



**RX-7**  
SURFACE CORING DRILL



## **RX-7** Surface Coring Drill Rig

RX-7 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-7 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, foldable mast and Gas Spring Rod Holder.

RX-7 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-7, 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-7, can be mounted on 3 different chassis.

- Skid frame
- Wheel frame
- Crawler frame

RX-7 drilling rig, as progress is being achieved with the drilling rig hydraulic cylinder, more precise settings can be done.

RX-7 drilling rig, automatic rod removal and clamping feature allows high progress rate, optimal core percentage and big time save.



# Technical Specifications

## Drilling Depth Capacity

The below drill depth capacities only serve as guidelines and refer to vertical down drilling. SON-MAK cannot guarantee that these results can be achieved in all drilling conditions.

| Drill Rod         | Fluid Filled |             |
|-------------------|--------------|-------------|
|                   | Metric       | U.S. System |
| BO / BRO Wireline | 3450 m       | 11318 ft    |
| NO / NRO Wireline | 2650 m       | 8694 ft     |
| NRO Thin Wall     | 3000 m       | 9842 ft     |
| HO / HRO Wireline | 1800 m       | 5905 ft     |
| HRO Thin Wall     | 2250 m       | 7411 ft     |
| PHD / PO Wireline | 1150 m       | 3772 ft     |
| PHD Thin Wall     | 1420 m       | 4658 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:      | Pivoting style - 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 | 144-199  | 5320-3825 | 3923-2820 |
| 2nd Gear               | 3.12:1 | 288-400  | 2647-1898 | 1952-1400 |
| 3rd Gear               | 1.75:1 | 514-714  | 1485-1065 | 1095-785  |
| 4th Gear               | 1.00:1 | 900-1250 | 848-610   | 625-450   |

## System Power Unit

| Cummins QSC 8.3, turbo charged, after cooled diesel engine. | Metric    | U.S. System  |
|---|-----------|--------------|
| Volume:   | 8.3 liter | 1.77 gallons |
| Power:  | 205 kW    | 275 bhp      |
| RPM:  | 2200      | 2200         |
| Electrical System:  | 12V       | 12V          |
| Cooling System:   | Water     |              |
| Emmissions Certifications:                                  | Stage III | Tier 3       |

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| <b>Hydraulic System</b> | <b>Metric</b>       | <b>U.S. System</b>    |
|-------------------------|---------------------|-----------------------|
| Primary Pump:           | 318 l/min - 310 bar | 84 gal/min - 4500 psi |
| Secondary Pump:         | 72 l/min - 210 bar  | 19 gal/min - 3000 psi |
| Auxiliary Pump:         | 42 l/min - 140 bar  | 11 gal/min - 2000 psi |
| Hydraulic Oil Cooling:  | Air                 |                       |

| <b>Mast and Feed System</b> | <b>Metric</b>                        | <b>U.S. System</b>                   |
|-----------------------------|--------------------------------------|--------------------------------------|
| Feed Stroke:                | 3.35 m                               | 11 ft                                |
| Thrust Force:               | 117,9 kN                             | 13480 lb                             |
| Pull Force:                 | 223.6 kN                             | 31000 lb                             |
| Mast Dump Travel:           | 2.74 m                               | 3.9 ft                               |
| Mast Telescope:             | 2.87 m                               | 11 ft                                |
| Drilling Angle:             | 45 to 90 degrees                     | 45 to 90 degrees                     |
| Rod Pull Length:            | 6.0 m or 9.0 m<br>on telescopic mast | 20 ft or 30 ft<br>on telescopic mast |

| <b>Rod Holder</b>      | <b>Metric</b> | <b>U.S. System</b> |
|------------------------|---------------|--------------------|
| Maximum Rod Size (HWT) | 114.3 mm      | 4.5 in             |
| Holding Force:         | 178 kN        | 40015 lb           |

| <b>Wireline Hoist</b>              | <b>Metric</b> | <b>U.S. System</b> |
|------------------------------------|---------------|--------------------|
| Drum Capacity (6.35mm - 1/4" wire) | 3200 m        | 10500 ft           |
| Line pull min. (full drum)         | 9.5 kN        | 2130 lb            |
| Line pull max. (bare drum)         | 17.2 kN       | 3880 lb            |
| Line speed min. (bare drum)        | 160 m/min     | 525 ft/min         |
| Line speed max. (full drum)        | 285 m/min     | 932 ft/min         |

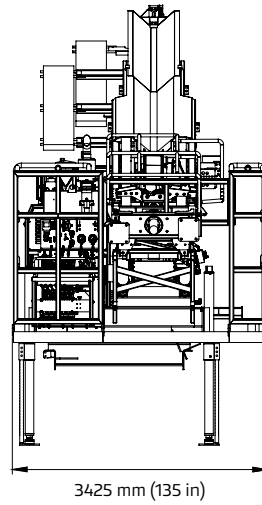
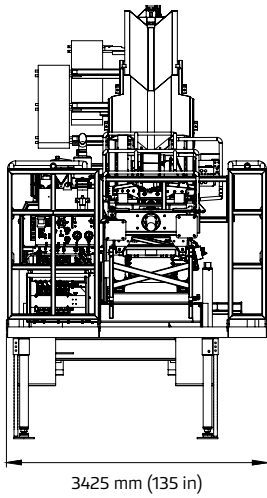
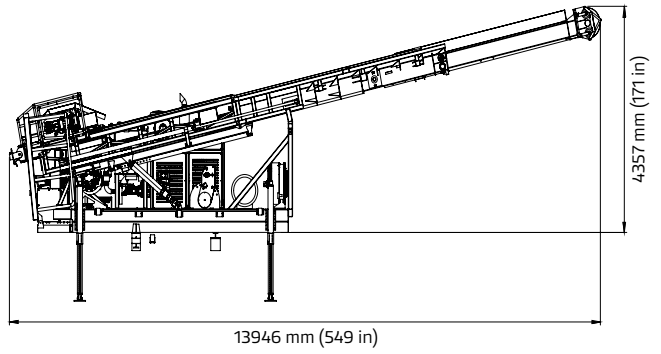
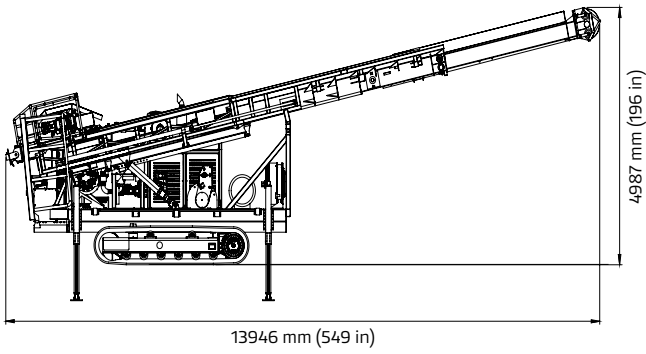
\*\*\*There is an automatic winding system to prevent the rope from making straight or mixed winding.

| <b>Main Winch</b>                 | <b>Metric</b> | <b>U.S. System</b> |
|-----------------------------------|---------------|--------------------|
| Single line capacity: (bare drum) | 180 kN        | 40000 lb           |
| Line speed: (bare drum)           | 72 m/min      | 236 ft/min         |
| Cable size:                       | 22 mm         | 7/8 in             |
| Cable length:                     | 29 m          | 96 ft              |

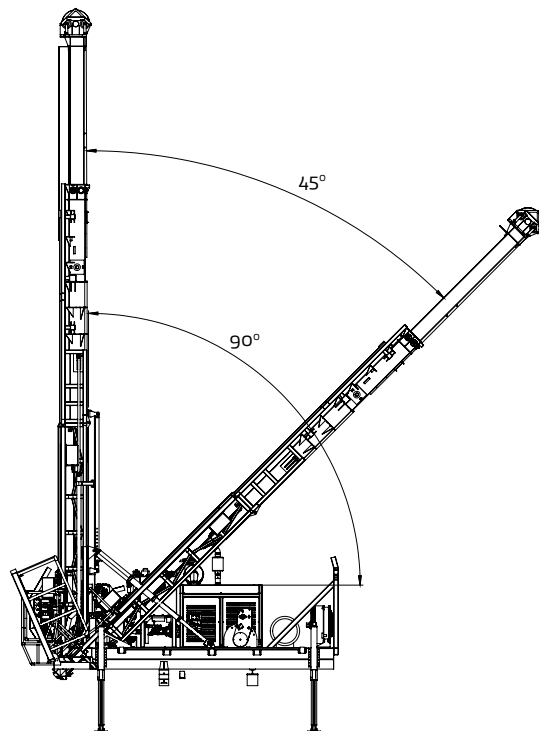
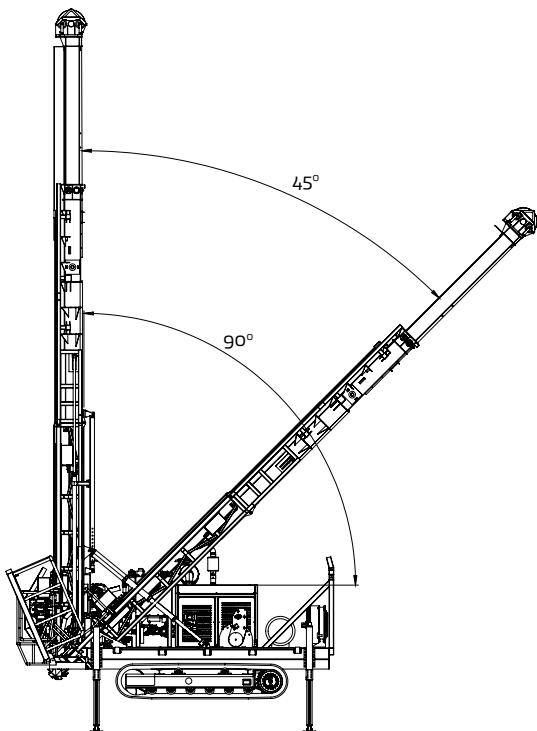
| <b>Mud Pump</b> | <b>Metric</b> | <b>U.S. System</b> |
|-----------------|---------------|--------------------|
| <b>TP220H</b>   |               |                    |
| Flow:           | 200 l/min     | 52.8 gal./min      |
| Pressure:       | 70 bar        | 1000 psi           |



# Transportation Dimensions



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### Weight

RX-7 Crawler: 21.000 kg (46.300 lb)

### Weight

RX-7 Trailer: 13.650 kg (30.000 lb)



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