Mechanized Tree Planter, Mulcher, Mower, Processor & Bucking Software

Presented by Joel Doupe
Quadco USA

QUADCO

FOREST MANAGEMENT MADE SIMPLE

Forest management is a cycle. For planting/ seeding, vegetation management, felling, processing, and site preparation, Quadco is your source for complete forestry equipment solutions.

Then vs. Now: Cutting a Tree Through Time

- **Late 1800s: The Hand-Saw Era**
- **Tools:** Crosscut saws and axes — operated entirely by hand.
- **Crew:** Typically **2 men per tree** ("sawyer" and "axeman").
- **Time:**
  - A single large pine, fir, or hardwood (2–4 ft diameter) could take **4 to 6 hours** to fell.
  - Tougher or larger trees sometimes took **a full day**.
  - After felling, additional hours were needed to limb and buck the log manually.
- **Output:** A strong two-man team could cut **4–5 medium trees per day**, depending on terrain and species.
- **Physical demand:** Extremely high — most loggers burned **6,000–8,000 calories per day**.

- **Today: The Mechanized Era**
- **Tools:** Hydraulic harvesters, processors, and saw heads (like Quadco's disc saws and processors).
- **Crew: One operator** inside a protected, climate-controlled cab.
- **Time:**
  - A modern processor can **fell, delimb, and buck a tree in 30–60 seconds.**
  - In good conditions, that's **60–80 trees per hour.**
- **Output:** One machine can do what **a 20-person crew** did in the early 1900s — with more precision, safety, and consistency.

Efficiency Comparison

Era	Average Time per Tree	Crew Size	Output per Day	Notes
1880s	4–6 hours	2–4 men	4–6 trees	Manual saws, axes, horses
2020s	1 minute	1 operator	400–600 trees	Mechanized saw/processor

“From Manual Labor to Mechanical Precision”

Since the late 1800s, forestry has evolved from muscle and hand tools to precision machines guided by data, hydraulics, and smart control systems.

What once required entire crews of men with axes and crosscut saws can now be accomplished by a single operator in a modern cab — faster, safer, and more efficient than ever before.

Today, **Quadco** carries that legacy forward.

Through innovation and integration, Quadco’s complete lineup — **M-Series Mulchers, Forestry Mowers, Processors, Bucking Software, and the Bracke Mechanized Planter** — delivers a fully connected forestry system:
one that **clears, processes, and regenerates** the forest with unmatched precision.

Let’s take a closer look at each part of that system — the technology shaping the future of mechanized forestry.

Planters

🌲 Technology Has Transformed Logging

Like everything else in today's world, **technology has advanced the logging industry** — from harvesting and processing to now, **reforestation**.

- Through an exclusive partnership between **Quadco** and **Bracke Forest of Sweden**, the **Mechanized Tree Planter** brings **European innovation** to **North American forestry**.

- This state-of-the-art system mounts to a forwarder or excavator and **automatically plants seedlings with precision** — controlling depth, spacing, and soil compaction with every cycle.
- What once took a full planting crew can now be done by **one operator and one machine**, planting **up to 200-300 seedlings per hour**.

Planters

•The **Bracke P11** is a **mechanized tree planter** that prepares the ground and plants seedlings in one smooth operation.

Step-by-Step Actions:

- **Prepares the site** — clears surface debris and creates a small mound of soil (called a “planting spot”).
- **Positions the seedling** — automatically places it at the correct depth and angle.
- **Compacts the soil** — presses around the seedling to ensure stability and moisture contact.
- **Repeats automatically** — the operator controls spacing and speed from the cab while the machine plants continuously.
- **One Bracke P11 = An Entire Planting Crew**
  1,500 – 3,000 seedlings per machine per day — with greater consistency, safety, and precision.

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The P11 in Action

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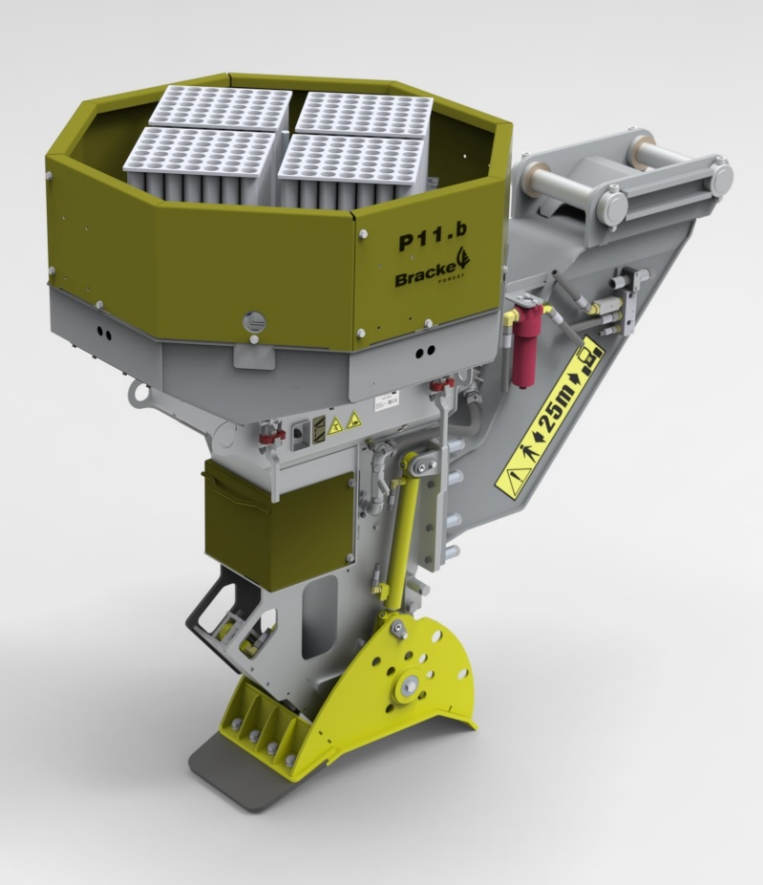
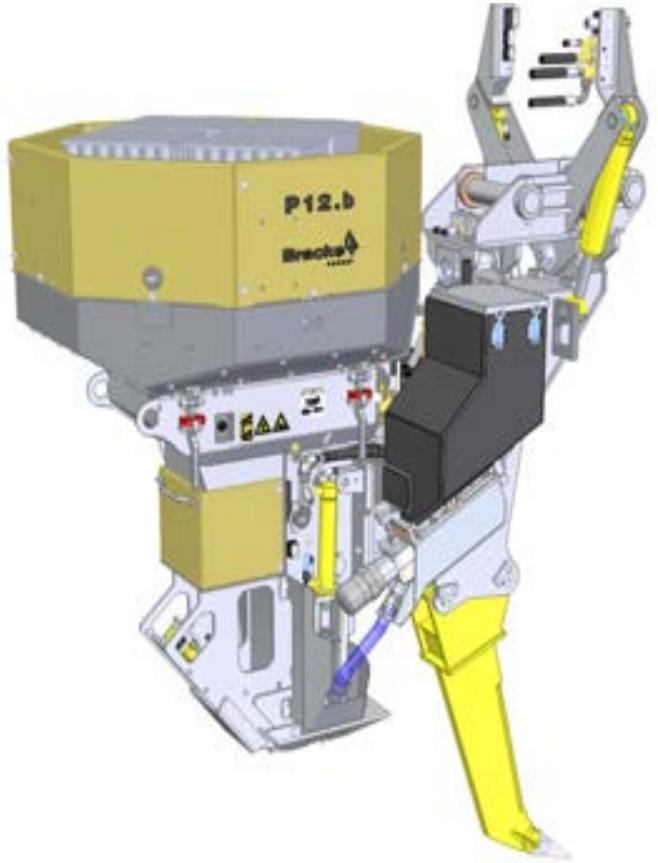
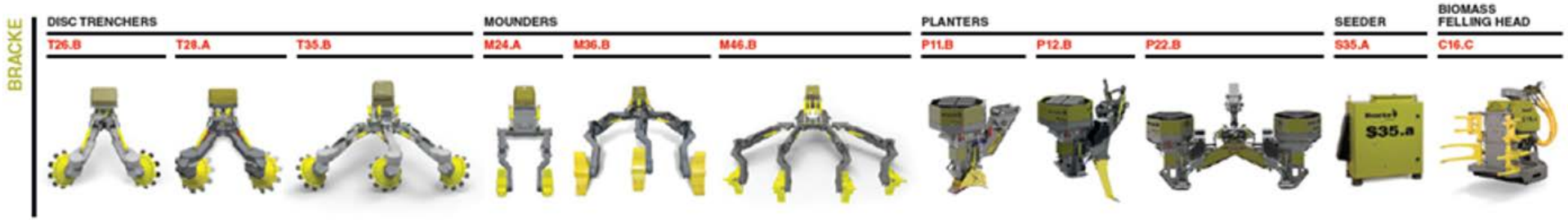
Bracke P11 Planter







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Base machine (PC210LC) modification for Bracke Planter

2 x Water Pump
Irrigation
Cleaning of inside of head

Optimal Hydraulic circuit for Planter

Additional piping

Water tank＋
Counter weight

Seedling refill box storage
+
Water spray
for keeping seedling condition

800mm Shoe
Stability up
Reduce ground pressure

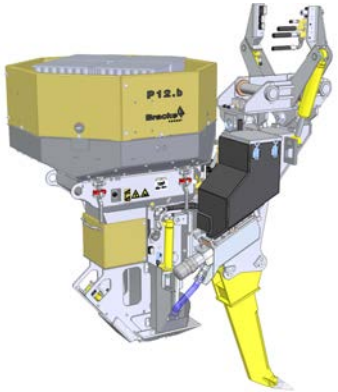
Air compressor
for pushing out fertizer

Bracke Product Range

TRENCHERS

MOUNDERS

SEEDERS / PLANTERS



FELLING HEAD FOR BIOMASS

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Planters

Big Picture - “The Future is Mechanized Regeneration”

- As manual labor becomes increasingly scarce and costly — and immigration and visa limitations continue to challenge the U.S. workforce — **mechanized planting remains an emerging niche, but one that is rapidly becoming essential for the future of forestry.**
- Machines like the **Bracke P11** represent this next step in evolution — combining multiple operations into a single system that delivers greater precision, reduces operational risk, and enhances overall field performance.
- For forward-looking forestry operations, adopting this technology isn’t just preparation — it’s positioning for the future: faster cycle times, lower cost per plant, improved stand quality, and stronger resilience against labor and immigration disruptions.

If your network of operations or dealer clients aren’t evaluating this now, they may be behind industry curve in 2-3 years.

Let’s talk Mulchers

If there were ever a machine that could turn chaos into compost, it’s the forestry mulcher. These beasts don’t just chew through brush and small trees—they *devour* them. One minute you’ve got a tangled mess of undergrowth, the next you’ve got a clean site and a nice layer of mulch Mother Nature would approve of.

In today’s logging and land management world, mulchers bridge the gap between brute strength and environmental finesse. They reduce fuel costs, eliminate the need for burning, and leave behind a site ready for regrowth.

Modern machines—like Quadco’s M-Series—bring serious bite with cutting-edge efficiency, operator comfort, and reliability that keeps the job moving (and the operator smiling).

Because let’s be honest—there’s something oddly satisfying about watching a machine turn a forest jungle into a tidy, mulch-covered masterpiece.

Mulchers

Mulching Technology: 30 Years of Progress

- **1990s – Basic Power**
  Heavy steel drums, fixed teeth, slow output, high fuel use, little safety or environmental control.
- **2000s – Hydraulic Boost**
  High-flow carriers emerge; interchangeable teeth, enclosed drums, and early tilt functions improve efficiency.
- **2010s – Smart Design**
  Spiral drums replace straight rows; variable hydraulics, lighter frames, and better cab safety improve precision and comfort.
- **2020s – Intelligent Systems**
  Telematics, adaptive hydraulics, GPS mapping, and quick-swap mounts make mulchers data-driven and efficient.
- **Today – Quadco M-Series**
  Spiral-bit limiter drum, smart flow control, universal mount, telematics-ready — delivering maximum power, precision, and sustainability.

“From Muscle to Mind — 30 Years of Mulching Evolution.”
Quadco M-Series: built for the modern era of smart, sustainable forestry.

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Excavator Mounted Mulchers

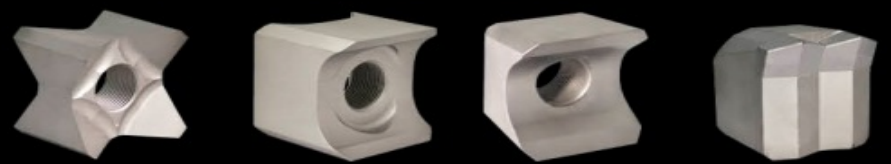
M-32
32” (81cm)

M-42

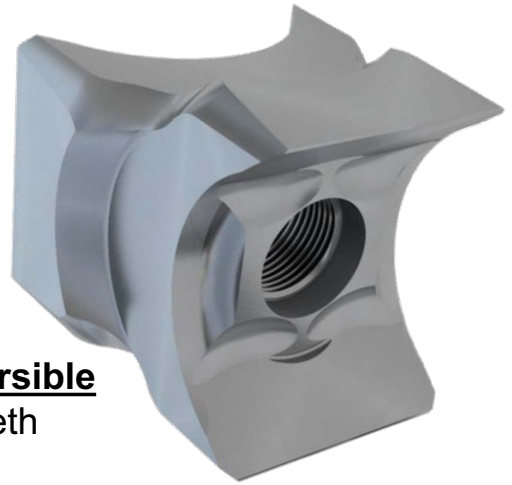
M-52
52” (132 cm)

M-62
62” (157 cm)

Many QuadTooth styles available: Reversible, Planer, Beaver and Carbide



New Patented
Rotatable & **Reversible**
Mulcher Teeth



QDM45
45” (114cm)

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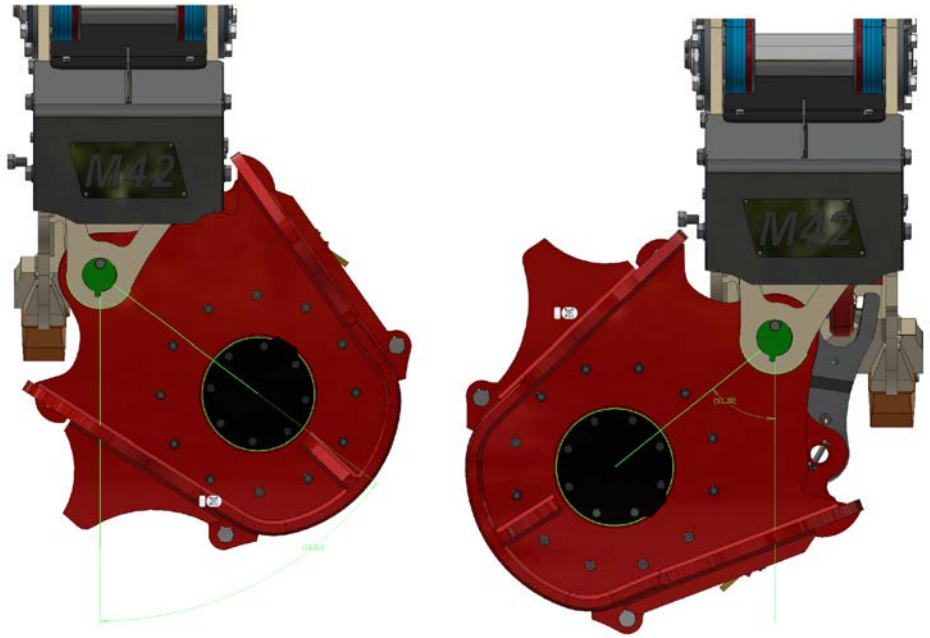
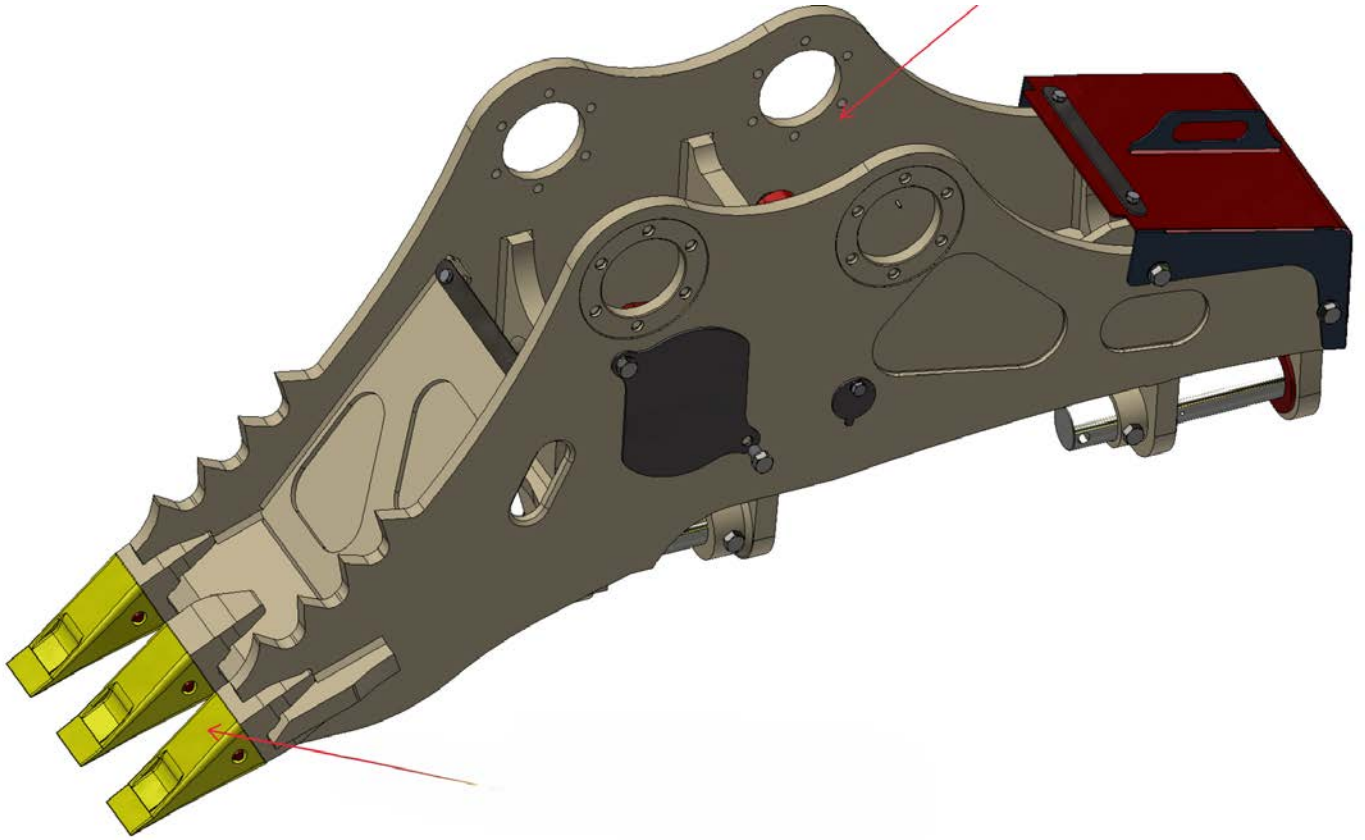
New: *QUADCO* M-Series Mulcher



Patent Pending 100-degree Tilt with built in Heel. Replaceable bucket teeth on heel.



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From Site Prep to Harvest

The **Harvester-Processor** is where preparation turns into production — combining power, precision, and performance in one machine.

Next Generation Harvestor-Processor Quadco SS23

Fell, delimb, buck with speed and intelligence…..

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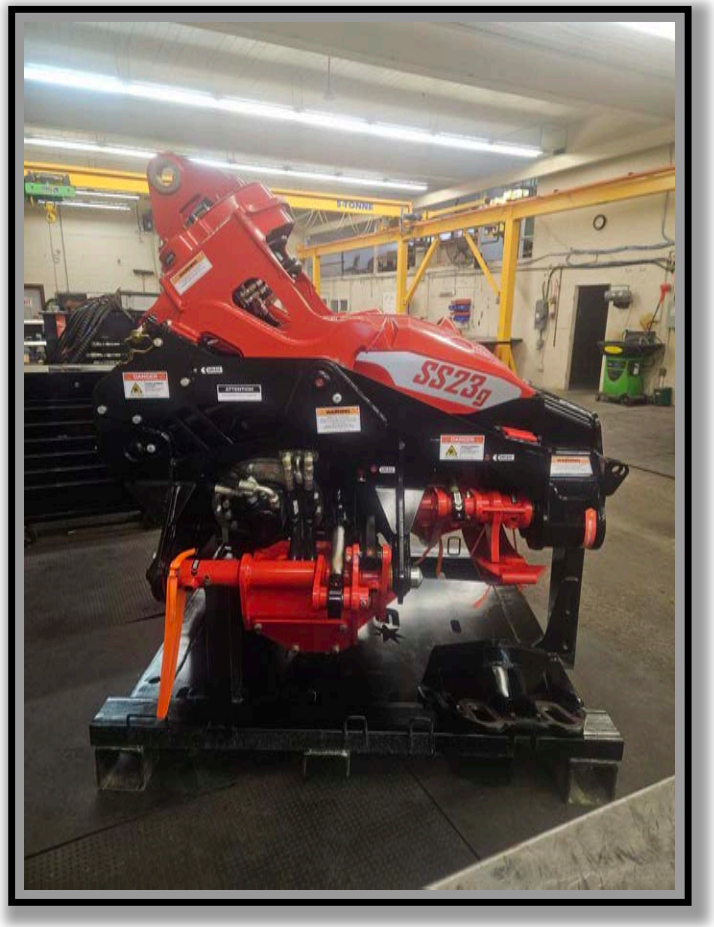
Next Generation Harvester-Processor Quadco SS23



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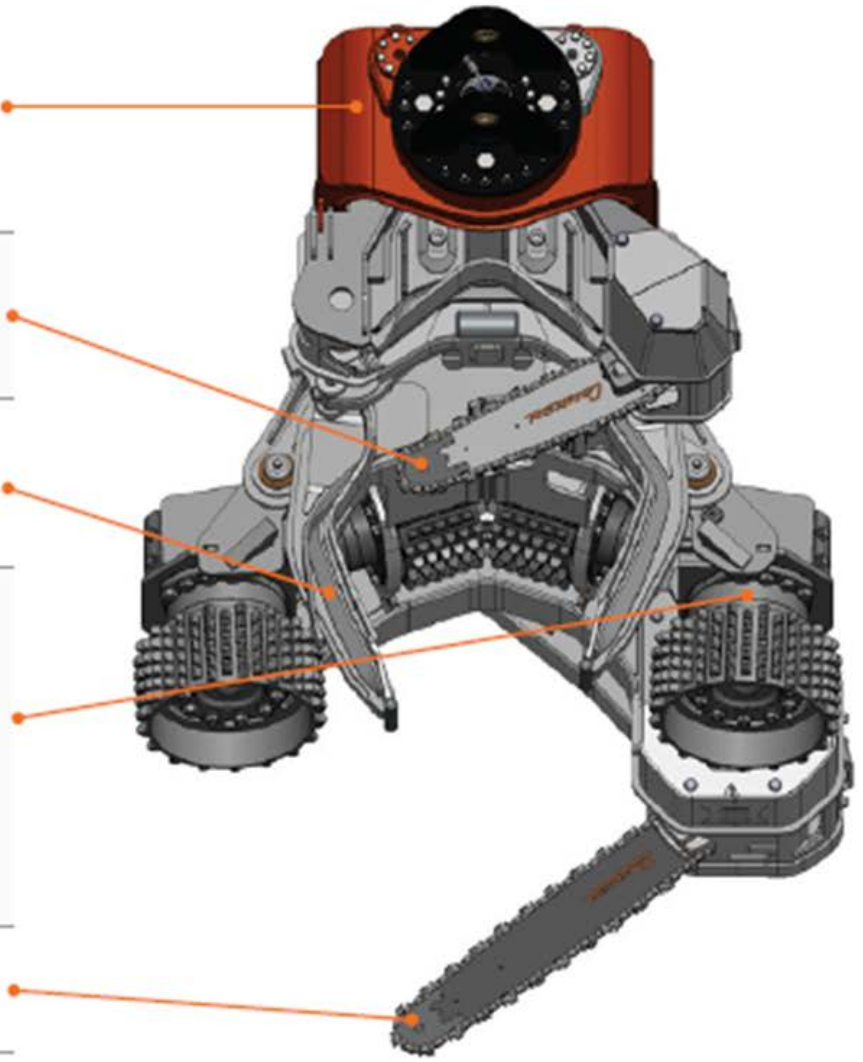
New QUADCO S* Series Processor SS23

	QS581
TILT BRACKET	New Tilt Bracket with dual rotate motors and dual tilt cylinders
TOP SAW & SAW BAR	¾" Top saw with 26" saw bar
DELIMB ARM	Modified delimb arms, optimised for a 23" stem.
DRIVE ARM	Poclain MS11-7 Drive Arm Motors and associated drive arms combined with Poclain MSE05 Centre Motors
MAIN SAW	36" Mainsaw bar



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Value Bucking

Optimizing Every Cut for Maximum Value

Overview:
Value Bucking enables you to **maximize the value of each stem** by determining the most profitable cutting pattern based on log dimensions, quality, and market demand.

Key Features:
•Fully compliant with **StanForD 2010** bucking instruction standards
•Integrates seamlessly with modern harvesting systems and onboard computers
•Provides **data-driven cutting instructions** to the operator

Benefits:
✅ **Maximizes timber value** — every stem is cut for highest return
✅ **Improves operator efficiency** through clear decision support
✅ **Ensures consistency** across machines, sites, and operators

Value Bucking

The processor does the physical work — delimbing, feeding, and cutting.

The **Bucking Software** does the thinking — analyzing length, diameter, and market value in real time to calculate the **most profitable cut pattern** for each stem.

Together, they form an intelligent system that turns trees into optimized products — efficiently, consistently, and profitably.

Value Bucking

🌲 What Is Value Bucking?

- Imagine you have a tree that's just been cut down.
  It can be turned into **different types of logs** — some best for sawmills, others for pulp, and others for specialty products.
  Each piece of that tree has a **different value**, depending on its size, quality, and what the market currently needs.
- **Value Bucking** is the process of deciding **where to cut the tree into logs** so you get **the most money and the least waste** from every stem.
- Instead of guessing or cutting by habit, the machine uses **real-time data** and **smart software** to guide the operator:
- Sensors in the harvester head **measure each log's length and diameter** as it's cut.
- The operator can note **changes in wood quality** (like knots or rot).
- The computer then calculates **the best possible cutting points** to get the highest total value.
- It's like having a **calculator in the cab** that tells the operator:
- "If you cut *here*, this log is worth $120;
  but if you cut *a little shorter*, you can make $135."
- That's **Value Bucking** —
  using data and smart decisions to **turn every tree into its highest-value product.**

What Is Value Bucking?

- Each tree has several possible products (sawlog, pulp, chipwood)
- The harvester measures and evaluates each cut in real time
- The system recommends where to cut for the best total value

Result: Less waste, more profit, and consistent quality

Turning every tree into its highest-value product—powered by smart data and precision cutting

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Value Bucking

How does it work?

- The bucking is based on four different parameters: Length, diameter, quality and value.

- Length and diameter are registered by sensors in the harvester head when the stem is processed. Any changes in stem quality are managed by the operator. Logs from the same stem can be divided into different qualities, with each length and diameter combination having a value.

- With the colour marking option, work is further simplified by marking certain assortments or, alternatively, marking individual diameter classes within an assortment.

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Questions


M62
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PLANTING/
SEEDING
VEGETATION
MANAGEMENT
SITE PREP
FELLING
PROCESSING
QUADCO
YOUR SOURCE FOR COMPLETE
FORESTRY EQUIPMENT
SOLUTIONS


M32
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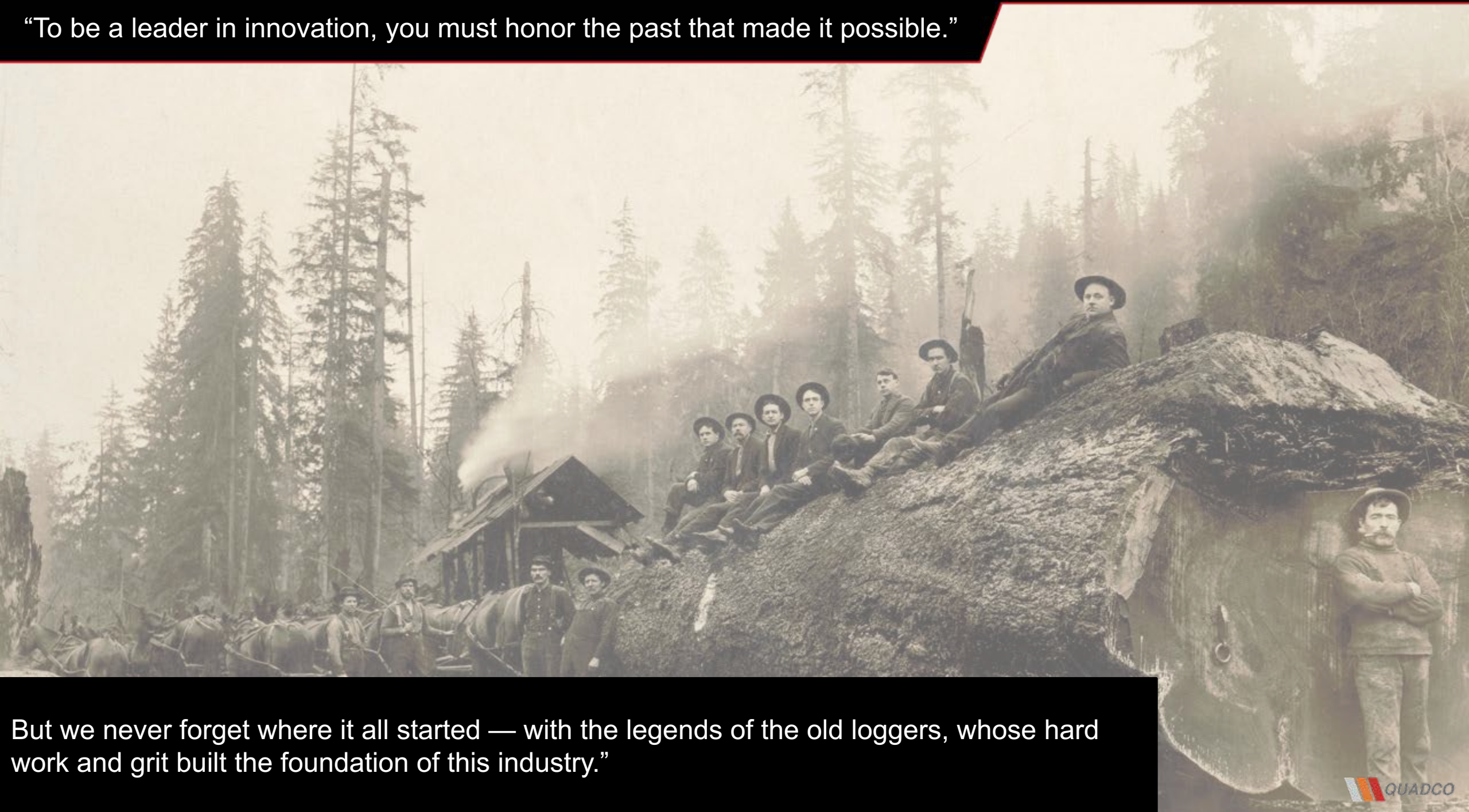
“To be a leader in innovation, you must honor the past that made it possible.”



But we never forget where it all started — with the legends of the old loggers, whose hard work and grit built the foundation of this industry.”

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“The future of forestry belongs to those who innovate — and at Quadco, that future has already begun.”

PACIFIC LOGGING CONGRESS

LA QUINTA-2025