JERRYMETALS
Onshore and Offshore Drilling Equipments

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DRILLING RIG

Oil Drilling Rig can be used in exploration and exploitation of oil and gas well.

All products conform to API Spec. 4F, 7K, 8A, and acquired the certificate of authority to use the official API monogram.

Technical Performance

1. Electric-drive drilling rig: The drive mode of DC electric-drive drilling rig is AC-SCR-DC, while AC electric-drive drilling rig is AC-DC-AC; it is equipped with a complete diesel generator as the power source. Drawworks adopts hydraulic disc brake and the EATON auxiliary brake， etc. Drawworks, Mud Pump and Rotary Table can be driven by independent motors (Rotary table can be driven compound). K type mast, self-lifting or spin-lifting substructure, mast and substructure are raised integrally. The rig is controlled concentratively in Driller's control cabin and achieves automatic bit feeding function. The auxiliary brake of AC-VFD drilling rig is dynamic brake
2. Combined drive drilling rig: The rig's drive mode is that the diesel engines provide power and integrated chain compound box transmits power. Drawworks adopts sealed chain transmission with hydraulic disc brake, etc. Drawworks and Mud Pump are driven uniformly. Rotary Table is driven by AC frequency converter and equipped with VFD system; K type mast; Substructure adopts box on box type or spin-lifting type; Mast and substructure are installed at ground level and raised integrally.
3. Mechanical drive drilling rig: The rig's drive mode is that the diesel engines provide power and the belt compound device transmits power. Drawworks adopts sealed chain driving with band brake system. Drawworks, Rotary Table, Mud Pump are driven uniformly. A type or K type mast. Substructure adopts box on box type or spin-lifting type. Mast is installed at ground level and raised integrally.

4000m digital-control VF electric rig

Major features:

It adopts integrated design of mechanical, electrical, hydraulic, pneumatic and digital control, utilizes fully the advantages of advanced digital control AC VF electric transmission, and simplifies its mechanical structure.

As adopting of slingshot type substructure, drill floor equipments and driller cabin etc realize low-position installation and integer lifting.

Electric transmission adopts vector VF drive system to realize all digital operation and control, and also processes elementary functions of automation, intelligence and information to realize collection (signal), display, restoration, printing, remote monitoring and management of control and drilling parameters.

By the use of VF technology, DW realizes max torque output when its speed is zero to ensure the suspension function of rig lifting system, which change traditional driller operation mode completely.

This rig is equipped with an integral driller's cabin, in which a driller can finish major operations.

Main technical parameters:

ZJ40/2250DBS Rig

1	Nominal drilling depth	2500 ~ 4000m （ 114mmDP ） 2000 ~ 3200m （ 127mmDP ）	10	Substructure type	slingshot type
2	Max hook load	2250kN	11	Substructure height and clear height under RT beam	7.5m ， 6.26m
3	Wire rope system of traveling system	5×6 ， parallel	12	Mast type and effective height	K TYPE ， 43m
4	DW rated power	1000kw	13	Transmission mode	AC-VFD-AC, one-on-one mode
5	DW gear	One gear stepless speed regulation	14	Quantity and power of main generator set	3× 1200 kw
6	Diameter of drilling	φ 32mm	15	Quantity and power of auxiliary generator set	1x292kw

	wire rope				
7	RT opening diameter	698.5mm （ 27 1/2″ ）	16	Quantity and power of AC motor	3×1000kW+1×45kw+1x600kw
8	RT gear	One gear stepless speed regulation	17	HP mud manifold	Φ 103mm （ bore diameter ） ×35MPa
9	Quantity and power of drilling pump	2× 1300 hp	18	Effective mud volume of solid control system	260m^3

● 4000m compound rig

Major features:

Major parts of the rig adopt mechanical transmission mode, of which the maintenance and control is simple and the cost performance is high.

Rig power is supplied by three diesel engines that adopt belt paralleling; it has the advantages of low running cost and environment pollution.

DW is installed at lower position, and it is convenient to transportation.

DW main brake is hydraulic disc brake which has big brake torque, and it's safe and reliable.

Main technical parameters:

ZJ40/2250J Rig

1	Nominal drilling depth	4000m （ 114mmDP ）	9	Quantity and power of drilling pump	2× 1300 hp	
		3200m （ 127mmDP ）	10	Substructure type	Block package type	box-on-box type
2	Max hook load	2250kN	11	Substructure height and clear height under RT beam	7.5m ， 6.3m	6m ， 4.8m
3	Wire rope system of traveling system	5×6 ， parallel	12	Mast type and effective height	K TYPE ， 43m	
4	DW rated power	735kW （ 1000hp ）	13	Transmission mode	Hydraulic transmission + belt	

						paralleling
5	DW gear	4 forward+ 2 reverse	6 forward+ 2 reverse	14	Quantity and power of main generator set	3×810kW
6	Diameter of drilling wire rope	φ 32mm		15	Quantity and power of auxiliary generator set	2×400kW
7	RT opening diameter	698.5mm （ 27 1/2″ ）		17	HP mud manifold	Φ 103mm （ bore diameter ） ×35MPa
8	RT gear	4 forward+ 2 reverse	6 forward+ 2 reverse	18	Effective mud volume of solid control system	260m^3

● 4000m mechanical rig

Major features:

K type mast is made of H steel, and has the advantages of wide eyeshot and convenient transportation.

The substructure is Block package type; while drawworks and mast adopt low-position installation and being lifted upon drawworks power.

Drawworks is a seal type chain transmission drawworks which has 4 forward gears+2 reverse gears (or 6 forward gears+2 reverse gears), and it equips auxiliary drive device for mast lifting and emergency lifting.

This rig is equipped with an integral driller's cabin, in which a driller can finish major operations and controls.

Between each part of rig transmission system adopt cardan shaft connection, which is convenient to install and disassemble.

Overall layout of the rig is reasonable, while its modularization can meet the requirements of integrally lifting, train and truck transportation.

The rig has advantages of wide matching range, high mechanization degree and good operation adaptability

Main technical parameters:

ZJ40/2250L Rig

1	Nominal drilling depth	2500 ～ 4000m （ 114mmDP ）		9	Quantity and power of drilling pump	2× 1300 hp
		2000 ～ 3200m （ 127mmDP ）		10	Substructure type	Block package type
2	Max hook load	2250kN		11	Substructure height and clear height under RT beam	7.5m ， 6.3m
3	Wire rope system of traveling system	5×6 ， parallel		12	Mast type and effective height	K TYPE ， 43m
4	DW rated power	735kW （ 1000HP ）		13	Transmission mode	hydraulic transmission and chain paralleling
5	DW gear	4 gears	6 gears	14	Quantity/power of main diesel engine	3x810kw
		4 forward+ 2 reverse	6 forward+ 2 reverse	15	Quantity and power of auxiliary generator set	1X400kw +1X220 kw
6	Diameter of drilling wire rope	φ 32mm				
7	RT opening diameter	698.5mm （ 27 1/2″ ）		16	HP mud manifold	φ 102mm （ bore diameter ） ×35MPa
8	RT gear	4 forward+ 2 reverse	6 forward+ 2 reverse	17	Effective mud volume of solid control system	260m^3