



HARVESTING/PROCESSING HEADS



# 400 SERIES







**It's no coincidence that Waratah has been an industry-leader for over 45 years. Because we've always listened to you to design durable, more productive and efficient harvesting and processing heads proven for your application.**

At our facilities in Finland and New Zealand, each head is made to order, so you get exactly what you need. Our heads are built to work with advanced technology providing precise control with accurate diameter and length measuring. With on-site facility testing, each product is proven on our time to be profitable on yours.

Our commitment to your success goes beyond product quality. When you put our heads to work, our global support network goes to work for you – from helping you choose the right head, to installation and startup, to being on site when you need us.

We offer the widest range of harvester/processor heads on the market. So whether you're harvesting at the stump, processing at the landing or somewhere in between, Waratah is built to work for you all over the world.



**"Our production is great with Waratah.  
The uptime is second to none."**

**Drew Betts, Owner, Clay Hill Equipment**







# 400 SERIES

**Proven in mixed stand and multi-tree harvesting applications, Waratah 400 Series harvesters balance production with precision.**

**High-tensile steel frames engineered for maximum performance, while providing good visibility to the tree**

**Stump treatment and color marking spray options**

**High performance saws with ample cutting capacity and automatic control for optimum performance in harvesting applications**

**Saw box designs to improve productivity and extend durability offering low stump heights**

**Delimb knives provide the best possible delimbing for large- and small-diameter wood**

**Large knife and feed roller openings for fast stem catching and productive tree harvesting**

**Superior tree holding, log handling, and processing of straight and crooked trees**





Several junction box configurations available to suit many applications

Rotator options to suit many carriers

Multi-tree harvesting options for some models

Advanced on-board controller and diagnostics

Highly efficient , high performance valves providing responsiveness and speed

Optional top saw on some models increases productivity

Fixed and floating front knife options for many applications providing optimum delimbing coverage

Extreme measuring accuracy with the latest sensor technology and many measuring wheel options

Dual diameter sensors for accurate log volumes, assortments, and providing optimum head performance

Specialized guarding packages for snow and harsh applications

High torque high performance feed motor options

Drive wheel options for optimum wood quality, debarking or maximum traction in crooked wood





# H412

When it comes to working productively in tight spaces, the agile H412 is perfectly suited. Its compact size, exceptional drive power and multi-tree harvesting ability make it the right head for efficient production in dense forest stands.

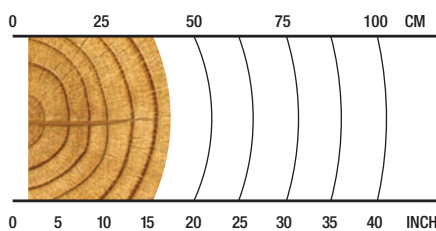
## OVERVIEW

Harvesting in early thinnings

## APPLICATIONS

Softwood harvesting  
Multi-tree harvesting

## RECOMMENDED RANGE



**4-40cm / 1.6-15.7 in.**

## SPECS



**735 kg / 1,620 lb.**  
Weight (Without Rotator & Link)



**28 MPa / 4,061 psi**  
Maximum Hydraulic Requirements



**550 mm / 21.7 in.**  
Max Upper Delimb Opening



**530 mm / 20.9 in.**  
Max Feed Roller Opening



**470 mm / 18.5 in.**  
Maximum Cutting Capacity



**11-18 metric ton**  
Carrier Size



**12-16 metric ton**  
Carrier Size





# H413

Need top production in a variety of wood sizes? The H413 is well-suited for the task. It has superb delimbing performance in all diameters, outstanding multi-tree harvesting qualities and an excellent power-to-weight ratio, taking productivity to a higher level.

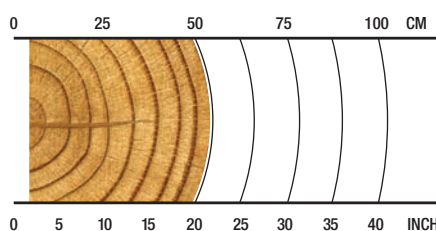
## OVERVIEW

Harvesting in early-to-late thinnings

## APPLICATIONS

Softwood harvesting  
Multi-tree harvesting

## RECOMMENDED RANGE



**4-50cm / 1.6-19.7in.**

## SPECS



**940 kg / 2,072 lb.**  
Weight (Without Rotator & Link)



**28 MPa / 4,061 psi**  
Maximum Hydraulic Requirements



**560 mm / 22.0 in.**  
Max Upper Delimb Opening



**560 mm / 22.0 in.**  
Max Feed Roller Opening



**580 mm / 22.8 in.**  
Maximum Cutting Capacity



**14-20 metric ton**  
Carrier Size



**13-21 metric ton**  
Carrier Size





# H424

Characterized by its consistent performance and skill set in second thinnings and early regeneration cuttings, the versatile H424 is equally suited for processing or debarking applications. With a durable frame, well-protected hosing, feed power and ample cutting capacity, it's a very capable all-around head for mid-sized harvesters.

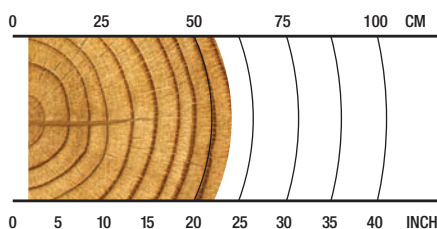
## OVERVIEW

Harvesting in early and second thinnings; early regeneration harvesting.

## APPLICATIONS








Softwood harvesting  
Mixed stand (hardwood and softwood) harvesting  
Multi-tree harvesting  
Processing  
Debarking

## RECOMMENDED RANGE



**4-57cm / 1.6-22.4 in.**

## SPECS

-  **1105 kg / 2,436 lb.**  
Weight (Without Rotator & Link)
-  **28 MPa / 4,061 psi**  
Maximum Hydraulic Requirements
-  **610 mm / 24.0 in.**  
Max Upper Delimb Opening
-  **430 mm / 17.0 in.**  
Delimb Diameter Tip-to-Tip
-  **640 mm / 25.2 in.**  
Max Feed Roller Opening
-  **620 mm / 24.4 in.**  
Maximum Cutting Capacity
-  **17-22 metric ton**  
Carrier Size
-  **16-21 metric ton**  
Carrier Size





# H415

Optimizing performance, productivity and delimbing, the H415 excels in large diameter regeneration harvesting. With a powerful control valve and feed-roller arm geometry that ensures a solid grip, log control is only an afterthought.

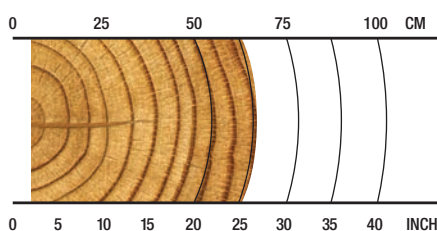
## OVERVIEW

Harvesting in late thinnings;  
regeneration harvesting.

## APPLICATIONS

Softwood harvesting  
Mixed stand (hardwood and  
softwood) harvesting  
Multi-tree harvesting

## RECOMMENDED RANGE



**5-65cm / 2-25.6 in.**

## SPECS



**1330 kg / 2,932 lb.**  
Weight (Without Rotator & Link)



**28 MPa / 4,061 psi**  
Maximum Hydraulic Requirements



**680 mm / 26.8 in.**  
Max Upper Delimb Opening



**680 mm / 26.8 in.**  
Max Feed Roller Opening



**750 mm / 29.5 in.**  
Maximum Cutting Capacity



**18-25 metric ton**  
Carrier Size



**20-25 metric ton**  
Carrier Size





# H415HD

The rugged H415HD is built to work on your toughest jobs. A heavy-duty tilt frame, feed motors and guarding provide even more durability. With a powerful control valve and a top saw option, this high-performance head will become your top choice for wheeled carrier applications.

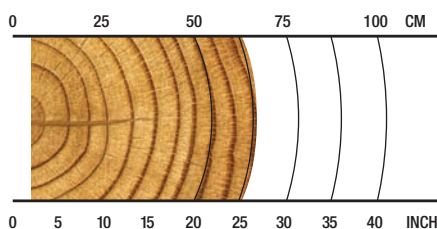
## OVERVIEW

Harvesting in late thinnings; regeneration harvesting; specialist in the wheeled machine application.

## APPLICATIONS

Softwood harvesting  
Mixed stand (hardwood and softwood) harvesting  
Multi-tree harvesting

## RECOMMENDED RANGE



**5-65cm / 2-25.6 in.**

## SPECS



**1401 kg / 3,089 lb.**  
Weight (Without Rotator & Link)



**28 MPa / 4,061 psi**  
Maximum Hydraulic Requirements



**680 mm / 26.8 in.**  
Max Upper Delimb Opening



**680 mm / 26.8 in.**  
Max Feed Roller Opening



**710 mm / 28.0 in.**  
Maximum Cutting Capacity



**18-25 metric ton**  
Carrier Size



**20-25 metric ton**  
Carrier Size





# H415X

Equally comfortable on track machines, the H415X comes equipped with an extreme duty main saw box and excels in mixed stand harvesting. With a powerful control valve, high-performance drive motors, precision delimbing and optional top saw, “backing up” will not be in your vocabulary.

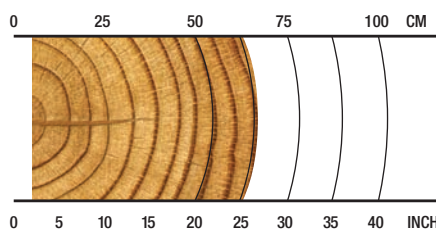
## OVERVIEW

Harvesting in late thinnings; regeneration harvesting; specialist in the track machine application.

## APPLICATIONS

Softwood harvesting  
Mixed stand (hardwood and softwood) harvesting  
Multi-tree harvesting

## RECOMMENDED RANGE



**5-65cm / 2-25.6 in.**

## SPECS



**1428 kg / 3,148 lb.**  
Weight (Without Rotator & Link)



**28 MPa / 4,061 psi**  
Maximum Hydraulic Requirements



**680 mm / 26.8 in.**  
Max Upper Delimb Opening



**680 mm / 26.8 in.**  
Max Feed Roller Opening



**710 mm / 28.0 in.**  
Maximum Cutting Capacity



**18-25 metric ton**  
Carrier Size



**20-25 metric ton**  
Carrier Size





# H480C

Experience counts, and the popular H480C is no exception. This aggressive head well-known for its large diameter capacity, optimized feed force and processing speed gives excellent and unprecedented tree processing especially in crooked timber.

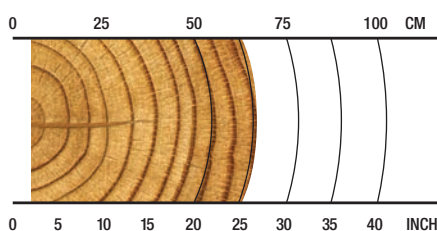
## OVERVIEW

Harvesting in early-to-late thinnings; regeneration harvesting.

## APPLICATIONS

Softwood harvesting  
Multi-tree harvesting

## RECOMMENDED RANGE



**5-65cm / 2-25.6 in.**

## SPECS



**1350 kg / 2,976 lb.**  
Weight (Without Rotator & Link)



**28 MPa / 4,061 psi**  
Maximum Hydraulic Requirements



**680 mm / 26.8 in.**  
Max Upper Delimb Opening



**680 mm / 26.8 in.**  
Max Feed Roller Opening



**710 mm / 28.0 in.**  
Maximum Cutting Capacity



**18-25 metric ton**  
Carrier Size



**20-25 metric ton**  
Carrier Size







# MEASURING AND CONTROL SYSTEMS

We focus on providing you with accurate diameter and length measuring systems for profitable precision. Simplify operations and boost productivity with real-time statistics and measuring information, and wireless data transfer.

## TIMBERRITE™ H-16



Imagine a fast, powerful control system that manages your workload and links your office to the forest.

The productive TimberRite measuring and control system uses a powerful Windows PC, providing accurate measuring technology and responsive head control for efficient operational productivity.

It records production information, tracks productivity, and packages all files in the latest StanForD 2010 format to ensure data interchanges with virtually any professional system in the forest industry.

Additionally, this user-friendly system has email capabilities, and can utilize our WaratahMate™ smartphone app for the efficient and timely transfer of production information and other important files regardless of your location. Configurable as standard with Pre-Selection priority, or optionally with Value Optimization it can manage your output to keep step with market demands. TimberRite keeps you productive and informed to manage your workload for whatever your market requires.

### KEY FEATURES

- **Onboard mapping** - (optional) - access your location and visualize your production data.
- **Pre-Selection Priority** - (standard) - sequential optimization by cutting list instruction, and alternate log assignments.
- **Value Optimization** - (optional) - value-based optimization, intuitive prognosis through intelligent assessment of advanced matrices.
- **Touch-screen display**, or wireless keyboard and touch pad mouse.
- **Windows™ PC** - based controller integrates the harvester head measuring and control system with the high processing power of a personal computer.
- **StanForD 2010** file structure ensures data interchanges with other professional systems in the forest industry.
- **Automatic file sending** - production reports, worksite instructions, repair follow-ups, calibration history, log tables, machine settings and harvesting instructions.
- **WaratahMate™ smartphone app** - Easily transfer data wirelessly regardless of location, or through email via phone USB.
- **Work & repair statistics** - Monitor uptime, productivity and operating costs.
- **Species specific calibration and soft-clamping** settings for delimb and drive arms.
- **Operator specific settings** and configurable menus for quick navigation and adjustments.
- **Extensive site documentation** - expanded site, contractor, and machine information.
- **Simplified diagnostics** - input and output tests with built-in diagnostic troubleshooting assistance.





# OPTIONS

Waratah heads are configurable to your application.  
Consult your dealer for option availability.



## Configurability

Waratah has a wide range of focused options for harvesting and processing applications including single- and multi-stem processing, multi-tree handling, and all models include options for softwood, crooked hardwood and debarking.



## Color Marking

Waratah offers nozzle-applied color marking systems to simplify log identification. Three colors provide many assortment combinations improving sorting and yard safety.



## Main Saws, Saw Motors, Top Saws

The 400 series have high-cutting capacity, main saws with saw boxes designed for quick cross cutting. All saw units have auto tensioning 0.404 pitch chain driven by efficient, high torque motors. Additionally, the H415 and H480C models have an optional top saw for extra efficiency in crooked wood applications.



## Measuring Wheels

Application-specific measuring wheels are engineered for accurate and consistent measuring in all tree species with enhancements for log quality. Selections include wide and narrow models, coarse and fine teeth options, and multi-stem, debarking configurations.



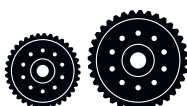
## Delimb Arms

Delimb arms are engineered for fast stem catching and durability in the toughest applications. Knife profiles ensure quality delimbing throughout the recommended diameter range.



## Rotators

Waratah offers high torque and productive rotator motor and hose bulkhead options on all of the 400 series models.



## Feed Rollers

Many feed roller options are available for a variety of applications, offering improved traction and reducing fiber damage. Wheel options include eucalyptus debarking, rib, v-type, MTH, Moipu, MenSe, thumbnail, aggressive and many combination styles.



## Multi-tree Harvesting

Select models have multi-tree harvesting (MTH) capabilities, providing superior accumulating and precise bundle feeding with the option. MTH ability increases productivity and can easily be installed between the rotator and hanging bracket – even on existing heads.



## Front Knives

Waratah offers heavy-duty floating or fixed front knife options with specialized profiles and cutting edges for superior delimbing in any application.



## Stump Treatment

Waratah has nozzle or bar-applied stump treatment kits.

Talk to your Waratah dealer about more available options.



	H412	H413	H424
<b>DIMENSIONS</b>			
Width, head open [mm/in.]	1320 / 52.0	1450 / 57.1	1520 / 60.0
Width, head closed	1070 / 42.1	1140 / 44.9	1300 / 51.2
Height without rotator and link	1155 / 45.5	1330 / 52.4	1345 / 53.0
<b>WEIGHT</b>			
Excluding rotator, link and some options [kg/lb.]	735 / 1620	940 / 2072	1105 / 2436
<b>DELIMBING [mm]</b>			
Delimbing knives	3 moving, 2 fixed	4 moving, 2 fixed	4 moving, 2 fixed
Delimbing diameter, tip to tip [mm/in.]	400 / 15.7	420 / 16.5	430 / 16.9
Maximum opening, upper knives [mm/in.]	550 / 21.7	560 / 22.0	610 / 24.0
Maximum opening, lower knives [mm/in.]	600 / 23.6	570 / 22.4	670 / 26.4
<b>DRIVE</b>			
Quantity of drive rollers	4	4	4
Motor cc - option 1	450 / 200-cc motors	500 / 315-cc motors	620 / 400-cc motors
Gross feed force [kN] (steel feed wheels)	17	23	27
Motor cc - option 2			503 / 315-cc motors
Gross feed force [kN] (steel feed wheels)			21.5
Motor cc - option 3			
Gross feed force [kN] (steel feed wheels)			
Maximum feed speed [m/s]	4.9–5.8	4.8–5.6	4.3–5.3
Maximum roller opening [mm/in.]	530 / 21.0	560 / 22.0	640 / 25.2
Minimum diameter [mm/in.]	40 / 1.6	40 / 1.6	40 / 1.6
<b>TOP SAW</b>			
Maximum cut diameter [mm/in.]			
Length of saw bar [mm]			
Chain type [mm/in.]			
Top saw motor displacement [cc]			
<b>BUTT / FELLING SAW</b>			
Standard saw	SuperCut 100S with auto chain tensioning	SuperCut 100S with auto chain tensioning	SuperCut 100S with auto chain tensioning
Maximum cut diameter [mm/in.]	470 / 18.5	580 / 22.8	620 / 24.4
Length of saw bar [mm]	540	640 / 750	750
Chain type [mm/in.]	0.404	0.404	0.404
Saw motor	19 or 20cc	19 or 20cc	19, 20 or 25 cc
Oil tank capacity	8.8 l	8.9 l	7.5 l
<b>CARRIER RANGE</b>			
Wheeled [metric ton]	11-18	14-20	17-22
Tracked [metric ton]	12-16	13-21	16-21
<b>HYDRAULIC SYSTEM</b>			
Maximum operating pressure [Mpa/PSI]	28	28	28
Recommended pump capacity [l/min., gal./min.]	200–260	240–280	260–320
<b>CONTROL AND MEASURING SYSTEM</b>			
	TimberRite H-16*	TimberRite H-16*	TimberRite H-16*
<b>OPTIONAL EQUIPMENT</b>			
Color marking	Yes	Yes	Yes
Stump treatment	Yes	Yes	Yes
Multi-tree-harvesting (MTH)	Yes	Yes	Yes
Debarking feed rollers	No	No	Yes
Steel thumbnail feed rollers	Yes	Yes	Yes
Steel V-profile feed rollers	Yes	Yes	Yes
Steel ribbed feed rollers	No	Yes	Yes
Moipu feed rollers	No	Yes	Yes
Chain and saw-bar kits	Yes	Yes	Yes
Hydraulic hose kit	Yes	Yes	Yes
Top Saw	No	No	No
Processing knives	Yes	No	Yes
Heavy-duty tilt frame	No	No	Yes
Rotator options	Yes	Yes	Yes
Saw bar and chain grease lubrication	Yes	Yes	Yes



This brochure has been compiled with care for worldwide circulation. While general information, pictures and descriptions are provided, some illustrations and text may include options and accessories not available in all regions. Please contact your local dealer for details. Waratah reserves the right to change specifications and design for products described in this brochure without notice. No liability for errors and omissions.

\*Other adaptations may be available. Please contact your local Waratah dealer.

H415	H415HD	H415X	H480C
1720 / 67.7	1720 / 67.7	1720 / 67.7	1880 / 74.0
1220 / 48.0	1220 / 48.0	1220 / 48.0	1200 / 47.2
1510 / 59.4	1510 / 59.4	1510 / 59.4	1450 / 57.1
1330 / 2932	1401 / 3089	1428 / 3148	1350 / 2976
4 moving, 2 fixed	4 moving, 2 fixed	4 moving, 2 fixed	4 moving, 2 fixed
460 / 18.1	460 / 18.1	460 / 18.1	460 / 18.1
680 / 26.8	680 / 26.8	680 / 26.8	680 / 26.8
710 / 28.0	710 / 28.0	710 / 28.0	730 / 28.7
4	4	4	4
400 / 630-cc motors	400 / 630-cc motors	400 / 630-cc motors	400 / 630-cc motors
27	27	27	27
500 / 780-cc motors	500 / 780-cc motors	500 / 780-cc motors	500 / 780-cc motors
30	30	30	30
1014 / 315-cc motors	1014 / 315-cc motors	1014 / 315-cc motors	
25-42	25-42	25-42	
2.9-7.0	2.9-7.0	2.9-7.0	4.0-6.5
680 / 26.8	680 / 26.8	680 / 26.8	680 / 26.8
50 / 2.0	50 / 2.0	50 / 2.0	50 / 2.0
	400 / 15.7	400 / 15.7	
	600	600	
	10/0.404	10/0.404	
	14cc	14cc	
SuperCut 100S with auto chain tensioning	SuperCut 100S with auto chain tensioning	SuperCut 100S with auto chain tensioning	SuperCut 100S with auto chain tensioning
750 / 29.5	710 / 28.0	710 / 28.0	710 / 28.0
825/900	900	900	825/900
0.404	0.404	0.404	0.404
19 or 20cc	19 or 20cc	19 or 20cc	19 or 20cc
9.0 l	9.0 l	9.0 l	9.2 l
18-25	18-25	18-25	18-25
20-25	20-25	20-25	20-25
28	28	28	28
260-340	260-340	260-340	260-340
<b>TimberRite H-16*</b>	<b>TimberRite H-16*</b>	<b>TimberRite H-16*</b>	<b>TimberRite H-16*</b>
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
No	Yes	Yes	No
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
No	Yes	Yes	No
Yes	Yes	Yes	No
No	Yes	Yes	No
Yes	Yes	Yes	No
Yes	Yes	Yes	Yes





FORESTRY EQUIPMENT

[www.Waratah.com](http://www.Waratah.com)

