

SLV Series Pneumatic Lockout Valves Accessories



<u>HVM-34N</u>



SLV-PU

Note: HVM series exhaust silencers have a maximum pressure of 250PSI (17 bar).

- Silencers (mufflers) are aluminum construction
- High flow rates needed for safety lockout valves
- Pressure indicator pops out when pressure of 5psi or more is present





NITE	NITRA SLV Series Pneumatic Lockout Valve Accessories												
Part No.	Description	Price	Weight (lbs)										
<u>HVM-18N</u>	NITRA pneumatic exhaust silencer, aluminum, cylindrical, Cv=2, 1/8in male NPT	\$23.50	0.1										
<u>HVM-14N</u>	NITRA pneumatic exhaust silencer, aluminum, cylindrical, Cv=2.7, 1/4in male NPT	\$23.50	0.1										
<u>HVM-38N</u>	NITRA pneumatic exhaust silencer, aluminum, cylindrical, Cv=3.2, 3/8in male NPT	\$23.50	0.1										
<u>HVM-38N-H</u>	NITRA pneumatic exhaust silencer, aluminum, cylindrical, Cv=4.9, 3/8in male NPT	\$31.50	0.2										
<u>HVM-12N</u>	NITRA pneumatic exhaust silencer, aluminum, cylindrical, Cv=5.9, 1/2in male NPT	\$33.00	0.2										
<u>HVM-34N</u>	NITRA pneumatic exhaust silencer, aluminum, cylindrical, Cv=5.9, 3/4in male NPT	\$31.50	0.2										
<u>HVM-34N-H</u>	NITRA pneumatic exhaust silencer, aluminum, cylindrical, Cv=13.5, 3/4in male NPT	\$66.00	0.6										
<u>HVM-1N</u>	NITRA pneumatic exhaust silencer, aluminum, cylindrical, Cv=16.7, 1in male NPT	\$66.00	0.6										
<u>HVM-114N</u>	NITRA pneumatic exhaust silencer, aluminum, cylindrical, Cv=17.4, 1-1/4in male NPT	\$66.00	0.6										
<u>SLV-PU</u>	NITRA pneumatic pop up pressure indicator, 5 psi, 1/8in male NPT	\$31.50	0.1										

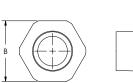


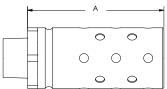
SLV Series Pneumatic Lockout Valves Accessories

Nitra High Volume Silencers (Mufflers)

Dimensions

inches [mm]



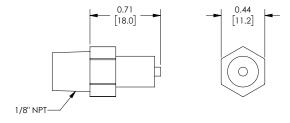


Muffl	er Dimens	ions
Part #	A	В
<u>HVM-18N</u>	1.6 [40.64]	0.8 [20.32]
<u>HVM-14N</u>	1.6 [40.64]	0.8 [20.32]
<u>HVM-38N</u>	1.6 [40.64]	0.8 [20.32]
<u>HVM-38N-H</u>	2.9 [73.66]	1.3 [33.02]
<u>HVM-12N</u>	2.9 [73.66]	1.3 [33.02]
<u>HVM-34N</u>	2.9 [73.66]	1.3 [33.02]
<u>HVM-34N-H</u>	4.5 [114.30]	2.0 [50.80]
HVM-1N	4.5 [114.30]	2.0 [50.80]
<u>HVM-114N</u>	4.5 [114.30]	2.0 [50.80]

Nitra Pop Up Pressure Indicator

Dimensions

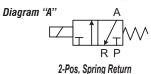
inches [mm]





Pneumatic Directional Control Solenoid Valves - AVP Series





 $NITRA^{TM}$ pneumatic AVP series directional control solenoid valves are 3-way stackable poppet style valves with 1/8" NPT ports. They provide 2-position, normally closed, spring return operation with either 24 VDC or 120 VAC solenoid coils. The AVP series can be used in individual valve applications or multiple valves can be field assembled (stacked) to share supply air, simplifying piping connections. The DIN style wiring connector includes LED indication of the solenoid coil status.

Features

- 3-way stackable poppet style valves
- 1/8" NPT ports
- 2-position, normally closed, spring return
- 24VDC or 120VAC solenoid coils
- DIN style wiring connector with LED indication
- Single valve or multiple stacked valve applications
- 2 year warranty





See www.AutomationDirect.com for a wide variety of fitting options







Stacked example using AVP-31KIT stacking screw kit and shown with mounting bracket AVP-31BKT





AVP-31KIT

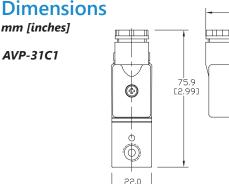
Note: One kit is required for each additional AVP-31 valve added to the stack.



AVP-31BKT

Dimensions in mm [inches]

	AVP Series Specificat	ons							
Model	AVP-31C1-24D	<u> AVP-31C1-120A</u>							
Price	\$33.50	\$33.50							
Weight (lbs)	0	3							
Valve Type	3-way 2	position							
Acting	Direct acting, normally	closed, spring return							
Diagram	A	A							
Port Size	1/	8"							
Orifice Size	1.2 mm, (Cv=0.051							
Fluid	Air (to be filtered by	40μ filter element)							
Operating Pressure	0 to 120psi, (0 to 0.8	0 to 120psi, (0 to 0.8 MPa), (0 to 8.3 bar)							
Voltage	20.4 - 26.4 VDC	102 - 132 VAC (50/60 Hz)							
Power Consumption	DC: 3.0W AC: 4.5 VA; co	continuous duty (100% ED)							
Maximum Frequency	10 cyc	es/sec							
Operating Life	50,000,0	00 cycles							
Insulation	B cl	ass							
Min Response	0.05	sec							
Temperature	-5~60°C (23~140°F)							
Lubrication	Not Re	quired							
Protection	IP65 (DI	N40050)							
Connection	11mm DIN Terminal with Grommet								
Material of Body	Aluminum Alloy								
Agency Approvals	Solenoid CE marked; RoHS								





62.4 [2.46] шш 63.4 [2.50]

Diagram "A"



Pneumatic Directional Control Solenoid Valves - AVS-3 Series



R

2-Pos, Spring Return

AVS-3211

2-Pos, Double Solenoid

Diagram "B"

NITRA™ pneumatic AVS-3 series directional control solenoid valves are body ported 3-port (3-way) spool valves. Available port sizes are 1/8", 1/4" or 3/8" NPT with flow coefficients (Cv) from 0.67 to 1.67. The single solenoid models provide 2-position, normally closed, spring return operation and the double solenoid models provide 2-position, energize open/energize closed operation. Solenoid coils are available in either 24VDC or 120VAC control voltages. The DIN style wiring connector includes LED indication of the solenoid coil status.

Features

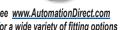
- Body ported, 3-port (3-way) spool valves
- 1/8", 1/4" or 3/8" NPT ports
- 2-position, single solenoid normally closed spring return; 2-position, double solenoid energize open/ energize closed
- 24VDC or 120VAC solenoid coils
- DIN style wiring connector with LED indication
- · Locking manual operator
- 2 year warranty







See www.AutomationDirect.com for a wide variety of fitting options



	AVS-3 Series Specifications													
Model	AVS-3111-24D	AVS-3111-120A	AVS-3211-24D	AVS-3211-120A	AVS-3221-24D	AVS-3212-24D	AVS-3212-120A	AVS-3222-24D	AVS-3222-120A					
Price	\$36.50	\$36.50	\$37.50	\$37.00	\$62.00	\$37.50	\$37.00	\$62.00	\$60.00					
Weight (lb)	0.3	0.3	0.5	0.5	0.8	0.5	0.5	0.7	0.7					
Valve Type		3 port 2 position												
Acting		Internally Piloted												
Diagram		A	,	A	В		A		В					
Port Size	In/Ou	it=1/8"		In/Out=1/8"			In/Ou	t=1/4"						
Orifice Size	12mm² (Cv=0.67)	1	14mm² (Cv=0.7	nm² (Cv=0.78) 16mm² (Cv=0.89)									
Fluid				Air (to be fil	tered by 40µ fil	lter element)								
Pressure		Working	j : 20~115 psi, ((0.15~0.8 MPa)	, (1.5~8.0 bar);	Proof: 215 ps	i, (1.48 MPa), (14.8 bar)						
Voltage	24VDC single solenoid	120VAC single solenoid	24VDC single solenoid	120VAC single solenoid	ngle double singl		120VAC single solenoid	24VDC double solenoid	120VAC double solenoid					
Power Consumption	DC: 2.5W continuous du	AC: 3.5 VA; uty (100% ED)		DC	C: 3.0W AC: 4.	5 VA; continuo	us duty (100% l	ED)						
Max Frequency					5 cycles/sec									
Operating Life				5	0,000,000 cycle	es								
Insulation					B class									
Min Response					0.05 sec									
Temperature				-5 ⁻	~60°C (23~140	°F)								
Lubrication		Not Required												
Protection		IP65 (DIN40050)												
Connection	9.4 mm D	N Terminal			11	Imm DIN Termi	nal							

Aluminum Alloy

Solenoid CE marked; RoHS

Body

Agency Approvals



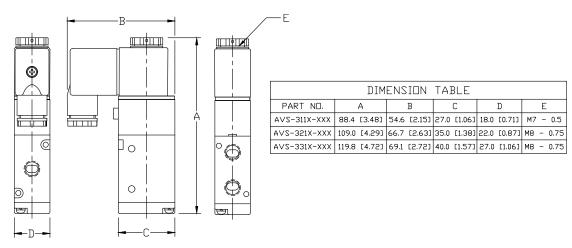
Pneumatic Directional Control Solenoid Valves – AVS-3 Series

	AVS-3 Series Specifications													
Model	AVS-3312-24D		AVS-3322-24D	AVS-3313-24D	AVS-3313-120A	AVS-3323-24D	AVS-3323-120A							
Price	\$53.00	\$53.00	\$81.00	\$53.00	\$53.00	\$81.00	Retired							
Weight (lb)	0.7	0.7	0.9	0.7	0.7	0.9	0.9							
Valve Type				3 port 2 position										
Acting	Internally Piloted													
Diagram	1	4	В	,	\		В							
Port Size		In/Out=1/4"			In/Ou	it=3/8"								
Orifice Size		16mm² (Cv=1.39)			25mm² (Cv=1.67)								
Fluid			Air (to be	filtered by 40µ filte	r element)									
Pressure		Working: 20~115	psi, (0.15~0.8 MP	a), (1.5~8.0 bar); F	Proof: 215 psi, (1.4	8 MPa), (14.8 bar)								
Voltage	24VDC single solenoid	120VAC single solenoid	24VDC double solenoid	24VDC single solenoid	120VAC single solenoid	24VDC double solenoid	120VAC double solenoid							
Power Consumption			DC: 3.0W AC:	4.5 VA; continuous	duty (100% ED)	1								
Max Freq				5 cycles/sec										
Insulation				B class										
Min Response				0.05 sec										
Temperature				5~60°C (23~140°F	·)									
Lubrication				Not Required										
Protection				IP65 (DIN40050)										
Connection	11mm DIN Terminal													
Body	Aluminum Alloy													
Agency Approvals			Sole	enoid CE marked; R	toHS									

Dimensions

mm [inches]

AVS-311x, AVS-321x, AVS-331x

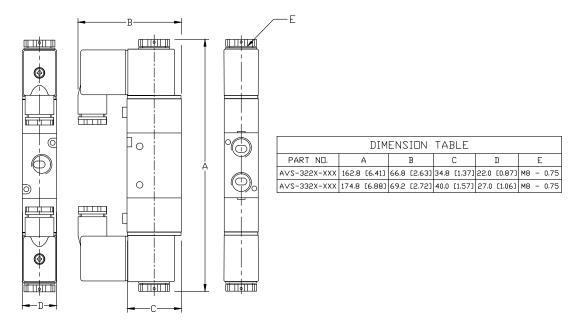




Dimensions

mm [inches]

AVS-322x, AVS-332x





Pneumatic Directional Control Solenoid Valves – AVS-5 Series

AVS-5211



NITRA™ pneumatic AVS-5 series directional control solenoid valves are body ported 5-port (4-way) spool valves. Available port sizes are 1/8″, 1/4″, 3/8″ or 1/2″ NPT with flow coefficients (Cv) from 0.50 to 2.79. Models are available with single solenoid, spring return or double solenoid 2-position operation. In addition, double solenoid models are available with 3-position, center closed or center exhaust operation. Solenoid coils are available in either 24VDC or 120VAC control voltages. The AVS-5 series can be used in individual valve applications or multiple valves can be field assembled on AM-5 series manifolds simplifying piping connections. AM-5 series manifolds are available in 2, 4, 6 or 8 stations. The DIN style wiring connector includes LED indication of the solenoid coil status.



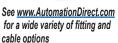
AVS-5221 Stacked solenoids shown mounted on optional manifold

- Body ported, 5-port (4-way) spool valves
- 1/8", 1/4", 3/8" or 1/2" NPT ports
- 2-position, single solenoid normally closed, spring return;
 2-position, double solenoid, energize open/energize closed;
 3-position, double solenoid center closed or center exhaust
- 24VDC or 120VAC solenoid coils
- DIN style wiring connector with LED indication
- Single valve or multiple manifold mounted valve applications
- · Locking manual operator
- · 2 year warranty











	AVS-5 Series Specifications															
Model	AVS-5111-24D	AVS-5111-120A	AVS-5121-24D	AVS-5121-120A	AVS-513C1-24D	AVS-513C1-120A	AVS-513E1-24D	AVS-513E1-120A	AVS-5211-24D	AVS-5211-120A	AVS-5221-24D	AVS-5221-120A	AVS-5212-24D	AVS-5212-120A	AVS-5222-24D	AVS-5222-120A
Price	\$36.50	\$36.50	\$59.00	\$59.00	\$82.00	\$82.00	\$82.00	\$82.00	\$37.00	\$37.50	\$60.00	\$62.00	\$37.00	\$37.50	\$60.00	\$62.00
Weight (lb)	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	8.0	0.8	0.5	0.5	8.0	0.8
Valve Type		5 port 2	position			5 port 3	position					5 port 2	position			
Acting								Internally	y Piloted							
Diagram	A	Ą	Е	3	()	[)	A	4	Е	3	/	A	E	3
Port Size	li	n/Out/Ext	naust=1/8	"	li	n/Out/Exh	naust=1/8	"	li li	n/Out/Exh	naust=1/8	"	In/C	Out=1/4",	Exhaust=	1/8"
Orifice Size		12mm² (Cv=0.67)			9mm² (C	cv=0.50)			14mm² (Cv=0.78)			16mm² (Cv=0.89)	
Fluid						P	ir (to be t	iltered by	40µ filte	r element	:)					
Pressure				Working	20~115				.0 bar); F	Proof: 21	5 psi, (1.4	8 MPa),	(14.8 bar)		
Voltage (VAC @ 50/60 Hz)	24VDC single solenoid	120VAC single solenoid	24VDC double solenoid	120VAC double solenoid	center closed	center closed double	24VDC center exhaust double solenoid	center exhaust double	single	120VAC single solenoid	double	double	24VDC single solenoid	single	double	
Power Consumption		DC: 2.5	5W AC: 3	3.5 VA; co	ontinuous	duty (100	0% ED)			DC: 3.0	W AC: 4	4.5 VA; co	ontinuous	duty (10	0% ED)	
Max Freqency		5 cycl	es/sec			3 cycle	es/sec					5 cycle	es/sec			
Operating Life								50,000,00	00 cycles							
Insulation								B cl	ass							
Min Response								0.05	sec							
Temperature							{	5~60°C (2	23~140°F	-)						
Lubrication								Not Re	quired							
Protection								IP65 (DI	N40050)							
Connection	9.4 mm DIN Terminal 11mm DIN Terminal															
Body								Aluminu	ım Alloy							
Agency Approvals							Sole	noid CE n	narked; R	RoHS						



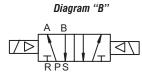
Pneumatic AVS Directional Control Solenoid Valves – AVS-5 Series

Diagram "A"





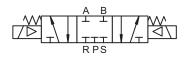
2-Pos, Spring Return



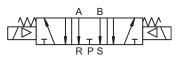
2-Pos, Double Solenoid

Diagram "D"

Diagram "C"



3-Pos, Closed Center



3-Pos, Exhaust Center

	AVS-5 Series Specifications															
Model	<u>AVS-5312-24D</u>	AVS-5312-120A	<u>AVS-5322-24D</u>	AVS-5322-120A	<u>AVS-5313-24D</u>	AVS-5313-120A	AVS-5323-24D	AVS-5323-120A	AVS-523C1-24 <u>D</u>	AVS-523C1-120A	<u>AVS-523E1-24D</u>	AVS-523E1-120A	AVS-523C2-24 <u>D</u>	AVS-523C2-120A	<u>AVS-523E2-24D</u>	AVS-523E2-120A
Price	\$51.00	\$51.00	\$74.00	\$75.00	\$51.00	\$51.00	\$74.00	\$75.00	\$99.00	\$99.00	\$99.00	\$99.00	\$99.00	\$99.00	\$99.00	\$99.00
Weight (lb)	0.8	0.8	1.0	1.0	0.7	0.7	1.0	1.0	0.9	0.8	0.9	0.9	0.9	0.8	0.9	0.8
Valve Type				5 port 2	position							5 port 3	position			
Acting								Internall	y Piloted							
Diagram	A	A	E	3	I	4		3	([)	(3	[)
Port Size		In/Out/Exl	naust=1/4"		In/	Out=3/8",	Exhaust=1	/4"		In/Out/Exh	naust=1/8"		In/	Out=1/4", I	Exhaust=1	/8"
Orifice Size		25mm²	(Cv=1.4)			30mm² (Cv=1.68)					12mm² (Cv=0.67)			
Fluid							Air (to be	filtered by	40µ filter	element)						
Pressure				Work	ing: 20~1	15 psi, (0.	15~0.8 MF	a), (1.5~8	.0 bar); P ı	r oof: 215	osi, (1.48 I	MPa), (14.	8 bar)			
Voltage (VAC @ 50/60 Hz)	24VDC single solenoid	120VAC single solenoid	24VDC double solenoid	120VAC double solenoid	24VDC single solenoid	120VAC single solenoid	24VDC double solenoid	120VAC double solenoid	24VDC center closed double solenoid	120VAC center closed double solenoid	24VDC center exhaust double solenoid	120VAC center exhaust double solenoid	24VDC center closed double solenoid	120VAC center closed double solenoid	24VDC center exhaust double solenoid	120VAC center exhaust double solenoid
Power Consumption						DC: 3	3.0W AC:	4.5 VA; co	ontinuous	duty (100%	% ED)					
Max Frequency				4 cycle	es/sec							3 cycl	es/sec			
Operating Life								50,000,0	00 cycles							
Insulation								Вс	lass							
Min Response								0.05	sec							
Temperature								-5~60°C (23~140°F)							
Lubrication								Not Re	equired							
Protection								IP65 (DI	N40050)							
Connection		11mm DIN Terminal														
Body								Aluminu	ım Alloy							
Agency Approvals							Sole	enoid CE r	marked; Ro	oHS						



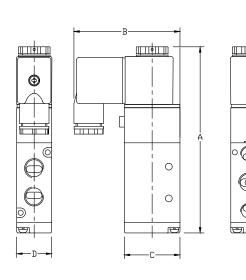
Pneumatic AVS Directional Control Solenoid Valves – AVS-5 Series

					AV	S-5 S	eries S	Specif	icatio	ns						
Model	AVS-533C2-24D	AVS-533C2-120A	AVS-533E2-24D	AVS-533E2-120A	AVS-533C3-24D	AVS-533C3-120A	AVS-533E3-24D	AVS-533E3-120A	AVS-5414-24D	AVS-5414-120A	AVS-5424-24 <u>D</u>	AVS-5424-120A	AVS-543C4-24D	AVS-543C4-120A	AVS-543E4-24D	AVS-543E4-120A
Price	\$140.00	\$140.00	\$140.00	\$140.00	\$140.00	\$140.00	\$140.00	\$140.00	\$69.00	\$80.00	\$103.00	\$103.00	\$143.00	\$143.00	\$143.00	\$143.00
Weight (lb)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.3	1.3	1.5	1.5	1.7	1.7	1.7	1.7
Valve Type				5 port 3	position					5 port 2	position			5 port 3	position	
Acting								Internally	y Piloted							
Diagram	(0	1)	()	[)	A	4	E	3	(2	[)
Port Size	ı	In/Out/Ext	naust=1/4	"	In/C	Out=3/8", I	Exhaust=	1/4"			ı	n/Out/Ext	naust=1/2	"		
Orifice Size				18mm² (Cv=1.0)					50mm² (Cv=2.79)			30mm² (Cv=1.68)	
Fluid						,	Air (to be	filtered by	40µ filte	r element)					
Pressure				Working	j: 20~115	psi, (0.15	~0.8 MP	a), (1.5~8.	0 bar); P	Proof: 215	psi, (1.4	8 MPa), (14.8 bar)			
Voltage (VAC @ 50/60 Hz)	24VDC center closed double solenoid	120VAC center closed double solenoid	24VDC center exhaust double solenoid	120VAC center exhaust double solenoid	center closed double	double	center exhaust double	double	single	120VAC single solenoid	double	120VAC double solenoid	closed double	120VAC center closed double solenoid	center	120VAC center exhaust double solenoid
Power Consumption						DC: 3.0	OW AC:	4.5 VA; co	ntinuous	duty (100	% ED)					
Max Frequency								3 cycle	es/sec							
Operating Life								50,000,00	00 cycles							
Insulation								B cl	ass							
Min Response								0.05	sec							
Temperature								5~60°C (2	23~140°F	:)						
Lubrication								Not Re	quired							
Protection								IP65 (DI	,							
Connection								11mm DIN	l Termina	l						
Body								Aluminu	ım Alloy							
Agency Approvals							Sole	noid CE n	narked; R	toHS						

Dimensions

mm [inches]

AVS-5111, AVS-5211, AVS-5212, AVS-5312, AVS-5313, AVS-5414



I	IM						
			DIM	ENSION	TABLE		
i		PART NO.	Α	В	С	D	E
		AVS-5111-XXX	99.4 [3.91]	55.0 [2.17]	27.0 [1.06]	18.0 [0.71]	M7 - 0.5
) (Q)	AVS-5211-XXX	117.1 [4.61]	66.7 [2.63]	35.0 [1.38]	22.0 [0.87]	M8 - 0.75
		AVS-5212-XXX	117.1 [4.61]	66.7 [2.63]	35.0 [1.38]	22.0 [0.87]	M8 - 0.75
Q	2)	AVS-5312-XXX	134.9 [5.31]	69.2 [2.72]	40.0 [1.57]	27.0 [1.06]	M8 - 0.75
		AVS-5313-XXX	134.9 [5.31]	69.2 [2.72]	40.0 [1.57]	27.0 [1.06]	M8 - 0.75
Q) 0	AVS-5414-XXX	168.4 [6.63]	74.0 [2.91]	50.0 [1.97]	34.0 [1.34]	M8 - 0.75
<u></u>							

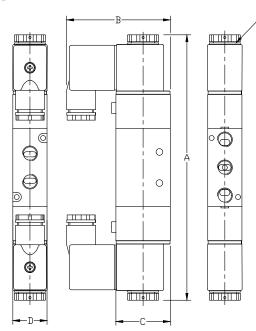


Pneumatic Directional Control Solenoid RA PNEUMATICS Valves – AVS-5 Series

Dimensions

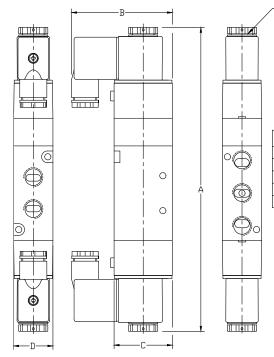


AVS-5121, AVS-5221, AVS-5222, AVS-5322, AVS-5323, AVS-5424



		DIM	ENS	ION	TA]	BLE					
PART NO.		A		В		С		D			
AVS-5121-XXX	142.4	[5.61]	54.8	[2.16]	27.0	[1.06]	18.0	[0.71]	М7	-	0.5
AVS-5221-XXX	170.8	[6.72]	66.7	[2.63]	35.0	[1.38]	22.0	[0.87]	м8	-	0.75
AVS-5222-XXX	170.8	[6.72]	66.7	[2.63]	35.0	[1.38]	22.0	[0.87]	м8	-	0.75
AVS-5322-XXX	189.8	[7.47]	69.2	[2.72]	40.0	[1.57]	27.0	[1.06]	м8	-	0.75
AVS-5323-XXX	189.8	[7.47]	69.2	[2.72]	40.0	[1.57]	27.0	[1.06]	М8	-	0.75
AVS-5424-XXX	222.8	[8.77]	74.0	[2.91]	50.0	[1.97]	34.0	[1.34]	М8	-	0.75

AVS-513xx, AVS-523xx, AVS-533xx, AVS-543xx



DIMENSION TABLE												
PART NO.		4		В		С		D	E			
AVS-513XX-XXX	157.4	[6.20]	54.8	[2.16]	26.6	[1.05]	18.0	[0.71]	М7	-	0.5	
AVS-523XX-XXX	189.8	[7.47]	66.7	[2.63]	35.0	[1.38]	22.0	[0.87]	М8	-	0.75	
AVS-533XX-XXX	208.8	[8.22]	69.2	[2.72]	40.0	[1.57]	27.0	[1.06]	М8	-	0.75	
AVS-543XX-XXX	243.8	[9.60]	74.0	[2.91]	50.0	[1.97]	34.0	[1.34]	М8	-	0.75	



Pneumatic A-Series Direction Control Solenoid Valves - Accessories



AVC1-12D



AVC2-12D

Pne	Pneumatic A-Series Directional Control Solenoid Valve Series Accessories											
Part No.	Price	Description	Weight (lb)									
<u>AVC1-12D</u>	\$12.50	NITRA solenoid coil, 12VDC, 2.5 W. For use with AVS-31 and AVS-51 series valves.	0.1									
<u>AVC1-24D</u>	\$12.50	NITRA solenoid coil, 24VDC, 2.5 W. For use with AVS-31 and AVS-51 series valves.	0.1									
<u>AVC1-24A</u>	\$12.50	NITRA solenoid coil, 24VAC, 4.0 VA. For use with AVS-31 and AVS-51 series valves.	0.1									
<u>AVC1-120A</u>	\$12.50	NITRA solenoid coil, 120VAC, 3.5 VA. For use with AVS-31 and AVS-51 series valves.	0.1									
<u>AVC2-12D</u>	\$13.00	NITRA solenoid coil, 12 VDC, 3.0W. For use with AVP-31, AVS-32, AVS-33, AVS-52, AVS-53, AVS-54 series valves and ASD series soft starters.	0.2									
<u>AVC2-24D</u>	\$13.00	NITRA solenoid coil, 24 VDC, 3.0W. For use with AVP-31, AVS-32, AVS-33, AVS-52, AVS-53, AVS-54 series valves and ASD series soft starters.	0.2									
<u>AVC2-24A</u>	\$12.50	NITRA solenoid coil, 24 VAC, 5.0VA. For use with AVP-31, AVS-32, AVS-33, AVS-52, AVS-53, AVS-54 series valves and ASD series soft starters.	0.2									
AVC2-120A	\$12.50	NITRA solenoid coil, 120 VAC, 4.5VA. For use with AVP-31, AVS-32, AVS-33, AVS-52, AVS-53, AVS-54 series valves and ASD series soft starters.	0.2									
AVP-31BKT	\$2.25	NITRA individual mounting bracket, plated steel. For use with AVP-31 directional control valves.	0.1									
AVP-31KIT	\$3.25	NITRA stacking screws, for use with AVP-31 directional control valves. One kit is required for each additional AVP-31 valve added to the stack.	0.1									



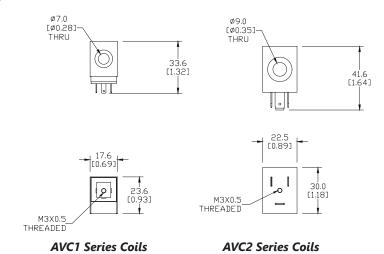
AVP-31BKT

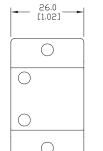


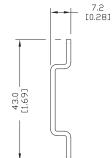
AVP-31KIT

Dimensions

mm [inches]







AVP-31BKT



Pneumatic Directional Control Solenoid Valve Manifolds and Accessories



AM-3 Series Manifolds



AM-31BP

	natic	Directional Control Solenoid Valve Series Acces	sories
Part No.	Price	Description	Weight (lb)
<u>AM-312</u>	\$26.00	NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 1/4in FNPT inlet port(s), (2) 1/4in FNPT exhaust port(s). For use with AVS-31 series.	0.2
<u>AM-314</u>	\$37.50	NITRA pneumatic valve manifold, aluminum, 4 stations, (2) 1/4in FNPT inlet port(s), (2) 1/4in FNPT exhaust port(s). For use with AVS-31 series.	0.3
<u>AM-316</u>	\$45.00	NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 1/4in FNPT inlet port(s), (2) 1/4in FNPT exhaust port(s). For use with AVS-31 series.	0.4
<u>AM-318</u>	\$59.00	NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 1/4in FNPT inlet port(s), (2) 1/4in FNPT exhaust port(s). For use with AVS-31 series.	0.5
<u>AM-31BP</u>	\$5.25	NITRA blanking plate, plated steel. For use with AM-31 series manifolds.	0.1
<u>AM-322</u>	\$24.00	NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 1/4in FNPT inlet port(s), (2) 1/4in FNPT exhaust port(s). For use with AVS-32 series.	0.2
<u>AM-324</u>	\$42.00	NITRA pneumatic valve manifold, aluminum, 4 stations, (2) 1/4in FNPT inlet port(s), (2) 1/4in FNPT exhaust port(s). For use with AVS-32 series.	0.4
<u>AM-326</u>	\$60.00	NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 1/4in FNPT inlet port(s), (2) 1/4in FNPT exhaust port(s). For use with AVS-32 series.	0.5
<u>AM-328</u>	\$78.00	NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 1/4in FNPT inlet port(s), (2) 1/4in FNPT exhaust port(s). For use with AVS-32 series.	0.7
<u>AM-32BP</u>	\$5.25	NITRA blanking plate, plated steel. For use with AM-32 series manifolds.	0.1
<u>AM-332</u>	\$27.00	NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 3/8in FNPT inlet port(s), (2) 3/8in FNPT exhaust port(s). For use with AVS-33 series.	0.4
<u>AM-334</u>	\$48.00	NITRA pneumatic valve manifold, aluminum, 4 stations, (2) 3/8in FNPT inlet port(s), (2) 3/8in FNPT exhaust port(s). For use with AVS-33 series.	0.6
<u>AM-336</u>	\$86.00	NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 3/8in FNPT inlet port(s), (2) 3/8in FNPT exhaust port(s). For use with AVS-33 series.	0.9
<u>AM-338</u>	\$91.00	NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 3/8in FNPT inlet port(s), (2) 3/8in FNPT exhaust port(s). For use with AVS-33 series.	1.1
<u>AM-33BP</u>	\$5.75	NITRA blanking plate, plated steel. For use with AM-33 series manifolds.	0.1
<u>AM-512</u>	\$13.00	NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 1/4in FNPT inlet port(s), (4) 1/4in FNPT exhaust port(s). For use with AVS-51 series.	0.4
<u>AM-514</u>	\$23.50	NITRA pneumatic valve manifold, aluminum, 4 stations, (2) 1/4in FNPT inlet port(s), (4) 1/4in FNPT exhaust port(s). For use with AVS-51 series.	0.6
<u>AM-516</u>	\$33.50	NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 1/4in FNPT inlet port(s), (4) 1/4in FNPT exhaust port(s). For use with AVS-51 series.	0.8
<u>AM-518</u>	\$46.50	NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 1/4in FNPT inlet port(s), (4) 1/4in FNPT exhaust port(s). For use with AVS-51 series.	1.1
<u>AM-51BP</u>	\$6.50	NITRA blanking plate, plated steel. For use with AM-51 series manifolds.	0.1
<u>AM-522</u>	\$17.50	NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 1/4in FNPT inlet port(s), (4) 1/4in FNPT exhaust port(s). For use with AVS-52 series.	0.5
<u>AM-524</u>	\$34.00	NITRA pneumatic valve manifold, aluminum, 4 stations, (2) 1/4in FNPT inlet port(s), (4) 1/4in FNPT exhaust port(s). For use with AVS-52 series.	0.9
<u>AM-526</u>	\$49.00	NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 1/4in FNPT inlet port(s), (4) 1/4in FNPT exhaust port(s). For use with AVS-52 series.	1.2
<u>AM-528</u>	\$66.00	NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 1/4in FNPT inlet port(s), (4) 1/4in FNPT exhaust port(s). For use with AVS-52 series.	1.5
	\$7.25	NITRA blanking plate, plated steel. For use with AM-52 series manifolds.	0.1



Pneumatic Directional Control Solenoid Valve Manifolds and Accessories



AM-5 Series Manifolds



AM-31GS

Pneu	matic I	Directional Control Solenoid Valve Series Access Continued	sories
Part No.	Price	Description	Weight (lb)
<u>AM-532</u>	\$23.00	NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 3/8in FNPT inlet port(s), (4) 3/8in FNPT exhaust port(s). For use with AVS-53 series.	0.8
<u>AM-534</u>	\$46.00	NITRA pneumatic valve manifold, aluminum, 4 stations, (2) 3/8in FNPT inlet port(s), (4) 3/8in FNPT exhaust port(s). For use with AVS-53 series.	1.4
<u>AM-536</u>	\$69.00	NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 3/8in FNPT inlet port(s), (4) 3/8in FNPT exhaust port(s). For use with AVS-53 series.	1.9
<u>AM-538</u>	\$92.00	NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 3/8in FNPT inlet port(s), (4) 3/8in FNPT exhaust port(s). For use with AVS-53 series.	2.5
<u>AM-53BP</u>	\$7.25	NITRA blanking plate, plated steel. For use with AM-53 series manifolds.	0.1
<u>AM-542</u>	\$31.00	NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 1/2in FNPT inlet port(s), (4) 1/2in FNPT exhaust port(s). For use with AVS-54 series.	1.7
<u>AM-544</u>	\$63.00	NITRA pneumatic valve manifold, aluminum, 4 stations, (2) 1/2in FNPT inlet port(s), (4) 1/2in FNPT exhaust port(s). For use with AVS-54 series.	2.8
<u>AM-546</u>	\$96.00	NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 1/2in FNPT inlet port(s), (4) 1/2in FNPT exhaust port(s). For use with AVS-54 series.	4.0
<u>AM-548</u>	\$115.00	NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 1/2in FNPT inlet port(s), (4) 1/2in FNPT exhaust port(s). For use with AVS-54 series.	5.2
<u>AM-54BP</u>	\$7.25	NITRA blanking plate, plated steel. For use with AM-54 series manifolds.	0.1
<u>AM-31GS</u>	\$5.50	NITRA manifold mounting set, for use with AM-31 series manifolds.	0.1
<u>AM-32GS</u>	\$6.25	NITRA manifold mounting set, for use with AM-32 series manifolds.	0.1
<u>AM-33GS</u>	\$6.25	NITRA manifold mounting set, for use with AM-33 series manifolds.	0.1
<u>AM-51GS</u>	\$5.50	NITRA manifold mounting set, for use with AM-51 series manifolds.	0.1
<u>AM-52GS</u>	\$6.25	NITRA manifold mounting set, for use with AM-52 series manifolds.	0.1
<u>AM-53GS</u>	\$6.25	NITRA manifold mounting set, for use with AM-53 series manifolds.	0.1
AM-54GS	\$6.50	NITRA manifold mounting set, for use with AM-54 series manifolds.	0.1

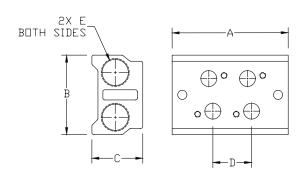


Pneumatic Directional Control Solenoid Valve Manifolds and Accessories

Dimensions

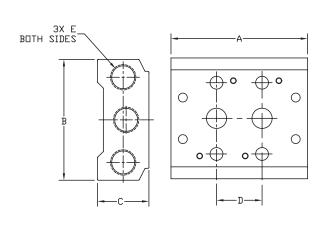
mm [inches]

AM 3x Series Manifolds



	MANIFOLD DIMENSIONS						
PART NO.	Α	В	С	D	E		
AM-312	57.0 [2.24]			19.0 [.075]			
AM-314	95.0 [3.74]	39.0 [1.54]	25.0 [0.98]	3X 19.0 [.075]			
AM-316	133.0 [5.24]	37.0 [1.34]	23.0 [0.36]	5X 19.0 [.075]			
AM-318	171.0 [6.73]			7X 19.0 [.075]	1/4 NPT		
AM-322	69.0 [2.72]			23.0 [0.91]	17 7 101 1		
AM-324	115.0 [4.53]	45.0 [1.77]	25.0 [0.98]	3X 23.0 [0.91]			
AM-326	161.0 [6.34]	45.0 [1.77]	23.0 [0.76]	5X 23.0 [0.91]			
AM-328	207.0 [8.15]			7X 23.0 [0.91]			
AM-332	82.0 [3.23]			28.0 [1.10]			
AM-334	138.0 [5.46]	500 (005)	20.0 [1.14]	3X 28.0 [1.10]	3/8 NPT		
AM-336	194.0 [7.64]	52.0 [2.05] 29.0 [1.14]		5X 28.0 [1.10]	3/0 NP1		
AM-338	250.0 [9.84]			7X 28.0 [1.10]			

AM 5x Series Manifolds



		MANIFOLD	DIMENSION	12	
PART NO.	Α	В	С	D	E
AM-512	57.0 [2.24]			19.0 [.075]*	
AM-514	95.0 [3.74]	58.0 [2.28]	25.0 [0.98]	3X 19.0 [.075]*	
AM-516	133.0 [5.24]	36.0 [5.56]	23.0 10.961	5X 19.0 [.075]*	
AM-518	171.0 [6.73]	7		7X 19.0 [.075]*	1/4 NPT
AM-522	69.0 [2.72]			23.0 [0.91]	1/4 NF1
AM-524	115.0 [4.53]	61.0 [2.40]	26.0 [1.02]	3X 23.0 [0.91]	
AM-526	161.0 [6.34]	61.0 [2.40]	20.0 [1.02]	5X 23.0 [0.91]	
AM-528	207.0 [8.15]			7X 23.0 [0.91]	
AM-532	82.0 [3.23]			28.0 [1.10]	3/8 NPT
AM-534	138.0 [5.46]	75.0 [2.95]	30.0 [1.19]	3X 28.0 [1.10]	
AM-536	194.0 [7.64]	75.0 [2.95]	30.0 [1.17]	5X 28.0 [1.10]	3/6 NF1
AM-538	250.0 [9.84]			7X 28.0 [1.10]	
AM-542	98.0 [3.86]			35.0 [1.38]	
AM-544	168.0 [6.61]	1040 [400]	38.0 [1.50]	3X 35.0 [1.38]	1/2 NPT
AM-546	238.0 [9.37]	104.0 [4.09] 38.0 [1.50		5X 35.0 [1.38]	TVE INFT
AM-548	308.0 [12.13]			7X 35.0 [1.38]	

^{*} Exhaust holes have 1mm offset from spacing centerline.

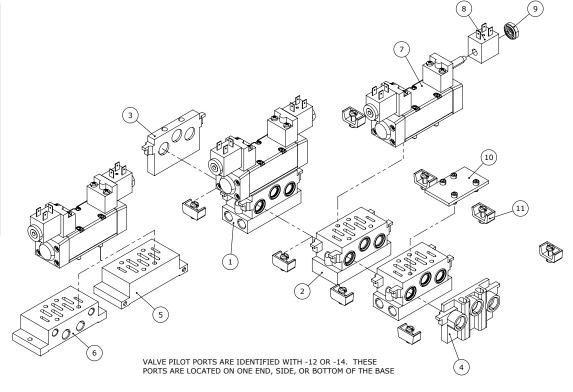


ISO 5599 Solenoid Valves, Bases, Manifolds and Accessories

TO OPERATE THE VALVE AT AN OPERATING PRESSURE (PORT 1) BELOW THE MINIMUM

NITRA ISO 5599 valves and other components are a robust directional control solution that conforms to ISO 5599/1 standard. Components are available in size 1 or size 2 to deliver excellent performance for many industrial pneumatic systems. Valves and bases are interchangeable with other 5599/1 systems from other manufacturers. Bases and manifolds are available in either G-thread (BSPP) or NPT.

IS	O 5599 Manifolds/
	Bases/Valves
1	Manifold Side Orientation
2	Manifold Bottom Orientation
3	Manifold Blind End Plate
4	Manifold Inlet
5	Stand Alone Base Bottom Orientation
6	Stand Alone Base Side Orientation
7	Solenoid Valve
8	Solenoid Coil
9	Coil Nut
10	Manifold Blank Plate
11	Manifold Attaching Kit





NITRA ISO 5599 manifold components are easily assembled to meet your needs:

- Determine if bottom or side ports are needed.
- Join manifold sections with included clamps.
- Add inlet plate(s) and blind end plate (if needed).
- Install valves on the manifold sections. Blanking plates are available for unused stations.
- · Install solenoid coils in desired voltage.
- Connect solenoids to control system and plumb as required.

PILOT GASKET
REVERSED (FLIPPED)
AND REINSTALLED

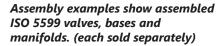
PILOT GASKET
REVERSED (FLIPPED)
AND REINSTALLED

PILOT GASKET
REVERSED (FLIPPED)
AND REINSTALLED



ISO 5599 Solenoid Valves

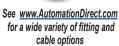






- \bullet ISO 5599/1 sizes 1 and 2 interchange with all other brands meeting ISO 5599/1
- 5-port / 2-position and 5/port / 3-position valves available
- Order stand-alone bases or manifolds separately
- Solenoid coils sold separately in 12 & 24 VDC and 24, 110 & 220 VAC







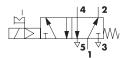


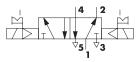
			ISO	5599 Sol	enoid Val	ves				
Model	<u>HVS-5211</u>	<u>HVS-5212</u>	HVS-53C12	HVS-53E12	<u>HVS-53P12</u>	<u>HVS-5221</u>	<u>HVS-5222</u>	HVS-53C22	HVS-53E22	<u>HVS-53P22</u>
Price	\$96.00	\$125.00	\$150.00	\$150.00	\$150.00	\$148.00	\$174.00	\$183.00	\$183.00	\$183.00
Drawing	PDF	PDF	PDF	PDF	PDF	PDF	PDF	PDF	PDF	PDF
Diagram	Α	В	С	D	Е	А	В	С	D	Е
Weight (lbs.)	0.76	0.86	0.82	0.82	0.82	1.58	1.63	1.59	1.59	1.59
Fluid			Filt	ered air without	lubrication; lubr	ication, if used,	must be continu	ious		
ISO Size			1					2		
Operating Pressure				Vac	cuum to 10 bar ((vacuum to 145	psi)			
Min. Pilot Pressure	2.5 bar (36 psi)		1 bar (15 psi)		2.5 bar (36 psi)		1 bar ((15 psi)	
Operating Temp. Range					-10 to 60°C	(14 to 140°F)				
Nominal Diameter			7.5 mm					12mm		
Sonic Conductance (C)		250 NI/i	min • bar (36.5 s	scfm/psi)			657.14 N	l/min • bar (95.9	scfm/psi)	
Critical Pressure Ratio (b)			0.36				0.25			
Flow Rate at 6 bar @ delta-P 0.5 bar (87 psi @ delta-P 7 psi)		700) NI/min (24.7 sc	cfm)			1800 NI/min (63.6 scfm)			
Flow Rate at 6 bar @ delta-P 1 bar (87 psi @ delta-P 15 psi)		110	0 NI/min (38.8 s	cfm)			270	0 NI/min (95.3 s	scfm)	
Min Response ON/OFF	24/50 ms		20/2	0 ms		39/60 ms		25/2	25 ms	
Installation	Any	Vert	ical not recomm	ended with vibr	ation	Any	Vert	ical not recomm	nended with vibr	ation
Assembly				On single a	nd manifold bas	ses according to	ISO 5599/1			
Manual Override					Loc	king				
Coils			22m	nm Form B in Ac	ccordance with E	EN 175301-803-	B (11mm pin w	ridth)		
Max. Coil Nut Torque					1 Nm /	/ 9 lb-in				
Approvals					N	I/A				



ISO 5599 Solenoid Valves

ISO 5599 Valve Diagrams





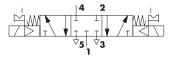
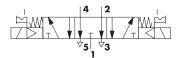


Diagram "A"

Diagram "B"

Diagram "C"



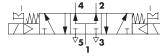
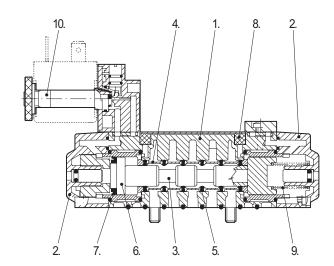


Diagram "D"

Diagram "E"

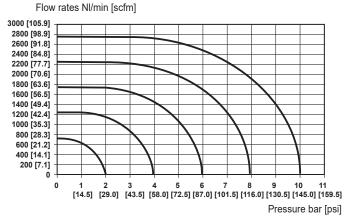
ISO 5599 Valve Components

- VALVE BODY: Aluminium
 END CAP: Hostaform®
- 3. SPOOL: chemically nickel-plated aluminium
- DISTANCE PLATES: plastic
 GASKETS: NBR (Buna-N)
 PISTONS: Hostaform®
- 7. PISTON GASKET: NBR (Buna-N)
- FILTER: sintered bronze
 SPRINGS: special steel
- 10. OPERATOR: Brass pipe Stainless steel core

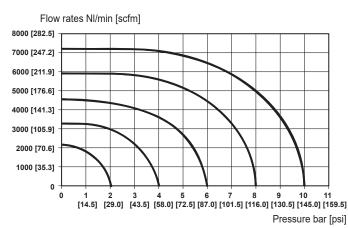


ISO 5599 Valve Flow Charts

ISO 1



ISO 2





ISO 5599 Solenoid Valve Bases

NITRA ISO 5599 Series Valve Bases allow mounting a single ISO 5599/1 solenoid valve. Bases will fit other brands of ISO 5599/1 valves.

Features

- Stand-alone bases compatible with all ISO 5599/1 valves in sizes 1 and 2
- · Available with side or bottom ports
- Available port threads in G-thread (BSPP) or NPT
- · Aluminum alloy





See <u>www.AutomationDirect.com</u> for a wide variety of fitting and cable options



			ISO 5599 Serie	es Valve Ba	ses			
Item Photo	Part No.	Pressure	Inlet(s) / Outlet(s)	Orientation	Usage	Weight (lbs.)	Price	Drawing Link
in.	<u>HSB-1SG</u>		G1/4 female BSPP	Side		0.36	\$16.00	<u>PDF</u>
· · · · · ·	<u>HSB-1SN</u>		1/4 in female NPT	Side	ISO 5599/1 size 1	0.36	\$16.00	<u>PDF</u>
ijin.	<u>HSB-1BG</u>		G1/4 female BSPP	Bottom	solenoid valves	0.43	\$15.50	<u>PDF</u>
lijitis	<u>HSB-1BN</u>	145 psi (10 bar) maximum	1/4 in female NPT	DOLLOTT		0.43	\$15.50	<u>PDF</u>
iden.	<u> HSB-2SG</u>	operating pressure	G3/8 female BSPP	Side		0.57	\$26.00	PDF
Sind.	<u>HSB-2SN</u>	3/8 in fer	3/8 in female NPT	Side	ISO 5599/1 size 2	0.57	\$26.00	PDF
inin	<u>HSB-2BG</u>		G3/8 female BSPP	- Bottom	solenoid valves	0.67	\$22.00	PDF
inin	<u>HSB-2BN</u>		3/8 in female NPT			0.67	\$22.00	PDF

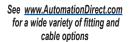


ISO 5599 Solenoid Valve Manifolds

NITRA ISO 5599 Series pneumatic valve manifolds can be joined with included fasteners to build valve islands. These manifolds will fit other brands of ISO 5599/1 valves.

- Manifolds compatible with all ISO 5599/1 valves
- · Available with side or bottom ports
- Available port threads in G-thread (BSPP) or NPT
- Aluminum alloy







	ISO 5599 Series Valve Size 1 Manifolds									
Item Photo	Part No.	Pressure	Inlet(s) / Outlet(s)	Orientation	Usage	Weight (lbs.)	Price	Drawing Link		
	<u>HM-1G</u>	145 psi (10 bar) maximum	G3/8 female BSPP	N/A		0.28	\$12.50	<u>PDF</u>		
	<u>HM-1N</u>		3/8 in female NPT	IN/A		0.28	\$12.50	<u>PDF</u>		
000	<u>HM-1SG</u>		G1/4 female BSPP	Sido	ISO 5599/1 size	0.29	\$29.00	<u>PDF</u>		
1000	<u>HM-1SN</u>	operating pressure	1/4 in female NPT	Side	1 solenoid valves	0.29	\$29.00	<u>PDF</u>		
1090	<u>HM-1BG</u>		G1/4 female BSPP	Delitore		0.69	\$29.00	<u>PDF</u>		
600	<u>HM-1BN</u>		1/4 in female NPT	Bottom		0.69	\$29.00	PDF		

	ISO 5599 Series Valve Size 1 Manifold Accessories									
Item Photo	Part No.	Weight (lbs.)	Price	Drawing Link						
	<u>HM-1B</u>	NITRA blind end, aluminum alloy. For use with ISO 5599/1 size 1 manifolds.	0.17	\$6.50	<u>PDF</u>					
	<u>HM-1BP</u>	NITRA blanking plate, aluminum alloy. For use with ISO 5599/1 size 1 manifolds. Assembly screws and seal included.	0.10	\$6.50	<u>PDF</u>					
000	<u>HM-1A</u>	NITRA manifold attaching kit, aluminum alloy. For use with ISO 5599/1 size 1 solenoid valves. Includes (2) assembly clamps and (3) o-rings.	0.10	\$3.25	<u>PDF</u>					



ISO 5599 Solenoid Valve Manifolds

		ISO	5599 Series Valv	e Size 2 M	anifolds			
Item Photo	Part No.	Pressure	Inlet(s) / Outlet(s)	Orientation	Usage	Weight (lbs.)	Price	Drawing Link
	<u>HM-2G</u>		G1/2 female BSPP	N/A		0.45	\$15.50	<u>PDF</u>
	<u>HM-2N</u>		1/2 in female NPT	N/A		0.45	\$15.50	PDF
000	<u>HM-2SG</u>	145 psi (10 bar) maximum	G3/8 female BSPP	Cida	ISO 5599/1 size 2 solenoid valves	0.69	\$35.50	PDF
1000	<u>HM-2SN</u>	operating pressure	3/8 in female NPT	Side		0.69	\$35.50	PDF
1000	<u>HM-2BG</u>		3/8 in female NPT	Dottom		1.11	\$35.50	PDF
1000 1000	<u>HM-2BN</u>		3/8 in female NPT	Bottom		1.11	\$35.50	PDF

	ISO 5599 Series Valve Size 2 Manifold Accessories									
Item Photo	Part No.	Description	Weight (lbs.)	Price	Drawing Link					
	<u>HM-2B</u>	NITRA blind end, aluminum alloy. For use with ISO 5599/1 size 2 manifolds.	0.29	\$10.00	PDF					
	<u>HM-2BP</u>	NITRA blanking plate, aluminum alloy. For use with ISO 5599/1 size 2 manifolds. Assembly screws and seal included.	0.21	\$8.25	PDF					
	<u>HM-2A</u>	NITRA manifold attaching kit, aluminum alloy. For use with ISO 5599/1 size 2 solenoid valves. Includes (2) assembly clamps and (3) o-rings.	0.10	\$3.75	PDF					



ISO 5599 Valve Coils

NITRA ISO 5599 Series pneumatic valve coils fit NITRA ISO 5599/1 solenoid valves.

Features

- Voltage tolerance: –10% to + 15%
- Insulation class: F155
- IP65 EN60529 protection with connector
- Coil temperature 100% ED: 55°C at 20°C ambient temperature
- In accordance to Atex 2014/34/EU rule, group 2, category 3 GD
- Coils have 11mm DIN style connector







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	ISO 5599 Series Valve Coils								
Item Photo	Part No.	Description	Weight (lbs.)	Price	Drawing Link				
0	HVC-12D	NITRA solenoid coil, 12 VDC, 2W. For use with HVS series solenoid valves.	0.1	\$12.00	<u>PDF</u>				
0	<u>HVC-24D</u>	NITRA solenoid coil, 24 VDC, 2W. For use with HVS series solenoid valves.	0.1	\$12.00	<u>PDF</u>				
0	HVC-24A	NITRA solenoid coil, 24 VAC, 3.5VA. For use with HVS series solenoid valves.	0.1	\$12.00	PDF				
O	HVC-110A	NITRA solenoid coil, 110 VAC, 3.5VA. For use with HVS series solenoid valves.	0.1	\$12.00	PDF				
0	<u>HVC-220A</u>	NITRA solenoid coil, 220 VAC, 3.5VA. For use with HVS series solenoid valves.	0.1	\$12.00	<u>PDF</u>				

ISO 5599 Valve Accessories

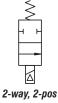
ISO 5599 Series Valve Accessories									
Item Photo	Part No. Description								
000	<u>HS-NUT</u>	NITRA solenoid coil nut, replacement. For use with HVS series solenoid valves.	0.05	\$4.75					
	HVS-1SEAL	NITRA seal kit, replacement. For use with ISO 5599/1 size 1 solenoid valves. Includes o-rings, lip seals and valve bottom gasket.	0.05	\$4.25					
	HVS-2SEAL	NITRA seal kit, replacement. For use with ISO 5599/1 size 2 solenoid valves. Includes o-rings, lip seals and valve bottom gasket.	0.05	\$6.50					





Part No. DVD-2AC3A-24D

Valve Symbol



Process Pipeline Solenoid Valves DVD-2A Series

The NITRA™ DVD-2A Series valves are 2-way, 2-position, normally closed valves for the control of air, oil, water, or media that is compatible with valve materials of manufacture. These valves feature an all brass body and a zero minimum pressure differential while still boasting a full flow 1/2″ orifice. Available in 1/4″, 3/8″ and 1/2″ FNPT port sizes, the DVD-2A valves can handle pressures to 230psi. The encapsulated coil construction ensures that the valve functions well under long periods of energization (100% duty), as well as providing a high degree of environmental protection (NEMA Type 4). The inner valve functions as a direct assist using a flat diaphragm and orifice plate. Pressure differentials shift the valve to full open. A push, non-locking manual override is standard.

- 2-way diaphragm style valves
- 1/4, 3/8, or 1/2" FNPT ports
- 2-position, normally closed, spring return
- 24VDC, 24VAC, or 120VAC solenoids
- DIN style wiring connector





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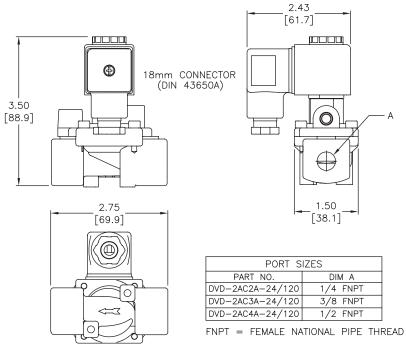
	DVD-2A Series Solenoid Valve Specifications									
Model	DVD-2AC2A-24 <u>D</u>	DVD-2AC2A-24A	DVD-2AC2A-120A	DVD-2AC3A-24 <u>D</u>	DVD-2AC3A-24A	DVD-2AC3A-120A	DVD-2AC4A-24 <u>D</u>	DVD-2AC4A-24A	DVD-2AC4A-120A	
Price	\$89.00	\$89.00	\$89.00	\$89.00	\$89.00	\$89.00	\$89.00	\$89.00	\$89.00	
Weight (lbs)	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	
Valve Type				2	2-way, 2-positio	n				
Acting				Diaphragm, n	ormally closed	, spring return				
Port Size		1/4" FNPT			3/8" FNPT			1/2" FNPT		
Orifice Size					1/2" [12.7 mm]					
Cv		1.55			1.95			2.45		
Media				Air, oil, wa	ter, emulsion, i	nert gases				
Pressure Range	1–180 psi [0–12.4 bar]	1–160 psi [0–11.0 bar]	0–230 psi [0–15.9 bar]	1–180 psi [0–12.4 bar]	1–160 psi [0–11.0 bar]	0–230 psi [0–15.9 bar]	1–180 psi [0–12.4 bar]	1–160 psi [0–11.0 bar]	0-230 psi [0-15.9 bar]	
Voltage (±10%)	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz	
Inrush AC	-	10.	5 VA	-	10.5	5 VA	-	10.	5 VA	
Power Consumption	10W	8'	VA.	10W	8/	VA	10W	8/	/A	
Max Freq					12.5 Hz					
Insulation				Class	F (continuous	duty)				
Min Response				20–8	0 ms complete	cycle				
Temperature		Max fl	uid 194 deg F (90 deg C); Amb	oient 14 deg F t	to 122 deg F (-	10 deg C to 50	deg C)		
Lubrication					Not required					
Protection					NEMA Type 4					
Connection			18mm D	IN terminal; Ca	ble OD 0.315"	to 0.394", 14 A	WG max			
Construction				Brass body,	Viton seals; Op	perator Brass				
Life Cycle					10 million					
Agency Approvals					CE					



Process Pipeline Solenoid Valves DVD-2A Series

Dimensions

inches [mm]



See our website www.AutomationDirect.com for complete Engineering drawings.

Accessories

DVD-2A Series Solenoid Valve Accessories								
Part No.	Description	Price	Weight (lbs)					
DVD-1VSEAL	Seal kit, replacement, Viton, for DVD-2AC series NITRA pneumatic solenoid valves. Includes one Viton diaphragm.	\$10.00	0.1					



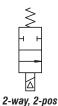


Process Pipeline Solenoid Valves DVD-2B Series



Part No. DVD-2BC3A-120A

Valve Symbol



The NITRA™ DVD-2B Series valves are engineered composite 2-way, 2-position solenoid/air operated valves designed for the control of liquid media and inert gas. The valves are available with a large 1/2" or 1-1/8" orifice and five port sizes, 1/4", 3/8", 1/2", 3/4", and 1" FNPT. The valve's compact design utilizes the latest in material sciences with the use of composite materials in the valve body. The solenoid pilot is power saving low wattage, made of stainless steel working components and is miniaturized to fit in tight places. The fully encapsulated coils are available in three voltages with a DIN connector attached. Typical applications are for installations where there is a need to control inert fluids and gases, condensate drainage, hot water plumbing and sprinkler systems.

- 2-way diaphragm style valves
- 1/4, 3/8, 1/2, 3/4, or 1" FNPT ports
- 2-position, normally closed, spring return
- 24VDC, 24VAC, or 120VAC solenoids
- DIN style wiring connector





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			DVD	-2B S	eries	Solenoi	d Valve	Specif	ication	S				
Model	DVD-2BC2A-24D	DVD-2BC2A-24A	DVD-2BC2A-120A	DVD-2BC3A-24D	DVD-2BC3A-24A	DVD-2BC3A-120A	DVD-2BC4A-24D	DVD-2BC4A-24A	DVD-2BC4A-120A	DVD-2BC5F-24D	DVD-2BC5F-120A	DVD-2BC6F-24 <u>D</u>	DVD-2BC6F-120A	
Price	\$55.00	\$55.00	\$55.00	\$55.00	\$55.00	\$55.00	\$55.00	\$55.00	\$55.00	\$116.00	\$116.00	\$116.00	\$116.00	
Weight (lbs)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	
Valve Type							2-way, 2-p	osition						
Acting						Diaphragm	, normally o	losed, sprin	g return					
Port Size		1/4" FNPT	•		3/8" FNP	Т		1/2" FNPT		3/4"	FNPT	1" F	NPT	
Orifice Size					1/2" [12.7	7 mm]					1.125" [2	28.6 mm]		
Cv		1.55			1.95			2.45			1	4		
Media						А	ir, oil, water	, inert gas						
Pressure Range					7–150 [0.5–10.3						10–1: [0.7–8	20 psi 3.3 bar]		
Voltage (± 10%)	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz	24VDC	120VAC 50/60 Hz	24VDC	120VAC 50/60 Hz	
Inrush AC	-	10	VA	-	10	OVA	-	10	VA	-	8VA	-	8VA	
Power Consumption	6.5 W	8.5	VA	6.5 W	8.8	5 VA	6.5 W	8.5	VA	6 W	9 VA	6 W	9 VA	
Max Freq					12.5 I	Hz					8.33	3 Hz		
Insulation						Cla	ass F (conti	nuous duty)						
Min Response				20–8	30 ms com	plete cycle				8	0–120 ms c	omplete cyc	ele	
Temperature						14°F	to 122°F [-	10°C to 50°	C]					
Lubrication							Not req	uired						
Protection							NEMA T	ype 4						
Connection		11mm DIN terminal 18mm DIN terminal												
Construction			Glass fi	lled nylon	body; Vito	on seals; Op	erator Bras	S		Glass fille	ed nylon boo ope	dy; Viton sea rator	als; Brass	
Life Cycle							10 mil	lion						
Agency Approvals							CE							

^{*} Requires minimum sealing pressure

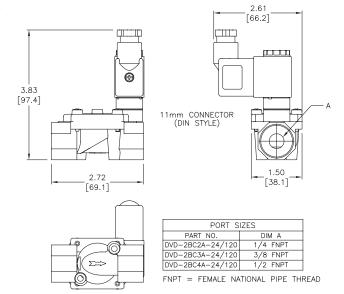


Process Pipeline Solenoid Valves DVD-2B Series

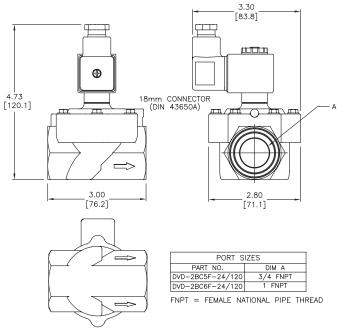
Dimensions

inches [mm]

DVD-2BCXX



DVD-2BC5&6



Accessories

	DVD-2B Series Solenoid Valve Accessories								
Part No.	Description	Price	Weight (lbs)						
DVD-2VSEAL	Seal kit, replacement, Viton, for DVD-2BC2A, DVD-2BC3A and DVD-2BC4A series NITRA pneumatic solenoid valves. Includes one Viton diaphragm.	\$10.00	0.1						
DVD-3VSEAL	Seal kit, replacement, Viton, for DVD-2BC5F or DVD-2BC6F series NITRA pneumatic solenoid valves. Includes one Viton diaphragm.	\$27.50	0.6						



Part No. DVD-2VSEAL



Part No. DVD-3VSEAL



Process Pipeline Solenoid Valves DVP-2C & DVP-3C Series



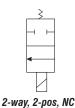
Part No. DVP-2CC1C-24A

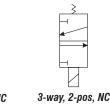
The NITRA™ DVP-2C and DVP-3C Series valves can be stacked into a multiple output bank of solenoid valves. The DVP-2C and 3C valves feature a fully encapsulated coil, spring compensated plunger seats for long life, and a miniature stackable composite valve body. The advantage to this design

is the versatility to stock single units and build, mix, and match to meet specifications. In most cases these valves reduce inventory costs and lower installation costs over a conventional manifold valve series. The coils are available with DIN connectors installed.

- 2-way and 3-way stackable poppet style valves
- 1/8" FNPT ports
- 2-position, normally closed, spring return
- 24VDC, 24VAC or 120VAC solenoids
- DIN style wiring connector











CE KOHS

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DVP-2C & DVP-3C Series Solenoid Valve Specifications									
Model	DVP-2CC1C-24 <u>D</u>				DVP-3CC1C-24A	DVP-3CC1C-120A			
Price	\$28.00	\$28.00	\$28.00	\$28.00	\$28.00	\$28.00			
Weight (lbs)	0.3	0.3	0.3	0.3	0.3	0.3			
Valve Type		2-way, 2-position			3-way, 2-position				
Acting		Stacka	ble poppet valve, no	rmally closed, spring	g return				
Port Size			1/8" [FNPT					
Orifice Size			0.6" [1	.5 mm]					
CV		0.08			0.08 (exhaust 0.08)				
Media			Air, oil, inert gas	, water, caustics*					
Pressure Range		0–200 psi [0–13.8 bar]			1–150 psi [0–10.3 bar]				
Voltage (± 10%)	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz			
Inrush AC	-	10	VA	-	10	IVA			
Power Consumption	6.5 W	8.5	VA	6.5 W	8.5	VA			
Max Freq			71.4	1 Hz					
Insulation			Class F (con	tinuous duty)					
Min Response			12–14 ms co	mplete cycle					
Temperature			14°F to 122°F	[-10°C to 50°C]					
Lubrication			Not re	quired					
Protection			NEMA	Type 4					
Connection			11mm DII	N terminal					
Construction		Glass	filled nylon body; V	iton seals; Operator	Brass				
Life Cycle			20 m	illion					
Agency Approvals			C	E					

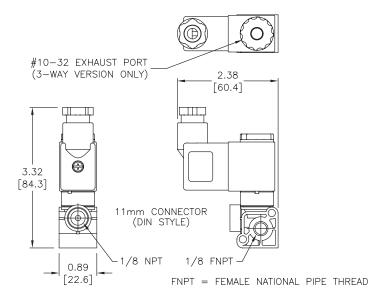
^{*} Check the chemical compatibility of the valve materials with the process media being used.



Process Pipeline Solenoid Valves DVP-2C & DVP-3C Series

Dimensions

inches [mm]



See our website www.AutomationDirect.com for complete Engineering drawings.

Accessories

	DVP-2C & DVP-3C Series Solenoid Valve Accessories									
Part No.	Description	Price	Weight (lbs)							
DVP-2BKT	Mounting kit for DVP-2C & 3C series valves, 2 station. Includes (2) #8-32 x 2 inch screws, (2) #8 lock nuts and (1) Viton o-ring.	\$5.50	0.1							
DVP-3BKT	Mounting kit for DVP-2C & 3C series valves, 3 station. Includes (2) #8-32 x 3 inch screws, (2) #8 lock nuts and (2) Viton o-rings.	\$7.50	0.1							
DVP-4BKT	Mounting kit for DVP-2C & 3C series valves, 4 station. Includes (2) #8-32 x 4 inch screws, (2) #8 lock nuts and (3) Viton o-rings.	\$9.00	0.1							
DVP-5BKT	Mounting kit for DVP-2C & 3C series valves, 5 station. Includes (2) #8-32 x 5 inch screws, (2) #8 lock nuts and (4) Viton o-rings.	\$11.00	0.1							
DVP-6BKT	Mounting kit for DVP-2C & 3C series valves, 6 station. Includes (2) #8-32 x 6 inch screws, (2) #8 lock nuts and (5) Viton o-rings.	\$13.50	0.1							



Part No. DVP-4BKT



Process Pipeline Solenoid Valves DVP-2B & DVP-3B Series



The NITRA™ DVP-2B and DVP-3B Series valves are composite body solenoid valves offered in both 2-way and 3-way normally closed styles. Component features include the proven solenoid operator available in brass/ stainless or all stainless pilot design. The glass filled composite material is media compatible, eliminating the need for stocking multiple body materials.

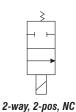
Features

- 2-way and 3-way poppet style valves
- 1/8" FNPT ports
- 2-position, normally closed, spring return
- 24VDC, 24VAC or 120VAC solenoids
- DIN style wiring connectors

CE KOHS

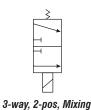








3-way, 2-pos, NC









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3-way, 2-pos, Diverting

DVF	-2B & DVP-	3B Series So	lenoid Valve	Specification	ons			
Model	DVP-2BC1C-24 <u>D</u>	DVP-2BC1C-24A	DVP-2BC1C-120A	DVP-3BC1C-24 <u>D</u>	DVP-3BC1C-24A	DVP-3BC1C-120A		
Price	\$28.00	\$28.00	\$28.00	\$28.00	\$28.00	\$28.00		
Weight (lbs)	0.3	0.3	0.3	0.3	0.3	0.3		
Valve Type		2-way, 2-position			3-way, 2-position			
Acting	Poppet valv	e, normally closed,	spring return	Poppet valv	e, normally closed,	spring return		
Port Size			1/8" [FNPT				
Orifice Size			0.059" [1.5 mm]				
Cv		0.8			0.8 (exhaust 0.08)			
Media			Air, oil, inert gas	, water, caustics*				
Pressure Range		0–200 psi [0–13.8 bar]			1–150 psi [0–10.3 bar]			
Voltage (±10%)	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz		
Inrush AC	_	10	VA	_	10	VA		
Power Consumption	6.5 W	8.5	VA	6.5 W	8.5	VA		
Max Freq			71.4	4 Hz				
Insulation			Class F (con	tinuous duty)				
Min Response			12–14 ms co	mplete cycle				
Temperature			14°F to 122°F	[-10°C to 50°C]				
Lubrication			Not Re	equired				
Protection			NEMA	••				
Connection			11mm Dli					
Construction		Glass	filled nylon body; Vi		Brass			
Life Cycle			20 m	nillion				
Agency Approvals			С	E				

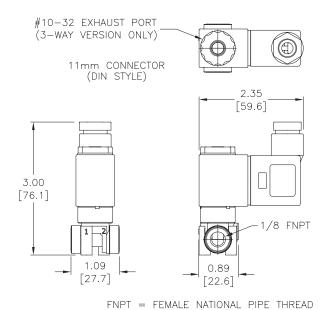
^{*} Check the chemical compatibility of the valve materials with the process media being used.



Process Pipeline Solenoid Valves DVP-2B & DVP-3B Series

Dimensions

inches [mm]



See our website www.AutomationDirect.com for

complete Engineering drawings.



Process Pipeline Solenoid Valves DVP-2D & DVP-3D Series



Part No. DVP-2DC1D-24D

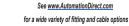
The Nitra DVP-2D and DVP-3D Series valves are composite body solenoid valves offered in both 2-way and 3-way normally closed styles in three orifice sizes. Features include a direct acting solenoid utilizing a long-life spring compensated poppet at the heart of an all stainless solenoid operator. Body construction is glass filled nylon with Viton seals, making the valves compatible with air, oil, inert gas, water and caustics*. Operating voltages of 24VDC, 24VAC or 120VAC are available.

- 2-way and 3-way poppet style valves
- 1/8, 1/4 or 3/8" FNPT ports
- 2-position, normally closed, spring return
- 24VDC, 24VAC or 120VAC solenoids
- DIN style wiring connector

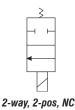




CE ROHS



Valve
Symbols



		DVP-2D	Series So	lenoid Va	Ive Speci	fications					
Model	DVP-2DC1D-24D	DVP-2DC1D-24A	DVP-2DC1D-120A	DVP-2DC2E-24D	DVP-2DC2E-24A	DVP-2DC2E-120A	DVP-2DC3F-24D	DVP-2DC3F-24A	DVP-2DC3F-120A		
Price	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00		
Weight (lbs)	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6		
Valve Type				2	2-way, 2-positio	n					
Acting		Poppe	t valve, normall	y closed, spring	g return		Poppet valv	ve, normally clo return	osed, spring		
Port Size		1/8" FNPT			1/4" FNPT			3/8" FNPT			
Orifice Size		0.062" [1.6 mm]		0.094" [2.4 mm]		0.118" [3.0 mm			
Cv		0.12			0.245			0.315			
Media				Air, oil, in	nert gas, water,	caustics*					
Pressure Range				50 psi .2 bar]			0–150 psi 0–250 psi [0–17.2 bar]				
Voltage (±10%)	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz		
Inrush AC	_	26	SVA	-	26	VA	_	26	SVA		
Power Consumption	10W	11.	5 VA	10W	11.5	5 VA	10W	11.	5 VA		
Max Freq					25Hz						
Insulation				Class	F (continuous	duty)					
Min Response					16–40 ms						
Temperature				14°F to	122°F [-10°C	to 50°C]					
Lubrication					Not Required						
Protection					NEMA Type 4						
Connection					Bmm DIN termin						
Construction			Glass fi	lled nylon body		perator Stainle	ss Steel				
Life Cycle					10 million						
Agency Approvals					CE						

^{*} Check the chemical compatibility of the valve materials with the process media being used.

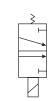


Process Pipeline Solenoid Valves DVP-2D & DVP-3D Series

Valve Symbols







3-way, 2-pos, NC

3-way, 2-pos, Mixing

3-way, 2-pos, Diverting

		DVP-3D	Series So	lenoid Va	lve Spec	ifications			
Model	DVP-3DC1D-24D	DVP-3DC1D-24A	DVP-3DC1D-120A	DVP-3DC2E-24D	DVP-3DC2E-24A	DVP-3DC2E-120A	DVP-3DC3F-24D	DVP-3DC3F-24A	DVP-3DC3F-120A
Price	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00
Weight (lbs)	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Valve Type				3	-way, 2-positio	n			
Acting				Poppet valve,	normally closed	d, spring return			
Port Size		1/8" FNPT			1/4" FNPT			3/8" FNPT	
Orifice Size	(0.062" [1.6 mm]	(0.094" [2.4 mm]		0.118" [3.0 mm]
Cv	0.12	(exhaust port	0.08)	0.245	(exhaust port	0.08)	0.31	(exhaust port	0.08)
Media				Air, oil, in	ert gas, water,	caustics*			
Pressure Range		0–220 psi [0–15.2 bar]			0 psi 3 bar]	1–150 psi [0–10.3 bar]	1–82 psi 1–90 psi [0–5.7 bar] [0–6.2 bar		
Voltage (±10%)	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz
Inrush AC	-	26	VA	-	26	VA	-	26	VA
Power Consumption	10W	11.5	5 VA	10W	11.5	5 VA	10W	11.5	5 VA
Max Freq					25Hz				
Insulation				Class	F (continuous	duty)			
Min Response					16–40 ms				
Temperature				14°F to	122°F [-10°C	to 50°C]			
Lubrication					Not Required				
Protection					NEMA Type 4				
Connection					mm DIN termir				
Construction			Gla	ss filled nylon l	oody; Viton sea	ıls; Operator Br	ass		
Life Cycle					10 million				
Agency Approvals					CE				

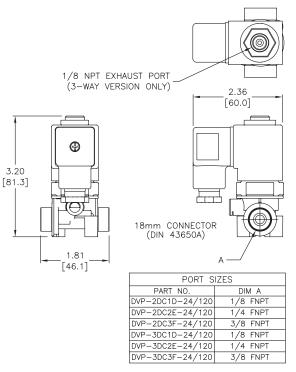
^{*} Check the chemical compatibility of the valve materials with the process media being used.



Process Pipeline Solenoid Valves DVP-2D & DVP-3D Series

Dimensions

inches [mm]



FNPT = FEMALE NATIONAL PIPE THREAD

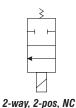


Process Pipeline Solenoid Valves DVM-2B Series



Part No. DVM-2BC2E-24D

Valve Symbols



The Nitra DVM-2B Series valves are media separated, dry operator, 2-way, 2-position solenoid operated valves for use with gases or fluids where the metal working components of the valves do not come into contact with the working fluid. Three orifice

sizes are offered. Body construction is glass filled nylon with Viton seals, making the valves compatible with air, gases, water and chemicals. Operating voltages of 24VDC, 24VAC or 120VAC are available.

Features

- 2-way media separated diaphragm style valve
- 1/8 or 1/4" FNPT ports
- 2-position, normally closed, spring return
- 24VDC, 24VAC or 120VAC solenoids

• DIN style wiring connector





CE ROHS

See <u>www.AutomationDirect.com</u> for a wide variety of fitting and cable options

z-way, z-pos, n											
	DVM-2B Series Solenoid Valve Specifications										
Model	DVM-2BC1B-24D	DVM-2BC1B-24A	DVM-2BC1B-120A	DVM-2BC2E-24D	DVM-2BC2E-24A	DVM-2BC2E-120A	DVM-2BC2G-24D	DVM-2BC2G-24A	DVM-2BC2G-120A		
Price	\$55.00	\$55.00	\$55.00	\$89.00	\$89.00	\$89.00	\$89.00	\$89.00	\$89.00		
Weight (lbs)	0.2	0.2	0.2	0.6	0.6	0.6	0.6	0.6	0.6		
Valve Type	2-way, 2-position										
Acting	Media separated valve, normally closed, spring return										
Port Size	1/8" FNPT			1/4" FNPT							
Orifice Size	0.047" [1.2 mm]			(0.094" [2.4 mm]			0.157" [4.0 mm]			
Cv	0.065				0.24			0.52			
Media	Water, chemicals, air, gases			Air, noble gases, oils, medical fluid applications*							
Pressure Range	0 to 120 psi [0 to 8.3 bar]			15" Hg (mercury) to 120psi [-0.5 to 8.3 bar]	15" Hg (mercury) to 120psi [-0.5 to 8.3 bar]		15" Hg (mercury) to 45psi [-0.5 to 3.1 bar]	15" Hg (mercury) to 45psi [-0.5 to 3.1 bar]	15" Hg (mercury) to 55psi [-0.5 to 3.8 bar]		
Maximum Allowable Back Pressure	20psi regardless of voltage										
Voltage (±10%)	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz		
Inrush AC	_	10	VA	-	10.5 VA –		26	SVA			
Power Consumption	6.5 W	8.5	VA	10W 9VA 10W		9	9VA				
Max Freq	40Hz 38.5 Hz										
Insulation	Class F (continuous duty)										
Min Response	18–2	5 ms complete	cycle	18–26 ms complete cycle							
Temperature	14°F to	131°F [-10°C	to 55°C]	14°F to 122°F [-10°C to 50°C]							
Lubrication	Not required										
Protection	NEMA Type 4										
Connection	11mm DIN terminal 18mm DIN terminal										
Construction	Glass filled nylon body; Viton seals; 302 stainless steel inlet strainer										
Life Cycle					10 million						
Agency Approvals	CE										

^{*} Check the chemical compatibility of the valve materials with the process media being used.



Process Pipeline Solenoid Valves DVM-2B Series

DVM-2B Series Solenoid Valve Specifications											
Model	DVM-2BC3E-24D	DVM-2BC3E-24A	DVM-2BC3E-120A	DVM-2BC3G-24D	DVM-2BC3G-24A	DVM-2BC3G-120A					
Price	\$89.00	\$89.00	\$89.00	\$89.00	\$89.00	\$89.00					
Weight (lbs)	0.6	0.6	0.6	0.6	0.6	0.6					
Valve Type	Media separated valve										
Acting	2-way, 2-position, normally closed, spring return										
Port Size	3/8" FNPT										
Orifice Size		0.094" [2.4 mm]		0.157" [4.0 mm]							
Cv		0.24		0.52							
Fluid	Air, noble gases, oils, medical fluid applications*										
Pressure Range	15" vacuum to 120psi [0.04–8.3 bar]	15" vacuur [0.04–	m to 120psi 8.3 bar]	15" vacuum to 45psi [0.04–3.1 bar]	15" vacuum to 55psi [0.04–3.8 bar]	15" vacuum to 45psi [0.04–3.1 bar]					
Maximum Allowable Back Pressure	20psi regardless of voltage										
Voltage (±10%)	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz					
Inrush AC	_	26	iVA	_	26VA						
Power Consumption	10W	10W 11.5 VA			11.5 VA						
Max Freq	38.5 Hz										
Insulation	Class F (continuous duty)										
Min Response	18–26 ms complete cycle										
Temperature	14°F to 122°F [-10°C to 50°C]										
Lubrication	Not required										
Protection	NEMA Type 4										
Connection	18mm DIN terminal										
Construction	Glass filled nylon body; Viton seals; 302 stainless steel inlet strainer										
Life Cycle	10 million										
Agency Approvals	CE										

^{*} Check the chemical compatibility of the valve materials with the process media being used.

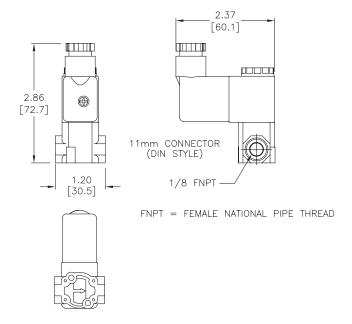


Process Pipeline Solenoid Valves DVM-2B Series

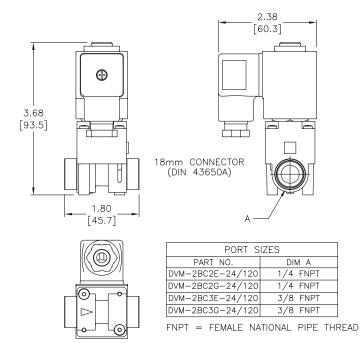
Dimensions

inches [mm]

DVM-2BC1B-XX



DVM-2BCXX



8mm Connectors

Dimensions shown mm [inches]

Solenoid Valve Cables and Connectors

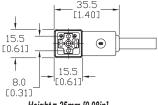


These high quality connectors and over-molded cables help reduce wiring time. The lower voltage models, 24V or 110V AC/DC, include built-in surge suppression, Yellow LED indicator and are rated for connecting with electronics. The 230V AC/DC models are rated for straight wired products. All models are available in five sizes based on DIN 43650.

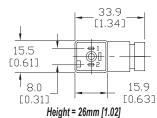
Features

- 8mm, 9.4mm, 10mm, 11mm and 18mm square DIN styles
- Fits most popular solenoid valves and sensors
- Suppression and LED indication available in 24V or 110V AC/DC models
- PVC jacketed cables in 1, 3 or 5 meter lengths on select connectors
- Field wireable connectors on select models
- Polarity insensitive (follow solenoid, sensor, or other devices wiring diagram)









Field Wireable Connector

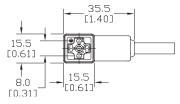
				8mm	(3-pole) C	onnecto	rs (p	er DIN 43650 Fo	rm C)			
Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia. (in.)	LED	Surge Protection	Wiring Figure	Screw Size/ Torque	Weight (lbs)	Agency Approval
SC8-LS24-3	\$17.00	24 ±20%						zener diode	1	m2.5-	0.40	
SC8-LS24-5	\$20.50	24 ±20 /0	max 4A				yes	(D-Z DO-15 47V 2W)	ı	0.45x25mm/	0.65	CSA
SC8-LS110-3	\$20.50	110 ±10%	IIIdx 4A	67	18 AWG	0.23	yes	zener diode	7	0.4 Nm (3.5 in lb)	0.41	(080128-0-000)
SC8-LS110-5	\$24.00	110 ± 10 /0						(D-Z DO-41 ZY200 2W)	,	(3.3 111 10)	0.63	
SC8-3	\$13.50						no		2		0.39	
<u>SC8-0</u>	\$8.75	230	max 6A	65	Solid 12 AWG Stranded 14 AWG w/Ferrule 16 AWG	field wireable gland size 0.20 to 0.24		none	9	m2.5- 0.45x25mm/ 0.5 Nm (4.4 in lb)	0.10	none
SC8-1	\$17.50			67	18 AWG	0.23			2	(0.10	
<u>SC8-5</u>	\$19.50			07	10 AWG	0.23					0.68	

Last digit in part number denotes cable length in meters, a 0 indicates field termination.

8mm Transmitter Connector

Dimensions shown mm [inches]





Height = 25mm [0.98in]

Connector with Cable

	8mm (4-pole) Connectors (per DIN 43650 Form C)													
Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia. (in.)	LED	Surge Protection	Wiring Figure	Screw Size/ Torque	Weight (lbs)	Agency Approval		
<u>SC8-5T</u>	\$26.00	230	max 6A	67	18 AWG	0.26	yes	none	8	m3-0.5x42mm/ 0.5 Nm (4.4 in lb)	0.80	CSA (080128-0- 000)		

Last numeric digit in part number denotes cable length in meters, a 0 indicates field termination.

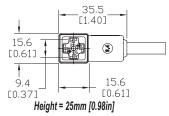


Solenoid Valve Cables and Connectors

9.4mm Connectors

Dimensions shown mm [inches]





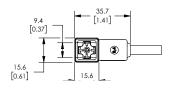
Connector with Cable

			9.4mr	n (3-p	ole)	Connect	ors	(DIN Style, Form C Industrial)						
Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia. (in.)	LED	Surge Protection	Wiring Figure	Screw Size/ Torque	Weight (lbs)	Agency Approval		
SC9-LS24-3	\$17.00	24 ±20%						zener diode	1		0.40			
SC9-LS24-5	\$20.50	24 ±20%	max 4A				1/00	(D-Z DO-15 47V 2W)	'	m3-0.5x26mm/ 0.4 Nm	0.64	CSA (080128-0-000)		
SC9-LS110-3	\$20.50	110 ±10%			18	0.23	yes	zener diode	7	(3.5 in lb)	0.40	CSA (000120-0-000)		
SC9-LS110-5	\$24.00	110 ± 10%		67	AWG			(D-Z DO-41 ZY200 2W)	'	, ,	0.64			
<u>SC9-3</u>	\$13.50									m3-0.5x26mm/	0.40			
<u>SC9-5</u>	\$19.50	230	max 6A				no	none	2	0.5 Nm (4.4 in lb)	0.64	none		

9.4mm Connectors

Dimensions shown mm [inches]

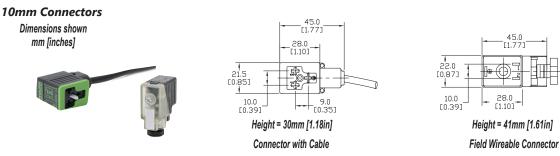




Height = 25mm [0.98in] Connector with Cable

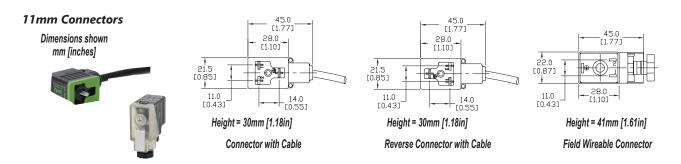
		9.4 n	nm (4-	pole)	Conn	ectors	(DIN Style, Form C Industrial)						
Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia.	Cable Length	LED	Surge Protection	Wiring Figure	Screw Size/ Torque	Weight (lbs)	Agency Approval
7000-94141-6270300	\$22.00	220 1/40/			10	E C C O	9.8ft/3m				m3-	0.50	CSA
<u>7000-94141-6270500</u>	\$29.00	230 VAC/ VDC	max 6A	IP67	18 AWG	5.6–6.2 mm	16.4ft/5m	no	none	8	0.5x26mm/ 0.4 Nm (3.5 in lb)	0.79	(080128-0-000)/ RoHS

Solenoid Valve Cables and Connectors



	10mm (3-pole) Connectors (per DIN 43650 Form B)												
Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia. (in.)	LED	Surge Protection	Wiring Figure	Screw Size/ Torque	Weight (lbs)	Agency Approval	
<u>SC10-LS24-3</u>	\$17.00	24 ±20%	max 4A					zener diode	10		0.43		
<u>SC10-LS24-5</u>	\$20.50	24 ±20%	IIIax 4A					(D-Z DO-15 47V 2W)	10		0.68		
<u>SC10-LS110-3</u>	\$20.50	110 ±10%	may 1A	67	18 AWG	field wireable gland size 0.24 to 0.32	no	zener diode	6	m3-0.5x30mm/ 0.4 Nm (3.5 in lb)	0.43	CSA (080128-0-	
SC10-LS110-5	\$24.00	110 ± 10%	:10% max 4A	07				(D-Z DO-41 ZY200 2W)	0		0.68	000)	
SC10-3	\$13.50	230	max 10A						3		0.43		
<u>SC10-5</u>	\$19.50	230	max TUA					none	3		0.68		
SC10-LS24-0	\$12.50	24 ±20%	max 4A	GE.	Solid 12 AWG Stranded 14 AWG w/Ferrule 16 AWG			zener diode (D-Z DO-15 47V 2W)	4	m3-0.5x42mm/ 0.5 Nm	0.07	nono	
<u>SC10-LS110-0</u>	\$14.00	110 ±10%	max 1A	65			yes	mov (SIOV S10 K130)	5	(4.4 in lb)	0.07	none	

Last digit in part number denotes cable length in meters, a 0 indicates field termination.



			11mm	(3-pol	e) Connec	tors (DI	N St	yle, Form B In	dustri	al)		
Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia. (in)	LED	Surge Protection	Wiring Figure	Screw Size/ Torque	Weight (lbs)	Agency Approval
SC11-LS24-3	\$17.00	24 ±20%	max 4A					zener diode	10		0.44	
SC11-LS24-5	\$20.50	24 ±20%	IIIdX 4A					(D-Z DO-15 47V 2W)	10		0.67	
<u>SC11-LS110-3</u>	\$20.50	110 ±10%	max 4A					zener diode (D-Z DO-41 ZY200	6		0.44	
<u>SC11-LS110-5</u>	\$24.00	110 ±10 /0	IIIax 4A				V00	2W)	0		0.67	
<u>SC11-LS24-3R</u>	\$17.00	24 ±20%	max 4A	67	18 AWG	0.23	yes	zener diode	10	m3-0.5x30mm/ 0.4 Nm	0.44	CSA
SC11-LS24-5R	\$20.50	24 ±20%	IIIdX 4A	07	10 AWG	0.23		(D-Z DO-15 47V 2W)	10	(3.5 in lb)	0.67	(080128-0-000)
<u>SC11-LS110-3R</u>	\$20.50	110 ±10%	max 4A					zener diode (D-Z DO-41 ZY200	6		0.44	
<u>SC11-LS110-5R</u>	\$24.00	110 ± 10%	IIIdX 4A					2W)	0		0.67	
<u>SC11-3</u>	\$13.50	230	max 10A				no	nono	3		0.44	
<u>SC11-5</u>	\$19.50	230	IIIax IUA				no	none	3		0.67	
SC11-LS24-0	\$12.50	24 ±20%	max 4A		Solid 12 AWG Stranded 14	field wireable	ves	zener diode (D-Z DO-15 47V 2W)	4	m3-0.5x42mm/	0.07	
<u>SC11-LS110-0</u>	\$14.00	110 ±10%	max 1A	65	AWG w/Ferrule 16	gland size 0.24 to	yes	mov (SIOV S10 K130)	5	0.5 Nm (4.4 in lb)	0.07	none
<u>SC11-0</u>	\$10.50	230	max 10A		AWG	0.32	no	none	9		0.07	

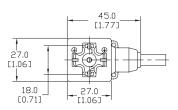
Last numeric digit in part number denotes cable length in meters, a 0 indicates field termination.

Solenoid Valve Cables and Connectors

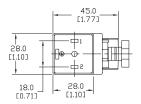
18mm Connectors

Dimensions shown mm [inches]





Height = 30mm [1.18in] Connector with Cable



Height = 41mm [1.61in]
Field Wireable Connector

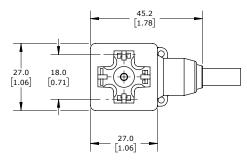
			18m	m (3- ₁	oole) Conn	ectors (per	DIN 43650 For	m A)			
Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia. (in)	LED	Surge Protection	Wiring Figure	Screw Size/ Torque	Weight (lbs)	Agency Approval
SC18-LS24-3	\$17.00	24 ±20%	may 1A					zener diode			0.44	
SC18-LS24-5	\$22.50	24 ±20%	max 4A					(D-Z DO-15 47V 2W)	7		0.69	
SC18-LS110-3	\$20.50	110 . 100/	may 11	67	18 AWG	0.23	yes	zener diode	,	m3-0.5x30mm/ 0.4 Nm (3.5 in lb)	0.44	CSA (080128-0-
SC18-LS110-5	\$24.00	110 ±10%	max 4A	67				(D-Z DO-41 ZY200 2W)			0.69	000)
<u>SC18-3</u>	\$13.50	230	max 10A				no	200	2		0.44	
<u>SC18-5</u>	\$19.50	230	max TUA				no	none	2		0.69	
SC18-LS24-0	\$12.50	24 ±20%	max 4A		Solid 12 AWG	field wireable	1/00	zener diode (D-Z DO-15 47V 2W)	4	m3-0.5x42mm/	0.07	
<u>SC18-LS110-0</u>	\$14.00	110 ±10%	max 1A	65	Stranded 14 AWG w/Ferrule 16	gland size 0.24 to	yes	mov (SIOV S10 K130)	5	0.5 Nm (4.4 in lb)	0.07	none
<u>SC18-0</u>	\$10.50	230	max 10A		AWG	0.32	no	none	9		0.07	-

Last digit in part number denotes cable length in meters, a 0 indicates field termination.

18mm Connectors

Dimensions shown mm [inches]

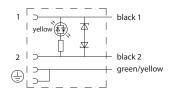


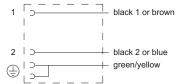


Height = 30mm [1.18in]
Connector with Cable

	18mm (4-pole) Connectors (DIN Style, Form A Industrial)													
Part No.	Price	Voltage (AC/DC)	Current Rating		Wire Size	Cable Dia.	Cable Length	LED	Surge Protection	Wiring Figure	Screw Size/ Torque	Weight (lbs)	Agency Approval	
7000-18111-6270300	\$22.00	230 VAC/	max 10A	67	18 AWG	5.6 – 6.2	9.8ft/3m	no	nono	8	m3-0.5x26mm/ 0.4 Nm	0.53	CSA (080128-0-000)/	
7000-18111-6270500	\$29.00	VDC	IIIax IUA	0/	10 AWG	mm	16.4ft/5m	no	none	0	(3.5 in lb)	0.83	RoHS	

Solenoid Valve Cables and Connectors Wiring Diagrams





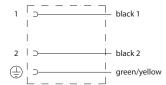


Figure No. 1

Figure No. 2

Figure No. 3

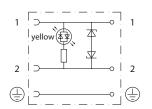


Figure No. 4

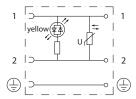


Figure No. 5

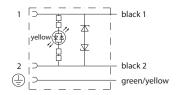


Figure No. 6

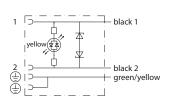


Figure No. 7



Figure No. 8

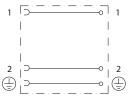


Figure No. 9

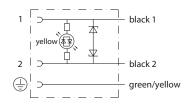


Figure No. 10



Pneumatic GVP Series Miniature Solenoid Valves



Part No. GVP-211C-12D



Part No. <u>GVP-321C-12D</u>

NITRA™ pneumatic miniature solenoid valves are an excellent choice for many automation applications with low flow requirements. Valves must be mounted to a GM-3 series manifold (sold separately).

Features

- 10mm and 15mm valve widths
- Available in 2-way or 3-way normally closed configurations
- 12 or 24 VDC solenoids
- GM-3 series manifolds sold separately

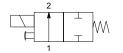






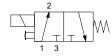
See <u>www.AutomationDirect.com</u> for a wide variety of fitting options

Diagram "A"



2-way, 2-position, Spring Return





3-way, 2-position, Spring Return

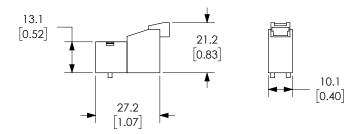
	GVP	Series Min	iature Sol	enoid Val	ves						
Models	GVP-211C-12 <u>D</u>	<u>GVP-211C-24D</u>	GVP-311C-12D	GVP-311C-24D	GVP-221C-12 <u>D</u>	GVP-321C-12D	GVP-321C-24D				
Price	\$43.50	\$43.50	\$43.50	\$43.50	\$38.00	\$38.00	\$38.00				
Weight (lbs)		0.05				0.1					
Size		10mm	ı			15mm					
Valve Type	2-way, 2-position	-way, 2-position, Normally Closed 3-way, 2-position, Normally 2-way, 2-position, Normally Closed 3-way, 2-position, Normally Closed 3-way, 2-position, Normally Closed									
Acting		Single solenoid spring return poppet									
Diagram	A B A B										
Fluid		Air	or Inert Gas (to	be filtered by 40)µ filter element)						
Min. / Max. Pressure			0 to 10	5 psi (0 to 7.24	bar)						
Flow (Cv)	0.013	0.013	0.013	0.013	0.047	0.047	0.047				
Port		Require	es GM type 10m	nm or 15mm ma	nifolds for operation	on					
Voltage	12VDC	24VDC	12VDC	24VDC	12VDC	12VDC	24VDC				
Continuous ON Power		1.3 W				2.3 W					
Expected Life			50,000,000 cyc	cles at max 3 cy	cles/second						
Wiring	Connec	tor Receptacle (Wir	e connector rec	juired)	18	8" Flying Leads					
Response Time			6m	s (on), 8ms (off)						
Indication		LED No LED									
Temperature - Operation and Storage	14~122°F (-10~50°C)										
Lubrication	Not Required										
Body			G	ass-filled nylon							
Protection				n/a							



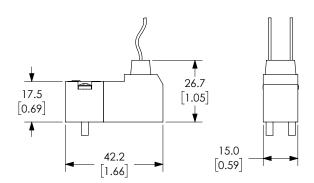
Pneumatic GVP Series Miniature Solenoid Valves

Dimensions

mm [inches]



GVP-x11C-xxD



GVP-x21C-xxD



Pneumatic GVP Series Miniature Latching Solenoid Valves

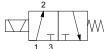


Part No. GVP-311CL-24D



Part No. GVP-321CL-12D

Diagram "A"



3-way, 2-position, Spring Return

NITRA pneumatic latching solenoid valves will stay open after being momentarily energized thus saving power consumption and reducing heat. Valves must be mounted to a GM-3 series manifold (sold separately).

Features

- 10mm and 15mm valve widths
- 3-way normally closed configuration
- Reversing polarity changes state
- GM-3 series manifolds sold separately







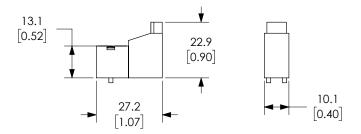
GVP S	eries Miniature Latching Sole	noid Valves
Model	<u>GVP-311CL-24D</u>	GVP-321CL-12D
Price	\$67.00	\$66.00
Weight (lbs)	0.05	0.1
Size	10mm	15mm
Valve Type	3-way, 2-position, Normally Closed	3-way, 2-position, Normally Closed
Acting	Single latching solenoid spr	ing return poppet
Diagram	А	А
Fluid	Air or Inert Gas (to be filtered b	y 40μ filter element)
Min. / Max. Pressure	0 to 105 psi (0 to 7	7.24 bar)
Flow (Cv)	0.013	0.047
Port	Requires GM type 10mm or 15mm	manifolds for operation
Voltage	24VDC	12VDC
Continuous ON Power	1.3 W	4 W
Expected Life	50,000,000 cycles at max	2 cycles/second
Wiring	Connector Receptacle (Wire connector required)	18" Flying Leads
Response Time	6ms (on), 8ms	(off)
Indication	LED	No LED
Temperature - Operation and Storage	14~122°F (-10~	
Lubrication	Not Require	ed
Body	Glass-filled ny	/lon
Protection	n/a	



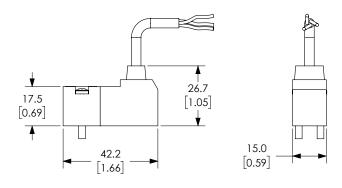
Pneumatic GVP Series Miniature Latching Solenoid Valves

Dimensions

mm [inches]



GVP-x11CL-xxD



GPV-x21CL-xxD



Pneumatic GVP Series Miniature Solenoid Valve Manifolds



NITRA manifolds designed to work with 10mm wide GVP series valves.

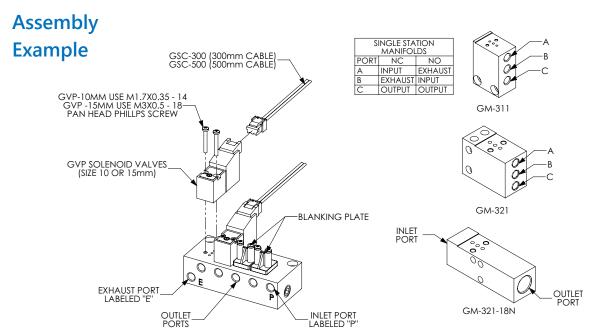
- Single to 6 stations
- #10-32 female threaded ports
- · Precision machined
- Compact
- Anodized aluminum for corrosion resistance
- Made in USA







Nitra P	neumatic G	VP Series 10mm Miniature Solenoid Valve	Manifolds		
Item	Part No.	Description	A inches [mm]	Price	Weight (lbs)
	<u>GM-311</u>	NITRA pneumatic valve manifold, anodized aluminum, white, rectangular, (1) station, #10-32 female UNF inlet(s), #10-32 female UNF outlet(s), #10-32 female threaded exhaust(s). For use with GVP-21 and GVP-31 series solenoid valves.	N/A	\$26.00	0.05
	<u>GM-312</u>	NITRA pneumatic valve manifold, anodized aluminum, white, rectangular, (2) stations, #10-32 female UNF inlet(s), #10-32 female UNF outlet(s), #10-32 female threaded exhaust(s). For use with GVP-21 and GVP-31 series solenoid valves.	1.42 [36.1]	\$35.50	0.05
220006	<u>GM-314</u>	NITRA pneumatic valve manifold, anodized aluminum, white, rectangular, (4) stations, #10-32 female UNF inlet(s), #10-32 female UNF outlet(s), #10-32 female threaded exhaust(s). For use with GVP-21 and GVP-31 series solenoid valves.	2.25 [78.2]	\$40.00	0.10
2,,,,,,	<u>GM-316</u>	NITRA pneumatic valve manifold, anodized aluminum, white, rectangular, (6) stations, #10-32 female UNF inlet(s), #10-32 female UNF outlet(s), #10-32 female threaded exhaust(s). For use with GVP-21 and GVP-31 series solenoid valves.	3.08 [78.2]	\$47.50	0.15





Pneumatic GVP Series Miniature Solenoid Valve Manifolds



NITRA manifolds designed to work with 15mm wide GVP series valves.

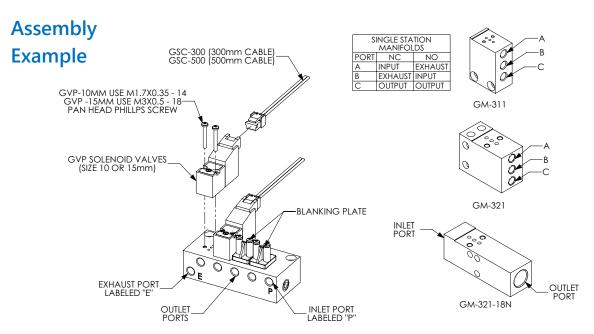
- Single to 4 stations
- #10-32 threaded or 1/8in NPT female ports
- Precision machined
- Compact
- Anodized aluminum for corrosion resistance
- Made in USA







Nitra Pi	neumatic G	VP Series 15mm Miniature Solenoid Valve	e Manifolds		
Item	Part No.	Description	A inches [mm]	Price	Weight (lbs)
0 0 0	<u>GM-321</u>	NITRA pneumatic valve manifold, anodized aluminum, white, rectangular, (1) station, #10-32 female UNF inlet(s), #10-32 female UNF outlet(s), #10-32 female threaded exhaust(s). For use with GVP-22 and GVP-32 series solenoid valves.	N/A	\$26.00	0.05
2000	GM-322	NITRA pneumatic valve manifold, anodized aluminum, white, rectangular, (2) stations, 1/8in female NPT inlet(s), #10-32 female UNF outlet(s), 1/8in female NPT exhaust(s). For use with GVP-22 and GVP-32 series solenoid valves.	2.13 [54.0]	\$33.00	0.15
2	<u>GM-324</u>	NITRA pneumatic valve manifold, anodized aluminum, white, rectangular, (4) stations, 1/8in female NPT inlet(s), #10-32 female threaded outlet(s), 1/8in female NPT exhaust(s). For use with GVP-22 and GVP-32 series solenoid valves.	3.37 [85.7]	\$45.00	0.25
	<u>GM-321-18N</u>	NITRA pneumatic valve manifold, anodized aluminum, black, rectangular, (1) station, 1/8in female NPT inlet(s), 1/8in female NPT outlet(s), vent hole exhaust(s). For use with GVP-22 and GVP-32 series solenoid valves.	N/A	\$31.50	0.6

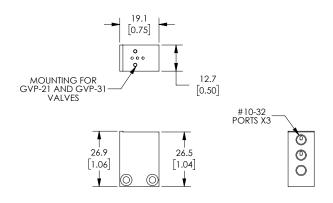




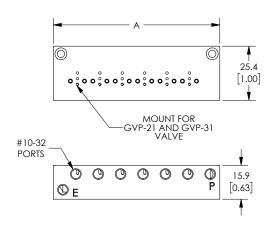
Pneumatic GVP Series Miniature Solenoid Valve Manifolds

Dimensions

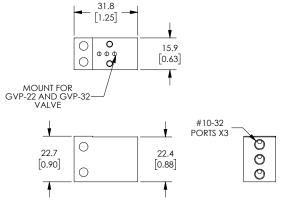
mm [inches]



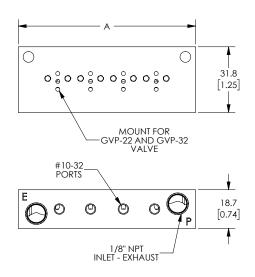
Part No. GM-311



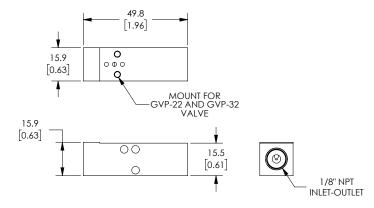
Part No. GM-312, GM-314, GM-316



Part No. GM-321



Part No. GM-322, GM-324



Part No. GM-321-18N



Pneumatic GVP Series Miniature Solenoid Manifold Accessories

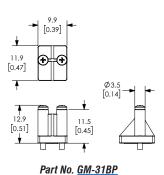


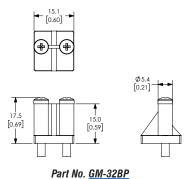


Nitra Pneumatic GVP Series Miniature Solenoid Valve Manifold Accessories									
Item	Part No.	Description	Price	Weight (lbs)					
	<u>GM-31BP</u>	NITRA blanking plate, nylon. For use with GM-31 series manifolds. Gasket and mounting screws included.	\$6.25	0.05					
	<u>GM-32BP</u>	NITRA blanking plate, nylon. For use with GM-32 series manifolds. Gasket and mounting screws included.	\$6.00	0.05					
	<u>GSC-300</u>	NITRA solenoid valve cable, miniature pin plug to pigtail, 11.8in/300mm cable length. For use with GVP series solenoid valves.	\$6.00	0.05					
	<u>GSC-500</u>	NITRA solenoid valve cable, miniature pin plug to pigtail, 19.6in/500mm cable length. For use with GVP series solenoid valves.	\$6.25	0.05					

Dimensions

mm [inches]







Manifolds for Modular Solenoid Valves – BVM-3 Series



BVM - 4-Station

NITRA pneumatic BVM-3 series modular manifolds simplify the mounting and wiring of BVS-3 series solenoid valves*. Made of sturdy glass reinforced thermoplastic with DIN rail mounting clips included, they are available in 4 and 8-station models. Push-to-connect inlet and out connections and a 9-pin D-sub connector allow quick and easy tubing and wiring.

Features

- No tools required to install/remove valves
- 2, 3, 4 or 8-station manifolds available
- 6mm or 1/4" tube inlets
- 35mm DIN rail mounting clips included
- 9-pin D-sub connector for easy wiring
- 2-year warranty



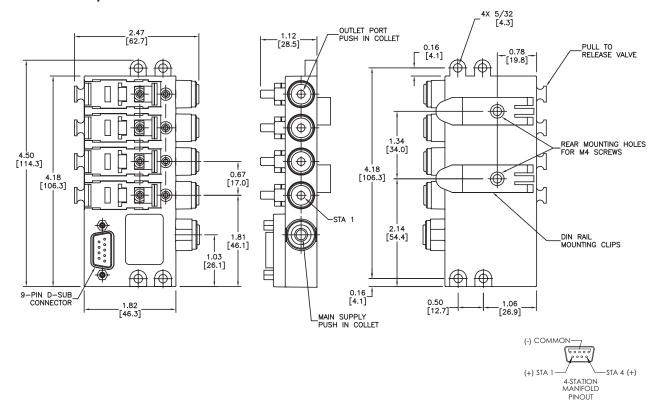
BVM Series Manifolds											
Part No.	Part No. Stations Inlet Outlet Connection Price Weight (lbs)										
BVM-346M	4	6mm	5/32" (4mm)	9-pin D-sub	Retired	0.3					

^{*} Works with BVS series valves with flying leads ONLY. Does not accept DIN connector valves

Dimensions

inches [mm]

4-Station Manifold





Pneumatic Directional Control Solenoid PNEUMATICS Valves – BVS Series - Accessories

Accessories

BVM Series Manifold Accessories										
Part No.	Description	Price	Weight (lbs)							
ZL-DB9F-CBL-2P	ZIP Link pigtail cable with 9-pin D-sub female connector, 28AWG, 2.0 meter (6.6 ft) length	\$14.00	0.3							
ZL-DB9F-CBL-5P	ZIP Link pigtail cable with 9-pin D-sub female connector, 28AWG, 5.0 meter (16.4 ft) length	\$27.00	0.5							

ZL-DB9F-CBL-xP Pinout



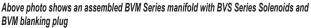
pin out

P1	P2	for BVM Series	for BVM Series
		4-station man	8-station man
1	black	N/A	station 4
2	brown	N/A	station 3
3	red	N/A	station 2
4	orange-	N/A	station 1
5	yellow	common	common
6	green	station 1	station 5
7	blue	station 2	station 6
8	violet	station 3	station 7
9	grey	station 4	station 8



ZL-DB9F-CBL-xP





Note: Manifold must have a BVS valve (flying leads ONLY)



See solenoid valve cables and connectors section



Pneumatic Directional Control Solenoid Valves – BVS-4 Series

NITRA pneumatic BVS-4 series modular solenoid valves are body ported 4-port (4-way) spool valve models have removable flying leads or DIN Form C connector. Units are only DIN rail



BVS Series Solenoid with Leads

Features

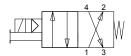
- Body ported, 4-port (4-way) spool valves
- 1/4" (6mm) push-to-connect ports
- Flow coefficients (Cv) 0.8
- 2-position, single solenoid spring return
- 12VDC, 24VDC, 24VAC or 120VAC solenoid coils with LED status indication & surge suppression diode

mountable when used with BVM series manifolds.

- Flying leads or DIN Form C connection
- Lever manual operator latching
- 2-year warranty



Valve Symbol



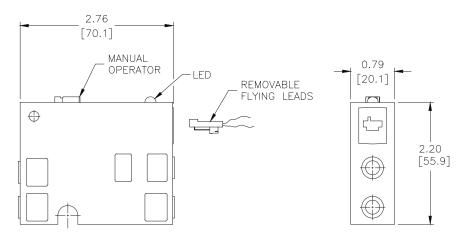
BVS (4-port, 2-position) 4 S	ries Specifications			
Models	BVS-4251-24A			
Price	Retired			
Weight (lbs)	0.2			
Acting	Spool (2-Position)			
Port Size	1/4" Push-to-Connect			
Orifice Size	0.2" [5.0 mm] (Cv = 0.8)			
Fluid	Air or Inert Gas (to be filtered by 40µ filter element)			
Min. / Max. Pressure	30psi (2bar) - 120psi (8.3 bar)			
Vacuum	Air pilot models can be used in vacuum applications with external air signal to pilot ports.			
Body	Glass Reinforced Thermoplastic			
Voltage	24VAC			
Inrush Power	1.4 VA			
Continuous ON Power	1.2 VA			
Expected Life	20,000,000 cycles at max 3 cycles/second			
Wiring	Removable 18" Flying Leads			
Response Time	0.016 sec			
Temperature - Operation and Storage	0~120°F (-18~49°C)			
Lubrication	Not Required			
Protection	IP 65			



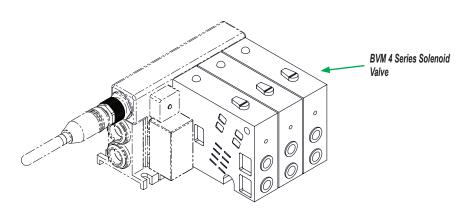
Pneumatic Directional Control Solenoid Valves – BVS-4 Series

Dimensions

inches [mm]



BVS 4 Series w/Removable Leads

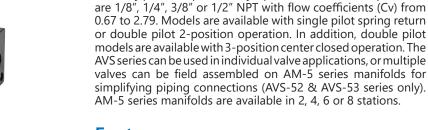




Pneumatic Directional Control Valves – AVS Air Pilot Valves



Single Pilot Valve



Features

- Body ported, 5-port (4-way) spool valves
- 1/8", 1/4", 3/8" or 1/2" NPT ports
- 2-position, single pilot normally closed, spring return; 2-position, double pilot; 3-position, double pilot center closed

NITRA[™] pneumatic AVS-5 series directional control air valves are body ported 5-port (4-way) spool valves. Available port sizes

- Single valve or multiple manifold mounted valve applications
- 2 year warranty

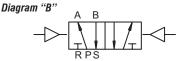


See <u>www.AutomationDirect.com</u> for a wide variety of fitting options

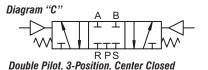




Single Pilot, Spring Return



Double Pilot, 2-Position





			AVS	Series	Air Pilo	ot Valve	Specifi	cations				
Models	AVS-5241	AVS-5251	AVS-526C1	AVS-5242	<u>AVS-5252</u>	AVS-526C2	AVS-5343	AVS-5353	AVS-536C3	AVS-544 <u>4</u>	AVS-5454	AVS-546C4
Price	\$30.00	\$39.00	\$63.00	\$31.50	\$44.00	\$64.00	\$44.50	\$54.00	\$69.00	\$48.00	\$69.00	\$78.00
Weight (lbs)	0.3	0.4	0.5	0.3	0.4	0.5	0.5	0.6	0.7	1.1	1.2	1.4
Valve Type		oort sition	5-port 3-position closed center	5-p	oort sition	5-port 3-position closed	5-p 2-pos		5-port 3-position closed	5-p 2-pos		5-port 3-position closed center
Acting	single air pilot	doubl	e air pilot	single air pilot	double	air pilot	single air pilot	double	air pilot	single air pilot	doub	le air pilot
Diagram	Α	В	С	Α	В	С	Α	В	С	Α	В	С
Port Size		1/8" NP	Γ	Inlet por	t 1/4" NPT 1/8" NPT	- Exhaust	Inlet port	3/8" NPT - 1/4" NPT	Exhaust		1/2" NP	Ī.
Pilot Port Size						1/8	NPT					
Flow Cv	0.	78	0.67	0.	89	0.67	0.67 1.67 1.00			2.79 1.68		
Fluid					Air (to	be filtered b	y 40µ filter e	element)				
Min. / Max. Pressure				20-	·115Psi (Pil	ot must be a	t least 50% o	of inlet pres	sure)			
Max Activate Rate	5 cycl	es/sec	3 cycles/sec	5 cycl	es/sec	3 cycles/ sec	5 cycle	es/sec		3 сус	cles/sec	
Temperature						-5~60°C	(23~140°F)					
Lubrication						Not R	equired					
Body						Alumin	um Alloy					
Drawing Figure	1	2	3	1	2	3	4	5	6	7	8	9



Pneumatic Directional Control - Foot Pedal Valve with Guard



Foot Pedal Valve with Guard

NITRA™ pneumatic CVS series directional control foot pedal valves are 5-port (4-way) spool valves that are ideal for non-electrical operator control applications. Available in 1/4" NPT with a flow coefficient (Cv) of 0.80. Models are available with momentary or latching operation.

Features

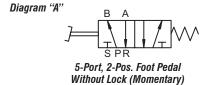
- Body ported, 5-port (4-way) spool valves
- 1/4" NPT ports
- Momentary or latching models
- Includes guard to prevent accidental actuation
- 2 year warranty

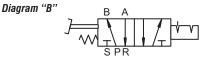






See <u>www.AutomationDirect.com</u> for a wide variety of fitting options





5-Port, 2-Pos. Foot Pedal With Lock (Latching)

CVS Series Air Pilot Valve Specifications									
Model	CVS-5272-FP CVS-527D2- (Momentary) (Latching)								
Price	\$51.00	\$57.00							
Weight (lbs)	2.3 2.4								
Valve Type	5-po 2-posit								
Acting	Direct A	cting							
Diagram	A	В							
Port Size	1/4" N	PT							
Flow Cv	0.80)							
Fluid	Air (to be filtered by 4	l0μ filter element)							
Min. / Max. Pressure	0-115	Psi							
Temperature	-5~60°C (23~140°F)								
Lubrication	Not Required								
Body	Aluminum	n Alloy							
Drawing Figure	10								



Pneumatic Directional Control

- Manual Valves

NITRA™ pneumatic directional control manual valves are body ported spool or ball valves. Available port sizes are 1/8", 1/4" or 1/2 NPT with flow coefficients (Cv) from 0.78 to 5.29. Models are available in 2-position or 3-position, detented or spring return operation styles.

Features

- Body ported, 5-port spool or 4-port rotary valves
- 2-position or 3-position detented operation models
- 2-position or 3-position spring return models
- 2 year warranty





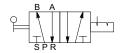


See <u>www.AutomationDirect.com</u> for a wide variety of fitting options



Toggle Style Hand Lever Valve

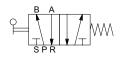
Diagram "A"



5-Port, 2-Pos. Toggle Detented

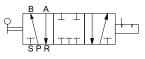
Diagram "B"

Diagram "F"



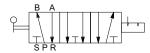
5-Port, 2-Pos. Spring Return

Diagram "C"



5-Port, 3-Pos. Center Closed Detented

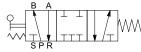
Diagram "D"



5-Port, 3-Pos. Center Exhaust Detented

-

Diagram "E"



5-Port, 3-Pos. Center Closed Spring Return

B A

5-Port, 3-Pos. Center Exhaust Spring Return

			Toggl	e Style I	Hand Lev	ver Valvo	Specifi	cations				
Models	AVS-527D1-HL	AVS-537D2-HL	AVS-5271-HL	AVS-528DC1-HL	AVS-528DE1-HL	AVS-538DC1-HL	AVS-538DE1-HL	AVS-528C1-HL	AVS-528E1-HL	AVS-538C1-HL	AVS-538E1-HL	AVS-5372-H <u>L</u>
Price	\$32.00	\$46.00	\$54.00	\$54.00	\$56.00	\$73.00	\$75.00	\$71.00	\$71.00	\$68.00	\$80.00	\$70.00
Weight (lbs)	0.40	0.60	0.40	0.60	0.40	0.40	0.60	0.60	0.40	0.40	0.60	0.60
Valve Type	2-po	port sition ented	5-port 2-position spring return	5-port 3-position center closed detented	5-port 3-position center exhaust detented	5-port 3-position center closed detented	5-port 3-position center exhaust detented	5-port 3-position center closed spring return	5-port 3-position center exhaust spring return	5-port 3-position center closed spring return	5-port 3-position center exhaust spring return	5-port 2-position spring return
Acting						Direct Action	Hand Lever					
Diagram	,	A	В	С	D	С	D	Е	F	Е	F	В
Port Size	1/8" NPT	1/4" NPT	1/8" NPT	1/8" NPT	1/8" NPT	1/4" NPT	1/4" NPT	1/8" NPT	1/8" NPT	1/4" NPT	1/4" NPT	1/4" NPT
Flow Cv	0.78	1.39	0.78	0.67	0.67	1.00	1.00	0.67	0.67	1.00	1.00	1.39
Fluid					Air (to	be filtered by	40µ filter ele	ment)				
Min. / Max. Pressure						0-11	5Psi					
Temperature						-5~60°C (2	23~140°F)					
Lubrication						Not Re	quired					
Body						Aluminu	ım Alloy					
Drawing Figure						1	1					



Pneumatic Directional Control – Manual Valves









See <u>www.AutomationDirect.com</u> for a wide variety of fitting options

Push-Pull Valves

Diagram "A"



5-Port, 2-Pos. Push-Pull Detented

Push-Pull	Valve Specifica	tions					
Models	<u>AVS-527D1-PP</u>	<u>AVS-537D2-PP</u>					
Price	\$30.00	\$37.00					
Weight (lbs)	0.3	0.6					
Valve Type	2-po	port sition ented					
Acting	Direct Actin	g Push-Pull					
Diagram	,	4					
Port Size	1/8" NPT	1/4" NPT					
Flow Cv	0.78	1.39					
Fluid	Air (to be filtered by	γ 40μ filter element)					
Min. / Max. Pressure	0-11	5Psi					
Temperature	-5~60°C (23~140°F)						
Lubrication	Not Required						
Body	Aluminu	ım Alloy					
Drawing Figure	1	2					



Pneumatic Directional Control – Manual Valves



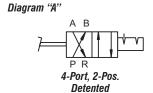


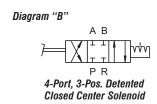




See <u>www.AutomationDirect.com</u> for a wide variety of fitting options

Rotary Style Hand Lever Valve





Rotar	Rotary Style Hand Lever Valve Specifications										
Models	<u>CVR-437D2-HL</u>	<u>CVR-438D2-HL</u>	<u>CVR-447D4-HL</u>	<u>CVR-448D4-HL</u>							
Price	\$32.00	\$32.00	\$39.00	\$39.00							
Weight (lbs)	1.5	1.5	3.1	3.1							
Valve Type	4-port 2-position detented	4-port 3-position detented closed center	4-port 2-position detented	4-port 3-position detented closed center							
Acting		Rotary S	tyle Hand Lever								
Diagram	A	В	A	В							
Port Size	1/4" NPT	1/4" NPT	1/2" NPT	1/2" NPT							
Flow Cv	0.89	0.89	5.29	5.29							
Fluid		Air (to be filtered	d by 40µ filter element)								
Min. / Max. Pressure		0)-145Psi								
Temperature	-5~63°C (23~145°F)										
Lubrication	Not Required										
Body		Alun	ninum Alloy								
Drawing Figure			13								

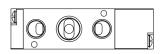


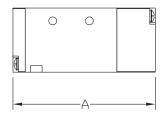
Pneumatic Directional Control – Manual Valve Dimensions

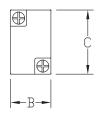
Dimensions

mm [inches]

Figures 1-9

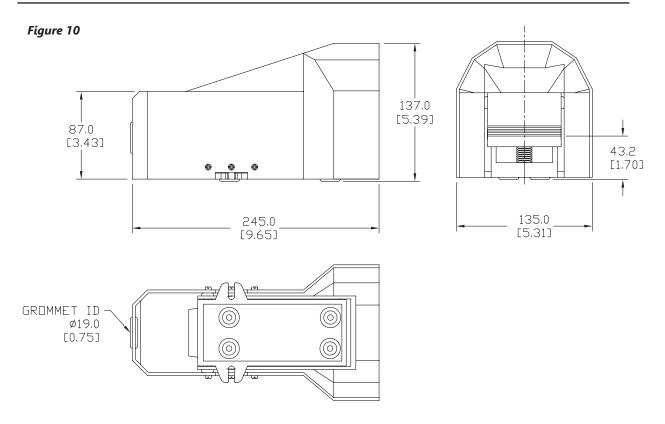






PILOT VALVE DIMENSIONS											
DWG FIGURE	1	2	3	4	5	6	7	8	9		
DIM. A	77.7 [3.06]	92.0 [3.62]	111.0 [4.37]	95.5 [3.76]	111.0 [4.37]	130.0 [5.12]	128.0 [5.04]	142.0 [5.51]	163.0 [6.42]		
DIM. B	DIM. B 22.0 [0.87] 22.0 [0.87] 22.0 [0.87] 22.0 [0.87] 27.0 [1.06] 27.0 [1.06] 34.0 [1.34] 34.0 [1.34] 34.0 [1.34]										
DIM. C	35.0 [1.38]	35.0 [1.38]	35.0 [1.38]	40.0 [1.57]	40.0 [1.57]	40.0 [1.57]	50.0 [1.97]	50.0 [1.97]	50.0 [1.97]		

See our website www.AutomationDirect.com for complete Engineering drawings



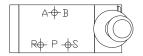


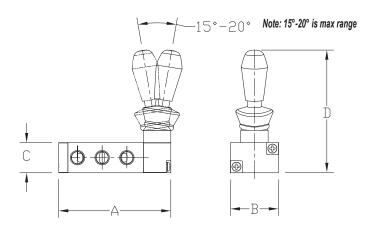
Pneumatic Directional Control - Manual Valve Dimensions

Dimensions

mm [inches]

Figure 11





	Push-Pull Valve Specifications											
Model	A mm [inches]	B mm [inches]	C mm [inches]	D mm [inches]								
<u>AVS-527D1-HL</u>	81.8 [3.22]	35.0 [1.38]	22.0 [0.87]	89.5 [3.52]								
<u>AVS-537D2-HL</u>	100.9 [3.97]	40.2 [1.58]	27.1 [1.07]	91.6 [3.61]								
AVS-5271-HL	81.5 [3.21]	35.0 [1.38]	22.0 [0.87]	89.9 [3.54]								
AVS-528DC1-HL	81.5 [3.21]	35.0 [1.38]	22.0 [0.87]	89.9 [3.54]								
AVS-528DE1-HL	81.5 [3.21]	35.0 [1.38]	22.0 [0.87]	89.9 [3.54]								
AVS-538DC1-HL	101.0 [3.98]	40.0 [1.57]	27.0 [1.06]	94.0 [3.70]								
AVS-538DE1-HL	101.0 [3.98]	40.0 [1.57]	27.0 [1.06]	94.0 [3.70]								
<u>AVS-528C1-HL</u>	100.5 [3.96]	35.0 [1.38]	22.0 [0.87]	90.4 [3.56]								
AVS-528E1-HL	100.5 [3.96]	35.0 [1.38]	22.0 [0.87]	90.4 [3.56]								
<u>AVS-538C1-HL</u>	120.0 [4.72]	40.0 [1.57]	27.0 [1.06]	94.0 [3.70]								
AVS-538E1-HL	120.0 [4.72]	40.0 [1.57]	27.0 [1.06]	94.0 [3.70]								
AVS-5372-HL	101.0 [3.98]	40.0 [1.57]	27.0 [1.06]	94.0 [3.70]								



Pneumatic Directional Control

- Manual Valve Dimensions

Dimensions

mm [inches]

Figure 12

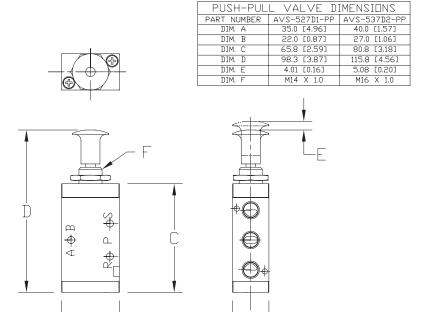
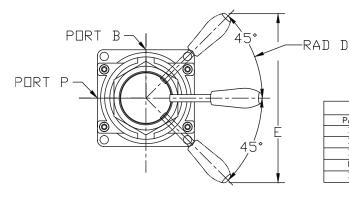
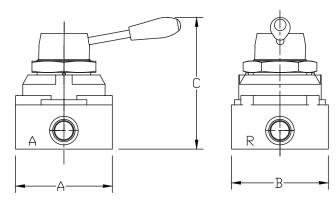


Figure 13



ROTARY VALVE DIMENSIONS							
PART NO	CRV-43_D2-HL	CRV-44_D4-HL					
DIM. A	73.7 [2.90]	94.0 [3.70]					
DIM. B	73.7 [2.90]	102.0 [4.02]					
DIM. C	100.3 [3.95]	126.0 (4.96]					
RAD D	101.6 [4.00]	113.0 [4.45]					
DIM. E	144.8 [5.70]	160.0 [6.30]					



See our website www.AutomationDirect.com for complete Engineering drawings



Pneumatic Pushbuttons, 22mm

NITRA® pneumatic pushbuttons are all plastic and come with adapters to allow mounting of up to two 3-way valves, or one valve and one to three contact blocks. They fit in a standard 22.5mm hole, just like electrical pushbuttons.

Features

3.





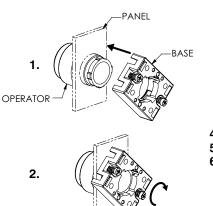
- Valve adapters and mounting screws included
- · Valves sold separately

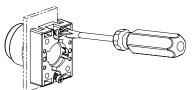
• Plastic bezel and button

• Bases will work with GCX plastic operators and **only** the three ECX Series contact blocks shown below

Pushbutton Specifications					
Operating Temperature	-13 to 158°F (-25 to +70°C)				
Storage Temperature	-40 to 176°F (-40 to +80°C)				
Mechanical Life	1,000,000 cycles				
Switching Cycles	3600 cycles/hr				
Mounting (Valve)	(4) M3x5 valve mounting screws included				
Protection	IP65 after installation				
Approvals	CE				

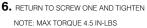
Adapter Block Installation

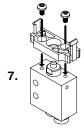


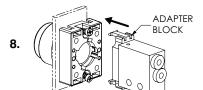


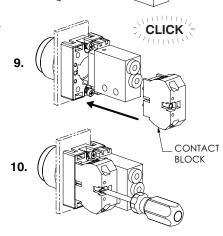




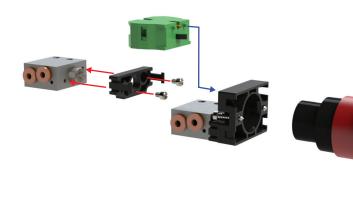








NOTE: MAX TORQUE 4.5 IN-LBS



CLICK



ECX1040-2



ECX1042-2

ECX1030-2



Pneumatic Pushbuttons, 22mm

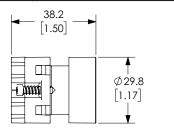
Momentary flush pushbuttons with protective plastic ring (30mm diameter actuator)

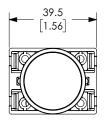


ECP3100

Part Number	Color	Description		Price
ECP3100	Black	NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: black, flush, 30mm, round, plastic.	0.07	\$3.00
<u>ECP3101</u>	Red	NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: red, flush, 30mm, round, plastic.	0.07	\$3.00
ECP3102 Green		Green NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: green, flush, 30mm, round, plastic.		\$3.00
ECP3103	Yellow	NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: yellow, flush, 30mm, round, plastic.	0.07	\$3.00
ECP3104	Blue	NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: blue, flush, 30mm, round, plastic.	0.07	\$3.00
ECP3105	White	NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: white, flush, 30mm, round, plastic.	0.07	\$3.00
ECP3106		NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: red, flush, 30mm, round, plastic, operator text "(O)".	0.07	\$3.25
ECP3107		NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: green, flush, 30mm, round, plastic, operator text "(I)".	0.07	\$3.25

Dimensions mm [inches]





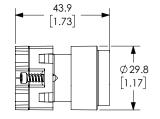
Momentary extended pushbuttons with protective plastic ring (30mm diameter actuator)

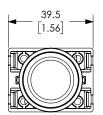


ECP3110

Part Number	Color	Description	Weight (lbs)	Price
ECP3110		NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: black, extended, 30mm, round, plastic.	0.07	\$3.00
ECP3111		NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: red, extended, 30mm, round, plastic.	0.07	\$3.00
ECP3112 Green		NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: green, extended, 30mm, round, plastic.	0.07	\$3.00
ECP3113		NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: yellow, extended, 30mm, round, plastic.	0.07	\$3.00
ECP3114		NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: blue, extended, 30mm, round, plastic.	0.07	\$3.00
ECP3115		NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: white, extended, 30mm, round, plastic.	0.07	\$3.00

Dimensions mm [inches]







Pneumatic Pushbuttons, 22mm Mushroom

Mushroom pushbutton operator (40mm & 60mm diameter actuator)



ECP3131



ECP3133

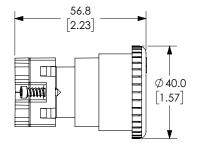


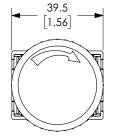
ECP3138

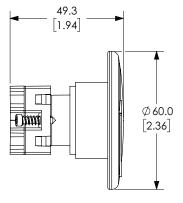
Part Number	Color	Description	Weight (lbs)	Price
ECP3131	Red	NITRA pneumatic pushbutton, IP65, 22mm, twist-to-release, emergency stop, plastic base, plastic bezel, black, operator only, Operator: red, mushroom, 40mm, round, plastic.	0.1	\$8.25
ECP3132	Black	NITRA pneumatic pushbutton, IP65, 22mm, twist-to-release, plastic base, plastic bezel, black, operator only, Operator: black, mushroom, 60mm, round, plastic.	0.1	\$10.50
ECP3133	Black	NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: black, mushroom, 60mm, round, plastic.	0.1	\$11.50
ECP3134	Black	NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: black, mushroom, 40mm, round, plastic.	0.1	\$6.25
ECP3135	Red	NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: red, mushroom, 40mm, round, plastic.	0.1	\$6.25
ECP3136	Red	NITRA pneumatic pushbutton, IP65, 22mm, twist-to-release, emergency stop, plastic base, plastic bezel, black, operator only, Operator: red, mushroom, 60mm, round, plastic.	0.1	\$10.00
ECP3137	Red	NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: red, mushroom, 60mm, round, plastic.	0.1	\$8.75
ECP3138	Yellow	NITRA pneumatic pushbutton, IP65, 22mm, twist-to-release, plastic base, plastic bezel, black, operator only, Operator: yellow, mushroom, 60mm, round, plastic.	0.1	\$10.50
ECP3139	Yellow	NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: yellow, mushroom, 40mm, round, plastic.	0.1	\$6.25

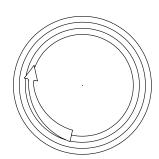
Dimensions mm [inches]

40mm Versions









60mm Versions



Pneumatic Pushbuttons, 22mm Key Operated & Double Headed

Mushroom pushbutton operator - key operated (40mm dia. actuator)



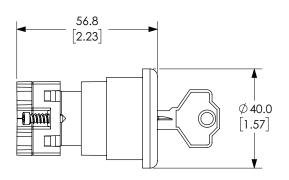
Part Number	Color	Description	Weight (lbs)	Price
<u>ECP3141</u>	Red	NITRA pneumatic pushbutton, IP65, 22mm, key operated release, plastic base, plastic bezel, black, operator only, Operator: red, mushroom, 40mm, round, plastic.	0.19	\$12.50

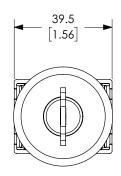


Note: Keyed switches come with two keys. All plastic 22mm keyed switches are keyed the same. Replacement keys are available. Order part no. ECX1067-2 (pkg. of 2). Keys for plastic 22mm keyed switches are not compatible with Cutler-Hammer key switches.

ECP3141

Dimensions mm [inches]





Double headed pushbutton operator



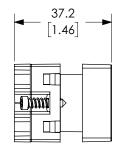


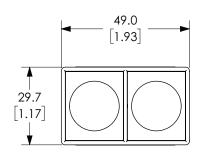
ECP3150

ECP3152

Part Number Color Description		Description	Weight (lbs)	Price
ECP3150 Green/		NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: green and red, double headed, rectangular, plastic.	0.08	\$5.50
Green/ Red NITRA pneumatic pushbutton, IP65, 22mm, momentary, plastic base, plastic bezel, black, operator only, Operator: green and red, double headed, rectangular, plastic, operator text "(I) and (O)".		0.08	\$6.25	

Dimensions mm [inches]







Pneumatic Selector Switches, 22mm Lever

Knob selector switches



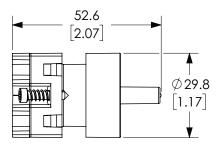
ECP3300

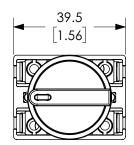
Part Number	Color	Description	Weight (lbs)	Price
<u>ECP3300</u>	NITRA pneumatic selector switch, IP65, 22mm, 2-position, maintained, plastic base, plastic bezel, operator only, Operator: black, knob, 30mm, round, plastic.		0.09	\$5.25
<u>ECP3310</u>	Black	NITRA pneumatic selector switch, IP65, 22mm, 2-position, spring return from right, plastic base, plastic bezel, operator only, Operator: black, knob, 30mm, round, plastic.	0.09	\$6.50
<u>ECP3320</u>	Black	NITRA pneumatic selector switch, IP65, 22mm, 3-position, maintained, plastic base, plastic bezel, operator only, Operator: black, knob, 30mm, round, plastic.	0.09	\$5.25
<u>ECP3330</u>	Black	NITRA pneumatic selector switch, IP65, 22mm, 3-position, spring return to center from right or left, plastic base, plastic bezel, operator only, Operator: black, knob, 30mm, round, plastic.	0.09	\$6.25



ECP3320







Long lever selector switches



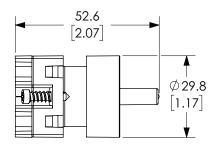
ECP3350

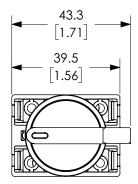
Part Number	Color	Description	Weight (lbs)	Price
ECP3350	Black	NITRA pneumatic selector switch, IP65, 22mm, 2-position, maintained, plastic base, plastic bezel, operator only, Operator: black, lever, 30mm, round, plastic.	0.09	\$6.50
ECP3360	Black	NITRA pneumatic selector switch, IP65, 22mm, 2-position, spring return from right, plastic base, plastic bezel, operator only, Operator: black, lever, 30mm, round, plastic.	0.09	\$6.75
ECP3370	Black	NITRA pneumatic selector switch, IP65, 22mm, 3-position, maintained, plastic base, plastic bezel, operator only, Operator: black, lever, 30mm, round, plastic.	0.09	\$6.50
ECP3380	Black	NITRA pneumatic selector switch, IP65, 22mm, 3-position, spring return to center from right or left, plastic base, plastic bezel, operator only, Operator: black, lever, 30mm, round, plastic.	0.09	\$6.75



ECP3370

Dimensions mm [inches]







Pneumatic Key Selector Switches, 22mm

Key selector switches



ECP3420

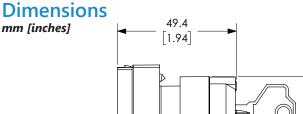
Part Number	Color	Description	Weight (lbs)	Price
<u>ECP3420</u>	Black	NITRA pneumatic selector switch, IP65, 22mm, 2-position, maintained, key removable in all positions, plastic base, plastic bezel, operator only, Operator: black, key, 30mm, round, plastic.		\$12.50
<u>ECP3430</u>	Black	NITRA pneumatic selector switch, IP65, 22mm, 2-position, spring return from right, key removable left position, plastic base, plastic bezel, operator only, Operator: black, key, 30mm, round, plastic.	0.17	\$12.50
<u>ECP3470</u>	Black	NITRA pneumatic selector switch, IP65, 22mm, 3-position, maintained, key removable in all positions, plastic base, plastic bezel, operator only, Operator: black, key, 30mm, round, plastic.	0.17	\$11.50

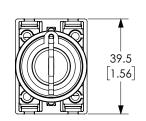


Note: Keyed switches come with two keys. All plastic 22mm keyed switches are keyed the same. Replacement keys are available. Order part no. ECX1067-2 (pkg. of 2). Keys for plastic 22mm keyed switches are not compatible with Cutler-Hammer key switches.



ECP3470





Ø29.8

[1.17]

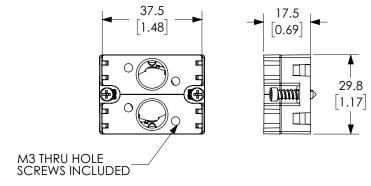
Pneumatic switch accessory - support base with adapters



Part Number	Description	Weight (lbs)	Price
FI:P311/U=11/	NITRA valve adapter block, replacement, plastic. For use with ECP series pneumatic pushbuttons.	0.03	\$1.00

ECP3029-02

Dimensions mm [inches]



Note: base sold as three piece kit.



Pneumatic Manual Valve Materials

- 1. Aluminum valve body
- 2. Chemically nickel-plated brass button
- 3. Brass distance plates
- 4. NBR gaskets
- 5. Stainless steel, brass and plastic push-to-connect cartridges
- 6. Stainless steel springs

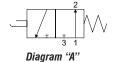
Pneumatic Metal Plunger Valves

These pneumatic valves are used with Nitra pneumatic pushbuttons and switches

Valve Symbols

Features

- Available in normally open or normally closed
- 5/32" [4mm] push-to-connect ports located on side or end



0

0

INLET (1) -

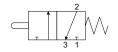


Diagram "B"



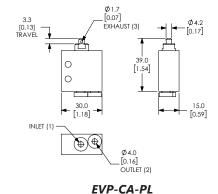
EVP-CA-PL

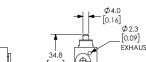


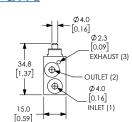
EVP-CS-PL

	S	pecifications		
Models	EVP-CA-PL	EVP-AA-PL	EVP-CS-PL	EVP-AS-PL
Price	\$24.00	\$26.50	\$21.50	\$24.00
Weight (lbs)	0.1	0.1	0.1	0.1
Valve Type		2-port (3-wa	y) 2-position	
Acting	Metal plunger, normally closed, spring return	Metal plunger, normally open, spring return	Metal plunger, normally closed, spring return	Metal plunger, normally open, spring return
Diagram	В	Α	В	Α
Port Size	Axial ports 5	i/32in (4mm)	Side ports 5	5/32in (4mm)
Flow (Cv)	0.13	0.13	0.13	0.13
Fluid		Air (to be filtered by	40µ filter element)	
Min. / Max. Pressure		7.25 to 145 psi	(0.5 to 10 bar)	
Temperature		14°F to 140°F	(-10°C to 60°C)	
Lubrication		Not Re	equired	
Body		Alum	inum	
Protection		IP	65	•

Dimensions mm [inches]







[0.16] OUTLET (2)

[0.09] EXHAUST (3)

EVP-AA-PL

[1.53]

See our website www.AutomationDirect.com for complete Engineering drawings.

EVP-CS-PL / EVP-AS-PL

0

0

30.0 [1.18]



Pneumatic Metal Plunger Valves with metal roller

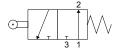
Features

- These valves function as pneumatic limit switches
- Available in normally open or normally closed
- 5/32" [4mm] push-to-connect ports located on side or end





Valve Symbols



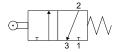


Diagram "C"

Diagram "D"

EVP-CA-R

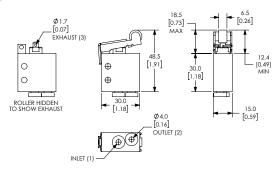


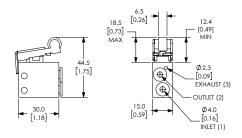
EVP-AS-R

	Specifications Specification S							
Models	EVP-CA-R	EVP-AA-R	EVP-CS-R	EVP-AS-R				
Price	\$28.00	\$28.00	\$26.00	\$28.50				
Weight (lbs)	0.1	0.1	0.1	0.1				
Valve Type		2-port (3-wa	y) 2-position					
Acting	Metal plunger with metal roller, normally closed, spring return open, spring return with metal roller, normally closed, spring return open, spring return closed, spring return open, spring return closed, spring return open, spring return open, spring return closed, spring return open,							
Diagram	D	С	D	С				
Port Size	Axial ports 5	5/32in (4mm)	Side ports 5	i/32in (4mm)				
Flow (Cv)	0.13	0.13	0.13	0.13				
Fluid		Air (to be filtered by	/ 40µ filter element)					
Min. / Max. Pressure		7.25 to 145 ps	i (0.5 to 10 bar)					
Temperature		14°F to 140°F	(-10°C to 60°C)					
Lubrication	Not Required							
Body		Alum	ninum					
Protection		IP	65					

Dimensions

mm [inches]





EVP-CS-R / EVP-AS-R

EVP-CA-R / EVP-AA-R



Pneumatic Metal Plunger Valves with one-way metal roller

Features

- These valves function as pneumatic limit switches
- Available in normally closed
- 5/32" [4mm] push-to-connect ports located on side or end





Valve Symbol

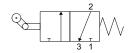


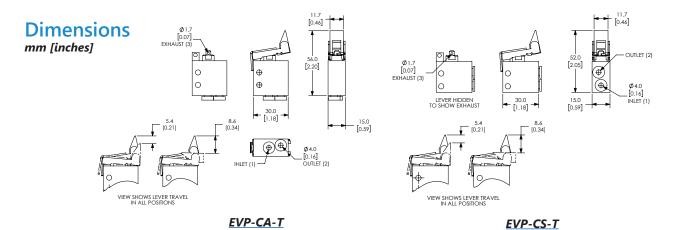
Diagram "E"

EVP-CA-T



EVP-CS-T

	Specifications					
Models	EVP-CA-T	<u>EVP-CS-T</u>				
Price	\$29.50	\$27.50				
Weight (lbs)	0.1	0.1				
Valve Type	2-port (3-wa	y) 2-position				
Acting	Metal plunger with one -way metal roller, normally closed, spring return Metal plunger with one-way metal roller, normally closed, spring return					
Diagram	E E					
Port Size	Axial ports 5/32in (4mm)	Side ports 5/32in (4mm)				
Flow (Cv)	0.13	0.13				
Fluid	Air (to be filtered by	ν 40μ filter element)				
Min. / Max. Pressure	7.25 to 145 psi	(0.5 to 10 bar)				
Temperature	14°F to 140°F (-10°C to 60°C)					
Lubrication	Not Required					
Body	Aluminum					
Protection	IP	65				





Pneumatic Metal Plunger Valves for thru-panel mounting

Features

- These valves function as pneumatic limit switches
- · Available in normally closed
- 5/32" [4mm] push-to-connect ports located on side or end
- Fits 1/2" diameter hole in panel





Valve Symbol

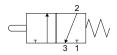


Diagram "B"

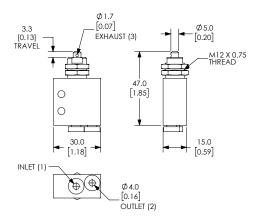
EVP-CA-PL-PNL

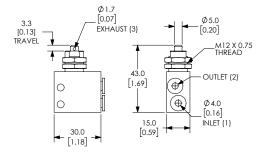


EVP-CS-PL-PNL

	Specifications Specification Specification Specification Specification Specification Specification Specification Specification							
Models	EVP-CA-PL-PNL	EVP-CS-PL-PNL						
Price	\$26.00	\$23.50						
Weight (lbs)	0.1	0.1						
Valve Type	2-port (3-wa	y) 2-position						
Acting	Metal plunger, normally closed, spring return, through panel mount spring return, through panel mo							
Diagram	В							
Port Size	Axial ports 5/32in (4mm)	Side ports 5/32in (4mm)						
Flow (Cv)	0.13	0.13						
Fluid	Air (to be filtered b	y 40µ filter element)						
Min. / Max. Pressure	7.25 to 145 ps	i (0.5 to 10 bar)						
Temperature	14°F to 140°F	(-10°C to 60°C)						
Lubrication	Not Required							
Body	Aluminum							
Protection	IP	65						

Dimensions mm [inches]





EVP-CS-PL-PNL

EVP-CA-PL-PNL



Manual Valves, Normally Closed, Spring Return, Pushbutton



Part No. GVP-3C2P-PB

NITRA GVP manual valves offer a simple, convenient method for directional control and other pneumatic valve applications. All valves can be through panel mounted for a very clean looking operator interface. Valves with male NPT inlets can be threaded into MR series air manifolds to simplify supply connections.

Diagram "A"

2

3-port, 2-position

- Swivel output port
- · High flow
- Poppet design contributes to product life
- Made in USA









Part No. GVP-3C1M2P-PB



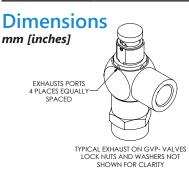
Part No. GVP-3C1F-PB

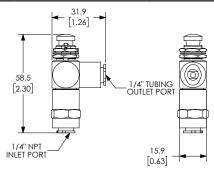
Note: For panel mounting

· Maximum thickness 0.25"

· Diameter Ø 0.484 thru

	Specifications Specification								
Models	<u>GVP-3C2P-PB</u> <u>GVP-3C1F-PB</u> <u>GVP-3C1F-PB</u>								
Price	\$38.50	\$37.00	\$33.50						
Weight (lbs)	0.1	0.1	0.1						
Valve Type		3-port (3-way) 2-position							
Acting	Pushbutton, no	rmally closed, spring return, throu	gh panel mount						
Diagram	A	A	A						
Port Size	90-degree ports, 1/4in tube inlet(s), 1/4in tube outlet(s), (1) vent hole exhaust(s)	90-degree ports, 1/8in male NPT inlet(s), 1/4in tube outlet(s), (1) vent hole exhaust(s)	90-degree ports, 1/8in female NPT inlet(s), 1/8in FNPT outlet(s), (1) vent hole exhaust(s)						
Flow (Cv)	0.29	0.29	0.29						
Fluid	Ai	r (to be filtered by 40µ filter eleme	nt)						
Min. / Max. Pressure		0 to 125 psi (0 to 8.62 bar)							
Temperature	-20°F to 160°F (-51°C to 71°C)								
Lubrication	Not Required								
Body	Aluminum/ Anodize, Brass/ Ele	ctroless Nickel, Stainless Steel, Ny	ylon, Acetal Copolymer, Buna-N						
Protection		IP65							





Part No. GVP-3C2P-PB

31.9 [1.26] 51.6 [2.03] 1/4" TUBING OUTLET PORT NET PORT

Part No. GVP-3C1M2P-PB

53.0 [2.09] 1/8" NPT FEMALE OUTLET PORT

Part No. GVP-3C1F-PB

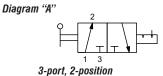
See our website www.AutomationDirect.com for complete Engineering drawings.

15.9



Manual Valves, Normally Closed, Detented, Toggle

NITRA GVP manual valves offer a simple, convenient method for directional control and other pneumatic valve applications. All valves can be through panel mounted for a very clean looking operator interface. Valves with male NPT inlets can be threaded into MR series air manifolds to simplify supply connections.





Part No. GVP-3C2P-TD

Swivel output port

- Poppet design contributes to product life
- Made in USA

· High flow









Part No. GVP-3C1M2P-TD

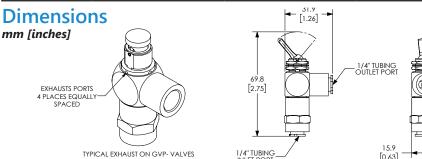


Part No. GVP-3C1F-TD

Note: For panel mounting

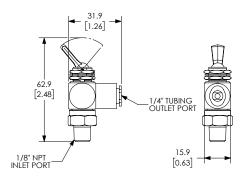
· Maximum thickness 0.25" · Diameter Ø 0.484 thru

Specifications Specification								
Models	<u>GVP-3C2P-TD</u> <u>GVP-3C1M2P-TD</u> <u>GVP-3C1F-TD</u>							
Price	\$40.00	\$41.00	\$39.00					
Weight (lbs)	0.1	0.1	0.1					
Valve Type		3-port (3-way) 2-position, NC						
Acting	Toggle style actua	ator, normally closed, detented, thr	ough panel mount					
Diagram	A	A	А					
Port Size	90-degree ports, 1/4in tube inlet(s), 1/4in tube outlet(s), (1) vent hole exhaust(s)	90-degree ports, 1/8in male NPT inlet(s), 1/4in tube outlet(s), (1) vent hole exhaust(s)	90-degree ports, 1/8in female NPT inlet(s), 1/8in FNPT outlet(s), (1) vent hole exhaust(s)					
Flow (Cv)	0.23	0.23	0.23					
Fluid	Ai	ir (to be filtered by 40µ filter eleme	nt)					
Min. / Max. Pressure		0 to 125 psi (0 to 8.62 bar)						
Temperature	-20°F to 160°F (-51°C to 71°C)							
Lubrication	Not Required							
Body	Aluminum/ Anodize, Brass/ Ele	ctroless Nickel, Stainless Steel, Ny	rlon, Acetal Copolymer, Buna-N					
Protection		IP65						

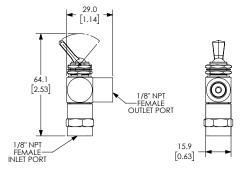


LOCK NUTS AND WASHERS NOT INLET PORT IN SHOWN FOR CLARITY

Part No. GVP-3C2P-TD



Part No. GVP-3C1M2P-TD



Part No. GVP-3C1F-TD



303 Stainless Steel Single Stem Style



Part No. GVS-3C0F-TD-SS



Part No. GVS-3C0F-PB-SS

NITRA GVS manual valves offer a simple, convenient method for directional control and other pneumatic valve applications. All valves can be through panel mounted for a very clean looking operator interface.

- Single stem design
- Stainless Steel construction
- High flow
- Made in USA







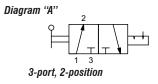


Diagram "B"

2

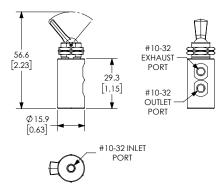
3-port, 2-position

	Specifications					
Models	GVS-3C0F-TD-SS	<u>GVS-3C0F-PB-SS</u>				
Price	\$44.00	\$42.50				
Weight (lbs)	0.1	0.1				
Valve Type	3-port (3-wa	y) 2-position				
Acting	Toggle style actuator, normally closed, detented, through panel mount Pushbutton, normally closed, spi return, through panel mount					
Diagram	A	В				
Port Size	90-degree ports, #10-32 female threaded inlet(s), #10-32 female threaded outlet(s), #10-32 female threaded exhaust(s)	90-degree ports, #10-32 female threaded inlet(s), #10-32 female threaded outlet(s), #10-32 female threaded exhaust(s)				
Flow (Cv)	0.27	0.27				
Fluid	Air (to be filtered by	y 40µ filter element)				
Min. / Max. Pressure	26" Hg to 125 psi	(-0.8 to 8.62 bar)				
Temperature	-20°F to 160°F (-51°C to 71°C)					
Lubrication	Not Re	equired				
Body	Brass/ Electroless Nickel, Aluminur	n/ Anodize, Stainless Steel, Buna-N				
Protection	IP	65				

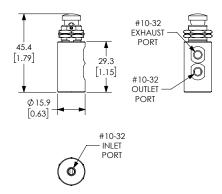
Dimensions mm [inches]

Note: For panel mounting

- · Maximum thickness 0.25"
- · Diameter Ø 0.484 thru



Part No. GVS-3C0F-TD-SS



Part No. GVS-3C0F-PB-SS



Pneumatic Manual Valves

Aluminum Single Stem Style



NITRA GVS manual valves offer a simple, convenient method for directional control and other pneumatic valve applications. All valves can bethrough panel mounted for a very clean looking operator interface.

Diagram "B" Diagram "A" 3-port, 2-position 3-port, 2-position

• Single stem design

- · High flow
- · Made in USA







Part No. GVS-3C1F-TD

Part No. GVS-3C1F-PB



Part No. GVS-3CS1F-TD



Part No. GVS-3CS1F-PB

	Opodifications							
Models	GVS-3C1F-TD	GVS-3C1F-PB	GVS-3CS1F-TD	GVS-3CS1F-PB				
Price	\$31.00	\$27.00	\$39.00	\$37.00				
Weight (lbs)	0.05	0.05	0.1	0.1				
Valve Type		3-port (3-wa	ay) 2-position					
Acting	Toggle style actuator, normally closed, detented, through panel mount	Pushbutton, normally closed, spring return, through panel mount	Toggle style actuator, normally closed, detented, through panel mount	Pushbutton, normally closed, spring return, through panel mount				
Diagram	A	В	A	В				
Port Size	1/8in female NPT inlet(s), 1/8in female NPT outlet(s), vent hole exhaust	1/8in female NPT inlet(s), 1/8in female NPT outlet(s), vent hole exhaust	Side ports, 1/8in female NPT inlet(s), 1/8in female NPT outlet(s), 1/8in female NPT exhaust(s)	Side ports, 1/8in female NPT inlet(s), 1/8in female NPT outlet(s), 1/8in female NPT exhaust(s)				
Flow (Cv)	0.42	0.42	0.42	0.42				
Fluid		Air (to be filtered b	by 40µ filter element)					
Min. / Max. Pressure	0 to 125 psi (0 to 8.62 bar)							
Temperature	-20°F to 160°F (-51°C to 71°C)							
Lubrication		Not R	equired					
Body	Aluminum/ Anodi	ze, Brass/ Electroless Nicke	I, Acetal, Stainless Steel, Nyl	on, Brass, Buna-N				
Protection		IF	P65					

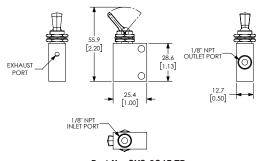
Specifications

Dimensions

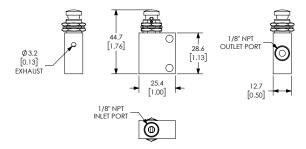
mm [inches]

Note: For panel mounting

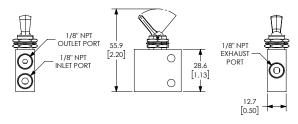
- · Maximum thickness 0.25"
- · Diameter Ø 0.484 thru



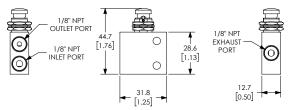
Part No. GVS-3C1F-TD



Part No. GVS-3C1F-PB



Part No. GVS-3CS1F-TD



Part No. GVS-3CS1F-PB

Dual 3-way, 3-position

Dual 2-way, 3-position

Diagram "B"

Diagram "D"



Pneumatic Manual Valves

Diagram "A"

Diagram "C"

Dual 3-way, 3-position

Dual 2-way, 3-position

Aluminum and Stainless Single Stem Style



Part No. GVS-331F-TD

NITRA GVS manual valves offer the unique feature of two spool valves in one body with a common inlet port. Available as either (2) 3-way NC or (2) 2-way NC with a momentary or detented toggle operator. All valves can be through-panel mounted for a very clean looking operator interface.

- Single stem design
- · High flow
- Made in USA







Part No. <u>GVS-331F-TM</u>



Part No. GVS-231F-TD



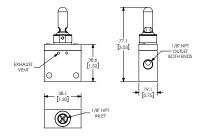
Part No. GVS-231F-TM

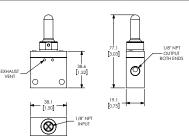
	Specifications Specification							
Models	<u>GVS-331F-TD</u>	<u>GVS-331F-TM</u>	GVS-231F-TD	<u>GVS-231F-TM</u>				
Price	\$70.00	\$70.00	\$70.00	\$74.00				
Weight (lbs)	0.3	0.3	0.3	0.3				
Valve Type	Dual 3-way, 3-posit	tion, center exhaust	Dual 2-way, 3-pos	sition, center closed				
Acting	Toggle style actuator, detented, through panel mount	Toggle style, spring return, through panel mount						
Diagram	Α	В	С	D				
Port Size	1/8in female NPT inlet(s), 1/8in female NPT outlet(s), 1 vent hole exhaust(s)	1/8in female NPT inlet(s), 1/8in female NPT outlet(s), 1 vent hole exhaust(s)	1/8in female NPT inlet(s), 1/8in female NPT outlet(s)	1/8in female NPT inlet(s), 1/8in female NPT outlet(s)				
Flow (Cv)	0.54	0.54	0.54	0.54				
Fluid		Air (to be filtered b	y 40µ filter element)					
Min. / Max. Pressure		0 to 125 psi	(0 to 8.62 bar)					
Temperature	-20°F to 160°F (-51°C to 71°C)							
Lubrication	Not Required							
Body	Aluminum/ Anodi	ze, Brass/ Electroless Nickel	I, Acetal, Stainless Steel, Ny	on, Brass, Buna-N				
Protection		IF	P65					

Dimensions mm [inches]

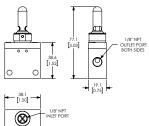
Note: For panel mounting

- Maximum thickness 0.25"
- · Diameter Ø 0.781 thru

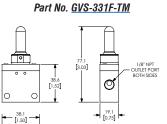




Part No. <u>GVS-331F-TD</u>



Part No. GVS-231F-TD



Part No. GVS-231F-TM

See our website $\underline{\textit{www.AutomationDirect.com}} \ \textit{for complete Engineering drawings}.$



Heavy Duty Toggle and Pushbutton Valves



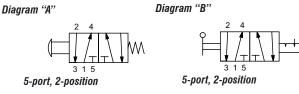
Part No. GVS-520F-PB

NITRA GVS manual valves offer convenient method simple, for directional control and other pneumatic valve applications. All valves can be thru-panel mounted for a very clean looking operator interface.

- Single stem design
- High flow
- Made in USA







Part No. GVS-520F-TD



Part No. GVS-521F-PB

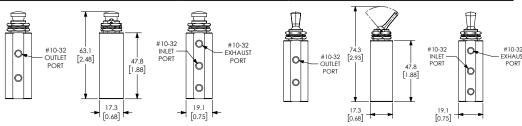


Part No. GVS-521F-TD

Dimensions
Dimensions
mm [inches]

Note: For panel mounting · Maximum thickness 0.25" · Diameter Ø 0,484 thru

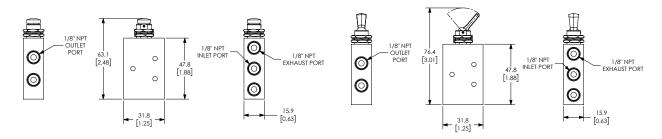
	Specifications Specification Specif							
Models	<u>GVS-520F-PB</u>	<u>GVS-521F-TD</u>						
Price	\$33.50	\$35.50	\$38.50	\$40.00				
Weight (lbs)	0.1	0.1	0.1	0.15				
Valve Type		5-port (4-w	ay) 2-position					
Acting	Pushbutton, spring return, through panel mount	Pushbutton, spring return, through panel mount	Toggle style actuator, detented, through panel mount					
Diagram	Α	В						
Port Size	#10-32 female threaded inlet(s), #10-32 female threaded outlet(s), #10-32 female threaded exhaust(s)	#10-32 female threaded inlet(s), #10-32 female threaded outlet(s), #10-32 female threaded exhaust(s)	1/8in FNPT inlet(s), 1/8in FNPT outlet(s), 1/8in FNPT exhaust(s)	1/8in FNPT inlet(s), 1/8in FNPT outlet(s), 1/8in FNPT exhaust(s)				
Flow (Cv)	0.23	0.23	0.37	0.37				
Fluid		Air (to be filtered b	by 40µ filter element)					
Min. / Max. Pressure		0 to 125 psi (0 to 8.62 bar)						
Temperature	-20°F to 160°F (-51°C to 71°C)							
Lubrication		Not R	Required					
Body	Aluminum/ Anodi	ze, Brass/ Electroless Nicke	l, Acetal, Stainless Steel, Nyl	on, Brass, Buna-N				
Protection		IF	P65					



Part No. GVS-520F-PB

Part No. GVS-521F-PB

Part No. GVS-520F-TD



Part No. GVS-521F-TD



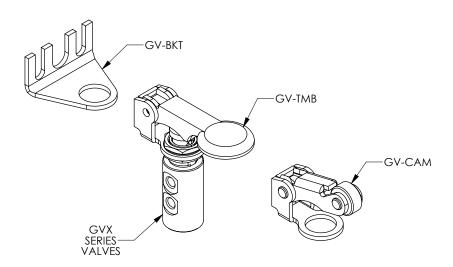
RA GVP and GVS Series Pneumatic Valve Accessories





Nitra Pneu	Nitra Pneumatic GVP and GVS Series Pneumatic Valve Accessories							
Item	Part No.	Description	Price	Weight (lbs)				
m	<u>GV-BKT</u>	NITRA 90 degree mounting bracket, plated steel. For use with all GVP and GVS valves.	\$3.50	0.5				
	<u>GV-CAM</u>	NITRA roller cam actuator, plated steel, for use with all GVP and GVS valves. The roller is manufactured from durable acetal plastic. All cams feature a unique acetal pad which minimizes side load and virtually eliminates wear.	\$15.50	0.5				
	<u>GV-TMB</u>	NITRA thumb actuator, plated steel, for use with all GVP and GVS valves.	\$14.50	0.5				

Assembly Example





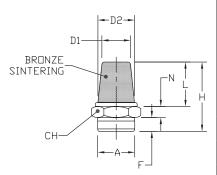
Exhaust Silencers

NITRA™ exhaust silencers are available in three styles and nine popular NPT and BSPT sizes. Add these to the exhaust ports of NITRA directional control solenoid valves to reduce noise.

Features

- Inch and metric sizes available
- Bronze cone and flat styles
- Plastic cylindrical
- Maximum pressure = 150 psi (10 bar)

SBC Silencers





Flow Characteristics

Bronze Cone Silencers

A: SBC-M5

B: SBC-18N; SBC-18R

C: SBC-14N; SBC-14R

D: SBC-38N; SBC-38R

E: SBC-12N; SBC-12R





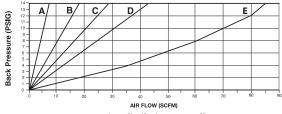


SBC Series

SBF Series

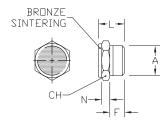
SPL Series

	NITRA™ Bronze Cone Silencers										
	Inch Sizes - dimensions in inches [mm]										
Part No.	Price	A	СН	D1	D2	F	Н	L	N	Package Weight (lb)	Qty. per pack
<u>SBC-18N</u>	\$3.50	MNPT 1/8	0.47 [12.0]	0.32 [8.0]	0.28 [7.0]	0.24 [6.0]	0.94 [24.0]	0.55 [14.0]	0.16 [4.0]	0.01	
<u>SBC-14N</u>	\$4.75	MNPT 1/4	0.63 [16.0]	0.47 [12.0]	0.40 [10.0]	0.32 [8.0]	1.18 [30.0]	0.71 [18.0]	0.16 [4.0]	0.01	2
<u>SBC-38N</u>	\$6.75	MNPT 3/8	0.71 [18.0]	0.55 [14.0]	0.39 [11.0]	0.35 [9.0]	1.38 [35.0]	0.83 [21.0]	0.197 [5.0]	0.05	
<u>SBC-12N</u>	\$12.50	MNPT 1/2	0.94 [24.0]	0.75 [19.0]	0.59 [15.0]	0.40 [10.0]	1.73 [44.0]	1.10 [28.0]	0.24 [6.0]	0.15	
			Metri	c Sizes	- dime	nsions	in incl	hes [mi	m]		
SBC-M5	\$2.50	M5	0.31 [8.0]	0.20 [5.0]	0.16 [4.0]	0.20 [5.0]	0.79 [20.0]	0.47 [12.0]	0.12 [3.0]	0.01	
<u>SBC-18R</u>	\$3.50	R 1/8	0.47 [12.0]	0.32 [8.0]	0.28 [7.0]	0.24 [6.0]	0.94 [24.0]	0.55 [14.0]	0.16 [4.0]	0.01	
<u>SBC-14R</u>	\$4.00	R 1/4	0.63 [16.0]	0.47 [12.0]	0.40 [10.0]	0.32 [8.0]	1.18 [30.0]	0.71 [18.0]	0.16 [4.0]	0.01	2
<u>SBC-38R</u>	\$6.00	R 3/8	0.71 [18.0]	0.55 [14.0]	0.39 [11.0]	0.35 [9.0]	1.38 [35.0]	0.83 [21.0]	0.197 [5.0]	0.05	
SBC-12R	\$10.50	R 1/2	0.94 [24.0]	0.75 [19.0]	0.59 [15.0]	0.40 [10.0]	1.73 [44.0]	1.10 [28.0]	0.24 [6.0]	0.15	



Noise Elimilation = > 20db Filtered Element = 40 micron

SBF Silencers



NITRA™ Bronze Flat Silencers													
Inch Sizes - dimensions in inches [mm]													
Part No.	Price	A	СН	F	L	N	Package Weight (lb)	Qty. per pack					
<u>SBF-18N</u>	\$3.50	MNPT 1/8	0.47 [12.0]	0.24 [6.0]	0.47 [12.0]	0.16 [4.0]	0.01						
<u>SBF-14N</u>	\$4.25	MNPT 1/4	0.67 [17.0]	0.32 [8.0]	0.59 [15.0]	0.16 [4.0]	0.01	2					
<u>SBF-38N</u>	\$7.25	MNPT 3/8	0.75 [19.0]	0.35 [9.0]	0.67 [17.0]	0.20 [5.0]	0.05	2					
<u>SBF-12N</u>	\$11.00	MNPT 1/2	0.94 [24.0]	0.40 [10.0]	0.71 [18.0]	0.24 [6.0]	0.15						
Metric Sizes - dimensions in inches [mm]													
SBF-M5	\$2.50	M5	0.31 [8.0]	0.20 [5.0]	0.35 [9.0]	0.12 [3.0]	0.01						
<u>SBF-18R</u>	\$3.50	R 1/8	0.47 [12.0]	0.24 [6.0]	0.47 [12.0]	0.16 [4.0]	0.01						
<u>SBF-14R</u>	\$4.00	R 1/4	0.67 [17.0]	0.32 [8.0]	0.59 [15.0]	0.16 [4.0]	0.01	2					
<u>SBF-38R</u>	\$6.25	R 3/8	0.75 [19.0]	0.35 [9.0]	0.67 [17.0]	0.20 [5.0]	0.05						
<u>SBF-12R</u>	\$11.00	R 1/2	0.94 [24.0]	0.40 [10.0]	0.71 [18.0]	0.24 [6.0]	0.15						



Exhaust Silencers

Flow Characteristics

Bronze Flat Silencers

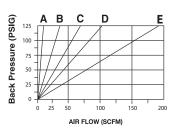
A: SBF-M5

B: SBF-18N; SBF-18R

C: SBF-14N; SBF-14R

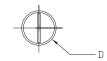
D: SBF-28N; SBF-38R

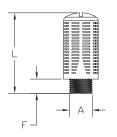
E: SBF-12N; SBF-12R



Noise Elimilation = > 30db Filtered Element = 40 micron

SPL Silencers





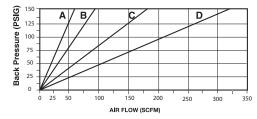
Note: SPL series plastic exhaust silencers have a maximum pressure of 80 PSI (5.5 bar).

NITRA™ Plastic Exhaust Silencers												
Inch Sizes - dimensions in inches [mm]												
Part No.	Price	Α	D	L	F	Package Weight (lbs)	Qty. per pack					
<u>SPL-18N</u>	\$2.75	MNPT 1/8	0.55 [13.8]	1.28 [32.4]	0.33 [8.3]	0.02	2					
<u>SPL-14N</u>	\$3.00	MNPT 1/4	0.68 [17.3]	1.68 [42.5]	0.39 [9.9]	0.03						
<u>SPL-38N</u>	\$3.50	MNPT 3/8	0.87 [22.0]	2.10 [53.4]	0.40 [10.0]	0.06						
<u>SPL-12N</u>	\$3.50	MNPT 1/2	1.00 [25.4]	2.66 [67.6]	0.44 [11.1]	0.08						
Metric Sizes - dimensions in inches [mm]												
<u>SPL-18R</u>	\$2.75	R 1/8	0.60 [15.2]	1.33 [33.7]	0.24 [6.1]	0.02						
<u>SPL-14R</u>	\$3.00	R 1/4	0.60 [18.8]	1.60 [40.6]	0.31 [7.7]	0.03	2					
<u>SPL-38R</u>	\$3.50	R 3/8	0.94 [24.0]	2.20 [55.9]	0.39 [9.9]	0.06	۷.					
<u>SPL-12R</u>	\$3.50	R 1/2	0.94 [24.0]	2.20 [55.9]	0.39 [9.9]	0.08						

Flow Characteristics

Plastic Silencers

A: SPL-18N; SPL-18R B: SPL-14N; SPL-14R C: SPL-38N; SPL-38R D: SPL-12N; SPL-12R



Noise Elimilation = > 30db Filtered Element = 40 micron