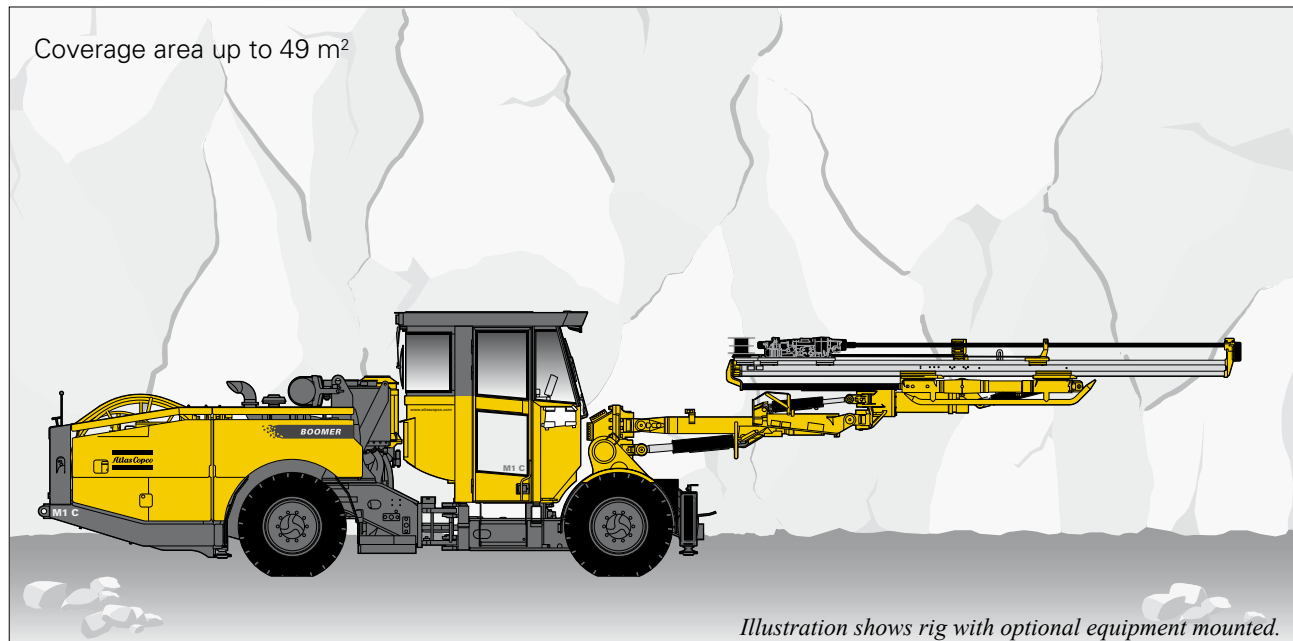


Boomer M1 C

Equipped with COP 1638, COP 1838 or COP 2238 rock drill



One-boom hydraulic tunnelling and mining rig with an advanced Rig Control System, COP 1638, COP 1838 or COP 2238 rock drill and heavy-duty BUT 35 SL boom.

Standard features

» Rock drill

- COP 1638, COP 1838 or COP 2238 rock drill with dual-damping system for optimal drill consumable life
- Pressurized housing and mating surfaces to reduce internal contamination of the rock drill

» Hydraulic boom

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

» Hydraulic feed

- BMH 6800-series heavy-duty aluminium feed with high bending and torsional resistance for maximum durability
- Snap-on stainless steel sleeves and polymer contacts

» Control system

- Advanced Rig Control System (RCS) allowing several levels of automation to suit customer requirements
- Standard functions include soft collaring and the anti-jamming function Rotation Pressure Controlled Feed (RPCF)
- Integrated diagnostic and event logging system to assist in equipment maintenance
- Interactive operator panel with full-colour display

» Carrier

- Sturdy, articulated carrier with four-wheel drive
- Powered by a 4-cylinder, EPA III/COM III (Tier 3/Stage IIIA) approved diesel engine
- Four jacks for stable set-up

» General

- FOPS-approved telescopic protective roof
- Hydraulically driven water booster pump
- Hydraulically driven compressor
- Cable reel
- Working lights

Specifications

ROCK DRILL

	COP 1638	COP 1838	COP 2238
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	440–1 000 Nm	640–1 000 Nm	640–1 000 Nm
Lub. air consump. at 2 bar	5–7 l/s	5 l/s	5 l/s
Water consumption	35–120 l/m	40–120 l/m	50–120 l/m
Weight	173 kg	170 kg	174 kg
Sound level	<106 dB(A)	<106 dB(A)	<106 dB(A)

FEED

BMH 6800	BMH 6814	BMH 6816	BMH 6818
Total length	5 882 mm	6 502 mm	7 102 mm
Drill steel length	4 310 mm	4 920 mm	5 530 mm
Hole depth	4 043 mm	4 668 mm	5 268 mm
Weight, incl. drill	631 kg	665 kg	696 kg
Feed force	22.0 kN	22.0 kN	22.0 kN

» Boom

- Boom.....BUT 32
- Feed extension.....1 800 mm
- Boom extension.....1 250 mm
- Parallel holdingcomplete
- Feed roll-over.....360°
- Max. lifting angle.....+65°/–30°
- Max. swinging angle.....±45°
- Weight, boom only.....2 075 kg

» Air system

- Hydraulically driven screw compressor... Atlas Copco GAR 5
- Capacity, max at 7 bar.....20 l/s
- Adjustable speed
- Air pressure gauge
- Hole blowing kit with 80 l air receiver

» Water system

- Hydraulically driven water booster pump.....Flygt PXR411H
- Water booster pump max capacity at 15 bar250 l/min
- Min water inlet pressure at 200 l/min,2 bar
- Water pressure gauge
- Water flow guard

» Control system

- Rig Control System (RCS) – versatile and upgradeable to a higher degree of automation
- One adjustable, electronic control panel with colour display
- USB-port for transfer of data and backup settings
- Integrated diagnostic system

» Electrical system

- Total installed power.....83 kW
- Main motors, Sf 1.15.....1x75 kW
- Voltage.....400–1 000 V
- Frequency.....50–60 Hz
- Starting method.....star/delta (400–700 V)
- Electronic overload protection for electric motors
- Percussion hour meter on operator display
- Digital voltmeter/ampere meter in electric cabinet
- Phase sequence indicator
- Earth fault indicator
- Battery charger
- Transformer.....8 kVA
- Cable reel, diameter1 600 mm
- Dual controls for cable reel

» Hydraulic system

- Hydraulic pump.....1 unit
- Pumps unloaded at start
- System pressure, max.....150–240 bar
- Hydraulic oil tank, volume max/min255/170 l
- Low oil level indicator
- Oil temperature gauge on oil tank
- Electrical oil filling pump
- Oil filter indicator
- Water cooled oil
- Filtration.....16 µm
- Mineral hydraulic oil

» Carrier

- Deutz 4-cylinder, TCD 2013 L04, EPA III/COM III (Tier 3/ Stage IIIA) approved 4-stroke prechamber diesel engine
- Power rating at 2 300 rpm.....120 kW (160 hp)
- Torque at 1 600 rpm.....618 Nm
- Articulated steering±41° steering angle
- Four-wheel drive
- Hydrostatic power steering system
- Hydrodynamic transmission.....Clark 24000
- Front axleDana 123/90
- Rear axleDana 123/90, ±8° oscillation
- Automatic differential lock on front axle, limited slip
- Tyres.....12.00xR24
- Clearance outside axles.....13° rear, 22° front
- Hydraulic jacks, front2 extendable
- Hydraulic jacks, rear2
- Service brakes2 separate circuits
- Emergency and parking brakesSAHR
- Fuel tank, volume.....100 l
- Exhaust catalyser
- Silencer
- Electric system24 V
- Batteries.....2x12V, 125 Ah
- Trammig lights6 x 40 W LED + 2 x 70 W halogen, 24 V
- Working lights.....4 x 35 W HID, 24 V DC
- Brake lights
- Illuminated stairs
- Fire extinguisher
- Central lubrication system
- Spirit levelone for longitudinal, one for sideways
- Gradeability at max. load on drive wheels.....1:4
- Horn, beacon and reverse alarm
- Shelf for drill bits and tools

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

EXTENSION RODS FOR INJECTION DRILLING/RAS

Dimension		Min. hole diameter
mm	Rnd 32 Speedrod	51
	Rnd 38 Speedrod	64

SHANK ADAPTERS

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

**Intended for RAS and extension drilling with BSH 110*

COUPLINGS

Thread		Diameter	Length
mm	R38	55	170
	T38	55	190

Optional equipment

» Rock drill/Drilling system

- Water mist flushing, external water and air supply
- External air supply connection for hole blowing kit

» Feed

- Telescopic feed BMHT 6000-series (max 18 ft)
- Extension drilling set BSH 110 (BMH feeds only)
- Feed prepared for RAS
- Rod Adding System, RAS
- Water spraying kit on cradle

» Boom

- Automatic boom lubrication kit, rear part of boom

» Software

- ABC Basic
- ABC Regular
- Electronic parallel holding (ABC Regular)
- Rig prepared for Measure While Drilling (MWD) logging and analyzing drill data
- Measure While Drilling (MWD)
- Bolt view (ABC Regular and Total)
- Rig Remote Access (RRA) – LAN or WLAN connection
- RRA server

» Protective roof

- Mounting height -80 mm/+60 mm/+310 mm
- Manual spotlight, left and/or right
- Swingable seat for drilling and tramming

» Cabin

- FOPS-approved cabin, noise level <80 dB(A), height 3 044 mm including:
 - Air conditioning unit
 - Fixed seat
 - CD-changer
 - Boot washing kit
- Cabin body made of stainless steel
- Front window, 24 mm

- Heating function for air conditioning (water transferred)
- Electrical heater, 1.2 kW, 230 V (CE)
- Joystick-controlled spotlights left and/or right
- Swingable seat for drilling and tramming

» Air system

- Compressor, GAR 30

» Water system

- Water hose reel

» Hydraulic system

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

» Carrier

- Exhaust system: particle filter
- Fire suppression system ANSUL (manual or Checkfire)
- Fire suppression system FORREX (manual or automatic)
- Large plates for boom frame hydraulic jacks

» Electrical system

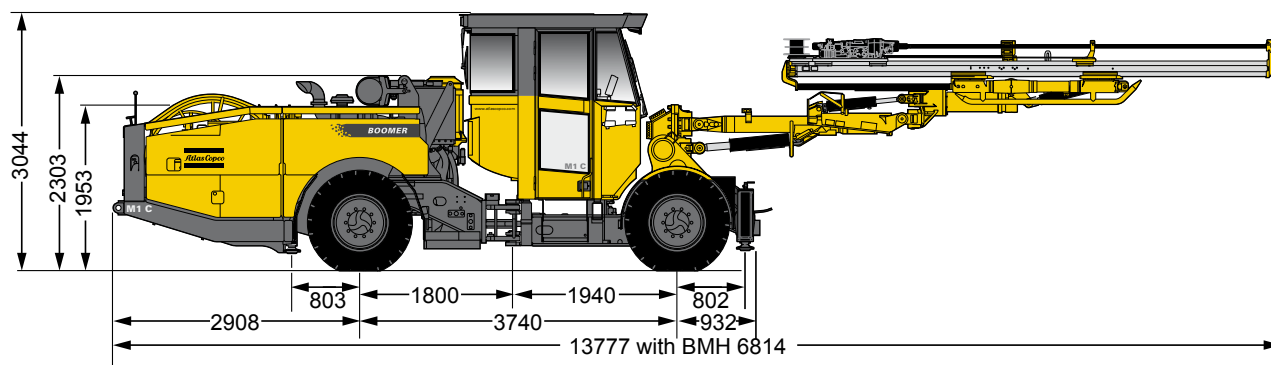
- Stainless steel electrical enclosure
- Electric cable type H07RN-F or Buxflex
- Plug for cable
- Switch gear
- Electrical outlet voltage 16 A 3-phase (CE and not for 1 000 V)
- Extra transformer, 3-phase, 15 kVA (230/400 V)
- Starting method – soft start (not for 1 000 V)

» Miscellaneous

- Hose/cable guiding at water/cable reel
- Hydraulic Swellex pump type H1 for manual installation
- Manual lubrication kit
- Rig washing kit
- Boot washing kit
- Ni-Cr plated piston rods (limitations exist)

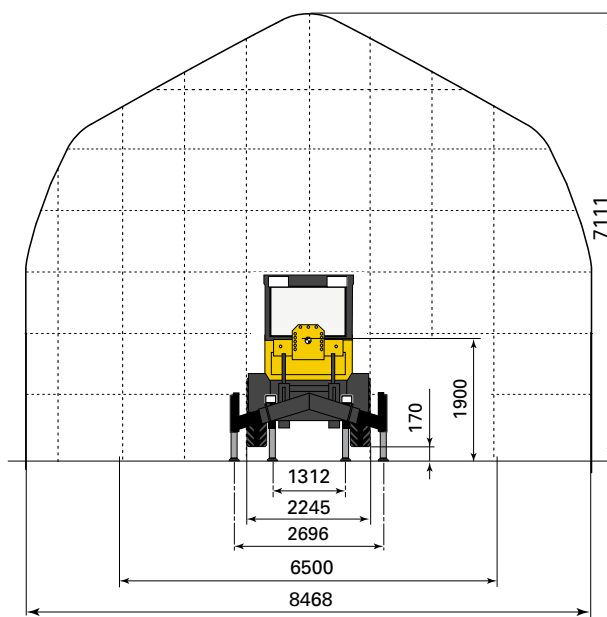
Measurements

SIDE VIEW



COVERAGE AREA

Illustration shows rig with optional equipment mounted.



DIMENSIONS

mm		
Width		2 245
Height with cabin		3 044
Height roof up/down		3 019/2 303
Length with BMH 6814 feeds		13 777
Ground clearance		260

WEIGHT

gross weight, depending on configuration

kg		
Total		18 000–20 000
Boom side		9 000–11 000
Engine side		9 000

TRAMMING SPEED

km/h		
On flat ground (rolling resistance 0.05)		>14
On incline 1:8		> 6

NOISE AND VIBRATION

Operator sound pressure level in canopy, drilling, free field (ISO 11201)	104±6 dB(A) re 20uPa
Operator sound pressure level in cabin, drilling, free field (ISO 11201)	75± 3 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	128 dB(A) re 1pW
Vibration levels standing, canopy (ISO 2631-1)	0.1± 0.15 m/s ²
Vibration levels standing, cabin (ISO 2631-1)	0.07± 0.07 m/s ²
Vibration levels seated, cabin (ISO 2631-1)	0.07± 0.07 m/s ²

RECOMMENDED CABLE SIZE AND LENGTH

Voltage	Type	Dimension, mm ²	Diameter, mm	Length, m
380–400 V	H07RN-F	4X70	49	110
	Buflex	3x95+3G16	45	155
440–500 V	H07RN-F	4X50	44	140
	Buflex	3x70+3G16	39	200
550 V	H07RN-F	4X50	44	140
	Buflex	3x70+3G16	39	200
660–690V	H07RN-F	4X35	38	200
	Buflex	3x50+3G10	33	200
1 000 V	H07RN-F	N/A	N/A	N/A
	Buflex	3x35+3G6	29	200

Recommendations are given for surrounding temperature of 40 °C and up to a height of 2 000 m.