

## DC ELECTRIC DRILLING RIG

Drawworks, mud pump, rotary table driven by DC electrical system. DC Electric Drilling Rig suits to the land and offshore deep and super deep water operation.

### TECHNICAL FEATURES

- Adopting advanced AC-SCR-DC technology, smooth shift changes are available for drawworks, rotary table and mud pumps for optimum drilling performance.
- Both swing lift and sling-shot parallel-integrated substructures with 9m and 10.5 m floor height are optional. All parts on rig floor and mast are installed on ground and raised with drawworks power.
- Main brake of drawworks can be hydraulic disc brake or band brake. Auxiliary brake of drawworks is air-cooled or water-cooled electric magnetic eddy brake, or pneumatic disc brake.
- Rotary table is driven by drawworks power through compound drive or by an independent motor. In addition, emergency device is provided to drive rotary table via drawworks once in emergency for reliable drilling operations.
- A separate driller cabin is fitted. Operations for air, electric and hydraulic, drilling data and parameters are all in the cabin. Logic control, supervision and maintenance during complete drilling operations are available by PLC processes. The drilling data can be stored, printed and remote transmitted.
- Integrated skid rail may be provided to meet requirements for cluster well drilling.
- Top drive drilling system can be equipped.



## TECHNICAL PARAMETER

Drilling rig model		ZJ40/2250D	ZJ50/3150D	ZJ70/4500D
Nominal drilling depth, m	127mm(5") drill pipe	2000-3200	2800-4500	4000-6000
	114mm(4 1/2" ) drill pipe	2500-4000	3500-5000	5000-7000
Max. hook load, kN (t)		2250 ( 225 )	3150 ( 315 )	4500 ( 450 )
Hook speed , m/s		0-1.4	0-1.49	0-1.51
Line strung of hoisting system		10	12	12
Drill line diameter, mm		32	35	38
Max. pull of fast line, kN		280	350	487
Drawworks	Model	JC-40D	JC-50D	JC-70D
	Power rating, kW (HP)	735 ( 1000 )	1100(1500)	1470(2000)
	Speed	4	4	4
Main brake		Hydraulic disc brake		
Auxiliary brake		Eddy or pneumatic disk brake		
Crown block		TC-225	TC-315	TC-450
Traveling block		YC-225	YC-315	YC-450
Sheave OD of hoisting system, mm (in)		1270(50)	1270(50)	1540(60.6)
Hook		DG-225	DG-315	DG-450
Swivel	Model	SL-450	SL-450	SL-450
	Stem dia. , mm	75	75	75
Rotary table	Table opening, mm (in)	698.5(27 1/2)	952.5(37 1/2)	952.5(37 1/2)
	Speed	I or II, smooth change	I or II, smooth change	I or II, smooth change
	Drive mode	Independent electric drive	Independent electric drive or compound drive	Independent electric drive or compound drive
Mast	Type	K	K	K
	Height, m	44	45	45
	Max. load, kN(lbs)	2250(500000)	3150(700000)	4500(1000000)
	Racking board height,m	24.5, 25.5, 26.5		
Substructure	Type	sling-shot	Swing lift or sling-shot	
	Floor height,m	7.5	9	9 (10.5)
	Clear height,m	6	7.6	7.6 (9)
Mud pump	Model × number	F-1000 × 2	F-1600 × 2	F-1600 × 3
	Drive mode	DC electric		
High pressure manifold		Φ 103( bore dia. ) × 35MPa		
Electric drive mode		AC-SCR-DC, one for one or one for two control		
The number and capacity of the main generator sets		2 × 1910KVA	3 × 1500KVA	4 × 1500KVA