

Atlas Copco Surface Drill Rigs

ROC[®] 460PC & ROC 460HF



Heavy duty DTH crawler rig

ROC 460PC hole range 85 – 152 mm (3 1/3" – 6")

ROC 460HF hole range 110-165 mm (4 1/3" – 6 1/2")

Atlas Copco

ROC 460PC & HF

DTH crawler rig for 85–152 mm (3 1/3"–6") holes

Heavy duty DTH crawler rig for 110–165 mm (4 1/3"–6 1/2") holes

The less homogeneous the rock formation, the harder it is to drill straight blastholes and keep your productivity at top level. The ROC 460PC DTH crawler gives you the solution by enabling you to drill straight holes with maximum economy. Its rigid pipe string has a very high resistance to bending, and leaves very little space at the hole walls. Together with the optimally adjusted feed force, it keeps hole deviations to a minimum. With the resulting straight holes you can increase burden and spacing, reducing your overall drill and blast costs.

HOW BIG A HOLE DO YOU NEED?

With the ROC 460PC you can drill big holes with a small rig. Its perfect stability allows the use of 3" to 5" DTH-hammers, selected according to the hole size range. There will always be an optimal relation between the impact piston area and the drill bit size. And the high torque rotation unit gives you more than enough power to drill holes up to 152 mm (6") in diameter.

ENERGY USED EFFECTIVELY

There are minimal energy losses when drilling with the ROC 460PC. The impact force is delivered directly to the bit, without having to pass through the drill string. That gives you constant penetration, independent of hole depth, and a much better performance when drilling in fissured rock. Because of high air pressure and volume, and the small space between the drill string and hole walls, flushing conditions are also optimized. The upgraded hydraulic



ROC 460 HF (heavy feed) equipped with reinforced feed beam is capable of drilling up to 6 1/2" holes down to 140 metres (459 ft)

system has improved the tramming. An increased traction force and speed give decreased oil temperature and a low working temperature.

OPTIONS THAT MAKE SENSE

The ROC 460PC can be equipped with a series of dust collectors, with a large filter area and shock pulsation cleaning. There is a front swing arm for horizontal drilling, a pipe rack to reduce handling time, and a hydraulic support jack to give you more stable setups. To increase drilling efficiency even more, the ROC 460PC can be equipped with an inclination instrument for faster and more accurate hole angle setting. Sensible options that add real value!



DHR 45, rotation unit

VALUE FOR MONEY

Reliability and clever in-depth solutions make the difference with the ROC 460PC. Like the hydraulic system, centrally driven by a powerful air motor. And the

hydraulic traction drive, with a force of 45 kN (9664 lbf) for comfortable tramming and smooth setups. The operating panels are ergonomically designed and user friendly. Controls for drilling are located directly at the feed, while tramming and boom positioning are performed from a swing arm panel.

HIGH POWER FOR DEEP PENETRATION

To meet the ongoing challenge for higher productivity, we've provided the ROC 460HF with a robust power pack – tuned for maximum efficiency but with plenty in hand for those difficult jobs that stress a rig to the limit. This, in combination with our fast COP DTH rock drills, gives the ROC 460HF top level performance even when drilling deep, large diameter holes.

The specifications are impressive. The CFA 854 feed is designed for seriously heavy-duty work. It has a worm gear with holdback device to control the massive feed force of 34.5 kN (7753 lbf) – more than twice that of the standard ROC 460PC. While the powerful DHR 56A rotation unit, with two air motors to the 460PC's one, is capable of developing an outstanding torque of 3700 Nm (2738 lbf.ft) and a maximum rotation speed of 65 rpm. To cope with the resultant stresses, the strengthened drill wagon has a reinforced feed holder and boom head.

ROCK DRILLS THAT COMBINE SPEED WITH ECONOMY

We supply the ROC 460HF with a range of Atlas Copco DTH rock drills – the COP 44, 54, and 64. These are among the fastest on the market. Their high performance, together with great functional reliability and outstanding service life, give first-class drilling economy.



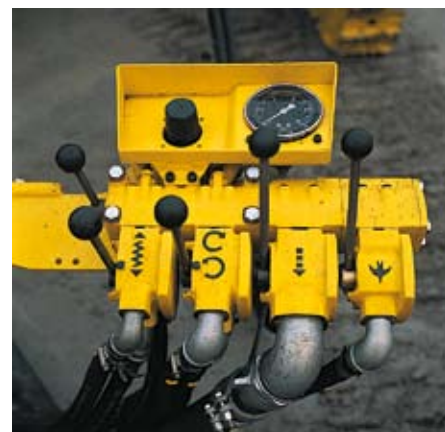
Oil cooler



Dust collector



Feedmotor



Drilling panel

ROC 460PC
MAIN APPLICATIONS:

- Construction
- Quarrying
- Open pit mining

TOTAL COVERAGE AREA:
 • 3 m²

ROC 460HF
MAIN APPLICATIONS:

- Water well drilling
- Quarring
- Open pit mining
- Geotechnical drilling
- Ground engineering

TOTAL COVERAGE AREA:
 • 3 m²

MAX DRILLING DEPTH:

AC tube size	Depth*
89mm x 3m	270m
102mm x 3m	160m
114mm x 3m	140m

* Subject to rock formations

Technical Data ROC 460PC & HF

	ROC 460PC	ROC 460HF
Dimensions		
Weight kg	5000	6000
Length (feed in transport pos.) mm	6350	6350
Width mm	2300	2300
Height mm	1500	1500
Ground clearance mm	350	350
Ground pressure N/mm	0.054	0.064
Drill tube dimension		
Diameter mm	70,76,89,102	76,89,102,114
Length mm	3000	3000
Tramming		
Traction speed km/h	2.5	2.5
Traction force kN	45	45
Track oscillation	±12°	±12
Hill climbing ability	30°	30°
Feed		
Feed force kN	17	34.5
Feed rate m/s	0.4	0.33
Travel length mm	4350	3730
Total length mm	6350	5630
Feed swing	± 30°	± 30°
Air consumption (l/s at 6 bar)	25	35
Rotation units		
DHR 45A		
Hole range mm	110-140	-
Air consumption (l/s at 30 rpm)	70	-
Rotation torque (max)	1650	-
DHR 56A		
Hole range mm	-	110-165
Air consumption (l/s at 30 rpm)	-	150
Rotation torque (max)	-	3700
Dust collectors		
DCT 140E		
Air consumption (l/s at 7 bar)	65	65
DCT 240E		
Air consumption (l/s at 7 bar)	110	110



Standard equipment

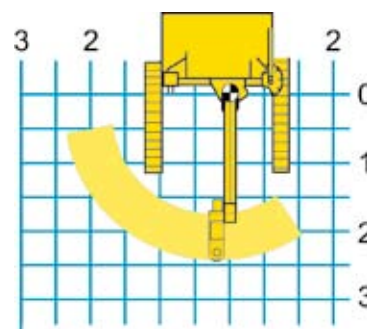
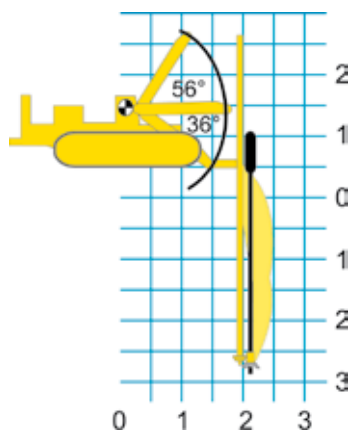
- Front control panel
- Swing arm for tramming and positioning
- Two-speed traction motors
- Oil cooler
- Tropical hydraulic oil ISO VG 68 (temp > 40°C)

Optional equipment

- Dust collector DCT 140E E or DCT 240 E
- Hydraulic support leg
- Pipe rack holding 9 drill tubes
- Mechanical hole inclination instrument
- Front swing arm with drilling controls
- Foam flushing system
- Hydraulic breakout wrench
- Work lights
- CEN kit (including work lights and lifting device)

Compressor recommendations

For all versions Atlas Copco offers a full range of compressors with a maximum operating pressure of 7 bar (102 psi)/8,6 bar (125 psi)/12 bar (174 psi) and 20 bar (290 psi) to satisfy most drilling needs and site requirement.



The boom reach areas are approximate.