

ELFOR*CONTROLS*
Actuators and Valves Automation

Company Profile

History

Elfor Controls, established in the last 70's, is an Italian company specialized in engineering and manufacturing a complete range of valves actuators and related accessories.

The Company was founded by experienced professional people who worked for decades as senior managers for leading multinational companies in the valves automation market.

They started to develop and produce a short range of electric actuators under the increasing demand of valves automation in various industrial markets.

From 2006 to 2014, according to a radical renewal of the Company, they expand the product

range to scotch-yoke pneumatic & hydraulic actuators, rack and pinion actuators and relevant control systems.

Elfor Controls offers a deep knowledge and hands-on experience in the field, flexibility in a continuously changing market, problem-solving capabilities, customized products and services to meet Customers' needs.

Elfor Controls has proven its flexibility and capacity to anticipate and to meet the market requirements.

Mission

According to our philosophy "**Elfor Controls** strongly believes that the greater the value, the higher the Customers' satisfaction.", we are pleased to introduce our formula:

*Excellent Quality +
Customized Solutions +
Short Delivery =
Total Customer Satisfaction*



Quality

Every manufacturing step, from design to delivery, is performed in accordance with EN ISO 9001:2008 Certification and related Quality Manual, with a particular focus on efficiency and effectiveness, in order to guarantee that the final product exceeds the customers' expectations and has an increased reliability.



SIL Applicable   

Quarter Turn Scotch Yoke Pneumatic Actuators



- Totally enclosed waterproof body in Carbon Steel.
- Pneumatic cylinder polished with electro-less nickel plated internal in compliance with specifications
- ASTM-B733 and UNI ISO 4527 and carbon steel piston with dynamic floating O-ring seal.
- 2 independent external travel stops for precise angular stroke adjustment (7° in both directions).
- Position indicator complete with VDI/VDE 3845 NAMUR for mounting accessories.



Elfor Controls Quarter Turn Scotch yoke Pneumatic Actuators are heavy duty, pneumatically operated, quarter-turn rotary, scotch-yoke design.

- Manufactured in EC0, EC1, EC2 and EC3 Models according to different Output Torque ranging.



KEY FEATURES

- Scotch-yoke mechanism
- Single or double acting versions
- Symmetric or canted Scotch yoke design
- Temperature range: - 29°C / +80°C (Standard)
- Temperature range: - 60°C / +80°C (Low).



Compact Pneumatic Actuator Single & Double Acting

Elfor Controls has created the EC-COMPACT series actuators based on the markets requirements for a new compact heavy duty high performance design actuator.



Quarter Turn Scotch Yoke Hydraulic



- Totally enclosed waterproof body in Carbon Steel
- Hydraulic cylinder double acting, electro-less nickel-plated, to reduce surface roughness and provide minimum friction and maximum protection against corrosion.
- Carbon steel piston with dynamic floating O-Ring seals (PARKER N. 674-70).
- Two independent external travel stops for precise angular stroke adjustment (7° in both directions).
- Position indicator complete with VDI/VDE 3845 NAMUR for mounting accessories.



Elfor Controls Quarter Turn Scotch yoke Hydraulic Actuators are heavy duty, hydraulically operated, quarter-turn rotary, scotch-yoke design.

- Manufactured in EC0, EC1, EC2 and EC3 Models according to different Output Torque ranging.



KEY FEATURES

- Scotch-yoke mechanism
- Single or double acting versions
- Symmetric or canted Scotch Yoke Design
- Temperature range: - 29°C / +80°C (Standard)
- Temperature range: - 60°C / +80°C (Low).



Electro-hydraulic Actuators

Elfor Controls electro-hydraulic actuators (EHAs) is a hydraulic actuation system operated solely by electric power.

High pressure hydraulic fluid operates a linear or rotary actuator for either On-Off or modulating applications.

Considering that hydraulic actuators operate at higher pressure than pneumatic,

Elfor Controls EHA are the best solution where minimization of the overall dimension is a key point. EHAs also eliminates the request of a separate hydraulic pump and tubing, simplifies the system

architectures and improves safety and reliability.



Quarter Turn Rack and Pinion Pneumatic Actuators



Elfor Controls Quarter Turn Rack and Pinion Pneumatic Actuators are pneumatically operated, quarter-turn rotary, dual rack and pinion compact design.

- Manufactured in full compliance with the latest requirement of ISO5211 and EN12116.

- Compact modular design with same body and end caps for double acting and spring return design.
- Hard anodized extruded aluminum body with honed internal surface.
- Dual rack and pinion design for compact and lightweight construction, high cycle life, symmetrical mounting position, fast and efficient operation.
- Modular pre-loaded spring cartridges for a safe and efficient use of actuator.
- Two independent travel stops for an easy and precise setting ($\pm 5^\circ$) in both directions.
- Provisions for mounting solenoid valves and accessories according to Namur VDI/VDE 3845.
- Mechanical virtual position indicator
- The shaft is designed to allow manual override by simply removing the position indicator
- All seals in nitrile rubber are permanently lubricated.



KEY FEATURES

- Rack and pinion mechanism
- Single or double acting versions
- Temperature range:
 - $-20^\circ\text{C} / +50^\circ\text{C}$ (Standard)
 - $-60^\circ\text{C} / +80^\circ\text{C}$ (Low)



Quarter Turn and Multi-Turn Electric Actuators



Elfor Controls Electric Actuators are Quarter-turn (AFG1-AFG2 Models) and Multi-Turn (SEM10-SEM50 Models).

AFG1 / AFG2 Key Features:

- Electric Motor weather-proof to IP67
- Class F insulation and thermal cut out
- Temperature range: $-20^\circ\text{C} / +80^\circ\text{C}$ (Standard)
- Speed: Up to 2800 rpm
- Power: Up to 0,23 KW

SEM10 / SEM50

- Key Features:**
- 3 Phase Electric Motor to IP67
 - Class H insulation
 - Temperature range: $-20^\circ\text{C} / +80^\circ\text{C}$ (Standard)
 - Speed: Up to 144 rpm
 - Power: Up to 1,25 KW.

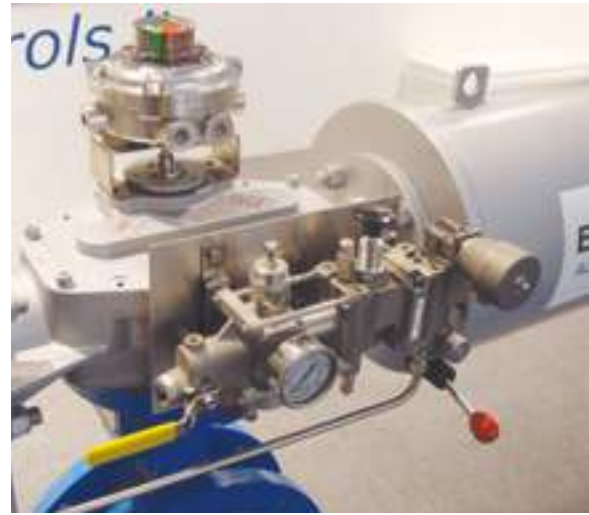


Control System



and technology, enabling us to keep up with the constantly changing demands of the client in order to satisfy all customers' requirements and project specifications. The control systems for actuators are of fundamental importance for providing actuator performance, functionality and reliability.

Elfor Controls control systems are generally an integral part of each actuator; permit a local or remote control by electric or pneumatic signals for On/Off, Modulating and Emergency Shut Down valve.



The global Oil & Gas industry employs ever more complex process systems to optimize the operating and to minimize the possibility of safety related incidents.

Elfor Controls constantly monitors the development of new standards



Remote Controller

Elfor Controls can provide a wide range of limit switch, positioner and booster with a different kind of construction body materials, from techno-polymers, aluminium and stainless steel.



Accessories

Manual Override Options for Single and Double Acting

J.S.
Manual Override
Jack Screw
for Spring
Return.



M.G.D.A.
Declutchable
Manual Override
for Double
Acting.



M.O.H.P.
The Compact Hydraulic
Manual Override
consist of:
- hand pump
- selector valve
- oil tank
- hydraulic
cylinder
- relief valve
- check valve



M.O.G.
Manual Override with
Integrated Gear
for Spring
Return.



Passive Fire Protection



Rigid Enclosure System

Easy to install, remove and reuse, the products line offers a simple and effective means to protect critical process control equipment.

Products meet UL1709 requirements and follow the recommended standards of API.

Actuators insulation jackets are designed to insulate actuators and valves helping to improve energy efficiency.

Elfor Controls can provide any kind of Passive Fire Protection, in order to meet any Customer requirement.

Passive fire protection system are designed to insulate equipment and significantly delay internal temperature rise in the event of a fire.



Flexible Enclosure System



Insulation Jackets for Low Temperatures

They are also commonly used to provide insulation against low temperatures (-60°C) and protect personnel from burns by reducing the temperature of the exposed actuators surfaces.



Valves Automation and Service

Elfor Controls offers a deep knowledge in Valves Automation and Service, as following:

- Testing
- Maintenance on site
- After sales support.





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Elfor Controls Srl
Via Friuli 23/25,
24044 Dalmine (BG) – Italy
Phone: +39-035567465
Fax: +39-035567466

info@elforcontrols.it

www.elforcontrols.it



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