DM30 XC

Rotary blasthole drill rigs

Hole diameter: Up to 200 mm (7 7/8 in)

For details on how the DM30 XC can enhance your profitability, contact your Epiroc representative or visit epiroc.com.

Next-gen drilling power

The Epiroc DM30 XC is a crawler mounted, hydraulic tophead drive, multi-pass or single-pass drilling rig designed to handle 102 mm (4 in) up to 159 mm (6 1/4 in) drill pipe. The drill has a weight on bit of 20 000 kgs (44 065 lbs), and offers either a low or a high pressure compressor, making it suitable for Rotary or DTH drilling applications.

Built for the job

High quality at an excellent value sets the DM30 XC apart from other drills in its class. The drill is designed for mining so the structural components will hold up to the heavy duty cycles required in a mining drill – The frame and tower weldments are designed to last the life of the machine.

Powerful performance

The DM30 XC can be configured with multi-pass or single-pass tower with up to 11 m clean hole capacity in SP version. The 300 GL (1134 L) fuel tank allows the rig to run for 16 hours before refill

Options to fit your application

The small footprint of the DM30 XC makes it easy to maneuver on tight benches and simple to transport over the road between pits.

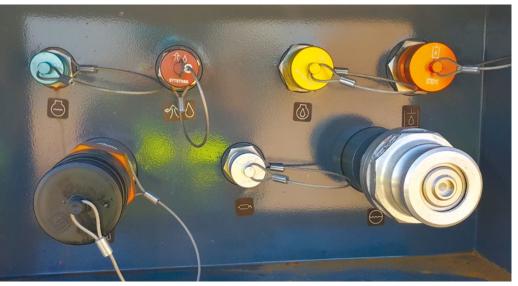
A spacious FOPS (Falling Object Protective Structure) rated cab with Electric over Hydraulic controls that are common across the DM series makes it easy to operate, especially for drillers who have experience in other DM series machines – The ergonomic controls layout allows immediate switch over from drilling to tramming mode, therefore increasing productivity.

The Electronic Air Regulation System (EARS) allows you to easily adjust your compressor to save horsepower and fuel consumption to decrease TCO.

Designed for maximum productivity and value

+ Operator comfort

The cab is insulated and pressurized, featuring tinted glass and a six-way adjustable suspension seat for maximum comfort. Electric over hydraulic controllers provide smooth and precise operation. All operational functions are conveniently controlled from the driller's console, which has an ergonomic control layout designed to improve efficiency. The cab also offers excellent visibility and maintains a low noise level with an 80 dBA rating.



+ Ease of maintenance

The deck layout allows easy access to all major serviceable components, simplifying maintenance tasks. Several options are available to facilitate serviceability, including fast fluid fill, tower access with fall restraint, central lubrication, and fluid sampling ports.

Contact your local Epiroc representative for a full list.

+ Enhanced safety

Safety features include a FOPS cab to protect the operator, an airend safety shutdown system for high temperatures, and a back-up alarm. Additional safety enhancements include a head-up propel interlock, a tramming inclinometer, lockable battery and starter isolators, and jacks-up indicator lights.

Service and support

Epiroc offers several types of service agreements to meet your operational requirements and maximize your productivity:

Variable-price repairs
Service when you need it.

Fixed-price repairs
Service with controlled costs.

Equipment audit
Scheduled equipment quality control.

Preventive maintenance programs
Peace of mind so you can focus on your core business.

Electronic Air Regulation System (EARS) allows you to easily adjust your compressor to save horsepower and fuel consumption for a lower total cost of ownership.

Spacious FOPS (Falling Object Protective Structure)-rated cab is designed for visibility and fitted with thermal and sound insulation to insure operator comfort.

A 300 gal. (1136 L) fuel tank allows the rig to run for 16 hours before refill.

Structural components stand up to the heavy-duty cycles required of a mining drill. Frame and tower weldments are designed to last for the life of the machine.

Main frame is verified by FEA and dynamic strain gauging. Designed for longevity and resilience.

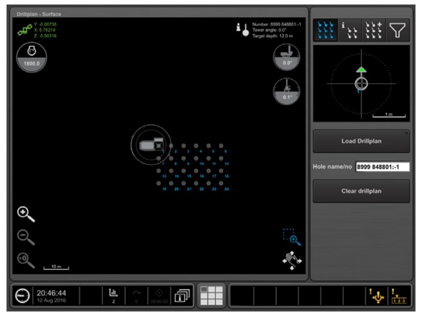
Flexibility for the future

Add flexibility to your Drill Master series drill rig with Epiroc's RCS Lite. Built on the RCS 5 platform that comes standard on the Pit Viper series, RCS Lite offers a number of safety and interlock features. It also provides a convenient foundation to add more functionality and technology options in the future without a major rebuild of the machine. In addition, RCS Lite allows all Epiroc rotary drills to have the same onboard display and system for consistent operator training and service. It's a modular solution that delivers efficiency now, along with the opportunity to enhance your equipment down the road as your mining requirements grow.

Home screen: all selections are done from the main menu.

Drilling: shows information about pressures and flows for various systems during drilling.

Setup and Propel: shows machine conditions during setup and while propelling.



Drill Plan: shows the interactive drill plan.

User: sets the control system language. Logs in users to the control system and shows user information.

Performance: shows statistics about the machine and drilling consumables.

Choose from three packages

RCS Lite | Basic

- RSC 5 touchscreen display and GUI with:
  - Real-time depth and pen rate feedback with histogram.
  - Rotation RPM and pressure (torque).
  - Pulldown/holdback.
  - Air pressure, water tank level.
  - On-screen machine inclinometers.
- Autolevel
- Safety features
  - Pipe-in-hole interlocks.
  - Stability interlock.
- Telematics capable

RCS Lite | Connected

Includes all features of RCS Lite | Basic, plus:

- CCI module for data storage and transmission to wireless network
  - Rig events, drilling quality, drill status, etc.
- Surface manager
- Remote desktop viewer
- Measure While Drilling (MWD)
- Onboard storage
- Operator ID and management
- Delay code management and reporting
- Consumable tracking

RCS Lite | NAV

Includes all features of RCS Lite | Connected, plus:

- GPS-ready with brackets (Option A) OR high-precision GPS installed (Option B)
- Moving map display software
- Geofence capability

Technical specifications

Sub structure

Mainframe 66 kg/m (44.35 lb/ft)	
• Weld fabricated I-beam type using wide flange structural steal beam for both rails and crossbeams • Designed by Epiroc, main frame is verified by FEA and strain gauge testing	
Leveling jack	
Type	Hydraulic cylinder
Quantity	3
Jack pad diameter	457 mm (18 in)
Position indication	"Jack up" indicator lights on console or RCS screen
Capacities	
Fuel tank	1134 L (300 gal)
Water tank	795 L (210 gal)
Hydraulic tank	397 L (105 gal)
Undercarriage and propel system	
Make	Epiroc or Caterpillar 320L
Mounting	Oscillating walking beam: 5˚ each side, total 10˚
Total length	4.45 m (175 in)
Ground contact	3.65 m (144 in)
Take-up adjustment	Grease slack adjustment; hydraulic recoil
Rollers	9 lower / 2 upper
Location	Strategically located for load distribution relative to the tower position (vertical or horizontal)
Roller bearings	Sealed for life
Track pads	Type: Triple bar grouser Width: 500 mm (19.69 in) Ground pressure: 89.6 kPa (13 psi)
Drive	Hydrostatic closed loop through planetary speed reducer
Propel motors	Two - Hydraulic, axial piston, fixed displacement rating (each): 120 kW (160 HP)
Propel speed range	0 - 3.22 km/hr (0 – 2.0 mph)

Tower, carousel and drill rod handling

Tower

Tower construction	Fully welded four main member with open front ASTM A500; rectangular steel tubing
Tower raising	Two hydraulic cylinders; live tower (raise and lower with full carousel and rotary head at top of tower)
Rod support	Hydraulic cylinder clamping and actuation to center drill rod

Rated capacity

	Multi-Pass	**Single-Pass**
Single pass depth	8.5 m (28 ft)	11.0 m (36 ft)
Maximum hole depth	45.1 m (148 ft)	20.1 m (65.9 ft)

Carousel (carousel internal to the tower with key-lock retention)

	Multi-Pass	**Single-Pass**
Rod length	9.1 m (30 ft)	9.1 m (30 ft)
Capacity	• Four 102 mm (4 in), 114 mm (4-1/2 in) or 127 mm (5 in) diameter rods • Two 140 mm (5-1/2 in) rods • One 159 mm (6-1/4 in) rod	• One piece of 102 mm (4 in), 114 mm (4-1/2 in), 127 mm (5 in), 140 (5-1/2 in), 159 mm (6-1/4 in) • Two swing cylinders
Actuation	One worm gearbox and one hydraulic cylinder for 102 mm (4 in), 114 mm (4-1/2 in) or 127 mm (5 in) rod diameter One indexing cylinder and two swing cylinders for 140 mm (5-1/2 in) rod diameter Two swing cylinders for 159 mm (6-1/4 in) rod diameter	
Safety	Drill pipe is held securely in carousel by "key lock design" mechanism No bump system to prevent damage if carousel not stowed	

Drill rods

Drill pipe diameter x 9.1 m (30 ft)	**Thread**	**Suggested bit diameter**
102 mm (4 in)	2-7/8 in API	127 mm - 152 mm (5 in - 6 in)
114 mm (4-1/2 in)	3-1/2 in API	140 mm – 171 mm (5-1/2 in – 6-3/4 in)
127 mm (5 in)	3-1/2 in API or BECO	171 mm (6-3/4 in)
140 mm (5-1/2 in)	3-1/2 in BECO	200 mm (7-7/8 in)
159 mm (6-1/4 in)	4 in BECO	200 mm (7-7/8 in)

Rotary head

Speed range	Variable 0 – 180 RPM (need to adjust controller)
Torque	Variable 0 – 9,300 Nm (0 – 6,870 lbf-ft)
Number of motors	One
Type of motor	Variable displacement axial piston
Reduction	15.36 : 1
Horsepower	120 kW (160 HP)
Travel length	10.8 m (35 ft 5 in)

Feed system

Pulldown capacity	Up to 176.4 kN (40,000 lbf)
Pullback capacity	0 – 57.3 kN (0 – 13,000 lbf)
Weight on bit	Variable, 0 – 20,000 kg (0 – 44,065 lb)
Mechanism type	Hydraulic cylinder with sheave block and cable
Number of cables - diameter	Two pulldown, two pullback – 19 mm (3/4 in)
Number of sheaves - outside diameter	Twelve – 397 mm (15.6 in)
Feed speed	33.8 m/min (111 ft/min)
Retract speed	97.5 m/min (320 ft/min)

Cab and controls

Cab

- Thermally insulated and pressurized
- Adjustable suspension swivel seat with seat belt
- Two hinged and lockable doors
- Quiet (tested at 80 dBA)
- Falling Object Protective Structure (FOPS) certified
- Side-mounted air conditioning (easier to service as no roof access required)
- Ergonomically designed wrap-around console
- Windshield wiper on drilling and rear tramming window

Controls

	All drilling and propelling functions are hydraulically powered with ergonomically grouped controls
Panels	• Drilling function • Compressor function • Propel, leveling and tower raising function • Gauges for system pressure, temperature, etc. • Engine start and gauges

Hydraulic system

- Hydraulic pumps mounted on a single three-hole gearbox driven off the engine through a drive shaft
- Two variable displacement main pumps for propel, drill feed and rotation functions
- One double pump for setup, auxiliary functions and cooling fan

Power package

Airend

	29.7 m^3/min @ 7.6 bar (1,050 cfm @ 110 psi) 25.5 m^3/min @ 24 bar (900 cfm @ 350 psi) 29.7 m^3/min @ 24 bar (1,050 cfm @ 350 psi) - only for Tier 4 X15 575 HP or X15 575 HP China IV engine

Diesel engine (1,800 RPM)

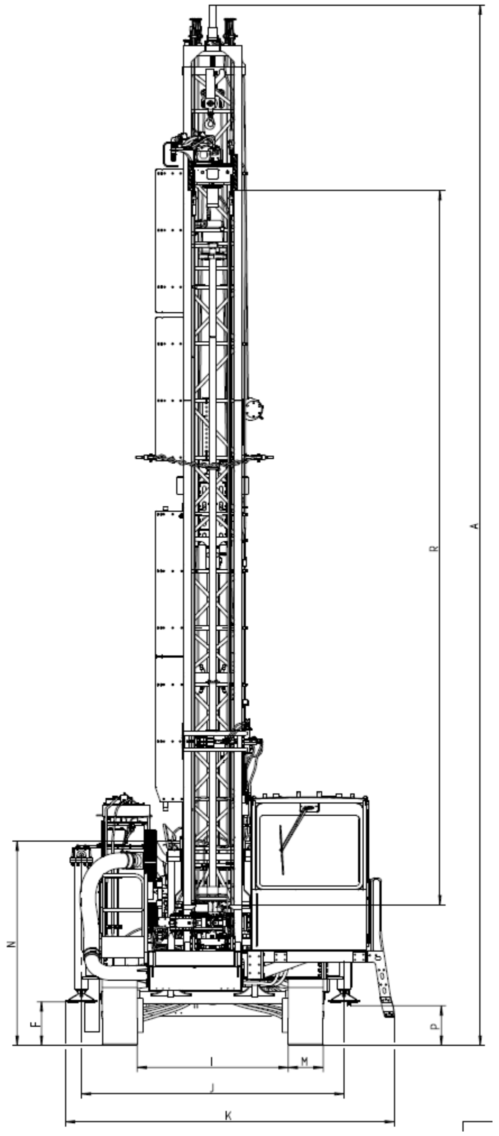
Diesel engine – Non Tier 4	CAT C15 ENGINE - 397 kW (540 HP) CAT C15 ENGINE - 350 kW (475 HP) CUMMINS QSX15 TIER 3 ENGINE - 390 kW (530 HP)
Diesel engine – Tier 4	CAT C13B TIER 4 - 395 kW (536 HP) CUMMINS X15 TIER 4 - 422 kW (575 HP)
China IV	CAT C13B CHINA IV - 395 kW (536 HP) CUMMINS X15 CHINA IV 422 kW (575 HP)

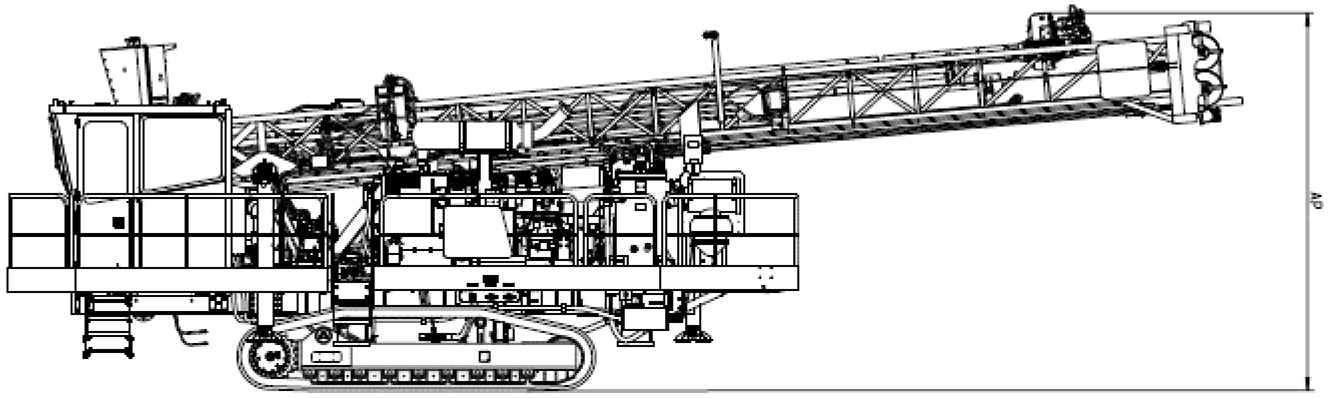
Dimensions and weight

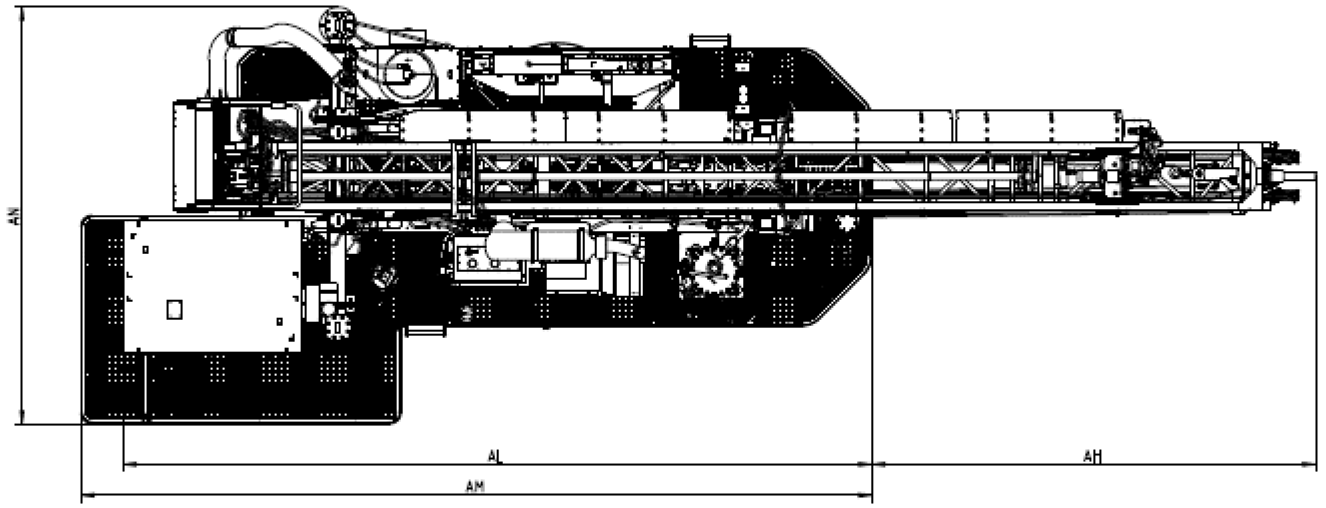
Operating weight	
Estimated weight	70,000 – 78,000 lbs (32 – 35 tonnes)

Operating dimensions
(Dimensions for DM30 XC)

	Description	Dimensions mts (in)	
		MP	SP
A	Height – tower up	14.8 (586.2)	17.93 (706.2)
B	Distance – cab to decking non drill end	7.8 (310)	9.38 (369.5)
C	Length – tower down	14.3 (564.8)	17.87 (703.8)
D	Length – undercarriage	4.4 (175.4)	4.45 (175.2)
E	Length – jack center to jack center	5.3 (209.7)	5.32 (209.7)
F	Height – jack to ground, drill end	0.61 (24.5)	6.21 (24.5)
H	Height – tower down	5.11 (201)	5.10 (201)
I	Width – track inside to track inside	2.16 (85)	2.16 (85)
J	Width – jack center to jack center, drill end	3.76 (148)	3.75 (147.9)
K	Width – overall	4.71 (185.3)	4.70 (185.4)
M	Width – track	0.5 (19.7)	0.50 (19.69)
N	Height – tower off	2.92 (115)	3.16 (124.6)
P	Height – to lowest point	0.56 (22.2)	0.56 (22.2)
R	Rotary head travel	10.2 (402.4)	13.27 (522.6)
S	Cab width	1.67 (65.8)	1.67 (65.8)
V	Height – top of cab to ground	3.55 (140)	3.55 (139.9)
AA	Height – jack to ground, non drill end	0.62 (24.4)	0.62 (24.4)
AB	Height – decking to ground	1.35 (53.2)	1.35 (53.2)
AC	Tower to DCS decking	7.25 (285.3)	7.95 (313.4)
AD	Distance-decking to tower end	5.52 (217.4)	7.14 (281.4)
AE	Width – decking	3.45 (136)	3.45 (136)
AJ	Height – tower bottom to ground	3.31 (130.3)	4.32 (170.4)
AK	Distance – frame non drill end to tower end	6.47 (254.8)	3.57 (140)
AL	Distance - Cab to decking non drill end	9.31 (366.7)	8.49 (334.4)
AM	Length - Decking cab side	9.84 (387.3)	9.90 (390.1)
AN	Width - Overall	5.18 (204.1)	5.18 (204.1)
AP	Height - Overall with folded extension drill table	4.7 (184.9)	4.96 (195.3)







Optional equipment

For a comprehensive list, please contact your local Epiroc Customer Center.

- Angle drill package – 0-30 degrees
- Epiroc dust collector
- Water injection
- Wiggins central service
- Cold weather options
- Cushion spindle sub
- RCS Lite
  - Basic: drill depth, penetration rate and auto level
  - Connected: Real time communication, data storage and transmission
  - Navigation: GPS and moving map display of pattern
- Automatic lube system
- Tow hooks on non-drill end
- Tower access ladder
- Tower fall restraint
- Maintenance walkways
- Cab and tower strobe lights

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