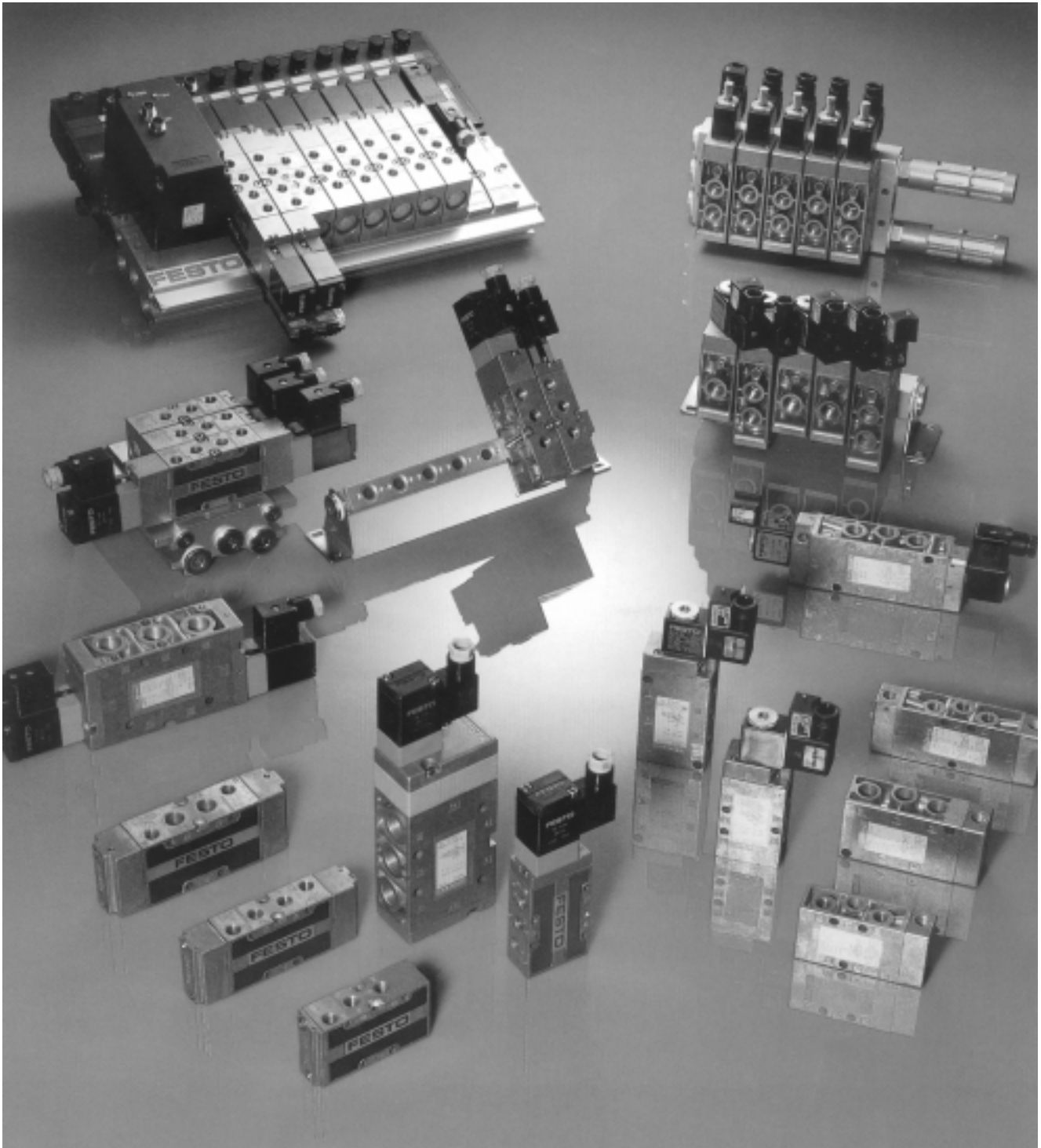


Tiger 2000 and Classic Tiger Series Pneumatic Power Valves

Sizes 1/8", 1/4", 3/8", 1/2", 3/4"



FESTO

Tiger 2000 and Classic Tiger Series Valves

Contents, How to Order

Tiger 2000 Series Valves

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Manifold/Rail Mounting

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How to Order:

Valves:

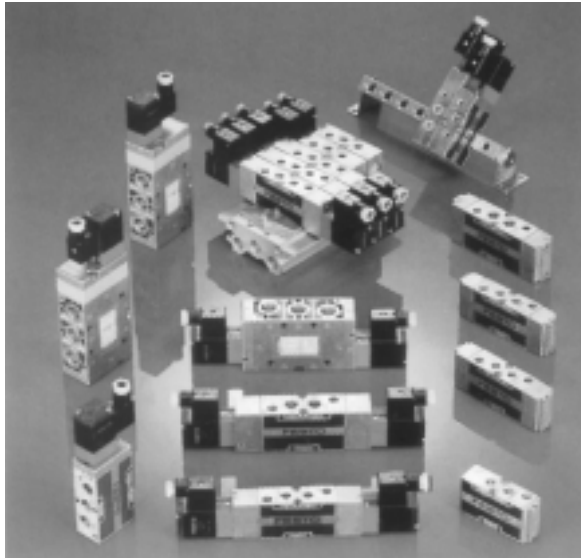
To order Tiger valves, simply indicate the part number and type. The part number for Type MVH and JMVH valves includes the coil. For Type MFH and JMFH valves, the coil must be ordered separately.

Accessories:

All solenoid sockets, cables and accessories must be ordered separately.

Ordering Example: To order a 5/2 single solenoid Tiger 2000 valve with 1/8" ports, pneumatic reset, external pilot supply, 24 VDC solenoid F-coil, and socket with LED and 8 ft cable, order:

	Part No.	Type
Valve	30992	MFH-5-1/8-L-S-B
F-coil	34411	MSFG-24-OD
Socket with LED and 8 ft cable	30935	KMF-1-24-2.5-LED

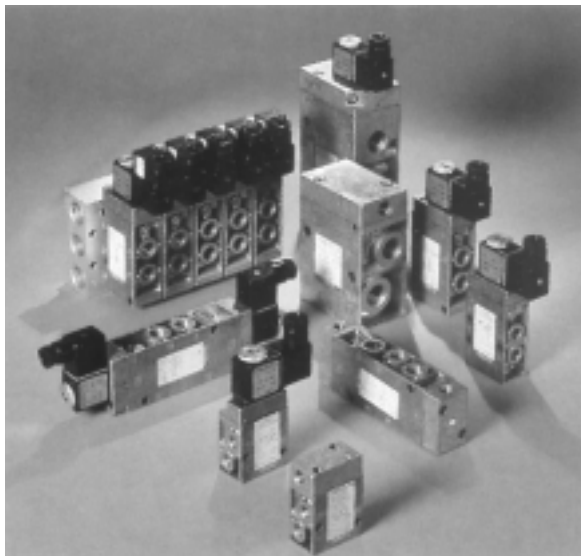


Tiger 2000 Series Valves

Tiger 2000 Series valves feature 5/2 and 5/3-way air-piloted and solenoid-actuated valves with 1/8, 1/4 or 3/8 metric ports.

These economically priced valves are available with low 2.5 watt V-coil or standard voltage F-coils. Tiger 2000 valves mount easily in-line or from the front on PBS or PAL manifolds.

Tiger 2000 valves are also available as preassembled Smart Valve/Sensor Manifolds and/or Fieldbus Valve/Sensor Manifold configurations for stand-alone or networked automation control applications.



Classic Tiger Series Valves

Classic Tiger valves feature 3/2, 5/2-way air-piloted and solenoid-actuated valves with NPT or metric ports, sizes 1/8, 1/4, 1/2 and 3/4.

Rugged and reliable Classic Tiger valves are field-proven for over 100 million cycles. A wide range of DC/AC voltages are available (F-coil).

These slim-design valves feature high flow rates (up to 7.5 Cv) and fast response times. They are easily mounted in-line or on PRS/PAL manifolds.

Tiger 2000 Series Power Valves

Complete Range of Long Life, 5/2 and 5/3 Way Valves

FESTO

■ 3 sizes: 1/8, 1/4, 3/8 BSP

■ High Flow Rates Up To 2.6 C_v

■ Wide pressure range, up to 150 psi (10 bar)

Wide Voltage Range and **Low 2.5 Watt Power Consumption**
 12...220V DC
 12...240V AC
 50 or 60 Hz

Multiple Solenoid Accessories

Socket with integral cable, protective circuit, and status LED

Standard socket



or



LED gasket



Electrical pulse and time-delay inserts



Built in manual override

Optional Flow Controls and Silencers

Common exhaust 5(R)

Common supply 1(P)

Common exhaust 3(S)

Pilot exhaust air

Auxiliary pilot air 14, 12

Working line 4 (A)

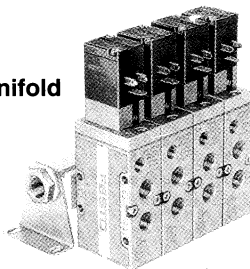
Working line 2 (B)

26 - 40 mm

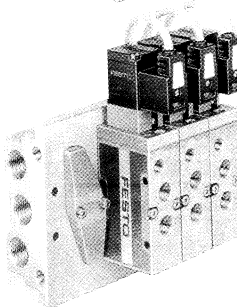
Space-saving, trim, slim-line design mounts in-line or on lightweight, aluminum manifolds

In-line or Manifold Mounting Options:

PAL Rail Manifold



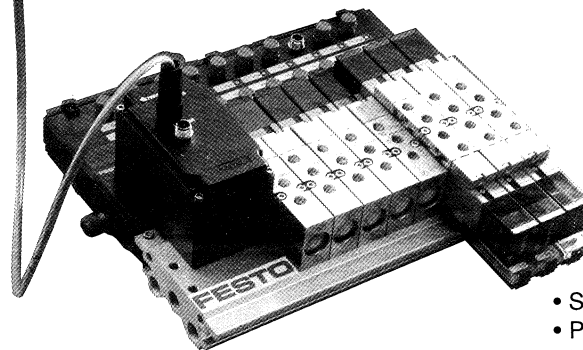
PRS Manifold



Smart Valve Manifolds/Fieldbus Valve Manifolds

- Stand-alone and Fieldbus control capability
- Saves up to 90% on installation time, labor and costs!
- Embedded microprocessor and integrated electronics eliminate the need for a separate PLC control!

Fieldbus Valve/Sensor Manifolds can also CONNECT DIRECTLY INTO your PLC/PC network:



- Festo Fieldbus
- Allen-Bradley 1771 Remote I/O
- DeviceNet
- Phoenix Interbus-S
- GE Fanuc Genius I/O
- VME bus
- IBM PC (via third party interface card)

- Siemens, Sinec L2-DP
- Profibus DP, 12 MB
- Klockner-Moeller Suconet
- Mitsubishi Mini Net
- Westinghouse Series 2000
- Omron Sysmac Bus
- ASi
- SDS
- CAN open
- FIP-IO

Tiger 2000 Power Valves

Tiger 2000 Valve Overview, Valves with "F" Coils

Solenoid Actuated Valves Type MFH-..., JMFH-...*

Wide Voltage Range 12...200V DC / 12...240V AC / 50 or 60 Hz

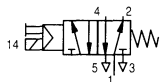
5/2 Single Solenoid Actuated Valves

Type MFH-...-B



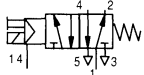
With manual override and spring return

Type	Part #	Page
MFH-5-1/8-B	19758	345
MFH-5-1/4-B	15901	349
MFH-5-3/8-B	19705	354



With manual override, spring return, and external pilot supply

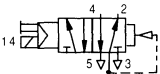
Type	Part #	Page
MFH-5-1/8-S-B	19759	345
MFH-5-1/4-S-B	15902	349



MFH-5-3/8-S-B	19706	354
---------------	-------	-----

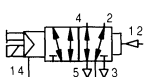
With manual override and pneumatic reset

Type	Part #	Page
MFH-5-1/8-L-B	30991	345
MFH-5-1/4-L-B	31010	349
MFH-5-3/8-L-B	14946	354



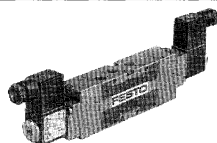
With manual override, pneumatic reset, and external pilot supply

Type	Part #	Page
MFH-5-1/8-L-S-B	30992	345
MFH-5-1/4-L-S-B	33185	349
MFH-5-3/8-L-S-B	33181	354



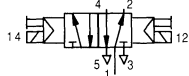
5/2 Double Solenoid Actuated Valves

Type JMFH-...-B



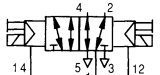
With manual override

Type	Part #	Page
JMFH-5-1/8-B	30486	357
JMFH-5-1/4-B	19789	361
JMFH-5-3/8-B	19700	365



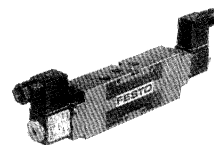
With manual override and external pilot supply

Type	Part #	Page
JMFH-5-1/8-S-B	30487	351
JMFH-5-1/4-S-B	19790	361
JMFH-5-3/8-S-B	19702	365



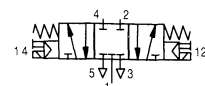
5/3 Double Solenoid Actuated Valves

Type MFH-5/3-...-B



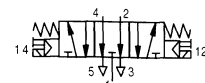
With manual override, without socket, and closed center

Type	Part #	Page
MFH-5/3G-1/8-B	30484	369
MFH-5/3G-1/4-B	19787	373
MFH-5/3G-3/8-B	19707	377



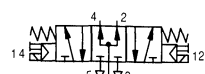
With manual override, without socket, and open center

Type	Part #	Page
MFH-5/3E-1/8-B	30483	369
MFH-5/3E-1/4-B	19786	373
MFH-5/3E-3/8-B	19708	377



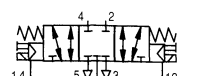
With manual override, without socket, and pressurized center

Type	Part #	Page
MFH-5/3B-1/8-B	30485	369
MFH-5/3B-1/4-B	19788	373
MFH-5/3B-3/8-B	19709	377



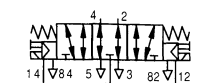
With manual override, external pilot, without socket, and closed center

Type	Part #	Page
MFH-5/3G-1/8-S-B	30993	369
MFH-5/3G-1/4-S-B	31001	373
MFH-5/3G-3/8-S-B	31317	377



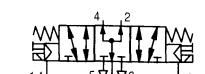
With manual override, external pilot, without socket, and open center

Type	Part #	Page
MFH-5/3E-1/8-S-B	30994	369
MFH-5/3E-1/4-S-B	31002	373
MFH-5/3E-3/8-S-B	31318	377




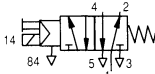
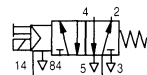
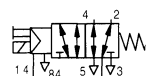
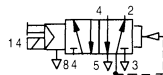
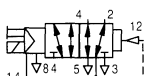
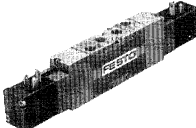
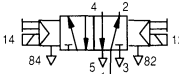
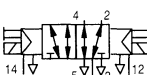
With manual override, external pilot, without socket, and pressurized center

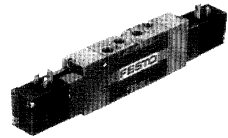
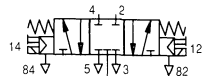
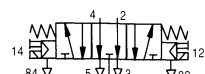
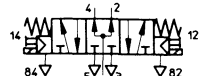
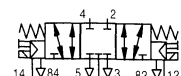

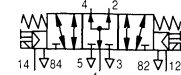
Type	Part #	Page
MFH-5/3B-1/8-S-B	30995	369
MFH-5/3B-1/4-S-B	31003	373
MFH-5/3B-3/8-S-B	31319	377



* **Note:** Type MFH: Part number is for valve only. Order desired "F" coil and socket separately, see pages 455-460.

Solenoid Actuated Valves Type MVH-..., JMVH-...*
With Low 2.5 Watt Power Consumption "V" Coil, 24V DC

5/2 Single Solenoid Actuated Valves			
Type MVH-...-B			
			
With manual override and spring return			
<u>Type</u>	<u>Part #</u>		<u>Page</u>
MVH-5-1/8-B	19779		343
MVH-5-1/4-B	19701		347
MVH-5-3/8-B	14945		351
With manual override, spring return, and external pilot supply			
<u>Type</u>	<u>Part #</u>		<u>Page</u>
MVH-5-1/8-S-B	30996		343
MVH-5-1/4-S-B	15903		347
MVH-5-3/8-S-B	15342		351
With manual override and pneumatic reset			
<u>Type</u>	<u>Part #</u>		<u>Page</u>
MVH-5-1/8-L-B	19749		343
MVH-5-1/4-L-B	31009		347
MVH-5-3/8-L-B	14947		351
With manual override, pneumatic reset, and external pilot supply			
<u>Type</u>	<u>Part #</u>		<u>Page</u>
MVH-5-1/8-L-S-B	19750		343
MVH-5-1/4-L-S-B	33184		347
MVH-5-3/8-L-S-B	33180		351
5/2 Double Solenoid Actuated Valves			
Type JMVH-...-B			
			
With manual override			
<u>Type</u>	<u>Part #</u>		<u>Page</u>
JMVH-5-1/8-B	30475		355
JMVH-5-1/4-B	19136		359
JMVH-5-3/8-B	14948		363
With manual override and external pilot supply			
<u>Type</u>	<u>Part #</u>		<u>Page</u>
JMVH-5-1/8-S-B	30476		355
JMVH-5-1/4-S-B	19137		359
JMVH-5-3/8-S-B	15343		363

5/3 Double Solenoid Actuated Valves			
Type MVH-5/3-...-B			
			
With manual override, without socket, and closed center			
<u>Type</u>	<u>Part #</u>		<u>Page</u>
MVH-5/3G-1/8-B	30477		368
MVH-5/3G-1/4-B	19138		371
MVH-5/3G-3/8-B	14944		375
With manual override, without socket, and open center			
<u>Type</u>	<u>Part #</u>		<u>Page</u>
MVH-5/3E-1/8-B	30478		368
MVH-5/3E-1/4-B	19139		371
MVH-5/3E-3/8-B	14943		375
With manual override, without socket, and pressurized center			
<u>Type</u>	<u>Part #</u>		<u>Page</u>
MVH-5/3B-1/8-B	30480		368
MVH-5/3B-1/4-B	19140		371
MVH-5/3B-3/8-B	19699		375
With manual override, external pilot, without socket, and closed center			
<u>Type</u>	<u>Part #</u>		<u>Page</u>
MVH-5/3G-1/8-S-B	30997		368
MVH-5/3G-1/4-S-B	31004		371
MVH-5/3G-3/8-S-B	15346		375
With manual override, external pilot, without socket, and open center			
<u>Type</u>	<u>Part #</u>		<u>Page</u>
MVH-5/3E-1/8-S-B	30998		368
MVH-5/3E-1/4-S-B	31005		371
MVH-5/3E-3/8-S-B	15344		375
With manual override, external pilot, without socket, and pressurized center			
<u>Type</u>	<u>Part #</u>		<u>Page</u>
MVH-5/3B-1/8-S-B	30999		368
MVH-5/3B-1/4-S-B	31006		371
MVH-5/3B-3/8-S-B	15345		375

* **Note:** Type MVH: "V" coil is included in valve part number. Order socket separately, see page 461.

Tiger 2000 Power Valves

Tiger 2000 Valve Overview

Pneumatically Actuated Valves

5/2 Single Pilot Actuated Valves

Type VL-...-B



With spring return

Type	Part #		Page
VL-5-1/8-B	31000		379
VL-5-1/4-B	14294		379
VL-5-3/8-B	14952		381

5/2 Double Pilot Actuated Valves

Type J-...-B



Type	Part #		Page
J-5-1/8-B	30988		383
J-5-1/4-B	14295		383
J-5-3/8-B	14953		385

5/3 Double Pilot Actuated Valves

Type VL-5/3-...-B



Spring centered, center position closed

Type	Part #		Page
VL-5/3G-1/8-B	30990		387
VL-5/3G-1/4-B	14298		389
VL-5/3G-3/8-B	14950		391

Spring centered, center position open

Type	Part #		Page
VL-5/3E-1/8-B	31309		387
VL-5/3E-1/4-B	14297		389
VL-5/3E-3/8-B	14949		391

Spring centered, pressurized center position

Type	Part #		Page
VL-5/3B-1/8-B	31310		387
VL-5/3B-1/4-B	14299		389
VL-5/3B-3/8-B	14951		391

Tiger 2000 Single Solenoid-Actuated Valves

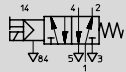
5/2 - 5 Ported, 4 Way, 2 Position Valves, Piloted, G 1/8

FESTO

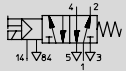
Type MVH-5-1/8-...-B

Single Solenoid Valve

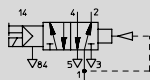
With Manual Override and Spring Return
Type MVH-5-1/8-B



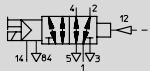
With External Pilot Supply
Type MVH-5-1/8-S-B



With Manual Override and Pneumatic Reset
Type MVH-5-1/8-L-B



With External Pilot Supply
Type MVH-5-1/8-L-S-B



Solenoid V-coil is included with valve

Accessories

(Ordered Separately)

Standard Sockets, Type MSSD-V, see page 461.

Sockets with cable, Type KMV-..., see page 461.

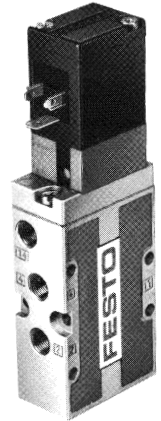
LED Gaskets, Type MV-LD-..., see pages 462-463.

V-coil is included in valve part number. Order socket separately, see page 461.

These are piloted valves with the solenoid controlling the pilot air. Pilot air is supplied via pressure port 1. When the solenoid is energized, the valve shifts and remains shifted until the solenoid is de-energized.

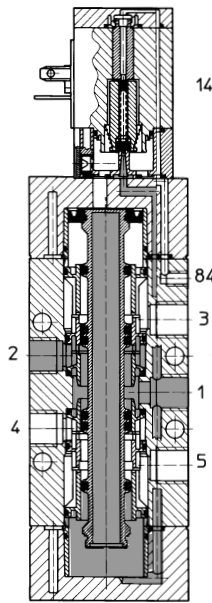
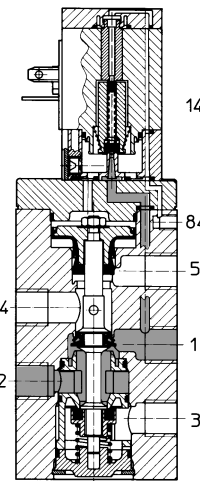
For Type MVH-... valves, pilot exhaust air is ducted at port 84. Valve exhaust can be directly vented to the atmosphere when the seal under the cap is removed.

Manifolds: Type PRS-...-BB and Type PAL-...-B; for manifold mounting, see pages 393-404.



Example:
Type MVH-5-1/8-L-B

Example:
Type MVH-5-1/8-B



- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 14 (Pz) = External Pilot Air
- 84 = Pilot Exhaust Air

Order Number Part No./Type	Low 2.5 Watt Valve with Solenoid (Order Sockets Separately)	19779 MVH-5-1/8-B	30996 MVH-5-1/8-S-B	19749 MVH-5-1/8-L-B	19750 MVH-5-1/8-L-S-B
Medium		Compressed air (filtered, lubricated or unlubricated)*			
Design		Poppet valve			Spool valve
Mounting		Holes through housing			
Connection		G 1/8 ISO; 84: M5			
Orifice Size		0.20 in / 5 mm			0.31 in / 8 mm
C _v Factor (1 → 2, 1 → 4)		0.762 C _v / 750 l/min			1.0 C _v / 1000 l/min
Pressure Range (See graph on page 344)	Operating Range	30 to 150 psi / 2 to 10 bar	0 to 150 psi / 0 to 10 bar	45 to 150 psi / 3 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar
	Pilot Range	—	30 to 150 psi / 2 to 10 bar	—	45 to 150 psi / 3 to 10 bar
Response Time at 90 psi / 6 bar		On: 20 ms, Off: 36 ms			On: 31 ms, Off: 18 ms
Ambient Temperature		23 to 122°F / -5 to +50°C			
Medium Temperature		23 to 122°F / -5 to +50°C			
Materials		Housing, Cover: Diecast Al, Seals: Buna N			
Weight		0.640 lb / 0.290 kg			
Direct Current		24V			
Power Consumption		2.5 W			
Duty Cycle		100%			
Type of Protection		IP 65 (DIN 40050)			

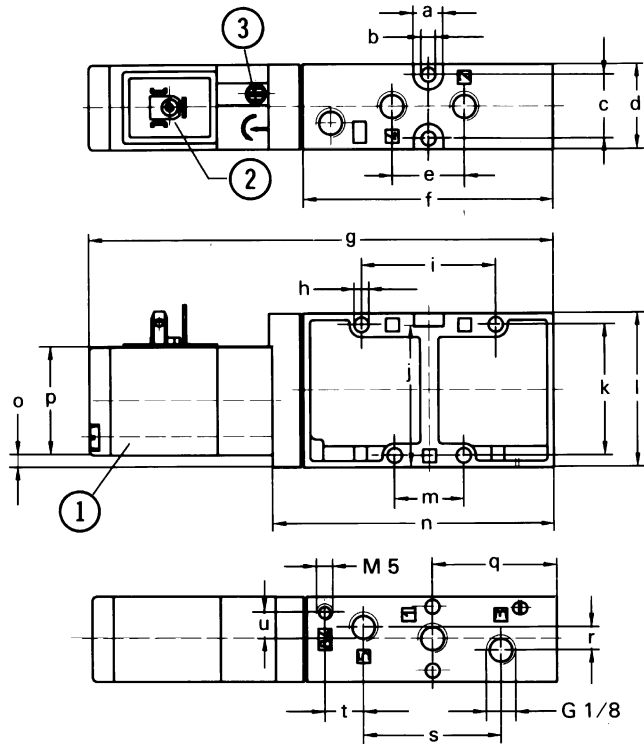
* Type MVH-5-1/8-L-S-B is suitable for vacuum operation.

Tiger 2000 Single Solenoid-Actuated Valves

Dimensions

Type MVH-5-1/8-...-B

With Manual Override and Spring Return



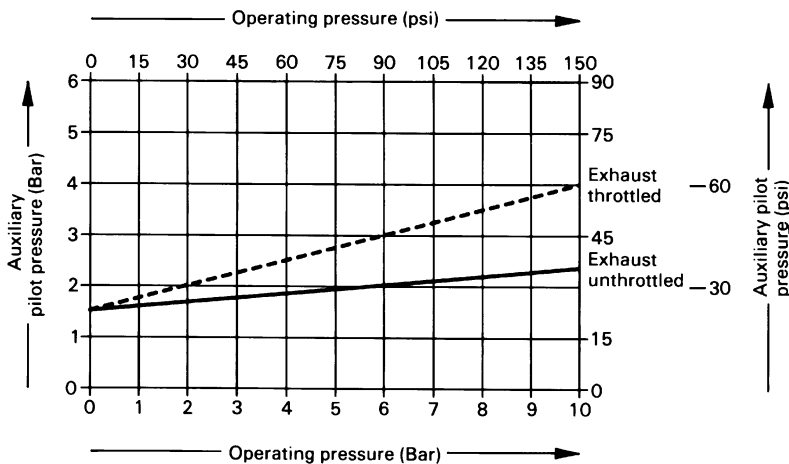
Wear Parts Kit

for Type	MVH-5-1/8-B
Order Number	115071

An external pilot pressure must be supplied to port 14. This valve can be used to control pressure to 150 psi / 10 bar and used in applications where port 4 is blowing unthrottled to atmosphere (i.e., part ejection, chip removal, etc.).

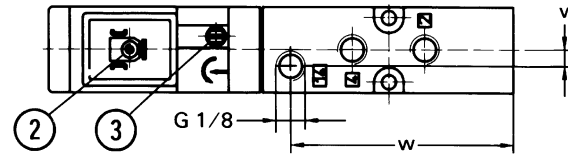
Type MVH-5-1/8-S-B

Minimum Pilot Pressure versus Operating Pressure



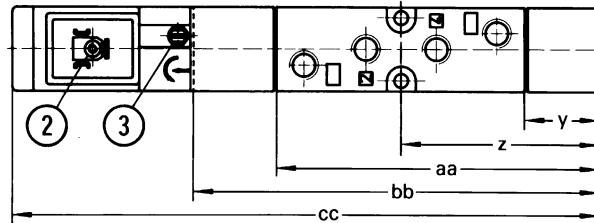
Type MVH-5-1/8-S-B

With External Pilot Supply



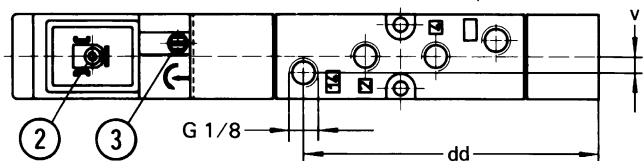
Type MVH-5-1/8-L-B

With Manual Override and Pneumatic Reset



Type MVH-5-1/8-L-S-B

With External Pilot Supply



- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 (Y, Z) = External Pilot Air
- 84 = Pilot Exhaust Air

- ① Solenoid coil can be turned 180°
Note: When rotating solenoid, cap must be kept in original position to avoid blocking pilot exhaust.
- ② Socket connection per DIN 43650, Code B
- ③ Manual override detent

Dimensions

a	0.35 in / 9 mm	p	1.30 in / 33 mm
b	0.17 in / 4.3 mm	q	1.52 in / 38.5 mm
c	0.77 in / 19.5 mm	r	0.28 in / 7 mm
d	1.02 in / 26 mm	s	1.65 in / 42 mm
e	0.87 in / 22 mm	t	0.47 in / 12 mm
f	3.03 in / 77 mm	u	0.31 in / 8 mm
g	5.61 in / 142.6 mm	v	0.20 in / 5 mm
h	0.18 in / 4.5 mm	w	2.70 in / 68.5 mm
i	1.61 in / 41 mm	y	0.91 in / 23.2 mm
k	1.57 in / 40 mm	z	2.43 in / 61.7 mm
l	1.85 in / 47 mm	aa	3.94 in / 100.2 mm
m	0.83 in / 21 mm	bb	4.96 in / 126 mm
n	3.41 in / 86.5 mm	cc	7.17 in / 182 mm
o	0.15 in / 3.8 mm	dd	3.61 in / 91.7 mm

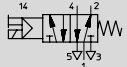
Tiger 2000 Single Solenoid-Actuated Valves

5/2 - 5 Ported, 4 Way, 2 Position Valves, Piloted, G 1/8

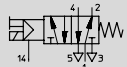
FESTO

Single Solenoid Valve

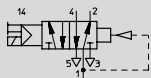
With Manual Override and Spring Return
Type MFH-5-1/8-B



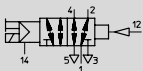
With External Pilot Supply
Type MFH-5-1/8-S-B



With Manual Override and Pneumatic Reset
Type MFH-5-1/8-L-B



With External Pilot Supply
Type MFH-5-1/8-L-S-B



- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air

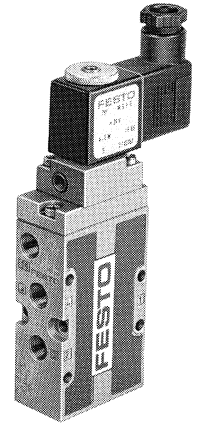
Note:

Part number is for valve only. Order desired F-coil and socket separately.

These are piloted valves with the solenoid controlling the pilot air. Pilot air is supplied via pressure port 1. When the solenoid is energized, the valve shifts and remains shifted until the solenoid is de-energized.

Manifolds: Type PRS-...-BB and Type PAL-...-B; for manifold mounting, see pages 393-404.

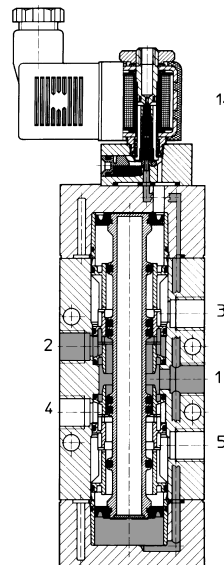
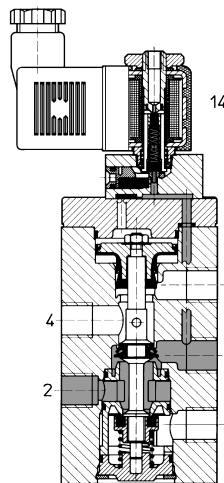
Type MFH-5-1/8-...-B



Valve shown with coil and socket accessories.

Example:
Type MFH-5-1/8-L-B

Example:
Type MFH-5-1/8-B



Accessories: (Ordered Separately)

Manual Override Lever
rotary, detented;
157651 AHB-MD/MF/MV

Solenoid F-Coils
with socket, see page 455
without socket, see page 456

Standard Sockets, Type MSSD-F
see page 459
Sockets with cable, Type KMF-...
see page 460

LED Gaskets, Type MF-LD-...
see pages 462-463
Indicator Inserts, Type MFL-...-...
see page 464
Solenoid Inserts, Type MFZ-...
see page 465

Order Number Part No./Type	Valve Only (Order Solenoid and Socket Separately)	19758 MFH-5-1/8-B	19759 MFH-5-1/8-S-B	30991 MFH-5-1/8-L-B	30992 MFH-5-1/8-L-S-B
Medium		Compressed air (filtered, lubricated or unlubricated)*			
Design		Poppet valve			Spool valve
Mounting		Holes through housing			
Connection		G 1/8 ISO			
Orifice Size		0.20 in / 5 mm			0.31 in / 8 mm
C _v Factor (1 → 2, 1 → 4)		0.762 C _v / 750 l/min			1.0 C _v / 1000 l/min
Pressure Range (See graph on page 346)	Operating Range	30 to 150 psi / 2 to 10 bar	0 to 150 psi / 0 to 10 bar	45 to 150 psi / 3 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar
	Pilot Range	—	30 to 150 psi / 2 to 10 bar	—	45 to 150 psi / 3 to 10 bar
Response Time at 90 psi / 6 bar		On: 10 ms, Off: 30 ms		On: 21 ms, Off: 15 ms	
Ambient Temperature		23 to 122°F / -5 to +50°C			
Medium Temperature		23 to 122°F / -5 to +50°C			
Materials		Housing, Cover: Diecast Al, Seals: Buna N			
Weight		0.485 lb / 0.220 kg			0.617 lb / 0.280 kg
Direct Current	Standard Voltage	12, 24V			
Alternating Current	Available Voltage	12 to 230V			
	Standard Voltage	24, 42, 110, 230V / 50 to 60 Hz			
	Available Voltage	12 to 240V / 50 or 60 Hz			
Power Consumption		DC: 4.5 W; AC: Holding 6 VA, Inrush 7.5 VA			
Duty Cycle		100%			
Type of Protection		IP 65 (DIN 40050)			

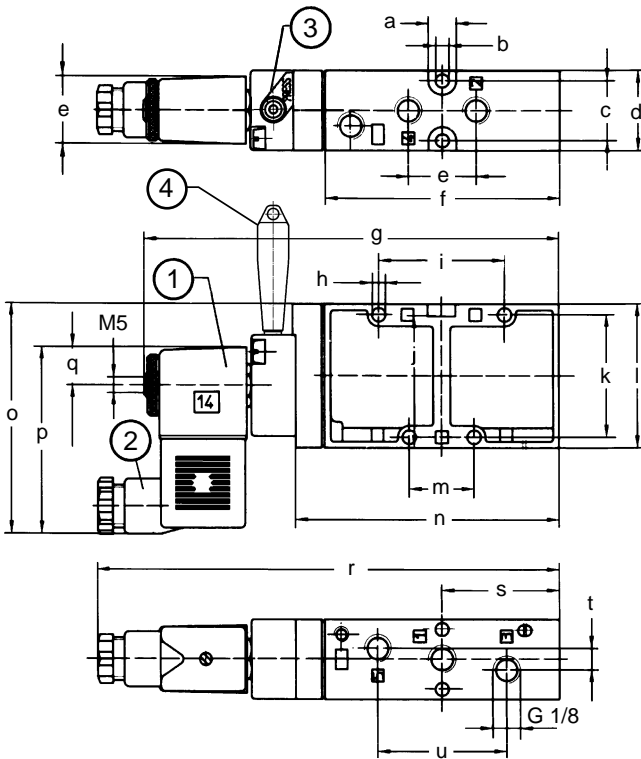
* Type MFH-5-1/8-L-S-B is suitable for vacuum operation.

Tiger 2000 Single Solenoid-Actuated Valves

Dimensions

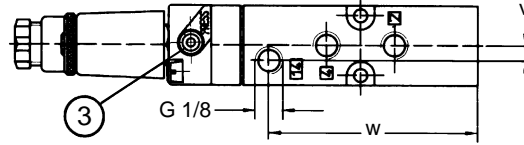
Type MFH-5-1/8-...-B

With Manual Override and Spring Return



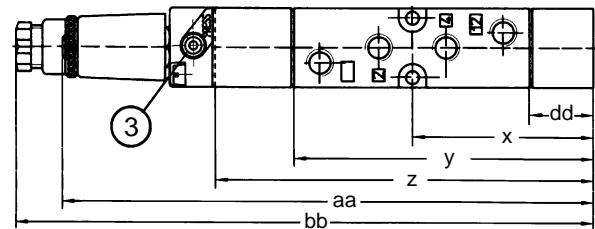
Type MFH-5-1/8-S-B

With External Pilot Supply



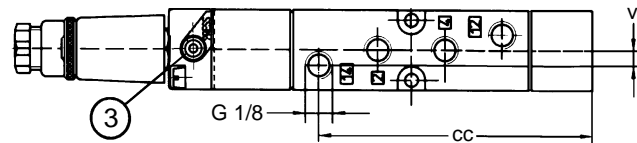
Type MFH-5-1/8-L-B

With Manual Override and Pneumatic Reset



Type MFH-5-1/8-L-S-B

With External Pilot Supply



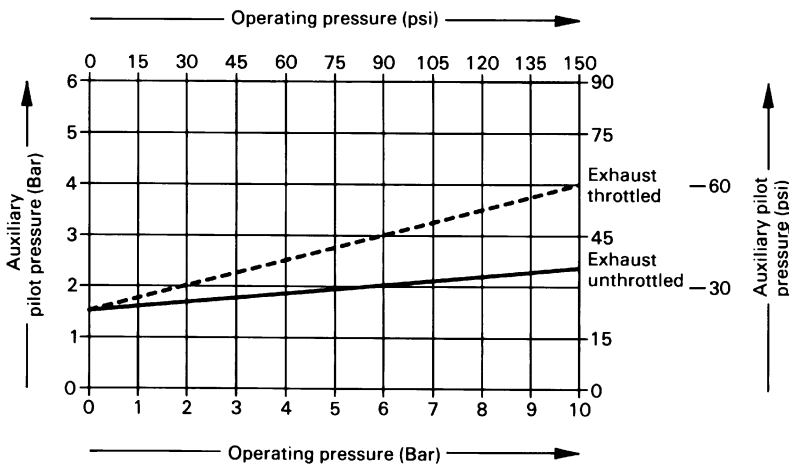
An external pilot pressure must be supplied to port 14. This valve can be used to control pressure to 150 psi / 10 bar and used in applications where port 4 is blowing unthrottled to atmosphere (i.e., part ejection, chip removal, etc.).

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 14 = External Pilot Air

- ① Solenoid coil, rotatable 360°
 - ② Socket, rotatable 180°
 - ③ Manual override, rotatable 180°
 - ④ Manual override lever, rotary, detented (order separately)
- Note: Coil and manual override are independently rotatable.

Type MFH-5-1/8-S-B

Minimum Pilot Pressure versus Operating Pressure



Dimensions

a	0.35 in / 9 mm	p	2.40 in / 61 mm
b	0.17 in / 4.3 mm	q	0.49 in / 12.5 mm
c	0.77 in / 19.5 mm	r	6.02 in / 153 mm
d	1.02 in / 26 mm	s	1.52 in / 38.5 mm
e	0.87 in / 22 mm	t	0.28 in / 7 mm
f	3.03 in / 77 mm	u	1.65 in / 42 mm
g	5.39 in / 137 mm	v	0.20 in / 5 mm
h	0.18 in / 4.5 mm	w	2.70 in / 68.5 mm
i	1.61 in / 41 mm	x	2.43 in / 61.7 mm
j	1.69 in / 43 mm	y	3.95 in / 100.2 mm
k	1.57 in / 40 mm	z	4.97 in / 126.2 mm
l	1.85 in / 47 mm	aa	6.97 in / 177 mm
m	0.83 in / 21 mm	bb	7.56 in / 192 mm
n	3.41 in / 86.5 mm	cc	3.61 in / 91.7 mm
o	2.96 in / 75.2 mm	dd	0.91 in / 23.2 mm

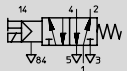
Tiger 2000 Single Solenoid-Actuated Valves

5/2 - 5 Ported, 4 Way, 2 Position Valves, Piloted, G 1/4

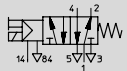
FESTO

Single Solenoid Valve

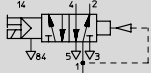
With Manual Override and Spring Return
Type MVH-5-1/4-B



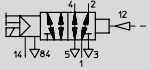
with External Pilot Supply
Type MVH-5-1/4-S-B



With Manual Override and
Pneumatic Reset
Type MVH-5-1/4-L-B



With External Pilot Supply
Type MVH-5-1/4-L-S-B



- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 14 = External Pilot Air
- 84 = Pilot Exhaust Air

Note:

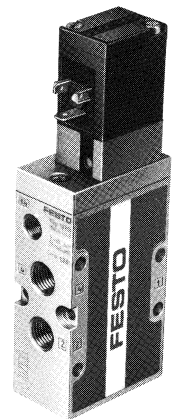
V-coil is included with valve. Order socket separately.

These are piloted valves with the solenoid controlling the pilot air. Pilot air is supplied via pressure port 1. When the solenoid is energized, the valve shifts and remains shifted until the solenoid is de-energized.

For Type MVH-... valves, pilot exhaust air is ducted at port 84. Valve exhaust can be directly vented to the atmosphere when the seal under the cap is removed.

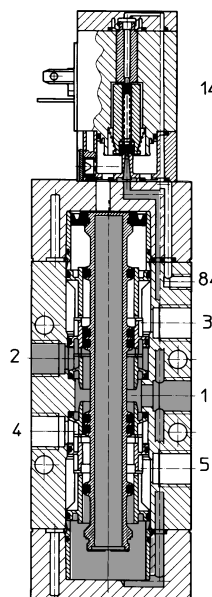
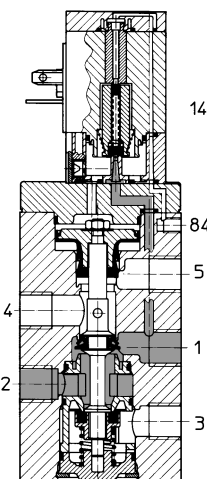
Manifolds: Type PRS-...-B and Type PAL-...-B; for manifold mounting, see pages 393-404.

Type MVH-5-1/4-...-B



Example:
Type MVH-5-1/4-L-B

Example:
Type MVH-5-1/4-B



Solenoid V-coil is included with valve.

Accessories:
(Ordered Separately)

Standard Sockets, Type MSSD-V
see page 461
Sockets with cable, Type KMV-...
see page 461

LED Gaskets, Type MV-LD-...
see pages 462-463

Order Number Part No./Type	Low 2.5 Watt Valve with Solenoid (Order Sockets Separately)	19701 MVH-5-1/4-B	15903 MVH-5-1/4-S-B	31009 MVH-5-1/4-L-B	33184 MVH-5-1/4-L-S-B
Medium		Compressed air (filtered, lubricated or unlubricated)*			
Design		Poppet valve		Spool valve	
Mounting		Holes through housing			
Connection		G 1/4 ISO; 14: G 1/8 ISO; 84: M5			
Orifice Size		0.28 in / 7 mm		0.39 in / 10 mm	
C _v Factor (1 → 2, 1 → 4)		1.321 C _v / 1300 l/min		1.626 C _v / 1600 l/min	
Pressure Range (See graph on page 348)	Operating Range	30 to 150 psi / 2 to 10 bar	0 to 150 psi / 0 to 10 bar	45 to 150 psi / 3 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar
	Pilot Range	—	22.5 to 150 psi / 1.5 to 10 bar	—	45 to 150 psi / 3 to 10 bar
Response Time at 90 psi / 6 bar		On: 15 ms, Off: 36 ms		On: 28 ms, Off: 37 ms	
Ambient Temperature		23 to 122°F / -5 to +50°C			
Medium Temperature		23 to 122°F / -5 to +50°C			
Materials		Housing, Cover: Diecast Al, Seals: Buna N			
Weight		0.794 lb / 0.360 kg			
Direct Current		24V			
Power Consumption		2.5 W			
Duty Cycle		100%			
Type of Protection		IP 65 (DIN 40050)			

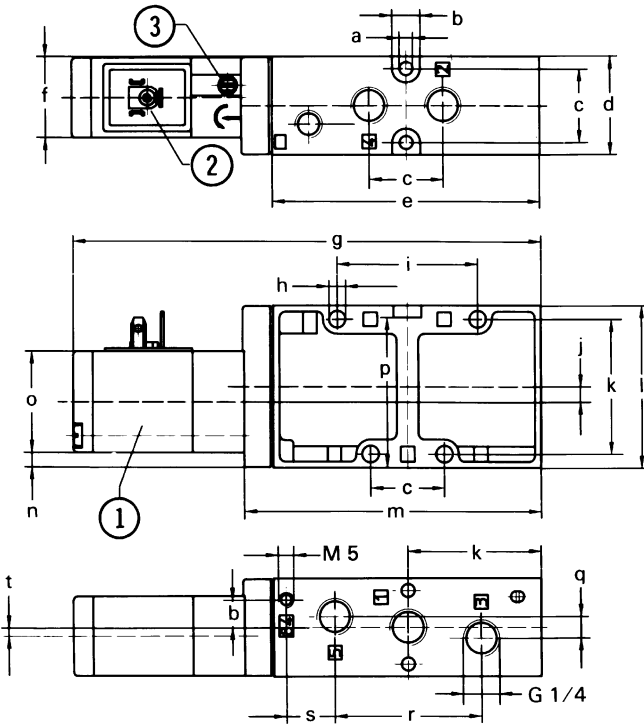
* Type MVH-5-1/4-L-S-B is suitable for vacuum operation.

Tiger 2000 Single Solenoid-Actuated Valves

Dimensions

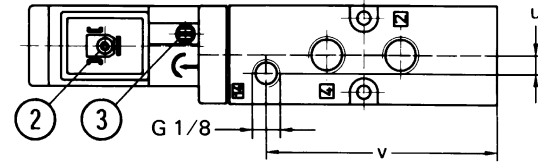
Type MVH-5-1/4-...-B

With Manual Override and Spring Return



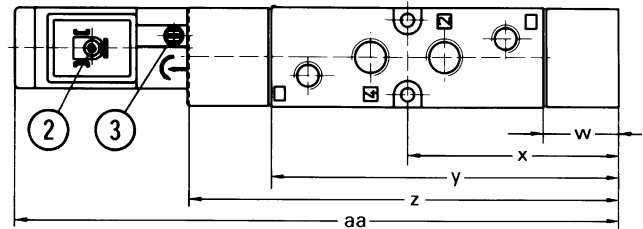
Type MVH-5-1/4-S-B

With External Pilot Supply



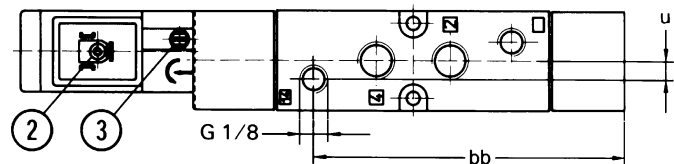
Type MVH-5-1/4-L-B

With Manual Override and Pneumatic Reset



Type MVH-5-1/4-L-S-B

With External Pilot Supply



Wear Parts Kit

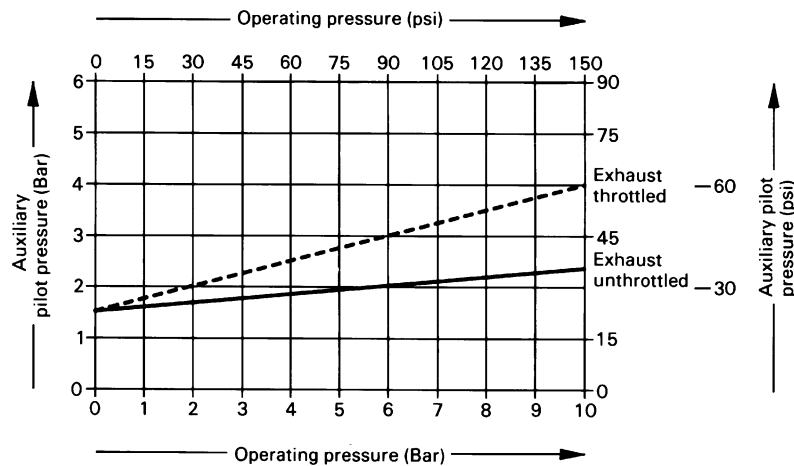
for Type	MVH-5-1/4-B	MVH-5-1/4-S-B
Order Number	115069	115070

An external pilot pressure must be supplied to port 14. This valve can be used to control pressure to 150 psi / 10 bar and used in applications where port 4 is blowing unthrottled to atmosphere (i.e., part ejection, chip removal, etc.).

The separate auxiliary pilot air connection means that this valve can also be used with low operating pressures and external gases other than air.

Type MVH-5-1/4-S-B

Minimum Pilot Pressure versus Operating Pressure



- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air
- 84 = Pilot Exhaust Air

- ① Solenoid coil can be turned 180°
Note: When rotating solenoid on Type MVH valves, cap must be kept in original position to avoid blocking pilot exhaust.
- ② Socket connection per DIN 43650, Code B
- ③ Manual override detent

Dimensions

a	0.17 in / 4.3 mm	o	1.30 in / 33 mm
b	0.35 in / 9 mm	p	1.93 in / 49 mm
c	0.94 in / 24 mm	q	0.28 in / 7 mm
d	1.26 in / 32 mm	r	1.89 in / 48 mm
e	3.46 in / 88 mm	s	0.63 in / 16 mm
f	1.04 in / 26.3 mm	t	0.11 in / 2.7 mm
g	6.05 in / 153.6 mm	u	0.24 in / 6 mm
h	0.22 in / 5.5 mm	v	2.99 in / 76 mm
i	1.81 in / 46 mm	w	0.96 in / 24.5 mm
j	0.20 in / 5 mm	x	2.70 in / 68.5 mm
k	1.73 in / 44 mm	y	4.43 in / 112.5 mm
l	2.09 in / 53 mm	z	5.47 in / 139 mm
m	3.84 in / 97.5 mm	aa	7.68 in / 195.1 mm
n	0.19 in / 4.8 mm	bb	3.96 in / 100.5 mm

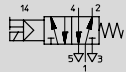
Tiger 2000 Single Solenoid-Actuated Valves

5/2 - 5 Ported, 4 Way, 2 Position Valves, Piloted, G 1/4

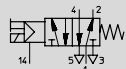
FESTO

Single Solenoid Valve

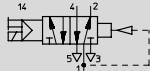
With Manual Override and Spring Return
Type MFH-5-1/4-B



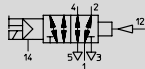
With External Pilot Supply
Type MFH-5-1/4-S-B



With Manual Override and Pneumatic Reset
Type MFH-5-1/4-L-B



With External Pilot Supply
Type MFH-5-1/4-L-S-B



- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air

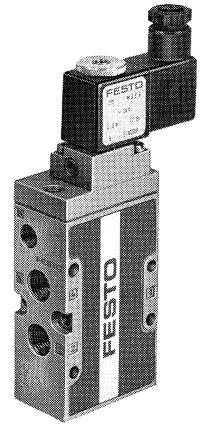
Note:

Part number is for valve only. Order desired F-coil and socket separately.

These are piloted valves with the solenoid controlling the pilot air. Pilot air is supplied via pressure port 1. When the solenoid is energized, the valve shifts and remains shifted until the solenoid is de-energized.

Manifolds: Type PRS-...-B and Type PAL-...-B; for manifold mounting, see pages 393-404.

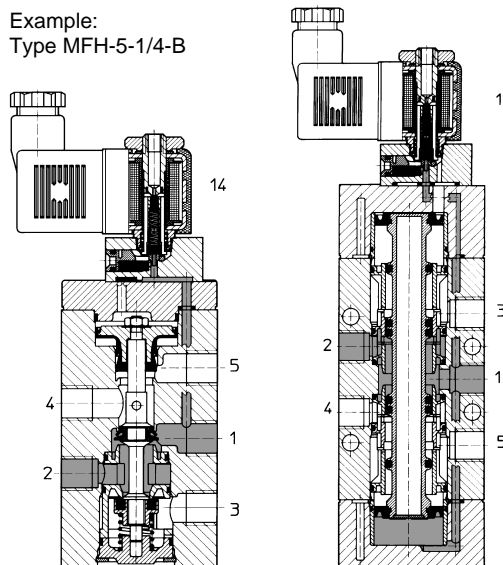
Type MFH-5-1/4-...-B



Valve shown with coil and socket accessories.

Example:
Type MFH-5-1/4-L-B

Example:
Type MFH-5-1/4-B



Accessories: (Ordered Separately)

Manual Override Lever
rotary, detented;
157651 AHB-MD/MF/MV

Solenoid F-Coils
with socket, see page 455
without socket, see page 456

Standard Sockets, Type MSSD-F
see page 459
Sockets with cable, Type KMF-...
see page 460

LED Gaskets, Type MF-LD-...
see pages 462-463
Indicator Inserts, Type MFL-...-...
see page 464
Solenoid Inserts, Type MFZ-...
see page 465

Order Number Part No./Type	Valve Only (Order Solenoid and Socket Separately)	15901 MFH-5-1/4-B	15902 MFH-5-1/4-S-B	31010 MFH-5-1/4-L-B	33185 MFH-5-1/4-L-S-B
Medium		Compressed air (filtered, lubricated or unlubricated)*			
Design		Poppet valve			Spool valve
Mounting		Holes through housing			
Connection		G 1/4 ISO; 14: G 1/8 ISO			
Orifice Size		0.28 in / 7 mm			0.39 in / 10 mm
C _v Factor (1 → 2, 1 → 4)		1.321 C _v / 1300 l/min			1.626 C _v / 1600 l/min
Pressure Range (See graph on page 350)	Operating Range	30 to 150 psi / 2 to 10 bar	0 to 150 psi / 0 to 10 bar	45 to 150 psi / 3 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar
	Pilot Range	—	22 to 150 psi / 1.5 to 10 bar	—	45 to 150 psi / 3 to 10 bar
Response Time at 90 psi / 6 bar		On: 12 ms, Off: 36 ms			On: 23 ms, Off: 42 ms
Ambient Temperature		23 to 122°F / -5 to +50°C			
Medium Temperature		23 to 122°F / -5 to +50°C			
Materials		Housing, Cover: Diecast Al, Seals: Buna N			
Weight		0.661 lb / 0.300 kg			0.838 lb / 0.380 kg
Direct Current	Standard Voltage	12, 24V			
Alternating Current	Available Voltage	12 to 230V			
	Standard Voltage	24, 42, 110, 230V / 50 to 60 Hz			
	Available Voltage	12 to 240V / 50 or 60 Hz			
Power Consumption		DC: 4.5 W; AC: Holding 6 VA, Inrush 7.5 VA			
Duty Cycle		100%			
Type of Protection		IP 65 (DIN 40050)			

* Type MFH-5-1/4-L-S-B is suitable for vacuum operation.

Tiger 2000 Single Solenoid-Actuated Valves

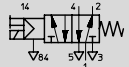
5/2 - 5 Ported, 4 Way, 2 Position Valves, Piloted, G 3/8

FESTO

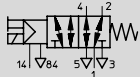
Type MVH-5-3/8-...-B

Single Solenoid Valve

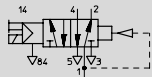
With Manual Override and Spring Return
Type MVH-5-3/8-B



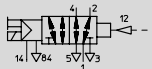
With External Pilot Supply
Type MVH-5-3/8-S-B



With Manual Override and Pneumatic Reset
Type MVH-5-3/8-L-B



With External Pilot Supply
Type MVH-5-3/8-L-S-B



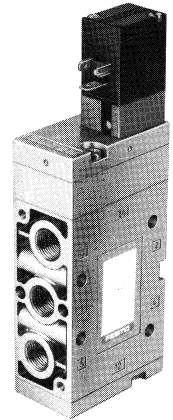
- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 14 = External Pilot Air
- 84 = Pilot Exhaust Air

Note:

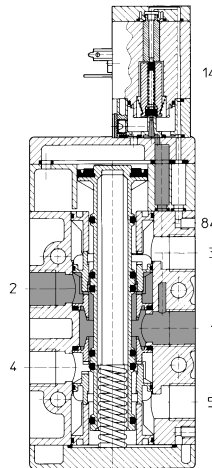
V-coil is included with valve. Order socket separately.

These are piloted valves with the solenoid controlling the pilot air. Pilot air is supplied via pressure port 1. When the solenoid is energized, the valve shifts and remains shifted until the solenoid is de-energized.

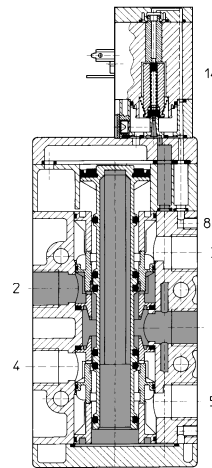
Manifolds: Type PRS-...-BB and Type PAL-...-B; for manifold mounting, see pages 393-404.



Example:
Type MVH-5-3/8-B



Example:
Type MVH-5-3/8-L-B



Solenoid V-coil is included with valve.

Accessories:
(Ordered Separately)

Standard Sockets, Type MSSD-V
see page 461

Sockets with cable, Type KMV-...
see page 461

LED Gaskets, Type MV-LD-...
see pages 462-463

Order Number Part No./Type	Low 2.5 Watt Valve with Solenoid (Order Socket Separately)	14945 MVH-5-3/8-B	15342 MVH-5-3/8-S-B	14947 MVH-5-3/8-L-B	33180 MVH-5-3/8-L-S-B
Medium		Compressed air (filtered, lubricated or unlubricated)*			
Design		Spool valve with pressure relief slots			
Mounting		Holes through housing			
Connection		G 3/8 ISO; 12, 14: G 1/8 ISO; 84: M5			
Orifice Size		0.55 in / 14 mm			
C _v Factor (1 → 2, 1 → 4)		2.03 C _v / 2000 l/min			
Pressure Range (See graph on page 352)	Operating Range	37.5 to 150 psi / 2.5 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar	30 to 150 psi / 2 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar
	Pilot Range	—	30 to 150 psi / 2 to 10 bar	—	30 to 150 psi / 2 to 10 bar
Response Time at 90 psi / 6 bar		On: 22 ms, Off: 60 ms			
Ambient Temperature		23 to 122°F / -5 to +50°C			
Medium Temperature		23 to 122°F / -5 to +50°C			
Materials		Housing, Cover: Diecast Al, Seals: Buna N			
Weight		1.653 lb / 0.750 kg			
Direct Current		24V			
Power Consumption		2.5 W			
Duty Cycle		100%			
Type of Protection		IP 65 (DIN 40050)			

* Type MVH-5-3/8-S-B and MVH-5-3/8-L-S-B are suitable for vacuum operation.

Tiger 2000 Single Solenoid-Actuated Valves

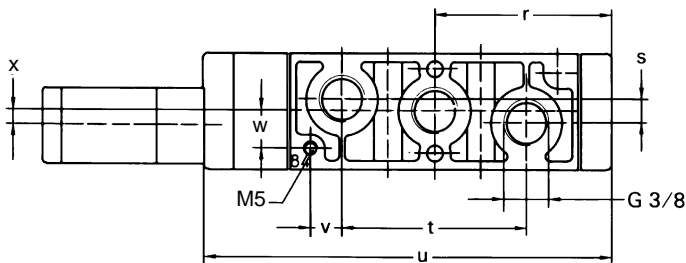
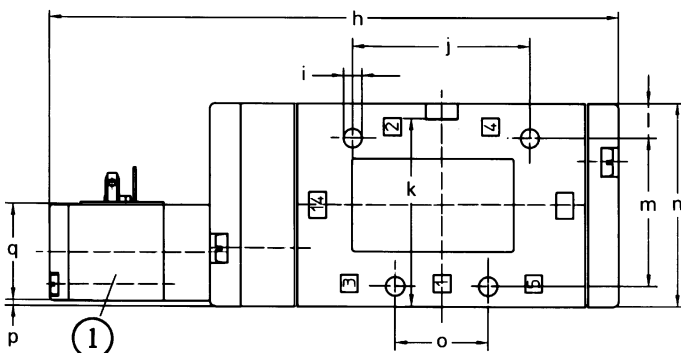
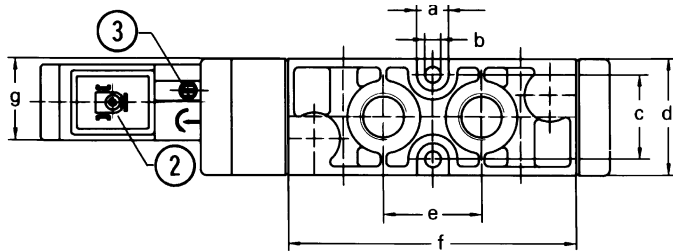
Dimensions

Type MVH-5-3/8-...-B

With Manual Override and Spring Return

Type MVH-5-3/8-L-B

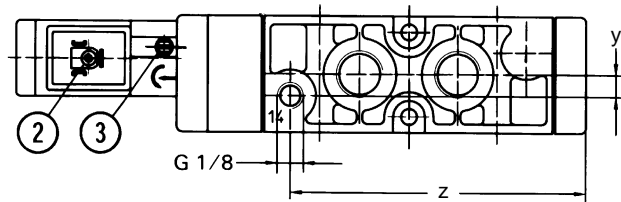
With Manual Override and Pneumatic Reset



Type MVH-5-3/8-S-B

MVH-5-3/8-L-S-B

With External Pilot Supply



An external pilot pressure must be supplied to port 14. This valve can be used to control pressure to 150 psi / 10 bar and used in applications where port 4 is blowing unthrottled to atmosphere (i.e., part ejection, chip removal, etc.).

Wear Parts Kit

for Type	MVH-5-3/8-LB	MVH-5-3/8-L-S-B
Order Number	115073	115074

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air
- 84 = Pilot Exhaust Air

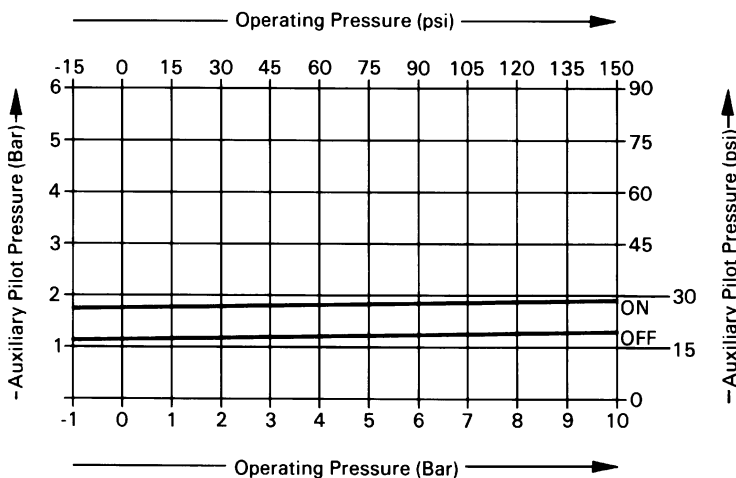
- ① Solenoid coil can be turned 180°
Note: When rotating solenoid on Type MVH valves, cap must be kept in original position to avoid blocking pilot exhaust.
- ② Socket connection per DIN 43650, Code B
- ③ Manual override detent

Dimensions

a	0.43 in / 11 mm	n	2.76 in / 70 mm
b	0.22 in / 5.5 mm	o	1.26 in / 32 mm
c	1.14 in / 29 mm	p	0.02 in / 2 mm
d	1.57 in / 40 mm	q	1.30 in / 33 mm
e	1.33 in / 33.8 mm	r	2.42 in / 61.5 mm
f	3.94 in / 100 mm	s	0.31 in / 8 mm
g	1.10 in / 28 mm	t	2.52 in / 64 mm
h	7.76 in / 197 mm	u	5.55 in / 141 mm
i	0.26 in / 6.5 mm	v	0.43 in / 11 mm
j	2.42 in / 61.4 mm	w	0.51 in / 13 mm
k	2.54 in / 64.5 mm	x	0.20 in / 5 mm
l	0.47 in / 12 mm	y	0.30 in / 7.5 mm
m	2.01 in / 51 mm	z	4.04 in / 102.5 mm

Type MVH-5-3/8-S-B

Minimum Pilot Pressure versus Operating Pressure



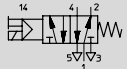
Tiger 2000 Single Solenoid-Actuated Valves

5/2 - 5 Ported, 4 Way, 2 Position Valves, Piloted, G 3/8

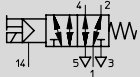
FESTO

Single Solenoid Valve

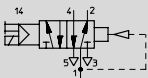
With Manual Override and Spring Return
Type MFH-5-3/8-B



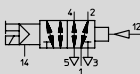
With External Pilot Supply
Type MFH-5-3/8-S-B



With Manual Override and Pneumatic Reset
Type MFH-5-3/8-L-B



With External Pilot Supply
Type MFH-5-3/8-L-S-B



- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 14 (Pz) = External Pilot Air

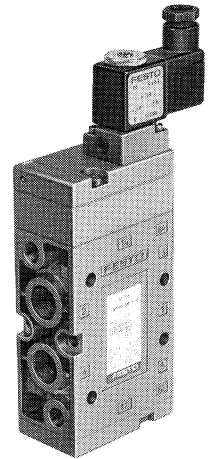
Note:

Part number is for valve only. Order desired F-coil and socket separately.

These are piloted valves with the solenoid controlling the pilot air. Pilot air is supplied via pressure port 1. When the solenoid is energized, the valve shifts and remains shifted until the solenoid is de-energized.

Manifolds: Type PRS-...-B and Type PAL-...-B; for manifold mounting, see pages 393-404.

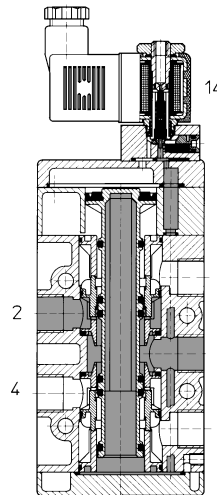
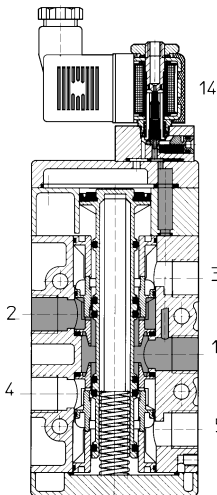
Type MFH-5-3/8-...-B



Valve shown with coil and socket accessories.

Example:
Type MFH-5-3/8-B

Example:
Type MFH-5-3/8-L-B



Accessories: (Ordered Separately)

Manual Override Lever
rotary, detented;
157651 AHB-MD/MF/MV

Solenoid F-Coils
with socket, see page 455
without socket, see page 456

Standard Sockets, Type MSSD-F
see page 459

Sockets with cable, Type KMF-...
see page 460

LED Gaskets, Type MF-LD-...
see pages 462-463

Indicator Inserts, Type MFL-...
see page 464

Solenoid Inserts, Type MFZ-...
see page 465

Order Number Part No./Type	Valve Only (Order Solenoid and Socket Separately)	19705 MFH-5-3/8-B	19706 MFH-5-3/8-S-B	14946 MFH-5-3/8-L-B	33181 MFH-5-3/8-L-S-B
Medium		Compressed air (filtered, lubricated or unlubricated)*			
Design		Spool valve with pressure relief slots			
Mounting		Holes through housing			
Connection		G 3/8 ISO; 14: G 1/8 ISO			
Orifice Size		0.55 in / 14 mm			
C _v Factor (1 → 2, 1 → 4)		2.03 C _v / 2000 l/min			
Pressure Range (See graph on page 354)	Operating Range	30 to 150 psi / 2 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar	30 to 150 psi / 2 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar
	Pilot Range	—	30 to 150 psi / 2 to 10 bar	—	45 to 150 psi / 3 to 10 bar
Response Time at 90 psi / 6 bar		On: 20 ms, Off: 56 ms		On: 28 ms, Off: 55 ms	
Ambient Temperature		23 to 122°F / -5 to +50°C			
Medium Temperature		23 to 122°F / -5 to +50°C			
Materials		Housing, Cover: Diecast Al, Seals: Buna N			
Weight		1.389 lb / 0.630 kg			
Direct Current	Standard Voltage	12, 24V		} See pages 455-456.	
Alternating Current	Available Voltage	12 to 230V			
	Standard Voltage	24, 42, 110, 230V / 50 to 60 Hz			
	Available Voltage	12 to 240V / 50 or 60 Hz			
Power Consumption		DC: 4.5 W; AC: Holding 6 VA, Inrush 7.5 VA			
Duty Cycle		100%			
Type of Protection		IP 65 (DIN 40050)			

* Type MFH-5-3/8-S-B and MFH-5-3/8-L-S-B are suitable for vacuum operation.

Tiger 2000 Single Solenoid-Actuated Valves

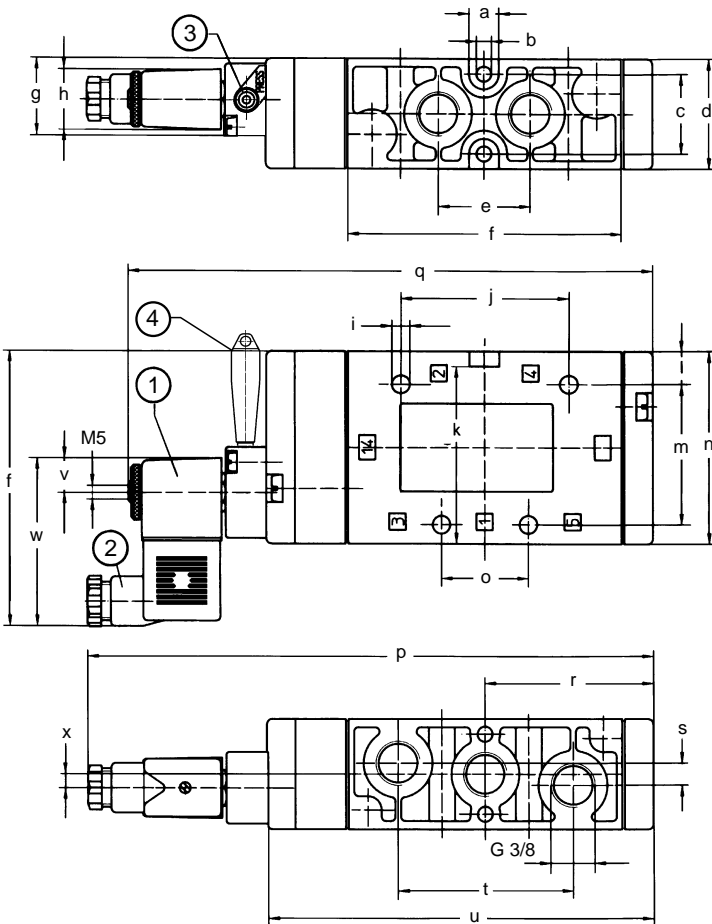
Dimensions

Type MFH-5-3/8-...-B

With Manual Override and Spring Return

Type MFH-5-3/8-L-B

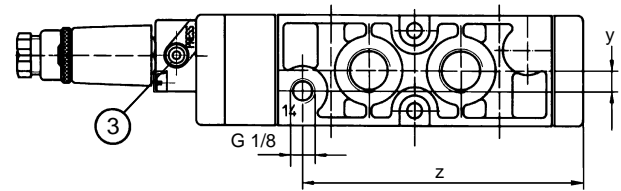
With Manual Override and Pneumatic Reset



Type MFH-5-3/8-S-B

MFH-5-3/8-L-S-B

With External Pilot Supply



An external pilot pressure must be supplied to port 14. This valve can be used to control pressure to 150 psi / 10 bar and used in applications where port 4 is blowing unthrottled to atmosphere (i.e., part ejection, chip removal, etc.).

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air

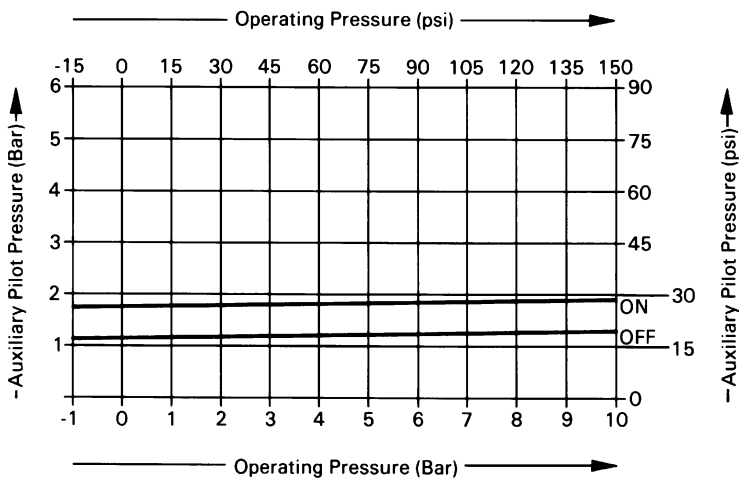
- ① Solenoid coil, rotatable 360°
 - ② Socket, rotatable 180°
 - ③ Manual override, rotatable 180°
 - ④ Manual override lever, rotary, detented (order separately)
- Note: Coil and manual override are independently rotatable.

Dimensions

a	0.43 in / 11 mm	n	2.76 in / 70 mm
b	0.22 in / 5.5 mm	o	1.26 in / 32 mm
c	1.14 in / 29 mm	p	8.15 in / 207 mm
d	1.57 in / 40 mm	q	7.56 in / 192 mm
e	1.33 in / 33.8 mm	r	2.42 in / 61.5 mm
f	3.94 in / 100 mm	s	0.31 in / 8 mm
g	1.10 in / 28 mm	t	2.52 in / 64 mm
h	0.87 in / 22 mm	u	5.55 in / 141 mm
i	0.26 in / 6.5 mm	v	0.49 in / 12.5 mm
j	2.42 in / 61.4 mm	w	2.40 in / 61 mm
k	2.54 in / 64.5 mm	x	0.20 in / 5 mm
l	0.47 in / 12 mm	y	0.30 in / 7.5 mm
m	2.01 in / 51 mm	z	4.04 in / 102.5 mm

Type MFH-5-3/8-S-B

Minimum Pilot Pressure versus Operating Pressure



A2.523rC(10.92)

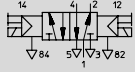
Tiger 2000 Double Solenoid-Actuated Valves

5/2 - 5 Ported, 4 Way, 2 Position Valves, Piloted, G 1/8

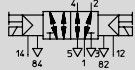
FESTO

Double Solenoid Valve

With Manual Override
Type JMVH-5-1/8-B



With Manual Override and
External Pilot Supply
Type JMVH-5-1/8-S-B



Solenoid V-coil is included with valve.

Accessories:
(Ordered Separately)

Standard Sockets, Type MSSD-V
see page 461

Sockets with cable, Type KMV-...
see page 461

LED Gaskets, Type MV-LD-...
see pages 462-463

Type JMVH-5-...-B



Note: V-coil is included with valve. Order socket separately.

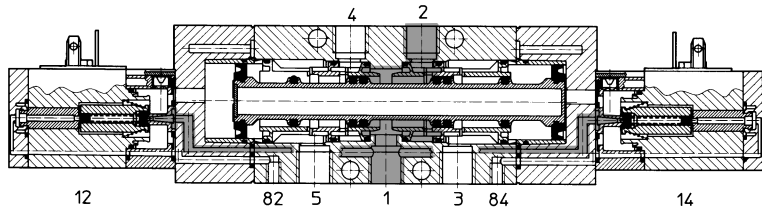
The valve is shifted by alternately energizing the solenoids. When a solenoid is energized the valve shifts. Only a momentary signal is required, (see response time) because the valve will maintain its shifted position until the other solenoid is energized. The externally piloted designs (-S) can be operated with vacuum.

For Type JMVH-... valves, pilot exhaust air is ducted at port 82, 84. Valve exhaust can be directly vented to the atmosphere when the seal under the cap is removed.

Manifolds: Type PRS-1/8-...-BB, PRS-1/4-...-B and Type PAL-...-B; for manifold mounting, see pages 393-404.

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air
- 82, 84 = Pilot Exhaust Air

Example: Type JMVH-5-1/8-B



Order Number Part No./Type	Low 2.5 Watt Valve with Solenoid (Order Socket Separately)	30475 JMVH-5-1/8-B	30476 JMVH-5-1/8-S-B
Medium		Compressed air (filtered, lubricated or unlubricated)*	
Design		Spool valve with pressure relief slots	
Mounting		Through-holes in housing	
Connection		G 1/8 ISO; 12, 14: G 1/8 ISO; 82, 84: M5	
Orifice Size		0.32 in / 8 mm	
C _v Factor (1 → 2, 1 → 4)		1.0 C _v / 1000 l/min	
Operating Range		30 to 150 psi / 2 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar
Pilot Range		—	30 to 150 psi / 2 to 10 bar (see page 356)
Response Time at 90 psi / 6 bar		18 ms	
Ambient Temperature		23 to 122°F / -5 to +50°C	
Medium Temperature		23 to 122°F / -5 to +50°C	
Materials		Housing, Cover: Diecast Al, Seals: Buna N	
Weight		1.235 lb / 0.560 kg	
Direct Current - DC		24V	
Power Consumption		2.5 W	
Duty Cycle		100%	
Type of Protection		IP 65 (DIN 40050)	

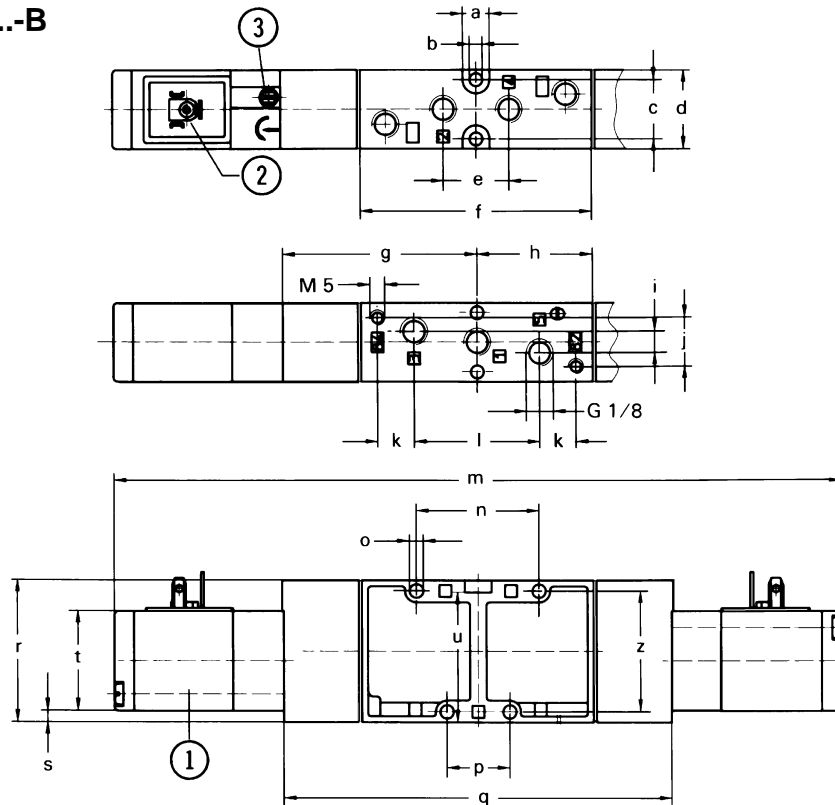
* Type JMVH-5-1/8-S-B is suitable for vacuum operation.

Tiger 2000 Double Solenoid-Actuated Valves

Dimensions

Type JMVH-5-1/8-...-B

With Manual Override

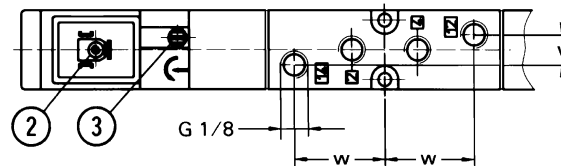


Dimensions

a	0.35 in / 9 mm
b	0.17 in / 4.3 mm
c	0.77 in / 19.5 mm
d	1.02 in / 26 mm
e	0.87 in / 22 mm
f	3.03 in / 77 mm
g	2.54 in / 64.5 mm
h	1.52 in / 38.5 mm
i	0.28 in / 7 mm
j	0.63 in / 16 mm
k	0.47 in / 12 mm
l	1.65 in / 42 mm
m	9.50 in / 241.2 mm
n	1.61 in / 41 mm
o	0.18 in / 4.5 mm
p	0.83 in / 21 mm
q	5.08 in / 129 mm
r	1.85 in / 47 mm
s	0.15 in / 3.8 mm
t	1.30 in / 33 mm
u	1.69 in / 43 mm
v	0.39 in / 10 mm
w	1.18 in / 30 mm
z	1.57 in / 40 mm

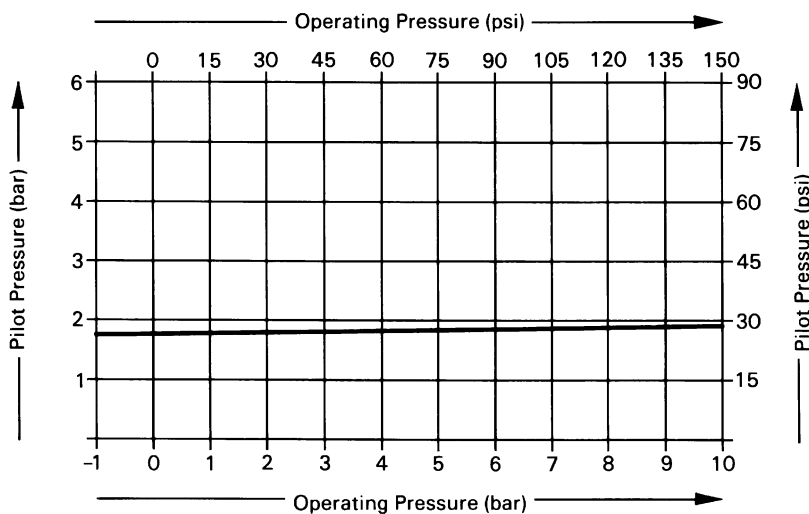
Type JMVH-5-1/8-S-B

With External Pilot Supply



Type JMVH-5-1/8-S-B

Minimum Pilot Pressure versus Operating Pressure



An external pilot pressure must be supplied to port 12 and 14. This valve can be used to control pressure to 150 psi / 10 bar and used in applications where port 4 is blowing unthrottled to atmosphere (i.e., part ejection, chip removal, etc.).

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air
- 82, 84 = Pilot Exhaust Air

- ① Solenoid coil can be turned 180°
Note: When rotating solenoid on Type MVH valves, cap must be kept in original position to avoid blocking pilot exhaust.
- ② Socket connection per DIN 43650, Code B
- ③ Manual override detent

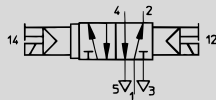
Tiger 2000 Double Solenoid-Actuated Valves

5/2 - 5 Ported, 4 Way, 2 Position Valves, Piloted, G 1/8

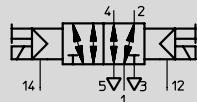
FESTO

Double Solenoid Valve

With Manual Override
Type JMFH-5-1/8-B



With Manual Override and
External Pilot Supply
Type JMFH-5-1/8-S-B



Accessories:
(Ordered Separately)

Manual Override Lever
rotary, detented;
157651 AHB-MD/MF/MV

Solenoid F-Coils
with socket, see page 455
without socket, see page 456

Standard Sockets, Type MSSD-F
see page 459

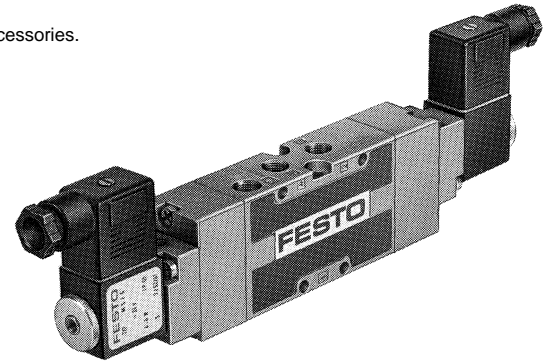
Sockets with cable, Type KMF-...
see page 460

LED Gaskets, Type MF-LD-...
see pages 462-463

Indicator Inserts, Type MFL-...
see page 464

Solenoid Inserts, Type MFZ-...
see page 465

Type JMFH-5-...-B
Valve shown with coil and socket accessories.



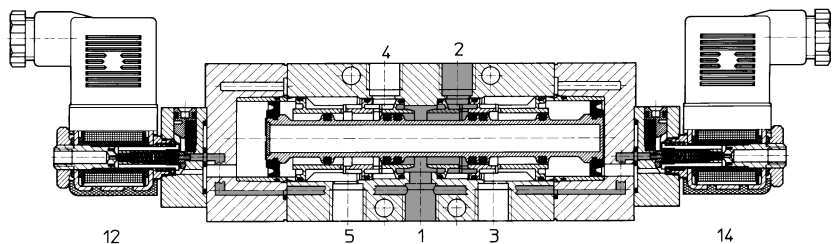
Note: Part number is for valve only. Order desired F-coil and socket separately.

The valve is shifted by alternately energizing the solenoids. When a solenoid is energized the valve shifts. Only a momentary signal is required, (see response time) because the valve will maintain its shifted position until the other solenoid is energized. The externally piloted designs (-S) can be operated with vacuum.

Manifolds: Type PRS-1/8-...-BB, PRS-1/4-...-B and Type PAL-...-B; for manifold mounting, see pages 393-404.

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 (Pz) = External Pilot Air

Example: Type JMVH-5-1/8-B



Order Number Part No./Type	Valve Only (Order Solenoid and Socket Separately)	30486 JMFH-5-1/8-B	30487 JMFH-5-1/8-S-B
Medium		Compressed air (filtered, lubricated or unlubricated)*	
Design		Spool valve with pressure relief slots	
Mounting		Through-holes in housing	
Connection		G 1/8 ISO	
Orifice Size		0.32 in / 8 mm	
C _v Factor (1 → 2, 1 → 4)		1.0 C _v / 1000 l/min	
Operating Range		30 to 150 psi / 2 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar
Pilot Range		—	30 to 150 psi / 2 to 10 bar (see page 358)
Response Time at 90 psi / 6 bar		14 ms	
Ambient Temperature		23 to 122°F / -5 to +50°C	
Medium Temperature		23 to 122°F / -5 to +50°C	
Materials		Housing, Cover: Diecast Al, Seals: Buna N	
Weight		0.882 lb / 0.400 kg	
Direct Current	Standard Voltage	12, 24V	} See pages 455-456.
	Available Voltage	12 to 230V	
Alternating Current	Standard Voltage	24, 42, 110, 230V / 50 to 60 Hz	
	Available Voltage	12 to 240V / 50 or 60 Hz	
Power Consumption		DC: 4.5 W; AC: Holding 6 VA, Inrush 7.5 VA	
Duty Cycle		100%	
Type of Protection		IP 65 (DIN 40050)	

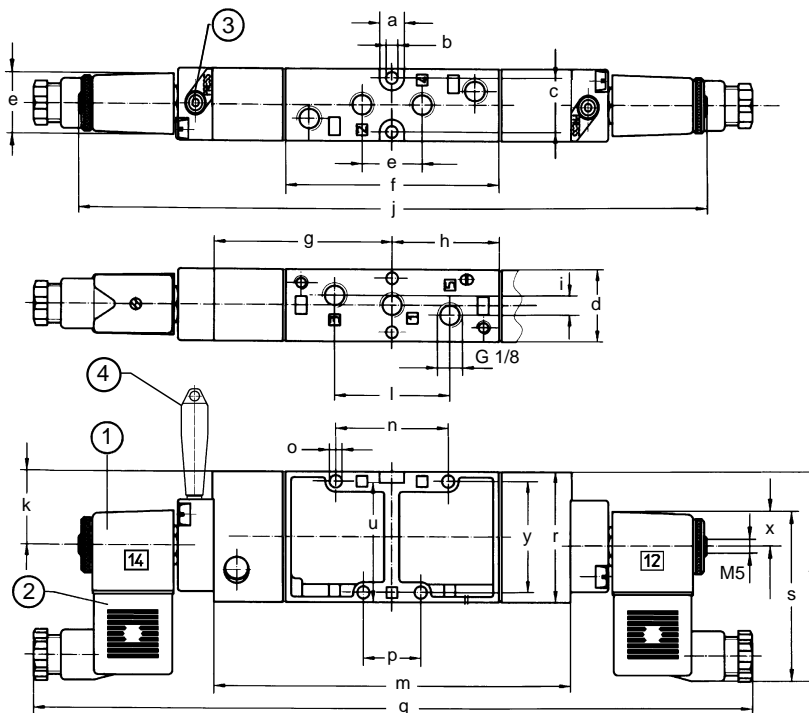
* Type JMFH-5-1/8-S-B is suitable for vacuum operation.

Tiger 2000 Double Solenoid-Actuated Valves

Dimensions

Type JMFH-5-1/8-...-B

With Manual Override

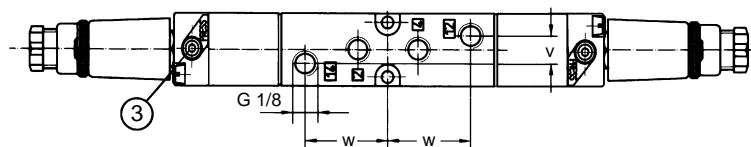


Dimensions

a	0.35 in / 9 mm
b	0.17 in / 4.3 mm
c	0.77 in / 19.5 mm
d	1.02 in / 26 mm
e	0.87 in / 22 mm
f	3.03 in / 77 mm
g	2.54 in / 64.5 mm
h	1.52 in / 38.5 mm
i	0.28 in / 7 mm
j	9.06 in / 230 mm
k	1.05 in / 26.7 mm
l	1.65 in / 42 mm
m	5.08 in / 129 mm
n	1.61 in / 41 mm
o	0.18 in / 4.5 mm
p	0.83 in / 21 mm
q	10.35 in / 263 mm
r	1.85 in / 47 mm
s	2.40 in / 61 mm
t	2.97 in / 75.5 mm
u	1.69 in / 43 mm
v	0.39 in / 10 mm
w	1.18 in / 30 mm
x	0.49 in / 12.5 mm
y	1.57 in / 40 mm

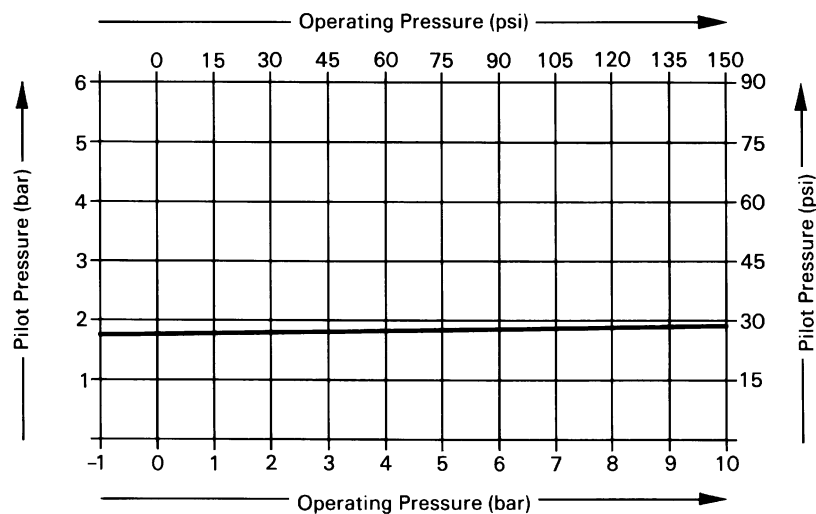
Type JMFH-5-1/8-S-B

With External Pilot Supply



Type JMFH-5-1/8-S-B

Minimum Pilot Pressure versus Operating Pressure



An external pilot pressure must be supplied to port 12 and 14. This valve can be used to control pressure to 150 psi / 10 bar and can be used in applications where port 4 is blowing unthrottled to atmosphere (i.e., part ejection, chip removal, etc.).

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air

- ① Solenoid coil, rotatable 360°
 - ② Socket, rotatable 180°
 - ③ Manual override, rotatable 180°
 - ④ Manual override lever, rotary, detented (order separately)
- Note: Coil and manual override are independently rotatable.

Tiger 2000 Double Solenoid-Actuated Valves

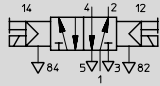
5/2 - 5 Ported, 4 Way, 2 Position Valves, Piloted, G 1/4

FESTO

Double Solenoid Valve

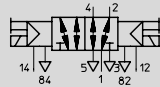
With Manual Override

Type JMVH-5-1/4-B



With Manual Override and External Pilot Supply

Type JMVH-5-1/4-S-B



Type JMVH-5-...-B



Note:

V-coil is included with valve. Order socket separately.

The valve is shifted by alternately energizing the solenoids. When a solenoid is energized the valve shifts. Only a momentary signal is required, (see response time) because the valve will maintain its shifted position until the other solenoid is energized. The externally piloted designs (-S) can be operated with vacuum.

For Type JMVH-... valves, pilot exhaust air is ducted at port 82, 84. Valve exhaust can be directly vented to the atmosphere when the seal under the cap is removed.

Manifolds: Type PRS-1/8-...-BB, PRS-1/4-...-B

and Type PAL-...-B; for manifold mounting, see pages 393-404.

Solenoid V-coil is included with valve.

Accessories:

(Ordered Separately)

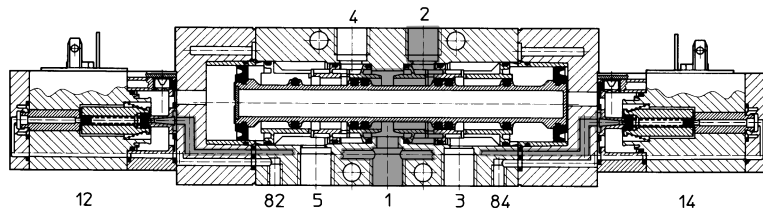
Standard Sockets, Type MSSD-V
see page 461

Sockets with cable, Type KMV-...
see page 461

LED Gaskets, Type MV-LD-...
see pages 462-463

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air
- 82, 84 = Pilot Exhaust Air

Example: Type JMVH-5-1/4-B



Order Number Part No./Type	Low 2.5 Watt Valve with Solenoid (Order Socket Separately)	19136 JMVH-5-1/4-B	19137 JMVH-5-1/4-S-B
Medium		Compressed air (filtered, lubricated or unlubricated)*	
Design		Spool valve with pressure relief slots	
Mounting		Through-holes in housing	
Connection		G 1/4 ISO; 12, 14: G 1/8 ISO; 82, 84: M5	
Orifice Size		0.39 in / 10 mm	
C _v Factor (1 → 2, 1 → 4)		1.6 C _v / 1600 l/min	
Operating Range		30 to 150 psi / 2 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar
Pilot Range		—	30 to 150 psi / 2 to 10 bar (see page 360)
Response Time at 90 psi / 6 bar		16 ms	
Ambient Temperature		23 to 122°F / -5 to +50°C	
Medium Temperature		23 to 122°F / -5 to +50°C	
Materials		Housing, Cover: Diecast Al, Seals: Buna N	
Weight		1.353 lb / 0.615 kg	
Direct Current - DC		24V	
Power Consumption		2.5 W	
Duty Cycle		100%	
Type of Protection		IP 65 (DIN 40050)	

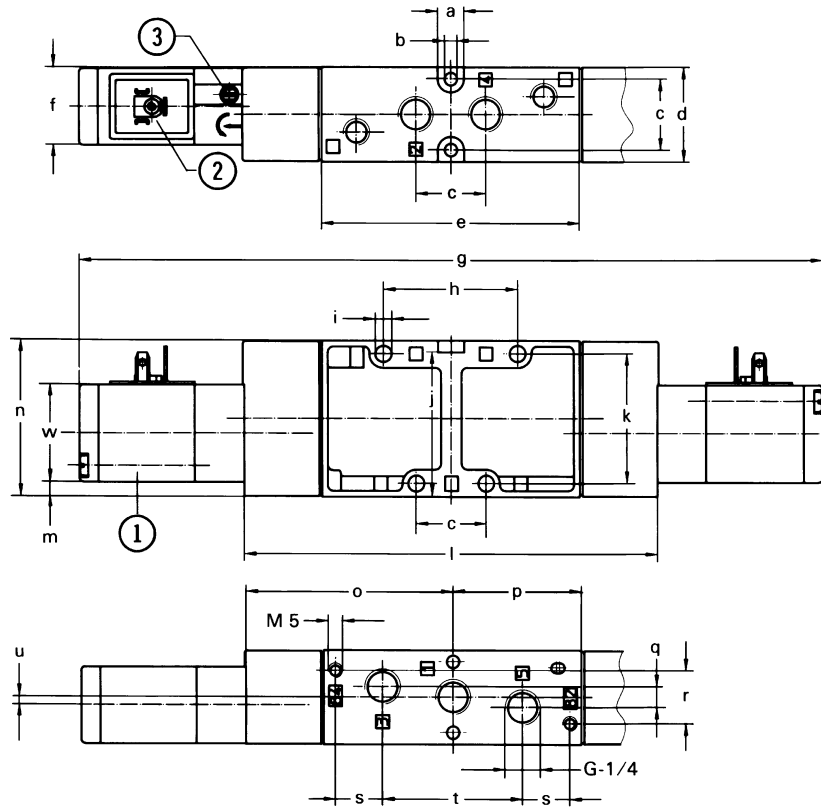
* Type JMVH-5-1/4-S-B is suitable for vacuum operation.

Tiger 2000 Double Solenoid-Actuated Valves

Dimensions

Type JMVH-5-1/4-...-B

With Manual Override

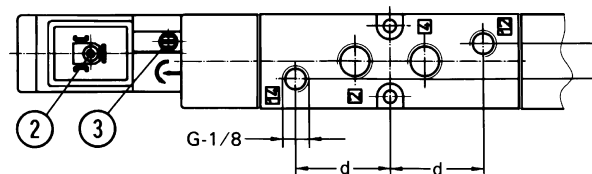


Dimensions

a	0.35 in / 9 mm
b	0.17 in / 4.3 mm
c	0.94 in / 24 mm
d	1.26 in / 32 mm
e	3.46 in / 88 mm
f	1.04 in / 26.3 mm
g	9.97 in / 253.2 mm
h	1.81 in / 46 mm
i	0.22 in / 5.5 mm
j	1.93 in / 49 mm
k	1.73 in / 44 mm
l	5.55 in / 141 mm
m	0.20 in / 5 mm
n	2.09 in / 53 mm
o	2.78 in / 70.5 mm
p	1.73 in / 44 mm
q	0.28 in / 7 mm
r	0.71 in / 18 mm
s	0.63 in / 16 mm
t	1.89 in / 48 mm
u	0.11 in / 2.7 mm
v	0.47 in / 12 mm
w	1.30 in / 33 mm

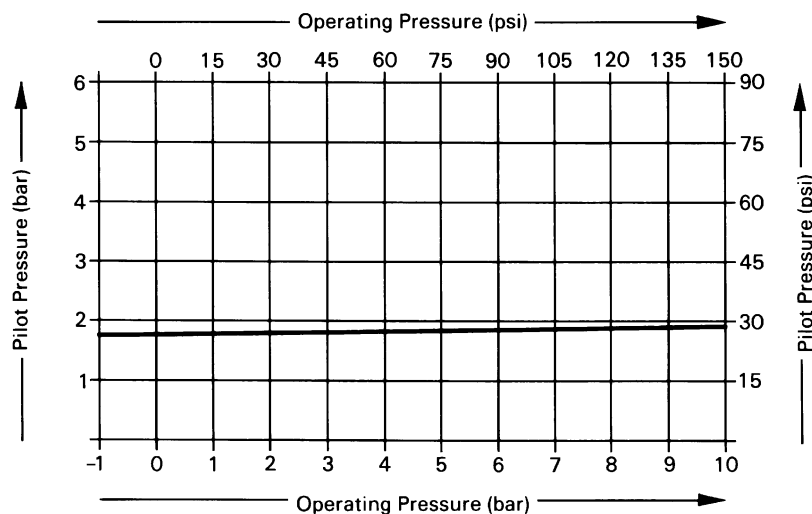
Type JMVH-5-1/4-S-B

With External Pilot Supply



Type JMVH-5-1/4-S-B

Minimum Pilot Pressure versus Operating Pressure



An external pilot pressure must be supplied to ports 12 and 14. This valve can be used to control pressure to 150 psi / 10 bar and can be used in applications where port 4 is blowing unthrottled to atmosphere (i.e., part ejection, chip removal, etc.).

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air
- 82, 84 = Pilot Exhaust Air

- ① Solenoid coil can be turned 180°
Note: When rotating solenoid on Type MVH valves, cap must be kept in original position to avoid blocking pilot exhaust.
- ② Socket connection per DIN 43650, Code B
- ③ Manual override detent

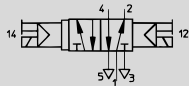
Tiger 2000 Double Solenoid-Actuated Valves

5/2 - 5 Ported, 4 Way, 2 Position Valves, Piloted, G 1/4

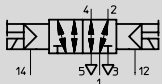
FESTO

Double Solenoid Valve

With Manual Override
Type JMFH-5-1/4-B



With Manual Override and
External Pilot Supply
Type JMFH-5-1/4-S-B



Accessories:

(Order Separately)

Manual Override Lever

rotary, detented;
157651 AHB-MD/MF/MV

Solenoid F-coils

with socket, see page 455
without socket, see page 456

Standard Sockets, Type MSSD-F

see page 459

Sockets with cable, Type KMF-...

see page 460

LED Gaskets, Type MF-LD-...

see pages 462-463

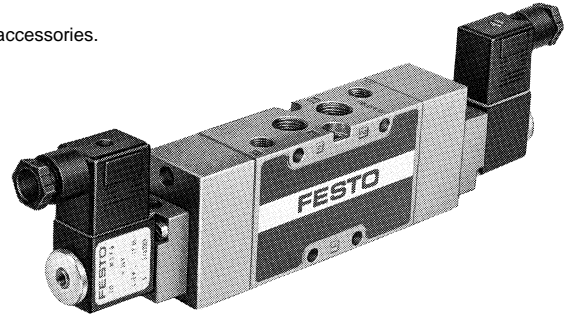
Indicator Inserts, Type MFL-...-...

see page 464

Solenoid Inserts, Type MFZ-...

see page 465

Type JMFH-5-...-B
Valve shown with coil and socket accessories.



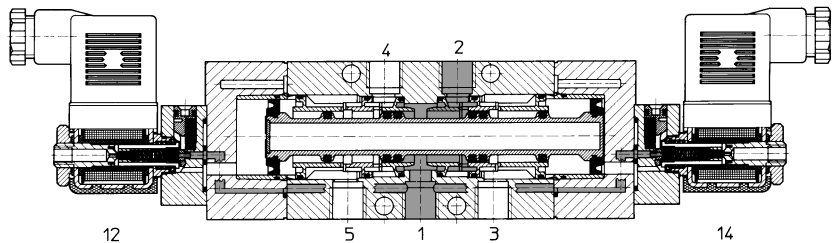
Note: Part number is for valve only. Order desired F-coil and socket separately.

The valve is shifted by alternately energizing the solenoids. When a solenoid is energized the valve shifts. Only a momentary signal is required, (see response time) because the valve will maintain its shifted position until the other solenoid is energized. The externally piloted designs (-S) can be operated with vacuum.

Manifolds: Type PRS-1/8-...-BB, PRS-1/4-...-B and Type PAL-...-B; for manifold mounting, see pages 393-404.

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air

Example: Type JMFH-5-1/4-B



Order Number Part No./Type	Valve Only (Order Solenoid and Socket Separately)	19789 JMFH-5-1/4-B	19790 JMFH-5-1/4-S-B
Medium		Compressed air (filtered, lubricated or unlubricated)*	
Design		Spool valve with pressure relief slots	
Mounting		Through-holes in housing	
Connection		G 1/4 ISO; 12, 14: G 1/8 ISO	
Orifice Size		0.39 in / 10 mm	
C _v Factor (1 → 2, 1 → 4)		1.6 C _v / 1600 l/min	
Operating Range		30 to 150 psi / 2 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar
Pilot Range		—	30 to 150 psi / 2 to 10 bar (see page 362)
Response Time at 90 psi / 6 bar		14 ms	
Ambient Temperature		23 to 122°F / -5 to +50°C	
Medium Temperature		23 to 122°F / -5 to +50°C	
Materials		Housing; Cover: Diecast, Al; Seals: Buna N	
Weight		1.014 lb / 0.460 kg	
Direct Current	Standard Voltage	12, 24V	} See pages 455-456.
	Available Voltage	12 to 230V	
Alternating Current	Standard Voltage	24, 42, 110, 230V / 50 to 60 Hz	
	Available Voltage	12 to 240V / 50 or 60 Hz	
Power Consumption		DC: 4.5 W; AC: Holding 6 VA, Inrush 7.5 VA	
Duty Cycle		100%	
Type of Protection		IP 65 (DIN 40050)	

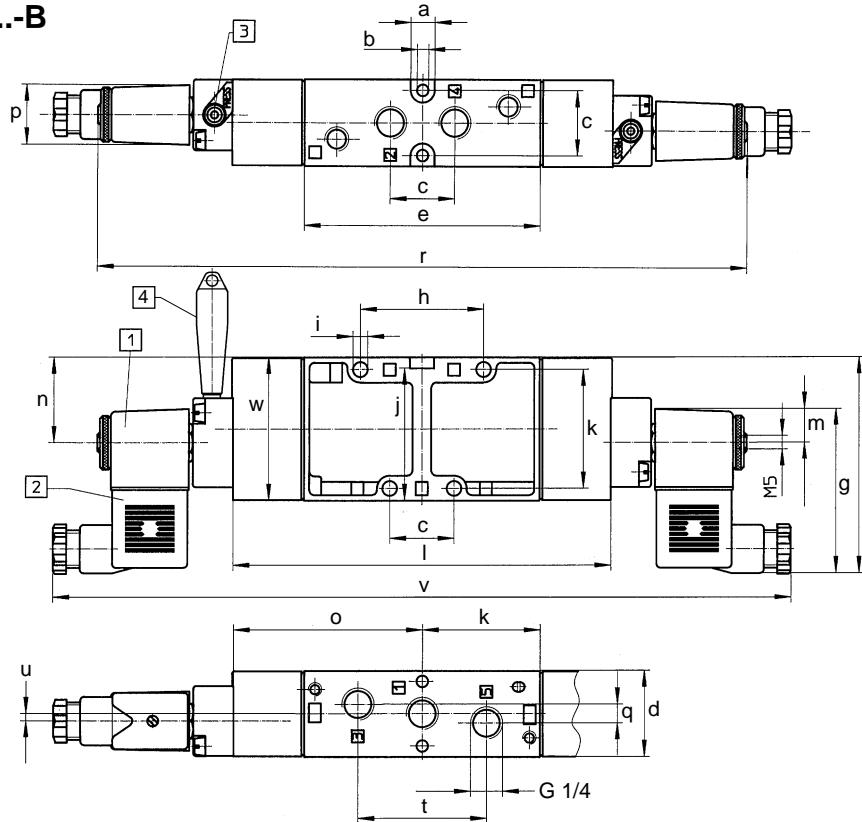
* Type JMFH-5-1/4-S-B is suitable for vacuum operation.

Tiger 2000 Double Solenoid-Actuated Valves

Dimensions

Type JMFH-5-1/4-...-B

With Manual Override

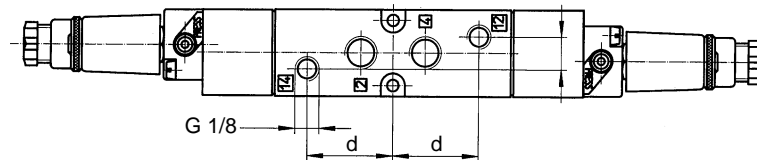


Dimensions

a	0.35 in / 9 mm
b	0.17 in / 4.3 mm
c	0.94 in / 24 mm
d	1.26 in / 32 mm
e	3.46 in / 88 mm
f	3.15 in / 80 mm
g	2.40 in / 61 mm
h	1.81 in / 46 mm
i	0.22 in / 5.5 mm
j	1.93 in / 49 mm
k	1.73 in / 44 mm
l	5.55 in / 141 mm
m	0.49 in / 12.5 mm
n	1.24 in / 31.5 mm
o	2.78 in / 70.5 mm
p	0.87 in / 22 mm
q	0.28 in / 7 mm
r	9.53 in / 242 mm
s	0.47 in / 12 mm
t	1.89 in / 48 mm
u	0.11 in / 2.7 mm
v	10.83 in / 275 mm
w	2.09 in / 53 mm

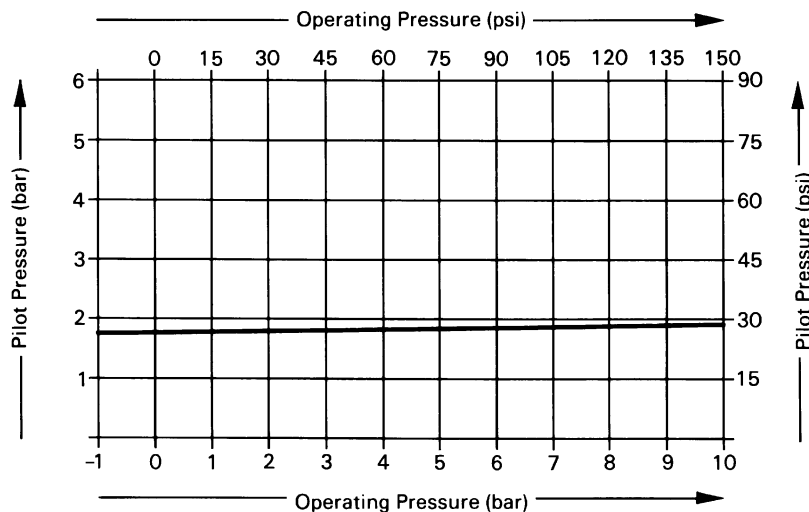
Type JMFH-5-1/4-S-B

With External Pilot Supply



Type JMFH-5-1/4-S-B

Minimum Pilot Pressure versus Operating Pressure



An external pilot pressure must be supplied to ports 12 and 14. This valve can be used to control pressure to 150 psi / 10 bar and can be used in applications where port 4 is blowing unthrottled to atmosphere (i.e., part ejection, chip removal, etc.).

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air

- 1 Solenoid coil rotatable 360°
 - 2 Socket, rotatable 180°
 - 3 Manual override, rotatable 180°
 - 4 Manual override lever, rotary, detented (order separately)
- Note: Coil and manual override are independently rotatable.

Tiger 2000 Double Solenoid-Actuated Valves

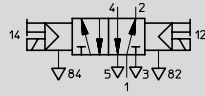
5/2 - 5 Ported, 4 Way, 2 Position Valves, Piloted, G 3/8

FESTO

Double Solenoid Valve

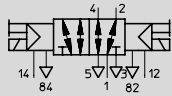
With Manual Override

Type JMVH-5-3/8-B



With Manual Override and External Pilot Supply

Type JMVH-5-3/8-S-B



Solenoid V-coil is included with valve

Accessories:

(Order Separately)

Standard Sockets, Type MSSD-V

see page 461

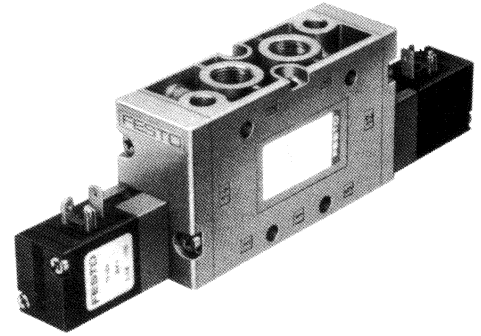
Sockets with cable, Type KMV-...

see page 461

LED Gaskets, Type MF-LD-...

see pages 462-463

Type JMVH-5-3/8-...-B



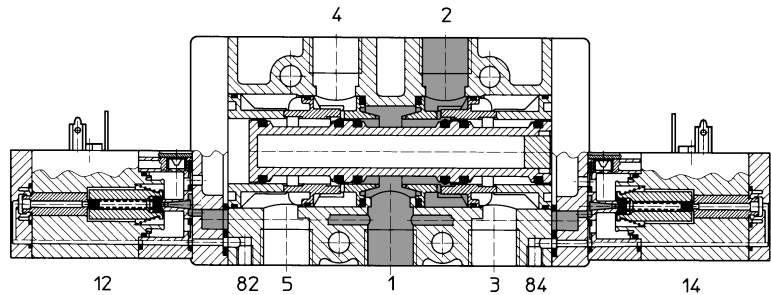
The valve is shifted by alternately energizing the solenoids. When a solenoid is energized the valve shifts. Only a momentary signal is required, (see response time) because the valve will maintain its shifted position until the other solenoid is energized. The externally piloted designs (-S) can be operated with vacuum.

For Type JMVH-... valves, pilot exhaust air is ducted at ports 82, 84. Valve exhaust can be directly verified to the atmosphere when the seal under the cap is removed.

Manifolds: Type PRS-...-B and Type PAL-...-B; for manifold mounting see pages 393-404.

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air
- 82, 84 = Pilot Exhaust Air

Example: Type JMVH-5-3/8-B



Order Number Part No./Type	Low 2.5 Watt Valve with Solenoid (Order Socket Separately)	14948 JMVH-5-3/8-B	15343 JMVH-5-3/8-S-B
Medium		Compressed air (filtered, lubricated or unlubricated)*	
Design		Spool valve with pressure relief slots	
Mounting		Through-holes in housing	
Connection		G 3/8 ISO; 12, 14: G 1/8 ISO; 82, 84: M 5	
Orifice Size		0.56 in / 14 mm	
C _v Factor (1 → 2, 1 → 4)		2.03 C _v / 2000 l/min	
Operating Range		30 to 150 psi / 2 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar
Pilot Range (see Graph on page 364)		–	30 to 150 psi / 2 to 10 bar
Response Time at 90 psi / 6 bar		17 ms	
Ambient Temperature		23 to 122°F / -5 to +50°C	
Medium Temperature		23 to 122°F / -5 to +50°C	
Materials		Housing, Cover: Diecast Al, Seals: Buna N	
Weight		1.980 lb / 0.900 kg	
Direct Current		24V=	
Power Consumption		2.5 W	
Duty Cycle		100%	
Type of Protection		IP 65 (DIN 40050)	

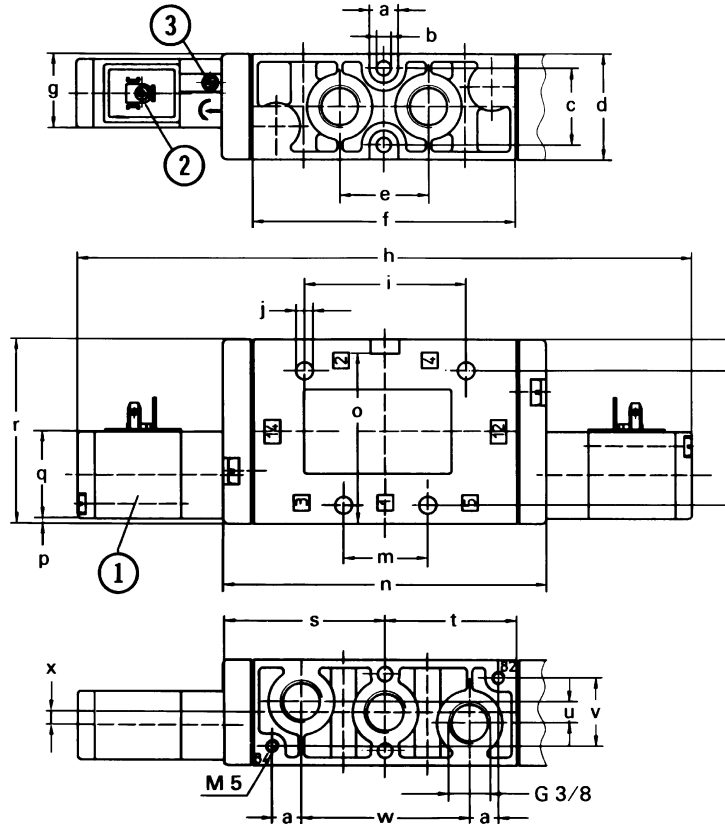
* Type JMVH-5-3/8-S-B is suitable for vacuum operation.

Tiger 2000 Double Solenoid-Actuated Valves

Dimensions

Type JMVH-5-3/8-...-B

With Manual Override

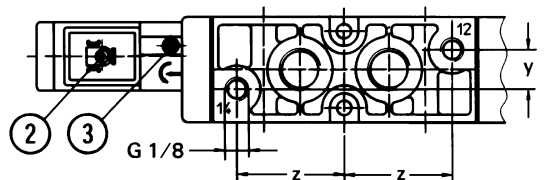


Dimensions

a	0.43 in / 11 mm
b	0.22 in / 5.5 mm
c	1.14 in / 29 mm
d	1.58 in / 40 mm
e	1.33 in / 33.8 mm
f	3.94 in / 100 mm
g	1.10 in / 28 mm
h	9.21 in / 234 mm
i	2.42 in / 61.4 mm
j	0.26 in / 6.5 mm
k	0.47 in / 12 mm
l	2.01 in / 51 mm
m	1.26 in / 32 mm
n	4.84 in / 123 mm
o	2.54 in / 64.5 mm
p	0.08 in / 2 mm
q	1.30 in / 33 mm
r	2.76 in / 70 mm
s	2.40 in / 61 mm
t	1.97 in / 50 mm
u	0.32 in / 8 mm
v	1.02 in / 26 mm
w	2.52 in / 64 mm
x	0.20 in / 5 mm
y	0.60 in / 15 mm
z	1.61 in / 41 mm

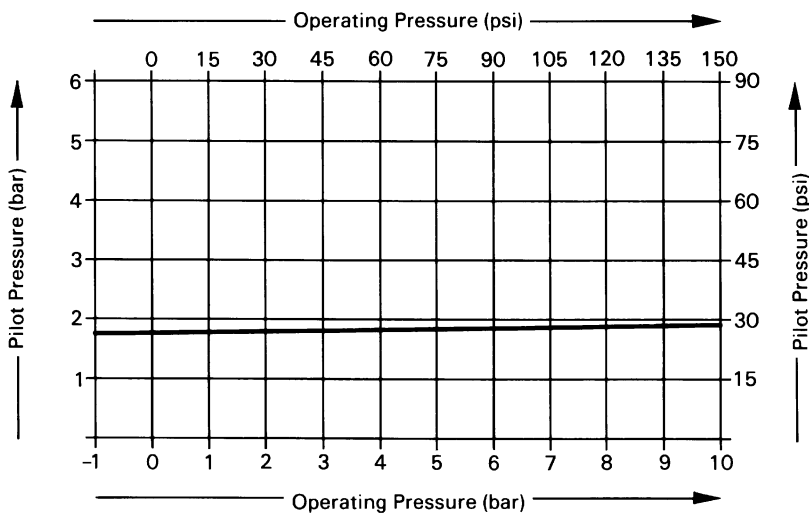
Type JMVH-5-3/8-S-B

With External Pilot Supply



Type JMVH-5-3/8-S-B

Minimum Pilot Pressure versus Operating Pressure



An external pilot pressure must be supplied to port 12 and 14. This valve can be used to control pressure to 150 psi / 10 bar and used in applications where port 4 is blowing unthrottled to atmosphere (i.e., part ejection, chip removal, etc.).

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air
- 82, 84 = Pilot Exhaust Air

- ① Solenoid coil can be turned 180°
Note: When rotating solenoid on Type MVH valves, cap must be kept in original position to avoid blocking pilot exhaust.
- ② Socket connection per DIN 43650. Code B
- ③ Manual override detent

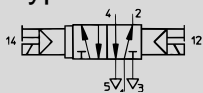
Tiger 2000 Double Solenoid-Actuated Valves

5/2 - 5 Ported, 4 Way, 2 Position Valves, Piloted, G 3/8

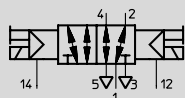
FESTO

Double Solenoid Valve

With Manual Override
Type JMFH-5-3/8-B



With Manual Override and External Pilot Supply
Type JMFH-5-3/8-S-B



Accessories:
(Order Separately)

Manual Override Lever
rotary, detented;
157651 AHB-MD/MF/MV

Solenoid F-coils
with socket, see page 455
without socket, see page 456

Standard Sockets, Type MSSD-F
see page 459

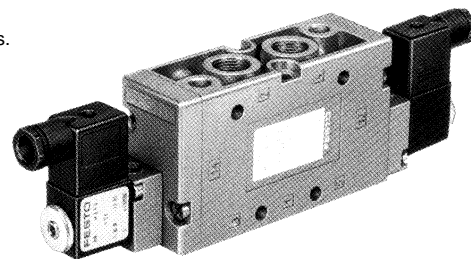
Sockets with cable, Type KMF-...
see page 460

LED Gaskets, Type MF-LD-...
see pages 462-463

Indicator Inserts, Type MFL-...-...
see page 464

Solenoid Inserts, Type MFZ-...
see page 465

Type JMFH-5-3/8-...-B
Valve shown with coil and socket accessories.



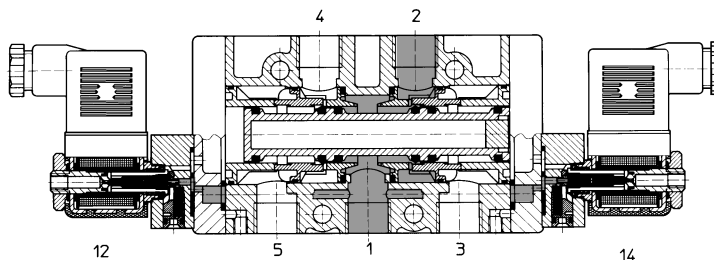
Note: Part number is for valve only. Order desired F-coil and socket separately.

The valve is shifted by alternately energizing the solenoids. When a solenoid is energized the valve shifts. Only a momentary signal is required, (see response time) because the valve will maintain its shifted position until the other solenoid is energized. The externally piloted designs (-S) can be operated with vacuum.

Manifolds: Type PRS-...-B and Type PAL-...-B; for manifold mounting see pages 393-404.

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air

Example: Type JMFH-5-3/8-B



Order Number Part No./Type	Valve Only (Order Solenoid and Socket Separately)	19700 JMFH-5-3/8-B	19702 JMFH-5-3/8-S-B
Medium		Compressed air (filtered, lubricated or unlubricated)*	
Design		Spool valve with pressure relief slots	
Mounting		Through-holes in housing	
Connection		G 3/8 ISO; 12, 14: G 1/8 ISO	
Orifice Size		0.56 in / 14 mm	
C _v Factor (1 → 2, 1 → 4)		2.03 C _v / 2000 l/min	
Operating Range		30 to 150 psi / 2 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar
Pilot Range		—	30 to 150 psi / 2 to 10 bar (see page 366)
Response Time at 90 psi / 6 bar		12 ms	14 ms
Ambient Temperature		23 to 122°F / -5 to +50°C	
Medium Temperature		23 to 122°F / -5 to +50°C	
Materials		Housing; Cover: Diecast, Al; Seals: Buna N	
Weight		1.433 lb / 0.650 kg	
Direct Current	Standard Voltage	12, 24V	} See pages 455-456.
	Available Voltage	12 to 230V	
Alternating Current	Standard Voltage	24, 42, 110, 230V / 50 to 60 Hz	
	Available Voltage	12 to 240V / 50 or 60 Hz	
Power Consumption		DC: 4.5 W; AC: Holding 6 VA, Inrush 7.5 VA	
Duty Cycle		100%	
Type of Protection		IP 65 (DIN 40050)	

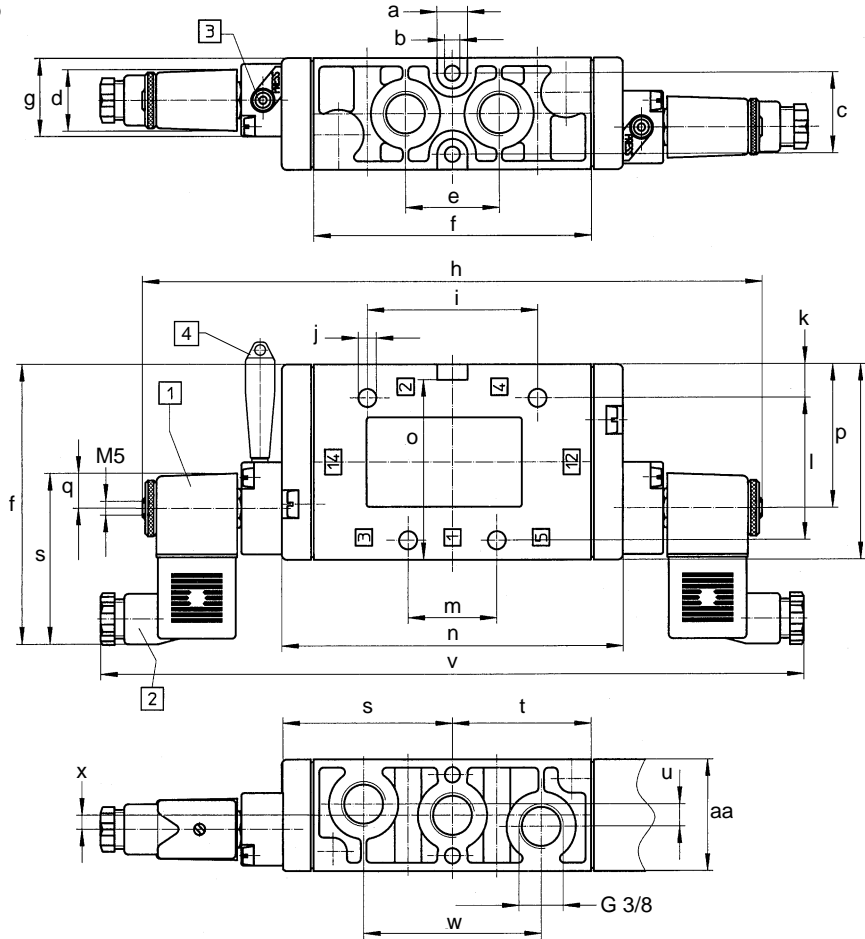
* Type JMFH-5-3/8-S-B is suitable for vacuum operation.

Tiger 2000 Double Solenoid-Actuated Valves

Dimensions

Type JMFH-5-3/8-...-B

With Manual Override

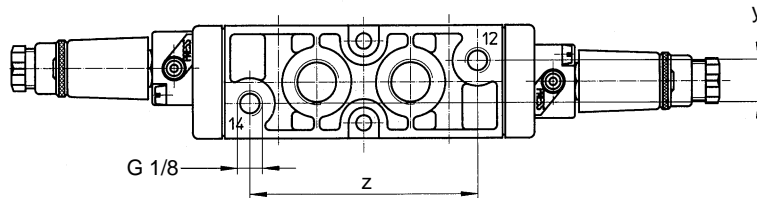


Dimensions

a	0.43 in / 11 mm
b	0.22 in / 5.5 mm
c	1.14 in / 29 mm
d	0.87 in / 22 mm
e	1.33 in / 33.8 mm
f	3.94 in / 100 mm
g	1.10 in / 28 mm
h	8.78 in / 223 mm
i	2.42 in / 61.4 mm
j	0.26 in / 6.5 mm
k	0.47 in / 12 mm
l	2.01 in / 51 mm
m	1.26 in / 32 mm
n	4.84 in / 123 mm
o	2.54 in / 64.5 mm
p	2.03 in / 51.5 mm
q	0.49 in / 12.5 mm
r	2.76 in / 70 mm
s	2.40 in / 61 mm
t	1.97 in / 50 mm
u	0.32 in / 8 mm
v	9.96 in / 253 mm
w	2.52 in / 64 mm
x	0.20 in / 5 mm
y	0.60 in / 15 mm
z	3.23 in / 82 mm
aa	1.58 in / 40 mm

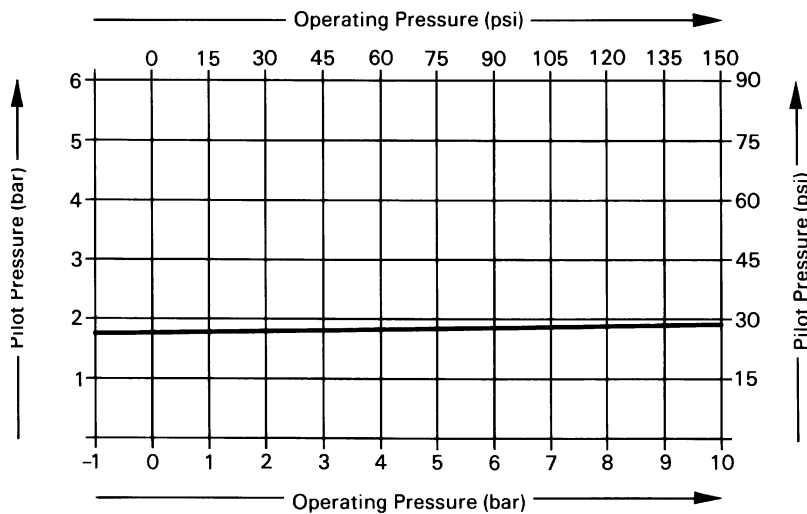
Type JMFH-5-3/8-S-B

With External Pilot Supply



Type JMFH-5-3/8-S-B

Minimum Pilot Pressure versus Operating Pressure



An external pilot pressure must be supplied to ports 12 and 14. This valve can be used to control pressure to 150 psi / 10 bar and can be used in applications where port 4 is blowing unthrottled to atmosphere (i.e., part ejection, chip removal, etc.).

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air

- 1 Solenoid coil, rotatable 360°
 - 2 Socket, rotatable 180°
 - 3 Manual override, rotatable 180°
 - 4 Manual override lever, rotary, detented (order separately)
- Note: Coil and manual override are independently rotatable.

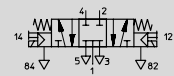
Tiger 2000 Double Solenoid-Actuated Valves

5/3 - 5 Ported, 4 Way, 3 Position Valves, Piloted, G 1/8

FESTO

Double Solenoid Valve

With Manual Override, Spring Centered
With Closed Center
Type MVH-5/3G-1/8-B



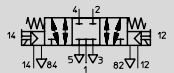
With Open Center
Type MVH-5/3E-1/8-B



Pressurized Center
Type MVH-5/3B-1/8-B



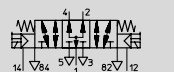
With Manual Override and External Pilot
With Closed Center
Type MVH-5/3G-1/8-S-B



With Open Center
Type MVH-5/3E-1/8-S-B



With Pressurized Center
Type MVH-5/3B-1/8-S-B



The valve is shifted when solenoid 12 or 14 is energized.

For Type MVH-... valves, pilot exhaust air is ducted at port 82, 84. Valve exhaust can be directly vented to the atmosphere when the seal under the cap is removed.

With the closed center valve, all ports are blocked (closed) when there are no electrical pilot signals. This valve can be used to stop a double acting cylinder at any point for a short period of time.

With the open center valve, the working ports are exhausted when there are no electrical pilot signals. This valve can be used to allow a double acting cylinder to "float" with no pressure on either side of the piston.

With the pressurized center valve, both working ports are supplied with air and exhausts are blocked when there are no electrical pilot signals. This valve should not be used to hold a standard double acting cylinder in mid-position (the cylinder will extend due to unequal forces exerted on the piston).

Solenoid V-coil is included with valve

Accessories:

(Order Separately)

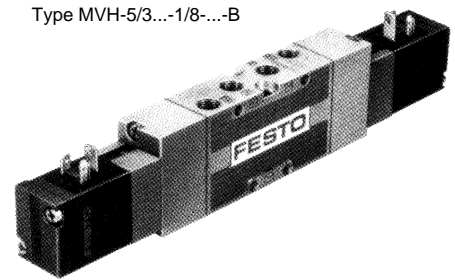
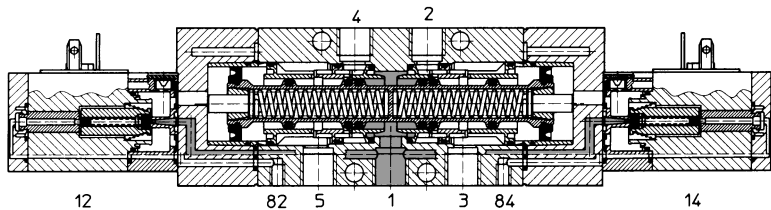
Standard Sockets, Type MSSD-V, see page 461

Sockets with cable, Type KMV-..., see page 461

LED Gaskets, Type MF-LD-..., see pages 462-463

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air
- 82, 84 = Pilot Exhaust Air

Example: Type MVH-5/3E-1/8-B



Order Number	Low 2.5 Watt Valve with Solenoid	30477 MVH-5/3G-1/8-B	30997 MVH-5/3G-1/8-S-B
Part No./Type	(Order Socket Separately)	30478 MVH-5/3E-1/8-B	30998 MVH-5/3E-1/8-S-B
		30480 MVH-5/3B-1/8-B	30999 MVH-5/3B-1/8-S-B
Medium		Compressed air (filtered, lubricated or unlubricated)*	
Design		Spool valve with pressure relief slots	
Mounting		Through-holes in housing	
Connection		G 1/8 ISO; 12, 14; G 1/8 ISO; 82, 84: M 5	
Nominal Size		0.32 in / 8 mm	
C _v Factor (1 → 2, 1 → 4)		1.0 C _v ; 1000 l/min	
Operating Pressure Range		45 to 150 psi / 3 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar
Pilot Pressure Range (See graph, page 368)		45 to 150 psi / 3 to 10 bar	
Response Time at 90 psi / 6 Bar	On/Off	MVH-5/3G... (28/26 ms); MVH-5/3E-... and MVH-5/3B-... (30/26 ms)	
Ambient Temperature		23 to 122°F / -5 to +50°C	
Medium Temperature		23 to 122°F / -5 to +50°C	
Materials		Housing: Cover: Diecast Al; Seals: Buna N	
Weight		1.268 lb / 0.575 kg	
Direct Current		24V	
Power Consumption		2.5 W	
Duty Cycle		100%	
Type of Protection		IP 65 (DIN 40050)	

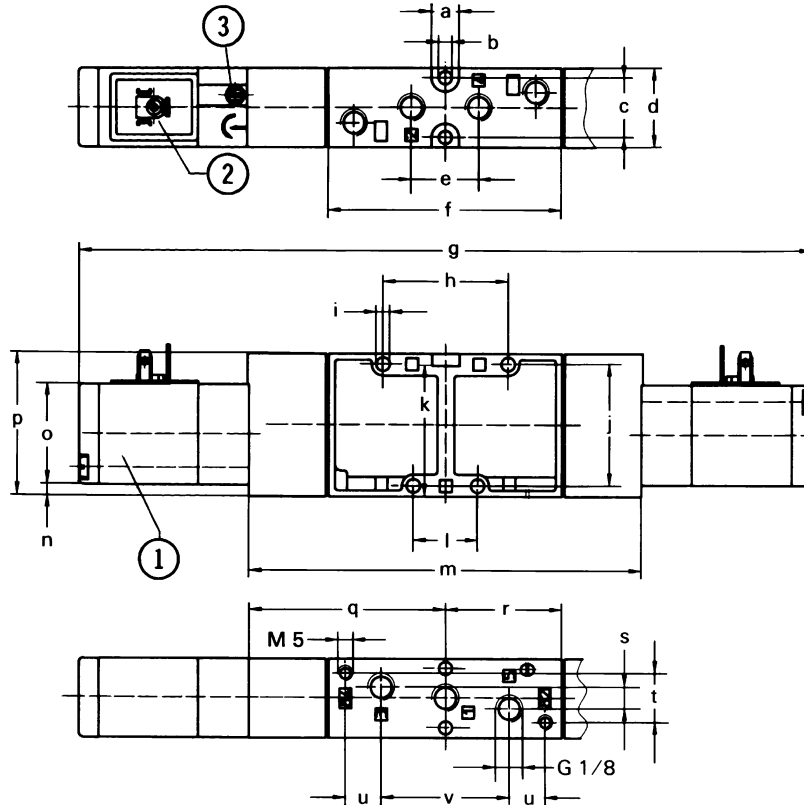
* Type MVH-5/3...-1/8-S-B is suitable for vacuum operation.

Tiger 2000 Double Solenoid-Actuated Valves

Dimensions

Type MVH-5/3...-1/8-B

With Manual Override

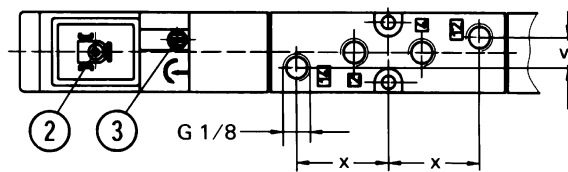


Dimensions

a	0.35 in / 9 mm
b	0.17 in / 4.3 mm
c	0.77 in / 19.5 mm
d	1.02 in / 26 mm
e	0.87 in / 22 mm
f	3.03 in / 77 mm
g	9.50 in / 241.2 mm
h	1.61 in / 41 mm
i	0.18 in / 4.5 mm
j	1.57 in / 40 mm
k	1.69 in / 43 mm
l	0.83 in / 21 mm
m	5.08 in / 129 mm
n	0.15 in / 3.8 mm
o	1.30 in / 33 mm
p	1.85 in / 47 mm
q	2.54 in / 64.5 mm
r	1.52 in / 38.5 mm
s	0.58 in / 7 mm
t	0.63 in / 16 mm
u	0.47 in / 12 mm
v	1.65 in / 42 mm
w	0.39 in / 10 mm
x	1.18 in / 30 mm

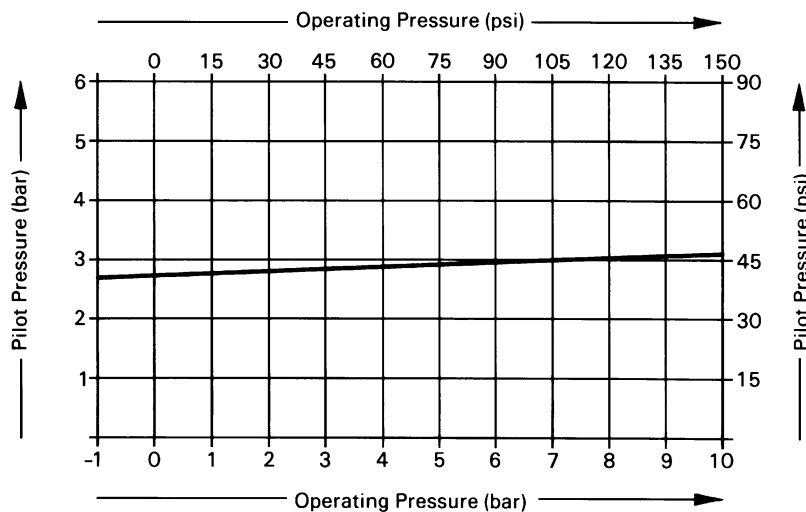
Type MVH-5/3...-1/8-S-B

With External Pilot Supply



Type MVH-5/3...-1/8-S-B

Minimum Pilot Pressure versus Operating Pressure



An external pilot pressure must be supplied to port 12 and 14. This valve can be used to control pressure to 150 psi / 10 bar and used in applications where port 4 is blowing unthrottled to atmosphere (i.e., part ejection, chip removal, etc.).

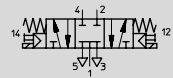
- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air
- 82, 84 = Pilot Exhaust Air

- ① Solenoid coil can be turned 180°
Note: When rotating solenoid on Type MVH valves, cap must be kept in original position to avoid blocking pilot exhaust.
- ② Socket connection per DIN 43650, Code B
- ③ Manual override detent

Double Solenoid Valve

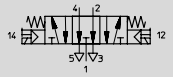
With Manual Override, Spring Centered
With Closed Center

Type MFH-5/3G-1/8-B



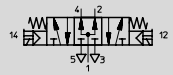
With Open Center

Type MFH-5/3E-1/8-B



Pressurized Center

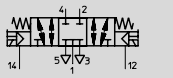
Type MFH-5/3B-1/8-B



With Manual Override and External Pilot

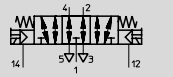
With Closed Center

Type MFH-5/3G-1/8-S-B



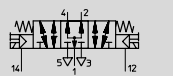
With Open Center

Type MFH-5/3E-1/8-S-B



With Pressurized Center

Type MFH-5/3B-1/8-S-B



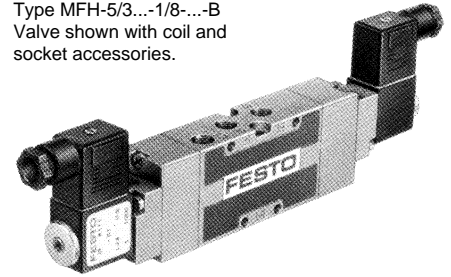
The valve is shifted when solenoid 12 or 14 is energized.

With the closed center valve, all ports are blocked (closed) when there are no electrical pilot signals. This valve can be used to stop a double acting cylinder at any point for a short period of time.

With the open center valve, the working ports are exhausted when there are no electrical pilot signals. This valve can be used to allow a double acting cylinder to "float" with no pressure on either side of the piston.

With the pressurized center valve, both working ports are supplied with air and exhausts are blocked when there are no electrical pilot signals. This valve should not be used to hold a standard double acting cylinder in mid-position (the cylinder will extend due to unequal forces exerted on the piston).

Type MFH-5/3...-1/8...-B
Valve shown with coil and socket accessories.



Accessories:

(Order Separately)

Manual Override Lever

rotary, detented;
157651 AHB-MD/MF/MV

Solenoid F-coils

with socket, see page 455
without socket, see page 456

Standard Sockets, Type MSSD-F, see page 459

Sockets with cable, Type KMF-..., see page 460

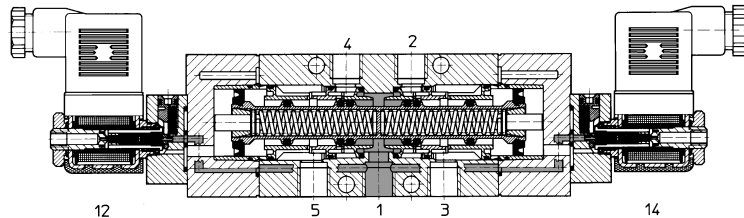
LED Gaskets, Type MF-LD-..., see pages 462-463

Indicator Inserts, Type MFL-..., see page 464

Solenoid Inserts, Type MFZ-..., see page 465

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air

Example: Type MFH-5/3E-1/8-B



Order Number Part No./Type	Valve Only (Order Solenoid and Socket Separately)	30484 MFH-5/3G-1/8-B 30483 MFH-5/3E-1/8-B 30485 MFH-5/3B-1/8-B	30993 MFH-5/3G-1/8-S-B 30994 MFH-5/3E-1/8-S-B 30995 MFH-5/3B-1/8-S-B
Medium		Compressed air (filtered, lubricated or unlubricated)*	
Design		Spool valve with pressure relief slots	
Mounting		Through-holes in housing	
Connection		G 1/8 ISO; 12, 14: G 1/8 ISO	
Nominal Size		0.32 in / 8 mm	
C _v Factor (1 → 2, 1 → 4)		1.0 C _v ; 1000 l/min	
Operating Pressure Range		45 to 150 psi / 3 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar
Control Pressure Range		—	45 to 150 psi / 3 to 10 bar (see page 370)
Response Time at 90 psi / 6 Bar	On/Off	MVH-5/3G-... (18/20 ms); MVH-5/3E-... (20/20 ms); MVH-5/3B-... (24/24 ms)	
Ambient Temperature		23 to 122°F / -5 to +50°C	
Medium Temperature		23 to 122°F / -5 to +50°C	
Materials		Housing: Cover: Diecast Al; Seals: Buna N	
Weight		0.882 lb / 0.400 kg	
Direct Current	Standard Voltage Available Voltage	12, 24V 12 to 230V	} See pages 455-456.
Alternating Current	Standard Voltage Available Voltage	24, 42, 110, 230V / 50 to 60 Hz 12 to 240V / 50 or 60 Hz	
Power Consumption		DC: 4.5 W; AC: Holding 6 VA, Inrush 7.5 VA	
Duty Cycle		100%	
Type of Protection		IP 65 (DIN 40050)	

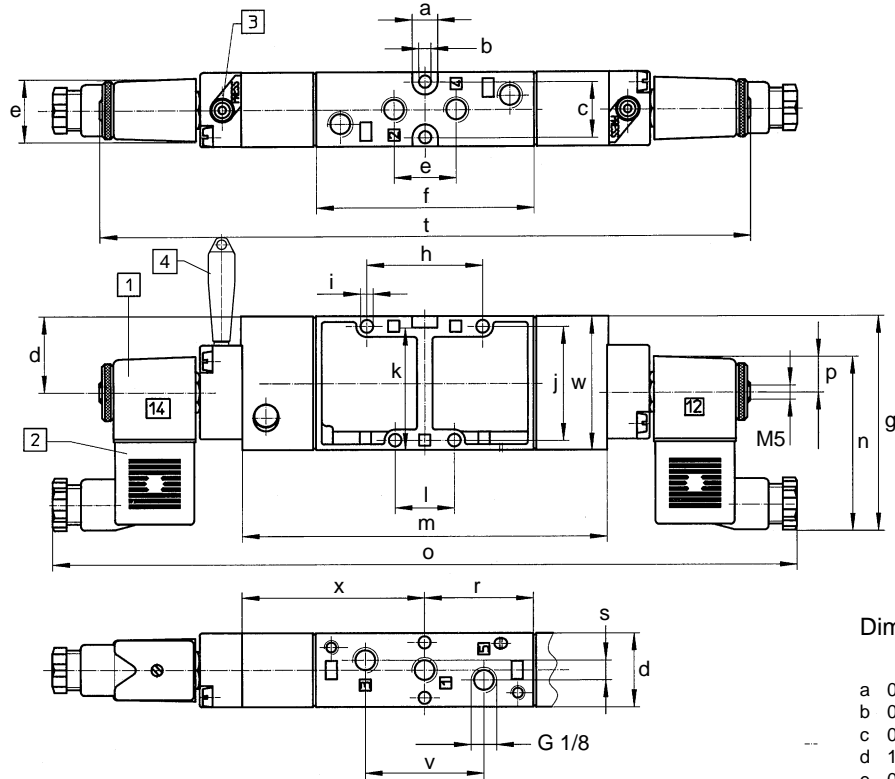
* Type MFH-5/3...-1/8-S-B is suitable for vacuum operation.

Tiger 2000 Double Solenoid-Actuated Valves

Dimensions

Type MFH-5/3...-1/8-B

With Manual Override

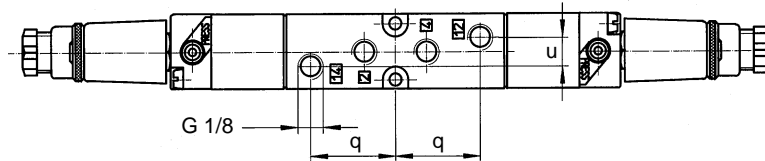


Dimensions

a	0.35 in / 9 mm
b	0.17 in / 4.3 mm
c	0.77 in / 19.5 mm
d	1.05 in / 26.7 mm
e	0.87 in / 22 mm
f	3.03 in / 77 mm
g	2.97 in / 75.5 mm
h	1.61 in / 41 mm
i	0.18 in / 4.5 mm
j	1.57 in / 40 mm
k	1.69 in / 43 mm
l	0.83 in / 21 mm
m	5.08 in / 129 mm
n	2.40 in / 61 mm
o	10.39 in / 264 mm
p	0.49 in / 12.5 mm
q	1.18 in / 30 mm
r	1.52 in / 38.5 mm
s	0.58 in / 7 mm
t	9.06 in / 230 mm
u	0.39 in / 10 mm
v	1.65 in / 42 mm
w	1.85 in / 47 mm
x	2.54 in / 64.5 mm

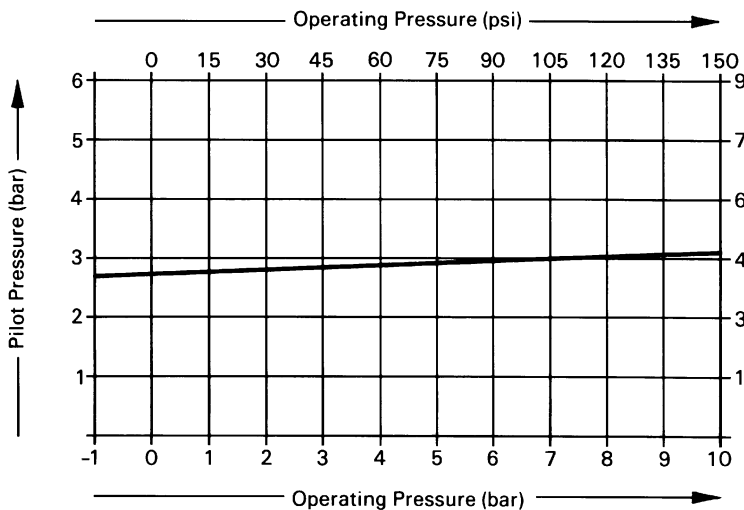
Type MFH-5/3...-1/8-S-B

With External Pilot Supply



Type MFH-5/3...-1/8-S-B

Minimum Pilot Pressure versus Operating Pressure



An external pilot pressure must be supplied to port 12 and 14. This valve can be used to control pressure to 150 psi / 10 bar and used in applications where port 4 is blowing unthrottled to atmosphere (i.e., part ejection, chip removal, etc.).

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air

- 1 Solenoid coil, rotatable 360°
 - 2 Socket rotatable 180°
 - 3 Manual override rotatable 180°
 - 4 Manual override lever, rotary, detented (order separately)
- Note: Coil and manual override are independently rotatable.

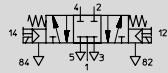
Tiger 2000 Double Solenoid-Actuated Valves

5/3 - 5 Ported, 4 Way, 3 Position Valves, Piloted, G 1/4

FESTO

Double Solenoid Valve

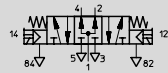
With Manual Override, Spring Centered
With Closed Center
Type MVH-5/3G-1/4-B



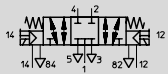
With Open Center Type MVH-5/3E-1/4-B



Pressurized Center Type MVH-5/3B-1/4-B



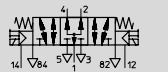
With Manual Override and External Pilot With Closed Center Type MVH-5/3G-1/4-S-B



With Open Center Type MVH-5/3E-1/4-S-B



With Pressurized Center Type MVH-5/3B-1/4-S-B



The valve is shifted when solenoid 12 or 14 is energized. For Type MVH-... valves, pilot exhaust air is ducted at port 82, 84. Valve exhaust can be directly vented to the atmosphere when the seal under the cap is removed.

With the closed center valve, all ports are blocked (closed) when there are no electrical pilot signals. This valve can be used to stop a double acting cylinder at any point for a short period of time.

With the open center valve, the working ports are exhausted when there are no electrical pilot signals. This valve can be used to allow a double acting cylinder to "float" with no pressure on either side of the piston.

With the pressurized center valve, both working ports are supplied with air and exhausts are blocked when there are no electrical pilot signals. This valve should not be used to hold a standard double acting cylinder in mid-position (the cylinder will extend due to unequal forces exerted on the piston).

Type MVH-5/3...-1/4...-B



Solenoid V-coil is included with valve

Accessories:

(Order Separately)

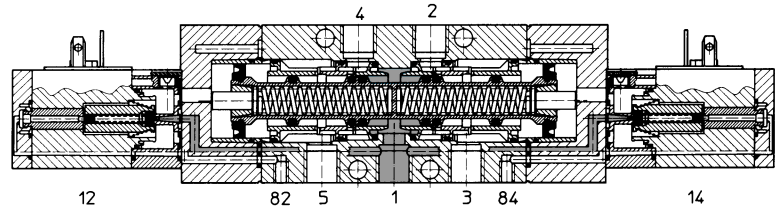
Standard Sockets, Type MSSD-V, see page 461

Sockets with cable, Type KMV-..., see page 461

LED Gaskets, Type MF-LD-..., see pages 462-463

Example: Type MVH-5/3E-1/4-B

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air
- 82, 84 = Pilot Exhaust Air



Order Number	Low 2.5 Watt Valve with Solenoid	19138 MVH-5/3G-1/4-B	31004 MVH-5/3G-1/4-S-B
Part No./Type	(Order Socket Separately)	19139 MVH-5/3E-1/4-B	31005 MVH-5/3E-1/4-S-B
		19140 MVH-5/3B-1/4-B	31006 MVH-5/3B-1/4-S-B
Medium		Compressed air (filtered, lubricated or unlubricated)*	
Design		Spool valve with pressure relief slots	
Mounting		Through-holes in housing	
Connection		G 1/4 ISO; 12, 14: G 1/8 ISO; 84: M5	
Nominal Size		0.39 in / 10 mm	
C _v Factor (1 → 2, 1 → 4)		1.6 C _v ; 1600 l/min	
Operating Pressure Range		45 to 150 psi / 3 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar
Control Pressure Range		–	45 to 150 psi / 3 to 10 bar (see page 372)
Response Time at 90 psi / 6 Bar	On/Off	MVH-5/3G-...(24/36 ms); MVH-5/3E-...(32/45 ms); MVH-5/3B-...(30/38 ms)	
Ambient Temperature		23 to 122°F / -5 to +50°C	
Medium Temperature		23 to 122°F / -5 to +50°C	
Materials		Housing: Cover: Diecast Al; Seals: Buna N	
Weight		1.445 lb / 0.660 kg	
Direct Current		24V	
Power Consumption		2.5 W	
Duty Cycle		100%	
Type of Protection		IP 65 (DIN 40050)	

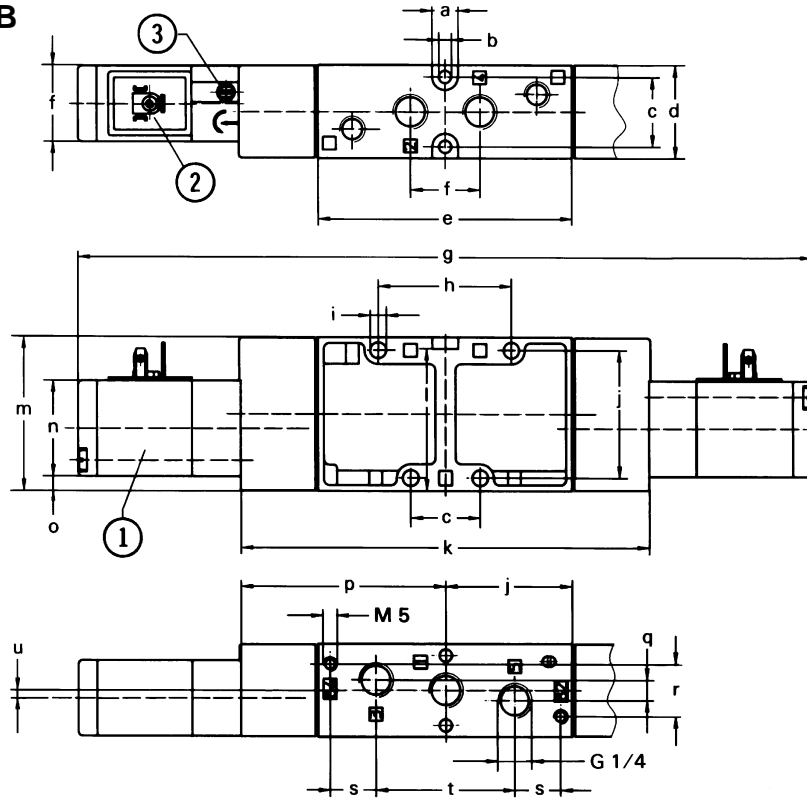
* Type MVH-5/3...-1/4-S-B is suitable for vacuum operation.

Tiger 2000 Double Solenoid-Actuated Valves

Dimensions

Type MVH-5/3...-1/4-B

With Manual Override

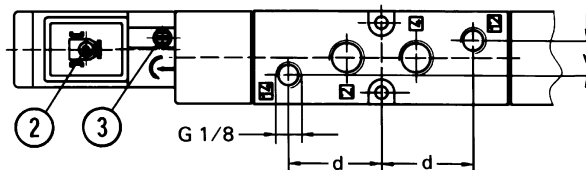


Dimensions

a	0.35 in / 9 mm
b	0.17 in / 4.3 mm
c	0.94 in / 24 mm
d	1.26 in / 32 mm
e	3.46 in / 88 mm
f	1.04 in / 26.3 mm
g	9.97 in / 253.2 mm
h	1.81 in / 46 mm
i	0.22 in / 5.5 mm
j	1.73 in / 44 mm
k	5.55 in / 141 mm
l	1.93 in / 49 mm
m	2.09 in / 53 mm
n	1.30 in / 33 mm
o	0.20 in / 5 mm
p	2.78 in / 70.5 mm
q	0.28 in / 7 mm
r	0.71 in / 18 mm
s	0.63 in / 16 mm
t	1.89 in / 48 mm
u	0.11 in / 2.7 mm
v	0.47 in / 12 mm

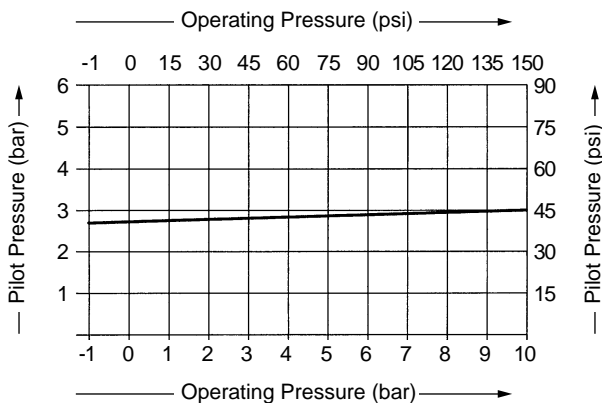
Type MVH-5/3...-1/4-S-B

With External Pilot Supply



Type MVH-5/3...-1/4-S-B

Minimum Pilot Pressure versus Operating Pressure



An external pilot pressure must be supplied to port 12 and 14. This valve can be used to control pressure to 150 psi / 10 bar and used in applications where port 4 is blowing unthrottled to atmosphere (i.e., part ejection, chip removal, etc.).

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air
- 82, 84 = Pilot Exhaust Air

- ① Solenoid coil can be turned 180°
Note: When rotating solenoid on Type MVH valves, cap must be kept in original position to avoid blocking pilot exhaust.
- ② Socket connection per DIN 43650, Code B
- ③ Manual override detent

Tiger 2000 Double Solenoid-Actuated Valves

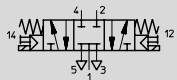
5/3 - 5 Ported, 4 Way, 3 Position Valves, Piloted, G 1/4

FESTO

Double Solenoid Valve

With Manual Override, Spring Centered
With Closed Center

Type MFH-5/3G-1/4-B



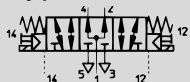
With Open Center

Type MFH-5/3E-1/4-B



Pressurized Center

Type MFH-5/3B-1/4-B



With Manual Override and External Pilot
With Closed Center

Type MFH-5/3G-1/4-S-B



With Open Center

Type MFH-5/3E-1/4-S-B



With Pressurized Center

Type MFH-5/3B-1/4-S-B



The valve is shifted when solenoid 12 or 14 is energized.

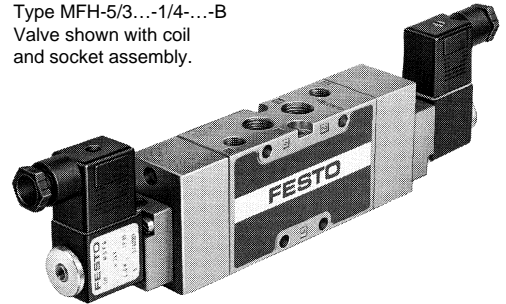
With the closed center valve, all ports are blocked (closed) when there are no electrical pilot signals. This valve can be used to stop a double acting cylinder at any point for a short period of time.

With the open center valve, the working ports are exhausted when there are no electrical pilot signals. This valve can be used to allow a double acting cylinder to "float" with no pressure on either side of the piston.

With the pressurized center valve, both working ports are supplied with air and exhausts are blocked when there are no electrical pilot signals. This valve should not be used to hold a standard double acting cylinder in mid-position (the cylinder will extend due to unequal forces exerted on the piston).

Type MFH-5/3...-1/4-...-B

Valve shown with coil and socket assembly.



Accessories:

(Order Separately)

Manual Override Lever
rotary, detented;
157651 AHB-MD/MF/MV

Solenoid F-coils

with socket, see page 455
without socket, see page 456

Standard Sockets, Type MSSD-F, see page 459

Sockets with cable, Type KMF-..., see page 460

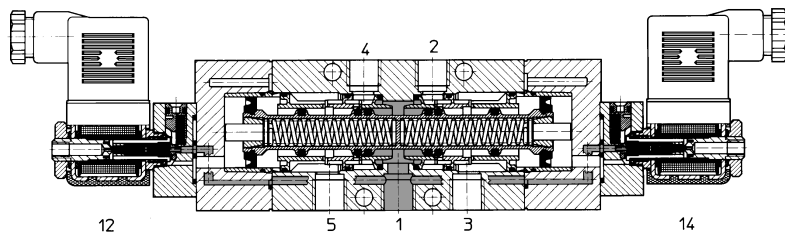
LED Gaskets, Type MF-LD-..., see pages 462-463

Indicator Inserts, Type MFL-..., see page 464

Solenoid Inserts, Type MFZ-..., see page 465

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air

Example: Type MFH-5/3E-1/4-B



Order Number Part No./Type	Valve Only (Order Solenoid and Socket Separately)	19787 MFH-5/3G-1/4-B	31001 MFH-5/3G-1/4-S-B
		19786 MFH-5/3E-1/4-B	31002 MFH-5/3E-1/4-S-B
		19788 MFH-5/3B-1/4-B	31003 MFH-5/3B-1/4-S-B
Medium		Compressed air (filtered, lubricated or unlubricated)*	
Design		Spool valve with pressure relief slots	
Mounting		Through-holes in housing	
Connection		G 1/4 ISO; 12, 14: G 1/8 ISO	
Nominal Size		0.39 in / 10 mm	
C _v Factor (1 → 2, 1 → 4)		1.6 C _v ; 1600 l/min	
Operating Pressure Range		45 to 150 psi / 3 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar
Control Pressure Range		—	45 to 150 psi / 3 to 10 bar (see page 374)
Response Time at 90 psi / 6 Bar On/Off		MFH-5/3G-... (20/22 ms); MFH-5/3E-... (24/36 ms); MFH-5/3B-... (24/30 ms)	
Ambient Temperature		23 to 122°F / -5 to +50°C	
Medium Temperature		23 to 122°F / -5 to +50°C	
Materials		Housing: Cover: Diecast Al; Seals: Buna N	
Weight		1.103 lb / 0.500 kg	
Direct Current	Standard Voltage	12, 24V	} See pages 455-456.
	Available Voltage	12 to 230V	
Alternating Current	Standard Voltage	24, 42, 110, 230V / 50 to 60 Hz	
	Available Voltage	12 to 240V / 50 or 60 Hz	
Power Consumption		DC: 4.5 W; AC: Holding 6 VA, Inrush 7.5 VA	
Duty Cycle		100%	
Type of Protection		IP 65 (DIN 40050)	

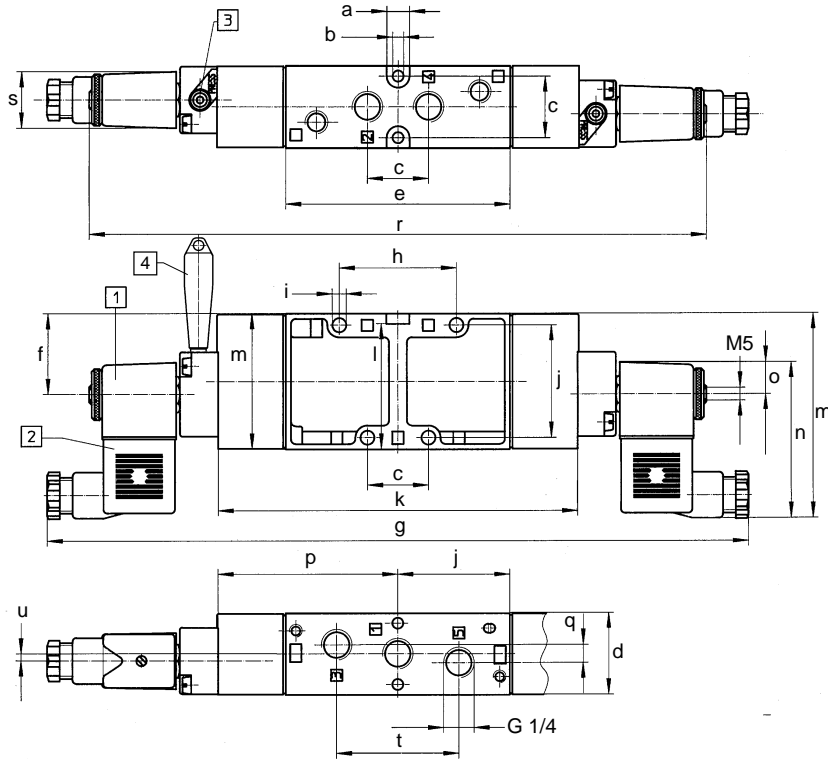
* Type MFH-5/3...-1/4-S-B is suitable for vacuum operation.

Tiger 2000 Double Solenoid-Actuated Valves

Dimensions

Type MFH-5/3...-1/4-B

With Manual Override

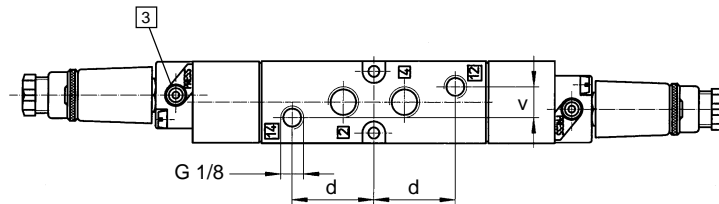


Dimensions

a	0.35 in / 9 mm
b	0.17 in / 4.3 mm
c	0.94 in / 24 mm
d	1.26 in / 32 mm
e	3.46 in / 88 mm
f	1.24 in / 31.5 mm
g	10.83 in / 275 mm
h	1.81 in / 46 mm
i	0.22 in / 5.5 mm
j	1.73 in / 44 mm
k	5.55 in / 141 mm
l	1.93 in / 49 mm
m	3.15 in / 80 mm
n	2.40 in / 61 mm
o	0.49 in / 12.5 mm
p	2.78 in / 70.5 mm
q	0.28 in / 7 mm
r	9.53 in / 242 mm
s	0.87 in / 22 mm
t	1.89 in / 48 mm
u	0.11 in / 2.7 mm
v	0.47 in / 12 mm

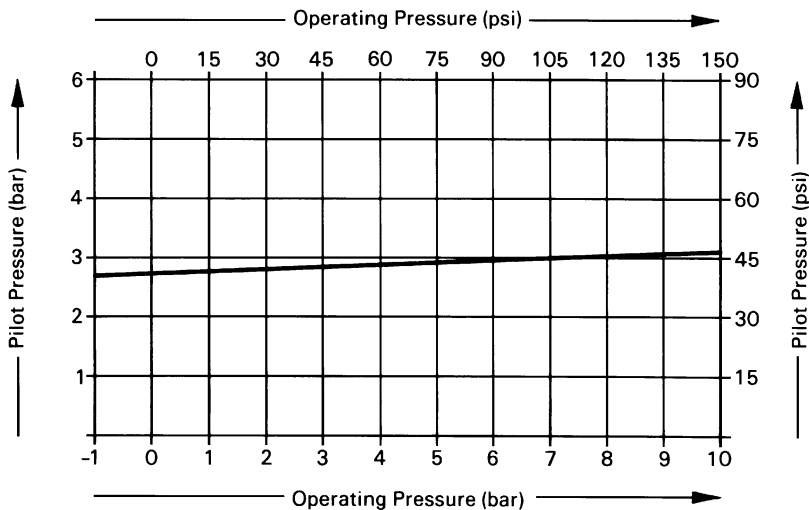
Type MFH-5/3...-1/4-S-B

With External Pilot Supply



Type MFH-5/3...-1/4-S-B

Minimum Pilot Pressure versus Operating Pressure



An external pilot pressure must be supplied to port 12 and 14. This valve can be used to control pressure to 150 psi / 10 bar and used in applications where port 4 is blowing unthrottled to atmosphere (i.e., part ejection, chip removal, etc.).

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air

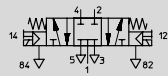
- ① Solenoid coil, rotatable 360°
 - ② Socket, rotatable 180°
 - ③ Manual override, rotatable 180°
 - ④ Manual override lever, rotary, detented (order separately)
- Note: Coil and manual override are independently rotatable.

Tiger 2000 Double Solenoid-Actuated Valves

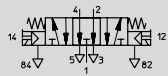
5/3 - 5 Ported, 4 Way, 3 Position Valves, Piloted, G 3/8

FESTO

Double Solenoid Valve With Manual Override, Spring Centered With Closed Center Type MVH-5/3G-3/8-B



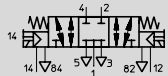
With Open Center Type MVH-5/3E-3/8-B



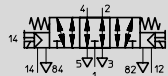
Pressurized Center Type MVH-5/3B-3/8-B



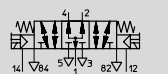
With Manual Override and External Pilot With Closed Center Type MVH-5/3G-3/8-S-B



With Open Center Type MVH-5/3E-3/8-S-B



With Pressurized Center Type MVH-5/3B-3/8-S-B



The valve is shifted when solenoid 12 or 14 is energized.

For Type MVH... valves, pilot exhaust air is ducted at port 82, 84. Valve exhaust can be directly vented to the atmosphere when the seal under the cap is removed.

With the closed center valve, all ports are blocked (closed) when there are no electrical pilot signals. This valve can be used to stop a double acting cylinder at any point for a short period of time.

With the open center valve, the working ports are exhausted when there are no electrical pilot signals. This valve can be used to allow a double acting cylinder to "float" with no pressure on either side of the piston.

With the pressurized center valve, both working ports are supplied with air and exhausts are blocked when there are no electrical pilot signals. This valve should not be used to hold a standard double acting cylinder in mid-position (the cylinder will extend due to unequal forces exerted on the piston).

Solenoid V-coil is included with valve

Accessories:

(Order Separately)

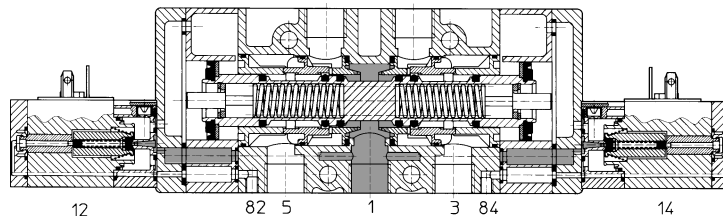
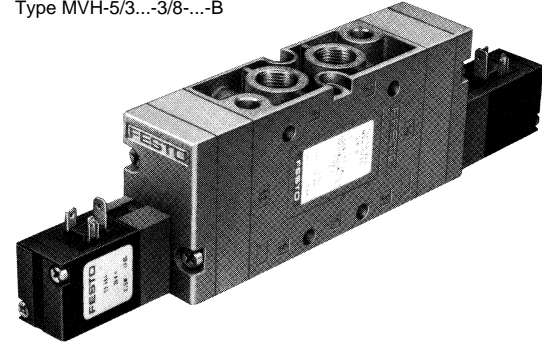
Standard Sockets, Type MSSD-V, see page 461

Sockets with cable, Type KMV-..., see page 461

LED Gaskets, Type MV-LD-..., see pages 462-463

Example: Type MVH-5/3E-3/8-B

Type MVH-5/3...-3/8...-B



- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air
- 82, 84 = Pilot Exhaust Air

Order Number	Low 2.5 Watt Valve with Solenoid	14944 MVH-5/3G-3/8-B	15346 MVH-5/3G-3/8-S-B
Part No./Type	(Order Socket Separately)	14943 MVH-5/3E-3/8-B	15344 MVH-5/3E-3/8-S-B
		19699 MVH-5/3B-3/8-B	15345 MVH-5/3B-3/8-S-B
Medium		Compressed air (filtered, lubricated or unlubricated)*	
Design		Spool valve with pressure relief slots	
Mounting		Through-holes in housing	
Connection		G 3/8 ISO; 12, 14: G 1/8 ISO; 82, 84: M 5	
Nominal Size		0.56 in / 14 mm	
C _v Factor (1 → 2, 1 → 4)		G: 2.03C _v / 2000 l/min; E: 2.24 C _v / 2200 l/min; B: 2.64 C _v / 2600 l/min	
Operating Pressure Range		45 to 150 psi / 3 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar
Control Pressure Range		–	45 to 150 psi / 3 to 10 bar (see page 376)
Response Time at 90 psi / 6 Bar	On/Off	G: 26/88 ms; E: 32/88 ms; B: 32/88 ms	
Ambient Temperature		23 to 122°F / -5 to +50°C	
Medium Temperature		23 to 122°F / -5 to +50°C	
Materials		Housing: Cover: Diecast Al; Seals: Buna N	
Weight		2.205 lb / 1.000 kg	
Direct Current		24V=	
Power Consumption		2.5 W	
Duty Cycle		100%	
Type of Protection		IP 65 (DIN 40050)	

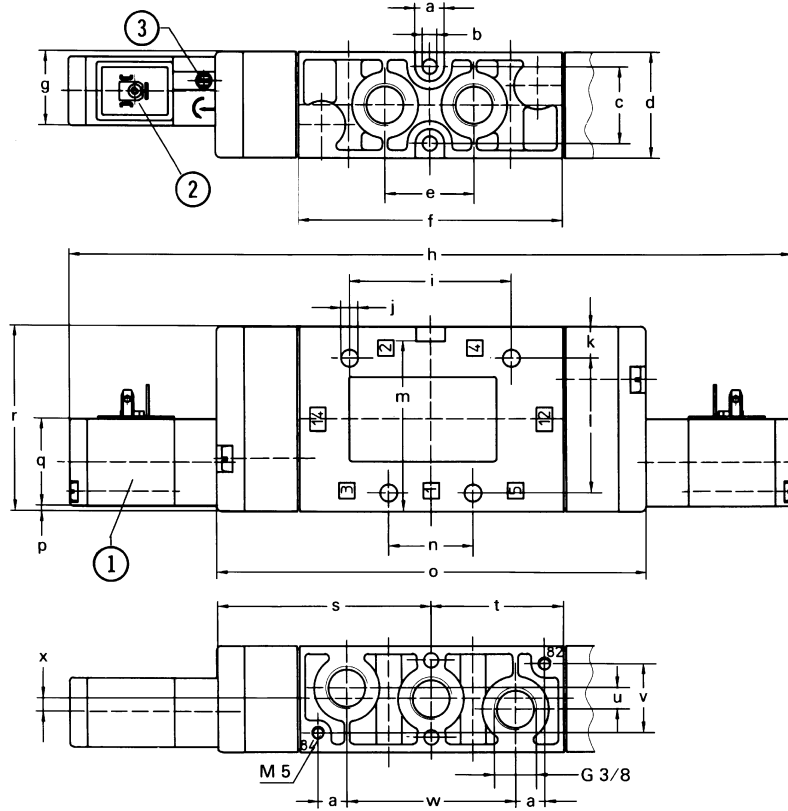
* Type MVH-5/3...-3/8-S-B is suitable for vacuum operation.

Tiger 2000 Double Solenoid-Actuated Valves

Dimensions

Type MVH-5/3...-3/8-B

With Manual Override

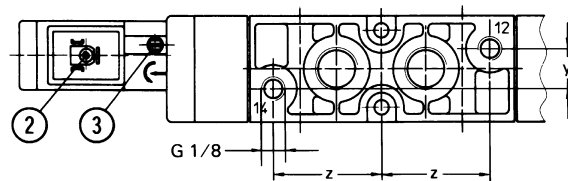


Dimensions

a	0.43 in / 11 mm
b	0.22 in / 5.5 mm
c	1.14 in / 29 mm
d	1.58 in / 40 mm
e	1.33 in / 33.8 mm
f	3.94 in / 100 mm
g	1.10 in / 28 mm
h	10.8 in / 274 mm
i	2.42 in / 61.4 mm
j	0.26 in / 6.5 mm
k	0.47 in / 12 mm
l	2.01 in / 51 mm
m	2.54 in / 64.5 mm
n	1.26 in / 32 mm
o	6.42 in / 163 mm
p	0.08 in / 2 mm
q	1.30 in / 33 mm
r	2.76 in / 70 mm
s	3.19 in / 81 mm
t	1.97 in / 50 mm
u	0.31 in / 8 mm
v	1.02 in / 26 mm
w	2.52 in / 64 mm
x	0.20 in / 5 mm
y	0.59 / 15 mm
z	1.61 in / 41 mm

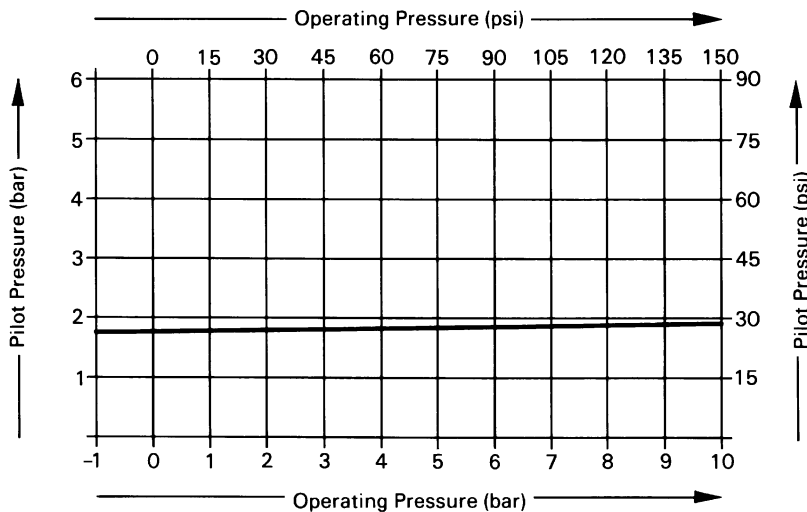
Type MVH-5/3...-3/8-S-B

With External Pilot Supply



Type MVH-5/3...-3/8-S-B

Minimum Pilot Pressure versus Operating Pressure



An external pilot pressure must be supplied to ports 12 and 14. This valve can be used to control pressure to 150 psi / 10 bar and can be used in applications where port 4 is blowing unthrottled to atmosphere (i.e., part ejection, chip removal, etc.).

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 = External Pilot Air
- 82, 84 = Pilot Exhaust Air

- ① Solenoid coil can be turned 180°
Note: When rotating solenoid, cap must be kept in original position to avoid blocking pilot exhaust.
- ② Socket connection per DIN 43650, Code B
- ③ Manual override detent

Tiger 2000 Double Solenoid-Actuated Valves

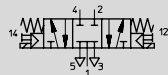
5/3 - 5 Ported, 4 Way, 3 Position Valves, Piloted, G 3/8

FESTO

Double Solenoid Valve

With Manual Override, Spring Centered
With Closed Center

Type MFH-5/3G-3/8-B



With Open Center

Type MFH-5/3E-3/8-B



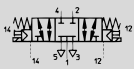
Pressurized Center

Type MFH-5/3B-3/8-B



With Manual Override and External Pilot
With Closed Center

Type MFH-5/3G-3/8-S-B



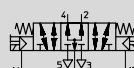
With Open Center

Type MFH-5/3E-3/8-S-B



With Pressurized Center

Type MFH-5/3B-3/8-S-B



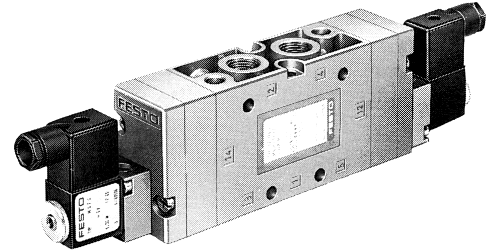
Type MFH-5/3...-3/8-...-B

The valve is shifted when solenoid 12 or 14 is energized.

With the closed center valve, all ports are blocked (closed) when there are no electrical pilot signals. This valve can be used to stop a double acting cylinder at any point for a short period of time.

With the open center valve, the working ports are exhausted when there are no electrical pilot signals. This valve can be used to allow a double acting cylinder to "float" with no pressure on either side of the piston.

With the pressurized center valve, both working ports are supplied with air and exhausts are blocked when there are no electrical pilot signals. This valve should not be used to hold a standard double acting cylinder in mid-position (the cylinder will extend due to unequal forces exerted on the piston).



Accessories:

(Ordered Separately)

Manual Override Lever
rotary, detented;
157651 AHB-MD/MF/MV

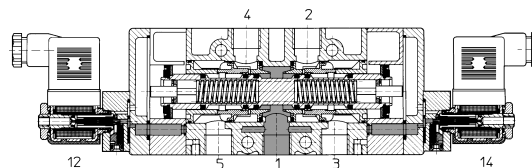
Solenoid F-Coils
with socket, see page 455
without socket, see page 456

Standard Sockets, Type MSSD-F
see page 459
Sockets with cable, Type KMF...
see page 460

LED Gaskets, Type MF-LD-...
see pages 462-463
Indicator Inserts, Type MFL...-...
see page 464
Solenoid Inserts, Type MFZ-...
see page 465

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Ports
- 5, 3 (R, S) = Exhaust Ports
- 12, 14 (Pz) = External Pilot Air

Example: Type MFH-5/3G-3/8-B



Order Number	Valve Only	19707 MFH-5/3G-3/8-B	31317 MFH-5/3G-3/8-S-B
Part No./Type	(Order Solenoid and Socket Separately)	19708 MFH-5/3E-3/8-B	31318 MFH-5/3E-3/8-S-B
		19709 MFH-5/3B-3/8-B	31319 MFH-5/3B-3/8-S-B
Medium		Compressed air (filtered, lubricated or unlubricated)*	
Design		Spool valve with pressure relief slots	
Mounting		Through-holes in housing	
Connection		G 3/8 ISO; 12, 14: G 1/8 ISO	
Nominal Size		0.56 in / 14 mm	
C _V Factor (1 → 2, 1 → 4)		G: 2.03 C _V / 2000 l/min; E: 2.24 C _V / 2200 l/min; B: 2.64 C _V / 2600 l/min	
Operating Pressure Range		45 to 150 psi / 3 to 10 bar	26.6 in Hg to 150 psi / -0.9 to 10 bar
Pilot Pressure Range		—	45 to 150 psi / 3 to 10 bar (see page 378)
Response Time at 90 psi / 6 Bar	On/Off	G: 24/80 ms; E: 32/85 ms; B: 30/82 ms;	
Ambient Temperature		+23 to 122°F / -5 to +50°C	
Medium Temperature		+23 to 122°F / -5 to +50°C	
Materials		Housing: Cover: Diecast Al; Seals: Buna N	
Weight		1.720 lb / 0.780 kg	
Direct Current	Standard Voltage	12, 24V	} See pages 455-456.
Alternating Current	Available Voltage	12 to 230V	
	Standard Voltage	24, 42, 110, 230V / 50 to 60 Hz	
	Available Voltage	12 to 240V / 50 or 60 Hz	
Power Consumption		DC: 4.5 W; AC: Holding 6 VA, Inrush 7.5 VA	
Duty Cycle		100%	
Type of Protection		IP 65 (DIN 40050)	

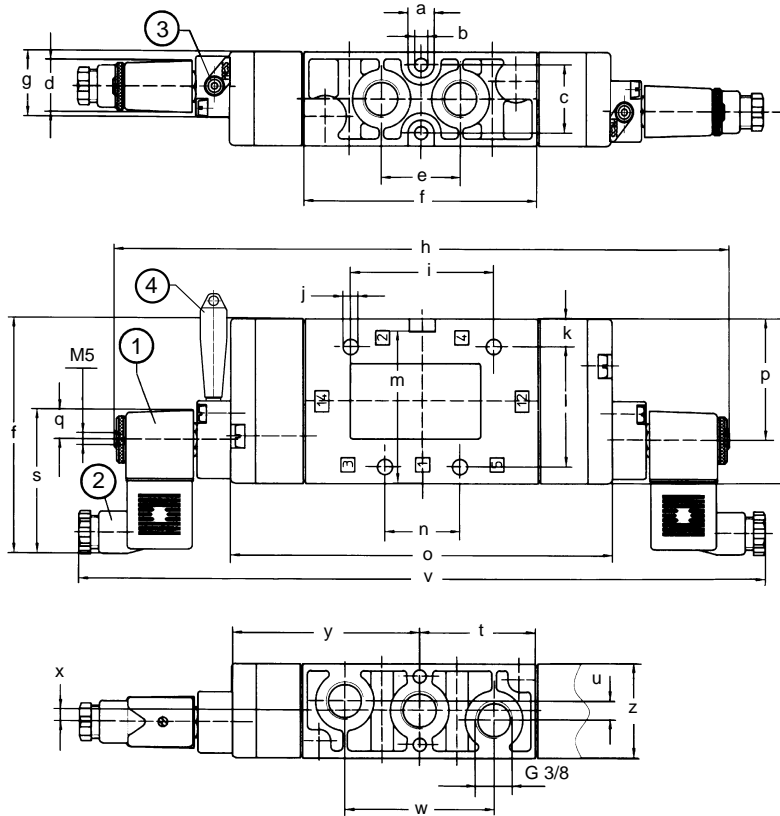
* Type MFH-5/3...-3/8-S-B is suitable for vacuum operation.

Tiger 2000 Double Solenoid-Actuated Valves

Dimensions

Type MFH-5/3...-3/8-B

With Manual Override

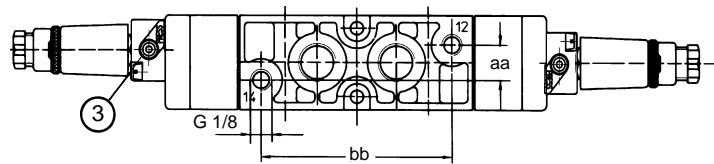


Dimensions

a	0.43 in / 11 mm
b	0.22 in / 5.5 mm
c	1.14 in / 29 mm
d	0.87 in / 22 mm
e	1.33 in / 33.8 mm
f	3.94 in / 100 mm
g	1.10 in / 28 mm
h	10.4 in / 263 mm
i	2.42 in / 61.4 mm
j	0.26 in / 6.5 mm
k	0.47 in / 12 mm
l	2.01 in / 51 mm
m	2.54 in / 64.5 mm
n	1.26 in / 32 mm
o	6.42 in / 163 mm
p	2.03 in / 51.5 mm
q	0.49 in / 12.5 mm
r	2.76 in / 70 mm
s	2.40 in / 61 mm
t	1.97 in / 50 mm
u	0.31 in / 8 mm
v	11.5 in / 293 mm
w	2.52 in / 64 mm
x	0.20 in / 5 mm
y	3.19 in / 81 mm
z	1.58 in / 40 mm
aa	0.59 in / 15 mm
bb	3.23 in / 82 mm

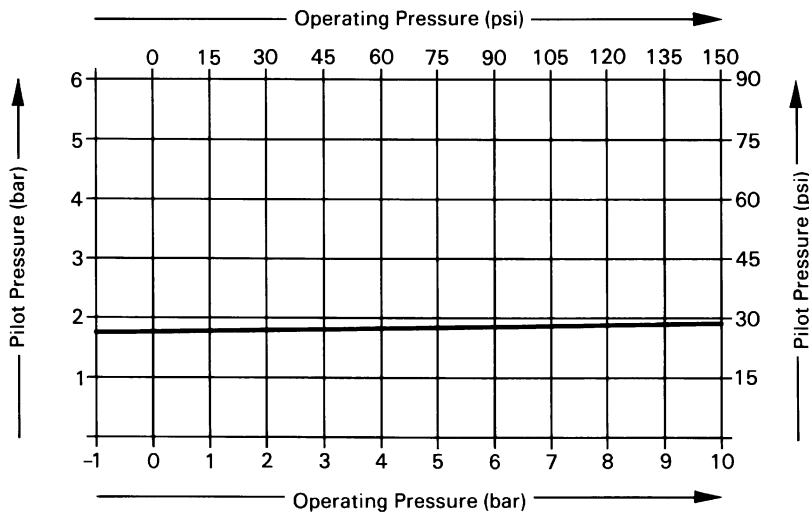
Type MFH-5/3...-3/8-S-B

With External Pilot Supply



Type MFH-5/3...-3/8-S-B

Minimum Pilot Pressure versus Operating Pressure



An external pilot pressure must be supplied to ports 12 and 14. This valve can be used to control pressure to 150 psi / 10 bar and can be used in applications where port 4 is blowing unthrottled to atmosphere (i.e., part ejection, chip removal, etc.).

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Port
- 5, 3 (R, S) = Exhaust Port
- 12, 14 (Y, Z) = External Pilot Air

- ① Solenoid coil, rotatable 360°
 - ② Socket, rotatable 180°
 - ③ Manual override, rotatable 180°
 - ④ Manual override lever, rotary, detented (order separately)
- Note: Coil and manual override are independently rotatable.

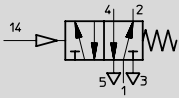
Tiger 2000 Pneumatically Actuated Valves

5/2-5 Ported, 4 Way, 2 Position Valves, G 1/8 and G 1/4

FESTO

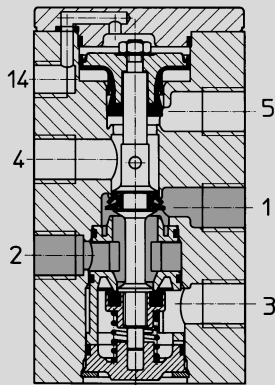
Single Pilot Valve

With Spring Return
 Type VL-5-1/8-B
 Type VL-5-1/4-B

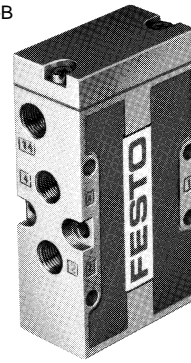


These valves are actuated only when pressure is present at pilot port 14 (Z).

Manifolds: Type PRS-...-B and PAL-...-B; for manifold mounting, see pages 393-404.



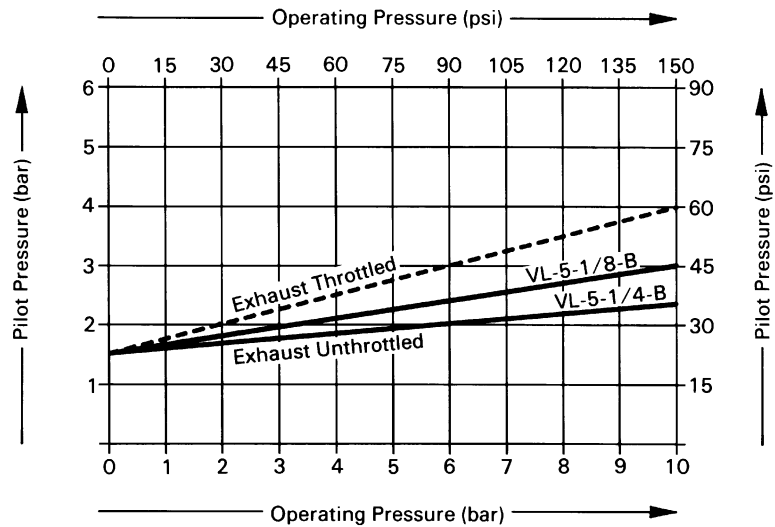
Type VL-5-1/8-B



Type VL-5-1/4-B



Minimum Pilot Pressure versus Operating Pressure



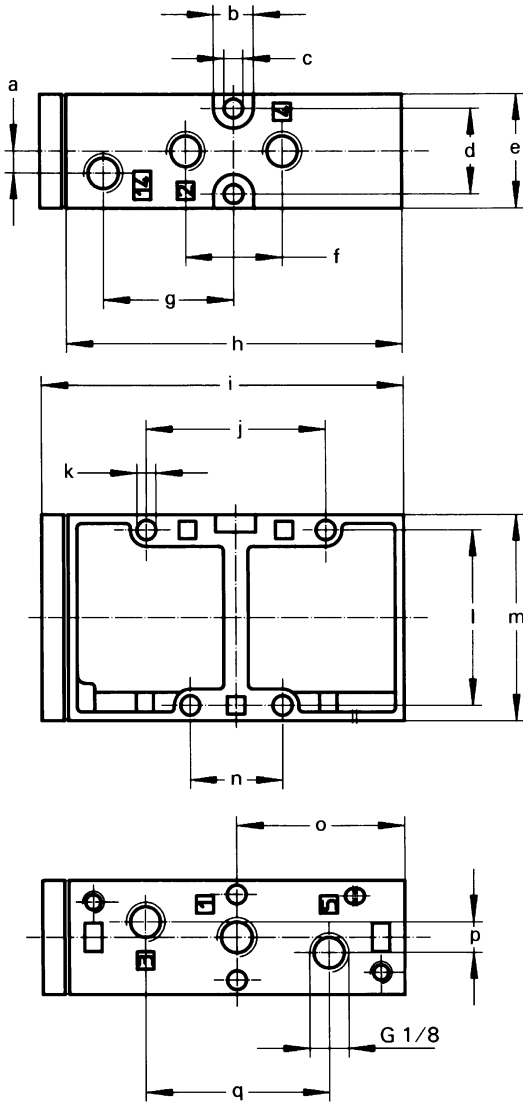
- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Ports
- 5, 3 (R, S) = Exhaust Ports
- 14 (Z) = External Pilot Ports

Order Number	Part No./Type	31000 VL-5-1/8-B	14294 VL-5-1/4-B
Medium		Compressed air (filtered, lubricated or unlubricated)	
Design		Poppet valve	
Mounting		Through-holes in housing	
Connection	Working Port	G 1/8 ISO	G 1/4 ISO
	Pilot Port	G 1/8 ISO	
Orifice Size		0.20 in / 5 mm	0.28 in / 7 mm
C _v Factor (1 → 2, 1 → 4)		0.762 C _v / 750 l/min	1.321 C _v / 1300 l/min
Operating Pressure Range		0 to 150 psi / 0 to 10 bar	
Pilot Pressure Range		22.5 to 150 psi / 1.5 to 10 bar (see graph above)	
Response Time at 90 psi / 6 bar		On: 2 ms Off: 10 ms	On: 2 ms Off: 12 ms
Temperature Range		23 to 122°F / -5 to +50°C	
Materials		Housing, cover: Diecast aluminum; Seals: Buna N	
Weight		0.375 lb / 0.170 kg	0.529 lb / 0.240 kg

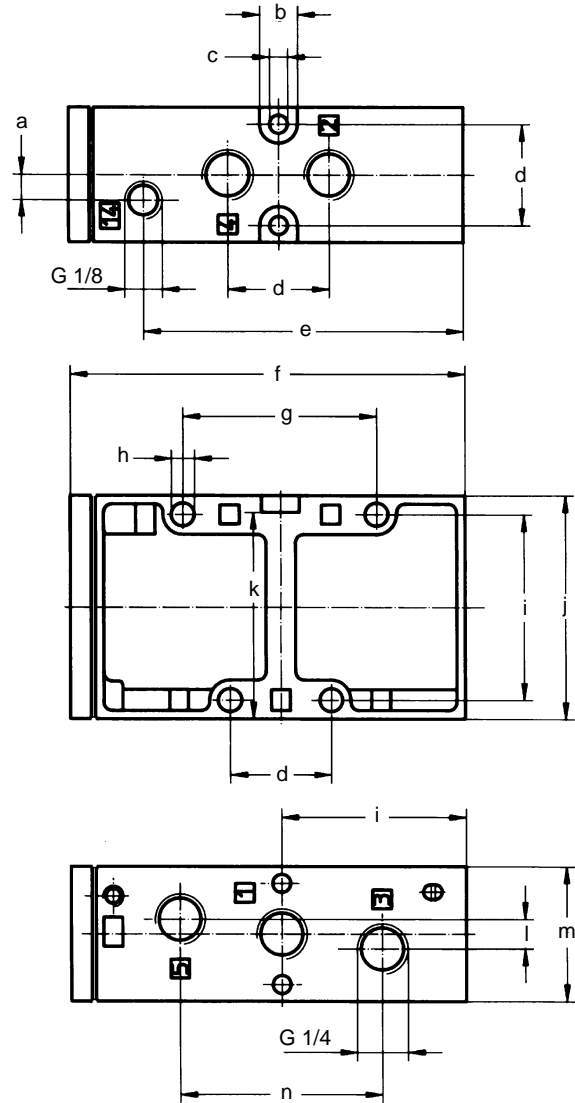
Tiger 2000 Pneumatically Actuated Valves

Dimensions

Type VL-5-1/8-B



Type VL-5-1/4-B



Dimensions

a 0.20 in / 5 mm	j 1.61 in / 41 mm
b 0.35 in / 9 mm	k 0.18 in / 4.5 mm
c 0.17 in / 4.3 mm	l 1.57 in / 40 mm
d 0.77 in / 19.5 mm	m 1.85 in / 47 mm
e 1.02 in / 26 mm	n 0.83 in / 21 mm
f 0.87 in / 22 mm	o 1.52 in / 38.5 mm
g 1.18 in / 30 mm	p 0.28 in / 7 mm
h 3.03 in / 77 mm	q 1.65 in / 42 mm
i 3.27 in / 83 mm	

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Ports
- 5, 3 (R, S) = Exhaust Ports
- 14 (Z) = External Pilot Ports

Dimensions

a 0.24 in / 6 mm	h 0.22 in / 5.5 mm
b 0.35 in / 9 mm	i 1.73 in / 44 mm
c 0.17 in / 4.3 mm	j 2.09 in / 53 mm
d 0.94 in / 24 mm	k 1.93 in / 49 mm
e 2.99 in / 76 mm	l 0.28 in / 7 mm
f 3.70 in / 94 mm	m 1.26 in / 32 mm
g 1.81 in / 46 mm	n 1.89 in / 48 mm

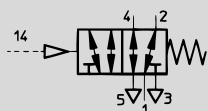
Tiger 2000 Pneumatically Actuated Valves

5/2-5 Ported, 4 Way, 2 Position Valves, G 3/8

FESTO

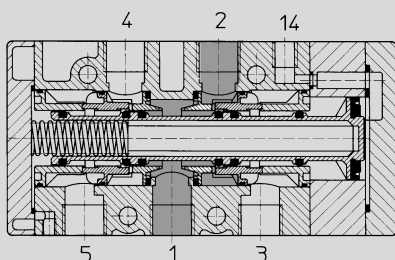
Single Pilot Valve

With Spring Return
Type VL-5-3/8-B

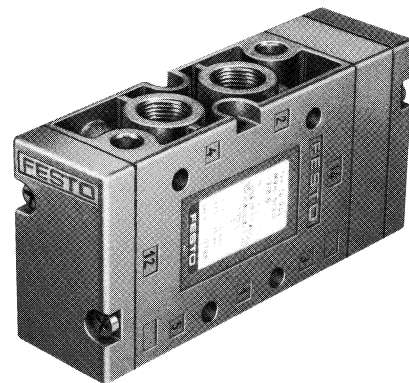


These valves are actuated only when pressure is present at pilot port 14 (Z).

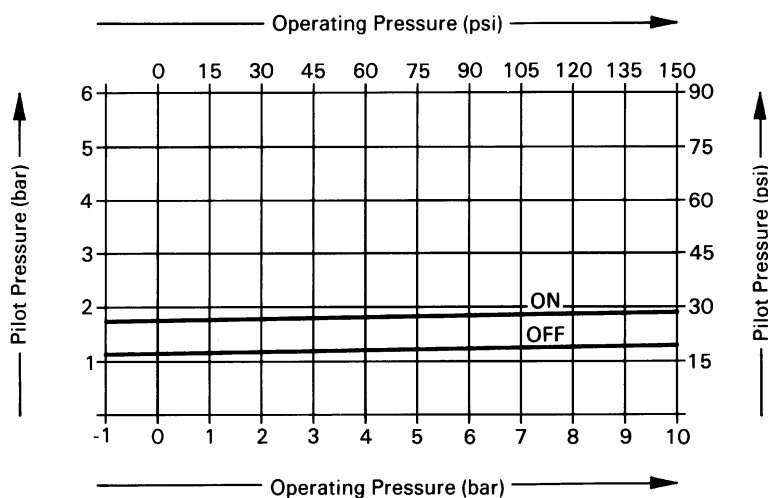
Manifolds: Type PRS-...-B and PAL-...-B; for manifold mounting, see pages 393-404.



Type VL-5-3/8-B



Minimum Pilot Pressure versus Operating Pressure



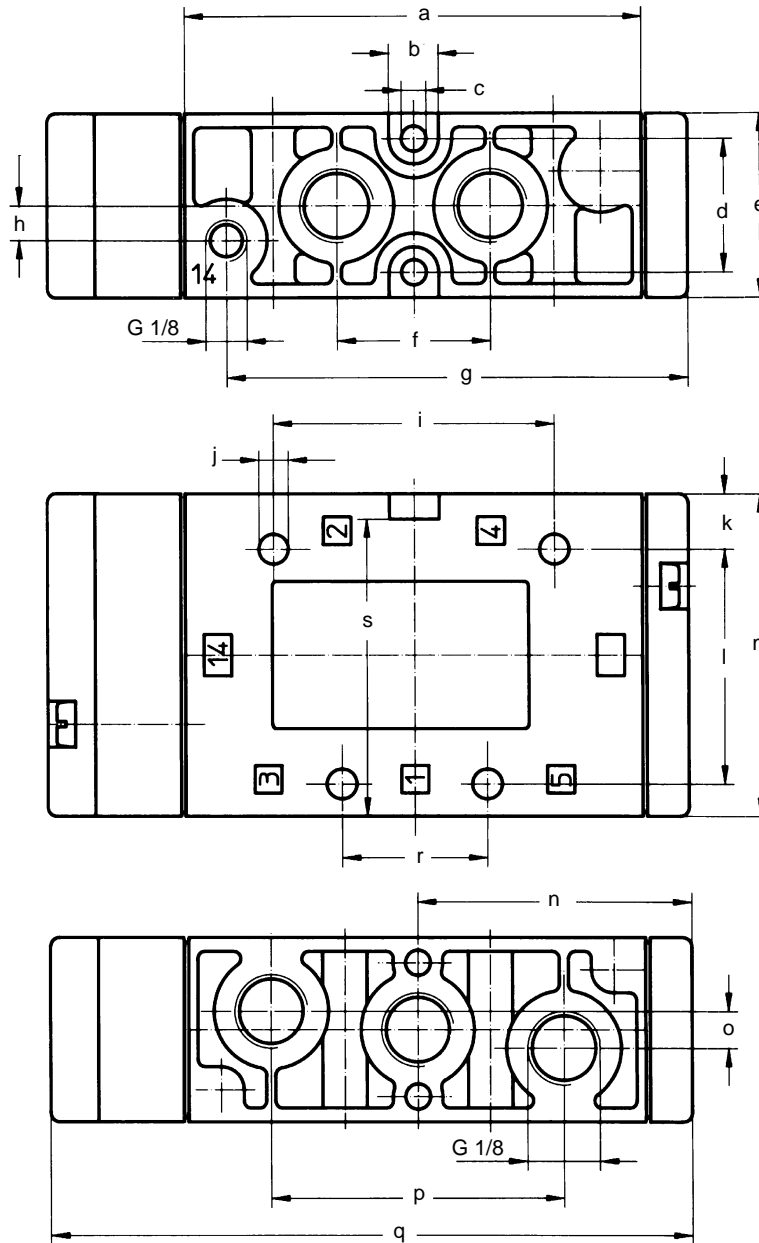
- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Ports
- 5, 3 (R, S) = Exhaust Ports
- 14 (Z) = External Pilot Ports

Order Number	Part No./Type	14952 VL-5-3/8-B
Medium		Compressed air (filtered, lubricated or unlubricated) or vacuum
Design		Spool valve, directly actuated in one direction, with return spring
Mounting		Through-holes in housing
Connection	Working Port	G 3/8 ISO
	Pilot Port	G 1/8 ISO
Orifice Size		0.55 in / 14 mm
C _v Factor (1 → 2, 1 → 4)		2.033 C _v / 2000 l/min
Operating Pressure Range		26.6 in Hg to 150 psi / -0.9 to 10 bar
Pilot Pressure Range		30 to 150 psi / 2 to 10 bar (see graph above)
Response Time at 90 psi / 6 bar		On: 4 ms Off: 16 ms
Temperature Range		23 to 122°F / -5 to +50°C
Materials		Housing, cover: Diecast aluminum; Seals: Buna N
Weight		1.257 lb / 0.570 kg

Tiger 2000 Pneumatically Actuated Valves

Dimensions

Type VL-5-3/8-B



Dimensions

a	3.94 in / 100 mm
b	0.43 in / 11 mm
c	0.22 in / 5.5 mm
d	1.14 in / 29 mm
e	1.57 in / 40 mm
f	1.33 in / 33.8 mm
g	3.98 in / 101 mm
h	0.30 in / 7.5 mm
i	2.42 in / 61.4 mm
j	0.26 in / 6.5 mm
k	0.47 in / 12 mm
l	2.01 in / 51 mm
m	2.76 in / 70 mm
n	2.36 in / 60 mm
o	0.31 in / 8 mm
p	2.52 in / 64 mm
q	5.51 in / 140 mm
r	1.26 in / 32 mm
s	2.54 in / 64.5 mm

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Ports
- 5, 3 (R, S) = Exhaust Ports
- 14 (Z) = External Pilot Ports

Tiger 2000 Pneumatically Actuated Valves

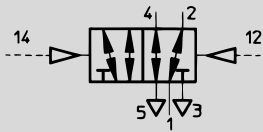
5/2-5 Ported, 4 Way, 2 Position Valves, G 1/8 and G 1/4

FESTO

Double Pilot Valve

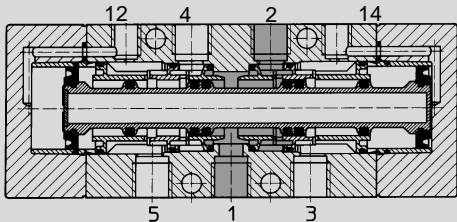
Type J-5-1/8-B

J-5-1/4-B



The valves are shifted by alternating pneumatic pressure at ports 12 (Z) and 14 (Y). After the signal is removed, the valve maintains its shifted position until a counter signal is received.

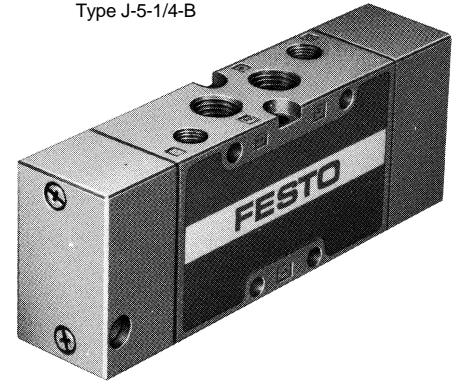
Manifolds: Type PRS-1/8-...-BB, PRS-1/4-...-B and PAL-...-B; for manifold mounting, see pages 393-404.



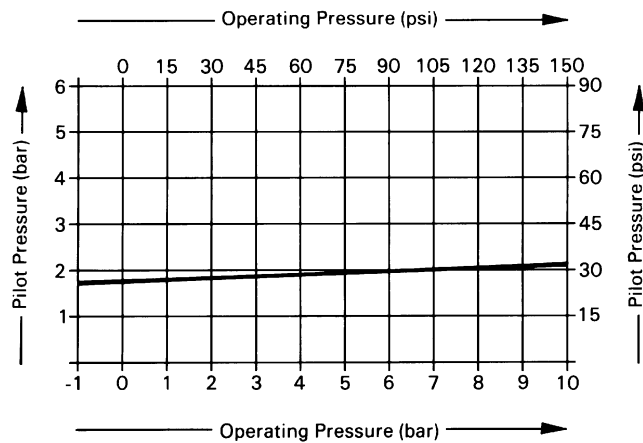
Type J-5-1/8-B



Type J-5-1/4-B



Minimum Pilot Pressure versus Operating Pressure



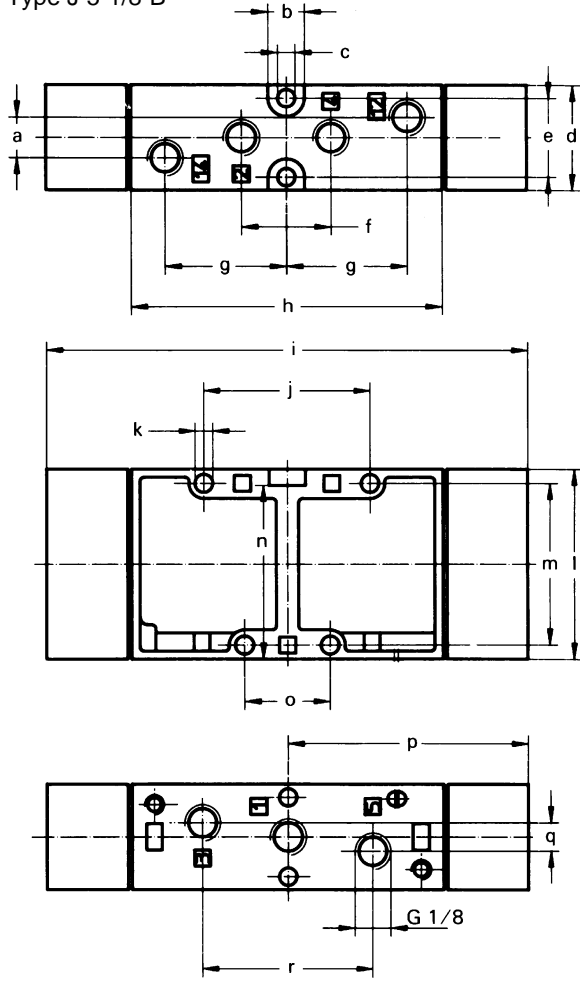
- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Ports
- 5, 3 (R, S) = Exhaust Ports
- 12, 14 (Y, Z) = External Pilot Ports

Order Number	Part No./Type	30988 J-5-1/8-B	14295 J-5-1/4-B
Medium		Compressed air (filtered, lubricated or unlubricated) or vacuum	
Design		Spool valve, actuated at both ends	
Mounting		Through-holes in housing	
Connection	Working Port	G 1/8 ISO	G 1/4 ISO
	Pilot Port	G 1/8 ISO	G 1/8 ISO
Orifice Size		0.31 in / 8 mm	0.39 in / 10 mm
Cv Factor (P → A)		0.813 Cv / 800 l/min	1.623 Cv / 1600 l/min
Operating Pressure Range		26.6 in Hg to 150 psi / -0.9 to 10 bar	
Pilot Pressure Range		30 to 150 psi / 2 to 10 bar (see graph above)	
Response Time at 90 psi / 6 bar		3 ms	3 ms
Temperature Range		23 to 122°F / -5 to +50°C	
Materials		Housing, cover: Diecast aluminum; Seals: Buna N	
Weight		0.705 lb / 0.320 kg	0.827 lb / 0.375 kg

Tiger 2000 Pneumatically Actuated Valves

Dimensions

Type J-5-1/8-B

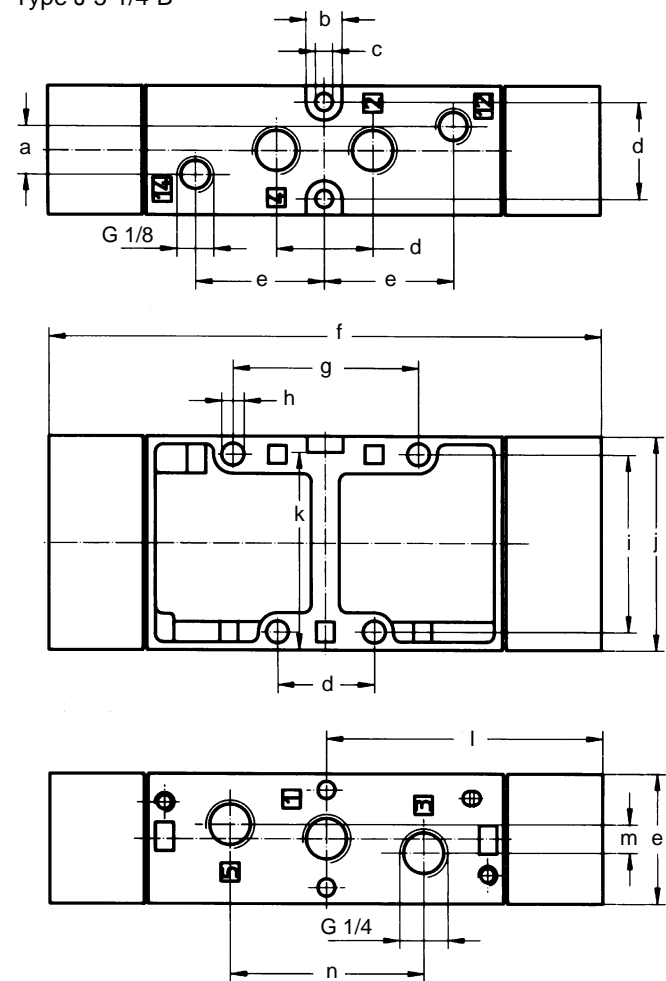


Dimensions

a 0.39 in / 10 mm	j 1.61 in / 41 mm
b 0.35 in / 9 mm	k 0.18 in / 4.5 mm
c 0.17 in / 4.3 mm	l 1.85 in / 47 mm
d 1.02 in / 26 mm	m 1.57 in / 40 mm
e 0.77 in / 19.5 mm	n 1.69 in / 43 mm
f 0.87 in / 22 mm	o 0.83 in / 21 mm
g 1.18 in / 30 mm	p 2.43 in / 61.7 mm
h 3.03 in / 77 mm	q 0.28 in / 7 mm
i 4.86 in / 123.4 mm	r 1.65 in / 42 mm

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Ports
- 5, 3 (R, S) = Exhaust Ports
- 12, 14 (Y, Z) = External Pilot Ports

Type J-5-1/4-B



Dimensions

a 0.47 in / 12 mm	h 0.22 in / 5.5 mm
b 0.35 in / 9 mm	i 1.73 in / 44 mm
c 0.17 in / 4.3 mm	j 2.09 in / 53 mm
d 0.94 in / 24 mm	k 1.93 in / 49 mm
e 1.26 in / 32 mm	l 2.70 in / 68.5 mm
f 5.39 in / 137 mm	m 0.28 in / 7 mm
g 1.81 in / 46 mm	n 1.89 in / 48 mm

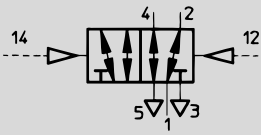
Tiger 2000 Pneumatically Actuated Valves

5/2-5 Ported, 4 Way, 2 Position Valves, G 3/8

FESTO

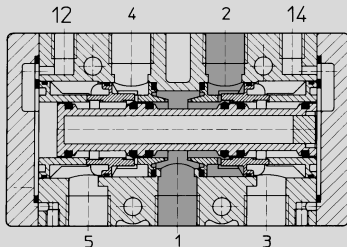
Double Pilot Valve

With Spring Return
Type J-5-3/8-B

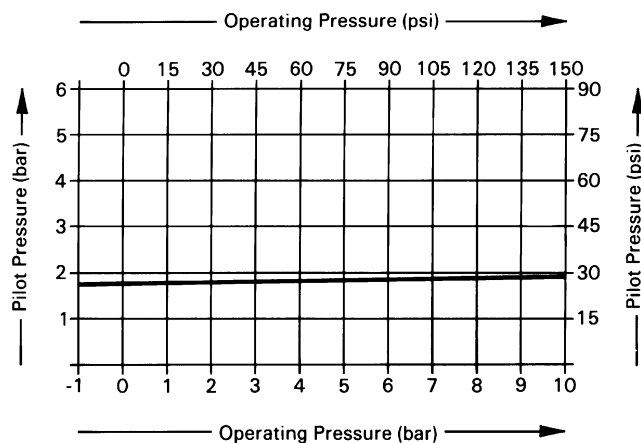


The valves are shifted by alternating pneumatic pressure at ports 12 (Z) and 14 (Y). After the signal is removed, the valve maintains its shifted position until a counter signal is received.

Manifolds: Type PAL-...-B; for manifold mounting, see pages 393-404.



Minimum Pilot Pressure versus Operating Pressure



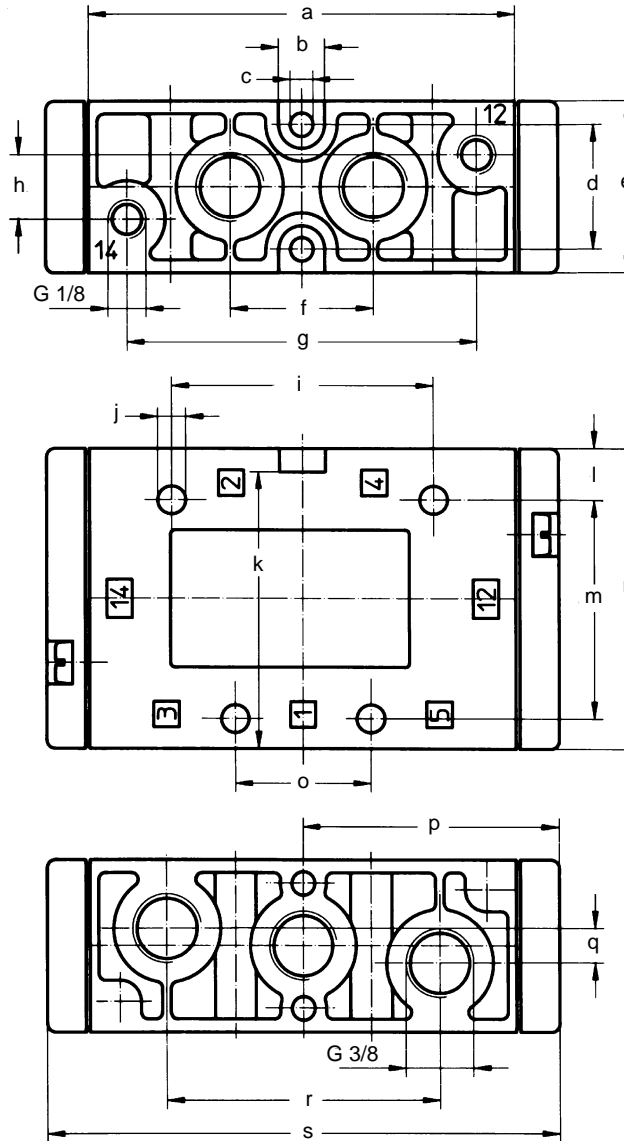
- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Ports
- 5, 3 (R, S) = Exhaust Ports
- 12, 14 (Y, Z) = External Pilot Ports

Order Number	Part No./Type	14953 J-5-3/8-B
Medium		Compressed air (filtered, lubricated or unlubricated) or vacuum
Design		Spool valve, actuated at both ends
Mounting		Through-holes in housing
Connection	Working Port	G 3/8 ISO
	Pilot Port	G 1/8 ISO
Orifice Size		0.55 in / 14 mm
C _v Factor (1 → 2, 1 → 4)		2.032 C _v / 2000 l/min
Operating Pressure Range		26.6 in Hg to 150 psi / -0.9 to 10 bar
Pilot Pressure Range		30 to 150 psi / 2 to 10 bar (see graph above)
Response Time at 90 psi / 6 bar		3 ms
Temperature Range		23 to 122°F / -5 to +50°C
Materials		Housing, cover: Diecast aluminum; Seals: Buna N
Weight		1.213 lb / 0.550 kg

Tiger 2000 Pneumatically Actuated Valves

Dimensions

Type J-5-3/8-B



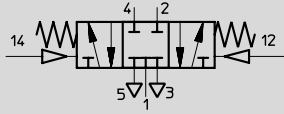
Dimensions

- a 3.94 in / 100 mm
- b 0.43 in / 11 mm
- c 0.22 in / 5.5 mm
- d 1.14 in / 29 mm
- e 1.57 in / 40 mm
- f 1.33 in / 33.8 mm
- g 3.23 in / 82 mm
- h 0.59 in / 15 mm
- i 2.42 in / 61.4 mm
- j 0.26 in / 6.5 mm
- k 2.54 in / 64.5 mm
- l 0.47 in / 12 mm
- m 2.01 in / 51 mm
- n 2.76 in / 70 mm
- o 1.26 in / 32
- p 2.36 in / 60 mm
- q 0.31 in / 8 mm
- r 2.52 in / 64 mm
- s 4.72 in / 120 mm

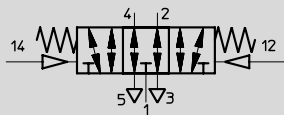
- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Ports
- 5, 3 (R, S) = Exhaust Ports
- 12, 14 (Y, Z) = External Pilot Ports

Double Pilot Valve Spring Centered

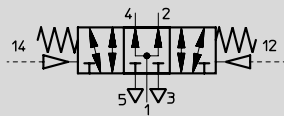
Center Position Closed
Type VL-5/3G-1/8-B



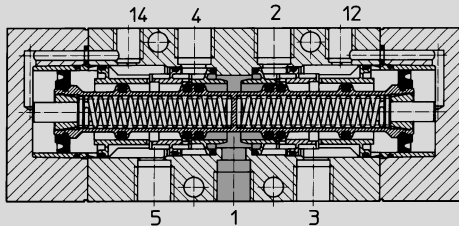
Center Position Open
Type VL-5/3E-1/8-B



Pressurized Center Position
Type VL-5/3B-1/8-B



Example:
Type VL-5/3E-1/8-B



- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Ports
- 5, 3 (R, S) = Exhaust Ports
- 12, 14 (Y, Z) = External Pilot Ports



The valve is shifted by applying pilot pressure to port 12 or 14.

Center Position Closed:

All ports are blocked (closed) when no pilot signal is present...holding the piston of a double acting cylinder under pressure for a short period of time.

Center Position Open:

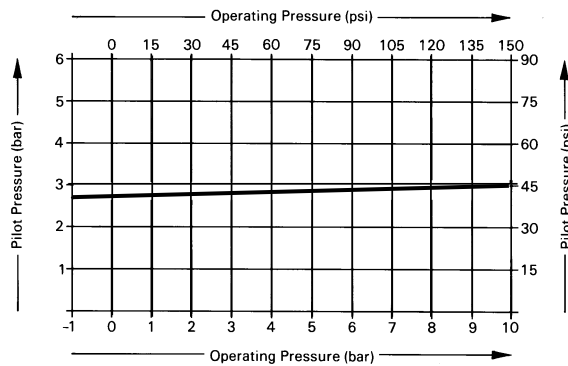
The working ports are exhausted when neither pilot signal is present. The double acting cylinder piston can be moved without pressure.

Center Position Supplied with Air:

The cylinder piston is held firmly in place under pressure.

Manifolds: Type PRS-...-BB and PAL-...-B; for manifold mounting, see pages 393-404.

Minimum Pilot Pressure Versus Operating Pressure

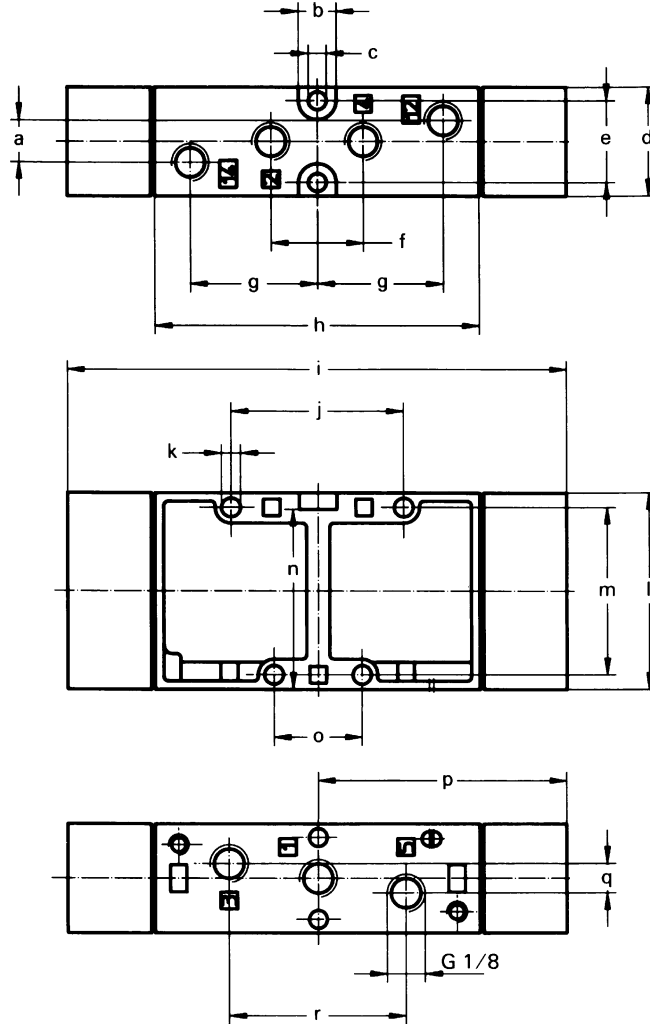


Order Number	Part No./Type	30990 VL-5/3G-1/8-B	31309 VL-5/3E-1/8-B	31310 VL-5/3B-1/8-B
Medium		Compressed air (filtered, lubricated or unlubricated) or vacuum		
Design		Spool valve, actuated at both ends		
Mounting		Through-holes in housing		
Connection	Working Port	G 1/8 ISO		
	Pilot Port	G 1/8 ISO		
Orifice Size		0.31 in / 8 mm		
C _V Factor (1 → 2, 1 → 4)		0.813 C _V / 800 l/min		
Operating Pressure Range		26.6 in Hg to 150 psi / -0.9 to 10 bar		
Pilot Pressure Range		45 to 150 psi / 3 to 10 bar (see graph above)		
Response Time at 90 psi / 6 bar		On: 5 ms Off: 14 ms		
Temperature Range		23 to 122°F / -5 to +50°C		
Materials		Housing, cover: Diecast aluminum; Seals: Buna N		
Weight		0.705 lb / 0.320 kg		

Tiger 2000 Pneumatically Actuated Valves

Dimensions

Type VL-5/3...-1/8-B



Dimensions

- a 0.39 in / 10 mm
- b 0.35 in / 9 mm
- c 0.17 in / 4.3 mm
- d 1.02 in / 26 mm
- e 0.77 in / 19.5 mm
- f 0.87 in / 22 mm
- g 1.18 in / 30 mm
- h 3.03 in / 77 mm
- i 4.86 in / 123.4 mm
- j 1.61 in / 41 mm
- k 0.18 in / 4.5 mm
- l 1.85 in / 47 mm
- m 1.57 in / 40 mm
- n 1.69 in / 43 mm
- o 0.83 in / 21 mm
- p 2.43 in / 61.7 mm
- q 0.28 in / 7 mm
- r 1.65 in / 42 mm

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Ports
- 5, 3 (R, S) = Exhaust Ports
- 12, 14 (Y, Z) = External Pilot Ports

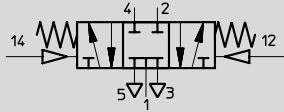
Tiger 2000 Pneumatically Actuated Valves

5/3-5 Ported, 4 Way, 3 Position Valves, G 1/4

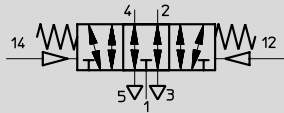
FESTO

Double Pilot Valve Spring Centered

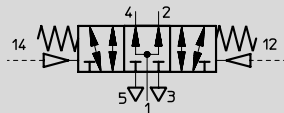
Center Position Closed
Type VL-5/3G-1/4-B



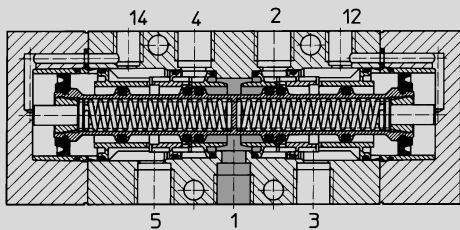
Center Position Open
Type VL-5/3E-1/4-B



Pressurized Center Position
Type VL-5/3B-1/4-B



Example:
Type VL-5/3E-1/4-B



- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Ports
- 5, 3 (R, S) = Exhaust Ports
- 12, 14 (Y, Z) = External Pilot Ports



The valve is shifted by applying pilot pressure to port 12 or 14.

Center Position Closed:

All ports are blocked (closed) when no pilot signal is present...holding the piston of a double acting cylinder under pressure for a short period of time.

Center Position Open:

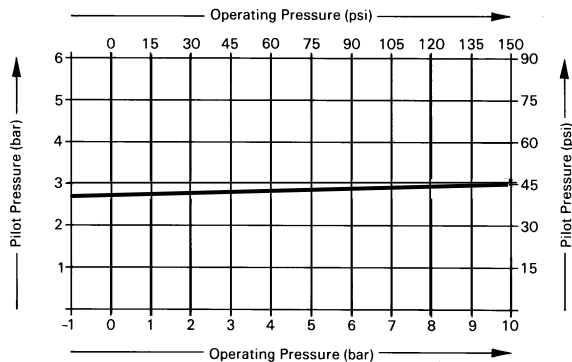
The working ports are exhausted when neither pilot signal is present. The double acting cylinder piston can be moved without pressure.

Center Position Supplied with Air:

The cylinder piston is held firmly in place under pressure.

Manifolds: Type PRS-...-B and PAL-...-B; for manifold mounting, see pages 393.404.

Minimum Pilot Pressure Versus Operating Pressure

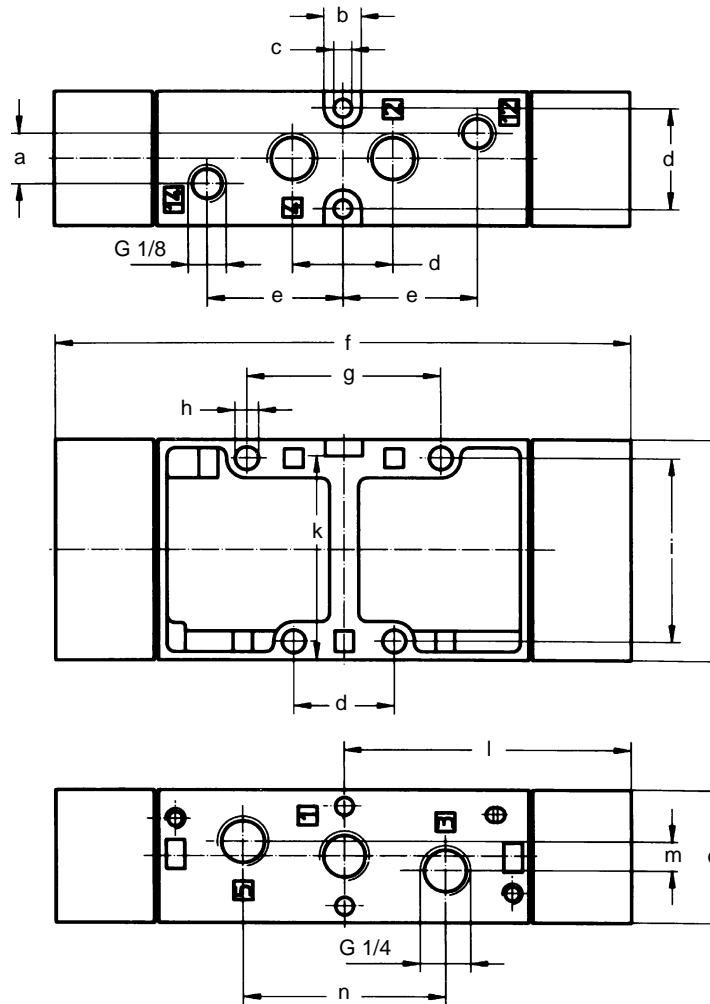


Order Number	Part No./Type	14298 VL-5/3G-1/4-B	14297 VL-5/3E-1/4-B	14299 VL-5/3B-1/4-B
Medium		Compressed air (filtered, lubricated or unlubricated) or vacuum		
Design		Spool valve, actuated at both ends		
Mounting		Through-holes in housing		
Connection	Working Port	G 1/4 ISO		
	Pilot Port	G 1/8 ISO		
Orifice Size		0.39 in / 10 mm		
C _v Factor (1 → 2, 1 → 4)		1.626 C _v / 1600 l/min		
Operating Pressure Range		26.6 in Hg to 150 psi / -0.9 to 10 bar		
Pilot Pressure Range		45 to 150 psi / 3 to 10 bar (see graph above)		
Response Time at 90 psi / 6 bar		On: 6 ms Off: 26 ms		
Temperature Range		23 to 122°F / -5 to +50°C		
Materials		Housing, cover: Diecast aluminum; Seals: Buna N		
Weight		0.827 lb / 0.375 kg		

Tiger 2000 Pneumatically Actuated Valves

Dimensions

Type VL-5/3...-1/4-B



Dimensions

- a 0.47 in / 12 mm
- b 0.35 in / 9 mm
- c 0.17 in / 4.3 mm
- d 0.94 in / 24 mm
- e 1.26 in / 32 mm
- f 5.39 in / 137 mm
- g 1.81 in / 46 mm
- h 0.22 in / 5.5 mm
- i 1.73 in / 44 mm
- j 2.09 in / 53 mm
- k 1.93 in / 49 mm
- l 2.70 in / 68.5 mm
- m 0.28 in / 7 mm
- n 1.89 in / 48 mm

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Ports
- 5, 3 (R, S) = Exhaust Ports
- 12, 14 (Y, Z) = External Pilot Ports

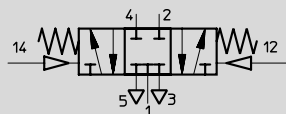
Tiger 2000 Pneumatically Actuated Valves

5/3-5 Ported, 4 Way, 3 Position Valves, G 3/8

FESTO

Double Pilot Valve Spring Centered

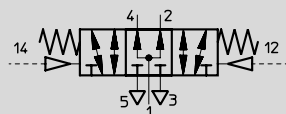
Center Position Closed
Type VL-5/3G-3/8-B



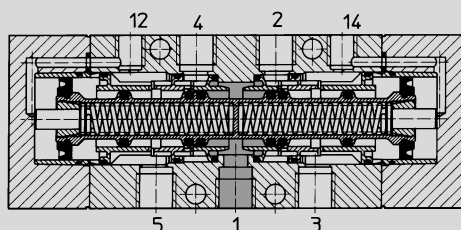
Center Position Open
Type VL-5/3E-3/8-B



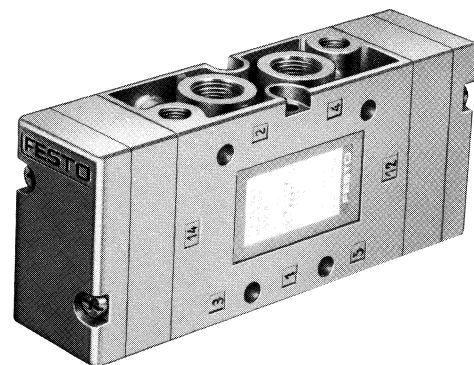
Pressurized Center Position
Type VL-5/3B-3/8-B



Example:
Type VL-5/3E-3/8-B



- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Ports
- 5, 3 (R, S) = Exhaust Ports
- 12, 14 (Y, Z) = External Pilot Ports



The valve is shifted by applying pilot pressure to port 12 or 14.

Center Position Closed:

All ports are blocked (closed) when no pilot signal is present...holding the piston of a double acting cylinder under pressure for a short period of time.

Center Position Open:

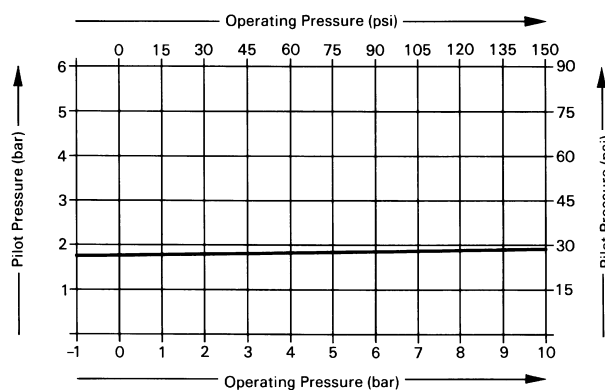
The working ports are exhausted when neither pilot signal is present. The double acting cylinder piston can be moved without pressure.

Center Position Supplied with Air:

The cylinder piston is held firmly in place under pressure.

Manifolds: Type PRS-...-B and PAL-...-B; for manifold mounting, see pages 393-404.

Minimum Pilot Pressure Versus Operating Pressure

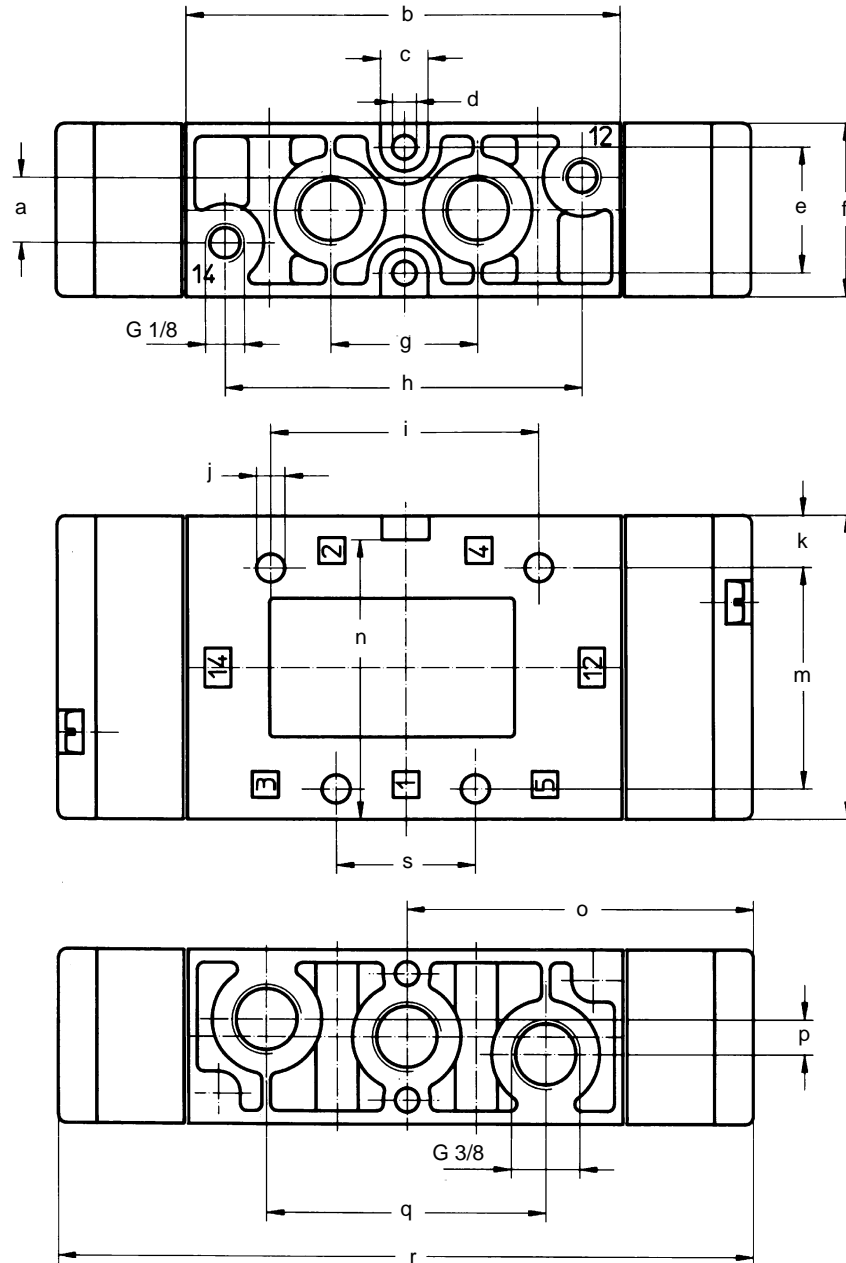


Order Number	Part No./Type	14950 VL-5/3G-3/8-B	14949 VL-5/3E-3/8-B	14951 VL-5/3B-3/8-B
Medium		Compressed air (filtered, lubricated or unlubricated) or vacuum		
Design		Spool valve, actuated at both ends		
Mounting		Through-holes in housing		
Connection	Working Port	G 3/8 ISO		
	Pilot Port	G 1/8 ISO		
Orifice Size		0.55 in / 14 mm		
C _V Factor (1 → 2, 1 → 4)		2.032 C _V / 2000 l/min	2.236 C _V / 2200 l/min	2.642 C _V / 2600 l/min
Operating Pressure Range		26.6 in Hg to 150 psi / -0.9 to 10 bar		
Pilot Pressure Range		45 to 150 psi / 3 to 10 bar (see graph above)		
Response Time at 90 psi / 6 bar		On: 7 ms Off: 28 ms		
Temperature Range		23 to 122°F / -5 to +50°C		
Materials		Housing, cover: Diecast aluminum; Seals: Buna N		
Weight		1.499 lb / 0.680 kg		

Tiger 2000 Pneumatically Actuated Valves

Dimensions

Type VL-5/3...-3/8-B



Dimensions

- a 0.59 / 15 mm
- b 3.94 in / 100 mm
- c 0.43 in / 11 mm
- d 0.22 in / 5.5 mm
- e 1.14 in / 29 mm
- f 1.57 in / 40 mm
- g 1.33 in / 33.8 mm
- h 3.23 in / 82 mm
- i 2.42 in / 61.4 mm
- j 0.26 in / 6.5 mm
- k 0.47 in / 12 mm
- l 2.76 in / 70 mm
- m 2.01 in / 51 mm
- n 2.54 in / 64.5 mm
- o 3.15 in / 80 mm
- p 0.31 in / 8 mm
- q 2.52 in / 64 mm
- r 6.30 in / 160 mm
- s 1.26 in / 32 mm

- 1 (P) = Supply Port
- 4, 2 (A, B) = Working or Outlet Ports
- 5, 3 (R, S) = Exhaust Ports
- 12, 14 (Y, Z) = External Pilot Ports

Manifolds

Type

- PRS-1/8-2-BB (for 2 valves)
- PRS-1/8-3-BB (for 3 valves)
- PRS-1/8-4-BB (for 4 valves)
- PRS-1/8-5-BB (for 5 valves)
- PRS-1/8-6-BB (for 6 valves)
- PRS-1/8-7-BB (for 7 valves)
- PRS-1/8-8-BB (for 8 valves)
- PRS-1/8-9-BB (for 9 valves)
- PRS-1/8-10-BB (for 10 valves)

This manifold is designed for any combination of B-Series 5 ported 2 position or 5 ported 3 position valves with G 1/8 connection threads.

The 2 socket head capscrews make possible a simple and quick method of mounting the valves from the front onto the manifold.

This manifold provides a common supply port, common exhaust port and common pilot exhaust ports serving all the valves. The common ports can be connected (blocked) on either side.

Includes:

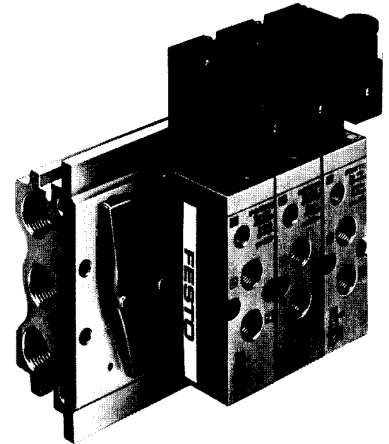
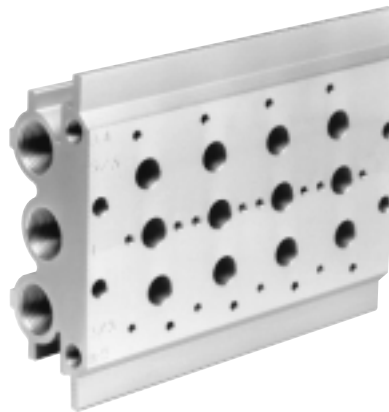
- 1 manifold, 3 plugs G 3/8 and 3 sealing rings, 0-3/8, 2 plugs G 1/8 and 2 sealing rings, 0-1/8.
- 1 gasket and 2 socket head capscrews M 4 x 50, per valve position.

Accessories:

Cover plate for blocking unused holes
Order Number 15909 PRSB-1/8-B

Sealing plug for separate pressure zones
Order Number 160997 PRSV-1/8

Type PRS-1/8-...-BB

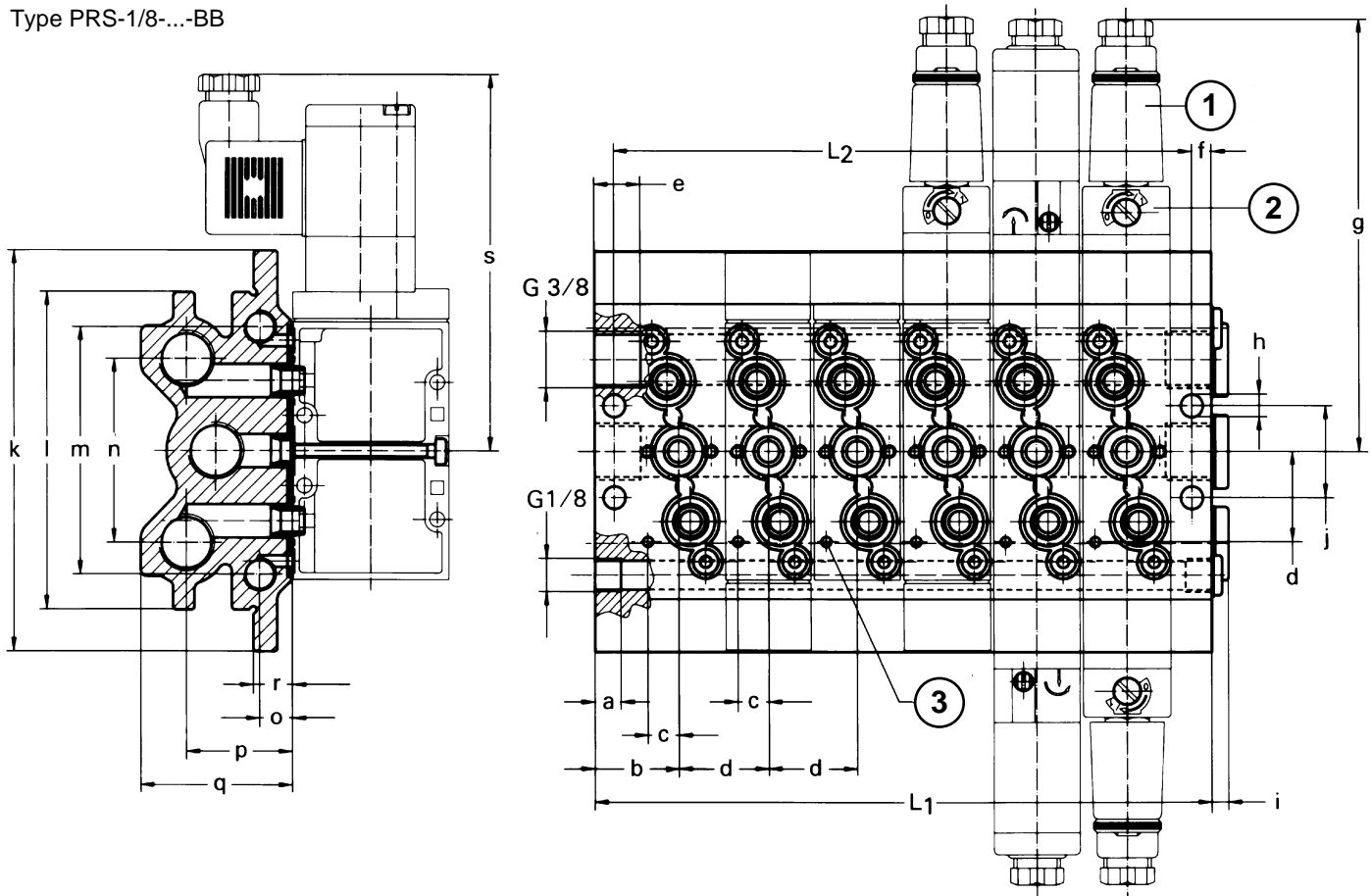


Order Number	Part No./Type	30542	30543	30544	30545	30546
		PRS-1/8-2-BB	PRS-1/8-3-BB	PRS-1/8-4-BB	PRS-1/8-5-BB	PRS-1/8-6-BB
		30547	30548	30549	30550	
		PRS-1/8-7-BB	PRS-1/8-8-BB	PRS-1/8-9-BB	PRS-1/8-10-BB	
Mounting		2 through-holes				
Connection	Supply Port, Exhaust Port	G 3/8				
	Pilot Exhaust Port	G 1/8				
Material		Aluminum, anodized				
Weight		1.54 lb / 0.700 kg	2.02 lb / 0.920 kg	2.53 lb / 1.150 kg	2.90 lb / 1.320 kg	3.34 lb / 1.520 kg
		3.85 lb / 1.750 kg	4.42 lb / 2.010 kg	4.84 lb / 2.200 kg	5.28 lb / 2.400 kg	

Tiger 2000 Manifolds

Dimensions

Type PRS-1/8-...-BB



Type	L1 in / mm	L2 in / mm
PRS-1/8-2-BB	3.07 / 78	2.60 / 66
PRS-1/8-4-BB	5.20 / 132	4.72 / 120
PRS-1/8-6-BB	7.32 / 186	6.85 / 174
PRS-1/8-8-BB	9.45 / 240	8.98 / 228
PRS-1/8-10-BB	11.57 / 294	11.10 / 282

- ① The manifold can be used to maintain all 1/8 ported Tiger 2000 Series pneumatic and solenoid actuated valves
- ② The valve cover can be rotated 180°
- ③ Bore size for dowel pin is DIN 7346 3 x 8

Dimensions

a	0.32 in / 8 mm	k	4.72 in / 120 mm
b	1.00 in / 25.5 mm	l	3.74 in / 95 mm
c	0.37 in / 9.4 mm	m	2.91 in / 74 mm
d	1.06 in / 27 mm	n	2.17 in / 55 mm
e	0.55 in / 14 mm	o	0.39 in / 9.8 mm
f	0.24 in / 6 mm	p	1.26 in / 32 mm
g	5.10 in / 129.5 mm	q	1.81 in / 45.5 mm
h	0.27 in / 6.8 mm	r	0.46 in / 11.7 mm
i	0.20 in / 5 mm	s	4.43 in / 112.6 mm
j	1.08 in / 27.5 mm		

Manifolds

Type

- PRS-1/4-2-B (for 2 valves)
- PRS-1/4-3-B (for 3 valves)
- PRS-1/4-4-B (for 4 valves)
- PRS-1/4-5-B (for 5 valves)
- PRS-1/4-6-B (for 6 valves)
- PRS-1/4-7-B (for 7 valves)
- PRS-1/4-8-B (for 8 valves)
- PRS-1/4-9-B (for 9 valves)
- PRS-1/4-10-B (for 10 valves)

This manifold is designed for any combination of B-Series 5 ported 2 position or 5 ported 3 position valves with G 1/4 connection threads.

The 2 socket head capscrews make possible a simple and quick method of mounting the valves from the front onto the manifold.

This manifold provides a common supply port, common exhaust port and common pilot exhaust ports serving all the valves. The common ports can be connected (blocked) on either side.

Includes:

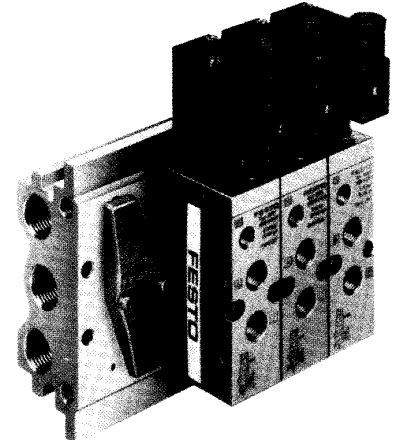
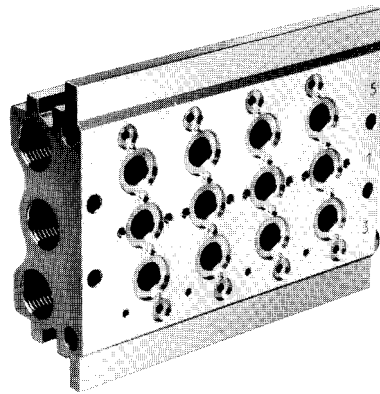
- 1 manifold, 3 plugs G 1/2 and 3 sealing rings, 0-1/2, 2 plugs G 1/8
- 1 gasket and 2 socket head capscrews M 4 x 50, per valve position.

Accessories:

Cover plate for blocking unused holes
Order Number 30666 PRSB-1/4-B

Sealing plug for separate pressure zones
Order Number 160996 PRSV-1/4

Type PRS-1/4-...-B

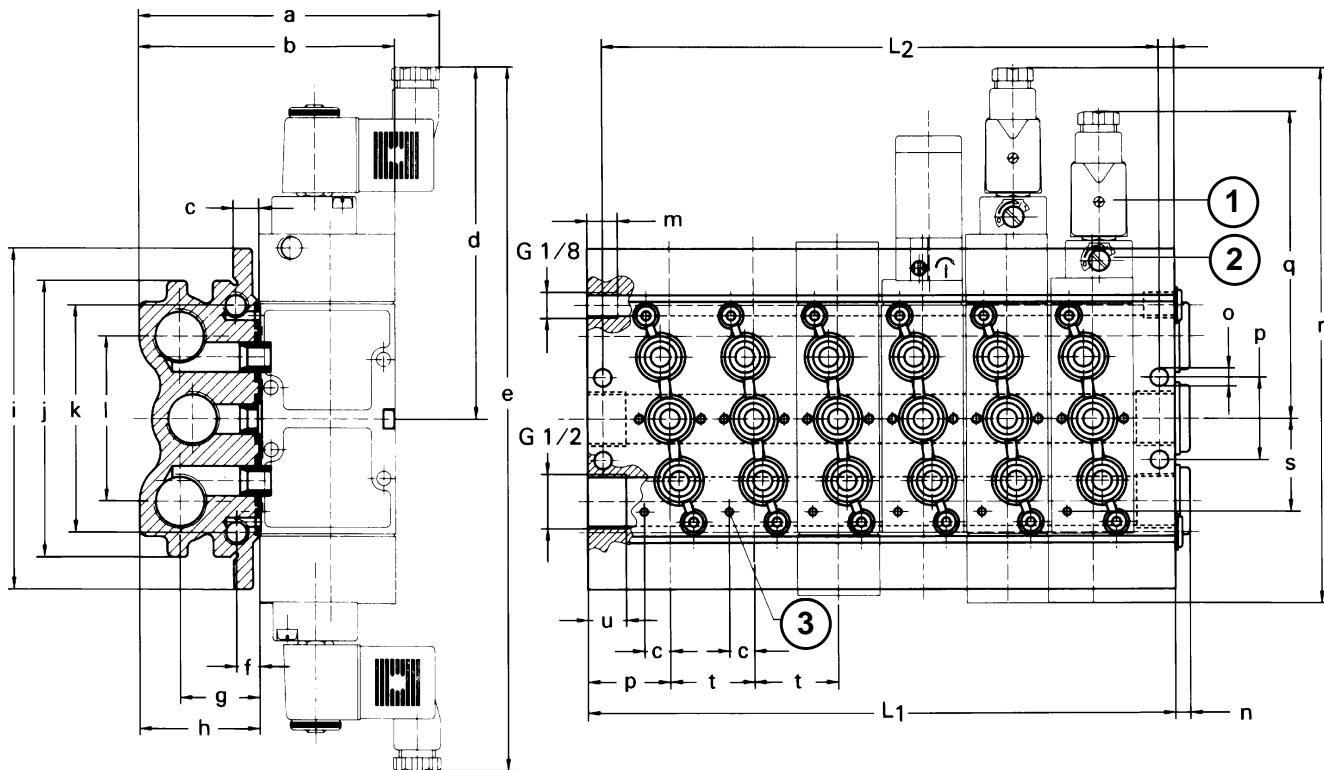


Order Number	Part No./Type	15861	15862	15863	15864	15865
		PRS-1/4-2-B	PRS-1/4-3-B	PRS-1/4-4-B	PRS-1/4-5-B	PRS-1/4-6-B
		15866	15867	15868	15869	
		PRS-1/4-7-B	PRS-1/4-8-B	PRS-1/4-9-B	PRS-1/4-10-B	
Mounting		4 through-holes				
Connection	Supply Port, Exhaust Port	G 1/2				
	Pilot Exhaust Port	G 1/8				
Material		Aluminum, anodized				
Weight		2.31 lb / 1.050 kg	2.88 lb / 1.310 kg	2.54 lb / 1.610 kg	4.18 lb / 1.900 kg	4.84 lb / 2.200 kg
		5.50 lb / 2.500 kg	6.16 lb / 2.800 kg	6.82 lb / 3.100 kg	7.39 lb / 3.360 kg	

Tiger 2000 Manifolds

Dimensions

Type PRS-1/4-...-B



Type	L1 in / mm	L2 in / mm
PRS-1/4-2-B	3.82 / 97	3.35 / 85
PRS-1/4-4-B	6.42 / 163	5.94 / 151
PRS-1/4-6-B	9.02 / 229	8.54 / 217
PRS-1/4-8-B	11.61 / 295	11.14 / 283
PRS-1/4-10-B	14.21 / 361	13.74 / 349

- ① The manifold can be used to maintain all 1/4 ported Tiger 2000 Series pneumatic and solenoid actuated valves.
- ② The valve cover can be rotated 180°
- ③ Bore size for dowel pin is DIN 7346 3 x 8

Dimensions

a	4.63 in / 117.5 mm	l	2.52 in / 64 mm
b	3.94 in / 100 mm	m	0.47 in / 12 mm
c	0.39 in / 10 mm	n	0.24 in / 6 mm
d	5.35 in / 136 mm	o	0.27 in / 6.8 mm
e	10.71 in / 272 mm	p	1.26 in / 32 mm
f	0.35 in / 9 mm	q	4.69 in / 119 mm
g	1.22 in / 31 mm	r	8.17 in / 207.5 mm
h	1.85 in / 47 mm	s	1.42 in / 36 mm
i	5.20 in / 132 mm	t	1.30 in / 33 mm
j	4.21 in / 107 mm	u	0.59 in / 15 mm
k	3.46 in / 88 mm		

Manifolds

Type

- PRS-3/8-2-B (for 2 valves)
- PRS-3/8-4-B (for 4 valves)
- PRS-3/8-6-B (for 6 valves)
- PRS-3/8-8-B (for 8 valves)
- PRS-3/8-10-B (for 10 valves)

This manifold is designed for any combination of B-Series 5 ported 2 position or 5 ported 3 position valves with G 3/8 connection threads.

The 2 socket head capscrews make possible a simple and quick method of mounting the valves from the front onto the manifold.

This manifold provides a common supply port, common exhaust port and common pilot exhaust ports serving all the valves. The common ports can be connected (blocked) on either side.

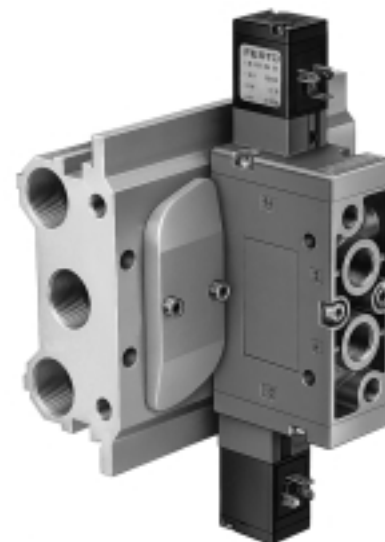
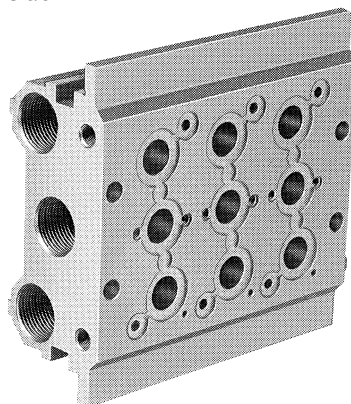
Includes:

- 1 manifold, 3 plugs G 3/4 and 3 sealing rings, 0-3/4, 2 plugs G 1/8.
- 1 gasket and 2 socket head capscrews M 5 x 75, per valve position.

Accessories

- Cover plate for blocking unused holes
- Order Number 30681 PRSB-3/8-B

Type PRS-3/8-...-B

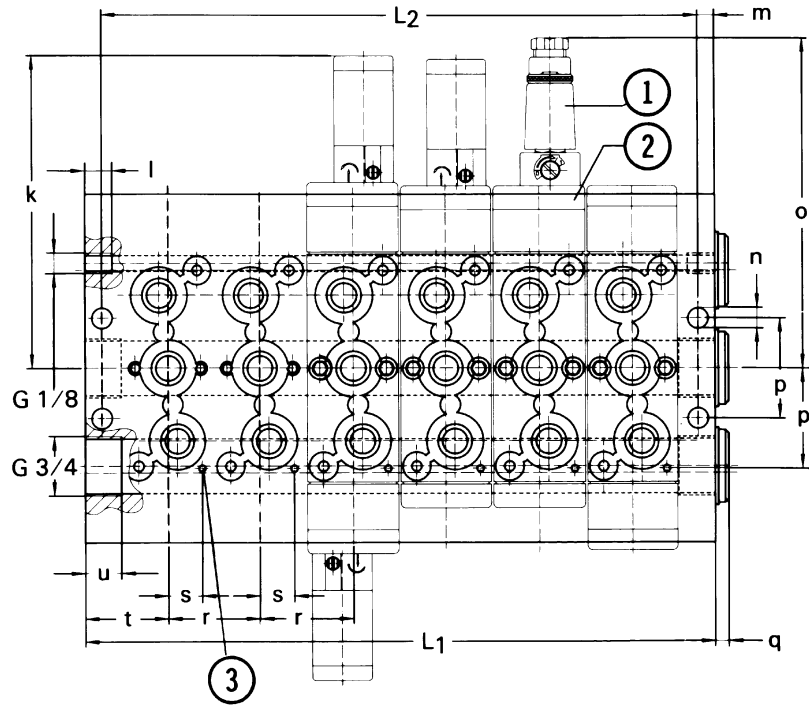
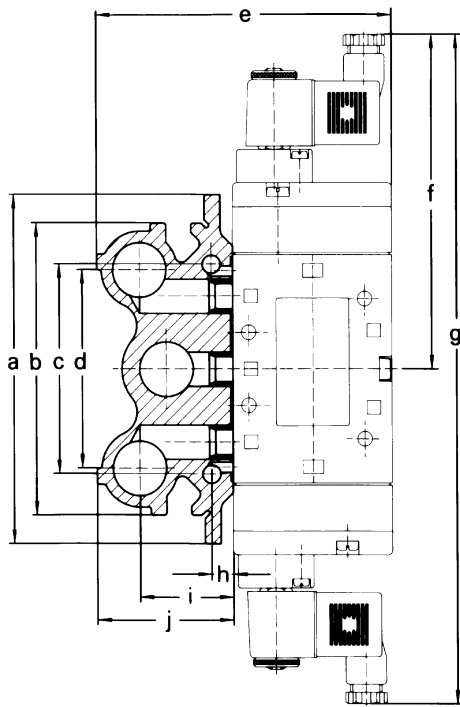


Order Number	Part No./Type	30682 PRS-3/8-2-B	30684 PRS-3/8-4-B	30686 PRS-3/8-6-B	30688 PRS-3/8-8-B	30690 PRS-3/8-10-B
Mounting		4 through-holes				
Connection	Supply Port, Exhaust Port	G 3/4				
	Pilot Exhaust Port	G 1/8				
Material		Aluminum, anodized				
Weight		3.53 lb / 1.600 kg	5.80 lb / 2.630 kg	7.72 lb / 3.500 kg	10.19 lb / 4.620 kg	12.35 lb / 5.600 kg

Tiger 2000 Manifolds

Dimensions

Type PRS-3/8-...-B



Type	L1 in / mm	L2 in / mm
PRS-3/8-2-B	4.49 / 114	3.90 / 99
PRS-3/8-4-B	7.72 / 196	7.13 / 181
PRS-3/8-6-B	10.94 / 278	10.35 / 263
PRS-3/8-8-B	14.17 / 360	13.58 / 345
PRS-3/8-10B	17.40 / 442	16.81 / 427

- ① The manifold can be used to mount all 3/8 ported Tiger 2000 Series pneumatic and solenoid actuated valves.
- ② Solenoid head can be rotated 180°.
- ③ Bore size for dowel pin is DIN 7346 3x8.

Dimensions

a	6.02 in / 153 mm
b	5.04 in / 128 mm
c	3.62 in / 92 mm
d	3.39 in / 86 mm
e	5.14 in / 130.5 mm
f	~5.77 in / ~146.5 mm
g	~11.54 in / ~293 mm
h	0.37 in / 9.5 mm
i	1.63 in / 41.5 mm
j	2.38 in / 60.5 mm
k	~5.39 in / ~137 mm
l	0.47 in / 12 mm
m	0.30 in / 7.5 mm
n	0.35 in / 9 mm
o	~5.71 in / ~145 mm
p	1.73 in / 44 mm
q	0.24 in / 6 mm
r	1.61 in / 41 mm
s	0.60 in / 15.2 mm
t	1.44 in / 36.5 mm
u	0.63 in / 16 mm

Manifold Rails

Type

- PAL-1/8-2-B (for 2 valves)
- PAL-1/8-4-B (for 4 valves)
- PAL-1/8-6-B (for 6 valves)
- PAL-1/8-8-B (for 8 valves)
- PAL-1/8-10-B (for 10 valves)

Includes:

1 manifold rail, 2 mounting brackets, 2 sealing rings 0-3/8

At all valve positions: 1 O-ring 9 x 2.5 mm and 2 socket head capscrews M 4 x 50.

Accessories (dependent on connection):

Order separately

Reducing bushing with sealing ring

Order Number 3581 D-1/4i-3/8a

Pipe plug with sealing ring

Order Number 3570 B-3/8

Blanking plate for blocking unused valve positions

Order Number 30903 PALB-1/8-B

This common supply manifold can be used to mount 2 to 10, 5/2 or 5/3 series B solenoid actuated valves, with connections G 1/8, together to form a manifold.

The valves are easily mounted on the manifold rail with two socket head capscrews, included with the PAL rail.

Type PAL-1/8-...-BB



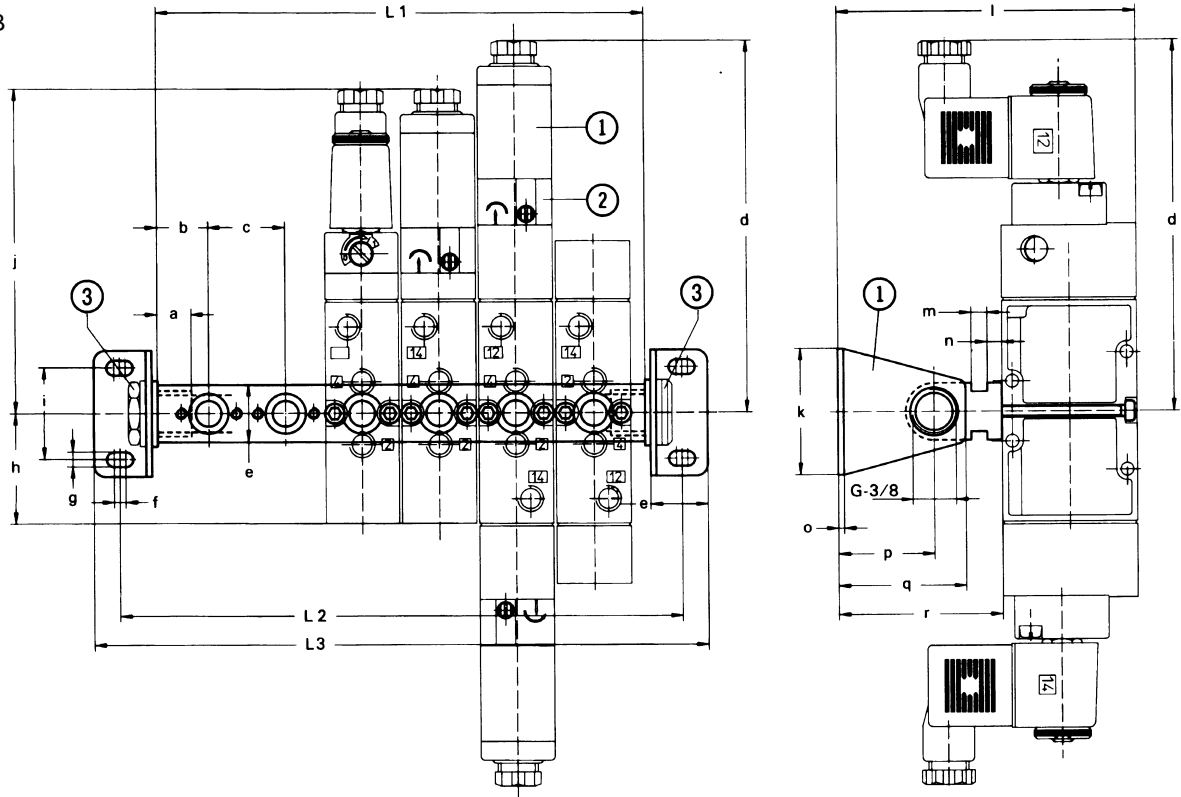
Mounting Brackets

Order Number	Part No./Type	30552 PAL-1/8-2-B	30554 PAL-1/8-4-B	30556 PAL-1/8-6-B	30558 PAL-1/8-8-B	30560 PAL-1/8-10-B
Mounting	2 mounting brackets					
Connection	G 3/8 ISO					
Materials	Aluminum, anodized					
Weight	0.331 lb / 0.150 kg	0.507 lb / 0.230 kg	0.693 lb / 0.290 kg	0.816 lb / 0.370 kg	0.992 lb / 0.450 kg	

Tiger 2000 Manifolds

Dimensions

Type PAL-1/4-...-B



Type	L1 in / mm	L2 in / mm	L3 in / mm
PAL-1/8-2-B	2.48 / 63	3.50 / 89	4.21 / 107
PAL-1/8-4-B	4.61 / 117	5.63 / 143	6.34 / 161
PAL-1/8-6-B	6.73 / 171	7.76 / 197	8.46 / 215
PAL-1/8-8-B	8.86 / 225	9.88 / 251	10.59 / 269
PAL-1/8-10-B	10.98 / 279	12.01 / 305	12.72 / 323

- ① The manifold can be used to mount all 1/8 ported Tiger 2000 Series pneumatic and solenoid actuated valves.
- ② Solenoid head can be rotated 180°.
- ③ G 3/8 ISO pipe plug and G 3/8 ISO reducing bushing are not included with a basic manifold order, and must be ordered separately.

Dimensions

- a 0.47 in / 12 mm
- b 0.71 in / 18 mm
- c 1.06 in / 27 mm
- d 5.12 in / 130 mm
- e 0.79 in / 20 mm
- f 0.16 in / 4 mm
- g 0.20 in / 5.2 mm
- h 1.52 in / 38.5 mm
- i 1.26 in / 32 mm
- j 4.45 in / 113 mm
- k 1.73 in / 44 mm
- l 4.09 in / 104 mm
- m 0.22 in / 5.5 mm
- n 0.20 in / 5 mm
- o 0.08 in / 2 mm
- p 1.32 in / 33.5 mm
- q 1.75 in / 44.5 mm
- r 2.24 in / 57 mm

Manifold Rails

Type

- PAL-1/4-2-B (for 2 valves)
- PAL-1/4-4-B (for 4 valves)
- PAL-1/4-6-B (for 6 valves)
- PAL-1/4-8-B (for 8 valves)
- PAL-1/4-10-B (for 10 valves)

Includes:

1 manifold rail, 2 mounting brackets, 2 sealing rings 0-1/2
 At all valve positions: 1 O-ring 10 x 3 mm and 2 socket head capscrews M 4 x 55.

Accessories (dependent on connection):

Order separately
 Reducing bushing with sealing ring
 Order Number 3585 D-3/8i-1/2a

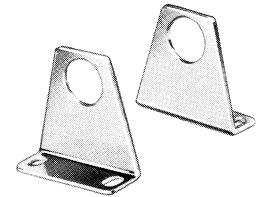
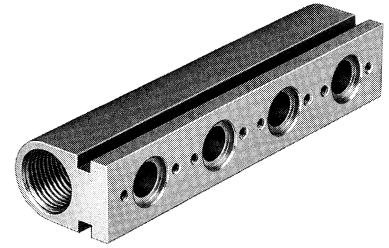
Pipe plug with sealing ring
 Order Number 3571 B-1/2

Blanking plate for blocking unused valve positions
 Order Number 30904 PALB-1/4-B

This common supply manifold can be used to mount 2 to 10, 5/2 or 5/3 series B solenoid actuated valves, with connections G 1/8, together to form a manifold.

The valves are easily mounted on the manifold rail with two socket head capscrews, included with the PAL rail.

Type PAL-1/4-...-B



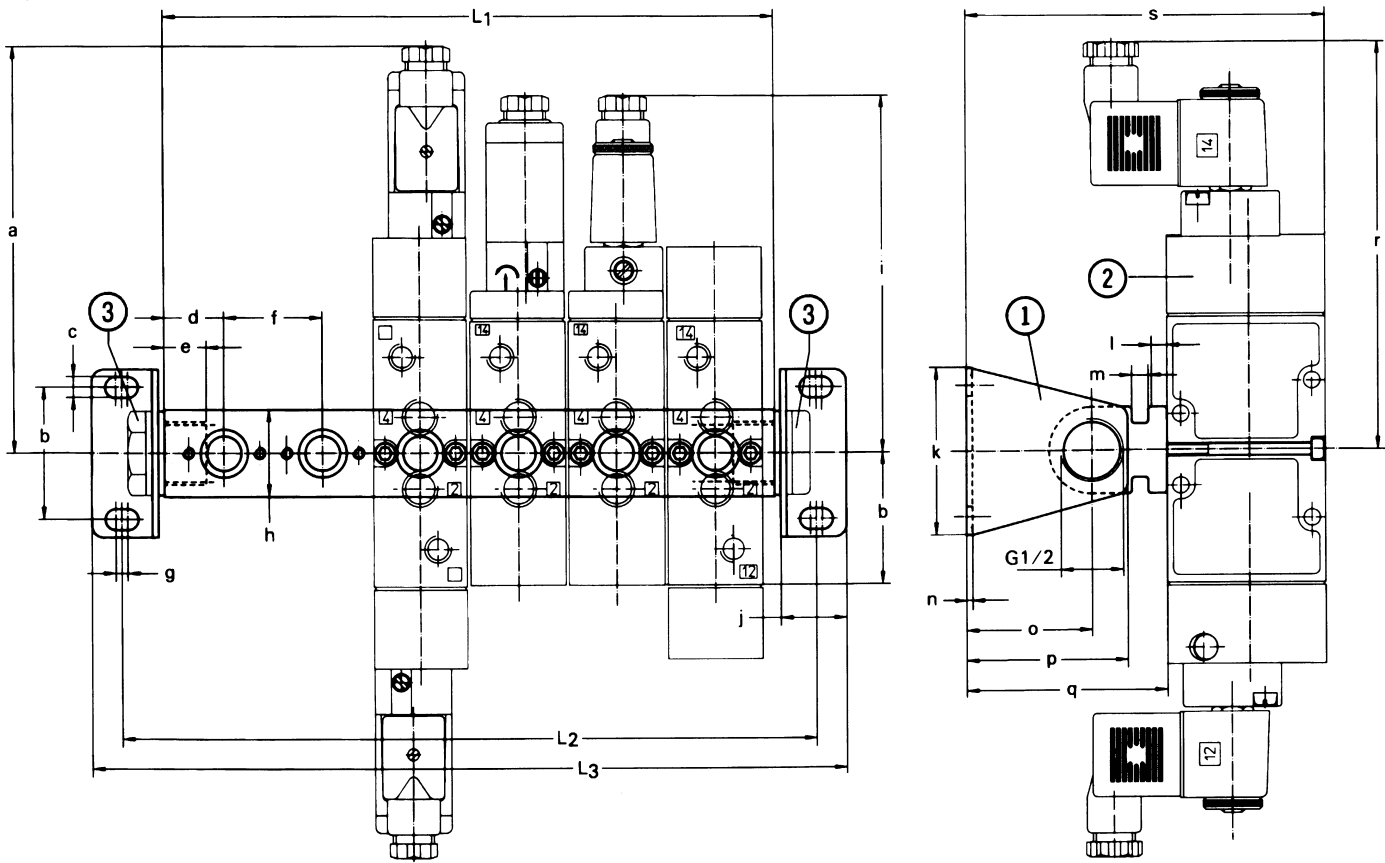
Mounting Brackets

Order Number	Part No./Type	30280 PAL-1/4-2-B	30282 PAL-1/4-4-B	30284 PAL-1/4-6-B	30286 PAL-1/4-8-B	30288 PAL-1/4-10-B
Mounting		2 mounting brackets				
Connection		G 1/2 ISO				
Materials		Aluminum, anodized				
Weight		0.507 lb / 0.230 kg	0.772 lb / 0.350 kg	1.058 lb / 0.480 kg	1.323 lb / 0.600 kg	1.609 lb / 0.730 kg

Tiger 2000 Manifolds

Dimensions

Type PAL-1/4-...-B



Type	L1 in / mm	L2 in / mm	L3 in / mm
PAL-1/4-2-B	2.87 / 73	3.98 / 101	4.76 / 121
PAL-1/4-4-B	5.47 / 139	6.57 / 167	7.36 / 187
PAL-1/4-6-B	8.07 / 205	9.17 / 233	9.96 / 253
PAL-1/4-8-B	10.67 / 271	11.77 / 299	12.56 / 319
PAL-1/4-10-B	13.27 / 337	14.37 / 365	15.16 / 385

- ① The manifold can be used to mount all 1/4 ported Tiger 2000 Series pneumatic and solenoid actuated valves.
- ② Solenoid head can be rotated 180°.
- ③ G 1/2 ISO pipe plug and G 1/2 ISO reducing bushing are not included with a basic manifold order, and must be ordered separately.

Dimensions

- a 5.31 in / 135 mm
- b 1.73 in / 44 mm
- c 0.28 in / 7 mm
- d 0.79 in / 20 mm
- e 0.55 in / 14 mm
- f 1.30 in / 33 mm
- g 0.16 in / 4 mm
- h 1.14 in / 29 mm
- i 4.65 in / 118 mm
- j 0.87 in / 22 mm
- k 2.20 in / 56 mm
- l 0.20 in / 5.1 mm
- m 0.22 in / 5.5 mm
- n 0.08 in / 2 mm
- o 1.65 in / 42 mm
- p 2.13 in / 54 mm
- q 2.64 in / 67 mm
- r 5.35 in / 136 mm
- s 4.72 in / 120 mm

Manifold Rails

Type

- PAL-3/8-2-B (for 2 valves)
- PAL-3/8-4-B (for 4 valves)
- PAL-3/8-6-B (for 6 valves)
- PAL-3/8-8-B (for 8 valves)
- PAL-3/8-10-B (for 10 valves)

Includes:

1 manifold rail, 2 mounting brackets, 2 seating rings 0-3/4
 At all valve positions: 1 O-ring 17 x 2.5 mm and 2 socket head capscrews M 5 x 75.

Accessories (dependent on connection):

Order separately
 Reducing bushing with sealing ring
 Order Number 3588 D-1/2i-3/4a

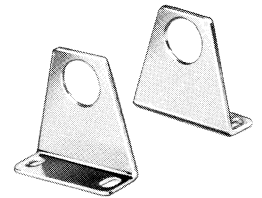
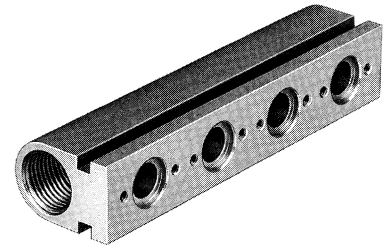
Pipe plug with sealing ring
 Order Number 3572 B-3/4

Blanking plate for blocking unused valve positions
 Order Number 30905 PALB-3/8-B

This common supply manifold can be used to mount 2 to 10, 5/2 or 5/3 series B solenoid actuated valves, with connections G 3/8, together to form a manifold.

The valves are easily mounted on the manifold rail with two socket head capscrews, included with the PAL rail.

Type PAL-3/8-...-B



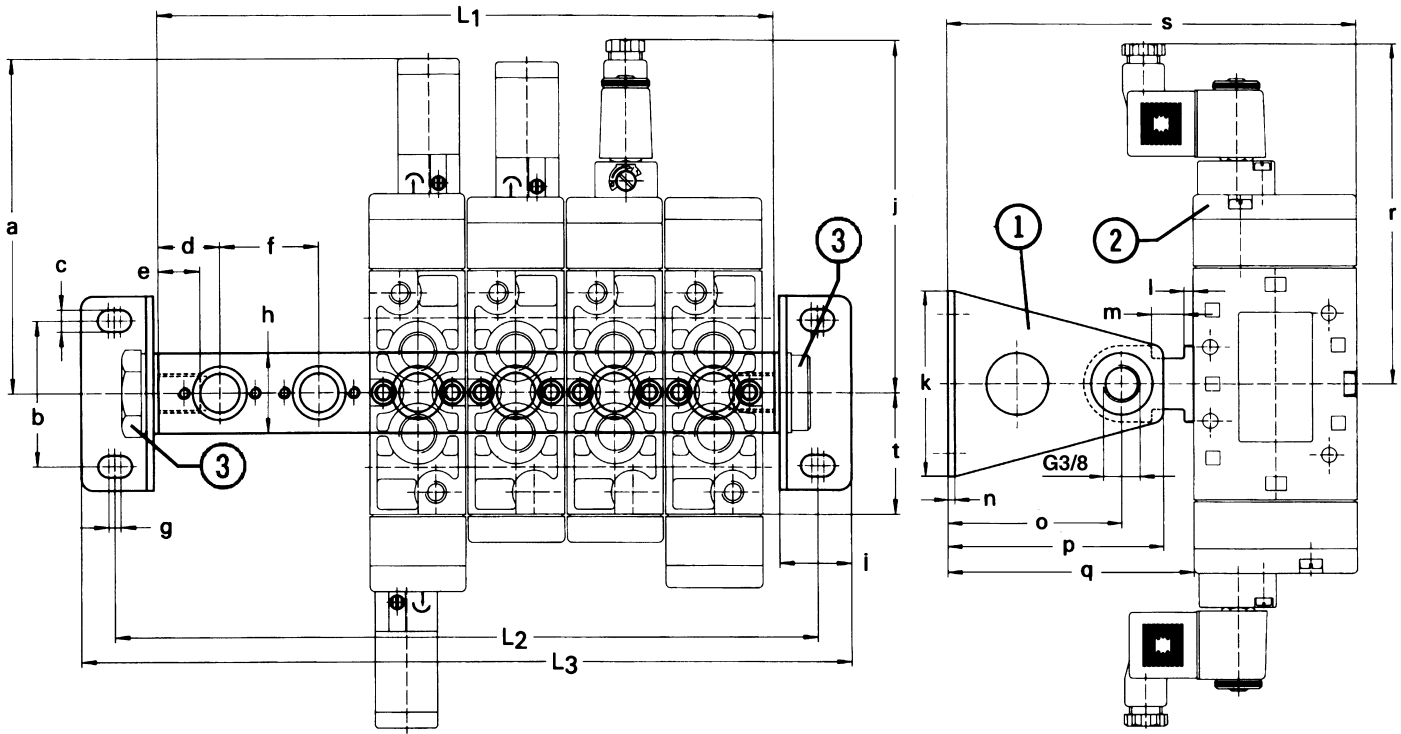
Mounting Brackets

Order Number	Part No./Type	30692 PAL-3/8-2-B	30694 PAL-3/8-4-B	30696 PAL-3/8-6-B	30698 PAL-3/8-8-B	30680 PAL-3/8-10-B
Mounting		2 mounting brackets				
Connection		G 3/4 ISO				
Materials		Aluminum, anodized				
Weight		1.124 lb / 0.510 kg	1.587 lb / 0.720 kg	2.116 lb / 0.960 kg	2.557 lb / 1.160 kg	2.998 lb / 1.360 kg

Tiger 2000 Manifolds

Dimensions

Type PAL-3/8-...-B



Type	L1 in / mm	L2 in / mm	L3 in / mm
PAL-3/8-2-B	3.58 / 91	5.00 / 127	6.10 / 155
PAL-3/8-4-B	6.81 / 173	8.23 / 209	9.33 / 237
PAL-3/8-6-B	10.04 / 255	11.46 / 291	12.56 / 319
PAL-3/8-8-B	13.27 / 337	14.69 / 373	15.79 / 401
PAL-3/8-10-B	16.50 / 419	17.91 / 455	19.02 / 483

- ① The manifold can be used to mount all 3/8 ported Tiger 2000 Series pneumatic and solenoid actuated valves.
- ② Solenoid head can be rotated 180°.
- ③ G 1/2 ISO pipe plug and G 1/2 ISO reducing bushing are not included with a basic manifold order, and must be ordered separately.

Dimensions

- a ~5.39 in / ~137 mm
- b 2.36 in / 60 mm
- c 0.35 in / 9 mm
- d 0.98 in / 25 mm
- e 0.67 in / 17 mm
- f 1.61 in / 41 mm
- g 0.20 in / 5 mm
- h 1.30 in / 33 mm
- i 1.18 in / 30 mm
- j ~5.71 in / ~145 mm
- k 3.15 in / 80 mm
- l 0.18 in / 4 mm
- m 0.55 in / 14 mm
- n 0.12 in / 3 mm
- o 2.95 in / 75 mm
- p 3.66 in / 93 mm
- q 4.17 in / 106 mm
- r ~5.77 in / 146.5 mm
- s 6.93 in / 176 mm
- t 1.97 in / 50 mm