

# Robbins 74 S

Smart series

Mid-size raiseboring machine for holes up to 4.5 meters in diameter



# The new generation of Robbins 70 series

Robbins 74 S is the latest rig in the 70 series — the most popular model in Epiroc's raiseboring line up. The new Robbins 74 S is a mid-sized raiseboring machine, drilling holes up to 4.5 meters in diameter and is reliable in a variety of applications. The machine has enhanced functionality and reduced manual handling, allowing for a safer and more effortless operation while still retaining the same performance as its predecessor. With its sturdy and high-quality design, the Robbins 74 S facilitates easy operations and maintenance.

## + Main benefits

**Automation ready with less manual handling** thanks to the semi-automatic drive head wrench and hydraulic cylinders with optional integrated sensors.

**Improved wear resistance** through an updated machine design that focuses on enhancing durability of main components and boosting productivity.

**Steadfast and efficient** with standard functions such as anti-jamming, auto make-up and gradual ramp up of speed and torque.



The new swivel design is equipped with wear sleeves, to reduce risk of bailing, wear and tear of high risk areas, and to simplify the assembly. This increases productivity and operations time.



The new drivetrain has a float box positioning indicator, which increases the control of the treading process and improves durability.



Semi-automatic drive head wrench that boosts productivity and safety.



Automation ready pipe loader with integrated sensors for increased precision, control and safety

New protective cover that facilitates an extended lifespan of the float box

Built-in worktable lighting

Specially designed base plate that can handle an incline and decline from 95 to 50 degrees

### S – Smart

Machines within the Smart series are equipped with Epiroc's Rig Control System, RCS, which makes them ready for automation and remote control.





# Raiseboring made easy

Robbins 74 S feature Epiroc's Rig Control System (RCS 5), enabling more efficient, reliable, safe, and user-friendly operations, while reducing overall energy and maintenance costs. Thanks to connections on all hydraulic hoses, the Robbins 74 S is easy to set up and service, allowing you to focus on productivity within your operation.



## + Safety

To enhance safety in your operations, Robbins 74 S is automation ready and designed to minimize manual handling. With the semi-automatic drive head wrench, hydraulic cylinders and RCS 5 as enablers for automation, your productivity can be increased while facilitating operator safety.



## + Epiroc's Rig Control System

As early as 1998, Epiroc introduced its Rig Control System (RCS) – a computerized control system for drilling rigs that stunned the market. More than 10 000 RCS rigs are currently in operation the world over. Long experience and an ongoing dialogue with customers have resulted in increasingly sophisticated functions – with expertise that makes Epiroc uniquely qualified to drive development in the industry.



## + Digital tools

To streamline drilling operations, improve customer service and training techniques, Robbins 74 S utilizes digital and automation tools. The Measure While Drilling (MWD) collects drilling data for evaluation and predictive analysis. My Epiroc enhances the customer experience and functionality through a modern interface and comprehensive fleet management, supported by various devices, including smartphones and tablets. Lastly, Virtual Reality technology enables general training and equipment walk-throughs of the machine.



## A comprehensive service offering

Even the best equipment needs to be serviced regularly to make sure it sustains peak performance. An Epiroc service solution offers peace of mind, maximizing availability and performance throughout the lifetime of your equipment. We focus on safety, productivity and reliability.

By combining genuine parts and an Epiroc service from our certified technicians, we safeguard your productivity – wherever you are.

## Technical specifications

○ - Option

### Gearbox

Planetary-type reduction
Spherical roller thrust bearing for reaming
Thrust bearing for pilot hole drilling
Spring pre-loaded bearing
Floating drive box with DI 22 threads

### Pipe loader

Ground loading
Remote controlled
Cylinders with integrated length sensors
Semi-automatic pipe rack (min 5 pipes)

### Motor

Two hydraulic motors connected in series CA50/210
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### Lubrication

Filtration 25 µ
Water cooled
Electric driven submersed gear pump, built-in to the gear box 19 l/min (5 gal/min)
Hydraulic driven lubrication pump motor on Derrick

### Wrench system

Worktable, hydraulic horse shoe wrench
Semi-automatic drive head wrench

### Electrical system

Separate cabinet inside the drive pack	
Standard protection ground fault, over/under voltage	
Phase fault and emergency stop	
Thermal overload protection for electrical motors	
Anti-condensation heaters in electrical cabinet	
Built in heaters in the electrical motor	
Electric motor started by soft starter	
Auxiliary outlet 115/230 V (16 A)	
Main breaker with overload and short circuit protection	
Electrical standard - CE	○
Electrical standard - other	○
Extended cables to derrick (20 m or 30 m)	○

### Power pack

Electrical filling/drain pump	
Off-line filtration system	○
Fire suppression system	○
High pressure filtration	○
Extended hoses to Derrick (15 or 20 m)	○
Built-in heater in oil reservoir	○
Cooling unit, closed loop	○
<b>Power pack system</b>	
Total installed 260 kWh at 50/60 Hz	
Rotation pump 500 cm <sup>3</sup> /rev max pump pressure 330 bar	
Oil reservoir 400 l (105 gal)	
Water cooled	
Oil filtration 10 µ	

### Control system

Epiroc Rig Control System (RCS)	
Net force control	
Bailing pressure supervision	
Auto make up log	
Remote control pipe loader	
Power management	
Measure while drilling (MWD) for analysis of drill data	○
Rig Remote Access (RRA), LAN or WLAN connection	○
Advance remote control	○
Bailing pump control and power outlet	○
Extended cable to Derrick (20 or 30 m)	○
Extended cable to operator panel (20 or 30 m)	○
Operator platform	○

### Delivered equipment not mounted

Operating equipment	
Equipment tools	
Equipment tools Drilling toolkit (Starter bushing, bit breaker box, Blooie system, floatbox installation tool)	○
Makeup and breakout tool (MBT)	○
Drivehead installation/removal tool	○

### Transporters

Diesel crawler	○
Sled assembly	○

### Closed loop air/oil cooling system (hydraulic)

Quick disconnections	○
Temperature up to 40° C for ambient temperature	○
One radiator	○

## Technical specifications

### Operation data

<b>Raise diameter</b>		
Nominal	2.1 m	7 ft
Range	2.1-4.5 m	7-15 ft
<b>Raise length</b>		
Nominal	550 m	1 800 ft
Maximum	700 m	2 300 ft
<b>Maximum torque</b>		
Reaming	250 kNm	185 000 ft-lbs
Break out	320 kNm	236 000 ft-lbs
<b>Reaming thrust</b>		
Standard cylinders	4 159 kN	935 000 lbs
<b>Stroke</b>		
	2 057 mm	81"
<b>RPM</b>		
Pilot	0-52 rpm	
Reaming	0-11.5 rpm	
<b>Traverse rate</b>		
Fast traverse rate	U75/D43	
Feed rate	U260/D150 sec	
<b>Bailing</b>		
Air	17-19 m <sup>3</sup> /min (7 bar)	600-670 ft <sup>3</sup> /min (100 psi)
Water	487-545 L/min	130-145 gal/min
<b>Electrical</b>		
Power supply	Softstart	
Voltage	380-1000 V	
Frequency	50/60 Hz	
Power requirement	310 kVA (50/60Hz)	
<b>Drill pipe</b>		
Optimal diameter	254 mm	10"
Diameter	286 mm	11 1/4"
Length s/s	1 524 mm	60"
<b>Pilot hole</b>		
Diameter	279 mm	11"
Optional diameter	311 mm	12 1/4"
Optional diameter	349 mm	13 3/4"
<b>Cooling water</b>		
At 25°C inlet temperature	100 L/min	27 gal/min

### Derrick

Height extended	5 337 mm	210'
Height retracted	3 852 mm	150'
Width	1 770 mm	70'
Width pipeloader and pipe in gripper included	3 760 mm	150'
Depth with erection plates	2 241 mm	90'
Weight	12 850 kg	28 000 lb
Weight pipeloader included	13 500 kg	30 000 lb
Drill angle (from horizontal)	50-95°	
Drill angle (option)	40-49°	

### Power pack

Length, HP filter excluded/ included	3 370/3 575 mm	130/140'
Height	1 790 mm	70'
Width	1 700 mm	67'
Weight, HP filter excluded/ included	6 400/6 900 kg	14 000/15 000 lb

## Technical specifications

Dimensions in millimeters

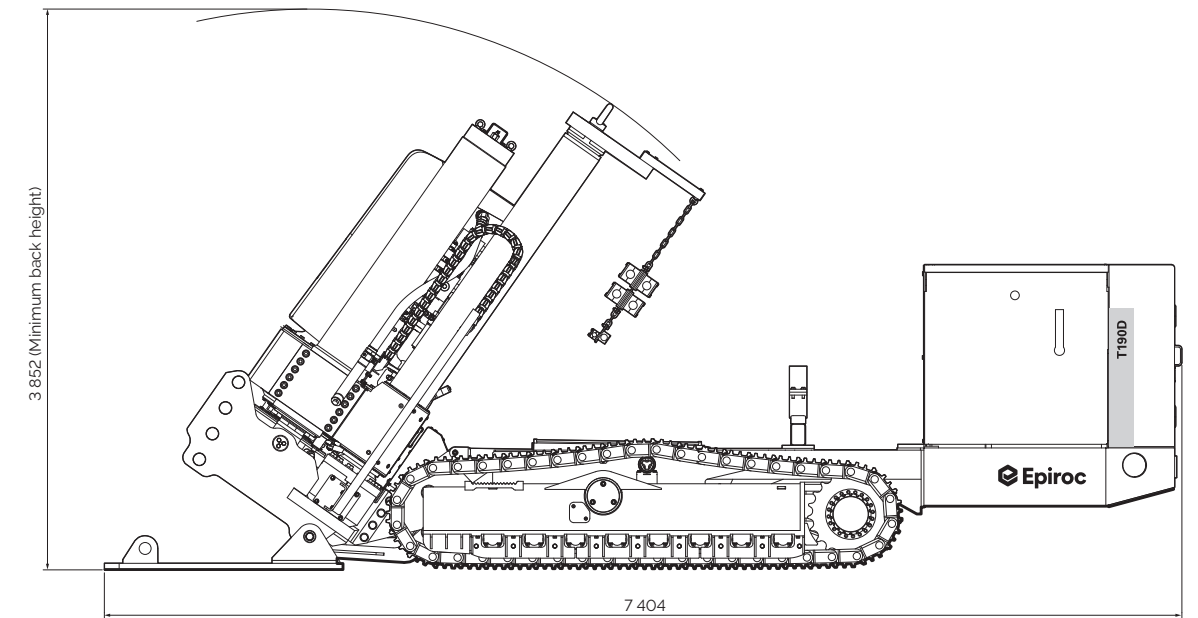


Illustration shows Robbins 74 S side view, including crawler.

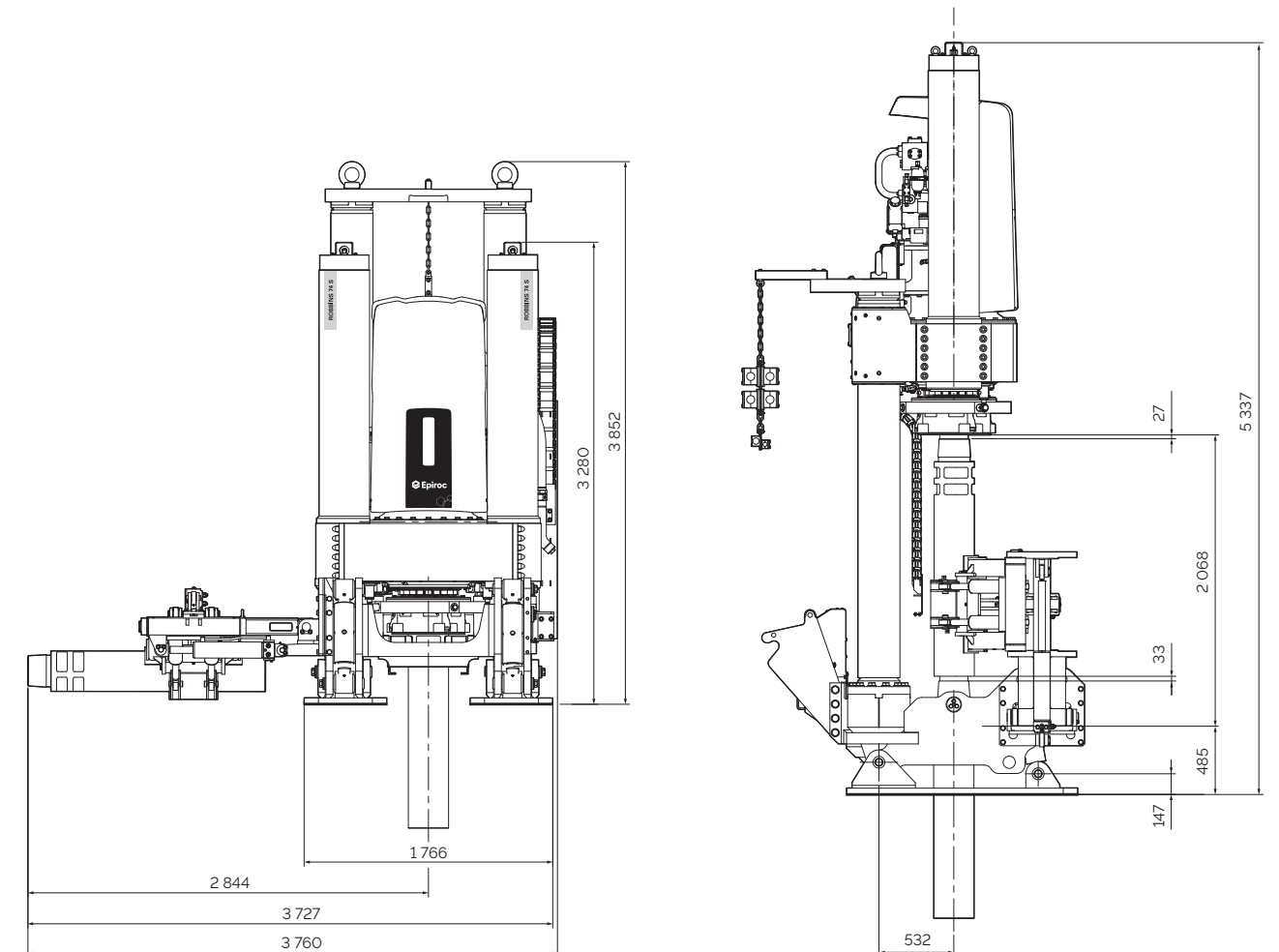


Illustration shows Robbins 74 S front view, including pipe loader.

Illustration shows Robbins 74 S side view.

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# Technical specifications

Dimensions in millimeters

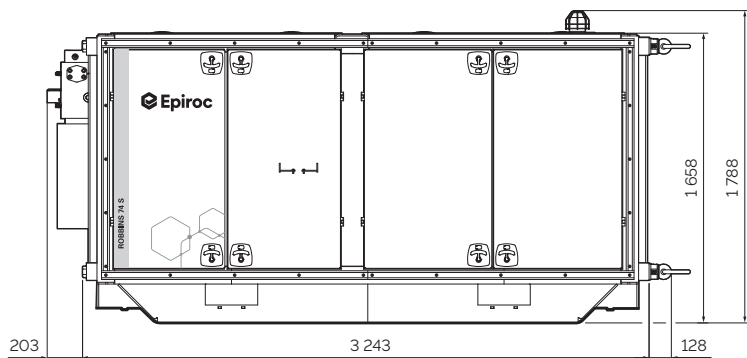


Illustration shows power pack side view.

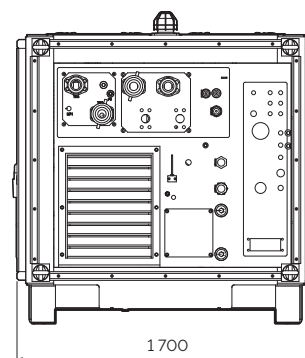


Illustration shows power pack rear view.

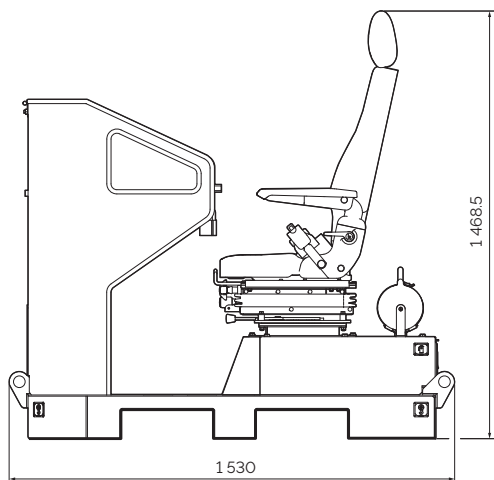


Illustration shows operator unit.

## United in performance. Inspired by innovation.

Performance unites us, innovation inspires us, and commitment drives us to keep moving forward. Count on Epiroc to deliver the solutions you need to succeed today and the technology to lead tomorrow.  
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