

ROADTEC RX-505 COLD PLANER





ROADTEC
RX-505e



AS TEC

MANUAL
OPERATION



BUILT TO CONNECT

Astec Industries' Roadtec RX-505 cold planer provides industry-leading asphalt milling for highways, interstates, and more.

The Roadtec brand has been an integral member of the Astec Industries family since 1981. By aligning all Astec brands, we harness the power of a comprehensive dealer network, expansive parts distribution, and robust service.

Based in Chattanooga, Tennessee, Astec was founded in 1972 with the vision to supply creative thinking and state-of-the-art technologies to Rock to Road industries.

Today Astec manufactures more than 100 products in 25 facilities worldwide. Astec products include:

- Rock crushing plants.
- Screening plants.
- Hot mix asphalt facilities.
- Concrete plants.
- Asphalt pavers.
- Recycling solutions.
- Forestry solutions.

Astec is committed to placing the customer first. We focus on customer-driven innovation in everything we do. This approach informs how we design, build, and service our products.

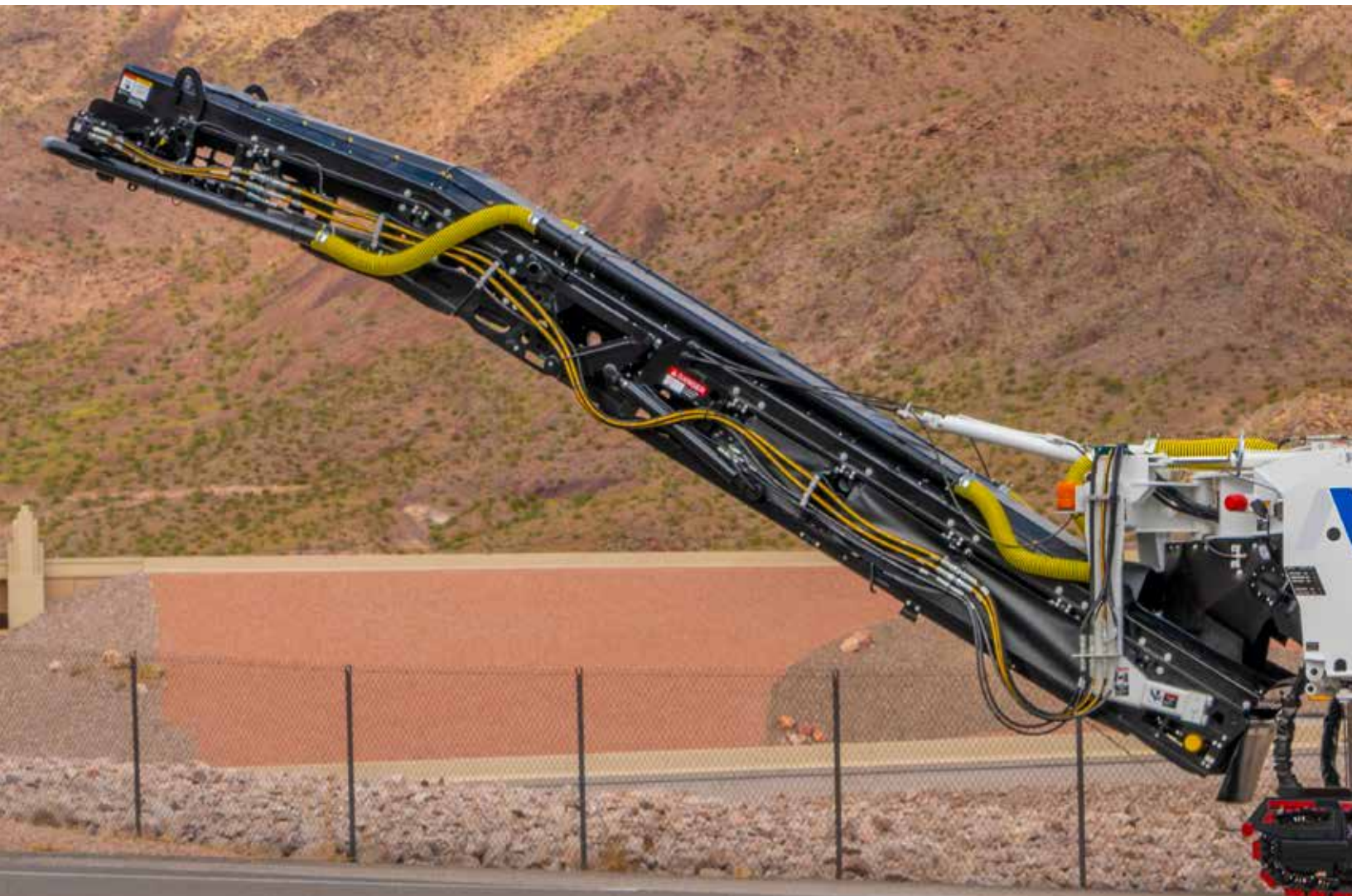
As part of Astec Industries we are Built to Connect today, tomorrow, and in the future. This means that our products, services, and solutions connect communities. We design and develop innovative and sustainable industry-leading cold planers through collaboration, modernization, and teamwork. We are Built to Connect.

HIGH-PRODUCTIVITY MILLING

Power and solid construction make the RX-505 ideal for high-productivity milling. The RX-505 offers enhanced features and is built for high productivity, easy maintenance, and superior operator comfort and safety.

The Cummins® 610 hp (466 kW) engine includes engine load control as well as automated engine throttle, two tools that allow the operator to maximize engine performance. The RX-505 incorporates high function conveyors as well as automated controls for rpm, water, elevation, load, and traction.

The powerful RX-505 cuts up to 13 in (330 mm) deep and includes a 60 degree front load-out conveyor swing. The wide conveyor design transports more material with increased efficiency.



Designed for enhanced productivity, with a heavy-duty engine, balanced weight, and lighter frame.

- The RX-505 is powered by a commanding 610 hp (466 kW) Cummins® engine. The engine includes Engine Load Control and well as Automated Engine Throttle, two tools that allow the operator to maximize engine performance.
- To perform all the functions of the milling operation, a cold planer requires a delicate balance of weight and power. The weight of the RX-505 is balanced over the cutter housing, to ensure excellent traction while maintaining the desired cut depth. The ability to properly balance the machine means the performance remains consistent while following trucks through tight turns.
- The RX-505's frame is durable and completely fabricated, welded, and assembled by Astec. Astec is the only manufacturer to use A656 Grade 80 steel throughout the frame. This allows you to have the industry's strongest frame, without adding weight.



KEY FEATURES



1 Dust Extraction System

A standard dust extraction system pulls dust from the primary conveyor and ejects the material along the secondary conveyor into the dump truck.

2 Folding Conveyor

A folding secondary conveyor aids in transport and loading.

3 Operator Display Screen

The operator display prompts the user when safety interlocks, which prevent the machine from operating, are engaged.

4 Operator Station

Intuitively designed operator station and controls increase safety and productivity.

5 Operator Seats

Comfortable operator seats are height adjustable and easily stowed if additional standing room is desired.

6 Belt-Lift Device

Belt lift device lifts the cutter drum drive belt from the clutch pulley to improve safety when performing drum maintenance.



7 Drum Index

Safely advance the cutter drum using a magnetic based control box.

8 ACE™ Grade and Slope Automation

ACE automates the elevation of the machine through a combination of grade and slope sensors. ACE includes three user friendly control panels to be placed at the operator station and at the sides of the machine.

9 Rear Object Detection

This system is designed to stop the cold planer if a person or object is detected behind the machine while it is in reverse. Rear Object Detection includes additional sensors and ground level buttons that allow crew members to disable reverse.

10 Grade Control Storage

Large drawers are conveniently positioned for storage and protection of grade control sensors, cables, and panels.

FOCUSED ON CREW SAFETY

When designing Astec machines, safety is always at the forefront. RX-505 safety features include:

- Rear Leg Load Sensing — Disables the drum when an abrupt change in rear leg pressure is detected. Load cell pins immediately recognize a change in weight on the machine's leg tubes and disable the cutter drum.
- Cutter Drum Safety Interlock — Prevents the gearbox and drum drive components from absorbing the shock load in the event the cutter drum makes contact with an underground obstruction.
- Dust Extraction System — Removes dust and debris through a hydraulic fan at the primary conveyor. The dust is ejected at the end of the secondary conveyor into the dump truck.
- Rear Backup Camera — Enhances visibility of ground workers and obstructions.
- Magnetic Base Halogen Work Lights — Illuminate key areas of the machine.



Drum Index & Belt Lift Device

The RX-505 is equipped with a Drum Index Device, a mechanism that rotates the drum independent of the cutter belt drive. The ability to rotate the drum while the drive belt is disengaged allows for safe cutter drum access and maintenance. An air compressor can safely operate while the engine is running.

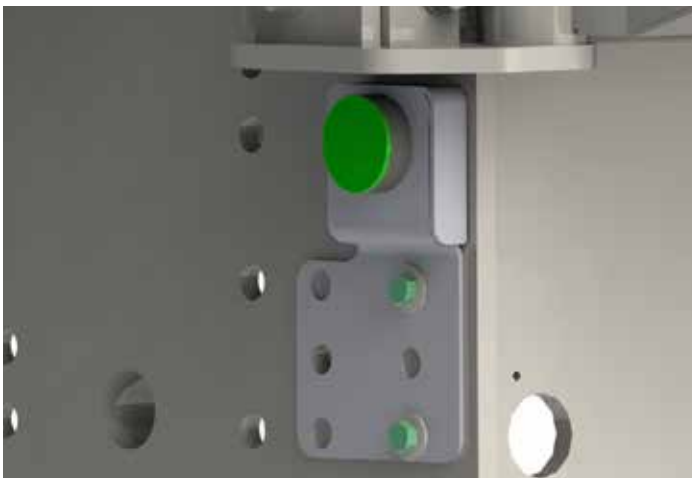


Belt Lift Feature

A device used to lift the cutter drum drive belt from the clutch pulley for a higher level of safety when performing drum maintenance.

Rear Object Detection

The optional rear object detection system provides an increased level of safety for your milling crew. This system is designed to aid in stopping the mill if a person or object is behind the machine while it is in reverse.



Ground Level Buttons allow crew to disable reverse if needed.



Maintenance Mode Control Box

A magnetic based control box provides easy control of the drum and belt lift feature while under the machine.



Sensors located on the back of the machine detect objects or people.

OPERATOR COMFORT



Adjustable Operator Seats

- Comfortable operator seats are height adjustable.
- Seats are easily folded and stowed if additional standing room is needed.

Comfortable Operator and Side Platforms

- The operator platform is conveniently accessed from the right or the left side.
- Isolated platforms absorb shock, eliminate vibration, and provide a quieter operator environment.

Maneuverability Options

- Four steering modes enhance the machine's agility, allowing it to produce through tight turns. Steering modes include crab, coordinated, rear only, and front only.

On-Board Service Tool

- The RX-505's operator display includes live schematics of various machine circuits for simplified troubleshooting.
- The display prompts the user when safety interlocks, which prevent the machine from operating, are engaged.



Simplified Controls

- Simplified controls are easily operated from either side of the platform.
- Multifunction joystick controls are easy to understand.
- Expanded on-board diagnostics keep the operator informed of changes made from ground controls.

Automated Features

- Automatic Traction Control.
- Engine Load Control.
- Automated Engine Throttle.
- Automated Water System.



Integrated Ground Box Controls

Integrated ground box controls let the ground crew select steering mode, secondary conveyor steering, front and rear moldboard pressure, and machine elevation. Handrests are also included.



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ACE™ GRADE AND SLOPE

Advanced Automated Elevation Controls

The RX-505 is equipped to use ACE, the Automated Control of Elevation System that automates machine elevation through a combination of grade and slope sensors.

With ACE, the operator and ground crew can easily make changes to the grade and slope parameters in real time. Graphic displays allow the crew to easily select, calibrate, and control sensors with minimal time and effort. The sensors used to measure depth and slope are continuously monitored and displayed on three separate control panels keeping your entire crew on the same page at all times.

ACE can be coupled with Roadtec's Auto-Cut™ feature, which automates the machine's rear elevation as it enters each cut. Auto-Cut uses technology to increase precision and reduce the effort required to resume cutting after encountering obstructions or beginning a new pass.

ACE Features

- Additional switches added to each ACE box for added functionality
- Smart cylinders at each endgate for grade reference

ACE[™]
Automated Control of Elevation
by **ROADTEC**



PRODUCTIVE CUTTER DESIGN

The RX-505 features a powerful cutter drive, angled moldboards, and dual spray bars. Each feature is designed to provide the ideal combination of productivity and reliability.

The RX-505's cutter drum cuts up to 13 in (330 mm) deep with available cut widths of 79 in (2,006 mm) and 86 inches (2,184 mm) with a heavy-duty, high-torque gearbox that transfers power from the drive belts to the cutter drum.

Specialty cutter drum designs range from wide spaced excavating patterns to fine spaced micro-milling patterns. Double hit drums are also available, as are multiple tooling options including Kennametal and Keystone Quick Change systems.

Dual Water Spray Bars

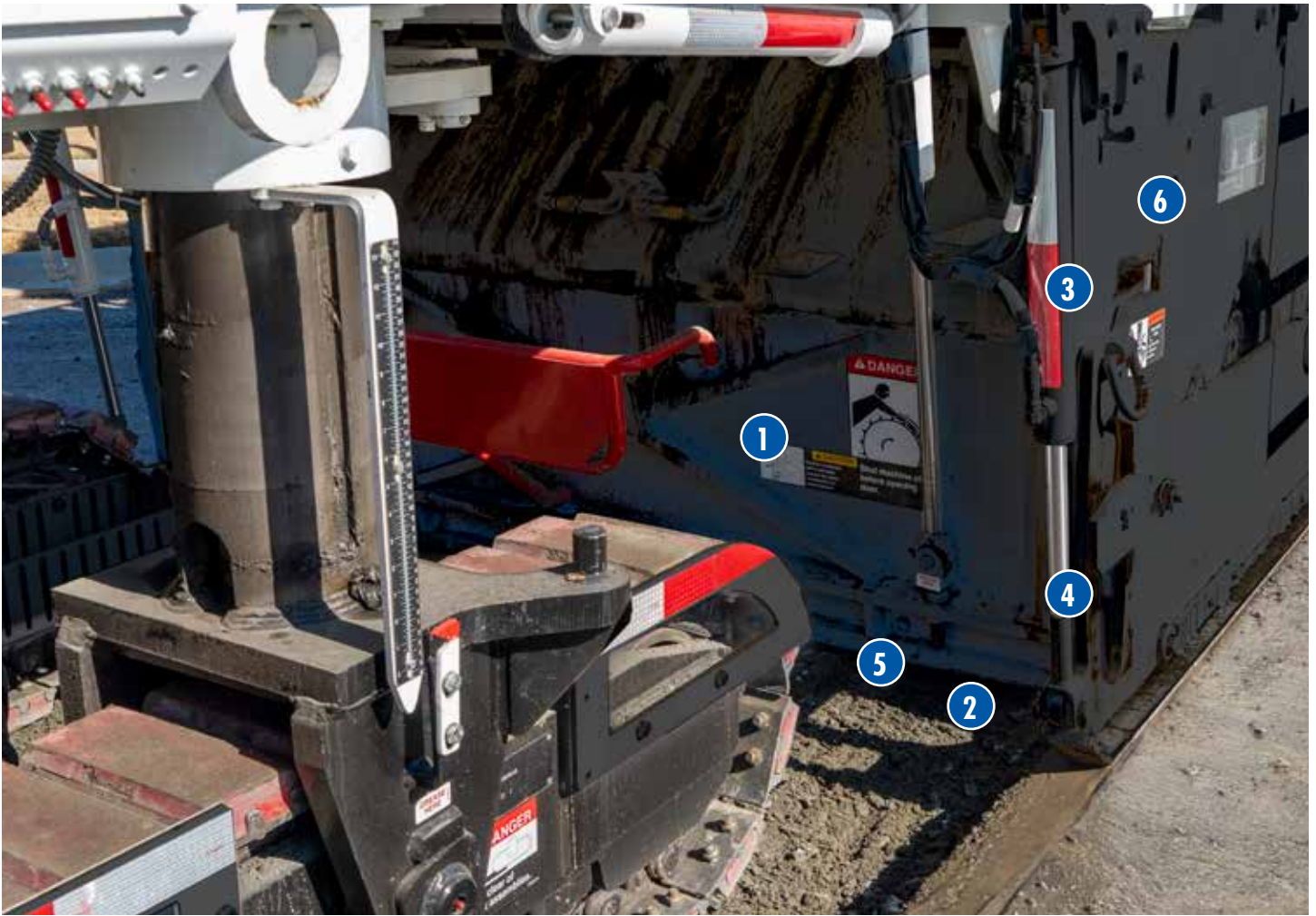
The two independent stainless steel spray bars positioned at the front and rear of the cutter housing provide increased tool life and dust control. The front spray bar is primarily for dust suppression, the rear spray bar cools the cutting teeth.

The RX-505 water tank holds 904 gallons (3422 L). The water system will engage when entering the cut and continue when forward propel is engaged at cut depth. The water will not spray when the machine is at a stop or when the machine is in travel mode.

Versatile and Productive Conveyors

Conveyors are integral to getting the most production from your mill. The wide conveyors on the RX-505 feature infinitely variable speeds to provide improved material removal and containment.

- Customized Conveyor Belt Tensioning — Each end of the belt on each conveyor can be independently tensioned. Keeping the belt tensioned properly ensures that the belt is tracking correctly, which improves belt life.
- Self Cleaning Pulleys — Each conveyor features self-cleaning pulleys, which release wet material to ensure maximum efficiency.
- Versatile Secondary Conveyor Swing — The secondary conveyor swings 60 degrees to the left and right. The traditional swing is only 40 degrees. This increased range makes it possible to mill tight turns, and send material to trucks in an adjacent lane.
- Convenient Folding Conveyor — A folding conveyor comes standard to aid in transport and loading, saving time and money on transport.



1 Material Brace

A material brace on the front moldboard applies even pressure to the front edge of the cut for excellent material sizing.

2 Scraper Blades

Bolt-on tungsten carbide scraper blades at the rear moldboard add to the housing's toughness.

3 Solid Cutter Housing & Wear Areas

Cutter housing is made of T-1 steel (350 BHN). Replaceable, 1/2 in (12.7 mm) chromium-clad (600 BHN) wearplates cover all potential wear areas.

4 Adjustable Engates

Adjustable endgates have replaceable shoes at the high-wearing front and rear corners.

5 Angled Rear Moldboard

The angled rear moldboard can be set in a fixed position or in float mode. Float allows the moldboard to adjust up and down with the elevation of the cut, and the height of the rear moldboard is fully adjustable. When the moldboard is fully raised the engine is shut down for safety. Both the rear and front moldboard are angled in toward the drum by 10 degrees. This allows less material to accumulate around the drum, which increases component life, production rates, and efficiency as well as leaving less material to clean up at the end of a pass.

6 Modular Cutter Housing

The cutter housing and drum are completely modular, allowing them to be easily interchanged with other housings and drums of different widths.



MAINTENANCE AND ACCESS

Preventative maintenance is vital to the longevity of machinery. Ensuring access to maintenance areas makes the process fast and simple.

- Access — The hood of the RX-505 opens hydraulically 60 degrees, providing unobstructed engine access. The rear radiator door also raises to facilitate ground level tasks. Additional maintenance doors are found at each service point.
- Storage — Two large, ground level storage compartments provide convenient storage. The battery compartment is at ground level for easy reach. Drums are also easily serviced.
- Maintenance — There is a magnetic based control box for trouble-free operation while under the machine, as well as a bench for cutter drum maintenance. Additionally, a belt lifter separates the drum drive belt from the clutch sheave to make maintenance and inspection painless.
- Security — Vandal covers for the operator station and ground control boxes are provided.

Quick Clean-Up

The RX-505's high pressure washdown system keeps the machine looking and running like new. The system includes spray nozzles at conveyors and plenty of hose length to reach all points of the machine.

Grade Control Storage

Large drawers are conveniently positioned for storage and protection of grade control sensors, cables, and panels.



Air Compressor

The RX-505 comes with a standard compressed air system. Two storage tanks and a compressor let you use your air tools for service and maintenance tasks.

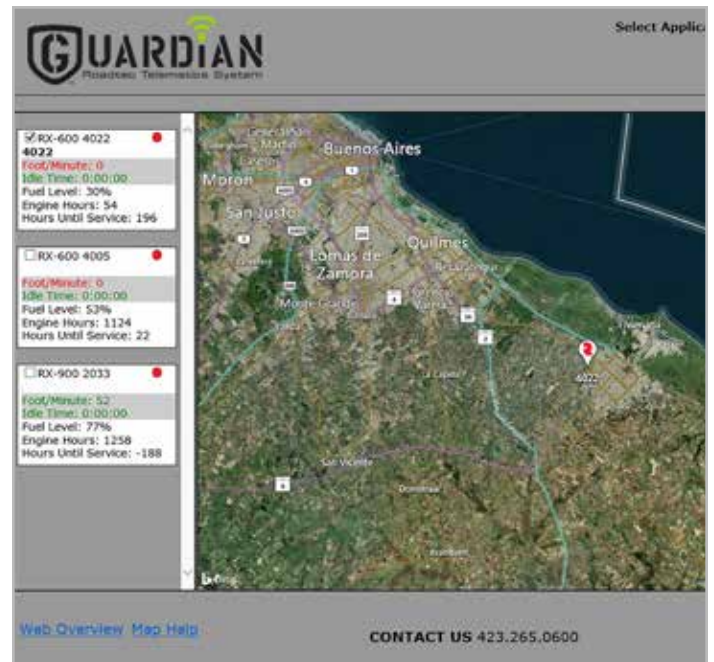
Electrical System

The RX-505 has a standard 24 volt electrical system with a 105 amp alternator. CAN-based electronics with on-board and remote diagnostics allow simple troubleshooting throughout the machine.

OPTIONS

Protect your investment and keep operating costs low by monitoring your machines in real time through a wireless signal with the Guardian® Telematics System. Guardian is the industry's only live 2-way telematics system. Guardian includes software, on-machine viewing screens, and wireless signal boosters to send and receive data in real time from anywhere at anytime.

Guardian provides the data you need to make changes in real time to mitigate risks and increase profits. Guardian's intuitive Live Schematics™ lets owners and technicians view electrical circuits in a simple, efficient layout with real time status of switches, valves, and settings.





RX-505

Detail	Spec
Engine	Cummins® QSX-15 610 hp (466 kW) @ 1,900 rpm
Weight	54,368 lbs* (24,660 kg) <i>*10% tank full; no water, 79 in cutter housing & drum, with canopy</i>
Cutting Width	79 in (2 m) or 86 in (2.18 m)
Cutting Depth	13 in (330 mm)
Standard Tooth Spacing	5/8 in (16 mm)
Standard Tip Diameter	44 in (1.12 m)

Options

Superior Automation

ACE Single and dual averaging ski systems

Automated lubrication system

Optimized Tools and Efficiency

Guardian™ Totalizer

Versatile Cutter Systems

Profiling or micro-milling cutter drum systems

79 in (2 m) or 86 in (2.18 m) cutter housings

Enhanced Visibility and Comfort

24v LED night light package

Operator station canopy – hydraulic or manual

Secondary conveyor camera



ASTEC™

www.astecindustries.com