



The multitalent in harvester technology

Kesla's extensive experience in forest technology has given it superior expertise as a developer of harvesters. Kesla's harvester family offers the market's most comprehensive line of both roller and stroke harvester heads. The product family also includes excavator harvester packages as well as special harvesters for eucalyptus handling.

When developing the harvester head range, special attention has been paid on requirements of biomass harvesting. With optional accessories the Kesla harvester heads can be equipped for effective biomass logging in addition to conventional timber harvesting, without compromises.

Kesla is a pioneer in the outfitting of excavators for harvester use. Kesla has an in-depth knowledge of almost all the excavator brands and their special requirements. When it comes to stroke harvesters, is Kesla is also the world's market and technology leader. An extensive selection of cranes designed specifically for harvesting use supplements the range of harvester products. As a testimony to Kesla's quality, several harvester manufacturers around the world have chosen KESLA as their original equipment.

The design and manufacturing of Kesla's forest machines complies with all applicable international quality criteria. All products pass through a rigorous quality assurance program as well as practical performance and safety tests; the principles of sustainable development guide every aspect of Kesla's operations.

COMPREHENSIVE SOLUTIONS:

- cut-to-length thinning and final felling
- gentle processing of valuable special timber
- harvesting of hardwoods and trees with robust branches
- cutting and debarking of eucalyptus trees
- ▶ processing as a part of a tree-length harvesting chain
- effective biomass harvesting
- cranes for harvesters and forwarders
- harvester accessories for excavators

Superior durability and performance

Besides bringing power and fluency to delimbing, the stepless adjustable feeding speed results in unprecedently accurate feed to the correct cutting length. The computer controlled pressure adjustment is based on tree diameter ensuring optimal clamping force throughout the feeding; the feed rollers' grip and delimbing power is maximized without wasting energy on unnecessary clamping. For RH and RHS models.

UNIQUE GEOMETRY OF FEEDING ROLLERS Low friction and excellent traction of feeding rollers in all working conditions saves energy and maximizes performance.

The computer-controlled HydCON length measuring wheel follows the timber surface precisely in all conditions which significantly improves measuring accuracy. When gripping on a new tree the measuring wheel is retracted, substantially facilitating and speeding up picking of trees. For 18, 20, 25, 28 and 30 RH/ RHS models.

AUTOMATIC CHAIN TIGHTENER RH and RHS models.

STUMP TREATMENT DEVICE RH and RHS models.

EXCELLENT SERVICEABILITY

Special attention has been paid for ease and convenience of daily maintenance. Thanks to the spacious structure of the Kesla heads, for example lubrication and change of hoses are easy to do.

EQUIPPED TO MEET THE CUSTOMER'S NEEDS The Kesla heads are always equipped according to the needs of customer. With the wide range of optional equipment and accessories there is always a Kesla head that perfectly fits to you.

Kesla harvesters have been designed to withstand extreme conditions. The market's best materials and components, combined with high quality and superior design, ensure the harvesters' reliability and ease of servicing. The standard equipment of Kesla harvesters have been carefully thought out. For example the proportional feed control that is already standard in all RH and RHS models makes the delimbing efficient and fluent, and feeding stops precisely to the desired cutting length. The ProCon and HydCon features, as well as a broad range of other additional accessories, can be added to further enhance the harvesters' efficiency and suitability to the customer's needs and working conditions. The range of accessories also includes a comprehensive range of

rotators as well as feed rollers designed for different conditions.

Diameter measuring carried out with front knives is accurate in all working conditions. Sensors of the system are well protected against twigs, snow, ice etc.

The EucaPro has been developed specifically for the efficient cutting and debarking of eucalyptus trees. The accessory package includes feeding rollers and delimbing knives specifically designed for eucalyptus tree, as well as special software for measuring computer. For 25, 28 and 30 RH/ RHS models.

MULTI-STEM PROCESSING

Effective multi-stem functions carried out with intelligent control logics, without expensive and heavy hardware.

TOPPING SAW For 20, 25, 28 and 30RH/RHS models.

COLOR MARKING DEVICE RH and RHS models.

The most ingenious double cutting system at the market combines maintenance-free cutting knife for small trees and unbeatable performance of chain saw for larger trees. For 16, 20 and 25 RH/RHS models.

WIDE RANGE OF CONTROL AND MEASURING SYSTEMS

The Kesla harvester heads are compatible with the common control- and measuring systems at the market.

Kesla 16RH is the market's lightest professional harvester head equipped with four delimbing knives and multi-stem functions. It's specially designed for integrated harvesting of timber and biomass. Professional multi-stem functions and

the unique ProAX-cutting systems are unequalled features in this size- and weight class. The 16RH and 16RHS are real powerhouses for thinning, suited to 6-10 tons wheeled harvesters and tractors.

TECHNICAL SPEC.	16RH		16RHS		
Width, head open	1 040 mm	41″	1 040 mm	41″	
Width, head closed	830 mm	32″	830 mm	32″	
Length	1 110 mm	44 1/2″	1 110 mm	44 1/2"	
Height (without rotator)	1 110 mm	43″	1 110 mm	43″	
Weight (without rotator)	445 kg	980 lbs	445 kg	980 lbs	
Chain saw					
Max cutting diameter	450 mm	18 ″	450 mm	18 ″	
Guide bar length	18 ″	18 ″	18 ″	18 ″	
Saw motor displacement	19 (10) cc	19 (10) cc	10 cc	10 cc	
Feeding	2 rollers	2 rollers	2 rollers	2 rollers	
Max. opening of rollers	350 mm	13.7″	350 mm	13.7″	
Feed force	16 kN	3,600 lbs	13 kN	3,600 lbs	
Delimbing					
Knives	4 moving+ 1 fixed	4 moving+ 1 fixed	4 moving+ 1 fixed	4 moving+ 1 fixed	
Diameter tip-to-tip	330 mm	13″	330 mm	13″	
Front knives max. opening	480 mm	19″	480 mm	19″	
Rear knives max. opening	500 mm	20″	500 mm	20″	
Hydraulic requirements					
Operating pressure	230-250 bar	3.335 – 3.625 PSI	230-250 bar	3.335 – 3.625 PSI	
Flow required	150-170 I/min	40 – 45 gpm (US)	120-150 I/min	32 – 40 gpm (US)	
Power required	65-80 kW	87-107 hp	50-65 kW	67-87 hp	
Crane recommendation	Kesla 671H parallel crane				

The values provided by the manufacturer are indicative. Kesla reserves the right to make changes. The harvesters shown may have additional accessories.

The Kesla 18RH and 18RHS are genuine powerhouses when it come to thinning. The feeding and sawing forces are exceptionally high compared to the head's weight. 18RH and 18RHS are at their best in thinning where the trees' average diameter is less than 25 cm. The head's maximum opening is 40 cm.

The head's compact construction also enables it to process crooked stems effectively. Additional accessories include the HydCon measuring roller, color marking device, automatic chain tightener and stump treatment device. The Kesla 18RH and 18RHS are best suited to 7-10 ton wheeled harvesters.

TECHNICAL SPEC.	18RH		18RHS		
Width, head open	1 130 mm	44 1/2″	1 130 mm	44 1/2″	
Width, head closed	870 mm	34 1/4"	870 mm	34 1/4"	
Length	1 140 mm	45″	1 140 mm	45″	
Height (without rotator)	1 110 mm	43 1/4"	1 110 mm	43 1/4"	
Weight (without rotator)	450 kg	992 lbs	450 kg	992 lbs	
Chain saw					
Max cutting diameter	450 mm	18 ″	450 mm	18 ″	
Guide bar length	18 ″	18 ″	18 ″	18 ″	
Saw motor displacement	19 cc	19 cc	10 (19) cc	10 (19) cc	
Feeding	2 rollers	2 rollers	2 rollers	2 rollers	
Max. opening of rollers	400 mm	16″	400 mm	16″	
Feed force	19 kN	4,270 lbs	15,1 kN	3,400 lbs	
Delimbing					
Knives	2 moving+ 1 fixed	2 moving+ 1 fixed	2 moving+ 1 fixed	2 moving+ 1 fixed	
Diameter tip-to-tip	330 mm	13″	330 mm	13″	
Front knives max. opening	480 mm	19″	480 mm	19″	
Rear knives max. opening	-	-	-	-	
Hydraulic requirements					
Operating pressure	210-240 bar	3,045- 3,480 PSI	210-240 bar	3,045- 3,480 PSI	
Flow required	170-200 I/min	45-53 gpm (US)	125-150 l/min	33-40 gpm (US)	
Power required	60-80 kW	80-107 hp	48-60 kW	65-80 hp	
Crane recommendation	Kesla 671H parallel crane				

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The Kesla 20RH-II and 20RHS-II are fast and agile heads for thinning and final fellings where the trees' average diameter is less than 30 cm. The head's maximum opening is 45 cm. Considering their size class, these lightweight yet sturdily constructed harvester heads provide exceptionally powerful feeding and sawing forces. Thanks to the 4 delimbing knives, the picking properties and delimbing quality are excellent. Additional accessories include the procon and hydcon

TECHNICAL SPEC

features as well as color marking device, automatic chain tightener and stump treatment device. The Kesla 20RH-II and 20RHS-II heads can be equipped also for productive biomass harvesting with the unique kesla proax-cutting system and multi-stem functions.

The Kesla 20RH-II and 20RHS-II suit 8-13 ton wheeled harvesters and excavators.

The Kesla 25RH-II and 25RHS-II are truly versatile harvester heads for thinning and final felling where the trees' average diameters are less than 40 cm. The head's maximum opening is 58 cm. The excellent balance, combined with the geometry of the rollers and knives, facilitates and speeds up the picking of trees either standing or laying on the ground, either vertically or from bundles lying on the ground. The head is also well suited to the processing on landing. Additional accessories

KESLAROW

The most ingenious biomass cutting equipment for harvester heads!

- one head for cutting of biomass and saw logs, without any compromise!
- ▶ the unbeatable power of chain saw when cutting large timber – the durability of knife when cutting small trees, bushes and tree tops.
- cut either with saw or knife it's always up to the operator's choice.
- simple construction only 25 kg extra weight.
- ▶ the features of the chain saw remain no effect to the height of the stumps or cutting capacity.
- ▶ max. Cutting diameter of the knife 8 cm (depending of hardness of the wood etc.)
- available to kesla 16RH/16RHS, 20RH-II/RHS-II and 25RH-II/RHS-II heads

Width, head open	1 150 mm	45 1/3″	1 150 mm	45 1/3″	
Width, head closed	900 mm	35 1/2	900 mm	35 1/2	
Length	1 290 mm	54″	1 290 mm	54″	
Height (without rotator)	1 220 mm	48"	1 220 mm	48"	
Weight (without rotator)	610 kg	1,345 lbs	610 kg	1,345 lbs	
Chain saw					
Max cutting diameter	520 mm	35 1/2"	520 mm	35 1/2"	
Guide bar length	20 ″	20 ″	20 ″	20 ″	
Saw motor displacement	19 cc	19 cc	19 cc	19 cc	
Feeding	2 rollers synch.	2 rollers synch.	2 rollers synch.	2 rollers synch.	
Max. opening of rollers	450 mm	18″	450 mm	18″	
Feed force	19 kN	4,270 lbs	15,1 kN	3,400 lbs	
Delimbing					
Knives	4 moving+ 1 fixed	4 moving+ 1 fixed	4 moving+ 1 fixed	4 moving+ 1 fixed	
Diameter tip-to-tip	330 mm	13″	330 mm	13″	
Front knives max. opening	480 mm	9"	480 mm	9"	
Rear knives max. opening	520 mm	20″	520 mm	20″	
Hydraulic requirements					
Operating pressure	210-240 bar	3,045- 3,480 psi	210-240 bar	3,045- 3,480 psi	
Flow required	170-200 l/min	45-53 gpm (US)	135-160 l/min	36-42 gpm (US)	
Power required	60-80 kW	80-107 hp	50-65 kW	67-87 hp	
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include the ProCon, HydCon and EucaPro features as well as color marking device, automatic chain tightener as well as stump treatment device. The 25RH-II and 25RHS-II can be equipped also for productive biomass harvesting with the unique Kesla ProAX-cutting system and multi-stem functions.

Kesla 25RH-II and 25RHS-II are best suited to 12-20 ton base machines. The 25RHS-II has been designed especially for use with excavators.

TECHNICAL SPEC.	25RH-II		25RHS-II	
Width, head open	1 350 mm	53″	1 350 mm	53″
Width, head closed	980 mm	38 1/2"	980 mm	38 1/2"
Length	1 400 mm	55″	1 400 mm	55″
Height (without rotator)	1 390 mm	54 3/4"	1 390 mm	54 3/4"
Weight (without rotator)	840 kg	1,850 lbs	840 kg	1,850 lbs
Chain saw				
Max cutting diameter	670 mm	26 1/4″	670 mm	26 1/4″
Guide bar length	25 ″	25 ″	22 (25) ″	22 (25) ″
Saw motor displacement	19 (30) cc	19 (30) cc	19 cc	19 cc
Feeding	2 rollers synch.	2 rollers synch.	2 rollers synch.	2 rollers synch.
Max. opening of rollers	580 mm	23″	580 mm	23″
Feed force	24 kN	5,400 lbs	20 kN	4,500 lbs
Delimbing				
Knives	4 moving+ 1 fixed	4 moving+ 1 fixed	4 moving+ 1 fixed	4 moving+ 1 fixed
Diameter tip-to-tip	390 mm	15 1/2″	390 mm	15 1/2″
Front knives max. opening	600 mm	23 3/4"	600 mm	23 3/4"
Rear knives max. opening	680 mm	26 3/4″	680 mm	26 3/4″
Hydraulic requirements				
Operating pressure	210-240 bar	3,045- 3,480 psi	210-240 bar	3,045- 3,480 psi
Flow required	200-250 l/ min	53-66 gpm (US)	170-210 l/ min	45-55 gpm (US)
Power required	75-100 kW	100-135 hp	60-85 kW	80-115 hp
Crane recommendation	KESLA	13h and 16h-	series parallel	cranes

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Kesla 28RH is based on experiences of 30RH, well-known as strong and reliable head for most demanding conditions. The 28RH and 30RH heads are sturdily constructed for heavy-duty final felling where trees' average diameter can be as large as 50 cm. These heads suit perfectly also to processing on landing as well as debarking of eucalyptus. The mechanically synchronized 4-motor drive of the 30RH and 30RHS provides plenty of power for processing of even the most robustly branched trees. The 2-motor driven

28RH and 28RHS are equipped with totally new hydraulic anti-slip system, providing feeding power and speed at incredible operating efficiency and fuel economy. The heads can be equipped with ProCon-hydraulics, HydCon-measuring wheel and EucaPro-package as well as color marking, stump treatment and automatic chain tightener among others. The 30RH and 30RHS are made for 18 -25 tons excavators, while the lighter 28RH and 28RHS fit to heavy wheeled harvesters and 17 – 22 tons excavators.

TECHNICAL SPEC.	28RH		28RHS		30RH		30RHS	
Width, head open	1 725 mm	68″						
Width, head closed	1 130 mm	44½″						
Length	1 635 mm	64½″						
Height (without rotator)	1 620 mm	64″						
Weight (without rotator)	1 280 kg	2,820 lbs	1 280 kg	2,820 lbs	1 400 kg	3,086 lbs	1 400 kg	3,086 lbs
Chain saw								
Max cutting diameter	670 (750) mm	26" (29½")						
Guide bar length	25 (28)"	25 (28)"	25 (28)"	25 (28)"	25 (28)"	25 (28)"	25 (28)"	25 (28)"
Saw motor displacement	19 (30) cc							
Feeding	2 rollers synch.	2 rollers synch.	2 rollers synch.	2 rollers synch.	3 rollers synch.	3 rollers synch.	3 rollers synch.	3 rollers synch.
Max. opening of rollers	700 mm	27½″						
Feed force	30 kN	6,750 lbs	25 kN	5,620 lbs	30 kN	6,750 lbs	27 kN	6,070 lbs
Delimbing								
Knives	4 moving+ 1 fixed							
Diameter tip-to-tip	480 mm	19″						
Front knives max. opening	720 mm	28½″						
Rear knives max. opening	760 mm	30″						
Hydraulic requirements								
Operating pressure	240-270 bar	3,480 – 3,916 PSI						
Flow required	250-300 l/min	66-80 gpm (US)	220-270 l/min	58-70 gpm (US)	250-300 l/min	66-80 gpm (US)	220-270 l/min	58-70 gpm (US)
Power required	120-150 kW	160-200 hp	100-130 kW	135-175 hp	120-150 kW	160-200 hp	100-130 kW	135-175 hp

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Proportional feed control	•	•	•	•	•	•	-	-
KESLA proCON pressure control	0	0	0	0	0	0	-	-
KESLA hydCON length measuring roller	-	0	0	0	0	0	-	-
Color marking equipment	0	0	0	0	0	0	-	-
Stump treatment equipment	0	0	0	0	0	0	-	-
Automatic chain tightener	0	0	0	0	0	0	-	-
Control valve for rotator, on/off	0	0	0	0	0	0	0	0
Control valve for rotator, proportional	0	0	0	0	0	0	-	-
KESLA eucaPRO kit	-	-	-	0	0	-	-	-
KESLA proAX cutting equipment	0	-	0	0	-	-	-	-
Multi-stem processing function *	•	•	•	•	•	•	-	-
KESLA spike feed rollers	•	•	•	•	•	•	-	-
KESLA multistem-feed rollers	0	-	0	0	-	-	-	-
KESLA softGRIP feed rollers	0	0	0	0	-	-	-	-
Rubber-dampened feed rollers	-	0	0	0	0	0	-	-
KESLA proSTROKE feeding system	-	-	-	-	-	-	•	٠
KESLA topSAW	-	-	0	0	0	0	-	-

* software-based, depending on the features of measuring & control system

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• = Standard equipment O = Optional equipment - = Not available

KESLA STROKE HARVESTERS • 205H • 255H

Leading stroke harvester technology

As the leader of stroke harvester market, Kesla has brought the technology of stroke heads to totally new level. The Kesla SH-stroke heads include lots of features and components previous-ly known from the roller heads. For example the control- and Measuring system are similar.

The stroke technology results in substantial delimbing force achieved with minimum hydraulic requirements. Kesla stroke harvesters particularly suit excavator bases. At their best they supply the raw delimbing power required for the harvesting of trees with robust branches; on the other hand are also able to process valuable special trees gently. Thanks to the huge delimbing power reversing feed is never needed, making actual delimbing speed unbeatable when processing robustly branched trees.

The unique prostroke partial stroke feed facilitates the delimbing of even crooked trees. Thanks to their excellent features for picking of trees and very wide movement angle of the tilt, the Kesla stroke harvesters excellently suit the cut-to-length harvesting of standing trees as well as the processing on landing as a part of tree length logging chain.

The Kesla 20SH stroke harvester is particularly well suited to the effective processing of robustly branched trees, either standing or in piles. Processing of valuable special trees without damaging timber surface is also easy with this harvester head. Thanks to the prostroke partial stroke function, even the delimbing of crooked trees is efficient. The optimum diameter of trees is 25 cm. The Kesla 20SH suits 7-13 ton base machines.

The Kesla 25SH stroke harvester is at its best when processing robustly branched trees – standing or in piles – requiring substantial delimbing force. The stroke technology ensures that the tree's surface is not damaged, facilitating the gentle handling of valuable timber. The 25SH suits cut-to-length harvesting of standing trees as well as the processing on landing. The optimum tree diameter is 40 cm.

The unique, combined middle feeding jaws and delimbing knives give even more force to handle heavy trees and improve delimbing quality. Thanks to the prostroke partial stroke function, even delimbing of crooked trees is efficient. The Kesla 25SH suits 10-15 ton base machines.

	TECHNICAL SPEC.	20	SH	25SH			
	Width, head open	950 mm	37½″	1 030 mm	401⁄2″		
	Width, head closed	855 mm	33½″	1015 mm	40″		
	Length	1 400- 2 150 mm	55-84½″	1 570-2 420 mm	62"-95"		
	Height (without rotator)	1275 mm	50″	1 450 mm	57″		
	Weight (without rotator)	520 kg	1,150 lbs	880 kg	1,940 lbs		
	Chain saw						
	Max cutting diameter	450 mm	18 ″	670 mm	26½″		
	Guide bar length	18″	18 ″	25″	25 ″		
	Saw motor displacement	10 cc	10 cc	19 cc	19 cc		
	Feeding	stroke feed	stroke feed	stroke feed	stroke feed		
	Max. opening of rollers	-	-	-	-		
	Feed force	41 kN	9,220 lbs	65 kN	14,600 lbs		
	Stroke of delimbing cylinder	750 mm	29½″	850 mm	33″		
ĺ	Delimbing						
	Knives	2 moving + 1 fixed	2 moving + 1 fixed	2 moving + 2 combined knives/feeding jaws + 1 fixed	2 moving + 2 combined knives/feeding jaws + 1 fixed		
	Diameter tip-to-tip	330 mm	13″	400 mm	15½″		
	Front knives max. opening	480 mm	19″	600 mm	231⁄2″		
	Rear knives max. opening	520 mm	20½″	720 mm	281⁄2″		
	Hydraulic requirements						
	Operating pressure	175-220 bar	2,540 – 3,190 PSI	175-220 bar	2,540 – 3,190 PSI		
	Flow required	70-120 I/min	18 – 32 gpm (US)	120-180 l /min	32 – 48 gpm (US)		
	Power required	20-44 kW	27-60 hp	40-75 kW	53-100 hp		

The values provided by the manufacturer are indicative. Kesla reserves the right to make changes. The harvesters shown may have additional accessories.

KESLA HARVESTER EQUIPMENT FOR EXCAVATORS

Besides its extensive harvester head range suiting almost all excavator models, Kesla also provides comprehensive installation services and extensive accessory packages. Options selected by customers may include, for example, an installation kit for hydraulics, measuring and control system, Xtender boom and a full range of safety equipment.

Supplied with the measuring system is a kit that makes its installation quick and easy; sensitive components are protected, and the finished result is stylish and userfriendly.

The Kesla Xtender boom expands the excavator's working range, improves the boom's geometry and facilitates movement in the terrain, resulting in a dramatic increase in productivity. Besides making it easy to set the transport position as well as extremely low-slung transport heights, the Xtender boom can be customized to fit almost any excavator.

The Kesla Xtender provides additional assistance in difficult terrain.

TECHNICAL SPEC.	Xtender 10	Xtender 15H	Xtender 20	
Total length	2 660 mm	2 615 mm	3 120 mm	
(telescope in)	105″	103″	123″	
Outreach	1 300 mm	1 200-2 650 mm	1 300 mm	
	51″	47″-104″	51″	
Length of telescope	-	1 450 mm 57″	-	
Weight	230 kg	450 kg	530 kg	
(depending on fittings)	507 lbs	992 lbs	1168 lbs	
Compatible KESLA	18RHS,	20RHS-II,	28RHS,	
harvester heads	20SH	25RHS-II, 25SH	30RHS	
Recommended weight	max 10 t	10 – 16 t	16 – 25 t	
of excavator	max 22 000 lbs	22 000-35 000 lbs	35 000-55 000 lbs	

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