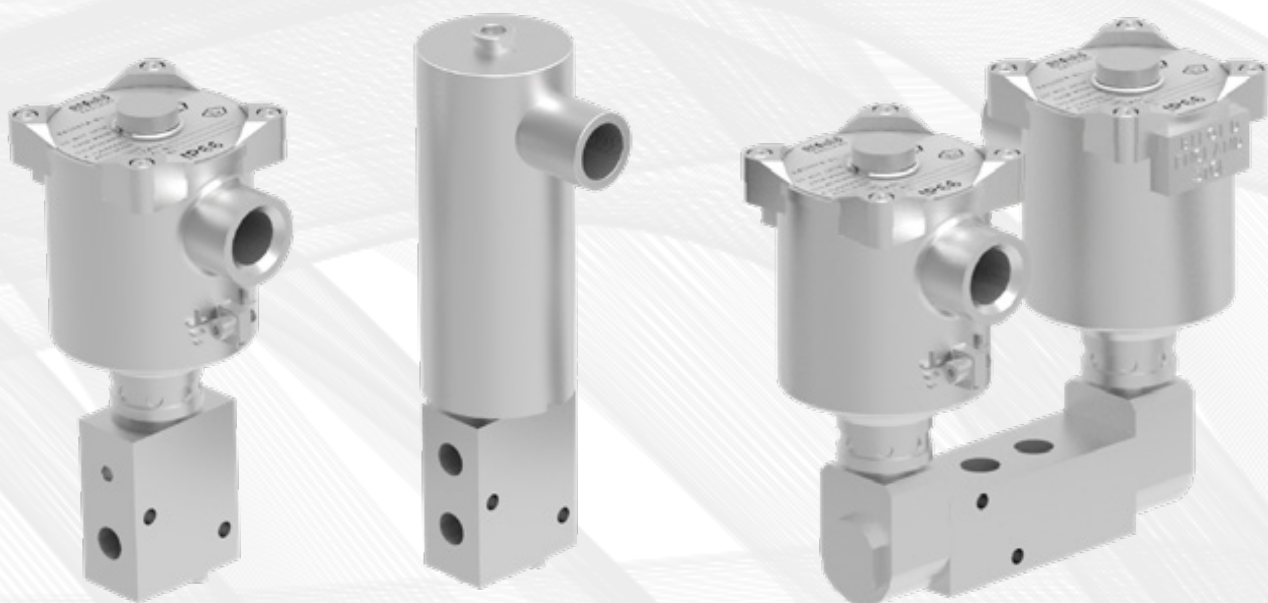




# rotork®

Keeping the World Flowing  
for Future Generations



# 07

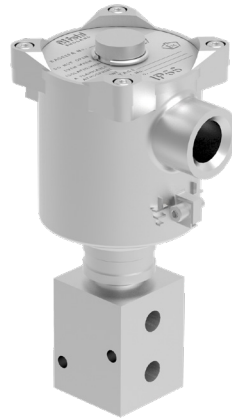
## Solenoid Valves

Pneumatic

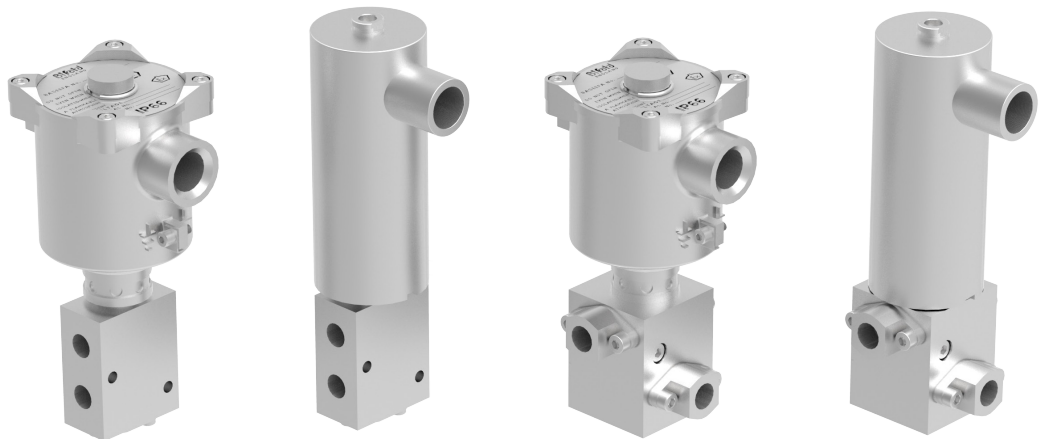
# 07 Solenoid Valves Pneumatic

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## Direct Acting Solenoid Valve Range



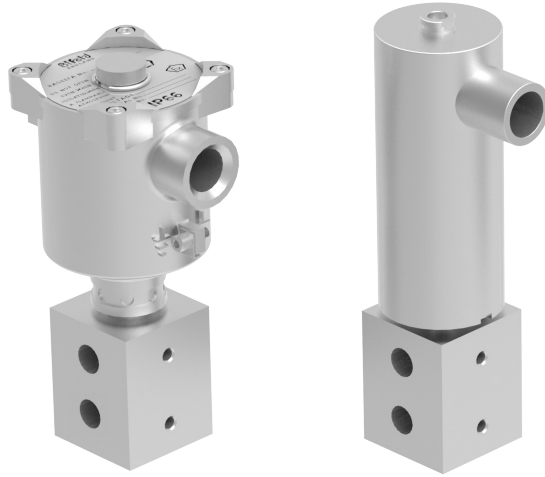
<b>Model Code</b>	<b>FP03P</b>		
<b>Configuration</b>	2/2 & 3/2		
<b>Port Connections</b>	NPT & BSP - 1/8" & 1/4"		
<b>Flow Rate</b>	0.1 Cv		
<b>Pressure</b>	Up to 145 psi / 10 bar		
<b>Power</b>	1.5W - 3.0W (Ex d)	1.8W - 3.6W (Ex emb)	370 Ohms (Ex ia) / 32 mA
<b>Mounting</b>	Body Ported		
<b>Cycle Testing</b>	Up to 1,000,000 Cycles		



<b>Model Code</b>	<b>FP06P</b>		
<b>Configuration</b>	2/2 & 3/2		
<b>Port Connections</b>	NPT & BSP - 1/4"		
<b>Flow Rate</b>	From 0.32 Cv, up to 1.2 Cv		
<b>Pressure</b>	Up to 232 psi / 16 bar		
<b>Power</b>	1.5W - 6.5W (Ex d)	1.8W - 6.8W (Ex emb)	135 Ohms (Ex ia) / 80 mA
<b>Mounting</b>	Body Ported NAMUR		
<b>Cycle Testing</b>	Up to 1,000,000 Cycles		

# 07 Solenoid Valves Pneumatic

## Direct Acting Solenoid Valve Range



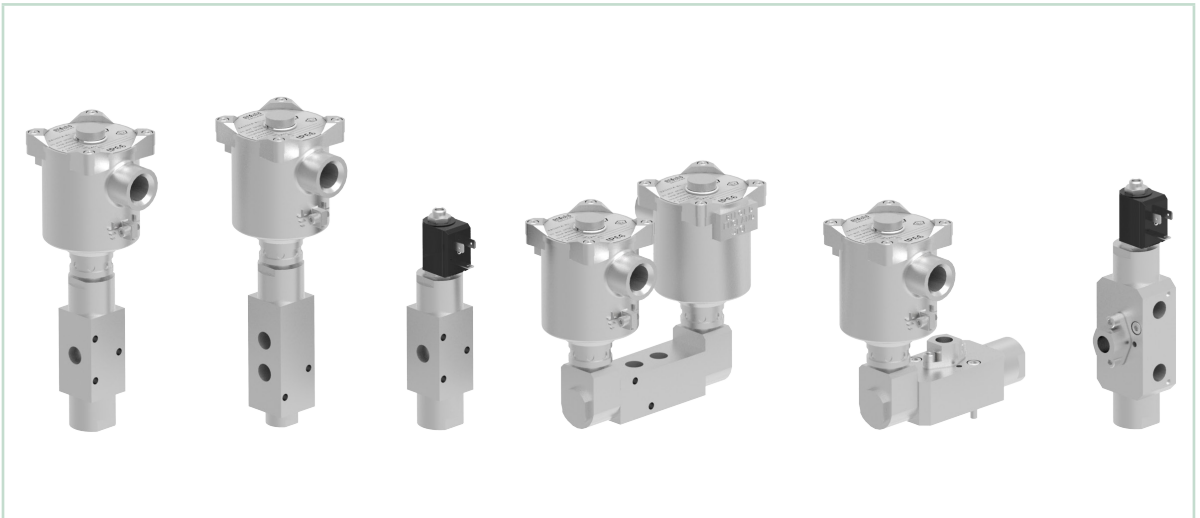
<b>Model Code</b>	<b>FP10P</b>	
<b>Configuration</b>	2/2 & 3/2	
<b>Port Connections</b>	NPT & BSP - 1/4", 3/8" & 1/2"	
<b>Flow Rate</b>	From 0.4 Cv, up to 1.2 Cv	
<b>Pressure</b>	Up to 725 psi / 50 bar	
<b>Power</b>	1.5W - 6.5W (Ex d)	1.8W - 6.8W (Ex emb)
<b>Mounting</b>	Body Ported	
<b>Cycle Testing</b>	Up to 1,000,000 Cycles	



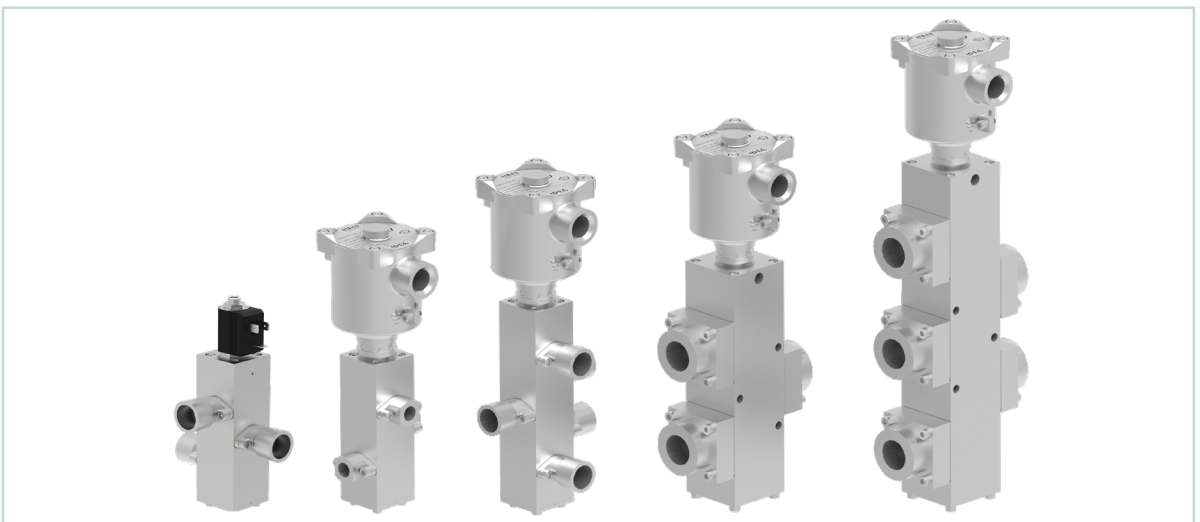
<b>Model Code</b>	<b>FP12P</b>	
<b>Configuration</b>	2/2 & 3/2	
<b>Port Connections</b>	NPT & BSP - 1/2"	
<b>Flow Rate</b>	2.5 Cv	
<b>Pressure</b>	Up to 145 psi / 10 bar	
<b>Power</b>	6.5W - 12.0W (Ex d)	
<b>Mounting</b>	Body Ported	
<b>Cycle Testing</b>	Up to 50,000 Cycles	



## Indirect Acting Solenoid Valve Range



<b>Model Code</b>	<b>BXS</b>		
<b>Configuration</b>	2/2, 3/2, 5/2 & 5/3		
<b>Port Connections</b>	NPT & BSP - 1/4"		
<b>Flow Rate</b>	0.73 Cv		
<b>Pressure</b>	Up to 145 psi / 10 bar		
<b>Power</b>	0.8W - 3.0W (Ex d)	1.8W (Ex emb)	260 - 375 Ohms (Ex ia) / 37 mA
<b>Mounting</b>	Body Ported NAMUR		
<b>Cycle Testing</b>	Up to 1,000,000 Cycles		



<b>Model Code</b>	<b>SPR &amp; (PPV Coming Soon)</b>		
<b>Configuration</b>	2/2, 3/2 & 5/2		
<b>Port Connections</b>	NPT & BSP - 1/4" up to 1"		
<b>Flow Rate</b>	From 2.0 Cv, up to 11.2 Cv		
<b>Pressure</b>	Up to 145 psi / 10 bar		
<b>Power</b>	0.8W - 3.0W (Ex d)	1.8W (Ex emb)	260 - 375 Ohms (Ex ia) / 37 mA
<b>Mounting</b>	Body Ported		
<b>Cycle Testing</b>	Up to 10,000 Cycles (SPR)	Up to 1,000,000 Cycles (PPV)	

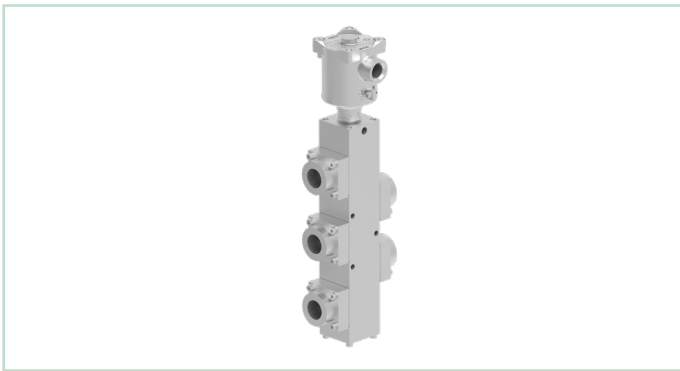
# 07 Solenoid Valves Pneumatic

## Product Spotlight



### Low Power Operator - (FP06P-(10LP & 28LP))

- (10LP) 1.0W holding power 3.5W energise (less than 100 mS)
- (28LP) 2.8W holding power 8.0W energise (less than 100 mS)
- High flow, low holding power
- Low power consumption
- High cycle capability up to 1 million cycles



### High Flow - (SPR & PPV)

- Low power consumption
- High flow capabilities
- Up to 1" NPT
- Operates down to -60°C
- High cycle capability up to 1 million cycles (PPV)

## Solenoid Valve Enclosure & Valve Body Options

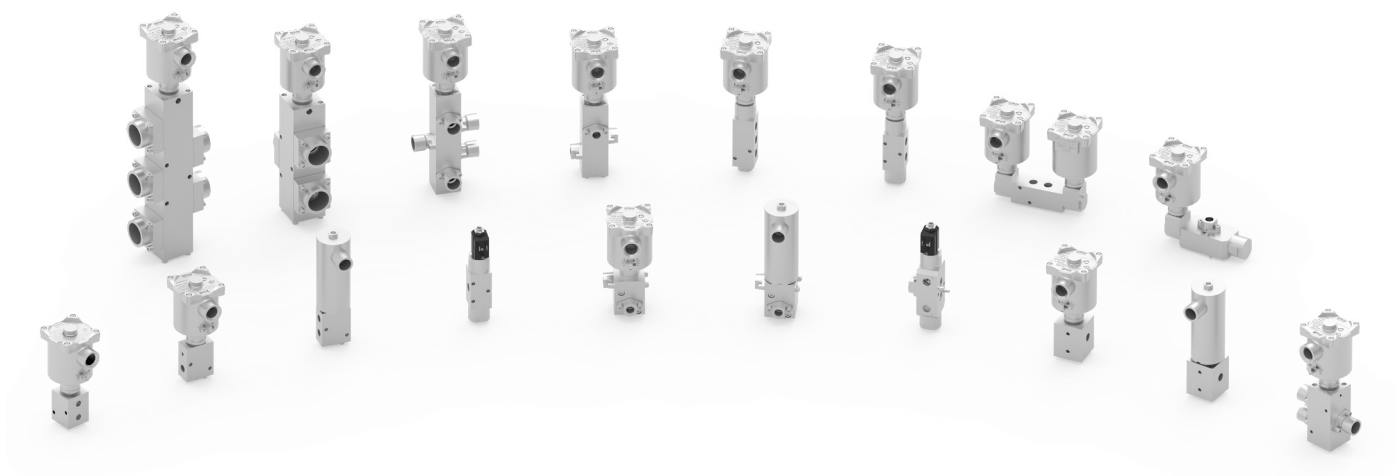


7x	74AT4, 77 & 78 Series	316L Stainless Steel Enclosure and Valve Body
2x	24, 27 & 28 Series	Aluminium Enclosure and 316L Stainless Steel Valve Body
		Aluminium Enclosure and Valve Body
5x	58 Series	316L Stainless Steel Enclosure and Valve Body
130	130 Series	PBT - Polybutylene Terephthalate (Reinforced Fibreglass 30%) Enclosure and 316L Stainless Steel Valve Body
		PBT - Polybutylene Terephthalate (Reinforced Fibreglass 30%) Enclosure and Aluminium Valve Body
140	140 Series	Thermoplastic Resin Enclosure and 316L Stainless Steel Valve Body
		Thermoplastic Resin Enclosure and Aluminium Valve Body



①	Standard	Standard - 24 & 74AT4 Series (Ex emb), 27 & 77 Series (Ex d) & 77 Series (Explosion Proof)
②	Slimline	28, 58 & 78 Series (Ex ia)
③	Safe Area	130 Series (Safe Area) (BXS and SPR Only)
③	Hazardous Area	140 Series (Ex ia) (BXS and SPR Only)

One Source..... One Solution



SETTING THE STANDARD:



**100%**

Outperforms all other solenoid valves in the industry.



UNDER  
**1.0W**

Ultra low power consumption, under 1.0W continuous power ideal for solar applications.



**No 1**

For global wellhead, process, choke, valve actuation, deluge and fire damper markets.



**1/8" UP TO 1"**

Wide Range of operating media covered - 1/8" to 1" ports, 2/2, 3/2, 5/2, 5/3, 2 out of 3 voting and over 1.5 x 10<sup>9</sup> permutations - every application covered.



**£\$€**

Low Cost Solution - Increase safety with no downtime and no leakage, without compromising on cost.



The operator is a flat plate armature, ensuring the valve will operate in all conditions.



Capability to offer an expedited delivery service.



Highest qualified safety factors in the industry - Worldwide Ex Hazardous Area solenoid approvals: Ex emb, Ex d, Ex ia, Explosion Proof & Safe Area use, SIL 3 third party certified options available.

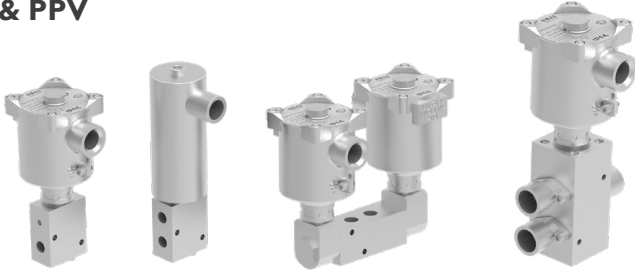


World leading supplier of control valves for low and high temperature applications.

# 07 Solenoid Valves Pneumatic

## Overview

### Pneumatic Direct Acting & Indirect Acting Solenoid Valves, FP03P, FP06P, FP10P, FP12P, BXS, SPR & PPV



Manufactured from 316L stainless steel as standard with aluminium options available, our range of pneumatic solenoid valves are ideally suited for hazardous (classified) locations and corrosive atmospheres and can also be used in low pressure hydraulic applications. Ultra low power consumption, under 1.0W continuous power ideal for solar applications up to 12.0W.

- Suitable for air quality to ISO 8573.1 Class 4: dirt, water and oil
- High flow - up to 11.2 Cv
- Versions available for up to 725 psi / 50 bar working pressure
- Namur interface available

## Market Sectors

- Wellhead Controls & Associated Field Instrumentation
- Shale Gas
- Process Choke Valve Actuation
- Process Skids & Modules
- HVAC, Fire Damper Actuator & Fire Water Deluge Controls
- Gas Compression & Turbine Controls
- Process Valve Actuator & Pipeline ESD (Emergency Shut Down) Valve Actuator Controls

## Application Example





## Solenoid Valve Features & Benefits



### Equipment Design & Build

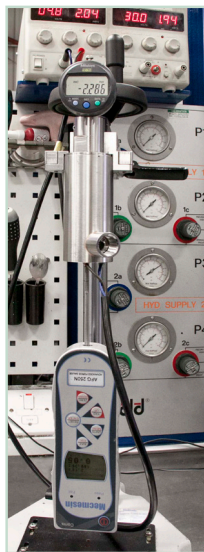
- Standard and slimline solenoid operator is free to rotate 360° allowing for an easy cable layout and ease of connection wiring. Solenoid operator internals rotate with the enclosure and prevent cables being pulled out of the terminal block.
- Widest range of override options: auto reset, spring return manual override, stayput manual override, manual latch and manual reset.
- Standard solenoid valve can be mounted in any orientation to simplify installation and also due to all the components having enhanced rotational capabilities.
- Coils fully encapsulated as standard.
- A NAMUR interface is available on 5/2 port configuration valves. These types are supplied with multi-functional adaptor plates to permit valve orientation through 90° or conversion to a 3/2 configuration.
- All internal wetted and body materials conforming to NACE MR-01-75 as standard on the FP03P, FP06P, FP10P & FP12P with options available on the BXS & SPR.
- Suitable for air quality to ISO 8573.1 Class 4: dirt, water and oil.
- Simple installation and operation - single enclosure with integral override options.
- Low / high temperature options.
- Ultra low power consumption, under 1.0W continuous holding power, ideal for solar applications.
- Compatible within our 'AXIS' valve actuator control modular systems.

### Commissioning & Maintenance

- Tropicalised solenoid operator design - 316L stainless steel enclosure with aluminium options also available; stainless steel or Remko B magnetic parts (dependant upon solenoid Ex series). Fully encapsulated coil.
- Worldwide technical and field support.
- Spacious solenoid enclosure for ease of wiring.
- No special high temperature cable requirements.
- No time penalty for heat dissipation before removing solenoid enclosure cover.
- Simple maintenance - Removable transient suppression diode on Ex d DC solenoid valve assemblies as standard and removable solenoid coil without removing valve from the tubing.
- Compact design and space envelope.

# 07 Solenoid Valves Pneumatic

## Solenoid Valve Features & Benefits



### Safety & Environmental

- Worldwide Ex hazardous area solenoid approvals: Ex emb, Ex d, Ex ia, explosion proof & safe area use.
- SIL 3 capability: The product has met manufacturer design process requirements of Safety Integrity Level (SIL) 3 in accordance with IEC 61508. (For the FP03P, FP06P, FP10P, BXS & SPR).
- Consistent high safety factors.
- The 77 series Ex d solenoid enclosure has been designed with 'spigot' and 'threaded' type flamepath joints. The minimum spacing requirements for obstruction of 'flange' joints - regarding the installation of the solenoid enclosure and its proximity with other objects is not applicable (in accordance with IEC/BS EN 60079-14 Explosive atmospheres: Electrical installations design, selection and erection).
- Our safe area operator option is designed for continuous duty in conformity to the EN60730 safety standards. They are encapsulated in a self-extinguishing synthetic material and offer high mechanical protection and excellent thermal dissipation.
- Force balanced valve design with high safety factors to de-energise at all pressures in Normally Open and Normally Closed configurations.
- 100% computerised diagnostic testing to ensure each solenoid valve is proven along with confirmed safety factors.
- Bifold has state of the art product qualification and production equipment including flow (Cv), environment (-60°C to +180°C), function and leakage testing and data logging.
- The standard solenoid operator is a flat plate armature type which ensures the valve will operate in all conditions. Other solenoid valve types using core tube design solenoid operators risk corrosion and seizure of the armature within the core tube.
- Tolerant to moist air in control lines.
- High tolerance to field misuse.
- Products are manufactured, inspected, assembled and tested in our state of the art production facilities.
- Large clearances, metal back up to seals and no knife edge sealing to prevent long term valve sticking.

## Standard & Slimline Solenoid Valve Technical Attributes

Solenoid Valve Information											
Model Codes	FP03P, FP06P, FP10P, FP12P, BXS & SPR										
Connections	1/8" up to 1" (NPT and BSP)										
Cv	0.1 up to 11.2										
Working Pressure	0 - 725 psi / 0 - 50 bar (Maximum)										
Enclosure Type	Standard						Slimline	Safe Area	Hazardous Area		
Enclosure Series	24	74AT4	27	77	28	78	58	130	140		
Solenoid Classification	Ex emb IIC Gb T3 / T4		Ex d IIC Gb T4 / T5 / T6		Ex ia IIC Gb T4 / T6		Ex ia IIC Ga T4 / T6		Ex ia IIC Ga T6		
Ingress Protection	IP66, IP67 and 4X		IP66, IP67 and 4X		IP66, IP67 and 4X		IP66, IP67 and 4X		IP66	IP65	IP65
Maximum Leakage Rate	40Pa/S Maximum (Closed) Compressed Air										
Materials of Construction											
Enclosure & Valve Body	316L stainless steel as standard with aluminium options also available										
Internal Components	316L stainless steel										
Springs	302S26 & 316S42 stainless steel as standard										
Fasteners	Metric A4 18/10 grade stainless steel; equivalent to 316L grade stainless steel										
O-ring Material	NBR - Nitrile (Standard) HNBR - Nitrile (Low Temperature) FKM - Fluoroelastomer FVMQ - Fluorosilicone FFKM - Perfluoroelastome				<b>Media Temperature Range</b> -60°C to +130°C (Dependant on seal type. Alternative elastomer's available for extreme conditions and to suit media)						
							<b>Ambient Temperature Range</b> -60°C to +90°C (Dependant on Solenoid Classification)				
Operating Media	Filtered lubricated or unlubricated air, inert gas, sweet (natural) and sour gas options. Water, water glycol mixtures and mineral oil (excluding IPV operated valves)										
Conformity	All internal wetted and body materials conforming to NACE MR-01-75 as standard on the FP06P, FP10P & FP12P with options available on the BXS & SPR  SIL 3 capability: The product has met manufacturer design process requirements of Safety Integrity Level (SIL) 3 in accordance with IEC 61508. (For the FP03P, FP06P, FP10P, BXS & SPR)										
Electrical Characteristics											
Duty cycle	100% continuously rated / energised										
Response Times	Pull in <100ms, drop out <70ms										
Solenoid Insulation	Class H										
Volts	Pull-In volts 90% up to 110% nominal					Drop-out volts, typically 10 - 20% of nominal					
Coil Voltage DC (=)	12V DC up to 240V DC										
Coil Voltage AC 50Hz and 60Hz (~)	24V AC up to 240V AC										
Cable Entry	M20 x 1.5 & 1/2" NPT										
Bifold solenoid valves must be installed, operated and maintained in accordance with the relevant Bifold installation, operating and maintenance instructions, relevant installation rules, regulations and codes of practice.											

# 07 Solenoid Valves

## Pneumatic

### Safe Area & Hazardous Area Solenoid Valve Technical Attributes

#### Safe Area Solenoid Valve Information

Enclosure Series	I30
Compatible with Valve Model Codes	BXS & SPR

#### Materials of Construction

Enclosure & Valve Body	PBT - Polybutylene Terephthalate (Reinforced Fiberglass 30%) enclosure and 316L stainless steel valve body as standard with aluminium options also available	
Tube	Stainless Steel AISI 304	
Flange	Stainless Steel 1.4305 EN 10088 (AISI 303)	
Plunger	Stainless Steel 1.4105 EN 10088 (AISI 430F) or equivalent	
Top Stop	Stainless Steel 1.4105 EN 10088 (AISI 430F)	
Springs	Stainless Steel AISI 302	
O-ring Material	FKM - Fluoroelastomer	<b>Media Temperature Range</b> -10°C to +130°C
		<b>Ambient Temperature Range</b> -10°C to +50°C

#### Electrical Characteristics

Duty Cycle	100%
Coil Insulation	Class F 155°C
Coil Voltage DC	24V DC
Voltage Tolerance	+10% ÷ -5%
Electrical Connection	PG9 EN 175301-803 Form B

#### Hazardous Area Solenoid Valve Information

Enclosure Series	I40
Compatible with Valve Model Codes	BXS & SPR

#### Materials of Construction

Enclosure & Valve Body	Thermoplastic Resin enclosure and 316L stainless steel valve body as standard with aluminium options also available	
Tube	Brass	
Flange	Brass	
Plunger	Magnetic Steel	
Top Stop	Magnetic Steel	
O-ring Material	FKM - Fluoroelastomer	<b>Media Temperature Range</b> -10°C to +50°C
		<b>Ambient Temperature Range</b> -40°C to +50°C


#### Electrical Characteristics

Duty Cycle	100%
Coil Insulation	Class F 155°C
Coil Voltage DC	28V DC
Voltage Tolerance	± 10 %
Electrical Connection	PG9 EN 175301-803 Form A

Impregnated coils for use in damp/humid environments are available on request, must be used with connector and gasket.



## Solenoid Valve Technical Attributes

Enclosure			
Certification	 (Please contact bifold for available certification)		
Protection Class (Ex emb) - 24 & 74AT4 Series	II 2 GD c Ex emb IIC Gb T3 Tamb -25°C to +55°C (powers up to 3.0W or below) II 2 GD c Ex emb IIC Gb T4 Tamb -25°C to +50°C (powers up to 4.0W or below) II 2 GD c Ex emb IIC Gb T3 Tamb -25°C to +45°C (powers up to 4.5W or below) II 2 GD c Ex emb IIC Gb T3 Tamb -25°C to +40°C (powers up to 6.8W or below)		
Protection Class (Ex d) - 27 & 77 Series	II 2 GD Ex db IIC Gb T6 (Tamb -60°C to +40°C) II 2 GD Ex db IIC Gb T5 (Tamb -60°C to +55°C) II 2 GD Ex db IIC Gb T4 (Tamb -60°C to +90°C)		
Protection Class (Ex ia) - 28, 58 & 78 Series	28 - II 2 GD Ex ia IIC Gb T6 (Tamb = -60°C to +60°C) II 2 GD Ex ia IIC Gb T4 (Tamb = -60°C to +95°C)  58 - II 1 GD Ex ia IIC Ga T6 (Tamb = -60°C to +60°C)  78 - II 1 GD Ex ia IIC Ga T6 (Tamb = -60°C to +60°C) II 1 GD Ex ia IIC Ga T4 (Tamb = -60°C to +95°C)		
Protection Class (Ex ia) - I40 Series	II 2 G Ex ia IIC Ga T6 (Tamb = -40°C to +40°C) II 2 G Ex ia IIC Ga T4 (Tamb = -40°C to +85°C)		
Power	24 & 74AT4 (Ex emb) - up to 6.8 Watts 27 & 77 (Ex d) - up to 6.5 Watts 77 (Ex d) - (I0LP)* 1.0W holding power 3.5W Energise and (28LP)* 2.8W holding power 8.0W Energise I30 (Safe Area) - up to 3.0 Watt		
Resistance (Ω) and (Ex ia) - Safety Parameters <sup>1</sup>	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>28 &amp; 78 (Ex ia) - 260 Ohms  <b>Safety Parameters: 28 &amp; 78 Series</b></p> <p>U<sub>i</sub> = 31 Vdc, I<sub>i</sub> = 210 mA, P<sub>i</sub> = 1.5 W, C<sub>i</sub> ≈ 0 μF, L<sub>i</sub> ≈ 0mH            Coil Resistance : 260 Ohm ± 5%            Minimum Current Required @ solenoid coil = 45 mA</p> <p>58 (Ex ia) - 135 Ohms  <b>Safety Parameters: 58 Series</b></p> <p>U<sub>i</sub> = 35Vdc, I<sub>i</sub> = 600 mA, P<sub>i</sub> = 3 W, C<sub>i</sub> ≈ 0 μF, L<sub>i</sub> ≈ 0 mH            Coil Resistance : 135 Ohm ± 5%            Minimum Current Required @ solenoid coil = 80 mA</p> <p>I40 (Ex ia) - 275 (Nominal) up to 375 (Warm) Ohms  <b>Safety Parameters: I40 Series</b></p> <p>U<sub>i</sub> = 28Vdc, I<sub>i</sub> = 115 mA, P<sub>i</sub> = 1.6 W, C<sub>i</sub> ≈ 0 μF, L<sub>i</sub> ≈ 0mH            Coil Resistance : 275 Ohm (nominal)                                  : 375 Ohm (warm)            Minimum Current Required @ solenoid coil = 37 mA</p> </td> <td style="width: 50%; vertical-align: top;"> <p>28 &amp; 78 (Ex ia) - 370 Ohms  <b>Safety Parameters: 28 &amp; 78 Series</b></p> <p>U<sub>i</sub> = 31 Vdc, I<sub>i</sub> = 210 mA, P<sub>i</sub> = 1.5 W, C<sub>i</sub> ≈ 0 μF, L<sub>i</sub> ≈ 0mH            Coil Resistance : 370 Ohm ± 5%            Minimum Current Required @ solenoid coil = 32 mA</p> </td> </tr> </table>	<p>28 &amp; 78 (Ex ia) - 260 Ohms  <b>Safety Parameters: 28 &amp; 78 Series</b></p> <p>U<sub>i</sub> = 31 Vdc, I<sub>i</sub> = 210 mA, P<sub>i</sub> = 1.5 W, C<sub>i</sub> ≈ 0 μF, L<sub>i</sub> ≈ 0mH            Coil Resistance : 260 Ohm ± 5%            Minimum Current Required @ solenoid coil = 45 mA</p> <p>58 (Ex ia) - 135 Ohms  <b>Safety Parameters: 58 Series</b></p> <p>U<sub>i</sub> = 35Vdc, I<sub>i</sub> = 600 mA, P<sub>i</sub> = 3 W, C<sub>i</sub> ≈ 0 μF, L<sub>i</sub> ≈ 0 mH            Coil Resistance : 135 Ohm ± 5%            Minimum Current Required @ solenoid coil = 80 mA</p> <p>I40 (Ex ia) - 275 (Nominal) up to 375 (Warm) Ohms  <b>Safety Parameters: I40 Series</b></p> <p>U<sub>i</sub> = 28Vdc, I<sub>i</sub> = 115 mA, P<sub>i</sub> = 1.6 W, C<sub>i</sub> ≈ 0 μF, L<sub>i</sub> ≈ 0mH            Coil Resistance : 275 Ohm (nominal)                                  : 375 Ohm (warm)            Minimum Current Required @ solenoid coil = 37 mA</p>	<p>28 &amp; 78 (Ex ia) - 370 Ohms  <b>Safety Parameters: 28 &amp; 78 Series</b></p> <p>U<sub>i</sub> = 31 Vdc, I<sub>i</sub> = 210 mA, P<sub>i</sub> = 1.5 W, C<sub>i</sub> ≈ 0 μF, L<sub>i</sub> ≈ 0mH            Coil Resistance : 370 Ohm ± 5%            Minimum Current Required @ solenoid coil = 32 mA</p>
<p>28 &amp; 78 (Ex ia) - 260 Ohms  <b>Safety Parameters: 28 &amp; 78 Series</b></p> <p>U<sub>i</sub> = 31 Vdc, I<sub>i</sub> = 210 mA, P<sub>i</sub> = 1.5 W, C<sub>i</sub> ≈ 0 μF, L<sub>i</sub> ≈ 0mH            Coil Resistance : 260 Ohm ± 5%            Minimum Current Required @ solenoid coil = 45 mA</p> <p>58 (Ex ia) - 135 Ohms  <b>Safety Parameters: 58 Series</b></p> <p>U<sub>i</sub> = 35Vdc, I<sub>i</sub> = 600 mA, P<sub>i</sub> = 3 W, C<sub>i</sub> ≈ 0 μF, L<sub>i</sub> ≈ 0 mH            Coil Resistance : 135 Ohm ± 5%            Minimum Current Required @ solenoid coil = 80 mA</p> <p>I40 (Ex ia) - 275 (Nominal) up to 375 (Warm) Ohms  <b>Safety Parameters: I40 Series</b></p> <p>U<sub>i</sub> = 28Vdc, I<sub>i</sub> = 115 mA, P<sub>i</sub> = 1.6 W, C<sub>i</sub> ≈ 0 μF, L<sub>i</sub> ≈ 0mH            Coil Resistance : 275 Ohm (nominal)                                  : 375 Ohm (warm)            Minimum Current Required @ solenoid coil = 37 mA</p>	<p>28 &amp; 78 (Ex ia) - 370 Ohms  <b>Safety Parameters: 28 &amp; 78 Series</b></p> <p>U<sub>i</sub> = 31 Vdc, I<sub>i</sub> = 210 mA, P<sub>i</sub> = 1.5 W, C<sub>i</sub> ≈ 0 μF, L<sub>i</sub> ≈ 0mH            Coil Resistance : 370 Ohm ± 5%            Minimum Current Required @ solenoid coil = 32 mA</p>		
Terminal Block (FP Operator)	The type MK3 terminal block can accommodate solid conductors between the range of 0.5mm <sup>2</sup> to 2.5mm <sup>2</sup> and flexible conductors between the range of 0.5mm <sup>2</sup> to 1.5mm <sup>2</sup>		
Seal Repair Kit	For solenoid operator specific SRK (Seal Repair Kits), please contact Bifold sales department		
Coil Repair Kit	For solenoid operator specific CRK (Coil Repair Kits), please contact Bifold sales department		

\* Low power

# 07 Solenoid Valves Pneumatic

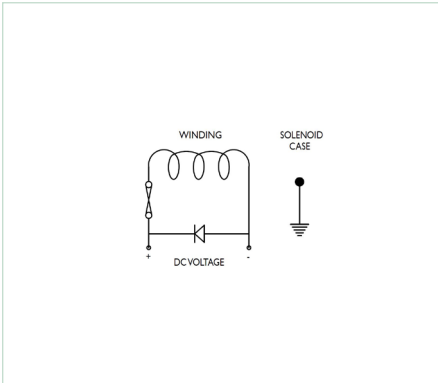
## Direct Acting & Indirect Acting Schematics

Configuration	Direct Acting Schematics		Indirect Acting Schematics	
	2/2	3/2	2/2	3/2
Auto Reset NO (Normally Open)				
Manual NO (Normally Open)				
Auto Reset NC (Normally Closed)				
Manual NC (Normally Closed)				
Auto Reset NU (Normally Universal)				
Manual NU (Normally Universal)				
Configuration	Indirect Acting Schematics			
	5/2		5/3	
Auto Reset				
Manual				

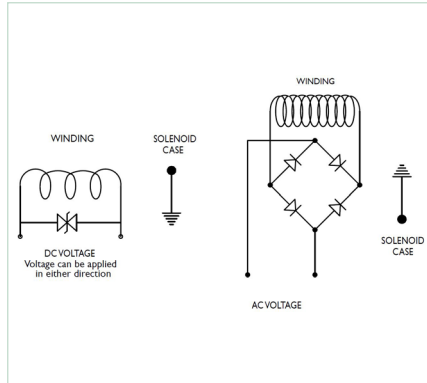
\* NAMUR Mounted

The manual operator feature attached to the valve schematics in this table defines the push button / spring return manual override option, other manual options are also available - please contact Bifold

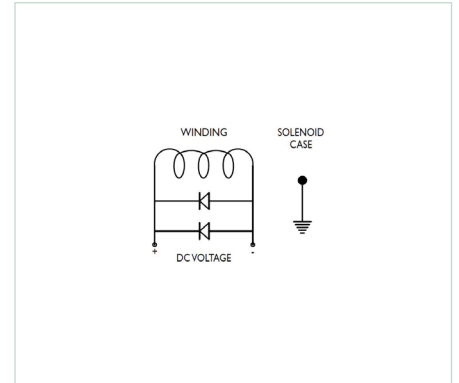
## Standard & Slimline Wiring Diagrams



■ (Ex emb) - 24 & 74AT4 Series

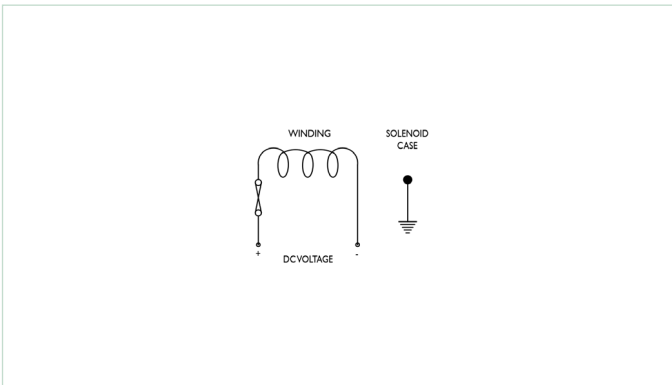


■ (Ex d) - 27 & 77 Series



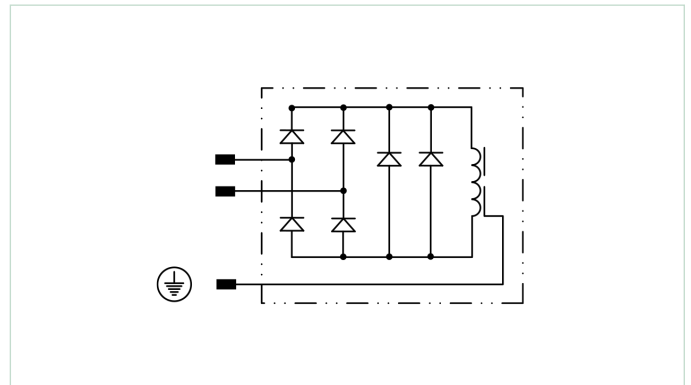
■ (Ex ia) - 28, 58 & 78 Series

## Safe Area Wiring Diagram



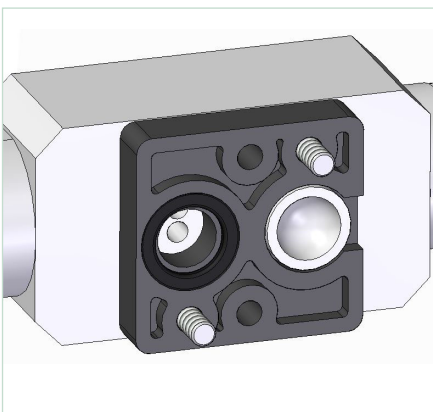
■ (Safe Area) - 130 Series

## Hazardous Area Wiring Diagram

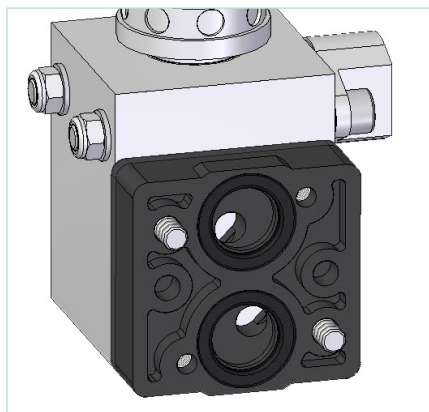


■ (Ex ia) - 140 Series

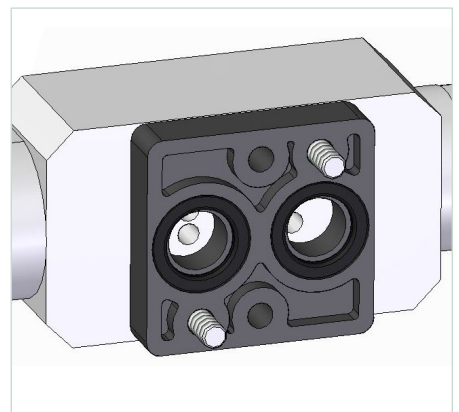
## 3/2 & 5/2 NAMUR Mounting Options



■ 3/2 (BXS)



■ 3/2 with 90° Rotation (FP06P)



■ 5/2 & 5/3 (BXS)

Supplied as Standard with NAMUR mounted valves

## Configurable Datasheet

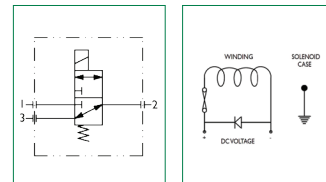
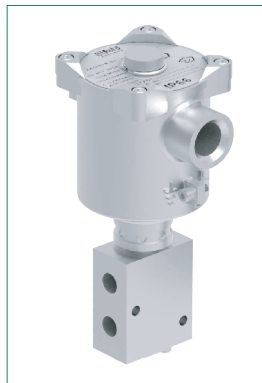
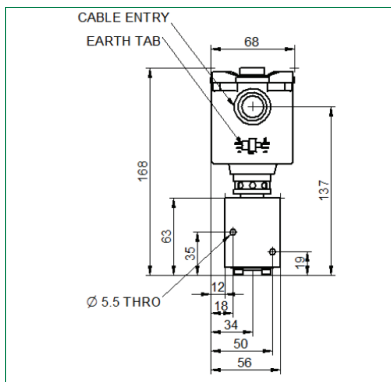
The Bifold Product Configurator can be used to configure valves to your exact specifications and automatically create a bespoke datasheet, 2D dimensional drawing and 3D CAD / Step file in real time, ready to download. Simply choose the product you would like from the products list and configure each option to your exact specification. Then simply click 'Request Documents' to download the relevant documents. To configure your product online visit [www.bifold.co.uk/Product-Configurator.aspx](http://www.bifold.co.uk/Product-Configurator.aspx), follow the instructions detailed on page 17 or contact Bifold for products not listed.

### FP06P Datasheet

# rotork®

# Bifold®

A rotork® Brand



### FP06P-SI-04-32-NU-S-74AT4-24D-36

<b>FP06P</b>	Direct Acting Solenoid Valve	<b>Model Code</b>
<b>SI</b>	145 psi / 10 bar Maximum Valve Pressure	<b>Operator</b>
<b>04</b>	1/4" Body Ported - Stainless Steel	<b>Connections</b>
<b>32</b>	3-way, 2-position	<b>Valve Configuration</b>
<b>NU</b>	Normally Universal	<b>Valve Configuration</b>
<b>S</b>	Nitrile -20°C to +130°C	<b>O-ring Material</b>
<b>74</b>	Ex emb	<b>Solenoid</b>
<b>AT4</b>	ATEX/IECEx Dual Certified/Labelled	<b>Solenoid Approval</b>
<b>24D</b>	24VDC	<b>Voltage</b>
	Auto Reset	<b>Options</b>
<b>36</b>	3.6 Watts	<b>Power</b>
	M20 x 1.5 Cable Entry	<b>Cable Entry</b>
	NPT Ports	<b>Port Type</b>
	No Identifier	<b>Identifier</b>
<b>FP06P -SI -04 -32 -NU -S -74 AT4 -24D -36</b>		<b>Model Number</b>

### Protection Class

- II 2 GD c Ex emb IIC Gb T3 Tamb -25°C to +55°C (powers up to 3.0W or below)
- II 2 GD c Ex emb IIC Gb T4 Tamb -25°C to +50°C (powers up to 4.0W or below)
- II 2 GD c Ex emb IIC Gb T3 Tamb -25°C to +45°C (powers up to 4.5W or below)
- II 2 GD c Ex emb IIC Gb T3 Tamb -25°C to +40°C (powers up to 6.8W or below)

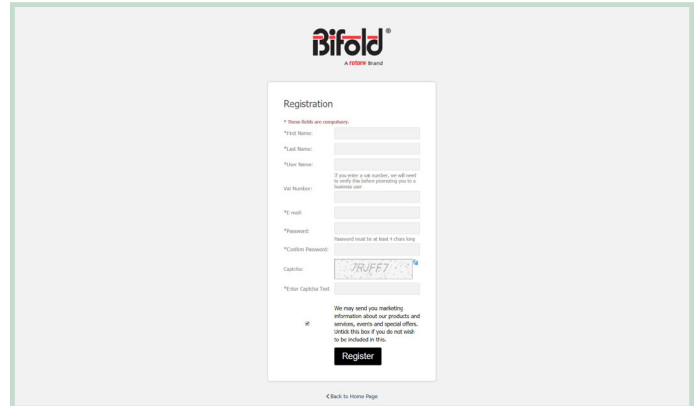
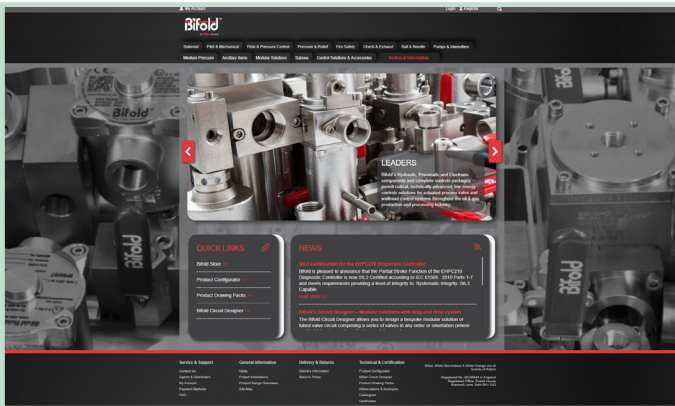
[www.bifold.co.uk](http://www.bifold.co.uk)

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We take care to ensure that product information in this catalogue is reasonably accurate and up-to-date. However, our products are continually developed and updated so to ensure accuracy and up-to-date information please refer to the product catalogue issue list on our web site or contact a member of our sales team.

When selecting a product, the applicable operating system design must be considered to ensure safe use. The products function, material compatibility, adequate ratings, correct installation, operation and maintenance are the responsibilities of the system designer and user.

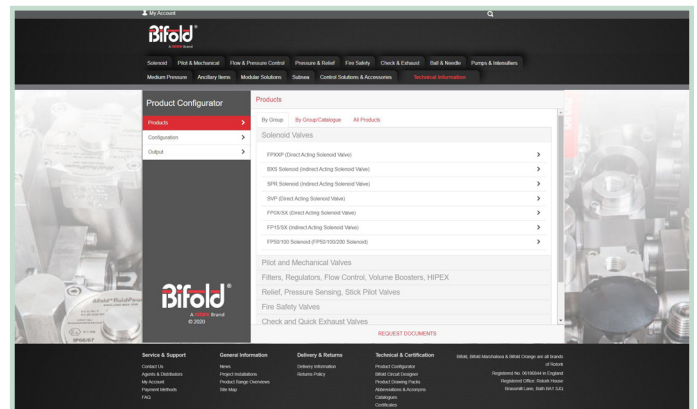
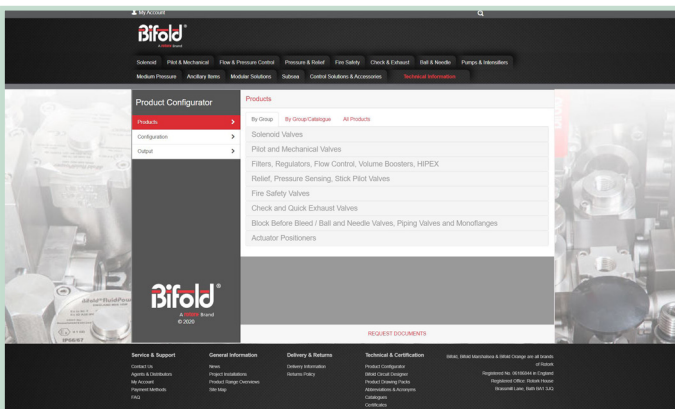
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All Bifold products are manufactured to a stringent QA programme to ensure that every product will give optimum performance and reliability. We are third party certified to BS EN ISO 9001. We reserve the right to make changes to the specifications and design etc, without prior notice.

## Product Configurator



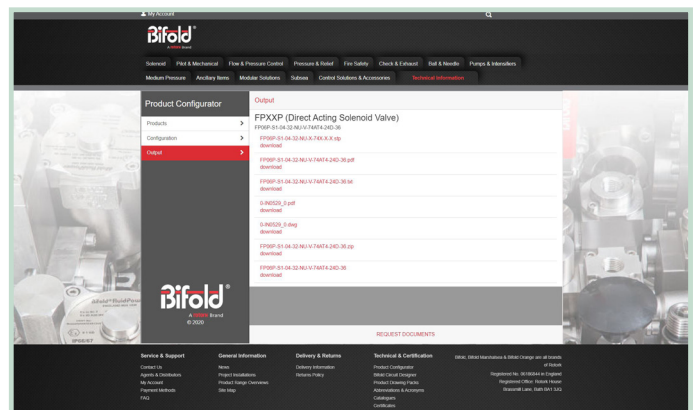
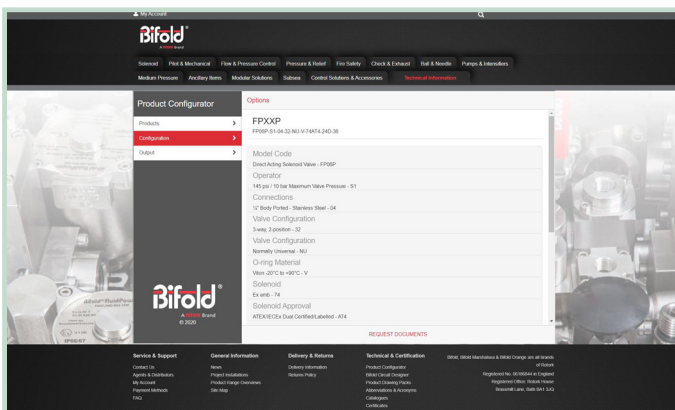
1. Visit [www.bifold.co.uk/Index.aspx](http://www.bifold.co.uk/Index.aspx) and go to the technical information tab or the technical & certification section of the footer and click the product configurator link.

2. Register or login to enter the product configurator.



3. Simply choose and click the product range you would like from the products list.

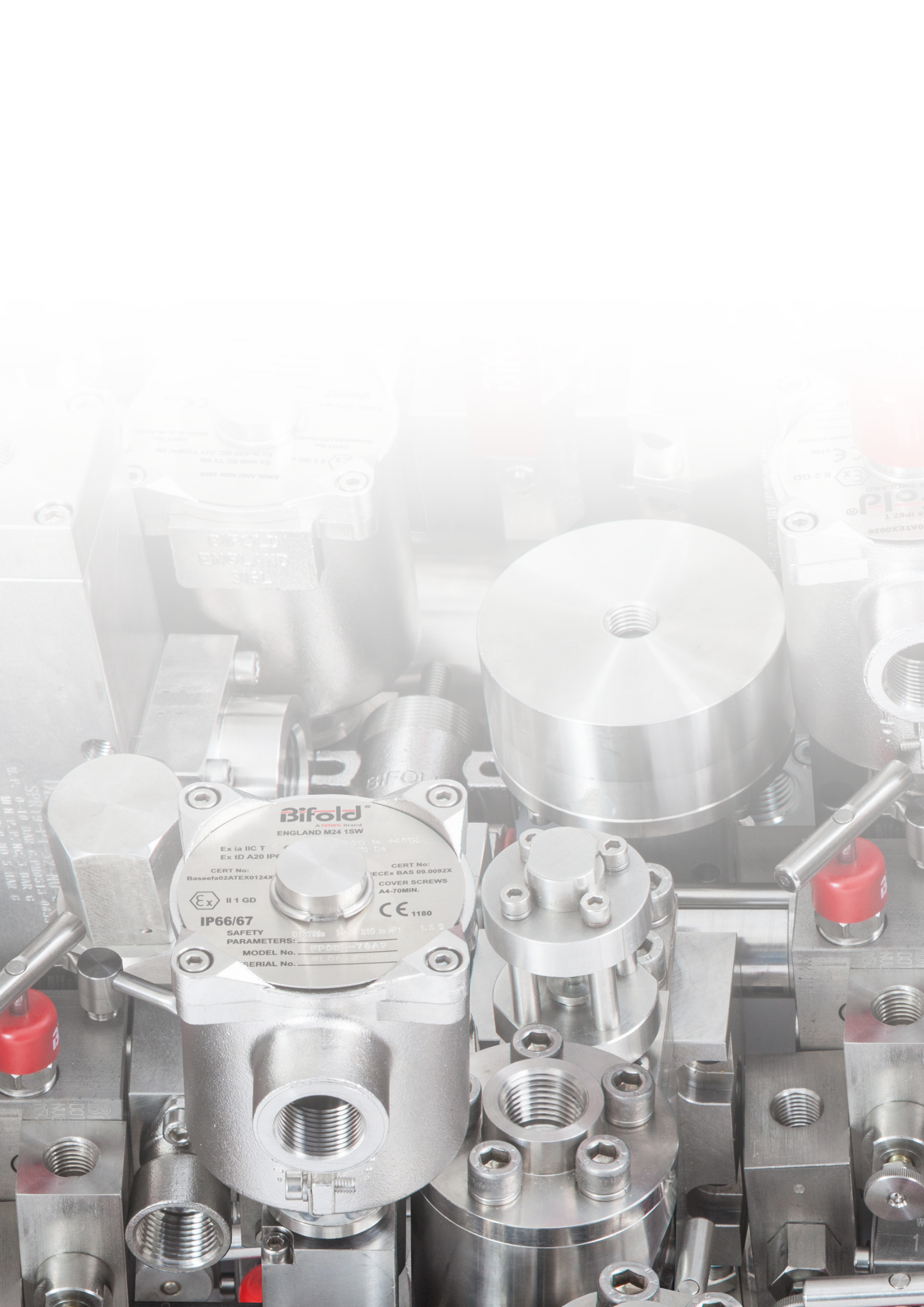
4. Choose and click the model code you would like to configure from the products list.



5. Configure the selected product to your required specification.

6. Once you have configured the products to your exact specifications, simply click 'request documents' which will automatically create a bespoke datasheet, 2D dimensional drawing and 3D CAD / Step file in real time, ready to download.









**Bifold**  
A 70000 Brand  
ENGLAND M24 1SW

Ex ia IIC T  
Ex tD A20 IP66

CERT No: Baseofa02ATEX0124X

Ex II 1 GD

IP66/67

SAFETY

PARAMETERS:

MODEL No. EP000-756A9

SERIAL No. 1204256A9

CERT No: CECEX BAS 09-0092X

COVER SCREWS

A4-70MIN.

CE 1180

1-32-NC-00-78AG-570  
FM0613-0060  
P. 2 - 10 BAR



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