

EZY-TORQ® Hydraulic Cathead

An essential part of any drill floor equipment package.

Hydraulic power increases torque arc smoothly.

The EZY-TORQ hydraulic cathead delivers consistent and smooth torque to makeup loads ranging from 40,000 to 150,000 ft.lbs for making up large-diameter BHA components with either premium or standard connections. When the system is used for rotary shouldered connections requiring less than 40,000 ft.lbs of makeup torque, the unit should be set up with a regularly calibrated load cell.

Application of smooth and consistent line pull to the rig tongs ensures proper makeup of all rotary shouldered connections. Maintaining proper connection makeup torque helps reduce wear on drill string connections, decreases maintenance costs, and reduces potential connection failures. *Note: In all applications, the torque rating of the rig tongs should never be exceeded.*

Two EZY-TORQ systems provide flexibility.

EZY-TORQ systems are available to fit individual rig requirements and operation parameters. The EZY-TORQ hydraulic cathead is available in two power systems to suit individual rig requirements. Available systems can be self-contained or powered by the rig hydraulic power supply. The standard hydraulic power unit configuration is rated for high temperature (131 deg F [55 deg C]), allowing it to be used in moderate (104 deg F [40 deg C]) to high ambient temperature environments without any changes or upgrades required.

TYPE SC: SELF-CONTAINED SYSTEM

The SC EZY-TORQ is a fully self-contained system. It incorporates a hydraulic power source and a control console to operate the unit's hydraulic cylinder assembly, which includes a specially rated wireline for easy connection to rig tongs. The entire unit can be temporarily or permanently installed on the rig floor as a self-contained system featuring a choice of Hydraulic or Explosion Proof (EXP) radio transmitter control.

- The Hydraulic controller comes with five 25-ft [7,620-mm] remote control hoses and two 25-ft cylinder hoses.
- The Explosion Proof (EXP) Control comes with two 25ft cylinder hoses.

Accurate and remote hydraulic pressure control

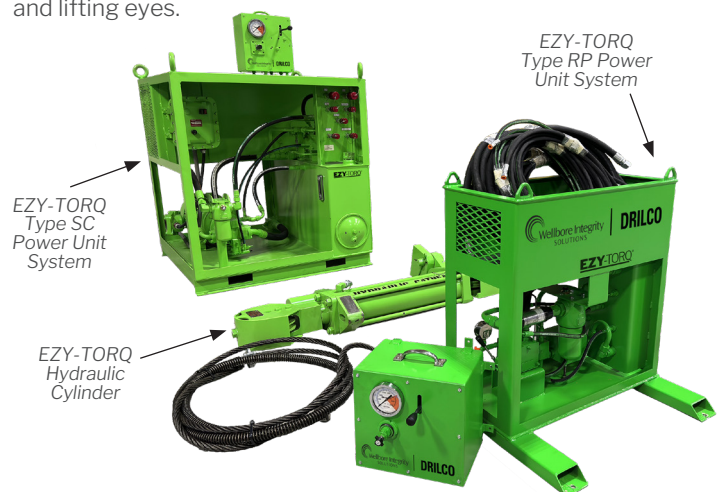
The unit is powered by a variable volume, pressure compensated piston pump that is capable of a standby condition at the desired pressure setting but at a minimal, almost zero flow output. This pump allows low standby power consumption, high-speed cylinder movement at low force-to-work-loading and a slow, steady pull at high force-to-full-loading. When a power stroke is activated and the load requires the system pressure to rise to the

desired setting, the pump automatically increases flow output to match the demand and “balances” the flow and pressure to supply high force for connection make-up.

The power unit can be controlled from a convenient location on the rig with a remote control module, which features a hydraulic lever actuated control valve, a pressure gauge, and a pilot relief valve to enable pressure operation and regulation. A wireless EXP controller is available with controls and a hip belt carrying option offering maximum mobility as there are no hydraulic connections to the EZY-TORQ unit.

Advantages

- Precise pressure control enables correct makeup.
- Simple hydraulic circuit ensures trouble-free performance.
- The variable volume, pressure compensated piston pump provides better efficiency, speed, control, and steady hydraulic energy from a single pump.
- Remote Hydraulic and EXP Control operation eliminates electrical hazards.
- For maximum safety, an Explosion Proof EXP 2.4GHz Radio transmitter is available. The EXP controller is triple certified (ATEX, IECEx, and NEC/CEC), allows license-free operation and Global operational approval for the majority of locations.
- All critical parts easily reached for maintenance or replacement if needed.
- Backup control lever built into the control unit in event of remote control failure or loss.
- Storage area on the HPU to store hoses and control module.
- Built-in skid with forklift pockets and lifting eyes.



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TYPE RP: CONNECTS TO EXISTING RIG HYDRAULIC SYSTEM

The Type RP EZY-TORQ system provides the same reliable performance as the Type SC system, but it has a smaller foot print. It operates with hydraulic components that connect to an existing rig hydraulic power source, such as the accumulator portion of a BOP system or positive displacement system. The Type RP consists of the main control unit, choice of Hydraulic or EXP, and two 25-ft [7.62 m] cylinder hoses. Conversion hydraulic fittings to existing rig components are supplied by the customer.

Pressure control with a minimized footprint

The remote control module is operated by a Hydraulic or EXP Controller, eliminating the hazards associated with electrical circuits. The hydraulic remote features an adjustable relief valve and a high-pressure gauge for setting the required fluid pressure. The pilot relief valve operates a pressure-reducing valve on the main control unit that governs the maximum pressure developed on the blind end of the cylinder (makeup stroke). An additional preset relief valve limits maximum pressure on the rod side of the cylinder (retraction stroke). A lever-actuated hydraulic valve mounted on the remote-control module can extend, retract, or stop cylinder movement.

- Hydraulic control comes with five 25-ft [7,620-mm] remote control hoses and two 25ft cylinder hoses.
- Explosion proof EXP Control comes with two 25ft cylinder hoses routed from the HPU to the cylinder.

Advantages

- Utilizes existing rig hydraulic equipment, minimizing unit space requirements.
- Remote Hydraulic and EXP Controller operation eliminates electrical hazards.
- Hydraulic Control console has an adjustable relief valve and a high-pressure gauge sets required fluid pressure.
- With the EXP module, the pilot relief valve will be replaced with a wireless Radio Frequency (RF) controlled adjustment for a proportional relief valve, with a digital readout, and a control potentiometer to adjust pressure.
- A backup control lever built into the main control unit is provided in the event of the remote failure or loss.
- A storage basket on the unit is available to store hoses and the control module.
- Built-in skid with forklift pockets and lifting eyes.

Note: The Hydraulic RP Control Unit is designed with a closed center valve for connection to a hydraulic system using accumulators or a piston pump, but can be easily configured for a fixed displacement pump if desired.

EZY-TORQ Cathead Recommended Spare Parts Kits for 12 Months Operation	
Description	Part Number
Self Contained Unit (SC)	80066349
Rig Power Positive Displacement Unit (RPPD)	80067580
Rig Power Accumulator Unit (RPAC)	80068177
Type SC Power Unit Spare Parts Kit	80068224
Type RP Auxiliary Unit Spare Parts Kit	80068223
Cylinder Assembly Spare Parts Kit (includes wireline assembly)	03677701

Shipping Weight Data		
Hydraulic Cylinder Assembly ² , lb	SC Unit Assembly ¹ , lb	RP Unit Assembly ¹ , lb
900	950	450

*All weights are approximate. ¹ Contains remote control module with hoses
² Contains wireline assembly*

System Power Design Data					
Motor Design	Cycle Frequency, hz	Amperage, amp		Cylinder Time, seconds	
		230 v	460 v	Power Stroke	Return Stroke
15 hp-1,750 rpm	60	37.5	18.8	10	5

Cylinder Assembly						
Minimum Flow Rate	Maximum Flow Rate	Maximum Test Pressure	Maximum Working Pressure	Stroke Length	Line Pull	Torque Range
4 galUS/min	35 galUS/min	3,000 psi	2,500 psi	22.5 in	32,900 lbf	40,000-150,000 ft.lbf
18.9 l/min	132.5 lpm	20.68 Mpa	17.2 Mpa	571.5 mm	146,000 N	54,240-203,400 N.m

Ordering instructions, please specify:

- EZY-TORQ Type SC System (standard)
- EZY-TORQ Type RP System for rig accumulator utilization or positive displacement pump.
- Hertz (Hz) of power source: 60 Hz
- Motor Voltage-The following are available:
 - 60 Hz-230V, 460V, 1750 RPM, 15HP
- Motor Temperature Rating
 - 131 degF [55 degC] ambient operating temperature standard.

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