

# Boomer 281 face drilling rig

Mining one-boom face drilling rig for medium sized underground drifts, with maximum coverage area 31 m<sup>2</sup>



# Durable and reliable rig

Time-proven powerful tool for your continuous and efficient work in mining development and production.

## + Main benefits

**Optimized** for small to medium size tunnels and drifts up to 6 m high \* 6 m wide.

**Time-proven robust design**, common sense control system and good after-sales service ensure great reliability.

**Operator and service friendly**: simple operator controls and easy service access.

**High popularity** and good after-sales service support.



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

FOPS approved telescopic protective roof

Strong and stable DC11 carrier with imported environmental friendly Chinese III stage engine



A competitive face drilling rig optimized for small to medium size mining application.



Installed with solid and robust boom BUT28. The excellent stability and accuracy of movement give fast positioning, low drill steel costs and straight holes.



Maintenance-friendly design makes the service work safe and easy. All service points are reachable from ground level.



Heavy duty BMH 2000 series feed with high feed force

Most reliable COP 1838HD + rock drill

Robust BUT 28 for efficient and trouble-free operation

# Keep you running

With mature engineering solution, solid experiences base and genuine components



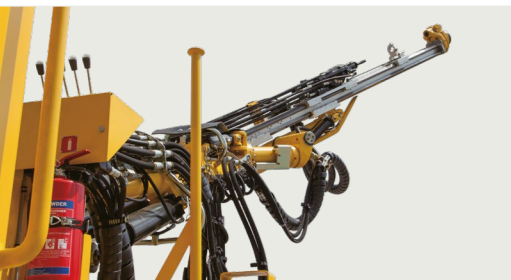
## + COP 1800 HD+ series rock drill

The Boomer K111 is equipped with COP 1800 HD+ series rock drill, featured by high efficiency, high penetration rate and excellent drill steel economy with dual-dampening system. With its adjustable stroke settings on rock drill and "Heavy Duty" (HD) front head, it can handle various ground conditions and even the toughest of conditions and operations. The "+" series have recommended service intervals increased by 50%, giving higher machine utilization and reduced running costs.



## + Drilling system

The Boomer 281 is featured by efficient and fast hydraulic controlled drilling system, which incorporates the antijamming function Rotation Pressure Controlled Feed (RPCF), rock drill lubrication warning kit and big hole drilling system



## + Operator station

Excellent visibility, logical control layout, and LED working lights & tramming lights 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

	COP 1638HD+	COP 1838HD+
Shank adapter	R32/R38/T38	R32/R38/T38
Height over drill centre	88 mm	88 mm
Length without shank	1 088 mm	1 088 mm
Impact power	16 kW	18 kW
Impact rate	60 Hz	60 Hz
Hydraulic pressure	200 bar	230 bar
Rotation system	Separate rotation	Separate rotation
Rotation speed	0-340/ 0-215 rpm	0-340 / 0-215 rpm
Rotation torque, max	640 / 1 000 Nm	640 / 1 000 Nm
Lub. air consump. at 2 bar	5 L/s	5 L/s
Water consumption	40-120 L/min	40-120 L/min
Weight	175 kg	175 kg
Sound level	<106 dB(A)	<106 dB(A)

### Feed

	BMH 2800	BMH 2831	BMH 2837	BMH 2843
Total length	4 677 mm	5 287 mm	5 287 mm	5 897 mm
Drill rod length	3 090 mm	3 700 mm	3 700 mm	4 310 mm
Hole depth	2 795 mm	3 405 mm	3 405 mm	4 015 mm
Weight, incl. drill	475 kg	495 kg	495 kg	525 kg
Feed force	15.0 kN	15.0 kN	15.0 kN	15.0 kN

### Boom

- Boom .....BUT 28
- Feed extension ..... 1 250 mm
- Boom extension ..... 1 250 mm
- Parallel holding .....complete
- Feed roll-over ..... 360°
- Lifting angle ..... +65°/-30°
- Boom swing angle L/R ..... ±35°
- Weight, Boom only ..... 1 750 kg

### Air system

- Electronically driven piston Compressor.....Atlas Copco LE3
- Capacity max. at 7 bar.....4.4 L/s
- Air pressure gauge

### Water system

- Hydraulic driven water booster pump..... Lowara 5SV11F015T
- Water booster pump working capacity, l/s.....0.7-2.4
- Water booster pump working pressure, bar..... 25
- Min. water inlet pressure, bar.....2
- Water flow guard

### Control system

- Hydraulic Direct Control System, DCS
- Basic functions such as anti-jamming included

### Electrical system

- Total installed power.....63 kW
- Main motor.....1 x 55 kW
- Voltage.....380 - 1 000 V
- Frequency.....50 Hz - 60Hz

- Starting method.....star/delta / (1 000 V direct start)
- Thermal overload protection for electric motors
- Percussion hour meters
- Digital voltmeter/ampere meter in electric cabinet
- Phase sequence indicator
- Earth fault indicator
- Battery charger
- Transformer.....3.9 kVA
- Cable reel.....660/1 095 mm

### Hydraulic system

- Hydraulic pumps.....1 unit
- Pumps unloaded at start
- System pressure, max.....150 - 230 bar
- Hydraulic oil tank, volume max..... 124 L
- Oil temperature meter
- Manual oil filling pump
- Oil filter indicator
- Low oil level indicator
- Water cooled oil
- Filtration..... 20 µm
- Mineral hydraulic oil

### Carrier

- Deutz TCD3.6L4, 4-cylinder, water-cooled diesel engine, Chinese Stage III
- Power rating at 2 300 rpm.....55.4 kW (75 hp)
- Torque at 1 300 rpm .....390 Nm
- Articulated steering..... ±40° steering angle
- Fixed seat for tramming
- Four-wheel drive
- Hydrostatic transmission
- Front axle..... Dana 112
- Rear axle..... Dana 112, ±10° oscillation
- Automatic differential, limited slip 45% rear axle
- Tyres.....8.25 x R15
- 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 12 W, 70 Ah
- Tramming 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

## Optional equipment

### Drifter rods

Dimension		Min. hole diameter
mm	R32-H35-R38	45
	R32-H35-T38	45
	R32-H35-T38 Speedrod	45
	SR35-H35-T38 Speedrod	45
	SR35-H35-T38	45
	SR35-R39-T38	45
	R32-R39-T38	45
	SR35-R39-T38 Speedrod	45

### Shank adapters

Thread		Diameter	Length
mm	R38	38	435
	T38	38	435
	R32	38	525
	T38*	38	525

\* Intended for extension drilling with BSH 110

### Couplings

Thread		Diameter	Length
mm	R38	55	170
	T38	55	190

### Rock drill

- Big hole drilling kit

### Boom

- Automatic boom lubrication kit, rear part of boom

### Feed

- Telescopic feed BMHT 2000-series booms
- Bulk head style hose trees on feed

### Electrical system

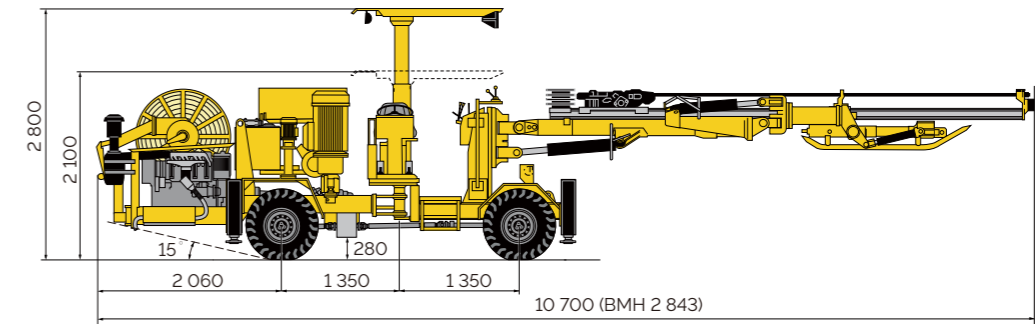
- Buflex cable

### Miscellaneous

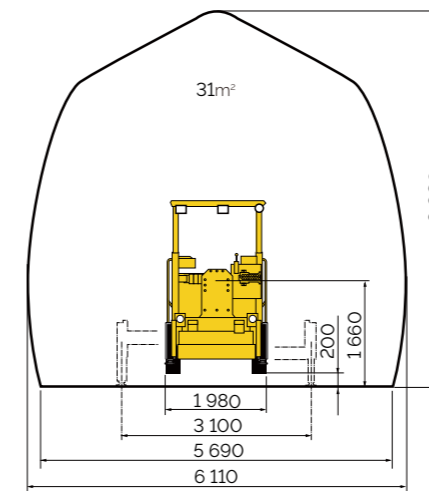
- KA Certificate (Mining safety standard approved by Ministry of Environmental protection of People's Republic of China, limited selection on requests)

## Measurements

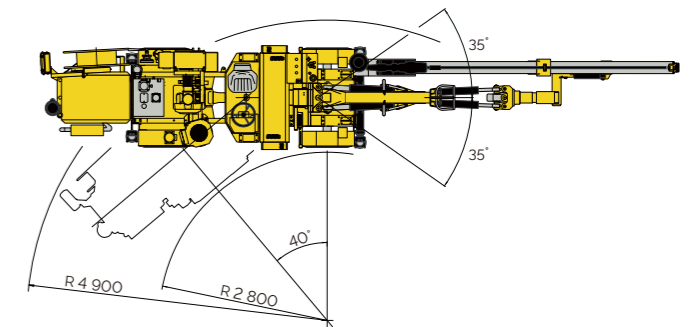
### Side view



### Coverage area



### Turning radius



### Dimensions

		Boomer 281
mm	width	1980
	Height roof up/down	2800/2100
	Length with BMH 2843 feed	10700
	Ground clearance	280

### Weight

gross weight, depending on configuration		Boomer 281
Kg	Total	10000
	Boom side	6700
	Engine side	3300

### Tramming speed

km/h	On flat ground (rolling resistance 0.05)	>10
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### Recommended cable size and length

Voltage	Type	Dimension, mm²	Diameter, mm²	Length, m
380-400V	Buflex	3x70+3G16	37	60
1000 V	Buflex	3x35+3G6	28	105

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



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