

DRAWWORKS

With more than forty years experience in designing and manufacturing drawworks, our company can design and manufacture 280-6000HP drawworks for 1000m ~ 12000m various types of land and offshore drilling, workover rig.

1. MECHANICALLY DRIVEN DRAWWORKS(B Series Drawworks)

Mechanical drive drawworks mainly takes diesel engine as prime mover, through the transmission assembly supplying power for the drawworks. Our company can produce 280HP ~ 2000HP different structural forms mechanical drive drawworks



TECHNICAL FEATURES

- Bearings adopt roller bearing totally, shaft materials adopt high-quality alloy steel
- Drawworks adopt roller chain roll transmission to realize forward gear and adopt gear transmission to realize reverse.
- All the chains are forced lubrication;
- The drum is grooved, and the high-speed and low-speed ends of the drum shaft are equipped with ventilated-type air tube clutches. The brake rim uses circulation water to force cool.
- Band or disc brake is used in main brake. Auxiliary brake is furnished with Regenerating brake , electromagnetic eddy current brake or air controlled disc brake.



Technical parameter

| Model | JC10B | JC20B | JC30B | JC40B | JC50B | JC70B |
|-----------------------------------|----------------------|----------------|------------------------|------------------------|------------------------|----------------|
| Rated. input power, kW | 210 | 400 | 440 | 735 | 1100 | 1470 |
| Max. pulling of fast- line, kN | 80 | 200 | 200 | 280 | 350 | 450 |
| Diameter of wire rope ,mm | Φ 22 | Φ 29 | Φ 29 | Φ 32 | Φ 35 | Φ 38 |
| Drum size (D x W) ,mm | Φ400×650 Φ417×650 | Φ473×1000 | Φ560×1304 Φ508×1304 | Φ644×1210 Φ644×1177 | Φ685×1108 Φ685×1144 | Φ770×1285 |
| Drum hub/ disc size (D x W),mm | Φ1100×230 | Φ1400×50 | Φ1067×267 | Φ1168×265 | Φ1270×267 | Φ1370×270 |
| | Φ1500×76 Φ1500×40 | | Φ1570×76 | Φ1650×76 | Φ1560×76 | |
| | | | Φ1570×40 | Φ1650×58 | | |
| Brake band wrap angle , ° | 273 | - | 280 | 280 | 271 | 280 |
| Hoisting speed | 3F | 3F | 4F | 4/6F | 4/6F | 4/6F |
| Reverse gear speed | 1R | 1R | 2R | 2/3R | 2R | 2R |
| Rotary table speed | ---- | 1 | 2 | 2/3 | 2/3 | 2/3 |
| Auxiliary brake | ---- | FDWS20 | FDWS30 | FDWS40 | FDWS50 | FDWS70 |
| Overall dimensions (Lx W x H) ,mm | 4000×1790×2200 | 5500×2620×2585 | 6542×2904×2464 | 6490×2995×2550 | 8100×3220×2697 | 8400×3295×2945 |
| Weight, kg | 7716 | 23243 | 25565 | 33500 | 37394 | 49950 |

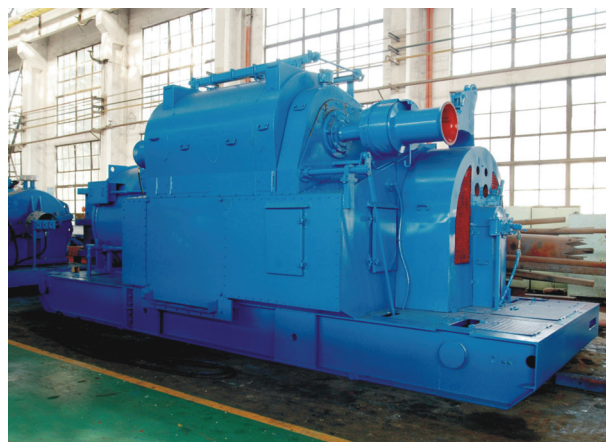
2. DC MOTOR DRIVEN DRAWWORKS(D Series Drawworks):

This type drawworks powered by DC motor improves the drilling efficiency of rig for DC motor speed can be regulated. It has features as structure simple, small size and light weight.

CNPC can produce 300 ~ 3000hp series DC motor-driven drawworks .

Technical Features

- Bearings adopt roller bearing totally, shaft materials adopt high-quality alloy steel
- The drawworks adopt wall type and fully enclosed structure, and adopt internal gear shift mode through roller chain drive.
- All the chains are forced lubrication;
- The drum is grooved, and the high-speed and low-speed ends of the drum shaft are equipped with ventilated-type air tube clutches. The brake rim is cooled by circulation water;
- Main brake adopts with a disc brake or hydraulic brake, Auxiliary brake is furnished with regenerating brake, electromagnetic eddy current brake or pneumatic drive and water-cooled disk brake.



Technical parameter

| model | JC40D | JC50D | JC70D | JC90D |
|-----------------------------------|--|--|--|--|
| Rated. input power, kW | 735 | 1100 | 1470 | 2200 |
| Max. pulling of fast- line, kN | 340 | 340 | 485 | 720 |
| Diameter of wire rop, mm | φ 32 | φ 35 | φ 38 | φ 45 |
| Drum size (D x W), mm | φ 644 × 1210 | φ 770 × 1287 | φ 770 × 1285 | φ 970 × 1652 |
| drum hub/disc size (D x W),mm | φ 1570 × 76 | φ 1520 × 76 | φ 1650 × 76 | φ 1820 × 80 |
| | | Φ 1370 × 270 | Φ 1370 × 270 | |
| Brake band wrap angle ,° | | 280° | 280° | |
| Hoisting speeds | 4F+4R | 4F+4R | 4F+4R | 4F+4R |
| Rotary table speeds | 2 | 2 | 2 | 2 |
| Cathead shaft speeds | 2 | 2 | 2 | 2 |
| Auxiliary brake | Electromagnetic eddy current brake or pneumatic brake disc | Electromagnetic eddy current brake or pneumatic disc brake | Electromagnetic eddy current brake or pneumatic disc brake | Electromagnetic eddy current brake or pneumatic disc brake |
| Overall dimensions (Lx W x H) ,mm | 7300 × 3200 × 3010 | 7190 × 2520 × 3216 5660 × 1505 × 1896 | 7520 × 3250 × 3216 6400 × 1580 × 1926 | 8100 × 3555 × 3226 60400 × 2200 × 2300 |
| | | 7300 × 2800 × 3050 | 7520 × 3350 × 2872 | |
| Weight ,kg | 37450 | 40400, 12000 | 45785, 12400 | 65500, 19000 |
| | | 44600 | 46900 | |

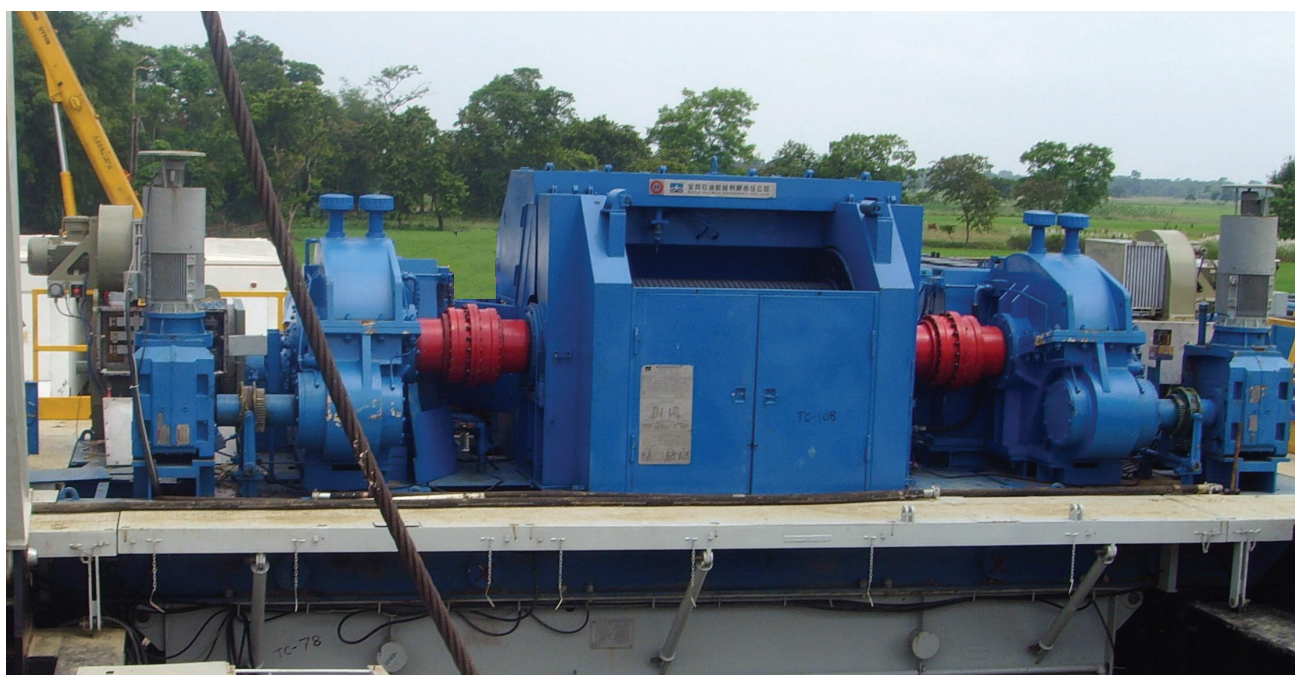
3. AC VARIABLE FREQUENCY ELECTRIC DRIVEN DRAWWORKS (DB Series Drawworks)

The single drum shaft and gear drive drawworks features small size, light weight, little vibration, low noise, high efficiency and long life, which especially meet the requirement of offshore rigs and high-power electric drive onshore rigs. It is one of the ways to further enhance the effective level of technology for the electric drive drilling rigs.

Our company can manufacture all series single shaft gear drive drawworks under 6000HP.

Technical Features

- Drawworks consists of AC variable-frequency motor, gear box, hydraulic disc brake, drawworks frame, drum shaft Assy and automatic-drilling system, etc; Gear transmission efficiency is high;
- The drawworks is single grooved drum in structure. Compared with similar products, it features simple structure, small volume and light weight;
- Drawworks is driven by AC variable-frequency motor to realize stepless speed regulation, thus have big power, wider range in speed regulation
- The drawworks adopt hydraulic disc brake and regenerating brake and adopt with independent motor automatic-drilling.



Technical parameter

| Model | JC15DB | JC30DB | JC40DB | JC50DB | JC70DB | JC90DB | JC120DB |
|-----------------------------------|--|--|--|----------------------|----------------------|----------------------|---------------------|
| Rated. input power, kW | 300 | 440 | 735 | 1100 | 1470 | 2210/3200 | 2940 |
| Max. pulling of fast- line , kN | 135 | 220 | 275 | 340 | 485 | 640 | 850 |
| Diameter of wire rope, mm | φ 26 | φ 29 | φ 32 | φ 35 | φ 38 | φ 42 | φ 48 |
| Drum size (D x W), mm | φ 473 × 878 | φ 508 × 1000 | φ 644 × 1210 | φ 770 × 1287 | φ 770 × 1402 | φ 1060 × 1840 | φ 1320 × 2312 |
| Drum hub/ disc size, mm | φ 1500 × 40 | φ 1500 × 40 | φ 1520 × 76 φ 1168 × 265 | φ 1520 × 76 | φ 1520 × 76 | φ 2200 × 80 | φ 2400 × 80 |
| Hoisting speeds | 2F | 2F | 4F | 2F | 2F | 2F | 1F |
| | 1F | | 2F | 1F | 1F | 1F | |
| | | | 1F | | | | |
| Rotary table speeds | 1 | 2 | 2 | | | | |
| Cathead shaft speeds | 1 | | 2 | | | | |
| Auxiliary brake | Regenerating brake | Regenerating brake | Regenerating brake | Regenerating brake | Regenerating brake | Regenerating brake | Regenerating brake |
| | Electromagnetic eddy current brake or pneumatic disk brake | Electromagnetic eddy current brake or pneumatic disk brake | Electromagnetic eddy current brake or pneumatic disk brake | pneumatic disk brake | pneumatic disk brake | pneumatic disk brake | |
| Overall dimensions (L × W × H) mm | 6730 × 3200 × 1720 | 6800 × 3256 × 2463 | 7000 × 3200 × 3010 | 7250 × 3075 × 2683 | 6880 × 3380 × 2795 | 10000 × 3350 × 3035 | 11990 × 3350 × 3260 |
| | 4350 × 2439 × 1752 | 4700 × 2950 × 2032 | 5700 × 3200 × 2715 | 6740 × 3190 × 2785 | 7820 × 3440 × 2775 | 10685 × 3250 × 3116 | |
| Weight, kg | 11000 | 19360 | 39125 | 36000 | 46500 | 76300 | 111000 |