

CDW-500

Onshore drawworks

APPLICATIONS

Onshore rigs requiring 500- to 750-t lifting capacity

BENEFITS

- Full lifting capacity with one motor in the event of a motor failure
- Advanced sensor technology that enables condition-based monitoring of equipment in real time

FEATURES

- High power density for superior performance
- Fully redundant lubrication system
- Ability to lift 500 t on eight lines; maximum speed (at 500 t) of 144 ft/min
- Pneumatic multidisc plate brake mounted directly to the main gearbox
- Vibration and temperature sensors on every bearing
- Remote I/O panel that simplifies interface, rig-up, and integration
- Horsepower
 - Continuous duty: 3,200 hp
 - Drawworks duty: 4,800 hp



CDW-500 onshore drawworks.

Satisfying the most demanding requirements in a compact package, the CDW-500 drawworks raises and lowers the traveling equipment in the mast, using AC motors equipped with local forced air cooling for hoisting, lowering, and service braking (regenerative). Emergency and parking brake functions are provided by a fail-safe, multidisc pneumatic brake or optional disc and caliper brake.

Flexibility and robustness

The drawworks offers redundancy on key functions, with 150% minimum worn braking capacity on full-load drum torque. The drawworks can operate at half load and full speed with one motor in the event of a single motor failure or at full load and half speed with an optional planetary speed-reducer module. A fully redundant lubrication system enables greater uptime in the event of minor leaks or valve issues.

A powerful yet compact design includes a brake that is mounted directly on the gearbox to conserve space and ensure alignment. Heat exchangers are mounted above the drivetrain, minimizing footprint and improving heat dissipation.

Efficiency and maintenance

The drawworks requires only electrical power, instrument connections, and air to operate. No water or hydraulic plumbing to the drawworks is required. Additionally, optional instrumentation and conditioning monitoring packages enable predictions of maintenance window and downtime.

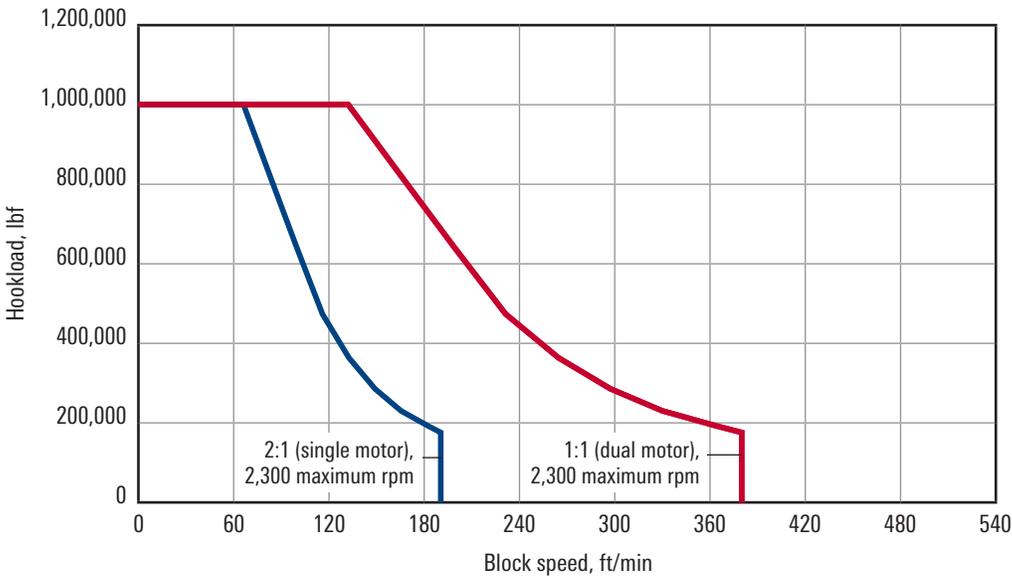
Streamlined operations and increased safety

A single-speed gearbox with optional motor, integrated speed-reducer modules, and reduced component count add to the efficient simplicity of the CDW-500 drawworks' design. Safety is enhanced as a result of fully automated drilling and guards that cover all rotating elements. Optional instrumentation packages can provide data required for remote monitoring.

CDW-500

CDW-500 Specifications

Service	Drilling
Design code and standard	API Spec. 7K SR2
Area classification	Atmosphères Explosibles (ATEX) Zone 2, Underwriters Laboratories (UL) Class 1, Div. 2 (API RP500/505)
Intermittent horsepower, hp	4,800
Continuous horsepower, hp	3,200
Drum size, ft [m]	3.92 × 3.92 [1.19 × 1.19] with LeBus grooving
Dimensions (L × W × H), ft [m]	21.33 × 11 × 9.33 [6.50 × 3.35 × 2.84]
Less optional planetary transmissions	18 × 11 × 9.33 [5.49 × 3.35 × 2.84]
Weight, lbm [kg]	95,000 [43,100]
Less optional planetary transmissions,	91,000 [41,300]
Line size, in	1½ extra extra improved plow (EEIP)
Second layer hookload, lbf [N]	
Eight lines	1,000,000 [4,448,222]
Ten lines	1,250,000 [5,560,277]
Twelve lines	1,500,000 [6,672,332]
Motors	Two 1,600 hp
Gearbox	One 5,000-hp max. input single helical triple reduction shaft mounted gearbox with carburized and ground gears with pressurized oil lubrication, $n = 10.16$
Brakes	One 448 fail-safe pneumatic (optional hydraulic) plate brake (optional disc with hydraulic calipers and local brake hydraulic pressure unit)
Single line pull, lbf [N]	133,584 [594,211]
Ambient operating temperature range, degF [degC]	-4 to 131 [-20 to 55]



Two-speed 500-ton US, two Breuer 1,600-hp.
47-in drum diameter, eight lines, 1½-in wire rope, second layer.

products.slb.com/drilling

