

Atlas Copco Bolting rigs

Boltec LC-DH

Technical specification



A diesel hydraulic, fully mechanized rock bolting rig with RCS based control system for high productivity and precision. For bolt lengths 1.5–6 m and effective in roof heights up to 12 m.

Standard features

» Control system

- Rig Control System (RCS)
- Interactive operator control panel with full-colour display
- Auto-collaring and anti-jamming protection
- Improved regulation of the rock drill
- Integrated diagnostic and fault location system
- Proportionell movements of the hydraulic components
- USB for transfer of data and for service engineers to store optimal drill settings

» Bolting unit

- MBU bolting unit
- Unique design based on a single feed system which utilizes a cradle indexer at the rear end and a centralizer at the top with 3 positions – drilling, injecting and bolting
- The magazine for 10 bolts is low mounted and designed for maximum flexibility during drilling and bolting operations

» Rock drill

- COP 1132 with hydraulic dual-damping system
- 11 kW impact power

» Hydraulic boom

- BUT 35HBE heavy-duty booms for direct, fast and accurate positioning between holes.
- Improved linkage bearings in main boom joints and new axial bearings in all boom joints reducing maintenance requirements.

» Carrier

- Sturdy, articulated carrier with turbocharged water-cooled, low emission diesel engine.
- High ground clearance, four wheel traction and articulated steering for easy manoeuvring in narrow drifts and fast tramming in steep ramps.

» General

- Basic rig includes telescopic FOPS-approved protective roof, fixed seat, hydraulic driven compressor and water booster pump, cable reel, bolt rack, air receiver and working lights.

Atlas Copco

Specifications

» Rock drill/drill system

- COP 1132
- Shank adapter R25, R28, R32
- Height over drill centre 77 mm
- Length without shank adapter 735 mm
- Impact power, max 11 kW
- Impact rate 100 Hz
- Hydraulic pressure, max 210 bar
- Rotation system separate rotation
- Rotation speed 0–300 rpm
- Rotation torque, max 225 Nm
- Lub. air consump. (at 3 bar) 6 l/s
- Water consumption 1.25 l/s
- Weight 75 kg
- Sound level <106dB(A)
- Rock drill lubrication warning kit
- Rock drill lubrication surveillance system
- Hole blowing kit
- Water mist flushing - internal water and air

» Bolting unit

- Mechanical Bolt Unit, MBU
- Magazine capacity 10 bolts
- Max. size of face plates, rectangular 150x150 mm
- Max. size of face plates, round Ø 200 mm
- Bolt length 1.5–6.0 m
- Adapted for all commonly used bolt types on the market, see options
- Drill steel and coupling according to MBU, delivered with rig
- Chain feed adapted according to bolt length

» Boom

- BUT 35HBE
- Feed extension 0–1 000 mm
- Boom extension 1 600 mm
- Feed roll-over 360°
- Max. lifting angle +65°/-30°
- Max. swinging angle ±45°
- Weight, boom only 2 870 kg

» Air system

- Atlas Copco GAR30 screw compressor
- Capacity, max 20 l/s at 7 bar and 5 400 rpm
- Air receiver 80 l
- Hydraulic drive, axial piston motor 10 cc
- Adjustable speed
- Air pressure gauge
- Hole blowing kit

» Carrier

- Deutz TCD 2013 L06 Tier 3/Stage III A (EPA III/COM III) approved, water-cooled, turbo-charged diesel engine
- Power rating at 2 300 rpm 173 kW
- Torque at 1 500 rpm 907 Nm
- Exhaust catalyser
- Exhaust silencer
- FOPS approved protective roof
- Fixed seat for tramming, incl. safety belt
- Articulated steering with ±38 degree steering angle
- Four wheel drive
- Hydrostatic power steering system
- Hydrodynamic Dana/Clark 24000 transmission
- Dana/Hurth 123 front axle
- Dana/Hurth 123 rear axle with ± 8 degree oscillation
- Automatic differential lock on front axle, limited slip
- Tyres front and rear, 14.00 R24
- Hydraulic jacks (2 extendable at front and 2 at rear)
- Large plates for boom frame hydraulic jacks
- Service brakes: two separate circuits, hydraulically applied, fully enclosed wet disc brakes
- Emergency and parking brakes: SAHR (Spring Applied Hydraulic Released)
- Control panel for roof, jacks and cable reel
- Fuel tank, volume 400 l
- Electric system 24 V
- Batteries 2x125 Ah
- Tramming lights 8x70 W, 24 V DC
- Spotlight 1x70 W, 24 V
- Diod illumination, stairs for platform
- Spirit levels, one for longitudinal and one for sideways
- Central lubrication system
- Fire extinguisher
- Gradeability at max load on drive wheels 1:4
- Beacon warning lamp and reverse alarm
- Break light
- Warning horn
- Boltrack
- Shelf for drill bits and tools
- Manual lubrication kit
- Dual controls for cable/water hose reel (if included)
- Bolt/rod holder

» Water system

- Internal water tank
- Water booster pump
- Max capacity at 7 bar 80 l/min
- Min water inlet pressure 2 bar
- Hydraulic drive, axial piston motor 5 cc
- Water pressure gauge
- Water flow guard, flushing water
- Water pressure switch
- Rig washing kit

Specifications

» Control system

- Rig Control System (RCS), versatile and upgradeable to a higher degree of automation
- Ergonomic operator panel with colour display
- All needed information and settings can be viewed on display i.e. pressure gauges, logging hole depth etc.
- Easy transfer of data and storage of optimal drill settings
- Integrated diagnostic system
- Exposed components are designed and tested acc. to IP 65 standard

» Hydraulic system

- Hydraulic pump unit consisting of two variable pumps for percussion and positioning, and two constant flow pumps for rotation and compressor
- Pumps unloaded at start
- System pressure 150–240 bar
- Hydraulic oil tank, volume max 250 l, min 200 l
- Low oil level indicator and shut down
- Oil temperature gauge on oil tank, electronically supervised
- Filtration, 16 µm absolute
- Oil filter indicator
- Water cooled, stainless steel oil cooler
- Mineral hydraulic oil
- Electrical oil filling pump
- Hydraulic oil thermostat

Optional Equipment

» Boom

- Automatic boom lubrication system, rear part
- Manual boom lubrication kit

» Bolting unit

- Swellex, Mn 12, Mn 16, Mn 24
- Split-Set, SS33, SS39, SS46
- Mechanical anchor bolts, CT, Kiruna, including boltrotator
- Split Wedge
- Rebar - manual resin / cement cartridge, including boltrotator
- Rebar - resin cartridge injection system, automatic, including boltrotator
- Rebar - cement injection system, automatic
- Hose injection system for resin cartridges
- Dual bolt lengths
- Dual bolt types
- Extension drilling kit

» Air/water system

- Water hose reel
- Water hose
- Dual controls for hose reel
- Booster pump at cement use

» Hydraulic system

- Heater kit
- Smart oil leakage shut down system
- Biogradable oil

» Automation

- Rig remote access
- Bolt quality log (BQL)
- Bolt angle indication
- Bolt plan navigation

» Protective roof

- Rig height roof up 3 070 mm, roof down 2 570 mm

» Cabin

- Cabin, FOPS approved with sound level <80 dB(A) including
 - Fixed seat
 - CD player
 - Air condition
 - Front window 16 mm
 - Rear windshield wiper
 - Joystick controlled spot light, 70 W (left side)
 - 12 V outlet for communication radio
 - Boot washing kit
- Heating function for air conditioning (water transferred, 2 kW)
- Swingable operator seat
- Additional operator's control panel
- Alternative mounting height: 140 mm (rig height 2 900 mm) or increased 250 mm (rig height 3 410 mm)
- FOPS approved grizzly bar for front window
- Cabin body made of stainless steel

- Electrical joystick steered spotlights, 1x75 W
- Cabin lift/tilt, 375 mm/15 degrees
- Reversing camera with monitor

» Carrier

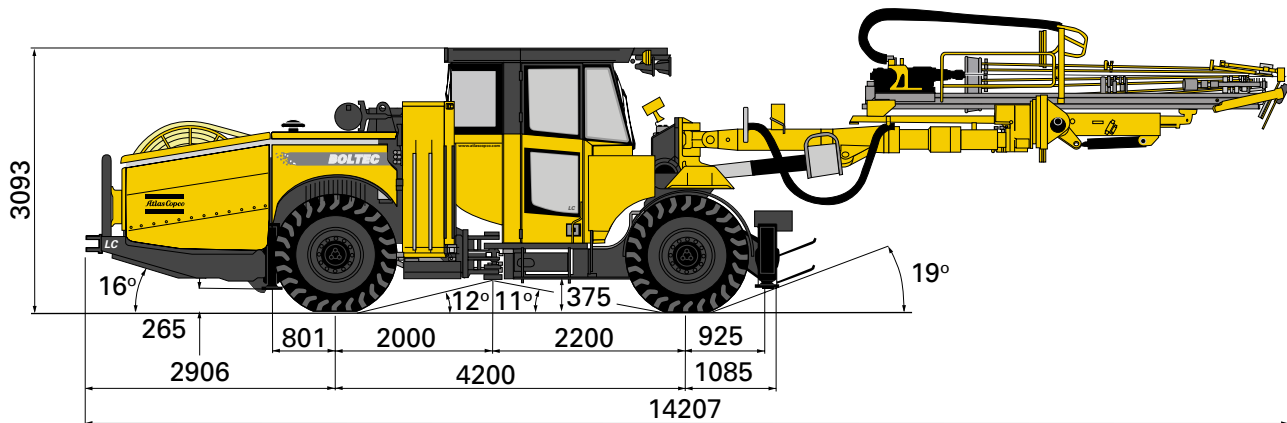
- Fire suppression system
 - Manual release
 - Automatic (Checkfire)
 - Full Automatic
- Particle filter UNIKAT
- Brake lights

» Miscellaneous

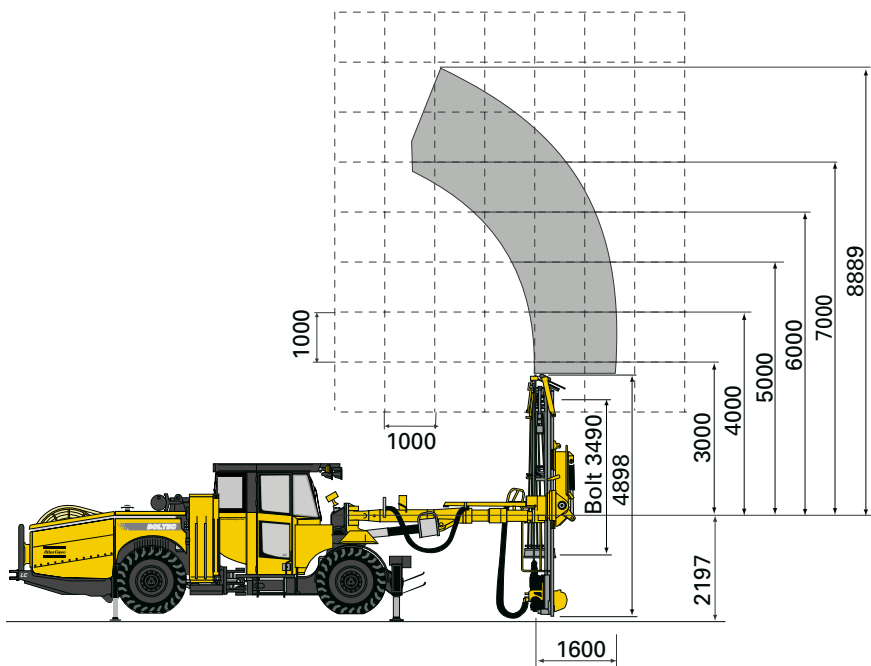
- Service platform HL 256
- FOPS approved protective roof for HL 256
- Water and air outlet in service platform basket
- Screen handling arm
- Hose and/or cable guide at water/cable reel
- Remote operating kit
- Ni-Cr plated piston rods
- Service tool box for electronic system

Measurements Atlas Copco Boltec

LENGTH / HEIGHT



COVERAGE AREA



DIMENSIONS		
mm	Width, without bolt rack	2 501
	Height, standard	3 093
	Length tramming MBU34.3	14 207
	Ground clearance	375
	Turning radius, outer	7 500
	Turning radius, inner	4 750

WEIGHT		
gross weight		
kg	Total	26 000
	Boom side	19 500
	Engine side	6 500

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