

ATLAS COPCO BLASTHOLE DRILLS DM30 II-SERIES

Rotary and DTH drilling – Multi pass
Hole diameter 5 1/2 in – 7 7/8 in (140 – 200 mm)
Maximum hole depth 146 ft (44.5 m)

Atlas Copco



Heavy duty concept

Designed for productivity

The Atlas Copco DM30 II is a crawler mounted, hydraulic tophead drive, multi pass rotary drilling rig featuring a 30 ft (9.1 m) drill pipe change and a standard 4-rod carousel. With a starter rod under the rotary head, the DM30 II has a total depth capacity of 146 ft (44.5 m).

It is designed to handle 4 1/2 in up to 5 1/2 in drill pipe. The drill has a weight on bit of 30,000 lb (13,608 kg), both a low and a high pressure compressor alternative are available for the DM30 II series, making it suitable for Rotary or DTH drilling applications.

Tower and pipe handling

Raising the tower with a full complement of up to four drill pipes in the carousel and one under the rotary head can be accomplished in less than one minute (maximum number of pipes is contingent upon pipe size selection). The carousel-type drill pipe changer is part of the tower assembly and is located on the inside of the tower frame. Tower pinning and pipe changing is performed remotely from the operator's cab. Breaking pipe joints is done by a hydraulic positioned sliding fork wrench with limited impact that minimizes shock loads on the tower, carousel, rotary head, and feed components. A hydraulic motor rotates the carousel to index the rotary head for changing. An exclusive "keylock" carousel design securely locks in the drill pipe to ensure maximum safety for drill pipe storage and changing. An auxiliary hoist is provided as standard for drill pipe and accessories handling. A safety rod catcher also comes standard. The DM30 II utilizes a hydraulic feed cylinder that raises and lowers the rotary head by way of cables for both pulldown and pullback..

Rotary or DTH drilling

The DM30 II is designed to handle 4.5" (114 mm) up to 5.5" (140 mm) drill pipe. The 30 ft (9.1 m) multipass tower provides a depth of 86 ft (26.2 m), using the 2-rod carousel combined with a starter rod under the rotary head. A total depth capacity of 146 ft (44.5 m) is possible when using the 4-rod carousel. A variable displacement axial motor powers the rotation of the head. A replaceable spindle adapter between the spindle and the drill pipe is furnished as standard equipment, along with replaceable head guides. Pulldown and pullback cables are attached to the mounting plates, which are attached to the rotary head case. On the low pressure version, 110 psi (7.6 bar) can be used for rotary drilling of blastholes up to 7 7/8" (200 mm) in diameter. On the high pressure version of the DM30 II, 350 psi (24 bar) can be used for up to 6" (152 mm) DTH hammers and up to a 7 7/8" (200 mm) bit diameter.

Compressor range

Low pressure rotary	1,050 cfm @ 110 psi / 29.7 m ³ /min @ 7.6 bar
High pressure DTH	900 cfm @ 350 psi / 25.5 m ³ /min @ 24 bar
High pressure DTH	1,050 cfm @ 350 psi / 29.7 m ³ /min @ 24 bar (Tier 4 engine)



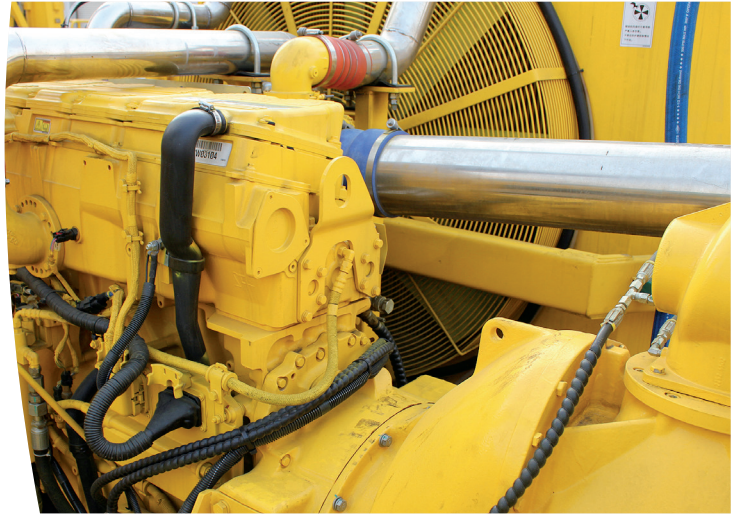
Operator comfort

All operational functions can be controlled from the drillers console in the cab. The ergonomic drilling console puts all of the drilling, tramming and auxiliary operations at the driller's fingertips and the operator has excellent visibility with an unobstructed view of the drill table. An 11-light halogen night lighting system is provided as standard for operator visibility under low light operating conditions. The cab is thermally insulated, pressurized, and has an ergonomic seat with seat belt. The FOPS (Falling Object Protection System) certified cab has an integrated air conditioning system and heating system, as well as a sound abatement less than 80 dBa.



Efficient power pack

The DM30 II power pack consists of a diesel engine directly coupled to an air compressor on one end and a hydraulic pump drive on the other end. This complete power pack assembly is mounted on its own sub base, which is, in turn mounted to the rig's main frame. The in-line drive-train configuration maximizes mechanical efficiency and the separate "floating sub base" isolates the components from drilling and propel loads, helping to maintain alignment between them. A hydraulic oil cooler is also standard to assure cool oil temperature to maximize system efficiency and component life. The hydraulic pumps are mounted for convenient service access on a single three-hole gear box driven off the engine through a drive shaft. Separate air inlet cleaners with quick release dust-drop covers are standard for both engine and air compressor intake. A cooler for hydraulic oil, compressor oil and diesel engine coolant is provided. Operational ambient temperature rating for the DM30 II is up to 125°F (52°C).



Sturdy and powerful

The DM30 II utilizes an excavator-type undercarriage that's built to Atlas Copco specifications. Tracks are driven by two hydraulic motors rated at 147 hp (110 kW) each. Each track is individually controlled and act as an independent unit. Track tension is hydraulically adjustable with a spring recoil system and equipped with 19.7" (500 mm) replaceable triple bar grouser pads. The Atlas Copco designed main frame is a weld fabricated I-beam type using the wide flange structural steel beam for both rails and crossbeams, verified by dynamic strain gauging. A "walking beam" oscillation yoke allows the rig to propel over uneven ground, while reducing torsional stresses on the main frame.

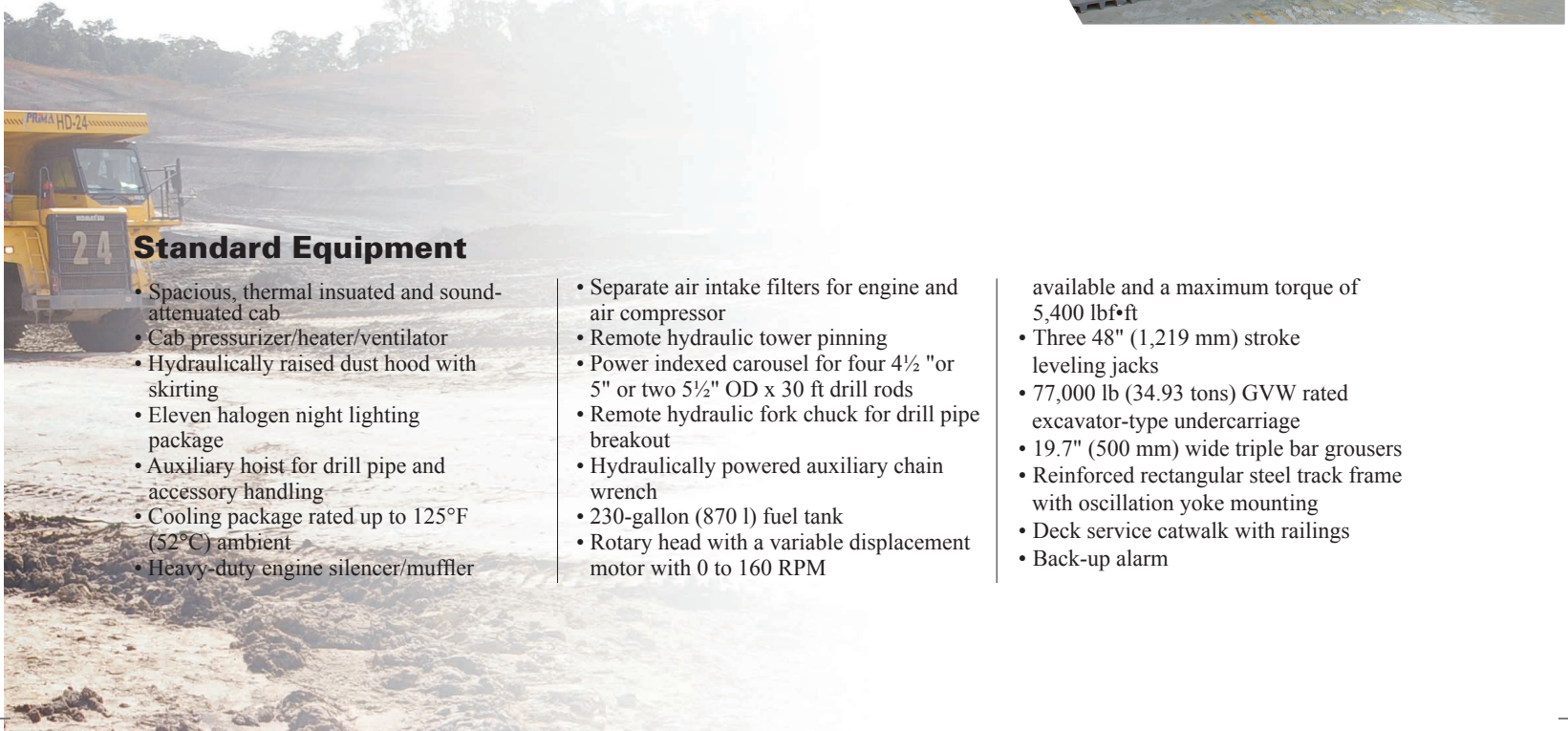


Standard Equipment

- Spacious, thermal insulated and sound-attenuated cab
- Cab pressurizer/heater/ventilator
- Hydraulically raised dust hood with skirting
- Eleven halogen night lighting package
- Auxiliary hoist for drill pipe and accessory handling
- Cooling package rated up to 125°F (52°C) ambient
- Heavy-duty engine silencer/muffler

- Separate air intake filters for engine and air compressor
- Remote hydraulic tower pinning
- Power indexed carousel for four 4½" or 5" or two 5½" OD x 30 ft drill rods
- Remote hydraulic fork chuck for drill pipe breakout
- Hydraulically powered auxiliary chain wrench
- 230-gallon (870 l) fuel tank
- Rotary head with a variable displacement motor with 0 to 160 RPM

- available and a maximum torque of 5,400 lbf•ft
- Three 48" (1,219 mm) stroke leveling jacks
- 77,000 lb (34.93 tons) GVW rated excavator-type undercarriage
- 19.7" (500 mm) wide triple bar grousers
- Reinforced rectangular steel track frame with oscillation yoke mounting
- Deck service catwalk with railings
- Back-up alarm



A selection of options for the DM30 II-series

For a more comprehensive options list, please contact your local Atlas Copco Customer Center.



Angle drilling package

This package allows the tower to be positioned up to a maximum of 30° from the vertical in increments of 5°. All controls for positioning are located at the operator's control console inside the cab. The package includes a drill pipe support.

Dust control

The Dust Collection is a system that uses a dust hood to collect and remove all of the cuttings from the hole. The water injection system consists of a 0-3 GPM (0-11 LPM) hydraulic drive pump and a 210 gallon water tank.

Auto lubrication system

An electric pump system provides grease on all non-traveling grease points with an automatic timer.

Rear additional decking

The optional, newly developed additional rear decking gives easy access to all air cleaners.

Technical data DM30 II

Drilling Method	Rotary or DTH Multi pass	
Hole Diameter	5 1/2 in - 7 7/8 in	140 mm - 200 mm
Hydraulic Pulldown	30,000 lbf	133 kN
Weight on bit	30,000 lb	13,600 kg
Hydraulic Pullback	10,000 lbf	44 kN
Single pass depth	26 ft	7.9 m
Maximum hole depth	146 ft	44.5 m
Feed speed	100 ft/min	0.5 m/s
Rotary head, torque	5,400 lbf·ft	7.3 kNm
Estimated weight	70,000 lb	31.75 tonnes

Dimensions tower up

Length	28 ft 7 in	8.7 m
Height	45 ft 2 in	13.77 m
Width	16 ft 11 in	5.16 m

Dimensions tower down

Length	44 ft 11 in	13.7 m
Height	16 ft 8 in	5.09 m

Compressor

Low pressure, Rotary	1050 cfm@110 psi / 29.7 m ³ /min@7.6 bar
High pressure, DTH	900 cfm@350 psi / 25.5 m ³ /min@24 bar
High pressure, DTH	1050 cfm@350 psi / 29.7 m ³ /min@24 bar (Tier 4 engine)

Engine (Tier 3)

Caterpillar	C15	425HP / 317 kW@1800RPM (LP 900)
Cummins	QSX15	425HP / 317 kW@1800RPM (LP 900)
Caterpillar	C15	475HP / 354 kW@1800RPM (LP 1050)
Cummins	QSX15	475HP / 354 kW@1800RPM (LP 1050)
Caterpillar	C15	540HP / 403 kW@1800RPM (HP 900)
Cummins	QSX15	530HP / 395 kW@1800RPM (HP 900)

Engine (Tier 4)

Cummins	QSX15	550HP / 410 kW@1800RPM (HP 1050)
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Drill pipe diameter	Suggested bit diameters	Thread
4 1/2" (114 mm)	5 7/8" - 6 3/4"	3 1/2" API
5" (127 mm)	6 3/4"	3 1/2" API or BECO
5 1/2" (140 mm)	7 7/8"	3 1/2" BECO

Sustainable Productivity

We stand by our responsibilities towards our customers, towards the environment and the people around us. We make performance stand the test of time. This is what we call – Sustainable Productivity

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