

Sip

ALWAYS AHEAD



SP 591 LX G3

-high speed debarking for extreme jobs

Without compromises for xtreme jobs

LX stands for Logging Xtreme, referring to the xtreme conditions that the LX harvester heads are designed to be able to handle without surrendering. Thanks to a number of both smart as well as simple solutions, the LX harvester heads offers a unique combination of maximized productivity, performance and uptime together with a minimum need for service and maintenance.

The LX harvester heads are first and foremost known for their xtreme strength, reliability and toughness, but thanks to performance and productivity increasing solutions like the SP patent LogHold, proportional pressures, and SP's highly developed computer software, they are also xtremely fast, efficient and easy to work with.

LX consists of four main features contributing to a maximized reliability and minimized need for service and maintenance, even under the toughest conditions. However when looking closer and in detail the LX harvester heads are packed with solutions adding up to the unique LX design.

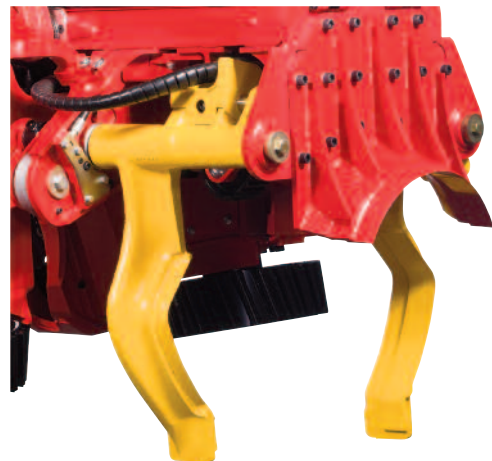


LX - Logging xtreme

1. The frame is made of special high strength steel and have an extremely robust overall design. Together with the compact and unique 3-piece bolt-on design this makes the frame extremely strong and torsion resistant. The frame sections are machined after the welding to ensure a perfect fit and minimum tension in the material when assembled.



2. The two wrap around knives are casted in high strength steel and are of an extremely robust design for maximum longevity. They are equipped with replaceable high quality knife inserts for a minimum and cost effective maintenance.



3. All components are strategically placed for best protection. In order to minimize internal wear and vibrations the LX harvester heads are equipped with dampening on exposed cylinders as well as mechanical dampening on movable parts. These solutions ensure a smooth operating and a maximized component life time as well as highest mechanical availability.



4. Pins for cylinders are both hardened and chromed. In combination with the large size diameter, this ensures a very reliable and long lasting design with a minimum need for maintenance. Pins for tilt frame, knives and roller arms are all large diameter expander pins. The pins are totally sealed off from sand and dirt, ensuring maximum longevity and a minimum of need for maintenance.



SP 591 LX G3

- high speed debarking for xtreme jobs

The SP 591 LX G3 is purpose built for harvesting and debarking of the most difficult species of plantation grown eucalyptus and acacia. It is an extremely strong and tough harvester head, designed according to the LX principle for maximum reliability and productivity even under the toughest conditions. The uncompromised LX design is to be found all throughout the harvester head, from large components like frame and knives down to pins and seals. In spite of its brute and tough appearance the SP 591 LX G3 does not just offer strength and reliability, smart solutions like proportional pressures in combination with an unprecedented debarking efficiency and a great handling of crooked trees also make the SP 591 LX G3 an extremely fast, productive and fuel efficient harvester head – the SP 591 LX G3 truly offers high speed debarking for xtreme jobs.

The SP 591 LX G3 is optimized for best productivity and performance handling tree sizes from 10 to 35 cm (4-14”) and is equally productive debarking at the stump as it is processing and debarking decked wood out of a pile.



The SP 591 LX G3 is lightning fast, reliable and robust. Together with its unique fuel saving hydraulic system and unparalleled handling of crooked timber it is able to offer a lowest cost per ton harvesting in the toughest of conditons.



Automatic proportional pressure system on knives and feed rollers for different tree species ensures a minimum of fiber damage and perfect debarking results.



The SP 591 LX G3 is designed with the user in mind. All components are strategically placed and easy to access, ensuring a fast and easy maintainance.

SP 591 LX G3



SP 591 LX G3 - Details

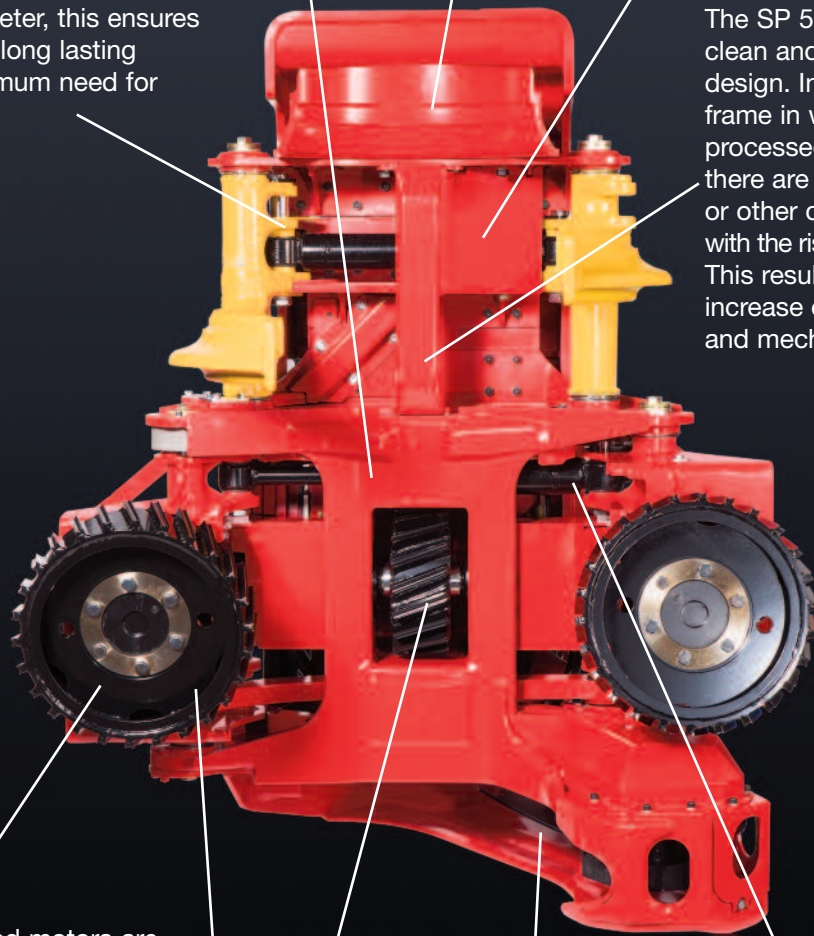
The frame is made of special high strength steel. Together with the compact and unique 3-piece bolt-on design this makes the frame extremely strong and torsion resistant. The frame sections are machined after the welding to ensure a perfect fit and minimum tension in the material when assembled.

Pins for cylinders are both hardened and chromed. In combination with the large size diameter, this ensures a very reliable and long lasting design with a minimum need for maintenance.

The robust top knife is equipped with a replaceable high quality knife insert for a minimum and cost effective maintenance.

Heavy duty protection cover ensures maximum life time of cylinder piston rod and seal kit.

The SP 591 LX G3 has a very clean and overall protected design. In the area of the frame in which the tree is processed and debarked there are no hoses, fittings or other delicate components with the risk of being damaged. This results in a general increase of uptime, output and mechanical availability.



The heavy duty feed motors are built to handle very high speed and are perfectly suited for high speed debarking operations. Length measuring is integrated in the feed motor for maximum longevity and minimum need for maintenance.

The SP 591 LX G3 has a total of only three hydraulic cylinders. All cylinders have the same heavy duty design for maximum longevity. All three cylinders shares the same seal kit for easy parts stocking.

The 4 motor/3 roller feeding system provides great grip, pulling force and debarking capabilities. All three feed rollers are virtually in line which makes the handling of crooked timber an easy task.

The cutting device is the robust, fast and efficient Hultdins Supercut 100. It features integrated chain lubrication and automatic hydraulic tensioning of the chain for maximized life time of bars and chains.

SP 591 LX G3 - Details

Extremely robust and torsion resistant tilt frame. Dampers on both tilt up and down minimizes vibrations and wear.

The hydraulic valve bank is the very reliable Parker L90/K170. It is working with an extremely good hydraulic efficiency, minimizing energy losses and the build up of heat in the hydraulic system. In combination with SP's control system and the proportional pressure system this makes the SP 591 LX G3 a very fast, productive and energy efficient harvester head.

Pins for tilt frame, knives and roller arms are all large diameter expander pins. The pins are totally sealed off from sand and dirt. This provides a very reliable and long lasting design with a minimum need for maintenance.

The main valve cover is hinged for an easy and fast maintenance. The tight fit prevents packing of dirt and debris. The chain oil tank is integrated in the cover with easy access for filling up chain oil.

All hydraulic fittings on the SP 591 LX G3 are well protected for minimum wear and maximum longevity.

Encoder for diameter measuring is well protected and integrated in the frame. Mounted in sealed housings for protection against moist and dust for minimum wear and maximum longevity.

The set feed rollers gives an increased spiralling of the tree resulting in a faster and more effective debarking

The two wrap around knives are casted in high strength steel and are extremely robust for maximum longevity. They are equipped with replaceable high quality knife inserts for a minimum and cost effective maintenance.



SP 591 LX G3



Technical data / recommendations

Hydraulics

	Metric	U.S.
Min. pump capacity	166 l/min	44 gpm
Rec. working pressure	25 - 30 Mpa	3626 – 4350 psi

Feeding

Proportional clamping pressure of the feed rollers. Individual settings for different species for optimum performance.

	Metric	U.S.
Hydraulic motors	500/315, 630/400	30,5/19,2 - 38,4/24,4
Max. opening	640 mm	25,2"
Feeding force	24 kN	5350 lbf
Feed speed	0 – 7 m/s	0 – 23 ft/s
Proportional pressure	Yes	Yes

Felling / Cutting

The SuperCut 100 is a very robust and powerful saw unit with integrated chain lubrication and automatic hydraulic tensioning of the chain.

	Metric	U.S.
Cutting diameter	600 mm	23,6"
Chain speed	40 m/s	121 ft/s
Saw motor	20 cc	1,22 cui
Saw unit	Automatic - SuperCut 100	Automatic - SuperCut 100

Delimiting

Proportional pressure on delimiting knives. Individual settings for different species for optimum performance.

	Metric	U.S.
Movable knives	2	2
Fixed knives	2	2
Diameter min.	30 mm	1,2"
Diameter tip to tip	430 mm	16,9"
Proportional pressure	Yes	Yes
LogHold	Yes	Yes

Weight and dimensions

In spite of the very robust LX design the weight of the SP 591 LX G3 makes it suitable for a variety of different carriers. Thanks to the compact height the SP 591 LX G3 handles crooked timber with ease and efficiency.

	Metric	U.S.
Width closed	1250 mm	49,2"
Width open	1550 mm	61"
Height excl. tilt frame	1670 mm	65,8"
Weight excl. rotator	1800 kg	3968 lb

Recommendations

Carriers

The SP 591 LX G3 can be fitted to a variety of different carriers such as conventional forest machines or excavators. In order to secure a good function please consult your nearest SP dealer.

Tree sizes

	Metric	U.S.
Optimum tree size dbh*:	15 – 35 cm	6 – 14"
Max. rec. tree size dbh*:	40 cm	16"

* Diameter breast height, measured 1,3 m (51,2") up from the ground.

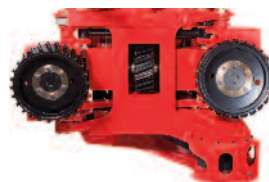
SP 591 LX G3

Optional equipment

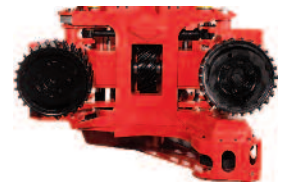
The SP 591 LX G3 has a number of different options available in order to be able to meet different customer requirements and to suit a large variety of different logging operations and conditions. The list below contains the most common options. For more information please contact your nearest SP dealer.

A or E frame

The SP 591 LX G3 comes in two different frame designs for optimum performance depending on tree species and tree form. The A frame is the standard frame design and is specifically designed for harvesting of poor tree forms and difficult to debark species such as Acacia and Australian Blue Gum. The E frame offers optimum performance for harvesting of good tree forms and easier to debark species of Eucalyptus.



A-frame



E-frame

Separate length measuring unit

For operations requiring a very accurate length measuring. The measuring unit is hydraulically controlled and features a non touching encoder and a very robust bearing for accurate measuring results as well as maximum longevity.



Feed motors

In order to optimize the SP 591 LX G3 for different carriers and conditions there are two different motor sizes to choose from.
500/315 - 630/400 - 30,5/19,2 - 38,4/24,4



Feed rollers

Different feed rollers for different species and conditions.



SP debarking dual



SP debarking single

3/4" saw unit

The SP 591 LX G3 can be equipped with a 3/4" version of the Hultdins SuperCut 100 automatic saw unit.



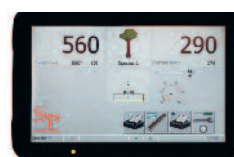
Find end sensor

Makes operations in pre felled woods easier and more productive. With the find end sensor the harvester head reverses down to the butt end of the stem, stops and sets the length to zero, all with the press of one button.



Complete measuring systems

The SP 591 LX G3 can be supplied with three different versions of the Dasa5 control- and measuring system, depending on customer requirements. For more information on the different system versions please consult your nearest SP dealer.



Dasa 5 screen



SP Dasa 5 cabin installation box

Preparation for measuring systems

The SP 591 LX G3 can be supplied prepared for carriers equipped with the most common measuring systems on the market such as Timbermatic, Timberrite, and MAXI. For detailed information please consult your nearest SP dealer.





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Distributor

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