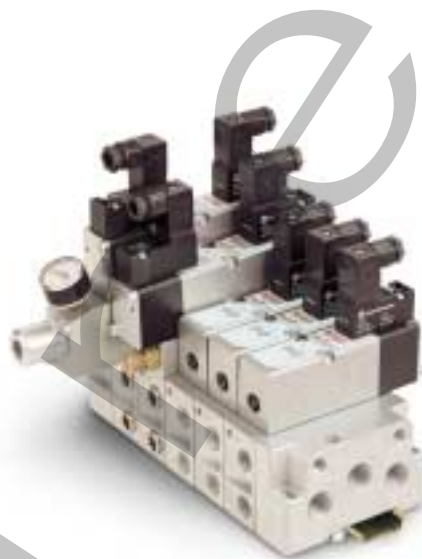


Mini ISO Star Valves

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
- 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, 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	Shrouded push button, spring return Convertible into lockable type with Set-up Kit Part no. V70532-K00 (see VAL-7-7)
Protection Class	IP 65 NEMA 4
Materials	PPS (body), Viton and NBR (seals)

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.

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

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-KAO
V45AA22D-C3***	NC	External	Not Collected	Sol/Spring	1.1	0 - 145	21.7+(0.5xop.press.)	0.53	V70546-KAO
V45AB11D-C3***	NO	Internal	Collected x	Sol/Spring	1.0	43.5 - 145	-	0.53	V70547-KAO
V45AB22D-C3***	NO	External	Not Collected	Sol/Spring	1.0	0 - 145	21.7+(0.5xop.press.)	0.53	V70547-KAO
V45AC11D-C3***	NO/NC	Internal	Collected x	Sol/Spring	1.0/	43.5 - 145	-	0.53	V70548-KAO
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-KAO
V44A523D-C3**†	GI	External	Not collected	Solenoid	Air Spring	0.9	26" Hg - 232	14.5 - 145	0.53	V70540-KAO
V44A517D-C3**†	GI	Internal	Collected x	Solenoid	Spring	0.9	23.2 - 145	-	0.44	V70540-KAO
V45A517D-C3**†	Ss	Internal	Collected x	Solenoid	Spring	1.2	29 - 145	-	0.46	V70541-KAO
V44A527D-C3**†	GI	External	Not collected	Solenoid	Spring	0.9	26" Hg - 232	23.2 - 145	0.44	V70540-KAO
V45A527D-C3**†	Ss	External	Not collected	Solenoid	Spring	1.2	26" Hg - 145	29 - 145	0.46	V70541-KAO
V44A511D-C3**†	GI	Internal	Collected x	Solenoid	Solenoid	0.9	29 - 145	-	0.60	V70540-KAO
V45A511D-C3**†	Ss	Internal	Collected x	Solenoid	Solenoid	1.2	29 - 145	-	0.60	V70542-KAO
V44A522D-C3**†	GI	External	Not collected	Solenoid	Solenoid	0.9	26" Hg - 232	29 - 145	0.60	V70540-KAO
V45A522D-C3**†	Ss	External	Not collected	Solenoid	Solenoid	1.2	26" Hg - 145	29 - 145	0.60	V70542-KAO

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-KAO
V45A611D-C3**†	Ss	APB	Internal	Collected x	Solenoid	Solenoid	1.15	36.3 - 145	-	0.59	V70543-KAO
V44A622D-C3**†	GI	APB	External	Not collected	Solenoid	Solenoid	0.9	26" Hg - 232	29 - 145	0.62	V70540-KAO
V45A622D-C3**†	Ss	APB	External	Not collected	Solenoid	Solenoid	1.15	26" Hg - 145	36.3 - 145	0.59	V70543-KAO
V44A711D-C3**†	GI	COE	Internal	Collected x	Solenoid	Solenoid	0.9	29 - 145	-	0.62	V70540-KAO
V45A711D-C3**†	Ss	COE	Internal	Collected x	Solenoid	Solenoid	1.15	36.3 - 145	-	0.59	V70544-KAO
V44A722D-C3**†	GI	COE	External	Not collected	Solenoid	Solenoid	0.9	26" Hg - 232	29 - 145	0.62	V70540-KAO
V45A722D-C3**†	Ss	COE	External	Not collected	Solenoid	Solenoid	1.15	26" Hg - 145	36.3 - 145	0.59	V70544-KAO
V44A811D-C3**†	GI	COP	Internal	Collected x	Solenoid	Solenoid	0.9	29 - 145	-	0.62	V70540-KAO
V45A811D-C3**†	Ss	COP	Internal	Collected x	Solenoid	Solenoid	1.15	36.3 - 145	-	0.59	V70545-KAO
V44A822D-C3**†	GI	COP	External	Not collected	Solenoid	Solenoid	0.9	26" Hg - 232	29 - 145	0.62	V70540-KAO
V45A822D-C3**†	Ss	COP	External	Not collected	Solenoid	Solenoid	1.15	26" Hg - 145	36.3 - 145	0.59	V70545-KAO

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)	0.20	V70546-KAO
V45AB33A-X0020	NO	Air/Spring	1.0	0 - 145	1.5 + (0.5xop. pressure)	0.20	V70547-KAO
V45AC33A-X0020	NO/NC	Air/Spring	1.0/1.1	0 - 145	1.5 + (0.5xop. pressure)	0.20	V70548-KAO

5/2 Air Pilot Actuated Valves

Model Techn.	Spool 14	Operator 12	Return Cv	Flow (psig)	Operating Pres. (psig)	Pilot Pres. (lb.)	Weight	Repair Kit
V44A537A-X0090	GI	Air	Spring	0.9	26" Hg - 232	23 - 232	0.40	V70540-KAO
V45A537A-X0090	Ss	Air	Spring	1.2	26" Hg - 145	29 - 145	0.40	V70541-KAO
V44A533A-X0020	GI	Air	Air	0.9	26" Hg - 232	29 - 232	0.44	V70540-KAO
V45A533A-X0020	Ss	Air	Air	1.2	26" Hg - 145	29 - 145	0.44	V70542-KAO

5/3 Air Pilot Actuated Valves

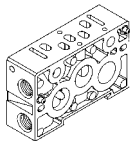
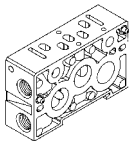
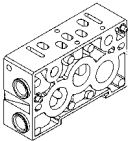
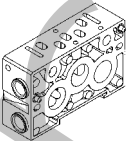
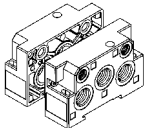
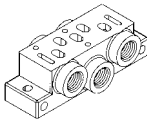
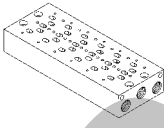
Model	Spool Techn.	Valve Function	Operator 14	Return 12	Flow Cv	Operating Pres. (psig)	Pilot Pres. (psig)	Weight (lb.)	Spares Kit
V44A633A-X0020	GI	APB	Air	Air	0.9	26" Hg - 232	29 - 232	0.48	V70540-KAO
V45A633A-X0020	Ss	APB	Air	Air	1.15	26" Hg - 145	36 - 145	0.46	V70543-KAO
V44A733A-X0020	GI	COE	Air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

Valves

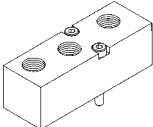
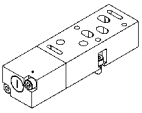
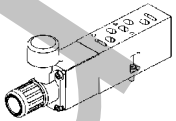
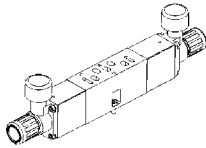
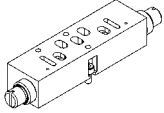
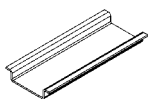
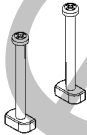
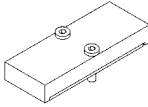

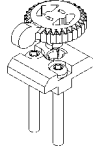
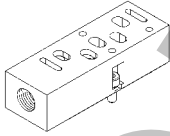
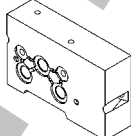
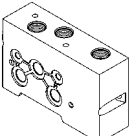
Mini ISO Star Valves

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

Bases

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

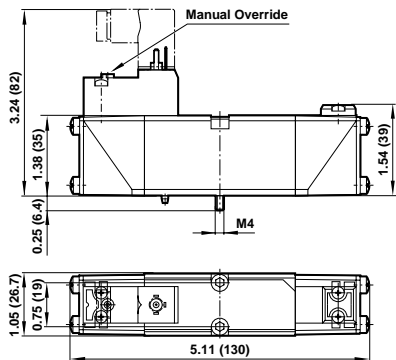
Intermediate Supply/Exhaust Module		Single Valve Shut-Off Plate		Single Pressure Regulator Plate		Double Pressure Regulator Plate		Flow Control Plate	
									
V70529-RA0	(1/4 NPTF)	V70530-KA0	(Port 1 blocked)	V70527-KA1	(Port 1 reg.)	V70527-KA4	(Ports 2+4 reg.)	V70528-KA0	(Ports 3+5)
V70529-BA0	(G1/4)			V70527-KA2	(Port 2 reg.)				
				V70527-KA3	(Port 4 reg.)				
DIN EN 50 022 rail (3.28 feet)		DIN-rail Mounting Kit		Blanking Plate for unused station		Blanking Disk to Modular Sub-base		Manual Override Set-Up Kit	
									
V10009-C00	(35x7.5mm)	V70531-KA0		V70500-KA0		V70522-K00	(Ports 1,3,5)	V70532-K00	
V10592-C01	(35x15mm)					V70523-K00	(Ports 12+14)		
Sandwich Plate with additional									
									
Pressure Port 1		Transition Plate #18 A#26 mm		Transition Plate #18 A#26 mm					
V70535-RA0	1/4 NPTF	V70436-K00		V70436-R00	1/4 NPTF				
V70535-BA0	G1/4			V70436-B00	G1/4				

Mini ISO Star Valves

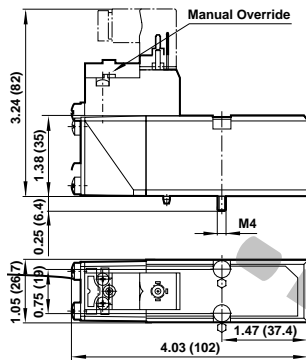
2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 26 mm

Dimensions in inches (mm)

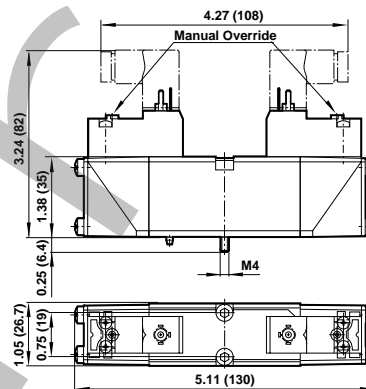
V44A5*3D-C3***
5/2 Single Solenoid Pilot Valve
Air Spring Return



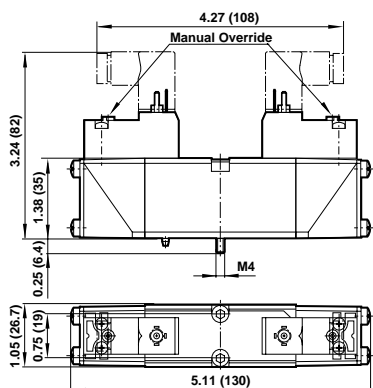
V44A5*7D-C3*** and V45A5*7D-C3***
5/2 Single Solenoid Pilot Valve
Mechanical Spring Return



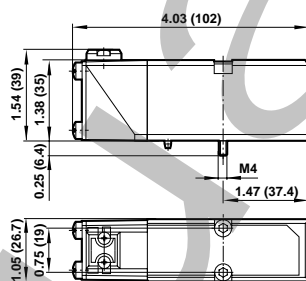
V44A5**D-C3*** and V45A5**D-C3***
5/2 Double Solenoid Pilot Valve



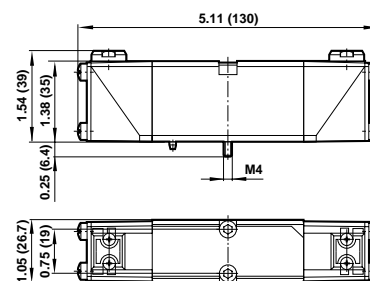
V44A***D-C3*** and V45A***D-C3***
2x3/2 + 5/3 Double Solenoid Pilot Valve



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



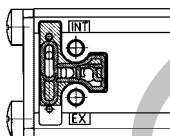
V44A*33A-X00*0 and V45A*33A-X00*0
2x3/2 + 5/2 + 5/3 Double Air Pilot Valve



Conversion from internal to external pilot supply / collected pilot exhaust

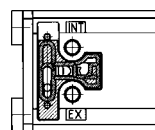
The lowered and captive gasket between valve body and pilot valve defines and indicates pilot air supply as well as pilot exhaust function of the valve.

Solenoid pilot actuated valves



blue gasket

Drawing shows no pilot valve.



blue gasket

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

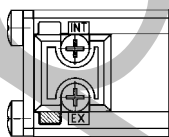
All solenoid pilot valves with code 1 at position 6 in the part number (e.g V45A51...) have the gasket mounted in this position on delivery.

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.

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.

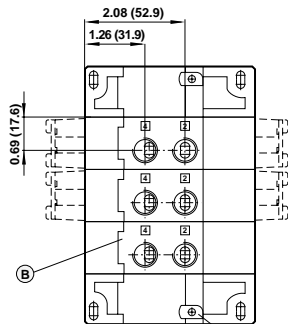
Air pilot actuated valves
External pilot supply.

Mini ISO Star Valves

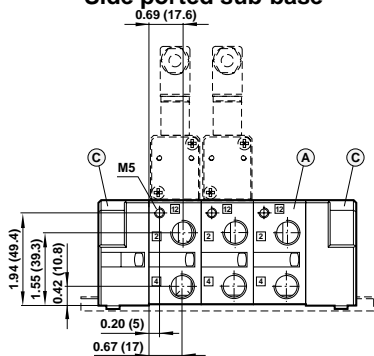
2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 26 mm

Dimensions in inches (mm)

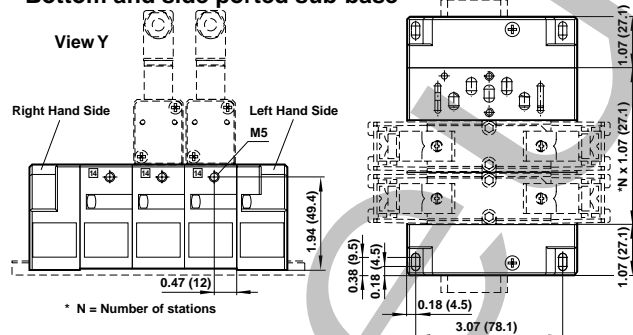
Bottom ported sub-base



Side ported sub-base

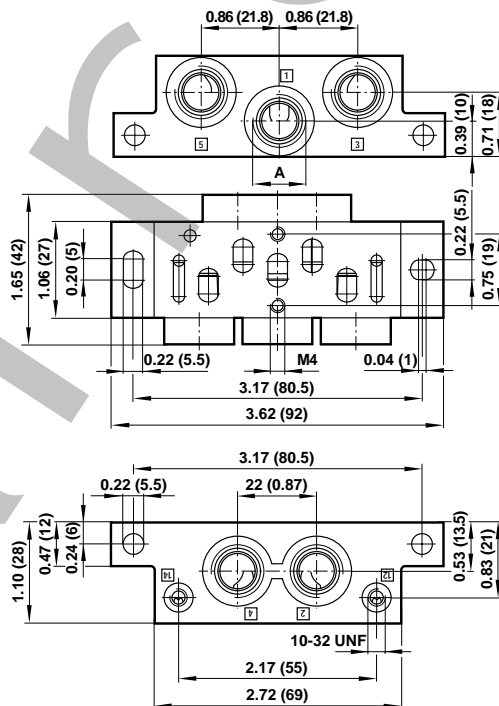


Bottom and side ported sub-base



* N = Number of stations

Single Station Sub-base - 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 side ported with pilot ports	(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) 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

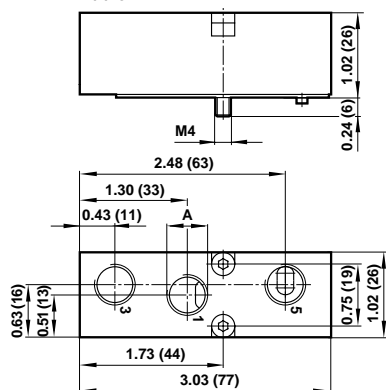
Modular Sub-base Ports 2+4 on side V70525-xAF	(A) 0.40 lb (0.18 kg)
Modular Sub-base Ports 2+4 on side Pilot Ports 12+14 on side V70526-xAF	(A) 0.40 lb (0.18 kg)
Modular Sub-base Ports 2+4 on bottom V70525-BAE	(B) 0.40 lb (0.18 kg)
Modular Sub-base Ports 2+4 on bottom Pilot Ports 12+14 on side V70526-BAE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

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.

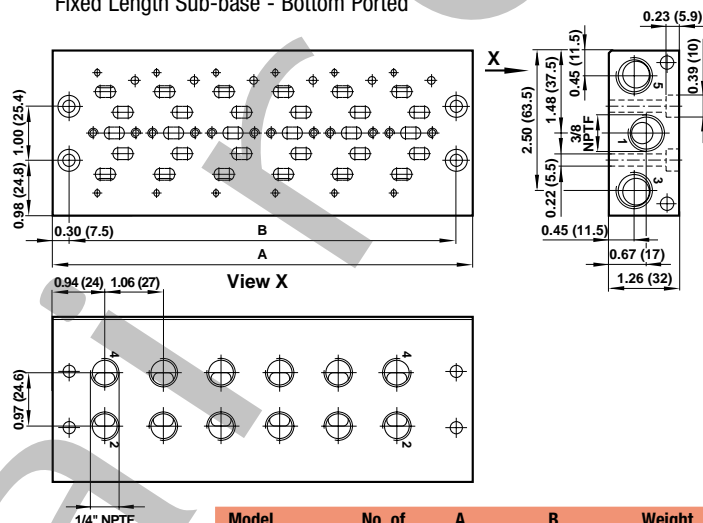
Occupies one valve station.

Supplied with gasket for both sub-bases.

Can be used to:

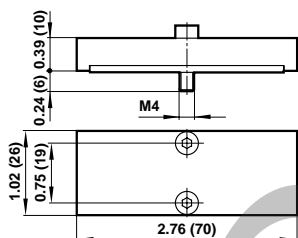
- Improve supply flow
- Increase exhaust capacity
- Pneumatically separate valves for fail safe emergency
- Multipressure system and system solutions

Fixed Length Sub-base - Bottom Ported



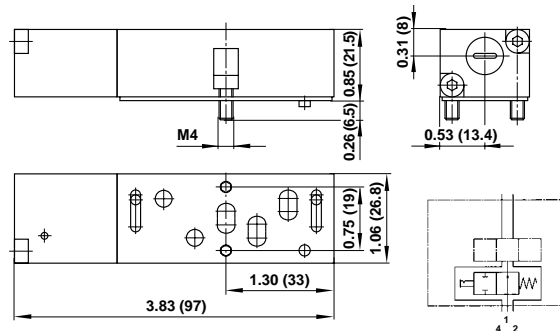
Model	No. of Stations	A inch (mm)	B inch (mm)	Weight lb (kg)
V70502-RAO	2	3.27 (83)	2.68 (68)	0.88 (0.40)
V70504-RAO	4	5.39 (137)	4.80 (122)	1.43 (0.65)
V70506-RAO	6	7.52 (191)	6.93 (176)	2.00 (0.91)
V70508-RAO	8	9.65 (245)	9.06 (230)	2.53 (1.15)
V70510-RAO	10	11.77 (299)	11.18 (284)	3.11 (1.41)
V70512-RAO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

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 island is pressurized by port 1.

Note: Flow restricted to max. Cv of 0.5

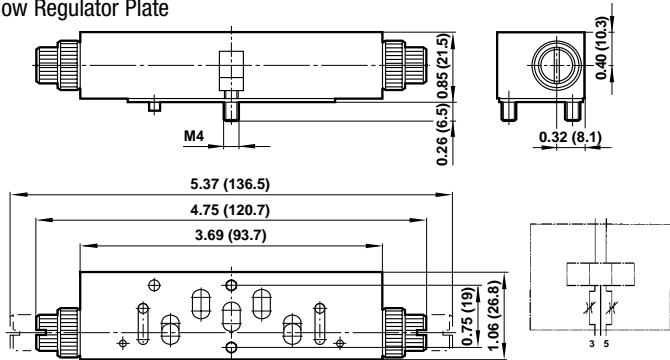
Valves

Mini ISO Star Valves

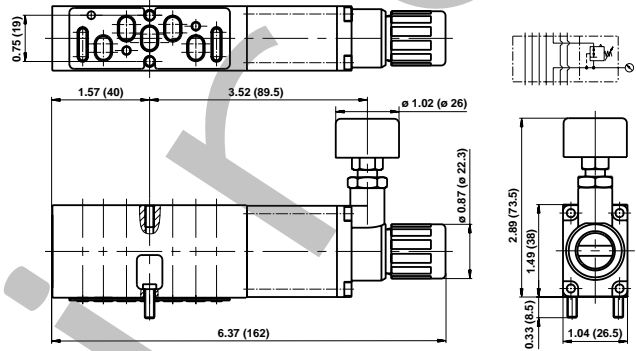
2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 26 mm

Dimensions in inches (mm)

Flow Regulator Plate



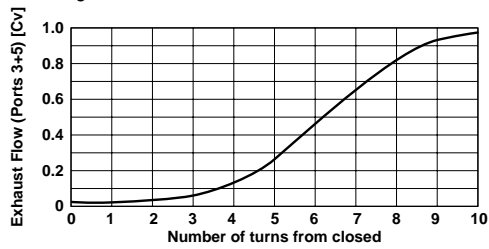
Pressure Regulator Plate



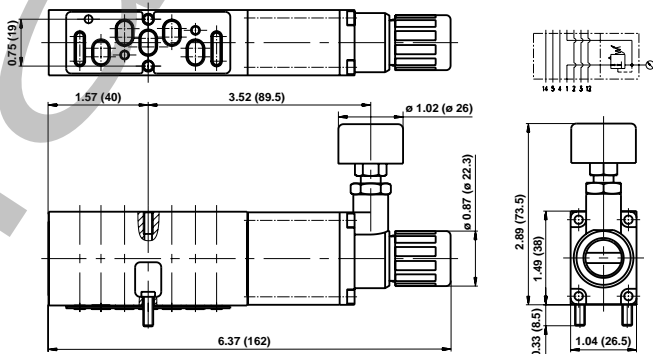
Model	Description	Weight lb (kg)
V70528-KA0	Flow Regulator supplied with gasket	0.37 (0.17)

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)	

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



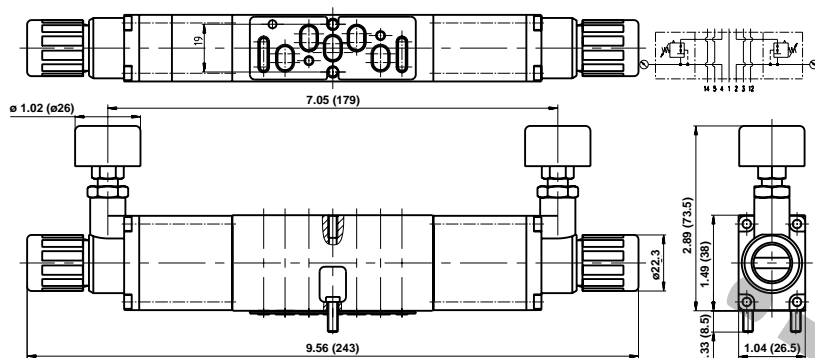
Model	Description	Weight lb (kg)
V70527-KA1	Regulation of Port 1	0.36 (0.79)
Maximum inlet pressure	232 psig(16 bar)	
Regulated pressure	7.25–145 psig(0.5–10 bar)	

Mini ISO Star Valves

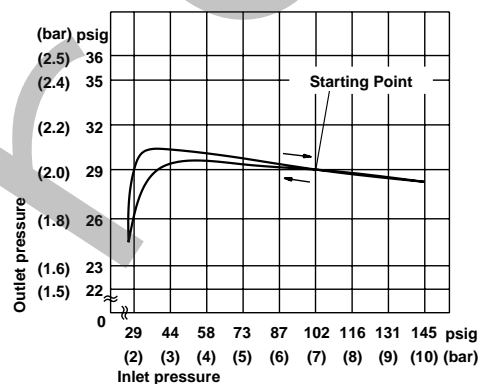
2x3/2, 5/2 and 5/3, Solenoid and Pilot Actuated ISO 15407-1 / VDMA 24 563 Size 26 mm

Dimensions in inches (mm)

Pressure Regulator Plate



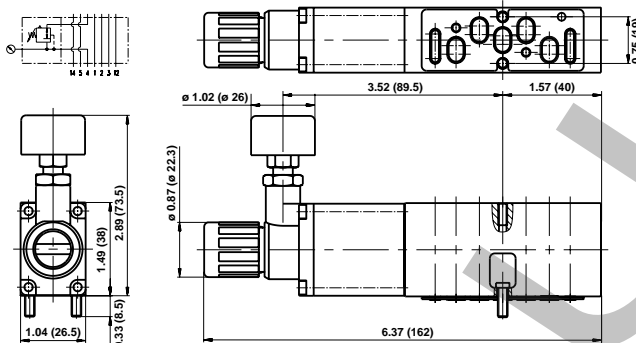
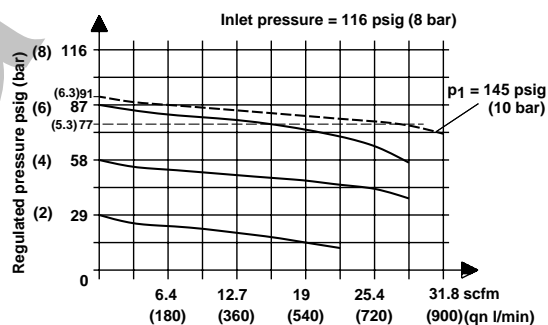
Hysteresis



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	7.25–145 psig (0.5–10 bar)

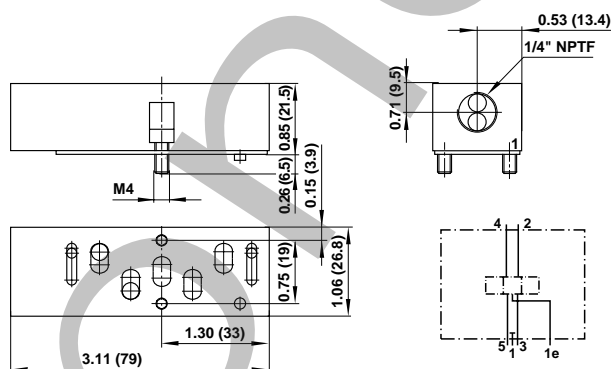
Flow Characteristics for Pressure Regulator Plates



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

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