

H400-Series Harvester Heads



PRODUCTIVITY • UPTIME • LOW DAILY OPERATING COSTS





Sign of high productivity and measuring accuracy

John Deere is the world's leading manufacturer of forestry equipment, with the most comprehensive range of attachments including Cut-To-Length (CTL) harvester heads.

The John Deere H400-Series is a range of four-wheel-drive harvester heads, tailor-made for John Deere wheel harvesters. Depending on base

machine and boom requirements, the John Deere H412, H414, H754, and H480C Harvester Heads are available for serious logging. Whatever the choice, John Deere harvester heads are known for outstanding productivity and measuring accuracy.



Quick specs

	H412	H414	H754	H480C
DIMENSIONS [mm / in.]				
Height without rotator and link	1155 / 45.5	1400 / 55.1	1130 / 44.5	1350 / 53.1
Width, arms open	1320 / 52.0	1520 / 59.8	1360 / 53.5	1880 / 74.0
WEIGHT [kg / lb.]				
Without rotator and link, from	733 / 1,615	1030 / 2,270	820 / 1,808	1240 / 2,734
SuperCut 100 Saw Unit				
Max. cutting diameter [mm / in.]	470 / 18.5	620 / 24.4	550 / 21.7 or 620 / 24.4	710 / 28.0
BEST APPLICATION				
	Early to late thinnings	Late thinnings and regeneration harvesting	Late thinnings and regeneration harvesting	Late thinnings and regeneration harvesting



Productivity, uptime, and low daily operating costs

Higher productivity

- 1. Wide opening of knives and roller arms eases the tree-catch and felling process.
- 2. The SuperCut 100 saw unit enables fast, productive cutting cycles.
- 3. The hydraulic feed motors and four-wheel drive combine high speed and torque for efficient feeding.

Increased uptime

- 4. Durable steel frame and knife structures enable long-lasting performance.
- 5. Hoses and sensors are well protected.
- 6. The EVO 2 hydraulic valve enables pressure settings from the cabin.

Lower daily operating cost

- 7. The SuperCut 100 saw unit with integrated chain lubrication enables economical oil consumption.
- 8. The EVO 2 hydraulic valve provides fuel-efficient and precise hydraulic control.
- 9. Optional equipment (ex. multi-tree handling [MTH], color marking) reduces work cycles, saving time and money.



Feeding principle

The H400-Series is characterized by a four-wheel-drive feeding principle. Harvester heads are equipped with two pairs of feed rollers, and each feed roller is driven by its own hydraulic feed motor. The hydraulic feed motors combine excellent starting torque and high speed for highly productive processing.

While feeding, the stem is carried mainly by the feed-roller arms that press the stem towards the inner feed rollers. Four feed rollers form a circle around the stem. This unique continuous four-wheel-drive with hydraulically connected feed rollers and mechanical differential lock ensures slip-free and fast feeding.

Delimiting knives only support stem carrying, and therefore cope with less hydraulic pressure, which reduces friction. Wide feed rollers provide a large contact area at the stem surface for efficient feeding of differently sized stems.

Four-wheel-drive feeding advantages in a nutshell:

- Excellent stem control
- High feed force and speed
- Reduced friction
- High efficiency



Feed rollers mainly carry the stem.

John Deere harvester heads may be customized for different applications with a variety of factory options, including feed motors of various power levels and a choice of feed-roller types.



Delimiting

John Deere harvester heads feature delimiting knives shaped for quality delimiting of stems of all sizes. Knife geometry and long cutting edges provide durability and efficient delimiting.

The state-of-the-art proportional hydraulic control quickly adapts the positioning of the knives to the diameter of the stem, leading to high-

quality delimiting. Necessary hydraulic pressure adjustments can be easily made from the cabin.

The wide opening of the knives allows fast grabbing for the felling cut, reducing processing time and improving productivity.



Cutting

John Deere harvester heads are equipped with the SuperCut 100 saw unit that efficiently manages the frequent crosscutting of stems required in CTL logging.

The latest sensor technology together with the new TimberMatic™ H-09 control system provides outstanding pressure control and an array of settings throughout the tree-diameter range.

The saw unit's automatic chain tensioning reduces maintenance efforts and prolongs the lifetime of the bar and chain. Fully integrated chain lubrication is economical, ensuring low operating costs.

The patented chain catcher is a standard safety feature of all John Deere harvester heads.

The saw unit can be customized with a variety of options, including Parker or Bucher saw motors, bar and chain kits, and several types of lubrication pumps.



Precision measuring

The new TimberMatic H-09 is a highly accurate control and measuring system with a straightforward user interface to ensure efficiency and reliability. The TimberMatic H-09 enables configuring settings of saw functions, diameter-based positioning of feed-roller arms and delimiting knives, and various feeding and crosscutting functions, all via one system. The user also benefits from a number of shortcut keys.

Log lengths are measured with the help of a measuring wheel located in the middle frame section of the harvester head. Log diameters are detected via two sensors located at the delimiting knives.

Monitoring system

For top performance you can track, all John Deere E-Series wheeled forest machines come equipped with an exclusive TimberLink™ machine performance follow-up and optimization tool that enables you to keep an eye on operating costs and ultimately protect your investment. The unique TimberLink system constantly monitors the technical performance of the entire machine, including boom and harvester head. The system provides information on fuel consumption, productivity, and time management in different stages of the harvesting process.

H400-Series common features:

- Four hydraulic feed motors allow a powerful and slip-free four-wheel-drive feed.
- The proven EVO2 valve provides efficient hydraulic oil flow and head control.
- The efficient SuperCut 100 saw unit has automatic chain lubrication and tensioning.
- The optional MTH equipment is ideal for energy wood harvesting.
- The measuring system of stem diameter and length is highly reliable.

H412

The H412 presents the next generation of John Deere harvester heads. This thinning head has been designed for use with the John Deere 770D as well as the new John Deere 1070E and 1170E Harvesters.

With the compact H412 it is easy to catch, fell, and process trees in dense forest stands. It enables efficient boom movements, which is a key factor for gaining high productivity in thinning operations. The main frame is machined as one piece, which provides high durability with dimensional accuracy.

Three moving delimiting knives, one fixed top knife, and one fixed back knife follow the contours of the stem. The H412 provides excellent delimiting quality for all stem diameters, even down to 80 mm.

The fast SuperCut 100 saw unit provides a maximum felling diameter of 470 mm, which gives the H412 superb performance in all thinning stages.



H414

The H414 is especially designed for the mid-sized John Deere 1170E and 1270E Wheel Harvesters. The H414 features an excellent power-to-weight ratio and a compact size, which make it highly maneuverable even in dense thinning stands.

The main frame is machined as one piece, which provides high dimensional accuracy. New feed-roller arms feature more durable bearings, built-in feed-roller guards, strengthened cylinders and pins, and well-protected hose routings.

Four moving delimiting knives, one fixed top knife, and one fixed back knife follow the contours of the stem. The redesigned knife geometry and long cutting edges of the H414 ensure excellent delimiting quality for all stem diameters.

The SuperCut 100 saw unit has a maximum felling diameter of 620 mm, for excellent performance from early thinnings up to early regeneration felling.



H754

The John Deere H754 is a lightweight, all-round harvester head designed to carry out a wide range of harvesting jobs, from first thinning to early regeneration harvesting. The compact frame design provides an excellent power-to-weight ratio. The short frame and optimal placement of the one fixed and five moving delimiting knives enable superb delimiting performance even on bent timber.

For fast and precise felling, two different saw-unit options are available for the H754. The standard saw unit cuts tree diameters up to 550 mm, and the SuperCut 100 saw unit cuts up to 620 mm.



H480C

The John Deere H480C Harvesting Head combines large-timber-cutting power with excellent delimiting quality throughout its tip-to-tip diameter range. Paired with the new John Deere 1270E and 1470E Harvesters, the H480C is hard to outcompete in terms of Productivity, Uptime, and Low Daily Operating Costs.

Optimized feed force and speed are realized via new feed-motor options. In early to late thinnings the 400/630-cc motors provide best performance. For late thinnings and regeneration felling the 500/800-cc or 500/780-cc motors are the preferred choice. The H480C gives unprecedented tree-processing performance, especially in large timber. New feed-roller-arm geometry ensures that feed rollers have solid grip and reliably carry trunks in all diameter ranges.

New John Deere manufacturing processes have led to even more durable frame structures. New feed-roller arms feature more durable bearings, strengthened cylinders and pins, and well-protected hose routings. Four moving delimiting knives, one fixed top knife, and one fixed back knife follow the contours of the stem. The knife geometry and long cutting edges of the H480C ensure excellent delimiting quality for all stem diameters.

The SuperCut 100 saw unit has a maximum felling diameter of 710 mm, and can be factory equipped with either Parker or Bucher saw-motor options.



Technical data

	H412	H414	H754	H480C
DIMENSIONS [mm / in.]				
Width, head open	1320 / 52.0	1520 / 59.8	1360 / 53.5	1880 / 74.0
Width, head closed	1070 / 42.1	1305 / 51.4	1200 / 47.2	1200 / 47.2
Height without rotator and link	1155 / 45.5	1400 / 55.1	1130 / 44.5	1350 / 53.1
WEIGHT [kg / lb.]				
Without rotator and link, from	733 / 1,615	1030 / 2,270	820 / 1,808	1240 / 2,734
FELLING/CUTTING				
SuperCut 100 saw unit, automatic chain tensioning	Standard	Standard	Option (depending on country specification)	Standard
Max. cut diameter [mm / in.]	470 / 18.5	620 / 24.4	550/620 / 21.7/24.4	710 / 28.0
Length of saw bar [mm / in.]	540 / 21.3	750 / 29.5	640/750 / 25.2/29.5	825 / 32.5
Chain type [mm / in.]	10 / 0.404	10 / 0.404	10 / 0.404	10 / 0.404
Chain speed [m/s / ft./sec.]	40 / 131	40 / 131	40 / 131	40 / 131
FEEDING, FOUR-WHEEL-DRIVE with steel feed rollers				
Gross feed force [kN/ lbf]	450 / 200-cc motors: 17 / 3,822	620 / 400-cc motors: 27 / 6,070	400 / 250-cc motors: 17.7 / 3,979 500 / 315-cc motors: 22.1 / 4,968	400 / 530-cc motors: 27 / 6,070 500 / 800-cc motors: 30 / 6,744 500 / 780-cc motors: 30 / 6,744
Max. feed speed [m/s / ft./sec.]	4.5–6.0 / 15–20	4.5–6.0 / 15–20	4.5–6.0 / 15–20	4.2–5.3 / 14–17.4
Max. roller opening [mm / in.]	530 / 20.8	640 / 25.2	560 / 22.0	680 / 26.8
DELIMBING [mm / in.]				
Delimiting knives	3 moving, 2 fixed	4 moving, 2 fixed	4 moving, 1 fixed	4 moving, 2 fixed
Delimiting diameter tip to tip	400 / 15.7	430 / 17.0	400 / 15.7	460 / 18.1
Max. opening upper knives	550 / 21.6	610 / 24.0	560 / 22.0	680 / 26.8
Max. opening lower knives	600 / 23.6	660 / 26.0	560 / 22.0	710 / 28.0
HYDRAULIC SYSTEM				
Max. operating pressure [MPa / psi]	28 / 4,061	28 / 4,061	28 / 4,061	28 / 4,061
Recommended pump capacity [l/min. / gpm]	200–280 / 53-74	200–340 / 53-90	200–340 / 53–90	290–340 / 76–90
CONTROL AND MEASURING SYSTEM	TimberMatic H-09, TimberMatic 300, TimberRite™			
OPTIONAL EQUIPMENT				
Color marking	Yes	Yes	Yes	Yes
Stump treatment	Yes	Yes	Yes	Yes
Multi-tree handling (MTH)	Yes	Yes	Yes	Yes
MenSe feed rollers	No	Yes	Yes	Yes
Moipu feed rollers	No	Yes	Yes	Yes
Steel thumbnail feed rollers	Yes	Yes	Yes	Yes
Steel V-profile feed rollers	Yes	Yes	Yes	Yes
Eucalyptus debarking rollers	No	No	Yes	Yes
Chain and saw bar kits	Yes	Yes	Yes	Yes
Tool kits	Yes	Yes	Yes	Yes
OTHER ACCESSORIES	For more information, please contact your dealer			

*Please note: Measurements are guidelines only and may vary depending on production tolerances. The manufacturer reserves the right to make changes.
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Nothing runs like a Deere

The cornerstones of E-Series forest machinery design are productivity, uptime, and low daily operating costs. Every year John Deere makes significant investments in product development in order to design and manufacture advanced forest machinery.

John Deere is your partner. We want to offer overall solutions to support your business by making everyday work more productive. In addition to high-quality forestry machines, we provide a wide range of services and tools to make your machine even more efficient. Our ambition is to help you to get the job done faster, safer, and more comfortably!

John Deere Forestry designs and manufactures cut-to-length forestry machinery in Finland.

