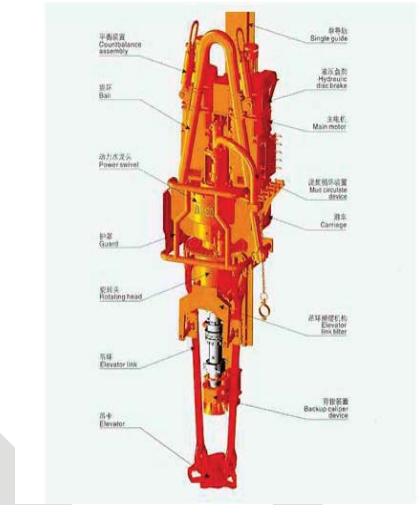


TOP DRIVE SYSTEM

Top Drive System

Top Drive System is one great technological revolution for rig to replace Kelly and rotary table. Top Drive System can drill with triples instead of singles to reduce two-thirds volume of work of makeup and breakout, which greatly increases drilling speed. The advantages of TDS is if there's block up or struck in tripping, you can rotate the drill string while circulating mud flow so it can reduce drilling accidents. Top Drive System can increase the level of mechanization of operation together with the wellhead system which can reduce the worker's labor intensity and the amount of operators. Especially in the directional well and cluster well, TDS is an integrative system that consists of mechanical manufacturing, hydraulic controlling, electric engineering and many other technologies, and the reliability is the key criterium to inspect performance and manufacturing level of top drive drilling system.



Top Drive System

Technical Specification for AC Electric Top Drive

Model	PPGL-TD40B	PPGL-TD50B	PPGL-TD70BS	PPGL-TD40BQ	PPGL-TD20B
Drive model	AC VFD	AC VFD	AC VFD	AC VFD	AC VFD
Rated Drilling Depth	4000m	5000m	7000m	4000m	2000m
Rated Load Capacities (ton)	250ton	350ton	500ton	250ton	1350kN
Power Supply	600VAC/50HZ	600VAC/50HZ	600VAC/50HZ	600VAC/50HZ	600VAC/50HZ
Rated Power (hp)	315KW	375KW	295KW*2	375KW	250KW
Rotary Speed	0~180r/min	0~180r/min	0~230r/min	0~180r/min	0~180r/min
Drilling Torque(continuous)	33KN.m	40KN.m	55KN.m	40KN.m	26kN.m
Max. Torque of Break Out	50KN.m	60KN.m	82KN.m	60KN.m	39kN.m
Backup Tong Range	87~216mm	87~216mm	87~216mm	87~216mm	87~216mm
Hydraulic System Working pressure	16MPa	16MPa	16MPa	16MPa	16MPa
Rated Pressure of IBOP	70MPA	70MPA	70MPA	70MPA	70MPA
Mud Circulating Diameter	62mm	75mm	75mm	75mm	62mm
Rated Circulating Pressure	35MPA	35MPA	35MPA	35MPA	35MPA
Max. Distance between Main Shaft Center and The Front End(in)	570mm	705mm	930mm	650mm	463mm
Main Body Height	4.8m	5m	5.5m	5.2m	4m
Ambient Temperature	-45~55°C	-35~55°C	-35~55°C	-35~55°C	-45~55°C

Technical Specifications for Hydraulic Top Drive

Model	PPGL-TD40HY	PPGL-TD20HY
Drive Model	Hydraulic	Hydraulic
Rated Drilling Depth(m)	4,000(114mm/drill pipe)	2,000(114/drill pipe)
Rated Load Capacities(ton)	250	150
Power Supply	380VAC/50Hz	380VAC/50Hz
Rated Power(hp)	540	400
Rotary Speed(RPM)	0-180	0-180
Drilling Torque(Continous)(lbf.ft)	25,800	18,500
Max. Torque of Break Out(lbf.ft)	36,000	36,000
Backup Tong Range(in)	3-1/2~10-1/2	3-1/2~10-1/2
Hydraulic System Working pressure(Psi)	5,000	5,000
Assistant Hydraulic System Working Pressure(Psi)	2,280	2,280
Rated Pressure of IBOP(Psi)	10,000	10,000
Mud Circulating Diameter(in)	2-1/2	2-1/2
Rated Circulating Pressure(Psi)	5,000	5,000
Max. Distance between Main Shaft Center and The Front End(in)	23.1	23.1
Main Body Height	3.8mm	3.6mm
Ambient Temperature	-35~55°C	-35~55°C