

Boyles C6/C6C CE

A versatile core drilling rig suitable for any job



Versatile drilling rigs for all conditions

The CE-market versions of Boyles C6 and C6C surface core drilling rigs come in two different carrier versions: the Boyles C6 CE rig being trailer mounted and the Boyles C6C CE rig being crawler mounted. Medium-sized, the drilling rigs are powerful and compact – ready for the job at hand. Both models have a drill capacity of 1 211 meters (NO).

+ Main benefits

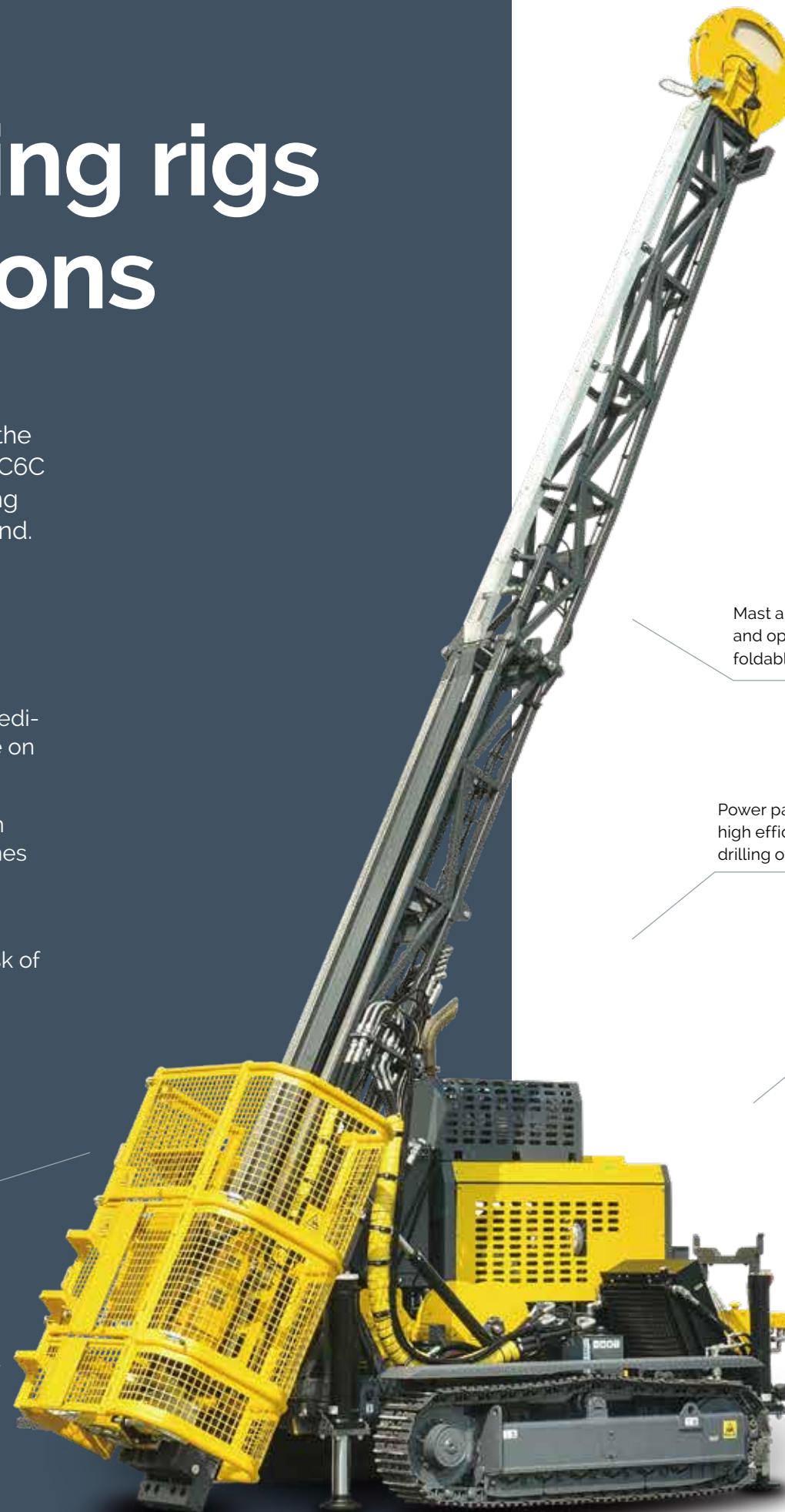
Versatility - The Boyles C6/C6C CE is optimized for medium-depth drilling and makes it possible for you to take on any exploration job.

Robust design - Designed for consistently operation in harsh environments, the Boyles C6/C6C CE rig combines high productivity with long service intervals.

Safety - The Boyles C6 and C6C CE is developed with safety as a top priority, with the goal to minimize the risk of personal injury during operation.

Rotation unit - robust rotation unit with two speeds providing the essential torque and rpm speed ranges for coring. It can drill effectively from 45 to 90 degree angles, make and break rods (from the control panel) and includes safety guard.

Rod holder – opens hydraulically and closes using gas pressure. In case of loss of hydraulic pressure, the rod holder closes instantly to prevent dropping of the drill string in the hole.



The Boyles C6C CE crawler rigs come with a radio remote control, which allows you to tram the rig from a distance providing a safer working environment.



Ergonomic and user-friendly design, which displays the drilling parameters necessary to ensure productive drilling. Also included is a hold back function to prolong bit life.

Mast and feed system – sturdy and stable, ensuring minimal vibrations, straight bore holes and optimum lifting/holding capacity. Includes a rod kicker to facilitate threading, and a foldable mast to facilitate convenient transportation.

Power pack and engine – the Cummins engine is recognized for its durable life, high efficiency and capability to minimize fuel consumption in the toughest of drilling operations. The engine is compliant with Tier 4/ Stage V.

Safety features -

Brake system - a brake system (for the Boyles C6 CE version) will enhance safety while stopping and running.

PoMP – the robust safeguard for Protection of Moving Parts (PoMP) is mounted to fulfil the EN 16228 standard, to prevent operators from coming into contact with moving parts.

ROM – the ROM (Restricted Operating Mode) makes sure to control rotation speed as well as feed speed when the cage is open.

Slidable rotation unit – the rotation unit can be moved to aside with help from a hydraulic cylinder, making the move easier and safer.

Winch mortar - equipped with a built-in auto lock device, preventing the wireline winch from accidental moving during motor parking.

Best in class

The well proven Boyles C6/C6C CE rigs are suitable for different project sites, confronting the most harsh conditions and environments. It offers suburb versatility in the surface core drilling segment for 1 211 meter N-size borehole depths. The rig's safety and ergonomic features provide confidence and assurance for drill rig operators.



+ Depth capacity

With a drill depth capacity of 1 211 meters N-size, the Boyles C6/C6C CE rig is the surface core drilling rig with the deepest drilling depth capacity in its drill class.



+ Ergonomics and safety

A user-friendly drilling rig that gives operators a sense of comfort during operation. The rig comes equipped with protection of moving parts, safety sensors, warning displays, nocturnal lighting, winch motor auto-lock device, brake system, safety stops and fire-extinguishers.



+ Productivity and lower operational costs

The parts and components that make up the drilling rig are of the highest quality and standard designed with durability in mind. The Boyles C6/C6C CE rig is synonymous with productive drilling, high rate of uptime and minimal maintenance needed.



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

Boyles C6/C6C CE

Slide function

The possibility to slide the rotation unit to the side with help from a hydraulic cylinder, making the move easier and safer.

Rotation unit

The rotation unit can handle BO-PO rods and BW-HW casing. It consists of a hydraulic motor, a sealed gear-box, a hollow spindle and a hydraulic chuck, and quick change chuck jaws. The rotation speed is adjustable from the control panel.



Main hoist

The powerful main hoist, equipped with a hydraulic motor and a dual brake system, ensures well-controlled feed. The dual brake system offers both dynamic and static breaking. When the lifting operation is stopped, firm self-locking is applied.

Wireline hoist

The wireline hoist has a high level of speed control to ensure safe and consistent operation.

Standard equipment

- Slide function
- Service lamp
- 6m (20 ft) pull mast with 3.5m (11.5 ft) feed stroke
- PO capacity drillhead with 2 gears and hydraulic chuck 1 set of NO jaws and bushing incl.
- Hydraulic mast dump
- Foldable mast
- Large crown sheave wheel
- Wear liners on lower mast
- Safety guards
- Hydraulic oil reservoir fill pump
- Hydraulic oil tank volume (300 liters)

- Diesel tank volume (200 liters)
- Radio remote control (C6C CE)
- Control panel
- Gas cartridge type rod holder - PO size
- 4 hydraulic levelling jacks
- Towing package (C6 CE)
- Hydraulic mast raise
- RPM meter
- Tachometer
- Lighting kit
- Crawler tracks (C6C CE)
- Wireline winch

Main hoist

	Metric	US
Single line capacity, bare drum	80 kN	17 985 lbf
Line speed, bare drum	44 m/min	144 ft/min
Cable size	27 m x 16 mm	89' x 0.63"

Chuck assembly

Type	Hydraulic open, spring close
Maximum diameter	124 mm (4 7/8")
Holding capacity	17 800kg (39 242 lb)

Depth capacity

Hole size	Standard		Thin Wall Rods	
	Metric	US	Metric	US
B wireline	1 536 m	5 039'	1 824 m	5 984'
N wireline	1 211 m	3 973'	1 381 m	4 530'
H wireline	804 m	2 637'	1 100 m	3 608'
P wireline	491m	1 610'	770 m	2 526'

*These figures serve as guidelines only. They are calculated with available pull force from main winch, weight of drill string in water filled hole and average WOB. 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.

Rotation unit

Power	Hydraulic motor - variable speed/ reversible
Final drive	Gear driven
Spindle (inner diameter)	124 mm (4.9")
Max torque	7 602Nm
Max speed	1 300 rpm
Gear change	Mechanical shift

Spindle data

Spindle	Ratio	Speed	Torque	
			Metric	US
1st	1755 : 1	79 – 200 rpm	7 602 – 2 993 Nm	5 606 – 2 208 lbf
2nd	2.70 : 1	512– 1 300 rpm	1 194 – 470 Nm	880 – 347 lbf

Slide rotation unit

Slide distance	355mm (14")
Push/Pull Force	42kN / 31kN
Slide direction	Left/right

Technical specifications

Rod holder

Hydraulic open, gas spring closed - BO to PO rods/HW casing	Metric	US
Max diameter	210 mm	8.3"
Clamping diameter PO size rods	114.7 mm	4.5"
Clamping capacity	13 000 kg	2 900 lb

Wireline hoist

Capacity	1 500 m (4 921') of 6 mm (¼")
Line pull	Bare drum: 77 kN (1 719lb), full drum: 2.3 kN (562 lb)
Line speed	Bare drum: 1679 m/min (550.8 ft/min), full drum: 566.3 m/min (1 683.6 ft/min)

Power unit

Manufacture	Cummins
Mode	B 6.7
Volume	6.7 liter, 6 cyl
Power	Tier 4/ Stage V: 168 kW (225 hp)
RPM	1 800
Engine type	Turbo-charged diesel/after cooled
Cooling system	Water
Electrical system	24V (Alternator 24 V, 95 Amp)
Sound level	116.5 dB(A)

Hydraulic system

Primary pump	28 MPa, 242 L/min (4 061 psi, 64 gal/min)
Secondary pump	20 MPa, 122 L/min (2 901 psi, 32 gal/min)
Auxiliary pump	21.5 MPa, 47 L/min (3 118 psi, 12 gal/min)
Hydraulic oil cooling	Air

Mast and feed system

	Metric	US
Feed travel	3.5 m	11.5'
Feed speeds	High and Low with variable control	
Mast dump travel Trailer version	0.8 m	2.6'
Mast dump travel Crawler version	0.8 m	2.6'
Thrust	60kN	13 488lbf
Pull	138 kN	31 024 lbf
Drilling angle	45° – 90°	
Rod pull length	6.1 m	20'
Transportation mode	Foldable mast	

Drill base supports

Mount/base system	Trailer mounted rig with four wheels (215/75R17.5) and towing package
Support	4 hydraulic jack legs to adjust rig height
Pad diameter	Ø200/230 mm
Leg adjust range	550 mm (21.7")
Crawler mounted rig on crawler tracks	Crawler mounted rig on crawler tracks
Crawler band width	300 mm (11.8")
Crawler ground pressure	12.6 psi/86.9kPa
Radio control tramming speed, min/max	2.5/5 km/h

Trido

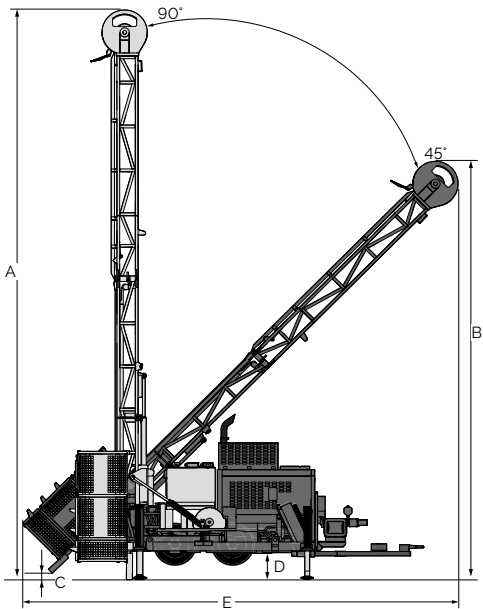
Trido 140H	Metric	US
Flow	140 L/min	37 gal/min
Pressure	70 bar	1 015 psi

Brake system

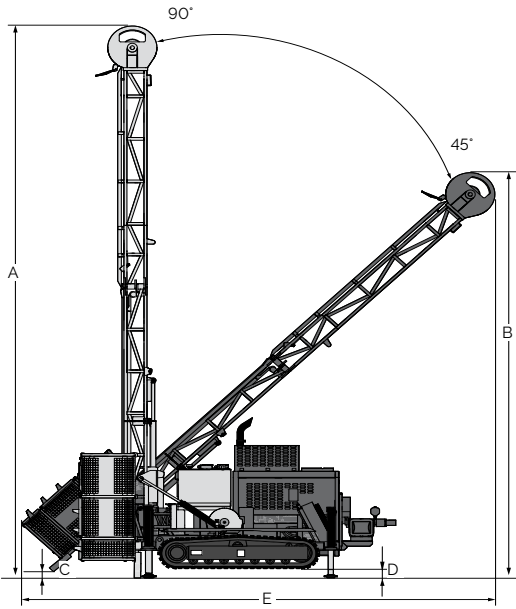
Parking brake force	20kN	
Service brake force	25kN	
Brake Quantity	2	

*This function is only used for Boyles C6 CE rig.

Boyles C6 CE



Boyles C6C CE



Technical specifications

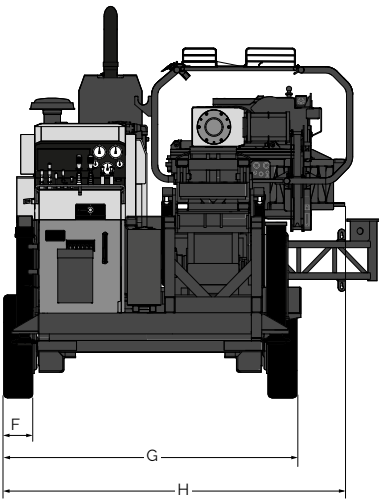
Working dimensions

Dimension	Boyles C6 CE		Boyles C6C CE	
	Metric	US	Metric	US
A	10 082 mm	397"	10 082 mm	397"
B	7 451 mm	297"	7 451mm	297"
C	9.5 mm	0.4"	256.5 mm	10.1"
D	196.5 mm	7.7"	87 mm	3.4"
E	7 486 mm	295"	7 486 mm	295"

Weight

	Metric	US
Trailer	8 ton	16 000 lb
Crawler	10 ton	20 000 lb

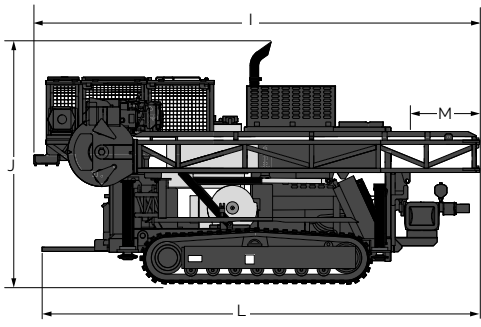
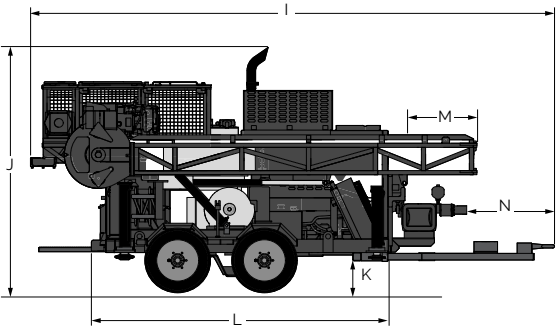
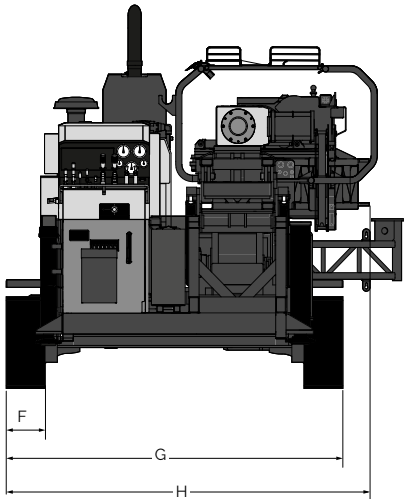
Boyles C6 CE



Transport dimensions

Dimension	Boyles C6 CE		Boyles C6C CE	
	Metric	US	Metric	US
F	222 mm	8.7"	300mm	12"
G	2 290 mm	90"	2 634 mm	104"
H	2 388 mm	94"	2 817 mm	111"
I	6 219 mm	245"	5 302 mm	209"
J	2 960 mm	116.5"	2 885 mm	114"
K	376.5 mm	14.8"	-	-
L	3 400 mm	134"	5 205 mm	205"
M	705 mm	28"	1 052 mm	41"
N	1 975 mm	77.8"	-	-

Boyles C6C CE



Selections of options

- Hydraulic mud mixer
- Trido water pump
- Water flow meter kit
- Heavy duty flow meter kit
- Wireline cable (1500m×6mm)
- Level wind

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