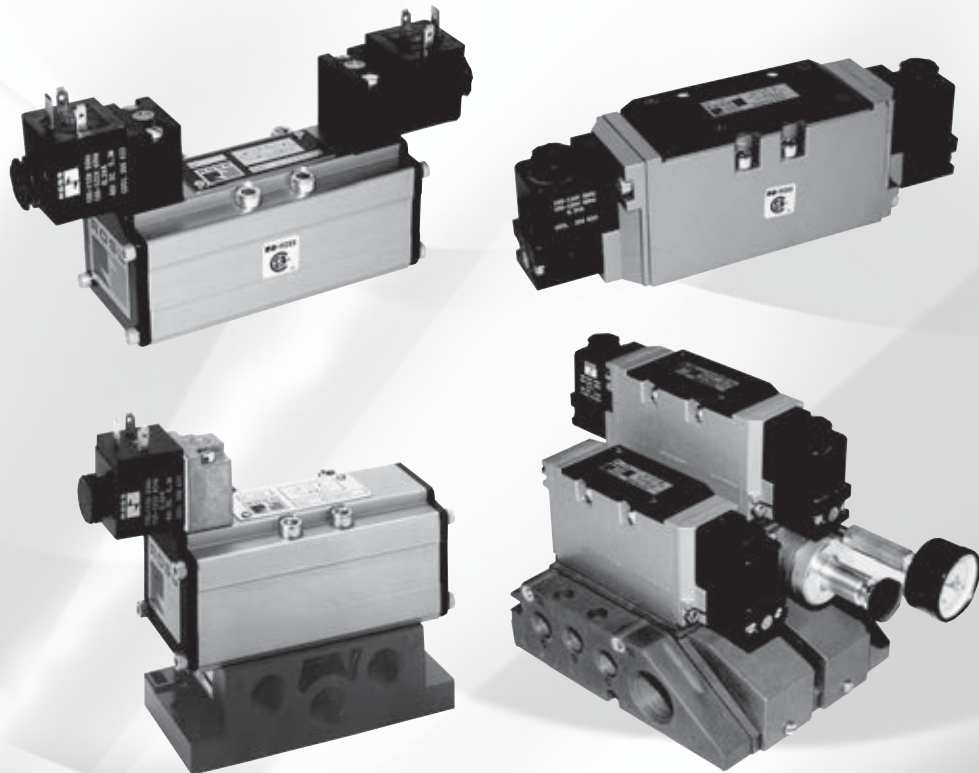


ROSS CONTROLS®



ISO 5599/I VALVES W60 & W64 SERIES
ISO 5599/II VALVES W65 SERIES



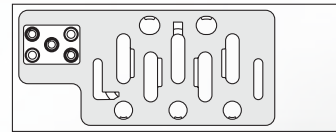
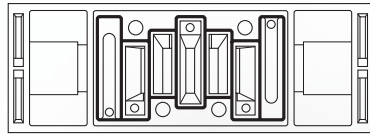
ISO W60, W64, & W65 SERIES VALVES – KEY FEATURES

- ISO Sizes 1, 2, & 3
- 5/2 Single, 5/2 Double, & 5/3 Double Solenoid Pilot & Pressure Controlled Valves
- Available with Buna-N and Fluororelastomer seals for a wide temperature and resistance range
- W60 Series - Precision Finish Stainless Steel Spool & Sleeve internals that provide high shifting speed, long life, non-lube service, and easy maintenance
- W64 Series - Poppet construction is highly tolerant to dirty air
- W65 Series - Precision Finish Stainless Steel Spool & Sleeve internals that provide high shifting speed, long life, non-lube service, and easy maintenance
 - Serial Bus Communication compatible
 - Plug-In valve to base electrical connector eliminates need to disconnect wires to remove valve

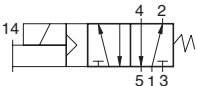
Standard Definitions

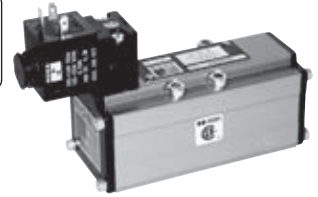
5599/I: Drop-cord Standards for Sizes 1, 2, 3

5599/II: Plug-in Standards for Size 1, 2, 3

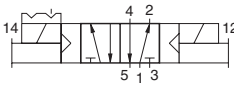


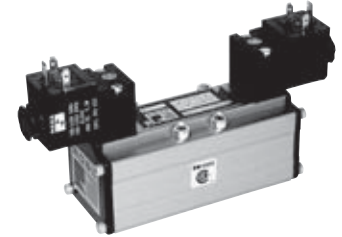
VALVE TYPE	VALVE SERIES	DESCRIPTION		AVAILABLE PORT SIZES									FUNCTIONS						Page			
		ISO Size	Spool & Sleeve	Poppet	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	3/2 Single	5/2 Single	5/2 Double	5/3 Closed Center	5/3 Open Center	5/3 Pressure Center		Max Flow (Cv)	Solenoid Control	Direct Solenoid Control
ISO 5599/I	W60	1	■	■	■	■	■						■	■	■	■	■	0.8	■			A2.3 - A2.7
	W60	2	■	■			■	■					■	■	■	■	■	1.9	■			A2.3 - A2.7
	W60	3	■	■				■	■	■			■	■	■	■	■	3.8	■			A2.3 - A2.7
	W64	1	■	■	■	■	■							■	■	■	■	1.0	■			A2.3 - A2.7
	W64	2	■	■			■	■						■	■	■	■	2.0	■			A2.3 - A2.7
	W64	3	■	■				■	■	■				■	■	■	■	4.0	■			A2.3 - A2.7
Single Sub-Bases & Sub-Base Manifolds																					A2.8	
Accessories																					A2.9 - A2.10	
ISO 5599/II	W65	1	■		■	■							■	■	■	■	■	0.8	■			A2.10 - A2.13
	W65	2	■			■	■						■	■	■	■	■	1.9	■			A2.10 - A2.13
	W65	3	■				■	■	■				■	■	■	■	■	3.8	■			A2.10 - A2.13
Sub-Bases & Modular Manifolds																					A2.14 - A2.15	
Accessories for Sub-Bases & Modular Manifolds																					A2.16	
Single Sub-Bases & Modular Sub-Base Manifolds																					A2.17	
End Plate Kits & Accessories																					A2.18 - A2.19	

5-Way 2-Position Valves, Single Solenoid Pilot Controlled, Spring Return								
ISO Size	Port Size	Valve Model Number*	Avg. C _v	Average Response Constants#		Weight lb (kg)		
				M	F			
					In-Out			Out-Exh.
1	1/8 - 3/8	W6076B2401**	0.8	29	3.5	4.9	1.5 (0.7)	
2	3/8 - 1/2	W6076B3401**	1.9	41	1.5	2.4	2.3 (1.1)	
3	1/2 - 3/4	W6076B4401**	3.8	51	0.8	1.1	3.5 (1.6)	



A

5-Way 2-Position Valves, Double Solenoid Pilot Controlled, Detented								
ISO Size	Port Size	Valve Model Number*	Avg. C _v	Average Response Constants#		Weight lb (kg)		
				M	F			
					In-Out			Out-Exh.
1	1/8 - 3/8	W6076B2407**	0.8	17	3.5	4.9	1.8 (0.9)	
2	3/8 - 1/2	W6076B3407**	1.9	20	1.5	2.5	2.7 (1.2)	
3	1/2 - 3/4	W6076E4407**	3.8	20	0.8	1.1	3.9 (1.8)	



A2

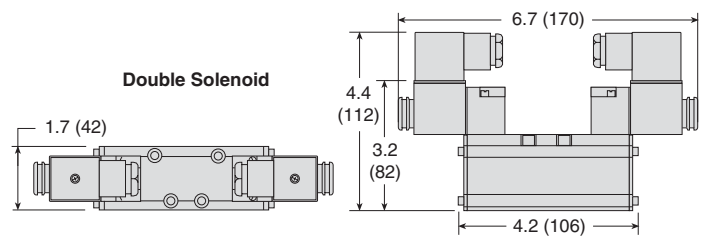
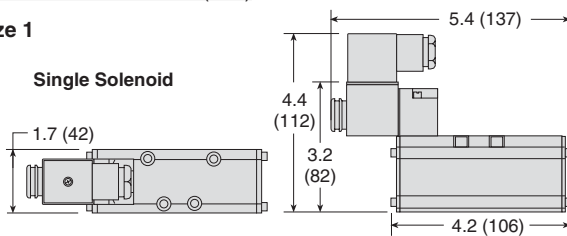
* Sub-bases and sub-base manifolds ordered separately, refer to page A2.8.

** Insert voltage code: "W" = 24 volts DC; "Z" = 110-120 volts AC, 50/60 Hz; e.g., W6076B2401W. For other voltages, consult ROSS.

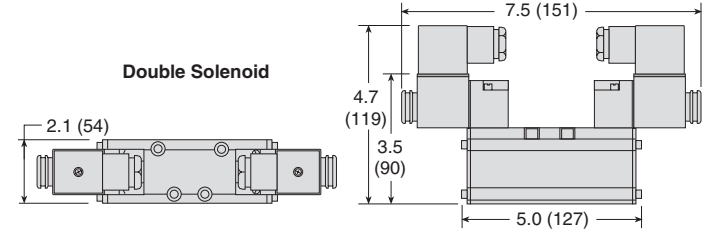
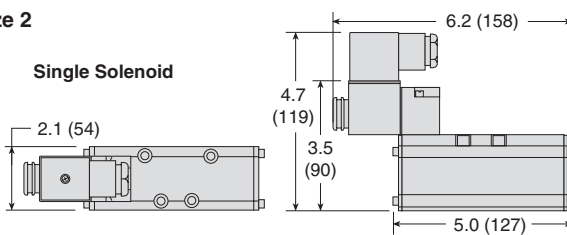
Valve Response Time – Response Time (msec) = M + (F • V). This is the average time required to fill a volume V (cubic inches) to 90% of supply pressure or to exhaust it to 10% of supply pressure. M and F values are shown above.

Valve Dimensions – inches (mm)

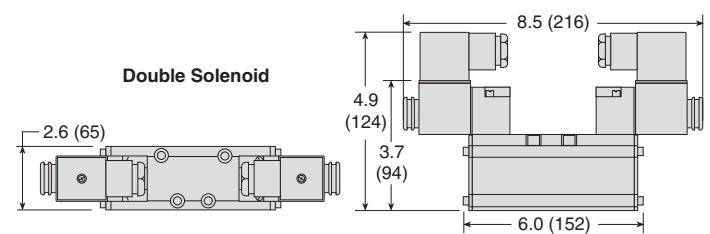
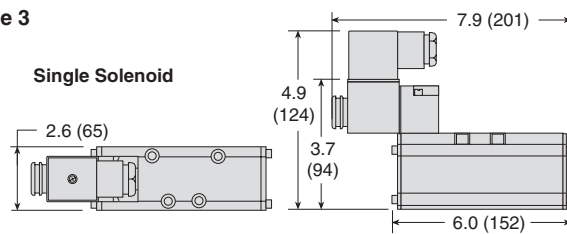
ISO Size 1



ISO Size 2



ISO Size 3



Options: Indicator Light (in electrical connectors), refer to page A2.9. Accessories ordered separately, refer to page A2.9-10.

STANDARD SPECIFICATIONS (for valves on this page):

Construction: Spool and sleeve.

Mounting Type: Base.

Solenoid Pilot: Rated for continuous duty.

Standard Voltages: 24 volts DC; 110-120 volts AC, 50/60 Hz.

Power Consumption (each solenoid): 11 VA inrush, 8.5 VA holding on 50 or 60 Hz; 6 watts on DC.

Enclosure Rating: IP65, IEC 60529.

Electrical Connections: EN 175301-803 Form A connector.

Ambient Temperature: 40° to 120°F (4° to 50°C).

Media Temperature: 40° to 175°F (4° to 80°C).

For other temperature ranges, consult ROSS.

Flow Media: Filtered air.

Inlet Pressure: Vacuum to 150 psig (10 bar).

Pilot Pressure: ISO size 1 models: At least 30 psig (2 bar).

ISO Size 2 & 3 models: At least 15 psig (1 bar).

Internal/External Supply: Selected automatically.

Manual Override: Flush; metal, non-locking.

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

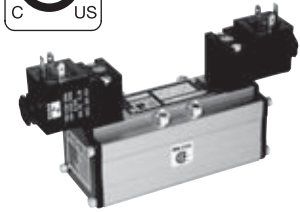


Solenoid Pilot Controlled Valves

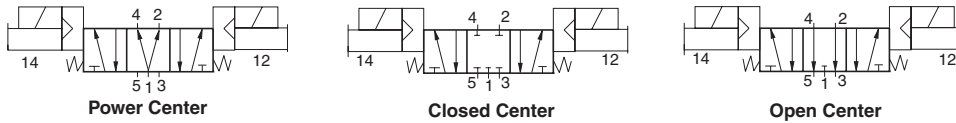
A

5-Way 3-Position Valves, Double Solenoid Pilot Controlled

ISO Size	Port Size	Valve Model Number*			Avg. C _v	Average Response Constants#			Weight lb (kg)
		Power Center	Closed Center	Open Center		M	F		
							In-Out	Out-Exh.	
1	1/8 - 3/8	W6077A2951**	W6077B2401**	W6077B2407**	0.8	30	3.5	5.0	1.8 (0.9)
2	3/8 - 1/2	W6077A3945**	W6077B3401**	W6077B3407**	1.9	40	1.5	2.5	2.8 (1.3)
3	1/2 - 3/4	W6077B4934**	W6077B4401**	W6077B4407**	3.8	50	0.8	1.1	4.0 (1.8)



A2



* Sub-bases and sub-base manifolds ordered separately, refer to page A2.8.

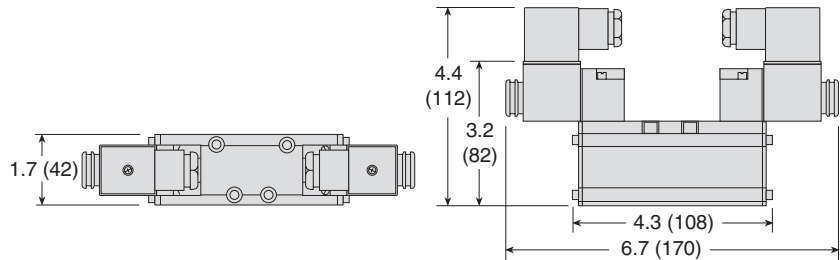
** Insert voltage code: "W" = 24 volts DC; "Z" = 110-120 volts AC, 50/60 Hz; e.g., W6077A2951W.

For other voltages, consult ROSS.

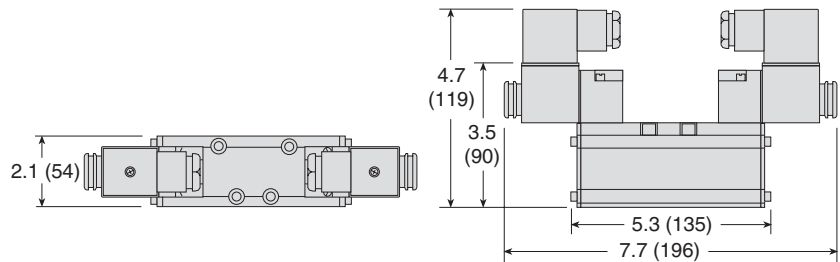
Valve Response Time – Response Time (msec) = M + (F • V). This is the average time required to fill a volume V (cubic inches) to 90% of supply pressure or to exhaust it to 10% of supply pressure. M and F values are shown above.

Valve Dimensions – inches (mm)

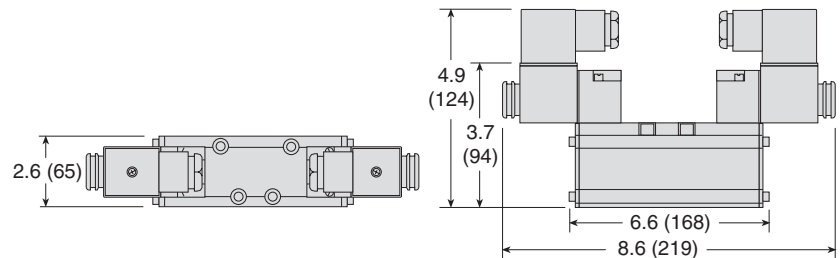
ISO Size 1



ISO Size 2



ISO Size 3



Options: Indicator Light (in electrical connectors), refer to page A2.9. Accessories ordered separately, refer to page A2.9-10.

STANDARD SPECIFICATIONS (for valves on this page):

Construction: Spool and sleeve.

Mounting Type: Base.

Solenoid Pilot: Rated for continuous duty.

Standard Voltages: 24 volts DC; 110-120 volts AC, 50/60 Hz.

Power Consumption (each solenoid): 11 VA inrush, 8.5 VA holding on 50 or 60 Hz; 6 watts on DC.

Enclosure Rating: IP65, IEC 60529.

Electrical Connections: EN 175301-803 Form A connector.

Ambient Temperature: 40° to 120°F (4° to 50°C).

Media Temperature: 40° to 175°F (4° to 80°C).

For other temperature ranges, consult ROSS.

Flow Media: Filtered air.

Inlet Pressure: Vacuum to 150 psig (10 bar).

Pilot Pressure:

Size 1 models: At least 30 psig (2 bar).

Size 2 & 3 models: At least 15 psig (1 bar).

Internal/External Supply: Selected automatically.

Manual Override: Flush; metal, non-locking.

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

Pressure Controlled Valves



5-Way 2-Position Valves, Single Pressure Controlled, Spring Return								
ISO Size	Port Size	Valve Model Number*	Avg. C _v	Average Response Constants#			Weight lb (kg)	
				M	F			
					In-Out	Out-Exh.		
1	1/8 - 3/8	W6056B2411	0.8	29	3.5	4.9	0.8 (0.4)	
2	3/8 - 1/2	W6056B3411	1.9	41	1.5	2.4	1.5 (0.7)	
3	1/2 - 3/4	W6056B4411	3.8	51	0.8	1.1	3.0 (1.4)	



A

5-Way 2-Position Valves, Double Pressure Controlled, Detented								
ISO Size	Port Size	Valve Model Number*	Avg. C _v	Average Response Constants#			Weight lb (kg)	
				M	F			
					In-Out	Out-Exh.		
1	1/8 - 3/8	W6056B2417	0.8	17	3.5	5.0	0.8 (0.4)	
2	3/8 - 1/2	W6056B3417	1.9	20	1.5	2.5	1.5 (0.7)	
3	1/2 - 3/4	W6056E4417	3.8	20	0.8	1.1	3.0 (1.4)	



A2

5-Way 3-Position Valves, Double Pressure Controlled									
ISO Size	Port Size	Valve Model Number*			Avg. C _v	Average Response Constants#			Weight lb (kg)
		Power Center	Closed Center	Open Center		M	F		
							In-Out	Out-Exh.	
1	1/8 - 3/8	W6057A2934	W6057B2411	W6057B2417	0.8	30	3.5	5.0	1.0 (0.5)
2	3/8 - 1/2	W6057A3933	W6057B3411	W6057B3417	1.9	40	1.5	2.5	1.5 (0.7)
3	1/2 - 3/4	W6057A4937	W6057B4411	W6057B4417	3.8	50	0.8	1.1	3.0 (1.4)

Power Center		Closed Center		Open Center	
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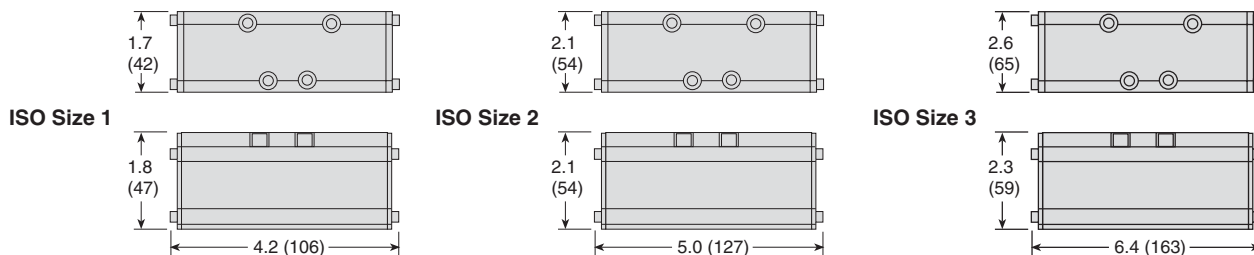


* Sub-bases and sub-base manifolds ordered separately, refer to page A2.8.

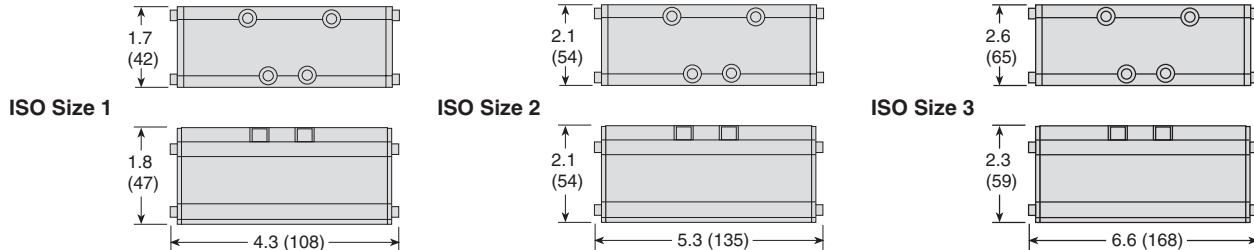
Valve Response Time – Response Time (msec) = M + (F • V). This is the average time required to fill a volume V (cubic inches) to 90% of supply pressure or to exhaust it to 10% of supply pressure. M and F values are shown above.

Valve Dimensions – inches (mm)

5/2 Valves



5/3 Valves



Accessories ordered separately, refer to page A2.9-10.

STANDARD SPECIFICATIONS (for valves on this page):

Construction: Spool and sleeve.

Mounting Type: Base.

Ambient/Media Temperature: 40° to 175°F (4° to 80°C).
For other temperature ranges, consult ROSS.

Flow Media: Filtered air.

Inlet Pressure: Vacuum to 150 psig (10 bar).

Pilot Pressure:

Size 1 models: At least 30 psig (2 bar).

Size 2 & 3 models: At least 15 psig (1 bar).

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



Online Version
Rev. 11/14/16

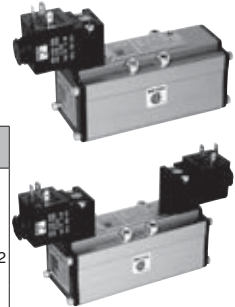
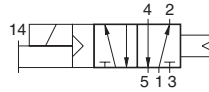
www.rosscontrols.com

Solenoid Pilot Controlled Valves

A

5-Way 2-Position Valves, Single Solenoid Pilot Controlled, Air Return

ISO Size	Port Size	Valve Model Number*		Avg. C _v	Average Response Constants#			Weight lb (kg)
		Std. Temp.	High Temp.		M	F		
						In-Out	Out-Exh.	
1	1/8 - 3/8	W6476B2401**	W6476B2402**	1.0	33	2.9	5.9	1.3 (0.6)
2	3/8 - 1/2	W6476B3401**	W6476B3402**	2.0	33	1.2	2.3	1.8 (0.8)
3	1/2 - 3/4	W6476B4401**	W6476B4402**	4.0	50	0.7	1.2	2.8 (1.3)



A2

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

ISO Size	Port Size	Valve Model Number*		Avg. C _v	Average Response Constants#			Weight lb (kg)
		Std. Temp.	High Temp.		M	F		
						In-Out	Out-Exh.	
1	1/8 - 3/8	W6476B2407**	W6476B2408**	1.0	16	2.9	5.6	1.8 (0.8)
2	3/8 - 1/2	W6476B3407**	W6476B3408**	2.0	16	1.2	2.3	2.3 (1.0)
3	1/2 - 3/4	W6476B4407**	W6476B4408**	4.0	16	0.7	1.1	3.3 (1.5)

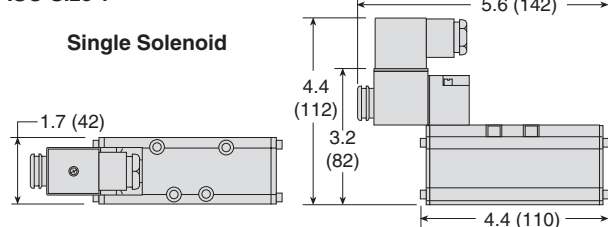


* Sub-bases and sub-base manifolds ordered separately, refer to page A2.8.

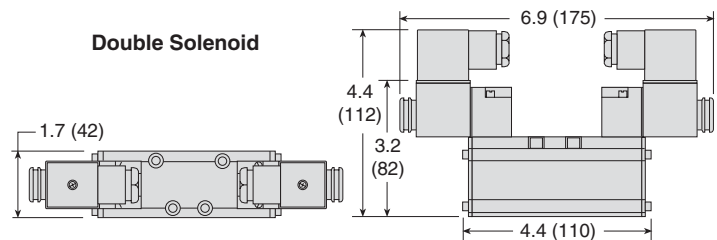
** Insert voltage code: "W" = 24 volts DC; "Z" = 110-120 volts AC, 50/60 Hz; e.g., W6476B2401W. For other voltages, consult ROSS.

Valve Response Time – Response Time (msec) = M + (F • V). This is the average time required to fill a volume V (cubic inches) to 90% of supply pressure or to exhaust it to 10% of supply pressure. M and F values are shown above.

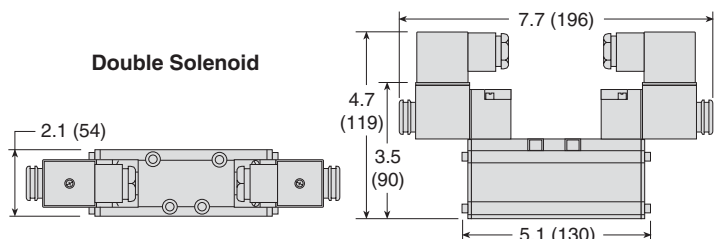
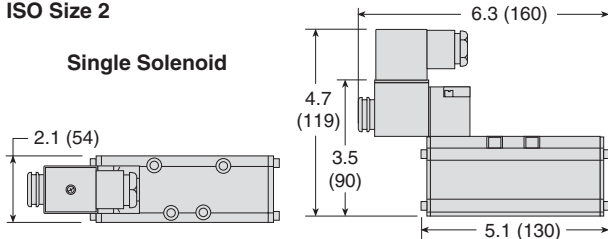
ISO Size 1



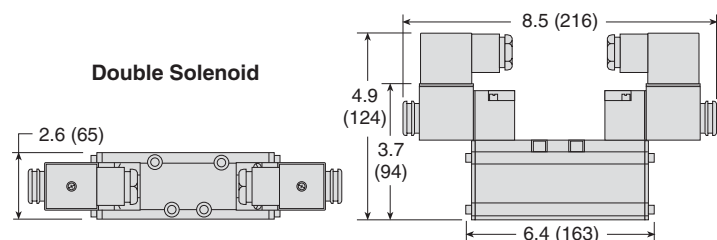
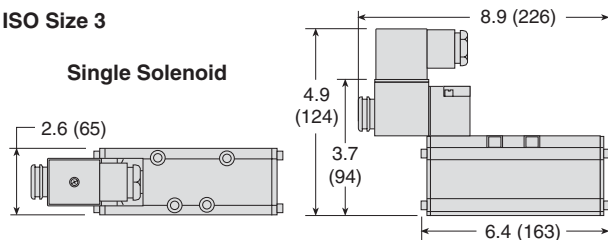
Valve Dimensions – inches (mm)



ISO Size 2



ISO Size 3



Options: Indicator Light (in electrical connectors); refer to page A2.9. Accessories ordered separately, refer to page A2.9-10.

STANDARD SPECIFICATIONS (for valves on this page):

Construction: Poppet.
Mounting Type: Base.
Solenoid Pilot: Rated for continuous duty.
Standard Voltages: 24 volts DC; 110-120 volts AC, 50/60 Hz.
Power Consumption (each solenoid): 11 VA inrush, 8.5 VA holding on 50 or 60 Hz; 6 watts on DC.
Ambient Temperature: 40° to 120°F (4° to 50°C); extended to 175°F (80°C) for High Temperature models.
Enclosure Rating: IP65, IEC 60529.

Electrical Connections: EN 175301-803 Form A or Form C connector.
Media Temperature: 40° to 175°F (4° to 80°C); extended to 220°F (105°C) for High Temperature models.
For other temperature ranges, consult ROSS.
Flow Media: Filtered air.
Inlet Pressure: 30 to 150 psig (2 to 10 bar).
Pilot Pressure: Must be equal to or greater than inlet pressure.
Internal/External Supply: Selected automatically.
Manual Override: Flush; metal 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 Pressure Controlled, Air Return								
ISO Size	Port Size	Valve Model Number*		Avg. C _v	Average Response Constants#			Weight lb (kg)
		Std. Temp.	High Temp.		M	F		
						In-Out	Out-Exh.	
1	1/8 - 3/8	W6456B2411	W6456B2412	1.0	33	2.9	5.9	0.8 (0.4)
2	3/8 - 1/2	W6456B3411	W6456B3412	2.0	33	1.2	2.3	1.3 (0.6)
3	1/2 - 3/4	W6456B4411	W6456B4412	4.0	50	0.7	1.2	2.3 (1.1)



A



5-Way 2-Position Valves, Double Pressure Controlled, Detented								
ISO Size	Port Size	Valve Model Number*		Avg. C _v	Average Response Constants#			Weight lb (kg)
		Std. Temp.	High Temp.		M	F		
						In-Out	Out-Exh.	
1	1/8 - 3/8	W6456B2417	W6456B2418	1.0	16	2.9	5.6	1.8 (0.8)
2	3/8 - 1/2	W6456B3417	W6456B3418	2.0	16	1.2	2.3	2.3 (1.0)
3	1/2 - 3/4	W6456B4417	W6456B4418	4.0	18	0.7	1.1	3.3 (1.5)



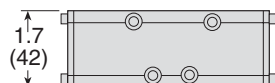
A2

* Sub-bases and sub-base manifolds ordered separately, refer to page A2.8.

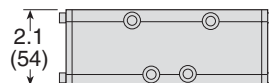
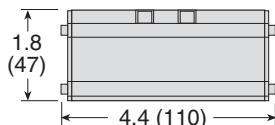
Valve Response Time – Response Time (msec) = M + (F • V). This is the average time required to fill a volume V (cubic inches) to 90% of supply pressure or to exhaust it to 10% of supply pressure. M and F values are shown above.

Valve Dimensions – inches (mm)

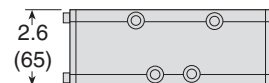
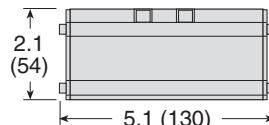
Single Pressure Controlled



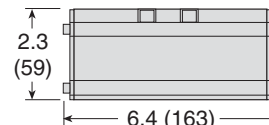
ISO Size 1



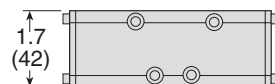
ISO Size 2



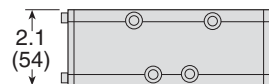
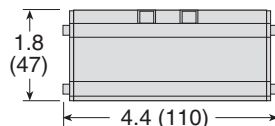
ISO Size 3



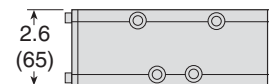
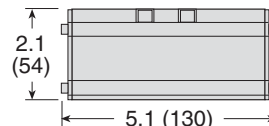
Double Pressure Controlled



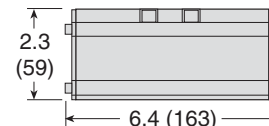
ISO Size 1



ISO Size 2



ISO Size 3



Accessories ordered separately, refer to page A2.9-10.

STANDARD SPECIFICATIONS (for valves on this page):

Construction: Poppet.

Mounting Type: Base.

Ambient/Media Temperature: 40° to 175°F (4° to 80°C).

For other temperature ranges, consult ROSS.

Flow Media: Filtered air.

Inlet Pressure: Vacuum to 150 psig (10 bar).

Pilot Pressure:

Size 1 models: At least 30 psig (2 bar).

Size 2 & 3 models: At least 15 psig (1 bar).



Single Sub-Bases & Sub-Base Manifolds

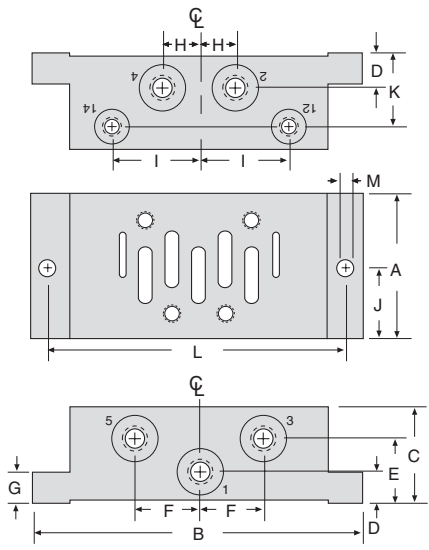
A

ISO 5599/I Sub-Bases

ISO Size	Port Threads	Port Size			Sub-Base Model Number (Side Ported)
		2, 4	1, 3, 5	12, 14	
1	NPT	1/8	1/4	1/8	654K91
	NPT	1/4	1/4	1/8	600C01
	G	1/4	1/4	1/8	D600C01
	NPT	3/8	3/8	1/8	642K91
2	NPT	3/8	3/8	1/8	601C01
	G	3/8	3/8	1/8	D601C01
	NPT	1/2	1/2	1/8	643K91
3	NPT	1/2	1/2	1/8	602C01
	G	1/2	1/2	1/8	D602C01
	NPT	3/4	3/4	1/8	644K91

	Sub-Base Dimensions inches (mm)		
	ISO 1	ISO 2	ISO 3
A	1.89 (48)	2.24 (57)	2.80 (71)
B	4.33 (110)	4.88 (124)	5.87 (149)
C	1.26 (32)	1.57 (40)	1.26 (32)*
D	0.41 (38)	0.55 (14)	0.67 (17)
E	0.85 (39)	1.02 (26)	0.67 (17)
F	0.85 (23)	1.10 (28)	1.34 (34)
G	0.39 (23)	0.51 (13)	0.71 (18)
H	0.47 (92)	0.59 (15)	0.63 (16)
I	1.14 (29)	1.46 (37)	1.77 (45)
J	0.94 (58)	1.12 (29)	1.40 (36)
K	0.93 (24)	1.518(30)	0.87 (22)
L	3.86 (22)	4.41 (112)	5.35 (136)
M	0.22 (6)	0.26 (7)	0.26 (7)

* 1.77 (45) on sub-base 644K91.



A2

ISO 5599/I Sub-Base Manifolds

ISO Size	Port Size			Manifold Model Number		
	2, 4	1, 3, 5	12, 14	Bottom Ported Station*	End Ported Station*	End Station Kit*
1	1/4	3/8	1/8	460K91	664K91	326K86
2	3/8	1/2	1/8	461K91	665K91	327K86
3	1/2	1	1/8	462K91	666K91	328K86

*NPT port threads. For BSPP threads, add a "D" prefix to the model number, e.g., D460K91.

	Manifolds Dimensions inches (mm)		
	ISO 1	ISO 2	ISO 3
A	5.12 (130)	6.46 (164)	7.95 (202)
B	0.87 (22)	1.02 (26)	1.18 (30)
C	1.69 (43)	2.20 (56)	2.80 (71)
D	0.30 (8)	0.24 (6)	0.31 (8)
E	0.06 (2)	0.20 (5)	0.24 (6)
F	4.25 (108)	5.43 (138)	6.77 (172)
G	0.55 (14)	0.69 (18)	1.02 (26)
H	0.94 (24)	1.24 (32)	1.85 (47)
I	0.83 (21)	0.87 (22)	1.22 (31)
J	0.94 (24)	0.94 (24)	1.34 (34)
K	1.81 (46)	1.85 (47)	2.20 (56)
L	0.33 (9)	0.35 (9)	0.39 (10)
M	0.85 (22)	1.10 (28)	1.40 (36)
N	0.51 (13)	0.59 (15)	0.75 (19)
P	0.27 (7)	0.35 (9)	0.47 (12)
Q	0.47 (12)	0.55 (14)	0.67 (17)
R	0.98 (25)	1.02 (26)	1.14 (29)
S	3.19 (81)	3.54 (90)	3.90 (99)
T	0.43 (11)	0.57 (15)	0.71 (18)

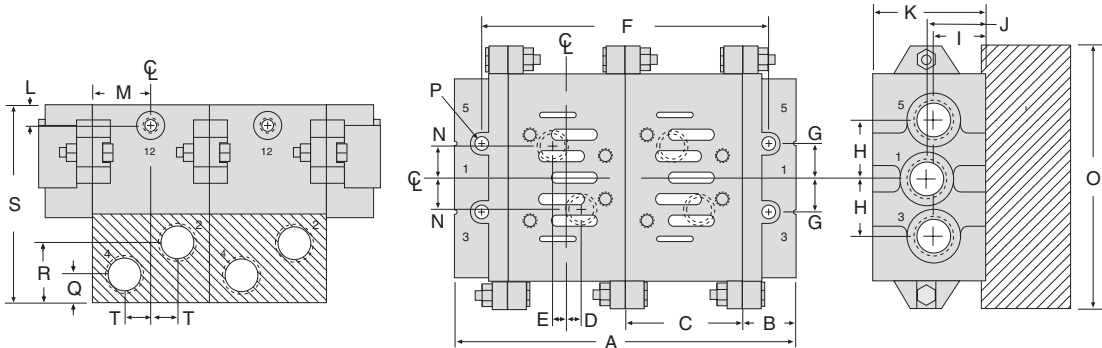
In addition to the manifold stations, an end station kit must be ordered for each manifold installation. End-ported stations are assemblies consisting of a bottom-ported station and an end-ported adaptor plate. Adaptor plates are cross-hatched in the drawings below.

NOTE: Lined portions of drawings are end-ported adaptors which are included only with end-ported stations.

A and F dimensions are for a 2-station manifold. For each additional station add the C dimension to obtain new A and F dimensions.

ACCESSORIES and OPTIONS for MANIFOLDS

Blank Station Kits, Blocking Discs, Pressure Plates, Transition Plates and other available options are shown on page A2.10.



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

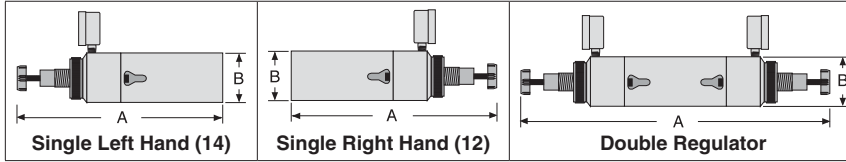
Accessories

for ISO 5599/I Valves W60 & W64 Series

Interposed Pressure Regulators

Single and double pressure regulators are available.

Single left hand (14) and single right hand (12) regulators are available. Single pressure regulators provide the same regulated pressure at both outlet ports. Double pressure regulators allow the pressure at each outlet port to be set independently. Pressure can be regulated from 0 to 150 psig (0 to 10 bar). Requires no new piping.



ISO Size	Regulator Model Number		
	Single		Double
	Left Hand (14)	Right Hand (12)	
1	1300K91	1301K91	1302K91
2	1303K91	1304K91	1305K91
3	1306K91	1307K91	1308K91

ISO Size	Regulator Dimensions - inches (mm)		
	A (Single)	B (Double)	B (Single/Double)
1	7.3 (186)	13.2 (336)	1.5 (39)
2	8.3 (211)	14.8 (376)	2.0 (51)
3	10.5 (267)	18.3 (465)	2.5 (64)

Interposed Pressure Regulators

HOW TO ORDER

(Choose your options (in red) to configure your valve model number.)

R **PS4037** **1** **6** **6** **C** **P**

Basic Series		
ISO Size 1	5599-1	PS4037
ISO Size 2	5599-1	PS4137
ISO Size 3	5599-1	PS4237

Regulator Function	
Common Pressure Regulator	1
Independent Pressure Regulator	2
Selector Regulator	3

#4 Port Regulator / Gauge*	
0**	Line By-Pass Plate
1	1-30 PSIG w/o Gauge
2	2-60 PSIG w/o Gauge
3	5-125 PSIG w/o Gauge
4	1-30 PSIG w/Gauge
5	2-60 PSIG w/Gauge
6	5-125 PSIG w/Gauge
C	Air Pilot w/60 PSIG Gauge
D	Air Pilot w/160 PSIG Gauge

* For Common Pressure Regulator Option, Regulator Gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

** Pressure Line By-Pass Option can only be used with Independent and Selector Regulators (Option 2 & 3 in Interposed Block Function).

#2 Port Regulator / Gauge*	
0**	Line By-Pass Plate
1	1-30 PSIG w/o Gauge
2	2-60 PSIG w/o Gauge
3	5-125 PSIG w/o Gauge
4	1-30 PSIG w/Gauge
5	2-60 PSIG w/Gauge
6	5-125 PSIG w/Gauge
C	Air Pilot w/60 PSIG Gauge
D	Air Pilot w/160 PSIG Gauge

* For Common Pressure Regulator Option, Regulator Gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

** Pressure Line By-Pass Option can only be used with Independent and Selector Regulators (Option 2 & 3 in Interposed Block Function).

Ordering Components

- Manifold or Subbase Kit required
- Interposed Regulator Kit configured for Internal Pilot as standard
- Order valve as External Pilot

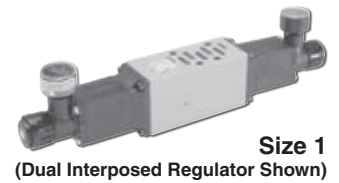
How to Configure Interposed Regulator / Valve Combinations

Internal Pilot Configuration - Pressure in Base Port 1 feeds regulator configured for Internal Pilot which feeds valve configured for External Pilot.

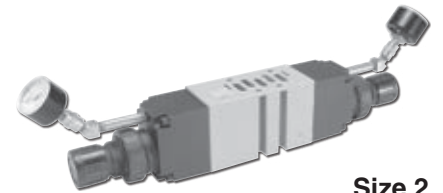
External Pilot Configuration - Size 1, Size 2, Size 3

An External Pilot pressure in Port 12 or 14 of the base feeds thru the Interposed Regulator 12 or 14 galley directly to the 12/14 pilot of the valve.

This configuration takes an External Pilot from the 12 port of the base and passes it thru the regulator to feed the 12 galley of the valve.



Size 1
(Dual Interposed Regulator Shown)



Size 2
(Dual Interposed Regulator Shown)

WARNING: Double interposed regulators will reverse output ports, the 12 solenoid will pressurize the 4 port, the 14 solenoid will pressurize the 2 port which may cause unexpected, potentially dangerous cylinder movement at valve pressurization.

Interposed Flow Controls

An interposed flow control unit regulates the exhaust flow of air from a pneumatic cylinder, thereby controlling the extension and retraction speeds. Separate controls regulate the air flow from each end of the cylinder. Being located between the valve and base, the unit requires no additional piping. Available only for W60 Series valves.

ISO Size	Part Number
1	701B77
2	702B77
3	722B77

Blank Station Kits

A blank station plate is used to cover the top of a manifold station that is not in use. A kit consists of a metal plate 0.32 inch (8 mm) thick, a gasket, and mounting bolts.

ISO Size	Part Number
1	546H77
2	694K77
3	537H77

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



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A2.9

Accessories

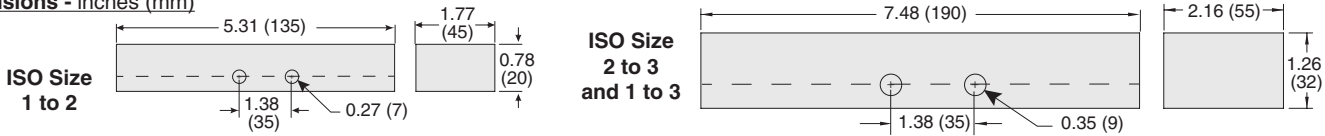
A

Transition Plates

Different size ISO valves can be used in the same manifold installation by means of transition plates. The inlet and exhaust ports of two different size manifold stations are connected by means of a transition plate installed between the two stations.

ISO Size	Part Number
1 to 2	D355K86
2 to 3	D356K86
1 to 3	D357K86

Dimensions - inches (mm)



A2

Independent Pressure Plates

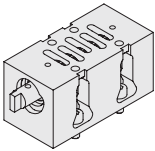
When a valve in a manifold installation must work at a different pressure than that supplied to the manifold, an independent supply can be provided via an independent pressure plate. The pressure plate mounts between valve and base and isolates the valve from the manifold inlet pressure. The independent supply is connected to an inlet port in the end of the pressure plate.

ISO Size	Inlet Port	Part Number
1	1/4	703K77
2	3/8	692K77
3	1/2	715K77

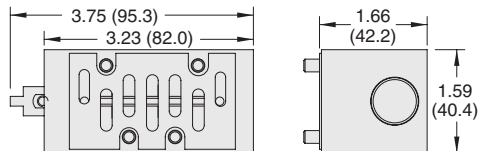
Interposed Shut-Off

Manually actuated with a 1/4 turn, the interposed shut-off isolates all ports, including the pilot.

ISO Size	Part Number
1	1871B91
2 & 3	Please contact ROSS.



ISO Size 1 Dimensions - inches (mm)



Blocking Disks

Ports between manifold stations can be closed by means of blocking disks.

ISO Size	Single Disk	Kit of 3 Disks
1	235A40	1007K77
2	236A40	1008K77
3	237A40	1009K77

Flying Solenoids Leads

Flying leads are available with 18 gauge insulated wires with spade connectors at one end. A kit of flying leads consists of three wires, each 39 inches (991 mm) long.

Kit Number	725K77
------------	--------

Electrical Connectors

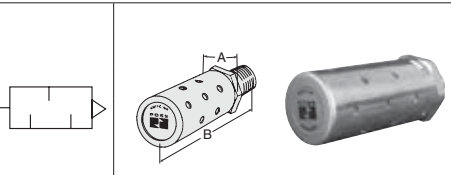
Electrical Connector	Electrical Connector Type	Cord Length meters (feet)	Cord Diameter	Electrical Connector Model Number		
				Without Light	Lighted Connector*	
					24 Volts DC	120 Volts AC
EN 175301-803 Form A	Prewired Connector (18 gauge)	2 (6½)	6-mm	721K77	720K77-W	720K77-Z
EN 175301-803 Form A	Prewired Connector (18 gauge)	2 (6½)	10-mm	371K77	383K77-W	383K77-Z
EN 175301-803 Form A	Connector for threaded conduit (1/2 inch electrical conduit fittings)	-	-	723K77	724K77-W	724K77-Z
EN 175301-803 Form A	Connector Only	-	-	937K87	936K87-W	936K87-Z



*Lights in connectors with a translucent housing can be used as indicator lights to show when solenoids are energized.

Silencers

Port Size	Thread Type	Model Number		Avg. C _v	Dimensions inches (mm)		Weight lb (kg)
		NPT Threads	BSPT Threads		A	B	
3/8	Male	5500A3013	D5500A3013	2.7	0.9 (21)	2.2 (55)	0.1 (0.1)
1/2	Male	5500A4003	D5500A4003	4.7	1.3 (32)	3.6 (91)	0.2 (0.1)
3/4	Male	5500A5013	D5500A5013	5.1	1.3 (32)	3.6 (91)	0.2 (0.1)
1	Male	5500A6003	D5500A6003	14.6	2.0 (51)	5.4 (138)	0.6 (0.3)



Pressure Range: 0 to 150 psig (0 to 10.3 bar) maximum. Flow Media: Filtered air.

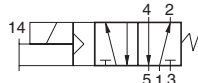
IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.



Solenoid Pilot Controlled Valves

5-Way 2-Position Valves, Single Solenoid Pilot Controlled, Spring Return

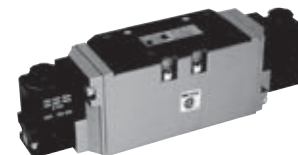
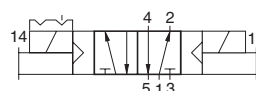
ISO Size	Port Size	Valve Model Number*	Avg. C _v	Weight lb (kg)
1	1/4 - 3/8	W6576A2401**	1.0	1.5 (0.7)
2	3/8 - 1/2	W6576A3401**	2.3	2.0 (1.0)
3	1/2 - 3/4	W6576A4401**	3.4	3.5 (1.6)



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

ISO Size	Port Size	Valve Model Number*	Avg. C _v	Weight lb (kg)
1	1/4 - 3/8	W6576A2407**	1.0	2.0 (1.0)
2	3/8 - 1/2	W6576A3407**	2.3	2.5 (1.2)
3	1/2 - 3/4	W6576A4407**	3.4	4.0 (1.9)



A2

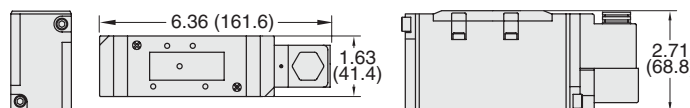
* Sub-bases and sub-base manifolds ordered separately, refer to page A2.14-15 or page A2.17 when used with serial bus system.

** Insert voltage code: "W" = 24 volts DC; "Z" = 110-120 volts AC, 50/60 Hz; e.g., W6576A2401W. For other voltages, consult ROSS.

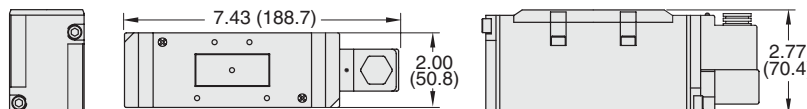
Valve Dimensions – inches (mm)

Single Solenoid

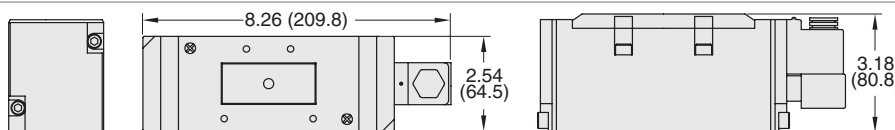
ISO Size 1



ISO Size 2

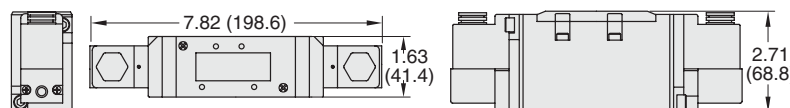


ISO Size 3

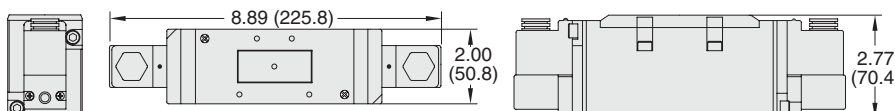


Double Solenoid

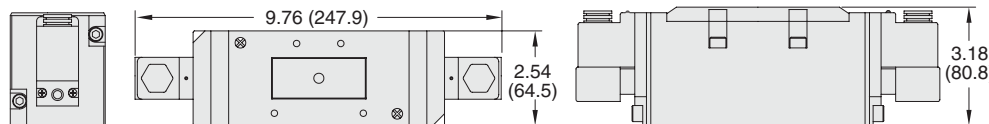
ISO Size 1



ISO Size 2



ISO Size 3



Accessories ordered separately, refer to page A2.16 or page A2.18-19 when used with serial bus system.

The W65 Series has a base electrical connector which eliminates the need to disconnect wires to remove the valve. This eliminates drop cords, simplifies maintenance and connection to Serial Data Communication systems.

STANDARD SPECIFICATIONS (for valves on this page):

Construction: Spool and sleeve.

Mounting Type: Base.

Solenoids: Rated for continuous duty.

Standard Voltages: 24 volts DC; 110-120 volts AC, 50/60 Hz.

Power Consumption (each solenoid): 6.5 VA holding on 50 or 60 Hz; 3.5 watts on DC (at 10 bar).

Ambient Temperature: 40° to 120°F (4° to 50°C).

Media Temperature: 40° to 175°F (4° to 80°C).

For other temperature ranges, consult ROSS.

Flow Media: Filtered air.

Inlet Pressure:

Size 1 models: 30 to 150 psig (2 to 10 bar);

Size 2 & 3 models: 15 to 150 psig (1 to 10 bar).

All sizes also available up to 232 psig (16 bar).

Pilot Supply: Internal/external supply selected automatically. Required pressure at least 30 psig (2 bar).

Indicator Light: Included, one per solenoid.

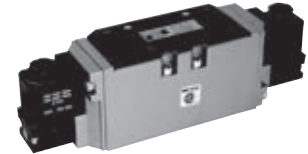
Manual Override: Flush; metal, non-locking.

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



A

5-Way 3-Position Valves, Double Solenoid Pilot Controlled



ISO Size	Port Size	Valve Model Number*			Avg. C _v	Weight lb (kg)
		Power Center	Closed Center	Open Center		
1	1/4 - 3/8	W6577A2902**	W6577A2401**	W6577A2407**	1.0	2.0 (1.0)
2	3/8 - 1/2	W6577A3901**	W6577A3401**	W6577A3407**	2.3	2.5 (1.2)
3	1/2 - 3/4	W6577A4900**	W6577A4401**	W6577A4407**	3.4	4.0 (1.9)

Power Center Closed Center Open Center

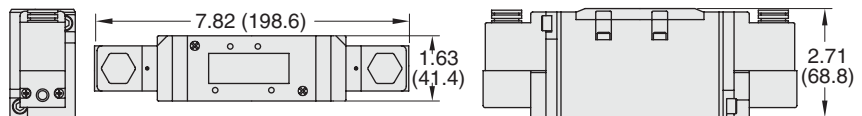
A2

* Sub-bases and sub-base manifolds ordered separately, refer to page A2.14-15 or page A2.17 when used with serial bus system.

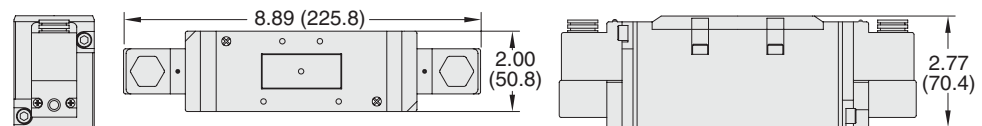
** Insert voltage code: "W" = 24 volts DC; "Z" = 110-120 volts AC, 50/60 Hz; e.g., W6577A2902W. For other voltages, consult ROSS.

Valve Dimensions – inches (mm)

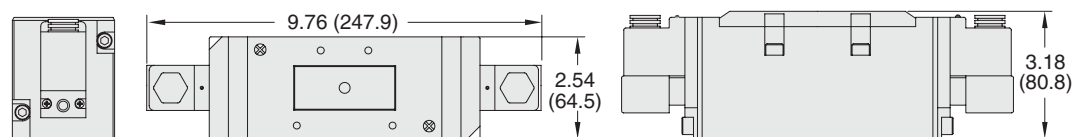
ISO Size 1



ISO Size 2



ISO Size 3



Accessories ordered separately, refer to page A2.16 or page A2.18-19 when used with serial bus system.

The W65 Series has a base electrical connector which eliminates the need to disconnect wires to remove the valve. This eliminates drop cords, simplifies maintenance and connection to Serial Data Communication systems.

STANDARD SPECIFICATIONS (for valves on this page):

Construction: Spool and sleeve.

Mounting Type: Base.

Solenoids: Rated for continuous duty.

Standard Voltages: 24 volts DC; 110-120 volts AC, 50/60 Hz.

Power Consumption (each solenoid): 6.5 VA holding on 50 or 60 Hz; 3.5 watts on DC (at 10 bar).

Ambient Temperature: 40° to 120°F (4° to 50°C).

Media Temperature: 40° to 175°F (4° to 80°C).

For other temperature ranges, consult ROSS.

Flow Media: Filtered air.

Inlet Pressure:

Size 1 models: 30 to 150 psig (2 to 10 bar);

Size 2 & 3 models: 15 to 150 psig (1 to 10 bar).

All sizes also available up to 232 psig (16 bar).

Pilot Supply: Internal/external supply selected automatically. Required pressure at least 30 psig (2 bar).

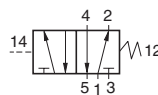
Indicator Light: Included, one per solenoid.

Manual Override: Flush; metal, non-locking.

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

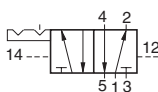
Pressure Controlled Valves

5-Way 2-Position Valves, Single Pressure Controlled, Spring Return				
ISO Size	Port Size	Valve Model Number*	Avg. C _v	Weight lb (kg)
1	1/4 - 3/8	W6556A2411	1.0	0.8 (0.4)
2	3/8 - 1/2	W6556A3411	2.3	1.5 (0.7)
3	1/2 - 3/4	W6556A4411	3.4	3.0 (1.4)



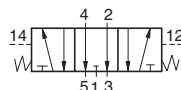
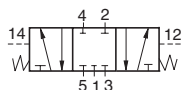
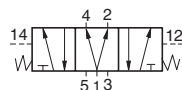
A

5-Way 2-Position Valves, Double Pressure Controlled, Detented				
ISO Size	Port Size	Valve Model Number*	Avg. C _v	Weight lb (kg)
1	1/4 - 3/8	W6556A2417	1.0	0.8 (0.4)
2	3/8 - 1/2	W6556A3417	2.3	1.5 (0.7)
3	1/2 - 3/4	W6556A4417	3.4	3.0 (1.4)



A2

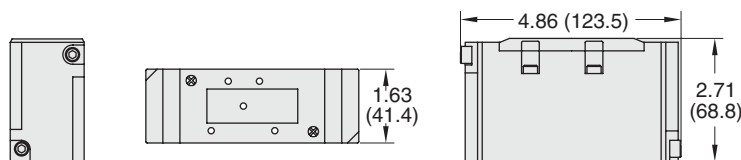
5-Way 3-Position Valves, Double Pressure Controlled						
ISO Size	Port Size	Valve Model Number*			Avg C _v	Weight lb (kg)
		Power Center	Closed Center	Open Center		
1	1/4 - 3/8	—	W6557A2411	W6557A2417	1.0	0.8 (0.4)
2	3/8 - 1/2	W6557A3901	W6557A3411	W6557A3417	2.3	1.5 (0.7)
3	1/2 - 3/4	W6557A4900	W6557A4411	W6557A4417	3.4	3.0 (1.4)



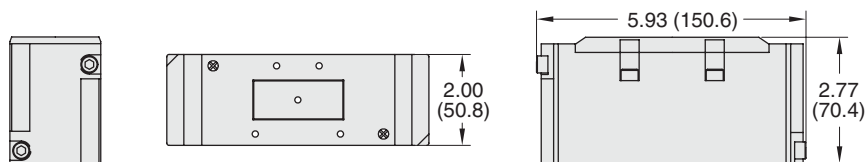
* Sub-bases and sub-base manifolds ordered separately, refer to page A2.14-15 or page A2.17 when used with serial bus system.

Valve Dimensions – inches (mm)

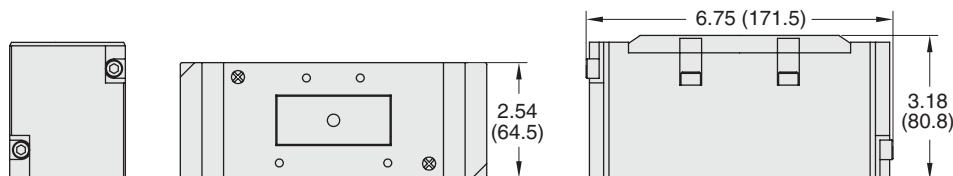
ISO Size 1



ISO Size 2



ISO Size 3



Accessories ordered separately, refer to page A2.16 or page A2.18-19 when used with serial bus system.

STANDARD SPECIFICATIONS (for valves on this page):

Construction: Spool and sleeve.

Mounting Type: Base.

Ambient/Media Temperature: 40° to 175°F (4° to 80°C).

For other temperature ranges, consult ROSS.

Flow Media: Filtered air.

Inlet Pressure: Size 1 models: 30 to 150 psig (2 to 10 bar);

Size 2 & 3 models: 15 to 150 psig (1 to 10 bar).

All sizes also available up to 232 psig (16 bar).

Pilot Supply: Internal/external supply selected automatically.

Required pressure at least 30 psig (2 bar).

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

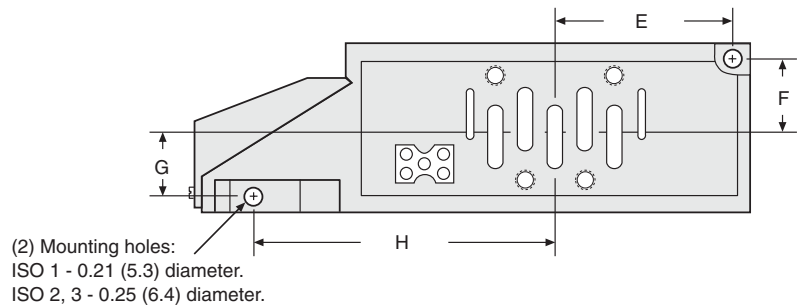
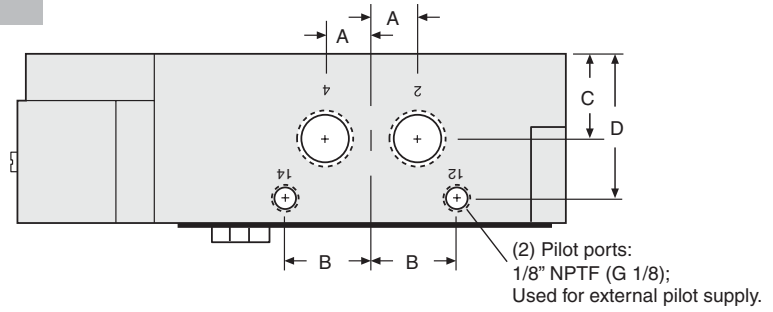


Sub-Bases

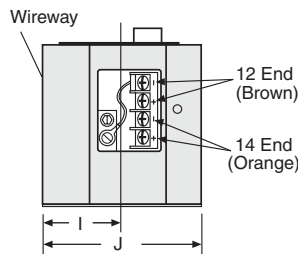
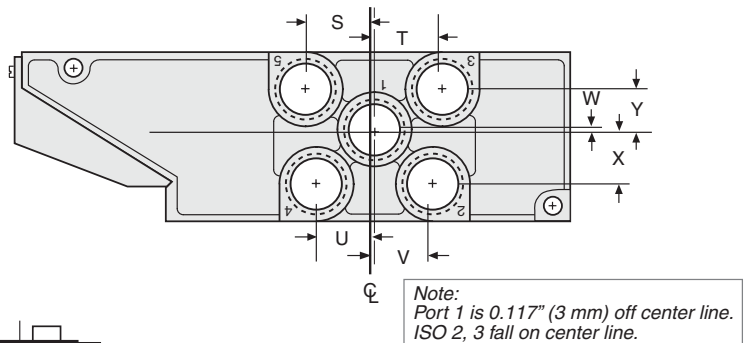
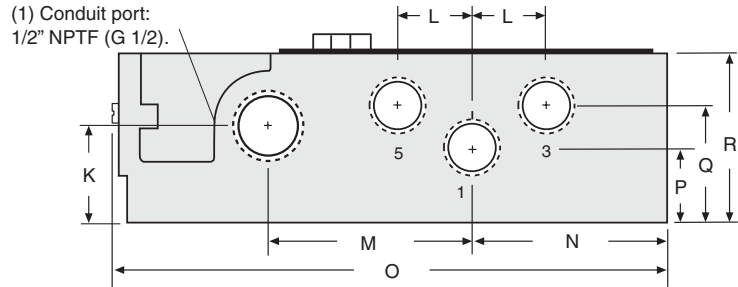
A Side and Bottom-Ported Sub-Bases

A2

ISO Size	Port Threads	Port Size	Sub-Base Model Number
1	NPT	1/4 Side	949N91
	NPT	1/4 Side/Bottom	971N91
	NPT	3/8 Side	950N91
	NPT	3/8 Side/Bottom	972N91
	G	1/4 Side	D949N91
	G	3/8 Side	D950N91
2	NPT	3/8 Side	951N91
	NPT	3/8 Side/Bottom	952N91
	NPT	1/2 Side	953N91
	NPT	1/2 Side/Bottom	954N91
G	1/2 Side	D953N91	
3	NPT	1/2" Side	955N91
	NPT	1/2" Side/Bottom	956N91
	NPT	3/4" Side	957N91
	NPT	3/4" Side/Bottom	958N91
	G	1/2 Side	D955N91
	G	1/2 Side/Bottom	D956N91
	G	3/4 Side	D957N91
	G	3/4 Side/Bottom	D958N91



Sub-Base Dimensions inches (mm)			
	ISO 1	ISO 2	ISO 3
A	0.5 (13)	0.6 (16)	0.8 (21)
B	1.0 (26)	1.3 (33)	1.8 (45)
C	0.8 (21)	1.2 (31)	1.3 (34)
D	1.5 (38)	1.9 (49)	2.7 (70)
E	1.6 (39)	2.3 (57)	2.5 (63)
F	0.9 (23)	1.1 (29)	1.5 (39)
G	0.9 (23)	1.1 (29)	1.4 (36)
H	3.6 (92)	4.3 (108)	5.4 (137)
I	1.1 (29)	1.4 (35)	1.8 (45)
J	2.3 (58)	2.8 (70)	3.5 (90)
K	0.9 (24)	1.5 (37)	1.8 (47)
L	0.9 (22)	1.1 (27)	1.5 (38)
M	2.4 (60)	3.0 (75)	4.1 (104)
N	1.8 (46)	2.5 (64)	2.7 (69)
O	6.5 (164)	7.8 (197)	9.3 (235)
P	0.8 (21)	1.1 (28)	1.3 (34)
Q	1.3 (34)	1.7 (44)	2.0 (51)
R	1.9 (47)	2.4 (60)	3.3 (85)
S	0.8 (21)	1.1 (27)	1.6 (42)
T	1.1 (27)	1.1 (27)	1.6 (42)
U	0.5 (13)	0.9 (22)	1.1 (27)
V	0.6 (15)	0.9 (22)	1.1 (27)
W	0.3 (8)	0.1 (3)	0.8 (20)
X	0.7 (17)	0.8 (20)	0.8 (20)
Y	0.6 (16)	0.9 (20)	0.8 (20)



Assembled manifolds also available, consult ROSS.

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

Modular Manifolds

A

A2

Bottom or End-Ported Manifolds

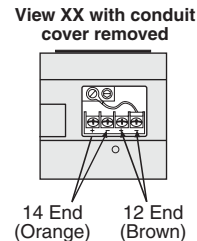
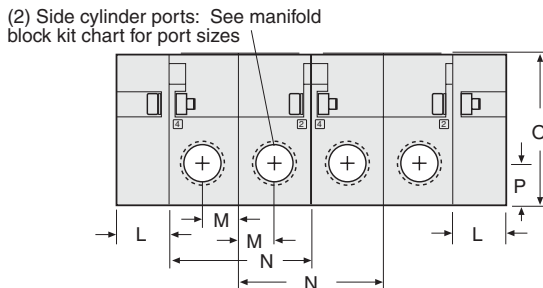
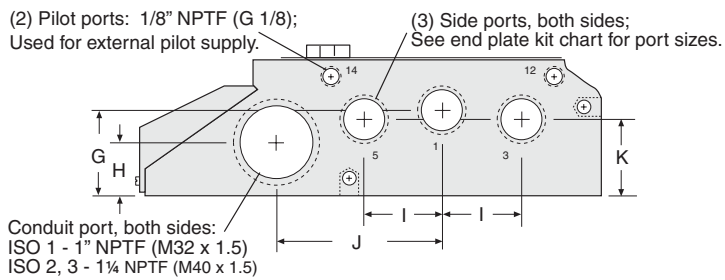
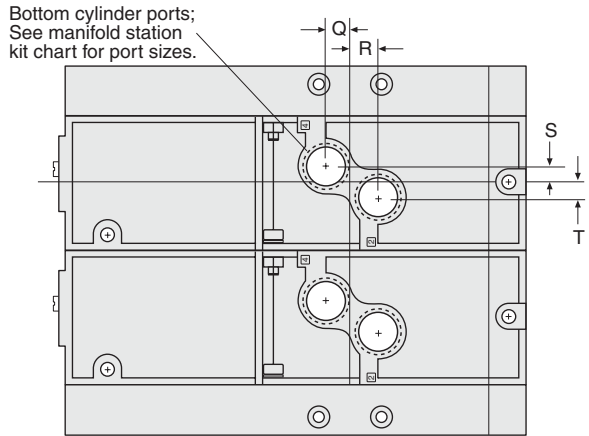
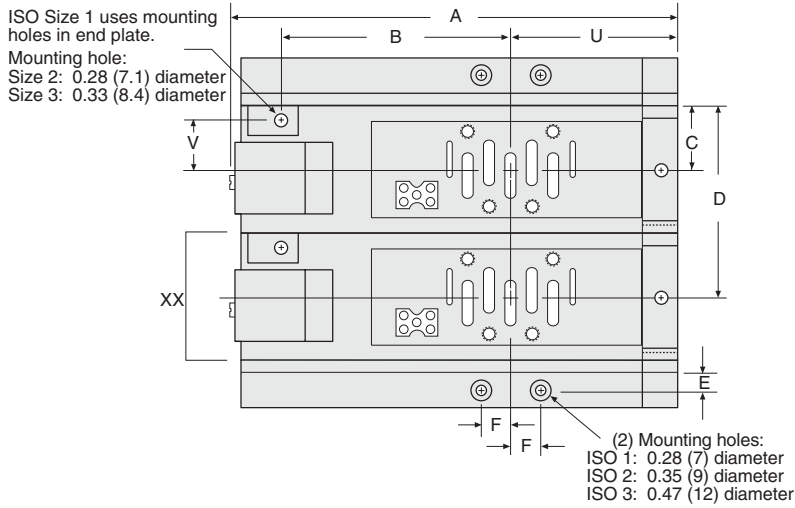
Manifold Station Assembly Numbers*		
ISO Size	Port Size	Part Number**
1	1/4" End/Bottom	959N91
	3/8" End/Bottom	960N91
2	3/8" End/Bottom	961N91
	1/2" End/Bottom	962N91
3	1/2" End/Bottom	963N91
	3/4" End/Bottom	964N91

*Each manifold station assembly includes a manifold assembly, socket head screws, nuts and seals.
**NPT port threads. For BSPP threads, add a "D" prefix to the model number, e.g., D959N91.

End Station Kit Numbers*		
ISO Size	Port Size	Part Number**
1	3/8"	493N86
2	1/2"	494N86
3	1"	495N86

*Each end station kit includes left and right end plates, socket head screws, nuts and seals.
**NPT port threads. For BSPP threads, add a "D" prefix to the model number, e.g., D493N86.

Manifold Dimensions inches (mm)			
	ISO 1	ISO 2	ISO 3
A	7.2 (183)	9.0 (229)	10.6 (270)
B	4.9 (125)	6.0 (152)	7.1 (180)
C	1.0 (26)	1.3 (33)	1.7 (43)
D	3.1 (79)	3.9 (100)	5.1 (128)
E	0.6 (14)	0.6 (16)	0.6 (15)
F	0.6 (14)	0.7 (17)	1.0 (26)
G	1.3 (34)	1.7 (42)	1.8 (46)
H	1.0 (25)	1.2 (30)	1.2 (31)
I	1.1 (28)	1.4 (35)	2.1 (52)
J	2.5 (64)	3.1 (79)	4.1 (104)
K	1.2 (31)	1.6 (40)	1.7 (42)
L	0.9 (22)	1.0 (25)	1.2 (30)
M	0.5 (13)	0.6 (16)	0.8 (21)
N	2.1 (53)	2.6 (67)	3.4 (86)
O	2.2 (55)	2.6 (66)	3.1 (78)
P	0.6 (16)	0.9 (22)	0.8 (20)
Q	0.5 (13)	0.6 (15)	0.7 (18)
R	0.5 (13)	0.6 (15)	0.8 (21)
S	0.3 (7)	0.3 (8)	0.5 (13)
T	0.3 (7)	0.3 (8)	0.5 (12)
U	2.0 (51)	2.8 (67)	3.1 (79)
V	-----	1.0 (26)	1.3 (31)



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



Accessories

A

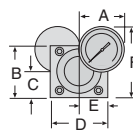
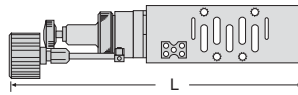
NOTE: Accessories from this page are to be used only with sub-bases and manifolds on page A2.14-15.

Interposed Regulators

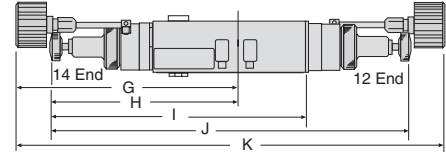
The interposed regulator controls the pressure through the base-mounted valve. These interposed devices are “sandwich” style, mounting between a valve and base or manifold. When using a dual interposed regulator for a W65 Series solenoid valve, the valve **must be externally piloted (port 14)**.

WARNING: Double interposed regulators will reverse output ports, the 12 solenoid will pressurize the 4 port, the 14 solenoid will pressurize the 2 port which may cause unexpected, potentially dangerous cylinder movement at valve pressurization.

Single Interposed Regulator (top view)



Double Interposed Regulator (top view)



A2

ISO Size	Model Number	Dimensions inches (mm)											
		A	B	C	D	E	F	G	H	I	J	K	L
1 (Sgl.)	965N91	1.6 (39)	1.8 (45)	0.9 (23)	1.7 (43)	0.9 (22)	2.5 (63)	6.2 (157)	7.2 (182)	8.0 (204)	11.6 (295)	13.6 (345)	9.0 (229)
1 (Dbl.)	966N91	1.6 (39)	1.8 (45)	0.9 (23)	1.7 (43)	0.9 (22)	2.5 (63)	6.2 (157)	7.2 (182)	8.0 (204)	11.6 (295)	13.6 (345)	9.0 (229)
2 (Sgl.)	967N91	1.6 (39)	1.8 (45)	0.9 (23)	2.0 (51)	1.0 (26)	2.5 (63)	6.5 (166)	7.5 (191)	9.0 (229)	12.6 (320)	14.6 (370)	10.0 (254)
2 (Dbl.)	968N91	1.6 (39)	1.8 (45)	0.9 (23)	2.0 (51)	1.0 (26)	2.5 (63)	6.5 (166)	7.5 (191)	9.0 (229)	12.6 (320)	14.6 (370)	10.0 (254)
3 (Sgl.)	969N91	2.1 (52)	2.7 (67)	1.3 (34)	2.6 (66)	1.3 (33)	3.4 (85)	9.5 (242)	8.0 (203)	10.6 (270)	18.2 (463)	15.2 (386)	13.0 (330)
3 (Dbl.)	970N91	2.1 (52)	2.7 (67)	1.3 (34)	2.6 (66)	1.3 (33)	3.4 (85)	9.5 (242)	8.0 (203)	10.6 (270)	18.2 (463)	15.2 (386)	13.0 (330)

Flow Control Kits

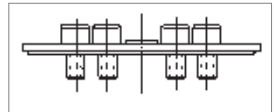
The interposed flow control independently adjusts the speed of a cylinder's extend and retract motions. This action is achieved by throttling the flow of exhaust air through ports 3 and 5 by means of a separate needle valve across each of these ports. These interposed devices are “sandwich” style, mounting between a valve and a base or manifold.

ISO Size	Part Number	Dimensions inches (mm)		
		A	B	C
1	1371N77	0.9 (24)	3.8 (97)	1.7 (43)
2	1372N77	1.3 (33)	5.1 (130)	2.0 (51)
3	1373N77	1.6 (41)	5.6 (142)	2.6 (66)

Blank Station Kits

A blank station plate is used to cover the top of a manifold station not in use.

ISO Size	1	2	3
Kit Number	1381N77	1382N77	1383N77



Blocking Disk Kits

A blocking disk closes the ports between manifold stations.

ISO Size	1	2	3
Kit Number	1376N77	1378N77	1380N77

Pilot Port Blocking Plug

The pilot blocking plug blocks the pilot ports between manifold stations.

ISO Size	1	2	3
Kit Number	1375N77	1377N77	1379N77

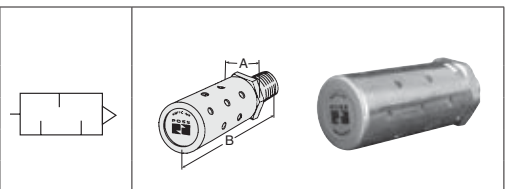
Transition Plates

To bank different manifold sizes together.

Left Manifold ISO Size	Right Manifold ISO Size	Part Number
1	2	1387N77
2	1	1388N77
2	3	1389N77
3	2	1390N77

Silencers

Port Size	Thread Type	Model Number		Avg. C _v	Dimensions inches (mm)		Weight lb (kg)
		NPT Threads	BSPT Threads		A	B	
1/4	Male	5500A2003	D5500A2003	1.2	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	4.7	1.3 (32)	3.6 (91)	0.2 (0.1)
1	Male	5500A6003	D5500A6003	14.6	2.0 (51)	5.4 (138)	0.6 (0.3)

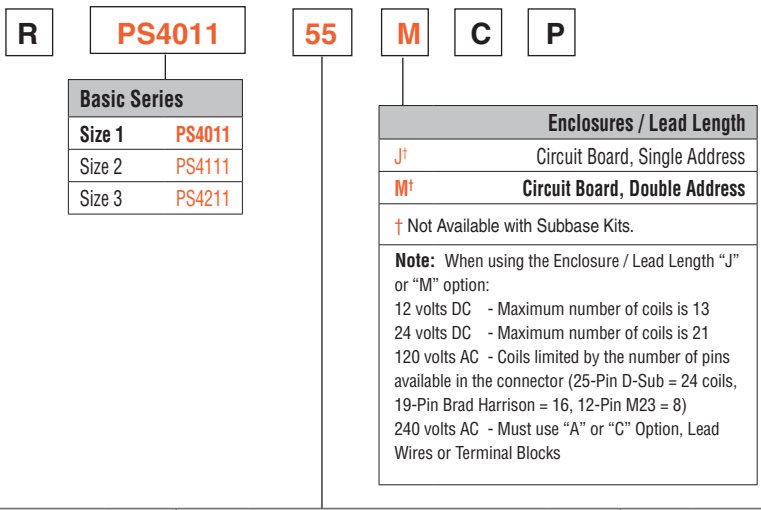


Pressure Range: 0 to 150 psig (0 to 10.3 bar) maximum. **Flow Media:** Filtered air.

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

HOW TO ORDER

(Choose your options (in red) to configure your valve model number.)



Mounting Base Style / Port Size		Mounting Base Style / Port Size		Mounting Base Style / Port Size	
ISO Size 1	Sub-base: 3/8 NPT Side Ports	15	ISO Size 2	Sub-base: 1/2 NPT Side Ports	17
	Sub-base: 3/8 BSPP Side Ports	16*		Sub-base: 1/2 BSPP Side Ports	18*
	Manifold: 3/8 NPT End Ports	55		Sub-base: 1/2 NPT Bottom / End Port	27
	Manifold: 3/8 BSPP End Ports	56*		Sub-base: 1/2 BSPP Bottom / End Port	28*
	Manifold: 3/8 NPT Bottom / End Port	65†		Manifold: 1/2 NPT Bottom / End Port	67
	Manifold: 3/8 BSPP Bottom / End Port	66*†		Manifold: 1/2 BSPP Bottom / End Port	68*
*BSPP ISO 1179 Specifications. † #1 Bottom Port - 1/4".		*BSPP ISO 1179 Specifications.		*BSPP ISO 1179 Specifications.	

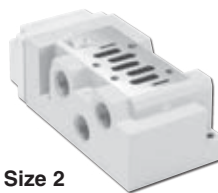
Sub-Base Kits

Automotive Connectors
Mounted in 1/2" Conduit Port

- 3-Pin - Wired for Single Solenoid
- 4-Pin / 5-Pin - Wired for Double Solenoid



Size 1



Size 2



Size 3

Sub-Base Manifold Kits

Automotive Connectors
Mounted in Individual Manifold Conduit Cover

- 3-Pin - Wired for Single Solenoid
- 4-Pin / 5-Pin - Wired for Double Solenoid



Size 1



Size 2



Size 3

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

End Plate Kits & Accessories

for ISO 5599/II Valves
W65 Series

A

End Plate Kits

HOW TO ORDER

(Choose your options (in red) to configure your valve model number.)

R

PS40

20

L2

0

C

P

Basic Series	
ISO Size 1	5599 PS40
ISO Size 2	5599 PS41
ISO Size 3	5599 PS42

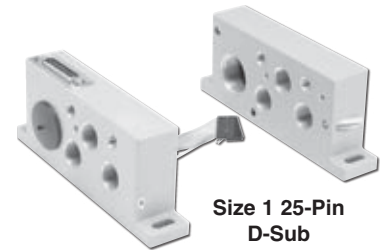
End Plate Kit Type	
End Plate, Collective Wiring	20
End Plate, Non-Collective Wiring	31

Options	
Non-Collective Wiring	01*
Collective Wiring End Plate, Top Ported	L1†**
25-Pin, D-Sub	L2†**
19-Pin, Round, Brad Harrison	L3†
12-Pin, M23	L4†
Serial Bus	L6†
16 Outputs (For Turck Serial Bus Communication Module)	T1
32 Outputs (For Turck Serial Bus Communication Module)	T2

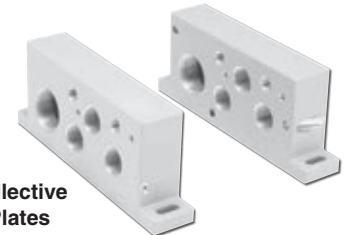
* Only Available with End Plate Kit Type "31".
 ** For PS41 and PS42 Kits Only.
 † Only Available with End Plate Kit Type "20".
 ‡ Must Order Collective Wiring Module Separately.
 # 120 VAC is Not CSA Rated.
 ^ Valve Driver Module and 24 Output Cable Installed. Must order communication modules separately.
 + Must Order Bases with Circuit Boards.

Engineering Level	
C	Current

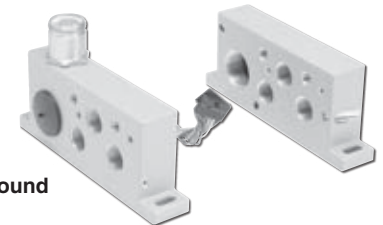
Thread Type	
0	NPT
1	BSPP "G"



Size 1 25-Pin D-Sub End Plates



Size 1 Non-Collective Wiring End Plates



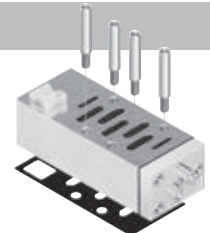
Size 1 19-Pin Round End Plates

A2

Remote Pilot Access Plate Kits

ISO Size	Port Size	Kit Number	
		NPT Threads	BSPP Threads
1	1/8"	RPS401500CP	RPS401501CP
2	1/8"	RPS411500CP	RPS411501CP
3	1/8"	RPS421500CP	RPS421501CP

Kit includes: Pilot Port Access Plate, Gasket and Mounting Studs.



Size 1 Auxiliary Access Plate Kits

ISO Size	Port Size	Kit Number	
		NPT Threads	BSPP Threads
1	1/4" & 3/8"	RPS403000CP	RPS403001CP

Kit includes:

- Pilot Port Access Plate, Gasket and Mounting Screws.
- Used on Size 1 Manifolds to provide auxiliary access to Ports 1, 3 & 5.
- Port 1: 1/4", Ports 3 & 5: 3/8". Height: .72 Inch



Blank Station Kits

ISO Size	Kit Number
1	RPS4034CP
2	RPS4134CP
3	RPS4234CP

Kit includes: Blank Station Plate, Gasket, and Mounting Bolts.

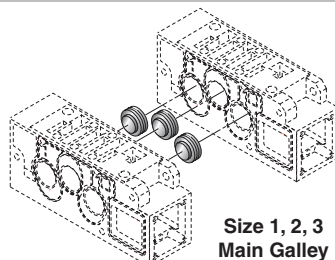


Manifold Port Isolation Kits

Main Galley (1, 3, 5)

ISO Size	Kit Number
1	RPS4032CP
2	RPS4132CP
3	RPS4232CP

Kit includes: Plugs with O-rings.

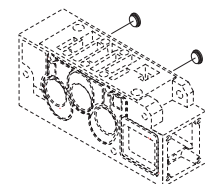


Size 1, 2, 3 Main Galley

Pilot Galley

ISO Size	Kit Number
1, 2, & 3	RPS4033CP

Kit includes: Plugs with O-rings.



Size 1, 2, 3 Pilot Galley

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

Interposed Pressure Regulators

HOW TO ORDER

(Choose your options (in red) to configure your valve model number.)

R **PS4038** **1** **6** **6** **C** **P**

Basic Series		
ISO Size 1	5599-2	PS4038
ISO Size 2	55992	PS4138
ISO Size 3	5599-2	PS4238

Regulator Function	
Common Pressure Regulator	1
Independent Pressure Regulator	2
Selector Regulator	3

#4 Port Regulator / Gauge*	
0**	Line By-Pass Plate
1	1-30 PSIG w/o Gauge
2	2-60 PSIG w/o Gauge
3	5-125 PSIG w/o Gauge
4	1-30 PSIG w/Gauge
5	2-60 PSIG w/Gauge
6	5-125 PSIG w/Gauge
C	Air Pilot w/60 PSIG Gauge
D	Air Pilot w/160 PSIG Gauge

* For Common Pressure Regulator Option, Regulator Gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

** Pressure Line By-Pass Option can only be used with Independent and Selector Regulators (Option 2 & 3 in Interposed Block Function).

#2 Port Regulator / Gauge*	
0**	Line By-Pass Plate
1	1-30 PSIG w/o Gauge
2	2-60 PSIG w/o Gauge
3	5-125 PSIG w/o Gauge
4	1-30 PSIG w/Gauge
5	2-60 PSIG w/Gauge
6	5-125 PSIG w/Gauge
C	Air Pilot w/60 PSIG Gauge
D	Air Pilot w/160 PSIG Gauge

* For Common Pressure Regulator Option, Regulator Gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

** Pressure Line By-Pass Option can only be used with Independent and Selector Regulators (Option 2 & 3 in Interposed Block Function).

How to Configure Interposed Regulator / Valve Combinations

Internal Pilot Configuration - Pressure in Base Port 1 feeds regulator configured for Internal Pilot which feeds valve configured for External Pilot.

External Pilot Configuration - Size 1, Size 2, Size 3

An External Pilot pressure in Port 12 or 14 of the base feeds thru the Interposed Regulator 12 or 14 galley directly to the 12/14 pilot of the valve.

This configuration takes an External Pilot from the 12 port of the base and passes it thru the regulator to feed the 12 galley of the valve.

WARNING: Double interposed regulators will reverse output ports, the 12 solenoid will pressurize the 4 port, the 14 solenoid will pressurize the 2 port which may cause unexpected, potentially dangerous cylinder movement at valve pressurization.

Gauge Adapter Kit

Description	Part Number
Gauge Kit	RPS5651160P
1/8" Female to 1/8" Female Coupling	R207P-2*
1/8" Male to 1/8" Male Long Nipple	RVS215PNL-2-15*

* Included in Gauge Kit RPS5651160P.

Included with all Size 00 Regulators. Both kits are required on all Size 0 & 00 Regulators when the Regulator is on the last Station on the Right (14) End.



Interposed Flow Controls

ISO Size	Part Number
1	RPS4035CP
2	RPS4135CP
3	RPS4235CP

Both adjustment screws are located on the 12 end of the unit.

Interposed Flow Control mounts with its own studs, which means the valve uses standard bolts for mounting.

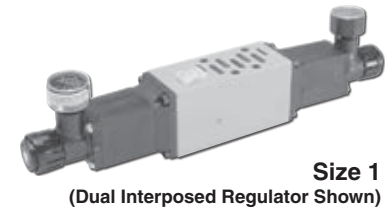
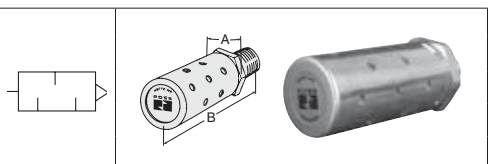
Interposed Flow Control is not to be used as a shut off device and is not bubble tight when needles are fully turned down.

A Interposed Flow Control and Common Port Interposed Regulator may be sandwiched together on a Manifold or Sub-Base. The Interposed Flow Control MUST be located between the manifold/subbase and the Common Port Interposed Regulator.

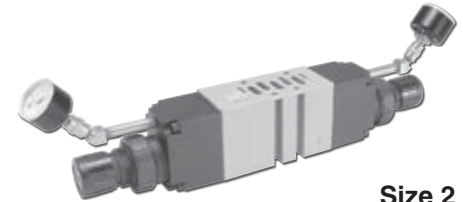
Silencers

Port Size	Thread Type	Model Number		Avg. C _v	Dimensions inches (mm)		Weight lb (kg)
		NPT Threads	BSPT Threads		A	B	
3/8	Male	5500A3013	D5500A3013	2.7	0.9 (21)	2.2 (55)	0.1 (0.1)
1/2	Male	5500A4003	D5500A4003	4.7	1.3 (32)	3.6 (91)	0.2 (0.1)
3/4	Male	5500A5013	D5500A5013	5.1	1.3 (32)	3.6 (91)	0.2 (0.1)

Pressure Range: 0 to 150 psig (0 to 10.3 bar) maximum. **Flow Media:** Filtered air.



Size 1
(Dual Interposed Regulator Shown)



Size 2
(Dual Interposed Regulator Shown)

Ordering Components

- Manifold or Subbase Kit required
- Interposed Regulator Kit configured for Internal Pilot as standard
- Order valve as External Pilot

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

General Information

Standard Specifications

The standard specifications for the products on each page of this catalog are given on the same page or referenced. For solenoid pilot valves, models with internal pilot supply are listed. Most models are also available for use with external pilot supply or have a built-in pilot supply selector valve.

The products in this catalog are intended for use in industrial pneumatic systems. Most products are adaptable to other uses and conditions not covered by the standard specifications given in this catalog. Weights shown are approximate and are subject to change. Dimensions given, unless otherwise noted, are envelope dimensions (not for mounting). Consult ROSS for further information.

Port Threads

Ports of valves and bases described in this catalog have NPT (ANSI B2.1) threads. Other thread types can be specified by putting an appropriate prefix letter on the model or part number when ordering.

Thread Types by Model Prefix Letter

Pneumatic Port Threads	Prefix Letter	Threaded Electrical Opening
NPT (ANSI B2.1)	None	NPT
ISO 228 - DIN 259 Parallel, BSPP#	C*	—
ISO 228 - DIN 259 Parallel, BSPP#	D	G
ISO 228 - JIS B0203 Tapered#	J	ISO
SAE 1926- ISO 11926	S	NPT

* Used only for filters, regulators, lubricators.

ISO 228 threads supersedes BSPP, G and JIS thread types.

Flow Ratings

Flow ratings are expressed as C_v where $C_v = 1$ corresponds to a steady state air flow of approximately 32 scfm under the following conditions:

Inlet pressure = 100 psig (6.7 bar)
Pressure drop = 10 psi (0.69 bar)
Air temperature = 68°F (20°C)
Relative humidity = 36%

Note: Because widely differing test standards are used to measure C_v values, the figures given in this catalog should not be used to compare ROSS valves with those of other makers. The C_v ratings given here are intended only for use with performance charts published by ROSS. The C_v ratings are averages for the various flow paths through the valve and are for steady flow conditions.

Approvals and Certifications

ROSS products are designed to meet a number of industrial standards, including the Canadian Standards Association (C.S.A.) guidelines. For more information on specific product approvals, contact your local distributor or ROSS.

Solenoids

All ROSS standard solenoids are rated for continuous duty (unless noted otherwise) and will operate the valve within the air pressure range specified in this catalog.

Explosion-Proof Solenoid Pilot available, for more information consult ROSS.

Voltage & Hertz

When ordering a solenoid valve, also specify the desired solenoid voltage and hertz.

Voltage Types by Model Suffix Letter

Voltage	Suffix Letter
120 volts AC	Z
220 volts AC	Y
12 volts DC	H
24 volts DC	W
48 volts DC	M
90 volts DC	K
110 volts DC	P
125 volts DC	C

Recommended Solenoid Voltages: 100-110 volts AC, 50 Hz; 100-120 volts AC, 60 Hz; 24 volts DC; 110 volts DC.

In addition, the following voltages are available:

200, 220 volts AC, 50 Hz
200, 240, 480 volts AC, 60 Hz
24, 48, 220 volts AC, 50 Hz
240 volts AC, 60 Hz
200, 220 volts AC, 50 Hz
200, 240 volts AC, 60 Hz.

For example: Model 2773B5001, 120 volts AC, 60 Hz.
Model W6076B2401, 220 volts AC, 50 Hz.

Please note that not all configurations are available for all models.

For additional information or help with voltage configuration, please contact your local distributor or ROSS.

Port Identification

Valve symbols in this catalog conform to the ISO 1219-1:1991 standard of the International Organization for Standardization (ISO) and the SAE J2051 standard of the Society of Automotive Engineers (SAE) respectively.

Information or Technical Assistance

For additional information or application assistance concerning ROSS products, consult ROSS or your local ROSS distributor (see contact information on the back cover).

Order Placement

For order placement, consult ROSS or your local ROSS distributor.

For a current list of countries and local distributors, visit ROSS' website at www.rosscontrols.com.

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. If you have any questions, call your nearest ROSS location listed on the cover of this document.
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

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 warranty is

