

# CX-EC 3.0 AUTOMATED CHOKE SETPOINT SYSTEM

**CORTEC is setting industry standards with field adaptable choke designs.** CORTEC setpoint systems integrate field-proven choke designs with remote operation capabilities to add value and consistency to an end user's operations. The CORTEC CX-EC 3.0 Setpoint System is electrically operated and has consistently been demonstrated to maintain desired pressure settings within MPD operations in pressures up to 3,000 PSI. The choke utilizes standard CORTEC CX body design and components with a ball screw operator, which can be driven by suitable actuation options. This system provides an efficient, cost-effective solution that maximizes setpoint performance with lower voltage requirements. This bonnet setup can be retrofitted and assembled onto many standard CORTEC CX models existing in the field. The setup offers the same field-friendly maintenance and robustness customers have come to appreciate within the CORTEC choke family.

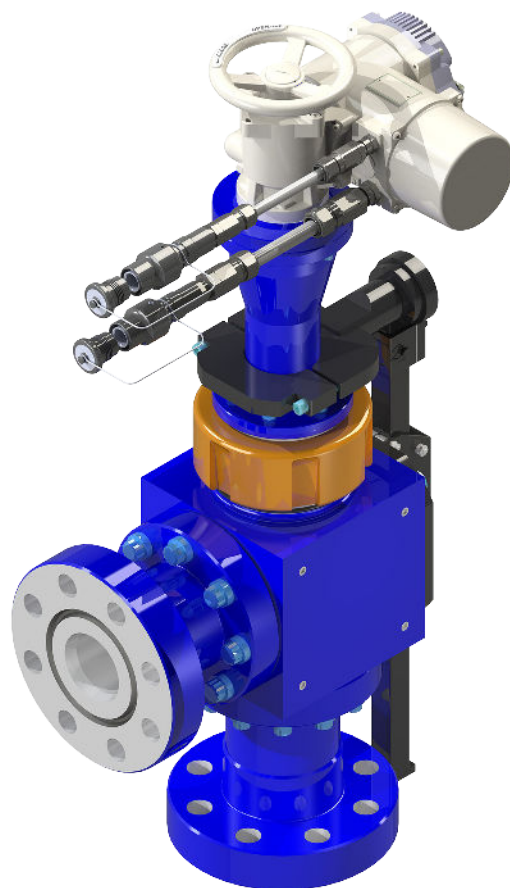
CORTEC Chokes are engineered and manufactured to offer the oilfield operator increased service life and cost savings in high-pressure applications where substantial amounts of solids and abrasives are present. CORTEC manufactures a complete line of chokes designed to maximize performance within abrasive applications like well control, drilling, frac flowback, coil tubing, and snubbing. This design, paired with CORTEC's automation capabilities, ensures end-user satisfaction and enhanced operational efficiency.

## CHOKE MODEL OVERVIEW

- 2K through 5K (maximum 3,000 psi operating rating based on current motor options)
- End Connections: API-6A Flange (consult factory for additional options)
- Utilizes Reversible Tungsten Carbide Gate & Seat Trim
- Electrically Actuated/Operated
- Available in 3.00" Orifice Standard (1500 PSI Max Service) and 3.00" Orifice XP (3,000 PSI Max Service) Trim Configurations
- Wear Resistant Nose Cone For Extended Wear Protection
- Bolt-On Inlet and Outlet Spools Standard (can be manufactured to customer specified centerline dimensions helping field retrofit)
- Tungsten Carbide Wear Sleeves Installed in Outlet Spool for Extended Wear Protection
- Inconel 625 Inconel Overlay on Inlet/Outlet RTJ Grooves as a Standard (other areas available upon request)
- Gantry System Available Upon Request for Enhanced Safety and Reduced Downtime During Field Maintenance
- Service Tools Available to Reduce Field Service Time

## APPLICABLE INDUSTRY STANDARDS

- API-6A, PSL-3, PR-2, TC-PU, MC-EE Standard (consult factory for additional options)
- NACE MR0175 (Latest Edition)
- ABS-CDS (available upon request)
- DNV-OS-E101 (available upon request)



**CORTEC**

**AMERICAN MADE. SUPERIOR GRADE.**

[uscortec.com](http://uscortec.com)

CORTEC proudly operates two US based manufacturing facilities in Louisiana.

C003\_CXEC3\_v.2.03

# CX-EC 3.0 AUTOMATED CHOKE SETPOINT SYSTEM

## ELECTRIC ACTUATOR DETAILS

- Single Phase 115-230 VAC
- Class 1, Zone 1, EX DB, EB IIC T4 GB
- 4-20mA Control & Position Feedback Signal
- Optional Profinet Communication
- Variable Speed Motor Control - 2.5 - 65RPM
- Fail-In-Place with Manual Handwheel Override



## ELECTRIC CONTROL PANEL DETAILS

- Enclosure, NEMA 4X (304SS), Designed for Hazardous Locations, Class 1, Div 2
- Dual Choke Controls, *standard*
- 110VAC, Single-Phase Power Supply, Less than 10 Amps
- 110VAC UPS Battery Backup Provides 15 ~ 30 Minutes on Battery
- Siemens S7-1200 PLC Processor, Communicates to actuator with 4-20ma signals (*with ProfiNET optional*)
- Two Intrinsically Safe GP50 Pressure Transducers, 1502 Connections, Measures Choke and Mud Pump Pressures
- Mud Pump Sensors (*whisker type*) for Three Parallel Pumps
- Capable of Auxiliary 4-20mA Flow and Density Measurement
- Remote 15" HMI with UPS Backup (*optional Toughbook PC*), includes 300 ft ProfiNET Cable
- Long-term Data Collection
- WITS IN/DUT Communication, *configurable*
- Optional Pressure Set Point Ramp Schedule
- Optional Skid-mounted Toolbox to House Control System and Associated Equipment



**CORTEC**

**AMERICAN MADE. SUPERIOR GRADE.**

[uscortec.com](http://uscortec.com)

CORTEC proudly operates two US based manufacturing facilities in Louisiana.

C003\_CXEC3\_v2.03