

# Explorac 100

Reverse circulation drill rig for exploration drilling

Hole diameter: 127-165 mm (5"-6.5")





# Fast and accurate

Reverse circulation (RC) drilling represents a fast and economical way to retrieve the high-quality mineral grade samples needed to efficiently plan your mining and quarrying operations.

The RC drilling method not only prevents cross contamination, but also enables collection of a large number of sample bags in a short amount of time. Sample bags are labelled with the same location and depth information.

Further analysis yields fast, reliable information about mineral deposits that allows you to selectively pinpoint zones for drilling and blasting for maximum ore recovery and greater profit per ton.



Reverse circulation is a quick and efficient method that has the potential to cut overall drilling costs significantly, while maintaining good sampling quality.

## + Main benefits

**Fast and economical**

**High quality, uncontaminated mineral samples**

**High production rates compared with traditional core drilling**



# Fast and efficient

Explorac 100 is a crawler-mounted, compact rig specifically designed for reverse circulation drilling at depths down to 250 meters. In order to optimize production, this rugged and easily manoeuvrable rig comes with a rod handler and a positionable magazine that holds up to 30 drill pipes.



## + Remote-controlled for safety

The two remote control units offer precise control of the rig at a distance of up to 40 meters, keeping both the operator and helper out of harm's way. Both remote control units are identical and can be used to control the drilling process or the Rod Handling System.



## + Hands-free rod handling

The remote-controlled Rod Handling System enables safe, hands-free loading, unloading and stacking of drill rods. The rack can be positioned to the rear or side and store up to 30 drill rods. A mechanized breakout table is fitted as standard which guides and locks rods hydraulically. The Rod Handling System reduces operator fatigue and increases safety.



## + Three splitters to choose between

The heart of RC drilling is the splitter. The Explorac 100 can be supplied with one of three options to best suit budget and requirements – a traditional riffle splitter, a tried-and-tested cone splitter or, an innovative new rotary splitter. The rotary splitter makes it possible to collect up to 3 sample bags simultaneously whilst increasing production and improving accuracy.



## 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

Riffle, cone or rotary/oscillation splitters are available as options. The cyclone is fitted to a hydraulically-retractable mounting-post



Discover more about the Explorac 100.

### Rotation unit

Dual hydraulic motors OMT315	Metric	US
Hydraulic system displacement	40 cm³/r	2.4 in³/r
Maximum working pressure	210 bar	3 046 psi
Main spindle speed in serial mode	0-74 rpm	-
Main spindle speed in parallel mode	0-37 rpm	-
Main spindle torque in serial mode	3 725 Nm	2 747 lbs
Main spindle torque in parallel mode	7 475 Nm	5 513 lbs
Spindle bore	50 mm	2"
Volume of oil in gear box	10 l	2.6 gal
Reduction gear ratio	3.89:1	-
Weight	220 kg	485 lbs
Integrated blow down valve		
Metzke air swivel with 4.5 inch thread		

### Mast

	Metric	US
Mast dump	1 500 mm	59"
Drilling angle range	90° to 45°	-
Total length, including jib boom	7 729 mm	304.3"
Feed beam with hydraulic rams		
Guide chain for hydraulic hoses		

### Feed system

	Metric	US
Pullback	100 kN (theoretical)	22 481 lbf
Feed force (restricted)	60 kN	13 488 lbf
Travel length	4 400 mm	173.2"
Maximum fast down travel	48.5 m/min	159.1 ft/min
Maximum fast lift travel	27 m/min	88.6 ft/min

### Spanners and breakout

	Metric	US
Maximum opening on brakeout table	382 mm	15"
Two hydraulically operated spanners for breakout system designed for 4.5" and 4" drilling pipes		
Hydraulically operated breakout key		

### Tool-handling hoist-winch

	Metric	US
Cable rope	10 mm x 35 m	4" x 114.8 ft
Pull on 1st layer	20 kN	4 496 lbf
Speed on 1st layer	40 m/min	131.2 ft/min
Features automatic brake and shut-off when minimum rope on drum level reached		

### Power unit

Cummins OSB4.5 Turbocharged and Charge air cooled	Metric	US
Torque at 2 200 rpm	357 Nm	263 lbs
Maximum Torque at 1 500 rpm	488 Nm	360 lbs
Fuel consumption at 2 200 rpm	23 L/h (890 l /kWh)	6 gal/h (6 oz/hp)
Displacement	4.5 l	1.2 gal
Bore	107 mm	4.2 in
Stroke	124 mm	4.9 in
Weight	371 kg	818 lbs
Fuel tank capacity	236 liter	62.4 gal
Power rating at 2 200 rpm	82 kW	110 bhp
Cylinders	4 in-line	

### Hydraulic system at 2 200rpm

	Metric		US	
	Max pressure	L/m	PSI max	G/m
Hydraulic pump 1	250 bar	132	3 626	35
Hydraulic pump 2	250 bar	132	3 626	35
Hydraulic pump 3	200 bar	35	2 900	9
Hydraulic pump (option with rotary splitter)	250 bar	35	3 626	9

### External compressor

	Metric	US
Max pressure	35 bar	510 psi

## Technical specifications

### Rig cooling system

Combi-cooler (charge air, water, hydraulic oil) with 645 mm fan, computer controlled speed.

	Metric	US
Maximum operational ambient air temperature	50°C	122°F

### Recovery winch

	Metric	US
Cable rope	10 mm x 35 m	0.40" x 38.3 yards
Pull on 1st layer	20 kN	4496 lbf
Speed on 1st layer	40 m/min	44 yards/min

### Splitter options

#### Type of splitter

Rifle
Cone
Rotary/oscillation

### Line oiler

	Metric	US
Hammer lubrication tank capacity	12 l	3.2 gal
Line oiler activated and controlled from rig control system (RCS)		
Adjustable capacity		

### Hydraulic jacks

	Metric	US
Max. extension x2 front hydraulic jacks	500 mm	19.7"
Max. extension x2 rear hydraulic jacks	500 mm	19.7"

### Pipe rack capacity

Rack capacity	Metric	US
30 pipes	Outer diameter 114.3 mm Length 3 m	Outer diameter 4.5" Length 118' (9.84 ft)
30 pipes	Outer diameter 101.6 mm Length 3 m	Outer diameter 4" Length 118' (9.84 ft)

### Control system

CAN technology (Controller Area Network)
Separate 24V DC support system
I/O modules (Input/Output)

### Safety alert system

6 emergency stop buttons - x1 on control panel, x1 on each remote control unit, x4 on the rig

Horn

### Electrical system

Starter motor	24 V
Alternator	24 V, 70A
Main batteries x2	12 V, 145 A per battery

### Working dimensions

	Metric	US
A	7 840 mm	309'
B	6 120 mm	241'

### Transport dimensions

	Metric	US
C	2 740 mm	108"
D	2 980 mm	118"
E	7 730 mm	305"
F	2 240 mm without rod rack installed 2 800 mm with rod rack installed	89" without rod rack installed 110" with rod rack installed

### Transport dimensions

	Metric	US
Drill rig	14 400 kg	31 747 lbs
Shipping dimensions	7 800 x 3 000 x 2 300 mm	307 x 118 x 90.5"

### Water/foam pump

Hydraulically driven high pressure pump HPW200/30-45

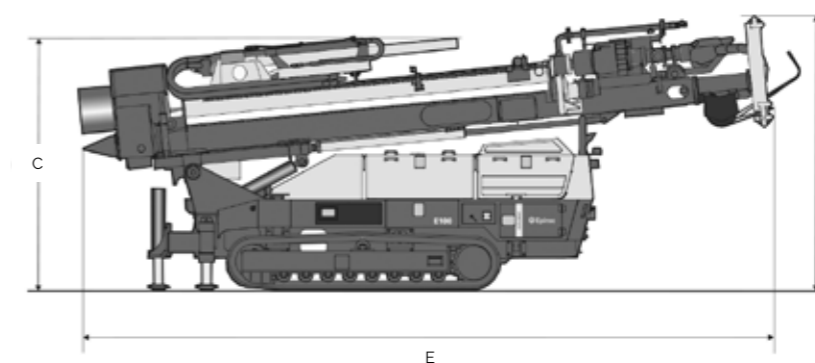
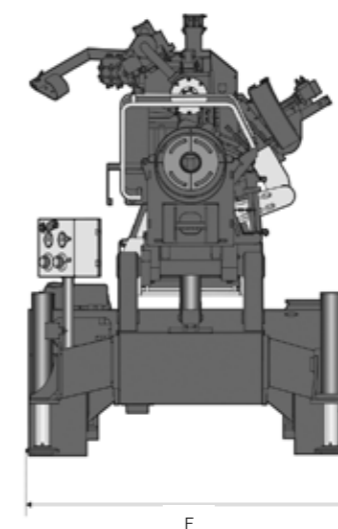
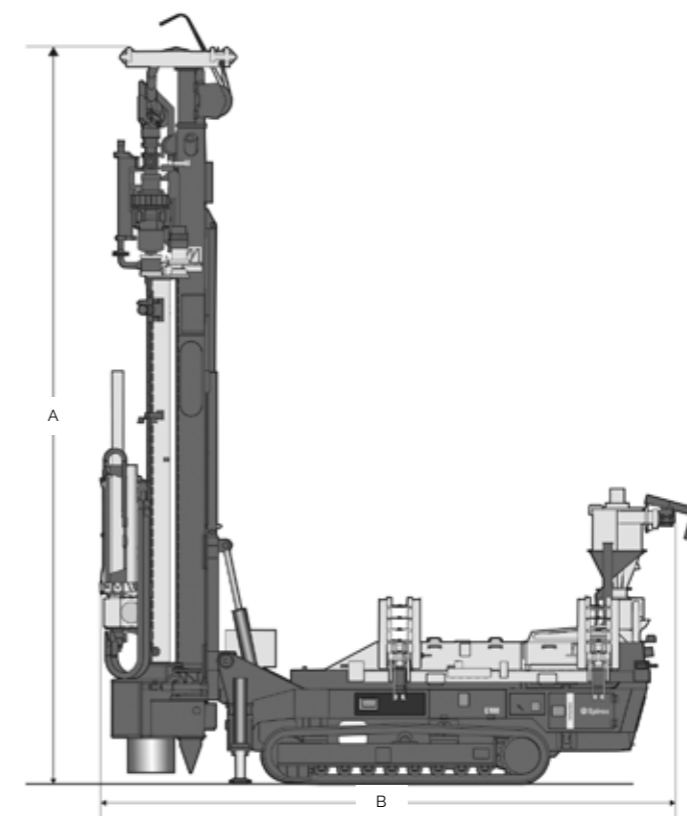
	Metric	US
Maximum water flow	30 l/min	7.9 gal/min
Maximum water pressure	200 bar	2 900 psi
Pump power	10 kW	13.4 hp
Suction head	3 m	10 ft
Weight	8 kg	17.6 lbs

### Sound\*

A-weighted Sound Power Level, LwA	118 dB
A-weighted sound pressure level, LpA, calculated	
Distance from rig	Level
4 m	98 dB
10 m	90 dB
20 m	84 dB
40 m	78 dB
80 m	72 dB
160 m	66 dB
320 m	60 dB
640 m	54 dB
1280 m	48 dB

\* The declared noise emission values should be combined with a measurement uncertainty of KpA-6 dB. The sum of declared measured value and the uncertainty value represent an upper limit of the range, in which measured values are likely to be included. The values were determined in accordance with the standards ISO 3744:2010 (for sound power level estimation) and ISO 11203:1995 (for sound pressure calculation at different distances from the rig).

## Technical specifications







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