



SP 661 LF

- fast, versatile
and reliable

SP

— ALWAYS AHEAD —



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The SP 661 LF is a compact and strong high performance harvester head designed according to SP's Low Friction principle for minimum friction and maximum productivity. The SP 661 LF is designed to be able to offer highest productivity in both small and large diameter harvesting.

In large diameter harvesting the proportional angled feed rollers in combination with SP's patented knife control system LogHold, allow for maximum capacity and productivity. When harvesting smaller diameter trees the compact and agile design is a great asset. Equipped with the optional Multi tree handling equipment the SP 661 LF is able to reach highest productivity also when harvesting very small tree dimensions.

The extremely protected and robust design in combination with state of the art hose routing ensures highest reliability and uptime regardless of tree size and harvesting condition. The SP 661 LF is without a doubt both fast, versatile and reliable. The SP 661 LF reaches top performance in stands with a diameter of 16 to 51 cm (6 - 20") dbh but is thanks to the LF principle also capable of efficiently working with larger tree sizes.



1480 kg
3262 lb

Weight



70 cm
27,6"

Cutting diameter



16-51 cm
6 - 20"

Optimum trunk diameter



26-30 MPa
3770 - 4351 psi

Recommended working pressure

LF – Maximum production and



and minimum friction

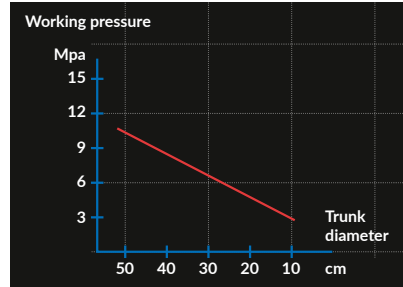
Four smart solutions and patent for increased profitability



Knife Design

The delimiting knives are cast in high-strength steel and equipped with long cutting edges.

This means that the limbs are cut off instead of being broken off. This minimizes friction during delimiting and allows the trunk to be fed through easily.



Proportional pressure

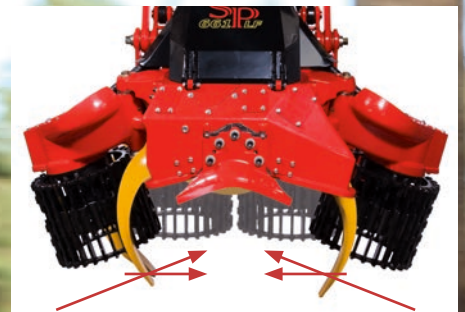
Proportional pressure ensures that the harvester head automatically works at the correct pressure in relation to tree diameter. This means that the friction between the trunk and harvester head is minimized and that the harvester head runs at peak efficiency. Individual settings per tree species maximises production further.



LogHold

LogHold is an evolution of proportional pressure and means that the delimiting knife pressure against the trunk can be reduced, without the risk of the trunk being dropped. If the trunk is about to fall, LogHold regulates the knife pressure so that the trunk is held in the right position. The amount by which the diameter may increase before LogHold takes action is set in the control system. No additional sensors are required.

SP patent



Proportionally angled feeder rollers.

This smart solution means that when the harvester head is fully open, i.e. at maximum tree size, the feed rollers are at their greatest angle and provide maximum carrying force against the trunk. As the feed rollers carry the trunk, the pressure on the delimiting knives can be reduced, which means less friction and the harvester head can feed the trunk through quickly and easily.

Always Ahead



Always Ahead

Is our slogan! It may not seem that important, however, it is much more than just that. For us at SP, ALWAYS AHEAD is our endeavour to always be at the forefront, to always deliver the best, whether it be our products, technical solutions or how we support and treat you as a customer.

When you choose SP, our goal is to provide you with a first class harvester head. Not just in terms of performance and productivity but also operational reliability and quality. We have more than 40 years of experience designing and manufacturing harvester heads and we know what is needed to provide our customers with the best equipment and support. Our goal is to exceed your expectations and that you as a customer should always have the best possible conditions so that you can be ALWAYS AHEAD.

We are proud of our products and it shows. It is evident in how thoroughly our development team analyzes and tests new components and materials before they are approved for installation in the heads. It is evident in the quality of the manufacture, welding and assembly of our heads. It shows in all our employees who always do their utmost to ensure that we live up to being ALWAYS AHEAD and delivering just that – the best.

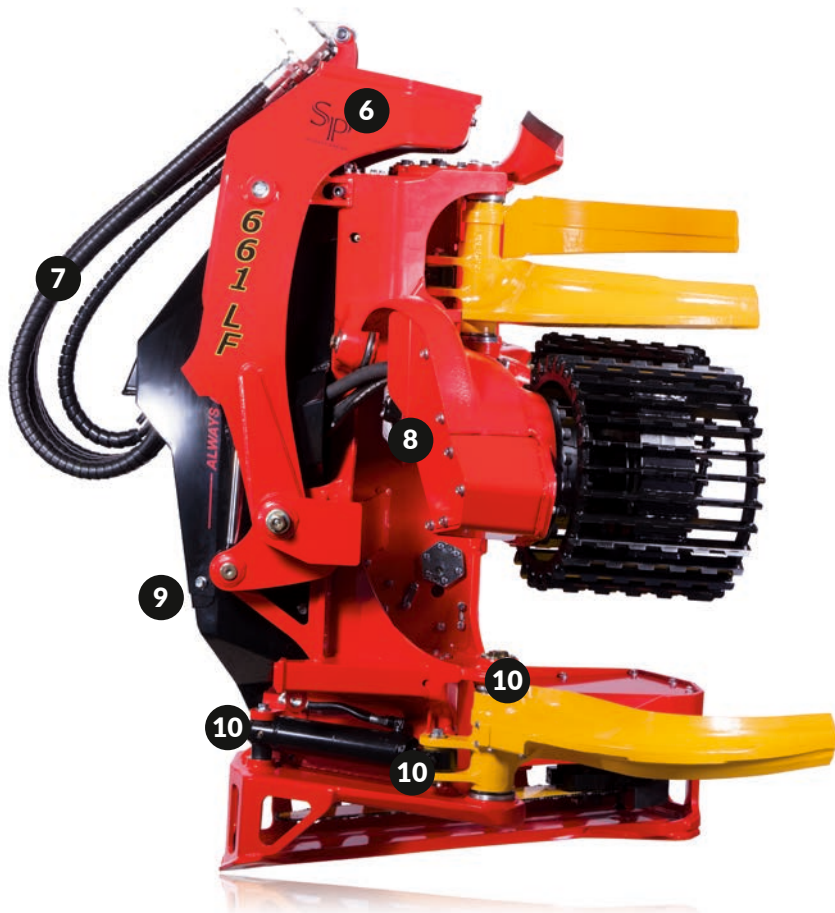
Technical details

The SP 661 LF is designed to offer the highest level of reliability and productivity.

On the following two pages we present a selection of the technical details that ensure this.



1. The highly reliable non-contact encoders for diameter measuring are mounted in completely sealed off steel housings and placed inside the frame for best protection and longevity.
2. The unique roller suspension provides more carrying force the larger the trunk is being processed. Thanks to this, the knife pressure can be maintained at a very low level which gives the lowest friction and the highest feed speed.
3. Thanks to the unique frame design with cast center piece, the number of frame plates has been minimized. Together with the fact that the complete frame is machined after welding this gives a very robust and torsion resistant frame.
4. A quick action cylinder combined with great mobility in the measuring wheel ensures highly accurate measuring also in crooked wood. The robust bearing and non-contact sensor ensure best reliability and longevity.
5. The saw unit is the very robust and fully-automatic Supercut 150, with integrated chain lubrication and hydraulic chain tensioning. The unit is prepared for use with both .404 and $\frac{3}{4}$ " saw bar. 32 cc saw motor in combination with SP's "QuickCut" system ensures extremely fast and efficient cutting.
6. Robust and torsionally rigid tilt frame for optimum durability. The two tilt cylinders have integrated dampening for reduced wear and vibrations.
7. The hose installation from the tilt block to the valve assembly is designed to minimize hose wear and offer highest reliability and longevity.
8. The roller motor hoses are installed on swivels to prevent twisting and wear. Together with the fully protected hose routing, integrated in the feed roller arm ensures highest reliability and longevity.



- 9. Durable folding valve cover with hinge for quick and easy service access. The tight fit prevents the build-up of dirt and debris. The electrical installation is positioned at the front for quick and easy access.
- 10. Expander pins equipped with robust seals ensure highest reliability and longevity.

- 11. The two tilt cylinders are positioned on the inside of the tilt frame for optimum protection. The hoses are connected to the rear of the cylinders for highest reliability and longevity.
- 12. The hydraulic valve is very reliable and efficient and is specially designed to manage high flows and pressure with very low pressure drops. Together with the proportional pressures and SP's patent LogHold, this gives a very productive and fast head with impressive performance and low energy consumption.



- 13. The delimiting cylinders have integrated dampening for reduced wear and vibrations.
- 14. The top knife is cast in high-strength steel for optimum durability. Available as either fixed or floating.
- 15. The three delimiting knives are cast in high-strength steel and have a very robust design for optimum durability. Separate pressure setting of the upper and lower knives for optimum performance.



The harvester head illustrated is equipped with EC (Extended Cut) saw box for an increased cutting diameter of up to 81 cm.

Accessories and equipment

The SP 661 LF has a vast range of different accessories in order to be able to adapt the harvester head to different needs, machines and felling conditions.

Color marking

Used to facilitate forwarding when the logs are difficult to distinguish with the naked eye.

Multi-tree equipment

SP's multi-tree equipment makes it possible to fell and gather several trees before processing them together. A highly productive option in small diameter harvesting.

Find end sensor

Using a sensor mounted in the saw box, the harvester head automatically locates the end of the trunk at the push of a button.

Topping saw

Facilitates felling of hardwood forest with a lot of forks as well as felling of stands with multiple top-breaks.

EC - saw box (Extended Cut)

Larger saw box for increased cutting diameter to 81 cm.

Multispeed feed

Optimizes the harvester head's relationship between feed speed and feed force for highest productivity regardless of trunk diameter.

Lighting saw box

LED lamp in the saw box for additional lighting of the work area.

FDM (Floating Diameter Measuring)

An additional measuring point that follows the movements of the top knife. This ensures a very accurate diameter measuring also during high feed speeds.

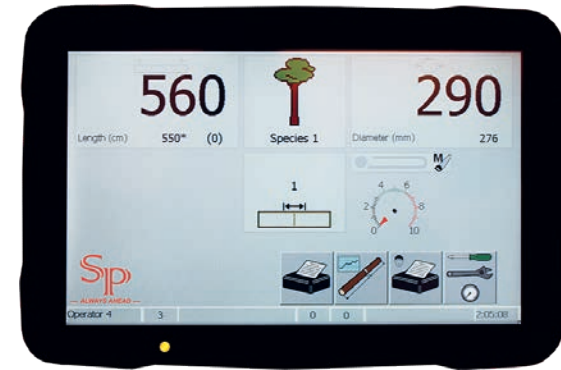
Eucalyptus kit

Debarking kit for eucalyptus trees.

Feed rollers

Feed rollers in several designs available to suit different conditions and needs.





Compatible with most control systems

SP 661 LF can be used with virtually all control systems on the market. Through a simple adaptation the SP 661 LF can be used together with the following systems:

- Dasa280
- Dasa380
- Dasa4
- Dasa4 Compact
- Dasa Forester
- John Deere Timbermatic
- Ponsse Opti
- Motomit IT
- Motomit PC
- Komatsu MAXI
- Techno Matic
- TOC-MD
- Technion

Complete control systems

There are three different versions of the Dasa5 control system to choose from depending on customer needs and requirements.

SPd5Bucking

SPd5Bucking is a complete measurement and control system for control of the felling process in a forest harvester in accordance with StanForD. This is our most advanced system and has support for value bucking. The system is also fully integrated with dasa5 control and communication system.

All communication with the operator is via dxPc, which is a mobile PC with Windows 10 operating system, and stores all information, e.g. statistics or instructions. The dxPc computer has a touchscreen, which facilitates the work for the operator considerably.

SPd5BuckingPrio

SPd5BuckingPrio is our intermediate system. The system has support for priority bucking and is equipped with a PC. SPd5BuckingPrio is a slightly simpler bucking system combined with the power of a PC for reporting, communication and other programs. Bucking is based on priority lengths with or without diameter classes. SPd5BuckingPrio is ideal when value bucking and reporting is not required according to StanForD at the same time as needing a PC for reporting, communication and other PC-programs.

All communication to the operator occurs via dxPc, which is a mobile PC with Windows 10 operating system. All information is stored there, for example statistics or instructions. The dxPc computer has a touchscreen, which facilitates the work for the operator considerably.

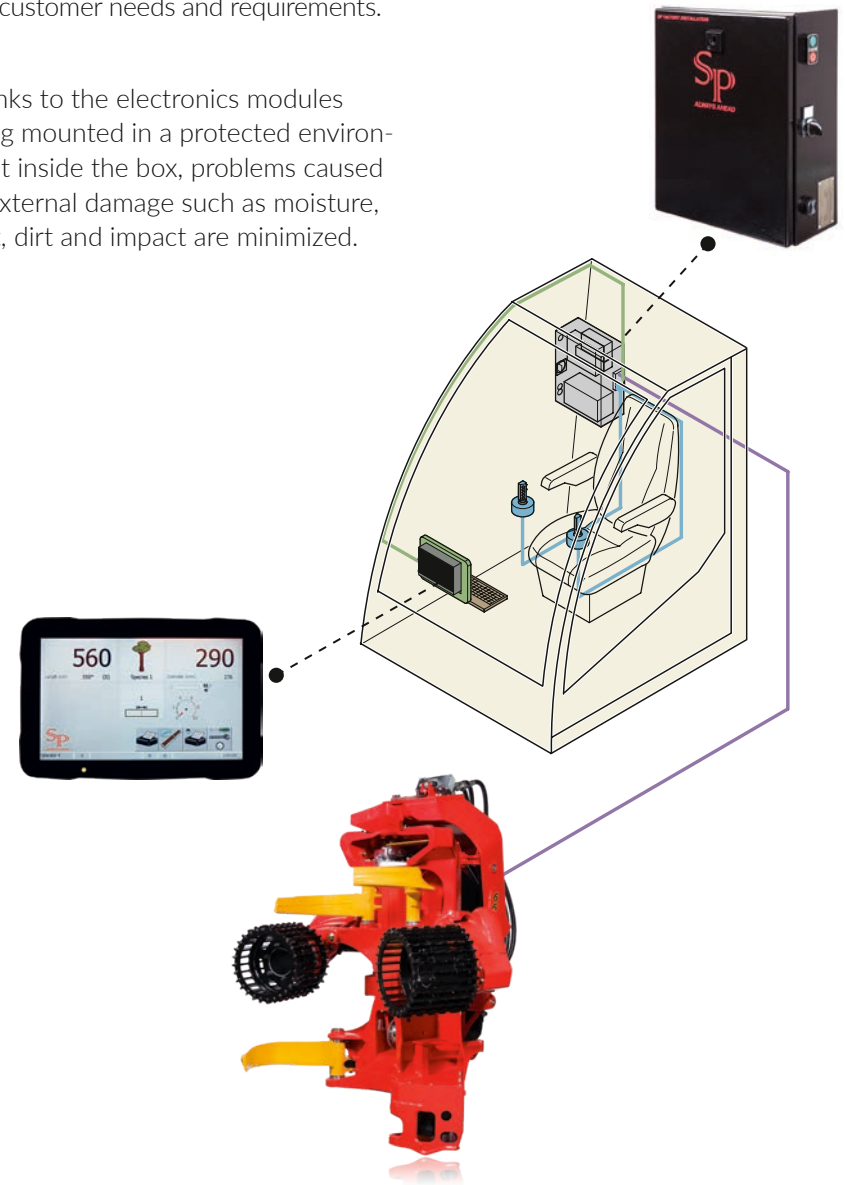
SPd5BuckingPrio-C

SPd5BuckingPrio-C is a bucking system that focuses on simplicity without compromising on head control, performance or productivity. SPd5BuckingPrio-C has support for priority bucking with or without diameter classes and has been specially developed for felling where there is no need for wireless production reporting or the use of PC programs. SPd5Bucking Prio-C runs the Windows CE operating system.

SPd5 cab box

Regardless of which system you choose above, you can get it with our SPd5 cab box. The cab box allows SPd5 cab modules do be installed quickly, efficiently and at the highest quality. The cab box is factory-fitted at SP and delivered completely finished and tested together with the head, which ensures a correct connection and trouble-free commissioning.

Thanks to the electronics modules being mounted in a protected environment inside the box, problems caused by external damage such as moisture, dust, dirt and impact are minimized.





Technical data

Hydraulic

	Metric	US
Min. pump capacity:	200 l/min	52 gpm
Rec. working pressure:	26-30 MPa	3770-4350 psi

Feeding

Proportional clamping pressure of the feed rollers in relation to trunk diameter, individual settings for different species for optimum performance.

Roller motors:	613-920cc	37,4-56,1 cui
Max. opening:	630 mm	24,8"
Feed speed:	0-7 m/s	0-22 ft/s
Feeding force:	38 kN	8543 lbf
Proportional pressure:	Yes	Yes

Cutting

The SuperCut 150 is a very powerful saw unit with integrated chain lubrication and hydraulic tensioning of the chain. Together with SP's QuickCut, this optimises cutting time and minimizes the risk of cutting cracks.

Cutting diameter standard:	700 mm	27,6"
Cutting diameter option EC saw box:	810 mm	32"
Chain speed:	40 m/s	131 ft/s
Saw motor:	32 cc	1.9 cui
Saw unit:	SuperCut 150	SuperCut 150

Topping saw (option)

	Metric	US
Cutting diameter:	350 mm	13,8"
Chain speed:	40 m/s	131 ft/s
Saw motor:	20 cc	1.22 cui

Delimiting

Delimiting knives with proportional pressure. Individual settings for different species for optimum performance.

Movable knives:	4	4
Fixed knives:	1	1
Delimiting diameter tip to tip:	510 mm	20"
Min. delimiting diameter:	30 mm	1,18"
Proportional pressure:	Yes	Yes
LogHold:	Yes	Yes

Weight and dimensions

Despite its capacity to handle large diameter trees the SP 661 LF is, thanks to its compact measurements, also capable to efficiently harvest small tree sizes.

Width closed:	1360 mm	53,5"
Width open:	1820 mm	71,6"
Height, excl. tilt frame:	1730 mm	68"
Weight, excl. rotator:	1480kg	3262 lb
Weight with top saw, excl. rotator:	1595 kg	3516 lb

Recommendations

Carriers

The SP 661 LF is an excellent choice for use on both wheeled harvesters, tracked harvesters as well as excavators. To inquiry about the suitability of a specific machine brand/model, please contact your SP dealer.

Optimum tree size (DBH) for highest productivity*:	160 - 510 mm	6 - 20"
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* Diameter at breast height, measured 1.3 m up the trunk.

We reserve the right to change specifications and design. Harvester heads pictured may have some extra equipment. All stated measurements/values are approximate and refer to standard equipment.



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Box 870 | SE-341 18 Ljungby | Sweden
Tel: +46 (0)372 253 50 | E-mail: info@spmaskiner.se
Website: www.spmaskiner.com