

# Boltec 235 bolting rig

Fully mechanized rock bolting rig for a variety of bolt types and coverage height up to 8.5 m



# Make it different when it comes to rock reinforcement

A strong guard that can be used for the toughest rock condition, for your safe working environment in medium size drifts.

## ⊕ Main benefits

**MBU bolting unit** for fully mechanized bolt handling for high productivity, carries 10 bolts in its carousel and handles all commonly used bolts in the 1.5 to 2.4 m range.

**Direct Control System (DCS)** for high productivity and precision also incorporates anti-jamming protection.

**COP RR11**, the short, high-frequency hydraulic rock drill provides a high penetration rate with excellent drill steel economy.

**Adapted for various bolt types** including Swellex, resin and cement rebar, splitset and mechanical anchor.

Mature and easy trouble-shooting DCS system (Direct Control System)



Standard imported Deutz 4-cylinder, TCD3.6 L4, 55.4 kW, Chinese Stage III, environmental friendly.



Hose injection system for resin cartridges, shooting the cartridges from the operator's platform, injecting through a foldable nozzle in front of the feed.



DC 15 sturdy common carrier. "Open" carrier designed for easy service to reduce down-time.



Heavy duty boom BUT 35BS for direct fast and accurate positioning between holes

Sturdier new designed MBU (Mechanical Bolting Unit) to handle all bolt types and fast and easy to change between bolt types

COP RR11 rock drill, a short and light rock drill that is very efficient when drilling in the designated hole range.

Strong DC 15 carrier, with more engine options to meet your different application requirements

# Safety is guaranteed by excellent and various capabilities

Operator is always protected. Risk of rock falling is minimized since each bolt is installed immediately and stably.

## + Full range of bolt types

For mechanized installation of all commonly used types of rock bolts.

- Splitset: friction anchored rock bolt. Simple installation; immediate support action after installation; easy application of wire mesh
- Resin rebar: a competent and durable reinforcement system; high load bearing capacity in hard rock conditions; can be used in permanent installations
- Swellex: rapid and simple installation; immediate support action after installation; can be used in a variety of ground conditions
- Mechanical anchored rock bolts: relatively inexpensive; bolt gives immediate support action after installation; high bolt loads can be achieved

## + COP RR11 rock drill

- What differentiates the COP RR11 from other rock drills is its small size (both short and light). The combination of its size and high frequency makes it an optimal rock drill in loose to medium hard rock
- A powerful, step less variable and reversible rotation motor gives high torque for efficient drilling, and minimizes the risk for jamming

## + Operator station

Excellent visibility, logical control layout, ensure improved productivity and safe operation.

## 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

### Rock drill/drill system

- COP RR11
- Shank adapter ..... R28, R32
- Height over drill centre ..... 77 mm
- Length ..... 735 mm
- Impact power, max ..... 11 kW
- Impact rate ..... 100 Hz
- Hydraulic pressure, max ..... 200 bar
- Rotation system ..... separate rotation
- Rotation torque, max ..... 225 Nm
- Lub. air consumption at 2 bar ..... 6 l/s
- Weight ..... 75 kg
- Sound level ..... <106 dB(A)
- Rock drill lubrication warning kit
- Hole blowing kit

### Bolting unit

- Mechanical Bolt Unit, MBU
- Magazine capacity ..... 10 bolts
- Max. size of face plates, rectangular ..... 150x150 mm
- Max. size of face plates, round ..... Ø 200 mm
- Bolt length ..... 1.5–2.4 m
- Adapted for all commonly used bolt types on the market, see options
- Drill steel and coupling according to MBU, delivered with rig
- Chain feed adapted according to bolt length

### Boom

- BUT 35BS
- Feed extension ..... 0-542 mm
- Boom extension ..... 1 600 mm
- Feed roll-over ..... 360°
- Max. lifting angle ..... +65°/-30°
- Max. swinging angle ..... ±45°
- Weight, boom only ..... 2 870 kg

### Hydraulic system

- Hydraulic pumps ..... 1 unit
- Pumps unloaded at start
- System pressure ..... 150–230 bar
- Hydraulic oil tank, volume max/min ..... 195/167 l
- Low oil level indicator including shut down
- Oil temperature gauge on oil tank
- Filtration ..... 16 µm
- Water-cooled oil cooler
- Mineral hydraulic oil
- Oil filter indicator

### Air system

- Compressor ..... Atlas Copco LE10
- Capacity, max at 7 bar ..... 15.7 l/s
- Electric-powered ..... 10 cc
- Air pressure gauge
- Air receiver ..... 80 l

### Electrical system

- Total installed power ..... 66 kW
- Main motor ..... 55 kW
- Compressor motor ..... 7.5 kW
- Voltage ..... 380–525 V
- Frequency ..... 50–60 Hz
- Starting method ..... star/delta
- Electronic overload protection
- Percussion hour meters in electrical cabinet
- Digital volt/ampere meter in electric cabinet
- Phase sequence indicator
- Earth fault indicator
- Battery charger
- Transformer ..... 4 kVA
- Working lights, halogen ..... 3x500 W, 230 V
- Spot light ..... 1x70 W, 24 V
- Cable reel diameter ..... 1 400 mm

### Carrier

- Deutz TCD3.6 L4, 4-cylinder water-cooled Chinese Stage III approved diesel engine
- Power rating at 2 300 rpm ..... 55.4 kW
- Torque at 1 300 rpm ..... 390 Nm
- Articulated steering ..... ±41° steering angle
- Fixed seat for tramping
- Four-wheel drive
- Hydrostatic power steering system
- Hydrostatic transmission ..... Clark 12000
- Front axle ..... Dana 123
- Rear axle ..... Dana 123, ±6° oscillation
- Automatic differential lock on rear axle
- Tyres ..... 12.00 x R20
- Clearance outside axles ..... 15"
- Hydraulic jacks, front ..... 2 extendable
- Hydraulic jacks, rear ..... 2
- Service brakes ..... 2 separate circuits
- Emergency and parking brakes ..... SAHR
- Fuel tank, volume ..... 60 l
- Silencer
- Electric system ..... 24 V
- Batteries ..... 2 x 70 Ah
- Tramping lights ..... LED 8 x 25W, 24V DC
- Working lights ..... LED 4 x 50W, 24V DC
- Fire extinguisher
- Central lubrication system
- Spirit level
- Gradeability at max. load on drive wheels ..... 1:4
- Horn, beacon and reverse alarm

### Water system

- Hydraulic driven water booster pump
- Capacity, max at 7 bar boost ..... 80 l/min
- Min water inlet pressure ..... 2 bar

## Optional equipment

### Bolting unit/Boom

- Swellex, Mn 12, Mn 16
- Split-Set, SS39, SS46, including COP 1025
- Mechanical anchor bolts, including boltrotator
- Rebar - manual resin cartridge, including boltrotator
- Hose injection system for resin cartridges
- Dual bolt lengths
- Dual bolt types
- Extension drilling kit

### Water system

- Water hose reel

### Carrier

- Fire suppression system
  - Manual release
  - Automatic (Checkfire)
- Deutz D914 L4 2V, 55kW EU Stage IIIA/Tier 3 diesel engine
- Deutz BF4L 914 72kW EU Stage II / Tier 2 engine
- Spot lights, extra

### Electrical system

- Electric cable Buflex
- Plug
- Socket
- Connector
- Switch gear
- Electric outlet for accessories, 16 A

### Hydraulic system

- Hydraulic oil thermostat

### Miscellaneous

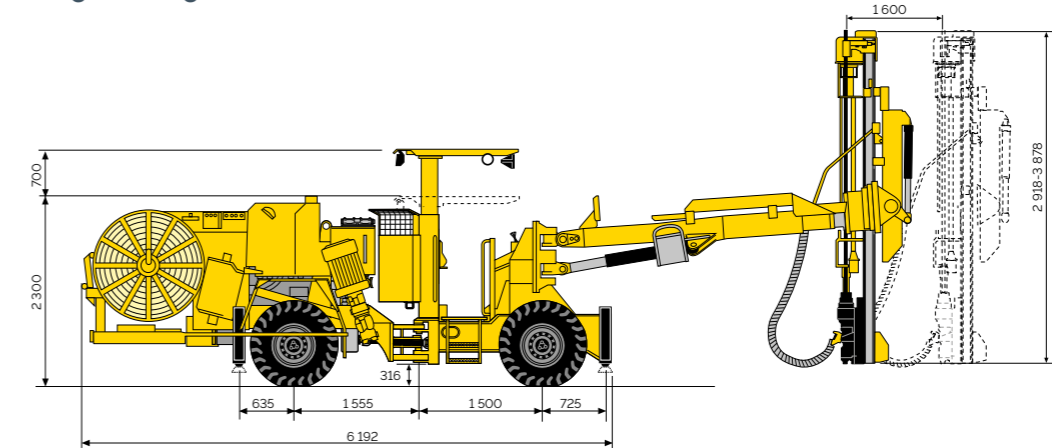
- Ni-Cr plated piston rods (limited selection)
- Manual lubrication kit
- Rig washing kit with water hose and reel
- Illuminated stairs
- Boots washing kit

## Recommended Drill Steel Length

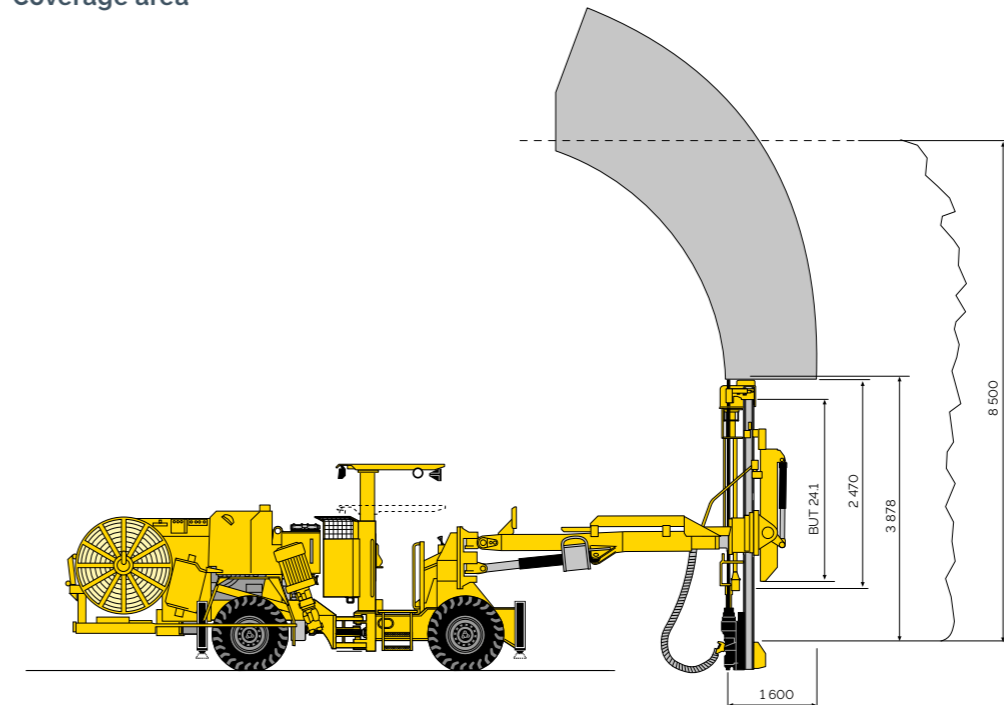
Maximum bolt length, mm (limited by RA-30)	Drill steel length, mm	Drill steel length, mm	Drill steel length, mm	Total length, mm
	COP RR11 R32	COP RR11 R32E	COP RR11 R32F	
1 510	1 830 - 1 885	1 740 - 1 795	2 035 - 2 090	2 918
1 870	2 190 - 2 245	2 100 - 2 155	2 395 - 2 450	3 278
2 050	2 370 - 2 425	2 280 - 2 335	2 575 - 2 630	3 458
2 170	2 490 - 2 545	2 400 - 2 455	2 695 - 2 750	3 578
2 470	2 790 - 2 845	2 700 - 2 755	2 995 - 3 050	3 878

## Measurements

### Length / Height



### Coverage area



### Dimensions

mm	Width, without bolt rack	1 930
	Height, carrier	2 300
	Length, excluding boom	6 192
	Ground clearance	316
	Turning radius, outer	5 800
	Turning radius, inner	3 000

### Tramming speed

km/h	On flat ground (rolling resistance 0.05)	> 14
	On incline 1:8	> 4.5

### Weight

gross weight, depending on configuration		
kg	Total	17 500
	Boom side	12 500
	Engine side	5 000

### Recommended cable size and length

Voltage	Type	Dimension, mm <sup>2</sup>	Diameter, mm	Length, m
400 V	Buflex	3x95+3G16	42	125
400 V	Buflex	3x70+3G16	37	145
460-500 V	Buflex	3x70+3G16	37	145
500-550 V	Buflex	3x70+3G16	37	145

Recommendations are given for surrounding temperature of 40 °C. and up to a height of 2000m.



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