

Avatel

Development charging rig for tunneling and mining applications with a coverage area up to 65 m²



The world's first fully mechanised development charging system

Avatel™ eliminates the need of handling initiating systems or manually loading of blastholes. A single operator can complete the entire charging cycle from within the safety of an enclosed, roll-over protection structure (ROPS) and falling object protective structure (FOPS) cabin, several meters from the face.

Avatel™ is built on the foundation of Epiroc's proven Boomer M2 platform and Orica's established WebGen™ wireless initiation and HandiLoader™ emulsion delivery technologies.

⊕ Main benefits

Increased productivity through automation and minimized manual work

Increased operator safety with less exposure to hazardous areas at the face

Complete and repeatable control over the full charging cycle



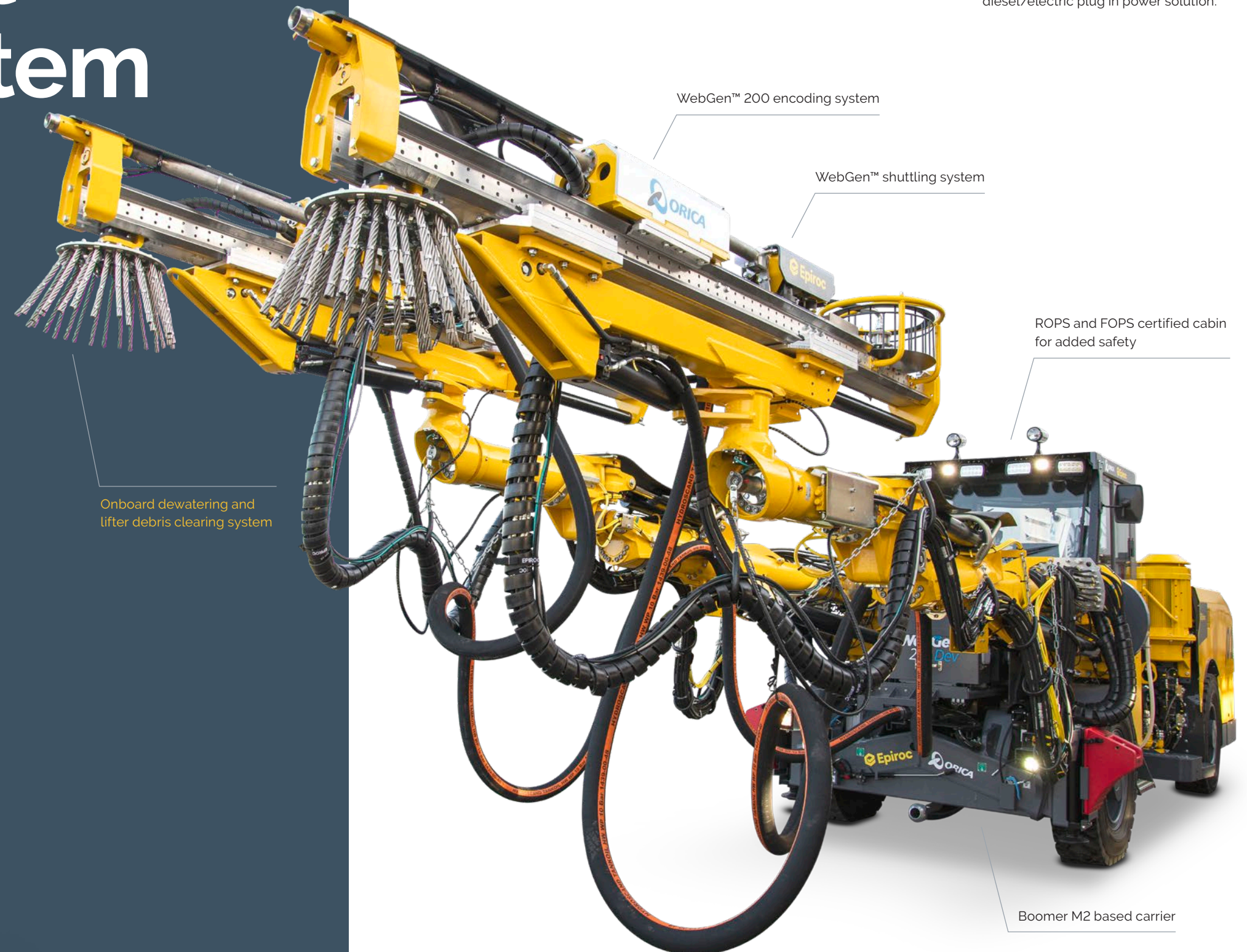
Avatel™ is equipped with the most sophisticated version of Epiroc's acclaimed Rig Control System (RCS 5).



The advanced and robust feed design of Avatel™ builds on Epiroc's solid application design experience, further adapted to match conditions this new solution will face.



Future developments can be extended to other Epiroc carriers including battery driveline. Other key advantages include flexibility at the face through Epiroc's dual diesel/electric plug in power solution.



WebGen™ 200 encoding system

WebGen™ shuttling system

ROPS and FOPS certified cabin for added safety

Onboard dewatering and lifter debris clearing system

Boomer M2 based carrier

The future of development charging

Avatel™ is a step change in safe and productive development charging through advanced mechanization, automation and digitalization.



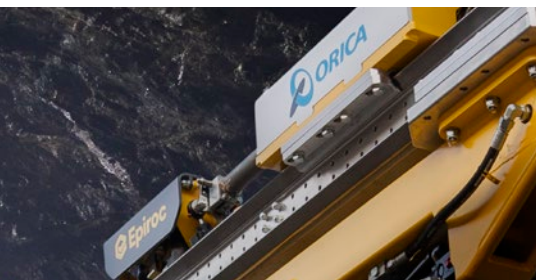
+ Advanced features

Avatel™ is a purpose-built machine equipped with the most advanced underground development charging system ever designed, integrated with the Boomer M2 carrier. Leveraging Orica's WebGen wireless initiating system, Avatel™ eliminates the need for traditional tie-ins and other manual connections from the charging cycle.



+ Built on proven technology

Built on the foundation of Epiroc's proven Boomer M2 carrier and integrated with Orica's latest explosives technology, Avatel™ is a twin boom, semi-autonomous and fully mechanized development charging solution that allows a single operator to complete the entire charging cycle from the safety of Epiroc's enclosed ROPS and FOPS certified cabin.



+ Excellence through partnership

Avatel™ is the result of a partnership between Epiroc and Orica - the largest provider of commercial explosives and advanced blasting systems. We have combined Orica's expertise with Epiroc's technologies and innovations as a leading provider for the mining and infrastructure industries. By combining our strengths we are now able to deliver exactly what the industry and our customers have been seeking - a solution that improves safety and combines the individual tasks of drilling, charging and blasting into one seamless process.



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

● = Standard ○ = Option

Charging system

HandiLoader™	●
Process body	●
Progressive cavity pump for emulsion	●
Holeblowing kit (cleaning holes before charging)	●
Lifter hole cleaning system	●
WebGen™ magazine and assembler	●
WebGen™ shuttling system	●
Cameras for hole navigation	●
Emulsion hose reel	●
Switchbox for WebGen™ (WebGen™ encoding system)	●

Boom

BUT36S T Auto Nicrom	●
Automatic boom lubrication	●

Feed

Avatel 6000-series	●
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Air/watersystem

Hydraulically driven screw compressor Atlas Copco GA 30*	●
Hydraulic driven drainage pump, max capacity 800 L/min	●
High pressure rig washing kit with hose and reel	●

Hydraulic system

Low oil level indicator	●
Oil temperature gauge on oil tank, electronically supervised	●
Filtration 16 µm	●
Oil filter indicator	●
Extra filtration package for water and fine particle removal	○
Mineral hydraulic oil	●
Biodegradable hydraulic oil	○
Electrical oil filling pump	●
Heater kit for hydraulic oil tank, diesel engine and electric motors	○
Ni-Cr plated piston rods (limitations exist)	●

Control system

Epiroc Rig Control System (RCS 5)	●
Orica LoadPlus™	●
Orica ShotPlus™	●
3-points navigation	●
Two operator panels (Epiroc and Orica)	●
Rig Remote Access (RRA)	●
Rig Access Control (RAC)	●

Electrical system

Total installed power 63 kW, main motor, Sf 1.15 55 kW	●
Voltage 380–1 000 V 50/60 Hz	●
Starting method, star/delta (400-690 V)	●
Starting method, direct start (1 000 V)	●
Starting method soft start (not for 1 000 V)	○
Transformer 8 kVA	●
Electronic overload protection for electric motors	●
Digital voltmeter/ampere meter in electric cabinet	●
Phase sequence and eart fault indicator	●
Cable reel, diameter 1 600 mm	●
Electric outlet for accessories, 16 A (CE)/32 A (CE) (380-690 V)	○
PC4 or PC5 plug	○
Battery charger	●
Dual controls for cable reel	●
Stainless steel electrical enclosure	●
Electric system 24 V	●
24 V Batteries 2x125 Ah	●
Battery Jump start receptacle	○
Tramming lights 8x22 W LED	●
Working lights 4x150 W, 24 V DC	●
Illuminated stairs LED	●

Carrier

Deutz TCD 2012 L06, stage IIIA, 155 kW	●
Deutz TCD 6.1 L6 tier4 final/stage 5, 180 kW	○
Articulated steering ±41° steering angle*	●
Four-wheel drive	●
Hose/cable guiding at water/cable reel	○
Dana 113 (short) axle	●
Automatic differential lock on axles, limited slip	●
Tires 12.00xR24	●
Clearance outside axles 12" rear, 21" front	●
Fuel tank, volume 165 l	●
Central lubrication system	●
Fire suppression system ANSUL (Manual, checkfire or automatic)	○
Fire suppression system FORREX (Automatic)	○
Rig washing kit	○
Manual lubrication kit	○
Boot washing kit	○

Cabin

ROPS and FOPS certified cabin, noise level <80 dB(A)	●
Air conditioning unit	●
Heating function for air conditioning (water transferred)	○
12 V outlet for communication radio	○
Electrical heater, 1.2 kW, 230 V (CE)	○
Reversing camera with monitor	○
Fixed seat	●
Cabin body made of stainless steel	○
Joystick-controlled spotlights left and/or right, 70 W	○
Front window 22 mm (P8B safety classed)	●
Media player	○

Technical specifications

● - Standard ○ - Option

Recommended cable size and length

Voltage	Type	Dimension (mm²)	Diameter (mm)	Length (m)
380-440V	Buflex	3x50+3G10	32	200
500-1000V	Buflex	3x35+3G6	28	200

Recommendations are given for surrounding temperature of 40°C and up to a height of 2 000 m. Cable dimension for battery version depends on charging cycle.

Noise and vibration

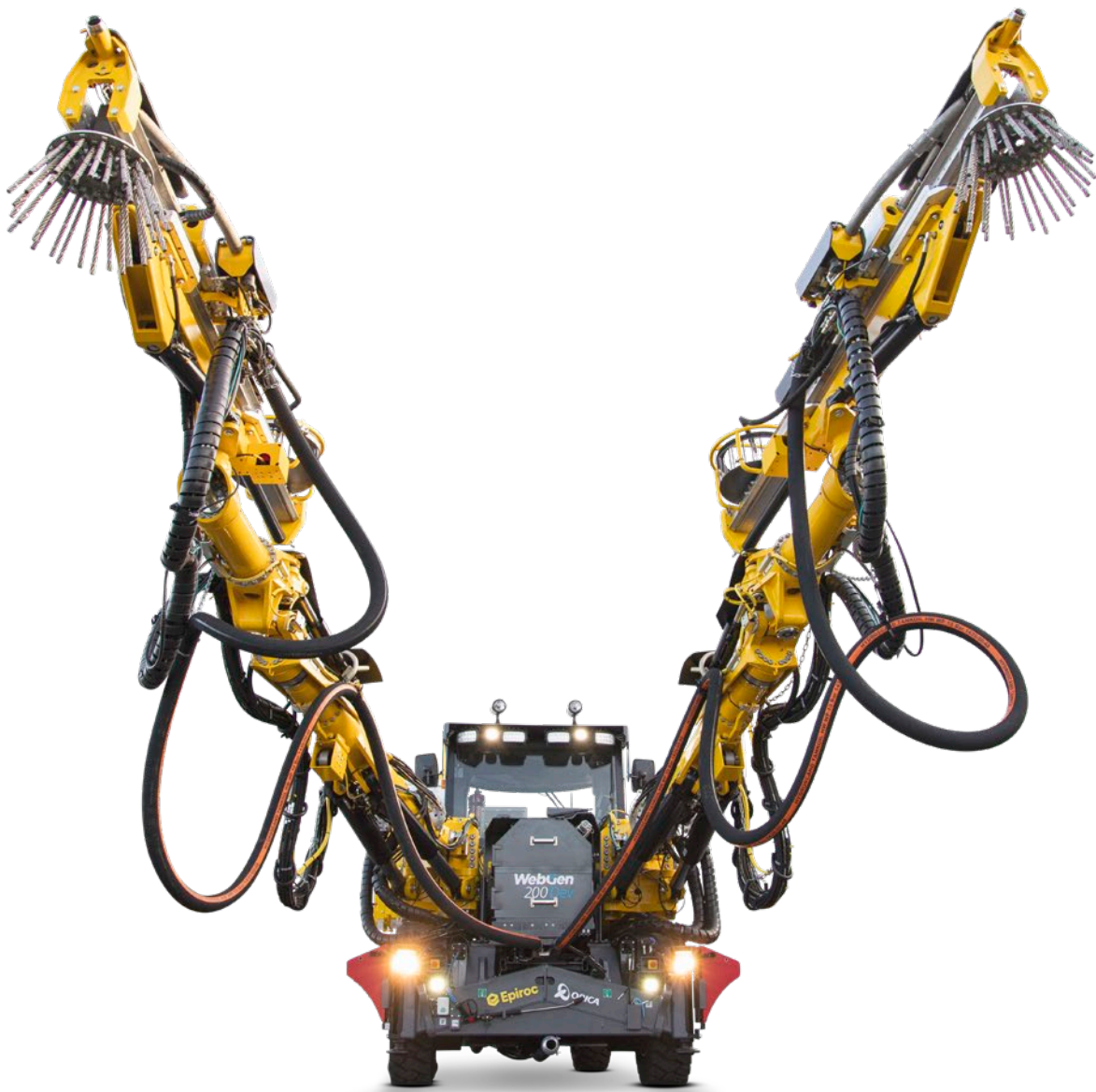
Operator sound pressure in cabin using engine, maximum (ISO 11201)	69 dB(A), re 20 µPa
Operator sound pressure in cabin using electric motor, maximum 65 dB(A) (ISO 11201)	65 dB(A), re 20 µPa
Vibration levels, maximum (ISO 2631-1)	0.05 m/s²

Tramming speed

On flat ground (rolling resistance 0.05)*	>15 km/h
On incline 1:8	>5 km/h

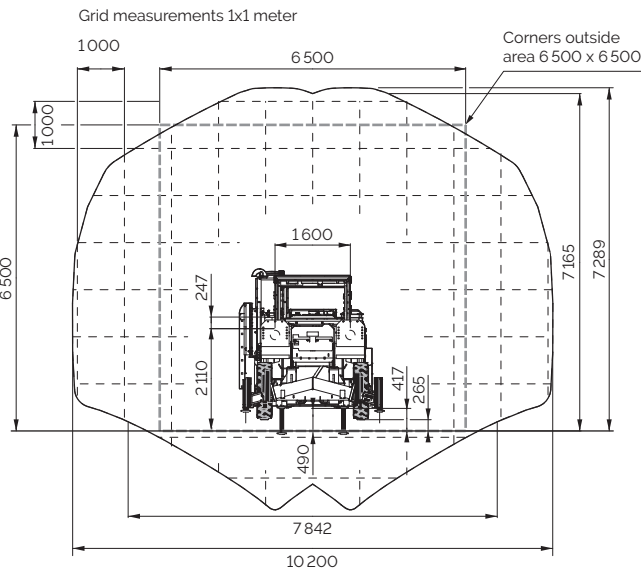
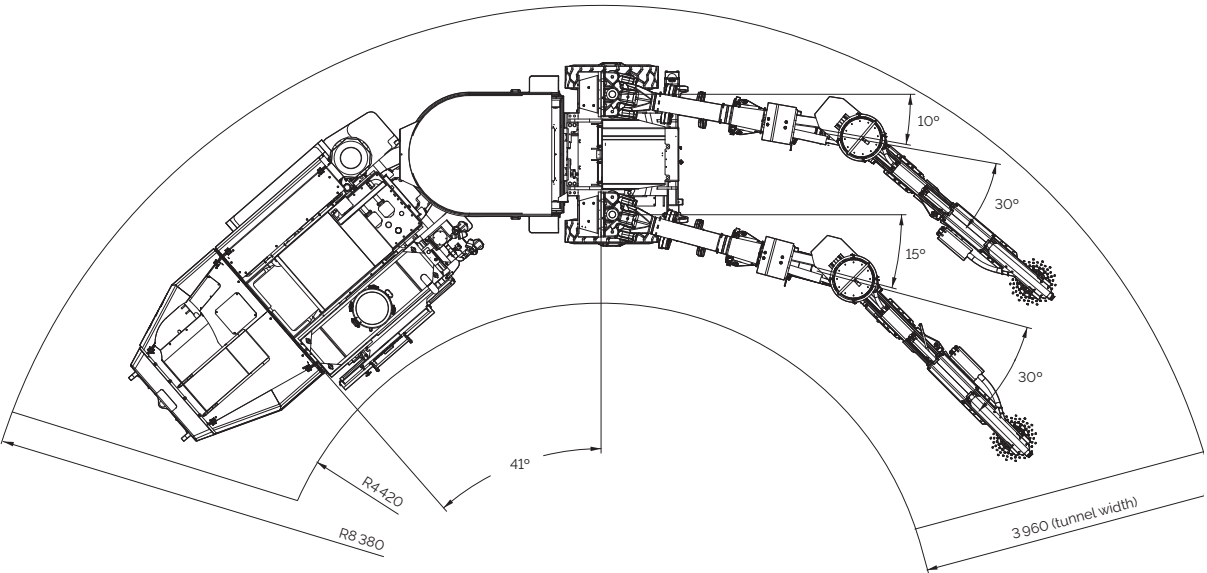
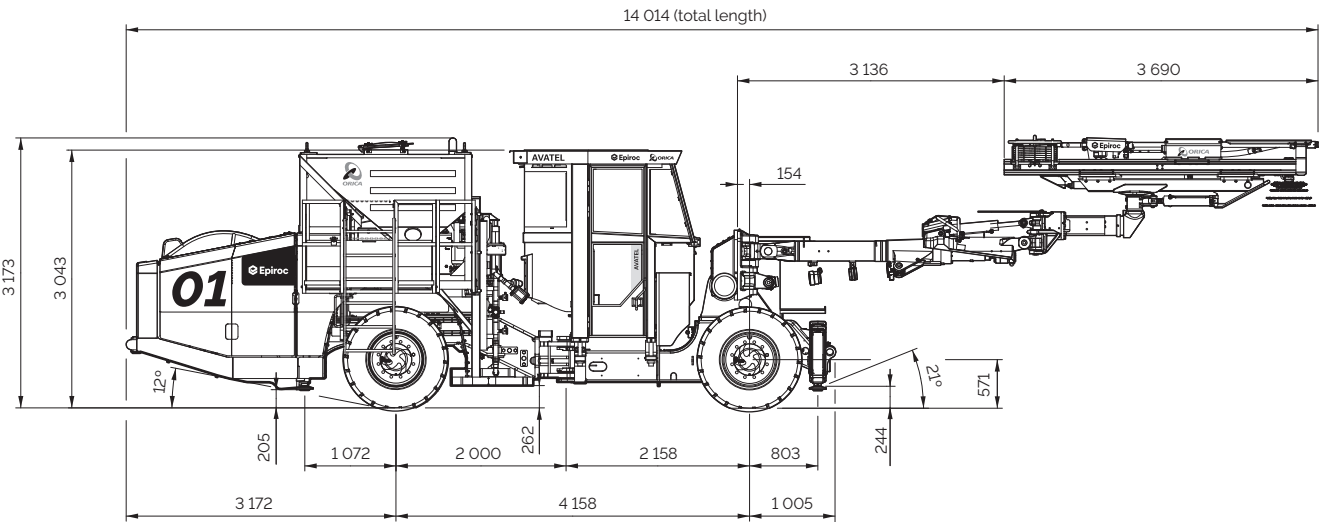
Gross weight (depending on configuration)

Rig type	Total	Boom side	Engine side
Avatel	28 400 kg	18 300 kg	10 100 kg



Technical specifications

Dimensions in millimeters



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.

epiroc.com

