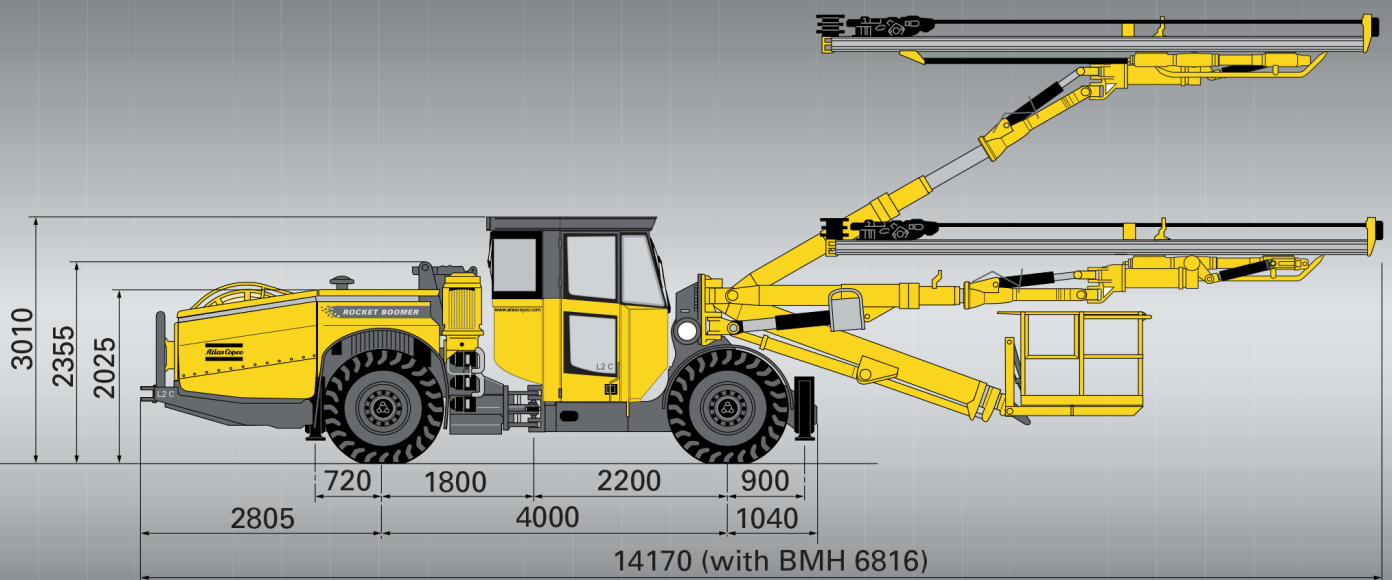


ROCKET BOOMER L2C UNDERGROUND DRILLS

TECHNICAL SPECIFICATION

For cross sections up to 104 m²



All dimensions in mm.

Rocket Boomer L2 C equipped with optional cabin and service platform.

Features

- Rig Control System (RCS) with interactive operator control panels with full-colour display of the computer-based drilling system. Automatic functions in the drilling process such as auto-collaring and anti-jamming protection as well as improved regulation of the rock drill provide high performance and outstanding drill steel economy. Integrated diagnostic system can immediately identify faulty electrical components.
- COP 1838 rock drill with modern double reflex dampening giving genuine high speed drilling and excellent drill steel economy. New lubrication system with separate lubrication of driver and gear, pressurized sidebolts and mating surfaces gives reliable operation, low maintenance cost and long intervals between overhauls.
- BMH 6800 heavy duty aluminium hydraulic feeds with double bottom for high torsional resistance. Snap-on stainless steel sleeves and polymer contact pads for long life and low maintenance cost.
- BUT 35 heavy-duty booms for direct, fast and accurate positioning between holes. New powerful feed rotation unit and increased coverage. Improved linkage bearings in main boom joints and new axial bearings in all boom joints.
- Sturdy, articulated carrier with four wheel drive for easy manoeuvring in narrow tunnels and drifts. Powered by a turbocharged, water-cooled 4-cylinder, low emission diesel engine for high mobility. Four jacks for stable set up.
- Basic rig includes FOPS-approved protective roof, adjustable operator's control panel and fixed seat, cable reel, water booster pump, screw compressor and work lights.

Rocket Boomer L2 C

Rock drill COP 1838ME-07

Drill steel	R32, R38 or T38
Height over drill centre	88 mm
Impact power	20 kW
Impact rate	60 Hz
Hydraulic pressure, max.	230 bar
Rotation system	separate rotation
Rotation speed	0-240 rpm
Rotation torque, max.	700 Nm (alt. 540 Nm)
Lub. air consump. (at 3 bar)	5 l/s
Water consumption	1.1 l/s
Weight	171 kg

Rock drill COP 1838HF-06

Drill steel	R32, R38 or T38
Height over drill centre	88 mm
Impact power	22 kW
Impact rate	73 Hz
Hydraulic pressure, max.	250 bar
Rotation system	separate rotation
Rotation speed,max	0-300 rpm
Rotation torque, max.	545 Nm
Lub. air consump.(at 3 bar)	6 l/s
Water consumption	1.2 l/s
Weight	171 kg

Feeds

	BMH 6814	BMH 6816	BMH 6818	BMH 6820
Total length (mm)	5882	6502	7102	7677
Drill steel length (mm)	4310	4920	5530	6100
Hole depth (mm)	4048	4668	5268	5843
Weight,incl.rock drill (kg)	631	665	696	721
Feed force (kN)	20.0	20.0	20.0	20.0

Boom BUT 35G

Feed extension	1800 mm
Boom extension	1600 mm
Parallel holding	Complete
Feed roll-over	360 degrees
Max. lifting angle	+70 degrees
	-45 degrees
Max. swinging angle	±45 degrees
Weight, boom only	2860 kg

Hydraulic system

- Hydraulic pumps: 2 separate units, one for each boom. Each consists of two variable pumps for percussion and positioning, and two constant flow pump for rotation and compressor
- Pumps unloaded at start
- System pressure, max 250 bar
- Hydraulic oil tank, volume max 250 l, min 200 l
- Low oil lever indicator (incl.shut down when power supply is connected)
- Oil temperature gauge on oil tank
- Filtration, 16 µm
- Mineral hydraulic oil

Air system

- Hydraulic driven Atlas Copco GA 5 screw compressor
- Capacity, max 26 l/s at 9bar
- Hydraulic drive, axial piston motor 10 cc
- Adjustable speed
- Air pressure guage

Water system

- Hydraulic driven water booster pump CR 16-80
- Capacity, max 250 l/min at 15 bar boost
- Min water inlet pressure 2 bar at 200 l/min
- Hydraulic drive, axial piston motor 10 cc
- Water pressure guage
- Water flow gauge

Carrier

- Deutz BF4M 1013C engine, water cooled turbocharged 115 kW (156 hp) at 2300 rpm, 572 Nm at 1400 rpm
- Articulated steering with +/- 38 degree steering angle
- Four wheel drive
- Hydrostatic power steering system
- Hydrodynamic Clark 24000 transmission
- Hurth 176HD front axle
- Hurth 176HD rear axle with +/- 8 degree oscillation
- Automatic differential lock on front axle, limited slip
- Tyres front and rear 14.00 R24 Michelin XKA
- Clearence outside axles 15 degree
- Hydraulic jacks; front 2 extensible with large plates, rear 2
- Service brakes: Two separate circuits, hydraulically applied, fully enclosed wet disc brakes
- Emergency and parking brakes: SAHR (Spring Applied Hydraulic Released) fully enclosed wet disc brakes
- Fuel tank, volume 100l
- Electric system 24 V
- Batteries 2 x 125 Ah
- Tramming lights 8 x 70 W
- Illuminated stairs for platform, 2 x 70 W
- Central lubrication system
- Silencer
- Fire extinguisher
- Spirit levels one for longitudinal and one for sideway
- Horn
- Shelf for drill bits and tools
- Gradeability 1:4 at max. load on drive wheels
- Trammimg speed on flat ground 15 km/hr (at rolling resistance 0,05); on incline 1:8 5 km/hr
- Beacon warning lamp
- Reverse alarm

Electronic system

- Rig Control System, CAN-based network. Versatile and scalable to higher degree of automation.
- One adjustable, electronic control panel with colour display
- PC-card for transfer of data and for service engineers to store preferred drill settings
- Integrated diagnostic system
- Pre-set drilling parameters for up to three bit types, e.g. big hole drilling

Electrical system

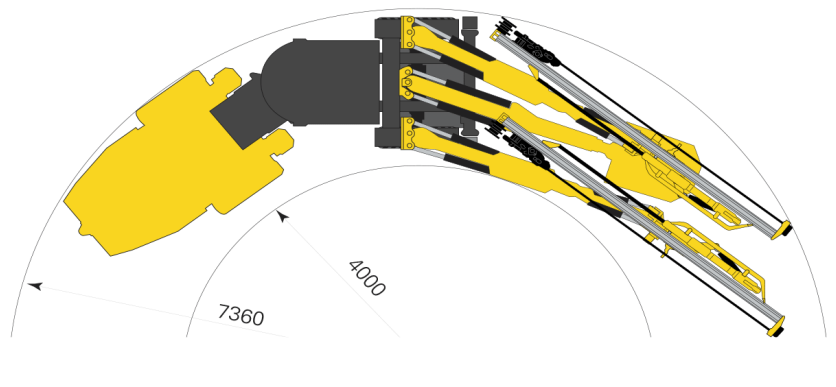
- Total installed power 158 kW
- Main motors 2 x 75 kW
- Voltage (as per customer specification) 400-700 V
- Frequency (as per customer specification) 50-60 Hz
- Starting method - star/delta
- Electronic overload protection for electric motors
- Percussion hour meters on operator's display
- Digital volt/amperage meter in electric cabinet
- Phase sequence indicator
- Earth fault indicator
- Battery charger
- Transformer 8 kVA
- 2 x 1000 W working lights, halogen
- Cabel reel, diameter 1600 mm

Recommended cable size and length				
Voltage	Type	Dimension	Diameter	Length
400 V	H07RN-F	4G150 mm²	67 mm	60 m
440 V	H07RN-F	4G120 mm²	60 mm	75 m
440 V	Buflex	3x150+3G25 mm²	52 mm	100 m
460-500 V	H07RN-F	4G120 mm²	60 mm	75 m
460-500 V	Buflex	3x150+3G25 mm²	52 mm	100 m
500-550 V	H07RN-F	4G95 mm²	55 mm	90 m
500-550 V	Buflex	3x120+3G25 mm²	46 mm	135 m
660-700 V	H07RN-F	4G70 mm²	49 mm	125 m
660-700 V	Buflex	3x95+3G16 mm²	42 mm	150 m
1000 V	Buflex	3x50+3G10 mm²	32 mm	250 m

G= Protection yellow/green
Surrounding temperature < 30 degrees C.

Turning radius

In mm with 16 ft feeds



Dimensions and weights

Width	2530 mm
Height with roof down*	2355 mm
Height with roof up*	3050 mm
Height with cabin*	3010 mm
Length (with 16 ft feeds)	14170 mm
*Alternative mounting heights (see below)	
Ground clearance	370 mm
Gross weight** (rig without options)	23600 kg
Axle load* boom side	17400 kg
engine side	6000 kg
** = Depending on equipment	

Optional equipment

Rock drill/Drill system

- Rock drill rotation motor –05 (435 Nm, 0-370 rpm)
- Hole blowing kit, with 80 l air receiver
- Water mist flushing with external water and air supply (incl. extra hydraulic driven fan for oil cooling)
- Rock drill lubrication warning kit

Feed

- Telescopic feed BMHT 6800-series for left/right handed booms, max 20 ft. (not in combination with ABC Regular or ABC Total or 700 mm fixed boom segment)
- Hydraulic drill steel gripper BSH 110 for extension drilling
- Rod Adding System RAS, max 18+12 ft rods (on booms with fixed segment max 16+10 ft)
- Rig prepared for RAS

Boom

- Extended boom reach with 700 mm long fixed boom segment (not for booms with BMHT feed or in combination with service platform)
- Fixed boom console angled outside 7°
- Automatic boom lubrication system, rear part of boom
- Ni-Cr plated piston rods (limited selection) on request

Software

- Advanced Boom Control system - ABC Basic
- Advanced Boom Control system - ABC Regular for computer assisted drilling. Incl. Tunnel Manager Lite
- Advanced Boom Control system - ABC Total for computer controlled drilling. Incl. Tunnel Manager Lite
- Rig prepared for ABC Total
- Measure While Drilling - MWD, logging drill data for geological survey purposes

Air system

- Extra compressor GA 5 (not in combination with hose reel)

Water system

- Water hose reel (diam. 1100 mm) for hose diam. 1 1/2", length 60 m at 70% filling rate (not in combination with extra transformer or extra air compressor)
- Dual controls for hose reel
- Water hose diam. 1 1/2"

Hydraulic system

- Electric oil filling pump
- Biodegradable hydraulic oil, Statoil Hydraway Bio PA 46 (PAO), Petro Canada Premium ECO HT-E 46/68
- Heater kit for hydraulic oil tank, 0.8 kW

Protective roof

- Protective roof mounting height lowered 140 mm (rig height roof up 2910 mm/down 2265 mm); or increased 60 mm (rig height roof up 3110 mm/down 2415 mm) or 310 mm (rig height roof up 3360 mm/down 2665 mm)

Carrier

- Exhaust water scrubber 150 l
- Exhaust catalyser
- Ansul fire suppression system, dry or wet
- Spare wheel
- Foam filled tyres
- High altitude setting of diesel engine

Cabin

- Large FOPS approved cabin, noise level 80 dB(A)
- Rubber-damped for comfort during tramming and drilling
- Safety glass. Two wipers with washer (front/rear shield)
- Swingable and fully adjustable pivot seat or fixed seat
- Possible to work standing or sitting with ergonomic panels
- Additional operator's panel
- Cabin light 220 V, adjustable reading lamp 24 V
- Fire extinguisher 6 kg (13 lbs) dry chemical ABE class III type
- Outlets socket 12 V for communication radio
- 220 V (10 A) electrical outlet for accessories
- Spotlight 2x70 W with joy-stick control
- CD-player, radio and speakers mounted in cabin
- Cabin mounting height lowered 200 mm (rig height 2810 mm) or increased 250 mm (rig height 3260 mm)
- Air conditioner/heating, hydraulic powered and water transferred, with heater control and stepless fan and filtered inlet air.
 - Refrigerant R134a
 - Cooling capacity at 35°C 50% Rh 8.5 kW. 95° F wet bulb 79.0 28.000 btu.
 - Heating capacity - 12 kW 42.000 btu diesel power, and 3 kW 10.500 btu with electric use
 - Airflow - 1300 m³/h, 747 cfm

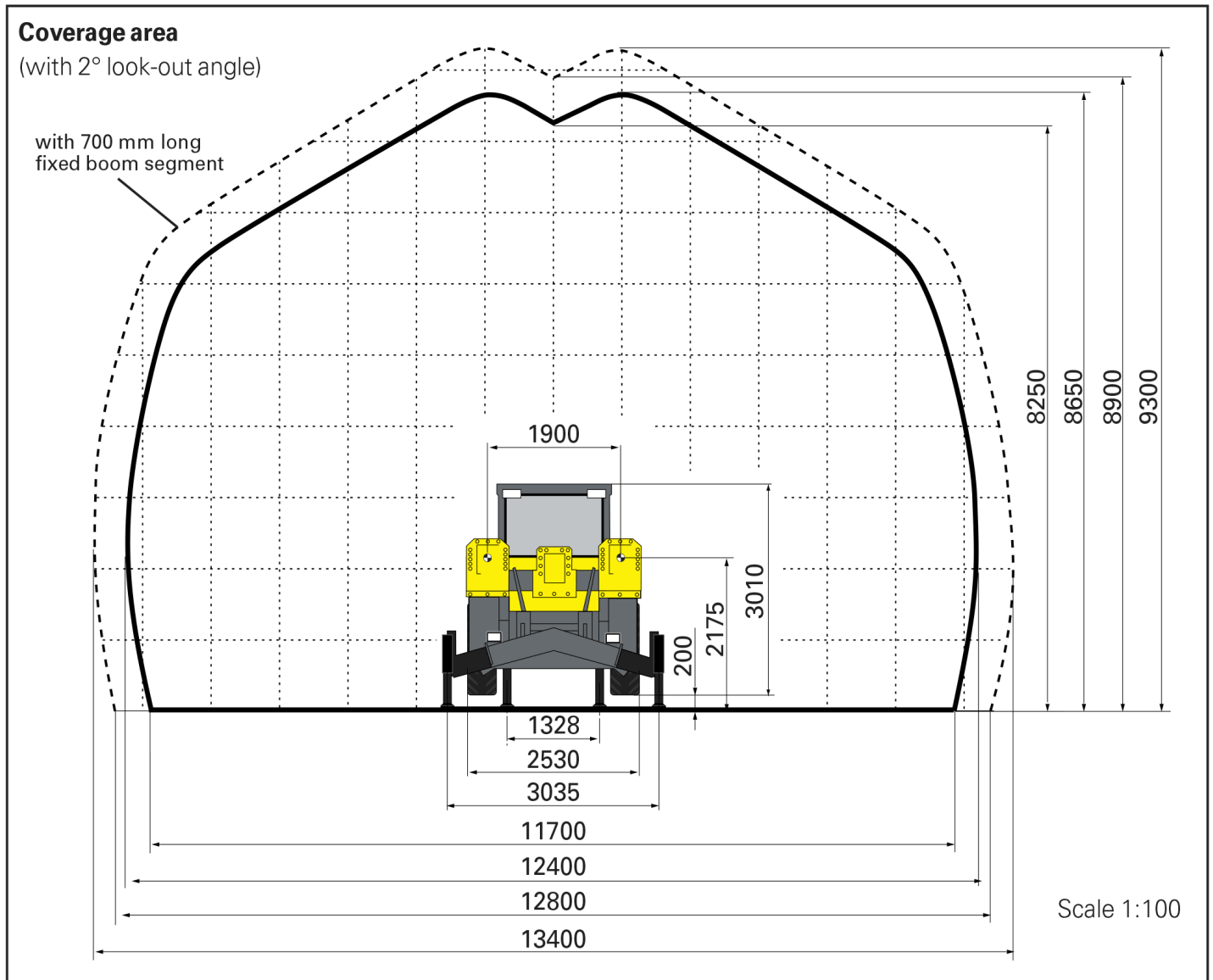
Electrical system

- Soft start for electrical motors, for 400 - 700 V (not for CSA approved rigs)
- 1000 V electric system, direct start only
- Electric cable, type H07 or Buxflex see recommendations
- Dual controls for cable reel
- Limit switch for cable reel
- Plug for cable (with wire hose mesh)
- Power supply (incl. male plug)
- Electric outlet for accessories, 32 Amp (Voltage = main supply voltage if no extra transformer is chosen. Not for 1000 V.)
- Extra transformer, 15 kVA (not in combination with water hose reel and not CSA)
- CSA approved electrics (Canadian regulations)
- Australian electrics according to AUS 3000

Miscellaneous

- Service platform HL 210-MBE
- Protective roof for service platform, FOPS approved
- Water and air outlet in service platform basket
- Hydraulic Swellex pump
- Rig washing kit, with water hose and reel (water supplied from booster pump)
- Manual lubrication system, grease-gun with hose and reel (incl. 18 kg grease barrel)
- Service tool box for electronic network system

Rocket Boomer L2C



Rock Drilling Tools

Drifter rods

Dimension	Min. hole dia, mm
R38-Hex 35-R32	45
T38-Hex 35-R32	45
T38-Hex 35-R32 Speedrod	45
R38-Hex35- 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

Shank adapters

Thread	Dia, mm	Length, mm	Part No.
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 rod adding system, RAS, and extension drilling with BSH 110.*

Extension rods for injection drilling/RAS

Dimension	Min. hole dia, mm
R32 Speedrod	51
T38 Speedrod	64

Couplings

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