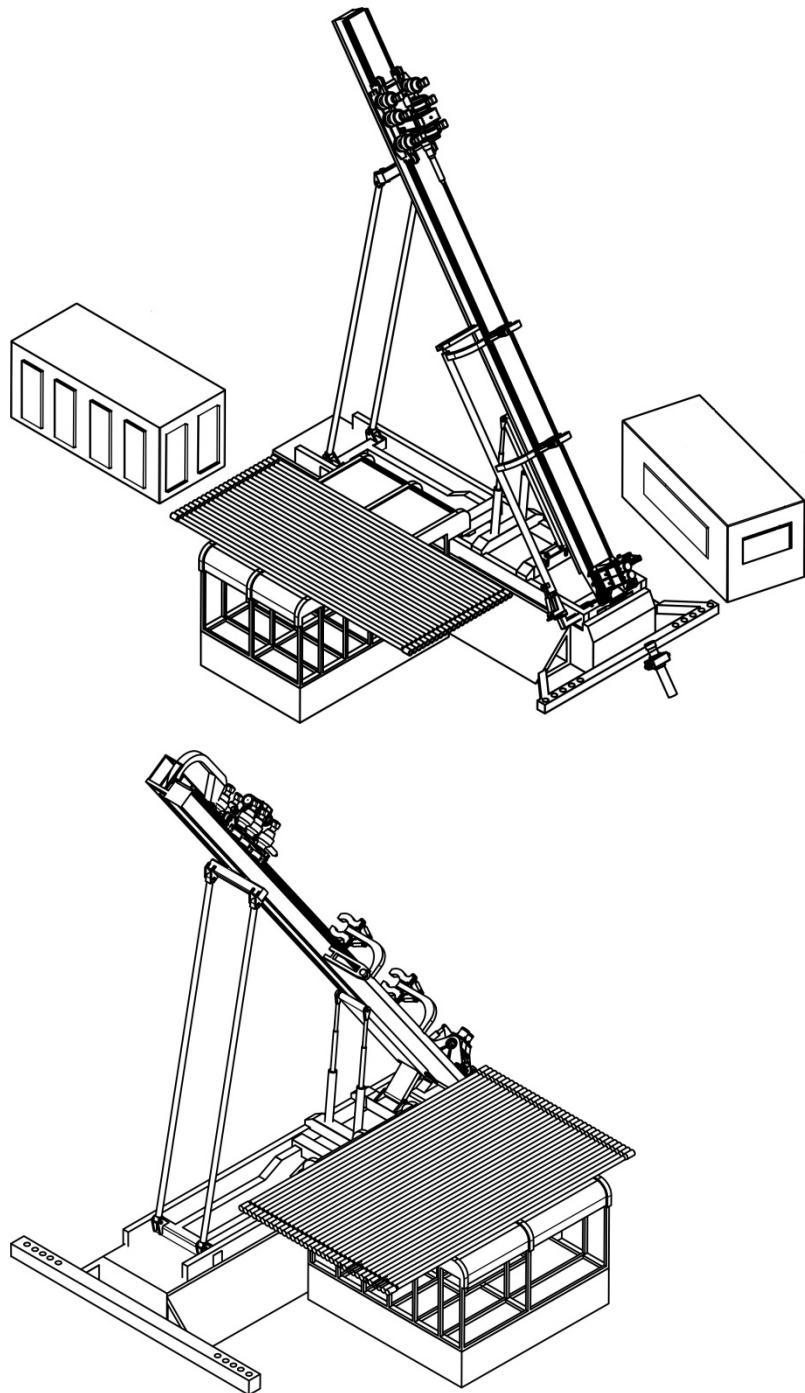


RX250×900V Multi-Functional Drilling Rig

Main Machine

The maximum feeding / push-pull power of the RX250×900V multi-functional rig is 250 tons, which can drill inclined and straight holes with drilling angle from 12° to 90°. This rig has foundation base, which is easy to be installed. Meanwhile, the main machine has the robot hand changing the drill rods automatically.

The whole drilling rig adopts split type layout, which is divided into: base, main machine, robot hand, power station, wellhead clamp holder, control chamber.



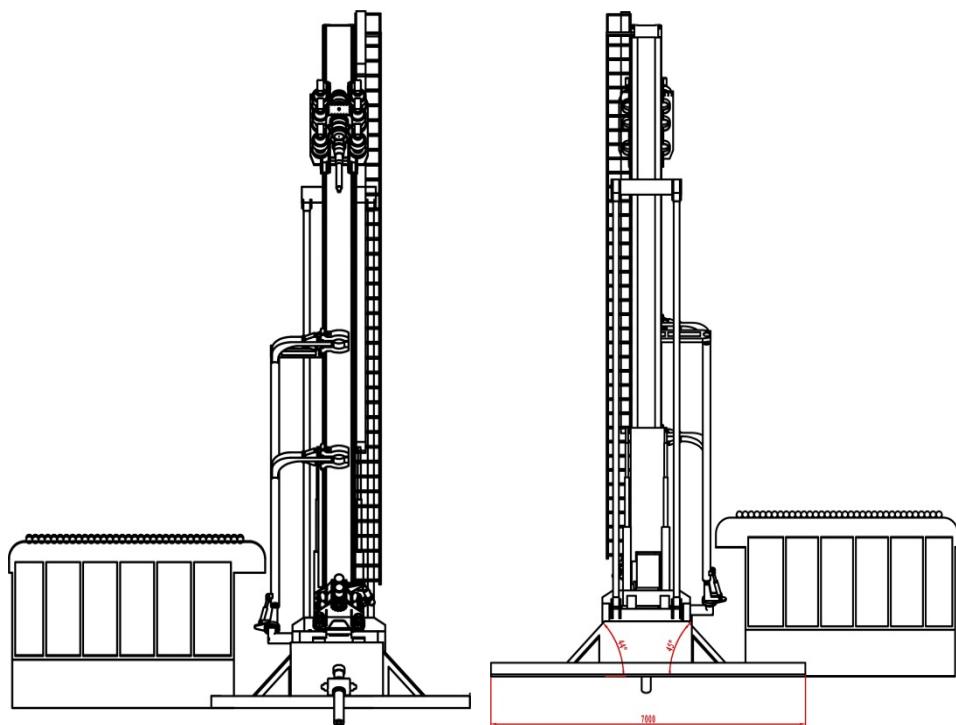
Main Machine Base

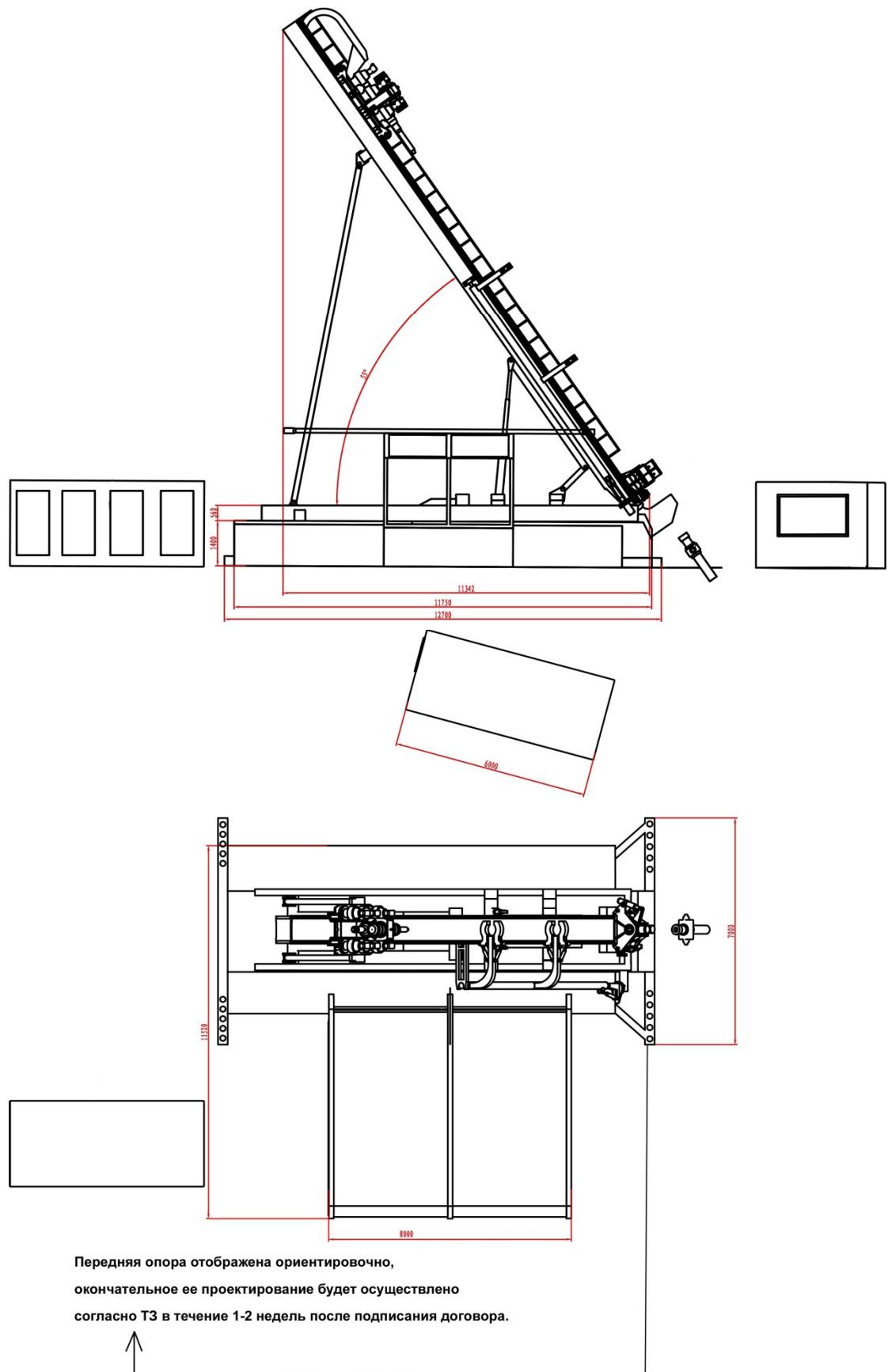
The rig is mounted on the base. The base should be strong enough, and easy to install.

The base consists of eight parts - in order to facilitate transport.

- **Foundation Base** (on the top of which displays the rig), composed by two parts, length and width, respectively: 6 m and 2.5 m
- **Side Ramp** (which is installed on the side of the base), composed by four parts, with the length of 6m and the angle of 45° .
- **Back and Forth Riveting Plate**, composed by two parts, with the length of 7m, see the following picture: (the open file distance from the middle is 300mm)

All parts are connected with the bolts.





Automatic Device for Loading and Unloading Drill Rods

The function of the robot hand is for loading and unloading drill rods or casings. The maximum clamping diameter should be 451mm.

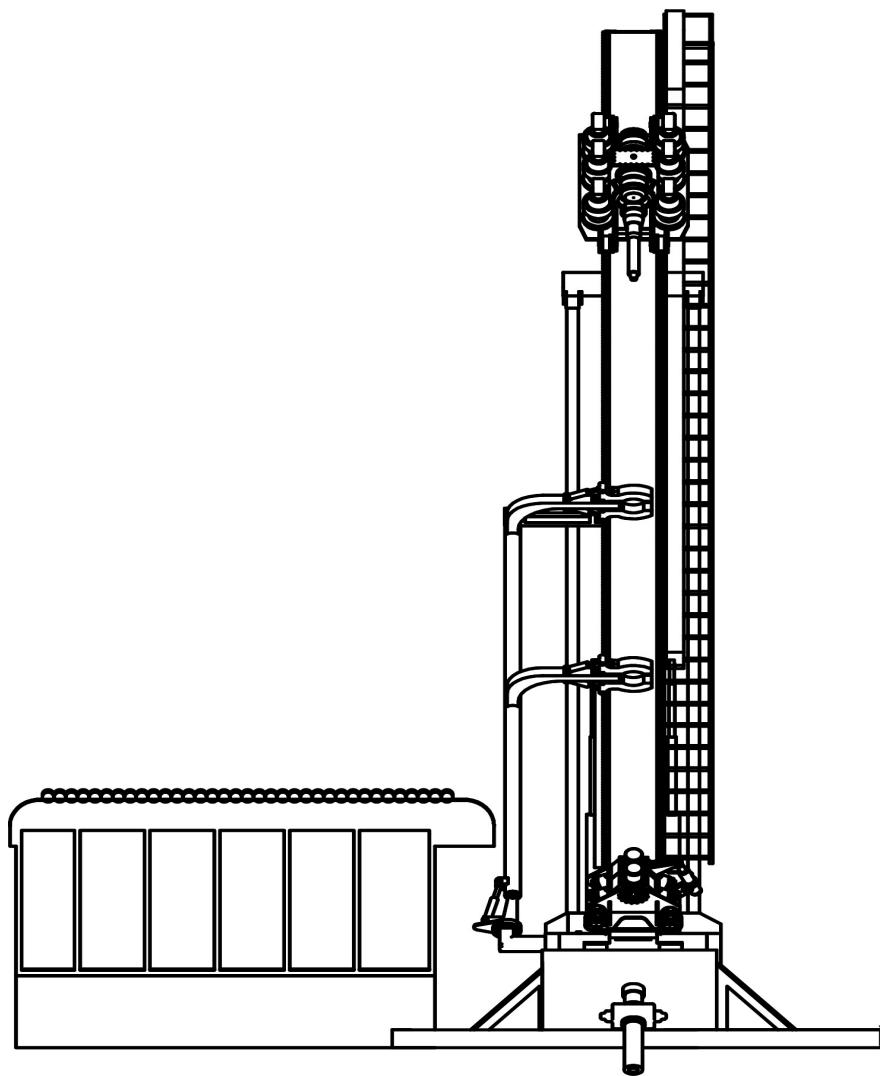
The role of the drill rod rack is to put the drill rods or casings in the suitable position. The length of the drill rod rack should be 8m.

The device should be able to fit all the drilling angles and should give full consideration to the bending caused by the movement of the drill rods and casings. At the same time, the safety should be ensured, the displacement such as falling down of the drill rods/casings should not be allowed. All of the safety factors should be greater than 2.

The position of the drill rods on the rack should be controlled by the means of hydraulic or electric, no manual intervention.

All the controls should be carried out in the driving room.

Please see the picture below for the specified placement:



Technical Data

Technical Date of the Main Machine		
Drilling Rig	Gearing Mode	Gear Rack
	Clamping Range of the Robot Hand	102 – 450 (mm)
	Maximum Length of the Drill Rod/Casing It clamps	12.5m
Push & Pull part of the Power Head	Maximum Feed/Pull & Push Power	2 550 (kN)
	Movement Speed of the Power Head	0-27 (m/min)
	Push & Pull Motor with A Brake (REXROTH)	6 PCS
	Adjusting Gear of the Feed/Pull & Push Speed	2
	Low Speed	Feed Force
		Pull-Back Force
		Movement Speed
	High Speed	Feed Force
		Pull-Back Force
		Movement Speed
Gyratory Part of the Power Head	Quantity of Gyratory Motors (REXROTH)	4PCS
	Hole Diameter of the Water Swivel	76.2 (mm)
	Floating Routes of the Spindle	180 mm
	Gear of Gyratory Speed	2
	Low Speed	Rotate Speed
		Maximum Torque
	High Speed	Rotate Speed
		Maximum Torque
Clamping Shackle Device	Diameter Range the Clamp Holder	102 – 451mm
	Mode of Tightly Clamp the Drill Rods	Clamping in 3 Directions
	Maximum Shackle Torque of the Shackle Device	196 000 (Nm)
	Maximum Tighten Torque of the Shackle Device	98 000 (Nm)
Wellhead Clamp Holder	Wellhead Clamp Holder Tightly Clamp the Drill Rods in Four Directions, Which Can Bear the Tension of	150 (ton)
	Diameter Range of the Clamping	102 – 451mm
Drilling Angles	12-90°	
Mast Heating	Yes	
Dimension & Weight		
Weight of the Platform	12 000 (kg)	
Weight of the Rig	30 000 (kg)	
Drill Rod Rack(Drill Rod Box)	4 000 (kg)	
(L×W×H) Transportation Dimension	18,500×2,500×3,200 mm	

Other Requirements

1. The diameter range of the clamp holder, wellhead and the robot hand shall be carried out in accordance with the 102-451mm.
2. Install the blowout preventer

Wellhead clamp holder can load 250 tons, with the clamp diameter of 102-451mm, should be controlled from the driving room

3. The need of paint coating shall be in accordance with the demand of customers.

Operating Room

The operating room is installed in a standard 20ft container, equipped with heaters and air conditioners.

All instruments of drilling rig are set on the console.

The control of the blowout preventer should be in the driving room.

The operator's seat should to be able to rotate and move.

There should be video monitoring system in the operating room-- eight cameras, two screens (40 inches), at the same time there should be the device with the ability to store video data of 30 days.

It is also should be equipped with external radio system.

The operating room adopts external power system, 10kw external power supply should be applied (configured by the user)

Technical Data of the Operating Room		
Control	Function	Appearance Inspection
Main Machine	Feed and Pull Back Force at Low Speed of the Power Head	Aseismic Hydraulic Gauge
	Feed and Pull Back Force at High Speed of the Power Head	Aseismic Hydraulic Gauge
	Gyrate at the Low Speed	Aseismic Hydraulic Gauge
	Gyrate at the High Speed	Aseismic Hydraulic Gauge
	The Movement of the Part Shacking/Tightening the Drill Rod	Aseismic Hydraulic Gauge
	The Part for Shacking/Tightening the Drill Rod	Aseismic Hydraulic Gauge
	Supporting Part to Control the Mast	Aseismic Hydraulic Gauge
Hydraulic Wellhead	Hydraulic Wellhead	Aseismic Hydraulic Gauge
Power Station	Adjustment of the Start and Speed of the Diesel Engine	Electric Apparatus
	Pressure of each Hydraulic Pump	Aseismic Hydraulic Gauge

	Rotate Speed, Oil Pressure, Water Temperature, Electric Pressure, etc	Electrical Gauge
	The Fuel Level of the Diesel Tank	Electrical Gauge
	The Pollution Indicators for All the Filters	Aseismic Hydraulic Gauge & Light Signal
	The Gauge of Low Level Hydraulic Oil	Electrical Gauge
Blowout Preventer	Voltage Switch-Five Blowout Preventers	
Video Monitoring System	The Monitoring System to the Main Machine, Can Observe the Drilling, Mask, the Gyratory Part of the Power Head, Shacking and Tightening the Drill Rods	
Lighting System	Two LED Lights Outside the Operating Room	
	Two LED Lights Inside the Operating Room	
Communication System	Broadcasting System Outwards	
Operator's Seat	Move Back & Forth, Rotate	
Air Condition of the Operating Room	1 (pic)	
Heating System of the Operating Room	4 (pic)	
Dimension & Weight		
Dimension	6.10×2.44×2.59 (m)	
Weight	7000 (kg)	
Container	20 (ft)	

Power Station

Technical Data of the Power Station		
Diesel Engine	Model	WEICHAI-STEYR
	Power	2×243 (kW)
	Quantity of Oil Cylinders	6
	Rotate Speed	2 200 (rpm)
	Cooling Mode	Water
	Hourly Oil Consumption When it Arrives at 1500RPM	2×40.8 (L/h)
Diesel Engine Heating System		+
Hydraulic Oil Tank Heating System (electric heater 220wt)		+
Diesel Tank Capacity		1 000 (L)
Capacity of Hydraulic Oil Tank		1 000 (L)
Dimension & Weight		
Weight		12 000 (kg)
Dimension		6.10×2.44×2.59 (m)
Container		20 ft

