

Atlas Copco Surface drill rigs

# ROC<sup>®</sup> D5, D7, D9 and D7LF

## Technical specification



### A true workhorse for the widest range of applications

- Unique, durable cylinder-operated feed system that makes the best use of the rock drill
- Long reach makes it ideal for use also in slope stabilization
- Supreme productivity thanks to the use of the proven COP-series of rock drills

**ROC D5, D7, D9 and D7LF (Long Feed) are intended for construction sites and aggregate quarries. The main components are:**

- Operator's cabin, ROPS and FOPS approved
- Automatic feed force control system
- Hydraulic Tophammer Rock Drill
- Caterpillar turbo charged diesel engine CAT C7
- Atlas Copco screw compressor
- Folding Boom system
- Heavy duty track frames with single grouser pads and cleaning holes, hydraulic track oscillation and two speed traction

Hole range			
ROC D5	R32, T38, T45	35-89 mm	1 3/8" - 3 1/2"
ROC D7 and D7LF	T38, T45, T51	64-115 mm	2 1/2" - 4 1/2"
ROC D9	T45, T51	76-115 mm	3" - 4 1/2"
Hydraulic rod handling system for max hole depth, with 3,6 m (12' ) extension rods			
ROC D5	R32, T38, T45	28 m	92'
ROC D7	T38, T45, T51	28 m	92'
ROC D9	T45, T51	28 m	92'
Hydraulic rod adding system for max hole depth, with 6,1 m + 4,2 m (20' + 14' ) extension rods			
ROC D7LF	T38, T45, T51	10 m	33'



# Specifications

## Engine

Caterpillar turbo charged, diesel engine, CAT C7, Tier III/stage 3  
 • Power rating at 2200 rpm ..... 168 kW 225 HP  
 • Fuel consumption, approx ..... 26 l/h 6,9 US gal/h

## Feed

Hydraulic cylinder feed with hose guide and double drill steel support with movable lower guide/dust hood

- Feed extension ..... 1 400 mm 4'7"
- Feed rate, max ..... 0.92 m/s 184 ft/min
- Feed force, max ..... 20 kN 4 400 lbf
- Tractive pull, max ..... 20 kN 4 400 lbf

ROC D5, D7 and D9

- Total length ..... 7 140 mm 23'5"
- Travel length ..... 4 240 mm 14'

ROC D7LF

- Total length ..... 8 240 mm 27'7"
- Travel length ..... 5 670 mm 18'7"

## Dust collector DCT 110D

- Filter area ..... 11 m<sup>2</sup> 118 sq.ft
- Number of filter elements ..... 11 pcs
- Suction capacity at 500 mm wg ..... 560 l/s 1 200 cfm
- Suction hose diam ..... 127 mm 5"
- Cleaning air pressure, max ..... 7.5 bar 109 psi
- Cleaning air consumption ..... 2-4 l/pulse 0.06 - 0.12 cu.ft/pulse

## Safety cabin

- ROPS and FOPS approved with rubber vibration dampers
- 2 x wipers with washer (front shield and roof)
- Safety glass
- Fully adjustable operator's seat
- Cabin light with dimmer
- Rig inclination indicator
- Rear view mirror
- Fire extinguisher 6 kg (13 lbs) dry chemical ABE class III type
- Outlet socket 12 VDC
- Prepared for radio/speakers

## Air conditioner

- Refrigerant ..... R134a
- Cooling capacity ..... 5,5 kW
- Fan suction capacity ..... 125 l/s 265 cfm

## Compressor

Atlas Copco OIS K-27-C106 GD, screw compressor  
 ROC D5

- Working pressure, max ..... 8.5 bar 123 psi
- FAD, at normal working pressure ..... 85 l/s 180 cfm

ROC D7 and D7LF

- Working pressure, max ..... 10.5 bar 152 psi
- FAD, at normal working pressure ..... 105 l/s 223 cfm
- Alternatively ..... 127 l/s 270 cfm

ROC D9

- Working pressure, max ..... 10.5 bar 152 psi
- FAD, at normal working pressure ..... 136 l/s 288 cfm
- Alternatively ..... 127 l/s 270 cfm

## Hydraulic system

- Anti-jamming
- Automatic feed force control RPC-F
- Damper pressure control - impact DPC-I
- Hydraulic oil cooler
- Max ambient temperature ..... 50°C 122°F

Pumps

- Axial piston pump (1) ..... 150 l/min 39.6 US gal/min
- Gear pump (2) ..... 80 l/min 21.1 US gal/min
- Gear pump (3) ..... 40 l/min 10.6 US gal/min
- ROC D5 gear pump (4) ..... 35 l/min 9.2 US gal/min
- ROC D7, D9 and D7LF gear pump (4) ..... 40 l/min 10.6 US gal/min

Return and drainage filters

- Filtration rate ..... 16 µm absolute

## Electrical system

- Voltage ..... 24 V
- Batteries ..... 2 x 12 V, 185 Ah
- Alternator ..... 28 V, 95 Ah
- Work lights, front ..... 4 x 70 W
- Work lights, rear ..... 2 x 70 W
- Work lights, feed ..... 2 x 70 W
- Warning lamp and reverse buzzer

## Volumes

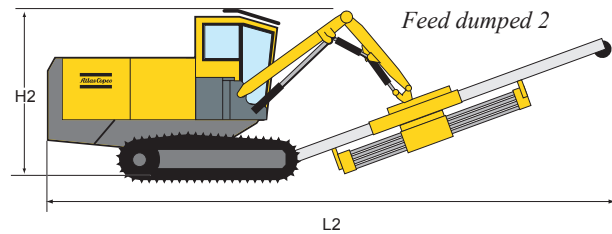
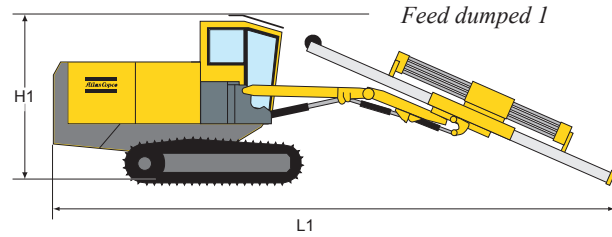
- Hydraulic oil tank ..... 250 l 65 US gal
- Hydraulic system, total ..... 300 l 79 US gal
- Compressor oil ..... 24 l 6.3 US gal
- Diesel engine oil ..... 28 l 7.4 US gal
- Diesel engine, cooling water ..... 31 l 8.2 US gal
- Diesel engine, fuel tank ..... 370 l 98 US gal
- Traction gear ..... 3 l 0.8 US gal
- Lubrication tank (ECL) ..... 10 l 2.6 US gal

## Hydraulic rock drill

Rock drill	Drill rig	Impact power		Hydraulic pressure, max		Impact rate	Torque, max		Weight approx	
		kW	HP	bar	psi		Nm	lbf/ft	kg	lb
COP 1238 ME	ROC D5	12 kW	16.3 HP	230 bar	3 336 psi	40-60 Hz	630 Nm	465 lbf/ft	150 kg	330 lb
COP 1838 LE	ROC D5	16 kW	21.8 HP	200 bar	2 900 psi	60 Hz	630 Nm	465 lbf/ft	170 kg	375 lb
COP 1838 ME	ROC D7 and D7LF	18 kW	24.5 hp	230 bar	3 335 psi	60 Hz	630 Nm	465 lbf/ft	170 kg	375 lb
COP 1838 MEX									225 kg	496 lb
COP 1838/40 HE	ROC D7 and D7LF	18 kW	24.5 hp	230 bar	3 335 psi	42-50 Hz	950 Nm	701 lbf/ft	175 kg	385 lb
COP 1838/40 HEX									230 kg	507 lb
COP 2160	ROC D9	21kW	28 hp	220 bar	3 190 psi	36 Hz	1 810 Nm	1 335 lbf/ft	187 kg	412 lb
COP 2160 EX									249 kg	549 lb

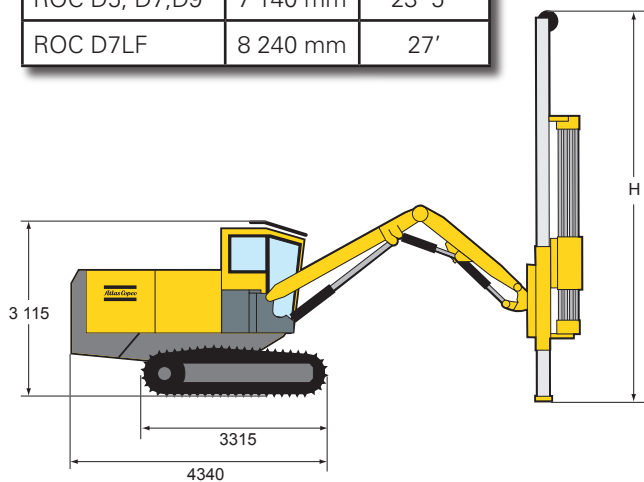
## Transport dimensions

Hight and lenght			
Feed dumped 1			
ROC D5, D7, D9	Height (H1)	3 130 mm	10' 3"
ROC D5, D7, D9	Length (L1)	11 000 mm	36'
ROC D7LF	Height (H1)	3 200 mm	10' 6"
ROC D7 LF	Length (L1)	11 970 mm	38' 8"
Feed dumped 2			
ROC D5, D7	Height (H2)	3 160 mm	10' 5"
ROC D5, D7	Length (L2)	11 280 mm	37'

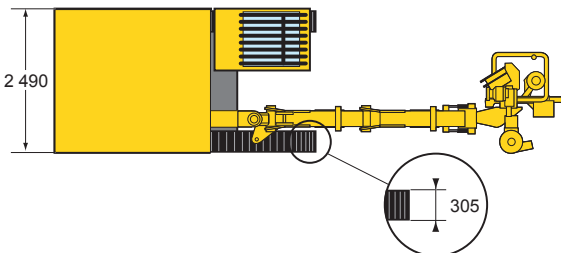


## Dimensions and weight

Feed Height (H)		
ROC D5, D7,D9	7 140 mm	23' 5"
ROC D7LF	8 240 mm	27'



Weight		
Standard unit excluding all options and drill steel		
ROC D5,D7,D9	14 200 kg	31 300 lb
ROC D7LF	13 900 kg	30 650 lb



## Selection of optional equipment

### General

- Diesel engine preheater
- Hydraulic winch remote controlled, including wire with towing eye and wire guides
- Mechanical hole inclination instrument ROC-Angie
- Selection of electronic hole inclination/ hole depths instrument
- Laser receiver upgrading kit
- Thread greasing device ECG (with oil)
- Thread greasing device, brush type (with grease)
- Toe hole drilling kit (not for LF version)
- Hydraulic support leg
- Track chains with tripple grouser pads

- Electric refuelling pump
- Service lamps inside canopy
- Air flow switch
- High/low air flushing system
- PROCOM satellite based drill rig monitoring system (only in combination with a written and confirmed Service Agreement)

### Sleeve retainer for RHS 51

- Jaw set R32/T38
- Jaw set T45/T51

### Oil

- Tropic hydraulic oil 300 l (ISO VG 68)
- Arctic hydraulic oil 300 l (ISO VG 32)
- Environmentally conformed hydraulic oil, 300 l (ISO VG 46)

### Guide tubes

- TAC guide tube guides for drill steel support
  - TAC 45 mm
  - TAC 56 mm
  - TAC 64 mm
  - TAC 76 mm

### Lubrication and water mist system

- Rock drill lubrication oil collecting system
- Central lubrication system
- Water mist system 120 l tank
- Water mist system exkl tank

### Dust control

- Dust pre-separator
- Rubber disc for DCT
- Rubber skirt for DCT

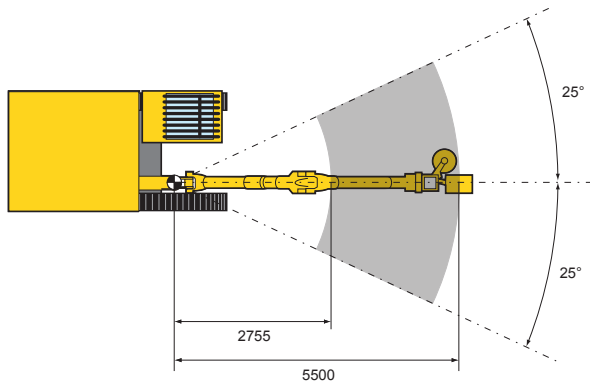
### Safety Cabin

- Heating system for cabin
- Wiper on right hand side cabin window
- Radio and CD-player
- Cab windows laminated
- Cab windows tinted
- Window sun shades
- Electric heated operator's seat

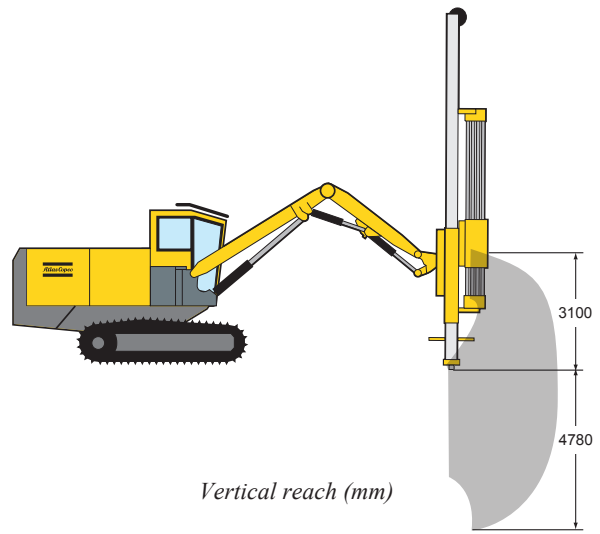
### Delivered equipment not mounted

- Conversion kit R32
- Conversion kit R38/T38
- Conversion kit T45
- Conversion kit T51 (only ROC D7, D9)
- Gas charging equipment for rock drill

## Coverage areas

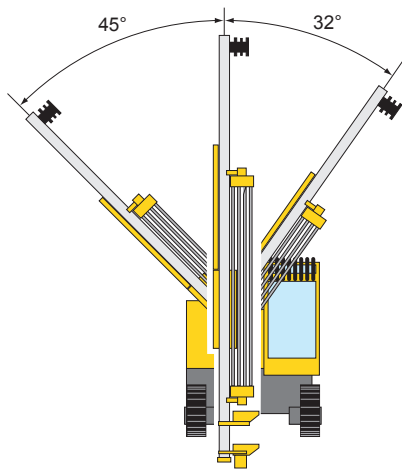


Horizontal reach (mm)

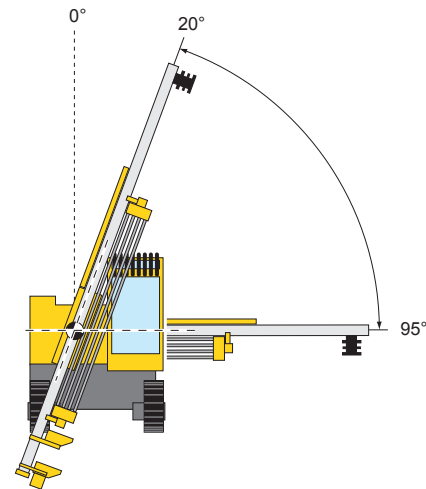


Vertical reach (mm)

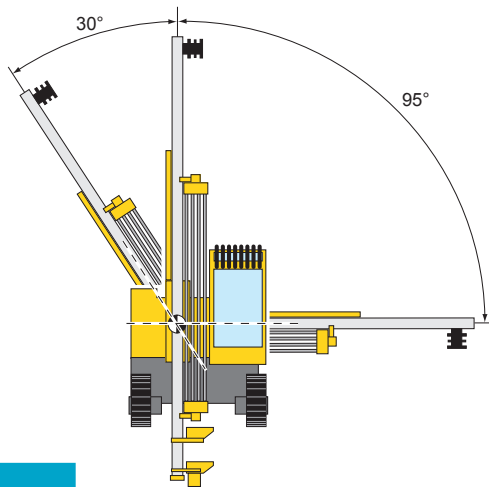
## Feed swing angles



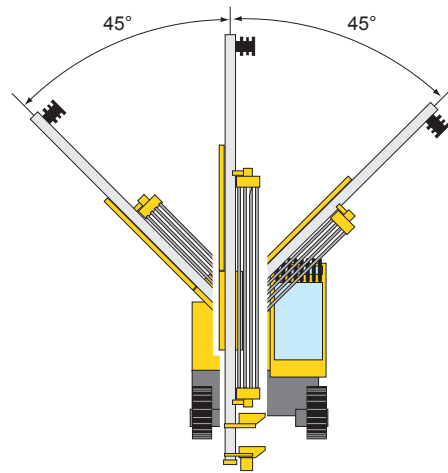
Feed without toe-hole kit



Feed without toe-hole kit but after reconnection for horizontal feed



Feed with toe-hole kit



ROC D7LF