



TOP DRIVES

CASING DRILLING®

AZIMUTH TUBULAR SERVICES™

500/650 ECI 1350

500 or 650 Ton 1350 HP AC Electric 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.

OPERATIONAL 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.

Better Ways to The Bottom™

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500/650 ECI 1350

- 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 60 in. 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 3 in. to 8-3/4 in. OD.
- The entire ECI can be transported in three standard 20 ft. sea containers.

SPECIFICATIONS:

500/650 TON ECI 1350 HP (without swivel)

Rated Capacity	500/650 ton	454/590 tonne
Rated Power	1350 hp	1 007 kW
Weight	13,800 lbs.	6 270 kg
Operating Length (including 9' links & elevators)	172 in.	4 360 mm
Width	62 in.	1 575 mm
Max. Drill Torque	58,000 ft.-lb.	7 860 daN-m
Make-up Torque	68,000 ft.-lb.	9 490 daN-m
Breakout Torque	84,000 ft.-lb.	11 389 daN-m
Max Speed	193 rpm	193 rpm
Quill ID	2.5 in.	63.5 mm

Power System (Mechanical Module)

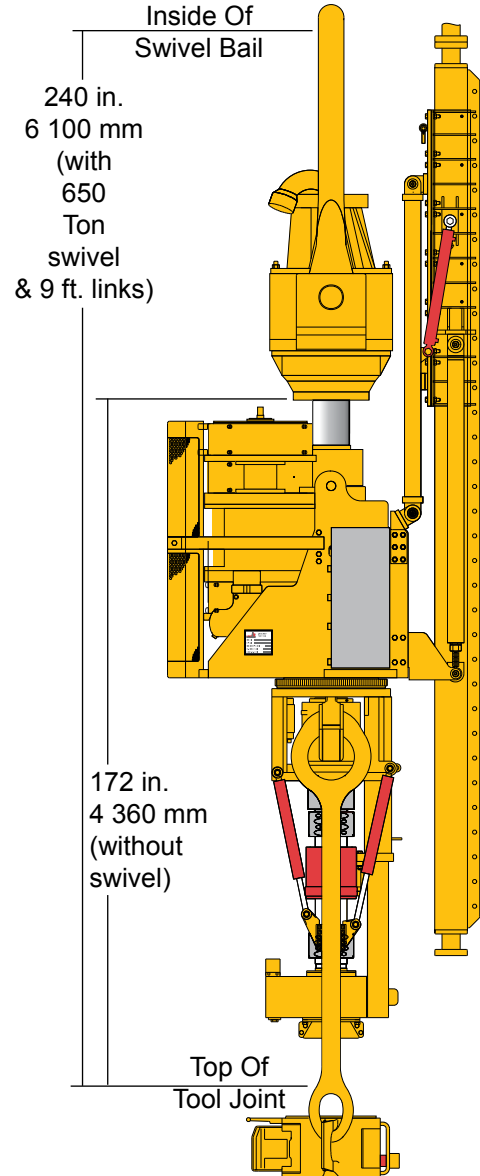
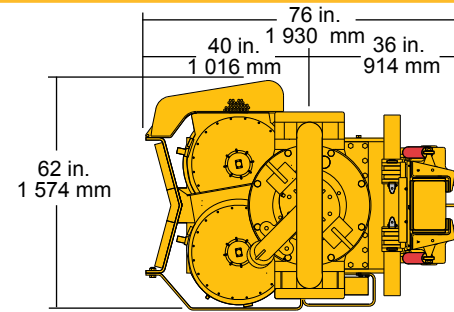
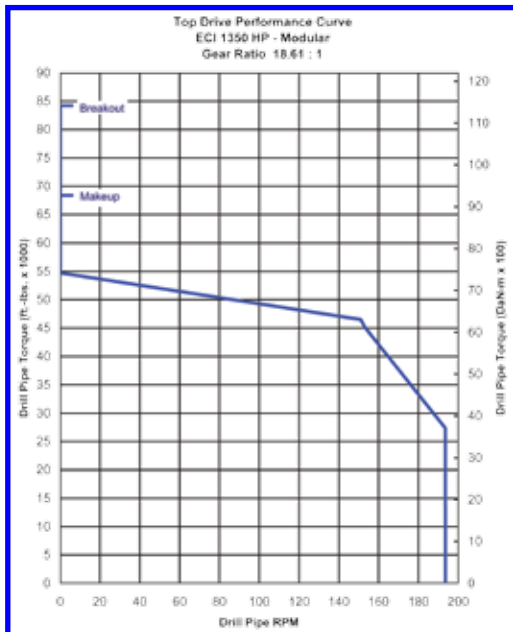
Weight (approximate)	8,200 lb.	3 730 kg
Length	250 in.	6 350 mm
Width	91 in.	2 310 mm

Power System (Power Module)

Weight (approximate)	9,500 lb.	4 320 kg
Length	115 in.	2 920 mm
Width	91 in.	2 310 mm

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

PERFORMANCE CURVE:



Printed in Canada / August 2006 / FOD
Due to ongoing product development, all specifications are subject to change without notice.

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