

PowerROC D50

Surface drill rig for quarrying and mining

Hole diameter: 90–152 mm (3.5–6")





Practicability which exceeds expectations

The PowerROC D50 is a reliable, user-friendly surface drilling rig which is highly versatile. It is designed to optimize surface drilling operations by combining efficiency with low running costs.

The PowerROC D50 can offer your operation high availability and boosted productivity. It is well suited to limestone, aggregate, coal mines and cement quarries as well as open pit mines — all areas where high efficiency is vital. The rig includes a user-friendly interface and reliable PowerROC control system with a dedicated PLC and display in the cab. A straightforward design provides for simple troubleshooting and servicing.

The PowerROC D50 is a compact hydraulic drill rig which has plenty of power. It features a reliable powerpack, plus an optimized Rod Handling System (RHS) and electrical control system. A 12.1" touchscreen with built-in buttons offers operators an intuitive, easy to understand interface. The screen clearly presents the current status of the rig, making maintenance easier and helping to reduce service costs.

⊕ Main benefits

Improved productivity and reliability thanks to its powerful powerpack and flexible carrier with increased drilling capacity.

Ergonomic operation due to its user friendly control system with display and dedicated PLC system.

Well proven robust design offers high productivity and reliability at an affordable cost.

Speed up your drilling operation

The PowerROC D50 has the potential to push productivity to a higher level with low cost. Its high reliability ensures high attendance.



+ High performance

The PowerROC D50 utilizes well-proven Epiroc technology and is fitted with a strong powerpack which provides ample power. The PowerUp function helps to maintain high drilling quality and reliable drilling results. The hydraulic system features several piston pumps which improve reliability and efficiency. By combining a low initial investment, high penetration rate and fuel efficiency, this rig helps keep your operation profitable.



+ Operator friendly

The PowerROC D50 is fitted with a FOPS/ROPS-certified cabin with a high comfort level and good visibility. Joystick controls enable easy and intuitive operations. A powerful dust collection system helps keep the worksite clean. The 12.1 inch screen displays a wealth of information including engine data, rig status, diagnostic help, warnings, alarms and parameter settings.



+ Easy operation and maintenance

The PowerROC D50 is designed to be easy to operate and maintain. All hoses and cables are marked at each end to assist with trouble-shooting for example. Also, the electrical system features a simplified design.

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

- Trammig system including triple grouser pads with cleaning holes, hydraulic track oscillation and two speed traction motor
 - Cummins turbo-charged Tier III diesel engine
 - Cummins turbo-charged China IV diesel engine
 - Atlas Copco two stage screw compressor for high pressure
 - Air-conditioned cabin with a display, FOPS and ROPS-certified
 - Standard boom
 - Steel feed beam
 - PowerUP function
 - Power ECO function
- Chain feed system powered by hydraulic motor
 - Rod Handling System(RHS), 6+1 carousel type
 - Break-out table
 - Dust collection system
 - Pre-separator
 - DTH hammer lubricator device
 - Thread greasing device
 - Back-up alarm
 - 2D angle indicator, electronic, integrated into display
 - Hydraulic oil heater

Engine

Power rating at 1 800 rpm	Metric
Cummins Turbo charged, QSL8.9-C360, Tier 3	264 kW
Cummins Turbo charged, L9CS4 360C, China IV	264 kW

Feed

Hydraulic motor driven chain feed with hose guide and double drill tube support with break-out table and movable lower guide/dust hood	Metric
Feed rate, max	0.88 m/s
Feed force, max	12 kN
Tractive pull, max	23 kN
Total length	7 560 mm
Travel length	4 684 mm

Dust collector

DCT 200	Metric
Filter area	20 m²
Number of filter elements	20 pcs
Suction capacity at 500 mm wg	950 L/s
Suction hose diameter	152 mm
Cleaning air pressure, max	7.0 bar
Cleaning air consumption	2–4 L/pulse

Volumes

Hydraulic oil tank	360 l
Hydraulic system, total	450 l
Compressor oil	70 l
Diesel engine oil	35 l
Diesel engine, cooling water	60 l
Diesel engine, fuel tank	500 l
Traction gear	3 l
Lubrication tank (ECL)	20 l
Urea tank (Only for China IV engine version)	60 l

Rotary head

Rotary head	Connection thread	Max rpm	Max torque, drilling	Max torque, breaking	Suitable for DTH hammer
DRU 5	API 2 3/8" REG. box	90	2040 Nm	3400 Nm	3.5", 4" and 5" DTH hammer

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 3/8" REG pin	90–100 mm (3.5–4")	23 kg (51 lbf)	925 mm (36.4")
COP 44	API 2 3/8" REG pin	115–127 mm (4.5–5")	38 kg (84 lbf)	958 mm (37.7")
COP 54	API 2 3/8" REG pin	134–152 mm (5.5–6")	57 kg (125 lbf)	1 069 mm (42.1")

Compressor

Atlas Copco, two stage screw type compressor	Metric
Maximum working pressure	20 bar
FAD, at normal working pressure at 1 800 rpm	289 L/s
FAD, at normal working pressure at 2 000 rpm	322 L/s

Hole range & depth (recommended)

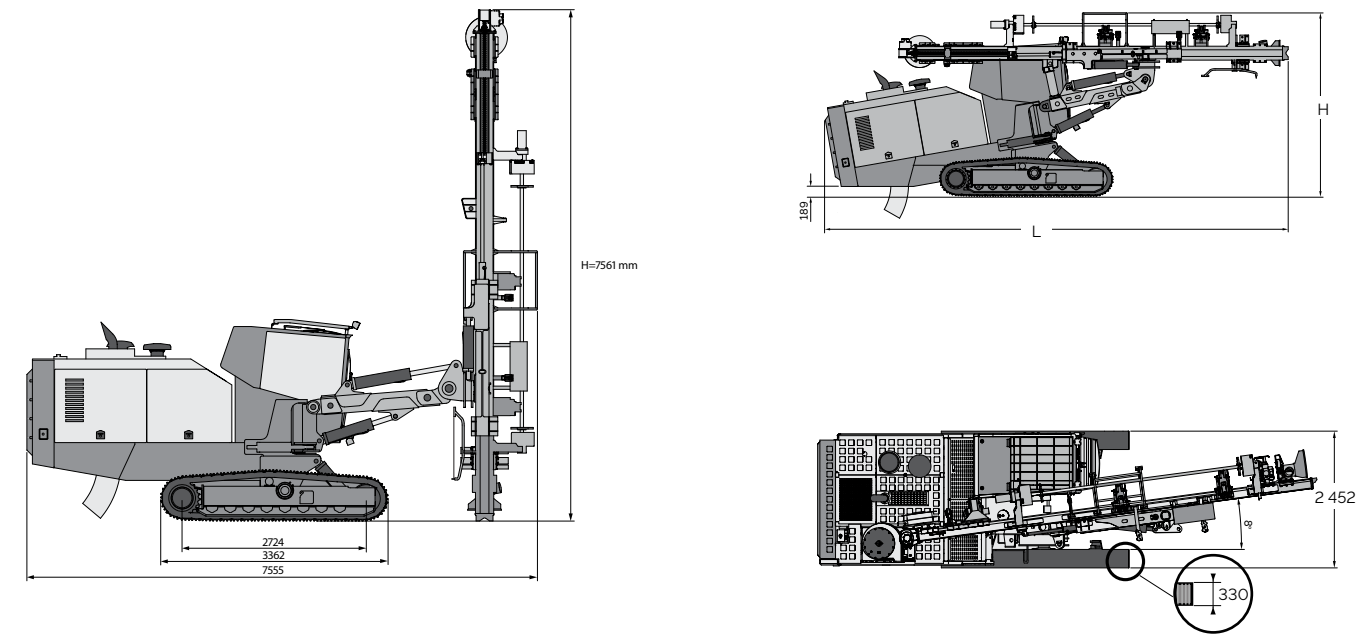
		Metric
Recommended DTH hammers and hole range	3.5", 4" and 5" DTH hammer	90–152 mm
Hydraulic rod handling system for max hole depth, with 4m (13.12') rods	Ø 89 mm Rod	29 m
Single pass drilling, max hole depth		4.3 m

Hydraulic system

Hydraulic oil cooler	Metric
Ambient temperature	–25–50°C
Piston pump (1)	99.4 L/min
Piston pump (2)	99.4 L/min
Gear pump (3)	67.8 L/min
Gear pump (4)	23.2 L/min
Gear pump (5)	23.2 L/min
Filtration rate	10 µm absolute

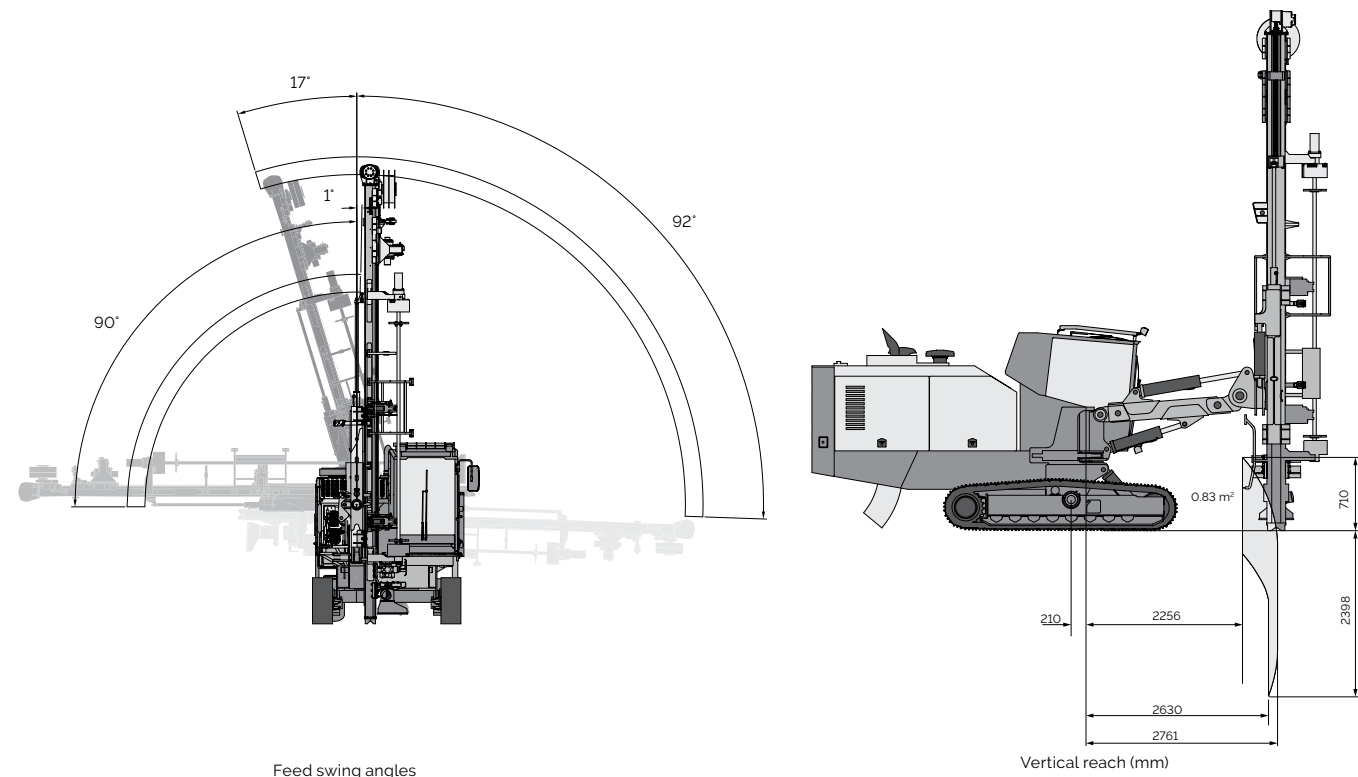
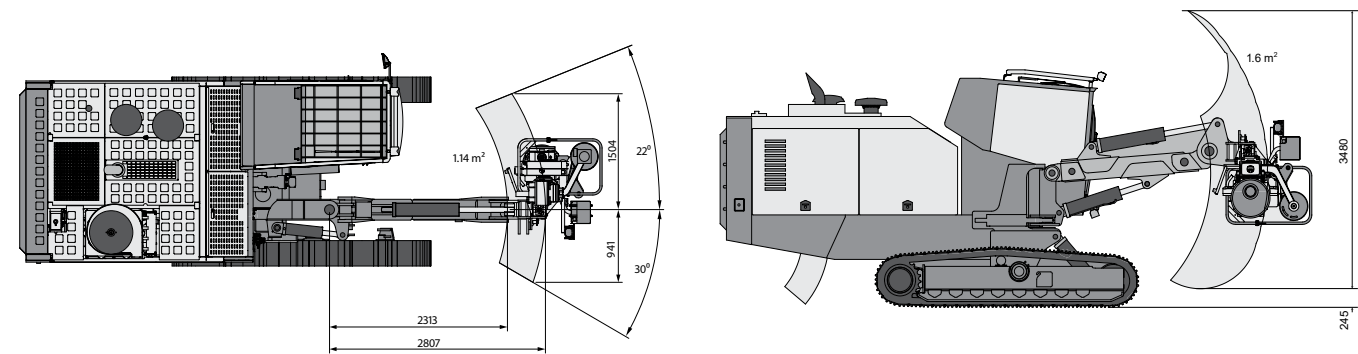
Electrical system

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 alarm buzzer	



Transport dimensions

	Metric	US
Height(H)	3 500 mm	137.8"
Length(L)	8 990 mm	353.9"
Width	2 500 mm	98.4"
Weight	16 400 kg	36 155.8 lb



Selection of options

Carrier

- Heavy duty air intake filters for engine and compressor
- Cold weather kit below -25°C, diesel engine pre-heater and compressor regulation heating kit
- Combined warning sound and warning light
- Reverse camera
- Service lights
- Super rotate function for scrap bit application
- Certiq with MCG

Hole&inclination system

- Hole depth indicator into display

Feed

- Rod Handling System (RHS) dimension kit, 76 mm

Lube oil, lube system and water mist system

- Central Lubrication System (CLS)
- Arctic hydraulic oil, VG 32
- Tropical hydraulic oil, VG 68
- Standard hydraulic oil, VG 46
- Water mist system, with water pump and 300 l water tank (dual 150 l tank)

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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