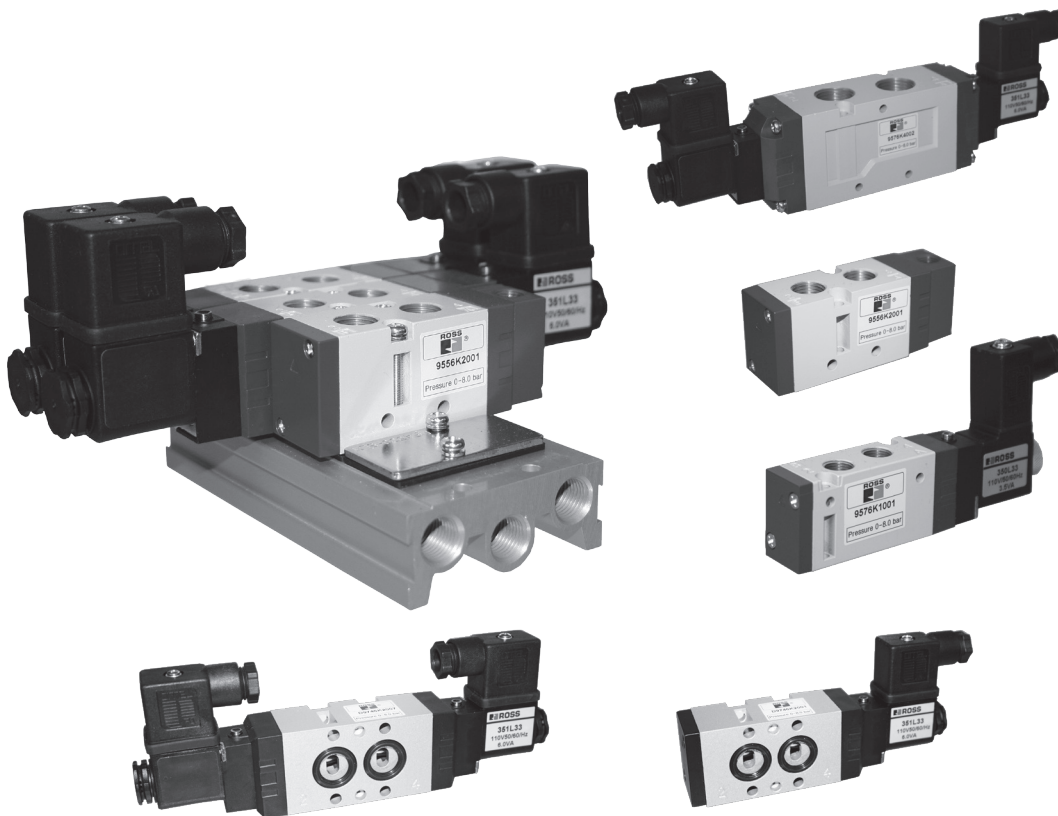


# ROSS CONTROLS

## 95 Series Inline Directional Control Valves



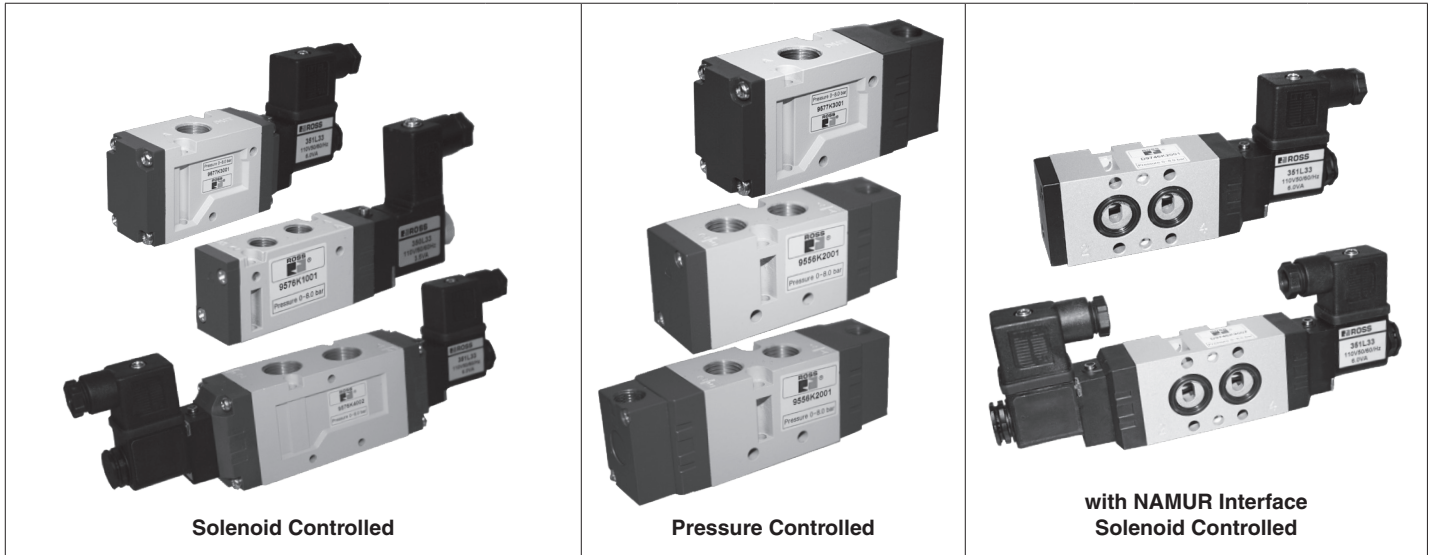
• *Manufacturers of Premium Pneumatic Controls since 1921* •



# 95 Series Valves

## INLINE DIRECTIONAL VALVES AND MANIFOLDS– KEY FEATURES

- 3/2-, 5/2- and 5/3 way
- Solenoid pilot control and pressure control
- 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 - inline or manifold
- Resilient seal spool construction
- Compact size
- High flow capacity
- Lube or non-lube service
- Manual overrides
- Pressure ports located in valve body
- 5/2 way, 1/4" port NAMUR interface



VALVE TYPE	AVAILABLE PORT SIZES				FLOW	MOUNTING		Page
	1/8	1/4	3/8	1/2	MAX FLOW Cv	INLINE	MANIFOLD	
<b>SOLENOID CONTROLLED</b>								
3/2 NC/NO Spring return					2.6			3
5/2 Spring Return					4.5			4
5/2 Detented					4.5			5
5/3 Spring Center					2.2			6
<b>PRESSURE CONTROLLED</b>								
3/2 NC/NO Spring return					2.6			7
5/2 Spring Return					4.5			8
5/2 Detented					4.5			9
5/3 Spring Center					3.4			10
<b>with NAMUR INTERFACE SOLLENOID CONTROLLED</b>								
					1.3			13
<b>ACCESSORIES</b>								
Manifold Blocks (3/2 Valves)								11
Manifold Blocks (5/2 & 5/3 Valves)								12
Manifold Blanking Plates								11-12
Pilot Coils & Connectors								14
MUFL-AIR® SILENCERS								14

# Solenoid Controlled Valves

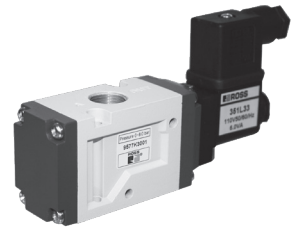
## 3/2 - Single Solenoid, Spring Return

95 Series

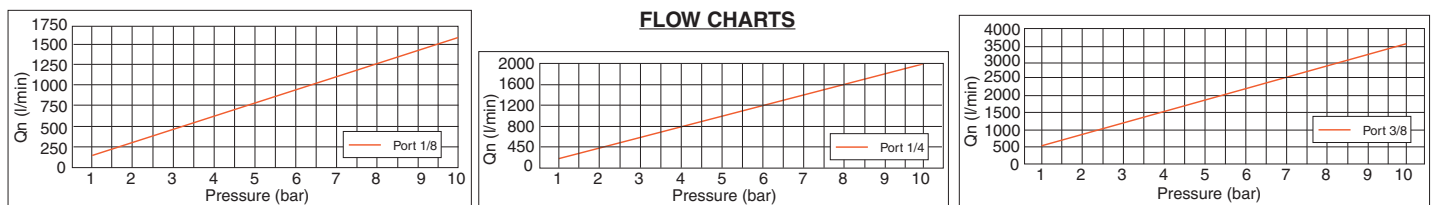
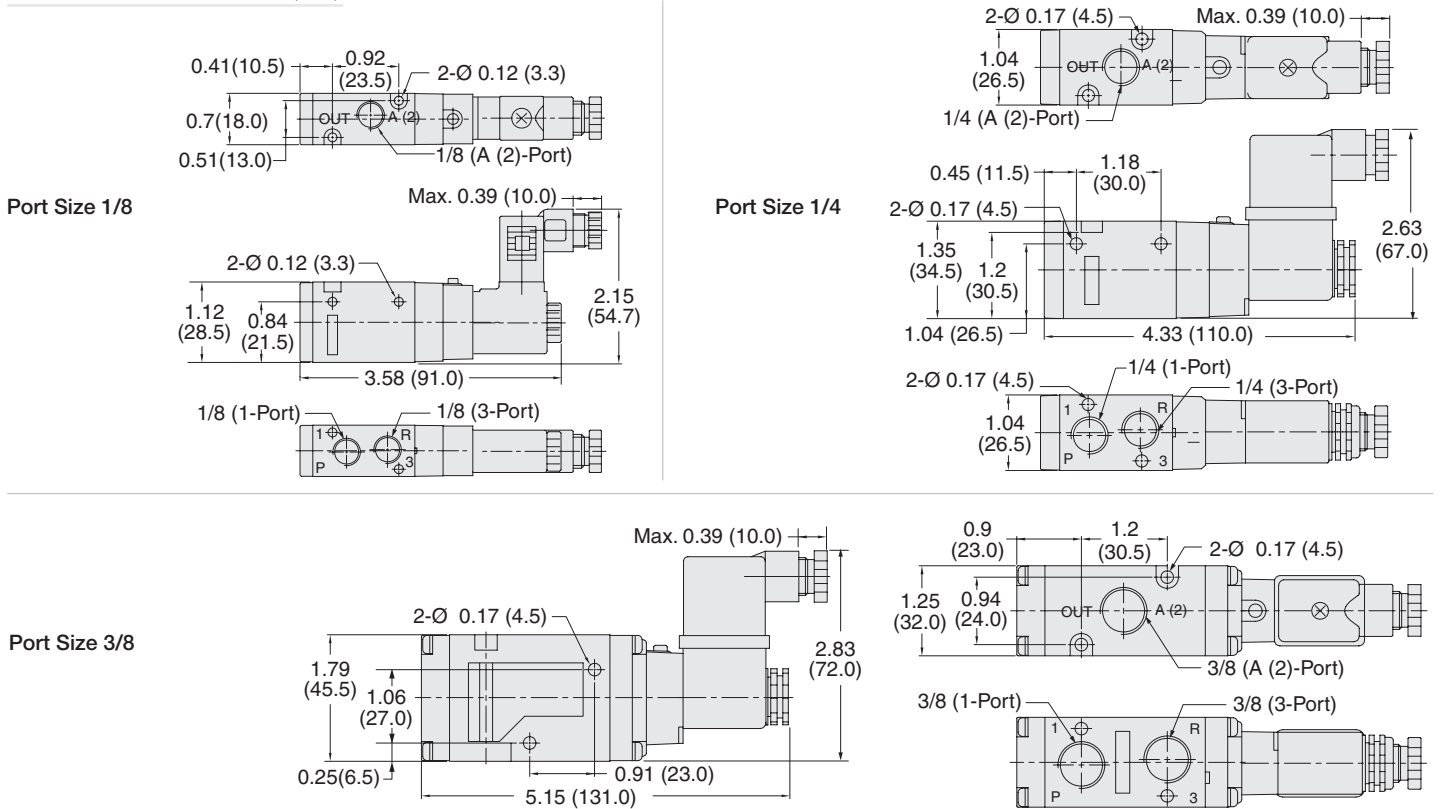
Port Size		Valve Model Number*		Avg. C <sub>v</sub>	Weight lb (kg)
1, 2	3	Normally Closed	Normally Open		
1/8	1/8	9573K1001**	9574K1001**	0.9	0.38 (0.17)
1/4	1/4	9573K2001**	9574K2001**	1.3	0.70 (0.32)
3/8	3/8	9573K3001**	9574K3001**	2.6	1.15 (0.52)

Normally Closed

Normally Open



### Valve Dimensions – inches (mm)



For connector options and manifold accessories, see pages 11, 12 & 14.

\* NPT port threads, for BSP threads add a "D" prefix to the model number e.g., D9573K1001.

\*\* Insert voltage code: "W" = 24 volts DC; "Z" = 110-120 volts AC, 50/60 Hz; e.g., 9573K1001W.

### STANDARD SPECIFICATIONS (for valves on this page):

**Construction:** Spool.

**Mounting Type:** In-line or manifold mounted.

**Standard Voltages:** 24 volts DC; 110 volts AC, 50/60 Hz.

**Power Consumption:** 3.5 VA holding on 50/60 Hz; 2.5 watts on DC.

**Ambient/Media Temperature:** 41° to 140°F (5° to 60°C).

**Flow Media:** Filtered air.

**Inlet Pressure:** 22.5 to 150 psig (1.5 to 10 bar).

**Manual Override:** Pushbutton, non-locking.

**For other options, consult ROSS.**

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

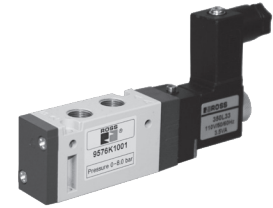
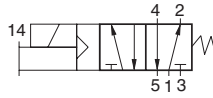


# Solenoid Controlled Valves

## 5/2- Single Solenoid, Spring Return

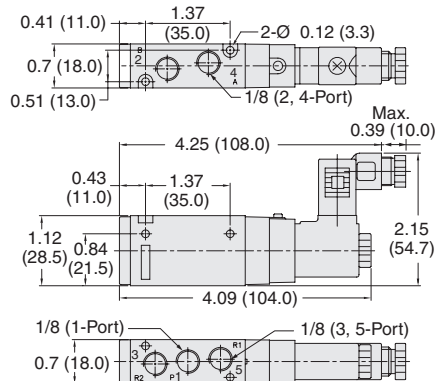
# 95 Series

Port Size	Valve Model Number*	Avg. $C_v$	Weight lb (kg)
1, 2, 4	3, 5	Normally Closed	
1/8	1/8	9576K1001**	0.9 0.43 (0.20)
1/4	1/8	9576K2001**	1.3 0.80 (0.36)
3/8	3/8	9576K3001**	2.6 1.29 (0.59)
1/2	1/2	9576K4001**	4.5 1.66 (0.75)

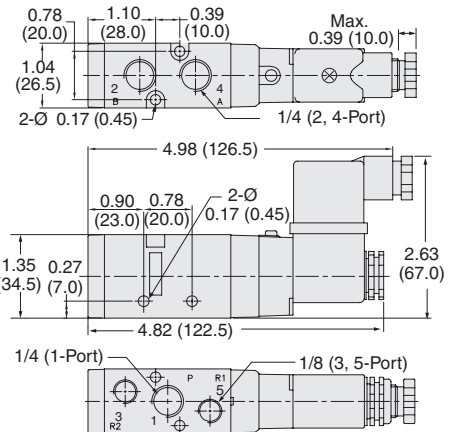


### Valve Dimensions – inches (mm)

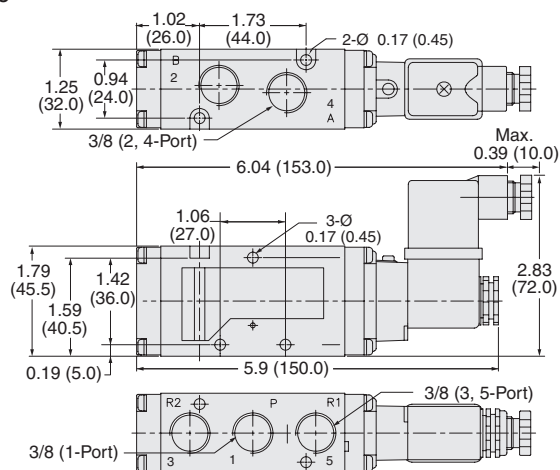
#### Port Size 1/8



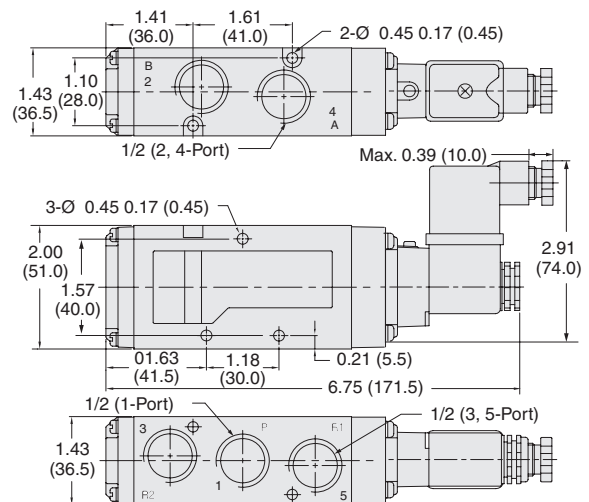
#### Port Size 1/4



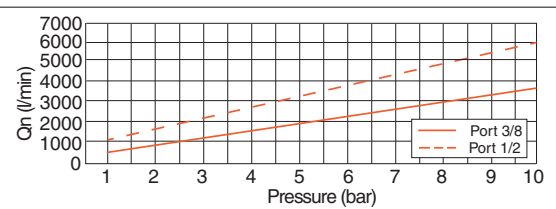
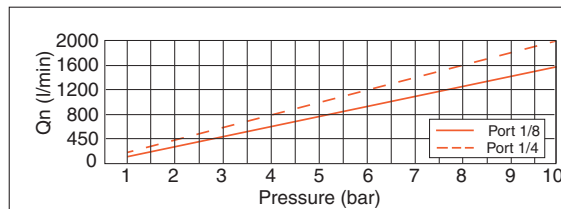
#### Port Size 3/8



#### Port Size 1/2



### FLOW CHARTS



For connector options and manifold accessories, see pages 11, 12 & 14.

\* NPT port threads, for BSP threads add a "D" prefix to the model number e.g., D9576K1001.

\*\* Insert voltage code: "W" = 24 volts DC; "Z" = 110-120 volts AC, 50/60 Hz; e.g., 9576K1001W.

### STANDARD SPECIFICATIONS (for valves on this page):

**Construction:** Spool.

**Mounting Type:** In-line or manifold mounted.

**Standard Voltages:** 24 volts DC; 110 volts AC, 50/60 Hz.

**Power Consumption:** 3.5 VA holding on 50/60 Hz; 2.5 watts on DC.

**Ambient/Media Temperature:** 41° to 140°F (5° to 60°C).

**Flow Media:** Filtered air.

**Inlet Pressure:** 22.5 to 150 psig (1.5 to 10 bar).

**Manual Override:** Pushbutton, non-locking.

**For other options, consult ROSS.**

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

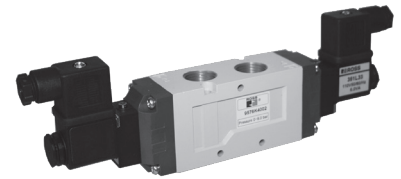
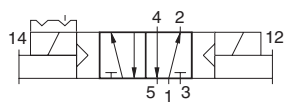


# Solenoid Controlled Valves

## 5/2- Double Solenoid, Detented

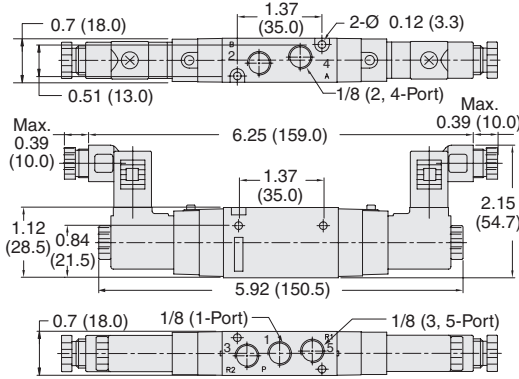
95 Series

Port Size	Valve Model Number*	Avg. C <sub>v</sub>	Weight lb (kg)
1, 2, 4	3, 5	Normally Closed	
1/8	1/8	9576K1002**	0.9 0.62 (0.28)
1/4	1/8	9576K2002**	1.3 1.04 (0.47)
3/8	3/8	9576K3002**	2.6 1.58 (0.72)
1/2	1/2	9576K4002**	4.5 2.04 (0.93)

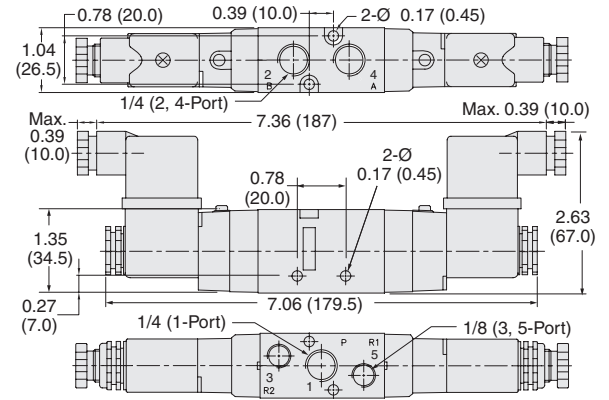


### Valve Dimensions – inches (mm)

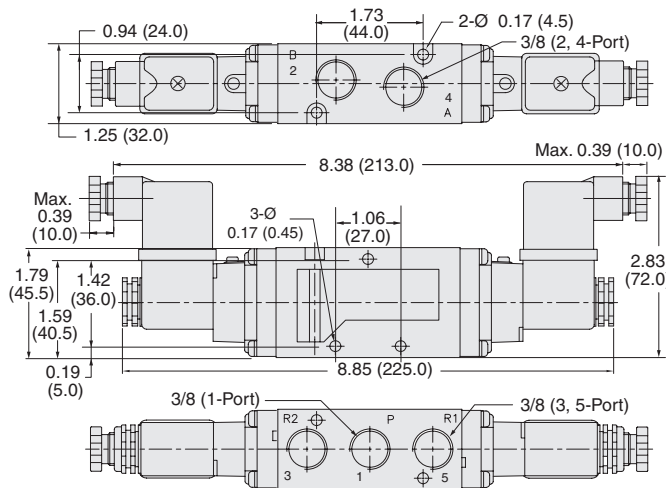
#### Port Size 1/8



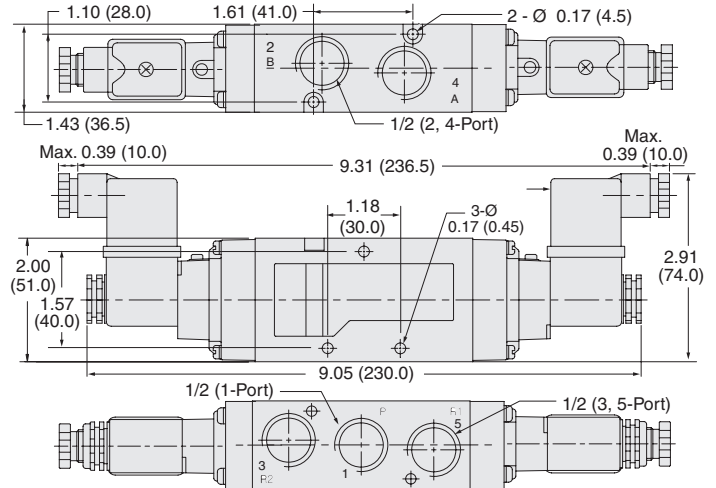
#### Port Size 1/4



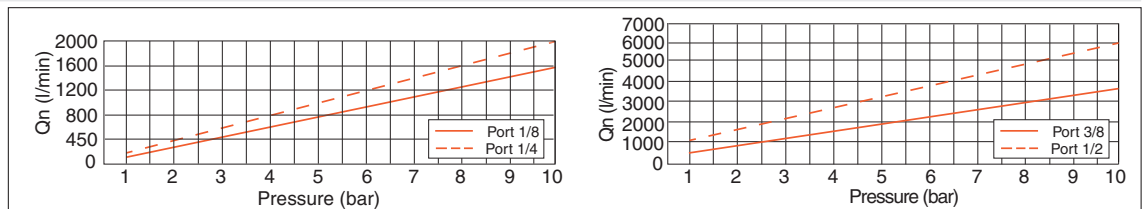
#### Port Size 3/8



#### Port Size 1/2



### FLOW CHARTS



For connector options and manifold accessories, see pages 11, 12 & 14.

\* NPT port threads, for BSPP threads add a "D" prefix to the model number e.g., D9576K1002.

\*\* Insert voltage code: "W" = 24 volts DC; "Z" = 110-120 volts AC, 50/60 Hz; e.g., 9576K1002W.

### STANDARD SPECIFICATIONS (for valves on this page):

**Construction:** Spool.

**Mounting Type:** In-line or manifold mounted.

**Standard Voltages:** 24 volts DC; 110 volts AC, 50/60 Hz.

**Power Consumption:** 3.5 VA holding on 50/60 Hz; 2.5 watts on DC.

**Ambient/Media Temperature:** 41° to 140°F (5° to 60°C).

**Flow Media:** Filtered air.

**Inlet Pressure:** 22.5 to 150 psig (1.5 to 10 bar).

**Manual Override:** Pushbutton, non-locking.

**For other options, consult ROSS.**

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

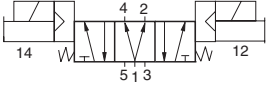
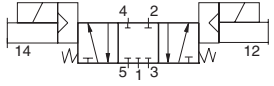
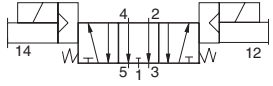


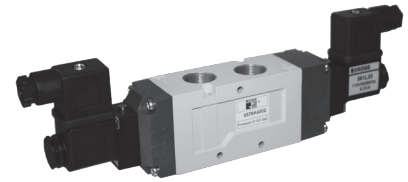
# Solenoid Controlled Valves

## 5/3- Double Solenoid, Spring Center

95 Series

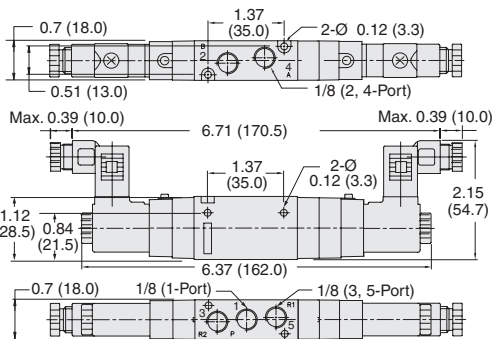
Port Size		Valve Model Number*			Avg. C <sub>v</sub>	Weight lb (kg)
1, 2, 4	3, 5	Power Center	Closed Center	Open Center		
1/8	1/8	9577K1019**	9577K1010**	9577K1007**	0.7	0.70 (0.32)
1/4	1/8	9577K2019**	9577K2010**	9577K2007**	1.1	1.26 (0.57)
3/8	3/8	9577K3019**	9577K3010**	9577K3007**	2.2	1.71 (0.78)
1/2	1/2	9577K4019**	9577K4010**	9577K4007**	4.5	2.41 (1.09)

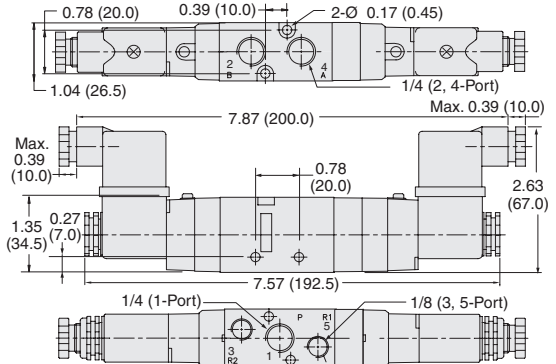


### Valve Dimensions – inches (mm)

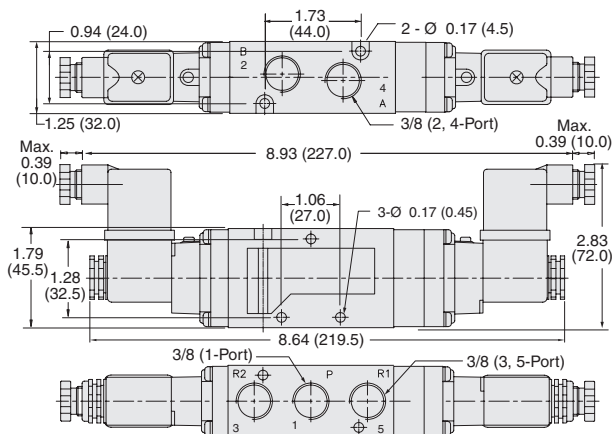
#### Port Size 1/8



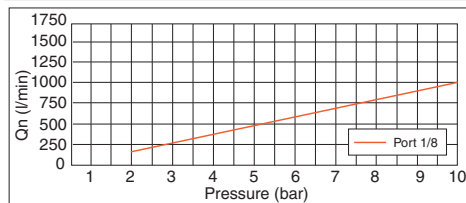
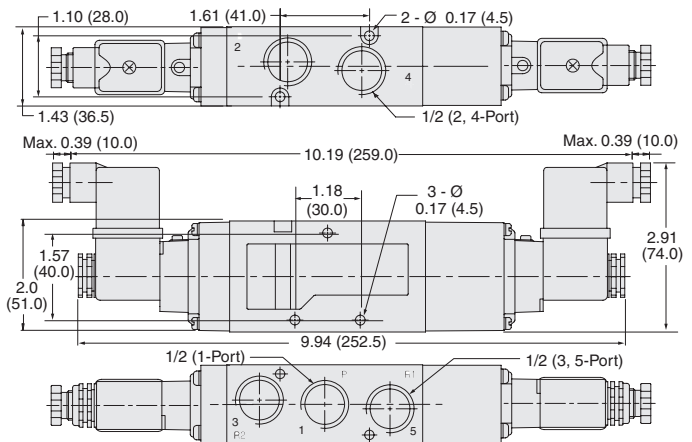
#### Port Size 1/4



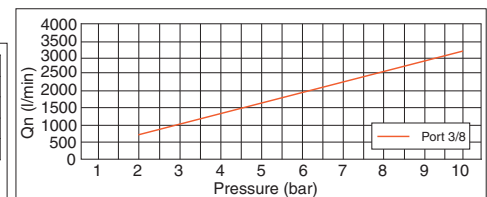
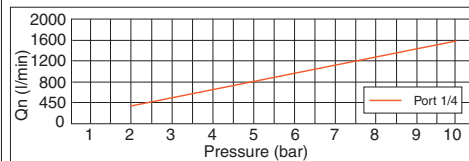
#### Port Size 3/8



#### Port Size 1/2



### FLOW CHARTS



For connector options and manifold accessories, see pages 11, 12 & 14.

\* NPT port threads, for BSPP threads add a "D" prefix to the model number e.g., D9577K1019.

\*\* Insert voltage code: "W" = 24 volts DC; "Z" = 110-120 volts AC, 50/60 Hz; e.g., 9577K1019W.

### STANDARD SPECIFICATIONS (for valves on this page):

**Construction:** Spool.

**Mounting Type:** In-line or manifold mounted.

**Standard Voltages:** 24 volts DC; 110 volts AC, 50/60 Hz.

**Power Consumption:** 3.5 VA holding on 50/60 Hz; 2.5 watts on DC.

**Ambient/Media Temperature:** 41° to 140°F (5° to 60°C).

**Flow Media:** Filtered air.

**Inlet Pressure:** 30 to 150 psig (2 to 10 bar).

**Manual Override:** Pushbutton, non-locking.

**For other options, consult ROSS.**

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



# Pressure Controlled Valves

## 3/2 - Single Pilot, Spring Return

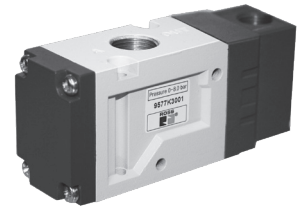
95 Series

Port Size		Signal Port Thread	Valve Model Number*		Avg. C <sub>v</sub>	Weight lb (kg)
1, 2	3		Normally Closed	Normally Open		
1/8	1/8	10-32 UNF	9553K1000	9554K1000	0.9	0.26 (0.12)
1/4	1/4	1/8	9553K2000	9554K2000	1.3	0.51 (0.23)
3/8	3/8	1/8	9553K3000	9554K3000	2.6	0.86 (0.39)

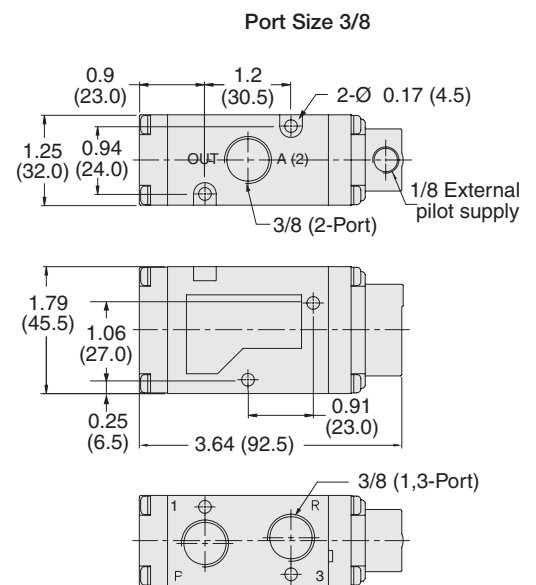
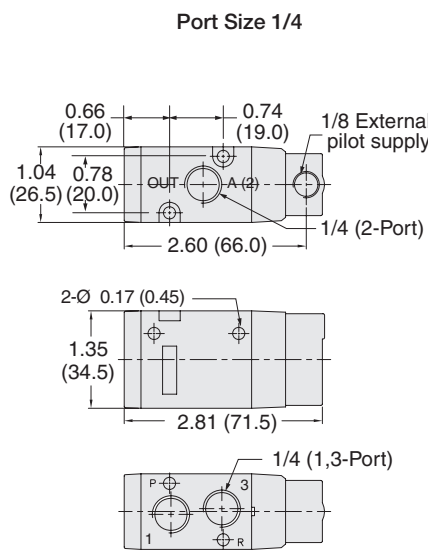
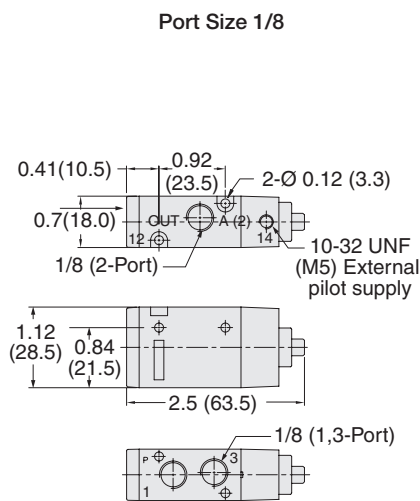
  

Normally Closed

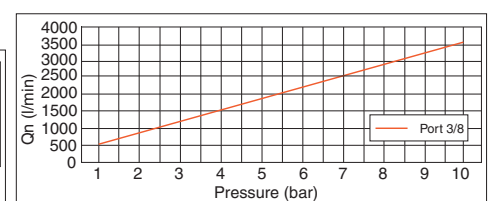
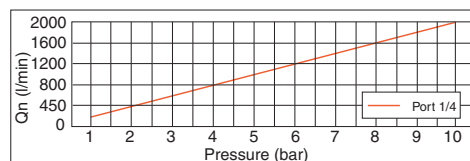
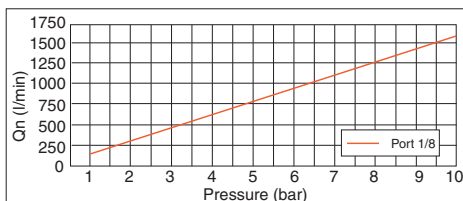
Normally Open



### Valve Dimensions – inches (mm)



### FLOW CHARTS



For connector options and manifold accessories, see pages 11, 12 & 14.

\* NPT port threads, for BSPP threads add a "D" prefix to the model number e.g., D9553K1000.

### STANDARD SPECIFICATIONS (for valves on this page):

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

**Inlet Pressure:** 22.5 to 150 psig (1.5 to 10 bar).  
**Pilot Pressure:** Must be equal to or greater than inlet pressure.  
**Manual Override:** Pushbutton, non-locking.  
**For other options, consult ROSS.**

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

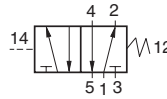


# Pressure Controlled Valves

## 5/2- Single Pilot, Spring Return

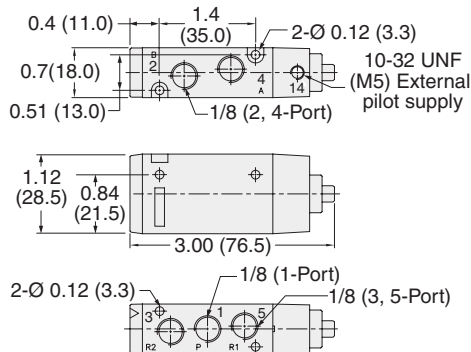
# 95 Series

Port Size	Signal Port Thread	Valve Model Number*	Avg. C <sub>v</sub>	Weight lb (kg)
1, 2, 4	3, 5	Normally Closed		
1/8	1/8	9556K1001	0.9	0.26 (0.12)
1/4	1/8	9556K2001	1.3	0.48 (0.22)
3/8	3/8	9556K3001	2.6	1.02 (0.46)
1/2	1/2	9556K4001	4.5	1.39 (0.63)

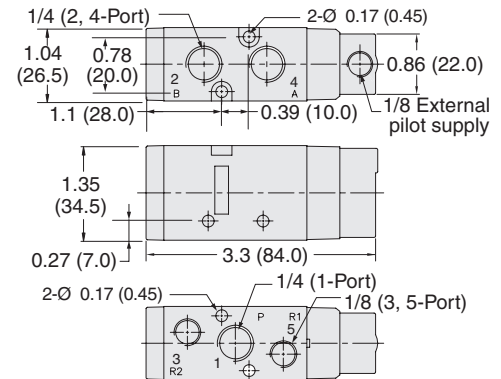


### Valve Dimensions – inches (mm)

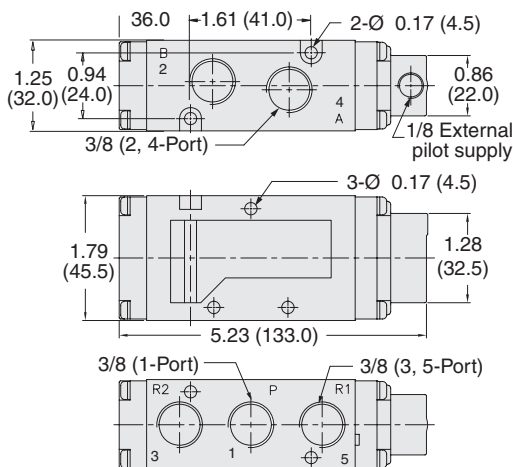
#### Port Size 1/8



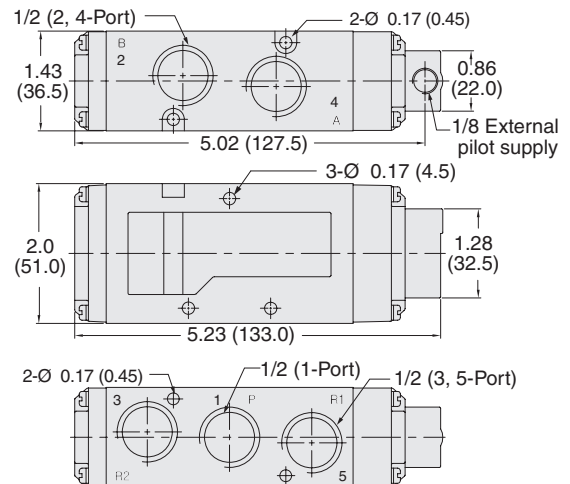
#### Port Size 1/4



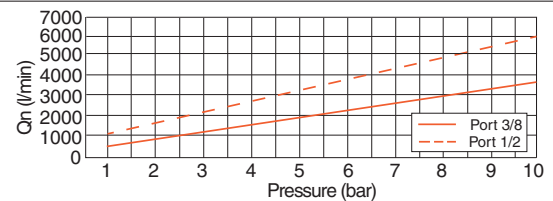
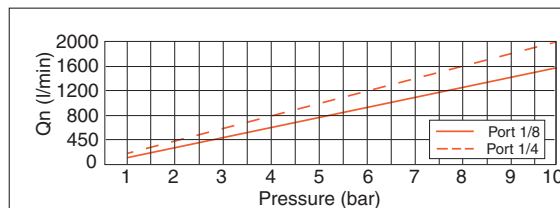
#### Port Size 3/8



#### Port Size 1/2



### FLOW CHARTS



For connector options and manifold accessories, see pages 11, 12 & 14.

\* NPT port threads, for BSPP threads add a "D" prefix to the model number e.g., D9556K1001.

### STANDARD SPECIFICATIONS (for valves on this page):

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

**Inlet Pressure:** 22.5 to 150 psig (1.5 to 10 bar).  
**Pilot Pressure:** Must be equal to or greater than inlet pressure.  
**Manual Override:** Pushbutton, non-locking.  
**For other options, consult ROSS.**

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



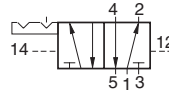


# Pressure Controlled Valves

## 5/2- Double Pilot, Detented

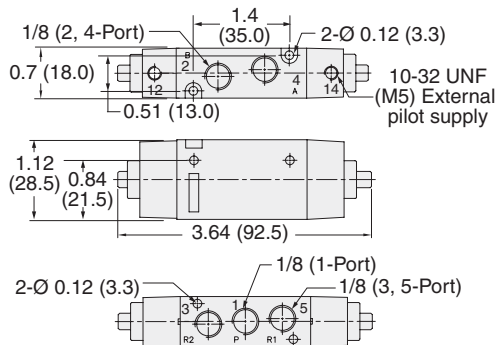
95 Series

Port Size	Signal Port	Valve Model Number*	Avg. C <sub>v</sub>	Weight
1, 2, 4	3, 5	Normally Closed		lb (kg)
1/8	1/8	9556K1002	0.9	0.32 (0.15)
1/4	1/8	9556K2002	1.3	0.59 (0.27)
3/8	3/8	9556K3002	2.6	1.07 (0.49)
1/2	1/2	9556K4002	4.5	1.55 (0.70)

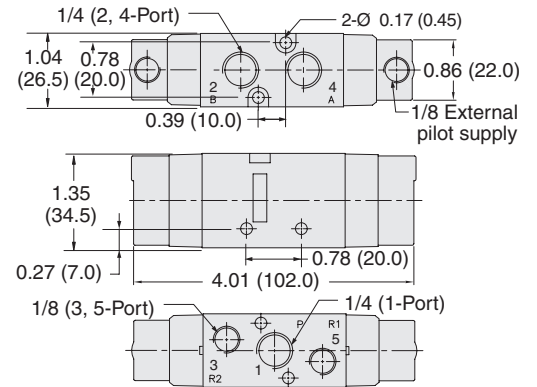


### Valve Dimensions – inches (mm)

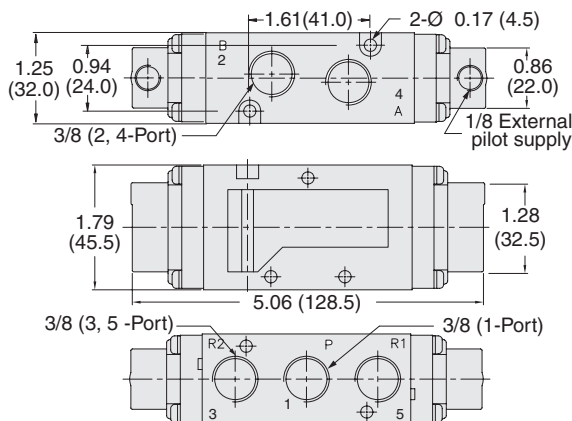
#### Port Size 1/8



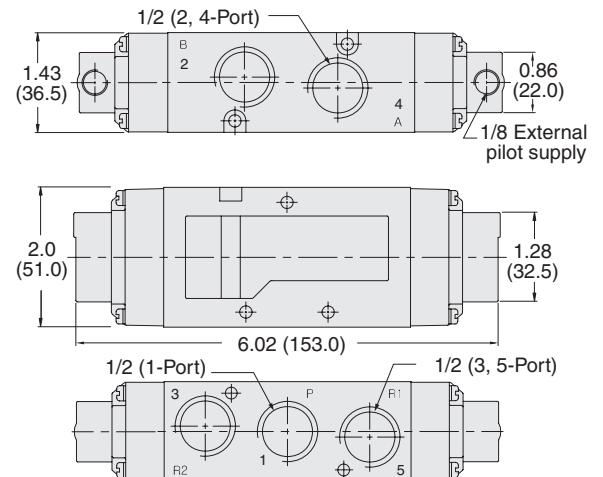
#### Port Size 1/4



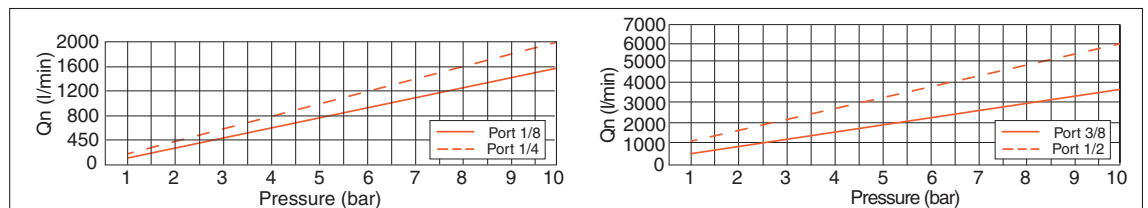
#### Port Size 3/8



#### Port Size 1/2



### FLOW CHARTS



For connector options and manifold accessories, see pages 11, 12 & 14.

\* NPT port threads, for BSPP threads add a "D" prefix to the model number e.g., D9556K1002.

### STANDARD SPECIFICATIONS (for valves on this page):

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

**Inlet Pressure:** 22.5 to 150 psig (1.5 to 10 bar).  
**Pilot Pressure:** Must be equal to or greater than inlet pressure.  
**Manual Override:** Pushbutton, non-locking.  
**For other options, consult ROSS.**

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



# Pressure Controlled Valves

## 5/3- Double Pilot, Spring Center

95 Series

Port Size		Signal Port Thread	Valve Model Number*			Avg. C <sub>v</sub>	Weight lb (kg)
1, 2, 4	3, 5		Power Center	Closed Center	Open Center		
1/8	1/8	10-32 UNF	9557K1019	9557K1010	9557K1007	0.7	0.38 (0.17)
1/4	1/8	1/8	9557K2019	9577K2010	9557K2007	1.1	0.51 (0.23)
3/8	3/8	1/8	9557K3019	9557K3010	9557K3007	2.2	1.39 (0.63)
1/2	1/2	1/8	9557K4019	9557K4010	9557K4007	3.4	1.98 (0.90)

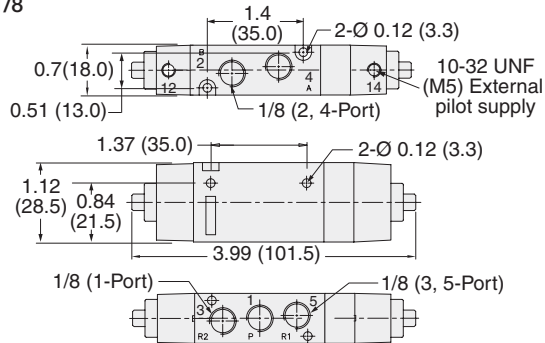
  

Power Center	Closed Center	Open Center

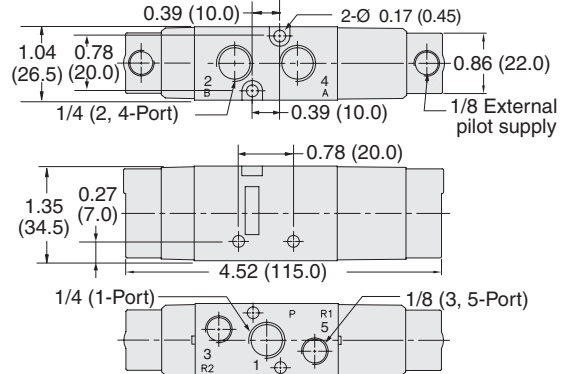


### Valve Dimensions – inches (mm)

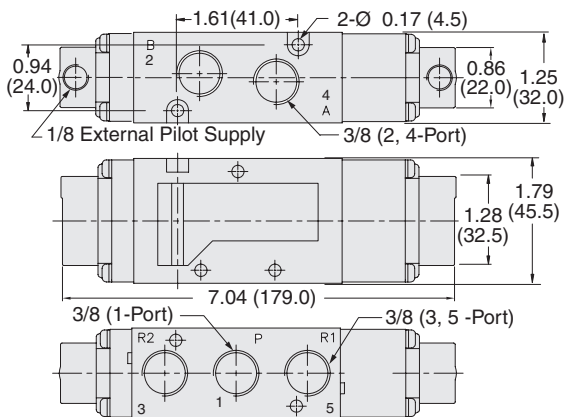
#### Port Size 1/8



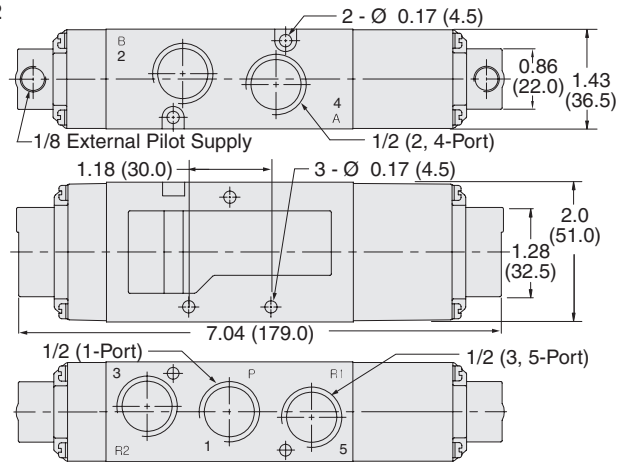
#### Port Size 1/4



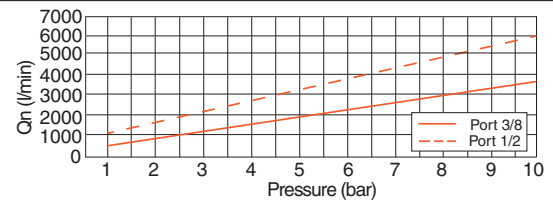
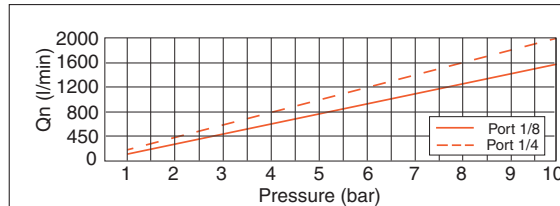
#### Port Size 3/8



#### Port Size 1/2



### FLOW CHARTS



For connector options and manifold accessories, see pages 11, 12 & 14.

\* NPT port threads, for BSPP threads add a "D" prefix to the model number e.g., D9557K1019.

### STANDARD SPECIFICATIONS (for valves on this page):

**Construction:** Spool.

**Mounting Type:** In-line or manifold mounted.

**Ambient/Media Temperature:** 41° to 140°F (5° to 60°C).

**Flow Media:** Filtered air.

**Inlet Pressure:** 30 to 150 psi (2 to 10 bar).

**Pilot Pressure:** Must be equal to or greater than inlet pressure.

**Manual Override:** Pushbutton, non-locking.

**For other options, consult ROSS.**

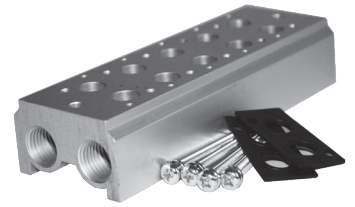
**IMPORTANT NOTE:** Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

# Manifold Base

for 3/2- Spring Return or Detented Valves

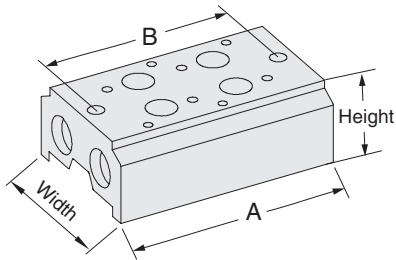
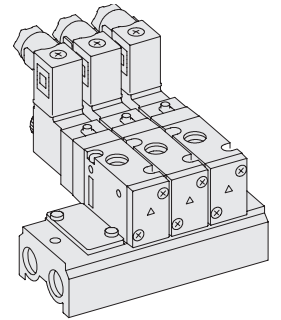
95 Series

Port Size		Manifold Base Part Number*				
1, 3	2	2 Valves Unit	4 Valves Unit	6 Valves Unit	8 Valves Unit	10 Valves Unit
1/8	1/8	1472H91	1474H91	1476H91	1478H91	1480H91
1/4	1/4	1492H91	1494H91	1496H91	1498H91	1500H91



Port Size	Base Dimensions*	Numbers of Valves Unit				
		2	4	6	8	10
		Dimensions – inches (mm)				
1/8	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	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)

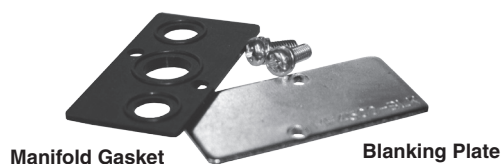
\*Height, length, width - inches (mm).



## MANIFOLD BLANKING KITS

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

Port Size	Part Number
1/8	1813H77
1/4	1814H77



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

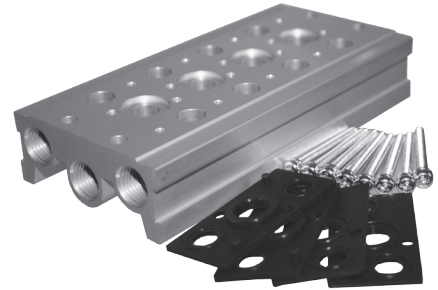


# Manifold Base

for 5/2 & 5/3- Spring Return or Detented Valves

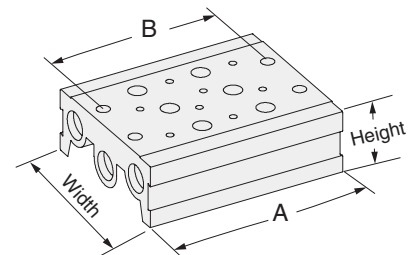
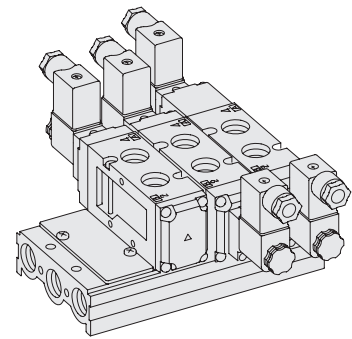
95 Series

Port Size		Manifold Base Part Number*				
1, 2, 4	3, 5	2 Valves Unit	4 Valves Unit	6 Valves Unit	8 Valves Unit	10 Valves Unit
1/8	1/8	1392H91	1394H91	1396H91	1398H91	1390H91
1/4	1/4	1412H91	1414H91	1416H91	1418H91	1420H91
3/8	3/8	1432H91	1434H91	1436H91	1438H91	1440H91
1/2	1/2	1652H91	1654H91	1656H91	1658H91	1650H91



Port Size	Base Dimensions*	Numbers of Valves Unit				
		2	4	6	8	10
Dimensions – inches (mm)						
1/8	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	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	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	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)

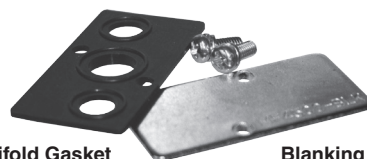
\*Height, length, width - inches (mm); Weight - lb (Kg).



## MANIFOLD BLANKING KITS

Port Size	Part Number
1/8	1806H77
1/4	1807H77
3/8	1808H77
1/2	1809H77

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



Manifold Gasket

Blanking Plate

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

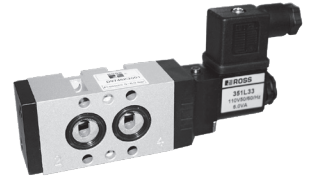
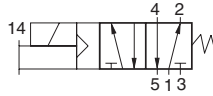
# Solenoid Controlled Valves with NAMUR Interface

## 5/2- Single or Double Solenoid

95 Series

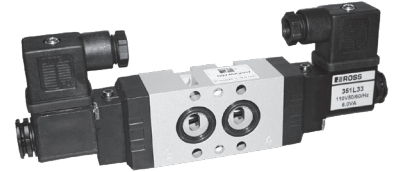
### Single Solenoid, Spring Return

Port Size	Valve Model Number*	Avg. C <sub>v</sub>	Weight lb (kg)
1, 3, 5	Normally Closed		
1/4	9576K2901**	1.3	0.80 (0.36)

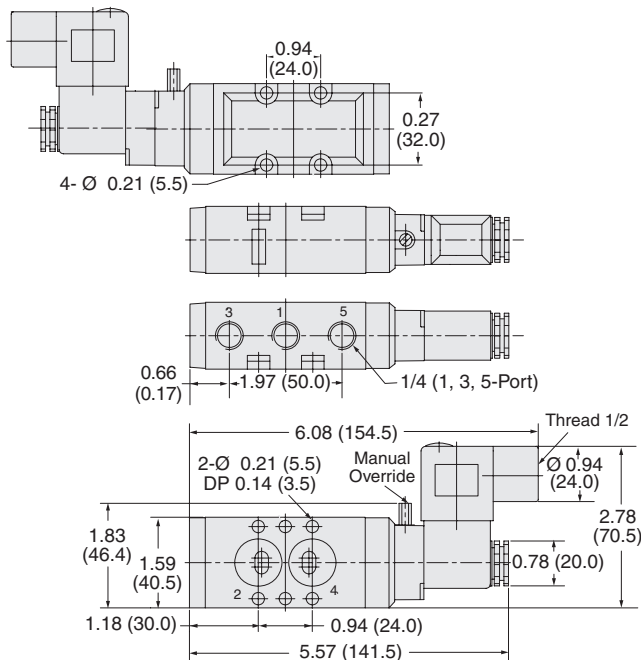


### Double Solenoid, Detented

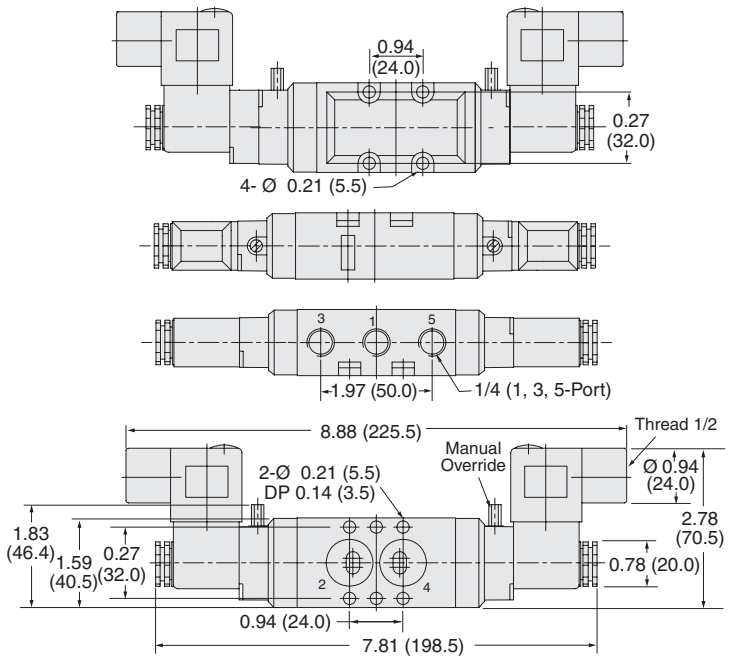
Port Size	Valve Model Number*	Avg. C <sub>v</sub>	Weight lb (kg)
1, 3, 5	Normally Open		
1/4	9576K2902**	1.3	1.04 (0.47)



#### Single Solenoid Valve

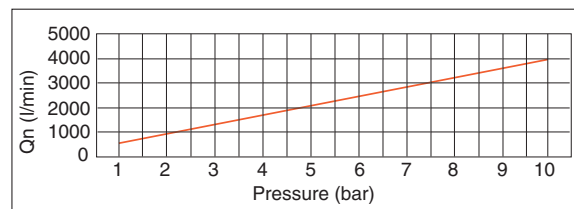


#### Double Solenoid Valve



#### Valve Dimensions – inches (mm)

#### FLOW CHART



*Accessories not included with the product, see page 14 for accessories.*

\* NPT port threads, for BSPP threads add a "D" prefix to the model number e.g., D9576K2901.

\*\* Insert voltage code: "W" = 24 volts DC; "Z" = 110-120 volts AC, 50/60 Hz; e.g., 9576K2901W.

#### STANDARD SPECIFICATIONS (for valves on this page):

**Construction:** Spool.

**Mounting Type:** In-Line.

**Standard Voltages:** 24 volts DC; 110 volts AC, 50/60 Hz.

**Power Consumption:** 5.5 VA holding on 50/60 Hz; 2.5 watts on DC.

**Ambient/Media Temperature:** 41° to 140°F (5° to 60°C).

**Flow Media:** Filtered air.

**Inlet Pressure:** 22.5 to 150 psig (1.5 to 10 bar).

**Manual Override:** Pushbutton, non-locking.

**For other options, consult ROSS.**

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



# Accessories

## ELECTRICAL CONNECTORS

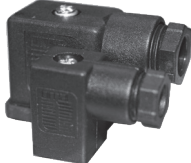
Electrical connectors are required to connect the valve solenoids to the drop cords supplying electrical power. Each connector can be positioned so that the cord exits upward or to the side. Cords of 6 mm to 10 mm diameter can be used.

Connectors with a light in a translucent housing are also available to serve as indicator lights.

Order connectors by the part numbers given in the tables below.


### 3-Pin Electrical Connectors for 95 Series Solenoid Pilot Controlled Valves

Port Size	Part Number	
	24 Volts DC	110 Volts AC
1/8	2515K77	
1/4, 3/8, 1/2	2522K77	




### 3-Pin Electrical Connectors with LED & Surge Suppressor for Series 95 Solenoid Pilot Controlled Valves

Port Size	Part Number	
	24 Volts DC	110 Volts AC
1/8	1766L77	1780L77
1/4, 3/8, 1/2	1767L77	1781L77



### 3-Pin Solenoid Coil IP65 for Series 95 Solenoid Pilot Controlled Valves


Port Size	Part Number	
	24 Volts DC	110 Volts AC
1/8	341L33	350L33
1/4, 3/8, 1/2	342L33	351L33



## MUFL-AIR® SILENCERS

Reduces exhaust noise levels.

Port Size	Threads*	Part Number
1/8	Male	5500A1003
1/4	Male	5500A2003
3/8	Male	5500A3013
1/2	Male	5500A4003



\* NPT port threads, for BSPP threads add a "D" prefix to the model number e.g., D5500A1003.

### STANDARD SPECIFICATIONS (for silencers):

**Pressure Range:** 0 to 150 psig (0 to 10.3 bar) maximum.

**Flow Media:** Filtered air.

**Port Threads:** NPT, BSPP.

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



# CAUTIONS, WARNINGS and STANDARD WARRANTY

## PRE-INSTALLATION or SERVICE

1. Before servicing a valve or other pneumatic component, be sure that all sources of energy are turned off, the entire pneumatic system is shut off and exhausted, and all power sources are locked out (ref: OSHA 1910.147, EN 1037).
2. All ROSS products, including service kits and parts, should be installed and/or serviced only by persons having training and experience with pneumatic equipment. Because any installation can be tampered with or need servicing after installation, persons responsible for the safety of others or the care of equipment must check every installation on a regular basis and perform all necessary maintenance.
3. All applicable instructions should be read and complied with before using any fluid power system in order to prevent harm to persons or equipment. In addition, overhauled or serviced valves must be functionally tested prior to installation and use.
4. Each ROSS product should be used within its specification limits. In addition, use only ROSS parts to repair ROSS products.

**WARNING:** *Failure to follow these directions can adversely affect the performance of the product or result in the potential for human injury or damage to property.*

## FILTRATION and LUBRICATION

5. 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. ROSS recommends a filter with a 5-micron rating for normal applications.
6. All standard ROSS filters and lubricators with polycarbonate plastic bowls are designed for compressed air applications only. Do *not* fail to 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, hazardous leakage, and the potential for human injury or damage to property. Immediately replace a crazed, cracked, or deteriorated bowl. When bowl gets dirty, replace it or wipe it with a clean dry cloth.

7. Only use lubricants which are compatible with materials used in the valves and other components in the system. Normally, compatible lubricants are petroleum based 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 human injury, and/or damage to property.

## AVOID INTAKE/EXHAUST RESTRICTION

8. Do not restrict the air flow in the supply line. To do so could reduce the pressure of the supply air below the minimum requirements for the valve and thereby cause erratic action.
9. 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.

**WARNING:** *ROSS expressly disclaims all warranties and responsibility for any unsatisfactory performance or injuries caused by the use of the wrong type, wrong size, or an inadequately maintained silencer installed with a ROSS product.*

## POWER PRESSES

10. 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.

## ENERGY ISOLATION/EMERGENCY STOP

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

## STANDARD WARRANTY

warranty is limited to repair or replacement of the product or refund of the purchase price paid solely at the discretion of ROSS and provided such product is returned to ROSS freight prepaid and upon examination by ROSS is found to be defective. This warranty becomes void in the event that product has been subject to misuse, misapplication, improper maintenance, modification or tampering.

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

All products sold by ROSS CONTROLS are warranted for a one-year period [with the exception of all Filters, Regulators and Lubricators ("FRLs") which are warranted for a period of seven years] from the date of purchase to be free of defects in material and workmanship. ROSS' obligation under this





**GLOBAL Reach with a LOCAL Touch<sup>SM</sup>**

**ROSS CONTROLS**

Troy, Michigan, USA  
Telephone: + 1-248-764-1800  
Fax: + 1-248-764-1850  
In the United States:  
Customer Service: 1-800-GET ROSS  
(438-7677)  
Technical Service: 1-888-TEK-ROSS  
(835-7677)  
Email: [sales@rosscontrols.com](mailto:sales@rosscontrols.com)  
[www.rosscontrols.com](http://www.rosscontrols.com)

**ROSS EUROPA GmbH**

Langen, Germany  
Telephone: + 49-6103-7597-0  
Fax: + 49-6103-74694  
Email: [info@rosseuropa.com](mailto:info@rosseuropa.com)  
[www.rosseuropa.com](http://www.rosseuropa.com)

**ROSS ASIA K.K.**

Kanagawa, Japan  
Telephone: + 81-427-78-7251  
Fax: + 81-427-78-7256  
Email: [custsvc@rossasia.co.jp](mailto:custsvc@rossasia.co.jp)  
[www.rossasia.co.jp](http://www.rossasia.co.jp)

**ROSS UK Ltd.**

Burntwood, United Kingdom  
Telephone: + 44-1543-671-495  
Fax: + 44-1543-674-054  
Email: [sales@rossuk.co.uk](mailto:sales@rossuk.co.uk)  
[www.rossuk.co.uk](http://www.rossuk.co.uk)

**ROSS CONTROLS INDIA Pvt. Ltd.**

Chennai, India  
Telephone: + 91-44-2624-9040  
Fax: + 91-44-2625-8730  
Email: [ross.chennai@rossindia.net](mailto:ross.chennai@rossindia.net)

**ROSS SOUTH AMERICA Ltda.**

São Paulo, Brazil CEP 09725-020  
Telephone: + 55-11-4335-2200  
Fax: + 55-11-4335-3888  
Email: [vendas@ross-sulamerica.com.br](mailto:vendas@ross-sulamerica.com.br)

**DIMAFLUID s.a.s.**

Saint Ouen, France  
Telephone: + 33-01-4945-6565  
Fax: + 33-01-4945-6530  
Email: [dimafluid@dimafluid.com](mailto:dimafluid@dimafluid.com)  
[www.dimafluid.com](http://www.dimafluid.com)

**ROSS CONTROLS (CHINA) Ltd.**

Shanghai, China  
Telephone: + 86-21-6915-5551  
Fax: + 86-21-6915-7960  
Email: [sales@rosscontrols.com.cn](mailto:sales@rosscontrols.com.cn)  
[www.rosscontrolschina.com](http://www.rosscontrolschina.com)

**ROSS DECCO Company**

(Industrial Solenoids Division)  
Ferndale, Michigan, USA  
Telephone: + 1-248-398-5600  
Fax: + 1-248-398-0481  
Email: [sales@rossdecco.com](mailto:sales@rossdecco.com)  
[www.rossdecco.com](http://www.rossdecco.com)

Your local ROSS distributor is:



**There are ROSS Distributors Throughout the World**

To meet your requirements across the globe, ROSS distributors are located throughout the world. Through ROSS or its distributors, guidance is available for the selection of ROSS products, both for those using pneumatic components for the first time and those designing complex pneumatic systems.

This catalog presents an overview of the extensive ROSS product line. Other literature is available for engineering, maintenance, and service requirements. If you need products or specifications not shown here, please contact ROSS or your ROSS distributor. They will be happy to assist you in selecting the best product for your application.