NISULA

THE FUTURE OF EFFICIENT LOGGING

ENERGY WOOD HEADS

NISULA

NISULA E SERIES ENERGY WOOD HEADS

”Why didn’t I buy this head earlier? is a frequent comment from our customers after the replacement of a normal grapple to a Nisula energy wood head. Nisula brought its first 150E Energy Wood Head onto the market in 2005. This energy wood head model has raised great interest among our customers and even among other manufactures. The series covers four different size categories for different customer needs. The E-Series energy wood heads are easy to install in the place of a normal timber grapple. 105E, 155E, 175E and 205E do not require electricity or additional hydraulics.

HARDOX® IN MY BODY

105E | 155E | 175E | 205E

E-SERIES ENERGY WOOD HEADS: OPERATING PRINCIPLE

With the cutting blade attached, small trees can be felled and bundled on the ground or felled and loaded directly on the trailer.
With the cutting blade detached and the tilt mechanically locked, the head can be used like a normal timber grapple to load energy wood or other timber grades.

DETAILS THAT IMPROVE DURABILITY, USABILITY AND RELIABILITY

All the structures of the heads are made of high strength steel. The structures are welded by using special filler metals designed for high strength steel. The shaft sleeves are made of tempered steel and the axles of surface hardened tempered steel.

105E

NISULA 105E

NISULA 105E ENERGY WOOD HEAD FOR SMALL CRANES

Simple structure and a new kind of mechanical tilt (pat.pend.) together with high quality materials ensure a lightweight but durable structure. This allows machines with even small cranes to be used for energy wood harvesting.

USES

- Energy wood harvesting
- Clearing bushes and trees from the edges of fields and forest truck roads
- Maintaining forest parks, felling trees in gardens

SUITABLE BASE MACHINES

- Agricultural tractor with suitable crane
- ATV
- Mini excavator

TECHNICAL INFORMATION

Weight, kg	52	115lb
Grapple opening, mm	500	20"
Width, mm (open/closed)	640/460	26/18"
Height, mm (open/closed)	690/480	27/19"
Height in felling position, mm	270	11"
Single cut Ø, mm (1 tree)	90-120	4"- 5"
Required oil pressure, bar	150-210	2176-3046psi
Required oil flow, l/min	8+	2+ gal/min

155E

NISULA 155E

LIGHT ENERGY WOOD HEAD

The new 155E is an updated model of the popular Nisula 150E. In 155E, the shape and blade of the grapple arms have been improved to achieve better cutting efficiency. The colouring of the head is also new. The adjustable block makes it easy to adjust the tilt for various pressure levels. 155E is a cost-effective choice for energy wood harvesting.

The spike-shaped grapple arms ensure that all the grabbed trees get cut by the blade and are not pulled out of the ground. When loading, the head lifts the wood bunches without grabbing dirt or stones, and small branches do not get stuck in the head. Thus, the 155E is an excellent choice for feeding a chipper.

USES

- Energy wood harvesting
- Clearing bushes and trees from the edges of fields and forest truck roads
- Maintaining forest parks, felling trees in gardens

SUITABLE BASE MACHINES

- Agricultural tractor with suitable crane
- Mini excavator

TECHNICAL INFORMATION

Weight, kg	115	254lb
Grapple opening, mm	650	26"
Width, mm (open/closed)	840/600	33/24"
Height, mm (open/closed)	900/580	35/23"
Height in felling position, mm	380	15"
Single cut Ø, mm (1 tree)	120-150	5"- 6"
Required oil pressure, bar	175-210	2538-3046psi
Required oil flow, l/min	25+	7+ gal/min

175E

NISULA 175E

ENERGY WOOD HEAD WITH TRADITIONAL STYLE GRAPPLE

175E is equipped with a traditional style grapple to improve the head's loading capabilities. The tip-plated grapple arms direct all the grabbed trees to the blade, which cuts tree groups and bushes fast and efficiently. The tilting action is easily adjustable to different pressure levels by means of an adjustment valve.

in 175EV, the tilt direction can be turned by means of a tilt direction valve, allowing the use of the head for tasks like erecting electricity and other columns. 175EV increases the number of ways harvester heads can be utilised.

USES

- Energy wood harvesting
- Clearing bushes and trees from the edges of fields and forest truck roads
- Clearing thinning sites
- Maintaining forest parks, felling trees in gardens
- Clearing the edges of power lines and removing dangerous trees
- Erection of electricity and other columns (175E)

SUITABLE BASE MACHINES

- Agricultural tractor
- Excavator, 4-7 t
- Truck equipped with a crane
- Small forwarders

TECHNICAL INFORMATION

Weight, kg	183	403lb
Grapple opening, mm	765	30"
Width, mm (open/closed)	980/680	39"/27"
Height, mm (open/closed)	1100/760	43"/30"
Height in felling position, mm	520	20,5"
Single cut Ø, mm (1 tree)	150-180	6"- 7"
Required oil pressure, bar	175-210	2538-3046psi
Required oil flow, l/min	25+	7+ gal/min

205E

NISULA 205E
HEAVY ENERGY WOOD HEAD

With 205E, you can equip e.g. a forwarder for energy wood harvesting easily without major installations or modifications. Just attach the head in the place of the normal grapple, and the machine is ready to harvest energy wood.

The spike-shaped grapple arms ensure that all the grabbed trees get cut by the blade and are not pulled out of the ground. When loading, the head efficiently grabs the wood bunches, and the high pressing power ensures effortless handling of even big bunches. Thanks to the grapple design, the head does not easily grab dirt or stones, nor do branches get stuck in the grapple.

USES

- Energy wood harvesting
- Clearing bushes and trees from the edges of fields and forest truck roads
- Clearing thinning sites
- Clearing the edges of power lines and removing dangerous trees
- Maintaining forest parks, felling trees in gardens

SUITABLE BASE MACHINES

- Forwarder
- Heavy agricultural tractor
- Excavator 6-12 t

TECHNICAL INFORMATION

Weight, kg	295	650lb
Grapple opening, mm	860	34"
Width, mm (open/closed)	1120/770	44"/30"
Height, mm (open/closed)	1220/820	48"/32,3"
Height in felling position, mm	500	20"
Single cut Ø, mm (1 tree)	200+	8"
Required oil pressure, bar	180-250	2611-3626psi
Required oil flow, l/min	45+	12+ gal/min

285E+

285E

NISULA 285E & 285E+

ACCUMULATING ENERGY WOOD HEAD FOR PROFESSIONAL ENERGY WOOD HARVESTING

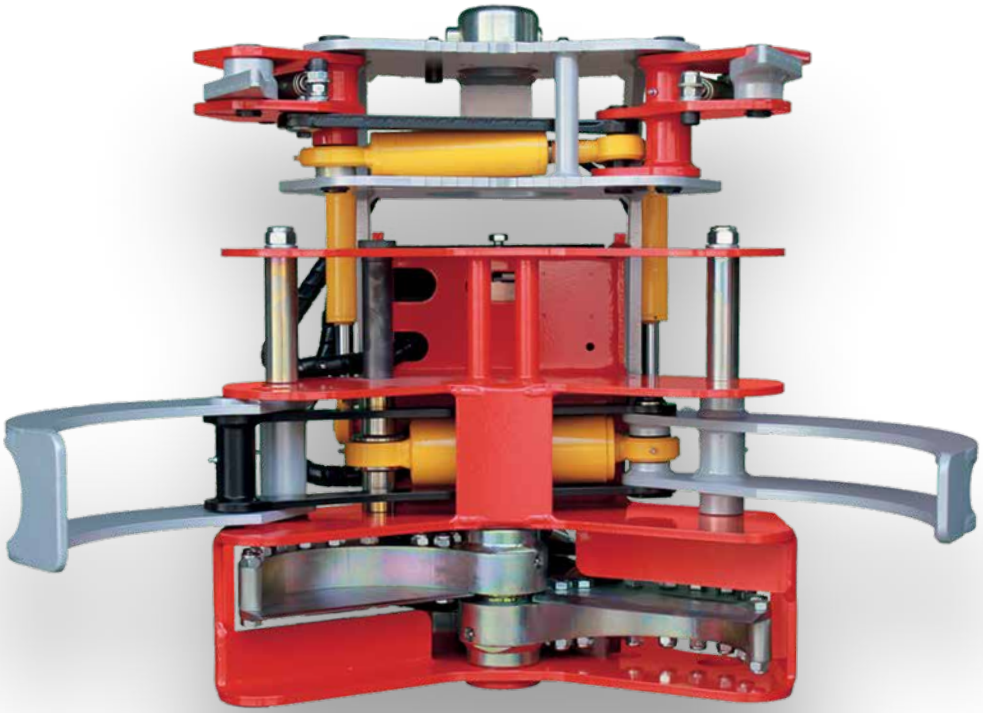
Accumulating energy wood heads are designed for professional small wood harvesting: easy felling, bunching and loading. Depending on the base machine, the whole small wood harvesting process (standing tree to roadside) can be performed without changing the head. Thanks to the structure of the grapple, tree stems and bushes are easy to grip and take to the blades for cutting.

USES

- Energy wood harvesting
- Clearing bushes and trees from the edges of fields and forest truck roads
- Clearing the edges of power lines
- Maintaining forest parks, felling trees in gardens

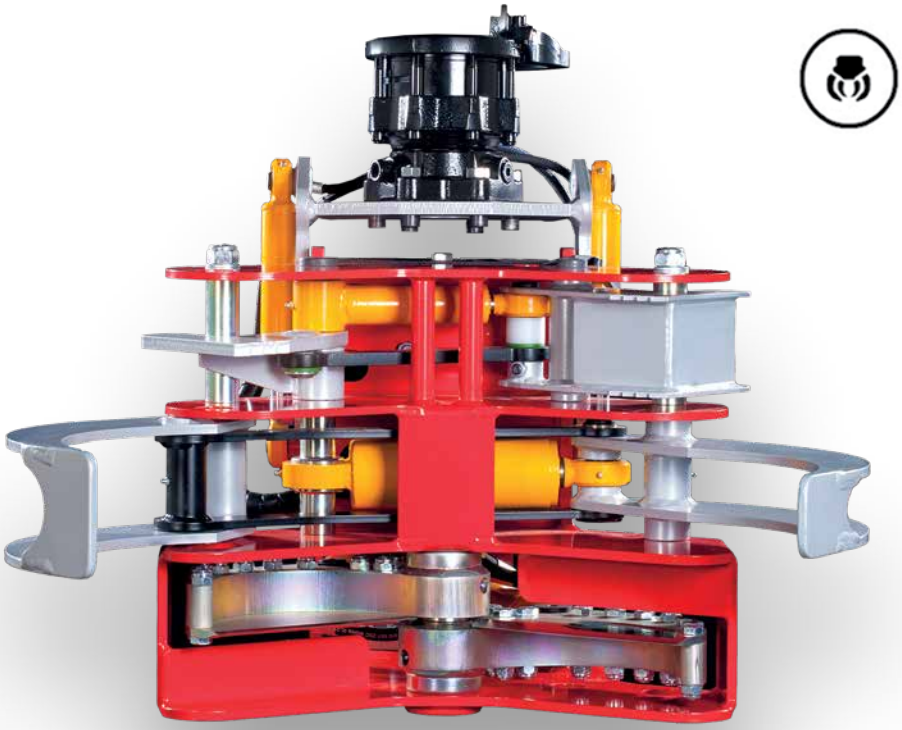
SUITABLE BASE MACHINES

- Forwarders
- Timber loaders mounted with sleeve adapters on an agricultural tractor
- Light harvesters
- Excavators from 7 t up to 12 t



NISULA 285E+

- 285E+ is equipped with an accumulating tilt system, which improves the head's collecting capacity and the handling of bunches.
- ¾" pressure and tanki line is needeed and hose for cable protection



NISULA 285E

- Lighter model without a separate accumulating gripper.
- This head is the right choice for smaller cranes in which the head should weigh as little as possible
- ¾" pressure and tanki line is needeed and hose for cable protection

TECHNICAL INFORMATION

	285E		285E+	
Weight, kg	290	639lb	330	728lb
Grapple opening, mm	930	37"	930	37"
Cut area Ø mm	280	11"	280	11"
Single cut Ø, mm (1 tree)	180-240	7-9,4"	180-240	7,1"
Required oil pressure, bar	180-210	2611-3046psi	180-210	2611-3046psi
Required oil flow, l/min	80-150	21-40 gal/min	80-150	21-40 gal/min

CONTROL SYSTEMS

NCU1
NCU1 is a reliable and easy-to-use unit which automatically controls the hydraulics of the base machine, as well as the harvester head and its functions.

NCU3 ja NCU3X
NCU3 or NCU3X control system when using the harvester head also at the same base machine.

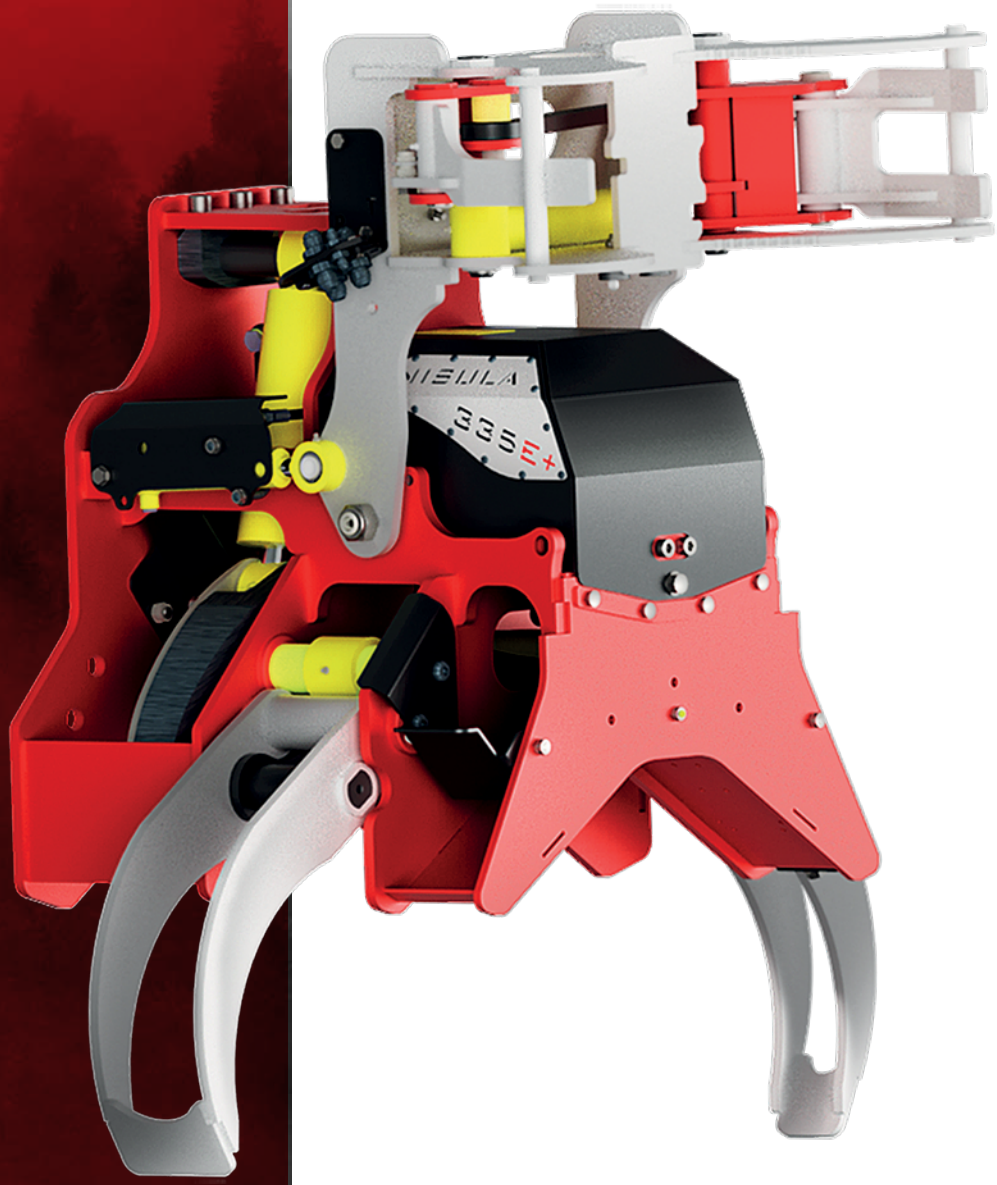
ACCESSORIES

- Stump treatment facility
- Extra valves for the rotator and grapple (propo or on/off)

335E+

NISULA 335E+

EFFICIENCY IN ENERGY WOOD LOGGING



The new Nisula 335E+ accumulating energy wood head is equipped with an all-new Nisula BioArms accumulating system. Thanks to the ingenious design of the motion path of the new accumulating system's grapples, it is easy to grip energy wood and bushes. The accumulation and bundle management features are state-of-the-art. With is superior loading features and blade cutting, the new 335E+ is suitable for forwarders. The 335E+ can also be mounted in harvesters and excavators. This grapple is the right choice if the aim is maximum productivity.

USES

- Harvesting energy wood
- Cleaning up edges of fields and forest roads
- Cleaning up edges of power lines
- Tending seedling stands and removing garden trees

SUITABLE BASE MACHINES

- Forwarders, 14+ t
- Harvesters, 16+ t
- Excavators, 12 t–18 t

TECHNICAL INFORMATION

Weight, kg	650	1433lb
Grapple arm opening, mm	1200	47"
Cutting diameter, mm	250-320	9-10"
Operating pressure, bar	210-230	3046-335psi
Required oil flow, l/min	150-200	40-53gal/min

CONTROL SYSTEM OPTIONS

NCU1
is a reliable and easy-to-use unit which automatically controls the hydraulics of the base machine, as well as the harvester head and its functions.

Nisula NCU3, NCU3Lite, NCU3i and NCU3X
when using Nisula harvester head in the same machine, eliminating the need for a separate control system for the energy wood head.

Suitable for installation in the most common control systems

ACCESSORIES

- Stump treatment facility
- Grapple arm and rotator control valves

JRPP
JRKPP

ROTATORS AND SWING DAMPERS

The size of the crane and its purpose of use determine what rotator and swing damper are the best for it. When a shaft rotator is used with the adapter flange designed for it, the head can be changed fast and easily.

Our recommendation for lighter cranes is FR10 or FR15 shaft rotator with the Nisula JRPP dual swing damper. For heavier cranes, possible alternatives are flange-mounted Indexator GV6, or with the head change facility Indexator GV6-69 shaft rotator with the Nisula JRKPP35S dual swing damper. With Indexator AV12s or GV12S the suitable swing damper is JRKPP45S dual swing damper.
Nisula's dual swing damper makes operations accurate and controlled

	JRPP 7	**JRPP 10HD**	**JRPP 15HD**	**JRKPP 35S**
Weight, kg	20	23	23	39,5
Suitable rotator	FR7	FR10	FR15	GV6-
Rotators top pin Ø	24 mm	25 mm	30 mm	35 mm
Suitable adapter	ADFR7	ADFR10-2	ADFR15	ADGV6-69

Nisula swing dampers, benefits to the customer

- Disc brake structure
- Maintains excellent braking efficiency for a long time
- Low operating costs
- Easily adjustable braking force
- Made of special steel
- Lubricated bronze alloy bearings
- Hardened pins

JRPP10HD-, JRPP15HD-, JRKPP35S and JRKPP45S have four brake pads, two for both motion directions. Thanks to the disc brake structure, braking efficiency remains good for a long time, with little need for adjustments or maintenance.

NISULA WORLDWIDE

Nisula harvester heads are known worldwide for their straightforward solutions, easy maintainability, durability and unique features. Our customers around the world harvest wood daily with different kinds of base machine and harvester head combinations. Welcome to the Nisula family of satisfied customers!

NISULA 105E

kg	52
mm	120
optimal mm	10-100

NISULA 155E

kg	115
mm	150
optimal mm	10-120

NISULA 175E

kg	183
mm	180
optimal mm	10-150

NISULA 205E

kg	295
mm	200
optimal mm	10-180

NISULA 285E

kg	290
mm	180-240
optimal mm	10-180

NISULA 285E+

kg	330
mm	180-240
optimal mm	10-180

NISULA 335E+

kg	650
mm	250-320
optimal mm	10-280

NISULA

THE FUTURE OF EFFICIENT LOGGING

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