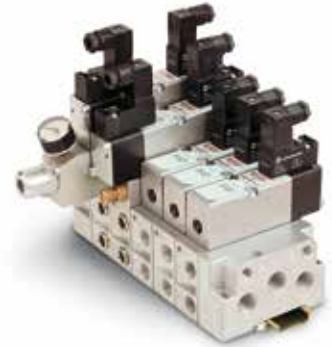


- Compact design and high performance**
- Flexible Sub-base system**
- True multipressure system (including vacuum)**
- Sandwich regulators and flow controls**
- Dual spool technology**
 - V44 Glandless spool and sleeve**
 - V45 Softseal spool**
- Collected pilot exhaust with internal pilot air supply**
- 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 Subbases Size ISO 15407-1 / VDMA 24563, 26mm

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)



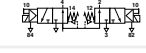



Materials

Die cast aluminum body and sub-base. Hard anodized spool, PTFE 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

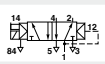
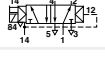
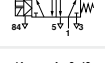

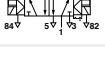

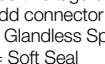


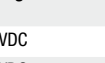
Voltage Tolerances	-10% / +15%
Rating	100% Continuous Duty
Inlet orifice	0.8 mm
Electrical Connection	DIN 43 650 table 'C'
Manual Override	Push-turn locking and non-locking
Protection Class	IP 65 NEMA 4
Materials	PPS (body), FPM and NBR (seals)

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

NC = Normally Closed
 NO = Normally Open

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".
 GI = Glandless Spool
 Ss = Soft Seal

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

Voltage	Code	Power Inrush / Hold	Pilot Valve Part.-no.	
			Push only	Push and Turn
12 VDC	12	1.2 W	VZC7L2C1-C312A	
24 VDC	13	1.2 W	VZC7L2C1-C313A	VZC7L2C1-C213A
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 VDC	17	1 W	VZC7L2C1-C317A	
115 V 50/60 Hz	18	2.1 / 1.5 VA	VZC7L2C1-C318A	VZC7L2C1-C218A
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

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**†	Gl	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**†	Gl	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**†	Gl	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**†	Gl	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**†	Gl	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**†	Gl	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

Gl = Glandless Spool
Ss = Soft Seal

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

Table 1
**Voltage Codes and Spare Pilot Valves

Voltage	Code	Power Inrush / Hold	Pilot Valve Part.-no. Push only	Push and Turn
12 VDC	12	1.2 W	VZC7L2C1-C312A	
24 VDC	13	1.2 W	VZC7L2C1-C313A	VZC7L2C1-C213A
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 VDC	17	1 W	VZC7L2C1-C317A	
115 V 50/60 Hz	18	2.1 / 1.5 VA	VZC7L2C1-C318A	VZC7L2C1-C218A
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	Operating Pres. (psig)	Pilot Pres. (psig)	Weight (lb.)	Spares Kit
V45AA33A-X0020	NC	Air/Spring	1.1	0 - 145	1.5 + (0.5xop. pressure)	0.20	V70546-KA0
V45AB33A-X0020	NO	Air/Spring	1.0	0 - 145	1.5 + (0.5xop. pressure)	0.20	V70547-KA0
V45AC33A-X0020	NO/NC	Air/Spring	1.0/1.1	0 - 145	1.5 + (0.5xop. pressure)	0.20	V70548-KA0

NC = Normally Closed NO = Normally Open

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	Gl	Air	Spring	0.9	26" Hg - 232	23 - 232	0.40	V70540-KA0
	V45A537A-X0090	Ss	Air	Spring	1.2	26" Hg - 145	29 - 145	0.40	V70541-KA0
	V44A533A-X0020	Gl	Air	Air	0.9	26" Hg - 232	29 - 232	0.44	V70540-KA0
	V45A533A-X0020	Ss	Air	Air	1.2	26" Hg - 145	29 - 145	0.44	V70542-KA0

Gl = Glandless Spool Ss = Soft Seal

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

GI = Glandless Spool
Ss = Soft Seal

APB = All Ports Blocked
COE = Center Open to Exhaust

COP = Center Open to Pressure

Bases

Modular Sub-base Side Ported without Pilot Ports Side		Modular Sub-base* Ported with Pilot Ports		Modular Sub-base Side Ported (PIF) without Pilot Ports		Modular Sub-base* Side Ported (PIF) with Pilot Ports	
							*Use with air pilot valves.
V70525-PAF (1/8 NPTF)	V70526-PAF (1/8 NPTF)	V70525-2AF (3/8 PIF)	V70526-2AF (3/8 PIF)	V70525-8AF (ø8 mm)	V70526-8AF (ø8 mm)	V70525-YAF (ø10 mm)	V70526-YAF (ø10 mm)
V70525-RAF (1/4 NPTF)	V70526-RAF (1/4 NPTF)						
V70525-BAF (G1/4)	V70526-BAF (G1/4)						

End Plate Kit
End Ported

Single Station Sub-base
Side ported with Pilot Ports

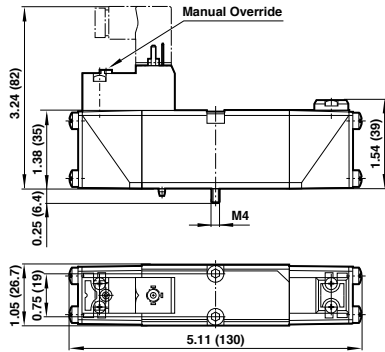
Fixed Length Sub-base
Bottom ported

	V70524-SAC (3/8 NPTF)		V70501-RAB (1/4 NPTF)		V705**-RA0
	V70524-CAC (G3/8)		V70501-BAB (G1/4)		**=02, 04, 06, 08, 10, 12 stations

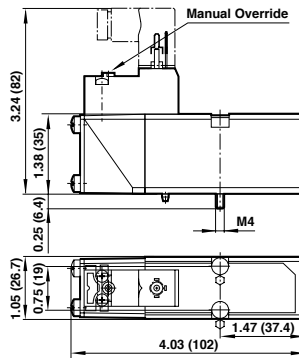
Accessories

Intermediate Supply/ Exhaust Module 	Single Valve Shut-Off Plate 	Single Pressure Regulator Plate 	Double Pressure Regulator Plate 	Flow Control Plate
V70529-RA0 (1/4 NPTF) V70529-BA0 (G1/4)	V70530-KA0 (Port 1 blocked)	V70527-KA1 (Port 1 reg.) V70527-KA2 (Port 2 reg.) V70527-KA3 (Port 4 reg.)	V70527-KA4 (Ports 2+4 reg.)	V70528-KA0 (Ports 3+5)
DIN EN 50 022 rail (3.28 feet) 	DIN-rail Mounting Kit 	Blanking Plate for unused station 	Single Blanking Disk to Modular Sub-base 	Manual Override Set-Up Kit
V10009-C00 (35x7.5mm) V10592-C01 (35x15mm)	V70531-KA0	V70500-KA0	V70522-K00 (Ports 1,3,5) V70523-K00 (Ports 12+14)	V70532-K00
Sandwich Plate with additional				
Pressure Port 1 	Transition Plate #18 A#26 mm 			
V70535-RA0 1/4 NPTF V70535-BA0 G1/4	V70436-K00			

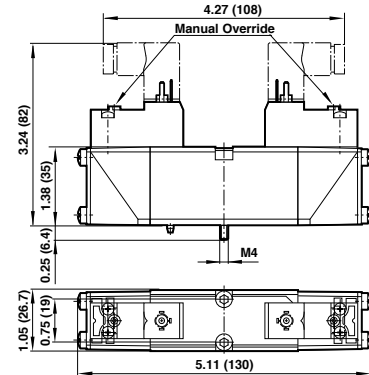
V44A5*3D-C3***
 5/2 Single Solenoid Pilot Valve
 Air Spring Return



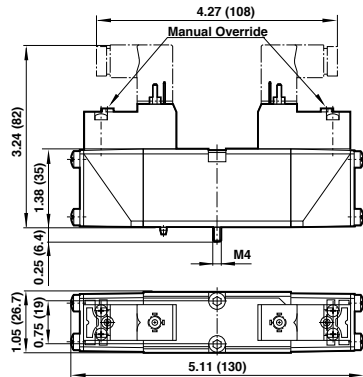
V44A5*7D-C3* and V45A5*7D-C3*****
 5/2 Single Solenoid Pilot Valve
 Mechanical Spring Return



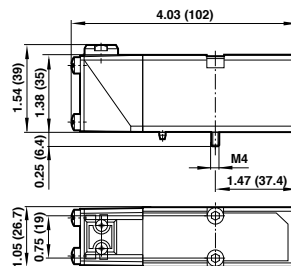
V44A5D-C3*** and V45A5**D-C3*****
 5/2 Double Solenoid Pilot Valve



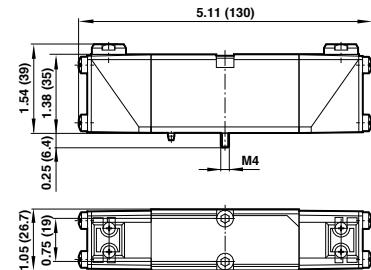
V44A*D-C3*** and V45A***D-C3*****
 2x3/2 + 5/3 Double Solenoid Pilot Valve



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



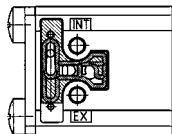
V44A*33A-X00*0 and V45A*33A-X00*0
 2x3/2 + 5/2 + 5/3 Double Air Pilot Valve



Dimensions in inches (mm)

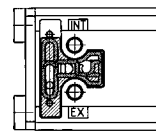
Conversion from internal to external pilot supply / collected pilot exhaust

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.

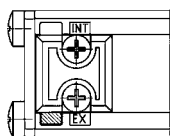
All solenoid pilot valves with code 1 at position 6 in the part number (e.g V45A51to) have the gasket mounted in this position on delivery.

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 V45A52to) 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.

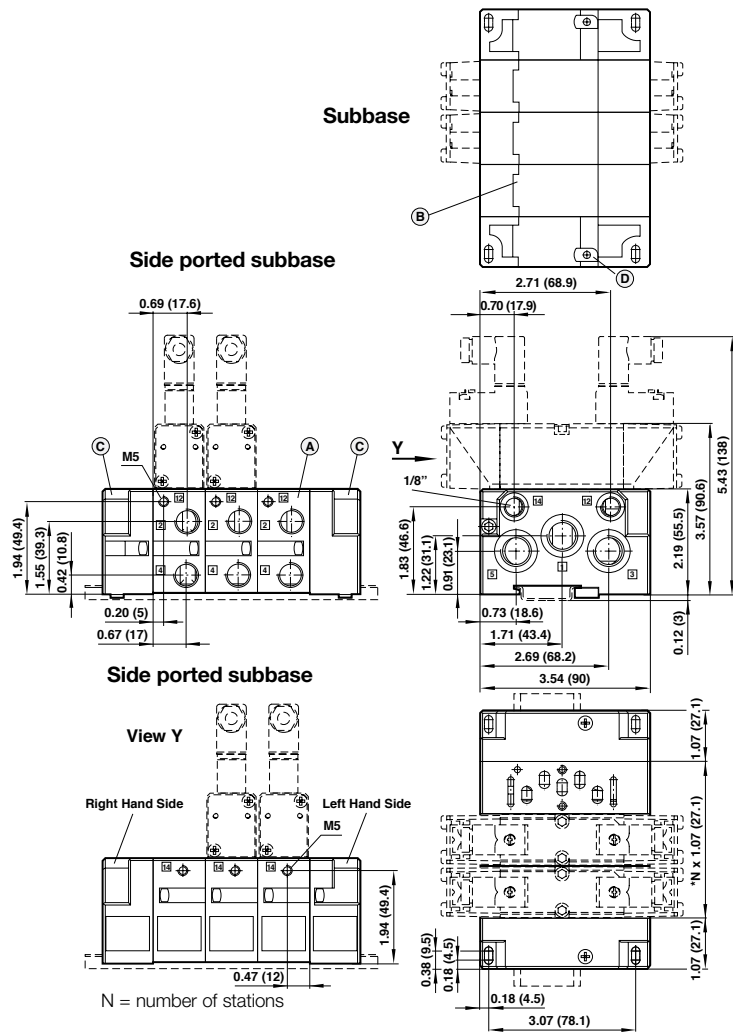
Air pilot actuated valves



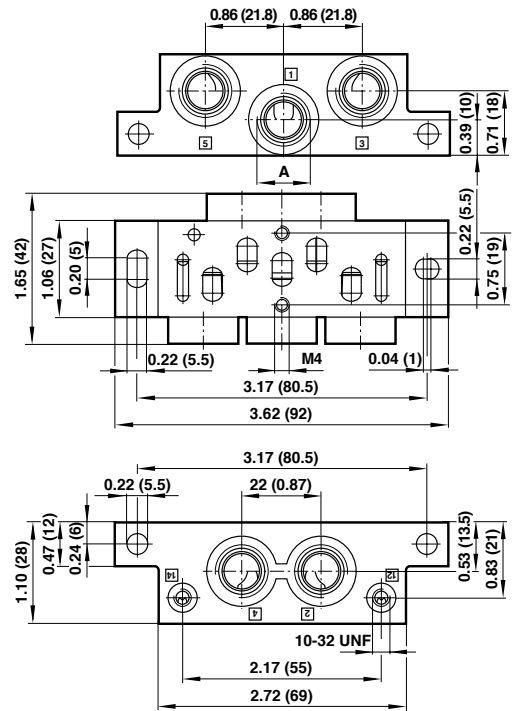
blue gasket

Drawing includes cover plate.

Air pilot actuated valves
 External pilot supply.



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 (0.11)
V70501-BAB	G1/4 side ported with pilot portS	0.24 (0.11)

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) 0.68 lb (0.31 kg)
V10009-C00

DIN EN 50022 rail
35 x 15 mm, 3.3' (1m) 2.25 lb (1.02 kg)
V10592-C01

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

Blanking Disk to Modular Sub-base
Ports 1, 3, 5 0.02 lb (0.01 kg)
V70522-K00

Blanking Disk to Modular Sub-base
Ports 12+14 0.02 lb (0.01 kg)
V70523-K00

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 (A) 0.40 lb (0.18 kg)
Pilot Ports 12+14 on side
V70526-xAF

Modular Sub-base

Ports 2+4 on bottom (B) 0.40 lb (0.18 kg)
V70525-BAE

Modular Sub-base

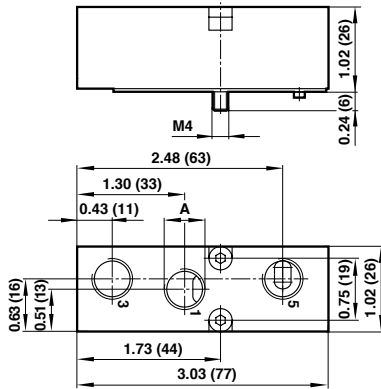
Ports 2+4 on bottom (B) 0.40 lb (0.18 kg)
Pilot Ports 12+14 on side
V70526-BAE

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

Dimensions in inches (mm)

Intermediate Supply / Exhaust Module



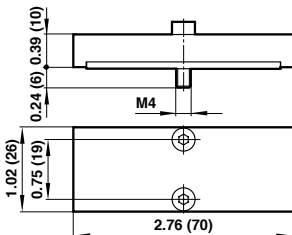
Model	Port Size A	Weight lb (kg)
V70529-RA0	1/4NPTF	0.26
V70529-BA0	G1/4	(0.12)

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:

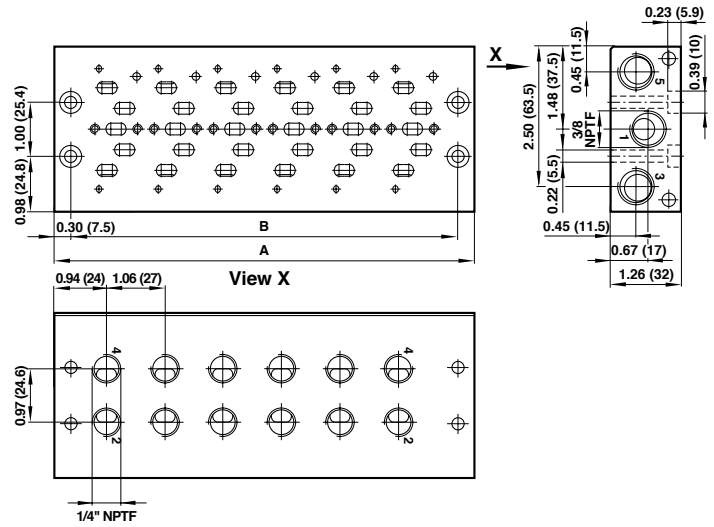
- Improve supply flow
- Increase exhaust capacity
- Pneumatically separate valves for fail save emergency
- Multipressure system and system solutions

Blanking Plate



Model	Description	Weight lb (kg)
V70500-KA0	Blanking Plate for blocking of unused stations (supplied with gasket)	0.11 (0.05)

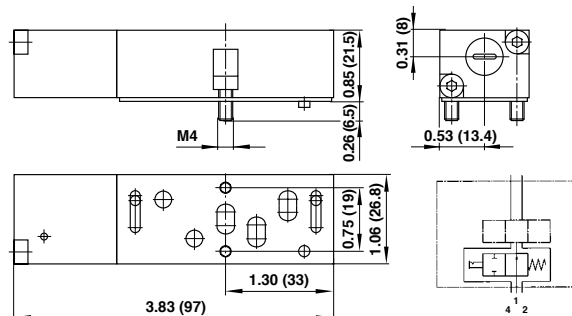
Fixed Length Subbase - Bottom Ported



Model	No. of Stations	A inch (mm)	B inch (mm)	Weight lb (kg)
V70502-RA0	2	3.27 (83)	2.68 (68)	0.88 (0.40)
V70504-RA0	4	5.39 (137)	4.80 (122)	1.43 (0.65)
V70506-RA0	6	7.52 (191)	6.93 (176)	2.00 (0.91)
V70508-RA0	8	9.65 (245)	9.06 (230)	2.53 (1.15)
V70510-RA0	10	11.77 (299)	11.18 (284)	3.11 (1.41)
V70512-RA0	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.

Single Valve Shut-Off Plate



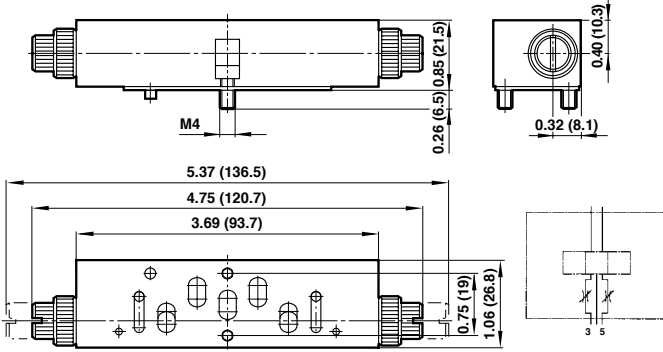
Model	Description	Weight lb (kg)
V70530-KA0	Single Shut-Off Plate supplied with gasket	0.28 (0.13)

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

Note: Flow restricted to max. Cv of 0.5

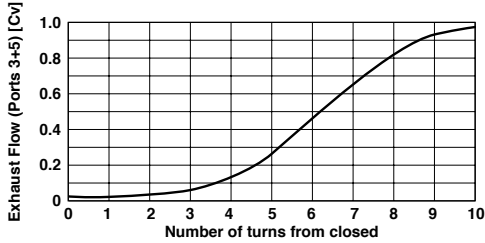
Dimensions in inches (mm)

Flow Control Plate



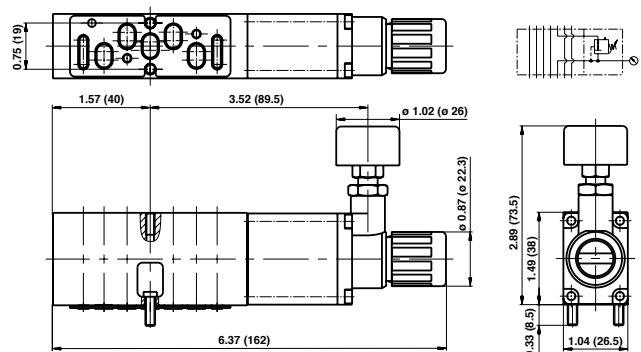
Model	Description	Weight lb (kg)
V70528-KA0	Flow control supplied with gasket	0.37 (0.17)

Dual Regulation of Exhaust Ports 3 and 5



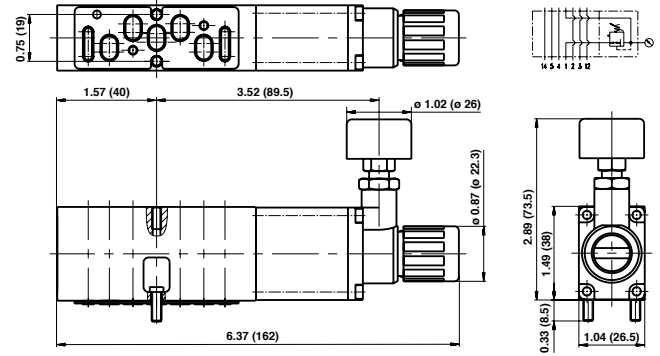
Flow: Port 1 → 2 and 1 → 4 remain unchanged
Flow measured at 87 psig inlet, Pressure drop 15 psi

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)

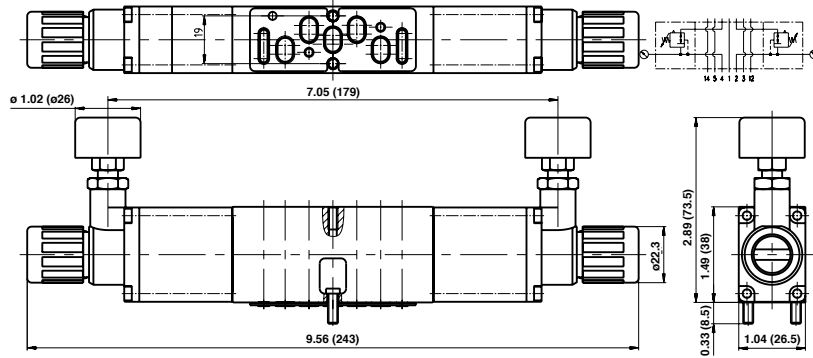


Model	Description	Weight lb (kg)
V70527-KA1	Regulation of Port 1	0.36 (0.79)

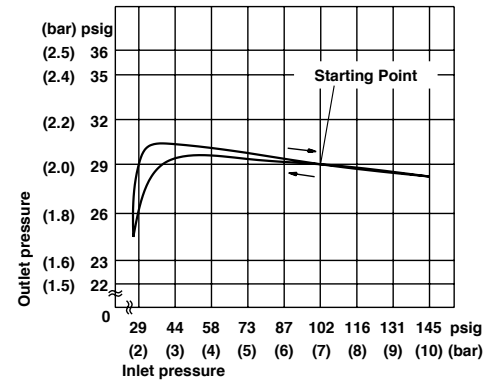
Maximum inlet pressure	232 psig (16 bar)
Regulated pressure	14.5–145 psig (1–10 bar)

Dimensions in inches (mm)

Pressure Regulator Plate

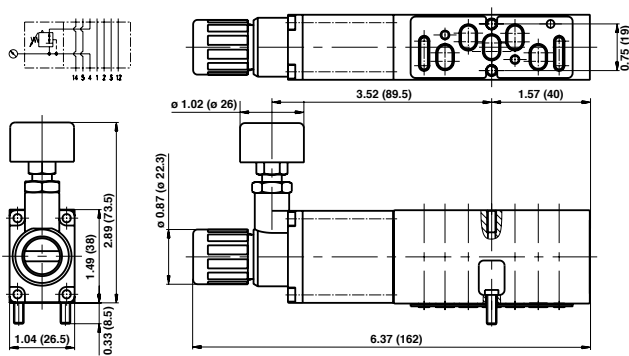


Hysteresis



Model	Description	Weight lb (kg)
V70527-KA4	Regulation of Ports 2+4	1.23 (0.56)

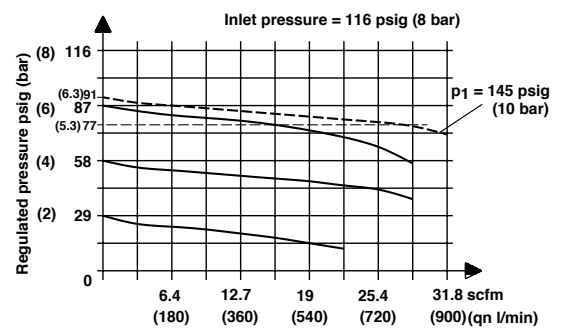
Maximum inlet pressure	232 psig (16 bar)
Regulated pressure	14.5–145 psig (1–10 bar)



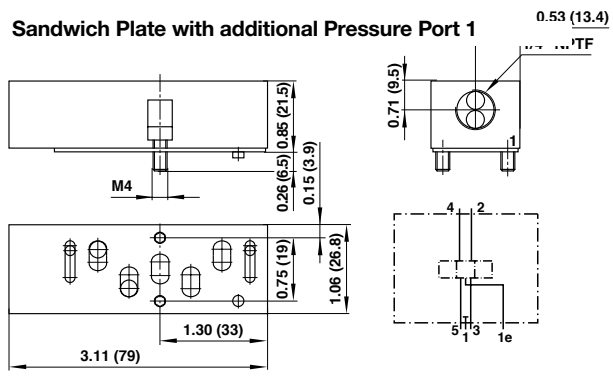
Model	Description	Weight lb (kg)
V70527-KA3	Regulation of Port 4	0.79 (0.36)

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

Flow Characteristics for Pressure Regulator Plates



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)

Dimensions in inches (mm)