

SmartROC T45

Tophammer surface drill rig for quarrying and construction

Single boom hole diameter: 89–152 mm (3.5"–6")
Folding boom hole diameter: 89–127 mm (3.5"–5")

 **Epiroc**





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6th Sense

Smart. Safe. Seamless.

SmartROC T45 is a
6th Sense product.

6th Sense is the Epiroc way
of optimizing your value
chain through automation,
system integration and
information management.

Smart, reliable and efficient

With the SmartROC T45 you're in control. The rig features an intelligent control system which presents information to the operator via an easy-to-use touchscreen interface. This system constantly monitors compressor load and engine RPM to ensure no fuel is wasted and that environmental impact is kept to a minimum. A SmartROC does more of the work itself and reduces the demands placed on the operator. The SmartROC T45 boosts productivity, reduces fuel costs and provides you with valuable data to help keep you on top of your business. Furthermore, clever Smart options and features such as Hole Navigation System (HNS), Measure While Drilling (MWD), AutoPos and ROC Manager help to keep you ahead of the pack.

⊕ Main benefits

Increased efficiency due to high capacity and further improved fuel consumption

Safety and high availability thanks to a reliable, well-proven, intuitive design which is easy to maintain

Boosted productivity thanks to precise drilling and consistency which delivers improved blast-results and further cost-savings all the way through your operation

Technology that keeps you in control

Safety depends on being in control. The SmartROC T45 dramatically reduces the risk of manual errors and human mistakes. With options such as Hole Navigation System (HNS) you have the right information directly at your fingertips. This greatly improves both efficiency and safety on the worksite. Additionally, if an issue occurs, the smart control system guides you to the affected area and helps get you back to work quickly.



+ Plan your work, then work your plan

The SmartROC T45 includes smart features which help to ensure that you always drill as planned. Automatic feed alignment ensures that the desired angle is maintained when drilling — this is crucial for achieving optimum blasting results. Furthermore, the automatic rod adding system makes it easy for the operator by adding rods as necessary as the rig drills down to the desired depth on its own. This ensures consistent results that you can rely on — shift-after-shift.

+ Reduce your fuel costs and increase productivity

There are two things you never need to compromise on with the SmartROC T45 – fuel efficiency and productivity. The key to its low fuel consumption is the advanced rig control system. The engine RPM and compressor load are adjusted automatically depending on current conditions. For example, during tramping or when the rig is idle, the compressor puts no demand on the engine so the rig automatically reduces RPM. Additionally, the airflow and dust collector speed can be adjusted easily directly from the cabin as required.

+ Efficient and environmentally aware

The SmartROC T45 maximizes your productivity and saves you money, whilst keeping your environmental impact as low as possible. This is one of the most energy efficient rigs in its class. Its hydraulic system uses significantly less oil when compared to other similar rigs. It has a hydraulic tank that is one-third of the standard size for its class. This means you can use environmentally-friendly oil for approximately the same cost as regular oil.

A comprehensive service offering

Even the best equipment needs to be serviced regularly to make sure it sustains peak performance. An Epiroc service solution offers peace of mind, maximizing availability and performance throughout the lifetime of your equipment. We focus on safety, productivity and reliability.

By combining genuine parts and an Epiroc service from our certified technicians, we safeguard your productivity – wherever you are.



Technical specifications



Discover more about the SmartROC T45.

Main components and selection of options

		●=Standard ○=Option	
Automation & software	AutoPos	●	
	Measure While Drilling (MWD)	○	
	Rig Control System (RCS)	●	
	Rig Remote Access (RRA)	○	
Cabin	ROC Manager	○	
	10 or 24 mm laminated clear front glass	●	
	15" touch display	●	
	Adjustable foot rest	●	
Carrier	Air conditioning	●	
	Air flow switch	●	
	Audio system	○	
	Automatic cooler fan control	●	
Feed/boom	Cabin light	●	
	Clear or tinted surrounding glass	●	
	Combined front mounted platform/tool box	●	
	Fire extinguisher, 6 kg (13 lbs)	●	
Hole and inclination systems	FOPS and ROPS approved	●	
	Fully adjustable operator's seat	●	
	Outlet socket, 24 V	●	
	Prepared with speakers for audio system	●	
Hole Navigation System (HNS)	Rear view mirrors	●	
	Reverse camera	○	
	Rig inclination indicator, analog	●	
	Rubber vibration dampers	●	
Hole system	Window wiper, right hand window	○	
	Wipers, front and roof windows	●	
	Atlas Copco screw type compressor	●	
	Caterpillar turbo charged diesel engine	●	
Hole system	Two speed undercarriage with track oscillation	●	
	Dust collection system	●	
	Hydraulic support leg	○	
	Hydraulic winch	○	
Hole system	Radio Remote Control (RRC)	○	
	Warning BEACON light with alarm	○	
	Extra LED lighting kit	○	
	Integral jetwash (watermist system required)	○	
Hole system	Sleeve retainer	○	
	Single or folding boom system	●	
	TDS guide tube guides, 64/76/87 mm	○	
	Thread lubrication system	○	
Hole system	Toe-hole drilling system	●	
	GPS compass aiming unit	○	
	Laser plane receiver for hole depth	○	
	Leica (fully installed option or pre-prepared)	○	
Hole system	Trimble (fully installed option or pre-prepared)	○	
	Water mist system	○	
	Water mist system incl. 400 L tank	○	
	Insulation for water tank	○	
Hole system	Extra 400 L tank	○	
	Conversion kit for threads T45/T51/T60	○	
	COP Care	○	
	Electrical tool kit	○	
Hole system	First 50 hrs service kit for compressor	○	
	Gas charging equipment (for rock drill)	○	
	Lubrication kit	○	
	RCS service tool-box	○	
Hole system	ROC Care	○	

Hole range (recommended)

	Threads	Metric	US
Single boom	T51, T60	Ø 89-152 mm	Ø 3.5-6"
Folding boom	T45, T51	Ø 89-127 mm	Ø 3.5-5"
Rods and length			
Single boom with hydraulic rod handling system for max hole length, with 4.2 m (14') extension rods and a 5.5 m (18 ft) starter rod	T51, T60	35 m	115 ft
Single boom with hydraulic rod handling system for max hole length, with 6.1 m (20') extension rods and a 7.3 m (24 ft) starter rod	T51, T60	36 m	118 ft
Folding boom hydraulic rod handling system for max hole length, with 3.6 m (12') extension rods and a 4.2 m (14 ft) starter rod	T45, T51	29 m	95 ft

Hydraulic rock drill

Rock drill	Boom	Impact power		Hydraulic pressure, max		Impact rate, max	Torque, max		Weight approx	
COP SC25-HE	Folding boom	25 kW	33.5 hp	200 bar	2 900 psi	44 Hz/55 Hz	1 550 Nm	1 143 lbf/ft	195 kg	430 lb
COP SC25X-HE							1 970 Nm	1 453 lbf/ft	249 kg	549 lb
COP 3060	Single boom	30 kW	41 hp	240 bar	3 481 psi	50 Hz	2 450 Nm	1 807 lbf/ft	315 kg	694 lb
COP 3060EX									355 kg	783 lb

Engine

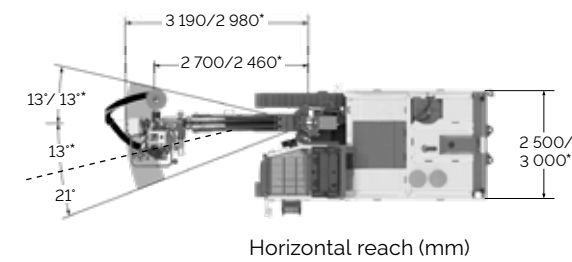
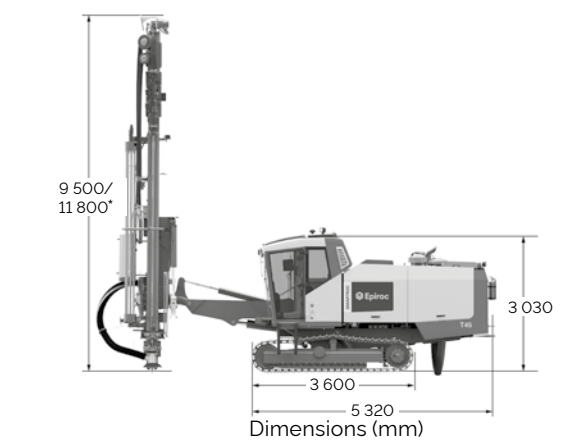
Caterpillar turbo charged diesel engine		
CAT C9.3B Tier 4 Final/Stage 5 (EU/US cert.)	250 kW/340 hp at 1 900 rpm	
CAT C9.3B Tier 3/EU stage IIIA	250 kW/340 hp at 1 900 rpm	

Compressor

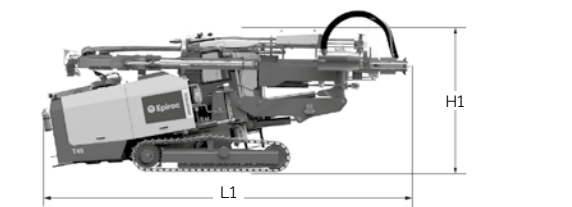
Atlas Copco C146-07, screw type compressor	Metric	US
Working pressure, max	12 bar	174 psi
FAD, at normal working pressure	223 l/s	473 cfm

Technical specifications

Single boom



The long feed option also includes the Wide Body Kit option to add extra stability due to the increased length of the feed.

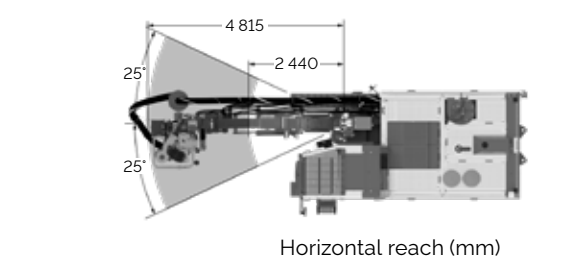
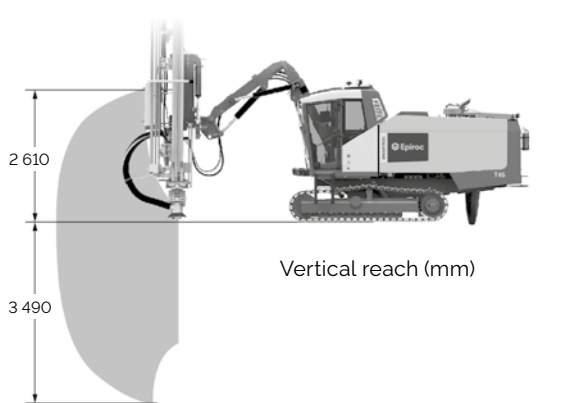
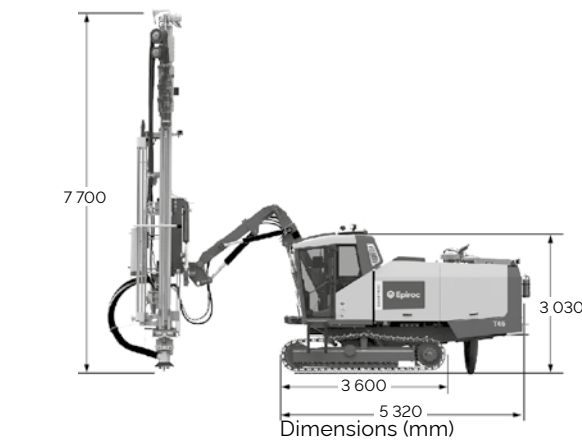


Transport dimensions

Single boom	Metric	US
Height (H1)	3 300 mm/3 600" mm	130.0"/142.0"
Length (L1)	10 700 mm/11 800" mm	421.5"/464.5"

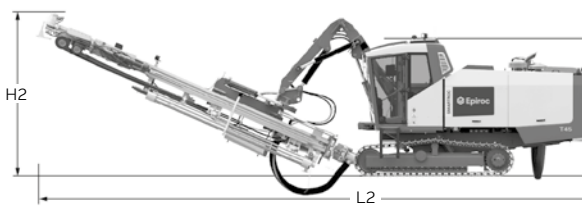
* Long feed

Folding boom

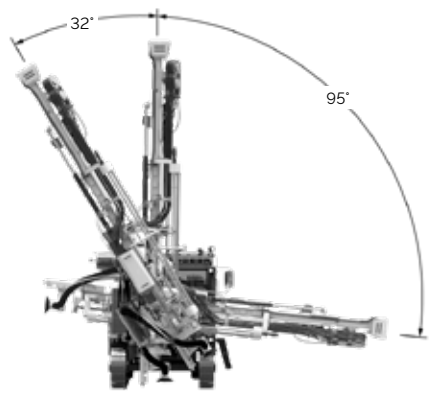


Transport dimensions

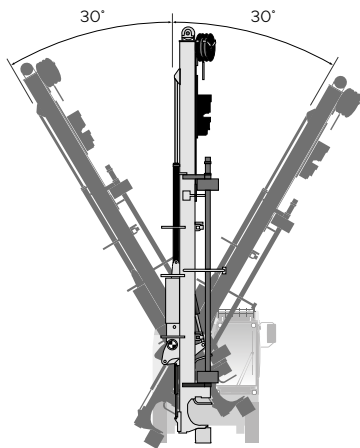
Folding boom	Metric	US
Height (H2)	3 300 mm	130.0"
Length (L2)	13 300 mm	524.0"



Technical specifications



Single and folding boom



Single boom with long feed

Feed with single boom

Hydraulic chain driven aluminum feed with hose guide and double drill rod support with movable lower guide/dust hood	Metric	US
Feed extension	1 900 mm/1150 mm*	74.8'/45.3"
Feed rate, max	0.9 m/s	177 ft/min
Feed force, max	40 kN	8 992 lbf
Tractive pull, max	50 kN	11 240 lbf
Total length	9 500 mm/11 800 mm*	374'/464.5"
Travel length	5 520 mm/7 630 mm*	217.3'/300"

* Long feed.

Volumes

	Metric	US
Hydraulic oil tank	100 l	36.4 gal
Hydraulic system, total	240 l	63.4 gal
Compressor oil	52 l	13.7 gal
Diesel engine oil	32 l	8.4 gal
Diesel engine, cooling water	75 l	19.8 gal
Diesel engine fuel tank	400 l	105.7 gal
Traction gear	3 l	0.8 gal
Lubrication tank (ECL)	23 l	6.1 gal

Hydraulic system

Pumps at 1900 rpm	Metric	US
Axial piston pump (1)	160 l/min	42.3 gal/min
Axial piston pump (2)	120 l/min	31.7 gal/min
Axial piston pump (3)	40 l/min	10.6 gal/min
Gear pump (4)	40 l/min	10.6 gal/min
Gear pump (5)	40 l/min	10.6 gal/min
Hydraulic oil cooler Max ambient temperature	50°C	122°F
Return & drainage filters (filtration rate)	10 µm absolute	

Dust collector DCT 200

	Metric	US
Filter area	20 m²	215 sq.ft
Number of filter elements	20 pcs	20 pcs
Suction capacity at 500 mm wg	540 l/s	1144 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

Feed with folding boom

Hydraulic chain driven rod feed with hose guide and double drill rod support with moveable lower guide/dust hood	Metric	US
Feed extension	1 150 mm	45.3"
Feed rate, max	0.9 m/s	177 ft/min
Feed force, max	20 kN	4 496 lbf
Tractive pull, max	30 kN	6 744 lbf
Total length	7 700 mm	303"
Travel length	4 610 mm	181.5"

Weight

Standard unit excluding all options and drill rod	Metric	US
Single boom	20 100 kg	44 300 lb
Single boom Long Feed	20 600 kg	45 400 lb
Folding boom	17 700 kg	39 000 lb

Carrier

	Metric	US
Tramming speed	3.4 km/h	2.1 mph
Track oscillation	±10°	±10°
Ground clearance	405 mm	15.9"

Electrical system

Voltage	24 V
Batteries	2 x 12 V, 185 Ah
Alternator	28 V, 105 Ah
Work lights LED type, front	4 x 3 500 Lumen
Work lights LED type, rear	2 x 3 500 Lumen
Work lights LED type, feed	2 x 5 300 Lumen
Warning lamp and reverse buzzer	

Sound and vibration*

Cabin: A-weighted Sound Pressure Level, LpA			76 dB
Cabin: Weighted whole body vibration level, a _w			< 0.5 m/s ²
A-weighted Sound Power Level, LwA			126 dB
A-weighted sound pressure level, LpA, calculated (distance from rig)			
10 m	98 dB	160 m	74 dB
20 m	92 dB	320 m	68 dB
40 m	86 dB	640 m	62 dB
80 m	80 dB	1280 m	56 dB

* The declared noise emission values should be combined with a measurement uncertainty of KpA-6 dB. The sum of declared measured value and the uncertainty value represent an upper limit of the range, in which measured values are likely to be included. The values were determined in accordance with the standards ISO 3744:2010 (for sound power level estimation), ISO 11203:1995 (for sound pressure calculation at different distances from the rig), ISO 11201:2010 (for operator cabin sound pressure level) and ISO 2631-1 (for whole body vibration).



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