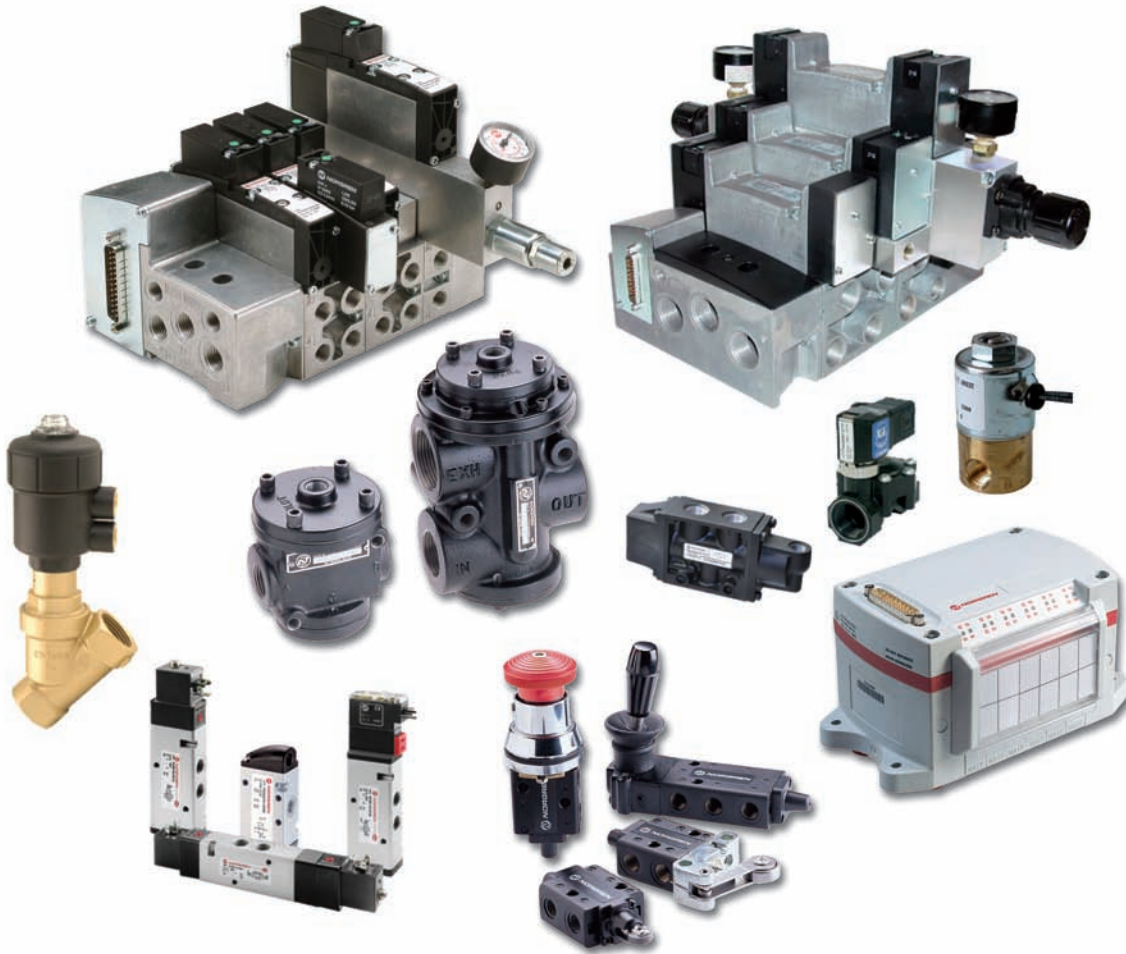


VALVES



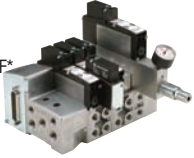
An unmatched, state-of-the-art lineup of pneumatic and fluid control valves for any application. Norgren offers high-flow, compact valves used in multi-industry solutions. From Valve Manifolds to Solenoid and Air Pilot Valves to Manual/Mechanical Valves to Safety Valves to Fluid Control Valves, Norgren has a comprehensive range to meet demanding applications.



VALVES


Valve Manifolds

VS18
2x2/2, 2x3/2, 5/2, 5/3
Cv 0.66*
Size 18 mm
232 psig*
5°F to 122°F*




VAL-2

VS26
2x2/2, 2x3/2, 5/2, 5/3
Cv 1.37*
Size 26 mm
232 psig*
5°F to 122°F*



VAL-26

VS45
2x3/2, 5/2, 5/3
Cv 3.7*
Size 45 mm
232 psig*
5°F to 122°F*



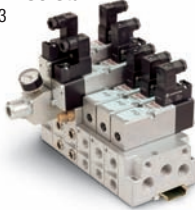
VAL-50

V40/V41 Mini ISO Star
2x3/2, 5/2, 5/3
Cv 0.69*
Size 18 mm
232 psig*
5°F to 176°F*




VAL-74

V44/V45 Mini ISO Star
2x3/2, 5/2, 5/3
Cv 1.17*
Size 26 mm
232 psig*
5°F to 176°F*




VAL-85

ISO Star
5/2, 5/3
Cv 4.4*
Sizes 1, 2, 3
232 psig*
5°F to 176°F*




VAL-94

VM10 (integral push-in fittings)
2x3/2, 5/2, 5/3
Cv 0.44*
Size 10 mm
116 psig
4°F to 122°F*



VAL-102

VM15 (integral push-in fittings)
2x3/2, 5/2, 5/3
Cv 1.01*
Size 15 mm
116 psig
4°F to 122°F*



VAL-110

VALVES

* See catalog page

VALVES

Solenoid and Air Pilot Valves

V50 - V53 Directional control
3/2, 5/2, 5/3
Cv 2.48*
1/8" to 1/2"
116 psig
23°F to 140°F*




VAL-124

V60-V62 Directional control
3/2, 5/2, 5/3, 2x3/2
Cv 2.6*
1/8" to 3/8"
145 psig
14°F to 122°F*



VAL-142

Nugget 200 Spool Valves
3/2, 5/2, 5/3
Cv 1.7*
1/4" to 1/2"
150 psig
-20°F to 160°F*




VAL-154

Nugget 500 Directional control
5/2, 5/3
Cv 4.7*
3/8" to 1/2"
150 psig
-20°F to 160°F*




VAL-162

Herion
3/2, 4/2, 5/2, 5/3
Cv 3.5*
1/8" to 1/2"
230 psig*
-4°F to 122°F*




VAL-166

Webber Exce!
2/3, 3/2
Cv .08*
1/8", 1/4"
232 psig*
-4°F to 122°F*




VAL-180

Prospector solenoid actuated poppet
2/2, 3/2, 4/2
Cv 49.5*
1/4" to 2"
150 psig
-20°F to 120°F*



VAL-184

Prospector air pilot actuated poppet
2/2, 3/2, 4/2
Cv 49.5
1/4" to 2"
300 psig
-20°F to 175°F*



VAL-188

Manual and Mechanical Valves

Nugget 200 Spool valves
3/2, 5/2, 5/3
Cv 1.7
1/4", 3/8", 1/2"
150 psig
-20°F to 160°F*




VAL-208

Super X
3/2, 5/2, 5/3
Cv 0.98
1/8", 1/4"
145 psig
32°F to 158°F*



VAL-212

Prospector poppet
2/2, 3/2, 4/2
Cv 49.5*
1/4" to 2"
300 psig
-20°F to 175°F*




VAL-222

* See catalog page

VALVES

Safety Valves

Herion XSz
Double valve
Cv 62.4
1/4" to 1-1/2"
145 psig
14°F to 140°F



VAL-239

Fluid Control Valves

FAS and Buschjost Solenoid Valves without Differential Pressure



VAL-246

Buschjost Solenoid Valves with Differential Pressure



VAL-298

Buschjost Pressure Actuated valves



VAL-314

Buschjost Valves and Systems for Dust Filters



VAL-352

FAS Proportional Valves



VAL-368

KIP Solenoid Valves



VAL-372

KIP Liquid Level switches



VAL-407

* See catalog page

Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves

ISO 15407-2, Size 18 mm

24V DC or 115V AC Multipole

Integrated Fieldbus

Field expandable with single add-on stations

Dual spool technology

VS18G Glandless spool and sleeve for long life

VS18S Softseal spool for high flow

Wide range of accessories

ATEX

Universal PNP/NPN 24V DC Multipole

Technical data

Medium

Compressed air, filtered to 40 µm, lubricated or non-lubricated

Operation

VS18G: Glandless spool valve, solenoid pilot actuated

VS18S: Softseal spool valve, solenoid pilot actuated

Mounting

Sub-base

Ports 2+4

NPTF 1/8, PIF 1/4, PIF 6 and 8 mm, G1/8,

Operating pressure

Maximum pressure

145 psi (10 bar) VS18S models and VS18G solenoid pilot actuated valves with internal pilot supply

232 psi (16 bar) VS18G solenoid pilot actuated valves with external pilot supply

Details of minimum and maximum pilot pressure see overleaf.

Flow characteristics

Series	Function	Cv	L/min
VS18G	5/2	0.56	550
VS18G	5/3	0.56	550
VS18S	2x2/2	0.56	550
VS18S	2x3/2	0.61	600
VS18S	5/2	0.66	650
VS18S	5/3	0.66	650

Ambient temperature:

5°F to 122°F (-15°C to +50°C)

Medium temperature:

23°F to 122°F (-5°C to +50°C)

Consult our technical service for use below 35°F (+2°C).

Materials

Body / sub-base: die-cast aluminum

Glandless spool & sleeve (VS18G): aluminum, hard anodised, teflon coated

Softseal spool (VS18S): aluminum with HNBR seals

Plastic parts: POM, PA, PPA

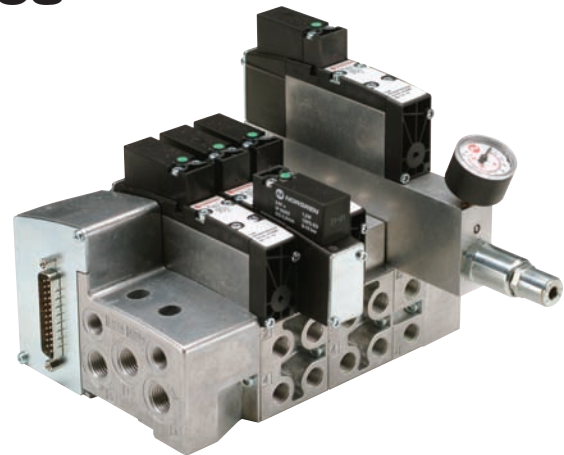
Mounting sheets / screws: steel, zinc coated

Springs: stainless steel

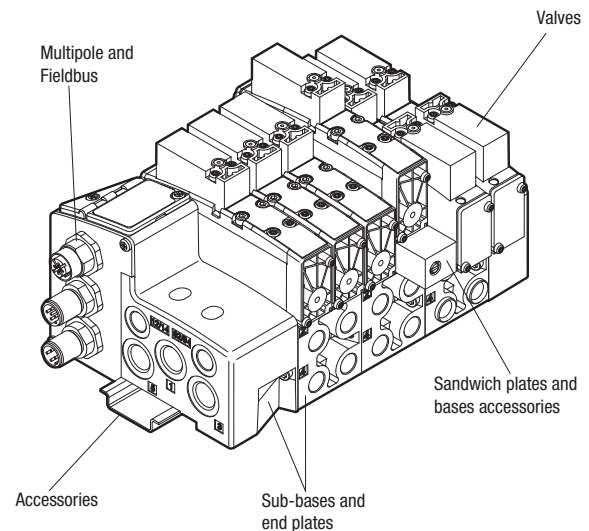
Sandwich plates: aluminum bar material

Electrical contacts: brass, tin/gold coated

PCB: glasepoxy



To order please use valve island configurator available at www.norgren.com
 Alternatively contact Norgren for a configurator on CD or use our worksheet.



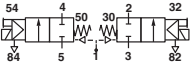
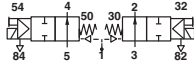
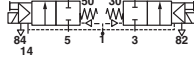
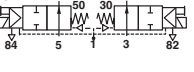
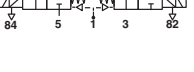
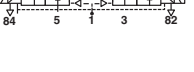
Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2,

Size 18 mm

2x2/2 Double solenoid actuated softseal valves flow = 0.56 Cv (550 l/min)

Model	Function 2 x 2/2	Actuation	Pilot supply	Pilot pressure psi (bar)	Operating pressure psi (bar)	Manual override	Voltage
 VS18SE11DF313A	NC	Sol/spring	Internal	36 to 145 (2.5 to 10) ¹	26" Hg to 145 (-0.9 to 10)	Push only	24 V DC 1.2 W
VS18SE11DF318A	NC	Sol/spring	Internal	36 to 145 (2.5 to 10) ¹	26" Hg to 145 (-0.9 to 10)	Push only	115 V AC 1.5 VA
VS18SE11DF213A	NC	Sol/spring	Internal	36 to 145 (2.5 to 10) ¹	26" Hg to 145 (-0.9 to 10)	Push & turn	24 V DC 1.2 W
VS18SE11DF218A	NC	Sol/spring	Internal	36 to 145 (2.5 to 10) ¹	26" Hg to 145 (-0.9 to 10)	Push & turn	115 V AC 1.5 VA
VS18SE11DF513A	NC	Sol/spring	Internal	36 to 145 (2.5 to 10) ¹	26" Hg to 145 (-0.9 to 10)	Extended, push only	24 V DC 1.2 W
VS18SE11DF518A	NC	Sol/spring	Internal	36 to 145 (2.5 to 10) ¹	26" Hg to 145 (-0.9 to 10)	Extended, push only	115 V AC 1.5 VA
 VS18SF11DF313A	NO	Sol/spring	Internal	36 to 145 (2.5 to 10) ¹	26" Hg to 145 (-0.9 to 10)	Push only	24 V DC 1.2 W
VS18SF11DF318A	NO	Sol/spring	Internal	36 to 145 (2.5 to 10) ¹	26" Hg to 145 (-0.9 to 10)	Push only	115 V AC 1.5 VA
VS18SF11DF213A	NO	Sol/spring	Internal	36 to 145 (2.5 to 10) ¹	26" Hg to 145 (-0.9 to 10)	Push & turn	24 V DC 1.2 W
VS18SF11DF513A	NO	Sol/spring	Internal	36 to 145 (2.5 to 10) ¹	26" Hg to 145 (-0.9 to 10)	Extended, push only	24 V DC 1.2 W
VS18SF11DF518A	NO	Sol/spring	Internal	36 to 145 (2.5 to 10) ¹	26" Hg to 145 (-0.9 to 10)	Extended, push only	115 V AC 1.5 VA
VS18SF11DF218A	NO	Sol/spring	Internal	36 to 145 (2.5 to 10) ¹	26" Hg to 145 (-0.9 to 10)	Push & turn	115 V AC 1.5 VA
 VS18SE22DF313A	NC	Sol/spring	External	25 + (0.5 x press. port 1) ²	26" Hg to 145 (-0.9 to 10)	Push only	24 V DC 1.2 W
VS18SE22DF318A	NC	Sol/spring	External	25 + (0.5 x press. port 1) ²	26" Hg to 145 (-0.9 to 10)	Push only	115 V AC 1.5 VA
VS18SE22DF213A	NC	Sol/spring	External	25 + (0.5 x press. port 1) ²	26" Hg to 145 (-0.9 to 10)	Push & turn	24 V DC 1.2 W
VS18SE22DF218A	NC	Sol/spring	External	25 + (0.5 x press. port 1) ²	26" Hg to 145 (-0.9 to 10)	Push & turn	115 V AC 1.5 VA
VS18SE22DF513A	NC	Sol/spring	External	25 + (0.5 x press. port 1) ²	26" Hg to 145 (-0.9 to 10)	Extended, push only	24 V DC 1.2 W
VS18SE22DF518A	NC	Sol/spring	External	25 + (0.5 x press. port 1) ²	26" Hg to 145 (-0.9 to 10)	Extended, push only	115 V AC 1.5 VA
 VS18SF22DF313A	NO	Sol/spring	External	25 + (0.5 x press. port 1) ²	26" Hg to 145 (-0.9 to 10)	Push only	24 V DC 1.2 W
VS18SF22DF318A	NO	Sol/spring	External	25 + (0.5 x press. port 1) ²	26" Hg to 145 (-0.9 to 10)	Push only	115 V AC 1.5 VA
VS18SF22DF213A	NO	Sol/spring	External	25 + (0.5 x press. port 1) ²	26" Hg to 145 (-0.9 to 10)	Push & turn	24 V DC 1.2 W
VS18SF22DF218A	NO	Sol/spring	External	25 + (0.5 x press. port 1) ²	26" Hg to 145 (-0.9 to 10)	Push & turn	115 V AC 1.5 VA
VS18SF22DF513A	NO	Sol/spring	External	25 + (0.5 x press. port 1) ²	26" Hg to 145 (-0.9 to 10)	Extended, push only	24 V DC 1.2 W
VS18SF22DF518A	NO	Sol/spring	External	25 + (0.5 x press. port 1) ²	26" Hg to 145 (-0.9 to 10)	Extended, push only	115 V AC 1.5 VA
 VS18SG11DF313A	NO/NC	Sol/spring	Internal	36 to 145 (2.5 to 10) ¹	26" Hg to 145 (-0.9 to 10)	Push only	24 V DC 1.2 W
VS18SG11DF318A	NO/NC	Sol/spring	Internal	36 to 145 (2.5 to 10) ¹	26" Hg to 145 (-0.9 to 10)	Push only	115 V AC 1.5 VA
VS18SG11DF213A	NO/NC	Sol/spring	Internal	36 to 145 (2.5 to 10) ¹	26" Hg to 145 (-0.9 to 10)	Push & turn	24 V DC 1.2 W
VS18SG11DF218A	NO/NC	Sol/spring	Internal	36 to 145 (2.5 to 10) ¹	26" Hg to 145 (-0.9 to 10)	Push & turn	115 V AC 1.5 VA
VS18SG11DF513A	NO/NC	Sol/spring	Internal	36 to 145 (2.5 to 10) ¹	26" Hg to 145 (-0.9 to 10)	Extended, push only	24 V DC 1.2 W
VS18SG11DF518A	NO/NC	Sol/spring	Internal	36 to 145 (2.5 to 10) ¹	26" Hg to 145 (-0.9 to 10)	Extended, push only	115 V AC 1.5 VA
 VS18SG22DF313A	NO/NC	Sol/spring	External	25 + (0.5 x press. port 1) ²	26" Hg to 145 (-0.9 to 10)	Push only	24 V DC 1.2 W
VS18SG22DF318A	NO/NC	Sol/spring	External	25 + (0.5 x press. port 1) ²	26" Hg to 145 (-0.9 to 10)	Push only	115 V AC 1.5 VA
VS18SG22DF213A	NO/NC	Sol/spring	External	25 + (0.5 x press. port 1) ²	26" Hg to 145 (-0.9 to 10)	Push & turn	24 V DC 1.2 W
VS18SG22DF218A	NO/NC	Sol/spring	External	25 + (0.5 x press. port 1) ²	26" Hg to 145 (-0.9 to 10)	Push & turn	115 V AC 1.5 VA
VS18SG22DF513A	NO/NC	Sol/spring	External	25 + (0.5 x press. port 1) ²	26" Hg to 145 (-0.9 to 10)	Extended, push only	24 V DC 1.2 W
VS18SG22DF518A	NO/NC	Sol/spring	External	25 + (0.5 x press. port 1) ²	26" Hg to 145 (-0.9 to 10)	Extended, push only	115 V AC 1.5 VA

¹ Pilot air supply through port 1

² Pilot air supply through port 12/14

Valve function designations

NO = Normally open

NC = Normally closed

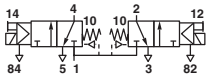
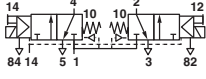
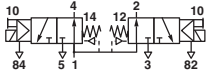
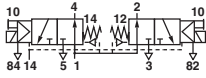
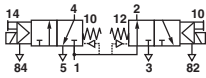
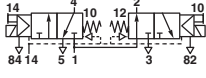
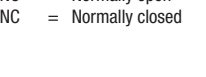
NOTE: The supply ports for the 2x2/2 valves are port 3 & 5 on the end plate. Therefore the flow path is from port 3 to port 2 or port 5 to port 4. Port 1 is only used to supply internal pilot pressure. Therefore care must be used when selecting other valves to be used on the same manifold as the 2x2/2's. You may be required to use isolation plugs in ports 3 & 5 to ensure proper operation.

Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 18 mm

2x3/2 Double solenoid actuated Softseal valves flow = 0.61 Cv (600 l/min)

	Model	Function 2x3/2	Actuation	Pilot supply	Pilot pressure psi	Operating pressure psi (bar)	Manual override	Voltage
	VS18SA11DF313A	NC	Sol/spring	Internal	-	36 to 145 (2.5 to 10)	Push only	24V DC 1.2W
	VS18SA11DF318A	NC	Sol/spring	Internal	-	36 to 145 (2.5 to 10)	Push only	115V AC 1.5VA
	VS18SA11DF213A	NC	Sol/spring	Internal	-	36 to 145 (2.5 to 10)	Push & turn	24V DC 1.2W
	VS18SA11DF218A	NC	Sol/spring	Internal	-	36 to 145 (2.5 to 10)	Push & turn	115V AC 1.5VA
	VS18SA11DF513A	NC	Sol/spring	Internal	-	36 to 145 (2.5 to 10)	Extended, push only	24V DC 1.2W
	VS18SA11DF518A	NC	Sol/spring	Internal	-	36 to 145 (2.5 to 10)	Extended, push only	115V AC 1.5VA
	VS18SA22DF313A	NC	Sol/spring	External	25 + (0.5 x op. press)	0 to 145 (0 to 10)	Push only	24V DC 1.2W
	VS18SA22DF318A	NC	Sol/spring	External	25 + (0.5 x op. press)	0 to 145 (0 to 10)	Push only	115V AC 1.5VA
	VS18SA22DF213A	NC	Sol/spring	External	25 + (0.5 x op. press)	0 to 145 (0 to 10)	Push & turn	24V DC 1.2W
	VS18SA22DF218A	NC	Sol/spring	External	25 + (0.5 x op. press)	0 to 145 (0 to 10)	Push & turn	115V AC 1.5VA
	VS18SA22DF513A	NC	Sol/spring	External	25 + (0.5 x op. press)	0 to 145 (0 to 10)	Extended, push only	24V DC 1.2W
	VS18SA22DF518A	NC	Sol/spring	External	25 + (0.5 x op. press)	0 to 145 (0 to 10)	Extended, push only	115V AC 1.5VA
	VS18SB11DF313A	NO	Sol/spring	Internal	-	36 to 145 (2.5 to 10)	Push only	24V DC 1.2W
	VS18SB11DF318A	NO	Sol/spring	Internal	-	36 to 145 (2.5 to 10)	Push only	115V AC 1.5VA
	VS18SB11DF213A	NO	Sol/spring	Internal	-	36 to 145 (2.5 to 10)	Push & turn	24V DC 1.2W
	VS18SB11DF218A	NO	Sol/spring	Internal	-	36 to 145 (2.5 to 10)	Push & turn	115V AC 1.5VA
	VS18SB11DF513A	NO	Sol/spring	Internal	-	36 to 145 (2.5 to 10)	Extended, push only	24V DC 1.2W
	VS18SB11DF518A	NO	Sol/spring	Internal	-	36 to 145 (2.5 to 10)	Extended, push only	115V AC 1.5VA
	VS18SB22DF313A	NO	Sol/spring	External	25 + (0.5 x op. press)	0 to 145 (0 to 10)	Push only	24V DC 1.2W
	VS18SB22DF318A	NO	Sol/spring	External	25 + (0.5 x op. press)	0 to 145 (0 to 10)	Push only	115V AC 1.5VA
	VS18SB22DF213A	NO	Sol/spring	External	25 + (0.5 x op. press)	0 to 145 (0 to 10)	Push & turn	24V DC 1.2W
	VS18SB22DF218A	NO	Sol/spring	External	25 + (0.5 x op. press)	0 to 145 (0 to 10)	Push & turn	115V AC 1.5VA
	VS18SB22DF513A	NO	Sol/spring	External	25 + (0.5 x op. press)	0 to 145 (0 to 10)	Extended, push only	24V DC 1.2W
	VS18SB22DF518A	NO	Sol/spring	External	25 + (0.5 x op. press)	0 to 145 (0 to 10)	Extended, push only	115V AC 1.5VA
	VS18SC11DF313A	NO/NC	Sol/spring	Internal	-	36 to 145 (2.5 to 10)	Push only	24V DC 1.2W
	VS18SC11DF318A	NO/NC	Sol/spring	Internal	-	36 to 145 (2.5 to 10)	Push only	115V AC 1.5VA
	VS18SC11DF213A	NO/NC	Sol/spring	Internal	-	36 to 145 (2.5 to 10)	Push & turn	24V DC 1.2W
	VS18SC11DF218A	NO/NC	Sol/spring	Internal	-	36 to 145 (2.5 to 10)	Push & turn	115V AC 1.5VA
	VS18SC11DF513A	NO/NC	Sol/spring	Internal	-	36 to 145 (2.5 to 10)	Extended, push only	24V DC 1.2W
	VS18SC11DF518A	NO/NC	Sol/spring	Internal	-	36 to 145 (2.5 to 10)	Extended, push only	115V AC 1.5VA
	VS18SC22DF313A	NO/NC	Sol/spring	External	25 + (0.5 x op. press)	0 to 145 (0 to 10)	Push only	24V DC 1.2W
	VS18SC22DF318A	NO/NC	Sol/spring	External	25 + (0.5 x op. press)	0 to 145 (0 to 10)	Push only	115V AC 1.5VA
	VS18SC22DF213A	NO/NC	Sol/spring	External	25 + (0.5 x op. press)	0 to 145 (0 to 10)	Push & turn	24V DC 1.2W
	VS18SC22DF218A	NO/NC	Sol/spring	External	25 + (0.5 x op. press)	0 to 145 (0 to 10)	Push & turn	115V AC 1.5VA
	VS18SC22DF513A	NO/NC	Sol/spring	External	25 + (0.5 x op. press)	0 to 145 (0 to 10)	Extended, push only	24V DC 1.2W
	VS18SC22DF518A	NO/NC	Sol/spring	External	25 + (0.5 x op. press)	0 to 145 (0 to 10)	Extended, push only	115V AC 1.5VA

Valve functions designations:

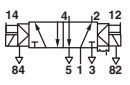
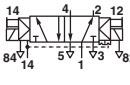
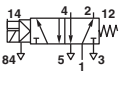
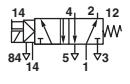
NO = Normally open

NC = Normally closed

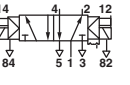
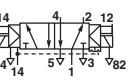
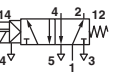
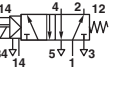
Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

**5/2 Single and double solenoid actuated
Glandless valves flow = 0.56 Cv (550 l/min)**

	Model	Function	Actuation	Pilot supply	Pilot pressure psi (bar)	Operating pressure psi (bar)	Manual override	Voltage
	VS18G511DF313A	5/2	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
	VS18G511DF318A	5/2	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push only	115V AC 1.5VA
	VS18G511DF213A	5/2	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
	VS18G511DF218A	5/2	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push & turn	115V AC 1.5VA
	VS18G511DF513A	5/2	Sol/sol	Internal	-	29 to 145 (2 to 10)	Extended, push only	24V DC 1.2W
	VS18G511DF518A	5/2	Sol/sol	Internal	-	29 to 145 (2 to 10)	Extended, push only	115V AC 1.5VA
	VS18G522DF313A	5/2	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	24V DC 1.2W
	VS18G522DF318A	5/2	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	115V AC 1.5VA
	VS18G522DF213A	5/2	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	24V DC 1.2W
	VS18G522DF218A	5/2	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	115V AC 1.5VA
	VS18G522DF513A	5/2	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Extended, push only	24V DC 1.2W
	VS18G522DF518A	5/2	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Extended, push only	115V AC 1.5VA
	VS18G517DF313A	5/2	Sol/spring	Internal	-	23 to 145 (1.6 to 10)	Push only	24V DC 1.2W
	VS18G517DF318A	5/2	Sol/spring	Internal	-	23 to 145 (1.6 to 10)	Push only	115V AC 1.5VA
	VS18G517DF213A	5/2	Sol/spring	Internal	-	23 to 145 (1.6 to 10)	Push & turn	24V DC 1.2W
	VS18G517DF218A	5/2	Sol/spring	Internal	-	23 to 145 (1.6 to 10)	Push & turn	115V AC 1.5VA
	VS18G517DF513A	5/2	Sol/spring	Internal	-	23 to 145 (1.6 to 10)	Extended, push only	24V DC 1.2W
	VS18G517DF518A	5/2	Sol/spring	Internal	-	23 to 145 (1.6 to 10)	Extended, push only	115V AC 1.5VA
	VS18G527DF313A	5/2	Sol/spring	External	23 to 145 (1.6 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	24V DC 1.2W
	VS18G527DF318A	5/2	Sol/spring	External	23 to 145 (1.6 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	115V AC 1.5VA
	VS18G527DF213A	5/2	Sol/spring	External	23 to 145 (1.6 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	24V DC 1.2W
	VS18G527DF218A	5/2	Sol/spring	External	23 to 145 (1.6 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	115V AC 1.5VA
	VS18G527DF513A	5/2	Sol/spring	External	23 to 145 (1.6 to 10)	26" Hg to 232 (-0.9 to 16)	Extended, push only	24V DC 1.2W
	VS18G527DF518A	5/2	Sol/spring	External	23 to 145 (1.6 to 10)	26" Hg to 232 (-0.9 to 16)	Extended, push only	115V AC 1.5VA

**5/2 Single and double solenoid actuated
Softseal valves flow = 0.66 Cv (650 l/min)**

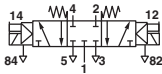
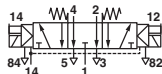
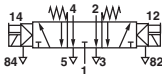
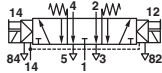
	Model	Function	Actuation	Pilot supply	Pilot pressure psi (bar)	Operating pressure psi (bar)	Manual override	Voltage
	VS18S511DF313A	5/2	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
	VS18S511DF318A	5/2	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push only	115V AC 1.5VA
	VS18S511DF213A	5/2	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
	VS18S511DF218A	5/2	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push & turn	115V AC 1.5VA
	VS18S511DF513A	5/2	Sol/sol	Internal	-	29 to 145 (2 to 10)	Extended, push only	24V DC 1.2W
	VS18S511DF518A	5/2	Sol/sol	Internal	-	29 to 145 (2 to 10)	Extended, push only	115V AC 1.5VA
	VS18S522DF313A	5/2	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
	VS18S522DF318A	5/2	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	115V AC 1.5VA
	VS18S522DF213A	5/2	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	24V DC 1.2W
	VS18S522DF218A	5/2	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	115V AC 1.5VA
	VS18S522DF513A	5/2	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Extended, push only	24V DC 1.2W
	VS18S522DF518A	5/2	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Extended, push only	115V AC 1.5VA
	VS18S517DF313A	5/2	Sol/spring	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
	VS18S517DF318A	5/2	Sol/spring	Internal	-	29 to 145 (2 to 10)	Push only	115V AC 1.5VA
	VS18S517DF213A	5/2	Sol/spring	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
	VS18S517DF218A	5/2	Sol/spring	Internal	-	29 to 145 (2 to 10)	Push & turn	115V AC 1.5VA
	VS18S517DF513A	5/2	Sol/spring	Internal	-	29 to 145 (2 to 10)	Extended, push only	24V DC 1.2W
	VS18S517DF518A	5/2	Sol/spring	Internal	-	29 to 145 (2 to 10)	Extended, push only	115V AC 1.5VA
	VS18S527DF313A	5/2	Sol/spring	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
	VS18S527DF318A	5/2	Sol/spring	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	115V AC 1.5VA
	VS18S527DF213A	5/2	Sol/spring	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	24V DC 1.2W
	VS18S527DF218A	5/2	Sol/spring	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	115V AC 1.5VA
	VS18S527DF513A	5/2	Sol/spring	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Extended, push only	24V DC 1.2W
	VS18S527DF518A	5/2	Sol/spring	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Extended, push only	115V AC 1.5VA

Valve Manifolds VS18 Series

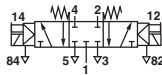
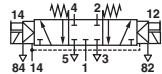
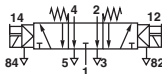
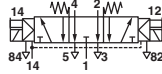
Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 18 mm

5/3 Double solenoid actuated Glandless valves flow = 0.56 Cv (550 l/min)

Model	Function 5/3	Actuation	Pilot supply	Pilot pressure psi (bar)	Operating pressure psi (bar)	Manual override	Voltage	
	VS18G611DF313A	APB	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
	VS18G611DF318A	APB	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push only	115V AC 1.5VA
	VS18G611DF213A	APB	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
	VS18G611DF218A	APB	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push & turn	115V AC 1.5VA
	VS18G611DF513A	APB	Sol/sol	Internal	-	29 to 145 (2 to 10)	Extended, push only	24V DC 1.2W
	VS18G611DF518A	APB	Sol/sol	Internal	-	29 to 145 (2 to 10)	Extended, push only	115V AC 1.5VA
	VS18G622DF313A	APB	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	24V DC 1.2W
	VS18G622DF318A	APB	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	115V AC 1.5VA
	VS18G622DF213A	APB	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	24V DC 1.2W
	VS18G622DF218A	APB	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	115V AC 1.5VA
	VS18G622DF513A	APB	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Extended, push only	24V DC 1.2W
	VS18G622DF518A	APB	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Extended, push only	115V AC 1.5VA
	VS18G711DF313A	COE	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
	VS18G711DF318A	COE	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push only	115V AC 1.5VA
	VS18G711DF213A	COE	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
	VS18G711DF218A	COE	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push & turn	115V AC 1.5VA
	VS18G711DF513A	COE	Sol/sol	Internal	-	29 to 145 (2 to 10)	Extended, push only	24V DC 1.2W
	VS18G711DF518A	COE	Sol/sol	Internal	-	29 to 145 (2 to 10)	Extended, push only	115V AC 1.5VA
	VS18G722DF313A	COE	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	24V DC 1.2W
	VS18G722DF318A	COE	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	115V AC 1.5VA
	VS18G722DF213A	COE	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	24V DC 1.2W
	VS18G722DF218A	COE	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	115V AC 1.5VA
	VS18G722DF513A	COE	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Extended, push only	24V DC 1.2W
	VS18G722DF518A	COE	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Extended, push only	115V AC 1.5VA

5/3 Double solenoid actuated Softseal valves flow = 0.66 Cv (650 l/min)

Model	Function 5/3	Actuation	Pilot supply	Pilot pressure psi (bar)	Operating pressure psi (bar)	Manual override	Volatage	
	VS18S611DF313A	APB	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
	VS18S611DF318A	APB	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push only	115V AC 1.5VA
	VS18S611DF213A	APB	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
	VS18S611DF218A	APB	Sol/sol	Internal	-	29 to 145 (2 to 10)	Push & turn	115V AC 1.5VA
	VS18S611DF513A	APB	Sol/sol	Internal	-	29 to 145 (2 to 10)	Extended, push only	24V DC 1.2W
	VS18S611DF518A	APB	Sol/sol	Internal	-	29 to 145 (2 to 10)	Extended, push only	115V AC 1.5VA
	VS18S622DF313A	APB	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
	VS18S622DF318A	APB	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	115V AC 1.5VA
	VS18S622DF213A	APB	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	24V DC 1.2W
	VS18S622DF218A	APB	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	115V AC 1.5VA
	VS18S622DF513A	APB	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Extended, push only	24V DC 1.2W
	VS18S622DF518A	APB	Sol/sol	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Extended, push only	115V AC 1.5VA
	VS18S711DF313A	COE	Sol/sol	Internal	-	36 to 145 (2.5 to 10)	Push only	24V DC 1.2W
	VS18S711DF318A	COE	Sol/sol	Internal	-	36 to 145 (2.5 to 10)	Push only	115V AC 1.5VA
	VS18S711DF213A	COE	Sol/sol	Internal	-	36 to 145 (2.5 to 10)	Push & turn	24V DC 1.2W
	VS18S711DF218A	COE	Sol/sol	Internal	-	36 to 145 (2.5 to 10)	Push & turn	115V AC 1.5VA
	VS18S711DF513A	COE	Sol/sol	Internal	-	36 to 145 (2.5 to 10)	Extended, push only	24V DC 1.2W
	VS18S711DF518A	COE	Sol/sol	Internal	-	36 to 145 (2.5 to 10)	Extended, push only	115V AC 1.5VA
	VS18S722DF313A	COE	Sol/sol	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
	VS18S722DF318A	COE	Sol/sol	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	115V AC 1.5VA
	VS18S722DF213A	COE	Sol/sol	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	24V DC 1.2W
	VS18S722DF218A	COE	Sol/sol	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	115V AC 1.5VA
	VS18S722DF513A	COE	Sol/sol	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Extended, push only	24V DC 1.2W
	VS18S722DF518A	COE	Sol/sol	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Extended, push only	115V AC 1.5VA

Valve functions designations:
 APB = All ports blocked
 COE = Centre open exhaust

Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2,

Size 18 mm

Valve part number breakdown

VS18****DF***A

Spool technology	Substitute
Glandless spool & sleeve	G
Softseal spool	S

Guiding systems	Substitute
2x3/2 Normally closed ¹⁾	A
2x3/2 Normally open ¹⁾	B
2x3/2 Normally open/Normally closed ¹⁾	C
2x2/2 Normally closed ¹⁾	E
2x2/2 Normally open ¹⁾	F
2x2/2 Normally open/Normally closed ¹⁾	G
5/2	5
5/3 All ports blocked	6
5/3 Center open exhaust	7

¹⁾ Available with softseal spool only

Voltage	Substitute
24V DC 1.2W	13
115V AC 1.5VA	18

Manual override	Substitute
Push & turn	2
Push only	3
Extended, push only	5

Actuation/Pilot supply	Substitute
Solenoid/Spring	
Internal pilot supply	17
Solenoid/Spring	
External pilot supply	27
Solenoid/Solenoid	
Internal pilot supply	11
Solenoid/Solenoid	
External pilot supply	22

Electrical details for solenoid operators

Voltage tolerances	(24V DC) +/- 10%
Voltage tolerances	(115V AC) +15%/-10%
Rating	100 % Continuous duty
Inlet orifice	0.8 mm
Indication	LED green
Surge suppression	Transil diode
Materials	PPS (body), Viton and NBR (seal)

Protection classification (IP Code)

All VS18 valve manifolds fulfill IP65 and NEMA4 ratings.

Power supply and precautions

All VS18 24 V d.c products are designed to be used with a protective extra low voltage (PELV) power supply.

All VS18 115 V a.c products correspond to the protection class I.

Connection of the protective earth (PE) ground is required.

ATEX

The 24 V d.c Multipole and Fieldbus valve manifolds fulfil the requirement of the standard 94/9/EC for intended use in hazardous locations.

Equipment group, category, type of protection:



The Declaration of Conformity of the valve islands was conducted by Electrosuisse, who issued number SEV 04 ATEX 0114 X.

Please review all ATEX data and notes in the maintenance and instruction booklet to eliminate any risks, allowing for safe function of the valve manifolds.

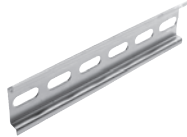
Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 18 mm

Accessories

DIN EN 50 022 rail (1 meter)



V10009-C00 (35 x 7.5 mm)
V10592-C01 (35 x 15 mm)

DIN-rail mounting kit



V70531-KA0

Blanking disc to modular sub-base



VS1872405-KF00 (Ports 1, 3, 5)
VS1872406-KF00 (Port 12/14)

Manual override set-up kit



VS2673606-KG00

Extended manual override kit



VS2672960-KG00

Spare valve identification labels 1)



VS2672905-KG00 (10 pcs)

Blanking plug for base connector hole 2)



VS2672914-KG00

1) When purchasing assembled valve manifolds from Norgren, valve identification labels are already included.
2) When V40/V41 valves are fitted on VS18 bases.

Base accessories

Intermediate supply/exhaust module



VS1872402-AF00 (G 1/8)
VS1872402-PF00 (NPTF 1/8)

Blanking plate



VS1872404-KF00

Replacement gauge



V70534-500

Pilot valves

Part no.	Description*	Voltage	Manual override
VS2672930-KG00	Pilot valve	24V DC 1.2W	Push only
VS2672932-KG00	Pilot valve	24V DC 1.2W	Push & turn
VS2672934-KG00	Pilot valve	24V DC 1.2W	Extended, push only
VS2672931-KG00	Pilot valve	115V AC 1.5VA	Push only
VS2672933-KG00	Pilot valve	115V AC 1.5VA	Push & turn
VS2672935-KG00	Pilot valve	115V AC 1.5VA	Extended, push only

* Kit includes screws, gasket and V-ring

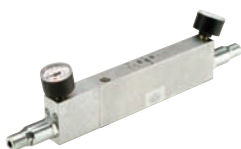
Sandwich plates

Single pressure regulator plate



VS1872400-KF10 (Port 1)
VS1872400-KF20 (Port 2)
VS1872400-KF30 (Port 4)

Double pressure regulator plate



VS1872400-KF40 (Ports 2+4)

Sandwich flow control



VS1872401-KF00 (Ports 3+5)

Sandwich plate with additional pressure port 1



VS1872428-KF00 (G1/8)
VS1872429-KF00 (NPTF 1/8)

Single valve shut-off plate



VS1872403-KF00 (Port 1)

Sub-bases and end plates

Single station sub-base

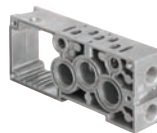


See page VAL-10

Double station modular sub-base

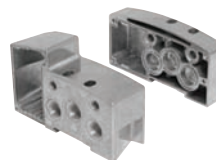


Single station modular sub-base



See page VAL-24 for additional information

End plate kit



Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

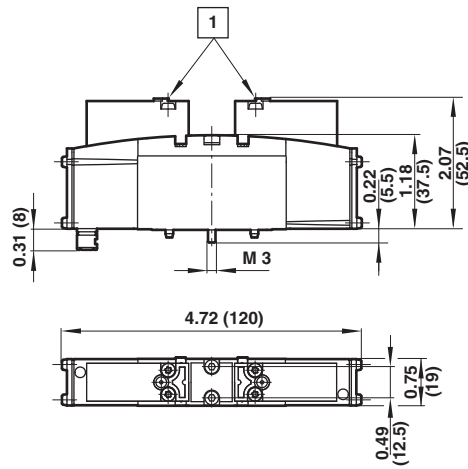
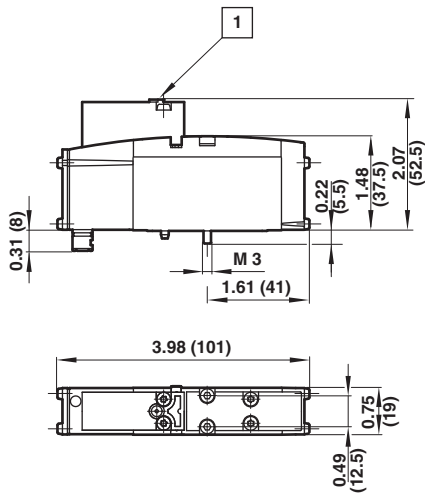
2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2,

Size 18 mm

Valve dimensions

VS18*5*7DF*1*A models
5/2 Single solenoid pilot valve
Mechanical spring return

VS18****DF*1*A models
2x2/2, 2x3/2, 5/2 and 5/3 Double solenoid pilot valve



1 Manual override

Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

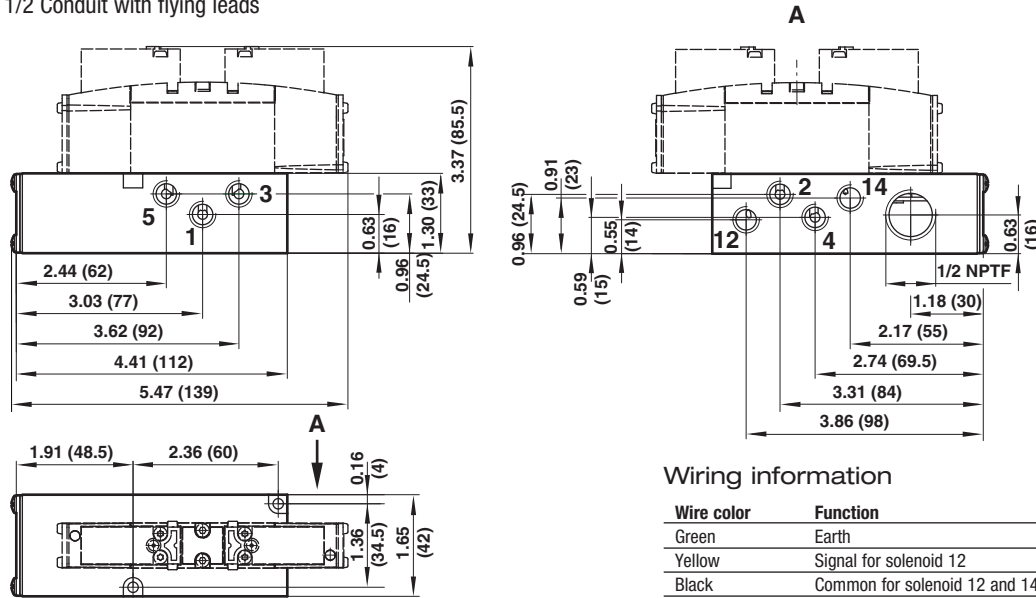
2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 18 mm

Dimensions in inches (mm)

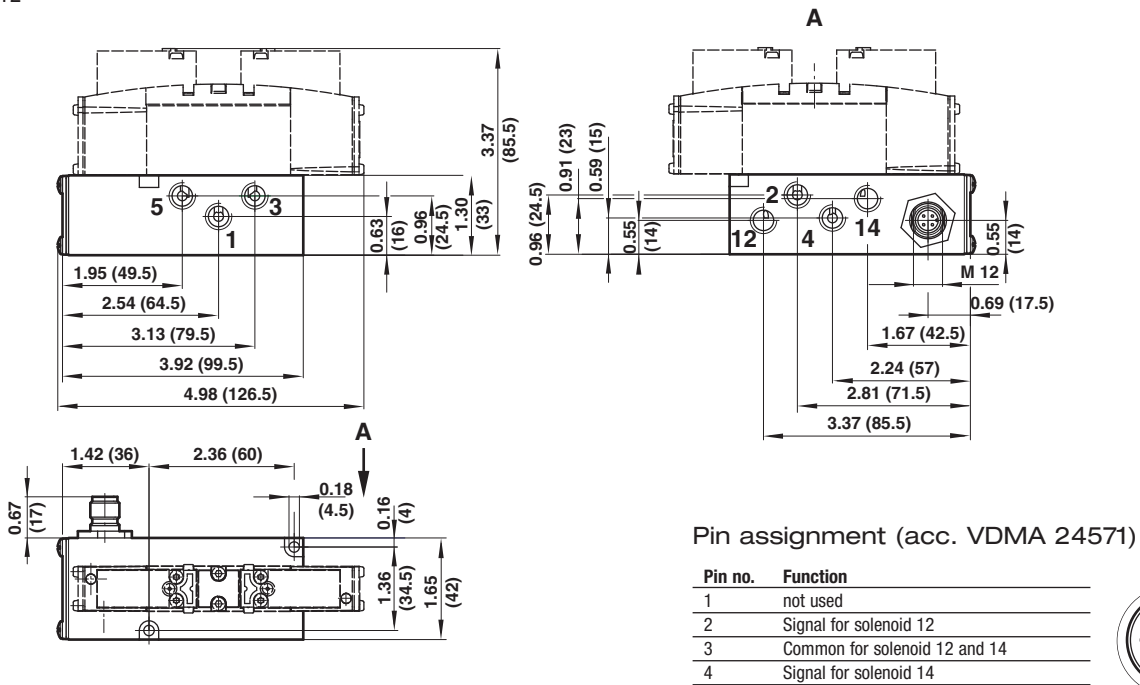
Single station sub-base

Model	Description	Ports 1, 3 & 5	Ports 12/14 & 82/84	Ports 2 & 4	Connector type
VS1872010-PF00	Single station sub-base for 24V DC	NPTF 1/8	NPTF1/8	NPTF1/8	M12
VS1872011-PF00	Single station sub-base for 24V DC and 115V AC	NPTF 1/8	NPTF1/8	NPTF1/8	NPTF1/2 conduit
VS1872010-AF00	Single station sub-base for 24V DC	G 1/8	G1/8	G1/8	M12

Connector type: NPTF 1/2 Conduit with flying leads



Connector type: M12



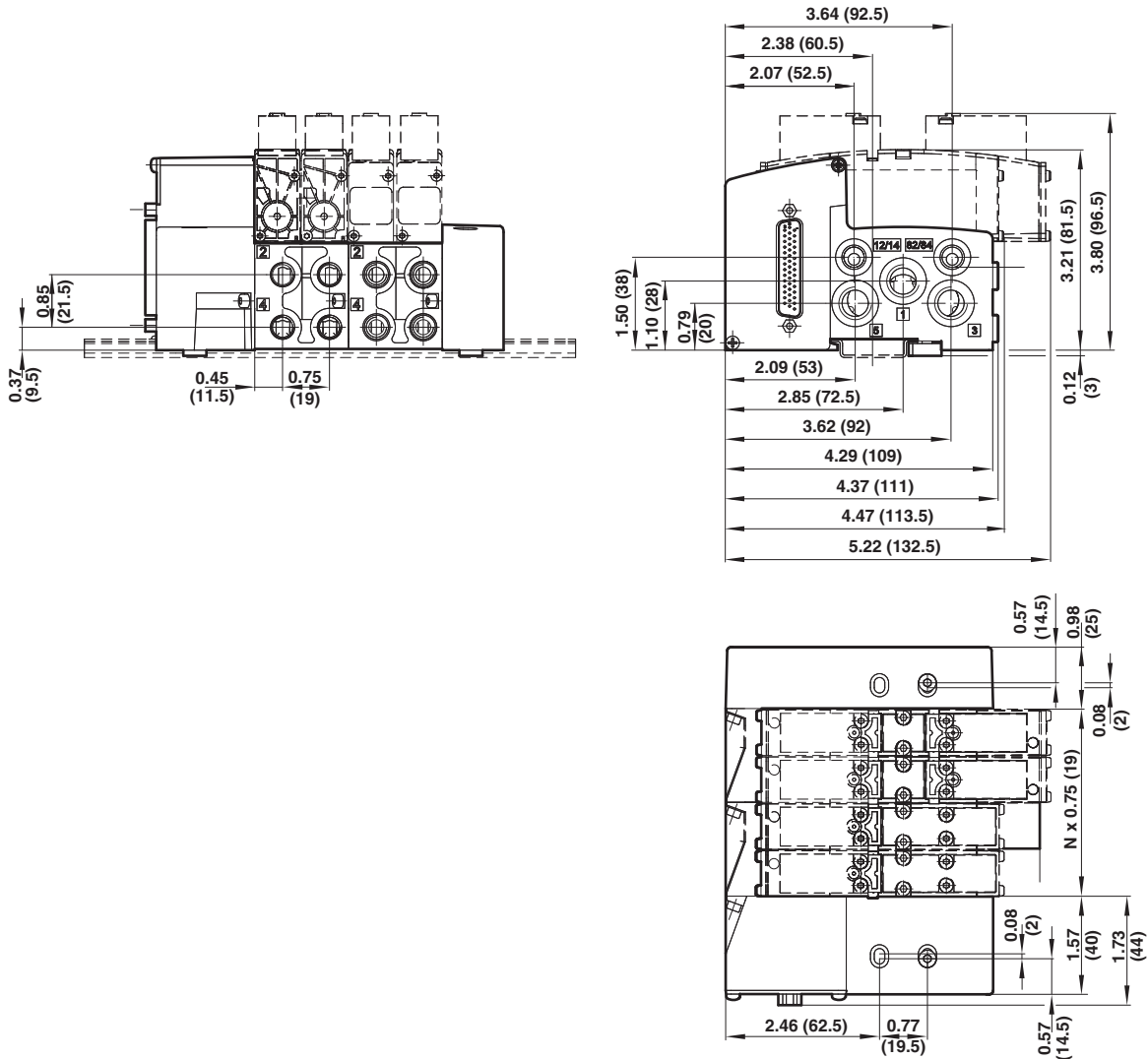
Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2,

Size 18 mm

Valve manifolds dimensions



Electrical connection	Min. no. of valve stations	Max. no. of valve stations
Multipole	2	16
AS-Interface	2	8
Other Fieldbus protocols	4	16

N Number of station

VALVES

Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

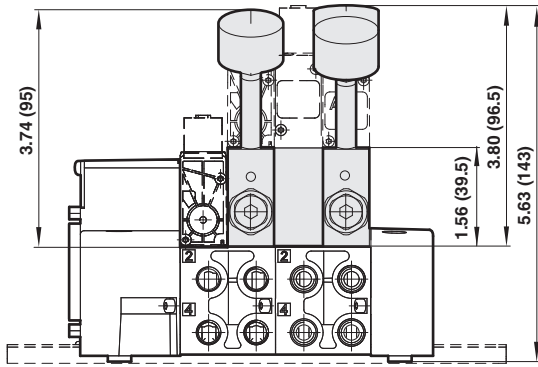
2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 18 mm

Sandwich plates

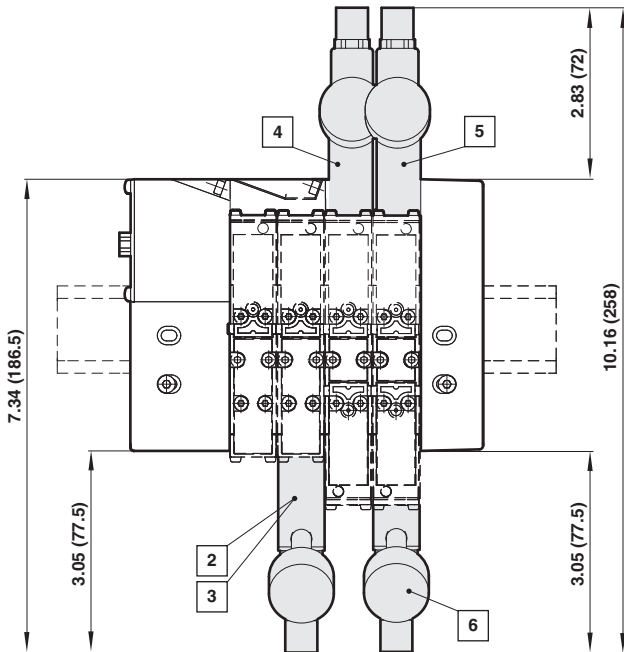
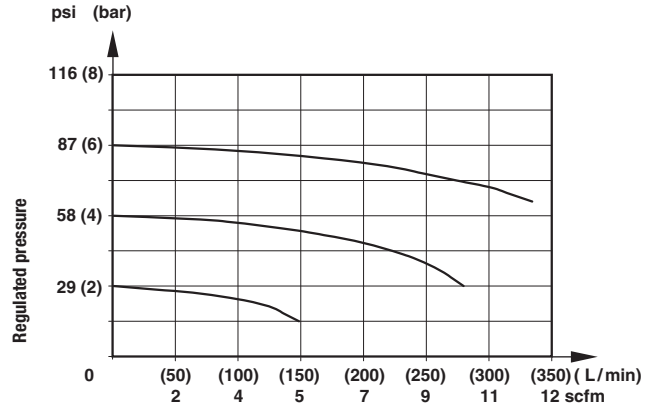
Pressure regulator sandwich plates

Symbol	Model	Description
	VS1872400-KF10	Regulation of port 1, regulator on side 12
	VS1872400-KF20	Regulation of port 2, regulator on side 12

Symbol	Model	Description
	VS1872400-KF30	Regulation of port 4, regulator on side 14
	VS1872400-KF40	Regulation of port 2+4



Flow characteristics for pressure regulator plates



Gauge part number = V70534-500

- 2 Regulation of port 1
- 3 Regulation of port 2
- 4 Regulation of port 4
- 5 Regulation of port 2+4
- 6 Gauge

Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2,

Size 18 mm

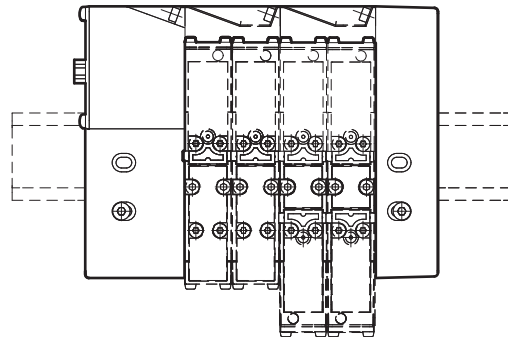
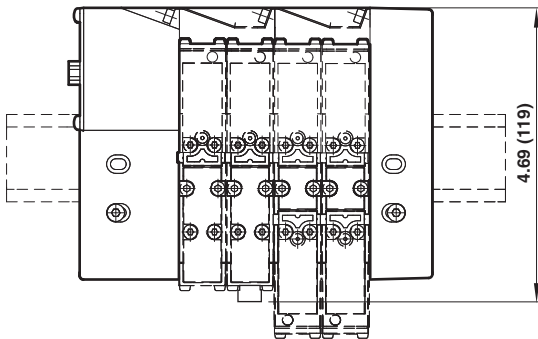
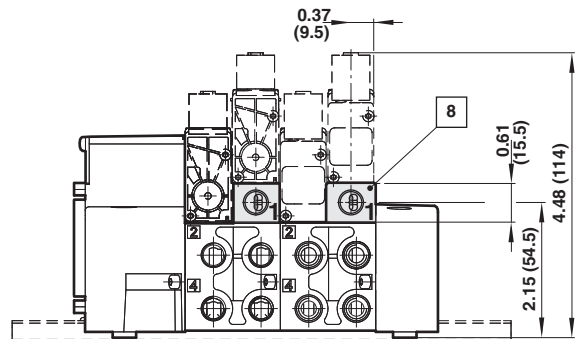
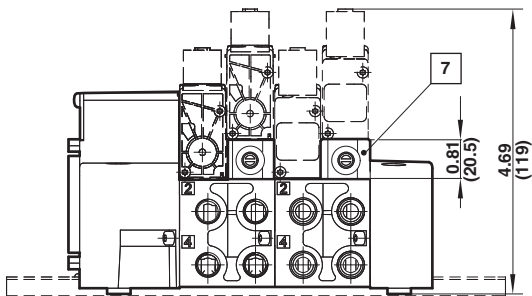
Sandwich plates

Flow control sandwich plate

Symbol	Model	Description
	VS1872401-KF00	Flow control supplied with gasket, dual regulation of exhaust ports 3 and 5

Sandwich plate with additional pressure port 1

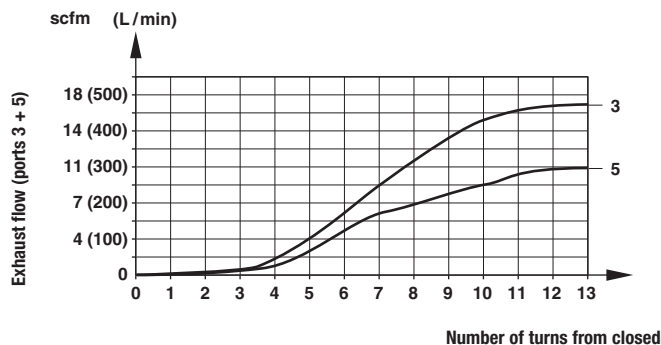
Symbol	Model	Description
	VS1872428-KF00	Sandwich plate with additional pressure port 1 (G1/8), supplied with gasket
	VS1872429-KF00	Sandwich plate with additional pressure port 1 (NPTF1/8), supplied with gasket



7 Flow control plate

8 Sandwich plate with additional pressure port 1

Flow characteristics
Dual regulation of exhaust ports 3 and 5



Flow: port 1-2 and 1-4: remains unchanged.
Flow measured at 87 psi (6 bar) inlet, pressure drop 14.5 psi (1 bar)

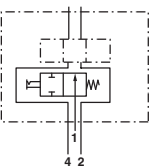
Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 18 mm

Sandwich plates

Single valve shut-off plate

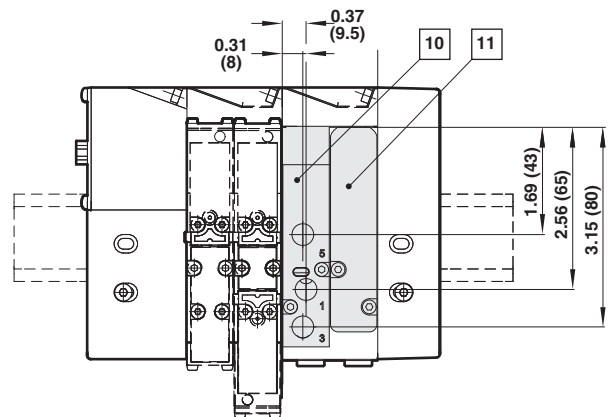
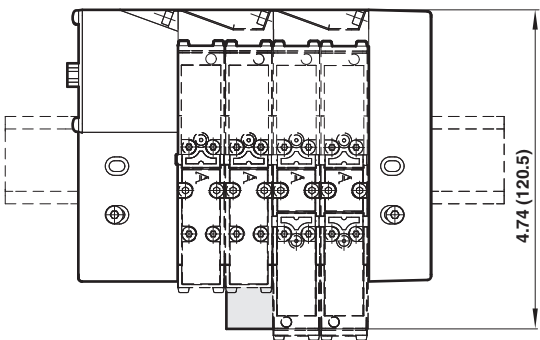
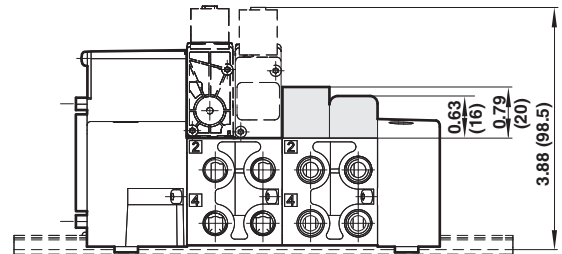
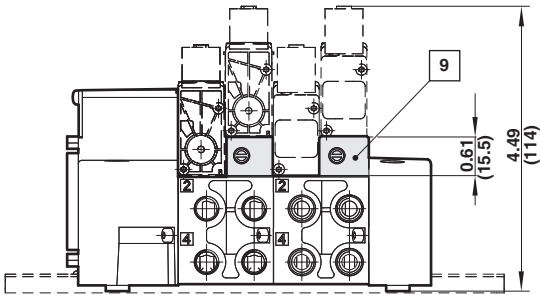
Symbol	Model	Description
	VS1872403-KF00	Single valve shut-off plate supplied with gasket

Base accessories

Model	Description
VS1872403-PF00	Intermediate supply/exhaust module, port size NPTF 1/8
VS1872402-AF00	Intermediate supply/exhaust module, port size G1/8
VS1872404-KF00	Blanking plate for blocking of unused station (supplied with gasket)

Allows individual exchange of valve while valve island is pressurised by port 1.

Flow restricted to max. Cv 0.24 (240 l/min.)



- 9 Single valve shut-off plate
- 10 Intermediate supply/exhaust module
- 11 Blanking plate

Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2,

Size 18 mm

Multi pressure configurations

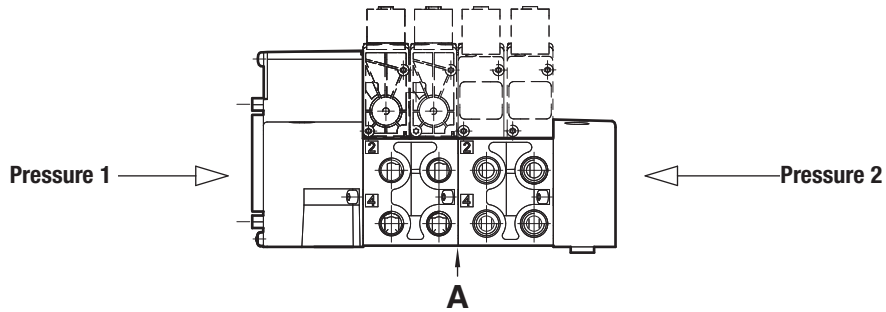
A

Blanking disc	Type
VS1872405-KF00	Suitable for ports 1, 3 or 5

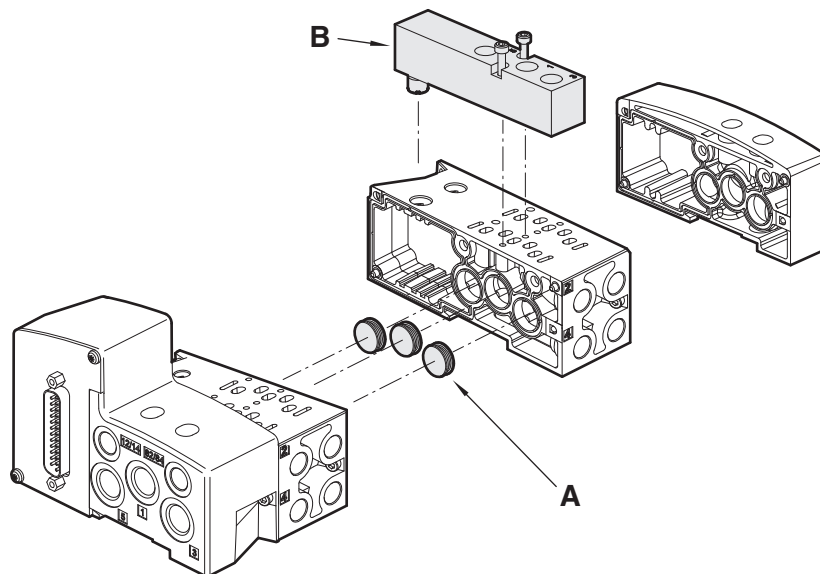
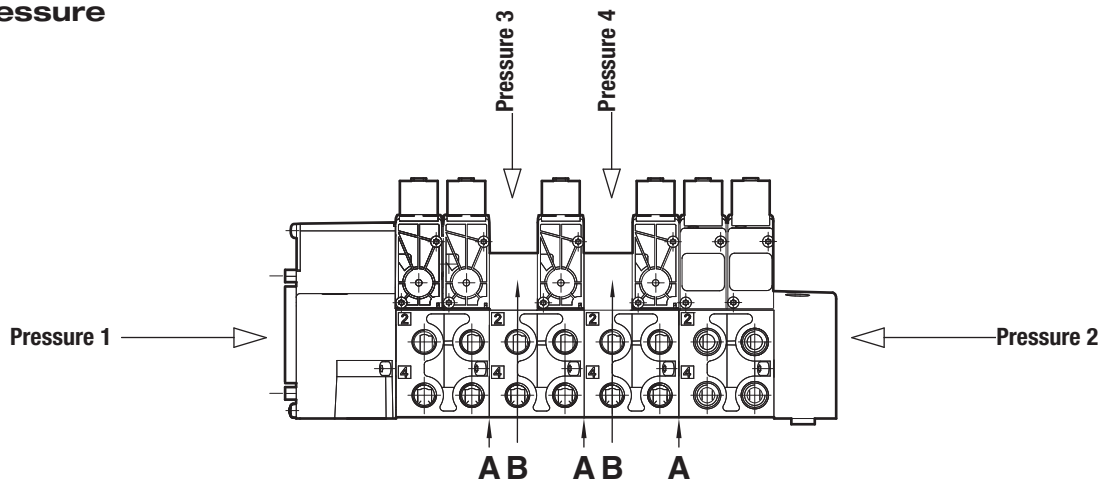
B

Intermediate supply/exhaust module	Type
VS1872402-PF00	NPTF 1/8
VS1872402-AF00	G 1/8

Dual pressure



Multi pressure



Valve Manifolds VS18 Series

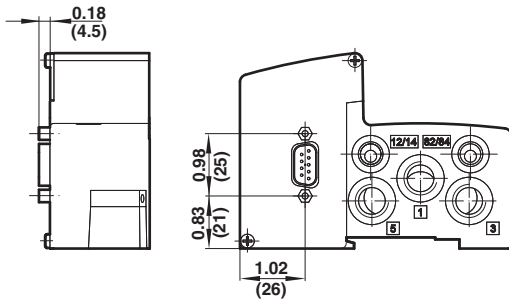
Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 18 mm

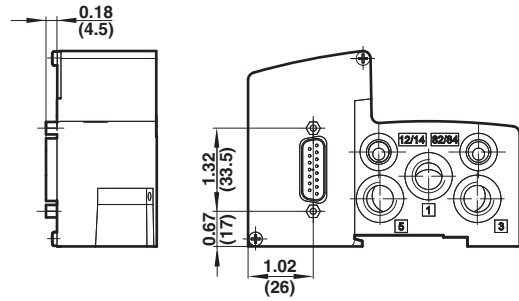
Multipole options

Connector type	Voltage	No. of stations	Max. no. coils
D-Sub 9-pin	24V DC	02/03/04	8
D-Sub 15-pin	24V DC	02/03/04/05/06/07	14
D-Sub 25-pin	24V DC	02/03/04/05/06/07/08/09/10/11/12	24
D-Sub 44-pin	24V DC	08/09/10/11/12/13/14/15/16	32
M23 19-pin	115 V AC, 24 V DC	02/03/04/05/06/07/08	16
NPTF 1" Conduit entry with terminals	115V AC, 24V DC	02/03/04/05/06/07/08/09/10/11/12	24

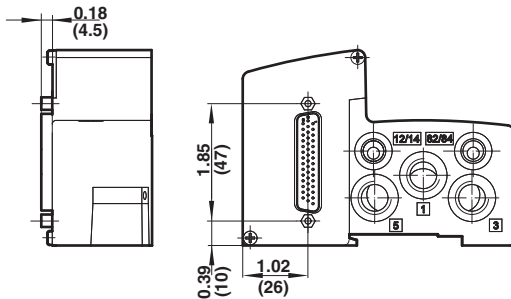
D-Sub 9-pin



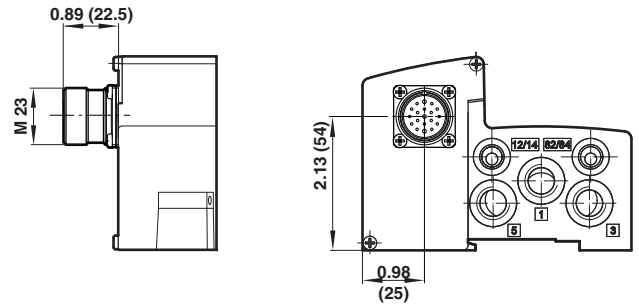
D-Sub 15-pin



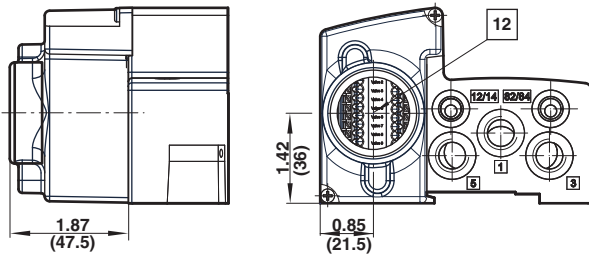
D-Sub 25-pin / 44-pin



M23 19-pin



NPTF 1" Conduit entry with terminals



12 Max. wire size AWG18

Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2,

Size 18 mm

Multipole accessories

D-Sub connector 9-pin IP65 ¹⁾



D-Sub connector 15-pin IP65 ¹⁾



D-Sub connector 25-pin IP65 ¹⁾



D-Sub connector 44-pin IP65 ¹⁾



M23 connector 19-pin IP65 ¹⁾



VS2672910-KG00	3' (1m)	VS2672915-KG00	3' (1m)	V11569-E01	3' (1m)	V11570-E01	3' (1m)	VS2672943-KG00	3' (1m)
VS2672911-KG00	10' (3m)	VS2672916-KG00	10' (3m)	V11569-E03	10' (3m)	V11570-E03	10' (3m)	VS2672944-KG00	10' (3m)
VS2672912-KG00	16' (5m)	VS2672917-KG00	16' (5m)	V11569-E05	16' (5m)	V11570-E05	16' (5m)	VS2672945-KG00	16' (5m)

¹⁾ Required for ATEX

D-Sub connector 9-pin^A

Pin no.	Wire color	Socket	Pilot	Station
1	White	Solenoid 1-a	14	1
2	Brown	Solenoid 2-a	14	2
3	Green	Solenoid 3-a	14	3
4	Yellow	Solenoid 4-a	14	4
5	Grey	Solenoid 1-b	12	1
6	Pink	Solenoid 2-b	12	2
7	Blue	Solenoid 3-b	12	3
8	Red	Solenoid 4-b	12	4
9	Black	Common	-	-

D-Sub connector 25-pin^A

Pin no.	Wire color	Socket	Pilot	Station
1	White	Solenoid 1-a	14	1
2	Brown	Solenoid 2-a	14	2
3	Green	Solenoid 3-a	14	3
4	Yellow	Solenoid 4-a	14	4
5	Grey	Solenoid 5-a	14	5
6	Pink	Solenoid 6-a	14	6
7	Blue	Solenoid 7-a	14	7
8	Red	Solenoid 8-a	14	8
9	Black	Solenoid 9-a	14	9
10	Violet	Solenoid 10-a	14	10
11	Grey/Pink	Solenoid 11-a	14	11
12	Red/Blue	Solenoid 12-a	14	12
13	White/Green	Common	-	-
14	Brown/Green	Solenoid 1-b	12	1
15	White/Yellow	Solenoid 2-b	12	2
16	Yellow/Brown	Solenoid 3-b	12	3
17	White/Grey	Solenoid 4-b	12	4
18	Grey/Brown	Solenoid 5-b	12	5
19	White/Pink	Solenoid 6-b	12	6
20	Pink/Brown	Solenoid 7-b	12	7
21	White/Blue	Solenoid 8-b	12	8
22	Brown/Blue	Solenoid 9-b	12	9
23	White/Red	Solenoid 10-b	12	10
24	Brown/Red	Solenoid 11-b	12	11
25	White/Black	Solenoid 12-b	12	12

D-Sub connector 15-pin^A

Pin no.	Wire color	Special	Pilot	Station
1	White	Solenoid 1-a	14	1
2	Brown	Solenoid 2-a	14	2
3	Green	Solenoid 3-a	14	3
4	Yellow	Solenoid 4-a	14	4
5	Grey	Solenoid 5-a	14	5
6	Pink	Solenoid 6-a	14	6
7	Blue	Solenoid 7-a	14	7
8	Red	Solenoid 1-b	12	1
9	Black	Solenoid 2-b	12	2
10	Violet	Solenoid 3-b	12	3
11	Grey/Pink	Solenoid 4-b	12	4
12	Red/Blue	Solenoid 5-b	12	5
13	White/Green	Solenoid 6-b	12	6
14	Brown/Green	Solenoid 7-b	12	7
15	White/Yellow	Common	-	-

^{A)} According to DIN 47100

Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 18 mm

D-Sub connector 44-pin

Pin no.	Wire color	Socket	Pilot	Station
1	white	Solenoid 1-a	14	1
2	brown	Solenoid 2-a	14	2
3	green	Solenoid 3-a	14	3
4	yellow	Solenoid 4-a	14	4
5	grey	Solenoid 5-a	14	5
6	pink	Solenoid 6-a	14	6
7	blue	Solenoid 7-a	14	7
8	red	Solenoid 8-a	14	8
9	black	Solenoid 9-a	14	9
10	violet	Solenoid 10-a	14	10
11	grey/pink	Solenoid 11-a	14	11
12	red/blue	Solenoid 12-a	14	12
13	white/green	Solenoid 13-a	14	13
14	brown/green	Solenoid 14-a	14	14
15	white/yellow	Solenoid 15-a	14	15
16	yellow/brown	Solenoid 1-b	12	1
17	white/grey	Solenoid 2-b	12	2
18	grey/brown	Solenoid 3-b	12	3
19	white/pink	Solenoid 4-b	12	4
20	pink/brown	Solenoid 5-b	12	5
21	white/blue	Solenoid 6-b	12	6
22	brown/blue	Solenoid 7-b	12	7
23	white/red	Solenoid 8-b	12	8
24	brown/red	Solenoid 9-b	12	9
25	white/black	Solenoid 10-b	12	10
26	brown/black	Solenoid 11-b	12	11
27	grey/green	Solenoid 12-b	12	12
28	yellow/grey	Solenoid 13-b	12	13
29	pink/green	Solenoid 14-b	12	14
30	yellow/pink	Solenoid 15-b	12	15
31	green/blue	Solenoid 16-a	14	16
32	yellow/blue	Solenoid 16-b	12	16
33	-	not used	-	-
34	-	not used	-	-
35	-	not used	-	-
36	-	not used	-	-
37	-	not used	-	-
38	-	not used	-	-
39	-	not used	-	-
40	-	not used	-	-
41	-	not used	-	-
42	-	not used	-	-
43	green/black	Common	-	-
44	yellow/black	Common	-	-

M23 connector 19-pin

Pin no.	Wire color	Socket	Pilot	Station
1	White	Solenoid 8-a	14	8
2	Brown (thin)	Solenoid 6-a	14	6
3	Green	Solenoid 4-a	14	4
4	Yellow	Solenoid 2-b	12	2
5	Grey	Solenoid 2-a	14	2
6	Blue (thick)	Common	-	-
7	Blue (thin)	Solenoid 1-b	12	1
8	Red	Solenoid 3-b	12	3
9	Black	Solenoid 5-b	12	5
10	Violet	Solenoid 7-b	12	7
11	Grey/Pink	Solenoid 7-a	14	7
12	Yellow/Green	Earth	-	-
13	White/Green	Solenoid 6-b	12	6
14	Brown/Green	Solenoid 4-b	12	4
15	White/Yellow	Solenoid 1-a	14	1
16	Yellow/Brown	Solenoid 3-a	14	3
17	Pink	Solenoid 5-a	14	5
18	Red/Blue	Solenoid 8-b	12	8
19	Brown (thick)	NOT USED	-	-

NPTF 1" Conduit entry with terminals¹

Clamp no.	Socket	Pilot	Station
C1	Solenoid 1-a	14	1
C2	Solenoid 2-a	14	2
C3	Solenoid 3-a	14	3
C4	Solenoid 4-a	14	4
C5	Solenoid 5-a	14	5
C6	Solenoid 6-a	14	6
C7	Solenoid 7-a	14	7
C8	Solenoid 8-a	14	8
C9	Solenoid 9-a	14	9
C10	Solenoid 10-a	14	10
C11	Solenoid 11-a	14	11
C12	Solenoid 12-a	14	12
C13	Solenoid 1-b	12	1
C14	Solenoid 2-b	12	2
C15	Solenoid 3-b	12	3
C16	Solenoid 4-b	12	4
C17	Solenoid 5-b	12	5
C18	Solenoid 6-b	12	6
C19	Solenoid 7-b	12	7
C20	Solenoid 8-b	12	8
C21	Solenoid 9-b	12	9
C22	Solenoid 10-b	12	10
C23	Solenoid 11-b	12	11
C24	Solenoid 12-b	12	12
C25	Common	-	-
C26	Common	-	-
C27	Earth	-	-
C28	Earth	-	-

¹⁾ Max. wire size AWG18

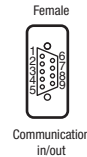
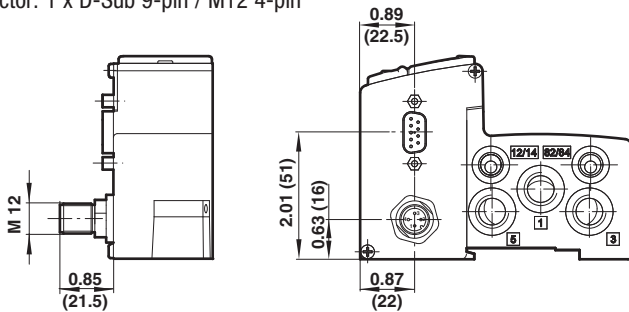
Fieldbus options: Overview

Fieldbus protocol	Fieldbus interface/connector	Supply voltage connector (Fieldbus and valves)	No. of stations	Max. no. coils
Profibus DP	1 x D-Sub 9-pin	M12 4-pin	04/05/06/07/08/09/10/11/12/13/14/15/16	32
	2 x M12 5-pin	M12 4-pin	04/05/06/07/08/09/10/11/12/13/14/15/16	32
	2 x M12 5-pin	7/8 5-pin	04/05/06/07/08/09/10/11/12/13/14/15/16	32
Interbus-S	2 x D-Sub 9-pin	M12 4-pin	04/05/06/07/08/09/10/11/12/13/14/15/16	32
AS-Interface - Single slave	1 x M12 4-pin	M12 4-pin	02/03/04	4
AS-Interface - Double slave	1 x M12 4-pin	M12 4-pin	04/05/06/07/08	8
FD67 bus	2 x M12 6-pin	(integrated in bus connector)	04/05/06/07/08/09/10/11/12/13/14/15/16	32
DeviceNet	1 x M12 5-pin	M12 4-pin	04/05/06/07/08/09/10/11/12/13/14/15/16	32
CANopen	1 x M12 5-pin	M12 4-pin	04/05/06/07/08/09/10/11/12/13/14/15/16	32
AB RIO	2 x M12 5-pin	M12 4-pin	04/05/06/07/08/09/10/11/12/13/14/15/16	32

For parts and assembly instructions of Fieldbus components, consult our technical service.

Fieldbus protocol: Profibus DP

Connector: 1 x D-Sub 9-pin / M12 4-pin



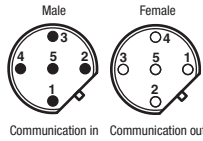
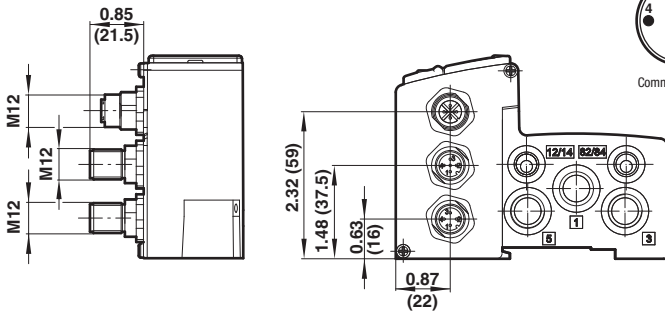
Bus connector: D-Sub 9-pin

Pin no.	Function
1	Shield
2	N/C
3	B-line (red) Rx/D / Tx-D-P
4	N/C
5	DGND (OVI) isolated
6	VP (5VI) isolated
7	N/C
8	A-line (green) Rx/D / Tx-D-N
9	N/C

Power connector: M12 4-pin

Pin no.	Function	Tolerance	Max. current
1	24 VB logic circuit supply	+/-25%	300 mA
2	24 VA valves	+/-10%	1)
3	0 volts	-	2)
4	Earth	-	-

Connector: 2 x M12 5-pin / M12 4-pin



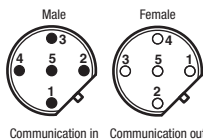
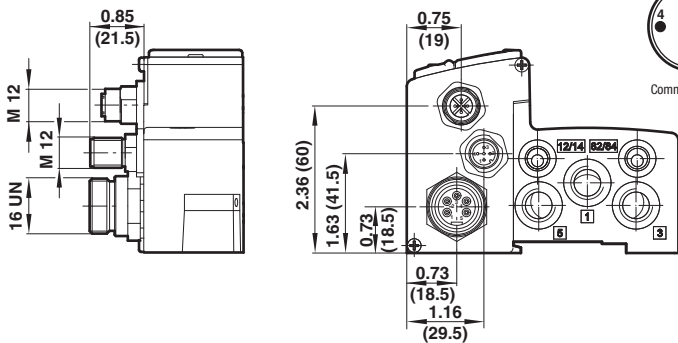
Bus connector: M12 5-pin (B-coded)

Pin no.	Function
1	5VI opto isolated
2	A-line (green)
3	OVI isolated
4	B-line (red)
5	Shield
Threaded joint	Shield

Power connector: M12 4-pin

Pin no.	Function	Tolerance	Max. current
1	24 VB logic circuit supply	+/-25%	300 mA
2	24 VA valves	+/-10%	1)
3	0 volts	-	2)
4	Earth	-	-

Connector: 2 x M12 5-pin / 7/8 5-pin



Bus connector: M12 5-pin (B-coded)

Pin no.	Function
1	5VI isolated
2	A-line (green)
3	OVI isolated
4	B-line (red)
5	Shield
Threaded joint	Shield

Power connector: 7/8 5-pin

Pin no.	Function	Tolerance	Max. current
1	-	-	-
2	0 volts	-	2)
3	Earth	-	-
4	24 VA valves	+/-10%	1)
5	24 VB logic circuit supply	+/-25%	300 mA

- $I_{max} = 10 \text{ mA} + n \cdot 60 \text{ mA}$
n = number of energized solenoids
- $I_{max} = I_{VA} + I_{VB}$

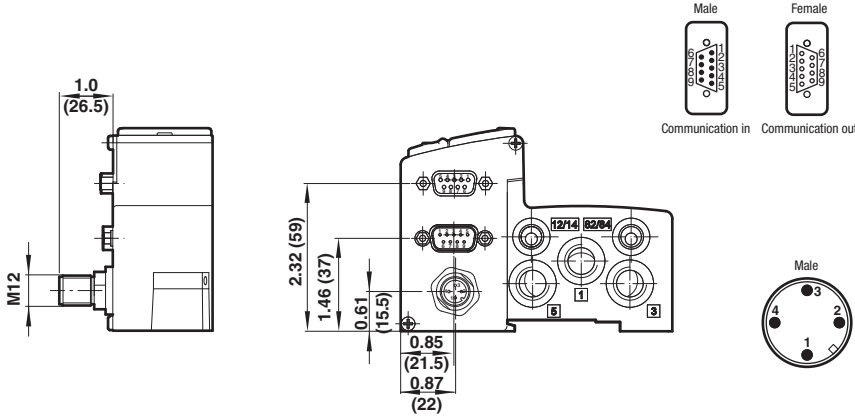
Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 18 mm

Fieldbus protocol: Interbus-S

Connector: 2 x D-Sub 9-pin / M12 4-pin



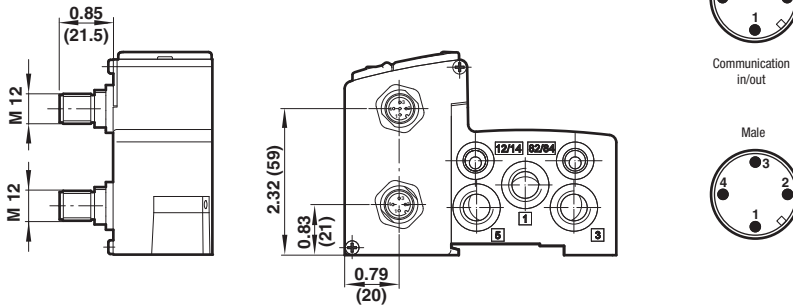
Bus connector: D-Sub 9-pin

Pin no.	Function Male	Function Female
1	DO	DO
2	DI	DI
3	OVI	OVI
4	-	-
5	-	+5VI
6	/DO	/DO
7	/DI	/DI
8	-	-
9	-	RBST

Power connector: M12 4-pin

Pin no.	Function	Tolerance	Max. current
1	24 VB logic circuit supply	+/-25%	300 mA
2	24 VA valves	+/-10%	1)
3	0 volts	-	2)
4	Earth	-	-

Fieldbus protocol: AS-Interface



Bus connector: M12 4-pin

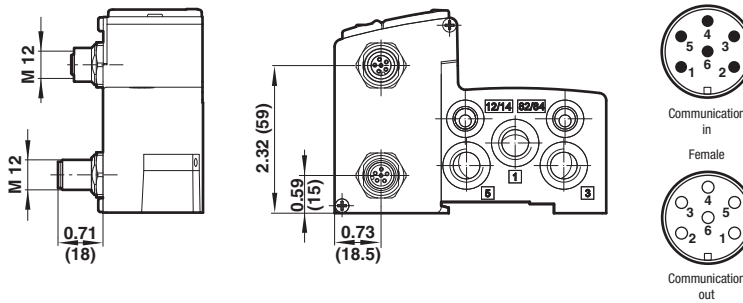
Pin no.	Function	Max. current
1	AS-I	3)
2	-	-
3	AS-I	-
4	-	-

Power connector: M12 4-pin

Pin no.	Function	Tolerance	Max. current
1	+24 V DC	+/-10%	4)
2	-	-	-
3	0 volts	-	-
4	-	-	-

Fieldbus protocol: FD67 bus

Connector: 2 x M12 6-pin (power connector integrated in bus connectors)



Bus connector: M12 6-pin (B-coded)

Pin no.	Function	Tolerance	Max. current
1	24 V actuator supply	±10%	5)
2	24 V sensor supply/internal supply	±25%	30 mA
3	Ground	-	-
4	Internal system connection	-	-
5	Internal system connection	-	-
6	Ground	-	-

- 1) $I_{max} = 10 \text{ mA} + n \cdot 60 \text{ mA}$
n = number of energized solenoids
- 2) $I_{max} = I_{VA} + I_{VB}$
- 3) Single slave: 40 mA
Double slave: 75 mA
- 4) Single slave:
 $I_{max} = 20 \text{ mA} + n \cdot 60 \text{ mA}$
Double slave:
 $I_{max} = 35 \text{ mA} + n \cdot 60 \text{ mA}$
n = number of energized solenoids
- 5) $I_{max} = n \cdot 60 \text{ mA}$
n = number of energized solenoids

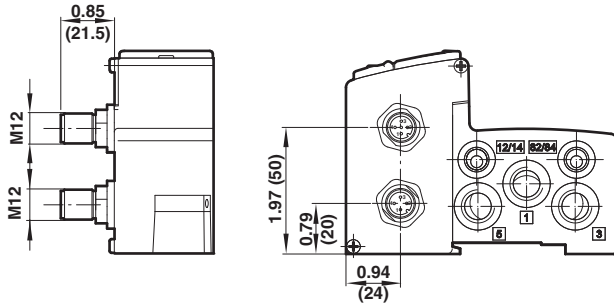
Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 18 mm

Fieldbus protocol: DeviceNet

Connector: 1 x M12 5-pin / M12 4-pin



Bus connector: M12 5-pin (A-coded)

Pin no.	Function
1	Drain
2	V+ ³
3	V- ³
4	CAN_H
5	CAN_L

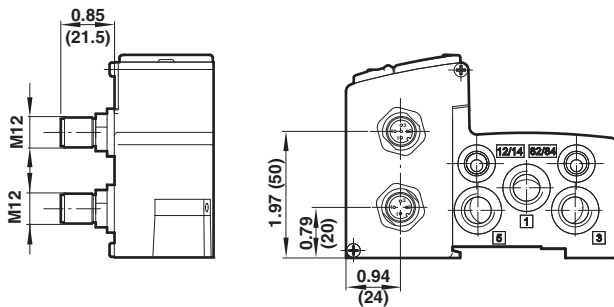


Power connector: M12 4-pin

Pin no.	Function	Tolerance	Max current
1	24 VB logic circuit supply	+/-25%	300 mA
2	24 VA valves	+/-10%	1)
3	0 volts	-	2)
4	Earth	-	-

Fieldbus protocol: CANopen

Connector: 1 x M12 5-pin / M12 4-pin



Bus connector: M12 5-pin (A-coded)

Pin no.	Function
1	Drain
2	V+ ³
3	V- ³
4	CAN_H
5	CAN_L



Power connector: M12 4-pin

Pin no.	Function	Tolerance	Max. current
1	24 VB logic circuit supply	+/-25%	300 mA
2	24 VA valves	+/-10%	1)
3	0 volts	-	2)
4	Earth	-	-

1) $I_{max} = 10 \text{ mA} + n \cdot 60 \text{ mA}$

n = number of energized solenoids

2) $I_{max} = I_{VA} + I_{VB}$

3) Must be galvanic isolated to 24 VA valves.

Fieldbus accessories

Symbol	Model	Description	Connection	Cable length	Protection class
Fieldbus power connector					
	V11588-E01	Profibus DP (4-pin, female) Interbus-S (4-pin, female) DeviceNet (4-pin, female) CANopen (4-pin, female)	M12	Wireable	IP65 Required for ATEX
	FD6760R5S75010	Profibus DP (5-pin, female)	7/8	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
Communication cable and connector					
	FD6710H5S75S10	DeviceNet (5-pin, female) CANopen (5-pin, female)	M12	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
	FD6710D5S75S10	DeviceNet (5-pin, male) CANopen (5-pin, female)	M12	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
	FD6710G5S75S10	Profibus DP, reverse keyway (5-pin, female)	M12	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
	V11591-E01	Profibus DP, reverse keyway (5-pin, male)	M12	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
	V11654-E01	Profibus DP connector (9-pin, male) with terminating resistor	D-Sub	Wireable	IP40
	FD67L FD67L FD67K FD67N	DeviceNet CANopen Profibus System	M12	—	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
	VE1ASCN1-M1200	AS-Interface power or communications (4-pin, female)	M12	Wireable	IP65 Required for ATEX
	VE2FBC9P-9S010 VE2FBC9P-9S030 VE2FBC9P-9S050	Interbus-S (9-pin)	D-Sub	1m 3m 5m	IP65 Required for ATEX
	VE2FBC9P-00000	Interbus-S (9-pin, male)	D-Sub	Wireable	IP65 Required for ATEX
	VE2FBC9S-00000	Interbus-S (9-pin, female)	D-Sub	Wireable	IP65 Required for ATEX
	V11340-E03	Interbus-S terminating connector (9-pin, male)	D-Sub	—	IP65 Required for ATEX

Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 18 mm

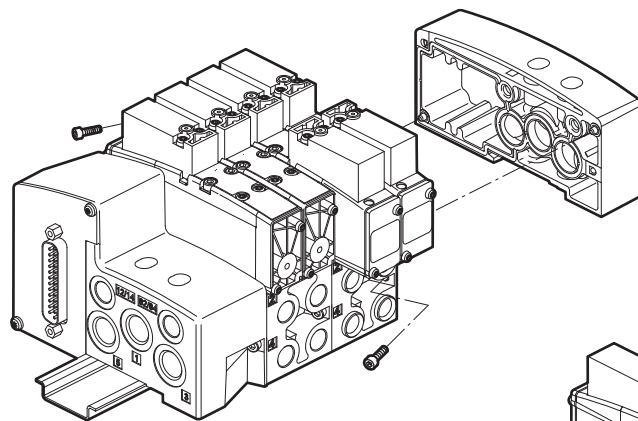
A - Single add-on stations

including PCB, sub-base, gasket and screws

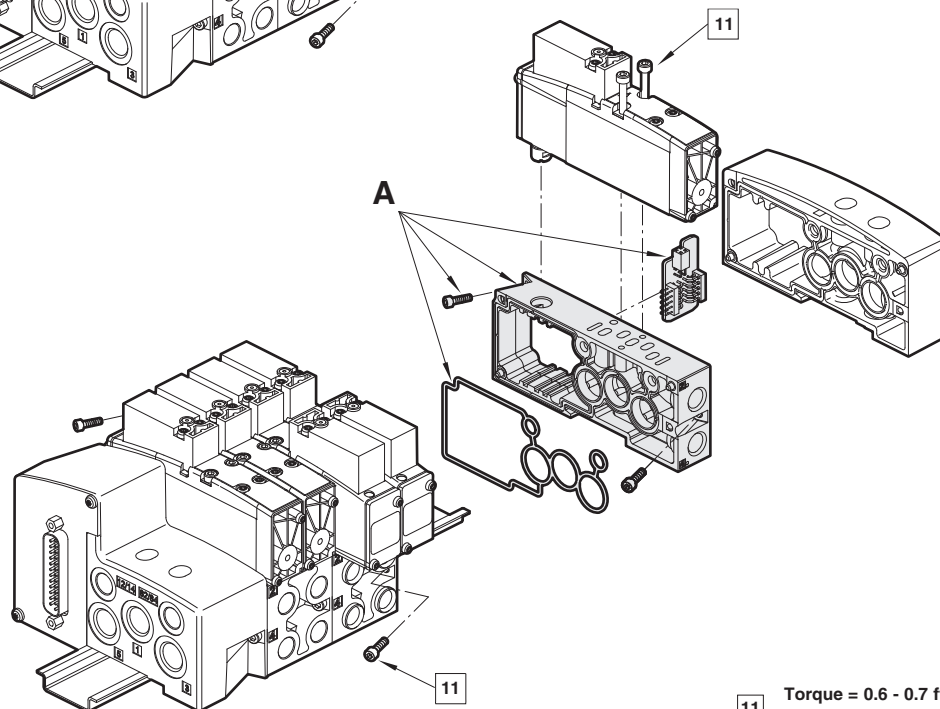
Model	Description	Ports 2 & 4
VS1872004-AFF0	Add-on station for D-Sub connectors and Fieldbus	G 1/8
VS1872004-PFF0	Add-on station for D-Sub connectors and Fieldbus	NPTF 1/8
VS1872004-8FF0	Add-on station for D-Sub connectors and Fieldbus	PIF 8 mm
VS1872004-6FF0	Add-on station for D-Sub connectors and Fieldbus	PIF 6 mm
VS1872004-1FF0	Add-on station for D-Sub connectors and Fieldbus	PIF 1/4
VS1872005-AFF0	Add-on station for Conduit entry and M23 connector	G 1/8
VS1872005-PFF0	Add-on station for Conduit entry and M23 connector	NPTF 1/8
VS1872005-8FF0	Add-on station for Conduit entry and M23 connector	PIF 8 mm
VS1872005-6FF0	Add-on station for Conduit entry and M23 connector	PIF 6 mm
VS1872005-1FF0	Add-on station for Conduit entry and M23 connector	PIF 1/4

Valves and accessories to be ordered separately

Step 1



Step 2



11 Torque = 0.6 - 0.7 ft. lbs. (0.8 - 0.9 Nm)
Screw driver speed = max. 1100 r.p.m.

For detailed assembly instructions, please see maintenance & instruction booklet!

Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 18 mm

Sub-bases and end plates (without PCB's)

including screws and gaskets

A – End plate kit

Model	Description	Ports 1, 3 & 5	Ports 12/14 & 82/84
VS1872000-BFCO	End plate kit for Multipole	G 1/4	G1/8
VS1872000-RFCO	End plate kit for Multipole	NPTF 1/4	NPTF1/8
VS1872001-BFCO	End plate kit for Fieldbus	G 1/4	G1/8
VS1872001-RFCO	End plate kit for Fieldbus	NPTF 1/4	NPTF1/8

C – Single station modular sub-base

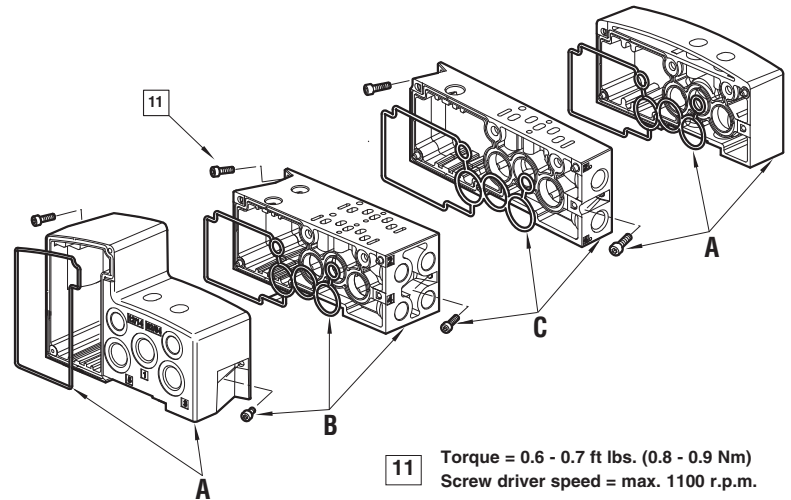
Model	Ports 2 & 4
VS1872003-AFFO	G 1/8
VS1872003-PFFO	NPTF 1/8
VS1872003-8FFO	PIF 8 mm
VS1872003-6FFO	PIF 6 mm
VS1872003-1FFO	PIF 1/4

B – Double station modular sub-base

Model	Ports 2 & 4
VS1872002-AFFO	G 1/8
VS1872002-PFFO	NPTF 1/8
VS1872002-8FFO	PIF 8 mm
VS1872002-6FFO	PIF 6 mm
VS1872002-1FFO	PIF 1/4

Spare parts

Model	Description	Quantity per slice
77.31055	Hexagon socket screw M3x10	2
94.01015	Gasket	1
94.00816	Connector-kit gasket on end plate	1



11 Torque = 0.6 - 0.7 ft lbs. (0.8 - 0.9 Nm)
Screw driver speed = max. 1100 r.p.m.

Multipole components

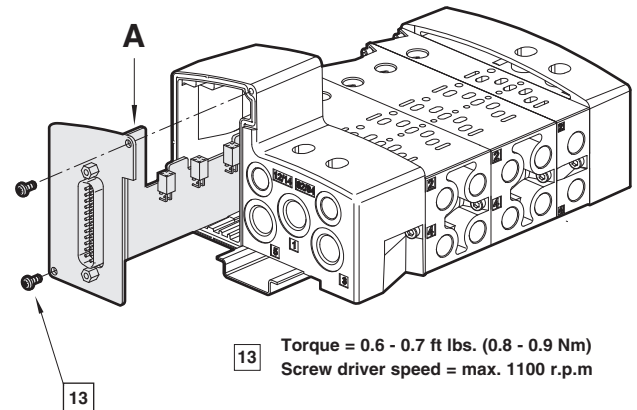
A – Output boards with D-Sub connectors

Model	Connector type	Description	Expandable to max. x no. of stations 1)	Voltage
VS1872217-KF00	D-Sub 9-pin	Multipole PCB 2 stations	4	24V DC
VS1872218-KF00	D-Sub 15-pin	Multipole PCB 2 stations	6	24V DC
VS1872205-KF00	D-Sub 15-pin	Multipole PCB 4 stations	7	24V DC
VS1872219-KF00	D-Sub 25-pin	Multipole PCB 2 stations	6	24V DC
VS1872200-KF00	D-Sub 25-pin	Multipole PCB 4 stations	8	24V DC
VS1872201-KF00	D-Sub 25-pin	Multipole PCB 6 stations	10	24V DC
VS1872202-KF00	D-Sub 25-pin	Multipole PCB 8 stations	12	24V DC
VS1872203-KF00	D-Sub 44-pin	Multipole PCB 8 stations	12	24V DC
VS1872206-KF00	D-Sub 44-pin	Multipole PCB 10 stations	14	24V DC
VS1872204-KF00	D-Sub 44-pin	Multipole PCB 12 stations	16	24V DC

1) By using below expansion output boards.

Expansion output boards for D-Sub connectors

Model	Description	Voltage
VS1872255-KF00	Multipole PCB 1 station	24V DC
VS1872213-KF00	Multipole PCB 2 stations	24V DC



13 Torque = 0.6 - 0.7 ft lbs. (0.8 - 0.9 Nm)
Screw driver speed = max. 1100 r.p.m.

Valve Manifolds VS18 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 18 mm

Multipole components

A – Connector-kit for conduit entry

Model	Description	Voltage
VS2672742-KG00	E-Connector-kit NPTF1 Conduit entry	115V AC, 24V DC

C – Connector-kit for M23 connector

Model	Description	Voltage
VS2672743-KG00	E-Connector-kit M23 connector 19-pin	115V AC, 24V DC

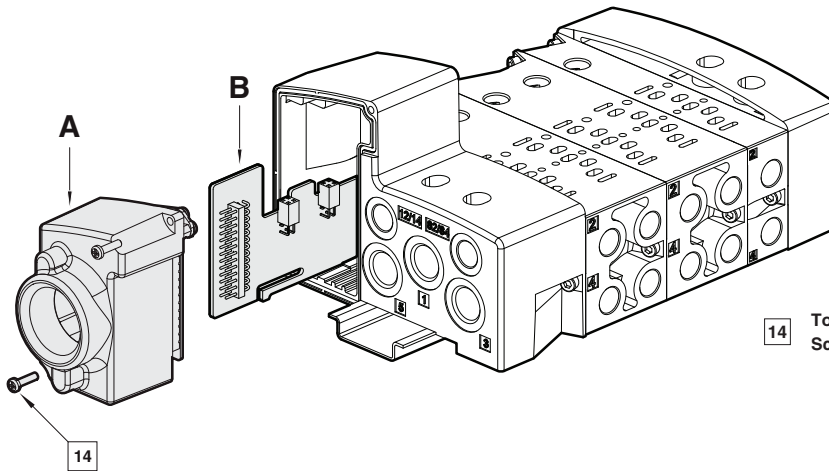
B – Output boards for conduit entry and M23 connector

Model	Description	Expandable to max. x no. of stations ¹⁾	Voltage
VS1872208-KF00	Multipole PCB 2 stations	6	115V AC, 24V DC
VS1872209-KF00	Multipole PCB 4 stations	8	115V AC, 24V DC
VS1872210-KF00	Multipole PCB 6 stations	10	115V AC, 24V DC
VS1872211-KF00	Multipole PCB 8 stations	12	115V AC, 24V DC

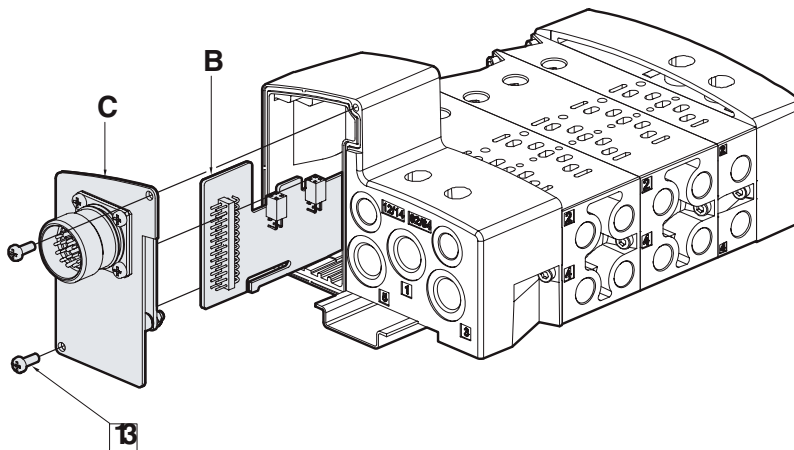
1) By using below expansion output boards.

Expansion output boards for conduit entry

Model	Description	Voltage
VS1872256-KF00	Multipole PCB 1 station	115V AC, 24V DC
VS1872215-KF00	Multipole PCB 2 stations	115V AC, 24V DC



14 Torque = 0.6 - 0.7 ft lbs. (0.8 - 0.9 Nm)
Screw driver speed = max. 1100 r.p.m



13 Torque = 0.6 - 0.7 ft lbs. (0.8 - 0.9 Nm)
Screw driver speed = max. 1100 r.p.m

For detailed assembly instructions, please see maintenance & instruction booklet!

Valve Manifolds VS26 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves

ISO 15407-2

Size 26 mm

24V DC or 115V AC Multipole

Integrated Fieldbus

Field expandable with single add-on stations

Dual spool technology

VS26G Glandless spool and sleeve for long life

VS26S Softseal spool for high flow

Wide range of accessories

ATEX

Universal PNP/NPN 24V DC

Multipole

Technical data

Medium

Compressed air, filtered to 40 µm, lubricated or non-lubricated

Operation

VS26G: Glandless spool valve, solenoid pilot actuated

VS26S: Softseal spool valve, solenoid pilot actuated

Mounting

Sub-base

Ports 2+4

NPTF 1/4, PIF 3/8, 8 mm, and 10 mm, G1/4

Operating pressure

Maximum pressure

145 psi (10 bar) VS26S models and VS26G solenoid pilot actuated valves with internal pilot supply, 232 psi (16 bar) VS26G solenoid pilot actuated valves with external pilot supply

Details of minimum and maximum pilot pressure see overleaf.

Flow characteristics

Series	Function	Cv	l/min
VS26G	5/2	1.02	1000
VS26G	5/3	1.02	1000
VS26S	2x2/2	1.17	1150
VS26S	2x3/2	1.27	1250
VS26S	5/2	1.37	1350
VS26S	5/3	1.37	1350

Ambient temperature

5°F to 122°F (-15°C to +50°C)

Medium temperature

23°F to 122°F (-5°C to +50°C)

Consult our technical service for use below 35°F (+2°C).

Materials

Body/sub-base: die-cast aluminum

Glandless spool & sleeve (VS26G): aluminum, hard anodized, teflon coated

Softseal spool (VS26S): aluminum with HNBR seals

Plastic parts: POM, PA, PPA

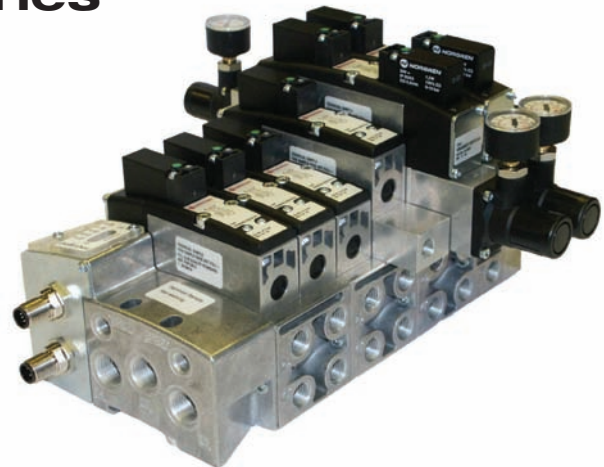
Mounting sheets/screws: steel, zinc coated

Springs: stainless steel

Sandwich plates: aluminum bar material

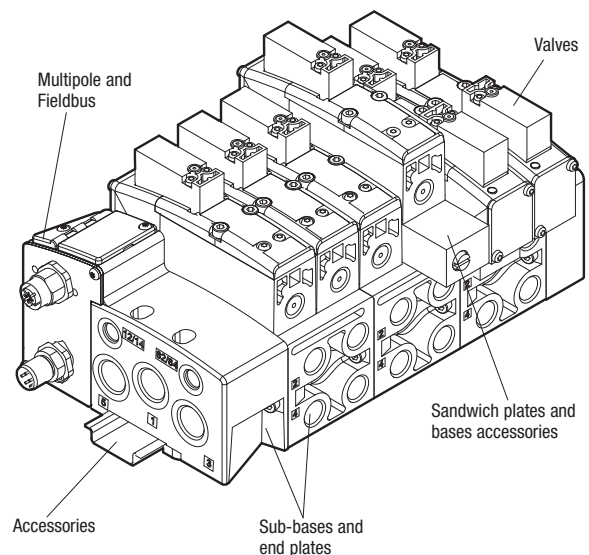
Electrical contacts: brass, tin/gold coated

PCB: glasepoxy



To order please use valve island configurator available at www.norgren.com

Alternatively contact Norgren for a configurator on CD or use our worksheet.



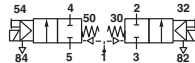
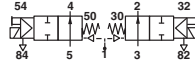
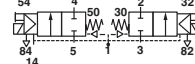
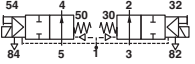
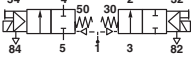
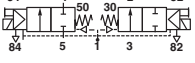
Valve Manifolds VS26 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2,

Size 26 mm

2x2/2 Double solenoid actuated Softseal valves flow = 1.17 Cv (1150 l/min)

	Model	Function 2 x 2/2	Actuation	Pilot supply	Pilot pressure psi	Operating pressure psi (bar)	Manual override	Voltage
	VS26SE11DF313A	NC	Sol/Spring	Internal	44 to 145 ¹⁾	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
	VS26SE11DF318A	NC	Sol/Spring	Internal	44 to 145 ¹⁾	26" Hg to 145 (-0.9 to 10)	Push only	115V AC 1.5VA
	VS26SE11DF213A	NC	Sol/Spring	Internal	44 to 145 ¹⁾	26" Hg to 145 (-0.9 to 10)	Push & turn	24V DC 1.2W
	VS26SE11DF218A	NC	Sol/Spring	Internal	44 to 145 ¹⁾	26" Hg to 145 (-0.9 to 10)	Push & turn	115V AC 1.5VA
	VS26SE11DF513A	NC	Sol/Spring	Internal	44 to 145 ¹⁾	26" Hg to 145 (-0.9 to 10)	Extended, push only	24V DC 1.2W
	VS26SE22DF313A	NC	Sol/Spring	External	25 + (0.35 x press. port 1) ²⁾	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
	VS26SE22DF318A	NC	Sol/Spring	External	25 + (0.35 x press. port 1) ²⁾	26" Hg to 145 (-0.9 to 10)	Push only	115V AC 1.5VA
	VS26SE22DF213A	NC	Sol/Spring	External	25 + (0.35 x press. port 1) ²⁾	26" Hg to 145 (-0.9 to 10)	Push & turn	24V DC 1.2W
	VS26SE22DF218A	NC	Sol/Spring	External	25 + (0.35 x press. port 1) ²⁾	26" Hg to 145 (-0.9 to 10)	Push & turn	115V AC 1.5VA
	VS26SE22DF513A	NC	Sol/Spring	External	25 + (0.35 x press. port 1) ²⁾	26" Hg to 145 (-0.9 to 10)	Extended, push only	24V DC 1.2W
	VS26SF11DF313A	NO	Sol/Spring	Internal	44 to 145 ¹⁾	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
	VS26SF11DF213A	NO	Sol/Spring	Internal	44 to 145 ¹⁾	26" Hg to 145 (-0.9 to 10)	Push & turn	115V AC 1.5VA
	VS26SF11DF218A	NO	Sol/Spring	Internal	44 to 145 ¹⁾	26" Hg to 145 (-0.9 to 10)	Push & turn	115V AC 1.5VA
	VS26SF11DF513A	NO	Sol/Spring	Internal	44 to 145 ¹⁾	26" Hg to 145 (-0.9 to 10)	Extended, push only	24V DC 1.2W
	VS26SF11DF518A	NO	Sol/Spring	Internal	44 to 145 ¹⁾	26" Hg to 145 (-0.9 to 10)	Extended, push only	115V AC 1.5VA
	VS26SF22DF313A	NO	Sol/Spring	External	25 + (0.35 x press. port 1) ²⁾	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
	VS26SF22DF318A	NO	Sol/Spring	External	25 + (0.35 x press. port 1) ²⁾	26" Hg to 145 (-0.9 to 10)	Push only	115V AC 1.5VA
	VS26SF22DF213A	NO	Sol/Spring	External	25 + (0.35 x press. port 1) ²⁾	26" Hg to 145 (-0.9 to 10)	Push & turn	24V DC 1.2W
	VS26SF22DF218A	NO	Sol/Spring	External	25 + (0.35 x press. port 1) ²⁾	26" Hg to 145 (-0.9 to 10)	Push & turn	115V AC 1.5VA
	VS26SF22DF513A	NO	Sol/Spring	External	25 + (0.35 x press. port 1) ²⁾	26" Hg to 145 (-0.9 to 10)	Extended, push only	24V DC 1.2W
	VS26SG11DF313A	NO/NC	Sol/Spring	Internal	44 to 145 ¹⁾	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
	VS26SG11DF318A	NO/NC	Sol/Spring	Internal	44 to 145 ¹⁾	26" Hg to 145 (-0.9 to 10)	Push only	115V AC 1.5VA
	VS26SG11DF213A	NO/NC	Sol/Spring	Internal	44 to 145 ¹⁾	26" Hg to 145 (-0.9 to 10)	Push & turn	24V DC 1.2W
	VS26SG11DF218A	NO/NC	Sol/Spring	Internal	44 to 145 ¹⁾	26" Hg to 145 (-0.9 to 10)	Push & turn	115V AC 1.5VA
	VS26SG11DF513A	NO/NC	Sol/Spring	Internal	44 to 145 ¹⁾	26" Hg to 145 (-0.9 to 10)	Extended, push only	24V DC 1.2W
	VS26SG22DF313A	NO/NC	Sol/Spring	External	25 + (0.35 x press. port 1) ²⁾	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
	VS26SG22DF318A	NO/NC	Sol/Spring	External	25 + (0.35 x press. port 1) ²⁾	26" Hg to 145 (-0.9 to 10)	Push only	115V AC 1.5VA
	VS26SG22DF213A	NO/NC	Sol/Spring	External	25 + (0.35 x press. port 1) ²⁾	26" Hg to 145 (-0.9 to 10)	Push & turn	24V DC 1.2W
	VS26SG22DF218A	NO/NC	Sol/Spring	External	25 + (0.35 x press. port 1) ²⁾	26" Hg to 145 (-0.9 to 10)	Push & turn	115V AC 1.5VA
	VS26SG22DF513A	NO/NC	Sol/Spring	External	25 + (0.35 x press. port 1) ²⁾	26" Hg to 145 (-0.9 to 10)	Extended, push only	24V DC 1.2W
	VS26SG22DF518A	NO/NC	Sol/Spring	External	25 + (0.35 x press. port 1) ²⁾	26" Hg to 145 (-0.9 to 10)	Extended, push only	115V AC 1.5VA

1) Pilot air supply through port 1

2) Pilot air supply through port 12/14

Valve functions designations:

NO = Normally open

NC = Normally closed

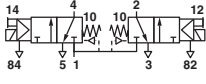
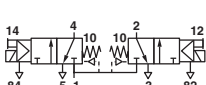
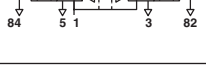
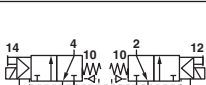

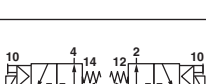
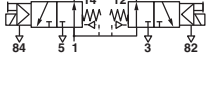
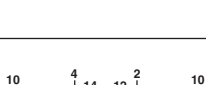
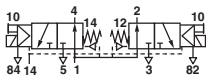
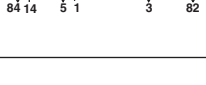
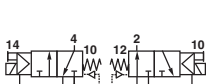
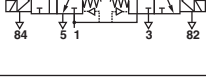
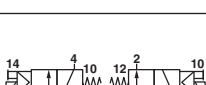
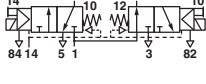
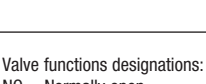
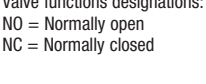












NOTE: The supply ports for the 2x2/2 valves are port 3 & 5 on the end plate. Therefore the flow path is from port 3 to port 2 or port 5 to port 4. Port 1 is only used to supply internal pilot pressure. Therefore care must be used when selecting other valves to be used on the same manifold as the 2x2/2's. You may be required to use isolation plugs in ports 3 & 5 to ensure proper operation.

Valve Manifolds VS26 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 26 mm

2x3/2 Double solenoid actuated Softseal valves flow = 1.27 Cv (1250 l/min)

Model	Function 2 x 3/2	Actuation	Pilot supply	Pilot pressure psi	Operating pressure psi (bar)	Manual override	Voltage
 VS26SA11DF313A	NC	Sol/Spring	Internal	-	36 to 145 (2.5 to 10)	Push only	24V DC 1.2W
 VS26SA11DF318A	NC	Sol/Spring	Internal	-	36 to 145 (2.5 to 10)	Push only	115V AC 1.5VA
 VS26SA11DF213A	NC	Sol/Spring	Internal	-	36 to 145 (2.5 to 10)	Push & turn	24V DC 1.2W
 VS26SA11DF218A	NC	Sol/Spring	Internal	-	36 to 145 (2.5 to 10)	Push & turn	115V AC 1.5VA
 VS26SA11DF513A	NC	Sol/Spring	Internal	-	36 to 145 (2.5 to 10)	Extended, push only	24V DC 1.2W
 VS26SA11DF518A	NC	Sol/Spring	Internal	-	36 to 145 (2.5 to 10)	Extended, push only	115V AC 1.5VA
 VS26SA22DF313A	NC	Sol/Spring	External	25 + (0.5 x op. press.)	0 to 145 (0 to 10)	Push only	24V DC 1.2W
 VS26SA22DF318A	NC	Sol/Spring	External	25 + (0.5 x op. press.)	0 to 145 (0 to 10)	Push only	115V AC 1.5VA
 VS26SA22DF213A	NC	Sol/Spring	External	25 + (0.5 x op. press.)	0 to 145 (0 to 10)	Push & turn	24V DC 1.2W
 VS26SA22DF218A	NC	Sol/Spring	External	25 [1.7] + (7.3 [0.5] x op. press.)	0 to 145 (0 to 10)	Push & turn	115V AC 1.5VA
 VS26SA22DF513A	NC	Sol/Spring	External	25 + (0.5 x op. press.)	0 to 145 (0 to 10)	Extended, push only	24V DC 1.2W
 VS26SA22DF518A	NC	Sol/Spring	External	25 + (0.5 x op. press.)	0 to 145 (0 to 10)	Extended, push only	115V AC 1.5VA
 VS26SB11DF313A	NO	Sol/Spring	Internal	-	36 to 145 (2.5 to 10)	Push only	24V DC 1.2W
 VS26SB11DF318A	NO	Sol/Spring	Internal	-	36 to 145 (2.5 to 10)	Push only	115V AC 1.5VA
 VS26SB11DF213A	NO	Sol/Spring	Internal	-	36 to 145 (2.5 to 10)	Push & turn	24V DC 1.2W
 VS26SB11DF218A	NO	Sol/Spring	Internal	-	36 to 145 (2.5 to 10)	Push & turn	115V AC 1.5VA
 VS26SB11DF513A	NO	Sol/Spring	Internal	-	36 to 145 (2.5 to 10)	Extended, push only	24V DC 1.2W
 VS26SB11DF518A	NO	Sol/Spring	Internal	-	36 to 145 (2.5 to 10)	Extended, push only	115V AC 1.5VA
 VS26SB22DF313A	NO	Sol/Spring	External	25 + (0.5 x op. press.)	0 to 145 (0 to 10)	Push only	24V DC 1.2W
 VS26SB22DF318A	NO	Sol/Spring	External	25 + (0.5 x op. press.)	0 to 145 (0 to 10)	Push only	115V AC 1.5VA
 VS26SB22DF213A	NO	Sol/Spring	External	25 + (0.5 x op. press.)	0 to 145 (0 to 10)	Push & turn	24V DC 1.2W
 VS26SB22DF218A	NO	Sol/Spring	External	25 + (0.5 x op. press.)	0 to 145 (0 to 10)	Push & turn	115V AC 1.5VA
 VS26SB22DF513A	NO	Sol/Spring	External	25 + (0.5 x op. press.)	0 to 145 (0 to 10)	Extended, push only	24V DC 1.2W
 VS26SB22DF518A	NO	Sol/Spring	External	25 + (0.5 x op. press.)	0 to 145 (0 to 10)	Extended, push only	115V AC 1.5VA
 VS26SC11DF313A	NO/NC	Sol/Spring	Internal	-	36 to 145 (2.5 to 10)	Push only	24V DC 1.2W
 VS26SC11DF318A	NO/NC	Sol/Spring	Internal	-	36 to 145 (2.5 to 10)	Push only	115V AC 1.5VA
 VS26SC11DF213A	NO/NC	Sol/Spring	Internal	-	36 to 145 (2.5 to 10)	Push & turn	24V DC 1.2W
 VS26SC11DF218A	NO/NC	Sol/Spring	Internal	-	36 to 145 (2.5 to 10)	Push & turn	115V AC 1.5VA
VS26SC11DF513A	NO/NC	Sol/Spring	Internal	-	36 to 145 (2.5 to 10)	Extended, push only	24V DC 1.2W
VS26SC11DF518A	NO/NC	Sol/Spring	Internal	-	36 to 145 (2.5 to 10)	Extended, push only	115V AC 1.5VA
VS26SC22DF313A	NO/NC	Sol/Spring	External	25 + (0.5 x op. press.)	0 to 145 (0 to 10)	Push only	24V DC 1.2W
VS26SC22DF318A	NO/NC	Sol/Spring	External	25 + (0.5 x op. press.)	0 to 145 (0 to 10)	Push only	115V AC 1.5VA
VS26SC22DF213A	NO/NC	Sol/Spring	External	25 + (0.5 x op. press.)	0 to 145 (0 to 10)	Push & turn	24V DC 1.2W
VS26SC22DF218A	NO/NC	Sol/Spring	External	25 + (0.5 x op. press.)	0 to 145 (0 to 10)	Push & turn	115V AC 1.5VA
VS26SC22DF513A	NO/NC	Sol/Spring	External	25 + (0.5 x op. press.)	0 to 145 (0 to 10)	Extended, push only	24V DC 1.2W
VS26SC22DF518A	NO/NC	Sol/Spring	External	25 + (0.5 x op. press.)	0 to 145 (0 to 10)	Extended, push only	115V AC 1.5VA

Valve functions designations:
 NO = Normally open
 NC = Normally closed

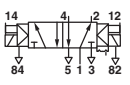
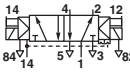
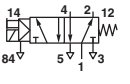
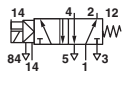

Valve Manifolds VS26 Series

Plug-in Mini ISO Valves

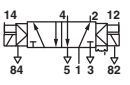
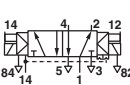
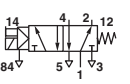
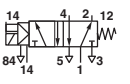

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2,

Size 26 mm

5/2 Single and double solenoid actuated Glandless valves flow = 1.02 Cv (1000 l/min)

	Model	Function	Actuation	Pilot supply	Pilot pressure psi (bar)	Operating pressure psi (bar)	Manual override	Voltage
	VS26G511DF313A	5/2	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
	VS26G511DF318A	5/2	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Push only	115V AC 1.5VA
	VS26G511DF213A	5/2	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
	VS26G511DF218A	5/2	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Push & turn	115V AC 1.5VA
	VS26G511DF513A	5/2	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Extended, push only	24V DC 1.2W
	VS26G511DF518A	5/2	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Extended, push only	115V AC 1.5VA
	VS26G522DF313A	5/2	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	24V DC 1.2W
	VS26G522DF318A	5/2	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	115V AC 1.5VA
	VS26G522DF213A	5/2	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	24V DC 1.2W
	VS26G522DF218A	5/2	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	115V AC 1.5VA
	VS26G522DF513A	5/2	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Extended, push only	24V DC 1.2W
	VS26G522DF518A	5/2	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Extended, push only	115V AC 1.5VA
	VS26G517DF313A	5/2	Sol/Spring	Internal	-	23 to 145 (1.6 to 10)	Push only	24V DC 1.2W
	VS26G517DF318A	5/2	Sol/Spring	Internal	-	23 to 145 (1.6 to 10)	Push only	115V AC 1.5VA
	VS26G517DF213A	5/2	Sol/Spring	Internal	-	23 to 145 (1.6 to 10)	Push & turn	24V DC 1.2W
	VS26G517DF218A	5/2	Sol/Spring	Internal	-	23 to 145 (1.6 to 10)	Push & turn	115V AC 1.5VA
	VS26G517DF513A	5/2	Sol/Spring	Internal	-	23 to 145 (1.6 to 10)	Extended, push only	24V DC 1.2W
	VS26G517DF518A	5/2	Sol/Spring	Internal	-	23 to 145 (1.6 to 10)	Extended, push only	115V AC 1.5VA
	VS26G527DF313A	5/2	Sol/Spring	External	23 to 145 (1.6 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	24V DC 1.2W
	VS26G527DF318A	5/2	Sol/Spring	External	23 to 145 (1.6 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	115V AC 1.5VA
	VS26G527DF213A	5/2	Sol/Spring	External	23 to 145 (1.6 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	24V DC 1.2W
	VS26G527DF218A	5/2	Sol/Spring	External	23 to 145 (1.6 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	115V AC 1.5VA
	VS26G527DF513A	5/2	Sol/Spring	External	23 to 145 (1.6 to 10)	26" Hg to 232 (-0.9 to 16)	Extended, push only	24V DC 1.2W
	VS26G527DF518A	5/2	Sol/Spring	External	23 to 145 (1.6 to 10)	26" Hg to 232 (-0.9 to 16)	Extended, push only	115V AC 1.5VA

5/2 Single and double solenoid actuated Softseal valves flow = 1.37 Cv (1350 L/min)

	Model	Function	Actuation	Pilot supply	Pilot pressure psi (bar)	Operating pressure psi (bar)	Manual override	Voltage
	VS26S511DF313A	5/2	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
	VS26S511DF318A	5/2	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Push only	115V AC 1.5VA
	VS26S511DF213A	5/2	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
	VS26S511DF218A	5/2	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Push & turn	115V AC 1.5VA
	VS26S511DF513A	5/2	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Extended, push only	24V DC 1.2W
	VS26S511DF518A	5/2	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Extended, push only	115V AC 1.5VA
	VS26S522DF313A	5/2	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
	VS26S522DF318A	5/2	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	115V AC 1.5VA
	VS26S522DF213A	5/2	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	24V DC 1.2W
	VS26S522DF218A	5/2	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	115V AC 1.5VA
	VS26S522DF513A	5/2	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Extended, push only	24V DC 1.2W
	VS26S522DF518A	5/2	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Extended, push only	115V AC 1.5VA
	VS26S517DF313A	5/2	Sol/Spring	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
	VS26S517DF318A	5/2	Sol/Spring	Internal	-	29 to 145 (2 to 10)	Push only	115V AC 1.5VA
	VS26S517DF213A	5/2	Sol/Spring	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
	VS26S517DF218A	5/2	Sol/Spring	Internal	-	29 to 145 (2 to 10)	Push & turn	115V AC 1.5VA
	VS26S517DF513A	5/2	Sol/Spring	Internal	-	29 to 145 (2 to 10)	Extended, push only	24V DC 1.2W
	VS26S517DF518A	5/2	Sol/Spring	Internal	-	29 to 145 (2 to 10)	Extended, push only	115V AC 1.5VA
	VS26S527DF313A	5/2	Sol/Spring	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
	VS26S527DF318A	5/2	Sol/Spring	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	115V AC 1.5VA
	VS26S527DF213A	5/2	Sol/Spring	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	24V DC 1.2W
	VS26S527DF218A	5/2	Sol/Spring	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	115V AC 1.5VA
	VS26S527DF513A	5/2	Sol/Spring	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Extended, push only	24V DC 1.2W
	VS26S527DF518A	5/2	Sol/Spring	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Extended, push only	115V AC 1.5VA

Valve Manifolds VS26 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 26 mm

5/3 Double solenoid actuated Glandless valves flow = 1.02 scfm (1000 l/min)

Model	Function	Actuation	Pilot supply	Pilot pressure psi (bar)	Operating pressure psi (bar)	Manual override	Voltage
VS26G611DF313A	APB	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
VS26G611DF318A	APB	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Push only	115V AC 1.5VA
VS26G611DF213A	APB	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
VS26G611DF218A	APB	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Push & turn	115V AC 1.5VA
VS26G611DF513A	APB	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Extended, push only	24V DC 1.2W
VS26G611DF518A	APB	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Extended, push only	115V AC 1.5VA
VS26G622DF313A	APB	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	24V DC 1.2W
VS26G622DF318A	APB	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	115V AC 1.5VA
VS26G622DF213A	APB	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	24V DC 1.2W
VS26G622DF218A	APB	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	115V AC 1.5VA
VS26G622DF513A	APB	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Extended, push only	24V DC 1.2W
VS26G622DF518A	APB	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Extended, push only	115V AC 1.5VA
VS26G711DF313A	COE	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
VS26G711DF318A	COE	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Push only	115V AC 1.5VA
VS26G711DF213A	COE	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
VS26G711DF218A	COE	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Push & turn	115V AC 1.5VA
VS26G711DF513A	COE	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Extended, push only	24V DC 1.2W
VS26G711DF518A	COE	Sol/Sol	Internal	-	29 to 145 (2 to 10)	Extended, push only	115V AC 1.5VA
VS26G722DF313A	COE	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	24V DC 1.2W
VS26G722DF318A	COE	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	115V AC 1.5VA
VS26G722DF213A	COE	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	24V DC 1.2W
VS26G722DF218A	COE	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	115V AC 1.5VA
VS26G722DF513A	COE	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Extended, push only	24V DC 1.2W
VS26G722DF518A	COE	Sol/Sol	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Extended, push only	115V AC 1.5VA

5/3 Double solenoid actuated Softseal valves flow = 1.37 Cv (1350 L/min)

Model	Function	Actuation	Pilot supply	Pilot pressure psi (bar)	Operating pressure psi (bar)	Manual override	Voltage
VS26S611DF313A	APB	Sol/Sol	Internal	-	36 to 145 (2.5 to 10)	Push only	24V DC 1.2W
VS26S611DF318A	APB	Sol/Sol	Internal	-	36 to 145 (2.5 to 10)	Push only	115V AC 1.5VA
VS26S611DF213A	APB	Sol/Sol	Internal	-	36 to 145 (2.5 to 10)	Push & turn	24V DC 1.2W
VS26S611DF218A	APB	Sol/Sol	Internal	-	36 to 145 (2.5 to 10)	Push & turn	115V AC 1.5VA
VS26S611DF513A	APB	Sol/Sol	Internal	-	36 to 145 (2.5 to 10)	Extended, push only	24V DC 1.2W
VS26S611DF518A	APB	Sol/Sol	Internal	-	36 to 145 (2.5 to 10)	Extended, push only	115V AC 1.5VA
VS26S622DF313A	APB	Sol/Sol	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
VS26S622DF318A	APB	Sol/Sol	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	115V AC 1.5VA
VS26S622DF213A	APB	Sol/Sol	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	24V DC 1.2W
VS26S622DF218A	APB	Sol/Sol	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	115V AC 1.5VA
VS26S622DF513A	APB	Sol/Sol	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Extended, push only	24V DC 1.2W
VS26S622DF518A	APB	Sol/Sol	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Extended, push only	115V AC 1.5VA
VS26S711DF313A	COE	Sol/Sol	Internal	-	36 to 145 (2.5 to 10)	Push only	24V DC 1.2W
VS26S711DF318A	COE	Sol/Sol	Internal	-	36 to 145 (2.5 to 10)	Push only	115V AC 1.5VA
VS26S711DF213A	COE	Sol/Sol	Internal	-	36 to 145 (2.5 to 10)	Push & turn	24V DC 1.2W
VS26S711DF218A	COE	Sol/Sol	Internal	-	36 to 145 (2.5 to 10)	Push & turn	115V AC 1.5VA
VS26S711DF513A	COE	Sol/Sol	Internal	-	36 to 145 (2.5 to 10)	Extended, push only	24V DC 1.2W
VS26S711DF518A	COE	Sol/Sol	Internal	-	36 to 145 (2.5 to 10)	Extended, push only	115V AC 1.5VA
VS26S722DF313A	COE	Sol/Sol	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
VS26S722DF318A	COE	Sol/Sol	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	115V AC 1.5VA
VS26S722DF213A	COE	Sol/Sol	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	24V DC 1.2W
VS26S722DF218A	COE	Sol/Sol	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	115V AC 1.5VA
VS26S722DF513A	COE	Sol/Sol	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Extended, push only	24V DC 1.2W
VS26S722DF518A	COE	Sol/Sol	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Extended, push only	115V AC 1.5VA

APB = All ports blocked
COE = Center open to exhaust

Valve Manifolds VS26 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2,

Size 26 mm

Valve part no. breakdown

VS26***DF***A

Spool technology	Substitute
Glandless spool & sleeve	G
Softseal spool	S
Guiding systems	Substitute
2x3/2 Normally closed 1)	A
2x3/2 Normally open 1)	B
2x3/2 Normally open/Normally closed 1)	C
2x2/2 Normally closed 1)	E
2x2/2 Normally open 1)	F
2x2/2 Normally open/Normally closed 1)	G
5/2	5
5/3 All ports blocked	6
5/3 Center open exhaust	7

1) Available with softseal spool only

Electrical details for solenoid operators

Voltage tolerances	(24V DC) +/- 10%
Voltage tolerances	(115V AC) +15%/-10%
Rating	100 % Continuous duty
Inlet orifice	0.8 mm
Indication	LED green
Surge suppression	Transil diode
Materials	PPS (body), Viton and NBR (seal)

Voltage	Substitute
24V DC 1.2W	13
115V AC 1.5VA	18

Manual override	Substitute
Push & turn	2
Push only	3
Extended, push only	5

Actuation/Pilot supply	Substitute
Solenoid/Spring	17
Internal pilot supply	
Solenoid/Spring	27
External pilot supply	
Solenoid/Solenoid	11
Internal pilot supply	
Solenoid/Solenoid	22
External pilot supply	

2) Available with glandless spool & sleeve only

Protection classification (IP Code)

All VS26 valve manifolds fulfill IP65 and NEMA4 ratings.

Power supply and precautions

All VS26 24 V d.c products are designed to be used with a protective extra low voltage (PELV) power supply.

All VS26 115 V a.c products correspond to the protection class I.

Connection of the protective earth (PE) ground is required.

ATEX

The 24 V d.c Multipole and Fieldbus valve manifolds fulfil the requirement of the standard 94/9/EC for intended use in hazardous locations.

Equipment group, category, type of protection:



The Declaration of Conformity of the valve islands was conducted by Electrosuisse, who issued number SEV 04 ATEX 0114 X.

Please review all ATEX data and notes in the maintenance and instruction booklet to eliminate any risks, allowing for safe function of the valve manifolds.

Valve Manifolds VS26 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 26 mm

Accessories

DIN EN 50 022 rail 3 ft (1 meter)



V10009-C00 35 x 7.5 mm
V10592-C01 35 x 15 mm

DIN-rail mounting kit



V70531-KA0

Blanking disc to modular sub-base



V70522-K00 (Ports 1, 3, 5)
V70523-K00 (Ports 12/14)

Manual override set-up kit



VS2672906-KG00

Extended manual override kit



VS2672960-KG00

Spare valve identification labels ¹⁾



VS2672905-KG00 (10 pcs)

Blanking plug for base connector hole ²⁾



VS2672914-KG00

¹⁾ When purchasing assembled valve manifolds from Norgren, valve identification labels are included.
²⁾ When V44/V45 valves are fitted on VS18 bases.

Base accessories

Intermediate supply/exhaust module



VS2672902-RG00 (NPTF1/4)
VS2672902-BG00 (G1/4)

Blanking plate



VS2672904-KG00

Replacement gauge



V70534-500

Pilot valves

Part no.	Description*	Voltage	Manual override
VS2672930-KG00	Pilot valve	24V DC 1.2W	Push only
VS2672932-KG00	Pilot valve	24V DC 1.2W	Push & turn
VS2672934-KG00	Pilot valve	24V DC 1.2W	Extended, push only
VS2672931-KG00	Pilot valve	115V AC 1.5VA	Push only
VS2672933-KG00	Pilot valve	115V AC 1.5VA	Push & turn
VS2672935-KG00	Pilot valve	115V AC 1.5VA	Extended, push only

* Kit includes screws, gasket and V-ring

Sandwich plates

Single pressure regulator



VS2672900-KG10 (port 1)
VS2672900-KG20 (port 2)
VS2672900-KG30 (port 4)

Double pressure regulator plate



VS2672900-KG40 (port 2+4)

Flow control plate



VS2672901-KG00 (ports 3+5)

Sandwich plate with additional port 1



VS2672929-KG00 (NPTF 1/4)
VS2672928-KG00 (G1/4)

Single valve shut-off plate



VS2672903-KG00 (port 1)

Sub-bases and end plates

Single station sub-base

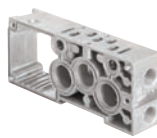


See page VAL-34

Double station modular sub-base

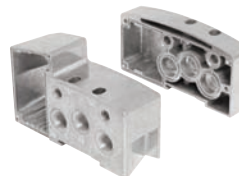


Single station modular sub-base



See page VAL-48 for additional information

End plate kit



Valve Manifolds VS26 Series

Plug-in Mini ISO Valves

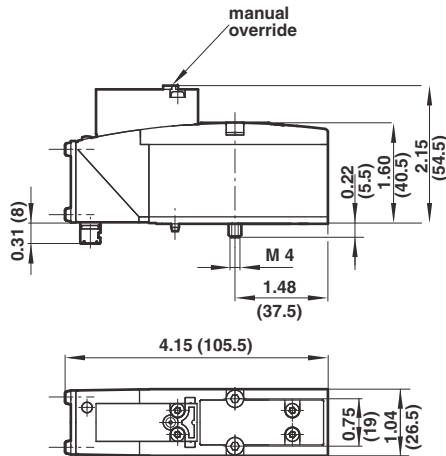
2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2,

Size 26 mm

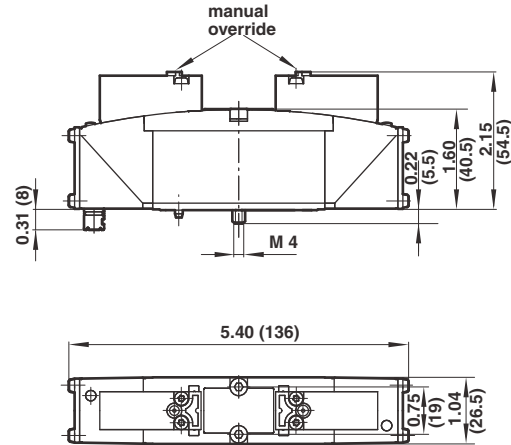
Dimensions in inches (mm)

Valve dimensions

VS26*5*7DF*1*A models
5/2 Single solenoid pilot valve
Mechanical spring return



VS26****DF*1*A models
2x2/2, 2x3/2, 5/2 and 5/3 Double solenoid pilot valve



Valve Manifolds VS26 Series

Plug-in Mini ISO Valves

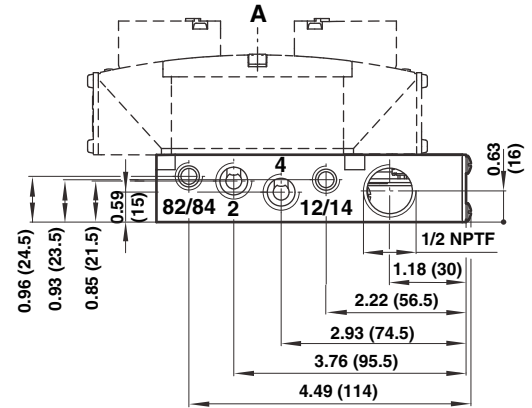
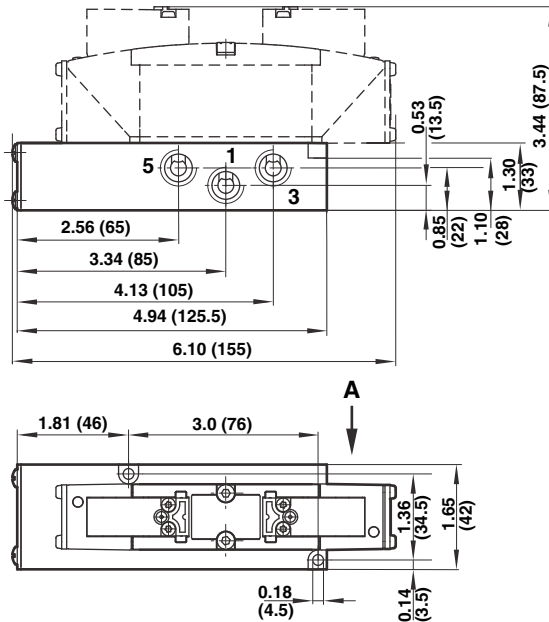
2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 26 mm

Dimensions in inches (mm)

Single station sub-base

Model	Description	Ports 1, 3 & 5	Ports 12/14 & 82/84	Ports 2 & 4	Connector type
VS2672510-RG00	Single station sub-base for 24V DC	NPTF1/4	NPTF1/8	NPTF1/4	M12
VS2672511-RG00	Single station sub-base for 24V DC and 115V AC	NPTF1/4	NPTF1/8	NPTF1/4	NPTF1/2 conduit
VS2672510-BG00	Single station sub-base for 24V DC	G1/4	G1/8	G1/4	M12

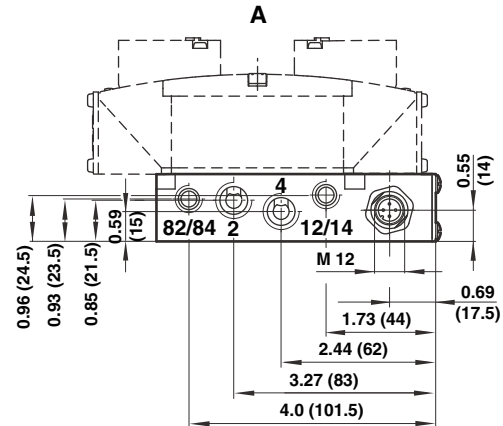
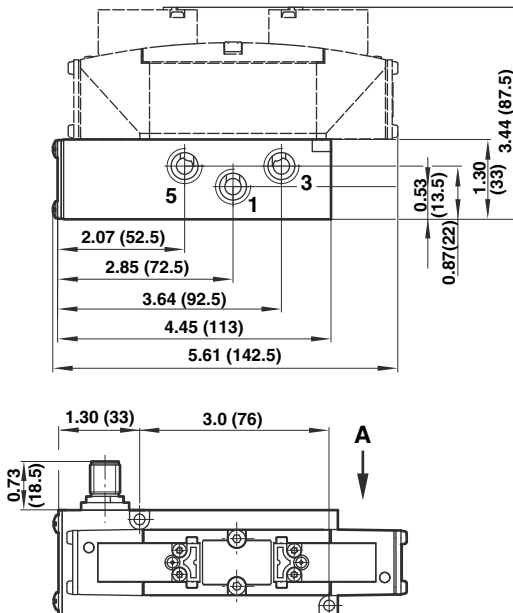
Connector type: NPTF1/2 Conduit with flying leads



Wiring information

Wire color	Function
Green	Earth
Yellow	Signal for solenoid 12
Black	Common for solenoid 12 and 14
Red	Signal for solenoid 14

Connector type: M12



Pin assignment (acc. VDMA 24571)

Pin no.	Function
1	not used
2	Signal for solenoid 12
3	Common for solenoid 12 and 14
4	Signal for solenoid 14



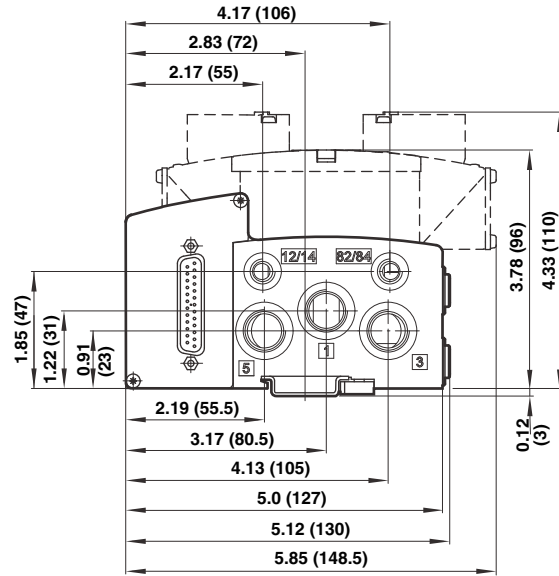
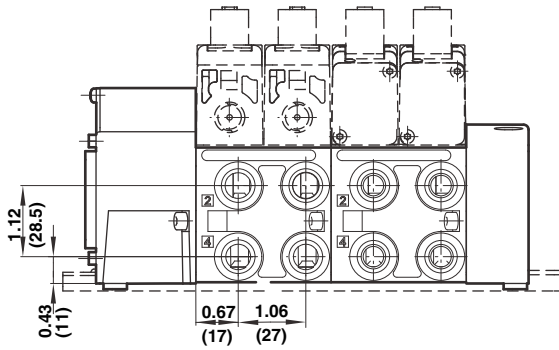
Valve Manifolds VS26 Series

Plug-in Mini ISO Valves

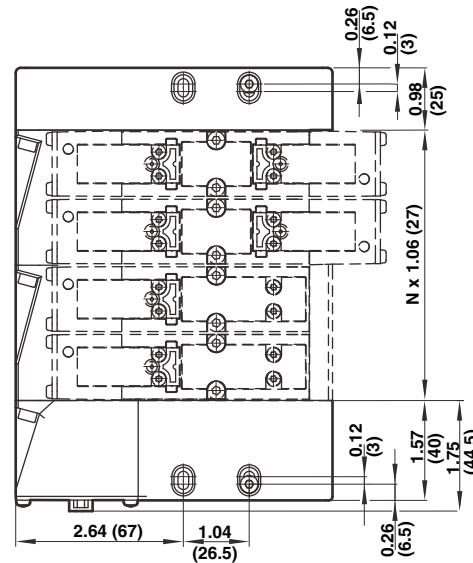
2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2,

Size 26 mm

Valve manifolds dimensions



Electrical connection	Min. no of valve stations	Max. no. of valve stations
Multipole	2	16
AS-Interface	2	8
Other Fieldbus protocols	4	16



N Number of station

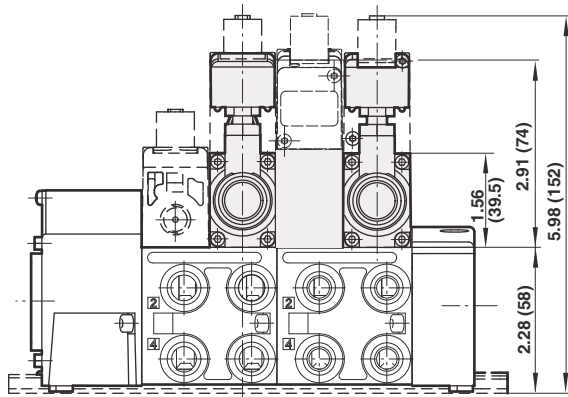
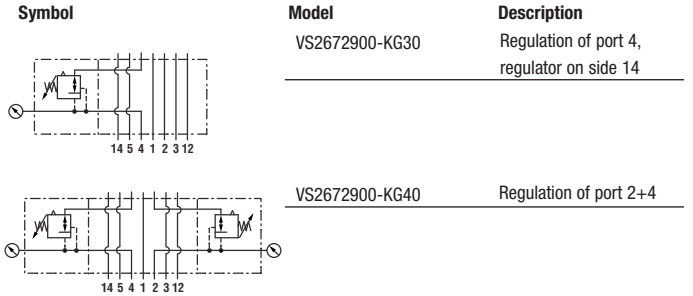
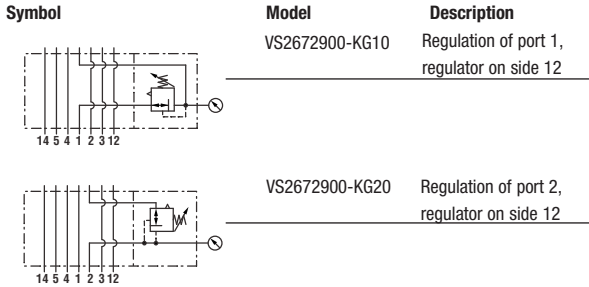
VALVES

Valve Manifolds VS26 Series

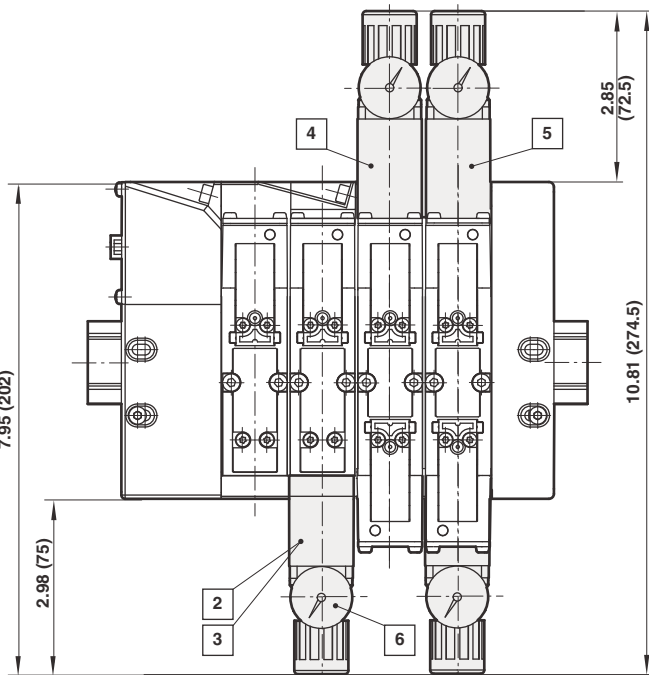
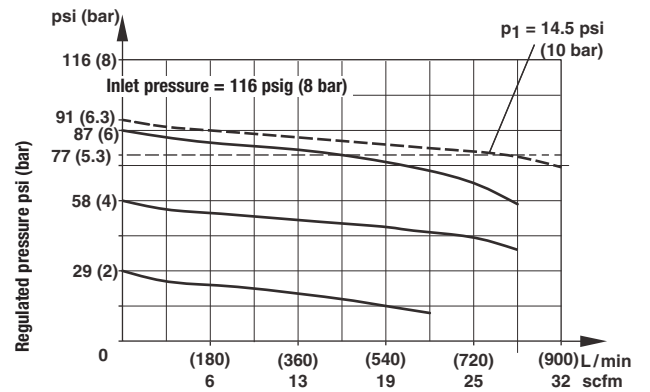
Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 26 mm

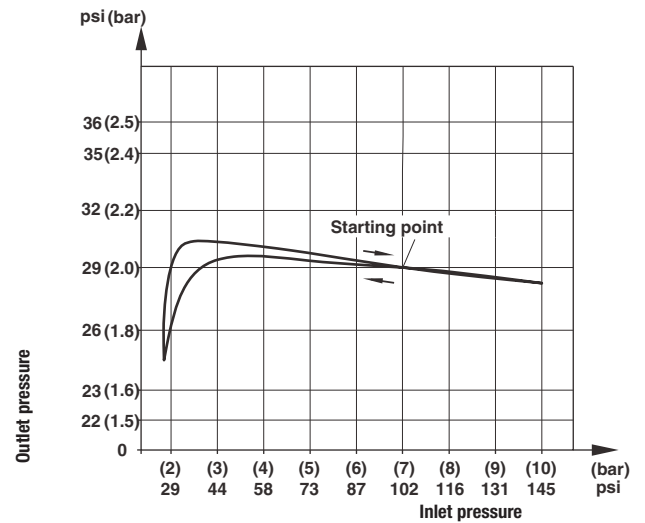
Pressure regulator sandwich plates



Flow characteristics for pressure regulator plates



Hysteresis



Gauge part number = V70534-500

- 2 Regulation of port 1
- 3 Regulation of port 2
- 4 Regulation of port 4
- 5 Regulation of port 2+4
- 6 Gauge

Valve Manifolds VS26 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2,

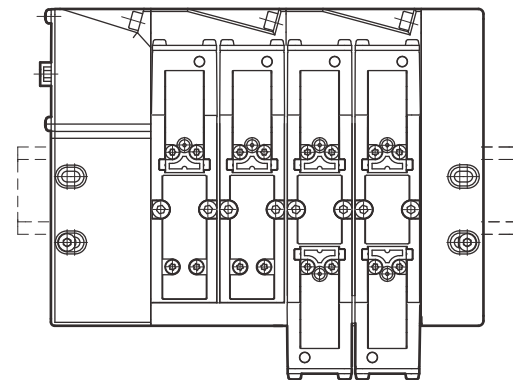
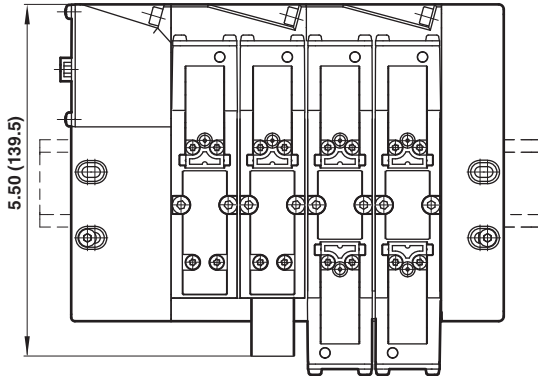
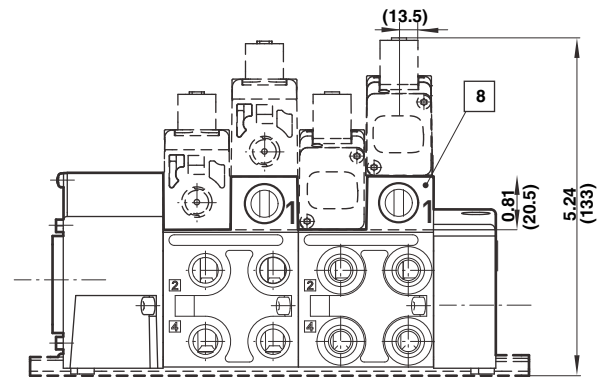
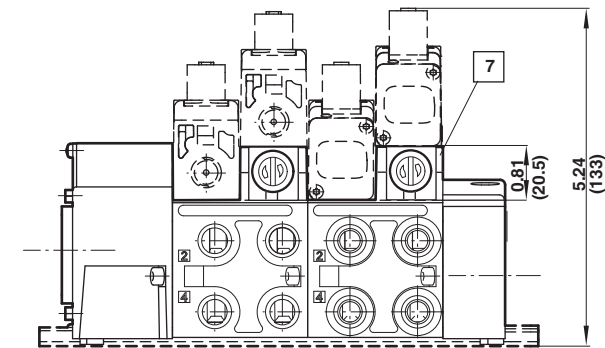
Size 26 mm

Flow control sandwich plate

Symbol	Model	Description
	VS2672901-KG00	Flow control supplied with gasket, dual regulation of exhaust ports 3 and 5

Sandwich plate with additional pressure port 1

Symbol	Model	Description
	VS1872928-KF00	Sandwich plate with additional pressure port 1 (G1/4), supplied with gasket
	VS1872929-KF00	Sandwich plate with additional pressure port 1 (NPTF1/4), supplied with gasket

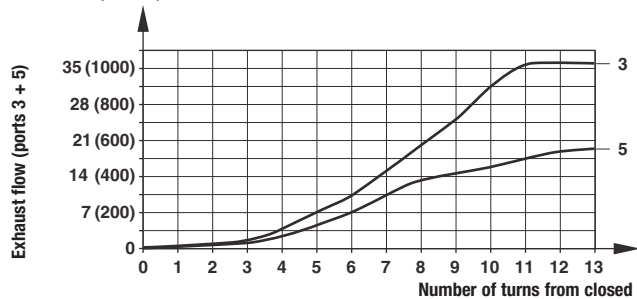


7 Flow regulator plate

8 Sandwich plate with additional pressure port 1

Flow characteristics

Dual regulation of exhaust ports 3 and 5
(L/min)



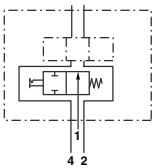
Flow: port 1-2 and 1-4: remains unchanged.
Flow measured at 87 psi (6 bar) inlet, pressure drop 14.5 psi (1 bar)

Valve Manifolds VS26 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 26 mm

Single valve shut-off plate

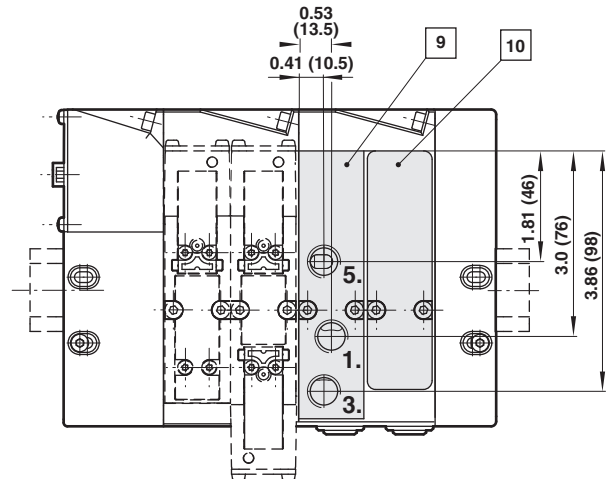
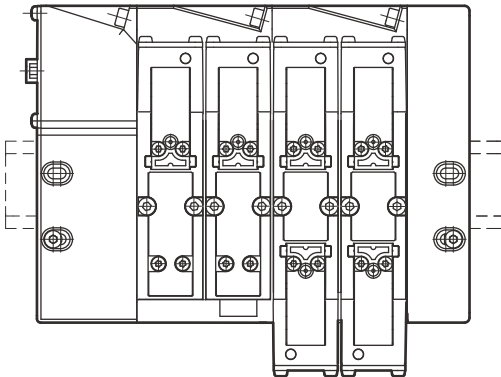
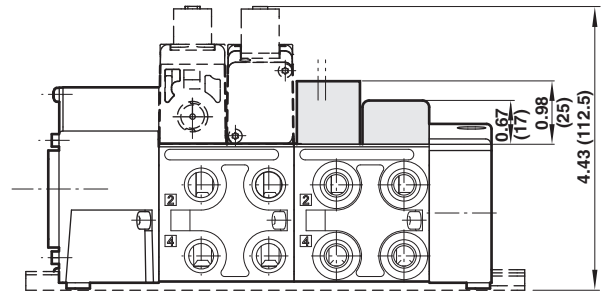
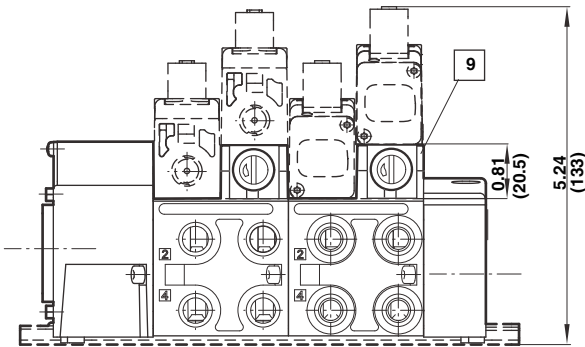
Symbol	Model	Description
	VS2672903-KG00	Single valve shut-off plate supplied with gasket

Allows individual exchange of valve while valve island is pressurised by port 1.

Flow restricted to max. Cv 0.56 (550 L/min.)

Base accessories

Model	Description
VS2672902-RG00	Intermediate supply/exhaust module, port size NPTF 1/4
VS2672902-BG00	Intermediate supply/exhaust module, port size G1/4
VS2672902-KG00	Blanking plate for blocking of unused station (supplied with gasket)



- 9** Single valve shut-off plate
- 10** Intermediate supply/exhaust module
- 11** Blanking plate

Valve Manifolds VS26 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2,

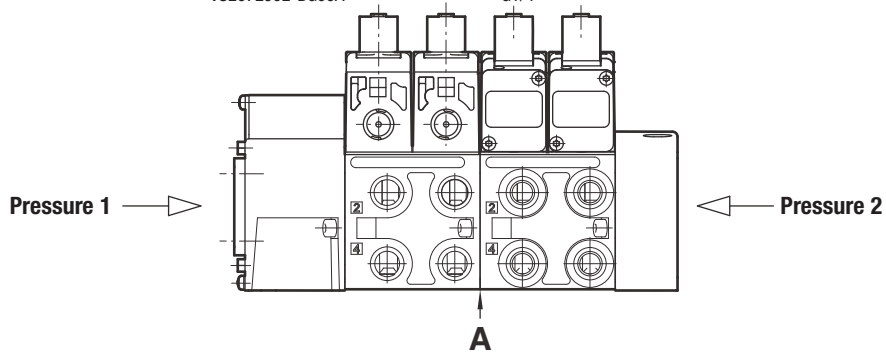
Size 26 mm

Multi pressure configurations

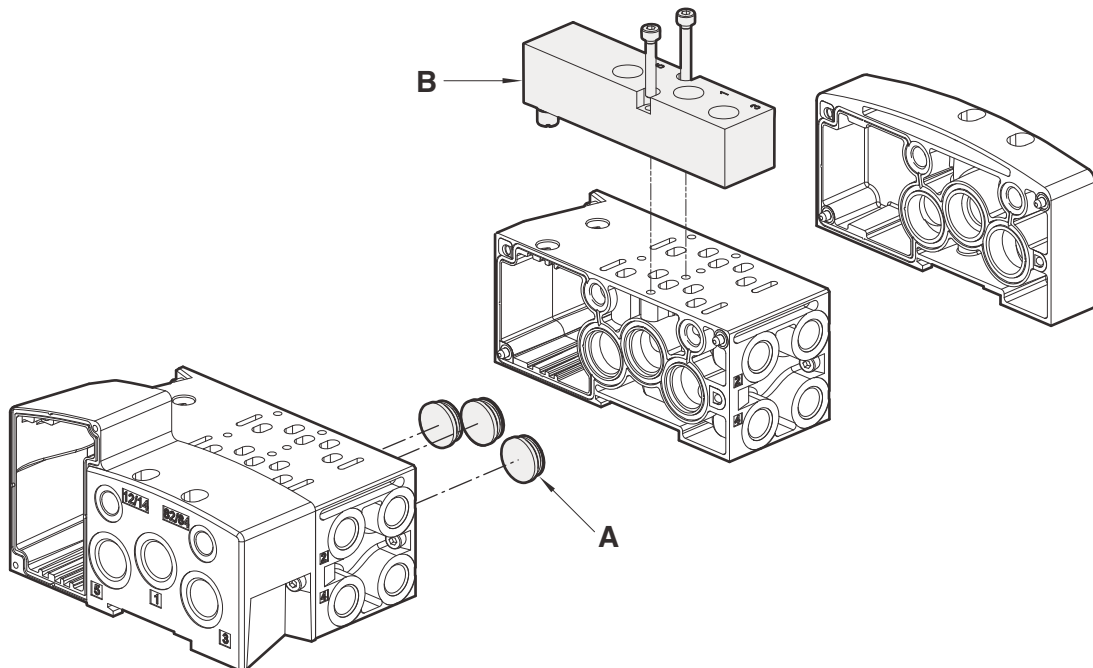
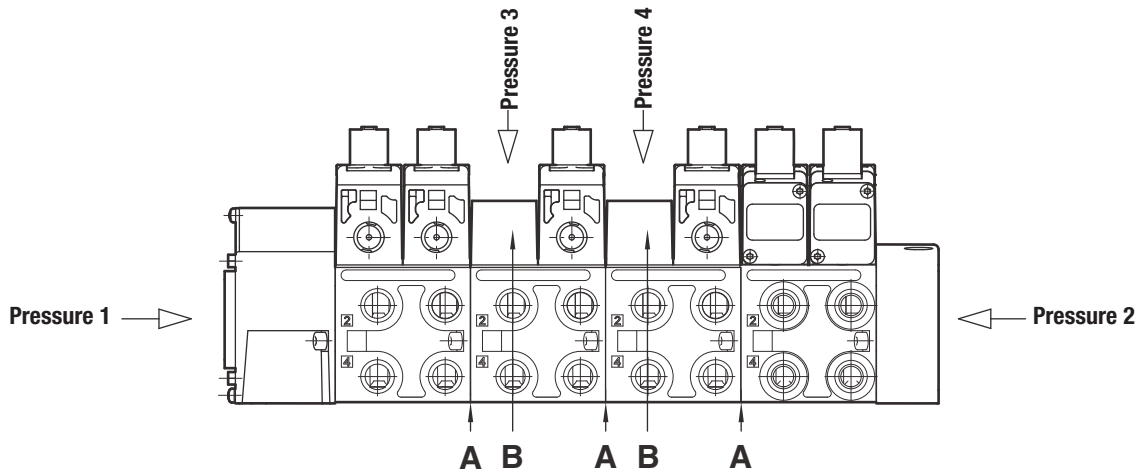
A	Type
Blanking disc	
V70522-K00	Suitable for ports 1, 3 or 5

B	Type
Intermediate supply/exhaust module	
VS2672902-RG00A	NPTF1/4
VS2672902-BG00A	G1/4

Dual pressure



Multi pressure



Valve Manifolds VS26 Series

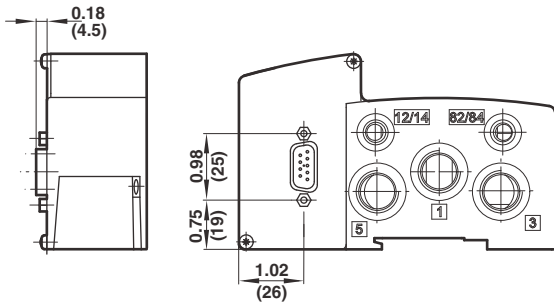
Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 26 mm

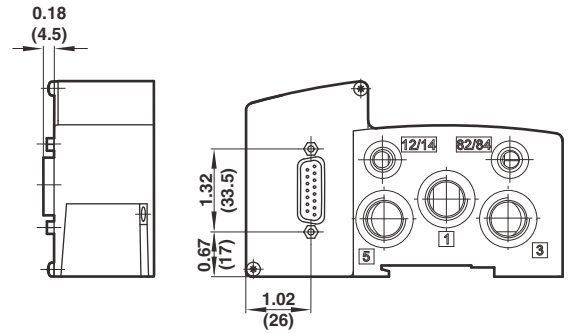
Multipole options

Connector type	Voltage	No. of stations	Max. no. coils
D-Sub 9-pin	24V DC	02/03/04	8
D-Sub 15-pin	24V DC	02/03/04/05/06/07	14
D-Sub 25-pin	24V DC	02/03/04/05/06/07/08/09/10/11/12	24
D-Sub 44-pin	24V DC	08/09/10/11/12/13/14/15/16	32
M23 19-pin	115 V AC, 24 V DC	02/03/04/05/06/07/08	16
NPTF1 Conduit entry with terminals	115V AC, 24V DC	02/03/04/05/06/07/08/09/10/11/12	24

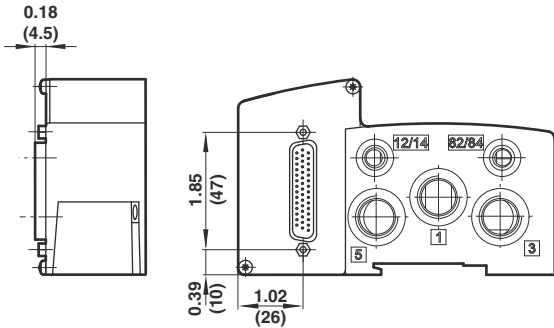
D-Sub 9-pin



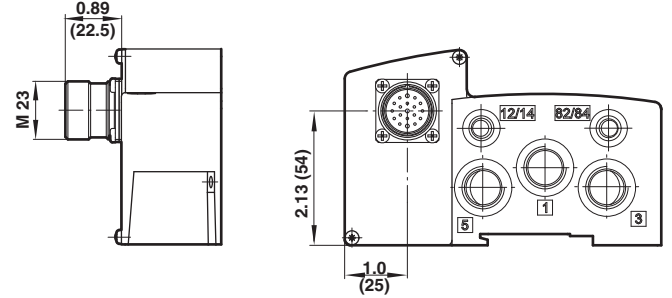
D-Sub 15-pin



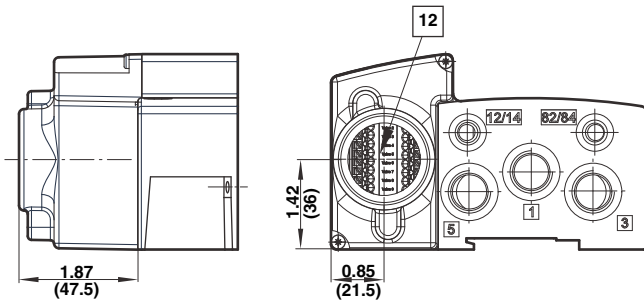
D-Sub 25-pin / 44-pin



M23 19-pin



NPTF1 Conduit entry with terminals



12 Max. wire size AWG18

Valve Manifolds VS26 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2,

Size 26 mm

Multipole accessories

D-Sub connector 9-pin IP65 1)



VS2672910-KG00	3' (1m)
VS2672911-KG00	10' (3m)
VS2672912-KG00	16' (5m)

D-Sub connector 15-pin IP65 1)



VS2672915-KG00	3' (1m)
VS2672916-KG00	10' (3m)
VS2672917-KG00	16' (5m)

D-Sub connector 25-pin IP65 1)



V11569-E01	3' (1m)
V11569-E03	10' (3m)
V11569-E05	16' (5m)

D-Sub connector 44-pin IP65 1)



V11570-E01	3' (1m)
V11570-E03	10' (3m)
V11570-E05	16' (5m)

M23 connector 19-pin IP65 1)



VS2672943-KG00	3' (1m)
VS2672944-KG00	10' (3m)
VS2672945-KG00	16' (5m)

1) Required for ATEX

D-Sub connector 9-pin^{A)}

Pin no.	Wire color	Socket	Pilot	Station
1	White	Solenoid 1-a	14	1
2	Brown	Solenoid 2-a	14	2
3	Green	Solenoid 3-a	14	3
4	Yellow	Solenoid 4-a	14	4
5	Grey	Solenoid 1-b	12	1
6	Pink	Solenoid 2-b	12	2
7	Blue	Solenoid 3-b	12	3
8	Red	Solenoid 4-b	12	4
9	Black	Common	-	-

D-Sub connector 25-pin^{A)}

Pin no.	Wire color	Socket	Pilot	Station
1	White	Solenoid 1-a	14	1
2	Brown	Solenoid 2-a	14	2
3	Green	Solenoid 3-a	14	3
4	Yellow	Solenoid 4-a	14	4
5	Grey	Solenoid 5-a	14	5
6	Pink	Solenoid 6-a	14	6
7	Blue	Solenoid 7-a	14	7
8	Red	Solenoid 8-a	14	8
9	Black	Solenoid 9-a	14	9
10	Violet	Solenoid 10-a	14	10
11	Grey/Pink	Solenoid 11-a	14	11
12	Red/Blue	Solenoid 12-a	14	12
13	White/Green	Common	-	-
14	Brown/Green	Solenoid 1-b	12	1
15	White/Yellow	Solenoid 2-b	12	2
16	Yellow/Brown	Solenoid 3-b	12	3
17	White/Grey	Solenoid 4-b	12	4
18	Grey/Brown	Solenoid 5-b	12	5
19	White/Pink	Solenoid 6-b	12	6
20	Pink/Brown	Solenoid 7-b	12	7
21	White/Blue	Solenoid 8-b	12	8
22	Brown/Blue	Solenoid 9-b	12	9
23	White/Red	Solenoid 10-b	12	10
24	Brown/Red	Solenoid 11-b	12	11
25	White/Black	Solenoid 12-b	12	12

D-Sub connector 15-pin^{A)}

Pin no.	Wire color	Socket	Pilot	Station
1	White	Solenoid 1-a	14	1
2	Brown	Solenoid 2-a	14	2
3	Green	Solenoid 3-a	14	3
4	Yellow	Solenoid 4-a	14	4
5	Grey	Solenoid 5-a	14	5
6	Pink	Solenoid 6-a	14	6
7	Blue	Solenoid 7-a	14	7
8	Red	Solenoid 1-b	12	1
9	Black	Solenoid 2-b	12	2
10	Violet	Solenoid 3-b	12	3
11	Grey/Pink	Solenoid 4-b	12	4
12	Red/Blue	Solenoid 5-b	12	5
13	White/Green	Solenoid 6-b	12	6
14	Brown/Green	Solenoid 7-b	12	7
15	White/Yellow	Common	-	-

A) According to DIN 47100

Valve Manifolds VS26 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 26 mm

D-Sub connector 44-pin

Pin no.	Wire color	Socket	Pilot	Station
1	white	Solenoid 1-a	14	1
2	brown	Solenoid 2-a	14	2
3	green	Solenoid 3-a	14	3
4	yellow	Solenoid 4-a	14	4
5	grey	Solenoid 5-a	14	5
6	pink	Solenoid 6-a	14	6
7	blue	Solenoid 7-a	14	7
8	red	Solenoid 8-a	14	8
9	black	Solenoid 9-a	14	9
10	violet	Solenoid 10-a	14	10
11	grey/pink	Solenoid 11-a	14	11
12	red/blue	Solenoid 12-a	14	12
13	white/green	Solenoid 13-a	14	13
14	brown/green	Solenoid 14-a	14	14
15	white/yellow	Solenoid 15-a	14	15
16	yellow/brown	Solenoid 1-b	12	1
17	white/grey	Solenoid 2-b	12	2
18	grey/brown	Solenoid 3-b	12	3
19	white/pink	Solenoid 4-b	12	4
20	pink/brown	Solenoid 5-b	12	5
21	white/blue	Solenoid 6-b	12	6
22	brown/blue	Solenoid 7-b	12	7
23	white/red	Solenoid 8-b	12	8
24	brown/red	Solenoid 9-b	12	9
25	white/black	Solenoid 10-b	12	10
26	brown/black	Solenoid 11-b	12	11
27	grey/green	Solenoid 12-b	12	12
28	yellow/grey	Solenoid 13-b	12	13
29	pink/green	Solenoid 14-b	12	14
30	yellow/pink	Solenoid 15-b	12	15
31	green/blue	Solenoid 16-a	14	16
32	yellow/blue	Solenoid 16-b	12	16
33	-	not used	-	-
34	-	not used	-	-
35	-	not used	-	-
36	-	not used	-	-
37	-	not used	-	-
38	-	not used	-	-
39	-	not used	-	-
40	-	not used	-	-
41	-	not used	-	-
42	-	not used	-	-
43	green/black	Common	-	-
44	yellow/black	Common	-	-

M23 connector 19-pin

Pin no.	Wire color	Socket	Pilot	Station
1	White	Solenoid 8-a	14	8
2	Brown (thin)	Solenoid 6-a	14	6
3	Green	Solenoid 4-a	14	4
4	Yellow	Solenoid 2-b	12	2
5	Grey	Solenoid 2-a	14	2
6	Blue (thick)	Common	-	-
7	Blue (thin)	Solenoid 1-b	12	1
8	Red	Solenoid 3-b	12	3
9	Black	Solenoid 5-b	12	5
10	Violet	Solenoid 7-b	12	7
11	Grey/Pink	Solenoid 7-a	14	7
12	Yellow/Green	Earth	-	-
13	White/Green	Solenoid 6-b	12	6
14	Brown/Green	Solenoid 4-b	12	4
15	White/Yellow	Solenoid 1-a	14	1
16	Yellow/Brown	Solenoid 3-a	14	3
17	Pink	Solenoid 5-a	14	5
18	Red/Blue	Solenoid 8-b	12	8
19	Brown (thick)	NOT USED	-	-

NPTF1 Conduit entry with terminals ²⁾

Clamp no.	Socket	Pilot	Station
C1	Solenoid 1-a	14	1
C2	Solenoid 2-a	14	2
C3	Solenoid 3-a	14	3
C4	Solenoid 4-a	14	4
C5	Solenoid 5-a	14	5
C6	Solenoid 6-a	14	6
C7	Solenoid 7-a	14	7
C8	Solenoid 8-a	14	8
C9	Solenoid 9-a	14	9
C10	Solenoid 10-a	14	10
C11	Solenoid 11-a	14	11
C12	Solenoid 12-a	14	12
C13	Solenoid 1-b	12	1
C14	Solenoid 2-b	12	2
C15	Solenoid 3-b	12	3
C16	Solenoid 4-b	12	4
C17	Solenoid 5-b	12	5
C18	Solenoid 6-b	12	6
C19	Solenoid 7-b	12	7
C20	Solenoid 8-b	12	8
C21	Solenoid 9-b	12	9
C22	Solenoid 10-b	12	10
C23	Solenoid 11-b	12	11
C24	Solenoid 12-b	12	12
C25	Common	-	-
C26	Common	-	-
C27	Earth	-	-
C28	Earth	-	-

²⁾ Max. wire size AWG18

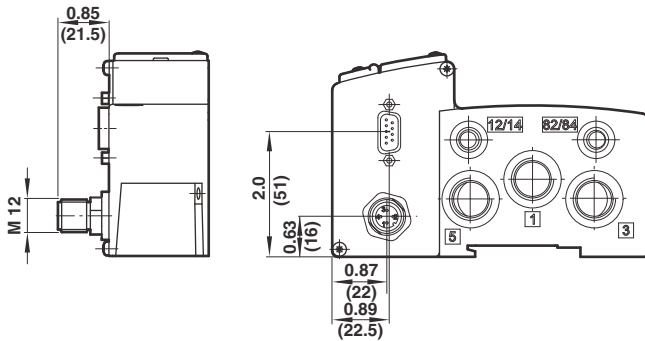
Fieldbus options: Overview

Fieldbus protocol	Fieldbus interface/connector	Supply voltage connector (Fieldbus and valves)	No. of stations	Max no. coils
Profibus DP	1 x D-Sub 9-pin	M12 4-pin	04/05/06/07/08/09/10/11/12/13/14/15/16	32
	2 x M12 5-pin	M12 4-pin	04/05/06/07/08/09/10/11/12/13/14/15/16	32
Interbus-S	2 x M12 5-pin	7/8 5-pin	04/05/06/07/08/09/10/11/12/13/14/15/16	32
	2 x D-Sub 9-pin	M12 4-pin	04/05/06/07/08/09/10/11/12/13/14/15/16	32
AS-Interface - Single slave	1 x M12 4-pin	M12 4-pin	02/03/04	4
AS-Interface - Double slave	1 x M12 4-pin	M12 4-pin	04/05/06/07/08	8
DeviceNet	1 x M12 5-pin	M12 4-pin	04/05/06/07/08/09/10/11/12/13/14/15/16	32
CANopen	1 x M12 5-pin	M12 4-pin	04/05/06/07/08/09/10/11/12/13/14/15/16	32
AB RIO	2 x M12 5-pin	M12 4-pin	04/05/06/07/08/09/10/11/12/13/14/15/16	32

For parts and assembly instructions of Fieldbus components, consult our technical service.

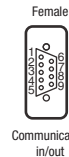
Fieldbus protocol: Profibus DP

Connector: 1 x D-Sub 9-pin / M12 4-pin



Bus connector: D-Sub 9-pin

Pin no.	Function
1	Shield
2	N/C
3	B-line (red) RxD / TxD-P
4	N/C
5	DGND (OVI) isolated
6	VP (5VI) isolated
7	N/C
8	A-line (green) RxD / TxD-N
9	N/C

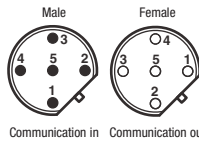
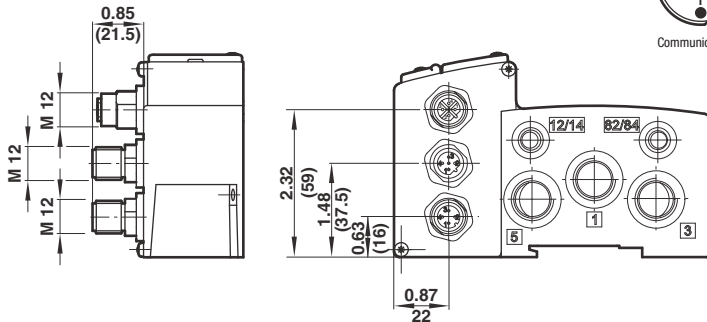


Power connector: M12 4-pin

Pin no.	Function	Tolerance	Max. current
1	24 VB logic circuit supply	+/-25%	300 mA
2	24 VA valves	+/-10%	1)
3	0 volts	-	2)
4	Earth	-	-



Connector: 2 x M12 5-pin / M12 4-pin



Bus connector: M12 5-pin (B-coded)

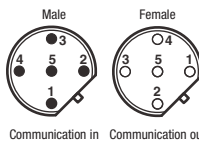
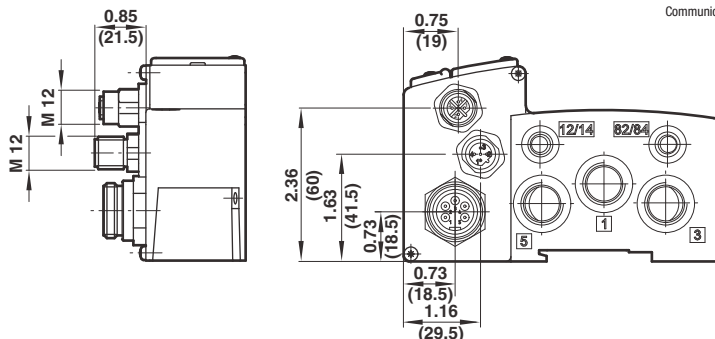
Pin no.	Function
1	5VI opto isolated
2	A-line (green)
3	OVI isolated
4	B-line (red)
5	Shield
Threaded joint	Shield

Power connector: M12 4-pin

Pin no.	Function	Tolerance	Max current
1	24 VB logic circuit supply	+/-25%	300 mA
2	24 VA valves 1)	+/-10%	-
3	0 volts 2)	-	-
4	Earth	-	-



Connector: 2 x M12 5-pin / 7/8 5-pin

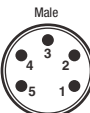


Bus connector: M12 5-pin (B-coded)

Pin no.	Function
1	5VI isolated
2	A-line (green)
3	OVI isolated
4	B-line (red)
5	Shield
Threaded joint	Shield

Power connector: 7/8 5-pin

Pin no.	Function	Tolerance	Max. current
1	-	-	-
2	0 volts	-	2)
3	Earth	-	-
4	24 VA valves	+/-10%	1)
5	24 VB logic circuit supply	+/-25%	300 mA



1) $I_{max} = 10 \text{ mA} + n \cdot 60 \text{ mA}$
 $n = \text{number of energized solenoids}$
 2) $I_{max} = I_{VA} + I_{VB}$

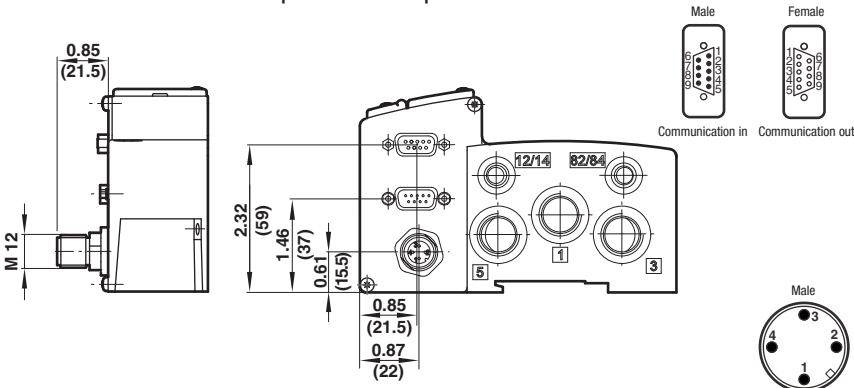
Valve Manifolds VS26 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2, Size 26 mm

Fieldbus protocol: Interbus-S

Connector: 2 x D-Sub 9-pin / M12 4-pin



Bus connector: D-Sub 9-pin

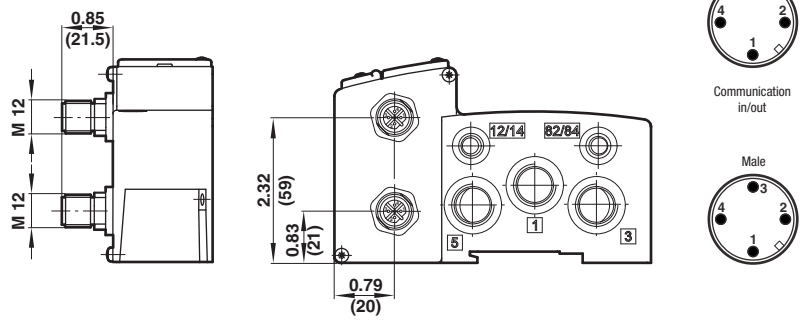
Pin no.	Function Male	Function Female
1	DO	DO
2	DI	DI
3	OVI	OVI
4	-	-
5	-	+5VI
6	/DO	/DO
7	/DI	/DI
8	-	-
9	-	RBST

Power connector: M12 4-pin

Pin no.	Function	Tolerance	Max. current
1	24 VB logic circuit supply	+/-25%	300 mA
2	24 VA valves	+/-10%	1)
3	0 volts	-	2)
4	Earth	-	-

Fieldbus protocol: AS-Interface

Connector: 1 x M12 / M12 4-pin



Bus connector: M12 4-pin

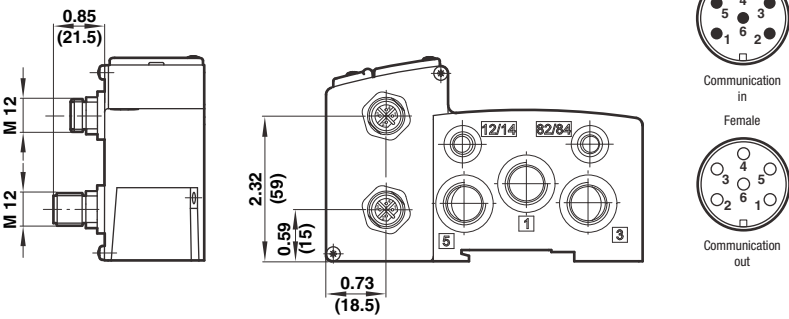
Pin no.	Function	Max. current
1	AS-I	3)
2	-	-
3	AS-I	-
4	-	-

Power connector: M12 4-pin

Pin no.	Function	Tolerance	Max. current
1	+24 V DC	+/-10%	4)
2	-	-	-
3	0 volts	-	-
4	-	-	-

Fieldbus protocol: FD67 bus

Connector: 2 x M12 6-pin (power connector integrated in bus connectors)



Bus connector: M12 6-pin

Pin no.	Function	Tolerance	Max. current
1	24 V actuator supply	±10%	5)
2	24 V sensor supply/internal supply	±25%	30 mA
3	Ground	-	-
4	Internal system connection	-	-
5	Internal system connection	-	-
6	Ground	-	-

- 1) $I_{max} = 10 \text{ mA} + n \cdot 60 \text{ mA}$
n = number of energized solenoids
- 2) $I_{max} = I_{VA} + I_{VB}$
- 3) Single slave: 40 mA
Double slave: 75 mA
- 4) Single slave:
 $I_{max} = 20 \text{ mA} + n \cdot 60 \text{ mA}$
Double slave:
 $I_{max} = 35 \text{ mA} + n \cdot 60 \text{ mA}$
n = number of energized solenoids
- 5) $I_{max} = n \cdot 60 \text{ mA}$
n = number of energized solenoids

Valve Manifolds VS26 Series

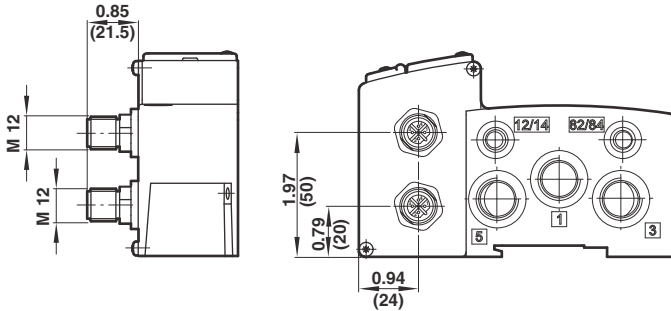
Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2,

Size 26 mm

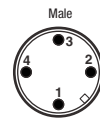
Fieldbus protocol: DeviceNet

Connector: 1 x M12 5-pin / M12 4-pin



Bus connector: M12 5-pin (A-coded)

Pin no.	Function
1	Drain
2	V+ ³⁾
3	V- ³⁾
4	CAN_H
5	CAN_L

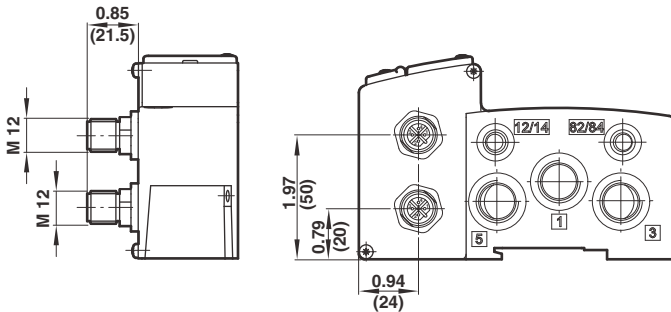


Power connector: M12 4-pin

Pin no.	Function	Tolerance	Max. current
1	24 VB logic circuit supply	+/-25%	300 mA
2	24 VA valves	+/-10%	1)
3	0 volts	-	2)
4	Earth	-	

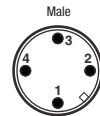
Fieldbus protocol: CANopen

Connector: 1 x M12 5-pin / M12 4-pin



Bus connector: M12 5-pin (A-coded)

Pin no.	Function
1	Drain
2	V+ ³⁾
3	V- ³⁾
4	CAN_H
5	CAN_L



Power connector: M12 4-pin

Pin no.	Function	Tolerance	Max. current
1	24 VB logic circuit supply	+/-25%	300 mA
2	24 VA valves	+/-10%	1)
3	0 volts	-	2)
4	Earth	-	

1) $I_{max} = 10 \text{ mA} + n \cdot 60 \text{ mA}$

n = number of energized solenoids

2) $I_{max} = I_{VA} + I_{VB}$

3) Must be galvanic isolated to 24 VA valves.

Fieldbus accessories

Symbol	Model	Description	Connection	Cable length	Protection class
Fieldbus power connector 	V11588-E01	Profibus DP (4-pin, female) Interbus-S (4-pin, female) DeviceNet (4-pin, female) CANopen (4-pin, female)	M12	Wireable	IP65 Required for ATEX
	FD6760R5S75010	Profibus DP (5-pin, female)	7/8	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
Communication cable and connector					
	FD6710H5S75S10	DeviceNet (5-pin, female) CANopen (5-pin, female)	M12	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
	FD6710D5S75S10	DeviceNet (5-pin, male) CANopen (5-pin, female)	M12	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
	FD6710G5S75S10	Profibus DP, reverse keyway (5-pin, female)	M12	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
	V11591-E01	Profibus DP, reverse keyway (5-pin, male)	M12	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
	V11654-E01	Profibus DP connector (9-pin, male) with terminating resistor	D-Sub	Wireable	IP40
	FD67L FD67L FD67K FD67N	DeviceNet CANopen Profibus System	M12	—	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
	VE1ASCN1-M1200	AS-Interface power or communications (4-pin, female)	M12	Wireable	IP65 Required for ATEX
	VE2FBC9P-9S010 VE2FBC9P-9S030 VE2FBC9P-9S050	Interbus-S (9-pin)	D-Sub	1m 3m 5m	IP65 Required for ATEX
	VE2FBC9P-00000	Interbus-S (9-pin, male)	D-Sub	Wireable	IP65 Required for ATEX
	VE2FBC9S-00000	Interbus-S (9-pin, female)	D-Sub	Wireable	IP65 Required for ATEX
	V11340-E03	Interbus-S terminating connector (9-pin, male)	D-Sub	—	IP65 Required for ATEX

Valve Manifolds VS26 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2,

Size 26 mm

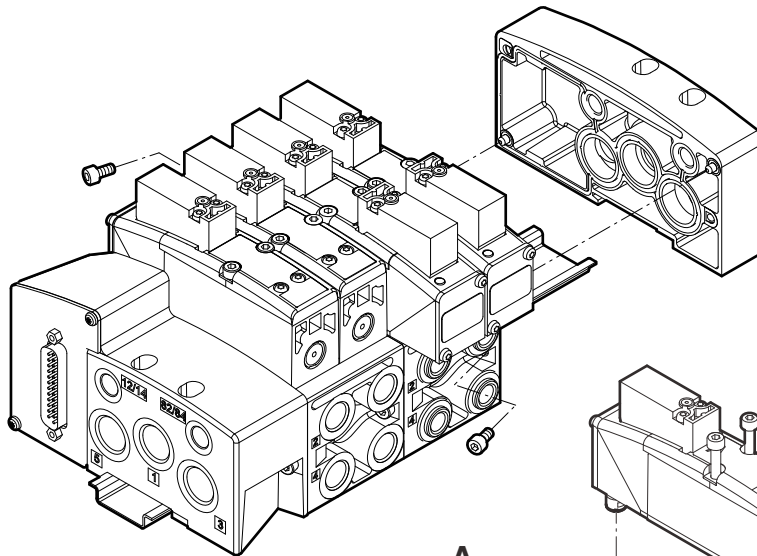
A – Single add-on stations

including PCB, sub-base, gasket and screws

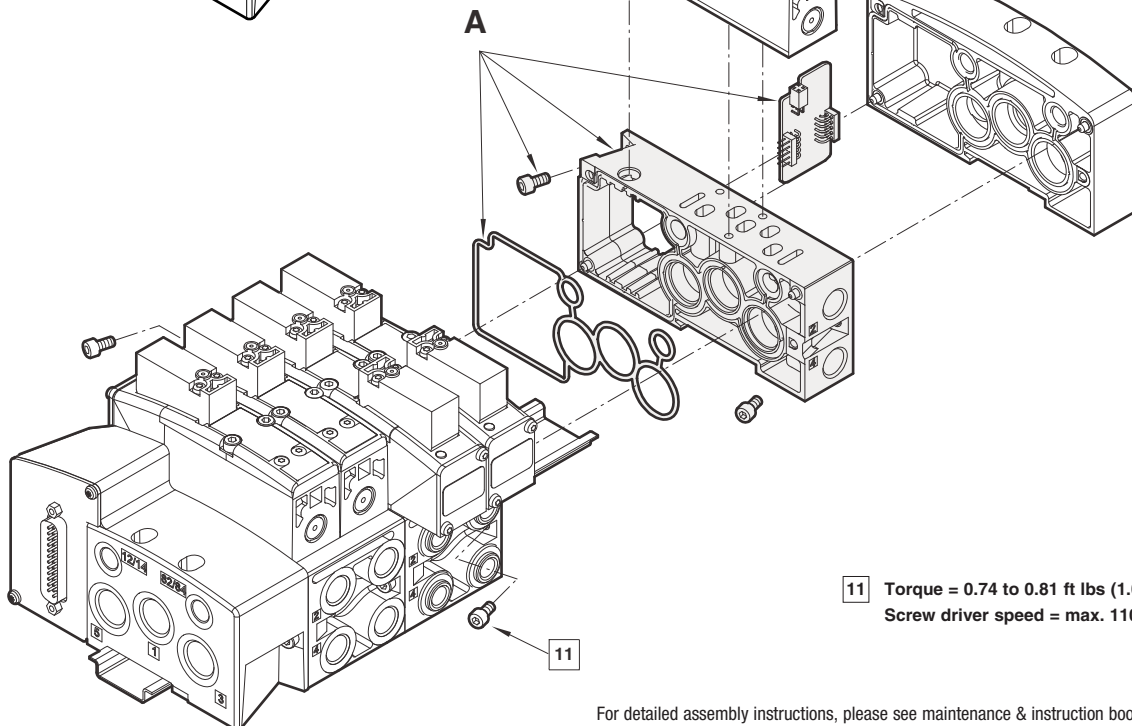
Model	Description	Ports 2 & 4
VS2672504-BGF0	Add-on station for D-Sub connectors and Fieldbus	G1/4
VS2672504-RGF0	Add-on station for D-Sub connectors and Fieldbus	NPTF 1/4
VS2672504-YGF0	Add-on station for D-Sub connectors and Fieldbus	PIF 10 mm
VS2672504-8GF0	Add-on station for D-Sub connectors and Fieldbus	PIF 8 mm
VS2672504-2GF0	Add-on station for D-Sub connectors and Fieldbus	PIF 3/8
VS2672505-BGF0	Add-on station for Conduit entry and M23 connector	G1/4
VS2672505-RGF0	Add-on station for Conduit entry and M23 connector	NPTF 1/4
VS2672505-YGF0	Add-on station for Conduit entry and M23 connector	PIF 10 mm
VS2672505-8GF0	Add-on station for Conduit entry and M23 connector	PIF 8 mm
VS2672505-2GF0	Add-on station for Conduit entry and M23 connector	PIF 3/8

VALVES

Step 1



Step 2



11 Torque = 0.74 to 0.81 ft lbs (1.0 - 1.1 Nm)
Screw driver speed = max. 1100 r.p.m.

For detailed assembly instructions, please see maintenance & instruction booklet!

Valve Manifolds VS26 Series

Sub-bases and end plates (without PCB's)
includes screws and gaskets

A – End plate kit

Model	Description	Ports 1, 3 & 5	Ports 12/14 & 82/84
VS2672500-CGCO	End plate kit for Multipole	G3/8	G1/8
VS2672500-SGCO	End plate kit for Multipole	NPTF3/8	NPTF 1/8
VS2672501-CGCO	End plate kit for Fieldbus	G3/8	G1/8
VS2672501-SGCO	End plate kit for Fieldbus	NPTF3/8	NPTF 1/8

B – Double station modular sub-base

Model	Ports 2 & 4
VS2672502-BGFO	G1/4
VS2672502-RGFO	NPTF 1/4
VS2672502-YGFO	PIF 10 mm
VS2672502-8GFO	PIF 8 mm
VS2672502-2GFO	PIF 3/8

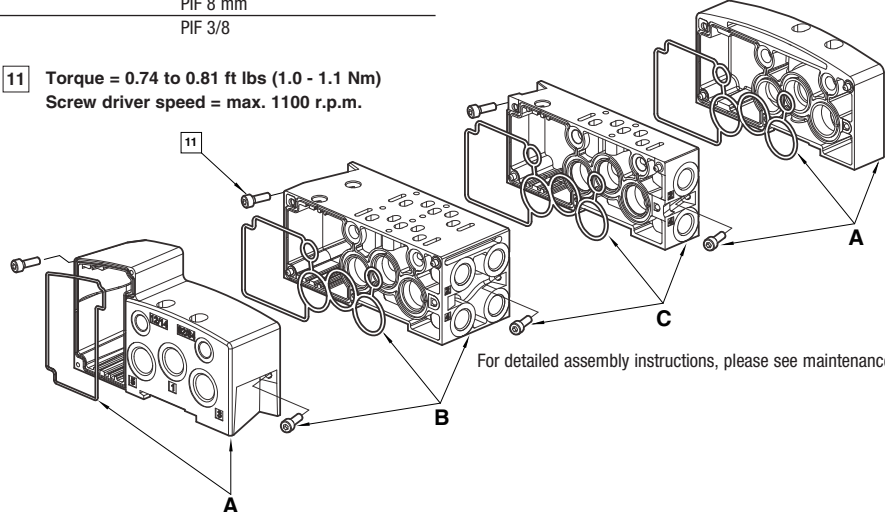
C – Single station modular sub-base

Model	Ports 2 & 4
VS2672503-BGFO	G1/4
VS2672503-RGFO	NPTF 1/4
VS2672503-YGFO	PIF 10 mm
VS2672503-8GFO	PIF 8 mm
VS2672503-2GFO	PIF 3/8

Spare parts

Model	Description	Quantity per slice
77.31106	Hexagon socket screw M4x12	2
94.00815	Gasket	1
94.00816	Connector-kit gasket on end plate	1

11 Torque = 0.74 to 0.81 ft lbs (1.0 - 1.1 Nm)
Screw driver speed = max. 1100 r.p.m.



For detailed assembly instructions, please see maintenance & instruction booklet!

Multipole components

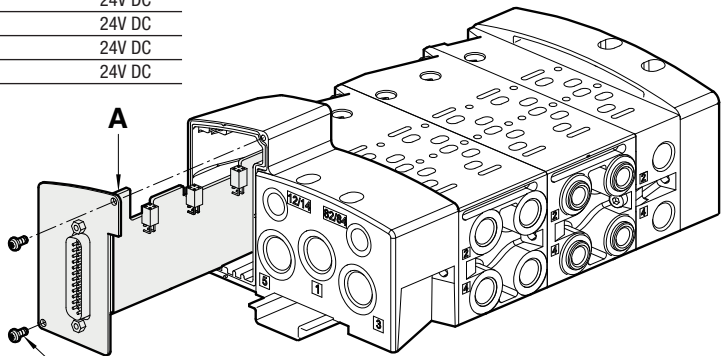
A – Output boards with D-Sub connectors

Model	Connector type	Description	Expandable to max. x no. of stations ¹⁾	Voltage
VS2672717-KG00	D-Sub 9-pin	Multipole PCB 2 stations	4	24V DC
VS2672718-KG00	D-Sub 15-pin	Multipole PCB 2 stations	6	24V DC
VS2672705-KG00	D-Sub 15-pin	Multipole PCB 4 stations	7	24V DC
VS2672719-KG00	D-Sub 25-pin	Multipole PCB 2 stations	6	24V DC
VS2672700-KG00	D-Sub 25-pin	Multipole PCB 4 stations	8	24V DC
VS2672701-KG00	D-Sub 25-pin	Multipole PCB 6 stations	10	24V DC
VS2672702-KG00	D-Sub 25-pin	Multipole PCB 8 stations	12	24V DC
VS2672703-KG00	D-Sub 44-pin	Multipole PCB 8 stations	12	24V DC
VS2672706-KG00	D-Sub 44-pin	Multipole PCB 10 stations	14	24V DC
VS2672704-KG00	D-Sub 44-pin	Multipole PCB 12 stations	16	24V DC

Expansion output boards for D-Sub connectors

Model	Description	Voltage
VS2672755-KG00	Multipole PCB 1 station	24V DC
VS2672713-KG00	Multipole PCB 2 stations	24V DC

¹⁾ By using below expansion output boards.



13 Torque = 0.59 to 0.66 (0.8 - 0.9 Nm)
Screw driver speed = max. 1100 r.p.m.

For detailed assembly instructions, please see maintenance & instruction booklet!

Valve Manifolds VS26 Series

Plug-in Mini ISO Valves

2x2/2, 2x3/2, 5/2 and 5/3 valves, ISO 15407-2,

Size 26 mm

Multipole components

A - Connector-kit for conduit entry

Model	Description	Voltage
VS2672742-KG00	E-Connector-kit NPTF1 Conduit entry	115V AC, 24V DC

C - Connector-kit for M23 connector

Model	Description	Voltage
VS2672743-KG00	E-Connector-kit M23 connector 19-pin	115V AC, 24V DC

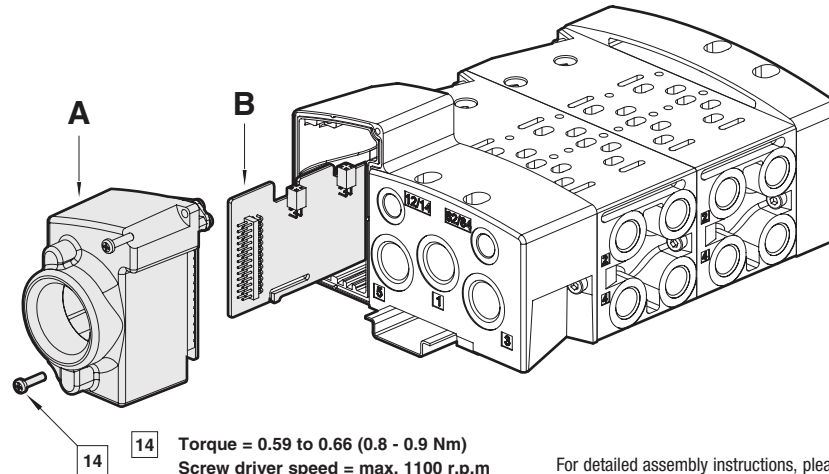
Expansion output boards for conduit entry

Model	Description	Voltage
VS2672756-KG00	Multipole PCB 1 station	115V AC, 24V DC
VS2672715-KG00	Multipole PCB 2 stations	115V AC, 24V DC

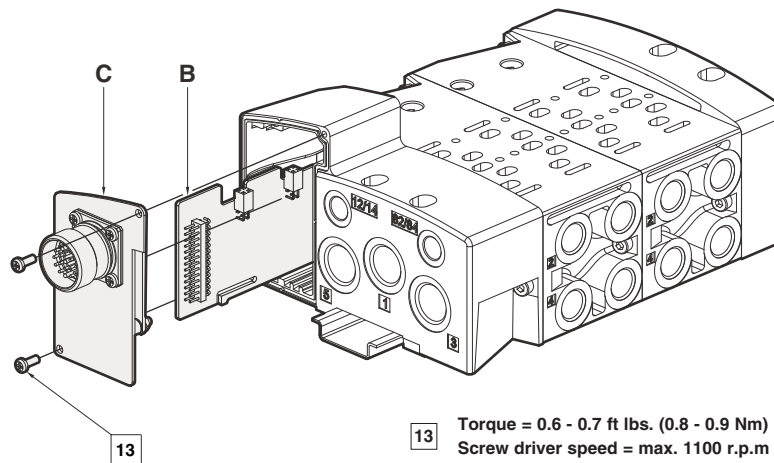
B - Output boards for conduit entry and M23 connector

Model	Description	Expandable to max. x no. of stations ¹⁾	Voltage
VS2672708-KG00	Multipole PCB 2 stations	6 (M23 only)	115V AC, 24V DC
VS2672709-KG00	Multipole PCB 4 stations	8 (M23 only)	115V AC, 24V DC
VS2672710-KG00	Multipole PCB 6 stations	10	115V AC, 24V DC
VS2672711-KG00	Multipole PCB 8 stations	12	115V AC, 24V DC

¹⁾ By using below expansion output boards.



For detailed assembly instructions, please see maintenance & instruction booklet!



For detailed assembly instructions, please see maintenance & instruction booklet!

Valve Manifolds VS45 Series

2x3/2, 5/2 and 5/3 valves

Size 45 mm

24V DC or 115V AC Multipole

Integrated Fieldbus

Field expandable with single add-on stations

Dual spool technology

VS45G Glandless spool and sleeve for long life

VS45S Softseal spool for high flow

Wide range of accessories

Universal PNP/NPN 24V DC Multipole

Technical data

Medium

Compressed air, filtered to 40 µm, lubricated or non-lubricated

Operation

VS45G: Glandless spool valve, solenoid pilot actuated

VS45S: Softseal spool valve, solenoid pilot actuated

Mounting

Sub-base

Ports 2+4

3/8 NPTF, 1/2 NPTF and 3/4 NPTF

3/8 ISO G, 1/2 ISO G and 3/4 ISO G

Operating pressure

Maximum pressure

145 psi (10 bar) VS45S models and VS45G solenoid pilot actuated valves with internal pilot supply, 232 psi (16 bar) VS45G solenoid pilot actuated valves with external pilot supply

Details of minimum and maximum pilot pressure see overleaf.

Flow characteristics

Series	Function	Cv	l/min
VS45G	5/2	3.2	3200
VS45G	5/3	2.9	2900
VS45S	2x3/2	3.9	3900
VS45S	5/2	4.2	4200
VS45S	5/3	3.7	3700

Ambient temperature

5°F to 122°F (-15°C to +50°C)

Medium temperature

23°F to 122°F (-5°C to +50°C)

Consult our technical service for use below 35°F (+2°C).

Materials

Body/sub-base: die-cast aluminum

Glandless spool & sleeve (VS45G): aluminum, hard anodized, teflon coated

Softseal spool (VS45S): aluminum with HNBR seals

Plastic parts: POM, PA, PPA, TPE, PBT

Mounting sheets/screws: steel, zinc coated

Springs: stainless steel

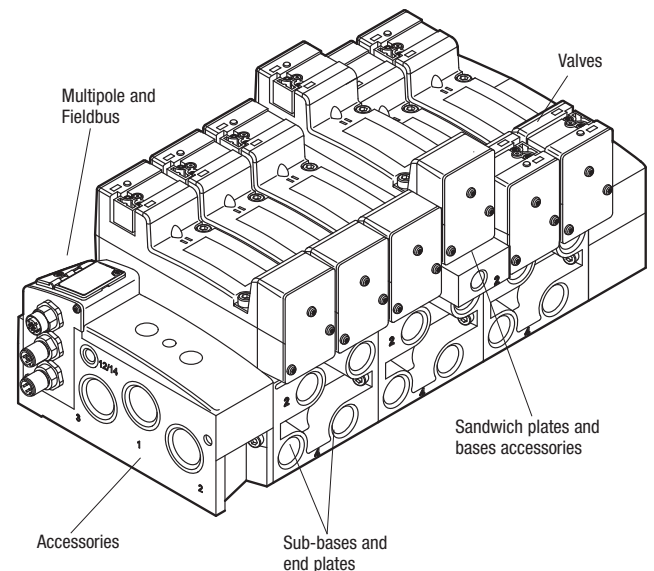
Sandwich plates: aluminum bar material

Electrical contacts: brass, tin/gold coated

PCB: glass reinforced epoxy



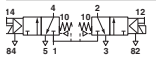
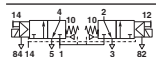
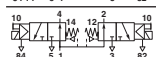
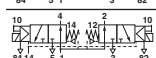
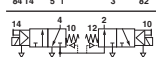
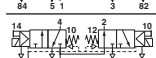
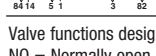



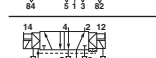
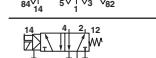
To order please use valve manifold configurator available at www.norgren.com/usa.



Valve Manifolds VS45 Series

Size 45 mm 2x3/2, 5/2 and 5/3 valves,

Plug-in connection, solenoid pilot actuated valves 2x3/2 Double Solenoid, NC/NC, NO/NO, or NC/NO

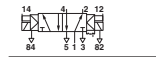
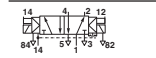
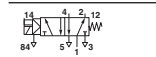
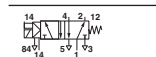

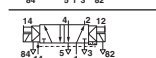
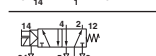
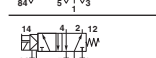


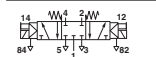
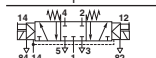

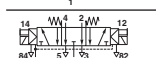
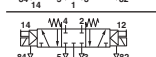
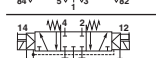
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 VS45SA11DF313A	Softseal	NC or COE	Sol/Spring	3.9	Internal	-	44 to 145 (3 to 10)	Push only	24V DC 1.2W
 VS45SA11DF213A	Softseal	NC or COE	Sol/Spring	3.9	Internal	-	44 to 145 (3 to 10)	Push & turn	24V DC 1.2W
 VS45SA22DF313A	Softseal	NC or COE	Sol/Spring	3.9	External	25 + (0.6 x op. press.)	0 to 145 (0 to 10)	Push only	24V DC 1.2W
 VS45SA22DF213A	Softseal	NC or COE	Sol/Spring	3.9	External	25 + (0.6 x op. press.)	0 to 145 (0 to 10)	Push & turn	24V DC 1.2W
 VS45SB11DF313A	Softseal	NO or COP	Sol/Spring	3.9	Internal	-	44 to 145 (3 to 10)	Push only	24V DC 1.2W
 VS45SB11DF213A	Softseal	NO or COP	Sol/Spring	3.9	Internal	-	44 to 145 (3 to 10)	Push & turn	24V DC 1.2W
 VS45SB22DF313A	Softseal	NO or COP	Sol/Spring	3.9	External	25 + (0.6 x op. press.)	0 to 145 (0 to 10)	Push only	24V DC 1.2W
 VS45SB22DF213A	Softseal	NO or COP	Sol/Spring	3.9	External	25 + (0.6 x op. press.)	0 to 145 (0 to 10)	Push & turn	24V DC 1.2W
 VS45SC11DF313A	Softseal	NO/NC	Sol/Spring	3.9	Internal	-	44 to 145 (3 to 10)	Push only	24V DC 1.2W
 VS45SC11DF213A	Softseal	NO/NC	Sol/Spring	3.9	Internal	-	44 to 145 (3 to 10)	Push & turn	24V DC 1.2W
 VS45SC22DF313A	Softseal	NO/NC	Sol/Spring	3.9	External	25 + (0.6 x op. press.)	0 to 145 (0 to 10)	Push only	24V DC 1.2W
 VS45SC22DF213A	Softseal	NO/NC	Sol/Spring	3.9	External	25 + (0.6 x op. press.)	0 to 145 (0 to 10)	Push & turn	24V DC 1.2W

Valve functions designations

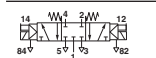
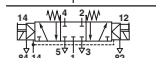


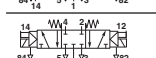
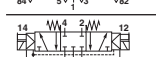
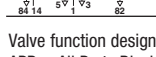

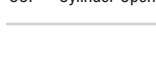


NO = Normally open
NC = Normally closed

COE = Cylinder Open Exhaust
COP = Cylinder Open Pressure

5/2 Single and Double Solenoid

Model	Spool technology	Function	Actuation	Cv	Pilot supply	Pilot pressure psi (bar)	Operating pressure psi (bar)	Manual override	Voltage
 VS45G511DF313A	Glandless	5/2	Sol/Sol	3.2	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
 VS45G511DF213A	Glandless	5/2	Sol/Sol	3.2	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
 VS45G522DF313A	Glandless	5/2	Sol/Sol	3.2	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	24V DC 1.2W
 VS45G522DF213A	Glandless	5/2	Sol/Sol	3.2	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	24V DC 1.2W
 VS45G517DF313A	Glandless	5/2	Sol/Spring	3.2	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
 VS45G517DF213A	Glandless	5/2	Sol/Spring	3.2	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
 VS45G527DF313A	Glandless	5/2	Sol/Spring	3.2	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	24V DC 1.2W
 VS45G527DF213A	Glandless	5/2	Sol/Spring	3.2	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	24V DC 1.2W
 VS45S511DF313A	Softseal	5/2	Sol/Sol	4.2	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
 VS45S511DF213A	Softseal	5/2	Sol/Sol	4.2	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
 VS45S522DF313A	Softseal	5/2	Sol/Sol	4.2	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
 VS45S522DF213A	Softseal	5/2	Sol/Sol	4.2	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	24V DC 1.2W
 VS45S517DF313A	Softseal	5/2	Sol/Spring	4.2	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
 VS45S517DF213A	Softseal	5/2	Sol/Spring	4.2	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
 VS45S527DF313A	Softseal	5/2	Sol/Spring	4.2	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
 VS45S527DF213A	Softseal	5/2	Sol/Spring	4.2	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	24V DC 1.2W

5/3 Double Solenoid, APB and COE

Model	Spool technology	Function 5/3	Actuation	Cv	Pilot supply	Pilot pressure psi (bar)	Operating pressure psi (bar)	Manual override	Voltage
 VS45G611DF313A	Glandless	APB	Sol/Sol	2.9	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
 VS45G611DF213A	Glandless	APB	Sol/Sol	2.9	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
 VS45G622DF313A	Glandless	APB	Sol/Sol	2.9	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	24V DC 1.2W
 VS45G622DF213A	Glandless	APB	Sol/Sol	2.9	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	24V DC 1.2W
 VS45G711DF313A	Glandless	COE	Sol/Sol	2.9	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
 VS45G711DF213A	Glandless	COE	Sol/Sol	2.9	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
 VS45G722DF313A	Glandless	COE	Sol/Sol	2.9	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	24V DC 1.2W
 VS45G722DF213A	Glandless	COE	Sol/Sol	2.9	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	24V DC 1.2W
 VS45S611DF313A	Softseal	APB	Sol/Sol	3.7	Internal	-	36 to 145 (2.5 to 10)	Push only	24V DC 1.2W
 VS45S611DF213A	Softseal	APB	Sol/Sol	3.7	Internal	-	36 to 145 (2.5 to 10)	Push & turn	24V DC 1.2W
 VS45S622DF313A	Softseal	APB	Sol/Sol	3.7	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
VS45S622DF213A	Softseal	APB	Sol/Sol	3.7	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	24V DC 1.2W

Valve function designations:

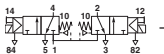
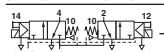

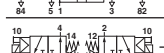
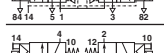


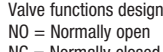




APB = All Ports Blocked
COE = Cylinders Open Exhaust
COP = Cylinder Open Pressure

Valve Manifolds VS45 Series

Size 45 mm 2x3/2, 5/2 and 5/3 valves

Non-plug-in solenoid pilot actuated valves

2x3/2 Double Solenoid, NC/NC, NO/NO, or NC/NO

Model	Spool technology	Function 2 x 3/2	Actuation	Cv	Pilot supply	Pilot pressure psi	Operating pressure psi (bar)	Manual override	Voltage
 VS45SA11DC3**†	Softseal	NC or COE	Sol/Spring	3.9	Internal	-	44 to 145 (3 to 10)	Push only	24V DC 1.2W
 VS45SA11DC2**†	Softseal	NC or COE	Sol/Spring	3.9	Internal	-	44 to 145 (3 to 10)	Push & turn	24V DC 1.2W
 VS45SA22DC3**†	Softseal	NC or COE	Sol/Spring	3.9	External	25 + (0.6 x op. press.)	0 to 145 (0 to 10)	Push only	24V DC 1.2W
 VS45SA22DC2**†	Softseal	NC or COE	Sol/Spring	3.9	External	25 + (0.6 x op. press.)	0 to 145 (0 to 10)	Push & turn	24V DC 1.2W
 VS45SB11DC3**†	Softseal	NO or COP	Sol/Spring	3.9	Internal	-	44 to 145 (3 to 10)	Push only	24V DC 1.2W
 VS45SB11DC2**†	Softseal	NO or COP	Sol/Spring	3.9	Internal	-	44 to 145 (3 to 10)	Push & turn	24V DC 1.2W
 VS45SB22DC3**†	Softseal	NO or COP	Sol/Spring	3.9	External	25 + (0.6 x op. press.)	0 to 145 (0 to 10)	Push only	24V DC 1.2W
 VS45SB22DC2**†	Softseal	NO or COP	Sol/Spring	3.9	External	25 + (0.6 x op. press.)	0 to 145 (0 to 10)	Push & turn	24V DC 1.2W
 VS45SC11DC3**†	Softseal	NO/NC	Sol/Spring	3.9	Internal	-	44 to 145 (3 to 10)	Push only	24V DC 1.2W
 VS45SC11DC2**†	Softseal	NO/NC	Sol/Spring	3.9	Internal	-	44 to 145 (3 to 10)	Push & turn	24V DC 1.2W
 VS45SC22DC3**†	Softseal	NO/NC	Sol/Spring	3.9	External	25 + (0.6 x op. press.)	0 to 145 (0 to 10)	Push only	24V DC 1.2W
 VS45SC22DC2**†	Softseal	NO/NC	Sol/Spring	3.9	External	25 + (0.6 x op. press.)	0 to 145 (0 to 10)	Push & turn	24V DC 1.2W

Valve functions designations

NO = Normally open
NC = Normally closed

COE = Cylinder Open Exhaust
COP = Cylinder Open Pressure

5/2 Single and Double Solenoid

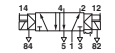
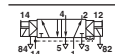
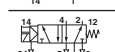
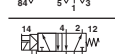
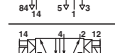
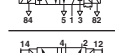
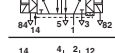
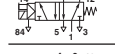
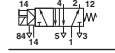




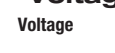
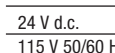
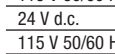
Model	Spool technology	Function	Actuation	Cv	Pilot supply	Pilot pressure psi (bar)	Operating pressure psi (bar)	Manual override	Voltage
 VS45G511DC3**†	Glandless	5/2	Sol/Sol	3.2	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
 VS45G511DC2**†	Glandless	5/2	Sol/Sol	3.2	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
 VS45G522DC3**†	Glandless	5/2	Sol/Sol	3.2	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	24V DC 1.2W
 VS45G522DC2**†	Glandless	5/2	Sol/Sol	3.2	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	24V DC 1.2W
 VS45G517DC3**†	Glandless	5/2	Sol/Spring	3.2	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
 VS45G517DC2**†	Glandless	5/2	Sol/Spring	3.2	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
 VS45G527DC3**†	Glandless	5/2	Sol/Spring	3.2	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	24V DC 1.2W
 VS45G527DC2**†	Glandless	5/2	Sol/Spring	3.2	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	24V DC 1.2W
 VS45S511DC3**†	Softseal	5/2	Sol/Sol	4.2	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
 VS45S511DC2**†	Softseal	5/2	Sol/Sol	4.2	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
 VS45S522DC3**†	Softseal	5/2	Sol/Sol	4.2	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
 VS45S522DC2**†	Softseal	5/2	Sol/Sol	4.2	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	24V DC 1.2W
 VS45S517DC3**†	Softseal	5/2	Sol/Spring	4.2	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
 VS45S517DC2**†	Softseal	5/2	Sol/Spring	4.2	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
 VS45S527DC3**†	Softseal	5/2	Sol/Spring	4.2	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
 VS45S527DC2**†	Softseal	5/2	Sol/Spring	4.2	External	29 to 145 (2 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	24V DC 1.2W

Table 1
**Voltage Codes and Spare Pilot Valves

Voltage	Code	Manual Override	Power Inrush / Hold	Pilot Valve Part-no.
24 V d.c.	13	Push & turn	1.2W	VS45DC213-KG00
115 V 50/60 Hz	18	Push & turn	2.1 / 1.5 VA	VS45DC218-KG00
24 V d.c.	13	Push only	1.2W	VS45DC313-KG00
115 V 50/60 Hz	18	Push only	2.1 / 1.5 VA	VS45DC318-KG00

Other voltages available on request.

Spare pilot valves are delivered with mounting screws.

Table 2
†Connector Codes and Part Number

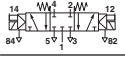
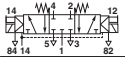
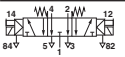
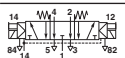
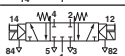
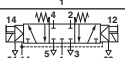
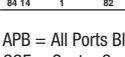
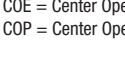

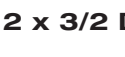
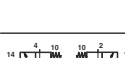
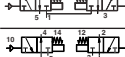
Code	Part Number
A = Solenoid without connector	
B = Cable grip	V10027-D00
C = 10 ft. molded cable, 0-240 VAC/VDC	V10013-D03
H = Cable grip w/indicator light, 24 VAC/VDC	V10012-D13
J = Cable grip w/indicator light, 120 VAC/VDC	V10012-D18
5 = 10 ft. molded cable with indicator light, surge suppression, 24 VAC/VDC	V10014-D03
6 = 10 ft. molded cable with indicator light, 110V/50 Hz-120V.60Hz	V10015-D03

Valve Manifolds VS45 Series

Size 45 mm 2x3/2, 5/2 and 5/3 valves,

Non-plug-in solenoid pilot actuated valves

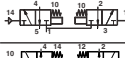


5/3 Double Solenoid, APB and COE

Model	Spool technology	Function	Actuation	Cv	Pilot supply	Pilot pressure psi (bar)	Operating pressure psi (bar)	Manual override	Voltage
 VS45G611DC3**†	Glandless	APB	Sol/Sol	2.9	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
 VS45G611DC2**†	Glandless	APB	Sol/Sol	2.9	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
 VS45G622DC3**†	Glandless	APB	Sol/Sol	2.9	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	24V DC 1.2W
 VS45G622DC2**†	Glandless	APB	Sol/Sol	2.9	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	24V DC 1.2W
 VS45G711DC3**†	Glandless	COE	Sol/Sol	2.9	Internal	-	29 to 145 (2 to 10)	Push only	24V DC 1.2W
 VS45G711DC2**†	Glandless	COE	Sol/Sol	2.9	Internal	-	29 to 145 (2 to 10)	Push & turn	24V DC 1.2W
 VS45G722DC3**†	Glandless	COE	Sol/Sol	2.9	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push only	24V DC 1.2W
 VS45G722DC2**†	Glandless	COE	Sol/Sol	2.9	External	29 to 145 (2 to 10)	26" Hg to 232 (-0.9 to 16)	Push & turn	24V DC 1.2W
 VS45S611DC3**†	Softseal	APB	Sol/Sol	3.7	Internal	-	36 to 145 (2.5 to 10)	Push only	24V DC 1.2W
 VS45S611DC2**†	Softseal	APB	Sol/Sol	3.7	Internal	-	36 to 145 (2.5 to 10)	Push & turn	24V DC 1.2W
 VS45S622DC3**†	Softseal	APB	Sol/Sol	3.7	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Push only	24V DC 1.2W
 VS45S622DC2**†	Softseal	APB	Sol/Sol	3.7	External	36 to 145 (2.5 to 10)	26" Hg to 145 (-0.9 to 10)	Push & turn	24V DC 1.2W

APB = All Ports Blocked
COE = Center Open Exhaust
COP = Center Open Pressure


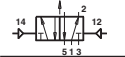


Non-plug-in air pilot actuated valves

2 x 3/2 Double Solenoid, NC/NC, NO/NO, or NC/NO

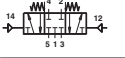
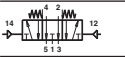
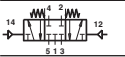
Model	Spool technology	Function 2 x 3/2	Actuation	Cv	Pilot supply	Pilot pressure psi	Operating pressure psi (bar)
 VS45SADDAX900A	Softseal	NC or COE	Air Pilot/air pilot	3.9	External	25 + (0.6 x op. press.)	44 to 145 (3 to 10)
 VS45SBDDAX900A	Softseal	NO or COP	Air Pilot/air pilot	3.9	External	25 + (0.6 x op. press.)	44 to 145 (3 to 10)
 VS45SCDDAX900A	Softseal	NO/NC	Air Pilot/air pilot	3.9	External	25 + (0.6 x op. press.)	44 to 145 (3 to 10)

Valve functions designations
NO = Normally Open
NC = Normally Closed
COE = Cylinder Open Exhaust
COP = Cylinder Open Pressure

5/2 Single and Double Solenoid

Model	Spool technology	Function	Actuation	Cv	Pilot supply	Pilot pressure psi (bar)	Operating pressure psi (bar)
 VS45G5D7AX900A	Glandless	5/2	Air Pilot/spring	3.2	External	29 to 145 (2 to 10)	23 to 145 (1.6 to 10)
 VS45S5D7AX900A	Softseal	5/2	Air Pilot/spring	4.2	External	29 to 145 (2 to 10)	29 to 145 (2 to 10)
 VS45G5DDAX900A	Glandless	5/2	Air Pilot/air pilot	3.2	External	29 to 145 (2 to 10)	29 to 145 (2 to 10)
 VS45S5DDAX900A	Softseal	5/2	Air Pilot/air pilot	4.2	External	29 to 145 (2 to 10)	29 to 145 (2 to 10)

5/3 Double Solenoid, APB and COE

Model	Spool technology	Function 5/3	Actuation	Cv	Pilot supply	Pilot pressure psi (bar)	Operating pressure psi (bar)
 VS45G6DDAX900A	Glandless	APB	Air Pilot/air pilot	2.9	External	29 to 145 (2 to 10)	29 to 145 (2 to 10)
 VS45G7DDAX900A	Glandless	COE	Air Pilot/air pilot	2.9	External	29 to 145 (2 to 10)	29 to 145 (2 to 10)
 VS45S6DDAX900A	Softseal	APB	Air Pilot/air pilot	3.7	External	36 to 145 (2 to 10)	36 to 145 (2.5 to 10)

APB = All Ports Blocked
COE = Center Open Exhaust
COP = Center Open Pressure

Valve Manifolds VS45 Series

Size 45 mm 2x3/2, 5/2 and 5/3 valves

Valve part number breakdown

VS45*****A

Spool technology	Substitute
Glandless spool & sleeve	G
Softseal spool	S
Guiding systems	Substitute
2x3/2 Normally closed or Cylinder Open Exhaust	A*
2x3/2 Normally open or Cylinder Open Pressure	B*
2x3/2 Normally open/Normally closed	C*
5/2	5
5/3 All ports blocked	6
5/3 Cylinder open exhaust	7**

* Available with softseal spool only
 ** Available with glandless spool only

Voltage	Substitute
110/120 VAC	18
24V DC 1.2W	13
Air pilot	00
Manual override	Substitute
Push & turn	2
Push only	3
Extended, push only†	5
Air pilot 5/32 PIF	9
Connection	Substitute
Plug in	DF
Non Plug-in	DC
Non plug-in air pilot	AX
Actuation/Pilot supply	Substitute
Solenoid/Spring	17
Internal pilot supply	
Solenoid/Spring	27
External pilot supply	
Solenoid/Solenoid	11
Internal pilot supply	
Solenoid/Solenoid	22
External pilot supply	
Air/Spring	D7
Air/Air	DD

†Available with plug-in valves only

Electrical details for solenoid operators

Voltage tolerances	(24V DC) +/- 10%
Rating	100 % Continuous duty
Inlet orifice	0.8 mm
Indication	LED green
Surge suppression	Transil diode
Materials	PPS (body), Viton and NBR (seal)

Protection classification (IP Code)

All VS45 valve manifolds fulfill IP65 and NEMA4 ratings.

Power supply and precautions

All VS45 24 V d.c products are designed to be used with a protective extra low voltage (PELV) power supply.

All VS45 115 V a.c products correspond to the protection class I. Connection of the protective earth (PE) ground is required.

Valve Manifolds VS45 Series

Size 45 mm

Accessories

Blanking disc to modular sub-base



V40414-K00 (Ports 1, 3, 5)

D-sub connector 25-pin IP65



V11569-E01 3' (1m)
V11569-E03 10' (3m)
V11569-E05 16' (5m)

D-sub connector 44-pin IP65



V11570-E01 3' (1m)
V11570-E03 10' (3m)
V11570-E05 16' (5m)



Replacement Solenoids

Plug-in replacement solenoids

Pilot valves Part no.	Description*	Voltage	Manual override Plug-in
VS45DF313-KG00	Pilot valve	24V DC 1.2W	Push only
VS45DF213-KG00	Pilot valve	24V DC 1.2W	Push & turn
VS45DF513-KG00	Pilot valve	24V DC 1.2W	Extended, push only

* Kit includes screws, gasket and V-ring

Intermediate supply/exhaust module



G 1/2 VS4540416-BG00

1/2 NPTF VS4540416-RG00

Blanking plate



VS4540415-KG00

Replacement gauge



18-013-212



Non plug-in replacement solenoids

Pilot valves Part no.	Description*	Voltage	Manual override Non-Plug-in
VS45DC313-KG00	Pilot valve	24V DC 1.2W	Push only
VS45DC213-KG00	Pilot valve	24V DC 1.2W	Push & turn
VS45DC318-KG00	Pilot valve	120/120 Vac	Push only
VS45DC218-KG00	Pilot valve	120/120 Vac	Push & turn

Single pressure regulator



VS4540410-KG10

Double pressure regulator plate



VS4540410-KG40

Flow control plate



VS4540408-KG00



Air pilot replacement operator

Air Pilot Part no.	Description*	Voltage	Manual override Non-Plug-in
VS45AX900-KG00	Pilot	na	na

* Kit includes screws, gasket and V-ring

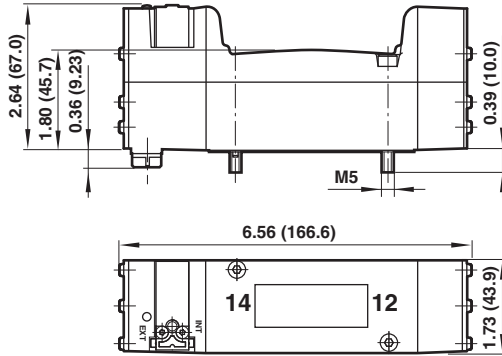
Valve Manifolds VS45 Series

Size 45 mm 2x3/2, 5/2 and 5/3 valves

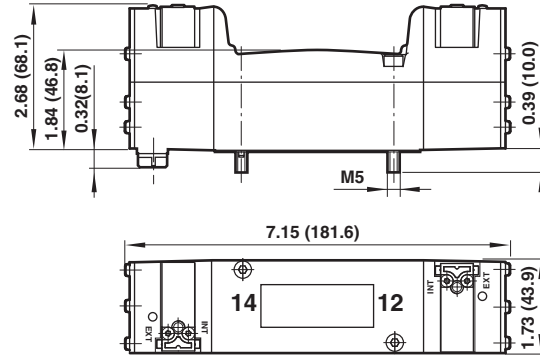
Dimensions in inches (mm)

Plug-in

VS45*5*7DF*1*A models
5/2 Single solenoid pilot valve
Mechanical spring return

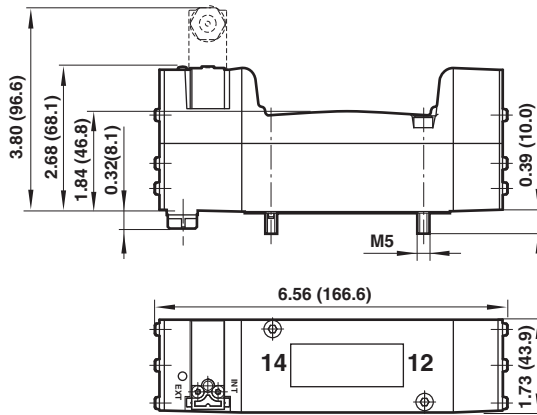


VS45****DF*1*A models
2x3/2, 5/2 and 5/3 Double solenoid pilot valve

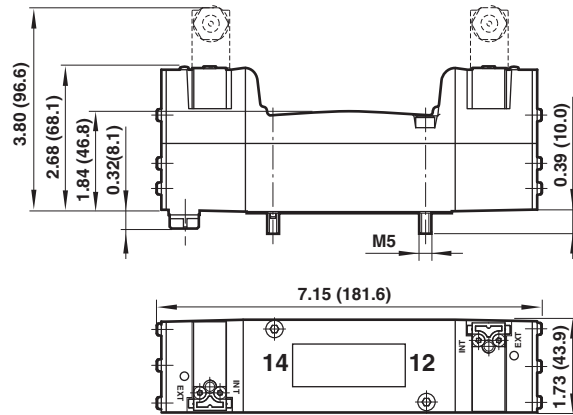


Non-plug-in

VS45*5*7DC*1*A models
5/2 Single solenoid pilot valve
Mechanical spring return

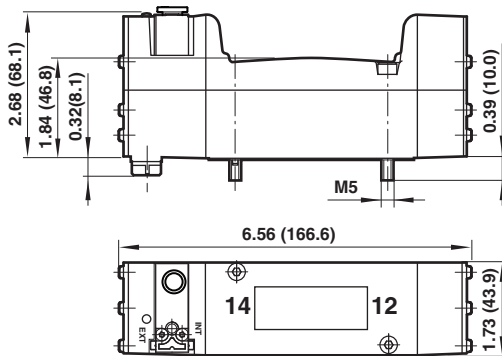


VS45****DC*1*A models
2x3/2, 5/2 and 5/3 Double solenoid pilot valve

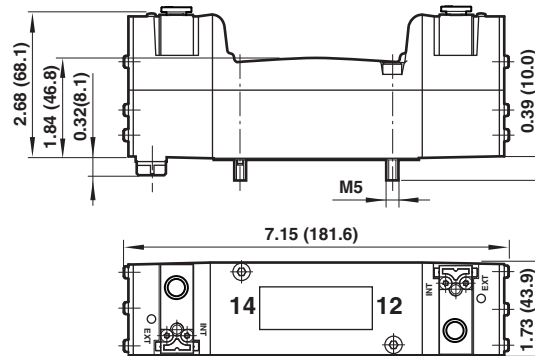


Non-plug-in Air pilot

VS45*5*7AX**** models
5/2 Single solenoid pilot valve
Mechanical spring return



VS45****AX**** models
2x3/2, 5/2 and 5/3 Double solenoid pilot valve



Valve Manifolds VS45 Series

Size 45 mm

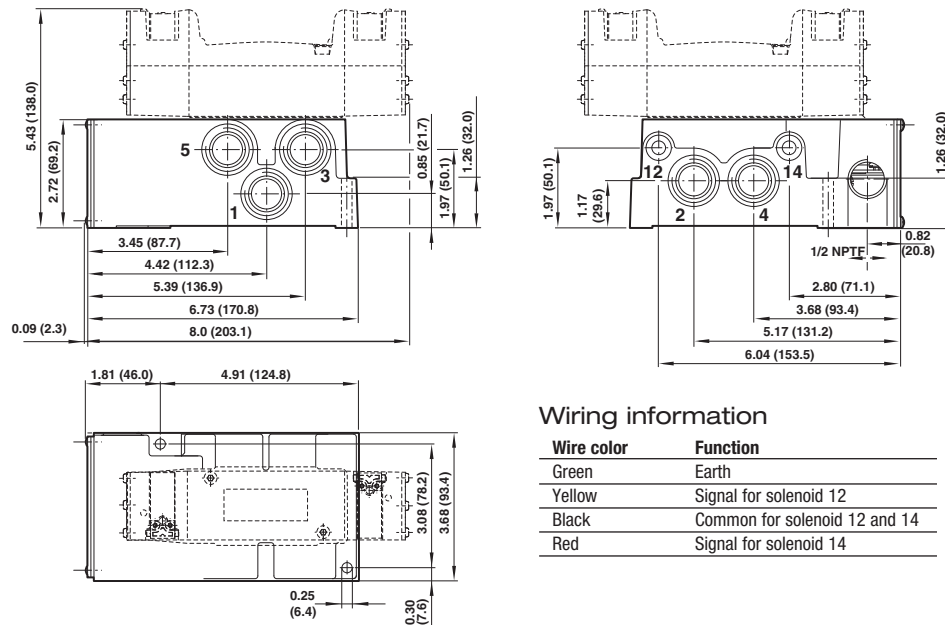
Single station sub-base

Part Number	Description	Ports 1, 3 & 5	Ports 12/14	Ports 2 & 4	Connector Type	Voltage
VS4540438-DG00	Stand alone, single subbase, plug-in, 24Vdc	G1/2"	G1/8"	G1/2"	M12	24Vdc
VS4540438-DG01	Stand alone, single subbase, non-plug-in, individually wired	G1/2"	G1/8"	G1/2"	N/A	24Vdc & 110/120Vac
VS4540438-EG00	Stand alone, single subbase, plug-in, 24Vdc	G3/4"	G1/8"	G3/4"	M12	24Vdc
VS4540438-EG01	Stand alone, single subbase, non-plug-in, individually wired	G3/4"	G1/8"	G3/4"	N/A	24Vdc & 110/120Vac
VS4540438-TG00	Stand alone, single subbase, plug-in, 24Vdc	1/2" NPT	1/8" NPT	1/2" NPT	M12	24Vdc
VS4540438-TG01	Stand alone, single subbase, non-plug-in, individually wired	1/2" NPT	1/8" NPT	1/2" NPT	N/A	24Vdc & 110/120Vac
VS4540438-TG02	Stand alone, single subbase, plug-in, 115Vac	1/2" NPT	1/8" NPT	1/2" NPT	1/2" Conduit	110/120Vac
VS4540438-UG00	Stand alone, single subbase, plug-in, 24Vdc	3/4" NPT	1/8" NPT	3/4" NPT	M12	24Vdc
VS4540438-UG01	Stand alone, single subbase, non-plug-in, individually wired	3/4" NPT	1/8" NPT	3/4" NPT	N/A	24Vdc & 110/120Vac
VS4540438-UG02	Stand alone, single subbase, plug-in, 115Vac	3/4" NPT	1/8" NPT	3/4" NPT	1/2" Conduit	110/120Vac

NOTE: The 1/2" conduit output boards used on the VS45 incorporate integrated power rectification and regulation from 115Vac to 24Vdc on the output boards. The 115Vac voltage being supplied to the 1/2" conduit is converted to a 24Vdc signal to the valves on the manifold. Therefore, even though the manifold is wired for AC, the valves used on the manifold are 24Vdc.

Dimensions in inches (mm)

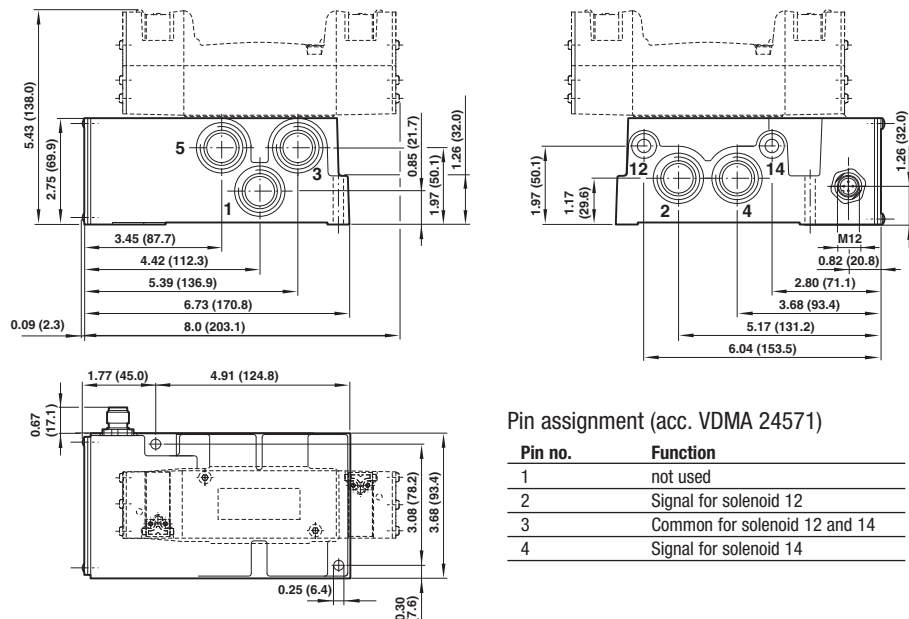
Connector type: NPTF1/2 Conduit with flying leads



Wiring information

Wire color	Function
Green	Earth
Yellow	Signal for solenoid 12
Black	Common for solenoid 12 and 14
Red	Signal for solenoid 14

Connector type: M12



Pin assignment (acc. VDMA 24571)

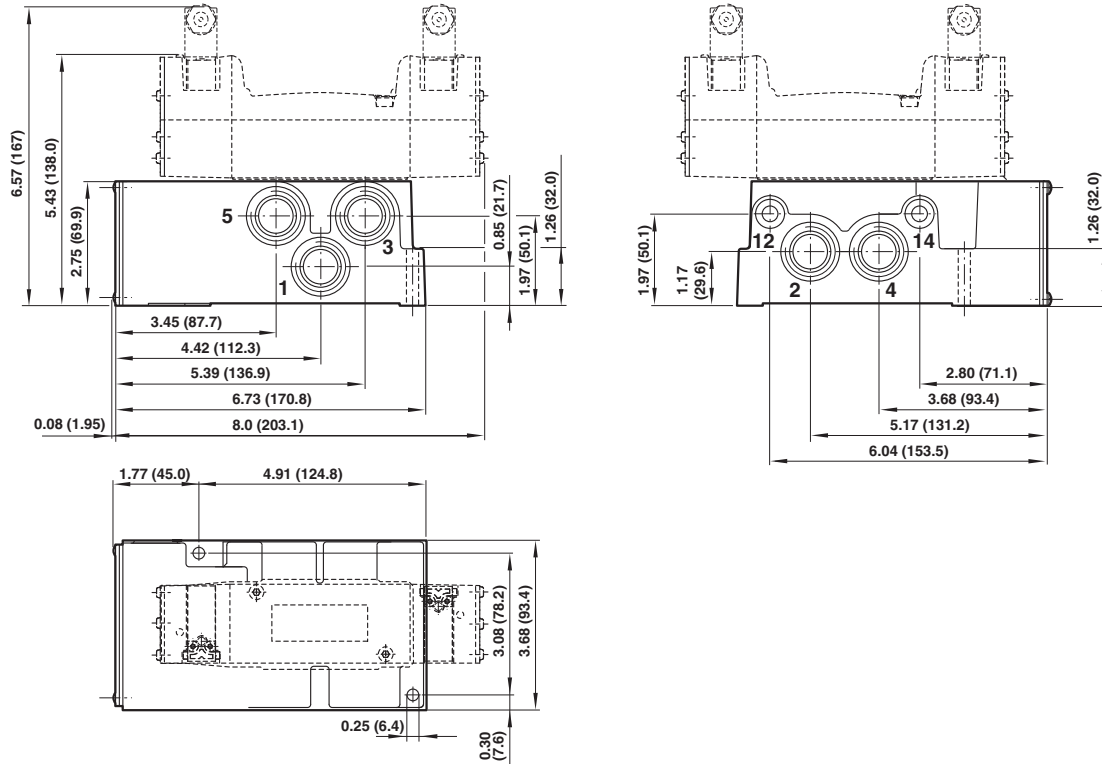
Pin no.	Function
1	not used
2	Signal for solenoid 12
3	Common for solenoid 12 and 14
4	Signal for solenoid 14



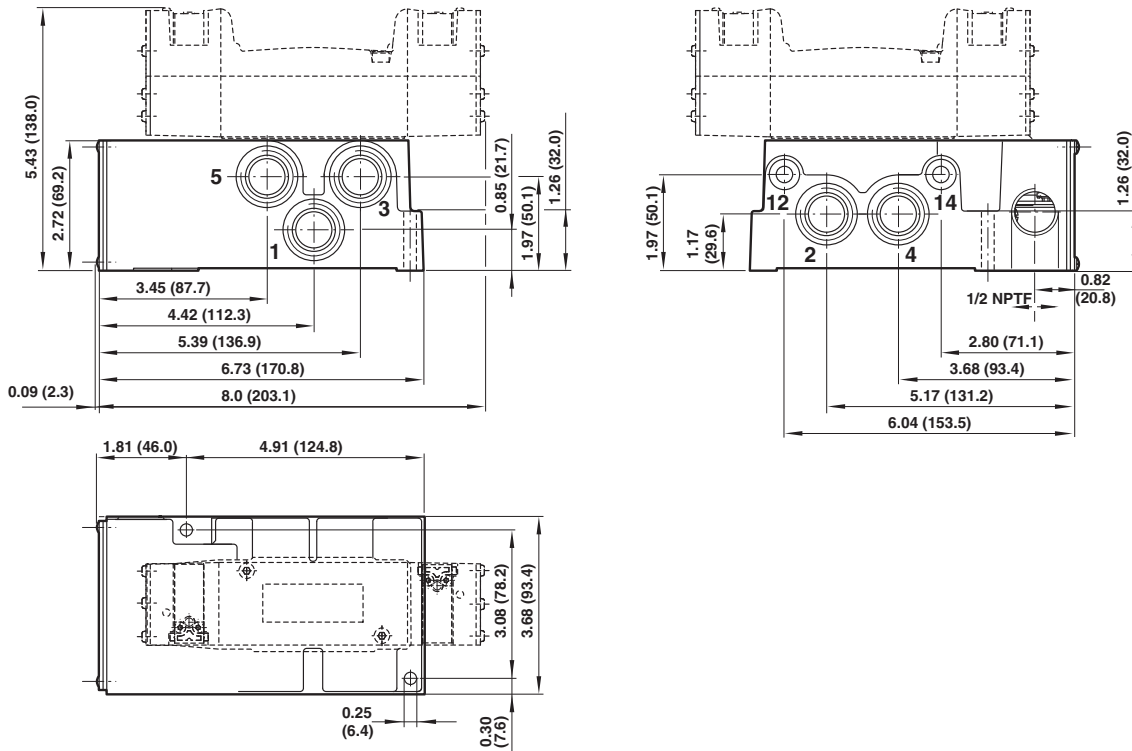
Valve Manifolds VS45 Series

Size 45

Single subbase, individually wired



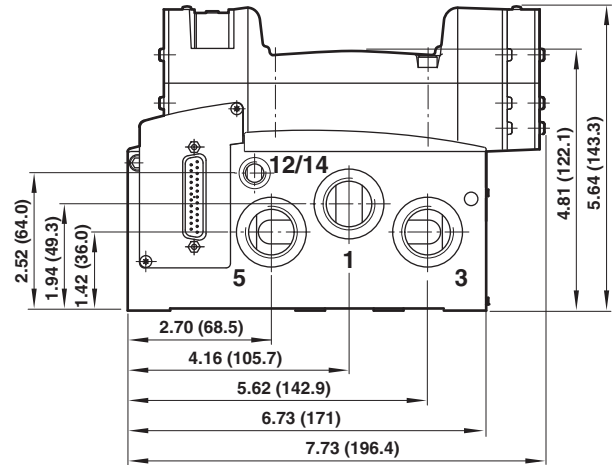
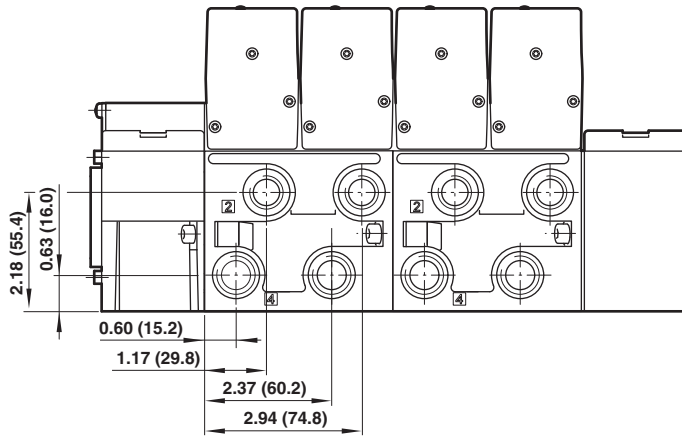
Single subbase, air pilot



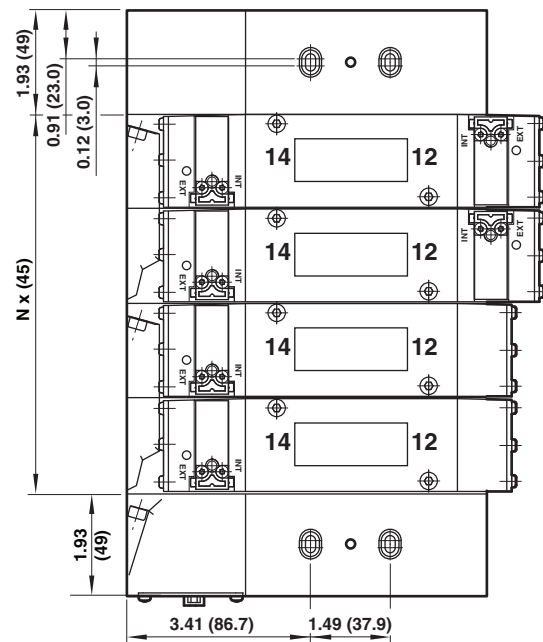
Valve Manifolds VS45 Series

Size 45 mm

Multipole and fieldbus valve manifold dimensions



Electrical connection	Min. no of valve stations	Max. no. of valve stations
Multipole	2	16
Other Fieldbus protocols	4	16



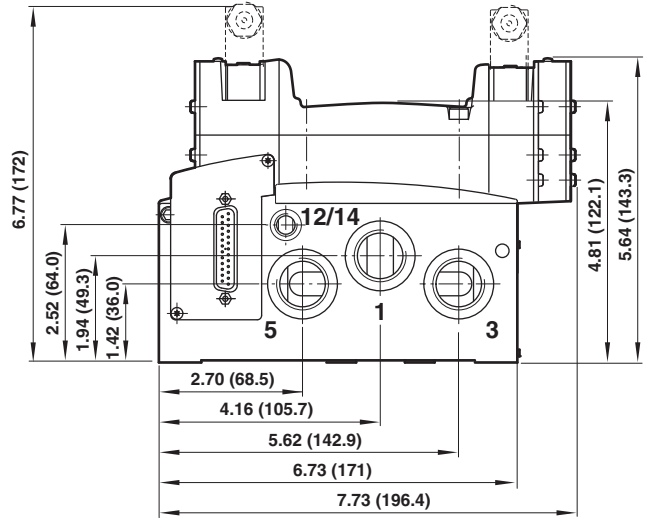
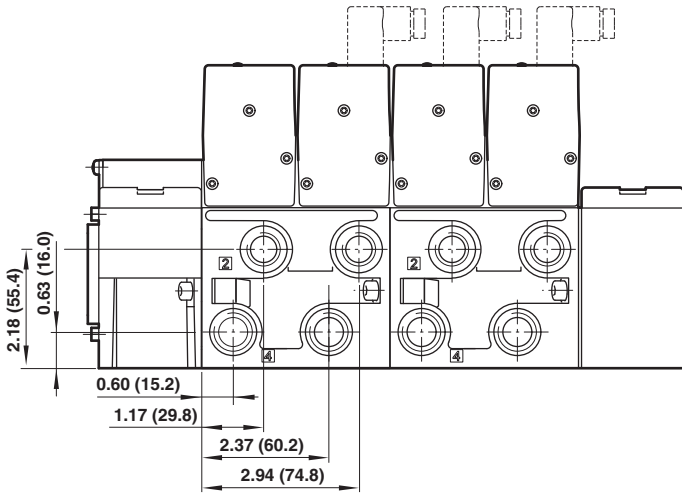
N Number of station

Valve Manifolds VS45 Series

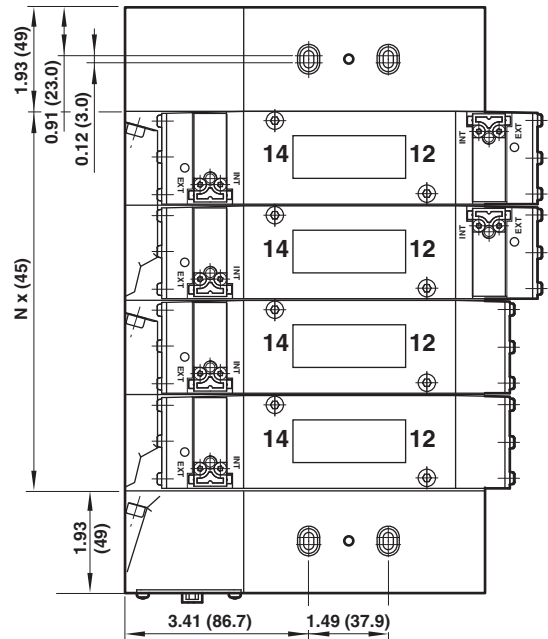
Size 45 mm

Individually wired or air pilot valve manifold dimensions

VALVES



Electrical connection	Min. no of valve stations	Max. no. of valve stations
Non-plugin	2	16

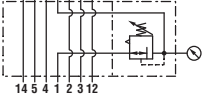


N Number of station

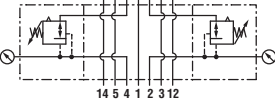
Valve Manifolds VS45 Series

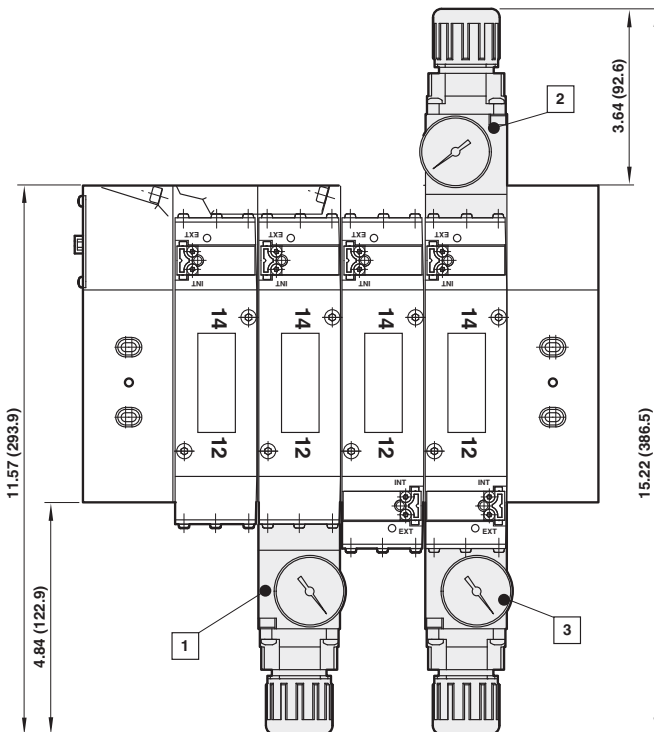
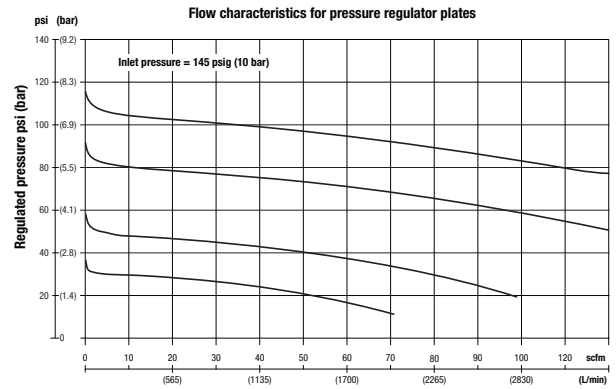
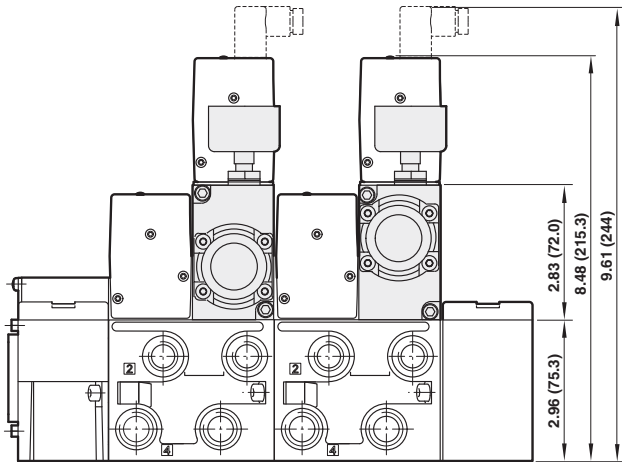
Size 45 mm

Pressure regulator sandwich plates

Symbol	Model	Description
	VS4540410-KG10	Regulation of port 1, regulator on side 12

NOTE: Sandwich regulator rated to 150 psi inlet.

Symbol	Model	Description
	VS4540410-KG40	Regulation of port 2+4



Gauge part number = 18-013-212

- Inlet pressure
- 1 Regulation of port 1
 - 2 Regulation of port 2+4
 - 3 Gauge

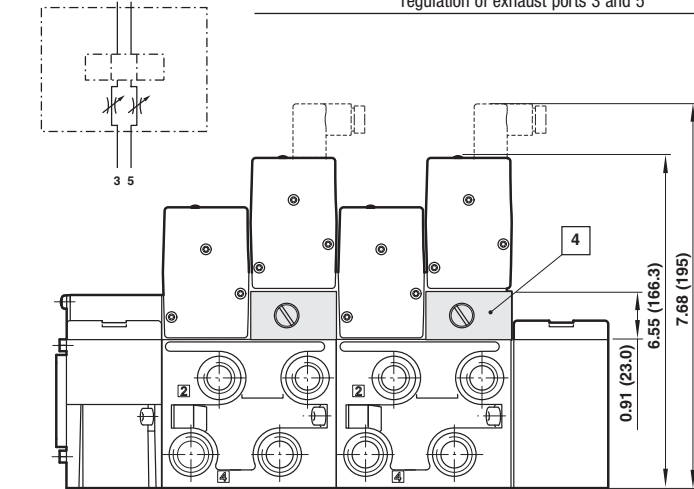
Valve Manifolds VS45 Series

Size 45 mm

VALVES

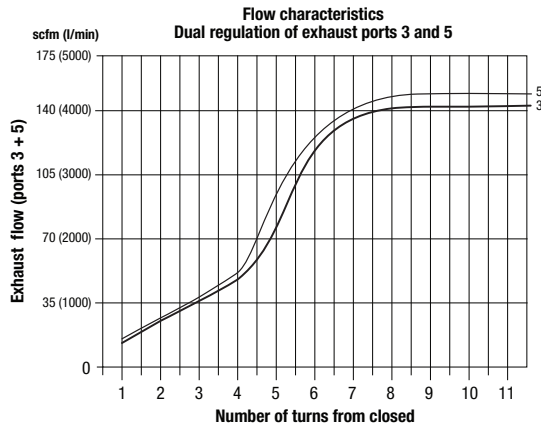
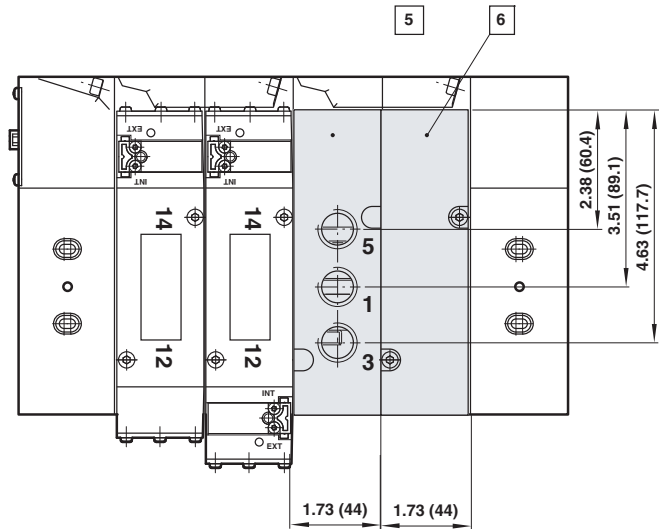
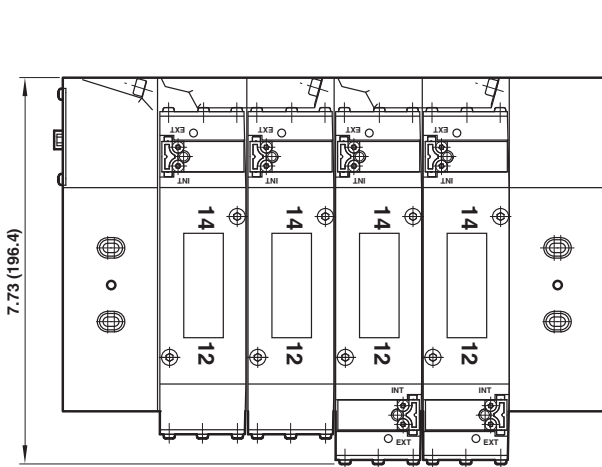
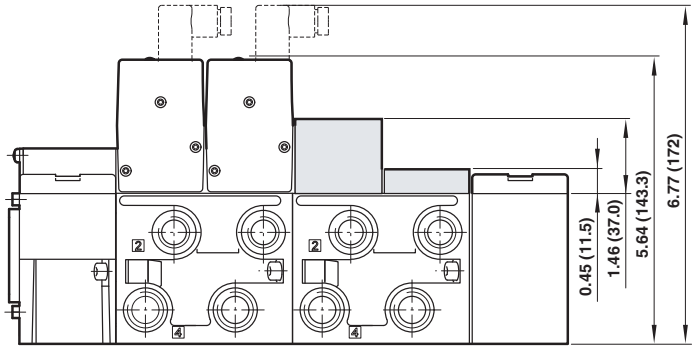
Flow control sandwich plate

Symbol	Model	Description
	VS4540408-KG00	Flow control supplied with gasket, dual regulation of exhaust ports 3 and 5



Base accessories

Model	Description
VS4540416-RG00	Intermediate supply/exhaust module, port size NPTF 1/2
VS4540416-BG00	Intermediate supply/exhaust module, port size G1/2
VS4540415-KG00	Blanking plate for blocking of unused station (supplied with gasket)



Flow: port 1-2 and 1-4: remains unchanged.
Flow measured at 87 psi (6 bar) inlet,
pressure drop 14.5 psi (1 bar)

- 4 Flow control plate
- 5 Intermediate supply/exhaust module
- 6 Blanking plate

Valve Manifolds VS45 Series

Size 45 mm

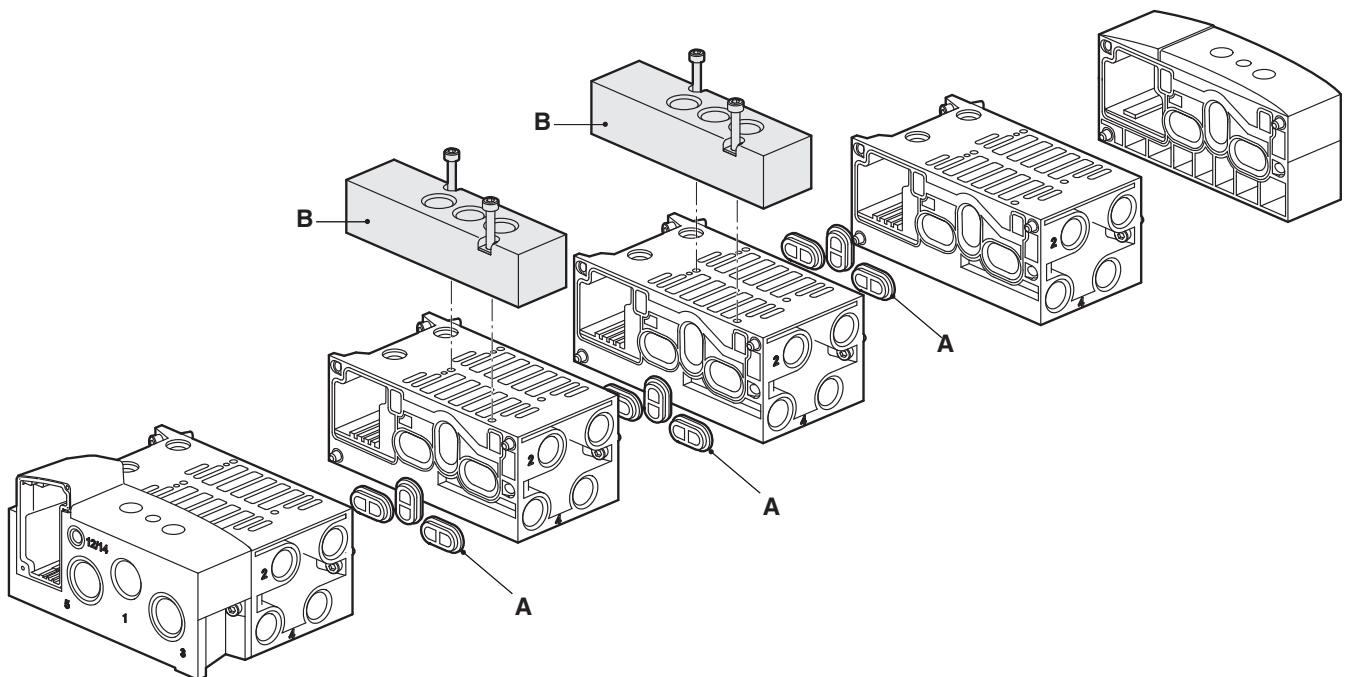
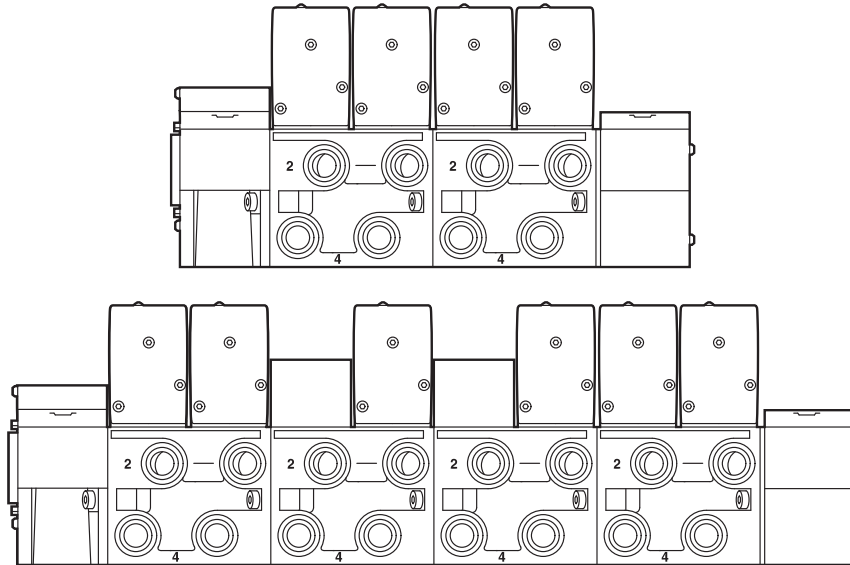
Multi pressure configurations

A

Blanking disc	Type
V40414-K00	Suitable for ports 1, 3 or 5

B

Intermediate supply/exhaust module	Type
VS4540416-RG00	NPTF1/4
VS4540416-BG00	G1/4



VALVES

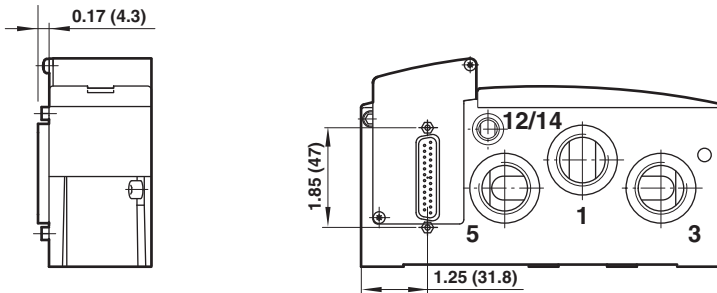
Valve Manifolds VS45 Series

Size 45 mm

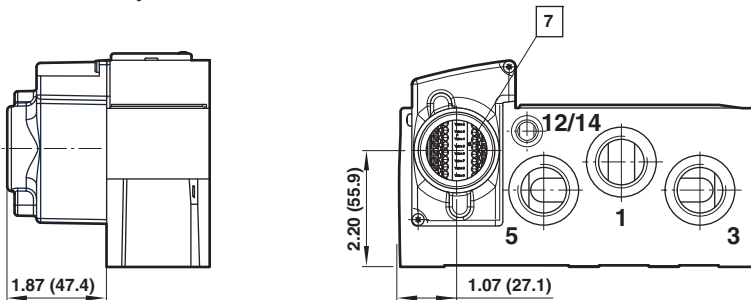
Multipole options

Connector type	Voltage	No. of stations	Max. no. coils
D-Sub 25-pin	24V DC	02/03/04/05/06/07/08/09/10/11/12	24
D-Sub 44-pin	24V DC	10/11/12/13/14/15/16	32
NPTF1 Conduit entry with terminals	115V AC, 24V DC	02/03/04/05/06/07/08/09/10/11/12	24
Non-plug-in	115V AC, 24V DC	2 to 16	32

D-Sub 25-pin / 44-pin

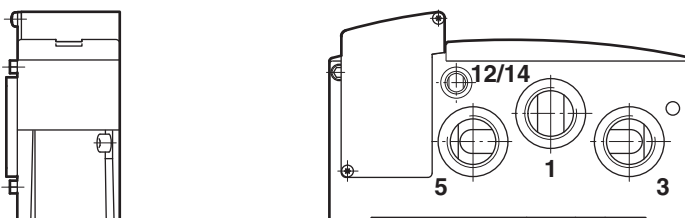


NPTF1 Conduit entry with terminals



7 Max. wire size AWG18

Non plug-in



Valve Manifolds VS45 Series

Size 45 mm

D-Sub connector 44-pin

Pin no.	Wire color	Socket	Pilot	Station
1	white	Solenoid 1-a	14	1
2	brown	Solenoid 2-a	14	2
3	green	Solenoid 3-a	14	3
4	yellow	Solenoid 4-a	14	4
5	grey	Solenoid 5-a	14	5
6	pink	Solenoid 6-a	14	6
7	blue	Solenoid 7-a	14	7
8	red	Solenoid 8-a	14	8
9	black	Solenoid 9-a	14	9
10	violet	Solenoid 10-a	14	10
11	grey/pink	Solenoid 11-a	14	11
12	red/blue	Solenoid 12-a	14	12
13	white/green	Solenoid 13-a	14	13
14	brown/green	Solenoid 14-a	14	14
15	white/yellow	Solenoid 15-a	14	15
16	yellow/brown	Solenoid 1-b	12	1
17	white/grey	Solenoid 2-b	12	2
18	grey/brown	Solenoid 3-b	12	3
19	white/pink	Solenoid 4-b	12	4
20	pink/brown	Solenoid 5-b	12	5
21	white/blue	Solenoid 6-b	12	6
22	brown/blue	Solenoid 7-b	12	7
23	white/red	Solenoid 8-b	12	8
24	brown/red	Solenoid 9-b	12	9
25	white/black	Solenoid 10-b	12	10
26	brown/black	Solenoid 11-b	12	11
27	grey/green	Solenoid 12-b	12	12
28	yellow/grey	Solenoid 13-b	12	13
29	pink/green	Solenoid 14-b	12	14
30	yellow/pink	Solenoid 15-b	12	15
31	green/blue	Solenoid 16-a	14	16
32	yellow/blue	Solenoid 16-b	12	16
33	-	not used	-	-
34	-	not used	-	-
35	-	not used	-	-
36	-	not used	-	-
37	-	not used	-	-
38	-	not used	-	-
39	-	not used	-	-
40	-	not used	-	-
41	-	not used	-	-
42	-	not used	-	-
43	green/black	Common	-	-
44	yellow/black	Common	-	-

D-Sub connector 25-pin^{A)}

Pin no.	Wire color	Socket	Pilot	Station
1	White	Solenoid 1-a	14	1
2	Brown	Solenoid 2-a	14	2
3	Green	Solenoid 3-a	14	3
4	Yellow	Solenoid 4-a	14	4
5	Grey	Solenoid 5-a	14	5
6	Pink	Solenoid 6-a	14	6
7	Blue	Solenoid 7-a	14	7
8	Red	Solenoid 8-a	14	8
9	Black	Solenoid 9-a	14	9
10	Violet	Solenoid 10-a	14	10
11	Grey/Pink	Solenoid 11-a	14	11
12	Red/Blue	Solenoid 12-a	14	12
13	White/Green	Common	-	-
14	Brown/Green	Solenoid 1-b	12	1
15	White/Yellow	Solenoid 2-b	12	2
16	Yellow/Brown	Solenoid 3-b	12	3
17	White/Grey	Solenoid 4-b	12	4
18	Grey/Brown	Solenoid 5-b	12	5
19	White/Pink	Solenoid 6-b	12	6
20	Pink/Brown	Solenoid 7-b	12	7
21	White/Blue	Solenoid 8-b	12	8
22	Brown/Blue	Solenoid 9-b	12	9
23	White/Red	Solenoid 10-b	12	10
24	Brown/Red	Solenoid 11-b	12	11
25	White/Black	Solenoid 12-b	12	12

^{A)} According to DIN 47100

NPTF1 Conduit entry with terminals ²⁾

Clamp no.	Socket	Pilot	Station
C1	Solenoid 1-a	14	1
C2	Solenoid 2-a	14	2
C3	Solenoid 3-a	14	3
C4	Solenoid 4-a	14	4
C5	Solenoid 5-a	14	5
C6	Solenoid 6-a	14	6
C7	Solenoid 7-a	14	7
C8	Solenoid 8-a	14	8
C9	Solenoid 9-a	14	9
C10	Solenoid 10-a	14	10
C11	Solenoid 11-a	14	11
C12	Solenoid 12-a	14	12
C13	Solenoid 1-b	12	1
C14	Solenoid 2-b	12	2
C15	Solenoid 3-b	12	3
C16	Solenoid 4-b	12	4
C17	Solenoid 5-b	12	5
C18	Solenoid 6-b	12	6
C19	Solenoid 7-b	12	7
C20	Solenoid 8-b	12	8
C21	Solenoid 9-b	12	9
C22	Solenoid 10-b	12	10
C23	Solenoid 11-b	12	11
C24	Solenoid 12-b	12	12
C25	Common	-	-
C26	Common	-	-
C27	Earth	-	-
C28	Earth	-	-

²⁾ Max. wire size AWG18

Multipole accessories

D-Sub connector 25-pin IP65 ¹⁾ D-Sub connector 44-pin IP65 ¹⁾



V11569-E01	3' (1m)	V11570-E01	3' (1m)
V11569-E03	10' (3m)	V11570-E03	10' (3m)
V11569-E05	16' (5m)	V11570-E05	16' (5m)

¹⁾ Required for ATEX

Valve Manifolds VS45 Series

Size 45 mm

VALVES

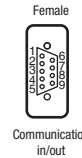
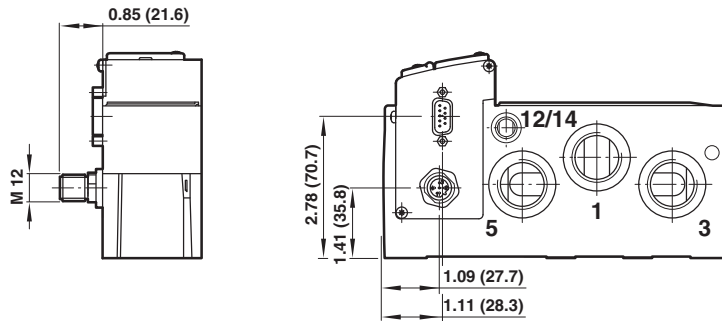
Fieldbus options: Overview

Fieldbus protocol	Fieldbus interface/connector	Supply voltage connector (Fieldbus and valves)	No. of stations	Max. no coils
Profibus DP	1 x D-Sub 9-pin	M12 4-pin	04/05/06/07/08/09/10/11/12/13/14/15/16	32
	2 x M12 5-pin	M12 4-pin	04/05/06/07/08/09/10/11/12/13/14/15/16	32
	2 x M12 5-pin	7/8 5-pin	04/05/06/07/08/09/10/11/12/13/14/15/16	32
DeviceNet	1 x M12 5-pin	M12 4-pin	04/05/06/07/08/09/10/11/12/13/14/15/16	32
CANopen	1 x M12 5-pin	M12 4-pin	04/05/06/07/08/09/10/11/12/13/14/15/16	32

For parts and assembly instructions of Fieldbus components, consult our technical service.

Fieldbus protocol: Profibus DP

Connector: 1 x D-Sub 9-pin / M12 4-pin



Bus connector: D-Sub 9-pin

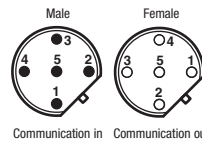
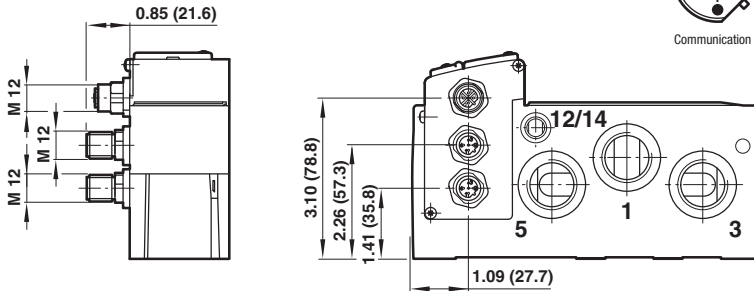
Pin no.	Function
1	Shield
2	N/C
3	B-line (red) RxD / TxD-P
4	N/C
5	DGND (0V) isolated
6	VP (5V) isolated
7	N/C
8	A-line (green) RxD / TxD-N
9	N/C

Power connector: M12 4-pin



Pin no.	Function	Tolerance	Max. current
1	24 VB logic circuit supply	+/-25%	300 mA
2	24 VA valves	+/-10%	1)
3	0 volts	-	2)
4	Earth	-	-

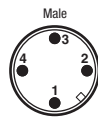
Connector: 2 x M12 5-pin / M12 4-pin



Bus connector: M12 5-pin (B-coded)

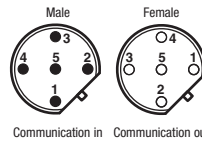
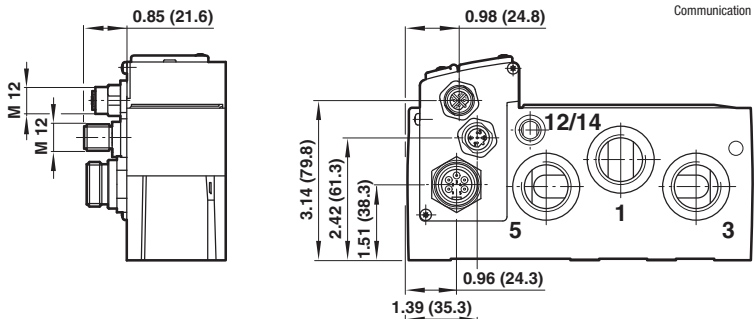
Pin no.	Function
1	5VI opto isolated
2	A-line (green)
3	OVI isolated
4	B-line (red)
5	Shield
Threaded joint	Shield

Power connector: M12 4-pin



Pin no.	Function	Tolerance	Max current
1	24 VB logic circuit supply	+/-25%	300 mA
2	24 VA valves	+/-10%	1)
3	0 volts	-	2)
4	Earth	-	-

Connector: 2 x M12 5-pin / 7/8 5-pin



Bus connector: M12 5-pin (B-coded)

Pin no.	Function
1	5VI isolated
2	A-line (green)
3	OVI isolated
4	B-line (red)
5	Shield
Threaded joint	Shield

Power connector: 7/8 5-pin



Pin no.	Function	Tolerance	Max. current
1	-	-	-
2	0 volts	-	2)
3	Earth	-	-
4	24 VA valves	+/-10%	1)
5	24 VB logic circuit supply	+/-25%	300 mA

1) $I_{max} = 10 \text{ mA} + n \cdot 60 \text{ mA}$
 $n = \text{number of energized solenoids}$
 2) $I_{max} = I_{VA} + I_{VB}$

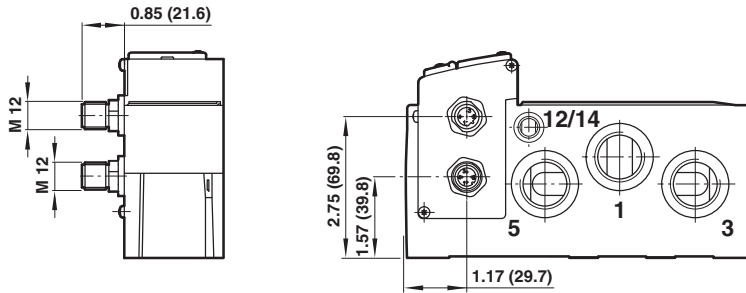
Valve Manifolds VS45 Series

Size 45 mm

VALVES

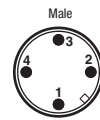
Fieldbus protocol: DeviceNet

Connector: 1 x M12 5-pin / M12 4-pin



Bus connector: M12 5-pin (A-coded)

Pin no.	Function
1	Drain
2	V+ ³⁾
3	V- ³⁾
4	CAN_H
5	CAN_L

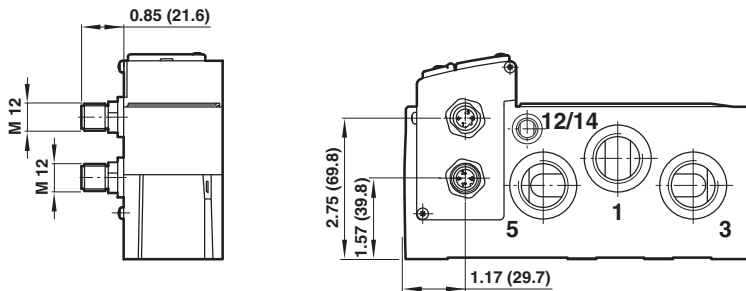


Power connector: M12 4-pin

Pin no.	Function	Tolerance	Max. current
1	24 VB logic circuit supply	+/-25%	300 mA
2	24 VA valves	+/-10%	1)
3	0 volts	-	2)
4	Earth	-	-

Fieldbus protocol: CANopen

Connector: 1 x M12 5-pin / M12 4-pin



Bus connector: M12 5-pin (A-coded)

Pin no.	Function
1	Drain
2	V+ ³⁾
3	V- ³⁾
4	CAN_H
5	CAN_L



Power connector: M12 4-pin

Pin no.	Function	Tolerance	Max. current
1	24 VB logic circuit supply	+/-25%	300 mA
2	24 VA valves	+/-10%	1)
3	0 volts	-	2)
4	Earth	-	-

1) $I_{max} = 10 \text{ mA} + n \cdot 60 \text{ mA}$

n = number of energized solenoids

2) $I_{max} = I_{VA} + I_{VB}$








3) Must be galvanic isolated to 24 VA valves.

Valve Manifolds VS45 Series

Size 45 mm

VALVES

Fieldbus accessories

Symbol	Model	Description	Connection	Cable length	Protection class
Fieldbus power connector					
	V11588-E01	Profibus DP (4-pin, female) DeviceNet (4-pin, female) CANopen (4-pin, female)	M12	Wireable	IP65 Required for ATEX
	FD6760R5S75010	Profibus DP (5-pin, female)	7/8	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
Communication cable and connector					
	FD6710H5S75S10	DeviceNet (5-pin, female) CANopen (5-pin, female)	M12	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
	FD6710D5S75S10	DeviceNet (5-pin, male) CANopen (5-pin, female)	M12	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
	FD6710G5S75S10	Profibus DP, reverse keyway (5-pin, female)	M12	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
	V11591-E01	Profibus DP, reverse keyway (5-pin, male)	M12	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
	V11654-E01	Profibus DP connector (9-pin, male) with terminating resistor	D-Sub	Wireable	IP40

Valve Manifolds VS45 Series

Size 45 mm

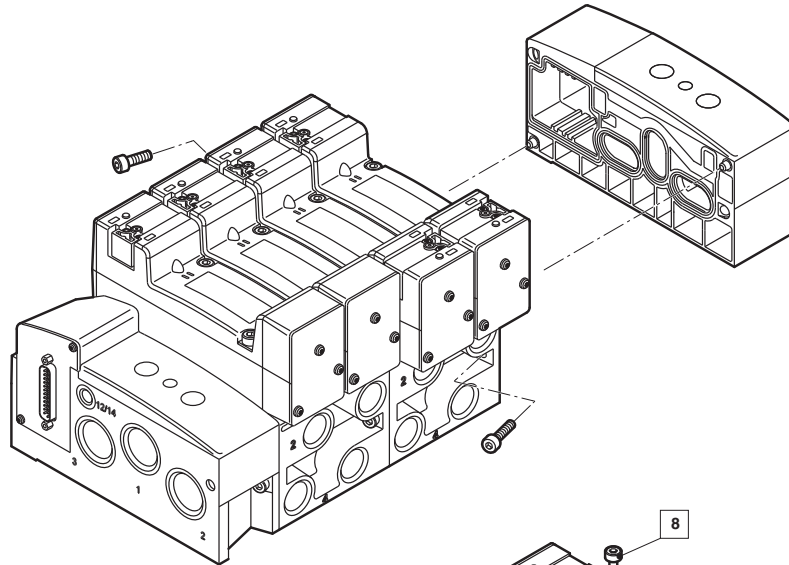
A – Single add-on stations

including PCB, sub-base, gasket and screws

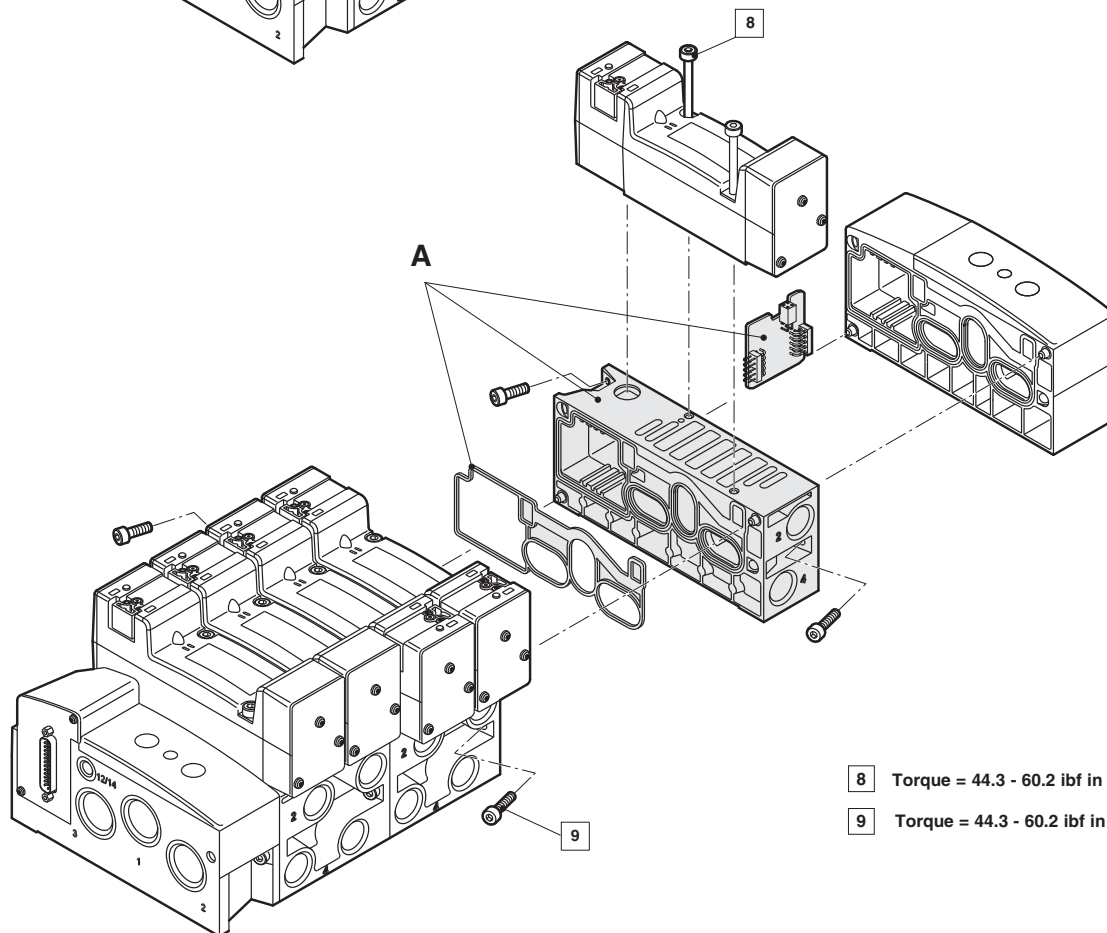
Model	Description	Port 2 & 4
VS4540400-SGC1	Add-on station for D-Sub connectors and Fieldbus	3/8" NPTF
VS4540400-TGC1	Add-on station for D-Sub connectors and Fieldbus	1/2" NPTF
VS4540400-CGC1	Add-on station for D-Sub connectors and Fieldbus	3/8" ISO G
VS4540400-DGC1	Add-on station for D-Sub connectors and Fieldbus	1/2" ISO G

VALVES

Step 1



Step 2



8 Torque = 44.3 - 60.2 lbf in (5.0 - 6.8 Nm)

9 Torque = 44.3 - 60.2 lbf in (5.0 - 6.8 Nm)

For detailed assembly instructions, please see maintenance & instruction booklet!

Valve Manifolds VS45 Series

Size 45 mm Sub-bases and end plates (without PCB's)

Includes screws and gaskets

A – End plate kit

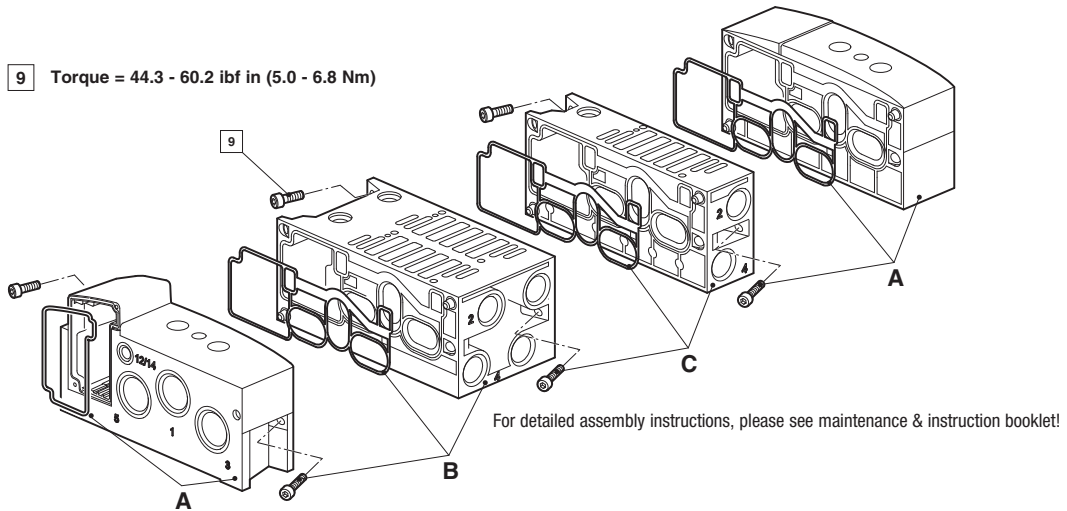
Model	Description	Ports	
		1, 3 & 5	12/14 & 82/84
VS4540403-UGCO	End plate kit for Multipole	3/4 NPT	1/8
VS4540403-EGCO	End plate kit for Multipole	G 3/4	1/8
VS4540403-UGC1	End plate kit for Fieldbus	3/4 NPT	1/8
VS4540403-EGC1	End plate kit for Fieldbus	G 3/4	1/8

B – Double station modular sub-base

Model	Ports	
	2 & 4	
VS4540401-SGCO	3/8" NPTF	
VS4540401-TGCO	1/2" NPTF	
VS4540401-CGCO	3/8" ISO G	
VS4540401-DGCO	1/2" ISO G	

C – Single station modular sub-base

Model	Ports	
	2 & 4	
VS4540400-SGCO	3/8" NPTF	
VS4540400-TGCO	1/2" NPTF	
VS4540400-CGCO	3/8" ISO G	
VS4540400-DGCO	1/2" ISO G	



Multipole components

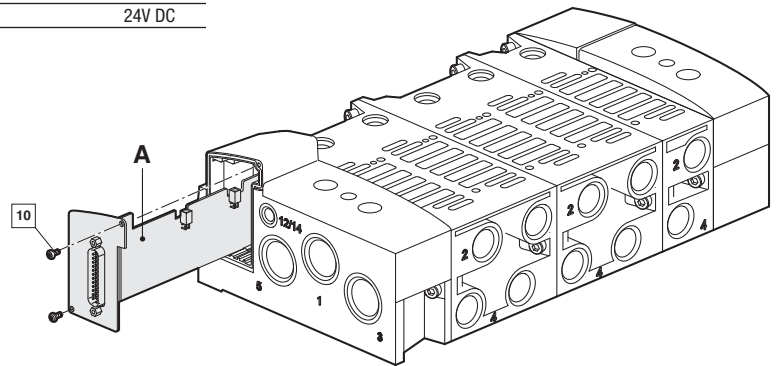
A – Output boards with D-Sub connectors

Model	Connector type	Description	Expandable to max x no. of stations ¹⁾	Voltage
VS4540550-KG00	D-Sub 25-pin	Multipole PCB 2 stations	6	24V DC
VS4540550-KG01	D-Sub 25-pin	Multipole PCB 4 stations	8	24V DC
VS4540550-KG02	D-Sub 25-pin	Multipole PCB 6 stations	10	24V DC
VS4540550-KG03	D-Sub 25-pin	Multipole PCB 8 stations	12	24V DC
VS4540550-KG04	D-Sub 44-pin	Multipole PCB 10 stations	14	24V DC
VS4540550-KG05	D-Sub 44-pin	Multipole PCB 12 stations	16	24V DC

Expansion output boards for D-Sub connectors

Model	Description	Voltage
VS4540553-KG00	Multipole PCB 1 station	24V DC
VS4540553-KG01	Multipole PCB 2 stations	24V DC

¹⁾ By using below expansion output boards.



Valve Manifolds VS45 Series

Size 45 mm

VALVES

Multipole components

A – Connector kit for conduit entry

Model	Description	Voltage
VS4540440-KG00	E-Connector-kit NPTF1 Conduit entry	115V AC, 24V DC

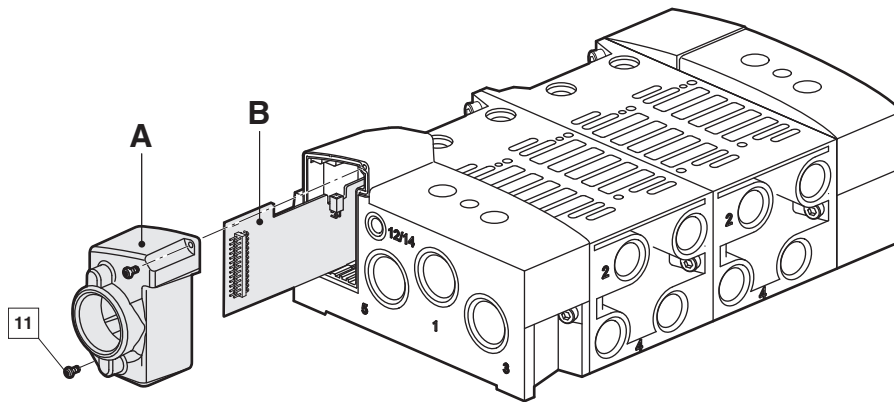
NOTE: The 1" conduit output boards used on the VS45 incorporate integrated power rectification and regulation from 115Vac to 24Vdc on the output boards. The 115Vac voltage being supplied to the 1" conduit is converted to a 24Vdc signal to the valves on the manifold. Therefore, even though the manifold is wired for AC, the valves used on the manifold are

B – Output boards for conduit entry

Part Number	Connector Type	Description	Expandable to max. no. of stations 1)	Voltage
VS4540551-KG00	1" Conduit entry	Multipole PCB 2 stations	6	110/120Vac
VS4540551-KG01	1" Conduit entry	Multipole PCB 4 stations	8	110/120Vac
VS4540551-KG02	1" Conduit entry	Multipole PCB 6 stations	10	110/120Vac
VS4540551-KG03	1" Conduit entry	Multipole PCB 8 stations	12	110/120Vac
VS4540556-KG00	1" Conduit entry	Multipole PCB 2 stations	6	24Vdc
VS4540556-KG01	1" Conduit entry	Multipole PCB 4 stations	8	24Vdc
VS4540556-KG02	1" Conduit entry	Multipole PCB 6 stations	10	24Vdc
VS4540556-KG03	1" Conduit entry	Multipole PCB 8 stations	12	24Vdc

Expansion output boards

Model	Description	Voltage
VS4540553-KG00	Multipole PCB 1 station	24V DC
VS4540553-KG01	Multipole PCB 2 stations	24V DC



11 Torque = 7.1 - 8.0 lbf in (0.8 - 0.9 Nm)

For detailed assembly instructions, please see maintenance & instruction booklet!

Valve Manifolds VS45 Series

Size 45 mm Non-plug-in

Sub-bases and end plates (without PCB's)

includes screws and gaskets

A – End plate kit

Model	Description	Ports 1, 3 & 5	Ports 12/14 & 82/84
VS4540403-UGCO	End plate kit	3/4 NPT	1/8
VS4540403-EGCO	End plate kit	G 3/4	1/8

C – Single station modular sub-base

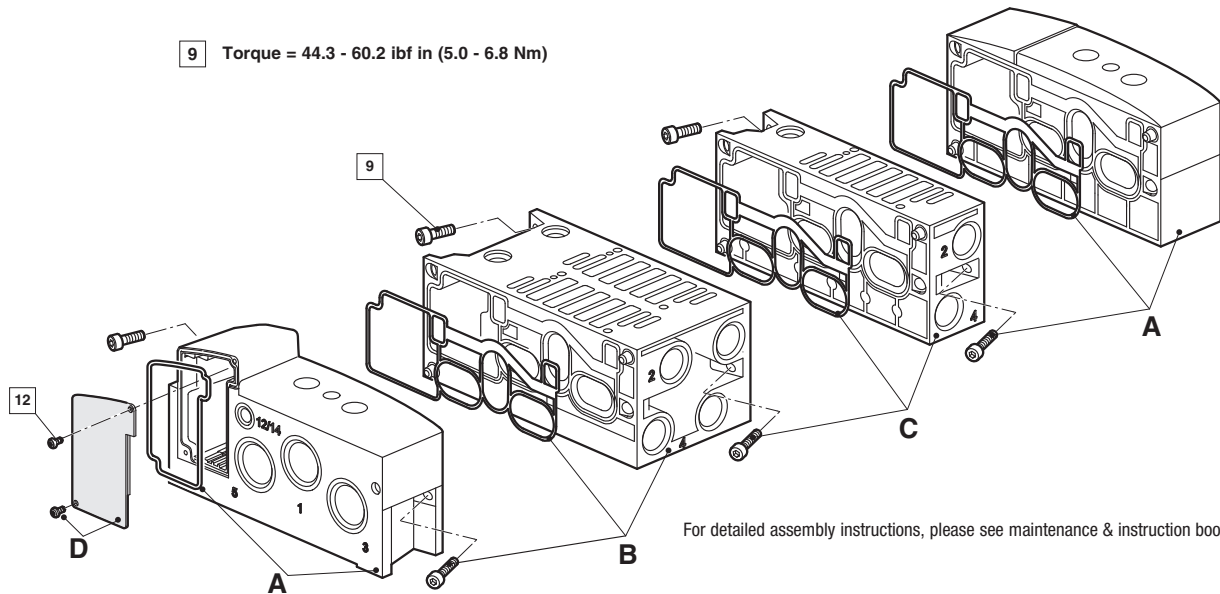
Model	Ports 2 & 4
VS4540400-SGCO	3/8" NPTF
VS4540400-TGCO	1/2" NPTF
VS4540400-CGCO	3/8" ISO G
VS4540400-DGCO	1/2" ISO G

B – Double station modular sub-base

Model	Ports 2 & 4
VS4540401-SGCO	3/8" NPTF
VS4540401-TGCO	1/2" NPTF
VS4540401-CGCO	3/8" ISO G
VS4540401-DGCO	1/2" ISO G

D – Wireway cover

Model	Description
VS4540442-KG00	Cover plate

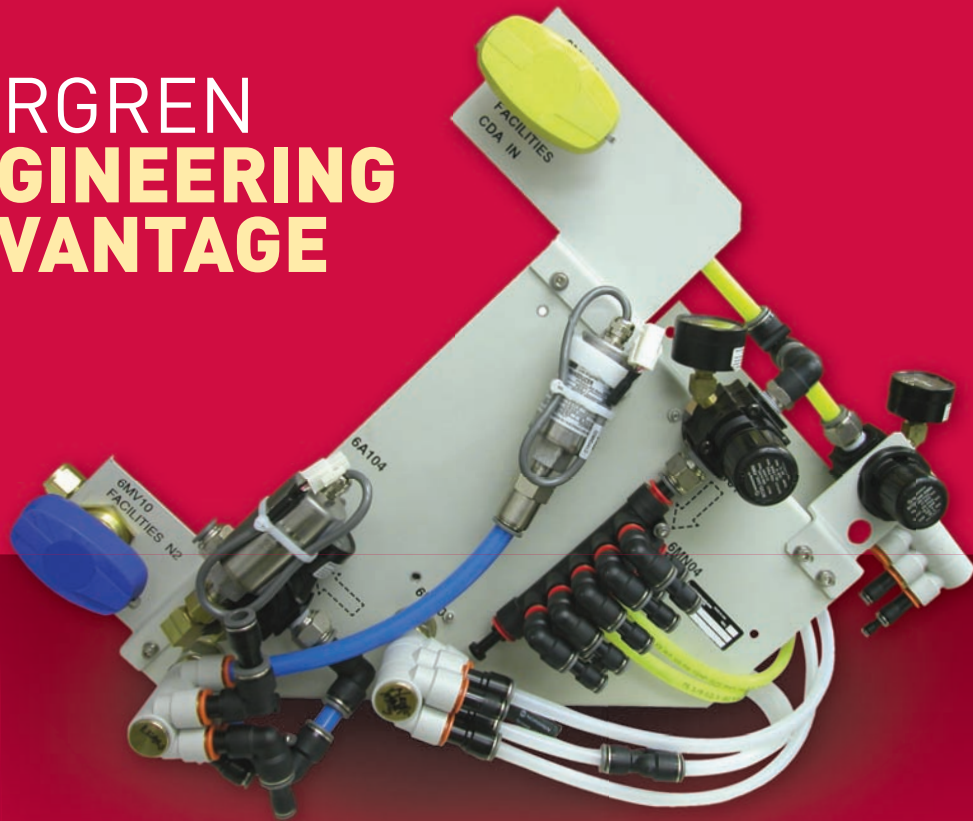


9 Torque = 44.3 - 60.2 ibf in (5.0 - 6.8 Nm)

For detailed assembly instructions, please see maintenance & instruction booklet!

12 Torque = 7.1 - 8.0 ibf in (0.8 - 0.9 Nm)

NORGREN ENGINEERING ADVANTAGE



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CASE STUDY

Pressure Monitoring Panel

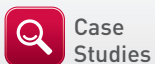
CUSTOMER CHALLENGE

- Speed assembly
- Reduce inventory and floor space

CUSTOM SOLUTION BENEFITS

- New design replaces up to 70 single parts
- Validated Plug-and-Play assembly
- Simplified system pressure monitoring
- Reduced scrap and improved safety

OVER 85 YEARS | Motion & Fluid Control Innovation



Case Studies



Downloads & Resources

Read the full case study and learn more:
www.EngineeringAdvantage.com

V40/V41 Mini ISO Star Valves

2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 18 mm

Compact design and high performance

Flexible Sub-base system

True multipressure system

Sandwich regulators and flow controls

Dual spool technology

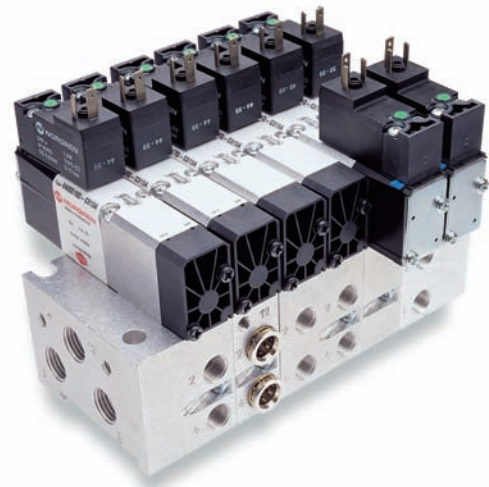
V40 Glandless spool and sleeve

V41 Softseal spool

Collected pilot exhaust with internal pilot air supply

Easy to convert from internal to external pilot supply

Shut-off plate allows for exchange of valves under pressure



Technical Data

Medium

Compressed air, 40µm filtered, lubricated or non-lubricated

Operation

V40: Glandless spool valve, solenoid pilot or air pilot actuated

V41: Softseal spool valve, solenoid pilot or air pilot actuated

Mounting

On sub-bases

Size

ISO 15407-1 / VDMA 24 563, 18 mm

Operating Pressure

Maximum pressure

145 psig (10 bar) V41 models and V40 solenoid pilot actuated valves with internal pilot supply

232 psig (16 bar) V40 solenoid pilot actuated valves with external pilot supply and V40 air pilot actuated valves

Flow Characteristics

Series	Function	Cv	l/min
V40	5/2	0.58	570
V40	5/3	0.62	610
V41*	2x3/2	1.62	610
V41*	5/2	0.66	650
V41*	5/3	0.69	680

Ambient Temperature

5°F* to +122°F (-15°C* to +50°C) V40/V41 sol. and V41 air pilot models

5°F* to +176°F (-15°C* to +80°C) V40 air pilot models

*Consult our Application Engineering for use below 36°F (+2°C)

Materials

Die cast aluminum body and sub-base. Hard anodized spool, Teflon coated, matched aluminum spool and sleeve(V40) or aluminum alloy spool with HNBR Seals (V41). POM plastic parts and NBR static seals. End cover and screws zinc plated, stainless steel springs.

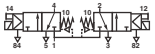
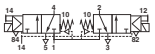
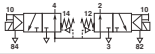

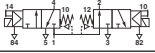
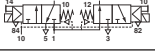
Electrical Details for Solenoid Pilot

Voltage Tolerances	-10% / +15%
Rating	100% Continuous Duty
Inlet orifice	0.8 mm
Electrical Connection	DIN 43 650 table 'C'
Manual Override	Push and turn locking and non-locking
Protection Class	IP 65
	NEMA 4
Materials	PPS (body), Viton and NBR (seals)

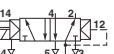
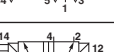
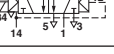
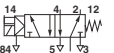
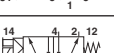
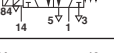
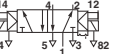
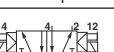
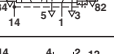
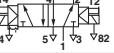
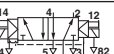
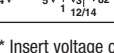
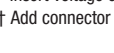

V40/V41 Mini ISO Star Valves

2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 18 mm

2x3/2 Solenoid Pilot Actuated Valves (Softseal Spool only)

Model	Function 2x3/2	Pilot Supply	Pilot Exhaust	Actuation 3/2 Function	Flow Cv	Operating Pres. psig	Pilot Pres. (psig)	Weight lb.	Repair Kit
 V415A11D-C3**†	NC	Internal	Collected	Sol/Spring	0.62	36 - 145	-	0.40	V70447-K50
 V415A22D-C3**†	NC	External	Not Collected	Sol/Spring	0.62	0 - 145	24.7+(0.35 x op.press.)	0.40	V70447-K50
 V415B11D-C3**†	NO	Internal	Collected	Sol/Spring	0.62	36 - 145	-	0.40	V70448-K50
 V415B22D-C3**†	NO	External	Not Collected	Sol/Spring	0.62	0 - 145	24.7+(0.35 x op.press.)	0.40	V70448-K50
 V415C11D-C3**†	NO/NC	Internal	Collected	Sol/Spring	0.62	36 - 145	-	0.40	V70449-K50
 V415C22D-C3**†	NO/NC	External	Not collected	Sol/Spring	0.62	0 - 145	24.7+(0.35 x op.press.)	0.40	V70449-K50

5/2 Solenoid Pilot Actuated Valves

Model	Spool Techn.	Pilot Supply	Pilot Exhaust	Operator 14	Return 12	Flow Cv	Operating Pres. (psig)	Pilot Pres. (psig)	Weight lb.	Repair Kit
 V405513D-C3**†	GI	Internal	Collected	Solenoid	Air Spring	0.58	14.5 - 145	-	0.26	V70440-K50
 V415513D-C3**†	Ss	Internal	Collected	Solenoid	Air Spring	0.66	14.5 - 145	-	0.29	V70442-K50
 V405523D-C3**†	GI	External	Not collected	Solenoid	Air Spring	0.58	26" Hg - 232	14.5 - 145	0.26	V70440-K50
 V415523D-C3**†	Ss	External	Not collected	Solenoid	Air Spring	0.66	26" Hg - 145	14.5 - 145	0.29	V70442-K50
 V405516D-C3**†	GI	Internal	Collected	Solenoid	Spring & air	0.58	23.2 - 145	-	0.29	V70440-K50
 V415517D-C3**†	Ss	Internal	Collected	Solenoid	Spring	0.66	29 - 145	-	0.29	V70442-K50
 V405526D-C3**†	GI	External	Not collected	Solenoid	Spring & air	0.58	26" Hg - 232	23.2 - 145	0.29	V70440-K50
 V415527D-C3**†	Ss	External	Not collected	Solenoid	Spring	0.66	26" Hg - 145	29 - 145	0.29	V70442-K50
 V405511D-C3**†	GI	Internal	Collected	Solenoid	Solenoid	0.58	29 - 145	-	0.40	V70441-K50
 V415511D-C3**†	Ss	Internal	Collected	Solenoid	Solenoid	0.66	29 - 145	-	0.40	V70443-K50
 V405522D-C3**†	GI	External	Not collected	Solenoid	Solenoid	0.58	26" Hg - 232	29 - 145	0.40	V70441-K50
 V415522D-C3**†	Ss	External	Not collected	Solenoid	Solenoid	0.66	26" Hg - 145	29 - 145	0.40	V70443-K50
 V405591D-C3**†	GI	Internal	Collected	Solenoid (priority)	Solenoid	0.58	29 - 145	-	0.40	V70441-K50
 V405592D-C3**†	GI	External	Not collected	Solenoid (priority)	Solenoid	0.58	26" Hg - 232	29 - 145	0.40	V70441-K50

** Insert voltage code from Table 1 "Voltage Codes and Spare Pilot Valves".

† Add connector code from Table 2 "Connector Codes and Part Number".

Table 1
**Voltage Codes and Spare Pilot Valves

Voltage	Code	Power Inrush / Hold	Pilot Valve Part.-no.
12 V d.c.	12	1.2 W	VZC7L2C1-C312A
24 V d.c.	13	1.2 W	VZC7L2C1-C313A
24 V 50/60 Hz.	14	2.1 / 1.5 VA	VZC7L2C1-C314A
48 V 50/60 Hz	16	2.1 / 1.5 VA	VZC7L2C1-C316A
110 V d.c.	17	1 W	VZC7L2C1-C317A
115 V 50/60 Hz	18	2.1 / 1.5 VA	VZC7L2C1-C318A
230 V 50/60 Hz	19	2.1 / 1.5 VA	VZC7L2C1-C319A

Other voltages available on request.

Spare pilot valves are delivered with mounting screws.

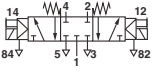
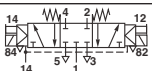
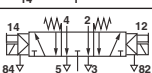
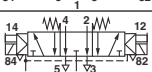
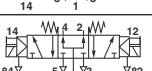
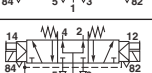
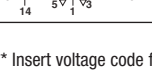

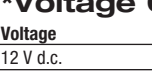
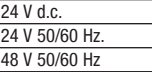
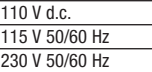
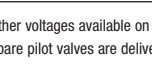
Table 2
†Connector Codes and Part Number

Code	Part Number
A = Solenoid without connector	
B = Cable grip	V10027-D00
C = 10 ft. molded cable, 0-240 VAC/VDC	V10013-D03
H = Cable grip w/indicator light, 24 VAC/VDC	V10012-D13
J = Cable grip w/indicator light, 120 VAC/VDC	V10012-D18
5 = 10 ft. molded cable with indicator light, surge suppression, 24 VAC/VDC	V10014-D03
6 = 10 ft. molded cable with indicator light, 110V/50 Hz-120V.60Hz	V10015-D03

V40/V41 Mini ISO Star Valves

2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 18 mm

5/3 Solenoid Pilot Actuated Valves

Model	Spool Techn.	Valve Function	Pilot Supply	Pilot Exhaust	Operator 14	Return 12	Flow Cv	Operating Pres. (psig)	Pilot Pres. (psig)	Weight lb.	Repair Kit
 V405611D-C3**†	GI	APB	Internal	Collected	Solenoid	Solenoid	0.62	29 - 145	-	0.40	V70441-K50
 V415611D-C3**†	Ss	APB	Internal	Collected	Solenoid	Solenoid	0.69	29 - 145	-	0.40	V70444-K50
 V405622D-C3**†	GI	APB	External	Not collected	Solenoid	Solenoid	0.62	26" Hg - 232	29 - 145	0.40	V70441-K50
 V415622D-C3**†	Ss	APB	External	Not collected	Solenoid	Solenoid	0.69	26" Hg - 145	29 - 145	0.40	V70444-K50
 V405711D-C3**†	GI	COE	Internal	Collected	Solenoid	Solenoid	0.62	29 - 145	-	0.40	V70441-K50
 V415711D-C3**†	Ss	COE	Internal	Collected	Solenoid	Solenoid	0.69	29 - 145	-	0.40	V70441-K50
 V405722D-C3**†	GI	COE	External	Not collected	Solenoid	Solenoid	0.62	26" Hg - 232	29 - 145	0.40	V70441-K50
 V415722D-C3**†	Ss	COE	External	Not collected	Solenoid	Solenoid	0.69	26" Hg - 145	29 - 145	0.40	V70445-K50
 V405811D-C3**†	GI	COP	Internal	Collected	Solenoid	Solenoid	0.62	29 - 145	-	0.40	V70441-K50
 V415811D-C3**†	Ss	COP	Internal	Collected	Solenoid	Solenoid	0.69	29 - 145	-	0.40	V70446-K50
 V404822D-C3**†	GI	COP	External	Not collected	Solenoid	Solenoid	0.62	26" Hg - 232	29 - 145	0.40	V70441-K50
 V415822D-C3**†	Ss	COP	External	Not collected	Solenoid	Solenoid	0.69	26" Hg - 145	29 - 145	0.40	V70446-K50

** Insert voltage code from Table 1 "Voltage Codes and Spare Pilot Valves".

† Add connector code from Table 2 "Connector Codes and Part Number".

Table 1
****Voltage Codes and Spare Pilot Valves**

Voltage	Code	Power Inrush / Hold	Pilot Valve Part.-no.
12 V d.c.	12	1.2 W	VZC7L2C1-C312A
24 V d.c.	13	1.2 W	VZC7L2C1-C313A
24 V 50/60 Hz.	14	2.1 / 1.5 VA	VZC7L2C1-C314A
48 V 50/60 Hz	16	2.1 / 1.5 VA	VZC7L2C1-C316A
110 V d.c.	17	1 W	VZC7L2C1-C317A
115 V 50/60 Hz	18	2.1 / 1.5 VA	VZC7L2C1-C318A
230 V 50/60 Hz	19	2.1 / 1.5 VA	VZC7L2C1-C319A


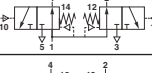
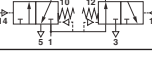
Other voltages available on request.

Spare pilot valves are delivered with mounting screws.

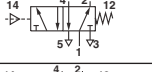
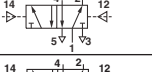
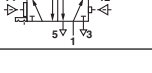


Table 2
†Connector Codes and Part Number

Code	Part Number
A = Solenoid without connector	
B = Cable grip	V10027-D00
C = 10 ft. molded cable, 0-240 VAC/VDC	V10013-D03
H = Cable grip w/indicator light, 24 VAC/VDC	V10012-D13
J = Cable grip w/indicator light, 120 VAC/VDC	V10012-D18
5 = 10 ft. molded cable with indicator light, surge suppression, 24 VAC/VDC	V10014-D03
6 = 10 ft. molded cable with indicator light, 110V/50 Hz-120V.60Hz	V10015-D03

2x3/2 Air Pilot Actuated Valves (Softseal Spool)

Model	Function 2x3/2	Actuation 3/2 Function	Flow Cv	Operating Pres. (psig)	Pilot Pres. (psig)	Weight (lb.)	Spares Kit
 V415A33A-X0020	NC	Air/Spring	0.62	0 - 145	24.7 + (0.35 x op. pressure)	0.26	V70447-K50
 V415B33A-X0020	NO	Air/Spring	0.62	0 - 145	24.7 + (0.35 x op. pressure)	0.26	V70448-K50
 V415C33A-X0020	NO/NC	Air/Spring	0.62	0 - 145	24.7 + (0.35 x op. pressure)	0.26	V70449-K50

5/2 Air Pilot Actuated Valves

Model	Spool Techn.	Operator 14	Return 12	Flow Cv	Operating Pres. (psig)	Pilot Pres. (psig)	Weight (lb.)	Repair Kit
 V405537A-X0090	GI	Air	Spring	0.58	26" Hg - 232	23.2 - 232	0.24	V70440-K50
 V415537A-X0090	Ss	Air	Spring	0.66	26" Hg - 145	29 - 145	0.22	V70442-K50
 V405533A-X0020	GI	Air	Air	0.58	26" Hg - 232	29 - 232	0.24	V70441-K50
 V415533A-X0020	Ss	Air	Air	0.66	26" Hg - 145	29 - 145	0.24	V70443-K50
 V405533A-X0020	GI	Air (priority)	Air	0.58	26" Hg - 232	29 - 232	0.24	V70441-K50

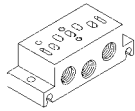
V40/V41 Mini ISO Star Valves

2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 18 mm

5/3 Air Pilot Actuated Valves

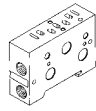
	Model	Spool	Valve Function	Operator 14	Return 12	Flow Cv	Operating Pres. (psig)	Pilot Pres. (psig)	Weight (lb.)	Spares Kit
	V405633A-X0020	GI	APB	Air	Air	0.62	26" Hg - 232	29 - 232	0.24	V70441-K50
	V415633A-X0020	Ss	APB	Air	Air	0.69	26" Hg - 145	36 - 145	0.26	V70444-K50
	V405733A-X0020	GI	COE	Air	Air	0.62	26" Hg - 232	29 - 232	0.24	V70441-K50
	V415733A-X0020	Ss	COE	Air	Air	0.69	26" Hg - 145	36 - 145	0.26	V70445-K50
	V405833A-X0020	GI	COP	Air	Air	0.62	26" Hg - 232	29 - 232	0.24	V70441-K50
	V415833A-X0020	Ss	COP	Air	Air	0.69	26" Hg - 145	36 - 145	0.26	V70446-K50

Bases



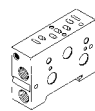
Single Station Sub-base Side Ported w/ Pilot Ports

V70401-P5B	(1/8 NPTF)
V70401-A5B	(G1/8)



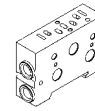
Modular Sub-base Side Ported w/o Pilot Ports

V70425-P5F	(1/8 NPTF)
V70425-A5F	(G1/8)



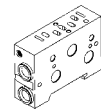
Modular Sub-base Side Ported with Pilot Ports

V70426-P5F	(1/8 NPTF)
V70426-A5F	(G1/8)



Modular Sub-base Side Ported (PIF) w/o Pilot Ports

V70425-15F	(ø1/4")
V70425-85F	(ø8 mm)
V70425-65F	(ø6 mm)



Modular Sub-base Side Ported (PIF) with Pilot Ports

V70426-15F	(ø1/4")
V70426-85F	(ø8 mm)
V70426-65F	(ø6 mm)

*Use with air pilot valves



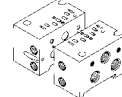
End Plate Kit End Ported

V70424-R5C	(1/4 NPTF)
V70424-B5C	(G1/4)



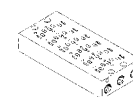
Double Station Modular Sub-base Side Ported without Pilot Ports

V70432-P5F	(1/8 NPTF)
V70432-A5F	(G1/8")



End Plate Kit with 2 Side Ported Valve Stations without Pilot Ports

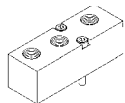
V70431-P5F	(1/4, 1/8 NPTF)
V70431-A5F	(G1/4, G1/8)



Fixed Length Sub-base Bottom Ported

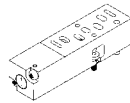
V704**-P50	(1/8 NPTF)
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** = 02,04,06,08,10,12 stations



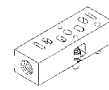
Intermediate Supply/Exhaust Module

V70429-P50	(1/8 NPTF)
V70429-A50	(G1/8)



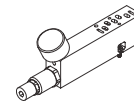
Single Valve Shut-Off Plate

V70430-K50	(Port 1 open/closed)
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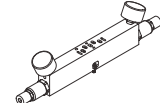
Sandwich Plate with additional Pressure Port 1

V70435-P50	(1/8 NPTF)
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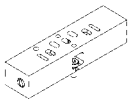
Single Pressure Regulator Plate

V70427-K51	(Port 1 reg.)
V70427-K52	(Port 2 reg.)
V70427-K53	(Port 4 reg.)



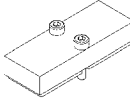
Double Pressure Regulator Plate

V70427-K54	(Ports 2+4 reg.)
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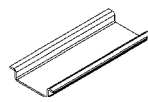
Flow Control Plate

V70428-K50	(Ports 3+5 reg.)
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Blanking Plate for unused Station

V70400-K50



DIN EN 50 022 rail (1 metre)

V10009-C00	(35x7.5mm)
V10592-C01	(35x15mm)



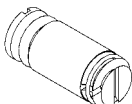
DIN-rail Mounting Kit

V70531-KA0



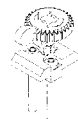
Blanking Disk to Modular Sub-base

V70422-K50	(1 each) (Ports 1,3,5)
V70423-K50	(1 each) (Ports 12+14)



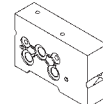
Blanking Plug for

Fixed Length Sub-base	
V70421-K50	(Ports 1,3,5)



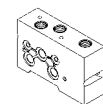
Manual Override Set-Up Kit

V70532-K00



Transition Plate #18 mm → #26 mm

V70436-K00



Transition Plate #18 mm → #26 mm w/ supply and exhaust ports

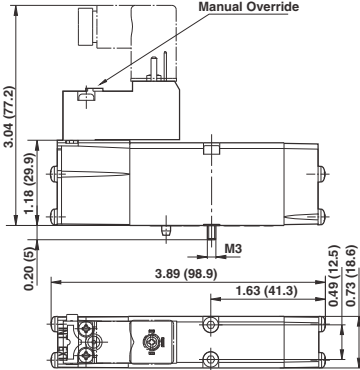
V70436-R00	(1/4 NPTF)
V70436-B00	(G1/4)

V40/V41 Mini ISO Star Valves

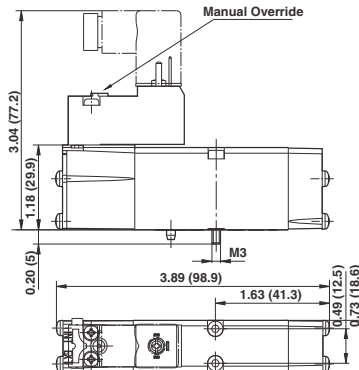
2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 18 mm

All Dimensions in Inches (mm)

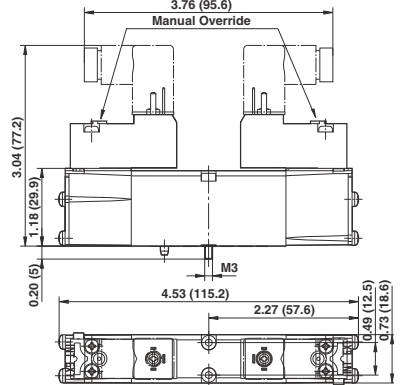
V4055*3D-C3*** and V4155*3D-C3*** Models
5/2 Single Solenoid Pilot Valve
Air Spring Return



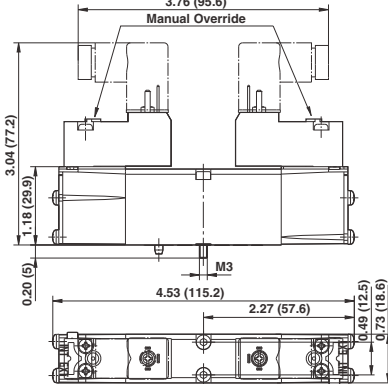
V4055*6D-C3*** and V4155*7D-C3*** Models
5/2 Single Solenoid Pilot Valve
Mechanical (& Air) Spring Return



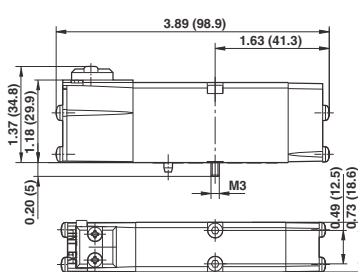
V4055**D-C3*** and V4155**D-C3*** Models
5/2 Double Solenoid Pilot Valve



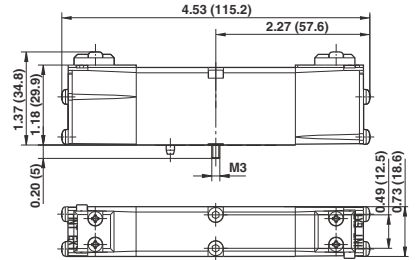
V405***D-C3*** and V415***D-C3*** Models
2x3/2 + 5/3 Double Solenoid Pilot Valve



V415537A-X0090
5/2 Single Air Pilot Valve



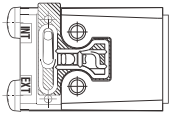
V405537A-X0090 5/2 Single Air Pilot Valve
V405*33A-X00*0 and V415*33A-X00*0 Models
2x3/2, 5/2 + 5/3 Double Air Pilot Valve



Conversion from internal to external pilot supply / Collected pilot exhaust

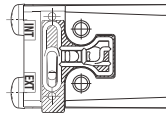
The lowered and captive gasket between valve body and pilot valve defines and indicates pilot air supply as well as pilot exhaust function of the valve.

Solenoid pilot actuated valves



blue gasket

Drawing shows no pilot valve.



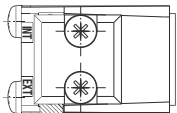
blue gasket

Internal pilot supply, pilot exhaust air collected and exhausted via port 14.

All solenoid pilot valves with code 1 at position 6 in the part number (e.g. V41551...) have the gasket mounted in this position on delivery.

Note: Dismounting pilot valve gives access to gasket. Conversion from internal to external pilot supply (or vice versa) by turning the gasket. Caution: In this case part number and symbol on label shows different function. Therefore check gasket position when mounting valve.

Air pilot actuated valves



blue gasket

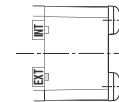
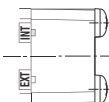
Air pilot actuated valves

External pilot supply.

External pilot supply from port 14 only, pilot exhaust air not collected but bleed through valve body.

All solenoid pilot valves with code 2 at position 6 in the part number (e.g. V41552...) have the gasket mounted in this position on delivery.

5/2 Solenoid pilot actuated valves with air spring return
Drawing shows end cap side 12.

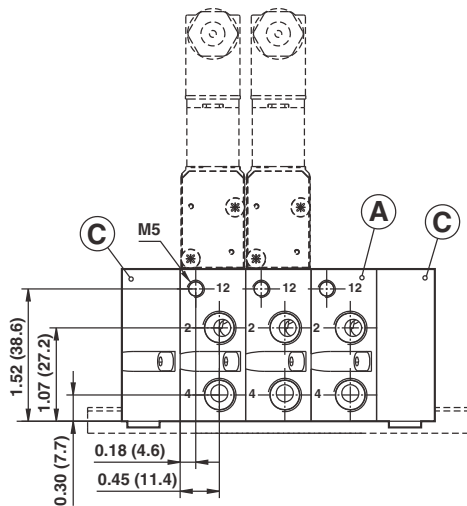


Note: Additional to above described work, gasket between end cap and valve body must be turned too at valves with this function.
For detailed instructions see Installation- and Maintenance Sheet.

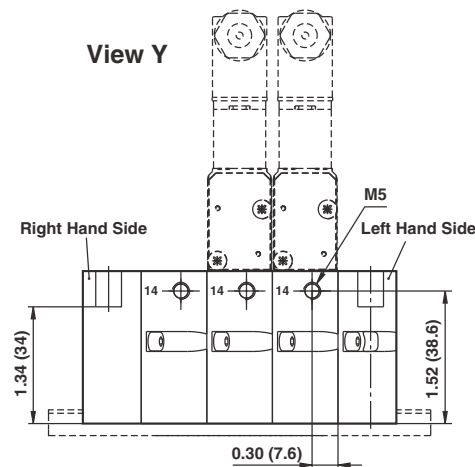
V40/V41 Mini ISO Star Valves

Modular Subbases parts for DIN rail or surface mounting Subbase

Side ported subbase

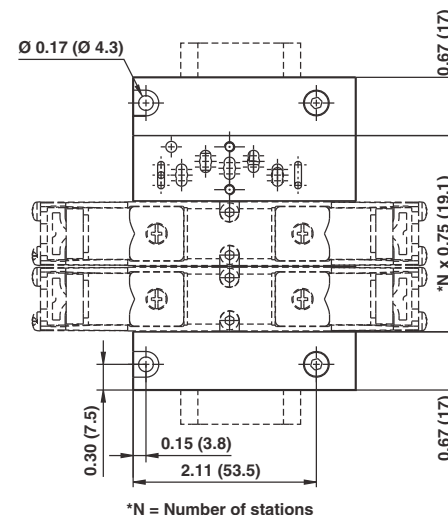
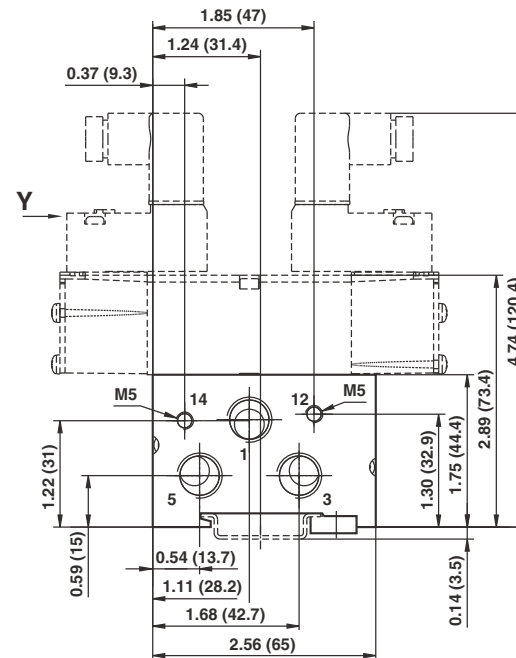
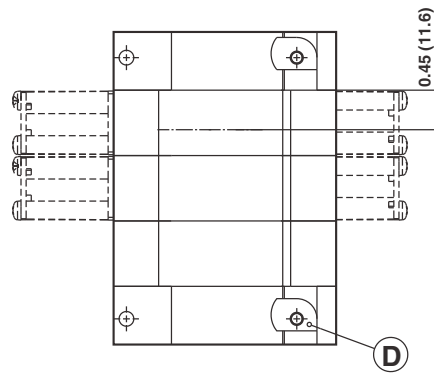


Side ported sub-base



Note:

Port 14 either used for external pilot air supply or for collected pilot air exhaust.
Therefore, **never plug port 14 when using valves with internal pilot air supply.**
Port 12 is not used, plugging not necessary.



Individual components

Modular Subbase (A) 0.26 lb
Ports 2+4 on side (0.12 kg)
V70425-x5F

Double Station
Modular Subbase 0.53 lb
Ports 2+4 on side (0.24 kg)
V70432-y5F

Modular Subbase (A) 0.26 lb
Ports 2+4 on side (0.12 kg)
Pilot Ports 12+14 on side
V70426-x5F

End Plate Kit (C) 0.46 lb
End Ported (0.21 kg)

V70424-B5C (G1/4)
V70424-R5C (1/4NPTF)
End ported end caps
1 left hand and 1 right hand

End Plate Kit with Valve Station
Ports 2+4 on side 0.88 lb
V70431-A5F (0.4 kg)

V70431-P5F (1/3/5 G1/4, 2/4 G1/8)
V70431-P5F (1/3/5 1/4NPTF, 2/4 1/8NPTF)
End ported end caps
1 left hand and 1 right hand

Accessories

DIN EN 50022 rail 0.68 lb
35 x 7.5 mm, 1m (0.31 kg)
V10009-C00

DIN EN 50022 rail 2.25 lb
35 x 15 mm, 1m (1.02 kg)
V10592-C01

DIN rail (D) 0.02 lb
Mounting Kit (0.01 kg)
V70531-KA0

Blanking Disk to
Modular Subbase 0.02 lb
Ports 1, 3, 5 (0.01 kg)
V70422-K50

Blanking Disk to
Modular Subbase 0.02 lb
Ports 12+14 (0.01 kg)
V70423-K50

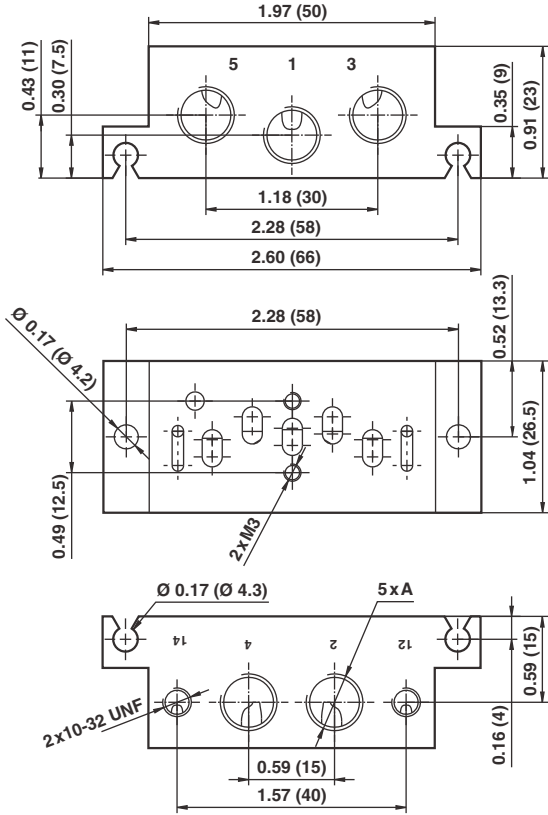
x/y = Insert port type from table below

Code x	Code y	Ports 2+4	Ports 12+14
A	A	G1/8	M5
P	P	1/8 NPTF	M5
8	-	ø 8 mm PIF	M5
6	-	ø 6 mm PIF	M5
1	-	ø 1/4" PIF	M5

V40/V41 Mini ISO Star Valves

2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 18 mm

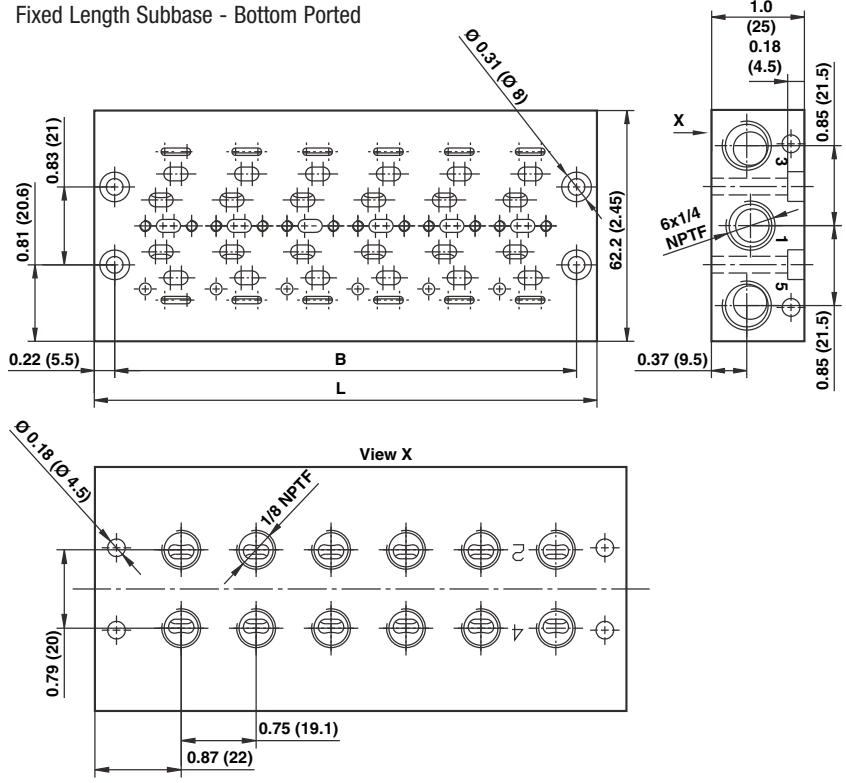
Single Station Subbase - Side Ported with Pilot Ports



Model	Port Size A	Weight lb (kg)
V70401-P5B	1/8NPTF Side Ported with Pilot Ports	0.18
V70401-A5B	G1/8 Side Ported with Pilot Ports	(0.08)

Note: Pilot Ports for both types = 10-32 UNF

Fixed Length Subbase - Bottom Ported



Model	No. of Stations	A inch (mm)	B inch (mm)	Weight lb (kg)
V70402-P50	2	2.33 (59.1)	1.89 (48.1)	0.40 (0.18)
V70404-P50	4	3.83 (97.3)	3.40 (86.3)	0.66 (0.30)
V70406-P50	6	5.34 (135.5)	4.90 (124.5)	0.93 (0.42)
V70408-P50	8	6.84 (173.7)	6.41 (162.7)	1.19 (0.54)
V70410-P50	10	8.34 (211.9)	7.91 (200.9)	1.46 (0.66)
V70412-P50	12	9.85 (250.1)	9.41 (239.1)	1.72 (0.78)

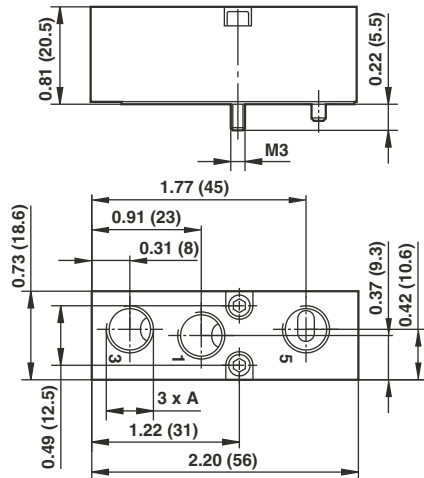
Note: This subbase is suitable for solenoid pilot actuated valves with internal pilot air supply only.

V40/V41 Mini ISO Star Valves

2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 18 mm

VALVES

Intermediate Supply / Exhaust Module



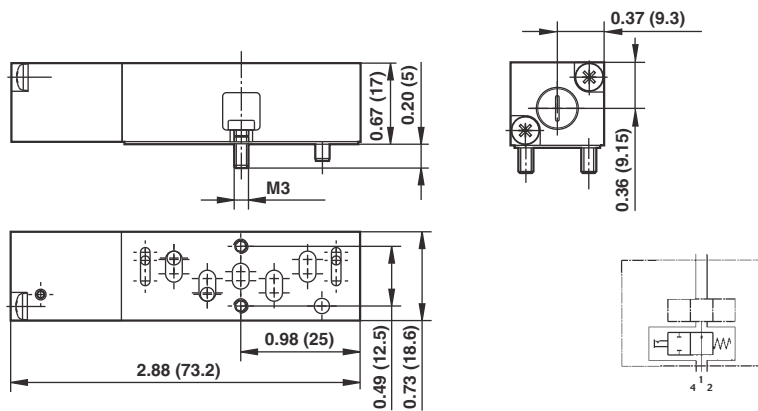
Model	Port Size A	Weight lb (kg)
V70429-P50	1/8NPTF	0.11
V70429-A50	G1/8	(0.05)

Provides additional porting on Modular- or Fixed Length Sub-base.
Occupies one valve station.
Supplied with gasket for both sub-bases.

Can be used to:

- Improve supply flow
- Increase exhaust capacity
- Pneumatically separate valves for fail safe emergency
- Multipressure system and system solutions

Single Valve Shut-Off Plate

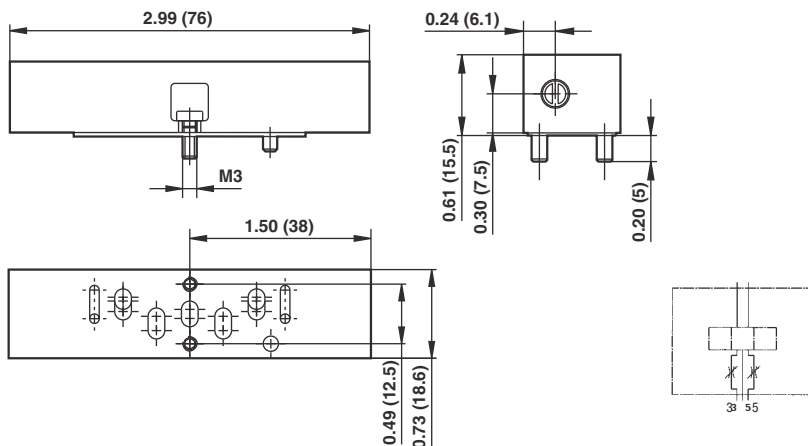


Model	Description	Weight lb (kg)
V70430-K50	Single Shut-Off Plate supplied with gasket	0.13 (0.06)

Allows individual exchange of valve, while valve manifold is pressurized by port 1.

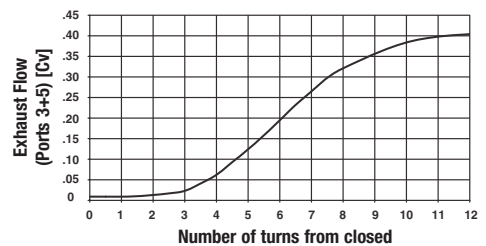
Note: Flow restricted to maximum .24 Cv

Sandwich Flow Control



Model	Description	Weight lb (kg)
V70428-K50	Flow Control supplied with gasket	0.13 (0.06)

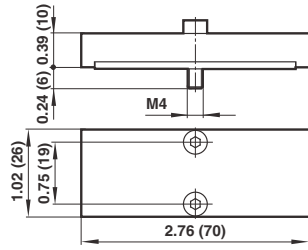
Dual Regulation of Exhaust Ports 3 and 5



Flow: Port 1 → 2 and 1 → 4: remains unchanged
Flow measured at 6 bar inlet, Pressure drop 1 bar

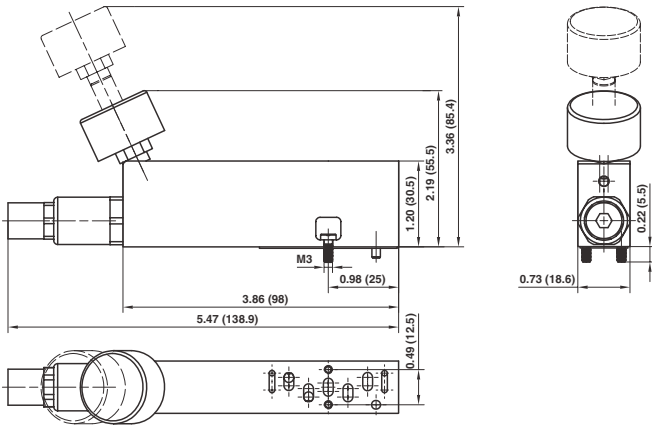
V40/V41 Mini ISO Star Valves

Blanking Plate

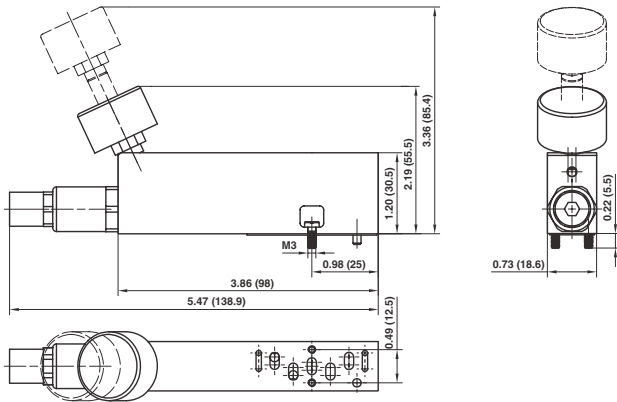
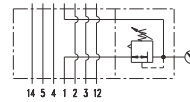


Model	Description	Weight lb (kg)
V70400-K50	Blanking Plate for blocking of unused Stations (supplied with gasket)	0.04 (0.02)

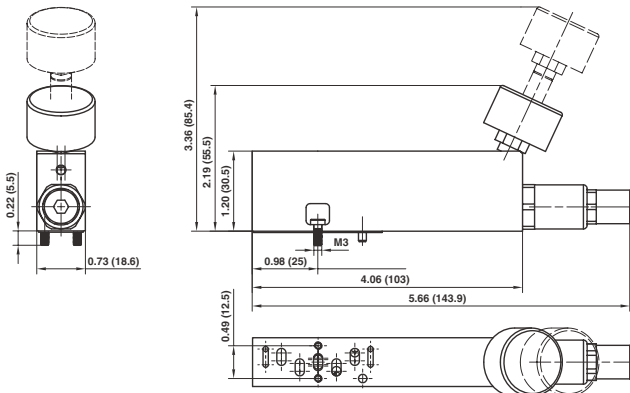
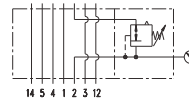
Pressure Regulator Plates (including gauge and adapter tube)



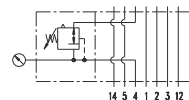
Model	Description	Weight lb (kg)
V70427-K51	Regulation of Port 1	0.46 (0.21)
Maximum inlet pressure	232 psig (16 bar)	
Regulated pressure	14.5–145 psig (1–10 bar)	



Model	Description	Weight lb (kg)
V70427-K52	Regulation of Port 2	0.46 (0.21)
Maximum inlet pressure	232 psig (16 bar)	
Regulated pressure	14.5–145 psig (1–10 bar)	



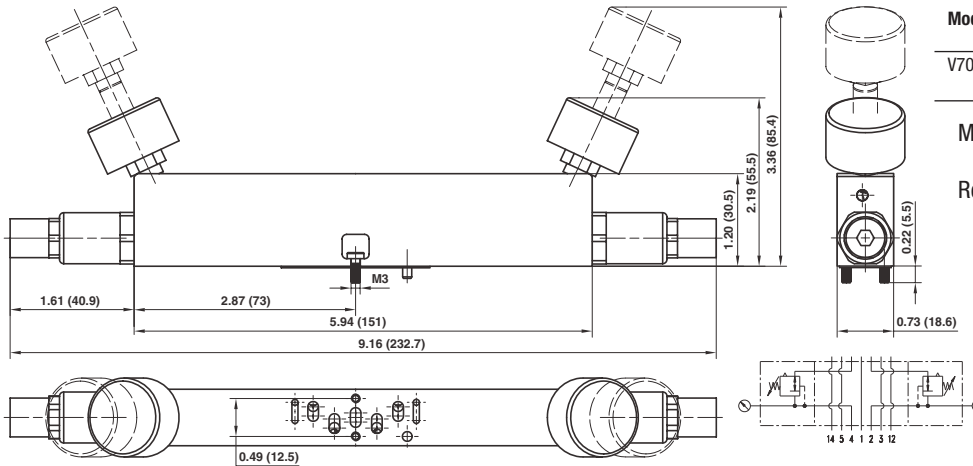
Model	Description	Weight lb (kg)
V70427-K53	Regulation of Port 4	0.46 (0.21)
Maximum inlet pressure	232 psig (16 bar)	
Regulated pressure	14.5–145 psig (1–10 bar)	



V40/V41 Mini ISO Star Valves

2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 18 mm

Dual regulator

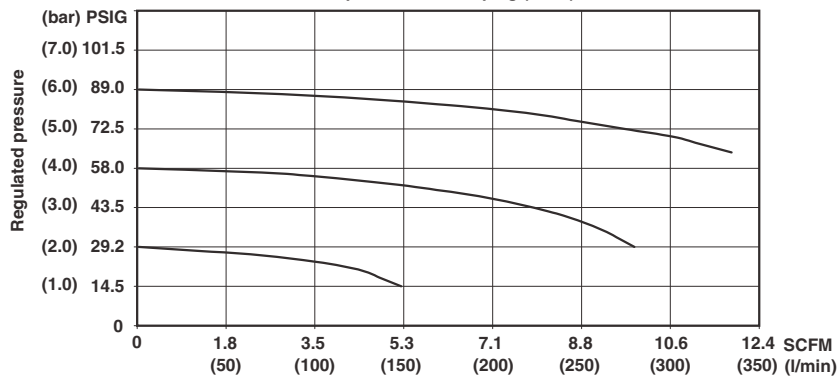


Model	Description	Weight lb (kg)
V70427-K54	Regulation of Ports 2+4	0.79 (0.36)

Maximum inlet pressure	232 psig (16 bar)
Regulated pressure	14.5–145 psig (1–10 bar)

Flow Characteristics for
Pressure Regulator Plates

Inlet pressure = 116 psig (8 bar)

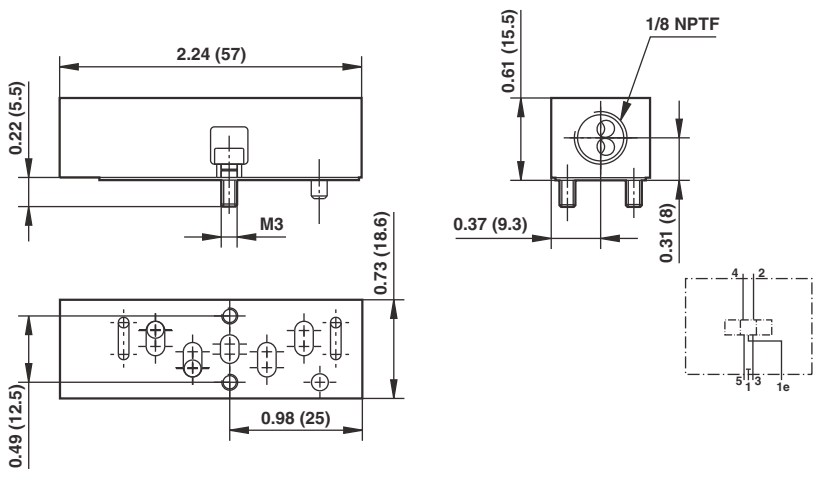


V40/V41 Mini ISO Star Valves

2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 18 mm

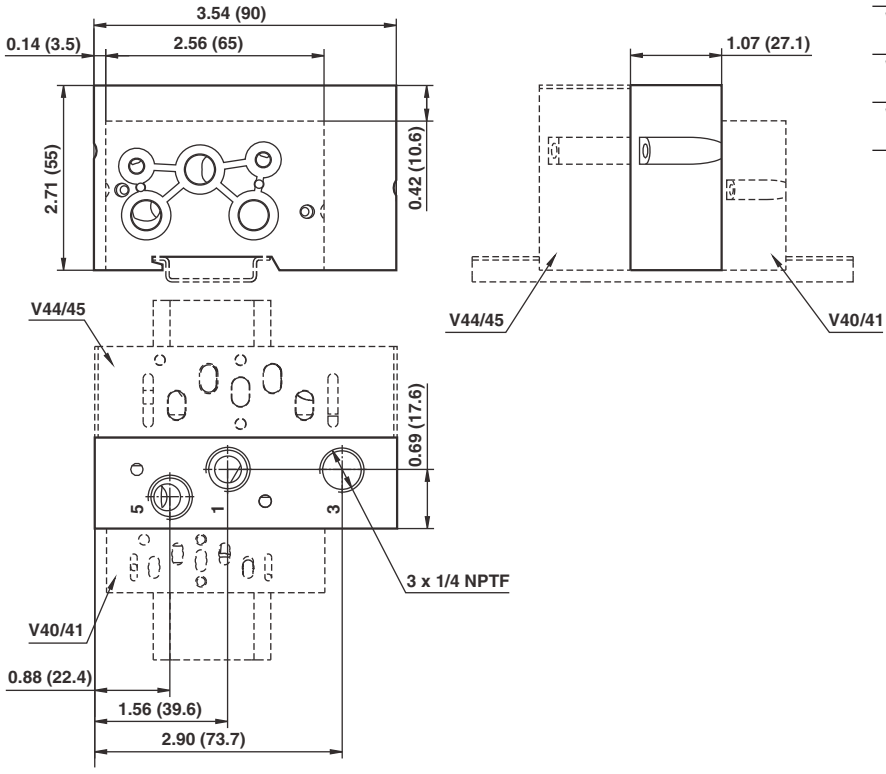
Sandwich Plate with additional Pressure Port 1

Model	Description	Weight lb (kg)
V70435-P50	Sandwich Plate with additional Port 1, supplied with gasket	0.09 (0.04)



Transition Plate #18 mm to #26 mm

Model	Description	Port 1/3/5	Weight lb (kg)
V70436-K00	Transition Plate # 18 - # 26 mm	without Ports 1/3/5	0.71 (0.32)
V70436-R00	Transition Plate # 18 - # 26 mm	1/4 NPTF	0.68 (0.31)
V70436-B00	Transition Plate # 18 - # 26 mm	G1/4	0.68 (0.31)



V44/V45 Mini ISO Star Valves

2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 26 mm

- Compact design and high performance
- Flexible Sub-base system
- True multipressure system (including vacuum)
- Sandwich regulators and flow controls
- Dual spool technology
 - V44 Glandless spool and sleeve
 - V45 Softseal spool
- Collected pilot exhaust with internal pilot air supply
- Easily converted from internal to external pilot supply
- Sandwich plate allows for exchange of valves under pressure
- Shutoff plate allows for exchange of valves under pressure

Technical Data

- Medium
- Compressed air, 40µm filtered, lubricated or non-lubricated
- Operation
 - V44: Glandless spool valve, solenoid pilot or air pilot actuated
 - V45: Softseal spool valve, solenoid pilot or air pilot actuated
- Mounting
 - On sub-bases
- Size
 - ISO 15407-1 / VDMA 24 563, 26 mm

Operating Pressure

- Maximum pressure
 - 145 psig (10 bar) V45 models and V44 solenoid pilot actuated valves with internal pilot supply
 - 232 psig (16 bar) V44 solenoid pilot actuated valves with external pilot supply and V44 air pilot actuated valves

Flow Characteristics

Series	Function	Cv	l/min
V44	5/2	0.92	900
V44	5/3	0.92	900
V45	5/2	1.22	1200
V45	5/3	1.17	1150
V45	2x3/2	1.17	1150

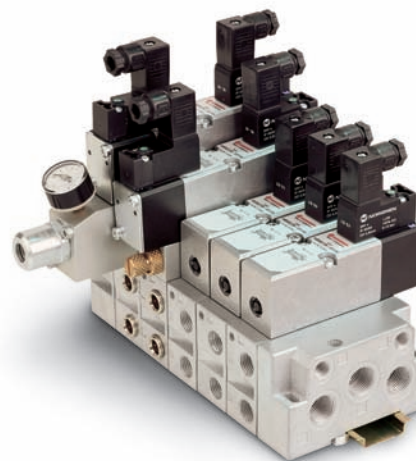
Ambient Temperature

- 5°F* to +122°F (-15°C* to +50°C) V44/V45 sol. and V45 air pilot models
- 5°F* to +176°F (-15°C* to +80°C) V44 air pilot models

*Consult our Application Engineering for use below 36° F (+2°C)

Materials

Die cast aluminum body and sub-base. Hard anodized spool, Teflon coated, matched aluminum spool and sleeve(V44) or aluminum alloy spool with HNBR Seals (V45). POM plastic parts and NBR static seals. End cover and screws zinc plated, stainless steel springs.



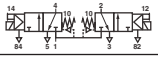

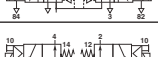
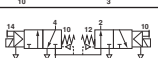


Electrical Details for Solenoid Pilot

Voltage Tolerances	-10% / +15%
Rating	100% Continuous Duty
Inlet orifice	0.8 mm
Electrical Connection	DIN 43 650 table 'C'
Manual Override	Push-turn locking and non-locking
Protection Class	IP 65 NEMA 4
Materials	PPS (body), Viton and NBR (seals)

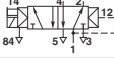
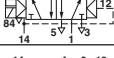
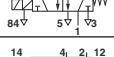
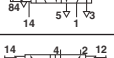

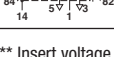
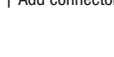

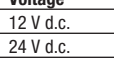
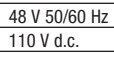
V44/V45 Mini ISO Star Valves

2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 26 mm

2x3/2 Solenoid Pilot Actuated Valves (Softseal Spool only)

Model	Function 2x3/2	Pilot Supply	Pilot Exhaust	Actuation 3/2 Function	Flow Cv	Operating Pres. psig	Pilot Pres. (psig)	Weight lb.	Repair Kit
 V45AA11D-C3**†	NC	Internal	Collected x	Sol/Spring	1.1	43.5 - 145	-	0.53	V70546-KA0
 V45AA22D-C3**†	NC	External	Not Collected	Sol/Spring	1.1	0 - 145	21.7+(0.5xop.press.)	0.53	V70546-KA0
 V45AB11D-C3**†	NO	Internal	Collected x	Sol/Spring	1.0	43.5 - 145	-	0.53	V70547-KA0
 V45AB22D-C3**†	NO	External	Not Collected	Sol/Spring	1.0	0 - 145	21.7+(0.5xop.press.)	0.53	V70547-KA0
 V45AC11D-C3**†	NO/NC	Internal	Collected x	Sol/Spring	1.0/	43.5 - 145	-	0.53	V70548-KA0
 V45AC22D-C3**†	NO/NC	External	Not collected	Sol/Spring	1.0/	0 - 145	21.7+(0.5xop.press.)	0.53	V70548-KA

5/2 Solenoid Pilot Actuated Valves

Model	Spool Techn.	Pilot Supply	Pilot Exhaust	Operator 14	Return 12	Flow Cv	Operating Pres. (psig)	Pilot Pres. (psig)	Weight lb.	Repair Kit
 V44A513D-C3**†	GI	Internal	Collected x	Solenoid	Air Spring	0.9	14.5 - 145	-	0.53	V70540-KA0
 V44A523D-C3**†	GI	External	Not collected	Solenoid	Air Spring	0.9	26" Hg - 232	14.5 - 145	0.53	V70540-KA0
 V44A517D-C3**†	GI	Internal	Collected x	Solenoid	Spring	0.9	23.2 - 145	-	0.44	V70540-KA0
 V45A517D-C3**†	Ss	Internal	Collected x	Solenoid	Spring	1.2	29 - 145	-	0.46	V70541-KA0
 V44A527D-C3**†	GI	External	Not collected	Solenoid	Spring	0.9	26" Hg - 232	23.2 - 145	0.44	V70540-KA0
 V45A527D-C3**†	Ss	External	Not collected	Solenoid	Spring	1.2	26" Hg - 145	29 - 145	0.46	V70541-KA0
 V44A511D-C3**†	GI	Internal	Collected x	Solenoid	Solenoid	0.9	29 - 145	-	0.60	V70540-KA0
 V45A511D-C3**†	Ss	Internal	Collected x	Solenoid	Solenoid	1.2	29 - 145	-	0.60	V70542-KA0
 V44A522D-C3**†	GI	External	Not collected	Solenoid	Solenoid	0.9	26" Hg - 232	29 - 145	0.60	V70540-KA0
 V45A522D-C3**†	Ss	External	Not collected	Solenoid	Solenoid	1.2	26" Hg - 145	29 - 145	0.60	V70542-KA0

** Insert voltage code from Table 1 "Voltage Codes and Spare Pilot Valves".

† Add connector code from Table 2, "Connector Codes and Part Number".

Table 1

**Voltage Codes and Spare Pilot Valves

Voltage	Code	Power Inrush / Hold	Pilot Valve Part.-no.
12 V d.c.	12	1.2 W	VZC7L2C1-C312A
24 V d.c.	13	1.2 W	VZC7L2C1-C313A
24 V 50/60 Hz.	14	2.1 / 1.5 VA	VZC7L2C1-C314A
48 V 50/60 Hz	16	2.1 / 1.5 VA	VZC7L2C1-C316A
110 V d.c.	17	1 W	VZC7L2C1-C317A
115 V 50/60 Hz	18	2.1 / 1.5 VA	VZC7L2C1-C318A
230 V 50/60 Hz	19	2.1 / 1.5 VA	VZC7L2C1-C319A
115 V 50/60 Hz	18	2.1 / 1.5 VA	VZC7L2C1-C213A
230 V 50/60 Hz	19	2.1 / 1.5 VA	VZC7L2C1-C218A

Other voltages available on request.

Spare pilot valves are delivered with mounting screws.

Table 2

†Connector Codes and Part Number

Code	Part Number
A = Solenoid without connector	
B = Cable grip	V10027-D00
C = 10 ft. molded cable, 0-240 VAC/VDC	V10013-D03
H = Cable grip w/indicator light, 24 VAC/VDC	V10012-D13
J = Cable grip w/indicator light, 120 VAC/VDC	V10012-D18
5 = 10 ft. molded cable with indicator light, surge suppression, 24 VAC/VDC	V10014-D03
6 = 10 ft. molded cable with indicator light, 110V/50 Hz-120V.60Hz	V10015-D03

V44/V45 Mini ISO Star Valves

2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 26 mm

5/3 Solenoid Pilot Actuated Valves

	Model	Spool Techn.	Valve Function	Pilot Supply	Pilot Exhaust	Operator 14	Return 12	Flow Cv	Operating Pres. (psig)	Pilot Pres. (psig)	Weight lb.	Repair Kit
	V44A611D-C3**†	GI	APB	Internal	Collected x	Solenoid	Solenoid	0.9	29 - 145	-	0.62	V70540-KA0
	V45A611D-C3**†	Ss	APB	Internal	Collected x	Solenoid	Solenoid	1.15	36.3 - 145	-	0.59	V70543-KA0
	V44A622D-C3**†	GI	APB	External	Not collected	Solenoid	Solenoid	0.9	26" Hg - 232	29 - 145	0.62	V70540-KA0
	V45A622D-C3**†	Ss	APB	External	Not collected	Solenoid	Solenoid	1.15	26" Hg - 145	36.3 - 145	0.59	V70543-KA0
	V44A711D-C3**†	GI	COE	Internal	Collected x	Solenoid	Solenoid	0.9	29 - 145	-	0.62	V70540-KA0
	V45A711D-C3**†	Ss	COE	Internal	Collected x	Solenoid	Solenoid	1.15	36.3 - 145	-	0.59	V70544-KA0
	V44A722D-C3**†	GI	COE	External	Not collected	Solenoid	Solenoid	0.9	26" Hg - 232	29 - 145	0.62	V70540-KA0
	V45A722D-C3**†	Ss	COE	External	Not collected	Solenoid	Solenoid	1.15	26" Hg - 145	36.3 - 145	0.59	V70544-KA0
	V44A811D-C3**†	GI	COP	Internal	Collected x	Solenoid	Solenoid	0.9	29 - 145	-	0.62	V70540-KA0
	V45A811D-C3**†	Ss	COP	Internal	Collected x	Solenoid	Solenoid	1.15	36.3 - 145	-	0.59	V70545-KA0
	V44A822D-C3**†	GI	COP	External	Not collected	Solenoid	Solenoid	0.9	26" Hg - 232	29 - 145	0.62	V70540-KA0
	V45A822D-C3**†	Ss	COP	External	Not collected	Solenoid	Solenoid	1.15	26" Hg - 145	36.3 - 145	0.59	V70545-KA0

Table 1
**Voltage Codes and Spare Pilot Valves

Voltage	Code	Power Inrush / Hold	Pilot Valve Part.-no.
12 V d.c.	12	1.2 W	VZC7L2C1-C312A
24 V d.c.	13	1.2 W	VZC7L2C1-C313A
24 V 50/60 Hz.	14	2.1 / 1.5 VA	VZC7L2C1-C314A
48 V 50/60 Hz	16	2.1 / 1.5 VA	VZC7L2C1-C316A
110 V d.c.	17	1 W	VZC7L2C1-C317A
115 V 50/60 Hz	18	2.1 / 1.5 VA	VZC7L2C1-C318A
230 V 50/60 Hz	19	2.1 / 1.5 VA	VZC7L2C1-C319A
115 V 50/60 Hz	18	2.1 / 1.5 VA	VZC7L2C1-C213A
230 V 50/60 Hz	19	2.1 / 1.5 VA	VZC7L2C1-C218A

Other voltages available on request.
Spare pilot valves are delivered with mounting screws.

Table 2
†Connector Codes and Part Number

Code	Part Number
A = Solenoid without connector	
B = Cable grip	V10027-D00
C = 10 ft. molded cable, 0-240 VAC/VDC	V10013-D03
H = Cable grip w/indicator light, 24 VAC/VDC	V10012-D13
J = Cable grip w/indicator light, 120 VAC/VDC	V10012-D18
5 = 10 ft. molded cable with indicator light, surge suppression, 24 VAC/VDC	V10014-D03
6 = 10 ft. molded cable with indicator light, 110V/50 Hz-120V.60Hz	V10015-D03

2x3/2 Air Pilot Actuated Valves (Softseal Spool)

Model	Function 2x3/2	Actuation 3/2 Function	Flow Cv	Operating Pres. (psig)	Pilot Pres. (psig)	Weight (lb.)	Spares Kit
	V45AA33A-X0020	NC	Air/Spring	1.1	0 - 145	1.5 + (0.5xop. pressure)	V70546-KA0
	V45AB33A-X0020	NO	Air/Spring	1.0	0 - 145	1.5 + (0.5xop. pressure)	V70547-KA0
	V45AC33A-X0020	NO/NC	Air/Spring	1.0/1.1	0 - 145	1.5 + (0.5xop. pressure)	V70548-KA0

5/2 Air Pilot Actuated Valves

Model Techn.	Spool	Operator 14	Return 12	Flow Cv	Operating Pres. (psig)	Pilot Pres. (psig)	Weight (lb.)	Repair Kit
	V44A537A-X0090	GI	Air	Spring	0.9	26" Hg - 232	23 - 232	V70540-KA0
	V45A537A-X0090	Ss	Air	Spring	1.2	26" Hg - 145	29 - 145	V70541-KA0
	V44A533A-X0020	GI	Air	Air	0.9	26" Hg - 232	29 - 232	V70540-KA0
	V45A533A-X0020	Ss	Air	Air	1.2	26" Hg - 145	29 - 145	V70542-KA0

V44/V45 Mini ISO Star Valves

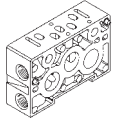
2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 26 mm

5/3 Air Pilot Actuated Valves

	Model	Spool	Valve Function	Operator 14	Return 12	Flow Cv	Operating Pres. (psig)	Pilot Pres. (psig)	Weight (lb.)	Spares Kit
	V44A633A-X0020	GI	APB	Air	Air	0.9	26" Hg - 232	29 - 232	0.48	V70540-KAO
	V45A633A-X0020	Ss	APB	Air	Air	1.15	26" Hg - 145	36 - 145	0.46	V70543-KAO
	V44A733A-X0020	GI	COE	Air	Air	0.9	26" Hg - 232	29 - 232	0.48	V70540-KAO
	V45A733A-X0020	Ss	COE	Air	Air	1.15	26" Hg - 145	36 - 145	0.46	V70544-KAO
	V44A833A-X0020	GI	COP	Air	Air	0.9	26" Hg - 232	29 - 232	0.48	V70540-KAO
	V45A833A-X0020	Ss	COP	Air	Air	1.15	26" Hg - 145	36 - 145	0.46	V70545-KAO

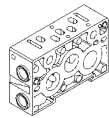
Bases

Modular Sub-base
Side Ported without Pilot Ports



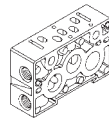
V70525-PAF (1/8 NPTF)
V70525-RAF (1/4 NPTF)
V70525-BAF (G1/4)

Modular Sub-base*
Ported with Pilot Ports



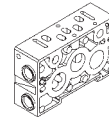
V70526-PAF (1/8 NPTF)
V70526-RAF (1/4 NPTF)
V70526-BAF (G1/4)

Modular Sub-base
Side Ported (PIF) without Pilot Ports



V70525-2AF (3/8 PIF)
V70525-8AF (ø8 mm)
V70525-YAF (ø10 mm)

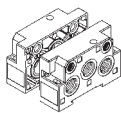
Modular Sub-base*
Side Ported (PIF) with Pilot Ports



V70526-2AF (3/8 PIF)
V70526-8AF (ø8 mm)
V70526-YAF (ø10 mm)

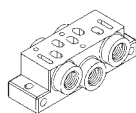
*Use with air pilot valves.

End Plate Kit
End Ported



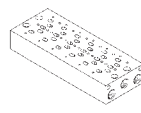
V70524-SAC (3/8 NPTF)
V70524-CAC (G3/8)

Single Station Sub-base
Side ported with Pilot Ports



V70501-RAB (1/4 NPTF)
V70501-BAB (G1/4)

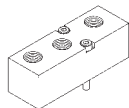
Fixed Length Sub-base
Bottom ported



V705**-RAO
**=02, 04, 06, 08, 10, 12 stations

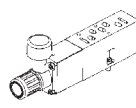
Accessories

Intermediate Supply/Exhaust Module Single Valve Shut-Off Plate



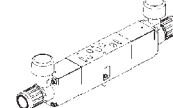
V70529-RAO (1/4 NPTF)
V70529-BAO (G1/4)

Single Pressure Regulator Plate



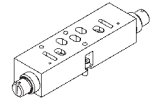
V70527-KA1 (Port 1 reg.)
V70527-KA2 (Port 2 reg.)
V70527-KA3 (Port 4 reg.)

Double Pressure Regulator Plate



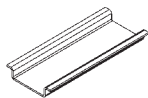
V70527-KA4 (Ports 2+4 reg.)

Flow Control Plate



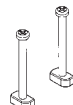
V70528-KAO (Ports 3+5)

DIN EN 50 022 rail (3.28 feet)



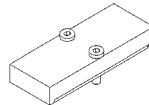
V10009-C00 (35x7.5mm)
V10592-C01 (35x15mm)

DIN-rail Mounting Kit



V70531-KAO

Blanking Plate for unused station



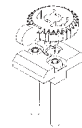
V70500-KAO

Blanking Disk to Modular Sub-base



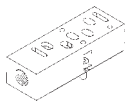
V70522-K00 (Ports 1,3,5)
V70523-K00 (Ports 12+14)

Manual Override Set-Up Kit

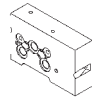


V70532-K00

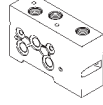
Sandwich Plate with additional



Pressure Port 1
V70535-RAO 1/4 NPTF
V70535-BAO G1/4



Transition Plate #18 A#26 mm
V70436-K00



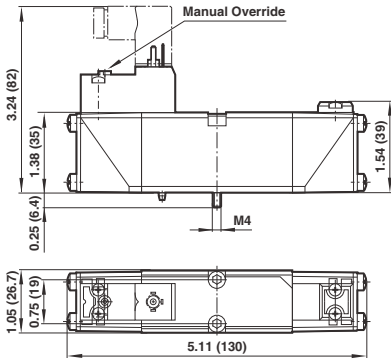
Transition Plate #18 A#26 mm (with supply and exhaust ports)
V70436-R00 1/4 NPTF
V70436-B00 G1/4

V44/V45 Mini ISO Star Valves

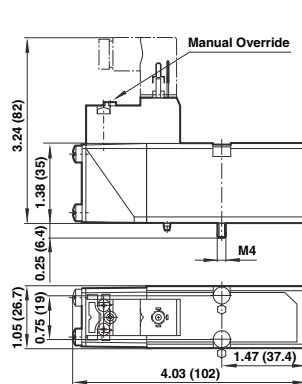
2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 26 mm

Dimensions in inches (mm)

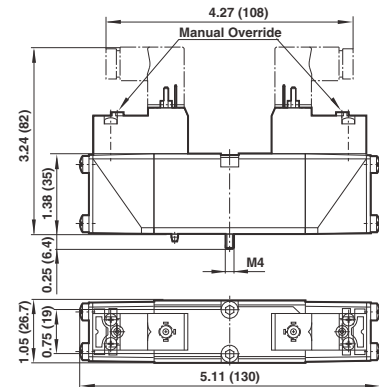
V44A5*3D-C3***
5/2 Single Solenoid Pilot Valve
Air Spring Return



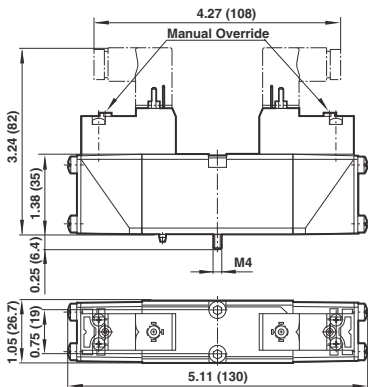
V44A5*7D-C3*** and V45A5*7D-C3***
5/2 Single Solenoid Pilot Valve
Mechanical Spring Return



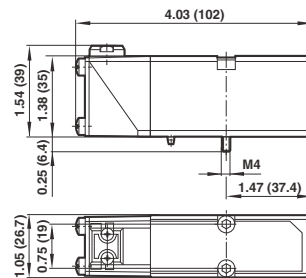
V44A5**D-C3*** and V45A5**D-C3***
5/2 Double Solenoid Pilot Valve



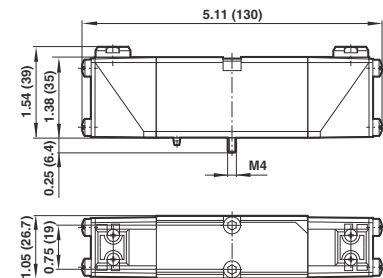
V44A***D-C3*** and V45A***D-C3***
2x3/2 + 5/3 Double Solenoid Pilot Valve



V44A537A-X00*0 and V45A537A-X00*0
5/2 Single Air Pilot Valves



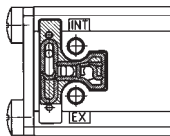
V44A*33A-X00*0 and V45A*33A-X00*0
2x3/2 + 5/2 + 5/3 Double Air Pilot Valve



Conversion from internal to external pilot supply / collected pilot exhaust

The lowered and captive gasket between valve body and pilot valve defines and indicates pilot air supply as well as pilot exhaust function of the valve.

Solenoid pilot actuated valves



blue gasket

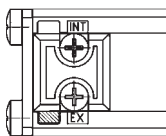
Internal pilot supply, pilot exhaust air collected and exhausted via port 14.

All solenoid pilot valves with code 1 at position 6 in the part number (e.g V45A51...) have the gasket mounted in this position on delivery.

Note: Dismounting pilot valve gives access to gasket. Conversion from internal to external pilot supply (or vice versa) by turning the gasket.

Caution: In this case part number and symbol on label shows different function. Therefore check gasket position when mounting valve.

Air pilot actuated valves

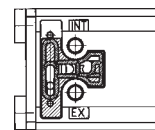


blue gasket

Drawing includes cover plate.

Air pilot actuated valves
External pilot supply.

Drawing shows no pilot valve.



blue gasket

External pilot supply from port 14 only, pilot exhaust air not collected but bled through valve body.

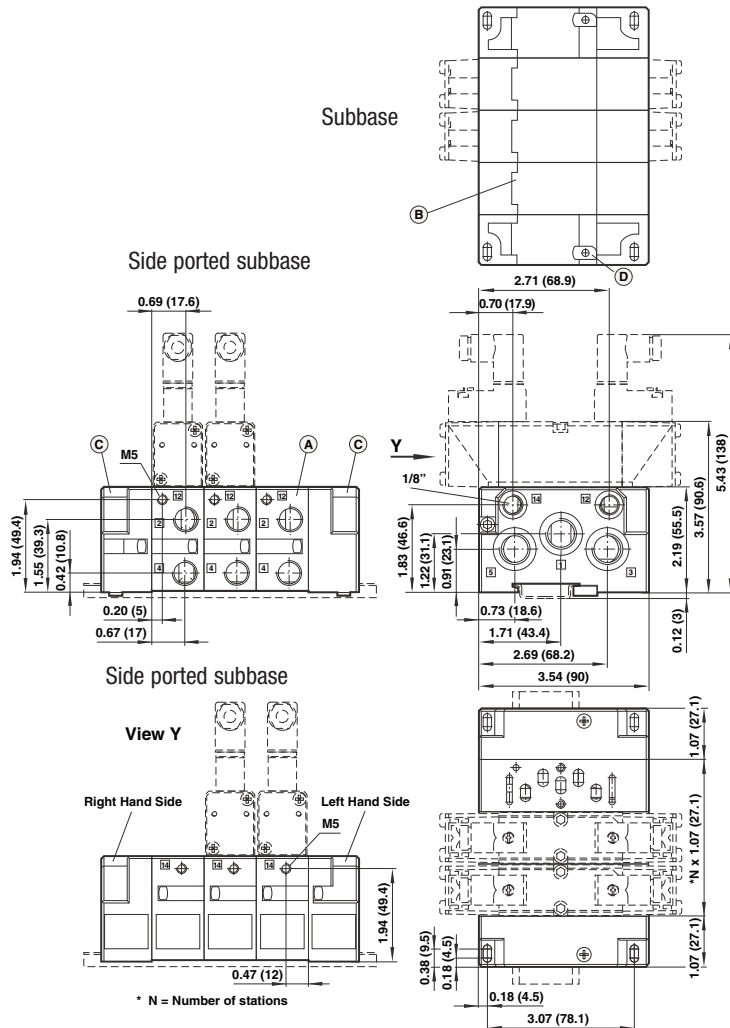
All solenoid pilot valves with code 2 at position 6 in the part number (e.g V45A52...) have the gasket mounted in this position on delivery.

V44/V45 Mini ISO Star Valves

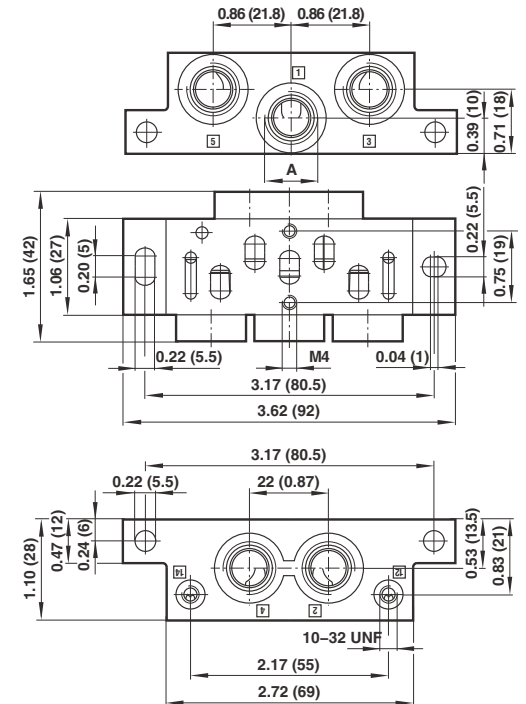
2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 26 mm

Dimensions in inches (mm)

VALVES



Single Station Subbase - Side Ported with Pilot Ports



Model	Port Size A	Weight lb (kg)
V70501-RAB	NPTF1/4	
	side ported with pilot ports	0.24
V70501-BAB	G1/4	(0.11)
	side ported with pilot ports	

Note: Port 14 used for external pilot air supply or for collected pilot air exhaust. **Never plug port 14 when using valves with internal pilot air supply. Port 12 is not used, plugging not necessary.**

Accessories

DIN EN 50022 rail 35 x 7.5 mm, 3.3' (1m) V10009-C00	0.68 lb (0.31 kg)
DIN EN 50022 rail 35 x 15 mm, 3.3' (1m) V10592-C01	2.25 lb (1.02 kg)
DIN rail Mounting Kit V70531-KA0	D 0.02 lb (0.01 kg)
Blanking Disk to Modular Sub-base Ports 1, 3, 5 V70522-K00	0.02 lb (0.01 kg)
Blanking Disk to Modular Sub-base Ports 12+14 V70523-K00	0.02 lb (0.01 kg)

x = Insert port type from table below

Code	Ports 2+4	Ports 12+14
P	1/8NPTF	10-32 UNF
R	1/4NPTF	10-32 UNF
2	3/8 PIF	10-32 UNF
B	G1/4	M5
8	ø 8 mm PIF	M5
Y	ø 10 mm PIF	M5

Individual components

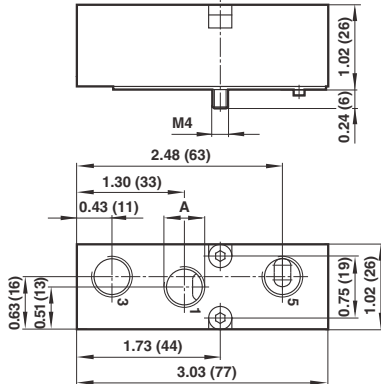
Modular Sub-base Ports 2+4 on side	A 0.40 lb (0.18 kg)
V70525-xAF	
Modular Sub-base Ports 2+4 on side Pilot Ports 12+14 on side	A 0.40 lb (0.18 kg)
V70526-xAF	
Modular Sub-base Ports 2+4 on bottom	B 0.40 lb (0.18 kg)
V70525-BAE	
Modular Sub-base Ports 2+4 on bottom Pilot Ports 12+14 on side	B 0.40 lb (0.18 kg)
V70526-BAE	
End Plate Kit Side Ported	C 0.80 lb (0.36 kg)
V70524-CAC (G3/8) V70524-SAC (3/8NPTF) End ported end caps 1 left hand and 1 right hand	

V44/V45 Mini ISO Star Valves

2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 26 mm

Dimensions in inches (mm)

Intermediate Supply / Exhaust Module



Model	Port Size A	Weight lb (kg)
V70529-RAO	1/4NPTF	0.26
V70529-BAO	G1/4	(0.12)

Provides additional porting on Modular or Fixed Length Sub-base.

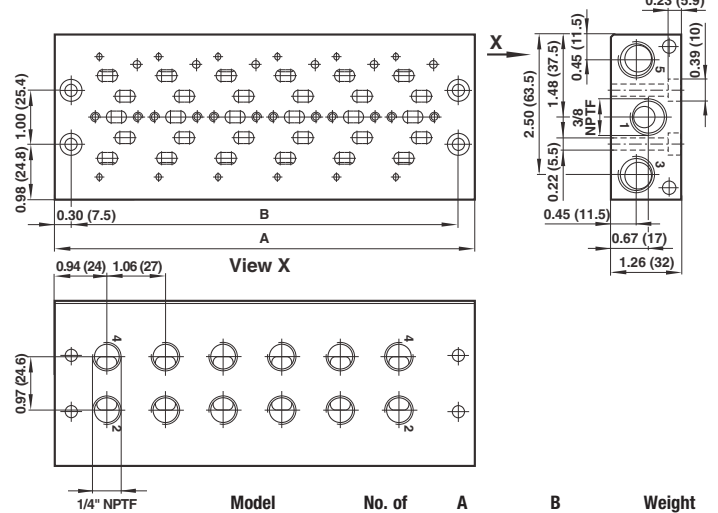
Occupies one valve station.

Supplied with gasket for both sub-bases.

Can be used to:

- Improve supply flow
- Increase exhaust capacity
- Pneumatically separate valves for fail save emergency
- Multipressure system and system solutions

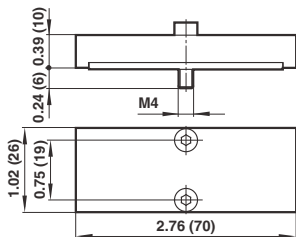
Fixed Length Subbase - Bottom Ported



Model	No. of Stations	A inch (mm)	B inch (mm)	Weight lb (kg)
V70502-RAO	2	3.27 (83)	2.68 (68)	0.88 (0.40)
V70504-RAO	4	5.39 (137)	4.80 (122)	1.43 (0.65)
V70506-RAO	6	7.52 (191)	6.93 (176)	2.00 (0.91)
V70508-RAO	8	9.65 (245)	9.06 (230)	2.53 (1.15)
V70510-RAO	10	11.77 (299)	11.18 (284)	3.11 (1.41)
V70512-RAO	12	13.90 (353)	13.31 (338)	3.66 (1.66)

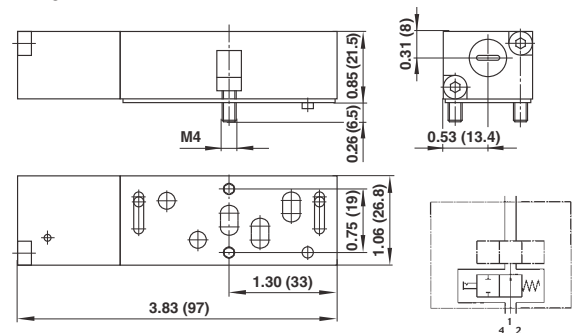
NOTE: This subbase is suitable for solenoid pilot actuated valves with internal pilot air supply only.

Blanking Plate



Model	Description	Weight lb (kg)
V70500-KAO	Blanking Plate for blocking of unused stations (supplied with gasket)	0.11 (0.05)

Single Valve Shut-Off Plate



Model	Description	Weight lb (kg)
V70530-KAO	Single Shut-Off Plate supplied with gasket	0.28 (0.13)

Allows individual exchange of valve, while valve manifold is pressurized by port 1.

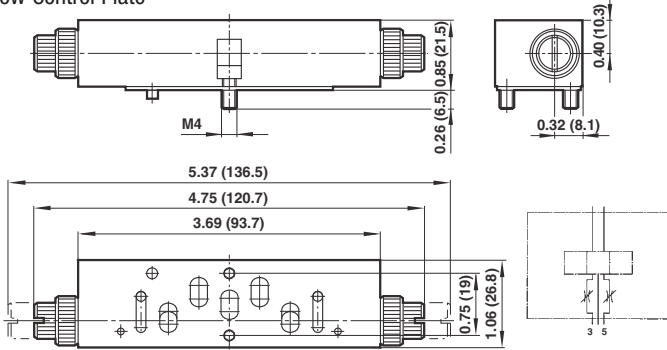
Note: Flow restricted to max. Cv of 0.5

V44/V45 Mini ISO Star Valves

2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 26 mm

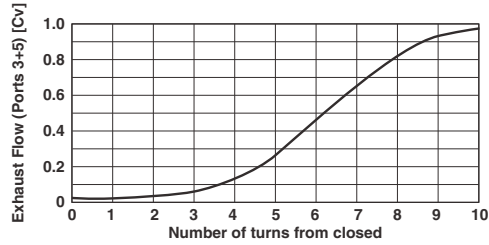
Dimensions in inches (mm)

Flow Control Plate



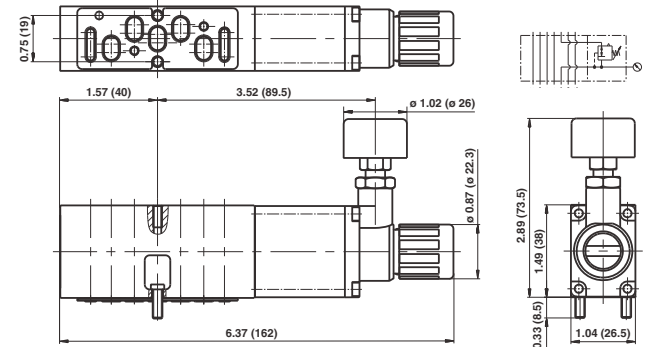
Model	Description	Weight lb (kg)
V70528-KA0	Flow control supplied with gasket	0.37 (0.17)

Dual Regulation of Exhaust Ports 3 and 5



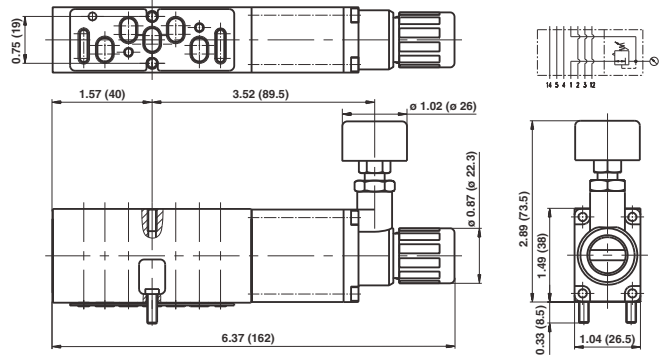
Flow: Port 1 → 2 and 1 → 4 remain unchanged
Flow measured at 87 psig inlet, Pressure drop 15 psi

Pressure Regulator Plate



Model	Description	Weight lb (kg)
V70527-KA2	Regulation of Port 2	0.79 (0.36)

Maximum inlet pressure 232 psig (16 bar)
Regulated pressure 7.25–145 psig (0.5–10 bar)



Model	Description	Weight lb (kg)
V70527-KA1	Regulation of Port 1	0.36 (0.79)

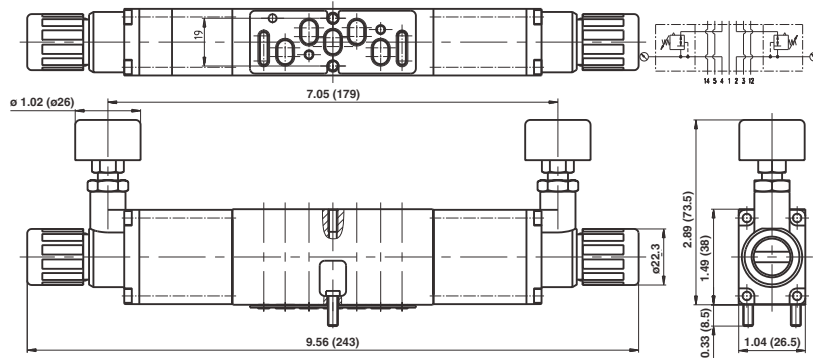
Maximum inlet pressure 232 psig (16 bar)
Regulated pressure 14.5–145 psig (1–10 bar)

V44/V45 Mini ISO Star Valves

2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 26 mm

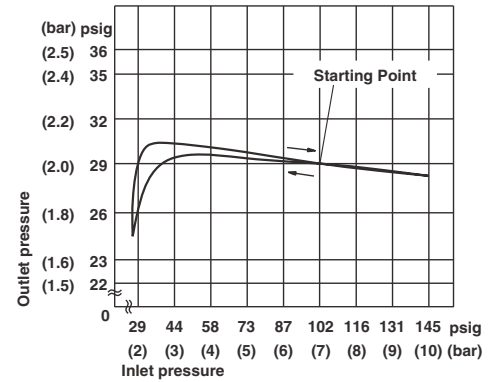
Dimensions in inches (mm)

Pressure Regulator Plate

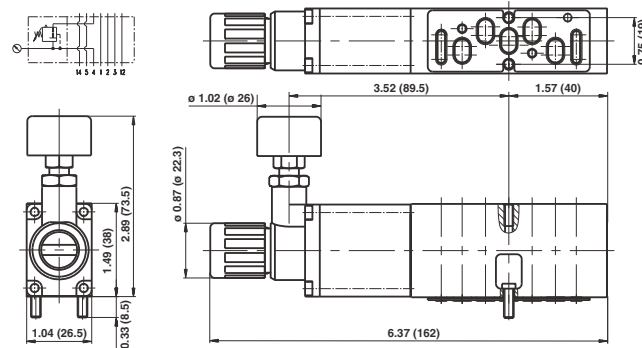
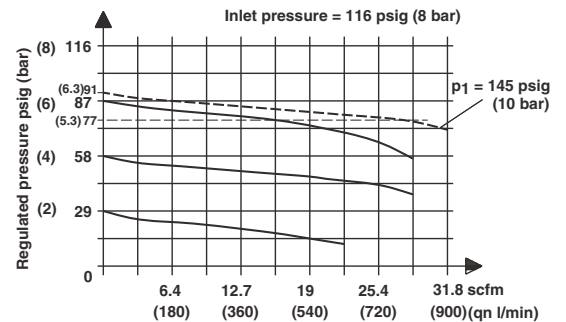


Model	Description	Weight lb (kg)
V70527-KA4	Regulation of Ports 2+4	1.23 (0.56)
Maximum inlet pressure	232 psig (16 bar)	
Regulated pressure	14.5–145 psig (1–10 bar)	

Hysteresis

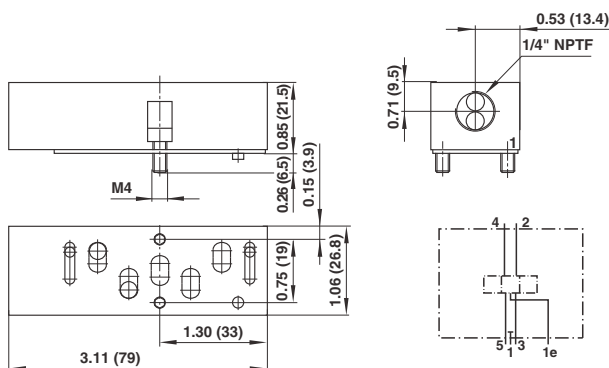


Flow Characteristics for Pressure Regulator Plates



Model	Description	Weight lb (kg)
V70527-KA3	Regulation of Port 4	0.79 (0.36)
Maximum inlet pressure	232 psig (16 bar)	
Regulated pressure	14.5–145 psig (1–10 bar)	

Sandwich Plate with additional Pressure Port 1



Model	Description	Weight lb (kg)
V70535-RA0	Sandwich Plate with additional Port 1, supplied with gasket	0.26 (0.12)

ISO Star Series Valves

5/2 and 5/3 solenoid and air pilot actuated valves

- NITUFF® coated non-corrosive spool and sleeve for long trouble free life (100 million plus cycles)**
- Integral flow controls for cylinder speed control on size #1, and #2 models**
- Low power solenoids with manual override options**
- End and CNOMO solenoid pilots**
- Base mounted soft start valves available**
- Minimal maintenance**

Technical Data

Medium:

Compressed air, 40µm filtered, lubricated or non-lubricated

Operation:

Glandless spool valve, solenoid pilot or air pilot actuated

Mounting:

On sub-bases

Sizes:

#1, #2, #3

Operating Pressure:

Maximum pressure

145 psig (10 bar) solenoid pilot actuated valves with internal pilot supply

232 psig (16 bar) solenoid pilot actuated valves with external pilot supply

232 psig (16 bar) air pilot actuated valves

Flow Characteristics (unregulated):

Size	Cv	l/min
#1	1.2	5.5
#2	2.4	10.7
#3	4.4	17.9

Ambient Temperature:

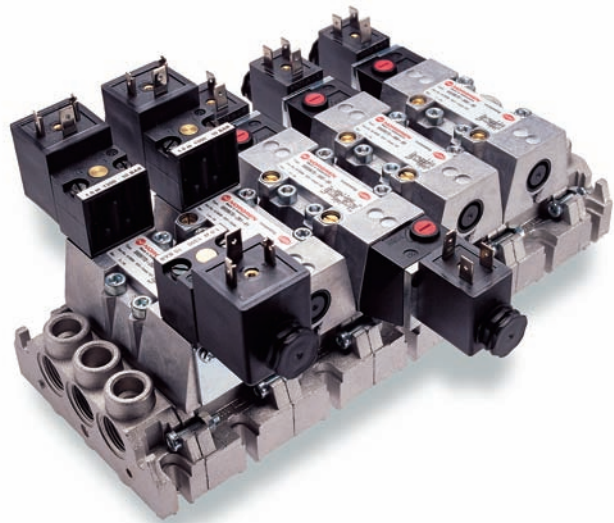
5°F* to 122°F (-15°C to 50°C) solenoid pilot actuated valves

5°F* to 176°F (-15°C to 80°C) air pilot actuated valves

*Consult our Technical Service for use below 36°F (2°C)

Materials:

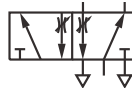
Die cast aluminum body. Hard anodized, Teflon coated, matched aluminum spool and sleeve. Viton and nitrile rubber seals. Zinc die cast locking plate. POM plastic parts. Zinc plated screws. Brass flow regulators.



Ordering Information

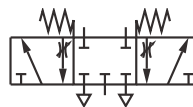
To order select model number, add voltage code and connector code, e.g. SXE 0573-A60-00/13JB for a 5/2 double end solenoid pilot size #1 valve with internal pilot air supply, integral flow regulators, shrouded push button lockable manual override, 22 mm coil 24V d.c. with cable grip connector.

5/2



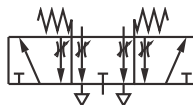
5/3

All ports blocked mid position



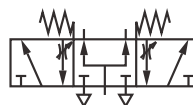
5/3

Center open exhaust mid position



5/3

Center open pressure mid position



ISO Star Series Valves

5/2 and 5/3 solenoid and air pilot actuated valves

VALVES

5/2 Solenoid Pilot Actuated Valves

	Model	Size	Flow Control	Pilot Supply	Operator	Return	Operating Pressure psig (bar)	Pilot Pressure psig (bar)	Weight lb. (kg)
	SXE9573-A70-00***†	#1	-	Internal	Solenoid	Air Spring	14.5 - 145 (1 - 10)	-	0.74 (0.33)
	SXE9574-A70-00***†	#2	-	Internal	Solenoid	Air Spring	14.5 - 145 (1 - 10)	-	1.34 (0.59)
	SXE9575-A70-00***†	#3	-	Internal	Solenoid	Air Spring	14.5 - 145 (1 - 10)	-	1.93 (0.85)
	SXE9573-A80-00***†	#1	Integral	Internal	Solenoid	Air Spring	14.5 - 145 (1 - 10)	-	0.74 (0.33)
	SXE9574-A80-00***†	#2	Integral	Internal	Solenoid	Air Spring	14.5 - 145 (1 - 10)	-	1.34 (0.59)
	SXE9573-A75-00***†	#1	-	External	Solenoid	Air Spring	26" Hg - 232 (-0.9 - 16)	14.5 - 145 (1 - 10)	0.74 (0.33)
	SXE9574-A75-00***†	#2	-	External	Solenoid	Air Spring	26" Hg - 232 (-0.9 - 16)	14.5 - 145 (1 - 10)	1.34 (0.59)
	SXE9575-A75-00***†	#3	-	External	Solenoid	Air Spring	26" Hg - 232 (-0.9 - 16)	14.5 - 145 (1 - 10)	1.93 (0.85)
	SXE9573-A85-00***†	#1	Integral	External	Solenoid	Air Spring	26" Hg - 232 (-0.9 - 16)	14.5 - 145 (1 - 10)	0.74 (0.33)
	SXE9574-A85-00***†	#2	Integral	External	Solenoid	Air Spring	26" Hg - 232 (-0.9 - 16)	14.5 - 145 (1 - 10)	1.34 (0.59)
	SXE0573-A50-00***†	#1	-	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	1.02 (0.45)
	SXE0574-A50-00***†	#2	-	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	1.63 (0.72)
	SXE0575-A50-00***†	#3	-	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	2.18 (0.96)
	SXE0573-A60-00***†	#1	Integral	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	1.02 (0.45)
	SXE0574-A60-00***†	#2	Integral	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	1.63 (0.72)
	SXE0573-A55-00***†	#1	-	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.02 (0.45)
	SXE0574-A55-00***†	#2	-	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.63 (0.72)
	SXE0575-A55-00***†	#3	-	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	2.18 (0.96)
	SXE0573-A65-00***†	#1	Integral	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.02 (0.45)
	SXE0574-A65-00***†	#2	Integral	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.63 (0.72)

5/3 Solenoid Pilot Actuated Valves

	Model	Size	Flow Control	Valve Function*	Pilot Supply	Operator	Operator	Operating Pressure psig (bar)	Pilot Pressure psig (bar)	Weight lb. (kg)
	SXE9673-A60-00***†	#1	Integral	APB	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	1.02 (0.45)
	SXE9674-A60-00***†	#2	Integral	APB	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	1.63 (0.72)
	SXE9675-A60-00***†	#3	-	APB	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	2.18 (0.96)
	SXE9673-A65-00***†	#1	Integral	APB	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.02 (0.45)
	SXE9674-A65-00***†	#2	Integral	APB	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.63 (0.72)
	SXE9675-A65-00***†	#3	-	APB	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	2.18 (0.96)
	SXE973-A60-00***†	#1	Integral	COE	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	1.02 (0.45)
	SXE9774-A60-00***†	#2	Integral	COE	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	1.63 (0.72)
	SXE9775-A60-00***†	#3	-	COE	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	2.18 (0.96)
	SXE973-A65-00***†	#1	Integral	COE	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.02 (0.45)
	SXE9774-A65-00***†	#2	Integral	COE	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.63 (0.72)
	SXE9775-A65-00***†	#3	-	COE	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	2.18 (0.96)
	SXE9873-A60-00***†	#1	Integral	COP	Internal	Solenoid	Solenoid	29 - 14 5 (2 - 10)	-	1.02 (0.45)
	SXE9874-A60-00***†	#2	Integral	COP	Internal	Solenoid	Solenoid	29 - 14 5 (2 - 10)	-	1.63 (0.72)
	SXE9875-A60-00***†	#3	-	COP	Internal	Solenoid	Solenoid	29 - 14 5 (2 - 10)	-	2.18 (0.96)
	SXE9873-A65-00***†	#1	Integral	COP	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.02 (0.45)
	SXE9874-A65-00***†	#2	Integral	COP	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.63 (0.72)
	SXE9874-A65-00***†	#3	-	COP	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	2.18 (0.96)

***Insert 3-digit voltage code from Voltage Codes and Replacement Coils table below.

† Insert letter from Connector Option Codes.

* Valve Function Designations:

APB = All Ports Blocked
COE = Center Open Exhaust
COP = Center Open Pressure

Part Number Example

SXE9573-Z70-00**12JA**

Where "12J" is a 12V d.c. coil with a 22 mm connector interface, and "A" is a solenoid without connector.

Voltage Codes and Replacement Coils

Voltage	22 mm Coil with connector interface acc. to Industrial Standard			30 mm Coil with connector interface acc. to DIN 43650 table "A"		
	Code	Power Inrush/Hold	Coil Part.-no.	Code	Power Inrush/Hold	Coil Part.-no.
12 V d.c.	12J	2 W	54469-01	22N	1.5 W	V10633-A22N
24 V d.c.	13J	2 W	54469-02	23N	1.5 W	V10633-A23N
24 V 50/60 Hz	14J	4/2.5 VA	54469-04	24N	3/2 VA	V10633-A24N
48 V 50/60 Hz	16J	4/2.5 VA	54469-07	26N	3/2 VA	V10633-A26N
110/120 V 50/60 Hz	18J	4/2.5 VA	54469-03	28N	3/2 VA	V10633-A28N
220/240 V 50/60 Hz	19J	9/5.0 VA	54469-08	89N	10/8VA	V10633-A89N

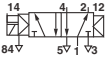
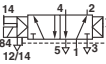
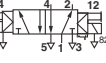
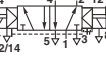




Other Voltages available on request.

ISO Star Series Valves

5/2 and 5/3 solenoid and air pilot actuated valves

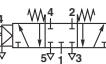

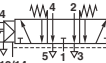


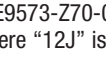
5/2 CNOMO Solenoid Pilot Actuated Valves

(Consult factory for lead times)

Model	Size	Flow Control	Pilot Supply	Operator	Return psig (bar)	Operating Pressure psig (bar)	Pilot Pressure lb. (kg)	Weight
 SXE9573-Z70-90***†	#1	-	Internal	Solenoid	Air Spring	14.5 - 145 (1 - 10)	-	0.74 (0.33)
SXE9574-Z70-90***†	#2	-	Internal	Solenoid	Air Spring	14.5 - 145 (1 - 10)	-	1.34 (0.59)
SXE9575-Z70-90***†	#3	-	Internal	Solenoid	Air Spring	14.5 - 145 (1 - 10)	-	1.93 (0.85)
 SXE9573-Z80-90***†	#1	Integral	Internal	Solenoid	Air Spring	14.5 - 145 (1 - 10)	-	0.74 (0.33)
SXE9574-Z80-90***†	#2	Integral	Internal	Solenoid	Air Spring	14.5 - 145 (1 - 10)	-	1.34 (0.59)
SXE9575-Z80-90***†	#3	-	External	Solenoid	Air Spring	26" Hg - 232 (-0.9 - 16)	14.5 - 145 (1 - 10)	1.34 (0.59)
 SXE9573-Z75-90***†	#1	-	External	Solenoid	Air Spring	26" Hg - 232 (-0.9 - 16)	14.5 - 145 (1 - 10)	1.93 (0.85)
SXE9574-Z75-90***†	#2	-	External	Solenoid	Air Spring	26" Hg - 232 (-0.9 - 16)	14.5 - 145 (1 - 10)	1.34 (0.59)
SXE9575-Z75-90***†	#3	-	External	Solenoid	Air Spring	26" Hg - 232 (-0.9 - 16)	14.5 - 145 (1 - 10)	1.93 (0.85)
 SXE9573-Z85-90***†	#1	Integral	External	Solenoid	Air Spring	26" Hg - 232 (-0.9 - 16)	14.5 - 145 (1 - 10)	0.74 (0.33)
SXE9574-Z85-90***†	#2	Integral	External	Solenoid	Air Spring	26" Hg - 232 (-0.9 - 16)	14.5 - 145 (1 - 10)	1.34 (0.59)
SXE9575-Z85-90***†	#3	-	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	1.02 (0.45)
 SXE0573-Z50-90***†	#1	-	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	1.63 (0.72)
SXE0574-Z50-90***†	#2	-	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	2.18 (0.96)
SXE0575-Z50-90***†	#3	-	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	1.02 (0.45)
 SXE0573-Z60-90***†	#1	Integral	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	1.63 (0.72)
SXE0574-Z60-90***†	#2	Integral	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	1.02 (0.45)
SXE0575-Z60-90***†	#3	-	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.02 (0.45)
 SXE0574-Z55-90***†	#2	-	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.63 (0.72)
SXE0575-Z55-90***†	#3	-	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	2.18 (0.96)
 SXE0573-Z65-90***†	#1	Integral	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.02 (0.45)
SXE0574-Z65-90***†	#2	Integral	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.63 (0.72)
SXE0575-Z65-90***†	#3	-	Integral	External	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.63 (0.72)

5/3 CNOMO Solenoid Pilot Actuated Valves

(Consult factory for lead times)

Model	Size	Flow Control	Valve Function*	Pilot Supply	Operator	Operator psig (bar)	Operating Pressure psig (bar)	Pilot Pressure lb. (kg)	Weight
 SXE9673-Z60-90***†	#1	Integral	APB	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	1.02 (0.45)
SXE9674-Z60-90***†	#2	Integral	APB	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	1.63 (0.72)
SXE9675-Z50-90***†	#3	-	APB	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	2.18 (0.96)
 SXE9673-Z65-90***†	#1	Integral	APB	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.02 (0.45)
SXE9674-Z65-90***†	#2	Integral	APB	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.63 (0.72)
SXE9675-Z55-90***†	#3	-	APB	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	2.18 (0.96)
 SXE9773-Z60-90***†	#1	Integral	COE	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	1.02 (0.45)
SXE9774-Z60-90***†	#2	Integral	COE	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	1.63 (0.72)
SXE9775-Z50-90***†	#3	-	COE	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	2.18 (0.96)
 SXE9773-Z65-90***†	#1	Integral	COE	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.02 (0.45)
SXE9774-Z65-90***†	#2	Integral	COE	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.63 (0.72)
SXE9775-Z55-90***†	#3	-	COE	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	2.18 (0.96)
 SXE9873-Z60-90***†	#1	Integral	COP	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	1.02 (0.45)
SXE9874-Z60-90***†	#2	Integral	COP	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	1.63 (0.72)
SXE9875-Z50-90***†	#3	-	COP	Internal	Solenoid	Solenoid	29 - 145 (2 - 10)	-	2.18 (0.96)
 SXE9873-Z65-90***†	#1	Integral	COP	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.02 (0.45)
SXE9874-Z65-90***†	#2	Integral	COP	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	1.63 (0.72)
SXE9875-Z55-90***†	#3	-	COP	External	Solenoid	Solenoid	26" Hg - 232 (-0.9 - 16)	29 - 145 (2 - 10)	2.18 (0.96)

***Insert 3-digit voltage code from Voltage Codes and Replacement Coils.

† Insert letter from Connector Option Codes.

* Valve Function Designations: APB = All Ports Blocked
COE = Center Open Exhaust
COP = Center Open Pressure

Part Number Example

SXE9573-Z70-0012JA

Where "12J" is a 12V d.c. coil with a 22 mm connector interface, and "A" is a solenoid without connector.

Voltage Codes and Replacement Coils

Voltage	22 mm Coil with connector interface acc. to Industrial Standard			30 mm Coil with connector interface acc. to DIN 43650 table "A"		
	Code	Power Inrush/Hold	Coil Part.-no.	Code	Power Inrush/Hold	Coil Part.-no.
12 V d.c.	12J	2 W	54469-01	22N	1.5 W	V10633-A22N
24 V d.c.	13J	2 W	54469-02	23N	1.5 W	V10633-A23N
24 V 50/60 Hz	14J	4/2.5 VA	54469-04	24N	3/2 VA	V10633-A24N
48 V 50/60 Hz	16J	4/2.5 VA	54469-07	26N	3/2 VA	V10633-A26N
110/120 V 50/60 Hz	18J	4/2.5 VA	54469-03	28N	3/2 VA	V10633-A28N
220/240 V 50/60 Hz	19J	9/5.0 VA	54469-08	89N	10/8VA	V10633-A89N

Other Voltages available on request.

ISO Star Series Valves

5/2 and 5/3 solenoid and air pilot actuated valves

Part Number Example

SXE9573-Z70-0012JA

Where "12J" is a 12V d.c. coil with a 22 mm connector interface, and "A" is a solenoid without connector.

Voltage Codes and Replacement Coils

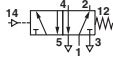
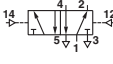
Voltage	22 mm Coil with connector interface acc. to Industrial Standard			30 mm Coil with connector interface acc. to DIN 43650 table "A"		
	Code	Power Inrush/Hold	Coil Part.-no.	Code	Power Inrush/Hold	Coil Part.-no.
12 V d.c.	12J	2 W	54469-01	22N	1.5 W	V10633-A22N
24 V d.c.	13J	2 W	54469-02	23N	1.5 W	V10633-A23N
24 V 50/60 Hz	14J	4/2.5 VA	54469-04	24N	3/2 VA	V10633-A24N
48 V 50/60 Hz	16J	4/2.5 VA	54469-07	26N	3/2 VA	V10633-A26N
110/120 V 50/60 Hz	18J	4/2.5 VA	54469-03	28N	3/2 VA	V10633-A28N
220/240 V 50/60 Hz	19J	9/5.0 VA	54469-08	89N	10/8VA	V10633-A89N

Other Voltages available on request.

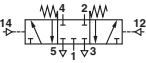
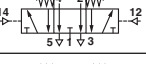
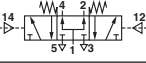
Connector option codes and replacement connectors

Connector Option Codes Industrial standard	22 mm coil DIN 43650 table "A"	30 mm coil
A = Solenoid without connector		
B = Cable grip	54934-01	54933-05
C = 6 ft. molded cable, 0-240V a.c./V d.c.	54934-21	54933-06
5 = 6 ft. molded cable with indicator light surge suppression, 24V a.c./V d.c.	54934-30	54933-09
6 = 6 ft. molded cable with indicator light, 110V/50 Hz - 120V/60 Hz	54934-35	M/P43316/23

5/2 Air Pilot Actuated Valves

	Model	Size	Flow Control	Operator	Return	Operating Pressure psig (bar)	Pilot Pressure psig (bar)	Weight lb. (kg)
	SXP9573-170-00B	#1	-	Air	Spring	26" Hg - 232 (-0.9 - 16)	23.2 - 232 (1.6 - 16)	0.47 (0.21)
	SXP9574-170-00B	#2	-	Air	Spring	26" Hg - 232 (-0.9 - 16)	23.2 - 232 (1.6 - 16)	1.02 (0.45)
	SXP9575-170	#3	-	Air	Spring	26" Hg - 232 (-0.9 - 16)	23.2 - 232 (1.6 - 16)	1.63 (0.72)
	SXP9573-180-00B	#1	Integral	Air	Spring	26" Hg - 232 (-0.9 - 16)	23.2 - 232 (1.6 - 16)	0.47 (0.21)
	SXP9574-180-00B	#2	Integral	Air	Spring	26" Hg - 232 (-0.9 - 16)	23.2 - 232 (1.6 - 16)	1.02 (0.45)
	SXP0573-170-00B	#1	-	Air	Air	26" Hg - 232 (-0.9 - 16)	29 - 232 (2 - 16)	0.68 (0.30)
	SXP0574-170-00B	#2	-	Air	Air	26" Hg - 232 (-0.9 - 16)	29 - 232 (2 - 16)	1.13 (0.50)
	SXP0575-170	#3	-	Air	Air	26" Hg - 232 (-0.9 - 16)	29 - 232 (2 - 16)	1.63 (0.72)
	SXP0573-180-00B	#1	Integral	Air	Air	26" Hg - 232 (-0.9 - 16)	29 - 232 (2 - 16)	0.68 (0.30)
SXP0574-180-00B	#2	Integral	Air	Air	26" Hg - 232 (-0.9 - 16)	29 - 232 (2 - 16)	1.13 (0.50)	

5/3 Air Pilot Actuated Valves

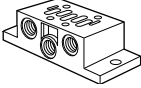
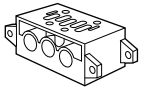
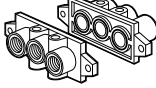
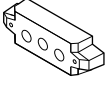

	Model	Size	Flow Control	Valve Function*	Operator	Operator	Operating Pressure psig (bar)	Pilot Pressure psig (bar)	Weight lb. (kg)
	SXP9673-180-00B	#1	Integral	APB	Air	Air	26" Hg - 232 (-0.9 - 16)	29 - 232 (2 - 16)	0.57 (0.25)
	SXP9674-180-00B	#2	Integral	APB	Air	Air	26" Hg - 232 (-0.9 - 16)	29 - 232 (2 - 16)	1.32 (0.58)
	SXP9675-170	#3	-	APB	Air	Air	26" Hg - 232 (-0.9 - 16)	29 - 232 (2 - 16)	1.82 (0.80)
	SXP9773-180-00B	#1	Integral	COE	Air	Air	26" Hg - 232 (-0.9 - 16)	29 - 232 (2 - 16)	0.57 (0.25)
	SXP9774-180-00B	#2	Integral	COE	Air	Air	26" Hg - 232 (-0.9 - 16)	29 - 232 (2 - 16)	1.32 (0.58)
	SXP9775-170	#3	-	COE	Air	Air	26" Hg - 232 (-0.9 - 16)	29 - 232 (2 - 16)	1.82 (0.80)
	SXP9873-180-00B	#1	Integral	COP	Air	Air	26" Hg - 232 (-0.9 - 16)	29 - 232 (2 - 16)	0.57 (0.25)
	SXP9874-180-00B	#2	Integral	COP	Air	Air	26" Hg - 232 (-0.9 - 16)	29 - 232 (2 - 16)	1.32 (0.58)
	SXP9875-170	#3	-	COP	Air	Air	26" Hg - 232 (-0.9 - 16)	29 - 232 (2 - 16)	1.82 (0.80)

* Valve Function Designations:
 APB = All Ports Blocked
 COE = Center Open Exhaust
 COP = Center Open Pressure

ISO Star Series Valves


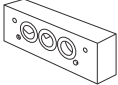



5/2 and 5/3 solenoid and air pilot actuated valves

VDMA 24 345 Base Range

VDMA 24 345	Form 'A' Single Station Sub-base Side Ported	Form 'C' Modular Sub-base Bottom Ported	Form 'D' Modular Sub-base End Plates (2)	Transition plate	Blanking disk * (dual supply)
					
NPT #1 models (1/4)	C/P19126	239-238B	239-289B	CQM/22152/3/24 #1'#2	239-251
NPT #2 models (3/8)	C/P19132	239-242B	239-291B	CQM/22253/3/24 #2'#3	239-252
NPT #3 models (1/2)	C/P19138	239-246B	239-293B	CQM/22354/3/24 #3'#4	239-253
ISO G #1 models	M/P19126	CQM/22152/3/21	CQM/22152/3/22	CQM/22152/3/24 #1'#2	FP8382
ISO G #2 models	M/P19132	CQM/22253/3/21	CQM/22253/3/22	CQM/22253/3/24 #2'#3	FP8482
ISO G #3 models	M/P19138	CQM/22354/3/21	CQM/22354/3/22	CQM/22354/3/24 #3'#4	FP8582

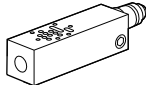
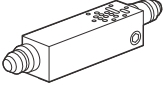
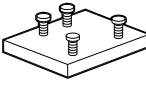
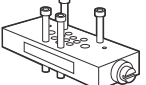
* Only suitable for specific base range.

Universal Base Range

	Modular Sub-base Side and bottom ported	Transition Plate	Blanking Disk** (dual supply)	Side End Plate All Ports Closed	Single End Plate End Ports Open
					
ISO #1 models (G1/4)	CQM/22152/3/27	CQM/22152/3/29#1'2	M/P43173	CQM/22152/3/28	CQM/22152/3/31
ISO #2 models (G3/8)	CQM/22253/3/27		M/P43174	CQM/22253/3/28	CQM/22253/3/31

** Universal base range only.

Accessories

	Single Pressure Regulator port 1 regulated	Pressure Regulator ports 2 & 4 regulated	Blanking Plate	Sandwich Flow Control
				
#1 models	RM1A-8B†	DRM1A-8-8B†	CQM/22152/3/23	
#2 models	RM2A-8B†	DRM2A-8-8B†	CQM/22253/3/23	
#3 models	RM3A-8B†	—	CQM/22354/3/23	CQM/22354/3/26

† CNOMO style valves recommended

Sandwich Regulators (valve mounts to regulator, regulator mounts to subbase)

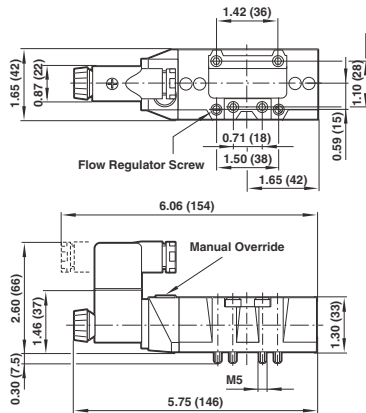
	Single Pressure port 1 regulated	Dual Pressure ports 2 & 4	Single Pressure port 2	Single Pressure Port 4
ISO #1	V71020-KB1	V71022-KB4	V71022-KB2	V71022-KB3
ISO #2	V71020-KC1	V71022-KC4	V71022-KC2	V71022-KC3
ISO #3	V71020-KD1	V71022-KD4	V71022-KD2	V71022-KD3

ISO Star Series Valves

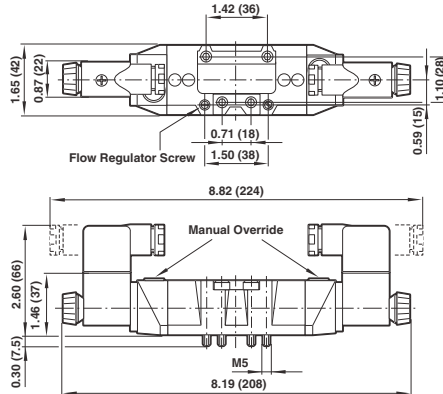
5/2 and 5/3 solenoid and air pilot actuated valves

Dimensions in inches (mm)

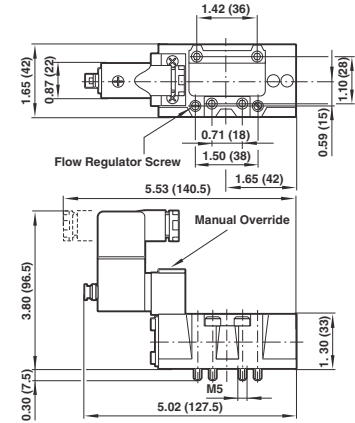
SXE 9573 – A Models
Single End Solenoid Pilot Valves Size #1



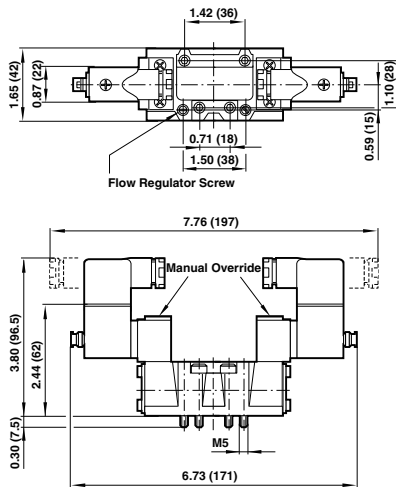
SXE 0573-A and SXE9*73-A Models
Double End Solenoid Pilot Valves Size #1



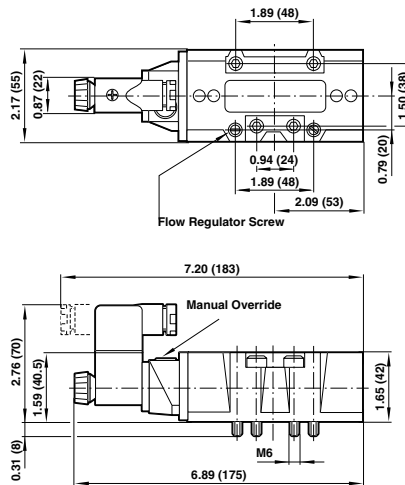
SXE 9573-Z Models
Single CNOMO Solenoid Pilot Valves Size #1



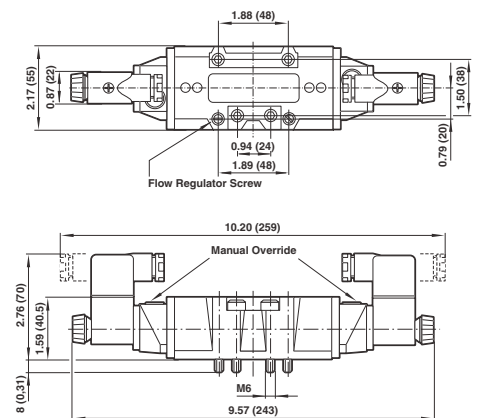
SXE 0573-Z and SXE 9*73-Z Models
Double CNOMO Solenoid Pilot Valves Size #1



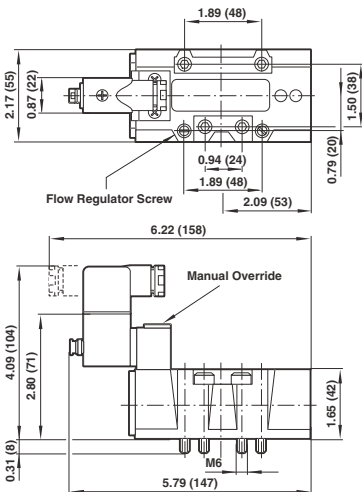
SXE 9574-A Models
Single End Solenoid Pilot Valves Size #2



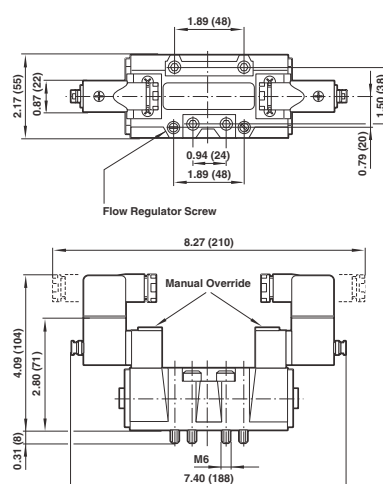
SXE 0574-A, SXE 9*74-A Models
Double End Solenoid Pilot Valves Size #2



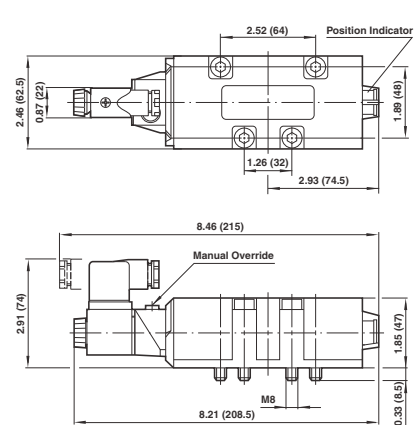
SXE 9574-Z Models
Single CNOMO Solenoid Pilot Valves Size #2



SXE 0574-Z and SXE 9*74-Z Models
Double CNOMO Solenoid Pilot Valves Size #2



SXE 9575-A Models
Single End Solenoid Pilot Valves Size #3

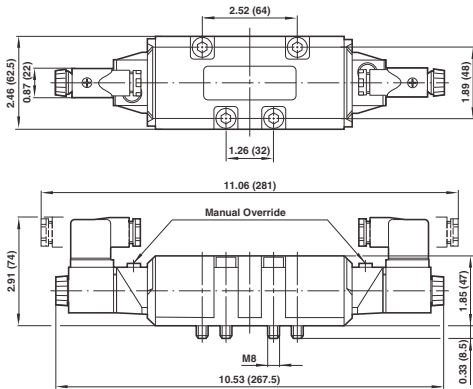


ISO Star Series Valves

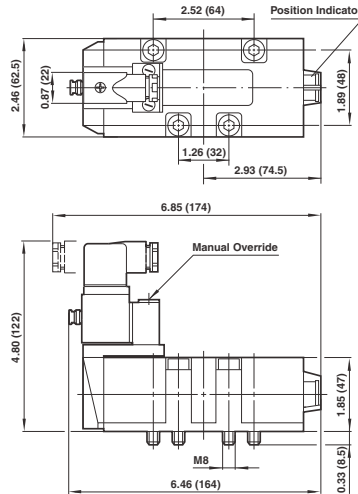
5/2 and 5/3 solenoid and air pilot actuated valves

Dimensions in inches (mm)

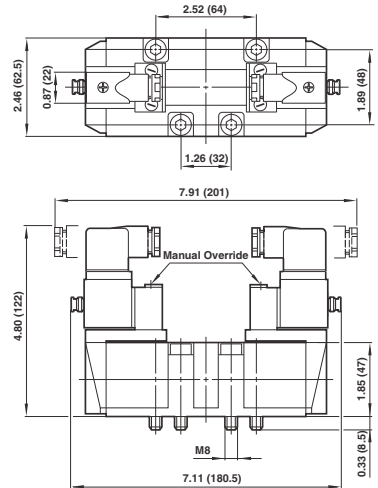
SXE 0575-A and SXE 9*75-A Models
Double End Solenoid Pilot Valves Size #3



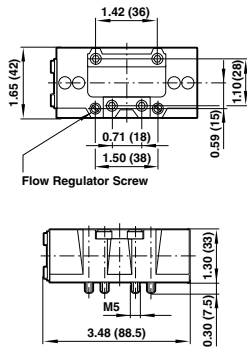
SXE 9575-Z Models
Single CNOMO Solenoid Pilot Valves Size #3



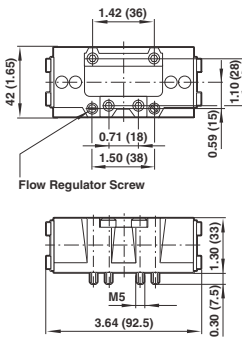
SXE 0575-Z and SXE 9*75-Z Models
Double CNOMO Solenoid Pilot Valves Size #3



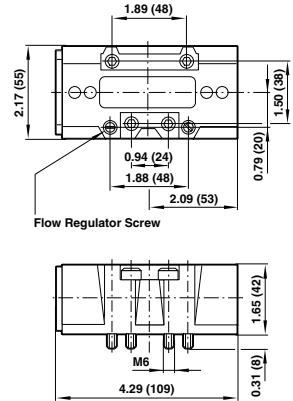
SXP 9573-1 Models
Single Air Pilot Valves Size #1 (5/2)



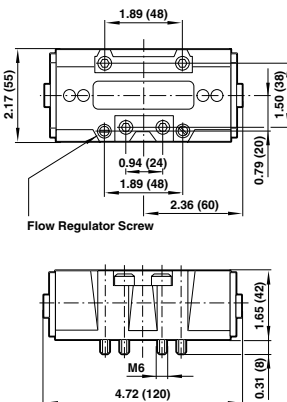
SXP 0573-1 and SXP 9*73-1 Models
Double Air Pilot, Spring Centered Valves Size #1 (5/3)



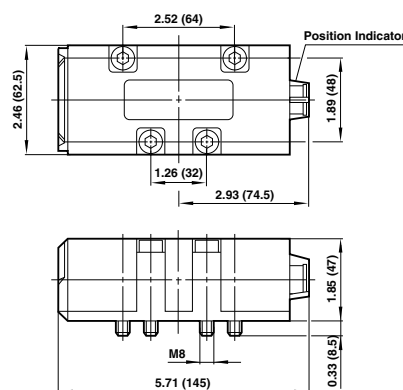
SXP *574-1 Models
Single and Double Air Pilot Valves Size #2 (5/2)



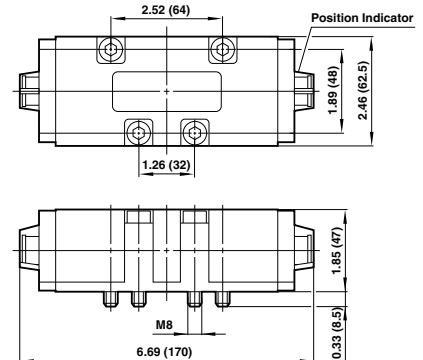
SXP 9*74-1 Models
Double Air Pilot, Spring Centered Valves Size #2 (5/3)



SXP *575-1 Models
Single and Double Air Pilot Valves Size #3 (5/2)



SXP 9*75-1 Models
Double Air Pilot, Spring Centered Valves Size #3 (5/3)



ISO Star Series Valves

5/2 and 5/3 solenoid and air pilot actuated valves

SXE 9574 – A70 – 0018 J B

Operator Type	Substitute
Solenoid pilot operated valve	SXE
Air pilot operated valve	SXP

Signal Duration	Substitute
Momentary (2-position double operator only)	0
Continuous	9

Internal Variations	Substitute
5-Port/2-position	5
5-Port/3-position, spring centered, all ports blocked	6
5-Port/3-position, spring centered, cylinder ports open to exhaust	7
5-Port/3-position, spring centered, cylinder ports open to pressure	8

Mounting Type	Substitute
ISO Star Series	7

Size	Substitute
Size 1	3
Size 2	4
Size 3	5

Solenoid Type	Substitute
Standard solenoid pilot operator	A
CNOMO solenoid pilot operator	Z

Valve Body Options		
Coils	Speed Control	Substitute
double solenoid	no	5
double solenoid	yes	6
single solenoid	no	7
single solenoid	yes	8

Connector	Substitute
No electrical connector	A
Cable grip	B
6 ft molded cable, 0-240 V a.c./V d.c.	C
6 ft molded cable, w/indicator light, surge suppression, 24V a.c./V d.c.	5
6 ft molded cable, 110-120 V a.c./V d.c.	6
Air pilot operated	Left Blank

Connector Interface	Substitute
22 mm coil with connector interface according to Industrial Standard	J
22 mm coil with connector interface according to DIN 43650 table "B"	L
30 mm coil with connector interface according to DIN 43650 table "A"	N
No coil or air pilot operated	Blank

Solenoid Voltage	Substitute
12V d.c.	2
24V d.c.	3
24V 50/60 Hz	4
48V 50/60 Hz	6
110/120V 50/60 Hz	8
220/240V 50/60 Hz	9
No coil or air pilot operated	Blank

Coil	Substitute
20 mm coil	1
30 mm coil	2

Manual Override	Substitute
Combination locking/nonlocking	00
Nonlocking	01
Low watt locking (CNOMO)	90

Pilot Supply/Integral Air Return Operator	Substitute
Internal / integral air return	0
Internal / spring return	1
External / integral air	5
External / spring return	6

Valve Manifolds, VM10 Series

Valve slices 2x3/2, 5/2, and 5/3 with integral push-in fittings



Multipole or individually wired for installation flexibility

Interchangeable Fieldbus compatible modules

Compact and lightweight

High flow exhaust paths

Quick disconnect base (Pneumapole)

High flow from 10 mm valve width

Technical Data

Medium:

Compressed air, filtered, lubricated and non-lubricated

Operation:

Solenoid pilot spool valve

Port sizes:

Push-in fittings of 1/8, 5/32, 1/4, 3 mm, 4 mm, 6 mm.

Tube types:

Nylon 11 or 12, polyurethane* and other plasticized or unplasticized tubing conforming to the tolerances specified in DIN 73378, NFE 49-101, ISO/WD 16026, ISO/WD 16627.

*Suitable for 85D

Operating pressure:

Maximum 116 psig (8 bar)

Flow:

Function	Cv	l/min
5/2	0.44	430
2 x 3/2	0.36	350
5/3	0.36	350

Degree of protection:

NEMA 4 and IP65

Ambient temperature:

4°F to 122°F (-15°C to +50°C)

For use below 36°F (+2°C) consult our Technical Service

Materials

Aluminum spool with nitrile rubber seals

Body, end plates: engineered PPA co-polymer

Electrical details

Voltage:	24 V d.c. 0.6 W
Surge suppression:	Flywheel diode
Indication:	Yellow LED

Solenoids

Voltage tolerance:	± 10%
Rating:	100% ED

Options selector

VM109517AB313B

Tube size	Substitute
3 mm PIF	3
4 mm PIF	4
6 mm PIF	6
1/8" PIF	A
1/4" PIF	1
5/32" PIF	9
No PIF (for use with Pneumapole)	7*

Valve function	Substitute
5/2	5
5/3 APB	6
2 x 3/2 NC and 5/3 COE	A
2 x 3/2 NO and 5/3 COP	B
2 x 3/2 NC and NO	C

Manual override	Substitute
Turn to lock manual override	2
Push only manual override	3
Exhaust	Substitute
Standard open exhaust	A
Actuation/pilot supply	Substitute
Solenoid/solenoid internal pilot	11
Solenoid/spring internal pilot **	17
Solenoid/solenoid external pilot	22
Solenoid/spring external pilot **	27

Note: For 5/3 COE please use 2 x 3/2 NC. For 5/3 COP please use 2 x 3/2 NO
 APB = All Ports Blocked COE = Center Open Exhaust COP = Center Open Pressure
 Use our configurator under www.norgren.com.

* Requires Pneumapole sub-base ** Can only be used with 5/2 valve

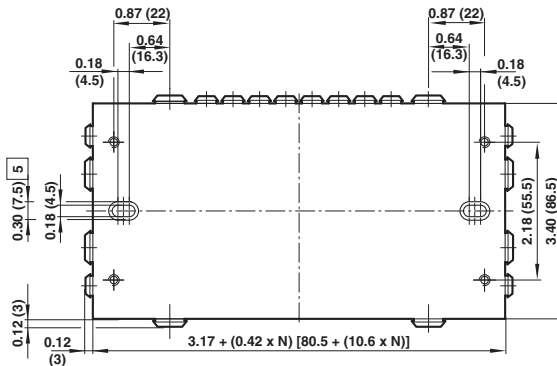
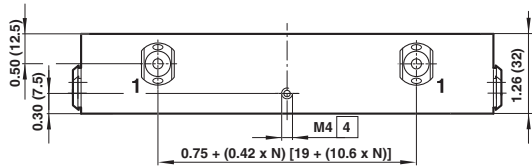
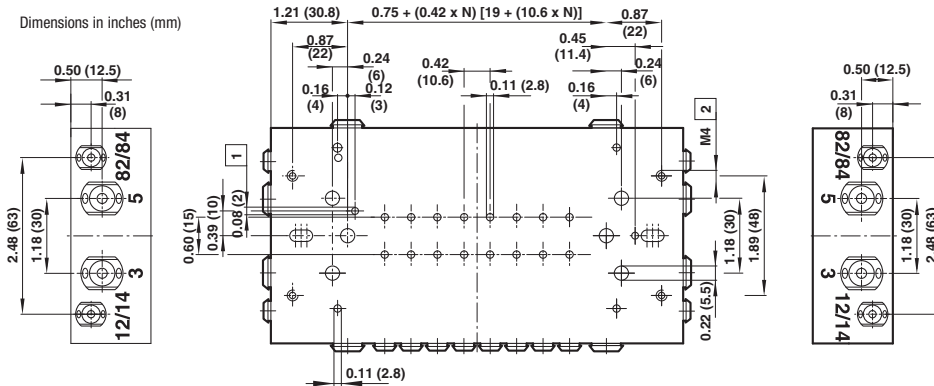
Valve Manifolds, VM10 Series

Valve slices 2x3/2, 5/2, and 5/3 with integral push-in fittings

Pneumapole sub-base – side ported

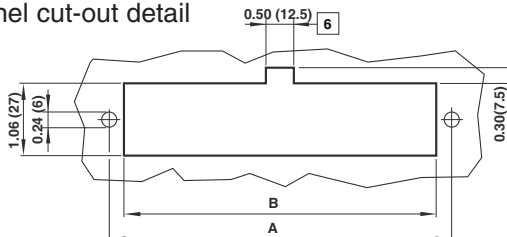
Model	Description	A Ports 1, 3 & 5	B Ports 12/14 & 82/84	C Ports 2 & 4	Exhaust type	Short code
VM106517AQ1S04	4 station Pneumapole	3/8"	1/4"	1/4"	Standard	CS04
VM106517AQ1S06	6 station Pneumapole	3/8"	1/4"	1/4"	Standard	CS06
VM106517AQ1S08	8 station Pneumapole	3/8"	1/4"	1/4"	Standard	CS08
VM106517AQ1S10	10 station Pneumapole	3/8"	1/4"	1/4"	Standard	CS10
VM106517AQ1S12	12 station Pneumapole	3/8"	1/4"	1/4"	Standard	-
VM106517AQ1S16	16 station Pneumapole	3/8"	1/4"	1/4"	Standard	-
VM106517AQ6S04	4 station Pneumapole	10 mm	6 mm	6 mm	Standard	6S04
VM106517AQ6S06	6 station Pneumapole	10 mm	6 mm	6 mm	Standard	6S06
VM106517AQ6S08	8 station Pneumapole	10 mm	6 mm	6 mm	Standard	6S08
VM106517AQ6S10	10 station Pneumapole	10 mm	6 mm	6 mm	Standard	6S10
VM106517AQ6S12	12 station Pneumapole	10 mm	6 mm	6 mm	Standard	-
VM106517AQ6S16	16 station Pneumapole	10 mm	6 mm	6 mm	Standard	-

Dimensions in inches (mm)



- 1 x 5 mm deep (chamfer 1x45°)
- 2 x 8 mm deep
- 3 x 10 mm deep
- 4 x 11 mm deep (12 & 16 station version only)
- 5 x 4.5 mm deep
- 6 Additional cut-out required when rear mounting 12 & 16 station versions

Panel cut-out detail



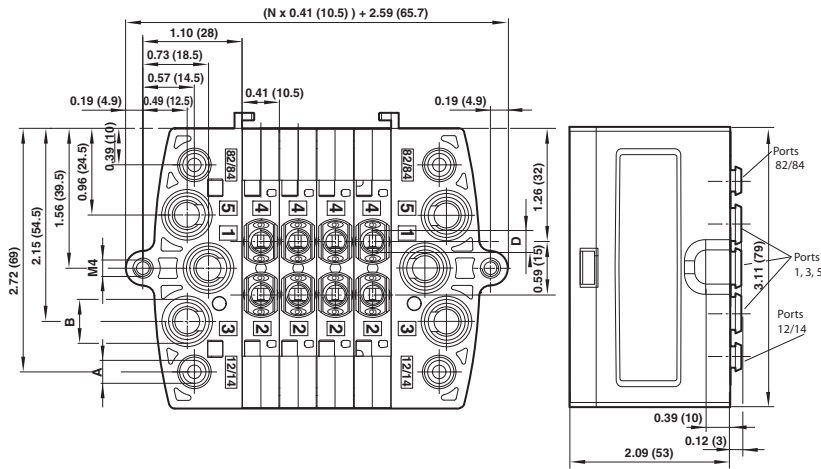
No. of stations	A	B
4	3.68 (93.50)	4.23 (107.50)
6	4.52 (114.75)	5.07 (128.75)
8	5.35 (136.00)	5.91 (150.00)
10	6.19 (157.25)	6.74 (171.25)
12	7.03 (178.50)	7.58 (192.50)
16	8.70 (221.00)	9.25 (235.00)

Valve Manifolds, VM10 Series

Valve slices 2x3/2, 5/2, and 5/3 with integral push-in fittings

Dimensions in inches (mm)

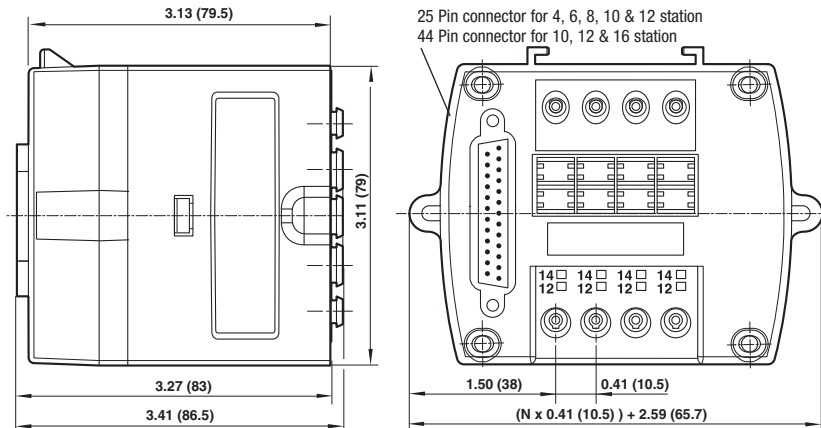
Port connections



End Plate Kit Model Number	Description End plate kit	B Ports 1, 3, 5	A Ports 12/14 & 82/84	Short code
VM106517AQ0202	feed both ends	3/8"	1/4"	1G
VM106517AQ020X	feed both ends	5/16"	5/32"	1H
VM106517AQ0212	feed left, right blocked	3/8"	1/4"	1J
VM106517AQ021X	feed left, right blocked	5/16"	5/32"	1K
VM106517AQ0222	feed right, left blocked	3/8"	1/4"	1L
VM106517AQ022X	feed right, left blocked	5/16"	5/32"	1M
VM106517AQ010Y	feed both ends	10 mm	6 mm	1A
VM106517AQ0108	feed both ends	8 mm	4 mm	1B
VM106517AQ011Y	feed left, right blocked	10 mm	6 mm	1C
VM106517AQ0118	feed left, right blocked	8 mm	4 mm	1D
VM106517AQ012Y	feed right, left blocked	10 mm	6 mm	1E
VM106517AQ0128	feed right, left blocked	8 mm	4 mm	1F
VM106517AQ0131	feed both ends	No PIF*	No PIF*	1N
VM106517AQ0132	feed left, right blocked	No PIF*	No PIF*	1P
VM106517AQ0133	feed right, left blocked	No PIF*	No PIF*	1R

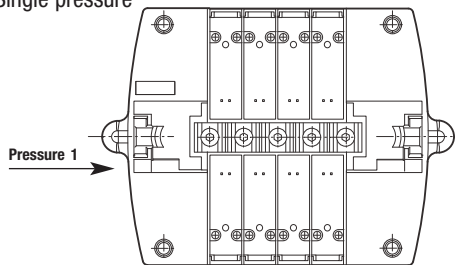
Available valve port sizes – Ø 1/8, 5/32, 1/4, 3 mm, 4 mm, 6 mm
 * No push in fitting for use with pneumapole sub-base

Multipole

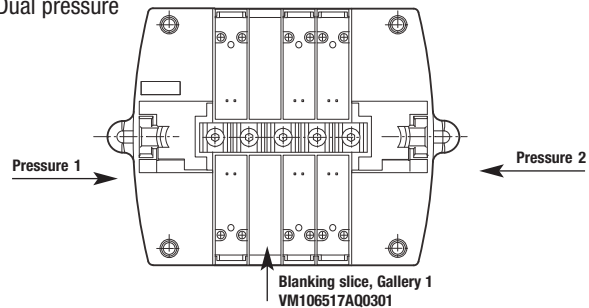


Multipole	No. stations	Model	Max. no. coils	Short code
25 Pin connector	04	VM106517AQ0404	8	A1
25 Pin connector	06	VM106517AQ0406	12	A2
25 Pin connector	08	VM106517AQ0408	16	A3
25 Pin connector	10	VM106517AQ0410	20	A4
25 Pin connector	12	VM106517AQ0412	24	A5
44 Pin connector	10	VM106517AQ0510	20	B1
44 Pin connector	12	VM106517AQ0512	24	B2
44 Pin connector	16	VM106517AQ0516	32	B3

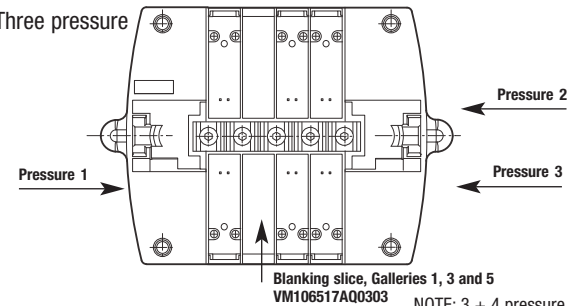
Single pressure



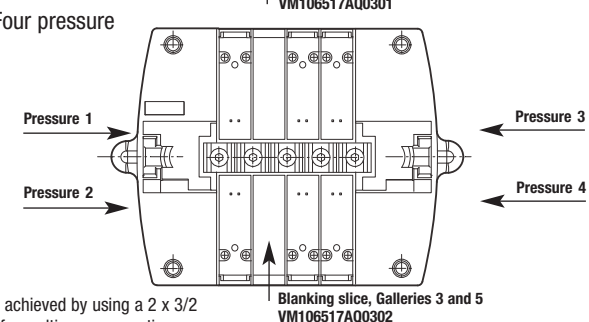
Dual pressure



Three pressure



Four pressure



Blanking slice, Galleries 1, 3 and 5
 VM106517AQ0303

NOTE: 3 + 4 pressure can only be achieved by using a 2 x 3/2 valve. Contact the factory for multi-pressure options.

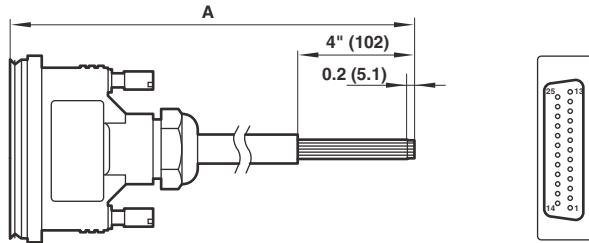
Blanking slice, Galleries 3 and 5
 VM106517AQ0302

Valve Manifolds, VM10 Series

Valve slices 2x3/2, 5/2, and 5/3 with integral push-in fittings

Multi-pin connector for multi-pole

25 pin D sub-connector (IP65, NEMA 4)

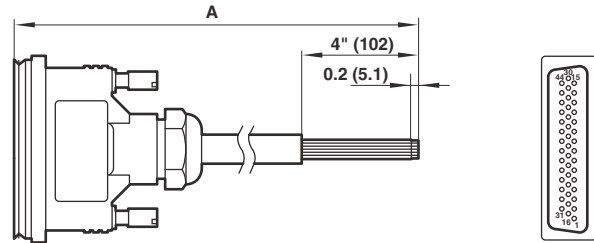


Model	A	Short code	lbs	(kg)
V11569-E01	3' (1 m)	L1	0.61	(0.276)
V11569-E03	10' (3 m)	L2	1.49	(0.676)
V11569-E05	16' (5 m)	L3	2.37	(1.076)

Pin no.	Wire color	Socket	Station
1	White	Solenoid 1-a	1
2	Brown	Solenoid 2-a	2
3	Green	Solenoid 3-a	3
4	Yellow	Solenoid 4-a	4
5	Grey	Solenoid 5-a	5
6	Pink	Solenoid 6-a	6
7	Blue	Solenoid 7-a	7
8	Red	Solenoid 8-a	8
9	Black	Solenoid 9-a	9
10	Violet	Solenoid 10-a	10
11	Grey/Pink	Solenoid 11-a	11
12	Red/Blue	Solenoid 12-a	12
13	White/Green	Common-Ve	-
14	Brown/Green	Solenoid 1-b	1
15	White/Yellow	Solenoid 2-b	2
16	Yellow/Brown	Solenoid 3-b	3
17	White/Grey	Solenoid 4-b	4
18	Grey/Brown	Solenoid 5-b	5
19	White/Pink	Solenoid 6-b	6
20	Pink/Brown	Solenoid 7-b	7
21	White/Blue	Solenoid 8-b	8
22	Brown/Blue	Solenoid 9-b	9
23	White/Red	Solenoid 10-b	10
24	Brown/Red	Solenoid 11-b	11
25	White/Black	Solenoid 12-b	12

Note: Conforms to DIN 47100

44 pin D Sub-connector (IP65, NEMA 4)



Model	A	Short code	lbs	(kg)
V11570-E01	3' (1 m)	M1	0.62	(0.280)
V11570-E03	10' (3 m)	M2	1.50	(0.680)
V11570-E05	16' (5 m)	M3	2.38	(1.080)

D-Sub connector 44-pin

Pin no.	Wire color	Socket	Pilot	Station
1	white	Solenoid 1-a	14	1
2	brown	Solenoid 2-a	14	2
3	green	Solenoid 3-a	14	3
4	yellow	Solenoid 4-a	14	4
5	grey	Solenoid 5-a	14	5
6	pink	Solenoid 6-a	14	6
7	blue	Solenoid 7-a	14	7
8	red	Solenoid 8-a	14	8
9	black	Solenoid 9-a	14	9
10	violet	Solenoid 10-a	14	10
11	grey/pink	Solenoid 11-a	14	11
12	red/blue	Solenoid 12-a	14	12
13	white/green	Solenoid 13-a	14	13
14	brown/green	Solenoid 14-a	14	14
15	white/yellow	Solenoid 15-a	14	15
16	yellow/brown	Solenoid 1-b	12	1
17	white/grey	Solenoid 2-b	12	2
18	grey/brown	Solenoid 3-b	12	3
19	white/pink	Solenoid 4-b	12	4
20	pink/brown	Solenoid 5-b	12	5
21	white/blue	Solenoid 6-b	12	6
22	brown/blue	Solenoid 7-b	12	7
23	white/red	Solenoid 8-b	12	8
24	brown/red	Solenoid 9-b	12	9
25	white/black	Solenoid 10-b	12	10
26	brown/black	Solenoid 11-b	12	11
27	grey/green	Solenoid 12-b	12	12
28	yellow/grey	Solenoid 13-b	12	13
29	pink/green	Solenoid 14-b	12	14
30	yellow/pink	Solenoid 15-b	12	15
31	green/blue	Solenoid 16-a	14	16
32	yellow/blue	Solenoid 16-b	12	16
33	-	not used	-	-
34	-	not used	-	-
35	-	not used	-	-
36	-	not used	-	-
37	-	not used	-	-
38	-	not used	-	-
39	-	not used	-	-
40	-	not used	-	-
41	-	not used	-	-
42	-	not used	-	-
43	-	Common	-	-
44	yellow/black	Common	-	-

Note: Conforms to DIN 47100

Accessories for individually wired and multipole VM10 valve manifolds

D Sub-connector 25 pin			D Sub-connector 44 pin			2 Pin connector		Valve blanking station		Port blocking station			
IP65, NEMA 4			IP65, NEMA 4			IP40, NEMA 4							
V11569-E01	3 ft (1m)	L1	V11570-E01	3 ft (1m)	M4	V11556-E03	1 ft (300mm)	K1	VM106517AQ0300	2A	VM106517AQ0301	Port 1 blocked	2B
V11569-E03	10 ft (3m)	L2	V11570-E03	10 ft (3m)	M5	V11556-E10	3 ft (1m)	K2			VM106517AQ0302	Ports 3 & 5 blocked	2C
V11569-E05	16 ft (5m)	L3	V11570-E05	16 ft (5m)	M6						VM106517AQ0303	Ports 1, 3 & 5 blocked	2D
Pressure switch			DIN Rail			DIN Rail fixing kit		Manual override kit		Pneumapole sub-base			
VM106517AQ0804	4 mm	7A	V10009-C00	3 ft (1m)	A17	V11900-C01	8D	V11574-K30	Push only	N1	See pages VAL-60, 61		
VM106517AQ0806	6 mm	7B						V11574-K31	Turn to lock	N2			
VM106517AQ0801	1/4"	7C						V11574-K32	Push only	14 side			

Fieldbus accessories

Fieldbus power connector

Model	Description	Connection	Cable length	Protection class
V11588-E01	Profibus DP (4-pin, female) Interbus-S (4-pin, female) DeviceNet (4-pin, female) CANopen (4-pin, female)	M12	Wireable	IP65 Required for ATEX
FD6760R5S75010	Profibus DP (5-pin, female)	7/8	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX

Communication cable and connector

FD6710H5S75S10	DeviceNet (5-pin, female) CANopen (5-pin, female)	M12	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
FD6710D5S75S10	DeviceNet (5-pin, male) CANopen (5-pin, female)	M12	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
FD6710G5S75S10	Profibus DP, reverse keyway (5-pin, female)	M12	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
V11591-E01	Profibus DP, reverse keyway (5-pin, male)	M12	Wireable	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
V11654-E01	Profibus DP connector (9-pin, male) with terminating resistor	D-Sub	Wireable	IP40
FD67L FD67L FD67K FD67N	DeviceNet CANopen Profibus System	M12	—	IP67 when plugged and screwed down DIN VDE 0470 Required for ATEX
VE1ASCN1-M1200	AS-Interface power or communications (4-pin, female)	M12	Wireable	IP65 Required for ATEX
VE2FBC9P-9S010 VE2FBC9P-9S030 VE2FBC9P-9S050	Interbus-S (9-pin)	D-Sub	1m 3m 5m	IP65 Required for ATEX
VE2FBC9P-00000	Interbus-S (9-pin, male)	D-Sub	Wireable	IP65 Required for ATEX
VE2FBC9S-00000	Interbus-S (9-pin, female)	D-Sub	Wireable	IP65 Required for ATEX
V11340-E03	Interbus-S terminating connector (9-pin, male)	D-Sub	—	IP65 Required for ATEX

Valve Manifolds, VM10 Series

Valve slices 2x3/2, 5/2, and 5/3 with integral push-in fittings

Stem Silencers

Port Size	Part Number
3/8"	T45Y0006
6mm	T45P0006
5/16"/8mm	T45P0008
10mm	T45P0010

Piloting selection

Integral Pilot gasket	
Black	11540-C95
External Pilot Gasket	
Red	11540-C96

Label cover kit

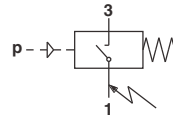
V12016-K36	4 Station	G1
V12016-K37	6 Station	G2
V12016-K38	8 Station	G3
V12016-K39	10 Station	G4
V12016-K40	12 Station	G5
V12016-K41	16 Station	G6

Labels

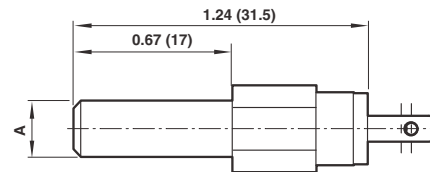
V12033-L02	Write & seal label	J1
V12034-L02	Paper label	J5

Pressure switch

Model	A	Short code	lbs	(kg)
VM106517AQ0804	0.16 (4)	7A	0.009	(0.004)
VM106517AQ0806	0.24 (6)	7B	0.009	(0.004)
VM106517AQ0801	0.25 (6.5)	7C	0.009	(0.004)



AMP E-terminals 2.8 x 0.8
 Degree of protection: NEMA 1, IP00
 Non adjustable
 Pressure range: 0 to 145 psig (0 to 10 bar)
 Switching point rising pressure: 4 to 73 psig (3 to 5 bar)
 Switch point falling pressure: 36 to 54 psig (2.5 to 3.7 bar)



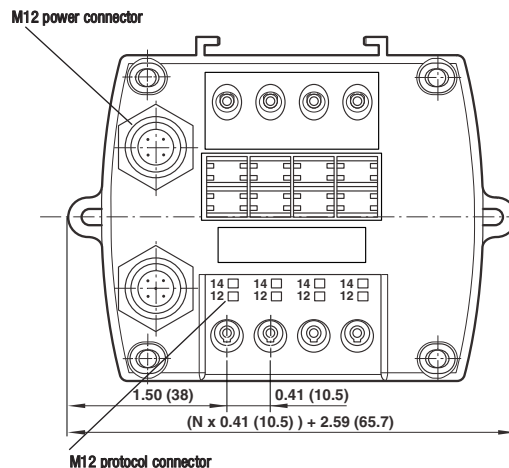
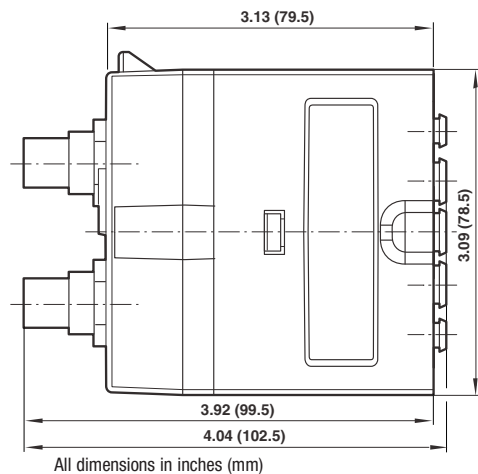
NOTE: Use Pneufit C composite plugs where needed. Do not use nickel plated brass plugs.

Fieldbus connections (M12 connector types)

Standard fieldbus - available protocols	No. stations	Node part numbers	Max. No. coils	Short code
DeviceNet	08	VM10DNFNB-00082	16	C1
DeviceNet	10	VM10DNFNB-00102	20	C2
DeviceNet	12	VM10DNFNB-00122	24	C3
DeviceNet	16	VM10DNFNB-00162	32	C4
CANopen	08	VM10CAFNB-00082	16	D1
CANopen	10	VM10CAFNB-00102	20	D2
CANopen	12	VM10CAFNB-00122	24	D3
CANopen	16	VM10CAFNB-00162	32	D4
AS - interface*	04	VM10AS10A-00410**	4	J1
AS - interface*	08	VM10AS10A-00810**	8	J2
AS - interface*	04	VM10AS10A-00820**	8	J3
AS - interface*	06	VM10AS10A-00830**	8	J4

* Use 2 x M12 protocol connectors

**Node part number = 410 (4 x sol/spring), 810 (8 x sol/spring), 820 (4 x sol/sol), 830 (4 x sol/spring, 2 x sol/sol)

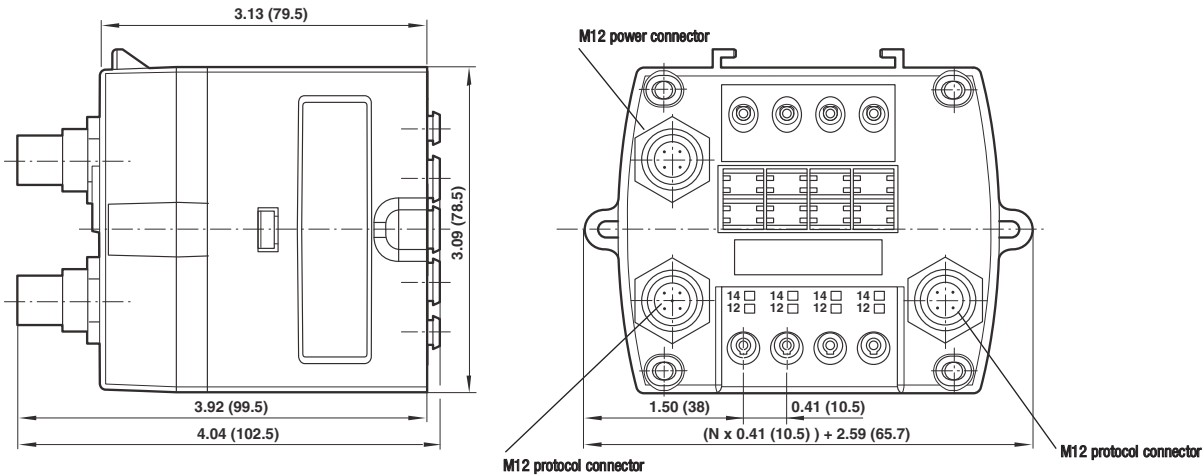


Valve Manifolds, VM10 Series

Valve slices 2x3/2, 5/2, and 5/3 with integral push-in fittings

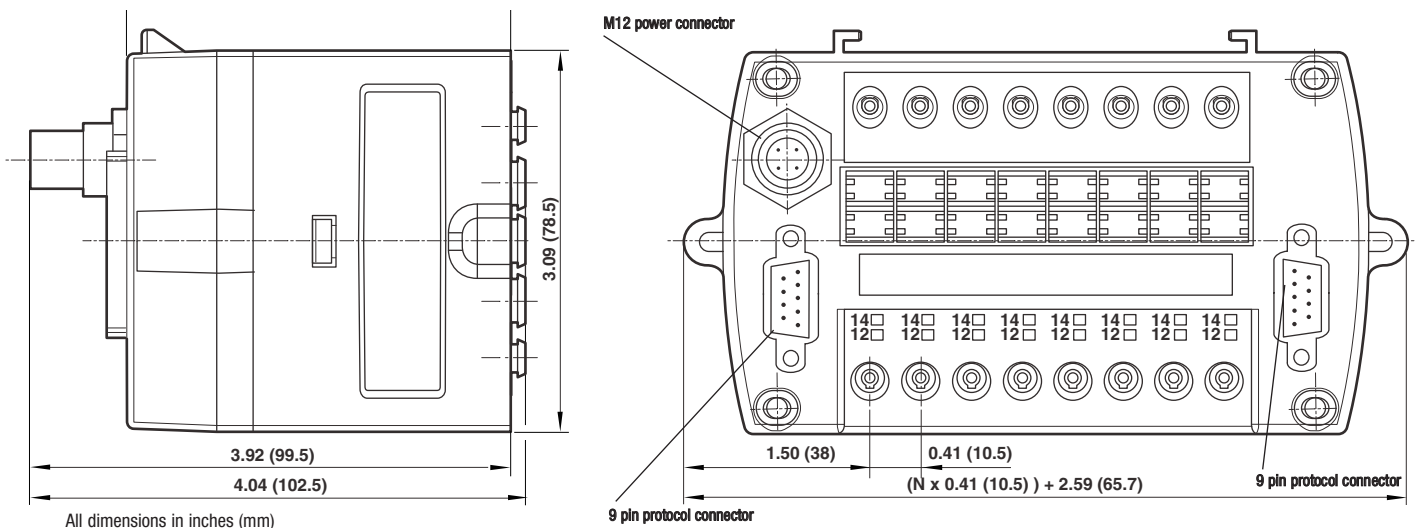
Fieldbus connections with (M12 connector types)

Standard fieldbus - available protocols	No. stations	Node part numbers	Max. no. coils	Short code
Profibus-DP	08	VM10DPFNB-00080	16	E1
Profibus-DP	10	VM10DPFNB-00100	20	E2
Profibus-DP	12	VM10DPFNB-00120	24	E3
Profibus-DP	16	VM10DPFNB-00160	32	E4



Fieldbus connections - (9 pin D-type connector)

Standard fieldbus - available protocols	No. stations	Node part numbers	Max. no. coils	Short code
Interbus-S	08	VM10IBFNB-00080	16	F1
Interbus-S	10	VM10IBFNB-00100	20	F2
Interbus-S	12	VM10IBFNB-00120	24	F3
Interbus-S	16	VM10IBFNB-00160	32	F4



Valve Islands VM15 Series

Valve slices 2x3/2, 5/2 and 5/3 with integral push-in fittings

Multipole or individually wired for installation flexibility

Interchangeable Fieldbus compatible modules

Compact and lightweight

Quick disconnect base (Pneumapole)

High flow from a (15 mm) valve width

Flexible design concept

Integral push in fittings



Technical data

Medium:

Compressed air, filtered to 40 µm, lubricated or non-lubricated

Operation:

Spool valve indirectly actuated

Port sizes:

Ø 1/4", 5/16" and 3/8" (6 mm, 8 mm and 10 mm) push-in fittings

Operating pressure:

116 psig (8 bar) max.

Ambient temperature*:

4°F to +122°F (-15°C to +50°C)

*Consult our Technical Service for use below +36°F (+2°C).

Flow:

Function	Cv	l/min
5/2	1.01	1.000
2 x 3/2	0.97	965
5/3	0.91	900

Degree of protection:

Individually wired	IP40
Multipole	IP65
Fieldbus	IP65

Materials

Aluminum spool with nitrile rubber seals

Body, end plates: engineered PPA co-polymer

Options selector

VM15★★★★AB★13B

Tube size	Substitute
1/4" PIF	1
5/16" PIF	5
3/8" PIF	2
6 mm PIF	6
8 mm PIF	8
10 mm PIF	Y
No PIF (for Pneumapole)	7*

Valve function	Substitute
5/2	5
5/3 APB	6
2 x 3/2 NC and 5/3 COE	A
2 x 3/2 NO and 5/3 COP	B
2 x 3/2 NC and NO	C

Manual override	Substitute
Push and turn to lock	2
Push only	3

Actuation/pilot supply	Substitute
Solenoid/solenoid (internal pilot)	11
Solenoid/spring (internal pilot) **	17
Solenoid/solenoid (external pilot)	22
Solenoid/spring (external pilot) **	27

Note: For 5/3 COE and COP use 2 x 3/2
 APB = All Ports Blocked COE = Center Open Exhaust COP = Center Open Pressure
 Use our configurator under www.norgren.com.

* Requires Pneumapole sub-base
 ** Can only be used with 5/2 valve

Electrical details

Voltage:	24 V d.c. 1,2 W
Surge suppression:	Flywheel diode
Indication:	Yellow LED

Solenoids

Voltage tolerance:	± 10%
Rating:	100% ED

Valve Islands VM15 Series

Valve slices 2x3/2, 5/2 and 5/3 with integral push-in fittings

VALVES

	2 x 3/2 double solenoid actuated valves	Manual override	Function	Pilot supply	Actuation	Operating pressure	Pilot pressure	oz. (kg)
			2 x 3/2			psig (bar)	psig (bar)	
	VM15*A11*B213B	Push and turn to lock	NC	Internal	Sol/spring	43.5 to 116 (3 to 8)	-	3.49 (0.099)
	VM15*A11*B313B	Push only	NC	Internal	Sol/spring	43.5 to 116 (3 to 8)	-	3.49 (0.099)
	VM15*A22*B213B	Push and turn to lock	NC	External	Sol/spring	29" Hg to 116 (-0.9 to 8)	43.5 to 116 (3 to 8)	3.49 (0.099)
	VM15*A22*B313B	Push only	NC	External	Sol/spring	29" Hg to 116 (-0.9 to 8)	43.5 to 116 (3 to 8)	3.49 (0.099)
	VM15*B11*B213B	Push and turn to lock	NO	Internal	Sol/spring	43.5 to 116 (3 to 8)	-	3.63 (0.103)
	VM15*B11*B313B	Push only	NO	Internal	Sol/spring	43.5 to 116 (3 to 8)	-	3.63 (0.103)
	VM15*B22*B213B	Push and turn to lock	NO	External	Sol/spring	29" Hg to 116 (-0.9 to 8)	43.5 to 116 (3 to 8)	3.63 (0.103)
	VM15*B22*B313B	Push only	NO	External	Sol/spring	29" Hg to 116 (-0.9 to 8)	43.5 to 116 (3 to 8)	3.63 (0.103)
	VM15*C11*B213B	Push and turn to lock	NC/NO	Internal	Sol/spring	43.5 to 116 (3 to 8)	-	3.56 (0.101)
	VM15*C11*B313B	Push only	NC/NO	Internal	Sol/spring	43.5 to 116 (3 to 8)	-	3.56 (0.101)
	VM15*C22*B213B	Push and turn to lock	NC/NO	External	Sol/spring	29" Hg to 116 (-0.9 to 8)	43.5 to 116 (3 to 8)	3.56 (0.101)
	VM15*C22*B313B	Push only	NC/NO	External	Sol/spring	29" Hg to 116 (-0.9 to 8)	43.5 to 116 (3 to 8)	3.56 (0.101)
5/2 single and double solenoid actuated valves								
	VM15*517*B213B	Push and turn to lock	5/2	Internal	Sol/spring	43.5 to 116 (3 to 8)	-	3.03 (0.086)
	VM15*517*B313B	Push only	5/2	Internal	Sol/spring	43.5 to 116 (3 to 8)	-	3.03 (0.086)
	VM15*527*B213B	Push and turn to lock	5/2	External	Sol/spring	29" Hg to 116 (-0.9 to 8)	43.5 to 116 (3 to 8)	3.03 (0.086)
	VM15*527*B313B	Push only	5/2	External	Sol/spring	29" Hg to 116 (-0.9 to 8)	43.5 to 116 (3 to 8)	3.03 (0.086)
	VM15*511*B213B	Push and turn to lock	5/2	Internal	Sol/sol	43.5 to 116 (3 to 8)	-	3.42 (0.097)
	VM15*511*B313B	Push only	5/2	Internal	Sol/sol	43.5 to 116 (3 to 8)	-	3.42 (0.097)
	VM15*522*B213B	Push and turn to lock	5/2	External	Sol/sol	29" Hg to 116 (-0.9 to 8)	29.0 to 116 (2 to 8)	3.42 (0.097)
	VM15*522*B313B	Push only	5/2	External	Sol/sol	29" Hg to 116 (-0.9 to 8)	29.0 to 116 (2 to 8)	3.42 (0.097)
5/3 double solenoid actuated valves								
	VM15*611*B213B	Push and turn to lock	5/3 APB	Internal	Sol/sol	43.5 to 116 (3 to 8)	-	3.30 (0.105)
	VM15*611*B313B	Push only	5/3 APB	Internal	Sol/sol	43.5 to 116 (3 to 8)	-	3.30 (0.105)
	VM15*622*B213B	Push and turn to lock	5/3 APB	External	Sol/sol	29" Hg to 116 (-0.9 to 8)	43.5 to 116 (3 to 8)	3.30 (0.105)
	VM15*622*B313B	Push only	5/3 APB	External	Sol/sol	29" Hg to 116 (-0.9 to 8)	43.5 to 116 (3 to 8)	3.30 (0.105)

Replacement valves

Voltage	MO type	Pin orientation	Version	Part number
24	Push only	Up	Pinch plug	V11997-E01
24	Turn & lock	Up	Pinch plug	V11997-E02
24	Push only	Down	Multipole & fieldbus	V11995-E01
24	Turn & lock	Down	Multipole & fieldbus	V11995-E02
12	Push only	Up	Pinch plug	V11998-E01
12	Turn & lock	Up	Pinch plug	V11998-E02
12	Push only	Down	Multipole	V11996-E01
12	Turn & lock	Down	Multipole	V11996-E02

Accessories

Din-rail	2-Pin connector IP4
V10009-C00 3.28' (1m)	V11556-E10 3.28' (1m)
	V11556-E03 .98' (0.3m)

Valve Islands VM15 Series

Valve slices 2x3/2, 5/2 and 5/3 with integral push-in fittings

Accessories

**D Sub-connector 25 pin
IP65, NEMA 4**



V11569-E01	3 ft (1m)	L1
V11569-E03	10 ft (3m)	L2
V11569-E05	16 ft (5m)	L3

**D Sub-connector 44 pin
IP65, NEMA 4**



V11570-E01	3 ft (1m)	M1
V11570-E03	10 ft (3m)	M2
V11570-E05	16 ft (5m)	M3

**2 Pin connector
IP40, NEMA 4**



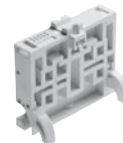
V11556-E03	1 ft (0.3m)	K2
V11556-E10	3 ft (1m)	K1

Valve blanking station



VM156517AQ0300	B000
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Port blanking station



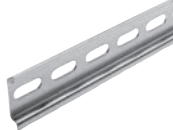
VM156517AQ0301	Port 1 blanked	B100
VM156517AQ0302	Ports 3 & 5 blanked	B300
VM156517AQ0303	Ports 1, 3 & 5 blanked	B500

Pressure switch



VM106517AQ0801	1/4"
VM106517AQ0806	6 mm

DIN Rail



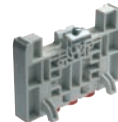
V10009-C00	3 ft (1m)	A17
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DIN Rail fixing kit



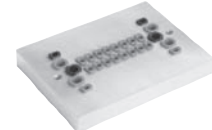
V12022-K30	8E
V11900-C01	8D

ISEM



VM156517AQ0307	5/16" ISEM Feed right	RMD0
VM156517AQ0308	5/16" ISEM Feed left	LMD0
VM156517AQ0309	5/16" ISEM Feed right&left	FMD0
VM156517AQ0304	8mm Feed right	RM80
VM156517AQ0305	8mm Feed left	LM80
VM156517AQ0306	8mm Feed right & left	FM80

Pneumapole sub-base



For part numbers and dimensional details see page ?

**D Sub-connector 25 pin 90°
Right handed**



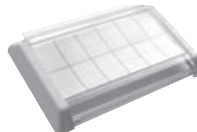
V12086-E01	3 ft (1m)	L4
V12086-E03	10 ft (3m)	L5
V12086-E05	16 ft (5m)	L6

**D Sub-connector 44 pin 90°
Left handed**



V12088-E01	3 ft (1m)	M4
V12088-E03	10 ft (3m)	M5
V12088-E05	16 ft (5m)	M6

Label cover kit



V12016-K30	4 Station	G1
V12016-K31	6 Station	G2
V12016-K32	8 Station	G3
V12016-K33	10 Station	G4
V12016-K34	12 Station	G5
V12016-K35	16 Station	G6

Labels



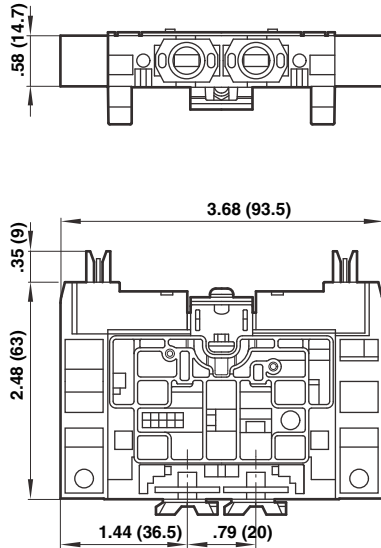
V12033-L01	Write and seal label	J1
V12034-L01	Paper label	J5

NOTE: Use Pneufit C composite plugs where needed. Do not use nickel plated brass plugs.

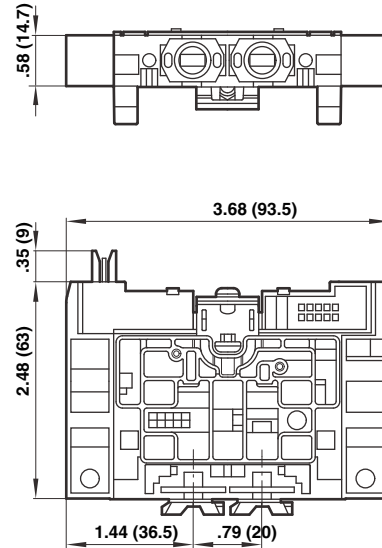
Valve Islands VM15 Series

Valve slices 2 x3/2, 5/2 and 5/3 with integral push-in fittings

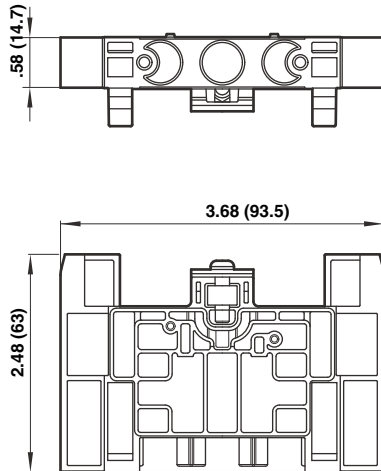
Single solenoid



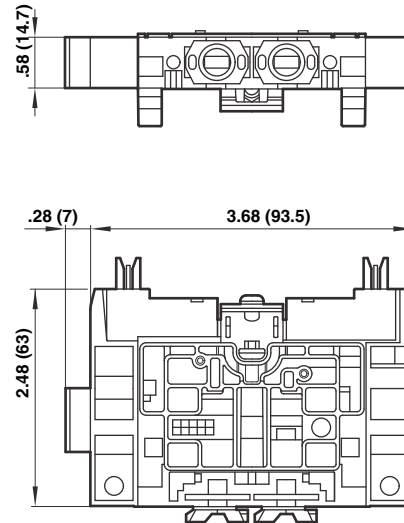
Double solenoid



Blanking plates



5/3 APB
Double solenoid



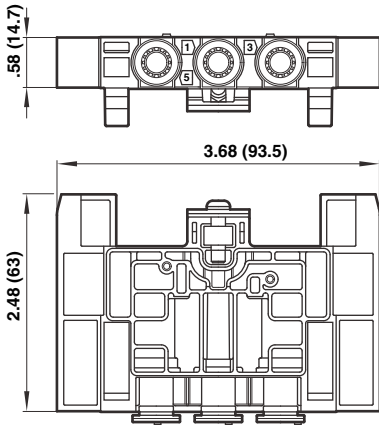
Valve blanking station	Short code	Port blanking station	Short code	oz. (kg)
VM156517AQ0300	B000	VM156517AQ0301	Port 1 blanked	B100 .098 (0.028)
		VM156517AQ0302	Ports 3 & 5 blanked	B300 .098 (0.028)
		VM156517AQ0303	Ports 1, 3 & 5 blanked	B500 .098 (0.028)

Valve Islands VM15 Series

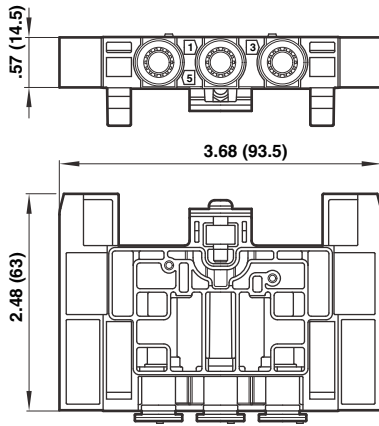
Valve slices 2x3/2, 5/2 and 5/3 with integral push-in fittings

ISEM (Intermediate Supply Exhaust Manifold)

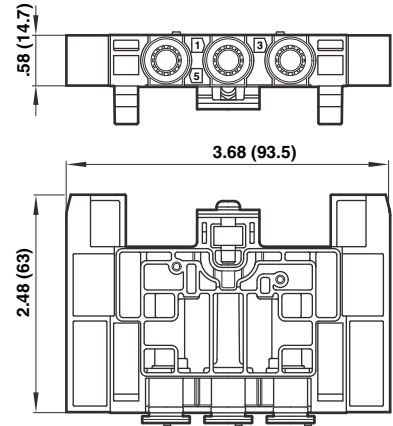
VM156517AQ0304



VM156517AQ0305



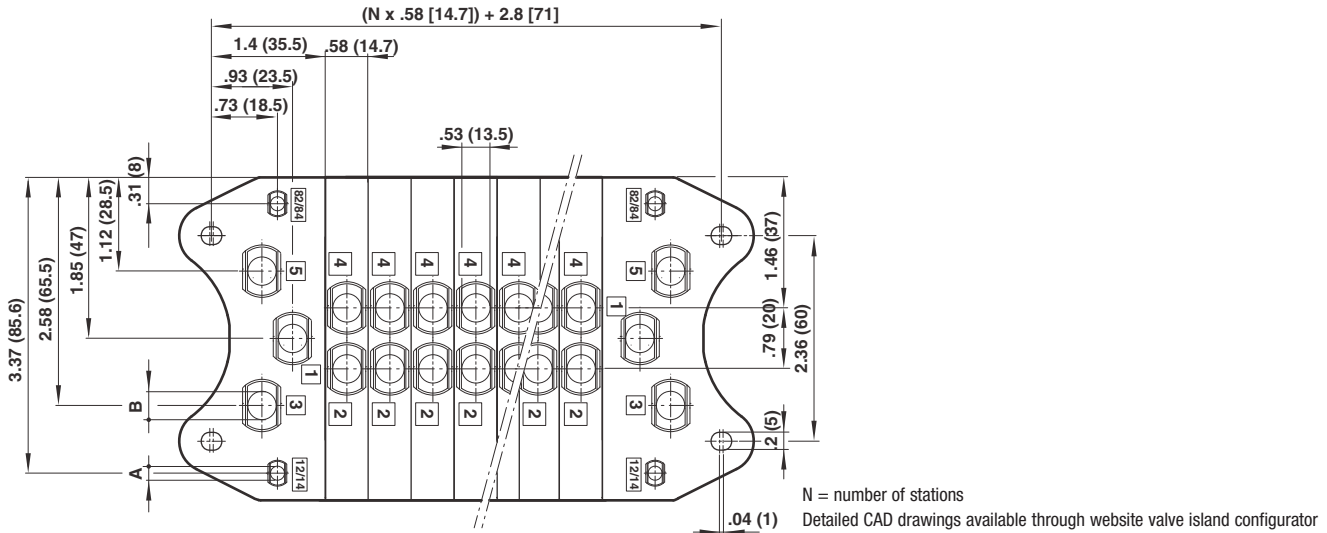
VM156517AQ0306



ISEM (5/16")		Short code
VM156517AQ0307	Feed right	RMD0
VM156517AQ0308	Feed left	LMDO
VM156517AQ0309	Feed right & left	FMDO

ISEM (8 mm)		Short code
VM156517AQ0304	Feed right	RM80
VM156517AQ0305	Feed left	LM80
VM156517AQ0306	Feed right & left	FM80

Port connections and mountings



Model	Description	B Ports 1, 3 & 5	A Ports 12/14 & 82/84	C Ports 2 & 4	Short code	lb. (kg)
VM156517AQ20V	End plate kit - feed both ends	1/2"	1/4"	1/4", 5/16" or 3/8"	FF00	1.4 (0.628)
VM156517AQ20Z	End plate kit - feed both ends	3/8"	1/4"	1/4", 5/16" or 3/8"	FE00	1.4 (0.628)
VM156517AQ21V	End plate kit - right blocked	1/2"	1/4"	1/4", 5/16" or 3/8"	LF00	1.4 (0.628)
VM156517AQ21Z	End plate kit - right blocked	3/8"	1/4"	1/4", 5/16" or 3/8"	LE00	1.4 (0.628)
VM156517AQ22V	End plate kit - left blocked	1/2"	1/4"	1/4", 5/16" or 3/8"	RF00	1.4 (0.628)
VM156517AQ22Z	End plate kit - left blocked	3/8"	1/4"	1/4", 5/16" or 3/8"	RE00	1.4 (0.628)
VM156517AQ010Z	End plate kit - feed both ends	12 mm	6 mm	6 mm, 8 mm or 10 mm	F200	0.6 (0.285)
VM156517AQ010Y	End plate kit - feed both ends	10 mm	6 mm	6 mm, 8 mm or 10 mm	F100	0.6 (0.285)
VM156517AQ011Z	End plate kit - right blocked	12 mm	6 mm	6 mm, 8 mm or 10 mm	L200	0.6 (0.285)
VM156517AQ011Y	End plate kit - right blocked	10 mm	6 mm	6 mm, 8 mm or 10 mm	L100	0.6 (0.285)
VM156517AQ012Z	End plate kit - left blocked	12 mm	6 mm	6 mm, 8 mm or 10 mm	R200	0.6 (0.285)
VM156517AQ012Y	End plate kit - left blocked	10 mm	6 mm	6 mm, 8 mm or 10 mm	R100	0.6 (0.285)
VM156517AQ0134	End plate kit - feed both ends - Pneumapole	no PIF	no PIF	3/8" or 10 mm	FP00	0.6 (0.285)
VM156517AQ0135	End plate kit - left blocked - Pneumapole	no PIF	no PIF	3/8" or 10 mm	RP00	0.6 (0.285)
VM156517AQ0136	End plate kit - right blocked - Pneumapole	no PIF	no PIF	3/8" or 10 mm	LP00	0.6 (0.285)

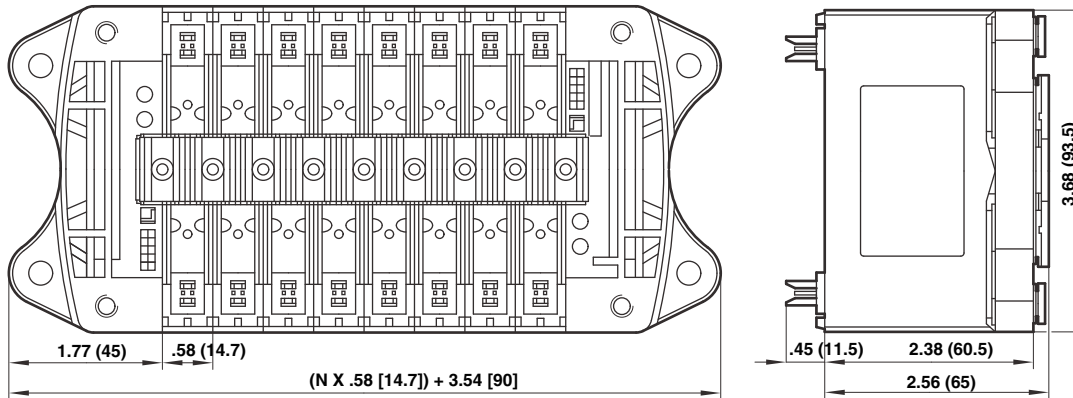
Note: Under no circumstances should port 82/84 be plugged. A filter/silencer can be fitted or the port can be piped away.

Valve Islands VM15 Series

Valve slices 2x3/2, 5/2 and 5/3 with integral push-in fittings

Modular assembly

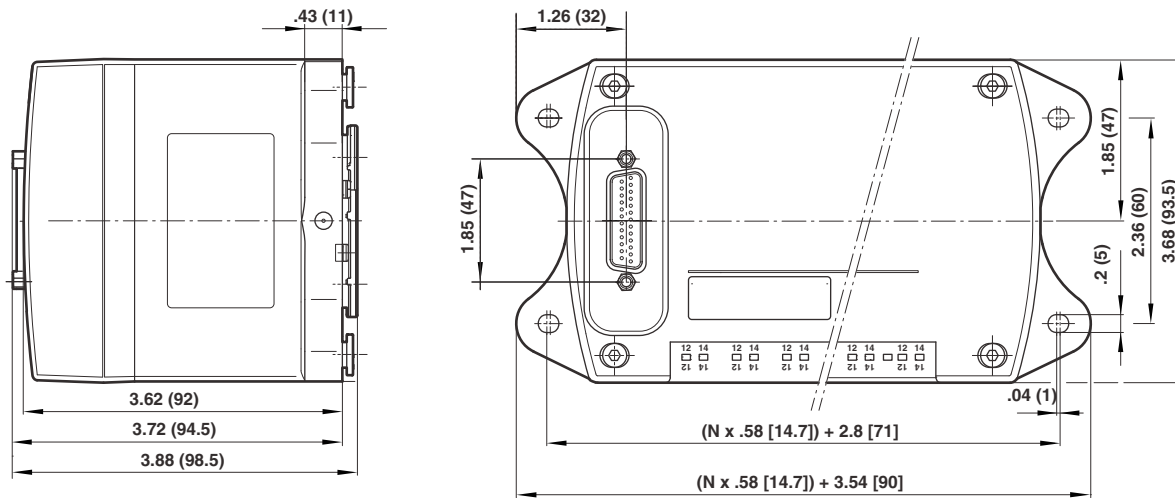
Individually wired IP40



Individually wired	No. of stations	Max. no. coils	Lb. (kg)*
2 Pin connector	2 to 20	40	.628 (0.285)

* Lb (kg) + valves weight

Multipole IP65



Multipole	No. of stations	model -ve common	Short code	Model +vd common	Short code	Max. no. coils	lb. (kg)
25 Pin connector	4	VM156517AQ0404	2N04	VM156517RQ0404	2P04	8	1.03 (0.467)
25 Pin connector	6	VM156517AQ0406	2N06	VM156517RQ0406	2P06	12	1.11 (0.505)
25 Pin connector	8	VM156517AQ0408	2N08	VM156517RQ0408	2P08	16	1.19 (0.540)
25 Pin connector	10	VM156517AQ0410	2N10	VM156517RQ0410	2P10	20	1.27 (0.575)
25 Pin connector	12	VM156517AQ0412	2N12	VM156517RQ0412	2P12	24	1.37 (0.623)
44 Pin connector	10	VM156517AQ0510	4N10	VM156517RQ0510	4P10	20	1.27 (0.575)
44 Pin connector	12	VM156517AQ0512	4N12	VM156517RQ0512	4P12	24	1.37 (0.623)
44 Pin connector	16	VM156517AQ0516	4N16	VM156517RQ0516	4P16	32	1.56 (0.706)

Valve Islands VM15 Series

Valve slices 2x3/2, 5/2 and 5/3 with integral push-in fittings

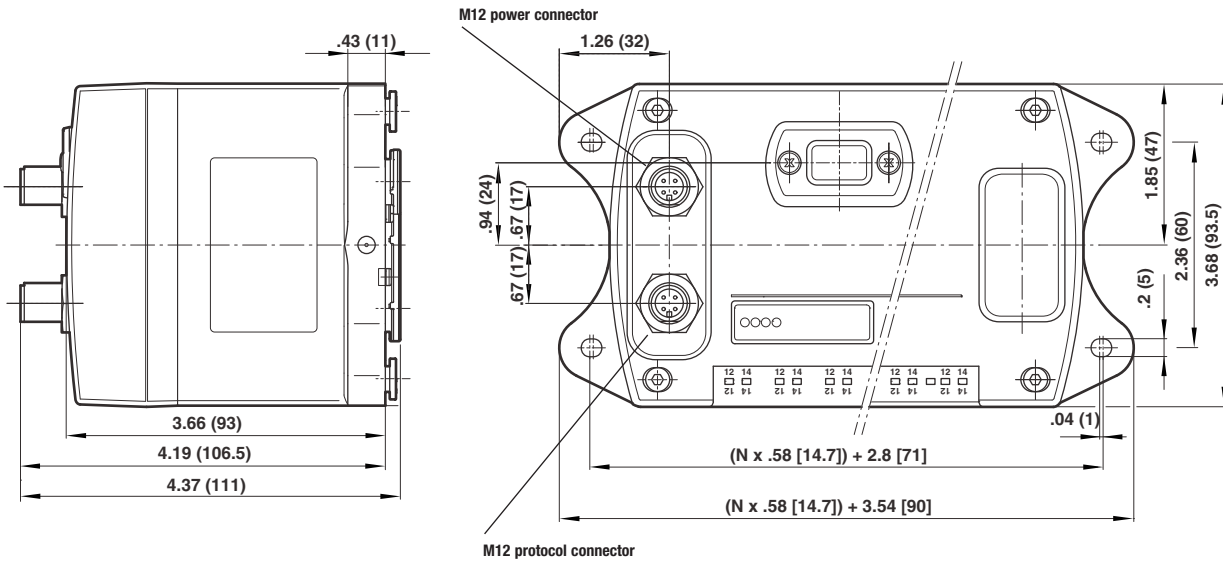
Fieldbus connections (M12 connector types IP65)

Standard fieldbus - available protocols	No. of stations	Model	Max. no. coils	Short code	lbs (kg)*
DeviceNet	6	VM15DNFNB-00062	12	DR06	1.19 (0.542)
DeviceNet	8	VM15DNFNB-00082	16	DR08	1.27 (0.578)
DeviceNet	10	VM15DNFNB-00102	20	DR10	1.36 (0.615)
DeviceNet	12	VM15DNFNB-00122	24	DR12	1.46 (0.663)
DeviceNet	16	VM15DNFNB-00162	32	DR16	1.64 (0.742)
CANopen	6	VM15CNFNB-00062	12	CR06	1.19 (0.542)
CANopen	8	VM15CNFNB-00082	16	CR08	1.27 (0.578)
CANopen	10	VM15CNFNB-00102	20	CR10	1.36 (0.615)
CANopen	12	VM15CNFNB-00122	24	CR12	1.46 (0.663)
CANopen	16	VM15CNFNB-00162	32	CR16	1.64 (0.742)

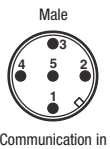
* Lb (kg) + valves weight

DeviceNet[®]

CANopen

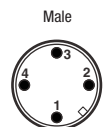


Connector details



Bus connector: M12 5-pin (A-coded)

Pin no.	Function
1	Drain
2	V+ (<100 mA)
3	V-
4	CAN_H
5	CAN_L



Power connector: M12 4-pin (A-coded)

Pin no.	Function	Tolerance	Max. current
2	24 VA valves	±10%	1.5 A
3	0 V	-	1.5 A
4	Earth	-	-

Valve Islands VM15 Series

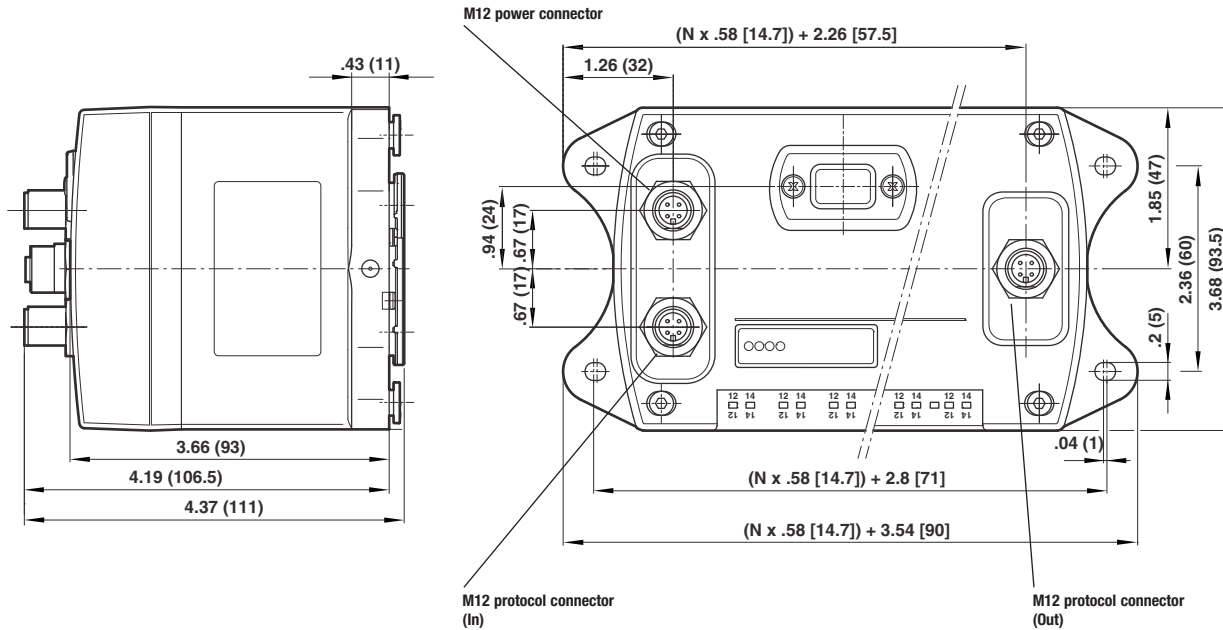
Valve slices 2x3/2, 5/2 and 5/3 with integral push-in fittings



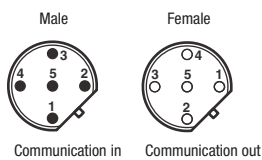
Fieldbus connections (M12 connector types IP65)

Standard Fieldbus - available protocols	No. of stations	Model	Max. no. coils	Short code	lb. (kg)*
Profibus-DP	6	VM15DPFNB-00062	12	PS06	1.21 (0.551)
Profibus-DP	8	VM15DPFNB-00082	16	PS08	1.29 (0.586)
Profibus-DP	10	VM15DPFNB-00102	20	PS10	1.38 (0.624)
Profibus-DP	12	VM15DPFNB-00122	24	PS12	1.48 (0.671)
Profibus-DP	16	VM15DPFNB-00162	32	PS16	1.66 (0.751)

* Lb (kg) + valves weight



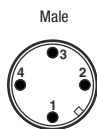
Connector details



Bus connector: M12 5-pin (B-coded)

Pin no.	Function
1	5VI Opto isolated
2	A-line (green)
3	OVI Opto isolated
4	B-line (red)
5	Shield
Threaded joint	Shield

Power connector: M12 4-pin (A-coded)



Pin no.	Function	Tolerance	Max. current
1	24 V logic circuit supply	±30%	300 mA
2	24 VA valves	±10%	1.5 A
3	0 V	-	1.8 A
4	Earth	-	-

Valve Islands VM15 Series

Valve slices 2x3/2, 5/2 and 5/3 with integral push-in fittings

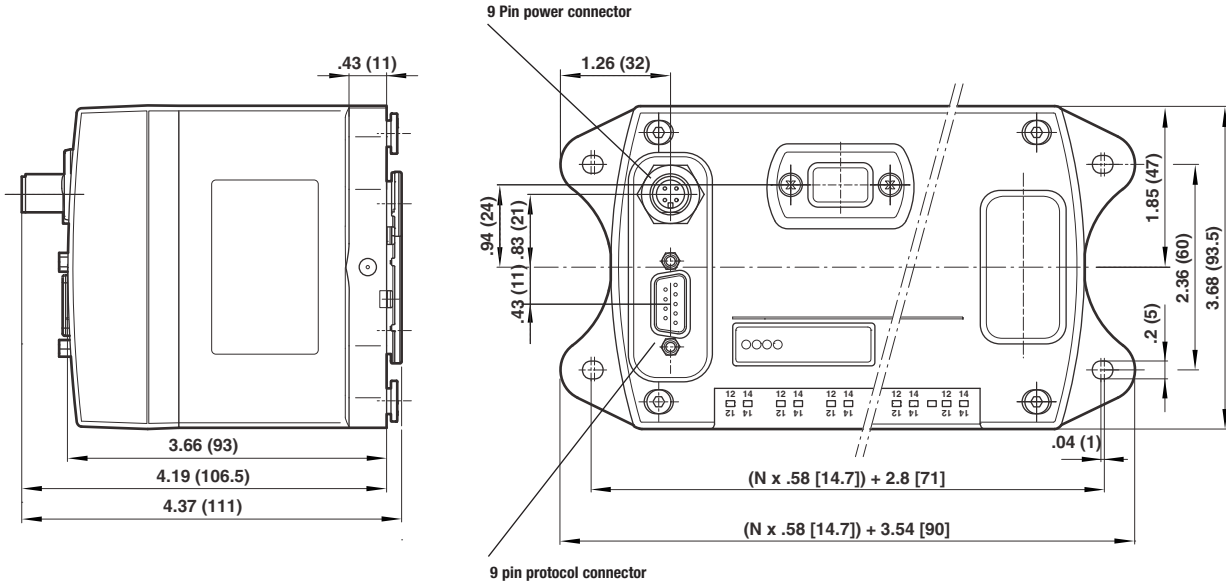
Fieldbus connections (9 Pin D-type connector types IP65)

Standard Fieldbus - available protocols	No. of stations	Model	Max. no. coils	Short code	Lb. (kg)*
Profibus-DP	6	VM15DPFNB-0006D	12	PR06	1.21 (0.551)
Profibus-DP	8	VM15DPFNB-0008D	16	PR08	1.29 (0.586)
Profibus-DP	10	VM15DPFNB-0010D	20	PR10	1.38 (0.624)
Profibus-DP	12	VM15DPFNB-0012D	24	PR12	1.48 (0.671)
Profibus-DP	16	VM15DPFNB-0016D	32	PR16	1.66 (0.751)

* Lb. (kg) + valves weight



VALVES



Connector details

Power connection

Female



Bus connector: D-Sub 9-pin

Pin no.	Function
1	Shield
2	N/C
3	B-Line (red) Rx/D / Tx/D-P
4	CNTR-P (RTS)
5	DGND (0V) Opto isolated
6	VP (5V) Opto isolated
7	N/C
8	A-Line (green) Rx/D / Tx/D-N
9	CNTR-N (direction control)

Power connector: M12 4-pin (A-coded)

Pin no.	Function	Tolerance	Max. current
1	24 VB logic circuit supply	±30%	300 mA
2	24 VA valves	±10%	1.5 A
3	0 V	-	1.8 A
4	Earth	-	-

Male



Valve Islands VM15 Series

Valve slices 2x3/2, 5/2 and 5/3 with integral push-in fittings

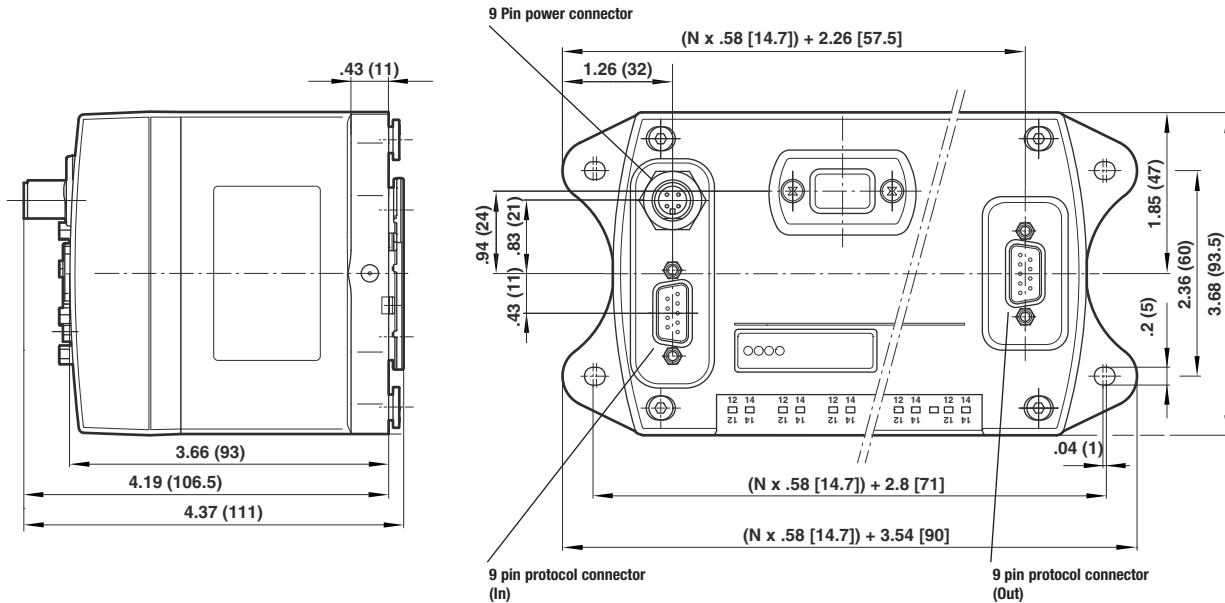
Fieldbus connections (9 Pin D-type connector types IP65)

Standard Fieldbus - available protocols	No. of stations	Model	Max. no. coils	Short code	lb. (kg)*
Interbus-S	6	VM15IBFNB-00060	12	S006	1.20 (0.546)
Interbus-S	8	VM15IBFNB-00080	16	S008	1.28 (0.581)
Interbus-S	10	VM15IBFNB-00100	20	S010	1.36 (0.619)
Interbus-S	12	VM15IBFNB-00120	24	S012	1.47 (0.666)
Interbus-S	16	VM15IBFNB-00160	32	S016	1.64 (0.746)

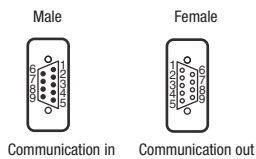
* Lb. (kg) + valves weight



VALVES



Connector details



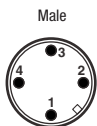
Bus connector: D-Sub 9-pin

Outgoing remote bus pin no.	D-Sub connector (female) signal	Incoming remote bus pin no.	D-Sub connector (male) signal
1	D0	1	D0
2	DI	2	DI
3	OVI	3	OVI
4	*	4	*
5	+5Vl**	5	*
6	/DO	6	/DO
7	/DI	7	/DI
8	*	8	*
9	RBST**	9	-

* Do not connect to pins 4 or 8

** If used, the outgoing bus connector should have pins 5 and 9 connected together to indicate the presence of a device on the outgoing bus

Power connector: M12 4-pin (A-coded)



Pin no.	Function	Tolerance	Max. current
1	24 VB logic circuit supply	±30%	300 mA
2	24 VA valves	±10%	1.5 A
3	0 V	-	1.8 A
4	Earth	-	-

Valve Islands VM15 Series

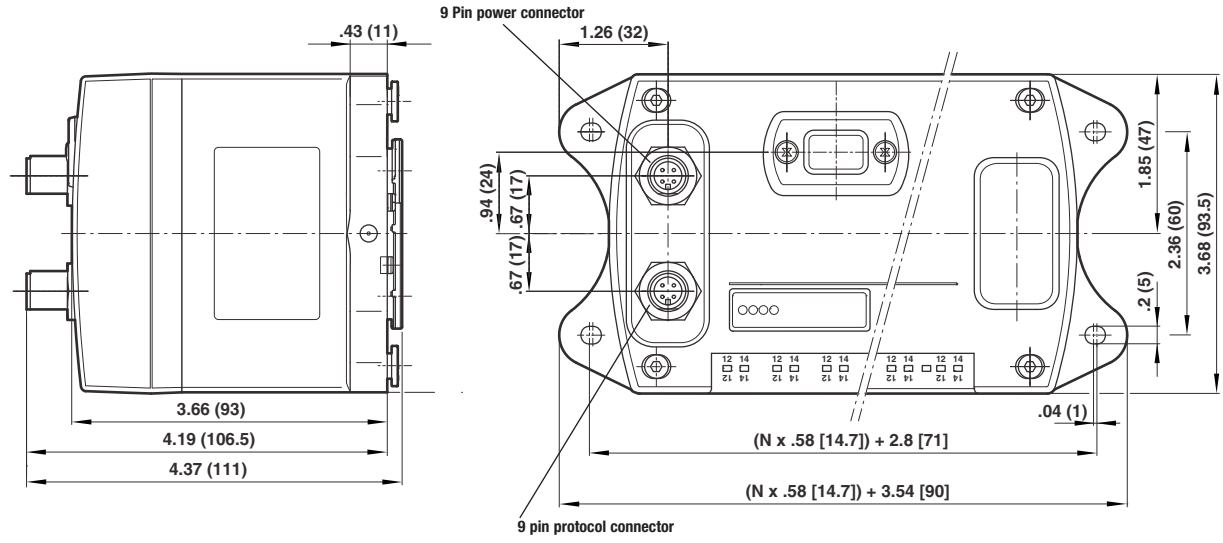
Valve slices 2x3/2, 5/2 and 5/3 with integral push-in fittings

Fieldbus connections (M12 connector types IP65)

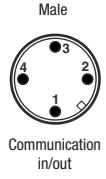
Standard Fieldbus - available protocols	No. of stations	Model	Max. no. coils	Short code	lb. (kg)*
AS-Interface	4	VM15AS10A00412	4	A404	1.11 (0.505)
AS-Interface	8	VM15AS10A00812	8	A808	1.27 (0.578)
AS-Interface	4	VM15AS10A00822	8	A804	1.11 (0.505)
AS-Interface	8	VM15AS10A00832	8	A406	1.19 (0.542)



* kg + valves weight

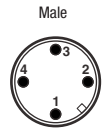


Connector details



Bus connector: M12 4-pin (A-coded)

Pin no.	Function	Max. current
1	AS-I	3)
2	-	-
3	AS-I	-
4	-	-



Power connector: M12 4-pin (A-coded)

Pin no.	Function	Tolerance	Max. current
1	+24 V d.c.	±10%	4)
2	-	-	-
3	0 V	-	-
4	-	-	-

3) Single slave: 40 mA, Double slave: 75 mA
 4) Single slave: I_{max} = 20 mA + n*60 mA
 Double slave: I_{max} = 35 mA + n*60 mA
 n = number of energized solenoids

Valve Islands VM15 Series

Valve slices 2x3/2, 5/2 and 5/3 with integral push-in fittings

Pneumapole sub-base

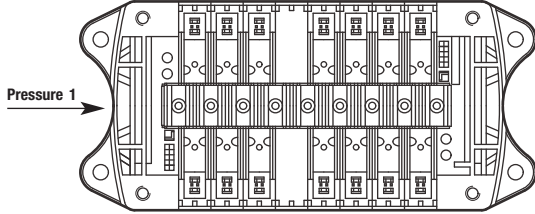
Model	Description	A Ports 1, 3 & 5	B Ports 12/14 & 82/84	C Ports 2 & 4	Exhaust type	Short code
VM156517AQ2604	4 station Pneumapole	1/2"	1/4"	3/8"	Standard	EB04
VM156517AQ2606	6 station Pneumapole	1/2"	1/4"	3/8"	Standard	EB06
VM156517AQ2608	8 station Pneumapole	1/2"	1/4"	3/8"	Standard	EB08
VM156517AQ2610	10 station Pneumapole	1/2"	1/4"	3/8"	Standard	EB10
VM156517AQ2612	12 station Pneumapole	1/2"	1/4"	3/8"	Standard	EB12
VM156517AQ2616	16 station Pneumapole	1/2"	1/4"	3/8"	Standard	EB16
VM156517AQY604	4 station Pneumapole	12 mm	6 mm	10 mm	Standard	1B04
VM156517AQY606	6 station Pneumapole	12 mm	6 mm	10 mm	Standard	1B06
VM156517AQY608	8 station Pneumapole	12 mm	6 mm	10 mm	Standard	1B08
VM156517AQY610	10 station Pneumapole	12 mm	6 mm	10 mm	Standard	1B10
VM156517AQY612	12 station Pneumapole	12 mm	6 mm	10 mm	Standard	1B12
VM156517AQY616	16 station Pneumapole	12 mm	6 mm	10 mm	Standard	1B16

Valve Islands VM15 Series

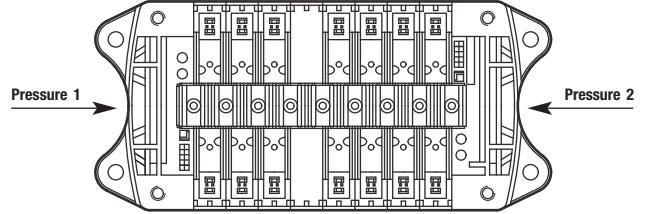
Valve slices 2x3/2, 5/2 and 5/3 with integral push-in fittings

Multi-pressure options

Single pressure

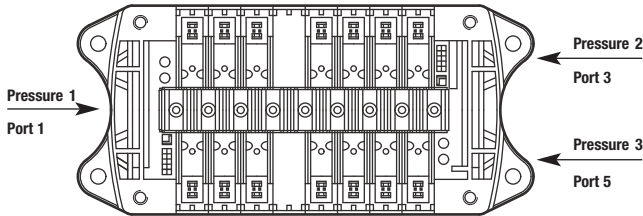


Dual pressure



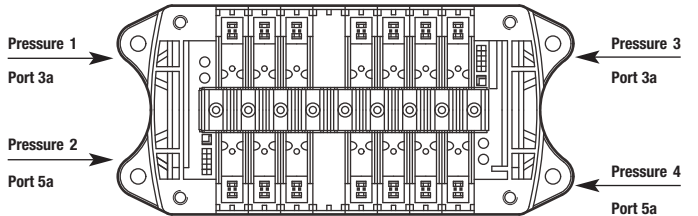
Blanking slice
Gallery 1
VM156517AQ0301

Three pressure



Blanking slice
Galleries 1, 3 and 5
VM156517AQ0303

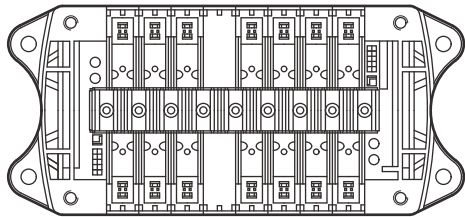
Four pressure



Blanking slice
Galleries 3 and 5
VM156517AQ0302

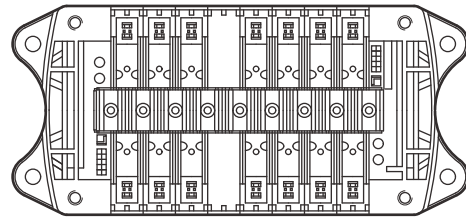
Multi-pressure options – Intermediate Supply Exhaust Manifolds

Feed right



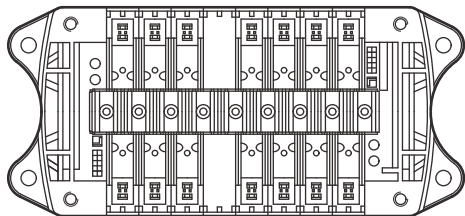
ISEM
VM156517AQ0304

Feed left



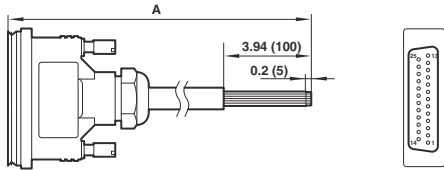
ISEM
VM156517AQ0305

Three pressure



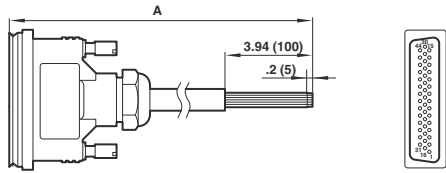
ISEM
VM156517AQ0306

25 pin D sub-connector (IP65, NEMA 4)



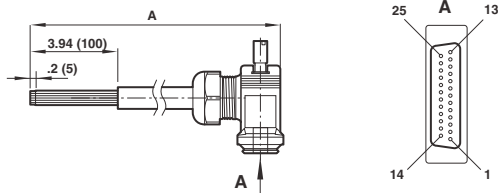
Model	A	Short code	lb. (kg)
V11569-E01	3 ft (1m)	L1	.61 (0.276)
V11569-E03	10 ft (3m)	L2	1.49 (0.676)
V11569-E05	16 ft (5m)	L3	2.37 (1.076)

44 pin D Sub-connector (IP65, NEMA 4)



Model	A	Short code	lb. (kg)
V11570-E01	3 ft (1m)	M1	.62 (0.280)
V11570-E03	10 ft (3m)	M2	1.5 (0.680)
V11570-E05	16 ft (5m)	M3	2.38 (1.080)

D Sub-connector 25 pin 90° (IP65, NEMA 4) Right handed



Model	A	Short code	lb. (kg)
V12086-E01	3 ft (1m)	L4	.61 (0.275)
V12086-E03	10 ft (3m)	L5	1.49 (0.675)
V12086-E05	16 ft (5m)	L6	2.37 (1.075)

D-Sub connector 25-pin

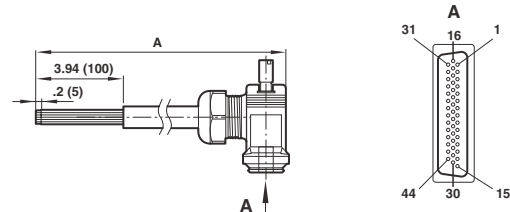
Pin no.	Wire color	Socket	Pilot	Station
1	White	Solenoid 1-a	14	1
2	Brown	Solenoid 2-a	14	2
3	Green	Solenoid 3-a	14	3
4	Yellow	Solenoid 4-a	14	4
5	Grey	Solenoid 5-a	14	5
6	Pink	Solenoid 6-a	14	6
7	Blue	Solenoid 7-a	14	7
8	Red	Solenoid 8-a	14	8
9	Black	Solenoid 9-a	14	9
10	Violet	Solenoid 10-a	14	10
11	Grey/Pink	Solenoid 11-a	14	11
12	Red/Blue	Solenoid 12-a	14	12
13	White/Green	Common-Ve	-	-
14	Brown/Green	Solenoid 1-b	12	1
15	White/Yellow	Solenoid 2-b	12	2
16	Yellow/Brown	Solenoid 3-b	12	3
17	White/Grey	Solenoid 4-b	12	4
18	Grey/Brown	Solenoid 5-b	12	5
19	White/Pink	Solenoid 6-b	12	6
20	Pink/Brown	Solenoid 7-b	12	7
21	White/Blue	Solenoid 8-b	12	8
22	Brown/Blue	Solenoid 9-b	12	9
23	White/Red	Solenoid 10-b	12	10
24	Brown/Red	Solenoid 11-b	12	11
25	White/Black	Solenoid 12-b	12	12

Note: Conforms to DIN 47100

Valve Islands VM15 Series

Valve slices 2x3/2, 5/2 and 5/3 with integral push-in fittings

D Sub-connector 44 pin 90° (IP65, NEMA 4)
Left handed



Model	A	Short code	lb. (kg)
V12088-E01	3 ft (1m)	M4	.62 (0.280)
V12088-E03	10 ft (3m)	M5	1.5 (0.680)
V12088-E05	16 ft (5m)	M6	2.38 (1.080)

D-Sub connector 44-pin

Pin no.	Wire color	Socket	Pilot	Station
1	white	Solenoid 1-a	14	1
2	brown	Solenoid 2-a	14	2
3	green	Solenoid 3-a	14	3
4	yellow	Solenoid 4-a	14	4
5	grey	Solenoid 5-a	14	5
6	pink	Solenoid 6-a	14	6
7	blue	Solenoid 7-a	14	7
8	red	Solenoid 8-a	14	8
9	black	Solenoid 9-a	14	9
10	violet	Solenoid 10-a	14	10
11	grey/pink	Solenoid 11-a	14	11
12	red/blue	Solenoid 12-a	14	12
13	white/green	Solenoid 13-a	14	13
14	brown/green	Solenoid 14-a	14	14
15	white/yellow	Solenoid 15-a	14	15
16	yellow/brown	Solenoid 1-b	12	1
17	white/grey	Solenoid 2-b	12	2
18	grey/brown	Solenoid 3-b	12	3
19	white/pink	Solenoid 4-b	12	4
20	pink/brown	Solenoid 5-b	12	5
21	white/blue	Solenoid 6-b	12	6
22	brown/blue	Solenoid 7-b	12	7
23	white/red	Solenoid 8-b	12	8
24	brown/red	Solenoid 9-b	12	9
25	white/black	Solenoid 10-b	12	10
26	brown/black	Solenoid 11-b	12	11
27	grey/green	Solenoid 12-b	12	12
28	yellow/grey	Solenoid 13-b	12	13
29	pink/green	Solenoid 14-b	12	14
30	yellow/pink	Solenoid 15-b	12	15
31	green/blue	Solenoid 16-a	14	16
32	yellow/blue	Solenoid 16-b	12	16
33	-	not used	-	-
34	-	not used	-	-
35	-	not used	-	-
36	-	not used	-	-
37	-	not used	-	-
38	-	not used	-	-
39	-	not used	-	-
40	-	not used	-	-
41	-	not used	-	-
42	-	not used	-	-
43	green/black	Common	-	-
44	yellow/black	Common	-	-

V50 ... V53 Series

3/2, 5/2 and 5/3 Spool valves
 Solenoid actuated and air pilot operated
 1/8" to 1/2"

High flow in-line valves

Compact and robust design

Low power energy efficient solenoids

High cycle life

Flexible in-line and fixed length manifold mounting options

Technical data

Connections:

1/8", 1/4", 3/8", and 1/2" NPT and ISO G

Medium:

Compressed air, filtered to 40 µm, lubricated or non-lubricated

Operation:

Softseal spool valve, solenoid and air pilot actuated

Mounting:

In-line or fixed length manifold

Maximum operating pressure:

116 psi (8 bar)

(Refer to Valve Selection Table for Minimum operating pressures.)

Flow Characteristics:

Size	Function	l/min	Cv
1/8	3/2 & 5/2	480	0.48
1/8	5/3	270	0.27
1/4	3/2 & 5/2	1020	1.02
1/4	5/3	755	0.75
3/8	3/2 & 5/2	1705	1.70
3/8	5/3	1190	1.19
1/2	3/2 & 5/2	2480	2.48
1/2	5/3	1910	1.91

Ambient & medium temperature:

23°F to 140°F (-5°C to 60°C) pilot models

23°F to 122°F (-5°C to 50°C) solenoid models

(consult our Technical Service for use below 36°F (2°C))

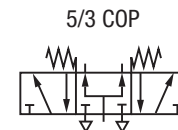
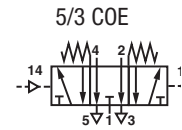
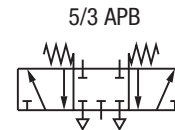
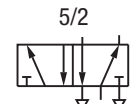
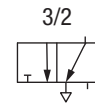
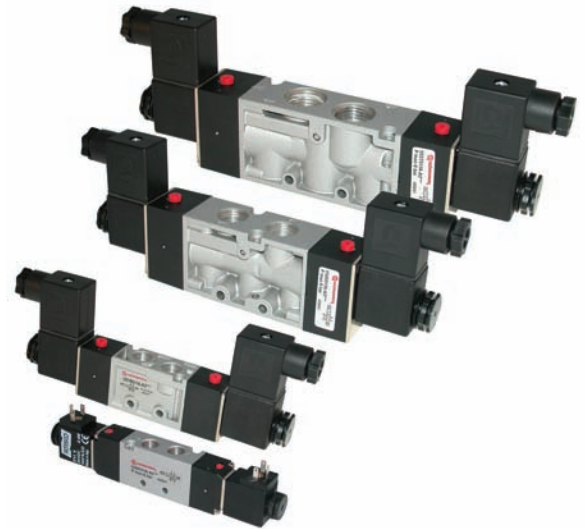
Materials

Body/sub-base: die-cast aluminum alloy or aluminum alloy

Softseal spool: NBR/aluminum alloy

Mounting screws: Plated steel

Springs: stainless steel



V50 ... V53 Series

Solenoid actuated valves

Symbol	Model	Function	Actuation	Pilot supply	Operating pressure (psi)	Flow (Cv)	Manual override	Weight (lb)	Drawing No.
	V50P413AA2*	3/2 NC	Solenoid	Internal	29 to 116	0.48	Push & turn	0.26	1
	V51R417AA2*	3/2 NC	Solenoid/spring	Internal	29 to 116	1.02	Push & turn	0.45	2
	V52S417AA2*	3/2 NC	Solenoid/spring	Internal	29 to 116	1.70	Push & turn	0.77	2
	V53T417AA2*	3/2 NC	Solenoid/spring	Internal	29 to 116	2.48	Push & turn	0.79	2
	V50P411AA2*	3/2	Solenoid/solenoid	Internal	29 to 116	0.48	Push & turn	0.38	3
	V51R411AA2*	3/2	Solenoid/solenoid	Internal	29 to 116	1.02	Push & turn	0.65	4
	V52S411AA2*	3/2	Solenoid/solenoid	Internal	29 to 116	1.70	Push & turn	0.97	4
	V53T411AA2*	3/2	Solenoid/solenoid	Internal	29 to 116	2.48	Push & turn	0.96	4
	V50P513AA2*	5/2	Solenoid/air	Internal	29 to 116	0.48	Push & turn	0.27	5
	V51R517AA2*	5/2	Solenoid/spring	Internal	29 to 116	1.02	Push & turn	0.41	6
	V52S517AA2*	5/2	Solenoid/spring	Internal	29 to 116	1.70	Push & turn	0.65	6
	V53T517AA2*	5/2	Solenoid/spring	Internal	29 to 116	2.48	Push & turn	0.67	6
	V50P511AA2*	5/2	Solenoid/solenoid	Internal	29 to 116	0.48	Push & turn	0.39	7
	V51R511AA2*	5/2	Solenoid/solenoid	Internal	29 to 116	1.02	Push & turn	0.64	8
	V52S511AA2*	5/2	Solenoid/solenoid	Internal	29 to 116	1.70	Push & turn	1.0	8
	V53T511AA2*	5/2	Solenoid/solenoid	Internal	29 to 116	2.48	Push & turn	0.42	8
	V50P611AA2*	5/3 APB	Solenoid/solenoid	Internal	44 to 116	0.27	Push & turn	0.75	9
	V51R611AA2*	5/3 APB	Solenoid/solenoid	Internal	44 to 116	0.75	Push & turn	0.85	10
	V52S611AA2*	5/3 APB	Solenoid/solenoid	Internal	44 to 116	1.19	Push & turn	1.25	11
	V53T611AA2*	5/3 APB	Solenoid/solenoid	Internal	44 to 116	1.91	Push & turn	1.40	11
	V50P711AA2*	5/3 COE	Solenoid/solenoid	Internal	44 to 116	0.27	Push & turn	0.75	9
	V51R711AA2*	5/3 COE	Solenoid/solenoid	Internal	44 to 116	0.75	Push & turn	0.85	10
	V52S711AA2*	5/3 COE	Solenoid/solenoid	Internal	44 to 116	1.19	Push & turn	1.25	11
	V53T711AA2*	5/3 COE	Solenoid/solenoid	Internal	44 to 116	1.91	Push & turn	1.40	11
	V50P811AA2*	5/3 COP	Solenoid/solenoid	Internal	44 to 116	0.27	Push & turn	0.75	9
	V51R811AA2*	5/3 COP	Solenoid/solenoid	Internal	44 to 116	0.75	Push & turn	0.85	10
	V52S811AA2*	5/3 COP	Solenoid/solenoid	Internal	44 to 116	1.19	Push & turn	1.25	11
	V53T811AA2*	5/3 COP	Solenoid/solenoid	Internal	44 to 116	1.91	Push & turn	1.40	11

* Insert coil code from below tables
 APB = All Ports Blocked, COE = Center Open Exhaust, COP = Center Open Pressure.

V50 series only

Voltage codes and spare solenoid kits

Voltage	Code	Power Inrush/hold	Solenoid Kit Model
12 V d.c.	12A	2.5 W	V12958-A12
24 V d.c.	13A	2.5 W	V12958-A13
110/120 V a.c. 50/60 Hz	18A	3.7/3.1 VA	V12958-A18

Electrical details for V50 solenoid operators

Voltage tolerances	+/- 10%
Rating	100 % Continuous duty
Inlet orifice	0.8 mm
Materials	PPS (body, FKM and NBR (seal))
Insulation class	F class
Connector type	DIN 43650 Table "C"
Protection class	IP65 (with sealed plugs)

V51 ... V53 series

Voltage codes and spare solenoid kits

Voltage	Code	Power Inrush/hold	Solenoid Kit Model
12 V d.c.	12J	2.0 W	54469-01
24 V d.c.	13J	2.0 W	54469-02
110/120 V a.c. 50/60 Hz	18J	4.0/2.5 VA	54469-03

Electrical details for V51 to V53 solenoid operators

Voltage tolerances	+/- 10%
Rating	100 % Continuous duty
Inlet orifice	0.8 mm
Materials	PPS (body), FKM and NBR (seal)
Insulation class	F class
Connector type	22 mm industrial standard
Protection class	IP65 (with sealed plugs)

V50 ... V53 Series

Solenoid Valve Options selector

V5★ ★ ★ 1★ A A2★ ★ ★ ★

Thread size	Substitute
1/8"	0
1/4"	1
3/8"	2
1/2"	3

Thread type	Substitute
1/8 NPT	P
1/4 NPT	R
3/8 NPT	S
1/2 NPT	T
G 1/8	A
G 1/4	B
G 3/8	C
G 1/2	D

Ordering example

To order a 5/2 solenoid valve, 1/4 NPT ports, spring return, 24 V d.c., with DIN connector.
quote: V51R517AA213JB

Connectors, 15 mm, DIN 43650, Form 'C'	Substitute
No connector	A
0 to 240 V a.c./d.c. w/ cable grip	B
0 to 240 V a.c./d.c. w/ 6 ft.molded cable	C
12 to 24 Vac/Vdc w/indicator light and cable grip	H
120 Vac/Vdc w/indicator light and cable grip	J

Connectors, 22 mm industrial standard	Substitute
No connector	A
0 to 240 V a.c./d.c.	B
0 to 240 V a.c./d.c., 6 ft. [1m] molded cable	C
12 to 24 Vac/Vdc w/indicator light and cable grip	H
120 Vac/Vdc w/indicator light and cable grip	J

Voltage (V50 valve series)	Substitute
12 V d.c 2.5 W	12A
24 V d.c 2.5 W	13A
110/120 V a.c (50/60 Hz) 3.7/3.2 VA	18A

Voltage (V51 ... V53 valve series)	Substitute
12 V d.c 2.0 W	12J
24 V d.c 2.0 W	13J
110/120 V a.c (50/60 Hz) 4.0/2.5 VA	18J

Actuation	Substitute
Solenoid/Air spring*	3
Solenoid/Spring	7
Solenoid/Solenoid	1

* V50 Series only

Function	Substitute
3/2 Normally closed	4
5/2	5
5/3 All ports blocked	6
5/3 Center open exhaust	7
5/3 Center open pressure	8

V50 ... V53 Series

Pilot actuated valves

Symbol	Model	Function	Pilot	Mid position	Return	Operating pressure (psi)	Pilot pressure (psi)	Flow (Cv)	Weight (lb)	Drawing No.
	V50P4D3AXP0900	3/2	Air		Air spring	0 to 116	22 to 116	0.48	0.13	12
	V51R4D7AXP0900	3/2	Air		Spring	0 to 116	22 to 116	1.02	0.27	13
	V52S4D7AXP0900	3/2	Air		Spring	0 to 116	29 to 116	1.70	0.65	13
	V53T4D7AXP0900	3/2	Air		Spring	0 to 116	29 to 116	2.48	0.66	13
	V50P4DDAXP0200	3/2	Air		Air	0 to 116	22 to 116	0.48	0.16	14
	V51R4DDAXP0200	3/2	Air		Air	0 to 116	22 to 116	1.02	0.30	15
	V52S4DDAXP0200	3/2	Air		Air	0 to 116	29 to 116	1.70	0.71	15
	V53T4DDAXP0200	3/2	Air		Air	0 to 116	29 to 116	2.48	0.72	15
	V50P5D3AXP0900	5/2	Air		Air spring	0 to 116	22 to 116	0.48	0.16	16
	V51R5D7AXP0900	5/2	Air		Spring	0 to 116	22 to 116	1.02	0.23	17
	V52S5D7AXP0900	5/2	Air		Spring	0 to 116	29 to 116	1.70	0.52	17
	V53T5D7AXP0900	5/2	Air		Spring	0 to 116	29 to 116	2.480	0.61	17
	V50P5DDAXP0200	5/2	Air		Air	0 to 116	22 to 116	0.48	0.19	18
	V51R5DDAXP0200	5/2	Air		Air	0 to 116	22 to 116	1.02	0.30	19
	V52S5DDAXP0200	5/2	Air		Air	0 to 116	29 to 116	1.70	0.52	19
	V53T5DDAXP0200	5/2	Air		Air	0 to 116	29 to 116	2.48	1.65	19
	V50P6DDAXP0200	5/3	Air	APB	Air	0 to 116	22 to 116	0.27	???	20
	V51R6DDAXP0200	5/3	Air	APB	Air	0 to 116	22 to 116	0.75	0.39	21
	V52S6DDAXP0200	5/3	Air	APB	Air	0 to 116	29 to 116	1.19	0.66	22
	V53T6DDAXP0200	5/3	Air	APB	Air	0 to 116	29 to 116	1.91	0.75	22
	V50P7DDAXP0200	5/3	Air	COE	Air	0 to 116	22 to 116	0.27	???	20
	V51R7DDAXP0200	5/3	Air	COE	Air	0 to 116	22 to 116	0.75	0.39	21
	V52S7DDAXP0200	5/3	Air	COE	Air	0 to 116	29 to 116	1.19	0.66	22
	V53T7DDAXP0200	5/3	Air	COE	Air	0 to 116	29 to 116	1.91	0.75	22
	V50P8DDAXP0200	5/3	Air	COP	Air	0 to 116	22 to 116	0.27	???	20
	V51R8DDAXP0200	5/3	Air	COP	Air	0 to 116	22 to 116	0.75	0.39	21
	V52S8DDAXP0200	5/3	Air	COP	Air	0 to 116	29 to 116	1.19	0.66	22
	V53T8DDAXP0200	5/3	Air	COP	Air	0 to 116	29 to 116	1.91	0.75	22

APB = All Ports Blocked, COE = Center Open Exhaust, COP = Center Open Pressure.

Air Pilot Valve Options selector

V5★ ★ ★ D★ A X★ 0★ 00

Thread size	Substitute
1/8"	0
1/4"	1
3/8"	2
1/2"	3
Thread type	Substitute
1/8 NPT	P
1/4 NPT	R
3/8 NPT	S
1/2 NPT	T
G 1/8	A
G 1/4	B
G 3/8	C
G 1/2	D





Return	Substitute
Double air pilot	0200
Single air pilot	0900
Pilot port thread	Substitute
1/8 NPT	P
G 1/8	A
Pilot	Substitute
Single air/Air spring (V50 only)	3
Single air/Spring return	7
Double air	D
Function	Substitute
3/2 Normally closed	4
5/2	5
5/3 All ports blocked	6
5/3 Center open exhaust	7
5/3 Center open pressure	8

Ordering example

To order a 5/2 valve, 3/8 NPT ports, air pilot, spring return
quote: **V52S5D7A-XA0900**

V50 ... V53 Series

Manifold system and blanking plates

	Manifold for 3 port valves		Blanking plate for 3 port valves	Manifold for 5 port valves		Blanking plate for 5 port valves
						
For valve series	NPT	BSP		NPT	BSP	
V50	V50P30*	V50A30*	V500351	V50P50*	V50A50*	V500551
V51	V51R30*	V51B30*	V510351	V51R50*	V51B50*	V510551
V52	V52S30*	V52C30*	V520351	V52S50*	V52C50*	V520551
V53	V53T30*	V53D30*	V530351	V53T50*	V53D50*	V530551

* Number of station 2 ... 9 for 2 ... 9 stations
 Number of station 10 for 10 stations

Accessories

Connectors, 15 mm, DIN 43650, Form 'C'



- B = V10027-D00 (0 to 240 V a.c./d.c.)
- C = V10013-D03 (0 to 240 V a.c./d.c., 6 ft. molded cable)
- H = V10012-D13 (12 to 24 Vac/Vdc w/indicator light)
- J = V10012-D18 (120 Vac/Vdc w/indicator light)

Accessories

Connectors, 22 mm industrial standard



- B = 54934-01 (0 to 240 V a.c./d.c.)
- C = 54934-21 (0 to 240 V a.c./d.c., 6 ft. [1m] molded cable)
- H = 54934-08 (12 to 24 Vac/Vdc w/indicator light)
- J = 54934-02 (120 Vac/Vdc w/indicator light)

Accessories

Silencers plastic



Silencers sintered bronze



Valve series	NPT	BSP	NPT	BSP
V50 (1/8")	C/S1	M/S1	MS001A	T40C1800
V51 (1/4")	C/S2	M/S2	MS002A	T40C2800
V52 (3/8")	C/S3	M/S3	MS003A	T40C3800
V53 (1/2")	C/S4	M/S4	MS004A	T40C4800

Manifold series	NPT	BSP	NPT	BSP
V50	C/S2	M/S2	MS002A	T40C2800
V51	C/S2	M/S2	MS002A	T40C2800
V52	C/S3	M/S3	MS003A	T40C3800
V53	C/S4	M/S4	MS004A	T40C4800

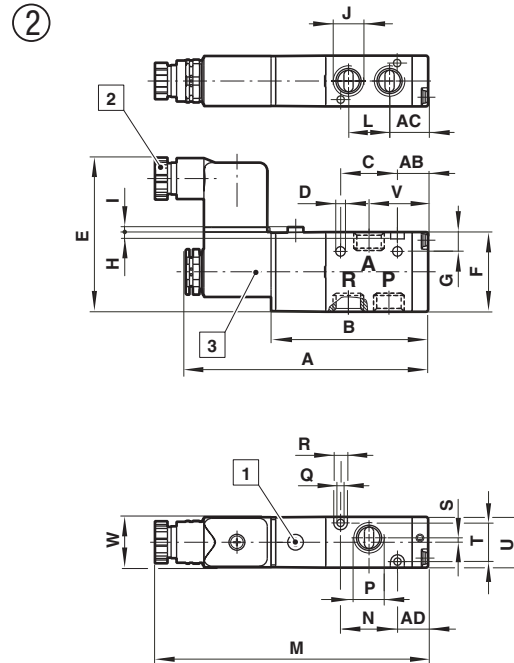
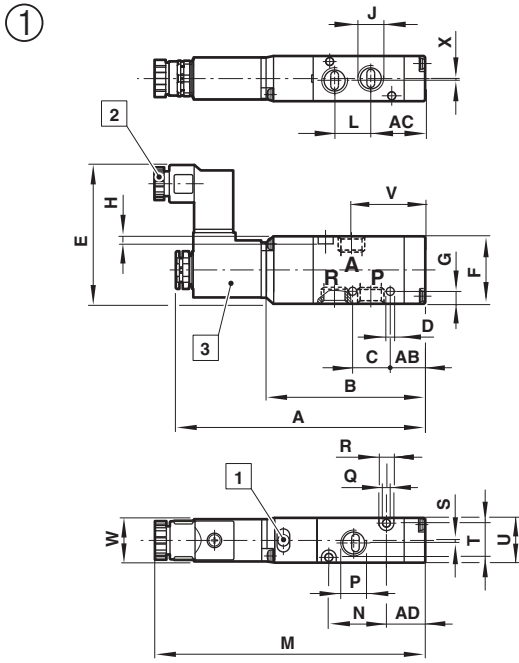
V50 ... V53 Series

Dimensions in Inches

Valve dimensions

**3/2 Single solenoid pilot valve,
1/8" port
Air Spring return**

**3/2 Single solenoid pilot valve,
1/4"... 1/2" ports
Mechanical spring return**



- 1 Manual override (Push and Turn)
- 2 4-6 mm cable dia.
- 3 Solenoid rotates 2 x 180° (V50) 4 x 90° (V51...V53)
- 4 6-8 mm cable dia.

Series	Drawing	A	AB	AC	AD	B	C	D	E	F	G	H	I	J
V50	1	3.92	0.53	0.85	0.59	2.56	0.59	0.13	2.19	1.06	0.20	0.12	-	1/8"
V51	2	4.23	0.53	0.67	0.53	2.72	0.98	0.17	2.68	1.38	0.33	0.12	0.12	1/4"
V52	2	4.98	0.51	1.02	0.59	3.50	1.02	0.18	2.87	1.83	1.56	0.16	0.12	3/8"
V53	2	5.24	0.49	1.06	0.59	3.78	1.14	0.18	2.87	1.83	1.56	0.16	0.12	1/2"
Series	Drawing	L	M	N	P	Q	R	S	T	U	V	W	X	
V50	1	0.57	4.25	0.91	1/8"	0.13	0.24	0.04	0.51	0.71	1.16	0.63	0.02	
V51	2	0.71	4.72	0.98	1/4"	0.13	0.24	0.08	0.67	0.89	1.02	0.87	-	
V52	2	1.02	5.49	1.61	3/8"	0.18	0.31	-	0.91	1.18	1.61	0.87	-	
V53	2	1.14	5.75	1.89	1/2"	0.17	0.31	0.10	0.91	1.18	1.59	0.87	-	

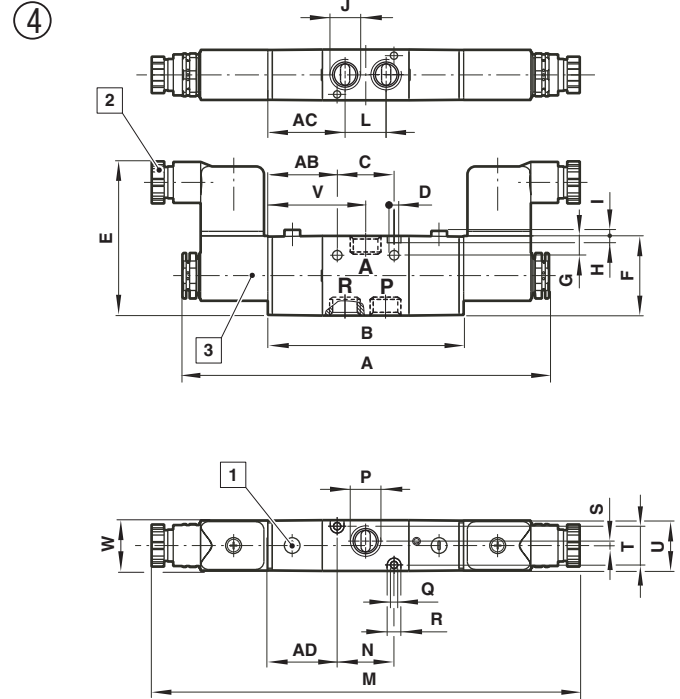
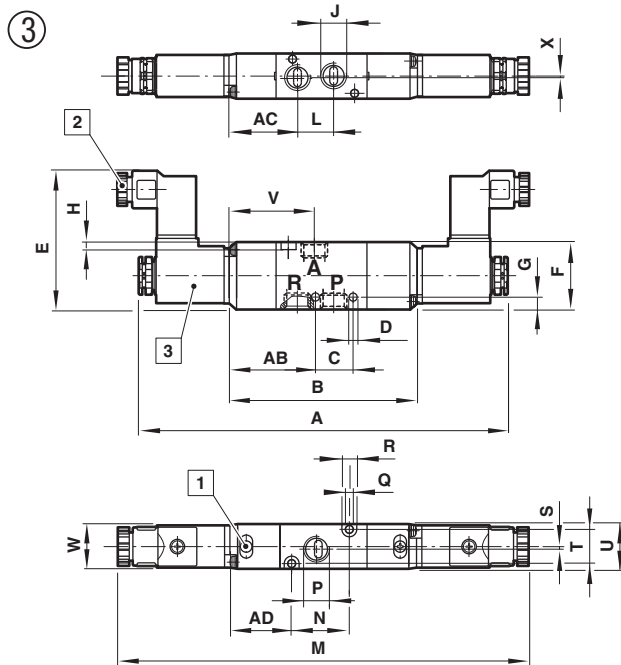
V50 ... V53 Series

Dimensions in Inches

**3/2 Double solenoid pilot valve,
1/8" port**

**3/2 Double solenoid pilot valve,
1/4" ... 1/2" ports**

VALVES



- 1 Manual override (Push and Turn)
- 2 4-6 mm cable dia.
- 3 Solenoid rotates 2 x 180° (V50) 4 x 90° (V51...V53)
- 4 6-8 mm cable dia.

Series	Drawing	A	AB	AC	AD	B	C	D	E	F	G	H	I	J
V50	3	5.69	1.44	1.14	1.06	3.01	0.59	0.13	2.19	1.06	0.20	0.12	-	1/8"
V51	4	5.75	1.20	1.34	1.20	3.39	0.98	0.17	2.68	1.38	0.33	0.12	0.12	1/4"
V52	4	7.17	1.22	1.73	1.30	4.21	1.02	0.18	2.87	1.83	1.56	0.16	0.12	3/8"
V53	4	7.40	1.20	1.77	1.30	4.49	1.14	0.18	2.87	1.83	1.56	0.16	0.12	1/2"
Series	Drawing	L	M	N	P	Q	R	S	T	U	V	W	X	
V50	3	0.58	6.46	0.92	1/8"	0.13	0.24	0.04	0.52	0.72	1.42	0.64	0.02	
V51	4	0.72	7.52	1.00	1/4"	0.13	0.24	0.08	0.68	0.90	1.72	0.88	-	
V52	4	1.04	8.32	1.64	3/8"	0.18	0.32	-	0.92	1.20	2.38	0.88	-	
V53	4	1.16	8.56	1.92	1/2"	0.17	0.32	0.10	0.92	1.20	2.34	0.88	-	

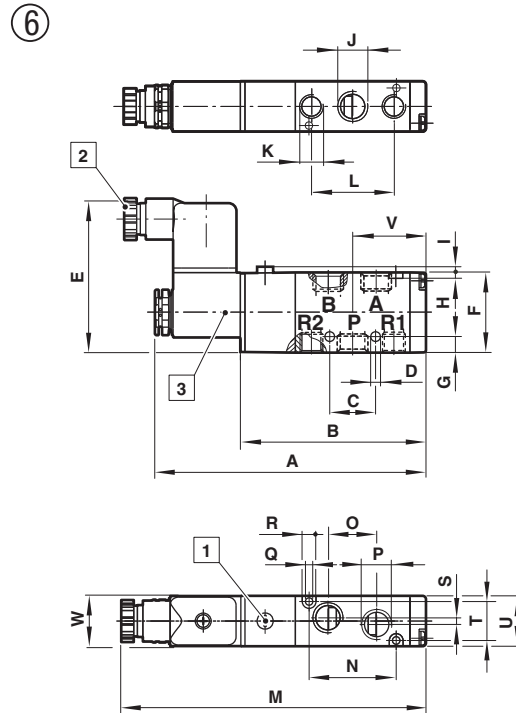
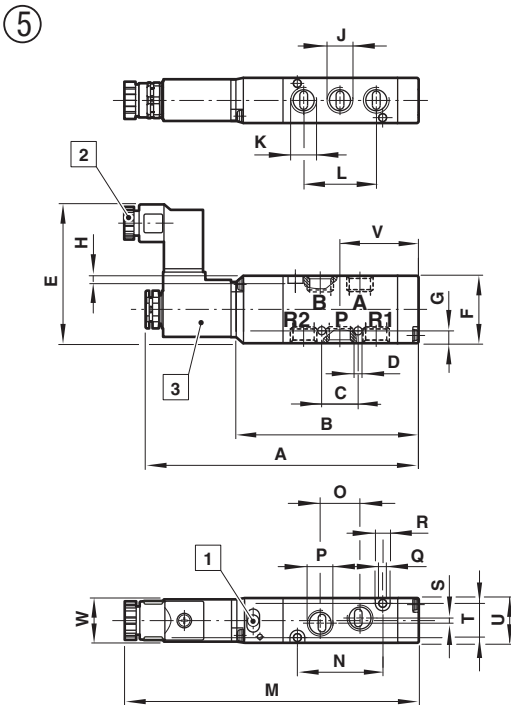
V50 ... V53 Series

VALVES

Dimensions in Inches

**5/2 Single solenoid pilot valve,
1/8" port
Air spring return**

**5/2 Single solenoid pilot valve,
1/4"... 1/2" ports
Mechanical spring return**



- 1 Manual override (Push and Turn)
- 2 4-6 mm cable dia.
- 3 Solenoid rotates 2 x 180° (V50) 4 x 90° (V51...V53)
- 4 6-8 mm cable dia.

Series	Drawing	A	B	C	D	E	F	G	H	I	J	K	L
V50	5	4.25	2.99	0.57	0.13	2.17	1.06	0.20	0.12	-	1/8"	1/8"	1.14
V51	6	4.55	3.19	0.79	0.17	2.64	1.38	0.28	0.12	0.12	1/4"	1/8"	1.42
V52	6	5.59	4.25	1.02	0.22	2.83	1.83	0.18	0.16	0.12	3/8"	3/8"	2.05
V53	6	6.18	4.72	1.14	0.18	2.87	1.83	0.28	0.16	0.12	1/2"	1/2"	2.28
Series	Drawing	M	N	O	P	Q	R	S	T	U	V	W	
V50	5	4.72	1.34	0.63	1/8"	0.13	0.24	0.08	0.51	0.71	1.30	0.63	
V51	6	5.12	1.50	0.83	1/4"	0.13	0.24	0.12	0.67	0.89	1.26	0.87	
V52	6	6.14	0.51	1.18	3/8"	0.18	0.31	-	0.91	1.18	1.77	0.87	
V53	6	6.69	2.83	1.10	1/2"	0.17	0.31	0.18	0.91	1.18	2.01	0.87	

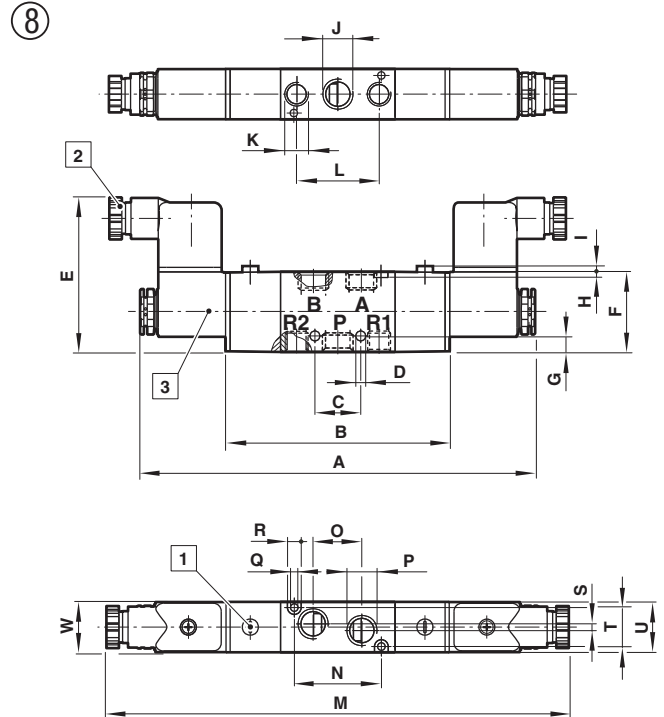
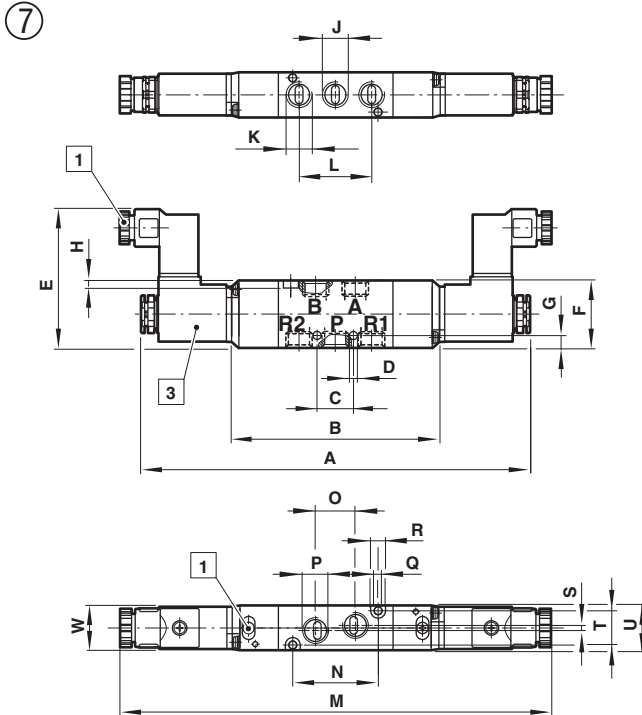
V50 ... V53 Series

Dimensions in Inches

5/2 Double solenoid pilot valve,
1/8" port

5/2 Double solenoid pilot valve,
1/4" ... 1/2" ports

VALVES



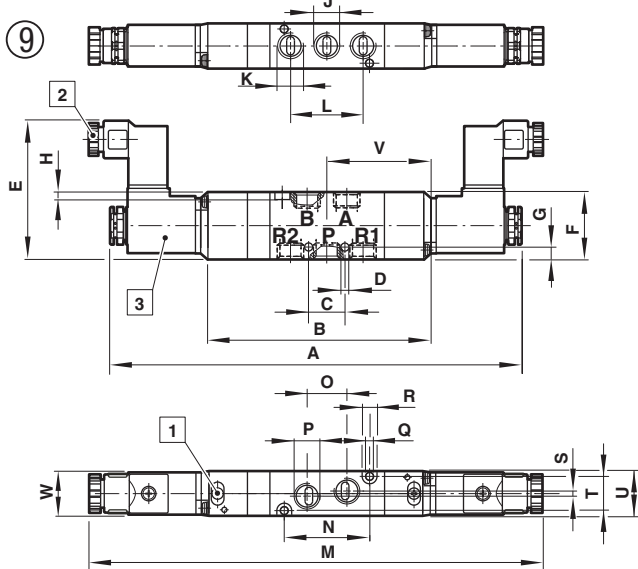
- 1 Manual override (Push and Turn)
- 2 4-6 mm cable dia.
- 3 Solenoid rotates 2 x 180° (V50) 4 x 90° (V51...V53)
- 4 6-8 mm cable dia.

Series	Drawing	A	B	C	D	E	F	G	H	I	J	K	L
V50	7	6.06	3.43	0.57	0.13	2.17	1.06	0.20	0.12	-	1/8"	1/8"	1.14
V51	8	6.57	3.82	0.79	0.17	2.64	1.38	0.28	0.12	0.12	1/4"	1/8"	1.42
V52	8	7.64	4.96	1.02	0.22	2.83	1.83	0.18	0.16	0.12	3/8"	3/8"	2.05
V53	8	8.35	5.43	1.14	0.18	2.87	1.83	0.28	0.16	0.12	1/2"	1/2"	2.28
Series	Drawing	M	N	O	P	Q	R	S	T	U	W		
V50	7	6.89	1.34	0.63	1/8"	0.13	0.24	0.08	0.51	0.71	0.63		
V51	8	7.80	1.50	0.83	1/4"	0.13	0.24	0.12	0.67	0.89	0.87		
V52	8	8.74	0.51	1.18	3/8"	0.18	0.31	-	0.91	1.18	0.87		
V53	8	9.37	2.83	1.10	1/2"	0.17	0.31	0.18	0.91	1.18	0.87		

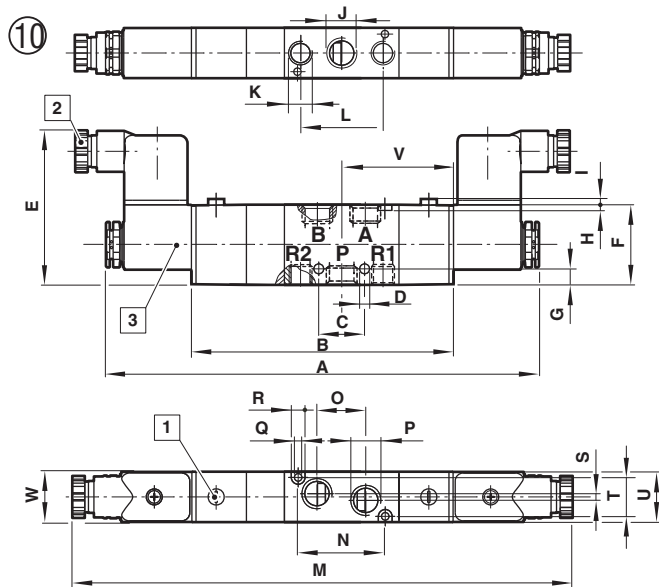
V50 ... V53 Series

Dimensions in Inches

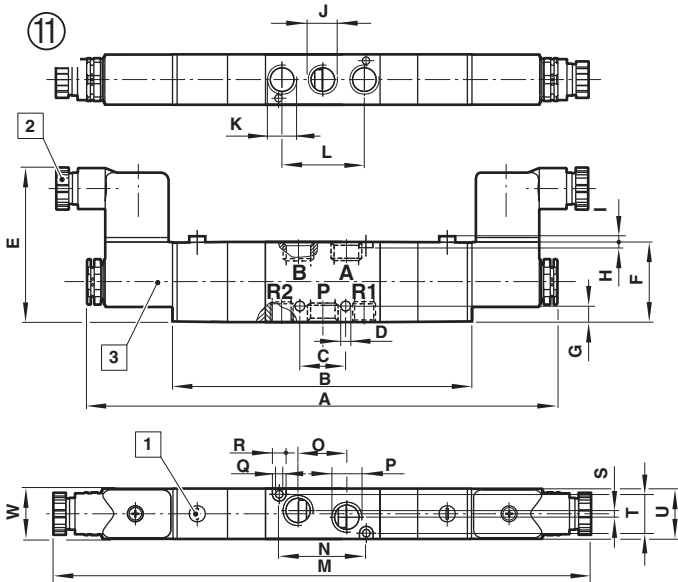
5/3 Double solenoid pilot valve, 1/8" port



5/3 Double solenoid pilot valve, 1/4" ports



5/3 Double solenoid pilot valve, 3/8" and 1/2" ports



- 1 Manual override (Push and Turn)
- 2 4-6 mm cable dia.
- 3 Solenoid rotates 2 x 180° (V50) 4 x 90° (V51...V53)
- 4 6-8 mm cable dia.

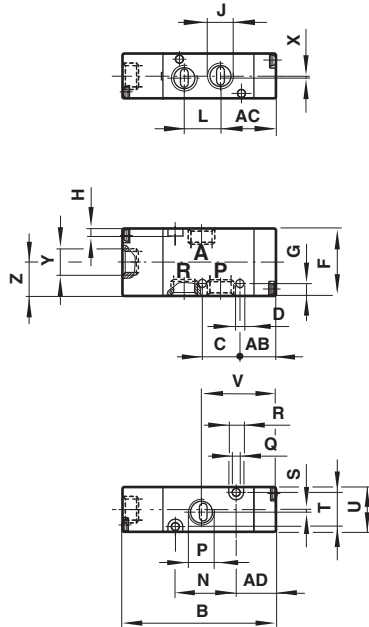
Series	Drawing	A	B	C	D	E	F	G	H	I	J	K	L
V50	9	6.42	3.78	0.57	0.13	2.17	1.06	0.20	0.12	-	1/8"	1/8"	1.14
V51	10	7.40	4.69	0.79	0.17	2.64	1.38	0.28	0.12	0.12	1/4"	1/8"	1.42
V52	11	9.61	7.07	1.02	0.22	2.83	1.83	0.18	0.16	0.12	3/8"	3/8"	2.05
V53	11	10.45	7.54	1.14	0.18	2.87	1.83	0.28	0.16	0.12	1/2"	1/2"	2.28
Series	Drawing	M	N	O	P	Q	R	S	T	U	V	W	
V50	9	7.24	1.34	0.63	1/8"	0.13	0.24	0.08	0.51	0.71	1.71	0.63	
V51	10	8.62	1.50	0.83	1/4"	0.13	0.24	0.12	0.67	0.89	1.91	0.87	
V52	11	10.83	0.51	1.18	3/8"	0.18	0.31	#VALUE!	0.91	1.18	-	0.87	
V53	11	11.48	2.83	1.10	1/2"	0.17	0.31	0.18	0.91	1.18	-	0.87	

V50 ... V53 Series

Dimensions in Inches

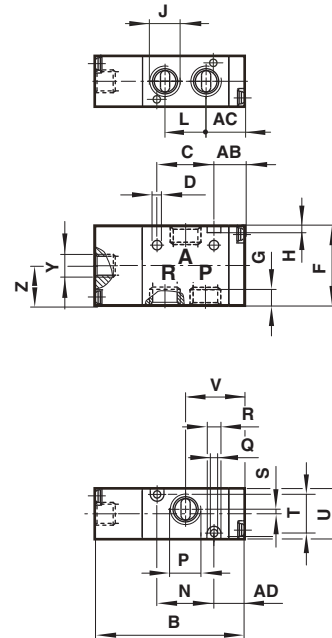
3/2 Single air pilot valve,
1/8" port
Air spring return

⑫



3/2 Single air pilot valve,
1/4" ... 1/2" ports
Mechanical spring return

⑬



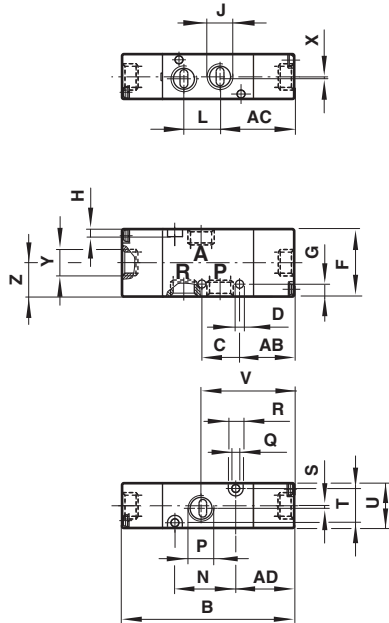
Series	Drawing	AB	AC	AD	B	C	D	F	G	H	J	L
V50	12	0.53	0.85	0.59	2.44	0.59	0.13	1.06	0.20	0.12	1/8"	0.57
V51	13	0.53	0.67	0.53	2.58	0.98	0.17	1.38	0.33	0.12	1/4"	0.71
V52	13	0.51	1.02	0.59	3.43	1.02	0.18	1.83	1.56	0.16	3/8"	1.02
V53	13	0.49	1.06	0.59	0.16	1.14	0.18	1.83	1.56	0.16	1/2"	1.14
Series	Drawing	N	P	Q	R	S	T	U	V	X	Y	Z
V50	12	0.91	1/8"	0.13	0.24	0.04	0.51	0.71	1.16	0.02	1/8"	0.53
V51	13	0.98	1/4"	0.13	0.24	0.08	0.67	0.89	1.02	-	1/8"	0.69
V52	13	1.61	3/8"	0.18	0.31	-	0.91	1.18	1.61	-	1/8"	0.67
V53	13	1.89	1/2"	0.17	0.31	0.10	0.91	1.18	1.59	-	1/8"	0.79

V50 ... V53 Series

Dimensions in Inches

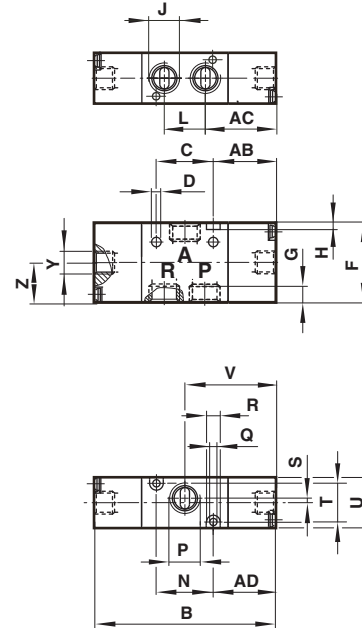
**3/2 Double air pilot valve,
1/8" port**

⑭



**3/2 Double air pilot valve,
1/4" ... 1/2" ports**

⑮



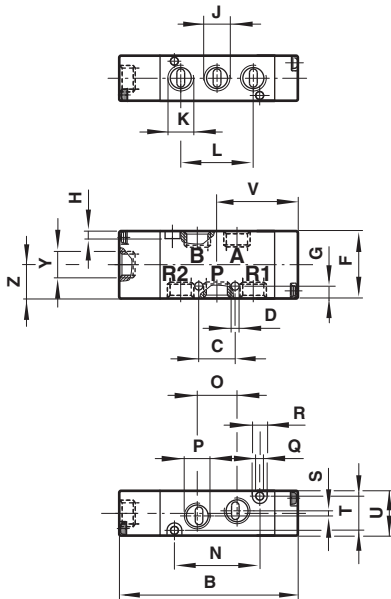
Series	Drawing	AB	AC	AD	B	C	D	F	G	H	J	L
V50	14	0.54	0.86	0.62	2.74	0.60	0.13	1.07	0.20	0.12	1/8"	0.58
V51	15	0.54	0.68	0.54	3.14	0.99	0.17	1.39	0.34	0.12	1/4"	0.72
V52	15	0.52	1.03	0.60	4.10	1.03	0.18	1.85	1.57	0.16	3/8"	1.03
V53	15	0.50	1.07	0.60	4.38	1.15	0.18	1.85	1.57	0.16	1/2"	1.15
Series	Drawing	N	P	Q	R	S	T	U	V	X	Y	Z
V50	14	0.91	1/8"	0.13	0.24	0.04	0.51	0.71	1.16	0.02	1/8"	0.53
V51	15	0.98	1/4"	0.13	0.24	0.08	0.67	0.89	1.02	-	1/8"	0.69
V52	15	1.61	3/8"	0.18	0.31	0.00	0.91	1.18	1.61	-	1/8"	0.67
V53	15	1.89	1/2"	0.17	0.31	0.10	0.91	1.18	1.59	-	1/8"	0.67

V50 ... V53 Series

Dimensions in Inches

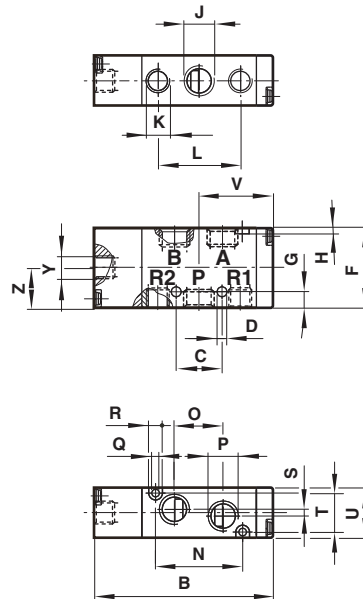
5/2 Single air pilot valve,
1/8" port
Air spring return

①⑥



5/2 Single air pilot valve,
1/4" ... 1/2" ports
Mechanical spring return

①⑦



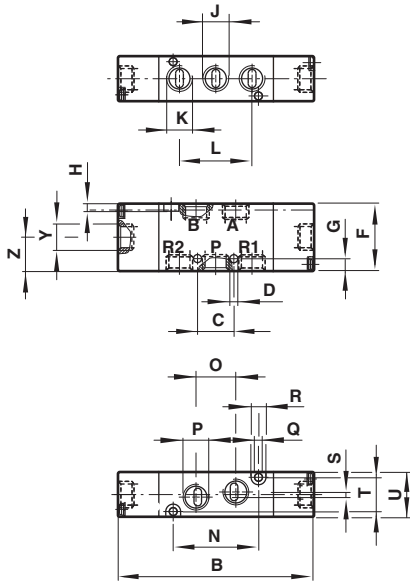
Series	Drawing	B	C	D	F	G	H	J	K	L	N
V50	16	2.87	0.57	0.13	1.06	0.20	0.12	1/8"	1/8"	1.14	1.34
V51	17	3.05	0.79	0.17	1.38	0.28	0.12	1/4"	1/8"	1.42	1.50
V52	17	4.17	1.02	0.22	1.83	0.18	0.16	3/8"	3/8"	2.05	0.51
V53	17	4.65	1.14	0.18	1.83	0.28	0.16	1/2"	1/2"	2.28	2.83
Series	Drawing	O	P	Q	R	S	T	U	V	Y	Z
V50	16	0.63	1/8"	0.13	0.24	0.08	0.51	0.71	1.30	1/8"	0.53
V51	17	0.83	1/4"	0.13	0.24	0.12	0.67	0.89	1.26	1/8"	0.69
V52	17	1.18	3/8"	0.18	0.31	-	0.91	1.18	1.77	1/8"	0.67
V53	17	1.10	1/2"	0.17	0.31	0.18	0.91	1.18	2.01	1/8"	0.79

V50 ... V53 Series

Dimensions in Inches

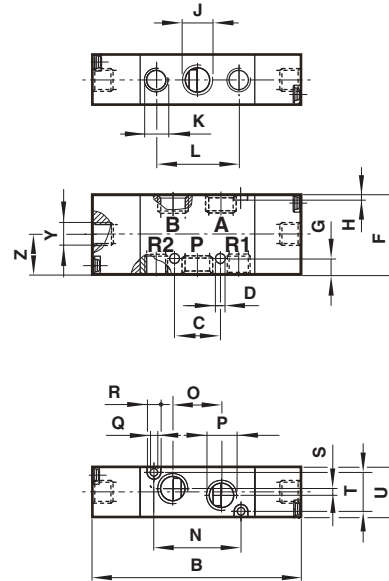
5/2 Double air pilot valve, 1/8" port

⑱



5/2 Double air pilot valve, 1/4" ... 1/2" ports

⑲



VALVES

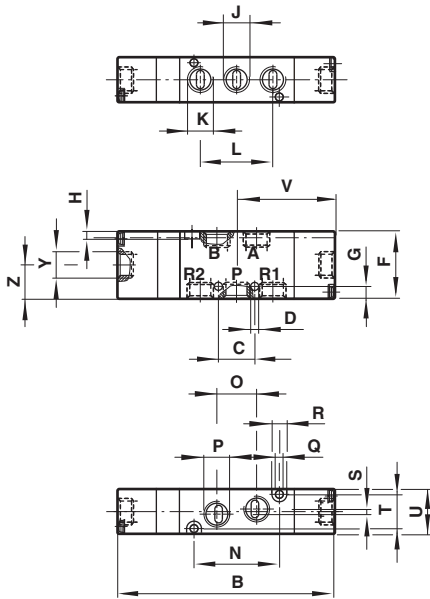
Series	Drawing	B	C	D	F	G	H	J	K	L	N
V50	18	3.15	0.57	0.13	1.06	0.20	0.12	1/8"	1/8"	1.14	1.34
V51	19	3.58	0.79	0.17	1.38	0.28	0.12	1/4"	1/8"	1.42	1.50
V52	19	4.80	1.02	0.22	1.83	0.18	0.16	3/8"	3/8"	2.05	0.51
V53	19	5.28	1.14	0.18	1.83	0.28	0.16	1/2"	1/2"	2.28	2.83
Series	Drawing	O	P	Q	R	S	T	U	Y	Z	
V50	18	0.63	1/8"	0.13	0.24	0.08	0.51	0.71	1/8"	0.53	
V51	19	0.83	1/4"	0.13	0.24	0.12	0.67	0.89	1/8"	0.69	
V52	19	1.18	3/8"	0.18	0.31	-	0.91	1.18	1/8"	0.67	
V53	19	1.10	1/2"	0.17	0.31	0.18	0.91	1.18	1/8"	0.79	

V50 ... V53 Series

Dimensions in Inches

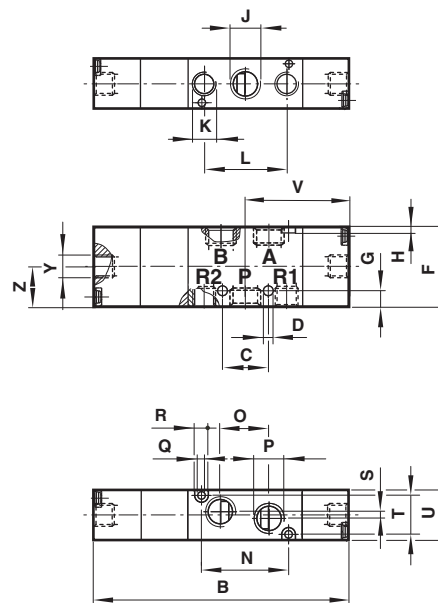
5/3 Double air pilot valve,
1/8" port

②0



5/3 Double air pilot valve,
1/4" port

②1

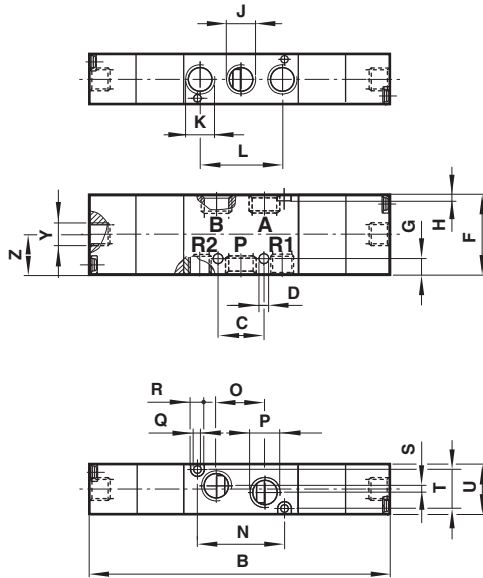


V50 ... V53 Series

Dimensions in Inches

5/3 Double air pilot valve, 3/8" and 1/2" ports

22



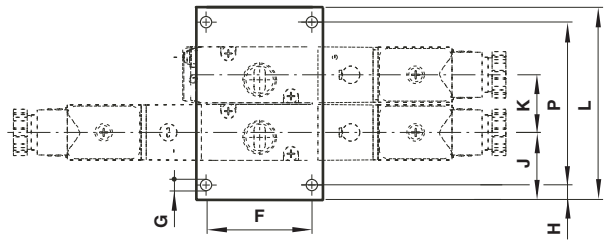
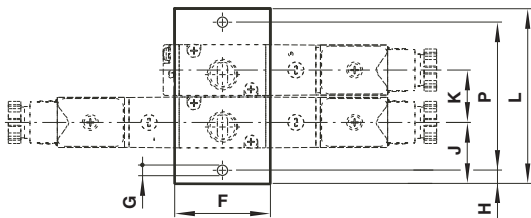
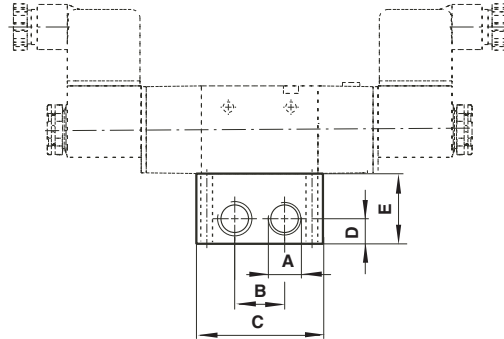
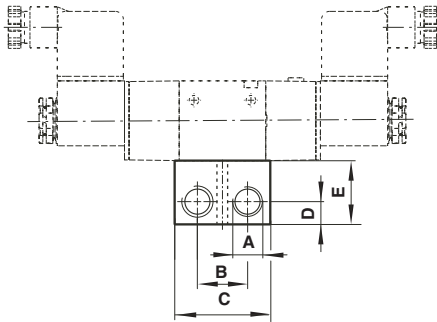
Series	Drawing	B	C	D	F	G	H	J	K	L	N
V50	20	3.50	0.57	0.13	1.06	0.20	0.12	1/8"	1/8"	1.14	1.34
V51	21	4.41	0.79	0.17	1.38	0.28	0.12	1/4"	1/8"	1.42	1.50
V52	22	6.91	1.02	0.22	1.83	0.18	0.16	3/8"	3/8"	2.05	0.51
V53	22	7.38	1.14	0.18	1.83	0.28	0.16	1/2"	1/2"	2.28	2.83
Series	Drawing	O	P	Q	R	S	T	U	V	Y	Z
V50	20	0.63	1/8"	0.13	0.24	0.08	0.51	0.71	1.30	1/8"	0.53
V51	21	0.83	1/4"	0.13	0.24	0.12	0.67	0.89	1.30	1/8"	0.69
V52	22	1.18	3/8"	0.18	0.31	-	0.91	1.18	1.77	1/8"	0.67
V53	22	1.10	1/2"	0.17	0.31	0.18	0.91	1.18	2.01	1/8"	0.79

V50 ... V53 Series

Manifold system, 3/2 valves

For V50 and V51

for V52 and V53



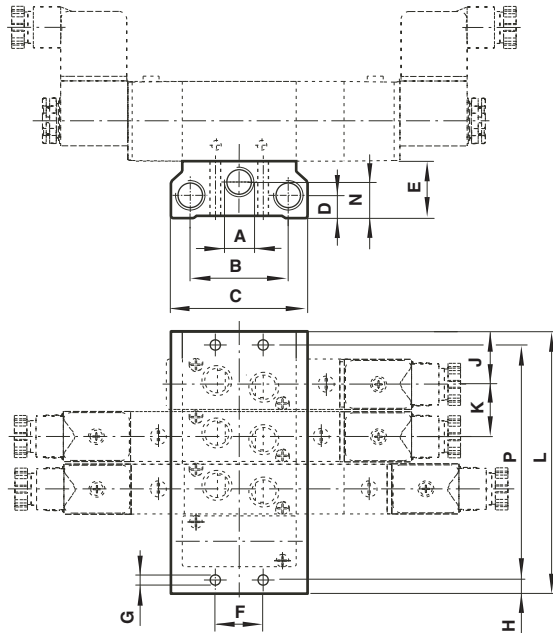
Series	A	B	C	D	E	Ø G	H	J	K	L	P	Weight (lb)
V50	1/4"	0.87	1.65	0.39	1.10	0.18	0.20	0.75	0.75	0.75 + (N x 0.75)	0.35 + (N x 0.75)	0.11 + (N x 0.11)
V51	1/4"	0.87	1.65	0.39	1.10	0.18	0.24	1.06	0.91	1.22 + (N x 0.91)	0.75 + (N x 0.91)	0.18 + (N x 0.13)
V52	3/8"	1.02	2.60	0.45	1.06	0.18	0.20	0.98	1.22	0.75 + (N x 1.22)	0.35 + (N x 1.22)	0.13 + (N x 0.24)
V53	1/2"	1.18	2.83	0.59	1.26	0.18	0.20	0.98	1.22	0.75 + (N x 1.22)	0.35 + (N x 1.22)	0.15 + (N x 0.31)

N = Number of stations 2 to 10

V50 ... V53 Series

Dimensions in Inches

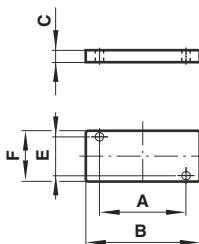
Manifold system, 5/2 valves



Series	A	B	C	D	E	F	Ø G	H	J	K	L	P	Weight (lb)
V50	1/4"	1.57	2.28	0.43	0.98	0.79	0.18	0.20	0.75	0.75	0.75 + (N x 0.75)	0.35 + (N x 0.75)	0.89 + (N x 0.89)
V51	1/4"	1.69	2.36	0.39	0.98	0.83	0.18	0.24	0.91	0.91	0.91 + (N x 1.22)	0.43 + (N x 0.91)	0.15 + (N x 0.13)
V52	3/8"	2.40	3.31	0.47	1.06	1.18	0.18	0.20	0.98	1.22	0.75 + (N x 1.22)	0.35 + (N x 1.22)	0.13 + (N x 0.20)
V53	1/2"	2.28	3.78	0.51	1.18	1.18	0.18	0.20	0.98	1.22	0.75 + (N x 1.22)	0.35 + (N x 1.22)	0.18 + (N x 0.33)

N = Number of stations 2 to 10

Blanking plate



Type	For function	A	B	C	E	F	Weight (lb)
V500351	3/2	0.91	1.38	0.08	0.51	0.71	0.02
V510351	3/2	0.98	1.50	0.08	0.67	0.89	0.03
V520351	3/2	1.61	2.17	0.08	0.91	1.18	0.07
V530351	3/2	1.89	2.44	0.08	0.91	1.18	0.13
V500551	5/2	1.33	1.69	0.08	0.51	0.71	0.02
V510551	5/2	1.50	2.0	0.08	0.67	0.89	0.04
V520551	5/2	0.51	2.91	0.08	0.91	1.18	0.07
V530551	5/2	2.83	3.39	0.08	0.91	1.20	0.18

V60-V62 Series

3/2, 5/2, 5/3, and 2 x 3/2

Directional control valves

VALVES

- High flow rate
- Extensive manual override options
- Manifold system with easy assembly
- Low power consumption
- Maintenance-free
- Technical data

Medium:

Compressed air, filtered to 50 µm, lubricated or non-lubricated.

Operation:

Solenoid pilot or air pilot operated

Mounting:

Individual or fixed length manifold

Connection:

1/8" NPT, 1/4" NPT and 3/8" NPT

Operating pressure:

145 psi (10 bar)

Flow direction:

Internal pilot supply: fixed

External pilot supply: optional

Flow:

Size NPT 3/2, 5/2 2 x 3/2, 5/3

Cv (l/min) Cv (l/min)

1/8 0.75 (750) 0.50 (500)

1/4 1.3 (1300) 0.95 (950)

3/8 2.6 (2600) 1.9 (1900)

Ambient temperature:

14°F to +122°F (-10°C to +50°C)

Consult our Technical Service for use below 36°F (+2°C).

Materials

Housing and base plate: aluminum

Spool: stainless steel,

Piston, spacers and cover: synthetic material

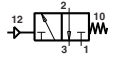
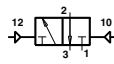
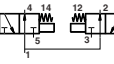


Static and dynamic seals: NBR

Screws: zinc plated

Springs: stainless steel



3-Port and 5-Port Air Pilot Valves

	Model	Port size	Function	Operator/Operator	Flow Cv	Operating Pressure (Cv)	Pilot pressure (psi)	Weight (lbs)	Drawing No.	
	V60P4D7A-XP0900	1/8	NC	Air/Spring	0.75	26" Hg to 145	36 to 145	0.29	16	
	V61R4D7A-XP0900	1/4	NC	Air/Spring	1.30	26" Hg to 145	36 to 145	0.46	16	
	V62S4D7A-XP0900	3/8	NC	Air/Spring	2.60	26" Hg to 145	36 to 145	0.95	16	
	V60P3D7A-XP0900	1/8	NO	Spring/Air	0.75	26" Hg to 145	36 to 145	0.29	17	
	V61R3D7A-XP0900	1/4	NO	Spring/Air	1.30	26" Hg to 145	36 to 145	0.46	17	
	V62S3D7A-XP0900	3/8	NO	Spring/Air	2.60	26" Hg to 145	36 to 145	0.95	17	
	V60P4DDA-XP0200	1/8	–	Air/Air	0.75	26" Hg to 145	22 to 145	0.29	18	
	V61R4DDA-XP0200	1/4	–	Air/Air	1.30	26" Hg to 145	22 to 145	0.46	18	
	V62S4DDA-XP0200	3/8	–	Air/Air	2.60	26" Hg to 145	22 to 145	0.95	18	
	2 x 3/2 Air Pilot Valves									
	V60PADDA-XP0200	1/8	NC/NC	Air/Air	0.50	29 to 145	29 to 145	0.4	19	
	V61RADDA-XP0200	1/4	NC/NC	Air/Air	0.95	29 to 145	29 to 145	0.67	19	
	V62SADDA-XP0200	3/8	NC/NC	Air/Air	1.90	29 to 145	29 to 145	1.32	19	
	V60PBDDA-XP0200	1/8	NO/NO	Air/Air	0.50	29 to 145	29 to 145	0.4	19	
	V61RBDDA-XP0200	1/4	NO/NO	Air/Air	0.95	29 to 145	29 to 145	0.67	19	
	V62SBDDA-XP0200	3/8	NO/NO	Air/Air	1.90	29 to 145	29 to 145	1.32	19	
	V60PCDDA-XP0200	1/8	NO/NC	Air/Air	0.50	29 to 145	29 to 145	0.4	19	
V61RCDDA-XP0200	1/4	NO/NC	Air/Air	0.95	29 to 145	29 to 145	0.67	19		
V62SCDDA-XP0200	3/8	NO/NC	Air/Air	1.90	29 to 145	29 to 145	1.32	19		
	5/2 Air Pilot Valves									
	V60P5D7A-XP0900	1/8	–	Air/Spring	0.75	26" Hg to 145	36 to 145	0.35	22	
	V61R5D7A-XP0900	1/4	–	Air/Spring	1.30	26" Hg to 145	36 to 145	0.57	22	
	V62S5D7A-XP0900	3/8	–	Air/Spring	2.60	26" Hg to 145	36 to 145	1.23	22	
	V60P5DDA-XP0200	1/8	–	Air/Air	0.75	26" Hg to 145	22 to 145	0.37	23	
V61R5DDA-XP0200	1/4	–	Air/Air	1.30	26" Hg to 145	22 to 145	0.6	23		
V62S5DDA-XP0200	3/8	–	Air/Air	2.60	26" Hg to 145	22 to 145	1.28	23		
	5/3 Air Pilot Valves									
	V60P6DDA-XP0200	1/8	APB	Air/Air	0.50	26" Hg to 145	44 to 145	0.44	24	
	V61R6DDA-XP0200	1/4	APB	Air/Air	0.95	26" Hg to 145	44 to 145	0.71	24	
	V62S6DDA-XP0200	3/8	APB	Air/Air	1.90	26" Hg to 145	44 to 145	1.48	24	
	V60P7DDA-XP0200	1/8	COE	Air/Air	0.50	26" Hg to 145	44 to 145	0.44	24	
	V61R7DDA-XP0200	1/4	COE	Air/Air	0.95	26" Hg to 145	44 to 145	0.71	24	
	V62S7DDA-XP0200	3/8	COE	Air/Air	1.90	26" Hg to 145	44 to 145	1.48	24	
	V60P8DDA-XP0200	1/8	COP	Air/Air	0.50	26" Hg to 145	44 to 145	0.44	24	
V61R8DDA-XP0200	1/4	COP	Air/Air	0.95	26" Hg to 145	44 to 145	0.71	24		
V62S8DDA-XP0200	3/8	COP	Air/Air	1.90	26" Hg to 145	44 to 145	1.48	24		

5-Port Solenoid Pilot Valves

	Model	Port size	Function	Pilot supply	Operator	Solenoid variant	Flow Cv	Operating pressure (psi)	Pilot pressure	Weight (lbs)	Drawing No.
2 x 3/2 Solenoid Pilot Valves											
	V60PA11A-Ax****	1/8	NC/NC	Internal	Sol/sol	Standard	0.5	29 to 145	—	0.75	7
	V60PA11D-Cx13AA	1/8	NC/NC	Internal	Sol/sol	Twin	0.5	29 to 145	—	0.53	8
	V61RA11A-Ax****	1/4	NC/NC	Internal	Sol/sol	Standard	0.95	29 to 145	—	0.95	7
	V61RA11D-Cx13AA	1/4	NC/NC	Internal	Sol/sol	Twin	0.95	29 to 145	—	0.73	8
	V62SA11A-Ax****	3/8	NC/NC	Internal	Sol/sol	Standard	1.9	29 to 145	—	0.73	7
	V62SA11D-Cx13AA	3/8	NC/NC	Internal	Sol/sol	Twin	1.9	29 to 145	—	1.39	8
	V60PB11A-Ax****	1/8	NO/NO	Internal	Sol/sol	Standard	0.5	29 to 145	—	0.75	7
	V60PB11D-Cx13AA	1/8	NO/NO	Internal	Sol/sol	Twin	0.5	29 to 145	—	0.53	8
	V61RB11A-Ax****	1/4	NO/NO	Internal	Sol/sol	Standard	0.95	29 to 145	—	0.95	7
	V61RB11D-Cx13AA	1/4	NO/NO	Internal	Sol/sol	Twin	0.95	29 to 145	—	0.73	8
	V62SB11A-Ax****	3/8	NO/NO	Internal	Sol/sol	Standard	1.9	29 to 145	—	1.61	7
	V62SB11D-Cx13AA	3/8	NO/NO	Internal	Sol/sol	Twin	1.9	29 to 145	—	1.39	8
	V60PC11A-Ax****	1/8	NO/NC	Internal	Sol/sol	Standard	0.5	29 to 145	—	0.75	7
	V60PC11D-Cx13AA	1/8	NO/NC	Internal	Sol/sol	Twin	0.5	29 to 145	—	0.53	8
	V61RC11A-Ax****	1/4	NO/NC	Internal	Sol/sol	Standard	0.95	29 to 145	—	0.95	7
	V61RC11D-Cx13AA	1/4	NO/NC	Internal	Sol/sol	Twin	0.95	29 to 145	—	0.73	8
	V62SC11A-Ax****	3/8	NO/NC	Internal	Sol/sol	Standard	1.9	29 to 145	—	1.61	7
	V62SC11D-Cx13AA	3/8	NO/NC	Internal	Sol/sol	Twin	1.9	29 to 145	—	1.39	8
5/2 Solenoid Pilot Valves											
	V60P517A-Ax****	1/8	—	Internal	Sol/spring	Standard	0.75	29 to 145	—	0.53	9
	V60P527A-Ax****	1/8	—	External	Sol/spring	Standard	0.75	26" Hg to 145	44 to 145	0.53	9
	V60P511D-Cx13AA	1/8	—	Internal	Sol/sol	Twin	0.75	29 to 145	—	0.51	12
	V60P522D-Cx13AA	1/8	—	External	Sol/sol	Twin	0.75	29" Hg to 145	44 to 145	0.51	12
	V61R517A-Ax****	1/4	—	Internal	Sol/spring	Standard	1.3	29 to 145	—	0.73	29
	V61R527A-Ax****	1/4	—	External	Sol/spring	Standard	1.3	26" Hg to 145	44 to 145	0.73	29
	V61R517D-Cx13AA	1/4	—	Internal	Sol/spring	Twin	1.3	29 to 145	—	0.71	12
	V61R527D-Cx13AA	1/4	—	External	Sol/spring	Twin	1.3	29 to 145	—	0.71	12
	V62S517A-Ax****	3/8	—	Internal	Sol/spring	Standard	2.6	29 to 145	—	1.36	29
	V62S527A-Ax****	3/8	—	External	Sol/spring	Standard	2.6	26" Hg to 145	44 to 145	1.36	29
	V62S517D-Cx13AA	3/8	—	Internal	Sol/spring	Twin	2.6	29 to 145	—	1.34	12
	V62S527D-Cx13AA	3/8	—	External	Sol/spring	Twin	2.6	26" Hg to 145	44 to 145	1.34	12
	V60P511A-Ax****	1/8	—	Internal	Sol/sol	Standard	0.75	29 to 145	—	0.73	10
	V60P522A-Ax****	1/8	—	External	Sol/sol	Standard	0.75	26" Hg to 145	44 to 145	0.51	10
	V60P522D-Cx13AA	1/8	—	External	Sol/sol	Twin	0.75	26" Hg to 145	44 to 145	0.51	11
	V61R511A-Ax****	1/4	—	Internal	Sol/sol	Standard	1.3	29 to 145	—	0.93	10
	V61R522A-Ax****	1/4	—	External	Sol/sol	Standard	1.3	26" Hg to 145	44 to 145	0.93	10
	V61R511D-Cx13AA	1/4	—	Internal	Sol/sol	Twin	1.3	29 to 145	—	0.71	11
	V61R522D-Cx13AA	1/4	—	External	Sol/sol	Twin	1.3	26" Hg to 145	44 to 145	0.71	11
	V62S511A-Ax****	3/8	—	Internal	Sol/sol	Standard	2.6	29 to 145	—	1.59	10
	V62S522A-Ax****	3/8	—	External	Sol/sol	Standard	2.6	26" Hg to 145	44 to 145	1.59	10
	V62S511D-Cx13AA	3/8	—	Internal	Sol/sol	Twin	2.6	29 to 145	—	1.36	11
	V62S522D-Cx13AA	3/8	—	External	Sol/sol	Twin	2.6	26" Hg to 145	44 to 145	1.36	11

NC = Normally closed, NO = Normally open, APB = All ports blocked, COE = Center open exhaust, COP = Center open pressure **** Insert coil connector code from Connectors table.
For manual override options, substitute 'x' as follows: 2 = locking, 3 = non-locking,

Coil & voltage codes

***Standard (22 mm coil industrial standard)

Voltage	Coil code	Power inrush/hold	Model
12 V d.c.	12J	2 W	54469-01
24 V d.c.	13J	2 W	54469-02
24 V 50/60 Hz	14J	4/2.5 VA	54469-04
110/120 V 50/60 Hz	18J	4/2.5 VA	54469-03
220/240 V 50/60 Hz	19J	6/5 VA	54469-08

Twin

Double solenoid DIN EN 175 301-803 (DIN 43650 type C) 4 pin

Voltage	Coil code	Power inrush/hold	Override	Replacement
24 V d.c.	13 A	2 W	Non-locking	9031703900024
24 V d.c.	13 A	2 W	Locking	9031704900024

Plug configuration, valve side/twin pilot

Symbol	Plug no.	Function	Actuation	Connector color
	1	(+)	12 (Solenoid 2)	Black
	2	(-)	12 + 14	Blue
	3	(+)	14 (Solenoid 1)	Brown
			Ground	Green

Electrical details

Voltage tolerance:	±10%
Rating:	100% E.D.
Protection class:	IP 65 with sealed plugs (ISO 6952)

†Connectors

3-Pin Industrial Standard 22mm

A = no connector	
B = Cable grip 0-240Vac/Vdc	54934-01
C = 6 ft molded cable, 0-240Vac/Vdc	54934-21
H = Cable grip w/indicator light 24Vdc	54934-08
J = Cable grip w/indicator light 120Vac	54934-02
Z = 1/2" Conduit 0-240Vac/Vdc	54934-05
5 = 6 ft molded cable w/indicator light, surge suppression, 24Vac/Vdc	54934-30
6 = 6 ft molded cable w/indicator light, 120Vac	54934-35

4-Pin Connector

A = no connector	
Y = 4-pin cable grip 0-240Vac/Vdc	0588666
X = 4-pin 10' molded cable 0-240Vac/Vdc	0102144

V60-V62 Series

3/2, 5/2, 5/3, and 2 x 3/2

Directional control valves

5-Port Solenoid Pilot Valves

Model	Port size	Function	Pilot supply	Operator	Solenoid variant	Flow Cv	Operating pressure (psi)	Pilot pressure	Weight (lbs)	Drawing No.
5/3 Solenoid Pilot Valves										
V60P611A-Ax****	1/8	APB	Internal	Sol/sol	Standard	0.5	44 to 145	–	0.77	14
V60P622A-Ax****	1/8	APB	External	Sol/sol	Standard	0.5	26" Hg to 145	44 to 145	0.77	14
V60P611D-Cx13AA	1/8	APB	Internal	Sol/sol	Twin	0.5	44 to 145	–	0.55	15
V60P622D-Cx13AA	1/8	APB	External	Sol/sol	Twin	0.5	26" Hg to 145	44 to 145	0.55	15
V61R611A-Ax****	1/4	APB	Internal	Sol/sol	Standard	0.95	44 to 145	–	1.04	14
V61R622A-Ax****	1/4	APB	External	Sol/sol	Standard	0.95	26" Hg to 145	44 to 145	1.04	14
V61R611D-Cx13AA	1/4	APB	Internal	Sol/sol	Twin	0.95	44 to 145	–	0.82	15
V61R622D-Cx13AA	1/4	APB	External	Sol/sol	Twin	0.95	26" Hg to 145	44 to 145	0.82	15
V62S611A-Ax****	3/8	APB	Internal	Sol/sol	Standard	1.9	44 to 145	–	1.79	14
V62S622A-Ax****	3/8	APB	External	Sol/sol	Standard	1.9	26" Hg to 145	44 to 145	1.79	14
V62S611D-Cx13AA	3/8	APB	Internal	Sol/sol	Twin	1.9	44 to 145	–	1.57	15
V62S622D-Cx13AA	3/8	APB	External	Sol/sol	Twin	1.9	26" Hg to 145	44 to 145	1.57	15
V60P711A-Ax****	1/8	COE	Internal	Sol/sol	Standard	0.5	44 to 145	–	0.77	14
V60P722A-Ax****	1/8	COE	External	Sol/sol	Standard	0.5	26" Hg to 145	44 to 145	0.77	14
V60P711D-Cx13AA	1/8	COE	Internal	Sol/sol	Twin	0.5	44 to 145	–	0.55	15
V60P722D-Cx13AA	1/8	COE	External	Sol/sol	Twin	0.5	26" Hg to 145	44 to 145	0.55	15
V61R711A-Ax****	1/4	COE	Internal	Sol/sol	Standard	0.95	44 to 145	–	1.04	14
V61R722A-Ax****	1/4	COE	External	Sol/sol	Standard	0.95	26" Hg to 145	44 to 145	1.04	14
V61R711D-Cx13AA	1/4	COE	Internal	Sol/sol	Twin	0.95	44 to 145	–	0.82	15
V61R722D-Cx13AA	1/4	COE	External	Sol/sol	Twin	0.95	26" Hg to 145	44 to 145	0.82	15
V62S711A-Ax****	3/8	COE	Internal	Sol/sol	Standard	1.9	44 to 145	–	1.79	14
V62S722A-Ax****	3/8	COE	External	Sol/sol	Standard	1.9	26" Hg to 145	44 to 145	1.79	14
V62S711D-Cx13AA	3/8	COE	Internal	Sol/sol	Twin	1.9	44 to 145	–	1.57	15
V62S722D-Cx13AA	3/8	COE	External	Sol/sol	Twin	1.9	26" Hg to 145	44 to 145	1.57	15
V60P811A-Ax****	1/8	COP	Internal	Sol/sol	Standard	0.5	44 to 145	–	0.77	14
V60P822A-Ax****	1/8	COP	External	Sol/sol	Standard	0.5	26" Hg to 145	44 to 145	0.77	14
V60P811D-Cx13AA	1/8	COP	Internal	Sol/sol	Twin	0.5	44 to 145	–	0.55	15
V60P822D-Cx13AA	1/8	COP	External	Sol/sol	Twin	0.5	26" Hg to 145	44 to 145	0.55	15
V61R811A-Ax****	1/4	COP	Internal	Sol/sol	Standard	0.95	44 to 145	–	1.04	14
V61R822A-Ax****	1/4	COP	External	Sol/sol	Standard	0.95	26" Hg to 145	44 to 145	1.04	14
V61R811D-Cx13AA	1/4	COP	Internal	Sol/sol	Twin	0.95	44 to 145	–	0.82	15
V61R822D-Cx13AA	1/4	COP	External	Sol/sol	Twin	0.95	26" Hg to 145	44 to 145	0.82	15
V62S811A-Ax****	3/8	COP	Internal	Sol/sol	Standard	1.9	44 to 145	–	1.79	14
V62S822A-Ax****	3/8	COP	External	Sol/sol	Standard	1.9	26" Hg to 145	44 to 145	1.79	14
V62S811D-Cx13AA	3/8	COP	Internal	Sol/sol	Twin	1.9	44 to 145	–	1.57	15
V62S822D-Cx13AA	3/8	COP	External	Sol/sol	Twin	1.9	26" Hg to 145	44 to 145	1.57	15

NC = Normally closed, NO = Normally open, APB = All ports blocked, COE = Center open exhaust, COP = Center open pressure **** Insert coil connector code from Connectors table. For manual override options, substitute 'x' as follows: 2 = locking, 3 = non-locking.

Coil & voltage codes

***Standard (22 mm coil industrial standard)

Voltage	Coil code	Power inrush/hold	Model
12 V d.c.	12J	2 W	54469-01
24 V d.c.	13J	2 W	54469-02
24 V 50/60 Hz	14J	4/2.5 VA	54469-04
110/120 V 50/60 Hz	18J	4/2.5 VA	54469-03
220/240 V 50/60 Hz	19J	6/5 VA	54469-08

Electrical details

Voltage tolerance:	±10%
Rating:	100% E.D.
Protection class:	IP 65 with sealed plugs (ISO 6952)

Twin

Double solenoid DIN EN 175 301-803 (DIN 43650 type C) 4 pin

Voltage	Coil code	Power inrush/hold	Override	Replacement
24 V d.c.	13 A	2 W	Non-locking	9031703900024
24 V d.c.	13 A	2 W	Locking	9031704900024

Plug configuration, valve side/twin pilot

Symbol	Plug no.	Function	Actuation	Connector color
	1	(+)	12 (Solenoid 2)	Black
	2	(-)	12 + 14	Blue
	3	(+)	14 (Solenoid 1)	Brown
		Ground		Green

†Connectors

3-Pin Industrial Standard 22mm

A = no connector	
B = Cable grip 0-240Vac/Vdc	54934-01
C = 6 ft molded cable, 0-240Vac/Vdc	54934-21
H = Cable grip w/indicator light 24Vdc	54934-08
J = Cable grip w/indicator light 120Vac	54934-02
Z = 1/2" Conduit 0-240Vac/Vdc	54934-05
5 = 6 ft molded cable w/indicator light, surge suppression, 24Vac/Vdc	54934-30
6 = 6 ft molded cable w/indicator light, 120Vac	54934-35

4-Pin Connector

A = no connector	
Y = 4-pin cable grip 0-240Vac/Vdc	0588666
X = 4-pin 10' molded cable 0-240Vac/Vdc	0102144

3-Port Solenoid Pilot Valves

Model	Port size	Function	Pilot supply*	Operator	Solenoid	Flow Cv	Operating pressure (psi)	Pilot Pressure (psi)	Wt	Drawing (lbs) no
3/2 Solenoid										
V60P417A-Ax***†	1/8	NC	Internal	Sol/spring	Standard	0.75	29 to 145	–	0.49	1
V60P427A-Ax***†	1/8	NC	External	Sol/spring	Standard	0.75	26" Hg to 145	44 to 145	0.49	1
V60P417D-Cx13AA	1/8	NC	Internal	Sol/spring	Twin	0.75	29 to 145	–	0.46	5
V60P427D-Cx13AA	1/8	NC	External	Sol/spring	Twin	0.75	26" Hg to 145	44 to 145	0.46	5
V61R417A-Ax***†	1/4	NC	Internal	Sol/spring	Standard	1.30	29 to 145	–	0.64	1
V61R427A-Ax***†	1/4	NC	External	Sol/spring	Standard	1.30	26" Hg to 145	44 to 145	0.64	1
V61R417D-Cx13AA	1/4	NC	Internal	Sol/spring	Twin	1.30	29 to 145	–	0.60	5
V61R427D-Cx13AA	1/4	NC	External	Sol/spring	Twin	1.30	26" Hg to 145	44 to 145	0.60	5
V62S417A-Ax***†	3/8	NC	Internal	Sol/spring	Standard	2.60	29 to 145	–	1.15	1
V62S427A-Ax***†	3/8	NC	External	Sol/spring	Standard	2.60	26" Hg to 145	44 to 145	1.15	1
V62S417D-Cx13AA	3/8	NC	Internal	Sol/spring	Twin	2.60	29 to 145	–	1.10	5
V62S427D-Cx13AA	3/8	NC	External	Sol/spring	Twin	2.60	26" Hg to 145	44 to 145	1.10	5
3/2 Solenoid (NO)										
V60P317A-Ax***†	1/8	NO	Internal	Sol/spring	Standard	0.75	29 to 145	–	0.5	2
V60P327A-Ax***†	1/8	NO	External	Sol/spring	Standard	0.75	26" Hg to 145	44 to 145	0.5	2
V60P317D-Cx13AA	1/8	NO	Internal	Sol/spring	Twin	0.75	29 to 145	–	0.5	5
V60P327D-Cx13AA	1/8	NO	External	Sol/spring	Twin	0.75	26" Hg to 145	44 to 145	0.5	5
V61R317A-Ax***†	1/4	NO	Internal	Sol/spring	Standard	1.30	29 to 145	–	0.64	2
V61R327A-Ax***†	1/4	NO	External	Sol/spring	Standard	1.30	26" Hg to 145	44 to 145	0.64	2
V61R317D-Cx13AA	1/4	NO	Internal	Sol/spring	Twin	1.30	29 to 145	–	0.60	5
V61R327D-Cx13AA	1/4	NO	External	Sol/spring	Twin	1.30	26" Hg to 145	44 to 145	0.60	5
V62S317A-Ax***†	3/8	NO	Internal	Sol/spring	Standard	2.60	29 to 145	–	1.15	2
V62S327A-Ax***†	3/8	NO	External	Sol/spring	Standard	2.60	26" Hg to 145	44 to 145	1.15	2
V62S317D-Cx13AA	3/8	NO	Internal	Sol/spring	Twin	2.60	29 to 145	–	1.10	5
V62S327D-Cx13AA	3/8	NO	External	Sol/spring	Twin	2.60	26" Hg to 145	44 to 145	1.10	5
3/2 Solenoid (Sol/sol)										
V60P411A-Ax***†	1/8	–	Internal	Sol/sol	Standard	0.75	22 to 145	–	0.66	3
V60P422A-Ax***†	1/8	–	External	Sol/sol	Standard	0.75	26" Hg to 145	44 to 145	0.66	3
V60P411D-Cx13AA	1/8	–	Internal	Sol/sol	Twin	0.75	22 to 145	–	0.44	4
V60P422D-Cx13AA	1/8	–	External	Sol/sol	Twin	0.75	26" Hg to 145	44 to 145	0.44	4
V61R411A-Ax***†	1/4	–	Internal	Sol/sol	Standard	1.30	22 to 145	–	0.84	3
V61R422A-Ax***†	1/4	–	External	Sol/sol	Standard	1.30	26" Hg to 145	44 to 145	0.84	3
V61R411D-Cx13AA	1/4	–	Internal	Sol/sol	Twin	1.30	22 to 145	–	0.60	4
V61R422D-Cx13AA	1/4	–	External	Sol/sol	Twin	1.30	26" Hg to 145	44 to 145	0.60	4
V62S411A-Ax***†	3/8	–	Internal	Sol/sol	Standard	2.60	22 to 145	–	1.34	3
V62S422A-Ax***†	3/8	–	External	Sol/sol	Standard	2.60	26" Hg to 145	44 to 145	1.34	3
V62S411D-Cx13AA	3/8	–	Internal	Sol/sol	Twin	2.60	22 to 145	–	1.10	4
V62S422D-Cx13AA	3/8	–	External	Sol/sol	Twin	2.60	26" Hg to 145	44 to 145	1.10	4

**** Insert coil connector code from Connectors table.

NC = Normally closed, NO = Normally open

For manual override options, substitute 'x' as follows:

2 = locking, 3 = non-locking,

* Valves are not field convertible from internal to external pilot.

Coil & voltage codes

***Standard (22 mm coil industrial standard)

Voltage	Coil code	Power inrush/hold	Model
12 V d.c.	12J	2 W	54469-01
24 V d.c.	13J	2 W	54469-02
24 V 50/60 Hz	14J	4/2.5 VA	54469-04
110/120 V 50/60 Hz	18J	4/2.5 VA	54469-03
220/240 V 50/60 Hz	19J	6/5 VA	54469-08

Twin

Double solenoid DIN EN 175 301-803 (DIN 43650 type C) 4 pin, with indicator lights, and surge suppression

Voltage	Coil code	Power inrush/hold	Override	Replacement
24 V d.c.	13 A	2 W	Non-locking	9031703900024
24 V d.c.	13 A	2 W	Locking	9031704900024

Plug configuration, valve side/twin pilot

Symbol	Plug no.	Function	Actuation	Connector color
	1	(+)	12 (Solenoid 2)	Black
	2	(-)	12 + 14	Blue
	3	(+)	14 (Solenoid 1)	Brown
			Ground	Green

Electrical details

Voltage tolerance:	±10%
Rating:	100% E.D.
Protection class:	IP 65 with sealed plugs (ISO 6952)

†Connectors

3-Pin Industrial Standard 22mm

A = no connector	
B = Cable grip 0-240Vac/Vdc	54934-01
C = 6 ft molded cable, 0-240Vac/Vdc	54934-21
H = Cable grip w/indicator light 24Vdc	54934-08
J = Cable grip w/indicator light 120Vac	54934-02
Z = 1/2" Conduit 0-240Vac/Vdc	54934-05
5 = 6 ft molded cable w/indicator light, surge suppression, 24Vac/Vdc	54934-30
6 = 6 ft molded cable w/indicator light, 120Vac	54934-35

4-Pin Connector

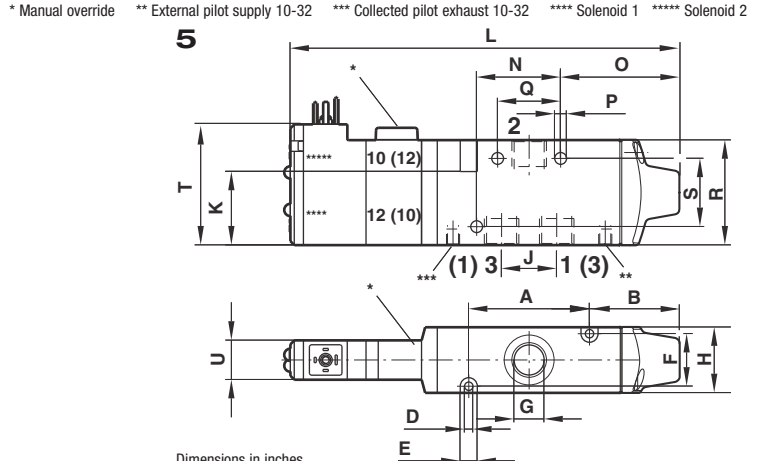
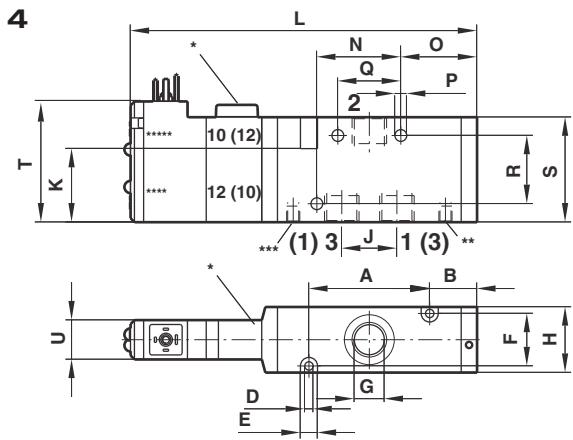
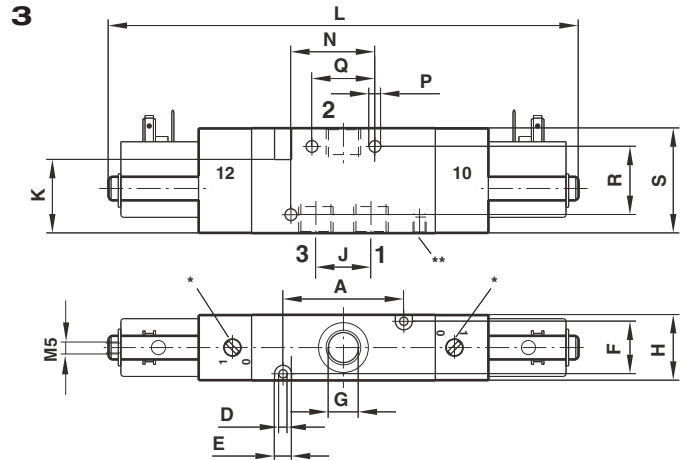
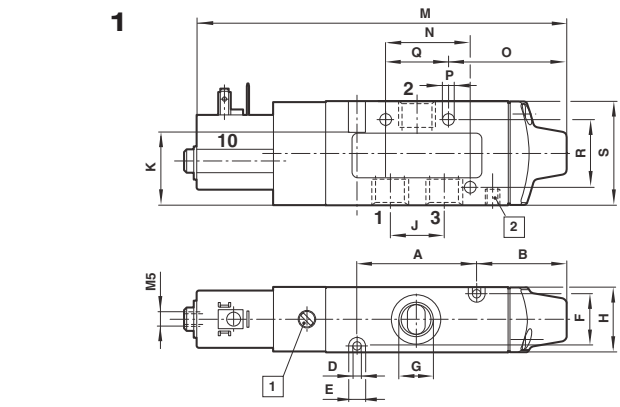
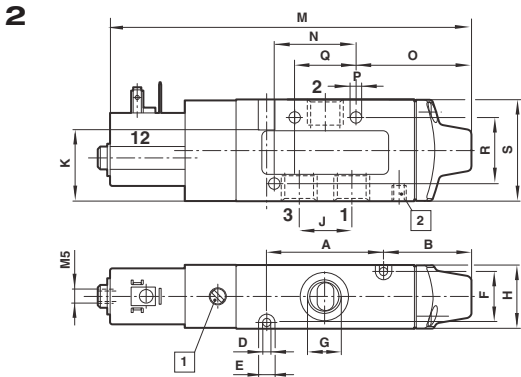
A = no connector	
Y = 4-pin cable grip 0-240Vac/Vdc	0588666
X = 4-pin 10' molded cable 0-240Vac/Vdc	0102144

V60-V62 Series

3/2, 5/2, 5/3, and 2 x 3/2

Directional control valves

VALVES



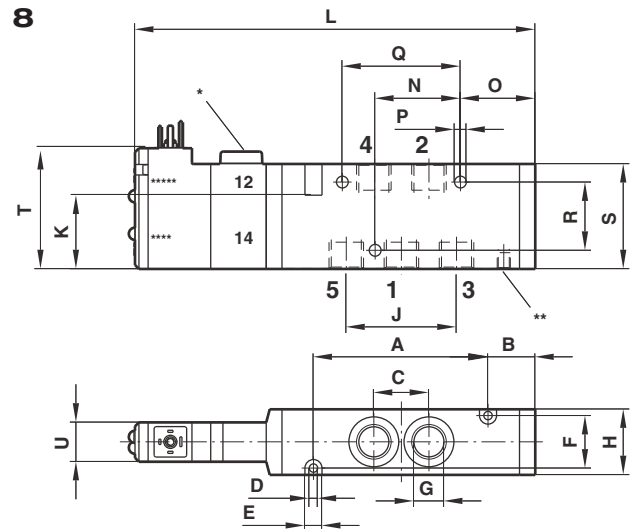
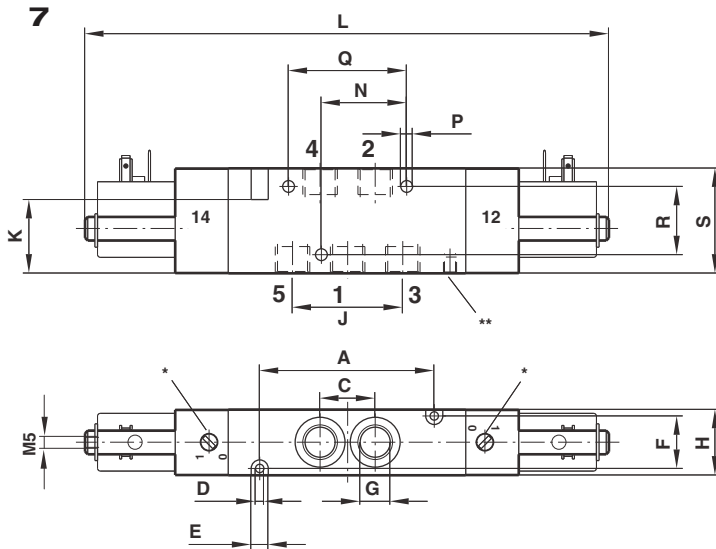
* Manual override ** External pilot supply 10-32 *** Collected pilot exhaust 10-32 **** Solenoid 1 ***** Solenoid 2

Dimensions in inches

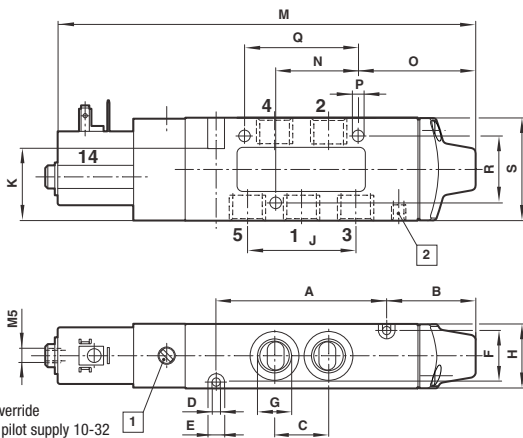
Drawing No	Type	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U
1	V60	1.38	0.67	-	0.13	0.26	0.67	1/8	0.87	0.64	1.10	-	4.49	0.98	0.98	0.18	0.71	1.02	1.38	-	-
1	V61	1.81	0.79	-	0.13	0.26	0.79	1/4	0.98	0.83	1.10	-	5.22	1.26	1.22	0.18	0.94	1.02	1.57	-	-
1	V62	2.13	0.83	-	0.18	0.31	1.10	3/8	1.34	0.96	1.73	-	5.71	0.47	1.42	0.18	1.02	1.42	2.17	-	-
2	V60	1.38	0.67	-	0.13	0.26	0.67	1/8	0.87	0.64	1.10	-	4.49	0.98	0.98	0.18	0.71	1.02	1.38	-	-
2	V61	1.81	0.79	-	0.13	0.26	0.79	1/4	0.98	0.83	1.10	-	5.22	1.26	1.22	0.18	0.94	1.02	1.57	-	-
2	V62	2.13	0.83	-	0.18	0.31	1.10	3/8	1.34	0.96	1.73	-	5.71	0.47	1.34	0.18	1.02	1.42	2.17	-	-
3	V60	1.38	-	-	0.13	0.26	0.67	1/8	0.87	0.64	1.10	6.30	-	0.98	-	0.18	0.71	1.02	1.38	-	-
3	V61	1.81	-	-	0.13	0.26	0.79	1/8	0.98	0.83	1.10	7.05	-	1.26	-	0.18	0.94	1.02	1.57	-	-
3	V62	2.13	-	-	0.18	0.31	1.10	3/8	1.34	0.96	1.73	7.64	-	0.47	-	0.18	1.02	1.42	2.17	-	-
4	V60	1.38	0.67	-	0.13	0.26	0.67	1/8	0.87	0.64	1.10	4.69	-	0.98	0.98	0.18	0.71	1.02	1.38	1.81	0.59
4	V61	1.81	0.71	-	0.13	0.26	0.79	1/4	0.98	0.83	1.10	5.24	-	1.26	1.14	0.18	0.94	1.02	1.57	1.81	0.59
4	V62	2.13	0.83	-	0.18	0.31	1.10	3/8	1.34	0.96	1.73	5.79	-	0.47	1.42	0.18	1.02	1.42	2.17	2.13	0.59
5	V60	1.38	1.1	-	0.13	0.26	0.67	1/8	0.87	0.64	1.10	5.12	-	0.98	1.41	0.18	0.71	1.02	1.38	1.81	0.59
5	V61	1.81	1.28	-	0.13	0.26	0.79	1/4	0.98	0.83	1.10	5.81	-	1.26	1.71	0.18	0.94	1.02	1.57	1.81	0.59
5	V62	2.13	1.70	-	0.18	0.31	1.10	3/8	1.34	0.96	1.73	6.66	-	0.47	2.29	0.18	1.02	1.42	2.17	2.13	0.59

V60-V62 Series

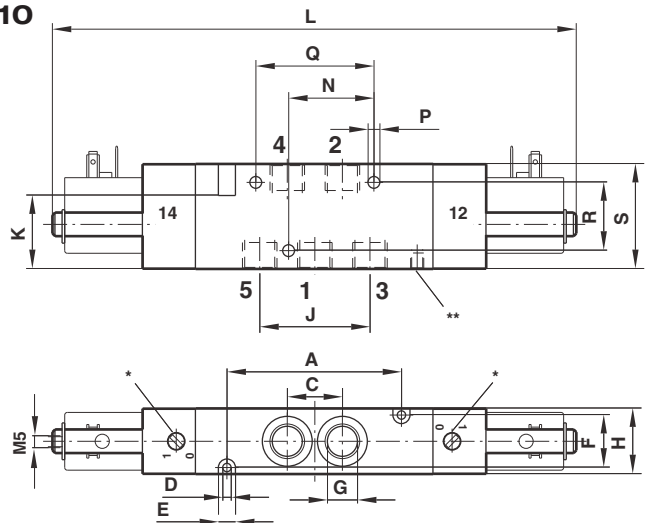
5/2 and 2/3
Directional control valves



9 DR_V_M29_R12



10



- * Manual override
- ** External pilot supply 10-32
- *** Collected pilot exhaust 10-32
- **** Solenoid 1
- ***** Solenoid 2

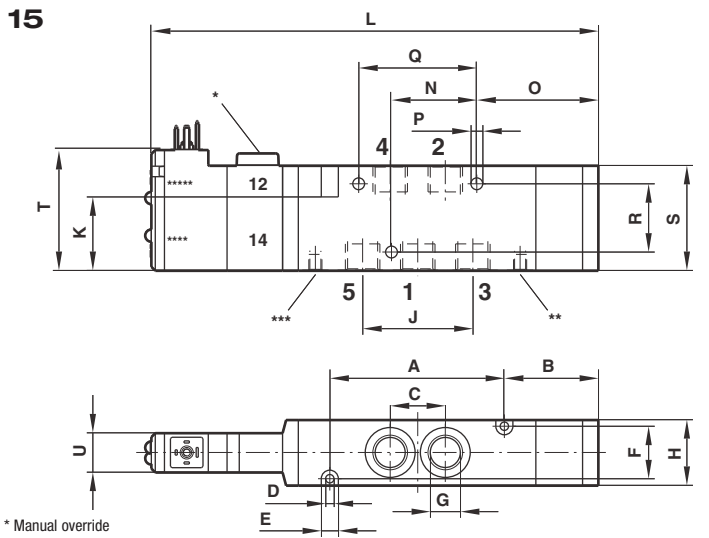
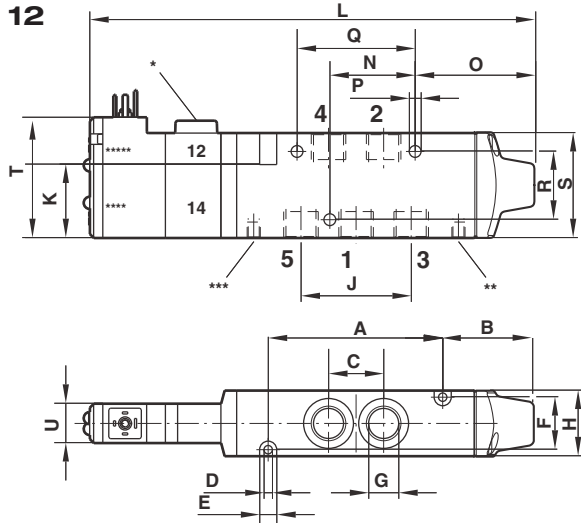
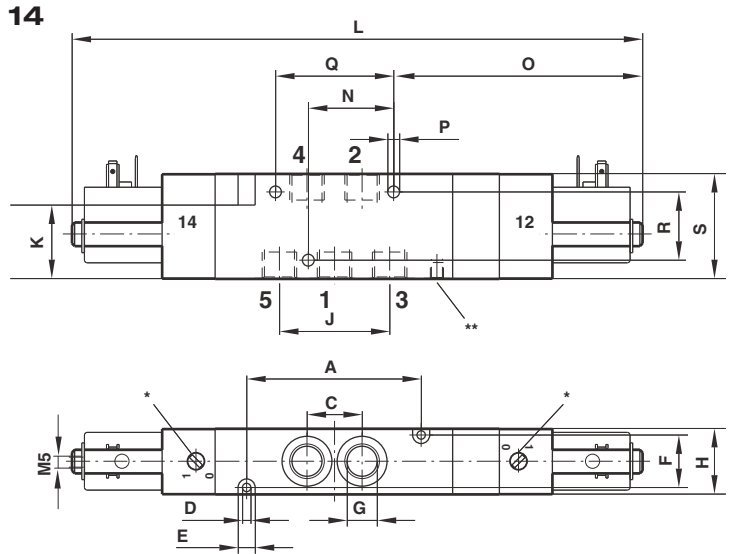
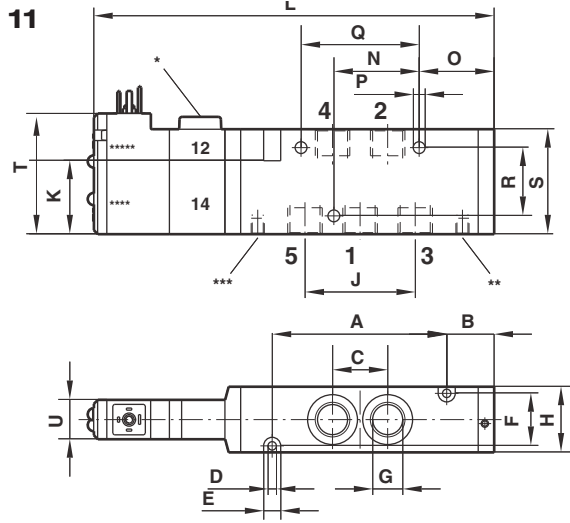
Dimensions in inches

Drawing No	Type	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U
7	V60	1.97	-	0.64	0.13	0.26	0.67	1/8	0.87	1.28	1.10	6.89	-	0.98	-	0.18	1.32	1.02	1.38	-	-
7	V61	2.60	-	0.83	0.13	0.26	0.79	1/4	0.98	1.65	1.10	7.83	-	1.26	-	0.18	1.73	1.02	1.57	-	-
7	V62	3.07	-	0.96	0.18	0.31	1.10	3/8	1.34	1.92	1.73	8.58	-	0.47	-	0.18	1.02	1.42	2.17	-	-
8	V60	1.97	0.67	0.64	0.13	0.26	0.67	1/8	0.87	1.28	1.10	5.28	-	0.98	0.98	0.18	1.32	1.02	1.38	1.81	0.59
8	V61	2.60	0.71	0.83	0.13	0.26	0.79	1/4	0.98	1.65	1.10	6.02	-	1.26	1.14	0.18	1.73	1.02	1.57	1.81	0.59
8	V62	3.07	0.87	0.96	0.18	0.31	1.10	3/8	1.34	1.92	1.73	6.77	-	0.47	2.40	0.18	1.02	1.42	2.17	2.13	0.59
9	V60	1.97	0.67	0.64	0.13	0.26	0.67	1/8	0.87	1.28	1.10	-	5.08	0.98	0.98	0.18	1.32	1.02	1.38	-	-
9	V61	2.60	0.79	0.83	0.13	0.26	0.79	1/4	0.98	1.65	1.10	-	6.00	1.26	1.22	0.18	1.73	1.02	1.57	-	-
9	V62	3.07	0.83	0.96	0.18	0.31	1.10	3/8	1.34	1.92	1.73	-	6.69	0.47	2.36	0.18	1.02	1.42	2.17	-	-
10	V60	1.97	-	0.64	0.13	0.26	0.67	1/8	0.87	1.28	1.10	6.89	-	0.98	-	0.18	1.32	1.02	1.38	-	-
10	V61	2.60	-	0.83	0.13	0.26	0.79	1/4	0.98	1.65	1.10	7.83	-	1.26	-	0.18	1.73	1.02	1.57	-	-
10	V62	3.07	-	0.96	0.18	0.31	1.10	3/8	1.34	1.92	1.73	8.58	-	0.47	-	0.18	1.02	1.42	2.17	-	-

V60-V62 Series

5/2 and 2 x 3/2

Directional control valves



* Manual override
 ** External pilot supply 10-32
 *** Collected pilot exhaust 10-32
 **** Solenoid 1
 ***** Solenoid 2

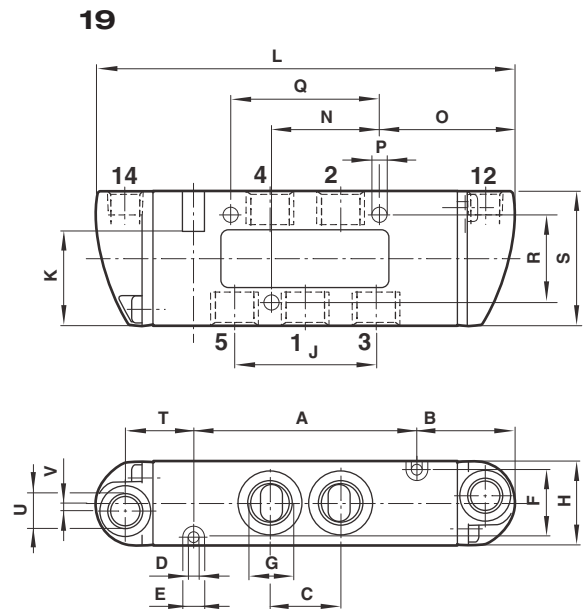
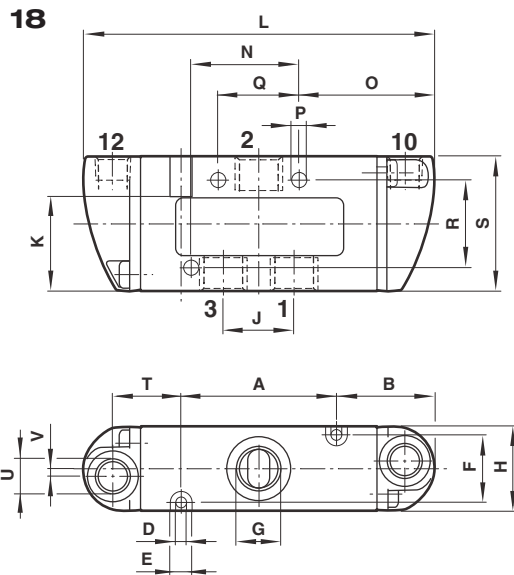
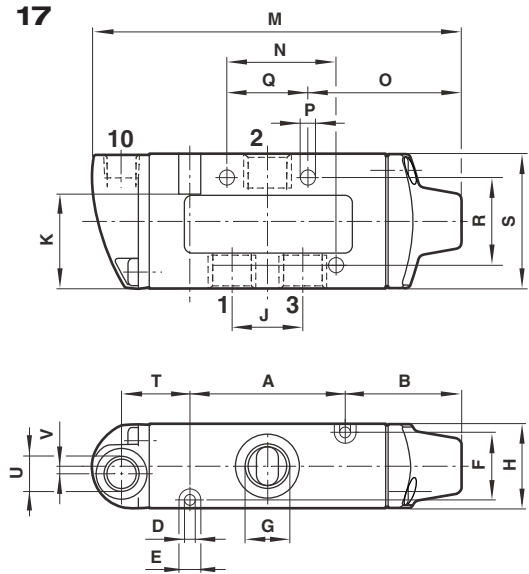
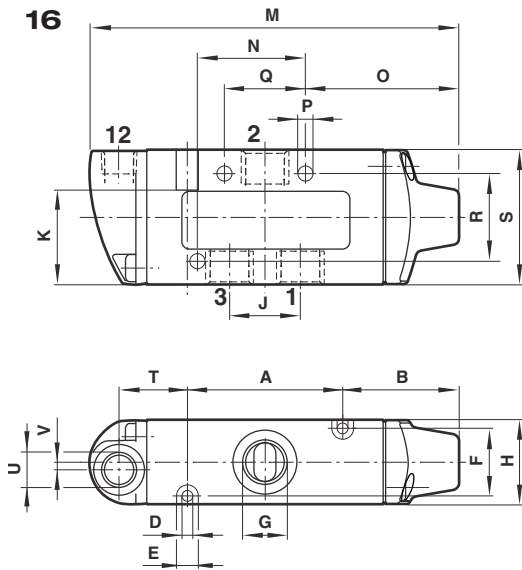
Dimensions in inches

Drawing No.	Type	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U
11	V60	1.97	0.67	0.64	0.13	0.26	0.67	1/8	0.87	1.28	1.10	5.28	-	0.98	0.98	0.18	1.32	1.02	1.38	1.81	0.59
11	V61	2.60	0.71	0.83	0.13	0.26	0.79	1/4	0.98	1.65	1.10	6.02	-	1.26	1.14	0.18	1.73	1.02	1.57	1.81	0.59
11	V62	3.07	0.87	0.96	0.18	0.31	1.10	3/8	1.34	1.92	1.73	6.77	-	0.47	2.40	0.18	1.02	1.42	2.17	2.13	0.59
12	V60	1.97	1.10	0.64	0.13	0.26	0.67	1/8	0.87	1.28	1.10	5.71	-	0.98	1.41	0.18	1.32	1.02	1.38	1.81	0.59
12	V61	2.60	1.28	0.83	0.13	0.26	0.79	1/4	0.98	1.65	1.10	6.59	-	1.26	1.71	0.18	1.73	1.02	1.57	1.81	0.59
12	V62	3.07	1.74	0.96	0.18	0.31	1.10	3/8	1.34	1.92	1.73	7.64	-	0.47	3.27	0.18	1.02	1.42	2.17	2.13	0.59
14	V60	1.97	-	0.64	0.13	0.26	0.67	1/8	0.87	1.28	1.10	7.44	-	0.98	3.33	0.18	1.32	1.02	1.38	-	-
14	V61	2.60	-	0.83	0.13	0.26	0.79	1/4	0.98	1.65	1.10	8.54	-	1.26	-	0.18	1.73	1.02	1.57	-	-
14	V62	3.07	-	0.96	0.18	0.31	1.10	3/8	1.34	1.92	1.73	9.49	-	0.47	5.20	0.18	1.02	1.42	2.17	-	-
15	V60	1.97	1.22	0.64	0.13	0.26	0.67	1/8	0.87	1.28	1.10	5.83	-	0.98	1.54	0.18	1.32	1.02	1.38	1.81	0.59
15	V61	2.60	1.42	0.83	0.13	0.26	0.79	1/4	0.98	1.65	1.10	6.73	-	1.26	1.85	0.18	1.73	1.02	1.57	1.81	0.59
15	V62	3.07	1.75	0.96	0.18	0.31	1.10	3/8	1.34	1.92	1.73	7.68	-	0.47	3.31	0.18	1.02	1.42	2.17	2.13	0.59

V60-V62 Series

5/2 and 2/3
Directional control valves

VALVES



Dimensions in inches

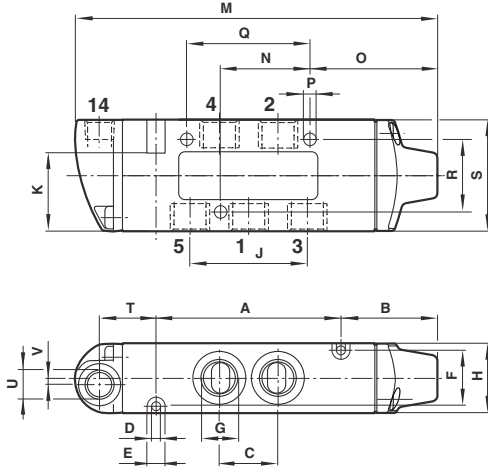
Drawing No.	Type	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U
16	V60	1.38	1.08	-	0.13	0.26	0.67	1/8	0.87	0.64	1.10	-	3.54	0.98	1.41	0.18	0.71	1.02	1.38	0.73	1/8" NPT
16	V61	1.81	1.36	-	0.13	0.26	0.79	1/4	0.98	0.83	1.10	-	4.33	1.26	1.79	0.18	0.94	1.02	1.57	0.80	1/8" NPT
16	V62	2.13	1.69	-	0.18	0.31	1.10	3/8	1.34	0.96	1.73	-	4.88	0.47	2.28	0.18	1.02	1.42	2.17	0.83	1/8" NPT
17	V60	1.38	1.08	-	0.13	0.26	0.67	1/8	0.87	0.64	1.10	-	3.54	0.98	1.41	0.18	0.71	1.02	1.38	0.73	1/8" NPT
17	V61	1.81	1.36	-	0.13	0.26	0.79	1/4	0.98	0.83	1.10	-	4.33	1.26	1.79	0.18	0.94	1.02	1.57	0.80	1/8" NPT
17	V62	2.13	1.69	-	0.18	0.31	1.10	3/8	1.34	0.96	1.73	-	4.88	0.47	2.20	0.18	1.02	1.42	2.17	0.83	1/8" NPT
18	V60	1.38	1.08	-	0.13	0.26	0.67	1/8	0.87	0.64	1.10	3.50	-	0.98	1.40	0.18	0.71	1.02	1.38	0.73	1/8" NPT
18	V61	1.81	1.14	-	0.13	0.26	0.79	1/4	0.98	0.83	1.10	4.09	-	1.26	1.57	0.18	0.94	1.02	1.57	0.80	1/8" NPT
18	V62	2.13	1.06	-	0.18	0.31	1.10	3/8	1.34	0.96	1.73	4.25	-	0.47	1.65	0.18	1.02	1.42	2.17	0.83	1/8" NPT
19	V60	1.97	1.07	0.64	0.13	0.26	0.67	1/8	0.87	1.28	1.10	4.11	-	0.98	1.40	0.18	1.32	1.02	1.38	0.74	1/8" NPT
19	V61	2.60	1.14	0.83	0.13	0.26	0.79	1/4	0.98	1.65	1.10	4.88	-	1.26	1.57	0.18	1.73	1.02	1.57	0.80	1/8" NPT
19	V62	3.07	1.06	0.96	0.18	0.31	1.10	3/8	1.34	1.92	1.73	5.20	-	0.47	2.60	0.18	1.02	1.42	2.17	0.83	1/8" NPT

V60-V62 Series

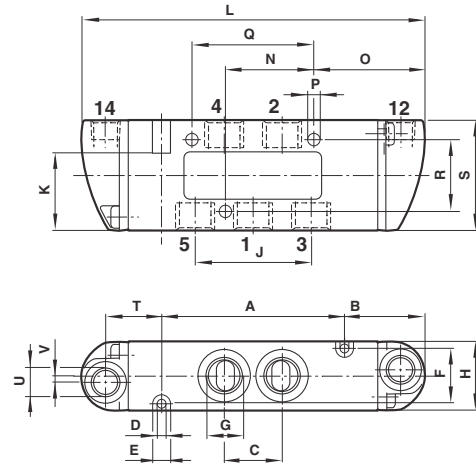
3/2 and 2 x 3/2

Directional control valves

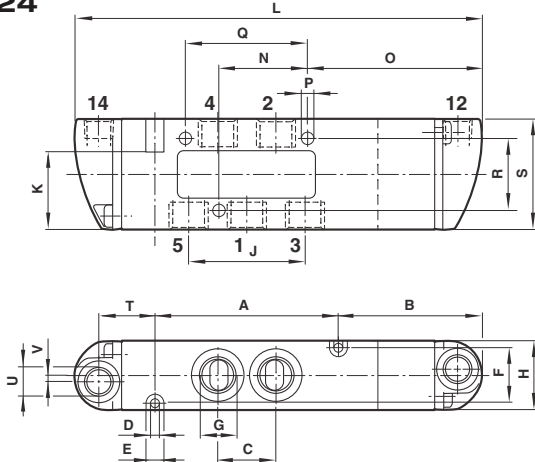
22



23



24



Dimensions in inches

Drawing No.	Type	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U
22	V60	1.97	1.08	0.64	0.13	0.26	0.67	1/8	0.87	1.28	1.10	-	4.13	0.98	1.41	0.18	1.73	1.02	1.38	0.74	1/8" NPT
22	V61	2.60	1.36	0.83	0.13	0.26	0.79	1/4	0.98	1.65	1.10	-	5.12	1.26	1.79	0.18	1.02	1.02	1.57	0.80	1/8" NPT
22	V62	3.07	1.69	0.96	0.18	0.31	1.10	3/8	1.34	1.92	1.73	-	5.83	0.47	3.23	0.18	1.32	1.42	2.17	0.83	1/8" NPT
23	V60	1.97	1.07	0.64	0.13	0.26	0.67	1/8	0.87	1.28	1.10	4.11	-	0.98	1.40	0.18	1.73	1.02	1.38	0.74	1/8" NPT
23	V61	2.60	1.14	0.83	0.13	0.26	0.79	1/4	0.98	1.65	1.10	4.88	-	1.26	1.57	0.18	1.02	1.02	1.57	0.80	1/8" NPT
23	V62	3.07	1.06	0.96	0.18	0.31	1.10	3/8	1.34	1.92	1.73	5.20	-	0.47	2.60	0.18	1.32	1.42	2.17	0.83	1/8" NPT
24	V60	1.97	1.63	0.64	0.13	0.26	0.67	1/8	0.87	1.28	1.10	4.67	-	0.98	1.95	0.18	1.73	1.02	1.38	0.74	1/8" NPT
24	V61	2.60	2.05	0.83	0.13	0.26	0.79	1/4	0.98	1.65	1.10	5.79	-	1.26	2.48	0.18	1.02	1.02	1.57	0.80	1/8" NPT
24	V62	3.07	1.95	0.96	0.18	0.31	1.10	3/8	1.34	1.92	1.73	6.08	-	0.47	3.48	0.18	1.32	1.42	2.17	0.83	1/8" NPT

V60-V62 Series

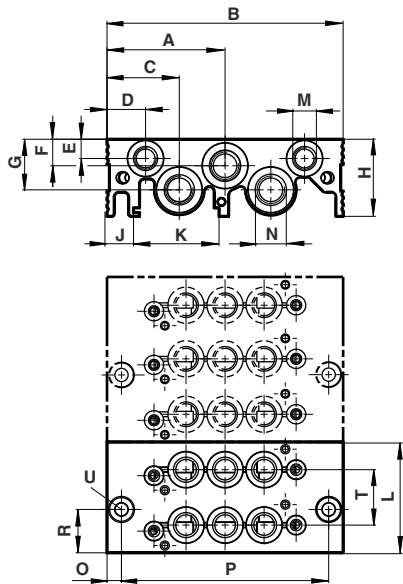
5/2 and 5/3
Directional control valves

Manifold plate

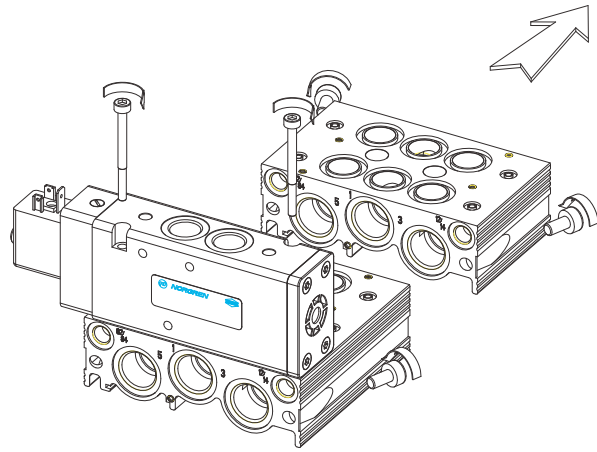
Valve ports	V60	lbs (kg)	V61	lbs (kg)	V62	lbs (kg)
2	2221032	0.51 (0.23)	2221132	0.62 (0.28)	2221232	1.10 (0.50)
3	2221033	0.62 (0.28)	2221133	0.99 (0.45)	2221233	1.87 (0.85)

Note: Fixed length manifolds can only be used with 5-ported V60-V62 valves

Drawing dimensions
Manifold plate 2 stations + 3 stations



Extension possibilities with manifold plates



Dimensions in inches

Type	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	T	U
V60 2 stations	1.93	3.86	1.18	0.63	0.31	0.43	0.83	1.26	0.43	1.40	1.81	1/8	1/4	0.24	3.39	1.10	-	0.91	10-32
V60 3 stations	1.93	3.86	1.18	0.63	0.31	0.43	0.83	1.26	0.43	1.40	2.72	1/8	1/4	0.24	3.39	1.10	-	0.91	10-32
V61 2 stations	2.05	4.09	1.02	0.35	0.31	0.51	0.83	1.30	0.39	1.40	2.05	1/8	3/8	1.57	0.94	1.02	-	1.02	10-32
V61 3 stations	2.05	4.09	1.02	0.35	0.31	0.51	0.79	1.30	0.39	1.40	3.07	1/8	3/8	1.57	0.94	2.05	-	1.02	10-32
V62 2 stations	2.36	4.72	1.14	0.35	0.31	0.59	0.87	1.50	0.51	1.40	2.76	1/8	1/2	1.73	1.26	1.38	-	1.38	M6
V62 3 stations	2.36	4.72	1.14	0.35	0.31	0.59	0.87	1.50	0.51	1.40	4.13	1/8	1/2	1.73	1.26	2.76	-	1.38	M6

Blanking plate	Pressure shut-off part for 4 station up to 20 station manifolds	Intermediate supply/exhaust plate (instead of a valve)	Adapter plate to connect different manifold sizes	DIN Rail fixing kit
0100561 (V60)	0100567 (V60)	0101808 (V60)	0101289 (V60-V61)	0101796 (V60-V62)
0100563 (V61)	0100569 (V61)	0101797 (V61)	0102160 (V61-V62)	
0100565 (V62)	0100571 (V62)	0101809 (V62)	0102162 (V60-V62)	

V60-V62 Series

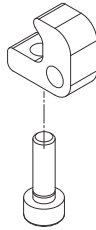
5/2, 5/3, and 2 x 3/2

Directional control valves

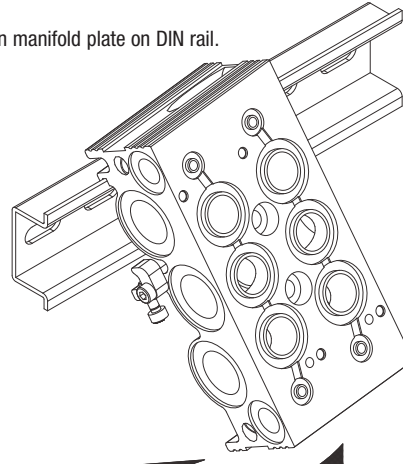
Mounting instructions

DIN Rail

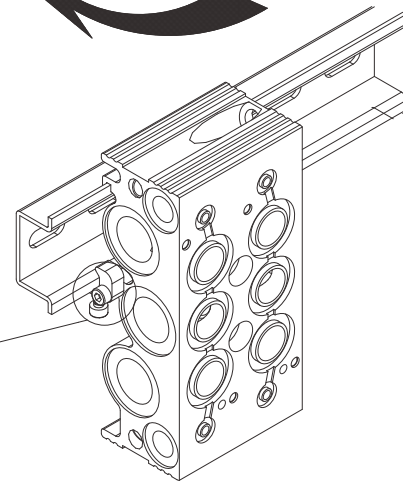
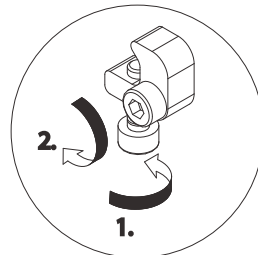
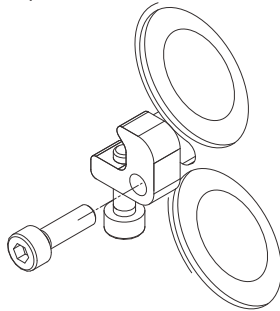
1. Mount screw in rod



3. Position manifold plate on DIN rail.

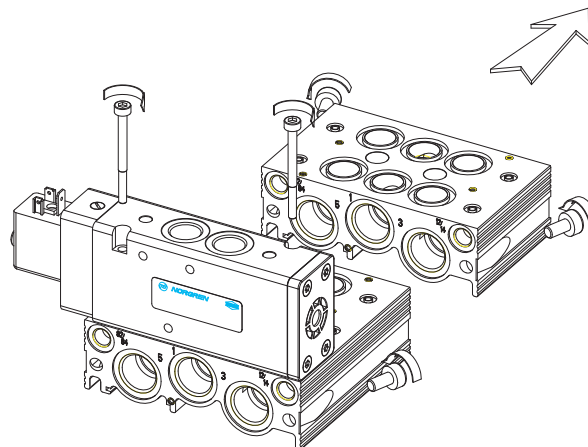


2. Fix rod on manifold plate with screw.



4. Tighten screws in steps as shown on picture

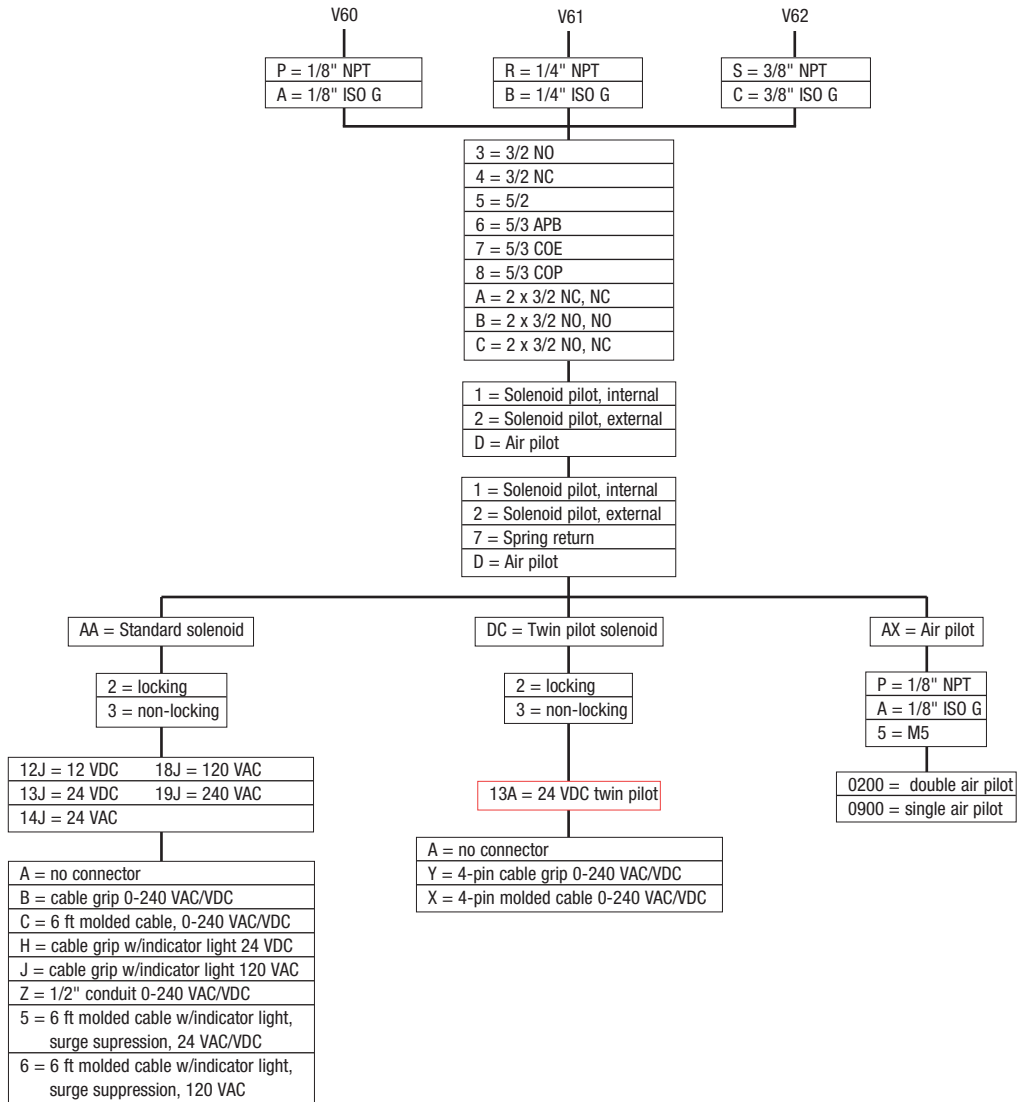
Extension possibilities with manifold plates



V60-V62 Series
5/2 and 5/3
Directional control valves

Product De-configuration Tree

V 6 0 A 5 1 7 A _ A 3 1 3 J B



Nugget 200 Spool Valves

1/4" and 3/8" Solenoid Pilot Actuated
3/2, 5/2, & 5/3 Inline Valves

Long lasting spool design
High flow compact valves
Wide range of operators and voltages available
Three functional types: available in 3/2, 5/2, and 5/3 configurations
Technical Data

Medium:
Filtered and lubricated or non-lubricated compressed air or vacuum.

Operation:
Spool valve solenoid pilot actuated.

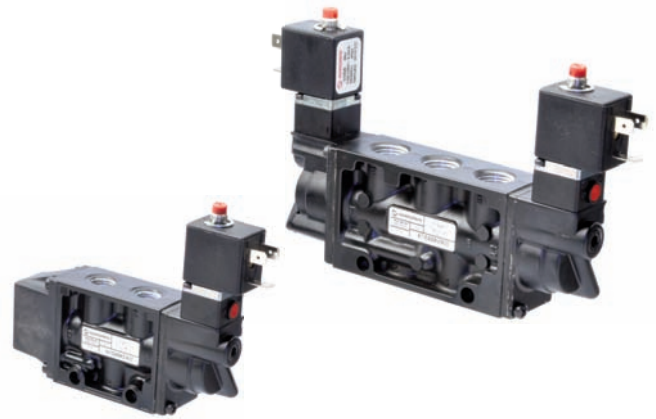
Mounting:
Stacking – through holes on manifold base.
Inline – through holes in valve body.

Port Size:
PTF – 1/4", 3/8", 1/2"
ISO G – 1/4", 3/8" .

Operating Pressure:
Maximum 150 psig (10.3 bar).

Operating Temperature:
-20° to 120°F (-29° to 50°C)
Consult Technical Service for use below 35°F (2°C).

Materials:
Body: Aluminum
Spool: Anodized aluminum
Solenoid Operator Base: plastic
Plunger and spring: Stainless steel
Elastomers: Nitrile and special nitrile-based low-friction elastomers.



Solenoid Operating Specifications

Inlet Pressure Range for Solenoid Operated Valves:

With Internal Pilot Supply: 15 to 150 psig* (1.03 to 10.3 bar)

With External Pilot Supply: 10" Hg vacuum to 150 psig (10.3 bar)

Temperature Range (Ambient/Inlet):

Solenoid Operated Valves: -20° to 120°F** (-29° to 50°C)

Low Wattage Solenoids: -20° to 155°F** (-29° to 68°C)

Operator Pilot Pressures:

Maximum Pilot Pressure: 150 psig (10.3 bar)

Minimum Pilot Pressure at 150 psig (10.3 bar) main valve inlet pressures are given in the following table:

* Minimum Inlet Pressure is dependent on the type of operator and return used. See Operator Pilot Pressure specifications in Operating Specifications.

** With the dew point of supply air less than air temperature below 35°F (2°C)

Minimum Pilot Pressures

Operator	Return psig (bar)	Nondetent psig (bar)	Detented psig (bar)	Spring Centered
Solenoid	Solenoid	15 (1.0)	25 (1.7)	45 (3.1)
Solenoid	Spring	35 (2.4)	–	–

Average Flow Factors in Cv‡ (l/min)

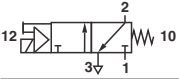
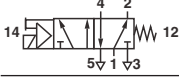
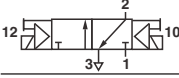
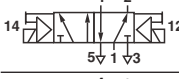
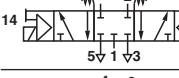
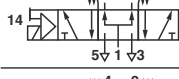
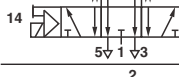
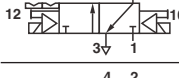
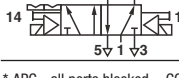
Valve	Port Size	Flow Path	
		Port 1 to 2 1 to 4	Port 2 to 3 4 to 5
3-Port, Inline	1/4"	1.6 (1600)	1.7 (1700)
	3/8"	1.6 (1600)	1.7 (1700)
5-Port, Inline	1/4"	1.6 (1600)	1.7 (1700)
	3/8"	1.6 (1600)	1.7 (1700)

‡ Flow Rating determined in accordance with NFPA/T3.21.3, Pneumatic fluid power – Flow test procedure and reporting method – For fixed orifice components.

Nugget 200 Spool Valves

1/4" and 3/8" Solenoid Pilot Actuated
3/2, 5/2, & 5/3 Inline Valves

Solenoid Pilot Operated Inline Valves

	Body**	Operator	Description	Type	Port Size	Function*	Pressure psig	Weight lbs.	Repair Kit
	K41DA00	KS1-KV2	Sol/spring	3/2	1/4"		35 - 150	2.22	54237-59
	K41EA00	KS1-KV2	Sol/spring	3/2	3/8"		35 - 150	2.22	54237-59
	K71DA00	KS6-KV2	Sol/spring	5/2	1/4"		35 - 150	2.22	54237-56
	K71EA00	KS6-KV2	Sol/spring	5/2	3/8"		35 - 150	2.22	54237-56
	K41DA00	KV2-KV2	Double Solenoid	3/2	1/4"		15 - 150	4.4	54237-59
	K41EA00	KV2-KV2	Double Solenoid	3/2	3/8"		15 - 150	4.4	54237-59
	K71DA00	KV2-KV2	Double Solenoid	5/2	1/4"		15 - 150	4.4	54237-56
	K71EA00	KV2-KV2	Double Solenoid	5/2	3/8"		15 - 150	4.4	54237-56
	K81DA00	KV0-KV0	Double Solenoid	5/3	1/4"	APB	15 - 150	4.4	54237-56
	K81EA00	KV0-KV0	Double Solenoid	5/3	3/8"	APB	15 - 150	4.4	54237-56
	K81DA05	KV0-KV0	Double Solenoid	5/3	1/4"	COS	15 - 150	4.4	54237-57
	K81EA05	KV0-KV0	Double Solenoid	5/3	3/8"	COS	15 - 150	4.4	54237-57
	K81DA06	KV0-KV0	Double Solenoid	5/3	1/4"	COE	15 - 150	4.4	54237-58
	K81EA06	KV0-KV0	Double Solenoid	5/3	3/8"	COE	15 - 150	4.4	54237-58
	K41DA00	KVL-KVL	Double Solenoid	3/2	1/4"		25 - 150	4.4	54237-59
	K41EA00	KVL-KVL	Double Solenoid	3/2	3/8"		25 - 150	4.4	54237-59
	K71DA00	KVL-KVL	Double Solenoid	5/2	1/4"		25 - 150	4.4	54237-56
	K71EA00	KVL-KVL	Double Solenoid	5/2	3/8"		25 - 150	4.4	54237-56

* APC - all ports blocked COS - cylinder open to supply COE - cylinder ports open to exhaust

** Standard valves are equipped with PTF threads, solenoid operators with locking overrides, internal pilot, 120V/60 Hz-110V/50 Hz coils and cable grip connectors. Optional solenoid operators, coil voltages and electrical connectors can be ordered using the information on the web address.

Vacuum service available with externally piloted valves.

Note: For ISO-G threads, insert "G" in the 5th position.

Additional Operators

Position	Operator PTF	ISO G	Description	Operating Pressure psig	Weight lbs.	Repair Kit
Standard Solenoid Operator with Rotatable Grip Connector*						
2-Position Valves	KV1	KVB	non-locking override, nondetented, internal pilot	15 - 150	.53	54344-17
	KV2	KVC	locking override, nondetented, internal pilot	15 - 150	.53	54344-17
	KV4	KVE	non-locking override, nondetented, external pilot	15 - 150	.53	54344-17
	KV5	KVF	locking override, nondetented, external pilot	15 - 150	.53	54344-17
	KV6	KVG	non-locking override, detented, internal pilot	15 - 150	.53	54344-17
	KVL	KVN	locking override, detented, internal pilot	15 - 150	.53	54344-17
	3-Position Valves	KV8	KVJ	non-locking override, spring centered, internal pilot	45 - 150	.53
KV0		KVA	locking override, spring centered, internal pilot	45 - 150	.53	54344-17
KV3		KVD	non-locking override, spring centered, external pilot	15 - 150	.53	54344-17
Standard Solenoid Operator without Electrical Connector*						
2-Position Valves	K11	K1B	non-locking override, nondetented, internal pilot	15 - 150	.53	54344-17
	K16	K1G	non-locking override, detented, internal pilot	15 - 150	.53	54344-17
	K1L	K1N	locking override, detented, internal pilot	15 - 150	.53	54344-17
3-Position	K10	K1A	locking override, spring centered, internal pilot	45 - 150	.53	54344-17

* Standard voltage is 110/1250 AC 50/60 Hz. For optional voltages add three characters to the end of the part number. For low wattage options contact Application Engineering.

** For external pilot options contact Application Engineering.

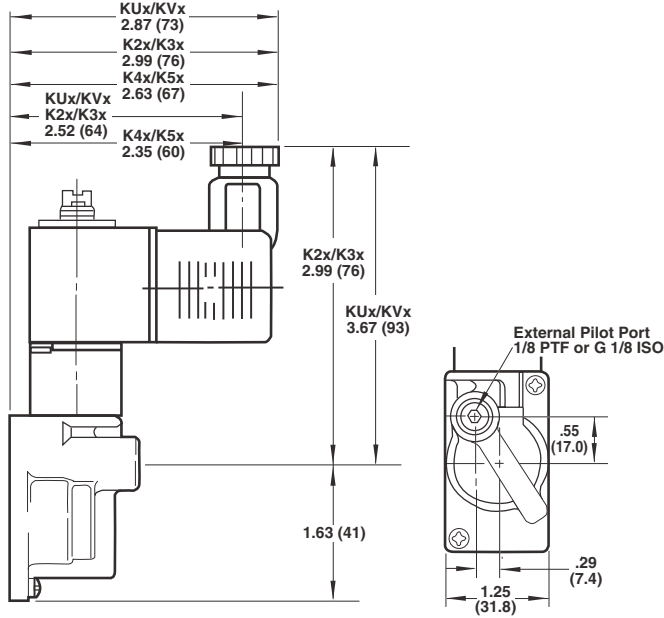
† Electrical connectors for KQX series solenoid operators go to web address.

Nugget 200 Spool Valves

1/4" and 3/8" Solenoid Pilot Actuated
3/2, 5/2, & 5/3 Inline Valves

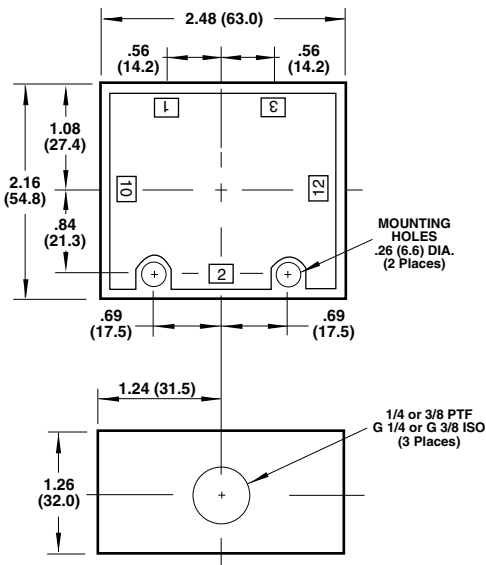
Dimensions in inches (mm)

- KUx/KVx Series (cable grip)
- K2x/K3x Series (conduit)
- K4x/K5x Series (molded cord)

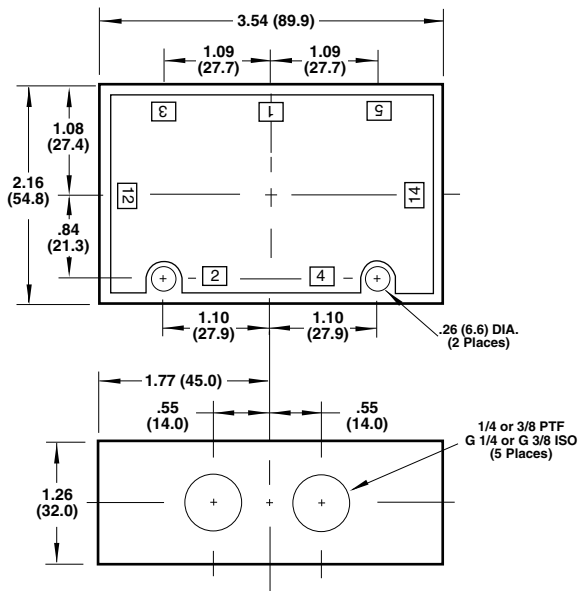


Inline Bodies

3-WAY - 1/4" & 3/8" PORTS K41



4-WAY - 1/4" & 3/8" PORTS K71 or K81



Nugget 200 Spool Valves

1/4", 3/8", 1/2" Air Pilot Actuated
3/2, 5/2, & 5/3 Inline Valves

Long lasting spool design

High flow compact valves

Mounting styles: inline and fixed length manifold.

Three functional types: available in 3/2, 5/2, and 5/3 configurations

Technical Data

Medium:

Filtered and lubricated or non-lubricated compressed air or vacuum.

Operation:

Spool valve air pilot actuated.

Mounting:

Stacking – through holes on manifold base.

Inline – through holes in valve body.

Port Size:

PTF – 1/4", 3/8", 1/2"

ISO G – 1/4", 3/8" .

Operating Pressure:

10 Hg vacuum to 150 psig (10.3 bar).

For details see overleaf.

Operating Temperature:

-20° to 160°F (-29° to 71°C)

Consult Technical Service for use below 35°F (2°C).

Materials:

Body: Aluminum

Spool: Anodized aluminum

Solenoid Operator Base: plastic

Plunger and spring: Stainless steel

Elastomers: Nitrile and special nitrile based low-friction elastomers.



Minimum Pilot Pressures

Operator	Return	Spring Centered		
		Nondetent psig (bar)	Detented psig (bar)	psig (bar)
Large Air	Large Air	15 (1.0)	25 (1.7)	45 (3.1)
Large Air †	Small Air	35 (2.4)	–	–
Small Air	Small Air	25 (1.7)	–	–
Large Air	Spring	35 (2.4)	–	–
Low Pressure Air ††	Spring	4 (.27)	–	–
Small Air	Spring	65 (4.5)	–	–
Air Bleed	Air Bleed	15 (1.0)	25 (1.7)	–
Air Bleed	Spring	35 (2.4)	–	–

† Pressure applied simultaneously to both operators. The piston area of the KA2 operator is approximately twice that of the KA1 operator.

†† Pressure applied to port B of KA6 operator (port A open). A minimum vacuum of 6.1 inches Hg (KS1 return) applied to A (port B open) will also operate the valve. The KA6 operator can also be used as a differential pressure operator with or without return spring. The differential pressure required to shift the valve without return spring is less than 1 psig (2" Hg). To reduce the possibility of internal contamination, it is suggested that a filter/breather be installed in the port.

Average Flow Factors in Cv‡ (l/min)

Valve	Port Size	Flow Path	
		Port 1 to 2	Port 2 to 3
		1 to 4	4 to 5
3-Port, Inline	1/4"	1.6 (1600)	1.7 (1700)
	3/8"	1.6 (1600)	1.7 (1700)
5-Port, Inline	1/4"	1.6 (1600)	1.7 (1700)
	3/8"	1.6 (1600)	1.7 (1700)
	1/2"	1.6 (1600)	1.7 (1700)

‡ Flow Rating determined in accordance with NFPA/T3.21.3, Pneumatic fluid power – Flow test procedure and reporting method – For fixed orifice components.

Nugget 200 Spool Valves

1/4", 3/8", 1/2" Solenoid Pilot Actuated
3/2, 5/2, & 5/3 Inline Valves

Lightweight Plastic* Solenoid Operator

	Wattage		Connector Type				Override	
	Standard Watt	Low Watt	No Connector	Cable Grip	Conduit	5' Molded	Locking	Non Locking
KY0	X	X				X		
KY1	X	X					X	
KY2X		X				X		
KY3X		X					X	
KY5	X		X			X		
KY5	X		X				X	
KY6X			X			X		
KY7X			X				X	
KY8	X			X		X		
KY9	X			X			X	
KYAX				X		X		
KYBX				X			X	
KYC	X				X	X		
KYD	X				X		X	
KYEX					X	X		
KYFX					X		X	

* Polyphthalamide resin (PPA)

Optional Coil Voltages Additional Part Number Characters

Voltages			Standard Wattage KVx, K1x, K3x, K5x, & K7x Series Operators		Low Wattage KUx, K0x, K2x, K4x, & K6x Series Operators		KDx, Series Operators		KQx Series Operators		KMx Series Operators		KXx Series Operators	
60 Hz	50 Hz	DC	Single Solenoid	Double Solenoid	Single Solenoid	Double Solenoid	Single Solenoid	Double Solenoid	Single Solenoid	Double Solenoid	Single Solenoid	Double Solenoid	Single Solenoid	Double Solenoid
120	110	-	Standard	Standard	1WH	2WH	Standard	Standard	Standard	Standard	Standard	Standard	-	-
240	220	-	1W6	2W6	-	-	1TE	2TE	1T2	2T2	1TN	2TN	1NH	2NH
12	12	-	1W3	2W3	-	-	-	-	-	-	-	-	-	-
24	24	-	1W4	2W4	1WJ	2WJ	1TD	2TD	1T1	2T1	1TM	2TM	-	-
48	48	-	1W5	2W5	-	-	-	-	-	-	-	-	-	-
-	240	-	-	-	-	-	-	-	1T3	2T3	-	-	-	-
120	100	-	-	-	-	-	-	-	-	-	-	-	Standard	Standard
-	-	6	1W7	2W7	1WK	2WK	1TF	2TF	1T4	2T4	-	-	1N7	2N7
-	-	12	1W1	2W1	1WF	2WF	1TG	2TG	1T5	2T5	1TS	2TS	1NA	2NA
-	-	24	1W2	2W2	Standard	Standard	1TH	2TH	1T6	2T6	1TT	2TT	1ND	2ND
-	-	48	-	-	-	-	1TJ	2TJ	1T7	2T7	1TU	2TU	-	-
-	-	115	-	-	1WL	2WL	1TK	2TK	1T8	2T8	1TX	2TX	-	-
-	-	10.5	-	-	-	-	-	-	1T9	2T9	-	-	-	-

Example: On K41DA00-KS6-KV1, change from standard 110VAC to 240VAC by adding 1W6 to the part number. New part number becomes K41DA00-KS6-KV11W6

Electrical Connectors for KQx Series Solenoid Operators – Order With Numbers

To order solenoid connectors for KQx Series Operators, specify the desired solenoid connector part number listed below in addition to the desired valve model number, e. g. K41DA00-KQ1-KQ12VC

CSA Certified Electrical Connectors for KQx Series Solenoid Operators

Rotatable Cable Grip Connector	Single/Dual1VC/2VC
1/2" NPT Conduit Connector	1V2/2V2
Rotatable Cable Grip with Indicator Light,		
110V AC/DC only	1C3/2C3
24V AC/DC only	1C2/2C2
12V AC/DC only	1C1/2C1
220V AC/DC only	1C4/2C4

Optional KQx Series Electrical Connectors Non-CSA Certified

5-Foot Molded Cord Connector 1V1/2V1

KQx Series Accessories – Non-CSA Certified

Extended Locking Override – Black Knob with Stainless Steel Plunger
Contact Application Engineering

Nugget 200 Spool Valves

1/4", 3/8", 1/2" Solenoid Pilot Actuated
3/2, 5/2, & 5/3 Inline Valves

Replacement Coils

Voltages			Standard Wattage KVx, K1x, K3x, K5x & K7x Series Operators Coil Only	Low Wattage KUx, K0x, K2x, K4x, & K6x Series Operators Coil Only	KDx, Series Operators Coil Only	KQx Series Operators Coil Only	KMx Series Operators Coil Only
60 Hz	50 Hz	DC					
120	110	-	54452-01	54469-03	54944-21	54932-21	54960-21
240	220	-	54452-07	-	54944-23	54932-23	54960-23
12	12	-	54452-04	-	-	-	-
24	24	-	54452-05	54469-04	54944-22	54932-22	54960-22
48	48	-	54452-06	-	-	-	-
-	240	-	-	-	54932-24	-	-
120	100	-	-	-	-	-	-
240	208	-	-	-	-	-	-
24	22	-	-	-	-	-	2362-07
-	-	6	-	54469-05	54944-25	54932-25	-
-	-	12	54452-02	54469-01	54944-26	54932-26	54960-26
-	-	24	54452-03	54469-02	54944-27	54932-27	54960-27
-	-	48	-	-	54944-28	54932-28	54960-28
-	-	115	-	54469-06	54944-29	54932-29	54960-29
-	-	10.5	-	-	-	54932-30	-

Solenoid Assemblies Ordered Separately Includes coil, plunger, sleeve and seal

Voltages			KD _x , Series	KQ _x Series	KM _x Series	KX _x
60 Hz	50 Hz	DC	Operators	Operators	Operators	Series
120	110	-	54944-01	54932-01	54960-01	53902-01
240	220	-	54944-03	54932-03	54960-03	53902-14
24	24	-	54944-02	54932-02	54960-02	-
-	240	-	-	54932-04	-	-
120	100	-	-	-	-	-
240	208	-	-	-	-	-
24	22	-	-	-	-	-
-	-	6	54944-05	54932-05	54960-05	53902-10
-	-	12	54944-06	54932-06	54960-06	53902-11
-	-	24	54944-07	54932-07	54960-07	53902-12
-	-	48	54944-08	54932-08	54960-08	-

KU_x/KV_x, K0_x/K1_x, K2_x/K3_x, K4_x/K5_x, K6_x/K7_x Series Operators

Solenoid assemblies for these operators can be obtained by ordering a replacement coil from the ordering information on this page. Appropriate solenoid base, standard or low wattage assemblies can be ordered from the following table.

	KV _x , K1 _x , K3 _x , K5 _x & K7 _x Series	KU _x , K0 _x , K2 _x , K4 _x & K6 _x Series
Locking Override	54462-02	54462-04
Non-locking Override	54462-09	54462-10

Nugget 200 Spool Valves

1/4", 3/8", 1/2" Air Pilot Actuated
3/2, 5/2, & 5/3 Inline and Stacking Valves

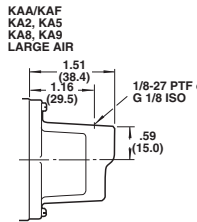
Air Pilot Operated Inline Valves

	Body*	Operator	Description	Type	Port Size	Pilot Pressure psig	Weight lbs.	Repair Kit
	K41DA00	KS1-KA2	Air/spring	3/2	1/4"	35 - 150	2.22	54237-59
	K41EA00	KS1-KA2	Air/spring	3/2	3/8"	35 - 150	2.22	54237-59
	K71DA00	KS6-KA2	Air/spring	5/2	1/4"	35 - 150	2.22	54237-56
	K71EA00	KS6-KA2	Air/spring	5/2	3/8"	35 - 150	2.22	54237-56
	K71FA00	KS6-KA2	Air/spring	5/2	1/2"	35 - 150	2.22	54237-56
	K41DA00	KA2-KA2	Air/Air	3/2	1/4"	15 - 150	4.4	54237-59
	K41EA00	KA2-KA2	Air/Air	3/2	3/8"	15 - 150	4.4	54237-59
	K71DA00	KA2-KA2	Air/Air	5/2	1/4"	15 - 150	4.4	54237-56
	K71EA00	KA2-KA2	Air/Air	5/2	3/8"	15 - 150	4.4	54237-56
	K71FA00	KA2-KA2	Air/Air	5/2	1/2"	15 - 150	4.4	54237-56
	K81DA00	KAC-KAC	Air/Air	5/3	1/4"	45 - 150	4.4	54237-56
	K81EA00	KAC-KAC	Air/Air	5/3	3/8"	45 - 150	4.4	54237-56
	K81FA00	KAC-KAC	Air/Air	5/3	1/2"	45 - 150	4.4	54237-56
	K81DA05	KAC-KAC	Air/Air	5/3	1/4"	45 - 150	4.4	54237-57
	K81EA05	KAC-KAC	Air/Air	5/3	3/8"	45 - 150	4.4	54237-57
	K81FA05	KAC-KAC	Air/Air	5/3	1/2"	45 - 150	4.4	54237-57
	K81DA06	KAC-KAC	Air/Air	5/3	1/4"	45 - 150	4.4	54237-58
	K81EA06	KAC-KAC	Air/Air	5/3	3/8"	45 - 150	4.4	54237-58
	K81FA06	KAC-KAC	Air/Air	5/3	1/2"	45 - 150	4.4	54237-58
	K41DA00	KAA-KAA	Air/Air	3/2	1/4"	25 - 150	4.4	54237-59
	K41EA00	KAA-KAA	Air/Air	3/2	3/8"	25 - 150	4.4	54237-59
	K71DA00	KAA-KAA	Air/Air	5/2	1/4"	25 - 150	4.4	54237-56
	K71EA00	KAA-KAA	Air/Air	5/2	3/8"	25 - 150	4.4	54237-56
	K71FA00	KAA-KAA	Air/Air	5/2	1/2"	25 - 150	4.4	54237-56

* Standard valves are equipped with PTF threads. For additional options see our website.
Note: For ISO-G threads, insert "G" in the 5th position. 1/2" ported bodies are not available with ISO G threads.

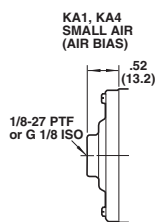
Air Operators

Position	Operator	ISO-G	PTF	Description	Minimum operating Pressure psig (bar)	Weight lbs. (kg)	Repair Kit
2-Position Valves	KAB	KAA		detent, large air	25 (1.7)	0.73 (.33)	54344-16
	KA5	KA2		nondetent, large air	15 (1.0)	0.70 (.32)	54344-16
	KAF	KAE		detent bleed - .02 (.5mm) diameter bleed orifice	25 (1.7)	0.73 (.33)	54344-16
	KA9	KA8		nondetent bleed - .02 (.5mm) diameter bleed orifice	15 (1.0)	0.70 (0.32)	54344-16
	KA7	KA6		nondetent, low pressure (inline only)	4 (.27)	2.46 (1.12)	
	KA4	KA1		nondetent, air bias (small air), return for manual operators or as air bias with KA2 or KA5	25 (1.7)	0.33 (0.15)	54344-16
		KS5	KS4		nondetent, spring bias, use with KA2 or KA5	35 (2.5)	0.44 (0.20)
3-Position Valves	KAD	KAC		spring centered	45 (3.1)	0.73 (0.33)	54344-16

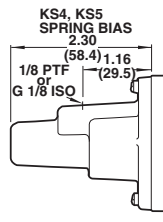


Air Bleed Operators
Constantly bleeds a small amount of air to atmosphere. The valve spool shifts when air bleed is stopped by a customer-supplied on-off valve.

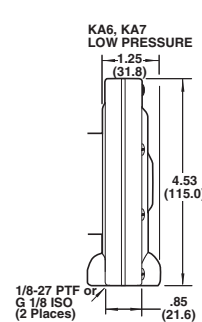
Dimensions in inches (mm)



KA1 Air Bias Operator
When pressure is applied to the KA1 operator the valve spool shifts to the KA2 end. When pressure is applied to both the KA1 and KA2 operators the valve spool shifts to the KA1 end.



KS4 Spring Bias Operator
Piston area of the KS4 operator is the same as the KA2 operator. The piston of the KS4 operator is spring loaded to shift the valve spool to the KA2 end. The valve spool shifts to the KS4 end when pressure is applied to the KA2 operator. When pressure is applied to both the KS4 and KA2 operators the valve spool shifts to the KA2 end.

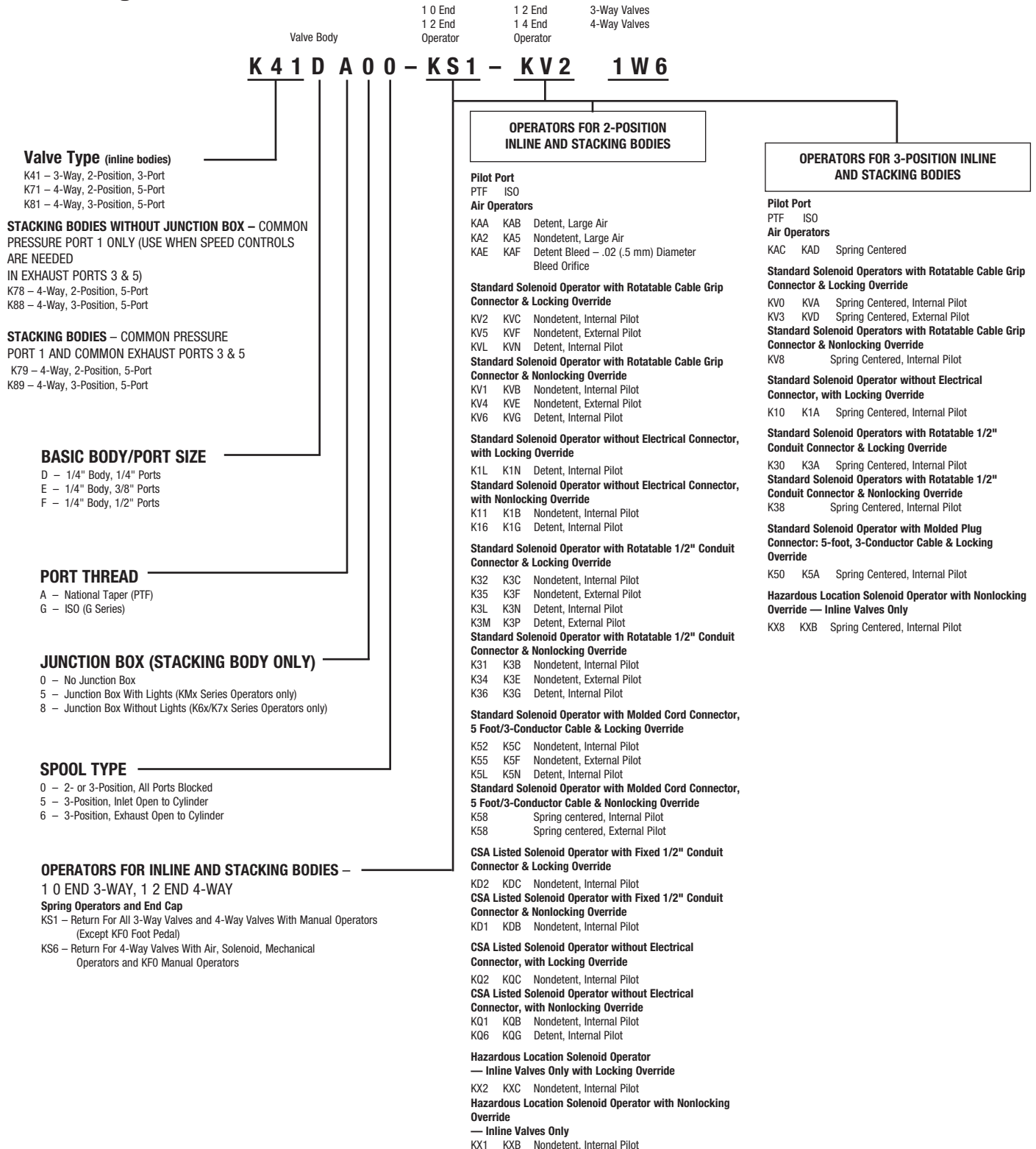


KA6 Low Pressure Operator (inline valves only)
Operator shifts the valve spool with only 4 psig (.28 bar) applied to Port B (Port A open). A minimum vacuum of 6.1" Hg (with KS1 spring return) applied to port A (Port B open) will also operate the valve. Can also be used as a differential pressure operator with or without spring return.

Nugget 200 Spool Valves

1/4", 3/8", 1/2" Solenoid Pilot Actuated
3/2, 5/2, & 5/3 Inline Valves

Nugget 200 Product Deconfigurator — Air, and Solenoid Operators with Locking, and Nonlocking Overrides



VALVES

Nugget 500 Series Valves

5/2 and 5/3 directional control spool valves



Long lasting spool design

High flow compact valves

Four mounting styles: inline, fixed length manifolds, single subbase, or subbase valves attached to manifolding subbases

Wide range of operators available

Two functional types: available in 5/2, and 5/3 configurations

Technical Data

Medium:

Filtered, lubricated or non-lubricated, compressed air or vacuum

Operation:

Spool valve air pilot actuated

Mounting:

Inline, fixed length manifold, single subbase, and manifolding subbase

Port Sizes:

3/8", 1/2", or 3/4", ISO G or PTF

Operating Pressure:

Maximum 150 psig (10.3 bar).

Flow Characteristics:

Port	Cv	l/min	scfm
3/8" Inline	4.0	4250	150
1/2" Inline	5.0	5150	180
3/4" Inline	5.6	6000	210
1/2" Subbase	4.7	5300	190

Operating Temperature

Solenoid Operated Valves:

-20° to 120°F (-29° to 50°C)

Air Operated Valves:

-20° to 160°F (-29° to 71°C)

*Consult our Technical Service for use below 36°F (2°C)

Materials

Valve Body: Aluminum

Spool: Aluminum

Elastomers: Nitrile

Solenoid Operator Base: PPS plastic

Operator Housing: Zinc

Speed Control Materials

Body: Zinc

Adjusting Screw: Brass

Elastomers: Nitrile

Subbase Materials

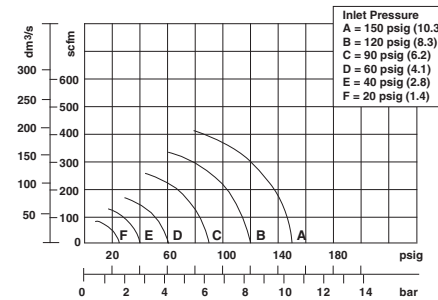
Fixed Length Manifolds: Aluminum

Single and Manifolding Subbase: Aluminum

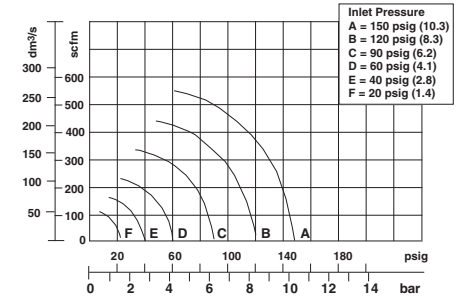
End Plate: Zinc

Elastomers: Nitrile

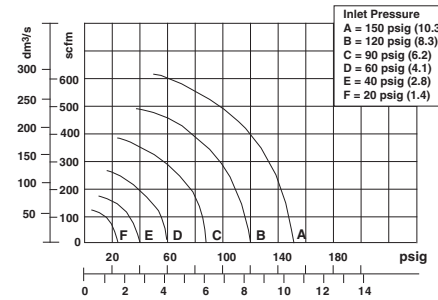
FLOW CHARACTERISTICS
3/8" Ported Inline Valves



FLOW CHARACTERISTICS
1/2" Ported Inline Valves



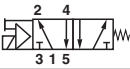
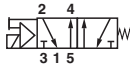

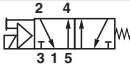

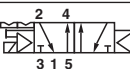
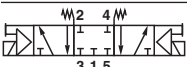
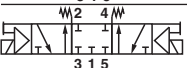
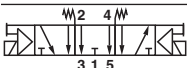
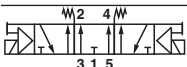
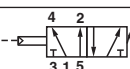
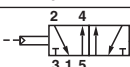
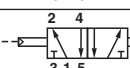
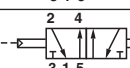
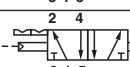
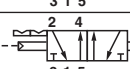
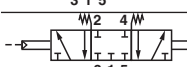
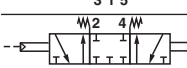
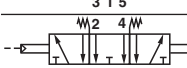
FLOW CHARACTERISTICS
3/4" Ported Inline Valves



Nugget 500 Series Valves

5/2 and 5/3 directional control spool valves

Inline Valves

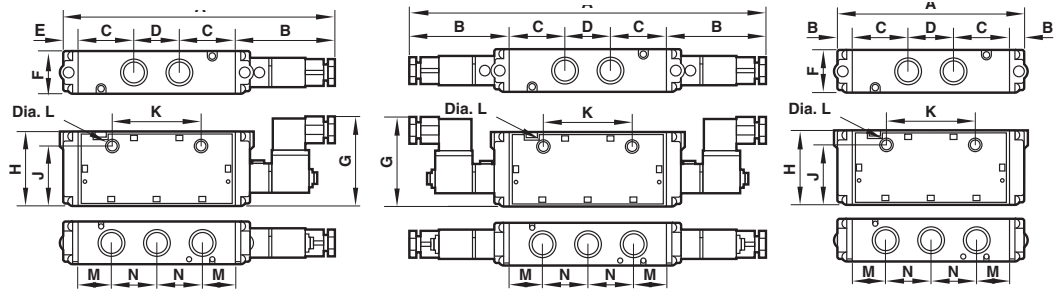
	Part Number	Description	Type	Port Size	Pilot Pressure psig (bar)	Weight lbs. (kg)	Repair Kit
	MN01CGA35-AJJA	Single Solenoid	5/2	1/2" PTF	40 - 150 (2.8 - 10.3)	1.42 (.65)	54677-50
	MN02CGA35-AKJA	Single Solenoid	5/2	1/2" PTF	40 - 150 (2.8 - 10.3)	1.42 (.65)	54677-51
	MN01CGA25-AJJA	Double Solenoid	5/2	1/2" PTF	20 - 150 (1.4 - 10.3)	1.71 (.78)	54677-50
	MN02CGA25-AJJA	Double Solenoid	5/2	1/2" PTF	20 - 150 (1.4 - 10.3)	1.71 (.78)	54677-51
	MN01CGA25-BJJA	Double Solenoid	5/2	1/2" PTF	30 - 150 (2.1 - 10.3)	1.99 (.90)	54677-50
	MN02CGA25-BJJA	Double Solenoid	5/2	1/2" PTF	30 - 150 (2.1 - 10.3)	1.99 (.90)	54677-51
	MN03CGA25-FJJA	Double Solenoid	5/3	1/2" PTF	40 - 150 (2.8 - 10.3)	1.99 (.90)	54677-52
	MN04CGA25-FJJA	Double Solenoid	5/3	1/2" PTF	40 - 150 (2.8 - 10.3)	1.99 (.90)	54677-53
	MN05CGA25-FJJA	Double Solenoid	5/3	1/2" PTF	20 - 150 (1.4 - 10.3)	1.99 (.90)	54677-54
	MN06CGA25-FJJA	Double Solenoid	5/3	1/2" PTF	20 - 150 (1.4 - 10.3)	1.99 (.90)	54677-55
	MN01CGA33-A000	Single Air	5/2	1/2" PTF	40 - 150 (2.8 - 10.3)	1.16 (.53)	54677-50
	MN02CGA33-A000	Single Air	5/2	1/2" PTF	40 - 150 (2.8 - 10.3)	1.16 (.53)	54677-51
	MN01CGA23-A000	Double Air	5/2	1/2" PTF	20 - 150 (1.4 - 10.3)	1.16 (.53)	54677-50
	MN02CGA23-A000	Double Air	5/2	1/2" PTF	20 - 150 (1.4 - 10.3)	1.16 (.53)	54677-51
	MN01CGA23-B000	Double Air	5/2	1/2" PTF	30 - 150 (2.1 - 10.3)	1.42 (.65)	54677-50
	MN02CGA23-B000	Double Air	5/2	1/2" PTF	30 - 150 (2.1 - 10.3)	1.42 (.65)	54677-51
	MN03CGA23-F000	Double Air	5/3	1/2" PTF	40 - 150 (2.8 - 10.3)	1.42 (.65)	54677-52
	MN04CGA23-F000	Double Air	5/3	1/2" PTF	40 - 150 (2.8 - 10.3)	1.42 (.65)	54677-53
	MN05CGA23-F000	Double Air	5/3	1/2" PTF	20 - 150 (1.4 - 10.3)	1.42 (.65)	54677-54

Nugget 500 Series Valves

5/2 and 5/3 directional control spool valves

Inline Valve Dimensions

Dimensions in inches (mm)



Note: 4 mm hex key drive required for mounting screw removal/replacement

Valve	A	B	C	D	E	F	G	H	J	K	L	M	N
Solenoid Pilot Operator — 5/2 Nondetent Single Solenoid*	9.46 (240)	3.53 (90)	1.91 (49)	1.48 (38)	0.63 (16)	1.44(37)	2.71 (69)	2.44 (62)	1.94 (49)	3.00 (76)	0.27 (7)	1.17 (30)	1.48 (38)
Double Solenoid	12.36 (314)	3.53 (90)	1.91 (49)	1.48 (38)	—	1.44 (37)	2.71 (69)	2.44 (62)	1.94 (49)	3.00 (76)	0.27 (7)	1.17 (30)	1.48 (38)
Solenoid Pilot Operator — 5/2 Detent or 5/3 Spring Centered Double Solenoid	13.30 (338)	4.00 (102)	1.91 (49)	1.48 (38)	—	1.44 (37)	2.71 (69)	2.44 (62)	1.94 (49)	3.00 (76)	0.27 (7)	1.17 (30)	1.48 (38)
Air Pilot Operator — 5/2 Nondetent Single Air*	6.56 (167)	0.63 (16)	1.91 (49)	1.48 (38)	0.63 (16)	1.44 (37)	—	2.44 (62)	1.94 (49)	3.00 (76)	0.27 (7)	1.17 (30)	1.48 (38)
Double Air	6.56 (7)	0.63 (16)	1.91 (49)	1.48 (38)	—	1.44 (37)	—	2.44 (62)	1.94 (49)	3.00 (76)	0.27 (7)	1.17 (30)	1.48 (38)
Air Pilot Operator — 5/2 Detent or 5/3 Spring Centered Double Air	7.50 (191)	1.10 (28)	1.91 (49)	1.48 (38)	—	1.44 (37)	—	2.44 (62)	1.94 (49)	3.00 (76)	0.27 (7)	1.17 (30)	1.48 (38)

*With air-assisted spring return, spring return or integral air return

Factory Installed Back Cover Plates for Valve Bodies

The Back Cover Plate ordered with the valve allows the valve to be used in wash-down environments such as food or medical processing. If a subbase valve is desired for wash-down environments, use only the single subbase.

For cover plate installed on an Inline Valve body specify with 54690-11 after the valve body number.

For cover plate installed on a Subbase Valve body specify with 54690-12 after the valve body number.

Part Numbers for Replacement Solenoid Coils & Armature Bases

Solenoid Coils:	
24V/60Hz-24V/50Hz, 3.5W	54469-04
120V/60Hz-110V/50Hz, 3.5W	54469-03
6VDC, 2W	54469-05
12VDC, 2W	54469-01
24VDC, 2W	54469-02
110VDC, 3.4W	54469-06
240V/60Hz-220V/50Hz, 7.5W	54452-07
120V/60Hz-110V/50Hz, 7.5W	54452-01
24V/60Hz-24V/50Hz, 7.5W	54452-05
12VDC, 7.5W	54452-02
24VDC, 6W	54452-03
Solenoid Base and Armature:	
Without Override	
6 to 7.5 Watt	54462-01
2 to 3.5 Watt	54462-03
With locking override	
6 to 7.5 Watt	54462-02
2 to 3.5 Watt	54462-04
With non-locking override	
6 to 7.5 Watt	54462-09
2 to 3.5 Watt	54462-10

Part Numbers for Replacement Connectors

Cable grip connector	54934-01
Cable grip connector with indicator light	
110/120 VAC/DC	54934-02
24 VAC/DC	54934-08
1/2" NPT conduit	54934-05
Molded 5-ft cable connector 0-220 VAC/DC	54934-21
Molded 5-ft cable connector with indicator light and surge suppression	
24 VAC/DC	54934-30
110 VAC/DC	54934-35
240 VAC/DC	54934-37

Part Numbers for Repair Parts & Kits

Metal coil retaining ring	54453-01
Solenoid connector seal kit	54935-01
Solenoid exhaust port diffuser	54463-01
Solenoid exhaust port filter	
Ordered with valve	54463-50
Ordered separately	54463-51

Spool replacement kits:

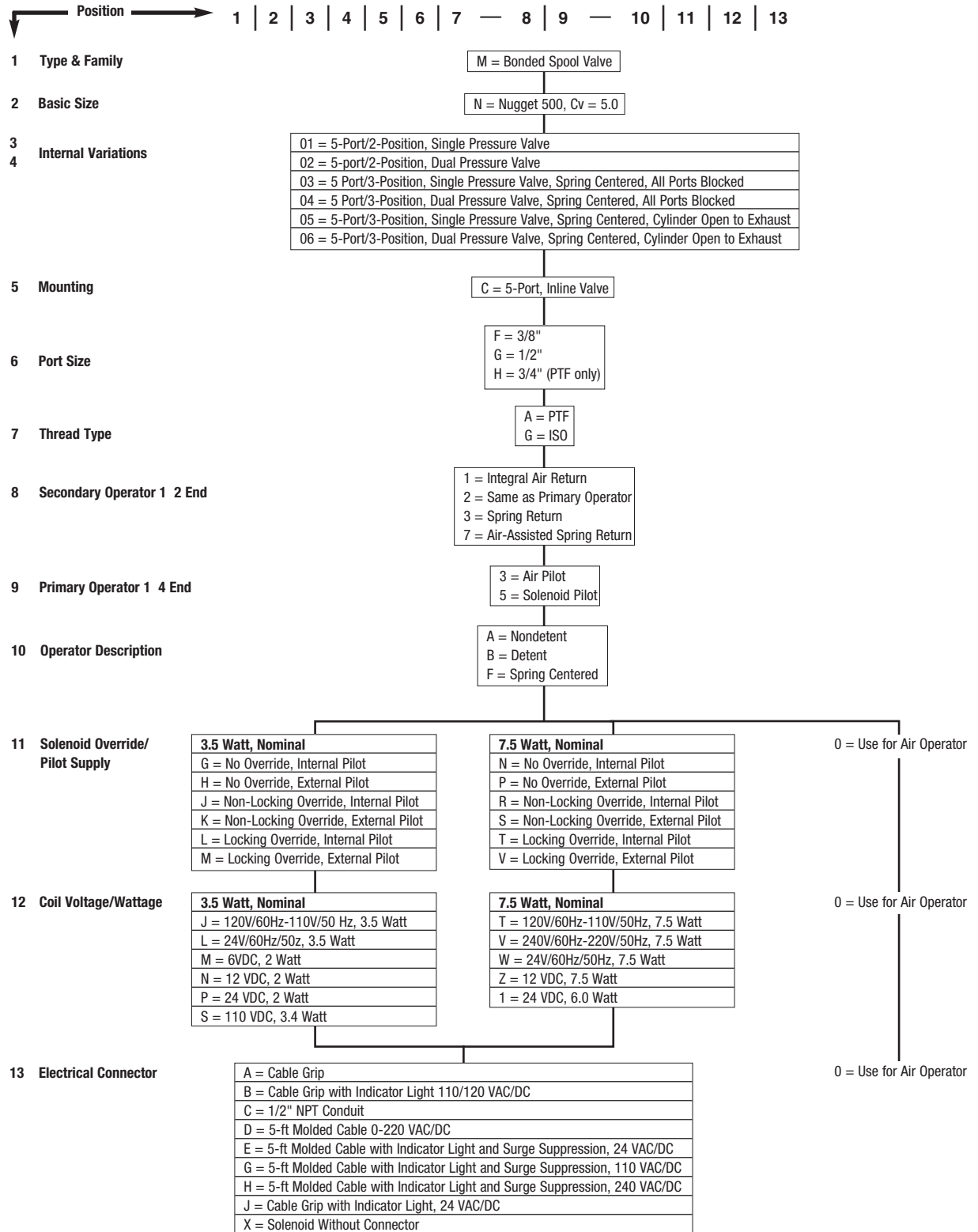
Single pressure, 2-position	54677-50
Dual pressure, 2-position	54677-51
Single pressure, 3-position, APB*	54677-52
Dual pressure, 3-position, APB*	54677-53
Single pressure, 3-position, COE*	54677-54
Dual pressure, 3-position, COE*	54677-55

*In the center position

Nugget 500 Series Valves

5/2 and 5/3 directional control spool valves

Nugget 500 Product Deconfigurator



VALVES

Herion Pilot Operated Solenoid Valve

with Soft seal spool, 3/2

Noise reduction through integrated pilot valve silencer

High flow performance

Simplified soft seal system, incorporating Herion's unique T-seal

Low maintenance and easy to service

Manual override standard on most models

Quick change of solenoids

Compact construction

Many configurations - air return, spring return or double solenoids



Technical data:

Port Sizes

1/4", 3/8" and 1/2" NPT

Fluid

Filtered air, lubricated or non-lubricated

Fluid Temperature

15° to 105° F

Ambient Temperature

15° to 140° F

Materials

Housing: Clear anodized aluminum

Seals: BUNA-N

Options

Manifold mounting

External pilot adapter

Hazardous duty ("explosion-proof") solenoids with UL, CSA, CENELEC and other international listings

"G" thread ports available (ISO 228/1)

Polyurethane seals

Different pilot valve / solenoid operators available for low power, intrinsically safe, etc.

Variety of manual overrides: detent, non-detent, brass push button

Hazardous duty applications

Solenoid	Power consumption			Remarks	NEMA classification
	DC	Inrush	AC Holding		
3720	1.4W	-	-	1/2" NPT 18" leads	4 X 7.9
3722	5 W	-	-		
3723	-	6 VA	6 VA		
3726	13 W	-	-		
3727	-	15 VA	15 VA		

These solenoids comply with insulation class H, and are for use in Class 1, Division 1,2 Groups A, B, C, D; Class 2, Division 1, 2 Groups E, F, G hazardous locations as defined in the National Electric Code.

Note: Valve numbers need to be modified to apply low watt solenoid; they cannot be applied to a standard part number.

Description	Port size (NPT)	Nom. size (mm)	Cv factor	Operating pressure (PSI)	Dim dwg	Spare parts kit	Order no.	
							Valve	Solenoid
3 way (3/2) solenoid air return Normally closed	1/4"	6	1.4	25-150 25-120	22	8110816	8020770	.0247
	3/8"	10	2.6	30-150 30-120	22	8110817	8020870	.0247
	1/2"	12	3.5	30-150 30-120	22	8110817	8020871	.0247
						8110817	8020875	.0240-.0241
3 way (3/2) solenoid air return Normally open	1/4"	6	1.4	25-150 25-120	22	8110816	8022770	.0247
	3/8"	10	2.6	30-150 30-120	22	8110817	8022870	.0247
	1/2"	12	3.5	30-150 30-120	22	8110817	8022871	.0247
						8110817	8022875	.0240/.0241
3 way (3/2) Double solenoid impulse	1/4"	6	1.4	25-150 25-120	24	8110818	8021770	.0247
	3/8"	10	2.6	30-150 30-120	24	8110819	8021870	.0247
	1/2"	12	3.5	30-150 30-120	24	8110819	8021970	.0247
						8110819	8021975	.0240/.0241
3 way (3/2) solenoid-spring return Normally closed	1/4"	6	1.4	50-150 50-120	23	8110829	8110006	.0247
	3/8"	10	2.6	50-150 50-120	23	8110828	8110007	.0247
	1/2"	12	3.5	50-150 50-120	24	8110828	8110008	.0247
						8110828	8110008X3	.0240/.0241
3 way (3/2) solenoid-spring return Normally open	1/4"	6	1.4	50-150 50-120	24	8110829	8110006X01	.0247
	3/8"	10	2.6	50-150 50-120	24	8110828	8110007X01	.0247
	1/2"	12	3.5	50-150 50-120	24	8110828	8110007X32	.0240/.0241
						8110828	8110008X01	.0247
						18110828	8110008X32	.0240/.0241

Solenoids

Solenoid	Power consumption			Remarks	NEMA classification
	DC	Inrush	AC Holding		
0247	7 W	18 VA	10 VA	with DIN Connector	4
0240	3 W	-	-		
0241	-	10 VA	5 VA		
0263	1.6 W	-	-		

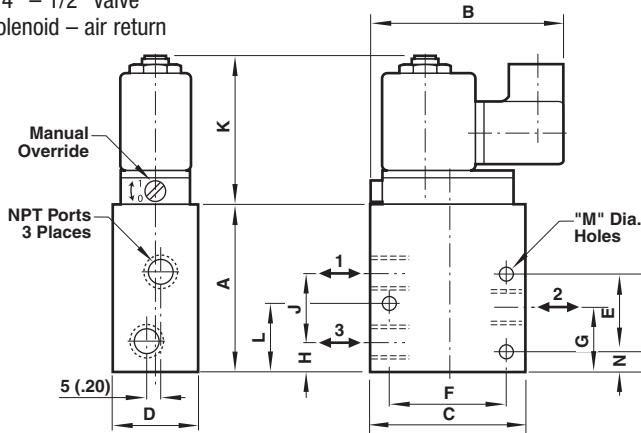
Connector options

Solenoid Series	Standard cable clamp	Optional connector part numbers			
		1/2" NPT	Lighted - Cable clamp		
			24 VAC, DC	120 VAC	220 VAC
02XX	0570275	0661374	0570818	0570816	0570817

Herion Pilot Operated Solenoid Valve

with Soft seal spool, 3/2

Fig. 22
1/4" – 1/2" valve
Solenoid – air return



Normally closed valve shown for normally open valve ports 1 and 3 are reversed

Fig. 23
1/4" – 1/2" valve
Solenoid – spring return

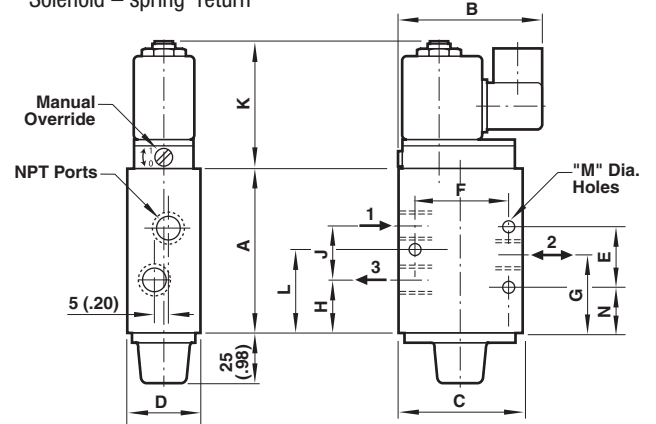


Figure	Valve size	A	B	C	D	E	F	G	H	J	K	L	M	N
22	1/4"	59 (2.32)	66 (2.70)	55 (2.17)	30 (1.18)	27 (1.06)	41 (1.61)	23 (.91)	11 (.43)	24 (.94)	61 (2.40)	24.5 (.96)	5.5 (.22)	7.5 (.30)
22	3/8"-1/2"	87 (3.43)	73 (2.87)	65 (2.56)	35 (1.38)	--	46 (1.81)	50 (1.97)	29 (1.14)	33 (1.30)	61 (2.40)	77.5 (3.05)	7 (.28)	31.5 (1.24)
23	1/4"	74 (2.91)	66 (2.70)	55 (2.17)	30 (1.18)	27 (1.06)	41 (1.61)	37 (1.46)	25 (.98)	24 (.94)	61 (2.40)	38.5 (1.52)	5.5 (.22)	21.5 (.85)
23	3/8"-1/2"	83 (3.27)	73 (2.87)	65 (2.56)	35 (1.38)	--	46 (1.81)	44 (1.73)	25 (.98)	33 (1.30)	61 (2.40)	73.5 (2.89)	7 (.28)	27.5 (1.08)
24	1/4"	74 (2.91)	66 (2.70)	55 (2.17)	30 (1.18)	27 (1.06)	41 (1.61)	37 (1.46)	25 (.98)	24 (.94)	61 (2.40)	38.5 (1.52)	5.5 (.22)	21.5 (.85)
24	3/8"-1/2"	83 (3.27)	73 (2.87)	65 (2.56)	35 (1.38)	--	46 (1.81)	44 (1.73)	25 (.98)	33 (1.30)	61 (2.40)	73.5 (2.89)	7 (.28)	27.5 (1.08)

Dimensions in mm (inches)

External pilot adapter
Part number: 8110138
For all 1/4" to 1/2" soft seal valves
One kit required for each solenoid on a valve.

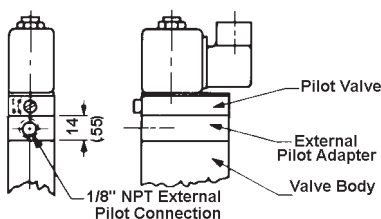
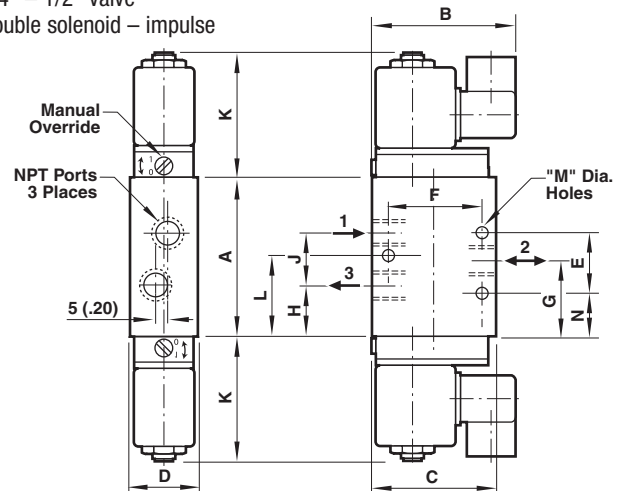


Fig. 24
1/4" – 1/2" valve
Double solenoid – impulse



Herion Air Operated Valve

with Soft seal spool, 3/2

Simplified soft seal system, incorporating HERION's unique T-Seal

Low maintenance and easy to service

Compact construction

Many configurations - air return, spring return or double air operated

Universal flow



Technical data

Port Sizes

1/4", 3/8", and 1/2" NPT

Fluid

Filtered air, lubricated or non-lubricated

Fluid Temperature

15° to 105° F

Ambient Temperature

15° to 140° F

Materials

Housing: Clear anodized aluminum

Seals: BUNA-N

Options

Manifold mounting

"G" thread ports available (ISO 228/2)

Polyurethane seals

NOTE: Pilot pressure must be equal to or greater than system pressure. Do not restrict exhaust port no. 3 on these valves.

Description	Port size (NPT)	Nom. size (mm)	Cv factor	Operating pressure (psi)	Pilot pressure (psi)	Dim dwg	Spare parts kit	Valve order number
3 way (3/2)	1/4"	6	1.4	25-230	25-230	40	8110816	4021370
Air operated	3/8"	10	2.6	30-230	30-230	40	8110817	4022070
air return	1/2"	12	3.5	30-230	30-230	40	8110817	4022071
3 way (3/2)	1/4"	6	1.4	VAC-230	30-230	41	8110818	4021470
Double air	3/8"	10	2.6	VAC-230	30-230	41	8110819	4022170
impulse	1/2"	12	3.5	VAC-230	30-230	41	8110819	4022171
3 way (3/2)	1/4"	6	1.4	VAC-230	50-230	42	8110829	4021371
Air operated	3/8"	10	2.6	VAC-230	50-230	42	8110828	4022072
spring return	1/2"	12	3.5	VAC-230	50-230	42	8110828	4022073

Herion Air Operated Valve

with Soft seal spool, 3/2

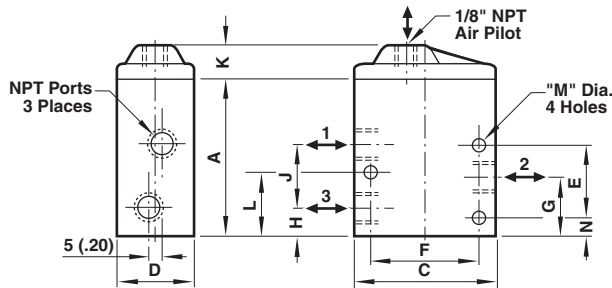


Fig. 40 Single air pilot

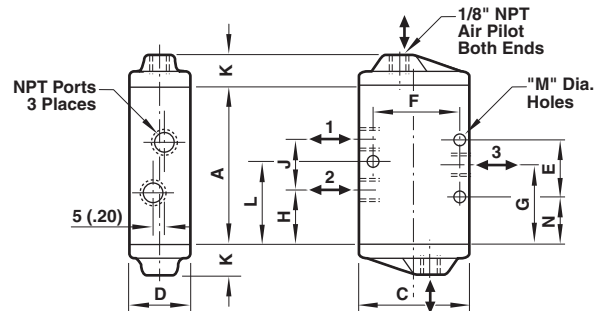


Fig. 41 Double air pilot

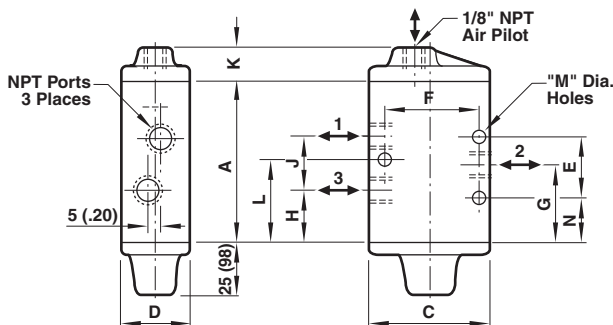


Fig. 42 Single air pilot - spring return

Figure Number	Valve Size	Dimensions											
		A	C	D	E	F	G	H	J	K	L	M	N
40	1/4"	59 (2.32)	55 (2.17)	30 (1.18)	27 (1.06)	41 (1.61)	23 (.91)	11 (.43)	24 (.94)	16 (.63)	24.5 (.96)	5.5 (.22)	7.5 (.30)
	3/8"	87	65	35	--	46	50	29	33	16	77.5	7	31.5
	1/2"	(3.43)	(2.56)	(1.38)		(1.81)	(1.97)	(1.14)	(1.30)	(.63)	(3.05)	(.28)	(1.24)
41	1/4"	74 (2.91)	55 (2.17)	30 (1.18)	27 (1.06)	41 (1.61)	37 (1.46)	25 (.98)	24 (.94)	16 (.63)	38.5 (1.52)	5.5 (.22)	21.5 (.85)
	3/8"	83	65	35	--	46	44	25	33	16	73.5	7	27.5
	1/2"	(3.27)	(2.56)	(1.38)		(1.81)	(1.73)	(.98)	(1.30)	(.63)	(2.89)	(.28)	(1.08)
42	1/4"	74 (2.91)	55 (2.17)	30 (1.18)	27 (1.06)	41 (1.61)	37 (1.46)	25 (.98)	24 (.94)	16 (.63)	38.5 (1.52)	5.5 (.22)	21.5 (0.85)
	3/8"	83	65	35	--	46	44	25	33	16	73.5	7	27.5
	1/2"	(3.27)	(2.56)	(1.38)		(1.81)	(1.73)	(.98)	(1.30)	(.63)	(2.89)	(.28)	(1.08)

Dimensions in mm (inches)

Herion Solenoid operated valve

4 Way (4/2, 5/2, 5/3) with soft seal

Noise reduction through integrated pilot valve silencer

High flow performance

Simplified soft seal system, incorporating HERION's unique T-Seal

Low maintenance and easy to service

Manual override standard on most models

Quick change of solenoids

Compact construction

Many configurations - air return, spring return or double solenoids



Technical data

Port Sizes

1/8", 1/4", 3/8" and 1/2" NPT

Fluid

Filtered air, lubricated or non-lubricated

Fluid Temperature

15° to 105°F

Ambient Temperature

15° to 140°F

Materials

Housing

Clear anodized aluminum

Seals: BUNA N

Options

Manifold mounting

External pilot adapter

Hazardous duty ("explosion-proof") solenoids with UL, CSA, CENELEC and other international listings

"G" Thread ports available (ISO 228/1)

Polyurethane seals

Different pilot valve / solenoid operators available for low power, intrinsically safe, etc.

Variety of manual overrides: detent, non-detent, brass push button

Description	Port size	Nom. size (NPT)	Cv factor (mm)	Operating pressure	Dim. dwg. (psi)	Spare parts	Order No.	
							Valve kit	Solenoid
4 Way (4/2) solenoid – air return	1/8"	4	0.5	25-150	2	8110767	2630670E	.0162
				25-150	2	8110767	2630670X6	.0163
4 Way (5/2) solenoid – air return	1/4"	6	1.4	25-150	5	8110831	2636070	.0247
				30-150	5	8110833	2637070	.0247
4 Way (5/2) solenoid – spring return	1/8"	4	0.5	50-150	3	8110769	8110134E	.0162
				50-120	3	8110769	8110134X6	.0163
	1/4"	6	1.4	50-150	6	8110832	8110132	.0247
				50-150	6	8110825	8110443	.0247
				50-150	6	8110825	8110413	.0247
4 Way (5/2) Double solenoid impulse	1/8"	4	0.5	25-150	4	8110768	2630770E	.0162
				25-120	4	8110768	2630770X6	.0163
				25-150	8	8110827	2636270	.0247
				30-150	7	8110826	2637270	.0247
	1/2"	12	3.5	30-150	7A	8110826	2637271	.0247
				50-150	8A	557586X2	2637370	.0247
4 Way (5/3) Double solenoid COE	1/2"	12	2.7	50-150	7A	8110756X1	2636370	.0247
				50-150	8A	0557586X2	2636570	.0247
4 Way (5/3) Double solenoid COP	1/2"	12	2.7	50-150	7A	8110756X1	2637570	.0247
				50-150	8A	0557586X2	2636470	.0247
4 Way (5/3) Double solenoid APB	1/2"	12	2.7	50-150	7A	8110756X1	2637470	.0247
				50-150	8A	0557586X2	2636470	.0247

Herion Solenoid operated valve

4 Way (4/2, 5/2, 5/3) with soft seal

Hazardous duty applications

Solenoid	Power consumption			Remarks	NEMA classification
	DC	AC			
		Inrush	Holding		
3720	1.4W	-	-	1/2" NPT 18" leads	4 X 7.9
3722	5 W	-	-		
3723	-	6 VA	6 VA		
3726	13 W	-	-		
3727	-	15 VA	15 VA		

These solenoid comply with insulation class H, and are for use in Class 1, Division 1,2 Groups A, B, C, D; Class 2, Division 1, 2 Groups E, F, G hazardous locations as defined in the National Electric Code.

NOTE: Solenoid valve part numbers change for low watt coil.

Solenoids

Solenoid	Power consumption			Remarks	NEMA classification
	DC	AC			
		Inrush	Holding		
0162	-	6 VA	6VA	with DIN Connector	4
0163	3 W	-	-		
0247	-	18 VA	10 VA		
0240	1.6 W	-	-		
0241	-	10 VA	5VA		
0263	1.6W	-	-		

Connector options

Solenoid Series	Standard cable clamp	Optional connector part numbers			
		1/2" NPT	Lighted - Cable clamp		
			24 VAC, DC	120 VAC	220 VAC
02XX	0570275	0661374	0570818	0570816	0570817
016X	0661464	8110519	0664811	8110548	8110549

Fig. 2 – 1/8" valve solenoid-air return

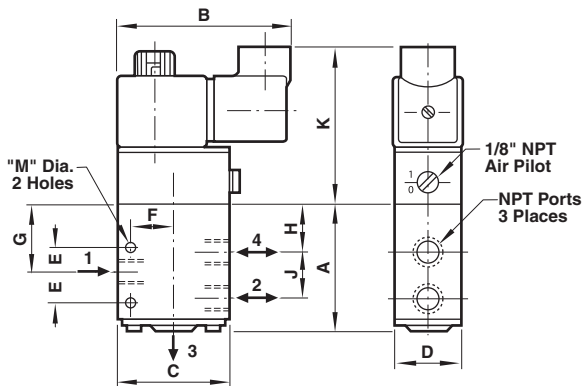
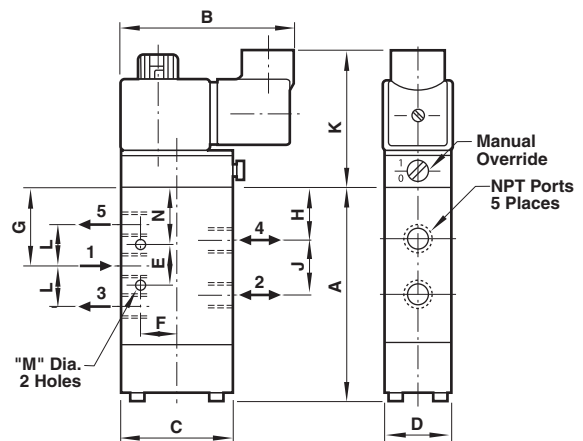


Fig. 3 – 1/8" valve solenoid-spring return



Herion Solenoid operated valve

4 Way (4/2, 5/2, 5/3)

Fig. 4 – 1/8" valve double solenoid

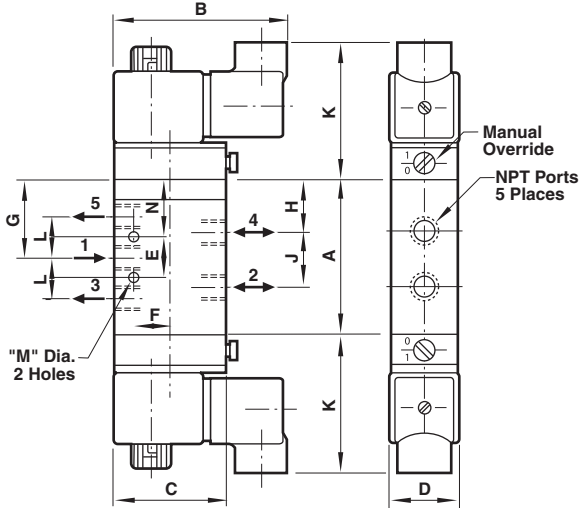


Fig. 5 – 1/2" valve solenoid-air return

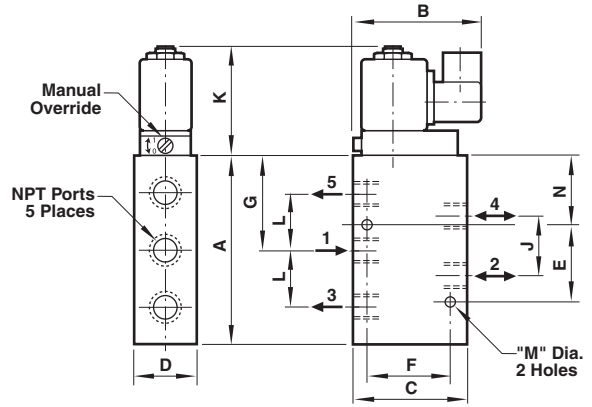
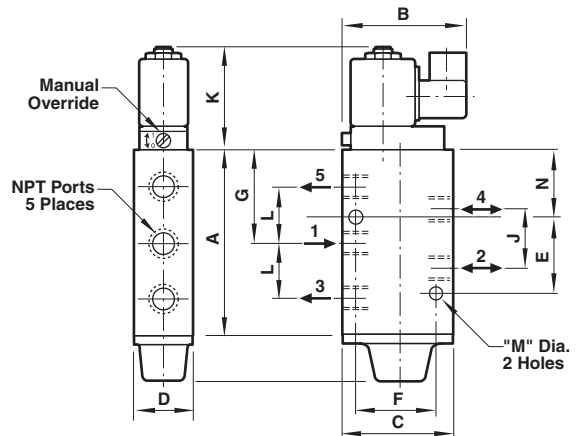
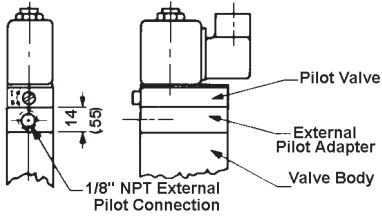


Fig. 6 – 1/4" - 1/2" valve solenoid spring return



External pilot adapter

Kit part number	Used for
8110796	1/8" soft seal valves
8110138	1/4" to 1/2" soft seal valves except 5/3 position valves
8110138X01	1/2" 5/3 position valves only
8110138X02	1/4" 5/3 position valves only



Herion Solenoid operated valve

4 Way (4/2, 5/2, 5/3) with soft seal

Fig. 7 – 3/8" - 1/2" valve 2 position double solenoid
Fig. 7A – 1/2" valve 3 position double solenoid

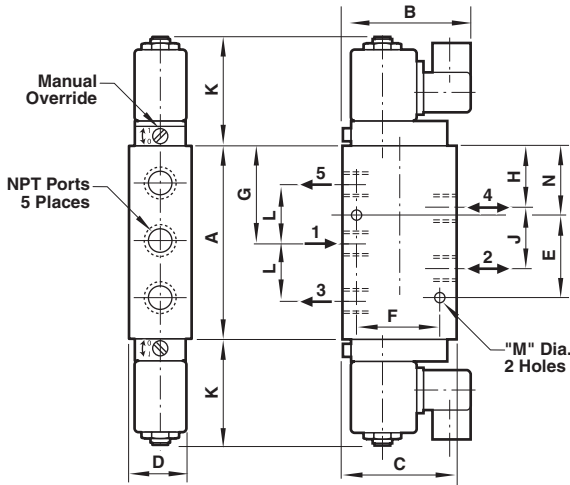
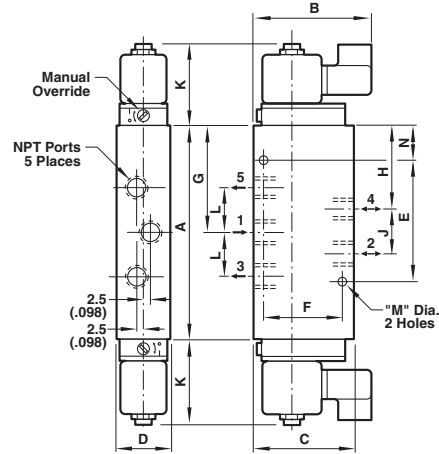


Fig. 8 – 1/4" valve 2 position double solenoid
Fig. 8A – 1/4" valve 3 position double solenoid



Drawing	Valve size	Dimensions												
		A	B	C	D	E	F	G	H	J	K	L	M	N
2	1/8"	47 (1.85)	80 (3.15)	40 (1.57)	25 (.98)	11 (.43)	14 (.55)	24 (.95)	15 (.59)	18 (.71)	67 (2.64)	-	5.5 (.22)	-
3	1/8"	84 (3.31)	80 (3.15)	40 (1.57)	25 (.98)	15.8 (.62)	14 (15.5)	30.3 (1.20)	21.3 (.84)	18 (.71)	67 (2.64)	16 (.63)	5.2 (.20)	22.4 (.88)
4	1/8"	60.5 (2.38)	80 (3.15)	40 (1.57)	25 (.98)	15.8 (.62)	14 (.5)	30.3 (1.20)	21.3 (.84)	18 (.71)	67 (2.64)	16 (.63)	5.2 (.20)	22.4 (.88)
5	1/4"	84 (3.31)	66 (2.60)	55 (2.17)	30 (2.18)	67 (2.64)	40 (1.57)	37 (1.46)	-	24 (.94)	61 (2.40)	24 (.94)	7 (.28)	12 (.47)
5	3/8"	115 (4.53)	73 (2.87)	65 (2.56)	35 (1.38)	46 (1.81)	46 (1.81)	56 (2.20)	-	33 (1.30)	61 (2.40)	33 (1.30)	7 (.28)	39 (1.54)
5	1/2"	115 (4.53)	73 (2.87)	65 (2.56)	35 (1.38)	46 (1.81)	46 (1.81)	56 (2.20)	-	33 (1.30)	61 (2.10)	33 (1.30)	7 (.28)	39 (1.54)
6	1/4"	102 (4.02)	66 (2.60)	55 (2.17)	30 (1.18)	67 (2.64)	40 (1.57)	51 (2.01)	-	24 (.94)	61 (2.40)	24 (.94)	7 (.28)	14 (.55)
6	3/8"	111 (4.37)	73 (2.87)	65 (2.56)	35 (1.38)	46 (1.81)	46 (1.81)	56 (2.20)	-	33 (1.30)	61 (2.40)	33 (1.30)	7 (.28)	39 (1.54)
6	1/2"	111 (4.37)	73 (2.87)	65 (2.56)	35 (1.38)	46 (1.81)	46 (1.81)	56 (2.20)	-	33 (1.30)	61 (2.40)	33 (1.30)	7 (.28)	39 (1.54)
7	3/8"	111 (4.37)	73 (2.87)	65 (2.56)	35 (1.38)	46 (1.81)	46 (1.81)	56 (2.20)	46 (1.81)	33 (1.30)	61 (2.40)	33 (1.30)	7 (.28)	39 (1.54)
7	1/2"	111 (4.37)	73 (2.87)	65 (2.56)	35 (1.38)	46 (1.81)	46 (1.81)	56 (2.20)	46 (1.81)	33 (1.30)	61 (2.40)	33 (1.30)	7 (.28)	39 (1.54)
8	1/4"	102 (4.02)	66 (2.60)	55 (2.17)	30 (1.18)	67 (2.64)	40 (1.57)	51 (2.01)	-	24 (.94)	61 (2.40)	24 (.94)	7 (.28)	14 (.55)
7A	1/2"	174 (6.85)	74 (2.91)	70 (2.76)	40 (1.57)	50 (1.97)	50 (1.97)	87 (3.43)	71 (2.80)	33 (1.30)	61 (2.40)	33 (1.30)	7 (.28)	71 (2.80)
8A	1/4"	122 (4.80)	66 (2.60)	55 (2.17)	30 (1.18)	67 (2.64)	40 (1.57)	61 (2.41)	49 (1.93)	24 (.94)	61 (2.40)	24 (.94)	7 (.28)	25 (.98)

Dimensions in mm (inches)

Herion Air operated valve

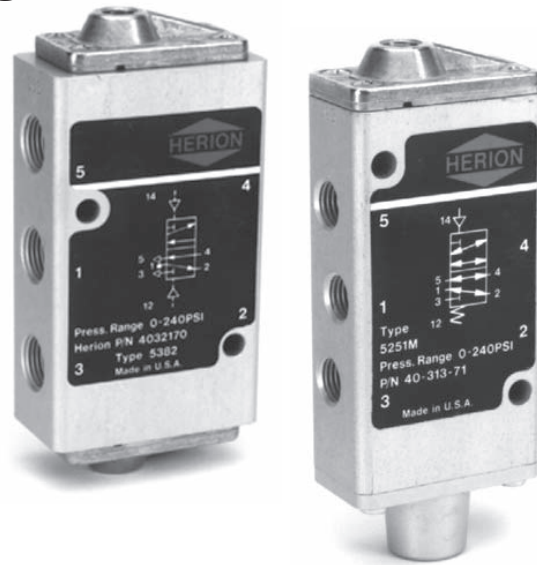
4 Way (4/2, 5/2, 5/3)

Simplified soft seal system, incorporating HERION's unique T-seal

Low maintenance and easy to service

Compact construction

Many configurations - air return, spring return or double air operated



Technical data

Port Sizes

1/8", 1/4", 3/8", and 1/2" NPT

Fluid

Filtered air, lubricated or non-lubricated

Fluid Temperature

15° to 105°

Ambient Temperature

15° to 140°F

Materials

Housing

Clear anodized aluminum

Seals

BUNA-N

Options

Manifold mounting

"G" thread ports available (ISO 228/1)

Polyurethane seals

NOTE: Pilot pressure must be equal to or greater than operating pressure

Description	Port size (NPT)	Nom. size (mm)	Cv factor	Operating pressure (psi)	Pilot pressure (psi)	wgt. (lb)	Dim dwg.	Spare parts kit	valve order no.
Way (4/2)									
air-operated air return	1/8	4	0.5	25-230	25-230	0.4	25	8110820	4030670
4 way (5/2)									
air-operated air return	1/4	6	1.4	25-230	25-230	0.8	27	8110831	4031370
	3/8	10	2.6	30-230	30-230	1.4	27	8110833	4032070
	1/2	12	3.5	30-230	30-230	1.4	27	8110833	4032071
4 way (5/2)									
double air impulse	1/8	4	0.5	VAC-230	30-230	.6	26	8110830	4030770
	1/4	6	1.4	VAC-230	30-230	1.1	29	8110827	4031470
	3/8	10	2.6	VAC-230	30-230	1.7	29	8110826	4032170
	1/2	12	3.5	VAC-230	30-230	1.7	29	8110826	4032171
4 way (5/2)									
air-operated spring return	1/4	6	1.4	VAC-230	50-230	1.2	28	8110832	4031371
	3/8	10	2.6	VAC-230	50-230	1.8	28	8110825	4032072
	1/2	12	3.5	VAC-230	50-230	1.8	28	8110825	4032073
4 way (5/3)									
air-operated APB	1/4	6	1.1	VAC-230	50-230		29A	0557586	8110009
	1/2	12	2.7	VAC-230	50-230		29A	8110756	8110114
4 way (5/3)									
air-operated COP	1/4	6	1.1	VAC-230	50-230		29A	0557586	8110012
	1/2	12	2.7	VAC-230	50-230		29A	8110756	8110116
4 way (5/3)									
air-operated COE	1/4	6	1.1	VAC-230	50-230		29A	0557586	8110011
	1/2	12	2.7	VAC-230	50-230		29A	8110756	8110115

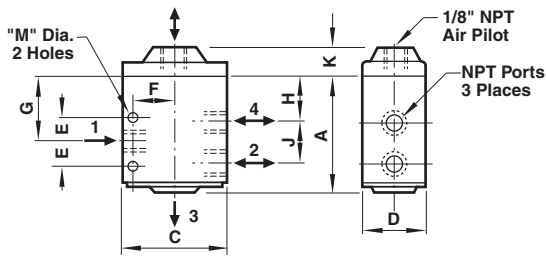


Fig 25. – 1/8" valve, single air pilot

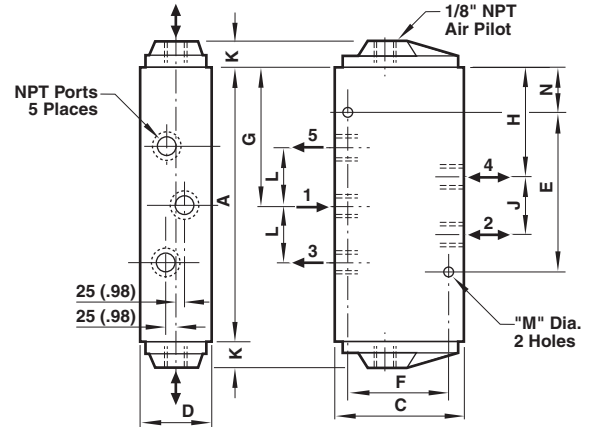


Fig 26. – 1/8" valve, double air pilot
 Fig 29. – 1/4", 3/8", 1/2" double air pilot
 Fig 29A. – 1/4", 1/2" 3 position double air pilot

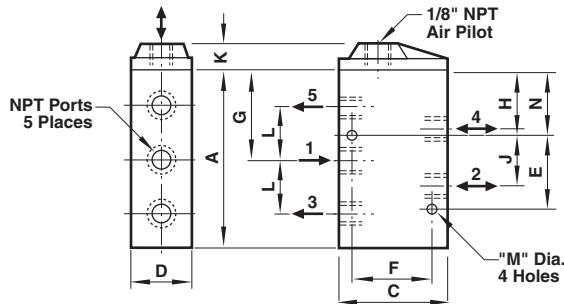


Fig 27. – 1/4", 3/8", 1/2" valve single air pilot

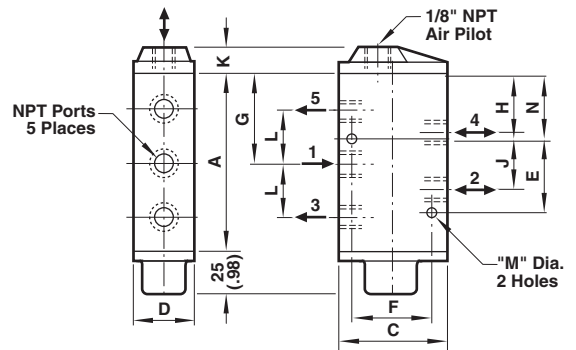


Fig 28. – 1/4", 3/8", 1/2" valve, single air pilot - spring return

Figure	Valve size	A	C	D	E	F	G	H	J	K	L	M	N
25	1/8"	47 (1.85)	40 (1.57)	25 (0.98)	11 (.43)	14 (.55)	24 (.95)	15 (.59)	18 (.71)	14 (.55)	-	5.5 (.22)	-
26	1/8"	60.5 (2.38)	40 (1.57)	25 (.98)	15.8 (.62)	14 (.55)	30.3 (1.20)	21.3 (.84)	18 (.71)	14 (.55)	16 (.63)	5.5 (.22)	22.4 (.88)
27	1/4"	84 (3.31)	55 (2.17)	30 (1.18)	67 (2.64)	40 (1.57)	37 (1.46)	25 (.98)	24 (.94)	16 (.63)	24 (.94)	7 (.28)	12 (.47)
27	3/8"	115 (4.53)	65 (2.56)	35 (1.38)	46 (1.81)	46 (1.81)	56 (2.20)	39.5 (1.56)	33 (1.30)	16 (.63)	33 (1.30)	7 (.28)	39 (1.54)
27	1/2"	115 (4.53)	65 (2.56)	36 (1.38)	46 (1.81)	46 (1.81)	56 (2.20)	39.5 (1.56)	33 (1.30)	16 (.63)	33 (1.30)	7 (.28)	39 (1.54)
28	1/4"	102 (4.02)	55 (2.17)	30 (1.18)	67 (2.64)	40 (1.57)	51 (2.01)	39 (1.54)	24 (.94)	16 (.63)	24 (.94)	7 (.28)	14 (.55)
28	3/8"	111 (4.37)	65 (2.56)	35 (1.58)	46 (1.81)	46 (1.81)	56 (2.20)	39.5 (1.56)	33 (1.30)	16 (0.63)	33 (1.30)	7 (.28)	39 (1.54)
28	1/2"	111 (4.37)	65 (2.56)	35 (1.38)	46 (1.81)	46 (1.81)	56 (2.20)	39.5 (1.56)	33 (1.30)	16 (0.63)	33 (1.30)	7 (.28)	39 (1.54)
29	1/4"	102 (4.02)	55 (2.17)	30 (1.18)	67 (2.64)	40 (1.57)	51 (2.01)	39 (1.54)	24 (.94)	16 (.63)	24 (.94)	7 (.28)	14 (.55)
29	3/8"	111 (4.37)	65 (2.56)	35 (1.38)	46 (1.81)	46 (1.81)	56 (2.20)	39.5 (1.56)	33 (1.30)	16 (0.63)	33 (1.30)	7 (.28)	39 (1.54)
29	1/2"	111 (4.37)	65 (2.56)	35 (1.38)	46 (1.81)	46 (1.81)	56 (2.20)	39.5 (1.56)	33 (1.30)	16 (0.63)	33 (1.30)	7 (.28)	39 (1.54)
29A	1/4"	122 (4.80)	55 (2.17)	30 (1.18)	67 (2.64)	40 (1.57)	61 (2.41)	49 (1.93)	24 (.94)	16 (.63)	24 (.94)	7 (.28)	25 (.98)
29A	1/2"	174 (6.85)	70 (2.76)	40 (1.57)	50 (1.97)	50 (1.97)	87 (3.43)	71 (2.80)	33 (1.30)	16 (0.63)	33 (1.30)	7 (.28)	71 (2.80)

Dimensions in mm (inches)

Series 97100 NAMUR

3/2-, 5/2- and 5/3-way valves

Indirectly controlled soft seal spool valves

Solenoid actuated

Port size G 1/4, 1/4" NPT

NAMUR Interface

Operating pressure: 29 to 116 psi (2 to 8 bar)

Description

NAMUR Interface for filtered, non-lubricated and dry compressed air*

Operation: solenoid, indirectly controlled

Mounting position: as required

Flow direction: fixed

Nominal size:

Connection 1: G 1/4

Connection 3 and 5: G 1/8

Electrical connection: see solenoid table

Temperatures:

Valve: -13°F to 122°F (-25 °C to +50 °C)

Solenoid: see solenoid table

* Oil recommendation: Shell Hydrol D0 32, ESSO Febis K 32 (as of July 1992) or comparable oils with DVI-values < 8 (DIN 53521) and ISO viscosity class 32-46 (DIN 51519).

Material

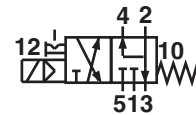
Body: Aluminium anodized

Pilot flange: PBT

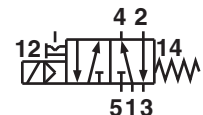
Seals: NBR

Features

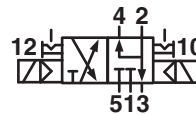
- For single and double operated actuators
- Exhaust air recirculation (3 way function)
- Crossover-free switching, switch-over function guaranteed even with small cross section air supply
- In event of power failure, valve switches to original position (spring-loaded with monostable design)
- Lockable manual override
- Compact design
- Simple design of soft seal spool system
- Easily interchangeable solenoid



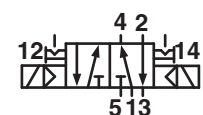
Symbol 1: 3/2



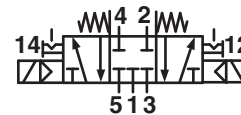
Symbol 2: 5/2



Symbol 3: 3/2



Symbol 4: 5/2



Symbol 5: 5/3

3/2, 5/2 and 5/3 directional valves, standard design


1	Connection size G		Cv-Value	Part number*	Operation	Operating pressure psi	Drawing no.
	3.5	2.4					
1/4	1/8	Flange	51.8	9710000	Solenoid/Spring	29 - 116	1
1/4	1/8	Flange	51.8	9711000	Solenoid/Solenoid	29 - 116	2
1/4	1/8	Flange	34.5	9712000	Solenoid/Solenoid mid position APB	29 - 116	3

* When ordering please indicate solenoid, voltage and current type (frequency).

Valve function: APB = All Ports Blocked

Series 97100 NAMUR

Solenoid actuators

	Type	Power consumption		Ex-protection categorie	Protection class	Temperature ambient/ fluid °C	Dimensions no.	Circuit diagram no.
		24V DC W	130V AC VA					
	3036	1.6	3.5	-	IP 65 (with connector) DIN EN 175301-803 form A *	-40 ... +50	5	1

Standard voltages 24V DC, 230V AC. Other voltages on request. Design according to VDE 0580, EN 50014/50028. 100% duty cycle.

* Connector not included: required connector for DC: type 0680003 Form B, 0570275 Form A.

3/2, 5/2 and 5/3 directional valves for minimal electrical power, including EEx i



5/2-way or 3/2-way function

1	Connection size G		Type *	Operation	Operating pressure bar	Flow l/min	Drawing no.
	3.5	2.4					
1/4	1/8	Flange	9710002	Solenoid/Spring	29 - 116	750	1
1/4	1/8	Flange	9712002	Solenoid/ Solenoid mid position APB	29 - 116	500	2

* When ordering please indicate solenoid, voltage and current type (frequency).

Valve function: APB = All Ports Blocked

Solenoid actuators



	Type	Power consumption		Rated current		Ex-protection categorie	Protection class	Temperature ambient/ fluid °C	Dimensions no.	Circuit diagram no.
		24V DC W	230V AC VA	24V DC mA	230V AC VA					
	3050	1.7	-	-	-	-	IP 65 (with connector) DIN EN 175301-803 form B **	-40 ... +50	4	1
	3034	0.7	0.7 *	-	-	-	IP 65 (with connector) DIN EN 175301-803 form A **	-40 ... +50	5	1

Standard voltages 24V DC, 230V AC. Other voltages on request. Design according to VDE 0580, EN 50014/50028. 100% duty cycle.

* Valves can be operated with DC only. For 230V AC application please use 206V DC coil together with rectifier plug 0663303.

** Connector not included: required connector for DC: type 0680003 Form B, 0570275 Form A.

Accessories

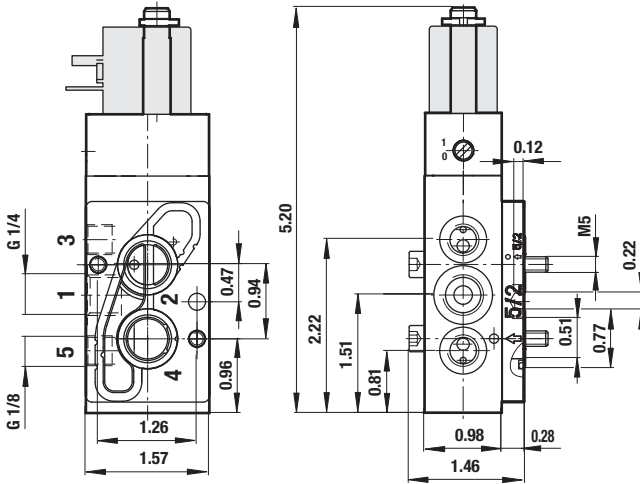
Silencer	Connectors
	
0014500 (G 1/8)*	0570275 form A
	0663303 with rectifier
	0680003 form B

* For indoor use.

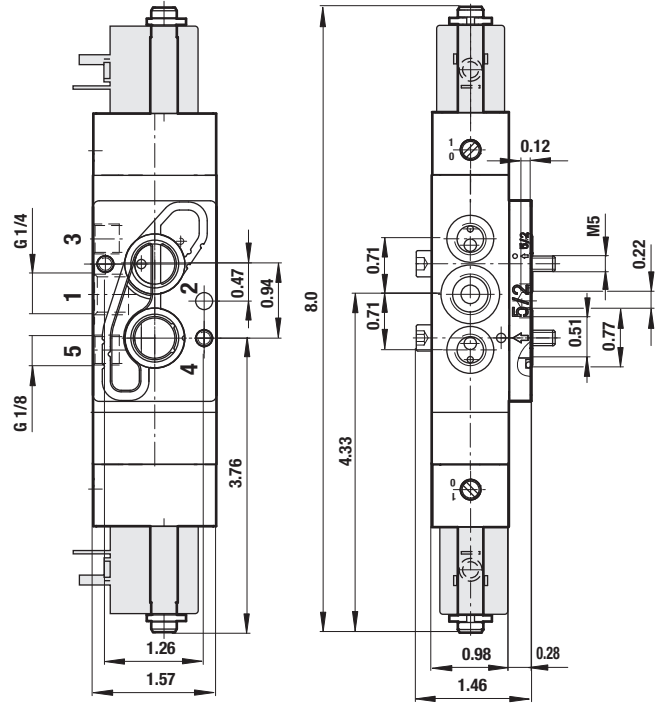
Series 97100 NAMUR

Dimensional drawings for valves

Drawing 1 and 2 *

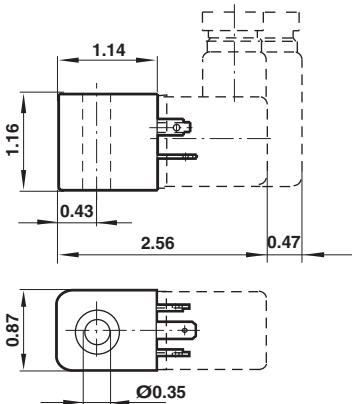


Drawing 3 *



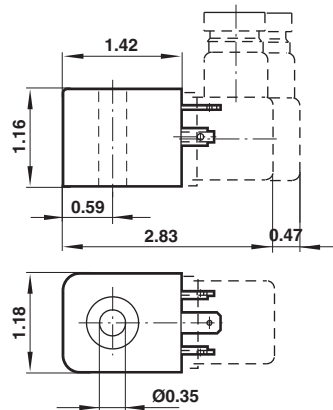
Dimensional drawings for solenoid operators

Drawing 4 *



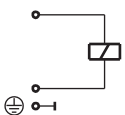
* Dimensions in inches

Drawing 5 *

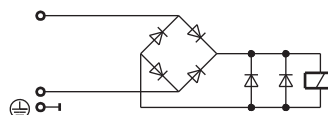


Circuit diagrams

Circuit diagram 1

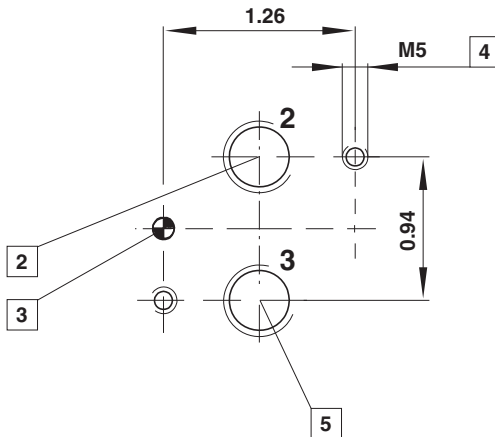


Circuit diagram 2



Series 97100 NAMUR

NAMUR hole pattern *



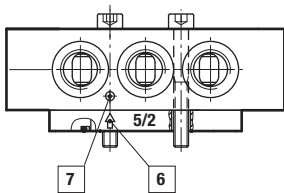
* Dimensions in inches

Drawing legend

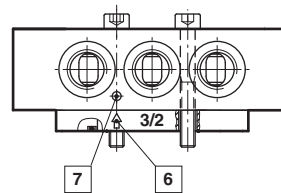
Index	Description
2	Port 2 (A)
3	Coated screw
4	M5 x 10
5	Port 3 (R)

Conversion instructions of 5/2 into 3/2-way function

5/2-way function (original mode of supply)



3/2-way function



Drawing legend

Index	Description
6	Arrow
7	Marker

3/2 or 5/2-way function can be achieved by swapping enclosed adaptor plates.
Make sure Marker and Arrow match as shown on above drawing. Original mode of supply: 5/2 function.

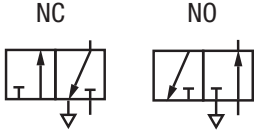
Further options on request

Excel 15 (M/54, DM/54)

Solenoid actuated 15 mm poppet valves

Sub-base

3/2, 5/32 NPT



15 mm micro solenoids
Sub-base and manifold mounted
– extremely compact and convenient

Manual override as standard
Piped exhaust for clean room applications

Technical data

Medium:
Compressed air, filtered,
lubricated and non lubricated.
Operating pressure:
3/2 NC: 0 to 145 psi (0 to 10 bar)
3/2 NO: 0 to 87 psi (0 to 6 bar)

Flow Cv (l/min):

3/2 NC - 0.016 (16)
3/2 NO - 0.029 (29)

Orifice

3/2 NC 0.75 mm
3/2 NO 1.0 mm

Ambient temperature:

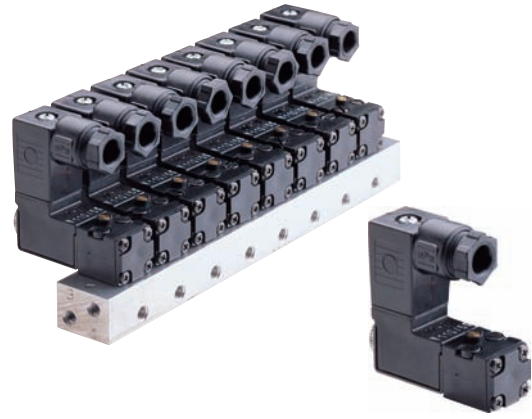
-4°F to 87°F (-20°C to 50°C).
Consult our Technical Service for use below 36°F (2°C).

Materials

Coil: epoxy encapsulated nylon
Base and end caps: acetal
Armature: stainless iron
Manifold base: aluminum
Seals: nitrile
Tube & spring: stainless steel

Alternative models

22 mm models.
32 mm models.
Contact our Technical Service for details.



Subbase mounted (valve only)

Function	Actuation	Voltage	Flow	Mounting	Manual override	Model
3/2 NC	Sol/spring	12V	0.016 (16)	Base interface	Push button	90304910/CB
3/2 NC	Sol/spring	24V	0.016 (16)	Base interface	Push button	90304910/CC
3/2 NO	Sol/spring	12V	0.029 (29)	Base interface	None	90205910/CB
3/2 NO	Sol/spring	24V	0.029 (29)	Base interface	None	90205910/CC

Manifolds

Size	Function	Actuation	lb (kg)	Mounting	Model
5/32 NPT	3/2 NC	Sol/spring	0.15 (0.069)	Single	M/54/NTZ*
5/32 NPT	3/2 NC	Sol/spring	0.28 to 1.05 (0.127 to 0.475)	Manifold	DM/54/NTZ*/T‡

Service kits are not available for these valves.

* Insert voltage code from table below.

‡ Add number of valves in manifold: 2 stations 2; 4 stations 4; 6 stations 6; 8 stations 8.

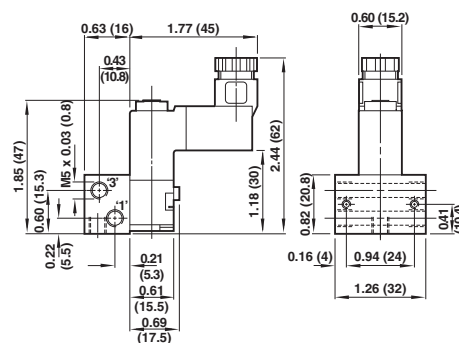
Voltage codes and spare coils

Voltage	Code	Power	Coil
12 V d.c.	12V=	1.5 W	QM/54/A12V=/21
24 V d.c.	24V=	1.5 W	QM/54/A24V=/21

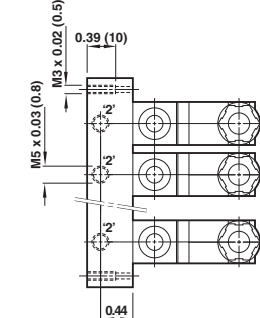
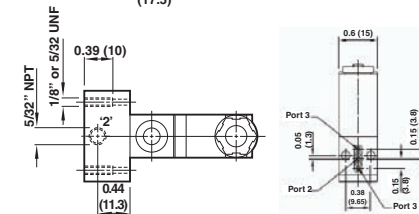
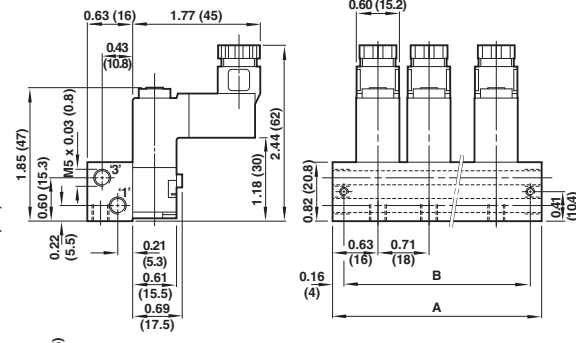
Electrical details for solenoid operators

Voltage tolerance:	±10%
Power:	1.5 W
Inlet orifice:	0.77 mm, or 1.0 mm
Electrical connection:	3 pin Industrial Standard
Cable entry:	8 mm max.
Protection class:	IP 65 (DIN 40 050) with plug fitted

M/54/NTZ*



DM/54/NTZ*/T‡



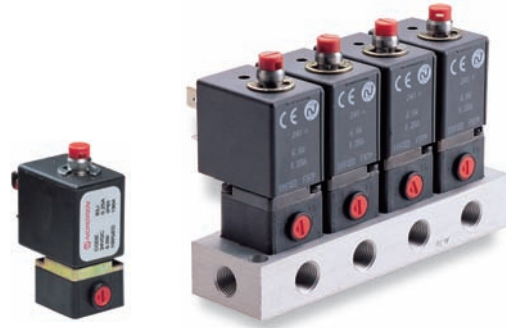
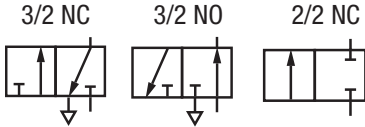
Model	A	B
DM/54/NTZ*/T2	2.0 (49)	1.61 (41)
DM/54/NTZ*/T4	3.27 (83)	2.95 (75)
DM/54/NTZ*/T6	4.61 (117)	4.29 (109)
DM/54/NTZ*/T8	5.94 (151)	5.63 (143)

Excel 22 (M/48, M/49)

Solenoid actuated 22 mm poppet valves

Sub-base

2/2, 3/2, 1/8", and 5/32" NPT



Miniature 22 mm normally open and normally closed models

Sub-base mounted and manifold mounted – compact and convenient

Manual override as standard

Technical data

Medium:

Compressed air, filtered, lubricated and non lubricated.

Operating pressure:

0 to 145 psi (0 to 10 bar)
0 to 160 psi (0 to 12 bar)

Flow:

Orifice	Cv (l/min)
1.0 mm	0.03 (30)
1.6 mm	0.08 (77)
2.0 mm	0.10 (98)

Ambient temperature:

-4°F to 122°F (-20°C to 50°C)
Consult our Technical Service for use below 36°F (2°C).

Materials

- Coil: glass reinforced thermo plastic
- Manual override base: glass reinforced nylon
- Armature: stainless iron
- Sub-base: aluminum
- Seals: nitrile
- Tube & spring: stainless steel

Alternative models

- 2/2 N/C models
- N/O models
- Push button manual operators
- 15 mm models
- 32 mm models
- Flying lead coils
- Viton
- Contact our Technical Service for details.

Subbase mounted (valve only)

Function	Max Pressure	Orifice	Voltage	Power	Model
2/2 NC	145 psi	2.0 mm	12 VDC	7.5 W	33304120/CB
2/2 NC	145 psi	2.0 mm	24 VDC	6 W	33304120/PC
3/2 NC	145 psi	1.6 mm	12 VDC	7.5 W	31304716/CB
3/2 NC	145 psi	1.6 mm	24 VDC	6 W	31304716/PC
3/2 NO	160 psi	1.6 mm	12 VDC	7.5 W	31305510/CB
3/2 NO	160 psi	1.6 mm	24 VDC	6 W	31305510/PC
3/2 NC	160 psi	1.0 mm	12 VDC/24 VDC	7.5 W/6 W	33304110CB/PC
3/2 NO	160 psi	1.0 mm	12 VDC/24 VDC	7.5 W/6 W	34305010CB/PC

Manifolds

Size	Function	Actuation	lb (kg)	Mounting	Model
5/32 NPT	3/2 NC	Sol/spring	0.29 (0.13)	Single	1.0 mm orifice (low power) M/48/MAZ***
					1.6 mm orifice M/48/MDZ***
5/32 NPT	3/2 NC	Sol/spring	0.68 to 2.0 (0.31 to 0.9)	Manifold	DM/48/MAZ***/T‡ DM/48/MDZ***/T‡

Service kits are not available for these valves.

*** Insert voltage codes from table below.

‡ Add number of valves in manifold up to 6 maximum.

Order connector plugs separately.

Electrical details for solenoid operators

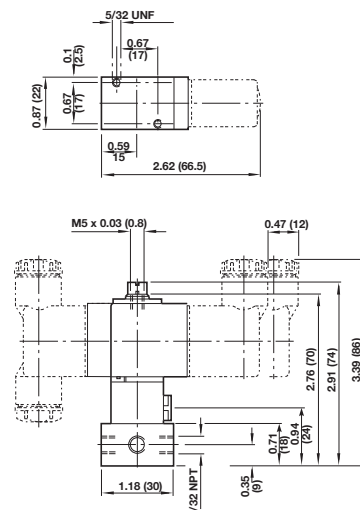
Voltage tolerance:	±10%
Rating:	100% E.D.
Inlet orifice:	1.0 mm, 1.6 mm, or 2.0 mm
Electrical connection:	22 mm Industrial Standard*
Protection class:	IP 65 (DIN 40 050) with plug fitted
Cable entry:	12 mm max.
Manual override:	Screwdriver operated, memory type, standard

*Form B electrical connections available – please refer to data sheets.

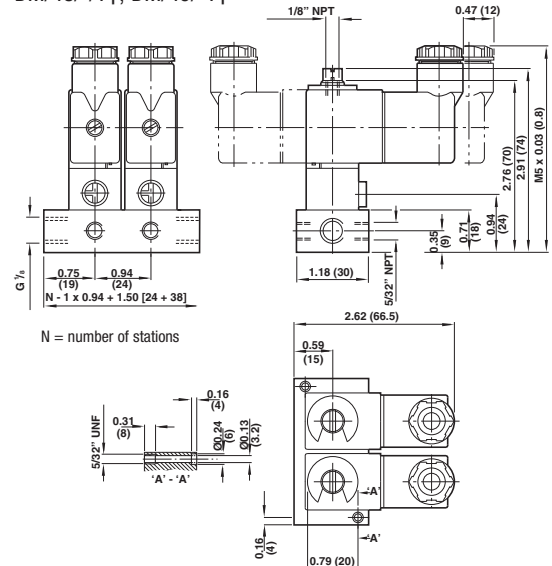
Voltage codes

Voltage	1.0 mm orifice (low power)		1.6 mm orifice	
	Code	Power	Code	Power
12 V d.c.	12J	2 W	QM/48/12J/21	82J 7.5 W
24 V d.c.	13J	2 W	QM/48/13J/21	83J 6 W
24 V 50/60 Hz	14J	4/2.5 VA	QM/48/14J/21	84J 12/8 VA
110/120 V 50/60 Hz	18J	4/2.5 VA	QM/48/18J/21	88J 12/8 VA

M/48, M/49



DM/48*/T‡, DM/49*/T‡



Cartridge Solenoid Valve

- Compact, fully encapsulated assembly
- 2/2 or 3/2 function with collected exhaust
- Maximum protection from vibration and impact damage
- Maximum environmental protection

Technical Data

Medium:

Compressed air, filtered, lubricated and non-lubricated
 Light oil, water and other non-corrosive liquids and gases

Operation:

Poppet valve, directly actuated with spring return

Mounting:

Direct integration with customer manifold

Operating Pressure:

0 to 174 psig (0 to 12 bar)

Inlet Orifice Sizes:

1.0, and 1.6 mm

Operating Temperature:

-40°F to 194°F (-40°C* to +90°C supply)
 -40°F to 122°F (-40°C* to +50°C ambient),
 (176°F [80°C] for automotive specifications)

* Consult Technical Service for use below +2°C

Life Expectancy:

Typically in excess of 20 million cycles

Environmental:

200 hours salt spray: UL94 V0

Vibration to EN60068-2-6

Weight: 2.5 oz. (0.08 kg)

Materials:

Valve base: moulded PBT

Coil: glass reinforced PET

Armature: stainless iron

Stem tube: stainless steel

Springs: stainless steel

Seals: nitrile rubber

Flow Characteristics - Air*

Inlet Orifice	Kv m ³ /h	NFPA Cv	l/min
1.0 mm	0.027	0.031	31.0
1.6 mm	0.069	0.08	80.0

* l/min calculation tested at 6 barg in, 5 barg out



3/2 Normally Closed



2/2 Normally Closed



Part Number Information

Valve Model Number	Orifice (mm)	Pressure (barg)	Power (Watt)	Manual Override
Standard models - 2/2 Normally Closed				
VSD2CAD4-K11*K	1.0	10	2	None
VSD2CAD4-K19*K	1.0	10	3.4	None
VSD2CAG4-K19*K	1.6	5	3.4	None
VSD2CAD4-K13*K	1.0	12	6	None
VSD2CAG4-K13*K	1.6	10	6	None
Standard models - 3/2 Normally Closed				
VSD7CAD4-K11*K	1.0	10	2	None
VSD7CAD4-K19*K	1.0	10	3.4	None
VSD7CAG4-K19*K	1.6	3	3.4	None
VSD7CAD4-K13*K	1.0	12	6	None
VSD7CAG4-K13*K	1.6	7	6	None
Automotive models - 2/2 Normally Closed				
VSD2CAD4-K19*K	1.0	10	3.4	None
VSD2CAD4-K1V*K	1.0	12	4.7	None
VSD2CAG4-K1V*K	1.6	3	4.7	None
Automotive models - 3/2 Normally Closed				
VSD7CAD4-K19*K	1.0	10	3.4	None
VSD7CAG4-K19*K	1.6	3	3.4	None
VSD7CAD4-K1V*K	1.0	12	4.7	None
VSD7CAG4-K1V*K	1.6	3	4.7	None

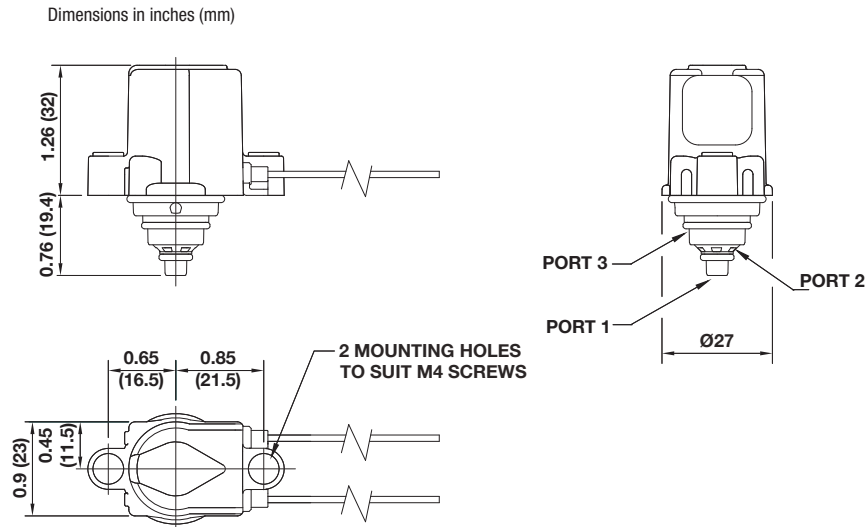
Voltage Codes

Supply D C	Power (w)	Code
12 V	2	2
	3.4	2
	4.7	2
	6	2
24V	2	3
	3.4	3
	4.7	3
	6	3

Electrical Details

Voltage Tolerance	+/- 10% standard specification +/- 25% automotive specification
DC Power	2, 3.4 & 6 w standard specification 3.4 & 4.7 w automotive specification
Typical Electrical	On 10 to 20 ms
Response Time	Off 5 to 10 ms
Protection Class	IP65 (DIN 40 050) with cable clamp
Electrical Duty	100 % (Continuously rated)
Coil	Fully encapsulated
Electrical Connections	Flying leads (length approx. 520 mm)

Cartridge Solenoid Valve



Contact Norgren for valve interface information.

Prospector Series Poppet Valves

1/4" to 2" Solenoid Pilot Actuated

2/2, 3/2, & 4/2 Inline Valves

High flow - Cv of 1.2 to 49.5

Durable, robust construction

1/4" to 2" ports (BSPP, PTF, or ISO Rc threads)

Wide range of voltages available

Four functional types: available in 2/2, 3/2, 3/2 multi-directional, and 4/2 configurations

Technical Data

Medium:

Filtered and lubricated or non-lubricated compressed air or vacuum.

Operation:

Poppet valve solenoid pilot actuated.

Mounting:

Through-holes in valve body and subbase.

Port Size:

1/4" to 2" PTF, BSPP, or ISO Rc.

Operating Pressure:

Maximum 150 psig (10.3 bar).

Flow Characteristics:

Basic size	Function	Cv*
1/4"	3/2 & 4/2	1.2 - 1.8
1/2"	2/2, 3/2 & 4/2	3.2 - 5.8
1"	2/2, 3/2 & 4/2	10.3 - 17.7
2"	2/2 & 3/2	39.6 - 49.5

*See web site for additional information.

Operating Temperature:
-20°F to 120°F** (-29°C to 49°C)

**Consult Technical Service for use below 34°F (+2°C).

Materials:

Body: Aluminum alloy body, piston, poppets and subbase.

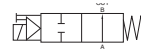
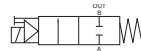
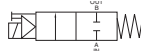
Operators: Zinc or aluminum solenoid pilot operators, stainless steel or steel, reinforced polyester, brass or polyurethane, acetal, copper wire.

Elastomers: Nitrile rubber seals. (Fluorocarbon seals are optional, contact Technical Services.)



Solenoid pilot operated spring return inline valves with non-locking overrides, 120V, 60 Hz, and cablegrip connector

Model	Solenoid	Basic Size	Port Size	Function	Operating Pressure (psig)	Pilot Pressure† (psig)	Weight lbs.	Repair Kit*
2/2 (2 way)								
A1012C-CY	Internal Pilot	1/2"	1/4"	NC	30 - 150	30 - 150	2.12	53474-03
A1013C-CY	Internal Pilot	1/2"	3/8"	NC	30 - 150	30 - 150	2.22	53474-03
A1014C-CY	Internal Pilot	1/2"	1/2"	NC	30 - 150	30 - 150	2.22	53474-03
A1015C-CY	Internal Pilot	1/2"	3/4"	NC	30 - 150	30 - 150	2.22	53474-03
A1025C-CC	Internal Pilot	1"	3/4"	NC	30 - 150	30 - 150	4.4	53475-01
A1026C-CC	Internal Pilot	1"	1"	NC	30 - 150	30 - 150	4.4	53475-01
A1027C-CC	Internal Pilot	2"	1-1/4"	NC	30 - 150	30 - 150	4.4	53475-01
A1038C-CC	Internal Pilot	2"	1-1/2"	NC	30 - 150	30 - 150	4.4	53822-01
A1039C-CC	Internal Pilot	2"	2"	NC	30 - 150	30 - 150	8.76	53822-01
3/2								
A1012H-CY	External Pilot	1/2"	1/4"	NC	0 - 150	30 - 150	2.12	53474-03
A1013H-CY	External Pilot	1/2"	3/8"	NC	0 - 150	30 - 150	2.22	53474-03
A1014H-CY	External Pilot	1/2"	1/2"	NC	0 - 150	30 - 150	2.22	53474-03
A1015H-CY	External Pilot	1/2"	3/4"	NC	0 - 150	30 - 150	2.22	53474-03
A1025H-CC	External Pilot	1"	3/4"	NC	0 - 150	30 - 150	4.4	53475-01
A1026H-CC	External Pilot	1"	1"	NC	0 - 150	30 - 150	4.4	53475-01
A1027H-CC	External Pilot	1"	1-1/4"	NC	0 - 150	30 - 150	4.4	53475-01
A1038H-CC	External Pilot	2"	1-1/2"	NC	0 - 150	30 - 150	4.4	53822-01
A1039H-CC	External Pilot	2"	2"	NC	0 - 150	30 - 150	8.76	53822-01
4/2								
B1012C-CY	Internal Pilot	1/2"	1/4"	NO	30 - 150	30 - 150	2.22	53474-03
B1013C-CY	Internal Pilot	1/2"	3/8"	NO	30 - 150	30 - 150	2.22	53474-03
B1014C-CY	Internal Pilot	1/2"	1/2"	NO	30 - 150	30 - 150	2.22	53474-03
B1015C-CY	Internal Pilot	1/2"	3/4"	NO	30 - 150	30 - 150	2.22	53474-03
B1025C-CC	Internal Pilot	1"	3/4"	NO	30 - 150	30 - 150	4.4	53475-01
B1026C-CC	Internal Pilot	1"	1"	NO	30 - 150	30 - 150	4.4	53475-01
B1027C-CC	Internal Pilot	1"	1-1/4"	NO	30 - 150	30 - 150	4.4	53475-01
B1012H-CY	External Pilot	1/2"	1/4"	NO	0 - 150	30 - 150	2.22	53474-03
B1013H-CY	External Pilot	1/2"	3/8"	NO	0 - 150	30 - 150	2.22	53474-03
B1014H-CY	External Pilot	1/2"	1/2"	NO	0 - 150	30 - 150	2.22	53474-03
B1015H-CY	External Pilot	1/2"	3/4"	NO	0 - 150	30 - 150	2.22	53474-03
B1025H-CC	External Pilot	1"	3/4"	NO	0 - 150	30 - 150	4.4	53475-01
B1026H-CC	External Pilot	1"	1"	NO	0 - 150	30 - 150	4.4	53475-01
B1027H-CC	External Pilot	1"	1-1/4"	NO	0 - 150	30 - 150	4.4	53475-01

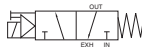
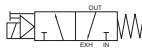
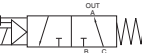



Prospector Series Poppet Valves

1/4" to 2" Solenoid Pilot Actuated

2/2, 3/2, & 4/2 Inline Valves

Solenoid pilot operated spring return inline valves with non-locking overrides, 120V, 60 Hz, and cablegrip connector

	Model 3/2 (3 way) Inline Valves	Solenoid	Basic Size	Port Size	Function	Operating Pressure (psig)	Pilot Pressure† (psig)	Weight lbs.	Repair Kit*
	D1012B-CY	Internal Pilot	1/4"	1/4"	NC	30 - 150	30 - 150	1.91	53473-05
	D1013B-CY	Internal Pilot	1/4"	3/8"	NC	30 - 150	30 - 150	1.91	53473-05
	D1022C-CY	Internal Pilot	1/2"	1/4"	NC	30 - 150	30 - 150	2.5	53474-03
	D1023C-CY	Internal Pilot	1/2"	3/8"	NC	30 - 150	30 - 150	2.5	53474-03
	D1024C-CY	Internal Pilot	1/2"	1/2"	NC	30 - 150	30 - 150	2.5	53474-03
	D1025C-CY	Internal Pilot	1/2"	3/4"	NC	30 - 150	30 - 150	2.5	53474-03
	D1035C-CC	Internal Pilot	1"	3/4"	NC	30 - 150	30 - 150	4.49	53475-01
	D1036C-CC	Internal Pilot	1"	1"	NC	30 - 150	30 - 150	4.49	53475-01
	D1047C-CC	Internal Pilot	1"	1-1/4"	NC	30 - 150	30 - 150	4.49	53475-01
		D1012H-CY	External Pilot	1/4"	1/4"	NC	0 - 150	30 - 150	1.91
D1013H-CY		External Pilot	1/4"	3/8"	NC	0 - 150	30 - 150	1.91	53473-05
D1022H-CY		External Pilot	1/2"	1/4"	NC	0 - 150	30 - 150	2.5	53474-03
D1023H-CY		External Pilot	1/2"	3/8"	NC	0 - 150	30 - 150	2.5	53474-03
D1024H-CY		External Pilot	1/2"	1/2"	NC	0 - 150	30 - 150	2.5	53474-03
D1025H-CY		External Pilot	1/2"	3/4"	NC	0 - 150	30 - 150	2.5	53474-03
D1035H-CC		External Pilot	1"	3/4"	NC	0 - 150	30 - 150	4.49	53475-01
D1036H-CC		External Pilot	1"	1"	NC	0 - 150	30 - 150	4.49	53475-01
D1047H-CC		External Pilot	1"	1-1/4"	NC	0 - 150	30 - 150	4.49	53475-01
		E1012B-CY	Internal Pilot	1/4"	1/4"	NO	30 - 150	30 - 150	1.91
	E1013B-CY	Internal Pilot	1/4"	3/8"	NO	30 - 150	30 - 150	1.91	53473-05
	E1022C-CY	Internal Pilot	1/2"	1/4"	NO	30 - 150	30 - 150	2.5	53474-03
	E1023C-CY	Internal Pilot	1/2"	3/8"	NO	30 - 150	30 - 150	2.5	53474-03
	E1024C-CY	Internal Pilot	1/2"	1/2"	NO	30 - 150	30 - 150	2.5	53474-03
	E1025C-CY	Internal Pilot	1/2"	3/4"	NO	30 - 150	30 - 150	2.5	53474-03
	E1035C-CC	Internal Pilot	1"	3/4"	NO	30 - 150	30 - 150	6.49	53475-01
	E1036C-CC	Internal Pilot	1"	1"	NO	30 - 150	30 - 150	4.49	53475-01
	E1047C-CC	Internal Pilot	1"	1-1/4"	NO	30 - 150	30 - 150	4.49	53475-01
		E1012H-CY	External Pilot	1/4"	1/4"	NO	0 - 150	30 - 150	1.91
E1013H-CY		External Pilot	1/4"	3/8"	NO	0 - 150	30 - 150	1.91	53473-05
E1022H-CY		External Pilot	1/2"	1/4"	NO	0 - 150	30 - 150	2.5	53474-03
E1023H-CY		External Pilot	1/2"	3/8"	NO	0 - 150	30 - 150	2.5	53474-03
E1024H-CY		External Pilot	1/2"	1/2"	NO	0 - 150	30 - 150	2.5	53474-03
E1025H-CY		External Pilot	1/2"	3/4"	NO	0 - 150	30 - 150	2.5	53474-03
E1035H-CC		External Pilot	1"	3/4"	NO	0 - 150	30 - 150	6.49	53475-01
E1036H-CC		External Pilot	1"	1"	NO	0 - 150	30 - 150	4.49	53475-01
E1047H-CC		External Pilot	1"	1-1/4"	NO	0 - 150	30 - 150	4.49	53475-01

* Repair Kit: Kits contain all elastomers necessary to service one valve body.

† External Pilot Supply: Pilot supply pressure must be equal to or greater than the operating pressure.

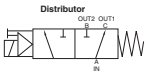
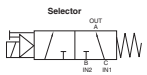
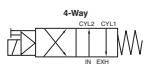
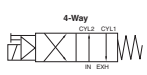
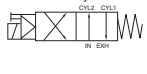
Prospector Series Poppet Valves

1/4" to 2" Solenoid Pilot Actuated

2/2, 3/2, & 4/2 Inline Valves

VALVES

Inline valves with non-locking override

	Model* 3/2 (3-way) multi-directional	Solenoid	Basic Size	Port Size	Operating Pressure (psig)	Pilot Pressure** (psig)	Weight lbs.	Repair Kit†	
	C1012C-CY	Internal Pilot	1/2"	1/4"	30 - 150	30 - 150	2.12	53474-03	
	C1013C-CY	Internal Pilot	1/2"	3/8"	30 - 150	30 - 150	2.12	53474-03	
	C1014C-CY	Internal Pilot	1/2"	1/2"	30 - 150	30 - 150	2.12	53474-03	
	C1025C-CY	Internal Pilot	1/2"	3/4"	30 - 150	30 - 150	2.12	53474-03	
	C1035C-CC	Internal Pilot	1"	3/4"	30 - 150	30 - 150	2.12	53475-01	
	C1036C-CC	Internal Pilot	1"	1"	30 - 150	30 - 150	4.64	53475-01	
	C1037C-CC	Internal Pilot	1"	1-1/4"	30 - 150	30 - 150	4.64	53475-01	
	C1048C-CC	Internal Pilot	2"	1-1/2"	30 - 150	30 - 150	9.42	53822-01	
	C1049C-CC	Internal Pilot	2"	2"	30 - 150	30 - 150	9.42	53822-01	
	<p>These models may be used as Distributor, Selector, Normally Open or Normally Closed.</p> 	C1012H-CY	External Pilot	1/2"	1/4"	0 - 150	30 - 150	2.12	53474-03
C1013H-CY		External Pilot	1/2"	3/8"	0 - 150	30 - 150	2.12	53474-03	
C1014H-CY		External Pilot	1/2"	1/2"	0 - 150	30 - 150	2.12	53474-03	
C1025H-CY		External Pilot	1/2"	3/4"	0 - 150	30 - 150	2.12	53474-03	
C1035H-CC		External Pilot	1"	3/4"	0 - 150	30 - 150	4.64	53475-01	
C1036H-CC		External Pilot	1"	1"	0 - 150	30 - 150	4.64	53475-01	
C1037H-CC		External Pilot	2"	1-1/4"	0 - 150	30 - 150	4.42	53475-01	
C1048H-CC		External Pilot	2"	1-1/2"	0 - 150	30 - 150	9.42	53822-01	
C1049H-CC		External Pilot	2"	2"	0 - 150	30 - 150	9.42	53822-01	
		C1052C-CY	Internal Pilot	1/2"	1/4"	30 - 150	30 - 150	2.12	53474-03
	C1053C-CY	Internal Pilot	1/2"	3/8"	30 - 150	30 - 150	2.12	53474-03	
	C1054C-CY	Internal Pilot	1/2"	1/2"	30 - 150	30 - 150	2.12	53474-03	
	C1065C-CY	Internal Pilot	1/2"	3/4"	30 - 150	30 - 150	2.12	53474-03	
	C1088C-CC	Internal Pilot	2"	1-1/2"	30 - 150	30 - 150	9.42	53822-01	
	C1089C-CC	Internal Pilot	2"	2"	30 - 150	30 - 150	9.42	53822-01	
	4/2 (4 way)								
		F1012C-CY	Internal Pilot	1/4"	1/4"	30 - 150	30 - 150	1.91	53477-06
		F1013C-CY	Internal Pilot	1/4"	3/8"	30 - 150	30 - 150	1.91	53473-05
		F1023C-CY	Internal Pilot	1/2"	3/8"	30 - 150	30 - 150	2.5	53474-06
F1024C-CY		Internal Pilot	1/2"	1/2"	30 - 150	30 - 150	2.5	53474-06	
F1025C-CY		Internal Pilot	1/2"	3/4"	30 - 150	30 - 150	2.5	53474-06	
F1035C-CC		Internal Pilot	1"	3/4"	30 - 150	30 - 150	2.5	53475-06	
F1036C-CC		Internal Pilot	1"	1"	30 - 150	30 - 150	4.49	53475-06	
F1037C-CC		Internal Pilot	1"	1-1/4"	30 - 150	30 - 150	4.49	53475-06	
F1012H-CY		External Pilot	1/4"	1/4"	0 - 150	30 - 150	1.91	53477-06	
F1013H-CY		External Pilot	1/4"	3/8"	0 - 150	30 - 150	1.91	53473-05	
	F1023H-CY	External Pilot	1/2"	3/8"	0 - 150	30 - 150	2.5	53474-06	
	F1024H-CY	External Pilot	1/2"	1/2"	0 - 150	30 - 150	2.5	53474-06	
	F1025H-CY	External Pilot	1/2"	3/4"	0 - 150	30 - 150	2.5	53474-06	
	F1035H-CC	External Pilot	1"	3/4"	0 - 150	30 - 150	2.5	53475-06	
	F1036H-CC	External Pilot	1"	1"	0 - 150	30 - 150	4.49	53475-06	
	F1037H-CC	External Pilot	1"	1-1/4"	30 - 150	30 - 150	4.49	53475-06	

* Operators have non-locking override and 110/120V 50/60 Hz coil

** External Pilot Supply: Pilot supply pressure must be equal to or greater than the operating pressure.

† Repair Kit: Kits contain all elastomers necessary to service one valve body.

Technical Details for Prospector Solenoid Pilot Operated Valves

Rating	90 - 105% Continuous Duty; and 85 - 105% for CC.
Power Requirements	CC: 8 WDC, 8 WAC. CY: 6 WDC, 7 WAC. (See Options on VAL-12-13).
Electrical Connection	CC: Form A per DIN 43650; CE, CF, CY: Industry Standard Form B per DIN 43650.
Manual Override	Non-Locking (See Options on VAL-12-13)
Protection Class	IP65 (NEMA 4) (See Options on VAL-12-13)
Coil Type	Class H. Molded with 3-pin plug in connector. (See Options on VAL-12-13).
Plug	Cable grips for cables 6 to 8 mm (1/4" to 5/16") in diameter.

Prospector Series Poppet Valves

1/4" to 2" Solenoid Pilot Actuated

2/2, 3/2, & 4/2 Inline Valves

Voltage Options

Specify the desired valve model number (from pages 2, 3 or 5) and note the solenoid operator from the last 2 digits. Use the table below to obtain options and add the desired option part number to the model number.

For example: order AA025C-00-CY1W4 for a 2-port/2-position, normally closed, internal pilot, Solenoid Pilot Operated spring return valve with non-locking override using 24V/60Hz optional voltage.

Standard Solenoid Operators VOLTAGE	Optional Solenoid Operator					
	CC	CE, CY	CF*	C0, C1	X1	P1
12V/60Hz/50Hz	—	1W3	—	—	—	—
24V/50Hz	1WC	1W4	1WJ	—	—	1PG
24V/60Hz	1WC	1W4	1WJ	—	—	1PH
48V/50Hz	—	1W5	—	—	—	—
48V/60Hz	—	1W5	—	—	—	1PF
100V/50Hz	—	—	—	Standard	Standard	—
110V/50Hz	Standard	Standard	1WH	—	—	Standard
120V/50Hz	—	—	—	1RD	1NF	—
120V/60Hz	Standard	Standard	1WH	Standard	Standard	Standard
220V/50Hz	1WB	1W6	—	—	—	1PD
240V/60Hz	1WB	1W6	—	1R5	1NH	1PA
440V/50Hz	—	—	—	—	—	1PE
480V/60Hz	—	—	—	—	—	1PB
6VDC	—	—	1WK	1R1	1N7	—
12VDC	1WD	1W1	1WF	1R2	1NA	—
24VDC	1WA	1W2	Standard	1R3	1ND	—
110VDC	—	—	1WL	—	—	—

* CF operator is equipped with fluorocarbon elastomer as standard.

Replacement Coils

For replacement connectors and bases, please contact Technical Services.

VOLTAGE	Standard Solenoid Operators			Optional Solenoid OperatorS		
	CC	CE, CY	CF*	C0, C1	X1	P1
12V/60Hz/50Hz	—	54452-04	—	—	—	—
24V/50Hz	40110-K40	54452-05	54469-04	—	—	53761-32
24V/60Hz	40110-K40	—	54469-04	—	—	53761-33
48V/50Hz	—	54452-06	—	—	—	—
48V/60Hz	—	54452-06	—	—	—	53761-31
100V/50Hz	—	—	—	53901-01	53902-01	—
110V/50Hz	40110-K38	54452-01	54469-03	—	—	53761-28
120V/50Hz	—	—	—	53901-07	53902-13	—
120V/60Hz	40110-K38	54452-01	54469-03	53901-01	53902-01	53761-28
220V/50Hz	40110-K39	54452-07	54452-07	—	—	53761-29
240V/60Hz	40110-K39	54452-07	54452-07	53901-05	53902-14	53761-26
440V/50Hz	—	—	—	—	—	53761-30
480V/60Hz	—	—	—	—	—	53761-27
6VDC	—	—	54469-05	53901-02	53902-10	—
12VDC	40110-K41	54452-02	54469-01	53901-03	53902-11	—
24VDC	40110-K37	54452-03	54469-02	53901-04	53902-12	—
110VDC	—	—	54469-06	—	—	—

* CF operator is equipped with fluorocarbon elastomer as standard.

Prospector Series Poppet Valves

1/4" to 2" Air Pilot Actuated

2/2, 3/2, & 4/2 Inline Valves



High flow - Cv of 1.2 to 49.5

Durable, robust construction

Two mounting styles: inline or subbase

1/4" to 2" ports (BSPP, PTF, or ISO Rc threads)

Wide range of Air Pilot Operators available

Four functional types: available in 2/2, 3/2, 3/2 multi-directional and 4/2 configurations

Technical Data

Medium:

Filtered and lubricated or non-lubricated compressed air or vacuum.

Operation:

Poppet valve air pilot actuated.

Mounting:

Through-holes in valve body and subbase.

Port Size:

1/4" to 2" PTF, BSPP, or ISO Rc.

Operating Pressure:

300 psig (Maximum 20.7 bar). For details see overleaf.

Flow Characteristics:

Basic size	Function	Cv*
1/4"	3/2 & 4/2	1.2 - 1.8
1/2"	2/2, 3/2 & 4/2	3.2 - 5.8
1"	2/2, 3/2 & 4/2	10.3 - 17.7
2"	2/2 & 3/2	39.6 - 49.5

*See VAL-12-58 for additional flow information.

Operating Temperature:

-20°F to 175°F** (-29°C to 79°C)

**Consult Technical Service for use below 35°F (+2°C).

Materials

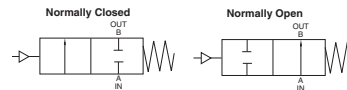
Body: Aluminum alloy body, piston, poppets and subbase.

Operators: Zinc or aluminum air pilot operators.

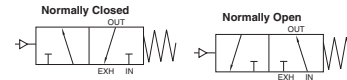
Elastomers: Nitrile rubber seals.

(Fluorocarbon seals are optional, contact Technical Services.)

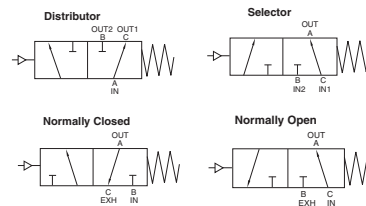
2-Port/2-Position



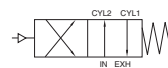
3-Port/2-Position



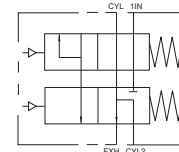
3-Port/2-Position Multi-Directional



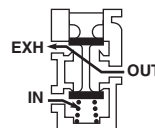
4-Port/2-Position 4-Way



4-Port/2-Position 3-Way Twin Normally Closed



This example shows a 3-way normally closed valve.



Prospector Series Poppet Valves

1/4" to 2" Air Pilot Actuated

2/2, 3/2, & 4/2 Inline Valves

Single air pilot operated spring return inline valves

	Model	Basic Size	Port	Function Size	Operating Pressure (psig)	Pilot Pressure* (psig)	Weight lbs.	Repair Kit†	
	2/2 (2 way)								
	A1012C-A1	1/2"	1/4"	NC	0 - 300	30 - 300	1.51	53474-03	
	A1013C-A1	1/2"	3/8"	NC	0 - 300	30 - 300	1.51	53474-03	
	A1014C-A1	1/2"	1/2"	NC	0 - 300	30 - 300	1.51	53474-03	
	A1015C-A1	1/2"	3/4"	NC	0 - 300	30 - 300	1.51	53474-03	
	A1025C-A1	1"	3/4"	NC	0 - 300	30 - 300	3.69	53475-01	
	A1026C-A1	1"	1"	NC	0 - 300	30 - 300	3.69	53475-01	
	A1027C-A1	1"	1-1/4"	NC	0 - 300	30 - 300	3.69	53475-01	
	A1038C-A1	2"	1-1/2"	NC	0 - 300	30 - 300	8.05	53822-01	
	A1039C-A1	2"	2"	NC	0 - 300	30 - 300	8.05	53822-01	
		2/2 (2 way)							
		B1012C-A1	1/2"	1/4"	NO	0 - 300	30 - 300	1.51	53474-03
B1013C-A1		1/2"	3/8"	NO	0 - 300	30 - 300	1.51	53474-03	
B1014C-A1		1/2"	1/2"	NO	0 - 300	30 - 300	1.51	53474-03	
B1015C-A1		1/2"	3/4"	NO	0 - 300	30 - 300	1.51	53474-03	
B1025C-A1		1"	3/4"	NO	0 - 300	30 - 300	3.69	53475-01	
B1026C-A1		1"	1"	NO	0 - 300	30 - 300	3.69	53475-01	
B1027C-A1		1"	1-1/4"	NO	0 - 300	30 - 300	3.69	53475-01	
	3/2 (3 way)								
	D1012H-A1	1/4"	1/4"	NC	0 - 300	30 - 300	1.2	53474-05	
	D1013H-A1	1/4"	3/8"	NC	0 - 300	30 - 300	1.2	53474-05	
	D1022C-A1	1/2"	1/4"	NC	0 - 300	30 - 300	1.79	53474-03	
	D1023C-A1	1/2"	3/8"	NC	0 - 300	30 - 300	1.79	53474-03	
	D1024C-A1	1/2"	1/2"	NC	0 - 300	30 - 300	1.79	53475-03	
	D1025C-A1	1/2"	3/4"	NC	0 - 300	30 - 300	1.79	53475-03	
	D1035C-A1	1"	3/4"	NC	0 - 300	30 - 300	3.78	53475-01	
	D1036C-A1	1"	1"	NC	0 - 300	30 - 300	3.78	53475-01	
	D1047C-A1	1"	1-1/4"	NC	0 - 300	30 - 300	3.78	53475-01	
		3/2 (3 way)							
		E1012H-A1	1/4"	1/4"	NO	0 - 300	30 - 300	1.2	53473-05
E1013H-A1		1/4"	3/8"	NO	0 - 300	30 - 300	1.2	53473-05	
E1022C-A1		1/2"	1/4"	NO	0 - 300	30 - 300	1.79	53474-03	
E1023C-A1		1/2"	3/8"	NO	0 - 300	30 - 300	1.79	53474-03	
E1024C-A1		1/2"	1/2"	NO	0 - 300	30 - 300	1.79	53474-03	
E1025C-A1		1/2"	3/4"	NO	0 - 300	30 - 300	1.79	53474-03	
E1035C-A1		1"	3/4"	NO	0 - 300	30 - 300	3.78	53475-01	
E1036C-A1	1"	1"	NO	0 - 300	30 - 300	3.78	53475-01		
E1047C-A1	1"	1-1/4"	NO	0 - 300	30 - 300	3.78	53475-01		
	3/2 (3 way) Multi-directional								
	C1012C-A1	1/2"	1/4"	-	0 - 300	30 - 300	1.41	53474-03	
	C1013C-A1	1/2"	3/8"	-	0 - 300	30 - 300	1.41	53474-03	
	C1014C-A1	1/2"	1/2"	-	0 - 300	30 - 300	1.41	53474-03	
	C1025C-A1	1/2"	3/4"	-	0 - 300	30 - 300	1.41	53474-03	
	C1035C-A1	1"	3/4"	-	0 - 300	30 - 300	3.94	53475-01	
	C1036C-A1	1"	1"	-	0 - 300	30 - 300	3.94	53475-01	
	C1037C-A1	1"	1-1/4"	-	0 - 300	30 - 300	3.94	53475-01	
	C1048C-A1	2"	1-1/2"	-	0 - 300	30 - 300	8.75	53822-01	
	C1049C-A1	2"	2"	-	0 - 300	30 - 300	8.75	53822-01	
	4/2 (3 way twin)								
	G1023B-A4	1/2"	3/8"	-	0 - 300	30 - 300	2.25	53474-06	
	G1024B-A4	1/2"	1/2"	-	0 - 300	30 - 300	2.25	53474-06	
	G1025B-A4	1/2"	3/4"	-	0 - 300	30 - 300	2.25	53474-06	
	G1035B-A4	1"	3/4"	-	0 - 300	30 - 300	4.96	53475-06	
	G1036B-A4	1"	1"	-	0 - 300	30 - 300	4.96	53475-06	
	G1037B-A4	1"	1-1/4"	-	0 - 300	30 - 300	4.96	53475-06	
	4/2 (4 way)								
	F1012C-A1	1/4"	1/4"	-	0 - 300	30 - 300	1.81	53473-05	
	F1013C-A1	1/4"	3/8"	-	0 - 300	30 - 300	1.81	53473-05	
	F1023C-A1	1/2"	3/8"	-	0 - 300	30 - 300	2.3	53474-06	
	F1024C-A1	1/2"	1/2"	-	0 - 300	30 - 300	2.3	53474-06	
	F1025C-A1	1/2"	3/4"	-	0 - 300	30 - 300	2.3	53474-06	
	F1035C-A1	1"	3/4"	-	0 - 300	30 - 300	5.42	53475-06	
	F1036C-A1	1"	1"	-	0 - 300	30 - 300	5.42	53475-06	
F1037C-A1	1"	1-1/4"	-	0 - 300	30 - 300	5.42	53475-06		

* Pilot supply pressure must be equal to or greater than the operating pressure.

** Repair Kit: Kit contains all elastomers necessary to service one valve body.

Prospector Series Poppet Valves

2/2, 3/2, & 4/2 Inline Valves

Port sizes (PTF standard: BSPP optional on most sizes)

Basic Size	Exhaust		Exhaust on all other Models
	Inlet and Cylinder Ports	on 3/2 Multi-directional Models	
1/4"	1/4"	–	3/8"
	3/8"	–	3/8"
1/2"	1/4"	1/4"	3/8"
	3/8"	3/8"	1/2"
	1/2"	1/2"	3/4"
	3/4"	3/4"	3/4"
1"	3/4"	3/4"	1"
	1"	1"	1-1/4"
	1-1/4"	1-1/4"	1-1/4"
	2"	2"	2"

Port Identification

Each of the valve ports is identified with a cast or stamped marking adjacent to the port.

Valve Materials

Main valve body, pistons, poppets, subbase: Aluminum (treated to resist corrosion).

Standard solenoid operators: Zinc (treated to resist corrosion), stainless steel, reinforced polyester, acetal, copper wire.

Optional solenoid operators: Aluminum (treated to resist corrosion), stainless steel, brass, acetal, copper wire.

Manual & mechanical operators: Aluminum (treated to resist corrosion) stainless steel, acetal, steel (treated to resist corrosion).

Elastomers: Nitrile. Fluorocarbon is optional when lubricants or impurities in the air system are incompatible with Nitrile.

Fluids

Filtered and lubricated compressed air or vacuum. Prospector poppet valves with A1, AA, or A4 air operators or with C, D, F, or X series solenoid operators may be used with filtered, non-lubricated compressed air or vacuum, although tests indicate that service life will be reduced. Valves with other operators must not be used in non-lubricated service.

Seal Compatibility

Prospector poppet valve seals are compatible with most good quality O-ring lubricants, including:

- DC BR-2+ grease (Dow Corning)
- DC 44 grease (Dow Corning)
- Magnalube G (Saunders Industries)
- Non-detergent mineral based oil such as Mobil DTE light oil.

Poppet valve seals are not compatible with WD-40 or commonly used deicer fluids. Consult factory to verify compatibility of lubricants or fluids not listed above.

Valve Exhaust

The valve exhaust port must not be restricted with anything more than a muffler or equal pipe size (most exhaust ports are larger than the inlet port). Back pressure on the exhaust side of the valve poppets can, under some conditions, result in failure to operate. If exhaust is to be piped away, piping should be installed horizontally or at a downward angle from the valve to provide drainage and minimize sludge formation.

Use of Speed Controls

Speed controls may be installed in the exhaust port on Norgren 3-port/2-position multi-direction popped valves. Note: On all other poppet valves, speed controls should only be installed in the air line between the valve and the air-operated device and as close as possible to the device.

Vacuum Service

Valves that can be used in vacuum service are identified by a "J" in the 6th position of the model number.

For on-off application of vacuum, use a normally closed 2-port/2-position (2-way) valve. Connect the vacuum to the inlet port. When the valve is actuated, vacuum will be applied to the outlet port.

For selecting alternately between vacuum and pressure, use a normally open 3-port/2-position (3-way) valve. Connect the vacuum to the exhaust port and vent the inlet port. When the valve is actuated, vacuum will be applied to the outlet port.

In additopm. 4-port/2-position (4-way) valves can be connected the same way as 3-port/2-position (3-way) valves for selectin alternately between vacuum and pressure or vacuum and vent. That is, connect the vacuum to the exhaust port and pressure or vent to the inlet port. When the valve is actuated, the cylinder ports (outlets) will be alternately switched between vacuum and pressure or vacuum and vent.

Representative response times @ 90 psig (6.2 bar) inlet pressure

Time lapse between solenoid energized and initial rise of outlet pressure

Operator	Valve body		
	Basic 1/4" 4-way	Basic 1/2" 3-way	Basic 1" 3-way
C1	3.1 ms	34.9 ms	68.9 ms
CC	3.4 ms	15.2 ms	32.2 ms
CE	4.0 ms	21.0 ms	42.0 ms
CF	3.9 ms	38.3 ms	82.3 ms

Time lapsed between solenoid energized and outlet pressure rise to 90% of inlet pressure

Operator	Valve body		
	Basic 1/4" 4-way	Basic 1/2" 3-way	Basic 1" 3-way
C1	63.7 ms	40.8 ms	83.0 ms
CC	28.9 ms	19.0 ms	40.3 ms
CE	37.8 ms	25.1 ms	52.4 ms
CF	80.7 ms	45.8 ms	102.8 ms

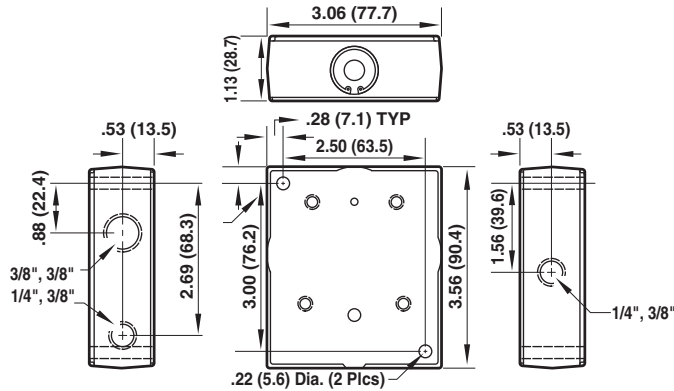
Prospector Series Poppet Valves

2/2, 3/2, & 4/2 Inline Valves

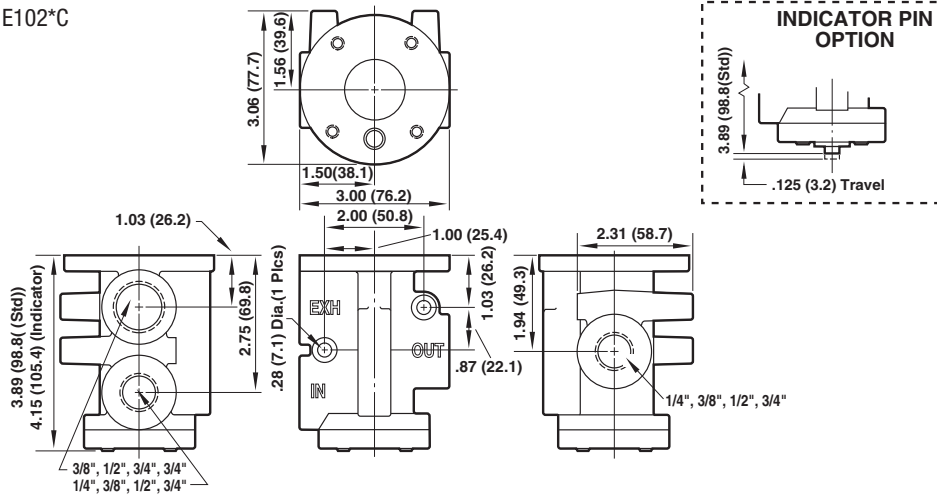
3/2 Inline Bodies

Dimensions in inches (mm)

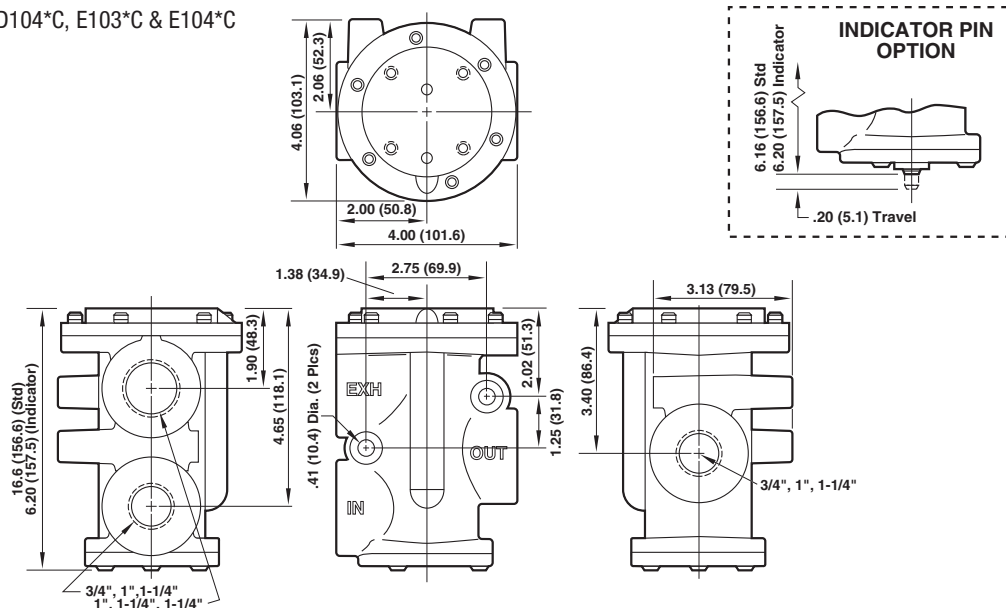
Basic 1/4-Inch Body D101*B & E101*B
(3-Port/2-Position Pilot Operated Valve)



Basic 1/2 - Inch Body D102*C & E102*C
(3/2 Pilot Operated Valve)



Basic 1 - Inch Body D103*C, D104*C, E103*C & E104*C
(3/2 Pilot Operated Valve)



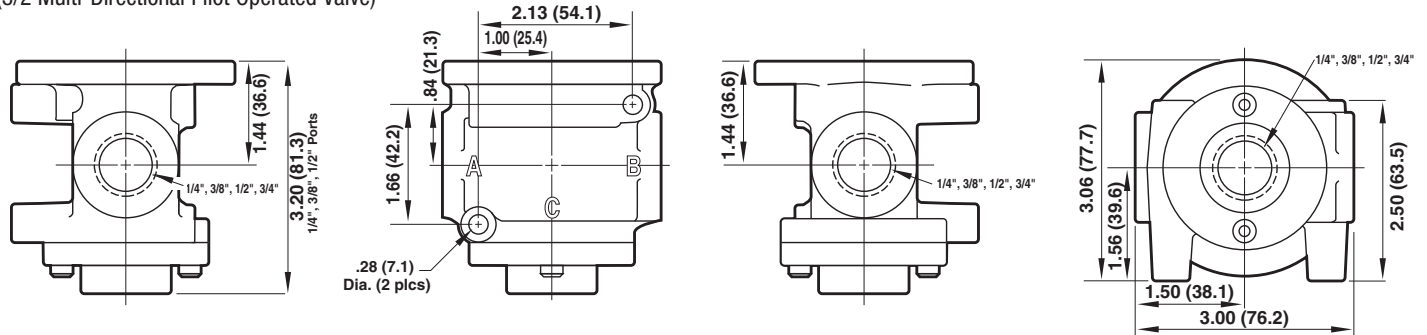
Prospector Series Poppet Valves

2/2, 3/2, & 4/2 Inline Valves

Dimensions in inches (mm)

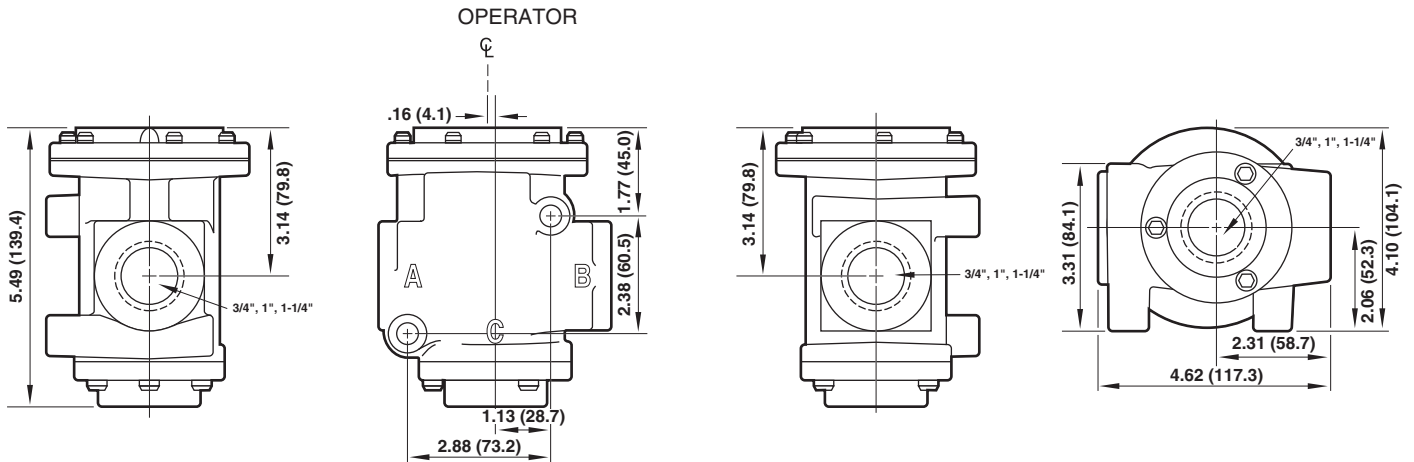
3/2 Multi-Directional Inline Bodies

Basic 1/2 - Inch Body C101*C, C102*C, C105*C & C106*C
(3/2 Multi-Directional Pilot Operated Valve)



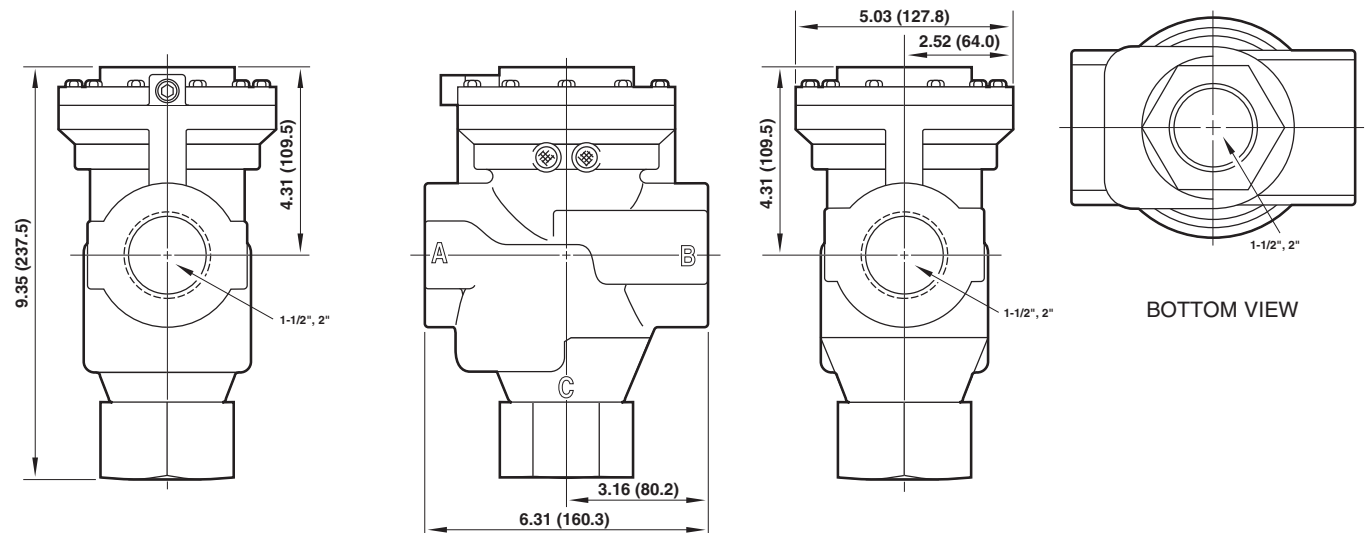
BOTTOM VIEW

Basic 1 - Inch Body C103*C
(3/2 Multi-Directional Pilot Operated Valve)



BOTTOM VIEW

Basic 2 - Inch Body C104*C & C108*C
(3/2 Multi-Directional Pilot Operated Valve)



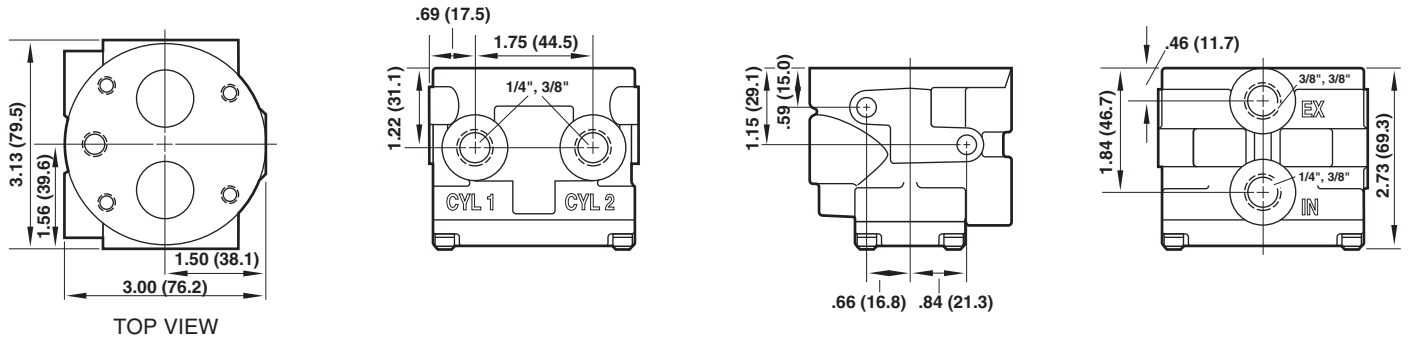
Prospector Series Poppet Valves

2/2, 3/2, & 4/2 Inline Valves

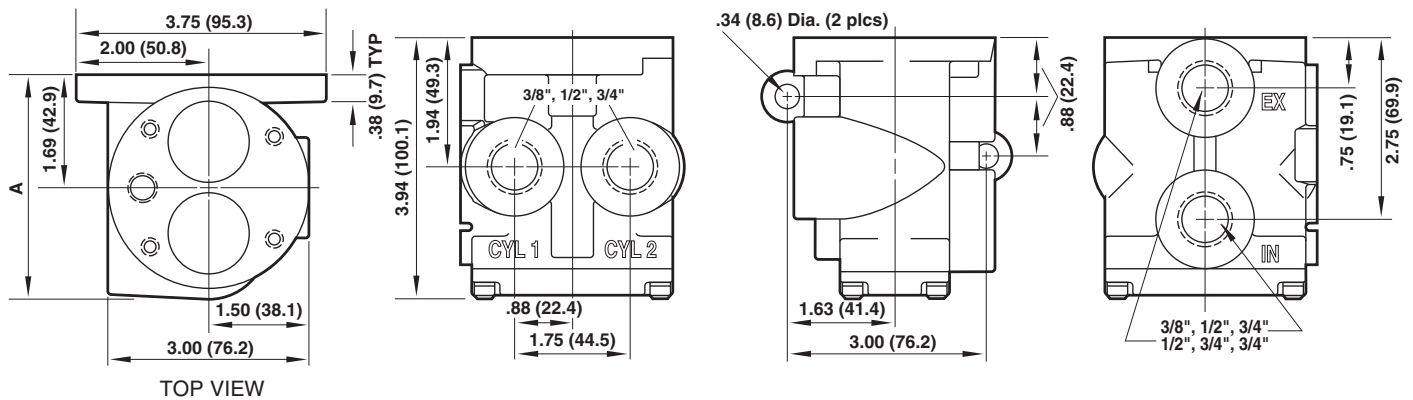
Dimensions in inches (mm)

4/2 Inline Bodies

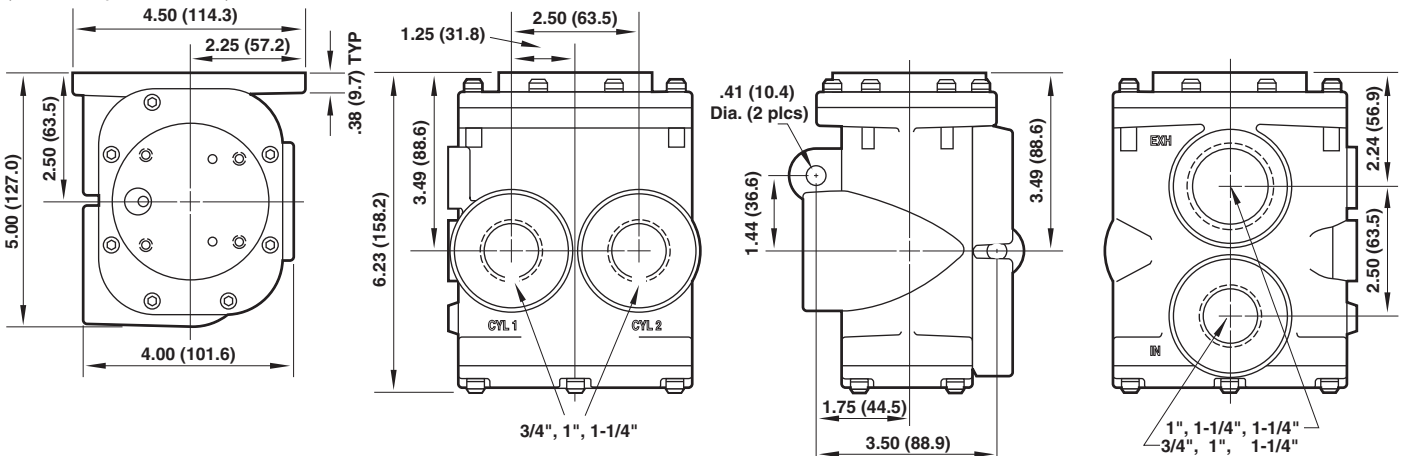
Basic 1/4 - Inch Body F101*C
(4/2 Pilot Operated Valve)



Basic 1/2 - Inch Body F102*C
(4/2 Pilot Operated Valve)



Basic 1 - Inch Body F103*C
(4/2 Pilot Operated Valve)

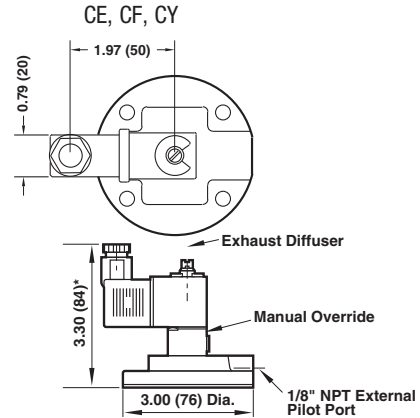
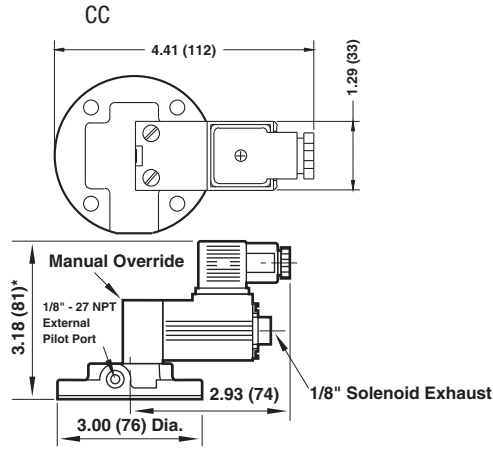


Prospector Series Poppet Valves

2/2, 3/2, & 4/2 Inline Valves

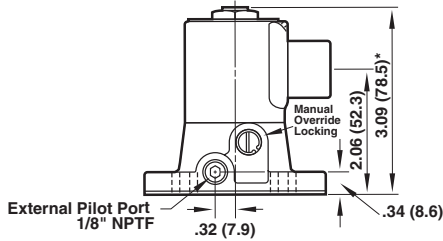
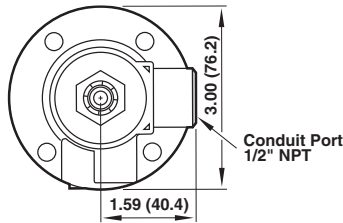
Dimensions in inches (mm)

Valve Body Operator with Standard Cable Grip Connector



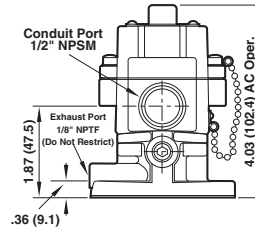
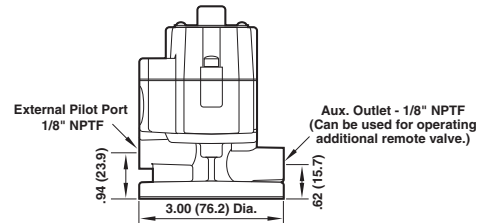
*Gasket 0.03 (0.8) thick included in dimensions

Optional C Series Conduit Housing CO, C1

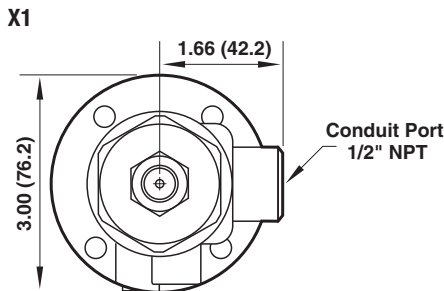


* Gasket 0.03 (0.8) thick included in dimensions.

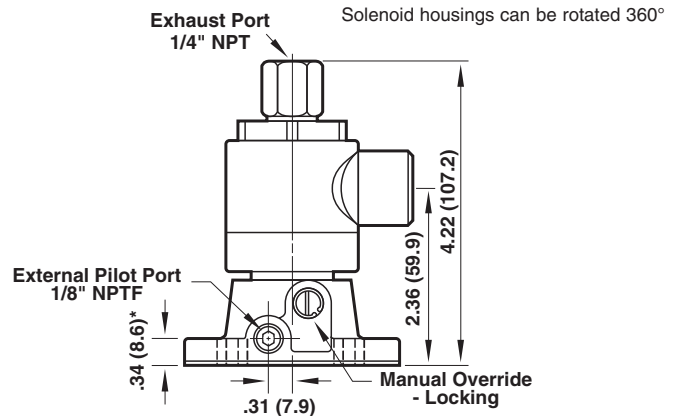
Optional P Series P1



Valve Body Operator Dimensions with Optional X Series - Hazardous Location



* Gasket 0.03 (0.8) thick included in dimensions.



Prospector Series Poppet Valves

Smooth Start Valves and Time Delay Options

Adjustable delay, up to 50 seconds
Time delays available in two functional models for 0 to 5 and 0 to 60 second delays
Time Delay on Operate and Time Delay on Release, normally open and normally closed available
Can be used in conjunction with most Norgren Poppet valves

Technical Data

Medium

3-Port/2-Position Time Delays: Filtered, nonlubricated dry compressed air.
 Other Time Delays: Filtered (5-micron), nonlubricated, dry compressed air at a constant pressure and temperature.
 The finer the filtration and the closer the regulation, the better the accuracy and repeatability of the time delay.

Mounting

Through-holes in valve body, inline, or on valve.

Port Size

3-Port/2-Position Time Delays: 1/4" PTF, BSPP, or ISO Rc.

Operating Pressure Range

3-Port/2-Position Time Delays: 30 to 150 psig (2.1 to 10.3 bar).
 Other Time Delays: Equal to or greater than main valve inlet pressure but not less than 30 psig (2.1 bar) and not greater than 150 psig (10.3 bar).

Operating Temperature

All Time Delays: 35°F to 130°F (2°C to 54°C).

Consult Technical Service for use below 35°F (+2°C).

Materials

Body: Aluminum alloy body, acetal, or aluminum check valve, stainless steel adjusting screw.

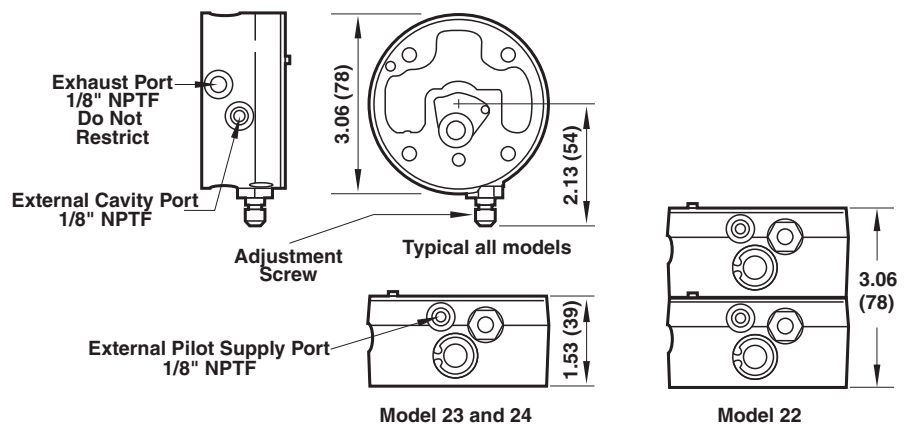
Elastomers: Nitrile rubber seals.

3-Port/2-Position Time Delay Valves

Norgren Time Delay Valves consist of a 0 to 60 second time delay fitted with an A1 air operator and a special bottom cap with IN and OUT ports. They are used to provide delayed actuation or release of valves or other pneumatic devices that do not require large air flows.

Symbol	Type	Port Size	Cv Factor		Model	Weight lbs (kg)
			In to Out Ports	Out to Exhaust Ports		
	Normally Closed, Time Delay on Operate (TDO)	1/4"	0.15	0.16	Z0002A	2.06 (0.94)
	Normally Open, Time Delay on Operate (TDO)	1/4"	0.16	0.09	Z0003A	2.06 (0.94)

* Thread: Insert 4 for BSPP; 1 for PTF; or 6 for ISO Rc.



Prospector Series Poppet Valves

Smooth Start Valves and Time Delay Options

0 to 5 Second Time Delays, & 0 to 60 Second Time Delays - Standard Applications and Special Applications For Use With Air and Solenoid Operated Poppet Valves

Most Norgren solenoid and air operated poppet valves can be equipped with an adjustable 0 to 5 or 0 to 60 second time delay. Both available in two functional models.

- (1) Time Delay on Operation (TDO), which delays shifting of the main valve poppet on application of the pilot signal, and releases the poppet immediately upon removal of the signal, and
- (2) Time Delay on Release (TDR), which shifts the main valve poppet immediately upon the application of the pilot signal, and delays release of the poppet on removal of the signal.

Norgren Air Pilot Operated Poppet Valves can be equipped with a Special Application 0 to 60 second One Shot Model, which shifts the main poppet respectively upon application of the pilot signal and releases the poppet after the time delay period is completed.

Ordering Information

Use only with valves as defined in the following diagram.

To order valves with a time delay, note the desired valve model number from previous pages in Section 10. Insert the desired time delay model number in the 7th and 8th positions of the valve model number as shown in the following diagram. For example: for a 4-Port/2-Position Air Pilot Operated Inline valve, F1024C-00-A1, with a 0 to 5 Second Time Delay on release order: F1024C-02-A1.

For 0 to 5 second time delay - DO NOT USE WITH 2" basic valves.

For 0 to 60 second ONE SHOT SPECIAL APPLICATION - DO NOT USE WITH 3-way twin valves.

Position in Model Number

1	2	3	4	5	6				
						0	0		

There must be an A, B, C, D, E, or F in the 1st position of the desired valve model number.

There must be a C, H, or J in the 6th position of the desired valve model number.*

For 0 to 60 Second, One Shot Models, there must be an A1 or AA in the 9th and 10th position of the desired model number.

Time Delay Models**	Weight lbs. (kg)
0 1 0 to 5 Second Time delay on operate.	0.68 (0.31)
0 2 0 to 5 Second Time delay on release.	0.68 (0.31)
0 3 0 to 60 Second Time delay on operate; Normally closed.	0.95 (0.43)
0 4 0 to 60 Second Time delay on release; Normally closed.	0.95 (0.43)
2 3 0 to 60 Second One Shot Time delay; Normally open.	0.95 (0.43)

NOTES:

* Valves with an internal pilot supply are identified by a C in the 6th position of the model number. See Figure 1 (on following page) for installation. ALTERNATE CONFIGURATION - MODE - 23 ONE SHOT TIME DELAY: The Alternate Configuration of Model 23 Time Delay (see next page for description) requires an unrestricted internal pilot supply passage. Select the desired valve model number as described above, then change the 6th position of the model number to B, i.e. D1022B-23-A1, when ordering Model 23 Alternate Configuration. See figure 1 for installation. When used with valves that have an external pilot supply (designated by an H or J in the 6th position of the valve model number), the pilot supply must be connected to the operator (Figure 2). Zero to five second time delays do not have an external pilot supply port.

** An adjustment screw provides an adjustment range of 0 to 5 or 0 to 60 seconds. For 0 to 60 second only this range can be extended by increasing the volume of the time delay cavity in the timer body. A port is provided in the body for connecting an additional external cavity which can consist of a short length of pipe (capped at one end) or other similar air receiver. Increasing the cavity an additional 29.5 cubic cm., (1.8 cubic inches) will roughly double the delay time for the same adjustment screw setting. There must be an A, B, C, D, E, or F in the 1st position of the desired valve model number.

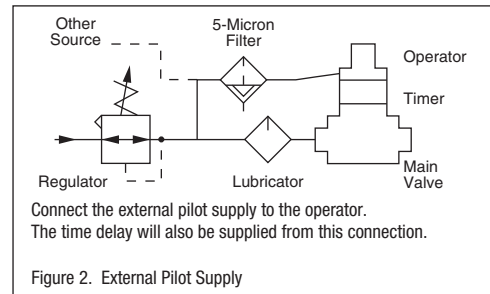
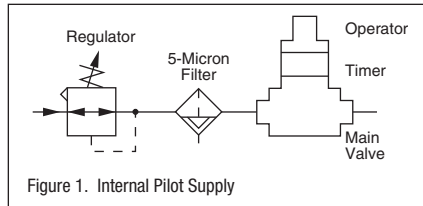
Prospector Series Poppet Valves

Smooth Start Valves and Time Delay Options

0 to 5 Second Time Delays, & 0 to 60 Second Time Delays - Standard Applications Cont.

Pilot Air Supply

The pilot air supply to the time delay must be filtered and regulated as described under Medium. For best timer performance, the installation shown in Figure 2 is recommended.



VALVES

Graphic Symbols and Timing Sequences

SIG — Pilot Signal

IPS — Internal Pilot Supply

EPS — External Pilot Supply (Shown Plugged)

EXH — Exhaust

MV — Main Valve (Piston)

ACT — Actuated

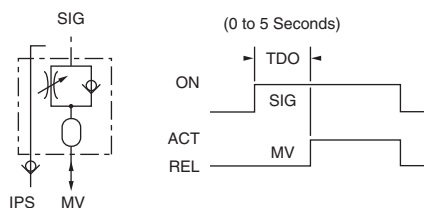
REL — Released (Deactuated)

IN PR — Inlet Pressure (Main Valve)

Port/Passage Plugged

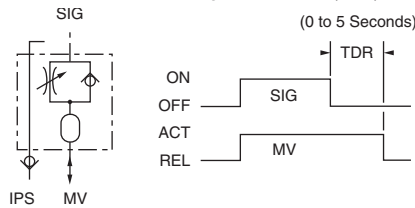
Passage Blocked

Model 01 - Time Delay on Operate (TDO)



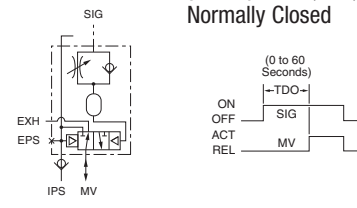
1. No pilot signal - main valve released.
2. Pilot signal applied - main valve actuates after the time delay period (TDO) is completed and remains actuated so long as the pilot signal is sustained.
3. Pilot signal removed - main valve released immediately.

Model 02 - Time Delay on Release (TDR)



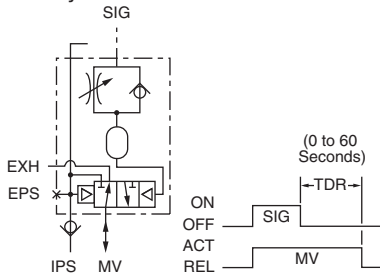
1. No pilot signal - main valve released.
2. Pilot signal applied - main valve actuates immediately and remains actuated so long as the pilot signal is sustained.
3. Pilot signal removed - main valve releases after the time delay period (TDR) is completed.

Model 03 - Time Delay on Operate (TDO) Normally Closed



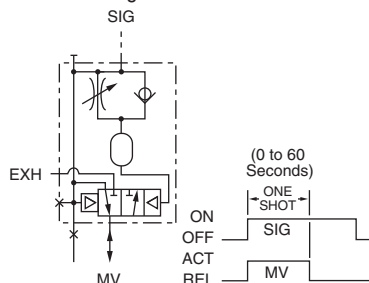
1. No pilot signal - main valve released.
2. Pilot signal applied - main valve actuates after the time delay period (TDO) is completed and remains actuated so long as the pilot signal is sustained.
3. Pilot signal removed - main valve released immediately.

Model 04 - Time Delay on Release (TDR) Normally Closed



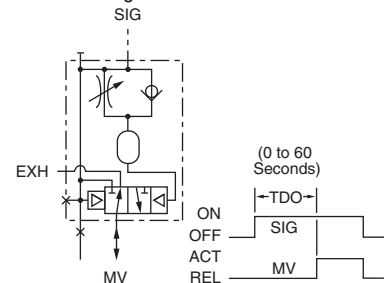
1. No pilot signal - main valve released.
2. Pilot signal applied - main valve actuates immediately and remains actuated so long as the pilot signal is sustained.
3. Pilot signal removed - main valve releases after the time delay period (TDR) is completed.

Model 23 One Shot, Normally Open Standard Configuration



1. No pilot signal - main valve released.
2. Pilot signal applied - main valve actuates immediately, then releases after the time delay period (one shot) is completed and remains released.
3. Pilot signal removed - main valve remains released.

Model 23 One Shot, Normally Open Alternate Configuration



1. Main valve inlet pressurized - main valve actuates immediately, then releases after the time delay period (one shot) is completed and remains released.
2. Main valve inlet pressure reduced to zero psig - main valve remains released.

Internal pilot supply Shut off air supply to main valve. Cycle valve operator until trapped air is exhausted from the main valve piston chamber, operator, and time delay. You may also install a 2-way vent valve on the external pilot supply port.

External pilot supply Shut off air supply to main valve and the pilot supply. Cycle the valve operator until the trapped air is exhausted. You may also install a 2-way vent valve on external pilot supply line.

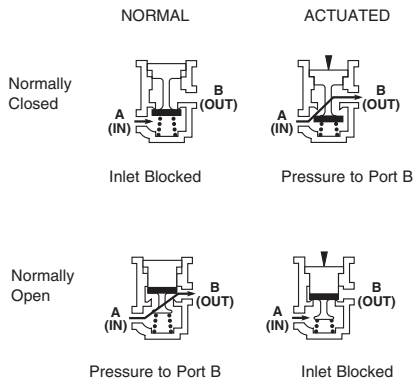
Prospector Series Poppet Valves

Valve types

2-Port/2-Position

These 2-way valves have an inlet and outlet port and are used as shutoff valves that open or close an air line. They are available in normally closed or normally open models. The normally closed model blocks flow when in its normal position, and permits flow when it is actuated. The normally open model permits flow when in its normal position, and blocks flow when actuated. Typical applications include on-off control of main plant air, air to branch lines, systems and air motors.

Flow Diagrams

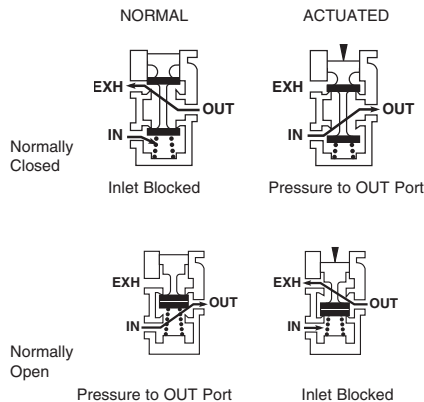


3-Port/2-Position

These 3-way valves have an inlet, outlet, and exhaust port and are typically used to pressurize and then exhaust air from such devices as single-acting cylinders. They are available in normally closed or normally open models. The normally closed model exhausts air from the device when in its normal position, and pressurizes the device when actuated. The normally open model pressurizes the device when in its normal position and exhausts air from the device when actuated.

The normally closed valve is available with two options: a position indicator pin and an air or solenoid momentary signal operator. The indicator pin can be used to operate a switch or other device to provide a signal for a control circuit. The momentary signal operator is used when it is desirable to control the valve with two alternately applied momentary signals (first signal shifts and holds the poppet; the second allows the poppet to return to its normal position).

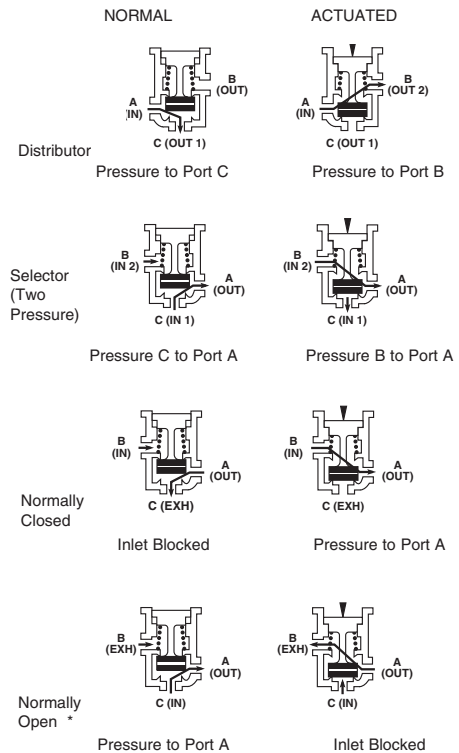
Flow Diagrams



3-Port/2-Position (Multi-Directional)

These 3-way valves can be used in four different ways — as a distributor, directing air first to one port, then to another; as a selector, directing first high, then low pressure air (or vacuum) to the same outlet; as a standard 3-port/2-position normally closed valve; and as a standard 3-port/2-position normally open * valve. Multi-directional valves are the only poppet valves with which speed controls can be installed in the exhaust port.

Flow Diagrams



* Normally open valves require an external pilot supply.

Prospector Series Poppet Valves

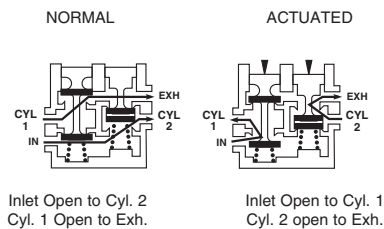
Valve types

4-Port/2-Position (4-Way)

This 4-way valve has a normally closed and a normally open 3-way valve element in a common body. Both elements are actuated simultaneously by a single operator. The valve body has an inlet, exhaust, and two outlet ports. In the normal position, pressurized air is directed to one outlet port and air is exhausted from the second outlet port. In the actuated position, the connections are reversed. Typical applications include control of double acting cylinders and reversible air motors.

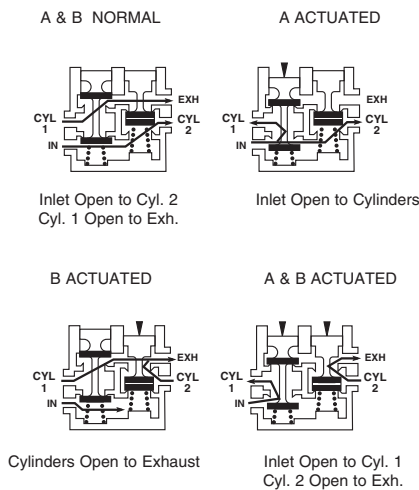
This valve is available with an optional air or solenoid momentary signal operator. Momentary signal operators are used when it is desirable to control the valve with two alternately applied momentary signals. The first signal shifts and holds the valve poppets in the actuated position; the second allows the poppets to return to the normal position.

Flow Diagrams with Single and Momentary Signal Operator



The 4-port/2-position (4-way) valve is also available with an optional air or solenoid twin operator, which allows independent operation of each valve element.

Flow Diagrams with Twin Operator



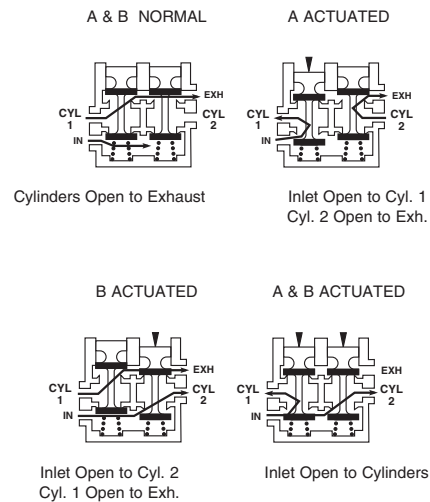
4-Port/2-Position (3-Way Twin, Normally Closed)

This 3-way twin valve has two normally closed 3-way valve elements in a common body. Each element is capable of independent actuation by an air or a solenoid operator. The valve body has an inlet, exhaust, and two outlet ports. In the normal position, pressurized air is blocked at the inlet port and air is exhausted from both outlet ports. It functions the same as two 3-port/2-position valves but provides greatly simplified plumbing and reduced package size.

NOTE

This valve may be used as a 3-position, 4-way, spring centered valve with cylinder ports open to exhaust in centered or normal position.

Flow Diagrams



Prospector Series Poppet Valves

Flow (Cv) Factors. Flow ratings determined in accordance with ANSI (NFPA) T3.21.3, Pneumatic fluid power - Flow test procedure and reporting method - for fixed orifice components.

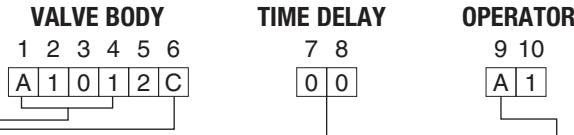
Valve Type		Basic Size	Port Size	Average Cv Factor			
2-Port/2-Position				Normally Closed Models A to B Ports		Normally Open Models A to B Ports	
		1/2"	1/4"	2.1	2.3		
			3/8"	3.4	3.8		
			1/2"	5.3	5.4		
			3/4"	6.5	6.3		
		1"	3/4"	10.7	12.0		
			1"	13.5	15.4		
			1-1/4"	16.3	17.9		
		2"	1-1/2"	34.0	—		
			2"	39.6	—		
3-Port/2-Position				Normally Closed Models		Normally Open Models	
				In to Out Ports	Out to Exh Ports	In to Out Ports	Out to Exh Ports
Basic	1/4"	1/4"	1.5	1.8	1.5	1.8	
		3/8"	1.7	1.8	1.7	1.8	
Basic	1/2"	1/4"	2.7	3.9	2.0	3.6	
		3/8"	3.6	4.9	3.1	4.6	
		1/2"	4.6	5.8	4.1	5.5	
Basic	1"	3/4"	5.4	6.2	4.9	5.8	
		1"	11.2	13.3	10.6	12.8	
		1-1/4"	13.2	14.6	11.7	13.8	
			16.6	18.4	12.0	15.5	
3-Port/2-Position Multi-Directional				A to C Ports	A to B Ports	C to A Ports	B to A Ports
Type	Ports	1/2"	1/4"	2.5	2.0	2.3	2.1
Distributor	A to C & A to B		3/8"	4.0	2.7	3.7	2.9
	C to A & B to A		1/2"	5.7	3.4	4.7	4.0
N.C.	A to C & B to A		3/4"	6.1	4.0	5.2	4.4
N.O.	C to A & A to B	1"	3/4"	14.8	10.3	13.4	11.1
			1"	17.7	13.2	14.0	14.1
			1-1/4"	18.3	14.0	14.6	16.5
		2"	1-1/2"	44.8	33.1	41.2	35.6
			2"	49.5	40.0	46.1	42.8
4-Port/2-Position (Inline Valves)				4-Way		3-Way Twin, Normally Closed	
				In to Cyl 2	Cyl 1 to Exh	In to Cyl 1 In to Cyls 1 & 2	Cyl 2 to Exh Cyls 1 & 2 to Exh
		1/4"	1/4"	1.2	1.6	1.2	1.6
			3/8"	1.4	1.6	1.4	1.6
		1/2"	3/8"	3.0	4.5	3.1	4.3
			1/2"	4.0	5.4	4.1	5.1
			3/4"	4.8	5.8	5.0	5.4
		1"	3/4"	10.3	13.1	11.0	12.5
			1"	11.3	14.3	12.9	13.4
			1-1/4"	11.6	14.5	14.3	13.7
All Subbase Valves				In to Cyl 1 Port	In to Cyl 2 Port	Cyl 1 to Exh Port	Cyl 2 to Exh Port
		1/2"	1/4"	1.8	2.0	3.4	3.2
			3/8"	2.7	3.0	3.7	3.7
			1/2"	3.2	3.6	4.7	4.7
			3/4"	3.5	3.9	4.7	4.7
		1"	3/4"	10.0	9.0	12.0	10.5
			1"	11.9	10.3	12.7	11.1
			1-1/4"	13.0	11.1	13.0	11.3

Prospector Series Poppet Valves

Repair Kits and Factory Installed Fluorocarbon Elastomers

- When requesting repair kits or information for your valve, give both main valve and operator model numbers exactly as found on their respective nameplates.
- Repair Kits - Repair kits contain all elastomers necessary to service one valve body, operator, or time delay. Order the appropriate valve body, operator, and time delay repair kit as required to service your valve.
- Valve Bodies and Operators with Factory Installed Fluorocarbon Elastomers - Valve bodies and some operators are available with fluorocarbon elastomers for use when contaminants in the air system are incompatible with the standard nitrile elastomers. To order valves with fluorocarbon elastomers, specify the desired valve model number (from the preceding pages plus the Order With numbers given below. Be sure to specify the Order With number for the valve body and the Order With number for the operator. Fluorocarbon elastomers are not available on Time Delays, on the A6 Air Operator, or on the standard C Series Solenoid Operators.

Position in Model Number



Type	Internal Variation	Repair Kit		Order With	Type	Repair Kit (Nitrile Only)	Repair Kit**		Order With
		Nitrile	Fluoro-carbon	Fluorocarbon Elastomer			Nitrile	Fluoro-carbon	Fluorocarbon Elastomer
A101	B, C, E, F, H, J, K	53474-03	53474-14	53474-21 1EE	01	53477-01	A1	None Used	None Used
A102	B, C, E, F, H, J, K	53475-01	53475-07	53475-13 1F2	02	53477-01	A4	None Used	None Used
A103	B, C, H, J	53822-01	53909-01	53909-03 1F8	03	53477-03	A6	53476-01	—
B101	B, C, E, F, H, J, K	53474-03	53474-14	53474-21 1EE	04	53477-03	—	—	—
B102	B, C, E, F, H, J, K	53475-01	53475-07	53475-13 1F2	05 Top	53477-01	CC	—	—
C101	B, C, E, F, H, J, K	53474-03	53474-08	53474-15 1E8	05 Bottom	53477-03	CE	—	—
C102	B, C, E, F, H, J, K	53474-03	53474-08	53474-15 1E8	09	53477-03	CF	—	Standard ††
C103	B, C, E, F, H, J, K	53475-01	53475-07	53475-13 1F2	10	53477-03	CN	—	—
C104	B, C, H, J	53822-01	53909-02	53909-04 1F9	22 Top	53477-03	CP	—	—
C105	B, C, E, F, H, J, K	53474-03	53474-08	53474-15 1E8	22 Bottom	53477-03	CR	—	—
C106	B, C, E, F, H, J, K	53474-03	53474-08	53474-15 1E8	23	53477-03	CS	—	—
C108	B, C, H, J	53822-01	53909-02	53909-04 1F9	24	53477-03	CT	—	53478-13
D101	B, E, F, H, K	53473-05	53473-06	53473-11	—	—	CU	—	—
D102	B, C, E, F, H, J, K	53474-03	53474-09	53474-16 1E9	—	—	CV	—	—
D103	B, C, E, F, H, J, K	53475-01	53475-08	53475-14 1F2	—	—	CW	—	—
D104	B, C, E, F, H, J, K	53475-01	53475-08	53475-14	—	—	CY	—	—
D107	B, C, F, H, J	53474-03	53474-24	53474-23	—	—	CZ	—	Standard ††
D108	B, C, F, H, J	53475-01	53475-22	53475-21	—	—	—	—	—
E101	B, F, H	53473-05	53473-07	53473-12	—	—	C0	53478-01	53478-13
E102	B, C, F, H, J	53474-03	53474-10	53474-17 1EA	—	—	C1	53478-01	53478-13
E103	B, C, F, H, J	53475-01	53475-09	53475-15	—	—	C2	53478-04	53478-13
E104	B, C, F, H, J	53475-01	53475-09	53475-15	—	—	C3	53478-04	53478-13
F101	B, C, E, H, K	53473-05	53473-08	53473-13 1E5	—	—	C4	53478-01	53478-13
F101	F	53473-16	53473-08*	53473-13	—	—	C8	53478-01	53478-13
F102	B, C, E, H, J, K	53474-06	53474-11	53474-18 1EB	—	—	DA	—	—
F102	F	53474-25	53474-11*	53474-18	—	—	D0 †	53478-02	53478-14
F103	B, C, E, H, J, K	53475-06	53475-10	53475-16	—	—	D1 †	53478-02	53478-14
F103	F	53475-25	53475-10*	53475-16	—	—	D2 †	53478-05	53478-16
F221	B, C, E, H, J, K	53474-06	53474-11	53474-18	—	—	D3 †	53478-05	53478-16
F221	F	53474-25	53474-11*	53474-18	—	—	D4 †	53478-01	53478-13
F222	B, C, E, H, J, K	53475-06	53475-10	53475-16	—	—	D5 †	53478-01	53478-13
F222	F	53475-25	53475-10*	53475-16	—	—	D6 †	53478-04	53478-15
F223	B, C, E, H, J, K	53474-06	53474-11	53474-18	—	—	D7 †	53478-04	53478-15
F223	F	53474-25	53474-11*	53474-18	—	—	D8 †	53478-04	53478-15
F224	B, C, E, H, J, K	53475-06	53475-10	53475-16	—	—	E1	53478-01	53478-13
F224	F	53475-25	53475-10*	53475-16	—	—	E3	53478-04	53478-15
F323	B, C, E, H, J, K	53474-06	53474-11	53474-18	—	—	E8	53478-01	53478-13
F323	F	53474-25	53474-11*	53474-18	—	—	F4 †	53478-02	53478-14
F324	B, C, E, H, J, K	53475-06	53475-10*	53475-16	—	—	F5 †	53478-05	53478-16
F324	F	53475-25	53475-10*	53475-16	—	—	F6 †	53478-01	53478-13
G102	B, C, E, H, J, K	53474-06	53474-12	53474-19 1EC	—	—	F7 †	53478-04	53478-15
G102	F	53474-25	53474-12*	53474-19 1EC	—	—	M Series	53769-01	53769-02
G103	B, C, E, H, J, K	53475-06	53475-11	53475-17	—	—	P Series	54853-01	NA
G103	F	53475-25	53475-11*	53475-17	—	—	X0	53478-07	53478-17
					—	—	X1	53478-07	53478-17
					—	—	X2 †	53478-08	53478-18
					—	—	X3 †	53478-08	53478-18
					—	—	X4 †	53478-07	53478-17
					—	—	X5 †	53478-07	53478-17

* Order Gasket 53045-02 when ordering fluorocarbon repair kits for valves with internal variation F.

** Solenoid operator repair kits do not include coils.

† Order two kits to service these operators.

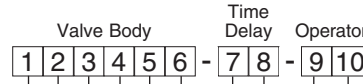
†† The CF, CT, CZ, and DA operators are equipped with fluorocarbon elastomers.

Prospector Series Poppet Valves

Product Number System

Use this chart as a product deconfigurator. It is not designed to "build" model numbers.

Position in Model Number



1 Valve Type

A	=	2-Port/2-Position, Normally Closed.
B	=	2-Port/2-Position, Normally Open.
C	=	3-Port/2-Position, Multi-Directional.
D	=	3-Port/2-Position, Normally Closed.
E	=	3-Port/2-Position, Normally Open.
F	=	4-Port/2-Position (4-way).
G	=	4-Port/2-Position, (3-way twin, Normally Closed).

2 Mounting Style

1	=	Inline, PTF Threads
A	=	Inline, BSPP Threads
2	=	Subbase valve with subbase, PTF Threads
3	=	Subbase valve without subbase, PTF Threads

3 & 4 Basic Size

01	=	1/4" Basic, (Valve Types D, E, F)
		1/2" Basic, (Valve Types A, B, C)
02	=	1/2" Basic, (Valve Types C, D, E, F, G)
		1" Basic, (Valve Types A, B)
03	=	1" Basic, (Valve Types C, D, E, F, G)
		2" Basic, (Valve Type A)
04	=	1" Basic, (Valve Types D, E)
		2" Basic, (Valve Type C)
05	=	1/2" Basic, (Valve Type C with 1/4", 3/8" & 1/2" ports)
06	=	1/2" Basic, (Valve Type C with 3/4" port)
21	=	1/2" Basic, (Valve Type F, Valve with subbase)
22	=	1" Basic, (Valve Type F, Valve with subbase)
23	=	1/2" Basic, (Valve Type F, Valve without subbase)
24	=	1" Basic, (Valve Type F, Valve without subbase)

5 Port Size PTF

2	=	1/4" Ports
3	=	3/8" Ports
4	=	1/2" Ports
5	=	3/4" Ports
6	=	1" Ports
7	=	1-1/4" Ports
8	=	1-1/2" Ports
9	=	2" Ports
0	=	Subbase valve without subbase.

6 Internal Variation

B	=	Internal Pilot Supply with unrestricted passage.
C	=	Internal Pilot Supply with check valve.
E	=	Sustaining Bleed Operation. Use only with momentary signal solenoid operator. Has an internal pilot supply.
F	=	Bleed Operation. Has an internal pilot supply with flow restrictor. Use only with A1 and A4 air operators.
H	=	External Pilot Supply.
J	=	Vacuum Service. Has an external pilot supply with heavy spring.
K	=	Sustaining Bleed Operation. Use only with momentary signal air operator.

7 & 8 Time Delay

01	=	0 to 5 seconds.	TDO	Normally closed.
02	=	0 to 5 seconds.	TDR	Normally closed.
03	=	0 to 60 seconds.	TDO	Normally closed.
04	=	0 to 60 seconds.	TDR	Normally closed.
05	=	0 to 60 seconds.	TDOR	Normally closed.
09	=	0 to 60 seconds.	TDO	Normally open.
10	=	0 to 60 seconds.	TDR	Normally open.
22	=	0 to 60 seconds.	Delayed One Shot.	
23	=	0 to 60 seconds.	One Shot	Normally closed.
24	=	0 to 60 seconds.	TDO	Normally closed.

Prospector Series Poppet Valves

Product Number System

VALVES

9 & 10 Solenoid Operators

Standard Solenoid Operators with Cable Grip Connector for use with Basic 1" & 2" Valves (Optional for use with Basic 1/4" & 1/2" Valves)

CC	=	Single solenoid, nonlocking override, 8 WAC & DC.
CR	=	Twin solenoid, nonlocking override, 8 WAC & DC.
CU	=	Momentary signal solenoid, nonlocking override, 8 WAC & DC
CK	=	CCW/24VDC & surge protector cable grip connector.*

Standard Solenoid Operators with Cable Grip Connector for use with Basic 1/2" & 1/4" Valves

CY	=	Single solenoid, nonlocking override, 7WAC, 6WDC
CE	=	Single solenoid, locking override, 7WAC, 6WDC
CS	=	Single solenoid, no override, 7WAC, 6WDC
CZ	=	Single solenoid, nonlocking override, 3.5WAC, 2WDC
CF	=	Single solenoid, locking override, 3.5WAC, 2WDC
DA	=	Single solenoid, no override, 3.5WAC, 2WDC
CW	=	Twin solenoid, nonlocking override, 7WAC, 6WDC
CN	=	Twin solenoid, locking override, 7WAC, 6WDC
CP	=	Twin solenoid, no override, 7WAC, 6WDC
CV	=	Momentary signal solenoid, nonlocking override, 7WAC, 6WDC.

Optional Solenoid Operators

C0	=	Single, no override, 1/2" conduit.
C1	=	Single, locking override, 1/2" conduit.
C2	=	Single, no override, junction box.
C3	=	Single, locking override, junction box.
C4	=	Single, no override, low pressure, 1/2" conduit.
C8	=	Single, locking override, high pressure, 1/2" conduit.
CT	=	Single, no override, high temperature, 1/2" conduit.
D0	=	Momentary Signal, no override, 1/2" conduit.
D1	=	Momentary Signal, locking override, 1/2" conduit.
D2	=	Momentary Signal, no override, junction box.
D3	=	Momentary Signal, locking override, junction box.
D4	=	Twin, no override, 1/2" conduit.
D5	=	Twin, locking override, 1/2" conduit.
D6	=	Twin, no override, junction box.
D7	=	Twin, locking override, junction box.
D8	=	Twin, locking override, high pressure, junction box.
E1	=	Single, nonlocking override, 1/2" conduit.
E3	=	Single, nonlocking override, junction box.
E8	=	Single, nonlocking override, high pressure, 1/2" conduit.
F4	=	Momentary Signal, nonlocking override, 1/2" conduit.
F5	=	Momentary Signal, nonlocking override, junction box.
F6	=	Twin, nonlocking override, 1/2" conduit.
F7	=	Twin, nonlocking override, junction box.
X0	=	Single, no override, hazardous location.
X1	=	Single, locking override, hazardous location.
X2	=	Momentary Signal, no override, hazardous location.
X3	=	Momentary Signal, locking override, hazardous location.
X4	=	Twin, no override, hazardous location.
X5	=	Twin, locking override, hazardous location.

9 & 10 Air Operators

A1	=	Single, PTF Threads
AA	=	Single, BSPP Threads
A4	=	Twin, PTF Threads
A6	=	Momentary signal, PTF Threads
Af	=	Momentary Signal, BSPP Threads

Voltage & Connector Options for Standard Solenoid Operators

Specify the desired valve model number (from pages 8, 10, or 12) plus the desired option part number from the following tables. When ordering options for the CN, CP, CR, CU, CV, and CW operators, specify (Qty 2) after the option part number.

Optional Voltages	Operator			
	CD, CE, CN, CP, CS, CV, CW, CY	DA, CF, CZ	CC, CR, CU	
12V/60Hz/50Hz	54452-34	—	—	
24V/60Hz/50Hz	54452-35	54469-24	40110-K40	
48V/60Hz/50Hz	54452-36	—	—	
120V/60Hz, 110V/50Hz	Standard	54469-23	Standard	
240V/60Hz, 220V/50Hz	54452-37	—	40110-K39	
6VDC	—	54469-25	—	
12VDC	54452-32	54469-21	40110-K41	
24VDC	54452-33	Standard	40110-K37	
110VDC	—	54469-26	—	

Optional Connectors

Cable Grip with Indicator Light	Operator	
	DA, CE, CF, CN, CP, CS, CV, CW, CY, CZ	CC, CR, CU
12VDC or AC	—	54257-54
24VDC or AC	54934-09	54257-55
120VDC or AC	54934-03	54257-56
220VDC or AC	—	54257-57
1/2" NPT Conduit	54934-04	54933-18
5-ft. Molded Cord	54934-06	54933-17
5-ft. Molded Cord, Indicator Light, Surge Protection, Polarity Independent		
24VAC or DC	54934-11	54933-08
48VAC or DC	54934-12	54933-10
120VAC or DC	54934-14	54933-12
240VAC or DC	54934-16	54933-14

Herion 3 way (3/2) Poppet Valves

for air and vacuum service
solenoid or air actuated

Medium

Compressed air, filtered, lubricated or non-lubricated

Temperature Range

15° to 140° F

Operating Pressure

30 to 120 psig

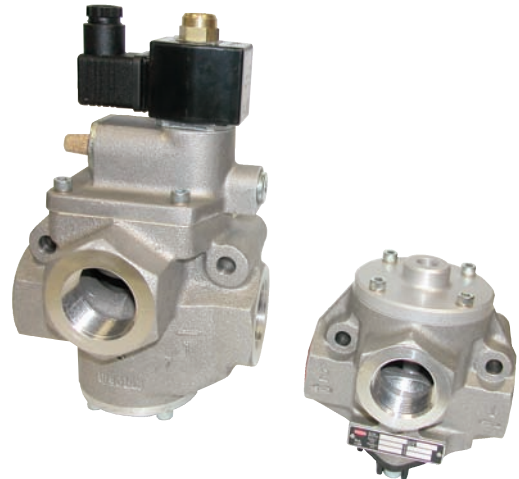
Operating Frequency

120 cpm (cycles per Minute)

Material

Body: Aluminum

Piston Seals: Polyurethane



VALVES

Nom. Size (mm)	Function	NPT Ports		Operating Pressure (psi)		Flow (Cv) Ports		Response Time (ms)	Weight (lb.)	Spare Parts Kit	Order No. Valve Solenoid
		1, 2	3	min.	max.	1-2	2-3				
Solenoid actuated valves with internal pilot air supply											
15	NC	1/2	3/4	30	150	4.8	6.1	10	2.8	05-553-70	80-265-80.0801
20	NC	3/4	1	30	150	8.3	14.4	10	3.3	05-553-71	80-266-80.0801
25	NC	1	1	30	150	11.7	15.6	10	3.3	05-553-71	80-267-80.0801
30	NC	1-1/4	1-1/4	30	150	19.2	23.0	12	6.6	05-571-42	80-268-80.0801
40	NC	1-1/2	1-1/2	30	150	26.7	31.8	15	8.4	05-571-41	80-269-80.0801
50	NC	2	2	30	150	39.6	44.4	20	15.0	05-571-40	80-270-80.0801
15	NO	1/2	3/4	30	150	4.8	6.1	10	2.8	05-553-72	80-285-80.0801
20	NO	3/4	1	30	150	8.3	14.4	10	3.3	05-553-73	80-286-80.0801
25	NO	1	1	30	150	11.7	15.6	10	3.3	05-553-73	80-287-80.0801
30	NO	1-1/4	1-1/4	30	150	19.2	23.0	12	6.6	05-571-48	80-288-80.0801
40	NO	1-1/2	1-1/2	30	150	26.7	31.8	15	8.4	05-571-47	80-289-80.0801
50	NO	2	2	30	150	39.6	44.4	20	15.0	05-571-46	80-290-80.0801
Solenoid actuated with internal pilot air supply and manual override											
15	NC	1/2	3/4	30	150	4.8	6.1	10	2.8	05-563-05	80-265-85.0801
20	NC	3/4	1	30	150	8.3	14.4	10	3.3	05-563-06	80-266-94.0801
25	NC	1	1	30	150	11.7	15.6	10	3.3	05-563-06	80-267-94.0801
40	NC	1-1/2	1-1/2	30	150	26.7	31.8	15	8.4	05-565-27	80-269-85.0801
50	NC	2	2	30	150	39.6	44.4	20	15.0	05-571-40	80-270-85.0801
Solenoid actuated with external pilot air supply ¹											
15	NC	1/2	3/4	0	150	4.8	6.1	10	2.8	05-553-70	80-265-88.0801
20	NC	3/4	1	0	150	8.3	14.4	10	3.3	05-553-71	80-266-88.0801
25	NC	1	1	0	150	11.7	15.6	10	3.3	05-553-71	80-267-88.0801
30	NC	1-1/4	1-1/4	0	150	19.2	23.0	12	6.6	05-571-42	80-268-88.0801
40	NC	1-1/2	1-1/2	0	150	26.7	31.8	15	8.4	05-571-41	80-269-88.0801
50	NC	2	2	0	150	39.6	44.4	20	15.0	05-571-40	80-270-88.0801
15	NO	1/2	3/4	0	150	4.8	6.1	10	2.8	05-553-72	80-285-88.0801
20	NO	3/4	1	0	150	8.3	14.4	10	3.3	05-553-73	80-286-88.0801
25	NO	1	1	0	150	11.7	15.6	10	3.3	05-553-73	80-287-88.0801
30	NO	1-1/4	1-1/4	0	150	19.2	23.0	12	6.6	05-571-48	80-288-88.0801
40	NO	1-1/2	1-1/2	0	150	26.7	31.8	15	8.4	05-571-47	80-289-88.0801
50	NO	2	2	0	150	39.6	44.4	20	15.0	05-571-46	80-290-88.0801
Solenoid actuated with external pilot air supply for vacuum service ²											
15	NC vac service	1/2	3/4	vac	90	4.8	6.1	10	2.8	05-564-76	80-265-87.0801
20	NC vac service	3/4	1	vac	90	8.3	14.4	10	3.3	05-564-77	80-266-87.0801
25	NC vac service	1	1	vac	90	11.7	15.6	10	3.3	05-564-77	80-267-87.0801
30	NC vac service	1-1/4	1-1/4	vac	90	19.2	23.0	12	6.6	05-574-71	80-268-87.0801
40	NC vac service	1-1/2	1-1/2	vac	90	26.7	31.8	15	8.4	05-574-74	80-269-87.0801
50	NC vac service	2	2	vac	90	39.6	44.4	20	15.0	05-574-77	80-270-87.0801
Air actuated ³											
15	NC	1/2	3/4	0	240	4.8	6.1	-	1.8	05-555-71	80-365-20
20	NC	3/4	1	0	240	8.3	14.4	-	2.2	05-555-72	80-366-20
25	NC	1	1	0	240	11.7	15.6	-	2.2	05-555-72	80-367-20
30	NC	1-1/4	1-1/4	0	150	19.2	23.0	-	4.8	05-571-53	80-368-20
40	NC	1-1/2	1-1/2	0	150	26.7	31.8	-	6.4	05-571-54	80-369-20
50	NC	2	2	0	150	39.6	44.4	-	12.5	05-571-55	80-370-20

1. Pilot air pressure must be equal to or greater than system (working) pressure at port No. 1 and a minimum of 30 psig.

2. Pilot air pressure must be at least 60 psig and a minimum of 15 psig greater than pressure at port No. 1. For vacuum service, vacuum is applied at Port No. 1.

3. Actuating air pressure must be equal to or greater than system (working) pressure at port No. 1 and a minimum of 15 psig.

Herion 3 way (3/2) Poppet Valves

for air and vacuum service

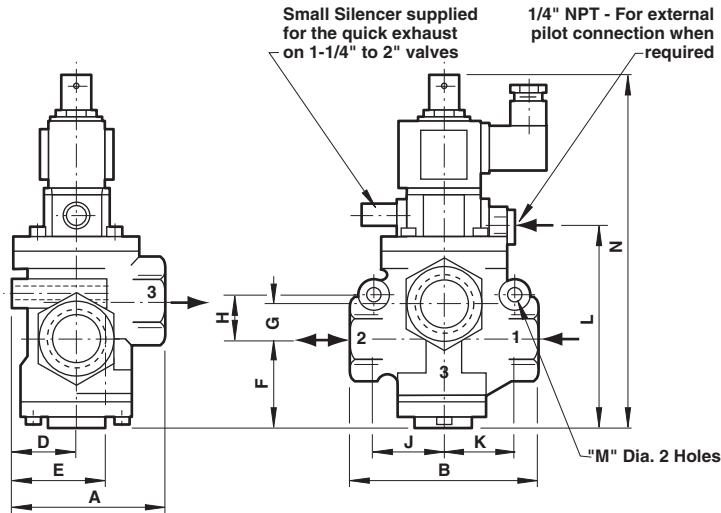
solenoid or air actuated

STANDARD SOLENOID NUMBER 0801

Specifications: The connector conforms to ISO 4400 and the combination solenoid / connector meets the classification NEMA 4. All HERION solenoids are rated for 100% duty cycle complying to insulation class 155°F (Class F).

Features: The solenoids are attached to the valve with a solenoid retaining nut. The coil of the solenoid is a pressure molded encapsulation. The electrical connection is made through three prongs (2 power, 1 ground) which attach to the mating connector with one screw. Solenoids are stocked for 24 VDC and 120 VAC 60 HZ.

3 way (3/2) Poppet valves with solenoid actuation

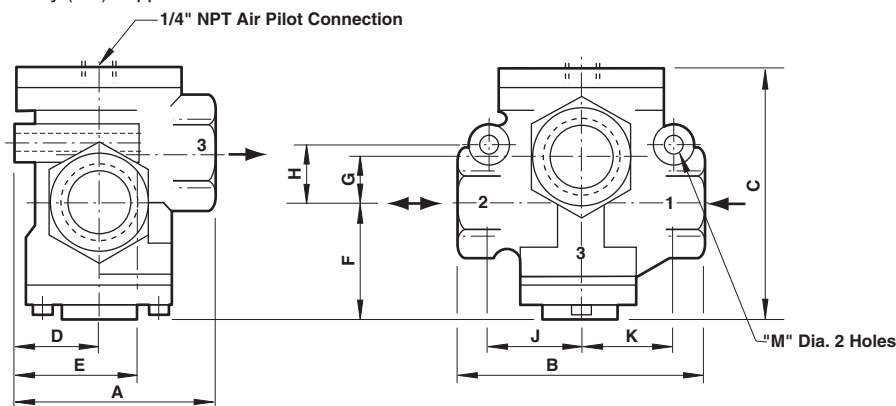


Connector

Solenoid Series	Standard Cable Clamp	1/2" NPT	Optional Connector Part Numbers		
			Lighted - Cable Clamp	24VAC DC	120 VAC
0801	0570275	0661374	0570818	0570816	0570817

Power consumption
 DC - 16W
 AC - 50 VA inrush, 27 VA holding

3 way (3/2) Poppet valve with air actuation



Port Size NPT		A	B	C	D	E	F	G	H	J	K	L	M	N
1, 2	3	78	86	105.5	39	52	48	15	17	32	39	104	9	20
1/2	3/4	(3.07)	(3.39)	(4.15)	(1.54)	(2.05)	(1.89)	(.59)	(.67)	(1.26)	(1.54)	(4.09)	(.35)	(7.87)
3/4	1	92	112	115.5	40	54	53	21	23	39	44	116	9	210
		(3.62)	(4.41)	(4.55)	(1.57)	(2.13)	(2.09)	(.83)	(.91)	(1.54)	(1.73)	(4.57)	(.35)	(8.27)
1	1	92	112	115.5	40	54	53	21	23	39	44	116	9	210
		(3.62)	(4.41)	(4.55)	(1.57)	(2.13)	(2.09)	(.83)	(.91)	(1.54)	(1.73)	(4.57)	(.35)	(8.27)
1-1/4	1-1/4	108	142	150	42	64	70	28	38	48	56	148	11	251
		(4.25)	(5.59)	(5.91)	(1.65)	(2.52)	(2.76)	(1.10)	(1.50)	(2.89)	(2.20)	(5.83)	(.43)	(9.88)
1-1/2	1-1/2	123	164	173	46	70	85	31	37	50	68	168	14	277
		(4.84)	(6.46)	(6.81)	(1.81)	(2.76)	(3.35)	(1.22)	(1.46)	(1.97)	(2.68)	(6.61)	(.55)	(10.9)
2	2	153	200	209	56	85	98	39	46	66	82	204	18	314
		(6.02)	(7.87)	(8.23)	(2.20)	(3.35)	(3.86)	(1.54)	(1.81)	(2.60)	(3.23)	(8.03)	(.71)	(12.4)

Dimensions in mm (inches)

Herion 4 way (4/2) Poppet Valves

Solenoid or air actuated



Use for applications requiring high Cv, fast response times, large exhaust, and dirt tolerant.

Slip-on coil design accepts explosion proof solenoids.

Medium

Compressed air, filtered, lubricated or non-lubricated

Temperature Range
20° to 140° F

Flow direction
Fixed

Material

Body: Aluminum

Seats: Polyurethane

4 Way (4/2) Poppet valves
Solenoid or air actuated

Nom. Size (mm)	NPT Ports			Operating Pressure (psi)		Flow (Cv) Ports		Response Time (ms)	Weight (lb.)	Spare Parts Kit	Order No. Valve Solenoid
	1	2, 4	3	min.	max.	1-2, 4	2,4-3				
Solenoid actuated valves with internal air supply											
15	1/2	1/2	1/2	30	150	4.8	6.1	10	4.2	8110782	2641250.0801
20	3/4	3/4	1	30	150	8.3	14.4	10	4.2	8110420	2641350.0801
25	1	1	1	30	150	11.7	15.6	10	4.2	8110420	2641450.0801
Solenoid actuated with external pilot air supply ¹											
15	1/2	1/2	1/2	0	150	4.8	6.1	10	4.2	8110782	2641270.0801
20	3/4	3/4	1	0	150	8.3	14.4	10	4.8	8110420	2641370.0801
25	1	1	1	0	150	11.7	15.6	10	4.8	8110420	2641470.0801
Air actuated valves ²											
15	1/2	1/2	1/2	0	150	4.8	6.1	10	3.4	8110783	2641290
20	3/4	3/4	1	0	150	8.3	14.4	10	4.0	8110781	2641390
25	1	1	1	0	150	11.7	15.6	10	4.0	8110781	2641490

1. Pilot air pressure must be equal to or greater than system pressure at port no. 1, and a minimum of 15 psig.

2. Air actuation pressure must be equal to or greater than system pressure at port no. 1, and a minimum of 15 psig.

Hazardous duty (3826, 3827) solenoids

Designed to be used with 1/2" NPT mating conduit, these solenoids meet NEMA 7 and NEMA 9 requirements, and are rated for a 100% duty cycle. They comply with insulation class H (180°C), and are for use in class 1, groups A, B, C, D; class II groups E, F, G, hazardous locations as defined in the National Electric Code. The solenoids are attached to the valve with a solenoid retaining nut. The electrical connection is made through three wire leads, (18" long).

Connector

Standard cable clamp type connector is included with the 0801 solenoid. Optional connectors may be selected from the table below.

Standard Cable Clamp	1/2" NPT	Optional Connector Part Numbers		
		24VAC DC	120 VAC	220 VAC
0570275	0661374	0570818	0570816	0570817

See website for additional options.

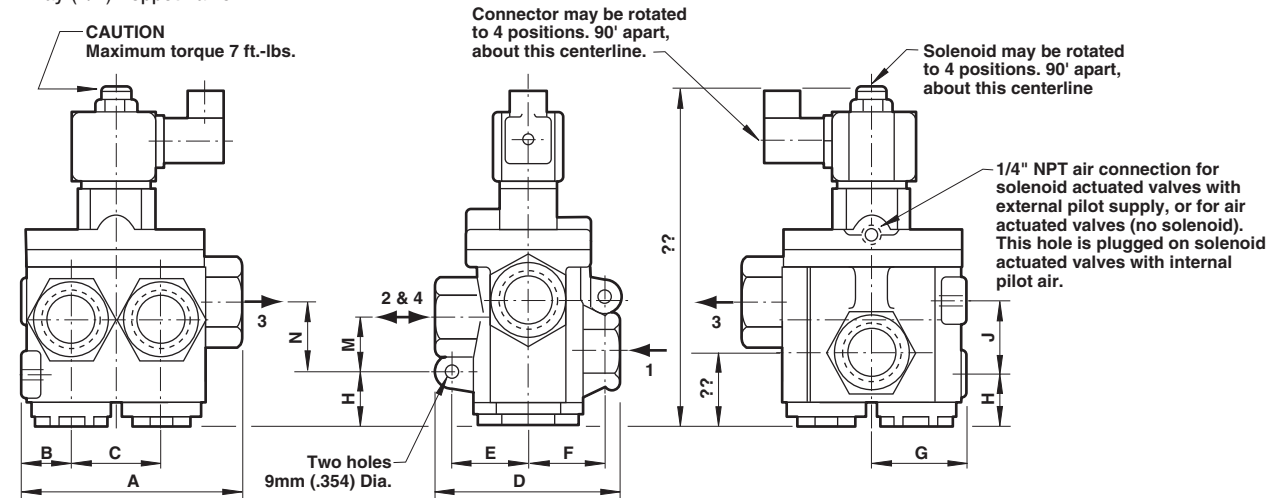
Power consumption

Solenoid Number	Inrush	Holding
0801 (AC)	50 VA	27 VA
0801 (AC)	16W	16W
3827 (AC)	15 VA	15 VA
3826 (DC)	13W	13W

Herion 4 way (4/2) Poppet Valves

Solenoid or air actuated

4 way (4/2) Poppet valve



Size NPT	A	B	C	D	E	F	G	H	J	K	L (sol)	L (air)	M	N
1/2	121 (4.76)	27.5 (1.08)	51 (2.01)	96 (3.78)	38.5 (1.52)	38.5 (1.52)	53 (2.09)	35 (1.38)	30.7 (1.21)	40.5 (1.59)	188 (7.40)	115 (4.53)	25.1 (.9)	31.5 (1.24)
3/4, 1	132 (5.20)	29 (1.14)	54 (2.13)	108 (4.25)	45 (1.77)	45 (1.77)	56 (2.20)	31.5 (1.24)	43 (1.69)	43.5 (1.71)	198 (7.79)	125 (4.92)	32 (1.26)	42 (1.65)

Dimensions in mm (in)

VALVES

Nugget 200 Spool Valves

1/4", 3/8", or 1/2" Ports, Manual and Mechanical Actuated
3/2, 5/2, & 5/3 Inline Valves

- Long lasting spool design
- High flow compact valves
- Wide range of Manual and Mechanical Operators available
- Three functional types available in 3/2, 5/2, and 5/3 configurations
- Technical Data**

Medium:
Filtered and lubricated or non-lubricated compressed air or vacuum.
Operation:
Spool valve manual or mechanical actuation.

Mounting:
Stacking – through holes on manifold base.
Inline – through holes in valve body.
Port Size:
1/4", 3/8", or 1/2" PTF, or 1/4", or 3/8" ISO-G

Operating Pressure:
Maximum 150 psig (10.3 bar).
Operating Temperature:
-20°F to 160°F (-29°C to 71°C)
Consult Technical Service for use below 35°F (2°C).

Materials:
Body: Aluminum
Spool: Anodized aluminum
Elastomers: Nitrile and special nitrile-based low-friction elastomers.

Stackable inline lockout valve (1/4")
Compliant with SEMI Standard S2-0200, section 17 "Hazardous Energy Control". This valve is lockable only in the position in which the hazardous energy is removed.

Order Information
K910121: Includes valve assembly with panel mount washer, nut, black knob and lockout key.
Kits
40164-K30: Includes cross bar and tie rods for connecting two valves for simultaneous operation of both valves. Additional kits may be used to create multi-valve manifolds.



Average Flow Factors in Cv± (l/min)

Valve	Port Size	Flow Path	
		Port 1 to 2 1 to 4	Port 2 to 3 4 to 5
3-Port, Inline	1/4"	1.6 (1600)	1.7 (1700)
	3/8"	1.6 (1600)	1.7 (1700)
5-Port, Inline	1/4"	1.6 (1600)	1.7 (1700)
	3/8"	1.6 (1600)	1.7 (1700)
	1/2"	1.6 (1600)	1.7 (1700)

± Flow Rating determined in accordance with NFPA/T3.21.3, Pneumatic fluid power – Flow test procedure and reporting method – For fixed orifice components.

Manual Operators

Position	Operator	Description	Min. Operating Force lbs. (kg)
2-Position	KB0	Palm Button - Black, Nondetent (Inline Only)	18.0 (8.2)
	KB1	Palm Button - Red, Nondetent (Inline Only)	18.0 (8.2)
	KB2	Palm Button - Green, Nondetent (Inline Only)	18.0 (8.2)
	KB3	Palm Button - Black, Detent (Inline Only)	9.0 (4.1)
	KB4	Palm Button - Red, Detent (Inline Only)	9.0 (4.1)
	KB5	Palm Button - Green, Detent (Inline Only)	9.0 (4.1)
	KF0	Foot Pedal, Nondetent	11.0 (5.0)
	KK0	Knob - Black, Nondetent	18.0 (8.2)
	KK1	Knob - Black, Detent	9.0 (4.1)
	KL0	Lever, Nondetent (Inline Only)	9.0 (4.1)
3-Position	KL1	Lever, 2-Position Detent (Inline Only)	7.0 (3.2)
	KL5	Lever, Nondetent	9.0 (4.1)
	KL6	Lever, 2-Position Detent	7.0 (3.2)
	KT0	Treadle, Nondetent (Inline Only)	13.0 (5.9)
	KT1	Treadle, 2-Position Detent (Inline Only)	9.0 (4.1)
	KB6	Palm Button - Black, Spring Centered	9.0 (4.1)
	KK2	Knob - Black, Spring Centered	9.0 (4.1)
	KK3	Knob - black, 3-Position Detent	9.0 (4.1)
	KL2	Lever, Spring Centered (Inline Only)	7.0 (3.2)
	KL3	Lever, 3-Position Detent (Inline Only)	7.0 (3.2)
	KL7	Lever, Spring Centered	7.0 (3.2)
	KL8	Lever, 3-Position Detent	7.0 (3.2)
KT2	Treadle, Spring Centered	9.0 (4.1)	

Mechanical Operators

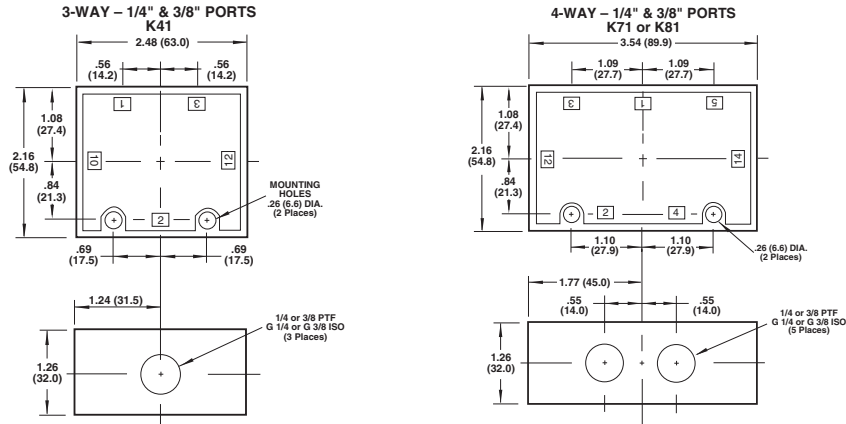
Position	Operator	Description	Min. Operating Force lbs. (kg)
2-Position	KP0	Tappet, Nondetent	18.0 (8.2)
	KR2	Lever Roller, Nondetent (Inline Only)	11.0 (5.0)
	KR3	One-Way Trip Roller, Nondetent	11.0 (5.0)
	KR4	Lever Roller, Nondetent	11.0 (5.0)
	KR5	One-Way Trip Roller, Nondetent (Inline Only)	11.0 (5.0)

Nugget 200 Spool Valves

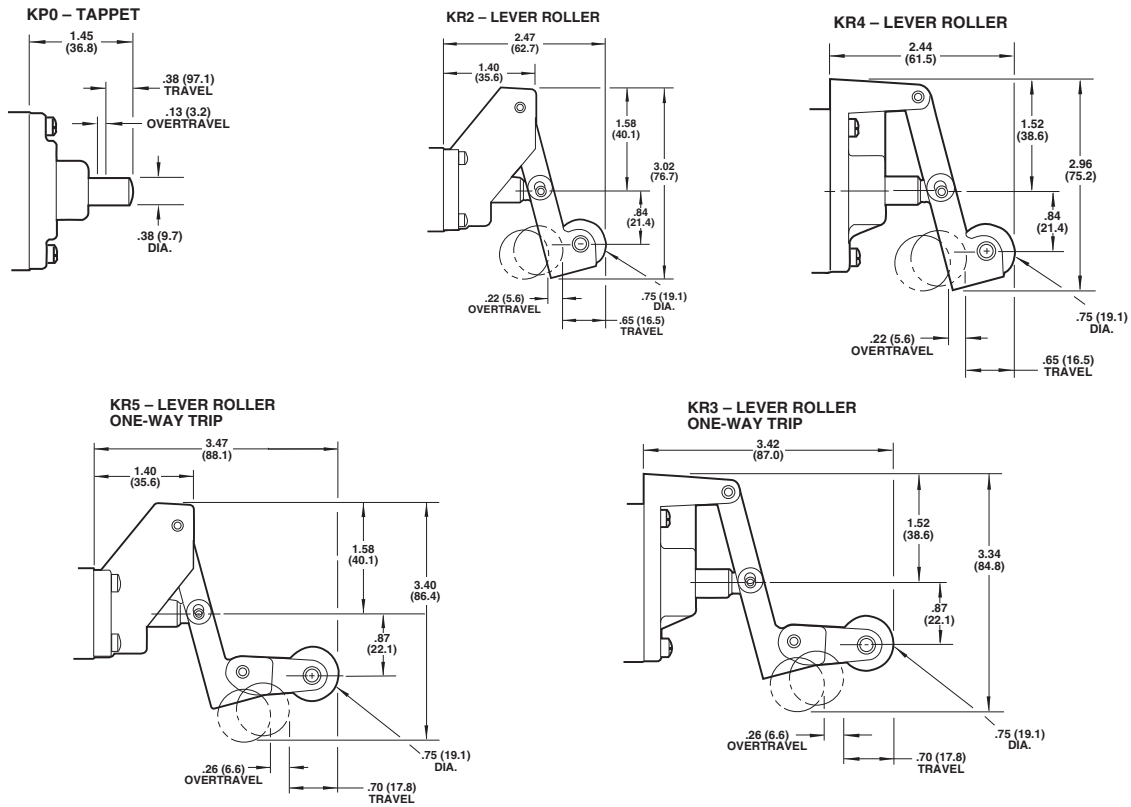
1/4", 3/8", or 1/2" Ports, Manual and Mechanical Actuated 3/2, 5/2, & 5/3 Inline and Stacking Valves

Dimensions in inches (mm)

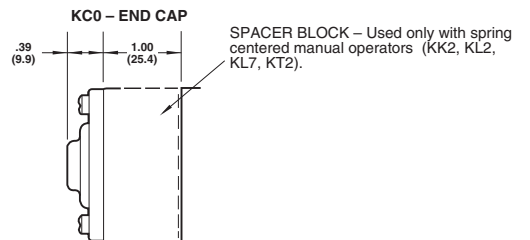
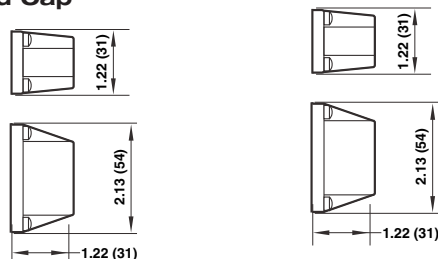
Inline Bodies



Mechanical Operators



KS1 Spring Return & KS6 Spring Return End Cap



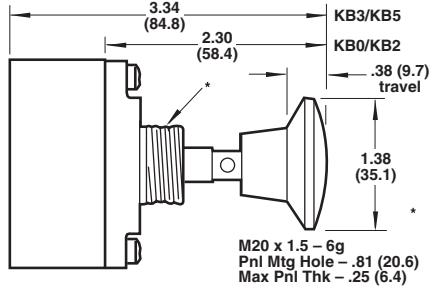
Nugget 200 Spool Valves

1/4", 3/8", or 1/2" Ports, Manual and Mechanical Actuated 3/2, 5/2, & 5/3 Inline and Stacking Valves

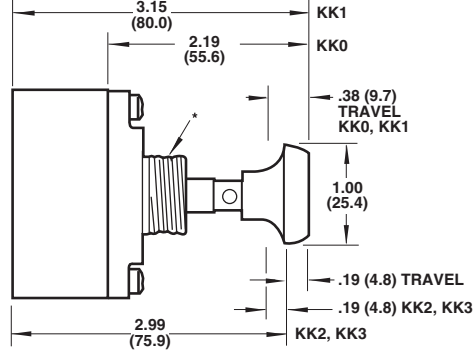
Dimensions in inches (mm)

Manual Operators

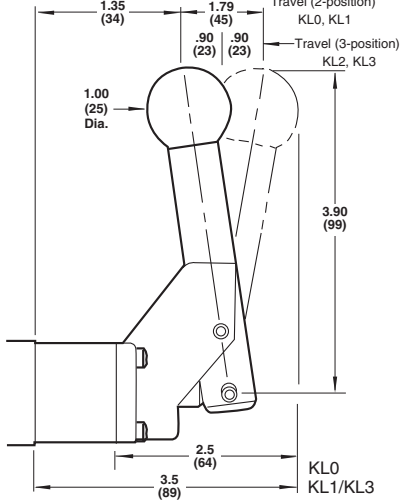
KB0/KB5 – PALM BUTTON



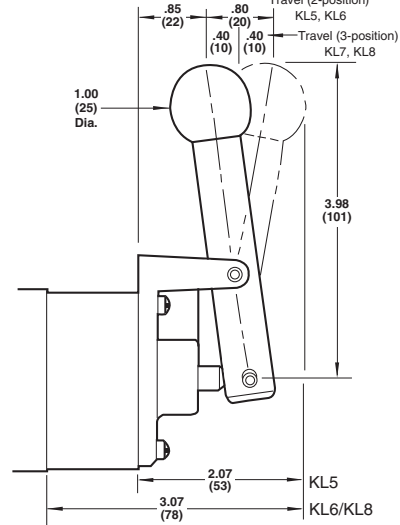
KK0/KK3 – KNOB



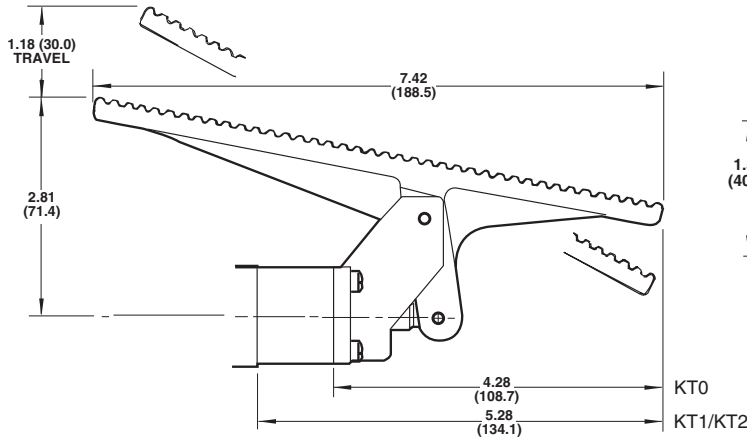
KL0/KL3 – LEVER



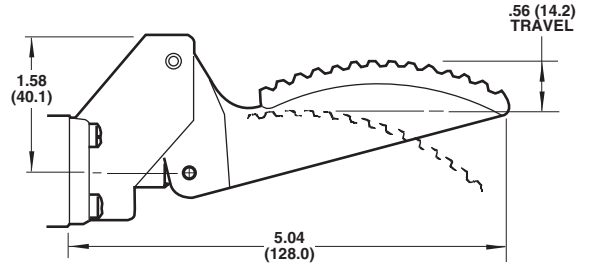
KL5/KL8 – LEVER



KT0/KT2 – TREADLE



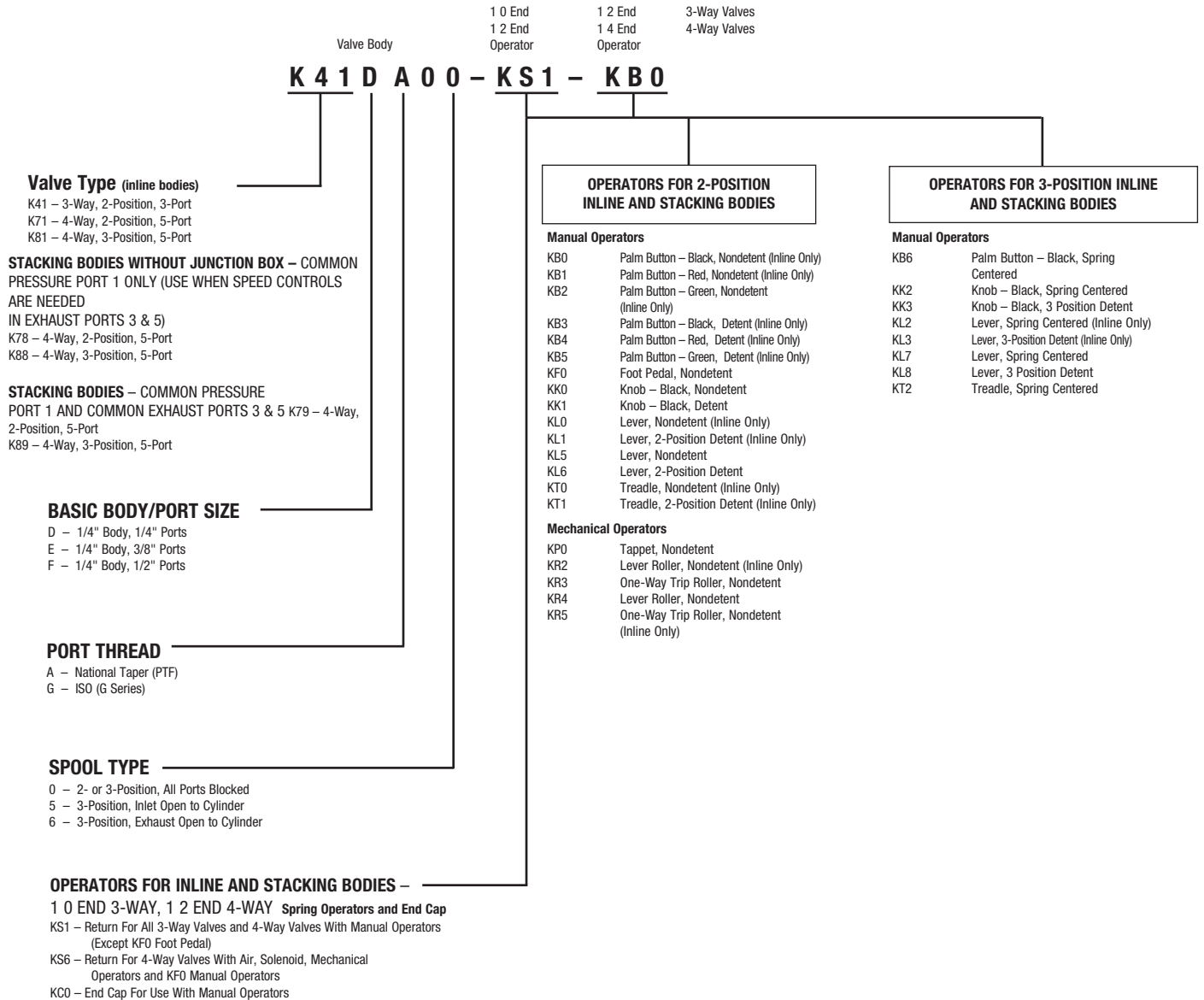
KF0 – FOOT PEDAL



Nugget 200 Spool Valves

1/4", 3/8", or 1/2" Ports, Manual and Mechanical Actuated 3/2, 5/2, & 5/3 Inline and Stacking Valves

Nugget 200 Product Deconfigurator — Manual, and Mechanical Operators

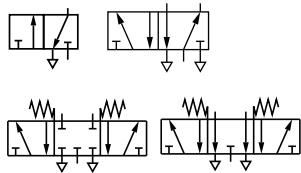


Super X

Manually & mechanically actuated spool valve

In-line

3/2, 5/2 & 5/3, 1/8" & 1/4" NPT



VALVES

Wide range of operators

Suitable for multi-directional flow and dual supply applications

High flow capacity

Lightweight corrosion resistant materials

*Applies to emergency stop valves only

Technical data

Medium:

Compressed air, filtered, lubricated and non-lubricated

Operation:

Spool Valve, directly and indirectly actuated

Mounting:

Through-holes in valve body

Port Size:

1/8" and 1/4" NPT

Operating Pressure:

Maximum 26.5" Hg to 145 psig (-0.9 to 10 bar)

Flow Characteristics:

Size	Function	Cv	l/min
1/8" NPT	3/2, 5/2, 5/3	0.34	335
1/4" NPT	3/2, 5/2, 5/3	0.98	965

Operating Temperature:

32°F* to 158°F (0°C* to 70°C)

* Consult our Technical Service for use below 35°F (2°C).

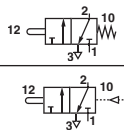
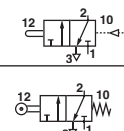
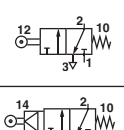
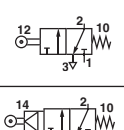
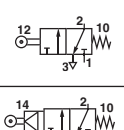
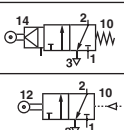
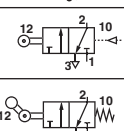
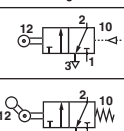
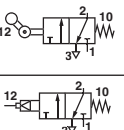
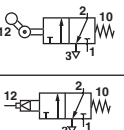
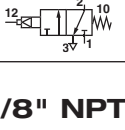
Materials

Diecast aluminum alloy body, aluminum or glass filled nylon end covers, nitrile rubber seals

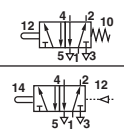
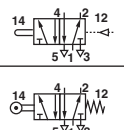
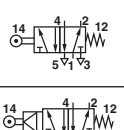
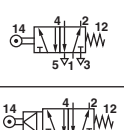
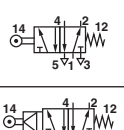
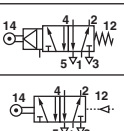
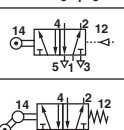
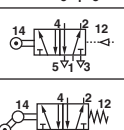
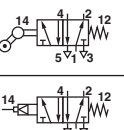
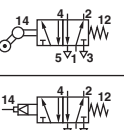
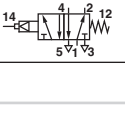
Alternative models

Solenoid and pilot operated version – see web site

1/8" NPT 3/2 Mechanical Valves

	Model	Port size	Function	Actuation	Wt lb	Service kits	Drawing number
	03 0400 22	1/8 NPT	3/2	Plunger /Spring	0.31	03 8408 02	A, 1
	03 0417 22	1/8 NPT	3/2	Plunger /Pilot	0.44	03 8408 02	C, 2
	03 0402 22	1/8 NPT	3/2	Roller /Spring	0.31	03 8408 02	A, 3
	03 0411 22	1/8 NPT	3/2	Roller lever /Spring	0.46	03 8408 02	A, 6
	03 0293 22	1/8 NPT	3/2	Roller lever (heavy duty) /Spring	0.46	03 8408 02	A, 4
	03 0423 22	1/8 NPT	3/2	Sensitive roller lever / Spring	0.55	–	A, 5
	03 0409 22	1/8 NPT	3/2	Roller /Pilot	0.4	03 8408 02	C, 3
	03 0427 22	1/8 NPT	3/2	Roller lever /Pilot	0.55	03 8408 02	C, 6
	03 0410 22	1/8 NPT	3/2	One-way trip /Spring	0.46	03 8408 02	A, 7
	03 0294 22	1/8 NPT	3/2	One-way trip (heavy duty) /Spring	0.46	03 8408 02	A, 8
	03 0432 22	1/8 NPT	3/2	Antenna /Spring	0.46	–	A, 9

1/8" NPT 5/2 Mechanical Valves

	Model	Port size	Function	Actuation	Wt lb	Service kits	Drawing number
	X3 0440 22	1/8 NPT	5/2	Plunger /Spring	0.55	03 8408 02	E, 1
	X3 0457 22	1/8 NPT	5/2	Plunger /Pilot	0.68	03 8408 02	G, 2
	X3 0442 22	1/8 NPT	5/2	Roller /Spring	0.55	03 8408 02	E, 3
	X3 0451 22	1/8 NPT	5/2	Roller lever /Spring	0.71	03 8408 02	E, 6
	X3 0393 22	1/8 NPT	5/2	Roller lever (heavy duty) /Spring	0.64	03 8408 02	E, 4
	X3 0463 22	1/8 NPT	5/2	Sensitive roller lever / Spring	0.79	–	E, 5
	X3 0449 22	1/8 NPT	5/2	Roller /Pilot	0.64	03 8408 02	G, 3
	X3 0467 22	1/8 NPT	5/2	Roller lever /Pilot	0.79	03 8408 02	G, 6
	X3 0450 22	1/8 NPT	5/2	One-way trip /Spring	0.71	03 8408 02	E, 7
	X3 0394 22	1/8 NPT	5/2	One-way trip (heavy duty) /Spring	0.64	03 8408 02	E, 8
	X3 0472 22	1/8 NPT	5/2	Antenna /Spring	0.66	–	E, 9

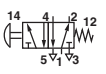
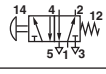
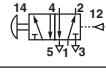
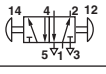
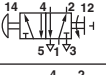

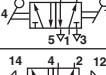
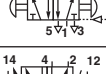



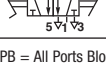
Super X

Manually & mechanically actuated spool valve

In-line

3/2, 5/2 & 5/3, 1/8", & 1/4" NPT

1/8" NPT 5/2 Manual Valves

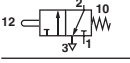
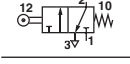
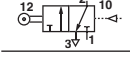
	Model	Port size	Function	Actuation	Mid position	Color	Wt lb	Service kits	Drawing number
	X3 0444 22	1/8 NPT	5/2	Button/spring	–	Black	0.57	03 8408 02	E, 10
	X3 0386 22	1/8 NPT	5/2	Button (palm)/spring	–	Red	0.88	03 8408 02	E, 11
	X3 0387 22	1/8 NPT	5/2	Button (palm)/spring	–	Green	0.88	03 8408 02	E, 11
	X3 0388 22	1/8 NPT	5/2	Button (palm)/spring	–	Black	0.88	03 8408 02	E, 11
	X3 0454 22	1/8 NPT	5/2	Button (shrouded)/spring	–	Black	0.71	03 8408 02	E, 12
	X3 0455 22	1/8 NPT	5/2	Button (shrouded)/spring	–	Green	0.71	03 8408 02	E, 12
	X3 0456 22	1/8 NPT	5/2	Button (shrouded)/spring	–	Red	0.71	03 8408 02	E, 12
	X3 0448 22	1/8 NPT	5/2	Button/pilot	–	Black	0.75	03 8408 02	G, 10
	X3 0460 22	1/8 NPT	5/2	Button/pilot	–	Green	0.75	03 8408 02	G, 10
	X3 0461 22	1/8 NPT	5/2	Button/pilot	–	Red	0.75	03 8408 02	G, 10
	X3 0465 22	1/8 NPT	5/2	Knob, push/knob, pull	–	Black	0.62	03 8408 02	E, 18
	X3 0299 22	1/8 NPT	5/2	Emergency stop/twist ring	–	Red	1.19	03 8473 02	E, 13
	X3 0375 22 801	1/8 NPT	5/2	Button (palm)/key	–	Red	1.06	03 8408 02	E, 14
	X3 0478 22	1/8 NPT	5/2	Lever/spring	–	Black	0.88	03 8408 02	E, 16
	X3 0466 22	1/8 NPT	5/2	Lever knob/spring	–	Black	0.62	03 8408 02	E, NA
	X3 0443 22	1/8 NPT	5/2	Toggle/toggle	–	Black	0.6	03 8408 02	E, 16
	X3 0477 22	1/8 NPT	5/2	Lever/lever	–	Black	0.88	03 8408 02	E, 17
	X3 0464 22	1/8 NPT	5/2	Knob/knob or pilot	–	Black	0.71	03 8408 02	G, 10
	X3 0298 22	1/8 NPT	5/2	Rotary knob/rotary knob	–	Black	0.88	03 8408 02	E, 19
	X3 0458 22 801	1/8 NPT	5/2	Key/key	–	Chrome	1.04	03 8408 02	E, 20
	X3 0482 22	1/8 NPT	5/2	Pedal/spring	–	Black	2.47	03 8408 02	22
	X3 0484 22	1/8 NPT	5/2	Pedal/pedal	–	Black	2.6	03 8408 02	22

APB = All Ports Blocked COE = Center Open Exhaust

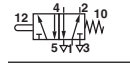
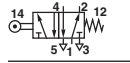
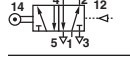
VALVES

Super X

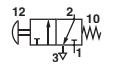
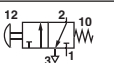
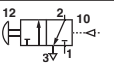
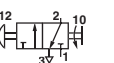
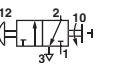
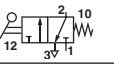
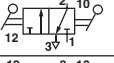
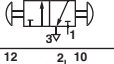
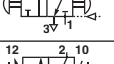
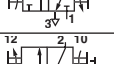
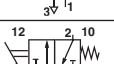
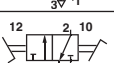
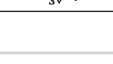
1/4" NPT 3/2 Mechanical Valves

	Model	Port size	Function	Actuation	Wt lb	Service kits	Drawing number
	03 0600 22	1/4 NPT	3/2	Plunger /Spring	0.75	03 8602 02	B, 1
	03 0602 22	1/4 NPT	3/2	Roller /Spring	0.75	03 8602 02	B, 3
	03 0611 22	1/4 NPT	3/2	Roller lever /Spring	0.9	03 8602 02	B, 6
	03 0609 22	1/4 NPT	3/2	Roller /Pilot	0.86	03 8612 02	D, 3
	03 0624 22	1/4 NPT	3/2	Roller lever /Pilot	0.99	03 8612 02	D, 6

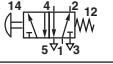
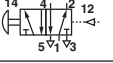
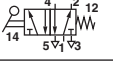
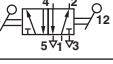
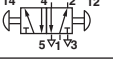
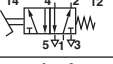
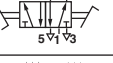



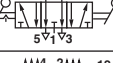




1/4" NPT 5/2 Mechanical Valves

	Model	Port size	Function	Actuation	Wt lb	Service kits	Drawing number
	X3 0640 22	1/4 NPT	5/2	Plunger /Spring	1.01	03 8602 02	B, 2
	X3 0642 22	1/4 NPT	5/2	Roller /Spring	1.01	03 8602 02	B, 3
	X3 0651 22	1/4 NPT	5/2	Roller lever /Spring	1.17	03 8602 02	B, 6
	X3 0649 22	1/4 NPT	5/2	Roller /Pilot	1.10	03 8612 02	D, 3
	X3 0664 22	1/4 NPT	5/2	Roller lever /Pilot	1.26	03 8612 02	D, 6

1/8" NPT 3/2 Manual Valves

	Model	Port size	Function	Actuation	Mid position	Color	Wt lb	Service kits	Drawing number
	03 0404 22	1/8 NPT	3/2	Button/spring	–	Black	0.33	03 8408 02	A, 10
	03 0366 22	1/8 NPT	3/2	Button (palm)/spring	–	Red	0.64	03 8408 02	A, 11
	03 0367 22	1/8 NPT	3/2	Button (palm)/spring	–	Green	0.64	03 8408 02	A, 11
	03 0368 22	1/8 NPT	3/2	Button (palm)/spring	–	Black	0.64	03 8408 02	A, 11
	03 0414 22	1/8 NPT	3/2	Button (shrouded)/spring	–	Black	0.46	03 8408 02	A, 12
	03 0408 22	1/8 NPT	3/2	Button/pilot	–	Black	0.49	03 8408 02	D, 10
	03 0420 22	1/8 NPT	3/2	Button/pilot	–	Green	0.49	03 8408 02	D, 10
	03 0421 22	1/8 NPT	3/2	Button/pilot	–	Red	0.49	03 8408 02	D, 10
	03 0299 22	1/8 NPT	3/2	Emergency stop/twist ring	–	Red	0.68	03 8473 02	A, 13
	03 0335 22 801	1/8 NPT	3/2	Button (palm)/key	–	Red	0.82	03 8408 02	A, 14
	03 0438 22	1/8 NPT	3/2	Lever/spring	–	Black	0.62	03 8408 02	A, 17
	03 0426 22	1/8 NPT	3/2	Lever knob/spring	–	Black	0.55	03 8408 02	A, 25
	03 0437 22	1/8 NPT	3/2	Lever/lever	–	Black	0.64	03 8408 02	A, 17
	03 0403 22	1/8 NPT	3/2	Toggle/toggle	–	Black	0.35	03 8408 02	A, 16
	03 0425 22	1/8 NPT	3/2	Knob/knob	–	Black	0.37	03 8408 02	A, 10
	03 0424 22	1/8 NPT	3/2	Knob/knob or pilot	–	Black	0.46	03 8408 02	D, 10
	03 0298 22	1/8 NPT	3/2	Rotary knob/rotary knob	–	Black	0.64	03 8408 02	A, 19
	03 0418 22 801	1/8 NPT	3/2	Key/key	–	Chrome	0.79	03 8408 02	A, 20
	03 0481 22	1/8 NPT	3/2	Pedal/spring	–	Black	2.27	03 8408 02	21
	03 0483 22	1/8 NPT	3/2	Pedal/pedal	–	Black	2.36	03 8408 02	21

1/8" NPT 5/2 & 5/3 Manual Valves

	Model	Port size	Function	Actuation	Mid position	Color	Wt lb	Service kits	Drawing number
	X3 0644 22	1/4 NPT	5/2	Button/spring	–	Black	1.04	03 8602 02	F, 23
	X3 0648 22	1/4 NPT	5/2	Button/pilot	–	Black	1.19	03 8612 02	H, 23
	X3 0678 22	1/4 NPT	5/2	Lever/spring	–	Black	1.32	03 8602 02	E, 22
	X3 0677 22	1/4 NPT	5/2	Lever/lever	–	Black	1.35	03 8602 02	E, 22
	X3 0665 22	1/4 NPT	5/2	Knob/knob	–	Black	1.08	03 8602 02	21
	X3 0682 22	1/4 NPT	5/2	Pedal/spring	–	Black	2.93	03 8602 02	21
	X3 0684 22	1/4 NPT	5/2	Pedal/pedal	–	Black	3.06	03 8602 02	J, 22
	X3 3438 22	1/8 NPT	5/3	Lever/spring/lever	APB	Black	1.87	03 8408 02	J, 16
	X3 3478 22	1/8 NPT	5/3	Lever/spring/lever	COE	Black	1.87	03 8408 02	J, 16
	X3 3437 22	1/8 NPT	5/3	Lever/lever/lever	APB	Black	0.97	03 8408 02	J, 16
	X3 3477 22	1/8 NPT	5/3	Lever/lever/lever	COE	Black	0.97	03 8408 02	J, 16
	X3 3638 22	1/4 NPT	5/3	Lever/spring/lever	APB	Black	1.06	03 8602 02	J, 22
	X3 3678 22	1/4 NPT	5/3	Lever/spring/lever	COE	Black	1.06	03 8602 02	J, 22
	X3 3637 22	1/4 NPT	5/3	Lever/lever/lever	APB	Black	1.43	03 8602 02	J, 22
	X3 3677 22	1/4 NPT	5/3	Lever/lever/lever	COE	Black	1.43	03 8602 02	J, 22

1/4" NPT 3/2 Manual Valves

	Model	Port size	Function	Actuation	Mid position	Color	Wt lb	Service kits	Drawing number
	03 0604 22	1/4 NPT	3/2	Button/spring	–	Black	0.77	03 8602 02	B, 23
	03 0608 22	1/4 NPT	3/2	Button/pilot	–	Black	0.93	03 8612 02	D, 23
	03 0638 22	1/4 NPT	3/2	Lever/spring	–	Black	2.34	03 8602 02	B, 22
	03 0637 22	1/4 NPT	3/2	Lever/lever	–	Black	1.08	03 8602 02	B, 22
	03 0625 22	1/4 NPT	3/2	Knob/knob	–	Black	0.82	03 8602 02	B, 24
	03 0627 22	1/4 NPT	3/2	Knob/knob or pilot	–	Black	0.9	03 8612 02	D, 24
	03 0681 22	1/4 NPT	3/2	Pedal/spring	–	Black	2.71	03 8602 02	21
	03 0683 22	1/4 NPT	3/2	Pedal/pedal	–	Black	2.8	03 8602 02	21

Super X

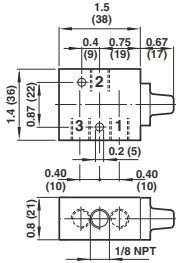
Manually & mechanically actuated spool valve

In-line

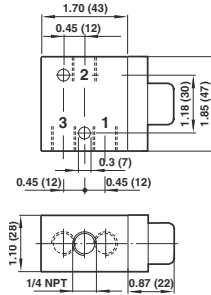
3/2, 5/2 & 5/3, 1/8" & 1/4" NPT

Dimensions in inches (mm)

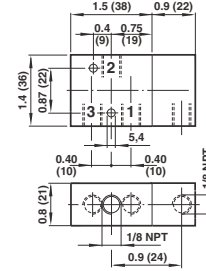
A 1/8" NPT, 3/2 Spring return, basic body



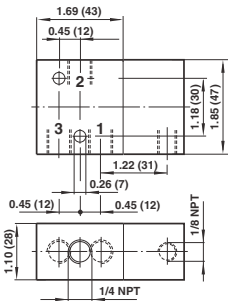
B 1/4" NPT, 3/2 Spring return, basic body



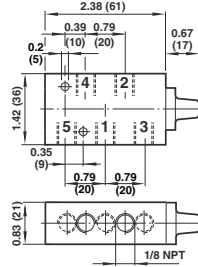
C 1/8" NPT, 3/2 Pilot return, basic body



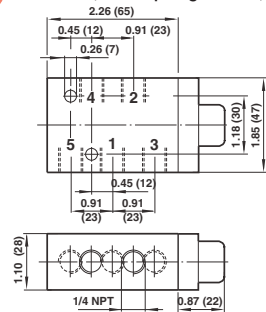
D 1/4" NPT, 3/2 Pilot return, basic body



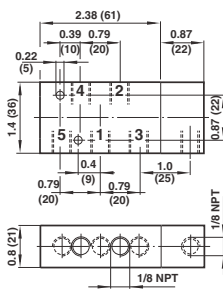
E 1/8" NPT, 5/2 Spring return, basic body



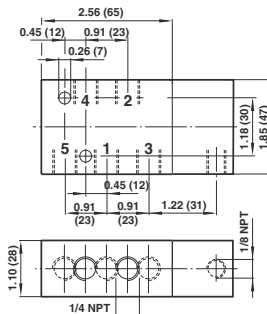
F 1/4" NPT, 5/2 Spring return, basic body



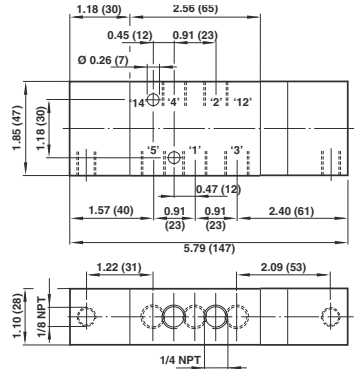
G 1/8" NPT, 5/2 Pilot return, basic body



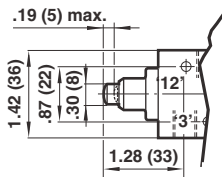
H 1/4" NPT, 5/2 Pilot return, basic body



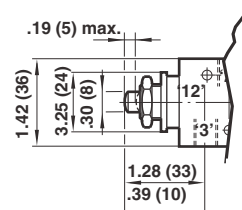
J 1/4" NPT, 5/3 Spring return, basic body



1 Plunger Spring Return



2 Plunger Pilot Return



Super X

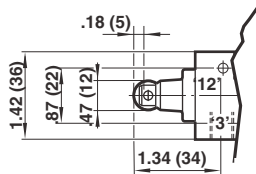
Manually & mechanically actuated spool valve

In-line

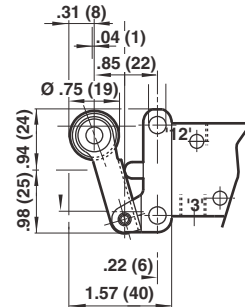
3/2, 5/2 & 5/3, 1/8", & 1/4" NPT

Dimensions in inches (mm)

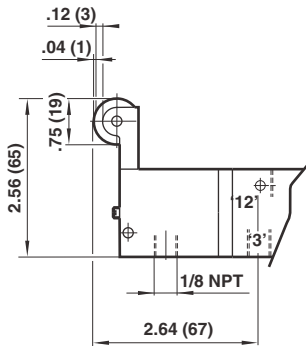
3 Roller



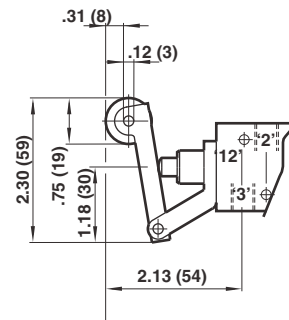
4 Heavy Duty Roller Lever



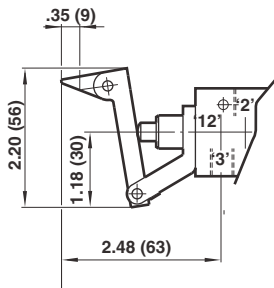
5 Sensitive Roller Lever



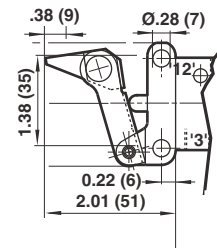
6 Roller Lever



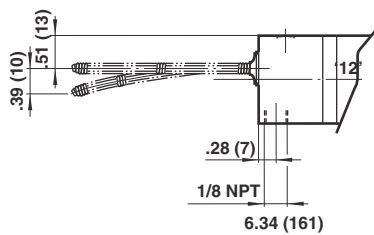
7 One-way Trip



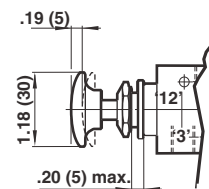
8 Heavy Duty One Way Trip



9 Antenna



10 Button Operated



Super X

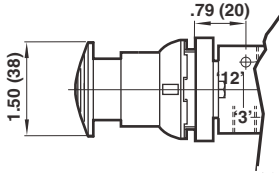
Manually & mechanically actuated spool valve

In-line

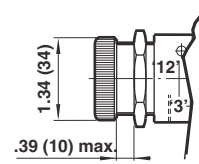
3/2, 5/2 & 5/3, 1/8" & 1/4" NPT

Dimensions in inches (mm)

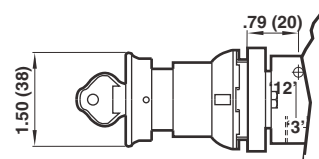
11 Button (Palm) Operated



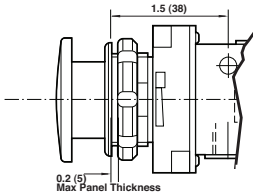
12 Button (Shrouded) Operated



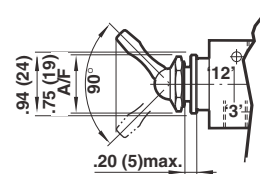
14 Button (Palm) Operated Key Return Valve



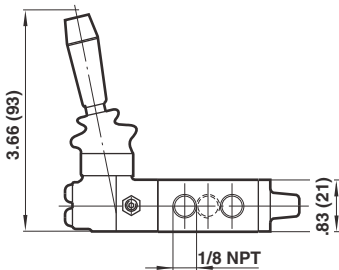
13 Palm Button Operated, Twist Return Valve (Emergency Stop)



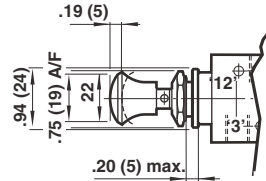
16 Lever Operated



17 Lever Operated



18 Knob Operated



Super X

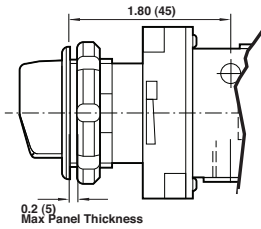
Manually & mechanically actuated spool valve

In-line

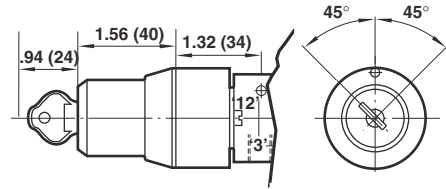
3/2, 5/2 & 5/3, 1/8", & 1/4" NPT

Dimensions in inches (mm)

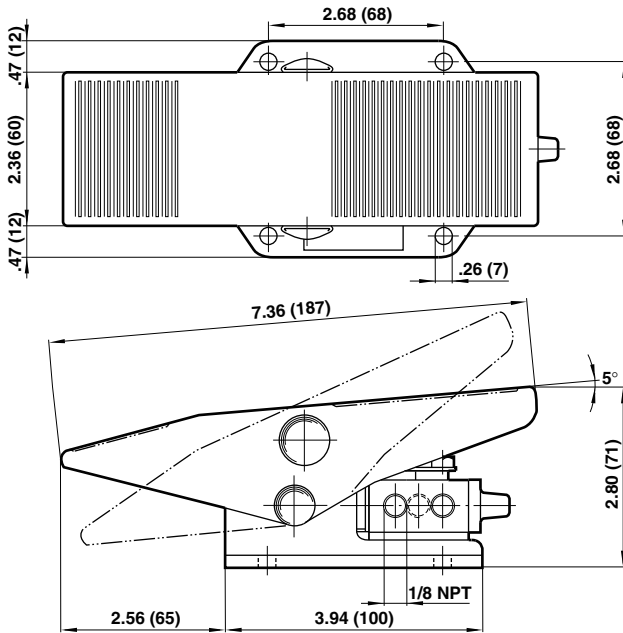
19 Rotary Knob Operated Rotary Knob Return Valve



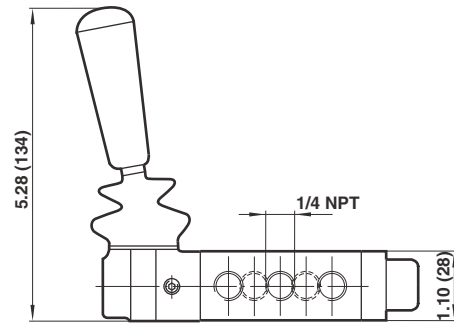
20 Key Operated Key Return Valve



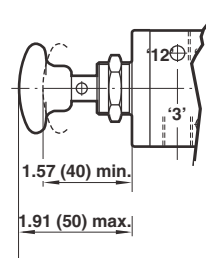
21 Pedal



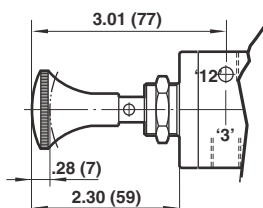
22 Lever Operated Valves



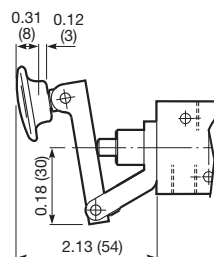
23 Button Operated Pilot Return Valve



24 Knob Operated Knob Return Valve

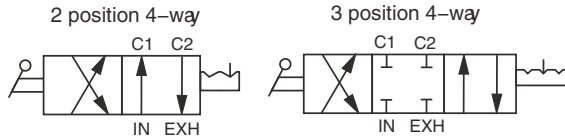


25 Lever/Knob



VHLA Series Rotary Hand Valves

1/4", 3/8", and 1/2" NPT porting



Aluminum die casting design for heavy applications

Detented center position

Easy to grasp and rotate handle

Cv's of 0.4 to 3.1

Port sizes of 1/4", 3/8", and 1/2"

2 or 3 position functions available

Technical Data

Fluid: Compressed air

Maximum operating pressure: 140 psi (9.7 bar)

Temperature Range: 40° to 140°F* (5° to 60°C).

*With a dew point of supply air less than air temperature below 35°F (2°C).

Flow:	1/4"	Cv 0.4
	3/8"	Cv 1.1
	1/2"	Cv 3.1

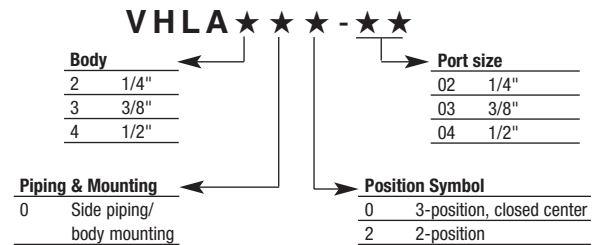
Materials of Construction

Body: Die cast aluminum

Order information

Port Size	Function	Model Number
1/4"	3 position, 4-way	VHLA200-02
1/4"	2 position, 4-way	VHLA202-02
3/8"	3 position, 4-way	VHLA300-03
3/8"	2 position, 4-way	VHLA302-03
1/2"	3 position, 4-way	VHLA400-04
1/2"	2 position, 4-way	VHLA402-04

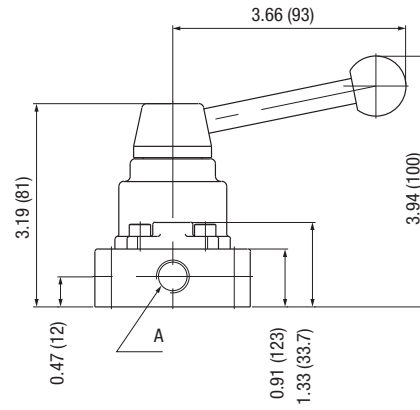
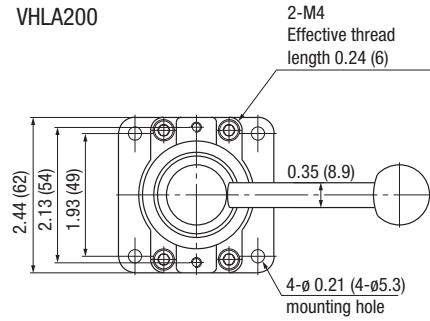
Options deconfigurator



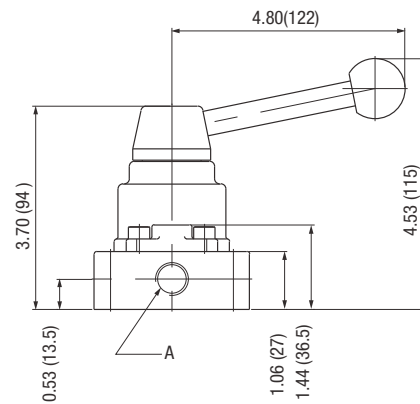
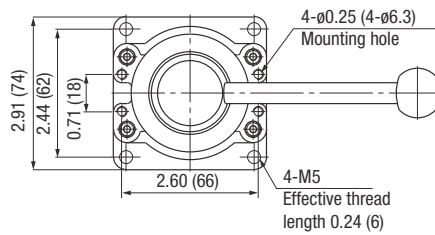
VHLA Series Rotary Hand Valves

1/4", 3/8", and 1/2" NPT porting

VHLA200



VHLA300



VHLA400

