

Slant Well Drilling Rig

Slant well drilling rig can drill from ground and finish slant well, slant directional well, slant cluster well drilling operation. It is applied to explore oil and gas in particular environmental conditions, such as offshore, shore, shallow formation, under building, marshy terrain, ground subsidence, etc. Compared to conventional rig, it has a significant merit in operation of extended reach well or slant straight directional well.

Main technical features

1. K type mast, adjusting tilt angle in step change, raised by oil cylinder continuously.
2. Drilling operation depending on hydraulic power swivel or AC VFD top drive. Back reaming and drilling together with mud circulating.
3. Fulfill the pipe handling procedure from pipe racking, transmitting to connection by mechanical equipment, such as hydraulic drive mechanical arm, hydraulic tong, hydraulic elevator, air slip, hydraulic pipe rack, etc.
4. Equipped with pressure added device for drilling tools and BOP handling device ,which are designed for slant well rig specially.
5. Driller' s cabin integrated electrical, hydraulic and air control system and driller can monitor and control rig inside cabin.
6. Fufill rig intelligent control function depending on AC VFD system through PLC and electrical, hydraulic and air control system
7. Adapt skid module or trailer design for rig. Main parts, such as mast, catwalk, top drive, mechanical arm, shall be installed on trailer and easy moving and convenient installation.



Technical parameter

| Rig model | | ZJ15/1000X | ZJ20/1700DBX |
|---|---------------------------|-------------------------|-------------------------|
| Normal drilling depth ,m | 127mm(5") drill pipe | 700 ~ 1 400 | 1100~ 1800 |
| | 114mm(4 1/2") drill pipe | 800 ~ 1500 | 1200~ 2000 |
| Max. hook load,kN | | 1000 | 1700 |
| Mast working tilt angle capacity | | 0 ~ 45° | 0 ~ 45° |
| Line strung of hoisting system | | 8 | 8 |
| Dia. Of wireline, mm (in) | | 26 (1) | 29 (1 1/8) |
| Hoisting speed,m/s | | 0.15 ~ 1.2 | 1.2 |
| Drawworks speed | | 5+1R | 1+1R, stepless speed |
| Opening of slip supporting disk , mm (in) | | 520 (20 1/2) | 520 (20 1/2) |
| RPM of top drive or power slip, r/min | | 0 ~ 160 | 0 ~ 191 |
| Max. continous torque of top drive or power slip , kN.m | | 11 | 31.4 |
| Mast working height, m | | 21 | 24 |
| Rig floor height (drilling condition) , m | | 3.1 | 4.5 |
| Mud pump model & No. | | F-800 × 2 | F-1300 × 1 |
| Lower pull force of pressure added device ,kN | | 200 | 300 |
| Hoisting force of mechanical arm ,kN | | 20 | 30 |
| Mechanical arm holding capacity, mm (in) | | 73(2 7/8) ~ 273(10 3/4) | 73(2 7/8) ~ 340(13 3/8) |
| Load mode of main equipment | | Semi trailer | Trailer or skid mounted |