | TYPE OF HEAD MONO BIPOD    | Detachable □ ■  | Fixed - -              | Removable Beam - -  |
|                                  | MAIN LOAD EYES             | 1 machined eye + 3 hardware pins  | 1 Ring Bolt            | 2 Shackles + 2 moveable Ring Bolts                                  |
|                                  | INTEGRATED PULLEY(S)       | Option for 4 pinned sheaves   | 0                      | 0   |
|                                  | LATERAL (GUY) EYES         | 6 (+optional lash-points)   | -                      | 4   |
| USES                             | LEG STEP LEG EYE           | - □   | - -                    | - -   |
|                                  | HINGED BALL-JOINT DETACH   | ■ - ■   | ■ - -                  | ■ - -   |
|                                  | ANCHOR HOLES SPIKE GRIP    | ■ ■ ■   | ■ -                    | ■ -   |
|                                  | SIDE RESTRAINT ANCHOR EYES | ■ ■   | ■ ■                    | ■ ■   |
| LEG                              | LEG RESTRAINTS LEGS LOCK   | Webbing& Rope -   | Webbing with cam -     | Webbing with cam -  |
|                                  | VERTICAL EDGE LUFFING      | ■ ●   | ■ -                    | ■ -   |
|                                  | HOLE CONFINE SHORING       | ■ ■*  | ■ ■                    | ■ ■   |
|                                  | STANDARDS                  | NFPA, EN795B, CEN/TS 16415/B  | EN795B, CEN/TS 16415/B | EN795B, CEN/TS 16415/B  |
| NOTES                            |                            | *All components can be purchased separately inc. AZORP rig-head shown (blue) -not in kit. *slight increase in some later models |                        | 55cm beam * but check out the fixed head Quadprod price as a guide. |
| WEBSITE                          |                            | resqjack.com  | resqjack.com           | sar-products.com  |



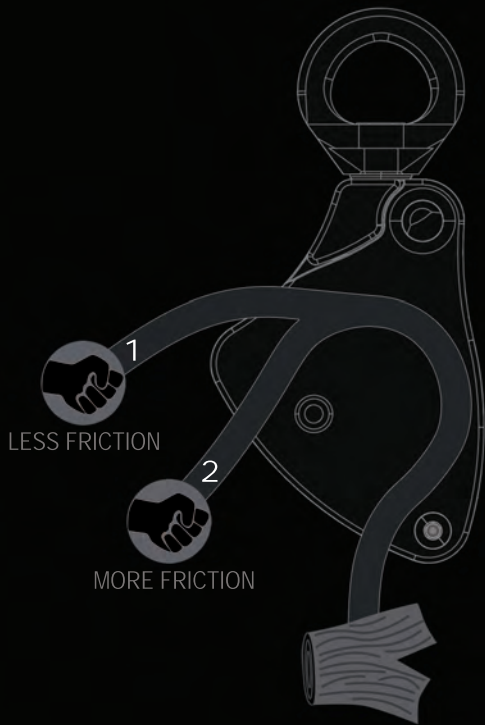
# rock

*Cut  
it*

# exotica

The **DownRigger** is an aerial friction device used for lowering limbs quickly and efficiently. With its light weight and compact size, it can be connected and operated overhead, or at the base of the rigging system. Features two rope paths to adjust friction.

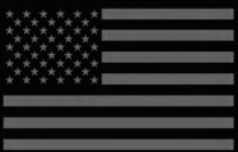
*& Run it*



*DownRigger*



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# at height



## K25 CurlyWirly

- World's first twisted aluminium karabiner – lightweight @ 87g
- Perfect for correctly orientating descender devices off rigging plates
- Available in screwgate and triple lock





f y in

[www.atheightuk.com](http://www.atheightuk.com)



Photo Credit:  
Peter Schepers  
[www.access-specialist.nl](http://www.access-specialist.nl)



Title Pic: Leader Group's Leader Cam and opposite, in use with the White Helmets in remote probe mode with the operator's screen shrouded for better visibility

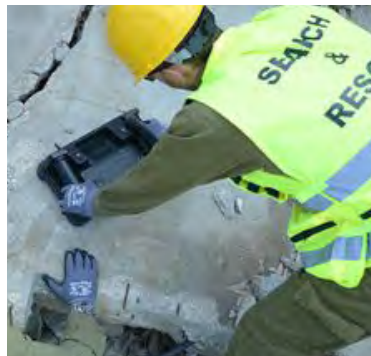
# Handheld SEARCH CAMERAS



Aside from the use of drones as a vehicle on which to mount search cameras, there hasn't been much to get excited about in void-searching camera development in recent years. That's testament to how good and robust the existing technology is I suppose with one or two of the top models virtually unchanged since the last century. Applications for pole-mounted search cameras began evolving about 20 years ago so that vehicle extrications in particular together with water searches saw more regular use of cameras previously marketed only for victim location in building collapse rescue. 'Pole-mounted' evolved into 'cable-lowered' and even helmet or ROV mounted. The biggest change within the market in recent years has been the purchasing of many of the main players in each sector by just three entities; *Scorpe*, *Savox* and *Leader Group* or *Groupe Leader* depending on which country you're in. The latter two companies dominate our sector as one-stop shops for disaster response equipment with *Delsar*, *Search Cam* and *Con-Space* on one side and *LeaderScan*, *LeaderCam* and *LeaderSound* (breath analysis) on the other – all are industry icons, as valuable today as they were in the 1990s. Another legendary name from that period that seemed to disappear for a while outside of France is the *Vibrascope* and associated *Vibraphone*. This company was bought by *Scorpe* and added structural movement monitors to their existing range of hydraulic tools and lifting bags so they truly are a one-stop-shop.

The problem with many sectors of rescue is that the market is so specialised and financially small, that development stagnates once something is found to work well. Look at *Conspace Communications'* hard-wired system. That has hardly

changed in over 30 year and is still the leading, if not sole, main contender for prospective purchasers of intrinsically safe, duplex comms. The same goes for *Search Cam* (both brands now being under the *Savox* umbrella). There will be changes of course; optics, acoustics and electronics are all superior now even if the outward appearance is the same and 'see-through-wall' technology (pic below) has definitely come of age to such an extent that it may be a key game changer for rescuers and we can include it in this guide as well as the forthcoming Thermal Imaging Camera Guide, more on this on p288. Back to the optical cameras and there was a period in the



early 2000's when much smaller systems like *Red Box* began to appear aimed more specifically at vehicle extrication and even underwater search at a more affordable price. Disaster response, however, continued to specify the larger, more complex and proven robust systems so *SearchCam* has remained at the forefront and is now sold as the *3000* together with its smaller brother the *Recon III*. The visually similar *Pro-Eye* from *Yone Corp* in Japan expanded on

the underwater capability with a system that has sonar as well as a camera while *Groupe Leader* augmented their *LeaderSearch* acoustic system with *Leader Cam*, a system more in tune with the proliferation of separated camera and TV systems. One notable model that piqued a lot of interest when launched a several years ago and the impetus for us compiling this guide is the *FirstLook360* which we have mentioned a few times in our magazine and in our *Emag Access&Rescue*. This has taken many of the best features of current market leaders and incorporated some neat additions to set it apart. Not least is its ability to

wirelessly transmit high resolution images to smartphones and tablets, doesn't everything these days? Apparently not and ironically, it's Andy Ibbetson, the son of the founder of *Con-Space Communications* Terry, that has co-developed this new camera, presumably drawing on his and Terry's decades of experience in the confined space rescue sector. I say 'ironically' because, unlike the *Con-Space Comms* system, which is firmly rooted in

'old' reliable technology, *FirstLook360* embraces every element of smart technology which is why it remains worlds apart from most of the others. And the same reason that *Con-Space Comms* has stood the test of time could conceivably be why the *FL360* uses direct, one-one wireless connectivity rather

than relying on satellite or mobile network-dependant connectivity.

Electronic, fly-by-wire and direct transmission is far superior most of the time but when mobile WiFi and Satellite comms fail so does your camera. Close-system connectivity using a wireless signal bypasses this particular failure mode but, as with all digital transmission, can presumably be hacked or

jammed

in some way if anyone was

desperate enough. So, just in case, systems like *FL360* can be hardwired as well. You sometimes can have it all ways and it has to be said that catastrophic failures predicted by the doom-merchants for fly-by-wire and satellite dependent systems when they first appeared have proven largely baseless and indeed have probably been far less than the 'mechanical' or analogue systems they replaced. One thing the *FL360* doesn't do which most of the others list as a key feature is have a mechanically articulating camera head. The *LeaderCam* top-left and above right (as featured on Issue 73's front cover in use with the White Helmets in Syria and here with sunlight shroud on the screen) can be made to look sideways at the flick of a toggle by the camera operator. Plus, of course, the person manipulating the camera can rotate the pole – which is a handy back-up should articulation jam. *Agility Corp*, the new kids on the block, thought, what's the point of all that sophisticated camera head articulation and associated telemetry? If we stitch together the image from two wide-angle, side facing cameras



to give a full 360 degree view it wouldn't need to move to look sideways. In the picture on the right you can see one half of the protruding 'bubble' lens at the top next to square LED lights (there's also a battery level and pairing indicator just below the 'F' of the product name.) It's like having 20x20 peripheral vision with no time-lag that you would otherwise get while articulating the camera head. Can't argue with that and so the 360 bit of the name was born. With no reliance on head manipulation there's less to go wrong. The camera head, remember, takes pretty much all of the abuse, and although they're built to be rugged with substantial protective shrouds around the hinge-points they're still vulnerable to damage and jamming when

a small opening in dusty, dirty, sharp-edged, re-bar filled concrete.

### CAMERA POLES

The original *Search Cam* now in its '3000' version (large pic left) and with a lighter, less costly variant the *Recon III* (smaller pic left) had the TV screen permanently mounted at the end of the pole making the whole assembly heavier and cumbersome because it limited your ability to manoeuvre the camera and pole. Subsequent *SearchCam* models made the screen detachable and this is a standard feature of most modern camera systems which either have the screen hardwired like *Leader-Cam* or wireless like *FL360* but either way this enables much easier forward-operating of the camera by a separate person. This is not always the case, in the picture below, the operator is manoeuvring the *Tactical*



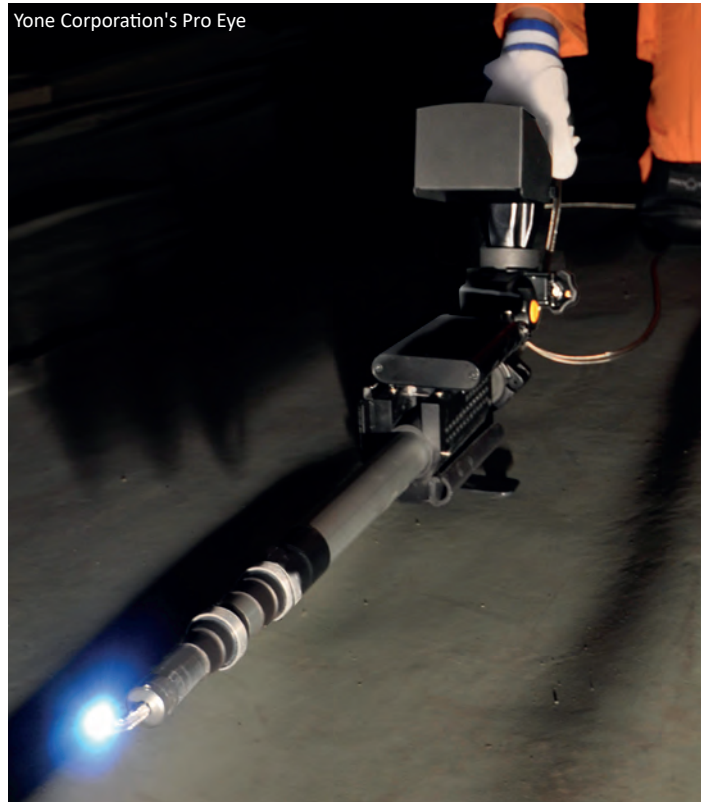


Electronics Core pole while viewing a detached screen fastened to his arm – there are definitely times when it's easiest to view something by twiddling the pole yourself, and some, even the aforementioned *FL360* have the option to be mounted to the pole for single operator use. One model has been specifically downsized to be used by one operator – the *Yone Nano* system (right) has a teeny 7mm head on an otherwise standard looking search camera system with a toggle directed camera, on-handle screen and it runs on double AA batteries, truly light and portable. *Savox* had something similar with their diminutive '*Mongoose*' but that seems to have now disappeared.

Most companies in this sector are first and foremost search camera specialists using or designing the pole or delivery system for that camera. One company however, is a pole specialist that has had a camera designed to utilise their poles. *Reach and Rescue* in the UK have an enormous telescopic pole that can reach up to 55ft/17m indeed, they have a pole adapted specifically to fit the *FL360* in addition to its standard pole offerings. This is currently the longest pole in the search camera sector and while it would be outstanding in large void searches, it might have limited applications in regular building collapse where the spectre of 'making progress through the rubble' rears its head.

Physically getting a rigid pole into a space to search can be problematic so camera heads have become compact so that a single manageable bore hole can be drilled in slabs or through brickwork to allow initial entry of the camera and pole. A much easier device to get into limited spaces is the endoscope-type camera also called a borescope or fiberscope, that has mostly migrated across to rescue from 'inspection' in other sectors. These use a flexible tube from the screen or relay to the camera. The tube can be 'bent' into shape to ease entry into spaces and such cameras have proven particularly useful in vehicle crashes where the rescuers are able to identify specific foot and limb entrapment points before they commence metal relocation. I remember attending an incident many years ago where the first arriving crew commenced a dash-roll only to find that an extraneous bolt on the old van's steering servo had penetrated the casualty's knee which was now being pulled off along with the steering wheel and dash! Had they existed at the time, a quick look with a flexible camera system would have identified this and enabled an alternative course of action. Since they have evolved from endoscope systems some of these systems can still marry back to an endoscope system ie. have a regular or magnifying eye piece connected to the end of the tube instead of, or as well, as a screen to aid clearer imaging of what the camera is looking at. The downside to these semi-flexible tube systems like *SnakeCam* (right) and *Unifire's* (above) is that they are not usually capable of having the camera detached and

Yone Corporation's Pro Eye



used separate from the pole/tube and screen. The *Core* system (below) aimed more at tactical users but equally applicable to rescue, offers a number of camera options including this borescope/endoscope-style camera which uses an eyepiece and monitor option with wireless transmission.

## REMOTE OPERATION

The "remote

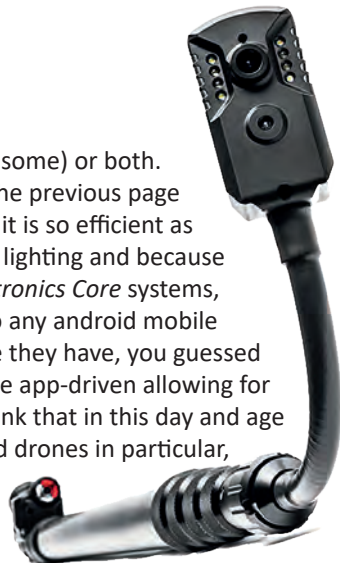
probe' idea, where the camera head is detached and lowered into a void was really pioneered by *Con Space* with their audio-only attachment to the hard-wired *Con-Space Communications* system so it's no surprise that *Con-Space's* second cousin once removed, the *FL360* also has this option with a metal eye that can be screwed in to the camera head as the most robust of lowering attachments. *Leadercam* has a variant, the *RD90* which attaches to a 90m cable and, unlike their standard camera head listed in the following table, is waterproof to the full 90m of the cable.

Many of the cameras have a two-way mic so that the operator can listen for, or communicate directly with the victim with the added huge advantage of full visual acuity of the victim and surroundings thanks either on-board lighting or





an infra-red camera (an option for some) or both. FL360's 'probe' head pictured on the previous page deserves special mention because it is so efficient as a probe with all-around vision and lighting and because it has, along with the *Tactical Electronics Core* systems, the ability to transmit wirelessly to any android mobile device, be it tablet or smart-phone they have, you guessed it, an app for that. Both systems are app-driven allowing for updates and ad-ons. You would think that in this day and age of remote operated everything and drones in particular, that wireless would be standard in rescue but as we mentioned before, this is too specialist an area to attract much funding for development so most of the old stalwarts are updated as best they can be and continue to be sold. There is not necessarily anything wrong with that, look how many wood-burning *Aga* or *Range* cookers are increasingly sold today in preference to modern alternatives and yet your average Victorian cook would be entirely familiar with it. It's solid and reliable even in the midst of Armageddon, much like some of these cameras! One area that can drive development is the military and one of the few ruggedised, wireless camera systems in this list is from Tactical Electronics with one of the most comprehensive range of camera head options in this list. The *Core* (pic above) also has an encrypted signal partially negating our hacking concern mentioned earlier.



## SEARCH CAMERAS

### CAMERAS, SCREENS & ELECTRONICS

Quality of electronics and optical components are obviously key to the best systems. You want to be able to see what the camera sees and hear with as much clarity as possible.

Headphones, as shown by the *Leader Cam* in our title picture, accentuate and concentrate the mind to listen for relevant sounds cutting out extraneous noise that might otherwise inhibit your ability to hear the faint signs of life coming from an external screen speaker. At least three systems here, the *Savox*, *Leader Group* and *Scorpe* systems allow integration of other assets such as acoustic monitoring, structural movement, breath analysis and even radar in the case of *LeaderScan*. The themselves don't necessarily make things easier when you're exploring a monotone dusty void where even exposed skin looks like concrete dust. It can even be the case that enhanced resolution just confuses things as it shows



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up every grain of dust. This is where infrared, thermal imaging and Sense-Through-Wall technology stands out as invaluable tools but we have yet to see a system with multiple camera systems on one head and the ability to switch seamlessly between them. Thermal imaging can offer the best option for live-person recovery as shown by the *Core* system screen (pic above) and *Leader Group* has a thermal imaging camera option for its system which replaces the existing standard camera head when you need it. The TI camera head (pics right) simply replaces the standard camera above it by screwing onto, and plugging back into, the pole of the *LeaderCam*. Thermal imaging effectiveness becomes marginal for hypothermic or near-death victims with little surface temperature to detect or paradoxically in very hot environments where masonry retains and emits heat long after the collapse and can mask the bodies diminishing thermal signature. Modern cameras are pretty much all daylight colour with LED illumination with some switching to infrared in low light which can accentuate and contrast skin tones more easily. Unless everything is covered in dust or is the same colour in which case camera orientation can be a real problem.



end *LTE* version costing \$850 but you can get lesser *S2* models for about \$300 and the incredibly versatile *Tactical Electronics Core* systems use virtually anything including radio networks so you can see how replacement and augmentation will become cheaper and easier in the future. However, there is something to be said for the simplicity of a screen with a handful of colour-coded buttons with icons as exemplified by the *Search Cam* screen above. When rain and dust are hindering the use of touch-screens, more conventional button screens will keep working.

## THROUGH WALL IMAGING

Without wishing to sound like a rep for the *FirstLook360*, its modernity means it has a useful handle on 'spatial orientation' in environments that are otherwise incredibly difficult to reconcile with what you think you should be seeing. This is to be expected for the newest camera on the market and similarly it has a higher resolution screen than most because it's the newest and is using easily upgradeable technology. Touchscreen overlays on the tablet(s) it's transmitting to, show the camera's real-time orientation – effectively an artificial horizon and depth perception indication because, don't forget, it has that 360 degree view – like two bubble observation ports stitched together back-to-back or the product images you see online where you can navigate all around them, back, front, top, bottom. It's not 3D but it is virtual 3D. This system and the *Tactical Core* models allow video snapshots to be taken of the entire void which is relayed back to larger screens (which might be on the other side of the world!) and enable support personnel to examine for clues in greater detail and report back to the frontline operators if they spot anything worth checking out. With some, like the *FL360*, images are GPS tagged so the operator knows exactly where to go even if frontline rescuers have long since moved on to another search area.

As mentioned earlier, screens have mostly become a detached component, no longer firmly fastened to the telescopic pole but handheld and most often used by a second rescuer while the first manoeuvres the camera. We will now see more systems with wifi compatibility and using apps so that regular tablets and smart phones can be used instead of a dedicated screen. The *FL360* for instance uses a *Samsung S2* tablet, albeit the top-





## UNDERWATER USE

A number of the cameras in this list will operate underwater or at least under the surface of the water, in other words you can break the plane of the surface to get a much clearer view underwater without going too deep – similar to a periscope of a glass bottom boat. Some however, are designed to be used underwater and have attributes that lend themselves to dive team searches or perhaps in place of a dive team search. The *Reach&Rescue Underwater*, *Yone ProEye 751 SNR* with Sonar and the *JW Fishers* models are clearly designed with an aquatic environment in mind but don't forget some of the regular models like the *LeaderCam* in it's *RD90* variant, the *Red Box Snake eye* and even the venerable *SearchCam 3000* which have camera heads that will all go beyond 20m/60 feet in depth. It's true that these will mostly be involved in body or evidence searches rather than rescue but as has been proven time and time again with cold-water drowning victims, they're not dead until they're warm and dead.

Assets like underwater cameras can be the difference between being just-in-time or having not-much-hope-in-the-first-place. It could be argued that any team or agency with available cameras AND with bodies of water on their response patch should leave the cameras packaged to be able to search underwater straight from the box since a change to structural collapse mode (if a change is even required) will never be as time sensitive as a drowning victim. It may be that the regular set up using a telescopic pole is your best approach to shallow water searches, particularly for victims that have fallen through ice where a pole can search an area in a radius of several metres from the entry hole or flow-predicted search hole.

Cold, deep open water on the other hand will generally benefit from a cable-lowered camera worked in a pre-determined search pattern via boat. Remember that many camera systems offer cable lengths that are far in excess of the camera's depth-rating. This is not an oversight, this is because your camera may be operating **LATERALLY** from the screen rather than straight down – you may for instance be using a crew on the bank/shore rather than in a boat so that the camera head may be hundreds of feet away and only a few feet deep rather than being hundreds of feet deep. Or you may be search well or liquid storage tank with a large void before reaching the water. This all sounds obvious but you may want to mark your cables with a maximum depth indication for those occasions when you ARE sending the camera straight down into water.



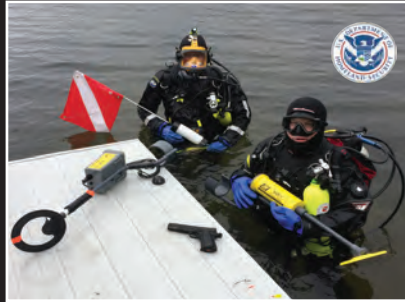
Another option is a rescue swimmer using a handheld camera like the *JW Fishers CHV-2* or *CM-1* with pistol grip (option). This is effectively a hard-wired dive camera capable of working the deepest of all the models in our guide. Nevertheless, it is prospectively still immensely useful even if used at the surface as a sub-water periscope or slightly deeper by a duck-diving rescuer without full scuba because surface monitoring of the screen by attentive observers may spot something the swimmer doesn't. In the case of the *MC-2 Mini Camera* this can be mounted on a pole or even on a helmet (pics left) but is otherwise a fully functioning dive camera which have no lens or camera movement other than being pointed in a particular direction by the rescuer.

Finally mention should be made of *Yone's Pro Eye* variant with sonar (pic below) This adds a whole new tool to your array because it is a colour camera on a cable which extends out from a sonar sensor sitting just below the water surface. Once a target is identified the camera can be lowered to visualise the sonar's detection. You don't have to use sonar since the camera can still operate as a stand-alone device but there is a gunwale clamp on the camera mount and two different screens in the system case – one for sonar and one for simultaneously colour imaging. The *Yone* cameras are also oddly unique in using propriety power tool 12v batteries that are easily obtainable from DIY stores, which is useful.



# Make Searching Open Waters Safer & Easier with JW Fishers Underwater Equipment

## Hand Held Underwater Metal Detectors



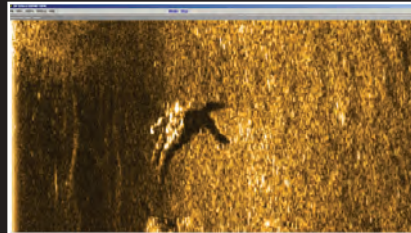
### Pulse 8X

- Detects ALL metals on land & underwater
- Audio and Visual output
- Commercial construction
- Ideal for evidence recovery
- Rated #1 by US Homeland Security

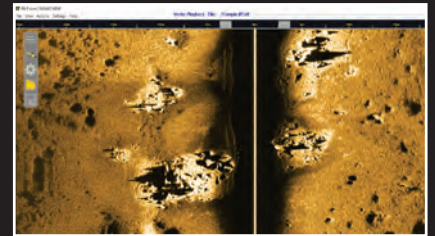
### SAR-1

- "Snareless" design with VIBRATING handle
- Bright red LED display
- Specialized for low visibility environments
- 200' depth rating

## Side Scan Sonar



\* Simulated Drowning Victim



### 600kHz - CW

- Simple to operate
- Up to 225' (75m) range on each side
- Displays images on laptop or tablet
- Commercial construction
- Works in all waters, regardless of clarity
- In use by public safety dive teams

### 450kHz / 900 kHz - CHIRP

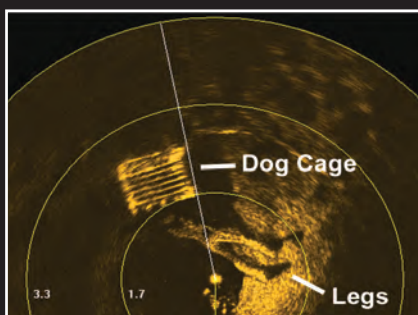
- Fully digital
- Up to 495' (150m) range on each side
- Breaks down for easy transport (case included)
- Commercial construction
- Low cost and easy operation
- Complete turnkey system

## Remote Operated Vehicle with Sector Scanning Sonar



### SeaLion-3

- 7 vectored, thruster system
- Front and rear 1080p HD cameras
- Two monitors for viewing and control
- Picture in picture (PIP) functionality
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- User friendly software
- Commercial construction
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- Starting at \$6,995



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**IN THE FOLLOWING TABLES.....**

We have included ONLY cameras that are actively marketed to and for rescuers even though there are a number of inspection cameras from other industries that might be viable. The majority of these are pole cameras which helps to narrow the field but there are a couple of flexible wire cameras because they are specifically sold to rescuers.

Options are shown as an outline box.... ☐ ☐ ☐

**COST:** Very approximate. Some manufacturers are oddly reticent to provide a price. We get this in all of our guides and particularly for high cost item which always makes us suspicious that there is differential pricing going on or they feel that a higher cost comparison counts against them.

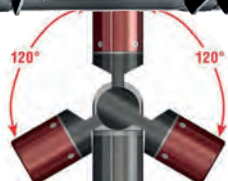
**WEIGHT:** There are 2 weights given, the first is the complete system including a case if that is how the system is sold. This is an important figure because it affects the overall shipping limits when moving equipment into a disaster zone. The second figure (in **burnt orange**) is the weight of the camera unit plus pole as it feels to the person holding and/or controlling it. For some cameras this may include the display screen because it is permanently attached. If not, the display screen is given as a separate weight in green in the SCREEN column.

**MIN to MAX Length :** the length of pole from shortest extension to longest. A single figure is the MAX extension. Many have extension or longer pole options and some, like the *Reach&Rescue* and *JWFishers* don't fit the pole in the case so you would need to factor in that extra weight to the system total.

**SUPPLIED CABLE:** refers to a camera extension cable to enable the camera to be clipped on and lowered or used remote from the operator. Most kits are supplied with a minimum length so you will again need to factor in the weight of longer lengths if purchased extra to the kit (in terms of air transport for overseas deployments). Cable lengths are shown in **burnt orange** and in brackets for optional lengths.

**SCREEN RESOLUTION, SIZE, WEIGHT:** We often see a screen resolution AND a camera resolution but if one is substantially lower than the other you will presumably not be seeing the image to best advantage. Screen or





Monitor resolution is usually in Pixels and is shown in **burnt orange**. Size and weight of the screen as distinct from the whole kit is important where the screen is fully detached and may be handheld or worn on the sleeve. For some it remains 'embedded' in the carry case (eg. the *ProEye Sonar*, *Reach & Rescue* and *JW Fishers* models) which is sat on the ground or a stand so weight isn't such an issue.

**CAMERA Resolution** for the camera may be given in a number of scales including TVL, lux (for the light source operating limit rather than resolution) and Pixels.

**ADJRANGE** (in black) refers to the articulation angle of the camera head. Some can be controlled by the operator to rotate through as much as 240 degrees (*Recon III* above right). The *FL360* on the other hand, doesn't articulate at all but has taken the more obvious option of a camera head that already sees a 360 degree view of the space. *Reach&Rescue's* camera head is a flexible but stiff articulation that is adjusted manually but normally views in the direction of the pole.

**Field of View:** is what the camera actually sees or rather the view you see from peripheries to straight in front. In the case of the *FL360* you see the entire 360 degree view but for most the view is dependant on how wide-angle the lens is. Endoscope style cameras tend to be quite narrow while larger lenses on *SearchCam* and *ProEye* give up to 260 degrees of view. Wide angle can sometimes lead to distortion at the peripheries.

## IN-USE COLUMNS

**CAMERA DETACH:** refers to the ability to remove the camera from its pole or mount and attach it to a cable for lowering.

**COLOUR / B&W CAMERA:** refers to the output to your screen being in full colour which may convert to Infra-Red in low light, or Black and White which is the minority of cameras in our Guide here even the *Mini JW Fishers* has a colour option.

**THERMAL / IR CAMERA:** refers to thermal imaging and/or Infra Red (IR) in black. Options are shown in an outline box ☐.

**IP RATING:** is an internationally recognised ingress protection figure for water, dust and gas – none of which is necessarily the same, ie. just because a product is waterproof doesn't mean it's intrinsically safe. The first figure is solids (dust) where 6 is the highest/best. The second figure is for liquids where 8



is the highest/best meaning waterproof beyond 1m and 7 is waterproof up to 1m below water. IP68 is therefore the best.

**CAMERA IMMERSION:** is further qualification of the IP Rating to show the actual depth capability of the camera – remember NOT to use cable longer than your camera's depth rating if lowering straight down into water.

**DATA STORAGE:** may be to a hard drive (in black) generally the case with laptops and tablets, SD card in burnt orange for transfer to other devices for manipulation or USB in green which is again normally only with a laptop option as with *JW Fishers*.

**IMAGE/VIDEO CAPTURE:** refers to either still images or video in burnt orange.

**GPS/GPS IMAGE TRACK:** this may be on-board GPS to indicate the location of the camera and operator (black square) or it might be an image tracking GPS (in burnt orange) which shows where any given image is taken so that search teams can return to the spot.

**HD CARRY CASE:** The HD in **burnt orange** refers to a heavy duty, waterproof, shockproof case like the *Peli*, *Explorer*, *Storm*, *Hardigge*, *IMPH* or *Otter*. The cases pictured here are all toughened, waterproof cases. A case listed as a black square will be a more standard hard carrying case, not necessarily waterproof or shock proof but well up to transporting the camera system. An outline square indicates a soft pack option











| IMAGES NOT TO SCALE | MODEL                    | COMPANY              | ORIGIN | COST<br>Basic System<br>excluding accessories | WEIGHT<br>PACKAGE TOTAL<br>IN HAND | LENGTH<br>MIN to MAX<br>SUPPLIED<br>CABLE                        | SCREEN<br>RESOLUTION<br>SIZE<br>WEIGHT      | CA<br>Dia |
|---------------------|--------------------------|----------------------|--------|---|------------------------------------|--|---|-----------|
|                     | First Look 360           | AGILITY TECHNOLOGIES |        | N/A   | 15.5kg/34.2lb<br>1.4kg/3lb         | 3m<br>118"   | 2048x1536<br>246mm / 9.7"<br>0.39kg/0.9lb   | 49<br>1   |
|                     | Leader-Cam               | LEADER GROUP         |        | N/A   | 14kg/31lb<br>2.78kg/6lb            | 2.4 - 3.4m*<br>7.8 - 11'<br>(1x25m or<br>2x90m cable<br>options) | 800 x 480<br>178mm / 7"<br>1.38kg / 3 lb    | 4<br>1    |
|                     | DV2                      | JW FISHERS           |        | \$3295<br>+ \$3195*                           | 27kg/59lb<br>6.8kg/15lb            | No Pole<br>50m / 150ft<br>(300m/1000ft<br>option)                | *<br>264mm/10.4"<br>10.9kg/24 lb*           | 12        |
|                     | DHC-2                    | JW FISHERS           |        | \$3795<br>+ \$3195*                           | 23kg/51lb<br>3.2kg/7lbs*           | No Pole<br>50m / 150ft<br>(300m/1000ft<br>option)                | 800 x 600 *<br>264mm/10.4"<br>10.9kg/24 lb* | 11        |
|                     | MC-2 Mini Camera         | JW FISHERS           |        | \$2095<br>+ \$3195*                           | 15.4kg / 34 lb<br>0.45kg / 1 lb*   | Pole adapter=\$225<br>50m / 150ft<br>(300m/1000ft<br>option)     | 800 x 600 *<br>264mm/10.4"<br>10.9kg/24 lb* | 6<br>2    |
|                     | Underwater Camera System | REACH & RESCUE       |        | £2014   | 10.2kg / 22.5 lb<br>exc pole       | *5m<br>16.4ft<br>20 m / 65ft<br>(30 & 40m<br>options)            | 800 x 480<br>178mm / 7"                     | 2         |
|                     | SnakeCam (RBW Kit)       | RED BOX AVIATION     |        | £4500   | 1.4kg / 3 lb                       | 0.45m<br>1.5'<br>9.25m*<br>(500m option)                         | 640 x 480*<br>127mm / 5"                    | 3         |
|                     | SearchCam Recon III      | SAVOX                |        | \$7615  |                                    | 1.09-1.43m<br>43-56.5"   | 18.2kg                                      | 4<br>1    |
|                     | SearchCam 3000           | SAVOX                |        | \$15000                                       |                                    | 1.04 -2.34m<br>41-92"  | 146mm /<br>5.75"<br>811 x 507               | 4<br>1    |
|                     | Vibrascope BVA6          | SCORPE               |        | €12000  | 13.2kg<br>29 lb                    | 0.5 - 2m<br>5m<br>(100m option)                                  | 178mm / 7"                                  | 3         |
|                     | DS100                    | SECA                 |        | £1890   | 7kg<br>15.4 lb<br>3.5kg<br>7.7 lb  | 1.2 - 4m<br>4 -  | 640x480<br>127mm / 5"<br>3.5kg              | 6<br>2    |

ORIGIN = Company origin, not necessarily the country of manufacture COST: INCLUDES local taxes/VAT . DUTY: HD Heavy Duty, S

| CAMERA<br>Resolution<br>ADJ RANGE<br>FIELD OF<br>VIEW | LIGHTS                           | BATTERY<br>DURATION<br>RECHARGE | OPERATING<br>TEMP                       | TWO-WAY MIC                | CAMERA DETACH | COLOUR/B&W CAMERA | THERMAL / IR CAMERA | IP RATING | CAMERA IMMERSION | DATA STORE SD USB | WIRELESS STREAMING | IMAGE VIDEO CAPTURE | MAINS/12v CHARGER | GPS/IMAGE TRACK | Heavy Duty CARRY CASE | NOTES   | WWW.               |
|---|----------------------------------|---------------------------------|---|----------------------------|---------------|-------------------|---------------------|-----------|------------------|-------------------|--------------------|---------------------|-------------------|-----------------|-----------------------|---|--------------------|
| 0.5mm<br>1.95"  | 1920 x 960<br>-<br>360°          | 6 x wide-angle LED              | Li-Ion*<br>3-5 hrs<br>1.5 hrs           | -10 to 60C<br>14 to 140F   | ■             | ■                 | ■                   | # 68      | 3m<br>10ft       | ■                 | ■                  | ■                   | ■                 | ■               | ■                     | *Will also operate using 4x CR123A cells<br># IR version/option in 2019   | agilitycorp.com    |
| 7mm<br>1.85"  | 700 x 480<br>0-170°<br>260°      | 8 x LED                         | NiMH<br>or 10x AA<br>2.3 hrs<br>3.3 hrs | -10 to 60C<br>14 to 140F   | ■             | ■                 | ■                   | 54        | 2m#<br>6.5ft     | ■                 | ■                  | ■                   | ■                 | ■               | ■                     | * figures for Std kit. Option fpr Poles up to 5.66m/18.6' Batteries compatible with Leader Scan, Hasty & Search<br>#RD90 version waterproof to 90m. now with GPS                        | leader-group.eu    |
| 27mm<br>5"  | 0.8 lux<br>/480L<br>NO<br>170°   | 2 x 1500 lumen LED              | Marine, AC-mains or 12v DC              | -25 to 60C<br>-14 to 140F  | ■             | ■                 | ■                   | -         | 150m#<br>500ft   | ■                 | NO                 | ■                   | ■                 | ■               | ■                     | *For VRM-2 screen module. Camera can be linked to any suitable laptop/display.<br>#300m/1000' housing available.<br>*exc cable, add 9kg/20lb /150ft<br>*Wt includes integral case       | jwfishers.com      |
| 14mm<br>4.5"  | 0.8 lux<br>/480L NO<br>170°      | 2 x 1500 lumen LED              | Marine, AC-mains or 12v DC              | -25 to 60C<br>-14 to 140F  | ■             | ■                 | ■                   | -         | 150m<br>500ft    | ■                 | NO                 | ■                   | ■                 | ■               | ■                     | *For VRM-2 screen module. Camera can be linked to any suitable laptop/display.<br>#300m/1000' housing available.<br>*exc cable, add 9kg/20lb /150ft<br>*Wt includes integral case       | jwfishers.com      |
| 30mm<br>1.375"  | NO<br>50°                        | Halogen or 12 x LED option      | Marine, AC-mains or 12v DC              | -25 to 60C<br>-14 to 140F  | ■             | ■                 | ■                   | -         | 150m<br>500ft    | ■                 | NO                 | ■                   | ■                 | ■               | ■                     | *For VRM-2 screen module & exc lights. Camera can be linked to any suitable laptop/display. Camera is B&W as standard but colour and EuroPAL options.<br>*exc cable, add 4kg/9lb /150ft | jwfishers.com      |
| 33mm<br>1.09"   | 480 TVL<br>360° (manual)<br>120° | 12 x LED                        | Li Ion<br>6-8 hrs<br>8 hrs              | -10C to 50C<br>14 to 122 F | ■             | ■                 | ■                   | 68        | 30m<br>100ft     | ■                 | ■                  | ■                   | ■                 | ■               | ■                     | *Poles an be 5m, 9m 13m or 17m/55ft long.<br>Pole can be simultaeously fitted with rescue aids and body recovery hook (shown).  | reachandrescue.com |
| 30mm<br>1.2"  | 512 x 492<br>90°<br>46°          | 4 x LED<br>1 XeNon              | 6v NiMH<br>35mins x 2<br>(6hr option)   | 0 to 50C<br>-32 to 122F    | ■             | ■                 | ■                   | 68        | 30m<br>100ft     | ■*                | NO                 | ■*                  | ■                 | ■               | ■                     | *Basic kit uses a lower res screen with no audio-visual record capability.<br>* Up to 500m cable available + 1.2-7.8m Pole option   | redboxaviation.com |
| 7mm<br>1.85"  | 0-240°                           | 16 x LED                        | Li Ion<br>2 hrs                         | -10 to 60C<br>14 to 140F   | ■             | ■                 | ■                   | 68        |                  | ■                 | ■                  | ■                   | ■                 | ■               | ■                     |   | savox.com          |
| 7mm<br>1.85"  | 0-240°                           | 16 x LED                        | Li Ion<br>2 hrs                         | -10 to 60C<br>14 to 140F   | ■             | ■                 | ■                   | 54        | 23m              | ■                 | ■                  | ■                   | ■                 | ■               | ■                     |   | savox.com          |
| 9mm   | 0.5 lux<br>0-360°                | 6 x LED                         | 12v NiMH<br>4.5 Ah<br>4-5 hrs<br>4 hrs  | -20 to 50C<br>-4 to 122F   | ■             | ■                 | ■                   | 66        | 60m              | ■                 | ■                  | ■                   | ■                 | ■               | ■                     | Data for waterproof camera, more basic camera available.  | scorpe.eu          |
| 5mm<br>2.56"  | 420 TVL<br>0-110°<br>90°         | 36 x LEDs                       | 11.1v Li<br>7hrs<br>4.5 hrs             | -10 to 55C<br>14 to 131F   | ■             | ■                 | ■                   | 67        |                  | ■                 | ■                  | ■                   | ■                 | ■               | ■                     | DM version has wireless AND wired camera  | dartsystems.co.uk  |

STD Standard Duty, LD Light Duty. ADJUSTMENT: Black box= Standard feature. White ( black or orange outline) Box ■=Option



| IMAGES NOT TO SCALE   | MODEL                 | COMPANY              | ORIGIN   | COST<br>Basic System<br>excluding accessories | WEIGHT<br>PACKAGE TOTAL<br>IN HAND | LENGTH<br>MIN to MAX<br>SUPPLIED CABLE   | SCREEN<br>RESOLUTION<br>SIZE<br>WEIGHT    | CA<br>Dia |
|---|-----------------------|----------------------|--|---|------------------------------------|--|---|-----------|
|   | CORE POLE CAMERA      | TACTICAL ELECTRONICS |   | \$8623  | 1.56kg<br>3.4lb                    | 0.6-3.2m<br>4-10ft<br>(5.3m/17ft option) | 1280x720<br>127mm / 5"<br>0.4kg / 0.85 lb | 4<br>1    |
|   | WSC4926               | UNIFIRE              |   | \$600   | 0.67kg<br>1.5lb                    | 0.9m*<br>3ft                             | 712 x 486<br>60mm / 2.36"<br>5oz          | 4<br>1    |
|   | Pro Eye 751 SNR       | YONE CORPORATION     |   | N/A   | 19kg<br>42lb<br>8.5kg<br>18.7lb    | 2.4m<br>7.8ft<br>10m*<br>33ft            | 795x595 142mm<br>/ 5.6"                   | 3         |
|   | ProEye 951 S-IR       | YONE CORPORATION     |   | N/A   | 19kg<br>42lb                       | (20m65ft option)                         | 177mm / 7"                                | 3<br>1    |
|  | ProEye 991 NH Nno-Cam | YONE CORPORATION     |  | N/A   | 15kg/33lb<br>3.3kg/7.3lb           |  |   | 6<br>0    |

| CAMERA<br>Parameter | CAMERA<br>RESOLUTION<br>ADJ RANGE<br>FIELD OF<br>VIEW | LIGHTS                  | BATTERY<br>DURATION<br>RECHARGE                | OPERATING<br>TEMP        | TWO-WAY MIC | CAMERA DETACH | COLOUR/B&W CAMERA | THERMAL / IR CAMERA | IP RATING | CAMERA IMMERSION | DATA STORE SD USB | WIRELESS STREAMING | IMAGE VIDEO CAPTURE | mains/12v CHARGER | GPS/GPS IMAGE TRACK | Heavy Duty CARRY CASE | NOTES  | WWW.                  |
|---------------------|---|-------------------------|--|--------------------------|-------------|---------------|-------------------|---------------------|-----------|------------------|-------------------|--------------------|---------------------|-------------------|---------------------|-----------------------|--|-----------------------|
| 2mm<br>1.65"        | 1280x720<br>0-360°<br>(manual)<br>70°                 | 4 x LED                 | 3xCR123<br>2.5hrs                              | -20 to 50C<br>-4 to 122F | ■           |               | ■                 | ■                   | -         | NO               | ■                 | ■                  | ■                   |                   | ■                   | ■                     | Hardwire option. 4 different camera head options -Fixed, Flexible, Flat/Under door and small-bore endoscope as well as a K9 camera.                  | tacticalectronics.com |
| 1mm<br>1.61"        | 320 x 240<br>0-360°<br>(manual)<br>45°                | 4 x LED                 | 4 x AA<br>2hrs                                 | -10 to 50C<br>14 to 122F |             |               |                   |                     |           |                  |                   |                    | ■                   |                   |                     | ■                     | *Cable available in 3ft lengths up to 12ft   | unifireusa.com        |
| 6mm<br>1.4"         | 811 x 507**<br>0-180°<br>231°                         | 12 x LED                | 12v NiMH<br>(Li-Ion option)<br>3-6hrs<br>5 hrs |                          |             |               |                   | ■                   | 67        | 50m              | □                 |                    | ■                   | ■                 | ■                   | ■                     | DSX version without sonar. SNR=SONAR & Colour visual cameras<br>3, 5 & 6m pole options.<br>**PAL version = 795 x 595<br>*4,20,30 & 50m cable options | yone-co.co.jp         |
| 2mm<br>1.25"        | 350TVL<br>0-180°<br>231°                              | 12 x LED                | 12v NiMH<br>3hrs<br>3hrs                       |                          | ■           | ■             | ■                 | ■                   | 67        | 50m              | □*                |                    |                     |                   | ■                   | ■                     | Standard version with colour camera. Second camera interchangeable with IR/TiC<br>*OPTION with 8gb or 4gb SD   | yone-co.co.jp         |
| 9mm<br>0.27"        |   | 4 x LED<br>8 Auxilliary | AA   |                          |             |               |                   |                     | 67        |                  | ■                 |                    |                     |                   |                     |                       |  | yone-co.co.jp         |



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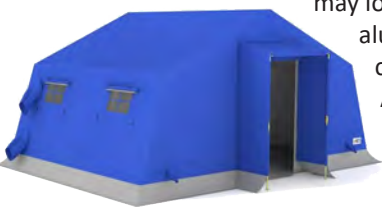
# EMERGENCY RESCUE SHELTERS



**W**e use the term 'Rescue' in the title to indicate RAPID DELPOYMENT and

differentiate these emergency shelters from those designed for refugee or disaster-victim temporary housing. Of course, ALL of these shelters could do that job and many do, but generally speaking, shelters intended for use by rescuers are erected within minutes and have different requirements and construction standards (and fitments) than mid-to long term occupancy shelters. Primary amongst them is the need to be able to transport easily and erect within minutes. There are many mid to long term shelters that

may look identical but have substantial aluminium or steel frames like this civil protection model from *Lanco*. Aluminium frame tents however, are a plausible option and we may well add them in at a later date. If you look at ROFI's inflatable versus alu-frame model the 606, there is only 43kg



difference for a 6m half dome shelter. Time to deploy though is vastly different- even the largest inflatables go up in minutes while a frame tent can take hours. We have NOT included Manually erected metal frame shelters or decontamination/ shower shelters though some of those we have included can be adapted for such use.

There are three distinct constructions for rescuers' shelters:

- 1) **HIGH PRESSURE - PNEUMATIC/PUMP- INFLATE & FORGET**
- 2) **LOW PRESSURE - POWERED -CONTINUAL/REGULAR INFLATION**
- 3) **MANUAL - POP-UP FRAME**- a rigid frame that concertina's up and locks into position - think garden gazebo or covered market stall.

a fourth category that we have not included in this guide but may be added later is

- 4) **MANUAL - SOLID FRAME** - Aluminium or steel poles instead of an inflatable frame. Longer time to erect and heavy/ bulky but no other equipment needed to maintain them.

All four types have been in regular use for the past 40 or 50 years so they don't need much introduction but there are some subtle improvements to the more recent models that weren't present on the models we were using in the last century.

Speed of erection and ease of transport are key to shelters used by day-to-day emergency services requiring something small enough to fit on a fire or rescue truck and used for a few hours as distinct from disaster response which has a much more coordinated heavy-lift of equipment into areas where they may stay erected for many days or weeks. Putting aside the vast number of civilian or household pop-up shelters with their concertina metal frames, by far the largest category in the emergency sector are the high-pressure one-time inflatable frame shelters. These can use compressed air cylinders for rally rapid inflation and once up may only need periodic topping up to allow for temperature differentials.



The second category we have listed, the low-pressure continual inflation models suffer from having to have a powered fan running continuously - so logistics, noise and bulk to contend with - but maintain their form (while the fans are running or with regular top-ups) and can sustain multiple punctures and still function. Pressure relief valves allow for accidental over-inflation on high-pressure models rather than rupturing the seams and for high temperature expansion but this expelled air then needs to be replaced as the temperature goes back down.

## Materials

All professional shelters are waterproof when new. This can obviously change as the material gets worn - often as a result of wind continually rubbing the shell against a metal frame which is not an issue for fully inflatable shelters. These can all be patched but inflatables will require a more substantial glue or weld. Fire resistance. There may also be external factors like fire /volcano ash or building debris actively damaging the shell which is not an issue for mountain or flood rescue but is for disaster response and fire-rescue. **DISCUSS FURTHER**

**Floor area** is obviously larger on the outside than it is on the inside for the pneumatic and inflating models. We have listed mostly the outside area because it is the area of land that you need to have available for the shelter but some, like the Vetter MT-series are quoting the usable or internal area. For internal space all others you should allow for a 20-40cm/8-16" reduction in length and width for pneumatic (inflate & forget) models and 50 to 100cm/20-40" for the largest fan-inflating models. For the pop-up shelters there is little to no difference in the internal versus external floor area. A key decision is whether to have a fixed 9attached) floor or a detachable or add-on floor. The former provide better weather-proofing, hygiene and speed of erection while an open base allows the shelter to be lifted and placed over an obstacle or an incident



like a vehicle.



with slack material remembering that ALL inflatable shelters will vary in rigidity depending on temperature fluctuations. 'Inflate and forget' shelters may need regular topping up assuming that they have pressure relief valves to exhaust heated air as it expands.

**resistance & Staking** is a very important consideration for temporary structures like this with big 'sail' areas that can be badly affected by gusts - and the sheer weight of the shelter is not necessarily foolproof - witness the number of very large inflatable bouncy castles that have literally taken off with people in/on them. The key companies in this sector go to great lengths to ensure their shelters can withstand at least 20-40mph - there's no accounting for the kinds of extremes we see these days. In the image above, MFC use a giant fan to test side and front-on exposure and one company, *Nixus* in Slovakia - uses a small jet aircraft to test some of theirs - that may just be one or two as a one-off test rather than their standard test method but a useful indicator nonetheless. All shelters offer ground stake anchor points either as an engineered hardpoint - generally welded - at the base like the IC Brindle title picture opposite with elasticated cord then attached or as material flaps with eyelets through which you drive a ground stake. The picture opposite also shows the most effective anchor option, a **ballast skirt** around the base. This is a tube or flap of material attached to the upper construction of the shelter either all the way around or as separate flaps as shown opposite. These can be sealed tubes that you can fill with water and/or flat and weighted with sand bags, water containers or best of all, a vehicle as long as it's not going to be driven off every 5 minutes.

Higher up around the eaves will be eyes for corded stays which are hugely important in maintaining the internal cube area during high winds. If you only staked at the ground the chances are the top half would deflect in high winds and create a rhomboid that would severely impact your inside working space. Of course, much of what you do inside can assist with stability in wind whether it be storage cases or beds pushed up against the inner wall.

Angled walls that are tight as a drum when erected like this Lanco modular shelter (three separate sections) offer a better defence against wind than an upright, square wall

**Water resistance** shouldn't be an issue for any of these shelters expect over time as materials wear or tears appear. The ticker, coated materials are the most resilient but also the heaviest and bulkiest so it is a decision based on the operational parameters - lighter, less resilient materials for the most temporary and remote of work locations.. The much bigger issue is to ensure that there is no pooling on the roof due to slack materials- this can be catastrophic. A decent angle and firm guys will help ensure good flow off the roof but if you get some deflation in the cooler night and the shallowest of curves appears in the roof this can be enough to pool an ever increasing expanse of water with very significant weight increases as rain continues.

**Small or Large?:** The smallest emergency shelters are really pop-up tents that can be the size of a person's body (bivvi) as well as the larger versions shown at the top that are equally at home as a family picnic shelter, but in inflatable terms the *Rigloo* is currently the smallest and shown left as a weather-protective casualty handling station in a mountain environment. Small shelters like this *Rescuer* and an even smaller 1.2m x 1.8m *Refuge* version can be inflated by hand/ foot pump - almost prohibitively time-consuming for the larger, standard sized shelters which really do need either a compressed air cylinder for the most rapid of inflation or an electric fan/pump. At the largest end of 'emergency' shelters is this modular *Lanco* giant which comes in 3 sections allowing you to use just the front and rear joined or insert mid sections. While we haven't included the full size field hospitals that can take days to erect we have included some like this that are huge but can easily be ready to use within an hour using an experienced crew. Many of these can be modified to create treatment centres or search-team dorms with separate cubicles inside adding to bulk and set-



up





time but considerably improving casualty and/or team comfort. The *MFC* model below has 3 such cubicles running down one wall with a wide access and/or storage area on the opposite wall. Just because they are large, does not mean they are entirely unwieldy, many have carry handles around the base so that even the largest *Nixus* model above can be lifted and carried by personnel to locate/relocate as required. This model has an integral floor but models without a floor can easily be lifted over obstructions or over vehicles and work areas that



of tents. The majority offer the means to connect one model to another via their doorways so end-to-end connection is common. In some cases the manufacturer offers a central hub where a shelter or line of shelters can be connected like spokes to a central chamber like this 4-opening model from Ego which we think is now discontinued and the *Lanco* model below left.

#### Exo-frames:

From a strength and resistance to wind standpoint, there are a handful of inflatables that go up in minutes that can then be reinforced with an alloy (or even steel if you can cope with the weight) external frame as distinct from nay that can use one or two strengthening poles for the apex and eaves. A full exo-frame is bulky and heavy but if your work environment is going to be a constant wind challenge this could be the way to go.



may not instantly come to mind as a good idea - for instance a trench rescue which can take many hours and might end in failure if undertaken during heavy rain could be entirely covered but these larger shelters.

#### Joining & Hubs

Although we haven't included the very largest, framed shelters there are a good many of these fast-erecting shelters that can be con-joined to create enormous corridors







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# NEW COMPILING Q1'25

## IN THE FOLLOWING TABLES.....

Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square ■■■■■■

Optional features or accessories are shown as an outline square □□□□□□

A circle ●○ in the 'USE' columns indicates that this feature is only partially present and/or is OK for that purpose but not ideal.

A model **VARIANT** is shown in cyan blue. Any features or specifications that differ from the standard are also in cyan or have a cyan outline to a black or coloured square ■■■■■■

**ORIGIN:** The company's home country, not necessarily the country of manufacture which is indicated by an inset flag or two equally sized flags if the tool is made in both countries.  
**COST:** approximate because it's subject to a lot of interchangeable elements like materials, windows, ports etc but most manufacturers give a generic price per size - you just need to ensure that the price takes into account all the features you need. Includes local taxes/VAT. Prices in burnt orange £\$, are, as always, **currency conversions only** and do not include shipping, duty etc.

**CONSTRUCTION:** Colour coded to three types

- PNEUMATIC/PUMP- INFLATE & FORGET
- POWERED FAN -CONTINUAL INFLATION
- MANUAL - POP-UP FRAME

**TIME to ERECT:** Depending on the type of inflatable shelter the fastest time will be with a compressed air cylinder which is usually twice as fast as an electric fan/inflater.

**WEIGHT: Shelter-Only:** does not include inflation/erection tools, stakes, additional groundsheets etc. and definitely NOT capital items like fans, pumps, air cylinders and generators. Add 5 to 20kg for the transport weight with the included bits and pieces like stakes, guy and carry bag.

**MATERIALS:** If two fabrics are given the first will be the roof and is generally lighter than the wall-material.

- FLAME-RETARDANT
- WATERPROOF

**AIR VOLUME:** For inflate & Forget shelters this can be vital information to ensure you have sufficient cylinder to do the job but largely irrelevant for fan-inflation other than indicating the sheer size of shelter and therefore the time it takes to erect.

**LENGTH, WIDTH, HEIGHT:** DEPLOYED / PACKED The dimensions in metres/feet for the shelter when erected - HEIGHT: unless two figures are given, this will be the maximum which is to the outside apex **so the top of side-walls inside will generally be at least half a full metre lower for an average 4 x 3 inflate&forget shelter.** You may also need to allow a further reduction in height for the inflated beams which are 25-35cm in diameter.

**PACKED** means rolled and stowed ready for transport excluding any fans, cylinders power-source, lighting etc.

**AREA: DETACHABLE FIXED FLOOR** In Square Metres/feet and most refer to the entire footprint rather than just the internal space. **Internal areas are given in italics** and if there are two figures, the smaller area is internal. To convert external floor area to internal floor space in inflatable models you will need to assume around 50cm reduction in width to allow for beams, and up to 1m for continual-inflation models. These figures in green (or as an option □) indicate whether the floor is detachable so that the shelter can be lifted over and onto



www.rescuemagazines.com

a site/vehicle/ incident.

**DOORS FULL-SPAN:** entrances may be a doorway with a roll-up closure or it may be a full-span opening with a roll-up or removable panel across the full width of

the shelter. In some cases the full-span panel may also have a doorway in it shown as 1+ ■. These entrances are closed/opened/secured by one or two of three options: **Zip Velcro Tie:** The 'door' can be sealed via zip or velcro/hook&loop or both and/or can be tied open

**WINDOWS:** Clear Mesh Opens

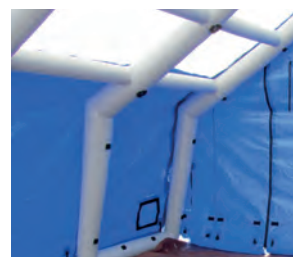
**CONNECTABLE Stakes Guys Skirt:** Whether the shelter can be connected to another door opening via zip/velcro and/or/tie. **Stakes** or pegs supplied as ground anchors. **Guys** or cords for staying the top of the shelter in high winds. **'Skirt'** refers to **Vehicle or ballast pads** which are wide flaps around the base that can be ballasted or your vehicle(s) can park on them to ensure the shelter withstands high winds.

**PORTS:** Some or all of the total number of ports may be differentiated into: **Vent - For air entry often with a mosquito mesh** **Power - smaller port that can close over a narrow cable or umbilical** **Water: unusual, but some make have standard direct fitting for hose pipe particularly in medical tents.** **HVAC: Much larger ports to allow fans to push air into the shelter - either ambient or heated or cooled.**

Openings, often sealable, that allow utilities, comms, air and externally generated heat/cold to enter the shelter. The total number of ports or inlets is in black. Some ports are specific to a use - for instance a **water** inlet may involve a hose or water pipe coupling and **power** tends to be quite small and lower down for sockets and around the eaves for lighting. The largest **HVAC** port could be used for any pipes or cabling you want to enter the shelter but is large to allow externally powered air, either as circulating ambient air, heated or cooled. Air vents are different as they are 'passive' and tend to be a meshed opening above the doors and not suitable as an inlet port which are otherwise set low to the ground and often adjacent the corners.

**ROOF TRANSLUSCENT OPAQUE:**

Some shelters have a clear or white roof which lets plenty of light in like this Canadian Tulmar model. Others are opaque and may require more internal lighting but most offer the option of translucent/clear or opaque.



**BRANDING HEATER LIGHTING PUMP:** Almost always an option rather than part of the price though some will provide a hand pump as standard and this is a last resort, slow erection method but it is at least, infallible.

**OTHER COLOURS:** Colours available in addition to the one shown.

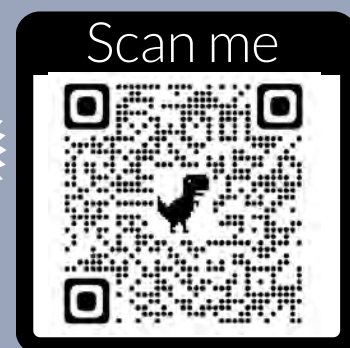
# RESCUER



## PRE-HOSPITAL EMS



Fast Pack Sack



# FAST DEPLOYING EMERGENCY SHELTER

## 1. CARRY



## 2. INFLATE



## 3. OPERATE



### Removable floor

Place shelter over casualty. 3 points of access.  
Multi use floor.

### Lone Responder deployable

Carry, inflate, operate and repack.

### Structured for hands free operation

Strong and durable. Fits a stretcher. Reusable.

### Protect from exposure

Privacy & dignity. Ripstop shell waterproof  
8000mm HH. Operating range from -50°C to  
+60°C and SPF 30. Mosquito nets. Air flow  
controls.

### Operational in ~ 1 minute

With time of the essence, medics need to  
quickly control the environment.

### CARRY SIZE

H 60cm | 23.6"  
W 30cm | 11.81"  
D 20cm | 7.87"

### CARRY WEIGHT

#### Shelter & Fast Pack Sack

7kg | 15.5lbs

#### Backpack & Pump

3.2kg | 7.05 lbs

### OPERATING ROOM

H 1.2m | 3.93ft  
W 1.6m | 5.24ft  
D 2.6m | 8.53ft

### DESIGNED TO TREAT

- Reusable
- Inflates in < 1 minute
- Exposure Protection
- Removable Floor

[www.rigloo-rs.com](http://www.rigloo-rs.com) [info@rigloo-rs.com](mailto:info@rigloo-rs.com)

Rigloo Ltd, 4/41 Burnblea Street, Hamilton, UK, ML3 6RF
















































































## A NEW APPROACH TO CASUALTY CARE



|   |  |   |  |   |  |   |  |  |  |
|---|--|---|--|---|--|---|--|--|--|
| IMAGES NOT TO SCALE                           |  |   |  |   |  |   |  |  |  |
| Construction                                  |  |   |  |   |  |   |  |  |  |
| PNEUMATIC/PUMP- INFLATE & FORGET              |  |   |  |   |  |   |  |  |  |
| POWERED FAN -CONTINUAL INFLATION              |  |   |  |   |  |   |  |  |  |
| MANUAL - POP-UP FRAME                         |  |   |  |   |  |   |  |  |  |
| =Option                                       |  |   |  |   |  |   |  |  |  |
| AREA in <i>ITALICS</i> = internal floor space |  |   |  |   |  |   |  |  |  |
| COMPANY                                       |  | AIRQUEE   |  | AIRQUEE   |  | AIRQUEE   |  | AI                                       |  |
| MODEL <i>VARIANT</i>                          |  | Rapid Deployment  |  | Emergency Response  |  | Airtight Frame 1  |  | Airtig                                   |  |
| PRODUCT CODE                                  |  | AQ6268SP1   |  | AQ5911  |  | AQ5109  |  |  |  |
| ORIGIN  |  |   |  |   |  |   |  |  |  |
| CONSTRUCTION <i>TIME-to-ERECT</i>             |  | 00mins  |  | 00mins  |  | 00mins  |  |  |  |
| COST inc tax / VAT                            |  | £3714 \$00 €00  |  | £4794 \$00 €00  |  | £3290 \$00 €00  |  | £35                                      |  |
| WEIGHT - Shelter-Only                         |  | 70kg / 00lb   |  | 140kg / 00lb  |  | 122kg / 00lb  |  | 15                                       |  |
| MATERIALS - ROOF/ WALLS                       |  | ?/?   |  | ?/?   |  | ?/?   |  |  |  |
| <i>FLOOR</i>                                  |  |   |  |   |  |   |  |  |  |
| FIRE-RESISTANT WATERPROOF                     |  |   |  |   |  |   |  |  |  |
| AIR VOLUME                                    |  | 00L / 00CuFt  |  | 00L / 00CuFt  |  | 00L / 00CuFt  |  | 00                                       |  |
| LENGTH DEPLOYED / <i>PACKED</i>               |  | 5 0.9 m / 16.4 00'  |  | 6 00m / 19.7 00'  |  | 5.4 1.1 m / 17.7 00'  |  | 5.4 1.1                                  |  |
| WIDTH DEPLOYED / <i>PACKED</i>                |  | 3.6 0.6m / 11.8 00'   |  | 5.05 00m / 16.6 00'   |  | 4.75 0.9 m / 15.4 00'   |  | 5.6 0.9                                  |  |
| HEIGHT DEPLOYED / <i>PACKED</i>               |  | 2.6 0.6m / 8.5 00'  |  | 3.3 00m / 10.8 00'  |  | 2.95 0.9 m / 9.7 00'  |  | 2.85 0                                   |  |
| AREA: -DETACHABLEFIXED FLOOR                  |  | 00sqm / 00sqft  |  | 00sqm / 00sqft  |  | 00sqm / 00sqft  |  | 00s                                      |  |
| DOORS FULL-SPAN Zip Velcro Tie                |  | 0   |  | 1   |  | 0   |  | 0  |  |
| WINDOWS Clear Mesh Opens                      |  | 0   |  | 0   |  | 0   |  | 0  |  |
| CONNECTABLE Stakes Guys Skirt                 |  |   |  |   |  |   |  |  |  |
| PORTS Vent Power Water HVAC                   |  | 0   |  | 0   |  | 0   |  | 0  |  |
| TRANSLUSCENT OPAQUE ROOF PRV                  |  |   |  |   |  |   |  |  |  |
| BRANDING HEATER LIGHTING PUMP                 |  |   |  |   |  |   |  |  |  |
| OTHER COLOURS                                 |  |   |  |   |  |   |  |  |  |
| NOTES   |  | 240/110v powered blower required<br>Inc Repair kit, delivery hose,pegs/<br>cord and Valise. |  | Includes Repair kit, delivery<br>hose,pegs/cord and Valise.                         |  | Includes Repair kit, delivery<br>hose,pegs/cord and Valise.                         |  | Includes R<br>hose,peg                   |  |
| WEBSITE                                       |  | airquee.com   |  | airquee.com   |  | airquee.com   |  | air                                      |  |
| IMAGES NOT TO SCALE                           |  |   |  |   |  |   |  |  |  |
| Construction                                  |  |   |  |   |  |   |  |  |  |
| PNEUMATIC/PUMP- INFLATE & FORGET              |  |   |  |   |  |   |  |  |  |
| POWERED FAN -CONTINUAL INFLATION              |  |   |  |   |  |   |  |  |  |
| MANUAL - POP-UP FRAME                         |  |   |  |   |  |   |  |  |  |
| =Option                                       |  |   |  |   |  |   |  |  |  |
| AREA in <i>ITALICS</i> = internal floor space |  |   |  |   |  |   |  |  |  |
| COMPANY                                       |  | AIRSHELTA   |  | AIRSHELTA   |  | AIRSHELTA   |  | AI                                       |  |
| MODEL <i>VARIANT</i>                          |  | Link Hub  |  | Aireshelta 3.6  |  | Aireshelta 6  |  | Pac                                      |  |
| PRODUCT CODE                                  |  | 00  |  | 00  |  | 00  |  |  |  |
| ORIGIN  |  |   |  |   |  |   |  |  |  |
| CONSTRUCTION <i>TIME-to-ERECT</i>             |  | <4mins  |  | <2mins  |  | <2mins  |  |  |  |
| COST inc tax / VAT                            |  | £00 \$00 €00  |  | £00 \$00 €00  |  | £00 \$00 €00  |  | £0                                       |  |
| WEIGHT - Shelter-Only                         |  | 00kg / 00lb   |  | 30kg / 66lb   |  | 00kg / 90lb   |  | 32                                       |  |
| MATERIALS - ROOF/ WALLS                       |  | PU-coated nylon<br>neoprene tubes   |  | PU-coated nylon   |  | PU-coated nylon   |  | PU-c<br>neop                             |  |
| <i>FLOOR</i>                                  |  |   |  |   |  |   |  |  |  |
| FIRE-RESISTANT WATERPROOF                     |  |   |  |   |  |   |  |  |  |
| AIR VOLUME                                    |  | 00L / 00CuFt  |  | 00L / 00CuFt  |  | 00L / 00CuFt  |  | 00                                       |  |
| LENGTH DEPLOYED / <i>PACKED</i>               |  | 6.4 00m / 21 00'  |  | 3.2 0.8m / 10.5 2.6'  |  | 00 00m / 00 00'   |  | 3.2 0.5                                  |  |
| WIDTH DEPLOYED / <i>PACKED</i>                |  | 6.4 00m / 21 00'  |  | 3.6 0.8m / 11.8 2.6'  |  | 6.7 00m / 22 00'  |  | 3.2 0.5                                  |  |
| HEIGHT DEPLOYED / <i>PACKED</i>               |  | 3.33 00m / 11 00'   |  | 2.63 0.8m / 8.6 2.6'  |  | 3.35 00m / 11 00'   |  | 2.6 0                                    |  |
| AREA: -DETACHABLEFIXED FLOOR                  |  | 00sqm / 00sqft  |  | 00sqm / 00sqft  |  | 00sqm / 00sqft  |  | 10.2                                     |  |
| DOORS FULL-SPAN Zip Velcro Tie                |  | 4x 3.6m   |  | 0   |  | 0   |  | 1+                                       |  |
| WINDOWS Clear Mesh Opens                      |  | 3   |  | 0   |  | 0   |  | 1-4                                      |  |
| CONNECT Stakes Guys Skirt                     |  |   |  |   |  |   |  |  |  |
| PORTS Vent Power Water HVAC                   |  | 0   |  | 0   |  | 0   |  | 0  |  |
| TRANSLUSCENT OPAQUE ROOF PRV                  |  |   |  |   |  |   |  |  |  |
| BRANDING HEATER LIGHTING PUMP                 |  |   |  |   |  |   |  |  |  |
| OTHER COLOURS                                 |  |   |  |   |  |   |  |  |  |
| NOTES   |  | Links to Airepod and Carpod   |  | 240/110v blower required<br>Inc Repair kit, delivery hose,pegs/<br>cord and Valise. |  | 240/110v blower required<br>Inc Repair kit, delivery hose,pegs/<br>cord and Valise. |  | 240/110v<br>Inc Repair kit,<br>Option- v |  |
| WEBSITE                                       |  | aireshelta.com  |  | aireshelta.com airesheltana.com   |  | aireshelta.com airesheltana.com   |  | aireshelta.com                           |  |



## EMERGENCY SHELTERS

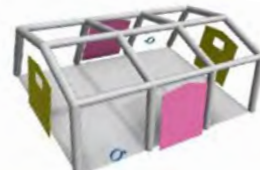
|   |  |  |  |  |
|---|--|--|--|--|
|    |                   |                   |                  |                           |
| <b>AIRQUEE</b><br>Airtight Frame 2<br>AQ7364                                      | <b>AIRQUEE</b><br>Airtight Frame 3<br>AQ5109   | <b>AIRQUEE</b><br>Airtight Frame 4<br>AQ6780   | <b>AIRQUEE</b><br>INFLATABLE SHELTER<br>AQ2229   | <b>AIRQUEE</b><br>INFLATABLE SHELTER<br>AQ2621   |
|    |                   |                   |                   |                           |
| 00mins  | 00mins   | 00mins   | 00mins   | 00mins   |
| £18 \$00 €00  | £5318 \$00 €00   | £11337 \$00 €00  | £3234 \$00 €00   | £4194 \$00 €00   |
| 5kg / 00lb  | 190kg / 00lb   | 419kg / 00lb   | 251kg / 00lb   | 360kg / 00lb   |
| ??/?  | ??/?   | ??/?   | ??/?   | ??/?   |
|    |                   |                   |                   |                           |
| L / 00CuFt  | 00L / 00CuFt   | 00L / 00CuFt   | 00L / 00CuFt   | 00L / 00CuFt   |
| 0.1m / 00'1.1   | 8 1.8 m / 26.2 00'   | 10.07 1.6 m / 35.1 00'   | 9 1m / 29.5 00'  | 9.95 1.4m / 32.6 00'   |
| 0.9 m / 18.4 00'  | 5.6 0.9 m / 18.4 00'   | 6.45 1.3 m / 21.2 00'  | 6.5 1.2m / 21.3 00'  | 8 1.2m / 26.2 00'  |
| 0.9 m / 9.4 00'   | 2.9 0.9 m / 9.5 00'  | 4.45 1.3m / 14.6 00'   | 3.3 1m / 10.8 00'  | 4.3 1.2m / 14.1 00'  |
| 0sqm / 00sqft   | 00sqm / 00sqft   | 00sqm / 00sqft   | 00sqm / 00sqft   | 00sqm / 00sqft   |
|    |                   |                   |                   |                           |
|    |                   |                   |                   |                           |
|    |                   |                   |                   |                           |
|    |                   |                   |                   |                           |
|    |                   |                   |                   |                           |
| Repair kit, delivery<br>hose/cord and Valise.                                     | Includes Repair kit, delivery<br>hose,pegs/cord and Valise.  | Includes Repair kit, delivery<br>hose,pegs/cord and Valise.  | Includes Repair kit, delivery<br>hose,pegs/cord and Valise.  | Includes Repair kit, delivery<br>hose,pegs/cord and Valise.  |
| airquee.com   | airquee.com  | airquee.com  | airquee.com  | airquee.com  |
|  |                 |                 |  |                         |
| <b>AIRSHELTA</b><br>Dock Pod  | <b>AIRSHELTA</b><br>Airepod  | <b>AIRSHELTA</b><br>Carpod   | <b>AIRSHELTA</b><br>Carpod Lg  | <b>AIRSHELTA</b><br>Cubicle Shelter  |
|  |                 |                 |                 |                         |
| <2mins  | 2mins  | 2-3mins  | 4-5mins  | <5mins   |
| £00 \$00 €00  | £00 \$00 €00   | £00 \$00 €00   | £00 \$00 €00   | £00 \$00 €00   |
| 2kg / 82lb  | 37kg / 110lb   | 45kg / 99lb  | 50kg / 110lb   | 52kg / 200lb   |
| coated nylon<br>neoprene tubes  | PU-coated nylon<br>neoprene tubes  | PU-coated nylon<br>neoprene tubes  | PU-coated nylon<br>neoprene tubes  | PU-coated nylon<br>neoprene tubes  |
|  |                 |                 |                 |                         |
| L / 00CuFt  | 00L / 00CuFt   | 00L / 00CuFt   | 00L / 00CuFt   | 00L / 00CuFt   |
| 5m / 10.5 1.8'  | 5 0.6m / 16.4 2'   | 5 0.6m / 16.4 2'   | 5 0.7m / 16.4 00'  | 6.5 0.9m / 00 00'  |
| 5m / 10.5 1.8'  | 3.2 0.55m / 10.5 1.8'  | 4 0.6m / 13.1 2'   | 5 0.65m / 16.4 2.1'  | 4.5 0.7m / 00 00'  |
| 5m / 8.5 1.6'   | 2.6 0.5m / 8.5 1.6'  | 2.6 0.5m / 8.5 1.6'  | 2.6 0.5m / 8.5 1.6'  | 2.8 0.5m / 00 00'  |
| 2sqm / 00sqft   | 16sqm / 00sqft   | 22sqm / 00sqft   | 25sqm / 00sqft   | 29sqm / 00sqft   |
|  |                 |                 |                 |                         |
|  |                 |                 |                 |                         |
|  |                 |                 |                 |                         |
|  |                 |                 |                 |                         |
|  |                 |                 |                 |                         |
| 240/110v blower required<br>pegs/cord and Valise.<br>water-fillable skirt         | 240/110v blower required<br>Inc Repair kit, ,pegs/cord and Valise.<br>Option- water-fillable skirt | 240/110v blower required<br>Inc Repair kit, ,pegs/cord and Valise.<br>Option- water-fillable skirt | 240/110v blower required<br>Inc Repair kit, ,pegs/cord and Valise.<br>Option- water-fillable skirt | 240/110v blower required. Inc<br>Repair kit, ,pegs/cord/Valise. 3x<br>cubicles. Option- water-fillable skirt |
| aireshelta.com  | aireshelta.com   | aireshelta.com   | aireshelta.com   | aireshelta.com   |

## IMAGES NOT TO SCALE

### Construction

- PNEUMATIC/PUMP- INFLATE & FORGET
- POWERED FAN -CONTINUAL INFLATION
- MANUAL - POP-UP FRAME

□ □ □ □ =Option



| COMPANY                             | EGO  | EGO  | EGO  |
|-------------------------------------|--|--|--|
| MODEL VARIANT                       | EU30-T   | EU45-T   | EU60-T   |
| PRODUCT CODE                        | -  | -  | -  |
| ORIGIN                              |  |  |  |
| CONSTRUCTION TIME-to-ERECT          | <span style="color: brown;">■</span> 3mins   | <span style="color: brown;">■</span> 4mins   | <span style="color: brown;">■</span> 6mins   |
| COST inc tax / VAT                  | £00 \$00 €00   | £00 \$00 €00   | £00 \$00 €00   |
| WEIGHT - Shelter-Only               | 160kg / 352lb  | 200kg / 327lb  | 260kg / 572lb  |
| MATERIALS FIRE-RESISTANT WATERPROOF | PVC-coated 650g/m<br><span style="color: brown;">■</span> <span style="color: blue;">■</span>  | PVC-coated 650g/m<br><span style="color: brown;">■</span> <span style="color: blue;">■</span>  | PVC-coated 650g/m<br><span style="color: brown;">■</span> <span style="color: blue;">■</span>  |
| AIR VOLUME                          | n/a  | n/a  | n/a  |
| LENGTH DEPLOYED / PACKED            | 5.6 00m / 18.4 00'   | 8.25 00m / 27.2 00'  | 10.9 00m / 35.8 00'  |
| WIDTH DEPLOYED / PACKED             | 6 00m / 19.7 00'   | 6 00m / 19.7 00'   | 6 00m / 19.7 00'   |
| HEIGHT DEPLOYED / PACKED            | 3.1 00m / 10.1 00'   | 3.1 00m / 10.1 00'   | 3.1 00m / 10.1 00'   |
| AREA: -DETACHABLE FIXED FLOOR       | 30sqm / 645.8sqft <span style="color: green;">■</span>   | 45sqm / 495sqft <span style="color: green;">■</span>   | 60sqm / 645.8sqft <span style="color: green;">■</span>   |
| ENTRANCES Zip Velcro Tie            | 2 <span style="color: brown;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span>   | 4 <span style="color: brown;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span>   | 2-4 <span style="color: brown;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span>   |
| WINDOWS Clear Mesh Opens            | 0-2 <span style="color: brown;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span>   | 0-4 <span style="color: brown;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span>   | 2-4 <span style="color: brown;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span>   |
| CONNECTABLE Stakes Guys Skirt       | <span style="color: black;">■</span> - <span style="color: red;">■</span> -  | <span style="color: black;">■</span> - <span style="color: red;">■</span> -  | <span style="color: black;">■</span> - <span style="color: red;">■</span> -  |
| PORTS Vent Power Water Heater       | 2 <span style="color: green;">■</span> <span style="color: brown;">■</span> <span style="color: blue;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span> <span style="color: blue;">■</span> <span style="color: red;">■</span> | 4 <span style="color: green;">■</span> <span style="color: brown;">■</span> <span style="color: blue;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span> <span style="color: blue;">■</span> <span style="color: red;">■</span> | 4 <span style="color: green;">■</span> <span style="color: brown;">■</span> <span style="color: blue;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span> <span style="color: blue;">■</span> <span style="color: red;">■</span> |
| TRANSLUSCENT OPAQUE ROOF PRV        | <span style="color: black;">■</span> <span style="color: green;">■</span>  | <span style="color: black;">■</span> <span style="color: green;">■</span>  | <span style="color: black;">■</span> <span style="color: green;">■</span>  |
| BRANDING HEATER LIGHTING PUMP       | <span style="color: black;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span>   | <span style="color: black;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span>   | <span style="color: black;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span>   |
| OTHER COLOURS                       | <span style="color: green;">■</span>   | <span style="color: green;">■</span>   | <span style="color: green;">■</span>   |
| NOTES                               | Includes Repair kit, hammer, pegs/cord and Valise. NB: ES, EZ & EL ranges discontinued.  | Includes Repair kit, hammer, pegs/cord and Valise.   | Includes Repair kit, hammer, pegs/cord and Valise.   |
| WEBSITE                             | ego-rescue.com   | ego-rescue.com   | ego-rescue.com   |

## IMAGES NOT TO SCALE

### Construction

- PNEUMATIC/PUMP- INFLATE & FORGET
- POWERED FAN -CONTINUAL INFLATION
- MANUAL - POP-UP FRAME

□ □ □ □ =Option



| COMPANY                             | IC BRINDLE   | IC BRINDLE   | IC BRINDLE   |
|-------------------------------------|--|--|--|
| MODEL VARIANT                       | ICB33  | ICB34  | ICB44  |
| PRODUCT CODE                        | 00   | 00   | 00   |
| ORIGIN                              |  |  |  |
| CONSTRUCTION TIME-to-ERECT          | <span style="color: brown;">■</span> 00mins  | <span style="color: brown;">■</span> 00mins  | <span style="color: brown;">■</span> 00mins  |
| COST inc tax / VAT                  | £1200 \$00 €00   | £00 \$00 €00   | £00 \$00 €00   |
| WEIGHT - Shelter-Only               | 60kg / 00lb  | 64kg / 00lb  | 94kg / 00lb  |
| MATERIALS FIRE-RESISTANT WATERPROOF | 550D PU-coated poly.<br>630g PVC coated Polyester<br><span style="color: brown;">■</span> <span style="color: blue;">■</span>  | 550D PU-coated poly.<br>630g PVC coated Polyester<br><span style="color: brown;">■</span> <span style="color: blue;">■</span>  | 550D PU-coated poly.<br>630g PVC coated Polyester<br><span style="color: brown;">■</span> <span style="color: blue;">■</span>  |
| AIR VOLUME                          | 00L / 00CuFt   | 00L / 00CuFt   | 00L / 00CuFt   |
| LENGTH DEPLOYED / PACKED            | 3 00m / 9.85 00'   | 3 00m / 9.85 00'   | 4 00m / 13.1 00'   |
| WIDTH DEPLOYED / PACKED             | 3 00m / 9.85 00'   | 4 00m / 13.1 00'   | 4 00m / 13.1 00'   |
| HEIGHT DEPLOYED / PACKED            | 2.6 00m / 8.5 00'  | 2.6 00m / 8.5 00'  | 2.7 00m / 8.9 00'  |
| AREA: -DETACHABLE FIXED FLOOR       | 7.5-9sqm / 80-97sqft   | 10.5-12sqm / 113-129sqft   | 14-16sqm / 150-172sqft   |
| ENTRANCES Zip Velcro Tie            | 1 <span style="color: brown;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span>   | 1 <span style="color: brown;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span>   | 2 <span style="color: brown;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span>   |
| WINDOWS Clear Mesh Opens            | 2 <span style="color: brown;">■</span> <span style="color: red;">■</span> -  | 2 <span style="color: brown;">■</span> <span style="color: red;">■</span> -  | 2 <span style="color: brown;">■</span> <span style="color: red;">■</span> -  |
| CONNECT Stakes Guys Skirt           | <span style="color: black;">■</span> <span style="color: brown;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span>  | <span style="color: black;">■</span> <span style="color: brown;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span>  | <span style="color: black;">■</span> <span style="color: brown;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span>  |
| PORTS Vent Power Water Heater       | 4 <span style="color: green;">■</span> <span style="color: brown;">■</span> <span style="color: blue;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span> <span style="color: blue;">■</span> <span style="color: red;">■</span> | 4 <span style="color: green;">■</span> <span style="color: brown;">■</span> <span style="color: blue;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span> <span style="color: blue;">■</span> <span style="color: red;">■</span> | 4 <span style="color: green;">■</span> <span style="color: brown;">■</span> <span style="color: blue;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span> <span style="color: blue;">■</span> <span style="color: red;">■</span> |
| TRANSLUSCENT OPAQUE ROOF PRV        | <span style="color: black;">■</span> <span style="color: green;">■</span> <span style="color: purple;">■</span>  | <span style="color: black;">■</span> <span style="color: green;">■</span> <span style="color: purple;">■</span>  | <span style="color: black;">■</span> <span style="color: green;">■</span> <span style="color: purple;">■</span>  |
| BRANDING HEATER LIGHTING            | <span style="color: black;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span>   | <span style="color: black;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span>   | <span style="color: black;">■</span> <span style="color: red;">■</span> <span style="color: green;">■</span>   |
| OTHER COLOURS                       | <span style="color: green;">■</span> <span style="color: blue;">■</span> <span style="color: orange;">■</span> <span style="color: red;">■</span> <span style="color: yellow;">■</span>  | <span style="color: green;">■</span> <span style="color: blue;">■</span> <span style="color: orange;">■</span> <span style="color: red;">■</span> <span style="color: yellow;">■</span>  | <span style="color: green;">■</span> <span style="color: blue;">■</span> <span style="color: orange;">■</span> <span style="color: red;">■</span> <span style="color: yellow;">■</span>  |
| NOTES                               | 4x Lift & Shift handles.<br>Inc. Repair kit, pegs/cord and Valise.   | 4x Lift & Shift handles.<br>Inc. Repair kit, pegs/cord and Valise.   | 4x Lift & Shift handles.<br>Inc. Repair kit, pegs/cord and Valise.   |
| WEBSITE                             | icbrindle.com  | icbrindle.com  | icbrindle.com  |



# PERFECT FOR MOBILE COMMAND SHELTER

Setup is quick and easy. The shelter inflates in less than five minutes.

## PRODUCT INFO & SPECS

Tulmar’s inflatable shelter system was developed to meet the requirements of emergency responders who required rapidly deployable shelters. The modular design allows canopies, end walls and floors to be easily detached for repair or replacement. Interconnect panels are available to join multiple shelters for custom configurations. Can be erected in less than five minutes—simply unpack from valise and inflate.

| Shelter Footprint | Interior Square Footage | Packed Dimensions      | Weight  |
|-------------------|-------------------------|------------------------|---------|
| 3.7 M X 4.6 M     | 17 sq M                 | 61 cm X 61 cm X 135 cm | 102 kg  |
| 12 FT X 15 FT     | 180 sq FT               | 24 in X 24 in X 52 in  | 225 lbs |
| 4.5 M X 6.1 M     | 27.5 sq M               | 71 cm X 71 cm X 152 cm | 168 kg  |
| 15 FT X 20 FT     | 300 sq FT               | 28 in X 28 in X 60 in  | 370 lbs |









Material is rated to operate from -30C - 60C to -22F -140F

The exposed parts of the Tulmar shelter are constructed with anti-fungus, anti-mildew, antibacterial and antimicrobial treatments.



The interior structure is made with anti-mildew and anti-fungal material. This preserves the integrity of the shelter.





|  |  |  |  |  |
|--|--|--|--|--|
| <b>IMAGES NOT TO SCALE</b><br><b>Construction</b><br><div> <div></div> PNEUMATIC/PUMP- INFLATE &amp; FORGET         <div></div> POWERED FAN -CONTINUAL INFLATION         <div></div> MANUAL - POP-UP FRAME       </div> <div> <div></div> <div></div> <div></div> <div></div> </div> =Option<br><b>AREA in <i>ITALICS</i> = internal floor space</b> |  |  |  |  |
|             |  |  |  |  |
| COMPANY  | IC BRINDLE   | IC BRINDLE   | IC BRINDLE   | IC BRINDLE   |
| MODEL VARIANT  | ICB45  | ICB56  | ICB58  | ICB56  |
| PRODUCT CODE   | 00   | 00   | 00   | 00   |
| ORIGIN   |  |  |  |  |
| CONSTRUCTION TIME-to-ERECT   | <div></div> 00mins   | <div></div> 00mins   | <div></div> 00mins   | <div></div> 00mins   |
| COST inc tax / VAT   | £00 \$00 €00   | £00 \$00 €00   | £00 \$00 €00   | £00 \$00 €00   |
| WEIGHT - Shelter-Only  | 97kg / 00lb  | 100kg / 00lb   | 120kg / 00lb   | 130kg / 00lb   |
| MATERIALS - ROOF/ WALLS  | 550D PU-coated poly.   | 550D PU-coated poly.   | 550D PU-coated poly.   | 550D PU-coated poly.   |
| FLOOR  | 630g PVC coated Polyester  | 630g PVC coated Polyester  | 630g PVC coated Polyester  | 630g PVC coated Polyester  |
| FIRE-RESISTANT   | <div></div>  | <div></div>  | <div></div>  | <div></div>  |
| WATERPROOF   | <div></div>  | <div></div>  | <div></div>  | <div></div>  |
| AIR VOLUME   | 00L / 00CuFt   | 00L / 00CuFt   | 00L / 00CuFt   | 00L / 00CuFt   |
| LENGTH DEPLOYED / PACKED   | 4 00m / 13.1 00'   | 5 00m / 16.4 00'   | 5 00m / 16.4 00'   | 6 00m / 19.7 00'   |
| WIDTH DEPLOYED / PACKED  | 5 00m / 16.4 00'   | 6 00m / 19.7 00'   | 8 00m / 26.25 00'  | 8 00m / 26.25 00'  |
| HEIGHT DEPLOYED / PACKED   | 2.7 00m / 8.9 00'  | 2.8 00m / 9.2 00'  | 3 00m / 9.85 00'   | 3 00m / 9.85 00'   |
| AREA: -DETACHABLEFIXED FLOOR   | 17.8-20sqm / 191-215sqft   | 27-30sqm / 290-323sqft   | 36.7-40sqm / 395-430sqft   | 44-48sqm / 475-515sqft   |
| DOORS FULL-SPAN Zip Velcro Tie   | 2 <div></div> <div></div> <div></div>  | 2 <div></div> <div></div> <div></div>  | 2 <div></div> <div></div> <div></div>  | 2 <div></div> <div></div> <div></div>  |
| WINDOWS Clear Mesh Opens   | 2-6 <div></div> <div></div> <div></div>  | 2-8 <div></div> <div></div> <div></div>  | 2-9 <div></div> <div></div> <div></div>  | 0 <div></div> <div></div> <div></div>  |
| CONNECTABLE Stakes Guys Skirt  | <div></div> <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div> <div></div>  |
| PORTS Vent Power Water HVAC  | 4 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>                                | 4 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>                                | 4 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>                                | 4 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>                                |
| TRANSLUSCENT OPAQUE ROOF PRV   | <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div>  |
| BRANDING HEATER LIGHTING PUMP  | <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div>  |
| OTHER COLOURS  | <div></div> <div></div> <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div> <div></div> <div></div>  |
| NOTES  | 4x Lift & Shift handles.<br>Inc. Repair kit, pegs/cord and Valise.                                       | 14x Lift & Shift handles.<br>Inc. Repair kit, pegs/cord and Valise.                                      | 14x Lift & Shift handles.<br>Inc. Repair kit, pegs/cord and Valise.                                      | 14x Lift & Shift handles.<br>Inc. Repair kit, pegs/cord and Valise.                                      |
| WEBSITE  | icbrindle.com  | icbrindle.com  | icbrindle.com  | icbrindle.com  |
| <b>IMAGES NOT TO SCALE</b><br><b>Construction</b><br><div> <div></div> PNEUMATIC/PUMP- INFLATE &amp; FORGET         <div></div> POWERED FAN -CONTINUAL INFLATION         <div></div> MANUAL - POP-UP FRAME       </div> <div> <div></div> <div></div> <div></div> <div></div> </div> =Option<br><b>AREA in <i>ITALICS</i> = internal floor space</b> |  |  |  |  |
|     |  |  |  |  |
| COMPANY  | LANCO  | LANCO  | LANCO  | LANCO  |
| MODEL VARIANT  | Inflatable Rescue Tent   | Inflatable Rescue Tent   | Inflatable Rescue Tent   | Inflatable Rescue Tent   |
| PRODUCT CODE   | ARZ30  | ARZ40  | ARZ50  | ARZ60  |
| ORIGIN   |  |  |  |  |
| CONSTRUCTION TIME-to-ERECT   | <div></div> 1.5-3mins  | <div></div> 2-4mins  | <div></div> 2-4mins  | <div></div> 2-4mins  |
| COST inc tax / VAT   | £00 \$00 €00   | £00 \$00 €00   | £00 \$00 €00   | £00 \$00 €00   |
| WEIGHT - Shelter-Only  | 103kg / 227lb  | 124kg / 273lb  | 142kg / 313lb  | 173kg / 381lb  |
| MATERIALS - ROOF/ WALLS  | 240 & 530g/m² PVC-coated Polyester   | 240 & 530g/m² PVC-coated Polyester   | 240 & 530g/m² PVC-coated Polyester   | 240 & 530g/m² PVC-coated Polyester   |
| FLOOR  | 240 & 530g/m² PVC-coated Polyester   | 240 & 530g/m² PVC-coated Polyester   | 240 & 530g/m² PVC-coated Polyester   | 240 & 530g/m² PVC-coated Polyester   |
| FIRE-RESISTANT   | <div></div>  | <div></div>  | <div></div>  | <div></div>  |
| WATERPROOF   | <div></div>  | <div></div>  | <div></div>  | <div></div>  |
| AIR VOLUME   | 00L / 00CuFt   | 00L / 00CuFt   | 00L / 00CuFt   | 00L / 00CuFt   |
| LENGTH DEPLOYED / PACKED   | 5.72 1.13m / 18.8 3.7'   | 7.5 1.2m / 24.6 4'   | 9.38 1.63m / 30.8 5.3'   | 11.21 1.8m / 36.9 5.9'   |
| WIDTH DEPLOYED / PACKED  | 5.5 0.75m / 18 2.5'  | 5.5 0.9m / 18 3'   | 5.5 0.45m / 18 1.5'  | 5.5 0.6m / 18 2'   |
| HEIGHT DEPLOYED / PACKED   | 2-2.95 0.65m / 6.5-9.7 2.1'  | 2-2.95 0.6m / 6.5-9.7 2'   | 2-2.95 0.45m / 6.5-9.7 1.5'  | 2-2.95 0.6m / 6.5-9.7 2'   |
| AREA: -DETACHABLEFIXED FLOOR   | 31sqm / 0sqft  | 41sqm / 0sqft  | 51sqm / 0sqft  | 61sqm / 0sqft  |
| DOORS FULL-SPAN Zip Velcro Tie   | 1 <div></div> <div></div> <div></div>  | 1-2 <div></div> <div></div> <div></div>  | 1-2 <div></div> <div></div> <div></div>  | 1-2 <div></div> <div></div> <div></div>  |
| WINDOWS Clear Mesh Opens   | 0 to 6 <div></div> <div></div> <div></div>   | 0 to 8 <div></div> <div></div> <div></div>   | 0 to 10 <div></div> <div></div> <div></div>  | 0 to 12 <div></div> <div></div> <div></div>  |
| CONNECT Stakes Guys Skirt  | <div></div> <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div> <div></div>  |
| PORTS Vent Power Water HVAC  | 4 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>                                | 4 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>                                | 0 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>                                | 0 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>                                |
| TRANSLUSCENT OPAQUE ROOF PRV   | <div></div> <div></div>  | <div></div> <div></div>  | <div></div> <div></div>  | <div></div> <div></div>  |
| BRANDING HEATER LIGHTING PUMP  | <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div>  |
| OTHER COLOURS  | <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>                      | <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>                      | <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>                      | <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>                      |
| NOTES  | Inc Repair kit, delivery hose, pegs/cord and Valise. Option for 550g/m² tent skin. Lift & shift handles. | Inc Repair kit, delivery hose, pegs/cord and Valise. Option for 550g/m² tent skin. Lift & shift handles. | Inc Repair kit, delivery hose, pegs/cord and Valise. Option for 550g/m² tent skin. Lift & shift handles. | Inc Repair kit, delivery hose, pegs/cord and Valise. Option for 550g/m² tent skin. Lift & shift handles. |
| WEBSITE  | lanco.eu lanco-usa.com   | lanco.eu lanco-usa.com   | lanco.eu lanco-usa.com   | lanco.eu lanco-usa.com   |



|  |   |   |   |                                 |
|--|---|---|---|---------------------------------|
| <b>IMAGES NOT TO SCALE</b><br><b>Construction</b><br><div> <div></div> PNEUMATIC/PUMP- INFLATE &amp; FORGET         <div></div> POWERED FAN -CONTINUAL INFLATION         <div></div> MANUAL - POP-UP FRAME       </div> <div> <div></div> <div></div> <div></div> <div></div> </div> =Option<br><b>AREA in <i>ITALICS</i> = internal floor space</b> |   |   |   |                                 |
|    |   |   |   |                                 |
| COMPANY  | LANCO   | LANCO   | LANCO   |                                 |
| MODEL <b>VARIANT</b>   | Self Erecting Tent  | Self Erecting Tent  | Self Erecting Tent  | Self E                          |
| PRODUCT CODE   | AZF29   | AZF42   | AZF56   |                                 |
| ORIGIN   |   |   |   |                                 |
| CONSTRUCTION <b>TIME-to-ERECT</b>  | <div></div> 00mins  | <div></div> 00mins  | <div></div> 00mins  | <div></div>                     |
| COST inc tax / VAT   | £00 \$00 €00  | £00 \$00 €00  | £00 \$00 €00  | £0                              |
| WEIGHT - Shelter-Only  | 126kg / 278lb   | 180kg / 397lb   | 234kg / 516lb   | 160                             |
| MATERIALS - ROOF/ WALLS  | 750g/m²PVC-coated Polyester.  | 750g/m²PVC-coated Polyester.  | 750g/m²PVC-coated Polyester.  | 750g/m²PVC                      |
| FLOOR  | Additional Internal alu frame   | Additional Internal alu frame   | Additional Internal alu frame   | Additional                      |
| FIRE-RESISTANT WATERPROOF  | <div></div> <div></div>   | <div></div> <div></div>   | <div></div> <div></div>   | <div></div>                     |
| AIR VOLUME   | 00L / 00CuFt  | 00L / 00CuFt  | 00L / 00CuFt  | 00                              |
| LENGTH DEPLOYED / PACKED   | 5.15 2.1m / 17 7'   | 7.55 2m / 24.8 6.6'   | 9.95 00m / 33 00'   | 5.15                            |
| WIDTH DEPLOYED / PACKED  | 5.6 0.45m / 18.7 1.5'   | 5.6 0.6m / 18.4 2'  | 5.6 0.6m / 18.4 2'  | 6.3 00                          |
| HEIGHT DEPLOYED / PACKED   | 2.2-2.8 0.45m / 7.2-9.2 1.5'  | 2.2-2.8 0.45m / 7.2-9.2 1.5'  | 2.2-2.8 0.45m / 7.2-9.2 1.5'  | 2.4-3.15 0                      |
| AREA: -DETACHABLEFIXED FLOOR   | 29sqm / 312sqft   | 42sqm / 452sqft   | 56sqm / 602sqft   | 33sq                            |
| DOORS FULL-SPAN Zip Velcro Tie   | 2 <div></div> - <div></div>   | 2 <div></div> - <div></div>   | 2 <div></div> - <div></div>   | 2                               |
| WINDOWS Clear Mesh Opens   | 0-4 <div></div> <div></div> -   | 0-6 <div></div> <div></div> -   | 0-8 <div></div> <div></div> -   | 0-4                             |
| CONNECTABLE Stakes Guys Skirt  | <div></div> <div></div> <div></div> -   | <div></div> <div></div> <div></div> -   | <div></div> <div></div> <div></div> -   | <div></div>                     |
| PORTS Vent Power Water HVAC  | 12 0 <div></div> 2 <div></div> 0 <div></div> 8 <div></div>  | 12 0 <div></div> 2 <div></div> 0 <div></div> 8 <div></div>                                      | 12 0 <div></div> 2 <div></div> 0 <div></div> 8 <div></div>                                      | 12 0                            |
| TRANSLUSCENT OPAQUE ROOF PRV   | <div></div> <div></div>   | <div></div> <div></div>   | <div></div> <div></div>   |                                 |
| BRANDING HEATER LIGHTING PUMP  | <div></div> <div></div> <div></div> <div></div>   | <div></div> <div></div> <div></div> <div></div>   | <div></div> <div></div> <div></div> <div></div>   | <div></div>                     |
| OTHER COLOURS  | <div></div> <div></div>   | <div></div> <div></div>   | <div></div> <div></div>   |                                 |
| NOTES  | Includes Repair kit, delivery hose,pegs/cord and Valise. Elasticated ground stake eyes                    | Includes Repair kit, delivery hose,pegs/cord and Valise. Elasticated ground stake eyes          | Includes Repair kit, delivery hose,pegs/cord and Valise. Elasticated ground stake eyes          | Includes R hose,peg Elasticated |
| WEBSITE  | lanco.eu lanco-usa.com  | lanco.eu lanco-usa.com  | lanco.eu lanco-usa.com  | lanco.eu                        |
| <b>IMAGES NOT TO SCALE</b><br><b>Construction</b><br><div> <div></div> PNEUMATIC/PUMP- INFLATE &amp; FORGET         <div></div> POWERED FAN -CONTINUAL INFLATION         <div></div> MANUAL - POP-UP FRAME       </div> <div> <div></div> <div></div> <div></div> <div></div> </div> =Option<br><b>AREA in <i>ITALICS</i> = internal floor space</b> |   |   |   |                                 |
|    |   |   |   |                                 |
| COMPANY  | LANCO   | LANCO   | LANCO   |                                 |
| MODEL <b>VARIANT</b>   | Link Hub  | Modular Inflatable Tent   | modular Inflatable Tent   | Inflatable                      |
| PRODUCT CODE   | AZF6-CT33   | AZM8-4  | AZM11-6   |                                 |
| ORIGIN   |   |   |   |                                 |
| CONSTRUCTION <b>TIME-to-ERECT</b>  | <div></div> 00mins  | <div></div> 00mins  | <div></div> 00mins  | <div></div>                     |
| COST inc tax / VAT   | £00 \$00 €00  | £00 \$00 €00  | £00 \$00 €00  | £0                              |
| WEIGHT - Shelter-Only  | 223kg / 492lb   | 566kg / 1248lb  | 765kg / 1687lb  | 00                              |
| MATERIALS - ROOF/ WALLS  | 750g/m²PVC-coated Polyester.  | 700g/m²PVC-coated Polyester.  | 700g/m²PVC-coated Polyester.  | 750g/m²PVC                      |
| FLOOR  | Additional Internal alu frame   | Additional Internal alu frame   | Additional Internal alu frame   | Extern                          |
| FIRE-RESISTANT WATERPROOF  | <div></div> <div></div>   | <div></div> <div></div>   | <div></div> <div></div>   |                                 |
| AIR VOLUME   | 00L / 00CuFt  | 00L / 00CuFt  | 00L / 00CuFt  | 00                              |
| LENGTH DEPLOYED / PACKED   | 6 00m / 19.7 00'  | 7.7-12.5 00m / 25-41 00'  | 16.8-22.2 00m / 55-73 00'   | 4.83                            |
| WIDTH DEPLOYED / PACKED  | 6 00m / 19.7 00'  | 8.3 00m / 27.2 00'  | 11.2 00m / 36.7 00'   | 5.95 0                          |
| HEIGHT DEPLOYED / PACKED   | 2.15-3.4 00m / 7-11.200'  | 3.16-4.15 00m / 10.4-13.6 00'   | 4.35-6 00m / 14.3-20 00'  | 2.2-2.8 0.4                     |
| AREA: -DETACHABLEFIXED FLOOR   | 33sqm / 355sqft   | 103.75sqm / 1117sqft  | 248.6sqm / 2676sqft   | 30sq                            |
| DOORS FULL-SPAN Zip Velcro Tie   | 2 <div></div> - <div></div>   | 2-3 <div></div> <div></div> <div></div>   | 2 <div></div> <div></div> <div></div>   | 1-2                             |
| WINDOWS Clear Mesh Opens   | 0-8 <div></div> <div></div> -   | 4-5 <div></div> <div></div> -   | 16 <div></div> <div></div> -  | 0-4                             |
| CONNECT Stakes Guys Skirt  | <div></div> <div></div> <div></div> -   | <div></div> <div></div> <div></div> -   | <div></div> <div></div> <div></div> -   | <div></div>                     |
| PORTS Vent Power Water HVAC  | 12 0 <div></div> 2 <div></div> 0 <div></div> 8 <div></div>  | 30 8 <div></div> 4 <div></div> 0 <div></div> 8 <div></div>                                      | 0 0 <div></div> 0 <div></div> 0 <div></div> 0 <div></div>                                       | 12 0                            |
| TRANSLUSCENT OPAQUE ROOF PRV   | <div></div> <div></div>   | <div></div> <div></div>   | <div></div> <div></div>   |                                 |
| BRANDING HEATER LIGHTING PUMP  | <div></div> <div></div> <div></div> <div></div>   | <div></div> <div></div> <div></div> <div></div>   | <div></div> <div></div> <div></div> <div></div>   | <div></div>                     |
| OTHER COLOURS  | <div></div> <div></div>   | <div></div> <div></div>   | <div></div> <div></div>   |                                 |
| NOTES  | Hub for AZF-series. Includes Repair kit, delivery hose,pegs/cord and Valise.Elasticated ground stake eyes | 3 separately erected modules zipped together in 4.8m lengths. min=two end sections minus middle | 3 separately erected modules zipped together in 5.4m lengths. min=two end sections minus middle | Includes R hose,peg/ fram       |
| WEBSITE  | lanco.eu lanco-usa.com  | lanco.eu lanco-usa.com  | lanco.eu lanco-usa.com  | lanco.eu                        |





| LANCO  | LANCO   | LANCO   |
|--|---|---|
| Directing Tent   | Self Erecting Tent  | Self Erecting Tent  |
| AZF6-33  | AZF6-48   | AZF6-63   |
|  |   |   |
| 00mins   | 00mins  | 00mins  |
| £00 \$00 €00   | £00 \$00 €00  | £00 \$00 €00  |
| 0kg / 353lb  | 229kg / 505lb   | 00kg / 00lb   |
| PVC-coated Polyester. Internal alu frame                                 | PVC-coated Polyester. Additional Internal alu frame                                     | PVC-coated Polyester. Additional Internal alu frame                                     |
|  |   |   |
| 00L / 00CuFt   | 00L / 00CuFt  | 00L / 00CuFt  |
| 00m / 17 00'   | 7.55 00m / 00 00'   | 9.95 00m / 33 00'   |
| 0m / 20.7 00'  | 6.3 00m / 20.7 00'  | 6.3 00m / 20.7 00'  |
| 0m / 7.9-10.3 00'  | 2.4-3.15 00m / 7.9-10.3 00'   | 2.4-3.15 00m / 7.9-10.3 00'   |
| 0sqm / 355sqft   | 48sqm / 516sqft   | 63sqm / 678sqft   |
|  |   |   |
|  |   |   |
|  |   |   |
|  |   |   |
|  |   |   |
| Repair kit, delivery hose/cord and Valise. Elasticated ground stake eyes | Includes Repair kit, delivery hose, pegs/cord and Valise. Elasticated ground stake eyes | Includes Repair kit, delivery hose, pegs/cord and Valise. Elasticated ground stake eyes |
| lanco-usa.com  | lanco.eu lanco-usa.com  | lanco.eu lanco-usa.com  |



| LANCO   | LANCO  | LANCO  |
|---|--|--|
| Inflatable Tent Ext Frame                                   | Inflatable Tent Ext Frame  | Inflatable Tent Ext Frame  |
| INX29   | INX42  | INX56  |
|   |  |  |
| 00mins  | 00mins   | 00mins   |
| £00 \$00 €00  | £00 \$00 €00   | £00 \$00 €00   |
| 0kg / 00lb  | 00kg / 00lb  | 00kg / 00lb  |
| PVC-coated Polyester. External alu frame                    | PVC-coated Polyester. External alu frame                                       | PVC-coated Polyester. External alu frame                                       |
|   |  |  |
| 00L / 00CuFt  | 00L / 00CuFt   | 00L / 00CuFt   |
| 00m / 16 00'  | 7.23 00m / 00 00'  | 9.63 00m / 00 00'  |
| 0m / 19.5 00'   | 5.95 00m / 19.5 00'  | 5.95 00m / 19.5 00'  |
| 45m / 7.2-9.2 1.5'  | 2.2-2.8 0.45m / 7.2-9.2 1.5'   | 2.2-2.8 0.45m / 7.2-9.2 1.5'   |
| 45sqm / 323sqft   | 45sqm / 484sqft  | 59sqm / 635sqft  |
|   |  |  |
|   |  |  |
|   |  |  |
|   |  |  |
|   |  |  |
| Repair kit, delivery hose/cord and Valise. Ext e=3.05m high | Includes Repair kit, delivery hose, pegs/cord and Valise. Ext frame=3.05m high | Includes Repair kit, delivery hose, pegs/cord and Valise. Ext frame=3.05m high |
| lanco-usa.com   | lanco.eu lanco-usa.com   | lanco.eu lanco-usa.com   |

# EMERGENCY SHELTERS

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Produced by Diversified Communications

|   |   |  |   |   |
|---|---|--|---|---|
| <b>IMAGES NOT TO SCALE</b><br><b>Construction</b><br><div> <div></div> PNEUMATIC/PUMP- INFLATE &amp; FORGET         <div></div> POWERED FAN -CONTINUAL INFLATION         <div></div> MANUAL - POP-UP FRAME       </div> <div> <div></div> <div></div> <div></div> <div></div> </div> =Option<br>AREA in <i>ITALICS</i> = internal floor space |   |  |   |   |
|   |    |    |    |    |
| COMPANY   | LANCO/ROFI  | LANCO/ROFI   | LANCO/ROFI  | LANCO/ROFI  |
| MODEL VARIANT   | ROFI Rapid  | ROFI Rapid   | ROFI Rapid  | ROFI Rapid  |
| PRODUCT CODE  | 504   | 506  | 508   | 510   |
| ORIGIN  |    |    |    |    |
| CONSTRUCTION TIME-to-ERECT  | <div></div> 00mins  | <div></div> 00mins   | <div></div> 00mins  | <div></div> 00mins  |
| COST inc tax / VAT  | £00 \$00 €00  | £00 \$00 €00   | £00 \$00 €00  | £00 \$00 €00  |
| WEIGHT - Shelter-Only   | 158kg / 00lb  | 00kg / 00lb  | 00kg / 00lb   | 260kg / 00lb  |
| MATERIALS - ROOF/ WALLS   | ??  | ??   | ??  | ??  |
| FIRE-RESISTANT  | <div></div>   | <div></div>  | <div></div>   | <div></div>   |
| WATERPROOF  | <div></div>   | <div></div>  | <div></div>   | <div></div>   |
| AIR VOLUME  | 00L / 00CuFt  | 00L / 00CuFt   | 00L / 00CuFt  | 00L / 00CuFt  |
| LENGTH DEPLOYED / PACKED  | 5 1.6m / 00 00'   | 00 00m / 00 00'  | 00 00m / 00 00'   | 6 1.6m / 00 00'   |
| WIDTH DEPLOYED / PACKED   | 4 0.8m / 00 00'   | 00 00m / 00 00'  | 00 00m / 00 00'   | 6 1.6m / 00 00'   |
| HEIGHT DEPLOYED / PACKED  | 2.7 0.95m / 00 00'  | 00 00m / 00 00'  | 00 00m / 00 00'   | 3 1.6m / 00 00'   |
| AREA: -DETACHABLE/FIXED FLOOR   | 20sqm / 0sqft   | 00sqm / 0sqft  | 00sqm / 0sqft   | 36sqm / 0sqft   |
| DOORS FULL-SPAN Zip Velcro Tie  | 0-4 <div></div> <div></div> <div></div>   | 0-6 <div></div> <div></div> <div></div>  | 0-8 <div></div> <div></div> <div></div>   | 0-10 <div></div> <div></div> <div></div>  |
| WINDOWS Clear Mesh Opens  | 4 <div></div> <div></div> <div></div>   | 0 <div></div> <div></div> <div></div>  | 0-8 <div></div> <div></div> <div></div>   | 0-6 <div></div> <div></div> <div></div>   |
| CONNECTABLE Stakes Guys Skirt   | <div></div> <div></div> <div></div> <div></div>                                     | <div></div> <div></div> <div></div> <div></div>                                      | <div></div> <div></div> <div></div> <div></div>                                       | <div></div> <div></div> <div></div> <div></div>                                       |
| PORTS Vent Power Water HVAC   | 2 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>           | 0 <div></div> <div></div> <div></div> <div></div> <div></div>                        | 0 <div></div> <div></div> <div></div> <div></div> <div></div>                         | 2 <div></div> <div></div> <div></div> <div></div> <div></div>                         |
| TRANSLUSCENT OPAQUE ROOF PRV  | - <div></div> <div></div> <div></div>   | <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div>   | <div></div> <div></div> <div></div>   |
| BRANDING HEATER LIGHTING PUMP   | <div></div> <div></div> <div></div>   | <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div>   | <div></div> <div></div> <div></div>   |
| OTHER COLOURS   | <div></div> <div></div>   | <div></div> <div></div>  | <div></div> <div></div>   | <div></div> <div></div>   |
| NOTES   | Includes Repair kit, delivery hose,pegs/cord and Valise.                            | Includes Repair kit, delivery hose,pegs/cord and Valise.                             | Includes Repair kit, delivery hose,pegs/cord and Valise.                              | Includes Repair kit, delivery hose,pegs/cord and Valise.                              |
| WEBSITE   | lanco.eu lanco-usa.com  | lanco.eu lanco-usa.com   | lanco.eu lanco-usa.com  | lanco.eu  |
| <b>IMAGES NOT TO SCALE</b><br><b>Construction</b><br><div> <div></div> PNEUMATIC/PUMP- INFLATE &amp; FORGET         <div></div> POWERED FAN -CONTINUAL INFLATION         <div></div> MANUAL - POP-UP FRAME       </div> <div> <div></div> <div></div> <div></div> <div></div> </div> =Option<br>AREA in <i>ITALICS</i> = internal floor space |   |  |   |   |
|   |  |  |  |  |
| COMPANY   | MFC INTERNATIONAL   | MFC INTERNATIONAL  | MFC INTERNATIONAL   | MFC INTERNATIONAL   |
| MODEL VARIANT   | INFLATABLE SHELTER 16   | Inflatable Shelter 20  | Inflatable Shelter 25   | Inflatable Shelter 30   |
| PRODUCT CODE  | SHW/16/001  | SHW/20/001   | SHW/25/001  | SHW/30/001  |
| ORIGIN  |  |  |  |  |
| CONSTRUCTION TIME-to-ERECT  | <div></div> 00mins  | <div></div> 00mins   | <div></div> 00mins  | <div></div> 00mins  |
| COST inc tax / VAT  | £00 \$00 €00  | £00 \$00 €00   | £00 \$00 €00  | £00 \$00 €00  |
| WEIGHT - Shelter-Only   | 58kg / 00lb   | 68kg / 00lb  | 78kg / 00lb   | 108kg / 00lb  |
| MATERIALS - ROOF/ WALLS   | 210D HT Nylon. Welded/Taped PU  | 210D HT Nylon. Welded/Taped PU   | 210D HT Nylon. Welded/Taped PU  | 210D HT Nylon. Welded/Taped PU  |
| FIRE-RESISTANT  | <div></div>   | <div></div>  | <div></div>   | <div></div>   |
| WATERPROOF  | <div></div>   | <div></div>  | <div></div>   | <div></div>   |
| AIR VOLUME  | 2600L / 00CuFt  | 2900L / 00CuFt   | 3050L / 00CuFt  | 3300L / 00CuFt  |
| LENGTH DEPLOYED / PACKED  | 4 1.3m / 00 00'   | 5 1.3m / 00 00'  | 5 1.2m / 00 00'   | 5 1.2m / 00 00'   |
| WIDTH DEPLOYED / PACKED   | 4 6.6m / 00 00'   | 4 6.6m / 00 00'  | 5 6.6m / 00 00'   | 5 6.6m / 00 00'   |
| HEIGHT DEPLOYED / PACKED  | 3.53 0.5m / 00 00'  | 3.53 0.5m / 00 00'   | 2.9 0.41m / 00 00'  | 2.9 0.41m / 00 00'  |
| AREA: -DETACHABLE/FIXED FLOOR   | 14.12sqm / 0sqft  | 17.65sqm / 0sqft   | 22.65sqm / 0sqft  | 22.65sqm / 0sqft  |
| DOORS FULL-SPAN Zip Velcro Tie  | 2x 1.2m <div></div> <div></div> <div></div>   | 2x 1.2m <div></div> <div></div> <div></div>  | 2x 1.2m <div></div> <div></div> <div></div>   | 2x 1.2m <div></div> <div></div> <div></div>   |
| WINDOWS Clear Mesh Opens  | 0 <div></div> <div></div> <div></div>   | 2 <div></div> <div></div> <div></div>  | 2 <div></div> <div></div> <div></div>   | 2 <div></div> <div></div> <div></div>   |
| CONNECT Stakes Guys Skirt   | <div></div> <div></div> <div></div> <div></div>                                     | <div></div> <div></div> <div></div> <div></div>                                      | <div></div> <div></div> <div></div> <div></div>                                       | <div></div> <div></div> <div></div> <div></div>                                       |
| PORTS Vent Power Water HVAC   | 3 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>           | 3 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>            | 3 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>             | 3 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>             |
| TRANSLUSCENT OPAQUE ROOF PRV  | <div></div> <div></div>   | <div></div> <div></div>  | <div></div> <div></div>   | <div></div> <div></div>   |
| BRANDING HEATER LIGHTING PUMP   | <div></div> <div></div> <div></div>   | <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div>   | <div></div> <div></div> <div></div>   |
| OTHER COLOURS   | [FR= <div></div> ] <div></div> <div></div> <div></div>                              | FR= <div></div> <div></div> <div></div> <div></div>                                  | [FR= <div></div> ] <div></div> <div></div> <div></div>                                | [FR= <div></div> ] <div></div> <div></div> <div></div>                                |
| NOTES   | Includes Repair kit, delivery hose,pegs/cord and Valise. optional ballast bags,     | Includes Repair kit, delivery hose,pegs/cord and Valise. optional ballast bags,      | Includes Repair kit, delivery hose,pegs/cord and Valise. optional ballast bags,       | Includes Repair kit, delivery hose,pegs/cord and Valise. optional ballast bags,       |
| WEBSITE   | mfc-international.com   | mfc-international.com  | mfc-international.com   | mfc-international.com   |

|  |   |   |  |  |
|--|---|---|--|--|
|  |   |   |  |  |
| <b>LANCO/ROFI</b>  | <b>LANCO/ROFI</b>   | <b>LANCO/ROFI</b>   | <b>MFC INTERNATIONAL</b>   | <b>MFC INTERNATIONAL</b>   |
| <b>ROFI Rapid</b>  | <b>ROFI Rapid</b>   | <b>ROFI Rapid</b>   | <b>INFLATABLE SHELTER 9</b>  | <b>INFLATABLE SHELTER 12</b>   |
| 606  | 608   | 610   | SHW/09/001   | SHW/12/001   |
|  |   |   |  |  |
| 00mins   | 00mins  | 00mins  | 00mins   | 00mins   |
| £00 \$00 €00   | £00 \$00 €00  | £00 \$00 €00  | £00 \$00 €00   | £00 \$00 €00   |
| 00kg / 00lb  | 00kg / 00lb   | 00kg / 00lb   | 36kg / 00lb  | 46kg / 00lb  |
| ??   | ??  | ??  | 210D HT Nylon.<br>Welded/Taped PU  | 210D HT Nylon.<br>Welded/Taped PU  |
|  |   |   |  |  |
| 00L / 00CuFt   | 00L / 00CuFt  | 00L / 00CuFt  | 1300L / 00CuFt   | 1850L / 00CuFt   |
| 00m / 00 00'   | 00 00m / 00 00'   | 00 00m / 00 00'   | 3 1.2m / 00 00'  | 4 1.2m / 00 00'  |
| 00m / 00 00'   | 00 00m / 00 00'   | 00 00m / 00 00'   | 3 6.6m / 00 00'  | 3 6.6m / 00 00'  |
| 00m / 00 00'   | 00 00m / 00 00'   | 00 00m / 00 00'   | 2.63 0.41m / 00 00'  | 2.63 0.41m / 00 00'  |
| 00sqm / 0sqft  | 00sqm / 0sqft   | 00sqm / 0sqft   | 7.9sqm / 0sqft   | 10.6sqm / 0sqft  |
| 0  | 0   | 0   | 1x 1.2m  | 1x 1.2m  |
| 0-8  | 0-8   | 0-10  | 0  | 0  |
| 2 0  | 2 0   | 2 0   | 3 0  | 3 0  |
|  |   |   |  |  |
|  |   |   |  |  |
| Repair kit, delivery<br>hose/cord and Valise.<br>Lift & shift handles. | Includes Repair kit, delivery<br>hose, pegs/cord and Valise.<br>Lift & shift handles. | Includes Repair kit, delivery<br>hose, pegs/cord and Valise.<br>Lift & shift handles. | Includes Repair kit, delivery<br>hose, pegs/cord and Valise.<br>optional ballast bags, | Includes Repair kit, delivery<br>hose, pegs/cord and Valise.<br>optional ballast bags, |
| lanco-usa.com  | lanco.eu lanco-usa.com  | lanco.eu lanco-usa.com  | mfc-international.com  | mfc-international.com  |


**MFC**International

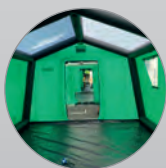
by RESPIREX

HELPING YOU DELIVER RESCUE UNDER PRESSURE

## Inflatable Shelters


































































































































































































































































































































































































- Quick and easy to deploy
- Welded and taped frame & canopy for leak-tightness
- Easily join multiple shelters together
- Heater & cabling sleeves included
- Includes opening windows with blinds
- Attachment points for lighting and ballast included
- Wide range of sizes and colour options
- Fully customisable



mfc-international.com













































































|  |   |   |   |   |
|--|---|---|---|---|
| <p><b>IMAGES NOT TO SCALE</b><br/> <b>Construction</b><br/>  PNEUMATIC/PUMP- INFLATE &amp; FORGET<br/>  POWERED FAN -CONTINUAL INFLATION<br/>  MANUAL - POP-UP FRAME<br/> <span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; background-color: white;"></span> <span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; background-color: white;"></span> <span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; background-color: white;"></span> <span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; background-color: white;"></span> =Option<br/> <b>AREA in <i>ITALICS</i> = internal floor space</b></p>       |   |   |   |   |
| <b>COMPANY</b>   | <b>MFC INTERNATIONAL</b>  | <b>MFC INTERNATIONAL</b>  | <b>MFC INTERNATIONAL</b>  |   |
| <b>MODEL <i>VARIANT</i></b>  | Inflatable Shelter 30   | Inflatable Shelter 36   | Inflatable Shelter 51   |   |
| <b>PRODUCT CODE</b>  | SHW/30/001  | SHW/36/001  | SHW/51/001  | NX  |
| <b>ORIGIN</b>  |    |    |    |   |
| <b>CONSTRUCTION <i>TIME-to-ERECT</i></b>   |  00mins  |  00mins  |  00mins  |        |
| <b>COST inc tax / VAT</b>  | £00 \$00 €00  | £00 \$00 €00  | £00 \$00 €00  | £0  |
| <b>WEIGHT - Shelter-Only</b>   | 88kg / 00lb   | 105kg / 00lb  | 125kg / 00lb  | 00  |
| <b>MATERIALS - ROOF/ WALLS</b>   | 210D HT Nylon.  | 210D HT Nylon.  | 210D HT Nylon.  |   |
| <b>FLOOR</b>   | Welded/Taped PU   | Welded/Taped PU   | Welded/Taped PU   |   |
| <b>FIRE-RESISTANT WATERPROOF</b>   |    |    |    |   |
| <b>AIR VOLUME</b>  | 3700L / 00CuFt  | 5900L / 00CuFt  | 8100L / 00CuFt  | 00  |
| <b>LENGTH DEPLOYED / PACKED</b>  | 6 1.2m / 19.7 3.9'  | 6 1.3m / 19.7 00'   | 8.5 1.2m / 27.9 3.9'  | 4 00  |
| <b>WIDTH DEPLOYED / PACKED</b>   | 5 0.66m / 16.4 2.2'   | 5 0.66m / 16.4 2.2'   | 5 0.66m / 16.4 2.2'   | 4 00  |
| <b>HEIGHT DEPLOYED / PACKED</b>  | 2.9 0.41m / 9.5 1.3'  | 3.1 0.5m / 10.1 1.6'  | 3.1 0.5m / 10.1 1.6'  | 00 0  |
| <b>AREA: -DETACHABLEFIXED FLOOR</b>  | 27.2sqm / 0sqft   | 32.04sqm / 0sqft  | 45.39sqm / 0sqft  | 00s   |
| <b>DOORS FULL-SPAN Zip Velcro Tie</b>  | 2x 1.2m      | 2x 1.2m      | 2x 1.2m      | 2x     |
| <b>WINDOWS Clear Mesh Opens</b>  | 4      | 4      | 4      | 0   |
| <b>CONNECTABLE Stakes Guys Skirt</b>   |      |      |      |        |
| <b>PORTS Vent Power Water HVAC</b>   | 3 0  2  0  1          | 3 0  2  0  1          | 3 0  2  0  1          | 0 0    |
| <b>TRANSLUSCENT OPAQUE ROOF PRV</b>  |     |    |     |   |
| <b>BRANDING HEATER LIGHTING PUMP</b>   |                       |                       |                       |        |
| <b>OTHER COLOURS</b>   | FR=                   | [FR=                  | FR=                   |   |
| <b>NOTES</b>   | Includes Repair kit, delivery hose,pegs/cord and Valise. optional ballast bags,   | Includes Repair kit, delivery hose,pegs/cord and Valise. optional ballast bags,   | Includes Repair kit, delivery hose,pegs/cord and Valise. optional ballast bags,   | Includes Repair kit, delivery hose,pegs/cord and Valise.                                  |
| <b>WEBSITE</b>   | mfc-international.com   | mfc-international.com   | mfc-international.com   | nexus2  |
| <p><b>IMAGES NOT TO SCALE</b><br/> <b>Construction</b><br/>  PNEUMATIC/PUMP- INFLATE &amp; FORGET<br/>  POWERED FAN -CONTINUAL INFLATION<br/>  MANUAL - POP-UP FRAME<br/> <span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; background-color: white;"></span> <span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; background-color: white;"></span> <span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; background-color: white;"></span> <span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; background-color: white;"></span> =Option<br/> <b>AREA in <i>ITALICS</i> = internal floor space</b></p> |   |   |   |   |
| <b>COMPANY</b>   | <b>NIXUS</b>  | <b>NIXUS</b>  | <b>NIXUS</b>  |   |
| <b>MODEL <i>VARIANT</i></b>  | Quick   | Quick   | Quick   |   |
| <b>PRODUCT CODE</b>  | NX-QM4040   | NX-QM4060   | NX-QM4080   | NX  |
| <b>ORIGIN</b>  |    |    |    |   |
| <b>CONSTRUCTION <i>TIME-to-ERECT</i></b>   |  00mins  |  00mins  |  00mins  |      |
| <b>COST inc tax / VAT</b>  | £00 \$00 €00  | £00 \$00 €00  | £00 \$00 €00  | £0  |
| <b>WEIGHT - Shelter-Only</b>   | 00kg / 00lb   | 00kg / 00lb   | 00kg / 00lb   | 00  |
| <b>MATERIALS - ROOF/ WALLS</b>   | ??  | ??  | ??  |   |
| <b>FLOOR</b>   |    |    |    |   |
| <b>FIRE-RESISTANT WATERPROOF</b>   |    |    |    |   |
| <b>AIR VOLUME</b>  | 00L / 00CuFt  | 00L / 00CuFt  | 00L / 00CuFt  | 00  |
| <b>LENGTH DEPLOYED / PACKED</b>  | 4 00m / 13.1 00'  | 4 00m / 13.1 00'  | 4 00m / 13.1 00'  | 5.6 00  |
| <b>WIDTH DEPLOYED / PACKED</b>   | 4 00m / 13.1 00'  | 6 00m / 19.7 00'  | 8 00m / 00 00'  | 4 00  |
| <b>HEIGHT DEPLOYED / PACKED</b>  | 00 00m / 00 00'   | 00 00m / 00 00'   | 00 00m / 00 00'   | 00 0  |
| <b>AREA: -DETACHABLEFIXED FLOOR</b>  | 00sqm / 0sqft   | 00sqm / 0sqft   | 00sqm / 0sqft   | 00  |
| <b>DOORS FULL-SPAN Zip Velcro Tie</b>  | 0      | 0      | 0      | 0   |
| <b>WINDOWS Clear Mesh Opens</b>  | 0      | 0      | 0      | 0   |
| <b>CONNECT Stakes Guys Skirt</b>   |      |      |      |      |
| <b>PORTS Vent Power Water HVAC</b>   | 0 0  0  0  0  | 0 0  0  0  0  | 0 0  0  0  0  | 0 0  |
| <b>TRANSLUSCENT OPAQUE ROOF PRV</b>  |     |    |     |   |
| <b>BRANDING HEATER LIGHTING PUMP</b>   |               |               |               |      |
| <b>OTHER COLOURS</b>   |   |   |   |   |
| <b>NOTES</b>   | Includes Repair kit, delivery hose,pegs/cord and Valise.  | Includes Repair kit, delivery hose,pegs/cord and Valise.  | Includes Repair kit, delivery hose,pegs/cord and Valise.  | Includes Repair kit, delivery hose,pegs/cord and Valise.                                  |
| <b>WEBSITE</b>   | nexus2protect.com   | nexus2protect.com   | nexus2protect.com   | nexus2  |

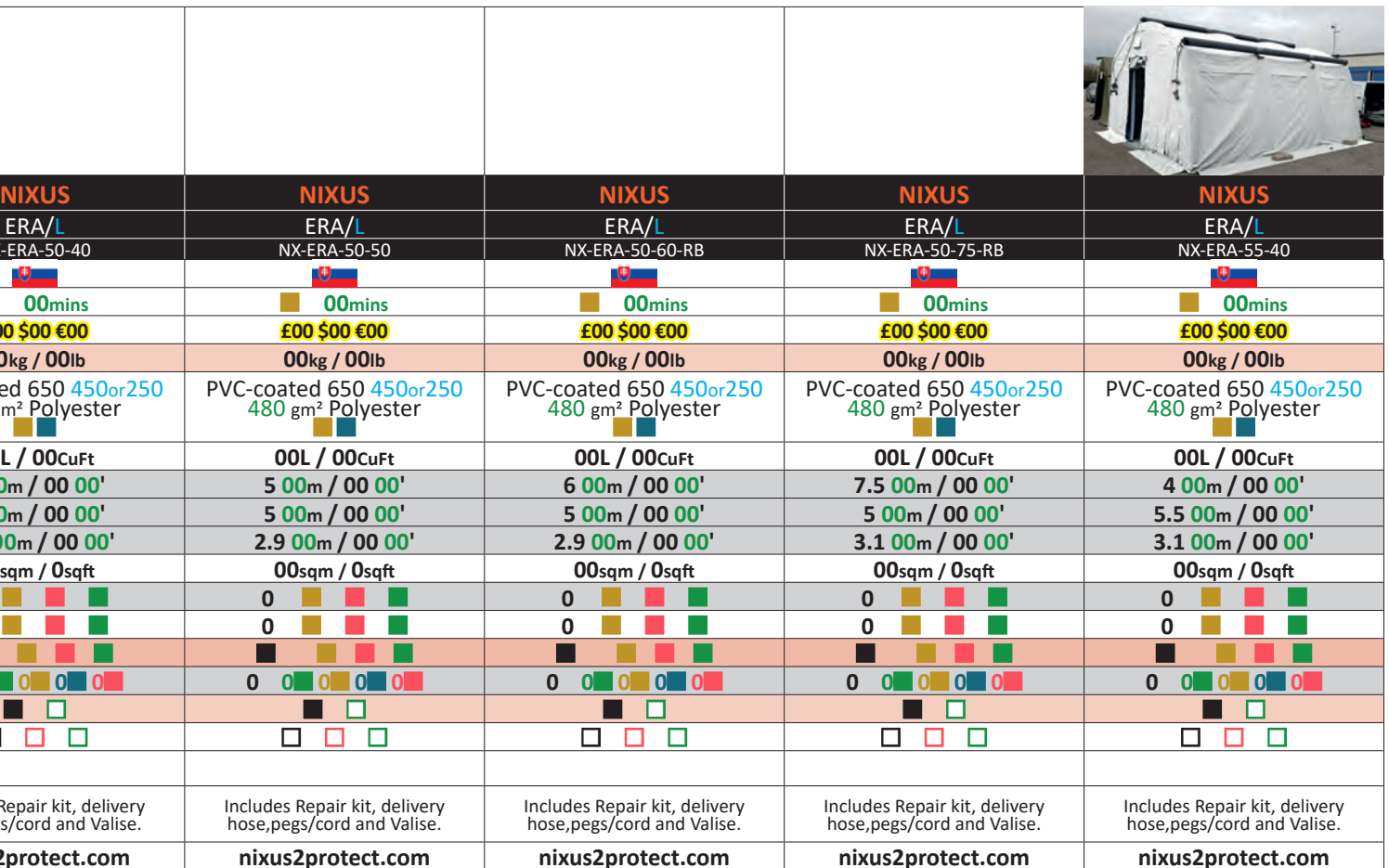
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|---|---|---|--|---|
|      |   |      |  |   |
| <b>NIXUS</b>  | <b>NIXUS</b>  | <b>NIXUS</b>  | <b>NIXUS</b>   | <b>NIXUS</b>  |
| Lite  | Lite  | Quick   | Quick  | Quick   |
| NX-LITE-40-40   | NX-LITE-50-50   | NX-QM3030   | NX-QM3045  | NX-QM3060   |
|      |      |      |      |      |
| 00mins  | 00mins  | 00mins  | 00mins   | 00mins  |
| £00 \$00 €00  | £00 \$00 €00  | £00 \$00 €00  | £00 \$00 €00   | £00 \$00 €00  |
| 0kg / 00lb  | 00kg / 00lb   | 00kg / 00lb   | 00kg / 00lb  | 00kg / 00lb   |
| ??  | ??  | ??  | ??   | ??  |
|      |      |      |      |      |
| L / 00CuFt  | 00L / 00CuFt  | 00L / 00CuFt  | 00L / 00CuFt   | 00L / 00CuFt  |
| 0m / 13.1 00'   | 5 00m / 16.4 00'  | 3 00m / 9.8 00'   | 3 00m / 9.8 00'  | 3 00m / 9.8 00'   |
| 0m / 13.1 00'   | 5 00m / 16.4 00'  | 3 00m / 9.8 00'   | 4.5 00m / 00 00'   | 6 00m / 19.7 00'  |
| 0m / 00 00'   | 00 00m / 00 00'   | 00 00m / 00 00'   | 00 00m / 00 00'  | 00 00m / 00 00'   |
| 0sqm / 00sqft   | 00sqm / 00sqft  | 00sqm / 00sqft  | 00sqm / 0sqft  | 00sqm / 0sqft   |
| 0    | 0    | 0    | 0    | 0    |
| 0    | 0    | 0    | 0    | 0    |
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| <b>IMAGES NOT TO SCALE</b><br><b>Construction</b><br>PNEUMATIC/PUMP- INFLATE & FORGET<br>POWERED FAN -CONTINUAL INFLATION<br>MANUAL - POP-UP FRAME<br>=Option<br><b>AREA in <i>ITALICS</i> = internal floor space</b> |  |  |  |  |
| COMPANY   | NIXUS  | NIXUS  | NIXUS  |  |
| MODEL <b>VARIANT</b>  | PGK  | PGK  | PGK  |  |
| PRODUCT CODE  | NX-PGK-60-63   | NX-PGK-60-76   | NX-PGK-60-100  | NX   |
| ORIGIN  |  |  |  |  |
| CONSTRUCTION <b>TIME-to-ERECT</b>   | 00mins   | 00mins   | 00mins   |  |
| COST inc tax / VAT  | £00 \$00 €00   | £00 \$00 €00   | £00 \$00 €00   | £0   |
| WEIGHT - Shelter-Only   | 00kg / 00lb  | 00kg / 00lb  | 00kg / 00lb  | 00   |
| MATERIALS - ROOF/ WALLS   | ??   | ??   | ??   |  |
| FLOOR   |  |  |  |  |
| FIRE-RESISTANT WATERPROOF   |  |  |  |  |
| AIR VOLUME  | 00L / 00CuFt   | 00L / 00CuFt   | 00L / 00CuFt   | 00   |
| LENGTH DEPLOYED / PACKED  | 00 00m / 00 00'  | 00 00m / 00 00'  | 00 00m / 00 00'  | 00 0   |
| WIDTH DEPLOYED / PACKED   | 00 00m / 00 00'  | 00 00m / 00 00'  | 00 00m / 00 00'  | 00 0   |
| HEIGHT DEPLOYED / PACKED  | 00 00m / 00 00'  | 00 00m / 00 00'  | 00 00m / 00 00'  | 00 0   |
| AREA: -DETACHABLEFIXED FLOOR  | 00sqm / 0sqft  | 00sqm / 0sqft  | 00sqm / 0sqft  | 00   |
| DOORS FULL-SPAN Zip Velcro Tie  | 0  | 0  | 0  | 0  |
| WINDOWS Clear Mesh Opens  | 0  | 0  | 0  | 0  |
| CONNECTABLE Stakes Guys Skirt   |  |  |  |  |
| PORTS Vent Power Water HVAC   | 0  | 0  | 0  | 0  |
| TRANSLUSCENT OPAQUE ROOF PRV  |  |  |  |  |
| BRANDING HEATER LIGHTING PUMP   |  |  |  |  |
| OTHER COLOURS   |  |  |  |  |
| NOTES   | Includes Repair kit, delivery hose,pegs/cord and Valise. | Includes Repair kit, delivery hose,pegs/cord and Valise. | Includes Repair kit, delivery hose,pegs/cord and Valise. | Includes Repair kit, delivery hose,pegs/cord and Valise. |
| WEBSITE   | nixus2protect.com  | nixus2protect.com  | nixus2protect.com  | nixus2   |
| <b>IMAGES NOT TO SCALE</b><br><b>Construction</b><br>PNEUMATIC/PUMP- INFLATE & FORGET<br>POWERED FAN -CONTINUAL INFLATION<br>MANUAL - POP-UP FRAME<br>=Option<br><b>AREA in <i>ITALICS</i> = internal floor space</b> |  |  |  |  |
| COMPANY   | NIXUS  | NIXUS  | NIXUS  |  |
| MODEL <b>VARIANT</b>  | Pro  | Pro  | Pro  |  |
| PRODUCT CODE  | NX-PRO-35-24   | NX-PRO-35-24   | NX-PRO-35-24   | NX   |
| ORIGIN  |  |  |  |  |
| CONSTRUCTION <b>TIME-to-ERECT</b>   | 00mins   | 00mins   | 00mins   |  |
| COST inc tax / VAT  | £00 \$00 €00   | £00 \$00 €00   | £00 \$00 €00   | £0   |
| WEIGHT - Shelter-Only   | 00kg / 00lb  | 00kg / 00lb  | 00kg / 00lb  | 00   |
| MATERIALS - ROOF/ WALLS   | ??   | ??   | ??   |  |
| FLOOR   |  |  |  |  |
| FIRE-RESISTANT WATERPROOF   |  |  |  |  |
| AIR VOLUME  | 00L / 00CuFt   | 00L / 00CuFt   | 00L / 00CuFt   | 00   |
| LENGTH DEPLOYED / PACKED  | 00 00m / 00 00'  | 00 00m / 00 00'  | 00 00m / 00 00'  | 00 0   |
| WIDTH DEPLOYED / PACKED   | 00 00m / 00 00'  | 00 00m / 00 00'  | 00 00m / 00 00'  | 00 0   |
| HEIGHT DEPLOYED / PACKED  | 00 00m / 00 00'  | 00 00m / 00 00'  | 00 00m / 00 00'  | 00 0   |
| AREA: -DETACHABLEFIXED FLOOR  | 00sqm / 0sqft  | 00sqm / 0sqft  | 00sqm / 0sqft  | 00   |
| DOORS FULL-SPAN Zip Velcro Tie  | 0  | 0  | 0  | 0  |
| WINDOWS Clear Mesh Opens  | 0  | 0  | 0  | 0  |
| CONNECT Stakes Guys Skirt   |  |  |  |  |
| PORTS Vent Power Water HVAC   | 0  | 0  | 0  | 0  |
| TRANSLUSCENT OPAQUE ROOF PRV  |  |  |  |  |
| BRANDING HEATER LIGHTING PUMP   |  |  |  |  |
| OTHER COLOURS   |  |  |  |  |
| NOTES   | Includes Repair kit, delivery hose,pegs/cord and Valise. | Includes Repair kit, delivery hose,pegs/cord and Valise. | Includes Repair kit, delivery hose,pegs/cord and Valise. | Includes Repair kit, delivery hose,pegs/cord and Valise. |
| WEBSITE   | nixus2protect.com  | nixus2protect.com  | nixus2protect.com  | nixus2   |











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|---|--|---|--|---|--|---|--|
|  |  |    |  |   |  |  |  |
| <b>NIXUS</b>  |  | <b>NIXUS</b>  |  | <b>NIXUS</b>  |  | <b>NIXUS</b>  |  |
| Pro   |  | Pro   |  | Pro   |  | Pro   |  |
| -PRO-35-24  |  | NX-PRO-35-24  |  | NX-PRO-35-24  |  | NX-PRO-35-24  |  |
|    |  |      |  |      |  |      |  |
| 00mins  |  | 00mins  |  | 00mins  |  | 00mins  |  |
| 00 \$00 €00   |  | £00 \$00 €00  |  | £00 \$00 €00  |  | £00 \$00 €00  |  |
| 0kg / 00lb  |  | 00kg / 00lb   |  | 00kg / 00lb   |  | 00kg / 00lb   |  |
| ?/?   |  | ?/?   |  | ?/?   |  | ?/?   |  |
|    |  |      |  |      |  |      |  |
| L / 00CuFt  |  | 00L / 00CuFt  |  | 00L / 00CuFt  |  | 00L / 00CuFt  |  |
| 0m / 00 00'   |  | 00 00m / 00 00'   |  | 00 00m / 00 00'   |  | 00 00m / 00 00'   |  |
| 0m / 00 00'   |  | 00 00m / 00 00'   |  | 00 00m / 00 00'   |  | 00 00m / 00 00'   |  |
| 0m / 00 00'   |  | 00 00m / 00 00'   |  | 00 00m / 00 00'   |  | 00 00m / 00 00'   |  |
| sqm / 0sqft   |  | 00sqm / 0sqft   |  | 00sqm / 0sqft   |  | 00sqm / 0sqft   |  |
|    |  | 0    |  | 0    |  | 0    |  |
|    |  | 0    |  | 0    |  | 0    |  |
|    |  |      |  |      |  |      |  |
|    |  | 0    |  | 0    |  | 0    |  |
|    |  |      |  |      |  |      |  |
|    |  |      |  |      |  |      |  |
| Repair kit, delivery<br>s/cord and Valise.  |  | Includes Repair kit, delivery<br>hose,pegs/cord and Valise.                         |  | Includes Repair kit, delivery<br>hose,pegs/cord and Valise.                         |  | Includes Repair kit, delivery<br>hose,pegs/cord and Valise.                         |  |
| 2protect.com  |  | nexus2protect.com   |  | nexus2protect.com   |  |   |  |
|   |  |   |  |   |  |   |  |
| <b>NIXUS</b>  |  | <b>NIXUS</b>  |  | <b>NIXUS</b>  |  | <b>NIXUS</b>  |  |
| Pro   |  | Pro   |  | Pro   |  | Pro   |  |
| -PRO-35-24  |  | NX-PRO-35-24  |  | NX-PRO-35-24  |  | NX-PRO-35-24  |  |
|  |  |    |  |    |  |    |  |
| 00mins  |  | 00mins  |  | 00mins  |  | 00mins  |  |
| 00 \$00 €00   |  | £00 \$00 €00  |  | £00 \$00 €00  |  | £00 \$00 €00  |  |
| 0kg / 00lb  |  | 00kg / 00lb   |  | 00kg / 00lb   |  | 00kg / 00lb   |  |
| ?/?   |  | ?/?   |  | ?/?   |  | ?/?   |  |
|  |  |    |  |    |  |    |  |
| L / 00CuFt  |  | 00L / 00CuFt  |  | 00L / 00CuFt  |  | 00L / 00CuFt  |  |
| 0m / 00 00'   |  | 00 00m / 00 00'   |  | 00 00m / 00 00'   |  | 00 00m / 00 00'   |  |
| 0m / 00 00'   |  | 00 00m / 00 00'   |  | 00 00m / 00 00'   |  | 00 00m / 00 00'   |  |
| 0m / 00 00'   |  | 00 00m / 00 00'   |  | 00 00m / 00 00'   |  | 00 00m / 00 00'   |  |
| sqm / 0sqft   |  | 00sqm / 0sqft   |  | 00sqm / 0sqft   |  | 00sqm / 0sqft   |  |
|  |  | 0  |  | 0  |  | 0  |  |
|  |  | 0  |  | 0  |  | 0  |  |
|  |  |    |  |    |  |    |  |
|  |  | 0  |  | 0  |  | 0  |  |
|  |  |    |  |    |  |    |  |
| Repair kit, delivery<br>s/cord and Valise.  |  | Includes Repair kit, delivery<br>hose,pegs/cord and Valise.                         |  | Includes Repair kit, delivery<br>hose,pegs/cord and Valise.                         |  | Includes Repair kit, delivery<br>hose,pegs/cord and Valise.                         |  |
| 2protect.com  |  | nexus2protect.com   |  | nexus2protect.com   |  | nexus2protect.com   |  |

|  |   |  |   |   |
|--|---|--|---|---|
| <b>IMAGES NOT TO SCALE</b><br><b>Construction</b><br><div> <div></div> PNEUMATIC/PUMP- INFLATE &amp; FORGET         <div></div> POWERED FAN -CONTINUAL INFLATION         <div></div> MANUAL - POP-UP FRAME       </div> <div> <div></div> <div></div> <div></div> <div></div> </div> =Option<br><b>AREA in <i>ITALICS</i> = internal floor space</b> |   |  |   |   |
|  |    |  |    |   |
| COMPANY  | NIXUS   | NIXUS  | NIXUS   |   |
| MODEL VARIANT  | ERA/L   | ERA/L  | ERA/L   |   |
| PRODUCT CODE   | NX-ERA-35-24  | NX-ERA-40-43   | NX-ERA-40-64  | NX-ERA-40-64  |
| ORIGIN   |    |    |    |    |
| CONSTRUCTION TIME-to-ERECT   | <div></div> 00mins  | <div></div> 00mins   | <div></div> 00mins  | <div></div> 00mins  |
| COST inc tax / VAT   | £00 \$00 €00  | £00 \$00 €00   | £00 \$00 €00  | £00 \$00 €00  |
| WEIGHT - Shelter-Only  | 00kg / 00lb   | 00kg / 00lb  | 00kg / 00lb   | 00kg / 00lb   |
| MATERIALS - ROOF/ WALLS  | PVC-coated 650 450or250 480 gm² Polyester   | PVC-coated 650 450or250 480 gm² Polyester  | PVC-coated 650 450or250 480 gm² Polyester   | PVC-coated 650 450or250 480 gm² Polyester   |
| FIRE-RESISTANT WATERPROOF  | <div></div> <div></div>   | <div></div> <div></div>  | <div></div> <div></div>   | <div></div> <div></div>   |
| AIR VOLUME   | 00L / 00CuFt  | 00L / 00CuFt   | 00L / 00CuFt  | 00L / 00CuFt  |
| LENGTH DEPLOYED / PACKED   | 2.4 00m / 11.6 00'  | 4.3 00m / 00 00'   | 6.4 00m / 00 00'  | 4 00m / 00 00'  |
| WIDTH DEPLOYED / PACKED  | 3.5 00m / 11.6 00'  | 4 00m / 00 00'   | 4 00m / 00 00'  | 5 00m / 00 00'  |
| HEIGHT DEPLOYED / PACKED   | 2.5 00m / 00 00'  | 2.7 00m / 00 00'   | 2.9 00m / 00 00'  | 2.9 00m / 00 00'  |
| AREA: -DETACHABLEFIXED FLOOR   | 00sqm / 0sqft   | 00sqm / 0sqft  | 00sqm / 0sqft   | 00sqm / 0sqft   |
| DOORS FULL-SPAN Zip Velcro Tie   | 0 <div></div> <div></div> <div></div>   | 0 <div></div> <div></div> <div></div>  | 0 <div></div> <div></div> <div></div>   | 0 <div></div> <div></div> <div></div>   |
| WINDOWS Clear Mesh Opens   | 0 <div></div> <div></div> <div></div>   | 0 <div></div> <div></div> <div></div>  | 0 <div></div> <div></div> <div></div>   | 0 <div></div> <div></div> <div></div>   |
| CONNECTABLE Stakes Guys Skirt  | <div></div> <div></div> <div></div> <div></div>                                     | <div></div> <div></div> <div></div> <div></div>                                      | <div></div> <div></div> <div></div> <div></div>                                       | <div></div> <div></div> <div></div> <div></div>                                       |
| PORTS Vent Power Water HVAC  | 0 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>           | 0 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>            | 0 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>             | 0 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>             |
| TRANSLUSCENT OPAQUE ROOF PRV   | <div></div> <div></div>   | <div></div> <div></div>  | <div></div> <div></div>   | <div></div> <div></div>   |
| BRANDING HEATER LIGHTING PUMP  | <div></div> <div></div> <div></div>   | <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div>   | <div></div> <div></div> <div></div>   |
| OTHER COLOURS  |   |  |   |   |
| NOTES  | Includes Repair kit, delivery hose,pegs/cord and Valise.                            | Includes Repair kit, delivery hose,pegs/cord and Valise.                             | Includes Repair kit, delivery hose,pegs/cord and Valise.                              | Includes Repair kit, delivery hose,pegs/cord and Valise.                              |
| WEBSITE  | nixus2protect.com   | nixus2protect.com  | nixus2protect.com   | nixus2protect.com   |
| <b>IMAGES NOT TO SCALE</b><br><b>Construction</b><br><div> <div></div> PNEUMATIC/PUMP- INFLATE &amp; FORGET         <div></div> POWERED FAN -CONTINUAL INFLATION         <div></div> MANUAL - POP-UP FRAME       </div> <div> <div></div> <div></div> <div></div> <div></div> </div> =Option<br><b>AREA in <i>ITALICS</i> = internal floor space</b> |   |  |   |   |
| COMPANY  | NIXUS   | NIXUS  | NIXUS   |   |
| MODEL VARIANT  | ERA/L   | ERA/L  | ERA/L   |   |
| PRODUCT CODE   | NX-ERA-55-50-RB   | NX-ERA-55-60   | NX-ERA-55-75-RB   | NX-ERA-55-75-RB   |
| ORIGIN   |  |  |  |  |
| CONSTRUCTION TIME-to-ERECT   | <div></div> 00mins  | <div></div> 00mins   | <div></div> 00mins  | <div></div> 00mins  |
| COST inc tax / VAT   | £00 \$00 €00  | £00 \$00 €00   | £00 \$00 €00  | £00 \$00 €00  |
| WEIGHT - Shelter-Only  | 00kg / 00lb   | 00kg / 00lb  | 00kg / 00lb   | 00kg / 00lb   |
| MATERIALS - ROOF/ WALLS  | PVC-coated 650 450or250 480 gm² Polyester   | PVC-coated 650 450or250 480 gm² Polyester  | PVC-coated 650 450or250 480 gm² Polyester   | PVC-coated 650 450or250 480 gm² Polyester   |
| FIRE-RESISTANT WATERPROOF  | <div></div> <div></div>   | <div></div> <div></div>  | <div></div> <div></div>   | <div></div> <div></div>   |
| AIR VOLUME   | 00L / 00CuFt  | 00L / 00CuFt   | 00L / 00CuFt  | 00L / 00CuFt  |
| LENGTH DEPLOYED / PACKED   | 5 00m / 00 00'  | 6 00m / 00 00'   | 7.5 00m / 00 00'  | 8 00m / 00 00'  |
| WIDTH DEPLOYED / PACKED  | 5.5 00m / 00 00'  | 5.5 00m / 00 00'   | 5.5 00m / 00 00'  | 5.5 00m / 00 00'  |
| HEIGHT DEPLOYED / PACKED   | 00 00m / 00 00'   | 00 00m / 00 00'  | 00 00m / 00 00'   | 00 00m / 00 00'   |
| AREA: -DETACHABLEFIXED FLOOR   | 3.1sqm / 0sqft  | 3.1sqm / 00sqft  | 3.1sqm / 00sqft   | 3.3sqm / 00sqft   |
| DOORS FULL-SPAN Zip Velcro Tie   | 0 <div></div> <div></div> <div></div>   | 0 <div></div> <div></div> <div></div>  | 0 <div></div> <div></div> <div></div>   | 0 <div></div> <div></div> <div></div>   |
| WINDOWS Clear Mesh Opens   | 0 <div></div> <div></div> <div></div>   | 0 <div></div> <div></div> <div></div>  | 0 <div></div> <div></div> <div></div>   | 0 <div></div> <div></div> <div></div>   |
| CONNECT Stakes Guys Skirt  | <div></div> <div></div> <div></div> <div></div>                                     | <div></div> <div></div> <div></div> <div></div>                                      | <div></div> <div></div> <div></div> <div></div>                                       | <div></div> <div></div> <div></div> <div></div>                                       |
| PORTS Vent Power Water HVAC  | 0 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>           | 0 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>            | 0 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>             | 0 <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>             |
| TRANSLUSCENT OPAQUE ROOF PRV   | <div></div> <div></div>   | <div></div> <div></div>  | <div></div> <div></div>   | <div></div> <div></div>   |
| BRANDING HEATER LIGHTING PUMP  | <div></div> <div></div> <div></div>   | <div></div> <div></div> <div></div>  | <div></div> <div></div> <div></div>   | <div></div> <div></div> <div></div>   |
| OTHER COLOURS  |   |  |   |   |
| NOTES  | Includes Repair kit, delivery hose,pegs/cord and Valise.                            | Includes Repair kit, delivery hose,pegs/cord and Valise.                             | Includes Repair kit, delivery hose,pegs/cord and Valise.                              | Includes Repair kit, delivery hose,pegs/cord and Valise.                              |
| WEBSITE  | nixus2protect.com   | nixus2protect.com  | nixus2protect.com   | nixus2protect.com   |



BUYERSGUIDES USAR/Extrication Equipment 497



|  |  |  |   |  |
|--|--|--|---|--|
| IMAGES NOT TO SCALE<br>Construction<br>■ PNEUMATIC/PUMP- INFLATE & FORGET<br>■ POWERED FAN -CONTINUAL INFLATION<br>■ MANUAL - POP-UP FRAME<br>□ □ □ □ =Option<br>AREA in <i>ITALICS</i> = internal floor space |  |  |   |  |
| COMPANY  | NIXUS  | NIXUS  | OO  |  |
| MODEL VARIANT  | ERA/L  | ERA/L  | OO  |  |
| PRODUCT CODE   | NX-ERA-60-80   | NX-ERA-60-100 -RB  | OO  |  |
| ORIGIN   |             |            |   |  |
| CONSTRUCTION TIME-to-ERECT   | ■ 00mins   | ■ 00mins   | ■ ■ ■ 00mins  | ■ ■  |
| COST inc tax / VAT   | £00 \$00 €00   | £00 \$00 €00   | £00 \$00 €00  | £00 \$00 €00   |
| WEIGHT - Shelter-Only  | 00kg / 00lb  | 00kg / 00lb  | 00kg / 00lb   | 00kg / 00lb  |
| MATERIALS - ROOF/ WALLS<br>FLOOR<br>FIRE-RESISTANT WATERPROOF  | PVC-coated 650 450or250<br>480 gm² Polyester<br>■ ■  | PVC-coated 650 450or250<br>480 gm² Polyester<br>■ ■  | ??<br>■ ■   |  |
| AIR VOLUME   | 00L / 00CuFt   | 00L / 00CuFt   | 00L / 00CuFt  | 00L / 00CuFt   |
| LENGTH DEPLOYED / PACKED   | 8 00m / 00 00'   | 10 00m / 00 00'  | 00 00m / 00 00'   | 00 00m / 00 00'  |
| WIDTH DEPLOYED / PACKED  | 6 00m / 00 00'   | 6 00m / 00 00'   | 00 00m / 00 00'   | 00 00m / 00 00'  |
| HEIGHT DEPLOYED / PACKED   | 3.4 00m / 00 00'   | 3.4 00m / 00 00'   | 00 00m / 00 00'   | 00 00m / 00 00'  |
| AREA: -DETACHABLEFIXED FLOOR   | 00sqm / 00sqft   | 00sqm / 00sqft   | 8sqm / 0sqft  | 8sqm / 0sqft   |
| DOORS FULL-SPAN Zip Velcro Tie   | 0 ■ ■ ■  | 0 ■ ■ ■  | 0 ■ ■ ■   | 0 ■ ■ ■  |
| WINDOWS Clear Mesh Opens   | 0 ■ ■ ■  | 0 ■ ■ ■  | 0 ■ ■ ■   | 0 ■ ■ ■  |
| CONNECTABLE Stakes Guys Skirt  | ■ ■ ■ ■  | ■ ■ ■ ■  | ■ ■ ■ ■   | ■ ■ ■ ■  |
| PORTS Vent Power Water HVAC  | 0 0 0 0 0 0  | 0 0 0 0 0 0  | 0 0 0 0 0 0   | 0 0 0 0 0 0  |
| TRANSLUSCENT OPAQUE ROOF PRV   | ■ ■  | ■ ■  | ■ ■   | ■ ■  |
| BRANDING HEATER LIGHTING PUMP  | □ □ □  | □ □ □  | □ □ □   | □ □ □  |
| OTHER COLOURS  |  |  |   |  |
| NOTES  | Includes Repair kit, delivery hose,pegs/cord and Valise.                                     | Includes Repair kit, delivery hose,pegs/cord and Valise.                                     | Includes Repair kit, delivery hose,pegs/cord and Valise.                              | Includes Repair kit, delivery hose,pegs/cord and Valise.             |
| WEBSITE  | nixus2protect.com  | nixus2protect.com  | OO.com  |  |
| IMAGES NOT TO SCALE<br>Construction<br>■ PNEUMATIC/PUMP- INFLATE & FORGET<br>■ POWERED FAN -CONTINUAL INFLATION<br>■ MANUAL - POP-UP FRAME<br>□ □ □ □ =Option<br>AREA in <i>ITALICS</i> = internal floor space |           |          |  |  |
| COMPANY  | RIGLOO   | RIGLOO   | RIGLOO  | SHELTER  |
| MODEL VARIANT  | Rescuer  | Defender   | Refuge  | Triad  |
| PRODUCT CODE   | 00   | 00   | 00  | 00   |
| ORIGIN   |           |          |  |  |
| CONSTRUCTION TIME-to-ERECT   | ■ 1-6mins  | ■ 1-6mins  | ■ <1-5mins  | ■ ■  |
| COST inc tax / VAT   | £00 \$00 €00   | £00 \$00 €00   | £00 \$00 €00  | £00 \$00 €00   |
| WEIGHT - Shelter-Only  | 7kg / 00lb   | 7kg / 00lb   | 4kg / 00lb  | 00kg / 00lb  |
| MATERIALS - ROOF/ WALLS<br>FLOOR<br>FIRE-RESISTANT WATERPROOF  | Polyester &Nylon Ripstop®<br>68D 210T<br>- ■ 8000mm  | Polyester &Nylon Ripstop®<br>68D 210T<br>- ■ 8000mm  | Polyester & Nylon 80g 210T<br>- ■ 8000mm  |  |
| AIR VOLUME   | 00L / 00CuFt   | 00L / 00CuFt   | 00L / 00CuFt  | 00L / 00CuFt   |
| LENGTH DEPLOYED / PACKED   | 2.6 0.6m / 00 00'  | 2.6 0.6m / 00 00'  | 1.8 0.4m / 00 00'   | 00 00m / 00 00'  |
| WIDTH DEPLOYED / PACKED  | 1.6 0.3m / 00 00'  | 1.6 0.3m / 00 00'  | 1.2 0.3m / 00 00'   | 00 00m / 00 00'  |
| HEIGHT DEPLOYED / PACKED   | 1.2 0.2m / 00 00'  | 1.2 0.2m / 00 00'  | 1.2 0.2m / 00 00'   | 00 00m / 00 00'  |
| AREA: -DETACHABLEFIXED FLOOR   | 4sqm / 00sqft  | 4sqm / 00sqft  | 2sqm / 00sqft   | 8sqm / 00sqft  |
| DOORS FULL-SPAN Zip Velcro Tie   | 1 ■ ■ ■  | 1 ■ ■ ■  | 2 ■ ■ ■   | 0 ■ ■ ■  |
| WINDOWS Clear Mesh Opens   | 6 ■ * -  | 6 ■ * -  | 6 ■ - -   | 0 ■ - -  |
| CONNECT Stakes Guys Skirt  | - ■ ■ ■  | - ■ ■ ■  | - ■ ■ ■   | ■ ■ ■ ■  |
| PORTS Vent Power Water HVAC  | 0 0 0 0 0 0  | 0 0 0 0 0 0  | 0 0 0 0 0 0   | 0 0 0 0 0 0  |
| TRANSLUSCENT OPAQUE ROOF PRV   | ■ -  | ■ -  | ■ -   | ■ -  |
| BRANDING HEATER LIGHTING PUMP  | □ - - ■  | □ - - ■  | □ - - ■   | □ - - ■  |
| OTHER COLOURS  |  |  |   |  |
| NOTES  | Inc Repair kit, ,pegs/cord stirrup-pump, rucksack. Diagrams on skirt. Mesh door (not window) | Inc Repair kit, ,pegs/cord stirrup-pump, rucksack. Diagrams on skirt. Mesh door (not window) | Includes Repair kit, ,pegs/cord stirrup-pump, Glo-Sticks & rucksack.                  | Includes Repair kit, ,pegs/cord stirrup-pump, Glo-Sticks & rucksack. |
| WEBSITE  | rigloo-rs.com  | rigloo-rs.com  | rigloo-rs.com   | shelterstru.com  |

## BUYERSGUIDES USAR/Extrication Equipment

## IMAGES NOT TO SCALE

## Construction

■ PNEUMATIC/PUMP- INFLATE &amp; FORGET

■ POWERED FAN -CONTINUAL INFLATION

■ MANUAL - POP-UP FRAME

□ □ □ □ =Option

AREA in *ITALICS* = internal floor space

|                                |   |   |   |   |
|--------------------------------|---|---|---|---|
| COMPANY                        | TULMAR SAFETY SYSTEMS   | TULMAR SAFETY SYSTEMS   | VETTER  |   |
| MODEL VARIANT                  | Tulmar Shelter 1  | Tulmar Shelter 2  | Universal Tent PZ12   | Univer  |
| PRODUCT CODE                   | 9508  | 9509  | 1520009402  | 15  |
| ORIGIN                         |   |   |   |   |
| CONSTRUCTION TIME-to-ERECT     | ■ <5mins  | ■ <5mins  | ■ <1min   | ■   |
| COST inc tax / VAT             | £00 \$13852 €00   | £00 \$16490 €00   | £00 \$00 €00  | £0  |
| WEIGHT - Shelter-Only          | 102kg / 225lb   | 168kg / 370lb   | 55kg / 121lb  | 65  |
| MATERIALS - ROOF/ WALLS        | Coated PVC  | Coated PVC  | ??  |   |
| FIRE-RESISTANT                 | ■   | ■   | ■   |   |
| WATERPROOF                     | ■   | ■   | ■   |   |
| AIR VOLUME                     | 2500L / 88CuFt  | 3200L / 113CuFt   | 1632L / 57.6CuFt  | 2025  |
| LENGTH DEPLOYED / PACKED       | 3.7 <i>1.35m</i> / 12 <i>2'</i>   | 6.1 <i>1.52m</i> / 20 <i>5'</i>   | 3.7 <i>1.1m</i> / 11.8 <i>0.43'</i>   | 4.9 <i>1.</i>   |
| WIDTH DEPLOYED / PACKED        | 4.6 <i>0.61m</i> / 15 <i>2'</i>   | 4.6 <i>0.71m</i> / 15 <i>2'</i>   | 3.36 <i>0.85m</i> / 12.4 <i>0.33'</i>   | 3.86 <i>0.</i>  |
| HEIGHT DEPLOYED / PACKED       | 00 <i>0.61m</i> / 8.1 <i>00'</i>  | 00 <i>0.71m</i> / 9.7 <i>0.71'</i>  | 2.58 <i>0.4m</i> / 8.3 <i>0.16'</i>   | 2.48 <i>0</i>   |
| AREA: -DETACHABLEFIXED FLOOR   | 17sqm / 180sqft □   | 27.5sqm / 300sqft □   | 12sqm / 00sqft  | 18s   |
| DOORS FULL-SPAN Zip Velcro Tie | 2+ ■ ■ ■ ■  | 2+ ■ ■ ■ ■  | 1+ ■ ■ ■ ■  | 1+ ■  |
| WINDOWS Clear Mesh Opens       | 0 ■ ■ ■   | 0 ■ ■ ■   | 2 ■ ■ ■   | 4   |
| CONNECTABLE Stakes Guys Skirt  | ■ ■ ■ ■ *   | ■ ■ ■ ■ *   | ■ ■ ■ ■   | ■   |
| PORTS Vent Power Water HVAC    | 3 0 ■ 1 ■ 1 ■   | 3 0 ■ 1 ■ 1 ■   | 0 0 ■ 0 ■ 0 ■   | 0 0 ■   |
| TRANSLUSCENT OPAQUE ROOF PRV   | ■ ■ ■   | ■ ■ ■   | ■ ■ ■   | ■   |
| BRANDING HEATER LIGHTING PUMP  | □ □ □   | □ □ □   | □ □ □   | □   |
| OTHER COLOURS                  | ■   | ■   | ■ ■ ■ ■ ■ ■   | ■ ■   |
| NOTES                          | Inc Repair kit, delivery hose, and Valise. Removable side walls<br>*Skirt = water ballast tubes | Inc Repair kit, delivery hose, and Valise. Removable side walls<br>*Skirt = water ballast tubes | Includes Repair kit, delivery hose, pegs/cord and Valise. Optional long ballast bags. | Includes Repair kit, delivery hose, pegs/cord and Valise. Optional long ballast bags. |
| WEBSITE                        | tulmar.com  | tulmar.com  | vetter.de   | v   |

## IMAGES NOT TO SCALE

## Construction

■ PNEUMATIC/PUMP- INFLATE &amp; FORGET

■ POWERED FAN -CONTINUAL INFLATION












































■ MANUAL - POP-UP FRAME

□ □ □ □ =Option

AREA in *ITALICS* = internal floor space

|                                |   |   |   |   |
|--------------------------------|---|---|---|---|
| COMPANY                        | VETTER  | VETTER  | VETTER  | V   |
| MODEL VARIANT                  | Medical Tent MT20   | Medical Tent MT30   | Medical Tent MT40   | Medic   |
| PRODUCT CODE                   | 1523034700  | 1523034800  | 1523034800  | 15  |
| ORIGIN                         |   |   |   |   |
| CONSTRUCTION TIME-to-ERECT     | ■ >2min   | ■ >3min   | ■ >4mins  | ■   |
| COST inc tax / VAT             | £00 \$00 €00  | £00 \$00 €00  | £00 \$00 €00  | £0  |
| WEIGHT - Shelter-Only          | 74.5kg / 00lb   | 107.5kg / 00lb  | 156.5kg / 00lb  | 20  |
| MATERIALS - ROOF/ WALLS        | ??  | ??  | ??  |   |
| FIRE-RESISTANT                 | ■   | ■   | ■   |   |
| WATERPROOF                     | ■   | ■   | ■   |   |
| AIR VOLUME                     | 3052L / 00CuFt  | 4566L / 00CuFt  | 5851L / 00CuFt  | 811   |
| LENGTH DEPLOYED / PACKED       | 3.7 <i>1.1m</i> / 00 <i>00'</i>                           | 5.5 <i>1.1m</i> / 00 <i>00'</i>                           | 7.3 <i>1.1m</i> / 00 <i>00'</i>                           | 11.43   |
| WIDTH DEPLOYED / PACKED        | 5.88 <i>0.85m</i> / 00 <i>00'</i>                         | 5.88 <i>0.85m</i> / 00 <i>00'</i>                         | 5.88 <i>0.85m</i> / 00 <i>00'</i>                         | 5.88 <i>3</i>   |
| HEIGHT DEPLOYED / PACKED       | 3.3 <i>0.6m</i> / 00 <i>00'</i>                           | 3.3 <i>0.6m</i> / 00 <i>00'</i>                           | 3.3 <i>0.85m</i> / 00 <i>00'</i>                          | 3.3 <i>3</i>  |
| AREA: -DETACHABLEFIXED FLOOR   | 20sqm / 0sqft   | 30sqm / 00sqft  | 40sqm / 0sqft   | 60  |
| DOORS FULL-SPAN Zip Velcro Tie | 2+ ■ ■ ■ ■  | 2+ ■ ■ ■ ■  | 2+ ■ ■ ■ ■  | 2+ ■  |
| WINDOWS Clear Mesh Opens       | 4 ■ ■ ■ -   | 4 ■ ■ ■ -   | 6 ■ ■ ■ -   | 6   |
| CONNECT Stakes Guys Skirt      | ■ ■ ■ ■ -   | ■ ■ ■ ■ -   | ■ ■ ■ ■ -   | ■   |
| PORTS Vent Power Water HVAC    | 4 0 ■ 0 ■ 0 ■   | 4 0 ■ 0 ■ 0 ■   | 4 0 ■ 0 ■ 0 ■   | 4 0 ■   |
| TRANSLUSCENT OPAQUE ROOF PRV   | ■ ■ ■   | ■ ■ ■   | ■ ■ ■   | ■   |
| BRANDING HEATER LIGHTING PUMP  | □ □ □   | □ □ □   | □ □ □   | □   |
| OTHER COLOURS                  | ■ ■ ■ ■ ■ ■   | ■ ■ ■ ■ ■ ■   | ■ ■ ■ ■ ■ ■   | ■   |
| NOTES                          | Includes Repair kit, delivery hose, pegs/cord and Valise. | Includes Repair kit, delivery hose, pegs/cord and Valise. | Includes Repair kit, delivery hose, pegs/cord and Valise. | Includes Repair kit, delivery hose, pegs/cord and Valise. |
| WEBSITE                        | vetter.de   | vetter.de   | vetter.de   | v   |



| VETTER   | VETTER   |
|--|--|
| al Tent MT60   | Medical Tent MT45  |
| 523034800  | 1523034800   |
|   |   |
| >6mins   | >5mins   |
| 00 \$00 €00  | £00 \$00 €00   |
| 5kg / 00lb   | 00kg / 00lb  |
| ?/?<br>   | ?/?<br>   |
|    |    |
| 3L / 00CuFt  | 00L / 00CuFt   |
| 3.1m / 00 00'  | 00 00m / 00 00'  |
| 7.4m / 00 00'  | 00 00m / 00 00'  |
| 9.4m / 00 00'  | 00 00m / 00 00'  |
| sqm / 0sqft  | 00sqm / 0sqft  |
|      | 2+     |
|   -   | 0     |
|   -   |        |
|     | 0      |
|     |    |
|    |     |
|  |  |
| Repair kit, delivery<br>s/cord and Valise.   | Includes Repair kit, delivery<br>hose, pegs/cord and Valise.   |
| vetter.de  | vetter.de  |

**BUYERSGUIDES** USAR/Extrication Equipment

UPDATED Oct '24

Images NOT to scale. [rescuemagazines.com](http://rescuemagazines.com)

# Pro/High Power BATTERIES

18 to 72 volt

**B**attery power is the new steam locomotive from James Watt's Rocket era - been around for a while but still changing the world as it evolves. We have limited this guide initially to a minimum of 18v because there are just too many 12v batteries to consider. So, while there are pro tools that run on 12v platforms (indeed we have hydraulic rescue tools running on the Makita 12v batteries) if there are no Hydraulic rescue tools or disc cutters using them we haven't included them and at the moment 18v is the minimum for pro tools while 12v are generally reserved for home/smallholding use.

DeWalt are a confusing brand because the US and Europeans use two different voltages and DeWalt keep changing their ranges - currently you could buy 5 different series of DeWalt batteries but there should only be three and the Europeans merge two of those series into one! The Europeans also give a different product code which, unlike the US, does not always reflect the Ah rating for the battery. The US sensibly uses a code to reflect the voltage and then the AH eg. DCB2015 is a 20volt 15Ah battery. We disappeared down a rabbit-hole with this one! There are four leading bespoke brands for batteries in our sectors: Holmatro, Lukas, Husqvarna and Stihl. These will all drive their own products but Husqvarna and Stihl have started to branch out and be used by other brands of equipment - the Skylotec Powered Ascender uses Husqvarna and the Edel Powered Ascender used the Stihl platform - we will see more of this. Two of the three key rescue hydraulics brands *Holmatro* and *Lukas* continue to service just their own products and in the case of the genius horseshoe-shaped *Holmatro* battery that's probably due to being limited to those hydraulic tools with a regulation barrel around which it can fit. The *Lukas* batteries could perhaps more easily be applied to new equipment but we may well see both of these companies adopt one of the off-the-shelf batteries for their ancillary products. *Weber* as the other major player in rescue hydraulics has already taken the leap and uses *Milwaukee M18* batteries which are a lot cheaper and a lot easier to get hold of.

## BATTERY TECHNOLOGY

The game-changer in battery tools was the improvement in off-the-shelf Lithium ion batteries engineered for trade tools like saws and drills. *Ogura* were the first to cotton onto this over



30 years ago until we now see many too particularly *Milwaukee*, because readily available and service maintenance cutting/spreading rescue gear - impact drivers. *Holmatro* initially the *DeWalt* 24v platform but soon requirements of rescue gear in 1 and withstanding water and dust ingress would benefit from a bespoke battery. Their unique, semi-circular wrap-around battery is engineered to streamline the tool as it sits around the barrel, and operate to the specific requirements of the motor. Along with *IDEX* (*Lukas*, *Hurst* and *Vetter*), *Holmatro* continued to work on their own batteries not only to streamline the tool profiles and enhance waterproofing but also because the batteries are high cost consumables that make the tools more profitable. The blue battery on the right is a salt-water resistant version of the two that *Lukas Hydraulik* have on their latest fully submersible tools and are the next stage on from the more ergonomic looking but slightly older white battery beneath.

*Holmatro*, *Lukas* and *Libervit* tools are not only waterproof, they can operate entirely underwater and even swap out batteries underwater on *Holmatro* and *Lukas/Hurst* tools. There are also clip-on waterproof





## BATTERIES

covers for some trade batteries like *Makita* and *Milwaukee* and *Weber Hydraulik* uses such a system on their Smart range to make them waterproof (see images below) but this is an adjunct, albeit a less expensive option, rather than integral waterproofing. Incidentally, before we get onto backpacks, *Weber* also has a hydraulic power unit for conventional hose-tools (right) which uses batteries instead of liquid fuel.

### BACKPACKS

A brand that often goes under the radar outside of its native France is *Libervit* with a waterproof backpack housing one (or two) 48v batteries giving 45 (90) minutes of use. *Libervit* may even have been the first underwater battery powered rescue tool, they were certainly the first that we saw. The backpack concept pioneered by *Powerhawk* and continued by *Libervit* is now in evidence in many battery tools requiring prolonged runtimes when a battery change is awkward - *ResQtec*, *Husqvarna*, *Makita*, *Hitachi* (now *Hikoki*), *Stihl* and many more. Expect to see more being offered in rescue systems. Backpacks are a means to provide much improved duration and taking the weight off the tool in-hand and this is something we've been fans of since the start. *Powerhawk* first used this concept in the 90's though it was more out of necessity at that time because it used a 12v car battery, in fact any old car battery including the ones at the scene of an accident



via long 'jump' leads so you would never be short of power supply options. This is still the case with the *Legacy P16* but their later models can also use this smaller bespoke battery. *Resqtec* and *Libervit* are so far the only two in our sector to go with a hardened backpack but *Makita* (above) also has them for rescue tools using that platform.

FL360 LR

# FIRSTLOOK

# USAR

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In fact they have two different types which highlight the way things might go - the integrated enlarged battery cell in a backpack as with the green *ResQtec* below and a multi-battery carrier in this case using batteries in series. *Libervit* tools were the first to really tackle underwater use but are NOT included here because they are not direct-attach batteries; they have a hydraulic/electric backpack which is a principle that ALL regular hydraulic tools could use and indeed many do. *Weber* for instance has the previously mentioned hydraulic backpack powered by M18 batteries (yellow pic below) but all of the primarily hydraulic tools, even where powered by battery backpacks, are larger and heavier than their direct-connect battery counterparts. *Libervit's* B.A.S. backpack battery (right) seems to have replaced their original hardened backpack and is now housed in a cordura pack. As a lead-connected backpack the BAS is fairly typical size-wise- perhaps wider than most because of the hydraulic pump element at 280x230x390 mm /11x9x15.5". They also have a large



acid!  
The next consideration is the ability charge multiple batteries at the same time. Most manufactures have at least a twin battery option but some have considerably more either as a racked system secured to your vehicle or as a more portable option like this Milwaukee 6-bay charger. Finally a quick word about maintenance or rather, avoiding unnecessary downtime. *Hilti* (among a few) have this handy diagnostic device to gauge the capacity, cell health and electronics to ensure that all is functioning well or give you a heads-up that your battery is deteriorating and may need replacing or side lining from critical tasks.



## IN THE FOLLOWING TABLES

We have included the all-important consideration (if cost is a consideration) of what other tool classes your battery will operate:

### FITS TOOLS FOR.....

We have given a generic idea of what types of tools this particular battery will fit because cross-platform capability can be such a key consideration for smaller services/ departments/agencies:

- = **OPE** - Outdoor Power Equipment - for rescuers the key consideration here are chainsaws and blowers
- = **Trade Tools** - Can be any number of over 200 tools in the case of Milwaukee, DeWalt and Makita etc but it really refers to hand tools like hand drills, impact drill and hammer drills used in vehicle extrication and/or building collapse etc.
- = **Lighting** - A specifically useful item for your battery platform to power - may be anything from a hand torch to area lighting.
- = **Rescue Hydraulics** - Cutters, spreaders, combi, rams and special tools like door breakers and re-bar cutters
- = **Disc Cutter** - either smaller disc cutters or larger circular saws for metal/concrete/masonry cutting
- ① = **Special Tools** - Other rescue-specific equipment detailed in the NOTES section

## CHARGERS

A much overlooked but vitally important consideration. If you buy a kit it will invariably come with a standard charger. In some cases they may provide a 'Rapid' charger which seems great until you realise that their base charger is a 'rapid'. For all other we would generally expect a standard charger and a rapid/quick charger and maybe a further enhancement as Milwaukee has with their 'Super' charger in addition to 'Rapid' and 'Standard' chargers. The difference in speed of charging is very roughly, twice as fast for a 'Rapid' versus a 'Standard' but don't forget that charge times increase as the Ah of your battery increases - a 3Ah may take 30minutes while an equivalent 6Ah would be 70mins. If you need fast turn-around a rapid charger is essential but some contest that fast charging lessens the life of your battery. Not sure that's true these days as much as it was back in the days of NIMH and lead

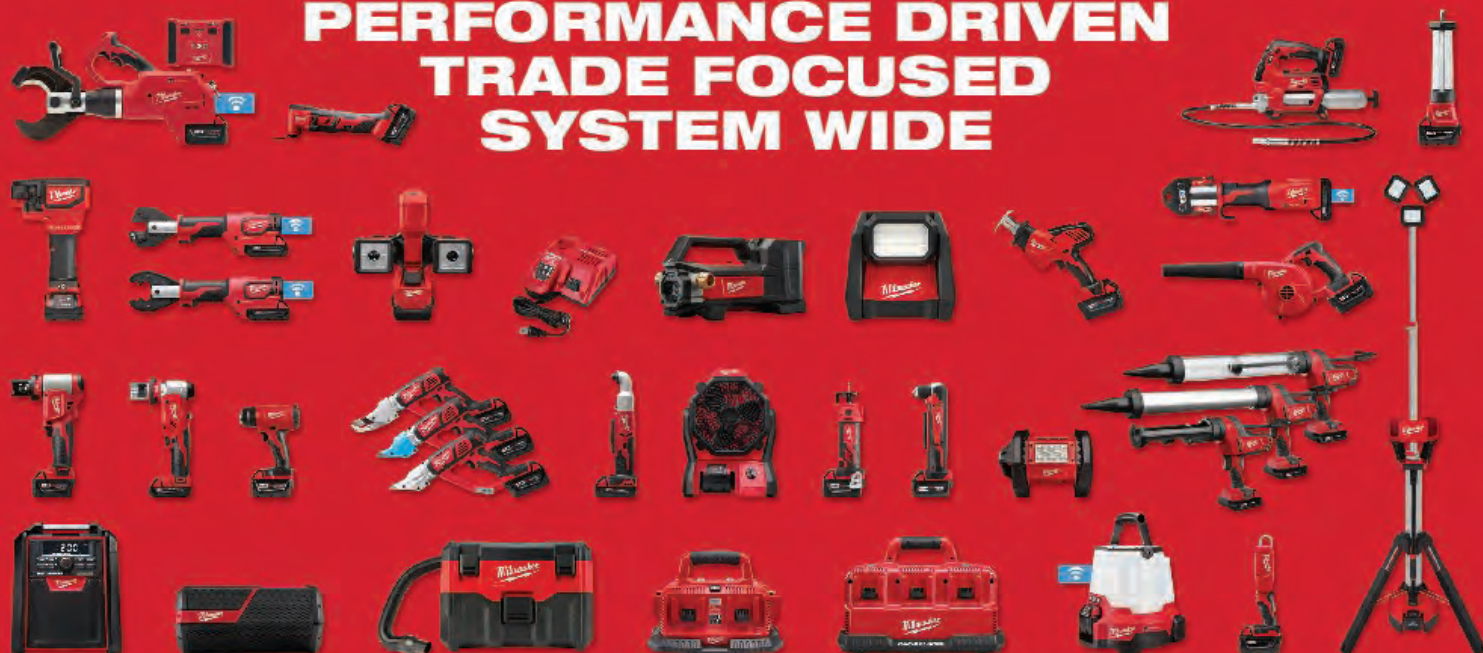
We've added an icon key to the additional features which indicate, from left to right:  
**LED charge indication:** This may be visible continuously or you may need to press the button to see what power you have left.  
**On-board cooling** - the battery itself has active cooling as distinct from the charger which is often fan-cooled.  
**Wifi or Bluetooth** connectivity of the battery (not necessarily the tool) for service management & inventory  
**The IP rating** indicating degree of water resistance 54/55/56 or waterproof 57/58  
**Operating temperature** - battery performance is at optimum room temp - colder and hotter will affect performance and work duration.







# PERFORMANCE DRIVEN TRADE FOCUSED SYSTEM WIDE



[milwaukeetool.com](http://milwaukeetool.com)

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IMAGES NOT TO SCALE  
 COSTS in £\$€= Currency conversion only. Most costs=max MSRP - you will often find for a lot less.  
 OTHER TOOLS IN RANGE:  
 ■CSaw ■Trade-Tools ■DiscCutter  
 ■OPE ■Rescue Tools ■Lighting  
 ①=Special Tools  
 ●=PARTIAL FEATURE  
 ■■■= Option

**SERIES**  
**MODEL**  
**COMPANY**

NB: 20v/60v in the US  
 is 18v/54v in Europe

FITS TOOLS FOR:...

ORIGIN

COST  
 inc tax /  
 VAT

WEIGHT

BATTERY TYPE  
**VOLTAGE**

AmpHours  
 Ah

Energy/  
 Work-  
 Hours  
 Wh

LE

|   |                                 |        |             |   |                    |                 |                  |       |       |    |
|---|---------------------------------|--------|-------------|---|--------------------|-----------------|------------------|-------|-------|----|
|    | 20vMax / XR<br>DCB203<br>DCB182 | DEWALT | ■<br>■<br>■ |    | £35<br>\$00<br>€00 | 350g<br>0oz     | Li ion<br>18/20v | 2 Ah  | 00 Wh | 11 |
|    | 20vMax<br>DCB230                | DEWALT | ■<br>■<br>■ |    | £0<br>\$00<br>€00  | 00g<br>1.15lb   | Li ion<br>20v    | 3 Ah  | 00 Wh | 17 |
|    | 20vMax<br>DCB200                | DEWALT | ■<br>■<br>■ |    | £0<br>\$00<br>€00  | 1.27kg<br>2.8lb | Li ion<br>18/20v | 3 Ah  | 00 Wh | 0  |
|    | 20vMax<br>DCB240                | DEWALT | ■<br>■<br>■ |    | £0<br>\$00<br>€00  | 00g<br>1.15lb   | Li ion<br>20v    | 4 Ah  | 00 Wh | 17 |
|   | 20vMax<br>DCB204<br>DCB184      | DEWALT | ■<br>■<br>■ |  | £80<br>\$00<br>€00 | 700g<br>00oz    | Li ion<br>18/20v | 4 Ah  | 00 Wh | 17 |
|  | 20vMax<br>DCB205<br>DCB185      | DEWALT | ■<br>■<br>■ |  | £0<br>\$00<br>€00  | 630g<br>1.4lb   | Li ion<br>18/20v | 5 Ah  | 00 Wh | 17 |
|  | 20vMax<br>DCB206<br>DCB186      | DEWALT | ■<br>■<br>■ |  | £0<br>\$00<br>€00  | 00g<br>2.25lb   | Li ion<br>18/20v | 6 Ah  | 00 Wh | 17 |
|  | 20vMax<br>DCB210<br>DCB1810     | DEWALT | ■<br>■<br>■ |  | £0<br>\$00<br>€00  | 00g<br>0oz      | Li ion<br>18/20v | 10 Ah | 00 Wh | 17 |
|  | XR<br>DCB2105<br>DCB184B-XJ     | DEWALT | ■<br>■<br>■ |  | £0<br>\$00<br>€00  | 00g<br>00oz     | Li ion<br>18/20v | 5 Ah  | 00 Wh | 17 |
|  | XR<br>DCB2108                   | DEWALT | ■<br>■<br>■ |  | £0<br>\$00<br>€00  | 00g<br>00oz     | Li ion<br>18/20v | 8 Ah  | 00 Wh | 17 |
|   |                                 |        |             |   |                    |                 |                  |       |       |    |





# BATTERIES

| LENGTH      | WIDTH         | DEPTH          | RECHARGE<br>Min to Max Time<br>Charger-dependant<br><br>No of CHARGE<br>CYCLES | MULTI<br>CHARGERS               | REPRESENTATIVE<br>ENDURANCE | WARRANTY (Years) | LED CHARGE STATUS | IN-USE COOLING FAN | WiFi/BLUETOOTH | IP RATING (WATERPROOF) | OP TEMPERATURE °C/°F | NOTES                                      | WWW.          |
|-------------|---------------|----------------|--|---------------------------------|-----------------------------|------------------|-------------------|--------------------|----------------|------------------------|----------------------|--|---------------|
| 100mm<br>4" | 100mm<br>4"   | 45mm<br>1.8"   | 1500   | 2 & 4-bank<br>Standard<br>Rapid |                             |                  | ■                 | -                  | -              | -                      | -                    |  | dewalt.com    |
| 78mm<br>3"  | 89mm<br>3.5"  | 45mm<br>1.8"   | 90mins   |                                 |                             |                  | ■                 | -                  | -              | -                      | -                    |  | dewalt.com    |
| 100mm<br>4" | 100mm<br>4.5" | 100mm<br>0.75" | 90mins   |                                 |                             |                  | ■                 | -                  | -              | -                      | -                    |  | dewalt.com    |
| 78mm<br>3"  | 89mm<br>3.5"  | 45mm<br>1.8"   | 90mins   |                                 |                             |                  | ■                 | -                  | -              | -                      | -                    |  | dewalt.com    |
| 78mm<br>3"  | 89mm<br>3.5"  | 100mm<br>4"    | 90mins   |                                 |                             |                  | ■                 | -                  | -              | -                      | -                    |  | dewalt.com    |
| 78mm<br>3"  | 89mm<br>3.5"  | 100mm<br>3"    | 90mins   |                                 |                             |                  | ■                 | -                  | -              | -                      | -                    |  | dewalt.com    |
| 78mm<br>3"  | 89mm<br>3.5"  | 100mm<br>3"    | 90mins   |                                 |                             |                  | ■                 | -                  | -              | -                      | -                    |  | dewalt.com    |
| 78mm<br>3"  | 89mm<br>3.5"  | 100mm<br>4"    |  |                                 |                             |                  | ■                 | -                  | -              | -                      | -                    | Also available as an oil-resistant version | dewalt.com    |
| 78mm<br>3"  | 89mm<br>3.5"  | 100mm<br>4"    |  |                                 |                             |                  | ■                 | -                  | -              | -                      | -                    |  | dewalt.com    |
|             |               |                |  |                                 |                             |                  |                   |                    |                |                        |                      |  | expansion row |

IMAGES NOT TO SCALE  
 COSTS in £/\$/€= Currency conversion only. Most costs=max MSRP - you will often find for a lot less.  
 OTHER TOOLS IN RANGE:  
 ■=CSaw ■=Trade-Tools ■=DiscCutter  
 ■=OPE ■=Rescue Tools ■=Lighting  
 ①=Special Tools  
 ●=PARTIAL FEATURE  
 ■■■= Option

**SERIES**  
**MODEL**  
**COMPANY**

NB: 20v/60v in the US  
 is 18v/54v in Europe

FITS TOOLS FOR:...

ORIGIN

COST  
 inc tax /  
 VAT

WEIGHT

BATTERY TYPE  
**VOLTAGE**

AmpHours  
 Ah

Energy/  
 Work-  
 Hours  
 Wh

LE








|   |   |                |   |                      |                  |  |         |        |    |
|---|---|----------------|---|----------------------|------------------|--|---------|--------|----|
|    | <b>XR Powerstack</b><br><b>DCBP034</b><br><b>DCBP034-XJ</b> | <b>DEWALT</b>  |       | £0<br>\$00<br>€00    | 320g<br>00oz     | Li ion<br><b>18/20v</b>                  | 1.7 Ah  | 00 wh  | 60 |
|    | <b>XR Powerstack</b><br><b>DCBP518-XJ</b>                   | <b>DEWALT</b>  |       | £0<br>\$00<br>€00    | 300g<br>12.8oz   | Li ion<br><b>18/20v</b>                  | 5 Ah    | 00 wh  | 00 |
|    | <b>Max/XR FlexVolt</b><br><b>DCB606</b><br><b>DCB546</b>    | <b>DEWALT</b>  |       | £0<br>\$180<br>€00   | 1.05kg<br>00oz   | Li ion<br><b>20-60v</b><br><b>18-54v</b> | 2/6 Ah  | 00 wh  | 00 |
|    | <b>Max/XR FlexVolt</b><br><b>DCB609</b><br><b>DCB547</b>    | <b>DEWALT</b>  |       | £180<br>\$300<br>€00 | 1.44kg<br>00oz   | Li ion<br><b>20-60v</b><br><b>18-54v</b> | 3/9 Ah  | 00 wh  | 13 |
|   | <b>Max/XR FlexVolt</b><br><b>DCB612</b><br><b>DCB548</b>    | <b>DEWALT</b>  |   | £0<br>\$00<br>€00    | 1.46kg<br>0lb    | Li ion<br><b>20-60v</b><br><b>18-54v</b> | 4/12 Ah | 00 wh  | 13 |
|  | <b>Max/XR FlexVolt</b><br><b>DCB615</b><br><b>DCB549</b>    | <b>DEWALT</b>  |   | £0<br>\$00<br>€00    | 2.04kg<br>4.55lb | Li ion<br><b>20-60v</b><br><b>18-54v</b> | 5/15 Ah | 00 wh  | 19 |
|  | <b>36v</b><br><b>DCB361</b>                                 | <b>DEWALT</b>  |   | £0<br>\$300<br>€00   | 1.44kg<br>38.4oz | Li ion<br><b>36v</b>                     | 2 Ah    | 00 wh  | 00 |
|  | <b>Max</b><br><b>DCB404</b>                                 | <b>DEWALT</b>  |   | £0<br>\$00<br>€00    | 1.6kg<br>3.53lb  | Li ion<br><b>40v</b>                     | 4 Ah    | 00 wh  | 18 |
|  | <b>Max XR</b><br><b>DCB406</b>                              | <b>DEWALT</b>  |   | £0<br>\$00<br>€00    | 1.96kg<br>4.32lb | Li ion<br><b>40v</b>                     | 6 Ah    | 300 wh | 18 |
|  | <b>Max XR</b><br><b>DCB407</b>                              | <b>DEWALT</b>  |   | £80<br>\$00<br>€00   | 2.1g<br>4.6lb    | Li ion<br><b>40v</b>                     | 7.5 Ah  | 00 wh  | 18 |
|  | <b>E force</b><br><b>107.289.3</b>                          | <b>GENESIS</b> |   |                      | 1.45g<br>3.2lb   | Li ion<br><b>28v</b>                     | 5 Ah    | 145 wh | 13 |



# BATTERIES

| LENGTH        | WIDTH           | DEPTH           | RECHARGE<br>Min to Max Time<br>Charger-dependant<br><br>No of CHARGE<br>CYCLES | MULTI<br>CHARGERS        | REPRESENTATIVE<br>ENDURANCE | WARRANTY (Years) | LED CHARGE STATUS | IN-USE COOLING FAN | WiFi/BLUETOOTH | IP RATING (WATERPROOF) | OP TEMPERATURE °C/°F | NOTES   | WWW.              |
|---------------|-----------------|-----------------|--|--------------------------|-----------------------------|------------------|-------------------|--------------------|----------------|------------------------|----------------------|---|-------------------|
| 2mm<br>00"    | 34mm<br>00"     | 46mm<br>00"     | 60mins   |                          |                             |                  | ■                 | -                  | -              | -                      | -                    |   | dewalt.com        |
| 0mm<br>7.4"   | 00mm<br>5.9"    | 00mm<br>2.62"   | 75mins   | multi voltage<br>charger | 70cuts 4x4 PT<br>Spruce     |                  | ■                 | -                  | -              | -                      | -                    | Enhanced power to<br>weight/Ah ratio +50%   | dewalt.com        |
| 0mm<br>00"    | 85mm<br>00"     | 90mm<br>00"     | 40-90mins  |                          |                             |                  | -                 | -                  | -              | -                      | -                    |   | dewalt.com        |
| 8mm<br>4.433  | 87mm<br>3.543"  | 97mm<br>3.813"  | 60-140mins   |                          |                             |                  | -                 | -                  | -              | -                      | -                    |   | dewalt.com        |
| 8mm<br>4.433" | 87mm<br>3.543"  | 97mm<br>3.813"  | 80-180mins   |                          |                             |                  | ■                 | -                  | -              | -                      | -                    |   | dewalt.com        |
| 2mm<br>5.63"  | 111mm<br>4.375" | 97mm<br>3.813"  | 100-233mins  |                          |                             |                  | ■                 | -                  | -              | -                      | -                    |   | dewalt.com        |
| 0mm<br>00"    | 00mm<br>00"     | 00mm<br>00"     | 30mins   |                          |                             |                  | -                 | -                  | -              | -                      | -                    | discontinued  | dewalt.com        |
| 4mm<br>5.25"  | 137mm<br>5.375" | 126mm<br>4.938" | 90mins   |                          |                             |                  | ■                 | -                  | -              | -                      | -                    |   | dewalt.com        |
| 4mm<br>5.25"  | 137mm<br>5.375" | 126mm<br>4.938" | 130mins  |                          |                             |                  | ■                 | -                  | -              | -                      | -                    |   | dewalt.com        |
| 4mm<br>5.25"  | 137mm<br>5.375" | 126mm<br>4.938" | 60mins   |                          |                             |                  | -                 | -                  | -              | -                      | -                    |   | dewalt.com        |
| 5mm<br>5.3"   | 81mm<br>3.2"    | 84mm<br>3.3"    | 90mins   | Standard                 |                             |                  |                   |                    |                |                        |                      | Milwaukee M28<br>replacement (in case<br>of discontinuation<br>by Milwaukee) for<br>Genesis E-Force tools | genesisrescue.com |

























| <p>IMAGES NOT TO SCALE</p> <p>COSTS in £\$€= Currency conversion only. Most costs=max MSRP - you will often find for a lot less.</p> <p>OTHER TOOLS IN RANGE:</p> <p>CSaw Trade-Tools DiscCutter</p> <p>OPE Rescue Tools Lighting</p> <p>①=Special Tools</p> <p>●=PARTIAL FEATURE</p> <p>Option</p> |                  |         |                    |        |                          |                |                         |                |                                 |       |
|---|------------------|---------|--------------------|--------|--------------------------|----------------|-------------------------|----------------|---------------------------------|-------|
|   | SERIES<br>MODEL  | COMPANY | FITS TOOLS FOR:... | ORIGIN | COST<br>inc tax /<br>VAT | WEIGHT         | BATTERY TYPE<br>VOLTAGE | AmpHours<br>Ah | Energy/<br>Work-<br>Hours<br>Wh | LEN   |
|    | Nuron<br>B22-55  | HILTI   |                    |        | £130+<br>\$00<br>€00     | 550g<br>00oz   | Li ion<br>22v           | 2.6 Ah         | 54 wh                           | 130   |
|    | Nuron<br>B22-85  | HILTI   |                    |        | £155+<br>\$00<br>€00     | 760g<br>0oz    | Li ion<br>18/20v        | 4 Ah           | 85 wh                           | 130   |
|    | Nuron<br>B22-110 | HILTI   |                    |        | £252-<br>\$00<br>€00     | 910g<br>00oz   | Li ion<br>22v           | 5 Ah           | 110 wh                          | 130   |
|    | Nuron<br>B22-170 | HILTI   |                    |        | £295+<br>\$00<br>€00     | 1.31kg<br>00oz | Li ion<br>22v           | 8 Ah           | 170.6 wh                        | 150   |
|   | Nuron<br>B22-255 | HILTI   |                    |        | £361+<br>\$00<br>€00     | 1.46kg<br>0lb  | Li ion<br>22v           | 12 Ah          | 255 wh                          | 150   |
|    | B36<br>B36/5.2   | HILTI   |                    |        | £381<br>\$00<br>€00      | 1.35kg<br>0lb  | Li ion<br>36v           | 5.2 Ah         | 187 wh                          | 167.5 |
|    | B36<br>B36/9     | HILTI   |                    |        | £483<br>\$00<br>€00      | 2.03kg<br>oz   | Li ion<br>36v           | 9 Ah           | 324 wh                          | 180   |
|   |                  |         |                    |        |                          |                |                         |                |                                 |       |
|   |                  |         |                    |        |                          |                |                         |                |                                 |       |
|   |                  |         |                    |        |                          |                |                         |                |                                 |       |
|   |                  |         |                    |        |                          |                |                         |                |                                 |       |
|   |                  |         |                    |        |                          |                |                         |                |                                 |       |



| LENGTH       | WIDTH          | DEPTH          | RECHARGE<br>Min to Max Time<br>Charger-dependant<br><br>No of CHARGE<br>CYCLES | MULTI<br>CHARGERS            | REPRESENTATIVE<br>ENDURANCE | WARRANTY (Years) | LED CHARGE STATUS | IN-USE COOLING FAN | WiFi/BLUETOOTH | IP RATING (WATERPROOF) | OP TEMPERATURE °C/°F | NOTES | WWW.      |
|--------------|----------------|----------------|--|------------------------------|-----------------------------|------------------|-------------------|--------------------|----------------|------------------------|----------------------|-------|-----------|
| 63mm<br>00"  | 82mm<br>00"    | 48mm<br>00"    | 0mins  | Standard<br>Fast<br>Ultimate |                             |                  | ■                 | -                  | -              | -                      | -17<br>+60           |       | hilti.com |
| 63mm<br>00"  | 82mm<br>00"    | 53mm<br>2.62"  | 0mins  | Standard<br>Fast<br>Ultimate |                             |                  | ■                 | -                  | -              | -                      | -17<br>+60           |       | hilti.com |
| 63mm<br>00"  | 82mm<br>00"    | 67mm<br>00"    | 0mins  | Standard<br>Fast<br>Ultimate |                             |                  | ■                 | -                  | -              | -                      | -17<br>+60           |       | hilti.com |
| 67mm<br>00"  | 87mm<br>00"    | 76mm<br>00"    | 0mins  | Standard<br>Fast<br>Ultimate |                             |                  | ■                 | -                  | -              | -                      | -17<br>+60           |       | hilti.com |
| 67mm<br>00"  | 87mm<br>00"    | 99mm<br>00"    | 0mins  | Standard<br>Fast<br>Ultimate |                             |                  | ■                 | -                  | -              | -                      | -17<br>+60           |       | hilti.com |
| 67mm<br>563" | 92mm<br>4.375" | 81mm<br>3.813" | 35-130mins   | 4-Bay<br>Fast<br>12v Car     |                             |                  | ■                 | -                  | -              | -                      | -17<br>+60           |       | hilti.com |
| 81mm<br>00"  | 99mm<br>00"    | 103mm<br>00"   | 56-255mins   | 4-Bay<br>Fast<br>12v Car     |                             |                  | ■                 | -                  | -              | -                      | -17<br>+60           |       | hilti.com |
|              |                |                |  |                              |                             |                  |                   |                    |                |                        |                      |       |           |
|              |                |                |  |                              |                             |                  |                   |                    |                |                        |                      |       |           |
|              |                |                |  |                              |                             |                  |                   |                    |                |                        |                      |       |           |
|              |                |                |  |                              |                             |                  |                   |                    |                |                        |                      |       |           |

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CSaw Trade-Tools DiscCutter  
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①=Special Tools  
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|   | SERIES<br>MODEL          | COMPANY   | FITS TOOLS FOR:... | ORIGIN  | COST<br>inc tax /<br>VAT | WEIGHT         | BATTERY TYPE<br>VOLTAGE | AmpHours<br>Ah | Energy/<br>Work-<br>Hours<br>Wh | LEN     |
|---|--------------------------|-----------|--------------------|---|--------------------------|----------------|-------------------------|----------------|---------------------------------|---------|
|    | Greenline EVO3<br>BPA286 | HOLMATRO  | ①                  |    | £00<br>\$00<br>€00       | 1kg<br>2.2lb   | Li ion<br>28v           | 6 Ah*          | 151 wh                          | 14<br>5 |
|    | Pentheon<br>PBPA288      | HOLMATRO  | ①                  |    | £00<br>\$00<br>€00       | 1.6kg<br>3.5lb | Li ion<br>28v           | 8 Ah           | 202 wh                          | 18<br>7 |
|    | 100<br>40-B70            | HUSQVARNA |                    |    | £100<br>\$<br>€          | 800g<br>0oz    | Li ion<br>36v           | 2 Ah           | 75.6 wh                         | 13      |
|    | 100<br>40-B140           | HUSQVARNA |                    |    | £150<br>\$<br>€          | 1.25kg<br>0oz  | Li ion<br>36v           | 2 Ah           | 144 wh                          | 13      |
|  | BLi<br>BLi30             | HUSQVARNA | ①                  |  | £280<br>\$<br>€          | 1.9kg<br>0oz   | Li ion<br>36v           | 7.7 Ah         | 75.6 wh                         | 13      |
|  | BLi<br>BLi200            | HUSQVARNA | ①                  |  | £240<br>\$00<br>€00      | 1.31kg<br>0oz  | Li ion<br>36v           | 5.2 Ah         | 180 wh                          | 13<br>0 |
|  | BLi<br>BLi200X           | HUSQVARNA | ①                  |  | £260<br>\$00<br>€00      | 1.3kg<br>0oz   | Li ion<br>36v           | 5.2 Ah         | 180 wh                          | 13<br>0 |
|  | BLi<br>BLi300            | HUSQVARNA | ①                  |  | £00<br>\$00<br>€00       | 1.9kg<br>0oz   | Li ion<br>36v           | 9 Ah           | 324 wh                          | 15<br>0 |
|  | BLiX<br>40-B140X         | HUSQVARNA | ①                  |  | £210<br>\$<br>€          | 800g<br>0oz    | Li ion<br>36v           | 4 Ah           | 75.6 wh                         | 13      |
|  | BLiX<br>40-B220X         | HUSQVARNA | ①                  |  | £310<br>\$<br>€          | 1437g<br>0oz   | Li ion<br>36v           | 6 Ah           | 216 wh                          | 13      |
|  | BLiX<br>40-B330X         | HUSQVARNA | ①                  |  | £420<br>\$<br>€          | 1929g<br>0oz   | Li ion<br>36v           | 9 Ah           | 324 wh                          | 15<br>0 |



| www.arbclimber.com |                 |               |   |  |                             | <div><div><div></div><div></div><div></div><div></div><div></div></div></div> |                   |                    |                |                        | BATTERIES            |  |               |
|--------------------|-----------------|---------------|---|--|-----------------------------|---|-------------------|--------------------|----------------|------------------------|----------------------|--|---------------|
| LENGTH             | WIDTH           | DEPTH         | RECHARGE TIME<br>Min to Max<br><br>No of CHARGE<br>CYCLES | MULTI-BAY<br>CHARGERS  | REPRESENTATIVE<br>ENDURANCE |   | LED CHARGE STATUS | IN-USE COOLING FAN | WIFI/BLUETOOTH | IP RATING (WATERPROOF) | OPERATING TEMP °C/°F | NOTES  | WWW.          |
| 133mm<br>5.6"      | 111mm<br>4.4"   | 62mm<br>2.4"  | 90mins<br>500   | Std EU<br>Std USA<br>Vehicle   |                             |   |                   |                    |                |                        |                      | * replaced 5Ah version<br>❶ Powers door ram  | holmatro.com  |
| 138mm<br>5.4"      | 107mm<br>4.2"   | 110mm<br>4.3" | 69mins<br>500   | 2 & 4-bank<br>On-Tool<br>charging<br>for 3 tools +<br>Standard 3.3Ah |                             |   | ■                 | -                  | 67             | -                      |                      | ❶ Also powers the<br>OMNIOLOCK shoring<br>struts.<br>Saltwater Submersible<br>On tool charging | holmatro.com  |
| 132mm<br>5.0"      | 117mm<br>4.6"   | 98mm<br>3.9"  | >600  |  |                             |   | ■                 |                    |                |                        |                      |  | husqvarna.com |
| 132mm<br>5.0"      | 117mm<br>4.6"   | 98mm<br>3.9"  | >600  |  |                             |   | ■                 |                    |                |                        |                      |  | husqvarna.com |
| 132mm<br>5.0"      | 155mm<br>6.1"   | 98mm<br>3.9"  | >600  |  |                             |   | ■                 |                    |                |                        |                      | ❶ Powered<br>ascender/winch  | husqvarna.com |
| 132mm<br>5.0"      | 115.6mm<br>4.5" | 98mm<br>3.9"  | 1500  |  |                             |   | ■                 |                    |                |                        |                      | ❶ Powered<br>ascender/winch  | husqvarna.com |
| 132mm<br>5.0"      | 115.6mm<br>4.5" | 98mm<br>3.9"  | 1500  |  |                             |   | ■                 |                    |                |                        |                      | ❶ Powered<br>ascender/winch  | husqvarna.com |
| 135mm<br>5.0"      | 115.6mm<br>4.5" | 98mm<br>3.9"  |   |  |                             |   | ■                 |                    |                |                        |                      | ❶ Powered<br>ascender/winch  | husqvarna.com |
| 132mm<br>5.0"      | 117mm<br>4.6"   | 98mm<br>3.9"  | >600  |  |                             |   | ■                 |                    | Bluetooth      | X4                     |                      | On-board Temperature<br>gauge.<br>❶ Powered<br>ascender/winch                                  | husqvarna.com |
| 132mm<br>5.0"      | 117mm<br>4.6"   | 98mm<br>3.9"  |   |  |                             |   | ■                 |                    | Bluetooth      | X4                     |                      | On-board Temperature<br>gauge.<br>❶ Powered<br>ascender/winch                                  | husqvarna.com |
| 135mm<br>5.0"      | 132mm<br>5.0"   | 93mm<br>3.5"  |   |  |                             |   | ■                 |                    | Bluetooth      | X4                     |                      | On-board Temperature<br>gauge.<br>❶ Powered<br>ascender/winch                                  | husqvarna.com |
















































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OTHER TOOLS IN RANGE:  
 =CSaw =Trade-Tools =DiscCutter  
 =OPE =Rescue Tools =Lighting  
 =Special Tools  
 =PARTIAL FEATURE  
 = Option

|  | SERIES<br>MODEL | COMPANY         | FITS TOOLS FOR:... | ORIGIN | COST<br>inc tax /<br>VAT | WEIGHT         | BATTERY TYPE<br>VOLTAGE | AmpHours<br>Ah | Energy/<br>WorkHours<br>Wh |
|--|-----------------|-----------------|--------------------|--------|--------------------------|----------------|-------------------------|----------------|----------------------------|
|  | EXL/X2<br>E2    | IDEX<br>(HURST) |                    |        | £00<br>\$728<br>€00      | 500g<br>0oz    | Li ion<br>25.2V         | 5Ah            | 126 wh                     |
|  | EXL/X2          | IDEX<br>(HURST) |                    |        | £00<br>\$728<br>€00      | 1.3kg<br>2.9lb | Li ion<br>25.2V         | 4Ah            | 98 wh                      |
|  | E3/EWXT<br>00   | IDEX            |                    |        | £65<br>\$00<br>€00       | 1.2kg<br>0oz   | Li ion<br>25.2V         | 5 Ah           | 126 wh                     |
|  | E3/EWXT<br>00   | IDEX            |                    |        | £90<br>\$820<br>€00      | 1.6kg<br>0oz   | Li ion<br>25.2V         | 9 Ah           | 226.8 wh                   |
|  | E3/EWXT<br>00   | IDEX            |                    |        | £00<br>\$900<br>€00      | 1.6kg<br>0oz   | Li ion<br>25.2V         | 9 Ah           | 226.8 wh                   |
|  | E3/EWXT<br>00   | IDEX            |                    |        | £00<br>\$900<br>€00      | 1.6kg<br>0oz   | Li ion<br>25.2V         | 9 Ah           | 226.8 wh                   |
|  | XGT<br>BL4020   | MAKITA          |                    |        | £75<br>\$00<br>€00       | 690g<br>0oz    | Li ion<br>40v           | 2 Ah           | 72 wh                      |
|  | XGT<br>BL4025   | MAKITA          |                    |        | £90<br>\$00<br>€00       | 710g<br>0oz    | Li ion<br>40v           | 2.5 Ah         | 90 wh                      |
|  | XGT<br>BL4040F  | MAKITA          |                    |        | £150<br>\$00<br>€00      | 1kg<br>2.2lb   | Li ion<br>40v           | 4 Ah           | 144 wh                     |
|  | XGT<br>BL4050F  | MAKITA          |                    |        | £180<br>\$00<br>€00      | 1.3kg<br>0oz   | Li ion<br>40v           | 5 Ah           | 180 wh                     |
|  | XGT<br>BL4080F  | MAKITA          |                    |        | £265<br>\$00<br>€00      | 1.9kg<br>0oz   | Li ion<br>40v           | 8 Ah           | 288 wh                     |

| LENGTH       | WIDTH       | DEPTH       | RECHARGE TIME<br>Min to Max<br><br>No of CHARGE<br>CYCLES | MULTI-BAY<br>CHARGERS                                     | REPRESENTATIVE<br>ENDURANCE |      |                    |                 |                        |                      | NOTES  | WWW.                        |
|--------------|-------------|-------------|---|---|-----------------------------|--|--------------------|-----------------|------------------------|----------------------|--|-----------------------------|
|              |             |             |   |   |                             | LED CHARGE STATUS  | IN-USE COOLING FAN | Wi-Fi/BLUETOOTH | IP RATING (WATERPROOF) | OPERATING TEMP °C/°F |  |                             |
| 152mm<br>00" | 86mm<br>00" | 78mm<br>00" | 150mins<br>500  | Standard 3Ah<br>4-bank 3Ah<br>110v Adapter<br>12v vehicle |                             |  |                    |                 | 54                     | -20<br>+55           |  | lukas.com<br>jawsoflife.com |
| 152mm<br>00" | 86mm<br>00" | 78mm<br>00" |   | Standard  |                             |  |                    |                 | 54                     | -20<br>+55           | Fits Lukas/Hurst<br>StrongArm tools only.<br>Discharge LEDs as per<br>SCBA grn, Grn, Ylw,<br>Red               | lukas.com<br>jawsoflife.com |
| 176mm<br>00" | 97mm<br>00" | 70mm<br>00" | 90mins<br>500   | Standard 4Ah<br>4-bank 3Ah<br>110v Adapter<br>12v vehicle |                             | ■  |                    |                 | 68                     | -20<br>+55           | Fresh water<br>Submersible<br>Change batteries<br>underwater.<br>Battery has on-board<br>LED for night-changes | lukas.com<br>jawsoflife.com |
| 176mm<br>00" | 97mm<br>00" | 89mm<br>00" |   | Standard 3Ah<br>4-bank 3Ah<br>110v Adapter<br>12v vehicle | 60mins in 3m of<br>water    | ■  |                    |                 | 68                     | -20<br>+55           | Fresh water<br>Submersible<br>Change batteries<br>underwater.<br>Battery has on-board<br>LED for night-changes | lukas.com<br>jawsoflife.com |
| 176mm<br>00" | 97mm<br>00" | 89mm<br>00" |   | Standard 3Ah<br>4-bank 3Ah<br>110v Adapter<br>12v vehicle | 60mins in 3m of<br>water    | ■  |                    |                 | 68                     | -20<br>+55           | Salt water Submersible<br>Change batteries<br>underwater.<br>Battery has on-board<br>LED for night-changes     | lukas.com<br>jawsoflife.com |
| 176mm<br>00" | 97mm<br>00" | 89mm<br>00" |   | Standard 3Ah<br>4-bank 3Ah<br>110v Adapter<br>12v vehicle | 60mins in 3m of<br>water    | ■  |                    |                 | 68                     | -20<br>+55           | Salt water Submersible<br>Change batteries<br>underwater.<br>Battery has on-board<br>LED for night-changes     | lukas.com<br>jawsoflife.com |
| 118mm<br>00" | 77mm<br>00" | 65mm<br>00" | 22-30mins   | 2-bank<br>Rapid<br>Standard<br>Back/Power Pack            |                             | ■  | ■                  | ●<br>*          | -                      | -                    | *Digital coms<br>between battery and<br>tool regarding staus<br>and power draw etc.                            | makitatools.com             |
| 118mm<br>00" | 77mm<br>00" | 65mm<br>00" | 28-38mins   | 2-bank<br>Rapid<br>Standard<br>Back/Power Pack            |                             | ■  | ■                  | ●<br>*          | -                      | -                    | *Digital coms<br>between battery and<br>tool regarding staus<br>and power draw etc.                            | makitatools.com             |
| 133mm<br>00" | 82mm<br>00" | 71mm<br>00" | 45-67mins   | 2-bank<br>Rapid<br>Standard<br>Back/Power Pack            |                             | ■  | ■                  | ●<br>*          | -                      | -                    | *Digital coms<br>between battery and<br>tool regarding staus<br>and power draw etc.                            | makitatools.com             |
| 152mm<br>00" | 79mm<br>00" | 92mm<br>00" | 50-85mins   | 2-bank<br>Rapid<br>Standard<br>Back/Power Pack            |                             | ■  | ■                  | ●<br>*          | -                      | -                    | *Digital coms<br>between battery and<br>tool regarding staus<br>and power draw etc.                            | makitatools.com             |
| 152mm<br>00" | 85mm<br>00" | 94mm<br>00" | 76mins  | 2-bank<br>Rapid<br>Standard<br>Back/Power Pack            |                             | ■  | ■                  | ●<br>*          | -                      | -                    | *Digital coms<br>between battery and<br>tool regarding staus<br>and power draw etc.                            | makitatools.com             |










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OTHER TOOLS IN RANGE:  
CSaw Trade-Tools DiscCutter  
OPE Rescue Tools Lighting  
Special Tools  
PARTIAL FEATURE  
Option

|   | SERIES<br>MODEL                     | COMPANY   | FITS TOOLS FOR:...  | ORIGIN  | COST<br>inc tax /<br>VAT | WEIGHT        | BATTERY TYPE<br>VOLTAGE | AmpHours<br>Ah | Energy/<br>Work-<br>Hours<br>Wh | LEN |
|---|-------------------------------------|-----------|---|---|--------------------------|---------------|-------------------------|----------------|---------------------------------|-----|
|    | 36Liion<br>BL3622A                  | MAKITA    |    |    | £00<br>\$00<br>€00       | 1.33kg<br>0oz | Li ion<br>40v           | 2.2 Ah         | 80 wh                           | 160 |
|    | 36Liion<br>BL3626                   | MAKITA    |    |    | £00<br>\$00<br>€00       | 1.34kg<br>0oz | Li ion<br>40v           | 2.6 Ah         | 94 wh                           | 160 |
|    | LXT<br>BL1820B                      | MAKITA    | <br><br><br>  |    | £00<br>\$00<br>€00       | 380g<br>0oz   | Li ion<br>18v           | 2 Ah           | 36 wh                           | 110 |
|   | LXT<br>BL1830B                      | MAKITA    | <br><br><br><br>       |    | £00<br>\$00<br>€00       | 640g<br>0oz   | Li ion<br>18v           | 3 Ah           | 54 wh                           | 110 |
|  | LXT<br>BL1840B                      | MAKITA    | <br><br><br><br> |  | £00<br>\$00<br>€00       | 640g<br>0oz   | Li ion<br>18v           | 4 Ah           | 72 wh                           | 110 |
|  | LXT<br>BL1850B                      | MAKITA    | <br><br><br><br> |  | £00<br>\$00<br>€00       | 640g<br>0oz   | Li ion<br>18v           | 5 Ah           | 90 wh                           | 110 |
|  | LXT<br>BL1860B                      | MAKITA    | <br><br><br><br> |  | £00<br>\$00<br>€00       | 660g<br>0oz   | Li ion<br>18v           | 6 Ah           | 108 wh                          | 110 |
|  | MX Fuel<br>RedLithium<br>XC3        | MILWAUKEE | <br><br><br>  |  | £00<br>\$00<br>€00       | 0g<br>9.8lb   | Li ion<br>00v           | 3 Ah           | 00 wh                           | 00  |
|  | MX Fuel<br>RedLithium<br>XC6        | MILWAUKEE | <br><br><br>  |  | £00<br>\$00<br>€00       | 0g<br>0oz     | Li ion<br>00v           | 6 Ah           | 00 wh                           | 00  |
|  | MX Fuel<br>RedLithium Forge<br>XC8  | MILWAUKEE | <br><br><br>  |  | £00<br>\$00<br>€1154     | 0g<br>9.8lb   | Li ion<br>00v           | 8 Ah           | 00 wh                           | 00  |
|  | MX Fuel<br>RedLithium Forge<br>XC12 | MILWAUKEE | <br><br><br>  |  | £00<br>\$00<br>€1546     | 0g<br>0oz     | Li ion<br>00v           | 12 Ah          | 00 wh                           | 00  |



| LENGTH       | WIDTH        | DEPTH        | RECHARGE<br>Min to Max Time<br>Charger-dependant<br><br>No of CHARGE<br>CYCLES | MULTI<br>CHARGERS                              | REPRESENTATIVE<br>ENDURANCE | WARRANTY (Years) | LED CHARGE STATUS | IN-USE COOLING FAN | WIFI/BLEETOOTH | IP RATING (WATERPROOF) | OP TEMPERATURE °C/°F | NOTES        | WWW.            |
|--------------|--------------|--------------|--|--|-----------------------------|------------------|-------------------|--------------------|----------------|------------------------|----------------------|--------------|-----------------|
| 55mm<br>00"  | 102mm<br>00" | 85mm<br>00"  |  | 2-bank<br>Rapid<br>Standard<br>Back/Power Pack |                             |                  | ■                 | -                  | -              | -                      | -                    | DISCONTINUED | makitatools.com |
| 62mm<br>00"  | 102mm<br>00" | 85mm<br>00"  |  | 2-bank<br>Rapid<br>Standard<br>Back/Power Pack |                             |                  | ■                 | -                  | -              | -                      | -                    | DISCONTINUED | makitatools.com |
| 63mm<br>00"  | 75mm<br>00"  | 45mm<br>00"  | 22-45 mins   | 2-bank<br>Rapid<br>Standard<br>Back/Power Pack |                             |                  | ■                 | -                  | -              | -                      | -                    |              | makitatools.com |
| 63mm<br>00"  | 75mm<br>00"  | 62mm<br>00"  | 24-60 mins   | 2-bank<br>Rapid<br>Standard<br>Back/Power Pack |                             |                  | ■                 | -                  | -              | -                      | -                    |              | makitatools.com |
| 63mm<br>00"  | 75mm<br>00"  | 62mm<br>00"  | 36-90 mins   | 2-bank<br>Rapid<br>Standard<br>Back/Power Pack |                             |                  | ■                 | -                  | -              | -                      | -                    |              | makitatools.com |
| 63mm<br>00"  | 75mm<br>00"  | 62mm<br>00"  | 45-110 mins  | 2-bank<br>Rapid<br>Standard<br>Back/Power Pack |                             |                  | ■                 | -                  | -              | -                      | -                    |              | makitatools.com |
| 63mm<br>00"  | 75mm<br>00"  | 62mm<br>00"  | 55-130 mins  | 2-bank<br>Rapid<br>Standard<br>Back/Power Pack |                             |                  | ■                 | -                  | -              | -                      | -                    |              | makitatools.com |
| 00mm<br>0.8" | 00mm<br>7.1" | 00mm<br>3.8" | 00mins   | RedLi Super                                    |                             |                  | ■                 | ■                  | ■              |                        | -28                  |              | milwaukee.com   |
| 00mm<br>00"  | 00mm<br>00"  | 00mm<br>00"  | 45mins   | RedLi Super                                    |                             |                  | ■                 | ■                  | ■              |                        |                      |              | milwaukee.com   |
| 00mm<br>0.8" | 00mm<br>7.1" | 00mm<br>3.8" | 45mins   | RedLi Super                                    |                             |                  | ■                 | ■                  | ■              |                        |                      |              | milwaukee.com   |
| 00mm<br>00"  | 00mm<br>00"  | 00mm<br>00"  | 45mins   | RedLi Super                                    |                             |                  | ■                 | ■                  | ■              |                        |                      |              | milwaukee.com   |

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OTHER TOOLS IN RANGE:  
C=Saw T=Trade-Tools D=DiscCutter  
O=OPE R=Rescue Tools L=Lighting  
①=Special Tools  
●=PARTIAL FEATURE  
□= Option

| SERIES<br>MODEL   | COMPANY   | FITS TOOLS FOR...   | ORIGIN | COST<br>inc tax /<br>VAT | WEIGHT           | BATTERY TYPE<br>VOLTAGE | AmpHours<br>Ah | Energy/<br>Work-<br>Hours<br>Wh | LEN     |
|---|-----------|---|--------|--------------------------|------------------|-------------------------|----------------|---------------------------------|---------|
|  M18 Red Lithium<br>Forge XC5          | MILWAUKEE |    | USA    | £00<br>\$00<br>€00       | 0g<br>0oz        | Li ion<br>18v           | 5 Ah           | 00 wh                           | 00      |
|  M18 Red Lithium<br>Forge XC6          | MILWAUKEE |    | USA    | £311<br>\$00<br>€00      | 0g<br>0oz        | Li ion<br>18v           | 6 Ah           | 00 wh                           | 00      |
|  M18 Red Lithium<br>Forge XC8          | MILWAUKEE |    | USA    | £220<br>\$200<br>€279    | 1.08kg<br>2.38lb | Li ion<br>18v           | 8 Ah           | 00 wh                           | 10<br>5 |
|  M18 Red Lithium<br>Forge HD12        | MILWAUKEE |    | USA    | £270<br>\$250<br>€361    | 1.54kg<br>3.4lb  | Li ion<br>18v           | 12 Ah          | 00 wh                           | 14<br>5 |
|  M18 Red Lithium<br>High Output CP3  | MILWAUKEE |  | USA    | £00<br>\$120<br>€166     | 0g<br>0oz        | Li ion<br>18v           | 3 Ah           | 00 wh                           | 00<br>0 |
|  M18 Red Lithium<br>XC5.5            | MILWAUKEE |  | USA    | £00<br>\$160<br>€237     | 1.21kg<br>0oz    | Li ion<br>18v           | 5.5 Ah         | 00 wh                           | 00<br>0 |
|  M18 Red Lithium<br>High Output XC6  | MILWAUKEE |  | USA    | £00<br>\$00<br>€00       | 1kg<br>2.2lb     | Li ion<br>18v           | 6 Ah           | 00 wh                           | 00<br>0 |
|  M18 Red Lithium<br>High Output XC8  | MILWAUKEE |  | USA    | £160<br>\$200<br>€279    | 1.08kg<br>2.38lb | Li ion<br>18v           | 8 Ah           | 00 wh                           | 00<br>5 |
|  M18 Red Lithium<br>High Output HD12 | MILWAUKEE |  | USA    | £240<br>\$250<br>€361    | 1.54kg<br>3.4lb  | Li ion<br>18v           | 12 Ah          | 00 wh                           | 15<br>5 |
|  M18 Red Lithium<br>XC1.5            | MILWAUKEE |  | USA    | £00<br>\$00<br>€00       | 0g<br>0oz        | Li ion<br>18v           | 1.5 Ah         | 00 wh                           | 00<br>0 |
|  M18 Red Lithium<br>XC2              | MILWAUKEE |  | USA    | £00<br>\$00<br>€136      | 0g<br>0oz        | Li ion<br>18v           | 2 Ah           | 00 wh                           | 00<br>0 |





# BATTERIES

| LENGTH       | WIDTH         | DEPTH         | RECHARGE<br>Min to Max Time<br>Charger-dependant<br><br>No of CHARGE<br>CYCLES | MULTI<br>CHARGERS                            | REPRESENTATIVE<br>ENDURANCE | WARRANTY (Years) | LED CHARGE STATUS | IN-USE COOLING FAN | WIFI/BLUETOOTH | IP RATING (WATERPROOF) | OP TEMPERATURE °C/°F | NOTES         | WWW.          |
|--------------|---------------|---------------|--|--|-----------------------------|------------------|-------------------|--------------------|----------------|------------------------|----------------------|---------------|---------------|
| 0mm<br>00"   | 00mm<br>00"   | 00mm<br>00"   | 0 mins   | 2,3,4 & 6-bank<br>Super<br>Rapid<br>Standard |                             | -                | ■                 | -                  | -              | -                      | -28                  |               | milwaukee.com |
| 0mm<br>00"   | 00mm<br>00"   | 00mm<br>00"   | 0 mins   | 2,3,4 & 6-bank<br>Super<br>Rapid<br>Standard |                             | -                | ■                 | -                  | -              | -                      | -28                  |               | milwaukee.com |
| 55mm<br>2.2" | 95mm<br>3.4"  | 154mm<br>3.5" | 45 mins<br>83 mins<br>162 mins   | 2,3,4 & 6-bank<br>Super<br>Rapid<br>Standard |                             | -                | ■                 | -                  | -              | -                      | -28                  | oil resistant | milwaukee.com |
| 17mm<br>5.8" | 0mm<br>00"    | 104mm<br>4.1" | 45 mins<br>130 mins<br>241 mins  | 2,3,4 & 6-bank<br>Super<br>Rapid<br>Standard |                             | -                | ■                 | -                  | -              | -                      | -28                  | oil resistant | milwaukee.com |
| 0mm<br>00"   | 00mm<br>00"   | 00mm<br>00"   | 35 mins<br>35 mins<br>65 mins  | 2,3,4 & 6-bank<br>Super<br>Rapid<br>Standard |                             |                  | ■                 |                    |                |                        |                      |               | milwaukee.com |
| 0mm<br>00"   | 00mm<br>00"   | 00mm<br>00"   | 65 mins<br>65 mins<br>115 mins   | 2,3,4 & 6-bank<br>Super<br>Rapid<br>Standard |                             |                  | ■                 |                    |                |                        |                      |               | milwaukee.com |
| 0mm<br>00"   | 00mm<br>00"   | 00mm<br>00"   | 35 mins<br>65 mins<br>123 mins   | 2,3,4 & 6-bank<br>Super<br>Rapid<br>Standard |                             |                  | ■                 |                    |                |                        |                      |               | milwaukee.com |
| 0mm<br>46"   | 00mm<br>3.33" | 00mm<br>3.25" | 45 mins<br>83 mins<br>153 mins   | 2,3,4 & 6-bank<br>Super<br>Rapid<br>Standard |                             |                  | ■                 |                    |                |                        |                      |               | milwaukee.com |
| 52mm<br>99"  | 86mm<br>3.4"  | 99mm<br>3.9"  | 60 mins<br>130 mins<br>241 mins  | 2,3,4 & 6-bank<br>Super<br>Rapid<br>Standard |                             |                  | ■                 |                    |                |                        |                      |               | milwaukee.com |
| 0mm<br>00"   | 00mm<br>00"   | 00mm<br>00"   | 21 mins<br>21 mins<br>31 mins  | 2,3,4 & 6-bank<br>Super<br>Rapid<br>Standard |                             |                  | ■                 |                    |                |                        |                      |               | milwaukee.com |
| 0mm<br>00"   | 00mm<br>00"   | 00mm<br>00"   | 27 mins<br>27 mins<br>42 mins  | 2,3,4 & 6-bank<br>Super<br>Rapid<br>Standard |                             |                  | ■                 |                    |                |                        |                      |               | milwaukee.com |

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OTHER TOOLS IN RANGE:  
CSaw Trade-Tools DiscCutter  
OPE Rescue Tools Lighting  
①=Special Tools  
●=PARTIAL FEATURE  
□= Option

|   | SERIES<br>MODEL              | COMPANY   | FITS TOOLS FOR:...            | ORIGIN  | COST<br>inc tax /<br>VAT | WEIGHT          | BATTERY TYPE<br>VOLTAGE | AmpHours<br>Ah | Energy/<br>Work-<br>Hours<br>Wh | LE |
|---|------------------------------|-----------|-------------------------------|---------|--------------------------|-----------------|-------------------------|----------------|---------------------------------|----|
|    | M18 Red Lithium<br>XC3/2.8   | MILWAUKEE | CSaw Trade-Tools DiscCutter   | USA     | £00<br>\$00<br>€00       | 0g<br>0oz       | Li ion<br>18v           | 2.8 Ah         | 00 wh                           | 00 |
|    | M18 Red Lithium<br>XC4       | MILWAUKEE | CSaw Trade-Tools DiscCutter   | USA     | £00<br>\$120<br>€160     | 0g<br>0oz       | Li ion<br>18v           | 4 Ah           | 00 wh                           | 00 |
|    | M18 Red Lithium<br>XC5       | MILWAUKEE | CSaw Trade-Tools DiscCutter   | USA     | £00<br>\$160<br>€190     | 0g<br>0oz       | Li ion<br>18v           | 5 Ah           | 00 wh                           | 00 |
|    | M18 Red Lithium<br>XC6       | MILWAUKEE | CSaw Trade-Tools DiscCutter   | USA     | £00<br>\$00<br>€00       | 0g<br>0oz       | Li ion<br>18v           | 6 Ah           | 00 wh                           | 00 |
|  | M28 Red Lithium<br>BX3<br>BX | MILWAUKEE | CSaw Trade-Tools DiscCutter   | USA     | £00<br>\$0<br>€231       | 1.1kg<br>2.25lb | Li ion<br>28v           | 3 Ah           | 00 wh                           | 00 |
|  | M28 Red Lithium<br>BX5<br>B5 | MILWAUKEE | CSaw Trade-Tools DiscCutter   | USA     | £00<br>\$00<br>€285      | 1.1kg<br>2.25lb | Li ion<br>28v           | 5 Ah           | 00 wh                           | 00 |
|  | AP (Pro)<br>AP 100           | STIHL     | CSaw Trade-Tools DiscCutter ① | Germany | £126<br>\$00<br>€00      | 1.3kg<br>0oz    | Li ion<br>36v           | 2Ah            | 94 wh                           | 00 |
|  | AP (Pro)<br>AP 200           | STIHL     | CSaw Trade-Tools DiscCutter ① | Germany | £156<br>\$00<br>€00      | 1.3kg<br>0oz    | Li ion<br>36v           | 2Ah            | 187 wh                          | 00 |
|  | AP (Pro)<br>AP 300           | STIHL     | CSaw Trade-Tools DiscCutter ① | Germany | £288<br>\$00<br>€00      | 1.8kg<br>0oz    | Li ion<br>36v           | 3Ah            | 227 wh                          | 00 |
|  | AP (Pro)<br>AP 300 S         | STIHL     | CSaw Trade-Tools DiscCutter ① | Germany | £288<br>\$00<br>€00      | 1.8kg<br>0oz    | Li ion<br>36v           | 3Ah            | 281 wh                          | 00 |
|  | AP (Pro)<br>AP 500 S         | STIHL     | CSaw Trade-Tools DiscCutter ① | Germany | £385<br>\$00<br>€00      | 0g<br>0oz       | Li ion<br>00v           | 5 Ah           | 337 wh                          | 00 |



| LENGTH     | WIDTH       | DEPTH       | RECHARGE<br>Min to Max Time<br>Charger-dependant<br><br>No of CHARGE<br>CYCLES | MULTI<br>CHARGERS                            | REPRESENTATIVE<br>ENDURANCE | WARRANTY (Years) | LED CHARGE STATUS | IN-USE COOLING FAN | WIFI/BLEETOOTH | IP RATING (WATERPROOF) | OP TEMPERATURE °C/°F | NOTES                       | WWW.          |
|------------|-------------|-------------|--|--|-----------------------------|------------------|-------------------|--------------------|----------------|------------------------|----------------------|-----------------------------|---------------|
| 0mm<br>00" | 00mm<br>00" | 00mm<br>00" | 34 mins<br>34 mins<br>57 mins  | 2,3,4 & 6-bank<br>Super<br>Rapid<br>Standard |                             |                  | ■                 |                    |                |                        |                      |                             | milwaukee.com |
| 0mm<br>00" | 00mm<br>00" | 00mm<br>00" | 48 mins<br>48 mins<br>76 mins  | 2,3,4 & 6-bank<br>Super<br>Rapid<br>Standard |                             |                  | ■                 |                    |                |                        |                      |                             | milwaukee.com |
| 0mm<br>00" | 00mm<br>00" | 00mm<br>00" | 60 mins<br>60 mins<br>105 mins   | 2,3,4 & 6-bank<br>Super<br>Rapid<br>Standard |                             |                  | ■                 |                    |                |                        |                      |                             | milwaukee.com |
| 0mm<br>00" | 00mm<br>00" | 00mm<br>00" | 70 mins<br>70 mins<br>125 mins   | 2,3,4 & 6-bank<br>Super<br>Rapid<br>Standard |                             |                  | ■                 |                    |                |                        |                      |                             | milwaukee.com |
| 0mm<br>00" | 00mm<br>00" | 00mm<br>00" | 60 mins  | Rapid  |                             |                  | ■                 |                    |                |                        |                      |                             | milwaukee.com |
| 0mm<br>00" | 00mm<br>00" | 00mm<br>00" | 90 mins  | Rapid  |                             |                  | ■                 |                    |                |                        |                      |                             | milwaukee.com |
| 0mm<br>00" | 00mm<br>00" | 00mm<br>00" |  |  |                             |                  | ■                 |                    |                |                        |                      | ① Powered<br>ascender/winch | stihl.com     |
| 0mm<br>00" | 00mm<br>00" | 00mm<br>00" |  |  |                             |                  | ■                 |                    |                |                        |                      | ① Powered<br>ascender/winch | stihl.com     |
| 0mm<br>00" | 00mm<br>00" | 00mm<br>00" |  |  |                             |                  | ■                 |                    |                |                        |                      | ① Powered<br>ascender/winch | stihl.com     |
| 0mm<br>00" | 00mm<br>00" | 00mm<br>00" |  |  |                             |                  | ■                 |                    |                |                        |                      | ① Powered<br>ascender/winch | stihl.com     |
| 0mm<br>00" | 00mm<br>00" | 00mm<br>00" |  |  |                             |                  | ■                 |                    |                |                        |                      |                             | stihl.com     |








| <div>IMAGES NOT TO SCALE</div> <div>COSTS in £\$€= Currency conversion only. Most costs=max MSRP - you will often find for a lot less.</div> <div>OTHER TOOLS IN RANGE:</div> <div><div>CSaw</div><div>Trade-Tools</div><div>DiscCutter</div><div>OPE</div><div>Rescue Tools</div><div>Lighting</div><div>Special Tools</div><div>PARTIAL FEATURE</div><div>Option</div></div> <div>NB: 20v/60v in the US is 18v/54v in Europe</div> | SERIES<br>MODEL | COMPANY | FITS TOOLS FOR... | ORIGIN | COST<br>inc tax /<br>VAT | WEIGHT | BATTERY TYPE<br>VOLTAGE | AmpHours<br>Ah | Energy/<br>Work-<br>Hours<br>Wh | LE |
|--|-----------------|---------|-------------------|--------|--------------------------|--------|-------------------------|----------------|---------------------------------|----|
|  |                 |         |                   |        |                          |        |                         |                |                                 |    |
|  |                 |         |                   |        |                          |        |                         |                |                                 |    |
|  |                 |         |                   |        |                          |        |                         |                |                                 |    |
|  |                 |         |                   |        |                          |        |                         |                |                                 |    |

INCLINED CUTTING

THE 30°  
REVOLUTION

1<sup>ST</sup> CHOICE  
FOR OVER 50 YRS

WORLD  
LEADING  
RESCUE  
TOOL

| LENGTH | WIDTH | DEPTH | RECHARGE<br>Min to Max Time<br>Charger-dependant<br><br>No of CHARGE<br>CYCLES | MULTI<br>CHARGERS | REPRESENTATIVE<br>ENDURANCE | <div><div></div></div> |                   |                    |                |                       |                      | NOTES | WWW. |
|--------|-------|-------|--|-------------------|-----------------------------|--|-------------------|--------------------|----------------|-----------------------|----------------------|-------|------|
|        |       |       |  |                   |                             | WARRANTY (Years)   | LED CHARGE STATUS | IN-USE COOLING FAN | WIFI/BLEETOOTH | IPRATING (WATERPROOF) | OP TEMPERATURE °C/°F |       |      |
|        |       |       |  |                   |                             |  |                   |                    |                |                       |                      |       |      |
|        |       |       |  |                   |                             |  |                   |                    |                |                       |                      |       |      |
|        |       |       |  |                   |                             |  |                   |                    |                |                       |                      |       |      |
|        |       |       |  |                   |                             |  |                   |                    |                |                       |                      |       |      |
|        |       |       |  |                   |                             |  |                   |                    |                |                       |                      |       |      |



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