

Boyles C6/C6C

A versatile core drilling rig suitable for any job



Versatile drilling rigs for all conditions

The Boyles C6 and C6C surface core drilling rigs come in two different carrier versions: the Boyles C6 rig being trailer mounted and the Boyles C6C 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

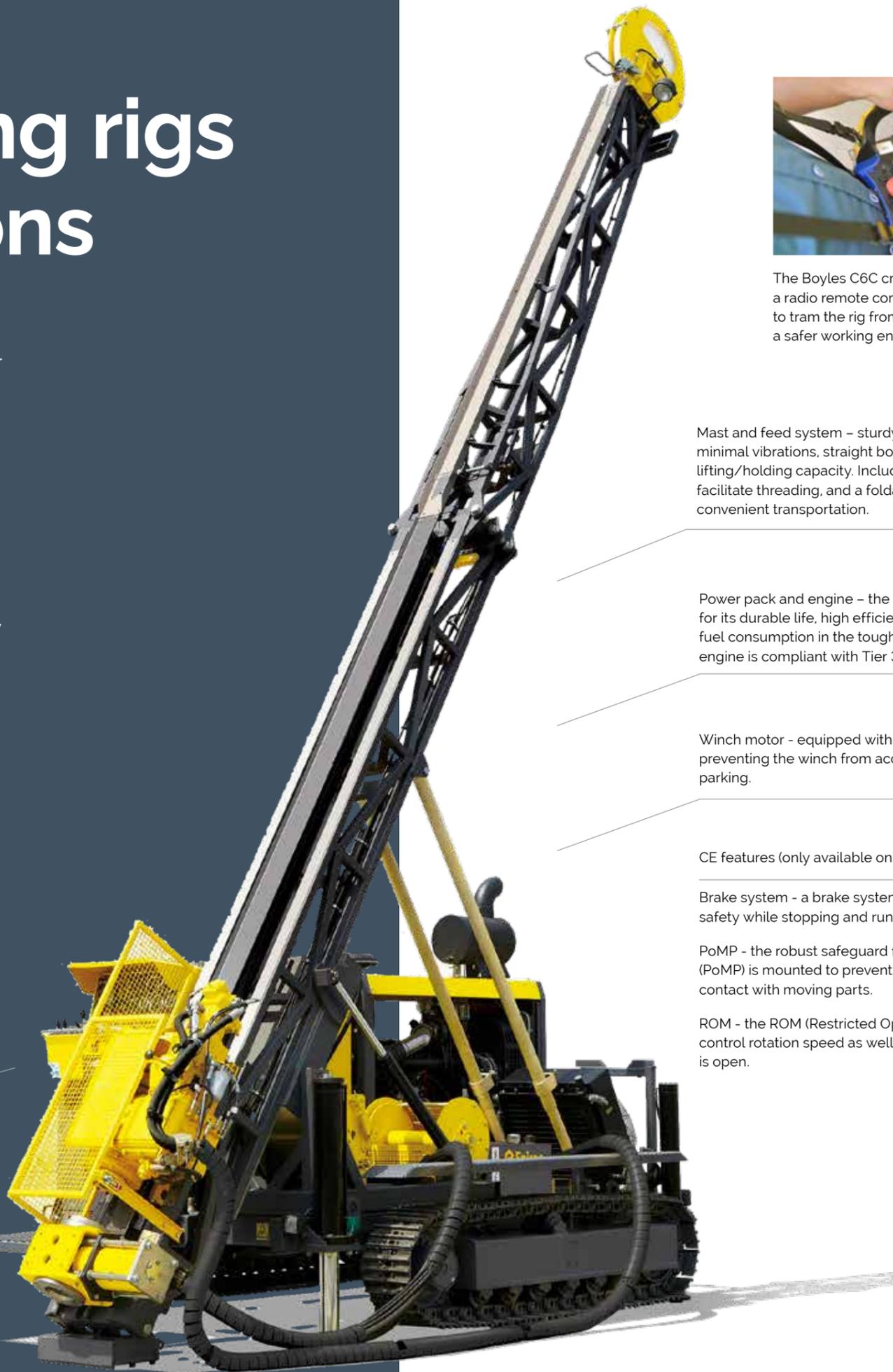
Versatility-Optimized for medium-depth drilling, the Boyles C6/C6C rig makes it possible for you to take on any exploration job.

Robust design-Designed for sturdiness and operation in harsh environments, the rig combines high productivity with long service intervals.

Safety-The rig is designed with safety in mind, minimizing 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 the drill string in the hole.



The Boyles C6C 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 boreholes 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 3/Tier 4 Final/Stage V.

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

CE features (only available on Boyles C6/C6C Stage V version)

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

PoMP - the robust safeguard for Protection of Moving Parts (PoMP) is mounted 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.



Best in class

The well proven Boyles C6/C6C rigs are today drilling in many 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 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 guarding around moving parts, safety sensors, warning displays, nocturnal lighting, safety stops, winch motor auto-lock device, fire-extinguishers and slidable rotation unit. Additionally, a brake system is mounted on Boyles C6 Stage V version to enhance safety feature.



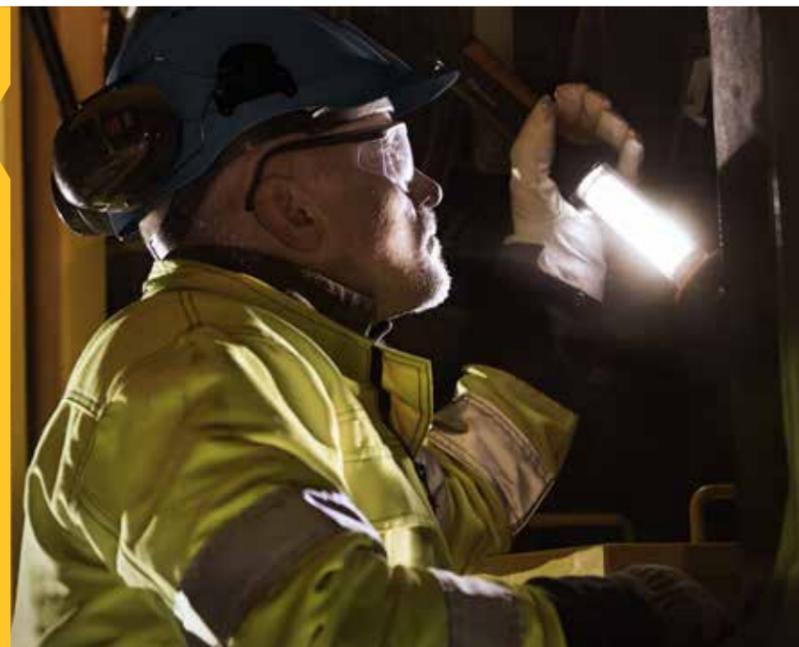
+ Higher productivity and lower operational costs

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 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

Wireline hoist

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

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 an Epiroc patented 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 braking. When the lifting operation is stopped, firm self-locking is applied.

Slidable rotation unit

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



Standard equipment

- 6m (20 ft) pull mast with 3.5m(11.5 ft) feed stroke
- PO capacity drillhead with 2 gears and a hydraulic chuck with 1 set of NO jaws and bushing
- 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)

- Control panel
- Gas cartridge type rod holder- PO size
- 4 hydraulic levelling jacks
- Towing package (C6)
- Hydraulic mast raise
- RPM meter
- Tachometer
- Lighting kit
- Crawler tracks (C6C)
- Wireline winch
- Slidable rotation unit
- Service lamp (only available on C6/C6C Stage V version)

Main hoist

	Metric	US
Single line capacity, bare drum	80 kN	18 000 lb
Line speed, bare drum	44 m/min	148 ft/min
Cable size	27 m x 16 mm	89' x 0.63"

Rod holder

Hydraulic open, gas spring closed	Max diameter	Clamping diameter	Clamping capacity
BO-PO/HW casing	210 mm (8.3')	114.7 mm (4.5')	13 000 kgf (28 660 lbf)
BO-PW	235 mm (9.3')	139.7 mm (5.5')	20 000 kgf (44 092 lbf)

* BO-PO rod clamp is standard. BO-PW rod clamp is optional.

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	2 638'	1 100 m	3 608'
P wireline	491 m	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	7 603 Nm
Max speed	1 300 rpm
Gear change	Mechanical shift

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	59.6 kN	13 390 lb
Pull	138 kN	31 020 lb
Drilling angle	45° - 90°	
Rod pull length	6.09 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 mm*3; Ø230 mm*1
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	11 psi/74.5 kPa
Crawler ground pressure (Satge V CE)	12.6 psi/86.9 kPa
Radio control tramping speed (max)	2 km/h
Radio control tramping speed (max) (Stage V CE)	2.5 km/h

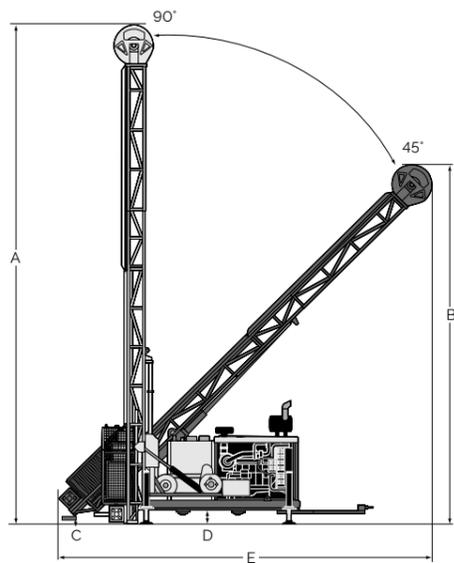
Wireline hoist

	Bare drum	Full drum
Line pull	8.2 kN (1 843 lb)	2.4 kN (540 lb)
Line speed	173 m/min (568 ft/min)	602 m/min (1 975 ft/min)
Capacity	1 500 m (4 921') of 6 mm (¼") or 1 800 m (5 906') of 5 mm (3/16")	

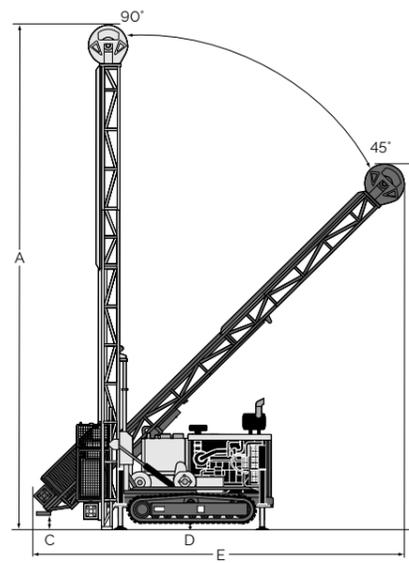
Power unit

Manufacture	Cummins
Mode	QSB 6.7
Volume	6.7 liter, 6 cyl
Power	Tier 3: 153 kW (205 hp)
Power	Tier 4 Final/Stage V: 168 kW (225 hp)
RPM	1 800
Engine type	Diesel turbocharged/after cooled
Cooling system	Water
Electrical system	24V (Alternator 24 V, 95 Amp)
Sound level	120 dB(A)

Boyles C6



Boyles C6C



Spindle data

	Ratio	Speed (rpm)	Torque	
			Metric (Nm)	US (lbf)
1st	1755 : 1	50 - 200	7 603 - 2 993	5 606 - 2 208
2nd	2.70 : 1	350 - 1 300	1 194 - 470	880 - 347

Hydraulic system

Primary pump	28 MPa, 242 L/min (4 060 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

Chuck assembly

Type	Hydraulic open, spring close
Maximum diameter	124 mm (4 7/8")
Holding capacity	178 kN

Trido

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

Slidable rotation unit

Slide distance	355 mm (14')
Push/pull force	42 kN/31 kN
Side direction	Left/right

Brake system (only available on Boyles C6 Stage V)

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

Selections of options

*Asterisked is option only for Tier 3 version.

- Hydraulic mud mixer
- Trido water pump
- Water flow meter kit
- Heavy duty flow meter kit
- Gas cartridge type rod holder- PW size
- Level wind for 6 mm cable
- Level wind for 5 mm cable
- Wireline cable 1 500 m x 6 mm*
- Wireline cable 1 200 m x 5 mm*
- 3.3 km/h high tramping speed (C6C)*

Weight

	Tier 3 version	CE version
Trailer	7 ton (15 432 lb)	8 ton (17 637 lb)
Crawler	9 ton (19 841 lb)	10 ton (22 046 lb)

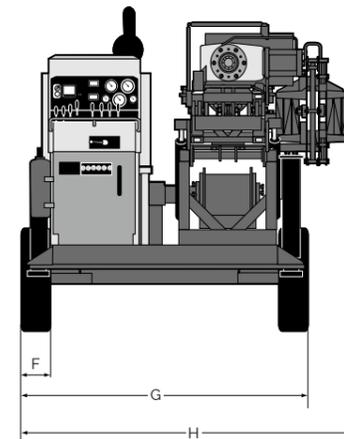
Working dimensions

Dimension	Boyles C6		Boyles C6C	
	Metric	US	Metric	US
A	10 082 mm	397'	10 082 mm	397'
B	7 294 mm	287'	7 541 mm	297'
B (CE)	7 541 mm	297'	7 541 mm	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'

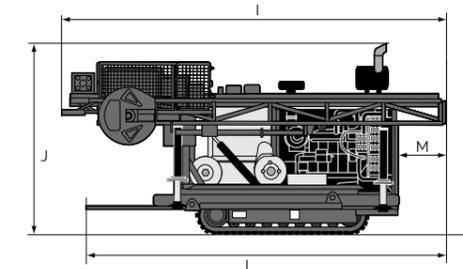
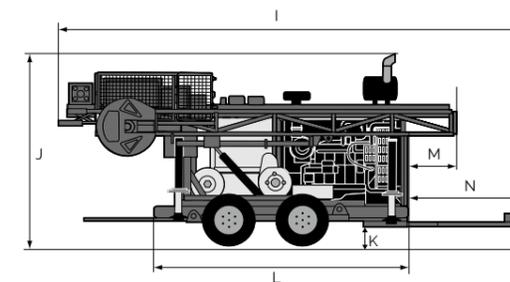
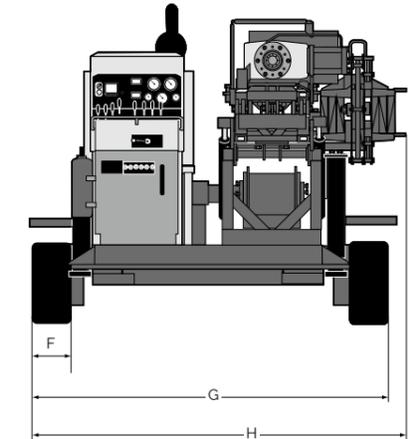
Transport dimensions

Dimension	Boyles C6		Boyles C6C	
	Tier 3 version	Stage V version	Tier 3 version	Stage V version
F	222 mm (9')	222 mm (9')	321 mm (13')	300 mm (12')
G	2 205 mm (87')	2 290 mm (90')	2 634 mm (104')	2 634 mm (104')
H	2 602 mm (102')	2 388 mm (94')	2 817 mm (111')	2 817 mm (111')
I	6 525 mm (257')	6 219 mm (245')	5 302 mm (209')	5 302 mm (209')
J	2 625 mm (104')	2 960 mm (117')	2 555 mm (101')	2 885 mm (114')
K	380 mm (15')	377 mm (15')	-	-
L	3 400 mm (134')	3 400 mm (134')	4 905 mm (193')	5 205 mm (205')
M	705 mm (28')	705 mm (28')	705 mm (28')	1 052 mm (41')
N	1 927 mm (76')	1 975 mm (78')	-	-

Boyles C6



Boyles C6C



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