



95 SERIES SLIM-LINE VALVES



PRODUCT CATALOG

Slim-Line Valves 95 Series

Product Overview

The ROSS® 95 Series are body-ported directional control valves, inline or manifold mounted with a durable seal design, for lube or non-lube service.

These valves stand out for their solid, compact construction and high flow capacity.

Solenoid Controlled	Pressure Controlled	Manifold Options
		

Illustration examples.

VALVE FEATURES

Spool Design	Resilient seal spool construction
Mounting Options	Flexible mounting - inline or manifold
Construction	Solid compact construction with high flow capacity
Reliability	Consistent response times over the life of the valve
Solenoid Pilot Valves	Solenoid and connector included

Actuation	Valve Function		Available Inlet Port Sizes				Maximum Flow C _v (Nl/min)	Page
			1/8	1/4	3/8	1/2		
Solenoid Control	3/2	Single Solenoid Pilot	●	●	●		2.6 (2600)	4 – 5
	5/2	Single & Double Solenoid Pilot	●	●	●	●	4.5 (4400)	6 – 9
	5/3	Double Solenoid Pilot	●	●	●	●	4.5 (4400)	10 – 11
Pressure Control	3/2	Single Air Pilot	●	●	●		2.6 (2600)	12 – 13
	5/2	Single & Double Air Pilot	●	●	●	●	4.5 (4400)	14 – 17
	5/3	Double Air Pilot	●	●	●	●	4.5 (4400)	18 – 19
Sub-Bases & Manifold Bases								20 – 21
Accessories								22

STANDARD SPECIFICATIONS

GENERAL	Function		3/2 Valve	Normally Closed			
				Normally Open			
			5/2 Valve				
			5/3 Valve	Center Position	Power Center		
					Closed Center		
					Open Center		
	Construction Design		Spool				
	Actuation		Electrical	Solenoid Pilot Controlled			
			Pneumatic	Pressure Controlled			
	Mounting	Type	Inline				
			Manifold				
		Orientation	Any, preferably vertical				
Connection		Threaded Ports	NPT				
			G				
Manual Override	Solenoid Pilot Controlled	Pushbutton, non-locking					

OPERATING CONDITIONS	Temperature		Ambient	41° to 140°F (5° to 60°C)		
			Media			
	Flow Media		Filtered air			
	Operating Pressure		22.5 to 150 psig (1.5 to 10 bar)			
	Pilot Supply		Internal			

ELECTRICAL DATA FOR SOLENOID PILOT VALVES	Solenoids		Current Flow	Operating Voltage		Power Consumption (each solenoid)
			DC	24 volts		2.5 watts
			AC	110 volts, 50/60 Hz		3.6 VA holding on 50/60 Hz
			Rated for continuous duty			
	Enclosure Rating		IP 65, IEC 60529			
	Electrical Connection		Port Size	1/8	DIN EN 175301-803	Micro-Mini
				1/4 & 3/8	DIN EN 175301-803	Form B

CONSTRUCTION MATERIAL	Valve Body		Bar Stock Aluminum			
	Poppet		Stainless Steel			
	Seals		Nitrile	Buna-N		

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

Solenoid Pinouts

DIN EN 175301-803 Micro-Mini	DIN EN 175301-803 Form B
1 - Positive 2 - Negative 4 - Ground	1 - Positive 2 - Negative 4 - Ground

Ordering Information

3/2 Single Solenoid Pilot Controlled Valves, Spring Return

MODEL NUMBER CONFIGURATOR

3-Way 2-Position Valves

Port Thread

NPT

Leave Blank

G

D

Series

95

Actuation

Solenoid Pilot

Valve Function

3/2 Normally Closed

3

3/2 Normally Open

4

Revision Level

7

3

K

1

0

01

W

Current

Voltage

DC

24 V

W

AC

110-120 V, 50/60 Hz

Z

Solenoid Pilot

Single Solenoid

Port Size

In-Out

Exhaust

1/8

1/8

1

1/4

1/4

2

3/8

3/8

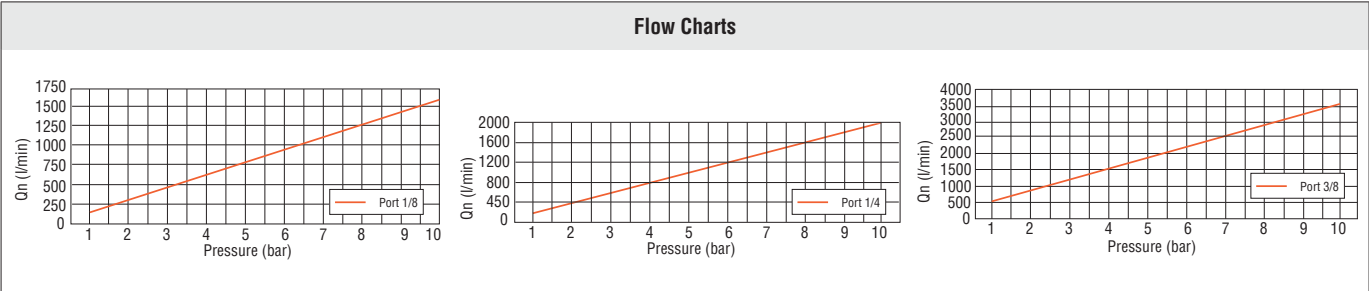
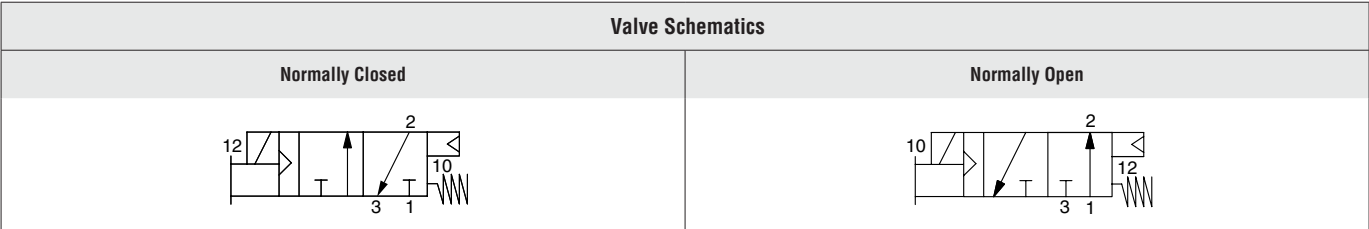
3

Model Number examples: 9573K1001W, D9573K3001Z.

Manifolds and accessories ordered separately. Please see manifolds and accessories page. For other options, consult ROSS.

Valves available with installed prewired connectors, please consult ROSS.

Size		Flow C _v (Nl/min)	Weight ≈ lb (kg)
Port 1, 2	Port 3	1-2	
1/8	1/8	0.9 (980)	0.38 (0.17)
1/4	1/4	1.3 (1300)	0.70 (0.32)
3/8	3/8	2.6 (2600)	1.15 (0.52)

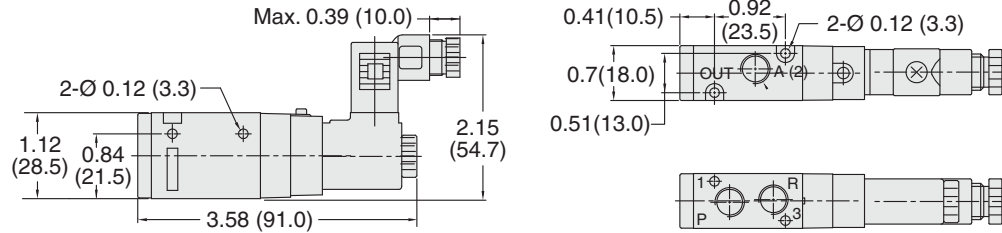


3/2 Single Solenoid Pilot Controlled Valves

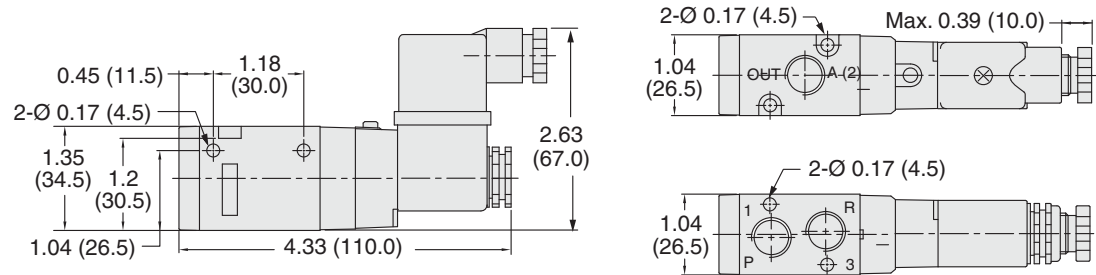
DIMENSIONS

Inches (mm)

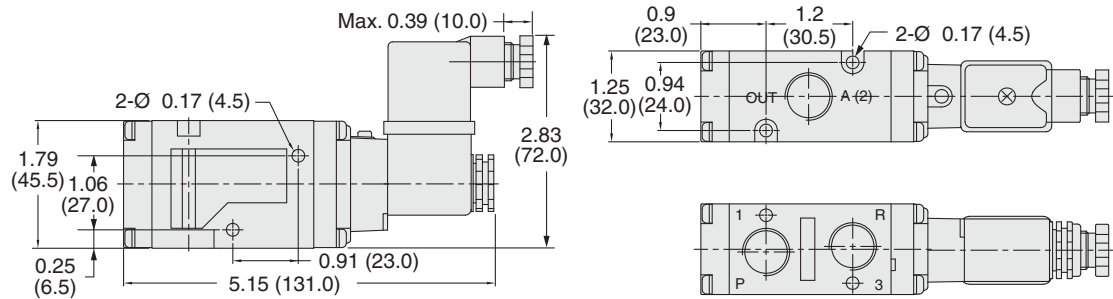
Port Size 1/8



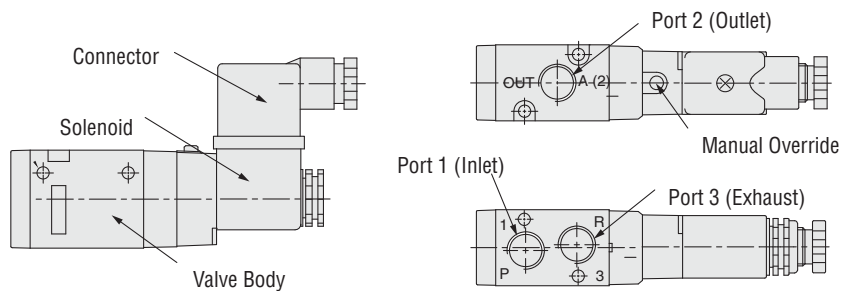
Port Size 1/4



Port Size 3/8



Downloadable CAD models available.



Ordering Information

5/2 Single Solenoid Pilot Controlled Valves, Spring Return

MODEL NUMBER CONFIGURATOR5-Way 2-Position Valves

Port Thread

NPT

Leave Blank

G

D

Series

95

Actuation

Solenoid Pilot

7

Valve Function

5/2

6

Revision Level

K

1

0

01

W

Current	Voltage	
DC	24 V	W
AC	110-120 V, 50/60 Hz	Z

Solenoid Pilot

Single Solenoid

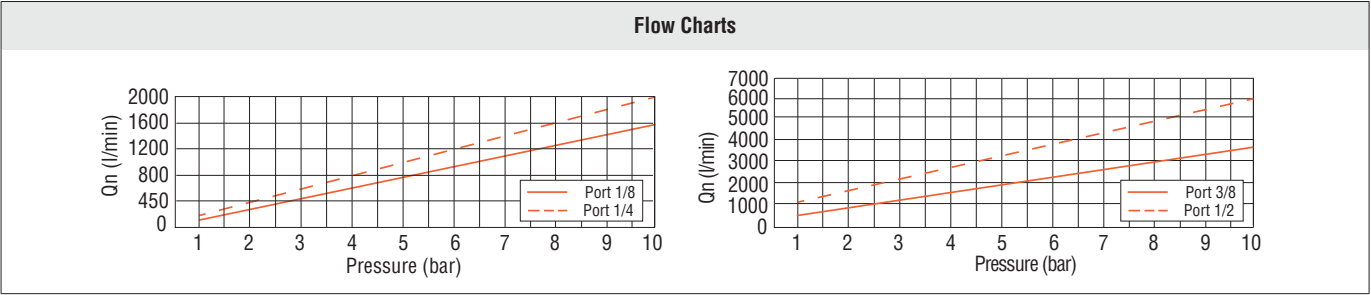
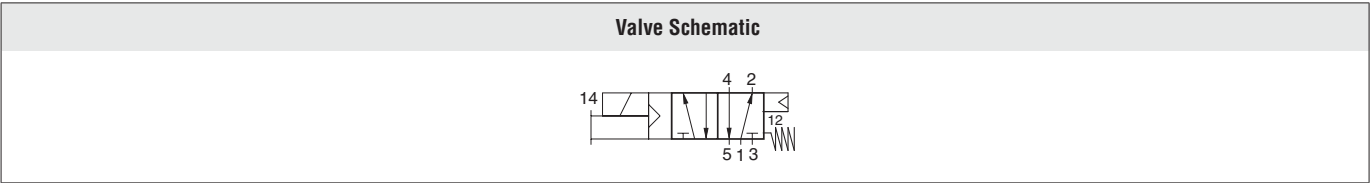
Port Size		
In-Out	Exhaust	
1/8	1/8	1
1/4	1/8	2
3/8	3/8	3
1/2	1/2	4

Model Number examples: 9576K1001W, D9576K4001Z.

Manifolds and accessories ordered separately. Please see manifolds and accessories page. For other options, consult ROSS.

Valves available with installed prewired connectors, please consult ROSS.

Size		Flow C _v (NL/min)	Weight ≈ lb (kg)
Port 1, 2, 4	Port 3, 5	1-2, 1-4	
1/8	1/8	0.9 (980)	0.43 (0.20)
1/4	1/8	1.3 (1300)	0.80 (0.36)
3/8	3/8	2.6 (2600)	1.29 (0.59)
1/2	1/2	4.5 (4400)	1.66 (0.75)

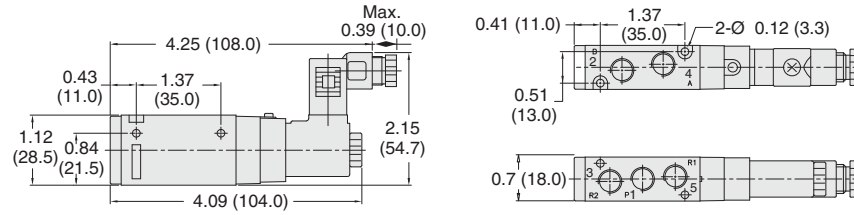


5/2 Single Solenoid Pilot Controlled Valves

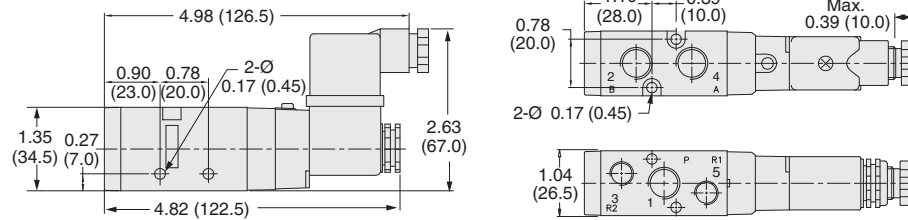
DIMENSIONS

Inches (mm)

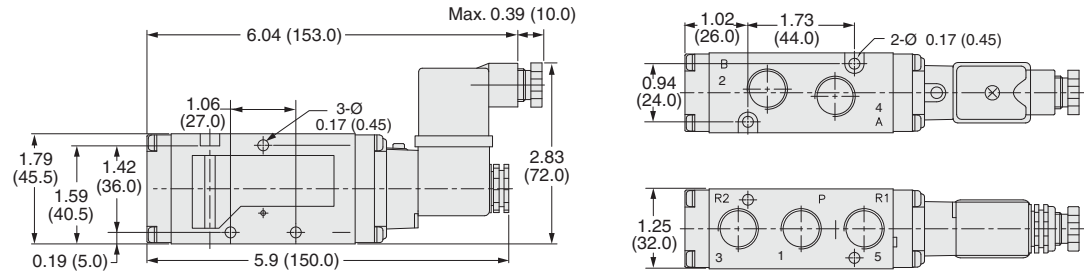
Port Size 1/8



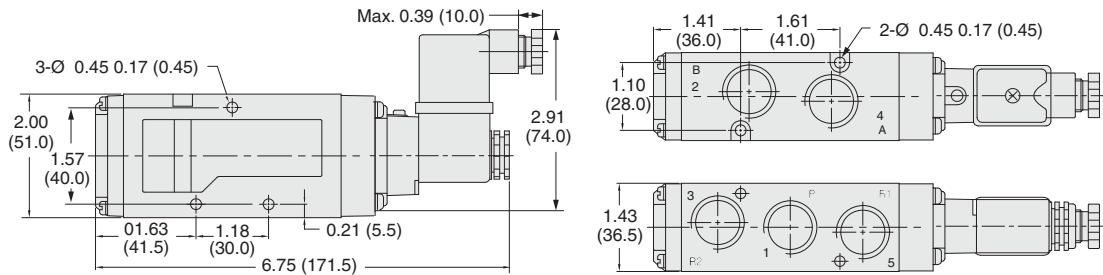
Port Size 1/4



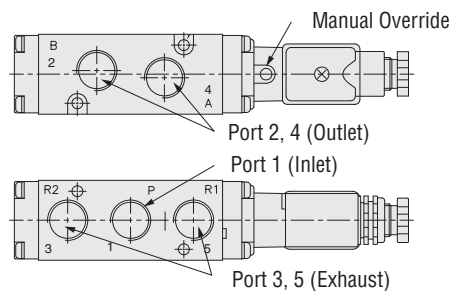
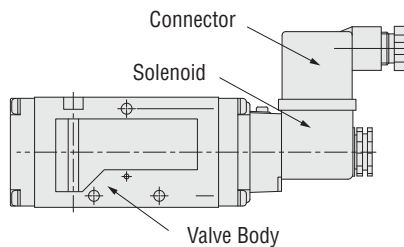
Port Size 3/8



Port Size 1/2



Downloadable CAD models available.



Ordering Information

5/2 Double Solenoid Pilot Controlled Valves, Detented

MODEL NUMBER CONFIGURATOR

5-Way 2-Position Valves

Port Thread

NPT

Leave Blank

G

D

Series

95

Actuation

Solenoid Pilot

7

Valve Function

5/2

6

Revision Level

K

1

1

0

02

W

Current	Voltage	
DC	24 V	W
AC	110-120 V, 50/60 Hz	Z

Solenoid Pilot

Double Solenoid

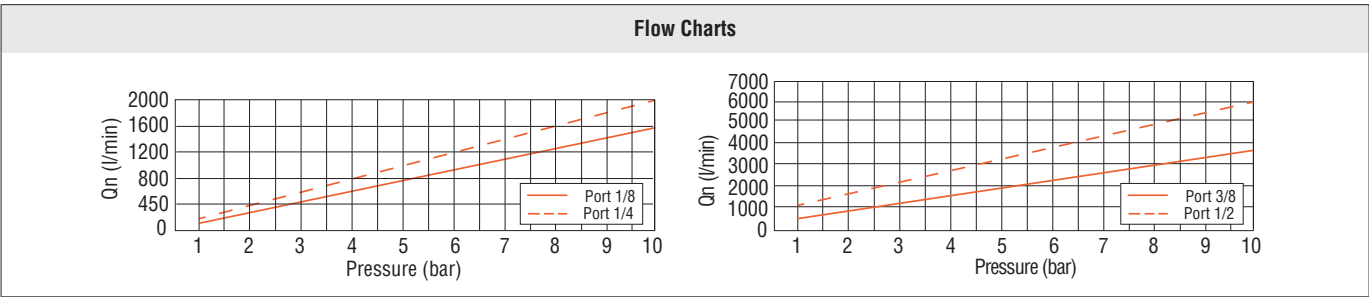
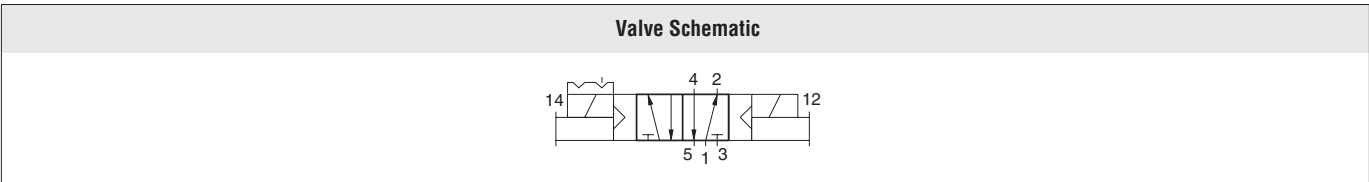
Port Size		
In-Out	Exhaust	
1/8	1/8	1
1/4	1/8	2
3/8	3/8	3
1/2	1/2	4

Model Number examples: 95761002W, D9576K4002Z.

Manifolds and accessories ordered separately. Please see manifolds and accessories page. For other options, consult ROSS.

Valves available with installed prewired connectors, please consult ROSS.

Size		Flow C _v (NL/min)	Weight ≈ lb (kg)
Port 1, 2, 4	Port 3, 5	1-2, 1-4	
1/8	1/8	0.9 (980)	0.62 (0.28)
1/4	1/8	1.3 (1300)	1.04 (0.47)
3/8	3/8	2.6 (2600)	1.58 (0.72)
1/2	1/2	4.5 (4400)	2.04 (0.93)

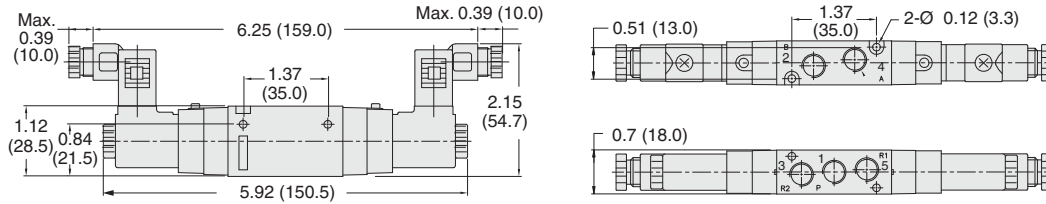


5/2 Double Solenoid Pilot Controlled Valves

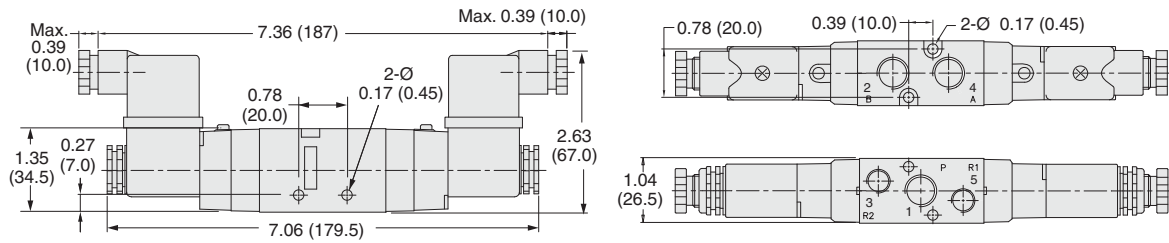
DIMENSIONS

Inches (mm)

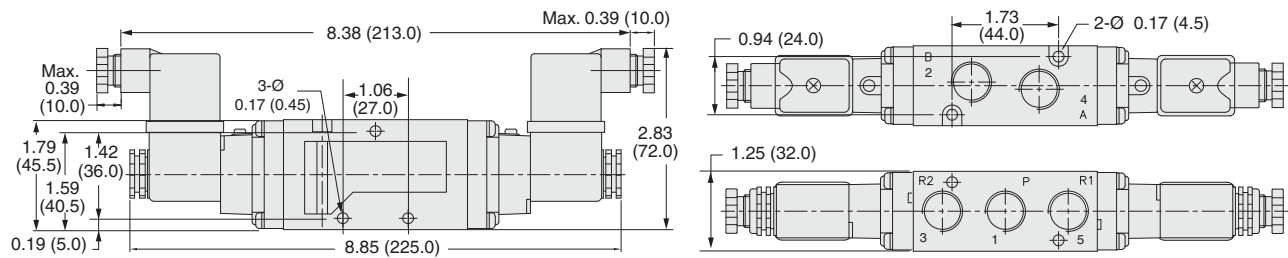
Port Size 1/8



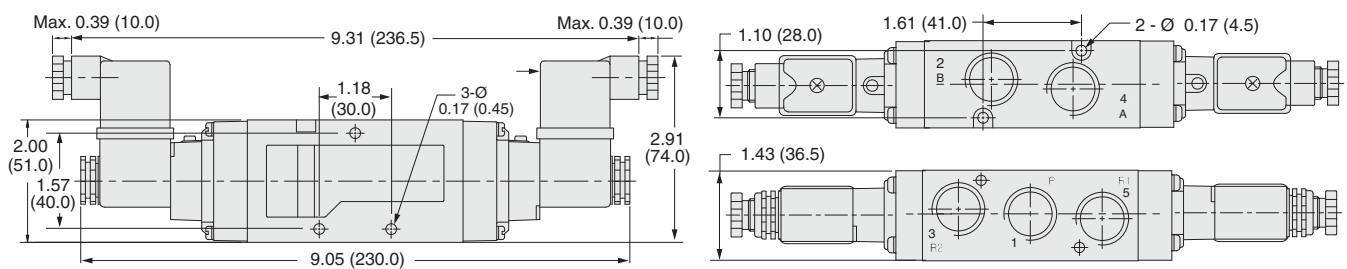
Port Size 1/4



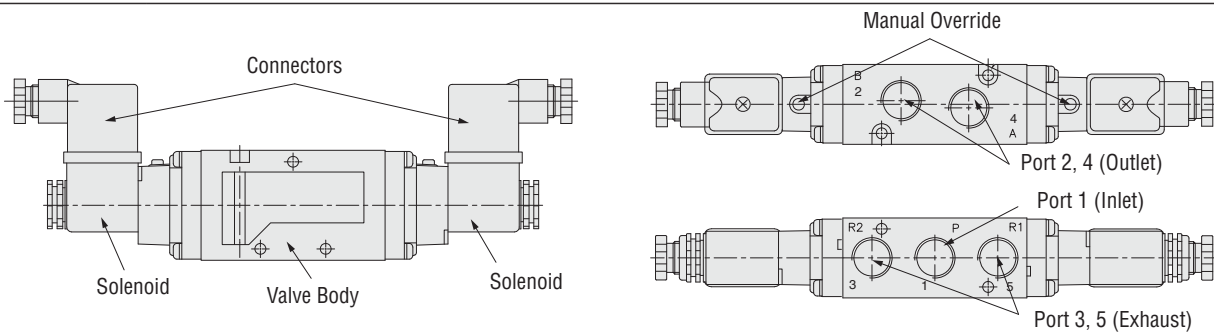
Port Size 3/8



Port Size 1/2



Downloadable CAD models available.



Ordering Information

5/3 Double Solenoid Pilot Controlled Valves, Spring Center

MODEL NUMBER CONFIGURATOR

5-Way 3-Position Valves

Port Thread

NPT

Leave Blank

G

D

Series

95

Actuation

Solenoid Pilot

7

Valve Function

5/3

7

Revision Level

K

1

0

19

W

Current	Voltage	
DC	24 V	W
AC	110-120 V, 50/60 Hz	Z

Center Position	
Power Center	19
Closed Center	10
Open Center	07

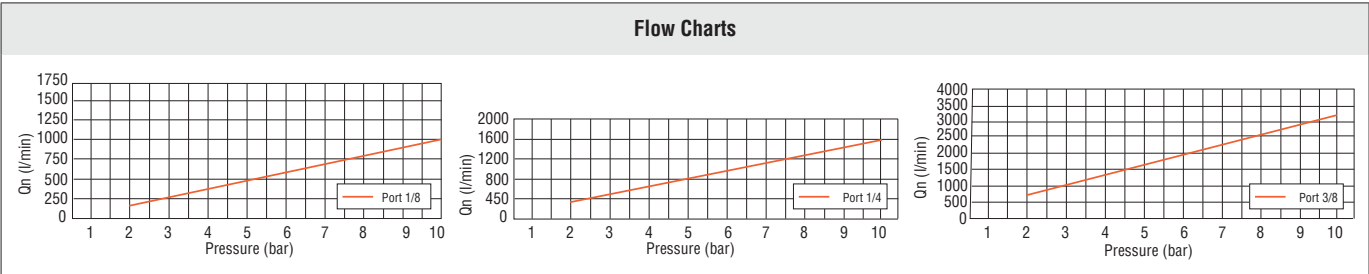
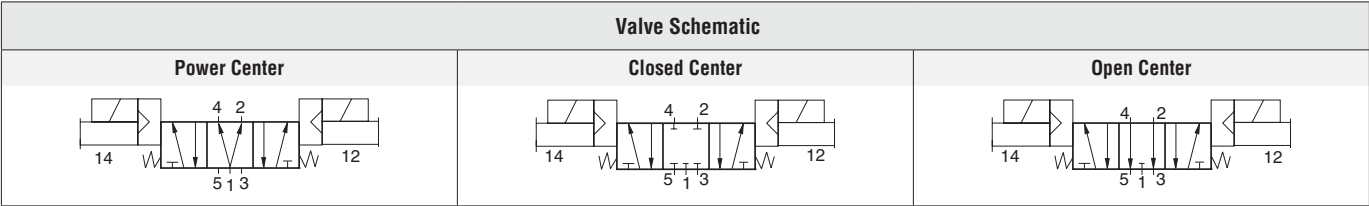
Port Size		
In-Out	Exhaust	
1/8	1/8	1
1/4	1/8	2
3/8	3/8	3
1/2	1/2	4

Model Number examples: 95771019W, D9577K4010Z.

Manifolds and accessories ordered separately. Please see manifolds and accessories page. For other options, consult ROSS.

Valves available with installed prewired connectors, please consult ROSS.

Size		Flow C _v (NI/min)	Weight ≈ lb (kg)
Port 1, 2, 4	Port 3, 5	1-2, 1-4	
1/8	1/8	0.7 (69)	0.70 (0.32)
1/4	1/8	1.1 (1100)	1.26 (0.57)
3/8	3/8	2.2 (2200)	1.71 (0.78)
1/2	1/2	4.5 (4400)	2.41 (1.09)

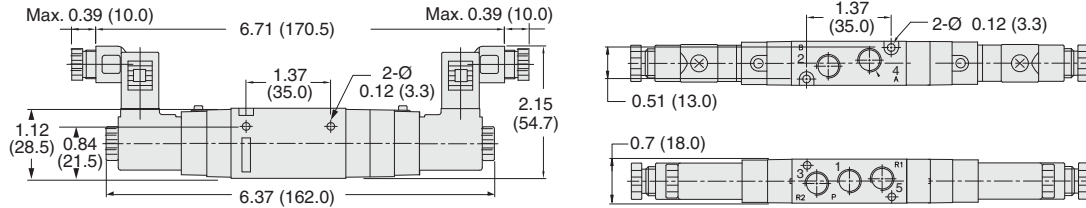


5/3 Double Solenoid Pilot Controlled Valves

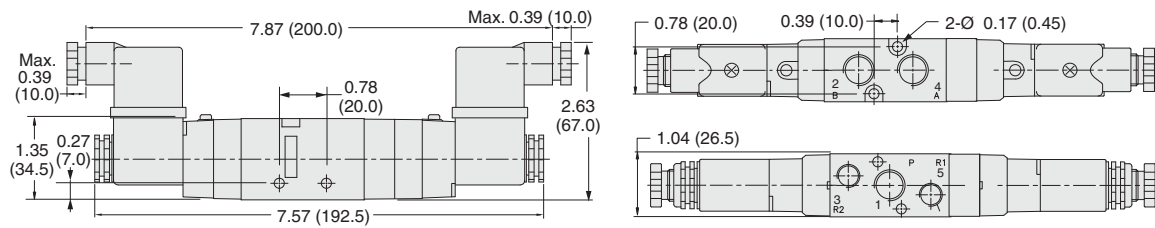
DIMENSIONS

Inches (mm)

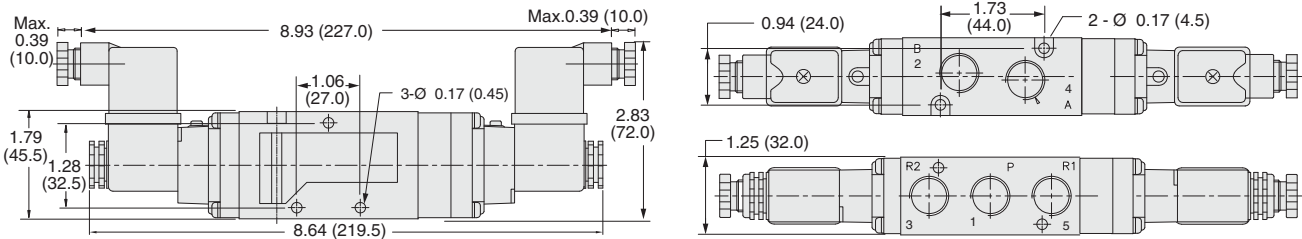
Port Size 1/8



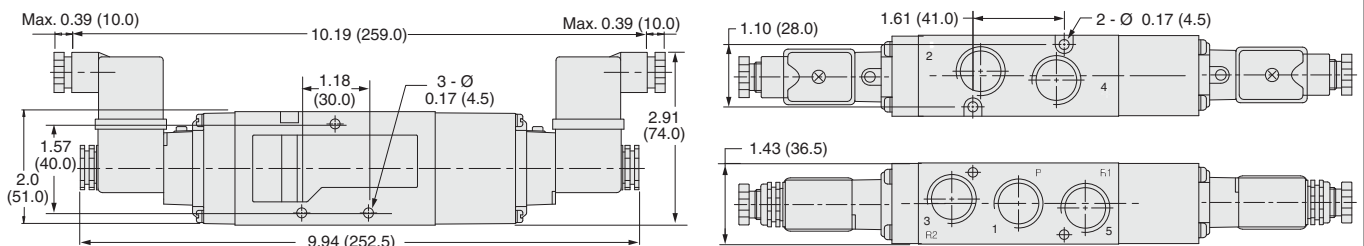
Port Size 1/4



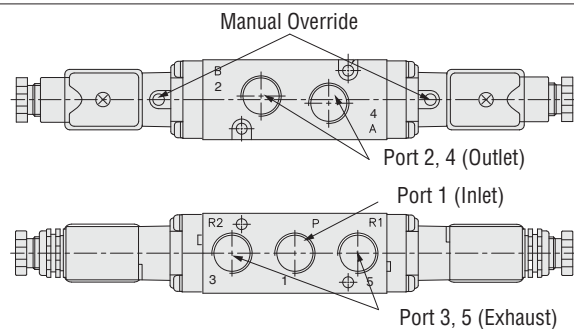
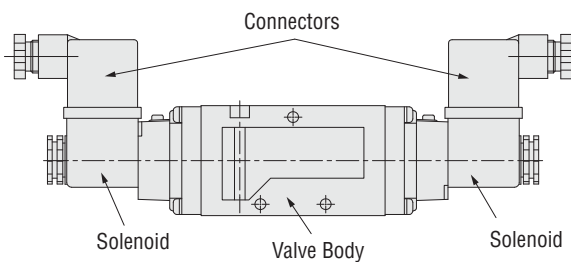
Port Size 3/8



Port Size 1/2



Downloadable CAD models available.



Ordering Information

3/2 Single Pilot Pressure Controlled Valves, Spring Return

MODEL NUMBER CONFIGURATOR3-Way 2-Position Valves

Port Thread

NPT

Leave Blank

G

D

Series

95

5

3

K

1

0

00

Actuation

Pressure Controlled

Valve Function

3/2 Normally Closed

3

3/2 Normally Open

4

Air Pilot

Single Pilot

Port Size

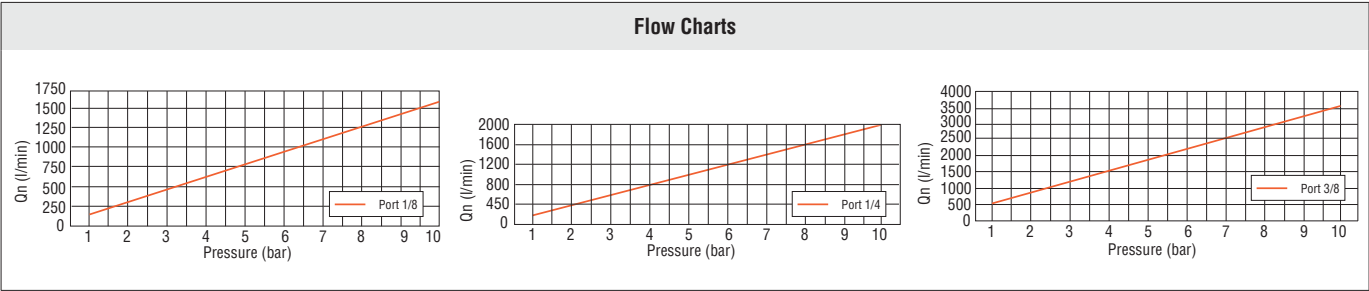
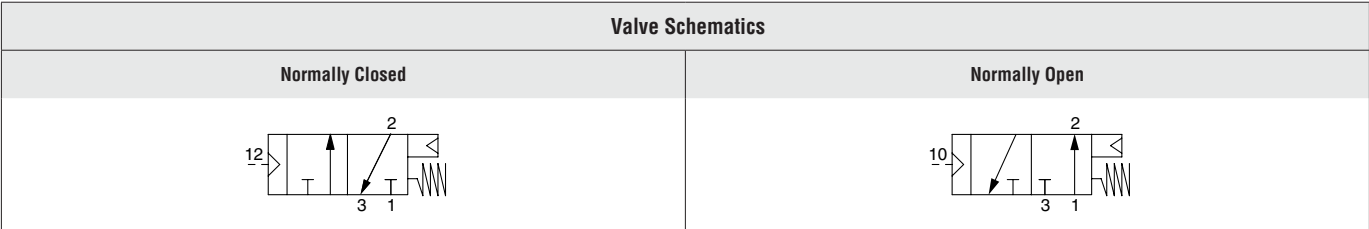
In-Out	Exhaust	Signal Port Thread		
1/8	1/8	NPT	10-32	1
		G	M5	
1/4	1/4	1/8		2
3/8	3/8	1/8		3

Revision Level

Model Number examples: 9553K1000, D9553K3000.

Manifolds and accessories ordered separately. Please see manifolds and accessories page. For other options, consult ROSS.

Size		Flow C _v (l/min)	Weight ≈ lb (kg)
Port 1, 2	Port 3	1-2	
1/8	1/8	0.9 (980)	0.26 (0.12)
1/4	1/4	1.3 (1300)	0.51 (0.23)
3/8	3/8	2.6 (2600)	0.86 (0.39)

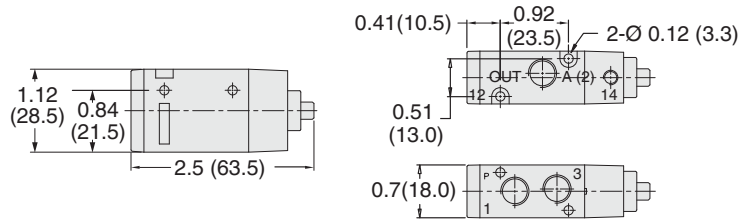


3/2 Single Pilot Pressure Controlled Valves, Spring Return

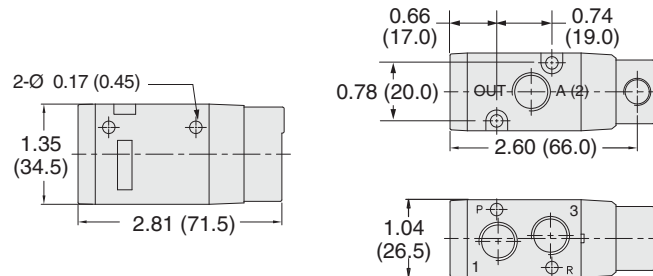
DIMENSIONS

Inches (mm)

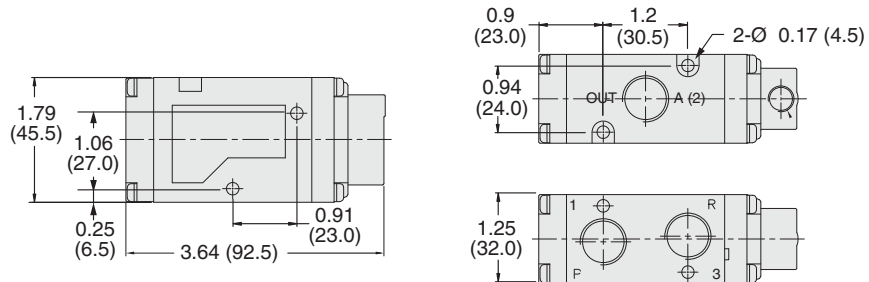
Port Size 1/8



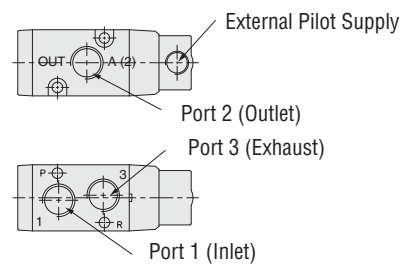
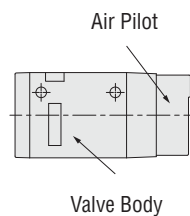
Port Size 1/4



Port Size 3/8



Downloadable CAD models available.



Ordering Information

5/2 Single Pilot Pressure Controlled Valves, Spring Return

MODEL NUMBER CONFIGURATOR

5-Way 2-Position Valves

Port Thread

NPT

Leave Blank

G

D

Series

95

Actuation

Pressure Controlled

Valve Function

5/2

5

6

K

1

0

01

Air Pilot

Single Pilot

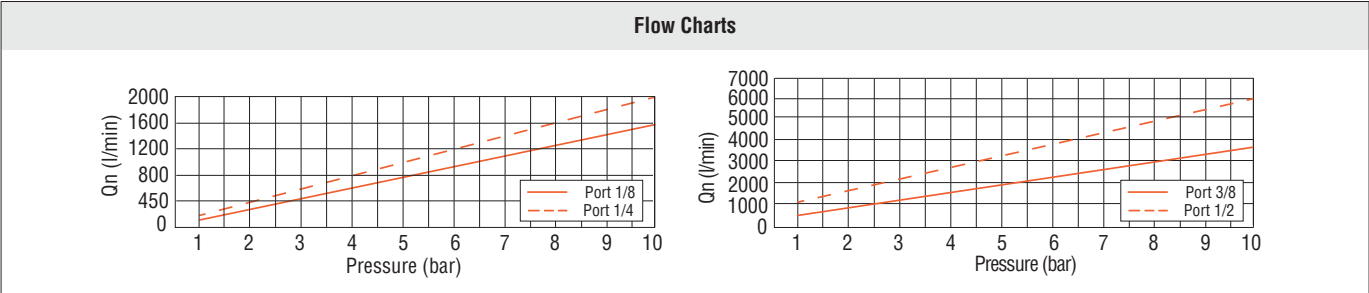
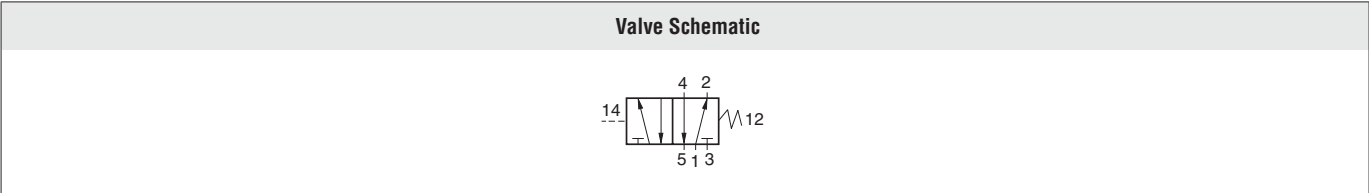
Port Size				
In-Out	Exhaust	Signal Port Thread		
1/8	1/8	NPT	10-32	1
		G	M5	
1/4	1/8	1/8		2
3/8	3/8	1/8		3
1/2	1/2	1/8		4

Revision Level

Model Number examples: 9556K1001, D9556K3001.

Manifolds and accessories ordered separately. Please see manifolds and accessories page. For other options, consult ROSS.

Size		Flow C _v (l/min)	Weight ≈ lb (kg)
Port 1, 2, 4	Port 3, 5	1-2, 1-4	
1/8	1/8	0.9 (890)	0.26 (0.12)
1/4	1/8	1.3 (1300)	0.48 (0.22)
3/8	3/8	2.6 (2600)	1.02 (0.46)
1/2	1/2	4.5 (4400)	1.39 (0.63)

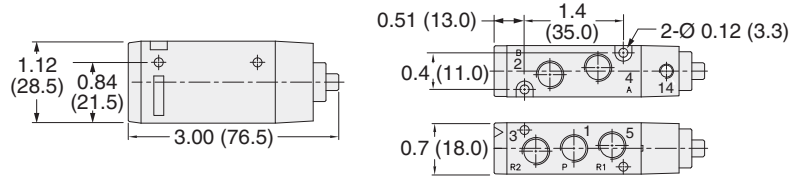


5/2 Single Pilot Pressure Controlled Valves, Spring Return

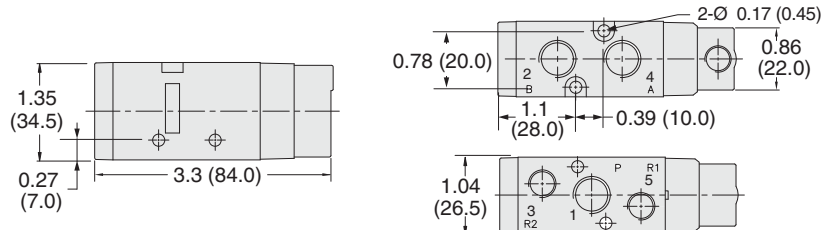
DIMENSIONS

Inches (mm)

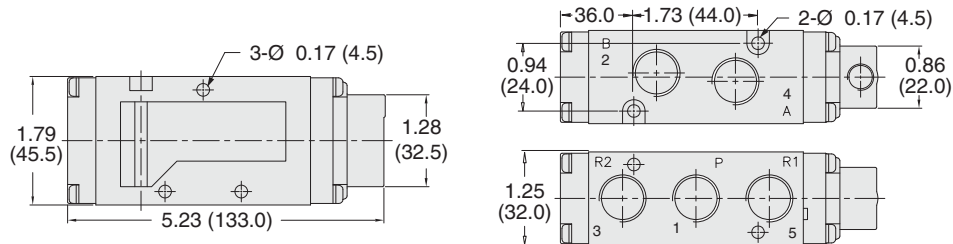
Port Size 1/8



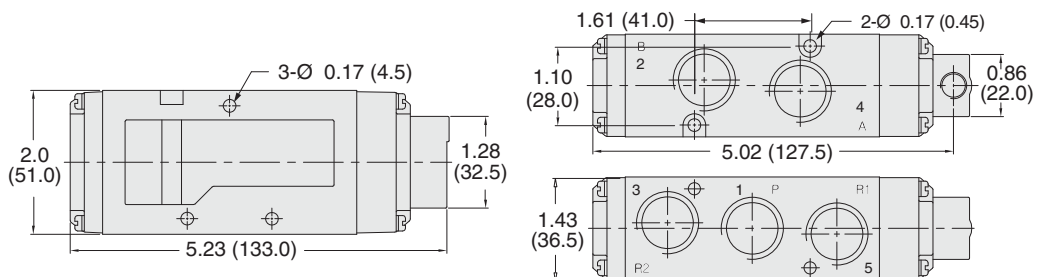
Port Size 1/4



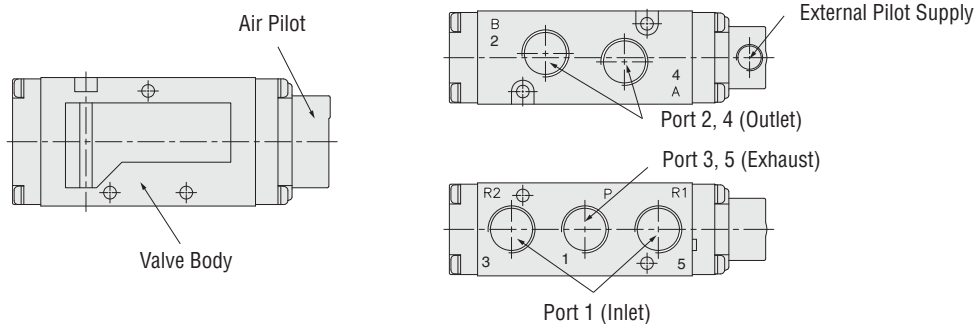
Port Size 3/8



Port Size 1/2



Downloadable CAD models available.



Ordering Information

5/2 Double Pilot Pressure Controlled Valves, Detented

MODEL NUMBER CONFIGURATOR5-Way 2-Position Valves

Port Thread

NPT

Leave Blank

G

D

Series

Actuation

Pressure Controlled

Valve Function

5/2

95

5

6

K

1

0

02

Air Pilot

Double Pilot

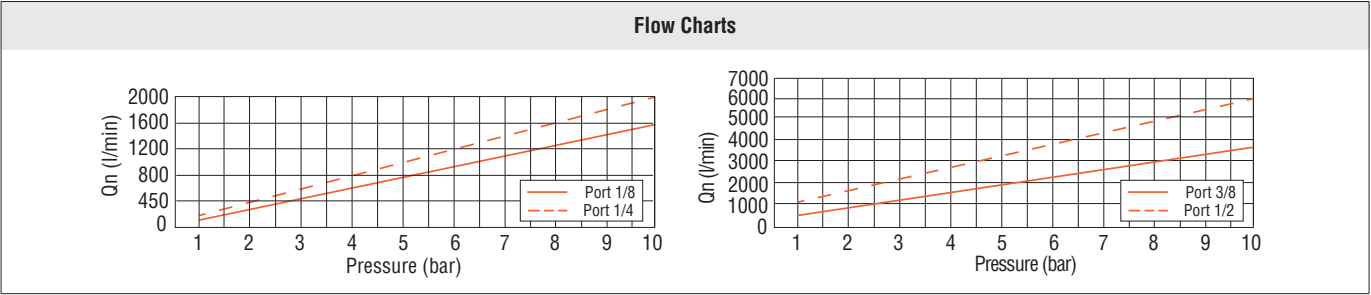
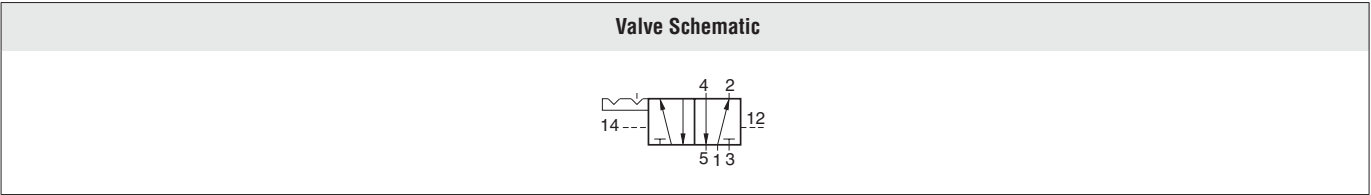
Port Size				
In-Out	Exhaust	Signal Port Thread		
1/8	1/8	NPT	10-32	1
		G	M5	
1/4	1/8	1/8		2
3/8	3/8	1/8		3
1/2	1/2	1/8		4

Revision Level

Model Number examples: 9556K1002, D9556K3004.

Manifolds and accessories ordered separately. Please see manifolds and accessories page. For other options, consult ROSS.

Size		Flow C _v (NI/min)	Weight ≈ lb (kg)
Port 1, 2, 4	Port 3, 5	1-2, 1-4	
1/8	1/8	0.9 (89)	0.32 (0.15)
1/4	1/8	1.3 (1300)	0.59 (0.27)
3/8	3/8	2.6 (2600)	1.07 (0.49)
1/2	1/2	4.5 (4400)	1.55 (0.70)

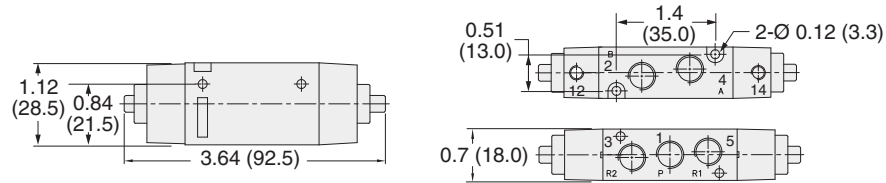


5/2 Double Pilot Pressure Controlled Valves, Detented

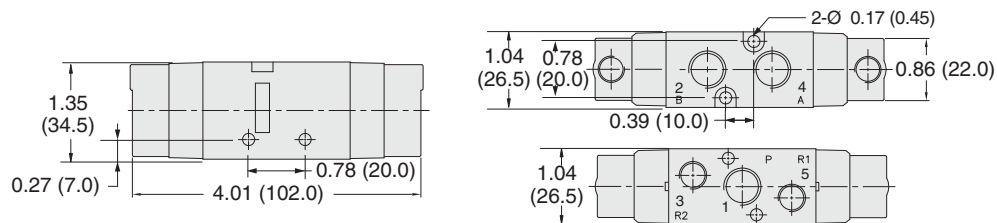
DIMENSIONS

Inches (mm)

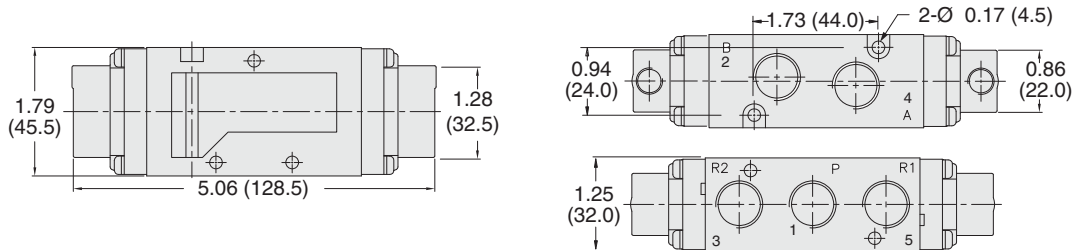
Port Size 1/8



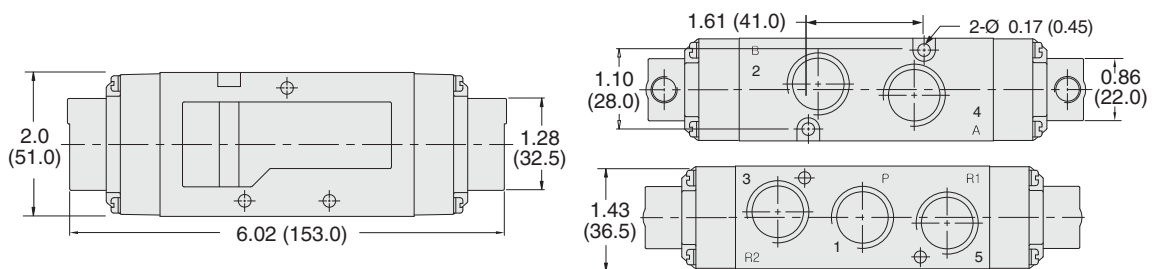
Port Size 1/4



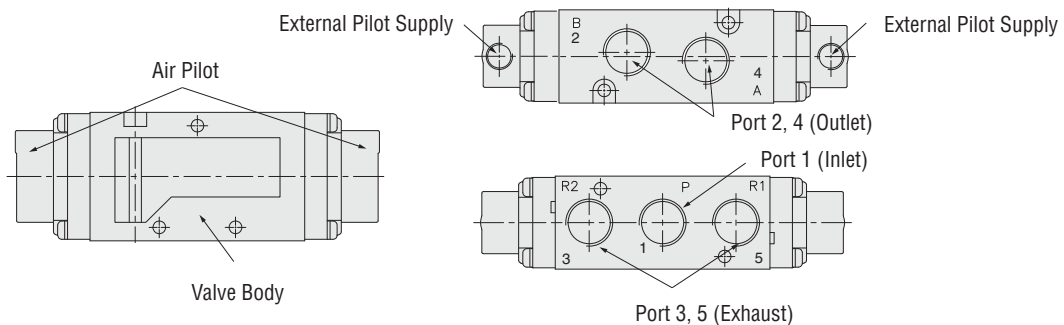
Port Size 3/8



Port Size 1/2



Downloadable CAD models available.



Ordering Information

5/3 Double Pilot Pressure Controlled Valves, Spring Center

MODEL NUMBER CONFIGURATOR

5-Way 3-Position Valves

Port Thread

NPT

Leave Blank

G

D

Series

95

Actuation

Pressure Controlled

5

Valve Function

5/3

7

Center Position

Power Center

Closed Center

Open Center

19

10

07

Port Size

In-Out	Exhaust	Signal Port Thread	
1/8	1/8	NPT	1
		G	
1/4	1/8	1/8	2
3/8	3/8	1/8	3
1/2	1/2	1/8	4

Revision Level

1

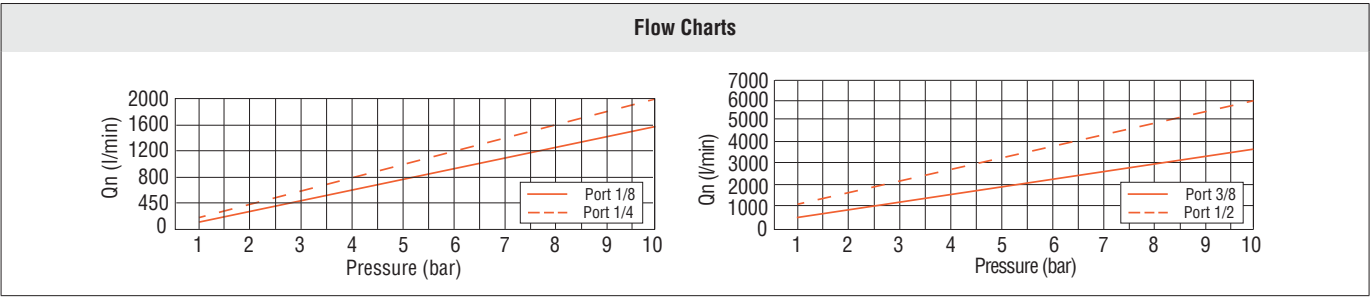
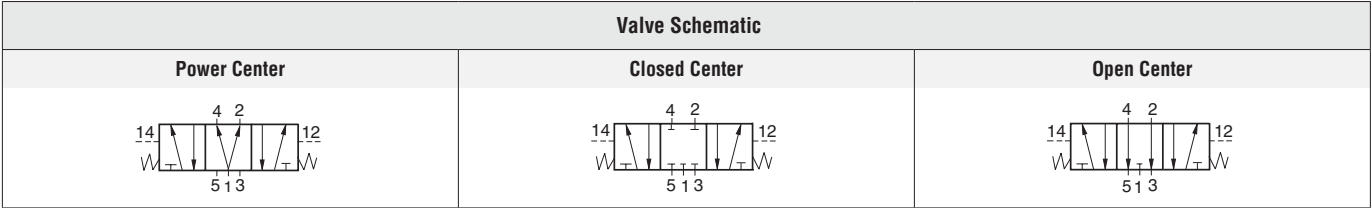
0

19

Model Number examples: 9557K1019, D9557K3007.

Manifolds and accessories ordered separately. Please see manifolds and accessories page. For other options, consult ROSS.

Size		Flow Cv (NI/min)	Weight ≈ lb (kg)
Port 1, 2, 4	Port 3, 5	1-2, 1-4	
1/8	1/8	0.7 (69)	0.38 (0.17)
1/4	1/8	1.1 (1100)	0.51 (0.23)
3/8	3/8	2.2 (2200)	1.39 (0.63)
1/2	1/2	3.4 (2900)	1.98 (0.90)

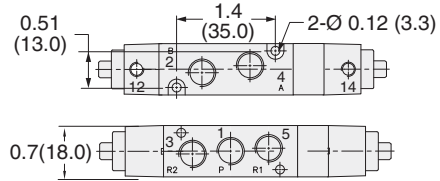
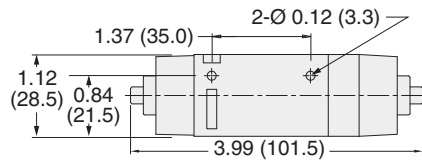


5/3 Double Pilot Pressure Controlled Valves, Spring Center

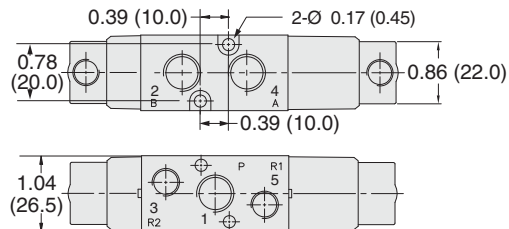
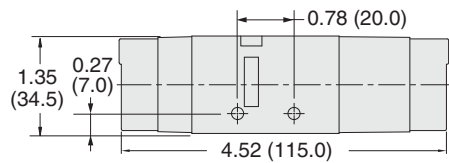
DIMENSIONS

Inches (mm)

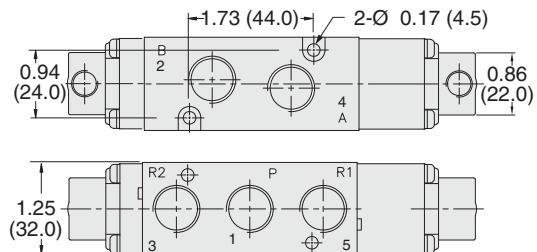
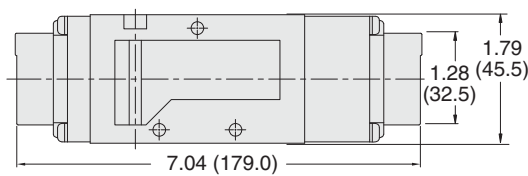
Port Size 1/8



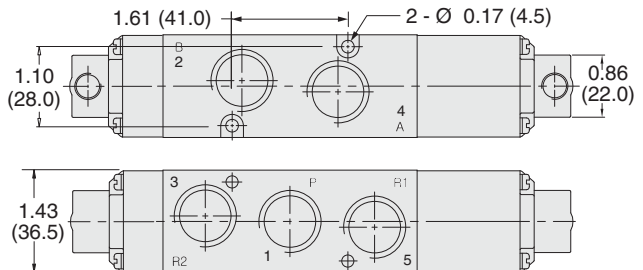
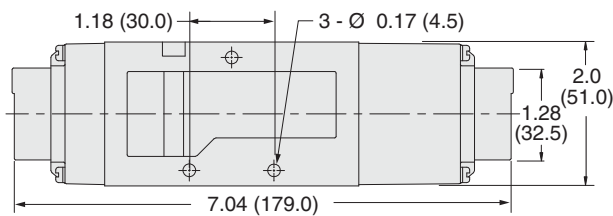
Port Size 1/4



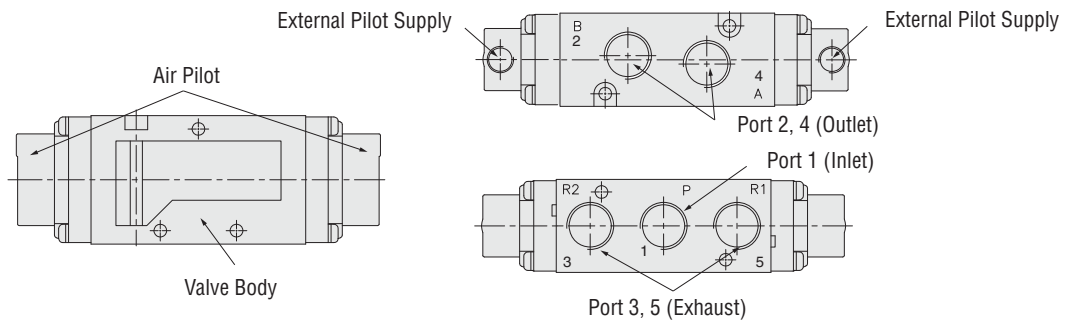
Port Size 3/8



Port Size 1/2



Downloadable CAD models available.



Manifold Bases for 3/2 Valves

MANIFOLD BASES

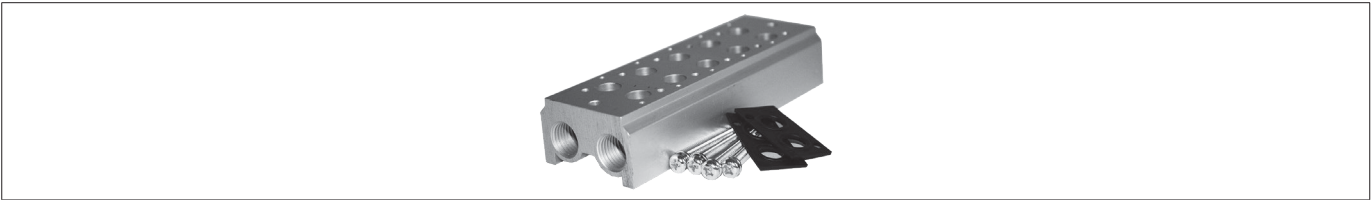
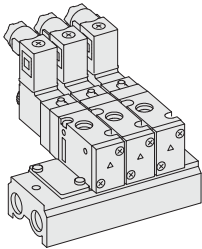
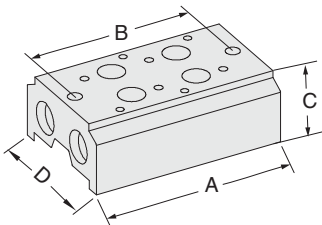


Illustration example.

Port Size		Manifold Model Number									
Valve	Base	2 Valves Unit		4 Valves Unit		6 Valves Unit		8 Valves Unit		10 Valves Unit	
1, 2, 3	1, 3	NPT Thread	G Thread	NPT Thread	G Thread	NPT Thread	G Thread	NPT Thread	G Thread	NPT Thread	G Thread
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

Port Size		Base Dimensions	Numbers of Valves Unit				
Valve	Base		Dimensions – inches (mm)				
1, 2, 3	1, 3		2	4	6	8	10
1/8	1/4	Height (C)	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 (D)	1.65 (42)	1.65 (42)	1.65 (42)	1.65 (42)	1.65 (42)
1/4	1/4	Height (C)	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 (D)	1.97 (50)	1.97 (50)	1.97 (50)	1.97 (50)	1.97 (50)



MANIFOLD BLANKING KITS



Illustration example.

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 Bases for 5/2 & 5/3 Valves

MANIFOLD BASES

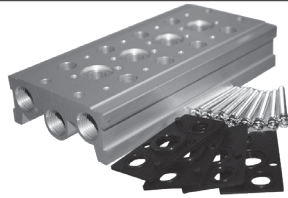
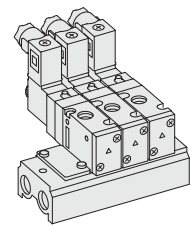
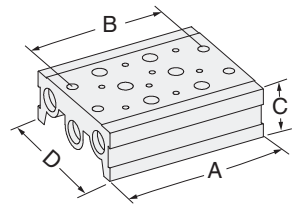


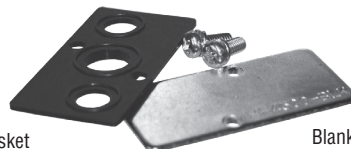
Illustration example.

Port Size			Manifold Model Number									
Valve		Base	2 Valves Unit		4 Valves Unit		6 Valves Unit		8 Valves Unit		10 Valves Unit	
1, 2, 4	3, 5	1, 3, 5	NPT Thread	G Thread	NPT Thread	G Thread	NPT Thread	G Thread	NPT Thread	G Thread	NPT Thread	G Thread
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

Port Size			Base Dimensions	Numbers of Valves Unit				
Valve		Base		Dimensions – inches (mm)				
1, 2, 4	3, 5	1, 3, 5		2	4	6	8	10
1/8	1/8	1/4	Height (C)	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 (D)	4.33 (110)	4.33 (110)	4.33 (110)	4.33 (110)	4.33 (110)
1/4	1/8	1/4	Height (C)	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 (D)	2.68 (68)	2.68 (68)	2.68 (68)	2.68 (68)	2.68 (68)
3/8	3/8	3/8	Height (C)	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 (D)	3.43 (87)	3.43 (87)	3.43 (87)	3.43 (87)	3.43 (87)
1/2	1/2	1/2	Height (C)	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 (D)	3.86 (98)	3.86 (98)	3.86 (98)	3.86 (98)	3.86 (98)



MANIFOLD BLANKING KITS



Manifold Gasket

Blanking Plate

Illustration example.

Blanking Kits	Valve Port Size	Kit Number	Description
	1/8	1806H77	Manifold blanking kits include blanking plate, manifold gasket and mounting bolts.
	1/4	1807H77	
	3/8	1808H77	
	1/2	1809H77	

EXHAUST SILENCERS

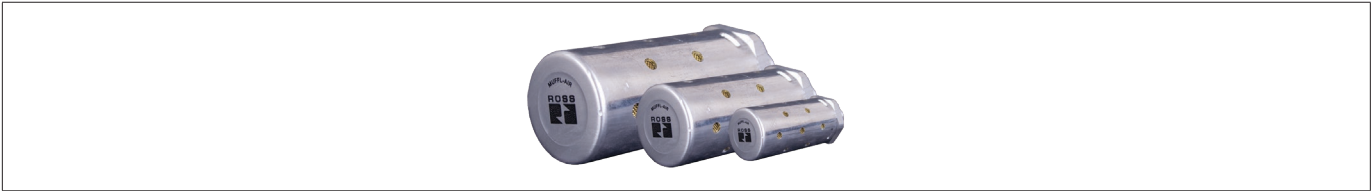


Illustration example.

Silencers	SPECIFICATIONS		Silencer Material		Pressure Range psig (bar)		Schematic	
			Aluminum		0-290 (0-20) maximum			
	Port Size	Thread Type	Flow C _v (NI/min)	Model Number		Dimensions inches (mm)		Weight ≈ lb (kg)
				NPT Thread	R/Rp Thread	Length	Hex Size (D)	
	1/8	Male	1.3 (1300)	5500A1003	D5500A1003	2.0 (5)	0.81 (21)	0.07 (0.03)
	1/4	Male	2.3 (2300)	5500A2003	D5500A2003	2.2 (6)	0.81 (21)	
3/8	Male	2.9 (2900)	5500A3013	D5500A3013				
1/2	Male	6.8 (6700)	5500A4003	D5500A4003	3.6 (9)	1.25 (32)	0.2 (0.1)	

ELECTRICAL CONNECTORS

Cable Grip	
Without Light	With Light

Illustration examples.

Connectors	Connector						Model Number	
	Type	Form	Connection	Fitting Connection	Quantity Included	Cord Diameter mm	Lighted Connector	
							24 V DC	120 V AC
	DIN EN 175301-803	B	Solenoid	Cable grip	1	8 to 10	1767L77	1781L77
		Micro-Mini	Solenoid	Cable grip	1	8 to 10	1766L77	1780L77

Connector Pinout	
Micro-Mini	Form B
1 - Black 2 - Black 4 - Green/Yellow (Ground)	

CAUTIONS, WARNINGS And STANDARD WARRANTY



ROSS OPERATING VALVE, ROSS CONTROLS®, ROSS DECCO®, and AUTOMATIC VALVE INDUSTRIAL, collectively the “ROSS Global Family”.

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 Global Family 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 Global Family 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 Global Family location.
4. Each ROSS Global Family Product should be used within its specification limits. In addition, use only ROSS Group components to repair ROSS Global Family 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 Global Family recommends a filter with a 5-micron rating for normal applications.
2. All standard ROSS Global Family 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. Safe 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 Safe 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 Global Family 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 Global Family's obligation under this warranty is limited to repair, replacement or refund of the purchase price paid for products which the ROSS Global Family 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 Global Family freight prepaid.

THE WARRANTY EXPRESSED ABOVE IS IN LIEU OF AND EXCLUSIVE OF ALL OTHER WARRANTIES AND THE ROSS GLOBAL FAMILY EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES EITHER EXPRESSED OR IMPLIED WITH RESPECT TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE ROSS GLOBAL FAMILY 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 GLOBAL FAMILY 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 GLOBAL FAMILY MAY EXTEND THE LIABILITY OF THE ROSS GLOBAL FAMILY AS SET FORTH HEREIN.



GLOBAL LOCATIONS

	AMERICAS	USA	ROSS CONTROLS	Tel: +1-248-764-1800	www.rosscontrols.com
		Canada	ROSS CANADA	Tel: +1-416-251-7677	www.rosscanada.com
		Brazil	ROSS BRASIL	Tel: +55-11-4335-2200	www.rosscontrols.com.br
	EUROPE	Germany	ROSS EUROPA	Tel: +49 (0)6103-7597-100	www.rosseuropa.com
		France	ROSS FRANCE	Tel: +33(0)1-49-45-65-65	www.rossfrance.com
		United Kingdom	ROSS UK	Tel: +44 (0)1254 872277	www.rossuk.co.uk
	ASIA & PACIFIC	India	ROSS CONTROLS INDIA	Tel: +91-44-2624-9040	www.rosscontrolsindia.com
		China	ROSS CONTROLS CHINA	Tel: +86-21-6915-7961	www.rosscontrolschina.com
		Japan	ROSS ASIA	Tel: +81-42-778-7251	www.rossasia.co.jp



www.automaticvalve.com



www.rossdecco.com



www.manufactis.net



www.masterpneumatic.com



www.pneumatrol.com



www.ubsafe.com