

DM75 Blasthole Drills

www.epiroc.homes



Legendary productivity

Epiroc's DM75 blasthole drills are built for productivity, delivering unsurpassed availability and utilization for drilling industry applications.

Epiroc's heavy-duty DM series models are some of the world's most popular drills for good reason. They have been proven in some of the toughest mining conditions, delivering productivity, reliability and low operating costs year after year. The DM series is so woven into the fabric of the industry that many operators learned to drill holes with this model. Today you'll find these drills operating in more than six different countries around the world.

For details on how the DM75 can enhance your profitability, contact your Epiroc representative or visit epiroc.com.

Efficient drilling

The DM75 is a crawler-mounted, hydraulic tophead-drive blasthole drill that is suitable for a variety of multi-pass rotary drilling applications. It has an on-board depth capability of up to 168 ft (51.2 m) using 35 ft (10.7 m) drill pipe and is designed to handle 7 in – 8-5/8 in (178 mm to 219 mm) drill pipe.

Powerful performance

The powerful rotary tricone drill delivers a hole diameter of 9 in – 10-5/8 in (229 mm – 270 mm) and can achieve a clean hole depth of 32.5 ft (9.9 m) in single-pass applications or depths of up to 168 ft (51.2 m) for multi-pass applications. It has a weight on bit of 75,000 lb (33,900 kg) and offers a low-pressure compressor, making it suitable for rotary drilling applications.

Options to fit your application

Choose from a selection of engine brands and a variety of low-pressure compressors to create the right configuration for your drilling operation. You can also add on-board technology capabilities with the optional Rig Control System Lite (RCS Lite) for added safety and productivity.

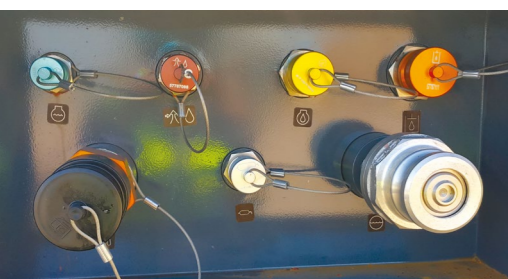


Designed for maximum productivity and value



+ Operator comfort

The DM75 features an insulated, pressurized cab with tinted glass, a six-way adjustable suspension seat and excellent visibility. All operational functions are controlled from the driller's console, and the ergonomic layout allows operators to instantly switch from drilling to tramming for increased productivity. In addition, the electric-over-hydraulic controls are common across the DM series, making operation easy for drillers with DM series experience. Plus, with a rating of 80 dBA, the noise inside the cab is kept to a minimum for greater operator comfort.



+ Ease of maintenance

The deck layout on the DM series offers easy access to all major service components. Hydraulic system filters are also mounted externally for accessibility, and the central lubrication manifold streamlines maintenance. Other features include a single receiver tank with a hinged access door, and optional Fast Fill connections for fuel, hydraulic oil, engine coolant, and other fluids.



+ Enhanced safety

The DM75 is equipped with a number of features to help keep operators safe on the job. Features include a FOPS cab with safety glass, remote hydraulic tower pinning and a pulldown over-center valve — as well as leveling jacks and load-holding valves. These rigs also have guards on rotating parts and safety shutdowns for temperature, low level, and pressure. Other features include spring-applied, hydraulic-released brakes on the tramming system, and technology options can be added to further increase safety.



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.

Robust, double-cut structural tower lacing offers strength without the added weight of less efficient designs and is designed for long life in the toughest mining conditions.

Spacious one-piece FOPS (Falling Object Protective Structure)-rated cab is designed for visibility and operator comfort.

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 (TCO).



Main frame features welded rectangular tubing, reinforced by dynamic strain gauging.

"Walking beam" oscillation yoke allows the rig to travel over uneven ground while reducing torsional stresses on the main frame.

Flexibility for the future

Add flexibility to your DM Series drill rig with Epiroc's Rig Control System (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.



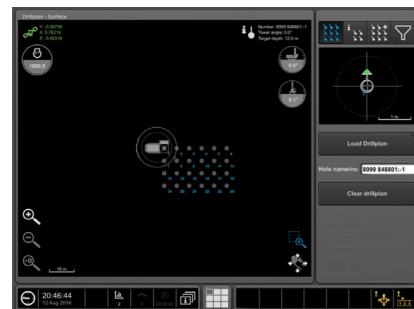
Home screen: all selections are done from the main menu.



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.

Technical specifications

Substructure

Mainframe

- Rectangular tubing construction
- Designed by Epiroc, and weld fabricated by certified welders
- Designed with the latest FEA technology and verified by dynamic strain gauging

Leveling jack

Type	Hydraulic cylinder
Quantity	Three (standard) Four (optional)
Calculated jack pad bearing pressure	Drill end: 68.9 psi (475 kPa) Non drill end (3 jacks): 66.7 psi (460 kPa) Non drill end (4 jacks): 59.9 psi (413 kPa)
Position indication	"Jack up" indicator lights on console

Capacities

Fuel tank	535 gal (2,022 L) standard 865 gal (3,270 L) optional
Water tank diesel	295 gal (1,115 L) or 590 gal (2,230 L) or 811 gal (3,065 L)
Water tank electric	295 gal (1,115 L) or 590 gal (2,230 L)
Hydraulic tank	178 gal (672 L)

Undercarriage and propel system

Make	Epiroc 75HD, 75SHD or Caterpillar 345SL
Mounting	Oscillating walking beam: 5" each side, total 10"
Total length	Epiroc 75HD: 210 in (5.35 m), Epiroc 75SHD & Caterpillar 345SL: 236 in (5.99 m)
Ground contact	Epiroc 75HD: 171 in (4.35 m), Epiroc 75SHD & Caterpillar 345SL: 196 in (4.98 m)
Take-up adjustment	Grease slack adjustment; spring recoil
Rollers	Epiroc 75HD: 11 lower / 2 upper, Epiroc 75SHD & Caterpillar 345SL: 13 lower / 3 upper
Location	Equally spaced between idler and sprocket
Roller bearings	Sealed for life
Track pads	Type: Triple bar grouser Width: Epiroc 75HD: 33.5 in (850 mm), Epiroc 75SHD & Caterpillar 345SL: 35.5 in (900 mm) Ground pressure: Epiroc 75HD, Epiroc 75SHD & Caterpillar 345SL: 14.7 psi (101 kPa)
Drive	Hydrostatic closed loop through planetary speed reducer
Propel motors	Two - Hydraulic, axial piston, fixed displacement rating (each): 200 HP (149 kW)
Propel speed range	Epiroc 75HD: 0 - 116 mph (0 - 19 km/h), Epiroc 75SHD: 0 - 0.9/1.4 mph (0 - 1.4/2.3 km/h), Caterpillar 345SL: 0 - 1.27 mph (0 - 1.96 km/h)

Choose from three packages

RCS Lite | Basic

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

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 actuation to center drill rod	
Rated capacity		
Single pass depth	28 ft (8.4 m)	
Maximum hole depth	168 ft (51.2 m)	
Carousel (carousel internal to the tower with key-lock retention)		
Rod length	35 ft (10.7 m)	
Capacity	Four pieces of 7 in, 7-5/8 in, 8 in, or 8-5/8 in (178 mm, 194 mm, 203 mm, or 219 mm)	
Acuation	Two hydraulic cylinders	
Safety	<ul style="list-style-type: none"> • 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 35 ft (10.7 m)	Thread	Suggested bit diameter
7 in (178 mm)	4-1/2 in BECO	9 in – 9-7/8 in (229 mm – 251 mm)
7-5/8 in (194 mm)	5-1/4 in BECO	9-7/8 in – 10-5/8 in (251 mm – 270 mm)
8 in (203 mm)	5-1/4 in BECO	9-7/8 in – 10-5/8 in (251 mm – 270 mm)
8-5/8 in (219 mm)	6 in BECO	9-7/8 in – 10-5/8 in (251 mm – 270 mm)
Rotary head		
Speed range	Variable 0 – 200 RPM	
Torque	Variable 0 – 8,700 lbf-ft (0 – 11,800 Nm)	
Number of motors	Two	
Type of motor	Variable displacement axial piston	
Reduction	Two-stage spur gear	
Travel length	38 ft 8 in (11.8 m)	
Feed system		
Pulldown capacity	0 to 75,000 lbf (0 to 340 kN)	
Pullback capacity	0 to 30,000 lbf (0 to 136 kN)	
Weight on bit	Variable, 0 – 75,000 lb (0 – 34,000 kg)	
Mechanism type	Hydraulic cylinders with cable feed	
Pulldown cable diameter	1 in (25.4 mm)	
Feed speed	89.7 ft/min (26.9 m/min)	
Retract speed	171.7 ft/min (51.5 m/min)	

Technical specifications

Cab and controls

Cab	
<ul style="list-style-type: none"> • 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 (electric over hydraulic)	
Panels	<ul style="list-style-type: none"> • Tramming and jack controls • Ignition console and gauges • Engine diagnostic • Air regulation controls • Drill controls and gauges
Hydraulic system	
<ul style="list-style-type: none"> • Hydraulic pumps mounted on a single three-hole gearbox driven off the engine through a drive shaft • Hydraulic system main pumps work through diverter valves to control feed/rotation and propel • Two main pumps • One double pump 	
Power package	
Airend	
Diesel only	1,900 cfm @ 110 psi (53.8 m ³ /min @ 7.6 bar)
Electric only	1,800 cfm @ 110 psi (51 m ³ /min @ 7.6 bar)
Diesel engine / electric motor (1,800 rpm)	
Diesel engine – non Tier 4	CAT C27 – 800 HP (597 kW) Cummins QSK19 – 755 HP (563 kW)
Electric motor*	TEC or WEG – 700 HP @ 50 Hz or 60 Hz (522 kW) *Airend output differs between 50 Hz and 60 Hz operation

Dimensions and weight

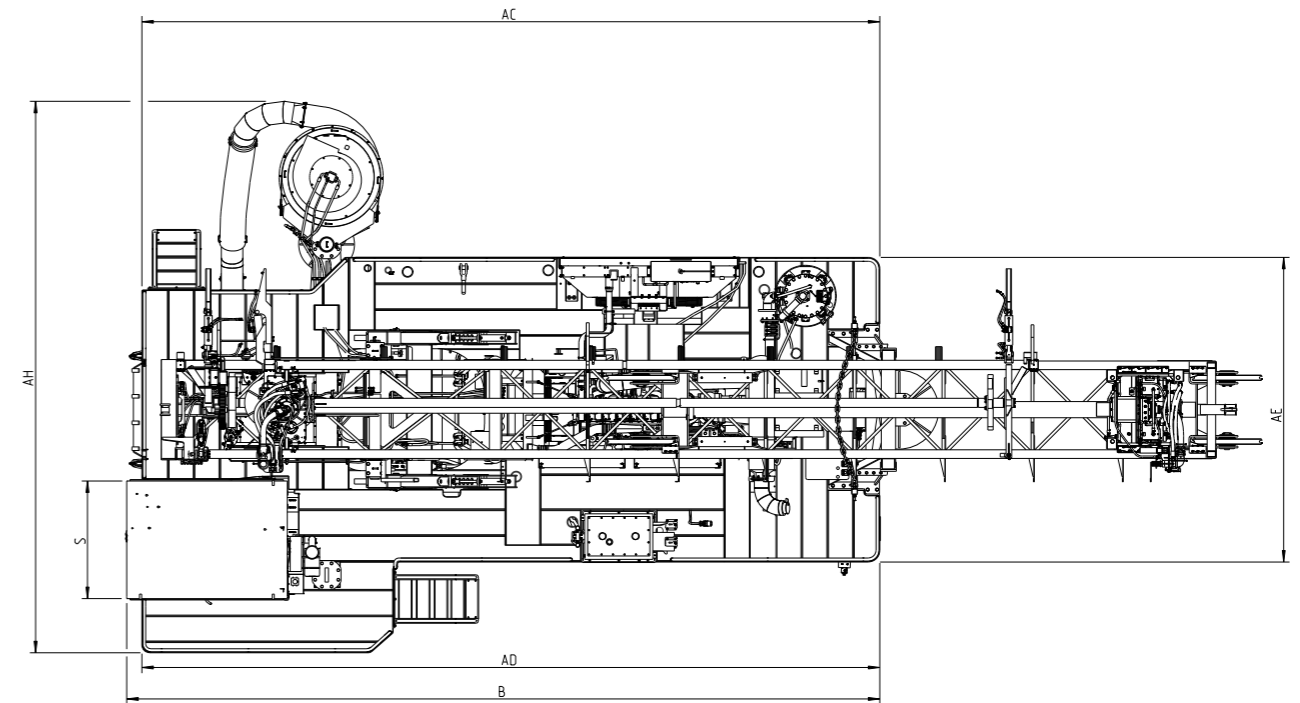
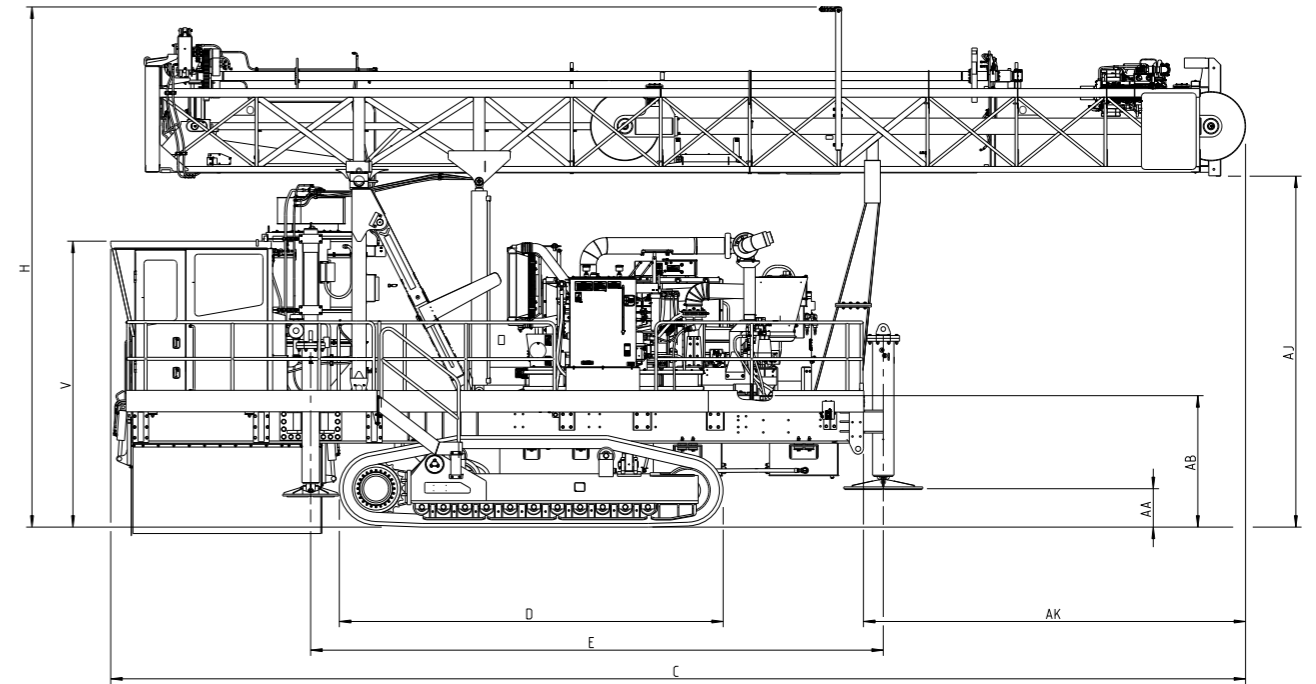
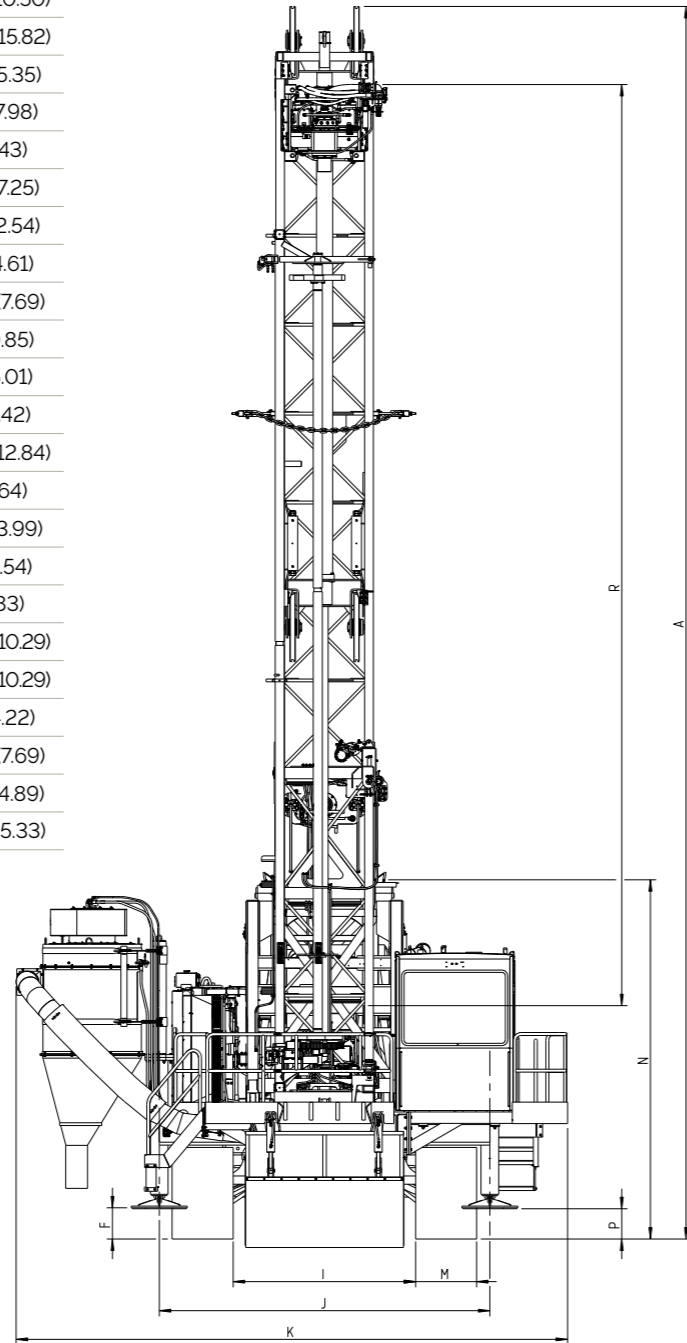
Operating weight

Estimated weight (diesel)	149,600 – 187,600 lb (68 – 85 tonnes)
Estimated weight (electric)	149,600 – 187,600 lb (68 – 85 tonnes)

Operating dimensions

(Dimensions for DM75 D with Epiroc heavy duty undercarriage)

	Description	Dimensions in (m)
A	Height - tower up	676.38 (17.18)
B	Distance - cab to decking non drill end	413.36 (10.50)
C	Length - tower down	622.84 (15.82)
D	Length - undercarriage	210.67 (5.35)
E	Length - jack center to jack center	314.25 (7.98)
F	Height - jack to center to jack center	17.07 (0.43)
H	Height - tower down (tower clearance)	285.47 (7.25)
I	Width - track inside to track inside	100.14 (2.54)
J	Width - jack center to jack center	181.42 (4.61)
K	Width - overall	302.64 (7.69)
M	Width - track	33.46 (0.85)
N	Height - tower off	197.12 (5.01)
P	Height to lowest point	16.59 (0.42)
R	Rotary head travel	505.51 (12.84)
S	Width - cab	64.57 (1.64)
V	Height - top of cab to ground	156.89 (3.99)
AA	Height - NDE jack to ground	21.06 (0.54)
AB	Height - decking to ground	72.13 (1.83)
AC	Length - DCS decking	405.08 (10.29)
AD	Length - CS decking	405.08 (10.29)
AE	Width - decking	167.16 (4.22)
AH	Width - overall	302.64 (7.69)
AJ	Height - tower bottom to ground	192.60 (4.89)
AK	Distance - frame NDE to tower end	209.72 (5.33)



Optional equipment

Following are some examples of available options. For a comprehensive list, please contact your local Epiroc Customer Center.

- Angle drill package – 0-30 degrees
- Video camera system with three cameras and LCD screen
- Cold-weather options for drill operation in extremely cold ambient conditions (-45° C)
- Ground-level emergency shutdown
- Hands-free auxiliary wrench
- Tow hooks on non-drill end
- Epiroc dust collector
- Cab and tower strobe lights
- Automatic lube system
- Rotational tachometer
- Wiggins central service
- Hydraulic test station
- Water injection

**United in performance.
Inspired by innovation.**

Performance unites us, innovation inspires us, and commitment drives us to keep moving forward. Count on Epiroc to deliver the solutions you need to succeed today and the technology to lead tomorrow.

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