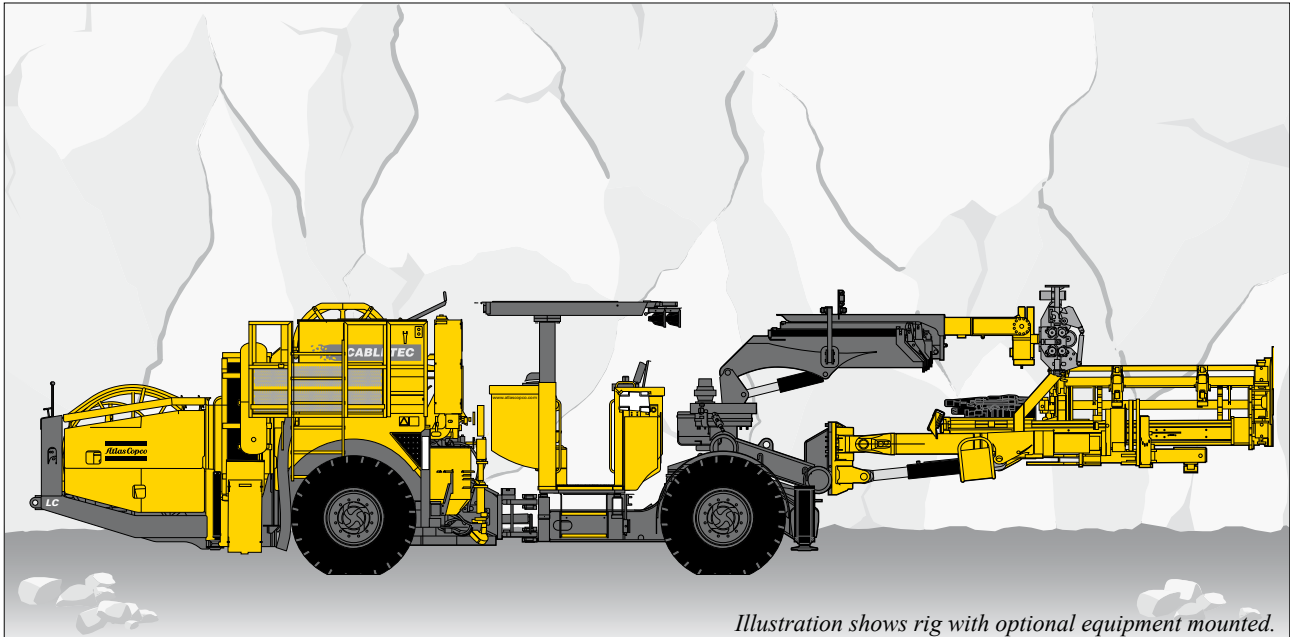


Cabletec LC

Technical specification



Fully mechanized rig for long hole drilling and cable bolting. Features automatic drilling and cement handling system, which together with the high capacity steel strand reel gives top performance and high quality bolt installations.

Standard features

» Rock drill

- Atlas Copco COP-series – high performance rock drills

» Drilling unit

- Accurate and fully adjustable feed control
- Sturdy and reliable carousel, 17 + 1 rods
- Drill steel support and cutting deflector
- Stinger support during drilling

» Control system

- Rig Control System (RCS)
- Advanced Boom Control (ABC) Regular
- Automatic functions such as one hole automatics
- Optimized regulation of the drilling process
- Logging system

» Drilling boom

- Hydraulic heavy-duty boom with proportional movements

» Cable bolting boom

- Telescopic boom with proportional movements
- Turning actuators enables full coverage in the working area
- Cement grouting separated from the drilling unit

» Cement handling unit

- Fully automatic cement handling unit
- On board silo for cement storage
- RCS-controlled water/cement ratio
- Cement dust collector
- Semi-automatic cement hose control

» Cable bolting head

- Cable and cement hose feeding system
- Cable bending mechanism
- Strand cutter
- Cable pusher for installation of twin cables

» Carrier

- Sturdy articulated carrier with four-wheel drive
- Powered by a 4-cylinder, EPA III/COM III (Tier 3/Stage IIIA) approved diesel engine
- Cable reel

Specifications

ROCK DRILL

	COP 1638	COP 1838ME	COP 1838MUX
Shank adapter	R32/ TC35/T38	R32/ TC35/T38	TC35/T38
Height over drill centre	88 mm	88 mm	122 mm
Length without shank	1 008 mm	1 008 mm	1 206 mm
Impact power	16 kW	18 kW	18 kW
Impact rate	60 Hz	60 Hz	60 Hz
Hydraulic pressure	200 bar	230 bar	220 bar
Rotation system	Separate rotation	Separate rotation	Separate rotation
Rotation speed	0–340 rpm	0–340 rpm	0–340 rpm
Rotation torque, max	440–1 000 Nm	640–1 000 Nm	–1 000 Nm
Lub. air consump. at 2 bar	5–7 l/s	5 l/s	5 l/s
Water consumption	35–120 l/min	40–120 l/min	55–120 l/min
Weight	170 kg	170 kg	225 kg

» Feed

- Feed BMH 200 series including BSH55 drill steel support and BSC55 cutting deflector
- RHS 17 for 1.2, 1.5 or 1.8 m rods

» Positioning system

- Feed extension, 4'/ 5', 6' drill steel 900/1 200 mm
- Boom extension, BUT 35 BS 1 600 mm
- Rotary actuator for 360° ring drilling BHR 30
- Positioning system tilt +90°/-10°
- Boom lift +45°
- Stinger, backward on feed holder BSJ 8-200
- Stinger, forward on feed BSJ 8-115

» Bolting system

- Grout hose diameter, inner/outer 20/29 mm
- Grout hose reel, max hole length 25 m
- Steel strand cable reel load, max 1 700 kg
- Cable bolt Standard 15.2 mm/bulb cable
- Cable and hose feeder with cable cutter and bending unit
- Logging of accumulated cable consumption
- Cable feeding depth measurement

» Cement grouting system

- Cement mixer, volume 114 l
- Cement silo, max load dry cement 1 000 kg
- Logging of accumulated cement consumption
- Water/cement ratio preprogrammed recipes
- Cement hose feeding depth measurement
- Preprogrammed cleaning sequences
- Form oil kit

» Hydraulic system

- Hydraulic oil tank, volume max/min 250/200 l
- System pressure 150–240 bar
- Filtration 16 µm
- Hydraulic oil temperature/level surveillance
- Oil leakage shut down system
- Electric oil filling pump
- Oil filter indicator
- Water oil cooler

» Control System

- Computerized operator panels with colour display
- USB-port for transfer of data
- Integrated diagnostic system
- Rig Control System (RCS)
- Single hole automatics
- Rock drill surveillance system

» Electrical system

- Total installed power 105 kW
- Main motor 95 kW
- Voltage/frequency 400–1 000 V/50–60 Hz
- Starting method star/delta, 400–690 V
- Digital volt/ampere meter in electric cabinet
- Electric cable reel with dual control and limit switch
- Electronic overload protection
- Phase sequence and earth fault indicators

» Air/Water system

- Water booster pump, max capacity at 15 bar 250 l/min
- Hydraulic drive, axial piston motor 10 cc
- Atlas Copco screw compressor GAR 5
- Maximum capacity at 7 bar and 5 400 rpm 20 l/s
- Joystick controlled water-jet canon for cleaning
- Water pressure/flow guard
- Air/water pressure gauge
- Hole blowing kit
- Rig washing kit

» Carrier

- Deutz TCD 2013 L04 2V water-cooled turbo-charged engine
- Power rating at 2 300 rpm 120 kW (163 hp)
- Swingable seat with safety belt for drilling and tramming
- Articulated steering ±38° steering angle
- Hydrostatic transmission Dana 24000
- Front/Rear axle Dana 114/ Dana 114, ±8° oscillation
- Tires 14.00 x R24
- Clearance outside axles 13°
- Fuel tank, volume 110 l
- Electric system 24 V
- Batteries (with charger) 2 x 125 Ah
- Tramming lights 6x40 W LED, 2x70 W, 24 V DC
- Working lights 4x35 W HID, 24 V DC
- Illuminated stairs for platform (LED)
- Spotlight 2 x 70 W, 24 V
- Beacon, horn, brake lights and reverse alarm
- Control panel for roof, jacks and cable reel
- Communication radio power outlet, 12 V
- Service brakes with two separate circuits
- Automatic differential lock on front axle
- SAHR, emergency and parking brakes
- Hydrostatic power steering system
- Reversing camera with monitor
- FOPS-approved protective roof
- Front and rear hydraulic jacks
- Shelf for drill bits and tools
- Central lubrication system
- Manual lubrication kit
- Rig alignment laser
- Fire extinguisher
- 4 wheel drive
- Hand throttle
- Catalyzer

Specifications

SHANK ADAPTERS

Thread	Diameter	Hole dimension	
mm	R32	38	48-76
	TC35	38	51-76
	T38/T38*	38/59.5	64-89

*Extractor

EXTENSION RODS FOR PRODUCTION DRILLING

Dimension	Min. hole diameter	
mm	R32 Speedrod	48
	TC35 Speedrod	51
	T38 Speedrod	64

RECOMMENDED CABLE SIZE AND LENGTH

Voltage	Type	Dimension, mm ²	Diameter, mm	Length, m
400V	H07RN-F	4G70	55	90
400V	Buflex	3x95 + 3G25	46	135
440-500V	H07RN-F	4G70	49	110
440-500V	Buflex	3x95 + 3G16	42	155
500-550V	H07RN-F	4G50	44	150
500-550V	Buflex	3x70 + 3G16	39	165
660-700V	H07RN-F	4G35	38	160
660-700V	Buflex	3x50 + 3G10	33	275
1000V	Buflex	3x25 + 3G6	26	275

G= Protection yellow/green. Valid for temperature below 40 C°

FEEDS

Recommended drift size					
Feed type	Length	Min. width	Min. height	Efficient height	Max. height
BMH 214	3200	3400	3400	6100	8300
BMH 215	3500	3700	3700	6200	8400
BMH 216	3800	4000	4000	6300	8500
BMH 214X	3400	3600	3600	6100	8300
BMH 215X	3700	3800	3900	6200	8400
BMH 216X	4000	4200	4200	6300	8500

Optional equipment

» Rock drill

- Extractor unit COP 1838MUX
- Lubrication surveillance kit
- Thread lubrication kit

» Boom

- Automatic boom lubrication kit
- Central boom lubrication kit
- Automatic lubrication kit, drilling unit/boom
- Stinger extensions

» Air/Water System

- Water hose reel with dual control
- Water hose

» Hydraulic system

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

» Software

- Rig Remote Access
- Breakthrough Automatic System
- Drill Plan Handling
- Drill Plan Handling with raise view
- Full Drill Data Handling

- Boom Alignment Laser
- Radio Text Message System
- Automatic Parallel Holding
- Void Detection
- Remote Cradle Control
- Remote Feed Control

» Cabin

- FOPS-approved cabin, noise level < 80 dB(A), including:
 - Air conditioning unit
 - Front window 16 mm
 - Media player
 - Boot washing kit
- Alternative mounting height (-200/+250 mm)
- Cabin body made of stainless steel
- Front window, 24 mm
- Protection bars, front window
- Cabin lift and tilt system
- Low-designed cabin, for seated operator cabin height 2 953 mm

» Carrier

- Fire suppression system ANSUL (manual, checkfire or automatic)
- Fire suppression system FORREX
- Particle filter UNIKAT

- Hot climate tramming kit

» Electrical system

- Soft start for electrical motors
- Electric cable
- Electric plugs, socket and switch gear
- Electric outlet for accessories
- Extra transformer 15 kVA
- CSA/Australian approved electrics

» Miscellaneous

- Hose/cable guide at water/cable reel
- Electronic part book on CD-CAT B
- Remote operating kit
- Ni-Cr plated piston rods
- Area guards

Dimensions

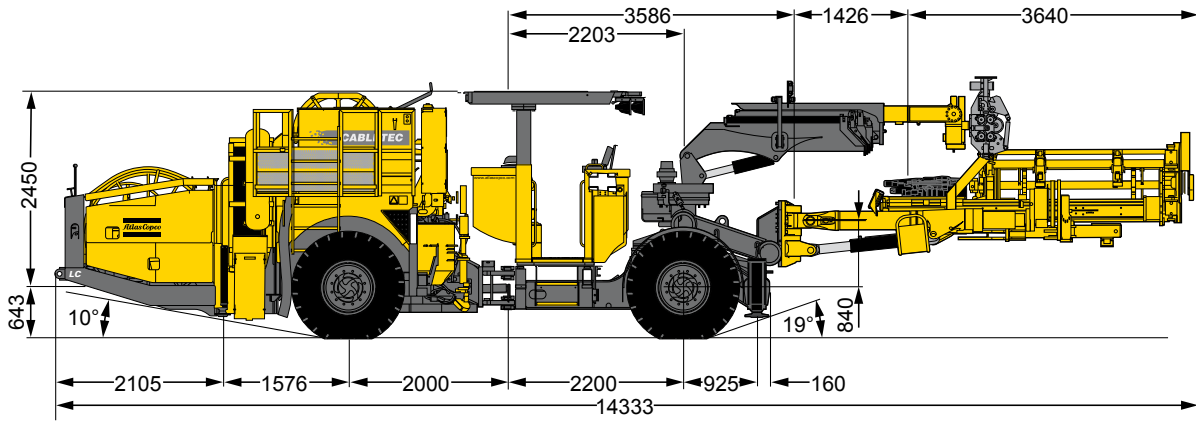
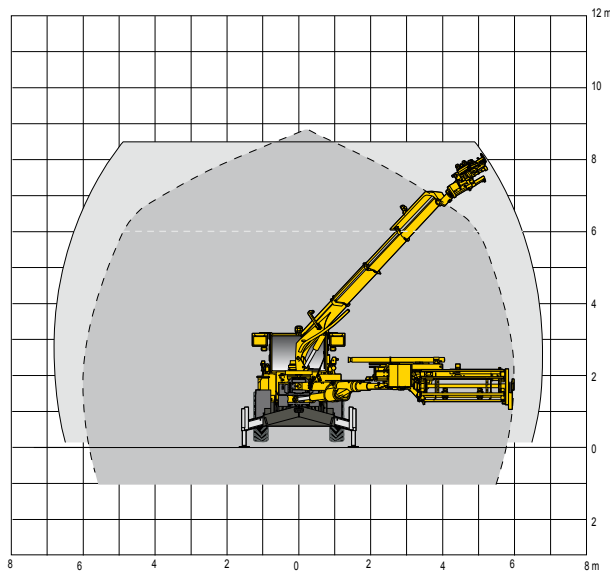


Illustration shows rig with optional equipment mounted.

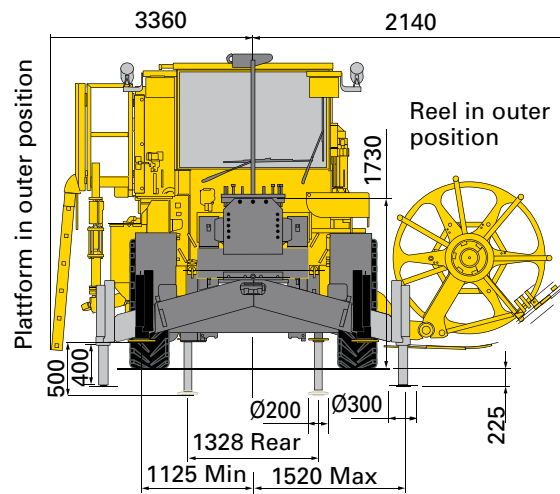
SIDE VIEW



COVERAGE AREA DRILLING AND BOLTING

Illustration shows equipment with 6 feet rod. Efficient working height 6 metres.

FRONT VIEW



DIMENSIONS

mm	Width, transport	2 750
	Rig height with canopy	3 133
	Rig height with cabin	3 093
	Length	14 333
	Ground clearance	265

TURNING RADIUS

depending on surface		
mm	Outer	7 400
	Inner	4 500

TRAMMING SPEED

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

WEIGHT

gross weight		
kg	Total	30 000
	Boom side	18 000
	Engine side	12 000

NOISE AND VIBRATION

Operator sound pressure level in canopy, drilling, free field (ISO 11201)	106+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	106+6 dB(A) re 20µPa
Sound power level (ISO 3744), drilling, free field	126 dB(A) re 1pW
Vibration levels seated, drilling (ISO 2631-1) canopy	0.1+ 0.15 m/s ^{A2}
Vibration levels seated, drilling (ISO 2631-1) cabin	0.07+ 0.07 m/s ^{A2}
Vibration levels standing, drilling (ISO 2631-1) canopy	0.07+ 0.07 m/s ^{A2}
Vibration levels standing, drilling (ISO 2631-1) cabin	0.1+ 0.15 m/s ^{A2}