

RAPTOR 7X

Long hole drilling rigs



RAPTOR 7X is an electro-hydraulic rig, for production applications by drilling long holes, in sections from 4.0 x 4.0 to 6.0 x 6.0 m. Fully mechanized operation, with the appropriate amount of automation, which allows for a controlled and reliable operation.

It incorporates a new model of hydraulic arm, designed for heavy work Boom 7X, with subsection by means of a Worm gear rotation unit that facilitates positioning.

Series 9000 advance beam, with reinforced design, with hydraulic clamp and equipped with 4 "Stinger" stabilizers, to obtain a good positioning and stability of the beam.

Equipped with a Montabert HC 112 drilling machine of 30 kW, of impact power.

With reverse percussion (Back Hammering), to remove stuck bars.

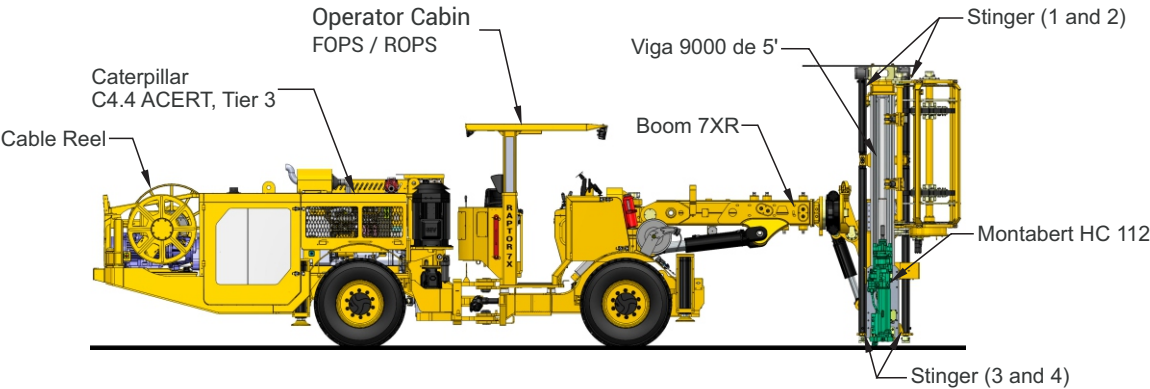
Drilling up to 35m in length with diameters up to 102mm, reaming up to 152mm.

Chassis for heavy duty, articulated 4WD, self propelled with diesel engine CAT Tier 3

Applications:

- Sub level and benching.*
- Block caving*
- VCR and cable bolting application.*

SPECIFICATIONS



DRIFTER

• Model	Montabert HC 112
• Percussion power	30 kW
• Percussion pressure	180 bar
• Frequency	42 - 46 Hz
• Rotation Speed	0 - 155 rpm
• Rotation torque	1677 Nm
• Hole diameter	64 - 89 mm
• Rhymed diameter	75 - 127 mm
• Air consumption (flushing)	10,000 l/min (8 - 10 bar)
• Air consumption (lubrication)	300 l/min (a 3 bar)
• Oil consumption (lubrication)	1.5 cc/min
• Water consumption	90 - 130 l/min
• Shank Adapter	T51 - male
• Weight	248 kg

FEED

• Model	RE 9000 series
• Drifter advance	Hydraulic cylinder
• Feed extension	800 mm
• Hydraulic clamp	BULL 140
• Stinger cylinder	4 units to stabilize when drilling
• Digital inclinometer	BAL - Boom Alignment Laser
• Magazine	T51 / 27 + 1 rods T45 / 27 + 1 rods ST58 / 27 + 1 tube

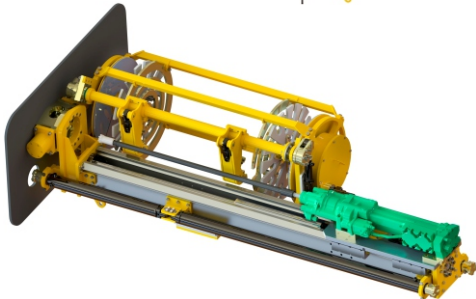
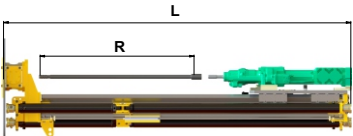
CARRIER

• Model	C87.2
• Diesel engine	Caterpillar C4.4 ACERT, Tier 3
- Power	106 kW @ 2200 rpm
• Exhaust catalyster	DOC (Diesel Oxidation Catalyst)
• Transmission	Hydrodynamics
• Powershift gearbox	Dana, T20000
• Differential axle	Dana, Series 113
• Rear axle oscillating	± 8°
• Tramming speed:	
- Horizontal	max. 14 km/h
- Positive ramp 15%	max. 7 km/h
• Positioning pump	Parker
• Service brakes	Wet discs
• Emergency and parking brakes	SAHR (Spring Applied Hydraulic Release)
• Steering (articulated carrier)	±40°
• Tyres	12 x R20
• Hydraulic jacks	2 extendable front, 2 rear
• Operator Cabin (Canopy)	FOPS / ROPS
• Fuel tank	24 gal / 92 l
• Battery	2x12 V, 95 Ah
• Electric system	24 VDC
• Tramming lights	8X, LED 28W, 9-32 V
• Centralized grease system	SKF
• Drilling lubrication system	SKF
• Automatic fire suppression system	ANSUL, 4 nozzles
• Fire extinguisher	1x20 lb (PQS)
• High pressure washing system	Manual
• Reel grease gun	Manual

BOOM

• Model	Boom 7XR
• Boom extension	1000 mm
• Lift angle	+38° / -20°
• Swing angle	±30°
• Rotation	360°
• Hydraulic cylinders	Parker

Feed Type	Overall length (mm) (L)	Rod length (mm) (R)
Feed 9000 of 5'	3,473	1,525
Feed 9000 of 6'	3,778	1,830



HYDRAULIC CONTROL SYSTEM

• Direct control valve	Electrohydraulic control, ATOS
• Percussion pump (compensated pressure)	Rexroth A10VO140
• Rotation pump	Rexroth A10VO710
• Working pressure	220 bar
• Hydraulic oil tank	50 gal / 190 l
• Hydraulic return filter	Parker, 10µ
• Hydraulic filter saturation indicator	Parker
• Low oil level indicator	Hydac
• Oil temperature indicator	Hydac

LUBRICATION AND WATER, AIR SYSTEM

• Compressor (Lubrication)	LE3-10UV
- Maximum capacity	5.1 l/s (10.8 CFM)@1800rpm
- Working pressure	3 bar
Optional:	
• Compressor (Flushing)	CT25
- Maximum capacity	132.5 l/min (7.95m³/min)
- Working pressure	8 bar
• Water pump and hydraulic motor	CR10-10
- Maximum flow	12 m³/h (200 l/m)@3525rpm, 7.5kW
- Minimum water inlet pressure	2 bar
• Bowman cooler	FG-120, 42 GPM, 20 bar

ELECTRIC SYSTEM

• Electric motor (Percussion / Advance)	60 Hz, 75kW, 100 HP
• Electric motor (Rotation)	50 Hz, 30kW, 40 HP
• Voltage	380 - 440 - 550 - 690 - 1000 VAC
• Frequency	50 - 60 Hz
• Starting method	Star - Triangle
• Option to 1000 VAC	Direct start
• Overload protection and ground fault	
• Percussion horometer	24V
• Phase sequence indicator	
• Battery charger	IN 32 VAC, 300W 13A OUT 28 VDC
• Main thermomagnetic switch	400A
• Electric transformer	3.5 kVA
• Working lights	2X, LED 50W, 9-32V
• Electric cable reel	60 m
• Electric cable	3x4/0 AWG
• Degree of protection	IP 65

OPTIONS

• A/C Enclosed Cabin	FOPS / ROPS
• Boom Alignment Laser (BAL)	

BAL SYSTEM (Boom Alignment Laser)

The Boom Alignment Laser (BAL) system is an electronic aid system in long drill rigs. Its main systems are the following:

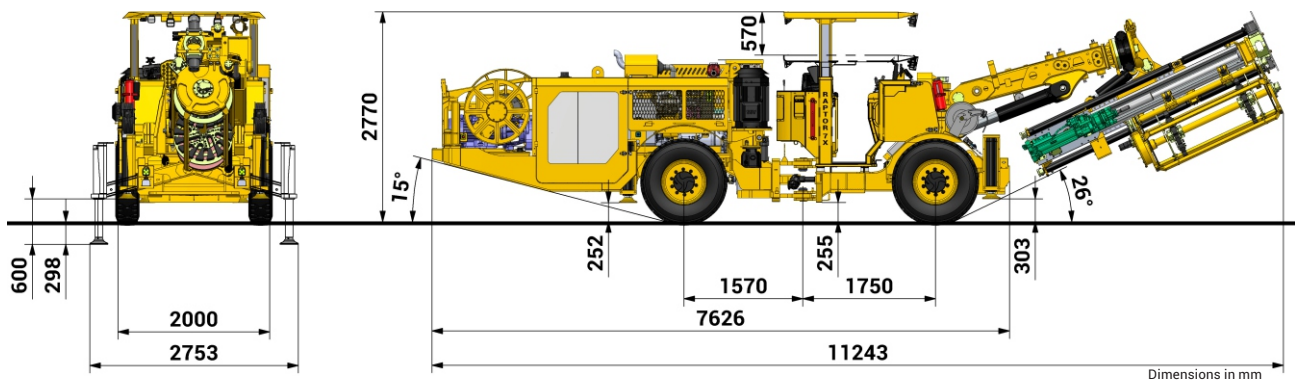
- Positioning of the beam with reference to the tunnel markings using the laser.
- Measurement of angles of rotation, inclination and beam parallelism (AMLH).
- Measurement of meters drilled per hole and totals.
- Electronic carousel control.

The entire system is connected by CAN-BUS protocol and analog cables, which simplifies the number of cables. It is robust, with IP67 protection onwards.

The system goes hand in hand with the implementation of the control panel, with hydraulically piloted valves, simplifying the number of levers in the cabin.

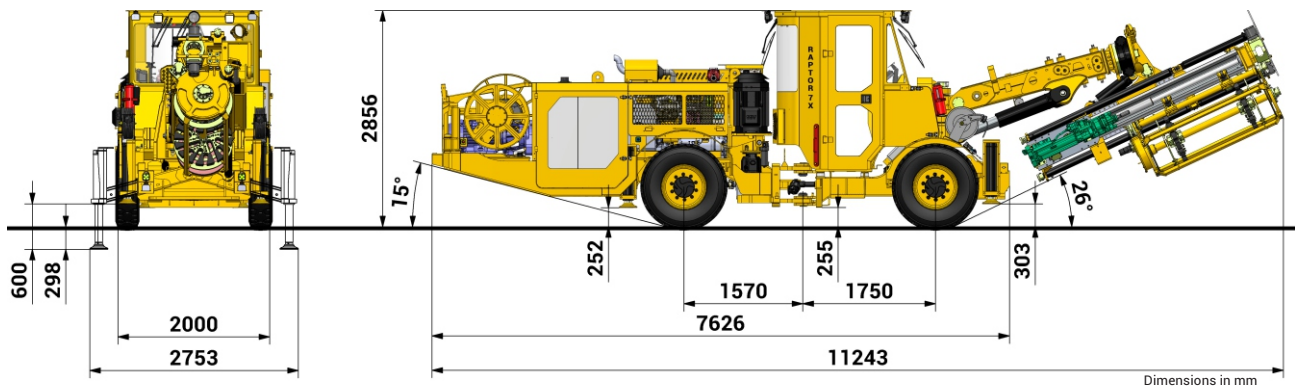


DIMENSIONS



Total Weight
23,450 kg

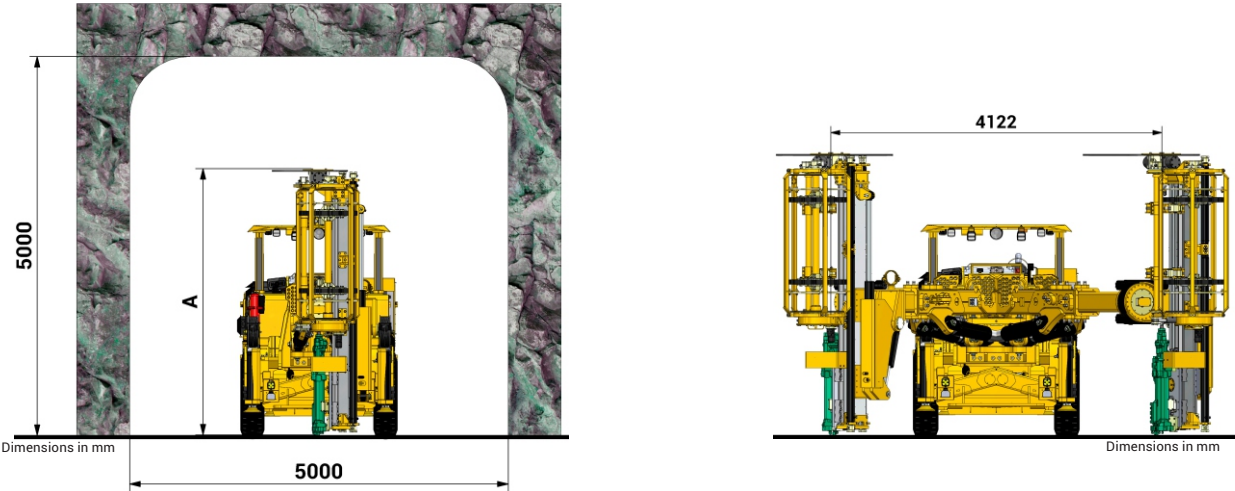
Option: A/C Enclosed Cabin



Total Weight
23,650 kg

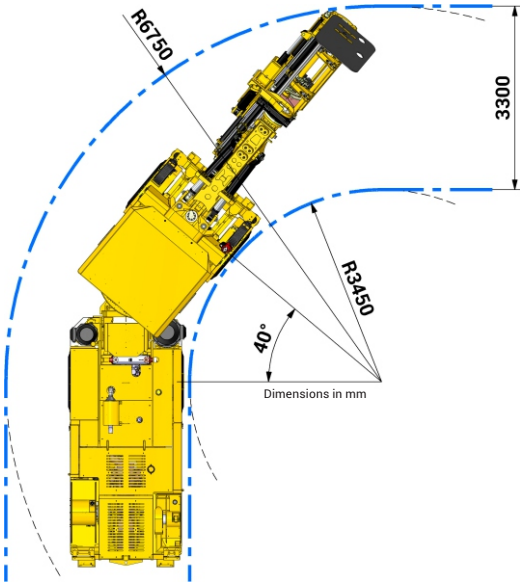


COVERAGE



Feed	5'	6'
Total Length (A)	3,473	3,778

TURNING RADIUS





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