



RX-4

SURFACE CORING DRILL



RX-4 Surface Coring Drill Rig

RX-4 is fully hydraulic diamond core drilling rig, designed for surface research drillings.

It is the perfect combination of the proven RX concept, combined with new and powerful components.

The RX-4 uses well proven technology for diamond core drills combined with new improvements in order to get easy drill operation. Hydraulic jacks, mast dump, hinged top mast and all controls available at the control panel provide the driller an easy set-up. Other features such as the strong main winch, powerful direct feed cylinder, advanced diesel engine, telescopic mast and Hydraulic Rod Holder.

RX-4 Coring Rig rotation speed, power and rotation unit aperture diameter is designed to give optimal performance in 60-122.6 mm (B-P) diameter wireline or conventional drilling.

RX-4, drilling unit, power unit, wireline unit (automatic winding system), main winch control of the mixer and mud pump are performed from the operator panel.

The gauge located on the operator panel displays, drilling rig advancement position;

- Hold back force,
- Feed force,
- Rotation speed,

It can observe the data and is able to control diesel engine.

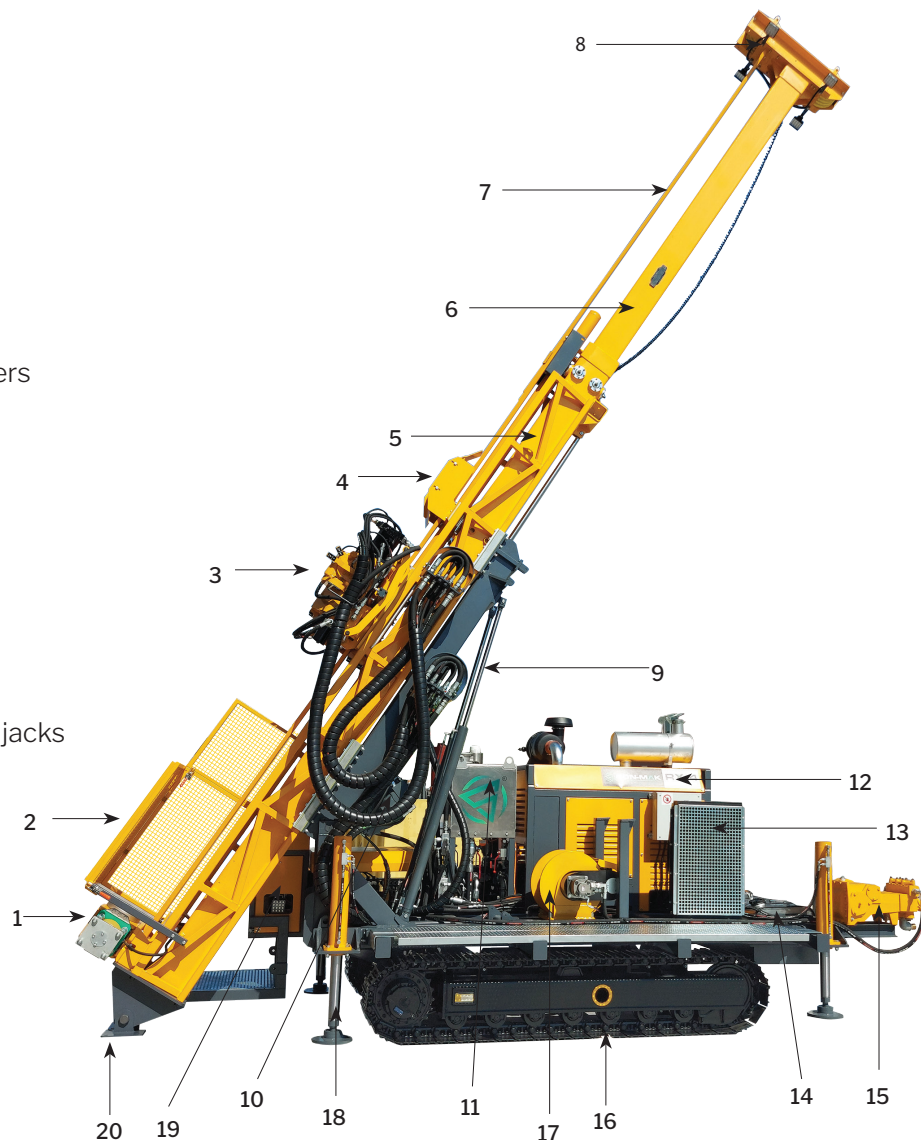
RX-4, can be mounted on 3 different chassis.

- Skid frame
- Wheel frame
- Crawler frame

RX-4 drilling rig, as progress is being achieved with the drilling rig hydraulic cylinder, more precise settings can be done.

RX-4 drilling rig, automatic rod removal and clamping feature allows high progress rate, optimal core percentage and big time save.

1. Rod holder
2. Head guard
3. Rotation unit
4. Rod centralizer
5. Feed frame
6. Telescopic mast
7. Rod guide
8. Crown block
9. Mast raising cylinders
10. Main hoist
11. Hydraulic oil tank
12. Power unit
13. Cooling circuit
14. Fuel tank
15. Fluid pump
16. Carrier
17. Wireline winch
18. Hydraulic leveling jacks
19. Control panel
20. Foot bracket



Technical Specifications

Drilling Depth 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 5MPa Tensile Strength. Son-Mak 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.

Drill Rod	Fluid Filled	
	Metric	U.S. System
BO / BRO Wireline	1375 m	4511 ft
NO / NRO Wireline	1050 m	3444 ft
NRO Thin Wall	1190 m	3904 ft
HO / HRO Wireline	720 m	2362 ft
HRO Thin Wall	900 m	2952 ft
PHD / PO Wireline	475 m	1558 ft
PHD Thin Wall	635 m	2083 ft

Rotation Unit

Rod sizes:	B-P
Power:	Hydraulic Motor
Transmission:	Funk 4 speed
Final Drive:	Straight cut gears
Ratio:	2:1
Rotation Unit Opener:	Side shift type - hydraulically actuated
Hydraulic P Chuck	Hydraulic Open, Closed by Gas Pressure
Spindle inner diameter:	127 mm (5 in)
Chuck axial holding force:	222 kN (50 000 lb)

Torque and RPM Ratings		Speed	Torque	
Spindle Speeds	Ratio	RPM	Nm	lbft
1st Gear	6.27:1	122-201	5320-3252	3923-2400
2nd Gear	3.12:1	246-403	2647-1620	1962-1195
3rd Gear	1.75:1	437-719	1485-907	1095-670
4th Gear	1.00:1	765-1245	848-520	625-383

System Power Unit

Cummins QSB 6.7 L, turbo charged, after cooled diesel engine.	Metric	U.S. System
Volume:	6.7 liter	1.77 gallons
Power:	164 kW	220 bhp
RPM:	2200	2200
Electrical System:	12V	12V
Cooling System:	Water	
Emmissions Certifications:	Stage III	Tier 3



Hydraulic System	Metric	U.S. System
Primary Pump:	165 l/min - 310 bar	43.5 gal/min - 4500 psi
Secondary Pump:	65 l/min - 210 bar	17.2 gal/min - 3045 psi
Auxiliary Pump:	43 l/min - 210 bar	11.4 gal/min - 3045 psi
Hydraulic Oil Cooling:	Air	

Mast and Feed System	Metric	U.S. System
Feed Stroke:	3.35 m	11 ft
Thrust Force:	88.4 kN	19880 lb
Pull Force:	167.7 kN	37700 lb
Mast Dump Travel:	2.35 m	7.7 ft
Mast Telescope:	3.35 m	11 ft
Drilling Angle:	45 to 90 degrees	45 to 90 degrees
Rod Pull Length:	3.05 m or 6.09 m on telescopic mast	10 ft or 20 ft on telescopic mast

Rod Holder	Metric	U.S. System
Maximum Rod Size (HWT)	114.3 mm	4.5 in
Holding Force:	178 kN	40015 lb
Type:	Hydraulically opens	

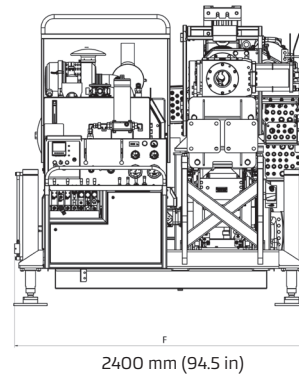
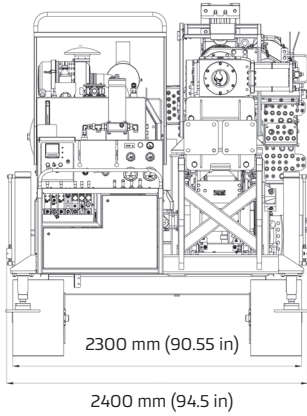
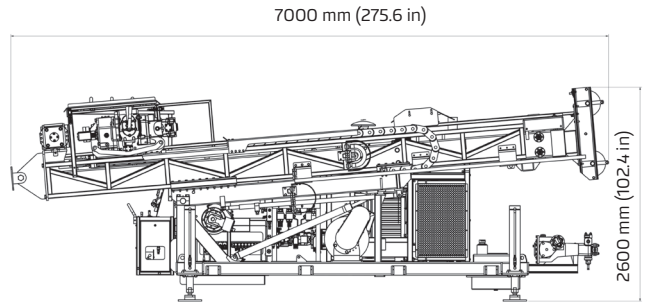
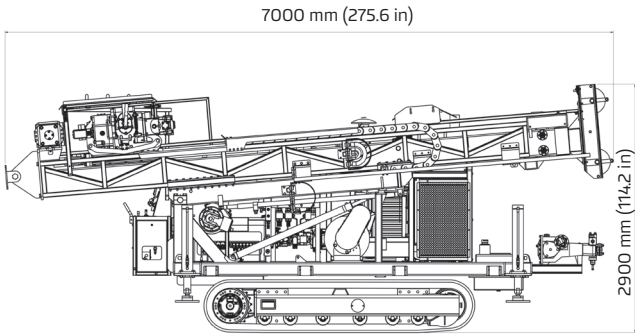
Wireline Hoist	Metric	U.S. System
Drum Capacity (4.76mm - 3/16" wire)	1800 m	5905 ft
Line pull min. (full drum)	3.5 kN	786 lb
Line pull max. (bare drum)	12 kN	2698 lb
Line speed min. (bare drum)	115 m/min	377 ft/min
Line speed max. (full drum)	420 m/min	1377 ft/min

***There is an automatic winding system to prevent the rope from making straight or mixed winding.

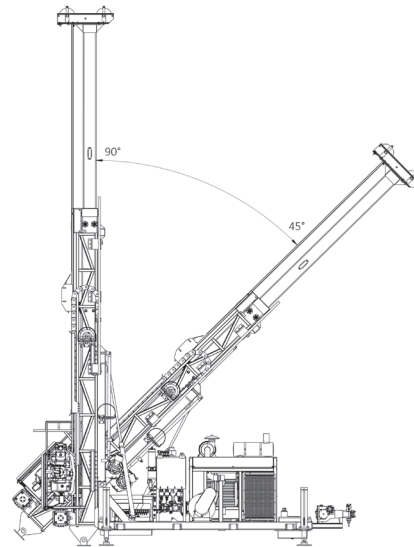
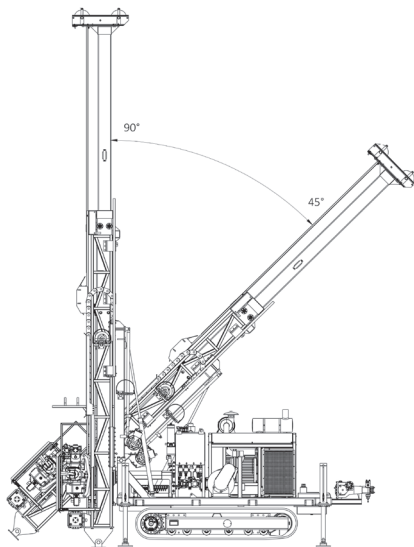
Main Winch	Metric	U.S. System
Single line capacity: (bare drum)	71.2 kN	16000 lb
Line speed:(bare drum)	35 m/min	114 ft/min
Cable size:	15 mm	0.59 in
Cable length:	35 m	114 ft

Mud Pump	Metric	U.S. System
TP135H		
Flow:	135 l/min	35 gal./min
Pressure:	70 bar	1000 psi

Transportation Dimensions



Working Dimensions



Weight

RX-4 Crawler: 11000 kg (24250 lb)

Weight

RX-4 Skid Frame: 8500 kg (18740 lb)





SON-MAK

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