

# RX-505e/ex

## HALF-LANE COLD PLANER



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Dedicated to Your Success.<sup>SM</sup>

### Engine

Cummins® QSX-15

Tier 4F; 610 hp (466 kW) @ 1,900 rpm

Tier 3; 610 hp (466 kW) @ 1,900 rpm

### Shipping Weight

54,368 lbs

\*10% tank fuel full; no water, 79" cutter housing & drum, with canopy



### **Roadtec — An Astec Industries Company**

Roadtec is a proud part of the family of companies that make up Astec Industries, Inc. Founded in 1972, Astec is America's leading manufacturer of equipment for asphalt road building, aggregate processing, wood processing, and oil, gas and water well drilling. Roadtec leads the industry by applying Astec's model of creative thinking bolstered by a corporate culture that puts the customer first.



## THE ROADTEC DIFFERENCE: DELIVERING QUALITY AND INNOVATION WITH SUPERIOR CUSTOMER SERVICE

### **Quality and Reliability**

Since 1981 we've manufactured innovative, heavy-highway equipment. We offer the most reliable and maintenance-free pavers in the industry. Our heavy-duty designs keep your machine working longer, lowering your maintenance and operating costs. Your operators work comfortably and confidently with our user-friendly, ergonomic designs.

### **Leading Innovation**

As the original innovator of the Shuttle Buggy® material transfer vehicle, Roadtec provides the industry's most refined pavement placement solutions. Our patented technologies enable nonstop paving and eliminate segregation, while providing the optimum balance of horsepower and maneuverability.

### **Customer Focus**

As we grow and develop new products, our personal connection to our customers remains steadfast. Our field service technicians live in the regions where they work. Our engineering, manufacturing and service departments are in the same building, enabling all teams to work together and provide quick and comprehensive customer service, 24/7. Our skilled and experienced technicians provide comprehensive training at our state-of-the-art training facility or your location.

# ROADTEC'S RX-505

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® Tier 4 Final, 610 hp (466 kW) engine includes engine load control and 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" (330 mm) deep and includes a 60° front load-out conveyor swing. The new wider conveyor design transports more material with increased efficiency.



# ENGINEERED FOR HIGH PRODUCTIVITY AND LOW COST OF OWNERSHIP

The RX-505 is designed for enhanced productivity, with a heavy-duty engine, balanced weight, and lighter frame.



## HEAVY DUTY ENGINE

The RX-505 is powered by a commanding 610 hp engine, (466 kW) Cummins® Tier 4 Final engine. The engine includes Engine Load Control and well as Automated Engine Throttle, two tools that allow the operator to maximize engine performance.

### Balanced Weight

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, to ensure excellent traction while maintaining the desired cut depth. The ability to properly balance the machine means the power remains consistent while following trucks through tight turns or in adjacent lanes.

### Lighter Frame

The RX-505's frame is durable and completely fabricated, welded, and assembled by Roadtec. Roadtec 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.

# FOCUSED ON CREW SAFETY

When designing Roadtec 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** — Illuminates key areas of the machine.

## Drum Index 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.

- Lifter separates drum drive belt from the clutch pulley.
- Air compressor can safely operate while the engine is running.
- A magnetic based control box provides access and easy operation while under the machine.



## Conveyor Access and 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 and increases production.





## REAR OBJECT DETECTION

Sensors and ground level buttons allow members of the crew to disable reverse.



### Rear Object Detection

An optional Rear Object Detection system provides an increased level of safety for your milling crew. This system is designed to stop the mill if a person or object is detected behind the machine while it is in reverse.

The system includes additional sensors and ground level buttons allowing crew members to disable reverse. The ground level buttons on the rear corners of the machine give the ground crew increased control if someone needs to walk behind the machine during operation.



**Red Light – Reverse Disabled.** The machine will operate normally in forward motion, but will not reverse while the button is red.



**Green Light – Normal Operation.** The machine will operate normally in forward and reverse. Detection sensors are still active.



**Yellow Light – Operator Override.** The machine will operate normally in forward and reverse. Detection sensors will not stop the machine.

# ENHANCED OPERATOR COMFORT AND EASE

The RX-505 is created for enhanced operator comfort and visibility. Elements designed with comfort in mind include:



## Adjustable Operator Seats

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

## Isolated 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 in Operator Display

- 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

## 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. Hand rests are also included.



## 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

# EFFICIENCY YOU CAN RELY ON

The RX-505 combines power with productivity. Dependable horsepower is coupled with intuitive features that boost efficiency, including high function conveyors and ACE, Automated Control of Elevation.

## Versatile and Productive Conveyors

Conveyors are integral to getting the most production from your mill. The conveyors on the RX-505 have a superior design for improved material removal and containment. Conveyors feature infinitely variable speeds as well as a wider conveyor design, which moves more material.

- **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° 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.



## ACE™ 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.



- Additional switches added to each ACE Control box for added functionality
- Smart cylinders at each end gate for grade reference



# 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" deep with available cut widths of 79" (2006.6 mm) and 86" (2184.4 mm). The inside walls of the cutter housing are fully lined with replaceable chromium-clad wear plates to ensure the housing withstands the abuse of the milling operation. Additionally, a heavy-duty, high-torque gearbox transfers power from the drive belts to the cutter drum.

An innovative drum turning device allows the drum to be turned manually so the crew can easily change teeth. 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 Sollami, Kennametal, and Keystone Quick Change systems.

## **Adjustable and Angled Moldboards**

The rear and front moldboards on the RX-505 are angled in toward the drum by 10°. This allows less material to accumulate around the drum, which means increased production rates, and efficiency, as well as leaving less material to clean up at the end of a pass.

- The 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.
- A safety disengage shuts off the machine when the moldboard is fully raised. A power pack can raise or lower the moldboard when the machine is off.
- A material brace on the front moldboard applies even pressure to the front edge of the cut for excellent material sizing.
- Bolt-on tungsten carbide scraper blades at the rear moldboard add to the housing's toughness.

## **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.





RX-505e

ROADTEC



GIBCO G-11

CATERPILLAR

Talley

# SIMPLE MAINTENANCE AND LONG WEAR LIFE

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

**Access** — The large hood of the RX-505 opens hydraulically 60 degrees, providing easy engine access. The ground level rear radiator door also raises for easy access. Additional access doors are found at each service point.

**Storage** — Two large, ground level storage compartments provide convenient storage. Also, the battery compartment is at ground level for easy reach. Drums are also easily accessed.

**Maintenance** — There is a magnetic based control box for easy 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 easier.

**Security** — Vandal covers for the operator station and ground control boxes are provided.

## Quick Clean-Up

The RX-505's high pressure wash-down system keep 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 HMI 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.

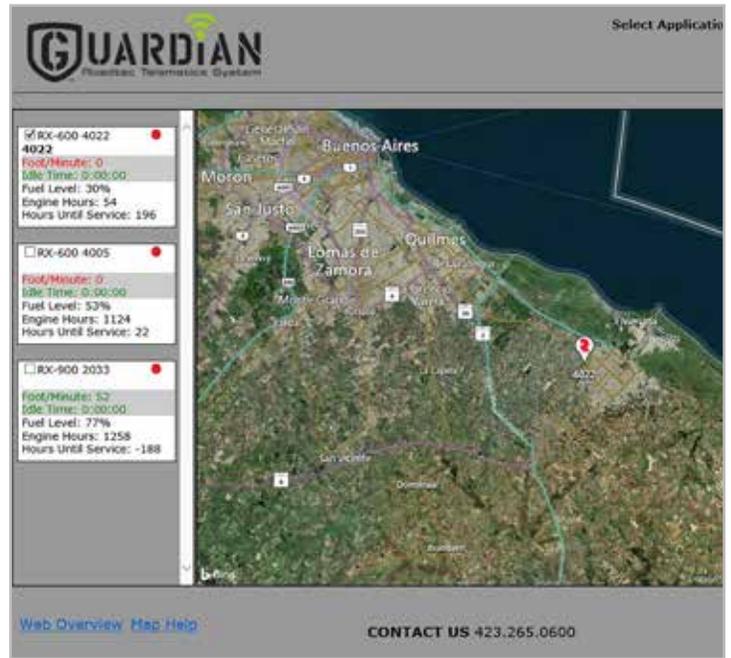
## Electrical System

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

# TWO-WAY REMOTE TELEMATICS

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.



# CUSTOMIZATION 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" or 86" cutter housings

## EDGE® Extended Equipment Warranty

The EDGE® Extended Equipment Warranty is an industry leading warranty that demonstrates our confidence in the quality and reliability of everything we make. This warranty goes above and beyond power train or extended engine warranties currently offered in the industry by covering more components and repairs as well as covering repairs done by the customer for a term of 3 years or 3,000 hours on the machine and 5 years or 6,000 hours on the engine. By covering most components other than wear items at full replacement cost and for a longer time period, the EDGE® warranty gives owners an edge over their competition by lowering their operating costs.

## Enhanced Visibility & Comfort

- 24V LED Night Light Package
- Operator Station Canopy- Hydraulic or Manual
- Secondary Conveyor Camera



# SPECIFICATIONS

## ENGINE

- RX-505e: Tier 4F; Cummins® QSX-15 610 hp (466 kW) @ 1,900 rpm
- RX-505ex: Tier 3; Cummins® QSX-15 610 hp (466 kW) @ 1,900 rpm

## WEIGHT

- 54,368 lbs
- \*10% tank full; no water, 79" cutter housing & drum, with canopy*

## ELECTRICAL SYSTEM

- 24v system with on board and remote diagnostics via Roadtec Guardian® Remote Telematics System
- Two 8D batteries & 105 amp alternator
- Emergency engine shut-down; cutter disengages and engine shuts down when rear cutter door is opened.

## PROPEL SYSTEM

- Hydrostatic drive with automatic traction control.
- Hydraulically controlled suspension. Manual and automatic.

## SPEEDS FOUR-TRACK

- Travel 0-3.2 mph (0-5 kph)
- High working 0-163 fpm (50 mpm)
- Low working 0-110 fpm (34 mpm)

## TRACKS

- Direct hydraulic, planetary track drives. Bolt-on, replaceable poly track pads 12" (305 mm) wide.

## TURNING RADIUS

- 6'8" (2,032 mm)

## OPERATOR STATION

- Left/right side full-function operator stations on shock-absorbing operator platform with joy stick controls

## GROUND CONTROLS

- Ground controls for mold boards, emergency stop, horn, load-out conveyor, rear steering, end gates, and elevation.

## CONVEYORS

- 32" (813 mm) wide endless, heavy-duty belts with 1" (25 mm) tall molded rubber cleats
- Canvas load-out conveyor covers and self-cleaning pulleys
- 120° load-out conveyor swing capability

## STANDARD LIGHT & ELECTRICAL OUTLET

- 24v lights & 24v DC power outlets, 2 magnetic base work lights

## SERVICE CAPACITIES

- Fuel tank..... 200 gal (757 l)
- Hydraulic fluid tank..... 56 gal (212 l)
- Water tank ..... 904 gal (3422 l)

## CUTTER SYSTEM FEATURES

### MAXIMUM CUT DEPTH

- 13" (330 mm)

### STANDARD TOOTH SPACING

- 5/8" (16 mm)

### STANDARD TIP DIAMETER

- 44" (1,118 mm)

### STANDARD DRUM SYSTEM

- Sollami® triple wrap, single hit drum with cutter bits for traditional milling
- Kennametal® drum optional

### CUTTER DRIVE & GEAR BOX

- Bolt-on with mechanical v-belt drive. Automatic drive belt tensioning.
- O&R cutter gear box with mechanical fail safe to protect engine from shock loads.
- Cutter drum clutch interlock mechanism is designed to automatically disengage the cutter drum when dangerous milling conditions or practices are present. Any abrupt change in weight on the rear leg tube will cause the clutch interlock to disengage the cutter drum.

## CUTTER SYSTEM OPTIONS

### STANDARD CUTTER HOUSINGS & CUT WIDTHS

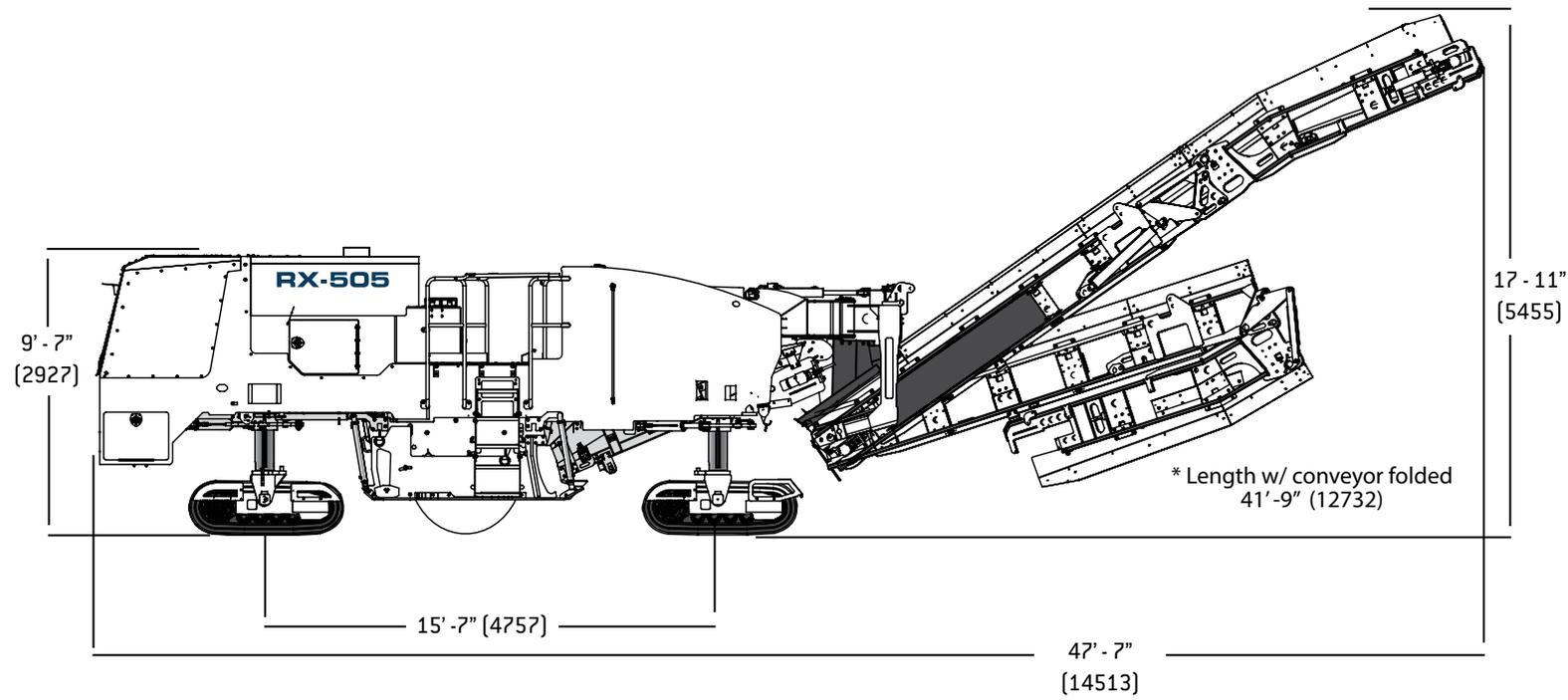
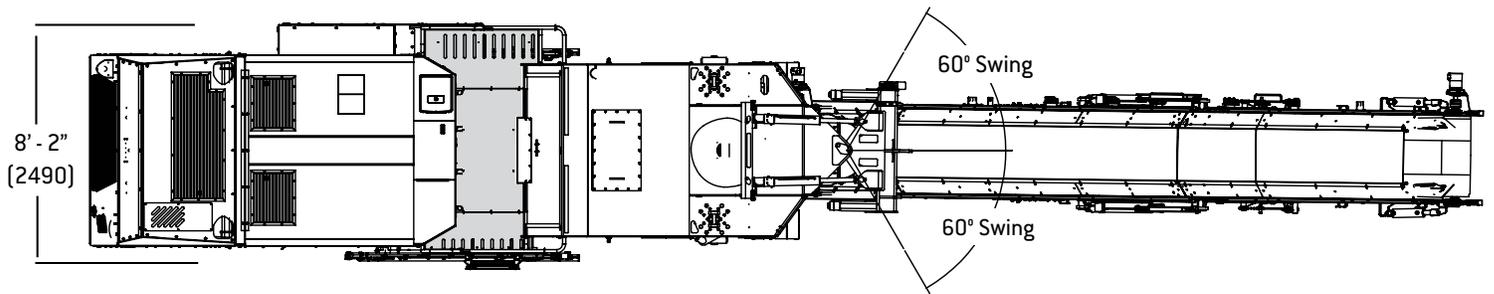
- 79" housing with 6'7" (2,007 mm) width cutter drum
- 86" housing with 7'2" (2,184 mm) width cutter drum

### OPTIONAL VCS® VARIABLE CUTTER SYSTEM

- Cutter housing with segmented rear moldboard capable of widths of 24" (610 mm), 36" (915 mm) & 48" (1,220 mm)
- Special VCS® housing allows change of cutting widths by only changing drum
- Maximum Cut Depth: 12" (305 mm)

# GRADE & SLOPE AUTOMATION

- ACE™ Grade & Slope Automation with Auto Cut
- Prewiring for ACE™ Averaging Ski
- ACE™ - Single Averaging Ski
- ACE™ - Dual Averaging Ski



Dimensions in brackets are mm.

Specifications are subject to change without notice.

# ROADTEC.COM

Dedicated to Your Success.<sup>SM</sup>

Roadtec is dedicated to helping you, our industry, and our country succeed.  
Your success builds your business, supports our industry, and strengthens our country.

**ROADTEC** an Astec Industries Company

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