

VALVE ACTUATION & CONTROL



General Catalogue

CARBON STEEL &  
316 STAINLESS STEEL  
**QUARTER-TURN &  
LINEAR ACTUATORS**

**HIPPS** INTEGRATION

## Company

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VALVE ACTUATION & CONTROL

We lead, actuate  
and control  
**unlike any other**

## Products

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## COMPLETE VALVE ACTUATION AND CONTROL



Headquarters in Italy  
Castell'arquato

# Certifications are our product guarantee

## Since its foundation in 2002

**PRO CONTROL** has focused on sustainable progression and continuous development, innovation and growth. With over 20 years experience in providing bespoke technologies to the Oil & Gas, Petrochemical, Mining, Minerals and Renewable Energy Industries, **PRO CONTROL** today is an international leader with complete overall solutions for valve actuation and control requirements and HIPPS systems integration.

Overall safety challenges and high-risk operations require technical expertise and first-hand experience to ensure better, faster and safer operations, at any time. **PRO CONTROL** product range has been engineered for maximum efficiency and reliability in any environmental condition and it meets, as a minimum, the following International Standards:

- SIL (certified by RWTUV).
- PED 2014/68/UE mod. H1.
- AtEx 2014/34/UE.
- EAC CU-TR.

Client loyalty is the hallmark of our success. In order to ensure that we are fully prepared for the challenges of tomorrow, we continue to invest to strengthen our position in the international market place and constantly improve our product portfolio capabilities, to better serve our customers.

**PRO CONTROL** actuators are SIL3 certified by TUV. Full SAR and final integration SIL certification is performed internally by our internal team of TUV qualified and certified engineers.

**PRO CONTROL** organizational management system complies with:

- ISO 9001 Quality.
- ISO 45001 Occupational Health and Safety.
- ISO 14001 Environmental.

## Corporate Social Responsibility

**PRO CONTROL** has worked ambitiously with targeted investments to ensure a healthy growth and continuity. We are proud to observe that all our associates (employees, shareholders, customers, suppliers, distributors and agents) are fully committed in doing business based on key values such as honesty, integrity in full compliance with all relevant local and international laws. Ethics, Transparency and Customer Commitment define **PRO CONTROL** key milestones.

We have the duty to act and comply with ethical standards in all of our dealings with customers, suppliers, public administration and governments. We review our policies on a regular basis to ensure their alignment and that they accurately reflect the changes and challenges of the global environment in which we live and work. We constantly strive to increase the individual awareness of our ethical culture in our workplace and with our working partners.

# Italian Headquarters **the central HUB**

**DETAILED KNOWLEDGE  
OF THE PROCESS, EFFECTIVE  
PLANNING, INTEGRITY AND  
CLOSE COORDINATION, TO  
ENSURE ON TIME DELIVERIES**

## **Advanced project management for fast-track and speedy assistance**

**PRO CONTROL** is able to manufacture and deliver ahead of schedule thanks to a bespoke process management system, designed internally, based on our 20 years manufacturing experience, allowing multiple functions and activities to be executed simultaneously rather than sequentially. Consequently, allowing large project management alongside dedicated fast-track project management.

From planning, engineering, production and delivery to after-sales, **PRO CONTROL** customers can rely on robust implemented strategies coupled by dedicated support and global assistance. The Italian genius, and our cutting-edge vision along with our technological solutions and market research is what defines **PRO CONTROL**'s winning approach to the challenges that we face every day side by side with our clients.

All activities including manufacturing and project management, closely integrated with our sales and technical departments, are conducted from our Headquarters in Italy and are the key to successful order execution.



Full engineering and planning

## **Competence, expertise and awareness**

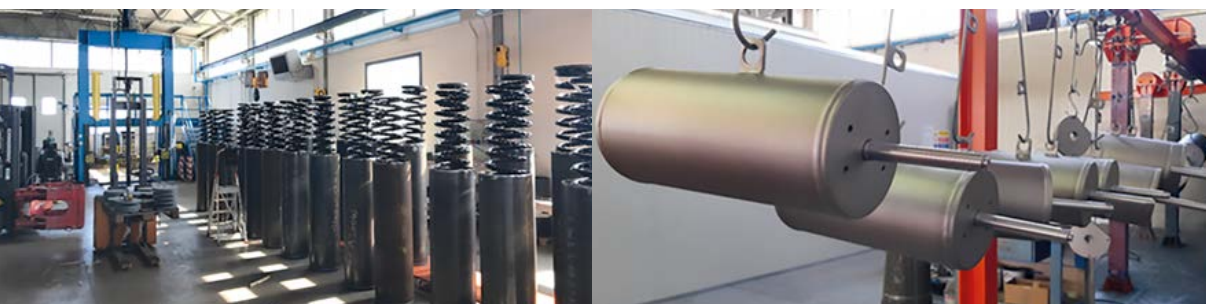
Working for objectives, highly focused on results with competence based on true expertise and awareness are the unavoidable characteristics for the talented workforce in the **PRO CONTROL** group.





Spring cartridge press and welding

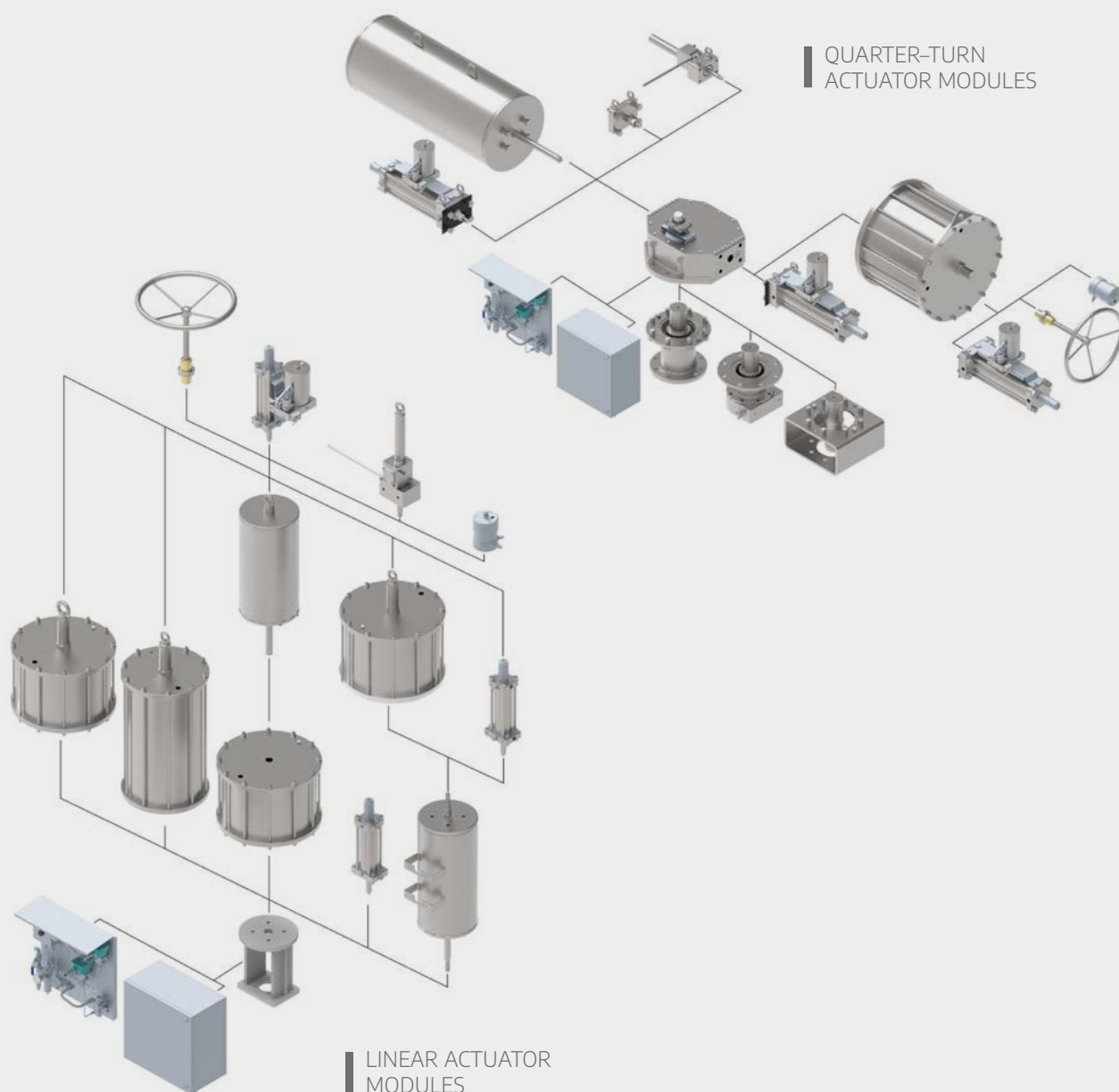
White metal blasting and primer coating



# Integrated factory acceptance testing (IFAT)

## Modular design philosophy

PRO CONTROL product range includes Heavy-Duty Scotch Yoke actuators for on/off and emergency shutdown and blowdown applications. Our scotch yoke design is available in both symmetric and canted design. With a large stock of finished and semi-machined components, actuators can be assembled, tested and shipped with unrivalled deliveries to our clients. Our engineering philosophy is based on modularity which allows quick and easy assembly and servicing activities: symmetrical drilled parts allow for power cylinders, spring containers, manual overrides and control systems to be assembled to provide multiple choice in operational requirements, allowing for fast changeover on site if needed.





**Start-up of HPU (Hydraulic Power Unit)  
connected with actuated valves**

## Single source partner for start-up, commissioning, field services and system safety upgrades

Strong engineering skills ensure **PRO CONTROL** actuators and control systems are tailored to customer's and plant's specific requirements with increased comfort level through integrated safety solutions. All actuators and control systems are tested according to **PRO CONTROL** internal test procedures which include operational, static leakage, dynamic leakage and torque test. Accuracy is crucial for effective response in any operation. Understanding the operational dynamics of a plant and its performance, processes and risks involved is the key to design unique bespoke solutions.



**Functional Acceptance Test (FAT)  
at valve maker factory**

## One-Stop Shop HIPPS Integration

**PRO CONTROL** is an ISO 9001 certified HIPPS (High-Integrity Pressure Protection System) integrator and solution provider with capabilities to engineer, manufacture and supply integrated HIPPS systems both skid assembled or not, in full accordance with clients requirements.

**Integrated  
electronic HIPPS**



### **Dedicated engineering and full assistance at site until commissioning**

**PRO CONTROL** HIPPS systems consist of API6D/API6A Valves, Spring Return Actuators, Control Systems, Logic Solver, Field Initiators. Depending on clients requirements these can be supplied as loose items or skid mounted and integrated by using connecting flanged pipes, pups and block and bleed manifolds.

## Certified system up to SIL4

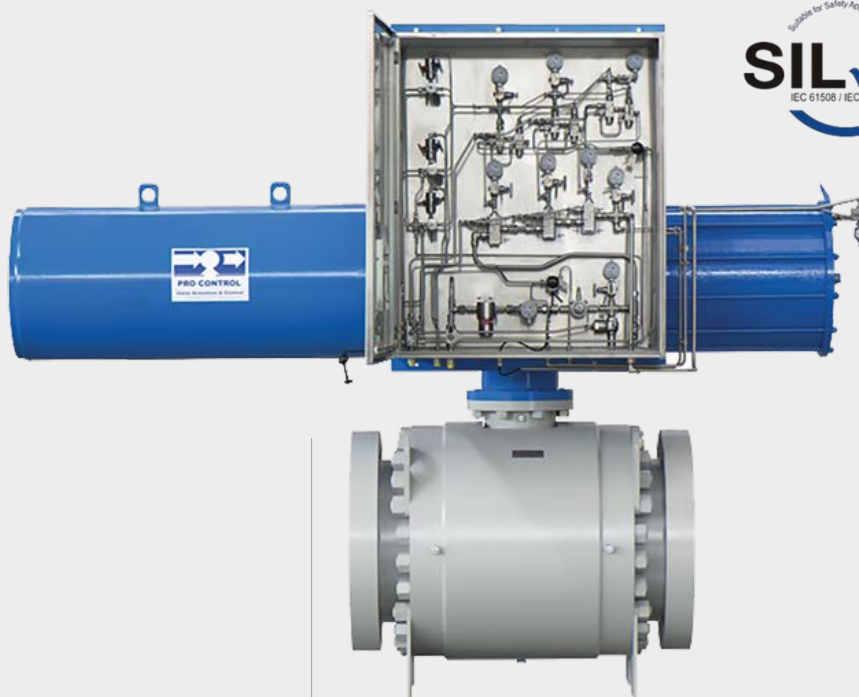
A HIPPS is a Safety Instrumented Systems (SIS) engineered and built as per IEC 61508 and IEC 61511 to prevent downstream over-pressurization in Gas, Chemical and Oil Refinery plants, supplied with bespoke engineered **PRO CONTROL** SIL3 certified actuators with a unique integrated quick exhaust valve, complete with adjustable end of stroke damper device designed to ensure fast-acting stroking times and valve drive train protection. It is an independent reliable system that operates on a higher Safety Integrity Level (SIL) than traditional Process Shut-Down (PSD) and Emergency Shut-Down (ESD) systems: Logic Solver can be programmable or Solid State SIL3 or SIL4 certified.

## PRO CONTROL HIPPS

HIPPS systems act as a barrier between a high pressure and a low pressure section of an installation, shutting off the source of the upstream high pressure before it exceeds the downstream system design pressure, thus preventing loss of containment through rupture and explosion.

HIPPS systems are the perfect solution when the risk profile of a plant must be reduced to avoid impacts on human life and the environment.

Partial Stroke Test (PST) can be performed by a dedicated auto-reset direct-acting solenoid valve with remote position feedback provided by a limit switch or by a 4-20mA signal.



### Electronic HIPPS

- Not dependent field initiator location.
- 2oo3 pressure sensing voting logic.
- Interlocking manifold with automatic voting logic.
- Selection (2oo3 → 1oo2).
- Automatic & scheduled partial stroke test.
- Complete array of diagnostics.

### Mechanical HIPPS

- Standalone assembly.
- Simpler & independent operation.
- Fit for purpose / Plug & Play.
- Integrated Pressure Sensing / Logic Solver.
- No electrical wiring.
- Lower total cost of ownership.

## Oil & Gas Industry applications



Full 316SS HPU (Hydraulic Power Unit) complete with Accumulator Bank for Linear Hydraulic Double Acting actuator for North Sea Offshore Installation

## 316SS stainless steel actuator



### 316 STAINLESS STEEL IS THE BEST AVAILABLE RESPONSE TO HIGHLY CORROSIVE ENVIRONMENTS

**Corrosion is one of the most common factors which contributes to equipment failure and is a threat to plant operation, profitability & safety.**

### Offshore, FPSO, Onshore, Pipelines and Petrochemical

PRO CONTROL product range covers high-grade Carbon Steel and 316 Stainless Steel actuators, which perfectly suit challenging applications in aggressive environmental conditions. PRO CONTROL actuators and control systems are engineered to operate any valve, from control valves to on/off valves, maintaining plant up-time and operational efficiency.

## 316 Stainless Steel Actuators

PRO CONTROL technologies are designed to operate in harsh and hostile conditions while keeping workers and plant safe. Actuators and control systems withstand freezing arctic or extreme temperature and dust, electromagnetic interference, coastal and hot humid marine environments, and more, while operating at full capacity. Further improvement includes also alternative materials of construction: PRO CONTROL complete product range comes also in 316 Stainless Steel with no limitation in shape or size. Currently the best available response to highly corrosive environments.

PRO CONTROL 316 Stainless Steel actuators contribute to lowering plants carbon foot print as they reduce the use of chemical coatings and, from an operation and production point of view, they lower considerably regular field maintenance costs. Combined to bespoke actuators, PRO CONTROL provides a complete range of control systems for valves automation, starting from simple pneumatic panels up to more complicated Control Stations and HPU (Hydraulic Power Units) which can manage singular or multiple actuators simultaneously.

## Challenges of LNG and Power Plants



### Pneumatic actuator

#### LNG, Geothermal Power Plants & Turbine Trip

LNG trains are extremely cold when running: LNG is Natural Gas cooled down to  $-161^{\circ}\text{C}$  ( $-258^{\circ}\text{F}$ ) to liquefy and it is mainly used in power generation as a suitable alternative to diesel.

**PRO CONTROL** actuators and control systems key applications include emergency shut-down, line isolation, steam dampers heating and turbine bypass systems.

Geothermal power generation involves no combustion because it uses magma heat energy from the inner core of our planet. This gives the advantage of a constant availability, comparable with that of thermal power generation. Following the steam production at high and low pressures, steam is directed to a steam turbine using separate pipelines. The in depth consideration of the interface where the geothermal subsurface source of energy is transformed into electricity or heating and the surrounding conditions such as ambient temperature, humidity and Hydrogen Sulphide ( $\text{H}_2\text{S}$ ), are the key element to select the correct equipment. Clients can rely on our knowledge, expertise and field experience in providing products to suit their operational requirements in extreme conditions.

#### Continuous and trouble free operation

The main aim when installing actuators and control systems for a power plant is to have continuous and trouble free operation throughout the plant: it is costly and challenging to restart a power plant after a shutdown. **PRO CONTROL** has a wide range of technologies available to suit both local and remote mode of operation, in total safe conditions. Instrumentation in a power plant is important and plays a major role for a safe and efficient operation.



### Full 316SS HPU (Hydraulic Power Unit)

## Mining, Metals and Minerals



HPU (Hydraulic Power Units)

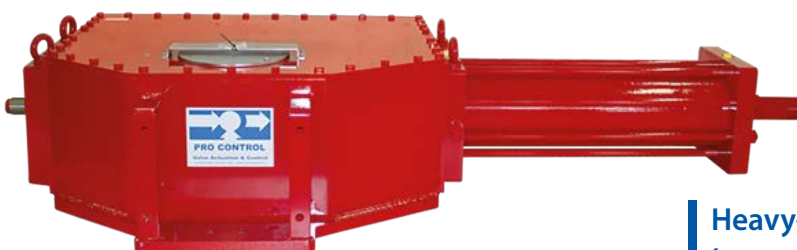
**Face your challenges  
on slurry pipeline valves  
with PRO CONTROL  
bespoke high torque  
output hydraulic actuators**

### Slurry pipelines

The most exploited commodities worldwide based on production volume are coal, iron ore, bauxite, potash and oil sands with an increasing demand for lithium and carbon for batteries, copper for motors and cables, and rare earth minerals for the rotors and stators of electric motors.

Most plants operate wet by centrifugal pumps through slurry pipelines. PRO CONTROL actuators are engineered to deliver high output torques where and when needed, and guarantee accurate valve control: precise pipeline product flow control as well as efficient product separation are crucial competitive advantages.

Heavy-Duty Scotch Yoke hydraulic actuators combined with Hydraulic Power Units (HPU) for remote operations make PRO CONTROL the ideal single source partner for complete valve actuation.



**Heavy-Duty high output  
torque hydraulic actuator**

## Featured items

### 316 stainless steel actuators



#### PRO CONTROL ACTUATORS PORTFOLIO

Includes quarter-turn and linear actuators in 316 stainless steel suitable for an extensive number of applications. 316 stainless steel actuators series are environmentally friendly sustainable products and contribute to lowering the plants carbon foot print reducing the use of chemical coatings and regular field maintenance costs.



#### Technical features

Construction	Scotch yoke Compact / Heavy duty
Action	Spring return / Double acting
Material	AISI 316 Stainless steel
Valve application	On-Off / Modulating / HIPPS Quarter-Turn / Linear Pneumatic / Hydraulic
Design	ISO 12490 / API 6DX / EN15714 / ASME VIII
Torque	Quarter-Turn Nm 2.000.000
Thrust	Linear N 10.000.000
Temperature range	°C -29°/+100° (F°-20/+212°) °C -60° (F°-76°) on request
Design pressure	Pneumatic Barg 12 Hydraulic Barg 250 (Barg 690 on request)
IP Protection	IP66/67M
ATEX	Yes
EAC CU TR	Yes
PED	Yes
SIL Capability	3

### 316 stainless steel gear boxes



#### Technical features

Material	AISI 316 Stainless steel
Valve application	On-Off
Torque	Up to Nm 7.000
Stroke range	0-90° (+/- 5° adjustable)
Temperature range	°C -29°/+100° (F°-20/+212°) °C -60° (F°-76°) on request
IP Protection	IP68
Padlockable flange	Yes

## Customized actuators

### Features

Larger diameter and high pressure class application Gate and Globe valves generate incredibly high operational thrust forces in service.

IN ORDER TO MEET EXTREME ENVIRONMENTAL CONDITIONS AND VERY HIGH PRESSURE APPLICATIONS, INCLUDING SPACE LIMITATIONS, PRO CONTROL HAS SPECIFICALLY ENGINEERED A HEAVY-DUTY HIGH-THRUST OUTPUT MULTI-SPRING ACTUATOR: COMPACT DESIGN AND BESPOKE CYLINDER ASSEMBLY WITH MULTIPLE HELICAL SPRING PACKS.



## Pneumatic actuators

### Compact Quarter-Turn pneumatic actuators

**SPS-K  
SPD-K**  
● Series



#### Technical features

Construction	Scotch yoke
Action	Spring return / Double acting
Material	Carbon steel / Stainless steel
Valve application	On-Off / Modulating
Design	ISO 12490 / API 6DX / EN15714 / ASME VIII
Torque	Up to Nm 1.000
Temperature range	°C -29°/+100° (F°-20/+212°) °C -60° (F°-76°) on request
Design pressure	Barg 12
IP Protection	IP66/67M
ATEX	Yes
EAC CU TR	Yes
PED	Yes
SIL Capability	3

#### NO CAST IRON OR ALUMINUM COMPONENTS

**PRO CONTROL** compact actuators series has been designed to achieve the lowest overall dimension and weight with many significant cost and performance benefits.

### Quarter-Turn pneumatic actuators

**SPS  
SPD**  
● Series



#### Technical features

Construction	Scotch yoke heavy duty
Action	Spring return / Double acting
Material	Carbon steel / Stainless steel
Valve application	On-Off / Modulating / HIPPS
Design	ISO 12490 / API 6DX / EN15714 / ASME VIII
Torque	Nm 2.000.000
Temperature range	°C -29°/+100° (F°-20/+212°) °C -60° (F°-76°) on request
Design pressure	Barg 12
IP Protection	IP66/67M
ATEX	Yes
EAC CU TR	Yes
PED	Yes
SIL Capability	3

#### CONSTANT PRESSURES & HIGH CYCLE CONTINUOUS USE

Regardless of how excessive the use of the application is, **PRO CONTROL** quarter-turn pneumatic actuator **SPS-SPD Series** can sustain constant pressures and are the perfect choice for high cycle continuous use.

## Linear pneumatic actuators

**LPS  
LPD**  
● Series



### Technical features

Construction	Linear
Action	Spring return / Double acting
Material	Carbon steel / Stainless steel
Valve application	On-Off / Modulating / HIPPS
Design	ISO 12490 / API 6DX / EN15714 / ASME VIII
Thurst	N 3.000.000
Temperature range	°C -29°/+100° (F°-20/+212°) °C -60° (F°-76°) on request
Design pressure	Barg 12
IP Protection	IP66/67M
ATEX	Yes
EAC CU TR	Yes
PED	Yes
SIL Capability	3

### OPTIMAL MAXIMUM PRESSURE RATINGS

PRO CONTROL linear pneumatic actuators LPS-LPD Series have optimal maximum pressure ratings which allow for a high range of output forces.



# Hydraulic actuators

## Compact Quarter-Turn hydraulic actuators

**SHS-K  
SHD-K**  
● Series



### Technical features

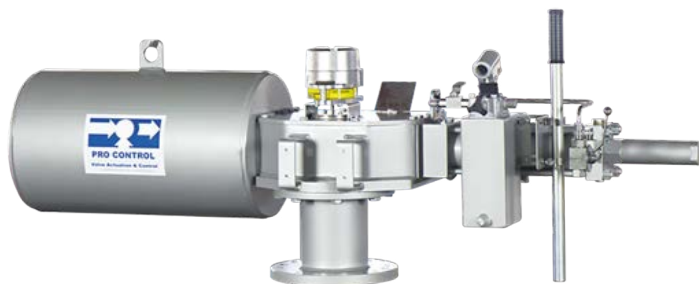
Construction	Scotch yoke
Action	Spring return / Double acting
Material	Carbon steel / Stainless steel
Valve application	On-Off / Modulating
Design	ISO 12490 / API 6DX / EN15714 / ASME VIII
Torque	Up to Nm 1.000
Temperature range	°C -29°/+100° (F°-20/+212°) °C -60° (F°-76°) on request
Design pressure	Barg 250 (Barg 690 on request)
IP Protection	IP66/67M
ATEX	Yes
EAC CU TR	Yes
PED	Yes
SIL Capability	3

### NO CAST IRON OR ALUMINUM COMPONENTS

**PRO CONTROL** compact actuators series has been designed to achieve the lowest overall dimension and weight with many significant cost and performance benefits.

## Quarter-Turn hydraulic actuators

**SHS  
SHD**  
● Series



### Technical features

Construction	Scotch yoke heavy duty
Action	Spring return / Double acting
Material	Carbon steel / Stainless steel
Valve application	On-Off / Modulating / HIPPS
Design	ISO 12490 / API 6DX / EN15714 / ASME VIII
Torque	Nm 3.000.000
Temperature range	°C -29°/+100° (F°-20/+212°) °C -60° (F°-76°) on request
Design pressure	Barg 250 (Barg 690 on request)
IP Protection	IP66/67M
ATEX	Yes
EAC CU TR	Yes
PED	Yes
SIL Capability	3

### HIGH FORCES AND SPEED

**PRO CONTROL** Quarter-Turn hydraulic actuators **SHS-SHD Series** can generate very high forces and speed and are ideal for critical valve applications.

## Linear hydraulic actuators

**LHS  
LHD**  
● Series



### Technical features

Construction	Linear
Action	Spring return / Double acting
Material	Carbon steel / Stainless steel
Valve application	On-Off / Modulating / HIPPS
Design	ISO 12490 / API 6DX / EN15714 / ASME VIII
Thrust	N 10.000.000
Temperature range	°C -29°/+100° (F°-20/+212°) °C -60° (F°-76°) on request
Design pressure	Barg 250 (Barg 690 on request)
IP Protection	IP66/67M
ATEX	Yes
EAC CU TR	Yes
PED	Yes
SIL Capability	3

### HIGH SPEED & ACCURACY

PRO CONTROL linear hydraulic actuators LHS-LHD Series are the perfect match to generate very high speed with smooth and precise valve operation.



# Electro-Hydraulic actuators & HPU

## Electro-Hydraulic actuators

### ENGINEERED COMBINATION

Engineered combination of actuators and a self-contained power unit to provide operation and control, the self-contained electro-hydraulic actuators are independent from pipeline pressure power source and they do not exhaust any gas to the atmosphere.



### Features

- ESD Capability for "Emergency-Shut-Down" services.
- Remote & Local PST "Partial Stroke Test" and operation capability.
- Various electric motor pump voltages available.
- Pressure & Voltage alarms.
- Electronic pressure transmitter (4-20Ma).
- Position Feedback-Device (4-20 Ma) and / or switches.
- All control signals available by 24Vdc hardwire contacts and / or by integrated software solution.
- LCD display for easy calibration Position & Diagnostic.
- Oil-Level-Protection.
- Hydraulic energy stored in high pressure compact accumulators.
- Automatic fail safe in case of electric power failure.

### Technical features

Construction	Self-Contained / Skid mounted unit
Action	Spring return / Double acting
Material	Carbon steel / Stainless steel
Valve application	Quarter-Turn / Linear On-Off / Modulating / HIPPS
Design	ISO 12490 / API 6DX / EN15714 / ASME VIII
Torque / Thrust	Nm 2.000.000 Nm / N 10.000.000
Temperature range	°C -29°/+100° (F°-20°/+212°) °C -60° (F°-76°) on request
Design pressure	Barg 250 (Barg 690 on request)
IP Protection	IP66/67M
ATEX	Yes
EAC CU TR	Yes
PED	Yes
SIL Capability	3

## HPU Hydraulic power units

### CRITICAL APPLICATIONS

When supporting critical applications it is essential to understand and decode customer requirements in order to supply bespoke solutions and ensure the highest performance.



### Features

- Hydraulic mineral or biodegradable oil.
- PLC or relay based control logic.
- Electric motor or diesel pumps.
- Typical power range from 1.1 Kw up to 4 Kw and from 1000-3000 turns in single and three phases.
- Hydraulic accumulator (bladder or piston type) sized based on client demand for numbers of required powerless strokes.
- Remote & Local Open / Close.
- Pressure / Voltage / Level / Pressure alarm.
- Electronic pressure transmitter (4-20Ma).
- The HPUS can include accumulators, redundant pumps or controls, and the multiple prime movers can be Solar-Powered or Gas-Powered pumps to back-up traditional electrical drives.

### Technical features

Construction	Skid mounted unit / Open type / Closed type
Employed Materials	Carbon steel / Stainless steel / Cast iron
Valve application	As per actuator category
Design	As per project requirements
Temperature range	As per project requirements
Design pressure	As per project requirements



# Gas operated actuators

## Gas-Over-Oil actuators

**SGO  
LGO**  
● Series



### Features

- Gas-Hydraulic tanks and weatherproof lockable cabinet.
- Basic control system.
- Hydraulic hand pump for emergency control.
- Remote and ESD operation by solenoid valves or different type of line break detection.

#### BESPOKE SOLUTIONS FOR TRANSMISSION PIPELINES

PRO CONTROL Gas-Over-Oil actuators SGO-LGO Series are used on gas transmission pipelines, with sweet or sour gas, due to the non availability of any other means of motive power.

#### Technical features

Construction	Quarter-Turn / Linear
Action	Double acting
Material	Carbon steel / Stainless steel
Valve application	On-Off
Design	ISO 12490 / API 6DX / EN15714 / ASME VIII
Torque / Thrust	Nm 2.000.000 Nm / N 10.000.000
Temperature range	°C -29°/+100° (F°-20/+212°) °C -60° (F°-76°) on request
Design pressure	Barg 100 (Barg 150 on request)
IP Protection	IP66/67M
ATEX	Yes
EAC CU TR	Yes
PED	Yes
SIL Capability	On request

## Direct-Gas actuators

### SGS-SGD LGS-LGD

● Series

#### SIMPLE, RELIABLE, LOW-MAINTENANCE

PRO CONTROL Direct-Gas actuators **SGS-SGD** and **LGS-LGD Series** are designed to operate using the tapped in pipeline gas, sweet or sour, to provide a simple, reliable, low-maintenance actuation for pipeline valves.



#### Technical features

Construction	Quarter-Turn / Linear
Action	Spring return / Double acting
Material	Carbon steel / Stainless steel
Valve application	On-Off
Design	ISO 12490 / API 6DX / EN15714 / ASME VIII
Torque / Thrust	Nm 2.000.000 Nm / N 10.000.000
Temperature range	°C -29°/+100° (F°-20°/+212°) °C -60° (F°-76°) on request
Design pressure	Barg 100 (Barg 150 on request)
IP Protection	IP66/67M
ATEX	Yes
EAC CU TR	Yes
PED	Yes
SIL Capability	On request

# Self-Contained & Quick operation systems

## Self-Contained hydraulic shutdown systems

### UNMANNED AND REMOTE SERVICES

**PRO CONTROL** Self-Contained hydraulic control systems are engineered to suit unmanned and remote services where external power source is not available, no exhaust gas is released into the atmosphere during operation.



### Features

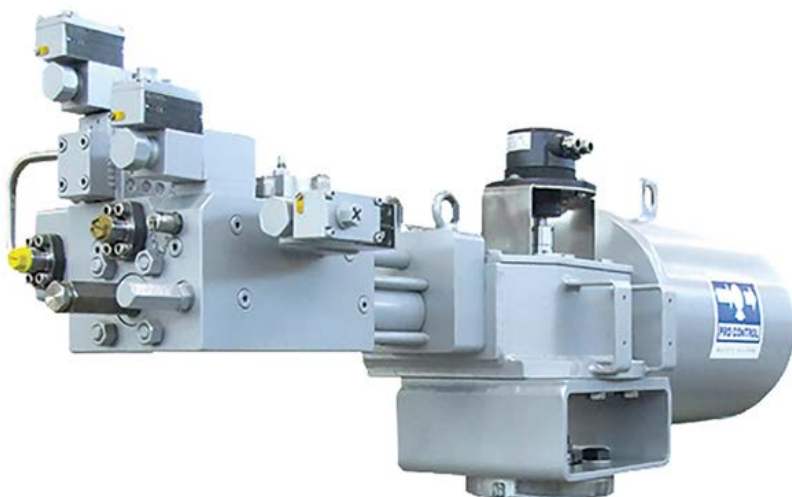
- Zero emission solution, no hazardous gas fugitive emission.
- No need of external power source.
- Designed for Non-Powered, unmanned and remote service.
- Adaptable for use with telemetry systems.
- SCADA or other remote control signals.
- Inherent spring fail safe design.
- Closed loop arrangement prevent system breathing in harsh environmental conditions.
- Large capacity accumulator to handle fast operating time due to optimized design of hydraulic flow path.
- Designed to meet a large range of engineering standards in order to supply one or several actuated valves.

### Technical features

Construction	Modular Self-Contained
Action	Spring return
Material	Carbon steel / Stainless steel
Valve application	Quarter-Turn / Linear
Design	ISO 12490 / API 6DX / EN15714 / ASME VIII
Temperature range	°C -29°/+100° (F°-20/+212°) °C -60° (F°-76°) on request
Design pressure	Barg 250 (Barg 690 on request)
IP Protection	IP66/67M
ATEX	Yes
EAC CU TR	Yes
PED	Yes
SIL Capability	3

## Fast & Ultra-Fast actuators

**TURBINE TRIP AND HIPPS APPLICATIONS REQUIRE FAST AND ULTRA-FAST CLOSING TIME TO RE-SEAT VALVES.**



### Hydraulic actuators

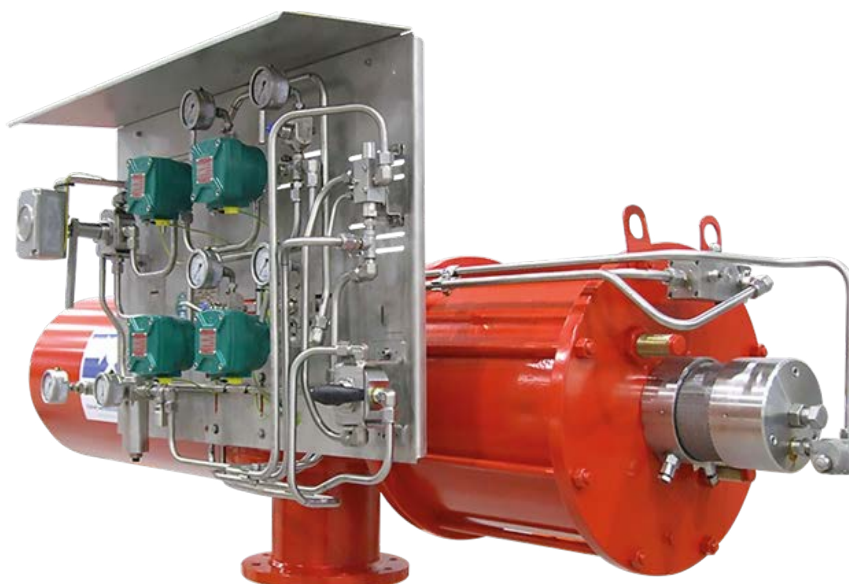
#### Features

PRO CONTROL has specifically engineered Quick-Closing SIL3 single acting actuators with integral hydraulic Quick-Damping solutions to shutdown valves in stroking time up to 0,099 seconds, avoiding damages to valve drive train.

### Pneumatic actuators

#### Features

PRO CONTROL has specifically engineered quick single acting actuators with SIL3 certified integral high flow pneumatic quick exhaust damp valve to trip valves up to 0,3 seconds, avoiding damages to valve drive train.



**UNIQUE BESPOKE DESIGNED SOLUTIONS, AVAILABLE FOR ALL VALVE SIZES AND PRESSURE CLASS RATINGS**

## Control systems

### Actuator control panels

#### Features

Control systems are generally an integral part of each **PRO CONTROL** actuator. They are individually engineered according to our clients specific Functional & Operational requirements.



**PRO CONTROL'S DEDICATED ENGINEERS HAVE ATTENDED SPECIFIC TRAINING COURSES ON PROPRIETARY TUBE & FITTING PREPARATION**



### Actuator weatherproof cabinets



#### Features

For the most corrosive, saline and sandy environments, control system components are recommended to be assembled inside weatherproof control cabinet which are available in stainless steel [SS316 GRADE] or GRP material. The control cabinet is also available with transparent inspection shatter-proof window or can be coated in accordance with customer specific coating systems.

Cabinets are weatherproof rated IP66 (or NEMA 4x) and are generally supplied complete with a blind door with Twin-Comb mapping locks with external parts in SS316. The SS316 hinged door allows a 120° opening as per CEI EN 60204-1.

## Actuator modular manifolds



### Features

**PRO CONTROL** is a manufacturer of bespoke compact pneumatic & hydraulic manifold control systems. Control system components can be typically assembled onto an open stainless steel [SS316L GRADE] back plate complete with a robust Sun-Shade protection roof, mounted on board the actuator or suitable for remote mounting. In order to minimize all potential leakage points across control system components, fittings and tubing, **PRO CONTROL** has designed compact manifold solutions, suitable for both low up to high flow capacity circuits. Manifold solutions provide the availability to utilize different brands for solenoid valves and to provide all demanded local functionalities.



CAN YOU IMAGINE WHAT  
THIS WOULD LOOK LIKE  
IF BUILT TRADITIONALLY?



## Actuator accessories

### Passive fire protection



#### Features

Passive fire protection is a key element in hydrocarbon process industry plant safety and it is considered a reliable method of lowering plant risks. **PRO CONTROL** actuators can be provided with suitable fireproof protection (rigid SS boxes, flexible blankets or intumescent coating) that will guarantee safe working conditions for a significant period of time, in temperatures of over 1100°C, engineered in accordance with market standards (as per UL1709).

### PROLOCK mechanical blocking & PST device



#### Features

Dec clutchable mechanical blocking device to allow a Pre-Set Valve & Actuator partial stroke of approximate 20 Degrees. During normal operation the Prolock System allows the valve to ESD on demand. When a partial stroke test (PST) is required, the PROLOCK is "engaged" and the ESD Valve will only travel to the specified percentage of stroke required. Being a mechanical travel limiter, **PRO CONTROL** Prolock does not introduce any chance of a spurious trip. Prolock is vibration resistant, it is mounted between the valve and the actuator.

### Hydraulic dampers



#### Features

**PRO CONTROL** has created the hydraulic damper series bearing in mind the users interests and engineering requirements in order to reduce surge pressure hammer blow, resulting from rapid valve closure, typical of Non-Return valves. The working principle consists in the dissipation in oil of the energy generated by the valve disc during its Closing / Opening movement.

- Compact solution consisting of a fully enclosed cylindrical rotational device, ideally suited for Heavy-Duty operation which allows our clients long maintenance free periods due to Non-Exposed rotating components.
- The bespoke designed hydraulic chamber cavities allow an easy and efficient drainage of hydraulic fluid from one chamber to the other through an interconnecting manifold.
- The interconnecting manifold has an incorporated flow regulator for fine throttling and different speed settings across the valve stroke.
- Several models available to cover all swing check valves and eccentric butterfly valves with no dimensions or torques limitation.
- For butterfly valves it is possible to fit the damper with an eccentric counterweight to reach the complete closure of the terminal part.

#### Technical features

Material	Carbon steel / Stainless steel
Valve application	Quarter-Turn
Torque	Up to Nm 500.000
Temperature range	°C -29°/+100° (F°-20/+212°)
	°C -60° (F°-76°) on request





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