

PowerROC D50

Surface drill rig for mining and quarrying

Hole diameter: 90–152 mm (3 5/16"–6")





Performance you can count on

The PowerROC D50 is a hydraulic down-the-hole rig you can trust on to perform reliably, even in the most demanding mines and quarries.

The PowerROC D50 offers you reduced downtime and maximum availability. The Epiroc Rod-Adding-System (RAS) adds a 6 meter rod onto the 6 meter starter rod, matching the rig perfectly to worksites with 12 meter high benches. Decreasing the time spent handling rods dramatically increases working hours

and productivity. Less rod-handling also serves to reduce operator fatigue and increases safety. Real-world performance proves, time-and-again, that the PowerROC D50 offers greater reliability and productivity than other comparable rigs due to its well-proven mechanics and features such as RAS.

+ Main benefits

- High performance** thanks to well-proven Epiroc technology and extensive experience
- High reliability** due to a tried-and-tested design and reliable, high-quality components
- Easy operation and maintenance** thanks to a simple design

Dependable performance

As a leading supplier to the mining and quarry industries, Epiroc is constantly focused on the safety of our products. The PowerROC D50 is designed to give you reliability, availability and performance. The rig is easy also to maintain and repair, which further serves to enhance a positive customer experience.



+ Safety in focus

The comfortable FOPS and ROPS certificated cabin is equipped with a safety switch under the seat which adds to operator safety. The rig also shuts down automatically if there is a reduction or loss of hydraulic pressure. The rig features a strong, standard boom giving strength and stability during drilling. The PowerROC D50 stops immediately if one of the five emergency stop switches distributed around the machine is operated.



+ High performance

The PowerROC D50 is fitted with an onboard Atlas Copco compressor delivering up to 283.3 l/s of air at a maximum pressure of 20 bar ensuring a high penetration rate. A protective system stops the rig if the oil level in the circuit is too low. This function improves reliability and increases compressor-life. A robust chain feed gives the PowerROC D50 lower running costs and a prolonged service life. The cooling system can handle a wide ambient temperature range of between -20°C to 55°C even during demanding drilling.



+ Easy maintenance

The Centralized Service Spot is a new feature on PowerROC D50. It provides easy access to vital service points, convenient replacement of air filters and oil filters, and makes it easy to check all oil levels. Additionally, the hydraulic valve blocks have been positioned to allow for easy adjustment and inspection. The feed beam can be positioned horizontally which enables toe-hole drilling and makes for easy inspection and maintenance.

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

Main components

- Track frames with triple grouser pads and cleaning holes, hydraulic track oscillation and two speed traction
- Cummins turbo-charged Tier III diesel engine
- High pressure compressor Atlas Copco screw compressor
- Air-conditioned cabin, ROPS and FOPS certified
- Standard boom
- Steel feed beam which can be positioned horizontally for toe-hole drilling
- Chain feed system powered by hydraulic motor
- Reversing camera with display mounted in the cabin
- Break-out table
- Rod Adding System (RAS)
- Thread lubrication, spray system
- Back-up alarm

Engine

Cummins turbo-charged, diesel engine, QSL8.9-C360, Tier III/stage 3	Metric	US
Power rating at 2 100 rpm	264 kW	352 hp

Hydraulic system

Hydraulic oil cooler	Metric	US
Maximum ambient temperature	55°C	131°F

Dust collector DCT 200

	Metric	US
Filter area	20 m ²	215 sq.ft
Number of filter elements	20 pcs	20 pcs
Cleaning air pressure, max	7.0 bar	102 psi
Cleaning air consumption	2-4 l/pulse	0.06-0.12 cu.ft/pulse

Compressor

Atlas Copco C146 • S1S, two-stage screw type compressor	Metric	US
Maximum working pressure	20 bar	290 psi
FAD, at normal working pressure	283.3 l/s	596 cfm

Hole range & depth (recommended)

Recommended DTH hammers and hole range			
PowerROC D50	COP 32, COP 44, COP 54	90-152 mm (3 7/16-6')	
Hydraulic rod adding system for max hole depth, with 6m tubes		Metric	US
PowerROC D50	Ø 102 mm Rod	12 m	39.4'
Single pass drilling, max hole depth			
PowerROC D50		6 m	19.7'

Feed

Chain feed with dual drill rod support	Metric	US
Feed extension	600 mm	23.6'
Feed rate, max	0.85 m/s	170 ft/min
Feed force, max	24 kN	5 394 lbf
Tractive pull, max	30 kN	6 743 lbf
Total length	10 400 mm	409.4'
Travel length	6 500 mm	256'

Volumes

Hydraulic oil tank	380 l	100 US gal
Hydraulic system, total	470 l	124 US gal
Compressor oil	70 l	18.5 US gal
Diesel engine oil	35 l	9.2 US gal
Diesel engine, cooling water	60 l	15.9 US gal
Diesel engine, fuel tank	760 l	201 US gal
Traction gear	3 l	0.8 US gal
Lubrication tank (ECL)	20 l	5.3 US gal

Electrical system

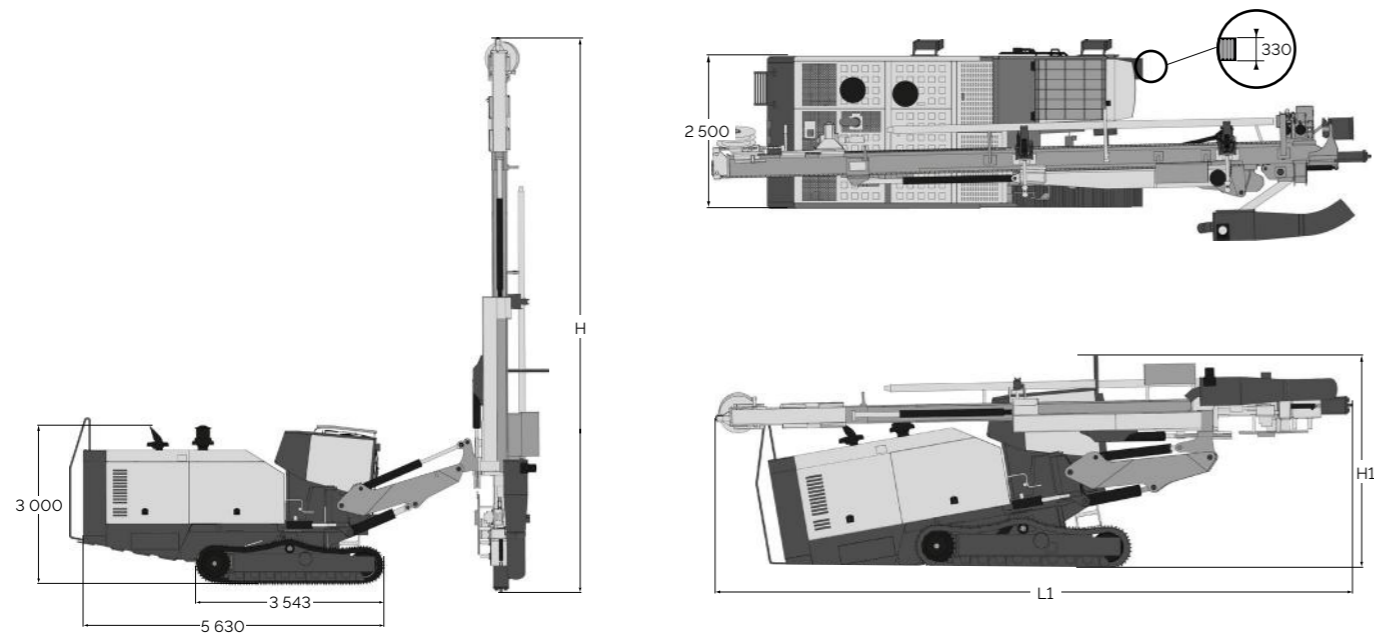
Voltage	24 V
Batteries	2 x 12 V, 200 Ah
Alternator	28 V, 110 A
Work lights, front	3 x 70 W
Work lights, rear	1 x 70 W
Work lights, feed	2 x 70 W
Reverse buzzer	
Beacon	

Rotary head

Rotary head	Connection thread	Hole range	Max rpm	Max torque, drilling	Max torque, breaking	Suitable for DTH hammer
DRU 5	API 2 3/4" REG, box	90-152 mm	90	2 040 Nm (1 504 lbf)	3 400 Nm (2 507 lbf)	COP 32, COP 44, COP 54

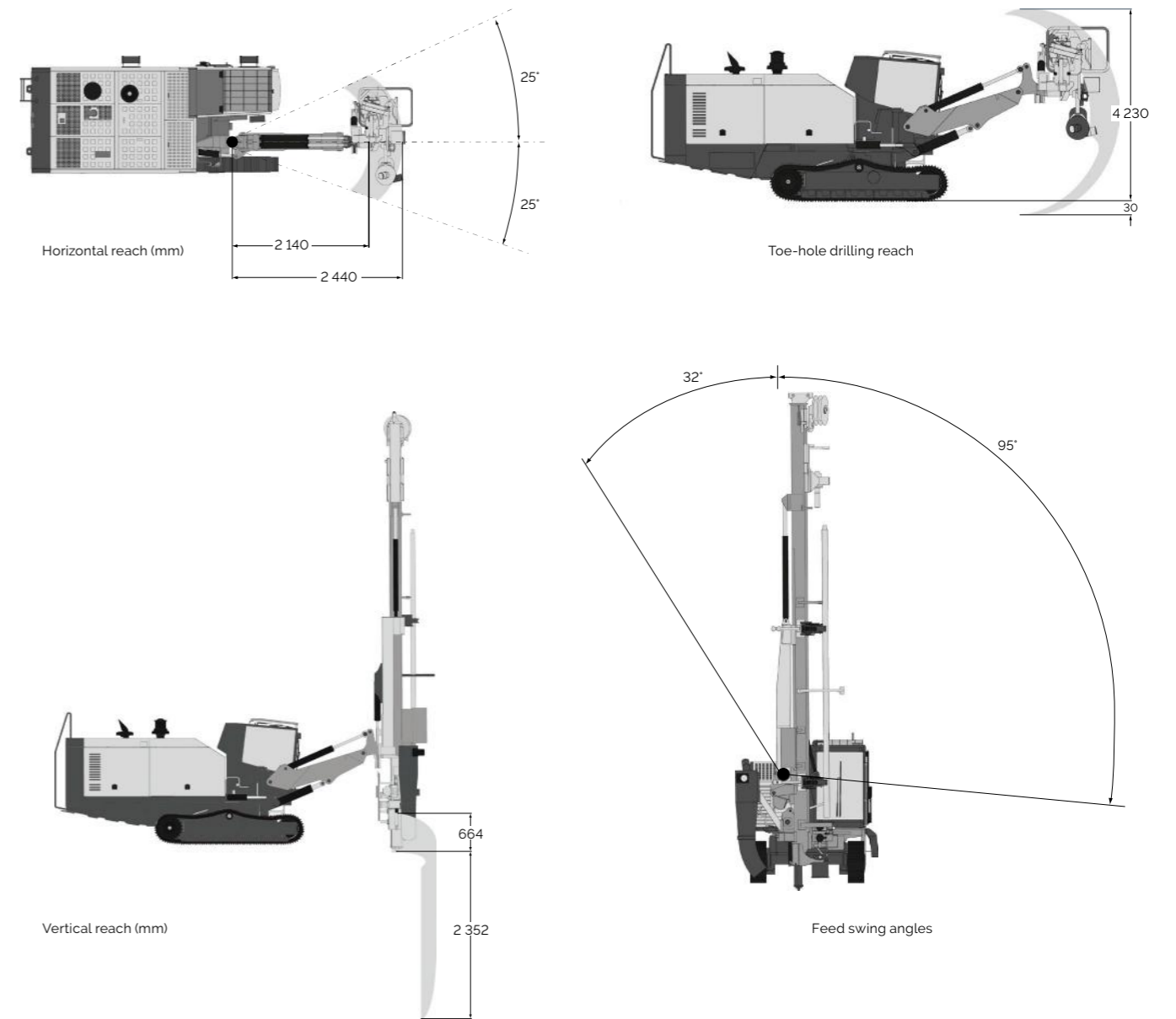
Down-the-hole hammer (to be ordered separately)

Down-the-hole hammer	Top sub thread	Hole range	Weight	Length excl thread
COP 32	API 2 3/4" REG pin	90-105 mm (3 7/16-4 1/8')	23 kg (51 lbf)	925 mm (36.4')
COP 44	API 2 3/4" REG pin	115-127 mm (4 1/2-5')	38 kg (84 lbf)	958 mm (37.7')
COP 54	API 2 3/4" REG pin	134-152 mm (5 1/4-6')	57 kg (125 lbf)	1 069 mm (42.1')



Transport dimensions

	Metric	US
Height (H1)	3 500 mm	1378"
Length (L1)	10 400 mm	409.4"
Feed height (H)	10 400 mm	409.4"
Weight	19 600 kg	43 211 lb



Selection of options

Safety cabin

- Sun shade kit
- 2D angle indicator, electronic

Carrier

- Hydraulic support leg
- Service lamps in canopy
- Cold weather kit +5°C to -25°C, include diesel engine heater

Feed

- Dimension kit for 76 mm, 89 mm tube

Lubrication oil, lubrication system and water mist system

- Central lubrication system (CLS)
- Artic hydraulic oil, VG 32
- Tropical hydraulic oil, VG 68
- Biological hydraulic oil, VG 46
- Water mist system, with water pump and 400 l water tank

Dust control

- DCT 200

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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