

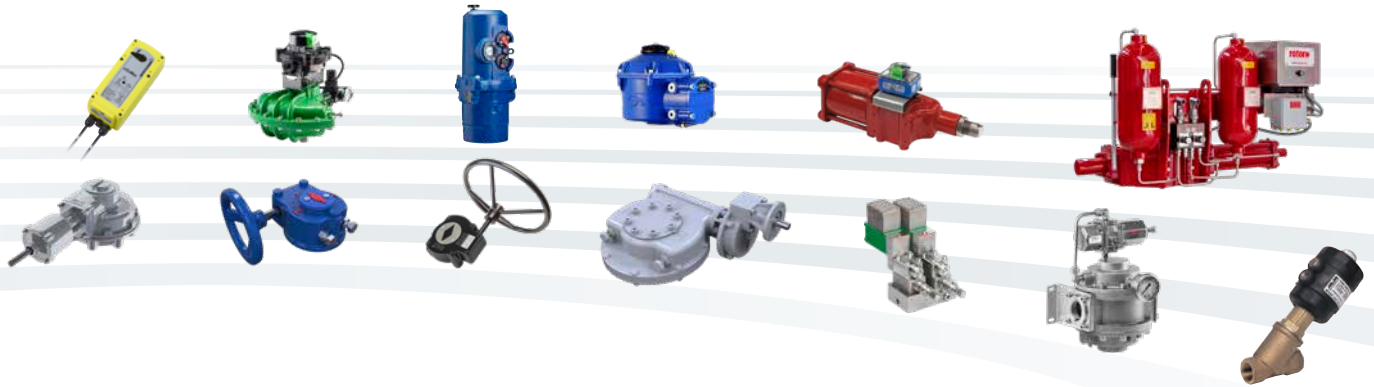
# rotork®

## Hydrogen Industry Intelligent Pressure and Flow Control Solutions



Instrumentation and Valve Actuation **Enabling a Sustainable Future**

## 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

At Rotork we 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 Industry

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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.

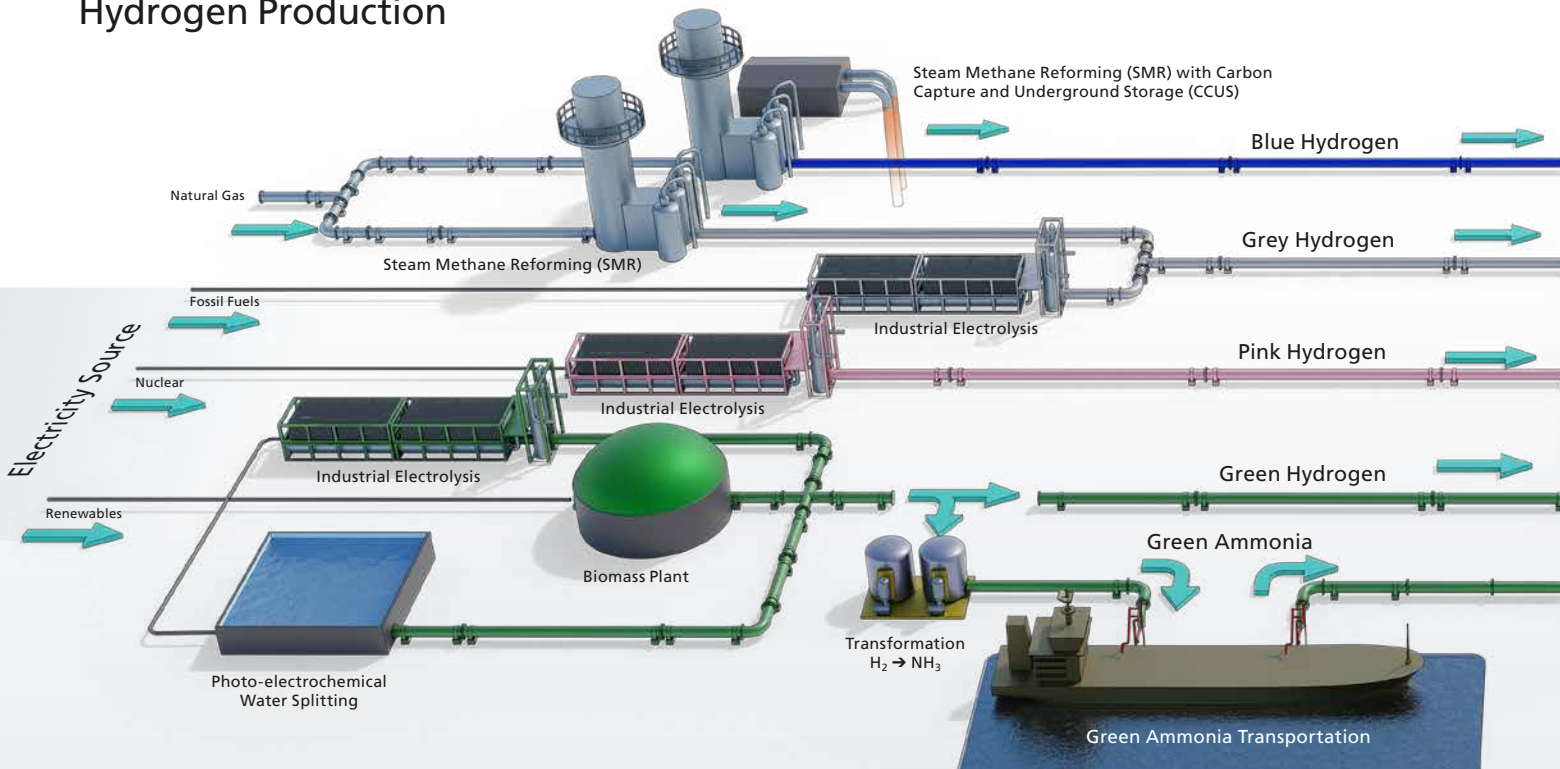
Manufacturing sites, service centres and sales offices throughout the world provide unrivalled customer services, fast delivery and ongoing, accessible support.

## Corporate social responsibility is at the heart of our business

We are socially, ethically and environmentally responsible and committed to embedding CSR across all our processes and ways of working.

# 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.

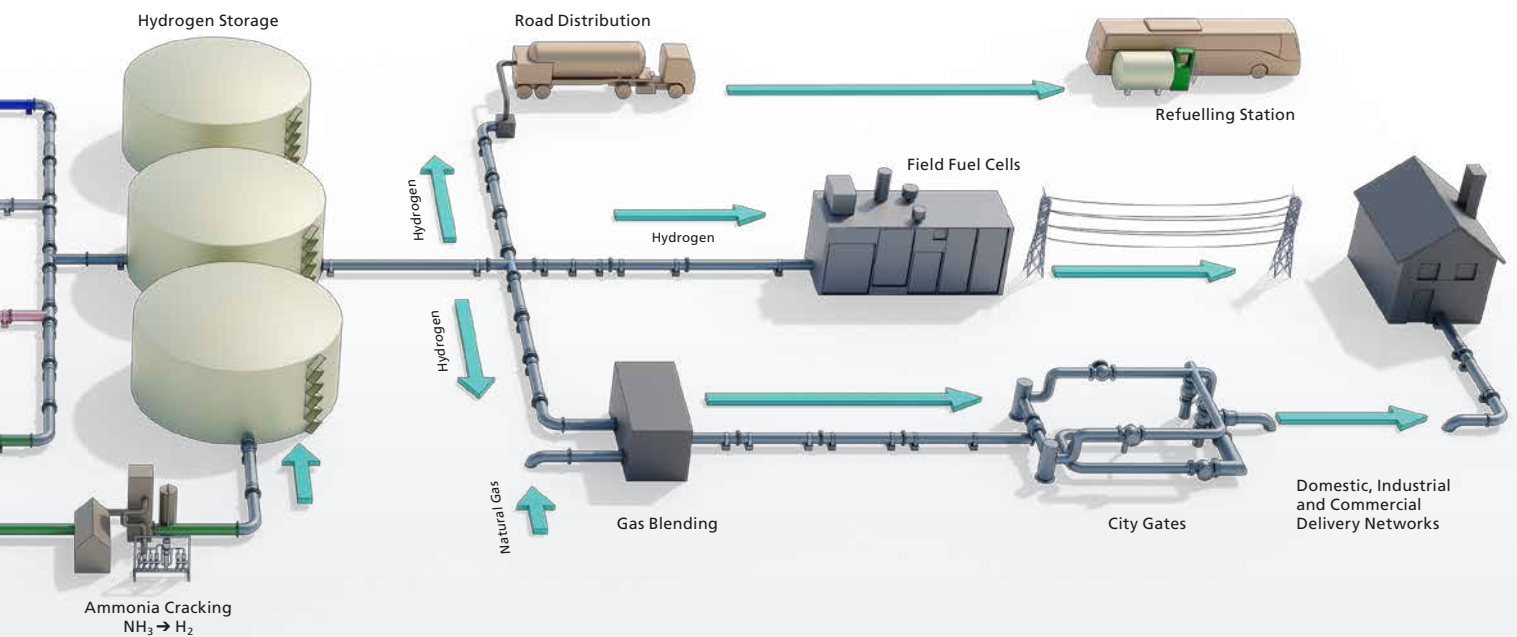
Hydrogen itself can be dangerous, which is why explosionproof products (with approvals such as ATEX, CSA, IECEx) must be used in its production, distribution, delivery and usage.

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-CO<sub>2</sub> hydrogen production and is known as "blue hydrogen".

In this production process, carbon dioxide is not released into the atmosphere. The waste CO<sub>2</sub> 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".

## Precision Products

Rotork has extensive knowledge and experience in all aspects of hydrogen production and distribution. We have the products and capability to cover your instruments needs throughout the entire value chain.

Our products can be found in almost every process control application throughout the hydrogen industry, from power generation and natural gas processing to hydrogen production, storage, distribution and consumer delivery.

## Pressure Regulators

### HPG Pressure Regulators



#### High pressure gas regulator

- Quick-change service insert for main valve and filter
- Internal 40 $\mu$  supply filter protects equipment
- Ceramic main valve for severe service application
- NACE compatible design
- 690 bar (10,000 psig) maximum inlet pressure
- Ambient temperature range: -40 to +80 °C (-40 to +176 °F)
- Flow capacity: Main valve CV = 0.09, Vent valve CV = 0.11
- Leakage: Main valve, 0.05 drop/min
- 2.95 kg (6.5 lbs)
- Design proof pressure - 1.5x maximum inlet pressure

See [PUB137-001](#) for further details.

### HPD Pressure Regulators



#### High pressure regulator

- Standard X-750 Inconel diaphragm for strength, corrosion resistance and longer 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.

## Pressure Regulators and Transducers

### PAX1 / PAXL

Compact Actuation  
and Regulators



#### Compact low power actuators and regulator controllers

The PAX<sub>1</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>1</sub> to a bi-directional non-rotating linear output optimised for automation of small valves, pumps and other devices.

PAX<sub>1</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.

### M100

High Flow  
Regulators



#### High flow pressure regulator

- Sensitivity of ½" (1.27 cm) of water, responds to equally small changes in downstream pressure
- Maximum supply pressure: 500 psig
- Balanced supply valve to minimise effects of supply pressure variation
- Flow capacity in excess of 1,500 SCFM (2,550 m<sup>3</sup>/hr)
- Ambient temperature range: -40 to +93.3 °C (-40 to +200 °F)

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

### T6000

I/P Transducers



#### Electro-pneumatic I/P, E/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.

## Filter Regulators, Logic Valves and Solenoid Valves

### SH/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.

### 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.

### PPV

#### Logic Valves



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

- Certified as SIL 3 capable
- 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.

### 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.



## Solenoid 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 Valves, Modular Systems and Manifolds

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### 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.

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### 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.

## Modular Systems



#### Manifolds - Rotork Modular Solution Range

##### Features and Benefits

- 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

##### Reduction in:

- Cost
- Components (below cost of separate valves and fittings)
- Panel (smaller panel/back plate required and fixings)
- Labour (reduce labour cost of fabricating system)
- Weight
- Eliminate fittings, tubing
- Smaller mounting plate
- Minimal mounting requirements

##### Ambient Temperature Range

- -60 to +90 °C (-13 to +194 °F)

##### Pressure Range:

- 0 - 10 bar (0 - 145 psig)

##### Flow Rate

- From 0.73 Cv up 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

##### Ingress Protection

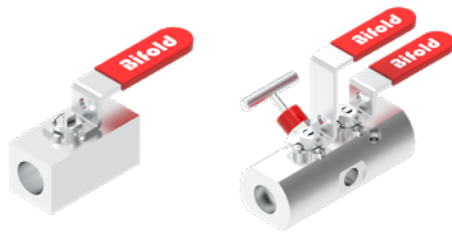
- IP66, IP67 and NEMA 4X

Contact Rotork for further details.

## Ball and Needle Valves

### BV

#### Ball Valves



#### 316 Stainless steel ball valves

- Single piece construction reducing leak paths
- Anti-blow out stem internally loaded
- Bi-directional
- Precision machined stainless steel ball
- Lever type handle as standard
- Compact design to save space and weight
- Thread milled connections for improved sealing
- Full material traceability and individual serial number stamped on the valve
- RTFE stem seals and O-Ring body seals
- Bubble tight shut-off
- Low operating torque
- Pressure energised stem sealing
- Seal integrity maintained if handle is removed
- Ambient temperature range: -46 to +150 °C (-51 to +302 °F)
- Pressure range: 0 - 690 bar (0 - 10,000 psig)
- NACE MR-01-75 / ISO 15156 compliance as standard

#### BV01 Bi-directional single isolating ball valve

A single isolate ball valve with pressures rated up to 10,000 psi / 690 bar. The single isolating ball valve is designed to give bubble tight shut off through 90° operation across the full operating temperature range of the valve. Totally enclosed soft seats offer both positive sealing and low operating torques.

- BV01 ports: 1/4", 3/8", 1/2"
- BV01 orifice size: 5 to 15 mm

#### BV05 Double block & bleed ball valve manifold

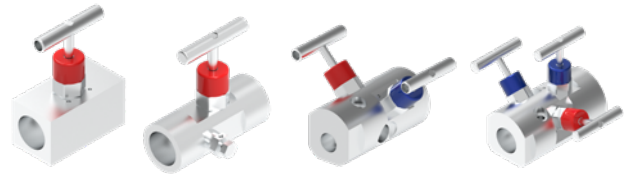
A double block & bleed ball - needle - ball valve manifold with pressures rated up to 10,000 psi / 690 bar. Manufactured from barstock, the two in-line balls are the primary and secondary isolating valves with a needle type valve for the vent facility. The ball valve is designed to give bubble tight shut off through a 90° operation across the full operating temperature range of the valve.

- BV05 ports: 1/4", 3/8", 1/2", 3/4"
- BV05 orifice size: 10 and 20 mm

See [BFD01/10](#) for further details.

### NV

#### Needle Valves



#### 316 Stainless steel needle valves

- Single piece construction reducing leak paths
- Anti-blow out stem
- Non-rotating, anti-galling tip as standard
- Metal to metal seating and metal to metal body joint to prevent thread contamination
- Compact design to save space and weight
- Full material traceability and individual serial number stamped on the valve
- Viton / RTFE stem seals - maintenance free
- Bubble tight shut-off
- Back seating needle
- Stem seal design prevents galling and contamination
- Thread milled connections for improved sealing
- Pressure energised stem sealing
- Pipe or panel mounting (NV01 pipe mount only)
- Ports: 1/4", 3/8", 1/2"
- Orifice size: 5 mm
- Ambient temperature range: -46 to +150 °C (-51 to +302 °F)
- Pressure range: 0 - 690 bar (0 - 10,000 psig)
- NACE MR-01-75 / ISO 15156 compliance as standard

#### NV01 Single isolation needle valve

Single isolation needle valve delivering leak tight sealing across the full operating temperature range of the valve.

#### NV03 Single isolation needle valve

Single isolation valve block and captive vent plug (with non-removable stem) bleed gauge / instrument manifold that permits isolation and controlled venting of the instrument for calibration and/or removal from the circuit, whilst leaving the process intact.

#### NV04 Double isolation needle valve manifold

Patented space and weight saving design two valve block & bleed gauge / instrument manifold that permits controlled venting of the instrument for calibration and or removal from the circuit, whilst leaving the process intact.

#### NV05 Double block & bleed valve manifold

Patented space and weight saving design double block & bleed manifold that permits controlled venting of the instrument for calibration and or removal from the circuit, whilst leaving the process intact.

See [BFD01/10](#) 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 and Valve Actuators

### 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
- SIL 3 certified by TÜV
- 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.

### 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
- SIL 3 certified by TÜV
- 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.

### SP/SM

#### Limit Switch Box



#### Compact limit switch box

- Integrated mounting kit for NAMUR pattern
- Corrosion free glass reinforced plastic enclosure on SP series
- Nickel plated aluminium body on SM series
- One cable entry (SP) or two cable entries (SM) either metric or imperial
- Multiple indicator options
- Easy wiring through the terminal PCB board
- ATEX, EAC, CCOE
- SIL 2 certified by TÜV
- 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.

### 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 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 for safety applications (SIL2/3)
- 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 [PUB002-038](#) 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 suitable for use at SIL3 as a single device (IEC 61508)

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

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

## Valve Actuators

### CVA

#### Valve Actuators



CVL (Linear)



CVQ (Part-turn)



CVL-5000 (Linear)

#### Linear and part-turn precision modulating electric actuators

- Compact, viable alternative technology when good quality instrument air is not available in hazardous areas
- Ultra-low energy consumption, suitable for solar powered applications
- 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
- Perfect for demanding applications including control valves and metering pumps
- Comprehensive data logging
- Programmable fail-to-position option
- Analogue, digital and network control options
- Pakscan™, HART®, Profibus®, Foundation Fieldbus® and Modbus® available
- Optional hardwired control
- Watertight IP68, NEMA 4 & 6, and explosionproof enclosures
- Option of intrinsically safe I/O connections
- Non-intrusive setup / calibration using Bluetooth wireless technology
- Optional manual override
- CVL Linear: thrust range 890 to 22,241 N (200 to 5,000 lbf)
- CVQ Part-turn: torque range 54.2 to 271 Nm (480 to 2,400 lbf.in)

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

## 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 centres throughout the world
- With over 3,000 diverse and inclusive employees globally, we provide local service on a global scale
- We are targeting net-zero emissions by 2045 and have set science-based targets to support our commitment in reducing our environmental impact

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[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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