ROSS®

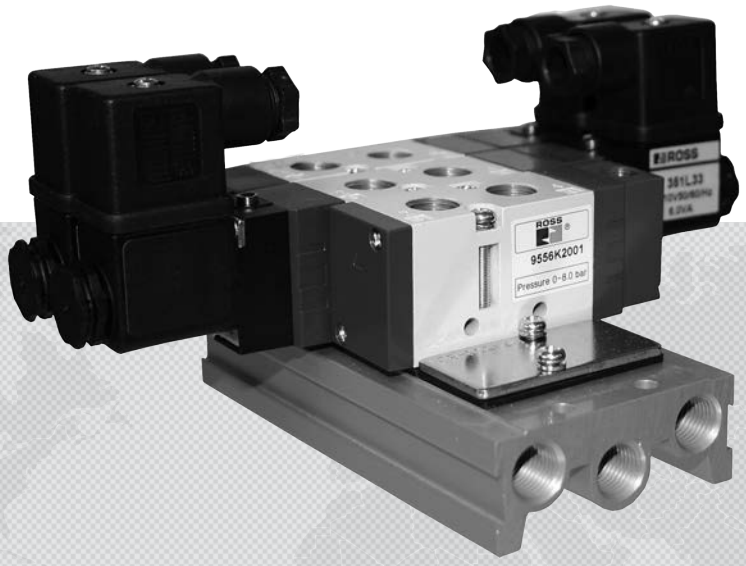
Flu-Tech
Fluid Control Specialists

บริษัท ฟลูเทค จำกัด
Flu-tech co.,ltd
Authorized Distributor

PRODUCT INFORMATION

DIRECTIONAL CONTROL VALVES

95 SERIES



ROSS CONTROLS

IN-LINE DIRECTIONAL VALVES AND MANIFOLDS– KEY FEATURES

- 24 volts DC and 110 volts AC options for solenoid control
- Available with 1/8, 1/4, 3/8, and 1/2 port options
- Flexible mounting - in-line or manifold
- Resilient seal spool construction
- Compact size
- High flow capacity
- Lube or non-lube service
- Manual overrides
- Pressure ports located in valve body

Solenoid Controlled

Pressure Controlled

Manifold Options

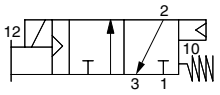
VALVE TYPE	AVAILABLE PORT SIZES				MAX. FLOW Cv	MOUNTING		Page
	1/8	1/4	3/8	1/2		IN-LINE	MANIFOLD	
SOLENOID PILOT CONTROLLED								
3/2 NC/NO Spring return	■	■	■		2.6	■	■	D4.3
5/2 Spring Return	■	■	■	■	4.5	■	■	D4.4
5/2 Detented	■	■	■	■	4.5	■	■	D4.5
5/3 Spring Center	■	■	■	■	2.2	■	■	D4.6
PRESSURE CONTROLLED								
3/2 NC/NO Spring return	■	■	■		2.6	■	■	D4.7
5/2 Spring Return	■	■	■	■	4.5	■	■	D4.8
5/2 Detented	■	■	■	■	4.5	■	■	D4.9
5/3 Spring Center	■	■	■	■	3.4	■	■	D4.10
MANIFOLD BLOCKS, OPTIONS, & ACCESSORIES								
Manifold Blocks (3/2 Valves)	■	■						D4.11
Manifold Blocks (5/2 & 5/3 Valves)	■	■	■	■				D4.12
Manifold Blanking Plates	■	■	■	■				D4.11 - D4.12
Pilot Coils & Connectors								D4.11 - D4.12
Silencers								D4.11 - D4.12

3-Way 2-Position Valves, Single Solenoid, Spring Return

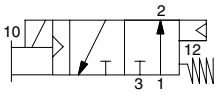
Port Size		Normally Closed Valve Model Number#		Normally Open Valve Model Number#		Avg. C_v	Weight lb (kg)
1, 2	3	NPT Threads	G Threads	NPT Threads	G Threads		
1/8	1/8	9573K1001W	D9573K1001W	9574K1001W	D9573K1001W	0.9	0.38 (0.17)
1/4	1/4	9573K2001W	D9573K2001W	9574K2001W	D9573K2001W	1.3	0.70 (0.32)
3/8	3/8	9573K3001W	D9573K3001W	9574K3001W	D9573K3001W	2.6	1.15 (0.52)

 # Voltage: W=24 VDC; Z=110-120 VAC, 50/60 Hz, e.g., 9573K1001Z.

Normally Closed

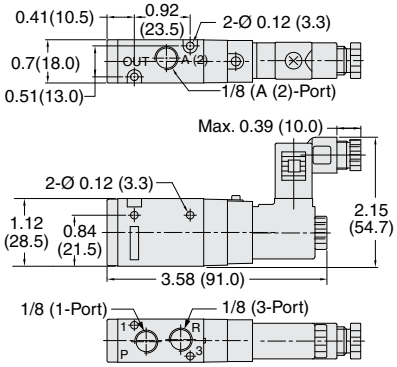


Normally Open

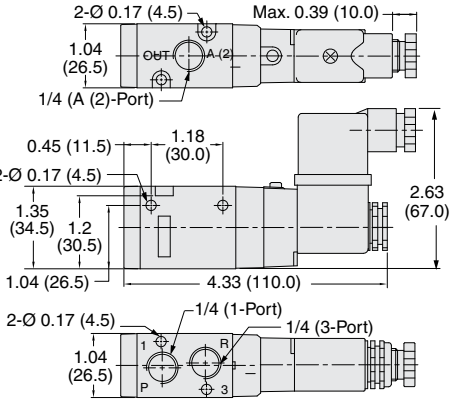


Valve Dimensions – inches (mm)

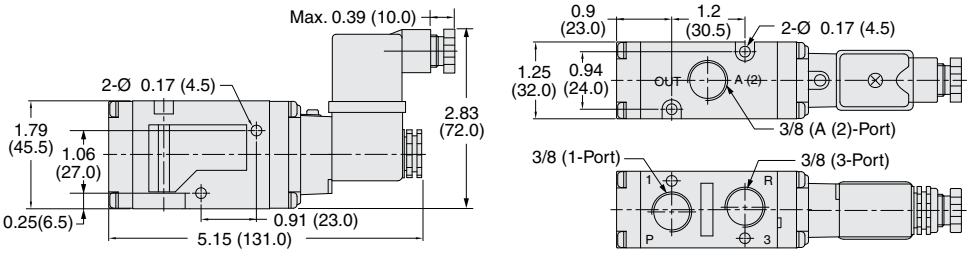
Port Size 1/8



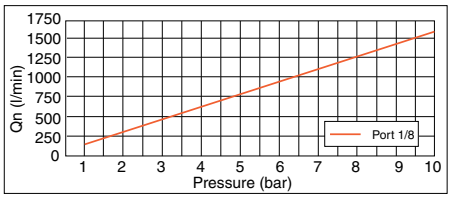
Port Size 1/4

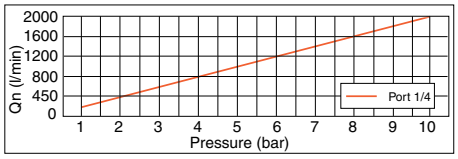


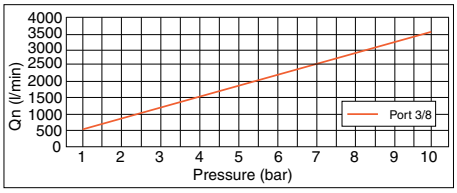
Port Size 3/8



FLOW CHARTS







Solenoid and Connector included.
Manifolds and Accessories ordered separately, refer to page D4.11. For other options, consult ROSS.

STANDARD SPECIFICATIONS (for valves on this page):

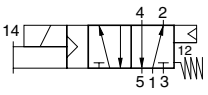
Construction Design	Spool
Mounting Type	In-line or manifold mounted
Solenoids	AC or DC power; Rated for continuous duty
Voltage	24 volts DC: 110 volts AC, 50/60 Hz
Power Consumption (each solenoid)	2.5 watts on DC; 3.6 VA holding on 50/60 Hz
Enclosure Rating	IP 65, IEC 60529
Electrical Connection	**Port Size 1/8:** MICRO-MINI EN 175301-803 connector **Port Size 1/4 & 3/8:** EN 175301-803 Industrial Form B connector

Temperature	**Ambient/Media:** 41° to 140°F (5° to 60°C)
Flow Media	Filtered air
Pilot Supply	Internal
Operating Pressure	22.5 to 150 psig (1.5 to 10 bar)
Construction Material	**Valve Body:** Bar Stock Aluminum **Spool:** Stainless Steel **Seals:** Buna-N
Manual Override	Pushbutton, non-locking

Valves available with installed prewired connectors, please consult ROSS.

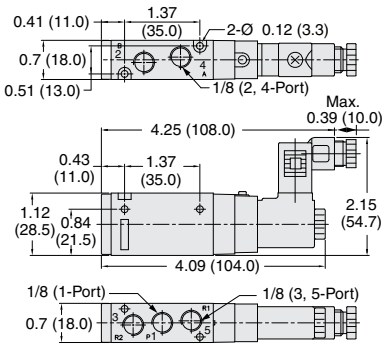
5-Way 2-Position Valves, Single Solenoid, Spring Return					
Port Size		Valve Model Number#		Avg. C_v	Weight lb (kg)
1, 2, 4	3, 5	NPT Threads	G Threads		
1/8	1/8	9576K1001W	D9576K1001W	0.9	0.43 (0.20)
1/4	1/8	9576K2001W	D9576K2001W	1.3	0.80 (0.36)
3/8	3/8	9576K3001W	D9576K3001W	2.6	1.29 (0.59)
1/2	1/2	9576K4001W	D9576K4001W	4.5	1.66 (0.75)

Voltage: W=24 VDC; Z=110-120 VAC, 50/60 Hz, e.g., 9576K1001Z.

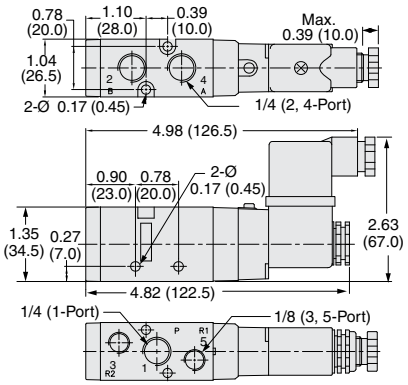


Valve Dimensions – inches (mm)

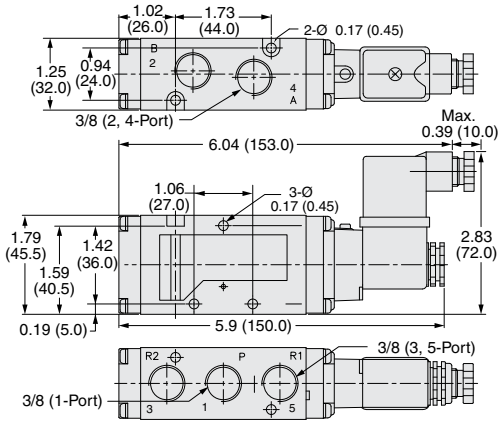
Port Size 1/8



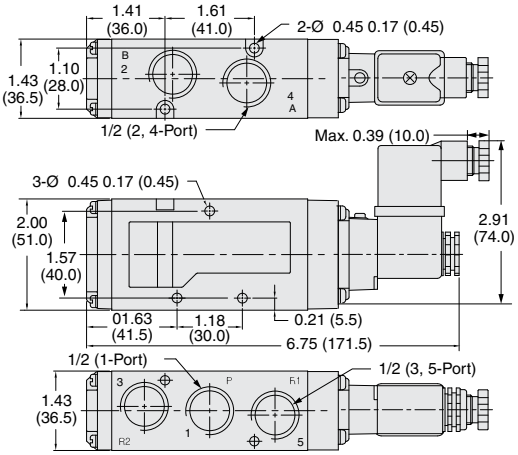
Port Size 1/4



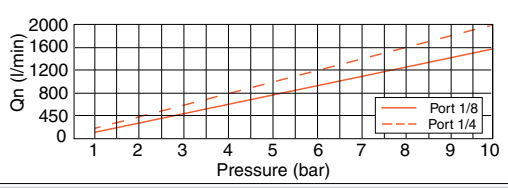
Port Size 3/8

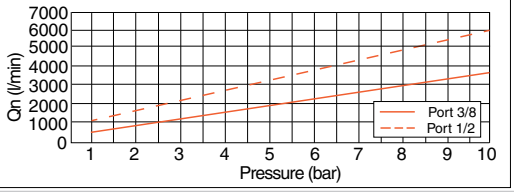


Port Size 1/2



FLOW CHARTS





Solenoid and Connector included.
Manifolds and Accessories ordered separately, refer to page D4.12. For other options, consult ROSS.

Valves available with installed prewired connectors, please consult ROSS.

STANDARD SPECIFICATIONS (for valves on this page):

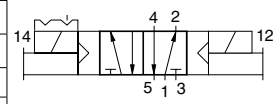
Construction Design	Spool
Mounting Type	In-line or manifold mounted
Solenoids	AC or DC power; Rated for continuous duty
Voltage	24 volts DC: 110 volts AC, 50/60 Hz
Power Consumption (each solenoid)	2.5 watts on DC; 3.6 VA holding on 50/60 Hz
Enclosure Rating	IP 65, IEC 60529
Electrical Connection	**Port Size 1/8:** MICRO-MINI EN 175301-803 connector **Port Size 1/4 & 3/8:** EN 175301-803 Industrial Form B connector

Temperature	**Ambient/Media:** 41° to 140°F (5° to 60°C)
Flow Media	Filtered air
Pilot Supply	Internal
Operating Pressure	22.5 to 150 psig (1.5 to 10 bar)
Construction Material	**Valve Body:** Bar Stock Aluminum **Spool:** Stainless Steel **Seals:** Buna-N
Manual Override	Pushbutton, non-locking

IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

5-Way 2-Position Valves, Double Solenoid, Detented

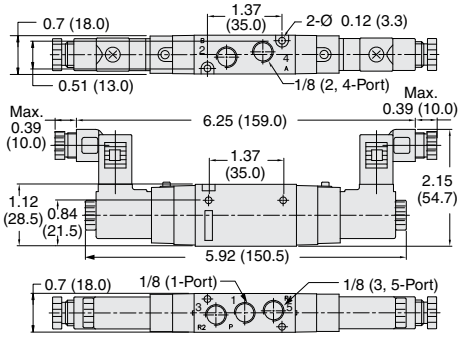
Port Size		Valve Model Number#		Avg. C_v	Weight lb (kg)
1, 2, 4	3, 5	NPT Threads	G Threads		
1/8	1/8	9576K1002W	D9576K1002W	0.9	0.62 (0.28)
1/4	1/8	9576K2002W	D9576K2002W	1.3	1.04 (0.47)
3/8	3/8	9576K3002W	D9576K3002W	2.6	1.58 (0.72)
1/2	1/2	9576K4002W	D9576K4002W	4.5	2.04 (0.93)



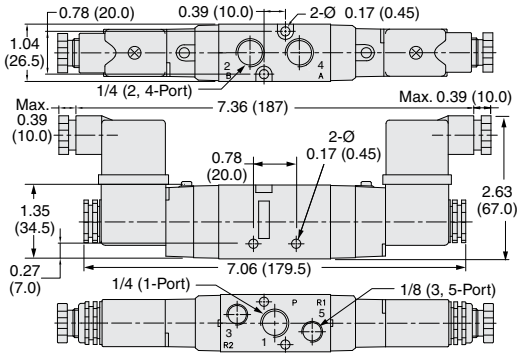
 # Voltage: W=24 VDC; Z=110-120 VAC, 50/60 Hz, e.g., 9576K1002W.

Valve Dimensions – inches (mm)

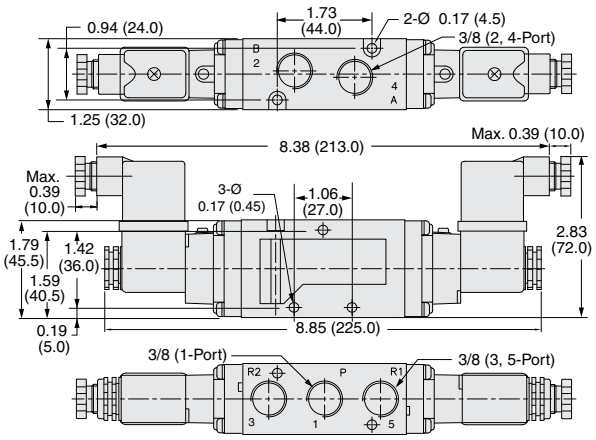
Port Size 1/8



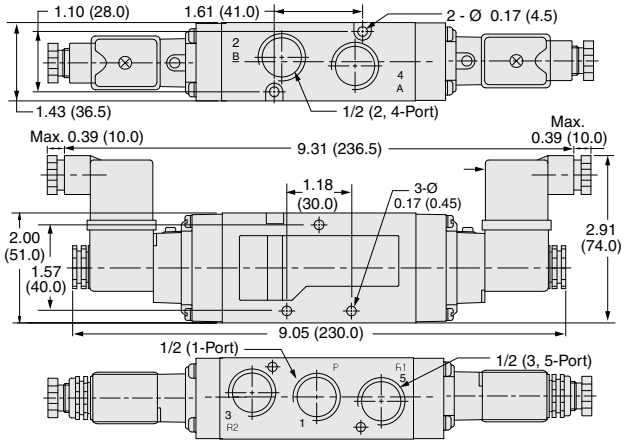
Port Size 1/4



Port Size 3/8



Port Size 1/2



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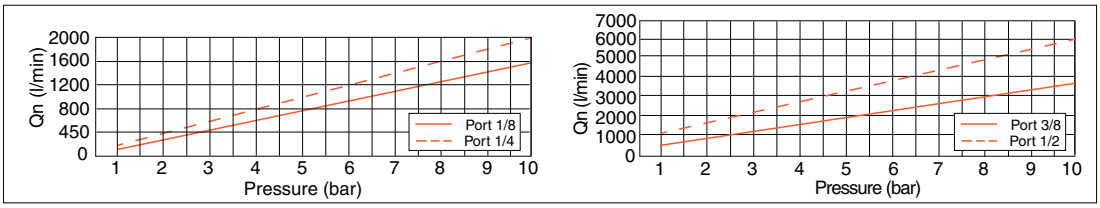


Solenoid and Connector included.
Manifolds and Accessories ordered separately, refer to page D4.12. For other options, consult ROSS.

Valves available with installed prewired connectors, please consult ROSS.

STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Spool
Mounting Type	In-line or manifold mounted
Solenoids	AC or DC power; Rated for continuous duty
Voltage	24 volts DC: 110 volts AC, 50/60 Hz
Power Consumption (each solenoid)	2.5 watts on DC; 3.6 VA holding on 50/60 Hz
Enclosure Rating	IP 65, IEC 60529
Electrical Connection	**Port Size 1/8:** MICRO-MINI EN 175301-803 connector **Port Size 1/4 & 3/8:** EN 175301-803 Industrial Form B connector

Temperature	**Ambient/Media:** 41° to 140°F (5° to 60°C)
Flow Media	Filtered air
Pilot Supply	Internal
Operating Pressure	22.5 to 150 psig (1.5 to 10 bar)
Construction Material	**Valve Body:** Bar Stock Aluminum **Spool:** Stainless Steel **Seals:** Buna-N
Manual Override	Pushbutton, non-locking

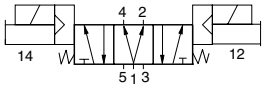
IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

5-Way 3-Position Valves, Double Solenoid, Spring Center

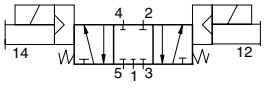
Port Size		Power Center		Closed Center		Open Center		Avg. C_v	Weight lb (kg)
		Valve Model Number#		Valve Model Number#		Valve Model Number#			
1, 2, 4	3, 5	NPT Threads	G Threads	NPT Threads	G Threads	NPT Threads	G Threads		
1/8	1/8	9577K1019W	D9577K1019W	9577K1010W	D9577K1010W	9577K1007W	D9577K1007W	0.7	0.70 (0.32)
1/4	1/8	9577K2019W	D9577K2019W	9577K2010W	D9577K2010W	9577K2007W	D9577K2007W	1.1	1.26 (0.57)
3/8	3/8	9577K3019W	D9577K3019W	9577K3010W	D9577K3010W	9577K3007W	D9577K3007W	2.2	1.71 (0.78)
1/2	1/2	9577K4019W	D9577K4019W	9577K4010W	D9577K4010W	9577K4007W	D9577K4007W	4.5	2.41 (1.09)

 # Voltage: W=24 VDC; Z=110-120 VAC, 50/60 Hz, e.g., 9577K1019Z.

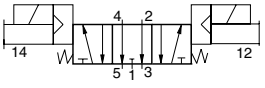
Power Center



Closed Center

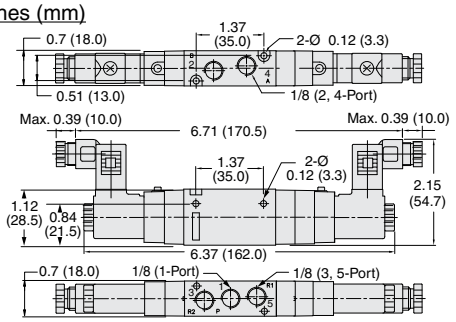


Open Center

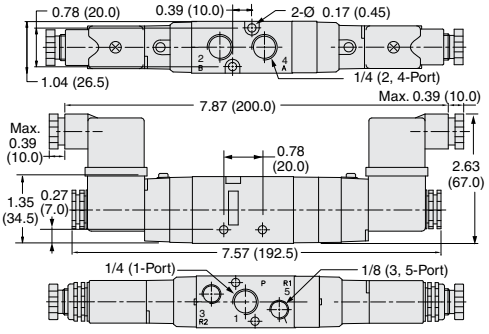


Valve Dimensions – inches (mm)

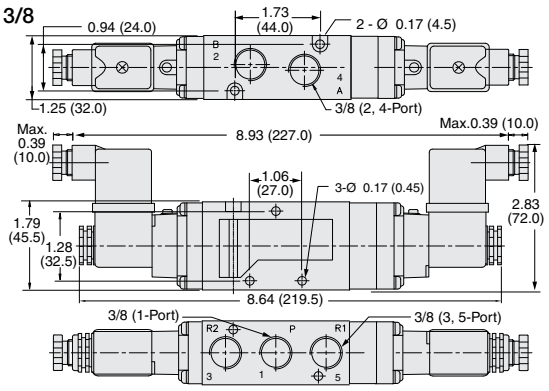
Port Size 1/8



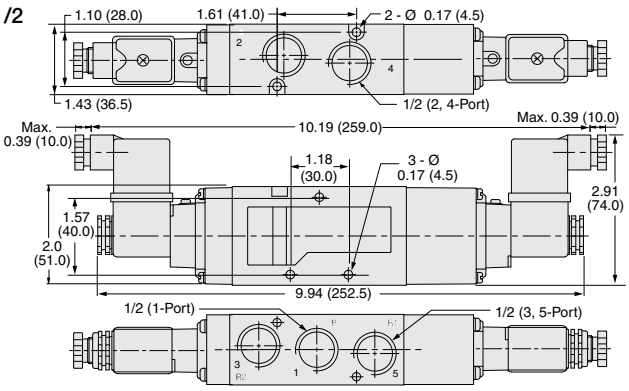
Port Size 1/4



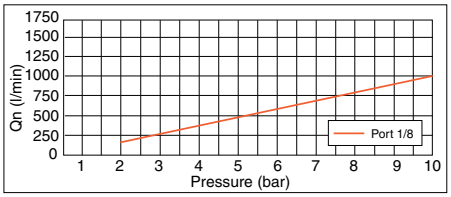
Port Size 3/8

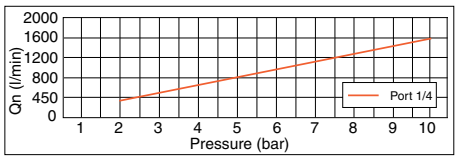


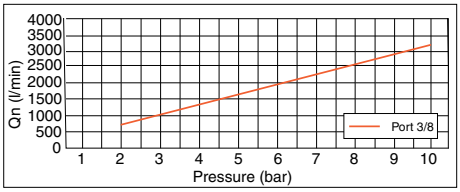
Port Size 1/2



FLOW CHARTS







Solenoid and Connector included.
Manifolds and Accessories ordered separately, refer to page D4.12. For other options, consult ROSS.

Valves available with installed prewired connectors, please consult ROSS.

STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Spool
Mounting Type	In-line or manifold mounted
Solenoids	AC or DC power; Rated for continuous duty
Voltage	24 volts DC: 110 volts AC, 50/60 Hz
Power Consumption (each solenoid)	2.5 watts on DC; 3.6 VA holding on 50/60 Hz
Enclosure Rating	IP 65, IEC 60529
Electrical Connection	**Port Size 1/8:** MICRO-MINI EN 175301-803 connector **Port Size 1/4 & 3/8:** EN 175301-803 Industrial Form B connector

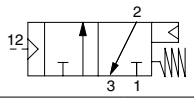
Temperature	**Ambient/Media:** 41° to 140°F (5° to 60°C)
Flow Media	Filtered air
Pilot Supply	Internal
Operating Pressure	22.5 to 150 psig (1.5 to 10 bar)
Construction Material	**Valve Body:** Bar Stock Aluminum **Spool:** Stainless Steel **Seals:** Buna-N
Manual Override	Pushbutton, non-locking

IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

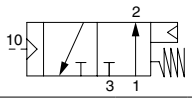
3-Way 2-Position Valves, Single Pilot, Spring Return

Port Size		Signal Port Thread	Normally Closed Valve Model Number		Normally Open Valve Model Number		Avg. C_v	Weight lb (kg)
1, 2	3		NPT Threads	G Threads	NPT Threads	G Threads		
1/8	1/8	10-32 UNF	9553K1000	D9553K1000	9554K1000	D9553K1000	0.9	0.26 (0.12)
1/4	1/4	1/8	9553K2000	D9553K2000	9554K2000	D9553K2000	1.3	0.51 (0.23)
3/8	3/8	1/8	9553K3000	D9553K3000	9554K3000	D9553K3000	2.6	0.86 (0.39)

Normally Closed

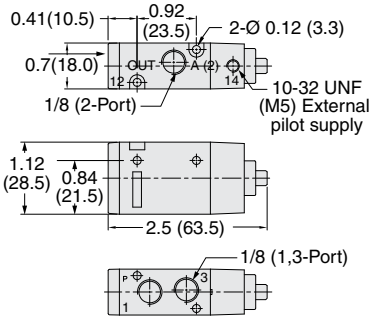


Normally Open

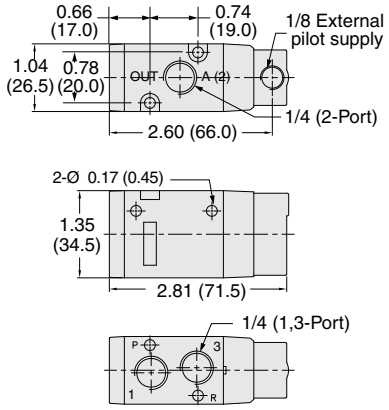


Valve Dimensions – inches (mm)

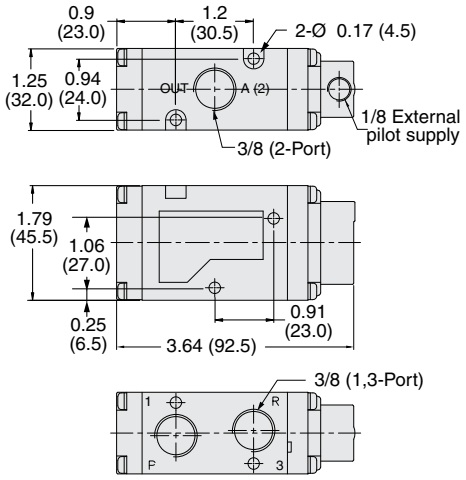
Port Size 1/8



Port Size 1/4



Port Size 3/8



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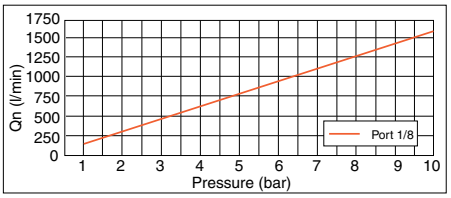
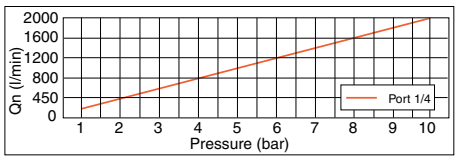
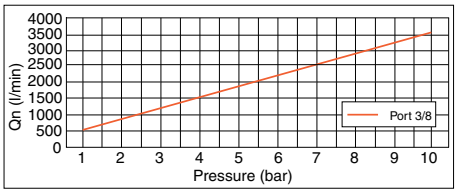






Manifolds and Accessories ordered separately, refer to page D4.11. For other options, consult ROSS.

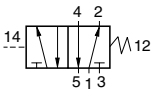
STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Spool
Mounting Type	In-line or manifold mounted
Temperature	**Ambient/Media:** 41° to 140°F (5° to 60°C)
Flow Media	Filtered air
Pilot Supply	External

Operating Pressure	22.5 to 150 psig (1.5 to 10 bar)
	Pilot supply pressure must be equal to or greater than inlet pressure.
Construction Material	**Valve Body:** Bar Stock Aluminum **Spool:** Stainless Steel **Seals:** Buna-N
Manual Override	Pushbutton, non-locking

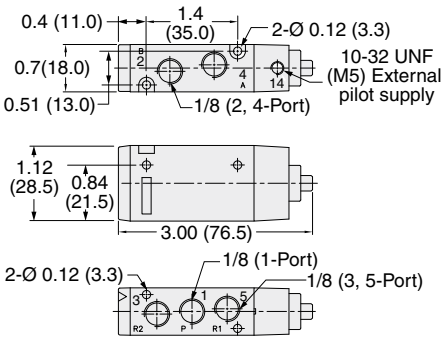
IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

5-Way 2-Position Valves, Single Pilot, Spring Return						
Port Size		Signal Port Thread	Valve Model Number		Avg. C_v	Weight lb (kg)
1, 2, 4	3, 5		NPT Threads	G Threads		
1/8	1/8	1/8	9556K1001	D9556K1001	0.9	0.26 (0.12)
1/4	1/8	1/8	9556K2001	D9556K2001	1.3	0.48 (0.22)
3/8	3/8	1/8	9556K3001	D9556K3001	2.6	1.02 (0.46)
1/2	1/2	1/8	9556K4001	D9556K4001	4.5	1.39 (0.63)

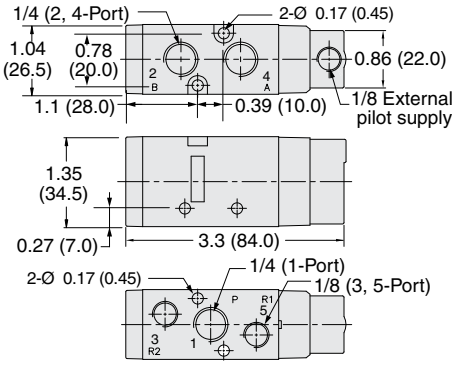


Valve Dimensions – inches (mm)

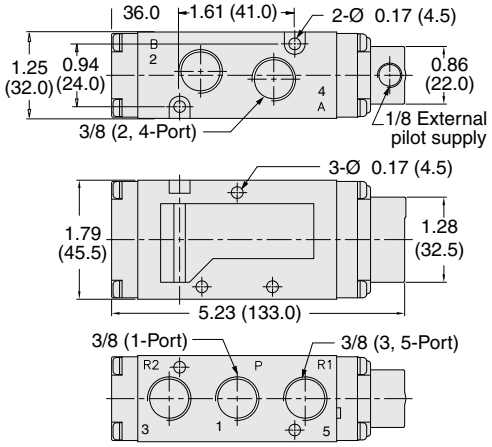
Port Size 1/8



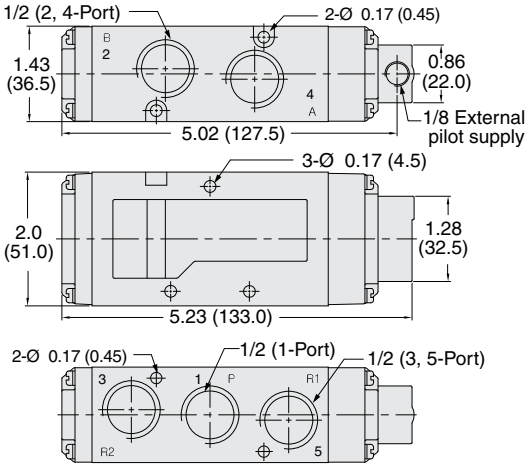
Port Size 1/4



Port Size 3/8



Port Size 1/2



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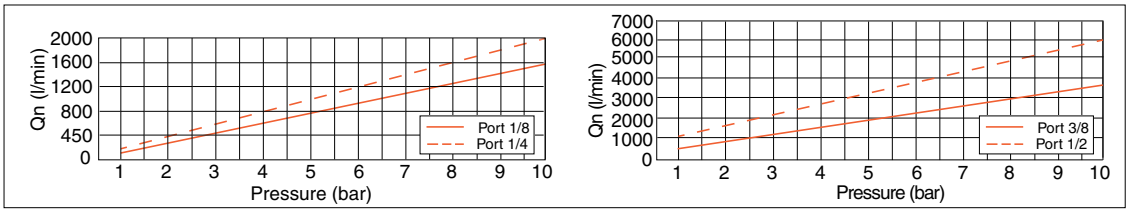


Manifolds and Accessories ordered separately, refer to page D4.12. For other options, consult ROSS.

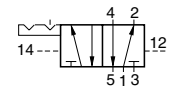
STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Spool
Mounting Type	In-line or manifold mounted
Temperature	**Ambient/Media:** 41° to 140°F (5° to 60°C)
Flow Media	Filtered air
Pilot Supply	External

Operating Pressure	22.5 to 150 psig (1.5 to 10 bar) *Pilot supply pressure must be equal to or greater than inlet pressure.*
Construction Material	**Valve Body:** Bar Stock Aluminum **Spool:** Stainless Steel **Seals:** Buna-N
Manual Override	Pushbutton, non-locking

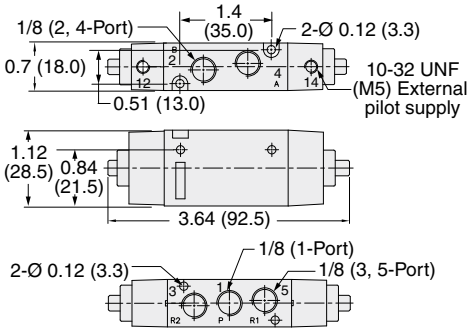
IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

5-Way 2-Position Valves, Double Pilot, Detented						
Port Size		Signal Port Thread	Valve Model Number		Avg. C_v	Weight lb (kg)
1, 2, 4	3, 5		NPT Threads	G Threads		
1/8	1/8	1/8	9556K1002	D9556K1002	0.9	0.32 (0.15)
1/4	1/8	1/8	9556K2002	D9556K2002	1.3	0.59 (0.27)
3/8	3/8	1/8	9556K3002	D9556K3002	2.6	1.07 (0.49)
1/2	1/2	1/8	9556K4002	D9556K4002	4.5	1.55 (0.70)

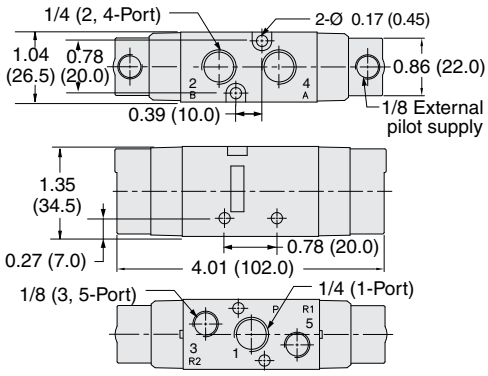


Valve Dimensions – inches (mm)

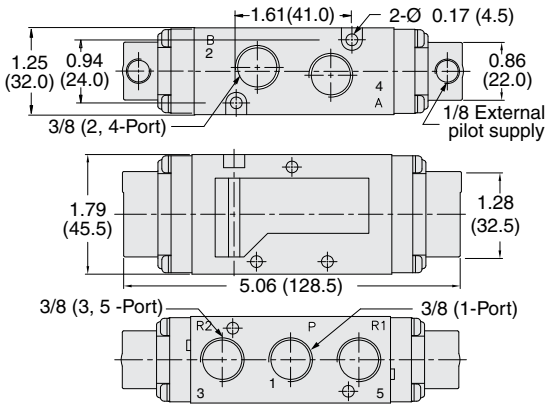
Port Size 1/8



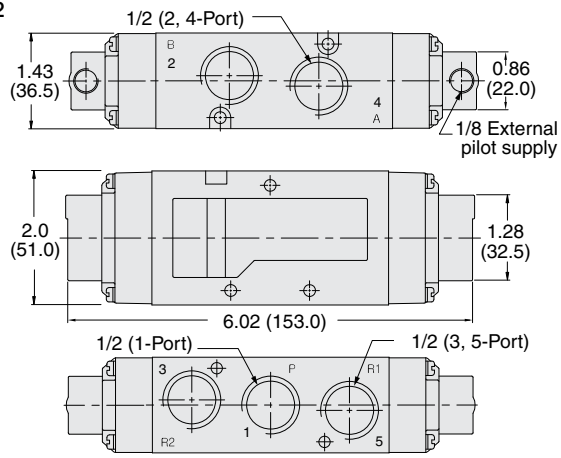
Port Size 1/4



Port Size 3/8



Port Size 1/2



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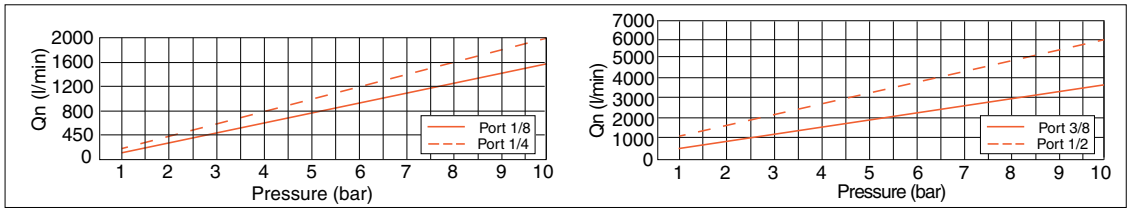


Manifolds and Accessories ordered separately, refer to page B4.12. For other options, consult ROSS.

STANDARD SPECIFICATIONS (for valves on this page):

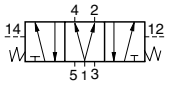
Construction Design	Spool
Mounting Type	In-line or manifold mounted
Temperature	**Ambient/Media:** 41° to 140°F (5° to 60°C)
Flow Media	Filtered air
Pilot Supply	External

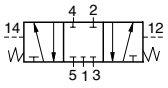
Operating Pressure	22.5 to 150 psig (1.5 to 10 bar) *Pilot supply pressure must be equal to or greater than inlet pressure.*
Construction Material	**Valve Body:** Bar Stock Aluminum **Spool:** Stainless Steel **Seals:** Buna-N
Manual Override	Pushbutton, non-locking

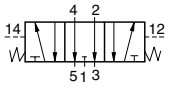
IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

5-Way 3-Position Valves, Double Pilot, Spring Center

Port Size		Signal Port Thread	Power Center		Closed Center		Open Center		Avg. C_v	Weight lb (kg)
			Valve Model Number		Valve Model Number		Valve Model Number			
1, 2, 4	3, 5		NPT Threads	G Threads	NPT Threads	G Threads	NPT Threads	G Threads		
1/8	1/8	10-32 UNF	9557K1019	D9557K1019	9557K1010	D9557K1010	9557K1007	D9557K1007	0.7	0.38 (0.17)
1/4	1/8	1/8	9557K2019	D9557K2019	9577K2010	D9577K2010	9557K2007	D9557K2007	1.1	0.51 (0.23)
3/8	3/8	1/8	9557K3019	D9557K3019	9557K3010	D9557K3010	9557K3007	D9557K3007	2.2	1.39 (0.63)
1/2	1/2	1/8	9557K4019	D9557K4019	9557K4010	D9557K4010	9557K4007	D9557K4007	3.4	1.98 (0.90)

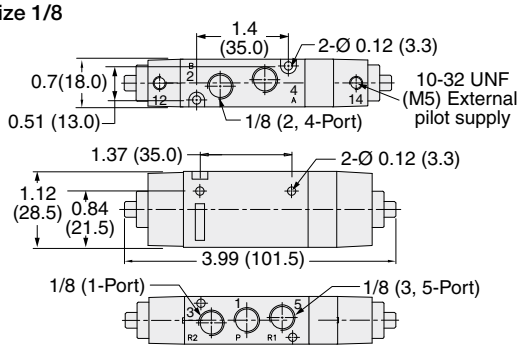
Power Center 

Closed Center 

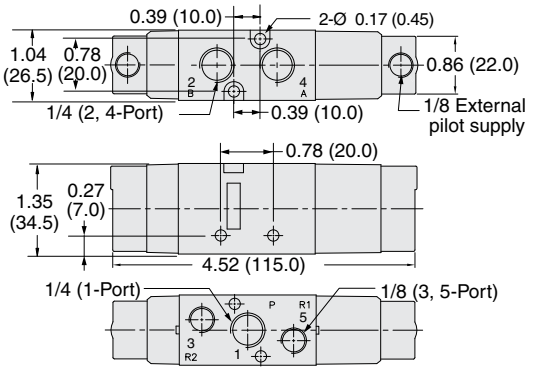
Open Center 

Valve Dimensions – inches (mm)

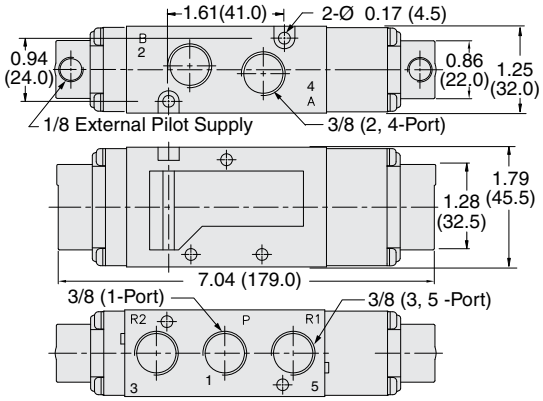
Port Size 1/8



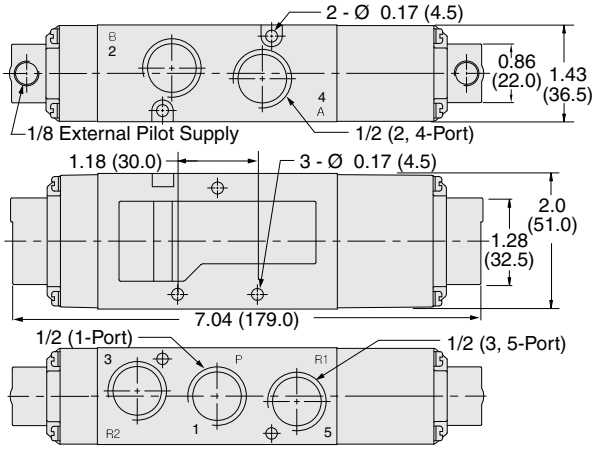
Port Size 1/4



Port Size 3/8



Port Size 1/2



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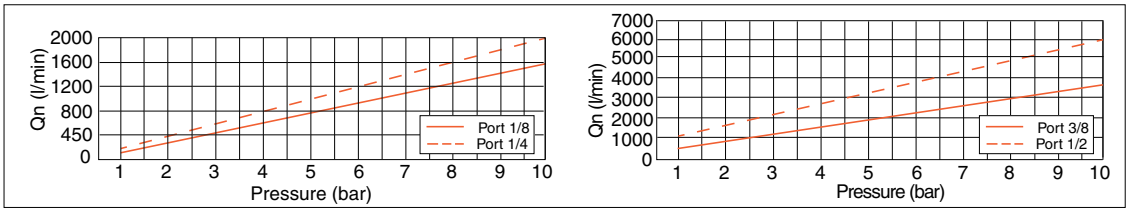


Manifolds and Accessories ordered separately, refer to page D4.12. For other options, consult ROSS.

STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Spool
Mounting Type	In-line or manifold mounted
Temperature	**Ambient/Media:** 41° to 140°F (5° to 60°C)
Flow Media	Filtered air
Pilot Supply	External

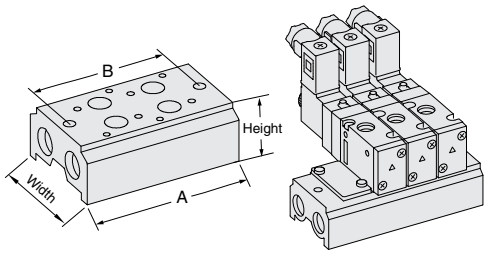
Operating Pressure	30 to 150 psig (2 to 10 bar) *Pilot supply pressure must be equal to or greater than inlet pressure.*
Construction Material	**Valve Body:** Bar Stock Aluminum **Spool:** Stainless Steel **Seals:** Buna-N
Manual Override	Pushbutton, non-locking

IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

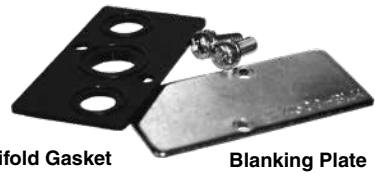
Manifold Bases for 3/2 Valves

Valve Port Size	Base Port Size	2 Valves Unit		4 Valves Unit		6 Valves Unit		8 Valves Unit		10 Valves Unit	
		Model Number		Model Number		Model Number		Model Number		Model Number	
1, 2, 3	1, 3	NPT Threads	G Threads	NPT Threads	G Threads	NPT Threads	G Threads	NPT Threads	G Threads	NPT Threads	G Threads
1/8	1/4	1472H91	D1472H91	1474H91	D1474H91	1476H91	D1476H91	1478H91	D1478H91	1480H91	D1480H91
1/4	1/4	1492H91	D1492H91	1494H91	D1494H91	1496H91	D1496H91	1498H91	D1498H91	1500H91	D1500H91

Valve Port Size	Base Port Size	Base Dimensions	Numbers of Valves Unit				
			2	4	6	8	10
1, 2, 3	1, 3		Dimensions – inches (mm)				
1/8	1/4	Height	0.98 (25)	0.98 (25)	0.98 (25)	0.98 (25)	0.98 (25)
		Length (A)	2.32 (59)	3.82 (97)	5.31 (135)	6.81 (173)	8.31 (211)
		Length (B)	1.85 (47)	3.35 (85)	4.84 (123)	6.34 (161)	7.83 (199)
		Width	1.65 (42)	1.65 (42)	1.65 (42)	1.65 (42)	1.65 (42)
1/4	1/4	Height	1.06 (27)	1.06 (27)	1.06 (27)	1.06 (27)	1.06 (27)
		Length (A)	3.03 (77)	5.16 (131)	7.28 (185)	9.41 (239)	11.53 (293)
		Length (B)	2.60 (66)	4.72 (120)	6.85 (174)	8.98 (228)	11.10 (282)
		Width	1.97 (50)	1.97 (50)	1.97 (50)	1.97 (50)	1.97 (50)



MANIFOLD BLANKING KITS	Valve Port Size	Kit Number	Description
	1/8	1813H77	Manifold blanking kits include blanking plate, manifold gasket and mounting bolts.
	1/4	1814H77	



Manifold Gasket Blanking Plate

Accessories & Options

Electrical Connectors	Connector Form	Valve Port Size	Model Number*	
			24 Volts DC	110 Volts AC
	EN 175301-803 MICRO-MINI	1/8	1766L77	1780L77
	EN 175301-803 Industrial Form B connector	1/4, 3/8	1767L77	1781L77
	*3-Pin Electrical Connectors with LED & Surge Suppressor			

Silencers

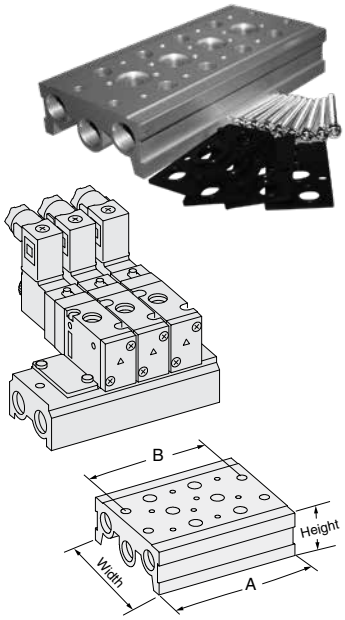
Port Size	Thread Type	Model Number		Avg. C_v	Dimensions inches (mm)		Weight lb (kg)
		NPT Threads	R/Rp Threads		Width	Length	
1/8	Male	5500A1003	D5500A1003	1.2	0.9 (21)	2.2 (55)	0.1 (0.1)
1/4	Male	5500A2003	D5500A2003	2.1	0.9 (21)	2.2 (55)	0.1 (0.1)
3/8	Male	5500A3013	D5500A3013	2.7	0.9 (21)	2.2 (55)	0.1 (0.1)
Pressure Range: 0 to 290 psig (0 to 20 bar) maximum. **Flow Media:** Filtered air.							

IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

Manifold Bases for 5/2 & 5/3 Valves

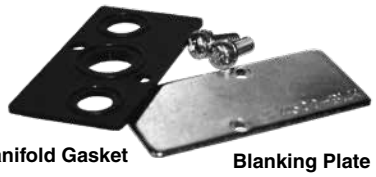
Valve Port Size		Base Port Size	2 Valves Unit		4 Valves Unit		6 Valves Unit		8 Valves Unit		10 Valves Unit	
			Model Number		Model Number		Model Number		Model Number		Model Number	
1, 2, 4	3, 5	1, 3, 5	NPT Threads	G Threads	NPT Threads	G Threads	NPT Threads	G Threads	NPT Threads	G Threads	NPT Threads	G Threads
1/8	1/8	1/4	1392H91	D1392H91	1394H91	D1394H91	1396H91	D1396H91	1398H91	D1398H91	1390H91	D1390H91
1/4	1/8	1/4	1412H91	D1412H91	1414H91	D1414H91	1416H91	D1416H91	1418H91	D1418H91	1420H91	D1420H91
3/8	3/8	3/8	1432H91	D1432H91	1434H91	D1434H91	1436H91	D1436H91	1438H91	D1438H91	1440H91	D1440H91
1/2	1/2	1/2	1652H91	D1652H91	1654H91	D1654H91	1656H91	D1656H91	1658H91	D1658H91	1650H91	D1650H91

Valve Port Size		Base Port Size	Base Dimensions	Numbers of Valves Unit				
				2	4	6	8	10
1, 2, 4	3, 5	1, 3, 5		Dimensions – inches (mm)				
1/8	1/8	1/4	Height	1.02 (26)	1.02 (26)	1.02 (26)	1.02 (26)	1.02 (26)
			Length (A)	2.32 (59)	3.81 (97)	5.31 (135)	6.81 (173)	8.31 (211)
			Length (B)	1.85 (47)	3.35 (85)	4.84 (123)	6.34 (161)	7.83 (199)
			Width	4.33 (110)	4.33 (110)	4.33 (110)	4.33 (110)	4.33 (110)
1/4	1/8	1/4	Height	1.06 (27)	1.06 (27)	1.06 (27)	1.06 (27)	1.06 (27)
			Length (A)	3.29 (83.5)	5.45 (138.5)	7.62 (193.5)	9.78 (248.5)	11.95 (303.5)
			Length (B)	2.81 (71.5)	4.98 (126.5)	7.15 (181.5)	9.31 (236.5)	7.94 (201.5)
			Width	2.68 (68)	2.68 (68)	2.68 (68)	2.68 (68)	2.68 (68)
3/8	3/8	3/8	Height	1.18 (30)	1.18 (30)	1.18 (30)	1.18 (30)	1.18 (30)
			Length (A)	3.66 (93)	6.26 (159)	8.86 (225)	11.46(291)	14.05 (357)
			Length (B)	3.15 (80)	5.75 (146)	8.35 (212)	10.94 (278)	13.54 (344)
			Width	3.43 (87)	3.43 (87)	3.43 (87)	3.43 (87)	3.43 (87)
1/2	1/2	1/2	Height	1.32 (33.5)	1.32 (33.5)	1.32 (33.5)	1.32 (33.5)	1.32 (33.5)
			Length (A)	4.05 (103)	7.01 (178)	9.96 (253)	12.91 (328)	15.87 (403)
			Length (B)	3.46 (88)	6.42 (163)	9.37 (238)	12.32 (313)	15.27 (388)
			Width	3.86 (98)	3.86 (98)	3.86 (98)	3.86 (98)	3.86 (98)



MANIFOLD BLANKING KITS	Valve Port Size	Model Number
	1/8	1806H77
	1/4	1807H77
	3/8	1808H77
	1/2	1809H77

Manifold blanking kits include blanking plate, manifold gasket and mounting bolts.



Accessories & Options

Electrical Connectors	Connector Form	Valve Port Size	Model Number*	
			24 Volts DC	110 Volts AC
	EN 175301-803 Form A MICRO-MINI	1/8	1766L77	1780L77
	EN 175301-803 Industrial Form B connector	1/4, 3/8, 1/2	1767L77	1781L77
	*3-Pin Electrical Connectors with LED & Surge Suppressor			

Silencers

Port Size	Thread Type	Model Number		Avg. C_v	Dimensions inches (mm)		Weight lb (kg)	
		NPT Threads	R/Rp Threads		Width	Length		
1/8	Male	5500A1003	D5500A1003	1.2	0.9 (21)	2.2 (55)	0.1 (0.1)	
1/4	Male	5500A2003	D5500A2003	2.1	0.9 (21)	2.2 (55)	0.1 (0.1)	
3/8	Male	5500A3013	D5500A3013	2.7	0.9 (21)	2.2 (55)	0.1 (0.1)	
1/2	Male	5500A4003	D5500A4003	2.7	1.3 (32)	3.6 (92)	0.2 (0.1)	
Pressure Range: 0 to 290 psig (0 to 20 bar) maximum. **Flow Media:** Filtered air.								

IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

CAUTIONS, WARNINGS And STANDARD WARRANTY

ROSS OPERATING VALVE, ROSS CONTROLS®, ROSS DECCO®, and AUTOMATIC VALVE INDUSTRIAL, collectively the "ROSS Group".

PRE-INSTALLATION or SERVICE

1. Before servicing a valve or other pneumatic component, be sure all sources of energy are turned off, the entire pneumatic system is shut down and exhausted, and all power sources are locked out (ref: OSHA 1910.147, EN 1037).

2. All ROSS Group Products, including service kits and parts, should be installed and/or serviced only by persons having training and experience with pneumatic equipment. Because any product can be tampered with and/or need servicing after installation, persons responsible for the safety of others or the care of equipment must check ROSS Group Products on a regular basis and perform all necessary maintenance to ensure safe operating conditions.

3. All applicable instructions should be read and complied with before using any fluid power system to prevent harm to persons or equipment. In addition, overhauled or serviced valves must be functionally tested prior to installation and use. If you have any questions, call your nearest ROSS Group location.

4. Each ROSS Group Product should be used within its specification limits. In addition, use only ROSS Group components to repair ROSS Group Products.

WARNINGS: Failure to follow these instructions can result in personal injury and/or property damage.

FILTRATION and LUBRICATION

1. Dirt, scale, moisture, etc., are present in virtually every air system. Although some valves are more tolerant of these contaminants than others, best performance will be realized if a filter is installed to clean the air supply, thus preventing contaminants from interfering with the proper performance of the equipment. The ROSS Group recommends a filter with a 5-micron rating for normal applications.

2. All standard ROSS Group filters and lubricators with polycarbonate plastic bowls are designed for compressed air applications only. Use the metal bowl guard, where provided, to minimize danger from high pressure fragmentation in the event of bowl failure. Do not expose these products to certain fluids, such as alcohol or liquefied petroleum gas, as they can cause bowls to rupture, creating a combustible condition and hazardous leakage. Immediately replace crazed, cracked, or deteriorated bowls.

3. Only use lubricants which are compatible with materials used in the valves and other components in the system. Normally, compatible lubricants are petroleum base oils with oxidation inhibitors, an aniline point between 180°F (82°C) and 220°F (104°C), and an ISO 32, or lighter, viscosity. Avoid oils with phosphate type additives which can harm polyurethane components, potentially leading to valve failure which risks personal injury, and/or damage to property.

WARNINGS: Failure to follow these instructions can result in personal injury and/or property damage.

AVOID INTAKE/EXHAUST RESTRICTION

1. Do not restrict air flow in the supply line. To do so could reduce the pressure of the supply air below minimum requirements for the valve and thereby causing erratic action.

2. Do not restrict a valve's exhaust port as this can adversely affect its operation. Exhaust silencers must be resistant to clogging and must have flow capacities at least as great as the exhaust capacities of the valves. Contamination of the silencer can result in reduced flow and increased back pressure.

WARNINGS: Failure to follow these instructions can result in personal injury and/or property damage.

SAFETY APPLICATIONS

1. Mechanical Power Presses and other potentially hazardous machinery using a pneumatically controlled clutch and brake mechanism must use a press control double valve with a monitoring device. A double valve without a self-contained monitoring device should be used only in conjunction with a control system which assures monitoring of the valve. All double valve installations involving hazardous applications should incorporate a monitoring system which inhibits further operation of the valve and machine in the event of a failure within the valve mechanism.

2. Safety exhaust (dump) valves without a self-contained monitoring device should be used only in conjunction with a control system which assures monitoring of the valve. All safety exhaust valve installations should incorporate a monitoring system which inhibits further operation of the valve and machine in the event of a failure within the valve mechanism.

3. Per specifications and regulations, the ROSS L-O-X® and L-O-X® with EEZ-ON®, N06 and N16 Series operation products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.

WARNINGS: Failure to follow these instructions can result in personal injury and/or property damage.

STANDARD WARRANTY

All products sold by the ROSS Group are warranted for a one-year period [with the exception of Filters, Regulators and Lubricators ("FRLs") which are warranted for a period of seven (7) years] from the date of purchase. All products are, during their respective warranty periods, warranted to be free of defects in material and workmanship. The ROSS Group's obligation under this warranty is limited to repair, replacement or refund of the purchase price paid for products which the ROSS Group has determined, in its sole discretion, are defective. All warranties become void if a product has been subject to misuse, misapplication, improper maintenance, modification or tampering. Products for which warranty protection is sought must be returned to the ROSS Group freight prepaid.

THE WARRANTY EXPRESSED ABOVE IS IN LIEU OF AND EXCLUSIVE OF ALL OTHER WARRANTIES AND THE ROSS GROUP EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES EITHER EXPRESSED OR IMPLIED WITH RESPECT TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE ROSS GROUP MAKES NO WARRANTY WITH RESPECT TO ITS PRODUCTS MEETING THE PROVISIONS OF ANY GOVERNMENTAL OCCUPATIONAL SAFETY AND/OR HEALTH LAWS OR REGULATIONS. IN NO EVENT IS THE ROSS GROUP LIABLE TO PURCHASER, USER, THEIR EMPLOYEES OR OTHERS FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES WHICH MAY RESULT FROM A BREACH OF THE WARRANTY DESCRIBED ABOVE OR THE USE OR MISUSE OF THE PRODUCTS. NO STATEMENT OF ANY REPRESENTATIVE OR EMPLOYEE OF THE ROSS GROUP MAY EXTEND THE LIABILITY OF THE ROSS GROUP AS SET FORTH HEREIN.

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