

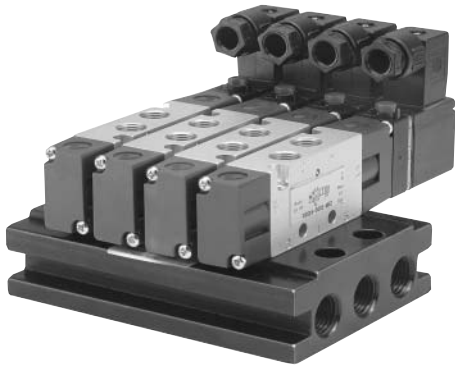
16mm and 22mm

Section A



Features 4
Ordering Information 5-6
Technical Data 7
Dimensions 8-9

VS High Flow Inline Valve



Valve Size and Port Size

- 16mm Ported 1/8 - BSP or NPT
- 22mm Ported 1/4 - BSP or NPT
- Compact and Aesthetic Design

Valve Types

- 16mm - 3/2, 5/2 & 5/3
- 22mm - 3/2, 5/2 & 5/3 & Namur Interface Valves
- Complete Inline Valve Range

Valve Flow

- 16mm - 1150 l/min (.6 Cv)
- Powering up to an 80mm Cylinder Diameter
- 22mm - 2000 l/min (1.2 Cv)
- Powering up to a 125mm Cylinder Diameter

Pilot Operator Options – 16mm & 22mm Inline valves

- Pressure - Pressure
- Pressure - Spring
- Solenoid - Solenoid
- Solenoid - Spring
- Index Locking Manual Override as Standard on all Solenoid Valves

Solenoid Voltage Options

- 24VDC (1 Watt)
- Low-wattage Coils
- 24 or 48VDC/AC, 110 or 230VAC (2-3 Watt)
- Complete Option of Solenoid Coils

Ports

- NPT & BSP Ports on Valves and Manifolds
- A Global Valve Range for Every Pneumatic Application

Maximum Number of Stations on Manifold

- 2 - 24 Station Manifolds
- Available in Equal Numbers Stations (2, 4, 6, 8, etc.)

Which Valves Can Be Manifold Mounted

- 5/2, 5/3 & 3/2 Valves
(Different Manifolds for 3/2 & 5/2 Valves)
- All High Flow Inline Valves are Manifold Mountable

Long Life Expectancy of Valves

- Life Expectancy is 50-Million Cycles
- Life Expectancy Extended to five Times Longer than Traditional Nitrile Seals

Corrosion Resistant

- Anodized Aluminium Valve Bodies, Spools and Manifolds
- High Surface Finish & Protection in Harsh Industrial Environments



Inline 16 & 22mm Spool Valves (Manifold Mountable – Supplied Without Connector)

Function	Valve Type		16mm - 1/8	22mm - 1/4
3-Port, 2-Position Inline				
	Pressure - Pressure	BSP NPT	VSG16-301-101 VSN16-301-101	VSG22-302-101 VSN22-302-101
	Pressure - Spring	BSP NPT	VSG16-301-102 VSN16-301-102	VSG22-302-102 VSN22-302-102
	Solenoid - Solenoid	BSP NPT	VSG16-301-*50 VSN16-301-*50	VSG22-302-*50 VSN22-302-*50
	Solenoid - Spring	BSP NPT	VSG16-301-*52 VSN16-301-*52	VSG22-302-*52 VSN22-302-*52
5-Port, 2-Position Inline				
	Pressure - Pressure	BSP NPT	VSG16-501-101 VSN16-501-101	VSG22-502-101 VSN22-502-101
	Pressure - Spring	BSP NPT	VSG16-501-102 VSN16-501-102	VSG22-502-102 VSN22-502-102
	Solenoid - Solenoid	BSP NPT	VSG16-501-*50 VSN16-501-*50	VSG22-502-*50 VSN22-502-*50
	Solenoid - Spring	BSP NPT	VSG16-501-*52 VSN16-501-*52	VSG22-502-*52 VSN22-502-*52
5-Port, 3-Position Inline				
	Press-Press - C-Blocked (APB)	BSP NPT	VSG16-501-125 VSN16-501-125	VSG22-502-125 VSN22-502-125
	Press-Press - C-Open (CE)	BSP NPT	VSG16-501-135 VSN16-501-135	VSG22-502-135 VSN22-502-135
	Press-Press - C-Applied (PC)	BSP NPT	VSG16-501-155 VSN16-501-155	VSG22-502-155 VSN22-502-155
	Sol-Sol - C-Blocked (APB)	BSP NPT	VSG16-501-*65 VSN16-501-*65	VSG22-502-*65 VSN22-502-*65
	Sol-Sol - C-Open (CE)	BSP NPT	VSG16-501-*75 VSN16-501-*75	VSG22-502-*75 VSN22-502-*75
	Sol-Sol - C-Applied (PC)	BSP NPT	VSG16-501-*85 VSN16-501-*85	VSG22-502-*85 VSN22-502-*85
5-Port Namur Valves				
	Solenoid - Solenoid	BSP NPT		VSGNM-502-*50 VSNNM-502-*50
	Solenoid - Spring	BSP NPT		VSGNM-502-*52 VSNNM-502-*52
	Sol-Sol - C-Blocked	BSP NPT		VSGNM-502-*65 VSNNM-502-*65
	Sol-Sol - C-Open	BSP NPT		VSGNM-502-*75 VSNNM-502-*75
	Sol-Sol - C-Applied	BSP NPT		VSGNM-502-*85 VSNNM-502-*85

Replace * with appropriate voltage code letter. External pilot supply valves on request.

Voltage Code	A	J	M	M1	L
Voltage	230V AC (3VAC)	110V AC (3VAC)	24V DC (2W)	24V DC (1W)	12V DC (2W)

Connectors – Standard 15mm, 3-Pin, DIN 43650C

Voltage	12VDC/AC	24VDC/AC	110/120VAC	220/240VAC
Cord Grip	PS2932P	PS2932P	PS2932P	PS2932P
Cord Grip with 6' Cord	PS2932JP	PS2932JP	PS2932JP	PS2932JP
Lighted Cord Grip*	PS294675P	PS294679P	PS294683P	N/A
Lighted Cord Grip* with 6' Cord	PS2946J75P	PS2946J79P	PS2946J83P	N/A
1/2" Conduit - Unlighted	PS2998P	PS2998P	PS2998P	PS2998P

* LED with surge suppression

Spare Coils for Solenoid Operated Valves

Spare coils are supplied without connectors, please order connectors separately						
Coil	230VAC	110VAC	24VAC	24VDC (2W)	24VDC (1W)	12VDC
Part Number	2EV15A3	2EV15J3	2EV15C2	2EV15M2	2EV15M1	2EV15L2

Low Profile Manifolds for 16mm Inline Valves

Port Type	Number of Valve Stations				
	2	4	6	8	10
3-Port Valves	VAN16-3002-02	VAN16-3002-04	VAN16-3002-06	VAN16-3002-08	VAN16-3002-10
5-Port Valves	VAN16-5002-02	VAN16-5002-04	VAN16-5002-06	VAN16-5002-08	VAN16-5002-10

For BSP manifolds , replace "N" in part number with "G".

Low Profile Manifolds for 22mm Inline Valves

Port Type	Number of Valve Stations				
	2	4	6	8	10
3-Port Valves	VAN22-3003-02	VAN22-3003-04	VAN22-3003-06	VAN22-3003-08	VAN22-3003-10
5-Port Valves	VAN22-5003-02	VAN22-5003-04	VAN22-5003-06	VAN22-5003-08	VAN22-5003-10

For BSP manifolds, replace "N" in part number with "G".
 Manifolds with 12 to 24 stations available; please contact factory.

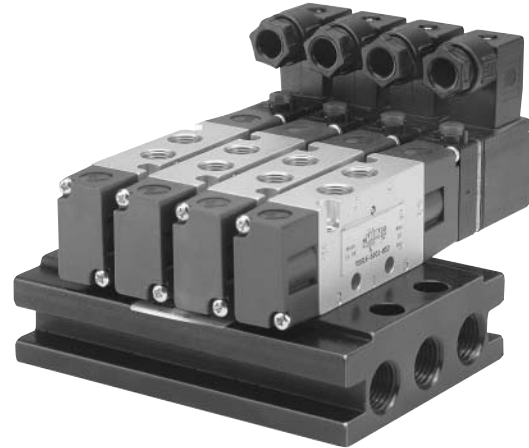
Manifold Accessories

Description	16mm	22mm
Blanking Plate Kit 5-Port Manifolds	VA016-5000-BLK	VA022-5000-BLK
Blanking Plate Kit 3-Port Manifolds	VA016-3000-BLK	VA022-3000-BLK
Din Rail Mounting Kit	VA016-5000-DIN	N/A

Low Profile Manifolds

Material Specifications

Body Anodized aluminium (black)
Screws Plated steel
Seals Nitrile



Valves

Material Specifications

Body Anodized Aluminium
End Caps Glass-filled Acetal
End Cover Seals Nitrile
Piston Operator Acetal
Piston Seals Polyurethane
Screws Zinc Plated Steel
Spool Anodized Aluminium
Spool Seals Polyurethane
Springs High-grade Stainless Steel

Performance

Flow Rate (at 6 bar):

16mm - 1150 l/min (.6 Cv)
22mm - 2000 l/min (1.2 Cv)

Insulation Protection:

IP65

Typical Response Time:

Pressure - Spring = 25ms ON, 35ms OFF
Pressure - Pressure = 23ms ON, 30ms OFF
Solenoid - Spring = 20ms ON, 28ms OFF
Solenoid - Solenoid = 22ms ON, 22ms OFF

Valve Specifications

Air Condition:

Filtered to 40 μ , regulated,
lubricated or non-lubricated, dry

Ambient Temperature Range:

-10°C to 50°C (14°F to 122°F)

Operating Temperature Range:

-20°C to 70°C (-4°F to 154°F)

Pressure Range:

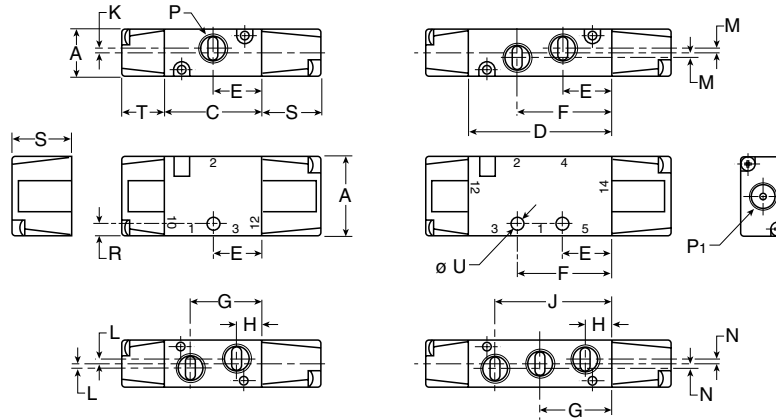
0 to 10 bar* (0 to 145 PSIG)

Voltage Tolerance:

-10% to +10%

* 8-bar maximum for 24V DC 1-Watt coil.

3/2 & 5/2 Inline Valves



3/2 and 5/2 Pressure / Spring and Pressure / Pressure Inline Valves

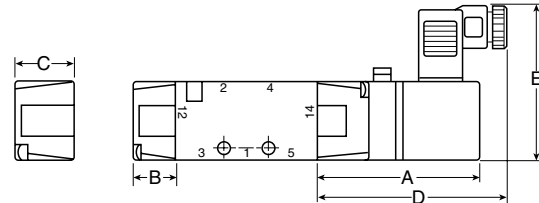
	A	B	C	D	E	F	G	H	J	K
16mm	0.63 (16)	1.10 (28)	1.34 (34)	1.97 (50)	0.67 (17.0)	1.30 (33.0)	0.98 (25.0)	0.35 (9.0)	2.09 (41.0)	0.06 (1.5)
22mm	0.87 (22)	1.57 (40)	1.69 (43)	2.48 (63)	0.85 (21.5)	1.63 (41.5)	1.24 (31.5)	0.45 (11.5)	2.03 (51.5)	0.08 (2.0)
	L	M	N	P	P ₁	R	S	T	U	
16mm	0.06 (1.5)	0.06 (1.5)	0.06 (1.5)	1/8	G1/8	0.18 (4.5)	0.83 (21)	0.59 (15.0)	0.17 (4.3)	
22mm	0.06 (1.5)	0.08 (2.0)	0.06 (1.5)	(1/4)	(G1/8)	0.28 (7.0)	0.95 (24)	1.00 (25.5)	0.17 (4.3)	

Inches
(mm)

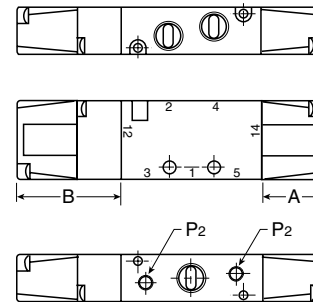
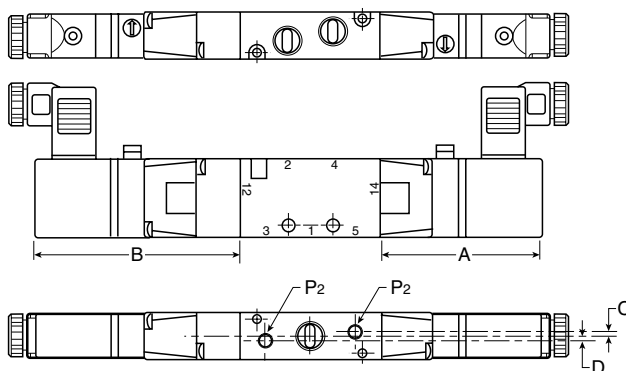
3/2 and 5/2 Solenoid / Spring and Solenoid / Solenoid

	A	B	C	D	E
16mm	2.26 (57.5)	0.59 (15.0)	0.83 (21)	2.74 (69.5)	2.13 (54)
22mm	2.48 (63.0)	1.00 (25.5)	0.95 (24)	2.95 (75.0)	2.40 (61)

Inches
(mm)



5/3 Inline Valves



5/3 Solenoid / Solenoid Inline Valves

	A	B	C	D	P ₂
16mm	2.26 (57.5)	2.89 (73.5)	0.83 (1.5)	0.83 (1.5)	(M5)
22mm	2.48 (63.0)	3.23 (82.0)	0.83 (1.5)	0.83 (1.5)	(1/8)

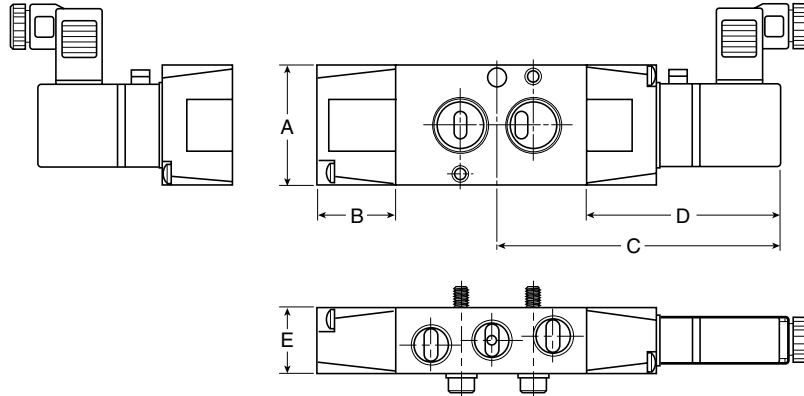
5/3 Pressure / Pressure Inline Valves

	A	B	P ₂
16mm	0.83 (21)	0.95 (37)	(M3)
22mm	0.95 (24)	1.69 (43)	(1/8)

Inches
(mm)

A

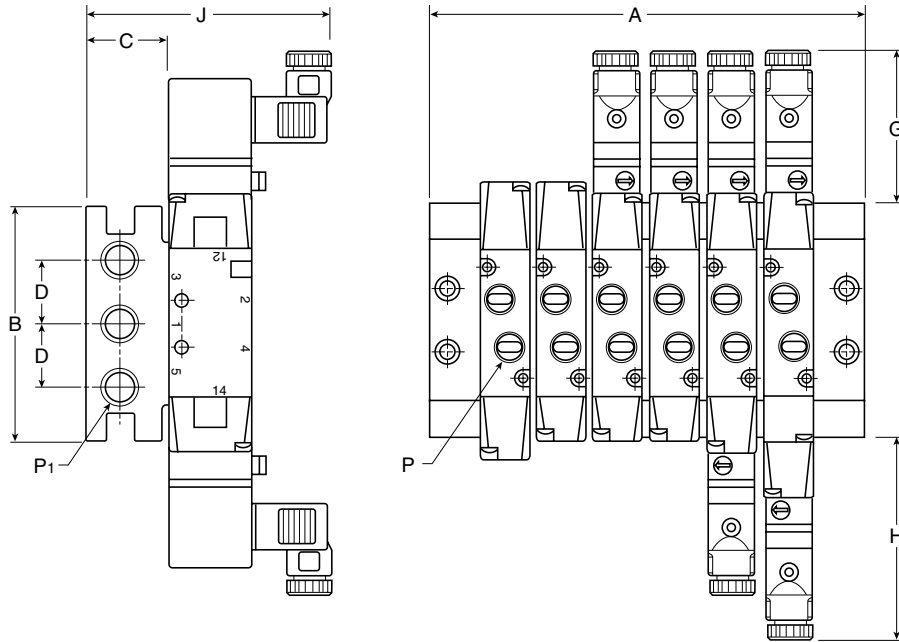
Namur Valve



Dimensions

	A	B	C	D	E
Inches (mm)	1.57 (40)	1.00 (25.5)	3.64 (92.5)	2.48 (63)	.87 (22)

Manifolds



Dimensions

	A					B	C	D	G	H	J	P	P ₁
	2 Station	4 Station	6 Station	8 Station	10 Station								
16mm	2.72 (69.0)	4.21 (107.0)	5.71 (145.0)	7.20 (183.0)	8.70 (221.0)	3.07 (78.0)	1.06 (27.0)	.83 (21.0)	2.13 (54.0)	2.76 (70.0)	3.23 (82.0)	1/8"	1/4"
22mm	2.85 (72.5)	4.63 (117.5)	6.40 (162.5)	8.17 (207.5)	9.94 (252.5)	3.15 (80.0)	1.20 (30.5)	1.04 (26.5)	2.56 (65.0)	3.31 (84.0)	3.62 (92.0)	1/4"	3/8"

Inches
(mm)