

Diamec Smart 8

Core drilling rig

Hole diameter: B, N and H



Power and intelligence

Epiroc's Diamec Smart 8 is designed to be tough and safe whilst requiring minimal maintenance. The rig delivers high productivity and low operational costs within underground deep hole coring. Our Diamec Smart range sets the standard for underground core drilling rigs.

+ Main benefits

Safe and ergonomic which reduces operator fatigue and minimises the number of hazardous operations

An advanced **Rig Control System** increases productivity and lowers operational costs

Advanced data management makes it possible to analyse data. This improves both drilling and operations whilst lowering the TCO of each Diamec rig

The safety guard provides a high level of protection from moving and rotating parts. Thanks to a hydraulic cylinder, the long section on the operation-side can be opened and closed from the control panel for safe, quick and ergonomic operation.

The rig is fitted with a well-proven, high torque rotation unit with few moving parts to maximize rig availability. The rotation unit and rodholder are synchronized to enhance safety.

Easy-to-use lightweight control panel with 12" touch screen and adjustable height.

Please note that this image does not feature the latest design of guard.



The gas spring rod holder opens hydraulically and closes with gas pressure for increased safety. If there is a loss of hydraulic pressure, the rod-holder closes instantly.



Increased safety and productivity thanks to the unique wire line winch design which enables drilling angles from -90° to +90° without repositioning.



An inductive water flow meter, without moving parts, and a highly accurate pressure sensor increases flushing reliability and availability of the machine.

Direct acting telescopic feed cylinder with equal pull/push force, providing optimal control and equal travel-speed and force in both directions.

The optional rod-handling system, hydraulic guard and rotation unit are synchronized with each other in auto-mode to enhance productivity and safety.



Discover more about the Diamec Smart 8



Robust electrically driven power unit with triple hydraulic pumps providing optimized power for the rotation unit and a dedicated pump just for the flush pump.

A two-hand activation controller ensures the safe operation of the rod-handler.

Everything you need to get the job done

Epiroc's Diamec Smart 8 is a true deep-hole exploration drill rig, meeting the high standards required for underground core drilling. With a drilling depth capacity of over 2 300 meters and 2400 Nm plus in torque, it is a rig you can count on.



+ Drill down deep

Diamec Smart 8 is the most powerful rig in the Diamec range. It features a compact design, but is still capable of covering a wide range of drilling angles. A sturdy feed and capable power unit combined with high torque help to make the Diamec Smart 8 a leader in the deep drilling sector.



+ Ergonomic and safe

Diamec Smart 8 can be equipped with a rod-handling system that relieves the operator and eliminates many of the hazardous operations in the drilling process, such as the handling of the inner tubes. All drilling operations are performed from a safe distance with an easy to use control panel. The two-hand controller is used for confirming rod-handler operations, further improving safety.



+ Productive and efficient

The rig is fitted with an advanced Rig Control System allowing it to perform a number of tasks automatically. All drilling parameters are set and monitored on the touch screen on the control panel. Automatic drilling of a complete run with a constant penetration rate can improve bit life dramatically compared to manual drilling. Automatic drilling also reduces the risk for core blockage and hole deviation.



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.



+ Data logging and Exploration Manager

All Diamec Smart rigs offer added value via a standard data logging feature, Measure While Drilling (MWD) which records drilling parameters. The optional added operational data logging feature enables the logging of activities directly on the rig screen plus automatic logging of key functions during drilling. Rigs also create a log file for major events and warnings. The optional Exploration Manager software presents all this data in a comprehensive way. It provides a full overview of the drilling process. Users have the ability to analyze data, find improvements and generate various reports. Exploration Manager improves productivity, lowers operational costs and provides fast and professional fleet management.

Technical specifications

Core drilling hole length capacity

These figures serve as guidelines only. They are calculated with available pull/feed force, weight of drill string in water filled hole, average WOB and reserve for breaking solid core in rock with 10MPa Tensile Strength. Epiroc cannot guarantee these capacities will be reached in all working conditions due to varying factors such as ITH used, conditions of the ground and differences in operation.

	Vertical down		Vertical up	
	Metric	US	Metric	US
AO/AT	-	-	-	-
BO/BT	2 390 m	7 842 ft	1 505 m	4 938 ft
NO/NT	1 745 m	5 725 ft	1 000 m	3 281 ft
HO/HT	1 025 m	3 363 ft	585 m	1 919 ft

Wireline winch capacity is 2 100 m with 5 mm wire

Rotation unit alternatives

Model	160CC B-H	
Rod sizes:	B-H	
Max rotation speed	1 400 rpm	
Power	Hydraulic motor	
	Metric	US
Max torque	2 425 Nm	1 789 ft lbf
Spindle (inner diameter)	101 mm	4"
Chuck axial holding force	150 kN	33 729 lb
Weight:	282 kg	622 lb

Feed frame alternatives

Model	1800	
	Metric	US
Feed length	1 800 mm (71 in)	71'
Feed force / Pull force	133 kN	29 900 lbf
Max feed speed:	0.8 m/s	2.6 fps

Wireline hoist

	Metric	US
Capacity (5 mm wire)	2 100 m	6 890 ft
Pull min. (full drum)	3.3 kN	742 lbf
Pull max. (empty drum)	11.8 kN	2 653 lbf
Line speed min (empty drum)	98 m/min	321 ft/min
Line speed max (full drum)	346 m/min	1 135 ft/min
Weight (without wire)	213 kg	470 lb
Level wind angle	Adjustable	

Control system and interface

Control system type	Epiroc Rig Control System (RCS)
Display	12" touch screen
Controls	Joysticks, control knobs and foot pedal
Data logging	Internal memory
Data export	USB port
Control unit weight	24 kg (53 lb)

Technical specifications

Rod holder

Hydraulically open / gas pressure close. The rod holder closes instantly on hydraulic pressure loss.		
	Metric	US
Max rod size:	1175 mm	4.6'
Bore (without jaws):	124 mm	4.9"
Axial holding force with TC insert jaws	133 kN	29 900 lbf

Optional flush pump

The flush pumps are designed for both mud and water flushing. The distribution block is prepared for mounting of accumulator, adjustable steady flow valve and other optional equipment.		
Model	Trido 140H	
	Metric	US
Flow	140 L/m	37 gpm
Pressure	70 bar	1 000 psi
Weight	230 kg	507 lb

Optional rod-handling system

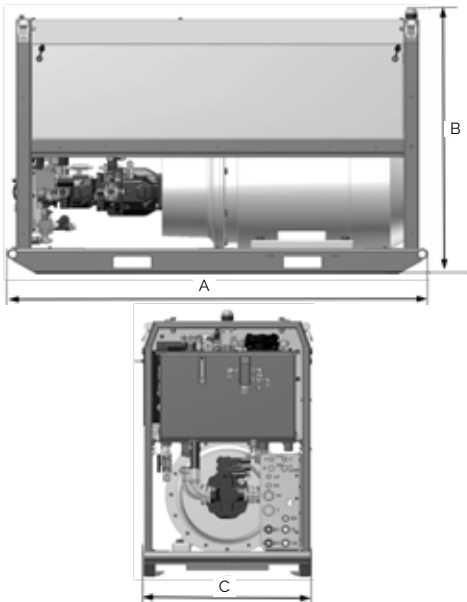
Rig integration	Rod-handling system (RHS) fully integrated with the rig control system for improved safety and productivity
Size coverage	B, N and H wireline
Length coverage	1.5 m (4.9') and 3 m (9.8') rods and core barrel
Gripper	N size gripper is standard. Other sizes sold as a separate kit

Additional optional equipment and accessories

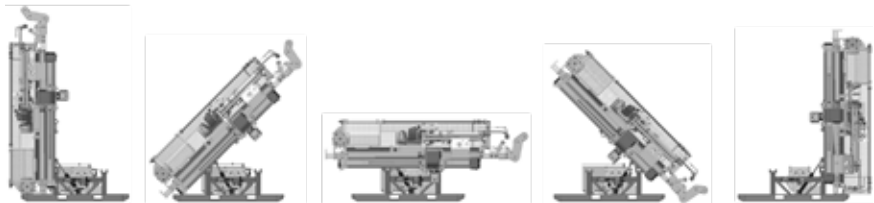
Dimension kits	Jaws and bushing kits in different sizes - steel and TC inserts (for better gripping force)
Keyhole wall bracket	Enables anchor hole drilling in the wall or ceiling. Available for B-H
RCS service box	Includes testing equipment for troubleshooting of RCS control system
Extra air oil cooler	Mounted on top of power unit with folding feature for increased cooling capacity
Operational logging/Exploration Manager	Comprehensive operational data logging and analyzing tool.
RHS-prepared	The rig is pre-prepared for the RHS system
Guard interlock	Various interlock options are available featuring different levels of safety stops for when the guard is in an open position.

Power unit

Electrical power unit with two variable flow hydraulic pumps, mounted in tandem.		
Electric motor	Metric	US
Power	110 kW	149 hp
RPM (50/60 Hz)	1 487 rpm / 1 789 rpm	
Oil tank	130 l	34.4 gal
Cooler	Water and air oil cooler	
Main pump		
Max flow	200 L/m	52.8 gpm
Max pressure	315 bar	4 569 psi
Service pump		
Max flow	65 L/m	17.2 gpm
Max pressure	240 bar	3 481 psi
Aux pump (water)		
Max flow	65 L/m	17.2 gpm
Max pressure	240 bar	3 481 psi
Dimensions and weight		
A	2 260mm	89 in
B	1 460 mm	57 in
C	890 mm	35 in
Weight	1 760 kg	3 880 lb



Working positions from -90° to +90°

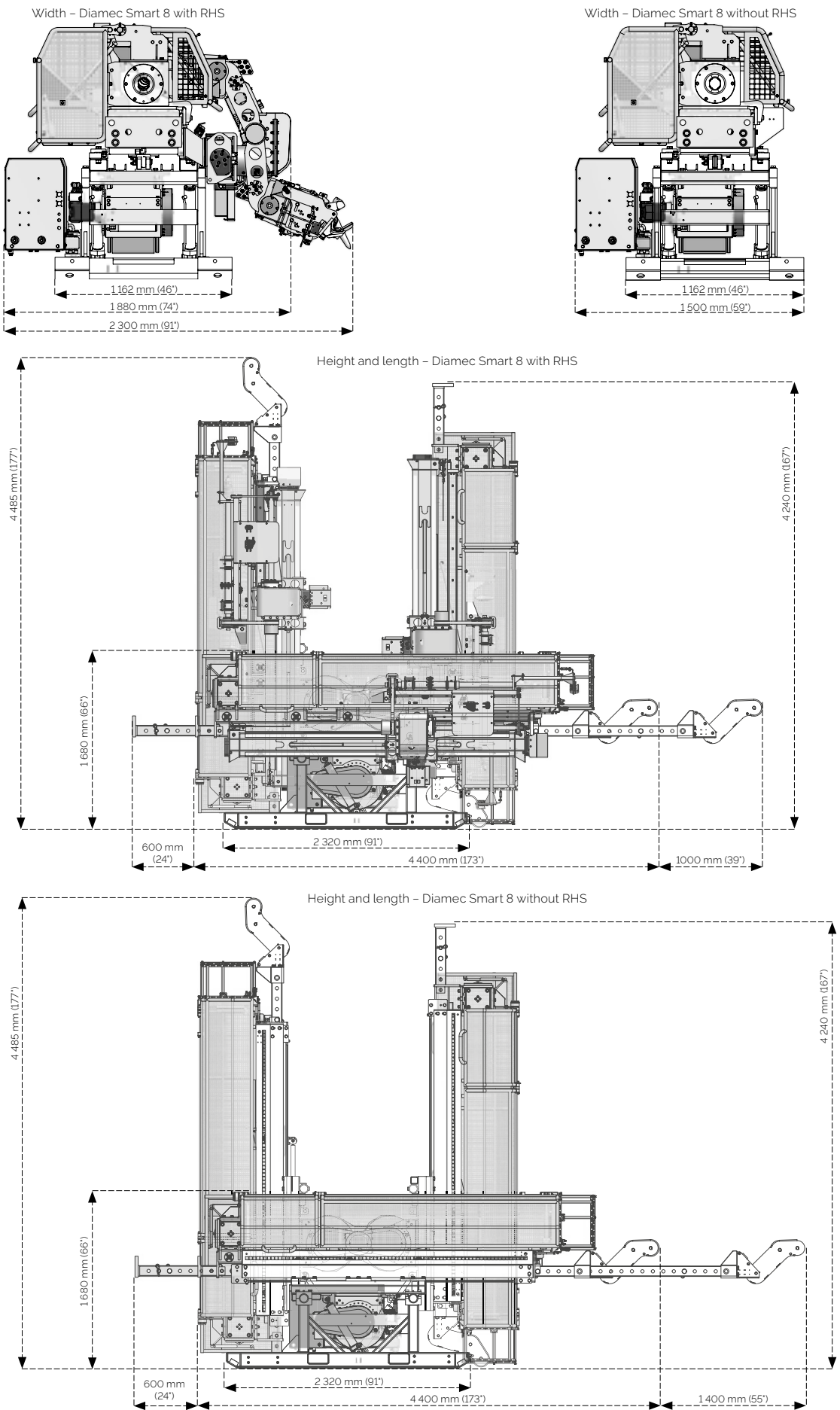


Weight of rig and control unit (without options/accessories)

Dimension	With RHS		Without RHS	
	Metric	US	Metric	US
Weight (including rotation unit)	4 200 kg	9 260 lbs	3 500 kg	7 720 lbs

Technical specifications

Working dimensions in mm



United in performance. Inspired by innovation.

Performance unites us, innovation inspires us, and commitment drives us to keep moving forward.

Count on Epiroc to deliver the solutions you need to succeed today and the technology to lead tomorrow.

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