ARB CLIMBER

AERIAL ARBORICULTURE•TECHNIQUES•CLIMBING & CUTTING EQUIPMENT

ISSUE 27
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ARB CLIMBER issue 27

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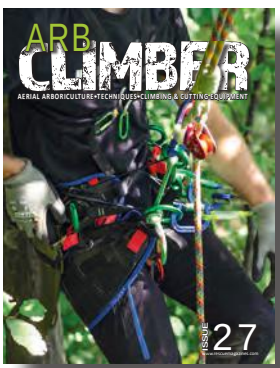
FRONT COVER:
Issue 27's cover features an arb-world icon - the *Teufelberger treeMOTION*. Now in it's 5th or 6th generation as the *X-series* we look at the evolution of the range via all the models in ON-THE-COVER on page 2



Teufelberger tree MOTION® HARNESS SERIES

With another new variant of the **TreeMOTION** this year albeit as a limited edition colour, we thought it would be a good idea to take a look at the various models and how the treeMOTION has evolved since its introduction in 2006/7. Our man Adam is a treeMOTION user and reviewed the **Pro** in issue 23. The first thing to note is that Teufelberger, like Petzl, have adopted a particular sequence of lower and upper case to make up their product names - the first bit lower case, the second bit upper case hence.... treeMOTION. We don't always adhere to these marketing foibles especially in our BUYERS GUIDES but since this particular article is all Teufelberger, we'll go with it.

So, 2007 saw the birth of my latest offspring but, more importantly to the tree world, Teufelberger's own new baby, the first treeMOTION harness. It caused a stir because it was truly unique in appearance and function. Teufelberger had seen the move towards technical hardware and loading up your harness with everything that, in the mountaineering or caving worlds would probably take up two tackle bags! To cater to the varied needs of a self-contained arborist they made a military molle style version of a harness using a heavily perforated leather/thermoplastic outer form. This enabled you to place kit hooks/eyes/loops virtually anywhere on the outer harness and legloops. In our 2023 review Adam described it perfectly...."...*That's not to say that its amazingly complex appearance and do-it-yourself approach to gear layout is to everyone's taste. Quite aside from the cost, many simply don't want the 'hassle' of having to thread their own gear loops and attach their own hooks etc. or wearing what looks a little like something made out of a Home Depot tool display board, preferring instead to go for something simpler that's ready to go straight out of the packaging, and that's perfectly understandable. I however, belong to that category of users that likes to fiddle around customizing my gear and having it in exactly the position on the harness that I want it rather than where the harness says I have to have it. Do you remember the days when your harness just had two gear rings and a chainsaw hook?*"

2006 ***Treemagineers*** showcased the original **treeMOTION** prototype at the **ISA ITCC** in Minneapolis. There wasmuch discussion in the industry because it seemed to be a radical departure from traditional designs.

2007 Official launch to the market of the **"OG" (**Original or Original Generation) **treeMOTION.**

2013-2015 Some changes to **treeMOTION** padding and hardware attachments plus the low-key introduction of **treeMOTION Superlight / S.light** variant introduced as a lighter version using thinner/lighter materials and less adjustability but with redesigned padding and improved ventilation for longer climbing sessions.

2018 Unisize **treeMOTION S.Light USCA** - An internationalised version of the previously Euro certified **S.Light** version with ANSI/CSA/ASTM/AS-NZS certifications for North America/Australia markets Hereafter all TreeMOTION harnesses meet international as well as EU standards,

2019—treeMOTION Evo introduced (at TCIA 2019) with forward D-rings and multiple bridge options including single & double rope or webbing. Cobra buckles also updated. Widespread availaibility in 2020.

2022 — treeMOTION Essential & **treeMOTION Pro** introduced.
— **USCA** & **S.Light** discontinued (though supported for spares until 2030.
Essential & **Pro** feature a 10 year service life and virtually all components as replaceable; bridges, pads, hip-leg connection, etc. **Essential** being a slightly lighter, cheaper, less endowed version of the **Pro**. The Pro featured thermo-moulded foam

padding moulding more evenly to the body without 'rucking' and this has been retained in the latest **Pro X** versions.
Although it may have appeared a feature of previous versions, this 2022 release saw specific colour-coding of life-support hardware in green and buckle adjustment and non-life-support elements in red. It also saw Improved location of, and increased number of, gear attachment options - as we said in the original review in issue 24, it's hard to believe that was even possible given the number of attachment options on the original version. Also new was an openable ring behind the side -'D' rings and in fact these can be moved and used as a rear-attachment instead of the new red webbing loop or on your bridge(s). Finally there was a larger area of belt and leg loop padding (and all these features carried forward to the X-series).

PRO

PRO SPECIAL EDITION

2025 — treeMOTION Pro Limited Edition harness in unique green and blue colours and with custom accessories raising money for an international childrens' charity.

ESSENTIAL X

2025 — treeMOTION Pro X harnesses introduced as the first of "**X-series**" and a rationilisation of the **treeMOTION** range by replacing the previous **Pro** and **Essential**. **Essential X** & **Pro X** differ from their predecessors in having Velcro attachment for the back pad, shortened/stronger elastics & refined, tougher semi-matt anodized hardware, dual-bridge set (long + short) and further tweaks to the overall durability.

PRO X

The **treeMOTION** range continues to evolve and adapt to user requirements even in the face of direct competition from models like the *DMM Kinisi* and *Husqvarna Climbing Harness*. Users of any previous **treeMOTION** needn't worry about being cut adrift as all models retain support and spare parts well beyond 2030 or the 'use-by' date of your purchase. Despite the bewildering number of models shown here, you now only have to think **Essential X** (costing around £356 $500 €440) and **Pro X** (costing around £472 $625 €582) for the current line-up but expect to see that expand. Check in with your local stockist or **teufelberger.com**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THE POWER
Get ready to revolutionize the way you work with the Husqvarna® x Skylotec Power Ascender. Designed for arborists and tree care professionals, this battery-powered ascender, using Husqvarna® Bli-X 36V battery system, makes the ascend into the canopy effortless and efficient. Experience smooth ascents and descents, remote control functionality and robust, weatherproof construction.
With a lifting capacity of 185 kg and speeds up to 24 meters per minute, you've got the power to tackle any challenge in the canopy. Elevate your workday with the ICX – because you've got the power!
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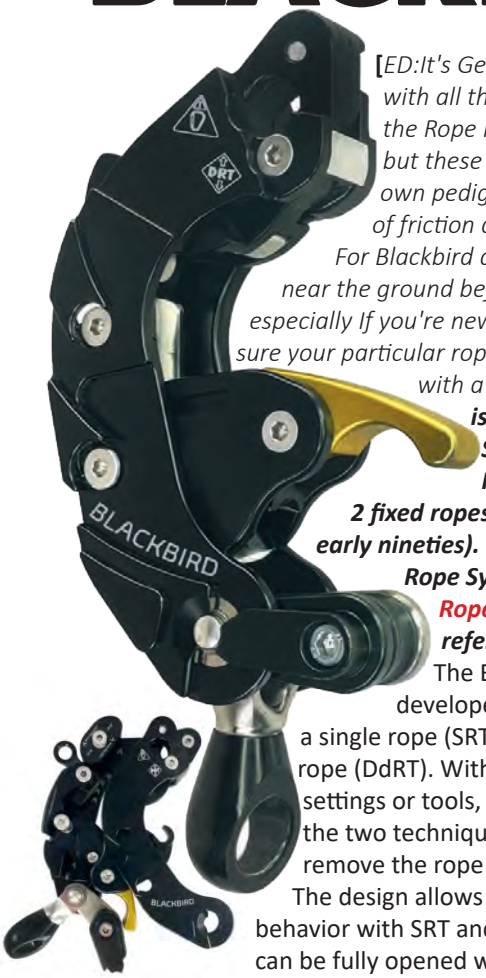
ART

BLACKBIRD



[*ED:It's Getting difficult to keep up with all these variations on either the Rope Runner or the Akimbo but these two obviously have their own pedigrees at the forefront of friction device development. For Blackbird and Ak² - practice on / near the ground before work deployment especially If you're new to the game. Make sure your particular rope works OK and try it with a wet rope too!* ***NB: DRT is not a Moving Rope System it is a Stationary Rope System (SRS) using 2 fixed ropes (for rescue since the early nineties). The arborist Moving Rope System (MRS) is Doubled Rope and should really be referred to as DdRT****]*

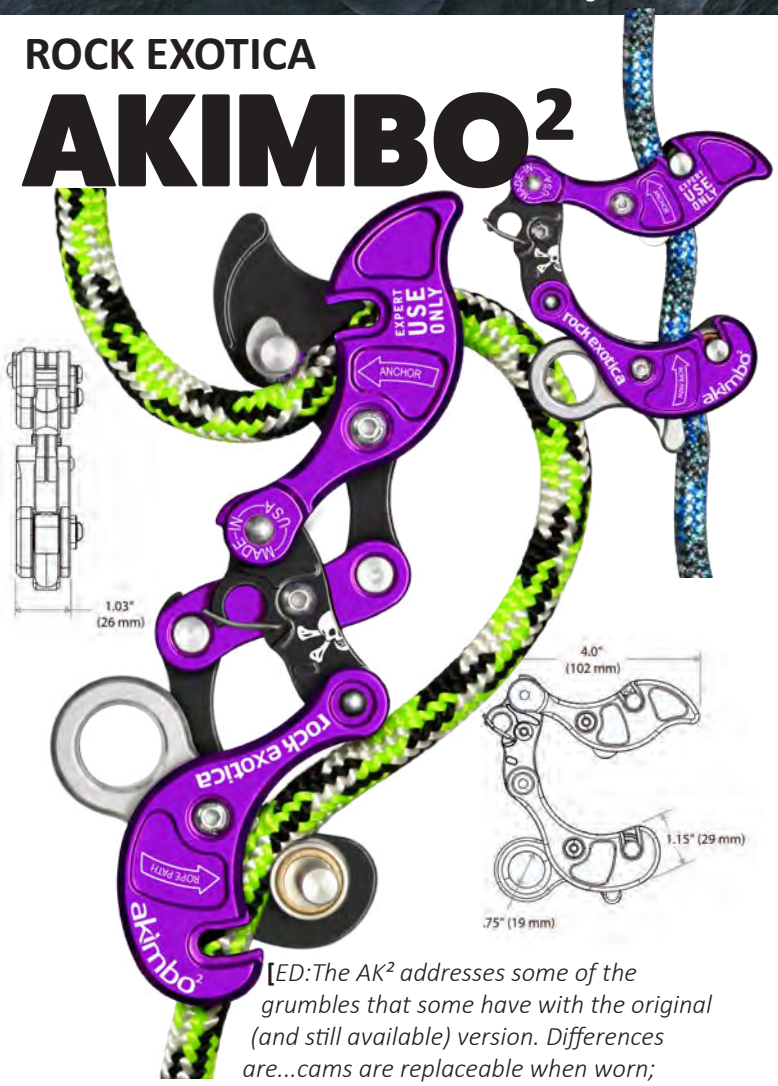
The BlackBird from ART was developed for climbing on both a single rope (SRT) and a running double rope (DdRT). Without any additional settings or tools, you can switch between the two techniques without having to remove the rope from the device. The design allows identical descent behavior with SRT and DdRT. The BlackBird can be fully opened with a push button and can be mounted centrally on the rope without having to remove the device from the harness. The integrated bearing swivel ensures optimal alignment at all times. The upper carabiner hook faces away from the person, allowing the rope to be fed into the device easily and unobstructed. The upper anchor point can also be used for V-rigs and 3:1 or 4:1 pulley systems. The friction cam can be rotated (and replaced) for individual adjustment. Carabiner connection eye to the chest harness for ascents. The BlackBird is approved for two-person rescues using a single rope (SRT) or doubled rope (DdRT).All wear parts are interchangeable. The BlackBird is supplied with two cams for different ropes.

- Certified according to EN 12841 B/C
- multifunctional ascending and descending device for the running double rope and standing single rope
- suitable for left- and right-handed users
- approved for rescue with two people

two brake shoes (A for ropes Ø 11.2 – 11.9 mm | B for ropes Ø 11.9 – 13 mm)
Service life: 7 years from first use
Weight: 609 g
COST: ~ £550/$630/€550 **www.climb-art.de**

ROCK EXOTICA

AKIMBO²



[*ED:The AK² addresses some of the grumbles that some have with the original (and still available) version. Differences are...cams are replaceable when worn; the breakaway ascending eye, that allows the chest ascender to disengage when pulled downwards, has been joined by an enlarged main eye below it as an ascending option; the top 'arm' is now sprung instead of just the cam; friction adjustment is better than most with a sprung eccentric cam that drops into two of 8 adjustment holes; faster rope installation; no specific rope brands any more but they still need to be a minimum of 11.5mm which technically precludes a lot of 11mm options. Finally the cams are now replaceable.]*

RG81 - The Akimbo² is the second iteration of the popular mid-line-attachable climbing device for tree care. Like the original, the Akimbo² allows you to position, ascend and descend in stationary or moving rope systems (SRS or MRS) without additional equipment or detaching from your saddle. Adjustable friction settings optimize performance on ropes ranging from 11.5 mm to 12.7 mm, all without tools and without an approved ropes list. The new Akimbo² features an additional SRS tending option, as well as modifications for improved performance on rope and replaceable components that extend service life. WLL (Working Load Limit): 30-to 130 kg (66 to 286 lbs)
MBS (Minimum Breaking Strength): 23 kN (5,170 lbf)
Weight: 301 gm (10.6 oz) Certification: CE
COST:~ £426/$425/€570 **www.rockexotica.com**

CMI **https://cmigearusa.com**

ROLLNANCHOR

The Rollnanchor (RA pulley for short) Pulley is machined from a solid block of aircraft grade aluminum and was designed in partnership with 3 Strand Design, owned and led by a field arborist. Its beefy tensile strength and flat surface make it ideal for use as a cinched canopy anchor. The pulley makes retrieving redirected canopy-anchored lines easier and less gear-intensive than with other options. When incorporated with a friction saver, the RA pulley reduces friction, making for a smoother climb.

The high tensile strength makes rescuable systems possible, as well. While the axle's mbs is 8,000 lbs, any rope configuration that incorporates the plate benefits from the 10+k rating. The openings allow for a bight *(see note below) or two lines to pass through, which means an access line, whether separate or isolated by knots, can be incorporated into anchor systems using the RA pulley.

Only properly trained professionals should build systems intended for possible rescue, to ensure all parts of the system are properly rated and installed.

INTENDED USES:

- Cinched canopy anchor
- MRS anchor
- Spar anchor
- Midline mechanical advantage on SRS limb walks

ATTRIBUTES:

- Made to be cinched
- Rated to support rescuer
- Rated becket
- Both openings pass small retrieval balls
- Openings can pass a bight or two lines

(Some rope constructions may be too stiff for passing a bight through the pulley openings. While not intended for such purposes, the RA pulley was pulled at both ends over a bollard. The strength of that pull was #15,000 lbs

- MBS: 8,000 lbs. Sheave Diameter: .918"
- Max Rope Diameter: ≤13mm / ½"
- Weight: 160g / 5.6 oz.
- Body & Sheave material: aluminum
- Sheave Mechanics: bushing
- Width: 1 ¾" Height: 4.5"

1)- Alpine Butterfly stopper, spiked with carabiner: Figure 1 This SRS canopy anchor configuration can be set with an alpine butterfly or figure eight on a bight (not pictured). The knot must be spiked with a carabiner or other connector for safety. This configuration allows for multiple natural branch redirects to be used and the anchor still be retrievable. A throwline can be added to the rope tail for soft retrieval (recommended). How easily the anchor is retrieved is based on the number, orientation, and branch shape of redirects.

2)- Girthed Alpine Butterfly: Figure 2 This SRS anchor configuration allows the climb line to be used for retrieval, and doesn't require the line to be threaded through the RA pulley prior to being installed in the tree.

3)- Prusik loop or eye-to-eye midline anchor: Figure 3 A prusik loop (recommended) or eye-to-eye (pictured) can be used for a more easily adjusted midline RA pulley anchor. This configuration is good for using the retrieval side to measure spar lengths during removal operations.

4) The RA pulley can be added to a friction saver to reduce friction in rope management while climbing. While only one method is pictured, there are several ways to incorporate the RA pulley into a moving rope anchor. ATTENTION: modifying established systems can introduce risk and is not recommended without proper training and approval by the manufacturer. The pictured anchor is a custom sling not representative of any marketed moving rope anchor system.

A word about our manufacturing: On some of the RA pulleys you may notice a small crack(s) along the edge of the axle as illustrated here. This is normal and does not affect the strength or the function of the pulley. This happens when we f lare the end of the axle out in order to add another layer of safety so that the axle does not come loose. The crack develops as a result of the outward movement of the axle when flaring. We could have utilized a softer axle material that would have allowed the edges to roll over completely without any cracking but that would decrease the strength of the pulley. We chose to use a stronger axle material in order to keep the strength of the pulley up. Note that there may be more than one small crack along the edges. All is perfectly fine. Small edge crack from flaring the axle.

NEW BATTERY SAWS from Husqvarna

550iXP &
550i XP-G

Out in 2025, the Husqvarna 550i XP and XP-G are battery chainsaws with an exceptional combination of outstanding power-to-weight and slim, lightweight design. An ideal, versatile solution for professionals who need agility, high reliability and the capability to handle the most demanding tasks. Thanks to the flexible battery system, 550i XP can easily be adapted to different daily needs. The B540X battery ensures peak power and runtime, and supports longer bars, while the lighter B330X offers outstanding manoeuvrability. This chainsaw has a new graphical display that gives complete control, delivering detailed information about battery level and the health and status of the product. Additionally, the display allows easy management of the SavE mode. The G version has heated handles and chain oil sensor.

- **Battery through body design** (Pat.pend.)The battery is placed horizontally through the machine to reduce the risk of dirt, water, chips and dust getting into the battery compartment, causing connector issues. Also, it enhances the weight distribution and balance of the tool, making it more user-friendly with increased maneuverability. The through body design also offers a high degree of flexibility since it allows battery packs of different sizes to be used.
- The **display shows battery level, status, and health of the product** while allowing easy control of SavE™ mode. Clear messages via the new user interface provide real-time insights, ensuring reliable control and efficient work.
- The **last used handle heating and SavE** mode settings are stored, making every restart quick and easy. Simply pick up where you left off without the need for adjustments, saving time and effort.
- The **centrifugal clutch** provides kick-start energy at the start of every cut, and helps keeping the chain from getting stuck in the wood.

PRICE exc Battery (+approx £$€450): £839 £879 / $830 $870 / €969 €979

FEATURES

Centrifugal clutch
Battery through body design (Pat. pend.)
Graphic display
Heated handles keep you productive
Extreme power-to-weight ratio
Start mode memory
Captive bar nuts
Improved starting
savE™
Made for professional use
Flip-up tank cap
Convenient trigger lock
Simplified serviceability
Ergonomic design
Versatile cutting equipment system
Chain oil sensor
ActiveCool
Performance optimization
Slimmed-down design
X-CUT® Chain
Weatherproof Design

www.husqvarna.com

New EVO SAFETY

EVOSTY

LEVEL 2

24m/s

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Chainsaw Protective
EN ISO 17249:2013/AC:2014
Class 2 24 m/s

Integrated connection
for replaceable
EZLoop® bridge

Steel toe

Anti penetration mid sole

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EDELRID TECTUM for ARBORISTS

Launched earlier this year, the ***TECTUM*** and ***TECTUM AIR*** with closable ventilation openings are modern, functionally equipped work safety helmets with a customizable design. They comply with EN 12492, EN 397 (*TECTUM* or *TECTUM AIR* with the ventilation slots closed), and ANSI/ISEA Z89.1-2014 type I class C and can be individually adapted to the job at hand thanks to its extensive range of optional accessories. The impact-resistant helmet shell is made from light yet robust ABS plastic, while the inner shell is produced from shock-absorbing EPS material. Thanks to the integrated Euroslots, headlamp clips, and additional attachment points, accessories can be easily attached so as to optimally tailor the helmet to different job requirements. The *TECTUM & AIR* can be optimally adjusted for a secure yet comfortable fit thanks to the adjustable chin strap and stowable *Wing Fit* system with a dial on rear.

www.edelrid.com

- Options for ear protectors and/or a visor (30 mm Euroslot)
- Four robust headlamp and accessory clips
- Chin strap and inner padding replaceable and washable
- the HiVis model offers
- Enhanced visibility thanks to the color schemes & reflective, prefabricated stickers Large, closable ventilation openings
- Replaceable chin strap buckle as per EN 397 and EN 12492
- Other Certification: UIAA 106 & ANSI Z89.1 Type 1 Class C
- Head size: 53 - 63
- COST (Helmet-ONLY): £72-79 / $130-$140 / €83-85

NEW FOR 2025 STIHL PRO-BLOWERS

New for 2025 from Stihl (in addition to the GSA40 mentioned in issue 26 and new larger chainsaw the MS400) are battery-powered backpack blowers BRA500 battery-with a max air velocity of 192 mph comparable to the gas-powered BR600 backpack blower and the BRA600 surpassing the gas BR600 at 246mph. These powerful backpack-cordless blowers are for professional use in noise-sensitive areas featuring:

- Uses AP series batteries
- 72-volt brushless motor
- STIHL Noise Reduction System.
- Digital control unit with integrated STIHL connected function.
- Four power levels including boost.
- Using the STIHL app, the power of all power levels can be reduced by 20%, thereby increasing runtime by 40%. Quick adjustment of blowpipe length and handle position.
- Adjustable, ergonomic carrying system with hip belt.
- Two nozzles included
- Enhanced ergonomic and comfort features
- HMI display and control panel
- COST

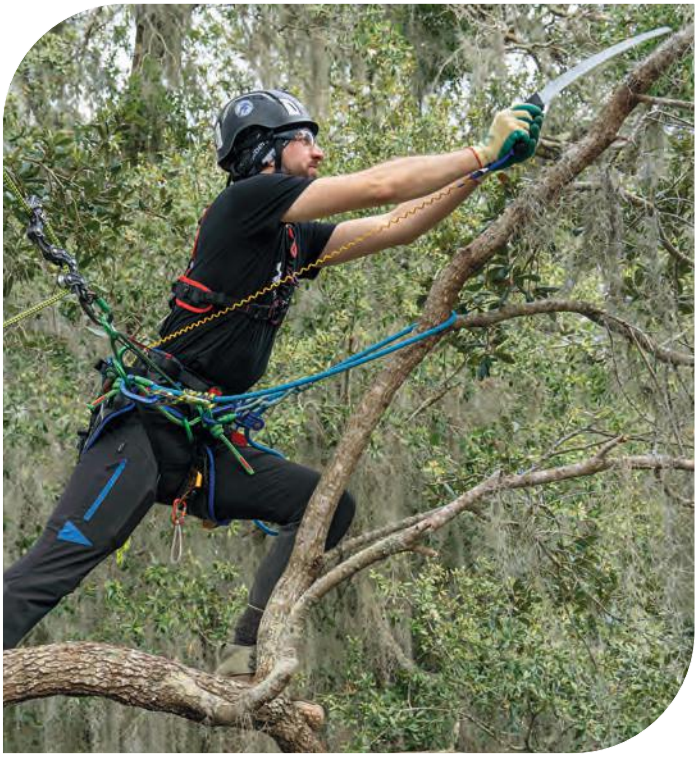
£1029 & 1829
$949 & $999
€950 & €999

www.stihl.com

Work Positioning LANYARDS

Here, in conjunction with our friends at the French-language magazine Arboristes Mag we take a look at Work Positioning lanyards or Les longes de maintien. French speakers can check out their website at www.arboristes-mag.com

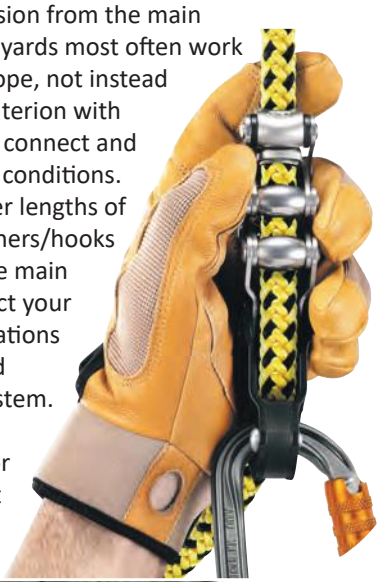
Work Positioning Lanyards

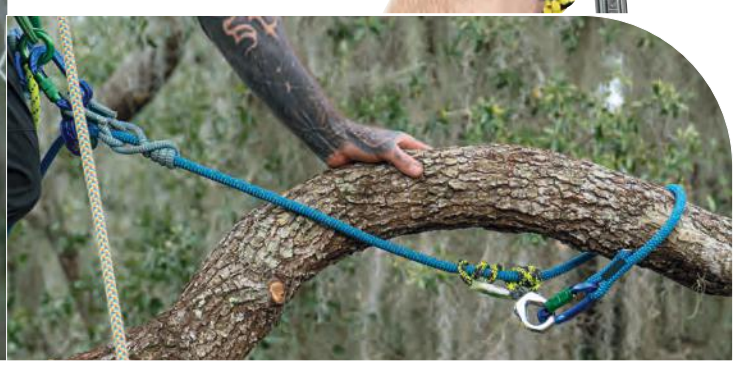


It used to be that all canopy work was carried from the single main rope regardless of the drag and potential pendulum it created. Anything more technical was considered too time-consuming. These days, safety is a higher priority than speed so positioning lanyards are essential equipment for arborists, providing both safety and efficiency in tree work. Such lanyards help provide a more balanced work position and considerably limit the fall potential particularly when manoeuvring out onto branches.

Modern positioning lanyards effectively evolved from extending traditional pole-straps/flip-line. Otherwise, doubled rope passing over a high anchor (fork/cleft) was all that arborists had when limb-walking and this required considerable physical strength and dexterity to navigate trees, often without adequate safety margins in the even of slipping or a fall. In recent years, relatively simple technological innovations have transformed arborists' equipment with positioning lanyards the norm having become longer and adjustable in length. They allow for greater flexibility adapting to many different work situations. The materials used for lanyards have continued to evolve, with high-performance fibers offering much greater strength and durability while remaining relatively light.

They are generally equipped with an automatic "braking/ locking" length adjuster, either in hardware form like the *Petzl Zillon* variation of the *ZigZag* below or as a cord hitch like the *Teufelberger hipSTAR Glide* on the left. These allow rapid fixing of work position and then equally fast take in to withdraw from the limb or revert to full suspension from the main climbing rope. Indeed, these lanyards most often work in conjunction with your man rope, not instead of. Ergonomics is an essential criterion with systems designed to be quick to connect and anchor and easy to handle in all conditions. Some lanyards are simply shorter lengths of rope with pre-connected carabiners/hooks operating as mini-versions of the main rope and onto which you connect your own hardware or hitch configurations while others (like the *Grillon* and *hipSTAR)* are a self contained system. There are MANY variations of rope and hardware or hitches for lanyards but we have picked out just eight for comparison.



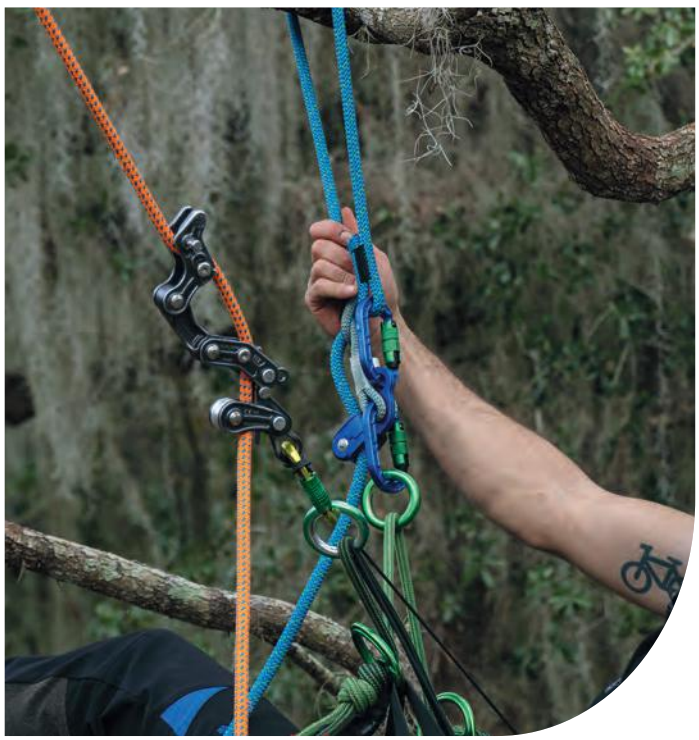


USING A LANYARD

The positioning lanyard is primarily used to ensure the arborist's stability at the workstation. Under certain conditions, as defined in the European June 2007 application note, the lanyard can serve as an anchor point.
Attached symmetrically to the tree branch/trunk or to the rings of the central bridge, it allows the arborist to maintain a stable position and/or add additional anchorage to the workstation.
It's all about triangulation and opposing forces that combine to create a safe and stable stance that frees up both hands to make your cut or install cabling. The techniques for using the lanyard are numerous and can be complex: they are frequently used in pairs, often one shorter than the other to limit weight and drag, but sometimes, depending on the situation, it is advantageous to use them alone, following the manufacturer's instructions. Some are long enough to become virtually a second main line like the *RopeRunner/Teufelberger* system below-left, switching between this and the actual main line to allow precise positioning while maintaining the redundant safety principle.

CUT-PROOF LANYARDS

In addition to the standard positioning lanyards which usually have sewn terminations like the green *Teufelbeger HipSTAR* on the left, there are reinforced positioning lanyards with a metal cable inside the textile sheath like the *Courant/ Honeybrothers Bumblebee* on the right. These are recommended for all tree removal operations, particularly for trunk sectioning and removal phases where increased cut resistance is desirable. Such reinforced positioning lanyards are more rigid than the standard lanyard, which may limit movement and certainly fluidity of movement but offers superior cut protection. Please note that a reinforced lanyard can still be cut; its resistance to a chainsaw cut is slightly greater, but this is by no means a guarantee that the lanyard will not be completely cut.



STANDARDS

Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 concerns personal protective equipment. This regulation replaces Directive 89/686/EEC and applies to all PPE placed on the European market, including positioning lanyards.

- Essential Health and Safety Requirements (EHSR): Positioning lanyards must meet strict requirements to ensure user safety. This includes mechanical strength, durability, and performance under normal and extreme conditions of use.
- Conformity Assessment: Manufacturers must conduct a conformity assessment to demonstrate that their products meet the EHSR. This includes testing and inspections by notified bodies.
- CE Marking: Lanyards that meet the requirements receive the CE mark, indicating that they can be legally sold and used in the European Economic Area.
- Technical Documentation and Declaration of Conformity: Manufacturers must provide detailed technical documentation and a CE declaration of conformity, which can be accessed by market surveillance authorities.

FTC-TREE.COM

NATE RANGE FOR SRT

BUILT LIGHT.
WORN TIGHT.
WORKS HARD.

#WEARANDFORGET

@ftctree

FTC TREE

photo by COURANT

photo by TEUFELBERGER

Top: *Courant's Flexbee* **adjuster**
Middle: *Teufelberger's hipSTAR Light,* **previously '*CE Lanyard*'**
Bottom: Devices NOT included in our comparison tables:
Top Left to Bottom Right : *Skylotec Tuner Pro, ART Positioner* (Ukraine colour)**, *Petzl Grillon*** (larger, handled version of ***Zillon) Petzl Progress Adjust, Kong Trimmer*** and ***RnR Renegade***

WORK POSITIONING LANYARDS

EN 358

The EN 358 standard applies to work positioning belts and work positioning lanyards in Europe. It defines the performance requirements and test methods for this equipment. This standard ensures that lanyards and work positioning belts provide adequate protection against falls and allow the user to maintain a safe working position. [Note that **ANSI Z133** is not specific to lanyards but a generic arb equipment standard in North America. **ANSI Z359.3** regarding fall arrest does apply specifically to lanyards]

In France, the French Labor Code includes specific provisions regarding the use of personal protective equipment. Articles R4323-61 to R4323-65 stipulate that employers must provide PPE appropriate to the risks of the work and ensure its good condition through regular inspections. These articles emphasize the importance of maintaining and inspecting positioning lanyards to prevent accidents.

As with all PPE, to ensure their effectiveness and to remain legally compliant, positioning lanyards must be inspected periodically. These inspections check the condition of the seams, carabiners, and lanyard material for any signs of wear, damage, or aging. Any abnormality detected must result in immediate replacement or repair of the lanyard to ensure the user's safety. Manufacturers provide specific use and maintenance instructions for each lanyard. It is important to follow these instructions to maintain the performance and safety of the lanyards. This includes storing them in appropriate conditions, cleaning them with non-aggressive products, and avoiding prolonged exposure to chemical or physical elements that can deteriorate the materials.

In conclusion, choosing the right positioning lanyard depends on cost, length, diameter, and adjustment system. The cost for longer lengths tends not to be much more than the shorter lengths. The *Petzl Zillon* for instance, is around £204 @2.5m but only £210 @5.5m - so it's not the cost that is the consideration, it's the actual length you require, too long and you have to manage more rope during your work, too short and it may limit your reach.
Remember to regularly check the condition of your lanyard and follow the manufacturer's instructions for optimal use. ***You should treat these with the same respect you do your main climbing rope***.

ARBORIST'S ADVANTAGE

YOU ARE PACKING IN DECADES OF DEPENDABILITY

Developed by Greg Good and manufactured by Harken, the GRCS is the backcountry at height lifting and control system you can pack in to handle equipment and limbs to and from the canopy. The GRCS secures a self-tailing winch to the tree trunk via its ratchet-tightened steel mounting plate. GRCS. Trust decades of experience to control the heaviest loads.

LEARN MORE ABOUT GRCS TREE MOUNT SYSTEM

Made In Wisconsin, USA

Dead lift rating of 3,000 lbs

Kit comes with the two-speed winch mounted on the plate. Also includes 254 mm aluminum SpeedGrip lock-in winch handle B10ASG

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STANDARDS CE EN 358 Work positioning lanyard EN 795 B Anchoring device EN 795/C Temporary lifeline AS/NZS5532 Anchors AS/NZS1891.1 Lanyards ANSI Z133 General Arb Safety ANSI Z359.3 Lanyards					
MODÈL	**DRUID LANYARD**	**GYRO LANYARD SINGLE**	**FLEXBEE V2**	**ARGIOPE SNAPHOOK**	**ZILLON**
MANUFACTURER	**CAMP**	**CAMP**	**COURANT**	**FTC TREE**	**PETZL**
COST inc VAT/tax for length in BOLD	£191 $290 €234	£203 $290 €245	£125 $244 €137	£140 $190 €154	£204 $250 €213
LENGTH	**5m** **16.4ft**	2/**3.5**/5/7m 6.6/**11.5**/16.4/23ft	**3**/4/5/7m **11.5**/13/16.4/23ft	**3**/4/5m **11.5**/13/16.4ft	**2.5**/4/5.5m **8.2**/13/18ft
DIAMETER Ø	11mm/ 7⁄16"	11mm/ 7⁄16"	11.5mm/ 7⁄16"	12.1mm/ ½"	12mm/ ½"
CONSTRUCTION	16 carrier	16 carrier	32 carrier	16 carrier	16 carrier
MATERIAL	Body & handle made of robust forged aluminum alloy, mechanical parts made of micro-cast stainless steel	Polyester and aramid	Polyester sheath and nylon X-Braid core	Polyester sheath and nylon core	Stainless steel, aluminum, polyester, nylon
MAX LOAD	150kg / 330lb	150kg / 330lb	150kg / 330lb	Varies with components	140kg / 308lb
STANDARDS	■■■■	■■	■	(rope- CE EN 1891 Type A)	■■
ADJUSTABILITY	Adjustable with hardware derived from the Druid Pro descender and 11 mm static rope	Self-locking knot and prusik-minding pulley	Adjustment ensured by a self-locking knot held in a specially designed pulley.	According to user choice	Adjustable with one hand thanks to fluid action when unlocking and locking the device.
INC CARABINER(S)	✗	✓	✓	✓	✗
TERMINATION	Sewn loop	Equipped with innovative CRT -Compact Rope Termination	Sewn loop	Splice with or without swivel snap hook & sewn termination with swivel on other end.	Sewn loop
AVANTAGES	In the hold position, adjustment is simple and intuitive with the trigger, while the handle is used in situations under full tension. The patented locking cam allows for a smoother and more progressive action on the rope. RFID scannable components/system	Equipped with innovative *CRT* (Compact Rope Termination) terminations, it offers long-lasting maneuverability and great resistance thanks to *Heatcore* technology which combines sheath and core.	Flexible sheath and innovative custom lanyard shortening (hardware) device	Short rope offering a good grip. Its construction maintains a well-rounded profile and provides comfortable handling. The splice benefits from ***SlimTECH***® expertise and remains thin and flexible. Also available without the snaphook and with two sewn ends (Ø 12.1 mm and Ø 11.7 mm).	Easily adjustable with one hand, even under tension thanks to its system similar to that of the *Zigzag*. Sealed ball bearing pulley to effortlessly take up slack.
SPARE PARTS / ACCESSORIES	✓ Removable and replaceable order in case of wear	✓ Removable and replaceable rope in case of wear	✓ Removable and replaceable rope in case of wear / available with or without ISC Snap carabiner	✓	✓ Removable and replaceable rope in case of wear
WEBSITE	camp.it	camp.it	mycourant.com	ftc-tree.com	petzl.com

Work Positioning Lanyards

		
TRITECH/GLIDE	**HIPSTAR GLIDE**	**HIPSTAR FLEX LIGHT**
ROPE LOGIC/ NOTCH	**TEUFELBERGER**	**TEUFELBERGER**
£228 $317 €250	£173 $252 €194	£150 $187 €164
3/5/7m **11.5**/16.4/23ft	**3**/4/5/7m **11.5**/13/16.4/23ft	**3**/4/5m **11.5**/13/16.4ft
11mm/ 7⁄16"	11.5mm/ 7⁄16"	11.5mm (also 12.7mm)
32 carrier	16 carrier	16 carrier
Stainless steel, aluminum, polyester, nylon Technora	Polyester, nylon, aluminium	Polyester, nylon, aluminium
150kg / 330lb	150kg / 330lb	150kg / 330lb
Adjustable via custom designed Glide shortener	Self-locking knot and prusik-minding pulley	Hitch Climber System for length adjustment combining a self-locking hitch and a prusik-minding pulley
✓	✓	✓
Sewn loop	Sewn loop	Sewn loop
Cut resistant *Technora* sheath. Purpose designed *Glide* device with simple, one-handed action and swivel attachment to maintain orientation. RFID scannable components/system 30kN snaphook	Sheath flexibility and innovative prusik-minder. The inclusion of an 8mm *Sirius* polyester cord with a prusik hitch provides an additional mounting point, expanding its functionality.	(Previoulsy called the *CE Lanyard*) The sewn ends feature *TEUFELBERGER*'s resin-based seam protection technology.
✓ All components are replaceable	✓ All components are replaceable	✓ Removable and replaceable rope in case of wear
notchequipment.com	teufelberger.com	teufelberger.com

Who Needs a Crane when you can Rig?

by Chris Girard

Chris Girard is an ISA Certified Arborist, a Society of Professional Rope Access Technicians (SPRAT) Level 1 Technician. He is the owner of Girard Tree Service, a 16-year TCIA member company based in Gilmanton,NH USA

I am sure that every tree worker has run into a case where you get a phone call to come in and remove a hazardous tree and construction has just been finished on a building site. Of course, it would have been so much easier and safer if the contractor had just called you beforehand.

We recently did a tree job for some long-time customers who just had a new house and septic system built, and the site contractor left an extremely dead eastern hemlock tree (*Tsuga canadensis*) directly over the new leach bed. The tree was approximately seventy feet tall with a DBH (Diameter at Breast Height) of around twenty inches. (photo 1) The homeowners did not see the tree until they moved in, but they knew that it needed to be taken down so they contacted me to come in and develop a work plan.

When I first saw the tree, I thought for sure that we were going to have to bring in the crane to climb and remove it safely, but I wanted to try and save the homeowners an additional expense for the crane, after all the construction and site work that they had just finished doing. The hemlock tree was already uprooting (photo 2) and the only thing holding it up was a small American paper birch tree (*Betula papyrifera*), which also looked like it was about ready to snap over. As most tree workers know, birch trees are not the strongest to begin with and I am actually surprised that it was still supporting the hemlock tree. I went home that afternoon scratching my head and thinking of ideas of how the tree could be safely rigged

Photo 1: Extremely dead hemlock tree lying on top of and straining a paper birch. Unless otherwise noted, all photos courtesy of the author.

Photo 2: Uprooting hemlock tree with severe root-structure failure. Paper birch is to the right.

Photo 3: Don Blair's memorable redwood-tree removal, described in the November 2001 issue of TCI Magazine.

I attributed to it. There was also no way that a climber could safely ascend the tree alone, without its probability of total failure. Most people would have said "let's just fall it across the leach field and see what happens" but I do not think this way.

What I did have going for me was a number of trees off to the left and right side of the dead hemlock. Then I started thinking about a rigging job that my good friend and mentor Don Blair did back in 1991 after a thunderstorm with 80 mph winds came barrelling through the Baltimore area, uprooting a huge hickory tree (*Carya ovata*) and sending it onto an apartment building. Don was called in as a consultant by Steve Mays with *Carroll Tree Experts* to produce a work plan and they definitely contacted the right person! His and May's idea was to use winch trucks and block, and tackle rigged from adjacent trees to lift, swing, and set the hickory down clear of the building. Don wrote extensively about this project along with another memorable redwood tree (*Sequoia sempervirens*) rigging job that he helped out with in California, back in April 2001. These articles can be found in the TCI November 2001 issue. (photo 3). Back then, TCIA was known as the National Arborist Association. Here is a link to the issue for those of you who are interested in reading more about overcoming rigging challenges. 11-2001-TCI-Mag-web.pdf (tcimagazine.wpenginepowered.com) After thinking about that hickory job, I decided that I could use the same concept, only on a smaller scale. In Don's project, he needed to lift the tree first before he could safely swing and set it down. In our case, since I was going to have to remove the white birch first, before I cut the dead hemlock, I figured that I could support both trees at the same time, then cut, swing and lower then down adjacent to the leach field with zero impact. Lifting the trees was not going to be necessary, as I had originally considered. I had a nice, sturdy red pine (*Pinus resinosa*) slightly in back and to the right, along with a healthy hemlock slightly in back and to the left of our removal trees. These trees were large enough that I was going to be able to use them as gin poles to support the dead hemlock and birch. Like Don mentions in the hickory rigging article, I too was envisioning the gin poles to be used like derricks for loading and unloading cargo ships, or as crane booms. They were also large enough that I was not going to have to add any backstays (guy lines) to support them, as I figured the bending moments and vectors were not going to be excessive. For those who do not know about simple physics such as bending moments and vectors, I highly recommend that you educate yourselves before tackling any technical tree rigging applications. A great article on vectors to start with is one written by my friend and colleague Tony Tresselt – CTSP and appears in the July 2024 TCI Magazine.

The first thing that I did when we got to the jobsite was to go over the work plan and JSA (Job Safety Analysis) plan with my two coworkers. I cannot begin to stress how important both of these things are to having a safe and successful technical rigging job, or any job for that matter. Not to mention that if an accident or fatality happens, you are going to have a lot of explaining to do to the families, insurance companies as well as OSHA.

Next, I started climbing the red pine to install a back-up safety climb line and a rigging line and block. As stated before, there was no way that I was going to climb that tree without having something else to tie-into, and I did not want to have to rely on the hemlock tree alone. (photo 4) Since I knew that I was going to have to ascend afterwards to de-rig the red pine, I decided to use an SRT (Stationary Rope Technique) setup, instead of a MRT (Moving Rope Technique), for easier ascend, before switching over to a friction saver and MRS setup for my final descent. Some people, as well as the ANSI Z-133 will call these climbing methods SRS (Stationary Rope System) and MRS (Moving Rope System). I believe that we should have kept the original SRT, just change the "S"

Photo 4: Backup climbing line, above, and rigging installed in adjacent red pine. Note running bowline and Yosemite tie-off on the climbing line.

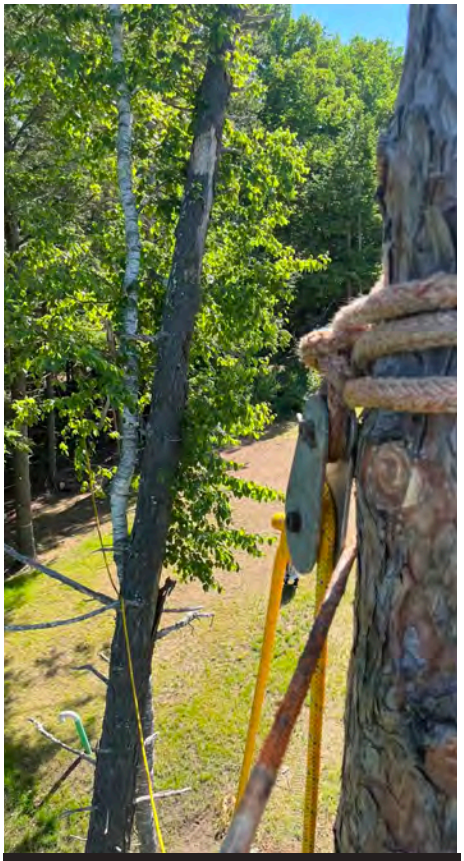

Photo 5: Rigging set with five-eighths-inch Hobbs Block (WLL 4,000pounds),three-quarter-inch Samson Tenex dead-eye sling (WLL 2,200 pounds) and five-eighths-inch Sterling Atlas rigging line (SWL 1,800 pounds, using a 10:1 safety factor).

Photo 6: Backup climber Cody Leblanc setting up a second rigging system in an adjacent, healthy hemlock.

to mean "Stationary" instead of keeping it as "Single" and it would have saved everyone a lot of headaches. This is what they did in countries like New Zealand, and it is working out fine. [*ED: it would also save the confusion we currently have with DdRT (MRS) systems being called DRT (SRS)*] You will notice in photo four, that my TIP (Tie-In Point) termination knot is a Running Bowline with Yosemite Tie-off. The diameter of the stem is large enough that I could have also safely used a choked off carabiner in the right configuration without worrying that it is unsafe.

The rigging block that I chose to use is a ⅝" *Hobbs* Lowering Block with a WLL (Working Load Limit) of 4,000lbs. These are the original arborist rigging/impact blocks and, in my opinion, still some of the best out there. I do have to say though, that I like the *Rock Exotica Omni Blocks* with the swivels. These come in handy sometimes when it is hard to keep a fairlead vector angle in your rigging lines (fairlead in rigging terms means, that a line passes through a block, or changes direction, without snagging or fouling). However, the swivel does severely limit the impact load as compared to the *Hobbs* or any regular eye block.

Next, I installed a *Sterling Atlas* ⅝" rigging line and then threw a coiled length of rope over into the dead hemlock. (photo 5) I also made sure to set a slip knot in the line at the block, so that I would not lose all the works and have to go back up before finishing the job. This usually only happens to new, "greenhorn" climbers, but can also happen to even veteran climbers.

While I was climbing in the red pine another one of my climbers Cody Leblanc was in the healthy hemlock installing the other rigging system. (photo 6) He too was climbing on an SRT setup. He installed another ⅝" *Hobbs Block* and a *Yale Cordage Double Esterlon* ⅝" rigging line. Both of our anchor points for the rigging systems would be terminated at the base of the trees using *Porta-Wrap*s and *Samson Tenex* hollow braid ¾" dead-eye rigging slings. (photo 7).

After our initial rigging was set, I was able to start climbing the dead hemlock. The first step that I took, my spur sank right down to the shank and showed no signs of wanting to stop! Talk about an uncomfortable feeling. That was some of the punkiest wood that I had ever seen and still be standing. Thank goodness for the backup climbing line. I also used my "breakaway lanyard," (photo 8) which is an eight-foot length of *Sterling Tri Tech* 11mm rope with a stitched eye splice on one end and no termination knot on the other end. The connector is an *ISC* triple action snap hook, and the adjustor is a *US Rigging Supply* basic rope grab with a *Petzl OK Triact* carabiner. This setup has been tested by me on the ground and allows for a quick disconnect from the lanyard in the event of a tree failing under you while climbing. Now, according to the ANSI Z-133Standard, I know that some people are going to say that this is an unsafe way to climb, without having

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Photo 7: One of the anchor points for the rigging line terminated at the base of the hemlock spar tree, using a large port-a-wrap and a timber-hitch termination on a dead-eye sling.

Photo 8: The author's "breakaway lanyard."

Photo 9: Rigging set at the location where the hemlock and birch were in contact with each other. Note how the load binder strap and rigging lines were secured around both stems.

some sort of stopper-termination on one end of the lanyard but let us put it into context for the situation. What is better, riding a tree down to the ground, or using a lanyard without a stopper knot (which you are aware of and monitoring as you climb)? There are exceptions to every rule, and in my opinion, this is one of them. You will also not find any manufacturers that are going to be making breakaway lanyards any time soon, as the liability implications are just too great.

Every time that I flipped up on my lanyard, the tree felt increasingly unstable. Anyone who has climbed a lot of extremely dead, hazardous trees develops a kind of "spidey sense" that will let them know when they are approaching imminent danger, but I wanted to reach the point where the tree had uprooted and landed on the white birch. When I finally reached that point (which was at about forty feet) where the two trees were touching, I was able to set the rest of the rigging. (photo 9) I installed a 10,000lb load binder strap around the birch and hemlock tree to secure the two stems together. This would allow me to fall both trees together from the ground afterwards. Next, I secured the two ⅝" rigging lines around both stems and terminated them with running bowline knots. After that, I had my ground workers take up the slack in the rigging lines and secure them to the *Porta-Wrap* bollards using an old sailing technique called "sweating the line". (photo 10) This is a difficult technique to describe on paper, but what you do is take a half wrap with the rigging line around the bottom of the lowering device, hold the tension upwards on the running end of the line, and lean back pulling outwards laterally with your other hand. Then quickly pull upwards with the hand holding on to the running end of the line to take up the slack that you have created. Do this a few more

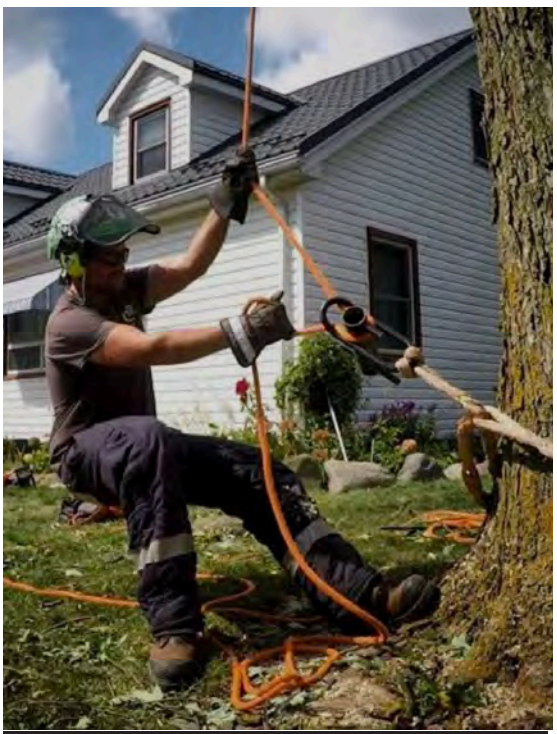

Photo 10: Example of sweating a line that uses simple mechanical advantage to pre-tension a rigging line. Photo courtesy of Patrick Masterson, *educatedclimber.com*

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times to get as much slack out of the line as you can. In essence, you have used a simple MA (Mechanical Advantage) to help you tension a line. After that, you can take your wraps and lock off the lowering device. We were now ready to fall the trees.

I descended using another SRT line, secured with a canopy anchor. By leaving this line in the tree, I had the assurance of having a tag line in the event that I needed one while lowering the trees. When I know that I will need a tag line, I always use a rigging line, but happened to overlook it this time. Next, I first notched the white birch and then the dead hemlock using a wide 70 degree open faced notch, as I wanted to hold them as long as I could on the stumps, before the hinges broke. (photo 11)
I also thought that it would be prudent to add a 10,000lb load binder strap above the notch in the hemlock, to prevent "barber-chairing." Yes, I could have also used a bore cut on the hemlock, but I have never been a fan of bore cutting on severely decayed trees in this manner.

One thing that I did notice, is that when I first notched the white birch, both trees started to pinch my kerf cut. This confirmed my suspicion that there was not much holding the hemlock and that both trees were under tremendous pressure.

It was now time to make the backcuts. First, I cut the birch and left a thin hinge (knowing that it was still being supported high up with the load binder strap). Then I started the backcut on the dead hemlock. It instantly started to open up, so I slowed down, easing the tension into the rigging lines. I continued cutting but left a much thicker hinge than I normally would, so that I would have as much full strength across the hinge as possible.

Photo 11 : 70-degree open-faced notches were used on the birch and hemlock to hold them on the stumps as long as possible before closing and breaking.

Once everything was cut up, I stood clear of the lowering path and instructed the crew to slowly start taking off wraps and begin lowering. Everything was going fine, until one side started drifting too far to the right, heading for the woodsline, where it would have hung up, had we continued lowering the trees. Luckily, I had left that climbing line in the tree to be used as a tag line for just such a situation. Even though we are not supposed to mix our climbing and rigging lines, this was an "emergency" and I deemed it necessary and safe. When

Photo 12: Both trees were lowered to the ground safely, adjacent to the leach field and with zero impact.

Photo 13: Hemlock stump uprooted during the lowering procedure, leaving hinge and back cut intact and showing just how compromised the tree had been, prior to removal.

I started pulling sideways on the stems away from the woodsline, the crew continued lowering the stems, and we were able to gently set the trees down, adjacent to the leach field. We could have held them suspended above an egg if we had wanted to! Everything worked out as planned. (photo 12)

Afterwards, I walked over to the stumps and was not surprised in the least to see that the dead hemlock tree had actually completely uprooted, leaving the hinge and backcut fully intact. (photo 13)
Overall, we proved that you can safely take down even the most hazardous of trees, without always having to bring in a crane. Of course, this is provided that you have the necessary surrounding trees, equipment, knowledge, and an outstanding crew. I was fortunate to have all these things on this particular job and could not have asked for anything else.

Thank you to:
Brandon Eldridge and Cody Leblanc for making this job a success!

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** When paired with a B330X or B540X battery, compared to the power output of all Husqvarna battery chainsaws as of July 2025.


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ARBORIST (<3tonne, >70mm/3"*) WOOD CHIPPERS

I remember when having a wood chipper was a sign of a very successful business or a rich relative because they were a German import from *Jensen* the original inventor (Peter Jensen in 1884 pic right). These days *Jensen* are still the company with the longest pedigree but they are far from unopposed. Back then us poor people usually contributed to global warming by burning the foliage on site or taking it away to a friendly farmer's field. Chippers are now much more of a necessity than a luxury since disposal of brush and cord wood would otherwise be a major headache for most companies. Now, everything gets chipped down to a useful mulch or top dressing and those with yards can store mountains of the stuff to sell off at leisure as either wood chips, mulch/dressing or compost. Those without yards just need to do a good job persuading the client how useful the wood chips are. Brush or wood chippers are, like blowers, a range of machinery not directly related to climbing, which is our usual niche, but they both represent equipment that virtually every arb business has to have. Chippers are still a major investment for any arb company, often more expensive than the truck that's towing or transporting your chipper hence leasing or finance are a common option, typically a new, small pro model might cost over £120/€150/$175 a week.

This Guide includes only models less than 3 metric tonnes and with a ≥3"/75mm chipping capacity, that are marketed towards arborists and tree workers - there are many, many more small and domestically oriented products, including some by pro brands *Hansa*, *Husqvarna* and *Stihl* and much larger, more 'industrial' machines from *Pezzolato*, *Vermeer*, *Bandit* and *Hazohack* etc. that we will include in the larger BUYERS GUIDE version. Remember that the *MATERIAL CAPACITY relates to the overall width of mixed material that can be chipped - it is not necessarily the diameter of solid wood that can be chipped - your machines control systems will regulate the power to suit the resistance of material being chipped.

Most medium and large chippers are towable while tracked and some PTO are not. Smaller, pedestrian models are mostly wheelbarrow-style like the smallest *Timberwolf* model (left) and can be easily manoeuvred by hand. All three of these latter models can be trailered or transported on a pick-up. The method of transport - whether it be towable, trailered or palletised (PTO) tends to coincide with the size of model and functional class which we can divide into two cutting mechanisms and three size classes:

DISC or DRUM interfaces which provide the platform for the (usually) removable cutting blades/knives/teeth, and.....

1) SMALL -'Pedestrian' machines are the smallest. They have wheels and a gravity/manual feed hopper where you push the material vertically into the rotating cutting disc/drum. We have only included professional models-there are many other domestic and semi-pro models.

2) SMALL-MEDIUM -Horizontal feed which may be manual or powered/hydraulic feed dealing with brush and wood up to around 10". This represents the vast majority of arborist-oriented chippers but at the smaller end are 'compact' models like the Japanese *Ohashi* which is tracked. Most other tracked machines are medium ranging into the next category, large.

3) LARGE - and so-called 'whole-tree' chippers dealing with wood (not just brush) diameters from 10 to >20" with powered intake some with conveyors and even cranes. At first sight some large machines can look similar to the 'jobbing' arborist machines but this Vermeer BC2100XL for instance (with ejection chute down) weighs over 7 tonnes.

BRUSH/WOOD CHIPPERS

Power Take-Off or PTO is effectively a transport option because many do not have wheels/tracks at all and are instead carried as an add-on to ta tractor. PTO is a distinct power option. We have not included PTO machines in this **ARBCLIMBER** version of the GUIDE because they are used more by farmers and estate management teams than regular arborists but our **BUYERS GUIDE** version does include PTO and you can even check out models by companies like *TP Chipper, Jensen* and the Finnish company *Junkkari* (pic right) that includes a crane for loading the hopper!

The power options remain relatively traditional across the model sizes with very few being battery powered:

1) petrol/gas,
2) Diesel
3) Power Take-Off (PTO)
4) Hybrid
5) Electric/Battery

'CLEANER' ENGINES

We are only recently beginning to see more battery and hybrid chipper models because battery technology can now provide the grunt needed to drive an absolute beast of a drive mechanism that has to crunch through the solid wood of branches up to about 8" in diameter which is a small tree rather than a branch. These forces are why diesel, with it's higher torque has remained the dominant engine type over petrol/gas and electric for the larger machines. Electric/battery will undoubtedly end up being the norm but currently, the vast majority are liquid fuel and within that distinction, petrol for smaller models and diesel for the rest. Unlike chainsaw engines these much larger diesel engines (over 24-26Hp) are subject to emissions regulations which are usually driven by Europe with greater environmental considerations but is also (currently) present in the US as 'Tier 4 Final' engines. In certain states these will be mandated rather than 'advisory'. Such engines are larger and more expensive than regular diesel because they use additives and control systems to limit the black stuff and unseen polluting emissions. Europe has moved forward with what would effectively be a 'Tier 5' requirement known as 'tier V' but this is very unlikely to see any traction in the US under the current government (as at 2025) with pollution control unusually, going backwards. Meanwhile, the rest of the world will continue to mandate mitigation of pollutions and CO2 emissions and this will ultimately lead to battery unless cold fusion or some, as yet, unforeseen alien technology crops up. But there is a case for a combination which might suit US arborists. As with cars, the term 'Hybrid' can be differentiated as a PHEV-style hybrid which allows the use of liquid fuel or battery consecutively rather than concurrently. By that we mean that with a PHEV hybrid, you have the option of using either battery or fuel at any given time - if the fuel runs out you use battery and vice versa rather than the concurrent hybrid system where the battery element supports the fuel element and only operates for as long as you have liquid fuel, it is not an either/or thing. Not yet a thing but you never know.

Turntable models enable the entire engine, chute and spout to be rotated on the sub-frame so that you can orientate the feed entry and discharge to the most convenient position without having to hand-manoeuvre the entire trailer. The picture above shows *Forst*'s variable angle tracked model, the *XR8D* and the diagram from *Jensen* shows the variable angle and variable width. These enhanced versions of regular tracked models allow the chipper to be used on slopes and uneven ground as well as muddy and low traction surfaces which is where all tracked vehicles come into their own when compared with wheeled models. However, there is no doubt that for most operators working in urban environments, a small to medium wheeled model is the most likely purchase option in terms of initial cost, ease of transport and number of jobs for which it will be most suitable. Those operating in cold and wet climates and in more rural settings would argue that tracks give them a narrower width and all year round operating options including mud, ice and snow and that pulling a trailer with the chipper on board like the *Greenmech Quadtrack* left, is not much more hassle than towing an integrated chipper/trailer. The variable track angle

This tracked Ohashi model is one of several only available in Japan (but we have included 4 other international models) and uses handlebars with brakes to manoeuvre including through narrow gates. Note the stop button is mounted above the hopper with the emergency stop-bar (red) below the hopper. These small-footprint machines are unusual in having a basal chip discharge but also have a chute so you can choose either.

option is a whole 'nuther commercial decision because of initial costs but often warranted by a single large hillside contract!

The largest companies in the arb sector are usually thought to be *Stihl* and *Husqvarna* but some of these chipper companies are massive entities, producing chippers as just one of a range of large and heavy machinery items often aimed more at production (forestry) than arboriculture. Consequently some machines featured here from *Vermeer, Bandit* and *Schliesing* for instance would be far larger than any regular arb company would use (or could afford!). *Vermeer's* previously mentioned *BC2100XL* weighs a whopping 7 metric tonnes has a 40" diameter hopper and can take up to 24cm/9.5" wood. The more industrial-oriented companies not only have this kind of whole-tree machine they even have 'grinders' that look like they belong in an open-cast coal mine and can grind up 40"+ diameter wood or materials like rubber and plastics. Needless to say, we haven't included any of these huge machines in our Guides. Nevertheless, it's always nice to see what's out there at the top end of your size range in case that really huge contract ever comes in. The smallest professional machines are around the weight of your heaviest ground crew colleague and will cut 2 or 3" (50-75mm) wood. A typical mid-size arborist model is around ¾ to 1½ tons/tonnes able to tackle wood from 5 to 8" (12-20cm)while the usual top-end for arb would be 2½ tons/3tonnes and mulching 8 to 12" (20-30cm) wood. Production and municipal applications will use the largest machines capable of whole tree disposal in excess of 20" (50cm) in diameter. Things that will add to these weights are rotating turntables mentioned earlier adding up to ¼ tonne and tracks instead of wheels which can further increase weight by a similar amount rising to ½ ton/tonne extra for rubber tracks and double that for steel tracks on the largest models. There are also many accessories most notably a winch to help drag material to the chipper or conveyor attachments to facilitate easier loading at the correct angle into the chute.

In terms of the size and type of machine best suited to arborists, it is not just the initial cost and the running costs that need to be considered. There is future adherence to emissions controls; the width in terms of getting closer access to your work site and the sheer weight which can affect getting over bridges and culverts and the class of license required to tow it.

BLADES/KNIVES, FEEDING & CHIP SIZE

The cutting of wood involves a set of blades/knives attached to a rotating disc or drum cutting through or shaving (with great force) strips of wood as the gripping rollers gain a purchase on whatever is offered up and drag it into the path of the blades. These are usually, but not always, replaceable and reversible and they take a lot of punishment so easy access to them is essential in minimising downtime.. Smaller, pedestrian machines may have non replaceable blades requiring the entire disc to be renewed but all mid to large machines will have easy field removal/replacement blades/knives and procedures. Some machines allow you to alter the size of chip being produced by altering the spacing between the blade/knife and the disc or drum on which it is mounted.

Some companies quote a linear feed rate in minutes indicating the number of lengths of material you can shove through but most quote a maximum feed - chip production rate in cubic metres/feet per hour which is the size f the chip pie you can expect every hour if you fed the machine consistently and evenly. This is not a 'target' figure, it's a maximum output and in most cases you will vary this with the type of material being shredded/chipped. Leafy material will go through much faster than larger wood and some like *Forst and Ohashi*, have a variable input dial/switch that allows you to adjust the input speed to suit the material - this can save considerably on power consumption if you are dealing with smaller material.

SAFETY & TECHNIQUE

The general public are well aware that chippers are used by serial killer to dispose of bodies but to ensure that a similar fate doesn't await your ground crew, the in-feed hopper has a prominent bar all around the entry, usually red or yellow, that will initiate an immediate stop should any part be pressed inwards/down. Much to the chagrin of serial killers trying to load a heavy, floppy body, this mechanism stops workers from falling in or being dragged forward. There are other safety options - a big, fat red STOP button near the chute in-feed for instance. Remote controls are available for many machines offering a safer stand-off work position and some companies have a 'Stress-Reduction' system that enables the in-feed roller(s) and or cutting blades (known in North America and elsewhere as knives) to sense any degree of overloading or overzealous pushing in of oversize wood and either pause the in-feed or reverse the roller action briefly before resuming. The skill in feeding chippers properly is to not force your brush into the rollers especially if it is larger wood diameters as these can kick back out. Let the rollers drag in at their own speed or you'll end up taking more time to extract blockages than the rushing to feed it saves. Luckily many modern machines have 'smart' in-feeds that sense you ramming too much in and will automatically reverse the feed before a jam occurs.

Noise levels are typically pretty high for chippers so *ear defenders are definitely called for.* Anything over 80dB for 8 hours is harmful to your hearing. As always, the figures give the overall acoustic output LwA)Power) first and may show a second, lower figure, LpA (Pressure) which is the actual noise at the level of operator's ears. Some have mitigating measures; *Schliesing* has insulated discharge chutes and a blade configuration which they consider feeds more smoothly to result in a 30% noise reduction although they don't give any actual noise/sound levels.


FÖRST
LITTLE CHIPPER. BIG JOB
FÖRST
XR8D
TRAXION
HIGH PERFORMANCE, AGGRESSIVE, COMPACT BRUSH CHIPPERS
FORST-USA.COM | FORSTGLOBAL.COM

SMARTSCREENS & BLUETOOTH

For those not averse to technology, waterproof smart screens providing data on engine performance, in-feed status, fuel levels and consumption etc. can be built into the machine (so watch where you're swing those branch ends) and can also be via *Bluetooth* to your phone like *Vermeer*'s *One system* which is perhaps the more versatile option as it means you can monitor what your newbie is up to even when you're away from the machine. It also means that if you get a problem, you can liaise with your dealer in real time with them able to see your maintenance/operating data and maybe offer remote solutions to save downtime. As mentioned earlier, The location and overall size/visibility of control button has improved hugely over the years from inch-wide camouflaged black buttons located under on the front of the hopper in the worst cases to these days being very large, very visible, often with protective shrouds and located at a safe height on the side of the hopper just behind the floating safety bars and in some cases, on top of the hopper so that anyone unfortunate enough to get snagged and begin being dragged in can flail around the hopper and stop the mechanism. These buttons are becoming more 'electronic' in nature without the connecting cables- so-called 'fly by wire' which is an odd term for something that doesn't have a wire! Some tracked machines have a remote control used primarily to manoeuvre in uneven and congested environment because you do not want to be anywhere near a chipper that topples over. We once attended an incident where a micro-tracked auger being used on a slope had fallen over (downslope) onto the operator, despite having a trauma doc on our Unit, he didn't survive. Remote operation like the *TP Chipper* model above, is a great safety asset. See page 53 for our man Adam Jones' advice on choosing a chipper.

£$€ - PRICE BANDS

0-3000	♦
4-9,000	♦♦
10-15,000	♦♦♦
16-25,000	♦
26-35,000	♦♦
36-55,000	♦♦♦
56-70,000	♦♦♦♦
70-90,000	♦♦♦♦♦

IN THE FOLLOWING TABLES:.....

ORIGIN:Not necessarily the country of manufacture - if we know there is a smaller inset flag to indicate where it is made.**NB: These machines are often country/region-specific - some models are not available in all countries particularly where European CE requirements are concerned.**

COST: Almost a state secret for many companies so we have had to resort to guideline bands. We try to give the RRP/ SRP for a one-off purchase **including tax** @20% in Europe and State tax @10% in the US - these rates will vary and dealers often have their own pricing/ deals so prices are a rough guide only. £$€ ♦♦ coloured prices in are a currency conversion only and DO NOT include shipping, duty etc. and shipping on such large,

BRUSH/WOOD CHIPPERS

heavy items will be considerable!

VARIANTS: Images will be the lower if there are two in the same column. Specifications will be the same apart from any details given in blue. £$€000= currency conversion only

MAIN FEATURES:

DIESEL ■ **PETROL** ■ **BATTERY** ■ **TPO** ■ (BUYERS GUIDE only)

■ = **Trailed/Towed** via-hitch for road-towing by vehicle

■ = **Tracked** vehicles that are self propelled by remote or may be driven via a rear platform as per the *Forst* model on p33.

■ = **Push - Pedestrian** models that are moved by hand and need to be transported to via trailer or pick up.

■ = **No-Road.** These models need to be transported by road-trailer or pick up for all but the very shortest distances.

■ = **Turntable**. the entire top assembly (engine, chipping module and chutes) can be rotated while the wheels remain fixed.

■ = **Remote control** for movement of tracked vehicles

■ = **Remote control** for In-feed so that workers are clear of danger when the brush/wood is dragged into the chipper.

● ● = OK but not ideal

TANK CAPACITY: Gal=US Gallons

CONSUMPTION: At maximum rpm so will be less if managed.

MIN/MAX HEIGHT/LENGTH: The ejection/discharge chute and hopper/chute can often be folded or removed to give a lower transport length/height but in some cases the transport dimensions might be the higher figure due to folding of a component - eg. *Ohashi 401* (Japan-only model) the chute folds in and increases the transport height.

WIDTH tracked vehicles often narrower, some able to adjust.

ENGINE: Often more than one choice of engines which might affect weights and costs shown.

HOPPER/INFEED TRAY SIZE: The infeed hopper and tray captures the brush as you lay it in and feed it through. The hopper concentrates it into the smaller roller aperture.

ROLLER APERTURE: The letterbox end of the infeed hopper that meets the infeed rollers and on to the cutting blades. Most are horizontal (some vertical) and may be larger than the stated material capacity.

INFEED MECHANISM: The number of and orientation of rollers with gripping surface that initially grasp the brush/wood and pull it in towards the cutting surfaces. Most are hydraulic.

CUTTING BLADES The number of blades/knives on a rotating disc or drum. Most list the primary cutting blades, *Ohashi* have listed all of theirs. The largest machines tend to have drums, the majority of arborist machines have discs.

MATERIAL CAPACITY: The maximum width of material that can be chipped in any single pass- NOT necessarily the same as the diameter of wood that can be chipped which may, in some models only be a ¼ of the quoted max capacity depending on density of wood grain.

FEED/PRODUCTION RATE Refers to the cubic area of chips/mulch produced per hour and this will vary with the type of material (hard or softwood, wet or dry) so is a rough guide.

EJECT/DISCHARGE CHUTE May be detachable and almost always rotates and deflects a certain amount to direct chips.

£$€ - PRICE BANDS

0-3000 ♦
4-9,000 ♦♦
10-15,000 ♦♦♦
16-25,000 ♦♦
26-35,000 ♦♦♦
36-55,000 ♦♦♦♦
56-70,000 ♦♦♦♦♦
70-90,000 ♦♦♦♦♦♦

Images NOT to Scale
~ = Approximate
COSTS♦♦: Approx RRP/SRP & inc local tax/VAT £$€ ♦♦in burnt orange are currency conversions only & do not inc shipping, import duty or tax
N/A = info Not Available/not given.
= Trailed/Towed behind truck
= Self-Propelled/Tracked
= Push - manually pushed/pulled
= No-road.Trailer/pick-up required
= Turntable, Engine/Chute rotates
= Remote Control Track/Drive
= App/Bluetooth monitoring
● ● = OK but not ideal
□□□ = Option
VARIANT=lower image if visually different & differing specification and price banding (♦♦)in blue

MANUFACTURER	ARBMAX	BANDIT	BANDIT	BANDIT
MODEL VARIANT	F30 -	65XP -	75XP -	90XP -
ORIGIN				
~COST inc 20% VAT/10%Local Tax £$€= Currency conversion only	£ ♦♦♦-♦♦♦♦ $0000 €0000	£ ♦♦ $ ♦♦ € ♦♦	£ ♦♦ $ ♦♦ € ♦♦	£ ♦♦♦ $ ♦♦♦ € ♦♦♦
DIESEL PETROL BATTERY	■	■	■	■ [■]
TOW TRACKS PUSH NO-ROAD	■	■	■	■
TURNTABLE REMOTE APP	- □ -	- - -	- - -	- - -
NOISE LwA/ LpA	119/-- dB(A)	N/A	N/A	N/A
FUEL CAPACITY Litres/US Gal DURATION @ max load	100L / 26.4Gal N/A	26L / 7Gal 3.8Lhr / 1Gal/Hr	26L / 7Gal 3.8Lhr / 1Gal/Hr	93L / 24.5Gal N/A
WEIGHT inc battery(ies)	3000kg* 6600lb	907kg 2000lb	952kg 2100lb	20871814 kg 46004000 lb
MAX HEIGHT with chute	378cm / 148.8"	229cm / 90"	229cm / 90"	244cm / 96"
MAX LENGTH	535cm / 210.6"	341cm / 134"	396cm / 156"	498cm / 196"
MIN LENGTH	478cm / 188.1"	305cm / 120"	396cm / 156"*	430cm / 169.3"
WIDTH	199cm / 78.34"	152cm / 60"	170cm / 67"	183cm / 72"
ENGINE / MOTOR	75HP/55kWDeutz or 134HP/100kWCAT C3.5*	25HP/18.6kWKohler EFI or 35HP/00kWB&S Vanguard	25HP/18.6kW Kohler EFI or 35HP/00kWB&S Vanguard	44HP CAT or Kohler 84HPCAT or CumminsV 49HP Kohler EFI
HOPPER/INFEED TRAY SIZE ROLLER APERTURE INFEED MECHANISM	1320 x 800mm / 52 x 31.5" 330 x 310mm / 13 x 12.2" 1x sprung Hydraulic Horizontal Roller	1070 x 740mm / 42 x 29" 152 x 305mm / 6 x 12" 1x sprung Hydraulic Horizontal Roller	1070 x 740mm / 42 x 29" 178 x 305mm / 7 x 12" 1x spring-Feed Horizontal Rollers	890 x 740mm / 35 x 29" 242 x 432mm / 9.5 x 17" 2x Auto-Feed Hydraulic Horizontal Rollers
DISC / DRUM CUTTING BLADES/KNIVES	DISC 2x blades	DISC	DISC	770mm 30" DISC 4x Reversible blades
MATERIAL CAPACITY	300mm / 12"	152mm / 6"	178mm / 7"	230mm /9"
FEED RATE (t=metric tonne) CHIP VOLUME	50³m/hr 1766³ft/hr	24-27m³/hr 80-90ft³/hr	24.4m³/hr 80ft³/hr	27m³/hr 90ft³/hr
DISCHARGE CHUTE Rotation	360°	360°	360°	360°
WARRANTY	1yr/2000hr std -5 yr Limited	1yr/2000hr std -5 yr Limited	1yr/2000hr std -5 yr Limited	1yr/2000hr std -5 yr Limite
NOTES	*may be over 3t depending on spec. also tracked versions >3t - see BUYERS GUIDE version Hydraulic oil tank 80L	27L 7Gal Hydraulic oil capacity. Yellow or green	27L 7Gal Hydraulic oil capacity. * infeed tray does not fold. yellow or green	27L 7Gal Hydraulic oil capacity Optional hydraulic winch. yellow or green
WEBSITE	arbmax.uk	banditchippers.com	banditchippers.com	banditchippers.com

<3t BRUSH/WOOD CHIPPERS

NB Tracked versions of Bandit chippers weigh over 3tonnes and are listed in the BUYERS GUIDE version of this article






BANDIT	BANDIT	BANDIT	BANDIT	ELIET
Intimidator 12XC Gas	Intimidator 12XPC Gas	Intimidator 12XP Gas	200UC Gas	Vector 4S PRO Vector S STD
-	-	-	-	-
£ ♦♦♦ $ ♦♦♦ € ♦♦♦	£ ♦♦♦ $ ♦♦♦ € ♦♦♦	£ ♦♦♦♦ $ ♦♦♦♦ € ♦♦♦♦	£ ♦♦♦ $ ♦♦♦ € ♦♦♦	£ ♦♦ $ ♦♦ € ♦♦
■ [■]	■ [■]	■ [■]	■ [■]	■
■	■	■	■	■ ■
- - -	- - -	- - -	- - -	- - -
N/A	125/-- dB(A)	125/-- dB(A)	--/108 dB(A)	113/99 dB(A)
68.1L / 18Gal N/A	94.6L / 25Gal N/A	93L / 0Gal N/A	92.7L / 24.5Gal N/A	6.1L / 1.6Gal 3.5Lhr / 0.9Gal/Hr
21771996kg 4800 4400 lb	24952313kg 55005100lb	2948 2495 kg 60005500lb	23602177 kg 52004800 lb	210185kg 1653584lb
243.8cm / 96"	249cm / 98"	00cm / 00"	244cm / 94"	225cm / 88.6"
485.1cm / 191"	492.8cm / 194"	530cm / 209"	503cm / 198"	350cm / 138"
409cm / 161"	416cm / 164"	455cm / 179"	427cm / 168"	350cm / 138"
200.7cm / 79"	203.2cm / 80"	200.7cm / 79"	183cm / 68.5"	170cm / 67"
49HP or 74HP Kohler 49HP or 74HP Mitsubishi	49HP CAT or Kohler 74HPCAT or CumminsV 49HP Kohler EFI or CAT or 74HPFord or PSI	49HP CAT or Kohler 74HPCAT or CumminsV 49HP Kohler EFI or CAT or 74HPFord or PSI	49HP CAT or Kubota 49HP Kohler EFI	12HP/9kW Honda GX390
1370 x 760mm / 54 x 30" 305 x 432mm /12 x 17" 2x Auto-Feed Hydraulic Horizontal Rollers	1370 x 760mm / 54 x 30" 305 x 432mm /12 x 17" 2x Auto-Feed Hydraulic Horizontal Rollers	1370 x 760mm / 54 x 30" 330 x 432mm / 13 x 17" 2x Auto-Feed Hydraulic Horizontal Rollers	1070 x 860mm / 42 x 34" 305 x 48.3mm / 12 x 19" 2x Auto-Feed Hydraulic Horizontal Rollers	520 x 540mm/20.4 x 21.25" 80mm / 3" 1x GravityAuto-Feed Hydraulic Horizontal Roller
DRUM 2 Blades	DRUM 2 Blades	DRUM 4x Reversible blades	DISC	DISC 3 Blades
305mm / 12"	305mm / 12"	305mm / 12"	305mm / 12"	80mm / 3"
37m³/hr 120ft³/hr	37m³/hr 120ft³/hr	37m³/hr 120ft³/hr	27m³/hr 90ft³/hr	0.35t / 0.38ton/ hr 3m³/hr 106ft³/hr
360°	360°	360°	360°	280°
1yr/2000hr std -5 yr Limited	1yr/2000hr std -5 yr Limited	1yr/2000hr std -5 yr Limited	1yr/2000hr std -5 yr Limited	Pro= 1 year / 100 hrs
30.2L 8Gal Hydraulic oil capacity. Least complex version of the 12 series. Yellow or green.	Compact version of 12XP. yellow or green	45L Hydraulic oil capacity. Inc hydraulic winch. See BUYERS GUIDE for 12XPTracked,15XP&19XP	200XP= Heavier duty model with larger, fixed hopper & more robust sub-frame	Std/basic version has no auto-feed roller
banditchippers.com	banditchippers.com	banditchippers.com	banditchippers.com	eliet.eu elietusa.com

Images NOT to Scale
~ = Approximate
COSTS♦♦♦: Approx RRP/SRP & inc local tax/VAT £$€ ♦♦♦in burnt orange are currency conversions only & do not inc shipping, import duty or tax
N/A = info Not Available/not given.
= Trailed/Towed behind truck
= Self-Propelled/Tracked
= Push - manually pushed/pulled
= No-road.Trailer/pick-up required
= Turntable, Engine/Chute rotates
= Remote Control Track/Drive
= App/Bluetooth monitoring
● ● = OK but not ideal
□□□ = Option
VARIANT=lower image if visually different & differing specification and price banding (♦♦♦)in blue

MANUFACTURER	ELIET	ELIET	ELIET	ELIET
MODEL VARIANT	Vector 4S on Wheels Cross Country -	Prof 6 E-power E-CrossCountry -	Prof 6 On-Road CrossCountry -	Super Prof On-Road CrossCountry -
ORIGIN				
~COST inc 20% VAT/10%Local Tax £$€= Currency conversion only	£♦♦ ♦♦♦ $♦♦♦ ♦♦♦ €♦♦ ♦♦♦	£♦ ♦ $♦$♦♦ €♦♦	£♦♦♦ ♦ $♦ $♦ €♦♦	£♦ ♦ $♦♦$♦♦ €♦♦♦
DIESEL PETROL BATTERY				
TOW TRACKS PUSH NO-ROAD	[ ]	[ ]	[ ]	[ ]
TURNTABLE REMOTE APP	- - -	- - -	- - -	- - -
NOISE LwA/ LpA	113/99 dB(A)	100/90 dB(A)	113/99 dB(A)	116/99 dB(A)
FUEL CAPACITY Litres/US Gal DURATION @ max load	6.1L / 1.6Gal 3.5Lhr / 0.9Gal/Hr	2 Hours 4 hr Recharge	11L / 3Gal 2.9Lhr / 0.8Gal/Hr	18L / 4.8Gal N/A
WEIGHT inc battery(ies)	240265-270kg 528583-594lb	419426kg 923939lb	419426kg 923939lb	495506kg 10911113lb
MAX HEIGHT with chute	225cm / 88.6"	152cm / 60"	167cm / 66"	145cm / 58"
MAX LENGTH	350cm / 138"	178cm / 70"	190cm / 75"	300200cm / 11880"
MIN LENGTH	350cm / 138"	178cm / 70"	190cm / 75"	300200cm / 11880"
WIDTH	170cm / 67"	83cm / 33"	147.5cm / 59"	15083.5cm / 5932.8"
ENGINE / MOTOR	12HP/9kW Honda GX390	15kW Motor 48v, 7 kW B&S Vanguard Li-Ion battery	14HP/10.40kW B&S Vanguard 400 ES	18or23HP/13.4 or17.2kW Briggs & Stratton Vanguard EFI Twin
HOPPER/INFEED TRAY SIZE ROLLER APERTURE INFEED MECHANISM	520 x 540mm/20.4 x 21.25" 80 mm / 3" 1x Auto-Feed Hydraulic Roller	600 x 580mm / 23.6 x 22.8" 100 x 150mm / 4 x 6" 1x Auto-Feed Hydraulic Horizontal Roller	600 x 580mm / 23.6 x 22.8" 100 x 150mm / 4 x 6" 0x Auto-Feed Hydraulic Rollers	500 x 700mm / 20 x 28" 130 x 150mm / 5 x 6" 0x Auto-Feed Hydraulic Rollers
DISC / DRUM CUTTING BLADES/KNIVES	DISC 3 Blades	DISC 8 Blades	DISC 8 Blades	6x DISCs 24 Blades
MATERIAL CAPACITY	80mm / 3"	100mm / 4"	100mm / 4"	130mm / 5"
FEED RATE (t=metric tonne) CHIP VOLUME	0.35t / 0.38ton/ hr 3m³/hr 106ft³/hr	4m³/hr 141ft³/hr	4m³/hr 141ft³/hr	6m³/hr 212ft³/hr
DISCHARGE CHUTE Rotation	280°	280°	280°	300°
WARRANTY	Pro= 1 year / 100 hrs	Pro= 1 year / 100 hrs	Pro= 1 year / 100 hrs	Pro= 1 year / 100 hrs
NOTES	self-propelled wheels/tracks	Self-propelled.. Also without self-propelled wheels wt=361kg/ £12500. Inactivity - power-sleep mode	Also self-propelled 'On-Wheels' version wt=361kg/ £12500 or the wheeled 'Monster' with 18HP Vanguard engine. 11L Oil tank	Easy access to dic/blades. Also self-propelled 'On-Wheels' version wt=441kg/ £18900
WEBSITE	eliet.eu elietusa.com	eliet.eu elietusa.com	eliet.eu elietusa.com	eliet.eu elietusa.com

£$€ - PRICE BANDS
0-3000 ♦
4-9,000 ♦♦
10-15,000 ♦♦♦
16-25,000 ♦
26-35,000 ♦♦
36-55,000 ♦♦♦
56-70,000 ♦♦♦♦
70-90,000 ♦♦♦♦♦

<3t BRUSH/WOOD CHIPPERS

ELIET	FÖRST	FÖRST	FÖRST	FÖRST
Mega Prof D P/gas	**Cadet6**	**ST6P/gas TR6P/gas**	**ST6P/gas HD**	**TT6**
-	-	-	-	-
£♦♦ $♦♦ €♦♦	£♦ $♦♦ €♦	£♦♦ $♦♦ $♦♦ €♦ €♦♦	£♦ $♦♦ €♦♦	£♦♦ $♦♦ €♦♦
■ [■]	■	■	■	■
■	■	■ [■■]	■	■
- - -	- - -	- - -	- - -	■ - -
115/90 dB(A)	118/107 dB(A)	122/106 dB(A)	122/106 dB(A)	122/106 dB(A)
40L / 10.6Gal N/A	30L / 7.9Gal N/A	30L / 7.9Gal N/A	30L / 7.9Gal N/A	30L / 7.9Gal N/A
<750kg <1653lb	745kg 1640lb	7451200kg 16402640lb	885kg 1947lb	745kg 1640lb
225cm / 88.6"	240cm / 94"	220240cm / 8794"	230cm / 90.5"	220cm / 87"
350cm / 138"	310cm / 126"	409340cm / 161134"	409cm / 161"	371cm / 146"
350cm / 138"	310cm / 126"	335263cm / 130103.5"	335cm / 130"	282cm / 111"
170cm / 67"	140cm / 55"	13080-110cm / 5131-43"	130cm / 51"	140cm / 55"
33HP/24.6kW Kubota Diesel 37HP B&S Vanguard	23HP/17.2kW B&S Vanguard V Twin	40hp V Twin	40hp V Twin	37HP/26.7kW V Twin EFI
1000 x 650mm / 00 x 00" 160 x 150mm / 6.3 x 6" 0x Auto-Feed Hydraulic Rollers	595mm / 23.5" 150 x 20mm / 6 x 8" 2x Auto-Feed Hydraulic Horizontal Rollers	N/A 150 x 20mm / 6 x 8" 2x Auto-Feed Hydraulic Horizontal Rollers	N/A 150 x 20mm / 6 x 8" 2x Auto-Feed Hydraulic Horizontal Rollers	N/A 150 x 20mm / 6 x 8" 2x Auto-Feed Hydraulic Horizontal Rollers
DISC 10 blades	DRUM twin revsible blades	DRUM twin revsible blades	DRUM twin revsible blades	DRUM twin revsible blades
160mm / 6.3"	150mm / 6"	150mm / 6"	150mm / 6"	150mm / 6"
10m³/hr 353ft³/hr	N/A	N/A	N/A	N/A
280°	280°	280°	280°	360°
Pro= 1 year / 100 hrs	3yr. 5yr option	3yr. 5yr option	3yr. 5yr option	3yr. 5yr option
		Variable input speed control.	Toughened, steel version of ST6P. Variable input speed control.	Variable input speed control.
eliet.eu elietusa.com	forstglobal.com forstusa.com	forstglobal.com forstusa.com	forstglobal.com forstusa.com	forstglobal.com forstusa.com

Images NOT to Scale
~ = Approximate
COSTS♦♦: Approx RRP/SRP & inc local tax/VAT £$€ ♦♦in burnt orange are currency conversions only & not inc shipping, import duty o
N/A = info Not Available/not given.
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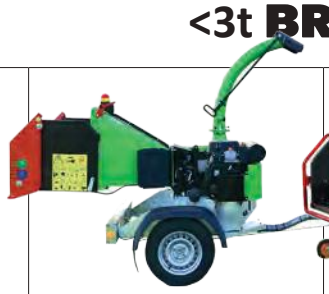
= No-road.Trailer/pick-up required
= Turntable, Engine/Chute rotates
= Remote Control Track/Drive
= App/Bluetooth monitoring
= OK but not ideal
= Option
VARIANT=lower image if visually different & differing specification and price banding (♦♦)n blue

MANUFACTURER	FÖRST	FÖRST	FÖRST	FÖRST
MODEL VARIANT	ST6D 24 TR6D 24 -	ST6D 42 TR6D 42 -	XR8D -	ST8D TR8D -
ORIGIN				
~COST inc 20% VAT/10%Local Tax £$€= Currency conversion only	£♦ ♦♦ $♦♦ $♦♦♦ €♦♦ €♦♦♦	£♦♦ ♦♦♦ $♦♦♦ $♦♦♦ €♦♦♦ €♦♦♦	£♦♦ $♦♦ €♦♦	£♦♦ ♦♦♦ $♦♦♦ $♦♦♦ €♦♦♦ €♦♦♦
DIESEL PETROL BATTERY	■	■	■	■
TOW TRACKS PUSH NO-ROAD	■ [■■]	■ [■■]	■■	■ [■■]
TURNTABLE REMOTE APP	- - -	- - -	-□-	-□-
NOISE LwA/ LpA	128/107 dB(A)	128/107 dB(A)	128/107 dB(A)	128/107 dB(A)
FUEL CAPACITY Litres/US Gal **DURATION** @ max load	3035L/ 7.99.2Gal N/A	3035L/ 7.99.2Gal N/A	35L / 9.2Gal N/A	35L / 9.2Gal N/A
WEIGHT inc battery(ies)	10051300kg 22112860lb	11051430kg 24313146lb	2135kg 4697lb	13751625kg 30253575lb
MAX HEIGHT with chute	220230cm / 8790.5"	230cm / 90.5"	250cm / 98"	240cm / 00"
MAX LENGTH	409340cm / 161134"	409340cm / 161134"	342cm / 134.6"	463340cm / 182133.8"
MIN LENGTH	335263cm / 130103.5"	335263cm / 130103.5"	260cm / 102"	397270cm / 156106.3"
WIDTH	130120cm / 5147"	140120cm / 00"	150cm / 59"	150130cm / 5951"
ENGINE / MOTOR	42HP/31.3kW Doosan 24HP/17.9kW Kubota	42HP/31.3kW Doosan	55HP/41kW Doosan	55HP/41kW Doosan
HOPPER/INFEED TRAY SIZE **ROLLER APERTURE** **INFEED MECHANISM**	N/A 150 x 20mm / 6 x 8" 2x Auto-Feed Hydraulic Horizontal Rollers	N/A 150 x 20mm / 6 x 8" 2x Auto-Feed Hydraulic Horizontal Rollers	N/A 200 x 255mm / 8 x 10" 2x Auto-Feed Hydraulic Horizontal Rollers	N/A 200 x 255mm / 8 x 10" 2x Auto-Feed Hydraulic Horizontal Rollers
DISC / DRUM **CUTTING BLADES/KNIVES**	DRUM twin revsible blades	DRUM twin revsible blades	(enlarged)DRUM twin revsible blades	(enlarged)DRUM twin revsible blades
MATERIAL CAPACITY	150mm / 6"	150mm / 6"	200mm / 8"	200mm / 8"
FEED RATE (t=metric tonne) **CHIP VOLUME**	N/A	N/A	N/A	N/A
DISCHARGE CHUTE Rotation	280°	280°	280°	280°
WARRANTY	3yr. 5yr option	3yr. 5yr option	3yr. 5yr option	3yr. 5yr option
NOTES	Variable input speed control.	Variable input speed control.	Variable input speed control.	Variable input speed control.
WEBSITE	forstglobal.com forstusa.com	forstglobal.com forstusa.com	forstglobal.com forstusa.com	forstglobal.com forstusa.co

<3t BRUSH/WOOD CHIPPERS

£$€ - PRICE BANDS
0-3000 ♦
4-9,000 ♦♦
10-15,000 ♦♦♦
16-25,000 ♦
26-35,000 ♦♦
36-55,000 ♦♦♦
56-70,000 ♦♦♦♦
70-90,000 ♦♦♦♦♦







GREENMECH	GREENMECH	GREENMECH	GREENMECH	GREENMECH
CS100 -	Arborist 130 -	ECO 135 135TT -	Arborist 150P/gas 150 DMax -	Quadchip 160D P/gas -
£♦♦ $♦♦♦ €♦♦	£♦ $♦♦ €♦	£♦♦♦ ♦♦♦ $♦ $♦ €♦ €♦	£♦♦ $♦♦$♦♦ €♦♦€♦♦	£♦♦ $♦♦$♦♦ €♦♦€♦♦
■	■	■	■ [■]	■ [■]
■	■	■	■	■
- - -	- - -	[■] - -		■ - -
120/92 dB(A)	116/92 dB(A)	115/91 dB(A)	115/92 dB(A)	116117/9293 dB(A)
7.5L / 2Gal N/A	27L / 7.1Gal N/A	33L /8.7Gal N/A	2727L / 7.17.1Gal 6.53.9Lhr / 1.71.03Gal/Hr	2532L / 6.68.4Gal 3.96.5Lhr / 1.031.7Gal/Hr
195kg 429lb	670kg 1474lb	640720kg 14081584lb	7107480kg 15621650lb	749kg 1648lb
147cm / 57.8"	233.5cm / 91.7"	230234cm / 90.592"	233.5cm / 92"	254.5cm / 100"
220cm / 86.6"	382.5cm / 150.5"	350360cm / 137.7141.7"	382.5382.5cm / 150.5150.5"	420420cm / 165.3 165.3"
172cm / 67.7"	355.6cm / 140"	300283cm / 118111"	355.6cm / 140"	321.1cm / 126"
76cm / 30"	129cm / 50.7"	160cm / 62.9"	129cm / 50.7"	150.2cm / 59"
18HP/13.4kW electric start	23HP/17.2kW Honda GX630	24HP/18kW Loncin	40HP/28kW B& S Vanguard EFI 26HP Kubota D1105	34HP/25.4kW Kubota D1105T 40HP/28kW B&S Vanguard EFI
600mm x 450mm/23.6 x 17.7" Gravity Fed	970 x 790mm / 38 x 31" 150 x 230mm / 6 x 9" 2x Auto-Feed Hydraulic Vertical Rollers	850 x 680mm / 33.5 x 26.8" 150 x 135mm / 6 x 5.3" 2x Auto-Feed Hydraulic Vertical Rollers	970 x 790mm / 38 x 31" 150 x 230mm / 6 x 9" 2x Auto-Feed Hydraulic Vertical Rollers	1100 x 800mm / 43.3 x 31.4" 160 x 230mm / 6 x9" 2x Auto-Feed Hydraulic Vertical Rollers
DISC Twin Blades	DISC 4 blades	DISC 2 blades	DISC 4 blades	DISC 4 blades
100mm / 4"	150mm / 6"	135mm / 5.3"	150mm / 6"	160mm / 6.3"
2t / 2.2ton/ hr 5.6³m/hr 200³ft/hr	3t / 3.3ton/ hr 9.5³m/min 335³ft/hr	4t / 4.4ton/ hr 11.3³m/hr 400³ft/hr	3.75t / 4.1ton/ hr 10.611.6³m/hr 375410³ft/hr	3.73.5t / 43.8ton/ hr 10.49.9³m/hr 400380³ft/hr
-	280°	280°	280°	280°
unlimited 3 Year	unlimited 3 Year	unlimited 3 Year	unlimited 3 Year	unlimited 3 Year
	'No-stress' in-feed system. 30L Hydraulic oil tank	'No-stress' in-feed system. Noise dampened version available.	'No-stress' in-feed system 30L Hydraulic Oil tank	'No-stress' in-feed system 2332L Hydraulic oil tank
greenmech.co.uk	greenmech.co.uk	greenmech.co.uk	greenmech.co.uk	greenmech.co.uk

£$€ - PRICE BANDS
0-3000 ♦
4-9,000 ♦♦
10-15,000 ♦♦♦
16-25,000 ♦
26-35,000 ♦♦
36-55,000 ♦♦♦
56-70,000 ♦♦♦♦
70-90,000 ♦♦♦♦♦

Images NOT to Scale
~ = Approximate
COSTS♦♦: Approx RRP/SRP & inc local tax/VAT £$€ ♦♦in burnt orange are currency conversions only & do not inc shipping, import duty or tax
N/A = info Not Available/not given.
■ = Trailed/Towed behind truck
■ = Self-Propelled/Tracked
■ = Push - manually pushed/pulled
■ = No-road.Trailer/pick-up required
■ = Turntable, Engine/Chute rotates
■ = Remote Control Track/Drive
■ = App/Bluetooth monitoring
● ● = OK but not ideal
□□□ = Option
VARIANT=lower image if visually different & differing specification and price banding (♦♦)in blue

MANUFACTURER	GREENMECH	GREENMECH	GREENMECH	GREENMECH
MODEL VARIANT	Quadtrack 160D -	EVO 165 P/gas Sub 750 -	EVO 165D 165DT -	205D SafeSureTrack -
ORIGIN				
~COST inc 20% VAT/10%Local Tax £$€= Currency conversion only	£♦♦♦ $♦♦♦ €♦♦♦	£♦ $♦♦ €♦♦	£♦ ♦♦♦ $♦♦ $♦♦♦ €♦♦ €♦♦♦	£♦♦♦ ♦♦♦♦ $♦♦♦♦ ♦♦♦♦♦ €♦♦♦♦ ♦♦♦♦♦
DIESEL PETROL BATTERY	■	■	■	■
TOW TRACKS PUSH NO-ROAD	■ ■	■	■ [■ ■]	■ ■
TURNTABLE REMOTE APP	■ - - ■	- - -	- - -	- ■ -
NOISE LwA/ LpA	116/93 dB(A)	115/92 dB(A)	114/92 dB(A)	118/91 dB(A)
FUEL CAPACITY Litres/US Gal DURATION @ max load	25L / 6.6Gal 3.9Lhr / 1.03Gal/Hr	33L / 8.7Gal 6.5Lhr / 1.7Gal/Hr	33L / 8.7Gal 3.8Lhr / 1Gal/Hr	50L / 13.2Gal 6.5Lhr / 1.7Gal/Hr
WEIGHT inc battery(ies)	1100kg 2420lb	750kg 1650lb	1010**1410**kg 2222**3102**lb	2150kg 4730lb
MAX HEIGHT with chute	248.7cm / 97.9"	245cm / 96"	260**258**cm / 102**101.5**"	289**276**cm / 113**108.6**"
MAX LENGTH	236.8cm / 93.2"	365cm / 143.7"	400**330**cm / 157.4**129.9**"	386cm / 151"
MIN LENGTH	236.8cm / 93.2"	315cm / 124"	350**254**cm / 137.8**100**"	302cm / 118.8"
WIDTH	136.6cm / 59"	145cm / 57"	151.5**137**cm / 59.6**53.9**"	149-235.6cm / 58-92.7"
ENGINE / MOTOR	34HP/25.4kW Kubota D1105T	40HP/28kW Briggs&Stratton Vanguard	25HP/18.5kW Kubota V1505	50HP/37kW Kubota D 1803-CR-TE4B (V)
HOPPER/INFEED TRAY SIZE ROLLER APERTURE INFEED MECHANISM	1100 x 800mm / 43.3 x 31.4" 160 x 230mm / 6 x9" 2x Auto-Feed Hydraulic Vertical Rollers	980 x 670mm/38.5x 26.3" 165 x 220mm / 6.5 x 8.7" 2x Auto-Feed Hydraulic Vertical Rollers	1110 x 700mm/43.7x 27.5" 165 x 220mm / 6.5 x 8.7" 2x Auto-Feed Hydraulic Vertical Rollers	1250 x 700mm/49.2 x 27.5 205 x 270mm / 8 x 10.6" 2x Auto-Feed Hydraulic Vertical Rollers
DISC / DRUM CUTTING BLADES/KNIVES	DISC 4 blades	DISC 4 blades	DISC 4 blades	DISC 6 blades
MATERIAL CAPACITY	160mm / 6.3"	165mm / 6.5"	165mm / 6.5"	205mm / 8"
FEED RATE (t=metric tonne) CHIP VOLUME	3.7**3.5**t / 4**3.8**ton/ hr 10.4³m/hr 400³ft/hr	4.25t / 4.7ton/ hr 15³m/hr 529³ft/hr	4.25t / 4.7ton/ hr 15³m/hr 529³ft/hr	7t / 7.7ton/ hr 22³m/hr 777³ft/hr
DISCHARGE CHUTE Rotation	280°	280°	280°	280°
WARRANTY	unlimited 3 Year	unlimited 3 Year	unlimited 3 Year	unlimited 3 Year
NOTES	Speed 3kph 240mm Ground clearance 'No-Stress' In feed system Petrol version DISCONTINUED	'No-stress' in-feed system	'No-stress' in-feed system	40**53**cm/16**21**" Ground clearanc Includes area lighting.'No-stres in-feed. 3**4**kph.30**35**° slope ang Suretrack=Independent pivot trac
WEBSITE	greenmech.co.uk	greenmech.co.uk	greenmech.co.uk	greenmech.co.uk

<3t BRUSH/WOOD CHIPPERS

GREENMECH	GREENMECH	HANSA	HANSA	HANSA
EVO 205D 205DT	EVO 205TT	C7	C13RT C13	C16c
-	-	-	-	-
£◆◆◆ ◆◆◆ $◆◆◆◆ $◆◆◆◆ €◆◆◆ €◆◆◆◆	£◆◆◆ $◆◆◆◆ $◆◆◆	£◆ - €◆◆	£◆◆ ◆◆ - €◆◆ €◆◆	£◆◆ - €◆◆
■	■	■	■	■
■ [■ ■]	■	■ ■	■ [■ ■]	■ ■
- - - ■	■ - -		- - -	- - -
118/91 dB(A)	120/91 dB(A)	108/92 dB(A)	109/92 dB(A)	109/92 dB(A)
3350L / 8.713.2Gal 6.5Lhr / 1.7Gal/Hr	50L / 13.2Gal 6.5Lhr / 1.7Gal/Hr	3.1L / 0.82Gal 1.7Lhr / 0.45Galhr	6L / 1.6Gal 3.5Lhr / 0.93Gal/Hr	8L / 2.1Gal 4.9Lhr / 1.29Gal/Hr
14501700kg 31903740lb	1760kg 3872lb	95kg 209lb	265202kg 583445lb	237kg 521.4lb
276273cm / 108.6107"	271.5cm / 106.8"	125.5cm / 49"	163.5149cm / 6459"	163.5cm / 64"
445377cm / 175148.4"	354.5cm / 136"	118cm / 46"	134.5145cm / 6057"	134.5cm / 60"
400300cm / 157118"	354.5cm / 136"	118cm / 46"	134.5145cm / 6057"	134.5cm / 60"
160145cm / 62.957"	196cm / 77"	82cm / 32"	65cm / 25.5"	65cm / 25.5"
50HP/37kW Kubota D 1803-CR-TE4B	50HP/37kW Kubota D 1803-CR-TE4B	6.5HP/4.8kW Honda GX200	13HP/9.5kW Honda GX390	16HP/11.8kW Briggs & Stratton Vanguard
1250 x 700mm/49.2 x 27.5" 205 x 270mm / 8 x 10.6" 2x Auto-Feed Hydraulic Vertical Rollers	1250 x 700mm/49.2 x 27.5" 205 x 270mm / 8 x 10.6" 2x Auto-Feed Hydraulic Horizontal Rollers	513 x 250mm / 20.2 x 9.8" 130 x 150mm / 5 x 6" Self-feed - Gravity	564 x 378mm / 22.2 x 14.9" 170 x 220mm / 6.7 x 8.7" Self-feed - Gravity	553 x 405mm / 21.8 x 16" 170 x 220mm / 6.7 x 8.7" Self-feed - Gravity
DISC 6 blades	DISC 6 blades	DISC 2x 10mm blades/knives	DISC 2x 10mm blades/knives	DISC 2x 10mm blades/knives
205mm / 8"	205mm / 8"	70mm / 3"	90mm / 3.5"	110mm / 4.3"
7t / 7.7ton/ hr 22³m/hr 777³ft/hr	7t / 7.7ton/ hr 22³m/hr 777³ft/hr	1.5³m/hr 53³ft/hr	~2.5m³/hr 88ft³/hr	>3.5m³/hr 124ft³/hr
280°	280°	825mm Deflector	15151400mm/6055" 270°	1485mm/60" 270°
unlimited 3 Year	unlimited 3 Year	3 Year	3 Year	3 Year
'No-stress' in-feed system	'No-stress' in-feed system		C13 version has non-road legal tow hitch (use with garden tractor etc.)	C16c has barrow wheels and rear casters
greenmech.co.uk	greenmech.co.uk	hansaproducts.com	hansaproducts.com	hansaproducts.com

designed by **women** | tested by **women** | built to **perform**

BREATHEFLEXPRO Women's Fit

For years, women working in arboriculture had little choice but to wear ill-fitting chainsaw trousers built for men - gear that compromised both comfort and performance. Arbortec saw that this needed to change. So in 2018, we introduced the original Breatheflex Ladies Range: a groundbreaking step that finally brought women in arb and forestry kit designed specifically for them.

But we knew this was only the beginning.

Partnering with Forestry England - an organisation celebrated for its commitment to inclusivity and innovation - we set out to push women's protective workwear even further. With input from industry professionals around the world, seven development rounds, and 49 meticulously refined prototypes, the Women's Fit Breatheflex Pro chainsaw trousers came to life. The result isn't just functional; it's transformative - setting a new benchmark for women's chainsaw protection.

And the innovation didn't stop there. Following a full year of design refinement and real-world testing by professional female arborists across the UK, we're proud to introduce the **BreatheDry® Ladies Fit Full-Zip Waterproof Jacket.** More than simply reshaped, this jacket has been completely reimagined for the female form. Every panel, seam and zip has been thoughtfully repositioned to deliver a tailored, flexible and flattering fit built for demanding work in forestry and arboriculture.

By listening, learning and adapting, we've created gear that truly fits - because professional female arborists deserve equipment engineered for them.

Images NOT to Scale
~ = Approximate
COSTS♦♦: Approx RRP/SRP & inc local tax/VAT £$€ ♦♦in burnt orange are currency conversions only & do not inc shipping, import duty or tax
N/A = info Not Available/not given.
= Trailed/Towed behind truck
= Self-Propelled/Tracked
= Push - manually pushed/pulled
= No-road.Trailer/pick-up required
= Turntable, Engine/Chute rotates
= Remote Control Track/Drive
= App/Bluetooth monitoring
● ● = OK but not ideal
□□□= Option
VARIANT=lower image if visually different & differing specification and price banding (♦♦)in blue

MANUFACTURER	**HANSA**	**JENSEN**	**JENSEN**	**JENSEN**
MODEL VARIANT	**C21** -	**A530 530Light** -	**A530 P/gas Turntable** -	**A530XL XLTRACKS/SPIDE** -
ORIGIN				
~COST inc 20% VAT/10%Local Tax £$€= Currency conversion only	£♦♦♦ - €♦♦♦	£♦ $♦♦ €♦	£♦-♦♦ £♦♦ $♦♦ $♦♦ €♦-♦♦ ♦♦	£♦♦ £♦♦♦ $♦♦♦ $♦♦♦♦ €♦♦ ♦♦♦
DIESEL PETROL BATTERY	■	■	■	■
TOW TRACKS PUSH NO-ROAD	■	■	■	■ [■■]
TURNTABLE REMOTE APP	- - -	- - -	[■] - -	- - -
NOISE LwA/ LpA	109/92 dB(A)	114/-- dB(A)	114/-- dB(A)	114/-- dB(A)
FUEL CAPACITY Litres/US Gal **DURATION** @ max load	11L / 2.9Gal 6Lhr / 1.59Gal/Hr	30L / 7.9Gal N/A	30L / 7.9Gal N/A	30L / 7.9Gal N/A
WEIGHT inc battery(ies)	407kg 896lb	800750kg 17601650lb	700750kg 15401650lb	8001200kg 17602706lb
MAX HEIGHT with chute	188.5cm / 74"	220cm / 86.6"	220230cm /86.689"	260270cm / 102106"
MAX LENGTH	244cm / 96"	390cm / 153.4"	390425cm / 153.4167"	300290cm / 118114"
MIN LENGTH	244cm / 96"	340320cm / 134126"	320345cm / 126135.8"	249278cm / 98110"
WIDTH	136cm / 53.5"	135cm / 53.15"	135138cm / 53.1554"	131-182cm / 51.5-71.7"
ENGINE / MOTOR	21HP/15.5kW Honda GX630	24HP/16.8kW Kubota 35HP/26KW Kubota	35HP/26KW B&S Vanguard or 40HP/27KW Vanguard	37HP/27KW Kubota or 25HP/18.5kW Kubota Dies
HOPPER/INFEED TRAY SIZE **ROLLER APERTURE** **INFEED MECHANISM**	597 x 401mm / 23.5 x 15.8" 200 x 285mm / 7.9 x 11.2" Self-feed - Gravity	850 x 830mm*/ 33.5 x 32.7" 210x130150mm/8.3x5.25.9" 2x Auto-Feed Hydraulic Horizontal Rollers	850 x 830mm / 33.5 x 32.7" 210 x 150mm / 8.3 x 5.9" 2x Auto-Feed Hydraulic Horizontal Rollers	1000x830mm*/39.4x32.7 210 x 150mm / 8.3 x 5.9" 2x Auto-Feed Hydraulic Horizontal Rollers
DISC / DRUM **CUTTING BLADES/KNIVES**	DISC 2x 12mm blades/knives	DISC 2 blades	DISC 2 blades	DISC 2 blades
MATERIAL CAPACITY	130mm / 5.1"	130150mm / 65.2"	150mm / 6"	150mm / 6"
FEED RATE (t=metric tonne) **CHIP VOLUME**	~6.5m³/hr 229ft³/hr	1215m³/hr 424529ft³/hr	15m³/hr 529ft³/hr	15m³/hr 529ft³/hr
DISCHARGE CHUTE Rotation	1885mm/00" 270°	270°	270°	270°
WARRANTY	3 Year	3 year	3 year	3 year
NOTES	Electric start	20L Hydraulic oil tank. No Stress infeed *A530 hopper = 860x740mm	No Stress infeed	Spider= variable gradient track Speed 3kmh. Adj track width option. No Stress infeed *A530XL hopper=860x740m
WEBSITE	hansaproducts.com	jensen-gmbh.de	jensen-gmbh.de	jensen-gmbh.de

<3t BRUSH/WOOD CHIPPERS

£$€ - PRICE BANDS
0-3000 ♦
4-9,000 ♦♦
10-15,000 ♦♦♦
16-25,000 ♦
26-35,000 ♦♦
36-55,000 ♦♦♦
56-70,000 ♦♦♦♦
70-90,000 ♦♦♦♦♦








	JENSEN	JENSEN	JENSEN	JENSEN	JENSEN
R	A540 P/gas D & TT	A540XL TRACKS SPIDER	A550	A550XL TRACKS SPIDER	A450 TT TRACKS
	£♦♦£♦♦ $♦♦♦$♦♦♦♦ $♦♦ ♦♦♦	£♦♦♦ £♦♦♦♦ $♦♦♦♦$♦♦♦♦♦ €♦♦♦♦ ♦♦♦♦♦	£♦♦♦ $♦♦♦♦ €♦♦♦	£♦♦♦ >£♦♦♦♦ $♦♦♦♦>$♦♦♦♦♦ €♦♦♦♦ >♦♦♦♦♦	£♦♦♦ £♦♦♦♦ >£♦♦♦♦♦ $♦♦♦♦$♦♦♦♦♦ >$♦♦♦♦♦ €♦♦♦-♦♦♦♦ ♦♦♦♦♦ >♦♦♦♦♦
	■ [■]	■	■	■	■
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	[■]- -	- [■*]	- - -	- ■*	■- -
	114/-- dB(A)	114/-- dB(A)	114/-- dB(A)	114/-- dB(A)	114/-- dB(A)
	3045L / 7.9/11.9Gal N/A	30L / 7.9Gal N/A	30L / 7.9Gal N/A	30L / 7.9Gal N/A	47L / 12.4Gal N/A
	12001450kg 26403190lb	14002000kg 30804400lb	1300kg 2860lb	1630-17802250kg 3586-39164950lb	16001800kg 35203960lb
	240255cm / 91101"	250280cm / 110"	232cm / 91"	270cm / 106.3"	270 255cm / 106 100"
	395405cm / 155.5160"	295cm /116"	455cm / 179"	295cm / 116.1"	362 225cm / 142.5 88.5"
	340353cm / 134138.9"	234.5278cm / 92"	375cm / 147.6"	240cm / 94.4"	312 225cm / 123 88.5"
	150180cm / 5971"	137cm / 54"	143cm / 56"	137cm / 53.9"	195cm / 76.7"
el	40HP/27kW Vanguard EFI 25HP/18.5kW Kubota Diesel	25HP/18.5kW Kubota (various engine ~36kW options)	37HP/27.2kW Yanmar Diesel	37HP 27.2kW Yanmar Diesel or 55HP Doosan 55HP Develon Diesel	50HP/38kW Hatz Diesel or 38HP/28kW Kubota Diesel
"	1000 x 800mm/39.4 x 31.5" 210 x 190mm / 8.3 x 7.5" 2x Auto-Feed Hydraulic Horizontal Rollers	1000 x 800mm/39.4 x 31.5" 240 x 200mm / 9.5 x 7.90" 2x Auto-Feed Hydraulic Horizontal Rollers	1000 x 800mm/39.4 x 31.5" 240 x 200mm / 9.5 x 7.90" 2x Auto-Feed Hydraulic Horizontal Rollers	1000 x 800mm/39.4 x 31.5" 240 x 200mm / 9.5 x 7.90" 2x Auto-Feed Hydraulic Horizontal Rollers	1050 x 880mm/41.3 x 34.6" 245 x 200mm / 9.65 x 7.9" 2x Auto-Feed Hydraulic Horizontal Rollers
	DISC 2 blades	DISC 2 blades	DISC 2 blades	DISC 2 blades	DISC 2 blades
	190mm / 7.5"	200mm / 8"	200mm / 8"	200mm / 8"	200mm / 8"
	18m³/hr 635ft³/hr	18m³/hr 635ft³/hr	18m³/hr 635ft³/hr	18m³/hr 635ft³/hr	20m³/hr 706ft³/hr
	270°	270°	270°	270°	360°
	3 year	3 year	3 year	3 year	3 year
s	28L Hydraulic oil tank. TT=Turntable. No Stress infeed	Option adj width tracks. Spider has variable gradient tracks.50-70cm ground clearance. *Option-only	Enhanced versin of A540 28L Hydraulic oil tank. No Stress infeed. Twin axle option	Available with adjustable width tracks. Spider has variable gradient tracks. 28L Hydr oil. *Option-only	28L Hydraulic oil tank No Stress infeed. May be a petrol version?
m	jensen-gmbh.de	jensen-gmbh.de	jensen-gmbh.de	jensen-gmbh.de	jensen-gmbh.de

Images NOT to Scale
~ = Approximate
COSTS♦♦: Approx RRP/SRP & inc local tax/VAT £$€ ♦♦in burnt c… are currency conversions only & do not inc shipping, import duty or tax
N/A = info Not Available/not given.
= Trailed/Towed behind truck
= Self-Propelled/Tracked
= Push - manually pushed/pulled
= No-road.Trailer/pick-up required
= Turntable, Engine/Chute rotates
= Remote Control Track/Drive
= App/Bluetooth monitoring
= OK but not ideal
= Option
VARIANT=lower image if visually different & differing specification and price banding (♦♦)in blue

MANUFACTURER	JENSEN	JENSEN	JENSEN	JENSEN
MODEL VARIANT	A425 TT TRACKS -	A328 TT TRACKS -	A350TT -	A231 TT TRACKS -
ORIGIN				
~COST inc 20% VAT/10%Local Tax £$€= Currency conversion only	£♦♦♦ £♦♦♦ £♦♦♦♦ $♦♦♦ $♦♦♦♦ $♦♦♦♦♦ €♦♦♦ ♦♦♦ ♦♦♦♦	£♦♦♦♦ £♦♦♦♦ >£♦♦♦♦♦ $♦♦♦♦♦ $♦♦♦♦ >$♦♦♦♦♦ €♦♦♦♦♦ ♦♦♦♦♦ >♦♦♦♦♦	£♦♦♦♦♦ >$♦♦♦♦♦ ≥€♦♦♦♦♦	£♦♦♦-♦♦♦♦ ≥£♦♦♦♦ £♦ $♦♦♦♦ $♦♦♦♦ >$♦♦♦ €♦♦♦♦ ♦♦♦♦♦ >♦♦♦
DIESEL PETROL BATTERY	■	■	■	■
TOW TRACKS PUSH NO-ROAD	■	■ [■■]	■	■ [■■]
TURNTABLE REMOTE APP	[■]*- -	[■]*- -	■- -	[■]*- -
NOISE LwA/ LpA	114/-- dB(A)	114/107 dB(A)	114/-- dB(A)	114/107 dB(A)
FUEL CAPACITY Litres/US Gal DURATION	27-30L / 7.1-Gal N/A	70L / 16.5Gal N/A	70L / 18.5Gal N/A	70L / 16.5Gal N/A
WEIGHT inc battery(ies)	1500 1800 2200kg 3300 3960 4400lb	1800 2100 2300kg 3960 4620 5060lb	2200kg 4840lb	2500 26502700kg 5500 58305940lb
MAX HEIGHT with chute	260280 280cm/102.4110"	280308 270cm/110121 106"	300cm / 118"	310 270cm/122 106"
MAX LENGTH	460330cm / 165.3130"	440 410cm / 173 161"	410cm / 161"	480 340cm / 189 134
MIN LENGTH	420370 235cm/165146 92.5"	340 235cm / 161 92.5"	410cm / 161"	430 295cm / 169 116
WIDTH	180200 140cm / 7179 55"	214 140cm / 83 55"	214cm / 84"	230cm / 90.5"
ENGINE / MOTOR	50HP Kubota or 38HP Kubota 50HP/43kW Hatz or Kubota	57HP/43.7kW Hatz 50HP Kubota 50 or 68HP Kubota 57HPHatz or 67HP Kubota	73HP/55.4kW Hatz Diesel	36 to 65HP Hatz or 50HP Kubota 50HP Kubota
HOPPER/INFEED TRAY SIZE ROLLER APERTURE INFEED MECHANISM	1050 x 880mm/41.3 x 34.6" 245 x 200mm / 9.65 x 7.9" 2x Auto-Feed Hydraulic Horizontal Rollers	1150 x 800mm/45.2 x 31.4" 280 x 220mm / 11 x 8.6" 2x Auto-Feed Hydraulic Horizontal Rollers	1300 x 850mm / 51 x 33.5" 300 x 240mm / 11.8 x 9.5" 2x Auto-Feed Hydraulic Horizontal Rollers	1160 x 800mm/46 x 31 310 x 240mm / 12.2 x 9 2x Auto-Feed Hydrau Horizontal Rollers
DISC / DRUM CUTTING BLADES/KNIVES	DISC 2 blades	DISC 2 blades	DISC 2 blades	DISC 2 blades
MATERIAL CAPACITY	200mm / 8"	220mm / 8.5"	240mm / 9.5"	240mm / 9.5"
FEED RATE (t=metric tonne) CHIP VOLUME	20m³/hr 706ft³/hr	25m³/hr 882ft³/hr	25-30m³/hr 882-1060ft³/hr	30m³/hr 1060ft³/hr
DISCHARGE CHUTE Rotation	360°	270°	270°	270°
WARRANTY	3 year	3 year	3 year	3 year
NOTES	Option twin wheel chassis. No Stress infeed. *Tracked = NO turntable & 3kph speed	*Tracked = NO turntable & 3kph speed 23L/6gal hydraulic oil tank	30L/8gal hydraulic oil tank. Available without turntable.	*Tracked has Turntable opt 23L/6gal hydraulic oil tan Single or twin wheel cha *pic=XLtrack version >3.5to
WEBSITE	jensen-gmbh.de	jensen-gmbh.de	jensen-gmbh.de	jensen-gmbh.de

<3t BRUSH/WOOD CHIPPERS

£$€ - PRICE BANDS
0-3000 ♦
4-9,000 ♦♦
10-15,000 ♦♦♦
16-25,000 ♦
26-35,000 ♦♦
36-55,000 ♦♦♦
56-70,000 ♦♦♦♦
70-90,000 ♦♦♦♦♦

NB: Ohashi range is being modified and these 4 European models do not reflect the models shown on Ohashi's website but these four have been verified as ongoing for sale outside Japan by Ohashi.

	OHASHI	OHASHI	OHASHI	OHASHI
*	ES73G	ES101GH -	ES131GH -	ES151GH -
♦♦♦ ♦♦ ♦♦	£♦♦ $♦♦♦ €♦♦♦	£♦♦♦ $♦♦♦ €♦♦♦	£♦♦♦ $♦ €♦	£♦♦ $♦♦ €♦♦
	■	■	■	■
	■ ■	■ ■	■ ■	■ ■
	- - -	- - -	- - -	- - -
	111/-- dB(A)	111/-- dB(A)	111/-- dB(A)	116/-- dB(A)
	3.1L / 0.8Gal 2.2Lhr / 0.5Gal/Hr	5.3L / 1.4Gal 2.4Lhr / 0.64Gal/Hr	6.1L / 1.6Gal 2.5Lhr / 0.66Gal/Hr	15L / 4Gal 6.5Lhr / 1.7Gal/Hr
	200kg 440lb	390kg 858lb	390kg 858lb	490kg 1078lb
"	137cm / 54"	154cm / 61"	150cm / 59"	156cm / 61.4"
4"	169cm / 66.5"	212cm / 83.5"	218cm / 85.8"	242cm / 95.3"
5"	128cm / 50.3"	162cm / 63.71"	165cm / 65"	165cm / 65"
	66cm / 25.9"	73cm / 28.7"	73cm / 28.7"	73cm / 28.7"
	6.5HP Honda GX200	9HP/6.3kW Honda GX270	13HP/9.7kW Honda GX390	23HP/16.9kW B&S Vanguard V Twin
.4" 9.5" lic	700 x 400mm/27.5 x 15.75" 180 x 90mm / 7 x 3.5" 1x Auto-Feed Hydraulic Horizontal Roller	700 x 400mm/27.5 x 15.75" 200 x 123mm / 7.8 x 4.8" 1x Auto-Feed Hydraulic Horizontal Roller	700 x 400mm/27.5 x 15.75" 200 x 131mm / 8 x 5.1" 1x Auto-Feed Hydraulic Horizontal Roller	700 x 400mm/27.5 x 15.75" 205 x 150mm / 8.1 x 6" 1x Auto-Feed Hydraulic Horizontal Roller
	DRUM 2x chipper, 1x counter, 8x shredder blades	DRUM 2x chipper, 1x counter, 8x shredder blades	DRUM 2x chipper, 1x counter, 8x shredder blades	DRUM 2x chipper, 1x counter, 8x shredder blades
	70mm / 3"	110mm / 4"	130mm / 5"	150mm / 6"
	1.5m³/hr 53ft³/hr	2m³/hr 70ft³/hr	2.8m³/hr 99ft³/hr	4.5-5.2m³/hr 159-184ft³/hr
	Basal discharge -45°	270°/Basal discharge -45°	270°/Basal discharge -45°	270°/Basal discharge -45°
	2 year	2 year	2 year	2 year
ion k ssis nnes	'No-stress' in-feed. Basal ejection. GS75 replaces GS72 & GS73	'No-stress' variable in-feed. Ejection chute redirects to basal ejection. 2.7km/h speed GS102 replaces GS100 & GS101	'NO-stress' variable in-feed. Ejection chute can be redirected to basal ejection. GS133 replaces GS130, 131 & 132	'No-stress' variable in-feed. Ejection chute redirects to basal ejection. 2.5km/h speedES152 replaces ES150
	ohashi-inc.com ohashi.co.uk	ohashi-inc.com ohashi.co.uk	ohashi-inc.com ohashi.co.uk	ohashi-inc.com ohashi.co.uk

MARKET GUIDE

£$€ - PRICE BANDS
0-3000 ♦
4-9,000 ♦♦
10-15,000 ♦♦♦
16-25,000 ♦
26-35,000 ♦♦
36-55,000 ♦♦♦
56-70,000 ♦♦♦♦
70-90,000 ♦♦♦♦♦

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MANUFACTURER	SCHLIESING	SCHLIESING	SCHLIESING	SCHLIESING
MODEL VARIANT	175MX-D MX-P/gas -	235EX-D -	235MX-D -	235MXRS Crawler MXRH-D Crawler -
ORIGIN				
~COST inc 20% VAT/10%Local Tax £$€= Currency conversion only	£♦♦ $♦♦♦ €♦♦	£♦♦♦ $♦♦♦♦♦ €♦♦♦♦	£♦♦♦ $♦♦♦♦♦ €♦♦♦♦	£♦♦♦♦ $♦♦♦♦♦ €♦♦♦♦♦
DIESEL PETROL BATTERY	■ [■]	■	■	■
TOW TRACKS PUSH NO-ROAD	■	■	■	■ ■
TURNTABLE REMOTE APP	- - -	■ - -	- - -	- - -
NOISE LwA/ LpA	N/A	N/A	N/A	N/A
FUEL CAPACITY Litres/US Gal **DURATION**	17L / 4.5Gal N/A	34L / 9Gal N/A	55L / 14.5Gal N/A	45L / 11.8Gal N/A
WEIGHT inc battery(ies)	825750kg 18151650lb	1400kg 3080lb	1600kg 3520lb	2100kg 4620lb
MAX HEIGHT with chute	237cm / 93.3"	252cm / 99.2"	265cm / 104.3"	265cm / 104.3"
MAX LENGTH	375cm / 147.6"	338cm / 133"	419cm / 165"	295cm / 116.1"
MIN LENGTH	325cm / 128"	332cm / 130.7"	366cm / 144"	250cm / 98.4"
WIDTH	155cm / 61"	177cm / 69.6"	245cm / 96.4"	150cm / 59"
ENGINE / MOTOR	21.9HP/16.1kW Kubota 25.3HP/18.6kW Honda	25.2HP/18.5kW Kubota	25.2HP/18.5kW Kubota	25.2HP/18.5kW Kubota
HOPPER/INFEED TRAY SIZE **ROLLER APERTURE** **INFEED MECHANISM**	900 x 720mm / 35.4 x 28.3" 150 x 240mm / 6 x 9.4" 2x Auto-Feed Hydraulic Horizontal Rollers	1040 x 950mm/40.9 x 37.4" 200 x 240mm / 7.9 x 9,4" 2x Auto-Feed Hydraulic Horizontal Rollers	1040 x 960mm/40.9 x 37.4" 200 x 240mm / 7.9 x 9,4" 2x Auto-Feed Hydraulic Horizontal Rollers	1040 x 960mm/40.9 x 37.4 200 x 240mm / 7.9 x 9,4" 2x Auto-Feed Hydraulic Horizontal Rollers
DISC / DRUM **CUTTING BLADES/KNIVES**	DISC 2 blades	DISC 2 blades	DISC 2 blades	DISC 2 blades
MATERIAL CAPACITY	160mm / 6.3"	180mm / 7"	180mm / 7"	190mm / 7.5"
FEED RATE (t=metric tonne) **CHIP VOLUME**	N/A	N/A	N/A	N/A
DISCHARGE CHUTE Rotation	270°	270°	270°	270°
WARRANTY	2 year	2 year	2 year	2 year
NOTES	MX= standard spec models, EX are enhanced	Turntable model. MX= standard spec models, EX are enhanced	MX= standard spec models, EX are enhanced	H version is the same but wi foldable roll bar
WEBSITE	schliesing.com	schliesing.com	schliesing.com	schliesing.com

	SCHLIESING
	235MX-E
	♦♦♦-♦♦♦♦ $♦♦♦♦♦ €♦♦♦♦-♦♦♦♦♦
	- - -
	N/A
	9kWh 6-8hr
	1550kg 3410lb
	245cm / 96.4"
	417cm / 164.1"
	366cm / 144"
	167cm / 65.7"
	28.5HP/21kW -96v LiFePO4 180aH batteries 9hr recharge
	1040 x 960mm/40.9 x 37.4" 200 x 240mm / 7.9 x 9,4" 2x Auto-Feed Hydraulic Horizontal Rollers
	DISC 2 blades
	190mm / 7.5"
	N/A
	270°
	2 year Battery-3yrs
	Intelligent control with screen MX= standard spec models, EX are enhanced
	schliesing.com

Choosing and using a chipper for general arb work - by Adam Jones

Buying a wood chipper isn't about going for the biggest machine you can find; it's about choosing something that actually suits the work you take on every day. For most operators working in the private, domestic, or light commercial sector, the real value is often found at the smaller end of the market, where ease of transport, manoeuvrability, and sensible running costs count for more than raw infeed capacity.

At the smallest scale are the 3 to 4" gravity feed, vertical hopper machines and the larger wheeled 4–5 inch machines. These come into their own on tight-access jobs where a full-size tow-behind just won't fit. You can wheel them through gates, down garden paths, and place them right next to the pile, which saves a lot of dragging. Most are petrol-powered and light enough to handle easily. They're perfect for domestic work involving brash and light branches. They won't touch heavy timber, but in the right setting, they're often quicker and less hassle than walking every armful out to a larger chipper parked in the road. The *Eliet* range includes self-propelled 4-trolley-wheel & tracked models with engines or this full battery model which we've not used but seems like a great option for domestic jobs. Similarly the Japanese *Ohashi* has handlebar style control of even medium sized machines.

Step up a notch and you get to the small trailed chippers, some now fitted with compact tracks. These are a good compromise between portability and performance. They'll go across lawns, handle a bit of rough ground, and still process a steady day's worth of domestic material, as long as your tow vehicle is up to it. In the 4–6 inch range, they're straightforward to tow, light enough for most vehicles, and relatively frugal with fuel.
For small commercial teams, or anyone working a mix of domestic and light clearance jobs, the 6–8 inch machines start to make more sense. They'll take awkward, forked branches and modest-sized timber without endless pre-cutting, yet they're still manageable to tow and store. Tracked versions shine on slopes or awkward ground where a wheeled unit would struggle. The trade-off is that you might need a suitable trailer and to keep an eye on your combined towing weight, though for most small-scale setups this is still manageable.
At the top of the tree are the 8–12 inch tracked drum chippers built for heavy commercial work.

They're impressive, but for the majority of smaller operators they're more than is needed. The extra running costs, storage space, and transport requirements can easily outweigh the gains unless you're working on large-scale clearance jobs day in, day out.

Transport is always worth thinking about. The compact machines are rarely an issue, but as you go up in size the limits of your tow vehicle, your licence entitlements, and the plated trailer weights come into play. In the UK, most pickups and 3.5-tonne vans can tow up to 3,500kg, but that figure covers both the chipper and whatever else you've got on board. It's rarely a problem with smaller units, but it's still worth knowing your numbers before setting off.

When I'm choosing a chipper for small-scale or light commercial work, I look for something I can move easily, get running quickly, and keep going all day without burning through too much fuel. It needs to be reliable to feed, simple to clear if it blocks, and easy to maintain. On the right jobs, I've seen a small hand-portable or compact tracked chipper like the *Eliet* above, clear more material, and in less time than a big machine parked halfway down the road. It's about matching the machine to the site, the crew, and the work itself.

The most productive crews I've worked with aren't the ones with the biggest kit, they're the ones with the right kit. Find a chipper that works with your jobs and your way of working, and it'll earn its keep every single time you fire it up.

£$€ - PRICE BANDS

0-3000 ♦
4-9,000 ♦♦
10-15,000 ♦♦♦
16-25,000 ♦
26-35,000 ♦♦
36-55,000 ♦♦♦
56-70,000 ♦♦♦♦
70-90,000 ♦♦♦♦♦

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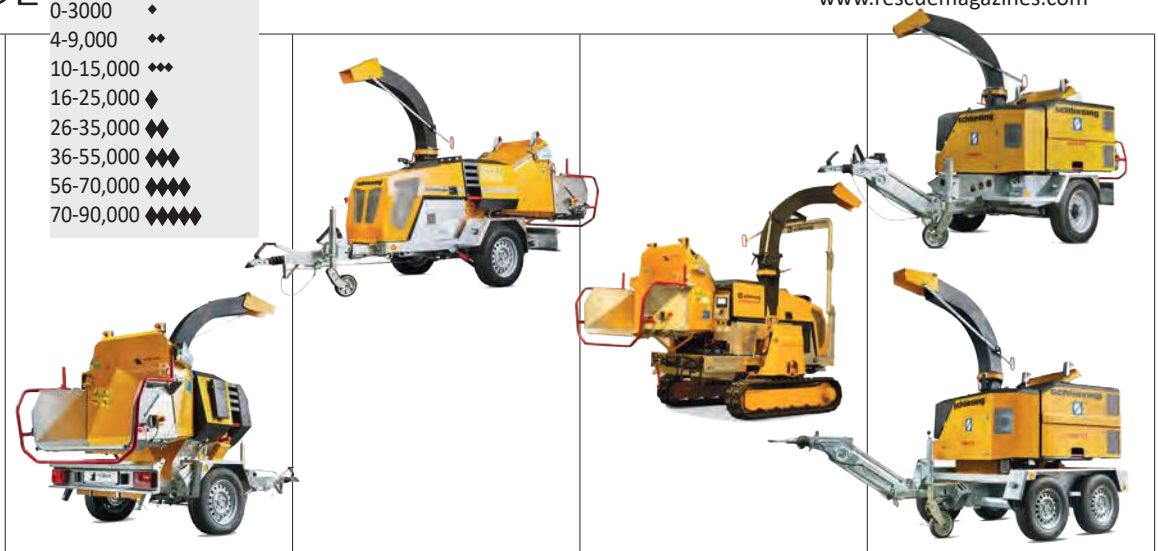

MANUFACTURER	SCHLIESING	SCHLIESING	SCHLIESING	SCHLIESING
MODEL VARIANT	325EX-D MX- D -	325MX-E -	325 MXRS MXRH Crawler -	495EX-D TX -
ORIGIN				
~COST inc 20% VAT/10%Local Tax £$€= Currency conversion only	£♦♦♦♦ $♦♦♦♦♦ €♦♦♦♦♦	£♦♦♦♦♦ >$♦♦♦♦♦ >€♦♦♦♦♦	£♦♦♦♦♦ >$♦♦♦♦♦ >€♦♦♦♦♦	£♦♦♦♦♦ >£♦♦♦♦♦ >$♦♦♦♦♦ >$♦♦♦♦♦+ >€♦♦♦♦♦ ♦♦♦♦♦+
DIESEL PETROL BATTERY	■	■	■	■
TOW TRACKS PUSH NO-ROAD	■	■	■ ■	■
TURNTABLE REMOTE APP	- - -	- - -	- - -	■ - -
NOISE LwA/ LpA	N/A	N/A	N/A	N/A
FUEL CAPACITY Litres/US Gal DURATION	3555L / 9.214.5Gal N/A	9kWh 6-8hr	3555L / 9.214.5Gal N/A	6069L / 15.818.2Gal N/A
WEIGHT inc battery(ies)	15701480kg 34543256lb	1595kg 3509lb	1950kg 4290lb	20002050kg 44004510lb
MAX HEIGHT with chute	255245cm / 10096.4"	240cm / 95"	260cm / 102.3"	265cm / 104.3"
MAX LENGTH	396419cm / 156165"	417cm / 164"	309cm / 121.6"	452478cm / 178188"
MIN LENGTH	345366cm / 136144"	366cm / 144"	258cm / 101.6"	405428cm / 159168.5"
WIDTH	200167cm / 78.765.7"	167cm / 65.7"	147cm / 57.9"	203.5cm / 80"
ENGINE / MOTOR	44.9HP/33kW Kubota Stage V	35HP/25kW -96v $LiFePO_4$ 360aH Batteries 9hr recharge	44.9HP/33kW Kubota Stage V	75.3HP/55.4kW Hatz Stage V
HOPPER/INFEED TRAY SIZE ROLLER APERTURE INFEED MECHANISM	1046 x 960mm/41.1 x 37.4" 200 x 240mm / 7.9 x 9.4" 2x Auto-Feed Hydraulic Horizontal Rollers	1046 x 960mm/41.1 x 37.4" 200 x 240mm / 7.9 x 9.4" 2x Auto-Feed Hydraulic Horizontal Rollers	1046 x 960mm/41.1 x 37.4" 200 x 240mm / 7.9 x 9.4" 2x Auto-Feed Hydraulic Horizontal Rollers	1160 x 1040mm/44.7 x 41" 200 x 300mm / 7.9 x 12" 2x Auto-Feed Hydraulic Horizontal Rollers
DISC / DRUM CUTTING BLADES/KNIVES	DISC 2 blades	DISC 2 blades	DISC 2 blades	DISC 2 blades
MATERIAL CAPACITY	200mm / 7.9"	200mm / 7.9"	200mm / 7.9"	240mm / 9.5"
FEED RATE (t=metric tonne) CHIP VOLUME	N/A	N/A	N/A	N/A
DISCHARGE CHUTE Rotation	270°	270°	270°	270°
WARRANTY	2 year	2 year Battery-3yrs	2 year	2 year
NOTES	MX-D version is a smaller, lighter, more frugal version	intelligent control with screen	MXRH is a folding rollcage version of the MXRS	TX=Turntable. MX= standard spec models, EX are enhanced
WEBSITE	schliesing.com	schliesing.com	schliesing.com	schliesing.com

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Goffstown, NH and TCIA Member since '21

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MANUFACTURER	TIMBERWOLF	TIMBERWOLF	TIMBERWOLF	TIMBERWOLF
MODEL VARIANT	TW13/75G -	TW 160PH 11039802	TW230HBD HBP/gas -	TW230VTR D -
ORIGIN				
~COST inc 20% VAT/10%Local Tax £$€= Currency conversion only	£♦♦ $♦♦ €♦♦	£♦ $♦♦ €♦	£♦♦ ♦♦ $♦♦♦ $♦♦♦ €♦♦♦ €♦♦	£♦♦♦ $♦♦♦ $♦♦♦
DIESEL PETROL BATTERY	■	■	■ [■]	■ [■]
TOW TRACKS PUSH NO-ROAD	■ ■	■	■	■ ■
TURNTABLE REMOTE APP	- - -	- - -	- - -	- - -
NOISE LwA/ LpA	120/96 dB(A)	117/-- dB(A)	118/-- dB(A)	118/-- dB(A)
FUEL CAPACITY Litres/US Gal **DURATION** @ max load	6.5L / 0.26Gal 3Lhr / 0.8Gal/Hr	18L /4.7Gal 4Lhr / 1Galhr	18L / 4.7Gal N/A	36L / 9.5Gal N/A
WEIGHT inc battery(ies)	188kg 414lb	632kg 1390lb	745710kg 16391485lb	1282kg 2820lb
MAX HEIGHT with chute	160cm / 62.9"	210.7cm / 82.95"	219.8214.1cm /86.584.3 "	222.5cm / 87.5"
MAX LENGTH	156.5cm / 61.6"	320cm / 126"	376.6356cm / 148.2140"	355cm / 139.7"
MIN LENGTH	81.5cm / 32.09"	290.3cm / 114"	352.5302.2cm / 138.78118.9"	263.5cm / 103.5"
WIDTH	80cm / 31.5"	127cm / 50"	152cm / 59.7"	81.2-130.2cm / 32-51.25"
ENGINE / MOTOR	13hp Honda 4-stroke	22hp Honda	24.8hp Kubota V1505 40hp B&S Vanguard	24.8hp Kubota V1505
HOPPER/INFEED TRAY SIZE **ROLLER APERTURE** **INFEED MECHANISM**	N/A 75mm / 3" 1x Gravity feed roller	N/A 160 x 152mm / 6.25 x 6" 2x Auto-Feed Hydraulic Horizontal Rollers	N/A 230 x 160mm / 9 x 6.3" 2x Auto-Feed Hydraulic Horizontal Rollers	N/A 230 x 160mm / 9 x 6.3" 2x Auto-Feed Hydraulic Horizontal Rollers
DISC / DRUM **CUTTING BLADES/KNIVES**	DISC 1x 177mm blade	DISC 2x 109mm reversible blades	DISC 2x 135mm reversible blades	DISC 2x 135mm reversible blades
MATERIAL CAPACITY	75mm / 3"	152cm / 6"	160mm / 6¼"	160mm / 6¼"
FEED RATE (t=metric tonne) **CHIP VOLUME**	0.75t / 0.83ton/ hr 1.2-2.5m³/hr 44-88ft³/hr	3.5t / 3.86ton/ hr 6-12m³/hr 206-412ft³/hr	4-5t / 4.4-5.5ton/ hr 7-17m³/hr 236-589ft³/hr	4-5t / 4.4-5.5ton/ hr 7-17m³/hr 236-589ft³/hr
DISCHARGE CHUTE Rotation	280°	280°	280°	280°
WARRANTY	3yr. 5yr option	3y. 5y option	3yr. 5 yr option	3yr. 5 yr option
NOTES				VTR= Variable width Tracks to f gate entrance Speed= 2.5-5kph Petrol/gas version discontinued
WEBSITE	timberwolf.co.uk	timberwolf.co.uk	timberwolf.co.uk	timberwolf.co.uk

<3t BRUSH/WOOD CHIPPERS

				
TIMBERWOLF	TIMBERWOLF	TIMBERWOLF	TIMBERWOLF	TP CHIPPERS
TW280HBD PHB P/gas	TW280HB Hybrid	TW280FTR Hybrid P/gas	TW280VGTR P/gas	TP100 Mobile
-	-	-	-	-
£♦♦♦ ♦♦♦ $♦♦♦♦ $♦♦♦♦ €♦♦♦ €♦♦♦	£♦♦♦ $♦♦♦♦ $♦♦♦	£♦♦♦ ♦♦♦ $♦♦♦♦ $♦♦♦♦ €♦♦♦ €♦♦♦	£♦♦♦♦ $♦♦♦♦♦ $♦♦♦♦♦	£♦♦ $♦♦♦ €♦♦
- - -	- -	- -	- - -	- - -
119/98 dB(A)	119/98 dB(A)	118/95 dB(A)	118/95 dB(A)	128/120 dB(A)
36L /9.5Gal N/A	36L / 9.5Gal N/A	36L / 9.5Gal N/A	36L / 9.5Gal N/A	*208.5L / 5.32.25Gal 4Lhr / 0.9Galhr
13171193kg 28972624lb	1270kg 2794lb	17351592kg 38173502lb	2118kg 4660lb	314kg 691lb
237cm / 93"	237cm / 93"	232cm / 91"	245-285cm / 96.4-112"	180cm / 70.8"
383386cm / 150152"	386cm / 151.9"	366cm / 144"	366cm / 144"	241.5cm / 95"
327333cm / 129131"	333cm / 131"	288cm / 113"	288cm / 113"	234.5cm / 92"
168164cm / 6664.5"	164cm / 64.5"	141cm / 55.5"	148-201cm / 58-79"	74cm / 29"
55HP Hyundai Turbo Diesel 57HP Kubota WG1605 Petrol	24.8HP(18.5kW) Kubota D902-TE4, , turbo + 37.3HP GM Generator	24.8HP (18.5kW) Kubota D902-TE4, , turbo + 37.3HP GM Generator* 57HP Kubota WG1605	57HP Kubota WG1605	20HP/14kw HONDA, 18HP/13kw B&S Vanguard
N/A 280 x 210mm / 11 x 8" 4x Auto-Feed Hydraulic Horizontal Rollers	N/A 280 x 210mm / 11 x 8" 4x Auto-Feed Hydraulic Horizontal Rollers	N/A 280 x 210mm / 11 x 8" 4x Auto-Feed Hydraulic Horizontal Rollers	N/A 280 x 210mm / 11 x 8" 4x Auto-Feed Hydraulic Horizontal Rollers	690mm / 27" 150 x 275mm/ 6 x 10.8" 1x Gravity-feed Roller
DISC 2x 158mm reversible blades	DISC 2x 158mm reversible blades	DISC 2x 158mm reversible blades	DISC 2x 158mm reversible blades	DRUM 2x reversible blades
210mm / 8"	210mm / 8"	210mm / 8"	210mm / 8"	100mm / 4"
76.5t / 0.00ton/ hr 11-24m³/hr 382-824ft³/hr	6.5t / 7.2ton/ hr 11-22m³/hr 382-766ft³/hr	7>7t / 7.7>7.7ton/ hr 12-24m³/hr 412-825ft³/hr	7>7t / 7.7>7.7ton/ hr 12-24m³/hr 412-825ft³/hr	3m³/hr 106ft³/hr
280°	280°	280°	280°	10cm / 4" 000°
3 yr. 5 yr option	3 yr. 5 yr option	3y. 5y option	3y. 5y option	3 years
HMI Display control screen	HMI Display control screen	Speed= 2.5-5kph 245mm ground clearance	VGTR= Variable Grade Tracks up to 30° Speed= 2.5-5kph 245mm ground clearance	*large capacity fuel tank on the Honda engine
timberwolf.co.uk	timberwolf.co.uk	timberwolf.co.uk	timberwolf.co.uk	tpchipper.com

£$€ - PRICE BANDS
0-3000 ♦
4-9,000 ♦♦
10-15,000 ♦♦♦
16-25,000 ♦
26-35,000 ♦♦
36-55,000 ♦♦♦
56-70,000 ♦♦♦♦
70-90,000 ♦♦♦♦♦

Images NOT to Scale
~ = Approximate
COSTS♦♦: Approx RRP/SRP & inc local tax/VAT £$€ ♦♦in burnt orange are currency conversions only & do not inc shipping, import duty or tax
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= Push - manually pushed/pulled
= No-road.Trailer/pick-up required
= Turntable, Engine/Chute rotates
= Remote Control Track/Drive
= App/Bluetooth monitoring
● ● = OK but not ideal
□□□= Option
VARIANT=lower image if visually different & differing specification and price banding (♦♦)in blue

MANUFACTURER	TP CHIPPERS	TP CHIPPERS	TP CHIPPERS	TP CHIPPERS
MODEL VARIANT	TP166 Mobile P/gas -	TP 176 Mobile P/gas -	TP 176 Mobile T -	TP176 Mobile ZE ZE TRAC -
ORIGIN				
~COST inc 20% VAT/10%Local Tax £$€= Currency conversion only	£♦ $♦♦ €♦	£♦♦ £♦♦ $♦♦♦ $♦♦ €♦♦ ♦♦	£♦♦ $♦♦♦ €♦♦♦	£♦♦♦ £♦♦♦♦ $♦♦♦♦ $♦♦♦♦♦ €♦♦♦♦ ♦♦♦♦♦
DIESEL PETROL BATTERY	■	■ [■]	■	■
TOW TRACKS PUSH NO-ROAD	■	■	■	■
TURNTABLE REMOTE APP	- - -	- - -	■ - -	- - - [- ■ -]
NOISE LwA/ LpA	123/108 dB(A)	123/108 dB(A)	123/108 dB(A)	123/108 dB(A)
FUEL CAPACITY Litres/US Gal DURATION @ max load	20L / 5.3Gal * 5Lhr / 1.3Galhr	20L / 5.3Gal * 36Lhr / 0.81.6Galhr	20L /5.3Gal 3Lhr / 0.8Galhr	n/a
WEIGHT inc battery(ies)	680kg 1500lb	749721kg 16481587lb	828kg 1822lb	7411150-1200kg 16302530-2640lb
MAX HEIGHT with chute	196-244cm / 77-96"*	220244cm / 86.696"	273.6cm /107.7"	244205-259cm/9680.7-102
MAX LENGTH	401.3cm / 157.9"	401.3cm / 157.9"	406.9cm / 160.2"	401.3347.5cm/157.9136.8
MIN LENGTH	351.5cm / 138"	351.5cm / 138"	365.6cm / 143.9"	351.5261cm / 138102.7"
WIDTH	141.6cm / 55.7"	141.6cm / 55.7"	141.7cm / 55.7"	141.7cm / 55.7"
ENGINE / MOTOR	22HP/16.5kW Honda GX690	25HP Kubota 38HP Kubota	25HP/18.5kW Kubota 1305 or1505	ME 1507 PMAC 65v DC NMC
HOPPER/INFEED TRAY SIZE ROLLER APERTURE INFEED MECHANISM	920 x 620mm/36.2 x 24.4" 176 x 191mm / 6.9 x 7.5" 2x Auto-Feed Hydraulic Horizontal Rollers	920 x 620mm/36.2 x 24.4" 176 x 191mm / 6.9 x 7.5" 2x Auto-Feed Hydraulic Horizontal Rollers	920 x 620mm/36.2 x 24.4" 176 x 191mm / 6.9 x 7.5" 2x Auto-Feed Hydraulic Horizontal Rollers	920 x 620mm/36.2 x 24.4 176 x 191mm / 6.9 x 7.5" 2x Auto-Feed Hydraulic Horizontal Rollers
DISC / DRUM CUTTING BLADES/KNIVES	DISC 2x blades/knives	DISC 2x blades/knives	DISC 2x blades/knives	DISC 2x blades/knives
MATERIAL CAPACITY	176mm / 7"	176mm / 7"	176mm / 7"	176mm / 7"
FEED RATE (t=metric tonne) CHIP VOLUME	12m³/hr 424ft³/hr	15m³/hr 530ft³/hr	15m³/hr 530ft³/hr	15m³/hr 530ft³/hr
DISCHARGE CHUTE Rotation	270°	270°	270°	270°
WARRANTY	3 year	3 year	3 year	3 year
NOTES	Stress control system, TP PILOT+, *Depends on fixed or vario spout. TP160 & 165 Discontinued *optional 35L fuel capacity	Stress control system, TP PILOT+, TP175 Discontinued *optional 35L fuel capacity	Stress control system, TP PILOT+, T = Turntable *Fixed spout =std, Ht adj Vario = Option	stress control system, TP PILOT- inc hour counter & start and stop of the feed rollers . Remot control option for track version
WEBSITE	tpchipper.com	tpchipper.com	tpchipper.com	tpchipper.com

<3t BRUSH/WOOD CHIPPERS

TP CHIPPERS	TP CHIPPERS	TP CHIPPERS	TP CHIPPER	TP CHIPPERS
TP 176 TRACK	TP 215 Mobile T	TP 215 TRACK Remote	TP215 Mobile ZE ZE.T	TP280 Mobile T
£◆◆◆-◆◆◆◆ >$◆◆◆◆ €◆◆◆◆	£◆◆◆ $◆◆◆◆ €◆◆◆	£◆◆◆ $◆◆◆◆◆ €◆◆◆◆	£◆◆◆◆ £◆◆◆◆◆ $◆◆◆◆◆ >$◆◆◆◆◆ €◆◆◆◆◆ >◆◆◆◆◆	£◆◆◆◆ £◆◆◆◆◆ >$◆◆◆◆◆ >$◆◆◆◆◆ €◆◆◆◆◆ >◆◆◆◆◆
■	■	■	■	■
■■	■	■■	■	■
-[■]-	[■]- -	-[■]-	- - - [■■-]	[■]- -
125/107 dB(A)	125/107 dB(A)	125/107 dB(A)	125/107 dB(A)	130/-- dB(A)
20L /5.3Gal 3Lhr / 0.8Galhr	52L / 13.7Gal 4Lhr / 1Galhr	52L /13.7Gal 4Lhr / 1Galhr	5hr	75L / 19.8Gal 6Lhr / 0Galhr
1200kg 2640lb	13501900kg 29704180lb	16001500kg 35203300lb	14761960kg 32474312lb	21002300kg 46205060lb
259cm / 102"	271.6293cm / 97.5115"	216.2-262.5cm/85.1-103.3"	271.6cm*/ 106.9"	335.8cm / 132.2"
406.9cm / 160.2"	490cm / 188.9"	378.4336.5cm/148.9132.4"	448.5cm / 176.5"	496.6cm / 195.5"
365.6cm / 143.9"	460cm / 181"	272.5262.5cm/107.3103.3"	388.7cm / 153"	436.9cm / 172"
115-130cm / 45.3-51.2"	196cm / 77"	140.6-149.5cm/55.3-58.8"	170.5cm / 67"	177.5117.5cm / 69.946"
25HP/18.5kW Kubota 1305 or1505	59HP/44kW Hatz 3H50TICD/DPF	59HP/44kW Hatz 3H50TICD/DPF	29kW Permanent Magnet Motor	74HP/55kW Hatz 4H50TICD
920 x 690mm/36.2 x 27.2" 176 x 191mm / 6.9 x 7.5" 2x Auto-Feed Hydraulic Horizontal Rollers	1100 x 750mm/43.3 x 29.5" 216 x 265mm / 00 x 00" 2x Auto-Feed Hydr. Horiz Rollers	1100 x 750mm/43.3 x 29.5" 216 x 265mm / 00 x 00" 2x Auto-Feed Hydraulic Horizontal Rollers	1100 x 750mm/43.3 x 29.5" 216 x265mm / 00 x 00" 2x Auto-Feed Hydraulic Horizontal Rollers	1100 x 800mm/43.3 x 31.5" 280 x 280mm / 11 x 11" 2x Auto-Feed Hydraulic Vertical Rollers
DISC 2x blades/knives	DISC 4x blades/knives	DISC 4x blades/knives	DISC 4x blades/knives	DISC 4x blades/knives
176mm / 7"	215mm / 8.5"	215mm / 8.5"	215mm / 8.5"	280mm / 11"
15m³/hr 530ft³/hr	20m³/hr 706ft³/hr	20m³/hr 706ft³/hr	20m³/hr 706ft³/hr	25m³/hr 882ft³/hr
270°	270°	270°	270°	270°
3 year	3 year	3 year	3 year	3 year
20cm Ground Clearance. Remote control option-weighs 50kg less	stress control system, TP PILOT+, includes hour counter& control of start and stop of the feed rollers. Tt is a turntable version	stress control system, TP PILOT+. Non-remote has rear platform. *Fixed spout =std, Ht adj Vario = Option	stress control system, TP PILOT+, includes hour counter and control of start and stop of the feed rollers. *Vario-spout Option	stress control system, TP PILOT+, includes hour counter & control of start and stop of the feed rollers. Tt is a turntable version
tpchipper.com	tpchipper.com	tpchipper.com	tpchipper.com	tpchipper.com

£$€ - PRICE BANDS

0-3000 ♦
4-9,000 ♦♦
10-15,000 ♦♦♦
16-25,000 ♦♦
26-35,000 ♦♦♦
36-55,000 ♦♦♦♦
56-70,000 ♦♦♦♦♦
70-90,000 ♦♦♦♦♦♦

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= No-road.Trailer/pick-up required
= Turntable, Engine/Chute rotates
= Remote Control Track/Drive
= App/Bluetooth monitoring
● ● = OK but not ideal
□□□= Option
VARIANT=lower image if visually different & differing specification and price banding (♦♦)in blue

MANUFACTURER	TP CHIPPERS	VERMEER	VERMEER	VERMEER
MODEL VARIANT	TP280 TRACK -	BC200 D P/gas -	BC200 D P/gas Turntable -	BC230XL Turntable -
ORIGIN				
~COST inc 20% VAT/10%Local Tax £$€= Currency conversion only	£♦♦♦♦♦ $♦♦♦♦♦ €♦♦♦♦♦	£♦♦-♦♦♦ $♦♦♦-♦♦♦♦ €♦♦♦	£♦♦♦ $♦♦♦-♦♦♦♦ €♦♦♦-♦♦♦♦	£♦♦♦ - €♦♦♦-♦♦♦♦
DIESEL PETROL BATTERY	■	■ [■]	■ [■]	■
TOW TRACKS PUSH NO-ROAD	■ ■	■	■	■
TURNTABLE REMOTE APP	- ■ -	- - ■ *	■ - ■ *	■ - ■ *
NOISE LwA/ LpA	130/- dB(A)	126117/- dB(A)	126117/- dB(A)	126/-- dB(A)
FUEL CAPACITY Litres/US Gal DURATION @ max load	75L / 0Gal 6Lhr / 1.6Gal/Hr	39.5L / 10.5Gal 7.6Lhr / 2Gal/Hr	39.5L / 10.5Gal 7Lhr / 1.8Gal/Hr	49.2L / 13Gal 9Lhr / 2.4Gal/Hr
WEIGHT inc battery(ies)	2750kg 6050lb	1498kg 3296lb	1840kg 4048lb	2150kg 4740lb
MAX HEIGHT with chute	290-360cm / 114-141.7"	251cm / 99"	265cm / 104"	262cm / 103"
MAX LENGTH	360cm / 141.7"	435cm / 171.3"	455cm / 179"	419cm / 165"
MIN LENGTH	290cm / 114"	377cm / 148"	414cm / 163"	383cm / 151"
WIDTH	105-140cm / 41-55"	157cm / 61.8"	167cm / 65.7"	188cm / 74"
ENGINE / MOTOR	74HP/55kW Hatz 4H50TICD	44HP/33kW Kubota V1505-V 57HP/42.5kW Kubota WG1605	44HP/33kW Kubota V1505-V 57HP/42.5kW Kubota WG1605	74HP/55kW CAT2.2 TD -V
HOPPER/INFEED TRAY SIZE ROLLER APERTURE INFEED MECHANISM	1000 x 80mm / 39 x 31" 280 x 280mm / 110 x 10" 2x Auto-Feed Hydraulic Vertical Rollers	1140 x 787mm / 45 x 31" 203 x 305mm / 8 x 12" 2x Auto-feed Hydraulic Horizontal Rollers	1140 x 787mm / 45 x 31" 203 x 305mm / 8 x 12" 2x Auto-Feed Hydraulic Horizontal Rollers	1250 x 813mm / 49 x 32" 230 x 355mm / 9 x 14" 2x Auto-Feed Hydraulic Horizontal Rollers
DISC / DRUM CUTTING BLADES/KNIVES	DISC 4x blades/knives	DISC 2x Reversible blades	DISC 2x Reversible blades	DISC 2x Reversible blades
MATERIAL CAPACITY	280mm / 11"	203mm / 8"	203mm / 8"	230mm / 9"
FEED RATE (t=metric tonne) CHIP VOLUME	25m³/hr 82ft³/hr	37.8m³/hr 124ft³/hr	37.8m³/hr 124ft³/hr	33.5m³/hr 110ft³/hr
DISCHARGE CHUTE Rotation	270°	251.5cm / 99" 270°	251.5cm / 99" 270°	270°
WARRANTY	3 year			
NOTES	stress control system, TP PILOT+, Hydraulic adj track width.	Eco-idle engine. 22.7L/6Gal Hydraulic Oil * Vermeer One app update Nov'25	Can have fixed or height adjustable drawbar 22.7L/6Gal Hydraulic Oil * Vermeer One app update Nov'25	Can have fixed or height adjustable drawbar. Eco-idle engine. * Vermeer One app update Nov'25
WEBSITE	tpchipper.com	vermeer.com	vermeer.com	vermeer.com

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not inc shipping, i
N/A = info Not Av
= Trailed/Towed
= Self-Propelled
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= No-road.Traile
= Turntable, Eng
= Remote Contr
= App/Bluetoot
= OK bu
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and price banding

VERMEER	VERMEER	MANUFACTU
BC700XL	BC900XL	MODEL VAR
-	-	ORIGIN
- $◆◆-◆◆◆ -	- $◆◆◆-◆◆◆◆ -	~COST inc 20% £$€= Currenc
		DIESEL PETROL
		TOW TRACKS PU
- - *	- - *	TURNTABLE RE
127/116 dB(A)	n/a	NOISE LwA/ Lp
22.7 L / 6Gal 9.1Lhr / 2.4Gal/Hr	60.6L / 16Gal 12.1Lhr / 3.2Gal/Hr	FUEL CAPACITY DURATION
816.5kg 1800lb	1387.9kg 3060lb	WEIGHT inc
259.1cm / 102"	246.3cm / 97"	MAX HEIGHT
345.4cm /136"	356.6cm / 140.4"	MAX LENGTH
292.1cm /115"	393.2cm / 154.8"	MIN LENGTH
180.3cm / 71"	201.9cm / 79.5"	WIDTH
25HP/18.6kW Kohler ECH740	35HP/ 26kW Briggs&Stratton Vanguard	ENGINE / MOT
1046 x 561mm /41.2 x 22.1" 152 x203mm / 6 x 8" 1x Manual/Sprung Horizontal Roller	1220 x 740mm / 48 x 29" 229 x 356mm / 9 x 14" 1x Manual/Sprung Horizontal Roller	HOPPER/INFE ROLLER APERT INFEED MECH
DISC 2x Reversible blades	DISC 2x Reversible blades	DISC / DRUM CUTTING BLAD
152mm / 6"	229mm / 9"	MATERIAL CAP
15m³/hr 49.4ft³/hr	42.7m³/hr 140ft³/hr	FEED RATE (t=r CHIP VOLUME
246.8cm / 97.2" 240°	245.6cm / 96.7" 270°	DISCHARGE CH
		WARRANTY
25.7L/6.8gal Hydraulic Oil. Smart in-feed control * Vermeer One app update Nov'25	25.7L/6.8gal Hydraulic Oil. Smart in-feed control * Vermeer One app update Nov'25	NOTES
vermeer.com	vermeer.com	WEBSITE

<3t BRUSH/WOOD CHIPPERS

ale RRP/SRP & inc ♦♦in burnt orange ersions only & do mport duty or tax ailable/not given. d behind truck /Tracked lly pushed/pulled er/pick-up required gine/Chute rotates rol Track/Drive th monitoring ut not ideal n mage if visually ing specification g (♦♦)n blue	**£$€ - PRICE BANDS** 0-3000 ♦ 4-9,000 ♦♦ 10-15,000 ♦♦♦ 16-25,000 ♦ 26-35,000 ♦♦ 36-55,000 ♦♦♦ 56-70,000 ♦♦♦♦ 70-90,000 ♦♦♦♦♦	
URER	VERMEER	VERMEER
IANT	BC1000XL Gas Teir4 D -	BC1200XL -
% VAT/10%Local Tax cy conversion only	£♦♦♦♦ $♦♦♦♦♦ €♦♦♦♦-♦♦♦♦♦	- $♦♦♦♦-♦♦♦♦♦ -
BATTERY	■ [■]	■
USH NO-ROAD	■	■
MOTE APP	- - ■ *	- - ■ *
A	119/95 dB(A)	124/-- dB(A)
Y Litres/US Gal @ max load	75.794.6L / 2025Gal 15.3Lhr / 4Gal/Hr	94.6L / 25Gal 31.4Lhr / 8.3Gal/Hr
battery(ies)	212322266kg 468049951b	2576kg 56801b
with chute	256.5cm /101"	264.2cm / 104"
	406cm / 160"	523cm / 206"
	528cm / 208"	427cm / 168"
	169cm / 66.5"	201cm / 79"
TOR	72.4HP/54kW Deutz 74HP/55kW CAT C2.2 Tier 4	115HP/85.8kW Origin 4.3
ED TRAY SIZE TURE ANISM	1320 x 813mm / 52 x 32" 305 x 432mm / 12 x 17.5" 2x Auto-Feed Hydraulic Horizontal Rollers	1320 x 813mm / 52 x 32" 337 x 432mm / 13.3 x 17" 2x Auto-feed Hydraulic Horizontal Rollers
DES/KNIVES	DISC 2x Reversible blades	DISC 2x Reversible blades
PACITY	305mm / 12"	338mm / 13.3"
metric tonne)	3641m³/hr 118105ft³/hr	33.5m³/hr 110ft³/hr
HUTE Rotation	256.5cm / 101" 270°	270°
	1yr (3yr-drum)	
	SEPARATE EUROPEAN & US CONFIGURATIONS 26.5L/7gal Hydraulic Oil. Smart in-feed control	12gal Hydraulic Oil, Optional winch * Vermeer One app update Nov'25
	vermeer.com	vermeer.com

THE ELEVATED BLUEPRINT A Quick Guide to Treehouse Construction

Treehouses designed and built by Michael Garnier at Out 'N' About Treesort in Oregon, USA. treehouses.com

by **Michael 'Ox' Oxman**

Somewhat peripheral to ARBCLIMBER's core themes but you can always rely on Ox to provide something different.

Ox is a resident of Washington state, USA, and a career arborist who began climbing on manila rope, right out of high school in 1970. Also a keen recreational climber, he now lectures on tree subjects at conferences, produces videos & is a content creator on social media platforms.

Climber Access

Making a treehouse construction project happen requires skills the project arborist provides, all the way from initial feasiblity assessment, pruning and repeat inspection service in the future. Workers must be suspended by ropes to work safely and efficiently during all these operations . The portion of climbing duties involves safety protocols, which include:

1) Wearing Personal Protective Equipment (PPE)
2) Communication with aerial workers who are aloft via Command/Response
3) Securing the Drop Zone to prevent unauthorized bystanders from entering the work area.

Tree Selection

Every tree has a story, and its architecture determines how your structure will take shape. Understanding branch strength, trunk integrity, and growth patterns prevents costly redesigns later. [*ED: Although oak, larger Acers and beech are usually considered the three best hardwood species to use for a large treehouse (along with mature cedar, hemlock and douglas fir), bear in mind that so called 'sudden beech snap' and the difficulty in predicting it (or why it occurs) especially in these times of temperature and water extremes, may make beech as unwise a choice as the faster growing but weaker willow, birch or poplar.]*

Site Selection

The foundation of a great treehouse starts at ground level. Protecting the tree's roots ensures long-term health and stability. A poorly chosen site [eg. subject to flooding] can lead to drainage issues, structural instability, or even tree failure over time.

Floor Height

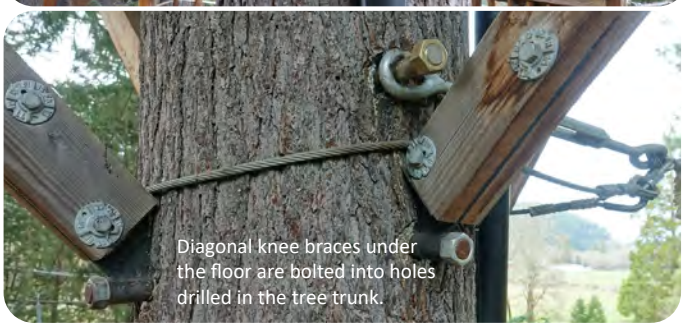
A balance between safety and experience, the height should consider both breathtaking views and practical headroom. Factor in accessibility and potential future growth to avoid unnecessary modifications.

Platform Dimensions

The span and placement of supports define the strength and stability of your treehouse—precision is key. Overextending beyond the tree's capacity can lead to structural failures and safety hazards.

Platform Weight

A tree can only bear so much; matching stem diameter to expected loads prevents stress and failure. Heavy structures



Diagonal knee braces under the floor are bolted into holes drilled in the tree trunk.

Access by suspension bridges supported by steel cables.
BELOW: Rubber gaskets divert most rainwater to the exterior of the roof.

may require additional support beams, suspension elements, or multiple anchor points.

Number of Attachments

Less is more when it comes to securing a treehouse — minimizing impact extends the tree's lifespan. Strategic placement of bolts and brackets prevents excessive circulatory system damage while ensuring stability.

Sliding Shock Absorbers

Trees are living things, and their movement must be accommodated. Flexibility is the secret to longevity. Without proper movement allowances, structural stress can lead to bolt loosening, wood crushing or splitting, and eventual failure.

Gaskets

A well-sealed structure withstands the elements; proper drainage ensures comfort and durability. Moisture intrusion is one of the biggest threats to longevity, so sealing joints and openings is essential.

Access

Whether stairs, ladders, or bridges, the journey to the treehouse should be as thoughtful as the destination. Safety, weather resistance, and ease of use must be considered when designing entry points.

Utility Routes

Power, water, and connectivity must follow paths that respect both nature and function. Concealing and securing these lines properly prevents damage from weather, animals, and tree movement.

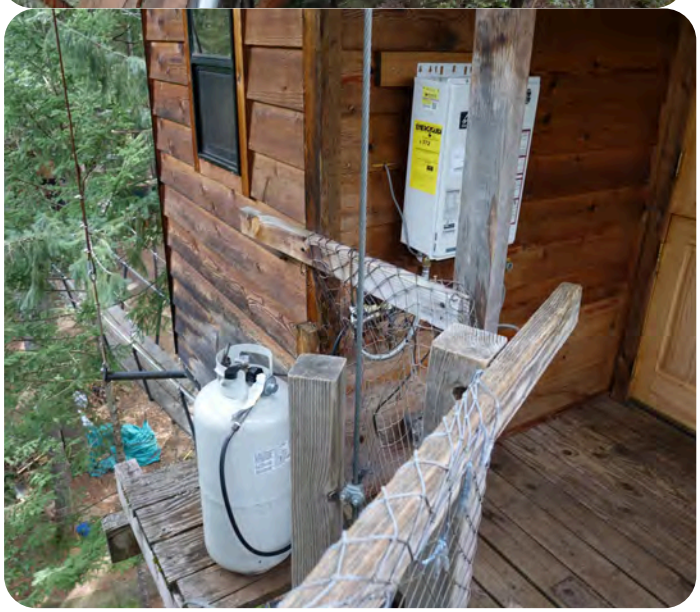
Turnbuckle supports captive slider bracket that allows tree to sway in the wind.

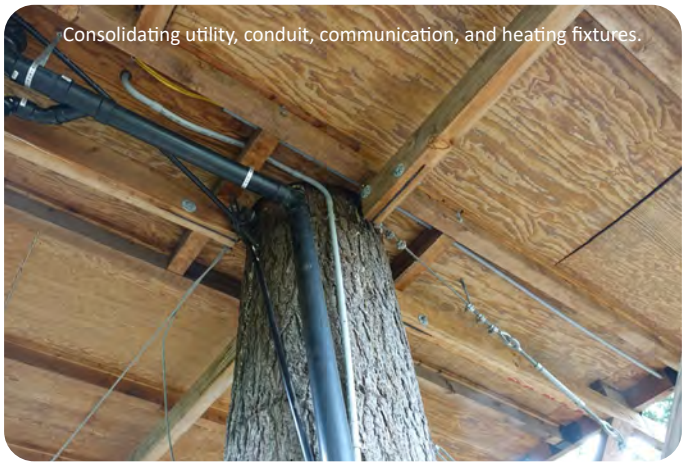
Allocation of Deck/Interior Space

A second story or loft isn't just an addition; it's an opportunity for expanded experiences. Careful planning ensures weight distribution is balanced and space is used efficiently.

Material Stockpiling

The right materials at the right time keep projects moving forward—delivery schedules matter. Delays in material availability can halt progress, increasing costs and labor inefficiencies.





Consolidating utility, conduit, communication, and heating fixtures.

Pre-Fab Components

What can be built on the ground should be, making hoisting of fewer components safer and more efficient. Modular design speeds up assembly while reducing risks associated with high-altitude construction.

Subcontracting

Specialists in roofing, electrical, and plumbing bring expertise that elevates the quality of the final structure. Knowing when to bring in experts prevents costly mistakes and ensures compliance with safety standards.

Seasonal/Weather Considerations

Timing is everything; working with nature's cycles prevents costly delays. Cold temperatures can affect adhesives and sealants, while excessive heat can expand materials unpredictably.

Permits

A well-documented project is a legal and safe one—engineers, architects, and arborists ensure compliance. Ignoring permit requirements can lead to fines, forced demolition, or liability issues.

Contract Administration

Unexpected changes are inevitable; a solid contingency plan keeps the vision intact. Clear contracts protect both builders and clients by setting expectations & resolving disputes fairly.

Inspection & Maintenance

A treehouse isn't a one-time build—it's a living structure that requires ongoing care and tracking. Regular checkups for bolt tension, weather damage, and tree health will extend the lifespan of the build.

Crew Accommodations

A skilled, well-supported team makes for efficient and high-quality construction. Providing proper shelter, food, and rest areas improves morale and productivity.

Completion Date

Progress payments tied to milestones ensure accountability and a steady march toward the final build. Setting realistic deadlines based on weather, material availability, and labor ensures smooth execution.

The Team

Key people (or, 'Departments') in the goals & actions of a successful treehouse construction project often overlap.
1) **Owner;** Occupant who will be responsible for maintenance & care of the completed structure.
2) **Designer/Architect**; The person/team with a vision of what the structure ends up looking like, and how it will be made.
3) **Engineer**; Determines weight distribution & space allocation, and specifies materials and blueprints to communicate with builders.
4) **Arborist**; Tree expert who evaluates the tree in it's microsite, & determines the allowable procedures that preserve healthy roots and canopy in the years to come.
5) **Materials Supplier**; Provides custom components that will become the above-ground surfaces that people occupy.
6) **Carpenters**; Installers who drill, hammer, saw, screw and attach parts to the living wood.
7) **Sub-contractors**; Specialists on the team who take on roofing, plumbing, glasswork, electrical wiring or other tasks."

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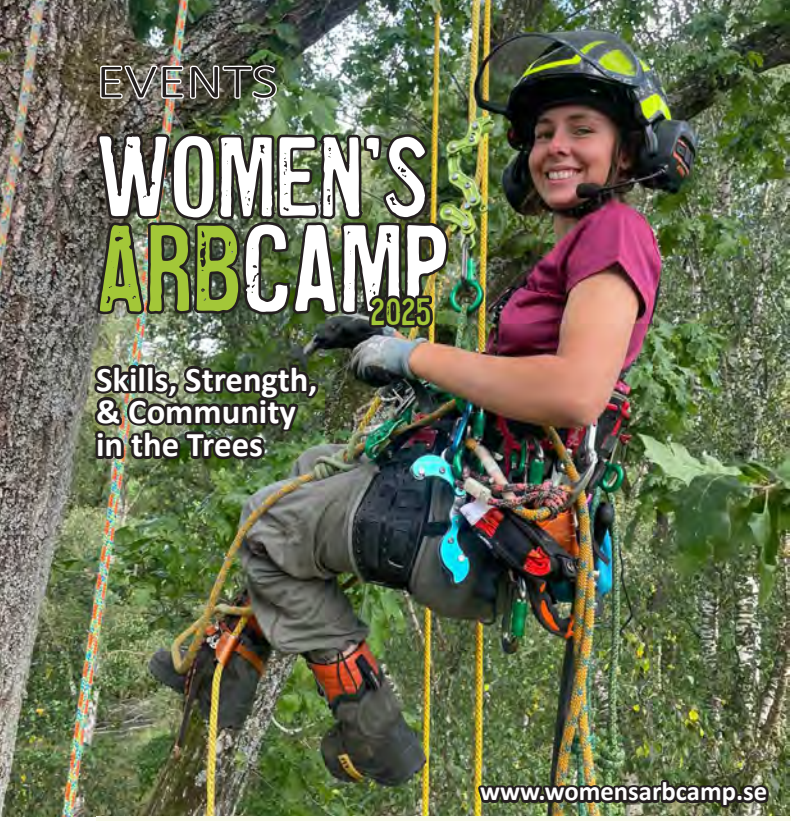
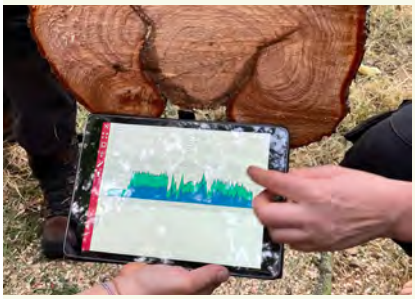
WOMEN'S ARBCAMP 2025

Skills, Strength, & Community in the Trees





At the end of August, climbers from across Europe headed to the forests of Hasslebro, Sweden, for ***Women's ArbCamp 2025***. Over three days, the camp brought together arborists and tree workers for training, connection, and plenty of time in the canopy.

Hands-on learning: Workshops formed the backbone of the weekend. Climbing efficiency, rescues, ergonomics, and advanced tree diagnostics were all on the programme. Under the guidance of experienced trainers and industry leaders, participants got the chance to refine techniques, test new kit, and swap ideas with fellow climbers.

An international crew: This year's *ArbCamp* welcomed women from many countries, making the woods buzz with different languages and styles of climbing. Despite varied backgrounds, the drive was the same: to work safer, climb smarter, and support each other in a demanding trade.

More than training: For many attendees, *ArbCamp* is about more than just skills. It's a space where women can see themselves represented in a still male-dominated industry. Around campfires and shared meals, friendships formed that will carry far beyond the event.

Women's ArbCamp 2025 showed that when women arborists come together, they don't just sharpen their skills—they build confidence, resilience, and a stronger climbing community.

FTC KOOMPASSIA

The updated KOOMPASSIA from FTC was designed to withstand whatever you throw at it: quick loads, wet floors, rough terrain, and repeated travel. It stands upright, opens flat, and lets you access your belongings without having to turn everything over. The two bottoms of the bag, made of reinforced waterproof fabric, resist abrasion and effectively protect the contents, even when placed on dirty or harsh surfaces. For carrying, several ergonomic and practical handles give you several options: two large side handles for carrying it with two people or pulling it from a vehicle, a comfortable short handle for moving it while standing, retractable shoulder straps with Cobra-type buckles for carrying it on your back, and a shoulder strap for shorter accesses. It's the bag that adapts to your habits, not the other way around. Inside, everything is designed to quickly organize your equipment: three zipped pockets, a large mesh pocket under the flap, a contrasting daisy chain to secure what shouldn't be moving around and that you need to easily retrieve when you arrive at your work site for the day, as well as a variable-volume helmet pocket, practical when you want to neatly separate the helmet from the rest.

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KOOMPASSIA	60L	80 L
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	2.3kg	5lb
Materials	Exterior: 50% TPU - 50% PVC	
	Interior & Rain Cover: 100% polyester	
Dimensions	65to50 x 35 x 22cm	26to20 x 14 x 9"
	70to55 x 35 x 30cm	28to22 x 14 x 12"
Colours	Black or Blk & beige with beige lining	
Carrying:	1x shoulder strap, 1x top & 1 bottom handle	
	2x side handles and 2 backpack straps	
Fixings	Cobra-type metal buckles	
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