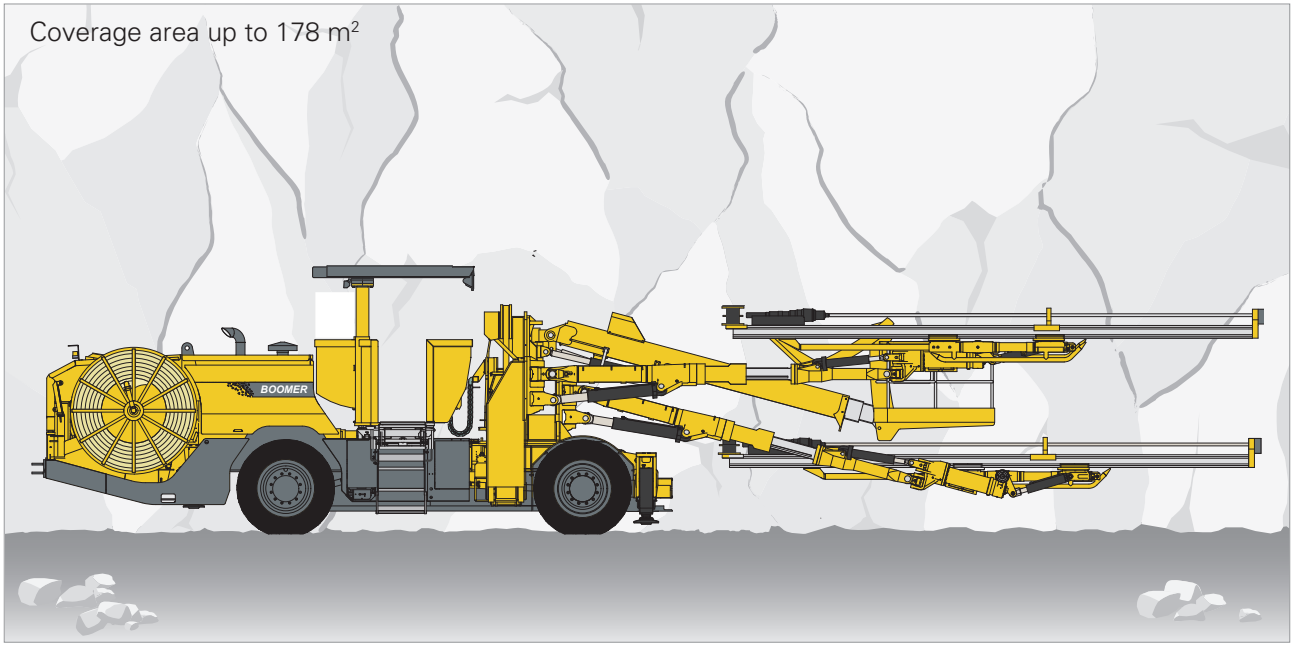
Atlas Copco Face drilling rigs

Boomer XL3 D

Technical specification



Three-boom pilot-hydraulic controlled tunnelling rig with high reach console, BUT 35 booms and COP 1638HD+, COP 1838HD+ or COP 2238HD+ rock drills.

Standard features

»Rock drill
- COP 1638HD+, COP 1838HD+ or COP 2238HD+ rock drill with dual-damping system
- Lubrication system with separate lubrication of driver and gear, pressurized sidebolts and mating surfaces

»Drilling system
- Pilot-hydraulic controlled drilling system which incorporates anti-jamming function RPCF (Rotation Pressure Controlled Feed force)

»Hydraulic boom
- BUT 35 heavy-duty boom with double tripod suspension for accurate parallel holding in all directions

»Hydraulic feed
- BMH 6800-series heavy-duty aluminium feeds with double bottom for high torsional resistance
- Snap-on stainless steel sleeves and polymer contacts

»Carrier
- Sturdy carrier with four-wheel drive
- Powered by a 6-cylinder, low-emission diesel engine
- Four jacks for stable set up

»General
- FOPS-approved telescopic protective roof
- Cable reel
- Electric driven piston compressor
- Electric driven water booster pump
- Working lights

Courtesy of Crane.Market

Specifications

ROCK DRILL

	COP 1638HD+	COP 1838HD+	COP 2238HD+
Shank adapter	R32/R38/T38	R32/R38/T38	R32/R38/T38
Height over drill centre	88 mm	88 mm	88 mm
Length without shank	1 008 mm	1 008 mm	1 008 mm
Impact power	16 kW	18 kW	22 kW
Impact rate	60 Hz	60 Hz	73 Hz
Hydraulic pressure	200 bar	230 bar	250 bar
Rotation system	Separate rotation	Separate rotation	Separate rotation
Rotation speed	0–340 rpm	0–340 rpm	0–340 rpm
Rotation torque, max	640 Nm	640 Nm	640 Nm
Lub. air consump. at 2 bar	6 l/s	5 l/s	6 l/s
Water consumption	0.7-2 l/s	0.7-2 l/s	0.7-2 l/s
Weight	170 kg	170 kg	170 kg

FEED

BMH 6800	BMH 6814	BMH 6816	BMH 6818	BMH 6820	BMH 6821
Total length	5 882 mm	6 502 mm	7 102 mm	7 677 mm	7 977 mm
Drill steel length	4 310 mm	4 920 mm	5 530 mm	6 100 mm	6 400 mm
Hole depth	4 043 mm	4 668 mm	5 268 mm	5 843 mm	6 140 mm
Weight, incl. drill	631 kg	665 kg	696 kg	721 kg	751 kg
Feed force	20.0 kN	20.0 kN	20.0 kN	20.0 kN	20.0 kN

» Boom

- BUT 35
- Feed extension ..... 1 800 mm
- Boom extension ..... 1 600 mm
- Parallel holding ..... complete
- Feed roll-over ..... 360°
- Max. lifting angle ..... +70°/-30°
- Max. swinging angle ..... ±45°
- Weight, boom only ..... 2,920 kg

» Hydraulic system

- Hydraulic pumps ..... 3 separate units, one for each boom
- Pumps unloaded at start
- System pressure, max ..... 210 bar
- Hydraulic oil tank, volume min/max ..... 470/755 l
- Low oil level indicator
- Oil temperature gauge on oil tank
- Electrical oil filling pump
- Filtration ..... 16 µm
- Mineral hydraulic oil

» Electrical system

- Total installed power ..... 200 kW
- Main motors ..... 3 x 55 kW
- Voltage ..... 400–690 V
- Frequency ..... 50–60 Hz
- Starting method ..... star/delta
- Thermal overload protection for electric motors
- Digital voltmeter/amperage/percussion hour meter in electric cabinet
- Phase sequence indicator
- Earth fault indicator
- Battery charger
- Transformer ..... 12 kVA
- Working lights, halogen ..... 2 x 1 500 W + 2 x 500 W
- Cable reel, diameter ..... 1 800 mm
- Limit switch for cable reel

» Air system

- Electric driven piston compressor ..... Atlas Copco LE 10
- Capacity, 7 bar ..... 15.7 l/s
- Electric motor ..... 7.5 kW
- Air pressure gauge

» Water system

- Electric driven water booster pump PXR 1614
- Water booster pump max capacity at 17 bar, l/min 300
- Min water inlet pressure at 300 l/min, bar 2
- Electric motor ..... 15 kW
- Water pressure gauge
- Water flow guard

» Carrier

- Engine ..... Deutz TCD 2013 L06 2V
- Power rating at 2,300 rpm ..... 173 kW (235 hp)
- Torque at 1,500 rpm ..... 907 Nm
- Four-wheel drive
- Hydrostatic power steering system
- Hydrodynamic transmission ..... Clark 32000
- Front axle ..... Dana 37R116
- Rear axle ..... Dana 276 with ±8° oscillation
- Manual differential lock on front axle
- Tyres ..... 14.00 x R24 Michelin XKA
- Clearance outside axles ..... 15°
- Hydraulic jacks, front ..... 2 extendable with large plates
- Hydraulic jacks, rear 2
- Service brakes ..... 2 separate circuits
- Emergency and parking brakes ..... SAHR
- Fuel tank, volume ..... 150 l
- Electric system ..... 24 V
- Batteries ..... 2 x 125 Ah
- Tramming lights ..... 8 x 70 W
- Illuminated stairs for platform ..... 2 x 70 W
- Silencer
- Fire extinguisher
- Gradeability at max. load on drive wheels 1:4
- Beacon and reverse alarm
- Horn
- Hand throttle

Courtesy of Crane.Market

Specifications

DRIFTER RODS

Dimension		Min. hole diameter
mm	R38-HEX 35-R32	45
	T38-HEX 35-R32	45
	T38-HEX 35-R32 Speedrod	45
	R38-HEX 35-SR35 Speedrod	45
	T38-HEX 35-SR35	45
	T38-Rnd 39-SR35	45
	T38-HEX 35-R35	48
	T38-HEX 35-R35 Speedrod	48
	T38-Rnd 39-R35	48
	T38-Rnd 39-R35 Speedrod	48

EXTENSION RODS FOR INJECTION DRILLING/RAS

Dimension		Min. hole diameter
mm	R32 Speedrod	51
	T38 Speedrod	64

SHANK ADAPTERS

Thread		Diameter	Length	Part No.
mm	R38	38	435	404-09101,00
	T38	38	435	435-09101,00
	R32	38	525	403-09103,00*
	T38	38	525	435-09103,00*

*Intended for RAS and extension drilling with BSH 110

COUPLINGS

Thread		Diameter	Length	Part No.
mm	R38	55	170	304-0055,00
	T38	55	190	335-0055,00

Optional equipment

» Drilling system

- Rock drill lubrication surveillance kit
- Hole blowing kit, excluding CSA approved air receiver
- Water mist flushing, external water and air supply, hydraulic oil cooled by fan air
- Water mist flushing, external water and air supply, hydraulic oil cooled by water

» Feed

- Telescopic feed BMHT 6800-series
- Rod Adding System, RAS, for drilling of long holes
- Rig prepared for RAS
- Extension drilling set BSH 110
- Top-mounted feeds

» Boom

- Extension segment, 700 mm long (not with service platform
- Automatic boom lubrication system, rear part of boom
- Ni-Cr plated piston rods on request

» Air system

- Hole blowing kit with internal air supply (80 l), extra compressor LE5 additional 8 l/s at 8 bar

» Water system

- Water hose reel, diameter 1 800 mm
- Dual controls for hose reel
- Water hose, diameter 2", lenght 70 m at 70% filling rate

» Hydraulic system

- Heater kit for oil tank, electric motor and diesel engine
- Biodegradable hydraulic oil

» Cabin

- FOPS/ROPS approved cabin, noise level <80 dB(A)
  - Air conditioning unit
  - Fixed seat
  - CD-Changer
  - Boot washing kit
- Front window
- Heating function for air conditioning
- Electrical heater, 1.2 kW, 230 V (CE)
- Joystick-controlled spotlights left and/or right

» Carrier

- Exhaust system catalyser
- Exhaust system particle filter
- Fire suppression system ANSUL, 6 nozzles
- Fire suppression system Forrex, 6 nozzles
- Automatic fire suppression system including suppression inside electrical cabinet (ANSUL or FOREX)
- LED Tramming lights
- HID Working lights

» Electrical system

- Soft start for electrical motors, 690 V
- Electric system, 1 000 V (direct start only)
- Electric cable type Buflex
- Dual controls for cable reel
- Power supply plug
- Power supply plug och socket
- Power supply plug and switch gear
- Connector
- Electric outlet for accessories, 3-phase, max 16 A, 690 V
- 3-phase outlets 32 A/16 A, with extra transformer 15 kVA, 1-phase outlets 10 A

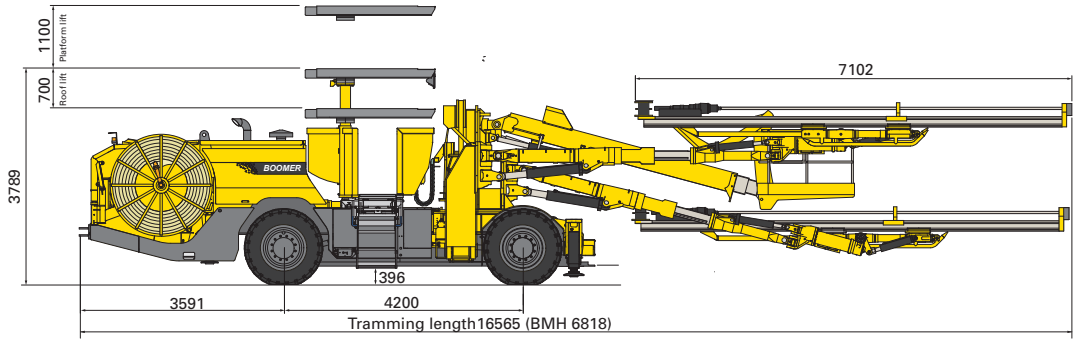
» Miscellaneous

- Service platform, SP2 or SP3
- FOPS-approved protective roof for service platform
- Water and air outlet in service platform basket
- Hydraulic Swellex pump
- Holder for spare drill rods
- Rig washing kit
- Manual lubrication system
- Cabin lift, 1 100 mm

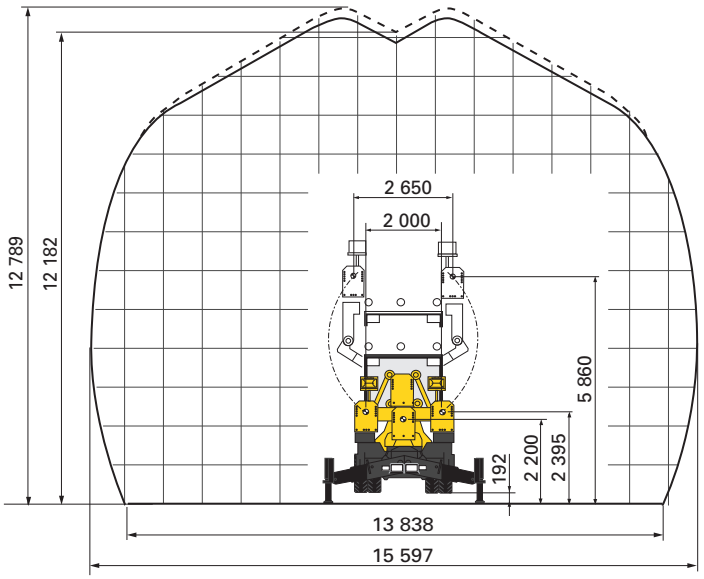
Courtesy of Crane.Market

Measurements

SIDE VIEW



COVERAGE AREA



DIMENSIONS

mm	Width	2 926
	Height roof down	3 089
	Height roof up	3 789
	Length with 18 ft feeds	16 565
	Ground clearance	396
	Turning radius	12 100/6 700

NOISE AND VIBRATION

Operator sound pressure level in canopy, drilling, free field (ISO 11201)	104±6 dB(A) re 20uPa
Operator sound pressure level working close to machine, drilling, free field	104±6 dB(A) re 20uPa
Sound power level (ISO 3744), drilling, free field	130 dB(A) re 1pW
Vibration levels standing, canopy (ISO 2631-1)	0.1± 0.15 m/s^2

WEIGHT

gross weight		
kg	Total	42 000
	Boom side	32 000
	Engine side	10 000

TRAMMING SPEED

km/h	On flat ground (rolling resistance 0.05)	>17
	On incline 1:8	> 6

RECOMMENDED CABLE SIZE AND LENGTH

Voltage	Type	Dimension, mm²	Diameter, mm	Length, m
400 V	Buflex	4x185+3G35	55	100
440–500 V	Buflex	3x150+3G25	52	110
550 V	Buflex	3x120+3G25	46	135
690 V	Buflex	3x95+3G16	42	150
1 000 V	Buflex	3x50+3G10	32	250

G = Protection yellow/green
Recommendations are given for surrounding temperature of 40°C.

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