



## **KESLA** *#***yourlifetimematch**

Kesla was founded by farmer Antti Kärkkäinen in 1960. The business was based on product that Antti invented for agriculture and later on for forestry. The real passion for Antti was to do things better, as it is for Kesla's personnel today. By listening to the customers and doing things better together we truly create the solutions which will meet the customer's needs. These solutions, KESLA machines, integrate with the base machines easily and benefit the customer throughout the machines' entire life cycle.

Today, Kesla is a strong forestry technology and material handling specialist, employing some 250 people in three locations in Finland and its subsidiary in Germany. KESLA products are exported to over 35 countries around the world.

We are proud members of the KESLA-team. We also welcome you, our valued customer, to join our team.







# ISO 9001 tells it all about the quality of the operations

Kesla has been granted an ISO 9001 quality certificate. It is a certificate of the overall, innovative development activities which enable the offering of quality products and services. The ISO standard affects not only the material and manufacture of the products, but also all of the activities of the company.





## ARGUMENTS **KESLA HARVESTER HEADS**

#### CONTROLLED PROCESSING

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An excellent example of the wide range of options available to KESLA harvesters is the pressure control that can be implemented with mechanical or electrical pressure regulators. The electric KESLA proCON control enables the clamping force of the delimbing knives and feed rollers as well as feeding force of saw bar to be optimized according to diameter, tree species, work stage and working conditions. The change of the pressure regulators from mechanical to electric ones can be easily done also to an existing KESLA head.

TEHTY SUOMESSA Made in Finland

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#### LIGHT BUT DURABLE CONSTRUCTION

The wide-bodied frame structure is an overwhelming solution for a light weight but durable construction.

#### STRONG TILT

The wide tilt arm with straight forward side profile is a very strong construction compared with its weight. Thanks to tilt's wide tilting angle, processing is efficient and less-straining on the head's structure even when working in hilly areas.

HIGH DELIMBING OUALITY AND EASY PICKING OF TIMBER

Optimal knife geometry is achieved thanks to the wide space between the delimbing knives and the correct shape of the knives. The shape accuracy and structural rigidity of the front delimbing knives that are cast-made give additional delimbing power in comparison with welded knives. The floating attachment of the stabilizer bar between the knives allows the knives to move more freely according to the form of the tree. The delimbing of even the most crooked trees is efficient, the delimbing quality is good, and picking up still standing or already fallen trees is easy.

#### CORRECTLY POSITIONED CENTER ROLLER

The support roller in the frame and the feed roller in 3WD models are located optimally, behind the main feed rollers which carry the timber. On the chassis there are support rollers as on the 3WD models, it has a pulling center roller behind the wood-supporting side rollers, positioned correctly in the longitudinal direction of the head. The roller is firmly mounted with strong bearings on the chassis.

#### FEEDING MOTORS BY THE NEED

Strong radial piston motors are used in the feed rollers, the size of which can be selected from a wide range regarding the hydraulic output of the base machine and the trees to be handled. For debarking processing, motors can also be equipped with internal length measuring sensors. The feed rollers are shaped so that the load on the motor shaft is as close as possible to the bearing, which maximizes the lifetime of the motors.

#### POWERFUL HYDRAULICS

Compact mobile valves with good oil flow for feeding and standard NG6 valves for other functions are an excellent combination. Individually detachable function-specific valve packages are easy to maintain and, thanks to the spacious design allow easy hose replacement. The modular valve structure makes it easy to change the valve specification also in exhisting heads if necessary.

ACCURATE LENGTH MEASURING

The length measuring wheel is optimally located and pivoted in the feeding direction of the timber. These, together with a wide movement range of the wheel, provide excellent length measurement accuracy. The support roller behind the length measuring wheel (feed roller in the 3WD models) effectively removes the wood bark and other debris from interfering with measuring. The contactless sensor is completely waterproof. The KESLA HvdCON measuring wheel with a 2-action cylinder further increases the accuracy of the measurement.

#### **RELIABLE SAW**

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The standard KESLA saw is without compromise simple and reliable. The saw swivel arm has precision machined surfaces that are continuously lubricated by saw chain oil. There is no need for separate wearable bearings nor maintenance for them. Maintenance is easy because the structure can be detached from both the motor and the sprocket side without disassembling the entire saw mechanism.

ALTERNATIVE JPS R5500-SAW increases the energy efficiency of sawing to a totally new level. The large, high torgue motor and the large diameter sprocket enable high cutting power at low saw motor rpm. Pressure losses are low, which means better efficiency and lower waste heat output. The extra wide guide bar is rigid and durable. The fully integrated pivot mechanism eliminates the problems caused by brushwood, packed snow and wood chips. Saw is available in both .404 and ¾ inched versions

#### REACHABLE AND OPTIMIZED GEOMETRY FOR REAR DELIMBING KNIVES

makes harvesting easy and efficient and ensures quality results. The range includes models both with one and two rear delimbing knives.

#### **EXCELLENT ACCURACY OF DIAMETER MEASURING**

The diameter is measured at the front delimbing knives, so that changes in the hardness of the wood due to weather conditions etc. do not affect the accuracy of the measurement. Since the feed rollers carry most of the weight of the wood, it is also accurate to measure heavy and large diameter logs with a delimbing knife. The sensor is a non-contact linear sensor. Alternatively, measurement can also be made with two non-contact magnetic pulse sensors that are very well protected against shocks and other external factors.





\* Kesla's unique progressive roller geometry combines the strengths of side-squeezing 2WD- heads (A) and traditional triangular geometry 3WD/4WD (B) heads without any compromise.

• With large diameters and heavy trees, the rollers carry the tree, and the grip is strengthened by the mass of the stem. The weight of the stem causes less strain on the delimbing knives, and friction between the head and the wood is minimal.

• As the diameter decreases, the rollers turn step by step to touch the stem from side to side against each other. The small tree is not pressed against the head's body, but the tree is transported gently between the feed rollers, whereby the friction between the head and the wood remains low and maximum grip is also achieved with knotty top parts.

 The floating attachment of the stabilizer bar between the feed rollers allows the stem to roll move more freely. while still retaining its tight grip. Feeding crooked trees is also light and smooth.



 The pressure compensation between the feed motors prevents slippage but allows for differences in speed between the rolls of the wood due to bends and flutter. In multi-stem processing both collecting and processing of multiple trees are effective.

• Depending on the size class of the head, the weight saving is 100-200 kg compared to a 3WD or a 4WD head. The excellent power/weight ratio of KESLA harvester heads increases the productivity and improves energy efficiency.

• The 2-motor hydraulic system is excellent for oil flow. The system's pressure losses are up to 20% lower, which means better net power and fuel economy.

 The simpler 2WD construction also makes harvester head maintenance easier.





#### **KESLA 16RH** 11 ΑB C



KESLA 16RH is the market's lightest full-blooded harvester head for profes-16RH is suitable for installation on tractors and max. 10-tonne wheeled sional use. Four delimbing knives and multi-stem processing capabilities, harvesters. combined with the unique KESLA proAX cutting knife (optional equipment) make it a particularly efficient head for integrated harvesting of pulp and biomass wood.

KESLA 16RH is the market's lightest full-blooded harvester head for professional use with four delimbing knives and excellent multi-stem processing capabilities.



Kesla reserves the rights for technical changes. The products shown in the images may have additional accessories.



= optimum tree diameter
 A = delimbing diameter (tip-to-tip)
 B = maximum diameter (opening of feed rollers)
 C = maximum cutting diameter



16RH		
Weight starting from (w/o rotator)	445 kg	1,000 lbs
CHAIN SAW	saw with manual o tensio	r automatic chain ning
Max sawing diameter	450 mm	17.7"
Guide bar / chain	18" / .404"	18″ / .404″
Saw motor	10 cc / 19 cc	0.61 / 1.16 cu.in
FEEDING	2WD anti-slip	ping control
Max opening of feed rollers	350 mm	14"
Feed motors	250 / 315 cc	15.2 / 19.2 cu.in
Feeding force @ 250 bar (4,600 PSI)	13 / 16 kN	2,920 / 3,600 lbf
Feeding speed @ 170 l/min (45 gpm)	5,0 / 4,0 m/s	16.4 / 13.1 ft/s
DELIMBING	4 moving + 1 fixed	delimbing knife
Delimbing diameter (tip-to-tip)	330 mm	13"
Front knives max opening	480 mm	18.9"
Rear knives max. opening	500 mm	19.7"
HYDRAULICS		
Max pressure level	250 bar	3,625 PSI
Min. hydraulic output and engin	e power	
250 сс	120 l/min, 50 kW	31 gpm, 68 hp
315 сс	150 l/min, 62 kW	40 gpm, 84 hp

**ROLLER HEADS 16RH** 





# **KESLA 18RH-II** A B C = optimum tree diameter A = delimbing diameter (tip-to-tip) B = maximum diameter (opening of feed rollers) C = maximum cutting diameter

KESLA 18RH-II has the large head's hydraulics and power in a small, thinning The KESLA 18RH-II, like larger KESLA heads, can be equipped with a wide friendly package. This head well known for its superior power/weight ratio, range of equipment to meet the customer's needs. is now further improved, e.g. the new frame structure is even more long 18RH-II is suitable for installation on max. 10-tonne wheeled harvesters and lasting even under the toughest operating conditions. The 18RH-II is now excavators. always equipped with three delimbing knives, which makes tree picking and delimbing more efficient and easier especially for processing large trees.

KESLA 18RH-II has been renewed. The result is a head with better durability and less maintenance.



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18RH-II								
Weight starting from (w/o rotator)	560 kg	1,235 lbs						
CHAIN SAW	saw with manual or automatic chain tensioning							
Max sawing diameter	500 mm	20"						
Guide bar / chain	20" / .404" (3/4" opt.)	1.16 / 1.8 / 1.95 cu.in						
Saw motor	19 cc / 30 cc / 32 cc	17.4 / 13.7 ft/s						
FEEDING	2WD anti-slip	ping control						
Max opening of feed rollers	420 mm	17"						
Feed motors	300 / 400 cc	18.3 / 24.4 cu.in						
Feeding force @ 240 Bar (4,600 PSI)	15 / 19 kN	3,370 / 4,270 lbf						
Feeding speed @ 200 l/min (53 gpm)	5,3 / 4,2 m/s	17,4 / 13,7 ft/s						
DELIMBING	3 moving + 1 fixed	l delimbing knife						
Delimbing diameter (tip-to-tip)	330 mm	13"						
Front knives max opening	480 mm	18.9"						
Rear knives max. opening	520 mm	20.5"						
HYDRAULICS								
Max pressure level	240 bar	3,480 PSI						
Min. hydraulic output and engin	e power							
200 cc	135 l/min, 54 kW	35 gpm, 73 hp						
400 cc	160 l/min, 65 kW	42 gpm, 88 hp						

18RH-II **ROLLER HEADS** 







KESLA 20RH-II is a powerful and agile harvester head for thinning and final Extensive additional accessories include the proCON and hydCON features as felling of light trees. Considering its size class, this lightweight yet sturdily well as color marking, automatic chain tensioner and stump treatment device. constructed harvester head provides exceptionally powerful feeding force The 20RH-II can be equipped also for efficient biomass harvesting with the and sawing power. Thanks to the four delimbing knives, the wood is easy unique market leading Kesla proAX-cutting system and multi-stem functions. to pick up and the delimbing result is excellent. KESLA 20RH-II is an ideal head for medium-sized thinning harvesters and 8 to 13 ton tracked excavators.

KESLA 20RH-II is a powerful and agile harvester head for thinning and even for final felling with the average diameter of trees less than 30 cm.



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ZURH-II								
Weight starting from (w/o rotator)	650 kg	1,430 lbs						
CHAIN SAW	saw with manual or automatic chain tensioning							
Max sawing diameter	540 mm	22"						
Guide bar / chain	22" / .404" (3/4" opt.)	22" / .404" (3/4" opt.)						
Saw motor	19 cc / 30 cc / 32 cc	1.16 / 1.8 / 1.95 cu.in						
FEEDING	2WD anti-slip	ping control						
Max opening of feed rollers	420 mm	17"						
Feed motors	300 / 400 cc	18.3 / 24.4 cu.in						
Feeding force @ 230 bar (3,300 PSI)	15 / 19 kN	3,370 / 4,270 lbf						
Feeding speed @ 220 l/min (74 gpm)	5,3 / 4,2 m/s	17.4 / 13.7 ft/s						
DELIMBING	4 moving + 1 fixed delimbing knife							
Delimbing diameter (tip-to-tip)	330 mm	13"						
Front knives max opening	480 mm	18.9"						
Rear knives max. opening	520 mm	25.5"						
HYDRAULICS								
Max pressure level	240 bar	3,480 PSI						
Min. hydraulic output and engin	e power							
325 сс	135 l/min, 54 kW	35 gpm, 73 hp						
400 cc	160 l/min, 65 kW	42 gpm, 88 hp						







= optimum tree diameter A= delimbing diameter (tip-to-tip) B = maximum diameter (opening of feed rollers)C = maximum cutting diameter



Kesla's best-selling harvester head 25RH-II is a real all-round tool from thinning to final felling. Excellent balance combined with excellent roller and knife geometry makes it easy and fast to pick up trees, both standing and pre-felled 25RH-II is also ideal for processing piled logs.

as well as colour marking, automatic chain tensioner and stump treatment

device. For efficient biomass harvesting the 25RH-II can be equipped also with the unique market leading KESLA proAX-cutting system and multi-stem functions.

From the wide range of feed motors can be found the right choice to match Extensive additional accessories include the proCON and hydCON features the hydraulic power of different base machines. KESLA 25RH-II is especially ideal for medium to heavy duty, 15 to 20 ton wheeled harvesters and 12 to 15 ton tracked excavators.

KESLA 25RH-II is a true multi-purpose machine from thinning to final felling, where the average diameter of the tree is less than 40 cm.



25RH-II									
Weight starting from (w/o rotator)	860 kg	1,895 lbs							
CHAIN SAW	saw with manual or automatic chain								
	tensi	oning							
Max sawing diameter	670 mm	26"							
Guide bar / chain	25" / .404" (3/4" opt.)	25" / .404" (3/4" opt.)							
Saw motor	19 cc / 30 cc / 32 cc	1.16 / 1.8 / 1.95 cu.in							
FEEDING	2WD anti-slip	oping control							
Max opening of feed rollers	580 mm	23"							
Feed motors	380 / 470 / 565 cc	23.2 / 28.7 / 34.5 cu.in							
Feeding force @ 240 Bar (4,600 PSI)	16/19/23 kN	3,600 / 4,270 / 5,170 lbf							
Feeding speed @ 220 l/min (74 gpm)	5,8 / 4,7 / 4,0 m/s	19 / 15.4 / 13.1 ft/s							
DELIMBING	4 moving + 1 fixe	d delimbing knife							
Delimbing diameter (tip-to-tip)	420 mm	16.5"							
Front knives max opening	600 mm	23.6"							
Rear knives max. opening	680 mm	26.8"							
HYDRAULICS									
Max pressure level	240 bar	3,480 PSI							
Min. hydraulic output and engin	e power								
380 cc	135 l/min, 54 kW	35 gpm, 73 hp							
470 cc	160 l/min, 65 kW	42 gpm, 88 hp							
565 cc	190 l/min, 76 kW	50 gpm, 103 hp							

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## KESLA 27RH-II | 28RH-II | 29RH-II | 30RH-II

The most powerful product family of KESLA harvester heads repre- ction of cylinders, hoses and sensors. Kesla's unique progressive sents the latest design and technology on the market. Based on the unique modular design, the range covers an unprecedented wide selection of applications, without compromise. The robust, modular frame construction of the head is designed to increase durability and easy-up maintenance. Special attention has been paid to the prote-

= optimum tree diameter
A = delimbing diameter (tip-to-tip) B = maximum diameter (opening of feed rollers) C = maximum cutting diameter

feed roller geometry and high-flow hydraulics make the harvester head unbeatably energy efficient. Thanks to the wide range of feed motors and accessories, the heads can be adapted to a wide range of base machines of different power classes.

## KESLA 27RH-II

KESLA 27RH-II is the lightest model in the series. Its short and compact body with one rear delimbing knife makes the harvester head particularly efficient in handling crooked trees. The excellent power/weight ratio of the harvester head and the wide range of feed motors make it suitable for a wide range of base machines and applications. It is suitable for medium-sized wheeled harvesters and 15 to 20 ton tracked excavators

## **KESLA 28RH-II**

KESLA 28RH-II is equipped with four delimbing knives, unlike its brother model the 27RH-II. The harvester head is optionally available in either 2WD or 3WD versions, according to the intended use and preferences. Thanks to the modular design, the 2WD/3WD conversion can also be done afterwards, which increases security to the investment for ever changing operating conditions. 28RH-II can be well accessorized for final felling for rough hardwood and deciduous trees, like e.g. acacia and eucalyptus debarking.

A suitable base machine is a heavy wheeled harvester, or an 18-20 ton tracked excavator.





	27R	H-II	28RI	I-11 2WD	28RH-11 3WD			
Weight starting from (w/o rotator)	1 290 kg	2,840 lbs	1 380 kg	3,042 lbs	1 440 kg	3,175 lbs		
CHAIN SAW	saw with manual or auto	matic chain tensioning	saw with manual or automatic chain tensioning		saw with manual or a	utomatic chain tensioning		
Max sawing diameter	780 mm	30"	780 mm	30"	780 mm	30"		
Guide bar / chain	30" / .404" (3/4" opt.)	30» / .404» (3/4» opt.)	30" / .404" (3/4" opt.)	30» / .404» (3/4» opt.)	30" / .404" (3/4" opt.)	30» / .404» (3/4» opt.)		
Saw motor	30 cc / 41 cc	1.8/2.5 cu.in	30 cc / 41 cc	1.8 / 2.5 cu.in	30 cc / 41 cc	1.8 / 2.5 cu.in		
FEEDING			2WD anti-	slipping control	3WD anti-slipping cont	rol (4 synchronized motors)		
Max opening of feed rollers	700 mm	27.5"	700 mm	27.5"	700 mm	27.5"		
Feed motors	520 / 620 / 680 / 820 cc	31.7 / 37.8 / 45.5 / 50 cu.in	520 / 620 / 680 / 820 cc	31.7 / 37.8 / 41.5 / 50 cu.in	680 cc	41.5 cu.in		
Feeding force @ 280 bar (4,600 PSI)	23 / 27 / 30 / 36 kN	5,170 / 6,100 / 6,750 /8,100 lbf	23 / 27 / 30 / 36 kN	5,170 / 6,100 / 6,750 / 8,100 lbf	30 kN	6,750 lbf		
Feeding speed @ 280 l/min (74 gpm)	5,7 / 4,8 / 4,5 / 3,7 m/s	18.7 / 15.7 / 14.7 / 12.1 ft/s	5,7 / 4,8 / 4,5 / 3,7 m/s	18.7 / 15.7 / 14.7 / 12.1 ft/s	4,5 m/s	14.7 ft/s		
DELIMBING	3 moving + 1 fixed	l delimbing knife	4 moving + 1 fi	xed delimbing knife	4 moving + 1 fixed delimbing knife			
Delimbing diameter (tip-to-tip)	480 mm	18.9"	480 mm	18.9"	480 mm	18.9"		
Front knives max opening	720 mm	28.3"	720 mm	28.3"	720 mm	28.3"		
Rear knives max. opening	760 mm	30"	760 mm	30"	760 mm	30"		
HYDRAULICS		·						
Max pressure level	280 bar	4,600 PSI	280 bar	4,600 PSI	280 bar	4,600 PSI		
Min. hydraulic output and engine power								
520 cc	175 l/min, 82 kW	46 gpm, 112 hp	175 l/min, 82 kW	46 gpm, 112 hp	-	-		
620 cc	200 l/min, 95 kW	53 gpm, 129 hp	200 l/min, 95 kW	53 gpm, 129 hp	-	-		
680 cc	220 l/min, 100 kW	58 gpm, 136 hp	220 l/min, 100 kW	58 gpm, 136 hp	220 l/min, 100 kW	58 gpm, 136 hp		
820 cc	260 l/min. 125 kW	69 gpm, 170 hp	260 l/min. 125 kW	69 apm, 170 hp	-	-		

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## KESLA 29RH-II

Like its little brother 27RH-II, **KESLA 29RH-II** is a 3-knife 2WD harvester head. The technology is equivalent to the 27RH-II, but instead of the ultimate power/weight ratio the construction is made to last in the most demanding working conditions. Due to its compact design, large diameter feed rollers, excellent protection and a robust construction, the harvester head is ideal for felling crooked and branched hardwoods.

29RH-II is also available with an integrated top saw (29RH-II TS). KESLA 29RH-II is suitable for the heaviest wheeled harvesters and 20 to 30 ton track equipped excavators.

## KESLA 30RH-II

**KESLA 30RH-II** is a sister models of 29RH-II, equipped with four delimbing knives. The harvester head is optionally available as whether 2WD - or 3WD-versions, according to intended use and preferences. Thanks to the modular design, the 2WD / 3WD conversion can also be done afterwards, which increases the security of machine investment in case of changing working conditions.

The robust construction, powerful 2WD- or 3WD feed with progressive roller geometry and the strong grip of the four delimbing knives make the 30RH-II an efficient and economical tool for processing heavy wood, both standing trees or piled tree logs. 30RH-II is also ideal for heavy eucalyptus and acacia debarking.

30RH-II is also available with an integrated top saw (30RH-II TS). KESLA 30RH-II is suitable for installation on the heaviest wheeled and track equipped harvesters and 20-30 ton tracked excavators.

= optimum tree diameter A = delimbing diameter (tip-to-tip)

B = maximum diameter (opening of feed rollers) C = maximum cutting diameter

	2	9RH-II	<b>29</b> F	RH-II TS	30RI	H-II 2WD	30RH-II 3WD		30R	H-II TS 2WD	30R	H-II TS 3WD
Weight starting from (w/o rotator)	1 540 kg	3,395 lbs	1 660 kg	3,660 lbs	1 630kg	3,600 lbs	1 690 kg	3,730 lbs	1 750 kg	3,860 lbs	1 810 kg	3,990 lbs
CHAIN SAW	saw with manual or a	utomatic chain tensioning	saw with manual or a	utomatic chain tensioning	saw with manual or a	utomatic chain tensioning	saw with manual or a	automatic chain tensioning	saw with manual o	or automatic chain tensioning	saw with manual	or automatic chain tensioning
Max sawing diameter	780 mm	30"	780 mm	30"	780 mm	30"	780 mm	30"	780 mm	30"	780 mm	30"
Guide bar / chain	30" / .404" (3/4" opt.)	30» / .404» (3/4» opt.)	30" / .404" (3/4" opt.)	30» / .404» (3/4» opt.)	30" / .404" (3/4" opt.)	30» / .404» (3/4» opt.)	30" / .404" (3/4" opt.)	30» / .404» (3/4» opt.)	30" / .404" (3/4" opt.)	30» / .404» (3/4» opt.)	30" / .404" (3/4" opt.)	30» / .404» (3/4» opt.)
Saw motor	30 cc / 41 cc	1.8 / 2.5 cu.in	30 cc / 41 cc	1.8 / 2.5 cu.in	30 cc / 41 cc	1.8/2.5 cu.in	30 cc / 41 cc	1.8 / 2.5 cu.in	30 cc / 41 cc	1.8 / 2.5 cu.in	30 cc / 41 cc	1.8 / 2.5 cu.in
Max sawing diameter (top saw)	-	-	450 mm	17.7"	-	-	-	-	450 mm	17.7"	450 mm	17.7"
Blade flange / chain (top saw)	-	-	18"/.404"	18"/.404"	-	-	-	-	18"/.404"	18» / .404»	18"/.404"	18» / .404»
Saw motor (top saw)	-	-	19 cc	1.16 cu.in	-	-	-	-	19 cc	1.16 cu.in	19 cc	1.16 cu.in
FEEDING	2WD anti-	slipping control	2WD anti-	slipping control	2WD anti-	slipping control	3WD anti-slipping con	trol (4 synchronized motors)	2WD ar	nti-slipping control	3WD anti-slipping control (4 synchronized motors)	
Max opening of feed rollers	700 mm	27.5"	700 mm	27.5"	700 mm	27.5"	700 mm	27.5"	700 mm	27.5"	700 mm	27.5"
Feed motors	520/620/680/820 cc	31.7 / 37.8 / 45.5 / 50 cu.in	520/620/680/820cc	31.7 / 37.8 / 45.5 / 50 cu.in	520/620/680/820 cc	31.7 / 37.8 / 41.5 / 50 cu.in	820 cc	50 cu.in	520/620/680/820 cc	31.7 / 37.8 / 41.5 / 50 cu.in	820 cc	50 cu.in
Feeding force @ 280 bar (4,600 PSI)	20 / 24 / 27 / 32 kN	4,500 / 5,400 / 6,070 / 7,200 lbf	20 / 24 / 27 / 32 kN	4,500 / 5,400 / 6,070 / 7,200 lbf	20 / 24 / 27 / 32 kN	4,500 / 5,400 / 6,070 / 7,200 lbf	32 kN	7,200 lbf	20 / 24 / 27 / 32 kN	4,500 / 5,400 / 6,070 / 7,200 lbf	32 kN	7,200 lbf
Feeding speed @ 280 l/min (74 gpm)	6,4/5,4/4,9/4,1 m/s	21 / 17.7 / 16 / 13.5 ft/s	6,4 / 5,4 / 4,9 / 4,1 m/s	21 / 17.7 / 16 / 13.5 ft/s	6,4 / 5,4 / 4,9 / 4,1 m/s	21 / 17.7 / 16 / 13.5 ft/s	4,9 m/s	16 ft/s	6,4 / 5,4 / 4,9 / 4,1 m/s	21 / 17.7 / 16 / 13.5 ft/s	4,9 m/s	16 ft/s
DELIMBING	3 moving + 1 f	ixed delimbing knife	3 moving + 1 fi	xed delimbing knife	4 moving + 1 fi	xed delimbing knife	4 moving + 1 f	ixed delimbing knife	4 moving + 1 fixed delimbing knife		4 moving +	1 fixed delimbing knife
Delimbing diameter (tip-to-tip)	480 mm	18.9"	480 mm	18.9"	480 mm	18.9"	480 mm	18.9"	480 mm	18.9"	480 mm	18.9"
Front knives max opening	720 mm	28.3"	720 mm	28.3"	720 mm	28.3"	720 mm	28.3"	720 mm	28.3"	720 mm	28.3"
Rear knives max. opening	760 mm	30"	760 mm	30"	760 mm	30"	760 mm	30"	760 mm	30"	760 mm	30"
HYDRAULICS												
Max pressure level	280 bar	4,600 PSI	280 bar	4,600 PSI	280 bar	4,600 PSI	280 bar	4,600 PSI	280 bar	4,600 PSI	280 bar	4,600 PSI
Min. hydraulic output and engir	ne power											
520 cc	175 l/min, 82 kW	46 gpm, 112 hp	175 l/min, 82 kW	46 gpm, 112 hp	175 l/min, 82 kW	46 gpm, 112 hp	-	-	175 l/min, 82 kW	46 gpm, 112 hp	-	-
620 cc	200 l/min, 95 kW	53 gpm, 129 hp	200 l/min, 95 kW	53 gpm, 129 hp	200 l/min, 95 kW	53 gpm, 129 hp	-	-	200 l/min, 95 kW	53 gpm, 129 hp	-	-
680 cc	220 l/min, 100 kW	58 gpm, 136 hp	220 l/min, 100 kW	58 gpm, 136 hp	220 l/min, 100 kW	58 gpm, 136 hp	220 l/min, 100 kW	58 gpm, 136 hp	220 l/min, 100 kW	58 gpm, 136 hp	220 l/min, 100 kW	58 gpm, 136 hp
820 cc	260 l/min, 125 kW	69 gpm, 170 hp	260 l/min, 125 kW	69 gpm, 170 hp	260 l/min, 125 kW	69 gpm, 170 hp	-	-	260 l/min, 125 kW	260 l/min, 125 kW 69 gpm, 170 hp		-







## **KESLA SH-HARVESTER HEADS – LEADING** STROKE HARVESTER TECHNOLOGY

Kesla, the world's leading manufacturer of stroke harvesters, has brought advanced stroke harvester quality and technology to an entirely new level. The KESLA 20SH-II and 25SH-II stroke harvesters are largely based on the same components and technical solutions as the roller feed KESLA RH-II series harvester heads.

The guiding idea behind KESLA SH-II stroke harvester heads is to produce maximum delimbing force with a low base machine power without damage to the wood caused by feed rollers. KESLA stroke harvester heads are an overwhelming tool for efficient processing of large and branched trees with low-power excavators. The harvester heads are ideal for use, for example, for mountainous conditions when base machine size is limited, and for efficient but gentle harvesting of valuable tree species. The excellent geometry of the delimbing knives and feeding jaws of the SH-II harvester heads makes it easy to pick up both standing and pre-felled trees, so they are also ideal for processing wood from piles. Thanks to their easy grip, they can also be efficiently used to handle and load cut timber.

KESLA 20SH



#### DELIMBING FORCE

The hydraulic cylinder can produce tremendous delimbing force even with very modest hydraulic power of the base machine. The maximum feed speed is slower than with the roller feed, but the huge delimbing force allows even the most difficult branches to be delimbed at once without reversing, which makes it very efficient in handling branched trees even with a small base machine.

#### STRONG TILT

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The KESLA SH-II harvester head has a strong tilt with wide tilting angle, which allows efficient processing even on steep slopes. The wide and side profile straightforward tilt is a very strong construction with respect to its weight.

#### LIGHT BUT DURABLE STRUCTURE

The capsular construction of the stroke harvester's frame forms a very strong structure relative to its weight.

#### **EXCELLENT SERVICABILITY**

The simple and spacious design of the stroke harvester head makes its maintaining easy.

#### ACCURATE MEASURING AND CONTROL

KESLA SH-II head uses the same simple and very accurate measuring sensors as the RH-II head. The KESLA proLOG measurement and control system offers the SH-II series the same latest features and functions on the market as in the RH-II.

#### POWERFUL AND RELIABLE CHAIN SAW

KESLA-stroke harvester head uses the same simple and reliable saw such as the RH-II harvester head. Alternatively, there is the JPS R5500 saw device available.

#### **EXCLUSIVE PROSTROKE PARTIAL STROKE FUNCTION**

With the partial stroke function, the total length of the head during the feeding sequence can be minimized, which helps processing of crooked trees.







## **KESLA 205H-II & 255H-II**



KESLA 20SH-II is equipped with two moving delimbing knives. It is a lightweight, but highly efficient harvester head for hardwood and other heavy-branched trees. It is best suited for installation on 7-10 ton tracked excavators and other base machines with limited hydraulic power, such as skidders.

20SH-II mounted on a 7-ton excavator is capable to efficiently handle heavily branched trees up to 40 cm diameter. The optimal wood size for the head is up to 30 cm.



	205	H-II	255	H-11			
Weight starting from (w/o rotator)	540 kg	1,190 lbs	920 kg	2,070 lbs			
CHAIN SAW	Saw with manual or auto	omatic chain tensioning	Saw with manual or auto	omatic chain tensioning			
Max sawing diameter	540 mm	22"	670 mm	26"			
Guide bar / chain	22" / .404" (3/4" opt.)	22"/.404" (3/4" opt.)	25" / .404" (3/4" opt.)	22"/.404" (3/4" opt.)			
Saw motor	19 cc / 30 cc / 32 cc	0.61 / 1.16 1.95 cu.in	19 сс / 32 сс	1.16 / 1.95 cu.in			
FEEDING	Stroke feed with h	nydraulic cylinder	Stroke feed with hydraulic cylinder				
Max opening of feeding jaws	520 mm	20.5"	720 mm	28.5"			
Length of feed stroke	750 mm	30"	850 mm	64"			
Feeding force @ 210 bar (3,000 PSI)	41 kN	9,220 lbf	65kN	14,600 lbf			
Feeding speed @ 100 l/min (26 gpm)	~1 m/s	~3 ft/s	~1 m/s	~3 ft/s			
DELIMBING	2 + 1 fixed delimbing	knife + feeding jaws	4 + 1 fixed delimbing	knife + feeding jaws			
Delimbing diameter (tip-to-tip)	330 mm	13"	400 mm	15.7"			
Front knives max opening	480 mm	18.9"	600 mm	23.6"			
Middle knife max.opening	520 mm	20.3″	720 mm	28.3"			
HYDRAULICS							
Max pressure level	220 bar	3,000 PSI	220 bar	3,000 PSI			
Min. hydraulic output and engine power	100 l/min, 30 kW	26 gpm, 40 hp	120 l/min, 40 kW	32 gpm, 55 hp			

Kesla reserves the rights for technical changes. The products shown in the images may have additional accessories.

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**KESLA 25SH-II** is a stroke harvester head with four moving delimbing knives for handling heavy and very difficult branched wood. Delimbing knife/jaw in the middle of the head adds extra strength when carrying heavy trees and improves delimbing results.

25SH-II is suitable for installation on 10-15 ton excavators, which can handle trees up to 50 cm in diameter, even with very branched trees. The optimal size of the timber is up to 40 cm.



= optimum tree diameter A = delimbing diameter (tip-to-tip) B = maximum diameter (opening of feed rollers) C = maximum cutting diamete



#### **KESLA - NUMBER ONE FOR EXCAVATOR HARVESTERS**

Kesla has overwhelming expertise in excavator harvester applications under different conditions, from the Nordic coniferous forests, hardwood harvesting, Alpine forestry and Japanese mountainous conditions such as the southern eucalyptus plantations. Long experience and cooperation with number of excavator manufacturers and dealers has brought solid know-how to equip various base machines with a harvester head.



In addition to the broadest range of excavator harvester heads available on the market, Kesla offers comprehensive expertise for the easy installation of efficient excavator harvesters. Accessories include, for example, different hydraulic installation kits, measurement and control system installation packages, KESLA Xtender booms and safety equipment, as well as knowledgeable assistance in installation and maintenance. The advantage of highly productized solutions is not only easy installation, but also documentation that supports after-sales service and increases machine resale value.

#### **KESLA Xtender booms**

• KESLA Xtender boom can be used to extend the working radius of the excavator boom and to improve the boom geometry, and significantly improve the machine's ability to move in the terrain. In practice, this means more comfortable work and a significant increase in productivity. The Xtender boom also makes it easier to fold the excavator boom and harvester in the transport position and enables a very low transportation height. The four sizes of the Xtender booms cover all sizes of KESLA-harvester heads and are suitable for all sizes of excavator and can be fitted to almost any excavator using the adapter parts.

	Xten	der 8	Xten	der 10	Xtend	ler 15	Xtend	er 15H	Xtender 20 & 20-II			
A suitable KESLA harvester head	18RH-II	, 20RH-II	18RH-II, 20F	RH-II, 20SH-II	20RH-II, 25SH-II, 25SH-II (27RH-II)		20RH-II, 255	H-II, 25SH-II	27RH-II, 28RH-II, 29RH-II, 30RH-II			
Weight starting from (depending on fittings)	130 kg	287 lbs	230 kg	507 lbs	300 kg	660 lbs	450 kg	992 lbs	530 kg	1,168 lbs		
Base machine weight class	max 8 tn	max 17,600 lbs	max 10 tn	max 22,000 lbs	10 - 16 tn	22,000 - 35,000 lbs	10 - 16 tn	22,000 - 35,000 lbs	16 - 30 tn	35,000 - 66,000 lbs		
A	880 mm	34.6"	1 185 mm	46,7"	1 200 mm	47.2"	1 185 - 1 575 mm	46.7" - 62,0"	1 300 mm	51.2"		
В	1 180 mm	46.5"	1 195 mm	47"	1 380 mm	54.3"	1 430 mm	56.3"	1 740 mm	68.5"		
с	2 125 mm	83.7"	2 460 mm	93,9"	2 660 mm	104.7"	2 685 - 3 075 mm	105,7" - 121,1"	3 120 mm	122.8"		



Kesla reserves the rights for technical changes. The products shown in the images may have additional accessories.

## CONTROL SYSTEM WORLD-CLASS CONTROL SYSTEM AND MEASUREMENT ACCURACY

- 7" wide screen
  - Clear production reports, easy to save in the internal SD memory or USB memory stick in the form of a PDF file.
- Easy-to-use interface, controlled with six control buttons, standard USB keyboard or mouse.
- StandforD 2010-compliant (with limitations):
   Different wood species and site information from an APT-File
  - Saving production and calibration files to standard files (PRD, PRI, HPR)
- Thanks to comprehensive adjustment possibilities, resulting in a high output in all conditions. All adjustment values and settings can be downloaded and saved to a file.
- Fully localized user interface in most languages (incl. English, German, Russian, Spanish, Japanese).
- Great computing power enables precise control of the head functions:
- Fast and instantaneous operations
- Quick dimension search and cutting
- Higher productivity
- More accurate measuring





- The all-new innovative cutting optimization (length class prioritization):
  - Higher productivity
  - Higher value of the timber produced
- Optional equipment:
  - · Elegant and finished mounting kit for easy installation
  - Various joystick options (e.g., SureGrip and KESLAgrip)
  - Electronic measuring caliper for calibration
  - Printer

#### KESLA xLogger

In addition to the full StandorD 2010 compatibility:

- 12 " touch screen
- value and distribution bucking



Measuring systems are also available with an electronic calipers for easy and accurate calibration.



#### **EQUIP YOUR HARVESTER HEAD**

	KESLA proCON pressure control	KESLA saw with manual chain tensioner	KESLA saw with automatic chain tensioner	JPS R5500 saw with automatic chain tensioner	Electric KESLA proLUBE saw oiler	KESLA steel rollers	KESLA EUCA rollers	KESLA Multistemming rollers	KESLA XtraGRIP rollers	Rib rollers, rubber dampening	Rib rollers, steel	KESLA HydCON Length measuring	KESLA HydCON+ Length measuring	Length encoders in feed motors	Colour marking	Stump treatment system	Control valve for rotator, proportional	Control valve for rotator, on/off	Top saw	Find-end sensor	KESLA proAX Cutting knife	Connector block for hoses
KESLA 16RH	•	•	٠	-	-	•	-	-	-	-	-	-	-	-	•	•	•	•	-	-	•	-
KESLA 18RH-II		•	•	•	•	•	-	•	-	٠	٠	٠	-	-	٠	•	•	٠	-	-	-	•
KESLA 20RH-II	•	•	•	•	•	•	-	٠	-	•	•	•	-	-	•	•	•	•	•	-	•	•
KESLA 25RH-II	•	•	•	•	•	•	٠	٠	•	•	•	•	-	•	•	•	•	•	•	•	•	•
KESLA 27RH-II 2WD		•	-	•	•	•	٠	-	-	-	-	-	•	٠	•	•	•	-	-	•	-	•
KESLA28RH-II 2/3WD	•	•	-	•	•	•	•	-	-	-	-	-	•	•	•	•	•	-	-	•	-	•
KESLA 29RH-II	•	•	-	•	•	•	٠	-	-	-	-	-	•	•	•	•	•	-	-	٠	-	•
KESLA 29RH-II TS	•	•	-	•	•	•	٠	-	-	-	-	-	•	•	•	•	٠	-	•	٠	-	•
KESLA 30RH-II 2/3WD	•	•	-	•	•	•	٠	-	-	-	-	-	•	•	•	•	•	-	-	٠	-	•
KESLA 30RH-II TS 2/3WD	•	•	-	•	•	•	٠	-	-	-	-	-	•	•	•	•	•	-	•	•	-	•
KESLA 20SH-II	-	•	-	•	٠	-	-	-	-	-	-	-	-	-	-	-	•	٠		-	-	•
KESLA 25SH-II	-	•	-	•	٠	-	-	-	-	-	-	-	-	-	-	-	•	•	•	-	-	•

Standard equipment • Optional equipment Not available

#### **COLOR MARKING** EQUIPMENT

The color marking helps separation of timber assortments during transport. The two-color marking device enables three different color codes. The high-pressure nozzles placed on the rear delimbing knife draw distinctive color stripes.



#### **KESLA HYDCON AND HYDCON+**

In the HydCON system, the traditional measuring wheel spring is replaced by a double-acting hydraulic cylinder, which allows the measuring wheel to be automatically retracted during the work steps other than delimbing. The HydCON +system has a spring and a dual-acting hydraulic cylinder in parallel. The retracted measuring wheel, when gripping wood, is better protected from dents and makes it easier to place the head on the tree. Thanks to the adjustable hydraulic pressure, length measurement is more accurate.

#### **SPARE HOSE KIT**

A model-specific hose kit, which includes all the hoses of the basic-equipped head, the same high hose quality as used in the original factory assembly.

A carefully considered model-specific package includes parts to fix the most common minor operating malfunctions.

CONTRACTOR OF THE CONTRACTOR

**SPARE PARTS PACKAGES** 



**KESLA** steel rollers

FEED ROLLERS





KESLA multi stem-feed rollers



Ribbed rollers with rubber damping





Steel rib rollers



The optical sensor detects the base of the wood, allowing the log to return to the base of the log and reset the length measurement without cutting.



#### **KESLA PROAX**

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The unprecedented KESLA proAX cutting knife combines the advantages of saw and guillotine cutting in the same harvester head. When small-diameter wood is cut, it speeds up cutting and minimizes consumption of saw chains and bars. In addition to smaller chain and bar wear, savings are also made in fuel costs, as cutting with a cylinder takes up much less energy than a saw motor.

#### **TOOL SERIES**

The KESLA special tool kit, packed in a handy tool case, includes special tools that are tailor-made to handle and repair your harvester head.

The KESLA universal toolkit includes the general maintenance tools chosen by our technicians and required for maintenance and repair of harvester heads. High quality tools are packed in a handy tool case.





### **TOP SAW**

The top saw is a saw unit mounted on the front of the harvester head, which allows from top limbed and top damaged trees maximum utilization. The 20/25RH-II and 20/25SH-II harvester heads' top saw is retrofitting unit to mount on the top knife's place. In the 29/30RH-II, the harvester head's top saw is rigid, a fixed part of the grapple's front module.

#### **HOSE CONNECTION** BLOCK

moves the connection point of the boom hoses from the inside the head to the block located in the tilt frame under the rotator.

The hose bundle to the head is shorter and more compact.







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