



500/650 ECI 900 Top Drive



A modular, high performance AC top drive for demanding drilling applications

TESCO's ECI top drive system represents a significant advance in electric top drive technology.

Traditional induction or brush style DC motors have been replaced with liquid cooled, permanent magnet synchronous motors. These motors, capable of producing 450HP each, set the standard for reliability, durability and power density.

Compact enough to fit into any triple mast, the ECI provides the performance and pipe handling features required for medium and deep drilling applications.

The ECI system includes a uniquely engineered power system suitable for all drilling requirements. This system is compatible with most 600V AC rig power systems.

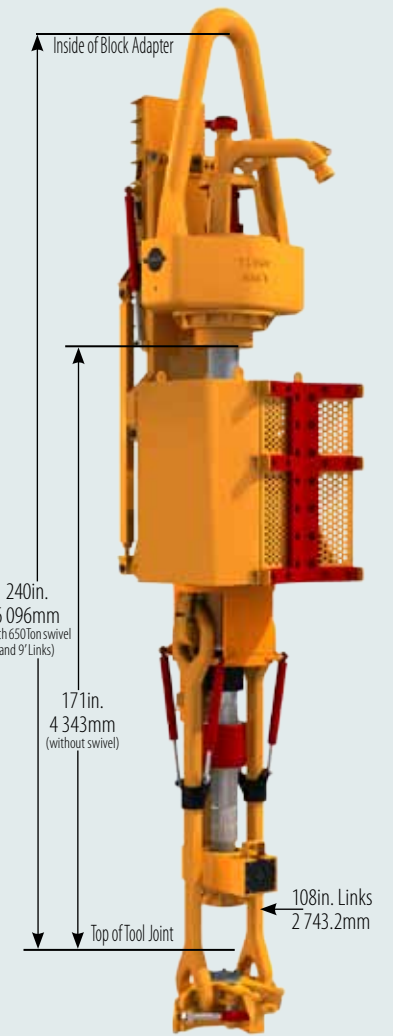
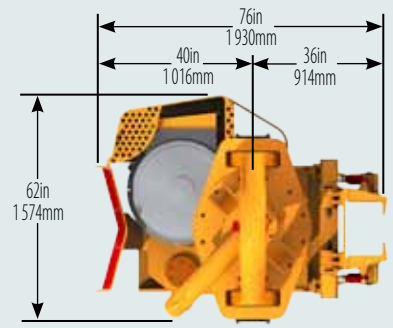
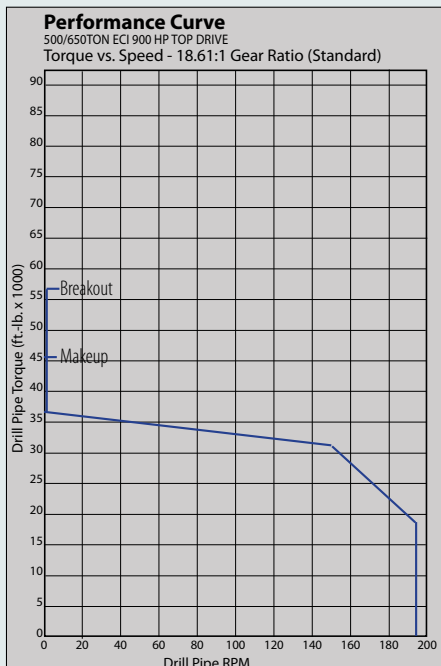
The ECI top drive is available with an integrated swivel or can use the customer's swivel. Casing load ratings of 500 or 650 tons are available. If applications require, the load path can be easily reconfigured.

The modular ECI is available in 900 and 1350HP configurations. An ECI 900 system can also be upgraded to a full 1350HP.

Optional Advantages:

- The complete system including the top drive, torque system and power unit can be installed in less than one day. In most cases, no rig modifications are necessary.
- The ECI can be interfaced with the existing power supply with minimal degradation to rig power. The system is monitored using a dedicated diagnostic computer and specialized software.
- PA44 permanent magnet synchronous motors have been successfully tested to 60G triaxial loading, making them the ideal choice for rough drilling environments.

- Modular design of the system allows drilling to continue at reduced HP with one or two motors.
- A double ball mud saver/safety valve is incorporated into the system design.
- The ECI package includes a specially designed torque system. The track/torque bushing configuration is simple to install and requires minimal maintenance
- The ECI offers an expanded suite of hydraulic pipe-handling functions including elevator link-tilt, an extend/retract feature for making mousehole connections up to 1524mm (60in.) from well center, 360° pipe-handler rotation, and grabber. The ECI grabber acts as a back-up tong for making or breaking connections and will accommodate tool joints from 76.2mm (3in.) to 222.25mm (8-3/4in.) OD.
- The entire ECI can be transported in three standard 6.09m (20 ft.) sea containers.



Specifications

500/650TON ECI 900HP (without swivel)	Imperial	Metric
Rated Capacity	500/650ton	454/590tonne
Rated Input Power	900HP	670kW
Estimated Weight	13,000lbs.	5 909kg
Operating Length (including 9 ft. links & elevators)	171in.	4 360mm
Width	62in.	1 575mm
Max. Continuous Drill Torque	36,700ft.-lb.	4 976daN-m
Make-up Torque	45,000ft.-lb.	6 101daN-m
Breakout Torque	56,000ft.-lb.	7 592daN-m
Max Speed	193RPM	193RPM
Quill ID	2.5in.	63.5mm.
Power System (Mechanical Module)		
Weight – Standard Ambient (approximate)	9,325lbs.	4 230kg
Weight – High Ambient (approximate)	11,000lbs	4 990kg
Size – Standard Ambient	115in. / 2 921mm L x 91in. / 2 311mm W x 88in. / 2 235mm H	
Size – High Ambient	115in. / 2 921mm L x 91in. / 2 311mm W x 127.25in. / 3 232mm H	
Power System (Power Module)		
Weight (approximate)	9,460lbs.	4 290kg
Size	115in. / 2 921mm L x 91in. / 2 311mm W x 88in. / 2 235mm H	

Weight includes top drive, pipe handling equipment and torque bushing.
The ECI can be equipped with a 500 or 650 ton swivel.
Power unit workshop contain high ambient cooler, and optional stacking kits are available

All specifications are subject to change without notice.

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