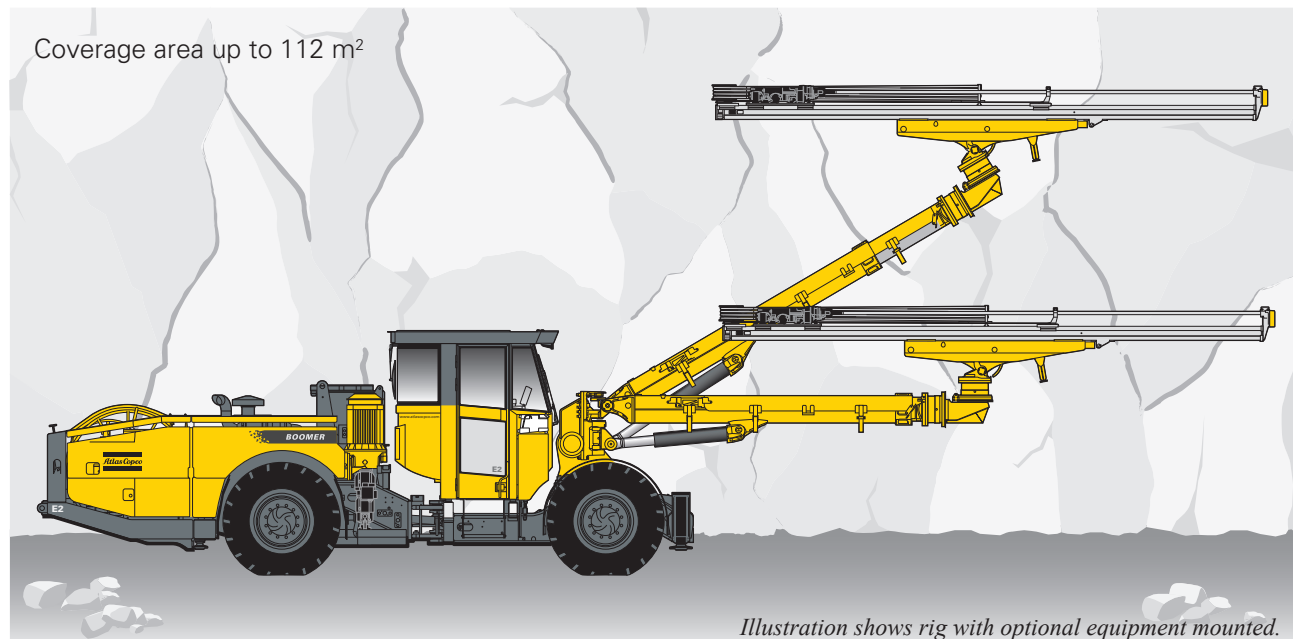


Boomer E2 C

Equipped with COP 1838HD+ or COP 2238HD+ rock drills



Two boom hydraulic tunnelling and mining rig with an advanced Rig Control System, COP 1838HD+ or COP 2238HD+ rock drills and heavy-duty BUT 45 booms for superior productivity.

Standard features

» Rock drill

- COP 1838HD+ or COP 2238HD+ rock drills 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 45 heavy-duty booms for direct, fast and accurate positioning between holes
- Double rotation unit for ± 190 degrees feed roll-over and ± 135 degrees feed rotation

» 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 Stage III B (EPA Tier 4i), 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 1838HD+	COP 2238HD+
Shank adapter	R32/R38/T38	R32/R38/T38
Height over drill centre	88 mm	88 mm
Length without shank	1 008 mm	1 008 mm
Impact power	18 kW	22 kW
Impact rate	60 Hz	73 Hz
Hydraulic pressure	230 bar	250 bar
Rotation system	Separate rotation	Separate rotation
Rotation speed	0–340 rpm	0–340 rpm
Rotation torque, max	640 Nm	640 Nm
Lub. air consump. at 2 bar	6 l/s	6 l/s
Water consumption	70 l/min	70 l/min
Weight	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	22.0 kN	22.0 kN	22.0 kN	22.0 kN	22.0 kN	

» Boom

- Boom BUT 45 M
- Feed extension 1 800 mm
- Boom extension 2 500 mm
- Parallel holding complete
- Feed roll-over ±190°
- Feed cross-cut ±135°
- Max. lifting angle +55°/-42°
- Max. swinging angle ±42°
- Weight, boom only 3 050 kg

» Air system

- Hydraulically driven screw compressor... Atlas Copco GAR 5
- Capacity, max at 9 bar 26 l/s
- Adjustable speed
- Air pressure gauge
- Hole blowing kit with 80 l air receiver

» Water system

- Hydraulic water booster pump Flygt PXR 160 7H
- Water booster pump max capacity at 15 bar boost 300 l/min
- Min water inlet pressure at 200 l/min, 2 bar
- Water pressure gauge
- Water flow guard
- Pressure compensated water pump

» Control system

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

» Electrical system

- Total installed power 158 kW
- Main motors, Sf 1.5 2 x 75 kW
- Voltage 400–1 000 V
- Frequency 50–60 Hz
- Starting method star/delta
- Electronic overload protection for electric motors
- Percussion hour meter on operator display
- Digital voltmeter/amperage meter in electric cabinet
- Phase sequence indicator
- Earth fault indicator
- Battery charger
- Transformer 8 kVA
- Cable reel, diameter 1 600 mm
- Dual controls for cable reel

» Hydraulic system

- Hydraulic pumps 2 separate units, one for each boom
- Pumps unloaded at start
- System pressure, max 250 bar
- Hydraulic oil tank, volume max/min 390/290 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 TCD 4.1L04, Tier 4i/Stage 3B approved, water-cooled, turbo-charged, with burner and EGR
- Exhaustsystem - Diesel Oxidation Catalyst and Diesel Particulate Filter
- Power rating at 2 300 rpm 115 kW (154 hp)
- Torque at 1 600 rpm 609 Nm
- Articulated steering ±38° steering angle
- Four-wheel drive
- Hydrostatic power steering system
- Hydrodynamic transmission Clark 24000
- Front axle Dana 114
- Rear axle Dana 114, ±8° oscillation
- Automatic differential lock on front axle, limited slip
- Tyres 14.00 x R24
- Clearance outside axles 16° rear, 23° front
- Hydraulic jacks, front 2 extendable
- Hydraulic jacks, rear 2
- Service brakes 2 separate circuits
- Emergency and parking brakes SAHR
- Fuel tank, volume 110 l
- Exhaust catalyser
- Silencer
- Electric system 24 V
- Batteries 2x125 Ah
- Trammig lights 6 x 40 W LED, 2 x 70 W, 24 V DC
- Working lights 4 x 80 W LED, 24 V DC
- Brake lights
- Illuminated stairs for platform LED
- Fire extinguisher
- Central lubrication system
- Spirit level one 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-R38 Speedrod	45
	SR35-H35-T38 Speedrod	45
	SR35-H35-T38	45
	SR35-R39-T38	45
	R32-R39-T38	45
	SR35-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 RAS and extension drilling with BSH 110

COUPLINGS

Thread		Diameter	Length
mm	R38	55	170
	T38	55	190

EXTENSION RODS FOR INJECTION DRILLING/RAS

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

Optional equipment**» Rock drill/Drilling system**

- Hole blowing kit excluding air receiver
- Water mist flushing, external water and air supply

» Feed

- Feed prepared for Rod Adding System (RAS) and Rod Handling System (RHS E), 10' extension rods
- Rod Adding System, RAS
- Rod Handling System E, RHS E
- Water spraying kit on cradle
- Hole depth sensor, hydraulic flow meter in place of standard fishing line sensor

» Boom

- Automatic boom lubrication

» Software

- Advanced Boom Control, ABC Regular
- Advanced Boom Control, ABC Total
- Automatic Rod Handling for RHS-E
- Tunnel Manager software
- Rig hydraulically prepared for ABC Total
- Boom equipped for Measure While Drilling, MWD
- Measure While Drilling logging and analyzing drill data
- Bolt view
- Water loss measurement instruments installed in service platform
- Rig Remote Access (RRA)
- Tunnel Profiler
- Total Station Navigation

» Protective roof

- Mounting height -80 mm/+30 mm/+310 mm
- Manual spotlight, left and/or right
- Swingable seat for drilling and tramping (one operator panel only)
- Two operator panels for standing operation only

» Cabin

- FOPS/ROPS approved cabin (not in conjunction with cabin lift), 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
- Hydraulic cabin lift system, 0–600 mm
- Mounting height -60/-140/+250 mm
- 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, 70 W
- Swingable seat for drilling and tramping
- Two operator panels (for standing operation only)

» 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

- Deutz TCD 6.1 L06 Stage III B Tier 4i (180 kW)
- Deutz TCD 2013 L04 2V Stage IIIa tier 3 (120 kW)
- 16xR25 tyres
- Fire suppression system ANSUL (manual or Checkfire)
- Fire suppression system FORREX (Automatic)

» Electrical system

- Stainless steel electrical enclosure
- Electric cable type Buflex, 400/1 000 V
- Plug for cable
- Switch gear
- Electric outlet for accessories, 16 A (CE)
- Extra transformer 3-phase, 15kVA (230/400 V outlet)

» Miscellaneous

- Service platform, SP 2
- Swingable basket for service platform
- Retractable protective roof for service platform
- Water and air outlet in service platform
- Hose/cable guiding at water/cable reel
- Hydraulic Swellex pump type H1 for manual installation
- Manual lubrication kit
- Rig washing kit
- Ni-Cr plated piston rods (limitations exist)
- Boot washing kit
- Hydraulic outlet for charging with Mini SSE

Measurements

SIDE VIEW

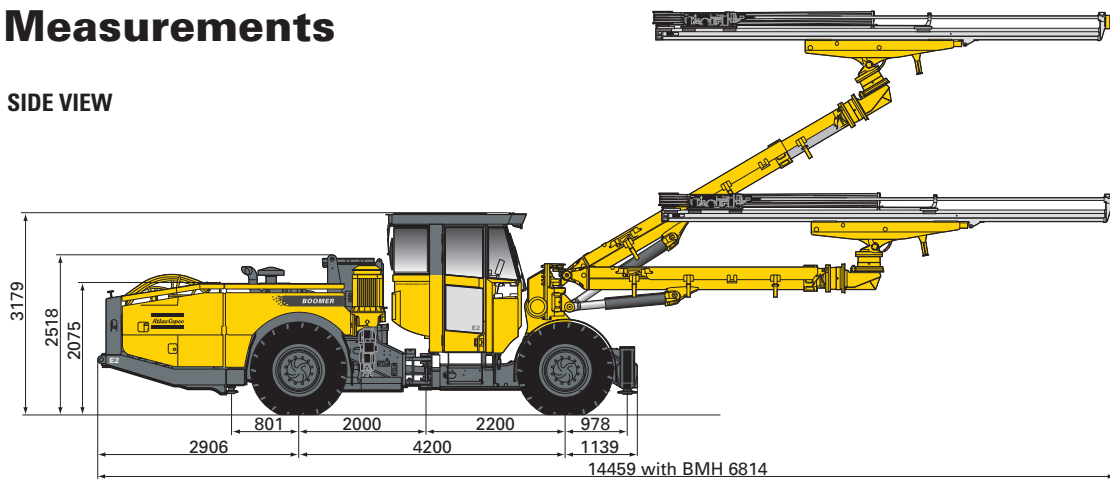
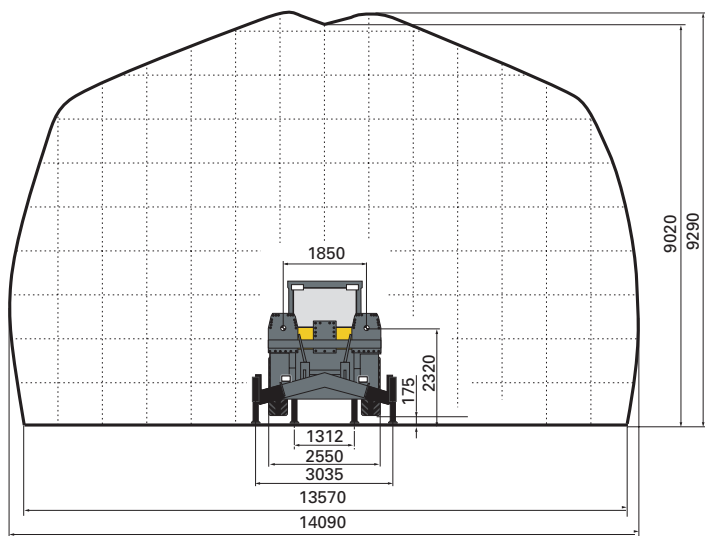


Illustration shows rig with optional equipment mounted.

COVERAGE AREA



Parallel coverage BUT 45 M

DIMENSIONS

mm		
Width		2 550
Height with cabin		3 179
Height roof up/down		3 144/2 518
Length with BMH 6914 feeds		14 459
Ground clearance		341
Turning radius outer/inner		8 600/4 800

WEIGHT

gross weight, depending on configuration		
kg		
Total		30 000–39 000
Boom side		24 000–29 000
Engine side		6 000–10 000

TRAMMING SPEED

km/h		
On flat ground (rolling resistance 0.05)		>15
On incline 1:8		> 5

NOISE AND VIBRATION

Operator sound pressure level in canopy, drilling, free field (ISO 11201)	104±6 dB(A) re 20µPa
Operator sound pressure level in cabin, drilling, free field (ISO 11201)	75± 3 dB(A) re 20µPa
Operator sound pressure level working close to machine, drilling, free field	104±6 dB(A) re 20µPa
Sound power level (ISO 3744), drilling, free field	128 dB(A) re 1pW
Vibration levels seated, drilling (ISO 2631-1)	0.07± 0.07 m/s ^{A2}
Vibration levels standing, drilling (ISO 2631-1)	0.07± 0.07 m/s ^{A2}

RECOMMENDED CABLE SIZE AND LENGTH

Voltage	Type	Dimension, mm ²	Diameter, mm	Length, m
380–400 V	H07RN-F	4X150	67	60
	Buflex	3x185+3G35	56	90
440–500 V	H07RN-F	4X120	60	75
	Buflex	3x150+3G25	52	100
550 V	H07RN-F	4X95	55	90
	Buflex	3x120+3G25	46	135
660–690V	H07RN-F	4X70	49	110
	Buflex	3x95+3G16	45	155
1 000 V	H07RN-F	N/A	N/A	N/A
	Buflex	3x50+3G10	33	200

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