

# rotork®

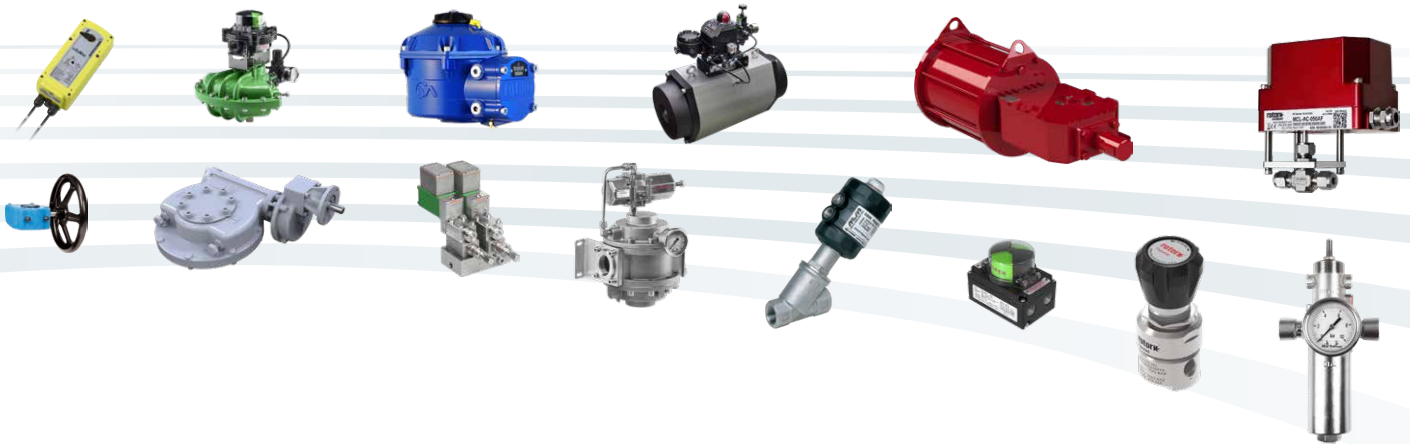


## Hydrogen industries Intelligent pressure and flow control solutions



Instrumentation and valve actuation

## Reliability in critical flow control applications



### › Reliable operation when it matters

Assured reliability for critical applications and environments. Whether used infrequently or continuously, Rotork products will operate reliably and efficiently.

### › Quality-driven global manufacturing

We offer products that have been designed with over 60 years of industry and application knowledge.

Our research and development ensures cutting edge products are available for multiple applications across multiple industries.

### › Customer focused service and worldwide support

Rotork solve customer challenges and develop new solutions that are tailored to the needs of our clients.

We offer dedicated, expert service and support from initial inquiry, to product installation, to long-term after sales care.

### › Low cost of ownership

Long-term reliability prolongs service life.

Rotork helps to reduce long-term cost of ownership and provides greater efficiency to process and plant.

## Hydrogen industries

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### Comprehensive product range serving multiple industries

Rotork products offer improved efficiency, assured safety and environmental protection across sectors such as the Power, Oil & Gas, Water & Wastewater, HVAC, Marine, Mining, Pulp & Paper, Food & Beverage, Pharmaceutical and Chemical sectors.

### Market leaders and technical innovators

We have been the recognised market leader in flow control for over 60 years.

Our customers rely upon Rotork for innovative solutions to safely manage the flow of liquids, gases and powders.

### Global presence, local service

We are a global company with local support.

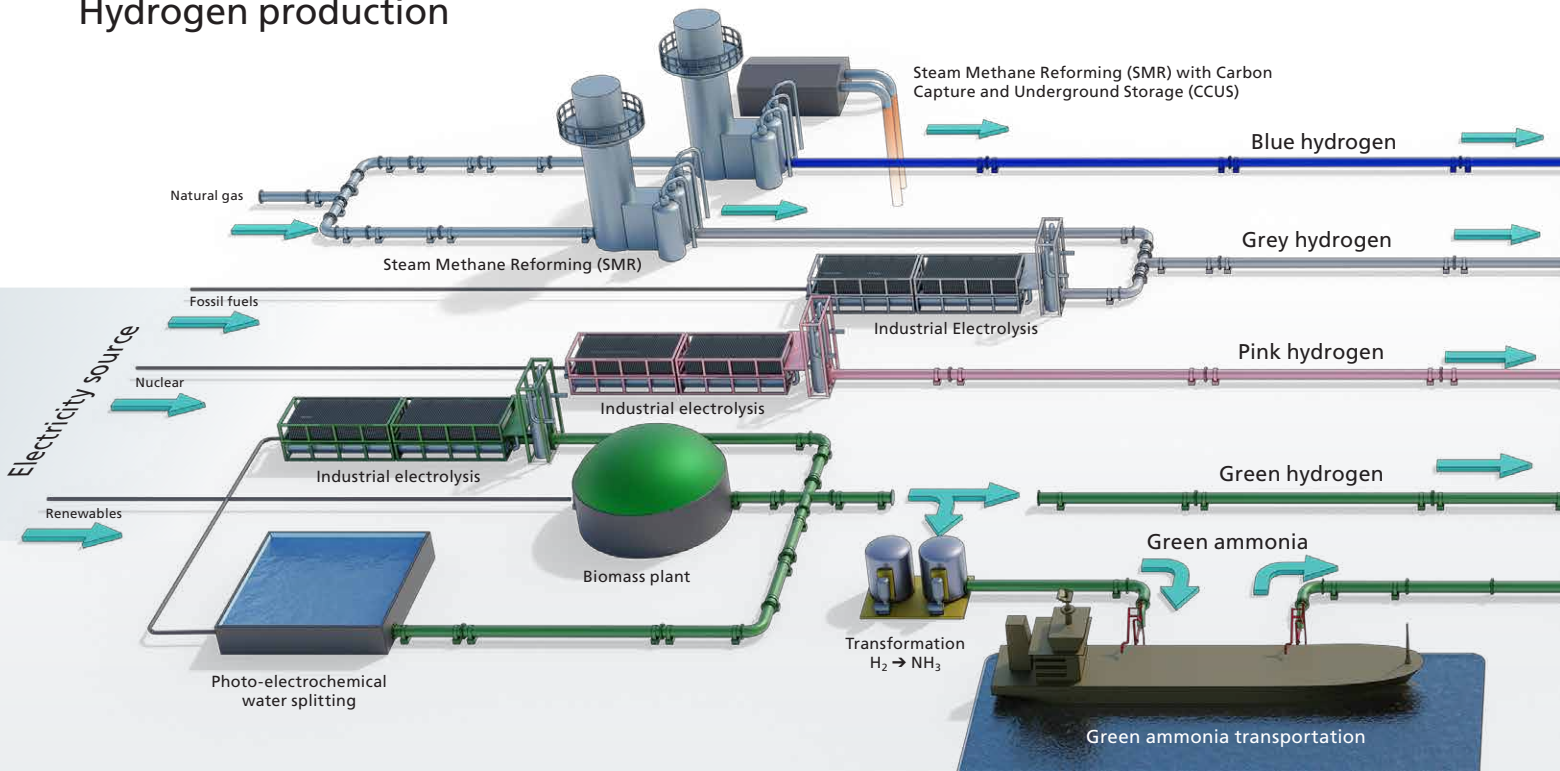
Manufacturing sites, service centres and sales offices throughout the world provide unrivalled customer services, fast delivery and ongoing, accessible support.

### Environmental Social and Governance is at the heart of our business

We have a range of policies in place that support our performance across environmental, social and governance topics. The majority of our policies are publicly available.

# Introduction

## Hydrogen production



Hydrogen production processes present challenges that can be managed through effective planning, control and specialist products that offer the appropriate regulation.

Hydrogen can be costly to produce, so it is essential that the production process runs as smoothly and efficiently as possible. Rotork products can contribute to this; the automation of the flow of water, hydrogen and associated hydrocarbons via actuators and related instrumentation ensures efficiency and peak performance with high levels of accuracy and precision and no human error.

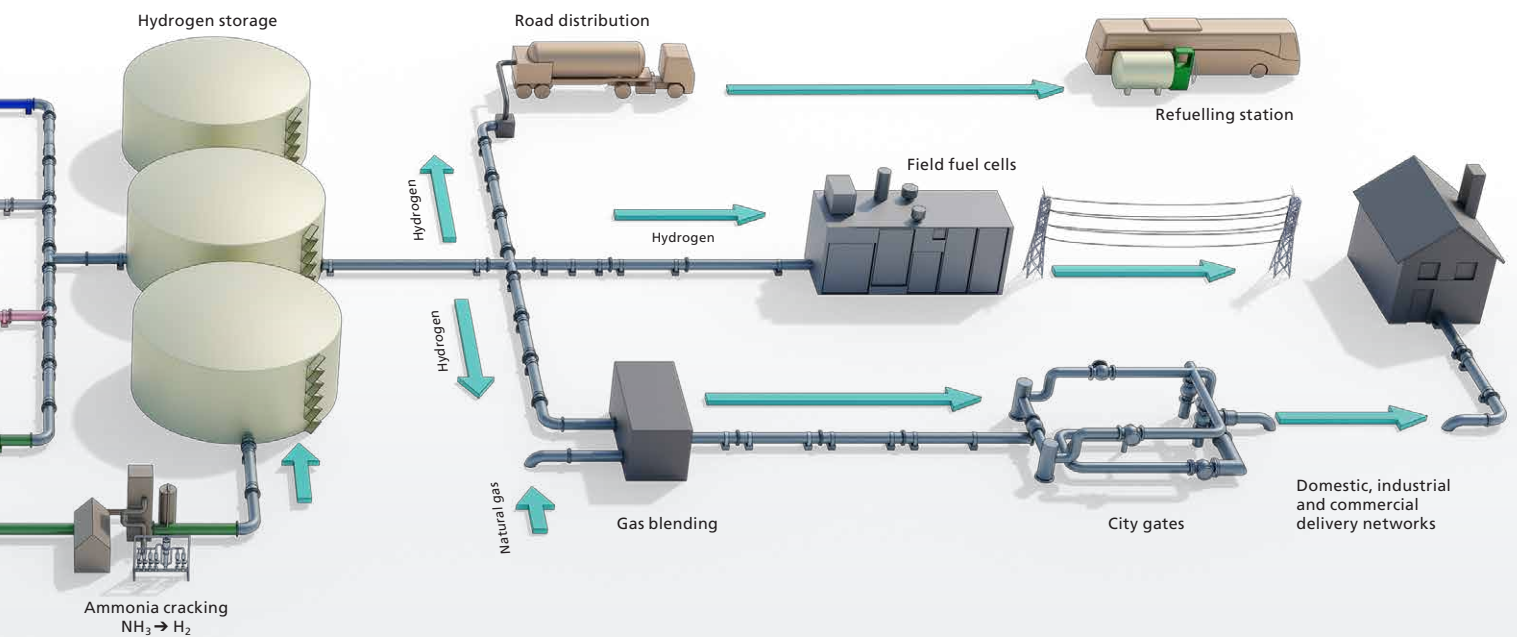
The production of hydrogen without the use of fossil fuels is the necessary future for the hydrogen industry. While the industry moves towards this goal it must maintain high levels of safety in a very visible industry experiencing increasing commercial and consumer awareness.

Hydrogen itself can be dangerous, which is why explosionproof products (with approvals such as ATEX, CSA, IECEx) must be used in its production, distribution, delivery and usage.

Ammonia is an efficient hydrogen carrier in liquid form at modest pressures and temperatures that require constant control and regulation. It can be used as a direct fuel source or cracked to release hydrogen.

Rotork products are known for accuracy and reliability, reducing process waste and increasing efficiency. Our reliability delivers longer product lifespans, reducing plant maintenance and increasing profitability.

## Storage and distribution



## Consumer delivery and end use

The four main viable methods of hydrogen production are identified using the following colour codes:

### Green hydrogen = renewables

Renewable energy is used as the feedstock to create "green hydrogen". If the fuel used and the processes undertaken do not involve the creation of carbon emissions, this hydrogen can be truly be considered as carbon neutral.

Renewable energy powers electrolysis systems to create hydrogen; an electric current is applied to water, splitting it into hydrogen and oxygen. The energy used in this process is usually a surplus from renewable sources.

### Pink hydrogen = nuclear

Similar to "green hydrogen", "pink hydrogen" is the production of hydrogen without the use of fossil fuels by using nuclear energy as the feedstock to produce electricity for use in water electrolysis.

"Pink hydrogen" can be considered carbon neutral, however it has the obvious side effect of nuclear waste disposal requirements.

### Blue hydrogen = carbon capture

Steam reforming process, using natural gas feedstock, produces hydrogen and carbon dioxide which is caught and stored through industrial Carbon Capture and Underground Storage (CCUS). This production method is described as low- $\text{CO}_2$  hydrogen production and is known as "blue hydrogen".

In this production process, carbon dioxide is not released into the atmosphere. The waste  $\text{CO}_2$  can also be re-used within industries such as cement manufacturing, chemical production and enhanced oil recovery.

### Grey hydrogen = steam reforming

Grey hydrogen is essentially any hydrogen created from fossil fuels without capturing the greenhouse gases made in the process. Traditionally, hydrogen is created by a reaction with either steam ("steam reforming" or "steam methane reforming"), oxygen ("partial oxidation"), or both in sequence ("autothermal reforming").

Steam reforming methods are the most common and result in carbon dioxide emissions. Hydrogen produced from this process is known as "grey hydrogen".

## Industrial partner

Rotork has worked closely with refining, processing and distribution partners for over 60 years, designing and developing industry leading flow control solutions. Working with today's hydrogen production partners allows us to understand your business and know the challenges that you face.

We are aware of the environmental, societal and legislative pressures that are forming the framework for hydrogen production and its operational processes.

### **Rotork are working with industry partners around the world, developing product solutions for upstream, midstream and downstream hydrogen applications.**

- › Compact solutions for restricted spaces and small footprints typically found with modularised and containerised systems
- › Standardised designs and global operations supporting scalability of hydrogen systems and production
- › Utilise renewable energy to manage and automate your flow control systems with low power/high performance electric actuation solutions reducing cost and improving sustainability
- › Quality products and components minimising failures
- › Enable electrification and digitalisation, improving efficiency and futureproofing of flow control systems

### **Safety first**

Equipment used to handle hydrogen must be tested and certified to the highest ATEX IIC and IECEX safety standards and provide safe, reliable operation in all environments.

### **Operational efficiency**

New hydrogen production industries have the chance to start with an efficient equipment infrastructure and connectivity, maximising long term operational profitability.

### **Reducing pollution**

Pollution can be eliminated by using renewables to generate green hydrogen and using technologies in production and delivery processes that identify and reduce or stop leaks.

### **Moving to zero emissions**

We can help you eliminate your emissions and achieve your targets. Zero emission targets for industry are fast approaching – The EU (2050), China (2060).

### **Storage reliability**

The high energy requirement of compressed hydrogen storage, due to low specific gravity, requires accurate and reliable valve control for temperature and pressure control.

### **Quality materials**

Hydrogen embrittlement and leakage are primary concerns when specifying flow control equipment. Materials selection must be carefully considered for all equipment.

### **Refuelling station accuracy**

Fine control of hydrogen flow, and temperature control during fast transfers to reduce thermal instability, is essential to minimise evaporation and losses from the system.

### **Life cycle management**

Plant designers and managers can reduce the risk of equipment failure and obsolescence by utilising Rotork's advanced technologies and asset management systems.



## Electric valve actuators

### IQ Valve actuators



#### Multi-turn, part-turn and linear electric actuators

- Unrivalled industry-leading safety and reliability
- Continuous position tracking, even without power
- Explosionproof and certified as suitable for use in SIL2/3 applications
- Drive bush bearings sealed for life – no maintenance
- Integral plug and socket connections available
- Safe and secure data download via non-intrusive Rotork Bluetooth® Setting Tool *Pro*
- Remote control operation with Remote Hand Station up to 100 m (328 ft) away from the actuator
- 1-phase, 3-phase or DC supplies

See [PUB002-197](#) for further details.

### CVA Valve actuators



#### Linear & part-turn modulating electric actuators

- Compact, viable alternative technology when good quality instrument air is not available in hazardous areas
- Ultra-low energy consumption
- 1-phase and DC power supply options
- Continuous, unrestricted modulation to S9 (IEC 60034), Class D duty (ISO 22153)
- Unparalleled accuracy, repeatability, resolution and stiffness
- Comprehensive data logging
- Programmable fail-to-position option
- Watertight IP68, NEMA 4 & 6, and explosionproof enclosures
- CVL: thrust range 890 to 22,241 N (200 to 5,000 lbf)
- CVQ: torque range 54.2 to 271 Nm (480 to 2,400 lbf.in)

See [PUB042-001](#) for further details.

### ExMax Valve actuators



#### Part-turn explosionproof electric actuators

Compact, robust and lightweight electric part-turn valve actuator, designed for use in Ex areas for all gases, mists, vapours and dust.

- On / off duty as standard
- 24-240 VAC/VDC universal power supply
- Standard ISO flanges available
- Torque range 5 to 150 Nm (3.7 to 110.6 lbf.ft)
- Explosionproof to international standards
- UL and CSA certified variants available
- Auto setup and selectable speeds
- Mechanical position indication
- Failsafe option
- Ingress protection IP66/67

See [PUB113-003](#) for further details.

### M and R Valve actuators



#### Compact rotary precision electric actuators

Compact electric rotary valve actuators designed for precision operation of valves in hydrogen applications.

- Suitable for use in gas or vapour, groups IIA, IIB +H2, IIC
- Torque range 0.45 to 118.6 Nm (4 to 1,050 lbf.in)
- 12-24 VDC/Max 3A, 110/220 VAC/Max 1.5A @ 50/60 Hz
- Feedback: TTL, 4-20 mA, Modbus
- Failsafe option
- R series: CSA, IECEx certified enclosure, Class I, Div 1 Groups B, C, D/T6 Class II Groups E, F, G/ T6 (+85 °C)
- M series: Ingress protection IP68

Contact Rotork for further details.



## Pneumatic and hydraulic valve actuators

### GP/GH

Valve actuators



#### Heavy-duty scotch yoke actuators

Pneumatic and hydraulic scotch yoke actuators (symmetric or canted yoke) in double-acting and spring-return configurations.

- Fail close/fail open
- For on/off and modulating
- Electroless nickel-plating
- Torque output to 600,000 Nm (442,537 lbf.ft)
- Certified to IP 66M/67M and ATEX 2014/34/EU
- Certified in accordance with PED 2014/68/EU
- Certified suitable for use at SIL3 as a single device in accordance with IEC 61508
- Optional emergency manual override suitable to operate the actuator in the event of fluid supply failure

See [PUB011-001](#) for further details.

### RC200

Valve actuators



#### Compact scotch yoke pneumatic actuators

- Extremely compact scotch yoke pneumatic actuator
- Contained spring module for safety and convenience
- Double-acting and spring-return configurations
- Fail close/fail open
- For on/off and modulating
- Torque output up to 4,400 Nm (3,245 lbf.ft)
- Valve mounting dimensions per ISO 5211/DIN 3337
- Certified to ATEX 2014/34/EU
- Certified to PED 2014/68/EU
- Certified as suitable for use in SIL3 applications as a single device (IEC 61508)
- Optional emergency manual override suitable to operate the actuator in the event of fluid supply failure

See [PUB014-001](#) (metric) and [PUB014-002](#) (imperial) for further details.

### GT

Valve actuators



#### Rack and pinion pneumatic actuators

- Double-acting and spring-return pneumatic actuators
- Fail close/fail open
- Extruded aluminium body with cast aluminium end caps
- Corrosion-resistant cylinders and nickel-plated pinion
- Mechanical interfaces to ISO 5211, EN 15714-3-4, NAMUR VDI / VDE 3845
- Torque output up to 15,300 Nm (11,285 lbf.ft)
- Certified to ATEX 2014/34/EU
- Certified as suitable for use in SIL3 applications as a single device (IEC 61508)

See [PUB110-001](#) (metric) and [PUB110-002](#) (imperial) for further details.

### K-TORK

Valve actuators



#### Vane pneumatic actuators

- Pneumatic actuators in double-acting and spring-return configurations
- Compact no-sideload, constant-torque design with output to 18,300 Nm (13,497 lbf.ft)
- Certified to IP66M/IP67M and meets NEMA 4/4X
- Certified to ATEX 2014/34/EU
- Complies with ANSI / AWWA C540-02 and C541-08
- Conforms to VDI / VDE 3485 control accessory mounting standards
- Modulating accuracy of 0.25% or better
- Capable of millions of operations at fast cycle times

See [PUB097-001](#) for further details.

## Valve positioners

### YT-3100

Valve positioner



#### Compact smart positioner

- **Compact.** Reliable and precise Smart Positioner, for linear and quarter-turn rotary actuators. Both single- and double-acting layouts are available
- **Gauge manifold.** An option to keep the unit as compact as possible when gauges are not required
- **Smart management system.** A clear and easy-to-navigate menu with four push buttons
- **Visual self diagnostic.** Rated to NE107 standard for a user friendly and simplified troubleshooting process
- **Position feedback.** 4-20 mA analogue completes the package, assuring full process control

See [PUB126-001](#) for further details.

### YT-3300

Valve positioner



#### Torque motor technology with communications

- **Auto calibration.** Simple menu structure with options to auto calibrate all parameters or zero and end points only
- **Partial Stroke Test (PST).** Performed locally or remotely with communication protocol
- **Feedback signal.** Analogue and digital feedback signals with 4-20 mA, mechanical and proximity switch options
- **PID control.** Pre-calibrated and user configurable variables via front panel pushbutton menu
- **Auto / Manual switch.** Enables closed-loop automatic valve position control or manual positioning via the A/M switch
- **Communications.** HART®, Foundation Fieldbus, Profibus (PA)

See [PUB126-001](#) for further details.

### YT-3700

Valve positioner



#### Smart positioner with enhanced diagnostics

- **Enhanced diagnostic** (offline and online) to fully check the integrity of the system. Device Description (DD) and Device Type Manager (DTM) files full compatibility
- **Visual diagnostic info** to NE107 standard with a severity alarm scale and a clear visual identification locally on the display or remotely through HART®
- **Digital input/output** configurable depending on the application and customer preferences
- **Auto tuning functionality**
- **Non-contact sensor** for increased performance for high frequency operating valves and an enhanced lifetime

See [PUB126-001](#) for further details.

### YT-3400

Valve positioner



#### Torque motor technology with communications

- **Enhanced diagnostic** (offline and online) to fully check the integrity of the system. Device Description (DD) and Device Type Manager (DTM) files full compatibility
- **Visual diagnostic info** to NE107 standard with a severity alarm scale and a clear visual identification locally on the display or remotely through HART®
- **Digital input/output** configurable depending on the application and customer preferences
- **Auto tuning functionality**
- **Non-contact sensor** for increased performance for high frequency operating valves and an enhanced lifetime

See [PUB126-001](#) for further details.

## Limit switch boxes

### SF

#### Limit switch box



#### Limit switch box for safe and hazardous areas

- Twin shaft design and self lubricating bushings
- Aluminium or 316 stainless steel housing options
- Two cable entries either metric or imperial
- Easy wiring through the terminal PCB board
- Position transmitter board optional
- Suitable for arctic environments
- ATEX, IECEX, EAC, CCOE, INMETRO
- Certified as suitable for use in SIL3 applications
- IP 66 / 67 (NEMA 4 4X on request)
- Standard temperature range: -40 to +80 °C (-40 to +176 °F)
- Low temperature option: -60 to +105 °C (-76 to +221 °F)

See [PUB109-003](#) for further details.

### SK

#### Limit switch box



#### Compact limit switch box for hazardous areas

- Twin shaft design and metallic self lubricant bushings
- Aluminium or 316L stainless steel housing options
- Two cable entries, either metric or imperial
- Adjustable mounting kit option for NAMUR actuators
- Easy wiring through the terminal PCB board
- Suitable for arctic environments
- ATEX, IECEX, EAC, CCOE, INMETRO
- Certified as suitable for use in SIL3 applications
- IP 66/68 15m for 100 hrs (NEMA 4 4X on request)
- Standard temperature range: -40 to +80 °C (-40 to +176 °F)
- Low temperature option: -55 to +105 °C (-67 to +221 °F)

See [PUB109-003](#) for further details.

### SP

#### Limit switch box



#### Compact limit switch box

- Integrated mounting kit for NAMUR pattern
- Corrosion free glass reinforced plastic enclosure
- One cable entry, either metric or imperial
- Multiple indicator options
- Easy wiring through the terminal PCB board
- ATEX, EAC, CCOE
- Certified as suitable for use in SIL2 applications
- IP65 (IP67 and NEMA 4 4X on request)
- Standard temperature range: -20 to +80 °C (-4 to +176 °F)

See [PUB109-003](#) for further details.



## Pressure regulators

### HPP

Pressure regulators



#### High pressure piston operated regulator

- 316 stainless steel high pressure piston for high output pressures up to 3,000 psi
- Three seat material choices for a wide range of chemical compatibility, (PEEK, CTFE, and Vespel)
- High maximum supply pressure of 6,000 psig to allow more through put of gas.
- Tamper proof option available
- Ambient temperature range: -40 to +260 °C (-40 to +500 °F), depending on seat material
- Panel mounting option available.

See [PUB103-007](#) for further details.

### HPD

Pressure regulators



#### High pressure diaphragm operated regulator

- X-750 Inconel diaphragm eliminates drift and provide long term accuracy and stability, strength, corrosion resistance and long life
- Three seat material choices for a wide range of chemical compatibility, (PEEK, CTFE, and Vespel)
- High maximum supply pressure of 6,000 psig to allow more through put of gas.
- Tamper proof option available
- Ambient temperature range: -40 to +260 °C (-40 to +500 °F), depending on seat material
- Panel mounting option available

See [PUB103-007](#) for further details.

### PAX1 / PAXL

Compact actuation and regulators



#### Compact low power actuators and regulator controllers

The PAX<sub>i</sub> is a low voltage DC or AC powered regulator controller with a rotating linear thrust rod output optimised to control regulators up to 25 mm (1") stroke.

The PAX<sub>L</sub> converts the rotating linear output of PAX<sub>i</sub> to a bi-directional non-rotating linear output optimised for automation of small valves, pumps and other devices.

PAX<sub>i</sub> and PAX<sub>L</sub> are suitable for use in hazardous areas due to the fully sealed explosionproof enclosure.

- Operation speed up to 60 mm/min (2.36 inch/min)
- Maximum thrust of 2,890 N (650 lbf)
- Control pressures up to 20,684 kPa (3,000 psig)
- IP rating IP66 / IP68 / Type 4X / Type 6P
- FM, CSA, CCC/NEPSI, ATEX, IECEx, UKEX hazardous areas
- Ambient temperature range: -40 to +80 °C (-40 to +176 °F)
- Less than 1 Watt power consumption during standby, ideal for remote solar applications
- Optional isolated 4-20 mA position feedback
- Configurable stroke limits

See [PUB136-001](#) for further details.

## Pressure regulators, filter regulators and logic valves

### M10BP

Back pressure regulators



#### High flow capacity back pressure regulator

- Higher accuracy than relief valves over a narrow pressure range
- Sensitivity of 1/8" (0.32 cm) of water, responds to equally small changes in downstream pressure
- Maximum supply pressure: 500 psig (35 bar)
- Balanced supply valve to minimise effects of supply pressure variation
- Flow capacity 40 SCFM (68 m<sup>3</sup>/hr)
- Ambient temperature range: -40 to +93 °C (-40 to +200 °F)

See [PUB103-007](#) for further details.

### SC

Filter regulators



#### Filter regulators

- Compact design
- High stability
- Up to 145 psi / 10 bar working pressure
- Arctic service options to -60 °C
- High flow up to 11.2 Cv
- NACE internal wetted and body materials option
- Modular design for in-line maintenance
- 5 to 50 micron filter available

See [BFD000](#) for further details.

### PPV

Logic valves



#### 1 1/2" and 2" Poppet valves

- Certified as suitable for use in SIL3 applications
- Compact design available in 1, 2 or 3 port exhaust units
- Positively sealed for low pressure applications up to 145 psi / 10 bar operating pressure
- Arctic service options to -60°C
- Valve body 316L stainless steel, aluminium options available
- Ports: 1/2" up to 2" NPT & BSP
- NACE-MR-01-75 option
- High flow - up to 103.0 Cv
- Extensive valve operator options

See [SPR-PPV](#) for further details.

### BXS/SPR

Logic valves



#### Indirect-acting solenoid valves

- Cycle capability up to 20,000 cycles
- 2/2, 3/2, 5/2 and 5/3 operation
- Ports (BXS): 1/4" NPT & BSP (Body-Ported)
- Ports (SPR): 1/4" up to 1" NPT & BSP
- Pressure range: 0 - 10 bar (0 - 145 psig)
- Ambient temperature range: -25 to +90 °C (-13 to +194 °F)
- Flow rate: 2.0 to 11.2 Cv
- IP66, IP67 and NEMA 4X

Contact [Rotork](#) for further details.

## Solenoid operated valves

### ACD

Water isolation solenoid valves



2/2 Normally Closed

- Robust valve design
- Diaphragm operation
- Fully ported orifices for high Kv
- Choice of valve body material seals
- Response time up to 1" 15-60 ms
- Response time up to 2" 60-120 ms

See [PUB124-005](#) for further details.

### ACP

Solenoid valves



2/2 Normally Closed

- Heavy-duty valve design
- Piston operation
- Wide temperature range capabilities
- Choice of valve body material seals
- ATEX approved
- Response time up to 1" 40-100 ms
- Response time up to 2" 60-1000 ms

See [PUB124-005](#) for further details.

### ACDN

Solenoid valves



2/2 Normally Open

- Robust valve design
- Diaphragm operation
- Fully ported orifices for high flow
- Choice of valve body material seals
- Sizes  $\frac{3}{8}$ " -  $\frac{3}{4}$ " Advantica approved to BS EN 60730 - 2 -8 for household use when used with EPDM seals
- Response time 1" 15-60 ms
- Response time 2" 60-120 ms
- Tested in accordance with BS-EN 12266-1

See [PUB124-005](#) for further details.

### 31/33

Solenoid valves



3/2 Normally Closed / Universal

- Direct-acting
- For mixing, diverting and venting applications
- Compact valve design
- Wide range of available orifices
- Zero pressure rated
- Choice of valve body material and seals
- Exd options (see separate datasheet)
- Response time 5-25 ms
- Tested in accordance with BS EN 12266-1

See [PUB124-005](#) for further details.

## Solenoid operated valves and piston actuated valves

# 21

Solenoid valves



**2/2 Normally Closed**

- Compact valve design
- Zero pressure rated
- Wide range of available orifices
- Choice of valve body material and seals
- Exd and Exm options
- Choice of electrical connections
- ATEX approved
- Response time 5-25 ms

See [PUB124-005](#) for further details.

# 68

Cryogenic solenoid valves



**2/2 Normally Closed**

- Controls cryogenic media down to -196 °C (-321 °F)
- Oxygen degreased and individually packed for cryogenic service
- Larger porting for high Kv
- Teflon® - PTFE seals
- Choice of brass or stainless steel valve body
- Tested in accordance with BS-EN 12266-1

See [PUB124-005](#) for further details.

# FP06P / FP10P

Solenoid valves



**Direct-acting solenoid valve**

- DC and AC solenoid options
- High cycle capability up to 1 million cycles
- 2/2 and 3/2 operation
- Ports: 1/4", 3/8", 1/2"
- Pressure range: 0 - 50 bar (0 - 725 psig)
- Ambient temperature range: -25 to +90 °C (-13 to +194 °F)
- Flow rate: up to 1.0 Cv with 50 bar option
- Ultra low power consumption, under 1.0 W continuous power
- Response time: Pull in <100ms, drop out <70ms
- IP66, IP67 and NEMA 4X

See [PUB171-001](#) for further details.

# 2/2 Way

Piston valves



**G 1/2" to 3/4" compact piston actuated valves**

- Waterhammer-free design for BPG - DPG (with flow direction 2→1)
- Actuator housing rotation 360°
- Position indicator for instantly visible valve position
- PTFE seal material for enhanced compatibility with media and high temperature resistance
- Self-registering gland and chevron packing for longer life
- Stainless steel valves suitable for vacuum applications up to 10-2 mbar
- NPT connection and ATEX versions available

See [PUB125-001](#) for further details.

## Pressure transducers, I/P converters and volume boosters

### T6000

Pressure transducers



#### E/P, I/P transducer

T6000 transducer is an electro-pneumatic device that converts a DC input signal to a pneumatic output.

- Field reversible
- RFI/EMI protection eliminates susceptibility to electromagnetic and radio interference
- Six output pressure ranges from 0 to 120 psig
- Six input signal ranges from 4-20 mA to 0-10 VDC
- Compact size for use in space restricted areas
- Explosionproof NEMA 4X, IP65, Type 4 enclosure for outdoor or indoor installations
- Input and output ports on both front and back for simplicity of installation

See [PUB103-074](#) for further details.

### YT-930 / YT-940

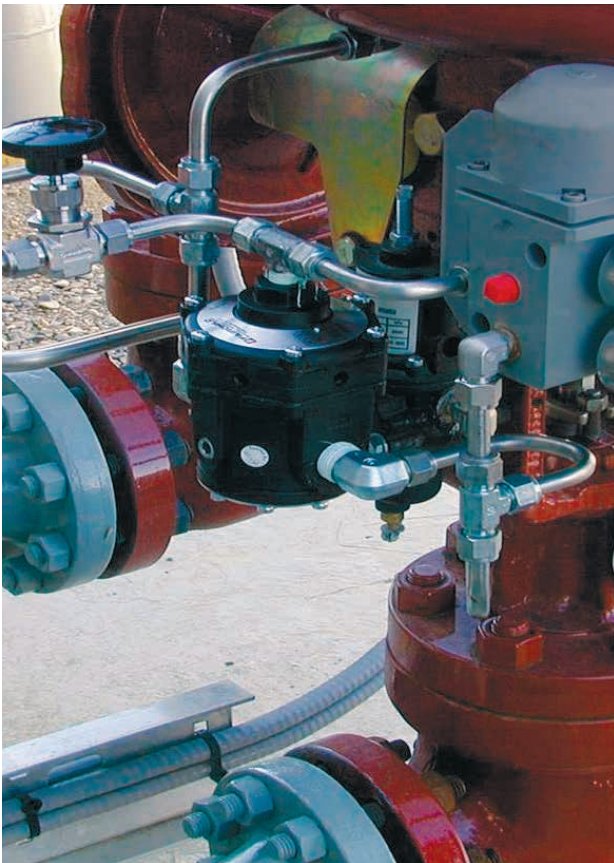
I/P converters



#### 4-20 mA signal air pressure control

- YT-930: Weather proof or Ex ia IIC T5/T6
- YT-940: Flameproof and explosionproof housing for Zone 1 installation, Ex d IIC T5/T6
- High accuracy and sensitivity with pressure sensor
- Simple zero and span adjustment
- Analogue PID control
- No effect from mounting orientation
- Ambient temperature range: -30 to +85 °C (-22 to 185 °F)
- Low temperature option: -40 to +85 °C (-40 to 185 °F)
- Feedback signal (option)

See [PUB126-001](#) for further details.



## Volume boosters



#### Highly controlled pressure supply

- Large flow capacity – Specifically designed to be used in conjunction with valve positioners
- Optimal sensitivity – Reacts to sudden change in supply pressure
- Fixed deadband – Provides accurate and stable final positioning of the valve
- Internal bypass control – Improves system stability.
- Remote feedback (option)

Contact Rotork for further details.



# Modular manifolds



### Manifolds - Rotork modular solution range

Fast configuration and delivery of accurate and reliable instrumentation configurations to suit your application.

- 360° fully rotational solenoid housing
- Worldwide solenoid approvals
- Booster manifolds available
- Patented stacker system
- Compact low cost version
- High system flow
- 316L stainless steel
- 3D modelling system design

Contact Rotork for further details.

Our modular systems deliver:

- Reduction in cost and weight over separate systems
- Less components, eliminating fittings and tubing
- Smaller panel/back plate and reduced fixings
- Smaller mounting plate with minimal requirements

Specifications:

- Ambient temperature range -60 to +90 °C (-13 to +194 °F)
- Pressure range 0 - 10 bar (0 - 145 psig)
- Flow rate from 0.73 to 11.2 Cv (XS04-04 up to XS16-16)
- Ports: ¼" up to 1" NPT & BSP (XS04-04 up to XS16-16)
- Solenoid classification: Ex d IIC, Ex emb IIC, Ex ia IIC
- IP66, IP67 and NEMA 4X

## Trusted partner

Rotork is a market-leading provider of flow control and instrumentation solutions. We have served global industrial actuation and flow control markets for more than 60 years, delivering results in all regions and in all environmental situations.

Our reliability record is second to none. Rotork products are designed with safety and performance at their core and are put through vigorous testing by international safety institutes. Our products are certified for use in the world's most dangerous, and hazardous areas.

**Our service engineers work with industrial partners to design, update and maintain their plant and equipment.**

Partnering with Rotork provides the following:

- Assured safety and reliability
- Industry leading accuracy and efficiency
- Proven technology that works with all control systems
- Product range with solutions to suit every application
- Assistance with plant planning, development and maintenance through our local support services

History shows we are a company to do business with:

- Established in 1957, we have always been innovators and leaders in flow control technology
- Safety is a core value of our business and products
- We have innovative research and development centers throughout the world
- With 3,200 employees globally and 79 sites, we provide local service on a global scale
- We are embracing a more diverse workforce
- We are committed to reducing our own environmental impact, reducing water and power usage year-on-year

# rotork®



[www.rotork.com](http://www.rotork.com)

A full listing of our worldwide sales and service network is available on our website.

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As part of a process of on-going product development, Rotork reserves the right to amend and change specifications without prior notice. Published data may be subject to change. For the very latest version release, visit our website at [www.rotork.com](http://www.rotork.com)

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