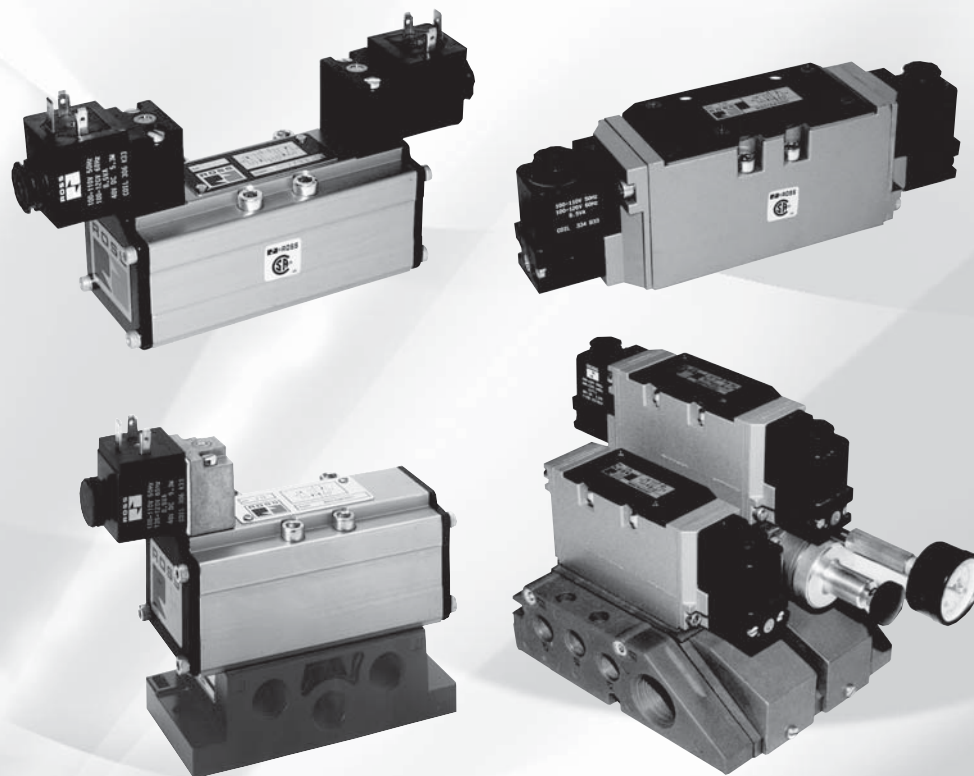


ROSS CONTROLS®



**ISO 5599-1 & ISO 5599-2 VALVES
W60 & W64, W65 SERIES**



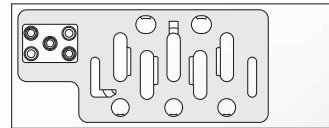
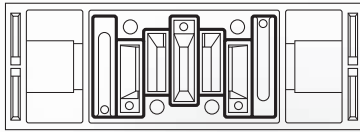
ISO W60, W64, & W65 SERIES VALVES – KEY FEATURES

- ISO Sizes 1, 2, & 3
- 5/2 Single, 5/2 Double, & 5/3 Double Solenoid Pilot & Pressure Controlled Valves
- Available with Buna-N and Fluoroelastomer 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


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

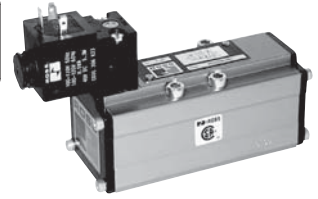
5599-2: Plug-in Standards for Size 1, 2, 3



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	1¼	1½	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 5599-1	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 & Manifold Bases																						A2.8-A2.9
Manifold Kits & Accessories																						A2.9 - A2.11
ISO 5599-2	W65	1																0.8				A2.12 - A2.14
	W65	2																1.9				A2.12 - A2.14
	W65	3																3.8				A2.12 - A2.14
Sub-Bases & Modular Manifold Bases																						A2.15
Accessories for Sub-Bases & Modular Manifold Bases																						A2.16
Single Sub-Bases & Modular Manifold Bases																						A2.17
End Station Kits & Accessories																						A2.18 - A2.19


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

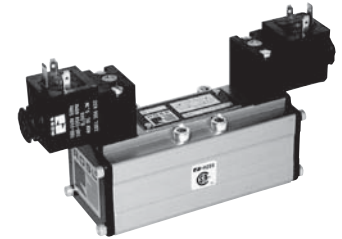
ISO Size	Port Size	Valve Model Number#*	Avg. C _v	Average Response Constants**			Weight lb (kg)	
				M	F			
					In-Out	Out-Exh.		
1	1/8 - 3/8	W6076B2401Z	0.8	29	3.5	4.9	1.5 (0.7)	
2	3/8 - 1/2	W6076B3401Z	1.9	41	1.5	2.4	2.3 (1.1)	
3	1/2 - 3/4	W6076B4401Z	3.8	51	0.8	1.1	3.5 (1.6)	



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	W6076B2407Z	0.8	17	3.5	4.9	1.8 (0.9)	
2	3/8 - 1/2	W6076B3407Z	1.9	20	1.5	2.5	2.7 (1.2)	
3	1/2 - 3/4	W6076E4407Z	3.8	20	0.8	1.1	3.9 (1.8)	



A2

#Voltage: Z=110-120 VAC, 50/60 Hz; W=24 VDC, e.g., W6076B2401W. For other voltages, consult ROSS.

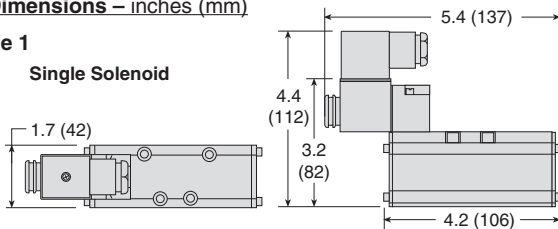
* Sub-bases and manifold bases ordered separately, refer to page A2.8-9.

** 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.

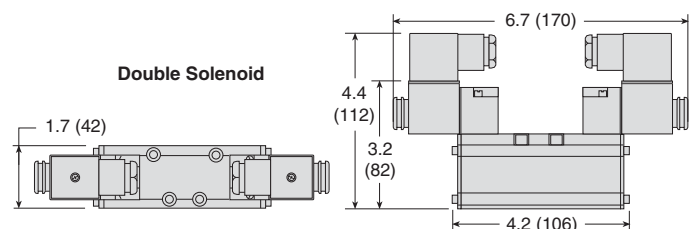
Valve Dimensions – inches (mm)

ISO Size 1

Single Solenoid

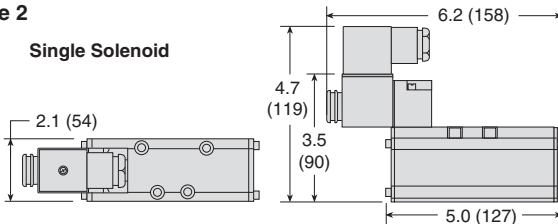


Double Solenoid

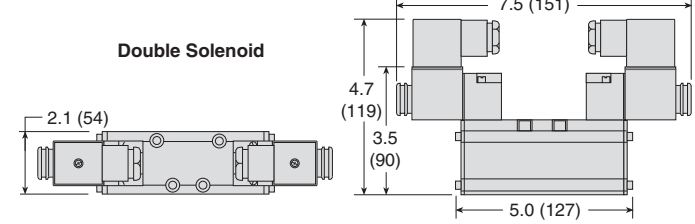


ISO Size 2

Single Solenoid

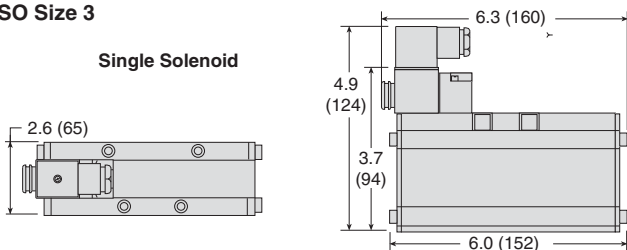


Double Solenoid

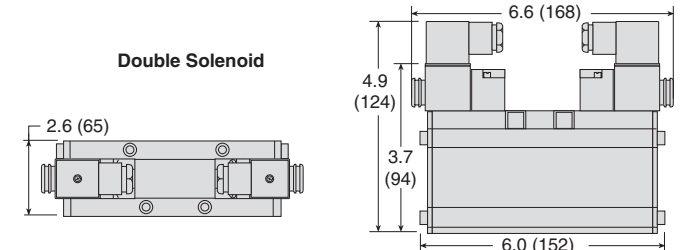


ISO Size 3

Single Solenoid



Double Solenoid



Options: Indicator Light (in electrical connectors), refer to page A2.11. Accessories ordered separately, refer to page A2.10-11.

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): 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; 5-micron recommended.

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.



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A2.3

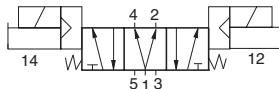
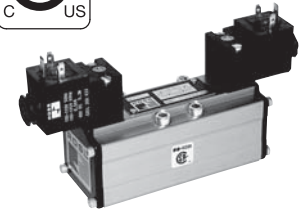
Solenoid Pilot Controlled Valves

ISO 5599-1
W60 Series

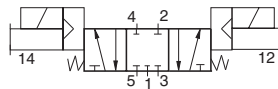
A

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

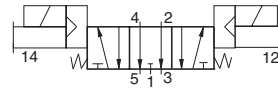
ISO Size	Port Size	Valve Model Number**			Avg. C _v	Average Response Constants**			Weight lb (kg)
		Power Center	Closed Center	Open Center		M	F		
1	1/8 - 3/8	W6077A2951Z	W6077B2401Z	W6077B2407Z	0.8	30	3.5	5.0	1.8 (0.9)
2	3/8 - 1/2	W6077A3945Z	W6077B3401Z	W6077B3407Z	1.9	40	1.5	2.5	2.8 (1.3)
3	1/2 - 3/4	W6077B4934Z	W6077B4401Z	W6077B4407Z	3.8	50	0.8	1.1	4.0 (1.8)



Power Center



Closed Center



Open Center

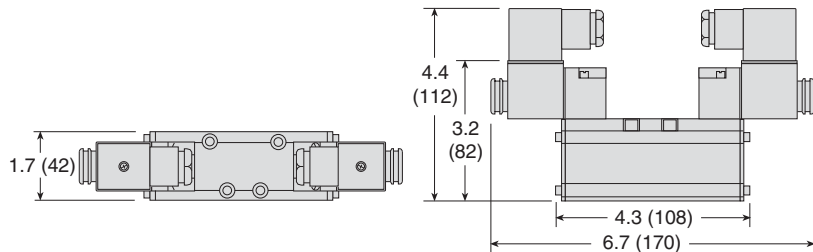
#Voltage: Z=110-120 VAC, 50/60 Hz; W=24 VDC, e.g., W6077A2951W. For other voltages, consult ROSS.

* Sub-bases and manifold bases ordered separately, refer to page A2.8-9.

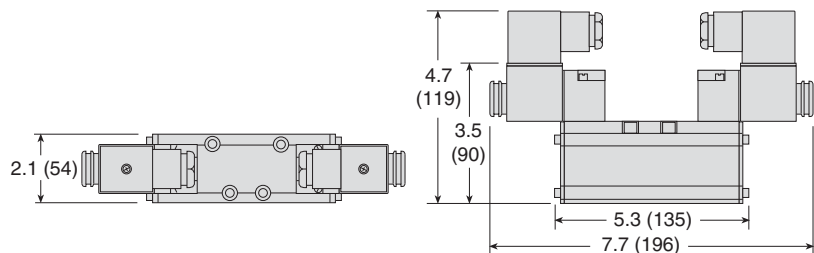
** Valve Response Time – Response Time (msec) = M + (F • V). This is the average time required to fill a volume V (cubic inches) to 90% of supply pressure or to exhaust it to 10% of supply pressure. M and F values are shown above.

Valve Dimensions – inches (mm)

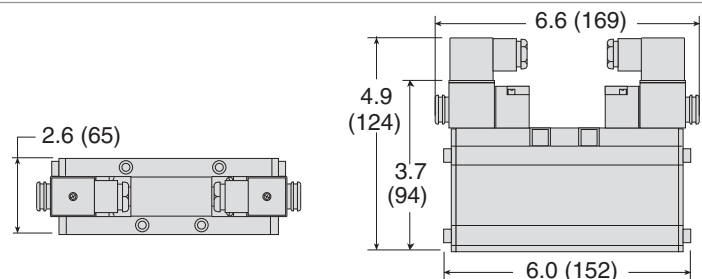
ISO Size 1



ISO Size 2



ISO Size 3



Options: Indicator Light (in electrical connectors), refer to page A2.11. Accessories ordered separately, refer to page A2.10-11.

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): 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.

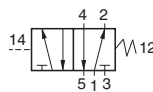
Manual Override: Flush; metal, non-locking.

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

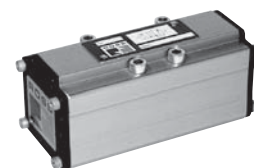
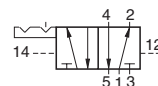
ISO Size	Port Size	Valve Model Number*	Avg. C _v	Average Response Constants**			Weight lb (kg)
				M	In-Out	Out-Exh.	
1	1/8 - 3/8	W6056B2411	0.8	29	3.5	4.9	0.8 (0.4)
2	3/8 - 1/2	W6056B3411	1.9	41	1.5	2.4	1.5 (0.7)
3	1/2 - 3/4	W6056B4411	3.8	51	0.8	1.1	3.0 (1.4)



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	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)

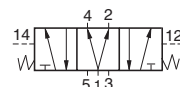


A2

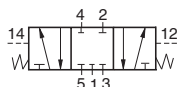
5-Way 3-Position Valves, Double Pressure Controlled

ISO Size	Port Size	Valve Model Number*			Avg. C _v	Average Response Constants**			Weight lb (kg)
		Power Center	Closed Center	Open Center		M	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)

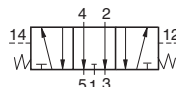
Power Center



Closed Center



Open Center

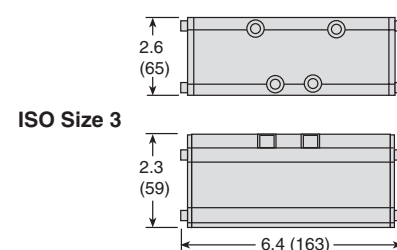
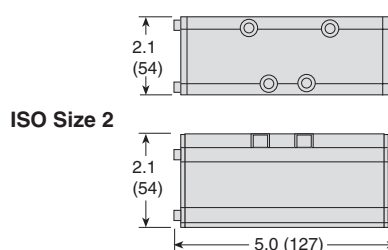
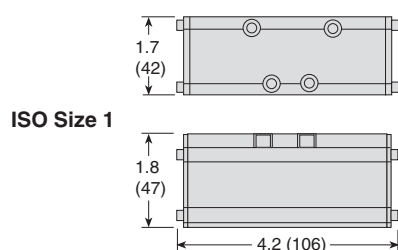


* Sub-bases and manifold bases ordered separately, refer to page A2.8-9.

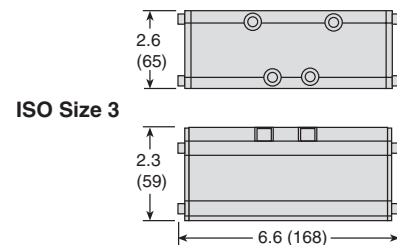
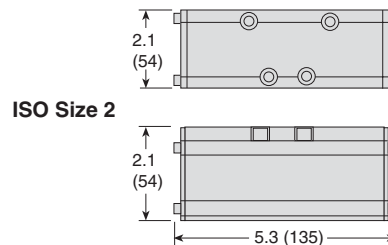
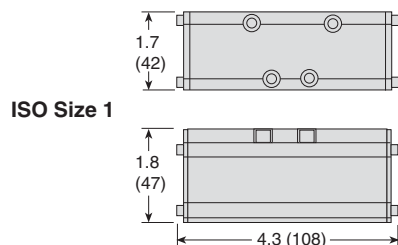
** Valve Response Time – Response Time (msec) = M + (F • V). This is the average time required to fill a volume V (cubic inches) to 90% of supply pressure or to exhaust it to 10% of supply pressure. M and F values are shown above.

Valve Dimensions – inches (mm)

5/2 Valves



5/3 Valves



Accessories ordered separately, refer to page A2.10-11.

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).


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A2.5

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

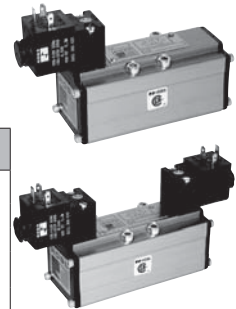
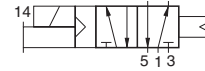
Solenoid Pilot Controlled Valves

ISO 5599-1
W64 Series

A

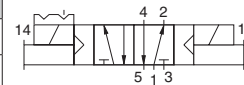
5-Way 2-Position Valves, Single Solenoid Pilot Controlled, Air Return

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	W6476B2401Z	W6476B2402Z	1.0	33	2.9	5.9	1.3 (0.6)
2	3/8 - 1/2	W6476B3401Z	W6476B3402Z	2.0	33	1.2	2.3	1.8 (0.8)
3	1/2 - 3/4	W6476B4401Z	W6476B4402Z	4.0	50	0.7	1.2	2.8 (1.3)



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	W6476B2407Z	W6476B2408Z	1.0	16	2.9	5.6	1.8 (0.8)
2	3/8 - 1/2	W6476B3407Z	W6476B3408Z	2.0	16	1.2	2.3	2.3 (1.0)
3	1/2 - 3/4	W6476B4407Z	W6476B4408Z	4.0	16	0.7	1.1	3.3 (1.5)



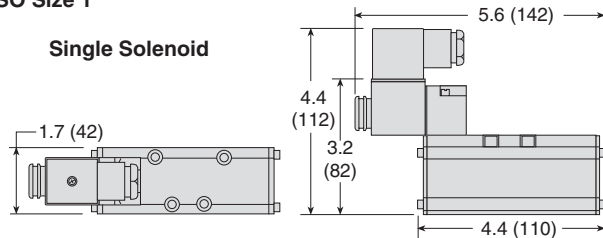
#Voltage: Z=110-120 VAC, 50/60 Hz; W=24 VDC, e.g., W6476B2401W. For other voltages, consult ROSS.

* Sub-bases and manifold bases ordered separately, refer to page A2.8-9.

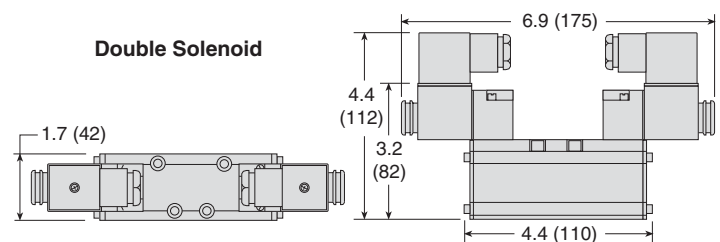
** Valve Response Time – Response Time (msec) = M + (F • V). This is the average time required to fill a volume V (cubic inches) to 90% of supply pressure or to exhaust it to 10% of supply pressure. M and F values are shown above.

ISO Size 1

Single Solenoid

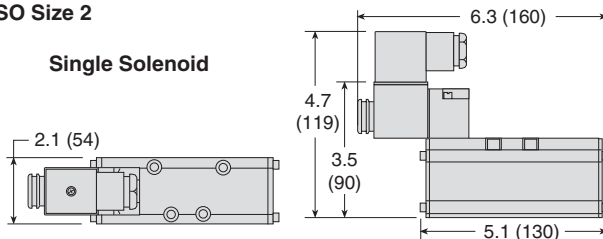


Double Solenoid

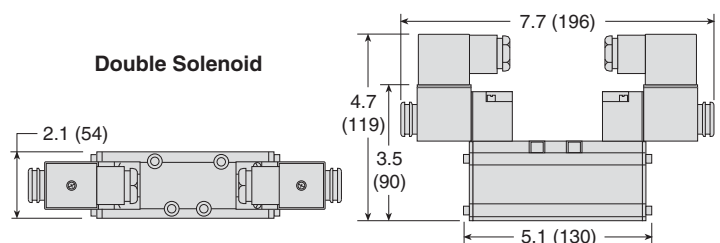


ISO Size 2

Single Solenoid

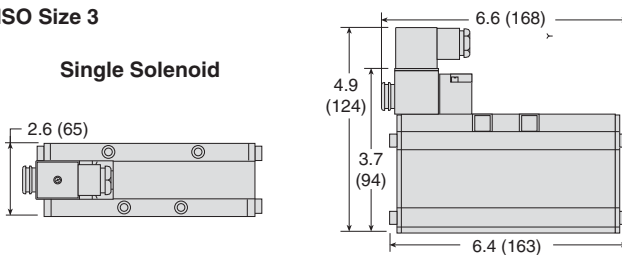


Double Solenoid

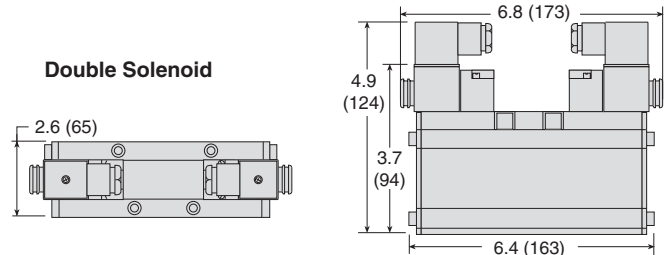


ISO Size 3

Single Solenoid



Double Solenoid



Options: Indicator Light (in electrical connectors); refer to page A2.11. Accessories ordered separately, refer to page A2.10-11.

STANDARD SPECIFICATIONS (for valves on this page):

Construction: Poppet.

Mounting Type: Base.

Solenoids: 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.

Pressure Controlled Valves

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)



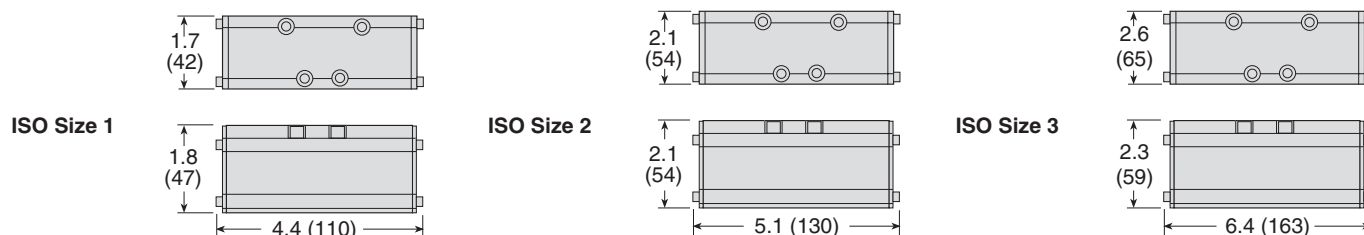
A2

* Sub-bases and manifold bases ordered separately, refer to page A2.8-9.

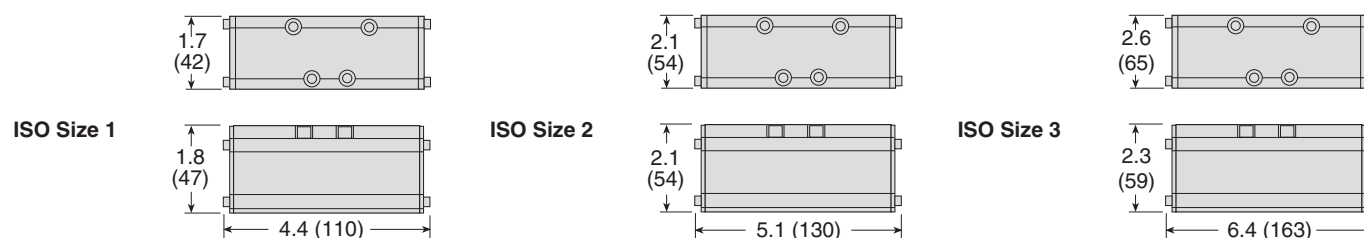
** Valve Response Time – Response Time (msec) = M + (F • V). This is the average time required to fill a volume V (cubic inches) to 90% of supply pressure or to exhaust it to 10% of supply pressure. M and F values are shown above.

Valve Dimensions – inches (mm)

Single Pressure Controlled



Double Pressure Controlled



Accessories ordered separately, refer to page A2.10-11.

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).



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A2.7

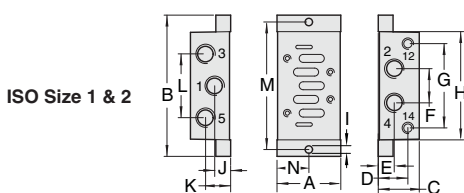
IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

Single Bases

for ISO 5599-1 Valves W60 & W64 Series

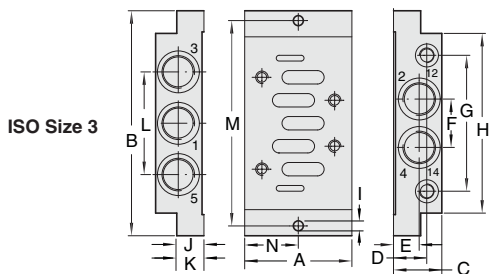
A ISO 5599-1 Single Bases, Side Ports

ISO Size	Port Size			Model Number	
	2, 4	1, 3, 5	12, 14	NPT Threads	BSPP Threads
1	1/4	1/4	1/8	2076C01	D2076C01
2	3/8	3/8	1/8	2078C01	D2078C01
3	1/2	1/2	1/8	2080C01	D2080C01



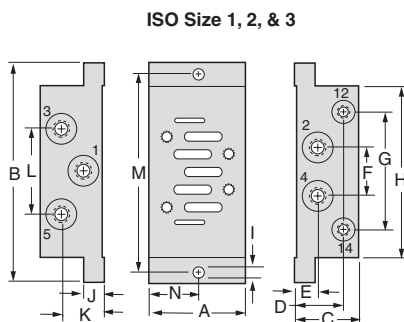
Dimensions inches (mm)			
	ISO 1	ISO 2	ISO 3
A	1.81 (46)	2.20 (56)	2.80 (71)
B	4.33 (110)	4.88 (124)	5.87 (149)
C	1.18 (30)	1.42 (36)	1.26 (32)
D	0.85 (21.5)	1.02 (26)	0.87 (22)
E	0.39 (10)	0.55 (14)	0.67 (17)
F	0.94 (24)	1.18 (30)	1.26 (32)
G	2.38 (60.5)	3.91 (74)	3.54 (90)
H	3.27 (83)	3.74 (95)	2.69 (119)
I	0.22 (5.5)	2.56 (6.5)	0.26 (6.6)
J	0.41 (10.5)	0.41 (10.5)	0.67 (17)
K	0.77 (19.5)	0.87 (22)	0.67 (17)
L	1.69 (43)	2.20 (56)	2.67 (68)
M	3.86 (98)	4.41 (112)	5.35 (136)
N	0.90 (23)	1.10 (28)	1.40 (35.5)

A2



ISO Size	Port Size			Model Number*
	2, 4	1, 3, 5	12, 14	NPT Threads
1	1/8	1/4	1/8	654K91
	3/8	3/8	1/8	642K91
2	1/2	1/2	1/8	643K91
3	3/4	3/4	1/2	644K91

* NPT port threads only.

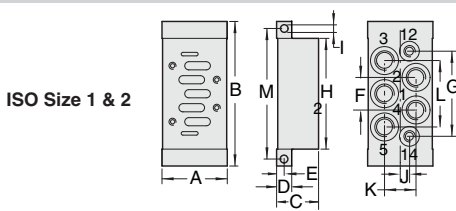


Dimensions inches (mm)			
	ISO 1	ISO 2	ISO 3
A	1.89 (48)	2.24 (57)	2.80 (71)
B	4.33 (110)	4.88 (124)	5.87 (149)
C	1.26 (32)	1.57 (40)	1.26 (32)*
D	0.93 (24)	1.18(30)	0.87 (22)
E	0.41 (38)	0.55 (14)	0.67 (17)
F	0.94 (24)	1.18 (30)	1.26 (32)
G	2.28 (58)	2.92 (74)	3.54 (90)
H	3.27 (83)	3.74 (95)	2.69 (119)
I	0.22 (6)	0.26 (7)	0.26 (7)
J	0.41 (38)	0.55 (14)	0.67 (17)
K	0.85 (22)	1.02 (26)	0.59 (15)
L	1.70 (43)	2.20 (56)	2.68 (68)
M	3.86 (22)	4.41 (112)	5.35 (136)

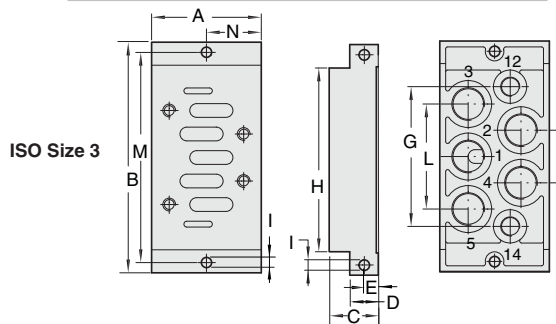
* 1.77 (45) on sub-base 644K91.

ISO 5599-1 Single Bases, Bottom Ports

ISO Size	Port Size			Model Number	
	2, 4	1, 3, 5	12, 14	NPT Threads	BSPP Threads
1	1/4	1/4	1/8	2077C01	D2077C01
2	3/8	3/8	1/8	2079C01	D2079C01
3	1/2	1/2	1/8	2081C01	D2081C01



Dimensions inches (mm)			
	ISO 1	ISO 2	ISO 3
A	1.81 (46)	2.20 (56)	2.80 (71)
B	4.33 (110)	4.88 (124)	5.87 (149)
C	1.18 (30)	1.42 (36)	1.26 (32)
D	0.39 (10)	0.51 (13)	0.71 (18)
E	0.20 (5)	0.26 (6.5)	0.35 (9)
F	0.94 (24)	1.18 (30)	1.26 (32)
G	2.36 (60)	2.87 (73)	3.54 (90)
H	3.27 (83)	3.74 (95)	2.69 (119)
I	0.22 (5.5)	2.56 (6.5)	0.26 (6.6)
J	0.41 (10.5)	0.41 (10.5)	—
K	0.91 (23)	1.06 (27)	—
L	1.81 (46)	2.24 (57)	—
M	3.86 (98)	4.41 (112)	5.35 (136)
N	—	—	1.40 (35.5)

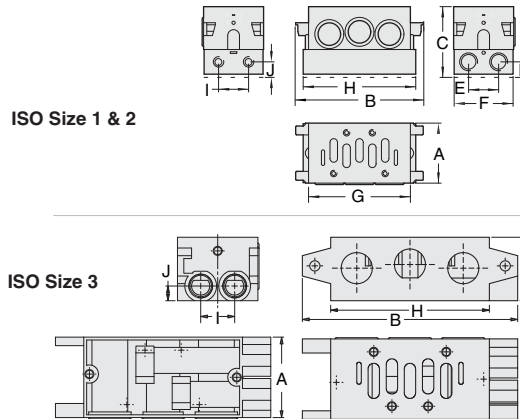


IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

ISO 5599-1 Manifold Bases, Side Ports

ISO Size	Port Size		Model Number	
	2, 4	12, 14	NPT Threads	BSPP Threads
1	1/4	1/8	2002K91	D2002K91
2	3/8	1/8	2003K91	D2003K91
3	1/2	1/8	2004K91	D2004K91

In addition to the manifold stations, an end station kit must be ordered for each manifold installation.



Dimensions inches (mm)			
	ISO 1	ISO 2	ISO 3
A	1.69 (43)	2.20 (56)	2.80 (71)
B	4.33 (110)	4.72 (120)	7.48 (190)
C	2.05 (52)	2.60 (66)	2.20 (56)
D	0.39 (10)	0.57 (14.5)	—
E	0.87 (22)	1.10 (28)	—
F	1.65 (42)	2.17 (55)	—
G	2.95 (75)	3.74 (95)	—
H	3.50 (89)	4.13 (105)	5.51 (140)
I	0.87 (22)	1.10 (28)	1.18 (30)
J	0.39 (10)	0.57 (14.5)	0.51 (13)

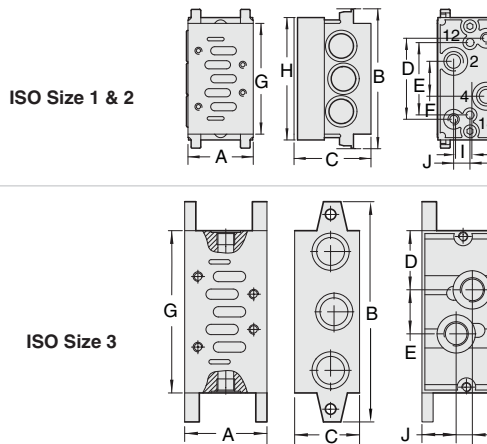


Connectors and gaskets are included with each manifold base.
The ISO Size 1 & 2 manifold bases contain 3 O-rings and 2 connector brackets.

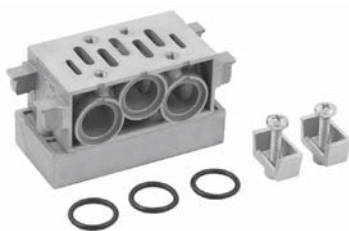
ISO 5599-1 Manifold Bases, Bottom Ports

ISO Size	Port Size		Model Number	
	2, 4	12, 14	NPT Threads	BSPP Threads
1	1/4	1/8	1997K91	D1997K91
2	3/8	1/8	1998K91	D1998K91
3	1/2	1/8	1999K91	D1999K91

In addition to the manifold stations, an end station kit must be ordered for each manifold installation.

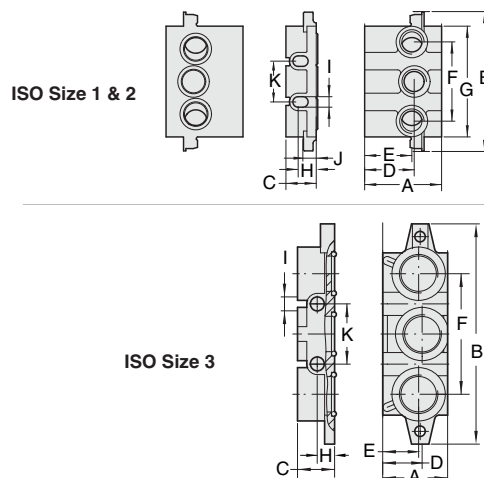


Dimensions inches (mm)			
	ISO 1	ISO 2	ISO 3
A	1.69 (43)	2.20 (56)	2.80 (71)
B	4.33 (110)	4.72 (120)	7.48 (190)
C	2.05 (52)	2.60 (66)	2.20 (56)
D	2.28 (58)	2.73 (69.5)	2.01 (51)
E	1.57 (40)	2.44 (62)	1.50 (38)
F	0.79 (20)	1.18 (30)	—
G	2.28 (58)	2.73 (69.5)	5.51 (140)
H	3.50 (89)	4.13 (105)	—
I	0.35 (9)	0.55 (14)	0.55 (14)
J	0.43 (11)	0.55 (14)	0.16 (29.5)



End Station Kits - ISO Size 1, 2, & 3

ISO Size	Port Size		Model Number	
	1, 3, 5		NPT Threads	BSPP Threads
1	3/8		723K86	D723K86
2	1/2		724K86	D724K86
3	1		731K86	D731K86



Dimensions inches (mm)			
	ISO 1	ISO 2	ISO 3
A	2.05 (52)	2.60 (66)	2.20 (56)
B	3.94 (100)	4.72 (120)	7.48 (190)
C	0.87 (22)	1.02 (26)	1.26 (32)
D	1.53 (39)	1.67 (42.5)	1.34 (34)
E	1.22 (31)	1.59 (40.5)	1.22 (31)
F	2.17 (55)	2.68 (68)	4.09 (104)
G	2.95 (75)	3.74 (95)	—
H	0.55 (14)	0.61 (15.5)	0.59 (15)
I	0.28 (7)	0.35 (9)	0.47 (12)
J	0.39 (10)	0.45 (11.5)	—
K	1.10 (28)	1.38 (35)	2.05 (52)



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

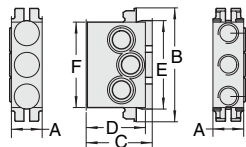
Manifold Kits & Accessories

for ISO 5599-1 Valves
W60 & W64 Series

A Air Supply Module Top & Bottom Ports - ISO Size 1 & 2

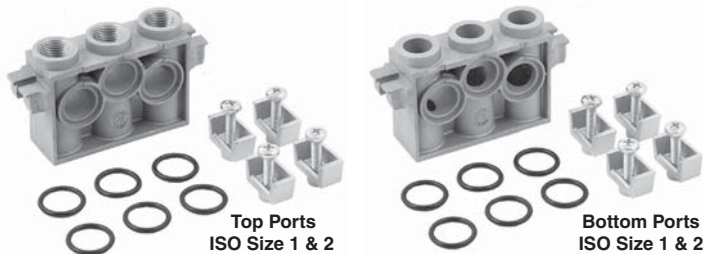
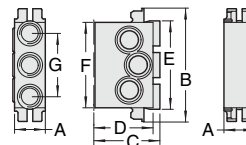
ISO Size	Ports Size	Model Number			
		Top Ports		Bottom Ports	
		NPT Treads	BSPP Threads	NPT Treads	BSPP Threads
1	3/8	725K86	D725K86	727K86	D727K86
2	1/2	726K86	D726K86	728K86	D728K86

Top Ports ISO Size 1 & 2



Dimensions inches (mm)		
	ISO 1	ISO 2
A	1.06 (27)	1.06 (27)
B	3.94 (100)	4.72 (120)
C	2.28 (58)	2.71 (69)
D	2.05 (52)	2.60 (66)
E	3.07 (78)	3.74 (95)
F	2.95 (75)	3.74 (95)
G	2.20 (56)	2.20 (56)

Bottom Ports ISO Size 1 & 2



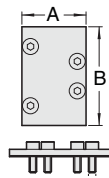
Top Ports
ISO Size 1 & 2

Bottom Ports
ISO Size 1 & 2

Blanking Plate Kits - ISO Size 1, 2, & 3

ISO Size	Model Number
1	2602H77
2	2603H77
3	2604H77

A blanking plate is used to cover the top of a manifold station that is not in use. A kit consists of a metal plate, a gasket, and mounting bolts.



Dimensions inches (mm)			
	ISO 1	ISO 2	ISO 3
A	1.57 (40)	2.04 (52)	3.03 (77)
B	2.60 (66)	3.15 (80)	4.17 (106)
Plate Thickness	0.16 (4)	0.24 (6.2)	0.41 (12)

Assembly Kits - ISO Size 1 & 2

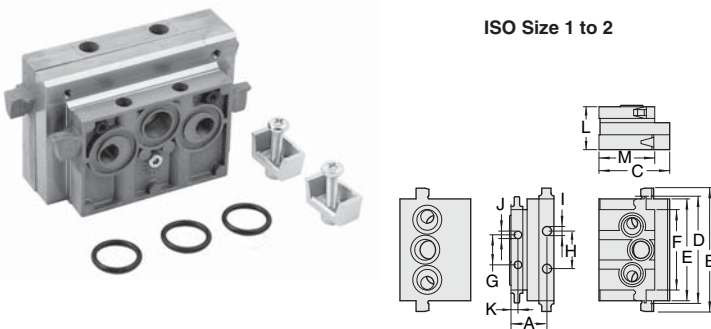
ISO Size	Model Number
1	732K86
2	733K86



Transition Modules - ISO Size 1, 2 & 3

ISO Size	Model Number
1 to 2	729K86
2 to 3	730K86

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



ISO Size 1 to 2

ISO Size 2 to 3

Dimensions inches (mm)		
	ISO 1 & 2	ISO 2 to 3
A	1.32 (33.5)	1.10 (28)
B	4.72 (120)	7.48 (190)
C	2.60 (66)	2.60 (66)
D	3.94 (100)	3.94 (100)
E	3.74 (95)	6.61 (168)
F	2.95 (75)	2.20 (56)
G	1.10 (28)	1.38 (35)
H	1.38 (35)	—
I	0.34 (8.5)	2.56 (6.5)
J	0.28 (7)	0.34 (8.5)
K	2.56 (6.5)	0.56 (14)
L	1.58 (40)	—
M	2.05 (52)	1.61 (41)

Blocking Disks - ISO Size 1 & 2

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

ISO Size	Model Number
1	319A40
2	320A40
3	321A40



Independent Pressure Modules

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 module. The pressure module 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 module.

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

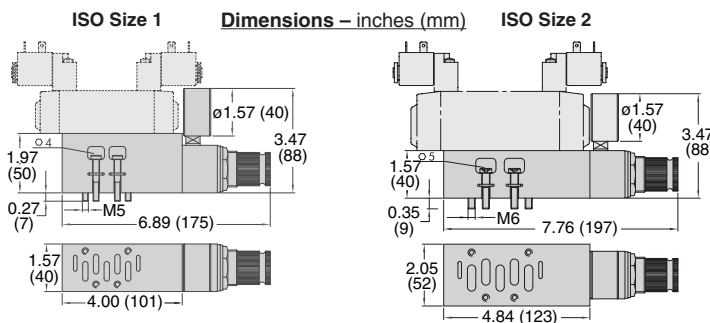
IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

Interposed Pressure Regulators

Single pressure regulators available.

Downstream pressure must always be set to increasing values. Max upstream pressure 190 psig (13 bar). Pressure can be regulated from 0 to 175 psig (0 to 12 bar). Requires no new piping.

ISO Size	Model Number	Weight lb (kg)
1	2000K91	1.68 (0.76)
2	2001K91	1.99 (0.9)



Single and double pressure regulators are available.

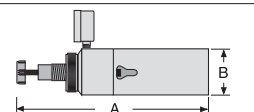
Single left hand (14) and single right hand (12) regulators are available. Single pressure regulators provide the same regulated pressure at both outlet ports.

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.

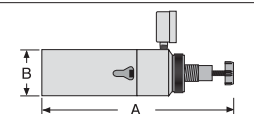
ISO Size	Regulator Model Number		
	Single Left Hand (14)	Single Right Hand (12)	Double
1	1300K91	1301K91	1302K91
2	1303K91	1304K91	1305K91
3	1306K91	1307K91	1308K91

ISO Size	Regulator Dimensions – inches (mm)		
	A (Single)	A (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)

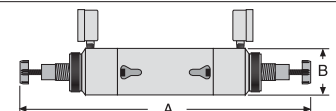
Single Left Hand (14)



Single Right Hand (12)



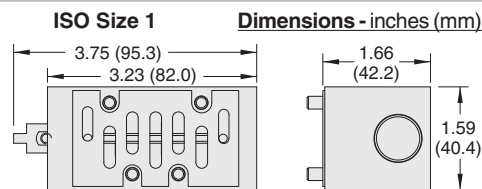
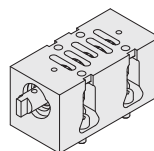
Double Regulator



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.



Interposed Flow Controls (for W60 Series valves only)

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.

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

Electrical Connectors

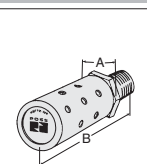
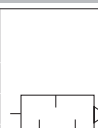
Electrical Connector	Electrical Connector Type	Cord Length meters (feet)	Cord Diameter	Electrical Connector Model Number		
				Without Light	Lighted Connector*	
EN 175301-803 Form A	Prewired Connector (18 gauge)	2 (6½)	6-mm	721K77	720K77-W	720K77-Z
	Prewired Connector (18 gauge)	2 (6½)	10-mm	371K77	383K77-W	383K77-Z
	Connector for threaded conduit (1/2 inch electrical conduit fittings)	—	—	723K77	724K77-W	724K77-Z
	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	
1/4	Male	5500A2003	D5500A2003	2.1	0.9 (21)	2.2 (55)	0.1 (0.1)
3/8	Male	5500A3013	D5500A3013	2.7	0.9 (21)	2.2 (55)	0.1 (0.1)
1/2	Male	5500A4003	D5500A4003	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)



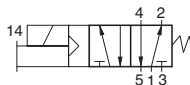
Pressure Range: 0 to 290 psig (0 to 20 bar) maximum. Flow Media: Filtered air.

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

A

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

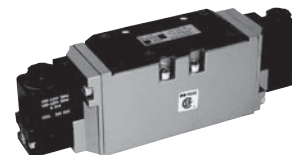
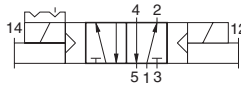
ISO Size	Port Size	Valve Model Number#*	Avg. C _v	Weight lb (kg)
1	1/4 - 3/8	W6576A2401Z	1.0	1.5 (0.7)
2	3/8 - 1/2	W6576A3401Z	2.3	2.0 (1.0)
3	1/2 - 3/4	W6576A4401Z	3.4	3.5 (1.6)



A2

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	W6576A2407Z	1.0	2.0 (1.0)
2	3/8 - 1/2	W6576A3407Z	2.3	2.5 (1.2)
3	1/2 - 3/4	W6576A4407Z	3.4	4.0 (1.9)



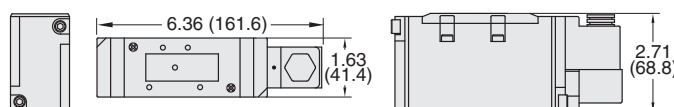
#Voltage: Z=110-120 VAC, 50/60 Hz; W=24 VDC, e.g., W6576A2401W. For other voltages, consult ROSS.

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

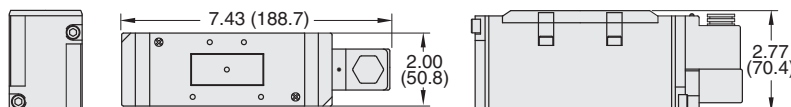
Valve Dimensions – inches (mm)

Single Solenoid

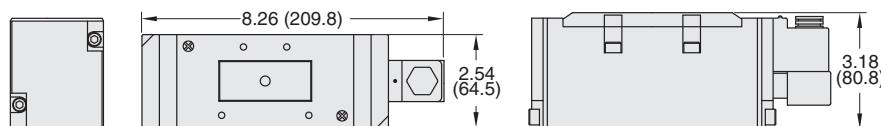
ISO Size 1



ISO Size 2

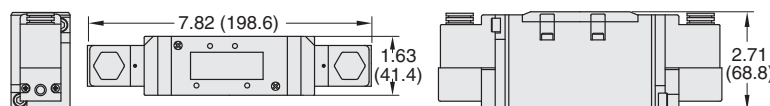


ISO Size 3

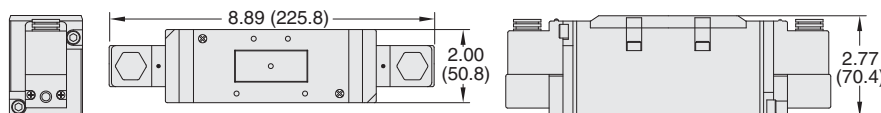


Double Solenoid

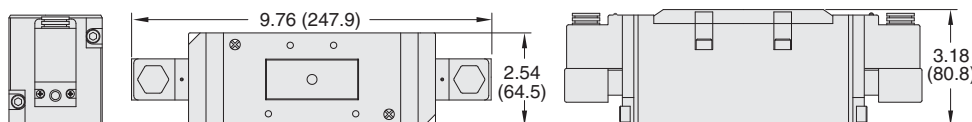
ISO Size 1



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.

Solenoid Pilot Controlled Valves

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	W6577A2902Z	W6577A2401Z	W6577A2407Z	1.0	2.0 (1.0)
2	3/8 - 1/2	W6577A3901Z	W6577A3401Z	W6577A3407Z	2.3	2.5 (1.2)
3	1/2 - 3/4	W6577A4900Z	W6577A4401Z	W6577A4407Z	3.4	4.0 (1.9)

Power Center	Closed Center	Open Center



A

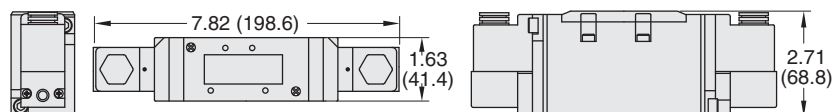
A2

#Voltage: Z=110-120 VAC, 50/60 Hz; W=24 VDC, e.g., W6577A2902W. For other voltages, consult ROSS.

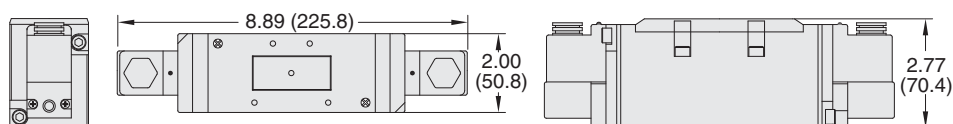
* Sub-bases and manifold bases ordered separately, refer to page A2.15 or page A2.17 when used with serial bus system.

Valve Dimensions – inches (mm)

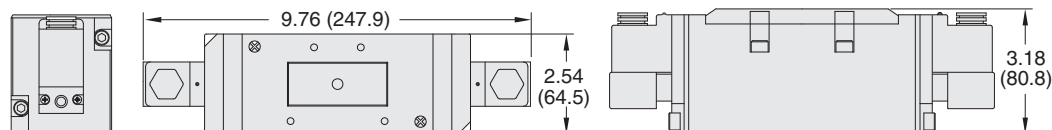
ISO Size 1



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.

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.



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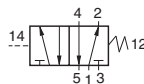
www.rosscontrols.com

A2.13

A

5-Way 2-Position Valves, Single Pressure Controlled, Spring Return

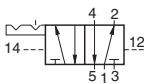
ISO Size	Port Size	Valve Model Number*	Avg. C _v	Weight lb (kg)
1	1/4 - 3/8	W6556A2411	1.0	0.8 (0.4)
2	3/8 - 1/2	W6556A3411	2.3	1.5 (0.7)
3	1/2 - 3/4	W6556A4411	3.4	3.0 (1.4)



A2

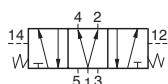
5-Way 2-Position Valves, Double Pressure Controlled, Detented

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)

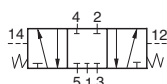


5-Way 3-Position Valves, Double Pressure Controlled

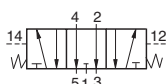
ISO Size	Port Size	Valve Model Number*			Avg C _v	Weight lb (kg)
		Power Center	Closed Center	Open Center		
1	1/4 - 3/8	—	W6557A2411	W6557A2417	1.0	0.8 (0.4)
2	3/8 - 1/2	W6557A3901	W6557A3411	W6557A3417	2.3	1.5 (0.7)
3	1/2 - 3/4	W6557A4900	W6557A4411	W6557A4417	3.4	3.0 (1.4)



Power Center



Closed Center

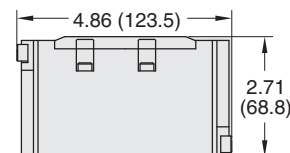
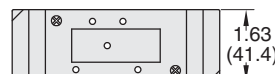
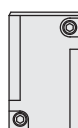


Open Center

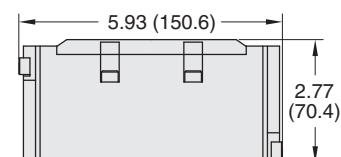
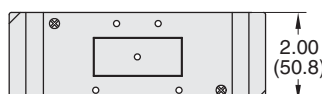
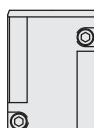
* Sub-bases and manifold bases ordered separately, refer to page A2.15 or page A2.17 when used with serial bus system.

Valve Dimensions – inches (mm)

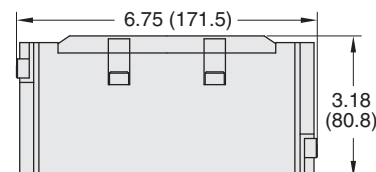
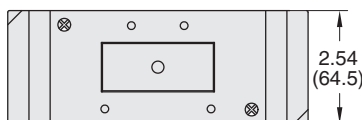
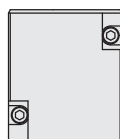
ISO Size 1



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.

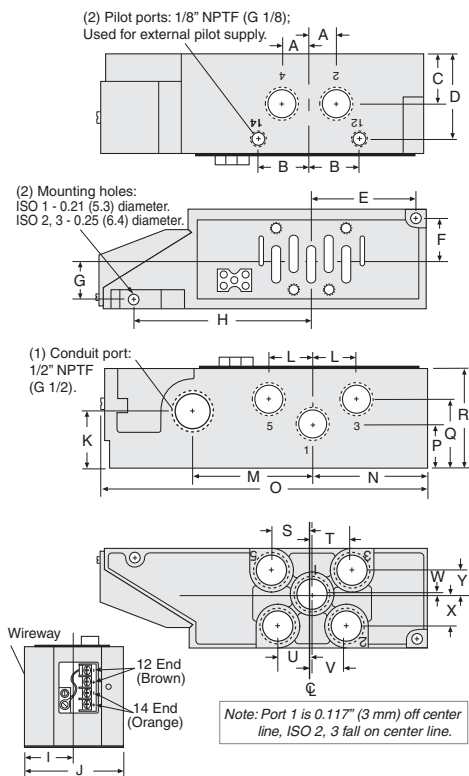
Sub-Bases & Modular Manifold Bases

for ISO 5599-2 Valves
W65 Series

Side and Bottom-Ported Sub-Bases

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
	BSPP	1/4 Side	D949N91
	BSPP	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
	BSPP	1/2 Side	D953N91
	BSPP	1/2 Side/Bottom	D954N91
3	NPT	1/2" Side	955N91
	NPT	1/2" Side/Bottom	956N91
	NPT	3/4" Side	957N91
	NPT	3/4" Side/Bottom	958N91
	BSPP	1/2 Side	D955N91
	BSPP	1/2 Side/Bottom	D956N91

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)

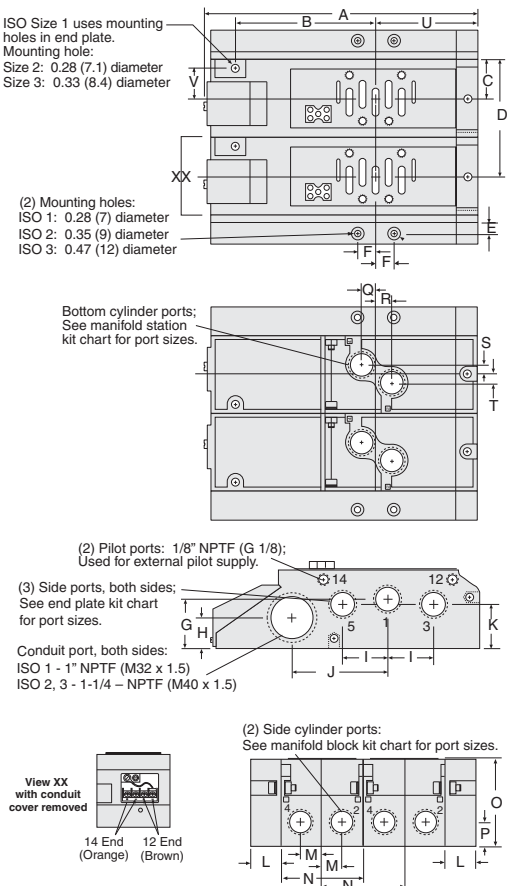


Bottom and End-Ported Manifold Bases

Each manifold station assembly includes a manifold assembly, socket head screws, nuts and seals. Each end station kit includes left and right end plates, socket head screws, nuts and seals.

Manifold Station Assembly			
ISO Size	Port Size	Model Number	
		NPT Treads	BSPP Threads
1	1/4" End/Bottom	959N91	D959N91
	3/8" End/Bottom	960N91	D960N91
2	3/8" End/Bottom	961N91	D961N91
	1/2" End/Bottom	962N91	D962N91
3	1/2" End/Bottom	963N91	D963N91
	3/4" End/Bottom	964N91	D964N91

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)



End Station Kit			
ISO Size	Port Size	Model Number	
		NPT Treads	BSPP Threads
1	3/8"	493N86	D493N86
2	1/2"	494N86	D494N86
3	1"	495N86	D495N86

Assembled manifolds also available, consult ROSS.

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



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A2.15

A

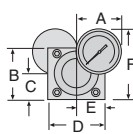
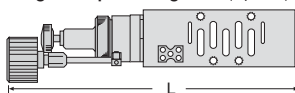
NOTE: Accessories from this page are to be used only with sub-bases and manifolds on page A2.14-15.

Interposed Regulators

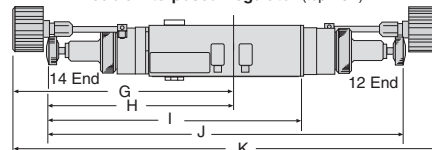
WARNING: Double interposed regulators will reverse output ports, the 12 solenoid will pressurize the 4 port, the 14 solenoid will pressurize the 2 port which may cause unexpected, potentially dangerous cylinder movement at valve pressurization.

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)**.

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

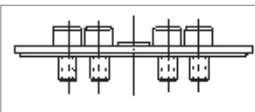
The interposed flow control independently adjusts the speed of a cylinder's extend and retract motions. This action is achieved by throttling the flow of exhaust air through ports 3 and 5 by means of a separate needle valve across each of these ports. These interposed devices are “sandwich” style, mounting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

ISO Size	Model 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	Model 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 290 psig (0 to 20 bar) maximum. **Flow Media:** Filtered air.



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

Single Sub-Bases & Manifold Bases

for ISO 5599-2 Valves
W65 Series

HOW TO ORDER

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

R

PS4011

55

M

C

P

Basic Series	
Size 1	PS4011
Size 2	PS4111
Size 3	PS4211

Enclosures / Lead Length	
J†	Circuit Board, Single Address
M†	Circuit Board, Double Address
† Not Available with Sub-Base Kits.	
Note: When using the Enclosure / Lead Length "J" or "M" option: 12 volts DC - Maximum number of coils is 13 24 volts DC - Maximum number of coils is 21 120 volts AC - Coils limited by the number of pins available in the connector (25-Pin D-Sub = 24 coils, 19-Pin Brad Harrison = 16, 12-Pin M23 = 8) 240 volts AC - Must use "A" or "C" Option, Lead Wires or Terminal Blocks	

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	ISO Size 3	Sub-base: 3/4 NPT Side Ports	19
	Sub-base: 3/8 BSPP Side Ports	16*		Sub-base: 1/2 BSPP Side Ports	18*		Sub-base: 3/4 BSPP Side Port	10*
	Manifold Base: 3/8 NPT End Ports	55		Sub-base: 1/2 NPT Bottom / End Port	27		Sub-base: 3/4 NPT Bottom / End Port	29
	Manifold Base: 3/8 BSPP End Ports	56*		Sub-base: 1/2 BSPP Bottom / End Port	28*		Sub-base: 3/4 BSPP Bottom / End Port	20*
	Manifold Base: 3/8 NPT Bottom / End Port	65†		Manifold Base: 1/2 NPT Bottom / End Port	67		Manifold Base: 3/4 NPT Bottom / End Port	69
	Manifold Base: 3/8 BSPP Bottom / End Port	66*†		Manifold Base: 1/2 BSPP Bottom / End Port	68*		Manifold Base: 3/4 BSPP Bottom / End Port	60*
*BSPP ISO 1179 Specifications. † #1 Bottom Port - 1/4".			*BSPP ISO 1179 Specifications.			*BSPP ISO 1179 Specifications.		

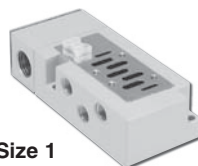
Sub-Base Kits

Automotive Connectors

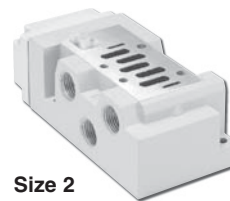
Mounted in 1/2" Conduit Port

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

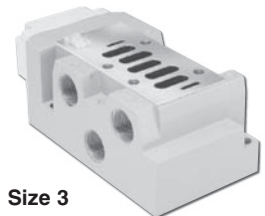
Size 1



Size 2



Size 3



Manifold Base 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.



Online Version
Rev. 03/12/18

www.rosscontrols.com

A2.17

End Station Kits & Accessories

for ISO 5599-2 Valves
W65 Series

A

End Station Kits

A2

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

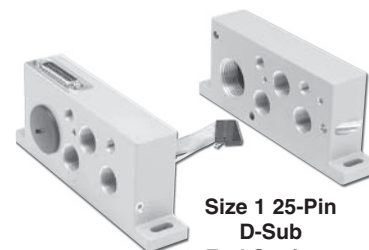
End Station Kit Type	
End Station, Collective Wiring	20
End Station, Non-Collective Wiring	31

Options	
Non-Collective Wiring	01*
Collective Wiring End Station, 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

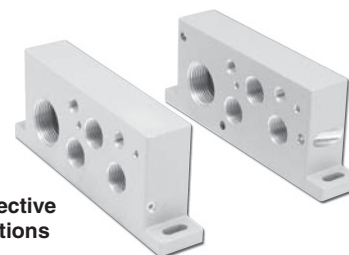
Engineering Level	
C	Current

Thread Type	
0	NPT
1	BSPP "G"

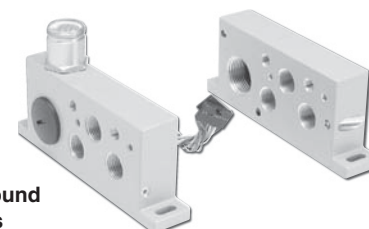
* Only Available with End Station Kit Type "31".
 ** For PS41 and PS42 Kits Only.
 † Only Available with End Station Kit Type "20".
 ‡ Must Order Collective Wiring Module Separately.
 # 120 VAC is Not CSA Rated.
 ^ Valve Driver Module and 24 Output Cable Installed. Must order communication modules separately.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



Size 1 25-Pin
D-Sub
End Stations



Size 1 Non-Collective
Wiring End Stations

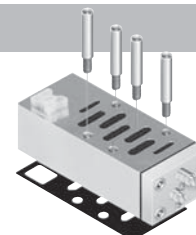


Size 1 19-Pin Round
End Stations

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.



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.

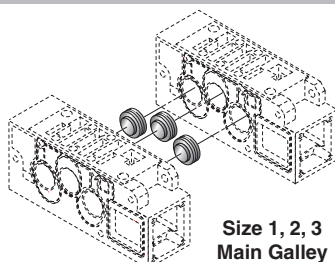


Manifold Port Isolation Kits

Main Galley (1, 3, 5)

ISO Size	Kit Number
1	RPS4032CP
2	RPS4132CP
3	RPS4232CP

Kit includes: Plugs with O-rings.

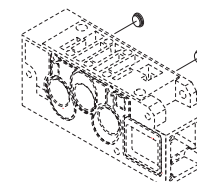


Size 1, 2, 3
Main Galley

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).

Ordering Components

- Manifold Base or Sub-Base 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.

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	Model 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	Model 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.

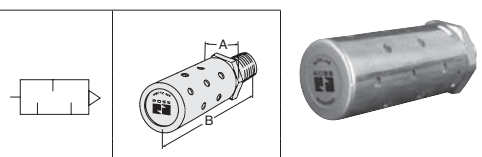
Interposed Flow Control is not to be used as a shut off device and is not bubble tight when needles are fully turned down.

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/Sub-Base 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 290 psig (0 to 20 bar) maximum. **Flow Media:** Filtered air.



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

A



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





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AN INDEPENDENT REPRESENTATIVE



Full-Service Global Locations

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.

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.

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