



## TECH UPDATE - HARVESTING HEADS

### Caterpillar Forest Products

Caterpillar Forest Products offers a full line of harvester heads including the PD-57, a large dangle head built to process big hardwood and limby trees. Extended delimiting arms on the PD-57 make log selection from a pile easy. Recently over 15 updates were implemented to the chassis, knives and rotator to increase the reliability and structural integrity.

For select thinning, the PF-48 fixed head offers one-of-a-kind 4-roller design giving the head more contact with the tree for better feeding. The valve body is mounted on the carrier not the head, reducing shock loads. Over 15 upgrades were performed in 2009 to increase uptime, including removal of the Independent Measuring Device (IMD) cylinder and implementation of SKF sealed bearings in the IMD.

The PE-44 and PD-46 are designed specifically for Caterpillar's wheel and small track harvesters. The PE-44 works best in medium size softwoods or mixed stands with smaller hardwoods. Its computer system offers extras, including production recording and proportional pressures on both the knives and feed rollers. The PD-46 has a more robust structure and has proved to be well suited for harvesting medium hardwoods and mixed stands.

[www.cat.com/forestry](http://www.cat.com/forestry)

### Hahn Machinery

Hahn Machinery, Inc. continues to offer the HSG140 and HSG160 single-grip harvester heads. These simple and compact heads are intended to fell, delimb, and buck small timber and have been used extensively in thinning operations.

Since 2006, Hahn has offered a high-performance version of its HSG series harvester heads. The successful "B" models feature digitally controlled, proportional, hydraulic valves with high pressure/high flow capability. The new hydraulic system enables the HSG "B" series to take full advantage of most modern excavator hydraulic systems and dramatically improves felling, delimiting, and bucking performance.

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

### Hakmet

Arbro harvesting heads are particularly designed for thinning and reforestation projects allowing the use of lighter and less expensive carriers such as small excavators. They are reasonably priced and provide a good return for a logger of small to medium size timber.

Arbro harvesting heads' capability to fell, delimb and cut-to-length makes them time and cost effective tools for small timber operations. The Arbro 400 handles trees up to 14" and the Arbro 1000 up to 18".



The harvesters have an automatic stroke with a length of 29.5” instead of 26”. A tree may be delimiting by pressing a single button. Eight different pre-selected lengths may be programmed in. Any length can be chosen at any time. The delimiting and grip knives will open separately. (A free DVD is available upon request.)

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

### **Komatsu Forest**

Komatsu Forest has launched the completely new Valmet 365 harvesting head for sale in North America following its initial introduction in Europe at the 2009 Elmia Wood show. The 2,755 lb 365 head is the newest addition to the Valmet harvesting head line-up. High performance frame design, three roller four motor feed and a grouped lubrication centre are key features of this model.

This new head represents a significant step forward in the development of Valmet heads, says the company. Designed for harvesting and thinning wood in the 8” to 17” diameter classes, the Valmet 365 offers an optimal combination of strength, performance, flexibility and reliability. A well balanced frame with new high strength low weight design improves harvester crane net lifting forces, especially important when working at long reach. The four motor three roller feed system provides traction with a firm grip from the carry style roller closing geometry. The three feed rollers keep the trunk centered under the measuring wheel while a differential lock minimizes roller spin for fast feed speeds. Extra large tilt angle makes harvesting on steeper slopes easier and more productive. Four hydraulically actuated delimiting knives provide additional holding power and provide clean delimiting for high log quality. A new, robust length measurement system with longer arm and a new patented measuring wheel cylinder deliver extremely precise length measurements. A well protected saw unit, protected sensors, easily accessed service points and a grouped lubrication center make maintenance easier.

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

### **Log Max**

Following the design philosophy of the XTreme Series, the Log Max 10000XT is a head for the toughest big wood and/or hardwood applications, but is still productive in small wood down to 1”. Developed specifically for tracked carriers, with a choice of harvester or dedicated processor, the 10000XT cuts wood up to 35” in diameter. Both versions feature integrated top saw and processor style knives with replaceable edges and mechanical stops.

With completely new one-piece cast roller arms and felling link, the 10000XT is a large-size head with a weight of only 6,600 lbs including rollers and rotator. This enables the head to be mounted on a smaller size carrier, leading to savings in both machine and fuel costs. It’s equipped with powerful 1404cc roller motors with all new steel rollers and a powerful 30cc saw motor with 404 or 3/4 pitch chain. The XTreme Series has been developed to provide the logging industry with a productive and durable head for the most XTreme applications and to produce wood at the lowest cost per tonne possible.

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



## **Pierce Pacific**

The Titan 22 is ready to harvest at the stump or process from a log deck. The Titan 22 features an additional valve section providing more flow to the drive system for greater speed and feed power, as well as to the butt saw for faster, cleaner cuts. It also features a heavy-duty frame designed to provide extra support where it's necessary for the rigors of North American timber and conditions. As with all of the Pierce and Denharco processing equipment, the Titan family is powered by Pierce's Intellitec Measuring System.

Pierce, independently owned and operated, builds all of its products in Portland, Ore., and has three service parts warehouses in North America to better serve customer needs. Its product support and customer service includes onsite training and troubleshooting, stocked warehouses, after hours pickup and emergency overnight delivery. Its professional service technicians are available 7 days a week, after business hours and on weekends.

If a customer's application requires a larger processing head, the Titan 23 is ideally suited—yet not exclusively—for a 25-29 metric ton machine.

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

## **Ponsse**

The Ponsse H6 harvester head is designed to be versatile, and is capable of handling thinning sites with small trees through to larger tree harvesting. The large opening on the H6 head and its accurate control features make harvesting work easy, the company says. The extensive tilt movement range—combined with the fast and powerful feeding and sawing system—make the H6 harvester head highly productive on all logging sites.

The short and durable structure, large feed rollers and excellent delimiting capacity of the Ponsse H6 harvester head, as well as the low grip friction of the knives, also help achieve high productivity in difficult conditions.

The Ponsse H6 harvester head can be equipped with a multi-stemming feature. This capability can be implemented using special multi-stemming delimiting knives or by means of simple software logic. With the software logic, the multi-stemming feature is based on automatic operation of the feed rollers and standard delimiting knives.

Multi-stemming can speed up harvesting operations, notably improving production numbers on sites with small trees.

The multi-stemming function does not impact the functioning of the harvester head's single trunk capabilities.

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



## **Quadco**

Quadco offers a full line of harvesting heads with different product lines to meet customers' needs and applications. High speed heads are available in 20", 22", 24", and 28" maximum cut capacity, with a unique reversible tooth system. All models can be ordered with a 40 or 360-degree tilt system.

Intermittent models range from 22" to 29" maximum cut capacity and have a powerful swing saw. Heads also have either 40 or 360-degree tilt system. Controlled-fall 5660 harvesters provide a maximum capacity of up to 24" cut and 22" processing. A swing saw comes standard on this model, designed for CTL/TL harvesting and roadside processing.

Quadco is the exclusive distributor for Keto heads in both North and South America. Keto offers five models—K 51, K 100, K 150, K 600TS, and K 825TS. All Keto heads feature a unique track feeding system offering excellent grips on logs and better accuracy for measuring. Their lightweight robust design cannot be overlooked.

Quadco's 32" bar saw head, is available with a 40- or 360-degree tilt system, as well as being available as a fixed-mount to suit applications.

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

## **Satco**

The SATCO 325 is a 25" single grip, two roller processing head and ideal for contractors who require a full processing head that's "not too big, but not too small". It can process 25" stems and weighs 800 to 900 kg. It's equipped with a unique "hose through centre" connection to the base machine, which allows the hoses to travel through the centerline of the attaching pins. This prevents the hoses over-bending and causing premature failure and protects them from damage, especially in cut-to-length applications.

Because the bottom delimb arms are so close to the butt saw, operators get accurate diameter measurements and have less risk of tree slippage when tree falling. There is also the advantage of better delimiting.

[www.satco.co.nz](http://www.satco.co.nz)

## **Tigercat**

Tigercat's TH575 harvesting head is specifically designed to match the high performance capabilities of the Tigercat track carriers in harvesting, processing, and debarking applications.

It has a heavy-duty steel structure for high-duty cycles and features isolation mounted valve assemblies and clean hose routings for maximum uptime. Its unique three-wheel drive system is designed for faster feed speed and superior feeding power—8,670 lb/f. The large diameter measuring wheel improves accuracy.

The TH575 features a Motomit IT computer system, which is programmable for up to eight species and has 100 preset selections per species. The TH575 also has a cutting capacity of 27.5" and an optional 31.5". And it's fast, with a feed speed of 19.7 ft/sec. The head also comes with a variety of options, including top saw, a variety of feed rollers and mea-



suring wheels, floating top knife, and more.

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

## **Waratah**

Waratah has released its all-new HTH623C harvesting head. It offers a unique balance of delimiting power and feed speed for tackling medium- to large-size timber.

Built as a perfect match to the 25-ton carrier class, the HTH623C is highly productive whether employed in stump-to-stump harvesting or processing at a landing or roadside.

It can handle large-tree varieties from softwoods to hardwoods—up to 28” in diameter. It has a top saw cut capacity of 18” and a main saw box cutting capacity of 30”

Several of the features found on the HTH623C include a new high-flow characteristic valve, an improved hose layout and a hood design allowing easier accessibility. The heavy-duty 360-degree rotator design and a high-torque drive motor option are features shared with the larger HTH624C.

Other key features of the 623C include double-tilt down stops to decrease frame stress and increase frame durability, and a new center-drive motor design, eliminating the need to grease the hub. A single bottom delimb arm option is also available. Matched to the TimberRite Measuring system, the 623C is an optimal solution for medium to large wood applications where the desired carrier size is 25 to 29 tons.

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

## **Felling HEADS**

### **Caterpillar Forest Products**

Caterpillar Forest Products offers a line of disc saw attachments for wheel and track feller bunchers.

Recent updates to the HF201 and HF221 felling heads for track feller bunchers have improved durability and performance. Structural changes, including stiffeners and reinforcement in high stress areas, increase service life. Performance enhancements include a new arm profile and length for better tree control, improved accumulation arm spring retention, an increase in the maximum cutting capacity and a redesigned top yoke for better bunching tree placement. The HF felling heads are available in a 40-degree partial tilt, 220-degree full tilt, and a new 330-degree full tilt configuration.

For wheel feller bunchers, the new SC-57 center post saw fells trees up to 22 in. diameter and also bunches medium and small stems, making it a versatile saw for thinning through final harvesting. The large box-section gathering arms support heavy loads that can bend the arms of less rigid saws. Also designed for wheel feller bunchers, the SH-50 bunching saw is ideal for first and second thinnings. The innovative bunching technology allows the operator to cut, bunch and control



more wood before piling. The line also includes the SH-56 high capacity bunching saw, the SS-56 felling saw and the RH-54 high capacity shear.

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

### **Endeavour**

The SS96 can handle timber up to 24", with a saw diameter of 32". It has a minimum flow of GPM but the optimum flow is 55 PGM. It weights 2,500 pounds and is ideal for 16-20+ ton carriers.

The SS94 is a little smaller head, handling timber up to 16" with a saw diameter of 24". Like the SS96, the minimum flow is 55 GPM and the maximum is 55 GPM. It weighs in at 1,200 lbs. and is designed for 10-20-ton carriers.

This patented mounting assembly increases flexibility since SS-FG can lock like a buncher or float like a dangle head. The rotary manifold features both hydraulic and electrical ports to enable 360° continuous rotation.

The innovative SliceSaw design vastly improves axial and radial-loading capabilities compared to previous ring saw designs. And the rotatable quadtooth system eliminates the required maintenance of changing damaged bars & chains.

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

### **Gilbert**

Gilbert 3000L series felling heads are high performance units and designed for productivity. They are built without compromise to help loggers increase the profitability of their operations.

They are available with a 350-degree high rotation wrist, recognized in the industry for its reliability and performance. There is also the option of either a fixed felling head or one with a 40-degree rotation wrist.

Gilbert's felling heads are multi-functional and can work in all types of operations. They control the stems for a perfect grouping without any crossing. The sturdiness of the units allows the same felling head to shine equally in the harvesting of hard wood and in the harvesting of the huge trees on the West Coast.

[www.gilbert-tech.com](http://www.gilbert-tech.com)

### **GN Roy**

GN ROY builds saw heads that meet the durability and production requirements of today's loggers. The company has been building high production heads since 1998 and their equipment has gained a solid reputation in the forest industry.

In 2008, the company introduced its 5000 Series heads, which feature a re-designed rotation system that offers optimum vision. The 5300 model (22") and 5600 model (24") can now rotate 360 degrees and each head features a heavy duty motor, and can be equipped with an optional 40 degree wrist. The 5000 Series features improved strength, reliability and



agility, which all add up to additional productivity. The saw heads offer easy maintenance and low operating costs.

GN ROY is planning to introduce 18” and 20” models with 40 or 360-degree rotation. The company is also working on newly designed teeth and saw disks, which they expect will be available soon.

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

### **Quadco**

Quadco features an extensive line of felling heads, including the company’s B-Series disc saw felling heads.

The B series feature “Arms-down” style high speed disk saw heads for use with boom-to-tree feller bunchers. The patented “Arms Down” feature, unique to Quadco, is specially designed to increase leverage for easier handling of tall timber.

Two cylinders per set of arms on the B Series felling heads (instead of one cylinder with linkage) contributes to better tree alignment and reduced butt friction.

There is an optional patented 360° wrist system using Quadco’s field proven double reduction gear box and two motors for maximum feller buncher versatility. The model 360-degree “High Torque” fits most applications. The extreme service model “VI”, designed for large West Coast timber, uses twin pinion to reduce gear tooth loading and improve pinion life.

A new tilt bearing design uses replaceable wear resistant steel plates hardened to maximum Rockwell rating to resist high axial and bending loads. All cylinders are cushioned.

The B Series has a large saw base with throat opening up to 50” and up to 5.8 sq. ft. accumulating area. Saw discs are available in either one-piece or segmented style with four sided rotatable QuadTooth system.

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

### **Tigercat**

The Tigercat 5702 for drive-to-tree and track feller bunchers is a ‘big timber’ felling saw. It is weight optimized and specially designed to control large or top-heavy trees, and the 5702 also has the ability to bunch small or mixed diameter stems in parallel alignment.

The 5,990-pound 5702 is best suited to large trees, natural stands, mixed stands and blow down applications. Large diameter trees are centered in the pocket for optimal lateral stability.

The 5702 is equipped with strong, cushioned, high pressure Tigercat cylinders for speed, powerful holding force and long life. It also comes with three 3-wrist options—30, 110, and 340-degree rotation.

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