

**rotork<sup>®</sup>**  
**MIDLAND**

**Oil & Gas** Products and Services



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Redefining Flow Control

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Rotork is the global market leader in valve automation and flow control. Our products and services are helping organisations around the world to improve efficiency, assure safety and protect the environment.

We strive always for technical excellence, innovation and the highest quality standards in everything we do. As a result, our people and products remain at the forefront of flow control technology.

Uncompromising reliability is a feature of our entire product range, from our flagship electric actuator range through to our pneumatic, hydraulic and electro-hydraulic actuators, as well as instruments, gearboxes and valve accessories.

Rotork is committed to providing first class support to each client throughout the whole life of their plant, from initial site surveys to installation, maintenance, audits and repair. From our network of national and international offices, our engineers work around the clock to maintain our position of trust.

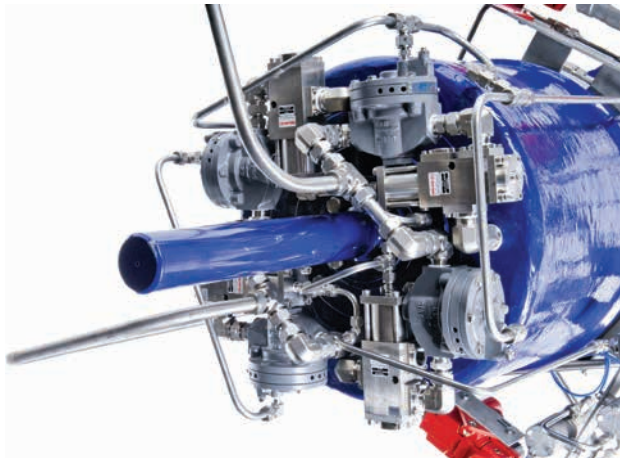
**Rotork. Redefining flow control.**

## Introduction

Since our founding in 1956, we have been known internationally as one of the oil & gas industries' premier designers and manufacturers of 316L stainless steel control equipment.

Over the years we have developed an enviable reputation for high quality products, reliability and innovation.

Our ability to investigate problems and provide comprehensive solutions for the control of hydraulic and pneumatic actuated process valves - on both onshore and offshore installations - whether fixed or floating production facilities including FPSO's and repeatedly delivering impressive results worldwide sets us apart from our competitors.



Certification Options Available



# Pneumatic Valves

Designed and constructed from 316L stainless steel using experience gained through project specification in a variety of industries, our range of pneumatic components are ideal for both hazardous area and industrial use. A variety of certification options are available.

## Air Preparation

### Filters, Pressure Regulators & Combined Units

- Manual / Automatic drain
- 1/4", 1/2", 3/4", 1" = 40 micron element (5 micron option)
- 1 1/2" - 2" = 25 micron element
- High flow capabilities
- Various pressure ranges available between 2 and 12 bar
- Self / Non-relieving options
- 50 mm pressure gauge
- NACE compliance available
- Low temperature version available

### Spool & Poppet

- 3/2 & 5/2 Function (Poppet 3/2 only)
- Air pilot
- Direct solenoid operated
- Solenoid pilot
- Manual
- Mechanical
- Low temperature version available



### Ancillaries

- Non-return valves
- Quick exhaust valves
- Flow (speed) control
- Needle valves
- Exhaust port protectors
- Thermal fuses
- Pneumatic pressure switches
- Visual indicators
- Boosters
- Low temperature version available

## Certification Options Available



## Modular Pneumatic Controls

IMPACT (International Modular Pneumatic Actuator Control Technology) is a high integrity modular pneumatic actuator control assembly in 316L stainless steel, used for the control and sequencing of process valve actuators on oil & gas facilities and pipelines. Using a range of field proven components, spool valves, poppet valves, direct acting valves and filter regulators are connected in series using a universally compatible interface block and mounted directly onto the valve actuator.

Manifolds are designed to suit the customer's standard or bespoke circuits. To accommodate specific solenoid operator requirements we work with a number of renowned solenoid manufacturers, thus allowing the manifold solution to be tailored to both valve control system construction and client solenoid specification requirements.

### Features

- Available ATEX compliant to category 2
- Range of circuits available designed to request
- Units will interface with all global pneumatic actuators
- Simplifies valve automation reducing potential failure
- Ideal for both hazardous area and industrial use
- Lighter, stronger and eliminates joining pipework and fittings
- Reduction in CAPEX & OPEX over panel mounted assemblies
- IP66 / 67 ingress protection



### Certification Options Available



## Electro-Pneumatic Valve Actuation

Using the modular nature of our IMPACT system, we also offer a range of electro-pneumatic actuation equipment. Designed for safety shutdown and control applications, electro-pneumatics offer speed, accuracy and repeatability.

MBTF, SFF and PFD data is also available upon request to enable engineers to calculate functional safety (SIL) requirements.

### Configurations dependent on need include:

#### Double-Acting (Air-To-Open, Air-To-Close)

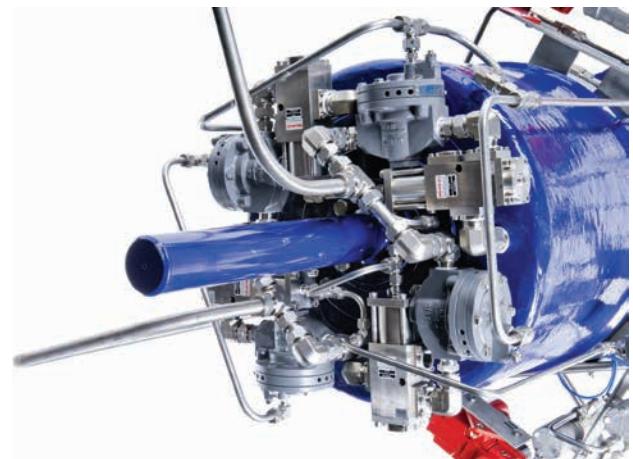
- Adaptable to any type of gate valve.  
Cylinder sizes range from 100 to 915 mm bore

#### Spring-Return

- Air energised, spring-to-fail position closed or open

**All configurations incorporate a non-rotating split rod coupling. As part of the customisation process actuation accessories can also be added including:**


- Solenoids
- Positioners
- Hand wheel overrides – side or end mounted
- Position switches





### Certification Options Available




# Pneumatic Valve Selection Chart


Filters	Model	Temp Range	Flow (Max)	Cv	Working Pressure (bar)	Ports NPT	Ingress Protection	Filter Element
	<b>3550 Series</b>	-20 to +80 °C (-4 to +176 °F)	At 7 bar (102 psi) inlet pressure, 0.35 bar (5 psi) pressure drop.	1/4" - 2.4 Cv 1/2" - 4.4 Cv 3/4" - 5.0 Cv	Manual drain 20 bar (290 psi) Auto drain 17 bar (247 psi)	1/4" 1/2" 3/4"	IP65	40 micron
	<b>3500 Series</b>	-20 to +80 °C (-4 to +176 °F)	At 7 bar (102 psi) inlet pressure 0.35 bar (5 psi) pressure drop. 3/4" - 10,020 l/min (353 SCFM)	3/4" - 6.5 Cv 1" - 8.0 Cv	Manual drain 20 bar (290 psi) Auto drain 17 bar (247 psi)	3/4" 1"	IP65	40 micron
	<b>3575 Series</b>	-20 to +80 °C (-4 to +176 °F)	6 bar (87 psi), 1 bar (14.5 psi) differential. 2" - 45,000 l/min (1590 SCFM)	1 1/2" - 38 Cv 2" - 45 Cv	Manual drain 20 bar (290 psi) Auto drain 17 bar (247 psi)	1 1/2" 2"	IP65	25 micron


Pressure Regulators	Model	Temp Range	Relief Flow (Max)	Flow (Max)	Cv	Maximum Inlet Pressure	Ports NPT	Ingress Protection
	<b>3550 Series</b>	-20 to +80 °C (-4 to +176 °F)	At 2 bar (29 psi) secondary pressure 0.5 cc/sec (0.03 cu in/sec)	At 10 bar (145 psi) inlet pressure, 6 bar (87 psi) secondary pressure, 1 bar (14.5 psi) pressure drop. 1/4" - 3,720 l/min (130 SCFM) 1/2" - 6,000 l/min (212 SCFM)	1/4" - 2.4 Cv 1/2" - 4.6 Cv 3/4" - 5.0 Cv	20 bar (290 psi)	1/4", 1/2", 3/4"	IP65
	<b>3500 Series</b>	-20 to +80 °C (-4 to +176 °F)	At 2 bar (29 psi) secondary pressure 0.5 cc/sec (0.03 cu in/sec)	At 7 bar (102 psi) inlet pressure, 1 bar (14.5 psi) pressure drop. 3/4" - 7,800 l/min (353 SCFM)	3/4" - 6.5 Cv 1" - 8.0 Cv	20 bar (290 psi)	3/4", 1"	IP65
	<b>3575 Series</b>	-20 to +80 °C (-4 to +176 °F)	At 2 bar (29 psi) secondary pressure 0.5 cc/sec (0.03 cu in/sec)	At 6 bar (87 psi) inlet pressure, 1 bar (14.5 psi) differential. 2" - 45,000 l/min (1590 SCFM)	2" - 45 Cv 1 1/2" - 38 Cv	20 bar (290 psi)	1 1/2", 2"	IP65

Spool Valves	Model	Configuration	Working Temp Range (Standard)	Cv	Working Pressure	Ports NPT	Media
	<b>1500 Series</b>	3/2 or 5/2, Pilot / Spring Double Pilot, Pad, Plunger, Roller	-20 to +180 °C (-4 to +356 °F)	3/2 valves - 1.0 5/2 valves - 1.2	12 bar (max)	1/4"	Gases - Filtered or non-lubricated air inert gas, sweet (natural) gases, sour gas option Liquids - Low pressure hydraulic, mineral oil or water
	<b>1600 Series</b>	3/2 or 5/2, Pilot / Spring Double Pilot, Pad, Plunger, Roller	-20 to +180 °C (-4 to +356 °F)	3/2 valves - 3.5 5/2 valves - 3.5	12 bar (max)	1/2"	Gases - Filtered or non-lubricated air inert gas, sweet (natural) gases, sour gas option Liquids - Low pressure hydraulic, mineral oil or water

Solenoid Valves	Model	Valve Type	Configuration	Working Temp Range (Standard)	Cv	Working Pressure
	<b>1500 Series</b>	Spool	3/2 or 5/2	Valve only version -20 to +180 °C (-4 to +356 °F)	3/2 valves - 1.0 Cv 5/2 valves - 1.2 Cv	Single solenoid valve: 3 - 12 bar (45 - 174 psi)  Double solenoid valves: 2 - 12 bar (30 - 174 psi)
	<b>1600 Series</b>	Spool	3/2 or 5/2	Valve only version -20 to +180 °C (-4 to +356 °F)	3/2 valves - 3.5 Cv 5/2 valves - 3.5 Cv	Single solenoid valve: 3 - 12 bar (45 - 174 psi)  Double solenoid valves: 2 - 12 bar (30 - 174 psi)
	<b>1750 Series</b>	Poppet	3/2 - NC, NO, div, changeover	Valve only version -20 to +180 °C (-4 to +356 °F)  Solenoid - Ambient Temperature -20 to +65 °C (-4 to +149 °F)	1/4" - 1.2 Cv, 3/8" - 1.75 Cv 1/2" - 3.5 Cv, 3/4" - 8.0 Cv 1" - 13.0 Cv, 1 1/4" - 18.0 Cv 1 1/2" - 22.0 Cv, 2" - 50.0 Cv 3" - 110 Cv (90 Cv offset ports)	0 to 12 bar (45 to 174 psi) - main valve only
	<b>67 Series</b>	Direct acting	3/2 - universal	-50 to +40 °C (-58 to +104 °F)	1/4", 1/2" - 0.86 Cv	10 bar (145 psi)
	<b>70 Series</b>	Direct acting	3/2 - NC, NO or universal	T4: -20 to +60 °C (-4 to +140 °F) T6: +80 °C (+176 °F)	1/4" - 1.4 Cv 1/2" - 2.2 Cv	0 to 12 bar (45 to 174 psi)








# Pneumatic Valve Selection Chart

Filter Regulators	Model	Temp Range	Relief Flow (Max)	Flow (Max)	Cv	Maximum Inlet Pressure	Ports NPT	Filter Element	Ingress Protection
	<b>3525 Series</b>	-20 to +80 °C (-4 to +176 °F)	Set at 6.3 bar, 6.9 bar secondary pressure 30 cc/sec (1.8 cu in/sec)	At 6.3 bar inlet pressure, 5.3 bar secondary pressure, 1 bar pressure drop. 696 l/min (707 cu in/sec)	1/4" - 0.48 Cv	20 bar (290 psi)	1/4"	25 micron	IP65
	<b>3550 Series</b>	-20 to +80 °C (-4 to +176 °F)	At 2 bar (29 psi) secondary pressure 0.5 cc/sec (0.03 cu in/sec)	At 10 bar (145 psi) inlet pressure, 6 bar (87 psi) secondary pressure, 1 bar (14.5 psi) pressure drop. 1/4" - 3,720 l/min (130 SCFM), 1/2" - 6,000 l/min (212 SCFM)	1/4" - 2.4 Cv 1/2" - 4.4 Cv 3/4" - 5.0 Cv	20/17 bar (manual/auto)	1/4", 1/2", 3/4"	40 micron	IP65
	<b>3500 Series</b>	-20 to +80 °C (-4 to +176 °F)	At 2 bar (29 psi) secondary pressure 0.5 cc/sec (0.03 cu in/sec)	At 7 bar (102 psi) inlet pressure, 1 bar (14.5 psi) pressure drop. 3/4" - 7,800 l/min (353 SCFM)	3/4" - 6.5 Cv, 1" - 8.0 Cv	20/17 bar (manual/auto)	3/4", 1"	40 micron	IP65
	<b>3575 Series</b>	-20 to +80 °C (-4 to +176 °F)	At 2 bar (29 psi) secondary pressure 0.5 cc/sec (0.03 cu in/sec)	At 6 bar (87 psi) inlet pressure, 1 bar (14.5 psi) differential. 2" - 45,000 l/min (1590 SCFM)	2" - 45 Cv, 1 1/2" - 38 Cv	20/17 bar (manual/auto)	1 1/2", 2"	25 micron	IP65

Poppet Valves	Model	Configuration	Working Temp Range (Standard)	Cv	Working Pressure	Ports NPT	Minimum Pilot Pressure	Media
	<b>1750 Series</b>	3/2 pilot operated N/C, N/O and Universal	-20 to +180 °C (-4 to +356 °F)	1/4" - 1.2 Cv 1/2" - 3.5 Cv 3/4" - 8.0 Cv 1" - 13.0 Cv 1 1/2" - 22 Cv	2 to 12 bar (30 to 174 psi)	1/4" - 1 1/2"	Minimum pilot pressure 3-4 bar	Gases - Filtered lubricated or non-lubricated Air, inert gas, sweet (natural) gases, sour gas option Liquids - Low pressure hydraulic, mineral oil or water
	<b>1750 Series</b>	3/2 pilot operated - N/C, N/O and Universal	-20 to +80 °C (-4 to +356 °F)	3" - 110 Cv (90 Cv offset ports)	2 to 12 bar (30 to 174 psi)	2", 3"	Please consult factory	Air, inert gas and sweet gas

Protection Class	Ports NPT	Media	Power Consumption
NEMA 7 & 9 - NEMA 4 (IP55), EExd IIC T4 - IP67, EExd IIC T6 - IP67, EExme IIC T4/T5 - IP66, EExia IIC T6 - IP66	1/4"	Gases - Filtered non-lubricated air, inert gas sweet (natural) gases	5-9 Watts (solenoid dependent)
NEMA 7 & 9 - NEMA 4 (IP55), EExd IIC T4 - IP67, EExd IIC T6 - IP67, EExme IIC T4/T5 - IP66, EExia IIC T6 - IP66	1/2"	Gases - Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases, sour gas option Liquids - Low pressure hydraulic, mineral oil or water	5-9 Watts (solenoid dependent)
NEMA 7 & 9 - NEMA 4 (IP55), EExd IIC T4 - IP67, EExd IIC T6 - IP67, EExme IIC T4/T5 - IP66, EExia IIC T6 - IP66	1/4" - 3"	Gases - Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases, sour gas option Liquids - Low pressure hydraulic, mineral oil or water	5-9 Watts (solenoid dependent)
EExd IIC T6 -50 °C to +40 °C Tamb - IP67	1/4", 1/2"	Gases - Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases, sour gas option Liquids - Low pressure hydraulic, mineral oil or water	9 Watts
EExd IIC T6 -50 °C to +60 °C Tamb - IP67, EExd IIC T4 -50 °C to +80 °C Tamb - IP67	1/4"	Gases - air, inert gas, sweet (natural) gases, sour gas option	3.5 Watts

# 4500 Ancillary Valve Selection Chart

Ancillary Valve	Model	Working Temp Range	Flow (Max)	Operating Medium
	<b>Air Pressure Switch</b>	-20 to +80 °C (-4 to +176 °F)	6 bar (87 psi), 1 bar (14.5 psi) differential 3/2 valves - 480 l/min (17 SCFM) 5/2 valves - 680 l/min (24 SCFM)	Gases - Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases Sour gas option available
	<b>Uni &amp; Bi-Directional Flow Regulators</b>	-20 to +70 °C (-4 to +158 °F)	6 bar (87 psi), 1 bar (14.5 psi) differential Uni-directional 1/4" - 1,000 l/min (35 SCFM) 3/8" - 1,680 l/min (59 SCFM) 1/2" - 2,520 l/min (89 SCFM) 3/4" - 5,428 l/min (192 SCFM) 1" - 9,820 l/min (347 SCFM) Bi-directional 1/4" - 620 l/min (22 SCFM) 3/8" - 1,290 l/min (45 SCFM) 1/2" - 2,000 l/min (71 SCFM)	Gases - Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases Sour gas option available Liquids - Low pressure hydraulic, mineral oil or water
	<b>Needle Valves Exhaust Port Flow Regulators</b>	-20 to +70 °C (-4 to +158 °F)	6 bar (87 psi), 1 bar (14.5 psi) differential Needle Valve (3 mm orifice) 1/4" - 290 l/min (10.5 SCFM) Needle Valve (6 mm orifice) 1/4" - 640 l/min (23 SCFM) Exhaust Port Flow Regulators 1/4" - 646 l/min (25 SCFM) 3/8" - 1,100 l/min (39 SCFM) 1/2" - 1,800 l/min (64 SCFM)	Gases - Filtered non-lubricated air, inert, sweet (natural) gases Sour gas option available
	<b>Non-Return Valve</b>	-20 to +70 °C (-4 to +158 °F)	6 bar (87 psi), 1 bar (14.5 psi) differential Non Return Valves (12 bar) 1/4" - 1,600 l/min (57 SCFM) 3/8" - 2,200 l/min (80 SCFM) 1/2" - 3,800 l/min (137 SCFM) 3/4" - 5,800 l/min (205 SCFM) 1" - 7,700 l/min (274 SCFM)	Gases - Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases Sour gas option available. Liquids - Low pressure hydraulic, mineral oil or water
	<b>Quick Exhaust and Shuttle Valves</b>	-20 to +70 °C (-4 to +158 °F)	6 bar (87 psi), 1 bar (14.5 psi) differential Quick Exhaust Valve (supply to outlet) 1/4" - 1,290 l/min (46 SCFM) 3/8" - 1,810 l/min (64 SCFM) 1/2" - 3,810 l/min (135 SCFM) 3/4" - 4,520 l/min (160 SCFM) 1" - 7,700 l/min (274 SCFM) Quick Exhaust Valve (outlet to exhaust) 1/4" - 2,780 l/min (98 SCFM) 3/8" - 3,810 l/min (135 SCFM) 1/2" - 5,490 l/min (194 SCFM) 3/4" - 6,460 l/min (228 SCFM) 1" - 11,000 l/min (388 SCFM) Shuttle Valve 1/4" - 1,350 l/min (45 SCFM) 1/2" - 3,550 l/min (126 SCFM)	Gases - Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases Sour gas option available. Liquids - Low pressure hydraulic, mineral oil or water
	<b>Thermal Fuses and Visual Indicator</b>	Thermal Fuses (1/2" NPT) -20 to +70 °C (-4 to +158 °F) -20 to +96 °C (-4 to +204 °F) -20 to +102 °C (-4 to +215 °F) -20 to +124 °C (-4 to +255 °F) -20 to +137 °C (-4 to +278 °F) -20 to +200 °C (-4 to +392 °F) Visual Indicator (1/8" NPT) 20 to +65 °C (-4 to +149 °F)	N/A	Gases - Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases Sour gas option available. Liquids - Low pressure hydraulic, mineral oil or water
	<b>N.R.V. Breathers and Breather (Silencers)</b>	-20 to +70 °C (-4 to +158 °F)	6 bar (87 psi), 1 bar (14.5 psi) differential N.R.V. Breathers 1/4" - 646 l/min (25 SCFM) 3/8" - 1,300 l/min (45 SCFM) 1/2" - 1,550 l/min (54 SCFM) Breathers (Silencers) 1/4" - 1,550 l/min (55 SCFM) 3/8" - 1,940 l/min (68 SCFM) 1/2" - 3,410 l/min (123 SCFM) 3/4" - 5,500 l/min (194 SCFM) 1" - 5,700 l/min (201 SCFM)	Gases - Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases Liquids - Low pressure hydraulic, mineral oil Sour gas option available



# 4500 Ancillary Valve Selection Chart

	Cv	Working Pressure
	3/2 valves 1.0 Cv 5/2 valves 1.2 Cv	For main directional valve 12 bar (174 psi)
	Uni-directional 1/4" - 1.0 Cv 3/8" - 1.7 Cv 1/2" - 2.5 Cv 3/4" - 5.4 Cv 1" - 9.8 Cv Bi-directional 1/4" - 0.6 Cv 3/8" - 1.3 Cv 1/2" - 2.0 Cv	12 bar (174 psi)
	Needle Valve (3 mm orifice) 1/4" - 0.30 Cv Needle Valve (6 mm orifice) 1/4" - 0.64 Cv Exhaust Port Flow Regulators 1/4" - 0.64 Cv 3/8" - 1.10 Cv 1/2" - 1.80 Cv	12 bar (174 psi)
	Non-Return Valves (12 bar) 1/4" - 1.6 Cv 3/8" - 2.3 Cv 1/2" - 3.9 Cv 3/4" - 5.8 Cv 1" - 7.8 Cv	12 bar (174 psi)
	Quick Exhaust Valve (supply to outlet) 1/4" - 1.3 Cv 3/8" - 1.8 Cv 1/2" - 3.8 Cv 3/4" - 4.5 Cv 1" - 7.8 Cv Quick Exhaust Valve (outlet to exhaust) 1/4" - 2.8 Cv 3/8" - 3.8 Cv 1/2" - 5.5 Cv 3/4" - 6.5 Cv 1" - 11.0 Cv Shuttle Valve 1/4" - 1.36 Cv 1/2" - 3.6 Cv	12 bar (174 psi)
	N/A	Thermal Fuses - 12 bar (174 psi) Visual Indicator - 1 to 12 bar (14.5 to 174 psi)
	N.R.V. Breathers 1/4" - 0.65 Cv 3/8" - 1.3 Cv 1/2" - 1.6 Cv Breathers (Silencers) 1/4" - 1.5 Cv 3/8" - 2.0 Cv 1/2" - 3.5 Cv 3/4" - 5.5 Cv 1" - 5.7 Cv	12 bar (174 psi)

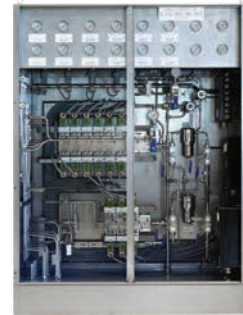


## Hydraulic & Pneumatic Local Control Panels

Local control panels for hydraulic and pneumatic actuators can be supplied to meet project requirements, whether for a simple On/Off actuator, a control system for the accurate positioning of choke or globe control valves, or Emergency Shutdown (ESD) actuator local control panels with partial stroking facilities.

Manufactured in 316L stainless steel with IP66 / 67 ingress protection the panels are suitable for the most hazardous, severe and corrosive environments. Both our hydraulic and pneumatic valve control systems can be produced as a manifold design to eliminate costly pipework and fittings, resulting in weight and space savings.

Components meeting the requirements demanded by ATEX and a multitude of individual international certifying authorities are available. MBTF, SFF and PFD data is also available upon request to enable engineers to calculate functional safety (SIL) requirements.



### Certification Options Available



## Electro-Hydraulic Valve Actuation

As a specialist manufacturer of electro-hydraulic actuation equipment we offer comprehensive purpose designed, engineered and manufactured solutions for the operation of choke and control valves installed on and offshore. Ring main and solar powered self-contained control options incorporating special features including:

### Double-Acting Systems

- For choke valves used for position and modulating control with a failsafe in position, failsafe closed or failsafe open options

### Spring-Return Actuator Systems

- For positioning and modulating control incorporating a preloaded mechanical spring arrangement to provide failure position conditions in the event of electrical power/ signal or hydraulic supply failure

### Stepping Feature

- Available on all systems providing positioning control with extended operating times associated with choke valves - failsafe in position and failsafe open or closed options are available

### Special purpose design electro-hydraulic control systems available on request including:

- Hydraulic control cabinet assemblies
- Solar power self-contained systems



### Certification Options Available



# Hydraulic Valves & Manifolds

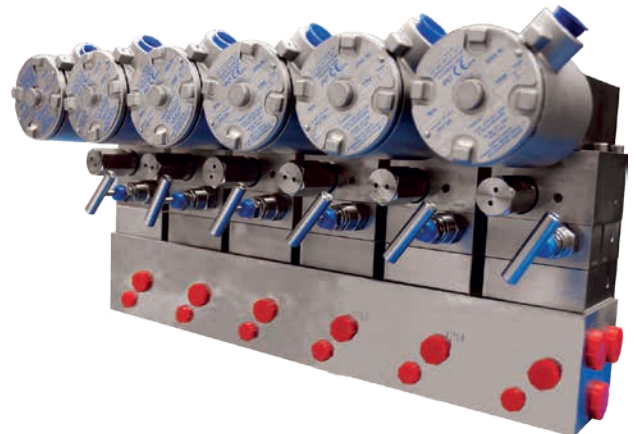
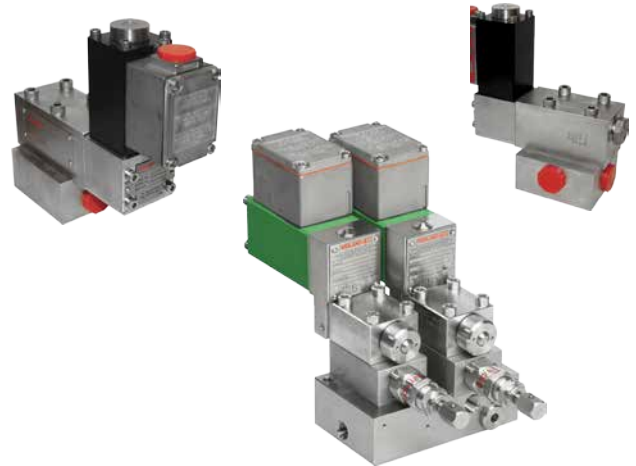
Our wealth of experience in actuator control systems has enabled us to develop both generic and tailored solutions with the ability to operate reliably in the most arduous and harsh environments. We can supply an engineered solution to meet your specification, whether it be direct solenoid operated or low pressure air / hydraulic logic control of wellhead controls, BOP skids chemical injection valves, ballast controls, local control panels, workover control systems, ESD and partial stroking circuitry.

## DN Series of Hydraulic Valves

- Specifically designed for severe offshore environments
- Certified for Zone 0, 1 and Class 1 Division 1 hazardous areas
- Easy installation, repair and replacement
- Ambient temperature range -50 to +60 °C (-58 to +140 °F)
- Low power consumption (3.5 and 8 Watts)
- 316L stainless steel construction
- Wide range of operators available
- 1,140 bar max operating pressure
- Virtually leak tight
- Up to 200 l/min (45 gpm)
- 2/2, 3/2, 4/2 and 4/3 functions available
- NACE compliance available
- 1/4" - 1" port size

## Multi-Station Manifold Systems







- Minimises pipework, fitting and potential leaks
- 316L stainless steel construction
- Reduced system costs
- Easy to maintain
- Compact and space saving
- Control circuits tailored to suit your specification
- Cartridge component technology for flow, check, relief and isolation valves
- Flowrates up to 200 l/min (45 gpm)
- Additional stations can be added for chemical injection and future slots



## Certification Options Available



# Hydraulic Solenoid Valve Selection Chart

Hydraulic Valve	Model	Flow Rate	Available Approvals	SIL Capability	Media	Pressure Range (bar)	Power Consumption
	<b>DN2 (Ball Seated)</b>	1 l/min	ATEX Zone 1, Zone 0 Intrinsically Safe	2	Mineral Oils, Water Glycols and Synthetic fluids	0 - 690	<1 Watt 3.5 Watts
	<b>DN2 (Cartridge)</b>	1 l/min	ATEX, UL, CSA, IECEx, Gost (R), Inmetro	3	Mineral Oils, Water Glycols and Synthetic fluids	0 - 690	3.5 Watts 8 Watts
	<b>DN3</b>	5 l/min	ATEX, UL, CSA, IECEx, Gost (R), Inmetro	2 and 3	Mineral Oils, Water Glycols, Methanol and Fresh Water, Air, Natural Gas and Nitrogen	0 - 1,140	3.5 Watts 8 Watts
	<b>DN5</b>	20 l/min	ATEX, UL, CSA, IECEx, Gost (R), Inmetro	2	Mineral Oils, Water Glycols and Synthetic fluids	0 - 690	3.5 Watts 8 Watts
	<b>DN6 / DN40</b>	15-700 l/min	N/A	N/A	Filtered Fresh Water for Hydro Electric Power Plants	0 - 320	30 Watts
	<b>DN10</b>	50 l/min	ATEX, UL, CSA, IECEx, Gost (R), Inmetro	2	Mineral Oils, Water Glycols and Synthetic fluids	0 - 690	3.5 Watts 8 Watts
	<b>DN15</b>	100 l/min	ATEX, UL, CSA, IECEx, Gost (R), Inmetro	2	Mineral Oils, Water Glycols and Synthetic fluids	0 - 400	3.5 Watts 8 Watts
	<b>DN25</b>	200 l/min	ATEX, UL, CSA, IECEx, Gost (R), Inmetro	2	Mineral Oils, Water Glycols and Synthetic fluids	0 - 517	3.5 Watts 8 Watts

## Global Certifications



Underwriters Laboratories Inc. does not “approve” products, it evaluates products, components, materials and systems for compliance to specific requirements, and permits acceptable products to carry a UL certification mark, as long as they remain compliant with the standards.



The Canadian Standards Association is a not-for-profit membership-based association serving business, industry, government and consumers in Canada and globally. As a solutions-oriented organisation, they develop standards that address needs, such as enhancing public safety and health, facilitating trade.



Declaration by the manufacturer that product meets the requirements of the applicable European directive(s).



Equipment and Protective Systems intended for use in potentially explosive atmospheres. See ATEX directive for additional information.



The IECEx is the IEC scheme for the certification to standards for electrical equipment for explosive atmospheres. The IECEx Scheme comprises two global certification programmes -

The IECEx Certified Equipment Programme - covering product that meets the requirements of international standards, e.g. IEC Standards.

The IECEx Certified Service Facilities Programme - covers the assessment and the on-site audit of organizations that provide a repair and overhaul service to the Ex industry.



GOST refers to a set of technical standards maintained by the Euro-Asian Council for Standardization, Metrology and Certification (EASC), a regional standards organisation operating under the auspices of the Commonwealth of Independent States (CIS).

GOST standards are adopted by Russia, and it is a common misconception to think of GOST standards as the national standards of Russia, they are not. The national standards of Russia are the GOST R standards.



Official accreditation body in Brazil. Created to provide technical support to Conmetro - the National Metrology, Standardization and Industrial Quality Council, responsible for establishing the national policies on metrology and quality.



IEC 61508 Functional Safety (SIL) functional safety is about a system or equipment performing specified functions to a defined level of reliability in order to control risks associated with hazardous processes or machinery. The amount of risk reduction needed determines the ‘Safety Integrity Level’ (SIL) of the system.



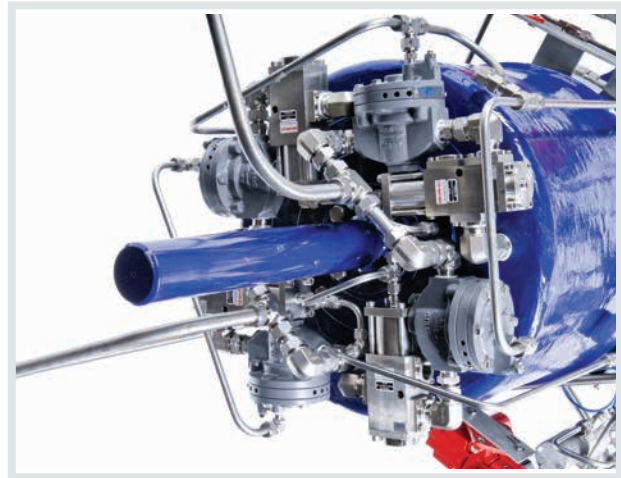
Bureau Veritas is a professional services company whose aim is to provide its clients with all the necessary services required to achieve, maintain and demonstrate compliance with their Quality, Health, Safety, Environment and Social Accountability (SHEQ/SA) obligations. Core part of Bureau Veritas is the Oil & Gas. They provide Inspection and Verification Services in accordance with the Offshore Installations (Safety Case) Regulations, which has a legal requirement for the Duty Holder (Shell, BP etc) to appoint an Independent Verification Body (IVB).

## Oil & Gas industries

# rotork® MIDLAND

Since our founding in 1956, we have been known internationally as one of the oil & gas industries premier designers and manufacturers of 316L stainless steel control equipment. Over the years we have developed an enviable reputation for high quality products, reliability and innovation.

We have the ability to investigate problems and provide comprehensive solutions for the control of hydraulic and pneumatic actuated process control valves across a broad range of industries and markets. This, coupled with repeatedly delivering impressive results worldwide, sets us apart from our competitors.



# rotork® Instruments

Rotork Instruments are experts in flow control, pressure control, flow measurement and pressure measurement.

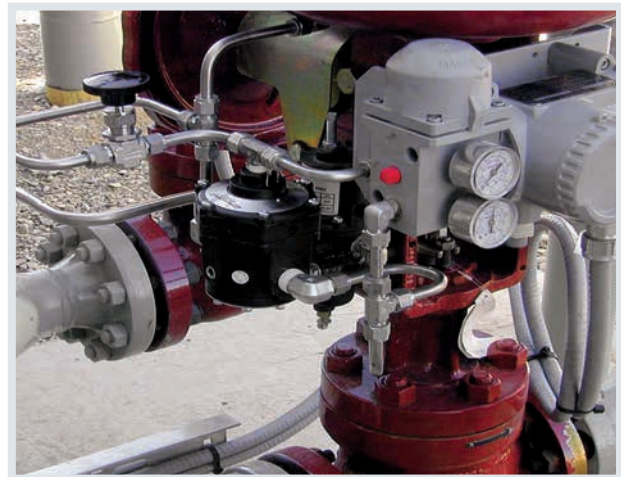
We manufacture products and components that are trusted for applications where high precision and reliability are required.

Rotork Instruments has manufacturing facilities in USA, Italy, Brazil, India, China and Singapore.

The Rotork global sales and service network supports all Rotork Instruments products. This network is the biggest global actuation support organisation in the world with direct sales offices and agents in all industrialised countries.

Customer service and field support provides quick and effective response to customer requirements.

The Rotork Site Services network is represented throughout the world and provides valuable service and assistance to all industries.



## Service and Support

# rotork® Site Services

In each of our divisions, Site Services staff are dedicated to providing customer service and support, carrying out new installations and delivering retrofit projects. These teams are based out of service centres around the world and are complemented by factory-trained agents.

Our expert technicians support Rotork customers, allowing us to deliver on our promise of global solutions backed by local service.

**Visit [www.rotork.com](http://www.rotork.com) to identify your nearest Rotork location.**



### Client Support Programme

Rotork offers a premium level of product reliability and availability through the flexible Client Support Programme (CSP). Designed to facilitate the highest production demands while providing a tiered approach to maintenance, the CSP is committed to reducing maintenance downtime and costs.

Through consultation, the CSP is tuned to deliver the optimum level of maintenance through predictive maintenance algorithms.

#### Features of the CSP are:

- Fixed term prices for Rotork products and services
- Customisable cover based on equipment criticality to production
- Equipment performance related targets for reliability and availability
- Priority support with customisable response times
- Fully parts and labour inclusive, no additional costs or discounted labour and parts
- Fix or replace options
- Periodic equipment performance and status reports
- Built-in regular health checks on all equipment

#### Benefits of the CSP include but are not limited to:

- Year-on-year reduced maintenance costs
- Easy budget management
- Maximised production resulting in reduced downtime
- Year-on-year improved reliability and availability
- Optimised resource usage to accelerate in-house projects
- Reduced lifecycle costs



# rotork®

Redefining Flow Control

[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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Scan with your smart phone  
for more information on  
this product range



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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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