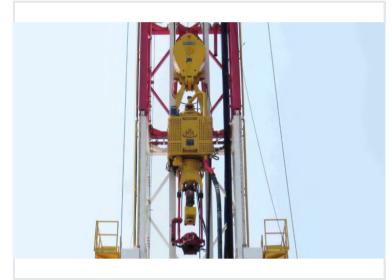
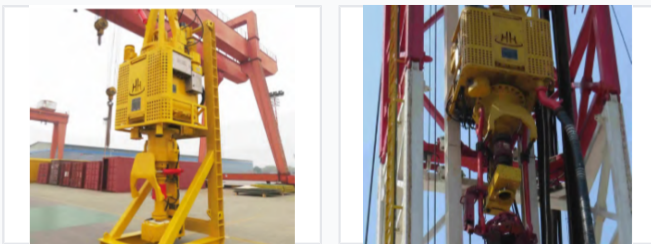


Direct Drive Top Drive Drilling System

This direct drive top drive system directly powers the main shaft, reducing energy loss and enhancing mechanical efficiency. The integrated hydraulic system responds quickly, ensuring minimal hydraulic pressure loss for the actuator.



ADDITIONAL IMAGES



Overview

High-Efficiency Direct Drive Technology

This Direct Drive Top Drive Drilling System utilizes a motor that directly drives the main shaft, significantly reducing transmission energy loss while increasing mechanical efficiency and reliability. The system features an integrated hydraulic design for rapid response and minimal pressure loss, alongside a simplified structure that eliminates gear lubricating oil systems for easier maintenance. Designed for versatility, it supports both drilling and casing operations with flexible connections for various rig configurations.

Performance Highlights

Performance Highlights

1000 ton

Max Load Capacity

1600 kW

Max Rated Power

201000 N-m

Max Breakout Torque

Operational Specifications

Working Environment Temperature	-40 to +55
Applicable Power Supply	600VAC, 690VAC, 50Hz, 60Hz

Technical Features

Core System Features

- Direct drive main shaft for higher mechanical efficiency
- Integrated hydraulic system for quick response
- Non-gear lubricating oil and cooling filtration system
- Safe guide rail installation without high construction
- Flexible bails for hook or travelling block connection
- Dual elevator link pairs for drilling and casing

Optional Enhancements

Anti-slip Vibration System • Angle Control System • Independent VFD • Integrated Rig VFD Sharing

Model Comparison

Technical Parameters

Model	DQ250Z	DQ250Z-1	DQ350Z	DQ500Z-1	DQ500Z	DQ500Z-2	DQ750Z	DQ1000Z
Max. Load (API BC)	250	250	350	500	500	500	750	1,000
ton	250	250	350	500	500	500	750	1,000
Motor Rated Power	335	416	500	700	700	800	1,080	1,400
kW	335	416	500	700	700	800	1,080	1,400
HP	450	550	670	940	940	1,070	1,450	1,870
Speed-rotating Range	0-187	0-182	0-220	0-220	0-220	0-220	0-220	0-260
RPM	0-187	0-182	0-220	0-220	0-220	0-220	0-220	0-260
Working Torque	30,000	40,000	45,000	60,000	70,000	80,000	90,000	130,000
N·m	30,000	40,000	45,000	60,000	70,000	80,000	90,000	130,000
ft·lb	22,128	29,504	33,190	44,256	51,632	59,008	66,384	95,830
Max. Breakout Torque	50,000	60,000	67,500	90,000	105,000	120,000	145,000	201,000
N·m	50,000	60,000	67,500	90,000	105,000	120,000	145,000	201,000
ft·lb	36,880	44,256	49,788	66,384	77,448	88,512	106,960	147,250
IBOP Rated Working Pressure	105	105	105	105	105	105	105	105
MPa	105	105	105	105	105	105	105	105
psi	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
Upper IBOP Thread	API Reg. Box-6.58	API Reg. Box-6.58	API Reg. Box-6.58	API Reg. Box-6.58	API Reg. Box-6.58	API Reg. Box-6.58	API NC20 Box-8.58	API Reg. Box-8.58
Lower IBOP Thread	API Reg. Box-6.58	API Reg. Box-6.58	API Reg. Box-6.58	API Reg. Box-6.58	API Reg. Box-6.58	API Reg. Box-6.58	API NC20 Box-8.58	API Reg. Box-8.58
Clamp Range for Back-up Wrench (Nomote)	88-217	88-217	88-217	88-217	88-217	88-217	88-254	88-254
mm	88-217	88-217	88-217	88-217	88-217	88-217	88-254	88-254
in	3 3/8-8 1/2	3 3/8-8 1/2	3 3/8-8 1/2	3 3/8-8 1/2	3 3/8-8 1/2	3 3/8-8 1/2	3 3/8-10	3 3/8-10
Quill Rated Working Pressure	35	35	52	52	52	52	52	52
MPa	35	35	52	52	52	52	52	52
psi	5,000	5,000	7,500	7,500	7,500	7,500	7,500	7,500
Quill I.D.	75	75	75	75	75	75	89	102
mm	75	75	75	75	75	75	89	102
in	3	3	3	3	3	3	3 1/2	4
Draking Torque	30,000	40,000	45,000	60,000	70,000	80,000	90,000	130,000
N·m	30,000	40,000	45,000	60,000	70,000	80,000	90,000	130,000
ft·lb	22,128	29,504	33,190	44,256	51,632	59,008	66,384	95,830
kg	12,300	13,000	14,500	16,600	18,000	19,000	20,000	30,000
Weight	27,116	28,600	31,900	36,596	39,693	41,887	67,900	85,980
lb	27,116	28,600	31,900	36,596	39,693	41,887	67,900	85,980

Comprehensive technical specifications for the DQ series direct drive top drives, covering load capacity, torque, and power ratings.

Technical Parameters by Model

Model	Max Load (ton)	Rated Power (kW)	Max Torque (N·m)	Weight (kg)
DQ250Z	250	335	30000	12300
DQ350Z	350	500	45000	14500
DQ500Z	500	700	70000	18000
DQ750Z	750	1080	90000	30600
DQ1000Z	1000	1600	134000	39000

Mechanical Details

IBOP Rated Working Pressure

105 MPa

Quill Internal Diameter

102 mm