



TapcoEnpro

TapcoEnpro's Service Group is the standard for valve and actuator service. Our Service Division handles the needs of customers throughout the world with the ability and knowledge to perform a complete valve overhaul in the field with an emphasis on safety, quality and "on time" completion.

Our aftermarket division offers repair or replacement spare parts plus complete in-shop repairs and on-site dismantling. Our field service personnel come to your site with a strong belief in exceptional quality and service to our customers.

Our Field Services department oversees all TapcoEnpro equipment installations, commissions, maintenance/repair and onsite training for both valve and control systems. We are focused on attending to our customer's turnaround needs, maintenance and repair requirements.

Our philosophy is that each project requires unique solutions and our approach is a diverse team with specialized engineering competencies, industry prominent quality control, pioneering research and development and superior field service personnel conducting themselves in accordance to the highest safety standards.



Our commitment to you begins with the installation of the valve and actuator assembly when we train your personnel at your site to properly care for the valve and control system. This continuing education program is the hallmark of a long term partnership between you and TapcoEnpro (TE).

Whether your turnarounds require in-shop or in-plant; routine field maintenance or an emergency repair, TE is your only source which offers the extensive worldwide support and service necessary to keep your operation functioning and safe. Our Field Services Group provides immediate response and exceptionally personal attention.

## Aftermarket and Field Services

- Reliable
- Adaptable
- Comprehensive

### Turnaround Planning

Over time, performance of valves and actuators will decrease due to degradation which leads to failure and so there are shutdowns (planned or unplanned) in which improved performance must be addressed.

Improvements will come from three areas:

1. **Minimizing** the total downtime during a turnaround. Knowing what to do before the turnaround is an essential piece for improved reliability.
2. **Maximizing** the elapsed time between turnarounds will impact the up-time and profitability of the unit.
3. **Maintaining** reliable performance of the equipment by reducing or eliminating unscheduled downtime.



Our Field Service Group provides a variety of services that are uniquely designed to achieve minimal downtime, maximum run time and maintain reliable performance.

### Condition Evaluation & Work Scope Definition

Our team will conduct an on-site evaluation of component conditions to ensure the scope of work is properly defined prior to any turnaround.

### Valve & Actuator Engineering Support

Our technical staff has the expertise to develop solutions required for your success:

- Any necessary valve and actuator design modifications
- Analysis and reporting of valve and actuator testing data
- Development of valve maintenance procedures

### Turnaround Planning & Scheduling

Prior to your shutdown, our team is available to help minimize your downtime by:

- Review in detail the report from last turnaround.
- Conduct a “hands on” inspection of the spare parts held in inventory and record their existing condition.
- Walk through the unit and determine necessary manpower and equipment required.
- Perform a risk assessment and develop a safety plan.

## Turnaround Planning (continued)

### Internal Spare Parts & Repair

Our legacy of supplying and repairing valves for severe service and extreme process conditions makes us the perfect choice for repair or replacement for your TapcoEnpro parts. Our in-house Engineering and Manufacturing capabilities also allows us to meet the criteria necessary for any possible modification of components and our attention to accuracy along with our innovative manufacturing processes provides you with replacement parts in accordance with original specifications and requirements.

### On-Site Field Crews and Supervisory Support

Focused on attending to our customer's equipment turnaround requirements, we provide a worldwide network of field service locations to oversee all equipment installations, commissioning supervision, site audits, maintenance and repair. To be more responsive while meeting customer expectations, our service personnel are available from locations throughout the world and provide:

- Response to your needs 24 hours / 7 days a week.
- Professional equipment installations with either fully equipped crews or supervisory personnel.
- Maintenance and repair for either our valves and actuators or equipment supplied by others.
- Onsite Training

### Valve/Actuator Training Services

When you choose the world's most respected valve manufacturer, you have the finest support in the industry. Through training, we enable your personnel on site to properly care for your valve and control systems. A custom tailored education course is developed and supported by TapcoEnpro as part of an ongoing long-term partnership.



## Aftermarket and Field Services

- Reliable
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## Aftermarket and Field Services

# Onsite Equipment Install and Turnarounds

When you are responsible for the maintenance and operation of flow control equipment for your refinery or processing facility, you need technical expertise you can rely upon. Nothing makes better sense than to trust your assets to the original inventors of the world's most respected valve and control system...TapcoEnpro.

### Field Support

Our valve service division handles the needs of customers throughout the world with the ability and knowledge to perform a complete valve overhaul in the field...always with an emphasis on safety, quality and on time completion.



**ONSITE MACHINING**



We know how financially disastrous any downtime can be so our Field Service Teams, based in Houston and the United Kingdom, along with fulltime support technicians in India and Japan, we can respond to on-site assistance within hours anywhere in the world.

Our skilled personnel are well trained and highly experienced to provide the depth of expertise you need on site. Whether your needs are valve or control system related, a TapcoEnpro field service representative brings more than 50 years of valve design and maintenance experience so you always have the best technical knowledge available in the industry.





Barnsley, UK Facility

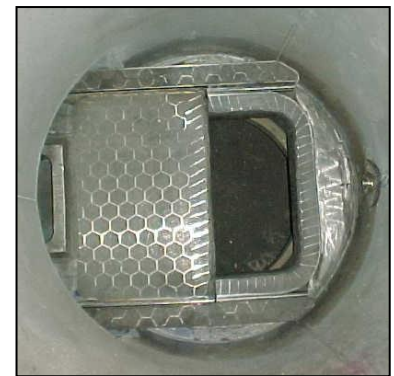


TapcoEnpro can provide either supervision to direct your on-site contractor or provide complete equipment and personnel to tear down, inspect, repair, assemble and test valves in the field and in-line.

Our expertise includes FCC Slide and Plug Valves, Flue Gas Butterfly Valves, Flue Gas Isolation Valves, Wedge Plug Valves and many others. Our international capabilities enable us to respond to emergencies any time, day or night. And, with our worldwide plant locations and their personnel available 24 hours per day seven days a week, there is always shop manufacturing and repair support for our field team and you to depend on.

### Shop Support

TapcoEnpro is one of the largest full service machine and fabrication shops in the US Gulf Coast Area. Along with our Barnsley UK plant, our ability to shop repair and modify valves plus repair valve components is unequalled by anyone.



Since we manufacture 100% of our new valves and actuators within our own facility, we can accommodate the most demanding turnaround schedule. All welding and overlay is done in strict accordance with ASME Section 9 welding requirements and our shop is a certified ASME Division 1 and Division 2 workshop. All NDE, radiography and refractory installation is performed in-house by our personnel.

Aftermarket and Field Services

## In Shop Rebuilds and Modifications

# Valve Controls and Actuator Systems

Our Field Service Group provides turnkey site installation services for the automation and control systems associated with the DeltaValve, TapcoEnpro and custom control system solutions. Our aftermarket services include spare parts for hydraulics and controls, preventive maintenance programs, site control system audits, troubleshooting, and control systems upgrades that improve operating performance, safety and reliability.

### Installation Services

- Electrical Power & Control Wiring
- Electrical Loop Checks
- Hydraulic Tubing Installation
- Hydraulic System Flushing
- Site Acceptance Testing
- Start-Up & Commissioning
- Operator Training



We pride ourselves with making customers our priority whenever assistance is needed regardless of location or time of day. Our team is strategically located around the world to ensure our response is measured in hours and not days.

This kind of philosophy has allowed our customers to manage and address the business end of maintenance on the Fluid Catalytic Cracking Unit to;

### Aftermarket Services

- Control Systems Audits
- Long-Term Preventive Maintenance
- Hydraulics & Controls Reconditioning
- Actuator Repair & Reconditioning
- Hydraulic Oil Testing
- Hydraulic Flushing Services
- Hydraulic Oil Changes & Upgrades
- Valve Automation Retrofits
- Hydraulics and Controls Spare Parts
- FCC Valve Controls Repair & Reconditioning



# Long Term Service Agreements

Reliable and controlled solutions to managing valve and actuator maintenance, parts management, improved technologies and best practices for your facilities.

- ❑ **Minimize** the total downtime
- ❑ **Maximize** the elapsed time between turnarounds
- ❑ **Maintain** reliable performance of the equipment

### Valve & Actuator Engineering Support

- Any necessary valve and actuator design modifications
- Analysis and reporting of valve and actuator operating data
- Specialized training to Maintenance, Instrument and Operations personnel
- Development of valve maintenance procedures

### Turnaround Planning & Scheduling

- Review in detail the report from last turnaround
- Conduct a “hands on” inspection of the spare parts held in inventory and record their existing condition
- Walk through the unit and determine necessary manpower and equipment required
- Perform a risk assessment and develop a safety plan



Aftermarket and Field Services

# International Support and Full Service Facilities



## Excellence In Flow Control

Asia | Europe | Middle East | North America | South America | Africa

CIRCOR is a market-leading, global provider of integrated flow control solutions, specializing in the manufacture of highly engineered valves, instrumentation, pipeline products and services, and associated products for critical and severe service applications in the oil and gas, power generation, process, aerospace and defense industries.



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