

# TD-500-AC-2M Top Drive

Digitally enabled features and high performance for superior uptime

## APPLICATIONS

Drilling operations

## BENEFITS

- Increased uptime, efficiency, and safety through total control of the drilling process
- Improved operational certainty and efficiency with best-in-class performance and reliability
- Rig-time savings through simplified maintenance

## FEATURES

- High-precision, redundant sensors for optimal system feedback
- Redundant motor configuration
- High-quality components and reliable no-failure gearbox

To help operators meet their drilling objectives no matter the demands or challenges of their application, Cameron offers a range of 500-tonUS to 1,500-tonUS AC-driven top drive systems with several accessories that can be tailor-made to meet unique requirements.

The TD-500-AC-2M provides the highest level of instrumentation, ensuring total control of the drilling process while increasing uptime and reliability through optimal system feedback and redundancy.

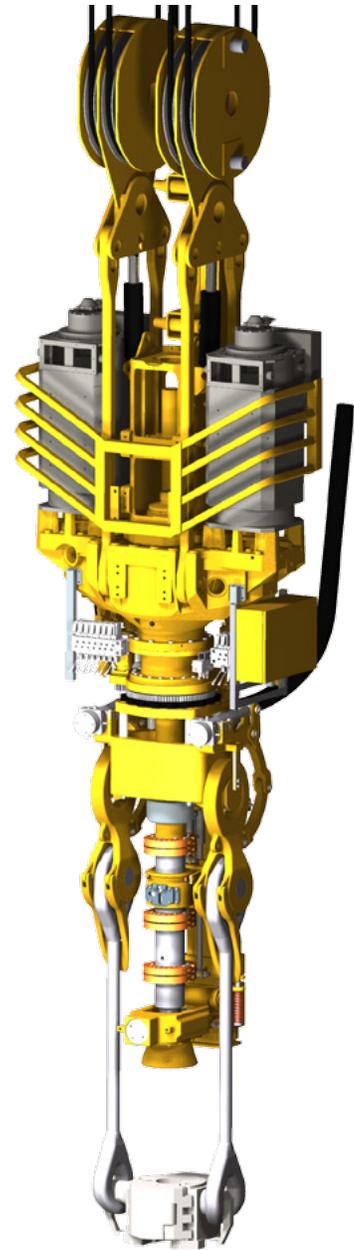
## Reliable automation

The TD-500-AC-2M top drive includes the following features:

- continuous high-accuracy monitoring of weight on bit, motor temperatures, lubrication oil temperature, and pressure and bearing temperature
- redundant motor and sensor configuration
- flat gearbox design for optimal use of space using extend-retract dolly and automated pipe handling equipment
- high-precision knuckle-link-type pipe handler and link tilt with stop function
- remote operation of all functions.

## Simplified, safer operation

The top drive's modular design ensures quick and easy replacement of parts. All maintenance and lubrication points are easily accessible and protected from collision. Washpipe can be replaced within 5 min. The pipe handling systems include a high-capacity knuckle-link tilt system that enables handling the latest-model fail-safe elevator—from drilling to maximum kickout mode.



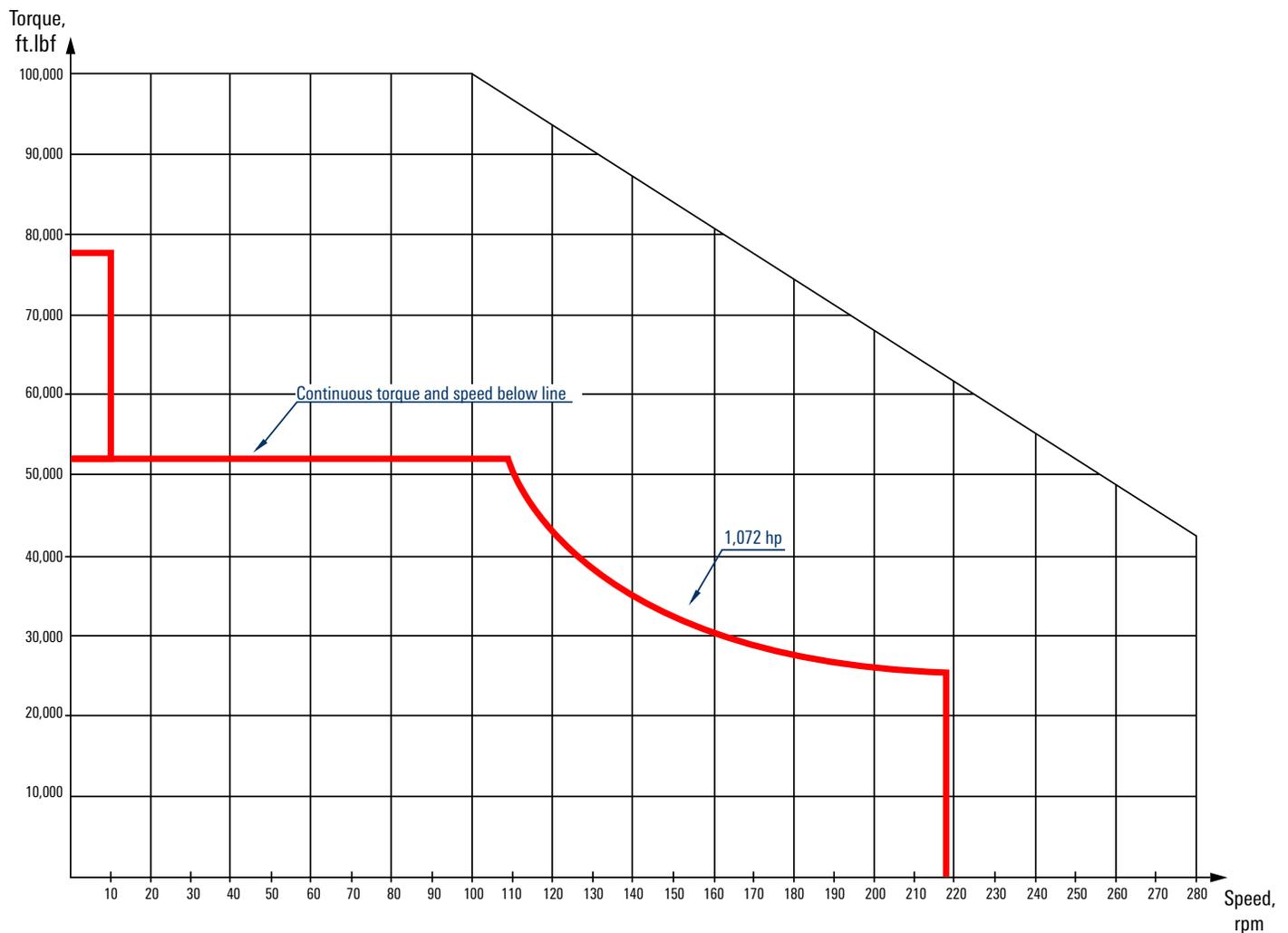
*The customizable TD-500-AC-2M top drive helps operators meet critical drilling objectives in challenging applications.*

# TD-500-AC-2M Top Drive

## Innovative software enhancements

Cameron drilling software, which feature user-friendly human machine interfacing (HMI), helps operators increase safety and drilling efficiency.

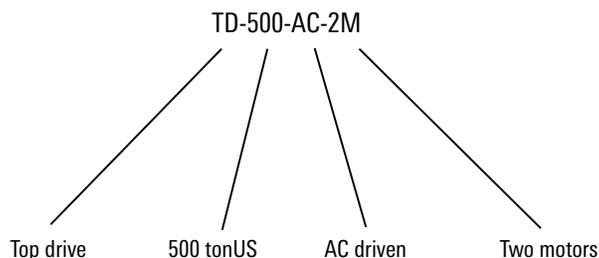
- OnTrack DM\* drilling management system includes autodrilling functions for real-time acquisition and transmission of weight on bit and ROP data.
- OnTrack SoftTorque\* top drive anti-stick/slip software eliminates stick/slip, improves wellbore quality, and reduces torque vibrations for longer bit runs and longer tool life.
- OnTrack ZMS\* drill floor zone management system is a dynamic anticollision solution for all moving machinery on the drill floor. Avoiding collisions enables increased personnel safety and rig uptime.
- OnTrack Tubular Interlock\* tubular equipment monitoring system evaluates the status of interacting equipment and prevents damage to machines when several interact on the same tubular, such as during connections.
- Condition-based monitoring (CBM) brings greater certainty to equipment maintenance. This tiered service solution automates the monitoring and inspection of technology, helping to optimize the analysis and maintenance of drilling equipment.



Torque and rpm performance curve of the top drive represents its high-quality performance in a range of operating parameters.

# TD-500-AC-2M Top Drive

## Nomenclature



## Specifications

Hoisting capacity, <sup>†</sup> tonUS [tonUK]	500 [454]
Maximum continuous torque, ft.lbf [N.m]	51,000 [70,000]
Maximum speed, rpm	220
Maximum makeup-brakeout torque, ft.lbf [N.m]	75,000 [100,000]
Backup tong grab size, in [mm]	
Minimum OD	4 [101]
Maximum OD	8 <sup>5</sup> / <sub>8</sub> [219]
Power rating, hp [kW]	1,100 [820]
Water course pressure rating, psi [MPa]	7,500 [51.7]
Inside BOP (IBOP) pressure rating, psi [MPa]	15,000 [103]
Design code and standard	API 8C (PSL 1)
Area classification	ATEX Zone 1, IIB, T3

<sup>†</sup> In elevator

## Scope of Supply

Top drive assembly with gearbox, S-pipe, AC drilling motor with IP44-rated enclosure, blower, drillstem subs, suspension system, weight-compensating system, rotatable pipehandler with knuckle-link tilt system, remote IBOP actuator, and grabber

Power and signal service loops

Control system that includes programmable logic controller (PLC), onboard valve control unit, and derrick junction box termination kit

Handling (transport) cradle including lifting sling

Auxiliary tools

Documentation

## Options

Retractable or nonretractable dolly specifically designed to fit existing guide rails

Elevator links for drilling, casing, or both

AC drive package

AC motor with IP56-rated enclosure

Mud hose

Saver sub for various tool joint sizes

Traveling block adapter

Operator's control panel

Waterjacket traction motor

Third-party certifications

Condition-based monitoring (CBM)

[cameron.slb.com/drilling](http://cameron.slb.com/drilling)

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