

# Robbins 34RH

Low profile raiseboring machine for holes ranging from 0.6 to 1.5 m in diameter



# Raising the bar in versatility

The Robbins 34RH is a low profile, lightweight raise drill rig for holes of smaller diameter. It is ideal for slot holes, back filling and narrow vein mining applications. The Robbins 34RH can effectively be used for conventional raiseboring as well as down reaming and upward boxhole boring, making it the most versatile raise drill rig on the market. The frame enables a 1.06 m reamer to pass the worktable.

## + Main benefits

**Unsurpassed versatility** with conventional raiseboring, down reaming and upward boxhole boring

**Boosted safety and productivity** thanks to the derrick which features a semi-automated drive head wrench and a hydraulically powered, remote-controlled worktable wrench to minimize heavy lifting

**Total control** from a remote work station, where the operator easily can adjust drilling speed and torque to optimally suit the current work conditions

Pipe loader features a jack-knife design for efficient handling of reamer and wing stabilizers

Telescopic thrust cylinders for compact design

Handy hose and cable connections for quick setup and easy maintenance

Single hydraulic-drive power pack

# Fast and cost effective raiseboring

Like other raiseboring rigs in the Robbins series, the highly versatile Robbins 34RH combines form and function to save you time and money. Thanks to its small footprint, the rig requires a smaller drilling pad and fewer tie-down bolts.



## + Smooth operation

The compact Robbins 34RH rig is designed with a slide-open worktable and integrated wrench system to facilitate drilling. The reamer and stabilizers are easily installed through the derrick using the pipe loader as a lifting tool for smooth, secure handling.



## + Advanced derrick design

The entire drive train features a hollow central shaft, enabling the efficient transmission of flushing media to clear the pilot hole. Telescopic thrust cylinders ensure high impact, while rigid crosshead guide columns provide efficient torque reaction to extend the service life of cylinders. The semi-automated drive head wrench and hydraulically powered worktable wrench that is operated remotely make drilling faster, easier and safer.



## + Effective muck handling

In boxhole boring configuration, the rig features a remote-controlled, hydraulically operated muck chute integrated on the derrick assembly. The muck chute is suitable for holes up to 1.06 m. A separate muck chute is available for larger holes up to 1.5 m in diameter.



## 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

● - Standard ○ - Option

### Motor

Two hydraulic motors connected in series CA50/CA50-25
Radial-piston type with a rotating cylinder hollow shaft, stationary housing
Hydrostatic system

### Gearbox

Planetary-type reduction
Spherical roller thrust bearing for reaming
Pre-loading of the bearings

### Drivehead

Floating drive box with DI-22 thread
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### Lubrication

Oil from the hydraulic system is used for the lubrication of the gearbox assembly: 19 l/min (5 US gal./min)
Filtration: 25 micron
Water cooled

### Pipeloder

Easy and safe pipe handling
Sturdy design
Mounted on either side
Remote controlled
Jack knife type pipe loader with lifting capacity to install reamer

### Wrench system

Drive head, semi automatic
Work table, sliding work table doors

### Electrical system

Separate cabinet inside the single power 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	●
Drive motor started by soft start	●
Auxiliary outlet: 115 V/230 V	●
Electrical standards UL, CSA or AS3000	○
20 or 30 m cables to derrick	○
Cable reel for main power cable	○

### Control system

Radio remote control for pipe loader	●
Epiroc Rig Control System (RCS)	●
15 m cable to op-panel	●
Power management	●
Auto makeup log	●
Net force control	●
Sureveillance kit (length sensor, reamer drop detection, pressurized drill string surveillance, angle indication)	○
Advanced radio remote control	○
Measure While Drilling (MWD)	○
Bailing pump control	○
20 or 30 m cable to OP-panel	○
Rig Remote Access (RRA)	○
Platform with chair	○

### Drive and thrust system

Off-line filtration system	●
Electric filling pump	●
Build in heater in reservoir	○
Fire suppression system inside the hydraulic cabinet	○
High pressure filtration	○
15 or 20 m hoses to derrick	○
Hydraulic oil leakage shut down system	○

Power: 160/185 kW at 50/60 Hz

Oil reservoir: 400 l (105 gal)

Oil filtration: 10 microns

Mineral hydraulic oil grade: 68

Proportional control of fast traverse and pipeloder movements

Water cooled

### Traverse/Auxiliary circuit

Pressure compensated variable displacement piston pump

Travers pump: 140 cm<sup>3</sup>/rev (8.5 in<sup>3</sup>/rev)

Travers pump max pressure: 230 bar

### Feed circuit

Pressure compensated variable displacement piston pump

Thrust pump: 40 cm<sup>3</sup>/rev (2.4 in<sup>3</sup>/rev)

Thrust pump max pressure: 330 bar

### Drive system

Rotation pump: 355 cm<sup>3</sup>/rev

Max pump pressure: 330 bar

Closed loop piston pump

## Technical specifications

● - Standard ○ - Option

### Transporters

Diesel crawler	○
Sled assembly	○
Trailer for power pack	○
Rail sled	○

### Operating equipment

Drilling tool kit incl. starter bushing, bit breaker box, blowie assembly	○
Make-up and Breakout Tool (MBT)	○

### Muck chute

Integrated muck chute for wide version up to 1.06 m diam.	○
Separate muck chute for diameters up to 1.5 m	○

### Closed loop cooling system

An external air/oil cooler connector to the ordinary cooling circuit	○
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### Operation data

Raise diameter		
Nominal	1.2 m	4 ft
Range	0.6-1.5 m	2-5 ft
Raise length		
Nominal (downreaming/boxhole)	1.06 m	3.5 ft
Maximum torque		
Reaming	64 kNm	47 200 ft-lbs
Break out	96 kNm	70 805 ft-lbs
Reaming thrust		
	1150 kN	258 500 lbs
Stroke		
	1710 mm	67"
RPM		
Pilot	0-65 rpm	
Reaming (reduced torque)	0-19 rpm (19-25 rpm)	
Traverse rate		
Fast traverse rate	5.9 m/min	19.4 ft/min
Feed rate	3.0 m/min	9.8 ft/min
Bailing		
Air	16 m <sup>3</sup> /min (7 bar)	565 ft <sup>3</sup> /min (100 psi)
Water	530 L/min	140 gal/min
Electrical		
Power supply	165/190 kW (50/60Hz)	
Voltage	400-1000 V	
Frequency	50-60 Hz	
Power requirement	198/227 kVA (50/60 Hz)	
Drill pipe		
Diameter	254 mm	10"
Optional	203 mm	8"
Length s/s	1219 mm	48"
Pilot hole		
Diameter	279 mm	11"
Optional diameter	229 mm	9"
Cooling water		
at 25 °C inlet temperature	60 L/min	15.8 gal/min

## Technical specifications



Derrick



Power pack

### Derrick

Conventional Raise boring		
Height	3 800 mm	150'
Width	2 215 mm	87"
Width (pipeloader included)	2 390 mm	94"
Depth	2 375 mm	94'
Weight	12 200 kg	26 896 lbs
Weight (pipeloader included)	13 800 kg	30 425 lbs
Drill angle (from horizontal)	90 - 45°	

### Derrick

Boxhole mode		
Height (muck chute extended)	4 915 mm	194'
Height (muck chute retracted)	4 120 mm	162'
Width	2 215 mm	87"
Width (pipeloader included)	2 390 mm	94"
Depth	2 375 mm	94'
Weight (pipeloader included)	15 200 kg	33 510 lbs

### Power pack

Length	3 300 mm	130'
Height	1 690 mm	67"
Width	1 600 mm	63"
Weight	4 700 kg	10 362 lbs

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