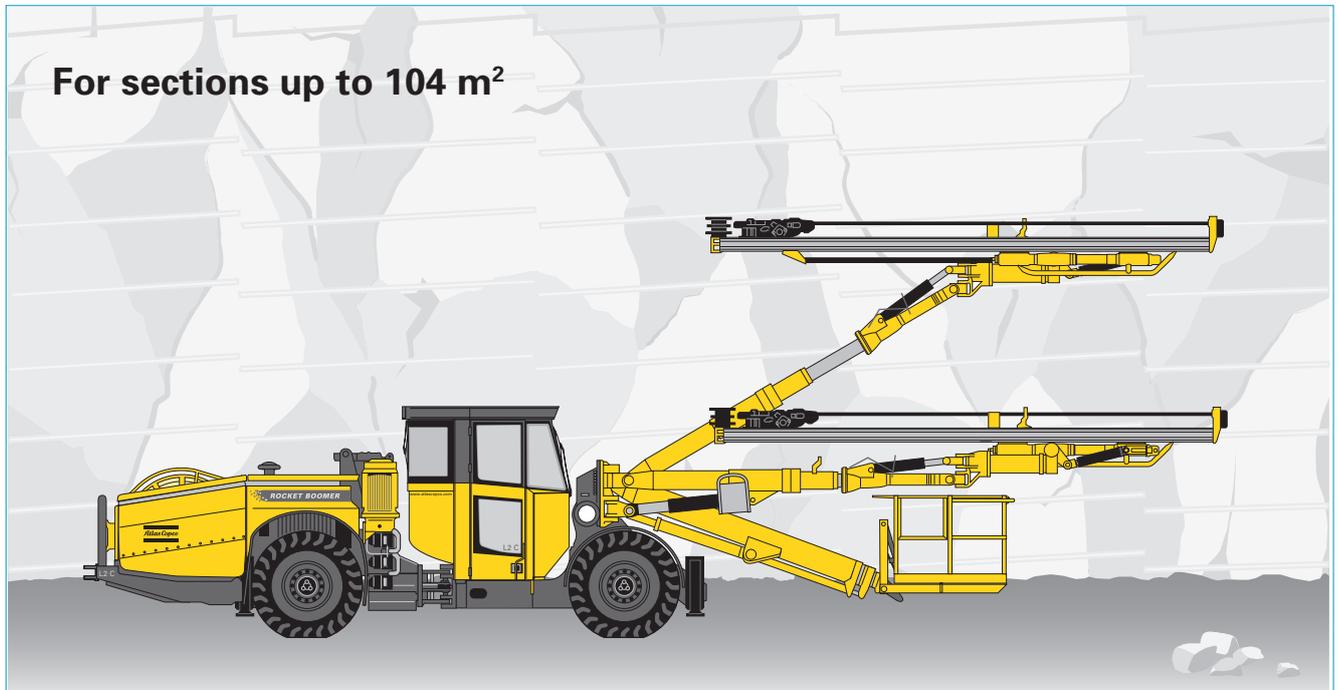


# Atlas Copco Face Drilling Rigs

## Technical specification Rocket Boomer® L2 C

Two boom hydraulic tunnelling and mining rig with computer controlled drilling system and COP 1838 rock drills for high accuracy and productivity



Picture shows rig with optional equipment mounted.

## Features

### Rock drill

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.

### Drilling system

The state-of-the-art computer controlled drilling system RCS ( Rig Control System ) with interactive operators panel and full-colour display. Standard computer controlled automatic functions in the drilling system include soft collaring and anti-jamming protection as well as continuous regulation of the rock drill and provide high performance and outstanding drill steel economy. With the integrated diagnostic system it is simple and fast to identify faulty electronic components

The electronic hardware is of modular design and can be interchanged with similar hardware on the rig.

### Hydraulic boom

BUT 35 heavy-duty booms for direct, fast and accurate positioning between holes. New powerful feed rotation head increased coverage.

### Carrier

Sturdy, articulated carrier with four wheel drive for easy manoeuvring. Powered by a turbocharged, water-cooled 4-cylinder, low emission diesel engine for high mobility. Four jacks for stable set up.

### General

Basic rig includes FOPS approved protective roof, adjustable operator's control panel, fixed driver's seat, hydraulic driven screw compressor and water booster pump, cable reel and working lights.

### Main components

Rock drill	2 x COP 1838
Feed	2 x BMH 6800-series
Boom	2 x BUT 35
Drilling system	RCS vers 3

# Rocket Boomer L2 C

## Rock drill COP 1838ME-07

Drill steel.....R32, R38 or T38  
 Height over drill centre .....88 mm  
 Impact power, max.....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, max.....22 kW  
 Impact rate .....73 Hz  
 Hydraulic pressure, max. ....250 bar  
 Rotation system.....separate rotation  
 Rotation speed .....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)	4043	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 35

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 pumps 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 level indicator (incl. shut down when power supply is connected)
- Oil temperature gauge on oil tank
- Electrical oil filling pump
- Oil filter indicator
- Water cooled oil
- Filtration 16 µm
- Mineral hydraulic oil

## Air system

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

## Water system

- Hydraulic driven water booster pump
- 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 gauge
- Water flow guard

## Carrier

- Deutz BF4M 1013C engine, water-cooled turbo-charged 112 kW (152 hp) at 2300 rpm, 572 Nm at 1400 rpm
- Articulated steering with ±38 degree steering angle
- Four wheel drive
- Hydrostatic power steering system
- Hydrodynamic Dana 24000 transmission
- Dana 176 front axle
- Dana 176 rear axle with ± 8 degree oscillation
- Automatic differential lock on front axle, limited slip
- Tyres front and rear 14.00 x R24 Michelin XKA
- Clearance outside axles 15 degree
- Hydraulic jacks; front 2 extendable 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)
- Fuel tank, volume 100 l
- Electric system 24 V
- Batteries 2 x 125 Ah
- Trimming lights 8 x 70 W
- Illuminated stairs for platform 2 x 70W
- Central lubrication system
- Silencer
- Fire extinguisher
- Spirit levels one for longitudinal and one for sideway
- Shelf for drill bits and tools
- Gradeability 1:4 at max. load on drive wheels
- Beacon and reverse alarm
- Horn

## Electronic system

- Rig Control System, CAN-based network. Reliable and scalable with possibility to upgrade
- One adjustable, electronic control panel with colour display
- PC-card for transfer of data and for service engineers to backup settings
- Integrated diagnostic system
- Pre-set drilling parameters for up to five bit types

## 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 meter on operator's display
- Digital voltmeter/amperage meter in electric cabinet
- Phase sequence indicator
- Earth fault indicator
- Battery charger
- Transformer 8 kVA
- 2 x 1000 W working lights, halogen
- Cable reel, diameter 1600 mm

## Recommended cable size and length

Voltage	Type	Dimension	Diameter	Length
400 V	H07RN-F	4G150 mm <sup>2</sup>	67 mm	60 m
440 V	H07RN-F	4G120 mm <sup>2</sup>	60 mm	75 m
440 V	Buflex	3x150+3G25 mm <sup>2</sup>	52 mm	100 m
460-500 V	H07RN-F	4G120 mm <sup>2</sup>	60 mm	75 m
460-500 V	Buflex	3x150+3G25 mm <sup>2</sup>	52 mm	100 m
500-550 V	H07RN-F	4G95 mm <sup>2</sup>	55 mm	90 m
500-550 V	Buflex	3x120+3G25 mm <sup>2</sup>	46 mm	135 m
660-700 V	H07RN-F	4G70 mm <sup>2</sup>	49 mm	125 m
660-700 V	Buflex	3x95+3G16 mm <sup>2</sup>	42 mm	150 m
1000 V	Buflex	3x50+3G10 mm <sup>2</sup>	32 mm	250 m

G = Protection yellow/green  
 Valid for ambient temperature below 30°C

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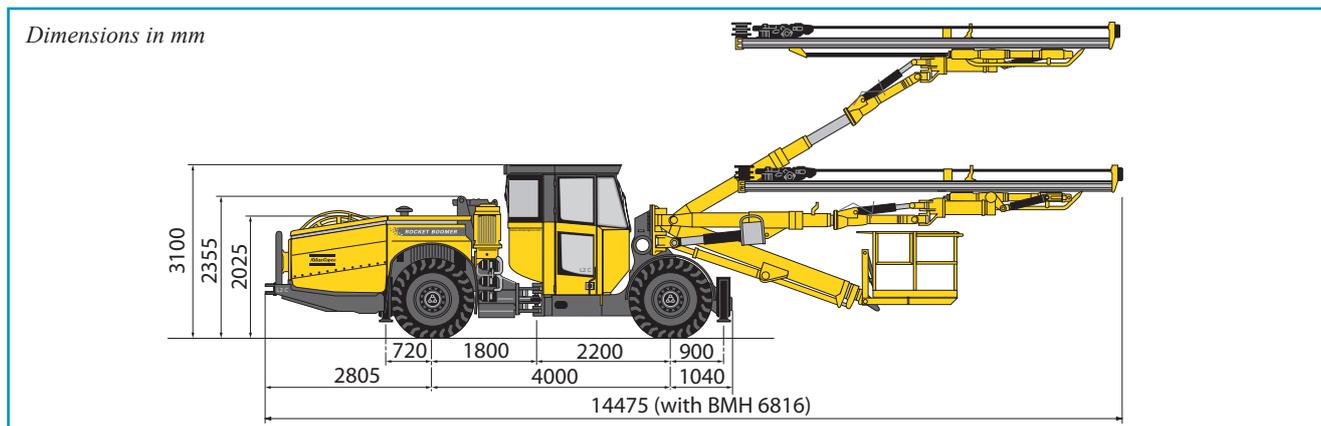
Dimensions	
Width	2530 mm
Height roof down*	2355 mm
Height roof up*	3050 mm
Height with cabin*	3100 mm
Length with 16 ft feeds	14475 mm
Ground clearance	370 mm

Weight (gross)**	
Total	23600 kg
Boom side	17400 kg
Engine side	6000 kg

Tramming speed	
On flat ground (at rolling resistance 0.05)	>15 km/hr
On incline 1:8	> 5 km/hr

Turning radius (depending on surface)	
Outer	7360 mm
Inner	4000 mm

\*Alternative mounting heights (see below)  
\*\* = Depending on optional equipment



## Optional equipment

### Rock drill/Drill system

- Hole blowing kit
- Water mist flushing with external water and air supply with either extra hydraulic driven fan for oil cooling or hydraulic oil cooled by water
- Rock drill lubrication surveillance system (for rigs with ABC Basic or ABC Regular only)

### Feed

- Telescopic feed BMHT 6800-series (with length sensor for cradle)
- Hydraulic drill steel support BSH 110 for extension drilling
- Rod adding system RAS, max 18+12 ft rods (on booms with fixed segments max 16 + 10 ft)
- Rig prepared for RAS

### Boom

- Extended boom reach with 700 mm long fixed boom segment (not with BMHT feed or with service platform)
- Automatic boom lubrication system, rear part of boom
- Safe bolting system (extra working platform mounted on side of the rig)
- Boom with top mounted feed

### Software

- ABC Basic for operator controlled drilling
- ABC Regular for computer assisted drilling. Incl. Tunnel Manager Lite
- ABC Total for computer controlled, operator supervised

drilling. Incl. Tunnel Manager Lite

- Rig prepared for ABC Total
- Electronic parallel holding (only ABC Regular)
- Navigation method C (ABC Regular and Total)
- Measure While Drilling MWD, logging and analyzing drill data
- Bolt view (ABC Regular and Total)
- Rig Remote Access - RRA
- Service tool box for electronic network system

### Air system

- Extra compressor GA 5 (not with extra transformer or hose reel)

### Water system

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

### Hydraulic system

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

### Carrier

- Exhaust systems: scubber, catalyser or particle filter
- Fire suppression systems ANSUL or FORREX, and with 6 nozzles
- Check fire system for ANSUL
- Automatic fire suppression

system incl. suppression inside electrical cabinet

- Safety belt for fixed drivers seat
- High altitude setting of diesel engine

### Protective roof

- Protective roof mounting height: lowered 140 mm (rig height with roof up 2910 mm/down 2355 mm); increased 60 mm (rig height with roof up 3110 mm/down 2500 mm) or 310 mm (rig height with roof up 3360 mm/down 2665 mm)

### Cabin

- Large FOPS approved cabin, noise level below 80 dB(A)
  - Outlets socket 12 V for communication radio
  - 230 V (10 A) electrical outlet for accessories
- Joy-stick controlled spotlight 55 W
- Swingable suspended seat for single panel incl safety belt
- Additional operator's panel
- CD-changer mounted in cabin
- Cabin mounting height lowered 200 mm (rig height 2900 mm) or increased 250 mm (rig height 3350 mm)
- Air condition, without heating
- Electrical heater, 1.2 kW
- Heater 2 kW, water transferred

### Electrical system

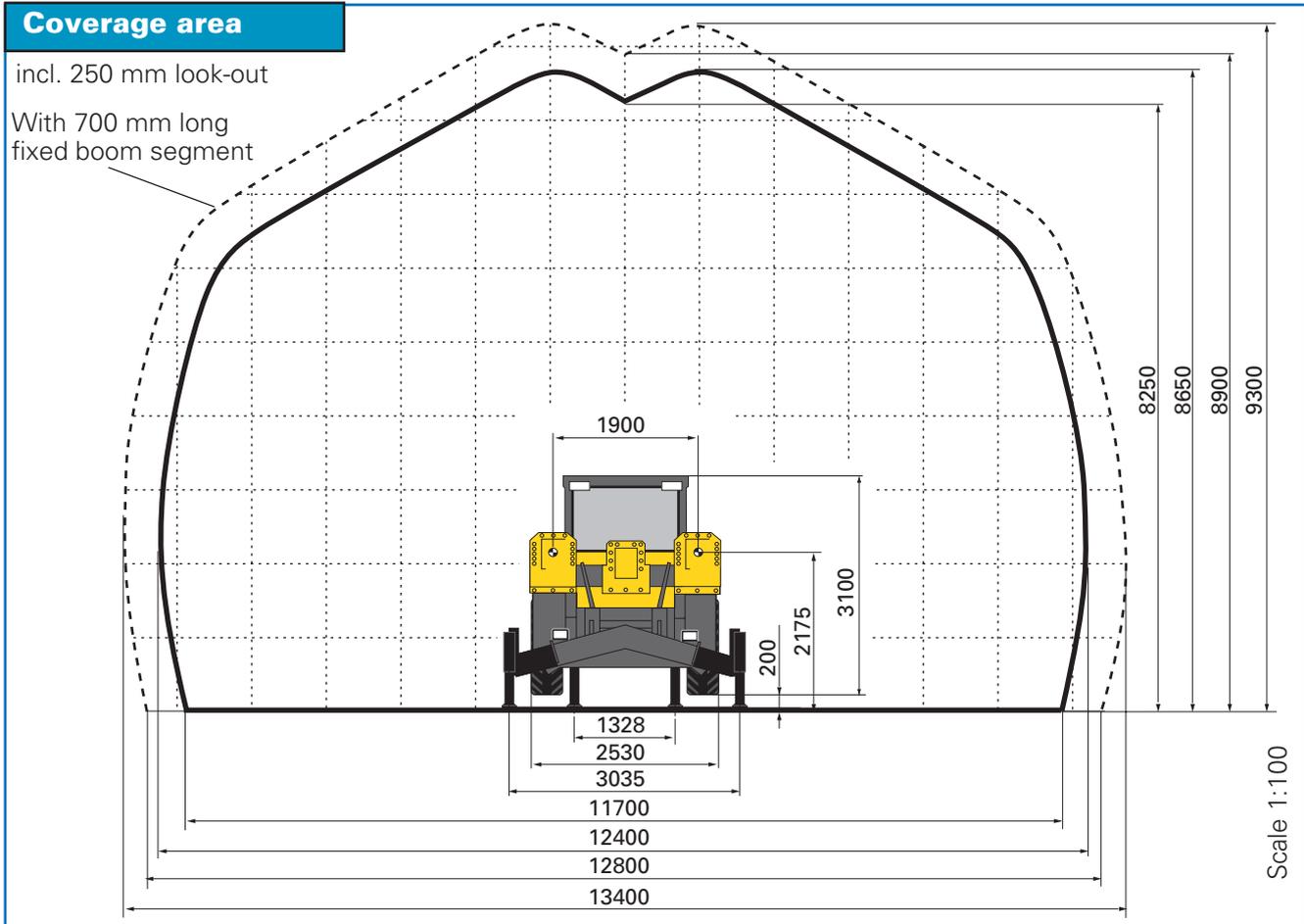
- Soft start for electric motors, for 400 - 700 V (not for CSA approved rigs)

- 1000 V electric system, direct start only
- Electric cable, type H07RN-F or Buxlex see recommendations
- Dual controls for cable reel
- Limit switch for cable reel
- Plug connector and socket outlet
- Plug connector and switch gear
- Electric outlet for accessories, 16 Amp (Voltage = main supply voltage if no extra transformer is chosen. Not for 1000 V.)
- Extra transformer, 15 kVA (not 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
- Extra Swellex chuck for Mn 12 bolt installation
- 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)
- Ni-Cr plated piston rods (limited selection) on request
- Boots washing arrangement

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## Rock Drilling Tools

### Drifter rods

Dimension	Min. hole diameter
R38-HEX 35-R32	45 mm
T38-HEX 35-R32	45 mm
T38-HEX 35-R32 Speedrod	45 mm
R38-Hex 35-SR35 Speedrod	45 mm
T38-Hex 35-SR35 Speedrod	45 mm
T38-Hex 35-SR35	45 mm
T38-Rnd 39-SR35	45 mm
T38-Rnd 39-R32	48 mm
T38-HEX 35-R35	48 mm
T38-Hex 35-R35 Speedrod	48 mm
T38-Rnd 39-R35	48 mm
T38-Rnd 39-SR35	48 mm
T38-Rnd 38-R35 Speedrod	48 mm
T38-Rnd39-SR35 Speedrod	48 mm

### Shank adapters

Thread	Diameter	Length	Part No.
R38	38 mm	435 mm	404-09101,00
T38	38 mm	435 mm	435-09101,00
R32	38 mm	525 mm	403-09103,00
T38	38 mm	525 mm	435-09103.00*

\* Intended for rod adding system, RAS, and extension drilling with BSH 110

### Couplings

Thread	Diameter	Length	Part No.
R38	55 mm	170 mm	303-0055,00
T38	55 mm	190 mm	335-0055,00

### Extension rods for injection drilling/RAS

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

For other dimensions and more information please see Secoroc General Catalogue, printed matter No. 9851 2156 01.