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

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GREY=COMING Q3&4 2025

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RTC Rescue (Extrication) Manuals

We 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 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, lets first consider what's in a name.

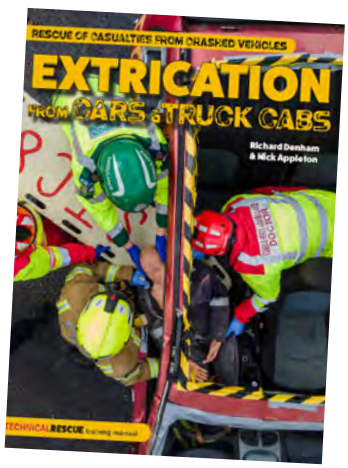
Of the fifteen manuals currently available, nine of these have the word 'extrication' in their titles and yet ironically if you look at their full titles and related contents, you'll see that at no point are any vehicles extricated or rescued. Unfortunately, but specifically to the point, neither are 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, its 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 than their predecessors, these are again worthy of your attention and for the same reasons.

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



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 :

EXTRICATION MANUALS

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.

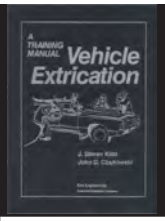
But in an acknowledgement of the fact that of all fifteen currently available manuals, they originate in either the UK (6, some arguably shared with the Netherlands) or the USA (9) we suggest that a UK and European audience would be well served by the orientation of the second Ian Dunbar book,' VEHICLE 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.

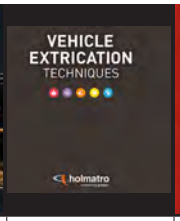
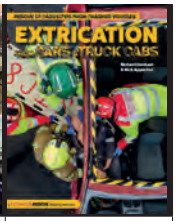
And incidentally, those who will look at our guide will likely notice that we only gave our book four stars, our reasoning being that this buyers guide relates to manuals dealing with the full scope of casualty rescue from RTC's and ours focuses only – although admittedly in some depth – on casualty 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 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...

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	•Space Creation •Training •Immediate Care and Medical •Appreciation (broad perspectives, some dated)	•Vehicle structure •Hand tools •Patient considerations & Packaging • Training	• Scene & vehicle stabilization •Space Creation, various postures •Casualty release theory	•Eqpt & Training •Managing the incident scene •Hazards •Gaining access •Disentangling •Patient packaging	•New Technology •Electric/Hybrids •Rescue Life-Cycle /Golden hour •Vehicle, Rescuer & Scene Safety •Incident Command •Casuaty Care •Tools & Eqpt •Rescue Evolutions •Glossary	•Tools & Rigs •Stabilization •Door/Side/Roof & Interior procedures •Entrapment beneath/between •Empalement •Trucks/Trailers •Buses •Sport vehicles	•Vehicle Design inc. Hybrids •Equipment •Scene Safety & crew organization •Techniques •Heavy Vehicles
BREADTH of COVERAGE	■■	■■■■	■■■	■■■	■■■■	■■■	■■■
IMAGE QUALITY/CLARITY	■	■■	■■■	■	■■	■■	■■■■
QUALITY of TEXT	■■■	■■■	■■	■■	■■■	■■■	■■■■
QUALTY 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	■■	■	■■	■	■■	■■	■■■

EXTRICATION MANUALS

								
FIRE SERVICE MANUALvol2 Incidents ıvolving rescue ɾom rd 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**
■	□	■	■	■	■	■	■	-
-	□	■■	■■	■■	■■	■■	■	■
■	□	■	■	■	■	■	-	-
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■	■	■	■	■	■	■	-	-
■	■	■	■	■	■	■	-	-
■	□	□	□	■	■	■	-	■
-	-	□	□	□	-	-	-	■
IM 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**
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EUA4 204	**USA4 230**	**Custom 256**	**USA4 522**	**USA4 442**	**EUA4 205**	**EUA4 293**	**USA4 94**	**UKA4 220+**
Vehicle Design Dealing with cidents Safety and Operational rocedures Medical care	**●Space Creation ●Hybrid vehicles ●Internal space creation ●Underride extrication**	**●Safety ●Vehicle Technology ●Tools&Eqpt ●Team Approach ●At the scene**	**●Passenger vehicles ●Commercial Vehicles ●Heavy vehicles ●Special circumstances**	**●Incident command ●Kinetics/ construction ●Electric/Hybrids ● SRS/Airbags ●Tools/Eqpt ●Site Ops/Stabiliza-tion ●Casualty handling ●Trucks/Tractors ●Alt Techniques ●Wrapping up**	**●Vehicles in water ●The collision ●Traffic management ●Debriefing**	**●Extrication planning ●Medical considerations ●Technical processes and evolutions**	**●Accident statistics ●Vehicle structure ●Electric ●Glass ●Airbags ●Restraints Battery**	**●Multi-agency approach ●Self & assisted extrication ●20 detailed car & cab extrication sequences ●Air ambulance & Trauma Care approved**
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Free download. Uses Holmatros'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
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UPDATED Jun '25

'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 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-Rescue* 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 *Petol*. *Eder Maschinebau* 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. **See also BATTERY SPECIAL TOOLS for powered wedges inc *Eder*'s *Titans*.**

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.

The Libervit Multitool 28 has a telescopic handle that makes stowage much easier

IMAGES NOT TO SCALE
£$€ = Currency Conversion Only-excludes duty, taxes, shipping etc.
●= Partial Feature/OK but not ideal
□□□= Option
N/A = info Not Available/not given
Str-Curve=Straight section ahead of curve

COMPANY	EDER	EDER	ENERPAC	ENERPAC
MODEL	Titan 50	Titan 80	SWi5TI-S	SWi2025TISTDEX
TYPE	WEDGE SPREADER	WEDGE SPREADER	WEDGE SPREADER	WEDGE SPREADER
ORIGIN				
COST inc tax /VAT	£540 $ €	£840 $ €	£ $2579 €	£ $45875887 €
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"	n/a	n/a
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	Dims exclude handle. * 3/8 or 1/2" impact wrench - Can also be operated via battery driver. *Lubricate after being wet.	Dims exclude handle. * 3/8 or 1/2" impact wrench - *Lubricate after being wet. See Battery Special Tools for powered-remote control versions		
WEBSITE	eder-maschinenbau.de	eder-maschinenbau.de	enerpac.com	enerpac.com

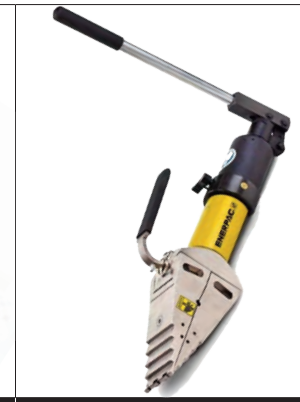
KEYTO TABLES

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

MECHANICAL' WEDGE TOOLS

				
ENERPAC	**PETOL (GEARENCH)**	**PETOL (GEARENCH)**	**RENQUIP**	**RENQUIP**
FSC14	**'POP-IT'** P95-525	**'POP-IT'** PHD0535	**FSW9**	**WJ19P**
WEDGE SPREADER	**WEDGE JACK**	**WEDGE JACK**	**WEDGE SPREADER**	**WEDGE JACK**
£ $ €	£ $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 Titan*s 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 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.
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.

IMAGES NOT TO SCALE
OTHER TOOLS IN RANGE:
■= Combi ■= Cutter ■=Ram
■= Special Tools
●= Partial Feature/OK but not ideal
□□□= Option
N/A = info Not Available/not given
Str-Curve=Straight section ahead of curve

	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 22.5lb	11.8kg 26lb	9.2kg 20.3lb	8.8kg 19.4lb
	HANDLE TYPE	Lever	Lever	Telescopic Lever	Telescopic Lever
DIMS	LENGTH	735mm / 29"	810mm / 31.9"	583mm / 23"	529mm / 20.8"
DIMS	WIDTH	212mm / 8.3"	205mm / 8"	276mm / 10.9"	275mm / 10.8"
DIMS	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
CUT	EN CUT CLASSIFICATIONS	-	-		1E 2E 3E 4E 5E
CUT	NFPA CUT CLASS	-	-	A5 B5 C5 D6 E4 F3	A5 B5 C5 D6 E4 F3
CUT	CUT FORCE	-	-	268kN 30.1USt	268kN 30.1USt
CUT	CUT OPENING	-	-	277mm 10.9"	196mm 7.7"
CUT	ROUND BAR	20mm 0.8"	24mm 0.9"		24mm 0.9"
SPREAD	EN SPREAD ■CLASSIFICATION	-	-	-	-
SPREAD	NFPA SPREAD ■CLASS	-	-	-	-
SPREAD	EN SPREAD FORCE RANGE t=US Ton	-	-	33-1350kN 3.7-152 USt	48-1350kN 5.4-152 USt
SPREAD	NFPA□ FORCE RANGE t=US Ton (at/near tips)	-	-	-	40-52kN ■ 4.5-5.8 USt
SPREAD	MAX SPREAD FORCE (Theoretical) t=US ton	-	-	1350kN / 152 USt	1350kN / 152 USt
SPREAD	SPREAD DISTANCE	160mm 6.3"	255mm 10"	362mm 14.25"	281mm 11"
PULL	PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton	-	-	-	-
PULL	MAX PULL DISTANCE	-	-	-	-
	MAX SQUEEZE FORCE t=US ton	-	-	34kN 00 USt	44kN 00 USt
	WORKING PRESSURE	720 Bar / 10.4K psi	720 Bar / 10.4K psi	720 Bar / 10.4K psi	720 Bar/ 10.4K psi
FEATURES	TIPS	FIXED	FIXED	FIXED	FIXED
FEATURES	ROTATE HEAD/HANDLE	360° -	360° -	- 360°	- 360°
FEATURES	LED LIGHTS	-	-	□ x6	□ 6
FEATURES	IN-WATER USE	■	■	■	■
	NOTES	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation	Extreme grip spreader tips. On-tool charging. Stepless speed maximisatio
	WEBSITE	aolai.com	aolai.com	holmatro.com	holmatro.com

HAND HYDRAULIC COMBI TOOLS

	HURST/LUKAS (IDEX)	**HYDRAM**	**LIBERVIT**	**WEBER**	**WEBER/GENSIS**
	Unitool SC 250M	**CHECM 275**	**Multitool 28**	**HandVario RIT-Tool**	**HandVario SPS270H**
	COMBI-TOOL	**COMBI-TOOL**	**COMBI-TOOL**	**COMBI-TOOL**	**COMBI-TOOL**
	N/A	N/A	N/A	N/A	N/A
	11.9kg 26.2lb	11.9kg 26.2lb	10kg 22lb	11.1kg* 24.4lb	9.8kg 52lb
	Lever	Articulating Lever	Telescopic Lever	'Bellows' handles	'Bellows' handles
	850mm / 33.47"	750mm / 29.5"	630mm / 25"	695mm / 27.3"	682mm / 26.8"
	190mm / 7.49"	210mm / 8.25"	230mm / 9"	192mm / 7.6"	192mm / 7.6"
	158mm / 6.23"	185mm / 7.3"	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	-	-
		-	-	215mm	221mm / 8.7"
	26mm 1"	25mm 1"	-	28mm / 1.1"	28mm / 1.1"
	-	-	-	-	-
	-	-	-	-	-
	34-405kN 3.8-45.5 USt	-	-	25-1175kN 2.8-132 USt	26-534kN 2.9-60 USt
	23.5-28kN ■ 2.6-3.15 USt	-	-	-	-
	34kN / 3.8 USt	51kN / 5.7 USt	41kN / 4.6 USt	1175kN / 132 USt	534kN / 60 USt
	308mm 12.1"	275mm 0"	200mm 8"	280-380*mm 11-15"	270mm 10.6"
	-	-	-	40kN 4.5 USt	32 kN 3.6 USt
	-	-	-	320mm 12.6"	380mm 15"
	-	-	-	-	-
	700 Bar / 10.1K psi	700 Bar / 10.1K psi	300 Bar / 4.5K 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. *Door opening, spreader, long and pulling tips	
	lukas.com jawsoflife.com	hydram.com	libervit.com	weber-rescue.com	weber-rescue.com genesisrescue.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 *HR*S 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'.

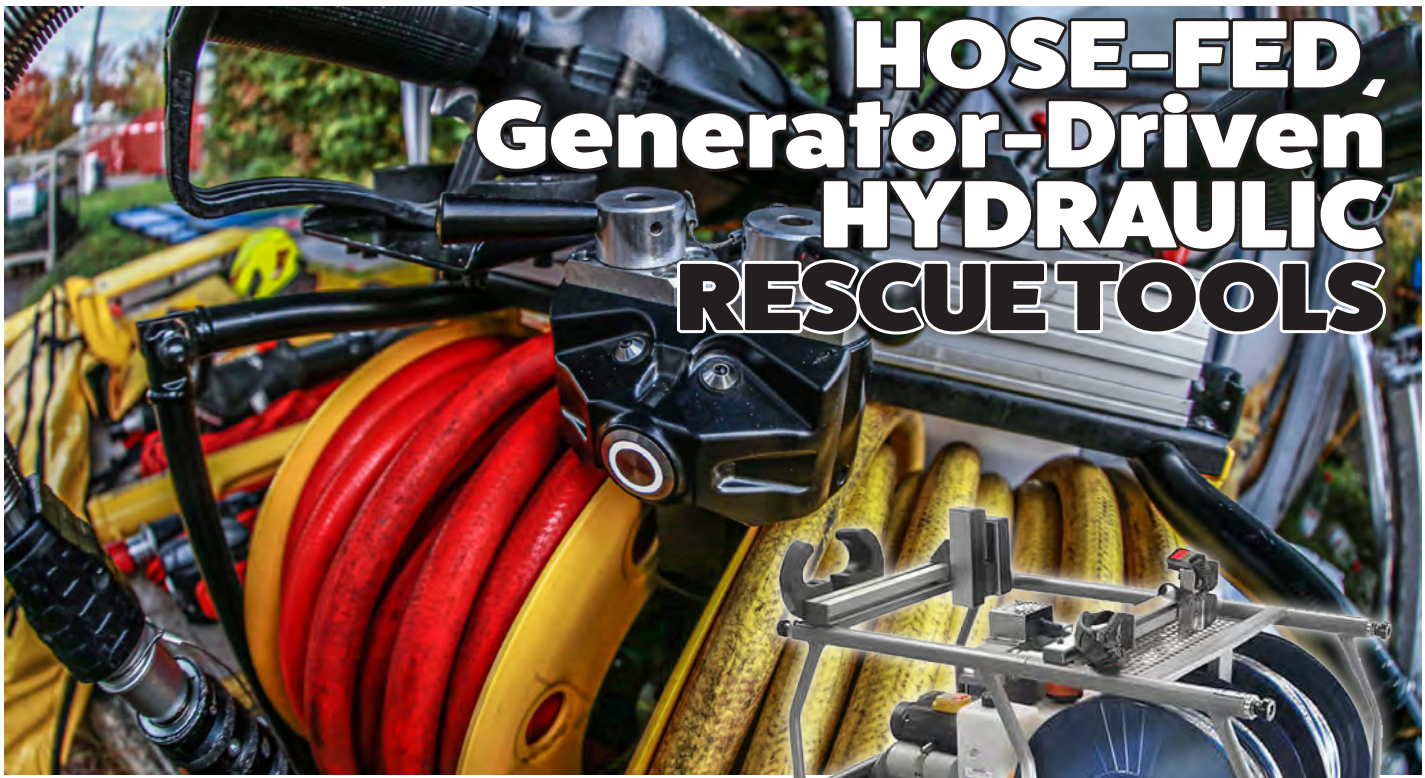
SMART/APP CONNECTIVITY

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/Actsafe*'s 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.

HOSE-FED, Generator-Driven HYDRAULIC RESCUE TOOLS



Before 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.

CORE

Traditional dual hoses / twin line

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 Oct '25

Hydraulic & Mechanical Hose-fed & Battery COMBI-TOOLS

COMBINATION CUTTING & SPREADING

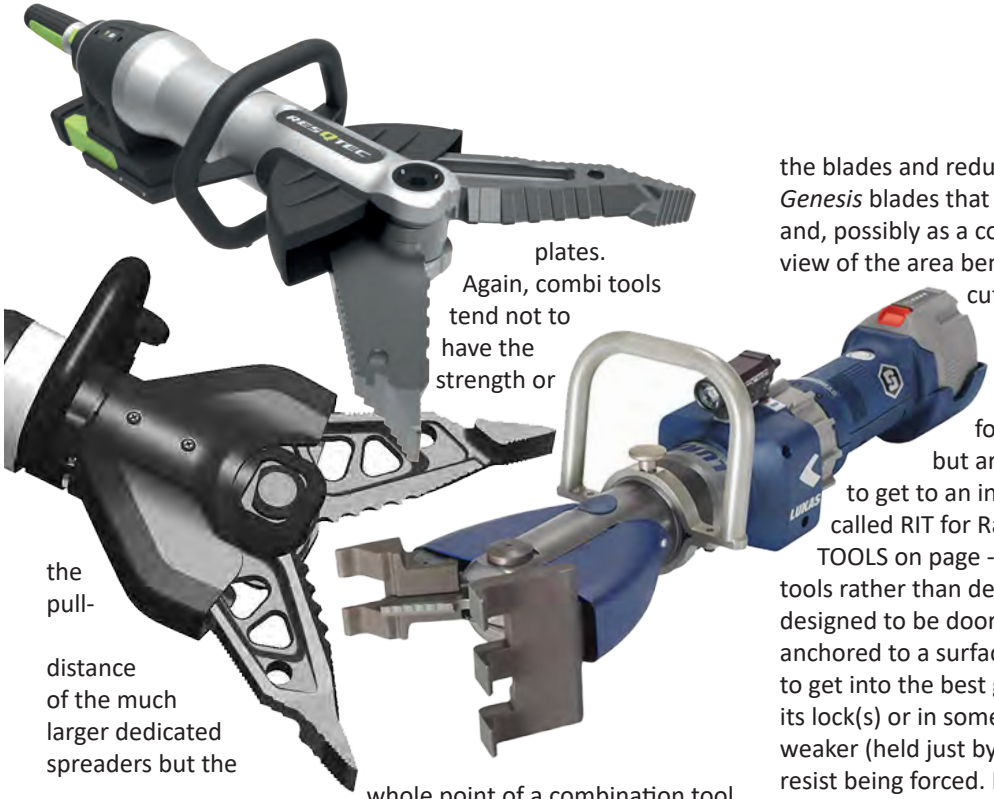
What sets a combi tool apart from dedicated cutters and spreaders? A combi is a combination cutter and spreader on the same set of blades - almost always this is a straight cutting blade with serrated edges operating in a scissor action with flattened ends that perform the spreading or squeezing function. 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 ⅔ '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 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

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!



plates. Again, combi tools tend not to have the strength or the pull-distance of the much larger dedicated spreaders but the 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 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.

UPDATED Oct '25

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 jn 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 *Homatro*'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.

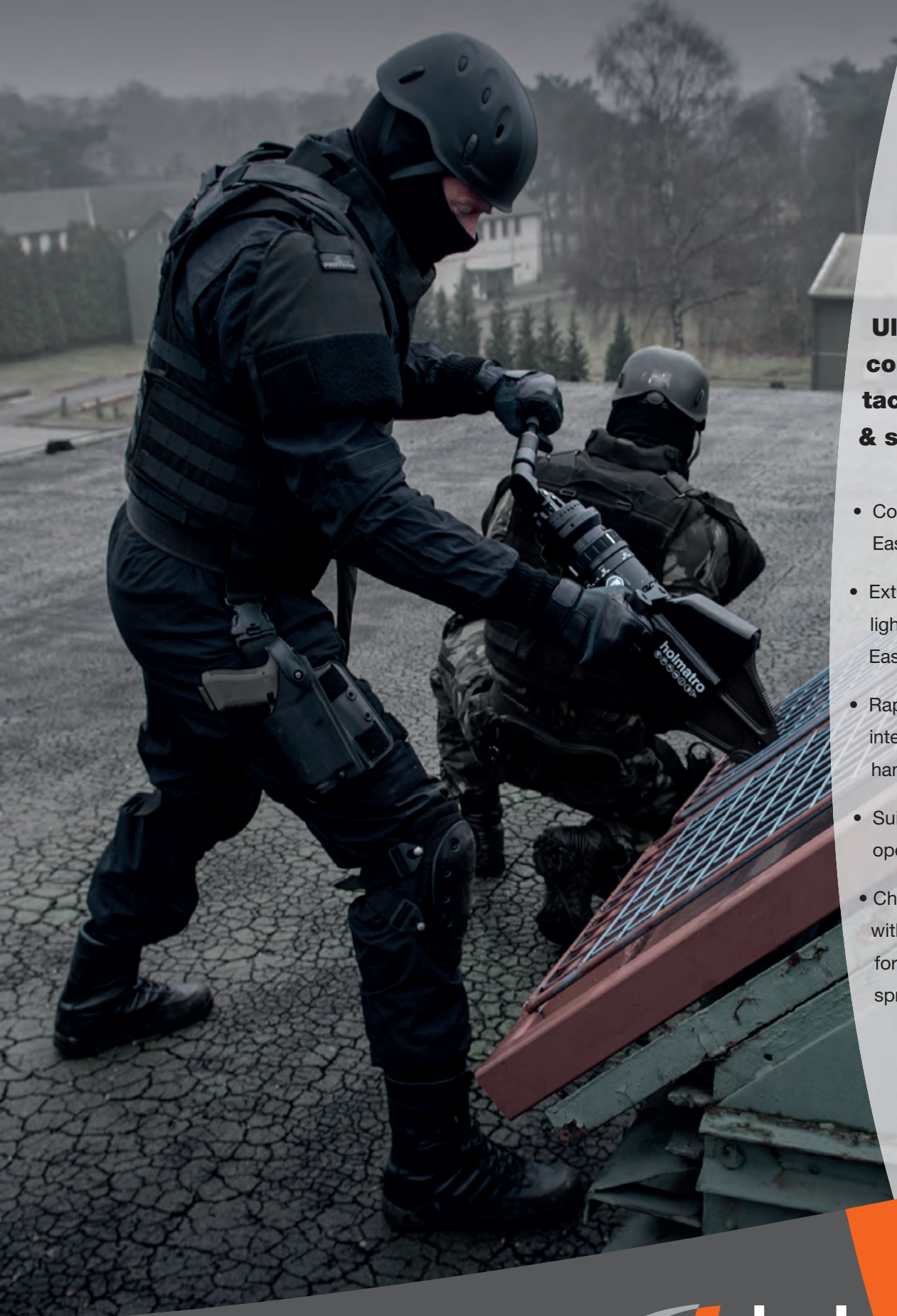
DISTANCE: Some give a range from minimum to maximum spread distance but don't forget that max distance provides only minimum force.

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.



Ultra-lightweight combi tools for tactical cutting & spreading

- Compact design:
  Easy to add to your kit
- Extremely powerfull and lightweight:
  Easy to carry and handle
- Rapidly deployable with integrated or seperate hand pump
- Suited for tactical operations
- Choice between models with highest spreading force or highest spreading distance

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mastering **power**

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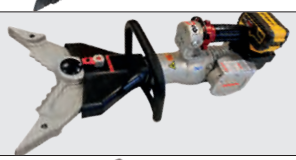
■= (cyan border) WiFi is present on the model variant `shown in cyan

	MODEL SERIES VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	**WEIGHT** IN HAND inc BATTERY(IES)	**WEIGHT** DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME	LENG w/TI
	ION ict614 54/60V	AMKUS			N/A	22.3kg 49lb	1.2kg 2.6 lb	DeWalt FlexVolt 6Ah 9,12Ah Li-ion	10-30mins 60mins	889m 35"
	ION ict516 Compact 54/60V	AMKUS			N/A	23kg 50.6 lb	1.2kg 2.6 lb	DeWalt FlexVolt 6Ah 9,12Ah Li-ion	10-30mins 60mins	861m 33.9
	ION ict716 54/60V	AMKUS			N/A	26.3kg 58lb	1.2kg 2.6 lb	DeWalt FlexVolt 6Ah 9,12Ah Li-ion	10-30mins 60mins	885m 34.8 917m 36.1
	MDC300 T30 BO 54/60V	EDILGRAPPA			N/A	15.7kg 34.5lb	1.4kg 3lb	DeWalt FlexVolt 9Ah Li-ion	10-30mins 60mins	731m 28.8
	MDC390N-E 54/60V	EDILGRAPPA			N/A	23.6kg 52lb	1.4kg 3lb	DeWalt FlexVolt 9Ah Li-ion	10-30mins 60mins	861m 33.9
	MDC300 T30 18/20V	EDILGRAPPA			N/A	13.1kg 28.8lb	0.6kg 1.3lb	DeWalt FlexVolt 5Ah Li-ion	12-20mins 30-75mins	748m 29.5
	11C RIT3 E-Force 28V	GENESIS RESCUE			N/A	14.9kg 32.8"	1.4/ 1kg 3.2/ 2.3lb	Genesis/ Milwaukee 5Ah* Li-ion	<45min 90mins	824m 32.4
	11C SL3 E-Force28V	GENESIS RESCUE			N/A	13.6kg 30 lb	1.4/ 1kg 3.2/ 2.3lb	Genesis/ Milwaukee 5Ah* Li-ion	<45min 90mins	811m 31.9
	14C SL3 E-Force 28V	GENESIS RESCUE			N/A	18.8kg 41.4lb	1.4/ 1kg 3.2/ 2.3lb	Genesis/ Milwaukee 5Ah* Li-ion	<45min 90mins	927m 36.5
	15C SL3 E-Force 28V	GENESIS RESCUE			N/A	20kg 44.1lb	1.4/ 1kg 3.2/ 2.3lb	Genesis/ Milwaukee 5Ah* Li-ion	<45min 90mins	933m 36.7
	17C SL3 E-Force 28V	GENESIS RESCUE			N/A	21kg 46.3lb	1.4/ 1kg 3.2/ 2.3lb	Genesis/ Milwaukee 5Ah* Li-ion	<45min 90mins	969m 38.1

BATTERY COMBI-TOOLS

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

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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

	MODEL SERIES VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT exc battery	**WEIGHT** IN HAND inc BATTERY(IES)	**WEIGHT** DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME	LENG w/TI
	PENTHEON PCT60 28V	**HOLMATRO**			N/A	23.4kg 51.6"	1.5kg 3.3lb	Holmatro PBPA287 8Ah Li-ion	>11mins 60mins	1011 39.8
	PENTHEON PCT5 28V	**HOLMATRO**			N/A	20.3kg 44.8lb	1.5kg 3.3lb	Holmatro PBPA287 8Ah Li-ion	>11mins 60mins	898 35.4
	PENTHEON PCT14 28V	**HOLMATRO**			N/A	14.2kg 31.3lb	1.5kg 3.3lb	Holmatro PBPA287 8Ah Li-ion	>11mins 60mins	731 28.8
	PENTHEON PCT11 28V	**HOLMATRO**			N/A	13.8kg 30.4lb	1.5kg 3.3lb	Holmatro PBPA287 8Ah Li-ion	>11mins 60mins	677 26.7
	SC758 E2 25.2V	**HURST JAWS of LIFE**			N/A	25.5kg 56.1lb	0.9kg 2lb	Lukas 5Ah Li-ion	<30mins 75mins	1065 41.9
	SC358 E2 25.2V	**HURST JAWS of LIFE**			N/A	19.7kg 43.3lb	0.9kg 2lb	Lukas 5Ah Li-ion	<30mins 75mins	956 37.7
	SC258 E2 25.2V	**HURST JAWS of LIFE**			$12,415	15.8kg 34.7lb	0.9kg 2lb	Lukas 5Ah Li-ion	<30mins 75mins	874 34.4
	SC758 E3connect 25.2V	**HURST JAWS of LIFE**			$13,290	26kg 57.2lb	1.6kg 3.5lb	Lukas 9 5Ah Li-ion	<60mins	980 38.6
	SC358 E3connect 25.2V	**HURST JAWS of LIFE**			N/A	20kg 44lb	1.6kg 3.5lb	Lukas 9 5Ah Li-ion	<60mins	876 34.5
	SC258 E3connect 25.2V	**HURST JAWS of LIFE**			N/A	16kg 35.2lb	1.6kg 3.5lb	Lukas 9 5Ah Li-ion	<60mins	792 31.2

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mm "	270mm 10.6"	275mm 10.7"	- CK45/468-J-23.4 1J 2J 3K 4K 5K A8 B9 C8 D9 E9 F4	370kN 41.6t 394mm 15.5" 40mm 1.6"	44.6-1860kN 5-209t 468mm 18.4"	105kN 11.8t 87.9kN 7.2t	720 Bar 00.4K psi	■	■	6	✱	■ 57 57		holmatro.com
m "	268mm 10.6"	273mm 10.7"	- CK43/380J-20.3 1J 2J 3K 4K 5K A7 B8 C8 D8 E8 F3	370kN 41.6t 320mm 12.6" 36mm 1.4"	43-1860kN 4.8-209t 380mm 15"	104kN 11.7t 87kN 9.8t	720 Bar 00.4K psi	■	-	6	✱	■ 57 57		holmatro.com
m "	270mm 10.6"	275mm 10.8"	- BK33/362-E-14.2 1E 2E 3E 4E 5E A5 B5 C5 D6 E4 F3	268kN 277mm 10.9" 24mm 0.9"	33-1350kN 3.7-151.7t 362mm 14.3"	- 34kN 3.8t	720 Bar 00.4K psi	-	-	6	✱	■ 57 57		holmatro.com
m "	270mm 10.6"	275mm 10.8"	- BK48/281-E-13.8 1E 2E 3E 4E 5E A5 B5 C5 D6 E4 F3	268kN 196mm 7.7" 24mm 0.9"	48-1350kN 5.4-151.7t 281mm 11.1"	- 44kN 4.9t	720 Bar 00.4K psi	-	-	6	✱	■ 57 57		holmatro.com
m "	275mm 10.8"	284mm 11.2"	- - - A8 B9 C9 D9 E9 F5	885kN 99.5t 408mm 16.1" 40mm 1.57"	43-1500kN 4.8-168.6t 475mm 18.7"	<94kN <10.6t 340mm 13.4"	700 Bar 10.1K psi	■	-	-	-	- 54	DISCONTINUED	jawsoflife.com
m "	237mm 9.3"	278mm 10.9"	- - - A7 B8 C7 D8 E7 F4	492kN 55.3t 309mm 12.2" 35mm 1.4"	38-1500kN 4.3-168.6t 368mm 14.5"	<61kN <6.9t 382mm 15"	700 Bar 10.1K psi	■	-	-	-	- 54	DISCONTINUED	jawsoflife.com
m "	215mm 8.5"	281mm 11.1"	- - - A6 B6 C6 D7 E7	280kN 31.5t 233mm 9.2" 26mm 1"	32-700kN 3.6-78.7t 321mm 12.6"	<34kN <3.8t 330mm 13.4"	700 Bar 10.1K psi	-	-	-	-	- 54	DISCONTINUED	jawsoflife.com
m "	266mm 10.5"	253mm 10"	- - - A8 B9 C9 D9 E9 F5	885kN 99.5t 400mm 15.7" 40mm 1.57""	43-1500kN 4.8-168.6t 475mm 18.7"	<94kN <10.6t 340mm 13.4"	700 Bar 10.1K psi	■	-	2	■	□ 54 58	Can use IP68 battery E2 & EWXT series discontinued	jawsoflife.com
m "	235mm 9.25"	253mm 10"	- - - A7 B8 C7 D8 E7 F4	492kN 55.3t 309mm 12.2" 35mm 1.4"	38-1500kN 4.3-168.6t 368mm 14.5"	<61kN <6.9t 382mm 15"	700 Bar 10.1K psi	■	-	2	■	□ 54 58	Can use IP68 battery. E2 & EWXT series discontinued	jawsoflife.com
m "	210mm 8.3"	253mm 10"	- - - A6 B6 C6 D7 E7	280kN 31.5t 233mm 9.2" 26mm 1"	24-700kN 2.7-78.7t 321mm 12.6"	<34kN <3.8t 330mm 13.4"	700 Bar 10.1K psi	-	-	2	■	□ 5458	Can use IP68 battery. E2 & EWXT series discontinued	jawsoflife.com
														expansion row

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	MODEL SERIES VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	**WEIGHT** IN HAND inc BATTERY(IES)	**WEIGHT** DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME	LENG w/TI
	E100 **StrongArm** 25.2V	**HURST JAWS of LIFE**			N/A	11- 11.7kg 24.25- 25.8lb	1.2kg 2.7lb	Lukas 273100610 4Ah Li-ion		775 796m 30.5 31.3
	LE100 **StrongArm** 25.2V	**HURST JAWS of LIFE**			N/A	11- 11.7kg 24.25- 25.8lb	1.2kg 2.7lb	Lukas 273100610 4Ah Li-ion		775 796m 30.5 31.3
	Combitool **Underwater** CHEBM120 28V	**HYDRAM**			N/A	28.75kg 63.25lb	00kg 00lb	5Ah Li-ion	00mins 66mins	900m 35.4

BATTERY COMBI-TOOLS

TH PS	WIDTH	HT/ DEPTH	**CUT** CLASSES EN CLASSIFICATION EN CUT CAPACITY NFPA CLASS	**CUT** (T) FORCE OPENING ROUND BAR	**SPREAD** (T) FORCE DISTANCE	**PULL** (T) FORCE DISTANCE (T)**SQUEEZE** FORCE	OPERATING PRESSURE	REMOVABLE TIPS	ROTATE HEAD/HANDLE	LED LIGHTS	WiFi/ CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	WWW.
- mm - "	195mm 7.7"	210mm 8.3"	- - - A5 B3 C5 D6 E6	155kN 17.4t 207mm 8.1" 22.2mm 0.9"	28-700kN 3.2-78.7t 184-215mm 7.2-8.5"	- - -	700 Bar 10.1K psi	■	-	-	-	54 54	Fire Rescue version with push-button release combi and door opening tips	jawsoflife.com
- mm - "	195mm 7.7"	210mm 8.3"	- - - A5 B3 C5 D6 E6	155kN 17.4t 207mm 8.1" 22.2mm 0.9"	28-700kN 3.2-78.7t 184-215mm 7.2-8.5"	- - -	700 Bar 10.1K psi	■	-	-	-	54 54	Military version with push-button release combi and door opening tips Picatinny rail	jawsoflife.com
mm "	205mm 8"	325mm 12.8"	- - - -	210mm 8.27" 00mm 00"		- - -	700 Bar 10.1K psi	-	-	2*	-	■ 68 68	Waterproof to 120.9m/398ft *300-3000 lumen	hydram.com

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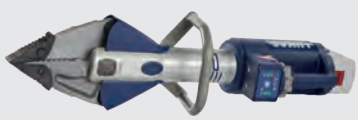
	MODEL SERIES VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	**WEIGHT** IN HAND inc BATTERY(IES)	**WEIGHT** DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME	LENG w/TI
	SC758 E2 25.2V	LUKAS			N/A	25.5kg 56.1lb	0.9kg 2lb	Lukas 5Ah Li-ion	<30mins 75mins	1065 41.9
	SC358 E2 25.2V	LUKAS			N/A	19.7kg 43.3lb	0.9kg 2lb	Lukas 5Ah Li-ion	<30mins 75mins	956 37.7
	SC258 E2 25.2V	LUKAS			N/A	15.8kg 34.7lb	0.9kg 2lb	Lukas 5Ah Li-ion	<30mins 75mins	874 34.4
	SC758 E3connect 25.2V	LUKAS			N/A	25.6kg 56.3lb	1.6kg 3.5lb	Lukas 9 5Ah Li-ion	<60mins	987 38.8
	SC358 E3connect 25.2V	LUKAS			N/A	20kg 44lb	1.6kg 3.5lb	Lukas 9 5Ah Li-ion	<60mins	876 34.5
	SC258 E3connect 25.2V	LUKAS			N/A	16kg 35.2lb	1.6kg 3.5lb	Lukas 9 5Ah Li-ion	<60mins	792 31.2
	SC758 eWCT 25.2V	LUKAS			N/A	26kg 57.3lb	1.6kg 3.5lb	Lukas 9 5Ah Li-ion	<60mins	987 38.8
	SC358 eWCT 25.2V	LUKAS			N/A	20kg 44lb	1.6kg 3.5lb	Lukas 9 5Ah Li-ion	<60mins	876 34.5
	SC258 eWCT 25.2V	LUKAS			N/A	16kg 35.2lb	1.6kg 3.5lb	Lukas 9 5Ah Li-ion	<60mins	792 31.2
	E100 StrongArm 25.2V	LUKAS			N/A	11.1-11.8kg	1.3kg 2.9lb	Lukas 273100610 4Ah Li-ion	?	775 796 30.5 31.3
	LE100 StrongArm 25.2V	LUKAS			N/A	11.1-11.8kg	1.3kg 2.9lb	Lukas 273100610 4Ah Li-ion	?	775 796 30.5 31.3

BATTERY COMBI-TOOLS

TH PS	WIDTH	HT/ DEPTH	**CUT** CLASSES EN CLASSIFICATION EN CUT CAPACITY NFPA CLASS	**CUT** (T) FORCE OPENING ROUND BAR	**SPREAD** (T) FORCE DISTANCE	**PULL** (T) FORCE DISTANCE (T)**SQUEEZE** FORCE	OPERATING PRESSURE	REMOVABLE TIPS	ROTATE HEAD/HANDLE	LED LIGHTS	WiFi / CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	WWW.
mm "	275mm 10.8"	284mm 11.2"	J CK 43/475-J-25,5 1J-2K-3K-4K-5K A8 B9 C9 D9 E9	885kN 99.5t 408mm 16.1" 40mm 1.57"	43-1500kN 4.8-168.6t 475mm 18.7"	<94kN <10.6t 340mm 13.4"	700 Bar 10.1K psi	■	-	-	-	- 54	DISCONTINUED	lukas.com
mm "	237mm 9.3"	278mm 10.9"	I CK 38/368-I-19,7 1I-2J-3I-4J-5J A7 B8 C7 D8 E7	492kN 309mm 12.2" 35mm 1.4"	38-1500kN 4.3-168.6t 368mm 14.5"	<61kN <6.9t 382mm 15"	700 Bar 10.1K psi	■	-	-	-	- 54	DISCONTINUED	lukas.com
mm "	215mm 8.5"	281mm 11.1"	F BK 32/320-F-15.8 1G-2F-3F-4F-5G A6 B6 C6 D7 E7	280kN 31.5t 233mm 9.2" 26mm 1"	32-700kN 3.6-78.7t 321mm 12.6"	<34kN <3.8t 330mm 13.4"	700 Bar 10.1K psi	-	-	-	-	- 54	DISCONTINUED	lukas.com
mm "	266mm 10.5"	253mm 10"	J - 1J-2K-3K-4K-5K A8 B9 C9 D9 E9 F5	885kN 99.5t 408mm 16.1" 40mm 1.57"	43-1500kN 4.8-168.6t 475mm 18.7"	<94kN <10.6t 340mm 13.4"	700 Bar 10.1K psi	■	-	2	■	□ 68 58	E2 & eWCT series discontinued. Tips options set to include Door Opening tips	lukas.com
mm "	235mm 9.25"	253mm 10"	I - 1I-2J-3I-4J-5J A7 B8 C7 D8 E7 F4	492kN 309mm 12.2" 35mm 1.4"	38-1500kN 4.3-168.6t 368mm 14.5"	<61kN <6.9t 382mm 15"	700 Bar 10.1K psi	■	-	2	■	□ 68 58	E2 & eWCT series discontinued. Tips options set to include Door Opening tips	lukas.com
mm "	210mm 8.3"	253mm 10"	F - 1G-2F-3F-4F-5G A6 B6 C6 D7 E7 F4	280kN 31.5t 233mm 9.2" 26mm 1"	32-700kN 3.6-78.7t 321mm 12.6"	<34kN <3.8t 330mm 13.4"	700 Bar 10.1K psi	-	-	2	■	□ 68 58	E2 & eWCT series discontinued.	lukas.com
mm "	266mm 10.5"	253mm 10"	J - 1J-2K-3K-4K-5K A8 B9 C9 D9 E9 F5	885kN 31.5t 400mm 15.7" 26mm 1"	43-1500kN 4.8-168.6t 475mm 18.7"	<94kN <10.6t 340mm 13.4"	700 Bar 10.1K psi	■	-	2	-	■ 68 68	DISCONTINUED	lukas.com
mm "	235mm 9.25"	253mm 10"	I CK 38/368-I-19,6 1I-2J-3I-4J-5J A7 B8 C7 D8 E7 F4	492kN 309mm 12.2" 35mm 1.4"	38-1500kN 4.3-168.6t 368mm 14.5"	<61kN <6.9t 382mm 15"	700 Bar 10.1K psi	■	-	2	-	■ 68 68	DISCONTINUED	lukas.com
mm "	210mm 8.27"	253mm 10"	F BK 32/320-F-15.6 1G-2F-3F-4F-5G A6 B6 C6 D7 E7	280kN 31.5t 233mm 9.2" 26mm 1"	32-700kN 3.6-78.7t 321mm 12.6"	<34kN <3.8t 330mm 13.4"	700 Bar 10.1K psi	-	-	2	-	■ 68 68	DISCONTINUED	lukas.com
- mm - "	195mm 7.7"	210mm 8.3"	- - - A5 B3 C5 D6 E6	155kN 17.4t 207mm 8.1" 22.2mm 0.9"	28-700kN 3.2-78.7t 184-215mm 7.2-8.5"	- - -	700 Bar 10.1K psi	■	-	-	-	54 54	Fire Rescue version with combi and door opening tips	lukas.com
- mm - "	195mm 7.7"	210mm 8.3"	- - - A5 B3 C5 D6 E6	155kN 17.4t 207mm 8.1" 22.2mm 0.9"	28-700kN 3.2-78.7t 184-215mm 7.2-8.5"	- - -	700 Bar 10.1K psi	■	-	-	-	54 54	Military/Law Enforcement version in black	lukas.com

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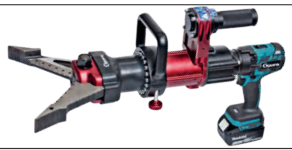
	MODEL SERIES VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	**WEIGHT** IN HAND inc BATTERY(IES)	**WEIGHT** DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME	LENG w/TI
	**BC-300BL** 18V	**OGURA**	■■■■	●	N/A	14.5kg 32lb	1/ 1.36kg 2,2/ 3lb	Makita 5/6Ah* Li-ion	<12mins 55-120mins	703m 27.7
	BC-300X 18V	**OGURA**		●	N/A	14kg 30.9lb	1/ 1.36kg 2,2/ 3lb	Makita 5/6Ah* Li-ion	<12mins 55-120mins	754m 29.7
	RP-V250 18v	**OGURA**		●	N/A	14kg 30.9 lb	1/ 1.36kg 2,2/ 3lb	Makita 5/6Ah* Li-ion	<12mins 55-120mins	558m 22"
	HRS931/ HRS-932 Shear Head 18v	**OGURA**	■■■■	●	N/A	3.9kg 8.6lb +6.2kg +13.7lb	1/ 1.36kg 2,2/ 3lb	Makita 5/6Ah* Li-ion	<12mins 55-120mins	303m 11.9 +382 +15
	HRS941/ HRS-934 Spreader 18v	**OGURA**		●	N/A	4.2kg 9.3lb 5.4kg 11.9lb	1/ 1.36kg 2,2/ 3lb	Makita 5/6Ah* Li-ion	<12mins 55-120mins	328m 12.9 +352 +13.9
	P16 Legacy PowerBlade 12v 16v LiGHT	**POWERHAWK TECHNOLOGIES**	■■■■		N/A	*21.4kg 47lb	*4.5kg 9.9lb 15.9kg *35lb	Powerhawk 12.4Ah LiGHT 33Ah Li-ion 12v Lead Acid	<120mins <15hr	659m 27"
	P-16X PowerBlade 12v	**POWERHAWK TECHNOLOGIES**			N/A	21.6kg 47.5lb	1.36kg 3lb	Powerhawk 7.5Ah Li-ion or any 12v Lead Acid source	<120mins	659m 27"
	Frontliner P4FX EDD 43.2V	**POWERHAWK TECHNOLOGIES /RESQTEC**			N/A	21.8kg 48lb	1kg 2.2lb	Resqtec 2.6Ah Li-ion	<45mins 90mins	765m 30.1
	FX4-FJ EDD 43.2V	**RESQTEC**	■■■■■		N/A	17.1kg 37.6lb	1kg 2.2lb	Resqtec 2.6Ah Li-ion	<45mins 90mins	856m 33.7
	FX6-DJ EDD 43.2V	**RESQTEC**			N/A	21.3kg 46.8lb	1kg 2.2lb	Resqtec 2.6Ah Li-ion	<45mins 90mins	950m 37.4
	G4-WX Frontliner EDD 43.2V	**RESQTEC**			N/A	17.1kg 37.6lb	1kg 2.2lb	Resqtec 2.6Ah Li-ion	<45mins 90mins	827m 32.6

BATTERY COMBI-TOOLS

TH PS	WIDTH	HT/ DEPTH	**CUT** CLASSES EN CLASSIFICATION EN CUT CAPACITY NFPA CLASS	**CUT** (T) FORCE OPENING ROUND BAR	**SPREAD** (T) FORCE DISTANCE	**PULL** (T) FORCE DISTANCE (T)**SQUEEZE** FORCE	OPERATING PRESSURE	REMOVABLE TIPS	ROTATE HEAD/HANDLE	LED LIGHTS	WiFi / BT CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	WWW.
nm	154mm 6.1"	288mm 11.3"	- - - -	36-549kN 4-61.7t 197mm 7.76" 25mm 1"	145-392kN 16.3-44t 300mm 11.8"	- - 74.5kN	n/a	-	■	□	-	- -	*EU uses 5Ah, US tends to use 6Ah	ogurarescuetools.com
nm	154mm 6"	293mm 11.5"	- - - -	145-392.3kN 16.3-44t 197mm 7.76" -	36-567kN 4-63.7t 300mm 11.8"	- - 74.5kN	n/a	-	■	□	-	- -		ogurarescuetools.com
nm	250mm 9.8"	180mm 7.1"	- - - -	600kN 67.4t 197mm 7.76" -	32-699kN 3.6-78.7t 250mm 9.8"	- - 119.6kN	n/a	-	■	□	-	- -		ogurarescuetools.com
nm " nm "	111mm 4.4" 186mm 7.3"	272mm 10.7" 104mm 4.1"	- - - -	98kN 11t 100mm 3.9" -	- -	- - -	n/a	-	■	-	-	- -	Heads swap out in seconds. Cutter, Spreader etc. attach via short hose or direct to the powerhead.	ogurarescuetools.com
nm " nm 9"	111mm 4.4" 121mm 4.8"	273mm 10.7" 78mm 3.1"	- - - -	- - -	39.3kN 4.4t 158mm 6.2"	- - -	n/a	-	■	-	-	- -	941 for US market. All heads interchangeable between power units	ogurarescuetools.com
nm	254mm 10"	279mm 11"	- - - A3 B6 C3 D5 E6	93.4-200kN 10.5t 254mm 10" -	44.5-80.1kN 5-9t 254mm 10"	- - -	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
nm	254mm 10"	279mm 11"	- - - PENDING	93.4-200kN 10.5t 254mm 10" -	44.5-80.1kN 5-9t 254mm 10"	- - -	None	■	■	-	-	- -		powerhawk.com
nm "	271mm 10.7""	274mm 10.8"	F - 1H 2F 3F 4H 5H A6 B6 C5 D6 E6	321kN 36t 236mm 9.3" -	43.7-107kN 4.9-12t 319mm 12.6"	- 96mm 3.8" -	None	■	■	□	-	- -	interchangeable Cutter,spreader and combi heads*10Ah powerpack also available	powerhawk.com rescue.resqtec.com
nm "	236mm 9.3"	228mm 9"	H CK36.3-350H-17.0 1H 2H 3H 4J 5I A6 B7 C6 D7 E6	<720kN <80.9t 283mm 11.1" -	29-286kN 3.3-32.1t 350mm 13.8"	52.9-62.9kN 6--7.1t 271mm 10.7" 38.5-43.3kN 4.3-4.9t	n/a	■	■	□	-	- -	*10Ah powerpack also available	rescue.resqtec.com
nm "	268mm 10.5""	235mm 9.25"	J CK44.8-432J-21.4 1J 2J 3J 4K 5K A7 B8 C7 D9 E7	1200kN 135t 358mm 14.1" -	44.8-1570kN 5-176.5t 432mm 17"	66.5-80.1kN 7.5-9t 327mm 12.9" 51.5-60.3kN 5.8-6.8t	n/a	-	-	□	-	- -	*10Ah powerpack also available	rescue.resqtec.com
nm "	236mm 9.3"	228mm 9"	F BK33.8-369F-17 1H 2F 3G 4F 5G A6 B6 C6 D7 E6	<554kN <62.3t 156mm 6.1" -	33.8-485kN 3.8-54.5t 369mm 14.5"	- - 36.8-42.3kN 4.2-4.7t t	n/a	■	■	□	-	- -	*10Ah powerpack also available	rescue.resqtec.com

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	MODEL SERIES VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	**WEIGHT** IN HAND inc BATTERY(IES)	**WEIGHT** DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME	LENG w/TI
	Combi MK 28v	**SCORPE**	■■■		N/A	19.3kg 42.2lb	1kg 2.2lb	Milwaukee 5Ah Li-ion	<45mins 90mins	974m 38.3
	Combi SK 28v	**SCORPE**			N/A	15.1kg 33.2lb	1kg 2.2lb	Milwaukee 5Ah Li-ion	<45mins 90mins	858m 33.8
	EBFCC-28 E-Force3 18V	**TNT RESCUE**	■■■■■		N/A	25.1kg 55lb	1.1kg 2.4lb	8/9Ah MilwaukeeM18 DeWalt FlexVolt or Makita 18v Li-ion	87mins	920m 36.2
	SPS270 mk2 E-Force3/ Smart 18/28V	**WEBER RESCUE**			N/A	13.6kg 30 lb	1kg 2.2lb	Milwaukee 5Ah M28M18 Li-ion	<45mins 90mins	811m 31.9
	SPS360 mk2 E-Force3/ Smart 18/28V	**WEBER RESCUE**			N/A	18.1kg 39.8lb	1kg 2.2lb	Milwaukee 5Ah M28M18 Li-ion	<45mins 90mins	927m 36.5
	SPS370 mk2 E-Force3/ Smart 18/28V	**WEBER RESCUE**	■■■■■		N/A	19.2kg 42.2lb	1kg 2.2lb	Milwaukee 5Ah M28M18 Li-ion	<45mins 90mins	933m 36.7
	SPS400 mk2 E-Force3/ Smart 18/28V	**WEBER RESCUE**			N/A	21kg 46.3lb	1kg 2.2lb	Milwaukee 5Ah M28M18 Li-ion	<45mins 90mins	969m 38.1
	SPS480 mk2 E-Force3/ Smart 18/28V	**WEBER RESCUE**			N/A	24.7kg 54.5lb	1kg 2.2lb	Milwaukee 5Ah M28M18 Li-ion	<45mins 90mins	1062r 41.8
	Rit Tool E-Force3/ Smart 18/28V	**WEBER RESCUE**			N/A	13.3kg 29.3lb	1kg 2.2lb	Milwaukee 5Ah M28M18 Li-ion	<45mins 90mins	773m 30.4

BATTERY COMBI-TOOLS

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

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VENTION TEAMS

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vindows, cutting steel and security sections,
es or opening vehicles (extrication).

Weber Rescue UK
Essex CO9 2EX
rescue@weberuk.com

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

www.weber-rescue.com

Discover more!

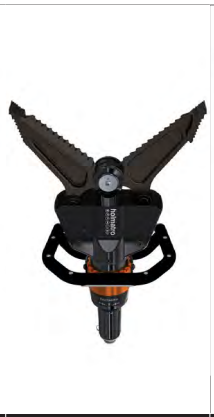
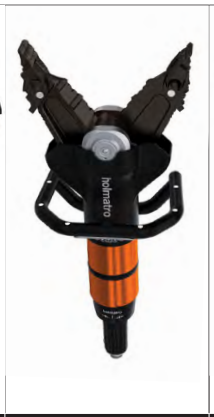
IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
■=BATTERY TOOLS
■= Cutter
■= Spreader
■=Ram
■= Special Tools

●●= PARTIAL or OK but not ideal
□□□= Option
N/A = info Not Available/not given

SERIES MODEL VARIANT Product Code	MDC360	11C SL2	14C Vario	15C Vario	17C Brute Vario	CORE CT 5111
COMPANY	EDILGRAPPA	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	HOLMAT
TOOLS IN RANGE	■■■■■		■■■■■			
ORIGIN						
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A	N/A
WEIGHT exc hose	00kg 00lb	23.8kg 10.8lb	14.9kg 32.8lb	16kg 35.3lb	18.3kg 40.3 lb	
LENGTH	00mm 00"	649mm 25.6"	765mm 30.1"	771mm 30.5"	807mm 31.8"	677mm 26.7"
WIDTH	00mm 00"	190mm 7.5"	236mm 9.3"	236mm 9.3"	236mm 9.3"	270mm 10.6"
DEPTH	00mm 00"	196mm 7.7"	241mm 9.5"	206mm 8.1"	206mm 8.1"	275mm 10.8"
CUT EN CLASS EN CUT CLASSIFICATION NFPA CLASS	- - - A0 B0 C0 D0 E0	- - - A6 B5 C6 D6 E7	- - - A6 B8 C6 D8 E7	- - - A6 B6 C6 D8 E7	- - - A7 B9 C7 D9 E9	- BK48/281-E- 1E 2E 3E 4E A5 B5 C5 D6
CUTTER FORCE OPENING ROUND BAR	?? 0mm / 0" -	?? 342mm / 13.5" -	?? 257mm / 10.1" -	?? 295mm / 11.6" -	?? 340mm / 13.4" -	268kN / 30 196mm / 7. 24mm / 0.9
SPREAD FORCE DISTANCE	0-0kN 00USt 0mm / 0"	32-40.5kN 3.5-4.4USt 265mm / 10.4"	38.5-42.5kN 4.3-4.7USt 370mm / 14.6"	36-44kN 4-4.9USt 365mm / 14.4"	34.9-43.4kN 3.9-3.7USt 425mm / 16.7"	48-1350k 5.4-151.7 281mm / 11
PULL FORCE DISTANCE SQUEEZE FORCE	0-0kN 00USt 0mm / 0" -	26-37kN 2.9-4.1USt 406mm / 16" -	39-48.5kN 4.3-5.4USt 396mm / 15.6" -	40.4-59kN 4.5-6.6USt 346mm / 13.6" -	36.6-57kN 4.1-6.4USt 402mm / 15.8" -	- - - 44kN / 4.9
OPERATING PRESSURE	700Bar/10.1K psi	700Bar/10.1K psi	700Bar/10.1K psi	700Bar/10.1K psi	700Bar/10.1K psi	
REMOVABLE TIPS	-	-	-	■	-	-
ROTATE HEAD/HANDLE	-	■360°	■360°	■360°	■360°	-
OPERATING TEMP	?	?	?	?	?	?
LED LIGHTS	-	-	-	-		6
IN-WATER-CAPABLE IP#	? ?	? ?	? ?	? ?	? ?	● 57
NOTES						
WEBSITE	edilgrappa.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	holmatro.co

HOSE-FED COMBI-TOOLS

	CORE CT 5114 ST	CORE CT 5150	CORE CT 5160	SC357	CHU2010 CX	CHU290 CX	CHU2900 CX
							
RO	HOLMATRO	HOLMATRO	HOLMATRO	HURST JAWS of LIFE	HYDRAM	HYDRAM	HYDRAM
	N/A	N/A	N/A	N/A	N/A	N/A	N/A
					12.6kg 27.7lb	13.38kg 44.7lb	14.88kg 32.8lb
	731mm 28.8"	898mm 35.4"	1011mm 39.8"	774mm 30.5"	685mm 26.9"	747mm 29.4"	758mm 29.8"
	270mm 10.6"	268mm 10.6"	270mm 10.6"	228mm 9"	240mm 9.4"	249mm 9.8"	249mm 9.8"
	275mm 10.8"	273mm 10.7"	275mm 10.7"	172mm 6.8"	175mm 6.8"	202mm 7.9"	202mm 7.9"
13.8 5E E4 F3	- BK33/362-E-14.2 1E 2E 3E 4E 5E A5 B5 C5 D6 E4 F3	- CK43/380J-20.3 1J 2J 3K 4K 5K A7 B8 C8 D8 E8 F3	- CK45/468-J-23.4 1J 2J 3K 4K 5K A8 B9 C8 D9 E9 F4	- - - A7 B8 C7 D8 E7 F4	F CC145-F-12.6 - A7 B8 C6 D7 E9	H CC103-H-13.38 1I 2J 3I 4J 5J A7 B8 C7 D7 E8	H CC103-H-14.88 - A7 B8 C6 D7 E9
USt 7" 9"	268kN / 30USt 277mm / 10.9" 24mm / 0.9"	370kN / 41.6USt 320mm / 12.6" 36mm / 1.4"	370kN / 41.6USt 394mm / 15.5" 40mm / 1.6"	492kN / 55.3USt 309mm / 12.2" 35mm / 1.4"	375kN / 42.1USt 210mm / 8.2" ?	6594kN / 741USt 290mm / 11.4" 33mm / 1.3"	375kN / 42.1USt 290mm / 11.4" ?
N USt .1"	33-1350kN 3.7-151.7USt 362mm / 14.3"	43-1860kN 4.8-209USt 380mm / 15"	44.6-1860kN 5-209USt 468mm / 8.4"	38-1500kN 4.3-168.6USt 368mm / 14.5"	122kN 13.7USt ?mm / ?"	122kN 13.7USt ?mm / ?"	163kN 13.7USt ?mm / ?"
t	- - - 34kN / 3.8t	104kN 11.7USt 87kN / 9.8t	105kN 11.8USt 87.9kN / 7.2t	<61kN <6.9USt382mm / 15" -	- - - -	- - - -	- - - -
					700Bar/10.1K psi	700Bar/10.1K psi	700Bar/10.1K psi
	-	■	■	■	- -	- -	- -
	-	-	■	-	-	-	-
	?	?	?	?	?	?	?
	6	6	6	-	-	-	-
	57	57	57	54	? ?	? ?	? ?
					Cut reach/depth = 150mm	Cut reach/depth = 149mm	Cut reach/depth = 149mm
om	holmatro.com	holmatro.com	holmatro.com	jawsoflife.com	hydram.com	hydram.com	hydram.com

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
■=BATTERY TOOLS
■= Cutter
■= Spreader
■=Ram
■= Special Tools

●●= PARTIAL or OK but not ideal
□□□= Option
N/A = info Not Available/not given
Str-Curve=Straight section ahead of curve

SERIES MODEL VARIANT Product Code	CHEC300 CX	CHEC360 CX	CHEC3600 CX	SC358	SC758
COMPANY	HYDRAM	HYDRAM	HYDRAM	LUKAS	LUKAS
TOOLS IN RANGE	■■■■	■■■■		■■■■■	
ORIGIN					
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A
WEIGHT exc hose	14.68kg 32lb	14.88kg 44.7lb	16.68kg 36.7lb	14.8kg 32.6lb	20.7kg 45.6lb
LENGTH	802mm 31.5"	802mm 31.5"	812mm 31.9"	774mm 30.5"	876mm 34.4"
WIDTH	249mm 9.8"	249mm 9.8"	249mm 9.8"	228mm 9"	301mm 11.8"
DEPTH	202mm 7.9"	202mm 7.9"	202mm 7.0"	172mm 6.8"	206mm 8.1"
CUT EN CLASS EN CUT CLASSIFICATION NFPA CLASS	H BK25-365-H-14.68 - A? B? C? D? E?	H CC103-H-13.38 - A7 B8 C6 D7 E9	H CK40-365-H-16.68 - A7 B8 C6 D7 E9	I CK 38/368-I-14.8 1I-2J-3I-4J-5J A7 B8 C7 D8 E7	J CK 43/475-J-20.7 1J-2K-3K-4K-5K A8 B9 C9 D9 E9
CUTTER FORCE OPENING ROUND BAR	694kN / 78USt 300mm / 11.81" ?	694kN / 78USt 365mm / 14.3" 33mm / 1.3"	950kN / 106.8USt 365mm / 14.3" ?	492kN / 55.3USt 309mm / 12.2" 35mm / 1.4"1.4"	885kN / 99.5USt 408mm / 16.1" 40mm / 1.57"
SPREAD FORCE DISTANCE	54kN 6USt ?mm / ?"	70kN 7.8USt ?mm / ?"	80kN 9USt ?mm / ?"	38-1500kN 4.3-168.6USt 368mm / 14.5"	43-1500kN 4.8-168.6USt 475mm / 18.7"
PULL FORCE DISTANCE SQUEEZE FORCE	- - - -	- - - -	- - - -	<61kN <6.9USt 382mm / 15" -	<94kN <10.6USt 340mm / 13.4" -
OPERATING PRESSURE	700Bar/10.1Kpsi	700Bar/10.1Kpsi	700Bar/10.1Kpsi	700Bar/10.1Kpsi	700Bar/10.1Kpsi
REMOVABLE TIPS	- -	- -	- -	■	■
ROTATE HEAD/HANDLE	-	-	-	-	-
OPERATING TEMP	?	?	?	?	?
LED LIGHTS	-	-	-	-	-
IN-WATER-CAPABLE IP#	? ?	? ?	? ?	● 54	● 54
NOTES	Cut reach/depth = 110mm	Cut reach/depth = 110mm	Cut reach/depth = 110mm	'Shark tooth' tips for enhanced grip	
WEBSITE	hydram.com	hydram.com	hydram.com	lukas.com/rescue	lukas.com/rescue

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  (from 120 Hydraulic Series)
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- 18 V Battery Powered
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OTHER TOOLS IN RANGE:
■=BATTERY TOOLS
■= Cutter
■= Spreader
■=Ram
■= Special Tools

●●= PARTIAL or OK but not ideal
□□□= Option
N/A = info Not Available/not given
Str-Curve=Straight section ahead of curve

SERIES MODEL VARIANT Product Code	G4-WX Frontliner	FX4-DJ Frontliner	FX6-DJ Frontliner	SLCC-20 Legacy	BFCC-28 Legacy	SLCC-3 Legacy
COMPANY	RESQTEC	RESQTEC	RESQTEC	TNT RESCUE	TNT RESCUE	TNT RESC
TOOLS IN RANGE						
ORIGIN						
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A	N/A
WEIGHT exc hose	11.3kg 24.9lb	11.8kg 26lb	15.8kg 34.8lb	00kg 00lb	00kg 00lb	00kg 00lb
LENGTH	827mm 32.6"	856mm 33.7"	950mm 37.4"	920mm 36.2"	920mm 36.2"	920mm 36.2"
WIDTH	236mm 9.3"	236mm 9.3"	268mm 10.5""	267mm 10.5"	267mm 10.5"	267mm 10.5"
DEPTH	228mm 9"	228mm 9"	235mm 9.25"	298mm 11.7"	298mm 11.7"	298mm 11.7"
CUT EN CLASS EN CUT CLASSIFICATION NFPA CLASS	F BK33.8-369F-17 1H 2F 3G 4F 5G A6 B6 C6 D7 E6	H CK36.3-350H-17.0 1H 2H 3H 4J 5I A6 B7 C6 D7 E6	J CK44.8-434J-15.8 1J 2J 3J 4K 5K A7 B8 C7 D9 E7	- - - A8 B9 C8 D8 E9 F4	- - - A8 B9 C8 D8 E9 F4	- - - A8 B9 C8 D8
CUTTER FORCE OPENING ROUND BAR	<554kN / <62.3USt 156mm / 6.1" 00mm / 00"	<720kN / <80.9USt 283mm / 11.1" 00mm / 00"	1035kN / 135USt 358mm / 14.1" 40mm / 1.6"	694kN / 78USt 343mm / 13.5" 38mm / 1.5"	694kN / 78USt 343mm / 13.5" 38mm / 1.5"	694kN / 78 343mm / 13 38mm / 1.
SPREAD FORCE DISTANCE	33.8-485kN 3.8-54.5USt 369mm / 14.5"	29-286kN 3.3-32.1USt 350mm / 13.8"	131-1570kN 14.7-176.5USt 434mm / 17"	106-1272kN 11.9-143USt 422.7mm / 16.6"	106-1272kN 11.9-143USt 422.7mm / 16.6"	106-1272 11.9-143U 422.7mm / 1
PULL FORCE DISTANCE SQUEEZE FORCE	- - - 37-42kN/4.2-4.7USt	52.9-62.9kN 6--7.1USt 271mm / 10.7" 38-43kN/4.3-4.9USt	66.5-80.1kN 7.5-9USt 327mm / 12.9" 51-60kN/5.8-6.8USt	- - - -	- - - -	- - - -
OPERATING PRESSURE				700Bar / 10.2K psi	700Bar / 10.2K psi	700Bar / 10.2
REMOVABLE TIPS	■	■	-	-	-	-
ROTATE HEAD/HANDLE	■	■	-	-	-	-
OPERATING TEMP	?	?	?	?	?	?
LED LIGHTS				-	-	-
IN-WATER-CAPABLE IP#	? ?	? ?	? ?	■ 64	■ 64	■ 64
NOTES						Chain pack ava for pulling
WEBSITE	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com	tntrescue.com	tntrescue.com	tntrescue.c

HOSE-FED COMBI-TOOLS

0		SPS270 mk2	SPS360 mk2	SPS370 mk2	SPS400 mk2	SPS480 mk2	
CUE		WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	
		N/A	N/A	N/A	N/A	N/A	
		9.7kg 21lb	14.2kg 31lb	15.4kg 33.9lb	17kg 37.5lb	21kg 46lb	
		649mm 25.5"	765mm 30.1"	771mm 30.3"	807mm 31.7"	1062mm 41.8"	
		236mm 9.3"	236mm 9.3"	236mm 9.3"	236mm 9.3"	263mm 10.4"	
		152mm 5.9"	158mm 6.2"	158mm 6.2"	161mm 6.3"	241mm 9.5"	
E9 F4		- BK31/270G-9.7 1H-2G-3G-4H-5G A6 B7 C6 D7 E7 F3	- CK36/360I-14.2 1I-2K-3J-4K-5J A7 B8 C7 D9 E8 F5	- CK35/370I-15.4 1I-2K-3J-4K-5J A7 B8 C7 D8 E8 F5	- CK35/405I-17 1I-2K-3J-4K-5J A7 B9 C7 D9 E9 F6	- CK45/480K-21 1K-2K-3K-4K-5K A8 B9 C9 D9 E9 F7	
USt .5" 5"		- 221mm / 8.7" 28mm / 1.1"	- 285mm / 11.2" 32mm /1.25"	- 285mm / 11.2" 32mm /1.25"	- 343mm /13.5" 32mm / 1.25"	- 402mm / 15.8" 32mm / 1.25"	
kN USt 6.6"		31-591kN 3.5-66.4USt 270mm / 10.6"	36-783kN 4-88USt 360mm / 14.1"	35-783kN 4-88USt 370mm / 14.5"	35-1071kN 3.9-120.4USt 405mm / 15.9"	45-1600kN 5-180USt 480mm / 18.9"	
		<36kN 4USt 395mm/15.5" <52kN / 5.8USt	<53kN 6USt 440mm/17.3" <70kN / 00USt	<57kN 0USt 410mm/16.1" <70kN / 7.8USt	<58kN 6.5t 450mm/17.7" <00kN / 00USt	<78kN 8.76USt 525mm/20.6" 107kN / 12USt	
2K psi		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	
		? ?	? ?	? ?	? ?	? ?	
ilable		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	
om		weber.com	weber.com	weber.com	weber.com	weber.com	

'hydraulic' BATTERY DEDICATED CUTTERS

Above: the newest models in Holmatro's & Lukas' ranges are mini cutters using standard 18v batteries, excellent for small spaces, pedals, seat-backs, rebar, padlocks & chains etc.

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 likley 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 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 H awk 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

IMAGES NOT TO SCALE

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 Decibells 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 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.

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www.rescuemagazines.com

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 EWXT 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 **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 SERIES VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	**WEIGHT** IN HAND inc BATTERY(IES)	**WEIGHT** DEFAULT BATTERY	BATTERY Ah OPTIONS	BATTERY DURATION RECHARGE TIME
	ION ic650 **Mid-Size** **Compact** 54/60V	**AMKUS**			N/A	23.7kg 52.3lb	1.2kg 2.6 lb	DeWalt FlexVolt 6Ah 9, 12Ah Li-ion	10-15mins 60mins
	ION ic700 **Short Blade** 54/60V	**AMKUS**			N/A	25.6kg 56.6lb	1.2kg 2.6 lb	DeWalt FlexVolt 6Ah 9, 12Ah Li-ion	10-15mins- 60mins
	ION ic750 **Large Blade** 54/60V	**AMKUS**			N/A	26kg 57.3 lb	1.2kg 2.6 lb	DeWalt FlexVolt 6Ah 9, 12Ah Li-ion	10-15mins 60mins
	F180-2P BO 54/60V	**EDILGRAPPA**			N/A	22.5kg 10.2lb	1.4kg 3lb	DeWalt FlexVolt 9Ah Li-ion	10-25mins 60mins
	F150N-E 54/60V	**EDILGRAPPA**			N/A	22.3kg 10.1lb	1.4kg 3lb	DeWalt FlexVolt 9Ah Li-ion	10-25mins 60mins
	F130-N-T30 18/20V	**EDILGRAPPA**			N/A	13.1kg 28.8lb	0.6kg 1.3lb	DeWalt FlexVolt 5Ah Li-ion	10-15mins 60mins

BATTERY CUTTERS

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

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	MODEL SERIES VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	**WEIGHT** IN HAND inc BATTERY(IES)	**WEIGHT** DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME
	TP10 18/20V	EDILGRAPPA	■ ■		N/A	8.5kg 18.7lb	0.6kg 1.3lb	DeWalt FlexVolt 5Ah Li-ion	10-15mins 60mins
	ALL9 E-Force 28V	GENESIS RESCUE			N/A	26.3kg 58lb	1.4kg 3.2lb 1kg 2.3lb	Genesis/ Milwaukee 5Ah* Li-ion	<45mins 90mins
	C195 SL3-NXTGEN E-Force 28V	GENESIS RESCUE	■ ■ ■ ■		N/A	20.6kg 45.4lb	1.4kg 3.2lb 1kg 2.3lb	Genesis/ Milwaukee 5Ah* Li-ion	<45mins 90mins
	236 SL3 NXTGEN E-Force 28V	GENESIS RESCUE			N/A	23.5kg 51.8lb	1.4kg 3.2lb 1kg 2.3lb	Genesis/ Milwaukee 5Ah* Li-ion	<45mins 90mins
	Mass Transit Cutter 109.104.0 E-Force 28V	GENESIS RESCUE			N/A	23.4kg 51.5lb	1.4kg 3.2lb 1kg 2.3lb	Genesis/ Milwaukee 5Ah* Li-ion	<45mins 90mins
	PENTHEON PCU60 28V	HOLMATRO			N/A	25kg 55.1lb	1.5kg 3.3lb	Holmatro PBPA287 8Ah Li-ion	>11mins 60mins
	PENTHEON PCU50 28V	HOLMATRO	■ ■ ■		N/A	21.5kg 47.4lb	1.5kg 3.3lb	Holmatro PBPA287 8Ah Li-ion	>11mins 60mins
	PENTHEON PCU40 28V	HOLMATRO			N/A	19kg 41.9lb	1.5kg 3.3lb	Holmatro PBPA287 8Ah Li-ion	>11mins 60mins
	PENTHEON PCU30CL 28V	HOLMATRO			N/A	15.3kg 33.7lb	1.5kg 3.3lb	Holmatro PBPA287 8Ah Li-ion	>11mins 60mins
	MIni-Cutter 18V	HOLMATRO	-		N/A*	4.9kg 10.8lb	0.4kg 0.9lb	Holmatro CAS 2Ah Li-ion	<70 cuts 30mins
	S 799 E2 25.2V	HURST (IDEX	■ ■ ■		$13,900	26.2kg	1kg 2.1lb	Hurst 5Ah Li-ion	30-60mins 90mins

BATTERY CUTTERS

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

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	MODEL SERIES VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	**WEIGHT** IN HAND inc BATTERY(IES)	**WEIGHT** DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME
	S 799 **E3connect** 25.2V	**HURST (IDEX**			N/A	26.5kg 58.3lb	1.6kg 3.5lb	Hurst 9Ah 5Ah Li-ion	<60mins 150-100mins
	S 789 **E3connect** 25.2V	**HURST (IDEX**	■ ■ ■		N/A	24kg 52.8lb	1.6kg 3.5lb	Hurst 9Ah 5Ah Li-ion	<60mins 150-100mins
	S 378 **E3connect** 25.2V	**HURST (IDEX**			$11,240	20kg 44lb	1.6kg 3.5lb	Hurst 9Ah 5Ah Li-ion	<60mins 150-100mins
	Cutter100 **Underwater** CHCBM100 28V	**HYDRAM**			N/A	27.8kg 61.2lb	00kg 00lb	5Ah Li-ion	00mins 66mins
	Cutter150 **Underwater** CHCBM150 28V	**HYDRAM**	■ ■ ■		N/A	28.3kg 62.3lb	00kg 00lb	5Ah Li-ion	00mins 66mins
	Cable Cutter **Underwater** CHCBM100 28V	**HYDRAM**			N/A	26.75kg 59lb	00kg 00lb	5Ah Li-ion	00mins 66mins
	S 799-Beast **E2** 25.2V	**LUKAS (IDEX)**			N/A	26.5kg 58.3lb	1.2kg 2.7lb	Lukas 9Ah 5Ah Li-ion	30-60mins 75-150mins
	S 788 **E2** 25.2V	**LUKAS (IDEX)**			N/A	23.8kg 52.4lb	1.6kg 3.5lb	Lukas 9Ah 5Ah Li-ion	30-60mins 75-150mins
	S 377 **E2** 25.2V	**LUKAS (IDEX)**	■ ■ ■		N/A	20.5kg 45.1lb	1.2kg 2.7lb	Lukas 9Ah 5Ah Li-ion	30-60mins 75-150mins
	S 312 **E2** 25.2V	**LUKAS (IDEX)**			N/A	20kg 44lb	1.2kg 2.7lb	Lukas 9Ah 5Ah Li-ion	30-60mins 75-150mins
	S 120e **Powercut** 90-20-10 18V	**LUKAS (IDEX)**	-		N/A	3.7kg 8.1lb	1/ 1.36kg 2.2- 3lb	Makita 5/6Ah* Li-ion	<15mins 55-120mins

BATTERY CUTTERS

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963mm 37.9"	265mm 10.4"	253mm 10"	K - 1K-2K-3K-4K-5K A9 B9 C9 D9 E9 F5	1310kN 147.25t	204mm 8" 45mm 1.8"	700 Bar 10.1K psi	Str-Curve	- 360°	2	■	■ 68 58	5Ah battery reduces length by 20mm	jawsoflife.com
939mm 37"	266mm 10.5"	253mm 10"	K - 1K-2K-3K-4K-5K A8 B9 C8 D9 E9 F5	1100kN 123.6t	205mm 8" 42mm 1.6"	700 Bar 10.1K psi	Str-Curve	- 360°	2	■	■ 68 58	5Ah battery reduces length by 20mm	jawsoflife.com
880mm 34.6"	235mm 9.25"	253mm 10"	I - 1I-2J-3K-4J-5J A7 B8 C7 D8 E8 F4	760kN 85.4t	202mm 7.9" 33mm 1.3"	700 Bar 10.1K psi	Curve	- 360°	2	■	■ 68 58	5Ah battery reduces length by 20mm	jawsoflife.com
820mm 00"	205mm 00"	325mm 00"	-	490kN 55t	00mm 00mm	700 Bar 10.1K psi	Curve	-	2*	-	■ 68 68	Waterproof to 120.9m/398ft *300-3000 lumen	hydram.com
850mm 00"	205mm 00"	325mm 00"	-	490kN 55t	00mm 00mm	700 Bar 10.1K psi	Curve	-	2*	-	■ 68 68	Waterproof to 120.9m/398ft *300-3000 lumen	hydram.com
815mm 00"	205mm 00"	325mm 00"	-	490kN 55t	20mm 15mm	700 Bar 10.1K psi	Curve	-	2*	-	■ 68 68	MOVE to SPECIAL TOOLS GUIDE Waterproof to 120.9m/398ft *300-3000 lumen	hydram.com
1025mm 40.4"	281mm 11.1"	269mm 10.6"	K CC 200 K-26,2 1K-2K-3K-4K-5K A9 B9 C9 D9 E9 F5	1376kN 155.7t	204mm 8" 45mm 1.8"	700 Bar 10.1K psi	Str-Curve	- 360°	2	-	- 54	E2 range DISCONTINUED	lukas.com
1000mm 39.4"	266mm 10.5"	281mm 10.1"	K - 1K-2K-3K-4K-5K A8 B9 C8 D9 E9 F4	1100kN 123.6t	200mm 7.7" 42mm 1.6"	700 Bar 10.1K psi	Curve	- 360°	2	-	- 54	E2 range DISCONTINUED	lukas.com
934mm 36.8"	237mm 9.3"	281mm 10.1"	I - 1I-2J-3I-4J-5J A7 B8 C7 D7 E8	650kN 73t	206mm 8.1" 33mm 1.3"	700 Bar 10.1K psi	Curve	- 360°	2	-	- 54	E2 range DISCONTINUED	lukas.com
917mm 36.1"	237mm 9.3"	281mm 11.1"	I BC 160 I - 19,3 1I-2J-3I-4J-5J A7 B8 C7 D7 E7	680kN 76.4t	160mm 6.3" 35mm 1.4"	700 Bar 10.1K psi	Curve	- 360°	2	-	- 54	E2 range DISCONTINUED	lukas.com
425mm 16.7"	127.3mm 5"	81.6mm 3.2"	E - 1E - 2C - 3B A5-B3-C2-D3-E3	183kN 20.5t	52.3mm 2" 22mm 0.86"	-	Straight	-	-	-	- 44	NEW for 2025 *EU uses 5Ah, US tends to use 6Ah	lukas.com

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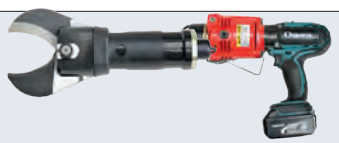
	S 799 E3/E3connect 25.2V	LUKAS (IDEX)	■ ■ ■		N/A	26.5kg 58.3lb	1.6kg 3.5lb	Lukas 9Ah 5Ah Li-ion	<60mins 150-100mins
	S 789 E3/E3connect 25.2V	LUKAS (IDEX)			N/A	24kg 53lb	1.6kg 3.5lb	Lukas 9Ah 5Ah Li-ion	<60mins 150-100mins
	S 378 E3/ E3connect 25.2V	LUKAS (IDEX)	■ ■ ■		N/A	20kg 44lb	1.6kg 3.5lb	Lukas 9Ah 5Ah Li-ion	<60mins 150-100mins
	RP-C160 18v	OGURA	■ ■ ■	●	N/A	14.7kg 32.4 lb	1/ 1.36kg 2.2-3lb	Makita 5/6Ah* Li-ion	<12mins 55-120mins
	HRS931/ HRS-932 Shear Head 18v	OGURA	■ ■ ■ ■	●	N/A	3.9kg 8.6lb +6.2kg +13.7lb	1/ 1.36kg 2.2-3lb	Makita 5/6Ah* Li-ion	<12mins 55-120mins
	HRS941/ HRS-932S 'Stubby' Shear Head 18v	OGURA	■ ■ ■ ■	●	N/A	4.2kg 9.3lb +5.7kg +12.5lb	1/ 1.36kg 2.2-3lb	Makita 5/6Ah* Li-ion	<12mins 55-120mins
	P16 Legacy 12v 16v LiGHT	POWERHAWK TECHNOLOGIES	■ ■ ■ ■		N/A	*21.4kg 47lb	*4.5kg 9.9lb 15.9kg *35lb	Powerhawk 12.4Ah LiGHT 33Ah Li-ion 12v Lead Acid	? <120mins <15hr
	P-16X PowerBlade 1602L 7.5/12v	POWERHAWK TECHNOLOGIES			N/A	22.1kg 48.7lb	1.36kg 3lb	Powerhawk 7.5Ah Li-ion or any 12v Lead Acid source	? <120mins
	P-16X Shredder Blade C1604 7.5/12v	POWERHAWK TECHNOLOGIES	■ ■ ■ ■		N/A	21.1kg 46.5lb	1.36kg 3lb	Powerhawk 7.5Ah Li-ion or any 12v Lead Acid source	? <120mins
	P-16X Curved Blade C-1601 7.5/12v	POWERHAWK TECHNOLOGIES			N/A	21.6kg 47.5lb	1.36kg 3lb	Powerhawk 7.5Ah Li-ion or any 12v Lead Acid source	? <120mins
	P-16X Hatchet Blade C1603 7.5/12v	POWERHAWK TECHNOLOGIES			N/A	20.5kg 45lb	1.36kg 3lb	Powerhawk 7.5Ah Li-ion or any 12v Lead Acid source	? <120mins

BATTERY CUTTERS

STORED DIMENSIONS LENGTH	WIDTH inc battery	DEPTH	CUT CLASSES EN CLASSIFICATION EN CUT CAPACITY NFPA CLASS	THEORETICAL CUT FORCE t= US short ton	CUT OPENING ROUND BAR	WORKING (HYDRAULIC) PRESSURE	BLADE TYPE	ROTATE HEAD/HANDLE	LED LIGHTS	WiFi / CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	WWW.
963mm 37.4"	265mm 10.4"	253mm 10"	K - 1K-2K-3K-4K-5K A9 B9 C9 D9 E9 F5	1376kN 155.7t	204mm 8" 45mm 1.7"	700 Bar 10.1K psi	Curve	- 360°	2	■	■ 68 58	All Can use IP68 battery. E2 & EWXT Tools Discontinued	lukas.com
939mm 37"	266mm 10.5"	253mm 10"	K - 1K-2K-3K-4K-5K A8 B9 C8 D9 E9 F5	1100kN 123.6t	205mm 8.1" 42mm 1.6"	700 Bar 10.1K psi	Str-Curve	- 360°	2	■	■ 68 58	All Can use IP68 battery. E2 & EWXT Tools Discontinued	lukas.com
880mm 34.6"	235mm 9.25"	266mm 10.5"	I - 1I-2J-3K-4J-5J A7 B8 C7 D8 E8 F4	760kN 85.4t	202mm 8" 33mm 1.3"	700 Bar 10.1K psi	Str-Curve	- 360°	2	■	■ 68 58	All Can use IP68 battery. E2 & EWXT Tools Discontinued	lukas.com
591mm 23.3"	256mm 10.1"	182mm 7.2"	- - - 1I 2D 3F 4F 5G	738kN 83t	160mm 6.3" 32mm 1.26"	N/A	Str-Curve	360°360°	■	-	- -	*EU uses 5Ah, US tends to use 6Ah	ogurarescuetools.com
303mm 11.9" +382mm +15"	111mm 4.4" 186mm 7.3"	272mm 10.7" 104mm 4.1"	- - - -	98kN 11t	100mm 3.9" 32mm 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. All heads interchangeable between power units	ogurarescuetools.com
328mm 12.9" +328mm +12.9"	111mm 4.4" 130mm 5.1"	273mm 10.7" 104mm 4.1"	- - - -	78.4kN 8.8t	26mm 1" 32mm 1.26"	N/A	Curve	360° 270°	-	-	- -		ogurarescuetools.com
659mm 27"	254mm 10"	279mm 11"	- - - A3 B6 C3 D5 E6	93.4 to 200kN 10.5-22.5t	250mm 10" 25mm 1"	No Hydraulics	Straight	70° 270°	-	-	- -	Original version. Only in support of existing purchases. Accepts all blades as per P-16X below *Wt = battery+ controller	powerhawk.com
659mm 27"	254mm 10"	279mm 11"	- - - PENDING	93.4 to 200kN 10.5-22.5t	250mm 10" 25mm 1"	No Hydraulics	Straight	70° 270°	-	-	- -	interchangeable Cutter,spreader and combi heads. *Both P16&P16X can use a regular 12v car battery or any 12v power source with relevant adapter.	powerhawk.com
635mm 25"	254mm 10"	279mm 11"	- - - PENDING	>311TkN 35t	108mm 4.25" PENDING	No Hydraulics	Straight	70° 270°	-	-	- -		powerhawk.com
610mm 24"	254mm 10"	279mm 11"	- - - PENDING	133.4TkN 15t	125mm 5" PENDING	No Hydraulics	Straight	70° 270°	-	-	- -		powerhawk.com
559mm 22"	254mm 10"	279mm 11"	- - - PENDING	200.2kN 22.5t	76mm 3" PENDING	No Hydraulics	Straight	70° 270°	-	-	- -		powerhawk.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) W[illegible] is present on the model variant `show[illegible]

	MODEL SERIES VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	**WEIGHT** IN HAND inc BATTERY(IES)	**WEIGHT** DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME
	P-4W EDD 43.2V	RESQTEC			N/A	20.6kg 45.3lb	1kg 2.2lb	Resqtec 2.6Ah Li-ion	<45mins 60mins
	G4W EDD 43.2V	RESQTEC	■ ■ ■		N/A	15.9kg 6lb	1kg 2.2lb	Resqtec 2.6Ah Li-ion	<45mins 60mins*
	G6C EDD 43.2V	RESQTEC			N/A	20.3kg 44.8lb	1kg 2.2lb	Resqtec 2.6Ah Li-ion	<45mins 60mins*
	G6W EDD 43.2V	RESQTEC			N/A	20kg 44lb	1kg 2.2lb	Resqtec 2.6Ah Li-ion	<45mins 60mins*
	Cutter SC 28v	SCORPE			N/A	18.9kg 41.6lb	1kg 2.2lb	Milwaukee 5Ah M28 Li-ion	<45mins 90mins
	Cutter MC 28v	SCORPE	■ ■ ■		N/A	21.6kg 47.5lb	1kg 2.2lb	Milwaukee 5Ah M28 Li-ion	<45mins 90mins
	ESLC-29 Storm Surge 18V/20v	TNT RESCUE			N/A	24.4kg 53.75lb 24.76kg 54.6lb	1.1kg 2.4lb 0.6kg 1.3lb	Milwaukee 8/9Ah M18 DeWalt 9Ah FlexVolt20 Li-ion	87mins 10-15mins 60mins
	EBFC-320 Storm Surge 18V/20v	TNT RESCUE	■ ■ ■		N/A	28.8kg 63.6lb 29kg 63.9lb	1.1kg 2.4lb 0.6kg 1.3lb	Milwaukee 8/9Ah M18 DeWalt 9Ah FlexVolt20 Li-ion	87mins 10-15mins 60mins
	ESLC-24D Storm2 28v	TNT RESCUE			N/A	21.5kg 47.5lb	2x 1kg 2.2lb	Milwaukee 2x 5Ah M28 Li-ion	<90mins 60mins
	ESLC-27D Storm2 28v	TNT RESCUE			N/A	22.5kg 49.7lb	2x 1kg 2.2lb	Milwaukee 2x 5Ah M28 Li-ion	<90mins 60mins
	ESLC-29D Storm2 28v	TNT RESCUE	■ ■ ■		N/A	24.4kg 53.8lb	2x 1kg 2.2lb	Milwaukee 2x 5Ah M28 Li-ion	<90mins 60mins
	EBFC-320D Storm2 28v	TNT RESCUE			N/A	28.6kg 63.1lb	2x 1kg 2.2lb	Milwaukee 2x 5Ah M28 Li-ion	<90mins 60mins

BATTERY CUTTERS

STORED DIMENSIONS LENGTH	WIDTH inc battery	DEPTH	CUT CLASSES EN CLASSIFICATION EN CUT CAPACITY NFPA CLASS	THEORETICAL CUT FORCE t= US short ton	CUT OPENING ROUND BAR	WORKING (HYDRAULIC) PRESSURE	BLADE TYPE	ROTATE HEAD/HANDLE	LED LIGHTS	WiFi / Bluetooth CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	WWW.
705mm 27.75"	271mm 10.7""	274mm 10.8"	E BC153E-20.6 1G 2E 3F 4F 5H A6 B5 C5 D6 E6	506kN 56.9t	153mm 6" 26mm 1"	No Hydraulics	Straight	61° -	☐	-	- 54	3x interchangeable heads/blades. Rear handle option. *Also 28Ah power-pack. Jaw recess (reach)= 118mm	rescue.resqtec.com
767mm 30.2"	236mm 9.3"	228mm 9"	F BC156F-15.9 1H 2F 3G 4F 5G A6 B6 C6 D7 E6	554kN 62.3t	156mm 6.1" 30mm 1.2"	N/A	Curve	- 360°	☐	-	- 54	*Also 28Ah powerpack. Jaw recess (reach) = 128mm. *Charger has been enhanced from pt1	rescue.resqtec.com
868mm 34.2"	251mm 9.9"	235mm 9.25"	H CC200H-20.3 1I 2J 3H 4H 5J A6 B7 C6 D7 E7	1102kN 124t	203mm 8" 34mm 1.3"	N/A	Curve	- 360°	☐	-	- 54	*Also 28Ah powerpack. Jaw recess (Reach) =150mm. *Charger has been enhanced from pt1	rescue.resqtec.com
854mm 33.6"	268mm 10.5"	235mm 9.25"	H BC185H-19.9 1I 2J 3H 4J 5J A6 B7 C6 D7 E9	1052kN 118t	185mm 7.3" 34mm 1.3"	N/A	Curve	- 360°	☐	-	- 54	*Also 10Ah powerpack. Jaw recess (Reach) = 150mm *Charger has been enhanced from pt1	rescue.resqtec.com
925mm 36.4"	222mm 8.7"	248mm 9.8"	G BC/160-G-18.9 - -	493kN 55.4t	160mm 6.3" 32mm 1.26"	700 Bar 10.2K psi	Curve	- 360°	4	-	- 54		scorpe.net
944mm 37.2"	232mm 9.1""	248mm 9.8"	I BC-185-I-21.6 - -	781kN 87.8t	180mm 7.1" 35mm 1.4"	700bar 10.2K psi	Curve	- 360°	4	-	- 54		scorpe.net
838mm 33"	267mm 10.5"	297mm 11.7"	- - - A8 B9 C9 D9 E9 F5	1256.4kN 141.2t	178mm 7" 38mm 1.5"	722 Bar 10.5K psi	Curve	- -	4	-	- 54	TNT prices include 2 batteries and Dual Rapid charger. Cut Reach 129mm/ 5"	tntrescue.com
909.7mm 35.8"	267mm 10.5"	300mm 11.8"	- - - A9 B9 C9 D9 E9 F6	1424kN 160t	257mm 10.12" 45mm 1.75"	722 Bar 10.5K psi	Curve	- -	4	-	- 54	TNT prices include 2 batteries and Dual Rapid charger. 5.5" cut reach	tntrescue.com
798mm 31.4"	267mm 10.5"	241mm 9.5"	- - - A6 B5 C7 D7 E6	528.4kN 59.4t	127mm 5" 0mm 0"	722 Bar 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 32.1"	267mm 10.5"	241mm 9.5"	- - - A6 B7 C7 D7 E7	528.4kN 59.4t	193mm 7.6" 0mm 0"	722 Bar 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 32.5"	267mm 10.5"	241mm 9.5"	- - - A8 B9 C9 D9 E9 F4	1256.4kN 141.2t	177.8mm 8" 38mm 1.5"	722 Bar 10.5K psi	Curve	-	2	-	- 54	ALL Spec is for 2 batteries but Can operate on one. Cut Reach 129mm/ 5"	tntrescue.com
879mm 34.6"	273mm* 10.75"	178mm 7"	- - - A9 B9 C9 D9 E9 F6	1424kN 160t	228.6mm 8.6" 45mm 1.75"	722 Bar 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 SERIES VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	**WEIGHT** IN HAND inc BATTERY(IES)	**WEIGHT** DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME
	RSC 170 **E-Force3** 1102148 28V	WEBER RESCUE	■■■■		N/A	18.1kg 39.8lb	1kg 2.2lb	Milwaukee 5Ah M28 Li-ion	<45-80mins 60mins
	RSC170+ **E-Force3** 1102149 28V	WEBER RESCUE			N/A	19.2kg 42.2lb	1kg 2.2lb	Milwaukee 5Ah M28 Li-ion	<45-80min 60mins
	RSC 190 **E-Force3** 1102150/ 28V	WEBER RESCUE			N/A	20.6kg 45.3lb	1kg 2.2lb	Milwaukee 5Ah M28 Li-ion	<45-80mins 60mins
	RSC 190+ **E-Force3** 1102150 28V	WEBER RESCUE			N/A	21kg 46.2lb	1kg 2.2lb	Milwaukee 5Ah M28 Li-ion	<45-80min 60mins
	RSC200 **E-Force3** 1102152 28V	WEBER RESCUE			N/A	24.8kg 54.6lb	1kg 2.2lb	Milwaukee 5Ah M28 Li-ion	<45-80mins 60mins
	RSC F7 **E-Force3** 1102153 28V	WEBER RESCUE			N/A	26.9kg 59.1lb	1kg 2.2lb	Milwaukee 5Ah M28 Li-ion	<45-80min 60mins
	RSC 170 **Smart-Force** 1101547 28V	WEBER RESCUE			N/A	19.1kg 42lb	1.1kg 2.33lb	Milwaukee 8Ah/12Ah M18 Li-ion	60/90mins 45-83mins
	RSC170+ **Smart-Force** 1101548 28V	WEBER RESCUE			N/A	20.1kg 44.2lb	1.1kg 2.33lb	Milwaukee 8Ah/12Ah M18 Li-ion	60/90mins 45-83mins
	RSC 190 **Smart-Force** 1101549 28V	WEBER RESCUE			N/A	21.7kg 47.7lb	1.1kg 2.33lb	Milwaukee 8Ah/12Ah M18 Li-ion	60/90mins 45-83mins
	RSC 190+ **Smart-Force** 1101550 28V	WEBER RESCUE			N/A	22.8kg 50.1lb	1.1kg 2.33lb	Milwaukee 8Ah/12Ah M18 Li-ion	60/90mins 45-83mins
	RSC200 **Smart-Force** 1101551 28V	WEBER RESCUE			N/A	25.7kg 56.5lb	1.1kg 2.33lb	Milwaukee 8Ah/12Ah M18 Li-ion	60/90mins 45-83mins
	RSC F7 **Smart-Force** 1101553 28V	WEBER RESCUE			N/A	27.7kg 60.9lb	1.1kg 2.33lb	Milwaukee 8Ah/12Ah M18 Li-ion	60/90mins 45-83mins

BATTERY CUTTERS

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

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
■=BATTERY TOOLS
■= Combi
■= Spreader
■=Ram
■= Special Tools

●●= PARTIAL or OK but not ideal
□□□= Option
N/A = info Not Available/not given

SERIES MODEL VARIANT Product Code	F180	C165	SC198-SL3	SC198-SL3 NextGen	C195 Next Gen	SC240-SL
COMPANY	EDILGRAPPA	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	GENESI RESCU
TOOLS IN RANGE	■■■■■					
ORIGIN						
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A	N/A
WEIGHT (exc hose)	19.5kg 43lb	16.3kg 36lb	14.3kg 31.5lb	15.4kg 33.9lb	16.9kg 37.25lb	16.9kg 37.25lb
LENGTH	774mm 30.5"	711mm 28"	727mm 28.6"	732mm 28.8"	736mm 28.9"	758mm 29.8"
WIDTH	264mm 10.4"	225mm 8.9"	236mm 9.3"	236mm 9.3"	212mm 8.3"	236mm 9.3"
DEPTH	186mm 7.3"	202mm 8"	164mm 6.5"	164mm 6.5"	212mm 8.3"	164mm 6.5"
CUT EN CLASS EN CUT CLASSIFICATION NFPA CLASS	K BC181-K-19.5 - -	- - - A8 B6 C6 D7 E9	- - - A7 B8 C6 D8 E9 F4	- - - A7 B8 C6 D8 E9 F4	- - - A8 B9 C7 D9 E9	- - - A8 B9 C7 D9
THEORETICAL CUT FORCE t= US short ton	941kN 105.8UStons	N/A	N/A	N/A	N/A	N/A
CUTTER OPENING ROUND BAR	181mm 7.1" 32mm 1.25"	150mm 5.9" 25mm 1"	175mm 6.9" 32mm 1.25"	175mm 6.9" 32mm 1.25"	180mm 7.1" 35mm 1.5"	187mm 7.4" 38.1mm* 1.5"
WORKING PRESSURE	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2
ROTATE HEAD/HANDLE	- -	- -	- 360°	- 360°	- -	- 360°
LED LIGHTS	-	-	-	-	-	-
OPERATING TEMP	?	?	?	?	?	?
IN-WATER-CAPABLE IP#	? ?	■ 68	■ 68	■ 68	■ 68	■ 68
NOTES			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 ba tools can conv hose and vice-
WEBSITE	edilgrappa.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue

HOSE-FED CUTTERS

L3	SC240-SL3 NextGen	C236-SL2 Next Gen	SC385-SL3	C365	All-9	F7-SL3	
S E	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	
	N/A	N/A	N/A	N/A	N/A	N/A	
	18kg 39.7lb	19.6kg 43.2lb	21kg 46.3lb	22kg 48.5lb	22.5kg 49.6lb	23.3kg 51.7lb	
	758mm 29.8"	833mm 33"	827mm 32.6"	811mm 31.9"	855mm 33.7"	886mm 34.9"	
	236mm 9.3"	260mm 10.2"	300mm 11.8"	298mm 11.7"	298mm 11.7"	295mm 11.6"	
	164mm 6.5"	221mm 8.7"	177mm 7"	221mm 8.7"	223mm 8.8"	179mm 7.1"	
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 7.4" 38.1mm* 1.5"	210mm 8.2" 45mm 1.75"	202mm 7.8" 45mm 1.75"	170mm 6.7" 30mm 1.25"	180mm 7.1" 35mm 1.5"	300mm 11.8" 45mm 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	
ttery ert to -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.			All Genesis battery tools can convert to hose and vice-versa	
.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
■=BATTERY TOOLS
■= Combi
■= Spreader
■=Ram
■= Special Tools

●●= PARTIAL or OK but not ideal
□□□= Option
N/A = info Not Available/not given

SERIES MODEL VARIANT Product Code	CORE CU5030	CORE CU5030i CL	CORE CU5040	CORE CU5040i CL	CORE CU5050	CORE CU5050i
COMPANY	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO	HOLMAT
TOOLS IN RANGE				■ ■ ■ ■ ■		
ORIGIN						
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A	N/A
WEIGHT (exc hose)	9.5kg 20.9lb	9.5kg 20.9lb	13.1kg 28.9lb	13.2kg 29.1b	15.7kg 34.6lb	15.9kg 35.1lb
LENGTH	674mm 26.5"	685mm 27"	692mm 27.2"	706mm 27.8"	752mm 29.6"	762mm 30"
WIDTH	270mm 10.6"	275mm 10.8"	271mm 10.7"	300mm 11.8"	278mm 10.9"	306mm 12"
DEPTH	188mm 7.4"	253mm 10"	190mm 7.5"	268mm 10.6"	200mm 7.9"	268mm 10.6"
CUT EN CLASS EN CUT CLASSIFICATION NFPA CLASS	F BC 150f-9.5 1H 2G 3G 4F 5G A6 B5 C6 D6 E6 F2	F BC150F-9.5 1H 2G 3G 4F 5G A6 B5 C6 D6 E6 F2	I BC165I-13.1 1I 2I 3I 4J 5J A7 B7 C6 D7 E8 F3	I BC165I-13.2 1I 2I 3I 4J 5J A7 B7 C6 D7 E8 F3	K BC165K-15.9 1K 2K 3K 4K 5K A8 B8 C7 D9 E9 F4	K BC165K-15 1K 2K 3K 4K A8 B8 C7 D9
THEORETICAL CUT FORCE t= US short ton	579kN 65USton	549kN 61.7USton	794kN 89.2USton	764kN 85.8USton	1412kN 158.7USton	1389kN 156.3USto
CUTTER OPENING ROUND BAR	170mm 6.7" 31mm 1.2"	170mm 6.7" 31mm 1.2"	170mm 6.7" 36mm 1.4"	170mm 6.7" 36mm 1.4"	182mm 7.2" 41mm 1.6"	182mm 7.2" 41mm 1.6"
WORKING PRESSURE	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4
ROTATE HEAD/HANDLE	- -	- -	- -	- -	- -	- -
LED LIGHTS	?	?	?	?	?	?
OPERATING TEMP	?	?	?	?	?	?
IN-WATER-CAPABLE IP#	■ 68	■ 68	■ 68	■ 68	■ 68	■ 68
NOTES	Stepless speed increase	Inclined blade angle. Stepless speed increase	Stepless speed increase	Inclined blade angle. Stepless speed increase	Stepless speed increase	Inclined blade Stepless spe increase
WEBSITE	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.co

HOSE-FED CUTTERS

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

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■=Ram
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SERIES MODEL VARIANT Product Code	CHM275 CX	CHM2750 CX	CHU1500	CHU1800	CHU2020	LD2
COMPANY	HYDRAM	HYDRAM	HYDRAM	HYDRAM	HYDRAM	LIBERV
TOOLS IN RANGE	■■■■			■■■■		
ORIGIN						
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A	N/A
WEIGHT (exc hose)	14.4kg 31.7lb	16.7kg 36.8lb	15.88kg 35lb	16.08kg 35.45lb	17.6kg 38.8lb	20.3kg 44.7lb
LENGTH	744mm 29.3"	756mm 29.6"	711mm 00"	744mm 29.3"	00mm 00"	934mm 36.8"
WIDTH	224mm 8.8"	224mm 8.8"	224mm 8.8"	224mm 8.8"	00mm 00"	237mm 9.3"
DEPTH	177mm 7"	177mm 7"	177mm 7"	177mm 7"	00mm 00"	281mm 11.1"
CUT EN CLASS EN CUT CLASSIFICATION NFPA CLASS	I CC130-H-14.4 ?? A7 B8 C6 D7 E9	I CC130-H-16.7 ?? A7 B8 C6 D7 E9	G BC150-G-15.88 ?? A? B? C? D? E?	H BC180-H-17.2 ?? A7 B8 C6 D7 E9	H BC180-H-17.2 ?? A? B? C? D? E?	I - 1I-2J-3I-4J- A7 B8 C7 D7
THEORETICAL CUT FORCE t= US short ton	694kN 78UStон	950kN 106UStон	950kN 106UStон	950kN 106UStон	1040kN 116.9UStон	650kN 73UStон
CUTTER OPENING ROUND BAR	154mm 6" ??mm ??	154mm 6" ??mm ??	150mm 5.9" ??mm ??	180mm 7.1" ??mm ??	202mm 7.9" ??mm ??	206mm 8.1" 33mm 1.3"
WORKING PRESSURE	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1
ROTATE HEAD/HANDLE	- -	- -	- -	- -	- -	- 360°
LED LIGHTS	-	-	-	-	-	2
OPERATING TEMP	?	?	?	?	?	?
IN-WATER-CAPABLE IP#	■ 68	■ 68	● 54	● 54	● 54	■ 68
NOTES	Cut reach/depth = 154mm See also 3x CHU models in combitools - these are closer to cutters than combis	Cut reach/depth = 154mm				
WEBSITE	hydram.com	hydram.com	hydram.com	hydram.com	hydram.com	libervit.com

HOSE-FED CUTTERS

	LD2C	BP2	BP2C	U400	
	LIBERVIT	LIBERVIT	LIBERVIT	LIBERVIT	
	N/A	N/A	N/A	N/A	
	26.5kg 58.3lb	24kg 52.8lb	20kg 44lb	26.5kg 58.4lb	
	963mm 37.9"	939mm 37"	880mm 34.6"	1025mm 40.4"	
	265mm 10.4"	266mm 10.5"	235mm 9.25"	281mm 11.1"	
	253mm 10"	253mm 10"	253mm 10"	269mm 10.6"	
-5J 7 E8	K - 1K-2K-3K-4K-5K A9 B9 C9 D9 E9 F5	K - 1K-2K-3K-4K-5K A8 B9 C8 D9 E9 F5	I - 1I-2J-3K-4J-5J A7 B8 C7 D8 E8 F4	K CC 200 K-26,2 1K-2K-3K-4K-5K A9 B9 C9 D9 E9 F5	
	1310kN 147.25UStон	1100kN 123.6UStон	760kN 85.4UStон	1376kN 155.7UStон	
	204mm 8" 45mm 1.8"	205mm 8" 42mm 1.6"	202mm 7.9" 33mm 1.3"	204mm 8" 45mm 1.8"	
1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	
	- 360°	- 360°	- 360°	- 360°	
	2	2	2	2	
	?	?	?	?	
	68	68	68	68	
n	libervit.com	libervit.com	libervit.com	libervit.com	

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- = Combi
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N/A = info Not Available/not given

SERIES MODEL VARIANT Product Code	S312	S378	S789	S799		G4A
COMPANY	LUKAS (IDEX)	LUKAS (IDEX)	LUKAS (IDEX)	LUKAS (IDEX)		RESQTE
TOOLS IN RANGE						
ORIGIN						
COST inc tax / VAT	N/A	N/A	N/A	N/A		N/A
WEIGHT (exc hose)	14.5kg 32lb	14.8kg 32.6lb	18.8kg 41.4lb	21.3kg 47lb		20.6kg 45.3lb
LENGTH	1000mm 39.4"	742mm 29.2"	801mm 31.5"	828mm 32.6"		705mm 27.75"
WIDTH	266mm 10.5"	228mm 9"	279mm 11"	291mm 11.5"		271mm 10.7""
DEPTH	281mm 10.1"	172mm 6.8"	187mm 7.4"	188mm 7.4"		274mm 10.8"
CUT EN CLASS EN CUT CLASSIFICATION NFPA CLASS	K BC 1601-14.5 1I-2J-3I-4J-5J A7 B8 C7 D7 E7	I BC 1801-14.8 1I-2J-3I-4J-5J A7 B8 C7 D7 E8	I CC 205 K - 18.8 1K-2K-3K-4K-5K A8 B9 C8 D9 E9 F5	K CC 200 K-21.3 1K-2K-3K-4K-5K A9 B9 C9 D9 E9 F5		E BC153E-20 1G 2E 3F 4F A6 B5 C5 D6
THEORETICAL CUT FORCE t= US short ton	680kN 76.4t	760kN 85.4t	1100kN 1234.6t	1376kN 155t		506kN 56.9t
CUTTER OPENING ROUND BAR	160mm 00" 35mm 00"	202mm 00" 35mm 00"	205mm 8" 42mm 00"	204mm 8" 45mm 1.7"		153mm 6" 26mm 1"
WORKING PRESSURE	700Bar/10.1Kpsi	700Bar/10.1Kpsi	700Bar/10.1Kpsi	700Bar/10.1Kpsi		N/A
ROTATE HEAD/HANDLE	- 360°	- 360°	- 360°	- 360°		61° -
LED LIGHTS	2	2	2	2		□
OPERATING TEMP	-20to 55	-20to 55	-20to 55	-20to 55		?
IN-WATER-CAPABLE IP#	■ 68	■ 68	■ 68	■ 68		? ?
NOTES						3x interchang heads/blad Rear handle op Jaw recess (re 118mm
WEBSITE	lukas.com	lukas.com	lukas.com	lukas.com		rescue.resqte

HOSE-FED CUTTERS

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

IMAGES NOT TO SCALE

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N/A = info Not Available/not given

SERIES MODEL VARIANT Product Code	SLC-24	SLC-27	SLC-28	SLC-29	BFC-320	
COMPANY	TNT RESCUE	TNT RESCUE	TNT RESCUE	TNT RESCUE	TNT RESCUE	
TOOLS IN RANGE			■■■■■			
ORIGIN						
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A	
WEIGHT (exc hose)	15.3kg 33.7lb	16.1kg 35.5lb	18kg 39.6lb	18.2kg 40lb	28.8kg 63.6lb	
LENGTH	723mm 28.5"	723mm 28.5"	736.6mm 29"	726.4mm 28.6"	762mm 30"	
WIDTH	228.6mm 9"	285mm 11.25"	285mm 11.25"	285mm 11.25"	273.1mm 10.75"	
DEPTH	177.8mm 7"	177.8mm 7"	177.8mm 7"	177.8mm 7"	177.8mm 7"	
CUT EN CLASS EN CUT CLASSIFICATION NFPA CLASS	- - - A6 B5 C7 D7 E6	- 1F-2F-3F-4F-5F - A6 B7 C7 D7 E7	- - - A7 B7 C7 D7 E7	- 1J-2J-3J-4K-5K - A8 B9 C9 D9 E9 F4	- 1K-2K-3K-4K-5K - A9 B9 C9 D9 E9 F5	
THEORETICAL CUT FORCE t= US short ton	528kN 59.3t	528kN 59.3t	694kN 78t	1256kN 141t	1424kN 160t	
CUTTER OPENING ROUND BAR	127mm 5" 00mm 00"	193mm 7.6" 00mm 00"	193mm 7.6" 00mm 00"	203mm 8" 00mm 00"	218.4mm 8.6" 00mm 00"	
WORKING PRESSURE	722Bar / 10.5Kpsi	722Bar / 10.5Kpsi	722Bar / 10.5Kpsi	722Bar / 10.5Kpsi	722Bar / 10.5Kpsi	
ROTATE HEAD/HANDLE	- -	- -	- -	- -	- -	- -
LED LIGHTS	-	-	-	-	-	-
OPERATING TEMP	?	?	?	?	?	
IN-WATER-CAPABLE IP#	■ 64	■ 64	■ 64	■ 64	■ 64	
NOTES	Cut Reach 82.4mm/ 3.24"	Cut Reach 100.6mm/ 4"	Cut Reach 101.6mm/ 4"	Cut Reach 113.6mm/ 4.47"	Cut Reach 140.5mm/ 5.5"	
WEBSITE	tntrescue.com	tntrescue.com	tntrescue.com	tntrescue.com	tntrescue.com	

HOSE-FED CUTTERS

	RSC 170	**RSC 170+**	**RSC 190**	**RSC 190+**	**RSC 200**	**RSC F7**
	WEBER RESCUE	**WEBER RESCUE**	**WEBER RESCUE**	**WEBER RESCUE**	**WEBER RESCUE**	**WEBER RESCUE**
	N/A	N/A	N/A	N/A	N/A	N/A
	14.3kg 31.5lb	15.4kg 33.9lb	16.9kg 37.2lb	18kg 39.7b	21kg 46.3lb	23.3kg 51.7lb
	727mm 28.6"	732mm 28.8"	758mm 29.8"	758mm 29.8"	827mm 32.6"	886mm 34.9"
	236mm 9.3"	236mm 9.3"	236mm 9.3"	236mm 9.3"	300mm 11.8"	295mm 11.6"
	164mm 6.5"	164mm 6.5"	164mm 6.5"	164mm 6.5"	177mm 7"	179mm 7.1"
	I BC166I-14.3 1J 2K 3I 4J 5J A7 B8 C6 D8 E9 F4	I BC166I-15.4 1J 2K 3I 4J 5J A7 B8 C6 D8 E9 F4	K BC187K-16.9 1K 2K 3K 4K 5K A8 B9 C7 D9 E9 F4	K BC187K-20,6 1K 2K 3K 4K 5K A8 B9 C7 D9 E9 F4	K CC202K-21 1K 2K 3K 4K 5K A9 B9 C9 D9 E9 F5	K CC268K-23.3 1K 2K 3K 4K 5K A9 B9 C9 D9 E9 F7
	N/A	N/A	N/A	N/A	N/A	N/A
	175mm 6.9" 32mm 1.25"	175mm 6.9" 32mm 1.25"	187mm 7.4" 38.1mm* 1.5"	187mm 7.4" 38.1mm* 1.5"	202mm 7.8" 45mm 1.75"	300mm 11.8" 45mm 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

'hydraulic' BATTERY DEDICATED SPREADERS

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

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-

BATTERY SPREADERS

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

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 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.

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.

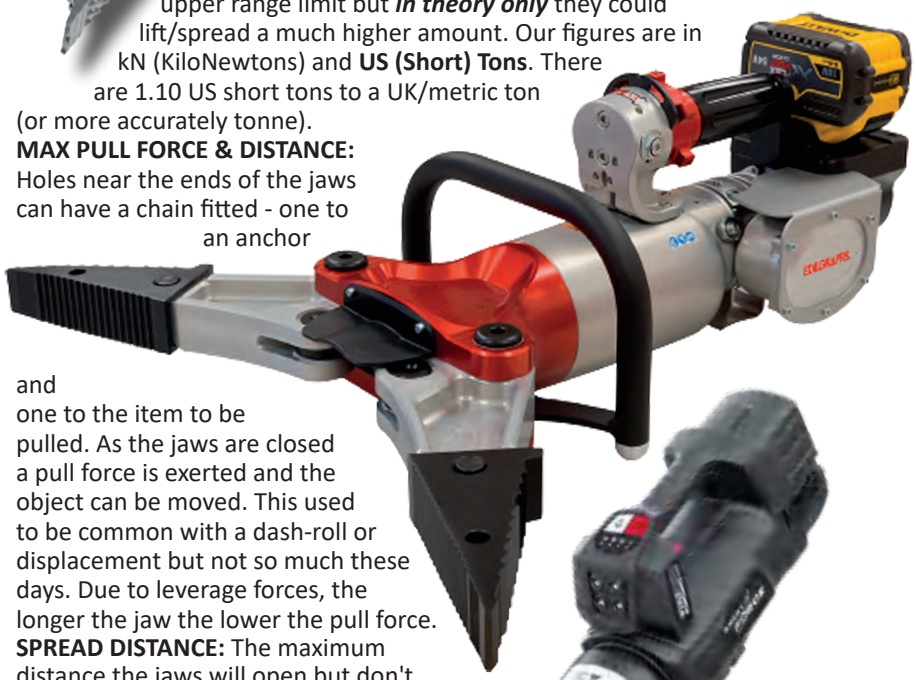
ROTATE HEAD/HANDLE: Either the Jaws or the handle can rotate for better access to the cut or the handle will extend around the tool by 180, 270 or 360° to allow it to be used in any position.

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 &/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
Cuttir
Replaceable tips fo
lifting of lo

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

TERY DRIVEN COMBI TOOL FOR
APID 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).

Weber Rescue UK
Essex CO9 2EX
rescue@weberuk.com

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

www.weber-rescue.com

Discover more!

IMAGES NOT TO SCALE
OTHER TOOLS IN RANGE:
■= Combi ■= Cutter ■=Ram
■= Special Tools
●= PARTIAL FEATURE
□□□= Option
N/A = info Not Available/not given
■= (cyan border) WiFi is present on the model variant `shown in cyan

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	■ ■ ■ ■		■ ■ ■		■ ■ ■ ■
ORIGIN					
COST inc tax / VAT	N/A	N/A	$4500 per 2 tools FOB	N/A	N/A
WEIGHT IN HAND inc BATTERY(IES) & TIPS	25.8kg 56.9lb	22.5kg 49.6lb	24.5kg 54lb	26kg 57.2lb	22.7kg 50lb
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 Ah OPTIONS	DeWalt FlexVolt 6Ah 9, 12Ah	DeWalt FlexVolt 6Ah 9, 12Ah	5Ah	5Ah	DeWalt FlexVolt 9Ah
BATTERY DURATION RECHARGE TIME	10-15mins 60mins	10-15mins 60mins	45-60mins 90mins	45-60mins 90mins	10-25mins 85mins
LENGTH	968mm 38.1"	889mm 35"	905mm 35.6"	1194mm 47"	787mm 30.9"
WIDTH	282mm 11.1"	246mm 9.7"	350mm 13.77"	320mm 12.6"	282mm 11.1"
DEPTH	294mm 11.6"	287mm 11.3"	279mm 10.9"	265mm 10.4"	244mm 9.6"
EN ■ CLASSIFICATION	-	-	■	■	■ AS45/625-
EN SPREAD FORCE RANGE t=US Ton	-	-	47-124kN 5.7-13.9 USt	52-562kN 5.8-63 USt	<131kN 14.7 USt
NFPA□ FORCE RANGE t=US Ton (at/near tips)	46.9-67.2kN ■ 5.3-7.5 USt	27.5-43.7kN ■ 3-4.6 USt	-	-	32.9-60.6kN ■ 3.6-6.8 US
MAX SPREAD FORCE (Theoretical) t=US ton	175.7kN 19.7 USt	43.7kN 4.4 USt	-	-	174kN 19.5 USt
SPREAD DISTANCE	810mm 31.9"*	940mm 37"*	650mm 25.6"	820mm 32.2"	625mm 24.6"
PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton	33.7-51.1kN 3.8-5.7 USt	17.9-28.9kN 2-3.2 USt	(68)kN (7.6) USt	(73)kN (8.2) USt	(≤46)kN (≤5.2) USt
MAX PULL DISTANCE	approx 675mm 26.5"	approx785mm 31"	520mm 20.5"	716mm 28"	482.5mm 19"
MAX SQUEEZE FORCE t=US ton	N/A	N/A	69kN 7.7 USt	140kN 15.8 USt	69kN 7.7 USt
WORKING PRESSURE (HYDRAULIC)	700 Bar 10.2K psi	700 Bar 10.2K psi	720 Bar 10.4K psi	720 Bar 10.4K psi	700 Bar 10.2K psi
WiFi/Bluetooth capable	- -	- -	- -	- -	- -
REMOVABLE DOOR OPENING TIPS	■	-	-	-	-
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

BATTERY SPREADERS

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

IMAGES NOT TO SCALE
OTHER TOOLS IN RANGE:
■= Combi ■= Cutter ■=Ram
■= Special Tools
●= PARTIAL FEATURE
□□□= Option
N/A = info Not Available/not given
■= (cyan border) WiFi is present on the model variant `shown in cyan

COMPANY	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO	HURST (IDE
MODEL	PSP60	PSP50	PSP40	PSP40CL	SP 333
SERIES	PENTHEON	PENTHEON	PENTHEON	PENTHEON	E3/E3conn
VOLTAGE	28v	28v	28v	28v	25.2v
TOOLS IN RANGE	■ ■ ■ ■				
ORIGIN					
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A
WEIGHT IN HAND inc BATTERY(IES) & TIPS	25kg 55.1lb	21kg 46.3lb	19.4kg 42.8lb	15.2kg 33.5lb	17.1kg 37.7lb
WEIGHT DEFAULT BATTERY	1.5kg 3.3lb	1.5kg 3.3lb	1.5kg 3.3lb	1.5kg 3.3lb	1.4kg/1kg 3.2lb/2.3lb
BATTERY Ah OPTIONS	Holmatro PBPA287 7Ah	Holmatro PBPA287 7Ah	Holmatro PBPA287 7Ah	Holmatro PBPA287 7Ah	Lukas 9Ah 5Ah
BATTERY DURATION RECHARGE TIME	>11mins 60mins	>11mins 60mins	>11mins 60mins	>11mins 60mins	<60mins 150-100mins
LENGTH	1052mm 41.4"	964mm 38"	956mm 37.6"	811mm 31.9"	823mm 32.4"
WIDTH	319mm 12.6"	272mm 10.7"	270mm 10.6"	270mm 10.6"	256mm 10.1"
DEPTH	274mm 10.8"	272mm 10.7"	276mm 10.9"	276mm 10.9"	253mm 9.96"
EN ■ CLASSIFICATION	■ BS62/820-25	■ AS54/725-21	■ AS43/725-19.4	-	-
EN SPREAD FORCE RANGE t=US Ton	62-522kN 6.9-58.6 USt	54-366kN 6.06-41.1 USt	43-280kN 4.8-31.5 USt	43-131kN 4.83-14.7 USt	-
NFPA□ FORCE RANGE t=US Ton (at/near tips)	60-112kN ■ 6.7-12.6 USt	50-93kN ■ 5.6-10.5 USt	39.1-69.2kN ■ 4.4-7.8 USt	39-53kN ■ 4.4-6 USt	39-63kN ■ 4.4-7.1 US
MAX SPREAD FORCE (Theoretical) t=US ton	875kN 98 USt	875kN 98.3 USt	875kN 98.4 USt	875kN 98.32 USt	836kN 94 USt
SPREAD DISTANCE	820mm 32.3"	725mm 28.5"	725mm 28.5"	510mm 20.1"	600mm 23.6"
PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton	79kN 8.8 USt	67kN 7.53 USt	51.7kN 5.8 USt	48kN 5.4 USt	23-43 (56) kN 2.6-4.8 (6.3) US
MAX PULL DISTANCE	700mm 27.6"	610mm 24"	613mm 24.1"	393mm 15.5"	440mm 17.3"
MAX SQUEEZE FORCE t=US ton	127kN 14.2 USt	135kN 15.17 USt	59kN 6.6 USt	47kN 5.28 USt	144kN 16.2 USt
WORKING PRESSURE (HYDRAULIC)	720 Bar 10.4K psi	720 Bar 10.4K psi	720 Bar 10.4K psi	720 Bar 10.4K psi	700 Bar 10.1K psi
WiFi/Bluetooth ■capable	■	■	■	■	■
REMOVABLE DOOR OPENING TIPS	■	■	■	■	■
ROTATE HEAD/HANDLE	- 360°	- 360°	- 360°	- 360°	- 360°
LED LIGHTS	6	6	6	6	4
IN-WATER USE BATTERY/TOOL IP	■ 67 57	■ 67 57	■ 67 57	■ 67 57	■ 68 58
NOTES	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation	Hurst E3 range is waterproof & can us IP68 battery. 5Ah battery reduces l by 20mm. 'Hero' graphics opti
WEBSITE	holmatro.com	holmatro.com	holmatro.com	holmatro.com	jawsoflife.com

X)	HURST (IDEX)	HURST (IDEX)	HURST (IDEX)	HYDRAM		
	SP 555	SP 777	M40 -Mammoth	Spreader		
ect	E3/E3connect	E3/E3connect	E3/E3connect	Underwater		
	25.2v	25.2v	25.2v	28V		
	■ ■ ■ ■			■ ■ ■ ■		
	N/A	N/A	N/A	N/A		
	19.9kg 43.9lb	23.4kg 51.6lb	24.9kg 54.9lb	00kg 00lb		
	1.4kg/1kg 3.2lb/2.3lb	1.6kg 3.5lb	1.6kg 3.5lb	00kg 00lb		
	Lukas 9Ah 5Ah	Lukas 9Ah 5Ah	Lukas 9Ah 5Ah	-0Ah 0Ah		
	<60mins 150-100mins	<60mins 150-100mins	<60mins 150-100mins	0mins 0-0mins		
	923mm 36.3"	997mm 39.3"	1106mm 43.6"	0mm 0"		
	265mm 10.4"	309mm 12.2"	309mm 12.1"	0mm 0"		
	253mm 9.96"	253mm 9.96"	253mm 9.96"	0mm 0"		
	-	-	-	-		
	-	-	-	-		
st	49-72kN ■ 5.5-8 USt	59-85kN ■ 6.6-9.6 USt	45-72kN ■ 5-8.1 USt	0kN ■ 0 USt		
	658kN 74 USt	600kN 67.4 USt	500kN 56.2 USt	0kN 0 USt		
	730mm 28.7"	813mm 32"	1018mm 40.1"	0mm 0"		
St	28-46 (58) kN 3.2-5.2 (6.5) USt	30-49 (60) kN 3.4-5.5 (6.7) USt	23-42 (50) kN 2.6-4.7 (5.6) USt	0 (0) kN 0-0(0) USt		
	569mm 22.4"	655mm 25.8"	~ 848mm 33"	~ 0mm 0"		
	115kN 12.9 USt	122kN 13.7 USt	N/A	N/A		
	700 Bar 10.1K psi	700 Bar 10.1K psi	700 Bar 10.1K psi	0 Bar 0K psi		
	■	■	■			
	■	-	-	-		
	- 360°	- 270°	- 360°	-		
	4	■	■			
	■ 68 58	■ 68 58	■ 68 58			
se T ength ion	Hurst E3 range is waterproof & can use IP68 battery. 5Ah battery reduces length by 20mm. 'Hero' graphics option	Hurst E3 range is waterproof & can use IP68 battery. 5Ah battery reduces length by 20mm. 'Hero' graphics option	Hurst E3 range is waterproof & can use IP68 battery. 5Ah battery reduces length by 20mm. 'Hero' graphics option			
	jawsoflife.com	jawsoflife.com	jawsoflife.com	hydram.com		

IMAGES NOT TO SCALE
OTHER TOOLS IN RANGE:
■= Combi ■= Cutter ■=Ram
■= Special Tools
●= PARTIAL FEATURE
□□□= Option
N/A = info Not Available/not given
■= (cyan border) WiFi is present on the model variant `shown in cyan

COMPANY	LUKAS (IDEX)	LUKAS (IDEX)	LUKAS (IDEX)	OGURA	OGURA
MODEL	SP 333	SP 555	SP 777	RPS-505	HRS941/HRS-9
SERIES	E3/E3connect	E3/E3connect	E3/E3connect	RP	SpreaderHe
VOLTAGE	25.2v	25.2v	25.2v	18v	18v
TOOLS IN RANGE	■ ■ ■ ■				■ ■ ■ ■
ORIGIN				●	●
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A
WEIGHT IN HAND inc BATTERY(IES) & TIPS	17.1kg 37.7lb	15.2kg 33.5lb	23.4kg 51.5lb	14.2kg 31.3lb	4.2kg +5.4kg 9.3lb +11.9lb
WEIGHT DEFAULT BATTERY	1.4kg/1kg 3.2lb/2.3lb	1.6kg 3.5lb	1.6kg 3.5lb	1-1.36kg 2.2-3lb	1-1.36kg 2.2-3lb
BATTERY Ah OPTIONS	Lukas 9Ah 5Ah	Lukas 9Ah 5Ah	Lukas 9Ah 5Ah	Makita 5-6Ah*	Makita 5-6Ah*
BATTERY DURATION RECHARGE TIME	<60mins 150-100mins	<60mins 150-100mins	<60mins 150-100mins	<12mins 55-120mins	<12mins 55-120mins
LENGTH	823mm 32.4"	1002mm 39.4"	997mm 39.3"	600mm 23.6"	328mm +352m 12.9"+13.9"
WIDTH	256mm 10.1"	265mm 10.4"	309mm 12.2"	206mm 8.1"	111mm +121m 4.4"+4.8"
DEPTH	253mm 9.96"	253mm 9.96"	253mm 9.96"	101mm 7.1"	272mm+78mm 10.7"+3.1"
EN ■ CLASSIFICATION	■ AS 42/600-18.3	■ AC 52/730-21.1	■ AS43/725-19.4	-	-
EN SPREAD FORCE RANGE t=US Ton	42-836kN 4.7-94 USt	52-658kN 5.8-74 USt	63-600kN 7.1-67.4 USt	-	<39.3kN 4.4 USt
NFPA□ FORCE RANGE t=US Ton (at/near tips)	-	-	-	-	-
MAX SPREAD FORCE (Theoretical) t=US ton	836kN 94 USt	658kN 74 USt	600kN 67.4 USt	745kN 83 USt	39.3kN 4.4 USt
SPREAD DISTANCE	600mm 23.6"	730mm 28.7"	813mm 32"	505mm 19.9"	158mm 6.2"
PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton	23-43 (56) kN 2.6-4.8 (6.3) USt	28-46 (58) kN 3.2-5.2 (6.5) USt	30-49 (60) kN 3.4-5.5 (6.7) USt	N/A	-
MAX PULL DISTANCE	440mm 17.3"	569mm 22.4"	655mm 25.8"	N/A	-
MAX SQUEEZE FORCE t=US ton	144kN 16.2 USt	115kN 12.9 USt	122kN 13.7 USt	692.5kN 77.8 USt	69kN 7.7 USt
WORKING PRESSURE (HYDRAULIC)	700 Bar 10.1K psi	700 Bar 10.1K psi	700 Bar 10.1K psi	N/A	N/A
WiFi/Bluetooth capable	■	■	■	- -	- -
REMOVABLE DOOR OPENING TIPS	■	■	■	■	-
ROTATE HEAD/HANDLE	- 360°	- 360°	- 360°	360° 360°	360° 270°
LED LIGHTS	2	6	6	-	-
IN-WATER USE BATTERY/TOOL IP	54 54	■ 57 57	■ 68 58	54 54	54 54
NOTES	All Can use IP68 battery. E2 & EWXT have been DISCONTINUED	All Can use IP68 battery. E2 & EWXT have been DISCONTINUED	All Can use IP68 battery. E2 & EWXT have been DISCONTINUED	*EU uses 5Ah, US tends to use 6Ah	Heads swap out in se via short hose 94 All heads intercha
WEBSITE	lukas.com	lukas.com	lukas.com	ogurarescuetools.com	ogurarescuetools.c

	OGURA	POWERHAWK TECHNOLOGIES	POWERHAWK TECHNOLOGIES	RESQTEC	RESQTEC	
934	HRS931/HRS-934	P16 / S-1601	P-16X /S-1601X	P-4X	X2	
ead	SpreaderHead	Legacy	X	EDD	EDD	
	18v	12v or 16v LiGHT	7.5/12v	43.2v	43.2v	28V
		■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■		■ ■ ■ ■
	●					
	N/A	N/A	N/A	N/A	N/A	N/A
	3.9kg +5.4kg 8.6lb+11.9lb	22.3kg 49.3lb	19.5kg 43lb	20kg 44lb	20.5kg 45.2lb	00kg 00lb
	1-1.36kg 2.2-3lb	*4.5kg / 9.9lb 15.9kg / *35lb	1..36kg 3lb	1kg 2.2lb	1kg 2.2lb	00kg 00lb
	Makita 5-6Ah*	Powerhawk 12.4Ah LiGHT 33Ah 12v	Powerhawk 7.5Ah or any 12v source	Resqtec 2.6Ah	Resqtec 2.6Ah	-0Ah 0Ah
	<12mins 55-120mins	>30 mins <120mins/<15hr	>30mins <120mins	<45mins 60mins	<45mins 60mins	0mins 0-0mins
m	303mm+352mm 11.9"+13.9"	635mm 25"	635mm 25"	711mm 28"	823mm 32.4"	0mm 0"
m	111mm +121mm 4.4"+4.8"	254mm 10"	254mm 10"	271mm 10.7"	273mm 10.7"	0mm 0"
n	272mm+78mm 10.7"+3.1"	305mm 12"	279mm 11"	274mm 10.8"	235mm 9.25"	0mm 0"
	-	-	-	-	■ AS38.4/607-20.5	-
	<39.3kN 4.4 USt	-	-	-	38.4-83.2kN 4.3-9.3 USt	-
	-	35.6-48.9kN ■ 4-5.4 USt	31.6-52.5kN ■ 3.5-5.9 USt	32.8-51kN ■ 3.7-5.7 USt	34.7-76.7kN ■ 3.9-8.6 USt	0kN ■ 0 USt
	39.3kN 4.4 USt	201.2kN 22.6 USt	711.7kN 80 USt	374kN 42 USt	342kN 38.4 USt	0kN 0 USt
	158mm 6.2"	356mm 14"	406.4mm 16"	401mm 15.8"	607mm 23.9"	0mm 0"
	-	N/A	N/A	-	27.4-59.6kN 3.1-6.7 USt	0 (0) kN 0-0(0) USt
	-	approx 270mm 11"	approx 312mm 12.5"	-	426mm 16.8"	~ 0mm 0"
	69kN 7.7 USt	N/A	N/A	36.3-57.7kN 4-6.48 USt	66.3-120.9kN 7.4-13.4 USt	N/A
	N/A	N/A	N/A	700 Bar 10.2K psi	720 Bar 10.4K psi	0 Bar 0K psi
	- -	- -	- -	- -	■	
	-	■	■	■	■	-
	360° -	70° 270°	70° 270°	61° 270°	- 360°	-
	-	-	-	□	6	
	54 54	54 54	54 54	54 54	■ 57 57	
	conds. Cutter, Spreader etc. attach or direct to the powerhead. 41 = US market. angeable between power units	Legacy only in support of existing purchases. Accepts all P-16X blades & can be retrofitted to become P-16X*Wt=battery+controller	interchangeable Cutter,spreader &combi heads. Both P16&P16X can use a 12v car battery or any 12v power source	3x interchangeable heads/ blades. Rear handle option. *Also 28Ah powerpack. Jaw recess (reach)= 118mm	Cutting tips option. Auto high-temp shut-off. Step less speed increase	
	om	ogurarescuetools.com	powerhawk.com	powerhawk.com	rescue.resqtec.com	rescue.resqtec.com	.com

IMAGES NOT TO SCALE
OTHER TOOLS IN RANGE:
■= Combi ■= Cutter ■=Ram
■= Special Tools
●= PARTIAL FEATURE
□□□= Option
N/A = info Not Available/not given
■= (cyan border) WiFi is present on the model variant `shown in cyan

COMPANY	SCORPE	TNT RESCUE	TNT RESCUE	TNT RESCUE	WEBER RESCUE	
MODEL	Spreader MS	ES100-32	ES100-28	ES100-24	SP 44 AS 1093703	SP
SERIES	GreenSpirit II	Storm Surge	Storm Surge	Storm Surge	E-Force3	
VOLTAGE	18v/28v	18v/20v	18v/20v	18v/20v	28v	
TOOLS IN RANGE	■ ■ ■		■ ■ ■			
ORIGIN						
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A	
WEIGHT IN HAND inc BATTERY(IES) & TIPS	18.1kg 39.8lb	23.9-23.5kg 51.8-52.6lb	23.31-22.9kg 51.4-50.55lb	22.31-22.7kg 49.2-50lb	17.3kg 38lb	
WEIGHT DEFAULT BATTERY	1kg 2.2lb	1.1kg /2.4lb 0.6kg / 1.3lb	1.1kg /2.4lb 0.6kg / 1.3lb	1.1kg /2.4lb 0.6kg / 1.3lb	1kg 2.2lb	
BATTERY Ah OPTIONS	Milwaukee 8Ah M18 5Ah M28	Milwaukee M18 8/9Ah. Makita6Ah DeWalt FlexVolt20 9Ah	Milwaukee M18 8/9Ah. Makita 6Ah DeWalt FlexVolt20 9Ah	Milwaukee M18 8/9Ah. Makita 6Ah DeWalt FlexVolt20 9Ah	Milwaukee M28 5Ah	Mi
BATTERY DURATION RECHARGE TIME	60/80mins 45-90mins	10-15mins 87 / 60mins	10-15mins 87 / 60mins	10-15mins 87 / 60mins	<45-80mins 60mins	
LENGTH	912mm 36"	944.2mm 37.2"	884mm 34.8"	823.77mm 32.43"	877mm 34.5"	
WIDTH	250mm 9.8"	283mm 11.15	283mm 11.15	283mm 11.15"	239mm 9.4"	
DEPTH	222mm 8.7"	345.4mm 13.6"	345.4mm 13.6"	344.9mm 13.58"	241mm 9.5"	
EN ■ CLASSIFICATION	■ AS44/610-18.1	-	-	-	■ AS44/610-17.3	■
EN SPREAD FORCE RANGE t=US Ton	44-857kN 5-96.3 USt	-	-	-	44-857kN 5-96.3 USt	
NFPA□ FORCE RANGE t=US Ton (at/near tips)	-	■ 225-895kN 25.3-100.56 USt	■ 249-1014kN 27.98-113.93USt	■ 286-1078kN 32-121 USt	-	
MAX SPREAD FORCE (Theoretical) t=US ton	171kN 19.2 USt	895kN 100.56 USt	1014kN 113.93 USt	-	-	
SPREAD DISTANCE	610mm 24"	700.1mm 31.5"	698.5mm 27.5"	596.9mm 23.5"	610mm 24"	
PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton	68kN 7.6 USt	41.54kN 4.67 USt	49.7kN 5.58 USt	63.9kN 7.2 USt	68kN 7.6 USt	
MAX PULL DISTANCE	465mm 18.3""	565.2mm 22.25"	463.5mm 18.25"	463.5mm 18.2"	465mm 18.3"	
MAX SQUEEZE FORCE t=US ton	149kN 16.9 USt	N/A	N/A	N/A	149kN 16.9 USt	
WORKING PRESSURE (HYDRAULIC)	700 Bar 10.2K psi	722 Bar 10.5K psi	722 Bar 10.5K psi	722 Bar 10.5K psi	700 Bar 10.2K psi	
WiFi/Bluetooth ✱capable	- -	- -	- -	- -	- -	
REMOVABLE DOOR OPENING TIPS	-	■	■	■	■■	
ROTATE HEAD/HANDLE	- 110°	- -	- -	- -	- 360°	
LED LIGHTS	4	4	4	4	4	
IN-WATER USE BATTERY/TOOL IP	■ 54/68* 68	54 54	54 54	54 54	54 54	
NOTES	Converter available for M28 & other batteries. * IP68 with M18 & waterproof cover (not shown)	TNT prices include 2 batteries and Dual Rapid charger. Storm2 series DISCONTINUED Mains adapter=option.	TNT prices include 2 batteries and Dual Rapid charger. Storm2 series DISCONTINUED Mains adapter=option	TNT prices include 2 batteries and Dual Rapid charger. Storm2 series DISCONTINUED Mains adapter.option	All E-Force tools can convert to hose	All
WEBSITE	scorpe.net	tntrescue.com	tntrescue.com	tntrescue.com	weber.com	

BATTERY SPREADERS

WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE
54 AS 1091736	SP 50 BS 1091735	SP 44 1101468	SP 54 AS 1101469	SP 50 BS 1101548	SP 60 BS 00000000	SP 60 BS 0000000
E-Force3	E-Force3	Smart Force	Smart Force	Smart Force	E-Force3	Smart Force
28v	28v	18v	18v	18v	28v	18v
N/A	N/A	N/A	N/A	N/A	N/A	N/A
20.7kg 45.5lb	20.9kg 46lb	18.2kg 40lb	21.6kg 47.5lb	21.8kg 48lb	23.7kg 52.1lb	24.7kg 54.3lb
1kg 2.2lb	1kg 2.2lb	1.1kg 2.33lb	1.1kg 2.33lb	1.1kg 2.33lb	1kg 2.2lb	1.1kg 2.33lb
lwaukee M28 5Ah	Milwaukee M28 5Ah	Milwaukee M18 8Ah/12Ah	Milwaukee M18 8Ah/12Ah	Milwaukee M18 8Ah/12Ah	Milwaukee M28 5Ah	Milwaukee M18 8Ah/12Ah
<45-80mins 60mins	<45-80mins 60mins	60/90mins 45-83mins	60/90mins 45-83mins	60/90mins 45-83mins	<45-80mins 60mins	60/90mins 45-83mins
982mm 38.7"	1015mm 40"	893mm 35.2"	999mm 39.30"	1032mm 40.6"	1040mm 41"	1080mm 42"
282mm 11.1"	282mm 11.1"	239mm 9.4"	282mm 11.1"	282mm 11.1"	307mm 12.1"	307mm 12.1"
241mm 9.5"	241mm 9.5"	228mm 9.5"	228mm 9.5"	228mm 9.5"	241mm 9.5"	228mm 9"
AS55/735-20.7	BS50/805-20.9	AS44/610-18.2	AS55/735-20.7	BS50/805-21.8	BS60/820-23.7	BS60/820-24.7
55-501kN 5.2-56.3 USt	50-501kN 5.6-56.3 USt	44-857kN 5-96.3 USt	50-501kN 5.6-56.3 USt	50-501kN 5.6-56.3 USt	60-638kN 6.7-71.7 USt	60-638kN 6.7-71.7 USt
-	-	-	-	-	-	-
-	-	-	-	-	-	-
735mm 28.9"	805mm 31.7"	610mm 24"	735mm 28.9"	805mm 31.7"	820mm 32.2"	820mm 32.2"
70kN 7.9 USt	67kN 7.5 USt	68kN 7.6 USt	70kN 7.9 USt	67kN 7.5 USt	74kN 8.3 USt	74kN 8.3 USt
620mm 24.4"	680mm 26.8"	465mm 18.3"	620mm 24.4"	680mm 26.80"	702mm 27.6"	702mm 27.6"
144kN 16.2 USt	144kN 16.2 USt	149kN 16.9 USt	144kN 16.2 USt	144kN 16.2 USt	114kN 12.8 USt	114kN 12.8 USt
700 Bar 10.2K psi	700 Bar 10.2K psi	700 Bar 10.2K psi	700 Bar 10.2K psi	700 Bar 10.2K psi	700 Bar 10.2K psi	700 Bar 10.2K psi
- -	- -				- -	
- 360°	- 360°	- 360°	- 360°	- 360°	- 360°	- 360°
4	4	4	4	4	4	4
54 54	54 54	54/68* 68	54/68* 68	54/68* 68	54 54	54/68* 68
E-Force tools can convert to hose	All E-Force tools can convert to hose	All E-Force tools can convert to hose. * IP68 with waterproof cover	All E-Force tools can convert to hose. *IP68 with waterproof cover	All E-Force tools can convert to hose. * IP68 with waterproof cover	All E-Force tools can convert to hose	All E-Force tools can convert to hose. * IP68 with waterproof cover
weber.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

SKYLOTEC

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
- =BATTERY TOOLS
- = Combi
- = Cutter
- =Ram
- = Special Tools

●● = PARTIAL or OK but not ideal
□□ = Option
N/A = info Not Available/not given

COMPANY	AOLAI RESCUE	AOLAI RESCUE	EDILGRAPPA	GENESIS RESCUE	GENESIS RESCUE	GENESI RESCU
SERIES MODEL VARIANT			DE700	S44 SL	S49 XL	S53 XL
Product Code						
TOOLS IN RANGE						
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 54lb	26kg 57.2lb	15.5kg 00lb	17.3kg 38lb	19.9kg 43.9lb	20.3kg 44.7lb
LENGTH	905mm 35.6"	1194mm 47"	775mm 00"	768mm 30.2"	766mm 30.2"	836mm 32.9"
WIDTH	350mm 13.77"	320mm 12.6"	280mm 11"	250mm 9.8"	243mm 9.6"	299mm 11.8"
DEPTH	279mm 10.9"	265mm 10.4"	190mm 7.5"	190mm 7.5"	199mm 7.8"	216mm 8.5"
EN CLASSIFICATION EN SPREAD FORCE RANGE t=US Ton	- 47-124kN 5.7-13.9 USt	- 52-562kN 5.8-63 USt	AS105/710-15.5 - -	- - -	- - -	- - -
NFPA□ FORCE RANGE t=US Ton (at/near tips)	-	-	38-105kN 4.2-11.8 USt	75-151kN 0-0 USt	49-61kN 0-0 USt	52.8-81.3 0-0 USt
MAX SPREAD FORCE (Theoretical) t=US ton	-	-	367kN 41.25 USt	-	-	-
SPREAD DISTANCE	650mm 25.6"	820mm 32.2"	710mm 28"	610mm 24"	710mm 28"	800mm 31.5"
PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton	(68)kN (7.6) USt	(73)kN (8.2) USt	63.7kN 7.1 USt	30-44kN 0-0 USt	38-48kN 0-0 USt	38.6-66k 0-0 USt
MAX PULL DISTANCE	520mm 20.5"	716mm 28"	595.5mm 00"	? ?	561mm 22"	645mm 25.4"
MAX SQUEEZE FORCE t=US ton	69kN 7.7 USt	140kN 15.8 USt	49kN 5.5 USt	- -	- -	- -
WORKING PRESSURE)	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2
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	genesisrescue.com	genesisrescue.com	genesisrescue

HOSE-FED SPREADERS

	GENESIS RESCUE S60 XL	**GENESIS RESCUE S80 XL**		**HOLMATRO CORE SP5240CL**	**HOLMATRO CORE SP5240**	**HOLMATRO CORE SP5250**	**HOLMATRO CORE SP5260**
	N/A	N/A		N/A	N/A	N/A	N/A
	24.7kg 40lb	25.1kg 55.3lb		15.2kg 33.5lb	19.4kg 42.8lb	21kg 46.3lb	25kg 55.1lb
	856mm 54.5"	749mm 29.5"		811mm 31.9"	956mm 37.6"	964mm 38"	1052mm 41.4"
	329mm 13"	329mm 13"		270mm 10.6"	270mm 10.6"	272mm 10.7"	319mm 12.6"
	213mm 8.4"	213mm 8.4"		276mm 10.9"	276mm 10.9"	272mm 10.7"	274mm 10.8"
	- -	- -		- 43-131kN 4.83-14.7 USt	AS43/725-19.4 43-280kN 4.8-31.5 USt	AS54/725-21 54-366kN 6.06-41.1 USt	BS62/820-25 62-522kN 6.9-58.6 USt
kN	63-84.7kN 0-0 USt	87.7-115.5kN 0-0 USt		39-53kN 4.4-6 USt	39.1-69.2kN 4.4-7.8 USt	50-93kN 5.6-10.5 USt	60-112kN 6.7-12.6 USt
	-	-		875kN 98.32 USt	875kN 98.4 USt	875kN 98.3 USt	875kN 98 USt
	810mm 31.9"	735mm 28.9"		510mm 20.1"	725mm 28.5"	725mm 28.5"	820mm 32.3"
N	45.2-63.5kN 0-0 USt	60-95.8kN 0-0 USt		48kN 5.4 USt	51.7kN 5.8 USt	67kN 7.53 USt	79kN 8.8 USt
	643mm 25"	444mm 17.5"		393mm 15.5"	613mm 24.1"	610mm 24"	700mm 27.6"
	- -	144kN 16.2 USt		47kN 5.28 USt	59kN 6.6 USt	135kN 15.17 USt	127kN 14.2 USt
2Kpsi	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. On-tool charging. Stepless speed maximisation	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation
.com	genesisrescue.com	genesisrescue.com		holmatro.com	holmatro.com	holmatro.com	holmatro.com

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
- =BATTERY TOOLS
- = Combi
- = Cutter
- =Ram
- = Special Tools

●● = PARTIAL or OK but not ideal
□□□ = Option
N/A = info Not Available/not given

COMPANY	HURST (IDEX)	HYDRAM	HYDRAM	HYDRAM	HYDRAM	LIBERVI
SERIES MODEL VARIANT	SP 555	EHM750	EHL800	EHL620	EHS570	E300 ME
Product Code	0000000	0000000	0000000	0000000	0000000	0000000
TOOLS IN RANGE	■■■■■		■■■■			
ORIGIN	DE US	FR	FR	FR	FR	FR
COST inc tax / VAT	$12,110.	N/A	N/A	N/A	N/A	N/A
WEIGHT inc TIPS	20kg 44.1lb	18.48kg 00lb	26.18kg 00lb	23.88kg 00lb	31.48kg 00lb	14.5kg 28lb
LENGTH	1002mm 39.4"	834mm 00"	885mm 00"	786mm 00"	936mm 00"	480mm 19"
WIDTH	265mm 10.4"	335mm 00"	385mm 00"	385mm 00"	395mm 00"	280mm 11"
DEPTH	280mm 11"	230mm 00"	225mm 00"	220mm 00"	269mm 00"	170mm 6.5"
EN CLASSIFICATION EN SPREAD FORCE RANGE t=US Ton	- -	AS41-750/18.48 41-132kN 00-00USt	BS 63-800/26.18 66-202kN 00-00USt	CS 88620/23.88 97-373kN 00-00USt	CS 91-565/31.48 92-260kN 00-00USt	- 00-00kN 00-00US
NFPA□ FORCE RANGE t=US Ton (at/near tips)	49-72kN 5.5-8 USt	-	-	-	-	
MAX SPREAD FORCE (Theoretical) t=US ton	658kN 74 USt	132kN 00 USt	202kN 00 USt	373kN 00 USt	260kN 00 USt	84kN 00USt
SPREAD DISTANCE	730mm 28.7"	750mm 00"	800mm 00"	620mm 00"	565mm 00"	288mm 11"
PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton	28-46 (58) kN 3.2-5.2 (6.5) USt	41-49kN 00USt	51.2-128kN 00USt	82-138kN 00-00USt	62-114.2kN 00-00USt	-
MAX PULL DISTANCE	569mm 22.4"	502mm 00"	565mm 00"	378mm 00"	431mm 00"	00mm 00"
MAX SQUEEZE FORCE t=US ton	115kN 12.9 USt	-	-	-	-	00kN 00USt
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	hydram.com	hydram.com	hydram.com	hydram.com	

HOSE-FED SPREADERS

T	LIBERVIT	LUKAS (IDEX)	LUKAS (IDEX)	LUKAS (IDEX)	RESQTEC	RESQTEC	RESQTEC
E4	E500 ME5	SP 333	SP 555	SP 777	X2	X4	X6
	0000000	0000000	0000000	0000000	0000000	0000000	0000000
	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	16.7kg 36.7lb	17.3kg 38.1lb	20kg 44.1lb	23.6kg 52lb	13.2kg 00lb	16.5kg 00lb	24.9kg 00lb
	589mm 23"	905mm 35.6"	1002mm 39.4"	1080mm 42.5"	711mm 28"	823mm 32.4"	823mm 32.4"
	226mm 9"	256mm 10.1"	265mm 10.4"	309mm 12.2"	271mm 10.7"	273mm 10.7"	273mm 10.7"
	228mm 9"	253mm 9.96"	280mm 11"	285mm 11.2"	274mm 10.8"	235mm 9.25"	235mm 9.25"
t	- 00-00kN 00-00USt	AS 42/600-18.3 42-836kN 4.7-94 USt	AS 52/730-20.9 52-658kN 5.8-74 USt	BS 63/813-24.5 63-600kN 7.1-67.4 USt	AS40.3-616-13.2 40.3-347kN 4.5-39USt	AS52-700-16.5 52-3643kN 5.8-409USt	BS60.4-802-20.5 60.4-2273.8kN 6.8-255.6USt
					■	■	■
	50kN 00USt	836kN 94 USt	658kN 74 USt	600kN 67.4 USt	347kN 39USt	3643kN 409USt	2273.8kN 255.6USt
	500mm 19.5"	600mm 23.6"	730mm 28.7"	813mm 32"	616mm 00"	670mm 00"	802mm 00"
	-	23-43 (56) kN 0 (0) USt	28-46 (58) kN 3.2-5.2 (6.5) USt	30-49 (60) kN 3.4-5.5 (6.7) USt	45.4-100kN 5.1-11.2USt	57.8-131.8kN 6.5-14.8USt	27.4-59.6kN 00-00USt
	00mm 00"	440mm 17.3"	569mm 22.4"	655mm 25.8"	-	-	-
	00kN 00USt	144kN 5.7 USt	115kN 12.9 USt	122kN 13.7 USt	62.4-103kN 7-11.5USt	80.1-197.3kN 9-22USt	173-245kN 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
	ME5 is an underwater-capable version of the E500				138° jaw opening. *Aircraft Jaws option.	149° jaw opening *Aircraft Jaws option.	130° jaw opening. *Aircraft Jaws option.
		lukas.com	lukas.com	lukas.com	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
- =BATTERY TOOLS
- = Combi
- = Cutter
- =Ram
- = 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 RESC
SERIES MODEL VARIANT	SL-24	SL-28	S-100-24	S-100-28	S-100-32	S-200-2
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 35.9lb	16.6kg 36.6lb	18.7kg 41.2lb	20.6kg 45.4lb	23.5kg 52.6lb	21.2kg 47lb
LENGTH	723.9mm 28.5"	772.2mm 30.4"	774.7mm 30.5"	894.1mm 35.2"	944.2mm 37.2"	774.7mm 30.5"
WIDTH	335.3mm 177.8"	335.3mm 177.8"	342.9mm 13.5"	342.9mm 13.5"	335.3mm 177.8"	342.9mm 13.5"
DEPTH	177.8mm 7"	177.8mm 7"	165.1mm 6.5"	165.1mm 6.5"	345.4mm 13.6"	165.1mm 6.5"
EN CLASSIFICATION EN SPREAD FORCE RANGE t=US Ton	AS39/609-17 - -	AS28/711-17 - -	AS47/609-19 - -	AS39/711-20 - -	AS35/812-21 - -	BS64/609- - -
NFPA FORCE RANGE t=US Ton (at/near tips)	155-857kN 00-00 USt	143-793kN 00-00USt	286-1078kN 32-121 USt	225-895kN 0-0USt	225-895kN 25.3-100.56 USt	453-1343 00-00USt
MAX SPREAD FORCE (Theoretical) t=US ton	857kN 00USt	793kN 00 USt	1078kN 121 USt	1014kN 00 USt	895kN 00 USt	-
SPREAD DISTANCE	609.6mm 24"	711.2mm 28"	609.6mm 24"	711.2mm 28"	812.8mm 32"	609.6mm 24"
PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton	131.2kN 00USt	119kN 00 USt	130kN 00 USt	102kN 00 USt	41.54kN 4.67 USt	205kN USt
MAX PULL DISTANCE	?mm ?"	?mm ?"	?mm ?"	?mm ?"	?mm ?"	?mm ?"
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 / 10.5
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

CUE 4	TNT RESCUE S-200-28 0000000	TNT RESCUE S-200-32 0000000	WEBER RESCUE SP 44 AS 0000000	WEBER RESCUE SP 50 BS 0000000	WEBER RESCUE SP 54 AS 0000000	WEBER RESCUE SP 64 BS 0000000	WEBER RESCUE SP 84 CS 1093904
	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	22.4kg 49.6lb	23.1kg 51.2lb	17.3kg 38lb	20.9kg 46lb	20.7kg 45.5lb	18.2kg 40lb	19.8kg 00lb
	830.6mm 32.7"	894.1mm 35.2"	877mm 34.5"	1015mm 40"	982mm 38.7"	893mm 35.2"	790mm 00"
	342.9mm 13.5"	335.3mm 177.8"	239mm 9.4"	282mm 11.1"	282mm 11.1"	239mm 9.4"	307mm 00"
	165.1mm 6.5"	345.4mm 13.6"	241mm 9.5"	241mm 9.5"	241mm 9.5"	228mm 9.5"	210mm 00"
22	BS54/711-23 - -	BS45/812-24 - -	AS44/610-17.3 44-857kN 5-96.3 USt	BS50/805-20.9 50-501kN 5.6-56.3 USt	AS55/735-20.7 55-501kN 6.2-56.3 USt	AS44/610-18.2 44-857kN 5-96.3 USt	CS82/660-19,8 82-680kN 00-00USt
kN	394-1199kN 00-00USt	356-1099kN 00-00 USt	-	-	-	-	-
	1099kN 00 USt	1099kN 00 USt	-	-	-	-	680kN
	711.2mm 28"	812.8mm 32"	610mm 24"	805mm 31.7"	735mm 28.9"	610mm 24"	660mm 00"
	49.7kN 5.58 USt	161kN 00USt	68kN 7.6 USt	67kN 7.5 USt	70kN 7.9 USt	68kN 7.6 USt	70kN 7.9 USt
	?mm ?"	?mm ?"	465mm 18.3"	680mm 26.8"	620mm 24.4"	465mm 18.3"	540mm 00"
	N/A	N/A	149kN 16.9 USt	144kN 16.2 USt	144kN 16.2 USt	149kN 16.9 USt	129kN 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 can convert to hose and vice-versa	All Weber battery tools can convert to hose and vice-versa	All Weber battery tools can convert to hose and vice-versa	All Weber battery tools can convert to hose and vice-versa	All Weber battery tools can convert to hose and vice-versa
om	tntrescue.com	tntrescue.com	weber.com	weber.com	weber.com	weber.com	weber.com

'hydraulic' BATTERY RAMS

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 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*

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 MAY NOT 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 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 snot 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 jn 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 e³ / 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
■= (cyan border) WiFi is present on the model variant `shown in cyan

COMPANY	AMKUS	AMKUS	AOLAI RESCUE	AOLAI RESCUE	EDILGRAPPA
MODEL VARIANT	ITR230	ION ITR500	GYCDD-A	GYDD-171-388/576C	MT730N-E
SERIES	ION	Compact	-	-	-
VOLTAGE	54/60v	54/60v	28v	28v	54/60v
TOOLS IN RANGE	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■ ■
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 Telescopi
WEIGHT IN HAND inc BATTERY exc EXTENSION	17.9kg 39.4lb	15.8kg 56.9lb	19.8kg 43.6lb	20.4kg 45lb	17.9kg 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 Ah OPTIONS	DeWalt FlexVolt 9Ah	DeWalt FlexVolt 6Ah 9, 12Ah	5Ah	5Ah	DeWalt FlexVolt 9Ah
BATTERY DURATION RECHARGE TIME	10-25mins 85mins	10-15mins 60mins	45-60mins 90mins	45-60mins 90mins	10-25mins 85mins
LENGTH retracted/extended*	290mm/ 11.4" 574mm/22.6"	558mm/ 21.9" 1283mm/50.5"	560mm/ 22.3" 930mm/0"	565mm/ 22.2" 1355mm/53.3"	290mm/ 11.4" 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" 457mm/18" 680mm/27" -	NO -	NO - -	NO --	254mm/10" 457mm/18" 680mm/27" -
EN ■ NFPA □	■ ■	■	■*	■* ■	■ ■
EN CLASSIFICATION	TR215/160-76.4/124-16.7	-	-	-	TR215/160-76.4/124-1
PUSH FORCE(S for telescoping) t=US Ton	215-76.4kN 24.2-8.6 USt	206-96kN 23.2-10.8 USt	120kN 13.5 USt	145.7-75.5kN 16.4-8.5 USt	215-76.4kN 24.2-8.6 USt
STROKE RANGE	160/124mm 6.3/4.9"	381/346mm 15/13.5"	370mm 14.6"	415/380mm 16.3/15"	160/124mm 6.3/4.9"
TOTAL STROKE DISTANCE	284mm 11.2"	727mm 25.5"	370mm 14.6"	975mm 38.4"	284mm 11.2"
WORKING PRESSURE (HYDRAULIC)	700 Bar 10.2K psi	700 Bar 10.2K psi	720 Bar 10.4K psi	720 Bar 10.4K psi	700 Bar 10.2K psi
WiFi/Bluetooth capable	--	--	--	--	--
SPEED CONTROL ON-BOARD LED	Rotating Star Grip -	Rotating Star Grip -	Rotating Star Grip □	Rotating Star Grip □	Rotating Star Gri
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

	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE
	21-36	21-36	31" Push-Pull	41" Push-Pull	22-54	22-54
	E-Force SL3	E-Force SLi	E-Force SL3	E-Force SL3	E-Force SL3	E-Force SLi
	28v	18v	28v	28v	28v	18v
	N/A	N/A	N/A	N/A	N/A	N/A
ng	1-Stage	1-Stage	1-Stage	1-Stage	2-Stage Telescoping	2-Stage Telescoping
	17.3kg 38.1lb	18.4kg 40.6lb	18.2kg 40.1lb	21.6kg 47.6lb	20.1kg 44.3lb	21.6kg 47.6lb
	1.4kg/1kg 3.2lb/2.3lb	1.1/1.7kg 2.33/3.74lb	1.4kg/1kg 3.2lb/2.3lb	1.4kg/1kg 3.2lb/2.3lb	1.4kg/1kg 3.2lb/2.3lb	1.1/1.7kg 2.33/3.74lb
	Genesis/ Milwaukee 5Ah*	Milwaukee M18 8Ah/12Ah*	Genesis/ Milwaukee 5Ah*	Genesis/ Milwaukee 5Ah*	Genesis/ Milwaukee 5Ah*	Milwaukee M18 8Ah/12Ah*
	<45mins 90mins	60/90mins 45-83mins	<45mins 90mins	<45mins 90mins	<45mins 90mins	60/90mins 45-83mins
	540mm /21.3" 908mm /35.7"	540mm /21.3" 908mm /35.7"	553mm /21.8" 840mm /33.1"	653mm /25.7" 1061mm /41.8"	587mm /23.1" 1387mm /53"	587mm /23.1" 1387mm /54.6"
	340mm / 13.4"	340mm / 13.4"	347mm / 13.7"	347mm / 13.7"	365mm / 14.4"	365mm / 14.4"
	134mm/ 5.3"	134mm/ 5.3"	142mm / 5.6"	142mm / 5.6"	134mm /5.3"	134mm / 5.3"
	76mm/3" 127mm/5" 254mm/10" Angled V-head Pull shackles, pins & adapters	50mm/2" 150mm/6" 270mm/10.6"	76mm/3" 127mm/5" 254mm/10" Angled V-head Pull shackles, pins & adapters	76mm/3" 127mm/5" 254mm/10" Angled V-head Pull shackles, pins & adapters	NO	NO
	■	■	■	■	■	■
16.7	-	-	-	-	-	-
	111kN 12.5 USt	111kN 12.5 USt	142 (47*) kN 16 (1.8*) USt	142 (47*) kN 16 (1.8*) USt	138(47kN*) 15.5 (1.8*) USt	108/62kN 12.1/7 USt
	368mm 14.5"	368mm 14.5"	287mm 11.3"	408mm 16.1"	428/372mm 16.8- 14.7"	428/372mm 16.8- 14.7"
	368mm 14.5"	368mm 14.5"	287mm 11.3"	408mm 16.1"	800mm 31.5"	800mm 31.5"
	700 Bar 10.1K psi	550 Bar 7.9K psi	700 Bar 10.1K psi	700 Bar 10.1K psi	700 Bar 10.1K psi	550 Bar 7.9K psi
	--	■	--	--	--	■
p -	Rocker switch ☐	Rocker switch ☐	Rocker switch ☐	Rocker switch ☐	Rocker switch ☐	Rocker switch ☐
	54 54	■ 68* 58	54 54	54 54	54 54	■ 68* 58
	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. *=PULL-FORCE	All E-Force tools can convert to hose. *=PULL-FORCE	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
	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com

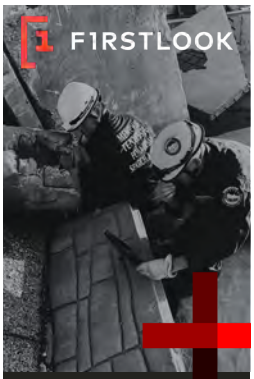
Images not exactly to Scale but comparative within their own series of tools.

OTHER TOOLS IN RANGE:
■= Combi ■= Spreader
■=Cutter ■= Special Tools
●= PARTIAL FEATURE
□□□= Option
N/A = info Not Available/not given
■= (cyan border) WiFi is present on the model variant `shown in cyan

COMPANY	GENESIS RESCUE	GENESIS 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	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■
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 inc BATTERY exc EXTENSION	21.7kg 47.8lb	22.7kg 50lb	14.1kg 31.1lb	15.5kg 34.2lb	18.2kg 40.1lb
WEIGHT - DEFAULT BATTERY	1.4kg/1kg 3.2lb/2.3lb	1.1/1.7kg 2.33/3.74lb	1.5kg / 3.3lb	1.5kg / 3.3lb	1.5kg / 3.3lb
BATTERY Ah OPTIONS	Genesis/ Milwaukee 5Ah*	Milwaukee M18 8Ah/12Ah*	Holmatro PBPA287 8Ah	Holmatro PBPA287 8Ah	Holmatro PBPA287 8Ah
BATTERY DURATION RECHARGE TIME	<45mins 90mins	60/90mins 45-83mins	30-90mins* 60mins	30-90mins* 60mins	30-90mins* 60mins
LENGTH retracted/extended*	700mm /27.6" 1500mm /59"	700mm /27.6" 1500mm /59"	385mm / 15.2" 600mm/23.6"	385mm/ 15.2" 792mm/31.2"	578mm/ 22.8" 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" (3.3kg/ 7.3lb) 440mm/17.3" (4.6kg/10.1lb)	220mm/8.7" (3.3kg/ 7.3lb) 440mm/17.3" (4.6kg/10.1lb)	220mm/8.7" (3.3kg/ 7.3lb) 440mm/17.3" (4.6kg/10.1lb)
EN ■ NFPA □	■	■	■ ■	■ ■	■ ■
EN CLASSIFICATION	-	-	R136/215-14.1	TR136/215-65/192-15.5	R136/407-18.2
PUSH FORCE(S for telescoping) t=US Ton	108/62kN 0USt	108/62kN 0USt	136kN 15.3 USt	65-136kN 7.3-15.3 USt	136kN 15.3 USt
STROKE RANGE	428/372mm 16.8- 14.7"	428/372mm 16.8- 14.7"	-	215/192mm 8.5/7.6"	-
TOTAL STROKE DISTANCE	800mm 31.5"	800mm 31.5"	215mm 8.5"	407mm 16"	407mm 16"
WORKING PRESSURE (HYDRAULIC)	700 Bar 10.1K psi	700 Bar 10.1K psi	540 Bar 7.8K psi	540 Bar 7.8K psi	540 Bar 7.8K psi
WiFi/Bluetooth capable	- -	■	ᛒ	ᛒ	ᛒ
SPEED CONTROL ON-BOARD LED	Rocker switch □	Rocker switch □	2speed throttle □	2speed throttle □	2speed throttle □
IN-WATER USE BATTERY/TOOL IP	54 54	■ 68* 58	■ 67 57	■ 67 57	■ 67 57
NOTES	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	Push-button ram ext. do not need original ram head to be removed.On-tool charging. tepless speed maximisation. *11mins at constant max force.	Push-button ram ext. do not need original ram head to be removed.On-tool charging. tepless speed maximisation. *11mins at constant max force.	Push-button ram ext. do need original ram head t removed.On-tool charg tepless speed maximisat *11mins at constant m force.
WEBSITE	genesisrescue.com	genesisrescue.com	holmatro.com	holmatro.com	holmatro.com

BATTERY RAMS

	HOLMATRO PTR50	HOLMATRO PTR51	HURST (IDEX) R320	HURST (IDEX) R521	HURST (IDEX) CR 522
	PENTHEON	PENTHEON	E3/E3connect	E3/E3connect	E3/E3connect
	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 45.2lb	21.4kg 47.2lb	13.7kg 30.2lb	19.4kg 42.8lb	21.6kg 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 PBPA287 8Ah	Holmatro PBPA287 8Ah	Lukas 9Ah 9AhSaltWater, 5Ah	Lukas 9Ah 9AhSaltWater, 5Ah	Lukas 9Ah 9AhSaltWater, 5Ah
	30-90mins* 60mins	30-90mins* 60mins	30-60mins 75-150mins	30-60mins 75-150mins	30-60mins 75-150mins
	578mm/ 22.8" 1365mm/53.7"	713mm/ 28.1" 1500mm/59.1"	340mm /13.4" 640mm /25.2"	579mm /22.8" 1359mm /53.5"	657mm /25.9" 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" (3.3kg/ 7.3lb) 440mm/17.3" (4.6kg/10.1lb)	NO	50mm/2" 150mm/6" 270mm/10.6"	NO	50mm/2" 150mm/6" 270mm/10.6"
	TR-136/405-65/382-20.5	TR136/405-65/382-21.4	-	-	-
	65-136kN 7.3-15.3 USt	65-136kN 7.3-15.3 USt	60-127kN 6.74-14.27 USt	60-127kN 6.74-14.27 USt	60-127kN 6.74-14.27 USt
	405/382mm 15.9/15"	405/382mm 15.9/15"	164/136mm 6.5-5.4"	403/377mm 15.9-14.8"	451/425mm 17.75-16.7"
	787mm 31"	787mm 31"	300mm 11.8"	780mm 30.7"	876mm 34.5"
	540 Bar 7.8K psi	540 Bar 7.8K psi	500 Bar 7.2K psi	500 Bar 7.2K psi	500 Bar 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. tepless speed maximisation. *11mins at constant max force.	Push-button ram ext. do not need original ram head to be removed.On-tool charging. tepless 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 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

www.firstlook.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
■= (cyan border) WiFi is present on the model variant `shown in cyan

COMPANY	LUKAS (IDEX)	LUKAS (IDEX)	LUKAS (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	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■
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 inc BATTERY exc EXTENSION	13.7kg 30.2lb	19.4kg 42.8lb	21.6kg 47.6lb	14.1kg 31.1lb	4.2kg +3.1kg 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 2.2-3lb	1-1.36kg 2.2-3lb
BATTERY Ah OPTIONS	Lukas 9Ah 9AhsaltWater, 5Ah	Lukas 9Ah 9AhsaltWater, 5Ah	Lukas 9Ah 9AhsaltWater, 5Ah	Makita 5-6Ah*	Makita 5-6Ah*
BATTERY DURATION RECHARGE TIME	30-60mins 75-150mins	30-60mins 75-150mins	30-60mins 75-150mins	<12mins 55-120mins	<12mins 55-120mins
LENGTH retracted/extended*	340mm /13.4" 640mm /25.2"	579mm /22.8" 1359mm /53.5"	657mm /25.9" 1533mm /60.3"	529mm /16" 899mm /27"	*219mm /8.6" 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" 150mm/6" 270mm/10.6"	NO	50mm/2" 150mm/6" 270mm/10.6"	200mm/7.9" 450mm/17.7" Flat surface and claw heads	*
EN ■ NFPA □	■ ■	■ ■	■ ■	-	-
EN CLASSIFICATION	-	-	-	-	-
PUSH FORCE(S for telescoping) t=US Ton	127/60kN 14.27/ 6.74 USt	127/60kN 14.27/ 6.74 USt	127/60kN 14.27/ 6.74 USt	66.6kN 0 USt	36.6kN 4.1 USt
STROKE RANGE	164/136mm 6.5-5.4"	403/377mm 15.9-14.8"	451/425mm 17.75-16.7"	370mm 14.6"	100mm 4"
TOTAL STROKE DISTANCE	300mm 11.8"	780mm 30.7"	876mm 34.5"	370mm 14.6"	100mm 4"
WORKING PRESSURE (HYDRAULIC)	500 Bar 7.2K psi	500 Bar 7.2K psi	500 Bar 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 under water inc salt water with Saltwater battery. E3 Connect has WiFi connectivity. Side-mounted battery	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. E3 Connect has WiFi connectivity for tool management and remote status etc.	Head can be switched between cutter, combi, spreader ram etc.*EU uses 5Ah, US tends to use 6Ah	*Ram dims only *HRS941 Head can switched between cu combi, spreader ram
WEBSITE	lukas.com	lukas.com	lukas.com	ogurarescuetools.com	ogurarescuetools.c

BATTERY RAMS

	OGURA	POWERHAWK TECHNOLOGIES	POWERHAWK TECHNOLOGIES	RESQTEC	SCORPE	SCORPE
	HRS931	P25 (S-1601X)	P40 (S-1601X)	V4 V4x	Ram SR	Ram TR
	HR938 Ram	X	X	EDD	GreenSpirit II	GreenSpirit II
	18v	12v or 16v LiGHT	7.5/12v	43.2v	28v	18v/28v
	N/A	N/A	N/A	N/A	N/A	N/A
	1-Stage	1-Stage+ hand-wind top section	1-Stage+ hand-wind top section	1-Stage	1-Stage	2-Stage Telescoping
	3.9kg +3.1kg 8.6lb+6.8lb	27kg 0lb	36kg 0lb	16.4kg 36.1lb	17.9kg	21.1kg 46.5lb
	1-1.36kg 2.2-3lb	1..36kg 3lb	1..36kg 3lb	1kg 2.2lb	1/1.1kg 2.2/2.33lb	1.1/1kg 2.33/2.2lb
	Makita 5-6Ah*	Powerhawk 7.5Ah or any 12v source	Powerhawk 7.5Ah or any 12v source	*Resqtec 2.6Ah	Milwaukee 5Ah M28 8Ah M18	Milwaukee 8Ah M18 5Ah M28
	<12mins 55-120mins	>30 mins <120mins/<15hr	>30 mins <120mins/<15hr	<45mins 60mins	60/80mins 45-90mins	60/80mins 45-90mins
	303mm /16" 899mm /27"	303mm /16" 899mm /27"	564mm /23" 1041mm /41"	636mm /25" 936mm /37"	540mm /21.3" 908mm /35.7"	587mm /23.1" 1387mm /53"
	290mm / 11.4"	178mm / 7"	327mm / 12.9"	355mm / 14"	291mm / 11.5"	365mm / 14.4"
	179mm / 7"	100mm / 4"	100mm / 4"	133mm/ 5.2"	167mm/ 6.6"	167mm/ 6.6"
	*	610mm/24" 1220mm/48" Coupling Swivel bases	610mm/24" 1220mm/48" Coupling Swivel bases	Multi-Adapter for.... 716mm / 28.2" 586mm / 23" 241.6mm / 9.5" 151.6mm / 6" 99.6mm / 4" Swivel & Power Plates	250mm/10" 350mm/14" 450mm/18" 100 &180mm Heads Sill Support	250mm/10" 350mm/14" 450mm/18" 100 &180mm Heads Sill Support
	-	■	■	■ ■	■	■
	-	-	-	-	R111/368-17.9	TR108/428-62/372-21.1
	36.6kN 4.1 USt	31.6-52.5kN 3.5-5.9 USt	31.6-52.5kN 3.5-5.9 USt	89 /58.8kN 10 /6.6 USt	111kN 12.47 USt	108/62kN* 12.1/7 USt
	100mm 4"	127/152*mm 5/6"	305/152*mm 12/6"	300mm 11.8"	368mm 14.5"	428/372mm 16.8- 14.7"
	100mm 4"	127mm (+152mm manual) 5"(+6"manual)	305mm(+152mm manual) 12" (+6"manual)	300mm 11.8"	368mm 14.5"	800mm 31.5"
	N/A	N/A mechanical	N/A mechanical	N/A mechanical	700 Bar 10.2K psi	550 Bar 7.9K psi
	--	--	--	--	--	--
	Trigger	Rotating Star Grip	Rotating Star Grip	■	Rocker switch ■	Rocker switch ■
	54 54	54 54	54 54	54 54	54/68 54	■ 54/68* 68
be utter, etc.	*Ram dims only *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. Ram compatible with all Resqtec shoring struts if using the Multi-Adapter.	Converter available for M28 & other batteries. * IP68 with M18 & waterproof cover (not shown)	*&36.9kN/4.1USt Pull force. Converter available for M28 & other batteries. * IP68 with M18 & waterproof cover (shown)
om	ogurarescuetools.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
■= (cyan border) WiFi is present on the model variant `shown in cyan

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	US	US	DE AT	DE AT	DE AT
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 inc BATTERY exc EXTENSION	19.77kg 43.6lb	18.64kg 41.1lb	17.3kg 38.1lb	18.4kg 40.6lb	20.9kg 46lb
WEIGHT - DEFAULT BATTERY	1.1kg /2.4lb 1.2[1.36]kg /2.6[3]lb	1.1kg /2.4lb 1.2[1.36]kg /2.6[3]lb	1.4kg/1kg 3.2lb/2.3lb	1.1/1.7kg 2.33/3.74lb	1.4kg/1kg 3.2lb/2.3lb
BATTERY Ah OPTIONS	Milwaukee M18 8/9Ah./[Makita6Ah] DeWalt FlexV20 9Ah	Milwaukee M18 8/9Ah./[Makita6Ah] DeWalt FlexV20 9Ah	Weber/ Milwaukee 5Ah*	Milwaukee M18 8Ah/12Ah*	Weber/ Milwaukee 5Ah*
BATTERY DURATION RECHARGE TIME	10-15mins 87 / 60mins	10-15mins 87 / 60mins	<45mins 90mins	60/90mins 45-83mins	<45mins 90mins
LENGTH retracted/extended*	647.7mm /25.5" 1041.4mm /41"	546.1mm /21.5" 1073.15mm /42.25"	540mm /21.3" 908mm /35.7"	540mm /21.3" 908mm /35.7"	543mm /21.4" 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" 300mm/12" 450mm/18"	150mm/6" 300mm/12" 450mm/18"	175mm/7" 250mm/9.8" 320mm/12.6"	175mm/7" 250mm/9.8" 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) t=US Ton	164.6kN 18.5 USt	169.3/58.2kN 19/6.5 USt	111kN 12.47 USt	111kN 12.47 USt	189-99kN 21.2/11.1 USt
STROKE RANGE	368mm 14.5"	329/221mm 12.95/8.7"	368mm 14.5"	368mm 14.5"	360/270mm 13.2-10.6"
TOTAL STROKE DISTANCE	368mm 14.5"	527mm 20.75"	368mm 14.5"	368mm 14.5"	630mm 24.8"
WORKING PRESSURE (HYDRAULIC)	722 Bar 10.5K psi	722 Bar 10.5K psi	700 Bar 10.1K psi	550 Bar 7.9K psi	700 Bar 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 and Dual Rapid charger. Storm2 series DISCONTINUED Mains adapter=option.	TNT prices include 2 batteries and Dual Rapid charger. Storm2 series DISCONTINUED Mains adapter=option.	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.
WEBSITE	tntrescue.com	tntrescue.com	weber.com	weber.com	weber.com

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THE NEXT-GEN PENTHEON RAM. MILES AHEAD.

PENTHEON

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.

FIND OUT MORE ON HOLMATRO.COM/PENTHEON

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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
THROTTLE is a motorcycle-style rotating hand grip.

COMPANY	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLAI RES
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--470
RAM TYPE	1-Stage	1-Stage	2-Stage Telescoping	2-Stage Telescoping	Double Ended	2-Stage Telescopir
WEIGHT inc Hose exc EXTENSIONS	9.4kg 20.7lb	10kg 22lb	20.4kg 45lb	13.7kg 45lb	10.9kg 24lb	18.5kg 40.7lb
LENGTH retracted/extended*	350mm/ 00" 930mm/0"	350mm/ 00" 1080mm/0"	500mm/ 00" 1390mm/53.3"	460mm/ 00" 1060mm/53.3"	565mm/ 00" 975mm/00"	740mm/ 0 1230mm/0
HEIGHT/WIDTH	180mm / 00"	260mm / 00"	400mm / 15.8"	200mm / 00"	320mm / 00"	200mm / 0
DEPTH (max diam)	90mm / 00"	90mm / 00"	120mm / 4.7"	110mm / 00"	120mm / 00"	110mm / 0
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 00 USt	00kN 00 USt	00-00kN 00-00 USt	00-00kN 00-00 USt	00kN 00 USt	00-00kN 00-00 US
STROKE RANGE	-	-	-	-	-	-
TOTAL STROKE DISTANCE	220mm 00"	730mm 00"	890mm 00"	600mm 00"	410mm 00"	490mm 00"
WORKING PRESSURE (HYDRAULIC)	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4
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. *FOB China	*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	*CE & NFPA is listed but you will need to verify this refers to the correct standard. *FOB China	*CE is listed but you will need to verify this refers to the correct standard. *FOB China	*CE & NFPA is list you will need to this refers to the standard. *FOB China
WEBSITE	aolairescue.com	aolairescue.com	aolairescue.com	aolairescue.com	aolairescue.com	aolairescue.c

HOSE-FED RAMS

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 00lb	17.3kg 38.1lb	17.2kg 38lb	15.2kg 21.3lb	18kg 39.6lb	13.6kg 30lb	16.2kg 35.7lb
0" 0"	540mm/ 00" 1284mm/00"	395mm/ 15.5" 775mm /30.5"	480mm /18.9" 1310mm /51.6"	540mm /21.3" 1170mm /49"	650mm /25.6" 1500mm /59"	521mm /20.5" 807mm /31.8"	646mm /25.4" 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" 127mm/5" 254mm/10" Angled V&X-head Pull shackles, pins & adapters	76mm/3" 127mm/5" 254mm/10" Angled V&X-head Pull shackles, pins & adapters	76mm/3" 127mm/5" 254mm/10" Angled V&X-head Pull shackles, pins & adapters	76mm/3" 127mm/5" 254mm/10" Angled V&X-head Pull shackles, pins & adapters	76mm/3" 127mm/5" 254mm/10" Angled V&X-head Pull shackles, pins & adapters
	TR218/385-77/360-17	-	-	-	-	-	-
t	218-77kN 00-00 USt	189.4/99kN 0USt		189.4/99kN 0USt	189.4/99kN 0USt	143.7-45.8 kN 16- USt	142-45.8 kN 16- USt
	-	-	-	-	-	-	-
	745.5mm 00"	380mm 15"	830mm 32.7"	630mm 24.8"	850mm 33.5"	286mm 11.3"	408mm 16.1"
Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700 Bar 10.1K psi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi
	Throttle	Throttle	Throttle	Throttle	Throttle	Throttle	Throttle
					- 360°		
	-						
	54	54	58	54	54	54	54
ed but verify correct a	-	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.		All E-Force tools can convert to hose. *=PULL-FORCE	All E-Force tools can convert to hose. *=PULL-FORCE
com	edilgrappa.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com

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COMPANY	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO	HOLMAT
SERIES MODEL VARIANT	CORE 5000 TR 5340 LP	CORE 5000 TR 5349 LP	CORE 5000 TR 5350 LP	CORE 5000 TR 5370 LP	CORE 5000 RA 5315 CL	CORE RA 532
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 Telescopic	2-Stage Telescopic	2-Stage Telescopic	2-Stage Telescopic	1-Stage	1-Stage
WEIGHT inc Hose exc EXTENSIONS	9.2/10.4kg 20.3/22.9lb	14.2/15.6kg 31.3/34.4lb	14.6/15.8kg 32.2/34.8lb	16.9/18.1kg 437.3/39.9lb	9.8/11.1kg 21.6/24.5lb	10.7/12k 23.6lb
LENGTH retracted/extended*	335mm / 13.2" 610mm/24"	540mm/ 21.3" 1225mm/48.2"	560mm/ 22" 1285mm/50.6"	635mm/ 25" 1510mm/59.5"	567mm/ 22.3" 967mm/38.1"	515mm/ 20 765mm/30
HEIGHT/WIDTH	280mm / 11"	280mm / 11"	280mm / 11"	281mm / 11.1"	256mm / 11"	280mm / 1
DEPTH (max diam)	105mm / 4.1"	105mm / 4.1"	105mm / 4.1"	109mm / 4.3"	100mm / 4"	105mm / 4
EXTENSION(S)/HEADS etc. (OPTIONAL EXTRA in GREEN)	220mm/8.7" (3.3kg/ 7.3lb) 440mm/17.3" (4.6kg/10.1lb) Cross Rams support 2x Sill Supports	220mm/8.7" (3.3kg/ 7.3lb) 440mm/17.3" (4.6kg/10.1lb) Cross Rams support 2x Sill Supports	220mm/8.7" (3.3kg/ 7.3lb) 440mm/17.3" (4.6kg/10.1lb) Cross Rams support 2x Sill Supports	220mm/8.7" (3.3kg/ 7.3lb) 440mm/17.3" (4.6kg/10.1lb) Cross Rams support 2x Sill Supports	220mm/8.7" (3.3kg/ 7.3lb) 440mm/17.3" (4.6kg/10.1lb) Cross Rams support 2x Sill Supports	330mm/1 (3.5kg/ 7.7 500mm/19 (4.5kg/ 9.9 Chains&hooks. ram & 2x Sill Su
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) t=US Ton	217/101kN 00-00 USt	217/101kN 00-00 USt	217/101kN 00-00 USt	231/111kN 00-00 USt	100kN 00 USt	150kN 00USt
STROKE RANGE	150-125mm 5.9-4.9"	335-330mm 14-13"	375-350mm 14.8-13.8"	450-425mm 17.7-16.7"	-	-
TOTAL STROKE DISTANCE	275mm 10.8"	725mm 28.5"	725mm 28.5"	875mm 34.5"	400mm 15.7"	250mm 9.8"
WORKING PRESSURE (HYDRAULIC)	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4
SPEED CONTROL	rotating throttle	rotating throttle	rotating throttle	rotating throttle	rotating throttle	rotating thro
ROTATE HEAD/HANDLE	- -	- -	- -	- -	- -	- 360°
ON-BOARD LED	□ x6 + Laser	□ x6 + Laser	□ x6 + Laser	□ x6 + Laser	-	□ x6 + La
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-exte target when unlo Push-button ra does not need o ram head to be re
WEBSITE	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.c

HOSE-FED RAMS

RO	HOLMATRO CORE RA 5322	HOLMATRO CORE RA5331	HOLMATRO CORE RA5332	HURST (IDEX) R424	HYDRAM VHE 150	HYDRAM VHE 250	HYDRAM VHE 425
1	151.000.388	151.000.391					
89							
	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
kg	15.8/34.8kg 17.1/37.7lb	12.5/13.8kg 27.6/30.4lb	19.3/20.6kg 42.5/45.4lb	21.0kg 46.3lb	00kg 00lb	00kg 00lb	00kg 00lb
0.3" .1"	750mm/ 29.5" 1250mm/49.2"	615mm/ 24.2" 955mm/37.6"	950mm/ 37.4" 1630mm/64.2"	625mm /24.6" 1500mm /59.1"	00mm /00" 00mm /00"	00mm /00" 00mm /00"	00mm /00" 00mm /00"
.1"	280mm / 11"	280mm / 11"	280mm / 11"	221mm / 8.7"	00mm / 00"	00mm / 00"	00mm / 00"
.1"	105mm / 4.1"	105mm / 4.1"	105mm / 4.1"	112mm / 4.41"	00mm / 00"	00mm / 00"	00mm / 00"
3" lb) .7" lb) Cross-pports	- Conical and wedge tips, base plate, Chains&hooks. Cross-ram & 2x Sill Supports	330mm/13" (3.5kg/ 7.7lb) 500mm/19.7" (4.5kg/ 9.9lb) Chains&hooks. Cross-ram & 2x Sill Supports	- Conical and wedge tips, base plate, Chains&hooks. Cross-ram & 2x Sill Supports	2x Sill Supports 1x Multi-Support			
	■ ■	■ ■	■ ■	■ ■			
10.7	R150/500-15.8	R150/340-12.5	R150/680-19.3	TR 269/445-134/430-21,0			
	150??kN 00/00USt	150kN 00USt	150??kN 00/00USt	269/134kN 00/00USt			
	?/?mm ?/?"	-	?/?mm ?/?"	445/430mm 00-00"			
	500mm 19.7"	340mm 31"	680mm 26.8"	875mm 34.5"			
4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	500Bar / 7.2K psi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi
ttle	rotating throttle	rotating throttle	rotating throttle	Star Grip	throttle	throttle	throttle
	- 360°	- 360°	- 360°				
aser	☐ x6 + Laser	☐ x6 + Laser	☐ x6 + Laser	☐	-	-	-
	■ 57	■ 57	■ 57	54			
ends to paded. m ext. riginal emoved	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.				
om	holmatro.com	holmatro.com	holmatro.com	jawsoflife.com	hydram.com	hydram.com	hydram.com

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COMPANY	HYDRAM	HYDRAM	HYDRAM	HYDRAM	HYDRAM	HYDRA
SERIES MODEL VARIANT	VHES 150	VHES 250	VHES 425	VHEM 150	VHEM 250	VHEM 3
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 00lb	00kg 00lb	00kg 00lb	00kg 00lb	9.88kg 00lb	10.38kg 00lb
LENGTH retracted/extended*	00mm /00" 00mm /00"	00mm /00" 00mm /00"	00mm /00" 00mm /00"	00mm /00" 00mm /00"	530mm /00" 742mm /00"	633mm /0 942mm /0
HEIGHT/WIDTH	00mm / 00"	00mm / 00"	00mm / 00"	00mm / 00"	335mm / 00"	335mm / 0
DEPTH (max diam)	00mm / 00"	00mm / 00"	00mm / 00"	00mm / 00"	124mm / 00"	124mm / 0
EXTENSION(S)/HEADS etc. (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 –
PUSH FORCE(S for telescoping) t=US Ton				158/76kN 00/00USt	158/76kN 00/00USt	158/76k 00/00US
STROKE RANGE				-	-	-
TOTAL STROKE DISTANCE				250mm 9.8"	250mm 9.8"	350mm 13.8"
WORKING PRESSURE (HYDRAULIC)	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.
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.co

M	HYDRAM VHEM 500	HYDRAM VHEM 700	HYDRAM VHET 259	HYDRAM VHET 619	HYDRAM VHETS 275	HYDRAM VHETS 575	HYDRAM VHETS 700
50							
	N/A	N/A				N/A	N/A
	1-stage Double Ended	1-stage Double Ended	1-Stage	1-stage Double Ended	1-stage Double Ended	1-Stage	1-Stage
	12.58kg 00lb	17.58kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	9.88kg 00lb	9.88kg 00lb
0" 0"	2x250mm /00" 1224mm /00"	966mm /00" 00mm /00"	00mm /00" 00mm /00"	00mm /00" 00mm /00"	00mm /00" 00mm /00"	530mm /00" 742mm /00"	530mm /00" 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 St	158/76kN 00/00USt	158/76kN 00/00USt				158/76kN 00/00USt	158/76kN 00/00USt
	250/250mm 00-00"	350/350mm 00-00"				-	-
	500mm 19.6"	700mm 19.6"				250mm 9.8"	250mm 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

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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					■■■■■	
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	2-Stage Telescoping	2-Stage Telescopi
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 /0 1255mm /(
HEIGHT/WIDTH	335mm / 00"	175mm /00"	175mm /00"	175mm /00"	221mm / 8.7"	221mm / 8
DEPTH (max diam)	124mm / 00"	95mm / 00"	95mm / 00"	95mm / 00"	112mm / 4.41"	112mm / 4.
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 Supp 1x Multi-Su
EN ■ NFPA □	■	■ ■	■ ■	■ ■	■ ■	■ ■
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 269/365-134/3
PUSH FORCE(S for telescoping) t=US Ton	158/76kN 00/00USt	137kN 00USt	137kN 00USt	124kN 00USt	269/134kN 00/00USt	269/134 00/00US
STROKE RANGE	-	-	-	-	295/280mm 00-00"	365/340r 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 / 7.2
SPEED CONTROL	throttle	Star Grip	Star Grip	Star Grip	Star Grip	Star Gri
ROTATE HEAD/HANDLE						
ON-BOARD LED	-	□	□	□	□	□
IN-WATER USE TOOL IP		54	54	54	54	54
NOTES						
WEBSITE	hydram.com	lukas.com	lukas.com	lukas.com	lukas.com	lukas.com

HOSE-FED RAMS

	LUKAS (IDEX) R424 81-40-34	LUKAS (IDEX) R430 81-40-40	RESQTEC V2	RESQTEC V3T	RESQTEC V4	RESQTEC V5T	RESQTEC V6
	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ng	2-Stage Telescoping	3-Stage Telescoping	1-Stage	2-Stage Telescoping	1-Stage	2-Stage Telescoping	1-Stage
	21.0kg 46.3lb	17.7kg 00lb	10.6kg 00lb	12.4kg 00lb	14.3kg 00lb	18.7kg 00lb	17.6kg 00lb
00" 00"	625mm /24.6" 1500mm /59.1"	475mm /00" 1295mm /00"	481mm /00" 788mm /00"	340mm /00" 622mm /00"	711mm /00" 1248mm /00"	556mm /00" 1270mm /00"	537mm /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"
orts pport	2x Sill Supports 1x Multi-Support	2x Sill Supports 1x Multi-Support	Multi-Adapter for.... 716mm / 28.2" 586mm / 23" 241.6mm / 9.5" 151.6mm / 6" 99.6mm / 4" Swivel & Power Plates	Multi-Adapter for.... 716mm / 28.2" 586mm / 23" 241.6mm / 9.5" 151.6mm / 6" 99.6mm / 4" Swivel & Power Plates	Multi-Adapter for.... 716mm / 28.2" 586mm / 23" 241.6mm / 9.5" 151.6mm / 6" 99.6mm / 4" Swivel & Power Plates	Multi-Adapter for.... 716mm / 28.2" 586mm / 23" 241.6mm / 9.5" 151.6mm / 6" 99.6mm / 4" Swivel & Power Plates	Multi-Adapter for.... 716mm / 28.2" 586mm / 23" 241.6mm / 9.5" 151.6mm / 6" 99.6mm / 4" 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 St	269/134kN 00/00USt	269/134/39kN 00/00USt	112kN 00USt	203/91kN 00USt	112kN 00USt	203/91kN 00USt	112kN 00USt
mm	445/430mm 00-00"	295/280/245mm 00-00"	-	-	-	-	-
	875mm 34.5"	820mm 00"	307mm 00"	282mm 00"	537mm 00"	718mm 00"	1548mm 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
			Ram compatible with all Resqtec shoring struts if using the Multi-Adapter.	Ram compatible with all Resqtec shoring struts if using the Multi-Adapter.	Ram compatible with all Resqtec shoring struts if using the Multi-Adapter.	Ram compatible with all Resqtec shoring struts if using the Multi-Adapter.	Ram compatible with all Resqtec shoring struts if using the Multi-Adapter.
n	lukas.com	lukas.com	resqtec.com	resqtec.com	resqtec.com	resqtec.com	resqtec.com

UPDATED Jun '25

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 RESC
SERIES MODEL VARIANT	R 20	R 30	R 40	R 50	R 60	TLS 25
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 Telescopi
WEIGHT inc Hose exc EXTENSIONS	12.3kg 27lb	14.5kg 32lb	16.8kg 37lb	18.6kg 41lb	21.3kg 47lb	18.2kg 40lb
LENGTH retracted/extended*	462.3mm /18.2" 629.9mm /24.8"	546.1mm /21.5" 774.7mm /30.5"	673.1mm /26.5" 1028.7mm /40.5"	802.6mm /31.6" 1285.2mm /50.6"	927.1mm /36.5" 1536.7mm /60.5"	425.5mm /16 831.9mm /32
HEIGHT/WIDTH	188mm / 7.4"	188mm / 7.4"	188mm / 7.4"	188mm / 7.4"	188mm / 7.4"	215.9mm / 8
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
EXTENSION(S)/HEADS etc. (OPTIONAL EXTRA in GREEN)						
EN ■ NFPA □	■	■	■	■	■	■
EN CLASSIFICATION	-	-	-	-	-	-
PUSH FORCE(S for telescoping) t=US Ton	147kN 00 USt	147kN 00 USt	147kN 00 USt	147kN 00 USt	147kN 0 USt	229/82.3k 00 USt
STROKE RANGE	-	-	-	-	-	247/159m 9.75/6.25
TOTAL STROKE DISTANCE	167.6mm 6.6"	229mm 9"	336mm 14"	482mm 19"	609.6mm 24"	406mm 16"
WORKING PRESSURE (HYDRAULIC)	722 Bar 10.5K psi	722 Bar 10.5K psi	722 Bar 10.5K psi	722 Bar 10.5K psi	722 Bar 10.5K psi	722 Bar 10.5K psi
SPEED CONTROL	Rotating Star Grip	Rotating Star Grip	Rotating Star Grip	Rotating Star Grip	Rotating Star Grip	Rotating Star
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.c

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
c	2-Stage Telescopic	2-Stage Telescopic		1-Stage	1-Stage	1-Stage	2-Stage Telescoping
	12.3kg 27lb	20.4kg 45lb		17.3kg 38.1lb	17.3kg 38.1lb	18.4kg 40.6lb	20.9kg 46lb
.75" .75"	501.7mm /19.75" 1022.4mm /40.25"	546.1mm /21.5" 1278.1mm /50.32"		540mm /21.3" 908mm /35.7"	540mm /21.3" 908mm /35.7"	540mm /21.3" 908mm /35.7"	543mm /21.4" 1170mm /44.3"
.5"	184.2mm /7.25"	215.9mm / 8.5"		340mm / 13.4"	340mm / 13.4"	340mm / 13.4"	351mm / 13.8"
.5"	88.9mm/ 3.5"	114.3mm/ 4.5"		134mm/ 5.3"	134mm/ 5.3"	134mm/ 5.3"	134mm / 5.3"
				175mm/7" 250mm/9.8" 320mm/12.6"	175mm/7" 250mm/9.8" 320mm/12.6"	175mm/7" 250mm/9.8" 320mm/12.6"	NO
	■	■		■ ■	■ ■	■ ■	■
	-	-		R111/368-17.3	R111/368-17.3	R111/368-18.4	TR189/360-99/27020,9
kN	229/57.3kN 00 USt	229/82.3kN 00 USt		111kN 12.47 USt	111kN 12.47 USt	111kN 12.47 USt	189-99kN 21.2/11.1 USt
m "	371/282mm 14.62/ 11.12"	411/320mm 16.2/12.6"		368mm 14.5"	368mm 14.5"	368mm 14.5"	360/270mm 13.2-10.6"
	653mm 25.7"	731mm 28.8"		368mm 14.5"	368mm 14.5"	368mm 14.5"	630mm 24.8"
i	722 Bar 10.5K psi	722 Bar 10.5K psi		700 Bar 10.1K psi	700 Bar 10.1K psi	550 Bar 7.9K psi	700 Bar 10.1K psi
Grip	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.
om	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

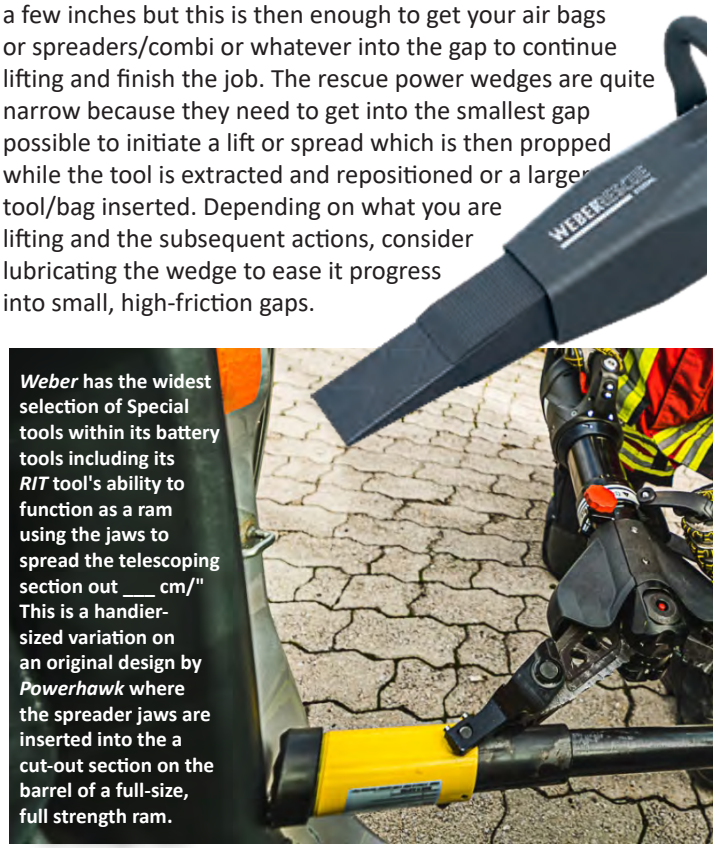
Since these are all hydraulic-electric tools as distinct from simply elecro-mechanical, there is a degree of crossover between the combi-tools which are true multi-role and the dedicated specialist tools that have a spreading or forced opening capability. The *Weber RIT* tool (opposite) for instance 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 b 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 it progress into small, high-friction gaps.



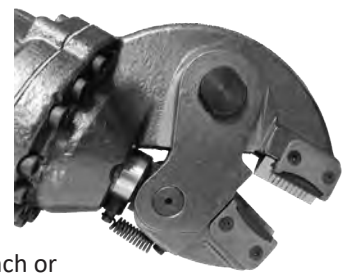
Weber has the widest selection of Special tools within its battery tools including its *RIT* tool's ability to function as a ram using the jaws to spread the telescoping section out ___ cm/" This is a handier-sized variation on an original design by *Powerhawk* where the spreader jaws are inserted into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

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 is 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 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 with 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

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TO COMPLETE ANY RESCUE SET.

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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/ -CAPABLE: The tool and/or battery are linked to a mobile device via Wi &/or Bluetooth to manage functions, servicing and inventory.
TOOLS-IN-RANGE: refers to the other types of tool available jn 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.

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 powertool 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'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 max distance the target load can be pushed/lifted.
ROTATE HEAD/HANDLE: The handle can 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 splash proof but not submersible without a bespoke cover.

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THE REVOLUTIONARY
BATTERY TOOL
SERIES

The new SMART-FORCE battery-powered tool series starts a digital revolution in the rescue equipment market.

More speed, a powerful and MILWAUKEE compatible 18 V battery, intuitive design and numerous smart features packed into a rugged and submersible housing.

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 WiFi/BT-capable	Titan	Titan	-	-
	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	£2400 $2567 €2350	N/A	£2530 $3200 €3030
	WEIGHT IN HAND inc BATTERY exc ACCESSORIES	3.2kg* 7lb*	9.9kg 21.8lb	8.6kg 18.9lb	7.2kg 15.8lb
BATTERY	**WEIGHT - DEFAULT BATTERY**	1.1kg 2.4lb	1.1kg 2.4lb	0.7 1kg 1.52.2 lb	0.7kg 1.5 lb
BATTERY	**BATTERY Ah OPTIONS**	Milwaukee 5Ah	Milwaukee 5Ah	DeWalt FlexVolt 4 6Ah*	DeWalt FlexVolt 4 6Ah*
BATTERY	**BATTERY DURATION RECHARGE TIME**	<45mins 60-105mins	<45mins 60-105mins	10-15mins /~100 cuts 40-90mins	10-15mins / ~100 cuts 40-90mins
DIMENSIONS	**LENGTH** retracted with tips/extended	420mm / 16.5" 520mm /20.5"	620mm /24.4" 780mm /30.7"	1034mm/ 40.7" -	494mm/ 19.4" -
DIMENSIONS	**HEIGHT/WIDTH**	*255mm / 10"	120mm / 4.7"	*348mm / 13.7"	*348mm / 13.7"
DIMENSIONS	**DEPTH (max diam)**	118mm/ 4.6"	180mm/ 7"	143mm / 5.6"	184mm / 7.2"
STANDARDS	**EXTENSION(S) & OPTIONS** or **CUT/SPREAD CE/NFPAClass**	- -	- -	- -	- -
STANDARDS	**CE** ■ **NFPA** □	-	■	■ ■	■ ■
STANDARDS	**EN CLASSIFICATION**	-	-	-	-
FEATURES/CAPACITIES	**CUT / PUSH/SPREAD FORCE** t=US Ton	147kN 16.5 USt	245kN 27.5 USt	232.4kN 26.1 USt	120kN 13.4 USt
FEATURES/CAPACITIES	**CUT-MATERIAL/BAR Ø STROKE/SPREAD RANGE**	50mm / 2" lift height	80mm / 3.15"		12mm / 0.5"
FEATURES/CAPACITIES	**JAW OPENING DISTANCE INSERTION HEIGHT**	- -	- -	52mm / 2" -	15mm /0.6" -
FEATURES/CAPACITIES	**WORKING PRESSURE** (HYDRAULIC)	-	-	550 Bar / 8K psi	300 Bar / 4.4K psi
FEATURES/CAPACITIES	**HEAD / HANDLE ROTATES**	■	-	■ ■	■ ■
FEATURES/CAPACITIES	**SPEED CONTROL ON-BOARD LED**	Button+Lever	Button+Lever	Trigger	Trigger
FEATURES/CAPACITIES	**IN-WATER USE BATTERY/TOOL IP**	54 54	54 54	54 54	54 54
	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
EDILGRAPPA		**EDILGRAPPA**	**GENESIS RESCUE**	**GENESIS RESCUE**	**HOLMATRO**
BAR CUTTER		BAR CUTTER	HD CUTTER	HD CUTTER	CUTTER
£2700 $3400 €3220		£2530 $3200 €3030	N/A	N/A	£3400 $4280 €4050
9.3kg 20.5lb		10kg 22lb	18.4kg 40.6lb	23kg 51lb	4.9kg 10.8lb
0.7kg 1.5 lb		0.7kg 1.5 lb	1.1/1.7kg 2.4/3.74lb	1.45/1.1kg 3.2/2.4lb	0.4kg 0.9lb
DeWalt FlexVolt 4 6Ah*		DeWalt FlexVolt 6Ah*	Milwaukee 5-8Ah*	Genesis/ Milwaukee 5Ah*	Holmatro CAS (inc Milwk/ DeWalt) 2Ah
10-15mins / ~100 cuts 40-90mins		10-15mins / ~100 cuts 40-90mins	60/90mins 45-60-105mins	<45mins 90 60-105mins	<70 cuts 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 1D 2D 3C A4 B3 C2 D4 E4
-		-	-	-	AC59-B-4.9
171kN 19.2 USt		189kN 21.2 USt	111kN 12.5 USt	142 (47*) kN 16 (1.8*) USt	220 kN 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 Multi-material/bar cutter. Anti-jamming release lever *6AH -add 50mm to height		Anvil Blade Also a 16mm version Multi-material/bar cutter. Anti-jamming release lever *6AH -add 50mm to height	Designed for heavy duty cable/ bar cutting in rail and municipal transport incidents *IP68 only with battery cover shown. IP54 splash cover for 12Ah	Designed for heavy duty cable/ bar cutting in rail and municipal transport incidents* Also a 3Ah option All E-Force tools can convert to hose.	Small hand-tool capable of getting into tight spaces or being easily carries in a response car/bike
edilgrappa.com		edilgrappa.com	genesisrescue.com	genesisrescue.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 WiFi/ -apable	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			●	●
COST inc tax / VAT	N/A	N/A	N/A	N/A
WEIGHT IN HAND inc BATTERY exc ACCESSORIES	13.4kg 29.5lb	11.1kg* 24.4lb	3.9/4.2kg 8.6/9.3lb	+5.7kg +12.6lb
WEIGHT - DEFAULT BATTERY	1kg 2.3lb	1.3kg 2.9lb	1-1.36kg 2.2-3lb	1-1.36kg 2.2-3lb
BATTERY Ah OPTIONS	Holmatro EVO3 5/6Ah*	StrongArm 4Ah	Makita 5-6Ah*	Makita 5-6Ah*
BATTERY DURATION RECHARGE TIME	0mins 90mins	30-60mins 75-150mins	<12mins 55-120mins	<12mins 55-120mins
LENGTH retracted with tips/extended	728mm /23.1" 1028mm /53"	775-796mm 30.5-31.3"	303/328mm / 11.9/12.9"	328mm / 12.9" -
HEIGHT/WIDTH	365mm / 14.4"	195mm / 7.7"	272/273mm / 10.7/10.7"	130mm / 5.1"
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/NFPAClass	- -	1E-2D-3D-4D-5D A5 B3 C5 D6 E6	1m Expansion Hose. Cutter, Spreader, mini ram, Stubby Shear, Pedal Cutter, L&S Door Opener.	-
CE ■ NFPA□	■ ■	■ ■	-	-
EN CLASSIFICATION	-	-	-	-
CUT / PUSH/SPREAD FORCE t=US Ton	72 kN 8 USt	155/20-700kN 17.4/ 2.25-78 USt	-	78.4kN 8.8 USt
CUT-MATERIAL/BAR Ø STROKE/SPREAD RANGE	<300mm 11.8"	184-215mm 7.2-8.5"	-	2/1.6mm sheet steel/StSt 0.08/0.06" sheet steel/StSt
JAW OPENING DISTANCE INSERTION HEIGHT	800mm 31.5"	207mm 8.1"	-	26mm 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. *6Ah replaced previous 5Ah	LE version =Tactical Black. *LED Light is an option * Add 700g for heaviest door-opening tips shown, Combi tips	FOR USE WITH OGURA HRS HEADS	USE WITH HRS931 or 941 360° swivel head.
WEBSITE	holmatro.com	lukas.com	ogurarescuetools.com	ogurarescuetools.com

BATTERY SPECIAL TOOLS

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
OGURA	**OGURA**	**OGURA**	**TNT RESCUE**	**WEBER RESCUE**
PEDAL/BAR CUTTER	ENTRY	ENTRY	COMBI /ENTRY	COMBI /ENTRY
■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■
●	●	●	🇺🇸	🇩🇪 🇦🇹
N/A	N/A	N/A	N/A	N/A
+5.4kg +11.9lb	+6kg +13.2lb	+8kg +17.6lb	19.1-19.5kg 42.2-43lb	13.3 / 14.2kg 29.3 / 00lb
1-1.36kg 2.2-3lb	1-1.36kg 2.2-3lb	1-1.36kg 2.2-3lb	1.1kg /2.4lb 1.2[1.36]kg /2.6[3]lb	1.1/1.7kg 2.33/3.74lb
Makita 5-6Ah*	Makita 5-6Ah*	Makita 5-6Ah*	Milwaukee M18 8/9Ah Makita [6Ah] DeWalt FlexV20 9Ah	Milwaukee M18 5/8Ah
<12mins 55-120mins	<12mins 55-120mins	<12mins 55-120mins	10-15mins 87 / 60mins	60/90mins 45-83mins
240mm / 9.5" -	255mm /10" 325mm /12.8"	338mm /13.3" 544mm /21.4"	791mm /31.1" -	540mm /21.3" 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, jack/ ram & pulling tips 1H-2H-3H-4H-5H A6-B7-C6-D7-E7-F3
-	-	-	■	■ ■
-	-	-	-	AC140H-13.314.2
70.6kN 7.9 USt	39.2kN 4.4 USt	34.3kN 3.8 USt	528/5.3kN 59.3/11.8 USt	111/30-1305kN 12.47/3.3-146 USt
16mm/⅝" rebar 38x6mm/1.5x0.23" bar	70mm 2.8"	206mm 8.1"	304.8mm 12"	285-380mm 11.2-15"
16mm ⅝"	00mm 0"	00mm 0"	231.77mm 9.12"	215mm 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 941 360° swivel head	USE WITH HRS931 or 941 360° swivel head	USE WITH HRS931 or 941 360° swivel head	- TNT prices include 2 batteries and Dual Rapid charger. Storm2 series DISCONTINUED Mains adapter=option.	All E-Force tools can convert to hose. Smart=WiFi Capable *for SMART Version-IP68 only with battery cover. IP54 splash cover for 12Ah
ogurarescuetools.com	ogurarescuetools.com	ogurarescuetools.com	tntrescue.com	weber-rescue.com

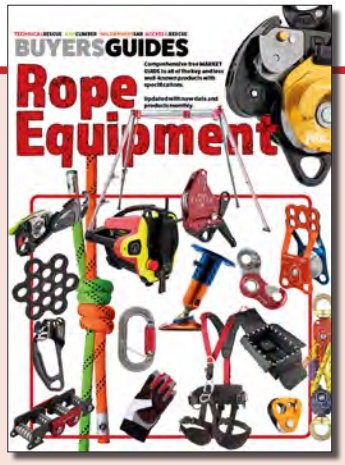
IMAGES NOT TO SCALE

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

BUYERSGUIDES

The most comprehensive GUIDEs to Rope Equipment & Water Rescue Eqpt ever produced



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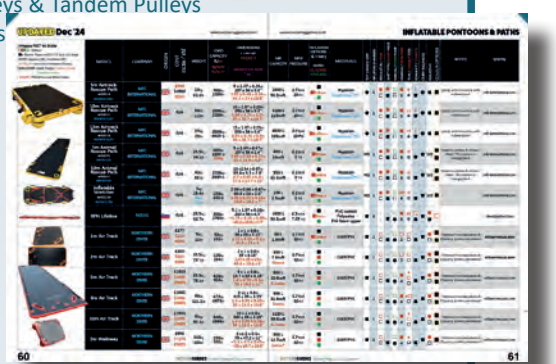
Our **WATER RESCUE BUYERSGUIDE** is compiling now and will be out Summer25 although some of these categories are so detailed and complex that some will still be compiling into late 2025.

FREE link:
https://accessandrescue.hflip.co/GuidetoWaterRescueEquipment

Water Rescue Helmets
Water & Ice Rescue Drysuits
Rescue PFDS
Dog PFDs
Water Rescue Drones & ROVs
Water-Capable Aerial Drones
Inflatable Platforms/Paths
Inflatable Rescue Boats
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



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

+ Concrete Cutting chainsaws

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 so they don't see the same style of use during firefighting.

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* below-right.

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 ■■.

MODELSERIES VARIANT: The model name, usually a number the same as the product code.

SERIES is the common platform (if there is one) and normally associated more with battery tools using the same battery type across a range of tools but could also be petrol tools with common components (eg the same engine as their chainsaws etc.

VOLTAGE: The battery voltage for the specific types of battery used.... or **FUEL: 2 stroke** using requiring a premix or you mix in an oil additive to a required ratio, usually 25:1 or 50:1 or **4-stroke** used 'neat' with no premix additive.

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.

TOOL-ONLY WEIGHT: Refers to the weight of the tool WITHOUT the default battery or a tank of fuel (see next category).

WEIGHT of Default BATTERY/of Full FUEL Tank add either of these to the previous **TOOL-ONLY WEIGHT** to get the operational weight-in-hand that the rescuer has to hold.

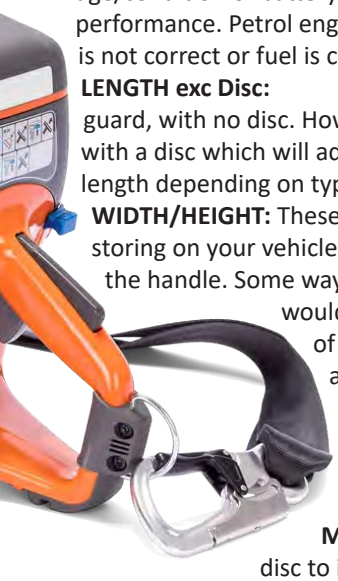
BATTERY Ah Options The default AmpHour and optional batteries available for this tool

FUEL CAPACITY: Size of the fuel tank in ml/millilitres and Fl0z/ Fluid ounces

POWER OUTPUT: in kW/ Kilowatts and CC (cubic centimetres (Cylinders for petrol engines)

DISC (ROTARY) CUTTERS

DURATION: Default BATTERY
Full FUEL Tank: The approximate runtime with a full fiel tank of fresh (new) battery remembering that temperature and age/condition of battery will adversely affect run-time and performance. Petrol engines not so affected unless the fuel mix is not correct or fuel is contaminated.



LENGTH exc Disc: Length of tool to the end of the disc guard, with no disc. However these tools will usually be stored with a disc which will add from nil to several cm/inches to the length depending on type of disc.
WIDTH/HEIGHT: These tools can be quite bulky in terms of storing on your vehicle and this is almost always dictated by the handle. Some way to quickly detach or fold the handle would be a useful way to save several inches of height and width but it's never been addressed, maybe because it would be a weak-point considering the force and weight applied to the handle during operation
BLADE
MAX DIAMETER: The physical size of the disc to its outer edges. The guard will dictate the maximum diameter of disc the tool can accommodate.
CUTTING DEPTH: Usually this will be to the obvious centre spindle or the disc-mount surrounding it but some may have specialist teeth inserts intended only for more shallow cuts than the overall disc diameter would imply.
ARBOR/SPINDLE DIAMETER: The all-important size of the hole in the disc into which the spindle or mounting bolt will fit. ***This has to be exact*** to ensure the disc rotates cleanly with no undue clearance that would cause vibration/oscillation and perhaps even lateral movement - either of which would severely limit effectiveness and might cause the disc to shatter. A collet (thick metal ring) can be used to alter the spindle size to fit discs with different bores - imperial to metric for instance.
BLADE THICKNESS: Some companies give a maximum thickness of disc that the tool can take but the vast majority of discs are standard format across all tools.
SOUND POWER
SOUND PRESSURE

FEATURES

XTRA BLADE GUARD: Virtually all tools have a guard that covers the top and rear edges of the disc closest the operator but some have an additional guard or an option that increases the coverage of the guarded area.
WATER INPUT: ■ Regular (off-the-shelf) hose attachment rangimng from ½" /12.7-13mm to ¾" / 19mm
■ Hand Pump - usually with a 'stirrup' on top of a plastic tank to pump the water via a hose attachment
■ Battery Pump offers hands-free constant flow to a predetermined or adjustable flow rate.
ON-BOARD SCRENCH: A screwdriver/socket wrench combination tool for changing the disc and adjusting the carb etc. and mounts directly to the tool so that it is always available.
CARRY STRAP: Usually a shoulder strap and used to carry the tool from the vehicle but can also help to alleviate weight in hand during use. **CART:** A wheeled, sack-truck style mount that carries the weight of the tool which is then rotated into its cutting position while still attached to the cart. Mainly used by civil road and rail crews carrying out maintenance but can have uses in rescue other than building collapse.
LED LIGHTS: As with many rescue tools the cutting area is illuminated by on-board LED lights - particularly in battery powered tools as no additional power source is required as would be the case with petrol tools.
WiFi/ Bluetooth CAPABLE: Maintenance and/or Inventory app that keeps track of tool-use, battery status and use, temperature during use etc.
IN-WATER-CAPABLE: Some battery tools can or will be able to be used in water and even underwater
TOOL/BATTERY IP: Related to the above in the case of water but also important in silo-rescue and confined spaces but the nature of the tool and what it is cutting often causing a huge amount of sparks and/or heat will be more of a consideration that the battery's IP rating!

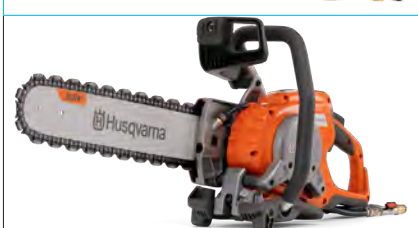
IMAGES NOT TO SCALE
OTHER TOOLS IN RANGE:
■= Cutter ■= Spreader ■=Ram
■= Special Tools ■= Hose-Fed Tools
●○= Partial feature or OK, but not ideal
WATER INPUT: ■Hose ½" ■HandPump ■BatteryPump
□□□= Option
N/A = info Not Available/not given

	MODEL SERIES VARIANT VOLTAGE FUEL	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	WEIGHT TOOL-ONLY exc Battery exc Fuel	WEIGHT Default BATTERY Full FUEL Tank	BATTERY Ah OPTIONS FUEL CAPACITY	PO OU
	DCS691X2 54v	**DEWALT**	■■■■■		£850 $ €	19.2kg 42.2lb	1kg 2.2lb	-	3 (1)
	DSH 600-X-12" 2 stroke	**HILTI**	■■■■■		£1370 $ €	00kg 00lb	0kg 0lb 0kg 0lb	- -	3 (63c
	DSH 700-X-14" 2 stroke	**HILTI**	■■■■■		£1720 $ €	00kg 00lb	0kg 0lb 0kg 0lb	- -	3 (70c
	DSH 900-X 14" 2 stroke	**HILTI**	■■■■■		£1980 $ €	00kg 00lb	0kg 0lb 0kg 0lb	- -	4 (87c
	DSH 900-X-16" 2 stroke	**HILTI**	■■■■■		£000 $ €	00kg 00lb	0kg 0lb 0kg 0lb	- -	4 (0)
	NURON **DSH600-22** 22v cordless	**HILTI**	■■■■■		£1120 $ €	12.2kg lb	1.31kg lb	22-170 li-ion 8ah	
	NURON **DSH700-22** 22v cordless	**HILTI**	■■■■■		£1200 $ €	13.5kg 00lb	1.84kg 0lb 0kg 0lb	22-255 li-ion 12ah -	(0)

DISC (ROTARY) CUTTERS

OWER UTPUT CC linders)	DURATION Default BATTERY Full FUEL Tank	LENGTH exc Disc	WIDTH	HEIGHT	BLADE MAX DIAMETER CUTTING DEPTH ARBOR DIAMETER BLADE THICKNESS	SOUND POWER PRESSURE	XTRA BLADE GUARD	WATER INPUT	ON-BOARD SCRENCH	CARRY STRAP CART	LED LIGHTS	WiFi / CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	WWW.
.7kW 73.5cm³	- 00mins	933mm 36.7"	236mm 9.3"	241mm 9.5"	300mm / 000" 100mm / 000" 20mm / 000" 5mm / 000"		■	■ ■ ■		■	□ 4	Wi Fi	- 68		hilti.com
.2kW cc) 00cm³	- 00mins	558mm 00"	326mm 00"	370mm 00"	300mm / 000" 120mm / 000" 20mm / 000" 5mm / 000"	102db	-	■ ■ ■						2.5m/s2 vibration	hilti.com
.5kW cc) 00cm³	- 00mins	808mm 00"	261mm 00"	434mm 00"	350mm / 000" 125mm / 000" 20mm / 000" 5mm / 000"	96db	-	■ ■ ■						4.9m/s2	hilti.com
.3kW cc) 00cm³	- 00mins	856mm 00"	266mm 00"	466mm 00"	400mm / 000" 150mm / 000" 20mm / 000" 5mm / 000"	102db	-	■ ■ ■						5.2 m/s2 vin	hilti.com
.3kW 00cm³	- 00mins	856mm 00"	266mm 00"	466mm 00"	000mm / 000" 100mm / 000" 20mm / 000" 5mm / 000"		-	■ ■ ■							hilti.com
	<45mins 90mins	660mm 25.9"	290mm 11.4"	350mm 13.8"	300mm / 000" 120mm / 000" 20mm / 000" 5mm / 000"	107db	■	■ ■ ■		■	□ 4		- 68		hilti.com
00kW 00cm³	- 00mins	740mm 00"	290mm 00"	350mm 00"	300mm / 000" 120mm / 000" 20mm / 000" 5mm / 000"	107db	-	■ ■ ■							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 ½" ■HandPump
■BatteryPump
□□□= Option
N/A = info Not Available/not given

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

OWER UTPUT CC linders)	DURATION Default BATTERY Full FUEL Tank	LENGTH exc Disc	WIDTH	HEIGHT	BLADE MAX DIAMETER CUTTING DEPTH ARBOR DIAMETER BLADE THICKNESS	SOUND POWER PRESSURE	XTRA BLADE GUARD	WATER INPUT	ON-BOARD SCRENCH	CARRY STRAP CART	LED LIGHTS	WiFi / CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	WWW.
.7kW 73.5cm³	- 00mins	605mm 23.8"	225mm 8.9"	391mm 15.4"	300mm / 000" 100mm / 000" 20mm / 000" 5mm / 000"	115dB 101dB	■	■ ■ ■		■	□ 4		-	2.3m/s2	husqvarna.com
.8kW 93.6cm³	- 00mins	661mm 00"	214mm 00"	444mm 00"	350mm / 000" 125mm / 000" 20mm / 000" 5mm / 000"	115dB 104dB	-	■ ■ ■						4.2m/s2	husqvarna.com
.8kW 00cm³	- 00mins	730mm 00"	243mm 00"	434mm 00"	350mm / 000" 118mm / 000" 20mm / 000" 5mm / 000"	117dB 104dB	-	■ ■ ■						4.5m/s2	husqvarna.com
.5kW 00cm³	- 00mins	443mm 00"	231mm 00"	378mm 00"	450mm / 000" 450mm / 000" mm / 000" mm / 000"	112dB 102dB	-	■ ■ ■						2.7m/s2	husqvarna.com
.5kW 00cm³	- 00mins	681mm 00"	187mm 00"	476mm 00"	400mm / 000" 155mm / 000" 25.4mm / 000" 5mm / 000"	111dB 96dB	-	■ ■ ■						1.8m/s2	husqvarna.com
.7kW 00cm³	<mins mins	631mm "	221mm "	313mm "	350mm / 000" 125mm / 000" 25.4mm / 000" 5.6mm / 000"	105dB 95dB	■	■ ■ ■		■	□ 4		-	3.5m/s2	husqvarna.com

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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 SERIES VARIANT VOLTAGE FUEL	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	WEIGHT TOOL-ONLY exc Battery exc Fuel	WEIGHT Default BATTERY Full FUEL Tank	BATTERY Ah OPTIONS FUEL CAPACITY	PO OU
	K4000 Cut-n-Break 110v	HUSQVARNA	■■■■■		£ $ €	8.4kg 00lb	0kg 0lb 0kg 0lb	- -	2 (0)
	K4000 mkII 220V	HUSQVARNA	■■■■■		£ $ €	00kg 00lb	0kg 0lb 0kg 0lb	- -	(0)
	K3600 Cut-n-Break 36V	HUSQVARNA	■■■■■		£ $ €	00kg 00lb	0kg 0lb 0kg 0lb	- -	(0)
	K970 Chain 2 stroke	HUSQVARNA	■■■■■		£ $ €	9.6kg 00lb	0kg 0lb 0kg 0lb	- -	4 (0)
	K2500 Hydraulic	HUSQVARNA	■■■■■		£ $ €	8.3kg 00lb	0kg 0lb 0kg 0lb	- -	5 (0)
	K1 Pace battery?	HUSQVARNA	■■■■■		£ $ €	7.2kg 00lb	0kg 0lb 0kg 0lb	- -	(0)
	K540i 36v	HUSQVARNA	■■■■■		£ $ €	4.2kg 00lb	0kg 0lb 0kg 0lb	- -	(0)

DISC (ROTARY) CUTTERS

OWER UTPUT CC linders)	DURATION Default BATTERY Full FUEL Tank	LENGTH exc Disc	WIDTH	HEIGHT	BLADE MAX DIAMETER CUTTING DEPTH ARBOR DIAMETER BLADE THICKNESS	SOUND POWER PRESSURE	XTRA BLADE GUARD	WATER INPUT	ON-BOARD SCRENCH	CARRY STRAP CART	LED LIGHTS	WiFi / CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	WWW.
.7kW 00cm³	- 00mins	867mm 00"	226mm 00"	325mm 00"	230mm / 000" 400mm / 000" 00mm / 000" 2.5mm / 000"	109dB 95dB	-	■ ■ ■						3.4m/s2	husqvarna.com
00kW 00cm³	- 00mins	000mm 00"	000mm 00"	00mm 00"	000mm / 000" 000mm / 000" 00mm / 000" 0mm / 000"		-	■ ■ ■						is this K3600?	husqvarna.com
00kW 00cm³	- 00mins	000mm 00"	000mm 00"	00mm 00"	000mm / 000" 000mm / 000" 00mm / 000" 0mm / 000"		-	■ ■ ■						is this k760??	husqvarna.com
.8kW 00cm³	- 00mins	456mm 00"	294mm 00"	380mm 00"	450mm / 000" 450mm / 000" 00mm / 000" 0mm / 000"	115dB 104dB	-	■ ■ ■						front3.6m/s2 rer 4.7m/s2	husqvarna.com
.2kW 00cm³	- 00mins	727mm 00"	260mm 00"	462mm 00"	400mm / 000" 145mm / 000" 25.4mm / 000" 5mm / 000"	107dB 85dB	-	■ ■ ■						front 7.5m/s2 rear 5.2m/s2	husqvarna.com
00kW 00cm³	- 00mins	648mm 00"	233mm 00"	400mm 00"	314mm / 000" 121mm / 000" 25.4mm / 000" 1.8mm / 000"	102dB(A)	-	■ ■ ■						front 2m/s2 rear 1.1m/s2	husqvarna.com
00kW 00cm³	- 00mins	558mm 00"	200mm 00"	330mm 00"	267mm / 000" 100mm / 000" 25.4mm / 000" 3mm / 000"	112.7dB 101.5dB	-	■ ■ ■						front 3.7m/s2 rear 2.4m/s2	husqvarna.com

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□□□= Option
N/A = info Not Available/not given

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

DISC (ROTARY) CUTTERS

OWER UTPUT CC linders)	DURATION Default BATTERY Full FUEL Tank	LENGTH exc Disc	WIDTH	HEIGHT	**BLADE** MAX DIAMETER CUTTING DEPTH ARBOR DIAMETER BLADE THICKNESS	**SOUND** POWER PRESSURE	XTRA BLADE GUARD	WATER INPUT	ON-BOARD SCRENCH	CARRY STRAP CART	LED LIGHTS	WiFi / CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	WWW.
.7kW 73.5cm³	- 00mins	603mm "	240mm "	350mm "	230mm /9" 88mm / 3.5" 17mm / 000" 3mm / 000"	116db 105db	■	■ ■		■	□ 4	Wi Fi	- 68		makita.com
00kW 00cm³	- 00mins	554mm 00"	000mm 00"	283mm 00"	230mm / 000" 88mm / 000" 22.23mm / 000" 3mm / 000"	114db 103db	-	■ ■ ■						5.9m/s2	makita.com
00kW 00cm³	- 00mins	663mm 00"	240mm 00"	406mm 00"	305mm / 000" 121mm / 000" 20mm / 000" 5mm / 000"	110db 99db	-	■ ■ ■						3.8m/s2	makita.com
00kW 00cm³	- 00mins	825mm 00"	272mm 00"	487mm 00"	355mm / 000" 127mm / 000" 25.4mm / 000" 0mm / 000"	120db 109db	-	■ ■ ■						2.5m/s2	makita.com
00kW 00cm³	- 00mins	000mm 00"	000mm 00"	00mm 00"	000mm / 000" 100mm / 000" 20mm / 000" 5mm / 000"		-	■ ■ ■							makita.com
00kW 00cm³	- 00mins	000mm 00"	000mm 00"	00mm 00"	000mm / 000" 000mm / 000" 00mm / 000" 0mm / 000"		-	■ ■ ■							makita.com
00kW 00cm³	- 00mins	000mm 00"	000mm 00"	00mm 00"	000mm / 000" 100mm / 000" 20mm / 000" 5mm / 000"		-	■ ■ ■							makita.com

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□□□= Option
N/A = info Not Available/not given

	MODEL SERIES VARIANT VOLTAGE FUEL	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	WEIGHT TOOL-ONLY exc Battery exc Fuel	WEIGHT Default BATTERY Full FUEL Tank	BATTERY Ah OPTIONS FUEL CAPACITY	PO OU
	EK7650H 2 Stroke	**MAKITA**	■■■■■		£1217 $ €	00kg 00lb	0kg 0lb 0kg 0lb	- -	0 (0)
	DPC6430 2 stroke	**MAKITA**	■■■■■		£616 $ €	00kg 00lb	0kg 0lb 0kg 0lb	- -	0 (0)
	M18 FUEL 18V	**MILWAUKEE**	■■■■■		£ $ €	00kg 00lb	0kg 0lb 0kg 0lb	- -	0 (0)
	MX FUEL 350MM 18V	**MILWAUKEE**	■■■■■		£ $ €	00kg 00lb	0kg 0lb 0kg 0lb	- -	0 (0)
	MX18 18V	**MILWAUKEE**	■■■■■		£ $ €	00kg 00lb	0kg 0lb 0kg 0lb	- -	0 (0)
	2 stroke	**MILWAUKEE**	■■■■■		£1290 $ €	00kg 00lb	0kg 0lb 0kg 0lb	- -	0 (0)
						00kg 00lb	0kg 0lb 0kg 0lb	- -	0 (0)

DISC (ROTARY) CUTTERS

OWER UTPUT CC linders)	DURATION Default BATTERY Full FUEL Tank	LENGTH exc Disc	WIDTH	HEIGHT	BLADE MAX DIAMETER CUTTING DEPTH ARBOR DIAMETER BLADE THICKNESS	SOUND POWER PRESSURE	XTRA BLADE GUARD	WATER INPUT	ON-BOARD SCRENCH	CARRY STRAP CART	LED LIGHTS	WiFi / CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	WWW.
00kW 00cm³	- 00mins	000mm 00"	000mm 00"	00mm 00"	000mm / 000" 000mm / 000" 00mm / 000" 0mm / 000"		-	■ ■ ■							makita.com
00kW 00cm³	- 00mins	000mm 00"	000mm 00"	00mm 00"	000mm / 000" 100mm / 000" 20mm / 000" 5mm / 000"		-	■ ■ ■							makita.com
00kW 00cm³	- 00mins	000mm 00"	000mm 00"	00mm 00"	000mm / 000" 000mm / 000" 00mm / 000" 0mm / 000"		-	■ ■ ■							milwaukee.com
00kW 00cm³	- 00mins	000mm 00"	000mm 00"	00mm 00"	000mm / 000" 100mm / 000" 20mm / 000" 5mm / 000"		-	■ ■ ■							milwaukee.com
00kW 00cm³	- 00mins	000mm 00"	000mm 00"	00mm 00"	000mm / 000" 000mm / 000" 00mm / 000" 0mm / 000"		-	■ ■ ■							milwaukee.com
00kW 00cm³	- 00mins	000mm 00"	000mm 00"	00mm 00"	000mm / 000" 100mm / 000" 20mm / 000" 5mm / 000"		-	■ ■ ■							milwaukee.com
00kW 00cm³	- 00mins	000mm 00"	000mm 00"	00mm 00"	000mm / 000" 100mm / 000" 20mm / 000" 5mm / 000"		-	■ ■ ■							

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□□□= Option
N/A = info Not Available/not given

	MODEL SERIES VARIANT VOLTAGE FUEL	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	WEIGHT TOOL-ONLY exc Battery exc Fuel	WEIGHT Default BATTERY Full FUEL Tank	BATTERY Ah OPTIONS FUEL CAPACITY	PO OU (Cy
	TS 500i 2 stroke	STIHL	■■■■■	■	£1290 $ €	00kg 00lb	0kg 0lb 0kg 0lb	- -	0 (0)
	TSA 230 36V	STIHL	■■■■■	■	£500 $ €	00kg 00lb	0kg 0lb 0kg 0lb	- -	0 (0)
	TSA 300 36V	STIHL	■■■■■	■	£850 $ €	00kg 00lb	0kg 0lb 0kg 0lb	- -	0 (0)
	TS 410 2 stroke	STIHL	■■■■■	■	£1230 $ €	00kg 00lb	0kg 0lb 0kg 0lb	- -	0 (0)
	TS 420 2 stroke	STIHL	■■■■■	■	£1240 $ €	00kg 00lb	0kg 0lb 0kg 0lb	- -	0 (0)
	TS 440 2 stroke	STIHL	■■■■■	■	£1316 $ €	00kg 00lb	0kg 0lb 0kg 0lb	- -	0 (0)
	TS 480i 2 stroke	STIHL	■■■■■	■	£1290 $ €	00kg 00lb	0kg 0lb 0kg 0lb	- -	0 (0)

DISC (ROTARY) CUTTERS

OWER UTPUT CC linders)	DURATION Default BATTERY Full FUEL Tank	LENGTH exc Disc	WIDTH	HEIGHT	**BLADE** MAX DIAMETER CUTTING DEPTH ARBOR DIAMETER BLADE THICKNESS	**SOUND** POWER PRESSURE	XTRA BLADE GUARD	WATER INPUT	ON-BOARD SCRENCH	CARRY STRAP CART	LED LIGHTS	WiFi / CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	WWW.
00kW 00cm³	- 00mins	000mm 00"	000mm 00"	00mm 00"	000mm / 000" 000mm / 000" 00mm / 000" 0mm / 000"		-	■ ■ ■							stihl.com
00kW 00cm³	- 00mins	000mm 00"	000mm 00"	00mm 00"	000mm / 000" 000mm / 000" 00mm / 000" 0mm / 000"		-	■ ■ ■							stihl.com
00kW 00cm³	- 00mins	000mm 00"	000mm 00"	00mm 00"	000mm / 000" 000mm / 000" 00mm / 000" 0mm / 000"		-	■ ■ ■							stihl.com
00kW 00cm³	- 00mins	000mm 00"	000mm 00"	00mm 00"	000mm / 000" 000mm / 000" 00mm / 000" 0mm / 000"		-	■ ■ ■							stihl.com
00kW 00cm³	- 00mins	000mm 00"	000mm 00"	00mm 00"	000mm / 000" 000mm / 000" 00mm / 000" 0mm / 000"		-	■ ■ ■							stihl.com
00kW 00cm³	- 00mins	000mm 00"	000mm 00"	00mm 00"	000mm / 000" 000mm / 000" 00mm / 000" 0mm / 000"		-	■ ■ ■							stihl.com
00kW 00cm³	- 00mins	000mm 00"	000mm 00"	00mm 00"	000mm / 000" 000mm / 000" 00mm / 000" 0mm / 000"		-	■ ■ ■							stihl.com

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OTHER TOOLS IN RANGE:
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WATER INPUT: ■Hose ½" ■HandPump
■BatteryPump
□□□= Option
N/A = info Not Available/not given

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

DISC (ROTARY) CUTTERS

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

'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 intergrated 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 webbng 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-solidstructure that is safe for rescueres 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 pic ture 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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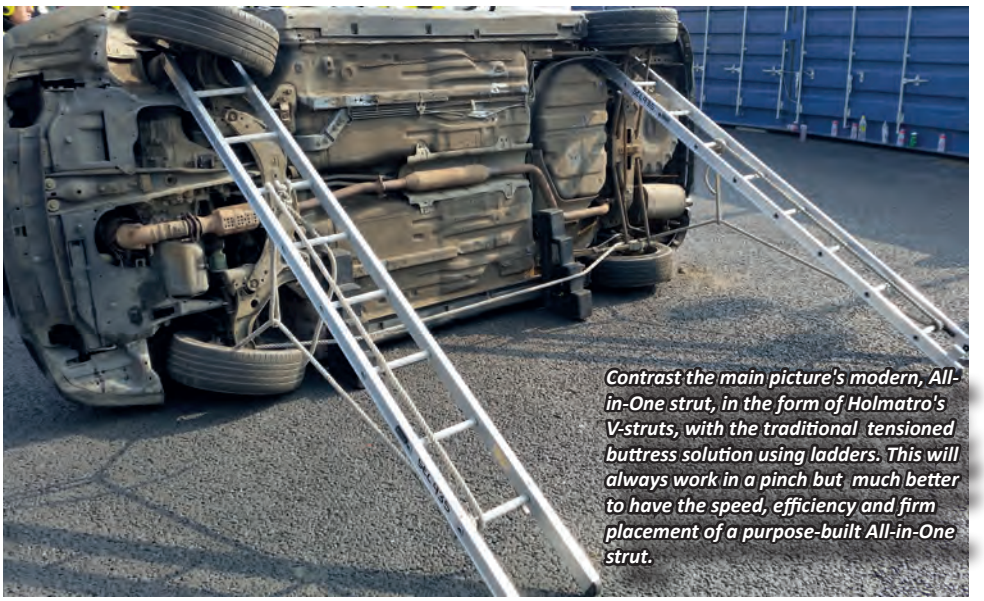

Contrast the main picture's modern, All-in-One strut, in the form of Holmatro's V-struts, with the traditional tensioned buttress solution using ladders. This will always work in a pinch but much better to have the speed, efficiency and firm placement of a purpose-built All-in-One strut.

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 ....

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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.

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

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 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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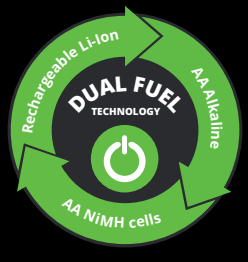

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IMAGES NOT to SCALE
HD. STD.LD refers to the type of vehicle load the strut can handle: **H**eavy **D**uty for all types of vehicles inc. trucks/trains/trams. **ST**andar**D** for all cars and most Large Goods Vehicles/trucks and **L**ight**D**uty for cars, vans and light trucks.

	MODEL	COMPANY	ORIGIN	2022 COST each	WEIGHT	MIN LENGTH	MAX LENGTH
		AOLAI					
	Stabilisation	COVEX		€2000	8.9kg 19.6lb	1150mm 45.27"	1950mm 76.77"
	Basic	COVEX		€1200	10.6kg 23.3lb	1100mm 43"	1950mm 76.77"
	Kodiak	GENESIS		$1000	4.8kg 10.5lb	686mm 27"	1067mm 42"
	V-Strut	HOLMATRO		$1050 €705	7.9kg 17.4lb	1080mm 42.5"	1800mm 70.9"
	X-Tend Small	JUNKYARD DOG INDUSTRIES		$1350	8.6kg 19lb	686mm 27"	1067mm 42"
	X-Tend Medium	JUNKYARD DOG INDUSTRIES		$1470	11.3kg 25lb	990mm 39"	1625mm 64"
	X-Tend Large	JUNKYARD DOG INDUSTRIES		$1510	11.3kg 25lb	1295mm 51"	2057mm 81"
	Z-Strut Small	JUNKYARD DOG INDUSTRIES		$2460	10.9kg 24lb	686mm 27"	1067mm 42"
	Z-Strut Medium	JUNKYARD DOG INDUSTRIES		$2670	13.15kg 29lb	990mm 39"	1625mm 64"
	Z-Strut Large	JUNKYARD DOG INDUSTRIES		$2880	14.5kg 32lb	1295mm 51"	2057mm 81"
	LVS10	LEADER GROUP/ PARATECH			8.8kg 19.4lb	980mm 38.6"	1700mm 67"
	LQS/ QuickStrut	LUKAS / HURST		$1000	16kg 35lb	1340mm 52.75"	2000mm 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 31.5"	1500kg 3307lb	1500kg 3307lb	Alloy	CE	■	■	■	■		hobrand-algebra.nl
	850mm 33.77"	1500kg 3307lb	1500kg 3307lb	Steel	CE	■			☐		hobrand-algebra.nl
	381mm 15"	4082kg 9000lb	9072kg 20000lb	Alloy		■	■	■	☐	Pointed, V & Chain heads + Extensions tubes. Also by Geneisis, Grizzly strut minus integrated webbing/ ratchet	genesisrescue.com
	720mm 28.4"	1632kg 3597lb	1632kg 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 15"	2269kg 5000lb	2269kg 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 25"	2269kg 5000lb	2269kg 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 30"	2269kg 5000lb	2269kg 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 15"	2269kg 5000lb	2269kg 5000lb	Steel		■		■	■	Std, 90°, Pointed Heads. Comes with picket anchor and accessories bag.	jydind.com
	635mm 25"	2269kg 5000lb	2269kg 5000lb	Steel		■		■	■	Std, 90°, Pointed Heads. Comes with picket anchor and accessories bag.	jydind.com
	762mm 30"	2269kg 5000lb	2269kg 5000lb	Steel		■		■	■	Std, 90°, Pointed Heads. Comes with picket anchor and accessories bag.	jydind.com
	720mm 28.4"	4500kg 9921lb	4500kg 9921lb	Alloy		■	■	■	■	Chain wedge, pike, convex surface grip with belt hook location all in one	leadernorthameri-ca.com
	660mm 25.95"	1000kg 2204.6lb	1000kg 2204.6lb	Alloy	CE	■			☐	Discontinued in USA	lukas.com

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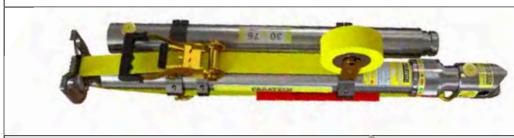
	MODEL	COMPANY	ORIGIN	2022 COST each	WEIGHT (strut-only)	MIN LENGTH	MAX LENGTH
	Supporter X2	PARATECH		$1300	15.9kg 35lb	1016mm 40"	1661mm 65.4"
	TeleCrib Jr	RESCUE 42		$1542	13.6kg 30lb	1041mm 41"	1753mm 69"
	GreenLite Short	RES-Q-JACK		$745	14kg* 31lb*	1067mm 42"	1625.6mm 64"
	GreenLite Long	RES-Q-JACK		$745*	15.4kg* 34lb*	1372mm 54"	2222.5mm 87.5"
	Aluminum X Short	RES-Q-JACK		$2005*	18kg* 40lb*	1016mm 40"	1689mm 66.5"
	Aluminum X Long	RES-Q-JACK		$2005	20.1kg* 46lb*	1384mm 54.5"	2216 mm 87.25"
	APEX Short	RES-Q-JACK		$2200*	15.4kg* 34lb*	1146mm 45.1"	1587mm 62.5"
	APEX Long	RES-Q-JACK		$2200	20kg* 44lb*	1492mm 58.75"	2324mm 91.5"
	Auto X Short	RES-Q-JACK		n/a	15.8kg* 35lb*	1118mm 44"	1695mm 66.75"
	Auto X Long	RES-Q-JACK		n/a	17.8kg 38lb*	1384mm 54.5"	2216mm 87.25"
	Greenstab	SCORPE		n/a	(7) 19kg* (14.4)42lb	1064mm 41.9"	1804mm 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. V, Cone & Chain Wedge heads.	paratech.com
712mm 28"	2269kg 5000lb	2269kg 5000lb	Kevlar Composite		■		■	□	Combi-Head	rescue42.com
558mm 22"	1133kg 2500lb	1133kg 2500lb	Steel		■	-	■	□	* Add 22lb for jack attachment. 1134kg/2500lb lift capacity. Ratchet strap not a fixed element. Swivel multi-head.	res-q-jack.com
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. * 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 being shored/stabilised using raker rails (title pic) or a vehicle on its side as shown on the right where a standard strut is being used in conjunction with a 'Come-Along' winch to triangulate the forces and prevent the vehicle 'submarining'. The inset picture shows a more bespoke version of the Paratech shoring strut designed specifically for vehicle stabilisation with integral ratchet strap.

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 *SuperX* pic left. 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. *Paratech*'s tripod head allows an additional single strut to be used on top of the tripod legs to extend the support height (pic above)

STRUCTURAL SHORING STRUTS

them but can go on to lift/ push the medium in the same way as an airbag. As a stabilisation strut, the ability to exert ***a lifting force rather than simply provide firm initial 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. So, although we have included some struts with a full 'structural' lifting capability like the *Holmatro H20*, *Paratech Hydrastut* and *Hydra'am* model , some are intended more for vehicle stabilisation like the *Genesis Kodiak* lifting

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. Load vectors are quite complex and rigging of high loads from an A-frame, monopod or off-centre tripod is an advanced procedure.

4) **LIFTING**: Hydraulic struts have very high lifting/pushing force but pneumatically pressurised struts (intended mainly for trench rescue) can also impart such a high force that they not only extend into position without the need to manually extend

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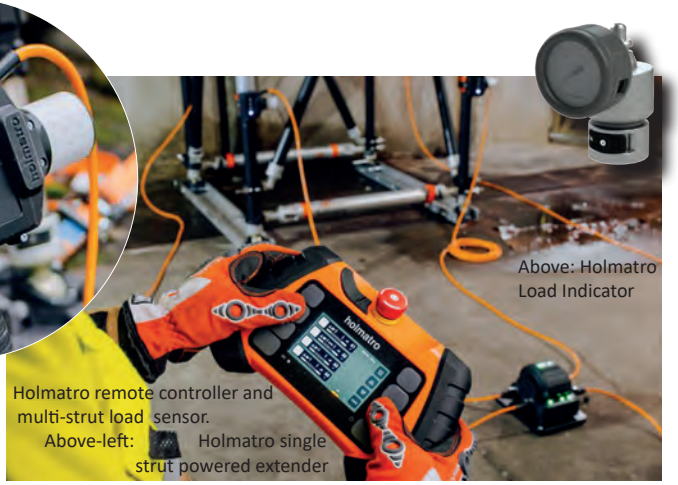
struts and power-drill lifting option versus their *Tornado* structural struts (left).



Above: Holmatro Load Indicator

Holmatro remote controller and multi-strut load sensor.
Above-left: Holmatro single strut powered extender

Paratech Rescue Guardian - Load-shift sensor & alarm.
Left: Paratech anaolgue single strut load monitor

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 one of 4 or 6 correctly aligned holes in the telescoping tubes -primarily *ProSpan* (and *Genesis Rescue* and *Scorpe*) now that *Idex* have discontinued the *Airshore,* and these remain pretty bombproof and affordable but these have largely transitioned into push-fit connections, sprung plunge-pin or push-button release. The *Holmatro Omnishore* is, at the time of writing, the newest bespoke shoring system and they have opted to use a total of 6 telescoping struts with no fixed-length extensions. Instead each sized strut can be coupled to ONE other strut via their '*Trident*' interlocking coupling on one end (pic right) with angled, interlocking fingers that don't allow any rotation or misalignment. . With any two struts you can pretty much span any distance you need without having to make calculations for a fixed-length extension. With two struts providing a telescoping section top and bottom the Omnishore can span from 30cm/1ft to 5.2m/17ft. Remember that the longer a shore and its extensions are, the smaller the load that it can take; Paratech recommend a maximum of 36" of extensions if joining more than one but for most ***do not use more than one extension per strut.***

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, Scorpe** and original *Airshore* (left) have additional adjustment on the collar via an angled top on which a pin will ride while you rotate using the keyhole-shaped extensions and then lock into position with that x-shaped screw. This allows an inch or two of more precise adjustment which can make the difference when trying to get a firm fit. The length of adjustment on the *Paratech*-style screw threaded tubes you can see on the right is 'captured' by a collar which will either be wound into place manually or may automatically follow the length of adjustment by pressurising pneumatically and then locking it at the approximate or in some cases, the exact point to which you raise it. Raising of the telescoping section can be manual or use compressed air cylinders, CO2 or even Nitrogen 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 old *Airshore* strut below left, (in its *Idex* blue livery rather than original red) best displays the traditional features still present on *Prospan, Genesis* and *Scorpe** ranges; the round red buttons are plunge pins for connecting foot and head attachments - this replaced simpler pins that you see on the adjustment collar. At the bottom is a valve for compressed air pressurisation of the strut and a pressure release 'screw' 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 original *Airshore* struts ultimately disappeared after being dropped from the *IDEX (Lukas/Hurst/Vetter)* ranges which would have left the field open for *Prospan* and 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* which has one strut in its array of 6 interconnecting pneumatic struts that can impart lift hydraulically if required. These are very slick and at the '*Rolls-Royce*' end of shoring with accessories like multiple strut load-monitoring, remote raising via electric pump and handheld controller plus a smaller single strut remote raising unit (pic top-left) and a single strut analogue load monitor which both *Holmatro* and *Paratech* have a version of. *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 p44) which can monitor up to 10 struts simultaneously and alarm audibly and via blue tooth to connected devices should there be an

Shoring reinvented.

First responders need shoring equipment that is as intuitive, versatile and smart as they are. That is why we have developed OmniShore, a shoring system reimagined from the ground up and designed in accordance with unparalleled standards of quality and safety.

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overload or change in load which is particularly useful in trench rescue and earthquake situations. After each family of struts in our tables is a visual list of all of the foot and head accessories that fit that 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 unstable trench walls - these require much broader load support using boards and walers or the smaller 'spot-walers' shown on the *ProSpan* shore above which can be used without boards on more stable trench walls. Some of the tripod heads and larger feet require an angled clevis to be connected between the plate and the strut but the newest models from *Holmatro, Reqtec, Paratech* etc. will connect directly into the accessory as a locking, push-fit rather than needing to be manually pinned. However, do bear in mind that, excellent though these newer, easier and quicker to use struts are, the older style manual shores using pins are very forgiving of rough handling and neglect, we can attest to the fact that the *Prospan TASS* models for instance will continue to function decades after they've been decommissioned and left to corrode behind the workshop! There are too many accessories to provide details in this particular article but we have listed all of the available spec for each accessory in the **USAR BUYERSGUIDE** available now on this link and due to be fully complete in late Summer.

IN THE FOLLOWING TABLES..... See our comprehensive Guide to shoring struts in the **USAR BUYERSGUIDE** for regular updates to this article and for a list of specs for each of the accessories (head, feet etc) shown in this article. All load figures are in **metric tons/tonnes** equivalent to 1000kg and **US (short) tons** equivalent to 2000lbs or 0.9 of a metric ton NB: the use of the word 'ton' without defining short, long, US, UK or metric is best differentiated using 'tonne' for a metric ton. 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 □□□□ **USES** ■Vehicle stabilisation ■Light Structural(timber building etc)■ Heavy concrete Structural & Trench●●● USE or 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 ■■. **ORIGIN:** The company's home country, not necessarily the country of

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MANUAL= extended by hand HYD = Hydraulically extended-NB: will impart high lift/push force
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MONITOR: Load cell or load-shift alarm ELECTRIC RAISE Extends the strut remotely -No high lift force

	SERIES MODEL VARIANT	COMPANY	ORIGIN	USES	COST (each) £$€ = Currency conversion only- no duty or shipping etc.	V
	Tornado Airstrut B ART.AS.B	GENESIS RESCUE		●■■	N/A	
	Tornado Airstrut E ART.AS.E547	GENESIS RESCUE		●■■	N/A	
	Tornado Extension ART.AS.18EXT	GENESIS RESCUE		■■■	N/A	
	Kodiak Lifting Device 500.600.KLD	GENESIS RESCUE		■●■	N/A	
	Kodiak ShortExtension 15	GENESIS RESCUE		■■■	N/A	
	Kodiak LongExtension 30	GENESIS RESCUE		■■■	N/A	
	ACCESSORIES	GENESIS RESCUE				

M foot

23° foot

See USAR BUYERSGUIDE for full spec on accessories

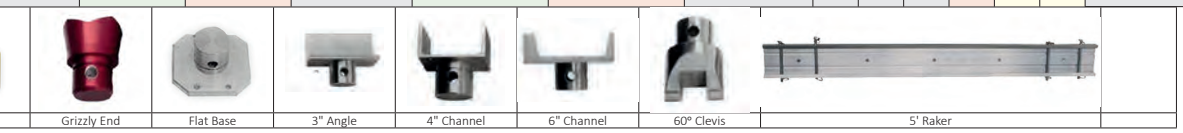
manufacture which is indicated by an inset flag or two equally sized flags if the tool is made in both countries.**COST:** rarely quoted because these are usually bulk agency purchases. We usually round up to the nearest Pound£/US Dollar$/ Euro€. Cost is for a basic strut excluding any accessories. **WEIGHT:** weight minus any accessories

ADJUSTMENT INCREMENTS: The distance between locked positions, may be half an inch or FINITE where the strut will lock in the exact position of the load **STROKE:**The total length the strut will adjust from minimum to maximum extension.**PNEUMATIC**: Pneumatically extended with compressed air, CO2, Nitrogen etc **MANUAL**: extended by hand and either pinned or a screw collar may be spun up to meet the extension point. **HYD**: Hydraulically extended either by hand pump or we will see electric/battery power becoming more prevalent. Both hydraulic and pneumatic pressurisation have the advantage of being able to place the strut remotely without placing rescuers into the danger zone. **CONNECT: PUSH-FIT** = No tools or pins are needed to lock together a strut and and accessory head/foot or extension or even two struts - they will either click into place automatically or an integral sprung plunge-pin does the job**. PIN:** a metal pin is manually placed to maintain the head/foot/extension in position.

AUTO LOCKING COLLAR: AUTO indicates that the strut will automatically default to a locked position during or after inflation/extension. A **LOCKING COLLAR** is manually locked either by being screwed on a thread or by placement of metal pins through the tube and collar.

LIFT ■ 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 (vectoring) of forces via webbing attached to the target load and the strut's base-plate. **(LOAD) MONITOR** = A load cell indicating load on the strut or an alarm to indicate over-load or load shift. **ELECTRIC RAISE**: an electric module to raise the strut (or coordinated struts) remotely without imparting the high lift forces. **It is vital that your load is in-line with the orientation of the strut usually at 90 degrees-unless it is an angled spot-load or distributed load using appropriately angled clevis and Raker-Rail/Waler combinations. if your target load starts to stray off-centre as it moves, the strut arrangement may become loose and collapse - this is why many larger strut heads have screw/nail holes to maintain their orientation. Load Capacities** are for that strut/ext only. **Joining struts & an extension=weaker.**

WEIGHT	MIN RETRACTED LENGTH	MAX EXTENDED LENGTH	ADJUSTMENT INCREMENTS /STROKE	MAX WORK LOAD @min2:1 RETRACTED t=metric tonnes	MAX WORK LOAD @min2:1 EXTENDED t=metric tonnes	STRUT MATERIAL OPERATING PRESSURE	PNEUMATIC MANUAL HYD	CONNECT: PUSH-FIT PIN	AUTO MANUAL LOCKING	LIFT RATCHET ATTACHMENT	MONITOR ELECTRIC RAISE	TRIPOD BIPOD MONOPOD	NOTES	WWW.
7.7kg 17lb	66cm 26"	94cm 37"	50mm/2" 28cm 11"	14.5t 16USton	7.25t 8USton	6061-T6 Alu Alloy 300 BAR 20.4psi	■ ■	■ ■	■	□ □	- -	- - -		genesisrescue.com
16.3kg 36lb	137cm 54"	213cm 84"	50mm/2" 76.2cm 30"	11.3t 12.5USton	6.5t 7.25USton	6061-T6 Alu Alloy 300 BAR 20.4psi	■ ■	■ ■	■	□ □	- -	- - -		genesisrescue.com
2.9kg 6.5lb	45.7cm 18"	-	-	14.5t 16USton	-	6061-T6 Alu Alloy -	■ ■	■ ■	■	□ □	- -	- - -		genesisrescue.com
7kg 15.5lb	77.5cm 30.5"	113cm 44.5"	Finite 35.6cm 14"	2.26t 2.5USton	2.26t 2.5USton	6061-T6 Alu Alloy -		- -	□	■ ■	- -	- - -	Can also use a power drill to rais. CAUTION-exerts lift - primarily for vehicle stabilisation	genesisrescue.com
3.9kg 8.5lb	38cm 15"	-	-	18.1t 20USton	-	6061-T6 Alu Alloy -	- - -	■		□ □	- -	- - -		genesisrescue.com
~7kg ~15.5lb	76cm 30"	-	-	18.1t 20USton	-	6061-T6 Alu Alloy -i	- - -	■		□ □	- -	- - -		genesisrescue.com



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Omnishore M10 151.001.601	HOLMATRO			N/A	3 7
Omnishore H20 151.002.166	HOLMATRO			N/A	1 2
Omnishore P20-OL 151.001.606 151.004.141	HOLMATRO			N/A	6 1
Omnishore P30-OL 151.002.159 151.004142	HOLMATRO			N/A	8 1
Omnishore P40-OL 151.002.023 151.004143	HOLMATRO			N/A	1 2
Omnishore P60-OL 151.002.160 151.004144	HOLMATRO			N/A	3

Omnishore ACCESSORIES

OmniLock Nut | Ratchet Base | Head/Foot | Beam Support | Strut Clamp | Column Clamp | BiPod Head | Mono & TriPod Head | Multi Head | Swivel Foot/Head | Anchor Hinge Base

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STRUCTURAL SHORING STRUTS

EIGHT	MIN RETRACTED LENGTH	MAX EXTENDED LENGTH	ADJUSTMENT INCREMENTS /STROKE	MAX WORK LOAD @min2:1 RETRACTED t=metric tonnes	MAX WORK LOAD @min2:1 EXTENDED t=metric tonnes	STRUT MATERIAL OPERATING PRESSURE	OPTIONS: PNEUMATIC MANUAL HYD	CONNECT: PUSH-FIT PIN	AUTO MANUAL LOCKING	LIFT RATCHET ATTACHMENT	MONITOR ELECTRIC RAISE	TRIPOD BIPOD MONOPOD	NOTES	WWW.
3.6kg 7.9lb	28.5cm 11.2"	47cm 18.5"	finite 18.5cm 7.3"	22.9t 25.2USton	22.9t 25.2USton	Alu Alloy 12BAR 174 psi	- ■ ■	■	■ -	□ -	□ □	- □ □		holmatro.com
1.4kg 5.1lb	61.3cm 24.1"	115.3cm 45.4"	finite 54cm 21.3"	22.9t 25.2USton	22.9t 25.2USton	Alu Alloy 720 BAR 10443 psi	■ ■ -	■	- ■	■	□ □	- □ □	2-stage telescoping, hydraulic strut can be attached to any other strut in this range	holmatro.com
6.7kg 4.8lb	56cm 22"	77.5cm 30.5"	finite 21.5cm 8.5"	22.9t 25.2USton	22.9t 25.2USton	Alu Alloy 12BAR 174 psi	- ■ ■	■	■ □	□ -	□ □	- □ □	OL= add-on Auto-Locking collar	holmatro.com
8.8kg 9.4lb	76cm 29.9"	111.5cm 45.5"	finite 39.5cm 15.6"	22.9t 25.2USton	22.9t 25.2USton	Alu Alloy 12 BAR 174 psi	- ■ ■	■	■ □	□ -	□ □	- □ □	Shown with optional LockNut. OL= add-on Auto-Locking collar	holmatro.com
1.9kg 6.2lb	105.5cm 41.5"	165cm 65"	finite 59.5cm 23.4"	22.9t 25.2USton	22.7t 25USton	Alu Alloy 12 BAR 174 psi	- ■ ■	■	■ □	□ -	□ □	- □ □	OL= add-on Auto-Locking collar	holmatro.com
18kg 9.7lb	162cm 63.8"	265cm 104.3"	finite 103cm 40.6"	22.9t 25.2USton	17t 18.7USton	Alu Alloy 12 BAR 174 psi	- ■ ■	■	■ □	□ -	□ □	- □ □	OL= add-on Auto-Locking collar	holmatro.com

Bipod Base | Static Base | Raker Thrust Block | Raker Edge Union | Load Cell Monitor | Hand Controller | OmniLock Drive | Power Station | Raker & Waler Rails | Raker & Waler Pins | Nailing Pad | Hydraulic Pump

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	Acme Thread 12-15" 22-796212	PARATECH		■ ■ ■	£340 $460 €404	6
	Acme Thread 19-25" 22-796206	PARATECH		■ ■ ■	£496 $670 €589	5 1
	Acme Thread 25-36" 22-796200	PARATECH		■ ■ ■	£571 $772 €678	6 1
	Acme Thread 37-58" 22-796202	PARATECH		■ ■ ■	£714 $965 €848	1 2
	Acme Thread 56-88" 22-796204	PARATECH		■ ■ ■	£962 $1300 €1142	1 3
	LockStroke 19-25" 22-796006	PARATECH		■ ■ ■	£744 $1005 €883	5 1
	LockStroke 25-36" 22-796000	PARATECH		■ ■ ■	£880 $1190 €1046	7 1
	LockStroke 36-57" 22-796002	PARATECH		■ ■ ■	£932 $1260 €1107	1
	LockStroke 55-89" 22-796004	PARATECH		■ ■ ■	£1242 $1680 €1475	1 3
	Lock/Acme Extension 6" 22-796017	PARATECH		■ ■ ■	£193 $260 €229	1 3
	Lock/Acme Extension 12" 22-796012	PARATECH		■ ■ ■	£204 $275 €242	2 4
	Lock/Acme Extension 24" 22-796024	PARATECH		■ ■ ■	£261 $352 €309	3 7
	Lock/Acme Extension 36" 22-796036	PARATECH		■ ■ ■	£341 $461 €405	4 9

SHORING STRUTS

EIGHT	MIN RETRACTED LENGTH	MAX EXTENDED LENGTH	ADJUSTMENT INCREMENTS /STROKE	MAX WORK LOAD @min2:1 RETRACTED t=metric tonnes	MAX WORK LOAD @min2:1 EXTENDED t=metric tonnes	STRUT MATERIAL / OPERATING PRESSURE	OPTIONS: PNEUMATIC MANUAL HYD	CONNECT: PUSH-FIT PIN	AUTO MANUAL LOCKING	LIFT RATCHET ATTACHMENT	MONITOR ELECTRIC RAISE	TRIPOD BIPOD MONOPOD	NOTES	WWW.
3kg 6.6lb	31cm 12"	38cm 15"	Finite 7.6cm 3"	19.95t 22USton	19.95t 22USton	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ -	■	■	- -	- ☐	☐ ☐ ☐	Threaded shaft allows infinite and finite locking positions	paratech.com
.1kg 1.2lb	48cm 19"	64cm 25"	Finite 15.2cm 6"	19.95t 22USton	19.95t 22USton	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- ☐	☐ ☐ ☐	Threaded shaft allows infinite and finite locking positions	paratech.com
.8kg 4.9lb	64cm 25"	91cm 36"	Finite 28cm 11"	19.95t 22USton	18t 19.8USton	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	☐ ☐	- ☐	☐ ☐ ☐	Threaded shaft allows infinite and finite locking positions	paratech.com
0.2kg 2.4lb	94cm 37"	147cm 58"	Finite 53.3cm 21"	18t 19.8USton	15.35t 16.9USton	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	☐ ☐	- ☐	☐ ☐ ☐	Threaded shaft allows infinite and finite locking positions	paratech.com
4.8kg 2.6lb	142cm 56"	224cm 88"	Finite 81.3cm 32"	15.35t 16.9USton	11t 12USton	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- ☐	☐ ☐ ☐	Threaded shaft allows infinite and finite locking positions	paratech.com
.8kg 2.7lb	00cm 19"	63.5cm 25"	1cm 0.4" 15.2cm 6"	19.95t 22USton	19.95t 22USton	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- ☐	☐ ☐ ☐	Auto-locking collar in 1cm/0.4" increments	paratech.com
.5kg 6.5lb	64cm 25"	91cm 36"	1cm 0.4" 28cm 11"	19.95t 22USton	18t 19.8USton	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- ☐	☐ ☐ ☐	Auto-locking collar in 1cm/0.4" increments	paratech.com
0.9kg 24lb	91cm 36"	144.8cm 57"	1cm 0.4" 53.3cm 21"	18t 19.8USton	15.35t 16.9USton	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- ☐	☐ ☐ ☐	Auto-locking collar in 1cm/0.4" increments	paratech.com
6.2kg 5.7lb	139.7cm 55"	226cm 89"	1cm 0.4" 86.4cm 34"	15.35t 16.9USton	11t 12USton	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- ☐	☐ ☐ ☐	Auto-locking collar in 1cm/0.4" increments	paratech.com
.7kg 3.8lb	15cm 6"	-	-	20t 22USton	-	Alu Alloy -	- - -	■	-	- -	- ☐	☐ ☐ ☐	To fit Acme Thread AND/ OR LockStroke Struts	paratech.com
.1kg 4.6lb	30cm 12"	-	-	20t 22USton	-	Alu Alloy -	- - -	■	-	- -	- ☐	☐ ☐ ☐	To fit Acme Thread AND/ OR LockStroke Struts	paratech.com
.2kg 7.1lb	61cm 24"	-	-	20t 22USton	-	Alu Alloy -	- - -	■	-	- -	- ☐	☐ ☐ ☐	To fit Acme Thread AND/ OR LockStroke Struts	paratech.com
.4kg 9.7lb	91cm 36"	-	-	18t 19.8USton	-	Alu Alloy -	- - -	■	-	- -	- ☐	☐ ☐ ☐	To fit Acme Thread AND/ OR LockStroke Struts	paratech.com

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LIFT= The strut will impart a pressurised lift RATCHET ATTACHMENT= Add-on strut-raising 'ratchet'
MONITOR: Load cell or load-shift alarm ELECTRIC RAISE Extends the strut remotely -No high lift force

	SERIES MODEL VARIANT	COMPANY	ORIGIN	USES	COST (each) £$€ = Currency conversion only- no duty or shipping etc.	WE
	AcmeThread Strut Driver 22-796200SD	PARATECH		■ ●	£3698 $5002 €4394	10 22
	AcmeThread Strut Driver 22-796202SD	PARATECH		■ ●	£4121 $5574 €4897	13 29
	LongShore 203 22-796710	PARATECH		■ ■ ■	£978 $1322 €1162	7. 1
	LongShore 304 22-796720	PARATECH		■ ■ ■	£1237 $1673 €1470	1 2
	LongShore 406 22-796730	PARATECH		■ ■ ■	£1480 $2001 €1758	12 2
	LongShore 610 22-796360	PARATECH		■ ■ ■	£1752 $2360 €2073	18 4
	LongShore 1016 22-796390	PARATECH		■ ■ ■	£2675 $3618 €3178	30 6
	LongShore Ext 135 22-796341	PARATECH		■ ■ ■	£407 $550 €483	0 0
	LongShore Ext 235 22-796342	PARATECH		■ ■ ■	£510 $690 €606	4. 9
	LongShore Ext 435 22-796356	PARATECH		■ ■ ■	£715 $966 €849	6. 1
	LongShore Ext 635 22-796376	PARATECH		■ ■ ■	£923 $1240 €1090	9. 2
	LongShore Adjustable Brace B23 22-796348	PARATECH		■ ■ ■	£747 $1011 €888	6. 1
	LongShore Adjustable Brace B57 22-796350	PARATECH		■ ■ ■	£1020 $1377 €1210	14 32

SHORING STRUTS

IGHT	MIN RETRACTED LENGTH	MAX EXTENDED LENGTH	ADJUSTMENT INCREMENTS /STROKE	MAX WORK LOAD @min2:1 RETRACTED t=metric tonnes	MAX WORK LOAD @min2:1 EXTENDED t=metric tonnes	STRUT MATERIAL / OPERATING PRESSURE	OPTIONS: PNEUMATIC MANUAL HYD	CONNECT: PUSH-FIT PIN	AUTO MANUAL LOCKING	LIFT RATCHET ATTACHMENT	MONITOR ELECTRIC RAISE	TRIPOD BIPOD MONOPOD	NOTES	WWW.
.2kg .6lb	64cm 25"	91cm 36"	1cm 0.4" 28cm 11"	2.7t 3USton	2.7t 3USton	Alu Alloy -	■		■	- -	- □	□ □ □	Geared Driver uses manual handle to raise the strut	paratech.com
.4kg .6lb	94cm 37"	147cm 58"	1cm 0.4" 53.3cm 21"	2.7t 3USton	2.7t 3USton	Alu Alloy -	■		■	- -	- □	□ □ □	Geared Driver uses manual handle to raise the strut	paratech.com
3kg 6lb	66cm 26"	91cm 36"	finite 25cm 10"	19.95t 22USton	18t 19.8USton	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- □	□ □ □	Always default to a locked position during/after inflation via air, CO2 or Nitrogen	paratech.com
0kg 2lb	91cm 36"	127cm 50"	finite 36cm 14"	18t 19.8USton	16.2t 17.9USton	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- □	□ □ □	Always default to a locked position during/after inflation via air, CO2 or Nitrogen	paratech.com
.7kg 8lb	122cm 48"	185cm 73"	finite 63cm 25"	19.95t 22USton	12.8t 14.1USton	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- □	□ □ □	Always default to a locked position during/after inflation via air, CO2 or Nitrogen	paratech.com
.6kg 1lb	183cm 72"	295cm 116"	finite 112cm 44"	12.8t 14.1USton	16.3t 18USton	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- □	□ □ □	Always default to a locked position during/after inflation via air, CO2 or Nitrogen	paratech.com
.2kg 7lb	290cm 114"	503cm 198"	finite 213cm 84"	7.7t 8.45USton	1.8t 2USton	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- □	□ □ □	Always default to a locked position during/ after inflation via air, CO2 or Nitrogen. 812 Discontinued	paratech.com
0kg 0lb	30.5cm 12"	-	-	19.95t 22USton	-	Alu Alloy -	- - -	■	-	- -	- □	□ □ □		paratech.com
1kg 9lb	61cm 24"	-	-	19.95t 22USton	-	Alu Alloy -	- - -	■	-	- -	- □	□ □ □		paratech.com
8kg 5lb	122cm 48"	-	-	16.2t 17.9USton	-	Alu Alloy -	- - -	■	-	- -	- □	□ □ □		paratech.com
1kg 0lb	170cm 67"	-	-	12.8t 14.1USton	-	Alu Alloy -	- - -	■	-	- -	- □	□ □ □		paratech.com
8kg 5lb	66cm 26"	91cm 36"	finite 24.5cm 10"	00t 00USton	-	Alu Alloy -	- ■ -	■	■	- -	- □	□ □ □	Threaded shaft for length adjustment on raker and support bracing	paratech.com
.5kg .7lb	152cm 60"	216cm 85"	finite 63.5cm 25"	00t 00USton	-	Alu Alloy -	- ■ -	■	■	- -	- □	□ □ □	Threaded shaft for length adjustment on raker and support bracing	paratech.com

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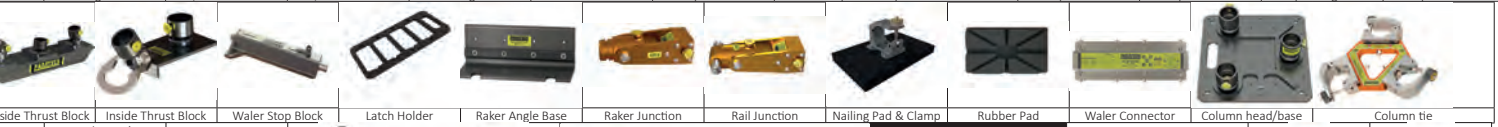
	SERIES MODEL VARIANT	COMPANY	ORIGIN	USES	COST (each) £$€ = Currency conversion only- no duty or shipping etc.	WI
	Damage Control Shore 03 22-798S03	PARATECH		● ■ ●	£1508 $2040 €1789	6 1
	Damage Control Shore 06 22-798S06	PARATECH		● ■ ●	£2070 $2800 €2456	1 2
	Damage Control Shore 10 22-798S10	PARATECH		● ■ ●	£2440 $3300 €2902	1 3
	Damage Control Ext 01 22-798X01	PARATECH		● ■ ●	£544 $735 €645	2 6
	Damage Control Ext 02 22-798X02	PARATECH		● ■ ●	£673 $910 €798	4 9
	Damage Control Ext 04 22-798X04	PARATECH		● ■ ●	£927 $1254 €1100	1
	Damage Control Brace 22-798B01	PARATECH		● ■ ●	£979 $1324 €1161	
	HydraFusion Strut 04 22-79HA04K	PARATECH		■ ■ ●	£2850 $3854 €3385	8 1
	HydraFusion Strut 10 22-79HA10K	PARATECH		■ ■ ●	£3310 $4474 €3930	1 2
	HydraFusion Strut 16 22-79HA16K	PARATECH		■ ■ ●	£3770 $5095 €4475	1 3

ALL Paratech Series ACCESSORIES
IMAGES NOT TO SCALE

SHORING STRUTS

EIGHT	MIN RETRACTED LENGTH	MAX EXTENDED LENGTH	ADJUSTMENT INCREMENTS /STROKE	MAX WORK LOAD @min2:1 RETRACTED t=metric tonnes	MAX WORK LOAD @min2:1 EXTENDED t=metric tonnes	STRUT MATERIAL OPERATING PRESSURE	OPTIONS: PNEUMATIC MANUAL HYD	CONNECT: PUSH-FIT PIN	AUTO MANUAL LOCKING	LIFT RATCHET ATTACHMENT	MONITOR ELECTRIC RAISE	TRIPOD BIPOD MONOPOD	NOTES	WWW.
.2kg 3.7lb	66cm 25"	91cm 36"	28cm 11"	20t 22USton	20t 22UStон	Anodized Aircraft Alu -	- ■ -	■	■	- -	- -	- - -	corrosion proof for marine environments. For sealing of hull ruptures on ships	paratech.com
1.8kg 26lb	122cm 47"	185cm 73"	66cm 26"	20t 22UStон	20t 22UStон	Anodized Aircraft Alu -	- ■ -	■	■	- -	- -	- - -	corrosion proof for marine environments. For sealing of hull ruptures on ships	paratech.com
7.8kg 9.3lb	183cm 71"	295cm 116"	114cm 45"	20t 22UStон	14.5t 16UStон	Anodized Aircraft Alu -	- ■ -	■	■	- -	- -	- - -	corrosion proof for marine environments. For sealing of hull ruptures on ships	paratech.com
.9kg 6.3lb	30.5cm 12"	-	-	20t 22UStон	20t 22UStон	Anodized Aircraft Alu -	- - -	■	-	- -	- -	- - -	corrosion proof for marine environments. For sealing of hull ruptures on ships	paratech.com
.3kg 9.4lb	61cm 24"	-	-	20t 22UStон	20t 22UStон	Anodized Aircraft Alu -	- - -	■	-	- -	- -	- - -	corrosion proof for marine environments. For sealing of hull ruptures on ships	paratech.com
7kg 5.4lb	122cm 48"	-	-	20t 22UStон	20t 22UStон	Anodized Aircraft Alu -	-	■	-	- -	- -	- - -	corrosion proof for marine environments. For sealing of hull ruptures on ships	ooo.com
00kg 00lb	45.7cm 18"	55.8cm 22"	-	20t 22UStон	20t 22UStон	Anodized Aircraft Alu -	- ■ -	■		- -	- -	- - -	Add 4" for head and foot plates. For sealing of hull ruptures on ships	ooo.com
.5kg 8.7lb	46.2cm 18.2"	55.8cm 22"	finite 10.2cm 4"	9t 10UStон	9t 10UStон	Anodized Aircraft Alu 690 BAR 10000 psi	■ - -	■	■	- ■	- -	- - -	hydraulic lifting strut can be attached to any *Para* strut via converter can lift 10USt or stabilise 20USst	paratech.com
2.8kg 8.3lb	64cm 25.2"	88.9cm 35"	finite 25.4cm 10"	9t 10UStон	9t 10UStон	Anodized Aircraft Alu 690 BAR 10000 psi	■ - -	■	■	- ■	- -	- - -	hydraulic lifting strut can be attached to any *Para* strut via converter can lift 10USt or stabilise 20USst	paratech.com
6.9kg 7.2lb	81.3cm 32"	121.2cm 47.7"	finite 40.4cm 15.9"	9t 10UStон	9t 10UStон	Anodized Aircraft Alu 690 BAR 10000 psi	■ - -	■	■	- ■	- -	- - -	hydraulic lifting strut can be attached to any *Para* strut via converter can lift 10USt or stabilise 20USst	paratech.com



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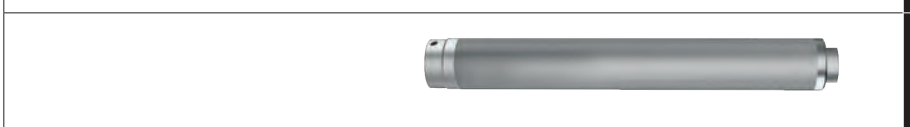
	SERIES MODEL VARIANT	COMPANY	ORIGIN	USES	COST (each) £$€ = Currency conversion only- no duty or shipping etc.	W
	Prospan PR01	PROSPAN MANUFACTURING		■ ■ ■	£370 $500 €440	6
	Prospan PR02	PROSPAN MANUFACTURING		■ ■ ■	£463 $625 €550	8
	Prospan PR03	PROSPAN MANUFACTURING		■ ■ ■	£518 $700 €615	1
	Prospan PR04	PROSPAN MANUFACTURING		■ ■ ■	£640 $865 €760	1
	Prospan Ext 12"	PROSPAN MANUFACTURING		■ ■ ■	N/A	2
	Prospan Ext 24"	PROSPAN MANUFACTURING		■ ■ ■	N/A	3
	Prospan Ext 36"	PROSPAN MANUFACTURING		■ ■ ■	N/A	5
	TASS Shore 1	PROSPAN MANUFACTURING		■ ■	N/A	5
	TASS Shore 2	PROSPAN MANUFACTURING		■ ■	N/A	7
	TASS Shore 3	PROSPAN MANUFACTURING		■ ■	N/A	
	TASS Shore 4	PROSPAN MANUFACTURING		■ ■	N/A	1
	TASS 12" Ext	PROSPAN MANUFACTURING		■ ■	N/A	5

Prospan & TASS ACCESSORIES

SHORING STRUTS

EIGHT	MIN RETRACTED LENGTH	MAX EXTENDED LENGTH	ADJUSTMENT INCREMENTS /STROKE	MAX WORK LOAD @min2:1 RETRACTED t=metric tonnes	MAX WORK LOAD @min2:1 EXTENDED t=metric tonnes	STRUT MATERIAL / OPERATING PRESSURE	OPTIONS: PNEUMATIC MANUAL HYD	CONNECT: PIN PUSH-FIT	AUTO MANUAL LOCKING	LIFT RATCHET ATTACHMENT	MONITOR ELECTRIC RAISE	TRIPOD BIPOD MONOPOD	NOTES	WWW.
6.8kg 15lb	54.6cm 21.5"	67.3cm 26.5"	50mm/2" 12.7cm 5"	9t 10UStON	9t 10UStON	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■ -	■ □*	- -	- -	- - □	Add 4" for head and foot plates. *Spring-loaded inner collar available for auto-locking at fixed increments	prospanshoring.com
3.2kg 18lb	74.9cm 29.5"	104cm 41"	50mm/2" 31.7cm 11.5"	9t 10UStON	9t 10UStON	6061-T6 aluminum 7.9-15 BAR 115-220 ps	- ■ ■	■ -	■ □*	- -	- -	- - □	Add 4" for head and foot plates. *Spring-loaded inner collar available for auto-locking at fixed increments	prospanshoring.com
0.9kg 24lb	107.9cm 42.5"	170cm 67"	50mm/2" 62.1cm 24.5"	9t 10UStON	9t 10UStON	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■ -	■ □*	- -	- -	- - □	Add 4" for head and foot plates. *Spring-loaded inner collar available for auto-locking at fixed increments	prospanshoring.com
4.5kg 32lb	170cm 67"	266.7cm 105"	50mm/2" 96.7cm 38"	9t 10UStON	9t 10UStON	6061-T6 aluminum 7.9-15 BAR 115-220 ps	- ■ ■	■ -	■ □*	- -	- -	- - □	Add 4" for head and foot plates. *Spring-loaded inner collar available for auto-locking at fixed increments	prospanshoring.com
2.3kg 5lb	30cm 12"	-	-	9t 10UStON	-	6061-T6 aluminum -	- - -	■ -	-	- -	- -	- - □	Add 4" for head and foot plates	prospanshoring.com
3.6kg 8lb	61cm 248"	-	-	9t 10UStON	-	6061-T6 aluminum -	- - -	■ -	-	- -	- -	- - □	Add 4" for head and foot plates	prospanshoring.com
5,4kg 12lb	91.4cm 36"	-	-	9t 10UStON	-	6061-T6 aluminum -	-	■ -	-	- -	- -	- - □	Add 4" for head and foot plates. 48 & 60" Extensions discontinued.	prospanshoring.com
5.9kg 13lb	58.4cm 23"	70cm 27.5"	12.7mm ½" 12cm 4.5"	9.5t 10.5UStON	3.2t 3.5UStON	6005 aluminum -	- ■ -	■	■	- -	- -	- - -	Telescoping Aluminum Support System for vehicles and light structural shoring	prospanshoring.com
.25kg 16lb	66cm 26"	109cm 43"	12.7mm ½" 30cm 12"	9.5t 10.5UStON	3.2t 3.5UStON	6005 aluminum -	- ■ -	■	■	- -	- -	- - -	Telescoping Aluminum Support System for vehicles and light structural shoring	prospanshoring.com
9kg 20lb	78.75cm 31"	121.9cm 48"	12.7mm ½" 56cm 22"	9.5t 10.5UStON	3.2t 3.5UStON	6005 aluminum -	- ■ -	■	■	- -	- -	- - -	Telescoping Aluminum Support System for vehicles and light structural shoring	prospanshoring.com
3.6kg 30lb	109cm 43"	259cm 102"	12.7mm ½" 150cm 59"	9.5t 10.5UStON	3.2t 3.5UStON	6005 aluminum -	- ■ -	■	■	- -	- -	- - -	Telescoping Aluminum Support System for vehicles and light structural shoring	prospanshoring.com
5.4kg 12lb	30cm 12"	-	-	3.6t 4UStON	-	6005 aluminum -	- ■ -	■	■	- -	- -	- - -	Telescoping Aluminum Support System for vehicles and light structural shoring	prospanshoring.com

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	SERIES MODEL VARIANT	COMPANY	ORIGIN	USES	COST (each) £$€ = Currency conversion only- no duty or shipping etc.	W
	Super X Short SPX-EX41	RES-Q-JACK		■ ■	N/A	1
	Super X Short SPX-EX41-S	RES-Q-JACK		■ ■ ●	N/A	13
	Super X Long SPX-EX56	RES-Q-JACK		■ ■	N/A	1 3
	Super X Long SPX-EX56-S	RES-Q-JACK		■ ■ ●	N/A	1
	Super X Trench 18 SPX-TS22	RES-Q-JACK		● ■ ■	N/A	4
	Super X Trench 28 SPX-TS32	RES-Q-JACK		● ■ ■	N/A	6 1
	Super X Trench 38 SPX-TS42	RES-Q-JACK		● ■ ■	N/A	8
	Super X 12"Extension SPX-12EX	RES-Q-JACK		■ ■ ■	N/A	2
	Super X 24"Extension SPX-24EX	RES-Q-JACK		■ ■ ■	N/A	3
	Super X 36"Extension SPX-36EX	RES-Q-JACK		■ ■ ■	N/A	
See USAR BUYERSGUIDE for full spec on accessories	Super X ACCESSORIES					

Static Foot

Swivel Foot

SHORING STRUTS

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0.9kg 24lb	131cm 51.6"	175cm 69"	Finite 44cm 17.3"	12.2t 13.4USton	8.1t 8.9USton	6061-T6 aluminum 13.8 BAR 200 psi	- ■ □	■	■	- -	- -	- - □	Red inner tube is lighter & lower strength	resqjack.com
3.15kg 29lb	131cm 51.6"	175cm 69"	Finite 44cm 17.3"	16.2t 17.8USton	10.9t 12USton	6061-T6 aluminum 13.8 BAR 200 psi	- ■ □	■	■	- -	- -	- - □	Black inner tube is heavier & higher strength. Can be supplied as pneumatic.	resqjack.com
4.9kg 2.8lb	172cm 67.7"	255cm 100.4"	Finite 82cm 32.3"	9.6t 10.6USton	8.2t 9USton	6061-T6 aluminum 13.8 BAR 200 psi	- ■ □	■	■	- -	- -	- - □	Red inner tube is lighter & lower strength	resqjack.com
7.7kg 39lb	172cm 67.7"	255cm 100.4"	Finite 82cm 32.3"	16.2t 17.8USton	10.9t 12USton	6061-T6 aluminum 13.8 BAR 200 psi	- ■ □	■	■	- -	- -	- - □	Black inner tube is heavier & higher strength	resqjack.com
4.1kg 9lb	56cm 22"	66cm 26"	Finite 10.1cm 4"	17.9t 19.7USton	17.5t 19.25USton	6061-T6 aluminum 13.8 BAR 200 psi	- ■ ■	■	■	- -	- -	- - □		resqjack.com
5.4kg 4.1lb	81.2cm 32"	116cm 46"	Finite 35.5cm 14"	16.5t 18.2USton	14.5t 15.95USton	6061-T6 aluminum 13.8 BAR 200 psi	- ■ ■	■	■	- -	- -	- - □		resqjack.com
3.2kg 18lb	107cm 42.1"	162.5cm 64"	Finite 56cm 22"	15t 16.6USton	12.4t 13.7USton	6061-T6 aluminum 13.8 BAR 200 psi	- ■ ■	■	■	- -	- -	- - □		resqjack.com
2.7kg 6lb	31cm 12.2"	-	-	17.9t 19.7USton	-	6061-T6 aluminum -	- - -	■	-	- -	- -	- - □		resqjack.com
3.6kg 8lb	61cm 24"	-	-	17.9t 19.7USton	-	6061-T6 aluminum -	- - -	■	-	- -	- -	- - □		resqjack.com
5kg 11lb	92cm 36"	-	-	17.9t 19.7USton	-	6061-T6 aluminum -	- - -	■	-	- -	- -	- - □		resqjack.com

Small Base Plate | Large Anchor Base Plate | Multi-Head | Tripod Head

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	ProFix PMX470	RESQTEC			N/A	1
	ProFix PMX600	RESQTEC			N/A	
	ProFix PMX880	RESQTEC			N/A	1 2
	ProFix PMX1400	RESQTEC			N/A	3
	ProFix PMX2300	RESQTEC			N/A	5
	ProFix Hyam250	RESQTEC			N/A	2
	ProFix 15cm Ext EX150	RESQTEC			N/A	1
	ProFix 30cm Ext EX300	RESQTEC			N/A	
	ProFix 60cm Ext EX600	RESQTEC			N/A	
	ProFix 90cm Ext EX900	RESQTEC			N/A	
	ProFix 120cm Ext EX1200	RESQTEC			N/A	1

ProFix ACCESSORIES	RESQTEC	Static Foot	Swivel Foot	Monopod Head	Collumn Gantry	Powerplate	Crown	Beam Support	Edge Support	Fixed Base

NB: As with all of our data tables in these GUIDES, corrections made by the manufacturers are often at odds with their own data listed in brochures or o manufactuer. If in doubt, check directly with the manufacturer.

SHORING STRUTS

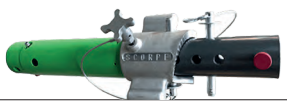
WEIGHT	MIN RETRACTED LENGTH	MAX EXTENDED LENGTH	ADJUSTMENT INCREMENTS /STROKE	MAX WORK LOAD @min2:1 RETRACTED t=metric tonnes	MAX WORK LOAD @min2:1 EXTENDED t=metric tonnes	STRUT MATERIAL / OPERATING PRESSURE	OPTIONS: PNEUMATIC MANUAL HYD	CONNECT: PUSH-FIT PIN	AUTO MANUAL LOCKING	LIFT RATCHET ATTACHMENT	MONITOR ELECTRIC RAISE	TRIPOD BIPOD MONOPOD	NOTES	WWW.
7.6kg 6.75lb	47cm 18.5"	66.3cm 26.1"	Finite 14.4cm 5.7"	30t 33USton	30t 33USton	Alu 12 BAR 174 psi	- ■ ■	■	■	- -	- -	□ □ □		resqtec.com
8.8kg 19.4lb	60cm 23.6"	91.4cm 36"	Finite 26.5cm 10.4"	30t 33USton	30t 33USton	Alu 12 BAR 174 psi	- ■ ■	■	■	- -	- -	□ □ □		resqtec.com
11.7kg 25.8lb	88cm 34.6"	142.9cm 56.25"	Finite 50cm 19.7"	30t 33USton	30t 33USton	Alu 12 BAR 174 psi	- ■ ■	■	■	- -	- -	□ □ □		resqtec.com
17kg 37.5lb	140cm 55.1"	238.6cm 94"	Finite 93.7cm 36.9"	30t 33USton	30t 33USton	Alu 12 BAR 174 psi	- ■ ■	■	■	- -	- -	□ □ □		resqtec.com
26kg 57.3lb	230cm 90.5"	404.2cm 159"	Finite 169.3cm 66.65"	30t 33USton	17.9t 19.8USton	Alu Alloy 12 BAR 174 psi	- ■ ■	■	■	- -	- -	□ □ □		resqtec.com
9.7kg 21.3lb	44.8cm 17.6"	70.2cm 27.6"	Finite 25.4cm 10"	22.6t 24.9USton	22.6t 24.9USton	Alu Alloy 700 BAR 10152 psi	■ - -	■	■	- -	- -	□ □ □		resqtec.com
1.76kg 3.9lb	15cm 6"	-	-	30t 33USton	-	Alu Alloy -	- - -	■	■	- -	- -	□ □ □		resqtec.com
2.5kg 5.5lb	30cm 12"	-	-	30t 33USton	-	Alu Alloy -	- - -	■	■	- -	- -	□ □ □		resqtec.com
4kg 9lb	60cm 23.7"	-	-	30t 33USton	-	Alu Alloy -	- - -	■	■	- -	- -	□ □ □		resqtec.com
5.5kg 12.2lb	90cm 35.6"	-	-	30t 33USton	-	Alu Alloy -	- - -	■	■	- -	- -	□ □ □		resqtec.com
7.2kg 15.9lb	120cm 47.4"	-	-	30t 33USton	-	Alu Alloy -	- - -	■	■	- -	- -	□ □ □		resqtec.com

Multi-Swivels | Rhino | Chain Head | Junction | Multi-Connector | Anchor Base Plate | Raker Rail | Raker Rail Connector | Raker Rail Hinge | Nailing Block | Load Monitor | Remote Controller

n their web pages. This can make it seem as though our figures are incorrect but we can only list details as they are provided/corrected by the

IMAGES NOT to SCALE ■Vehicle ■Light Structural ■ Heavy Structural ●●● OK but ideal
□□□□ = OPTION item - can be purchased separately from the strut. ~ = Approximate
ADJUSTMENT INCREMENTS: The distance between each locking point. FINITE will lock at any point
PNEUMATIC = Pneumatically extended with compressed air, CO2, Nitrogen etc
MANUAL= extended by hand HYD = Hydraulically extended-NB: will impart high lift/push force
CONNECT: PUSH-FIT = No tools or pins needed to connect extensions or accessories.
PIN = a metal pin is manually placed to maintain the head/ext in position
AUTO = the strut will automatically follow & lock in the extended position MANUAL= Locks with pins or may be a screw-thread collar wound up manually to lock the strut in the extended position
LIFT= The strut will impart a pressurised lift RATCHET ATTACHMENT= Add-on strut-raising 'ratchet'
MONITOR: Load cell or load-shift alarm ELECTRIC RAISE Extends the strut remotely -No high lift force

SERIES MODEL VARIANT	COMPANY	ORIGIN	USES	COST (each) £$€ = Currency conversion only- no duty or shipping etc.	WL
Air Stabilizer D -	SCORPE TECHNOLOGIES	■ ■	● ■ ■	N/A	11 25
Air Stabilizer E -	SCORPE TECHNOLOGIES	■ ■	● ■ ■	N/A	15 3
Air Stabilizer AA -	SCORPE TECHNOLOGIES	■ ■	● ■ ■	N/A	5 12
Air Stabilizer A -	SCORPE TECHNOLOGIES	■ ■	● ■ ■	N/A	6 1
Air Stabilizer B -	SCORPE TECHNOLOGIES	■ ■	● ■ ■	N/A	8 17
Air Stabilizer C -	SCORPE TECHNOLOGIES	■ ■	● ■ ■	N/A	9 2
Air Stabilizer F -	SCORPE TECHNOLOGIES	■ ■	● ■ ■	N/A	22 4
Air Stabilizer FF -	SCORPE TECHNOLOGIES	■ ■	● ■ ■	N/A	2 5
Air Stabilizer Ext 15 -	SCORPE TECHNOLOGIES	■ ■	■ ■ ■	N/A	1 0
Air Stabilizer Ext 30 -	SCORPE TECHNOLOGIES	■ ■	■ ■ ■	N/A	2 0
Air Stabilizer Ext 46 -	SCORPE TECHNOLOGIES	■ ■	■ ■ ■	N/A	2 0
Air Stabilizer Ext 61 -	SCORPE TECHNOLOGIES	■ ■	■ ■ ■	N/A	3 0
Air Stabilizer Ext 76 -	SCORPE TECHNOLOGIES	■ ■	■ ■ ■	N/A	5 11
Air Stabilizer Ext 91 -	SCORPE TECHNOLOGIES	■ ■	■ ■ ■	N/A	7 10
Air Stabilizer Ext 183 -	SCORPE TECHNOLOGIES	■ ■	■ ■ ■	£0 $0 €0	9 21



SHORING STRUTS

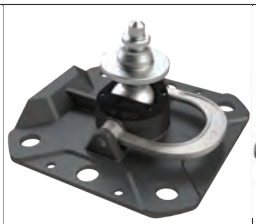
EIGHT	MIN RETRACTED LENGTH	MAX EXTENDED LENGTH	ADJUSTMENT INCREMENTS /STROKE	MAX WORK LOAD @min2:1 RETRACTED t=metric tonnes	MAX WORK LOAD @min2:1 EXTENDED t=metric tonnes	STRUT MATERIAL / OPERATING PRESSURE	OPTIONS: PNEUMATIC MANUAL HYD	OPTIONS: CONNECT: PUSH-FIT PIN	OPTIONS: AUTO MANUAL LOCKING	OPTIONS: LIFT RATCHET ATTACHMENT	OPTIONS: MONITOR ELECTRIC RAISE	OPTIONS: TRIPOD BIPOD MONOPOD	NOTES	WWW.
1.7kg 5.8lb	114cm 44.8"	170cm 66.9"	56cm 22.1"	00t 00uston	00t 00uston	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■	■	- -	- -	- - □		scorpe.net
5.4kg 34lb	137cm 53.9"	213cm 83.8"	76cm 29.9"	00t 00uston	00t 00uston	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■	■	- -	- -	- - □		scorpe.net
.8kg 2.8lb	33cm 12.9"	46cm 18.1"	13cm 5.1"	00t 00uston	00t 00uston	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■	■	- -	- -	- - □		scorpe.net
.8kg 15lb	53cm 20.8"	71cm 27.8"	18cm 7.1"	00t 00uston	00t 00uston	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■	■	- -	- -	- - □		scorpe.net
.1kg 7.85lb	66cm 26"	94cm 37"	28cm 11"	00t 00uston	00t 00uston	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■	■	- -	- -	- - □		scorpe.net
.5kg 21lb	84cm 33.1"	124cm 48.8"	40cm 15.7"	00t 00uston	00t 00uston	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■	■	- -	- -	- - □		scorpe.net
2.2kg 49lb	213cm 83.8"	335cm 131.9"	122cm 48"	00t 00uston	00t 00uston	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■	■	- -	- -	- - □		scorpe.net
24kg 53lb	236cm 93.9"	366cm 144.1"	130cm 51.2"	00t 00uston	00t 00uston	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■	■	- -	- -	- - □		scorpe.net
.1kg 00lb	15cm 5.9"	-	-	00t 00uston	-	6061-T6 aluminum -	- ■ ■	■	-	- -	- -	- - □		scorpe.net
.2kg 00lb	30cm 11.8"	-	-	00t 00uston	-	6061-T6 aluminum -	- ■ ■	■	-	- -	- -	- - □		scorpe.net
.9kg 00lb	46cm 18.1"	-	-	00t 00uston	-	6061-T6 aluminum -	- ■ ■	■	-	- -	- -	- - □		scorpe.net
.8kg 00lb	61cm 24"	-	-	00t 00uston	-	6061-T6 aluminum -	- ■ ■	■	-	- -	- -	- - □		scorpe.net
.4kg 1.9lb	76cm 29.9"	-	-	00t 00uston	-	6061-T6 aluminum -	- - -		-			- - -		scorpe.net
.4kg 6.3lb	91cm 35.8"	-	-	00t 00uston	-	6061-T6 aluminum -	- - -		-			- - -		scorpe.net
.9kg 1.8lb	183cm 72"	-	-	00t 00uston	-	6061-T6 aluminum -	- ■ ■					- - -		scorpe.net

IMAGES NOT to SCALE Ext = Fixed length Extension strut = Option					
COMPANY	**GENESIS RESCUE**	**GENESIS RESCUE**	**GENESIS RESCUE**	**GENESIS RESCUE**	**GENESIS RESCUE**
MODEL	M foot	23° foot	Grizzly End	Flat Base	3" Angle
PRODUCT CODE	ART.AS.12BP	ART.AS.23SW	ART.GS.104	ART.AS.FB	ART.AS. 3AC
FITS to SERIES	**Tornado**	**Tornado**	**Grizzly, Tornado**	**Tornado**	**Tornado**
ORIGIN					
COST each	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
WEIGHT	**00kg 00lb**	**00kg 00lb**	**00kg 00lb**	**00kg 00lb**	**00kg 00lb**
DIMENSIONS	**00cm 00"**	**00cm 00"**	**00cm 00"**	**00cm 00"**	**00cm 00"**
NOTES			Despite the name, will fit Tornado struts as well		WLL
WWW.	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com
COMPANY	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**
MODEL	OmniLock Nut	Flat Saddle	Beam Support	Load Indicator	Strut Clamp
PRODUCT CODE	OL01 / 151.002.355	HPL130 / 151.002.292	HPL120/ 151.002.312	LSE01 /	CLA90 / 151.002.301
FITS to SERIES	**Omnishore**	**Omnishore**	**Omnishore**	**Omnishore**	**Omnishore**
ORIGIN					
COST each	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
WEIGHT	**1.9kg 4.2lb**	**0.4kg 0.9lb**	**2.2kg 4.9lb**	**4kg 8.8lb**	**2.1kg 4.6lb**
DIMENSIONS	**12.1 x 10.4 x 13.3cm 4.8 x 4.1 x 5.2 "**	**7.4 x 9.7 x 9.7 cm 2.9 x 3.8 x 3.8"**	**17.4 x 20 x 20cm 6.9 x 7.9 x 7.9"**	**24.2 x 17.6 x 12cm 9.5 x 6.9 x 4.7"**	**27.9 x 15.3 x 9.7cm 11 x 6 x 3.8"**
NOTES	Converts a standard Omnishore strut to auto locking	head or foot support of a strut against a flat surface	For wooden beams up to 6"/150mm	attach between struts and heads/base plates to show applied load	To link struts in reinforcing systems
WWW.	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.com

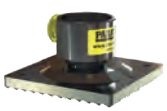
SHORING STRUT HEADS, FEET & ACCESSORIES

GENESIS RESCUE	**GENESIS RESCUE**	**GENESIS RESCUE**	**GENESIS RESCUE**	**HOLMATRO**	**HOLMATRO**
4" Channel	6" Channel	60° Clevis	5' Raker	Hydraulic Pump	Ratchet
ART.AS.4C	ART.AS.6C	ART.AS.60C	ART.AS.RR5	PA09H2S10 / 150.142.066	R24 / 151.002.332
Tornado	**Tornado**	**Tornado**	**Tornado**	**Omnishore**	**Omnishore**
n/a	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
00kg **00lb**	**00kg** **00lb**	**00kg** **00lb**	**00kg** **00lb**	**8.9kg** **19.6lb**	**13.2kg** **29.1lb**
00cm **4"**	**00cm** **6"**	**00cm** **00"**	**152cm** **60"**	**86.5 x 20 x 18.5cm** **34.1 x 7.9 x 7.3"**	**86.9 x 33.9 x 30cm** **34.2 x 13.3 x 11.8"**
				2-stage pump (other variations available) 720/72 (bar/Mpa) 10443 psi	For use of Omnishore in vehicle stabilisation
genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	holmatro.com	holmatro.com

HOLMATRO	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**
Column Clamp	BiPod Head	Mono-Pod Head	Wireless Controller	Omnilock Drive	Power Station
CLA90C / 151.002.494	POD02 / 151.002.444	POD01 / 151.002.445	WLC50 / 151.004.101	OL02 / 151.002.361	PS01 / 151.002.244
Omnishore	**Omnishore**	**Omnishore**	**Omnishore**	**Omnishore**	**Omnishore**
n/a	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
3.9kg **8.6lb**	**5.5kg** **12.1lb**	**3.2kg** **7.1lb**	**0.8kg** **1.8lb**	**4.1kg** **9lb**	**2.7kg** **6lb**
30.7 x 32.3 x 5cm **12.1 x 12.7 x 2"**	**28.3 x 18.9 x 13,8cm** **11.1 x 7.4 x 5.4"**	**28.1 x 12.4 x 12.4cm** **11.1 x 4.9 x 4.9"**	**29.1 x 18.2 x 5.9cm** **11.5 x 7.2 x 2.3"**	**22.8 x 18.9 x 13 cm** **9 x 7.4 x 5.1"**	**30 x 22.5 x 17.9cm** **11.8 x 8.9 x 7"**
Retains three struts as a vertical column support	Rope systems Bi-pod/A-frame. 5-eye Rig plate + 4x Anchor eyes. Use with monopod for Tripod	Rope systems Mo-no-pod/Gin-pole. Use with Bipod for Tripod	wireless remote control	Operate struts from push buttons on this drive powered by the Power Station & remote control	Hard-wire power connection to up to 4 struts
holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.com

IMAGES NOT to SCALE Ext = Fixed length Extension strut = Option					
COMPANY	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO
MODEL	Multi Head	Swivel BASE	Swivel Base with D	Bipod Base	Rigid Base
PRODUCT CODE	HPL140 / 151.004.176	BPL10 / 151.002.194	BPL11A / 151.002.213	BPL12 / 151.002.365	BPL30 / 151.002.229
FITS to SERIES	Omnishore	Omnishore	Omnishore	Omnishore	Omnishore
ORIGIN					
COST each	n/a	n/a	n/a	n/a	n/a
WEIGHT	1.8kg 4lb	2.1kg 5.6lb	5.2kg 11.5lb	5.8kg 12.8lb	1kg 2.2lb
DIMENSIONS	13.2 x 10.2 x 9.7cm 5.2 x 4 x 3.8"	17.4 x 15 x 15cm 6.9 x 5.9 x 5.9"	16.6 X 30 X 30cm 00"	12.9 x 30 x 30cm 5.1 x 11.8 x 11.8"	8.8 x 15 x 15cm 3.5 x 5.9 x 5.9"
NOTES		for <65° support	For support against angled surface up to 50° Also available without D-Ring	HD d-ring for ratchet/chain etc. & ground anchor holes	Fixed orientation with holes for nailing on vertical surfaces or stakes in ground.
WWW.	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.com
COMPANY	PARATECH	PARATECH	PARATECH	PARATECH	PARATECH
MODEL	Strut Converter	Lock/Acme 3"Converter	Sprung Connect	Adj Threaded Connector	12" Hinged Ground Plate
PRODUCT CODE	22-796035	22-796710	22-796170	796160	22-796180?/ 22-796180C
HEAD MID FOOT FITS to SERIES	Hydra/	Lockstroke, Acme Thread	Lockstroke	Lockstroke	All
ORIGIN					
COST each	n/a	n/a	£0 $381 €0	n/a	n/a
WEIGHT	1.2kg 2.7lb	00kg 00lb	1kg 2.2lb	1kg 2.2lb	5.4kg 12lb
DIMENSIONS	00cm 00"	00cm 00"	00cm 00"	00cm 00"	30.4cm 12"
NOTES	For attaching accessory head/base to a Hydrafusion Strut.	Converts an extension to a stand-alone, fixed-length strut. To fit Acme Thread AND/OR LockStroke Struts	?	?	180° Swivel base without anchor eye on 22-796180C version
WWW.	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

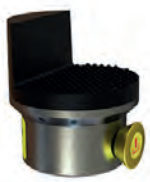
SHORING STRUT HEADS, FEET & ACCESSORIES

HOLMATRO	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**
Thrust Block TRB02	Inside L-Trench Block	Raker Rail Pin	Waler Rail	Raker Rail	Nailing Pad
TRB02 / 151.002.288	TRB01 / 151.002.344	RRP01 / 151.002.501	WR01 / 151.004.140	RR150 / 151.002.296	CLA90N / 151.002.302
Omnishore	**Omnishore**	**Omnishore**	**Omnishore**	**Omnishore**	**Omnishore**
n/a	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
7kg **15.4lb**	**4.4kg** **9.7lb**	**0.5kg** **1.1lb**	**22.9kg** **50.5lb**	**8.9kg** **19.6lb**	**3.5kg** **7.7lb**
23.6 x 27 x 22cm **9.3 x 10.6 x 8.7"**	**15.8 x 30 x 20cm** **6.2 x 11,8 x 7.9"**	**20.7 x 4.4 x 3cm** **8.2 x 1.7 x 1.2"**	**211 x 24.3 x 9cm** **83.1 x 9.6 x 3.5"**	**165.4 x 20.7 x 6.2cm** **65.1 x 8.2 x 2.4"**	**40x 30 x 15.2cm** **15.7 x 11.8 x 6"**
or attachment of two struts to construct a solid raker. Ground anchor holes.	For attachment of two struts to secure a corner in an L-trench. With nail holes and HD D-ring for ratchet/chains	to attach bases to a Raker Rail or to connect a second rail.	for trench/wall support	for load spreader plate for walls	attach to strut for nailing of timber supports/braces
holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.com
					
PARATECH	**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**
6" 45°Hinge Base	12" Swivel Ground Plate	6" 20° Swivel Base	12" Rigid Ground Plate	6" Rigid Base	Rubber Pad
22-796150..40	22-796180B	22796050	22-796180A	22796050	22-798A00
All	**All**	**All**	**All**	**All**	**All**
£0 **$650** **€0**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
2 1.7kg **4.5 3.8lb**	**4.2kg** **9.3lb**	**1.3kg** **2.8lb**	**3.9kg** **8.6lb**	**1.3kg** **2.8lb**	**0.45kg** **0.99lb**
15.2cm **6"**	**30.4cm** **12"**	**15.2cm** **6"**	**30.4cm** **12"**	**15.2cm** **6"**	**17.1cm** **6.75"**
22-796140 excludes D-ring					To buffer the interface between head/foot and shored surface particularly on ships and sheet metal
paratech.com	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

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

COMPANY	PARATECH	PARATECH	PARATECH	PARATECH	PARATECH
MODEL	6" Channel Base Metric	4" Channel Base Metric	Angle Base	Multi-Chain base	Multi-Base Anchor
PRODUCT CODE	22796136.....133	22796134.....131	22-796092	22-796685	22-796025
HEAD MID FOOT FITS to SERIES	All	All	All	Vehicle Stab	Vehicle Stab
ORIGIN					
COST each	£0 $253 €0	£0 $224 €0	n/a	£0 $872 €0	£0 $354 €0
WEIGHT	1.1kg 2.5lb	0.9/?kg 2/?lb	0.7kg 1.6lb	1.64kg 3.16lb	0.9kg 2lb
DIMENSIONS	15.2 x 15.2cm 6 x 6"	10.2/10.9 x 10.2/15.2cm 4/4.3 x 4/6"	00cm 00"	00cm 00"	00cm 00"
NOTES	beam support	beam support	beam and 90° edge support	For Vehicle Stabilisation. Takes both 3/8" (9.5mm) and 1/2" (12.7mm) either round or square chain	For Vehicle Stabilisation.
WWW.	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

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



COMPANY	PARATECH	PARATECH	PARATECH	PARATECH	PARATECH
MODEL	Elevator Supports L or R	Angled Rubber Base	Monopod	Tri-Anchor	Monopod Angle Base
PRODUCT CODE	22-796260L ...R	22-796266	22-796540	XX	22-796590
HEAD MID FOOT FITS to SERIES	Acme Thread, Lock Stroke	Acme Thread, Lock Stroke	All	All	All
ORIGIN					
COST each	n/a	n/a	n/a	n/a	n/a
WEIGHT	3.9kg 8.5lb	0.8kg 1.7lb	3.2kg 7lb	00kg 00lb	3.2kg 7lb
DIMENSIONS	00cm 00"	00cm 00"	00cm 00"	00cm 00"	00cm 00"
NOTES	Left &/or right arm for support of stalled/stuck elevator. individually coded/ purchased	Use in conjunction with Elevator supports	4 attachment rings + integral pulley. MBS 18kN per guy ring. Use with Tri-Anchor for hi-loads	High-strength anchor for monopod head. 3 attachment rings, MBS 88kN per ring	For mounting on a building or lift-shaft edge
WWW.	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

SHORING STRUT HEADS, FEET & ACCESSORIES

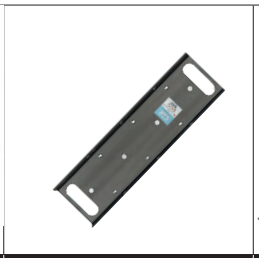
PARATECH	PARATECH	PARATECH	PARATECH	PARATECH	PARATECH	
Convex Multi-Base	xx	Contour Base	V-Base	Cone Base	Rubber Base	
22-796269	XX	22-796270	22-796090	22-796080	22-796190	
All	OO	All	All	All	All	
£0 $460 €0	n/a	£0 $325 €0	£0 $277 €0	n/a	n/a	
1.48kg 3.26lb	00kg 00lb	0.7kg 1.8lb	0.6kg 1.4lb	0.5kg 1.2lb	1.2kg 2.7lb	
17.2cm 6.76"	00cm 00"	00cm 00"	00cm 00"	00cm 00"	10.2cm 4"	
For Vehicle Stabilisation. inc Cone Pike, V Shape Notch, Two J Hook Pockets, Convex Gripping Surface, 1" (25.4 mm) Shackle Hole,3/8 in (9.52 mm) Chain Wedge	For Vehicle Stabilisation.	Contour grips surfaces in vehicle extrication	90° V will fit any right angled surface	Will dig into sheet metal, concrete & tarmac/asphalt	Provides grip on hard surfaces	
paratech.com	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com	

PARATECH	PARATECH	PARATECH	PARATECH	PARATECH	PARATECH	PAR
Monopod Roof Plate	Monopod Hitch Base	Bipod Base	BiPod Head	Tripod Head	xx	Clamp 3
22-796570	22-796575	22-796180E	22-796820	22-796010	XX	22-798C
Longshore	Longshore	Longshore	Longshore	All*	All	AcmeTh Stroke,
n/a	n/a	n/a	n/a	n/a	n/a	
6.4kg 14lb	6.1kg 13.4lb	5kg 11.1lb	15kg 33lb	4.1kg 9lb	00kg 00lb	3, 6
61 x 30.5cm 24 x 12"	00cm 00"	30.5cm 12"	00cm 00"	00cm 00"	00cm 00"	
Base for mounting/securing to a flat or sloping surface. Holes for bolts and/or pick-ets/stakes	For mounting to a vehicle 2x2" Tow Hitch frame. Plunge-pin locks rotation into 1 of 8 positions	For use with bipod but can be used as monpod/ tripod base with angle limitations	Use with 2x Bipod Bases to create A-frame	Single swivel anchor eye. Acme strut can be inserted in top receiver to extend support height *mainly for use with Amce/Longshore		flying rake bracing. Tig wi
paratech.com	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com	para

IMAGES NOT to SCALE Ext = Fixed length Extension strut = Option					
COMPANY	PARATECH	PARATECH	PARATECH	PARATECH	PARATECH
MODEL	Column Base/Head	Column Clamp	Angled End	Rubber Corner End	RubberAngled End
PRODUCT CODE	22-796680	XX	22-798E06	22-798E08	22-798E10
HEAD MID FOOT FITS to SERIES	All	All	Damage Control Sys	Damage Control Sys	Damage Control Sys
ORIGIN					
COST each	n/a	n/a	£0 $0 €0	£0 $0 €0	£0 $0 €0
WEIGHT	8.3kg 18.2lb	00kg 00lb	1.3kg 2.9lb	2.8kg 6.3lb	2.4kg 5.4lb
DIMENSIONS	40.6 x 40.6cm 16 x 16"	00cm 00"	19.3cm 7.6"	17.3cm 6.81"	23.5cm 9.25"
NOTES	Attaches to 3 struts to create column support	Ties the centre of 3 struts in a column support			
WWW.	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

COMPANY	PARATECH	PARATECH	PARATECH	PARATECH	PARATECH
MODEL	Latch Holder	Rail Junction Base	Rail Junction	Inside Thrust Block	Outside Thrust Block
PRODUCT CODE	22-796689	22-796290	22-796280	XX	XX
HEAD MID FOOT FITS to SERIES	All	Longshore	Longshore	OO	OO
ORIGIN					
COST each	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0
WEIGHT	2.1kg 4.6lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb
DIMENSIONS	38.1cm 15"	00cm 00"	00cm 00"	00cm 00"	00cm 00"
NOTES					
WWW.	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

SHORING STRUT HEADS, FEET & ACCESSORIES

					
PARATECH	**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**
Rubber End	Raker Rail Latch Brace	Rail End 02	Rail End 04	Raker Brace	Raker Angle Base
22-798E00	22-796250	22-798E02	22-798E04	XX	XX
Damage Control Sys	Damage Control Sys	Damage Control Sys	Damage Control Sys	OO	OO
£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0
0.9kg 1.9lb	1.5kg 3.2lb	3.1kg 6.8lb	6.3kg 13.8lb	00kg 00lb	00kg 00lb
10.2cm 4"	-	61cm 24"	122cm 48"	00cm 00"	00cm 00"
paratech.com	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

PARATECH	**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**
Longshore Converter	Raker Splice Brace	45° End	Raker Rail 2	Raker Rail 4	Raker Rail 6
22-796037	XX	XX	22-796258A	22-796258B	22-796258C
Longshore	Longshore	Longshore	OO	OO	Damage Control Sys
£0 $372 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0
1.1kg 2.5lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	1.5kg 3.2lb
8.9cm 3.5"	00cm 00"	00cm 00"	00cm 00"	00cm 00"	00cm 00"
paratech.com	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

IMAGES NOT to SCALE Ext = Fixed length Extension strut = Option					
COMPANY	PARATECH	PARATECH	PARATECH	PARATECH	PARATECH
MODEL	Hydraulic Pump	Strut Driver	Strut Driver	Strut Driver Handle	Waler Stop Block
PRODUCT CODE	22-790020	22-796200SD	22-796202SD	22-797727	22-796285
HEAD MID FOOT FITS to SERIES	Hydrafusion	Acme Thread	Acme Thread	Acme Thread	OO
ORIGIN					
COST each	£0 $1564 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $235 €0
WEIGHT	00kg 00lb	10.2kg 22.6lb	13.4kg 29.6lb	1.3kg 2.85lb	00kg 00lb
DIMENSIONS	00cm 00"	00cm 00"	00cm 00"	00cm 00"	00cm 00"
NOTES	With gauge with 10ft hose up to 690bar/10,000psi	Fits 64-91cm Strut	Fits 94-147cm Strut	Fits 94-147cm Strut	
WWW.	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

IMAGES NOT to SCALE Ext = Fixed length Extension strut = Option					
COMPANY	PROSPAN	PROSPAN	PROSPAN	PROSPAN	PROSPAN
MODEL	XX	XX	XX	XX	XX
PRODUCT CODE	XX	XX	XX	XX	XX
HEAD MID FOOT FITS to SERIES	Prospan	OO	Prospan	Prospan	Prospan
ORIGIN					
COST each	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0
WEIGHT	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb
DIMENSIONS	00cm 00"	00cm 00"	00cm 00"	00cm 00"	00cm 00"
NOTES			WLL		
WWW.	prospanshoring.com	prospanshoring.com	prospanshoring.com	prospanshoring.com	prospanshoring.com

SHORING STRUT HEADS, FEET & ACCESSORIES

PARATECH	**PARATECH**	**PROSPAN**	**PROSPAN**	**PROSPAN**	**PROSPAN**
Load Monitor	Angel Load Alarm	xx	xx	xx	xx
XX	XX	XX	XX	XX	XX
OO	OO	Prospan	Prospan	Prospan	Prospan
£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0
00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb
00cm 00"	00cm 00"	00cm 00"	00cm 00"	00cm 00"	00cm 00"
paratech.com	paratech.com	prospanshoring.com	prospanshoring.com	prospanshoring.com	prospanshoring.com

PROSPAN	**PROSPAN**	**PROSPAN**	**PROSPAN**	**PROSPAN**	**PROSPAN**
xx	Swivel End	4-Shore Wall Mount	2-Shore Wall Mount	Swivel Wale Plate	Gantry Column Plate
XX	PRO-SEA	PRO-QUAD	PRO-DUO	PRO-SWBP	PRO-GCPLT
Prospan	Prospan	Prospan	Prospan	Prospan	Prospan
£0 $0 €0	£0 $169 €0	£0 $0 €0	£0 $237 €0	£0 $237 €0	£0 $0 €0
00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb
00cm 00"	00cm 00"	00cm 00"	00cm 00"	00cm 00"	00cm 00"
					Requires 3x Clevis to attach to strut-legs for tripod or use two (top & bottom) as a column support
prospanshoring.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	PROSPAN
MODEL	Base Plate	Raker Base Plate	Baseplate Timber Block	Raker-Rail Splice	2xRaker Nailing Blocks
PRODUCT CODE	TASS/PRO-BP10	PRO-RRBP	PRO-BPTB	PRO-RRSPL	PRO-RRNB
HEAD MID FOOT FITS to SERIES	TASS/Prospan	Prospan	Prospan	Prospan	Prospan
ORIGIN					
COST each	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0
WEIGHT	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb
DIMENSIONS	00cm 00"	00cm 00"	00cm 00"	00cm 00"	00cm 00"
NOTES					
WWW.	prospanshoring.com	prospanshoring.com	prospanshoring.com	prospanshoring.com	prospanshoring.com

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

COMPANY	RESQTEC	RESQTEC	RESQTEC	RESQTEC	RESQTEC
MODEL	XX	XX	XX	XX	XX
PRODUCT CODE	XX	XX	XX	XX	XX
HEAD MID FOOT FITS to SERIES	ProFix	ProFix	ProFix	ProFix	ProFix
ORIGIN					
COST each	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0
WEIGHT	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb
DIMENSIONS	00cm 00"	00cm 00"	00cm 00"	00cm 00"	00cm 00"
NOTES	Load capacity 4.4 USt	Load capacity 4.4 USt	Load capacity 0.9 USt	Load capacity 4.4 USt	Load capacity 4.4 USt
WWW.	resqtec.com	resqtec.com	resqtec.com	resqtec.com	resqtec.com

SHORING STRUT HEADS, FEET & ACCESSORIES

RES-Q-JACK	RES-Q-JACK	RES-Q-JACK	RES-Q-JACK	RES-Q-JACK	RES-Q-JACK
Static Foot	Swivel Foot	Small Base Plate	Large Anchor Base Plate	Multi-Head	Tripod Head
XX	XX	XX	XX	XX	XX
SuperX	SuperX	SuperX	SuperX	SuperX	SuperX
£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0
00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb
00cm 00"	00cm 00"	00cm 00"	00cm 00"	00cm 00"	00cm 00"
resqjack.com	resqjack.com	resqjack.com	resqjack.com	resqjack.com	resqjack.com

RESQTEC	RESQTEC	RESQTEC	RESQTEC	SCORPE	
XX	XX	XX	XX	XX	
XX	XX	XX	XX	XX	
ProFix	ProFix	ProFix	ProFix	Air Stabilizer	
£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	
00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	
00cm 00"	00cm 00"	00cm 00"	00cm 00"	00cm 00"	
Load capacity 0.9 USt	Load capacity 4.4 USt	Load capacity 4.4 USt	Load capacity 0.9 USt		
resqtec.com	resqtec.com	resqtec.com	resqtec.com	scorpe.net	

'pneumatic' HIGH-PRESSURE AIRBAGS

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 >135metric 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.

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" x W" x operating pressure (psi) = lift capacity in lbs
eg. 26"x 26" = 676
676 x 116 (psi) = 78416'bs/39.2t(US)/35.5tonne

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

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.

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*Air CU = Air Control Unit

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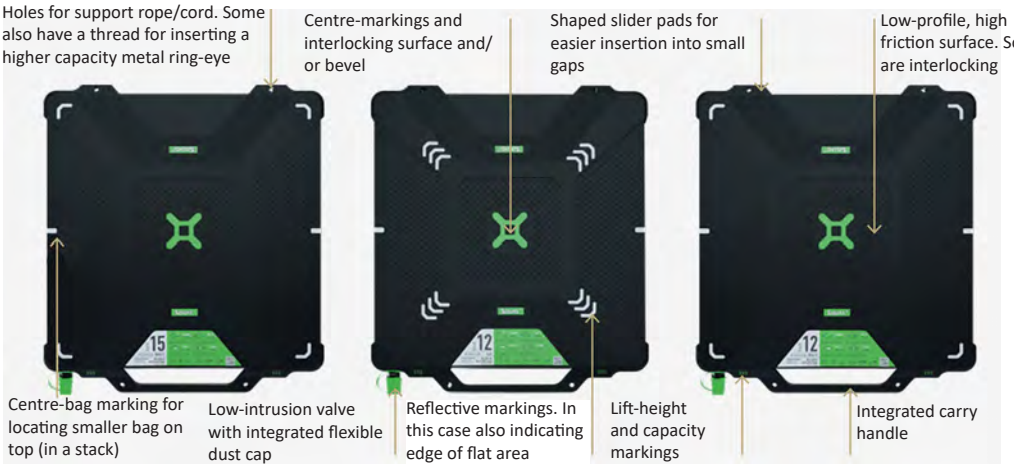
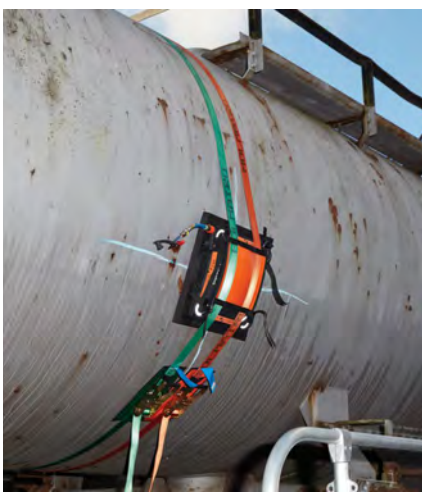
For further information visit www.vetter.de

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.





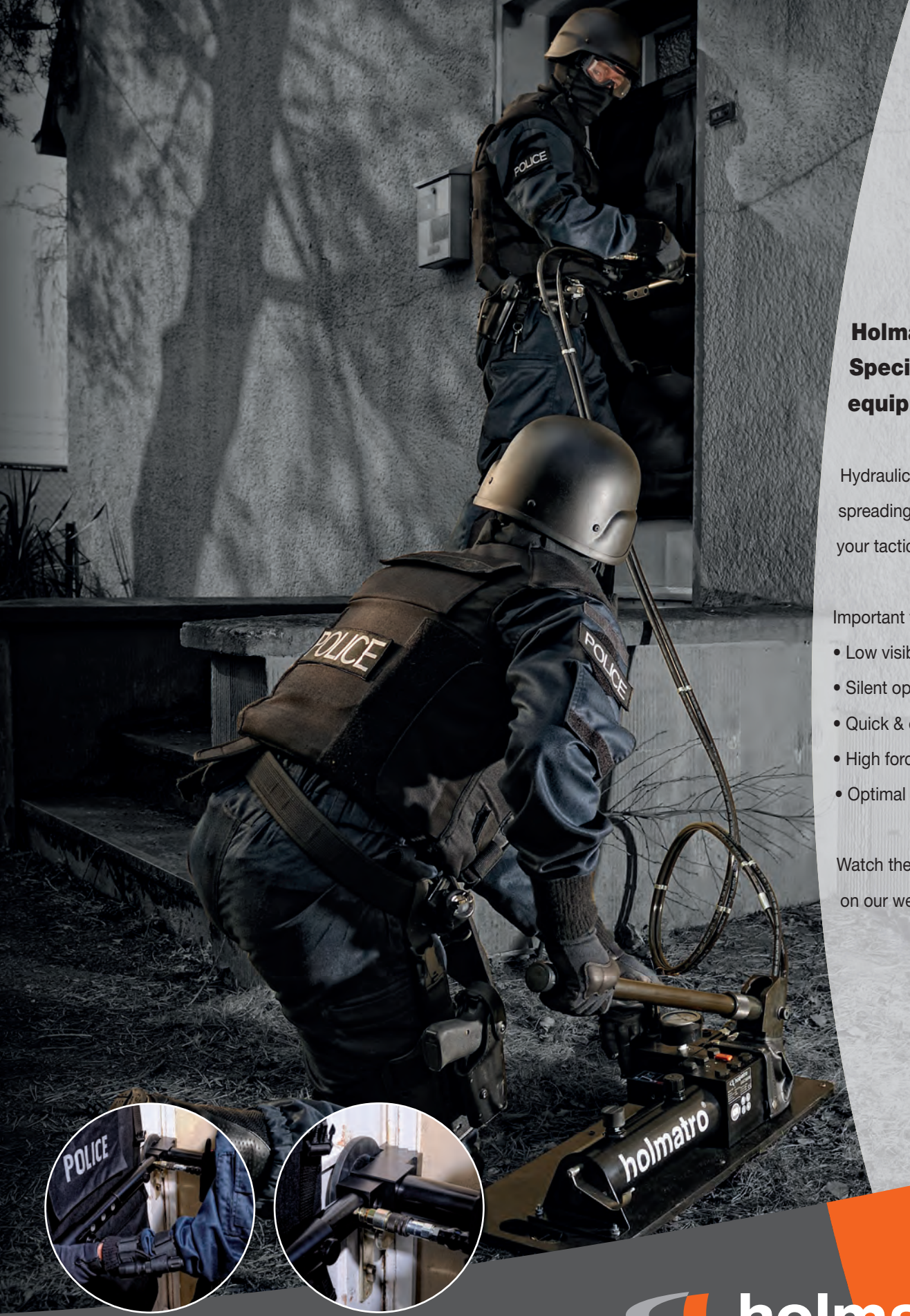
As with rams it is vital to centralise the lift on the centre of the bag - if your target load starts to stray off-centre as it moves the bag could be squeezed out with some force and the load will collapse back down if you have not followed the lift with cribbing.

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 **M**etric 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.



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images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum 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	AOLA
SERIES MODEL VARIANT	5T	10T	15T	20T	
CODE NUMBER VARIANT	ALQD-5	ALQD-10	ALQD-15	ALQD-20	
ORIGIN					
COST inc tax / VAT	N/A	N/A	N/A	N/A	
WEIGHT exc inflation eqpt	2.4kg / 5.3lb	4.2kg / 9.3lb	6kg / 13.2lb	8.5kg / 18.7lb	11.
DEFLATED DIMENSIONS (valve) Length (+Valve) x Width x Height/depth	30 x 30 x 2.5cm 11.8 x 11.8 x 1"	38 x 38 x 2.5cm 15 x 15 x 1"	45 x 45 x 2.5cm 17.7 x 17.7 x 1"	55 x 55 x 2.5cm 21.6 x 21.6 x 1"	61 x 24
INFLATED HEIGHT	16cm / 6.3"	21cm / 8.2"	25cm / 00"	30cm / 11.8"	34
Max LIFT CAPACITY @min ht @max height	00 tonnes 6.1 UStons	10.06 tonnes 11.1 UStons	13.4 tonnes 14.9 UStons	21.9 tonnes 24.2 UStons	26 29
MAX WORKBURSTPRESSURE	8 32BAR / 116 464 psi	8 32BAR / 116 464 psi	8 32BAR / 116 464 psi	8 32BAR / 116 464 psi	8 32BAR
AIR VOLUME	42L / 1.48cuft	86L / 3cuft	152L / 5.36cuft	296L / 10.45cuft	416
STACK/CONNECT HI-VIZ	2x ■ - ■	2x ■ - ■	2x ■ - ■	2x ■ - ■	2
MATERIAL REINFORCEMENT	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	R A
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	aolairescue.com	aolairescue.com	aolairescue.com	aolairescue.com	aolair

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum 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	AOLA
SERIES MODEL VARIANT	OO	OO	OO	OO	
CODE NUMBER VARIANT	00	00	00	00	
ORIGIN					
COST inc tax / VAT	N/A	N/A	N/A	N/A	
WEIGHT exc inflation eqpt	00kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb	00
DEFLATED DIMENSIONS (valve) Length (+Valve) x Width x Height/depth	00 x 00 x 2.5cm 00 x 00 x 1"	00 x 00 x 2.5cm 00 x 00 x 1"	00 x 00 x 2.5cm 00 x 00 x 1"	00 x 00 x 2.5cm 00 x 00 x 1"	00 x 00
INFLATED HEIGHT	00cm / 00"	00cm / 00"	00cm / 00"	00cm / 00"	00
Max LIFT CAPACITY @min ht @max height	00 tonnes 00 UStons	00 tonnes 00 UStons	00 tonnes 00 UStons	00 tonnes 00 UStons	0 0
MAX WORKBURSTPRESSURE	8-12BAR / 00psi	8-12BAR / 00psi	8-12BAR / 00psi	8-12BAR / 00psi	8-12
AIR VOLUME	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00
STACK/CONNECT HI-VIZ	■ ■ -	■ ■ -	■ ■ -	■ ■ -	
MATERIAL REINFORCEMENT	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	R A
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	aolairescue.com	aolairescue.com	aolairescue.com	aolairescue.com	aolair

HIGH PRESSURE AIRBAGS

AI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE
30T	40T	50T	70T	OO	OO
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 x 24 x 1"	78 x 78 x 2.7cm 30.7 x 30.7 x 1.1"	87 x 87 x 2.7cm 34 x 34 x 1.1"	100 x 98 x 2.8cm 39 x 38.5 x 1.2"	00 x 00 x 2.5cm 00 x 00 x 1"	00 x 00 x 2.5cm 00 x 00 x 1"
4cm / 13"	42cm / 16.5"	47cm / 18.5"	49cm / 19.2"	00cm / 00"	00cm / 00"
.9 tonnes .7 USton	44.5 tonnes 49.1 USton	54.9 tonnes 60.6 USton	64.9 tonnes 71.6 USton	00 tonnes 00 USton	00 tonnes 00 USton
R / 116 464 psi	8 32BAR / 116 464 psi	8 32BAR / 116 464 psi	8 32BAR / 116 464 psi	8-12BAR / 00psi	8-12BAR / 00psi
L / 14.7cuft	921L / 32.5cuft	1305L / 46cuft	1505L / 53.1cuft	00L / 00cuft	00L / 00cuft
2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■	3x■ ■ -	3x■ ■ -
Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid
EN13731	EN13731	EN13731	EN13731	EN13731	EN13731
rescue.com	aolairescue.com	aolairescue.com	aolairescue.com	aolairescue.com	aolairescue.com

AI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE	ENERPAC
OO	OO	OO	OO	OO	B1A
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 x 00 x 1"	00 x 00 x 2.5cm 00 x 00 x 1"	00 x 00 x 2.5cm 00 x 00 x 1"	00 x 00 x 2.5cm 00 x 00 x 1"	00 x 00 x 2.5cm 00 x 00 x 1"	00 x 00 x 2.5cm 00 x 00 x 1"
0cm / 00"	00cm / 00"	00cm / 00"	00cm / 00"	00cm / 00"	00cm / 00"
0 tonnes 0 USton	00 tonnes 00 USton	00 tonnes 00 USton	00 tonnes 00 USton	00 tonnes 00 USton	00 tonnes 00 USton
BAR / 00psi	8-12BAR / 00psi	8-12BAR / 00psi	8-12BAR / 00psi	8-12BAR / 00psi	8-12BAR / 00psi
L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft
■ ■ -	■ ■ -	■ ■ -	■ ■ -	■ ■ -	2x■ - ●
Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid
EN13731	EN13731	EN13731	EN13731	EN13731	EN13731
rescue.com	aolairescue.com	aolairescue.com	aolairescue.com	aolairescue.com	enerpac.com

images not to Scale
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COMPANY	ENERPAC	ENERPAC	ENERPAC	ENERPAC	EN
SERIES MODEL VARIANT	B3A	B6A	B11A	B14A	
CODE NUMBER VARIANT	350.321.006	350.321.008	350.321.011	350.321.016	35
ORIGIN					
COST inc tax / VAT	£ $895 €	£ $1408 €	£ $1736 €	£ $1970 €	£
WEIGHT exc inflation eqpt	1.3kg / 2.8lb	2.4kg / 5.3lb	4kg / 8.8lb	5.3kg / 11.6lb	8.1
DEFLATED DIMENSIONS (valve) Length (+Valve) x Width x Height/depth	22.9 x 22.9 x 2.8cm 9 x 9 x 1.1"	30.5 x 30.5 x 2.8cm 12 x 12 x 1.1"	38.1 x 38.1 x 2.8cm 15 x 15 x 1.1"	45.7 x 45.7 x 2.8cm 18 x 18 x 1.1"	55.9 x 22 x
INFLATED HEIGHT	12.9cm / 5.1"	15cm / 5.9"	17.8cm / 7"	21.8cm / 8.6"	26.9
Max LIFT CAPACITY @min ht @max height	2.81 tonnes 3.1 USton	5.8tonnes 6.4 USton	9.8 tonnes 10.8 USton	12.9 tonnes 14.2 USton	20 22
MAX WORKBURSTPRESSURE	8-12BAR / 116psi	8-12BAR / 116psi	8-12BAR / 116psi	8-12BAR / 116psi	8-12
AIR VOLUME	15L / 0.53cuft	41.9L / 1.48cuft	86L / 3.04cuft	152L / 5.37cuft	295.9
STACK/CONNECT HI-VIZ	2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●	2
MATERIAL REINFORCEMENT	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	R A
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	enerpac.com	enerpac.com	enerpac.com	enerpac.com	ene

images not to Scale
● ● ● =OK but not ideal
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COMPANY	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO	HO
SERIES MODEL VARIANT	HLB2	HLB6	HLB8	HLB11	
CODE NUMBER VARIANT	350.321.002	350.321.006	350.321.008	350.321.011	35
ORIGIN					
COST inc tax / VAT	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	4.5
DEFLATED DIMENSIONS (valve) Length (+Valve) x Width x Height/depth	16(+4) x 16 x 2.2cm 7.9(+1.6) x 6.3 x 0.9"	24.5(+4) x 24.5 x 2.2cm 9.65(+1.6) x 9.65 x 00"	29.5(+4) x 29.5 x 2.2cm 11.6(+1.6) x 11.6 x 00"	40.3 x 32.5 x 2.5cm 15.87 x 12.8 x 00"	46.7 x 18.39 x
INFLATED HEIGHT	9.4cm / 3.7"	14.1cm / 5.55"	17.9cm / 7.05"	20.7cm / 8.15"	23.6
Max LIFT CAPACITY @min ht @max height	*1.4-2.1 tonnes 1.5-2.3 USton	*3.8-5.6 tonnes 4.2-6.1 USton	*5.6-8.4 tonnes 6.1-9.25 USton	*7.4-11.2 tonnes 8.15-12.3 USton	*10.5 11.5-
MAX WORKBURSTPRESSURE	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi	*8-12BA
AIR VOLUME	0.8L / 0.03cuft	2.2L / 0.06cuft	3.3L / 0.12cuft	5.4L / 0.19cuft	8.7L
STACK/CONNECT HI-VIZ	2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■	2
MATERIAL REINFORCEMENT	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid	Nitri 3 lay
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 EN13731,
WEBSITE	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holr

HIGH PRESSURE AIRBAGS

NERPAC	ENERPAC	ENERPAC	ENERPAC	ENERPAC	ENERPAC
B22A	B28A	B35A	B46A	B59A	B77A
0.321.021	350.321.031	350.321.038	350.321.053	350.321.063	350.321.063
$2481 €	£ $3038 €	£ $3926 €	£ $4782 €	£ $5407 €	£ $6036 €
kg / 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 x 22 x 1.1"	61 x 61 x 3cm 24 x 24 x 1.2"	68.6 x 68.6 x 3cm 27 x 27 x 1.2"	78.7 x 78.7 x 3cm 31 x 31 x 1.2"	88.9 x 88.9 x 3cm 35 x 35 x 1.2"	91.4 x 91.4 x 3cm 38 x 38 x 1.2"
9cm / 10.6"	29.9cm / 11.8"	35.8cm / 14.1"	41.9cm / 16.5"	44.9cm / 17.7"	50.8cm / 20.5"
.6 tonnes .7 USton	25.1 tonnes 27.7 USton	32 tonnes 35.3 USton	42.1 tonnes 46.4 USton	53.3 tonnes 58.8 USton	67.2 tonnes 77 USton
BAR / 116psi	8-12BAR / 116psi	8-12BAR / 116psi	8-12BAR / 116psi	8-12BAR / 116psi	8-12BAR / 116psi
L / 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 Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid
EN13731	EN13731	EN13731	EN13731	EN13731	EN13731
erpac.com	enerpac.com	enerpac.com	enerpac.com	enerpac.com	enerpac.com
LMATRO	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO
HLB16	HLB21	HLB31	HLB38	HLB53	HLB63
0.321.016	350.321.021	350.321.031	350.321.038	350.321.053	350.321.063
N/A	N/A	N/A	N/A	N/A	N/A
5kg / 10lb	5.6kg / 12.3lb	8.6kg / 19lb	10kg / 22lb	15kg / 33lb	17kg / 37.5lb
x 39 x 2.5cm x 15.35 x 00"	51.7 x 44 x 2.5cm 20.35 x 17.32 x 1"	66.2 x 53 x 2.7cm 26.06 x 20.8 x 00"	66.2 x 58.5 x 2.7cm 00 x 00 x 00"	76.7 x 69 x 2.7cm 30.2 x 27.17 x 00"	82.7 x 75 x 2.7cm 32.56 x 29.53 x 1.06"
6cm / 9.29"	26.6cm / 10.47"	32.1cm /12.64 "	35.2cm / 13.86"	41.1cm / 16.18"	45.6cm / 17.95"
-15.8 tonnes 17.4 uston	*13.6-21.4 tonnes 15-23.5 USton	*20.8-31.2 tonnes 22.9-34.4 USton	*25.2-37.7 tonnes 27.7-31.5 USton	*35.4-53 tonnes 39-58.4 USton	*42.1-63.2 tonnes 46.4-69.6 USton
R / 116-174psi	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi
/ 0.31cuft	13.4L / 0.37cuft	24L / 0.85cuft	37L / 1.31cuft	58L / 2.05cuft	74L / 2.61cuft
2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■
ile Rubber er Aramid	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid
at both 8 & 12 bar cord-attachment eyes	*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, cord-attachment eyes	*Operates at both 8 & 12 bar EN13731, cord-attachment eyes	*Operates at both 8 & 12 bar EN13731, cord-attachment eyes
matro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.com

images not to Scale
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COMPANY	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO	HO
SERIES MODEL VARIANT	HLB85	HLB96	Stack Bag HSB27	Stack Bag HSB40	Stack
CODE NUMBER VARIANT	350.321.085	350.321.096	350.321.021	350.321.021	35
ORIGIN					
COST inc tax / VAT	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	23.8
DEFLATED DIMENSIONS (valve) Length (+Valve) x Width x Height/depth	94.8 x 87 x 2.7cm 37.3 x 34.3 x 1"	98.7 x 91 x 2.7cm 38.8 x 35.83 x 1"	52 x 52 x 2.7cm 20.5 x 20.5 x 1"	62 x 62 x 2.7cm 24.4 x 24.4 x 1"	84 x 33
INFLATED HEIGHT	55cm /21.65"	56.5cm /22.24"	17cm / 6.7"	17cm / 6.7"	17
Max LIFT CAPACITY @min ht @max height	*58.1-87.2 tonnes 64-96.1 USton	*63.9-95.9 tonnes 70.4-105.7 USton	*18-27 tonnes 19.8-29.7 USton	*29.4-39.6 tonnes 32.4-43.6 USton	*49.3 54.3
MAX WORKBURSTPRESSURE	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi	*8-12BA
AIR VOLUME	118L / 4.17cuft	135L / 4.77cuft	170L / 6cuft	266.2L / 9.4cuft	555
STACK/CONNECT HI-VIZ	2x■ - ■	2x■ - ■	3x■ ■ ■	3x■ ■ ■	3
MATERIAL REINFORCEMENT	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid	Nitri 3 lay
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 EN1
WEBSITE	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holr

images not to Scale
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COMPANY	MATJACK	MATJACK	MATJACK	MATJACK	M
SERIES MODEL VARIANT	1.5t Air lifting Bag	3.3t Air lifting Bag	6t Air lifting Bag	13t Air lifting Bag	22t Ai
CODE NUMBER VARIANT	101K	103K	106K 106	113K 113	1
ORIGIN					
COST inc tax / VAT	£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.
DEFLATED DIMENSIONS (valve) Length (+Valve) x Width x Height/depth	15.24 x 15.24 x 1.8cm 6 x 6 x 0.75"	30.5 x 15.24 x 1.8cm 12 x 6 x 0.75"	25 x 25 x 3.175cm 10 x 10 x 1.25"	37.5 x 37.5 x 3.17cm 15 x 15 x 1.25"	50 x 20 x
INFLATED HEIGHT	6cm / 2.5"	6cm / 2.5"	11.25cm / 4.5"	6cm / 2.5"	25.
Max LIFT CAPACITY @min ht @max height	1.3 tonnes 1.5 USton	2.9 tonnes 3.3 USton	5.4 tonnes 6 USton	11.8 tonnes 13 USton	2 2
MAX WORKBURSTPRESSURE	8.2BAR / 120psi	8.2BAR / 120psi	8.2BAR / 120psi	8.2BAR / 120psi	8.2B
AIR VOLUME	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00
STACK/CONNECT HI-VIZ	2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●	2
MATERIAL REINFORCEMENT	Nitrile Rubber 4LyrAramid	Nitrile Rubber 4LyrAramid	Nitrile Rubber 4Lyr Aramid 3lyr Steel	Nitrile Rubber 4Lyr Aramid 3lyr Steel	Nitri 4Lyr Ara
NOTES					Ara
WEBSITE	matjack.com	matjack.com	matjack.com	matjack.com	ma

HIGH PRESSURE AIRBAGS

LMATRO	HOLMATRO	
Bag HSB74	Stack Bag HSB92	
0.321.021	350.321.021	
N/A	N/A	
3kg / 52.5lb	28kg / 61.7lb	
84 x 2.7cm x 33 x 1"	92 x 92 x 2.7cm 36.2 x 36.2 x 1"	
cm / 6.7"	17cm / 6.7"	
-73.8 tonnes -81.3 USton	*61.5-92.2 tonnes 67.8-101.6 UStons	
AR / 116-174psi	*8-12BAR / 116-174psi	
L / 19.6cuft	691L / 24.4cuft	
x■	3x■	
ile Rubber yer Aramid	Nitrile Rubber 3 layer Aramid	
at both 8 & 12 bar 3731/NFPA	*Operates at both 8 & 12 bar EN13731/NFPA	
matro.com	holmatro.com	

ATJACK	MATJACK	MATJACK	MATJACK	MATJACK	MATJACK
r lifting Bag	32t Air lifting Bag	37t Air lifting Bag	50t Air lifting Bag	70t Air lifting Bag	86t Air lifting Bag
22K 122	132K 132	137K 137	150K 150	170K 170	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 20 x 1.25"	62.5 x 52.5 x 3.2cm 25 x21 x 1.25"	105 x 40 x 3.2cm 42 x 16 x 1.25"	73.7 x 73.7 x 3.2cm 29 x 29 x 1.25"	86 x 86 x 3.2cm 34 x 34 x 1.25"	106.7 x 106.7 x 3.2cm 42 x 42 x 1.25"
4cm / 10"	27.6cm / 11"	22.5cm / 9"	38.1cm / 15"	45.7cm /18"	60cm / 24"
0 tonnes 2 UStons	29 tonnes 32 UStons	33.6 tonnes 37 UStons	45.5 tonnes 50 UStons	63.6 tonnes 70 UStons	87.2 tonnes 86 UStons
AR / 120psi	8.2BAR / 120psi	8.2BAR / 120psi	8.2BAR / 120psi	8.2BAR / 120psi	8.2BAR / 120psi
L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft
2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●
ile Rubber mid 3lyr Steel	Nitrile Rubber 4Lyr Aramid 3lyr Steel	Nitrile Rubber 4Lyr Aramid 3lyr Steel	Nitrile Rubber 4Lyr Aramid 3lyr Steel	Nitrile Rubber 4Lyr Aramid 3lyr Steel	Nitrile Rubber 3lyr Steel
mid Steel					
tjack.com	matjack.com	matjack.com	matjack.com	matjack.com	matjack.com

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
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COMPANY	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INT
SERIES MODEL VARIANT	Stakjack 8 KSM17	Stakjack 8 KSM25	Stakjack 8 KSM49	Stakjack 8 KSM60	Stakjac
CODE NUMBER VARIANT	KSM17/08	KSM25/08	KSM49/08	KSM60/08	K
ORIGIN					
COST inc tax / VAT	£780	£995	£1550	£2365	
WEIGHT exc inflation eqpt	8kg / 18lb	12kg / 27lb	20kg /44lb	23kg / 51lb	8
DEFLATED DIMENSIONS (valve) Length (+Valve) x Width x Height/depth	52 x 52 x 2.5cm 20.4 x 20.4 x 1"	62 x 62 x 2.5cm 24.4 x 24.4 x 1"	84 x 84 x 2.5cm 33.1 x 33.1 x 1"	92 x 92 x 2.5cm 36.2 x 36.2 x 1"	52 x 20.4
INFLATED HEIGHT	17.5cm / 6.9"	17.5cm / 6.9"	17.5cm / 6.9"	17.5cm / 6.9"	17.
Max LIFT CAPACITY @min ht @max height	3.6 - 17.2tonnes 4 - 19USton	7.8-2.55tonnes 8.6 - 28.1USton	17.9-49.2tonnes 18.7-54.2USton	24.6-59.8 tonnes 27.1-65.9USton	5.4 - 6 -
MAX WORKBURSTPRESSURE	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	12B
AIR VOLUME	305L / 10.7cuft	465L / 16.4cuft	893L / 31.5cuft	1074L / 37.9cuft	479
STACK/CONNECT HI-VIZ	3x■ ● ●	3x■ ● ●	3x■ ● ●	3x■ ● ●	3
MATERIAL REINFORCEMENT	SBR Rubber Kevlar Cord	SBR Rubber Kevlar Cord	SBR Rubber Kevlar Cord	SBR Rubber Kevlar Cord	SBI Kev
NOTES	EN13731 Flat, not curved, top profile	EN13731 Flat, not curved, top profile	EN13731 Pic shows stack of 3 bags Flat, not curved, top profile	EN13731 Flat, not curved, top profile	Flat, not c
WEBSITE	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-inte

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COMPANY	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INT
SERIES MODEL VARIANT	Powermat 8 KS5	Powermat 8 KS10	Powermat 8 KS12	Powermat 8 KS16	Power
CODE NUMBER VARIANT	KS05/08	KS10/08	KS12/08	KS16/08	
ORIGIN					
COST inc tax / VAT	£295	£410	£480	£570	
WEIGHT exc inflation eqpt	1.8kg / 4lb	3.6kg / 7.9lb	4.1kg / 9lb	5.1kg / 11.2lb	8k
DEFLATED DIMENSIONS (valve) Length (+Valve) x Width x Height/depth	27 x 27 x 2.5cm 10.6 x 10.6 x 1"	38 x 38 x 2.5cm 15 x 15 x 1"	40.8 x 40.8 x 2.5cm 16.1 x 16.1 x 1"	46 x 46 x 2.5cm 18.1 x 18.1 x 1"	52 x 20.4
INFLATED HEIGHT	15cm / 5.9"	23cm / 8.9"	23cm / 8.9"	25cm / 9.8"	32
Max LIFT CAPACITY @min ht @max height	4.2tonnes 4.6USton	10.5tonnes 11.5USton	10.2tonnes 11.2USton	13.6tonnes 15USton	2 23
MAX WORKBURSTPRESSURE	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BA
AIR VOLUME	23L / 0.8cuft	69L / 2.4cuft	89L / 3.1cuft	124L / 4.4cuft	186
STACK/CONNECT HI-VIZ	2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●	2
MATERIAL REINFORCEMENT	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	Kev
NOTES	EN13731	EN13731	EN13731	EN13731	
WEBSITE	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-inte

HIGH PRESSURE AIRBAGS

TERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL
ck 12 KSM26	Stakjack 12 KSM38	Stakjack 12 KSM74	Stakjack 12 KSM90	Powermat 8 KS1	Powermat 8 KS3
SM26/12	KSM38/12	KSM74/12	KSM90/1	KS01/08	KS03/08
N/A	N/A	N/A	N/A	£180	£240
kg / 18lb	12kg / 27lb	20kg /44lb	23kg / 51lb	0.5kg / 1.1lb	1.3kg / 2.9lb
52 x 2.5cm x 20.4 x 1"	62 x 62 x 2.5cm 24.4 x 24.4 x 1"	84 x 84 x 2.5cm 33.1 x 33.1 x 1"	92 x 92 x 2.5cm 36.2 x 36.2 x 1"	15 x 15 x 2.5cm 5.9 x 5.9 x 1"	22.5x 22.5 x 2.5cm 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 28.5 USton	11.8 = 38.2 tonnes 13 - 42.1 USton	34.1 - 73.8 tonnes 37.6 - 81.4USton	45.1 -89.6 tonnes 49.7 -98.8USton	0.9 tonnes 1 USton	2.6 tonnes 2.9USton
AR / 174psi	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi	8BAR / 116psi	8BAR / 116psi
L / 16.9cuft	731L / 25.8cuft	1403L / 49.5cuft	1687L / 59.6cuft	3L / 0.1cuft	12L / 00cuft
x■■■	3x■■■	3x■■■	3x■■■	2x■ - ■	2x■ - ■
R Rubber vlar Cord	SBR Rubber Kevlar Cord	SBR Rubber Kevlar Cord	SBR Rubber Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord
EN13731 urved, top profile	EN13731 Flat, not curved, top profile	EN13731 Flat, not curved, top profile	EN13731 Flat, not curved, top profile	EN13731	EN13731
rnational.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com

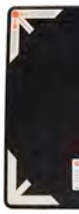
TERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL
rmat 8 KS21	Powermat 8 KS29	Powermat 8 KS33	Powermat 8 KS46	Powermat 8 KS54	Powermat 8 KS67
KS21/08	KS29/08	KS33/08	KS46/08	KS54/08	KS67/08
£655	£885	£1010	£1200	£1635	£1980
g / 17.6lb	12kg / 27lb	13.5kg / 29.8lb	14.5kg / 32lb	20kg / 44.1lb	23kg / 50.7lb
52 x 2.5cm x 20.4 x 1"	62 x 62 x 2.5cm 24.4 x 24.4 x 1"	65.8 x 65.8 x 2.5cm 25.9 x 25.9 x 1"	77.5 x 77.5 x 2.5cm 30.5 x 30.5 x 1"	84 x 84 x 2.5cm 33.1 x 33.1 x 1"	92 x 92 x 2.5cm 36.2 x 36.2 x 1"
cm / 12.6"	35cm / 13.8"	38cm / 14.8"	43cm / 16.7"	48cm / 18.7"	50cm / 19.7"
1tonnes .14USton	26.6tonnes 29.3USton	30.3tonnes 33.4USton	42.5tonnes 46.8USton	51.1tonnes 56.3USton	62.2tonnes 68.6USton
R / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi
L / 6.6cuft	311L / 11cuft	391L / 13.8cuft	672L / 22.1cuft	797L / 28.1cuft	1051L / 37.1cuft
2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■
SBR vlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord
EN13731	EN13731	EN13731	EN13731	EN13731	EN13731
rnational.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com

images not to Scale

● ● ● =OK but not ideal

NB: LIFT CAPACITY

Figures quoted may not be at maxmum 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 INT
SERIES MODEL VARIANT	Powermat 12 KS2	Powermat 12 KS5	Powermat 12 KS8	Powermat 12 KS16	Power
CODE NUMBER VARIANT	KS02/12	KS05/12	KS08/12	KS16/12	
ORIGIN					
COST inc tax / VAT	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.
DEFLATED DIMENSIONS (valve) Length (+Valve) x Width x Height/depth	15 x 15 x 2.5cm 5.9 x 5.9 x 1"	22.5 x 22.5 x 2.5cm 8.6 x 8.6 x 1"	27 x 27 x 2.5cm 10.6 x 10.6 x 1"	38 x 38 x 2.5cm 15 x 15 x 1"	40.8 x 16.1
INFLATED HEIGHT	8cm / 3.1"	13cm / 5.1"	16cm / 6.3"	23cm / 9"	25
Max LIFT CAPACITY @min ht @max height	1.4 tonnes 1.5 UStons	4.1 tonnes 4.5 UStons	6.6 tonnes 7.3 UStons	13.6 tonnes 15 UStons	1 17
MAX WORKBURSTPRESSURE	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi	12BA
AIR VOLUME	4l / 0.1cuft	18L / 0.6cuft	34L / 1.2cuft	100L / 3.5cuft	128
STACK/CONNECT HI-VIZ	2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■	2
MATERIAL REINFORCEMENT	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	Kev
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-inte

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- Security and Surveillance
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TERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL
mat 12 KS18	Powermat 12 KS23	Powermat 12 KS30	Powermat 12 KS43	Powermat 12 KS49	Powermat 12 KS68
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 x 16.1 x 1"	46 x 46 x 2.5cm 18.1 x 18.1 x 1"	52 x 52 x 2.5cm 20.4 x 20.4 x 1"	62 x 62 x 2.5cm 24.4 x 24.4 x 1"	65.8 x 65.8 x 2.5cm 25.9 x 25.9 x 1"	77.5 x 77.5 x 2.5cm 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 .6 USton	20.9 tonnes 23 USton	27.6 tonnes 30.4 USton	40.6 tonnes 44.8 USton	45.2 tonnes 49.8 USton	63.8 tonnes 70.3 USton
AR / 174psi	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi
3L / 4.5cuft	180L / 6.4cuft	268L / 9.5cuft	449L / 15.8cuft	565L / 20cuft	906L / 32cuft
2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■
SBR vlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord
EN13731	EN13731	EN13731	EN13731	EN13731	EN13731
rnational.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com

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SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum 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		PARATECH	PA
SERIES MODEL VARIANT	Powermat 12 KS81	Powermat 12 KS97		MaxiForce KPI-1	Maxi
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) Length (+Valve) x Width x Height/depth	84 x 84 x 2.5cm 33.1 x 33.1 x 1"	92 x 92 x 2.5cm 36.2 x 36.2 x 1"		15.2 x 15.2 x 1.9cm 6 x 6 x ¾"	15.2 x 6 x
INFLATED HEIGHT	52cm / 20.5"	57cm / 22.4"		7.6cm / 3"	8.9
Max LIFT CAPACITY @min ht @max height	75.5 tonnes 83.2 USton	93.2 tonnes 102.7 USton		1.3 tonnes 1.5 USton	3. 3
MAX WORKBURSTPRESSURE	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 Kevlar Cord	SBR Kevlar Cord		3 layer Neoprene Aramid	3 laye
NOTES	EN13731	EN13731		EN13731	
WEBSITE	mfc-international.com	mfc-international.com		paratech.com	para

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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) Length (+Valve) x Width x Height/depth	50.8 x 50.8 x 2.2cm 20 x 20 x ⅞"	50.8 x 66 x 2.2cm 20 x 26 x ⅞"	610 x 610 x 2.2cm 24 x 24 x ⅞"	38.1 x 106.6 x 2.2cm 15 x 42 x⅞"	71.1 x 28
INFLATED HEIGHT	27.4cm / 10.8"	29.9cm / 11.8"	33cm / 13"	24.1cm / 9.5"	38.8
Max LIFT CAPACITY @min ht @max height	23.2 tonnes 25.6 USton	30.9 tonnes 34 USton	34.4 tonnes 38 USton	35.8 tonnes 39.5 USton	47 52
MAX WORKBURSTPRESSURE	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 Aramid	3 layer Neoprene Aramid	3 layer Neoprene Aramid	3 layer Neoprene Aramid	3 laye
NOTES	EN13731	EN13731	EN13731	EN13731	
WEBSITE	paratech.com	paratech.com	paratech.com	paratech.com	para

RATECH	PARATECH	PARATECH	PARATECH	PARATECH	PARATECH
Force KPI-3	MaxiForce KPI-5	MaxiForce KPI-8	MaxiForce KPI-10	MaxiForce KPI-12	MaxiForce KPI-17
-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 x 12 x ¾"	25.4 x 25.4 x 1.9cm 10 x 10 x ¾"	30.5 x 30.5 x 2.2cm 12 x 12 x ⅞"	30.5 x 45.7 x 2.2cm 12 x 18 x ⅞"	38.1 x 38.1 x 2.2cm 15 x 15 x ⅞"	38.1 x 53.3 x 2.2cm 15 x 21 x ⅞"
9cm / 3.5"	13.7cm / 5.4"	16.3cm / 6.4"	18cm / 7.1"	20.6cm / 8.1"	22.6cm / 9"
.2 tonnes .5 UStons	4.9 tonnes 5.4 UStons	7.5 tonnes 8.2 UStons	11.7 tonnes 12.9 UStons	12.4 tonnes 13.7 UStons	17.3 tonnes 19 UStons
BAR / 180psi	12.4BAR / 180psi	12.4BAR / 180psi	12.4BAR / 180psi	12.4BAR / 180psi	12.4BAR / 180psi
L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft
-	-	-	-	-	-
r Neoprene Aramid	3 layer Neoprene Aramid	3 layer Neoprene Aramid	3 layer Neoprene Aramid	3 layer Neoprene Aramid	3 layer Neoprene Aramid
N13731	EN13731	EN13731	EN13731	EN13731	EN13731
atech.com	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

RATECH	PARATECH	PARATECH	PARATECH	PARATECH	PARATECH
orce KPI-44	MaxiForce KPI-55	MaxiForce KPI-74	MultiForce Compact	MultiForce Basic	MultiForce Remote
-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 x 28 x ⅞"	81.2 x 81.2 x 2.5cm 32 x 32 x 1"	93.9x 93.9 x 2.5cm 37 x 37 x 1"	62.1 x 60 x 12.4cm 00 x 00 x 5"	73.2 x 71.1 x 12.4cm 28.8 x 28 x 5"	78 x 71.1 x 15.3cm 30.7 x 28 x 6"
3cm / 15.3"	43.2cm / 17"	50.8cm / 20"	66cm / 26"	66cm / 26"	66cm / 26"
.8 tonnes .7 UStons	63.3 tonnes 69.7 UStons	80.9 tonnes 89.2UStons	28 tonnes 31 UStons	28 tonnes 31 UStons	28 tonnes 31 UStons
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
L / 00cuft	00L / 00cuft	00L / 00cuft	888.3L / 31.4cuft	888.3L / 31.4cuft	888.3L / 31.4cuft
-	-	-	* *	* *	* *
r Neoprene Aramid	3 layer Neoprene Aramid	3 layer Neoprene Aramid	Neoprene Aramid	Neoprene Aramid	Neoprene Aramid
N13731	EN13731	EN13731	* * 2-'chambered' bag Integrated trolley wheels. EN13731/NFPA	* * 2-'chambered' bag Integrated trolley wheels. EN13731/NFPA	* * 2-'chambered' bag Integrated trolley wheels. EN13731/NFPA
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COMPANY	RESQTEC	RESQTEC	RESQTEC	RESQTEC	RE
SERIES MODEL VARIANT	SQ 1	SQ 3	SQ 6	SQ 9L	S
CODE NUMBER VARIANT	-	-	-	-	
ORIGIN					
COST inc tax / VAT	€335	€400	€530	N/A	
WEIGHT exc inflation eqpt	0.55kg / 1.2lb	1.25kg / 2.76lb	2kg / 4.41lb	3.3kg / 7.3lb	3.5
DEFLATED DIMENSIONS (valve) Length (+Valve) x Width x Height/depth	15 x 15 x 2.5cm 5.9 x 5.9 x 1"	22.5 x 22.5 x 2.5cm 8.8 x 8.8 x 1"	30 x 30 x 2.5cm 11.8 x 11.8 x 1"	45 x 30 x 2.5cm 17.72 x 11.8 x 1"	38 x 15
INFLATED HEIGHT	8.0cm / 3.1"	13cm / 5.1"	16cm / 6.3"	19cm / 7.5"	21
Max LIFT CAPACITY @min ht @max height	1.1 tonnes 1.2 USton	2.7 tonnes 3 USton	5.5 tonnes 6.1 USton	8.9 tonnes 9.8 USton	10 11
MAX WORKBURSTPRESSURE	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BA
AIR VOLUME	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00
STACK/CONNECT HI-VIZ	● - ●	● - ●	● - ●	● - ●	
MATERIAL REINFORCEMENT	Oo Oo	Oo Oo	Oo Oo	Oo Oo	
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	rescue.resqtec.com	paratech.com	paratech.com	rescue.resqtec.com	rescue.

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SBR= Styrene-Butadiene Rubber

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Figures quoted may not be at maxmum 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	RE
SERIES MODEL VARIANT	SQ 21	SQ 25	SQ 33	SQ 45	S
CODE NUMBER VARIANT	-	-	-	-	
ORIGIN					
COST inc tax / VAT	€1055	€1185	€1340	€1920	
WEIGHT exc inflation eqpt	7kg / 15.4lb	9kg / 19.8lb	11kg / 24lb	14kg / 30.9lb	18k
DEFLATED DIMENSIONS (valve) Length (+Valve) x Width x Height/depth	55 x 55 x 2.5cm 21.6 x 21.6 x 1"	61 x 61 x 2.5cm 24 x 24 x 1"	69 x 69 x 2.5cm 27.1 x 27.1x 1"	78 x 78 x 2.5cm 31.7 x 31.7 x 1"	87 x 34.2
INFLATED HEIGHT	30cm / 11.8"	34cm / 13.4"	38cm / 15"	42cm / 16.5"	47
Max LIFT CAPACITY @min ht @max height	21.1 tonnes 23.2 USton	25.2 tonnes 27.7 USton	33 tonnes 36.3 USton	44.6 tonnes 49.1 USton	5 60
MAX WORKBURSTPRESSURE	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BA
AIR VOLUME	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00
STACK/CONNECT HI-VIZ	● - ●	● - ●	● - ●	● - ●	
MATERIAL REINFORCEMENT	Oo Oo	Oo Oo	Oo Oo	Oo Oo	
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com	rescue.

HIGH PRESSURE AIRBAGS

ESQTEC	RESQTEC	RESQTEC	RESQTEC	RESQTEC	RESQTEC
SQ 10	SQ 13L	SQ 13L	SQ 13L	SQ 14	SQ 20
-	-	-	-	-	-
€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 x 15 x 1"	50 x 37.5 x 2.5cm 19.7 x 14.7 x 1"	75 x 37.5 x 2.5cm 029.5x 14.7 x 1"	102x 32 x 2.5cm 40.1 x 12.6 x 1"	45 x 45 x 2.5cm 17.72 x 17.72 x 1"	75 x 37.5 x 2.5cm 29.5 x 14.7 x 1"
cm / 8.27"	23cm / 9"	23cm / 9"	20cm / 7.87"	25cm / 9.8"	00cm / 00"
.1 tonnes .1 USton	13.2tonnes 14.5 USton	20.2 tonnes 22.2 USton	24 tonnes 26.4 USton	13.1 tonnes 14.9 USton	00 tonnes 00 USton
AR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi
L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft
● - ●	● - ●	● - ●	● - ●	● - ●	● - ●
Oo Oo	Oo Oo	Oo Oo	Oo Oo	Oo Oo	Oo Oo
EN13731	EN13731	EN13731	EN13731	EN13731	EN13731 DISCONTINUED?
.resqtec.com	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com

ESQTEC	RESQTEC		RESQTEC	RESQTEC	RESQTEC
SQ 55	SQ 70		LT ONE S3	LT ONE S5	LT ONE S7
-	-		-	-	-
€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 x 34.2 x 1"	94.5 x 94.5 x 2.5cm 37.2 x 37.2 x 1"		36 x 31 x 2.1cm 00 x 00 x 0.8"	54 x 49 x 2.1cm 00 x 00 x 1"	74 x 68.8 x 2.3cm 00 x 00 x 0.9"
cm / 18.5"	52cm / 20.47"		16cm / 6.3"	25cm / 9.8"	35cm / 13.8"
5 tonnes 0.5 USton	70.4 tonnes 77.4 USton		8.3 tonnes 9.1 USton	21.5 tonnes 23.7 USton	44 tonnes 48.5 USton
AR / 116psi	8BAR / 116psi		12BAR / 174psi	12BAR / 174psi	12BAR / 174psi
L / 00cuft	00L / 00cuft		52L / 00cuft	221L / 00cuft	611L / 00cuft
● - ●	● - ●		2x■ ● ●	2x■ ● ●	2x■ ● ●
Oo Oo	Oo Oo		Oo Oo	Oo Oo	Oo Oo
EN13731	EN13731		EN13731. Dimpled surface interlocks with other LTs One Bags & Resqtec cribbing	EN13731. Dimpled surface interlocks with other LTs One Bags & Resqtec cribbing	EN13731. Dimpled surface interlocks with other LTs One Bags & Resqtec cribbing
.resqtec.com	rescue.resqtec.com		rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum 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	SCORPE	S
SERIES MODEL VARIANT	NT 2 Hybrid	NT 4 Hybrid	NT 8 Hybrid	Air S 1.3T	A
CODE NUMBER VARIANT	-	-	-	-	
ORIGIN					
COST inc tax / VAT	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	1.3
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	60.9 x 60.9 x 2.5cm 24 x 24 x 1"	60.9 x 60.9 x 2.5cm 24 x 24 x 1"	00 x 00 x 00cm 00 x 00 x 00"	15 x 15 x 2.2cm 5.9 x 5.9 x 0.86"	20 x 7.8 x
INFLATED HEIGHT	00cm / 00"	00cm / 00"	00cm / 00"	9cm / 3.5"	11.
Max LIFT CAPACITY @min ht @max height	6.2 -26 tonnes /USton 6.8 -28.6 USton	9.5 - 70 tonnes 10.4 - 77 USton	14 - 156 tonnes 15.4 - 172 USton	1.3 tonnes 1.4 USton	4 4
MAX WORKBURSTPRESSURE	12BAR / 174psi	12BAR / 174psi	00BAR / 00psi	10BAR / 145psi	10B
AIR VOLUME	00L / 00cuft	00L / 00cuft	00L / 00cuft	5.4L / 0.2cuft	9L
STACK/CONNECT HI-VIZ	3x■ ● ●	3x■ ● ●	3x■ ● ●	2x■ - ●	2
MATERIAL REINFORCEMENT	Aramid & Rubber 3D Aramid fibres	Aramid & Rubber 3D Aramid fibres	Aramid & Rubber 3D Aramid fibres	SBR 3D Fibres	3D
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com	scorpe.net	sc

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COMPANY	SCORPE	SCORPE	SCORPE	SCORPE	S
SERIES MODEL VARIANT	Air S 38T	Air S 54T	Air S 65T	Air S 81T	Ai
CODE NUMBER VARIANT	-	-	-	-	
ORIGIN					
COST inc tax / VAT	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	11k
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	62 x 62 x 2.2cm 24.4 x 24.4 x 0.86"	75 x 75 x 2.2cm 29.5 x 29.5 x 0.86"	84 x 84 x 2.2cm 33 x 33 x 0.86"	92 x 92 x 2.2cm 36.2 x 36.2 x 0.86"	56 x 22
INFLATED HEIGHT	34.5cm / 13.5"	41cm / 16"	46.5cm / 18.31"	51.5cm / 20.28"	17
Max LIFT CAPACITY @min ht @max height	38 tonnes 41.9 USton	54 tonnes 59.5 USton	65 tonnes 71.6 USton	81 tonnes 69.3 USton	3 36
MAX WORKBURSTPRESSURE	10BAR / 145psi	10BAR / 145psi	10BAR / 145psi	10BAR / 145psi	10B
AIR VOLUME	414L / 14.6cuft	720L / 25.4cuft	1044L / 36.8cuft	1449L / 51.1cuft	320
STACK/CONNECT HI-VIZ	2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●	3
MATERIAL REINFORCEMENT	SBR 3D Fibres	SBR 3D Fibres	SBR 3D Fibres	SBR 3D Fibres	3D
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	scorpe.net	scorpe.net	scorpe.net	scorpe.net	sc

CORPE	SCORPE	SCORPE	SCORPE	SCORPE	SCORPE
ir S 4T	Air S 8T	Air S 13T	Air S 18T	Air S 24T	Air S 30T L
-	-	-	-	-	-
N/A	N/A	N/A	N/A	N/A	N/A
kg / 2.8lb	2.2kg / 4.85lb	3.4kg / 7.5lb	4.1kg / 9lb	6kg / 13.2lb	7.5kg / 16.5lb
20 x 2.2cm 7.8 x 0.86"	30 x 30 x 2.2cm 11.8 x 11.8 x 0.86"	38 x 38 x 2.2cm 15 x 15 x 0.86"	42 x 42 x 2.2cm 16.5 x 16.5 x 0.86"	51 x 51 x 2.2cm 2o x 20 x 0.86"	100 x 32 x 2.2cm 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 .4 USton	8 tonnes 8.8 USton	13 tonnes 14.3 USton	18 tonnes 19.8USton	24 tonnes 26.5 USton	30 tonnes 33 USton
AR / 145psi	10BAR / 145psi	10BAR / 145psi	10BAR / 145psi	10BAR / 145psi	10BAR / 145psi
/ 0.3cuft	54L / 1.9cuft	99L / 3.5cuft	117L / 4.1cuft	225L / 7.9cuft	324L / 11.4cuft
2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●
SBR D Fibres	SBR 3D Fibres	SBR 3D Fibres	SBR 3D Fibres	SBR 3D Fibres	SBR 3D Fibres
EN13731	EN13731	EN13731	EN13731	EN13731	EN13731
orpe.net	scorpe.net	scorpe.net	scorpe.net	scorpe.net	scorpe.net
CORPE	SCORPE	SCORPE	SCORPE	SCORPE	
r 2S 33T	Air 2S 40T	Air 2S 60T	Air 2S 75T	Air 2S 90T	
-	-	-	-	-	
N/A	N/A	N/A	N/A	N/A	
g / 24.2lb	12kg / 26.4lb	18kg / 39.6lb	22kg / 48.5lb	26kg / 57.3lb	
56 x 2.5cm x 22 x 1"	62 x 62 x 2.5cm 24.4 x 24.4x 1"	75 x 75 x 2.5cm 29.5 x 29.5 x 1"	84 x 84 x 2.5cm 33 x 33 x 1"	92 x 92 x 2.5cm 36.2 x 36.2 x 1"	
cm / 6.7"	17cm / 6.7"	17cm / 6.7"	17cm / 6.7"	17cm / 6.7"	
3 tonnes 6.4 USton	40 tonnes 44 USton	60 tonnes 66.1 USton	75 tonnes 82.6 USton	90 tonnes 99.2 USton	
AR / 145psi	10BAR / 145psi	10BAR / 145psi	10BAR / 145psi	10BAR / 145psi	
L /11.3cuft	420L / 14.8cuft	680L / 24cuft	900L /31.8cuft	1120L /39.5cuft	
3x■ - ●	3x■ - ●	3x■ - ●	3x■ - ●	3x■ - ●	
SBR D Fibres	SBR 3D Fibres	SBR 3D Fibres	SBR 3D Fibres	SBR 3D Fibres	SBR 3D Fibres
EN13731	EN13731	EN13731	EN13731	EN13731	
orpe.net	scorpe.net	scorpe.net	scorpe.net	scorpe.net	

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SBR= Styrene-Butadiene Rubber

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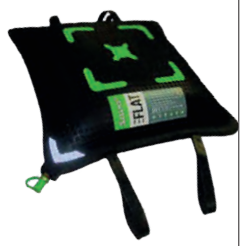

COMPANY	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRE
SERIES MODEL VARIANT	SAVA SLK 1	SAVA SLK 3	SAVA SLK 5	SAVA SLK 6	SAV
CODE NUMBER VARIANT	761.10.01	761.10.03	761.10.03	Discontinued	7
ORIGIN					
COST inc tax / VAT	N/A	N/A	N/A	N/A	
WEIGHT exc inflation eqpt	0.55kg / 1.2lb	1.25kg / 3lb	2kg / 4lb	2kg / 4lb	4k
DEFLATED DIMENSIONS (valve) Length (+Valve) x Width x Height/depth	15 x 15 x 2.2cm 6 x 6 x 0.8"	22.5x 22.5 x 2.2cm 9 x 9 x 0.8"	27 x 27 x 2.2cm 11 x 11 x 0.8"	30 x 30 x 2.5cm 12 x 12 x1"	38 x 15
INFLATED HEIGHT	8cm / 3.1"	13cm / 5.1"	15cm / 6"	16cm / 6.3"	21
Max LIFT CAPACITY @min ht @max height	1.1 tonnes 1.2 USton	2.7 tonnes 3 USton	5.1 tonnes 5.6 USton	5.5 tonnes 6.1 USton	10 11
MAX WORKBURSTPRESSURE	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BA
AIR VOLUME	5L / 0.2cuft	15L / 0.5cuft	22.5L / 0.8cuft	42L / 1.5cuft	76.5
STACK/CONNECT HI-VIZ	■ - ■	■ - ■	■ - ■	■ - ■	
MATERIAL REINFORCEMENT	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	R A
NOTES	EN13731	EN13731	EN13731	EN13731 DISCONTINUED	E
WEBSITE	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com	trell

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COMPANY	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRE
SERIES MODEL VARIANT	SAVA SLK 32	SAVA SLK 40	SAVA SLK 45	SAVA SLK 55	SAV
CODE NUMBER VARIANT	761.10.06	761.10.07	Discontinued	Discontinued	7
ORIGIN					
COST inc tax / VAT	N/A	N/A	N/A	N/A	
WEIGHT exc inflation eqpt	14kg / 31lb	15kg / 33lb	14kg / 31lb	18kg / 40lb	22.
DEFLATED DIMENSIONS (valve) Length (+Valve) x Width x Height/depth	65.8 x 65.8 x 2.5cm 26 x 26 x1"	70.8 x 70.8 x 2.5cm 28 x 28 x1"	78 x 78 x 2.5cm 31 x 31 x1"	87 x 87 x 2.5cm 34 x 34 x1"	90.8 x 36
INFLATED HEIGHT	38cm / 15"	40.5cm / 16"	42cm / 16.5"	47cm / 18.5"	52
Max LIFT CAPACITY @min ht @max height	32.6 tonnes 36 USton	40.7 tonnes 45 USton	44.6 tonnes 49.1 USton	55 tonnes 60.5 USton	68 75
MAX WORKBURSTPRESSURE	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BA
AIR VOLUME	450L / 15.9cuft	558L / 19.7cuft	921L / 32.5cuft	1305L / 46.1cuft	1206
STACK/CONNECT HI-VIZ	■ - ■	■ - ■	■ - ■	■ - ■	
MATERIAL REINFORCEMENT	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	R A
NOTES	EN13731	EN13731	EN13731 DISCONTINUED	EN13731 DISCONTINUED	E
WEBSITE	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com	trell

LLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG
A SLK 10	SAVA SLK 14	SAVA SLK 20	SAVA SLK 21	SAVA SLK 25	SAVA SLK 30
61.10.04	Discontinued	761.10.05	Discontinued	Discontinued	Discontinued
N/A	N/A	N/A	N/A	N/A	N/A
g / 8.8lb	5kg / 11lb	7kg / 15lb	7kg / 15lb	9kg / 20lb	11kg / 24lb
38 x 2.5cm x 15 x1"	45 x 45 x 2.5cm 18 x 18 x1"	50.8 x 50.8 x 2.5cm 20 x 20 x1"	55 x 55 x 2.5cm 22 x 22 x1"	61 x 61 x 2.5cm 24 x 24 x1"	69 x 69 x 2.5cm 27 x 27 x1"
cm / 8.3"	25cm / 9.8"	30cm / 11.8"	30cm / 11.8"	34cm / 13.4"	38cm / 15"
0.2 tonne .2 USton	13.5 tonnes 14.9 USton	20.4 tonnes 22.4 USton	21.1 tonnes 23.2 USton	25.2 tonnes 27.7 USton	33 tonnes 36.3 USton
R / 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 Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid
N13731	EN13731 DISCONTINUED	EN13731	EN13731 DISCONTINUED	EN13731 DISCONTINUED	EN13731 DISCONTINUED
eborg.com	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com

LLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG
A SLK 67	SAVA SLK 70	VEGA 2	VEGA 5	VEGA 10	VEGA 17
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 x 36 x1"	94.5 x 94.5 x 2.5cm 37 x 37 x1"	15 x 15 x 2.2cm 6 x 6 x 0.8"	23.5 x 23.5 x 2.2cm 9.2 x 9.2 x 0.8"	32 x 32 x 2.5cm 12.6 x 12.6 x 1"	40 x 40 x 2.5cm 15.7 x 15.7 x 1"
2cm / 20"	52cm / 20.5"	8cm / 3.1"	13cm / 5.1"	17cm / 6.9"	22cm /8.5"
.3 tonnes .3 USton	70.4 tonnes 77.4 USton	1.4 tonnes 1.5 USton	4.9 tonnes 5.4 USton	9.8 tonnes 10.8 USton	16.7 tonnes 18.4 USton
R / 116psi	8BAR / 116psi	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi
5L / 42.6cuft	1505L / 53.2cuft	4.5L / 0.16cuft	22.4L / 0.79cuft	63.4L / 2.24cuft	131.7L / 4.65cuft
-	-	-	-	-	-
Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid
N13731	EN13731 DISCONTINUED	EN13731	EN13731	EN13731	EN13731
eborg.com	trelleborg.com	ooo.com	trelleborg.com	trelleborg.com	trelleborg.com

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SBR= Styrene-Butadiene Rubber

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COMPANY	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRE
SERIES MODEL VARIANT	VEGA 25	VEGA 33	VEGA 41	VEGA 50	V
CODE NUMBER VARIANT	608051	608052	608053	608054	
ORIGIN					
COST inc tax / VAT	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	15.5
DEFLATED DIMENSIONS (valve) Length (+Valve) x Width x Height/depth	48 x 48 x 2.5cm 18.9 x 18.9 x 1"	55 x 55 x 2.5cm 22 x 22 x 1"	61 x 61 x 2.5cm 24 x 24 x 1"	67 x 67 x 2.5cm 26.4 x 26.4 x 1"	76 x 30 x
INFLATED HEIGHT	26cm / 10.4"	30cm /11.9"	34cm / 13.2"	37cm / 14.4"	41c
Max LIFT CAPACITY @min ht @max height	25.1 tonnes 27.6 UStons	33.2 tonnes 36.5 UStons	41.2 tonnes 45.3 UStons	50.2 tonnes 55.2 UStons	65 71
MAX WORKBURSTPRESSURE	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi	12BA
AIR VOLUME	236L / 8.33cuft	365L / 12.89cuft	681L / 24.05cuft	897L / 31.68cuft	1010
STACK/CONNECT HI-VIZ	■ - ■	■ - ■	■ - ■	■ - ■	
MATERIAL REINFORCEMENT	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	R A
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com	trell

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COMPANY	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRE
SERIES MODEL VARIANT	NOVA 21	NOVA 31	NOVA 41	NOVA 51	N
CODE NUMBER VARIANT	608064	608065	608066	608067	
ORIGIN					
COST inc tax / VAT	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	11.2
DEFLATED DIMENSIONS (valve) Length (+Valve) x Width x Height/depth	40 x 40 x 2.2cm 15.7 x 15.7 x 0.87"	48 x 48 x 2.2cm 18.9 x 18.9 x 0.87"	55 x 55 x 2.2cm 22 x 22 x 0.87"	61 x 61 x 2.2cm 24 x 24 x 0.87"	67 x 26.4 x
INFLATED HEIGHT	22cm / 8.5"	26cm / 10.4"	30cm / 11.9"	34cm / 13.2"	37c
Max LIFT CAPACITY @min ht @max height	20.5 tonnes 22.6 UStons	31.2 tonnes 34.3 UStons	41.3 tonnes 45.4 UStons	51.4 tonnes 56.5UStons	63 69
MAX WORKBURSTPRESSURE	15BAR / 218psi	15BAR / 218psi	15BAR / 218psi	15BAR / 218psi	15BA
AIR VOLUME	152L / 5.37cuft	273.4L / 9.66cuft	422L / 14.9cuft	585L / 20.66cuft	786L
STACK/CONNECT HI-VIZ	● - ■	● - ■	● - ■	● - ■	
MATERIAL REINFORCEMENT	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	R A
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com	trell

LLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG
EGA 65	VEGA 80	VEGA 100	NOVA 2	NOVA 6	NOVA 13
608055	608056	608057	608061	608062	608063
N/A	N/A	N/A	N/A	N/A	N/A
kg / 34.2lb	19kg / 41.9lb	23.3kg / 51.4lb	0.5kg / 1.2lb	1.2kg / 3lb	2.5kg / 5.5lb
76 x 2.7cm x 30 x 1.1"	84 x 84 x 2.7cm 33 x 33 x 1.1"	93 x 93 x 2.7cm 36.5 x 36.5 x 1.1"	15 x 15 x 2.2cm 6 x 6 x 0.9"	23.5 x 23.5 x 2.2cm 9.2 x 9.2 x 0.87"	32 x 32 x 2.2cm 12.6 x 12.6 x 0.87"
cm / 16.3"	46cm / 17.9"	51cm / 20.1"	8cm / 3"	13cm / 4.9"	17cm / 6.9"
.2 tonnes .7 USton	80.2 tonnes 88.2 USton	100.2 tonnes 110.2 USton	1.7 tonnes 1.9 USton	6.2 tonnes 6.8 USton	12.3 tonnes 13.5 USton
AR / 174psi	12BAR / 174psi	12BAR / 174psi	15BAR / 218psi	15BAR / 218psi	15BAR / 218psi
L / 35.67cuft	1381L / 48.77cuft	1895L / 66.92cuft	5.2L / 0.18cuft	25.8L / 0.91cuft	73.2L / 2.59cuft
-	-	-	-	-	-
Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid
EN13731	EN13731	EN13731	EN13731	EN13731	EN13731
eborg.com	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com

LLEBORG	TRELLEBORG	TRELLEBORG
OVA 63	NOVA 81	NOVA 100
608068	608069	608070
N/A	N/A	N/A
kg / 24.7lb	15.5kg / 34.2lb	19kg / 41.9lb
67 x 2.2cm 26.4 x 0.87"	76 x 76 x 2.7cm 30 x 30 x 1.1"	84 x 84 x 2.7cm 33 x 33 x 1.1"
cm / 14.4"	41cm / 16.3"	46cm / 17.9"
.2 tonnes .5 USton	81.5 tonnes 89.7 USton	100.3 tonnes 110.3 USton
AR / 218psi	15BAR / 218psi	15BAR / 218psi
/ 27.76cuft	1167L / 41.21cuft	1595L / 56.33cuft
-	-	-
Rubber Aramid	Rubber Aramid	Rubber Aramid
EN13731	EN13731	EN13731
eborg.com	trelleborg.com	trelleborg.com

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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) Length (+Valve) x Width x Height/depth	14 x 13 x 2.5cm 5.5 x 5.1 x 0.98"	25.5 x 20 x 2.5cm 10 x 7.9 x 0.98"	28 x 28 x 2.5cm 10 x 7.9 x 0.98"	29.5 x 29.5 x 2.5cm 11.6 x 11.6 x 0.98"	37 x 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 @max height	1 tonne 1.1 UStON	3.26 tonne 3.6 UStON	5.6 tonnes 6.2UStON	6.3 tonnes 7 UStON	9. 10
MAX WORKBURSTPRESSURE	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 CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcan CR
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum 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) Length (+Valve) x Width x Height/depth	69 x 65 x 2.5cm 00 x 00 x 0.98"	115 x 43 x 2.5cm 00 x 00 x 0.98"	61 x 61 x 2.5cm 24 x 24 x 0.98"	67 x 67 x 2.5cm 26.6 x 26.6 x 0.98"	78 x 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 @max height	31.3 tonnes 34.6 UStON	35.8 tonnes 39.5 UStON	40.3 tonnes 44.5 UStON	50.07 tonnes 55.2 UStON	59 65
MAX WORKBURSTPRESSURE	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 CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcan CR
NOTES	EN13731 V33 DISCONTINUED	EN13731	EN13731	EN13731	E
WEBSITE	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter

VETTER	VETTER	VETTER	VETTER	VETTER	VETTER
ec12 V10	S.Tec12 V12	S.Tec12 V18	S.Tec12 V20	S.Tec12 V24	S.Tec12 V24L
14002200	1314002400	1314002500	1314011800	1314002600	1314002700
€846	€868	N/A	€1115	N/A	N/A
8kg / 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 15 x 0.98"	52 x 35 x 2.5cm 20 x 13 x 0.98"	52 x 47 x 2.5cm 20 x 19 x 0.98"	58 x 48 x 2.5cm 23 x 19 x 0.98"	62 x 52 x 2.5cm 24 x 20 x 0.98"	00 x 00 x 2.5cm 12.2 x 40.2 x 0.98"
cm / 14.6"	31cm / 12.2"	27cm / 10.6"	28cm / 11"	30.6cm / 12"	20.9cm / 7.1"
.6 tonnes 0.6 UStons	10.8 tonnes 13.1 UStons	17.7 tonnes 19.5UStons	19.4 tonnes 21.4UStons	24 tonnes 26.5 UStons	24 kN 26.5UStons
AR/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
-	-	-	-	-	-
nized Rubber R/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid
EN13731	EN13731	EN13731	EN13731	EN13731	EN13731 V26 DISCONTINUED
r-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com

VETTER	VETTER	VETTER	VETTER	VETTER	VETTER
ec12 V59	S.Tec12 V83	S.Tec12 V102	C.Tec12 VCB N30	C.Tec12 VCB N 75	C.Tec12 VCB172
16001100	1316001200	1316001300	1316004600	1316004700	1316003900
€2981	€3892	€4534	N/A	N/A	N/A
8kg / 30.6lb	19kg / 42.1lb	23.1kg / 50.9lb	12kg / 26.4lb	22.4kg / 49.4lb	58kg / 127.9lb
78 x 2.5cm 27.2 x 0.98"	86 x 86 x 2.5cm 33.9 x 33.9 x 0.98"	95 x 95 x 2.5cm 37.4 x 37.4 x 0.98"	56.5 x 56.5 x 7cm 22.2 x 22.2 x 2.8"	89 x 89 x 7cm 35 x 35 x 2.8"	135 x 135 x 7cm 53.2 x 53.2 x 2.8"
cm / 15.5"	46.5cm / 18.3"	51.5cm / 20.3"	27.5cm / 10.8"	43.5cm / 17.1"	69cm / 27.2"
.4 tonnes 5.5 UStons	82.6 tonnes 91.1 UStons	101.6 tonnes 112 UStons	7 - 30.1 tonnes 7.7-33.2 UStons	12 - 74.6 tonnes 13.2 - 82.3UStons	15 - 171.7 tonnes 16.5 - 189.3UStons
AR/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
-	-	-	3x	3x	3x
nized Rubber R/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid
EN13731	EN13731 DISCONTINUED	EN13731 DISCONTINUED	EN13731	Image shows 3 bags connected. EN13731	EN13731
r-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum 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	
CODE NUMBER VARIANT	8123357	8123373	8123390	8123403	
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) Length (+Valve) x Width x Height/depth	23 x 23 x 2.5cm 9 x 9 x 1"	38 x 38 x 2.5cm 15 x 15 x 1"	55 x 55 x 2.5cm 21.65 x 21.65 x 1"	61 x 61 x 2.5cm 24 x 24 x 1"	7 3
INFLATED HEIGHT	130cm / 51.2"	210cm / 82.68"	300cm / 118"	340cm / 133"	
Max LIFT CAPACITY @min ht @max height	2.7 tonnes 3 USton	10.1 tonnes 11.1 USton	21.1 kg 23.2 USton	25.2 tonnes 27.8 USton	
MAX WORKBURSTPRESSURE	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 Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	
NOTES	EN13731	EN13731	EN13731	EN13731	
WEBSITE	Weber-rescue.com	Weber-rescue.com	Weber-rescue.com	Weber-rescue.com	We

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum 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 VARIANT	1104649	1102509	1102510	1102511	
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) Length (+Valve) x Width x Height/depth	48 x 48 x 2.5cm 21 x 21 x 1"	55 x 55 x 2.5cm 21 x 21 x 1"	61 x 61 x 2.5cm 24 x 24 x 1"	78 x 78 x 2.5cm 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 @max height	21.1 tonnes 23.2 USton	21.1 tonnes 23.2 USton	25.2 tonnes 27.8 USton	44.6 tonnes 49.1 USton	
MAX WORKBURSTPRESSURE	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 Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	
NOTES	EN13731 Stack up to 3 high	EN13731 Stack up to 3 high	EN13731 Stack up to 3 high	EN13731 Stack up to 3 high	S
WEBSITE	Weber-rescue.com	Weber-rescue.com	Weber-rescue.com	Weber-rescue.com	We

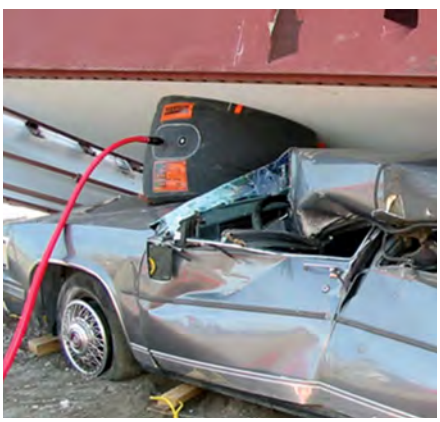
EBER RESCUE	WEBER RESCUE	WEBER RESCUE
8-BAR W41	8-BAR W52	8-BAR W66
8123438	8123446	8123454
N/A	N/A	N/A
14kg / 30.9lb	18kg / 39.7lb	22.5kg / 49.6lb
8 x 78 x 2.5cm 0.7 x 30.7 x 1"	87 x 87 x 2.5cm 34.25 x 34.25 x 1"	95 x 95 x 2.5cm 37.4 x 37.4 x 1"
420cm / 165"	470cm / 185"	520cm / 204"
44.6 tonnes 49.1 USton	55 tonnes 60.6 USton	70.4 tonnes 77.6 USton
8BAR / 116psi	8BAR / 116psi	8BAR / 116psi
921L / 32.5cuft	1305L / 46cuft	1505L / 53.1cuft
2x■ - ●	2x■ - ●	2x■ - ●
Rubber Aramid	Rubber Aramid	Rubber Aramid
EN13731	EN13731	EN13731
eber-rescue.com	Weber-rescue.com	Weber-rescue.com

EBER RESCUE	OO	OO
AR W-F 50/17	OO	OO
1102512	00	00
N/A	N/A	N/A
20.6kg / 45.4lb	00kg / 00lb	00kg / 00lb
2 x 92 x 2.5cm 36 x 36 x 1"	00 x 00 x 00cm 00 x 00 x 00"	00 x 00 x 00cm 00 x 00 x 00"
170cm / 66.9"	00cm / 00"	00cm / 00"
64 tonnes 70.5 USton	00 tonnes 00 USton	00 tonnes 00 USton
8BAR / 116psi	00BAR / 00psi	00BAR / 00psi
310L / 28.6cuft	00L / 00cuft	00L / 00cuft
2x■ - ●	■■■	■■■
Rubber Aramid	O O	O O
EN13731 tack up to 3 high	EN13731	EN13731
eber-rescue.com	OO.com	OO.com

'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. Lowand 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 alwayssimly temed 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 leviathon-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.

ABOVE: NOTE that there are some bags here that are not designed to LIFT, they are designed to CATCH. Just like a 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 infltaed 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 **TECHNICALRESCUE** 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 magnenta because it is important to know the insertion height - ie. the gap into which you can get your bag before beginning the lift.

I**NFLATED HEIGHT**: The all important- lft height that your bag can achieve.

MAX AIR VOLUME: This is not as straight-frward 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 max imum 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 aorund 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 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 Cushio
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 Length x Width x Height/depth	61 x 61 x 2.5-7.6cm 24 x 24 x 1-3"	76 x 76 x 2.5-7.6cm 30 x 30 x 1-3"	91.4 x 91.4 x 2.5-7.6cm 36 x 36 x 1-3"	91.4 x 91.4 x 2.5-7.6cm 36 x 36 x 1-3"	122 x 122 x 2.5-7. 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 /8USto
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/Neopren
NOTES	L102G=Grip top surface	L103G=Grip top surface	L105G=Grip top surface	L107G=Grip top surface	L112G=Grip top surf
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 INTERNATIO
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 Length x Width x Height/depth	76 x 5cm 30 x 2"	91 x5cm 36 x 2"	122 x 10cm 48 x 4"	61 x 5cm 24 x 2"	76 x 5cm 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 /5125
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 Ny
NOTES	8 web eyes	8 web eyes	8 web eyes	Pressure Relief Valve	Pressure Relief Val
WEBSITE	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.c

LOW/MED PRESSURE AIRBAGS

	MATJACK	MATJACK	MATJACK	MATJACK	MATJACK	MFC INTERNATIONAL
	10t Cushion	8400 Med 1	13000 Med 2	18000 Med 3	33600 Med 4	AK- 1 Bar
	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
6cm	122 x 122 x 2.5-7.6cm 48 x 48 x 1-3"	61 x 2.5-7.6cm 24 x 1-3"	75 x 2.5-7.6cm 30 x 1-3"	91.4 x 2.5-7.6cm 36 x 1-3"	122 x 10cm 48 x 4"	61 x 5cm 24 x 2"
	212cm / 84"	43cm / 17"	61cm / 24"	61cm / 24"	93.5cm / 37"	43cm / 17"
on	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
ne	Hypalon/Neoprene	Aramid reinforced Neoprene	Aramid reinforced Neoprene	Aramid reinforced Neoprene	Aramid reinforced Neoprene	Neoprene-coated Kevlar
face	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

NAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL
	C- 0.5 Bar	D- 0.5 Bar	120- High Lift	210 - High Lift	2-Tier	3-Tier
	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 36 x 2"	122 x 10cm 48 x 4"	135 x 10cm 53 x 4"	145 x 10cm 57 x 4"	55 x 45 x 5cm 21.7 x 17.7 x 2"	55 x 45 x 5cm 21.7 x 17.7 x 2"
	61cm / 24"	100cm / 39"	120cm / 47"	210cm /83"	40cm / 15.7"	60cm /23.6"
lb	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	- - -	- - -	* *	* *
lon	Hypalon-coated Nylon	Hypalon-coated Nylon	Neoprene-coated Nylon	Neoprene-coated Nylon	Hypalon-coated Nylon	Hypalon-coated Nylon
ve	Pressure Relief Valve	Pressure Relief Valve	0.5 Bar Pressure Relief Valve	0.5 BarPressure Relief Valve	* * Pre-connected/stacked but individually inflated.	* * Pre-connected/stacked but individually inflated.
com	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 Length x Width x Height/depth	61 x 5cm 24 x 2"	76 x 5cm 30 x 2"	91 x 5cm 36 x 2"	122 x 10cm 48 x 4"	00 x00cm 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 /00USto
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 Aramid, Kevlar reinforced	Neoprene-coated Aramid, Kevlar reinforced	Neoprene-coated Aramid, Kevlar reinforced	Neoprene-coated Aramid, Kevlar reinforced	
NOTES	8x web eyes	8x web eyes	8x web eyes	8x web eyes	NB: SIT Ltd make ma bags for other compa rather than selling dire customers.
WEBSITE	**paratech.com**	**paratech.com**	**paratech.com**	**paratech.com**	**sitltd.com**

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 Length x Width x Height/depth	102 x 10cm 40 x 4"	135 x 10cm 53 x 4"	145 x 10cm 57 x 4"	140/100 x 10cm 55/39 x 4"	110/80 x 10cm 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 /00USto
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 electric/gas blower	Can be inflated with electric/gas blowe
WEBSITE	**trelleborg.com**	**trelleborg.com**	**trelleborg.com**	**trelleborg.com**	**trelleborg.com**

LOW/MED PRESSURE AIRBAGS

	SIT	SIT	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG
	OO	OO	Sava MA 3ton	Sava MB 4.7ton	Sava MC 6.7ton	Sava MD 12ton
	-	-	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 x00cm 0 x 00"	00 x00cm 0 x 00"	61 x 5cm 24 x 2"	76 x 5cm 30 x 2"	91 x 5cm 36 x 2"	122 x 8cm 48 x 3"
	00cm / 00"	00cm / 00"	43cm / 17"	59cm / 23"	61cm / 24"	100cm / 39"
on	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 ■ - ■	● ● -	● ● -	● ● -	● ● -
ny nies ct to	NB: SIT Ltd make many bags for other companies rather than selling direct to customers.	NB: SIT Ltd make many bags for other companies rather than selling direct to customers.	8x web eyes. 3/8" male valve	8x web eyes		
	sitltd.com	sitltd.com	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com

	VETTER	VETTER	VETTER	VETTER	WEBER RESCUE	WEBER RESCUE
CB2	1/6	1/9	1/13	1/23	W6 1-Bar	W13 1-Bar
	-	-	-	-	-	-
	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 x00cm 0 x 00"	00 x00cm 0 x 00"	00 x00cm 0 x 00"	00 x00cm 0 x 00"	61 x00cm 0 x 00"	91 x00cm 0 x 00"
	00cm / 00"	00cm / 00"	00cm / 00"	00cm / 00"	43cm / 00"	61cm / 00"
on	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 ■ ●
n an er						
	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	weber-rescue.com	weber-rescue.com

UPDATED Sep '25

HEAVY DUTY, USAR-CAPABLE LIFTING FRAMES

Our **ROPE EQUIPMENT BUYERSGUIDE** 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 a 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 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 and above right) . 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 is a combination of their Monopod and Bipods heads with an integral, rotating rigging plate for the main load lines, an integral pulley sheave and no less than 8 stainless steel shackles for tensioning, restraint or guy lines. Notice that two of the strut 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.

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

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.

and heavier and need to be trasnported 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 modesl in our **ROPE EQUIPMENT BUYERS GUIDE**.

FIXED HEAD TRIPODS

Rather than attaching a modular head some have the leags 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 foorptint 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 narow 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 anvchor points like this *Holmatro OmniShore* to smaller but no less strong (and heavy) feet around 4"/10cm square like this *Res-Q-Jack* model. Notwithstnading that some tripods may be be erected with all legs at differnt 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 caaboe of full load bearing for hauling and progress capture.

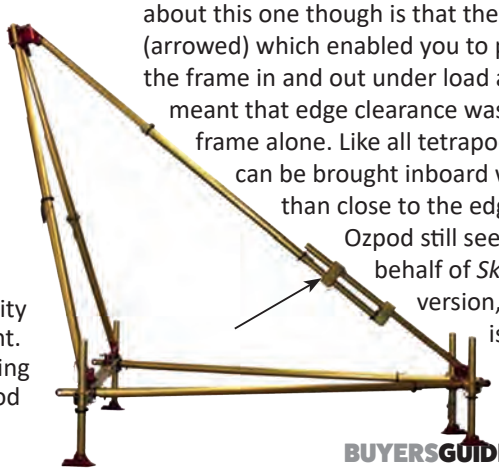
LAZY-LEG

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 Machinary 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.

TETRAHEDRAL FRAMES (TETRAPODS)

We're calling this a TETRAPOD. The iconic *Larkin Frame* above 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 (below)* 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



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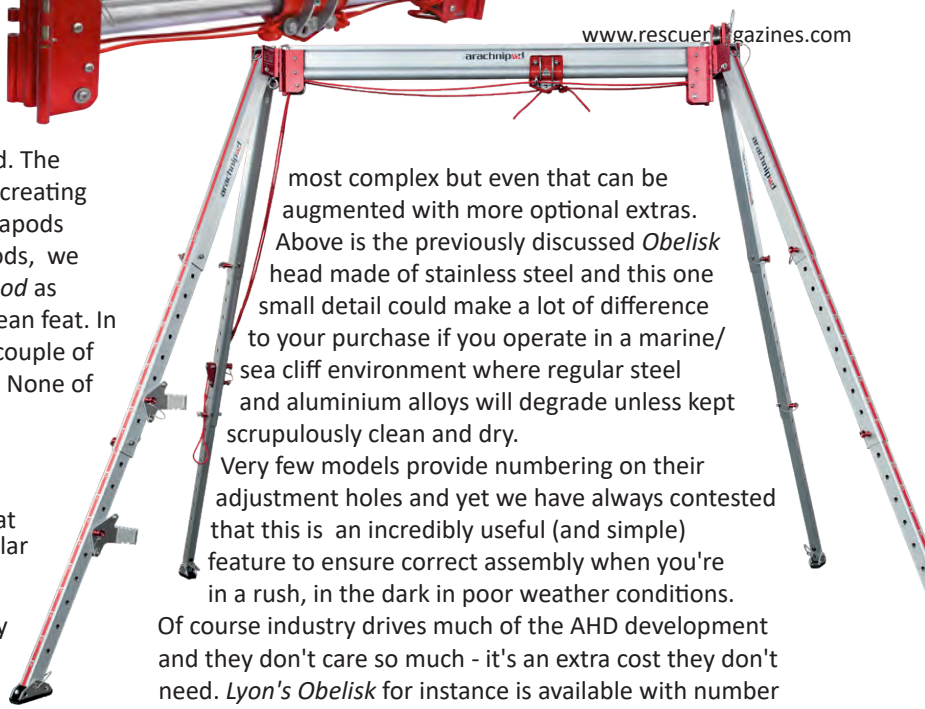
would be one of the edges of the pyramid. Like the *OzPod*, this is modular in that the legs or poles can be used to create a bespoke monopod and bipod. The components shackle together with the shackle then creating load bearing eyes at each corner. Multipods and tetrapods can take longer to set up than more basic tri/quadpods, we required a single rescue technician to set up the *Ozpod* as shown on the previous page 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 3-5minutes. None of these times include attaching stays/rigging.

BEAM GANTRIES

In the modern era it was *Ferno's Archnipod* (right)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 *Arachnipod* you can have a 2, 3 or 4 metre/13ft beam.



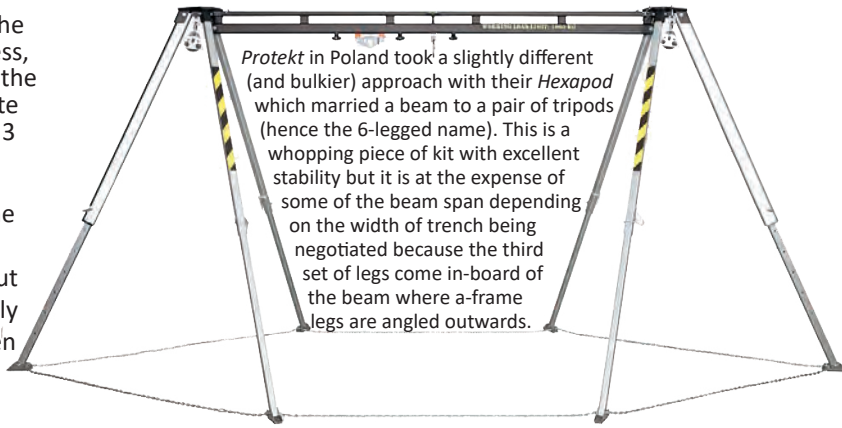
Then there's the *Obelisk* from *Lyon Eqpt* in the UK. They came up with a true cross between a quadpod and a manageable sized beam gantry with a very slick trolley system that's about as bombproof as they come. Their stainless steel beam is only 40cm/15" wide but can take one or two sliding eyes that 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 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.



Protekt in Poland took a slightly different (and bulkier) approach with their *Hexapod* which married a beam to a pair of tripods (hence the 6-legged name). This is a whopping piece of kit with excellent stability but it is at the expense of some of the beam span depending on the width of trench being negotiated because the third set of legs come in-board of the beam where a-frame legs are angled outwards.

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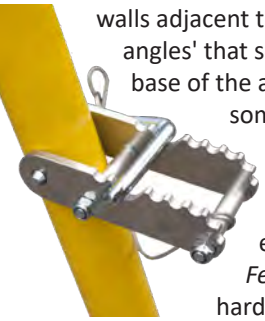
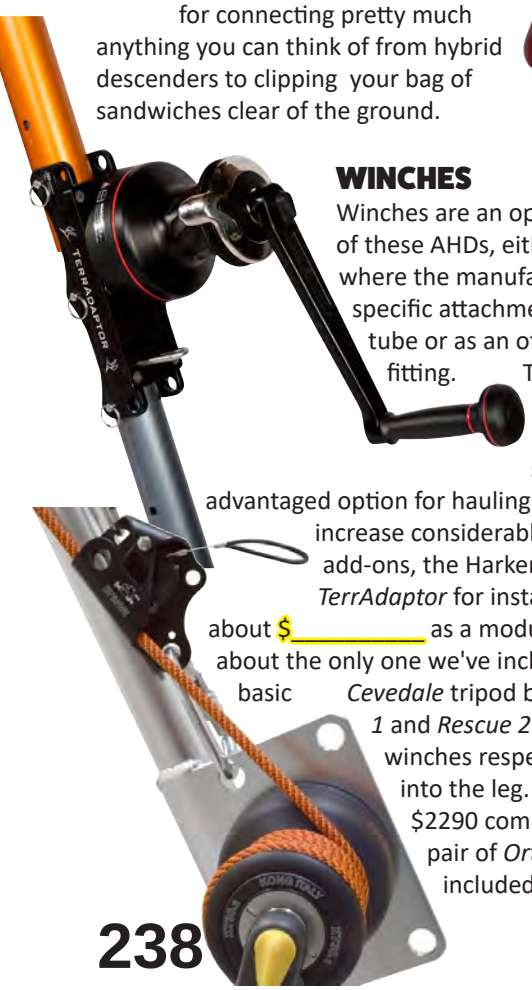
Talking of feet, two or three models have suction cup feet intended to used for tank and silo entry but only where you have a relatively clean, non-rusty surface. On site industrial rescue teams may opt for these as their dedicated feet but broad-spectrum teams would be better suited to a modular foot. Nevertheless, in the right situations these suction cup feet are excellent providing the best traction you will get on a 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 Aracnipod TEMS, the best selling (3m) of their 3 most expensive versions**.** Prices are **a**pproximate, 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 heigh 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 heigh of AHD is decreased. NOT

HEAVY DUTY LIFTING FRAMES

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 eye s 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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UPDATED Sep '25

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 Advantage** APOD-STD APOD-ADV	**Arachnipod TEMS 2m 3/4m** APOD-TEMS APOD-TEMS3/APOD-TEMS4	**Omnishore** 1x M10 1xP60 2xP60
	ORIGIN			
	COST Base model inc Tax/VAT **Variant or Top model**	£3290 $3600 €3830 £3350 $3700 €3900	£10055 $12800 €11705* £11000 $13800 €12600	n/a
STRUCTURE	**TYPE of DEVICE**	■ ■ ■	■ ■ ■ ■ ■	■ ■ ■ ■
STRUCTURE	**MATERIALS HEAD** **LEGS**	Alu Alu	Alu Alu	Alu Alu
STRUCTURE	**TUBE PROFILE TELE-SECTIONS**	Rectangular 3	Rectangular 3	Round 2*
STRUCTURE	**MARKED INCREMENTS**	■ 20x 10cm/4"	■ 20x 10cm/4"	- *finite over 2.4m
STRUCTURE	**LAZY LEG WINCH ADAPTER**	■ □	■ □	■ -
SPECIFICATIONS	**WEIGHT (BASIC TRIPOD)**	27 26kg 70 72.2lb	>32kg >70lb	36.3-79.5 133.5 kg 80-175lb 293lb 11oz
SPECIFICATIONS	**PACK(S) DIMENSIONS**	■ 1 210cm 82.7"	■ 3 210-400cm 82.7- x 157.5"	□ 1-3
SPECIFICATIONS	**MIN WORKING HEIGHT**	170cm / 5ft 5"	170cm / 5ft 5"	*38-164-326cm / 1- 5-10ft 3-4-8"
SPECIFICATIONS	**MAX WORKING HEIGHT**	267cm / 8ft 9"	269cm / 8ft 10"	*56-267-523cm / 1-8-17ft 10-9-2"
SPECIFICATIONS	**MAX FOOTPRINT**	250cm / 8ft 3"	253-534*cm/ 11-17ft-5"	530cm / 17ft 0" (@60°)
HEAD	**MAXIMUM DEVICE LOAD**	220-400kg 484-880lb	175-400kg 385-880lb	2400kg 5291lb
HEAD	**TYPE OF HEAD MONO BIPOD**	Detachable □ ■	2x Detachable □ ■ + Beam*	Detachable ■ ■
HEAD	**MAIN LOAD EYES**	2 Ring Bolts	4 Ring Bolts + Sliding/locking Eye	7 Rig Plate Eyes
HEAD	**INTEGRATED PULLEY(S)**	1 (Dbl sheave- 1 wire, 1 rope)	2 (each=Dbl sheave- 1 wire, 1 rope)	1
HEAD	**LATERAL (GUY) EYES**	3 (on top of each leg)	3 or 4 (top of each leg)	8 (on tripod head)
HEAD	**LEG STEP LEG EYE**	□ □	□ □	- -
FEET	**HINGED BALL-JOINT DETACH**	■ - ■	■ - ■	■ ■ ■
FEET	**ANCHOR HOLES SPIKE GRIP**	■ ■ ■	■ ■ ■	■ - ■
FEET	**SIDE RESTRAINT ANCHOR EYES**	■ -	■ -	■ ■
FEET	**LEG RESTRAINTS LEGS LOCK**	Rope	Rope	Webbing with Ratchets
USES	**VERTICAL EDGE LUFFING**	■ ●	■ ●	■ ●
USES	**HOLE CONFINE SHORING**	■ ■	■ ■	■ ■ ■
	STANDARDS	EN795B, CEN/TS 16415/B	EN795B, CEN/TS 16415/A	Machinery Directive
	NOTES	Tripod can UPGRADE TO TEMS. Alpha-numeric increment labels. Option-Foot steps & anchor points for legs.	**2,3 or 4m Bridge options create the wider footprint. Option-Foot steps & anchor points for legs.	Tripod= Bipod + Monopod. * theoretical min height with smallest adj strut M10- *Max height using 2xP60 struts *Thread enables finite 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.

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WORK & RESCUE

Lyon Equipment Limited Tel: **+44 (0) 15396 24040** Email: **info@lyon.co.uk** Web: **www.lyon.co.uk**

NOTES: Images NOT to Scale
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TYPES OF DEVICE:
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■ TETRAPOD
■ INDEPENDANT STRUTS

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□□□□ =Available as an Option

		IRUDEK	JSP	KONG
	MODEL VARIANT	Trip4 10020960000.8	Confined Space Rescue Tripod FAR1003	Cevedale Rescue1 Rescue2 842020000KK 842010000KK 842000000KK
	ORIGIN			
	COST Base model inc Tax/VAT Variant or Top model	£860 $1085 €1003 - - -	£990 $1400 €1300 - - -	£1730 $2290 €1710 £8670 $9000 €7160
STRUCTURE	TYPE of DEVICE	■	■	■
STRUCTURE	MATERIALS HEAD LEGS	Cast Alu Alu	Cast Alu Alu	- Alu
STRUCTURE	TUBE PROFILE TELE-SECTIONS	Square 2	Rectangular 2	Round 2
STRUCTURE	MARKED INCREMENTS	- 8/9 x 12/10cm/5/4"	- 2x 50cm/20"	- 3 6
STRUCTURE	LAZY LEG WINCH ADAPTER	-□/■	- □	- □ ■
SPECIFICATIONS	WEIGHT (BASIC TRIPOD)	12.1 23.6kg 26.6 52lb	13kg 28lb 10oz	14 20-25kg 30 44-55lb 13oz
SPECIFICATIONS	PACK(S) DIMENSIONS	■ 1	□ 1	■ 1 130 x 45 x 30cm 51.2 x 17.7 x 11.8"
SPECIFICATIONS	MIN WORKING HEIGHT	115 222cm / 3 7ft 9 3"	115cm / 3ft 9"	160165cm / 5ft 3 5"
SPECIFICATIONS	MAX WORKING HEIGHT	215 314cm / 7 10ft 0 3"	215cm / 7ft 0"	254cm / 8ft 3"
SPECIFICATIONS	MAX FOOTPRINT	150 245cm / 4 8ft 11 0"	150cm / 4ft 11"	180cm / 0ft 0"
HEAD	MAXIMUM DEVICE LOAD	200/500kg 440lb	500kg 1100lb	1223kg 2697lb
HEAD	TYPE OF HEAD MONO BIPOD	Fixed - -	Fixed - -	Fixed - -
HEAD	MAIN LOAD EYES	2 Ring Bolts	2 Ring Bolts	3 Ring Bolts
HEAD	INTEGRATED PULLEY(S)	1 2	1	0 (2 detachable supplied)
HEAD	LATERAL (GUY) EYES	0	0	3 (on tripod head)
HEAD	LEG STEP LEG EYE	- -	- -	- -
FEET	HINGED BALL-JOINT DETACH	■ - -	■ - -	□ - □
FEET	ANCHOR HOLES SPIKE GRIP	■ - ■	- - -	□ - □
FEET	SIDE RESTRAINT ANCHOR EYES	■ -	■ -	■ □
FEET	LEG RESTRAINTS LEGS LOCK	Webbing ■	Webbing with cams	Wire cable or Rope
USES	VERTICAL EDGE LUFFING	● -	● -	● -
USES	HOLE CONFINE SHORING	■ ● -	■ - -	■ ● -
	STANDARDS	EN795B ATEX II 2G Ex h II c T6	EN795B,	EN 795/B EN 1496/B CEN/TS 16415/A
	NOTES	Trip4 has two winch mounts on legs may also be intermediate sizes ***Trip 2 & 3***		*Rescue versions Include 1 and/or 2 integrated rope winches. Kong also has a stand-alone monopods - *STELVIO and 4D.*
	WEBSITE	irudek.com	jspsafety.com	kong.it

HEAVY DUTY LIFTING FRAMES

KRATOS	KRATOS	LYON/SPELEAN	PARATECH
Tripod FA6000100 FA6000200	**Quadpod** FA6010400	**Larkin Frame** -	**Strut Tripod** -
£550 $750 €650 £650 $900 €750	£900 $1065 €985 - - -	£5820 $7300 €6790 - - -	*head-kit:£3400 $4300 €4100 *1x 55"strut £1334 $1700 €1600
Alu Alu	Alu Alu	Cast Alu Alu	Cast Alu Alu
Square 2	Square 2	Round 1	Round 1,2 or 3
- 6	- 6	Not applicable	-
- ☐	- ☐	- -	☐ -
14.3 22.35kg 31lb 8oz	15.6kg 34lb 6oz	40kg 88lb 3oz	28.6* + 5.8-16.2kg (for 19-55"strut) 63* + 12.7-35.7lb (for 19-55"strut)
■	■	■ 1 202 x 24 x 30cm 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 1100lb	500kg 1100lb	400kg 880lb	2358.7kg 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 -
■ -	■ -	■ ■	■ *
■ ● -	■ ● -	■ ■*-	■ ■ ■
N795:2012 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. *because it can be used as a half sized frame	*minimum practical height but could use a 6" strut and be a foot high! *Not designed to be used off-centre. *Kit contains head, 3xbases,chain & case
kratossafety.com	kratossafety.com	lyonequipment.com	paratech.com

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	MANUFACTURER	PROTEKT	PROTEKT	PROTEKT
	MODEL VARIANT	TM15 TM15-G AT017 AT017G	TM15 Mini AT017 MINI	TM16 Compact TM16000
	ORIGIN	■	■	■
	COST Base model inc Tax/VAT Variant or Top model	n/a £645 $820 €754	£700 $865 €792 - - -	£1545 $1960 €1805 - - -
STRUCTURE	TYPE of DEVICE	■	■	■
STRUCTURE	MATERIALS HEAD LEGS	Alu Alu	Alu Alu	Alu Alu
STRUCTURE	TUBE PROFILE TELE-SECTIONS	Round 2	Round 3	Round 2
	MARKED INCREMENTS	- 6x	- 10x	- 10x & 14x
SPECIFICATIONS	LAZY LEG WINCH ADAPTER	- □	- □	■ □
SPECIFICATIONS	WEIGHT (BASIC TRIPOD)	28.7kg 63lb	19kg 41lb 13oz	16.5kg 36.4lb
SPECIFICATIONS	PACK(S) DIMENSIONS	□ 1 226 x 33 x 29cm 89 x 13x 11.4"	□ 1 133 x 33 x 29cm 52.4 x 13 x 11.4"	□ 1 117 x 33 x 29cm
SPECIFICATIONS	MIN WORKING HEIGHT	197cm / 6ft 5"	111cm / 0ft 0"	106cm / 0ft 0"
SPECIFICATIONS	MAX WORKING HEIGHT	313cm / 10ft 3"	227cm / 0ft 0"	166cm / 0ft 0"
SPECIFICATIONS	MAX FOOTPRINT	174cm / 50ft 8"	109cm / 0ft 0""	284cm / 0ft 0"
HEAD	MAXIMUM DEVICE LOAD	1000kg 2200lb	1000kg 2200lb	500kg 1100lb
HEAD	TYPE OF HEAD MONO BIPOD	Fixed - -	Fixed - -	Fixed - -
HEAD	MAIN LOAD EYES	3	3 Plate Eyes	3 Plate Eyes
HEAD	INTEGRATED PULLEY(S)	3	3	3
HEAD	LATERAL/REAR (GUY) EYES	3*	3*	3*
HEAD	LEG STEP LEG EYE	□ □	□ □	□ □
FEET	HINGED BALL-JOINT DETACH	■ - -	■ - -	■ - ■
FEET	ANCHOR HOLES SPIKE GRIP	- ■ ■	- ■ ■	- - ■(suction cups)
FEET	SIDE RESTRAINT ANCHOR EYES	■ -	■	■
FEET	LEG RESTRAINTS LEGS LOCK	Chain -	- ■	Chain -
USES	VERTICAL EDGE LUFFING	● -	● -	■ -
USES	HOLE CONFINE SHORING	■ - -	■ ■ -	■ ■ -
	STANDARDS	EN795B, CEN/TS 16415/A	EN795B, CEN/TS 16415/A	EN795B, CEN/TS 16415/B
	NOTES	Comes with detachable footholds on legs. 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
	WEBSITE	protekt.pl	protekt.pl	protekt.pl

HEAVY DUTY LIFTING FRAMES

PROTEKT	PROTEKT	PROTEKT	
TM9-N TM9-N	**TM14ZSE TM14/TM7** AT016	**TM12- Hexapod** TM12	
£455 $575 €528 - - -	£675/385 $860/490 €790/450 £1310 $1665 €1530	£820 $1040 €955 - - -	
Steel Alu	Steel Alu	Steel heads/Alu beam Alu	
Rectangular 2	Rectangular 2	Rectangular 2	
- 5x	- 7x	- 5x	
-	-	-	
15.45kg 52.3lb	65kg 143lb	86kg 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 1100lb	500kg 1100lb	1000kg 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, CEN/TS 16415/B&E, EN 1496B	CEN/TS 16415/B	
	ZSE is a modification of basic TM14 tripod. TM7 is the same but cannot be ZSE configured	Central beam=2.8m wide	
protekt.pl	protekt.pl	protekt.pl	

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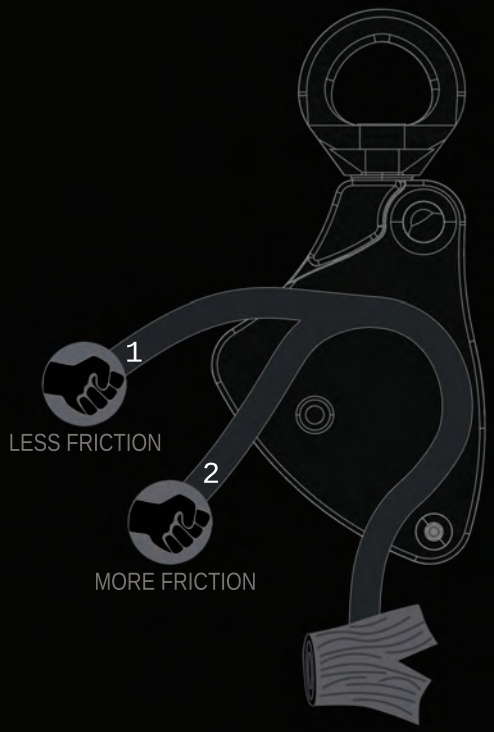
	MANUFACTURER	RES-Q-JACK	RES-Q-JACK	SAR PRODUCTS
	MODEL VARIANT	SteelX/RJ3 Tripod	Super X	Multipod QU005
	ORIGIN			
	COST Base model inc Tax/VAT Variant or Top model	£6300 $5279 €7558 - - -*	£1730 $2165 €2023 - - -	n/a* - - -
STRUCTURE	TYPE of DEVICE	■ ■ ■ ■	■	■ ■ ■
STRUCTURE	MATERIALS HEAD / LEGS	Alu / Alu	Stainless Steel / Alu	Stainless Steel / Alu
STRUCTURE	TUBE PROFILE TELE-SECTIONS	Round 2	Square 2	Square 2
	MARKED INCREMENTS	- 6x 14cm/5.5"	- 10x 10cm/4"	- 10x 10cm/4"
SPECIFICATIONS	LAZY LEG WINCH ADAPTER	■ -	- □	- □
SPECIFICATIONS	WEIGHT (BASIC TRIPOD)	33kg 72lb	13.2kg 29lb	17.5kg 38lb 8oz
SPECIFICATIONS	PACK(S) DIMENSIONS	□ 4-6	□ 1	■ 1 120 x 17cm 47 x 7" or □ 2 bags
SPECIFICATIONS	MIN WORKING HEIGHT	270cm / 9ft	150cm /5ft	150cm /5ft
SPECIFICATIONS	MAX WORKING HEIGHT	370cm / 12ft	200cm / 6ft 7"	200cm / 6ft 7"
SPECIFICATIONS	MAX FOOTPRINT	1.4-2.25m / 4ft 7"- 7ft 5"	125cm / 4ft 1"	125 x 175cm / 4ft-5ft 9"
HEAD	MAXIMUM DEVICE LOAD	272kg 600lb	300kg 660lb	300kg 660lb
HEAD	TYPE OF HEAD MONO BIPOD	Detachable □ ■	Fixed - -	Removable Beam - -
HEAD	MAIN LOAD EYES	1 machined eye + 3 hardware pins	1 Ring Bolt	2 Shackles + 2 moveable Ring Bolts
HEAD	INTEGRATED PULLEY(S)	Option for 4 pinned sheaves	0	0
HEAD	LATERAL (GUY) EYES	6 (+optional lash-points)	-	4
HEAD	LEG STEP LEG EYE	- □	- -	- -
FEET	HINGED BALL-JOINT DETACH	■ - ■	■ - -	■ - -
FEET	ANCHOR HOLES SPIKE GRIP	■ ■ ■	■ -	■ -
FEET	SIDE RESTRAINT ANCHOR EYES	■ ■	■ ■	■ ■
FEET	LEG RESTRAINTS LEGS LOCK	Webbing& Rope -	Webbing with cam -	Webbing with cam -
USES	VERTICAL EDGE LUFFING	■ ●	■ -	■ -
USES	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 exotica

Cut it & Run it

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.



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RCX POWER ASCENDER

RDD-KIT

MILAN 2.0 POWER

ultraBASKET STRETCHER SMALL

SKYLOTEC

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 that 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 unceremoniously shoved through 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 he 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 he 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

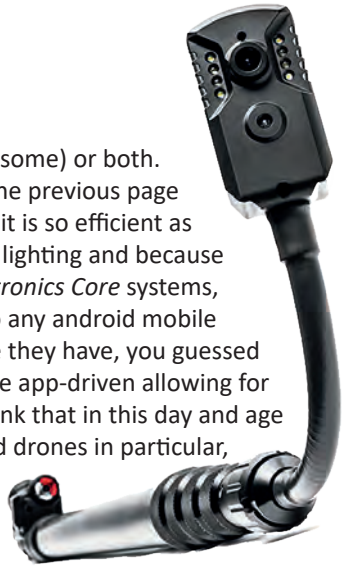
Yone Corporation's Pro Eye

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 its 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.

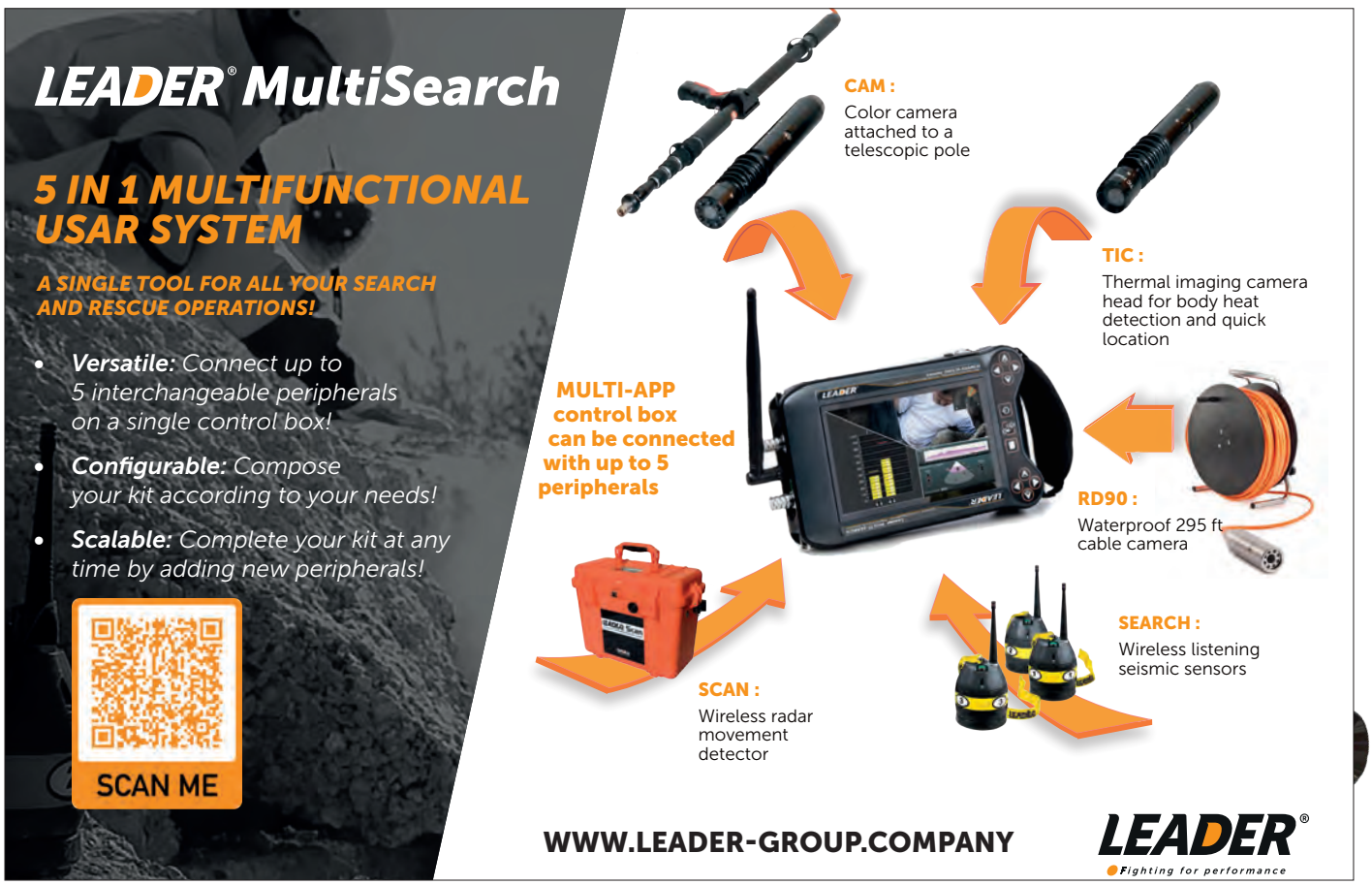
Many of the cameras have a two-way mic so that the operator can listen for, or communicate directly with the victim with the added huge advantage of full visual acuity of the victim and surroundings thanks to either on-board lighting or

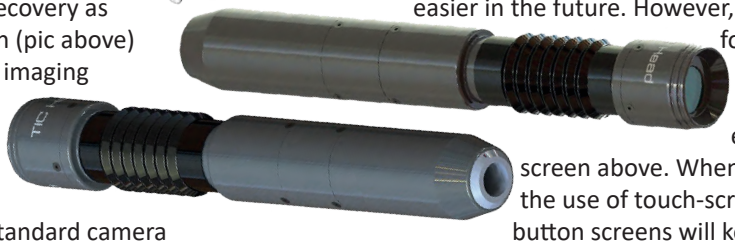


an infra-red camera (an option for some) or both. *FL360*'s 'probe' head pictured on the previous page deserves special mention because it is so efficient as a probe with all-around vision and lighting and because it has, along with the T*actical Electronics Core* systems, the ability to transmit wirelessly 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.

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 optics 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





up every grain of dust. This is where infra-red, 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.

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-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

WATER RESCUE OUT in LATE 2025 but visible now www.rescuemagazines.com

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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.

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- Detects ALL metals on land & underwater
- Audio and Visual output
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SAR-1

- "Snareless" design with VIBRATING handle
- Bright red LED display
- Specialized for low visibility environments
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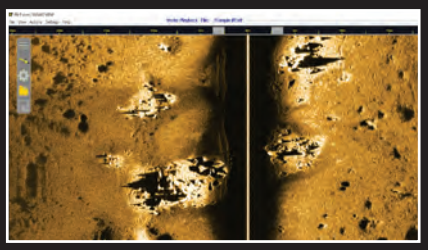
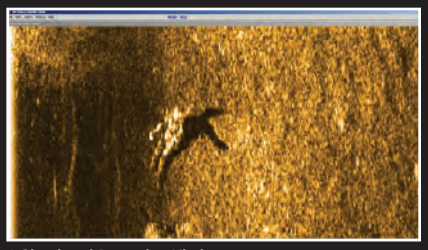
Side Scan Sonar





* 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

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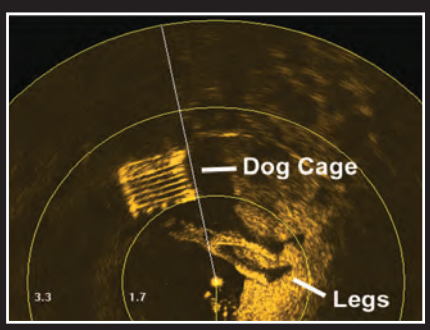
- Breaks down for easy transport (case included)
- Commercial construction
- Low cost and easy operation
- Complete turnkey system

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
- Easily transportable
- Commercial construction
- 1,000' depth capability



SCAN-650

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Red Box Snake Eye

UPDATING Q4 '25

Agility Corp First Look 360

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Leader Group LeaderCam

Scorpe Vibrascope

Savox SearchCam Recon III

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.

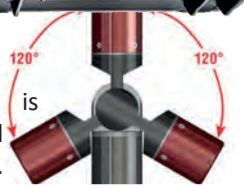
WEIGHT: There are 2 weights given, the first is the complete system including a case if that is how the system is sold. This is an important figure because it affects the overall shipping limits when moving equipment into a disaster zone. The second figure (in burnt orange) is the weight of the camera 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

Tactical Electronics Core



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 P*roEye 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.

ADJ RANGE (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.

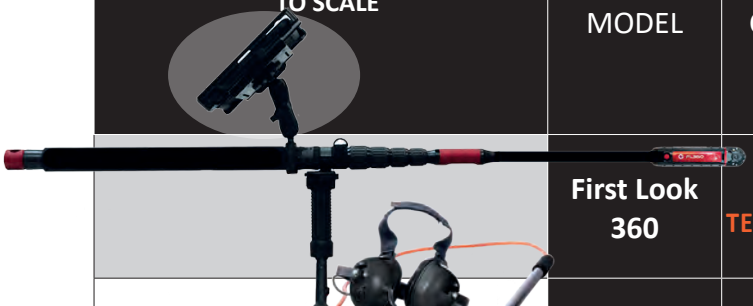
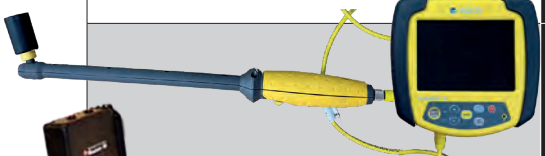
IN-USE COLUMNS

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 JWFishers* 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.

ProEye 751 SNR

JW Fishers VRM 2 Monitor

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/GPSIMAGE 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 – maybe a back pack or a fabric carry bag.

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

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

AMERA ameter	CAMERA RESOLUTION ADJ RANGE FIELD OF VIEW	LIGHTS	BATTERY DURATION RECHARGE	OPERATING 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	HeavyDuty CARRY CASE	NOTES	WWW.
.5mm 1.95"	1920 x 960 - 360°	6 x wide-angle LED	Li-Ion* 3-5 hrs 1.5 hrs	-10 to 60C 14 to140F	■	■	■	□#	68	3m 10ft	■	■	■ ■	■ ■	■	■	*WIll also operate using 4x CR123A cells # IR version/option in 2019	agilitycorp.com
7mm 1.85"	700 x 480 0-170° 260°	8 x LED	NiMH or 10x AA 2.3 hrs 3.3 hrs	-10 to 60C 14 to 140F	■	■	■	■ □	54	2m# 6.5ft	■		■ ■	■	□	■	* figures for Std kit. Option fpr Poles up to 5.66m/18.6' Batteries compatible with Leader Scan, Hasty & Search #RD90 version waterproof to 90m. now with GPS	leader-group.eu
27mm 5"	0.8 lux /480L NO 170°	2 x 1500 lumen LED	Marine, AC-mains or 12v DC	-25 to 60C -14 to 140F	□	■	■ □		-	150m# 500ft	■ ■ □	NO	■	■ ■		□	*For VRM-2 screen module. Camera can be linked to any suitable laptop/display. #300m/1000' housing available. *exc cable, add 9kg/20lb /150ft Wt includes integral case	jwfishers.com
14mm 4.5"	0.8 lux /480L NO 170°	2 x 1500 lumen LED	Marine, AC-mains or 12v DC	-25 to 60C -14 to 140F	□	■	■ □		-	150m 500ft	■ ■ □	NO	■	■ ■		□	*For VRM-2 screen module. Camera can be linked to any suitable laptop/display. #300m/1000' housing available. *exc cable, add 9kg/20lb /150ft *Wt includes integral case	jwfishers.com
0mm .375"	NO 50°	Halogen or 12 x LED option	Marine, AC-mains or 12v DC	-25 to 60C -14 to 140F	□	■	■ □		-	150m 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. *exc cable, add 4kg/9lb /150ft	jwfishers.com
3mm 0.9"	480 TVL 360° (manual) 120°	12 x LED	Li Ion 6-8 hrs 8 hrs	-10C to 50C 14 to 122 F		■	■		68	30m 100ft	■		■ ■	■ ■		■	*Poles an be 5m, 9m 13m or 17m/55ft long. Pole can be simultaeously fitted with rescue aids and body recovery hook (shown).	reachandrescue.com
0mm 1.2"	512 x 492 90° 46°	4 x LED 1 XeNon	6v NiMH 35mins x 2 (6hr option)	0 to 50C -32 to 122F		■		□	68	30m 100ft	■* ■*	NO	■*	■		■ ■	*Basic kit uses a lower res screen with no audio-visual record capability. * Up to 500m cable available + 1.2-7.8m Pole option	redboxaviation.com
7mm 1.85"	0-240°	16 x LED	Li Ion 2 hrs	-10 to 60C 14 to 140F		■			68		■					■		savox.com
7mm 1.85"	0-240°	16 x LED	Li Ion 2 hrs	-10 to 60C 14 to 140F		■	■		54	23m	■		■			■		savox.com
9mm	0.5 lux 0-360°	6 x LED	12v NiMH 4.5 Ah 4-5 hrs 4 hrs	-20 to 50C -4 to 122F	■	■	□ ■	□	66	60m				■ ■		■	Data for waterproof camera, more basic camera available.	scorpe.eu
5mm 2.56"	420 TVL 0-110° 90°	36 x LEDs	11.1v Li 7hrs 4.5 hrs	-10 to 55C 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 Basic System excluding accessories	WEIGHT PACKAGE TOTAL IN HAND	LENGTH MIN to MAX SUPPLIED CABLE	SCREEN RESOLUTION SIZE WEIGHT	CA Dia
	CORE POLE CAMERA	TACTICAL ELECTRONICS		$8623	1.56kg 3.4lb	0.6-3.2m 4-10ft (5.3m/17ft option)	1280x720 127mm / 5" 0.4kg / 0.85 lb	4 1
	WSC4926	UNIFIRE		$600	0.67kg 1.5lb	0.9m* 3ft	712 x 486 60mm / 2.36" 5oz	4 1
	Pro Eye 751 SNR	YONE CORPORA-TION		N/A	19kg 42lb 8.5kg 18.7lb	2.4m 7.8ft 10m* 33ft	795x595 142mm / 5.6"	3
	ProEye 951 S-IR	YONE CORPORATION		N/A	19kg 42lb	(20m65ft op-tion)	177mm / 7"	3 1
	ProEye 991 NH Nno-Cam	YONE CORPORATION		N/A	15kg/33lb 3.3kg/7.3lb			6 0

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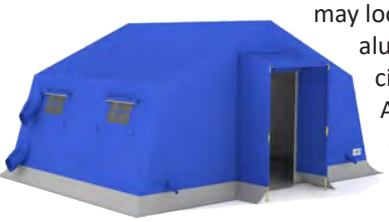
SEARCH CAMERAS

AMERA ameter	CAMERA RESOLUTION ADJ RANGE FIELD OF VIEW	LIGHTS	BATTERY DURATION RECHARGE	OPERATING 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	HeavyDuty CARRY CASE	NOTES	WWW.
2mm 1.65"	1280x720 0-360° (manual) 70°	4 x LED	3xCR123 2.5hrs	-20 to 50C -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.	tacticalelectronics.com
1mm 1.61"	320 x 240 0-360° (manual) 45°	4 x LED	4 x AA 2hrs	-10 to 50C 14 to 122F									■			■	*Cable available in 3ft lengths up to 12ft	unifireusa.com
6mm 1.4"	811 x 507** 0-180° 231°	12 x LED	12v NiMH (Li-Ion option) 3-6hrs 5 hrs					■	67	50m	□		■	■ ■	■	■	DSX version without sonar. SNR=SONAR & Colour visual cameras 3, 5 & 6m pole options. **PAL version = 795 x 595 *4,20,30 & 50m cable options	yone-co.co.jp
2mm 1.25"	350TVL 0-180° 231°	12 x LED	12v NiMH 3hrs 3hrs		■	■	■	■ ■	67	50m	□*				■	■	Standard version with colour camera. Second camera interchangeable with IR/TiC *OPTION with 8gb or 4gb SD	yone-co.co.jp
.9mm 0.27"		4 x LED 8 Auxilliary	AA						67		■							yone-co.co.jp

EMERGENCY RESCUE SHELTERS

We 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 logisitics, 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 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

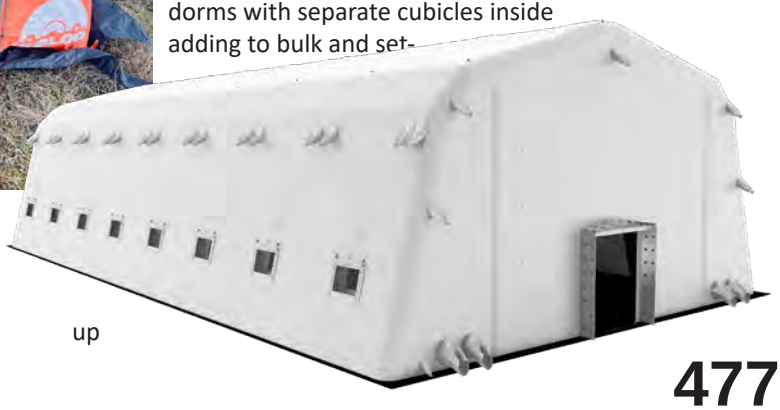
like a vehicle.

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 away 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 up



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-

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

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

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.

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NEW COMPILING Q4 '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 isonly 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 toERECT: Depending on the type of inflatable shelter the fastest time will be with a compressed air cylinder which is usualy 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 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.

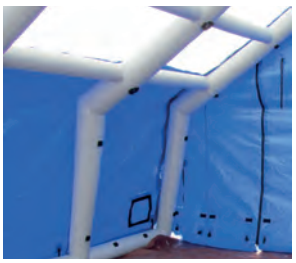
AREA: DETACHABLE **FIXED FLOOR** in Square Metres/feet and most refer to the entire footprint rather than just the internal space. **Internal areas are given in *italics*** and if there are two figures, the smaller area is internal. To convert external floor area to internal floor space in inflatable 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 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 mdical tents.
HVAC: Much larger ports to allow fans to push air into the shelter - either ambiant 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 of 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 transluscent/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

RIGLOO

PRE-HOSPITAL EMS

Fast Pack Sack

Scan me

Place over Patient P.O.P Technology

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

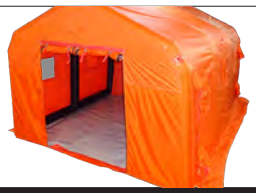
DESIGNED TO TREAT

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

www.rigloo-rs.com 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 *ITALICS* = internal floor space



COMPANY	AIRQUEE	AIRGQUEE	AIRQUEE	AI
MODEL VARIANT	Rapid Deployment	Emergency Response	Airtight Frame 1	Airti
PRODUCT CODE	AQ6268SP1	AQ5911	AQ5109	
ORIGIN				
CONSTRUCTION TIME-to-ERECT	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 FLOOR FIRE-RESISTANT WATERPROOF	?/? ?	?/? ?	?/? ?	
AIR VOLUME	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00
LENGTH DEPLOYED / PACKED	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 / PACKED	3.6 0.6m /11.8 00'	5.05 00m /16.6 00'	4.75 0.9 m /15.4 00'	5.6 0.
HEIGHT DEPLOYED / PACKED	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 0	0 0 0 0 0	0 0 0 0 0	0 0
TRANSLUSCENT OPAQUE ROOF PRV				
BRANDING HEATER LIGHTING PUMP				
OTHER COLOURS				
NOTES	240/110v powered blower required Inc 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 hose,peg
WEBSITE	airquee.com	airquee.com	airquee.com	air

IMAGES NOT TO SCALE
Construction
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
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AREA in *ITALICS* = internal floor space

COMPANY	AIRSHELTA	AIRSHELTA	AIRSHELTA	AI
MODEL VARIANT	Link Hub	Aireshelta 3.6	Aireshelta 6	Pac
PRODUCT CODE	00	00	00	
ORIGIN				
CONSTRUCTION TIME-to-ERECT	<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	3
MATERIALS - ROOF/ WALLS FLOOR FIRE-RESISTANT WATERPROOF	PU-coated nylon neoprene tubes	PU-coated nylon ?	PU-coated nylon ?	PU-c neop
AIR VOLUME	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00
LENGTH DEPLOYED / PACKED	6.4 00m / 21 00'	3.2 0.8m / 10.5 2.6'	00 00m / 00 00'	3.2 0.5
WIDTH DEPLOYED / PACKED	6.4 00m / 21 00'	3.6 0.8m / 11.8 2.6'	6.7 00m / 22 00'	3.2 0.5
HEIGHT DEPLOYED / PACKED	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- 0☐	0☐ 0- 0☐ 0- 0☐	0☐ 0- 0☐ 0- 0☐	0☐
TRANSLUSCENT OPAQUE ROOF PRV		-		
BRANDING HEATER LIGHTING PUMP				
OTHER COLOURS				
NOTES	Links to Airepod and Carpod	240/110v blower required Inc Repair kit, delivery hose,pegs/ cord and Valise.	240/110v blower required Inc Repair kit, delivery hose,pegs/ cord and Valise.	240/110v Inc Repair kit, Option- v
WEBSITE	aireshelta.com	aireshelta.com airesheltana.com	aireshelta.com airesheltana.com	aireshelta.co

RGQUEE	AIRGQUEE	AIRGQUEE	AIRGQUEE	AIRGQUEE
ght Frame 2	Airtight Frame 3	Airtight Frame 4	INFLATABLE SHELTER	INFLATABLE SHELTER
AQ7364	AQ5109	AQ6780	AQ2229	AQ2621
00mins	00mins	00mins	00mins	00mins
518 $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
. m /00 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'
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'
.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'
qm / 00sqft	00sqm / 00sqft	00sqm / 00sqft	00sqm / 00sqft	00sqm / 00sqft
	0	0	0	0
	0	0	0	0
0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
Repair kit, delivery s/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.	Includes Repair kit, delivery hose,pegs/cord and Valise.
quee.com	airquee.com	airquee.com	airquee.com	airquee.com
RSHELTA	AIRSHELTA	AIRSHELTA	AIRSHELTA	AIRSHELTA
ddock Pod	Airepod	Carpod	Carpod Lg	Cubicle Shelter
00	00	00	00	00
<2mins	2mins	2-3mins	4-5mins	<5mins
0 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00
2kg / 82lb	37kg / 110lb	45kg / 99lb	50kg / 110lb	52kg / 200lb
oated nylon prene tubes	PU-coated nylon neoprene tubes	PU-coated nylon neoprene tubes	PU-coated nylon neoprene tubes	PU-coated nylon 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
	1+	1+	1+	1+
- -	1-6 - -	1-6 - -	1-6 - -	1-6 - -
0- 0 0- 0	0 0- 0 0- 0	0 0- 0 0- 0	0 0- 0 0- 0	0 0- 0 0- 0
v blower required ,pegs/cord and Valise. water-fillable skirt	240/110v blower required Inc Repair kit, ,pegs/cord and Valise. Option- water-fillable skirt	240/110v blower required Inc Repair kit, ,pegs/cord and Valise. Option- water-fillable skirt	240/110v blower required Inc Repair kit, ,pegs/cord and Valise. Option- water-fillable skirt	240/110v blower required. Inc Repair kit, pegs/cord/Valise. 3x cubicles. Option- water-fillable skirt
m airesheltana.com	aireshelta.com airesheltana.com	aireshelta.com airesheltana.com	aireshelta.com airesheltana.com	aireshelta.com airesheltana.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	3mins	4mins	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 ?	PVC-coated 650g/m ?	PVC-coated 650g/m ?
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: -DETACHABLEFIXED FLOOR	30sqm / 645.8sqft ☐	45sqm / 495sqft ☐	60sqm / 645.8sqft ☐
ENTRANCES Zip Velcro Tie	2	4	2-4
WINDOWS Clear Mesh Opens	0-2	0-4	2-4
CONNECTABLE Stakes Guys Skirt	- - -	- - -	- - -
PORTS Vent Power Water Heater	2 2 0 0 2	4 2 0 0 2	4 0 0 0 4
TRANSLUSCENT OPAQUE ROOF PRV			
BRANDING HEATER LIGHTING PUMP	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
OTHER COLOURS			
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	00mins	00mins	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. 630g PVC coated Polyester	550D PU-coated poly. 630g PVC coated Polyester	550D PU-coated poly. 630g PVC coated Polyester
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: -DETACHABLEFIXED FLOOR	7.5-9sqm / 80-97sqft	10.5-12sqm / 113-129sqft	14-16sqm / 150-172sqft
ENTRANCES Zip Velcro Tie	1	1	2
WINDOWS Clear Mesh Opens	2 -	2 -	2 -
CONNECT Stakes Guys Skirt			
PORTS Vent Power Water Heater	4 2 0 0 2	4 2 0 0 2	4 2 0 0 2
TRANSLUSCENT OPAQUE ROOF PRV			
BRANDING HEATER LIGHTING	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
OTHER COLOURS			
NOTES	4x Lift & Shift handles. Inc. Repair kit, pegs/cord and Valise.	4x Lift & Shift handles. Inc. Repair kit, pegs/cord and Valise.	4x Lift & Shift handles. Inc. Repair kit, pegs/cord and Valise.
WEBSITE	icbrindle.com	icbrindle.com	icbrindle.com

TULMAR

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.

IMAGES NOT TO SCALE
Construction
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
☐☐☐☐ =Option
AREA in *ITALICS* = internal floor space

COMPANY	IC BRINDLE	IC BRINDLE	IC BRINDLE	IC
MODEL VARIANT	ICB45	ICB56	ICB58	
PRODUCT CODE	00	00	00	
ORIGIN				
CONSTRUCTION TIME-to-ERECT	00mins	00mins	00mins	
COST inc tax / VAT	£00 $00 €00	£00 $00 €00	£00 $00 €00	£0
WEIGHT - Shelter-Only	97kg / 00lb	100kg / 00lb	120kg / 00lb	13
MATERIALS - ROOF/ WALLS FLOOR FIRE-RESISTANT WATERPROOF	550D PU-coated poly. 630g PVC coated Polyester	550D PU-coated poly. 630g PVC coated Polyester	550D PU-coated poly. 630g PVC coated Polyester	550D P 630g PVC
AIR VOLUME	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00
LENGTH DEPLOYED / PACKED	4 00m / 13.1 00'	5 00m / 16.4 00'	5 00m / 16.4 00'	6 00
WIDTH DEPLOYED / PACKED	5 00m / 16.4 00'	6 00m / 19.7 00'	8 00m / 26.25 00'	8 00
HEIGHT DEPLOYED / PACKED	2.7 00m / 8.9 00'	2.8 00m / 9.2 00'	3 00m / 9.85 00'	3 00
AREA: -DETACHABLEFIXED FLOOR	17.8-20sqm / 191-215sqft	27-30sqm / 290-323sqft	36.7-40sqm / 395-430sqft	44-48sq
DOORS FULL-SPAN Zip Velcro Tie	2	2	2	2
WINDOWS Clear Mesh Opens	2-6 -	2-8 -	2-9 -	0
CONNECTABLE Stakes Guys Skirt				
PORTS Vent Power Water HVAC	4 2 0 0 2	4 2 0 0 2	4 2 0 0 2	4 2
TRANSLUSCENT OPAQUE ROOF PRV				
BRANDING HEATER LIGHTING PUMP				
OTHER COLOURS				
NOTES	4x Lift & Shift handles. Inc. Repair kit, pegs/cord and Valise.	14x Lift & Shift handles. Inc. Repair kit, pegs/cord and Valise.	14x Lift & Shift handles. Inc. Repair kit, pegs/cord and Valise.	14x Lift Inc. Repair kit
WEBSITE	icbrindle.com	icbrindle.com	icbrindle.com	icb

IMAGES NOT TO SCALE
Construction
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
☐☐☐☐ =Option
AREA in *ITALICS* = internal floor space

COMPANY	LANCO	LANCO	LANCO	
MODEL VARIANT	Inflatable Rescue Tent	Inflatable Rescue Tent	Inflatable Rescue Tent	Inflatab
PRODUCT CODE	ARZ30	ARZ40	ARZ50	
ORIGIN				
CONSTRUCTION TIME-to-ERECT	1.5-3mins	2-4mins	2-4mins	
COST inc tax / VAT	£00 $00 €00	£00 $00 €00	£00 $00 €00	£0
WEIGHT - Shelter-Only	103kg / 227lb	124kg / 273lb	142kg / 313lb	173
MATERIALS - ROOF/ WALLS FLOOR FIRE-RESISTANT WATERPROOF	240 & 530g/m² PVC-coated Polyester	240 & 530g/m² PVC-coated Polyester	240 & 530g/m² PVC-coated Polyester	240 & 530 P
AIR VOLUME	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00
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.
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.
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 0.4
AREA: -DETACHABLEFIXED FLOOR	31sqm / 0sqft	41sqm / 0sqft	51sqm / 0sqft	61
DOORS FULL-SPAN Zip Velcro Tie	1 -	1-2 -	1-2 -	1-2
WINDOWS Clear Mesh Opens	0 to 6 -	0 to 8 -	0 to 10 -	0 to 1
CONNECT Stakes Guys Skirt	-	-	-	
PORTS Vent Power Water HVAC	4 2 0 0 2	4 2 0 0 2	0 0 0 0 0	0 0
TRANSLUSCENT OPAQUE ROOF PRV				
BRANDING HEATER LIGHTING PUMP	- - -	- - -	- - -	
OTHER COLOURS				
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 cord and Valis tent skin.
WEBSITE	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu

BRINDLE	LANCO	LANCO	LANCO	LANCO
ICB68	Inflatable Rescue Tent	Inflatable Rescue Tent	Inflatable Rescue Tent	Inflatable Rescue Tent
00	ARZ5	ARZ10	ARZ20	ARZ204
00mins	00mins	00mins	1.5-3mins	1.5-3mins
00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00
35kg / 00lb	32kg / 70.5lb	52kg / 115lb	80kg / 176lb	82kg / 181lb
U-coated poly. coated Polyester	240 & 530g/m² PVC-coated Polyester	240 & 530g/m² PVC-coated Polyester	240 & 530g/m² PVC-coated Polyester	240 & 530g/m² PVC-coated Polyester
L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt
m / 19.7 00'	1.7 0.9m / 5.6 3'	3.2 1m / 10.5 3.28'	4 1.2m / 13.1 4'	3.8 1.2m / 12.5 4'
n / 26.25 00'	3.2 0.6m / 10.5 2'	3.4 0.7m / 11.1 2.3'	5 0.85m / 16.4 2.8'	5.5 0.87m / 18 2.85'
m / 9.85 00'	2.3-2.76 0.46m / 6.5-9 1.5'	2.3-2.76 0.46m / 6.5-9 1.5'	2-2.7 0.55m / 6.5-8.9 1.8'	2-2.95 0.45m / 6.5-9.7 1.5'
m / 473-516sqft	5sqm / 0sqft	10sqm / 0sqft	20sqm / 0sqft	21sqm / 0sqft
	1x	1x	1	1
-	0 or 2 -	0 to 2 -	0 to 4 -	0 to 4 -
	-	-	-	-
0 0 2	4 2 0 0 2	4 2 0 0 2	4 2 0 0 2	4 2 0 0 2
	---	---	---	---
	-			
& Shift handles. , pegs/cord and Valise.	Inc Repair kit, delivery hose,and Valise. Option for 550g/m² tent skin. Lift & shift handles.	Inc Repair kit, delivery hose,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.
rindle.com	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com

LANCO
le Rescue Tent
ARZ60
2-4mins
00 $00 €00
kg / 381.4lb
g/m² PVC-coated Polyester
L / 00CuFt
63m / 36.8 5.3'
75m / 18 2.5'
45m / 6.5-9.7 1.5'
sqm / 0sqft
0 -
-
0 0 0
---
t, delivery hose,pegs/ se. Option for 550g/m² Lift & shift handles.
lanco-usa.com

Emergency Pneumatics.

vetter

1 **4-6 windows**
Optimum air flow and light

2 **Removable floor**
Positioning the tent over the injured is quickly carried out

3 **Extendable and flexible**
Velcro collars and detachable entry covers for unlimited docking of other tents

MADE IN GERMANY

4 **Barrier-free**
Easy transport of the injured who are in the lying position

5 **Patented inside design**
Securing net in the roof area for attachment of equipment

6 **Duct opening**
Cables and heating quickly connected

More tent for your money!

With the MT series, Vetter developed a pneumatic quality tent especially tailored to medical applications. Take advantage of the most extensive standard package on the market at an unbeatable price you cannot ignore.

See the tents for yourself in the 360° multimedia viewing mode at www.vetter.de

You get more with the MT 30

Where Vetter is inclusive, whereas with others you have to pay extra!

Advantages of over € 1,000:

Windows:	594.-
Securing net:	499.-
Duct openings:	118.-
Your benefit:	**1211.-**

IMAGES NOT TO SCALE
Construction
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
☐☐☐☐ =Option
AREA in *ITALICS* = internal floor space

COMPANY	LANCO	LANCO	LANCO	
MODEL VARIANT	Self Erecting Tent	Self Erecting Tent	Self Erecting Tent	Self E
PRODUCT CODE	AZF29	AZF42	AZF56	
ORIGIN				
CONSTRUCTION TIME-to-ERECT	00mins	00mins	00mins	
COST inc tax / VAT	£00 $00 €00	£00 $00 €00	£00 $00 €00	£0
WEIGHT - Shelter-Only	126kg / 278lb	180kg / 397lb	234kg / 516lb	16
MATERIALS - ROOF/ WALLS FLOOR FIRE-RESISTANT WATERPROOF	750g/m²PVC-coated Polyester. Additional Internal alu frame	750g/m²PVC-coated Polyester. Additional Internal alu frame	750g/m²PVC-coated Polyester. Additional Internal alu frame	750g/m²PVC Additional
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 0
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 -	2 -	2 -	2
WINDOWS Clear Mesh Opens	0-4 -	0-6 -	0-8 -	0-4
CONNECTABLE Stakes Guys Skirt	-	-	-	
PORTS Vent Power Water HVAC	12 0 2 0 8	12 0 2 0 8	12 0 2 0 8	12 0
TRANSLUSCENT OPAQUE ROOF PRV	☐	☐	☐	
BRANDING HEATER LIGHTING PUMP	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐
OTHER COLOURS				
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 hose,peg Elasticated
WEBSITE	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu

IMAGES NOT TO SCALE
Construction
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
☐☐☐☐ =Option
AREA in *ITALICS* = internal floor space

COMPANY	LANCO	LANCO	LANCO	
MODEL VARIANT	Link Hub	Modular Inflatable Tent	modular Inflatable Tent	Inflatable
PRODUCT CODE	AZF6-CT33	AZM8-4	AZM11-6	
ORIGIN				
CONSTRUCTION TIME-to-ERECT	00mins	00mins	00mins	
COST inc tax / VAT	£00 $00 €00	£00 $00 €00	£00 $00 €00	£0
WEIGHT - Shelter-Only	223kg / 492lb	566kg / 1248lb	765kg / 1687lb	0
MATERIALS - ROOF/ WALLS FLOOR FIRE-RESISTANT WATERPROOF	750g/m²PVC-coated Polyester. Additional Internal alu frame	700g/m²PVC-coated Polyester. Additional Internal alu frame	700g/m²PVC-coated Polyester. Additional Internal alu frame	750g/m²PVC Extern
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 -	2-3	2	1-2
WINDOWS Clear Mesh Opens	0-8 -	4-5 -	16 -	0-4
CONNECT Stakes Guys Skirt	-	-	-	
PORTS Vent Power Water HVAC	12 0 2 0 8	30 8 4 0 8	0 0 0 0 0	12 0
TRANSLUSCENT OPAQUE ROOF PRV	☐	☐	☐	
BRANDING HEATER LIGHTING PUMP	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐
OTHER COLOURS				
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 hose,pegs/ fram
WEBSITE	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu

LANCO	LANCO	LANCO
Erecting 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
C-coated Polyester. Internal alu frame	750g/m²PVC-coated Polyester. Additional Internal alu frame	750g/m²PVC-coated Polyester. Additional Internal alu frame
L / 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'
qm / 355sqft	48sqm / 516sqft	63sqm / 678sqft
-	2 -	2 -
-	0-6 -	0-8 -
-	-	-
2 0 8	12 0 2 0 8	12 0 2 0 8
Repair kit, delivery s/cord and Valise. l 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
e 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
C-coated Polyester. nal alu frame	750g/m²PVC-coated Polyester. External alu frame	750g/m²PVC-coated Polyester. External alu frame
L / 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'
qm / 323sqft	45sqm / 484sqft	59sqm / 635sqft
-	1-2 -	1-2 -
-	0-6 -	0-8 -
-	-	-
2 0 8	12 0 2 0 8	12 0 2 0 8
Repair kit, delivery /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
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IMAGES NOT TO SCALE
Construction
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
☐☐☐☐ =Option
AREA in *ITALICS* = internal floor space

COMPANY	LANCO/ROFI	LANCO/ROFI	LANCO/ROFI	LAN
MODEL VARIANT	ROFI Rapid	ROFI Rapid	ROFI Rapid	RO
PRODUCT CODE	504	506	508	
ORIGIN				
CONSTRUCTION TIME-to-ERECT	00mins	00mins	00mins	
COST inc tax / VAT	£00 $00 €00	£00 $00 €00	£00 $00 €00	£0
WEIGHT - Shelter-Only	158kg / 00lb	00kg / 00lb	00kg / 00lb	26
MATERIALS - ROOF/ WALLS FLOOR FIRE-RESISTANT WATERPROOF	?/? ?	?/? ?	?/? ?	
AIR VOLUME	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00
LENGTH DEPLOYED / PACKED	5 1.6m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	6 1.
WIDTH DEPLOYED / PACKED	4 0.8m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	6 1
HEIGHT DEPLOYED / PACKED	2.7 0.95m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	3 1.
AREA: -DETACHABLEFIXED FLOOR	20sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	36
DOORS FULL-SPAN Zip Velcro Tie	0-4	0-6	0-8	0
WINDOWS Clear Mesh Opens	4 -	0	0-8	0-6
CONNECTABLE Stakes Guys Skirt				
PORTS Vent Power Water HVAC	2 0 0 0 2	0 0 0 0 0	0 0 0 0 0	2 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 hose,peg Lift &
WEBSITE	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu

IMAGES NOT TO SCALE
Construction
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
☐☐☐☐ =Option
AREA in *ITALICS* = internal floor space

COMPANY	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL
MODEL VARIANT	INFLATABLE SHELTER 16	Inflatable Shelter 20	Inflatable Shelter 25
PRODUCT CODE	SHW/16/001	SHW/20/001	SHW/25/001
ORIGIN			
CONSTRUCTION TIME-to-ERECT	00mins	00mins	00mins
COST inc tax / VAT	£00 $00 €00	£00 $00 €00	£00 $00 €00
WEIGHT - Shelter-Only	58kg / 00lb	68kg / 00lb	78kg / 00lb
MATERIALS - ROOF/ WALLS FLOOR FIRE-RESISTANT WATERPROOF	210D HT Nylon. Welded/Taped PU	210D HT Nylon. Welded/Taped PU	210D HT Nylon. Welded/Taped PU
AIR VOLUME	2600L / 00CuFt	2900L / 00CuFt	3050L / 00CuFt
LENGTH DEPLOYED / PACKED	4 1.3m / 00 00'	5 1.3m / 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'
HEIGHT DEPLOYED / PACKED	3.53 0.5m / 00 00'	3.53 0.5m / 00 00'	2.9 0.41m / 00 00'
AREA: -DETACHABLEFIXED FLOOR	14.12sqm / 0sqft	17.65sqm / 0sqft	22.65sqm / 0sqft
DOORS FULL-SPAN Zip Velcro Tie	2x 1.2m	2x 1.2m	2x 1.2m
WINDOWS Clear Mesh Opens	0	2	2
CONNECT Stakes Guys Skirt			
PORTS Vent Power Water HVAC	3 0 2 0 1	3 0 2 0 1	3 0 2 0 1
TRANSLUSCENT OPAQUE ROOF PRV			
BRANDING HEATER LIGHTING PUMP			
OTHER COLOURS	[FR=]	FR=]	[FR=]
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,
WEBSITE	mfc-international.com	mfc-international.com	mfc-international.com

NCO/ROFI	LANCO/ROFI	LANCO/ROFI	MFC INTERNATIONAL	MFC INTERNATIONAL
DFI Rapid	ROFI Rapid	ROFI Rapid	INFLATABLE SHELTER 9	INFLATABLE SHELTER 12
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. Welded/Taped PU	210D HT Nylon. Welded/Taped PU
L / 00CuFt	00L / 00CuFt	00L / 00CuFt	1300L / 00CuFt	1850L / 00CuFt
5m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	3 1.2m / 00 00'	4 1.2m / 00 00'
m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	3 6.6m / 00 00'	3 6.6m / 00 00'
1m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	2.63 0.41m / 00 00'	2.63 0.41m / 00 00'
sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	7.9sqm / 0sqft	10.6sqm / 0sqft
	0	0	1x 1.2m	1x 1.2m
	0-8	0-10	0	0
0 0 2	2 0 0 0 2	2 0 0 0 2	3 0 2 0 1	3 0 2 0 1
			[FR=]	FR=]
Repair kit, delivery s/cord and Valise. shift handles.	Includes Repair kit, delivery hose,pegs/cord and Valise. Lift & shift handles.	Includes Repair kit, delivery hose,pegs/cord and Valise. Lift & shift handles.	Includes Repair kit, delivery hose,pegs/cord and Valise. optional ballast bags,	Includes Repair kit, delivery hose,pegs/cord and Valise. optional ballast bags,
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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

IMAGES NOT TO SCALE Construction PNEUMATIC/PUMP- INFLATE & FORGET POWERED FAN -CONTINUAL INFLATION MANUAL - POP-UP FRAME ☐☐☐☐ =Option AREA in *ITALICS* = internal floor space				
COMPANY	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	
MODEL VARIANT	Inflatable Shelter 30	Inflatable Shelter 36	Inflatable Shelter 51	
PRODUCT CODE	SHW/30/001	SHW/36/001	SHW/51/001	NX
ORIGIN				
CONSTRUCTION TIME-to-ERECT	00mins	00mins	00mins	
COST inc tax / VAT	£00 $00 €00	£00 $00 €00	£00 $00 €00	£0
WEIGHT - Shelter-Only	88kg / 00lb	105kg / 00lb	125kg / 00lb	0
MATERIALS - ROOF/ WALLS FLOOR FIRE-RESISTANT WATERPROOF	210D HT Nylon. Welded/Taped PU	210D HT Nylon. Welded/Taped PU	210D HT Nylon. Welded/Taped PU	
AIR VOLUME	3700L / 00CuFt	5900L / 00CuFt	8100L / 00CuFt	00
LENGTH DEPLOYED / PACKED	6 1.2m / 19.7 3.9'	6 1.3m / 19.7 00'	8.5 1.2m / 27.9 3.9'	4 00
WIDTH DEPLOYED / PACKED	5 0.66m / 16.4 2.2'	5 0.66m / 16.4 2.2'	5 0.66m / 16.4 2.2'	4 00
HEIGHT DEPLOYED / PACKED	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
AREA: -DETACHABLE FIXED FLOOR	27.2sqm / 0sqft	32.04sqm / 0sqft	45.39sqm / 0sqft	00
DOORS FULL-SPAN Zip Velcro Tie	2x 1.2m	2x 1.2m	2x 1.2m	2x
WINDOWS Clear Mesh Opens	4	4	4	0
CONNECTABLE Stakes Guys Skirt				
PORTS Vent Power Water HVAC	3 0 2 0 1	3 0 2 0 1	3 0 2 0 1	0 0
TRANSLUSCENT OPAQUE ROOF PRV				
BRANDING HEATER LIGHTING PUMP				
OTHER COLOURS	FR=]	[FR=]	FR=]	
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 F hose,peg
WEBSITE	mfc-international.com	mfc-international.com	mfc-international.com	nixus2

IMAGES NOT TO SCALE Construction PNEUMATIC/PUMP- INFLATE & FORGET POWERED FAN -CONTINUAL INFLATION MANUAL - POP-UP FRAME ☐☐☐☐ =Option AREA in *ITALICS* = internal floor space				
COMPANY	NIXUS	NIXUS	NIXUS	
MODEL VARIANT	Quick	Quick	Quick	
PRODUCT CODE	NX-QM4040	NX-QM4060	NX-QM4080	NX
ORIGIN				
CONSTRUCTION TIME-to-ERECT	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	0
MATERIALS - ROOF/ WALLS FLOOR FIRE-RESISTANT WATERPROOF	?/?	?/?	?/?	
AIR VOLUME	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00
LENGTH DEPLOYED / PACKED	4 00m / 13.1 00'	4 00m / 13.1 00'	4 00m / 13.1 00'	5.6 0
WIDTH DEPLOYED / PACKED	4 00m / 13.1 00'	6 00m / 19.7 00'	8 00m / 00 00'	4 00
HEIGHT DEPLOYED / PACKED	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 0
AREA: -DETACHABLE FIXED 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 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 F hose,peg
WEBSITE	nixus2protect.com	nixus2protect.com	nixus2protect.com	nixus2

NIXUS	NIXUS	NIXUS	NIXUS	NIXUS
Lite	Lite	Quick	Quick	Quick
-LITE-40-40	NX-LITE-50-50	NX-QM3030	NX-QM3045	NX-QM3060
00mins	00mins	00mins	00mins	00mins
0 $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
m / 13.1 00'	5 00m / 16.4 00'	3 00m / 9.8 00'	3 00m / 9.8 00'	3 00m / 9.8 00'
m / 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'
qm / 00sqft	00sqm / 00sqft	00sqm / 00sqft	00sqm / 0sqft	00sqm / 0sqft
	0	0	0	0
	0	0	0	0
0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
Repair kit, delivery s/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.	Includes Repair kit, delivery hose,pegs/cord and Valise.
2protect.com	nixus2protect.com	nixus2protect.com	nixus2protect.com	nixus2protect.com

NIXUS	NIXUS	NIXUS	NIXUS	NIXUS
PGK	PGK	PGK	PGK	PGK
-PGK-56-40	NX-PGK-56-63	NX-PGK-56-76	NX-PGK-56-100	NX-PGK-60-40
00mins	00mins	00mins	00mins	00mins
0 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00
0kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb
?/?	Polyester500D PU-Coated or1000D PVC-coated	?/?	?/?	?/?
L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt
0m / 18.4 00'	5.6 00m / 18.4 00'	5.6 00m / 18.4 00'	5.6 00m / 18.4 00'	6 00m / 19.7 00'
m / 13.1 00'	6.3 00m / 00 00'	7.6 00m / 00 00'	10 00m / 32.8 00'	4 00m / 13.1 00'
0m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'
sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft
	0	0	1+	0
	0	0	0	0
0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
Repair kit, delivery s/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.	Includes Repair kit, delivery hose,pegs/cord and Valise.
2protect.com	nixus2protect.com	nixus2protect.com	nixus2protect.com	nixus2protect.com

IMAGES NOT TO SCALE Construction PNEUMATIC/PUMP- INFLATE & FORGET POWERED FAN -CONTINUAL INFLATION MANUAL - POP-UP FRAME ☐☐☐☐ =Option AREA in *ITALICS* = internal floor space				
COMPANY	NIXUS	NIXUS	NIXUS	
MODEL VARIANT	PGK	PGK	PGK	
PRODUCT CODE	NX-PGK-60-63	NX-PGK-60-76	NX-PGK-60-100	NX
ORIGIN				
CONSTRUCTION TIME-to-ERECT	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	0
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 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 F hose,peg
WEBSITE	nixus2protect.com	nixus2protect.com	nixus2protect.com	nixus2

IMAGES NOT TO SCALE Construction PNEUMATIC/PUMP- INFLATE & FORGET POWERED FAN -CONTINUAL INFLATION MANUAL - POP-UP FRAME ☐☐☐☐ =Option AREA in *ITALICS* = internal floor space				
COMPANY	NIXUS	NIXUS	NIXUS	
MODEL VARIANT	Pro	Pro	Pro	
PRODUCT CODE	NX-PRO-35-24	NX-PRO-35-24	NX-PRO-35-24	NX
ORIGIN				
CONSTRUCTION TIME-to-ERECT	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	0
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 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 F hose,peg
WEBSITE	nixus2protect.com	nixus2protect.com	nixus2protect.com	nixus2

NIXUS	NIXUS	NIXUS	NIXUS	NIXUS
Pro	Pro	Pro	Pro	Pro
-PRO-35-24	NX-PRO-35-24	NX-PRO-35-24	NX-PRO-35-24	NX-PRO-35-24
00mins	00mins	00mins	00mins	00mins
0 $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 / 00 00'	00 00m / 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'	00 00m / 00 00'
0m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'
sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft
	0	0	0	0
	0	0	0	0
0	0	0	0	0
Repair kit, delivery s/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.	Includes Repair kit, delivery hose,pegs/cord and Valise.
2protect.com	nixus2protect.com	nixus2protect.com		

NIXUS	NIXUS	NIXUS	NIXUS	NIXUS
Pro	Pro	Pro	Pro	Pro
-PRO-35-24	NX-PRO-35-24	NX-PRO-35-24	NX-PRO-35-24	NX-PRO-35-24
00mins	00mins	00mins	00mins	00mins
0 $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 / 00 00'	00 00m / 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'	00 00m / 00 00'
0m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'
sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft
	0	0	0	0
	0	0	0	0
0	0	0	0	0
Repair kit, delivery s/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.	Includes Repair kit, delivery hose,pegs/cord and Valise.
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IMAGES NOT TO SCALE
Construction
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
☐☐☐☐ =Option
AREA in *ITALICS* = internal floor space

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
ORIGIN				
CONSTRUCTION TIME-to-ERECT	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	0
MATERIALS - ROOF/ WALLS FLOOR FIRE-RESISTANT WATERPROOF	PVC-coated 650 450or250 480 gm² Polyester	PVC-coated 650 450or250 480 gm² Polyester	PVC-coated 650 450or250 480 gm² Polyester	PVC-coat 480 g
AIR VOLUME	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00
LENGTH DEPLOYED / PACKED	2.4 00m / 11.6 00'	4.3 00m / 00 00'	6.4 00m / 00 00'	4 0
WIDTH DEPLOYED / PACKED	3.5 00m / 11.6 00'	4 00m / 00 00'	4 00m / 00 00'	5 0
HEIGHT DEPLOYED / PACKED	2.5 00m / 00 00'	2.7 00m / 00 00'	2.9 00m / 00 00'	2.9
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 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 hose,peg
WEBSITE	nixus2protect.com	nixus2protect.com	nixus2protect.com	nixus2

IMAGES NOT TO SCALE
Construction
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
☐☐☐☐ =Option
AREA in *ITALICS* = internal floor space

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
ORIGIN				
CONSTRUCTION TIME-to-ERECT	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	0
MATERIALS - ROOF/ WALLS FLOOR FIRE-RESISTANT WATERPROOF	PVC-coated 650 450or250 480 gm² Polyester	PVC-coated 650 450or250 480 gm² Polyester	PVC-coated 650 450or250 480 gm² Polyester	
AIR VOLUME	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00
LENGTH DEPLOYED / PACKED	5 00m / 00 00'	6 00m / 00 00'	7.5 00m / 00 00'	80 0
WIDTH DEPLOYED / PACKED	5.5 00m / 00 00'	5.5 00m / 00 00'	5.5 00m / 00 00'	5.5
HEIGHT DEPLOYED / PACKED	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 0
AREA: -DETACHABLEFIXED FLOOR	3.1sqm / 0sqft	3.1sqm / 00sqft	3.1sqm / 00sqft	3.3
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 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 hose,peg
WEBSITE	nixus2protect.com	nixus2protect.com	nixus2protect.com	nixus2

NIXUS	NIXUS	NIXUS	NIXUS	NIXUS
ERA/L	ERA/L	ERA/L	ERA/L	ERA/L
-ERA-50-40	NX-ERA-50-50	NX-ERA-50-60-RB	NX-ERA-50-75-RB	NX-ERA-55-40
00mins	00mins	00mins	00mins	00mins
0 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00
0kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb
ed 650 450or250 m² Polyester	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
L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt
0m / 00 00'	5 00m / 00 00'	6 00m / 00 00'	7.5 00m / 00 00'	4 00m / 00 00'
0m / 00 00'	5 00m / 00 00'	5 00m / 00 00'	5 00m / 00 00'	5.5 00m / 00 00'
0m / 00 00'	2.9 00m / 00 00'	2.9 00m / 00 00'	3.1 00m / 00 00'	3.1 00m / 00 00'
sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft
	0	0	0	0
	0	0	0	0
0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
Repair kit, delivery s/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.	Includes Repair kit, delivery hose,pegs/cord and Valise.
2protect.com	nixus2protect.com	nixus2protect.com	nixus2protect.com	nixus2protect.com

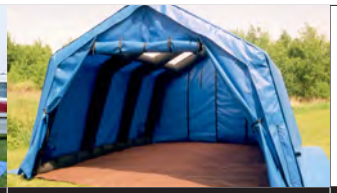
NIXUS	NIXUS	NIXUS	NIXUS	NIXUS
ERA/L	ERA/L	ERA/L	ERA/L	ERA/L
-ERA-55-80	NX-ERA-60-40	NX-ERA-60-50-RB	NX-ERA-60-60	NX-ERA-60-75-RB
0 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00
0kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb
??	??	??	??	??
L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt
0m / 00 00'	4 00m / 00 00'	5 00m / 00 00'	6 00m / 00 00'	7.5 00m / 00 00'
0m / 00 00'	6 00m / 00 00'	6 00m / 00 00'	6 00m / 00 00'	6 00m / 00 00'
0m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'
sqm / 00sqft	3.3sqm / 00sqft	3.3sqm / 00sqft	3.3sqm / 00sqft	3.3sqm / 00sqft
	0	0	0	0
0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
Repair kit, delivery s/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.	Includes Repair kit, delivery hose,pegs/cord and Valise.
2protect.com	nixus2protect.com	nixus2protect.com	nixus2protect.com	nixus2protect.com

IMAGES NOT TO SCALE Construction PNEUMATIC/PUMP- INFLATE & FORGET POWERED FAN -CONTINUAL INFLATION MANUAL - POP-UP FRAME ☐☐☐☐ =Option AREA in *ITALICS* = 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	00	
ORIGIN				
CONSTRUCTION TIME-to-ERECT	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	0
MATERIALS - ROOF/ WALLS FLOOR FIRE-RESISTANT WATERPROOF	PVC-coated 650 450or250 480 gm² Polyester	PVC-coated 650 450or250 480 gm² Polyester	?/? ?	
AIR VOLUME	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00
LENGTH DEPLOYED / PACKED	8 00m / 00 00'	10 00m / 00 00'	00 00m / 00 00'	00 0
WIDTH DEPLOYED / PACKED	6 00m / 00 00'	6 00m / 00 00'	00 00m / 00 00'	00 0
HEIGHT DEPLOYED / PACKED	3.4 00m / 00 00'	3.4 00m / 00 00'	00 00m / 00 00'	00 0
AREA: -DETACHABLEFIXED FLOOR	00sqm / 00sqft	00sqm / 00sqft	8sqm / 0sqft	8s
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
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 hose,peg
WEBSITE	nixus2protect.com	nixus2protect.com	OO.com	

IMAGES NOT TO SCALE Construction PNEUMATIC/PUMP- INFLATE & FORGET POWERED FAN -CONTINUAL INFLATION MANUAL - POP-UP FRAME ☐☐☐☐ =Option AREA in *ITALICS* = internal floor space				
COMPANY	RIGLOO	RIGLOO	RIGLOO	SA
MODEL VARIANT	Rescuer	Defender	Refuge	
PRODUCT CODE	00	00	00	
ORIGIN				
CONSTRUCTION TIME-to-ERECT	1-6mins	1-6mins	<1-5mins	
COST inc tax / VAT	£1200 $2480 €2145	£1620 $2685 €2320	£300 $400 €345	£812
WEIGHT - Shelter-Only	7kg / 15.4lb	7-9kg /15.4-19.8lb	4kg / 8.8lb	5.75
MATERIALS - ROOF/ WALLS FLOOR FIRE-RESISTANT WATERPROOF	Polyester &Nylon Ripstop® 68D 210T - 8000mm	Polyester &Nylon Ripstop® 68D 210T - 8000mm	Polyester & Nylon 80g 210T ? - 8000mm	66D 210T P TPU+150D 600D Oxfd-
AIR VOLUME	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00
LENGTH DEPLOYED / PACKED	2.6 0.6m / 8.5 2'	2.6 0.6m / 8.5 2'	1.8 0.4m / 5.9 1.3'	2.1 0.
WIDTH DEPLOYED / PACKED	1.6 0.3m / 5.25 1'	1.6 0.3m / 5.25 1'	1.2 0.3m / 3.9 1'	1.1 0
HEIGHT DEPLOYED / PACKED	1.2 0.2m / 3.9 0.7'	1.2 0.2m / 3.9 0.7'	1.2 0.2m / 3.9 0.7'	1.2 0.
AREA: -DETACHABLEFIXED FLOOR	4sqm / 43sqft	4sqm / 43sqft	2sqm /21.5sqft	2sq
DOORS FULL-SPAN Zip Velcro Tie	1	1	2	6
WINDOWS Clear Mesh Opens	6 * -	6 * -	6 - -	4
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
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 Re stirrup-p
WEBSITE	rigloo-rs.com	rigloo-rs.com	rigloo-rs.com	saf

OO	PRO-SAFE	PRO-SAFE	PRO-SAFE	PRO-SAFE
OO	Shelter	Shelter	Shelter	Shelter
00	NH402	NH355	NH336	00
00mins	00mins	00mins	00mins	00mins
00 $00 €00	£00 $4659 €00	£00 $7522 €00	£00 $18015 €00	£00 $00 €00
00kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb
?/?	?/?	?/?	?/?	?/?
L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt
00m / 00 00'	00 00m / 12 00'	00 00m / 16 00'	00 00m / 22 00'	00 00m / 42 00'
00m / 00 00'	00 00m / 7 00'	00 00m / 13 00'	00 00m / 22 00'	00 00m / 22 00'
00m / 00 00'	00 00m / 8 00'	00 00m / 8.5 00'	00 00m / 10 00'	00 00m / 10 00'
0sqm / 0sqft	00sqm / 00sqft	00sqm / 00sqft	00sqm / 00sqft	00sqm / 00sqft
	0	0	0	0
	0	0	0	0
0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
Repair kit, delivery s/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	240/110v powered blower or air cylinder required. Inc Repair kit, delivery hose,pegs/cord and Valise.	240/110v powered blower or air cylinder required. Inc Repair kit, delivery hose,pegs/cord and Valise.	240/110v powered blower or air cylinder required. Inc Repair kit, delivery hose,pegs/cord and Valise.
OO.com	OO.com	OO.com	OO.com	OO.com
AFESHEL	SHELTER STRUCTURES	SHELTER STRUCTURES	SHELTER STRUCTURES	SHELTER STRUCTURES
	Triage Tent 8	Triage Tent 16	FR30	FR45
	00	00	00	00
<1min	00mins	00mins	<10mins	00mins
$1045 €900	£00 $00 €00	£00 $00 €00	£00 $6000 €00	£00 $00 €00
kg / 12.65lb	00kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb
PE silvered Ripstop O Oxford/140g PE +80g fabric/foil-	?/?	?/?	850g/25oz dbl-coated	?/?
L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt	00L / 00CuFt
5m / 6.9 1.6'	00 00m / 00 00'	00 00m / 00 00'	6 00m / 20 00'	00 00m / 00 00'
0.3m / 3.6 1'	00 00m / 00 00'	00 00m / 00 00'	5 00m / 16 00'	00 00m / 00 00'
2m / 3.9 0.7'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'
m / 21.5sqft	8sqm / 0sqft	16sqm / 0sqft	30sqm / 320sqft	45sqm / 0sqft
- -	0	0	1	0
- -	0	4	4-6	6
-				
0 0 0	0 0 0 0 0	0 0 0 0 0	11 0 9 0 2	0 0 0 0 0
-				
- -				
epair kit, ,pegs/cord ump, & rucksack.	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.
feshel.com	shelterstructuresamerica.com	shelterstructuresamerica.com	shelterstructuresamerica.com	shelterstructuresamerica.com

IMAGES NOT TO SCALE
Construction
PNEUMATIC/PUMP- INFLATE & 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 FLOOR FIRE-RESISTANT WATERPROOF	Coated PVC -	Coated PVC -	?/? ?	
AIR VOLUME	2500L / 88CuFt	3200L / 113CuFt	1632L / 57.6CuFt	2025
LENGTH DEPLOYED / PACKED	3.7 1.35m / 12 2'	6.1 1.52m / 20 5'	3.7 1.1m / 11.8 0.43'	4.9 1.
WIDTH DEPLOYED / PACKED	4.6 0.61m / 15 2'	4.6 0.71m / 15 2.'	3.36 085m / 12.4 0.33'	3.86 0.
HEIGHT DEPLOYED / PACKED	00 0.61m / 8.1 00'	00 0.71m / 9.7 0.71'	2.58 0.4m / 8.3 0.16'	2.48 0
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 1	3 0 1 1 1	0 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 . *Skirt = water ballast tubes	Inc Repair kit, delivery hose,and Valise. Removable side walls . *Skirt = water ballast tubes	Includes Repair kit, delivery hose,pegs/cord and Valise. Optional long ballast bags.	Includes F hose,pegs/cor long
WEBSITE	tulmar.com	tulmar.com	vetter.de	v

IMAGES NOT TO SCALE
Construction
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
☐☐☐☐ =Option
AREA in *ITALICS* = internal floor space

COMPANY	VETTER	VETTER	VETTER	
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 FLOOR FIRE-RESISTANT WATERPROOF	?/? ?	?/? ?	?/? ?	
AIR VOLUME	3052L / 00CuFt	4566L / 00CuFt	5851L / 00CuFt	811
LENGTH DEPLOYED / PACKED	3.7 1.1m / 00 00'	5.5 1.1m / 00 00'	7.3 1.1m / 00 00'	11 43
WIDTH DEPLOYED / PACKED	5.88 0.85m / 00 00'	5.88 0.85m / 00 00'	5.88 0.85m / 00 00'	5.88 3
HEIGHT DEPLOYED / PACKED	3.3 0.6m / 00 00'	3.3 0.6m / 00 00'	3.3 0.85m / 00 00'	3.3 39
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 0	4 0 0 0 0	4 0 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 F hose,peg
WEBSITE	vetter.de	vetter.de	vetter.de	v

VETTER	VETTER	VETTER	VETTER	VETTER
rsal Tent PZ17	Universal Tent PZ20	Universal Tent PZ25	Universal Tent PZ30	Universal Tent PZ40
520009402	1520004701	1520008901	1520009402	1520010602
<1min	1min	2mins	<3mins	<3mins
00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00
5kg / 143lb	75kg / 165lb	85kg / 187lb	104kg / 229lb	117kg / 258lb
?/?	?/?	?/?	?/?	?/?
5L / 71.5CuFt	2332L / 82.3CuFt	00L / 90.7CuFt	00L / 101.2CuFt	00L / 143.3CuFt
1m / 16 0.45'	5 1.1m / 16 0.45'	5 00m / 16 0.45'	6 1.1m / 19.2 0.46'	8 1.1m / 25.6 0.46'
85m / 13 0.33'	4.36 0.85m / 14 0.33'	5.36 00m / 17.2 0.33'	5.5 0.85m / 17.6 0.33'	5.5 0.85m / 17.6 033'
0.6m / 8 0.24'	2.48 0.6m / 7.9 0.24'	2.58 00m / 8.3 0.24'	3.1 0.6m / 9.9 0.24'	3.1 0.85m / 9.9 0.33'
sqm / 00sqft	20sqm / 00sqft	25sqm / 00sqft	30sqm / 0sqft	40sqm / 0sqft
	1+	1+	1+	1+
	4	4	6	6
0	0	0	0	0
Repair kit, delivery rd and Valise. Optional ballast bags.	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.	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.
etter.de	vetter.de	vetter.de	vetter.de	vetter.de

VETTER	VETTER
al Tent MT60	Medical Tent MT45
523034800	1523034800
≥6mins	≥5mins
00 $00 €00	£00 $00 €00
95kg / 00lb	00kg / 00lb
?/?	?/?
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	0
Repair kit, delivery s/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.
etter.de	vetter.de

Images NOT to escuemagazines.com

Pro/High Power BATTERIES

18 to 72 volt

Battery 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 uti we now see many too particularly *Milwaukee*, because readily available and service ma cutting/spreading rescue gear - impact drivers. *Holmatro* initiall the *DeWalt* 24v platform but so requirements of rescue gear in t 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

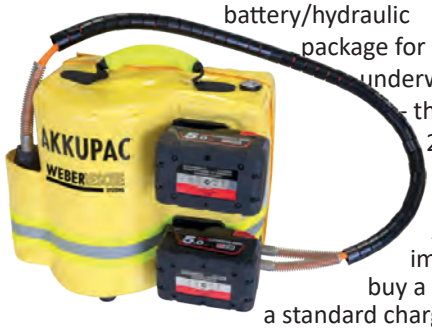
covers for some trade batteries like *Makita* and *Milwaukee* and *Weber Hydraulik* uses such a system on their Smart range to make them waterproof (see images below) but this is an adjunct, albeit a less expensive option, rather than integral waterproofing. Incidentally, before we get onto backpacks, 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, Hitatchi* (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.

magazines.com

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 battery/hydraulic package for use underwater - their *M38* but it weighs 22kg/45lb.



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 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

ⓘ=**Special Tools** - Other rescue-specific equipment detailed in the NOTES section

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.

REDLITHIUM
M18 REDLITHIUM HIGH OUTPUT HD12.0
M18
PERFORMANCE DRIVEN
TRADE FOCUSED
SYSTEM WIDE
milwaukeetool.com
©2023 Milwaukee Tool

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
ⓘ=Special Tools
●=PARTIAL FEATURE
□□□= Option

	SERIES MODEL NB: 20v/60v in the US is 18v/54v in Europe	COMPANY	FITS TOOLS FOR:...	ORIGIN	COST inc tax / VAT	WEIGHT	BATTERY TYPE VOLTAGE	AmpHours Ah	Energy/ Work-Hours Wh	LE
	20vMax / XR DCB203 DCB182	DEWALT	■■■		£35 $00 €00	350g 0oz	Li ion 18/20v	2 Ah	00 Wh	11
	20vMax DCB230	DEWALT	■■■		£0 $00 €00	00g 1.15lb	Li ion 20v	3 Ah	00 Wh	17
	20vMax DCB200	DEWALT	■■■■		£0 $00 €00	1.27kg 2.8lb	Li ion 18/20v	3 Ah	00 Wh	0
	20vMax DCB240	DEWALT	■■■■		£0 $00 €00	00g 1.15lb	Li ion 20v	4 Ah	00 Wh	17
	20vMax DCB204 DCB184	DEWALT	■■■■		£80 $00 €00	700g 00oz	Li ion 18/20v	4 Ah	00 Wh	17
	20vMax DCB205 DCB185	DEWALT	■■■■		£0 $00 €00	630g 1.4lb	Li ion 18/20v	5 Ah	00 Wh	17
	20vMax DCB206 DCB186	DEWALT	■■■■		£0 $00 €00	00g 2.25lb	Li ion 18/20v	6 Ah	00 Wh	17
	20vMax DCB210 DCB1810	DEWALT	■■■■		£0 $00 €00	00g 0oz	Li ion 18/20v	10 Ah	00 Wh	17
	XR DCB2105 DCB184B-XJ	DEWALT	■■■■		£0 $00 €00	00g 00oz	Li ion 18/20v	5 Ah	00 Wh	17
	XR DCB2108	DEWALT	■■■■		£0 $00 €00	00g 00oz	Li ion 18/20v	8 Ah	00 Wh	17

NGTH	WIDTH	DEPTH	RECHARGE Min to Max Time Charger-dependant / No of CHARGE CYCLES	MULTI CHARGERS	REPRESENTATIVE ENDURANCE	WARRANTY (Years)	LED CHARGE STATUS	IN-USE COOLING FAN	WiFi/BLUETOOTH	IPRATING (WATERPROOF)	OP TEMPERATURE °C°F	NOTES	WWW.
10mm 00"	00mm 00"	45mm 1.8"	1500	2 & 4-bank Standard Rapid			■	-	-	-	-		dewalt.com
78mm 7"	89mm 3.5"	45mm 1.8"	90mins				■	-	-	-	-		dewalt.com
0mm 10"	00mm 4.5"	00mm 0.75"	90mins				■	-	-	-	-		dewalt.com
78mm 7"	89mm 3.5"	45mm 1.8"	90mins				■	-	-	-	-		dewalt.com
78mm 7"	89mm 3.5"	00mm 00"	90mins				■	-	-	-	-		dewalt.com
78mm 7"	89mm 3.5"	00mm 3"	90mins				■	-	-	-	-		dewalt.com
78mm 7"	89mm 3.5"	00mm 3"	90mins				■	-	-	-	-		dewalt.com
78mm 7"	89mm 3.5"	00mm 00"					■	-	-	-	-		dewalt.com
78mm 7"	89mm 3.5"	00mm 00"					■	-	-	-	-	Also available as an oil-resistant version	dewalt.com
78mm 7"	89mm 3.5"	00mm 00"					■	-	-	-	-		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 ⓘ=Special Tools ●=PARTIAL FEATURE □□□= Option	SERIES MODEL NB: 20v/60v in the US is 18v/54v in Europe	COMPANY	FITS TOOLS FOR:...	ORIGIN	COST inc tax / VAT	WEIGHT	BATTERY TYPE VOLTAGE	AmpHours Ah	Energy/ Work-Hours Wh	LEN
	XR Powerstack DCBP034 DCBP034-XJ	DEWALT	■■■■	🇺🇸	£0 $00 €00	320g 00oz	Li ion 18/20v	1.7 Ah	00 Wh	6 (
	XR Powerstack DCBP518-XJ	DEWALT	■■■■	🇺🇸	£0 $00 €00	300g 12.8oz	Li ion 18/20v	5 Ah	00 Wh	0 7
	Max/XR FlexVolt DCB606 DCB546	DEWALT	■■■■	🇺🇸	£0 $180 €00	1.05kg 00oz	Li ion 20-60v 18-54v	2/6 Ah	00 Wh	0 (
	Max/XR FlexVolt DCB609 DCB547	DEWALT	■■■■	🇺🇸	£180 $300 €00	1.44kg 00oz	Li ion 20-60v 18-54v	3/9 Ah	00 Wh	13 5.
	Max/XR FlexVolt DCB612 DCB548	DEWALT	■■■■	🇺🇸	£0 $00 €00	1.46kg 0lb	Li ion 20-60v 18-54v	4/12 Ah	00 Wh	13 5.
	Max/XR FlexVolt DCB615 DCB549	DEWALT	■■■■	🇺🇸	£0 $00 €00	2.04kg 4.55lb	Li ion 20-60v 18-54v	5/15 Ah	00 Wh	19 7.
	36v DCB361	DEWALT		🇺🇸	£0 $300 €00	1.44kg 38.4oz	Li ion 36v	2 Ah	00 Wh	0 (
	Max DCB404	DEWALT		🇺🇸	£0 $00 €00	1.6kg 3.53lb	Li ion 40v	4 Ah	00 Wh	18 7.
	Max XR DCB406	DEWALT		🇺🇸	£0 $00 €00	1.96kg 4.32lb	Li ion 40v	6 Ah	300 Wh	18 7.
	Max XR DCB407	DEWALT		🇺🇸	£80 $00 €00	2.1g 4.6lb	Li ion 40v	7.5 Ah	00 Wh	18 7.
	E force 107.289.3	GENESIS	■■	🇺🇸		1.45g 3.2lb	Li ion 28v	5 Ah	145 Wh	13 5

NGTH	WIDTH	DEPTH	RECHARGE Min to Max Time Charger-dependant / No of CHARGE CYCLES	MULTI CHARGERS	REPRESENTATIVE ENDURANCE	WARRANTY (Years)	LED CHARGE STATUS	IN-USE COOLING FAN	WiFi/BLUETOOTH	IPRATING (WATERPROOF)	OP TEMPERATURE °C°F	NOTES	WWW.
2mm 00"	34mm 00"	46mm 00"	60mins				■	-	-	-	-		dewalt.com
0mm 7.4"	00mm 5.9"	00mm 2.62"	75mins	multi voltage charger	70cuts 4x4 PT Spruce		■	-	-	-	-	Enhanced power to weight/Ah ratio +50%	dewalt.com
0mm 00"	85mm 00"	90mm 00"	40-90mins				-	-	-	-	-		dewalt.com
88mm .433	87mm 3.543"	97mm 3.813"	60-140mins				-	-	-	-	-		dewalt.com
88mm 433"	87mm 3.543"	97mm 3.813"	80-180mins				■	-	-	-	-		dewalt.com
92mm 563"	111mm 4.375"	97mm 3.813"	100-233mins				■	-	-	-	-		dewalt.com
0mm 00"	00mm 00"	00mm 00"	30mins				-	-	-	-	-	discontinued	dewalt.com
84mm .25"	137mm 5.375"	126mm 4.938"	90mins				■	-	-	-	-		dewalt.com
84mm .25"	137mm 5.375"	126mm 4.938"	130mins				■	-	-	-	-		dewalt.com
84mm .25"	137mm 5.375"	126mm 4.938"	60mins				-	-	-	-	-		dewalt.com
85mm 5.3"	81mm 3.2"	84mm 3.3"	90mins	Standard								Milwaukee M28 replacement (in case of discontinuation by Milwaukee) for Genesis E-Force tools	genesisrescue.com

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 ⓘ=Special Tools ●=PARTIAL FEATURE = Option	SERIES MODEL NB: 20v/60v in the US is 18v/54v in Europe	COMPANY	FITS TOOLS FOR:...	ORIGIN	COST inc tax / VAT	WEIGHT	BATTERY TYPE VOLTAGE	AmpHours Ah	Energy/ Work-Hours Wh	LEN
	Nuron B22-55	HILTI			£130+ $00 €00	550g 00oz	Li ion 22v	2.6 Ah	54 Wh	13
	Nuron B22-85	HILTI			£155+ $00 €00	760g 0oz	Li ion 18/20v	4 Ah	85 Wh	13
	Nuron B22-110	HILTI			£252- $00 €00	910g 00oz	Li ion 22v	5 Ah	110 Wh	13
	Nuron B22-170	HILTI			£295+ $00 €00	1.31kg 00oz	Li ion 22v	8 Ah	170.6 Wh	15
	Nuron B22-255	HILTI			£361+ $00 €00	1.46kg 0lb	Li ion 22v	12 Ah	255 Wh	15
	B36 B36/5.2	HILTI			£381 $00 €00	1.35kg 0lb	Li ion 36v	5.2 Ah	187 Wh	16 7.
	B36 B36/9	HILTI			£483 $00 €00	2.03kg oz	Li ion 36v	9 Ah	324 Wh	18
	- -	-								

NGTH	WIDTH	DEPTH	RECHARGE Min to Max Time Charger-dependant / No of CHARGE CYCLES	MULTI CHARGERS	REPRESENTATIVE ENDURANCE	WARRANTY (Years)	LED CHARGE STATUS	IN-USE COOLING FAN	WiFi/BLUETOOTH	IPRATING (WATERPROOF)	OP TEMPERATURE °C°F	NOTES	WWW.
33mm 00"	82mm 00"	48mm 00"	0mins	Standard Fast Ultimate			■	-	-	-	-17 +60		hilti.com
33mm 00"	82mm 00"	53mm 2.62"	0mins	Standard Fast Ultimate			■	-	-	-	-17 +60		hilti.com
33mm 00"	82mm 00"	67mm 00"	0mins	Standard Fast Ultimate			■	-	-	-	-17 +60		hilti.com
57mm 00"	87mm 00"	76mm 00"	0mins	Standard Fast Ultimate			■	-	-	-	-17 +60		hilti.com
57mm 00"	87mm 00"	99mm 00"	0mins	Standard Fast Ultimate			■	-	-	-	-17 +60		hilti.com
57mm 563"	92mm 4.375"	81mm 3.813"	35-130mins	4-Bay Fast 12v Car			■	-	-	-	-17 +60		hilti.com
31mm 00"	99mm 00"	103mm 00"	56-255mins	4-Bay Fast 12v Car			■	-	-	-	-17 +60		hilti.com

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OTHER TOOLS IN RANGE:
■=CSaw ■=Trade-Tools ■=DiscCutter
■=OPE ■=Rescue Tools ■=Lighting
ⓘ=Special Tools
●=PARTIAL FEATURE
□□□= Option

	SERIES MODEL	COMPANY	FITS TOOLS FOR:...	ORIGIN	COST inc tax / VAT	WEIGHT	BATTERY TYPE VOLTAGE	AmpHours Ah	Energy/ Work-Hours Wh	LEN
	Greenline EVO3 BPA286	HOLMATRO	ⓘ		£00 $00 €00	1kg 2.2lb	Li ion 28v	6 Ah*	151 Wh	14
	Pentheon PBPA288	HOLMATRO	■ ⓘ		£00 $00 €00	1.6kg 3.5lb	Li ion 28v	8 Ah	202 Wh	18
	100 40-B70	HUSQVARNA	■ ■ ■		£100 $ €	800g 0oz	Li ion 36v	2 Ah	75.6 Wh	13
	100 40-B140	HUSQVARNA	■ ■ ■		£150 $ €	1.25kg 0oz	Li ion 36v	2 Ah	144 Wh	13
	BLi BLi30	HUSQVARNA	■ ■ ■ ⓘ		£280 $ €	1.9kg 0oz	Li ion 36v	7.7 Ah	75.6 Wh	13
	BLi BLi200	HUSQVARNA	■ ■ ■ ⓘ		£240 $00 €00	1.31kg 0oz	Li ion 36v	5.2 Ah	180 Wh	13
	BLi BLi200X	HUSQVARNA	■ ■ ■ ⓘ		£260 $00 €00	1.3kg 0oz	Li ion 36v	5.2 Ah	180 Wh	13
	BLi BLi300	HUSQVARNA	■ ■ ■ ⓘ		£00 $00 €00	1.9kg 0oz	Li ion 36v	9 Ah	324 Wh	15
	BLiX 40-B140X	HUSQVARNA	■ ■ ■ ⓘ		£210 $ €	800g 0oz	Li ion 36v	4 Ah	75.6 Wh	13
	BLiX 40-B220X	HUSQVARNA	■ ■ ■ ⓘ		£310 $ €	1437g 0oz	Li ion 36v	6 Ah	216 Wh	13
	BLiX 40-B330X	HUSQVARNA	■ ■ ■ ⓘ		£420 $ €	1929g 0oz	Li ion 36v	9 Ah	324 Wh	15

NGTH	WIDTH	DEPTH	RECHARGE TIME Min to Max / No of CHARGE CYCLES	MULTI-BAY CHARGERS	REPRESENTATIVE ENDURANCE		LED CHARGE STATUS	IN-USE COOLING FAN	W/FI/BLUETOOTH	IPRATING (WATERPROOF)	OPERATING TEMP °C°F	NOTES	WWW.
43mm 5.6"	111mm 4.4"	62mm 2.4"	90mins 500	Std EU Std USA Vehicle								* replaced 5Ah version ⓘ Powers door ram	holmatro.com
88mm 7.4"	107mm 4.2"	110mm 4.3"	69mins 500	2 & 4-bank On-Tool charging for 3 tools + Standard 3.3Ah			■		-	67	-	ⓘ Also powers the OMNILOCK shoring struts. Saltwater Submersible On tool charging	holmatro.com
32mm 0"	117mm 0"	98mm 0"	>600				■						husqvarna.com
32mm 0"	117mm 0"	98mm 0"	>600				■						husqvarna.com
32mm 0"	155mm 0"	98mm 0"	>600				■					ⓘ Powered ascender/winch	husqvarna.com
32mm 00"	115.6mm 00"	98mm 00"	1500				■					ⓘ Powered ascender/winch	husqvarna.com
32mm 00"	115.6mm 00"	98mm 00"	1500				■					ⓘ Powered ascender/winch	husqvarna.com
55mm 00"	115.6mm 00"	98mm 00"					■					ⓘ Powered ascender/winch	husqvarna.com
32mm 0"	117mm 0"	98mm 0"	>600				■		✱	X4		On-board Temperature gauge. ⓘ Powered ascender/winch	husqvarna.com
32mm 0"	117mm 0"	98mm 0"					■		✱	X4		On-board Temperature gauge. ⓘ Powered ascender/winch	husqvarna.com
55mm 00"	132mm 00"	93mm 00"					■		✱	X4		On-board Temperature gauge. ⓘ Powered ascender/winch	husqvarna.com

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	EXL/X2 E2	IDEX (HURST)			£00 $728 €00	500g 0oz	Li ion 25.2v	5Ah	126 Wh
	EXL/X2	IDEX (HURST)			£00 $728 €00	1.3kg 2.9lb	Li ion 25.2v	4Ah	98 Wh
	E3/EWXT 00	IDEX			£65 $00 €00	1.2kg 0oz	Li ion 25.2v	5 Ah	126 Wh
	E3/EWXT 00	IDEX			£90 $820 €00	1.6kg 0oz	Li ion 25.2v	9 Ah	226.8 Wh
	E3/EWXT 00	IDEX			£00 $900 €00	1.6kg 0oz	Li ion 25.2v	9 Ah	226.8 Wh
	E3/EWXT 00	IDEX			£00 $900 €00	1.6kg 0oz	Li ion 25.2v	9 Ah	226.8 Wh
	XGT BL4020	MAKITA			£75 $00 €00	690g 0oz	Li ion 40v	2 Ah	72 Wh
	XGT BL4025	MAKITA			£90 $00 €00	710g 0oz	Li ion 40v	2.5 Ah	90 Wh
	XGT BL4040F	MAKITA			£150 $00 €00	1kg 2.2lb	Li ion 40v	4 Ah	144 Wh
	XGT BL4050F	MAKITA			£180 $00 €00	1.3kg 0oz	Li ion 40v	5 Ah	180 Wh
	XGT BL4080F	MAKITA			£265 $00 €00	1.9kg 0oz	Li ion 40v	8 Ah	288 Wh

LENGTH	WIDTH	DEPTH	RECHARGE TIME Min to Max No of CHARGE CYCLES	MULTI-BAY CHARGERS	REPRESENTATIVE ENDURANCE	LED CHARGE STATUS	IN-USE COOLING FAN	WffFi/BLUETOOTH	IPRATING (WATERPROOF)	OPERATING TEMP °C°F	NOTES	WWW.
152mm 00"	86mm 00"	78mm 00"	150mins 500	Standard 3Ah 4-bank 3Ah 110v Adapter 12v vehicle					54	-20 +55		lukas.com jawsoflife.com
152mm 00"	86mm 00"	78mm 00"		Standard					54	-20 +55	Fits Lukas/Hurst StrongArm tools only. Discharge LEDs as per SCBA grn, Grn, Ylw, Red	lukas.com jawsoflife.com
176mm 00"	97mm 00"	70mm 00"	90mins 500	Standard 4Ah 4-bank 3Ah 110v Adapter 12v vehicle		■			68	-20 +55	Fresh water Submersible Change batteries underwater. Battery has on-board LED for night-changes	lukas.com jawsoflife.com
176mm 00"	97mm 00"	89mm 00"		Standard 3Ah 4-bank 3Ah 110v Adapter 12v vehicle	60mins in 3m of water	■			68	-20 +55	Fresh water Submersible Change batteries underwater. Battery has on-board LED for night-changes	lukas.com jawsoflife.com
176mm 00"	97mm 00"	89mm 00"		Standard 3Ah 4-bank 3Ah 110v Adapter 12v vehicle	60mins in 3m of water	■			68	-20 +55	Salt water Submersible Change batteries underwater. Battery has on-board LED for night-changes	lukas.com jawsoflife.com
176mm 00"	97mm 00"	89mm 00"		Standard 3Ah 4-bank 3Ah 110v Adapter 12v vehicle	60mins in 3m of water	■			68	-20 +55	Salt water Submersible Change batteries underwater. Battery has on-board LED for night-changes	lukas.com jawsoflife.com
118mm 00"	77mm 00"	65mm 00"	22-30mins	2-bank Rapid Standard Back/Power Pack		■	■	● *	-	-	*Digital coms between battery and tool regarding staus and power draw etc.	makitatools.com
118mm 00"	77mm 00"	65mm 00"	28-38mins	2-bank Rapid Standard Back/Power Pack		■	■	● *	-	-	*Digital coms between battery and tool regarding staus and power draw etc.	makitatools.com
133mm 00"	82mm 00"	71mm 00"	45-67mins	2-bank Rapid Standard Back/Power Pack		■	■	● *	-	-	*Digital coms between battery and tool regarding staus and power draw etc.	makitatools.com
152mm 00"	79mm 00"	92mm 00"	50-85mins	2-bank Rapid Standard Back/Power Pack		■	■	● *	-	-	*Digital coms between battery and tool regarding staus and power draw etc.	makitatools.com
152mm 00"	85mm 00"	94mm 00"	76mins	2-bank Rapid Standard Back/Power Pack		■	■	● *	-	-	*Digital coms between battery and tool regarding staus and power draw etc.	makitatools.com

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	36Liion BL3622A	MAKITA	■	●	£00 $00 €00	1.33kg 0oz	Li ion 40v	2.2 Ah	80 Wh	16
	36Liion BL3626	MAKITA	■	●	£00 $00 €00	1.34kg 0oz	Li ion 40v	2.6 Ah	94 Wh	16
	LXT BL1820B	MAKITA	■■■■	●	£00 $00 €00	380g 0oz	Li ion 18v	2 Ah	36 Wh	11
	LXT BL1830B	MAKITA	■■■■	●	£00 $00 €00	640g 0oz	Li ion 18v	3 Ah	54 Wh	11
	LXT BL1840B	MAKITA	■■■■	●	£00 $00 €00	640g 0oz	Li ion 18v	4 Ah	72 Wh	11
	LXT BL1850B	MAKITA	■■■■	●	£00 $00 €00	640g 0oz	Li ion 18v	5 Ah	90 Wh	11
	LXT BL1860B	MAKITA	■■■■	●	£00 $00 €00	660g 0oz	Li ion 18v	6 Ah	108 Wh	11
	MX Fuel RedLithium XC3	MILWAUKEE	■■■■	■	£00 $00 €00	0g 9.8lb	Li ion 00v	3 Ah	00 Wh	0 1
	MX Fuel RedLithium XC6	MILWAUKEE	■■■■	■	£00 $00 €00	0g 0oz	Li ion 00v	6 Ah	00 Wh	0
	MX Fuel RedLithium Forge XC8	MILWAUKEE	■■■■	■	£00 $00 €1154	0g 9.8lb	Li ion 00v	8 Ah	00 Wh	0 1
	MX Fuel RedLithium Forge XC12	MILWAUKEE	■■■■	■	£00 $00 €1546	0g 0oz	Li ion 00v	12 Ah	00 Wh	0

NGTH	WIDTH	DEPTH	RECHARGE Min to Max Time Charger-dependant / No of CHARGE CYCLES	MULTI CHARGERS	REPRESENTATIVE ENDURANCE	WARRANTY (Years)	LED CHARGE STATUS	IN-USE COOLING FAN	WFi/BLUETOOTH	IPRATING (WAITERPROOF)	OP TEMPERATURE °C°F	NOTES	WWW.
65mm 00"	102mm 00"	85mm 00"		2-bank Rapid Standard Back/Power Pack			■	-	-	-	-	DISCONTINUED	makitatools.com
62mm 00"	102mm 00"	85mm 00"		2-bank Rapid Standard Back/Power Pack			■	-	-	-	-	DISCONTINUED	makitatools.com
13mm 00"	75mm 00"	45mm 00"	22-45 mins	2-bank Rapid Standard Back/Power Pack			■	-	-	-	-		makitatools.com
13mm 00"	75mm 00"	62mm 00"	24-60 mins	2-bank Rapid Standard Back/Power Pack			■	-	-	-	-		makitatools.com
13mm 00"	75mm 00"	62mm 00"	36-90 mins	2-bank Rapid Standard Back/Power Pack			■	-	-	-	-		makitatools.com
13mm 00"	75mm 00"	62mm 00"	45-110 mins	2-bank Rapid Standard Back/Power Pack			■	-	-	-	-		makitatools.com
13mm 00"	75mm 00"	62mm 00"	55-130 mins	2-bank Rapid Standard Back/Power Pack			■	-	-	-	-		makitatools.com
0mm 0.8"	00mm 7.1"	00mm 3.8"	00mins	RedLi Super			■	■	■		-28		milwaukee.com
0mm 00"	00mm 00"	00mm 00"	45mins	RedLi Super			■	■	■				milwaukee.com
0mm 0.8"	00mm 7.1"	00mm 3.8"	45mins	RedLi Super			■	■	■				milwaukee.com
0mm 00"	00mm 00"	00mm 00"	45mins	RedLi Super			■	■	■				milwaukee.com

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	M18 Red Lithium Forge XC5	MILWAUKEE			£00 $00 €00	0g 0oz	Li ion 18v	5 Ah	00 Wh	0
	M18 Red Lithium Forge XC6	MILWAUKEE			£311 $00 €00	0g 0oz	Li ion 18v	6 Ah	00 Wh	0
	M18 Red Lithium Forge XC8	MILWAUKEE			£220 $200 €279	1.08kg 2.38lb	Li ion 18v	8 Ah	00 Wh	10 5
	M18 Red Lithium Forge HD12	MILWAUKEE			£270 $250 €361	1.54kg 3.4lb	Li ion 18v	12 Ah	00 Wh	14 5
	M18 Red Lithium High Output CP3	MILWAUKEE			£00 $120 €166	0g 0oz	Li ion 18v	3 Ah	00 Wh	0
	M18 Red Lithium XC5.5	MILWAUKEE			£00 $160 €237	1.21kg 0oz	Li ion 18v	5.5 Ah	00 Wh	0
	M18 Red Lithium High Output XC6	MILWAUKEE			£00 $00 €00	1kg 2.2lb	Li ion 18v	6 Ah	00 Wh	0
	M18 Red Lithium High Output XC8	MILWAUKEE			£160 $200 €279	1.08kg 2.38lb	Li ion 18v	8 Ah	00 Wh	0 5
	M18 Red Lithium High Output HD12	MILWAUKEE			£240 $250 €361	1.54kg 3.4lb	Li ion 18v	12 Ah	00 Wh	15 5
	M18 Red Lithium XC1.5	MILWAUKEE			£00 $00 €00	0g 0oz	Li ion 18v	1.5 Ah	00 Wh	0
	M18 Red Lithium XC2	MILWAUKEE			£00 $00 €136	0g 0oz	Li ion 18v	2 Ah	00 Wh	0

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0mm 00"	00mm 00"	00mm 00"	0 mins	2,3,4 & 6-bank Super Rapid Standard		-	■	-	-	-	-28		milwaukee.com
0mm 00"	00mm 00"	00mm 00"	0 mins	2,3,4 & 6-bank Super Rapid Standard		-	■	-	-	-	-28		milwaukee.com
95mm 5.6"	95mm 3.4"	154mm 3.5"	45 mins 83 mins 162 mins	2,3,4 & 6-bank Super Rapid Standard		-	■	-	-	-	-28	oil resistant	milwaukee.com
47mm 5.8"	0mm 00"	104mm 4.1"	45 mins 130 mins 241 mins	2,3,4 & 6-bank Super Rapid Standard		-	■	-	-	-	-28	oil resistant	milwaukee.com
0mm 00"	00mm 00"	00mm 00"	35 mins 35 mins 65 mins	2,3,4 & 6-bank Super Rapid Standard			■						milwaukee.com
0mm 00"	00mm 00"	00mm 00"	65 mins 65 mins 115 mins	2,3,4 & 6-bank Super Rapid Standard			■						milwaukee.com
0mm 00"	00mm 00"	00mm 00"	35 mins 65 mins 123 mins	2,3,4 & 6-bank Super Rapid Standard			■						milwaukee.com
0mm .46"	00mm 3.33"	00mm 3.25"	45 mins 83 mins 153 mins	2,3,4 & 6-bank Super Rapid Standard			■						milwaukee.com
52mm .99"	86mm 3.4"	99mm 3.9"	60 mins 130 mins 241 mins	2,3,4 & 6-bank Super Rapid Standard			■						milwaukee.com
0mm 00"	00mm 00"	00mm 00"	21 mins 21 mins 31 mins	2,3,4 & 6-bank Super Rapid Standard			■						milwaukee.com
0mm 00"	00mm 00"	00mm 00"	27 mins 27 mins 42 mins	2,3,4 & 6-bank Super Rapid Standard			■						milwaukee.com

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	SERIES MODEL NB: 20v/60v in the US is 18v/54v in Europe	COMPANY	FITS TOOLS FOR:...	ORIGIN	COST inc tax / VAT	WEIGHT	BATTERY TYPE VOLTAGE	AmpHours Ah	Energy/ Work-Hours Wh	LEN
	M18 Red Lithium XC3/2.8	MILWAUKEE			£00 $00 €00	0g 0oz	Li ion 18v	2.8 Ah	00 Wh	0
	M18 Red Lithium XC4	MILWAUKEE			£00 $120 €160	0g 0oz	Li ion 18v	4 Ah	00 Wh	0
	M18 Red Lithium XC5	MILWAUKEE			£00 $160 €190	0g 0oz	Li ion 18v	5 Ah	00 Wh	0
	M18 Red Lithium XC6	MILWAUKEE			£00 $00 €00	0g 0oz	Li ion 18v	6 Ah	00 Wh	0
	M28 Red Lithium BX3 BX	MILWAUKEE			£00 $0 €231	1.1kg 2.25lb	Li ion 28v	3 Ah	00 Wh	0
	M28 Red Lithium BX5 B5	MILWAUKEE			£00 $00 €285	1.1kg 2.25lb	Li ion 28v	5 Ah	00 Wh	0
	AP (Pro) AP 100	STIHL	ⓘ		£126 $00 €00	1.3kg 0oz	Li ion 36v	2Ah	94 Wh	0
	AP (Pro) AP 200	STIHL	ⓘ		£156 $00 €00	1.3kg 0oz	Li ion 36v	2Ah	187 Wh	0
	AP (Pro) AP 300	STIHL	ⓘ		£288 $00 €00	1.8kg 0oz	Li ion 36v	3Ah	227 Wh	0
	AP (Pro) AP 300 S	STIHL	ⓘ		£288 $00 €00	1.8kg 0oz	Li ion 36v	3Ah	281 Wh	0
	AP (Pro) AP 500 S	STIHL	ⓘ		£385 $00 €00	0g 0oz	Li ion 00v	5 Ah	337 Wh	0

NGTH	WIDTH	DEPTH	RECHARGE Min to Max Time Charger-dependant No of CHARGE CYCLES	MULTI CHARGERS	REPRESENTATIVE ENDURANCE	WARRANTY (Years)	LED CHARGE STATUS	IN-USE COOLING FAN	WfFi/BLUETOOTH	IPRATING (WAITERPROOF)	OP TEMPERATURE °C°F	NOTES	WWW.
0mm 00"	00mm 00"	00mm 00"	34 mins 34 mins 57 mins	2,3,4 & 6-bank Super Rapid Standard			■						milwaukee.com
0mm 00"	00mm 00"	00mm 00"	48 mins 48 mins 76 mins	2,3,4 & 6-bank Super Rapid Standard			■						milwaukee.com
0mm 00"	00mm 00"	00mm 00"	60 mins 60 mins 105 mins	2,3,4 & 6-bank Super Rapid Standard			■						milwaukee.com
0mm 00"	00mm 00"	00mm 00"	70 mins 70 mins 125 mins	2,3,4 & 6-bank Super Rapid Standard			■						milwaukee.com
0mm 00"	00mm 00"	00mm 00"	60 mins	Rapid			■						milwaukee.com
0mm 00"	00mm 00"	00mm 00"	90 mins	Rapid			■						milwaukee.com
0mm 00"	00mm 00"	00mm 00"					■					ⓘ Powered ascender/winch	stihl.com
0mm 00"	00mm 00"	00mm 00"					■					ⓘ Powered ascender/winch	stihl.com
0mm 00"	00mm 00"	00mm 00"					■					ⓘ Powered ascender/winch	stihl.com
0mm 00"	00mm 00"	00mm 00"					■					ⓘ Powered ascender/winch	stihl.com
0mm 00"	00mm 00"	00mm 00"					■						stihl.com

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NGTH	WIDTH	DEPTH	RECHARGE Min to Max Time Charger-dependant / No of CHARGE CYCLES	MULTI CHARGERS	REPRESENTATIVE ENDURANCE	WARRANTY (Years)	LED CHARGE STATUS	IN-USE COOLING FAN	WFi/BLUETOOTH	IPRATING (WAITERPROOF)	OP TEMPERATURE °C°F	NOTES	WWW.

UPDATED Jul '25

Wheeled

WATERPROOF CASES

By 'Waterproof' we also mean, crushproof, heavy duty, professional grade transport cases as exemplified by Pelican but, as you'll see from our tables, they don't have a monopoly on bombproof cases even if they are the name to beat in rescue. This is the first in a series of GUIDES to WATERPROOF CASES and will be the largest range of equipment we've ever included so it will be in many parts. This issue and part 2 in issue 78 contains wheeled cases, AtoG and HtoZ. The third one in the series will look at cylinders and so-called 'long cases', long and flat, generally only a few inches deep and best known as containers for sniper rifles but equally applicable to heavier rescue equipment like shoring, search cameras and modular poles. Heavy-duty cylindrical cases like the Plaber/ HPRC tube-cases are also 'long' but, unlike most of the golf club transporters, are fully toughened, waterproof resin cases.

Rescuers will no doubt be familiar with Pelican/Peli, Underwater Kinetics, SKB, Explorer, HPRC (Plaber) and maybe Nanuk cases but there are plenty of other industries that demand the best protection for expensive and maybe fragile equipment - photography and film-making for one and instruments and lighting/electronic paraphernalia for another and these are areas that at least two of the names in these Guides have come from - Gator Case and Turtle Cases. KSB probably produce the largest selection of waterproof cases of anyone with rotomoulded as well as injection moulded options.

We became case-fetishists in the mid seventies when Pelican (Peli in Europe) was our only choice so they have understandably been our firm favourite ever since with a range that continues to evolve as we need them to and after several dozen models we've still never had a failure. One of our other original favourites was Otter but they foresaw the explosion in personal electronic devices and went full-scale into smaller cases and away from transport cases. Equally we've had good experiences with Explorer, HPRC, Seahorse and Underwater Kinetics. All have performed extremely well and the only failure, which is more an example of ill-treatment than any fault of the case, is perishing of the outer wheel on a wheeled Explorer and a Storm case that were stored in permanent damp for several years. The outer that has disintegrated may be some kind of rubber compound but in both cases a working central wheel of plastic remains on both cases and they can still be rolled. Of the remainder, we have to confess to not being familiar with cases made by Condition1, Nanuk, Ibex or B&W International but they look to have good pedigrees and products. Elephant we're not sure about because we hadn't even heard of them until we were researching this article but we have included them because it's an extensive range made in Italy so they could well be worth seeking out and investigating.

TYPES of WHEELED CASE

Broadly speaking there are 6 distinct styles of wheeled case:

1) CASE - The smaller models, rectangular and about the size of a fat briefcase or small to medium suitcase. Able to be carried briefcase-style using the side handle. We can also sub-divide this category to indicate those of appropriate dimensions to be used as aircraft carry-on luggage **(1A)** - however, some airlines may be more picky than others so you'll always need to check before flying otherwise you'll be checking it as hold-luggage.

2) CHEST - as in a pirate's chest - the largest sizes, often as deep as they are wide and too big to be carried by the side handle alone. Some are cube-shapes designed to roll on 4 sets of weels rather thna be pulled with a handle.

3) TOP-LOADER - A bit like a giant tea-caddy where the top hinges open and you stuff everything in from the top down. Harder to organise kit but makes a great water carrier! However, there are none in this issue's selection.

WHEELED HARD CASES

4) CYLINDRICAL - Not many are fully ruggedised for rescue but when they are, they make great receptacles for lighting and medical gas or breathing air cylinders.
5) **LONG** - Long and flat 'rifle'-cases with and without wheels.
6) CRATE - Much larger transport and storage boxes not usually intended to have equipment deployed straight of the crate at an incident. More likely to have the other cases in this Guide stacked *inside* a crate for deployment to a disaster area. Not generally as waterproof and resilient as the smaller resin cases and chests and most don't have wheels.The larger military style crates like Peli Hardigg are designed for air or sea transport and require multiple persons to lift and shift and are often loaded/stacked/unloaded by fork lift.
7) RACKS - snug-fitting subdivisions of a large case or crate - effectively pull-out boxes or trays to protect and separate equipment, particularly electronics. the rack systems are too large and complex to include here but many would lend themselves to frontline deployment.

We have NOT included 4) 5),6) or 7) in this GUIDE.
The cases in this GUIDE, even the largest, are capable of being wheeled by one person assuming that you're on a hard flat surface and the case isn't full of gold bars. These cases allow for specialist equipment to be deployed direct to a frontline or incident scene and even the largest are capable of being transported in a standard pick-up, mpv/van or estate/station wagon.

We chose wheeled cases to start this series of Guides because they are the most useful and versatile of cases that might otherwise require a multi-person lift. It is the nature of even quite modest sizes that the contents may be so heavy that lugging it over any distance by a carry-handle alone is impractical. Pulling on a pair of wheels is the best way to move kit from the station or cache to the vehicle and once arrived, from the vehicle to the scene.

CONSTRUCTION

All of the cases in this series of Guides are made of extremely tough, injection-moulded or rotomoulded plastics and resins of various compositions and sealed against water-ingress with an O-ring seated in a channel in the lid. See the 'CASE MATERIALS' section for further discussion.

IN THE FOLLOWING TABLES:.....

COST: as always is a rough guide only - it can vary due to exchange rates, taxes etc. and we usually round the price up. The type of internal configuration will affect the cost. Many include pick and pluck foam as standard - check the Foam column, if all of the options are an outline square the cost is with the case empty, if it's a solid coloured square - that's what you get included in the price. Where it is included, the price will probably vary markedly from similar cases with an 'empty' price because Pick&Pluck style foam isn't overly cheap depsite being less expensive than custom foam and organisers.
ORIGIN: The main flag refers to the manufacturer's home country, but this may not be where the case is made. If

we know, we show an inset flag - Pelican for instance has a manufacturing facility in Barcelona as well as California but they're all listed under the US flag as that is where Pelican is headquartered. Some of these may be of Chinese manufacture but largely, what you see as an origin flag is where they're made - it's probably the case that the infrastructure necessary to manufacture carbon plastic, ABS and polypropylene cases in the first place continues to work well negating the need to outsource in the way we see so many other areas of rescue equipment.

VOLUME: This figure gives the best idea of average available space but as you'll see in our comments on DIMENSIONS, this isn't the full story - the largest volume isn't necessarily configured in a way that would suit your equipment. It does, nevertheless, give us a useful way to differentiate between models.

CASE MATERIALS: While there are any number of material combinations, the basic material is plastic. It's what they do with the plastic or how it's mixed that makes the difference. Plaber for instance use polypropylene TTX01, glass fiber and rubber. These toughest of cases are all injection moulded (rather than blown or rotomoulded as some of the hollow-chamber cases are) and use wholly or in combination:

- ABS
- Polypropylene
- Carbon plastics

with carbon-plastics (polycarbonate) being the top of the tree and ABS usually the least expensive. But while the companies will argue over the pros and cons of each you will, generally speaking, be more concerned about price and size. We've listed the material as described by the manufacturer

DEPTH of BASE and LID: while the overall volume quoted will include the lid it is important to know just how much of that area is comprised of the lid. There are many stowage options that make the lid a very useful place to store and organise smaller components and have them readily to hand while the case is open. As an example our typical Con-Space Entry case would be quite large, housing 2 sets of airline cylinders, harnesses and masks on top of airline hose, demand valve and comms cable with command module then the lid would have gas monitors, headsets/ throat mics, tools and personal PPE. Having a lid that includes at least a couple of inches of storage enables you to have equipment in the main compartment in the base sit slightly proud. However, a word of warning, make sure that any sensitive equipment with dials and screens has plenty of free space and is adequately buffered against intrusion by items stored in the lid. They may shift in pockets and end up being in close contact with a fragile screen or dial when closed.

DIMENSIONS: We've listed the Internal dimensions because that is the bit that actually stores your kit - that is your available space and may be radically different to the outside dimensions. Watch out for intrusion into that space by the wheels and maybe the telescopic handle. Some of our own have proved annoying over the years when trying to cram a quart into a pint pot. The wheels often occupy two curved quadrants of plastic in two corners as with this SKB case and some have full width channels of plastic housing the telescoping handles and this too alters the available stowage space.

EYE DIAMETER: refers to the width of the padlock or zip-tie hole for securing the case contents from prying eyes or thieving hands.

TYPE of CASE:

1) CASE
1A) AIRCRAFT CARRY-ON size CASE
2) CHEST (too large to be carried by the top handle alone)
3) TOP-LOADER
4) CYLINDRICAL/SHAPED
5) LONG

PRESSURE VALVE: Often a round knob on the front which ensures the case is NOT AIRTIGHT. This fronts the pressure release valve which allows pressure to equalise so that you can still open the case after it has been subjected to aircraft or altitude decompression which might otherwise suck the case tightly closed. Most are Automatic valves shown as an orange square ■ like Peli which uses a Goretex membrane. Manual valves are shown as a black square ■

LOCK / LOCKABLE: virtually all of the cases here have a means with which to secure them closed, either with a small padlock or with a cable/zip-tie. LOCKABLE means Padlockable' and it's up to you to come up with the most secure way to use it. Many models have stainless steel reinforcing to these eyes to help prevent unscrupulous folk simply tearing or melting the lock through the plastic. A cable-Zip tie stops the case from opening easily but otherwise just

WHEELED HARD CASES

lets you know that your case is suddenly lighter for a good reason.

LOCK indicates a physical lock requiring a key or combination. It may be a propriety lock that comes with the case or an option but some cases have a key-lock built into the latch or latches and in some, like Nanuk it is an optional accessory for any of their cases. The three options in the pictures on the left are from Explorer; a combination, a heavy-duty brass lock and a TSA combination. TSA approved locks are primarily for US airports and indicate to agents that the lock can be opened by them without the need to destroy it, presumably, any lock without the little secret logo is summarily smashed to bits with a hammer or separated from its charge by some mini bolt croppers.

SINGLE / DOUBLE LATCHES: Originally ALL cases had single latches - that means you pull it until it 'clicks' clear of its keeper and your case is open. With a heavily loaded case this can often be quite difficult and quite abrupt so some introduced a two-stage release offering something like mechanical advantage to open a first stage and then an easier second and final stage to release the latch and open the case. Some saw this as a security measure ensuring that you couldn't accidentally open a latch with just one click but any case with more than one latch already has a kind of redundant safety in that the case will remain closed until all the latches have been released. Many companies offer two stage (or double) latches in two or three distinct designs. With Otter for instance, you release the first stage in the normal way which then has to be further 'unhooked' back the other way - we've never liked this design Most went for something similar but the second stage releases the same way as the first - more intuitive and a more fluid opening as it's largely seamless rather than being two separate and distinct actions. Simpler still is the push-button release for the first stage and then release the latch

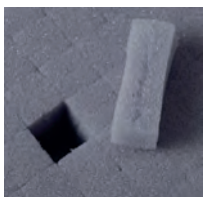
ID PANEL / STRAP: ID panels started out on Peli cases as a removable strip of plastic that you could have etched or printed professionally or you could simply write the case contents on it and swap around as necessary. Not all the case contents obviously as it was only a few inches long and an inch or so high, or have you got teeny, tiny writing? otherwise, just the general kit class that is in the case. When the smaller cases evolved into carry-on luggage we started to see more conventional name-badge style panels (although we did already have such a thing on an old Explorer case) so you could either use a bespoke label or slip in a business card luggage label.

STRAP refers to a shoulder strap for easier carrying. This can be pretty useful because, even empty, some of these cases aren't the lightest - that's why they have wheels but for those occasions when you can't wheel it a shoulder strap might be useful. rarely do they come with a

strap, it's generally an optional accessory but they don't all have them because they may not have the means to connect them.

HANDLES: Refers ONLY to the side or carry handles and does NOT include a rolling or telescopic handle. Unless otherwise indicated in the NOTES section ALL of these cases a have a telescoping handle enabling them to be pulled along by one person. There are some like SKB's R-series and Explorer's 7726 which have wheels but not a telescoping handle. The Long cases included in the third part of this Guide series also lack a telescopic handle.

ERGONOMIC GRIP: A shaped handle that is curved to better fit a closed hand rather than a more or less square cross-section is ergonomic in our eye s and get a black square. If it is further enhanced with a rubber or tactile grip, that get an orange square



FOAM / ORGANISERS: Next to the case itself, this is probably the most important factor in your purchase. Foam is still the commonest, cheapest option for organising your case. It is either layered sheets or 'Pick&Pluck' which is precut into columns as in the picture on the right or into little cubes still attached to each other by a corner of each cube so that together it makes one huge block of foam. You can pull out as many or as few little columns or cubes as you like to create pockets for your gear. A solid black square means that this is included in the price we've shown, an outline box means it's an option. We have included **ORGANISE** in orange to differentiate from standard foam and these may include laser cut, closed cell foam like the battery compartment options or the photographer-style padded dividers opposite (top) that are altered using Velcro fastening. Peli offers custom foams cut to your required shapes and they also have a new type of divider option with a robust series of walls that you pin into various positions. Another option are the kit packs or cubes as shown in the annotated title picture, this is a concept borrowed from travel luggage with see-through, zip or velcro cubes to keep things separate but easily identifiable. As already mentioned, lid organisers are a common accessory and not only make great use of space but they present well when the case is opened. Some cases, like B&W have the means to completely remove the lid easily (they could probably all be removed if you had the patience and tools). Not entirely sure of the advantage unless you were using it as a raft?

IP RATING / MILSPEC

IP RATING refers to how watertight and dustproof a case is where the last number ranges from 1 to 8 with X7 and X8 being submersible. The X in these examples refers to dust ingress and is a number from 1 to 6 . Most cases will be IP67 or 68 - completely waterproof and can withstand temporary immersion. IP68 can tolerate longer periods of immersion. Military standards vary but if we have listed a green square indicating a military specification it will be STANAG 4280 or DEF STAN 81-41 for instance.

WHEELED HARD CASES

COLOURS Colour options are shown as a square with the colour not quite an exact match, in fact, not even close in some cases but you'll get the idea. There aren't many secondary colours in cases but GT Line's Explorers for one have an accent colour on the handle grips to help differentiate what is otherwise overwhelmingly any colour you want as long as it's black. The secondary colour is shown in the frame of the square.

WARRANTY: these things are pretty robust with a minimal number of components to go wrong so most companies offer a Limited Lifetime warranty. The question is , what are the limitations, in theory it could be 'as long as it doesn't live beyond 3 years, or as long as you haven't tried to carry anything in it'! Check the actual terms to make sure but all of these look reasonably solid. B&W go a little further, and even though they've quoted a specific age-span it's pretty generous art 30 years and i think I might prefer an unlimited 30 year warranty to a Limited Lifetime? The exception is Pelican and SKB who have an UNLIMITED lifetime warranty - you break it, they replace it.

COST: Approx & include local tax/VAT.
COSTS in £$€= Currency conversion only.
CASE TYPES: 1=Carry Case, 1A=Carry On, 2=Chest,5=Long 6=Crate, 7=Rack.
HANDLES*: exc 1x telescoping handle
FOAM/ORGANISE: ☐= Option
WARRANTY: ☐=Limited Lifetime
■=LIMITED Lifetime

	MODEL	COMPANY	ORIGIN	COST	WT (empty)	VOLUME	CASE MATERIAL	DEPTH of LID BASE	
	430	AMABILIA		€156	4.7kg 10.4lb	16.8L 0.6cu'	Co-Polymer Polypropylene	45mm 1.8" 99mm 3.9"	43 1
	465.220	AMABILIA		€100	3.4kg 7.5lb	34.3L 1.2cu'	Co-Polymer Polypropylene	40mm 1.6" 180mm 7"	46 1
	505	AMABILIA		€176	6.2kg 13.7lb	30L 1cu'	Co-Polymer Polypropylene	58mm 2.3" 121mm 4.8"	50
	505.280	AMABILIA		€117	5.5kg 12.1lb	49L 1.7cu'	Co-Polymer Polypropylene	58mm 2.3" 222mm 8.7"	50 1
	520	AMABILIA		€103*	5.8kg 12.8lb	30.2L 1cu'	Co-Polymer Polypropylene	45mm 1.8" 155mm 6.1"	52 2
	540.190	AMABILIA		€123*	6.28kg 13.8lb	41.4L 1.5cu'	Co-Polymer Polypropylene	50mm 2" 140mm 5.5"	53
	540.245	AMABILIA		€126*	6.84kg 15lb	53.4L 1.9cu'	Co-Polymer Polypropylene	50mm 2" 195mm 7.7"	53
	620.250	AMABILIA		€163*	8.5kg 18.7lb	71.3L 2.5cu'	Co-Polymer Polypropylene	60mm 2.7" 190mm 7.5"	62 2
	620.340	AMABILIA		€169*	9.6kg 21.2lb	97L 3.4cu'	Co-Polymer Polypropylene	60mm 2.4" 280mm 11"	62 24
	750.280	AMABILIA		€190	10.2kg 22.5lb	100.8L 3.8cu'	Co-Polymer Polypropylene	60mm 2.4" 220mm 8.7"	75 2
	750.400	AMABILIA		€200	12.1kg 26.7lb	144L 5cu'	Co-Polymer Polypropylene	60mm 2.4" 340mm 13.4"	75 29
	HD-500	BARSKA/ LOADED GEAR		$182	4.6kg 10.2 lb	26L 0.9cu'	Polypropylene	50mm 2" 150mm 6"	50

WHEELED HARD CASES

INTERNAL DIMENSIONS	EXTERNAL DIMENSIONS	TEMP RANGE	EYE DIAMETER	TYPE of CASE	PRESSURE VALVE	LOCK/LOCKABLE	SNGL/DBL LATCHES	ID PANEL/STRAP	CARRY HANDLES *	ERGONOMIC GRIP	FOAM ORGANISE	I.P. MILSPEC	WARRANTY YRS	COLOURS	NOTES	WWW.
30x286x144mm 17x11.25x5.7"	485x391x222mm 19x15.4x8.7"	-30to90C -22to194F	mm "	1A	■	■	2	■	1	■ ■	□ □	67		■ ■ ■	All Black cases in the Amabilia range have option of handle in green, blue, orange, grey or black. Bearing wheels	amabiliastore.it
55x335x220mm 8.3x13.2x8.7"	502x415x246mm 19.8x16.3x9.7"	-30to90C -22to194F	mm "	1	■	■	2	■	1	■ ■	□ □	67		■ ■ ■	Bearing wheels	amabiliastore.it
05x350x179mm 19.9x13.8x7"	555x455x258mm 21.8x17.9x10.2"	-30to90C -22to194F	mm "	1	■	■	4	■	1	■ ■	□ □	67		■ ■ ■	Bearing wheels	amabiliastore.it
05x350x280mm 19.9x13.8x11"	555x428x306mm 21.8x16.8x12"	-30to90C -22to194F	mm "	1-2	■	■	4	■	1	■ ■	□* □	67		■ ■ ■	Option of removable carry bag with dividers. Bearing wheels	amabiliastore.it
20x290x200mm 0.5x11.4x7.9"	585x361x238mm 23x14.2x9.4"	-30to90C -22to194F	mm "	1-2	■	■	2	■	2	■ ■	□ □	67		■	* Basic price-Option of larger 60 or 80mm wheels with bearings and base stand/feet	amabiliastore.it
38x405x190mm 21.2x16x7.5"	604x473x225mm 23.8x18.6x8.9"	-30to90C -22to194F	mm "	2	■	■	4	■	3	■ ■	□ □	67		■	* Basic price-Option of larger 60 or 80mm wheels with bearings and base stand/feet	amabiliastore.it
38x405x245mm 21.2x16x9.7"	604x473x283mm 23.8x18.6x11.1"	-30to90C -22to194F	mm "	2	■	■	4	■	3	■ ■	□ □	67		■	* Basic price-Option of larger 60 or 80mm wheels with bearings and base stand/feet	amabiliastore.it
20x460x250mm 4.4x18.1x9.8"	687x528x286mm 27x20.8x11.25"	-30to90C -22to194F	mm "	2	■	■	4	■	3?	■ ■	□ □	67		■	* Basic price-Option of larger 60 or 80mm wheels with bearings and base stand/feet	amabiliastore.it
20x460x340mm 4.4x18.1x13.4"	687x528x376mm 27x20.8x14.8"	-30to90C -22to194F	mm "	2	■	■	4	■	3?	■ ■	□ □	67		■	* Basic price-Option of larger 60 or 80mm wheels with bearings and base stand/feet	amabiliastore.it
50x480x280mm 29.5x18.9x11"	816x540x306mm 32.1x21.25x12"	-30to90C -22to194F	mm "	2	■	■	7	■	3*	■ ■	□ □	67	□	■	*no telescoping handle. 3 includes large pull-handle	amabiliastore.it
50x480x400mm .5x18.9x15.75 "	816x540x426mm 32.1x21.25x16.8"	-30to90C -22to194F	mm "	2	■	■	7	■	3*	■ ■	□ □	67	□	■	*no telescoping handle, no front handle - handle on each end + large pull handle	amabiliastore.it
08x292x175mm 20x11.5x6.9"	533x356x229mm 21x14x9"	-23to99C -10to210F	8mm 0.3"	1	■	■	2	■	2	■	■	■ 67	1	■		barska.com

COST: Approx & include local tax/VAT.
COSTS in £$€= Currency conversion only.
CASE TYPES: 1=Carry Case, 1A=Carry S...
2=Chest,5=Long 6=Crate, 7=Rack.
HANDLES*: exc 1x telescoping hand...
FOAM/ORGANISE: ☐= Option
WARRANTY: ☐=Limited Lifetime
■=LIMITED Lifetime

	MODEL	COMPANY	ORIGIN	COST	WT (empty)	VOLUME	CASE MATERIAL	DEPTH of LID BASE	
	6600	B&W INTERNATIONAL		£126 $223 €263	5.3kg 11.7 lb	29 L 1 cu'	Polypropylene	40mm 1.6" 145mm 5.7"	
	6700	B&W INTERNATIONAL		£166 $260 €316	6.8kg 15lb	43 L 1.5 cu'	Polypropylene	50mm 2" 175mm 6.9"	
	70	B&W INTERNATIONAL		$283	9kg 19.8lb	60 L 2.1 cu'	Ultra High Impact ABS Plastic	n/a	
	6800	B&W INTERNATIONAL		£230 $357 €359	8.8kg 19.4lb	71 L 2.5 cu'	Polypropylene	50mm 2" 245mm 9.6"	
	7800	B&W INTERNATIONAL		$521 €414	13kg 28.7lb	187 L 6.6 cu'	Polypropylene	68mm 2.7" 310mm 12.2"	
	300	CONDITION 1		$210	6.9kg 15.2lb	27 L 0.9 cu'	Lightweight Polypropylene CoPolymer	41mm 1.61" 150mm 5.89"	
	286	CONDITION 1		$230	11.3kg 25lb	75 L 2.6 cu'	Lightweight Polypropylene CoPolymer	50mm 2" 272mm 10.7"	
	287	CONDITION 1		$200	10.2kg 22.4lb	55 L 1.9 cu'	Lightweight Polypropylene CoPolymer	33mm 1.3" 198mm 7.8"	
	258	CONDITION 1		$260	13kg 28.7lb	85 L 3 cu'	Lightweight Polypropylene CoPolymer	43mm 1.7" 226mm 8.9"	
	Elite 1808W	ELEPHANT		$140	4.4kg 9.8lb	33 L 1.2 cu'	Polypropylene CoPolymer	38mm 1.5" mm 7"	
	Elite 1907wp	ELEPHANT		$320*	8.2kg* 18 lb	33 L* 1.2 cu'	Polypropylene CoPolymer	50mm 2" mm 5.12"	
	Elite 1911w	ELEPHANT		$166	5.5kg 12.1 lb	45 L 1.6 cu'	Polypropylene CoPolymer	50mm 2" mm 8.5"	

WHEELED HARD CASES

INTERNAL DIMENSIONS	EXTERNAL DIMENSIONS	TEMP RANGE	EYE DIAMETER	TYPE of CASE	PRESSURE VALVE	LOCK/LOCKABLE	SNGL/DBL LATCHES	ID PANEL/STRAP	CARRY HANDLES *	ERGONOMIC GRIP	FOAM ORGANISE	I.P. MILSPEC	WARRANTY YRS	COLOURS	NOTES	WWW.
00x286x185mm 9.7x11.3x7.3"	550x350x225mm 21.7x13.8x8.9"	-30to80C -22to176F	7mm .03"	1	■	■	2	■	1	■ ■	□ □	■ 67	30	■		b-w-international.com
35x260x225mm 21.1x14.2x8.9"	610x430x265mm 24.8x17.7x11.4"	-30to80C -22to176F	7mm .03"	1	■	■	2	■	1	■ ■	□ □	■ 67	30	■ ■ ■	Precut Battery & Drone organiser options	b-w-international.com
76x424x211mm 26.6x16.7x8.3"	754x500x249mm 29.7x19.7x9.8"	-30to80C -22to176F	7mm .03"	1	-	■	7	-	3	-	□	67	30	■	DISCONTINUED but some still available from stockists	b-w-international.com
84x409x295mm 23x16.1x11.6"	660x490x335mm 26x19.3x13.2"	-30to80C -22to176F	7mm .03"	2	■	■	4	■	3	■ ■	□ □	■ 67	30	■		b-w-international.com
70x541x381mm 30.3x21.3x15"	846x615x414mm 33.3x24.2x16.3"	-30to80C -22to176F	7mm .03"	2	■	■	5	■	3	-		■ 67	30	■		b-w-international.com
00x284x190mm 9.7x11.2x7.5"	554x350x241mm 21.8x13.8x9.5"	n/a	7mm .03"	1	■	■	2	-	1	■ ■	■	67	■	■ ■ ■	all-terrain wheels	condition1.com
49x422x325mm 1.6x16.6x12.8"	624x498x371mm 24.6x19.6x14.6"	n/a	7mm .03"	2	■	■	4	-	3	■ ■	■	67	■	■ ■ ■ ■ ■	all-terrain wheels	condition1.com
56x432x231mm 21.9x17x9.1"	625x495x279mm 24.6x19.5x11"	n/a	7mm .03"	2	■	■	4	-	3	■ ■	■	67	■	■	all-terrain wheels	condition1.com
21x439x269mm 8.4x17.3x10.6"	803x511x323mm 31.6x20.1x12.7"	n/a	7mm .03"	2	■	■	4	-	3	■ ■	■	67	■	■	all-terrain wheels	condition1.com
63x336x216mm 8.25x13.25x8.5"	500x406x267mm 19.7x16x10.5"	-30to90C -22to194F	8mm 0.3"	1	■	■	2	-	1	-	□	67	□	■		elephantcases.com
00x350x193mm 9.7x13.8x7.6"	556x452x236 mm 21.9x17.8x9.3"	-30to90C -22to194F	6mm 0.25"	1	■	■	4	□	1	-	□ □	67	□	■	* Only available with organiser interior	elephantcases.com
95x345x267mm 9.5x13.6x10.5"	551x432x330mm 21.7x17x13"	-30to90C -22to194F	6mm 0.25"	1	■	■	4	□	1	-	□	67	□	■		elephantcases.com

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HANDLES*: exc 1x telescoping handle
FOAM/ORGANISE: ☐= Option
WARRANTY: ☐=Limited Lifetime
■=LIMITED Lifetime

MODEL	COMPANY	ORIGIN	COST	WT (empty)	VOLUME	CASE MATERIAL	DEPTH of LID BASE
Elite 2007w	ELEPHANT		$140	5.6kg 12.4 lb	29 L 1 cu'	Polypropylene CoPolymer	44mm 1.75" 152mm 6"
Elite 2107w	ELEPHANT		$215	7kg 15.4 lb	41 L 1.5 cu'	Polypropylene CoPolymer	50mm 2" 140mm 5.5"
Elite 2109w	ELEPHANT		$231	7.8kg 17.25 lb	53 L 1.9 cu'	Polypropylene CoPolymer	50mm 2" 190mm 7.5"
Elite 2409w	ELEPHANT		$260	10kg 21.15 lb	71 L 2.5 cu'	Polypropylene CoPolymer	61mm 2.4" 188mm 7.4"
Elite 2413w	ELEPHANT		$283	11.1kg 24.55 lb	97 L 3.4 cu'	Polypropylene CoPolymer	61mm 2.4" 279mm 11"
Elite 2911w	ELEPHANT		$336	11kg 24.45 lb	99 L 3.5 cu'	Polypropylene CoPolymer	61mm 2.4" 216mm 8.5"
Elite 2196w	ELEPHANT		$416	12.4kg 27.35 lb	144 L 5 cu'	Polypropylene CoPolymer	61mm 2.4" 337mm 13.25"
5122	EXPLORER (GT LINE)		£154 $153 €235	6kg 13.2 lb	31 L 1 cu'	Co-Polymer Polypropylene	50mm 2" 167mm 6.6"
5218	EXPLORER (GT LINE)		£165 €231	3.75kg 8.3 lb	26.6 L 0.9 cu'	Co-Polymer Polypropylene	30mm 1.2" 150mm 5.9"
5221	EXPLORER (GT LINE)		£165 $220 €231	3.9kg 8.6kg	30.3 L 1 cu'	Co-Polymer Polypropylene	55mm 2.2" 150mm "
5326	EXPLORER (GT LINE)		£224 $216 €350	10kg 22 lb	53L 1.9 cu'	Co-Polymer Polypropylene	60mm 2.4" 190mm "
5823	EXPLORER (GT LINE)		£225 $216 €357	9.2kg 20.3 lb	56 L 2 cu'	Co-Polymer Polypropylene	60mm 2.4" 160mm 6.3"

WHEELED HARD CASES

INTERNAL DIMENSIONS	EXTERNAL DIMENSIONS	TEMP RANGE	EYE DIAMETER	TYPE of CASE	PRESSURE VALVE	LOCK/LOCKABLE	SNGL/DBL LATCHES	ID PANEL/STRAP	CARRY HANDLES *	ERGONOMIC GRIP	FOAM ORGANISE	I.P. MILSPEC	WARRANTY YRS	COLOURS	NOTES	WWW.
20x285x198mm 20.5x11.4x7.8"	584x361x239mm 23x14.2x9.4"	-30to90C -22to194F	8mm 0.3"	1A	■	■	2	-	3	-	□	67	□	■		elephantcases.com
38x405x190mm 21.2x15.9x7.5"	604x472x226mm 23.8x18.6x8.9"	-30to90C -22to194F	8mm 0.3"	1	■	■	4	-	3	-	□	67	□	■		elephantcases.com
38x405x244mm 21.2x15.9x9.6"	604x472x282mm 23.8x18.6x11.1 "	-30to90C -22to194F	8mm 0.3"	2	■	■	4	-	3	-	□	67	□	■		elephantcases.com
20x460x249mm 24.4x18.1x9.8"	686x528x287mm 27x20.8x11.3"	-30to90C -22to194F	8mm 0.3"	2	■	■	4	-	3	-	□	67	□	■		elephantcases.com
20x460x340mm 4.4x18.1x13.4 "	686x528x376mm 27x20.8x14.8"	-30to90C -22to194F	8mm 0.3"	2	■	■	4	-	3	-	□	67	□	■		elephantcases.com
47x476x279mm 29.4x18.75x11"	813x533x305mm 32x21x12"	-30to90C -22to194F	9.5mm 0.4"	2	■	■	7	■	4*	-	□	67	□	■	*No Telescopic Handle	elephantcases.com
47x476x406mm 29.4x18.75x16"	813x533x432mm 32x 21x17 "	-30to90C -22to194F	9.5mm 0.4"	2	■	■	7	■	2*	-	□	67	□	■	*No Telescopic Handle	elephantcases.com
17x277x217mm 20.3x10.9x8.5"	546x347x247mm 21.5x13.7x9.7"	-33to90C -27to194F	7mm 0.3"	1A	■	■ □	2	■	1	■	□ □	■ 67	■	■ ■ ■	Lid can be set to slide off at 70 °	explorercases.com
20x285x180mm 20.5x11.2x7"	550x350x200mm 21.6x13.8x7.9"	-33to90C -27to194F	7mm 0.3"	1A	■	■ □	2	■	1	■	□ □	■ 67	■	■ ■ ■	Lid can be set to slide off at 70 °	explorercases.com
20x285x205mm 20.5x11.2x8"	550x350x225mm 21.6x13.x8.7"	-33to90C -27to194F	7mm 0.3"	1A	■	■ □	2	■	1	■	□ □	■ 67	■	■ ■ ■	Lid can be set to slide off at 70 °	explorercases.com
38x405x250mm 21.2x15.9x9.8"	627x475x292mm 24.7x 18.7x11.5"	-33to90C -27to194F	7mm 0.3"	2	■	■ □	4	■	3	■	□ □	■ 67	■	■ ■ ■	Lid can be set to slide off at 70 °	explorercases.com
80x440x220mm 22.8x17.3x8.7"	670x510x262mm 26.4x20x10.3"	-33to90C -27to194F	7mm 0.3"	2	■	■ □	4	■	3	■	□ □	■ 67	■	■ ■ ■	Lid can be set to slide off at 70 °	explorercases.com

COST: Approx & include local tax/VAT.
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CASE TYPES: 1=Carry Case, 1A=Carry On, 2=Chest,5=Long 6=Crate, 7=Rack.
HANDLES*: exc 1x telescoping handle
FOAM/ORGANISE: ☐= Option
WARRANTY: ☐=Limited Lifetime
■=LIMITED Lifetime

MODEL	COMPANY	ORIGIN	COST	WT (empty)	VOLUME	CASE MATERIAL	DEPTH of LID BASE
5833	EXPLORER (GT LINE)		£228 $241 €362	10.5kg 23.1 lb	84 L 2.9 cu'	Co-Polymer Polypropylene	60mm 2.4" 270mm 10.6"
7630	EXPLORER (GT LINE)		£248 $264 €396	13.6kg 30 lb	113 L 4 cu'	Co-Polymer Polypropylene	60mm 2.4" 245mm 9.6"
7641	EXPLORER (GT LINE)		£287 $306 €450	15kg 33 lb	154 L 5.4 cu'	Co-Polymer Polypropylene	60mm 2.4" 355mm 14"
7726	EXPLORER (GT LINE)		£325 $316 €438	10.3kg 22.7 lb	118 L 4.2 cu'	Co-Polymer Polypropylene	90mm 3.5" 175 mm 6.9"
7745	EXPLORER (GT LINE)		£355 $360 €546	15.5kg 34.1 lb	200 L 7 cu'	Co-Polymer Polypropylene	90mm 3.5" 360 mm 14.2"
Titan Utility GU-2015-10	GATOR CASE		$240	6.9kg 15.1 lb	52 L 1.8 cu'	NK-7 Resin	60mm* 2.4" 196mm 7.7"
Titan Utility GU-2217-13	GATOR CASE		$285	8.7kg 19.2 lb	78 L 2.75 cu'	NK-7 Resin	60mm* 2.4" 261mm 10.3"
Titan Utility GU-2011-07	GATOR CASE		$155	4.9kg 10.8 lb	28 L 1 cu'	NK-7 Resin	60mm* 2.4" 129mm 5.1"

WHEELED HARD CASES

INTERNAL DIMENSIONS	EXTERNAL DIMENSIONS	TEMP RANGE	EYE DIAMETER	TYPE of CASE	PRESSURE VALVE	LOCK/LOCKABLE	SNGL/DBL LATCHES	ID PANEL/STRAP	CARRY HANDLES *	ERGONOMIC GRIP	FOAM ORGANISE	I.P. MILSPEC	WARRANTY YRS	COLOURS	NOTES	WWW.
80x440x330mm 22.8x17.3x13"	670x510x372mm 26.4x20x14.6"	-33to90C -27to194F	7mm 0.3"	2	■	■ □	4	■	3	■	□ □	■ 67	■	■ ■ ■		explorercases.com
65x485x305mm 30.1x19x12"	860x560x355mm 33.9x22 x14"	-33to90C -27to194F	7mm 0.3"	2	■	■ □	7	■	3	-	□ □	■ 67	■	■ ■ ■		explorercases.com
65x485x415mm 30.1x19x16.3"	860x560x460mm 33.9x22 x14"	-33to90C -27to194F	7mm 0.3"	2	■	■ □	7	■	3	-	□ □	■ 67	■	■ ■ ■		explorercases.com
70x580x265mm 0.3x22.8x10.4 "	836x641x304mm 32.9x25.2x12"	-33to90C -27to194F	7mm 0.3"	2	■	■ □	7	■	3*	-	□	■ 67	■	■ ■ ■	*No Telescopic Handle	explorercases.com
70x580x450mm 0.3x22.8x 17.7"	836x641x489mm 32.9x25.2x19.25"	-33to90C -27to194F	7mm 0.3"	2	■	■ □	7	■	3	-	□	■ 67	■	■ ■ ■		explorercases.com
21x389x256mm 0.5x15.3x10.1"	579x465x297mm 22.8x18.3x11.7"	n/a	8mm 0.3"	1A	■	■	2	-	2	■ ■	□	■ 67	□	■	*approximate dimensions	gatorcases.com
59x432x323mm 22x17x12.7"	645x508x368mm 25.4x20x14.5"	n/a	8mm 0.3"	2	■	■	4	-	3	■ ■	□	■ 67	□	■	*approximate dimensions	gatorcases.com
21x287x190mm 0.5x 11.3x 7.5"	559x356x229mm 22x14x9"	n/a	8mm 0.3"	1A	■	■	2	-	2	■ ■	□	■ 67	□	■	*approximate dimensions	gatorcases.com

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HANDLES*: exc 1x telescoping handle
FOAM/ORGANISE: ☐= Option
WARRANTY: ☐=Limited Lifetime
■=LIMITED Lifetime

MODEL	COMPANY	ORIGIN	COST	WT (empty)	VOLUME	CASE MATERIAL	DEPTH of LID BASE	
2550W	HPRC (PLABER)		$179 €289	4.35kg 9.57 lb	29 L 1cu'	Polypropylene TTX01/Glass Fibre/Rubber	48mm 1.9" 152mm 6"	5
2600W	HPRC (PLABER)		$189 €336	6.05kg 13.3lb	38 L 1.34cu'	Polypropylene TTX01/Glass Fibre/Rubber	45mm 1.8" 172mm 6.8"	4
2700W	HPRC (PLABER)		$207 €408	8.4kg 18.3 lb	65 L 2.26cu'	Polypropylene TTX01/Glass Fibre/Rubber	45mm 1.8" 211mm 8.3"	5 2
2730W	HPRC (PLABER)		$291 €423	7.6kg 16.6 lb	72 L 2.5cu'	Polypropylene TTX01/Glass Fibre/Rubber	45mm 1.8" 271mm 10.7"	5
2745W	HPRC (PLABER)		$265 €370	7.05kg 15.6lb	77 L 2.7cu'	Polypropylene TTX01/Glass Fibre/Rubber	52mm 2" 195mm 7.7"	7
2760W	HPRC (PLABER)		$298 €413	9.2kg 20.3 lb	91 L 3.2cu'	Polypropylene TTX01/Glass Fibre/Rubber	52mm 2" 250mm 9.8"	6 2
2780W	HPRC (PLABER)		$394 €433	12.2kg 26.9 lb	142 L 5cu'	Polypropylene TTX01/Glass Fibre/Rubber	73mm 2.9" 293mm 11.5"	7 2
2800W	HPRC (PLABER)		$358 €445	13.2kg 29.1 lb	179 L 6.3cu'	Polypropylene TTX01/Glass Fibre/Rubber	73mm 2.9" 382mm 15"	7 2
4300W	HPRC (PLABER)		$298 €413	7.3kg 16.1 lb	62 L 2.2cu'	Polypropylene TTX01/Glass Fibre/Rubber	80mm 3.15" 220mm 8.7"	5
4600W	HPRC (PLABER)		$307 €432	10.7kg 23.5 lb	129 L 4.6cu'	Polypropylene TTX01/Glass Fibre/Rubber	85.5mm 3.36" 289mm 11.4"	6
4700W	HPRC (PLABER)		$395 €471	11.6kg 25.6 lb	81 L 2.9cu'	Polypropylene TTX01/Glass Fibre/Rubber	23mm 0.9" 474mm 18.7"	5
4800W	HPRC (PLABER)		$434 €462	10kg 22.2 lb	136 L 4.8cu'	Polypropylene TTX01/Glass Fibre/Rubber	60mm 2.4" 540mm 21.25"	7 2

WHEELED HARD CASES

INTERNAL DIMENSIONS	EXTERNAL DIMENSIONS	TEMP RANGE	EYE DIAMETER	TYPE of CASE	PRESSURE VALVE	LOCK/LOCKABLE	SNGL/DBL LATCHES	ID PANEL/STRAP	CARRY HANDLES *	ERGONOMIC GRIP	FOAM ORGANISE	I.P. MILSPEC	WARRANTY YRS	COLOURS	NOTES	WWW.
513x288x200mm 20.2x11.3x7.9"	549x346x236mm 21.6x13.6x9.3"	-40to80C 40to176F	6mm 1/4"	1A	■	■	2	■	2	■ ■	□ □	■ 67	□	■ ■ ■	updated in 2017 from previous model Foam+$20	hprc.it hprcusa.com
582x358x218mm 19x14.8x8.6"	546x423x250mm 21x16.7x9.8"	-40to80C 40to176F	6mm 1/4"	1	■	■	4	■	2	■ ■	□ □	■ 67	□	■ ■ ■ ■	updated in 2017 from previous model Foam+$20	hprc.it hprcusa.com
555x459x256mm 21.9x18.1x10.1"	620x525x280mm 24.4x20.7x11"	-40to80C 40to176F	6mm 1/4"	1/2	■	■	4	■	3	■ ■	□ □	■ 67	□	■ ■ ■ ■		hprc.it hprcusa.com
509x460x316mm 20x18.1x12.4"	620x520x350mm 24.4x20.5x13.8"	-40to80C 40to176F	6mm 1/4"	1/2	■	■	4	■	3	■ ■	□ □	■ 67	□	■		hprc.it hprcusa.com
771x401x247mm 30.4x15.8x9.7"	822x452x294mm 32.4x17.8x11.6 "	-40to80C 40to176F	6mm 1/4"	2	■	■	5	■	3	■ ■	□ □	■ 67	□	■ ■		hprc.it hprcusa.com
690x450x300mm 27.3x17.7x11.8"	750x510x329mm 29.5x20.1x13"	-40to80C 40to176F	6mm 1/4"	2	■	■	7	■	3	■ ■		■ 67	□	■	Wheels & fold-out handles at both ends, can be pulled flat like a cart. 1 super-wide handle	hprc.it hprcusa.com
749x525x366mm 29.5x20.7x14.4"	810x587x388mm 31.9x23.1x15.3"	-40to80C 40to176F	6mm 1/4"	2	■	■	7	■	3	■ ■		■ 67	□	■	No Telescopic handle- double width top handle instead	hprc.it hprcusa.com
749x525x455mm 29.5x20.7x17.9"	810x587x479mm 31.9x23.1x18.9"	-40to80C 40to176F	6mm 1/4"	2	■	■	7	■	2	■ ■		■ 67	□	■		hprc.it hprcusa.com
585x320x300 mm 23x12.6x11.8"	690x380x358mm 27.2x15x14.1"	-40to80C 40to176F	6mm 1/4"	3	■	■	4	■	3	■ ■	□ □	■ 67	□	■ ■		hprc.it hprcusa.com
611x611x375mm 24x24x14.8"	670x677x419mm 26.4x26.7x16"	-40to80C 40to176F	6mm 1/4"	3	■	■	6	■	1	■ ■	□	■ 67	□	■		hprc.it hprcusa.com
508x301x497mm 20x11.9x19.6"	572x412x564mm 22.5x16.2x22.2"	-40to80C 40to176F	6mm 1/4"	3	■	■	4	■	1	■ ■	□ □	■ 67	□	■		hprc.it hprcusa.com
720x320x600mm 28.3x12.6x23.6"	776x380x649mm 30.6x14.9x25.6"	-40to80C 40to176F	6mm 1/4"	3	■	■	3	■	2*	■ ■	□	■ 67	□	■	*not including the pulling handle which hinges out rather than being telescopic	hprc.it hprcusa.com

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HANDLES*: exc 1x telescoping handle
FOAM/ORGANISE: ☐= Option
WARRANTY: ☐=Limited Lifetime
■=LIMITED Lifetime

	MODEL	COMPANY	ORIGIN	COST	WT (empty)	VOLUME	CASE MATERIAL	DEPTH of LID BASE	
	6300W	HPRC (PLABER)		$321 €311	5.7kg 12.6 lb	54 L 1.9cu'	Polypropylene TTX01/Glass Fibre/Rubber	112mm 4.4" 131mm 5.2"	92
	6400W	HPRC (PLABER)		$353 €323	6.3kg 13.9 lb	64 L 2.3cu'	Polypropylene TTX01/Glass Fibre/Rubber	112mm 4.4" 131mm 5.2""	10
	6500W	HPRC (PLABER)		$408 €332	7.2kg 15.9 lb	76 L 2.7cu'	Polypropylene TTX01/Glass Fibre/Rubber	112mm 4.4" 131mm 5.2"	12 5
	935	NANUK (PLASTICASE)		£169 $222-$238 €186	5.2kg 11.6lb	28.3 L 1cu'	Lightweight NK-7 resin	53mm 2.1" 137mm 5.4"	52 2
	938	NANUK (PLASTICASE)		£227 $280 €252	6.35kg 14.55lb	51L 1.8cu'	Lightweight NK-7 resin	53mm 2.1" 241mm 9.5"	54 2
	950	NANUK (PLASTICASE)		£218 $219 €242	6.8kg 15.1lb	51.8L 1.8cu'	Lightweight NK-7 resin	53mm 2.1" 203mm 8"	52 20
	955	NANUK (PLASTICASE)		£262 $322 €290	8.16 kg 18.4 lb	62.5L 2.2cu'	Lightweight NK-7 resin	53mm 2.1" 274mm 10.8"	5
	960	NANUK (PLASTICASE)		£300 $341 €331	8.7 kg 19.2 lb	79L 2.8cu'	Lightweight NK-7 resin	53mm 2.1" 206mm 8.1"	55
	963	NANUK (PLASTICASE)		£306 $355 €388	11.36kg 25 lb	90.6L 3.2cu'	Lightweight NK-7 resin	53mm 2.1" 216mm 8.5"	73
	965	NANUK (PLASTICASE)		£337 $392 €373	11.36kg 25 lb	120L 4.2cu'	Lightweight NK-7 resin	53mm 2.1" 302mm 11.9"	73
	968	NANUK (PLASTICASE)		£301 $350 €333	9.76kg 21.5lb	89.5L 3.2cu'	Lightweight NK-7 resin	58mm 2.3" 203mm 8"	54 21
	970	NANUK (PLASTICASE)		£342 $453 €378	11.9kg 26.3lb	134L 4.7cu'	Lightweight NK-7 resin	58mm 2.3" 302mm 11.9"	61

WHEELED HARD CASES

INTERNAL DIMENSIONS	EXTERNAL DIMENSIONS	TEMP RANGE	EYE DIAMETER	TYPE of CASE	PRESSURE VALVE	LOCK/LOCKABLE	SNGL/DBL LATCHES	ID PANEL/STRAP	CARRY HANDLES *	ERGONOMIC GRIP	FOAM ORGANISE	I.P. MILSPEC	WARRANTY YRS	COLOURS	NOTES	WWW.
21x279x243mm 36.3x11x9.6"	970x335x258mm 38.2x13.2x11.2"	-40to80C 40to176F	6mm 1/4"	4	■	■	4	-	2	■ ■	□ □	■ 67	□	■	No Telescopic handle-regular top-handle and double width side handle instead	hprc.it hprcusa.com
81x279x243mm 42.6x11x9.6"	1128x335x258mm 44.4x13.2x11.2"	-40to80C 40to176F	6mm 1/4"	4	■	■	4	-	2	■ ■	□ □	■ 67	□	■ ■	No Telescopic handle-regular top-handle and double width side handle instead	hprc.it hprcusa.com
81x279x243mm 50.43x11x9.6"	1330x335x285mm 52.3x13.2x11.2"	-40to80C 40to176F	6mm 1/4"	4	■	■	4	-	2	■ ■	□ □	■ 67	□	■	No Telescopic handle-regular top-handle and double width side handle instead	hprc.it hprcusa.com
21x287x191mm 20.5x11.3x7.5"	559x356x229mm 22x14x9"	-29to60C -20to140F	8.6mm 0.34"	1A	■	■ □	2	□ □	2	■	□ □	■ 67	□	■ ■ ■ ■ ■	option of waterproof internal covers Stackable.Integrated lid stays.2-stage handle height	nanuk.com
46x318x294mm 1.5x12.5x11.6"	605x394x336mm 23.8x15.5x13.2"	-29to60C -20to140F	8.6mm 0.34"	2	■	■ □	2	□	2	■	□ □	■ 67	□	■ ■ ■	option of waterproof internal covers Stackable.Integrated lid stays.2-stage handle height	nanuk.com
21x389x257mm 0.5x15.3x10.1"	579x465x297mm 22.8x18.3x1.7"	-29to60C -20to140F	8.6mm 0.34"	2	■	■ □	2	□	3	■	□ □	■ 67	□	■ ■ ■ ■	option of waterproof internal covers Stackable.Integrated lid stays.2-stage handle height	nanuk.com
59x432x259mm 22x17x10.2"	650x508x300mm 25.6×20×11.8"	-29to60C -20to140F	8.6mm 0.34"	2	■	■ □	2	□	3	■	□ □	■ 67	□	■ ■ ■	option of waterproof internal covers Stackable.Integrated lid stays.2-stage handle height	nanuk.com
59x432x328mm 22×17×12.9"	645x508x368mm 25.4×20×14.5"	-29to60C -20to140F	8.6mm 0.34"	2	■	■ □	4	□	1	■	□ □	■ 67	□	■ ■ ■ ■	option of waterproof internal covers Stackable.Integrated lid stays.2-stage handle height	nanuk.com
37x457x269mm 29x18x10.6"	826x533x312mm 32.5x21x12.3"	-29to60C -20to140F	8.6mm 0.34"	2	■	■ □	5	□	3	■	□ □	■ 67	□	■	option of waterproof internal covers Stackable.Integrated lid stays.2-stage handle height	nanuk.com
37x457x356mm 29x18x14"	826x536x406mm 32.5x21x15.8"	-29to60C -20to140F	8.6mm 0.34"	2	■	■ □	5	□	3	■	□ □	■ 67	□	■	option of waterproof internal covers Stackable.Integrated lid stays.2-stage handle height	nanuk.com
46x546x300mm 1.5x21.5x11.8"	610x627x345mm 25x24.7x13.6"	-29to60C -20to140F	8.6mm 0.34"	2	■	■ □	6	□	1	■	□ □	■ 67	□	■	option of waterproof internal covers Stackable.Integrated lid stays.2-stage handle height	nanuk.com
10x610x361mm 24x24x14.2"	699x691x406mm 27.5x27.2x16"	-29to60C -20to140F	8.6mm 0.34"	2	■	■ □	6	□	1	■	□ □	■ 67	□	■	option of waterproof internal covers Stackable.Integrated lid stays.2-stage handle height	nanuk.com

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HANDLES*: exc 1x telescoping handle
FOAM/ORGANISE: ☐= Option
WARRANTY: ☐=Limited Lifetime
■=LIMITED Lifetime

MODEL	COMPANY	ORIGIN	COST	WT (empty)	VOLUME	CASE MATERIAL	DEPTH of LID BASE
Air/Travel 1535	PELICAN/ PELI-CASES		£275 £459 $201 $310 €280 €431	3.9kg 8.69lb	27 L 1cu'	Polypropylene HPX² polymer	51mm 2" 132mm 5.2"
Air 1556	PELICAN/ PELI-CASES		$211 €348	4.4kg 9.75lb	34 L 1.2cu'	Polypropylene HPX² polymer	51mm 2" 177mm 7"
Air 1606	PELICAN/ PELI-CASES		$244 €362	5.6kg 11.5lb	51 L 1.8cu'	Polypropylene HPX² polymer	51mm 2" 209mm 8.2"
Air 1607	PELICAN/ PELI-CASES		£359 $258 €366	6kg 13.2lb	63 L 2.2cu'	Polypropylene HPX² polymer	51mm 2" 244mm 9.6"
Air/Travel 1615	PELICAN/ PELI-CASES		£423 £703 $274 $420 €505 €718	6.4kg 14.1lb	71 L 2.5cu'	Polypropylene HPX² polymer	51mm 2" 187mm 7.4"
Air 1626	PELICAN/ PELI-CASES		£446 $279 €452	6.6kg 14.7lb	76 L 2.7cu'	Polypropylene HPX² polymer	51mm 2" 247mm 9.7"
Air 1637	PELICAN/ PELI-CASES		£439 $290 €447	6.9kg 15.2lb	89 L 3.1cu'	Polypropylene HPX² polymer	51mm 2" 284mm 11.2"
Protector 1440	PELICAN/ PELI-CASES		£294 $205 €275	6.6kg 14.5lb	34 L 1.2cu'	Polypropylene	51mm 2" 356mm 14"
Protector 1510	PELICAN/ PELI-CASES		£280 $200 €262	5.4kg 12lb	27 L 1cu'	Polypropylene	45mm 1.79" 147mm 5.79"
Protector 1510 Mobility	PELICAN/ PELI-CASES		£530 $368 €494	7.4kg 16.3lb	27 L 1cu'	Polypropylene	45mm 1.79" 147mm 5.79"
Protector 1560	PELICAN/ PELI-CASES		£309 $214 €288	7.7kg 17 lb	44 L 1.6cu'	Polypropylene	51mm 2" 178mm 7"
Protector 1560 Mobility	PELICAN/ PELI-CASES		£536 $385 €500	9.7kg 21.3 lb	44 L 1.6cu'	Polypropylene	51mm 2" 178mm 7"

WHEELED HARD CASES

INTERNAL DIMENSIONS	EXTERNAL DIMENSIONS	TEMP RANGE	EYE DIAMETER	TYPE of CASE	PRESSURE VALVE	LOCK/LOCKABLE	SNGL/DBL LATCHES	ID PANEL/STRAP	CARRY HANDLES *	ERGONOMIC GRIP	FOAM ORGANISE	I.P. MILSPEC	WARRANTY YRS	COLOURS	NOTES	WWW.
18x284x183mm 20.4x11.2x7.2"	558x355x228mm 22x14x9"	-51to71C -60-160F	8mm 5/16"	1A	■	■	2	■	1	■	□ □	■ 67	■	■ ■ ■ ■ ■ ■	Travel version c/w Cube storage pouches. Push-button latch release	pelican.com peli.co.uk peli.com
49x273x228mm 21.6x10.7x9"	595x343x268mm 23.4x13.5x10.6"	-51to71C -60-160F	8mm 5/16"	1	■	■	2	■	1	■	□ □	■ 67	■	■	Push-button latch release	pelican.com peli.com
623x312x26mm 245x12.3x10.2"	696x384x300mm 27.4x15.1x11.8"	-51to71C -60-160F	8mm 5/16"	1	■	■	5	■	3	■	□ □	■	■	■	Push-button latch release	pelican.com peli.com
35x402x295mm 21x15.8x11.6"	613x478x337mm 24 x19x13.25"	-51to71C -60-160F	8mm 5/16"	1/2	■	■	4	■	3	■	□ □	■ 67	■	■ ■ ■ ■	Push-button latch release	pelican.com peli.co.uk peli.com
52x394x238mm 29.6x155x9.4"	828x467x280mm 32.6x18.4x11"	-51to71C -60-160F	8mm 5/16"	2	■	■	5	■	3	■	□ □	■ 67	■	■ ■ ■ ■ ■ ■	Travel version c/w Cube storage pouches. Push-button latch release	pelican.com peli.co.uk peli.com
15x358x298mm 8.1x14.1x11.7"	790x433x339mm 31.2x17x13.3"	-51to71C -60-160F	8mm 5/16"	2	■	■	5	■	3	■	□ □	■	■	■	Push-button latch release	pelican.com peli.co.uk peli.com
95x446x337mm 3.4x17.5x13.25"	550x350x225mm 21.7x13.8x8.9"	-51to71C -60-160F	8mm 5/16"	2	■	■	5	■	3	■	□ □	■	■	■ ■ ■ ■	Push-button latch release.	pelican.com peli.co.uk peli.com
34x191x406mm 17.1x7.5x16"	500x305x457mm 19.7x12x18"	-40to99C -40to210F	8mm 5/16"	3	■	■	3	-	2	■ ■	■ ■	■ 67	■	■ □	Precut Battery & Drone organiser options.	pelican.com peli.co.uk peli.com
35x260x225mm 21.1x14.2x8.9"	610x430x265mm 24.8x17.7x11.4"	-40to99C -40to210F	8mm 5/16"	1A	■	■	2	■	1	■ ■	□ □	■ 67	■	■ ■ ■	Precut Battery & Drone organiser options	pelican.com peli.co.uk peli.com
35x260x225mm 21.1x14.2x8.9"	598x365x270mm 23.5x14.4x10.6"	-40to99C -40to210F	8mm 5/16"	1	■	■	2	■	1	■ ■	□ □	■ 67	■	■	Ruggedised wheels and stand for 'off-road' use	pelican.com peli.co.uk peli.com
06x380x229mm 19.9x15x9"	561x455x265mm 22x17.9x10.4"	-40to99C -40to210F	8mm 5/16"	1	■	■	2	■	2	■ ■	□ □	■ 67	■	■ ■ ■ ■ ■		pelican.com peli.co.uk peli.com
06x380x229mm 19.9x15x9"	604x466x307mm 23.8x18.3x12"	-40to99C -40to210F	8mm 5/16"	1	■	■	2	■	2	■ ■	□ □	■ 67	■	■	Ruggedised wheels and stand for 'off-road' use	pelican.com peli.co.uk peli.com

COST: Approx & include local tax/VAT.
COSTS in £$€= Currency conversion only.
CASE TYPES: 1=Carry Case, 1A=Carry On, 2=Chest,5=Long 6=Crate, 7=Rack.
HANDLES*: exc 1x telescoping handle
FOAM/ORGANISE: ☐= Option
WARRANTY: ☐=Limited Lifetime
■=LIMITED Lifetime

	MODEL	COMPANY	ORIGIN	COST	WT (empty)	VOLUME	CASE MATERIAL	DEPTH of LID BASE	
	Protector 1610	PELICAN/ PELI-CASES		£416 $278 €389	8.8kg 19.5 lb	63 L 2.2cu'	Polypropylene	51mm 2" 218mm 8.6"	5 2
	Protector 1610 Mobility	PELICAN/ PELI-CASES		£648 $449 €604	11.9kg 26.3 lb	63 L 2.2cu'	Polypropylene	51mm 2" 218mm 8.6"	5 2
	Protector 1620	PELICAN/ PELI-CASES		£444 $302 €414	9.6kg 21.2 lb	72 L 2.5cu'	Polypropylene	51mm 2" 267mm 10.5"	5 2
	Protector 1620 Mobility	PELICAN/ PELI-CASES		£688 $384 €642	12.7kg 28 lb	72 L 2.5cu'	Polypropylene	51mm 2" 267mm 10.5"	5 2
	Protector 1630	PELICAN/ PELI-CASES		£586 $433 €546	14.1kg 31 lb	148 L 5.2cu'	Polypropylene	83mm 3.25" 308mm 12.1"	7
	Protector 1640	PELICAN/ PELI-CASES		£493 $366 €460	15.4kg 34 lb	130 L 4.6cu'	Polypropylene	51mm 2" 302mm 11.9"	6
	Protector 1650	PELICAN/ PELI-CASES		£457 $316 €426	10.9kg 24 lb	87 L 3.1cu'	Polypropylene	46mm 1.8" 225mm 8.8"	7 2
	Protector 1660	PELICAN/ PELI-CASES		£673 $451 €627	15.5kg 34.2 lb	160 L 5.6cu'	Polypropylene	89mm 3.5" 359mm 14.2"	7 2
	Protector 1670	PELICAN/ PELI-CASES		£508 $370 €474	10.4kg 23 lb	70 L 2.5cu'	Polypropylene	46mm 1.8" 188mm 7.4"	7
	Protector 1690 Transport	PELICAN/ PELI-CASES		£692 $490 €644	15.4kg 34 lb	191 L 6.75cu'	Polypropylene	73mm 2.86" 308mm 12.1"	7 3
	Protector 1730 Transport	PELICAN/ PELI-CASES		£734 $546 €684	13.6kg 30 lb	167 L 5.9cu'	Polypropylene	64mm 2.5" 254mm 10"	8
	Protector 0450 Tool Chest	PELICAN/ PELI-CASES		£1200 $930 €1402	22kg 48.4 lb	46.75L 1.7cu'	Polypropylene	mm " mm "	5

WHEELED HARD CASES

INTERNAL DIMENSIONS	EXTERNAL DIMENSIONS	TEMP RANGE	EYE DIAMETER	TYPE of CASE	PRESSURE VALVE	LOCK/LOCKABLE	SNGL/DBL LATCHES	ID PANEL/STRAP	CARRY HANDLES *	ERGONOMIC GRIP	FOAM ORGANISE	I.P. MILSPEC	WARRANTY YRS	COLOURS	NOTES	WWW.
53x424x270mm 1.8x16.7x10.6"	631x500x302mm 24.8x16.7x11.9"	-40to99C -40to210F	8mm 5/16"	2	■	■	4	■	3	■ ■	□ □	■ 67	■	■ ■ ■		pelican.com peli.co.uk peli.com
53x424x270 mm 1.8x16.7x10.6"	665x584x347mm 26.2x23x13.7"	-40to99C -40to210F	8mm 5/16"	2	■	■	4	■	3	■ ■	□ □	■ 67	■	■	Ruggedised wheels and stand for 'off-road' use	pelican.com peli.co.uk peli.com
46x417x319mm 1.5x16.4x12.5"	629x497x353mm 24.8x19.6x13.9"	-40to99C -40to210F	8mm 5/16"	2	■	■	4	■	3	■ ■	□ □	■ 67	■	■ ■ ■		pelican.com peli.co.uk peli.com
46x417x319mm 1.5x16.4x12.5"	665x584x396mm 26.2x23x15.6"	-40to99C -40to210F	8mm 5/16"	2	■	■	4	■	3	■ ■	□ □	■ 67	■	■	Ruggedised wheels and stand for 'off-road' use	pelican.com peli.co.uk peli.com
04x533x394mm 27.7x21x15.5"	795x615x444mm 31.3x24.2x17.5"	-40to99C -40to210F	8mm 5/16"	2	■	■	7	■	2	-	□ □	■ 67	■	■ ■		pelican.com peli.co.uk peli.com
02x610x353mm 23.7x23x13.9"	691x699x414mm 27.2x27.5x16.3"	-40to99C -40to210F	8mm 5/16"	2	■	■	6	■	1	-	□ □	■ 67	■	■ ■	NB: US and European interior dimensions can vary on some models. US figures are shown.	pelican.com peli.co.uk peli.com
26x445x272mm 8.6x17.5x10.7"	803x521x317mm 31.6x20.5x12.5"	-40to99C -40to210F	8mm 5/16"	2	■	■	7	■	3	■ ■	□ □	■ 67	■	■ ■	NB: US and European interior dimensions can vary on some models. US figures are shown.	pelican.com peli.co.uk peli.com
16x499x448mm 8.2x19.7x17.6"	803x584x495mm 31.6x23x19.5"	-40to99C -40to210F	8mm 5/16"	2	■	■	7	■	2	-	□ □	■ 67	■	■ ■ ■		pelican.com peli.co.uk peli.com
14x419x233mm 28.1x16.5x9.2"	788x493x284mm 31x19.4x11.2"	-40to99C -40to210F	8mm 5/16"	2	■	■	5	■	2	-	□ □	■ 67	■	■ ■ ■	Oversize handles	peli.co.uk peli.com
65x638x390mm 0.1x25.1x15.4"	849x721x448mm 33.4x28.4x17.6 "	-40to99C -40to210F	8mm 5/16"	2	■	■	5	■	2	-	□ □	■ 67	■	■ ■ ■	Oversize handles	pelican.com peli.co.uk peli.com
64x610x318mm 34x24x12.5"	953x689x365mm 37.5x27.1x14.4"	-40to99C -40to210F	8mm 5/16"	2	■	■	8	■	2	-	□	■ 67	■	■ ■ ■	No Telescopic handle	pelican.com peli.co.uk peli.com
22x229x371mm	608x375x456mm 24x14.75x18"	-40to99C -40to210F	8mm 5/16"	7	■	■	4	■	2	-	□	■ 67	■	■	All 3 Prices are WITH drawers Double telescoping handle. Pull out drawers when the case is on its side.	peli.co.uk peli.com

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HANDLES*: exc 1x telescoping handle
FOAM/ORGANISE: ☐= Option
WARRANTY: ☐=Limited Lifetime
■=LIMITED Lifetime

MODEL	COMPANY	ORIGIN	COST	WT (empty)	VOLUME	CASE MATERIAL	DEPTH of LID BASE
Protector 1740	PELICAN/ PELI-CASES		£631 $448 €588	10kg 22 lb	105 L 3.7cu'	Polypropylene	65mm 2.56" 243mm 9.6"
Protector 1770	PELICAN/ PELI-CASES		£763 $616 €711	16.3kg 36 lb	120 L 4.2cu'	Polypropylene	48mm 1.9" 171mm 6.75"
Protector 1780T	PELICAN/ PELI-CASES		£789 $610 €736	17.4kg 38.4 lb	216 L 7.6cu'	Polypropylene	193mm 7.6" 185mm 7.3"
Storm iM2435	PELICAN/ PELI-CASES		£288 $183 €331	4.5kg 10 lb	29 L 1cu'	Polypropylene HPX² polymer	51mm 2" 343mm 13.5"
Storm iM2500	PELICAN/ PELI-CASES		£276 $212 €328	5kg 11.1 lb	28 L 1cu'	Polypropylene HPX² polymer	51mm 2" 132mm 5.2"
Storm iM2620	PELICAN/ PELI-CASES		£304 $229 €360	5.7kg 12.5 lb	46 L 1.6cu'	Polypropylene HPX² polymer	51mm 2" 203mm 8"
Storm iM2720	PELICAN/ PELI-CASES		£410 $278 €486	7.6kg 16.8 lb	61 L 2.2cu'	Polypropylene HPX² polymer	51mm 2" 203mm 8"
Storm iM2750	PELICAN/ PELI-CASES		£437 $302 €517	8.4kg 18.5 lb	78 L 2.75cu'	Polypropylene HPX² polymer	51mm 2" 272mm 10.7"
Storm iM2875	PELICAN/ PELI-CASES		£446 $316 €529	9.1kg 20.1 lb	89 L 3.1cu'	Polypropylene HPX² polymer	51mm 2" 239mm 9.4"
Storm iM2950	PELICAN/ PELI-CASES		£449 $319 €533	9.4kg 20.8 lb	90 L 3.2cu'	Polypropylene HPX² polymer	51mm 2" 216mm 8.5"
Storm iM2975	PELICAN/ PELI-CASES		£495 $345 €589	10.3kg 22.8 lb	118 L 4.2cu'	Polypropylene HPX² polymer	51mm 2" 300mm 11.8"
Storm iM3075	PELICAN/ PELI-CASES		£666 $453 €783	14.3kg 31.5 lb	181 L 6.4cu'	Polypropylene HPX² polymer	102mm 4" 349mm 13.75"

WHEELED HARD CASES

INTERNAL DIMENSIONS	EXTERNAL DIMENSIONS	TEMP RANGE	EYE DIAMETER	TYPE of CASE	PRESSURE VALVE	LOCK/LOCKABLE	SNGL/DBL LATCHES	ID PANEL/STRAP	CARRY HANDLES *	ERGONOMIC GRIP	FOAM ORGANISE	I.P. MILSPEC	WARRANTY YRS	COLOURS	NOTES	WWW.
041x328x308mm 41x12.9x12.1 "	1122x409x356mm 44.2x16.1x14"	-40to99C -40to210F	8mm 5/16"	5	■	■		■	2	-	□	■ 67	■	■ ■ ■	No Telescopic handle	pelican.com peli.co.uk
386x396x219mm 54.6x15.6x8.6"	1458x469x285mm 57.4x18.5x11.2"	-40to99C -40to210F	8mm 5/16"	5	■	■	6	■	2	-	□*	■ 67	■	■ ■ ■	No Telescopic handle	pelican.com peli.co.uk
044x547x378mm 1.1x21.5x14.9"	1140x643x419mm 44.9x25.3x16.5"	-40to99C -40to210F	8mm 5/16"	2	■	■	8	■	4	-	□	■ 67	■	■	Also 'W' Weapons variant	pelican.com peli.co.uk
45x165x394mm 17.5x6.5x15.5"	473x235x419mm 18.6x9.25x16.5"	-29to60C -20to140F	6mm 1/4"	1/3	■	■	2	■	1	■	□	67	■	■	Push-button latch release locks automatically	pelican.com peli.co.uk
21x292x183mm 20.5x11.5x7.2"	551x358x226mm 21.7x14.1x8.9"	-29to60C -20to140F	6mm 1/4"	1A	■	■	2	■	1	■ ■	□ □	67	■	■ ■ ■	Push-button latch release locks automatically	pelican.com peli.co.uk
08x356x254mm 20x14x10"	538x406x269mm 21.2x16x10.6"	-29to60C -20to140F	6mm 1/4"	1/2	■	■	2	■	1	■	□ □	67	■	■ ■	Push-button latch release locks automatically	pelican.com peli.co.uk
59x432x254mm 22x17x10"	625x500x297mm 24.6x19.7x11.7"	-29to60C -20to140F	6mm 1/4"	2	■	■	4	■	3	■	□ □	67	■	■ ■ ■	Push-button latch release locks automatically	pelican.com peli.co.uk
59x432x323mm 22x17x12.7"	625x500x366mm 24.6x19.7x14.4"	-29to60C -20to140F	6mm 1/4"	2	■	■	4	■	3	■	□ □	67	■	■ ■ ■	Push-button latch release locks automatically	pelican.com peli.co.uk
73x536x290mm 2.5x21.1x11.4"	632x602x333mm 24.9x23.7x13.1"	-29to60C -20to140F	6mm 1/4"	2	■	■	6	■	3	■	□ ■	67	■	■ ■	Push-button latch release locks automatically	pelican.com peli.co.uk
36x457x267mm 29x18x10.5"	795x518x310mm 31.3x20.4x12.2"	-29to60C -20to140F	6mm 1/4"	2	■	■	5	■	3	■	□ □	67	■	■ ■ ■	Push-button latch release locks automatically	pelican.com peli.co.uk
36x457x351mm 29x18x13.8"	795x518x394mm 31.3x20.4x15.5"	-29to60C -20to140F	6mm 1/4"	2	■	■	5	■	3	■	□ □	67	■	■ ■	Push-button latch release locks automatically	pelican.com peli.co.uk
57x528x452mm 9.8x20.8x17.9"	846x620x490mm 33.3x24.4x19.3"	-29to60C -20to140F	6mm 1/4"	2	■	■	7	■	4	■	□ □	67	■	■ ■	Push-button latch release locks automatically	pelican.com peli.co.uk

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HANDLES*: exc 1x telescoping handle
FOAM/ORGANISE: ☐= Option
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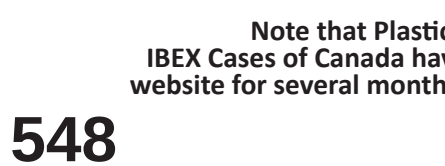
■=LIMITED Lifetime

	MODEL	COMPANY	ORIGIN	COST	WT (empty)	VOLUME	CASE MATERIAL	DEPTH of LID BASE	
	MAX 465H220TR	PLASTICA PANARO		£172 €138	4.5kg 13.4 lb	34.3 L 1.2cu'	Polypropylene Copolymer	40mm 1.6" 180mm 7"	
	MAX 505H280TR	PLASTICA PANARO		£207 €178	6.1kg 13.4 lb	49 L 1.7cu'	Polypropylene Copolymer	58mm 2.4" 222mm 8.7"	5
	MAX 505TR	PLASTICA PANARO		£156 €123	5kg 11.1 lb	34 L 1.2cu'	Polypropylene Copolymer	58mm 2.4" 136mm 5.3"	5 1
	MAX 520TR	PLASTICA PANARO		£173 €138	5.1kg	30.2 L 1.1cu'	Polypropylene Copolymer	45mm 1.8" 155mm 11"	5 2
	MAX 540H190TR	PLASTICA PANARO		£200 €162	6.3kg 13.8 lb	41.4 L 1.5cu'	Polypropylene Copolymer	50mm 2" 140mm 6.1"	5 2
	MAX 540H245TR	PLASTICA PANARO		£205 €167	6.8kg 15 lb	53.4 L 1.9 cu'	Polypropylene Copolymer	50mm 2" 195mm 7.7"	5 2
	MAX 620H250TR	PLASTICA PANARO		£242 €201	8.5kg 18.74 lb	71.3 L 2.5cu'	Polypropylene Copolymer	60mm 2.4" 190mm 7.5"	6 2
	MAX 620H340TR	PLASTICA PANARO		£249 €206	9.5kg	97 L 3.4cu'	Polypropylene Copolymer	60mm 2.4" 280mm 11"	62 2
	MAX 750H280	PLASTICA PANARO		£307 €259	10.2kg	100.8 L 3.6cu'	Polypropylene Copolymer	60mm 2.4" 280mm 11"	7 2
	MAX 750H400	PLASTICA PANARO		£326 €276	12.1	144 L 5.1cu'	Polypropylene Copolymer	60mm 2.4" 280mm 11"	7 29
	MAX 820	PLASTICA PANARO		n/a	15.4kg	221.4 L 4.3cu'	Polypropylene Copolymer	60mm 2.4" 280mm 11"	8 3

Note that Plastica Panaro is the manufacturer of the Elephant Cases listed on page 532 to 535.
IBEX Cases of Canada have not yet been included because we have been unable to contact them or access their website for several months. Their website flags as a security risk so we can't really point you in their direction. Fo

WHEELED HARD CASES

INTERNAL DIMENSIONS	EXTERNAL DIMENSIONS	TEMP RANGE	EYE DIAMETER	TYPE of CASE	PRESSURE VALVE	LOCK/LOCKABLE	SNGL/DBL LATCHES	ID PANEL/STRAP	CARRY HANDLES *	ERGONOMIC GRIP	FOAM ORGANISE	I.P. MILSPEC	WARRANTY YRS	COLOURS	NOTES	WWW.
65x335x220mm 18.3x13.2x8.7"	502x422x267mm 19.8x16.6x10.5"	-30to90C -22to194F	8mm 0.3"	1A	■	■	2	□ □	1	-	□ □	■ 67	□	■		plasticapanaro.it
00x350x280mm 19.7x13.8x "	555x437x326mm 21.8x11x12.8"	-30to90C -22to194F	8mm 0.3"	1A	■	■	4	□ □	1	-	□ □	■ 67	□	■		plasticapanaro.it
00x350xl94mm 19.7x13.8x7.6"	555x428x258mm 21.8x16.8x 10.2"	-40to80C 40to176F	8mm 0.3"	1A	■	■	4	□ □	1	-	□ □	67	□	■ ■		plasticapanaro.it
20x290x200mm 20.5x11.4x7.9"	585x361x238mm 23x14.2x9.4"	-30to90C -22to194F	8mm 0.3"	1	■	■	2	□	2	-	□	■ 67	□	■		plasticapanaro.it
38x405x190mm 21.2x15.9x7.5"	604x473x225mm 23.8x18.6x8.9"	-30to90C -22to194F	8mm 0.3"	2	■	■	4	□	3	-	□	■ 67	□	■		plasticapanaro.it
38x405x245mm 22.1x15.9x9.7"	604x473x283mm 23.8x18.6x11.1"	-30to90C -22to194F	8mm 0.3"	2	■	■	4	□	3	-	□	■ 67	□	■		plasticapanaro.it
20x460x250mm 24.4x18.1x9.8"	687x528x286mm 27x20.8x11.3"	-30to90C -22to194F	8mm 0.3"	2	■	■	4	□	3	-	□	■ 67	□	■		plasticapanaro.it
20x460x340 mm 4.4x18.1x13.4"	690x530x370 mm 27.2x21x14.6"	-30to90C -22to194F	8mm 0.3"	2	■	■	4	□	4	-	□	■ 67	□	■	Available without telescopic handle	plasticapanaro.it
50x480x280mm 29.5x18.9x11"	816x540x306mm 32.1x21.3x12"	-30to90C -22to194F	9.5mm 0.4"	2	■	■	7	□	4	-	□	■ 67	□	■	No Telescopic handle-double width top handle instead	plasticapanaro.it
50x480x400mm 9.5x18.9x15.75"	816x540x426mm 32.1x21.3x16.8"	-30to90C -22to194F	9.5mm 0.4"	2	■	■	7	■	3	-	□	■ 67	□	■	No Telescopic handle-double width top handle instead	plasticapanaro.it
20x600x450mm 2.3x23.6x17.7"	880x660x483mm 34.6x26x19"	-30to90C -22to194F	9.5mm 0.4"	2	■	■	7	■	3	-	□	■ 67	□	■	NEW. No Telescopic handle-double width top handle instead	plasticapanaro.it

reference they have have 3 cases relevant to this GUIDE which are still available on Amazon and via some suppliers, the 1800, 2500 and 2700.

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WARRANTY: ☐=Limited Lifetime
■=LIMITED Lifetime

	MODEL	COMPANY	ORIGIN	COST	WT (empty)	VOLUME	CASE MATERIAL	DEPTH of LID BASE	
	SE-830	SEAHORSE		$113	4.24kg 9.33 lb	28L 1cu'	Co-Polymer Polypropylene	43mm 1.7" 155mm 6.1"	5(
	SE-920	SEAHORSE		£153 $118	6.45kg 14.2 lb	41.75L 1.47cu'	Co-Polymer Polypropylene	61mm 2.4" 175mm 6.9"	5(2
	SE-1220	SEAHORSE		$189	11.66kg 25.7 lb	107.6L 3.8cu'	Co-Polymer Polypropylene	71mm 2.8" 251mm 9.9"	6(2
	3i-1914-8	SKB		£234 $194 €262	5.85kg 12.9 lb	35.25L 1.25cu'	Co-Polymer Polypropylene	50mm 2" 152mm 6"	4(
	3i-2011-7	SKB		£170 $156	4.76kg 10.5 lb	28L 1cu'	Co-Polymer Polypropylene	50mm 2" 139mm 5.5"	5(2
	3i-2011-10	SKB		$	5.8kg 12.75 lb	40L 1.4cu'	Co-Polymer Polypropylene	50mm 2" 216mm 8.5"	5(2
	3i-2015-10	SKB		£248 $206	6kg 13.2 lb	52L 1.8cu'	Co-Polymer Polypropylene	50mm 2" 203mm 8"	5(2
	3i-2213-12	SKB		£248 $206	7.44kg 16.4 lb	56.2L 2cu'	Co-Polymer Polypropylene	50mm 2" 152mm 6"	5(
	3i-2217-10	SKB		£252 $211	7.66kg 16.9 lb	64L 2.26cu'	Co-Polymer Polypropylene	50mm 2" 216mm 8.5	5(
	3i-2217-12	SKB		£264 $234	8.25kg 18.2 lb	77.4L 2.7cu'	Co-Polymer Polypropylene	50mm 2" 272mm 10.7"	5(
	3i-2222-12	SKB		£283 $256	9.3kg 20.6 lb	103.7L 3.7cu'	Co-Polymer Polypropylene	50mm 2" 266mm 10.5"	5(2
	3i-2317-14	SKB		£295 $223 €309	9kg 19.9 lb	89L 3.1cu'	Co-Polymer Polypropylene	63.5mm 2.5" 292mm 11.5"	5(

WHEELED HARD CASES

INTERNAL DIMENSIONS	EXTERNAL DIMENSIONS	TEMP RANGE	EYE DIAMETER	TYPE of CASE	PRESSURE VALVE	LOCK/LOCKABLE	SNGL/DBL LATCHES	ID PANEL/STRAP	CARRY HANDLES *	ERGONOMIC GRIP	FOAM ORGANISE	I.P. MILSPEC	WARRANTY YRS	COLOURS	NOTES	WWW.
00x280x200mm 19.5x11x7.8"	560x350x230mm 21.9x13.9x8.9"	n/a	9mm 0.35"	1A	■	■ □	2	-	2	-	□ □	■ 67	■	■ ■ ■	Some colours are options in some countries. 3 Latch options. Bearing wheels	seahorsecases.net
62x344x216mm 22.1x13.5x8.5"	617x406x257mm 24.3 x 16.0 x 10.1"	n/a	9mm 0.35"	1A	■	■ □	2	-	2	■ ■	□ □	■ 67	■	■ ■ ■ ■*	Some colours are options in some countries. 3 Latch options. Bearing wheels	seahorsecases.net
53x495x333mm 5.7x19.5x13.1"	721x566x390mm 28.4x22.3x15.3"	n/a	9mm 0.35"	2	■	■	6	-	3	-	□ □		■	■ ■ ■	Some colours are options in some countries. 3 Latch options. Bearing wheels	seahorsecases.net
83x368x200mm 19x14.5x8"	540x425x255mm 21.3x16.75x9.8"	-56to82C -69to180F	10mm 0.4"	1A	■	■	2	-	3	■ ■	□ □	■ 67	■	■		skbcases.com
20x293x190mm 20.5x11.5x7.5"	556x355x229mm 21.9x14x9"	-56to82C -69to180F	10mm 0.4"	1A	■	■ □	2	-	2	■	□ □	■ 67	■	■	Also available with cantilever trays	skbcases.com
08x293x269mm 20x11.5x10.6"	558x355x305mm 22x14x12"	-56to82C -69to180F	10mm 0.4"	1	■	■ □	2	-	2	■	□ □	■ 67	■	■		skbcases.com
20x393x254mm 20.5x15.5x10"	582x457x293mm 22.9x18x11.5"	-56to82C -69to180F	10mm 0.4"	1	■	■ □	2	-	2	■	□ □	■ 67	■	■		skbcases.com
59x330x305mm 22x13x12"	615x425x348mm 24.2x15.5x13.7"	-56to82C -69to180F	10mm 0.4"	1	■	■	2	-	3	■	□ □	■ 67	■	■	Also 2215-8 model £281/€281	skbcases.com
59x430x269mm 22x17x10.6"	623x492x310mm 24.5x19.4x12.2"	-56to82C -69to180F	10mm 0.4"	1	■	■	4	-	3	■	□ □	■ 67	■	■		skbcases.com
59x430x322mm 22x17x12.7"	618x495x365mm 243x19.5x14.4"	-56to82C -69to180F	10mm 0.4"	2	■	■	4	-	3	■	□ □	■ 67	■	■		skbcases.com
72x572x317mm 2.5x22.5x12.5"	620x635x359mm 24.8x25x14.2"	-56to82C -69to180F	10mm 0.4"	2	■	■	6	-	3	■	□ □	■ 67	■	■		skbcases.com
84x430x355mm 23x17x14"	651x495x397mm 25.6x19.5x15.6"	-56to82C -69to180F	10mm 0.4"	2	■	■	5	-	3	■	□	■ 67	■	■		skbcases.com

COST: Approx & include local tax/VAT.
COSTS in £$€= Currency conversion only.
CASE TYPES: 1=Carry Case, 1A=Carry On, 2=Chest,5=Long 6=Crate, 7=Rack.
HANDLES*: exc 1x telescoping handle
FOAM/ORGANISE: ☐= Option
WARRANTY: ☐=Limited Lifetime
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	MODEL	COMPANY	ORIGIN	COST	WT (empty)	VOLUME	CASE MATERIAL	DEPTH of LID BASE	
	3i-2421-7	SKB		£306 $244	8.35kg 18.34 lb	58L 2.1cu'	Co-Polymer Polypropylene	50mm 2" 127mm 5"	6
	3i-2424-14*	SKB		£310 $267	11.1kg 24.5 lb	132.5L 4.7cu'	Co-Polymer Polypropylene	50mm 2" 252mm 12"	6
	3i-2617-12*	SKB		£261 $228	9.4kg 20.8 lb	89.6L 3.2cu'	Co-Polymer Polypropylene	50mm 2" 254mm 10"	6
	3i-2914-15	SKB		$234	9.2kg 20.2 lb	100L 3.5cu'	Co-Polymer Polypropylene	50mm 2" 330mm 13"	7
	3i-2918-10	SKB		£312 $234	9.7kg 21.6 lb	92.6L 3.3cu'	Co-Polymer Polypropylene	50mm 2" 220mm 8.85"	7
	3i-2918-14	SKB		£318 $244	10.52kg 23.2 lb	119.6L 4.2cu'	Co-Polymer Polypropylene	63.5mm 2.5" 292mm 11.5"	7
	3i-2922-10	SKB		£462 $302	12.2kg 26.9lb	104.6L 3.7cu'	Co-Polymer Polypropylene	50mm 2" 356mm 8.5"	7
	3i-2922-16	SKB		£338 $306	12.7kg 28 lb	167.3L 5.9cu'	Co-Polymer Polypropylene	50mm 2" 356mm 14"	7
	3i-3016-10	SKB		£304 $223	8kg 17.6 lb	78.6L 2.8cu'	Co-Polymer Polypropylene	50mm 2" 203mm 8"	7
	3i-3019-12	SKB		£294 $267	10.6kg 23.5 lb	117L 4.1cu'	Co-Polymer Polypropylene	50mm 2" 254mm 10"	7
	3i-3021-18	SKB		£363 $334 €458	13kg 28.8 lb	185.6L 6.6cu'	Co-Polymer Polypropylene	50mm 2" 406mm 16"	7
	3i-3026-15	SKB		£383 $356	14.3kg 31.6 lb	202.3L 7.1cu'	Co-Polymer Polypropylene	50mm 2" 343mm 13.5"	7

WHEELED HARD CASES

INTERNAL DIMENSIONS	EXTERNAL DIMENSIONS	TEMP RANGE	EYE DIAMETER	TYPE of CASE	PRESSURE VALVE	LOCK/LOCKABLE	SNGL/DBL LATCHES	ID PANEL/STRAP	CARRY HANDLES *	ERGONOMIC GRIP	FOAM ORGANISE	I.P. MILSPEC	WARRANTY YRS	COLOURS	NOTES	WWW.
513x533x178mm 24.1x21x7"	666x597x220mm 26.2x23.5x8.7"	-56to82C -69to180F	10mm 0.4"	1/2	■	■	6	-	3	■	□	■ 67	■	■		skbcases.com
610x610x356mm 24x24x14"	673x674x397mm 26.5x26.5x15.6"	-56to82C -69to180F	10mm 0.4"	2	■	■	6	-	3	■	□	■ 67	■	■	*Also 2424-10 model with 10"interior height	skbcases.com
660x445x305mm 26x17.5x12"	726x508x247mm 28.6x20x13.6"	-56to82C -69to180F	10mm 0.4"	2	■	■	5	-	3	■	□ □	■ 67	■	■	*Also 2615-10 model with 10"interior height	skbcases.com
737x356x381mm 29x14x15"	833x424x403mm 32.8x16.7x15.9"	-56to82C -69to180F	10mm 0.4"	2	■	■	5	-	3	■	□	■ 67	■	■		skbcases.com
737x457x275mm 29x18x10.8"	801x529x317mm 31.7x20.5x12.5"	-56to82C -69to180F	10mm 0.4"	2	■	■	5	-	3	■	□ □	■ 67	■	■		skbcases.com
737x457x355mm 29x18x14"	801x529x400mm 31.7x20.5x15.75"	-56to82C -69to180F	10mm 0.4"	2	■	■	5	-	3	■	□	■ 67	■	■		skbcases.com
737x559x254mm 29x22x10.5"	813x622x310mm 32x24.5x12.25"	-56to82C -69to180F	10mm 0.4"	2	■	■	7	-	3*	■	□ □	■ 67	■	■	*3 does not include drag handle which is not telescopic	skbcases.com
737x559x406mm 29x22x16"	813x622x428mm 32x24.5x17"	-56to82C -69to180F	10mm 0.4"	2	■	■	5	-	3*	■	□ □	■ 67	■	■	*3 does not include drag handle which is not telescopic.	skbcases.com
762x406x254mm 30x16x10 "	823x470x276mm 32.4x18.5x11"	-56to82C -69to180F	10mm 0.4"	2	■	■	7	-	3*	■	□ □	■ 67	■	■	*3 does not include drag handle which is not telescopic	skbcases.com
775x495x305mm 30x19x12"	849x560x327mm 33.4x22x12.9"	-56to82C -69to180F	10mm 0.4"	2	■	■	7	-	3*	■	□ □	■ 67	■	■	*3 does not include drag handle which is not telescopic	skbcases.com
762x533x457mm 30x21x18 "	837x598x479mm 32.9x23.5x18.9"	-56to82C -69to180F	10mm 0.4"	2	■	■	7	-	3*	■	□ □	■ 67	■	■	*3 does not include drag handle which is not telescopic	skbcases.com
780x660x394mm 30x26x15.5"	856x725x415mm 33.7x28.5x16.4"	-56to82C -69to180F	10mm 0.4"	2	■	■	7	-	3*	■	□ □	■ 67	■	■	*3 does not include drag handle which is not telescopic	skbcases.com

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	MODEL	COMPANY	ORIGIN	COST	WT (empty)	VOLUME	CASE MATERIAL	DEPTH of LID BASE
	3i-3424-12	SKB		£421 $400 €611	13.7kg 30.4 lb	176L 6.2cu'	Co-Polymer Polypropylene	50mm 2" 273mm 10.75"
	3i-3613-12	SKB		£368 $295 €380	9.2kg 20.2 lb	100L 3.45u'	Co-Polymer Polypropylene	50mm 2" 254mm 10"
	3i-3913-12	SKB		£406 $302	10kg 22.2 lb	110L 3.9cu'	Co-Polymer Polypropylene	50mm 2" 271mm 10.7"
	3i-4213-12	SKB		£362 $322	10.3kg 22.8lb	114L 4cu'	Co-Polymer Polypropylene	50mm 2" 258mm 10.2"
	3R-1209-26	SKB		£499 $650	n/a	47.5L 1.7cu'	Moulded Polyethylene	70mm 2.75" 610mm 24"
	3R-1919-14	SKB		£464 $643 €520	9.5kg 21 lb	87.8L 3cu'	Moulded Polyethylene	83mm 3.2" 290mm 11.4"
	3R-2217-10	SKB		£383 $563 €430	9.3kg 20.5 lb	72L 2.5cu'	Moulded Polyethylene	79mm 3.1" 188mm 7.4"
	3R-2222-12	SKB		£441 $606 €493	11.6kg 25.7 lb	96.2L 3.4cu'	Moulded Polyethylene	79mm 3.1" 229mm 9"
	3R-2423-17	SKB		£602 $830 €675	14kg 30.8 lb	155L cu'	Moulded Polyethylene	95mm 3.75" 338mm 13.3"
	3R-2621-10	SKB		£559 $630	15kg 33 lb	92.7L 3.3cu'	Moulded Polyethylene	50mm 1.95" 203mm 8"
	3R-2817-10	SKB		£420 $587	10.2kg 22.4 lb	90.7L 3.2cu'	Moulded Polyethylene	50mm 2" 218mm 8.6"
	3R-3025-15	SKB		£647 $883 €725	18kg 39.7 lb	190L 6.7cu'	Moulded Polyethylene	99mm 3.9" 290mm 11.4"

WHEELED HARD CASES

INTERNAL DIMENSIONS	EXTERNAL DIMENSIONS	TEMP RANGE	EYE DIAMETER	TYPE of CASE	PRESSURE VALVE	LOCK/LOCKABLE	SNGL/DBL LATCHES	ID PANEL/STRAP	CARRY HANDLES *	ERGONOMIC GRIP	FOAM ORGANISE	I.P. MILSPEC	WARRANTY YRS	COLOURS	NOTES	WWW.
876x622x324m 34x24x12.75"	950x687x346mm 37.4x27x13.6"	-56to82C -69to180F	10mm 0.4"	2	■	■	7	-	3*	■	□	■ 67	■	■	*3 does not include drag handle which is not telescopic	skbcases.com
915x343x305mm 36x13.5x12"	982x408x326mm 39x16x12.8"	-56to82C -69to180F	10mm 0.4"	2/ 5	■	■	6	-	3*	■	□ □	■ 67	■	■	*Includes the pull handle which is an enlarged carry handle and not telescopic	skbcases.com
998x343x322mm 39.3x13.5x12.7"	1067x407x356mm 42x16x14"	-56to82C -69to180F	10mm 0.4"	2/ 5	■	■	6	-	3*	■	□	■ 67	■	■	*Includes the pull handle which is an enlarged carry handle and not telescopic	skbcases.com
080x343x309mm 42.5x13.5x12.2"	1145x407x330mm 45.5x16x13"	-56to82C -69to180F	10mm 0.4"	2/ 5	■	■	6	-	3*	■	□ □	■ 67	■	■	*Includes the pull handle which is an enlarged carry handle and not telescopic	skbcases.com
805x229x680mm 12x9x26.75"	371x338x737mm 14.6x13.3x29"	-56to82C -69to180F	10mm 0.4"	3	■	■	2*	-	2	■	-	■ 67	■	■	*Latches= military-style, stainless Steel wing-latch.-applies to all SKB R-series cases in this list.	skbcases.com
486x486x372mm 19x19x14.6"	572x572x429mm 22.5x22.5x16.9"	-56to82C -69to180F	10mm 0.4"	2/ 7	■	■	6*	-	4	■	□	■ 67	■	■		skbcases.com
559x432x267mm 22x17x10.5"	648x521x305mm 25.5x20.5x12"	-56to82C -69to180F	10mm 0.4"	2/ 7	■	■	4*	-	3	■	□	■ 67	■	■		skbcases.com
559x559x308mm 22x22x12.1"	648x648x345mm 25.5x25.5x13.6"	-56to82C -69to180F	10mm 0.4"	2/ 7	■	■	6*	-	3	■	□	■ 67	■	■		skbcases.com
610x584x437mm 24x23x17.2"	700x676x475mm 27.75x26.6x18.7"	-56to82C -69to180F	10mm 0.4"	2/ 7	■	■	6*	-	4	■	□	■ 67	■	■		skbcases.com
671x544x254mm 26.4x21.4x10"	747x616x362mm 29.4x24.25x14.25"	-56to82C -69to180F	10mm 0.4"	2/ 7	■	■	6*	-	4	■	□	■ 67	■	■		skbcases.com
737x451x273mm 9x17.75x10.75"	826x562x307mm 31.7x 21.2x12.1 "	-56to82C -69to180F	10mm 0.4"	2/ 7	■	■	3*	-	3	■	□	■ 67	■	■		skbcases.com
767x640x387mm 0.2x25.2x15.25"	856x730x426mm 33.7x28.75x16.75"	-56to82C -69to180F	10mm 0.4"	2/ 7	■	■	7*	-	6	■	□	■ 67	■	■		skbcases.com

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HANDLES*: exc 1x telescoping handle
FOAM/ORGANISE: ☐= Option
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MODEL	COMPANY	ORIGIN	COST	WT (empty)	VOLUME	CASE MATERIAL	DEPTH of LID BASE
3R-3214-15	SKB		£621 $938	14kg 30.9 lb	123.8L 4.4cu'	Moulded Polyethylene	83mm 3.25" 290mm 11.4"
3R-3426-19	SKB		£975 $750	24.7kg 54.4 lb	280L 9.9cu'	Moulded Polyethylene	70mm 2.75" 413mm 16.25"
3R-3722-20	SKB		£866 $750	n/a	269L 9.5cu'	Moulded Polyethylene	76mm 3" 407mm 16"
Renegade 22	SURELOCK SECURITY		$180	6.5kg 9.5 lb	27L 0.95cu'	Polypropylene	50mm 2" 150mm 6"
735	TURTLECASES		$247	5.3kg 11.6 lb	28.5L 1cu'	Polypropylene NK-7	53mm 2.1" 137mm 5.4"
738	TURTLECASES		$247	6.6kg 14.5 lb	51L 1.8cu'	Polypropylene NK-7	53mm 2.1" 9.5mm 242"
750	TURTLECASES		$356	6.8kg 15.1 lb	51.9L 1.8cu'	Polypropylene NK-7	53mm 2.1" 203mm 8"
760	TURTLECASES		$484	8.7kg 19.2 lb	79L 2.8cu'	Polypropylene NK-7	53mm 2.1" 274mm 10.8"
6001	TITAN AV		A$265	4.78kg 10.5 lb	29.9L 1cu'	Polypropylene	50mm 2" 150mm 6"
6002	TITAN AV		A$469	5.8kg 12.8 lb	37.9L 1.3cu'	Polypropylene	45mm 1.75" 170mm 6.7"
6003	TITAN AV		A$429	8kg 17.6 lb	61.1L 2.2cu'	Polypropylene	35mm 1.4" 250mm 9.8"
6004	TITAN AV		A$469	9.25kg 20.4 lb	74.1L 2.6cu'	Polypropylene	35mm 1.4" 250mm 9.8"

WHEELED HARD CASES

INTERNAL DIMENSIONS	EXTERNAL DIMENSIONS	TEMP RANGE	EYE DIAMETER	TYPE of CASE	PRESSURE VALVE	LOCK/LOCKABLE	SNGL/DBL LATCHES	ID PANEL/STRAP	CARRY HANDLES *	ERGONOMIC GRIP	FOAM ORGANISE	I.P. MILSPEC	WARRANTY YRS	COLOURS	NOTES	WWW.
13x368x414mm 32x14.5x16.3"	894x447x455mm 35.2x17.6x17.9"	-56to82C -69to180F	10mm 0.4"	2/ 7	■	■	5*	-	2	■	□	67	■	■		skbcases.com
70x667x483mm 4.25x26.25x19"	946x734x584mm 37.2x28.9x23"	-56to82C -69to180F	10mm 0.4"	2/ 7	■	■	7*	-	6	■	-	67	■	■	*Latches= military-style, stainless Steel wing-latch.-applies to all SKB R-series cases in this list	skbcases.com
43x562x508mm 7.5x22.25x20"	1022x635x584mm 40.2x25x23"	-56to82C -69to180F	10mm 0.4"	2/ 7	■	■	7*	■	6	■	-	67	■	■		skbcases.com
01x279x193mm 19.7x11x7.6"	559x351x229mm 22x13.8x9"		9mm 0.35"	1A	■	■	2	-	2	■ ■	■	67		■	Also rebadged by many resellers including Trifibre Cases in the UK	
21x287x190mm 20.5x11.3x7.5"	559x356x229mm 22x14x9"	-28to60C -18to140F	6mm 0.25"	1A	■	■	2	-	2	■ ■	■	67	□	■	stainless steel hardware	turtlecase.com
46x317x295mm 1.5x12.5x11.6"	604x395x335mm 23.8x15.5x13.2"	-28to60C -18to140F	6mm 0.25"	1	■	■	2	-	2	■ ■	■	67	□	■	stainless steel hardware	turtlecase.com
21x389x256mm 0.5x15.3x10.1"	579x465x297mm 22.8x18.3x11.7"	-28to60C -18to140F	6mm 0.25"	2	■	■	2	-	2	■ ■	□ ■	67	□	■	stainless steel hardware	turtlecase.com
59x432x328mm 22x17x12.9"	645x508x368mm 25.4x20x14.5"	-28to60C -18to140F	6mm 0.25"	2	■	■	4	-	2	■ ■	■	67	□	■	stainless steel hardware	turtlecase.com
20x288x200mm 20.5x11.3x7.9"	580x345x230mm 22.8x13.6x14.5"	n/a	7mm 0.3"	1	■	■	4	-	2	-	■	67	2	■	Prices for TitanAV range INCLUDE foam	vfmgroup.com.au
90x360x215mm 16.3s14.2x8.5"	550x425x257mm 21.6x16.7x10.1"	n/a	7mm 0.3"	1	■	■	4	-	1	-	□ ■	67	2	■	Listed as non-stackable but has prominent locating lugs for safer stacking	vfmgroup.com.au
45x395x240mm 25.4x15.5x9.5"	715x460x285mm 28.1x18.1x11.2"	n/a	7mm 0.3"	2	■	■	6	-	3	-	■	67	2	■	Listed as non-stackable but has prominent locating lugs for safer stacking	vfmgroup.com.au
50x400x285mm 5.6x15.7x11.2"	710x458x335mm 28x18x13.2"	n/a	7mm 0.3"	2	■	■	6	-	3	-	■	67	2	■	Listed as non-stackable but has prominent locating lugs for safer stacking	vfmgroup.com.au

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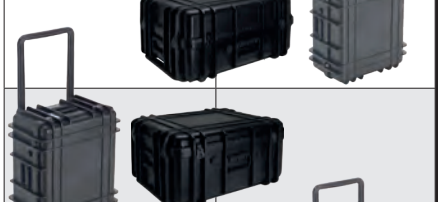
■=LIMITED Lifetime

	MODEL	COMPANY	ORIGIN	COST	WT (empty)	VOLUME	CASE MATERIAL	DEPTH of LID BASE	
	822 Loadout (Transit*)	UNDERWATER KINETICS		£460* $507* €613*	8.7kg* 19.2lb	54.8L 1.9 cu'	Polypropylene or ABS*	56mm 2.2" 157mm 6.2"	5
	827 Loadout (Transit*)	UNDERWATER KINETICS		£507* $546* €660*	9.6kg* 21.2lb	67.2L 2.4 cu'	Polypropylene or ABS*	56mm 2.2" 157mm 6.2"	6
	1022 Loadout (Transit*)	UNDERWATER KINETICS		£507* $546* €672*	9.6kg* 21.2lb	71.2L 2.5 cu'	Polypropylene or ABS*	119mm 4.7" 157mm 6.2"	5 2
	1122 Loadout (Transit*)	UNDERWATER KINETICS		£667* $583* €720*	9.6kg* 21.2lb	71.2L 2.5 cu'	Polypropylene or ABS*	56mm 2.2" 221mm 8.7"	5 2
	1322 Loadout (Transit*)	UNDERWATER KINETICS		£691* $603* €744*	10.5kg* 23.2lb	87.4L 3.1 cu'	Polypropylene or ABS*	119mm 4.7" 221mm 8.7"	5 2
	1422 Loadout (Transit*)	UNDERWATER KINETICS		£714* $623* €768*	10.5kg* 23.2lb	87.4L 3.1 cu'	Polypropylene or ABS*	56mm 2.2" 284mm 11.2"	5 2
	1127 Loadout (Transit*)	UNDERWATER KINETICS		£691* $603* €744*	10.5kg* 23.2lb	87.4L 3.1 cu'	Polypropylene or ABS*	56mm 2.2" 221mm 8.7"	6 2
	1027 Loadout (Transit*)	UNDERWATER KINETICS		£667* $583* €720*	10.5kg* 23.2lb	87.4L 3.1 cu'	Polypropylene or ABS*	119mm 4.7" 157mm 6.2"	6 2
	1622 Loadout (Transit*)	UNDERWATER KINETICS		£739* $642* €793*	11.4kg* 25.2lb	103.9L 3.7 cu'	Polypropylene or ABS*	119mm 4.7" 284mm 11.2"	5 2
	1327 Loadout (Transit*)	UNDERWATER KINETICS		£714* $623* €768*	11.4kg* 25.2lb	107.3L 3.8 cu'	Polypropylene or ABS*	119mm 4.7" 221mm 8.7"	6 2
	1427 Loadout (Transit*)	UNDERWATER KINETICS		£739* $642* €793*	11.4kg* 25.2lb	107.3L 3.8 cu'	Polypropylene or ABS*	56mm 2.2" 284mm 11.2"	6 2
	1627 Loadout (Transit*)	UNDERWATER KINETICS		£763* $662* €817*	12.3kg* 27.2lb	127.5L 4.5 cu'	Polypropylene or ABS*	119mm 4.7" 284mm 11.2"	6 2

WHEELED HARD CASES

INTERNAL DIMENSIONS	EXTERNAL DIMENSIONS	TEMP RANGE	EYE DIAMETER	TYPE of CASE	PRESSURE VALVE	LOCK/LOCKABLE	SNGL/DBL LATCHES	ID PANEL/STRAP	CARRY HANDLES *	ERGONOMIC GRIP	FOAM ORGANISE	I.P. MILSPEC	WARRANTY YRS	COLOURS	NOTES	WWW.
59x460x213mm 22x18.1x "	612x516x249mm 24.1x20.3x9.8"	-29to71C -20to160F	6mm 0.25"	1/2	■	■	6*	-	3	■	□	67	■	■	*for ABS version (Transit) add approx 12% to price & 20% to weight. Applies to all UWK cases in this list	uwkcase.com uwkinetics.eu
86x460x213mm 27x18.1x8.4"	739x516x249mm 29.1x20.3x9.8"	-29to71C -20to160F	6mm 0.25"	2	■	■	6*	-	3	■	□	67	■	■	*Latches= military-style, stainless Steel wing-latch. Applies to all UWK cases in this list	uwkcase.com uwkinetics.eu
59x460x277mm 2x18.1x10.9 "	612x516x312mm 24.1x20.3x12.3"	-29to71C -20to160F	6mm 0.25"	2	■	■	6*	-	3	■	□	67	■	■	Lid easily detached. Bearing rollers. Applies to all UWK cases in this list	uwkcase.com uwkinetics.eu
59x460x277mm 2x18.1x10.9 "	612x516x312mm 24.1x20.3x12.3"	-29to71C -20to160F	6mm 0.25"	2	■	■	6*	-	3	■	□	67	■	■		uwkcase.com uwkinetics.eu
59x460x340mm 2x18.1x13.4"	612x516x376mm 24.1x20.3x14.8"	-29to71C -20to160F	6mm 0.25"	2	■	■	6*	-	3	■	□	67	■	■		uwkcase.com uwkinetics.eu
59x460x340mm 2x18.1x13.4"	612x516x376mm 24.1x20.3x14.8"	-29to71C -20to160F	6mm 0.25"	2	■	■	6*	-	3	■	□	67	■	■		uwkcase.com uwkinetics.eu
86x460x277mm 7x18.1x10.9"	739x516x312mm 29.1x20.3x12.3"	-29to71C -20to160F	6mm 0.25"	2	■	■	6*	-	3	■	□	67	■	■		uwkcase.com uwkinetics.eu
86x460x277mm 7x18.1x10.9"	739x516x312mm 29.1x20.3x12.3"	-29to71C -20to160F	6mm 0.25"	2	■	■	6*	-	3	■	□	67	■	■		uwkcase.com uwkinetics.eu
59x460x404mm 2x18.1x15.9 "	612x516x439mm 24.1x20.3x17.3"	-29to71C -20to160F	6mm 0.25"	2	■	■	6*	-	3	■	□	67	■	■		uwkcase.com uwkinetics.eu
86x460x340mm 7x18.1x13.4"	739x516x376mm 29.1x20.3x14.8"	-29to71C -20to160F	6mm 0.25"	2	■	■	6*	-	3	■	□	67	■	■		uwkcase.com uwkinetics.eu
86x460x340mm 7x18.1x13.4"	739x516x376mm 29.1x20.3x14.8"	-29to71C -20to160F	6mm 0.25"	2	■	■	6*	-	3	■	□	67	■	■		uwkcase.com uwkinetics.eu
86x460x404mm 7x18.1x15.9"	739x516x439mm 29.1x20.3x17.3"	-29to71C -20to160F	6mm 0.25"	2	■	■	6*	-	3	■	□	67	■	■		uwkcase.com uwkinetics.eu

EDER Ascender EPC-240

With 36m/minute and a permissible payload of 240kg, the EDER Ascender is ready for any rescue job. The Ascender is powered by a powerful STIHL battery or 2-stroke engine.

www.eder-maschinenbau.de