

2013 COMPOSITE CATALOG

PRODUCT CATALOGUE



YAOU-OIL MACHINE

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如皋市雅鸥进出口贸易有限公司
RUGAO YAOU IMPORT EXPORT TRADE CO., LTD



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成套石油钻机

Complete Set of Drilling Rig



7000 米交流变频电驱动钻机



1500 米直流电驱动钻机



IDEAL RIG 1500 理想钻机

本公司可按用户需求，提供各种适应陆地、浅滩、海洋、沙漠的成套石油钻机和各种部机配件，并根据用户要求提供钻机的更新改造，以满足油田钻井各种需要。



AC VF drive drilling rig Features Specification

1、Digital Control VF Rig



Main Features

- 1、Adopting digital-control technique, computer technique and integrating mechanics, electricity, hydraulics and pneumatics into design, the intelligent control for drilling rig is realized through PLC technology and touch screen.
- 2、Adopting AC VF motor drive, the drawworks , rotary table and mud pump achieves stepless speed regulating function .
- 3、The drawworks is a structure with single shaft, gear transmission, stepless speed regulating, the brake adopts hydraulic disk brake and dynamic brake together, with simple structure and reliable performance.
- 4、Adopting constant WOB auto-bit-feed device, the WOB is controlled precisely.
- 5、The rig operation has realized the functions for collecting, display, storing, printing and transfer of drilling parameters, and the function of multi-points monitoring and communication.
- 6、The rig operation has realized the full digital-control or digital closed-loop control for traveling block position, trip speed, safety presetting and interlock protection, and preventing “ collide up and impact down ” (crown and RT protection) .
- 7、with the online monitoring system for working s tatus of mechanical, electric, hydraulic and pneumatic implements, failure alarm and failure self-diagnosis has been realized, the equipments can work normally and troubleshooting can be done easily.
- 8、The driller control cabin is independent and lifted hydraulically (ZJ70DBS), without contacting the drill floor, with little vibration, and convenient for installation and teardown. The driller control cabin is a pressurized unit for explosion – proof (certificated). The drillers can fitful all drilling



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operation parameter setting on the operating chair, the operation manner has been improved and the labor intensity lightened greatly .

9、It can be equipped with rig moving device, satisfying the requirement for cluster well drilling.

10、Satisfying the requirement for TDS installation.

Basic Parameter Of Varied Rigs

Rig Model		ZJ20DBS	ZJ30DBS	ZJ40DBS	ZJ50DBS	ZJ70DBS
Nominal drilling depth, 127mm(5″)DP, m		2000	3000	4000	5000	7000
Max. hook load, kN(t)		1350(135)	1700(170)	2250(225)	3150(315)	4500(450)
Drill line number		8	10	10	12	12
Dia. of wireline, mm		29	29	32	35	38
Max. pull of fastline, kN		200	200	275	350	487
Drawworks	Model	JC-20DB	JC-30DB	JC-40DB	JC-50DB	JC-70DB
	Rated power, kW(hP)	400(500)	450(600)	900(1200)	1200(1600)	1940(2600)
	Gears	one gear, stepless speed regulating				
Brake		hydraulic disk brake + dynamic brake				
		EATON brake + dynamic brake				
Crown block		TC135	TC170	TC225	TC315	TC450
Traveling block		YG135	YC170	YC225	YC315	YC450
OD of sheaves of hoisting system, mm			1005	1120	1270	1524
Hook		YG135	YG170	DG225 or DG250	DG315	DG450
Swivel	Model	SL-135	SL-170	SL-225	SL-450	SL-450
	Dia. of stem bore	75	75	75	75	75
Rotary table	Opening dia. mm(in)	444.5(17 1/2)	520(20 1/2)	698.5(27 1/2)	952.5(37 1/2)	952.5(37 1/2)
	Gears	one gear, stepless speed regulating				
	Drive mode	independent motor drive				
Derrick (mast)	Type	K or telescoping	K or A	K	K	K
	Height, m	31 or 39	41	43	45	45
	Max. load, kN(lbs)	900	1700	2250	3150	4500
Substructure	Type	box on box, or telescoping		dual-lifting	dual-lifting or swing up	
	Drillfloor height	3.8 or 4.5	5 or 5.5	7.5	9	10.5
	Clearance height under rotary beam, m	2.6 or 3.3	3.8 or 4.3	6	7.6	9
Mud pump	Model×number	F800×1	F1000×2	F1300×2	F-1600×2	F-1600×3
	Drive mode	electric drive			electric drive	
Electric control mode		AC-DC-AC、one to one				



2、ZJ90/5850DB AC VF drive drilling rig



Product information :

Features

1. The rig adopts integrated design of mechanical, electrical, digital control and communication, adopting up-to-state vector control, VF, digital control and field bus communication technology.
2. Advanced full digital AC VF PLC control technology plus touch screen, integrated pneumatic, electric, hydraulic and drilling parameter design, realize intelligent driller control of the rig.
3. Single shaft AC VF gear drive drawworks and speed digital close-loop control rationalize power utilization and increase drilling efficiency.
4. Rotary torque and mud pump pressure is digital limit controlled for over-torque or overpressure protection.
5. Intelligent traveling block position control to prevent “collide up and impact down” accident.
6. Drawworks main brake is dynamic brake and brake torque is quantitatively controlled by computer.
7. Main motor auto-bit-feeding is adopted for automatic drilling.
8. Intelligent driller control system change driller duty from skillful worker to knowledge technician.
9. The rig is network controlled to realize functions such as data sharing, auto control, centralized monitor, operation and equipment management.
10. Drill floor equipment install at ground level and rig up integrally with the mast.
11. Full hydraulic casing centralizer is highly automatic.
12. Main parts of the rig adopts established NOV technology with worldwide experience.



Specification

Rig model	ZJ90/5850DB	
Nominal drilling depth (114mm drill pipe) m	6000-9000	
Max. hook load kN	5850	
Max. drill line no.	14	
Wireline diameter mm(in)	42 (1 ⁵ / ₈)	
Sheave OD mm(in)	1524 (60)	
Swivel center pipe bore diameter mm(in)	75 (3)	
Drawworks rated power kW(hp)	2210 (3000)	
Drawworks gear	1 stepless change	
Rotary table opening diameter mm(in)	1257.3 (49 ¹ / ₂)	
Rotary table gear	1 stepless change	
Power/mud pump set kW(hp)	1470 (2000)	
Mast effective height m(ft)	46 (152)	
Drill floor height m(ft)	10.5 (35)	12 (40)
Drill floor clearance m(ft)	8.7(28.5)	10 (33)
Note: DB – AC VF drive rig		



3、ZJ70/4500DB AC VF drive drilling rig



Product information :

Features

1. The drawworks is one-piece single shaft structure, compact, light-weighted, higher transmission efficiency, less maintenance and hook hoisting speed is 0~1.3m/s stepless speed regulation.
2. Drawworks main brake is hydraulic disc brake. Assistant brake is dynamic brake. Brake unit automatically detects electric voltage on DC side and when the reading exceeds preset value, extra dynamics is consumed on brake resistance and tripping in speed (incl. suspension) is controlled to your will.
3. Drawworks is equipped with motor auto-bit-feeding device which adopts vector control technique enabled with speed sensor and realizes constant WOB auto-bit-feeding and zero speed suspension function. WOB is smooth and even and bit-feeding is sensitive and accurate and mechanical penetration is increased. As emergency response to main system failure, maximum drill string weight can be hoisted.
4. Traveling block position automatic control system prevents "collide up and impact down" accidents. Position control is achieved by real time detection of traveling block position and PLC calculation and analysis. When traveling block reaches alarming position, "soft-stop" control procedure of "alarming-slowdown-stop" is trigger automatically. Accurate real time position indication of traveling block makes driller's operation easy.
5. Field-bus control system forms a communication network founded on PROFIBUS-DP. The network enables data exchange and control of driller control cabin, auto-bit-feeding system, unitized instrumentation, traveling block position control system and VF speed regulation cabinet. Machine-human interface (touch screen) is used for displays of working state and parameters and realization of control function.
6. Intelligent driller control cabin is fully-equipped with real time display of operating parameter, electrical system monitoring and display and failure display and alarm. Driller is changing from skillful worker to knowledge technician. Driller's duty focus on acquisition of data and optimize



drilling parameter in response to well condition and engineering instruction to realize safe, efficient and cost-effective drilling operation.

7. The rig satisfies HSE regulations.

8. The rig performance and technical parameters comply with SY/T5609—1999 standard. Main parts conform to API spec and marked with API monogram.

Specification

Rig model	ZJ70/4500DB	
Nominal drilling depth (114mm drill pipe) m	4500-7000	
Max. hook load kN	4500	
Max. drill line no.	12	
Wireline diameter mm(in)	38 (1 1/2)	
Sheave OD mm(in)	1524 (60)	
Swivel center pipe bore diameter mm(in)	75 (3)	
Drawworks rated power kW(hp)	1470 (2000)	
Drawworks gear	1 stepless change	
Rotary table opening diameter mm(in)	952.5 (37 1/2)	
Rotary table gear	1 stepless change	
Power/mud pump set kW(hp)	1180 (1600)	
Mast effective height m(ft)	45 (147)	
Drill floor height m(ft)	9 (30)	10.5 (35)
Drill floor clearance m(ft)	7.62 (25)	8.92 (29.3)
Note: DB – AC VF drive rig		



4、ZJ50/3150DB AC VF drive drilling rig



Product information :

Features

1. The drawworks is one-piece single shaft structure, compact, light-weighted, higher transmission efficiency, less maintenance and hook hoisting speed is 0~1.3m/s stepless speed regulation.
2. Drawworks main brake is hydraulic disc brake. Assistant brake is dynamic brake. Brake unit automatically detects electric voltage on DC side and when the reading exceeds preset value, extra dynamics is consumed on brake resistance and tripping in speed (incl. suspension) is controlled to your will.
3. Drawworks is equipped with motor auto-bit-feeding device which adopts vector control technique enabled with speed sensor and realizes constant WOB auto-bit-feeding and zero speed suspension function. WOB is smooth and even and bit-feeding is sensitive and accurate and mechanical penetration is increased. As emergency response to main system failure, maximum drill string weight can be hoisted.
4. Traveling block position automatic control system prevents "collide up and impact down" accidents. Position control is achieved by real time detection of traveling block position and PLC calculation and analysis. When traveling block reaches alarming position, "soft-stop" control procedure of "alarming-slowdown-stop" is trigger automatically. Accurate real time position indication of traveling block makes driller's operation easy.
5. Field-bus control system forms a communication network founded on PROFIBUS-DP. The network enables data exchange and control of driller control cabin, auto-bit-feeding system, unitized instrumentation, traveling block position control system and VF speed regulation cabinet. Machine-human interface (touch screen) is used for displays of working state and parameters and realization of control function.
6. Intelligent driller control cabin is fully-equipped with real time display of operating parameter, electrical system monitoring and display and failure display and alarm. Driller is changing from skillful worker to knowledge technician. Driller's duty focus on acquisition of data and optimize



drilling parameter in response to well condition and engineering instruction to realize safe, efficient and cost-effective drilling operation.

7. The rig satisfies HSE regulations.

8. The rig performance and technical parameters comply with SY/T5609—1999 standard. Main parts conform to API spec and marked with API monogram.

Specification

Rig model	ZJ50/3150DB	
Nominal drilling depth (114mm drill pipe) m	3500-5000	
Max. hook load kN	3150	
Max. drill line no.	12	
Wireline diameter mm(in)	35 (1 ³ / ₈)	
Sheave OD mm(in)	1270 (50)	
Swivel center pipe bore diameter mm(in)	75 (3)	
Drawworks rated power kW(hp)	1100 (1500)	
Drawworks gear	1 stepless change	
Rotary table opening diameter mm(in)	698.5 (27 ¹ / ₂)	952.5 (37 ¹ / ₂)
Rotary table gear	1 stepless change	
Power/mud pump set kW(hp)	960 (1300)	1180 (1600)
Mast effective height m(ft)	45 (147)	
Drill floor height m(ft)	7.5 (25)	9 (30)
Drill floor clearance m(ft)	7.62 (25)	8.92 (29.3)
Note: DB – AC VF drive rig		



5、ZJ40/2250DB AC VF drive drilling rig



Product information :

Features

1. The drawworks is one-piece single shaft structure, compact, light-weighted, higher transmission efficiency, less maintenance and hook hoisting speed is 0~1.3m/s stepless speed regulation.
2. Drawworks main brake is hydraulic disc brake. Assistant brake is dynamic brake. Brake unit automatically detects electric voltage on DC side and when the reading exceeds preset value, extra dynamics is consumed on brake resistance and tripping in speed (incl. suspension) is controlled to your will.
3. Drawworks is equipped with motor auto-bit-feeding device which adopts vector control technique enabled with speed sensor and realizes constant WOB auto-bit-feeding and zero speed suspension function. WOB is smooth and even and bit-feeding is sensitive and accurate and mechanical penetration is increased. As emergency response to main system failure, maximum drill string weight can be hoisted.
4. Traveling block position automatic control system prevents "collide up and impact down" accidents. Position control is achieved by real time detection of traveling block position and PLC calculation and analysis. When traveling block reaches alarming position, "soft-stop" control procedure of "alarming-slowdown-stop" is trigger automatically. Accurate real time position indication of traveling block makes driller's operation easy.
5. Field-bus control system forms a communication network founded on PROFIBUS-DP. The network enables data exchange and control of driller control cabin, auto-bit-feeding system, unitized instrumentation, traveling block position control system and VF speed regulation cabinet. Machine-human interface (touch screen) is used for displays of working state and parameters and realization of control function.
6. Intelligent driller control cabin is fully-equipped with real time display of operating parameter, electrical system monitoring and display and failure display and alarm. Driller is changing from skillful worker to knowledge technician. Driller's duty focus on acquisition of data and optimize



drilling parameter in response to well condition and engineering instruction to realize safe, efficient and cost-effective drilling operation.

7. The rig satisfies HSE regulations.

8. The rig performance and technical parameters comply with SY/T5609—1999 standard. Main parts conform to API spec and marked with API monogram.

Specification

Rig model	ZJ40/2250DB
Nominal drilling depth (114mm drill pipe) m	2500-4000
Max. hook load kN	2250
Max. drill line no.	10
Wireline diameter mm(in)	32 (1 ¹ / ₄)
Sheave OD mm(in)	1120 (44)
Swivel center pipe bore diameter mm(in)	75 (3)
Drawworks rated power kW(hp)	800 (1090)
Drawworks gear	Stepless speed regulation
Rotary table opening diameter mm(in)	698.5 (27 ¹ / ₂)
Rotary table gear	Stepless speed regulation
Power/mud pump set kW(hp)	960 (1300)
Mast effective height m(ft)	43 (142)
Drill floor height m(ft)	7.5 (25)
Drill floor clearance m(ft)	6.26 (20.5)
Note: DB – AC VF drive rig	



DC Rig Features & Specification

1、ZJ90/5850DZ DC Rig



Product information :

Features

1. The rig adopts integrated design of mechanical, electrical, digital control and communication, adopting up-to-state vector control, VF, digital control and field bus communication technology.
2. Advanced full digital AC VF PLC control technology plus touch screen, integrated pneumatic, electric, hydraulic and drilling parameter design, realize intelligent driller control of the rig.
3. Single shaft AC VF gear drive drawworks and speed digital close-loop control rationalize power utilization and increase drilling efficiency.
4. Rotary torque and mud pump pressure is digital limit controlled for over-torque or overpressure protection.
5. Intelligent traveling block position control to prevent "collide up and impact down" accident.
6. Drawworks main brake is dynamic brake and brake torque is quantitatively controlled by computer.
7. Main motor auto-bit-feeding is adopted for automatic drilling.
8. Intelligent driller control system change driller duty from skillful worker to knowledge technician.
9. The rig is network controlled to realize functions such as data sharing, auto control, centralized monitor, operation and equipment management.
10. Drill floor equipment install at ground level and rig up integrally with the mast.
11. Full hydraulic casing centralizer is highly automatic.
12. Main parts of the rig adopts established NOV technology with worldwide experience.

Specification

Rig model	ZJ90/5850DB
Nominal drilling depth (114mm drill pipe) m	6000-9000
Max. hook load kN	5850



Max. drill line no.	14	
Wireline diameter mm(in)	42 (1 ⁵ / ₈)	
Sheave OD mm(in)	1524 (60)	
Swivel center pipe bore diameter mm(in)	75 (3)	
Drawworks rated power kW(hp)	2210 (3000)	
Drawworks gear	1 stepless change	
Rotary table opening diameter mm(in)	1257.3 (49 ¹ / ₂)	
Rotary table gear	1 stepless change	
Power/mud pump set kW(hp)	1470 (2000)	
Mast effective height m(ft)	46 (152)	
Drill floor height m(ft)	10.5 (35)	12 (40)
Drill floor clearance m(ft)	8.7(28.5)	10 (33)
Note: DB – AC VF drive rig		

2、ZJ70/4500DZ DC Rig



Product information :

Features

1. The drawworks is one-piece single shaft structure, compact, light-weighted, higher transmission efficiency, less maintenance and hook hoisting speed is 0~1.3m/s stepless speed regulation.
2. Drawworks main brake is hydraulic disc brake. Assistant brake is dynamic brake. Brake unit automatically detects electric voltage on DC side and when the reading exceeds preset value, extra dynamics is consumed on brake resistance and tripping in speed (incl. suspension) is controlled to your will.
3. Drawworks is equipped with motor auto-bit-feeding device which adopts vector control technique enabled with speed sensor and realizes constant WOB auto-bit-feeding and zero speed suspension function. WOB is smooth and even and bit-feeding is sensitive and accurate and



mechanical penetration is increased. As emergency response to main system failure, maximum drill string weight can be hoisted.

4. Traveling block position automatic control system prevents “collide up and impact down” accidents. Position control is achieved by real time detection of traveling block position and PLC calculation and analysis. When traveling block reaches alarming position, “soft-stop” control procedure of “alarming-slowdown-stop” is trigger automatically. Accurate real time position indication of traveling block makes driller’s operation easy.

5. Field-bus control system forms a communication network founded on PROFIBUS-DP. The network enables data exchange and control of driller control cabin, auto-bit-feeding system, unitized instrumentation, traveling block position control system and VF speed regulation cabinet. Machine-human interface (touch screen) is used for displays of working state and parameters and realization of control function.

6. Intelligent driller control cabin is fully-equipped with real time display of operating parameter, electrical system monitoring and display and failure display and alarm. Driller is changing from skillful worker to knowledge technician. Driller’s duty focus on acquisition of data and optimize drilling parameter in response to well condition and engineering instruction to realize safe, efficient and cost-effective drilling operation.

7. The rig satisfies HSE regulations.

8. The rig performance and technical parameters comply with SY/T5609—1999 standard. Main parts conform to API spec and marked with API monogram.

Specification

Rig model	ZJ70/4500DB	
Nominal drilling depth (114mm drill pipe) m	4500-7000	
Max. hook load kN	4500	
Max. drill line no.	12	
Wireline diameter mm(in)	38 (1 1/2)	
Sheave OD mm(in)	1524 (60)	
Swivel center pipe bore diameter mm(in)	75 (3)	
Drawworks rated power kW(hp)	1470 (2000)	
Drawworks gear	1 stepless change	
Rotary table opening diameter mm(in)	952.5 (37 1/2)	
Rotary table gear	1 stepless change	
Power/mud pump set kW(hp)	1180 (1600)	
Mast effective height m(ft)	45 (147)	
Drill floor height m(ft)	9 (30)	10.5 (35)
Drill floor clearance m(ft)	7.62 (25)	8.92 (29.3)
Note: DB – AC VF drive rig		



3、ZJ50/3150DZ DC Rig



Product information :

Features

1. The drawworks is one-piece single shaft structure, compact, light-weighted, higher transmission efficiency, less maintenance and hook hoisting speed is 0~1.3m/s stepless speed regulation.
2. Drawworks main brake is hydraulic disc brake. Assistant brake is dynamic brake. Brake unit automatically detects electric voltage on DC side and when the reading exceeds preset value, extra dynamics is consumed on brake resistance and tripping in speed (incl. suspension) is controlled to your will.
3. Drawworks is equipped with motor auto-bit-feeding device which adopts vector control technique enabled with speed sensor and realizes constant WOB auto-bit-feeding and zero speed suspension function. WOB is smooth and even and bit-feeding is sensitive and accurate and mechanical penetration is increased. As emergency response to main system failure, maximum drill string weight can be hoisted.
4. Traveling block position automatic control system prevents "collide up and impact down" accidents. Position control is achieved by real time detection of traveling block position and PLC calculation and analysis. When traveling block reaches alarming position, "soft-stop" control procedure of "alarming-slowdown-stop" is trigger automatically. Accurate real time position indication of traveling block makes driller's operation easy.
5. Field-bus control system forms a communication network founded on PROFIBUS-DP. The network enables data exchange and control of driller control cabin, auto-bit-feeding system, unitized instrumentation, traveling block position control system and VF speed regulation cabinet. Machine-human interface (touch screen) is used for displays of working state and parameters and realization of control function.
6. Intelligent driller control cabin is fully-equipped with real time display of operating parameter, electrical system monitoring and display and failure display and alarm. Driller is changing from skillful worker to knowledge technician. Driller's duty focus on acquisition of data and optimize



drilling parameter in response to well condition and engineering instruction to realize safe, efficient and cost-effective drilling operation.

7. The rig satisfies HSE regulations.

8. The rig performance and technical parameters comply with SY/T5609—1999 standard. Main parts conform to API spec and marked with API monogram.

Specification

Rig model	ZJ50/3150DB	
Nominal drilling depth (114mm drill pipe) m	3500-5000	
Max. hook load kN	3150	
Max. drill line no.	12	
Wireline diameter mm(in)	35 (1 ³ / ₈)	
Sheave OD mm(in)	1270 (50)	
Swivel center pipe bore diameter mm(in)	75 (3)	
Drawworks rated power kW(hp)	1100 (1500)	
Drawworks gear	1 stepless change	
Rotary table opening diameter mm(in)	698.5 (27 ¹ / ₂)	952.5 (37 ¹ / ₂)
Rotary table gear	1 stepless change	
Power/mud pump set kW(hp)	960 (1300)	1180 (1600)
Mast effective height m(ft)	45 (147)	
Drill floor height m(ft)	7.5 (25)	9 (30)
Drill floor clearance m(ft)	7.62 (25)	8.92 (29.3)
Note: DB – AC VF drive rig		



4、ZJ40/2250DZ DC Rig



Product information :

Features

1. The drawworks is one-piece single shaft structure, compact, light-weighted, higher transmission efficiency, less maintenance and hook hoisting speed is 0~1.3m/s stepless speed regulation.
2. Drawworks main brake is hydraulic disc brake. Assistant brake is dynamic brake. Brake unit automatically detects electric voltage on DC side and when the reading exceeds preset value, extra dynamics is consumed on brake resistance and tripping in speed (incl. suspension) is controlled to your will.
3. Drawworks is equipped with motor auto-bit-feeding device which adopts vector control technique enabled with speed sensor and realizes constant WOB auto-bit-feeding and zero speed suspension function. WOB is smooth and even and bit-feeding is sensitive and accurate and mechanical penetration is increased. As emergency response to main system failure, maximum drill string weight can be hoisted.
4. Traveling block position automatic control system prevents “collide up and impact down” accidents. Position control is achieved by real time detection of traveling block position and PLC calculation and analysis. When traveling block reaches alarming position, “soft-stop” control procedure of “alarming-slowdown-stop” is trigger automatically. Accurate real time position indication of traveling block makes driller’s operation easy.
5. Field-bus control system forms a communication network founded on PROFIBUS-DP. The network enables data exchange and control of driller control cabin, auto-bit-feeding system, unitized instrumentation, traveling block position control system and VF speed regulation cabinet. Machine-human interface (touch screen) is used for displays of working state and parameters and realization of control function.
6. Intelligent driller control cabin is fully-equipped with real time display of operating parameter, electrical system monitoring and display and failure display and alarm. Driller is changing from skillful worker to knowledge technician. Driller’s duty focus on acquisition of data and optimize



drilling parameter in response to well condition and engineering instruction to realize safe, efficient and cost-effective drilling operation.

7. The rig satisfies HSE regulations.

8. The rig performance and technical parameters comply with SY/T5609—1999 standard. Main parts conform to API spec and marked with API monogram.

Specification

Rig model	ZJ40/2250DB
Nominal drilling depth (114mm drill pipe) m	2500-4000
Max. hook load kN	2250
Max. drill line no.	10
Wireline diameter mm(in)	32 (1 ¹ / ₄)
Sheave OD mm(in)	1120 (44)
Swivel center pipe bore diameter mm(in)	75 (3)
Drawworks rated power kW(hp)	800 (1090)
Drawworks gear	Stepless speed regulation
Rotary table opening diameter mm(in)	698.5 (27 ¹ / ₂)
Rotary table gear	Stepless speed regulation
Power/mud pump set kW(hp)	960 (1300)
Mast effective height m(ft)	43 (142)
Drill floor height m(ft)	7.5 (25)
Drill floor clearance m(ft)	6.26 (20.5)
Note: DB – AC VF drive rig	



Electromechanical drilling rig Features & Specification

1、ZJ70/4500LDB Electromechanical drilling rig



Product information :

Features

1. The rig is powered by "4 parallel 2000 (3000) series diesel engines + hydraulic torque converter (coupling) + chain box drive".
2. Integral chain box compound ensure perfect sealing and well sealed and easy installation.
3. Drawworks drum is grooved. The main brake is hydraulic disc brake and assistant brake is electromagnetic eddy current brake.
4. Drawworks is equipped with assistant lifting device which can raise the mast without diesel engine or hoisting drill string while main drive fails to prevent down hole accident and realize drilling safety.
5. Rotary table is independently driven by AC VF motors for 0-240 r/min stepless speed regulation and eliminates rotary table and mud pump power conflict occurred in uniform driving system of mechanical rig, satisfying quick drilling. AC is provided by auxiliary generator set.
6. Drawworks adopt split type arrangement and installed above and under the drill floor. Heavy main drawworks is placed at lower position.
7. Drawworks adopt pneumatic tube clutch for remote control, operating easily and quickly.
8. Drill floor is "box-on-box type" or "front part telescoping + back part module assembly type" construction, compact, easy to rig up. Large clearance satisfies installation of BOP. Rotary table and standpipe box levels with drill floor to make available even floor and larger operating space.
9. Equipped with heavy-duty triplex single action mud pump with cardan shaft transmission.
10. Key mechanical parts conform to API spec and marked with API monogram.



Specification

Rig model	ZJ70/4500LDB
Nominal drilling depth (114mm drill pipe) m	4500-7000
Max. hook load kN	4500
Max. drill line no.	12
Wireline diameter mm(in)	38 (1½)
Sheave OD mm(in)	1524 (60)
Swivel center pipe bore diameter mm(in)	75 (3)
Drawworks rated power kW(hp)	1470 (2000)
Drawworks gear	6F + R
Rotary table opening diameter mm(in)	952.5 (37½)
Rotary table gear	1 stage or 2 stage stepless change
Power/mud pump set kW(hp)	1180 (1600)
Diesel engine no.	3×kW or 0kW
Integral chain box no.	1
Mast effective height m(ft)	45 (147)
Drill floor height m(ft)	9 (30)
Drill floor clearance m(ft)	7.7 (25.3)
Note: LDB – Chain compound at back and electric drive in front	

2、ZJ50/3150LDB Electromechanical drilling rig



Product information :

Features

1. The rig is powered by “3 parallel 2000 Series diesel engines + coupling + chain box drive”.
2. Integral chain box compound ensure perfect sealing and well sealed and easy installation.



3. Drawworks drum is grooved. The main brake is hydraulic disc brake and assistant brake is electromagnetic eddy current brake.
4. Drawworks is equipped with assistant lifting device which can raise the mast without diesel engine or hoisting drill string while main drive fails to prevent down hole accident and realize drilling safety.
5. Rotary table is independently driven by AC VF motors for 0-240 r/min stepless speed regulation and eliminates rotary table and mud pump power conflict occurred in uniform driving system of mechanical rig, satisfying quick drilling. AC is provided by auxiliary generator set.
6. Drawworks adopt split type arrangement and installed above and under the drill floor. Heavy main drawworks is placed at lower position.
7. Drawworks adopt pneumatic tube clutch for remote control, operating easily and quickly.
8. Drill floor is box-on-box type structure, compact, easy to rig up. Large clearance satisfies installation of BOP. Rotary table and standpipe box levels with drill floor to make available even floor and larger operating space.
9. Equipped with heavy-duty triplex single action mud pump with cardan shaft transmission.
10. Key mechanical parts conform to API spec and marked with API monogram.

Specification

Rig model	ZJ50/3150LDB	
Nominal drilling depth (114mm drill pipe) m	3500-5000	
Max. hook load kN	3150	
Max. drill line no.	12	
Wireline diameter mm(in)	35 (1 ³ / ₈)	
Sheave OD mm(in)	1270 (50)	
Swivel center pipe bore diameter mm(in)	75 (3)	
Drawworks rated power kW(hp)	1100 (1500)	
Drawworks gear	4F + 2R	6F + 2R
Rotary table opening diameter mm(in)	698.5 (27 ¹ / ₂)	
Rotary table gear	1 stepless change	
Power/mud pump set kW(hp)	9600 (1300)	
Diesel engine no.	3	
Integral chain box no.	1	
Mast effective height m(ft)	45 (147)	
Drill floor height m(ft)	7.5 (25)	
Drill floor clearance m(ft)	6.26 (20.5)	
Note: LDB – Chain compound at back and electric drive in front		



3、ZJ40/2250LDB Electromechanical drilling rig



Product information :

Features

1. The rig is powered by “3 parallel 2000 Series diesel engines + coupling + chain box drive”.
2. Integral chain box compound ensure perfect sealing and well sealed and easy installation.
3. Drawworks drum is grooved. The main brake is hydraulic disc brake and assistant brake is electromagnetic eddy current brake.
4. Drawworks is equipped with assistant lifting device which can raise the mast without diesel engine or hoisting drill string while main drive fails to prevent down hole accident and realize drilling safety.
5. Rotary table is independently driven by AC VF motors for 0-240 r/min stepless speed regulation and eliminates rotary table and mud pump power conflict occurred in uniform driving system of mechanical rig, satisfying quick drilling. AC is provided by auxiliary generator set.
6. Drawworks adopt split type arrangement and installed above and under the drill floor. Heavy main drawworks is placed at lower position.
7. Drawworks adopt pneumatic tube clutch for remote control, operating easily and quickly.
8. Drill floor is box-on-box type structure, compact, easy to rig up. Large clearance satisfies installation of BOP. Rotary table and standpipe box levels with drill floor to make available even floor and larger operating space.
9. Equipped with heavy-duty triplex single action mud pump with cardan shaft transmission.



10. Key mechanical parts conform to API spec and marked with API monogram.

Specification

Rig model	ZJ40/2250LDB
Nominal drilling depth (114mm drill pipe) m	2500-4000
Max. hook load kN	2250
Max. drill line no.	10
Wireline diameter mm(in)	32 (1 ¹ / ₄)
Sheave OD mm(in)	1120 (44)
Swivel center pipe bore diameter mm(in)	75 (3)
Drawworks rated power kW(hp)	735 (1000)
Drawworks gear	4F+2R
Rotary table opening diameter mm(in)	698.5 (27 ¹ / ₂)
Rotary table gear	1 Stepless change
Power/mud pump set kW(hp)	960 (1300)
Diesel engine no.	3
Integral chain box no.	1
Mast effective height m(ft)	43 (142)
Drill floor height m(ft)	6 (20)
Drill floor clearance m(ft)	4.76 (15.6)
Note: LDB – Chain compound at back and electric drive in front	



Chain drive drilling rig features & specification

1、ZJ70/4500L Chain drive drilling rig



Product information :

Features

1. Drill rig adopts "2000 (or 3000) series diesel engine + coupling gear box" drive.
2. Integral chain box compound
3. Drawworks drum is grooved. The main brake is hydraulic disc brake and assistant brake is electromagnetic eddy current brake.
4. Drawworks is equipped with assistant lifting device which can raise the mast without diesel engine or hoisting drill string while main drive fails to prevent down hole accident and realize drilling safety.
5. Drawworks adopt split type arrangement and installed above and under the drill floor. Heavy main drawworks is placed at lower position. "Bevel gear box + cardan shaft" are installed on the drill floor.
6. Main drawworks adopt pneumatic tube clutch for remote control, operating easily and quickly. Cathead drawworks is equipped with sand drum and bank brake, of one-piece structure.
7. K-type mast without pulling rope fit for assembly at ground level and raising as a whole
8. Drill floor is box-on-box type structure, compact, easy to rig up. Large clearance satisfies installation of BOP. Rotary table and standpipe box levels with drill floor to make available even floor and larger operating space.
9. Equipped with heavy-duty triplex single action mud pump with cardan shaft transmission.
10. Key mechanical parts conform to API spec and marked with API monogram.

Specification

Rig model	ZJ70/4500L
Nominal drilling depth (114mm drill pipe) m	4500-7000
Max. hook load kN	4500
Max. drill line no.	12
Wireline diameter mm(in)	38 (1½)



Hoisting system sheave OD mm(in)	1524 (60)
Swivel center pipe bore diameter mm(in)	75 (3)
Drawworks rated power kW(hp)	1470 (2000)
Drawworks gear	6 + 2R
Rotary table opening diameter mm(in)	952.5 (37 ¹ / ₂)
Rotary table gear	6 + 2R
Power/mud pump kW(hp)	1180 (1600)
Diesel engine no.	4
Integral chain box no.	1
Mast effective height m(ft)	45 (147)
Drill floor height m(ft)	9 (30)
Drill floor clearance m(ft)	7.7 (25.3)
Note: L - chain compound	

2、ZJ50/3150L Chain drive drilling rig



Product information :

Features

1. Drill rig adopts "3 parallel 2000 series diesel engines + chain box" drive.
2. Integral chain box compound
3. Drawworks drum is grooved. The main brake is hydraulic disc brake and assistant brake is electromagnetic eddy current brake.
4. Drawworks is equipped with assistant lifting device which can raise the mast without diesel engine or hoisting drill string while main drive fails to prevent down hole accident and realize drilling safety.



5. Drawworks adopt split type arrangement and installed above and under the drill floor. Heavy main drawworks is placed at lower position. "Bevel gear box + cardan shaft" are installed on the drill floor.
6. Main drawworks adopt pneumatic tube clutch for remote control, operating easily and quickly. Cathead drawworks is equipped with sand drum and bank brake, of one-piece structure.
7. K-type mast without pulling rope fit for assembly at ground level and raising as a whole
8. Drill floor is box-on-box type structure, compact, easy to rig up. Large clearance satisfies installation of BOP. Rotary table and standpipe box levels with drill floor to make available even floor and larger operating space.
9. Equipped with heavy-duty triplex single action mud pump with cardan shaft transmission.
10. Key mechanical parts conform to API spec and marked with API monogram.

Specification

Rig model	ZJ50/3150L	
Nominal drilling depth (114mm drill pipe) m	3500-5000	
Max. hook load kN	3150	
Max. drill line no.	12	
Wireline diameter mm(in)	35 (1 ³ / ₈)	
Hoisting system sheave OD mm(in)	1270 (50)	
Swivel center pipe bore diameter mm(in)	75 (3)	
Drawworks rated power kW(hp)	1100 (1500)	
Drawworks gear	4 + 2R	6 + 2R
Rotary table opening diameter mm(in)	952.5 (37 ¹ / ₂)	
Rotary table gear	4 + 2R	6 + 2R
Power/mud pump kW(hp)	1180 (1600)	
Diesel engine no.	3	
Integral chain box no.	1	
Mast effective height m(ft)	45 (147)	
Drill floor height m(ft)	7.5 (25)	
Drill floor clearance m(ft)	6.26 (20.5)	
Note: L - chain compound		



3、ZJ40/2250L Chain drive drilling rig



Product information :

Features

1. Drill rig adopts “3 parallel 2000 series diesel engines + chain box” drive.
2. Integral chain box compound
3. Drawworks drum is grooved. The main brake is hydraulic disc brake and assistant brake is electromagnetic eddy current brake.
4. Drawworks is equipped with assistant lifting device which can raise the mast without diesel engine or hoisting drill string while main drive fails to prevent down hole accident and realize drilling safety.
5. Drawworks adopt split type arrangement and installed above and under the drill floor. Heavy main drawworks is placed at lower position. “Bevel gear box + cardan shaft” are installed on the drill floor.
6. Main drawworks adopt pneumatic tube clutch for remote control, operating easily and quickly. Cathead drawworks is equipped with sand drum and bank brake, of one-piece structure.
7. K-type mast without pulling rope fit for assembly at ground level and raising as a whole
8. Drill floor is box-on-box type structure, compact, easy to rig up. Large clearance satisfies installation of BOP. Rotary table and standpipe box levels with drill floor to make available even floor and larger operating space.



9. Equipped with heavy-duty triplex single action mud pump with cardan shaft transmission.

10. Key mechanical parts conform to API spec and marked with API monogram.

Specification

Rig model	ZJ40/2250L
Nominal drilling depth (114mm drill pipe) m	2500-4000
Max. hook load kN	2250
Max. drill line no.	10
Wireline diameter mm(in)	32 (1 ¹ / ₄)
Sheave OD mm(in)	1120 (44)
Swivel center pipe bore diameter mm(in)	75 (3)
Drawworks rated power kW(hp)	735 (1000)
Drawworks gear	4 + 2R
Rotary table opening diameter mm(in)	698.5 (27 ¹ / ₂)
Rotary table gear	4 + 2R
Power/mud pump set kW(hp)	960 (1300)
Diesel engine no.	3
Integral chain box no.	1
Mast effective height m(ft)	43 (142)
Drill floor height m(ft)	6 (20)
Drill floor clearance m(ft)	4.76 (15.6)
Note: L – chain compound	



Belt drive drilling rig

1、ZJ50/3150J Belt drive drilling rig



Product information :

Features

1. The rig is powered by 3 sets 2000 Series diesel engine with gear box transmission.
2. Belt compound for transmission
3. The drawworks drum is grooved. Main brake is hydraulic disc brake and assistant brake is electromagnetic eddy current brake.
4. Drawworks is equipped with assistant lifting device which can raise the mast without diesel engine or hoisting drill string while main drive fails to prevent down hole accident and realize drilling safety.
5. Drawworks adopt split type arrangement and installed above and under the drill floor. Heavy main drawworks is placed at lower position. "Bevel gear box + cardan shaft" are installed on the drill floor.
6. Main drawworks adopt pneumatic tube clutch for remote control, operating easily and quickly. Cathead drawworks is equipped with sand drum and bank brake, of one-piece structure.
7. K-type mast without pulling rope fit for assembly at ground level and rigging up as a whole
8. Drill floor is box-on-box type structure, compact, easy to rig up. Large clearance satisfies installation of BOP. Rotary table and standpipe box levels with drill floor to make available even floor and larger operating space.



9. Equipped with heavy-duty triplex single action mud pump with cardan shaft transmission.。

10. Key mechanical parts conform to API spec and marked with API monogram.

Specification

Rig model	ZJ50/3150J	
Nominal drilling depth (114mm drill pipe) m	3500-5000	
Max. hook load kN	3150	
Max. drill line no.	12	
Wireline diameter mm(in)	35 (1 ³ / ₈)	
Sheave OD mm(in)	1270 (50)	
Swivel center pipe bore diameter mm(in)	75 (3)	
Drawworks rated power kW(hp)	1100 (1500)	
Drawworks gear	4F+2R	6F+2R
Rotary table opening diameter mm(in)	698.5 (27 ¹ / ₂)	952.5 (37 ¹ / ₂)
Rotary table gear	4F+2R	6F+2R
Power/mud pump set kW(hp)	1180 (1600)	
Diesel engine no.	3	
Belt compound no.	1	
Mast effective height m(ft)	45 (147)	
Drill floor height m(ft)	7.5 (25)	
Drill floor clearance m(ft)	6.26 (20.5)	
Note: J - Belt compound		



2、ZJ40/2250J Belt drive drilling rig



Product information :

Features

1. The rig is powered by 3 sets 2000 Series diesel engine with gear box transmission.
2. Belt compound for transmission
3. The drawworks drum is grooved. Main brake is hydraulic disc brake and assistant brake is electromagnetic eddy current brake.
4. Drawworks is equipped with assistant lifting device which can raise the mast without diesel engine or hoisting drill string while main drive fails to prevent down hole accident and realize drilling safety.
5. Drawworks adopt split type arrangement and installed above and under the drill floor. Heavy main drawworks is placed at lower position. "Bevel gear box + cardan shaft" are installed on the drill floor.
6. Main drawworks adopt pneumatic tube clutch for remote control, operating easily and quickly. Cathead drawworks is equipped with sand drum and bank brake, of one-piece structure.
7. K-type mast without pulling rope fit for assembly at ground level and rigging up as a whole
8. Drill floor is box-on-box type structure, compact, easy to rig up. Large clearance satisfies installation of BOP. Rotary table and standpipe box levels with drill floor to make available even floor and larger operating space.
9. Equipped with heavy-duty triplex single action mud pump with cardan shaft transmission.
10. Key mechanical parts conform to API spec and marked with API monogram.



Specification

Rig model	ZJ40/2250J
Nominal drilling depth (114mm drill pipe) m	2500-4000
Max. hook load kN	2250
Max. drill line no.	10
Wireline diameter mm(in)	32 (1 ¹ / ₄)
Sheave OD mm(in)	1120 (44)
Swivel center pipe bore diameter mm(in)	75 (3)
Drawworks rated power kW(hp)	735 (1000)
Drawworks gear	4F+2R
Rotary table opening diameter mm(in)	698.5 (27 ¹ / ₂)
Rotary table gear	4F+2R
Power/mud pump set kW(hp)	960 (1300)
Diesel engine no.	3
Belt compound no.	1
Mast effective height m(ft)	43 (142)
Drill floor height m(ft)	6 (20)
Drill floor clearance m(ft)	4.76 (15.6)
Note: J - Belt compound	



3、ZJ30/1700 Belt drive drilling rig



Product information :

ZJ30/1700 belt drive drilling rig follows the design philosophy of “being up-to-date, reliable, safe, easy-to-use and cost-effective”, adopts module construction, which enhances versatility, interchangeability and mobility of the rig and reduces the workload of transport and installation to great extent. The design of the rig also satisfies the requirement of using 25 tons crane for well location lifting and enables easy use, adjustment, maintenance, inspection and repair.

The rig is designed and manufactured in compliance with SY/T5609-1999 standard. Main components like mast, substructure, hook, crown block, swivel, rotary table, drawworks and mud pump conform to API spec. All members and structures satisfy railway and road transportation requirements.

The rig as a whole can operate under the temperature condition ranging from $+50^{\circ}\text{C} - 35^{\circ}\text{C}$, satisfy HSE regulations and possess the resistance to explosion, leakage, corrosion, high temperature, freezing and sand blocking. Safety devices are well designed and all alarm, limit switch and interlock devices are sensitive, reliable and accurate. Well location electrical system complies with international standards and on-site buildings and tanks are independently grounded. All safety equipment has statement of conformity and quality certificate.

The whole rig is painted with boat-side paint and is resistant to salt, alkali, oil, heat, humidity and low temperature. Fluid and gas loop connections are reliably sealed and ball valve is stainless steel.

The rig has reasonable general arrangement, satisfying the technical requirements of drilling 3000m (4 1/2 drill pipe) well in China, trailer transport and drilling cluster wells.

Two diesel engines provide power for the rig via narrow V belt compound, driving drawworks, mud pump, energy-saving generators unit and air compressors unit. The drawworks drive rotary table via cardan shaft and chain gear box.



Series of Truck-mounted Drilling Rigs

1、 ZJ10/1125CZ Truck-mounted Drilling Rig

ZJ10 truck mounted drilling rig is the earliest light duty self-propelled truck-mounted drilling equipment. After several years' technical progress, the products become more and more mature and reliable. Several patent technical designs and configuration, such as double fast line, hydraulic tong type auxiliary brake, are optional. The rig has following features: reasonable layout, low cost for mobilization, easy site installation, reliable operation performance, and easy maintenance.

The rig is especially suitable for short operating cycle drilling operation of shallow wells within 3,280' (1000m). The rig can also be used for water well drilling.



- 1、 Optimized for drilling and workover operations of shallow wells.
- 2、 CAT/DETROIT diesel engine.
- 3、 Allison hydromechanical transmission.
- 4、 10×8 reinforced chassis, fast transportation and good cross-country capacity.
- 5、 Air-controlled water-cooling disk auxiliary brake for drawworks is optional.

Main Parameters

Model	ZJ10/1125CZ
Drilling depth(4-1/2"DP) ft(m)	3280(1000)
Workover depth(3-1/2"DP) ft(m)	11483(3500)
Max.hook load lb(kN)	253000(1125)
Drill line dia.,in.(mm)/lines	φ1(φ26)/8
Max.hook speed ft/s(m/s)	4(1.23)
Overall dimensions in shipping status ft(m)	57.4×10.17×13.7(17.5×3.1×4.18)
Weight lb(kg)	92590(42000)



2、 ZJ15/1350CZ Truck-mounted Drilling Rig

ZJ15 truck mounted drilling rig is one of the earliest light duty self-propelled truck-mounted drilling equipment. After several years' technical progress, the products become more and more mature and reliable. Several patent technical designs and configuration, such as double fast line, air caliper type auxiliary brake, are optional. The rig has following features: reasonable layout, low cost for mobilization, easy site installation, reliable operation performance, and easy maintenance. The rig especially is suitable for short operating cycle drilling operation of shallow wells within 4,920' (1500m). The rig also can be used for water well drilling.



- 1、 Improved model for drilling and workover operations for shallow wells.
- 2、 CAT diesel engine.
- 3、 Allison hydraulic transmission.
- 4、 10×8 reinforced chassis, fast transportation and good cross-country capacity.
- 5、 Air-controlled water-cooling disk auxiliary brake for drawworks is optional.

Main Parameters

Model	ZJ15/1350CZ
Drilling depth(4-1/2"DP) ft(m)	4920(1500)
Workover depth(3-1/2"DP) ft(m)	13123(4000)
Max.hook load lb(kN)	303696(1350)
Drill line dia.,in.(mm)/lines	φ1(φ26)/8
Max.hook speed ft/s(m/s)	4.36(1.33)
Overall dimensions in shipping status ft(m)	66×10.99×14.1(20.13×3.35×4.3)
Weight lb(kg)	112430(51000)



3、 ZJ20/1470CZ Truck-mounted Drilling Rig

ZJ20 truck mounted drilling rig is a light duty self-propelled truck- mounted drilling equipment. It is the biggest single engine truck- mounted drilling rig, and is of greatest operation performance and most practical model in drilling work within 6,560' (2000m). The users can choose single drum or double drum, and also hydraulic disc brake, air disc auxiliary brake system and emergency power system are optional. It is the best choice for drilling operation of medium depth and shallow wells. The rig has following features: low cost for mobilization, easy site installation, reliable operation performance, and easy maintenance.



- 1、 Classic model for intermediate and shallow wells with reliable and stable capacity.
- 2、 12×8 reinforced chassis, fast transportation and good cross-country capacity.
- 3、 Hydraulic disk brake for drawworks is optional.
- 4、 Air-controlled water-cooling disk auxiliary brake for drawworks is optional.
- 5、 Emergency power system is optional.

Main Parameters

Model	ZJ20/1470CZ
Drilling depth(4-1/2"DP) ft(m)	6560(2000)
Workover depth(3-1/2"DP) ft(m)	18045(5500)
Max.hook load lb(kN)	330700(1470)
Drill line dia.,in.(mm)/lines	φ1-1/8(φ29)/8
Max.hook speed ft/s(m/s)	4.3(1.31)
Overall dimensions in shipping status ft(m)	66×10.99×14.44(20.13×3.35×4.4)
Weight lb(kg)	123456(56000)



4、 ZJ20/1470CZ Coal-bed Gas Drilling Equipment

ZJ20 coal-bed gas truck-mounted drilling rig (3 section mast) is an innovative product developed according to the requirements for coal-bed gas and mountainous oilfield developing. Compared with the drilling rigs with same mast height and 6,560' (2000m) drilling depth, the total length of the ZJ20 coal-bed gas truck mounted drilling rig is 30% shorter because of using of 3 section mast. Therefore, the turning radius of the unit is shorter, and the unit is more flexible and has very good roading performance. The rig with 10x8 chassis fitted with heavy duty axles and tyres for military use is suitable for the traveling in hillock and tough road condition.



- 1、 Special model for drilling and workover service in coal-bed gas fields and mountainous oilfields.
- 2、 Three (3) section telescoping mast.
- 3、 10×8 reinforced chassis with good cross-country capacity.
- 4、 Emergency power source.

Main Parameters

Model	ZJ20/1470CZ
Drilling depth(4-1/2"DP) ft(m)	6560(2000)
Workover depth(3-1/2"DP) ft(m)	18045(5500)
Max.hook load lb(kN)	330700(1470)
Drill line dia.,in.(mm)/lines	φ1-1/8(φ29)/8
Max.hook speed ft/s(m/s)	4.3(1.31)
Overall dimensions in shipping status ft(m)	66×10.99×14.44(20.13×3.35×4.4)
Weight lb(kg)	123456(56000)



5、ZJ30/1700CZ Truck-mounted Drilling Rig

ZJ30 truck-mounted drilling rig is a light duty self-propelled truck-mounted drilling equipment with 9,840' (3000m) drilling depth. Several patent technologies and new technologies are used in the unit. Double engine compound operation. Unique compound box design ensures the reliable driving performance and easy maintenance. The operation and roading can be driven by each engine independently or together. Auxiliary brake of drawworks is air control water cooling disc brake. Main drum is cooled by recirculating water. 14×8 chassis with reasonable load distribution.



ZJ30 drilling rig with top driver system





- 1、Two (2) sets of diesel engines and Allison transmissions.
- 2、Mature double engine compound box and drive system.
- 3、118/125ft(36/38m) mast with stiffened rectangular pipes.
- 4、14×8 reinforced chassis with good cross-country capacity.
- 5、5.5/6m foldable substructure and dog house.
- 6、Top drive system is available.

Main Parameters

Model	ZJ30/1700CZ
Drilling depth(4-1/2"DP) ft(m)	9840(3000)
Workover depth(3-1/2"DP) ft(m)	21325(6500)
Max.hook load lb(kN)	381260(1700)
Drill line dia.,in.(mm)/lines	φ1-1/8(φ29)/8
Max.hook speed ft/s(m/s)	4.46(1.36)
Overall dimensions in shipping status ft(m)	69.7×10.8×14.67(21.25×3.3×4.47)
Weight lb(kg)	167548(76000)



6、ZJ40/2250CZ Truck-mounted Drilling Rig

ZJ40 truck mounted drilling rig is the biggest light duty self-propelled truck-mounted drilling equipment. Several patent technologies and new technologies are used in the unit. Mature and reliable compound system for double engine is used. Compound gear box with unique design is of reliable driving performance and reasonable load distribution. Auxiliary brake of drawworks is air control water cooling disc brake. 128' (39m) mast and chassis frame is fabricated with special material and structure to ensure reliable strength and to reduce weight efficiently, and it provides great performance to satisfy the requirements for 13,120' (4000m) drilling operation, meanwhile, it also ensures the traveling efficiency and performance.



- 1、Biggest self-propelled truck-mounted drilling rig.
- 2、Mature double engine compound box drive system.
- 3、Weight of mast, frame and accessories will be effectively reduced.
- 4、14×10 reinforced chassis with good cross-country capacity.
- 5、New style foldable substructure with stable structure and convenient installation.

Main Parameters

Model	ZJ40/2250CZ
Drilling depth(4-1/2"DP) ft(m)	13120(4000)
Workover depth(3-1/2"DP) ft(m)	24606(7500)
Max.hook load lb(kN)	505800(2250)
Drill line dia.,in.(mm)/lines	φ1-1/4(φ32)/10
Max.hook speed ft/s(m/s)	4.46(1.36)
Overall dimensions in shipping status ft(m)	50.85×9.8×14.6(15.5×2.99×4.46)
Weight lb(kg)	180776(82000)



7、ZJ30 Cold Weather Drilling Rig

ZJ30 cold weather drilling rig is a truck-mounted drilling equipment developed on the basis of conventional ZJ30 drilling rig. In consideration of cold weather's effect on metal structural parts, rubber parts, electric elements, signal elements fluid media, manufacturing processes and operating environments, we have taken some feasible measures according to Russian oilfield condition to make the rigs be suitable for -45°C environment. To optimize the rig design, a lot of new measures, new materials and processes are adopted. The dual mode, including heating system and good low temperature property of materials, will ensure the safety and convenience of rig operation.



Efficient power system and special driveline for cold weather.

- 1、 Better and powerful chassis. Axles and tires for low temperature will ensure safe and reliable traveling.
- 2、 Stronger load-bearing capacity mast assembly can be suited to top drive installation;
- 3、 The drawworks system is equipped with WCB324 auxiliary brake;
- 4、 Wider and more stable drilling floor;
- 5、 More optimized configuration.
- 6、 Major structural parts are mostly made of quality materials for low temperature.
- 7、 Various key components and valves are suitable for low temperature.
- 8、 Special rubber parts, sealing parts and hoses can be used in cold weather.
- 9、 Local heating and insulation system, dual protection, to be more suitable for cold weather.
- 10、 Special oils for cold weather.
- 11、 Can be operated in -45°C and stored in -60°C .



Main Features:



- 1、Mature technology, time-tested design.
- 2、High reliability.
- 3、Safety distance for preventing collision is more than 3m.
- 4、Tires for cold weather are provided.
- 5、Good cross-country capability.
- 6、Suitable for cold weather, dual heating system for key areas. Operation is safe and reliable.

Main Parameters

Model	ZJ30 Cold Weather Drilling Rig
Drilling depth (4 1/2 DP) ft(m)	9840(3000)
(5" DP)(ft)m	8200(2500)
Max. hook load (lb)kN	403687(1800)
Diameter of drilling line in.(mm)	φ1.02(φ29)
Max. pull of fast line lb(kN)	50600(225)
Weight lb(kg)	185180(82000)
Suitable ambient temperature °C	-45



Series of Trailer-mounted Drilling Rigs

1、ZJ15/1125CT Trailer-mounted Drilling Rig

ZJ15CT trailer-mounted drilling rig is a kind of economy type trailer-mounted drilling rig that designed and manufactured using the mature technologies of light duty truck-mounted drilling rigs. It is fitted with reliable diesel engine and transmission, 111.55' (34m) telescoping mast, double wheel three-axle semi-trailer. Several patent technical designs and configuration, such as double fast line, hydraulic caliper type auxiliary brake, are optional. The rig has following features: reasonable layout, low cost for mobilization, easy site installation, reliable operation performance, and easy maintenance. The rig suits short operating cycle, frequent mobilization drilling operation of shallow well within 4,920' (1500m) and workover service within 9,840' (3000m).



- 1、Cummins diesel engine.
- 2、Hydraulic transmission.
- 3、Special semi-trailer chassis with fast transportation and low transportation cost.
- 4、Air-controlled water-cooling disk auxiliary brake for drawworks is optional.

Main Parameters

Model	ZJ15/1125CT
Drilling depth(4-1/2"DP) ft(m)	4920(1500)
Workover depth(3-1/2"DP) ft(m)	11483(3500)
Max.hook load lb(kN)	253000(1125)
Drill line dia.,in.(mm)/lines	φ1/8(φ26)/8
Max.hook speed ft/s(m/s)	4(1.23)
Overall dimensions in shipping status ft(m)	57.74×9.19×13.9(17.6×2.8×4.25)
Weight lb(kg)	109347(49600)



2、ZJ30/1800CT Trailer-mounted Drilling Rig

ZJ30CT trailer-mounted drilling rig is fitted with reliable diesel engine and transmission, 125' (38m) hydraulic telescoping mast, double wheel four-axle semi-trailer. Several patent technical designs and configuration, such as double fast line, hydraulic tong type auxiliary brake, are optional. The rig has following features: reasonable layout, low cost for mobilization, easy site installation, reliable operation performance, and easy maintenance. The rig suits drilling operation of shallow well within 9,840' (3000m).



- 1、Driven by double diesel engine and hydraulic transmission.
- 2、Allison hydraulic transmission.
- 3、Special semi-trailer chassis with fast transportation and low transportation cost.
- 4、Air-controlled water-cooling disk auxiliary brake for drawworks is optional.

Main Parameters

Model	ZJ30/1800CT
Drilling depth(4-1/2"DP) ft(m)	9840(3000)
Workover depth(3-1/2"DP) ft(m)	21325(6500)
Max.hook load lb(kN)	404640(1800)
Drill line dia.,in.(mm)/lines	φ1.25(φ32)/10
Max.hook speed ft/s(m/s)	4.46(1.36)
Overall dimensions in shipping status ft(m)	81.36×10.83×14.76(24.8×3.3×4.5)
Weight lb(kg)	165340(75000)



3、LS30/1700DBT Trailer-mounted Drilling Rig

LS30/1700DBT trailer-mounted drilling rig is developed with the help of a famous American engineering company on the basis of original LS30/1700DBT drilling rig. It features full digital vector control, AC-DC-AC driving, hydraulic/air/electric control, full trailer movement, and can meet the requirements for fast movement and quick installation. A LS30/1700DBT rig, composed of 13~15 trailer-mounted modules depending on different configurations, has all the advantages modular rigs and truck-mounted rigs have.



- 1、 Driven by VFD motor.
- 2、 Not more than 15 trailer-mounted modules for rig, substructure, mud pump, etc.
- 3、 High-efficiency hydraulic disc brake system.
- 4、 Independent drive for drawworks and rotary table.
- 5、 Operation controls are all centralized in the driller's room.
- 6、 Two-section K mast.
- 7、 Top drive system and hydraulic rotary table are available.



Main Parameters

Model	LS30/1700DBT
Drilling depth(4-1/2"DP) ft(m)	9840(3000)
Workover depth(3-1/2"DP) ft(m)	21325(6500)
Max.hook load lb(kN)	382160(1700)
Drill line dia.,in.(mm)/lines	φ1.13(φ29)/10
Max.hook speed ft/s(m/s)	3.61(1.1)
Overall dimensions in shipping status ft(m)	81.36×10.83×14.76(24.8×3.3×4.5)
Weight lb(kg)	165340(75000)