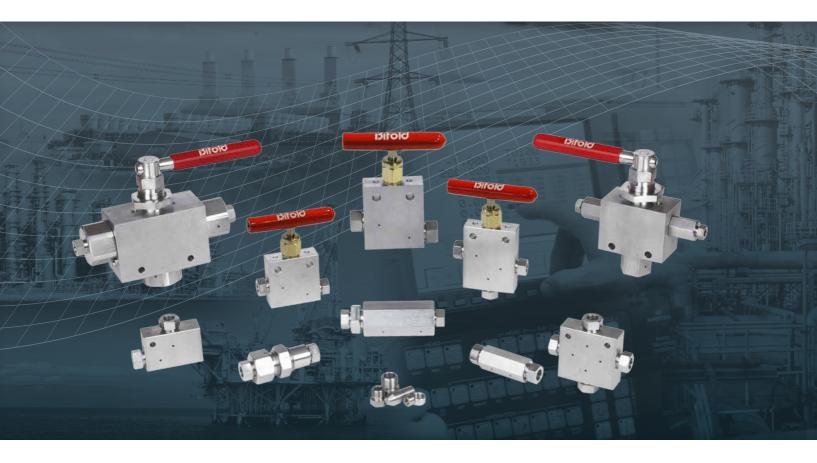


Medium Pressure Instrumentation Ball & Needle Valves, Fittings & Relief Valves

(Up to and including 20,000 psi / 1,379 bar)





Keeping the World Flowing

Contents

Black - Instrumentation Ball and Needle Valves

Blue - Marshalsea Relief Valves



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All bitolig products are manufacturied to a most stringent QA programme to ensure that every product will give opinium performance and reliability. We are third part certified to BS EN ISO 9001:2008. Functional tests certificate, letter of conformity copies of original mill certificates, polyading total transability are available on reque to BS EN 10209 3.1 where available. We reserve the right to make changes to the specifications and design etc., whitour prior notice.



Innovative Range

Product Portfolio

State of the Art Machining Centers

Bifold

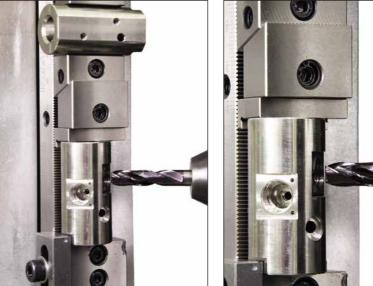
Bifold is enhanced by an in house lean and integrated manufacturing policy, alongside a unique business model, effectively reducing lead times and providing peace of mind to contractors, installers and end users for over a century.

Our state of the art production facilities, allow our superior and innovative designs of components to be manufactured on site, assembled to the finished product and tested to rigorous quality standards.

All Bifold valves have product traceability via a unique serial number stamped on all valve bodies, linking them with their testing and component certificates, materials of construction together with full Manufacturers Record Book (MRB).

Bifold ISO9001 Product Certification and Specialist Testing Options Include

- Non destructive testing including Liquid Penetrant Inspection (LPI), Magnetic Particle Inspection (MPI), Positive Material Identification (PMI) and Ferrite testing.
- Hydrostatic & Pneumatic testing.
- Nitrogen gas testing.
- Nitrogen / Helium leak detection.
- Low temperature testing.
- Fugitive Emission testing.
- Hydrogen Induced Cracking (HIC) testing and other specialist material tests.



Installation Picture of our Standard Range of Ball & **Needle Valves**



Installation Picture of our Standard Range of Ball & **Needle Valves**



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Features & Benefits



Bifold has manufactured Ball & Needle valves with a maximum pressure of 20,000 psi / 690 bar for more than 20 years. To add to this portfolio of valves, a range of Medium Pressure products have been developed, combining unique innovations with the highest standards of quality already being provided.

The portfolio of Medium Pressure products allows for the safe and reliable implementation of 20,000 psi / 1379 bar pressure systems incorporating Needle Valves, Ball Valves, Single Block & Bleed Manifolds, Double Block & Bleed Manifolds, Check Valves, Fittings and Adaptors.

The Medium Pressure valves are available in $\frac{1}{4}$, $\frac{3}{8}$, $\frac{9}{16}$, $\frac{3}{4}$ and 1 tubing sizes comprising of a coned and threaded connection. This connection method allows for increased flow rates due to the larger bore sizes, common within this pressure range.

Bifold has incorporated unique product features within this range alongside the many standard features which makes the product far superior to conventional products on the market.

Instrumentation Ball Valves



Innovative Locking Device

 Bifold Medium Pressure Ball Valves can be supplied with or without a handle locking device. The innovative design allows the valve to maintain its through panel mount function.

Pressure Tested

 Pressure tested in accordance with API 598 & BS EN 12266-1. Proof tested to 1.5 times maximum working pressure.

Why Use Bifold?

- Innovatively progressed and optimized designs throughout our product range.
- Constant vigorous research and development on all products, ensures that our valves represent the best of what we do.
- Our state of the art production facilities, allow our superior and innovative designs of components to be manufactured on site, assembled to the finished product and tested to rigorous quality standards.

Accuracy of Information 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 upda to to ensure accurate and up-to-date information plasse refere to the product catalous issue list on our web site or contact a member of our tales team. When selecting a product, the applicable operating system eding must be considered to ensure as use. The products function, material compatibility, adequate rating, correct installatio operation and maintenance are the responsibilises of the system edinger and user. Assurance

In amoup products are intransactioned to a most so might QM programme for formula to every product will give optimum performance and relations, here not ended part ended to BS EN ISO 1900 (2000) Functional test certificate, letter of conforming pipel of original mill certificates, providing testal traceability are available on BS EN 10204 31 where available. We reserve the right to make changes to the efficiency of the relation of the provided test of the solution of the test of the SE EN 10204 31 where available. We reserve the right to make changes to the certifications and design etc., which our prior notice.



Features & Benefits

Instrumentation Needle Valves





Maintenance Free Stem Sealing

• The unique stem seal design eliminates the loss of sealing integrity often experienced over the life time of traditional packing glands, reducing the risk of fugitive emissions.

Non Wetted Threads

• Needle head threads are isolated from process fluid corrosion or contamination using a pre-thread stem seal and a secondary metal to metal bonnet seal.

Lower Torque to Operate

• The unique stem seal is designed to reduce the effects of friction resulting in a reduced operating torque throughout the full operational pressure range.

Secondary Metal To Metal Seal Reduces Potential Leak Paths

• The needle valve bonnet seal using the unique stem seal and also a secondary metal to metal seal provides further product advantages:

Fail Safe Open and Closed System

In the unlikely event of a full stem seal failure, the valve can be made safe in either the open or closed state. Closing the valve will isolate process fluid at the primary seat preventing passage of any process fluid into the needle valve cavity, whilst fully opening against the inbuilt back seating feature will isolate the damaged stem seal from the process fluid.

Non Rotating Anti-Galling Tip as Standard

• The lower stem section is manufactured from 17/4 PH stainless steel and is assembled in such a way to prevent rotation whilst being operated. In turn this reduces the likelihood of galling on the valve seat.

Thread Rolled Stem

• The stem thread portion is manufactured using thread rolling techniques to help maintain the material strength.

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Product Portfolio

Bifold

Medium Pressure Needle Valves

The needle valve range is a one piece body construction with a maximum working pressure of 20,000 psi / 1379 bar and tube sizes from '/4" through to 1". Within the needle valve range, we also offer a standard instrumentation design with a maximum working pressure of 22,000 psi / 690 bar and pipe sizes from '/4" through to 1".

Medium Pressure Ball Valves

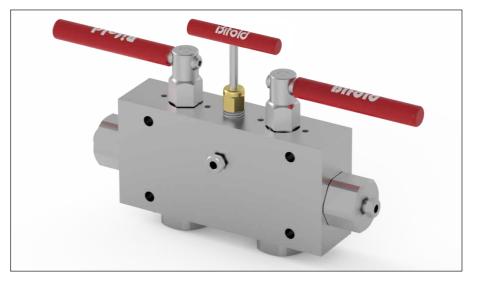
The Bifold range of ball valves are available with a maximum working pressure of 20,000 psi / 1379 bar. They are available in a variety of configurations to suit the specific application with tube sizes ranging from 1/4" through to 1". Within the ball valve range, we also offer a standard instrumentation design with a maximum working pressure of 22,000 psi / 690 bar and pipe sizes from 1/4" through to 1".

Medium Pressure Manifolds

The manifold range includes standard configurations of ball and needle, single block and bleed or double block and bleed valves. We can also design custom manifolds to suit the application. Manifolds are rated up to pressures of 20,000 psi / 1379 bar in a variety of tube sizes ranging from ¹/₄" through to 1".







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that every product will give optimum performance, and reliability We are third parcertified to BS (1050 000) 12006 Encoded are carefullational tester of conforming copies of original mill certificates, providing total exceebality are available on reque to BS EN (1020 21 Juviers available We reserve the right to make changes to the specifications and design etc., without prior notice.



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IN	STRUMENTAT	ION ME	EDIUM PRESSURE NEI	EDLE VALVES - PREFERRED RANGE
Product	Schematic Representation	Page Number	Product Code	Product Description
			MPN-20-04-1-V	1/4" MP, 2-Way Straight, Needle Configuration, 20,000 psi / 1379 bar
			MPN-20-06-1-V	3/8" MP, 2-Way Straight, Needle Configuration, 20,000 psi / 1379 bar
i.		10/13	MPN-20-09-1-V	9/16" MP, 2-Way Straight, Needle Configuration, 20,000 psi / 1379 bar
MPN 2-Way Straight			MPN-20-12-1-V	34" MP, 2-Way Straight, Needle Configuration, 20,000 psi / 1379 bar
Needle Valves			MPN-20-16-1-V	I" MP, 2-Way Straight, Needle Configuration, 20,000 psi / 1379 bar
Ellar			MPN-20-04-2-V	1/4" MP, 2-Way Angle, Needle Configuration, 20,000 psi / 1379 bar
			MPN-20-06-2-V	3/8" MP, 2-Way Angle, Needle Configuration, 20,000 psi / 1379 bar
		11/13	MPN-20-09-2-V	9/16" MP, 2-Way Angle, Needle Configuration, 20,000 psi / 1379 bar
MPN 2-Way Angle			MPN-20-12-2-V	³ ⁄4" MP, 2-Way Angle, Needle Configuration, 20,000 psi / 1379 bar
Needle Valves			MPN-20-16-2-V	I" MP, 2-Way Angle, Needle Configuration, 20,000 psi / 1379 bar
DilOtz			MPN-20-04-3-V	1/4" MP, 3-Way, 2-On Pressure, Needle Configuration, 20,000 psi / 1379 bar
		11/13	MPN-20-06-3-V	3/8" MP, 3-Way, 2-On Pressure, Needle Configuration, 20,000 psi / 1379 bar
			MPN-20-09-3-V	9/16" MP, 3-Way, 2-On Pressure, Needle Configuration, 20,000 psi / 1379 bar
MPN 3-Way, 2-On Pressure			MPN-20-12-3-V	³ /4" MP, 3-Way, 2-On Pressure, Needle Configuration, 20,000 psi / 1379 bar
Needle Valves			MPN-20-16-3-V	I" MP, 3-Way, 2-On Pressure, Needle Configuration, 20,000 psi / 1379 bar
211017			MPN-20-04-4-V	1/4" MP, 3-Way, 1-On Pressure, Needle Configuration, 20,000 psi / 1379 bar
			MPN-20-06-4-V	3/8" MP, 3-Way, I-On Pressure, Needle Configuration, 20,000 psi / 1379 bar
		12/13	MPN-20-09-4-V	9/16" MP, 3-Way, I-On Pressure, Needle Configuration, 20,000 psi / 1379 bar
MPN 3-Way, I-On Pressure			MPN-20-12-4-V	³ ⁄ ₄ " MP, 3-Way, I-On Pressure, Needle Configuration, 20,000 psi / 1379 bar
Needle Valves			MPN-20-16-4-V	I" MP, 3-Way, I-On Pressure, Needle Configuration, 20,000 psi / 1379 bar
			MPN-20-04-5-V	¹ /4" MP, 2-Stem Manifold, Needle - Needle Configuration, 20,000 psi / 1379 bar
			MPN-20-06-5-V	3/8" MP, 2-Stem Manifold, Needle - Needle Configuration, 20,000 psi / 1379 bar
~		12/13	MPN-20-09-5-V	9/16" MP,2-Stem Manifold, Needle - Needle Configuration, 20,000 psi / 1379 bar
MPN 2-Stem Manifold			MPN-20-12-5-V	³ / ₄ " MP, 2-Stem Manifold, Needle - Needle Configuration, 20,000 psi / 1379 bar
Needle Valves			MPN-20-16-5-V	I" MP, 2-Stem Manifold, Needle - Needle Configuration, 20,000 psi / 1379 bar

MPN - Medium Pressure Actuated Needle Valve Range - for technical information, please refer to the product selection chart on page 13.

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11	NSTRUMENTA		1EDIUM PRESSURE BA	ALL VALVES - PREFERRED RANGE
Product	Schematic Representation	Page Number	Product Code	Product Description
			MPBT-20-5-04-1-V	1/4" MP, 2-Way Trunnion Style, Ball Configuration, 20,000 psi / 1379 bar, 5mm Bore
MODT		15/18	MPBT-20-5-06-1-V	3/8" MP, 2-Way Trunnion Style, Ball Configuration, 20,000 psi / 1379 bar, 5mm Bore
2-Way Trunnion Style Ball Valves			MPBT-20-5-09-1-V	9/16" MP, 2-Way Trunnion Style, Ball Configuration, 20,000 psi / 1379 bar, 5mm Bore
			MPBT-20-5-04-2-V	1/4" MP, 3-Way Diverting Trunnion Style, Ball Configuration, 20,000 psi / 1379 bar, 5mm Bore
MDDT	- Ç -	16/18	MPBT-20-5-06-2-V	3/8" MP, 3-Way Diverting Trunnion Style, Ball Configuration, 20,000 psi / 1379 bar, 5mm Bore
MPBT 3-Way Diverting Trunnion Style BallValves	90° Operation		MPBT-20-5-09-2-V	9/16" MP, 3-Way Diverting Trunnion Style, Ball Configuration, 20,000 psi / 1379 bar, 5mm Bore
			MPBT-20-5-04-3-V	1/4" MP, 3-Way Selecting Trunnion Style, Ball Configuration, 20,000 psi / 1379 bar, 5mm Bore
MODT	180° Operation	16/18	MPBT-20-5-06-3-V	3/8" MP, 3-Way Selecting Trunnion Style, Ball Configuration, 20,000 psi / 1379 bar, 5mm Bore
MPBT 3-Way Selecting Trunnion Style Ball Valves			MPBT-20-5-09-3-V	9/16" MP, 3-Way Selecting Trunnion Style, Ball Configuration, 20,000 psi / 1379 bar, 5mm Bore
		17/10	MPBT-20-10-06-1-V	3/8" MP, 2-Way Trunnion Style, Ball Configuration, 20,000 psi / 1379 bar, 10mm Bore
MPBT 2-Way Trunnion Style Ball Valves		17/18	MPBT-20-10-09-1-V	9/16" MP, 2-Way Trunnion Style, Ball Configuration, 20,000 psi / 1379 bar, 10mm Bore
			MPBT-20-10-06-2-V	3/8" MP, 3-Way Diverting Trunnion Style, Ball Configuration, 20,000 psi / 1379 bar, 10mm Bore
MODT	- Ç -	17/18	MPBT-20-10-09-2-V	9/16" MP, 3-Way Diverting Trunnion Style, Ball Configuration, 20,000 psi / 1379 bar, 10mm Bore
MPBI 3-Way Diverting Trunnion Style Ball Valves	90° Operation		MPBT-20-10-12-2-V	³ ⁄4" MP, 3-Way Diverting Trunnion Style, Ball Configuration, 20,000 psi / 1379 bar, 10mm Bore
-			MPBT-20-10-06-3-V	3/8" MP, 3-Way Selecting Trunnion Style, Ball Configuration, 20,000 psi / 1379 bar, 10mm Bore
MDDT		18	MPBT-20-10-09-3-V	9/16" MP, 3-Way Selecting Trunnion Style, Ball Configuration, 20,000 psi / 1379 bar, 10mm Bore
MPBT 3-Way Selecting Trunnion Style Ball Valves	180° Operation		MPBT-20-10-12-3-V	³ ⁄4" MP, 3-Way Selecting Trunnion Style, Ball Configuration, 20,000 psi / 1379 bar, 10mm Bore
		10	MPBT-20-13-12-1-V	³ ⁄4" MP, 2-Way Trunnion Style, Ball Configuration, 20,000 psi / 1379 bar, 13mm Bore
MPBT 2-Way Trunnion Style BallValves		19	MPBT-20-13-16-1-V	I" MP, 2-Way Trunnion Style, Ball Configuration, 20,000 psi / 1379 bar, 13mm Bore

MPBT - Medium Pressure Actuated Ball Valve Range - for technical information, please refer to the product selection chart on pages 18 & 19.



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hat every product will give optimum performance and reliability. We are bird parts errified to BS EN 105 0901/2008. Envircional test certificates, letter of conformity a opties of original mill certificates, providing total traceability are available on reque to SE EN 10204 31, where available VM erseave the right to make changes to the pecifications and design etc., without prior notice.



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INSTRU		1EDIUM	PRESSURE NEEDLE VALV	/E MANIFOLDS - PREFERRED RANGE		
Product	Schematic Representation	Page Number	Product Code	Product Description		
		21	MPNM-20-04-04-1	¹ /4" MP, Single Block & Bleed Manifold, Needle - Needle Con- figuration, 20,000 psi / 1379 bar, ¹ /4" MP Vent Bleed		
MPNM Single Block & Bleed Needle Valve Manifolds	×		MPNM-20-06-04-1	3/8" MP, Single Block & Bleed Manifold, Needle - Needle Con- figuration, 20,000 psi / 1379 bar, 1/4" MP Vent Bleed		
		22	MPNM-20-04-04-2	 '/4" MP, Double Block & Bleed Manifold, Needle - Needle - Needle Configuration, 20,000 psi / 1379 bar, '/4" MP Vent Bleed 		
MPNM Double Block & Bleed Needle Valve Manifolds	¥		MPNM-20-06-04-2	3/8" MP, Double Block & Bleed Manifold, Needle - Needle - Needle Configuration, 20,000 psi / 1379 bar, '/4" MP Vent Bleed		
		23	MPM-20-04-04-1-V	1/4" MP, Five Way Manifold, Needle Configuration, 20,000 psi / 1379 bar, 1/4" MP Vent Bleed		
MPM Double Block & Bleed Needle Valve Manifolds		23	MPM-20-06-06-1-V	3/8" MP, Five Way Manifold, Needle Configuration, 20,000 psi / 1379 bar, 3/8" MP Vent Bleed		
INSTRUMEN	TATION MED		ESSURE BALL & NEEDLE	VALVE MANIFOLDS - PREFERRED RANGE		
			MPBM-20-10-04-04-1-H	1/4" MP,Trunnion Style Single Block & Bleed Manifold, Ball - Needle Configuration, 20,000 psi / 1379 bar, 10mm Bore, 1/4" MPVent Bleed		
		24	MPBM-20-10-06-04-1-H	3/8" MP,Trunnion Style Single Block & Bleed Manifold, Ball - Needle Configuration, 20,000 psi / 1379 bar, 10mm Bore, 1/4" MP Vent Bleed		
MPBM Trunnion Style Single Block & Bleed Manifolds			MPBM-20-10-09-04-1-H	9/16" MP,Trunnion Style Single Block & Bleed Manifold, Ball - Needle Configuration, 20,000 psi / 1379 bar, 10mm Bore, 1/4" MPVent Bleed		
			MPBM-20-10-04-04-2-H	¹ /4" MP,Trunnion Style Double Block & Bleed Manifold, Ball - Needle - Ball Configuration, 20,000 psi / 1379 bar, 10mm Bore, ¹ /4" MP Vent Bleed		
		25	МРВМ-20-10-06-04-2-Н	3/8" MP,Trunnion Style Double Block & Bleed Manifold, Ball - Needle - Ball Configuration, 20,000 psi / 1379 bar, 10mm Bore, 1/4" MP Vent Bleed		
MPBM Trunnion Style Double Block & Bleed Manifolds	1		MPBM-20-10-09-04-2-H	9/16" MP,Trunnion Style Double Block & Bleed Manifold, Ball - Needle - Ball Configuration, 20,000 psi / 1379 bar, 10mm Bore, 1/4" MP Vent Bleed		
IN	STRUMENTAT		1	(VALVES - PREFERRED RANGE		
			MPCV-20-04-1	1/4" MP, Check Valve, Ball Configuration, 20,000 psi / 1379 bar		
Th			MPCV-20-06-1	3/8" MP, Check Valve, Ball Configuration, 20,000 psi / 1379 bar		
- the		26	MPCV-20-09-1 MPCV-20-12-1	9/16" MP, Check Valve, Ball Configuration, 20,000 psi / 1379 ba 3/4" MP, Check Valve, Ball Configuration, 20,000 psi / 1379 bar		
MPCV			MPCV-20-12-1 MPCV-20-16-1	 ³/₄ MP, Check Valve, Ball Configuration, 20,000 psi / 1379 bar I " MP, Check Valve, Ball Configuration, 20,000 psi / 1379 bar 		
CheckValves	l		1111 - 10-1	I I II, CHECK VAIVE, Dall Configuration, 20,000 pst / 1373 Dal		

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INS	TRUME	NTATION MEDIUM PRESSUR	E FITTINGS - PREFERRED RANGE
Product	Page Number	Product Code	Product Description
Collar	27 / 38	MPF-##-C	Collar, 20,000 psi / 1379 bar
Gland Nut	28 / 38	MPF-##-G	Gland Nut, 20,000 psi / 1379 bar
Plug	28 / 38	MPF-##-P	Plug, 20,000 psi / 1379 bar
Elbow	29 / 38	MPF-##-L	Elbow, 20,000 psi / 1379 bar
Tee	29 / 38	MPF-##-T	Tee, 20,000 psi / 1379 bar
Cross	30 / 38	MPF-##-X	Cross, 20,000 psi / 1379 bar
Bulkhead Coupler	30 / 38	MPF-##-B	Bulkhead Coupler, 20,000 psi / 1379 bar
Straight Coupler	31/38	MPF-##-S	Straight Coupler, 20,000 psi / 1379 bar
Straight Coupler Replacement Seat	31/38	MPF-##-SR	Straight Coupler Replacement Seat, 20,000 psi / 1379 bar
Tube Cap	32/38	MPF-##-TC	Tube Cap, 20,000 psi / 1379 bar
Anti-Vibration Assemblies	33 / 38	MPF-##-AVA	Anti Vibration Assemblies, 20,000 psi / 1379 bar

MPF - Medium Pressure Fittings - for adaptors, threaded nipples and technical information, please refer to the product selection charts on pages 34 to 38. ### - Denotes connection size.

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Bifold

MPN

Product Description

The Bifold range of Medium Pressure Needle Valves have been developed to provide the safe and reliable control of both liquid and gas service applications up to 20,000 psi / 1379 bar. Typical applications include Hydraulic Control Panels, Hydrostatic Testing Equipment, Chemical Injection skids, Water Jetting and other general industrial applications.

Features & Benefits

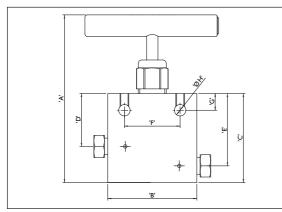
- Available in 5 configurations for a variety of applications.
- Maintenance Free Stem Sealing.
- Non rotating anti-galling tip as standard.
- Vee or Regulating options available.
- High tensile 316L CW stainless steel bodies as standard.

- Special materials available upon request.
- Traceability via a unique serial number stamped on the valve body.
- Standard operating temperature range of -4°F to +338°F as standard.
- Tube Sizes from 1/4" to 1".

MPN

2 Way Straight Needle Valves

Dimensional Drawing



SCHEMATIC





	MPN - SELECTION TABLE											
Product Code	Size	Rated	'A' (in)	'B' (in)	'C' (in)	'D' (in)	'E' (in)	'F' (in)	'G' (in)	' ØH' (in)	Thickness (in)	Minimum Orifice Size
MPN-20-04-1-V	¹⁄₄" MP	20,000 psi / 1379 bar	4.17"	2.00"	2.00"	1.19"	1.63"	1.25"	0.38"	0.26"	0.75"	0.11"
MPN-20-06-1-V	3/8"MP	20,000 psi / 1379 bar	4.17"	2.00"	2.00"	1.19"	1.63"	1.25"	0.38"	0.26"	0.75"	0.20"
MPN-20-09-1-V	9/16" MP	20,000 psi / 1379 bar	5.98"	2.50"	2.88"	1.75"	2.38"	1.38"	0.50"	0.34"	1.00"	0.31"
MPN-20-12-1-V	3⁄4" MP	20,000 psi / 1379 bar	8.46"	3.00"	3.75"	2.25"	3.00"	1.75"	0.63"	0.45"	1.38"	0.44"
MPN-20-16-1-V	I" MP	20,000 psi / 1379 bar	9.84"	4.13"	4.75"	2.81"	3.75"	2.50"	1.13"	0.57"	1.75"	0.56"

bifold.co.uk fairchildproducts.com Nextee the product information in this catalogue is reasonably accurate and u-po-date. However, our products are continually developed and updated to to ensure accurate and u-po-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 sale use. The products function, material compatibilities of the system designer and user. Quality Assurance BL Block products are manufactured to a most stringent QA programme to ensure that every product will give commun performance and reliability. We are thind part origins of original interrulticatis providing total increasibility are available on request, to BS EN 10204 3.1 where available. We reserve the right to make changes to the specifications and design etc., whitour prior notice.

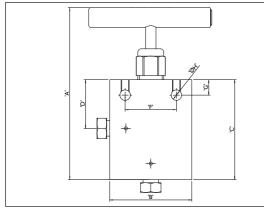


MPN

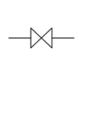
2 Way Angle Needle Valves



Dimensional Drawing



SCHEMATIC



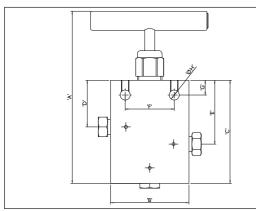


	MPN - SELECTION TABLE											
Product Code	Size	Rated	'A' (in)	'B' (in)	'C' (in)	'D' (in)	'F' (in)	'G' (in)	'ØH' (in)	Thickness (in)	Minimum Orifice Size	
MPN-20-04-2-V	¹⁄₄" MP	20,000 psi / 1379 bar	4.61"	2.00"	2.44"	1.19"	1.25"	0.38"	0.26"	0.75"	0.11"	
MPN-20-06-2-V	3/8"MP	20,000 psi / 1379 bar	4.61"	2.00"	2.44"	1.19"	1.25"	0.38"	0.26"	0.75"	0.20"	
MPN-20-09-2-V	9/16" MP	20,000 psi / 1379 bar	6.50"	2.50"	3.38"	1.75"	1.38"	0.50"	0.34"	1.00"	0.31"	
MPN-20-12-2-V	3⁄4" MP	20,000 psi / 1379 bar	9.21"	3.00"	10.56"	2.25"	1.75"	0.63"	0.45"	1.38"	0.44"	
MPN-20-16-2-V	I" MP	20,000 psi / 1379 bar	10.59"	4.13"	5.50"	2.81"	2.50"	1.13"	0.57"	1.75"	0.56"	

MPN

3 Way, 2 On Pressure Needle Valves

Dimensional Drawing









	MPN - SELECTION TABLE											
Product Code	Size	Rated	'A' (in)	' B ' (in)	'C' (in)	'D' (in)	'E' (in)	'F' (in)	'G' (in)	' ØH ' (in)	Thickness (in)	Minimum Orifice Size
MPN-20-04-3-V	1⁄4" MP	20,000 psi / 1379 bar	4.80"	2.00"	2.63"	1.19"	1.63"	1.25"	0.38"	0.26"	0.75"	0.11"
MPN-20-06-3-V	3/8"MP	20,000 psi / 1379 bar	4.80"	2.00"	2.63"	1.19"	1.63"	1.25"	0.38"	0.26"	0.75"	0.20"
MPN-20-09-3-V	9/16" MP	20,000 psi / 1379 bar	6.73"	2.50"	3.63"	1.75"	2.38"	1.38"	0.50"	0.34"	1.00"	0.31"
MPN-20-12-3-V	3⁄4" MP	20,000 psi / 1379 bar	9.72"	3.00"	5.00"	2.25"	3.00"	1.75"	0.63"	0.45"	1.38"	0.44"
MPN-20-16-3-V	I" MP	20,000 psi / 1379 bar	11.10"	4.13"	6.00"	2.81"	3.75"	2.50"	1.13"	0.57"	1.75"	0.56"

Learne of the product information in this catalogue is reasonably trained up-to-date. However, our products are continuityl developed and updates to ensure accurate and up-to-date information plases refer to the product catalogue use list on our web site or contact a member of our sales team. When selecting a odate, the applicable operating system development to ensure sale the. The products function, material compatibility, adequate ratings, correct installation, persition and maintenance are the responsibilities of the system designer and user. Assurance

hat every product will give optimum performance and reliability five are third parts errolfed to BS EN DO 2001/2008. Encicoal test certificates, letter of conformity opties of original mill certificates, providing total traceholity are available on reque to BS EN 10024 J. Where available V. We reserve the right to make changes to the pecifications and design esc., without prior notice.

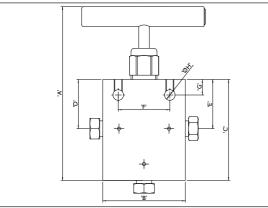


3 Way, I On Pressure Needle Valves

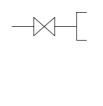


Dimensional Drawing

MPN



SCHEMATIC



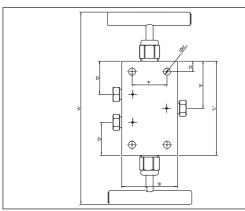


	MPN - SELECTION TABLE											•
Product Code	Size	Rated	'A' (in)	' B' (in)	'C' (in)	'D' (in)	'E' (in)	'F' (in)	'G' (in)	'ØH' (in)	Thickness (in)	Minimum Orifice Size
MPN-20-04-4-V	1⁄4" MP	20,000 psi / 1379 bar	4.61"	2.00"	2.44"	1.19"	1.19"	1.25"	0.38"	0.26"	0.75"	0.11"
MPN-20-06-4-V	3/8"MP	20,000 psi / 1379 bar	4.61"	2.00"	2.44"	1.19"	1.19"	1.25"	0.38"	0.26"	0.75"	0.20"
MPN-20-09-4-V	9/16' MP	20,000 psi / 1379 bar	6.50"	2.50"	3.38"	1.75"	1.75"	1.38"	0.50"	0.34"	1.00"	0.31"
MPN-20-12-4-V	¾" MP	20,000 psi / 1379 bar	9.21"	3.00"	10.56"	2.25"	2.25"	I.75"	0.63"	0.45"	1.38"	0.44"
MPN-20-16-4-V	I" MP	20,000 psi / 1379 bar	10.59"	4.13"	5.50"	2.81"	2.81"	2.50"	1.13"	0.57"	1.75"	0.56"

MPN

2 Stem Manifold Needle Valves

Dimensional Drawing









	MPN - SELECTION TABLE											
Product Code	Size	Rated	'A' (in)	' B' (in)	'C' (in)	'D' (in)	'E' (in)	'F' (in)	'G' (in)	'ØH' (in)	Thickness (in)	Minimum Orifice Size
MPN-20-04-5-V	1⁄4" MP	20,000 psi / 1379 bar	7.72"	2.00"	3.38"	1.19"	1.69"	1.25"	0.38"	0.26"	0.75"	0.11"
MPN-20-06-5-V	3/8"MP	20,000 psi / 1379 bar	7.72"	2.00"	3.38"	1.19"	1.69"	1.25"	0.38"	0.26"	0.75"	0.20"
MPN-20-09-5-V	9/16"MP	20,000 psi / 1379 bar	11.34"	2.50"	5.13"	1.75"	2.56"	1.38"	0.50"	0.34"	1.00"	0.31"
MPN-20-12-5-V	3⁄4" MP	20,000 psi / 1379 bar	16.42"	3.00"	7.00"	2.25"	3.50"	1.75"	0.63"	0.45"	1.38"	0.44"
MPN-20-16-5-V	I" MP	20,000 psi / 1379 bar	18.19"	4.13"	8.00"	2.81"	4.00"	2.50"	1.13"	0.57"	1.75"	0.56"

bifold.co.uk fairchildproducts.com Next and you mannatori We take care to ensure that products information in this catalogue is reasonably the take care to ensure accurate and up-to-date information plaser refer to the product catalogue take all to one web site or context a member of our takes takes. When selecting a product, the applicable operating system design must be considered to ensure as use. The products function, material compatibility adopted to ensure asia use. The products function, material compatibility adopted to ensure asia the appendix on administrate are the responsibilities of the system designer and user. Quality Assurance All Biolog products are manufactured to a most stringent QA programme to ensure that every product will give optimum performance and reliability. We are third party copies of original mill certificates, providing total intracebility are snallable on request, to BS NI 1024 3.1 where available. We reserve the right to make changes to the specification and degive etc., which on prior notice.



MPN

MPN Selection Chart - Ordering Example



M M	edium Pressure Needle Valve, 20,000 psi /1379 bar	Model Code
20	20,000 psi /1379 bar, Maximum Cold Working Pressure	Pressure Rating
04 06 09 12 16	3/8" MP 9/16" MP ¾" MP	Connection Siz
	I2 Way Straight22 Way Angle33 Way, 2 On Pressure43 Way, I On Pressure52 Stem Manifold	Configuration
	V Vee R Regulating	Tip
	NO LETTER HNBR (Standard) G Graphite	Seal Material
	NO LETTER 316L Stainless Steel Handle as Standard LK Lockable Handle PM Panel Mount Gland	Options
	NO LETTER 316L CW 63 Super Duplex ASTM A479 UNS S32750 Other materials are available on request, for more information please contact Rotork Instruments	Material

MPN-20 - 04 - 3 - V - G - LK - 63

I 3 bifold.co.uk fairchildproducts.com Net also care to ensure that product information in this catalogue is reasonably developed and up-to-that. However, our products are continually developed and update to o ensure accurate and up-to-tota information please refer to the product catalogue sue list on our web site or contact a member of our sales team. When selecting a rootact, the applicable operating system design must be considered to ensure sale as. The products function, material compatibility, adequate rating, correct installation, peration and mattemance are the responsibilities of the system designer and user. Assurance

Id products are manufactured to a most stringent QA programme to ensure rey product will give optimum performance and reliability. We are theird party d to BS EN ISO 9001.2000. Functional test certificate, letter of conformity a of original mill certificate, providing tocal tracability are available on reques 2010 and 9.1 where available. We reserve the right to make changes to the ations and design etc., without prino notice.



Ordering Example

MPN

Actuated 2 Way Straight Needle Valve



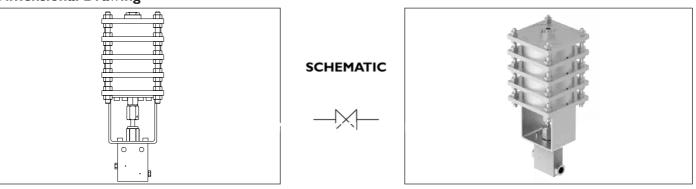
Product Description

The Bifold range of Medium Pressure Actuated Needle Valves have been developed to provide remote operation of both liquid and gas service applications up to 20,000 psi / 1379 bar. The pneumatic actuator is a modular solution utilizing stacked pistons providing a single design solution throughout the full needle valve range.

Features & Benefits

- All the actuated needle valves employ the features and benefits of the manual operated needle valves.
- A flexible coupling eliminates potential failures and leakage associated with installation misalignment.
- 72 psi / 5 bar pilot pressure as standard, optional pressures are available.
- The use of standard design elements provides ease of maintenance and spares management.
- Double acting and spring return options available.

Dimensional Drawing



MPN - SELECTION TABLE											
Product Code	Size	Rated									
MPN-20-04-1-V-ACTPSR-SO(5)	1/4" MP	20,000 psi / 1379 bar	Full dimensions and								
MPN-20-06-1-V-ACTPSR-SO(5)	3/8" MP	20,000 psi / 1379 bar	additional details available								
MPN-20-09-1-V-ACTPSR-SO(5)	9/16" MP	20,000 psi / 1379 bar	on request.								
MPN-20-12-1-V-ACTPSR-SO(5)	3⁄4" MP	20,000 psi / 1379 bar									
MPN-20-16-1-V-ACTPSR-SO(5)	I" MP	20,000 psi / 1379 bar									

MPN Selection Chart - Ordering Example

MPN Me	edium Pressure Actuated Needle Valve, 20,000 psi /1379 bar	Model Code				
20	20,000 psi / 1379 bar, Maximum Cold Working Pressure					
04 06 09	3/8" MP 16 I" MP	Connection Size				
	I2 Way Straight33 Way, 2 On Pressure22 Way Angle43 Way, 1 On Pressure	Configuration				
	V Vee R Regulating	Tip				
	ACTPSR-SO ACTPSR-SC ACTPDA ACT Aluminium Body Pneumatic Spring Return Actuator (Spring to Open) Aluminium Body Pneumatic Spring Return Actuator (Spring to Close) Aluminium Body Pneumatic Double Acting Actuator Bare Stem	Actuator Options				
	(5) 72 psi / 5 bar (Standard) ## Please contact Rotork Instruments for Pilot Pressure Options	Pilot Pressure				
	NO LETTER316L CW63Super Duplex ASTM A479 UNS S32750Other materials are available on request, for more information please contact Rotork Instruments	Material				
1PN-20 - 12	2 - I - V-ACTPSR-SC (5) - 63	Ordering Example				

bifold.co.uk fairchildproducts.com Accuracy or innormation pressure that product information in this catalogue is reasonably accurate and up-to-date. However, our products are continually developed and updated to to enture accurate and up-to-date information plass refer to the product catalogue sisse list on our web site or context a member of our talks team. When selecting a product, the applicable operating system development and the site state. When selecting a products function, meteral compatibility, adequate raining, correct installation, operation and maintenance are the responsibilities of the system development and site site. The products function meteral compatibility, adequate raining, correct installation, potention and maintenance are the responsibilities of the system designer and user. Quality Assurance. All Biolid products are manufactured to a most stringent QA programme to ensure all Biolid products are manufactured to a most stringent QA programme to ensure tertified to BS EN ISO 9001.2008. Functional test certificate, letter of conforming an opies of original mill certificate, provide goal arcatability are valiable on request. 08 ES IN 10094 31. Where available. We reserve the right to make changes to the perifications and design exc., whoto primo notice.



Product Description

The Bifold range of Medium Pressure Trunnion Ball Valves have been developed to the highest quality for uppermost performance. They are available in a wide range of configurations for most liquid service applications up to 20,000 psi / 1379 bar. An extensive range of seal materials available, which are suitable for extreme environments. Typical applications include Hydraulic Control Panels, Hydrostatic Testing Equipment, Chemical Injection skids, Water Jetting and other general industrial applications.

Features and Benefits

- Blow out proof stem design.
- Maintenance free stem sealing.
- Low operating torque.
- Pressure loaded seats creating a positive seal.
- Bi-directional straight through flow path minimizing pressure drop.
- High tensile 316L CW stainless steel bodies as standard.

Glass Reinforced PEEK seats as standard for excellent chemical resistance.

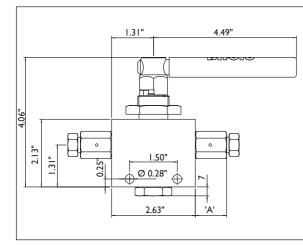
Bifold

- Special materials available upon request.
- Traceability via a unique serial number stamped on the valve body, gland and collar.
- NACE MR-01-75 / ISO 15156 compliant materials of construction are available upon request.

MPBT

2 Way Trunnion Style Ball Valves, 5mm Bore

Dimensional Drawing







MPBT - SELECTION TABLE									
Product Code	Size	Rated	'A' (in)	Thickness (in)	Minimum Orifice Size				
MPBT-20-5-04-1-V	1⁄4" MP	20,000 psi / 1379 bar	1.00"	1.50"	0.11"				
MPBT-20-5-06-1-V	3/8" MP	20,000 psi / 1379 bar	1.00"	I.50"	0.20"				
MPBT-20-5-09-1-V	9/16" MP	20,000 psi / 1379 bar	I.25"	1.50"	0.20"				

Accuracy or mormation the lac are to ensure that product information in this catalogue is reasonably to ensure accurate and up-to-date information plaser nefer to the product catalogue use list on our web site or contact a member of our talse stam. When selecting a roduct, the applicable operating system design must be considered to ensure satuter. The products function, material compatibility, adequate ratings, correct installation, peration and mathematics are the responsibilities of the system designer and user. urance

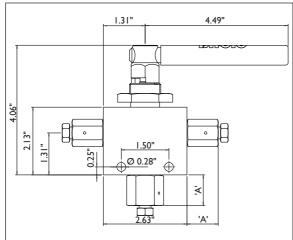
that every product will give optimum performance and reliability. We are third paracertified to SEN ISO 9001/2008, Functional test certificate, letter of conformity copies of original mill certificates, providing total traceability are available on reque to BSEN 10204 31. where available. We reserve the right to make changes to the specifications and design etc., without prior notice.



3 Way Diverting Trunnion Style Ball Valves, 5mm Bore



Dimensional Drawing





MPBT - SELECTION TABLE										
Product Code Size		Rated 'A' (in)		Thickness (in)	Minimum Orifice Size					
MPBT-20-5-04-2-V	1⁄4" MP	20,000 psi / 1379 bar	1.00"	1.50"	0.11"					
MPBT-20-5-06-2-V	3/8" MP	20,000 psi / 1379 bar	1.00"	1.50"	0.20"					
MPBT-20-5-09-2-V	9/16" MP	20,000 psi / 1379 bar	1.25"	1.50"	0.20"					

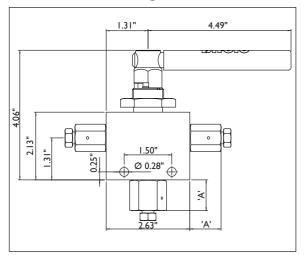
SCHEMATIC

180° Operation

MPBT

3 Way Selecting Trunnion Style Ball Valves, 5mm Bore

Dimensional Drawing





MPBT - SELECTION TABLE									
Product Code	Size	Rated	'A' (in)	Thickness (in)	Minimum Orifice Size				
MPBT-20-5-04-3-V	1⁄4" MP	20,000 psi / 1379 bar	1.00"	I.50"	0.11"				
MPBT-20-5-06-3-V	3/8" MP	20,000 psi / 1379 bar	1.00"	I.50"	0.20"				
MPBT-20-5-09-3-V	9/16" MP	20,000 psi / 1379 bar	I.25"	I.50"	0.20"				

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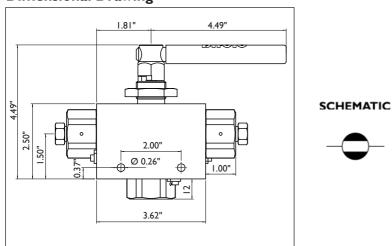


2 Way Trunnion Style Ball Valves, 10mm Bore



Dimensional Drawing

MPBT



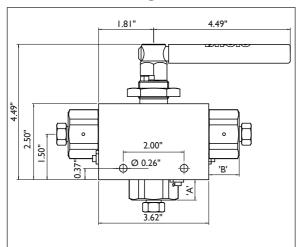


MPBT - SELECTION TABLE									
Product Code	Product Code Size Rated		Thickness (in)	Minimum Orifice Size					
MPBT-20-10-06-1-V	3/8" MP	20,000 psi / 1379 bar	I.75"	0.20"					
MPBT-20-10-09-1-V	9/16" MP	20,000 psi / 1379 bar	I.75"	0.31"					

MPBT

3 Way Diverting Trunnion Style Ball Valves, 10mm Bore

Dimensional Drawing





90° Operation



MPBT - SELECTION TABLE										
Product Code	Size	Rated 'A' (in)		'B' (in)	Thickness (in)	Minimum Orifice Size				
MPBT-20-10-06-2-V	3/8" MP	20,000 psi / 1379 bar	0.67"	1.00"	1.75"	0.20"				
MPBT-20-10-09-2-V	9/16" MP	20,000 psi / 1379 bar	1.00"	1.00"	1.75"	0.31"				
MPBT-20-10-12-2-V	³∕₄" MP	20,000 psi / 1379 bar	1.18"	1.18"	1.75"	0.39"				

ccuracy or mormation the lac care to ensure that product information in this catalogue is reasonably crunte and up-to-date. However, our products are continually developed and update to ensure accurate and up-to-date information please refer to the product catalogue use list on our web site or contact a member of our sales team. When selecting a roduct, the applicable operating system devision must be considered to ensure sale R. The products function, material compatibility, adequate raining, correct installation, persion and minimeture are the responsibilities of the system dedinger and user. surance

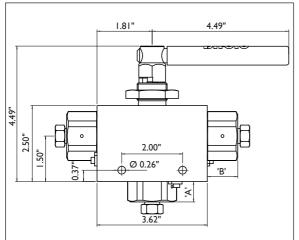
hat every product will give optimum performance and reliability. We are third para retrief to BS EN 105 2001/2008. Encicol test certificates, letter of conform copies of original mill certificates, providing total traceability are available on reque to SE EN 10204 3.1 where available VM erseave the right to make changes to the pecifications and design etc., without prior notice.



3 Way Selecting Trunnion Style Ball Valves, 10mm Bore



Dimensional Drawing





MPBT - SELECTION TABLE										
Product Code	Size	Rated	'A' (in)	' B ' (in)	Thickness (in)	Minimum Orifice Size				
MPBT-20-10-06-3-V	3/8" MP	20,000 psi / 1379 bar	0.67"	1.00"	1.75"	0.20"				
MPBT-20-10-09-2-V	9/16" MP	20,000 psi / 1379 bar	1.00"	1.00"	1.75"	0.31"				
MPBT-20-10-12-2-V	³∕₄" MP	20,000 psi / 1379 bar	1.18"	1.18"	I.75"	0.39"				

MPBT Selection Chart - Ordering Example

1edium Pressure Trunnion Style Ball Valve, up to 20,000 psi / 1379 bar	Model Code								
10,000 psi / 690 bar, Maximum Cold Working Pressure 20,000 psi / 1379 bar, Maximum Cold Working Pressure									
5 5mm (9/16" Maximum) 10 I0mm	Bore Size								
041/4" (5mm Bore Only)063/8"099/16"123/4" (Connection size only available with a 3 way valve)161" (Connection size only available with a 3 way valve)	Connection Size								
NO LETTER MP Female	Connection Type								
I2 Way23 Way Diverting33 Way Selecting	Configuration								
V Viton (90 Shore) V9 Endura V91A H HNBR	O-ring Material								
NO LETTER 316L Stainless Steel Handle as Standard LK Lockable Handle	Options								
NO LETTER316L CW63Super Duplex ASTM A479 UNS S32750Other materials are available on request, for more information please contact Rotork Instruments	Material								
10 - 0)6 - I - V - LK - 63								

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2 Way Trunnion Style Ball Valves, 13mm Bore



Product Description

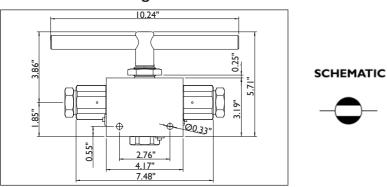
The Bifold range of Medium Pressure Trunnion Ball Valves have been developed to the highest quality for uppermost performance. They are currently available in a 2 Way configuration for most liquid service applications up to 20,000 psi / 1379 bar. An extensive range of seal materials available, which are suitable for extreme environments. Typical applications include Hydraulic Control Panels, Hydrostatic Testing Equipment, Chemical Injection skids, Water Jetting and other general industrial applications.

Features & Benefits

- Blow out proof stem design.
- Maintenance free stem sealing.
- Low operating torque.
- Pressure loaded seats creating a positive seal.

Dimensional Drawing

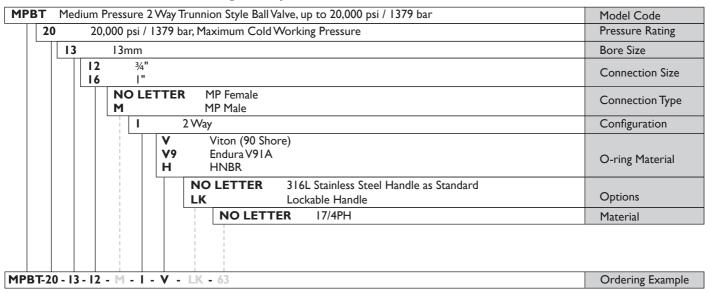
- Bi-directional straight through flow path minimizing pressure drop.
- High tensile 17.4 PH stainless steel bodies as standard.





MPBT - SELECTION TABLE									
Product Code	Size	Rated	'A' (in)	Thickness (in)	Minimum Orifice Size				
MPBT-20-13-12-1-V	3⁄4" MP	20,000 psi / 1379 bar	1.00"	I.50"	0.44"				
MPBT-20-13-16-1-V	I" MP	20,000 psi / 1379 bar	1.25"	1.50"	0.51"				

MPBT Selection Chart - Ordering Example



Accuracy or micromation by take care to ensure that product information in this catalogue is reasonably ccurate and up-to-date. However, our products are continually developed and upda to ensure accurate and up-to-date information please refer to the product catalo use list on our web site or contact a member of our sales team. When selecting a conduct, the applicable operating system design must be contained to ensure sale as. The products function, material compatibility adequate ratings, correct installation accine on our members are for accomposibility of the ourse durings of the same time of the ourse of the same time of the ourse our sale team. ty Assurance old products are manufactured to a most stringent QA pro ery product will give optimum performance and reliability.



Actuated 3 Way Selecting Trunnion Style Ball Valves, 10mm Bore



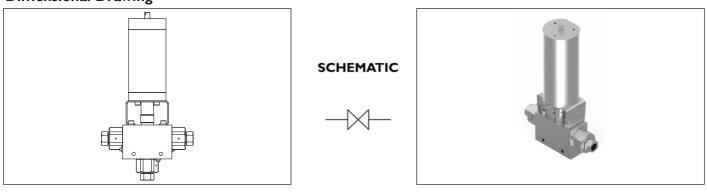
Product Description

The Bifold range of Actuated Trunnion Style Ball Valves have been developed to provide remote operation of both liquid and gas service applications up to 20,000 psi / 1379 bar. The pneumatic actuator delivers greater torque efficiency to maximum torque in a compact package.

Features & Benefits

- The pneumatic actuators compact size and superior torque efficiency makes it preferable in narrow spaces, skids structures, machines and more.
- Made from Stainless Steel for maximum Durability providing the user consistent performances.
- Maintenance Free.
- 72 psi / 5 bar pilot pressure as standard, optional pressures are available.
- Double acting and spring return options available.

Dimensional Drawing



MPBT - SELECTION TABLE										
Full dimensions and	Rated	Size	Product Code							
additional details availa	20,000 psi / 1379 bar	3/8" MP	MPBT-20-10-06-1-V-ACTPSR-SO(5)							
on request.	20,000 psi / 1379 bar	9/16" MP	MPBT-20-10-09-1-V-ACTPSR-SO(5)							
	20,000 psi / 1379 bar	³ ⁄ ₄ " MP	MPBT-20-10-12-1-V-ACTPSR-SO(5)							

MPBT Selection Chart - Ordering Example

5 1							
MPBT Medium Pressure Trunnion Style Actuated Ball Valve, up to 20,000 psi / 1379 bar	Model Code						
1020,000 psi / 690 bar, Maximum Cold Working Pressure2020,000 psi / 1379 bar, Maximum Cold Working Pressure	Pressure Rating						
10 I0mm	Bore Size						
06 3/8" 09 9/16" 12 ³ /4"	Connection Size						
NO LETTER MP Female	Connection Type						
I2 Way23 Way Diverting33 Way Selecting	Configuration						
V Viton (90 Shore) V9 Endura V91A H HNBR	O-ring Material						
ACTPSR-SO ACTPSR-SC ACTPDA ACT ACT ACT ACT ACT ACT ACT ACT ACT AC	Actuator Options						
(5) 72 psi / 5 bar (Standard) ### Please contact Rotork Instruments for Pilot Pressure Options	Pilot Pressure						
NO LETTER 316L CW 63 Super Duplex ASTM A479 UNS S32750 Other materials are available on request, for more information please contact Rotork Instruments	Material						
	Oudering Francels						
MPBT-20-10-09 - I - V-ACTPSR-SO(5) - 63	Ordering Example						

MPB 1-20-10-09 - I - V-ACTPSR

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MPNM

Product Description

The Bifold range of Medium Pressure Needle Valve Manifolds have been developed to provide safe and reliable intervention and control of both liquid and gas service applications up to 20,000 psi / 1379 bar. They are available in a variety of configurations including single block & bleed and double block & bleed designed for instrument calibration or repair. The manifolds house numerous needle valves, reducing the number of possible leak paths and in turn reducing system costs and weight.

Features & Benefits

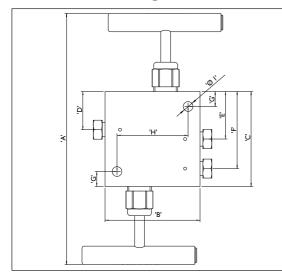
- Available in a number of configurations for a variety of applications.
- Maintenance free stem sealing.
- Non rotating anti-galling tip as standard.
- Vee tip stem.
- High tensile 316L CW stainless steel bodies as standard.

- Compact Design.
- Special materials available upon request.
- Traceability via a unique serial number stamped on the valve body.
- Standard operating temperature range of -4°F to +338°F as standard.
- Tube Sizes from 1/4" to 1".

MPNM

Single Block & Bleed Needle Valve Manifolds

Dimensional Drawing





SCHEMATIC



MPNM - SELECTION TABLE													
Product Code	Size	Rated	'A' (in)	'B' (in)	'C' (in)	'D' (in)	'E' (in)	'F' (in)	'G' (in)	'H' (in)	'Øl' (in)	Thickness (in)	Minimum Orifice Size
MPNM-20-04-04-1	¹ /4" MP	20,000 psi / 1379 bar	7.40"	2.50"	2.50"	1.00"	1.25"	51,50	0.39"	49,30	0.26"	1.00"	0.11"
MPNM-20-06-04-1	3/8"MP	20,000 psi / 1379 bar	7.28"	2.95"	60,32	0.75"	1.19"	48,32	0.39"	61,00	0.26"	1.00"	0.20"

Accuracy of Information Ve tale care to ensure that product information in this catalogue is reasonably ccurate and up-to-date. However, our products are continually developed and updates to ensure accurate and up-to-date information please refer to the product catalogue sue list on our web site or contact a member of our sales team. When selecting a roducts, the applicable operating system development and the sale team. When selecting a set list on ducts function, material compatibility, adequate raining, correct installation, peration and maintenance are the responsibilities of the system editore adiagree and update.

Assurance

As smoot products are transmissions to a most stringshir Q-P programme to tesso that every product will give optimum performance and reliability. We are third par certified to 85 EN ISO 90012008. Functional test certificate, letter of conformity copies of original mill certificates, perioding total transability are available on reque to 85 EN ISO 93 1 where available. We reserve the right to make changes to the specifications and design etc., without prior notice.





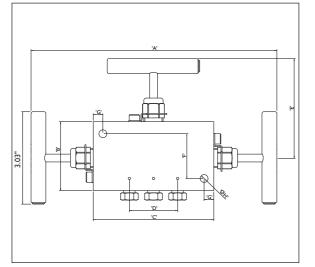
MPNM - Medium Pressure Needle Valve Manifold Range

MPNM

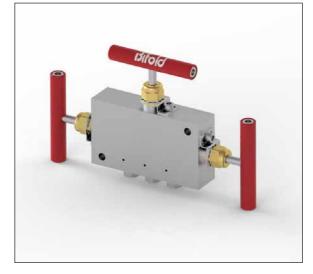
Double Block & Bleed Needle Valve Manifolds



Dimensional Drawing



SCHEMATIC



	MPNM - SELECTION TABLE											
Product Code	Size	Rated	'A' (in)	'B' (in)	'C' (in)	'D' (in)	'E' (in)	'F' (in)	'G' (in)	' ØH' (in)	Thickness (in)	Minimum Orifice Size
MPNM-20-04-04-2	1⁄4" MP	20,000 psi / 1379 bar	8.82"	2.25"	3.94"	1.57"	3.62"	I.46"	0.31"	0.26"	1.00"	0.11"
MPNM-20-06-04-2	3/8" MP	20,000 psi/1379 bar	9.61"	2.25"	4.72"	2.36"	3.62"	I.46"	0.31"	0.26"	1.00"	0.20"

MPNM Selection Chart - Ordering Example

1/4' 3/8 9/` 3/4" 1" 04 06 1 2 3	3" 6" <u>'/4"</u> 3/8"	9 bar, Maximum Cold Working Pressure	Pressure Rating Connection Size Vent Connectio
3/8 9/' 3/4" 1" 04 06 1 2 3	3" 6" <u> /4</u> " <u>3/8"</u>	ingle Block & Bleed	
06 1 2 3	3/8"	ingle Block & Bleed	Vent Connectio
23		ingle Block & Bleed	
4 5 6		Double Block & Bleed Double Block Double Block & Bleed (With Gauge Ports) Single Block & Bleed (Inline Pattern)	Configuration
	NO G	LETTER HNBR (Standard) Graphite	Seal Material
		NO LETTER316L Stainless Steel Handle as StandardLKLockable HandleAVAnti Tamper Vent	Options
		NO LETTER316L CW63Super Duplex ASTM A479 UNS S32750Other materials are available on request, for more information please contact Rotork Instruments	Material
	1 1	6 [NO	6 Double Block & Bleed (Inline Pattern) NO LETTER HNBR (Standard) G Graphite NO LETTER 316L Stainless Steel Handle as Standard LK Lockable Handle AV Anti Tamper Vent NO LETTER 316L CW 63 Super Duplex ASTM A479 UNS S32750 Other materials are available on request, for more information

Other configurations available upon request.

bifold.co.uk fairchildproducts.com 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 to to ensure accurate and up-to-date information plaser effer to the product catalogue issue list on our web site or contract a member of our sales team. When selecting a product, the applicable operantly system design must be considered to ensure safe use. The products function, material compatibility, debuter design data be context installation, operation and maintenance are the responsibilities of the system designer and user. Quality Assurance All Biold products are mandactured to a most stringent QA programme to ensure that every product will give optimum performance and reliability. We are third party confield to BS EN 1000 500 (2006 Function letts certificate, latter of conforming and configural mill certificates, providing total traceability are available on request, to BS EN 10204 31. where available. We reserve the rights to make changes to the specifications and design etc., without prive notice.



MPM

5 Valve Manifolds



Product Description

The Bifold range of Medium Pressure Manifolds are an economical remote mount manifold solution for differential pressure transmitter applications up to 20,000 psi / 1379 bar. The manifolds house two isolation valves, two vent valves and one equalization valve. Reducing the number of possible leak paths and in turn reducing system costs and weight.

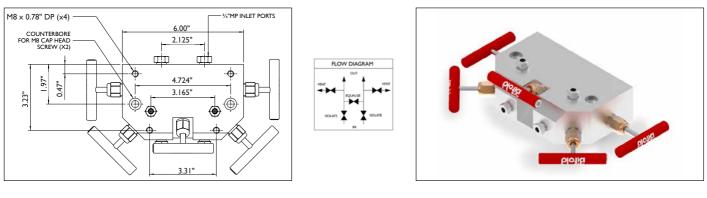
Features & Benefits

- Maintenance free stem sealing.
- Non rotating anti-galling tip as standard.
- Vee tip stem.
- High tensile 316L CW stainless steel bodies as standard.

• Compact Design.

- Special materials available upon request.
- Traceability via a unique serial number stamped on the valve body.

Dimensional Drawing



MPM - SELECTION TABLE								
Product Code	Minimum Orifice Size							
MPM-20-04-04-1	1/4" MP	20,000 psi / 1379 bar	0.11"					
MPM-20-06-06-1	3/8" MP	20,000 psi / 1379 bar	0.20"					

MPM Selection Chart - Ordering Example

1PM	Medium Pressure,	5 Needle Valve Manifold, 20,000 psi / 1379 bar	Model Code
20	20,000 psi /	1379 bar, Maximum Cold Working Pressure	Pressure Rating
	04 ¹ / ₄ " 06 3/8"		Connection Size
	04 ¹ /4 06 3/	" 8"	Vent Connection
		5 Valve Manifolds	Configuration
		NO LETTER HNBR (Standard) G Graphite	Seal Material
		NO LETTER316L Stainless Steel Handle as StandardLKLockable Handle (isolates and equalize)AVAnti Tamper Vent	Options
		NO LETTER316L CW63Super Duplex ASTM A479 UNS S32750Other materials are available on request, for more information please contact Rotork Instruments	Material
DM - 20	- 06 - 06 - 1 - (Ordering Example

Other configurations available upon request.

23 bifold.co.uk fairchildproducts.com curate or immormation at the crit to ensure that product information in this catalogue is reasonably urate and up-to-date. However, our products are continually developed and updates to ensure accurate and up-to-date information plases refer to the product catalogue to last on our web site or contact a member of our alse team. When selecting a doct, the applicable operating system design musc be considered to ensure safe . The products function, material compatibility, adequate ratings, correct installation, ension and maintenance are the responsibilities of the system designer and user. y Assurance Id products are manufactured to a most stringent C rry product will give optimum performance and reli

rformance and reliability. We are third party sional test certificate, letter of conformity and ling total traceability are available on request, reserve the right to make changes to the ior notice.



Bifold

MPBM

Product Description

The Bifold range of Medium Pressure Trunnion Ball Manifolds have been developed to provide safe and reliable intervention and control of liquid service applications up to 20,000 psi / 1379 bar. They are available in a variety of configurations including single block & bleed and double block & bleed, designed for instrument calibration or repair. The manifolds consist of trunnion ball valve isolation valves and a needle valve vent, reducing the number of possible leak paths and in turn reducing system costs and weight.

Features & Benefits

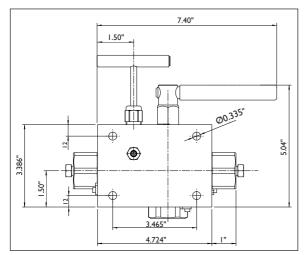
- Available in a number of configurations for a variety of applications.
- Maintenance free stem sealing.
- Bi-directional straight through flow path minimizing pressure drop.
- Non rotating anti-galling tip as standard.
- Vee tip vent valve.
- Compact design.

- High tensile 316L CW stainless steel bodies as standard.
- Special materials available upon request.
- Traceability via a unique serial number stamped on the valve body.
- Operating temperature range of -4°F to +320°F as standard.
- Tube Sizes from 1/4" to 1".

MPBM

Trunnion Style Single Block & Bleed Manifolds, 10mm Bore

Dimensional Drawing





MPBM - SELECTION TABLE									
Product Code	Size	Thickness	Minimum Orifice Size						
MPBM-20-10-04-04-1-H	'∕₄" MP	20,000 psi / 1379 bar	I.75"	0.11"					
MPBM-20-10-06-04-1-H	3/8" MP	20,000 psi / 1379 bar	1.75"	0.20"					
MPBM-20-10-09-04-1-H	9/16" MP	20,000 psi / 1379 bar	1.75"	0.31"					

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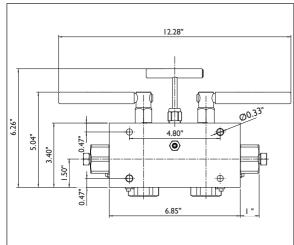


Trunnion Style Double Block & Bleed Manifolds, 10mm Bore



Dimensional Drawing

MPBM

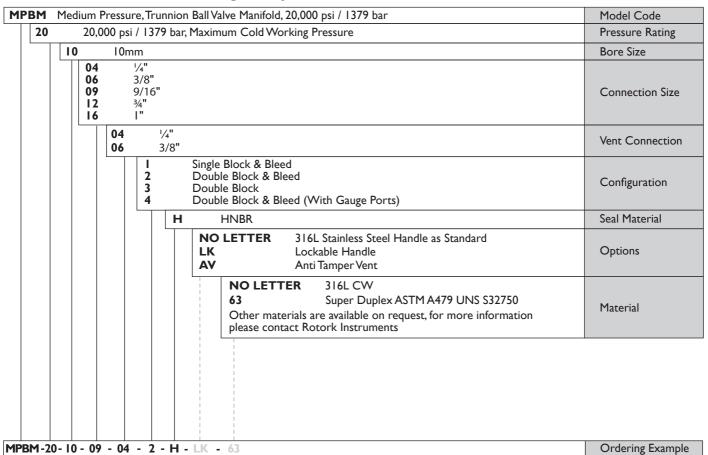






MPBM - SELECTION TABLE									
Product Code	Size	Rated	Thickness	Minimum Orifice Size					
MPBM-20-10-04-04-2-H	'∕₄" MP	20,000 psi / 1379 bar	1.75"	0.11"					
MPBM-20-10-06-04-2-H	3/8" MP	20,000 psi / 1379 bar	1.75"	0.20"					
MPBM-20-10-09-04-2-H	9/16" MP	20,000 psi / 1379 bar	1.75"	0.31"					

MPBM Selection Chart - Ordering Example



Other configurations available upon request.

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MPCV - Medium Pressure Check Valve Range

MPCV

Check Valves



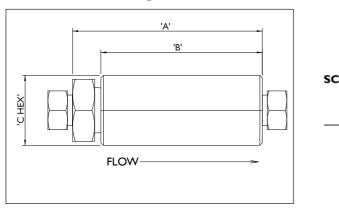
Product Description

The Bifold range of Check Valves have been developed using advanced sealing techniques from within the existing hydraulic control valve products. These sealing techniques ensure the ball check valve prevents reverse flow by providing a leak-tight shut off. Typical applications include Hydraulic Control Panels, Hydrostatic Testing Equipment, Chemical Injection Skids, Water Jet and other general industrial applications.

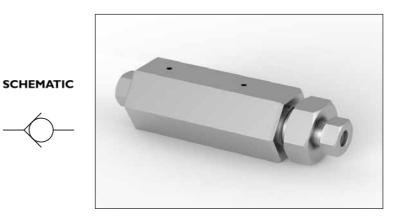
Features & Benefits

- 15 psi Nominal Cracking Pressure.
- Optimized Flow path.
- High tensile 316L CW stainless steel bodies as standard.
- Special materials available upon request.

Dimensional Drawing



- Traceability via a unique serial number stamped on the valve body.
- Tube Sizes from $\frac{1}{4}$ to 1".



	MPCV - SELECTION TABLE										
Product Code	Size	Rated	'A' (in)	'B' (in)	'C HEX' (in)	Minimum Orifice Size					
MPCV-20-04-1	1/4" MP	20,000 psi / 1379 bar	2.74"	2.26"	Ι"	0.11"					
MPCV-20-06-1	3/8" MP	20,000 psi / 1379 bar	3.06"	2.60"	I I/8"	0.20"					
MPCV-20-09-1	9/16" MP	20,000 psi / 1379 bar	4.31"	3.70"	I 3/8"	0.31"					
MPCV-20-12-1	3⁄4" MP	20,000 psi / 1379 bar	6.10"	5.16"	3/4"	0.44"					
MPCV-20-16-1	I" MP	20,000 psi / 1379 bar	6.85"	6.18"	2 1/8"	0.56"					

MPCV Selection Chart - Ordering Example

1PCV Medium Pressure Check Valve, 20,000 psi / 1379 bar	Model Code
20 20,000 psi / 1379 bar, Maximum Cold Working Pressure	Pressure Rating
04 1/4" 06 3/8" 09 9/16" 12 3/4" 16 1"	Connection Size
I Metal Seat 2 PEEK Seat	Configuration
PCV-20 - 06 - 1	Ordering Example

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MPF

Product Description

The Bifold range of medium pressure valves also includes a range of fittings. Typical applications include Hydraulic Control Panels, Hydrostatic Testing Equipment, Chemical Injection Skids, Water Jet and other general industrial applications.

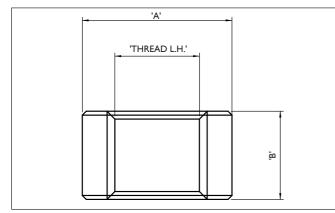
Features & Benefits

- Special materials available upon request.
- Tube Sizes from $\frac{1}{4}$ to 1".
- Operating temperature range of -421.6°F to +1,200°F

MPF

Collar

Dimensional Drawing





Bifold®

	MPF - SELECTION TABLE										
Product Code	Size	Rated	'A' (in)	'B' (in)	'Thread L.H'						
MPF-04-C	1/4" MP	20,000 psi / 1379 bar	0.374"	0.220"	1⁄4" - 28 UNF						
MPF-06-C	3/8" MP	20,000 psi / 1379 bar	0.468"	0.248"	3/8" - 24 UNF						
MPF-09-C	9/16" MP	20,000 psi / 1379 bar	0.719"	0.311"	9/16" - 18 UNF						
MPF-12-C	3⁄4" MP	20,000 psi / 1379 bar	0.937"	0.374"	34" - 16 UNF						
MPF-16-C	I" MP	20,000 psi / 1379 bar	1.250"	0.500"	I" - 14 UN						

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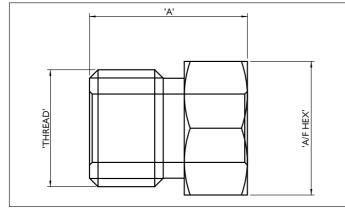
MPF - Medium Pressure Fitting Range

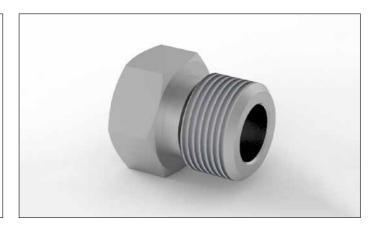
MPF

Gland Nut



Dimensional Drawing



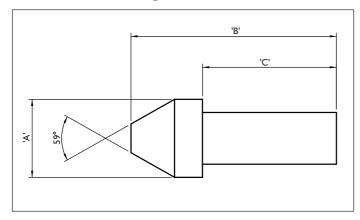


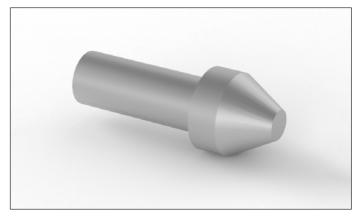
	MPF - SELECTION TABLE										
Product Code	Size	Rated	'A/F Hex' (in)	'A' (in)	'Thread'						
MPF-04-G	1/4" MP	20,000 psi / 1379 bar	1/2"	0.59"	7/16" - 20 UNF						
MPF-06-G	3/8" MP	20,000 psi / 1379 bar	5/8"	0.77"	9/16" - 18 UNF						
MPF-09-G	9/16" MP	20,000 psi / 1379 bar	7/8"	I.00"	13/16" - 16 UN						
MPF-12-G	3⁄4" MP	20,000 psi / 1379 bar	3/16"	I.024"	3⁄4" - 14 NPSM						
MPF-16-G	I" MP	20,000 psi / 1379 bar	I 3/8"	1.417"	13/8" - 12 UNF						

MPF

Plug

Dimensional Drawing





	MPF - SELECTION TABLE										
Product Code	Size	Rated	'A' (in)	'B' (in)	'C' (in)						
MPF-04-P	1/4" MP	20,000 psi / 1379 bar	0.374"	0.984"	0.642"						
MPF-06-P	3/8" MP	20,000 psi / 1379 bar	0.468"	1.102"	0.661"						
MPF-09-P	9/16" MP	20,000 psi / 1379 bar	0.719"	l.575"	I.075"						
MPF-12-P	3⁄4" MP	20,000 psi / 1379 bar	0.937"	I.752"	1.126"						
MPF-16-P	I" MP	20,000 psi / 1379 bar	I.250"	2.362"	1.551"						

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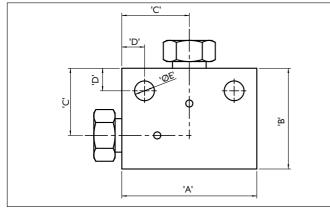


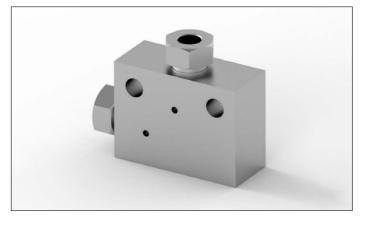
MPF

Elbow



Dimensional Drawing



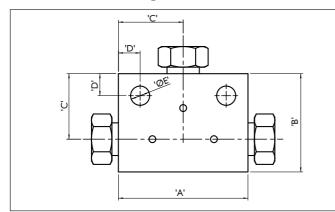


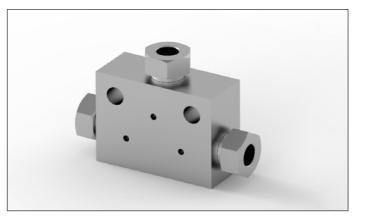
	MPF - SELECTION TABLE										
Product Code	Size	Rated	'A' (in)	'B' (in)	'C' (in)	'D' (in)	'ØE' (in)	Thickness (in)			
MPF-04-L	1/4" MP	20,000 psi / 1379 bar	1.50"	1.126"	0.75"	0.252"	0.22"	0.622"			
MPF-06-L	3/8" MP	20,000 psi / 1379 bar	2.00"	1.374"	1.00"	0.31"	0.22"	0.750"			
MPF-09-L	9/16" MP	20,000 psi / 1379 bar	2.50"	1.748"	1.25"	0.50"	0.28"	1.000"			
MPF-12-L	3⁄4" MP	20,000 psi / 1379 bar	3.00"	2.25"	1.50"	0.50"	0.338"	1.374"			
MPF-16-L	I" MP	20,000 psi / 1379 bar	4.126"	3.00"	2.063"	0.689"	0.409"	I.750"			

MPF

Tee

Dimensional Drawing





	MPF - SELECTION TABLE										
Product Code	Size	Rated	'A' (in)	'B' (in)	'C' (in)	'D' (in)	'ØE' (in)	Thickness (in)			
MPF-04-T	1⁄4" MP	20,000 psi / 1379 bar	I.50"	1.126"	0.75"	0.252"	0.22"	0.622"			
MPF-06-T	3/8" MP	20,000 psi / 1379 bar	2.00"	1.374"	1.00"	0.31"	0.22"	0.75"			
MPF-09-T	9/16" MP	20,000 psi / 1379 bar	2.50"	1.748"	1.25"	0.50"	0.28"	1.00"			
MPF-12-T	3⁄4" MP	20,000 psi / 1379 bar	3.00"	2.250"	I.50"	0.50"	0.338"	I.374"			
MPF-16-T	I" MP	20,000 psi / 1379 bar	4.126"	3.000"	2.063"	0.689"	0.409"	1.75"			

We take care to ensure that product information in this catalogue is reasonably crunter and up-to-date. However, our products are continually developed and update to ensure accurate and up-to-date information please refer to the product catalogue use fiss on our web site or context a member of our talse stem. When selecting a doract, the applicable operating system develop imma the considered to ensure safe R. The products function, material compatibility, adequate ratings, correct installation, persion and maintenance are the responsibilities of the system deligner and user. Assurance

that every product will give optimum performance and reliability. We are brind parcertified to BS INDS 0900:2008. Exerctional test certificate, letter of conformity copies of original mill certificates, providing total transability are available on reque to BS IN 10204. J Where available We reserve the right to make changes to the specifications and design etc., without prior notice.

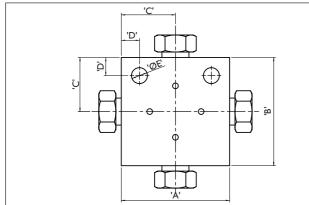


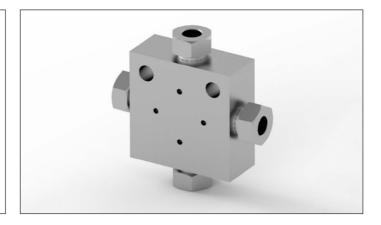
MPF

Cross



Dimensional Drawing



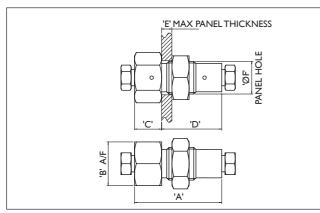


	MPF - SELECTION TABLE										
Product Code	Size	Rated	'A' (in)	'B' (in)	'C' (in)	'D' (in)	'ØE' (in)	Thickness (in)			
MPF-04-X	¹ /4" MP	20,000 psi / 1379 bar	I.50"	1.50"	0.75"	0.252"	0.22"	0.622"			
MPF-06-X	3/8" MP	20,000 psi / 1379 bar	2.00"	50.80	1.00"	0.31"	0.22"	0.750"			
MPF-09-X	9/16" MP	20,000 psi / 1379 bar	2.50"	2.50"	1.25"	0.50"	0.28"	1.000"			
MPF-12-X	3⁄4" MP	20,000 psi / 1379 bar	3.00"	3.00"	1.50"	0.50"	0.338"	1.374"			
MPF-16-X	I" MP	20,000 psi / 1379 bar	4.126"	4.126"	2.063"	0.689"	0.409"	1.750"			

MPF

Bulkhead Coupler

Dimensional Drawing





	MPF - SELECTION TABLE										
Product Code	Size	Rated	'A' (in)	'B' A/F (in)	'C' (in)	'D' (in)	'ØF' (in)	'E' (in)			
MPF-04-B	1/4" MP	20,000 psi / 1379 bar	2.00"	"	0.622"	1.378"	0.787"	0.39"			
MPF-06-B	3/8" MP	20,000 psi / 1379 bar	2.00"	Ι"	0.622"	1.378"	0.906"	0.39"			
MPF-09-B	9/16" MP	20,000 psi / 1379 bar	2.626"	I 3/8"	0.874"	1.752"	1.102"	0.63"			
MPF-12-B	3⁄4" MP	20,000 psi / 1379 bar	2.626"	I 7/8"	0.894"	1.732"	1.693"	0.51"			
MPF-16-B	I" MP	20,000 psi / 1379 bar	3.504"	2 1/8"	1.496"	2.007"	1.929"	0.39"			

bifold.co.uk fairchildproducts.com We take are to ensure that product information in this catalogue is reasonable accurate and up-to-date. However, our products are continually developed and updated to be neare accurate and up-to-date information please refer to the product catalogue state flict on our web site or contact a member of our able state. When selecting a product, the applicable operating system development and substate trains. When selecting a notacit, the applicable operating system development are considered to ensure safe use. The products function, material compatibility, adequera rating, correct insiliation, operation and maintenance are the responsibilities of the system deligner and user. Quality Assurance Al Biolog products are manufactured to a most stringent QA programme to ensure that every product will give sourcemp performance and reliability. We are third party copies of original interestings are provided in the second string and the copies of original interestings are provided to call and a second string to BS EN 10204 3.1 where available. We reserve the right to make changes to the specifications and delige nex, whitoou prior notice.

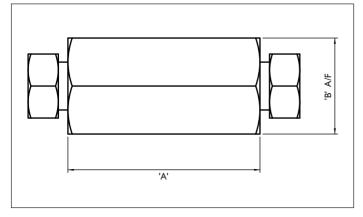


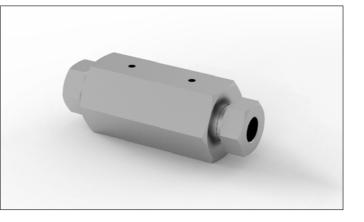
Straight Coupler

Bifold®

Dimensional Drawing

MPF



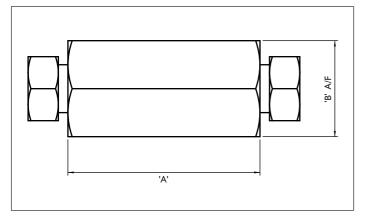


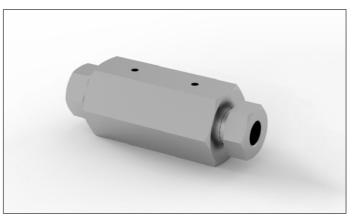
	MPF - SELECTION TABLE								
Product Code	'B' A/F (in)								
MPF-04-S	1/4" MP	20,000 psi / 1379 bar	1.500"	3/4"					
MPF-06-S	3/8" MP	20,000 psi / 1379 bar	I.752"	3/4"					
MPF-09-S	9/16" MP	20,000 psi / 1379 bar	2.126"	Ι"					
MPF-12-S	3⁄4" MP	20,000 psi / 1379 bar	2.500"	I 3/8"					
MPF-16-S	I" MP	20,000 psi / 1379 bar	3.500"	I 3/4"					

MPF

Straight Coupler Replaceable Seat

Dimensional Drawing





	MPF - SELECTION TABLE								
Product Code	Size	Rated	'A' (in)	'B' A/F (in)					
MPF-04-SR	1⁄4" MP	20,000 psi / 1379 bar	1.500"	3/4"					
MPF-06-SR	3/8" MP	20,000 psi / 1379 bar	I.752"	3/4"					
MPF-09-SR	9/16" MP	20,000 psi / 1379 bar	2.126"	"					
MPF-12-SR	3⁄4" MP	20,000 psi / 1379 bar	2.500"	I 3/8"					
MPF-16-SR	I" MP	20,000 psi / 1379 bar	3.500"	I 3/4"					

We are not ensure state product information in this catalogue is reasonably curate and up-to-date. However, our products are continually developed and update to ensure accurate and up-to-date information plases refer to the product catalogue use list on our web site or context a member of our sales team. When selecting a duct, the applicable operating system developm made to ensure sale in The products function, material compatibility, adequate ratings, correct installation, ensuiton and maintenance are the responsibilise of the system delayer and user. ssurance products are manufactured to a most strir

that every product will give optimum performance and reliability. We are third parcertified to BS EN ISO 9001/2008. Functional test certificate, letter of conformity copies of original mill certificates, providing total traceability are available on requ to BS EN 10204 21. I where available. We reserve the right to make changes to the specifications and design etc., without prior notice.

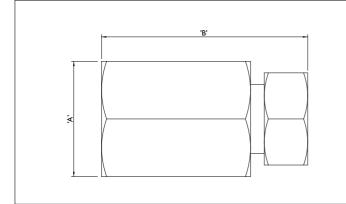


MPF

Tube Cap



Dimensional Drawing





	MPF - SELECTION TABLE								
Product Code	Size	Rated	'A' (in)	' B ' (in)					
MPF-04-TC	1/4" MP	20,000 psi / 1379 bar	5/8"	0.811"					
MPF-06-TC	3/8" MP	20,000 psi / 1379 bar	3/4"	1.126"					
MPF-09-TC	9/16" MP	20,000 psi / 1379 bar	"	I.374"					
MPF-12-TC	3⁄4" MP	20,000 psi / 1379 bar	I 3/8"	I.752"					
MPF-16-TC	I" MP	20,000 psi / 1379 bar	3/4"	2.244"					

MPF Selection Chart - Ordering Example

04		Model Code
	1/4" MP	
06	3/8" MP	
09	9/16" MP	Connection Siz
12	34" MP	
16	I" MP	
С	Collar	
G	Gland Nut	
P	Plug	
L	Elbow	
T		Туре
X		
B		
S		
SI		
T	C Tube Cap	
	NO LETTER 316L CW	
	63 Super Duplex ASTM A479 UNS S32750	
	Other materials are available on request, for more information	Material
	please contact Rotork Instruments	
	WO Without Glands & Collars	
	AP All Parts (special materials only)	
	Special material glands and collars rather than the default of only wetted parts.	Option
	AVA Anti Vibration Assemblies	Option
	Anti vibration assemblies added to all ports in place of default collars & glands	

MPF-04 - G - 63 - WO

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Other configurations available upon request.

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Quality Assurance Quality Assurance Al Biologi poducias and multicatorial do a most stringent QA programme to ensure a generative provident and a stringent QA programme to their jarry certified (p SS EN ISO 900) 2008. Functional test certificate, letter of conformity and conjust of program Il certificates providing total traceability year available on request. to BS EN 10204 31. where available. We reserve the right to make changes to the specifications and deling etc., which up inform notice.



Ordering Example

Anti-Vibration Assemblies



Product Description

MPF

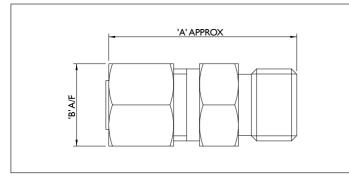
Bifold offer Medium Pressure Tubing Fittings for systems which may be subjected to vibration and shock loading. With standard fittings these loads could potentially cause excessive stress on the threaded ends of the tubing; the Anti-Vibration Assembly (AVA) equivalents dramatically reduce these forces, reducing the potential for system leaks due to tubing failure.

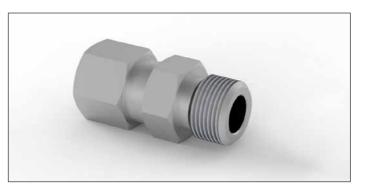
Features & Benefits

- Increased tubing life for systems with vibration and/or shock loading
- Provides the same connection as our standard medium pressure fitting
- Tube sizes 1/4", 3/8", 9/16", 3/4" & I"

- Operating temperature range of -421.6°F to +1,200°F
- High tensile 316L CW stainless steel with molybdenum disulphide coating as standard
- Special materials available upon request

Dimensional Drawing





	MPF - SELECTION TABLE								
Product Code	Size	Rated	'A' (in)	'B' A/F (in)					
MPF-04-AVA	1/4" MP	20,000 psi / 1379 bar	1.142"	1/2"					
MPF-06-AVA	3/8" MP	20,000 psi / 1379 bar	1.280"	5/8"					
MPF-09-AVA	9/16" MP	20,000 psi / 1379 bar	1.610"	7/8"					
MPF-12-AVA	3⁄4" MP	20,000 psi / 1379 bar	1.831"	3/16"					
MPF-16-AVA	I" MP	20,000 psi / 1379 bar	2.421"	3/8" / /2"					

MPF Selection Chart - Ordering Example

MPF	Medium Pressure Fitting	gs, up to and including 20,000 / 1379 bar	Model Code
04	1⁄4" MP		
06	3/8" MP		
09	9/16" MP		Connection Size
12	34" MP		
6	I" MP		
	AVA Anti Vibratio	on Assemblies	Туре
	NO LETTER	316L CW	
	63	Super Duplex ASTM A479 UNS S32750	Material
	Other materials a	are available on request, for more information please contact Rotork Instruments	

MPF - 04 - AVA - 63

Ordering Example

Accuracy or importance We take car to ensure that product information in this catalogue is reasonably accurate and up-to-date. However, our products are continuitly developed and upda to so ensure accurate and up-to-date information please refer to the product catalo 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 sale use. The products function, material compatibility, adequate ratings, correct instillatio operation and maintenance are the responsibilies of the system designer and user. ity Assurance fold products are manufactured to a most stringent QA program very product will give optimum performance and reliability. We a fed to BS EN ISO 9001:2008. Functional test certificate, letter of a cational discontinue available and test certificate and the second string optimizer optimizer and test certificate.



MPF - Medium Pressure Fitting Range

MPF

Adaptors



Product Description

The Bifold range of Medium Pressure valves also includes a range of Adaptors. Typical applications include Hydraulic Control Panels, Hydrostatic Testing Equipment, Chemical Injection Skids, Water Jet and other general industrial applications.

Features & Benefits

- High tensile 316L CW stainless steel as standard.
- Operating temperature range of -421.6°F to +1,200°F
- Special materials available upon request.
- Tube Sizes from $\frac{1}{4}$ to 1".

MPF

Adaptors

Adaptors Male NPT x Male MP

	ADAPTORS MALE NPT x MALE MP - SELECTION TABLE									
	1⁄4" MP	3/8" MP	9/16" MP	¾" MP	I" MP					
¼" NPT	MPF-04N-04-N	MPF-04N-06-N	MPF-04N-09-N	MPF-04N-12-N	MPF-04N-16-N					
3/8" NPT	MPF-06N-04-N	MPF-06N-06-N	MPF-06N-09-N	MPF-06N-12-N	MPF-06N-16-N					
½" NPT	MPF-08N-04-N	MPF-08N-06-N	MPF-08N-09-N	MPF-08N-12-N	MPF-08N-16-N					
3⁄4" NPT	MPF-12N-04-N	MPF-12N-06-N	MPF-12N-09-N	MPF-12N-12-N	MPF-12N-16-N					
I" NPT	MPF-16N-04-N	MPF-16N-06-N	MPF-16N-09-N	MPF-16N-12-N	MPF-16N-16-N					

Adaptors Male MP x Male MP

	ADAPTORS MALE MP x MALE MP - SELECTION TABLE									
	¼" MP 3/8" MP 9/16" MP ¾" MP I" MP									
1⁄4" MP	MPF-04-04-N	MPF-04-06-N	MPF-04-09-N	MPF-04-12-N	MPF-04-16-N					
3/8" MP	MPF-04-06-N	MPF-06-06-N	MPF-06-09-N	MPF-06-12-N	MPF-06-16-N					
9/16" MP	MPF-04-09-N	MPF-06-09-N	MPF-09-09-N	MPF-09-12-N	MPF-09-16-N					
3⁄4" MP	MPF-04-12-N	MPF-06-12-N	MPF-09-12-N	MPF-12-12-N	MPF-12-16-N					
I" MP	MPF-04-16-N	MPF-06-16-N	MPF-09-16-N	MPF-12-16-N	MPF-16-16-N					

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I Biold products are manufactured to a most stringent QA programme to ensure at every product will give optimum performance and reliability. Wa ere with qarty refinde to BS EN ISO 9001-2008. Functional test certificate, letter of conformity and pies of original mill certificate, providing total traceability are available on request, BS EN 10204 31. where savailable. We reserve the right to make changes to the edicitations and design etc., without prior notice.



Adaptors



Adaptors Male NPT x Female MP

MPF

	FEMALE										
		ADAPTORS MALE NPT x FEMALE MP - SELECTION TABLE									
ш		י∕₄" M P	3/8" MP	9/16" MP	³⁄4" MP	I" MP					
	¼" NPT	MPF-04N-04-A	MPF-04N-06-A	MPF-04N-09-A	MPF-04N-12-A	MPF-04N-16-A					
MA	3/8" NPT	MPF-06N-04-A	MPF-06N-06-A	MPF-06N-09-A	MPF-06N-12-A	MPF-06N-16-A					
	1⁄2" NPT	MPF-08N-04-A	MPF-08N-06-A	MPF-08N-09-A	MPF-08N-12-A	MPF-08N-16-A					
	3⁄4" NPT	MPF-12N-04-A	MPF-12N-06-A	MPF-12N-09-A	MPF-12N-12-A	MPF-12N-16-A					
	I" NPT	MPF-16N-04-A	MPF-16N-06-A	MPF-16N-09-A	MPF-16N-12-A	MPF-16N-16-A					

Adaptors Male MP x Female NPT

	FEMALE									
		ADAPTORS								
MALE		י∕₄ " NPT	3/8" NPT	½" NPT	3⁄4" NPT	I" NPT				
	1⁄4" MP	MPF-04-04N-A	MPF-04-06N-A	MPF-04-08N-A	MPF-04-12N-A	MPF-04-16N-A				
	3/8" MP	MPF-06-04N-A	MPF-06-06N-A	MPF-06-08N-A	MPF-06-12N-A	MPF-06-16N-A				
	9/16" MP	MPF-09-04N-A	MPF-09-06N-A	MPF-09-08N-A	MPF-09-12N-A	MPF-09-16N-A				
	³⁄4" M P	MPF-12-04N-A	MPF-12-06N-A	MPF-12-08N-A	MPF-12-12N-A	MPF-12-16N-A				
	I" MP	MPF-16-04N-A	MPF-16-06N-A	MPF-16-09N-A	MPF-16-12N-A	MPF-16-16N-A				

Adaptors Male MP x Female MP

	FEMALE								
MALE		ADAPTORS							
		1⁄4" MP	3/8" MP	9/16" MP	³⁄4" MP	I" MP			
	1⁄4" MP	MPF-04-04-A	MPF-04-06-A	MPF-04-09-A	MPF-04-12-A	MPF-04-16-A			
	3/8" MP	MPF-06-04-A	MPF-06-06-A	MPF-06-09-A	MPF-06-12-A	MPF-06-16-A			
	9/16" MP	MPF-09-04-A	MPF-09-06-A	MPF-09-09-A	MPF-09-12-A	MPF-09-16-A			
	³ ⁄4" MP	MPF-12-04-A	MPF-12-06-A	MPF-12-09-A	MPF-12-12-A	MPF-12-16-A			
	I" MP	MPF-16-04-A	MPF-16-06-A	MPF-16-09-A	MPF-16-12-A	MPF-16-16-A			

Assurance products are manufactured

that every product will give optimum performance and reliability. We are third performance certified to BS 100 5001/2008. Encicional tract certificates, letterer of conforma pa copies of original mill certificates, providing total tractability are available on request to BS 101 1004 J. Where available VM everaws the right to make changes to the specifications and design ecc. without prior notice.

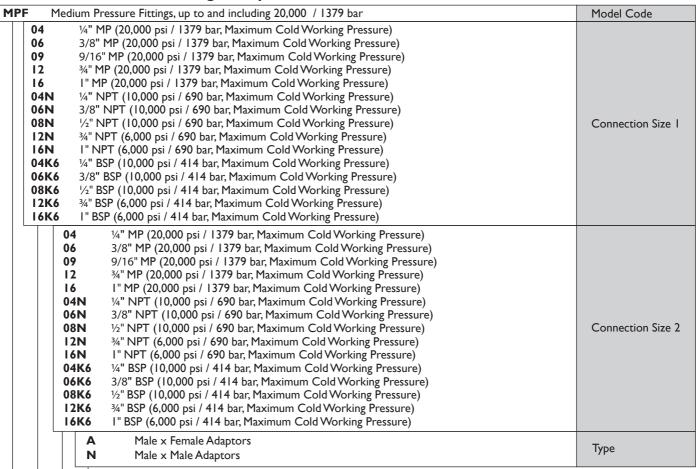


Bifold

MPF

Adaptors

MPF Selection Chart - Ordering Example



MPF - 04 - 04N - A

Ordering Example

bifold.co.uk fairchildproducts.com We take care to ensure that product information in this catalogue is reasonably accurate an udy-oracits. However, our products are containly developed and updates to to ensure accurate and up-to-date information please refer to the product catalogue size list on our web its or contact are member of our safet 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 design rand user. ality Assurance

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MPF

Threaded Nipples



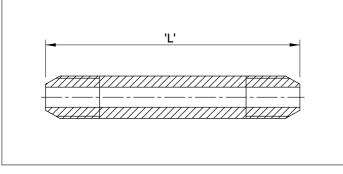
Product Description

Bifold offer Medium Pressure pre-cut coned and threaded nipples up to 12".

Features & Benefits

- 316 Stainless Steel.
- Provides a fast system build solution.

Dimensional Drawing





• Custom lengths available on request.

	LENGTH - SELECTION TABLE									
Size	2.75"	3"	4"	6"	8''	10"	12"	Rated		
1/4"	MPF-04-TN-L2.75	MPF-04-TN-L3	MPF-04-TN-L4	MPF-04-TN-L6	MPF-04-TN-L8	MPF-04-TN-LIO	MPF-04-TN-LI2	20,000 psi / 1379 bar		
3/8"		MPF-06-TN-L3	MPF-06-TN-L4	MPF-06-TN-L6	MPF-06-TN-L8	MPF-06-TN-LI0	MPF-06-TN-LI2	20,000 psi / 1379 bar		
9/16"			MPF-09-TN-L4	MPF-09-TN-L6	MPF-09-TN-L8	MPF-09-TN-LI0	MPF-09-TN-LI2	20,000 psi / 1379 bar		
3⁄4"				MPF-12-TN-L6	MPF-12-TN-L8	MPF-12-TN-LI0	MPF-12-TN-L12	20,000 psi / 1379 bar		
1"				MPF-16-TN-L6	MPF-16-TN-L8	MPF-16-TN-LI0	MPF-16-TN-L12	20,000 psi / 1379 bar		

MPF Selection Chart - Ordering Example

MPF	Medium Pressure Fittings, up to and including 20,000 / 1379 bar	Model Code
04 06 09 12 16	1/4" MP 3/8" MP 9/16" MP 3/4" MP 1" MP	Connection Size
	TN Threaded Nipples	Туре
	L2.75 2.75" L3 3" L4 4" L6 6" L8 8" L10 10" L12 12" Custom lengths are available on request, for more information please contact Rotork Instruments.	Length

MPF - 04 - TN - L3

Contact Rotork Instruments for stock medium pressure tube enquiries.

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to a most stringent QA programme to ensure performance and reliability. We are third party nctional test certificate, letter of conformity and widing total traceability are available on request. We reserve the right to make changes to the t prior notice.



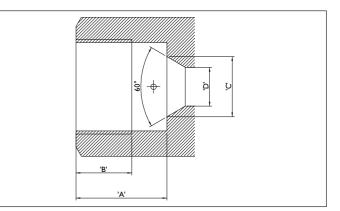
Ordering Example

Technical Data



Technical Data

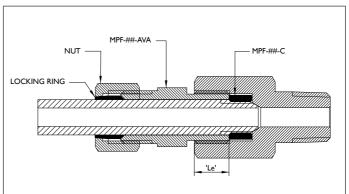
MEDIUM PRESSURE BODY CONNECTIONS						
Connection	'A'	'B'	'C'	'D'	'Thread'	
1/4" MP	0.50"	0.28"	0.19"	0.11"	7/16-20 UNF	
3/8" MP	0.62"	0.38"	0.31"	0.21"	9/16-18 UNF	
9/16" MP	0.75"	0.44"	0.50"	0.31	13/16-16 UN	
3⁄4" MP	0.94"	0.50"	0.62"	0.44"	3/4-14 NPSM	
I" MP	1.31"	0.81"	0.88"	0.56"	1 3/8-12 UNF	



MEDIUM PRESSURE TUBE CONNECTION					
Connection	'A' Ø	'B'	'Thread L.H'		
1/4" MP	0.138"	0.374"	1/4-28 UNF		
3/8" MP	0.248"	0.433"	3/8-24 UNF		
9/16" MP	0.406"	0.531"	9/16-18 UNF		
3⁄4" MP	0.563"	0.630	3/4-16 UNF		
I" MP	0.719"	0.846"	1-14 UN		

AVA GLAND ASSEMBLY TORQUE						
Size	Gland Minimum Thread Engagement Le (in)	Required Torque (Nm)	Nut			
¹ /4"	0.079"	22	HT+1-1/4 Full Turns			
3/8"	0.177"	30	HT+1-1/4 Full Turns			
9/16"	0.213"	55	HT+1-1/4 Full Turns			
3⁄4"	0.417"	95	HT+1-1/4 Full Turns			
1"	0.650"	160	HT+1-1/4 Full Turns			
	HT =	Hand Tight				

GLAND ASSEMBLY TORQUE						
Size	Gland Minimum Thread Engagement Le (in)	Required Torque (Nm)				
1/4"	0.177"	30				
3/8"	0.256"	42				
9/16"	0.311"	76				
3⁄4"	0.366"	125				
l"	0.610"	200				

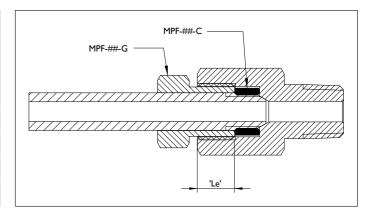


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THREAD -

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II Biold products are manufactured to a most stringent QA programme to ensure as every product will give opinium performance and reliability. We are third party artified to BS EN ISO 2001.2008. Functional test certificate, letter of conformity and parts of original mill certificates, providing total transability are available on request, BS EN 10204 31. I where available. We reserve the right to make changes to the excitacions and design etc., without prior notice.



Features & Benefits



Bifold Marshalsea provides pumps for use with fluids which include a variety of water-based, fire resistant and other media types. The properties of these fluids include a combination of high or low viscosity with either high or low lubricity.

Various pump models are available for use with water glycol and other calibration fluids.

Bifold Marshalsea also provide Relief Valves for both gaseous and liquid service.

Bifold Marshalsea also provide surface and subsea Pressure Intensifiers for pressure boosting of water based or synthetic oil-based fluids.

Fluid Relief Valves



Fluid Proportional Relief Valves



Fluid Proportional Relief Valves



Standard Valve Equipment Design & Build

 Manufactured from 316L grade stainless steel externals as standard. The valves are suited for offshore and other corrosive atmospheres. Materials can be supplied compliant to NACE MR-01-75. Low temperature elastomer seals are available for low temperature arctic service applications.

Compact Relief Valve (Direct Acting)

- Direct acting relief valves are designed for fast response in irregular duty applications. They are often used as an efficient solution to clip pressure spikes.
- Limits the maximum permissible system pressure and diverts some or all of the pump's flow to tank when the pressure of the relief valve is reached.

Hydraulic Precision Relief Valve

Precision relief valves have very high sealing forces along with accurate and narrow dead bands. Precision relief valves should be used in preference to conventional direct acting relief valves where there is risk of vibration induced leakage or where low dead bands are important to system safety performance. Conventional direct acting relief valves typically will have a narrow dead band when tested on a static dead weight tester but will have a much wider dead band under flowing conditions that will require a significant drop in system pressure to enable the valve to reseat.

Accuracy or imormation We also car to ensure that product information in this catalogue is reasonably accurate and up-to-date. However, our products are continuitly developed and updats to to ensure accurate 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 math & contaider to ensure as also use. The products function, material compatibility, adequate rating, correct installation operation and maintenance are the responsibilities of the system designer and user. I Biold products are manufactured to a most stringent QA programme to e at every product will give optimum performance and reliability. We are third reflect to BS EN ISO '9001/2008. Functional test certificate, letter of conformies of original mill certificates, powerling total tracessibility are available on ro BS EN ISO2 * 101/2008. We reserve the right to make changes to edifications and edisign etc., without prior notice.



Preferred Range

ilifold[®] Marshalsea

	FLUID RELIEF VALVES - PREFERRED RANGE							
Product	Schematic Representation	Page Number	Product Code	Product Description				
VRCD Compact Fluid Proportional Relief Valves		43/44	VRCD-NS-1380-020-M38F-N14F-N-S	³ ⁄ ₈ " MP Female, Inlet Connection and ¹ ⁄4" NPT Female, Outlet Connection, Compact Direct Acting Relief Valve. 10,805 psi / 745 bar to 20,015 psi / 1380 bar, Ø 2mm Orifice.				
		10711	VRCD-NS-1380-020-M38F-B14F-N-S	³ / ₈ " MP Female, Inlet Connection and 1/4" BSP Female, Outlet Connection, Compact Direct Acting Relief Valve. 10,805 psi / 745 bar to 20,015 psi / 1380 bar, Ø 2mm Orifice.				

Preferred Range

	FLUID RELIEF VALVES - PREFERRED RANGE							
Product	Schematic Representation	Page Number	Product Code	Product Description				
VRD Direct Acting Fluid Proportional Relief Valves		45 / 46	VRD-SS-1380-025-M38F-N14F-N-S	³ / ₈ " MP Female Inlet Connection and ¹ /4" NPT Female Outlet Connection, Direct Acting Relief Valve. 14,503 psi / 1000 bar to 20,015 psi / 1380 bar, Ø 2.5mm Orifice.				
			VRD-SS-1380-025-M38F-B14F-N-S	MP Female Inlet Connection and NPT Female Outlet Connection, Direct ting Relief Valve. 503 psi / 1000 bar to 20,015 psi / 1380 bar,				

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Quality Assurance All Bifold products are manufactured to a most stringent QA programme to ensure All Bifold products are manufactured to a most stringent QA programme to ensure terrified to 85 EN ISO 5001.2008. Functional test certificate, letter of conforming an opcies of original mill certificate, provide goal arcaeability are valiable on request to 85 EN 10204 31. where available. We reserve the right to make changes to the specifications and design exc., wholcu prior notice.



Preferred Range

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FLUID RELIEF VALVES - PREFERRED RANGE								
Product	Schematic Representation	Page Number	Product Code	Product Description				
I 4570 Fluid Precision Relief Valves		47 / 48	1 4570 - 09	9/16" MP Inlet Connection and 3/8" BSP Outlet Connection, Precision Relief Valve. 8,702 psi / 600 bar to 20,015 psi / 1380 bar, Ø '/8" Orifice.				
I 4570 Fluid Precision Relief Valves		47 / 48	14570 - 11	9/16" MP,Inlet Connection and 9/16" MP,Outlet Connection, Precision Relief Valve. 8,702 psi / 600 bar to 20,015 psi / 1380 bar, Ø '/8" Orifice.				
Image: Constraint of the second se		47 / 48	14570 - 15	9/16" MP, Inlet Connection and ½" NPT, Outlet Connection, Precision Relief Valve. 8,702 psi / 600 bar to 20,015 psi / 1380 bar, Ø '/8" Orifice.				
I 4580 Fluid Precision Relief Valves		47 / 48	14580 - 04	3/8" MP, Inlet Connection and 3/8" NPT, Outlet Connection, Precision Relief Valve. 8,702 psi / 600 bar to 20,015 psi / 1380 bar, Ø '/8" Orifice.				
I 4580 Fluid Precision Relief Valves		47 / 48	l 4580 - 09	3/8" MP, Inlet Connection and 3/8" BSP, Outlet Connection, Precision Relief Valve. 8,702 psi / 600 bar to 20,015 psi / 1380 bar, Ø '/8" Orifice.				

Accuracy of information We take cars to ensure that product information in this catalogue in accurate and up-out date. However, our products are constraining devi-tises list on our web site or constraint a member of our talls team. Who product, the applicable operating system design must be considered at use. The products function, material consultability, adequate ratings, co-mendation of the system design must be considered at use. The products function, material consultability, adequate ratings, co-server has a systematic and the system design.

Quality Assurance All Biold products are manufactured to a most stringent QA programm that every product will give optimum performance and reliability. We are certified to BS EN ISO 9001:2008. Functional text certificate, leater of co copies of original mill certificates, providing total traceability are available to BS EN 10204 31. Where available. We reserve the right to make chang



Preferred Range

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FLUID RELIEF VALVES - PREFERRED RANGE							
Product	Schematic Representation	Page Number	Product Code	Product Description			
I 4580 Fluid Precision Relief Valves		47 / 48	14580 - 11	3/8" MP Inlet Connection and 3/8" MP Outlet Connection, Precision Relief Valve. 8,702 psi / 600 bar to 20,015 psi / 1380 bar, Ø '/8" Orifice.			
I 4580 Fluid Precision Relief Valves		47 / 48	14580 - 16	3/8" MP Inlet Connection and ¼" NPT Outlet Connection, Precision Relief Valve. 8,702 psi / 600 bar to 20,015 psi / 1380 bar, Ø '/8" Orifice.			
I 4580 Fluid Precision Relief Valves		47 / 48	14580 - 20	3/8" MP Inlet Connection and ½" NPT Outlet Connection, Precision Relief Valve. 8,702 psi / 600 bar to 20,015 psi / 1380 bar, Ø '/8" Orifice.			
I 4580 Fluid Precision Relief Valves		47 / 48	14580 - 22	 '/4" MP Female Inlet Connection and '/2" BSP Female Outlet Connection, Precision Relief Valve. 8,702 psi / 600 bar to 22,011 psi / 1518 bar, Ø '/8" Orifice. 			
Image: Constraint of the second se		47 / 48	23800 - 04	³ ⁄ ₄ " MP Inlet Connection and ³ ⁄ ₄ " MP Outlet Connection, Precision Relief Valve. 8,702 psi / 600 bar to 20,015 psi / 1380 bar, Ø '/8" Orifice.			

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VRCD

Product Description

The type VRCD fluid proportional relief valves have been designed primarily to provide over pressure protection in systems subject to fluid thermal expansion, but it can also be reliably used as the primary relief valve in systems with low volume pump flow rates.

The relief valve weight is : 0.24 kg.

Features & Benefits

- Set Point Repeatability ±3%.
- Set Point Range user specified up to 1,380 bar.
- Sealing Re-Seat Pressure Virtually zero leakage re-seat pressure ≥ 80% of cracking pressure.
- Flow capacity flow rates up to 0.07 scfm at 10% over pressure.

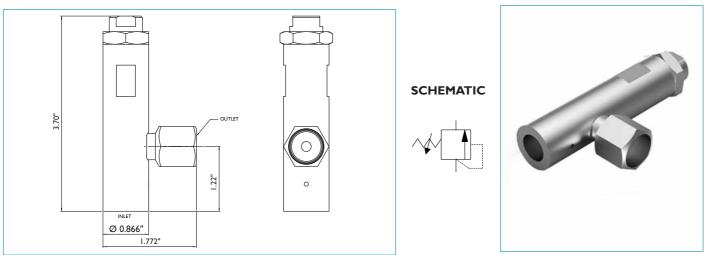
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- Orifice Size: Ø 2.5mm, Ø 2mm & Ø 1.7mm.
- Operating Media mineral oils, water glycol fluids and some chemicals. Consult Bifold Marshalsea for specific chemicals and synthetic oils compatibility.

Materials

Body:316L stainless steelNitrile (Standard)Spring:302S26 stainless steelVitonSeal Material:KalrezSeat Material:Monel and Stainless Steel (Standard)Nitrile (Low temperature)Nitrile (Low temperature)Nitrile (Low temperature)

Dimensional Drawing



Selection Chart - Ordering Example

VRCD - SELECTION TABLE						
Part Number	Pressure Range (psig)	Inlet Connection	Outlet Connection	Repair Kit		
VRCD-NS-0345-040-M38F-N14F-N-S	725 - 5,000 psig	∛₀" MP Female	1⁄4" NPT Female	RK VRCD-NS-0345-040-M38F-N14F-N-S		
VRCD-NS-0800-040-M38F-N14F-N-S	4,785 - 11,600 psig	³⁄₃" MP Female	'∕4" NPT Female	RK VRCD-NS-0800-040-M38F-N14F-N-S		
VRCD-NS-1380-020-M38F-N14F-N-S	10,805 - 20,015 psig	³∕ ₈ " MP Female	'∕4" NPT Female	RK VRCD-NS-1380-020-M38F-N14F-N-S		
VRCD-NS-0345-040-M38F-B14F-N-S	725 - 5,000 psig	³∕ ₈ " MP Female	1/4" BSP Female	RK VRCD-NS-0345-040-M38F-B14F-N-S		
VRCD-NS-0800-040-M38F-B14F-N-S	4,785 - 11,600 psig	³⁄₃" MP Female	1/4" BSP Female	RK VRCD-NS-0800-040-M38F-B14F-N-S		
VRCD-NS-1380-020-M38F-B14F-N-S	10,805 - 20,015 psig	³⁄₀" MP Female	1/4" BSP Female	RK VRCD-NS-1380-020-M38F-B14F-N-S		



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Bifold[®] Marshalsea

Selection Chart - Ordering Example

VR	Relief Valve	

VRCD

Relief Valve	<u> </u>	Product Group
CD Compact Di	-	Model Code
M0000 Special	Design (Marshalsea Variant Number)	Variant (Optional)
	o Stainless Stainless - NACE Compliant (Inlet Side Only)	Body Material
0345 0800 1380	507 - 5,000 psig (35 - 345 bar) 4,780 - 11,600 psig (330 - 800 bar) 10,800 - 20,000 psig (745 - 1380 bar)	Maximum Workin Pressure
020 040		Orifice size
	M Medium Pressure	
	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Inlet Connection
	M Medium Pressure	
	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Outlet Connectio
	K Kalrez (-13°F to +176°F) L Nitrile (Low temperature) (-40°F to +176°F) N Nitrile (Standard) (-4°F to +176°F) V Viton (14°F to +176°F)	Seal Material
	S Stainless (Standard)	Seat Material
	0000	Set Pressure (Opti
CD - SS-0345-040	-N38F-N38F - N - S -	Ordering Example

Approvals Details



This relief valve conforms to European Directive 2014/34/EU relating to equipment intended for use in potentially explosive atmospheres and are ATEX compliant. This valve also conforms to the Pressure Equipment Directive 97/23/EC. All valves are CE marked and supplied with a test certificate plus a declaration of conformity.

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VRD

Product Description

The direct acting type VRD relief valve has been designed to provide accurate pressure relief for systems operating g at pressures up to 20,015 psig.

The relief valve weight is 2.80 lb.

Features & Benefits

- Set Point Repeatability ±3%.
- Set Point Range user specified up to 20,000 psig.
- Sealing Re-Seat Pressure Virtually zero leakage re-seat pressure ≥ 80% of cracking pressure.
- Operating Media Mineral oils, water-glycol, for additional options please contact Rotork Instruments.

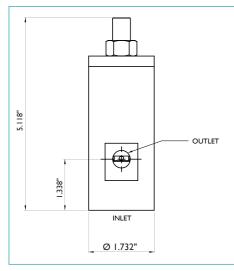
Bifold Marshalsea

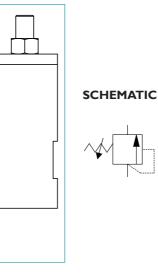
• 316L stainless steel externals.

Materials

External & Wetted Parts - 316L stainless steel

Dimensional Drawing (mm)







Selection Chart - Ordering Example

VRD - SELECTION TABLE				
Part Number	Pressure Range (psig)	Inlet Connection	Outlet Connection	Repair Kit
VRD-SS-0850-032-M38F-N14F-N-S	6,500 -12,300 psig	³∕8" MP Female	1/4" NPT Female	RK VRD-SS-0850-032-M38F-N14F-N-S
VRD-SS-1040-032-M38F-N14F-N-S	10,150-15,080 psig	³∕8" MP Female	1/4" NPT Female	RK VRD-SS-1040-032-M38F-N14F-N-S
VRD-SS-1380-025-M38F-N14F-N-S	14,500 - 22,000 psig	³∕8" MP Female	1/4" NPT Female	RK VRD-SS-1380-025-M38F-N14F-N-S
VRD-SS-0850-032-M38F-B14F-N-S	6,500 -12,300 psig	³∕8" MP Female	1/4" BSP Female	RK VRD-SS-0850-032-M38F-B14F-N-S
VRD-SS-1040-032-M38F-B14F-N-S	10,150-15,080 psig	³∕8" MP Female	1/4" BSP Female	RK VRD-SS-1040-032-M38F-B14F-N-S
VRD-SS-1380-025-M38F-B14F-N-S	14,500 - 22,000 psig	³∕8" MP Female	'/4" BSP Female	RK VRD-SS-1380-025-M38F-B14F-N-S

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Selection Chart - Ordering Example

VRD

Relief Valve		Product Group
D Direct Acting		Model Code
M0000 Special E	Design (Marshalsea Variant Number)	Variant (Optional)
NS 316 DX Dup	Stainless Stainless - NACE Compliant (Inlet Side Only) lex Stainless er Duplex Stainless	Body Material
0100 0360 0540 0850 1040 1380	290 - 1,450 psig (20 - 100 bar) 1,160 - 5,220 psig (0 - 360 bar) 4,350 - 7,830 psig (300 - 540 bar) 6,526 - 12,328 psig (450 - 850 bar) 10,150 - 15.080 psig (700 - 1040 bar) 14,500 - 22,000 psig (1000 - 1380 bar)	Maximum Working Pressure
025 032	2.5mm Orifice (Only availiable with the 0850,1040 and 1380 bar valves) 3.2mm Orifice	Orifice size
	M Medium Pressure 14 1/4" 38 3/8" 12 1/2" 916 9/16" F Female	Inlet Connection
	M Medium Pressure 14 1/4" 38 3/8" 12 1/2" 916 1/16" F Female	Outlet Connection
	K Kalrez (-13°F to +176°F) L Nitrile (Low temperature)(-40°F to +176°F) N Nitrile (Standard) (-4°F to +176°F) V Viton (14°F to +176°F)	Seal Material
	S Stainless (Standard)	Seat Material
	0000	Set Pressure (Optio
D - SS-0360 - 032	-N38F-N38F-N - S	Ordering Example

Approvals Details



This relief valve conforms to European Directive 2014/34/EU relating to equipment intended for use in potentially explosive atmospheres and are ATEX compliant. This valve also conforms to the Pressure Equipment Directive 97/23/EC. All valves are CE marked and supplied with a test certificate plus a declaration of conformity.

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14570, 14580 & 23800 - Precision Relief Valve Range

14570, 14580 & 23800

Bifold Marshalsea

Product Description

The Type 14520, 14530, 14570, 14580, 23600, 23700 & 23800 precision relief valve has been designed to provide accurate over pressure protection in systems operating at pressures of up to 17,404 psig and flows of up to 0.88 scfm.

Precision relief valves have very high sealing forces along with accurate and narrow dead bands. Precision relief valves should be used in preference to sprung relief valves where there is risk of vibration induced leakage or where dead bands are important to system safety performance. Sprung relief valves typically will have a narrow dead band when tested on a static dead weight tester but will have a much wider dead band under flowing conditions that will require a significant drop in system pressure to enable the valve to reseat.

The floating poppet design enhanced by the use of linear bearings produces a valve with a low pressure increase across the full range.

Installation and removal of system pipe work is simplified by the right angled porting configuration.

The relief valve weight is 2.14 lb.

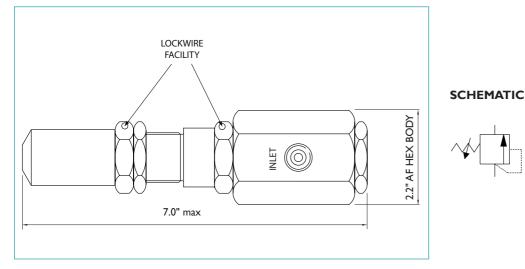
Features & Benefits

- Up to 22,000 psig, 0.882 scfm.
- Set Point Repeatability ±3%.
- Sealing Re-Seat Pressure Virtually zero leakage re-seat pressure ≥ 90% of cracking pressure.
- Flow Capacity at up to 10% overpressure: 0.882 scfm
- Orifice Size: Ø 1/8"
- Important Set point is affected by vent port back pressure and will DECREASE accordingly.
- The Main Spring Load is not transmitted to the seat, thus reducing distortion and wear.

Materials

External & Wetted Parts:	316L stainless steel. M390.	
Seal Material:	Nitrile (Standard) Viton - Add suffix M089 eg. 14520 - 08 - M089	(-4°F to +176°F). (14°F to +176°F).
Seat Material:	Nitrile (Low Temperature) - Add suffix M106 eg. 14520 - 08 - M106 M340.	(-40°F to +176°F).
Seat l'Iacellai.		

Dimensional Drawing





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product will give optimum performance and reliability. We are third party to BS EN ISO 90012008. Functional text certificate, letter of conformity and original mill certificates, providing total traceability are available on request, 10204.3.1. where available. We reserve the right to make changes to the ions and design etc., without prior notice.



14570, 14580 & 23800

Bifold[®] Marshalsea

Selection Chart - Ordering Example

14570, 14580 & 23800 - SELECTION TABLE					
Part Number	Pressure Range (psig)	Inlet Connection	Outlet Connection	Repair Kit	
14580 - 16	8,700 - 20,000	3/8" MP	!⁄₄" NPT	RK 14580 - 16	
14580 - 04	8,700 - 20,000	3/8" MP	3/8" NPT	RK 14580 - 04	
14580 - 09	8,700 - 20,000	3/8" MP	3/8" BSP	RK 14580 - 09	
14580 - 11	8,700 - 20,000	3/8" MP	3/8" MP	RK 14580 - 11	
14580 - 20	8,700 - 20,000	3/8" MP	1/2" NPT	RK 14580 - 20	
14580 - 22	14,500 - 22,000	1/4" MP Female	1/2" BSP Female	RK 23600 - 01	
14570 - 09	8,700 - 20,000	9/16" MP	1/4" BSP	RK 14570 - 09	
14570 - 11	8,700 - 20,000	9/16" MP	9/16" MP	RK 14570 - 11	
14570 - 15	8,700 - 20,000	9/16" MP	1/2" NPT	RK 14570 - 15	
23800 - 04	8,700 - 20,000	3⁄4" MP	3⁄4" MP	RK 23800 - 04	

Approvals Details



This relief valve conforms to European Directive 2014/34/EU relating to equipment intended for use in potentially explosive atmospheres and are ATEX compliant. This valve also conforms to the Pressure Equipment Directive 97/23/EC. All valves are CC marked and supplied with a test certificate plus a declaration of conformity.

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II Bildel products are manufactured to a most stringent QA programme to ensure at every product will give optimum performance and reliability. War exit with qarty artifield to BS EN ISO 9001-2008. Functional test certificate, letter of conformity and pipes of original III certificates, providing total traceability are available on request, 85 EN 10204 31. where available. We reserve the right to make changes to the exclications and design ecc., without prior notice.



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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 accurate 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.

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NOTES







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