

SmartROC D65

DTH surface drill rig for quarrying and mining

Hole diameter: 110–203 mm (4.3 – 8")



A mining mastermind

The SmartROC D65 down-the-hole drill rig brings the future of mining within your reach today. Isn't it time you gave your operation the chance to profit from the added intelligence of the SmartROC D65?

Incorporating cutting-edge automation technology, the SmartROC D65 has both the intelligence and power to drill production blast, pre-split and buffer holes. Reverse circulation options are also available for in-pit grade control. Maximize drilling time with the Hole Navigation System (HNS). This intelligent option enables a faster setup, so you

can perform high-precision drilling in any weather conditions. Minimize your production costs by optimizing drilling and blasting, improving fragmentation and reducing the quantity of explosives needed. HNS removes the need to both manually mark and survey hole positions. This greatly improves both efficiency and safety on the bench.



⊕ Main benefits

Reduced fuel consumption thanks to the intelligent control of compressor-load and engine rpm

Consistent productivity through automated drilling and rod handling

Rugged and efficient design which offers high availability and flexibility

Revolutionize your mining operation

SmartROC D65 shares its intelligent platform with Epiroc Pit Viper machines. When combined with the Surface Manager tool, this common communication platform enables total fleet management and operation control. Machines feed information directly into the worksite's wireless network. The platform is based on the IREDES standard.



+ A rig which drills on its own

The SmartROC D65 is highly automated and drills the holes on its own. It adds and then extracts rods automatically when the desired depth is reached. The SmartROC D65 is highly consistent and is less dependent on the operator. Consumables wear out at a slower rate thanks to the auto rod handling system and overall stress on the entire machine is reduced. The extra precision in drilling gives optimal blast results and increases safety. The SmartROC D65 significantly raises quality in the whole operation.



+ Self-diagnostic capabilities

The SmartROC D65 features an ingenious self-diagnostic system to help track down problems quickly and effectively to keep downtime to a minimum. However, the rig has been designed to be tough and dependable. The electrical system features a reduced number of cables for example – this reduces problems and makes troubleshooting much easier.



+ Operate multiple rigs remotely

With the BenchREMOTE option, one person can safely control up to three rigs simultaneously from up to 100 meters away which dramatically increases operator productivity. In combination with the Hole Navigation System (HNS), the BenchREMOTE removes the need for operators and surveyors to work in hazardous areas.



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

Main components

- Full drill cycle automation
- Hole Navigation System (option)
- Documentation by IREDES
- Epiroc Rig Control System (RCS)
- Troubleshooting support via cabin display
- Vaportec compressor control
- ROPS and FOPS approved cabin
- Aluminium profile feed beam
- Pressure regulated break-out table
- Turbo-charged diesel engine
- Atlas Copco high-pressure screw compressor

Hole range & length (recommended)

		Metric	US
SmartROC D65	Hammer - COP 44 Gold, COP 54 Gold, COP 64 Gold, COP 66	110-203 mm	4.33 - 8'
Max hole length with hydraulic rod handling system and 5 m (16.4') rods			
SmartROC D65	Ø 89-114 mm (3.5" - 4.5") drill rods	45 m	148'
SmartROC D65	Ø 127-140 mm (5" - 5.5") drill rods	25 m	82'
Max hole length with hydraulic rod handling system, 6 m (20') rods and a 7.5 m (24.6') starter rod			
SmartROC D65	Ø 89-114 mm (3.5" - 4.5") drill rods	55.5 m	182'
SmartROC D65	Ø 127-140 mm (5" - 5.5") drill rods	31.5 m	103'
Single pass drilling, max hole depth			
SmartROC D65 standard feed		5.4 m	18'
SmartROC D65 long feed		7.5 m	24.6'

Engine

CAT C15, Caterpillar turbo charged, diesel engine, Tier 4 final /stage IV, and Tier 3/stage IIIA	Metric	US
Power rating @ 1800 rpm	403 kW	540 hp

Carrier

	Metric	US
Tramming speed, max	3.2 km/h	2.0 mph
Traction force, max	138 kN	31 020 lbf
Ground clearance	405 mm	16"
Track oscillation		±10°

Rotary head

	Connection thread	Max rpm	Max torque, drilling		Suitable for DTH-hammer
			Metric	US	
DHR6 H 45	API 2 3/8" REG, box	137	1839 Nm	1356 lbf	COP 44 Gold (COP 54 Gold)
DHR6 H 56	API 3 1/2" REG, box	107	2353 Nm	1735 lbf	COP 54 Gold, COP 64 Gold, COP 66
DHR6 H 68	API 3 1/2" REG, box	68	5800 Nm	2712 lbf	COP 64 Gold, COP 66
DHR6 H 78	API 3 1/2" REG, box	54	6600 Nm	3417 lbf	COP 64 Gold, COP 66

Compressor

Atlas Copco XRX 10, two stage screw type compressor	Metric	US
Working pressure, max	30 bar	435 psi
FAD at 30 bar	470 L/s	995 cfm

Hydraulic system

Hydraulic oil cooler	Metric	US
Max ambient temperature	50°C	122°F
Pumps		
Axial piston pump (1)	240 L/min	63 gal/min
Gear pump (2)	111 L/min	29 gal/min
Gear pump (3)	63 L/min	16.6 gal/min
Gear pump (4)	39 L/min	10.3 gal/min
Gear pump (5)	31 L/min	8.2 gal/min
Gear pump (6)	31 L/min	8.2 gal/min
Return and drainage filters (2 x 3 filters)		
Filtration rate	20 µm absolute	

Electrical system

Voltage	24 V
Batteries	2 x 12 V, 235 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	

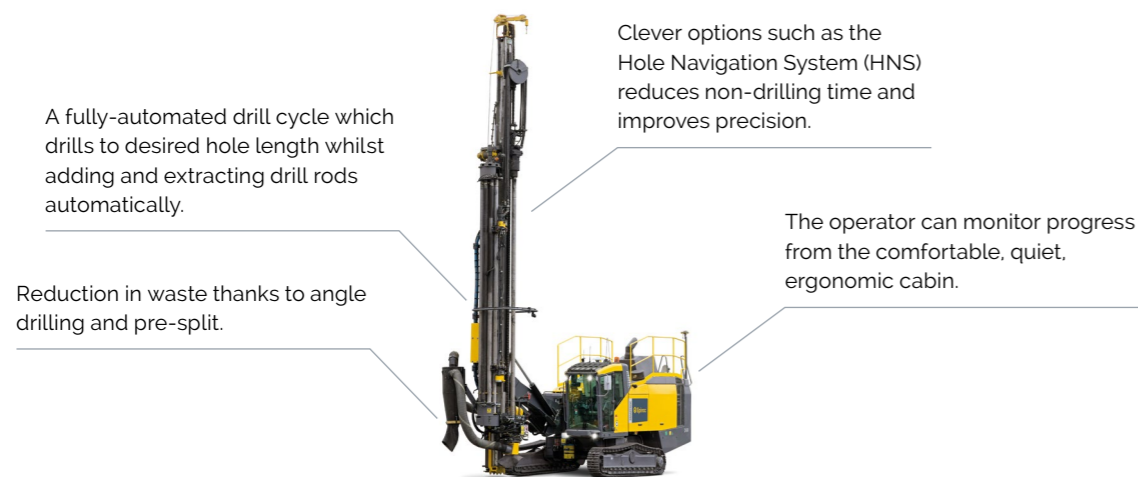
Aluminum feed

Aluminum profile feed with hose guide and double drill tube support with break-out table and movable lower guide/dust hood	Metric	US
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
Feed motor size	2099 cc	0.6 US gal
Chain size	45 mm	1.8"
Long Feed		
Feed extension	1150 mm	45.3'
Travel length	7 540 mm	296.8'
Total length	11 600 mm	456.7'
Standard Feed		
Feed extension	1 900 mm	74.8'
Travel length	5 400 mm	212.6'
Total length	9 400 mm	370'

Dust collector

DCT 320 including pre-separator	Metric	US
Filter area	32 m²	344 sq.ft
Suction capacity at 500 mm wg	1 270 L/s	2 690 cfm
Suction hose diam	203 mm	8"
Cleaning air pressure, max	8 bar	116 psi
Cleaning air consumption	2-4 L/pulse	0.06-0.12 cfm/pulse
Number of filter elements	32 pcs	

Technical specifications



Cabin

- ROPS and FOPS approved with rubber vibration dampers
- 2 x wipers with washer
- Clear laminated glass (front and roof windows)
- Clear toughened glass (side and rear windows)
- Fully adjustable operator's seat and foot rest
- Cabin light
- Air conditioning
- Rig inclination indicator
- Rear view mirror
- 6 kg dry chemical fire extinguisher, type ABE class III
- 24 V outlet socket
- Prepared for CD, radio or DVD
- Electric combined engine/inclination/hole depth instrument

Optional equipment

Carrier

- Wide body kit
- Hydraulic support leg
- Protection hand rails on top of canopy
- Halogen work light pointing to feed support, transport position
- LED Working lights
- Heavy duty air intake filters for engine and compressor
- Combined warning sound and beacon
- Reverse camera with display in cabin
- Manually or automatic ansul fire extinguisher system
- Tropical kit for 55° ambient temperature
- Electric pump for filling hydraulic oil
- Electric fuel filling pump
- Fast fuel-filling system
- Cold weather kit +5° C to -25° C, including diesel engine heater
- Cold weather kit -25° C and below, including diesel engine heater and prepared for ether start

Water mist system

- Water mist system, pump, one or two 400 l water tanks
- Artic-ready water mist system, pump, one or two 400 l water tanks

Cabin

- Clear laminated glass (front and roof windows)
- Tinted toughened glass (side and rear windows)
- Sunshade kit
- Cab heating
- Electric heated operator's seat
- Radio/CD or Radio/DVD
- Reverse camera with cab mounted monitor

Feed

- Service winch with jib boom mounted on the feed
- Wide feed foot
- Protective guard, according to EN16228
- Reverse circulation

Lubrication

- Central lubrication system, type Lincoln
- Thread lubrication, spray system
- Artic hydraulic oil, VG 32
- Tropical hydraulic oil, VG 68
- Biological hydraulic oil, VG 46

Hole and inclination systems

- Hole Navigation System
- GPS compass aiming unit
- Laser receiver

Automation and software

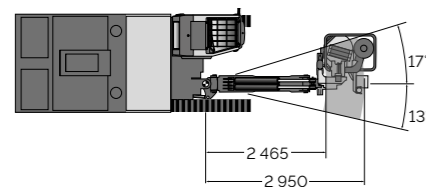
- BenchREMOTE remote operator station
- Rig Remote Access
- Surface Manager
- Rig Access control
- Configurable safety software

Parts and services products

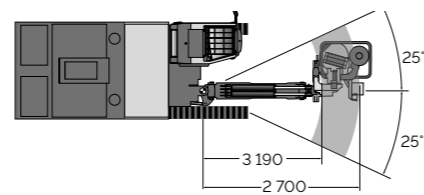
- ROC Care

Optional accessories

- First 50 hours service kit for compressor
- Tool kit for rotary head with fixed spindle sub
- Tool kit for rotary head with floating spindle sub
- Lubrication kit
- RCS tool box

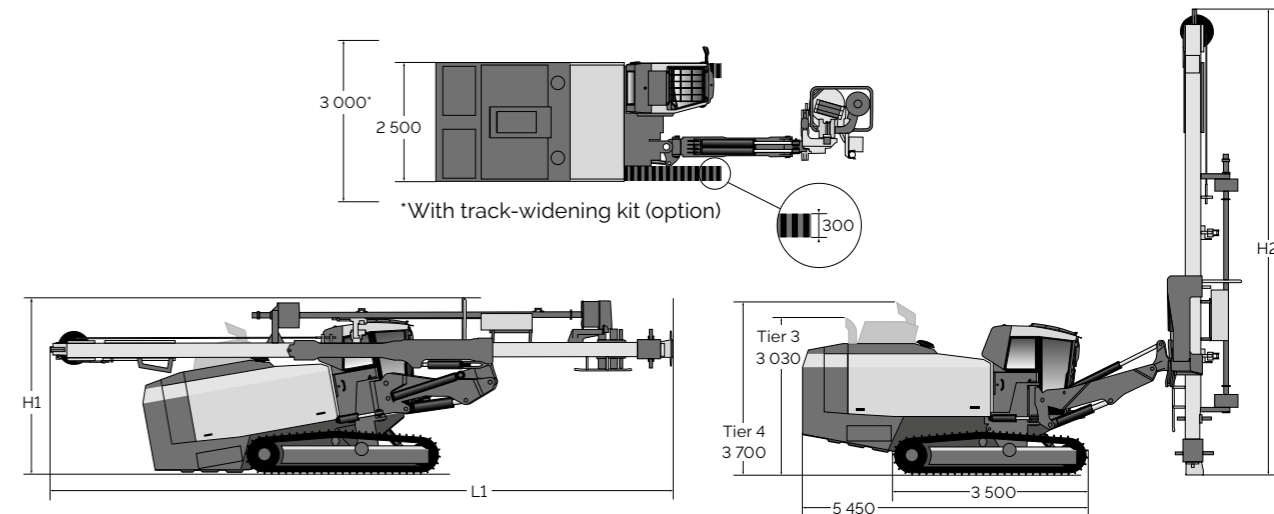


Horizontal reach (mm) with long feed



Horizontal reach (mm) with standard feed

Technical specifications

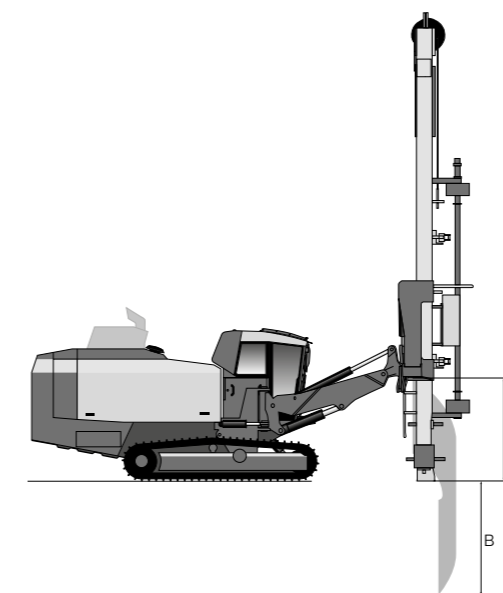
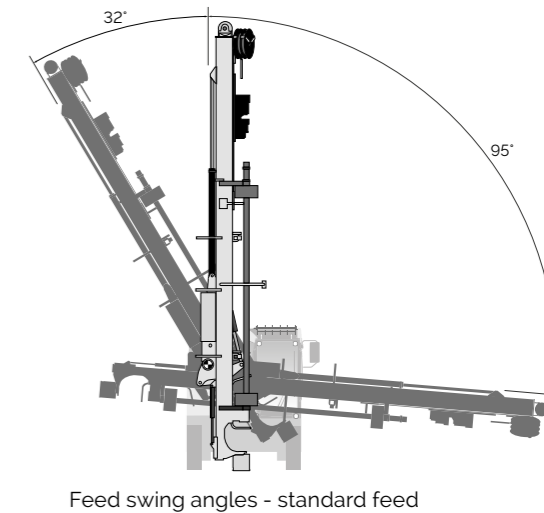
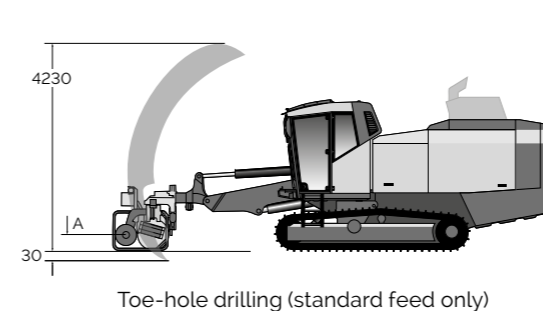


Height and length

Long feed (LF) dumped	Metric	US
Height (H1)	3 500 mm	138'
Length (L1)	11 600 mm	457'
Standard feed (SF) dumped		
Height (H1)	3 500 mm	138'
Length (L1)	11 350 mm	447'
Feed height (H2)		
Long feed (LF)	11 600 mm	457'
Standard feed (SF)	9 400 mm	370'

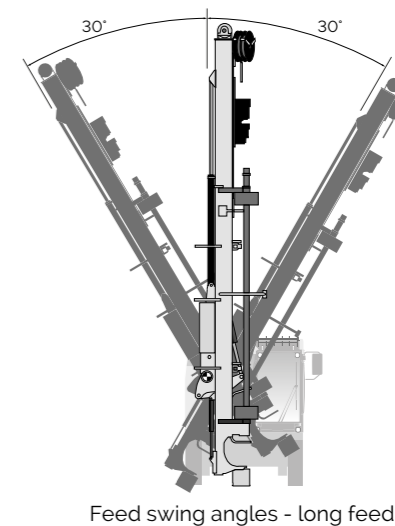
Weight

Standard unit excluding all options and drill rods	Metric	US
SmartROC D65 long feed	23 700 kg (T3)	52 250 lb
	24 100 kg (T4)	53 130 lb
SmartROC D65 standard feed	22 600 kg (T3)	49 820 lb
	23 000 kg (T4)	50 700 lb



Vertical reach

	A (Metric)	B (Metric)	A (US)	B (US)
Long feed	582 mm	2 277 mm	23'	90'
Standard feed	1 040 mm	2 659 mm	41'	105'





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