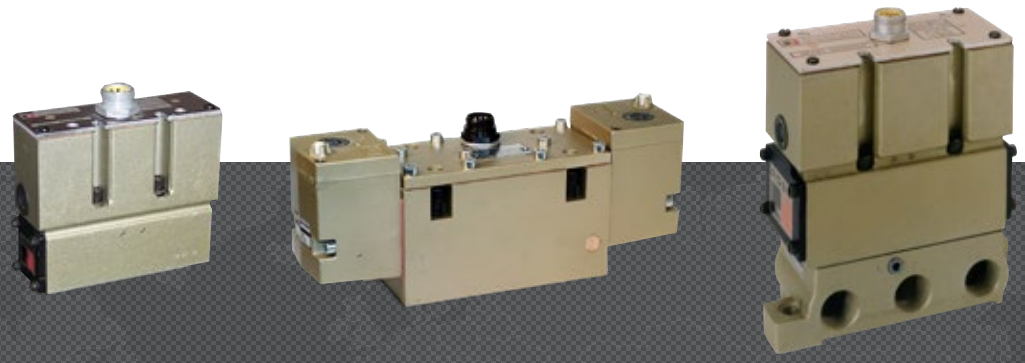
Directional Control SAE Valves
80 & 84 Series

Product Catalog



ROSS™
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SAE Valves 80 Series
Product Overview

The ROSS® SAE valves 80 Series are base mounted spool and sleeve valves, designed to conform to the standards of the Society of Automotive Engineers (SAE), this makes the valves for SAE bases interchangeable.

These SAE Size 125, 250, and 500 valves are available as, 2- and 3-position, 5-ported 4-way solenoid pilot valves with either internal or external pilot supply. The spool and sleeve design means there are no seals to wear out.

SAE Size 125 & 250	SAE Size 500
	

Illustration examples.

VALVE FEATURES

Spool Design	Balanced spool; no seals to wear out
Mounting Options	Individual sub-base or manifold base mounting
Pilot Supply	Internal or external; suitable for vacuum service (with external pilot supply)
External Pilot Supply	Easily field-convertible for use with an external pilot supply
Pilot Operation	Provides high shifting force with low power consumption

SAE Size	Available Inlet Port Sizes					Functions					Actuation	Maximum Flow C_v (Nl/min)	Page
						5/2		5/3					
	1/4	3/8	1/2	3/4	1	Single	Double	Closed Center	Open Center	Pressure Center	Solenoid Control		
125	●	●				●	●	●	●	●	●	1.0 (980)	3 – 9
250		●	●	●		●	●	●	●	●	●	2.5 (2500)	
500			●	●	●	●	●	●	●		●	4.2 (4100)	
Sub-Bases & Manifold Bases													16 – 20
Accessories and Options													21

Specifications

STANDARD SPECIFICATIONS

GENERAL	Function	5/2 and 5/3 Valve		
	Construction Design	Spool and Sleeve		
	Actuation	Electrical	Solenoid Pilot Controlled	
	Mounting	Base		
	Connection	Valve	Valve-to-base interface	
		Sub-Base, Manifold	Threaded	NPT
	Manual Override	Flush; rubber, non-locking		
	Solenoid Indicator Light	One per solenoid		

OPERATING CONDITIONS	Temperature	Ambient	40° to 120°F (4° to 50°C)
		Media	40° to 175°F (4° to 80°C)
	Flow Media	Filtered air	
	Operating Pressure	Vacuum to 150 psig (Vacuum to 10 bar)	
	Pilot Supply Pressure	Minimum 15 psig (1 bar)	
	External Pilot Supply	Must be equal to or greater than inlet pressure	

ELECTRICAL DATA FOR SOLENOID PILOT	Solenoids	SAE Size	Current Flow	Power Consumption	Operating Voltage (each solenoid)
		125 & 250	DC	24 volts	8 watts
			AC	100-120 volts, 50/60 Hz	8 VA inrush, 6 VA holding
				230-240 volts, 50/60 Hz	
		500	DC	24 volts	14 watts
			AC	100-120 volts, 50/60 Hz	87 VA inrush, 30 VA holding
				230-240 volts, 50/60 Hz	
		Rated for continuous duty			

CONSTRUCTION MATERIAL	Valve Body	Cast Aluminum
	Spool	Stainless Steel
	Seals	Buna-N

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

PRODUCT CREDENTIALS

Certificate of Compliance	Declaration of Conformity	
CSA C US	CE	EAC

Ordering Information

5/2 Single Solenoid Pilot Controlled Valves

SINGLE SOLENOID PILOT CONTROLLED VALVES — 5-Way 2-Position Valves

Wiring Type	Connector Type	SAE Size	Valve Model Number*		
			Voltage		
			24 V DC	120 V AC	230 V AC
Stellantis Wired Chrysler	Mini-connector 5-pin	125	8076C3341W	8076C3341Z	8076C3341Y
		250	8076C4341W	8076C4341Z	8076C4341Y
		500	8076B6341W	8076B6341Z	8076B6341Y
	Micro-connector 5-pin	125	8076C3321	8076C3311	–
		250	8076C4321	8076C4311	–
		500	8076B6321	8076B6311	–
Ford Wired	Mini-connector 5-pin	125	8076C3331W	8076C3331Z	8076C3331Y
		250	8076C4331W	8076C4331Z	8076C4331Y
		500	8076B6331W	8076B6331Z	8076B6331Y
	Micro-connector 4-pin	125	8076C3361	–	–
		250	8076C4361	–	–
		500	8076B6361	–	–
Hardwire		125	8076C3351W	8076C3351Z	8076C3351Y
		250	8076C4351W	8076C4351Z	8076C4351Y
		500	8076B6351W	8076B6351Z	8076B6351Y

For other voltages, consult ROSS.

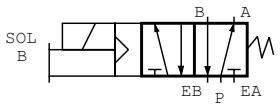
* **Sub-bases and manifold bases ordered separately. Please see Sub-Bases and Manifolds pages.**

Pressure Controlled Spool & Sleeve Valves for SAE available, consult ROSS.

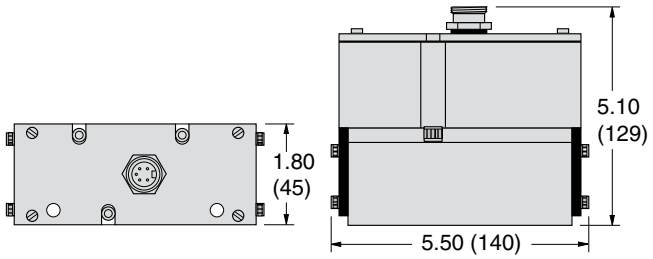
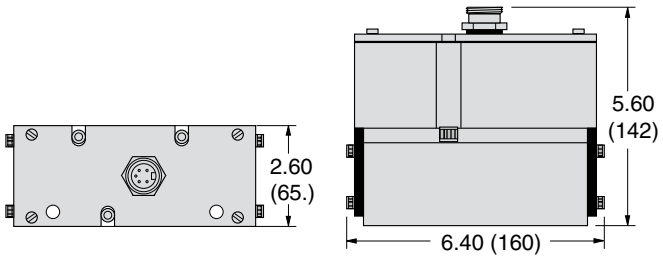
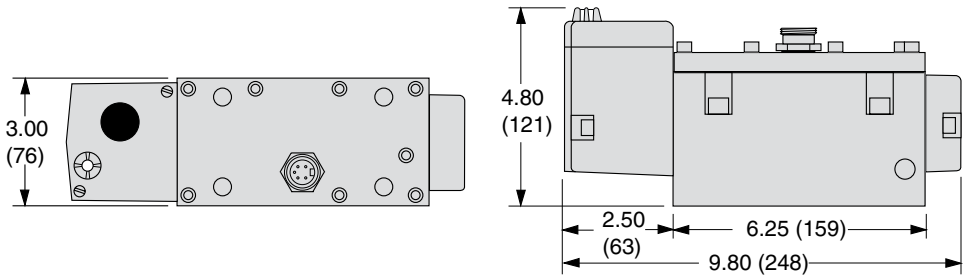
SAE Size	Flow C_v (Nl/min)	Average Response Constants*			Weight lb (kg)
		M	F		
	1-2		1-2	2-3	
125	1.4 (1400)	20	3.5	4.9	3.5 (1.6)
250	4.0 (3900)	10	1.4	2.6	6.5 (2.9)
500	8.2 (8100)	22	0.5	0.8	8.3 (3.7)

* **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.

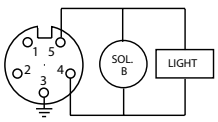
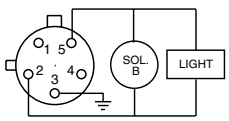
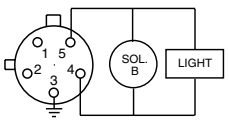
Valve Schematic

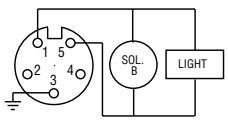
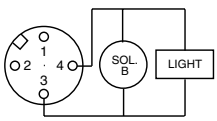


5/2 Single Solenoid Pilot Controlled Valves

DIMENSIONS	Inches (mm)
SAE Size 125	
SAE Size 250	
SAE Size 500	
Downloadable CAD models available.	

Wiring Diagrams

	5-pin mini-connector (all voltages)	5-pin micro-connector (V DC)	5-pin micro-connector (V AC)
Stellantis Wired Chrysler			

	5-pin mini-connector (all voltages)	4-pin micro-connector (V DC)
Ford Wired		

Ordering Information

5/2 Double Solenoid Pilot Controlled Valves

DOUBLE SOLENOID PILOT CONTROLLED VALVES — 5-Way 2-Position Valves

Wiring Type	Connector Type	SAE Size	Valve Model Number*		
			Voltage		
			24 V DC	120 V AC	230 V AC
Stellantis Wired Chrysler	Mini-connector 5-pin	125	8076C3342W	8076C3342Z	8076C3342W
		250	8076C4342W	8076C4342Z	8076C4342Y
		500	8076B6342W	8076B6342Z	8076B6342Y
	Micro-connector 5-pin	125	8076C3322	8076C3312	–
		250	8076C4322	8076C4312	–
		500	8076B6322	8076B6312	–
Ford Wired	Mini-connector 5-pin	125	8076C3332W	8076C3332Z	8076C3332Y
		250	8076C4332W	8076C4332Z	8076C4332Y
		500	8076B6332W	8076B6332Z	8076B6332Y
	Micro-connector 4-pin	125	8076C3362	–	–
		250	8076C4362	–	–
		500	8076B6362	–	–
Hardwire		125	8076C3352W	8076C3352Z	8076C3352Y
		250	8076C4352W	8076C4352Z	8076C4352Y
		500	8076B6352W	8076B6352Z	8076B6352Y

For other voltages, consult ROSS.

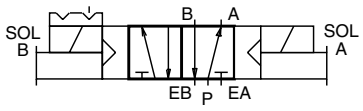
* **Sub-bases and manifold bases ordered separately. Please see Sub-Bases and Manifolds pages.**

Pressure Controlled Spool & Sleeve Valves for SAE available, consult ROSS.

SAE Size	Flow C_V (Nl/min)	Average Response Constants*			Weight lb (kg)
		M	F		
	1-2		1-2	2-3	
125	1.4 (1400)	15	3.5	4.9	3.5 (1.6)
250	4.0 (3900)	17	1.5	2.6	7.0 (3.2)
500	8.0 (7900)	30	0.4	0.5	9.5 (4.3)

***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.

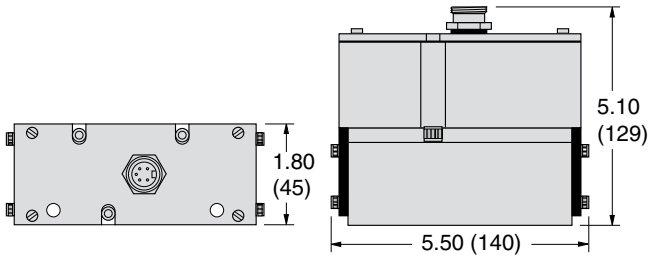
Valve Schematic



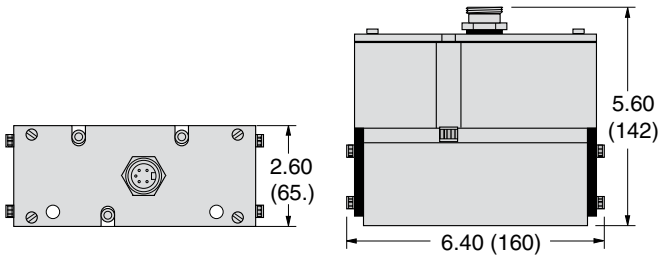
5/2 Double Solenoid Pilot Controlled Valves

DIMENSIONS	Inches (mm)

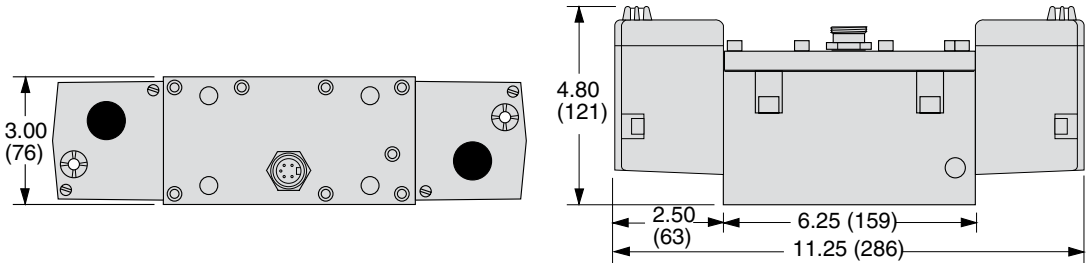
SAE Size 125



SAE Size 250



SAE Size 500

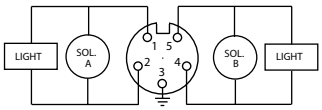


Downloadable CAD models available.

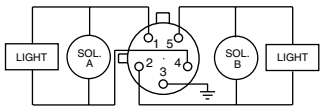
Wiring Diagrams

Stellantis Wired Chrysler

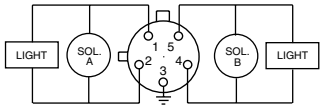
5-pin mini-connector (all voltages)



5-pin micro-connector (V DC)

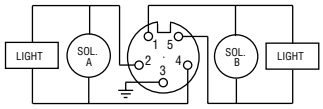


5-pin micro-connector (V AC)

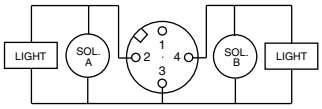


Ford Wired

5-pin mini-connector (all voltages)



4-pin micro-connector (V DC)



Ordering Information

5/3 Double Solenoid Pilot Controlled Valves

DOUBLE SOLENOID PILOT CONTROLLED VALVES — 5-Way 3-Position Valves

Wiring Type	Connector Type	SAE Size	SAE Size	Valve Model Number*		
				Voltage		
				24 V DC	120 V AC	230 V AC
Stellantis Wired Chrysler	Mini-connector 5-pin	Power Center	125	8077B3904W	8077B3904Z	8077B3904Y
			250	8077A4904W	8077A4904Z	8077A4904Y
		Closed Center	125	8077C3341W	8077C3341Z	8077C3341Y
			250	8077C4341W	8077C4341Z	8077C4341Y
			500	8077B6341W	8077B6341Z	8077B6341Y
		Open center	125	8077C3342W	8077C3342Z	8077C3342Y
			250	8077C4342W	8077C4342Z	8077C4342Y
			500	8077B6342W	8077B6342Z	8077B6342Y
	Micro-connector 5-pin	Closed Center	125	8077C3321	8077C3311	–
			250	8077C4321	8077C4311	–
			500	8077B6321	8077B6311	–
		Open center	125	8077C3322	8077C3312	–
			250	8077C4322	8077C4312	–
			500	8077B6322	8077B6312	–
Ford Wired	Mini-connector 5-pin	Power Center	125	8077B3910W	8077B3910Z	8077B3910Y
			250	8077A4907W	8077A4907Z	8077A4907Y
		Closed Center	125	8077C3331W	8077C3331Z	8077C3331Y
			250	8077C4331W	8077C4331Z	8077C4331Y
			500	8077B6331W	8077B6331Z	8077B6331Y
		Open center	125	8077C3332W	8077C3332Z	8077C3332Y
			250	8077C4332W	8077C4332Z	8077C4332Y
			500	8077B6332W	8077B6332Z	8077B6332Y
	Micro-connector 4-pin	Closed Center	125	8077C3361	–	–
			250	8077C4361	–	–
			500	8077B6361	–	–
		Open center	125	8077C3362	–	–
			250	8077C4362	–	–
			500	8077B6362	–	–
Hardwire		Closed Center	125	8077C3351W	8077C3351Z	8077C3351Y
			250	8077C4351W	8077C4351Z	8077C4351Y
			500	8077B6351W	8077B6351Z	8077B6351Y
		Open center	125	8077C3352W	8077C3352Z	8077C3352Y
			250	8077C4352W	8077C4352Z	8077C4352Y
			500	8077B6352W	8077B6352Z	8077B6352Y

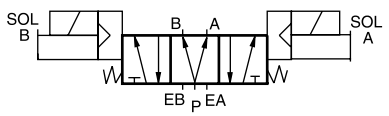
For other voltages, consult ROSS.

* **Sub-bases and manifold bases ordered separately. Please see Sub-Bases and Manifolds pages.**

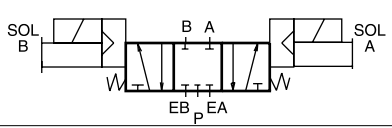
Pressure Controlled Spool & Sleeve Valves for SAE available, consult ROSS.

Valve Schematics

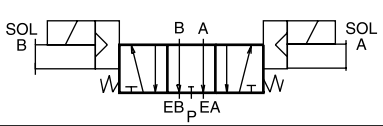
Power Center



Closed Center



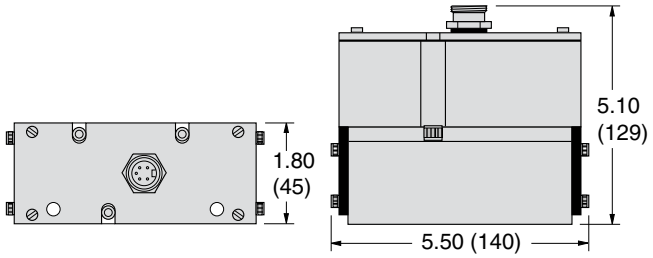
Open Center



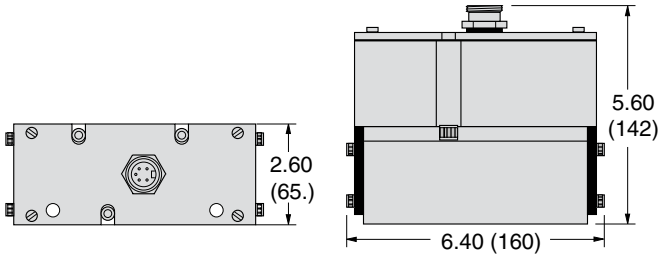
5/3 Double Solenoid Pilot Controlled Valves

DIMENSIONS — Inches (mm)

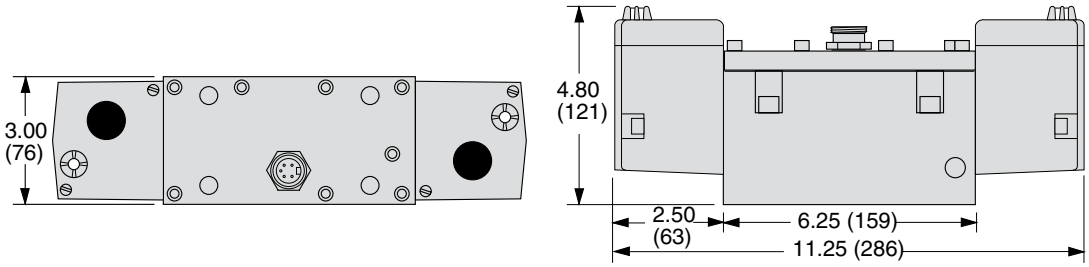
SAE Size 125



SAE Size 250



SAE Size 500



Downloadable CAD models available.

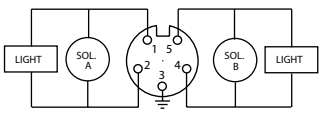
SAE Size	Flow C_v (Nl/min)	Average Response Constants*			Weight lb (kg)
		M	F		
	1-2		1-2	2-3	
125	1.4 (1400)	20	3.5	5.2	3.5 (1.6)
250	4.0 (3900)	10	1.4	2.6	7.0 (3.2)
500	8.0 (7900)	12	0.5	0.8	9.5 (4.3)

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.

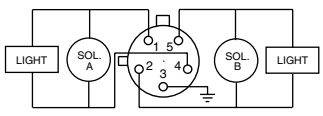
Wiring Diagrams

Chrysler Stellantis Wired

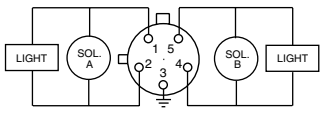
5-pin mini-connector (all voltages)



5-pin micro-connector (V DC)

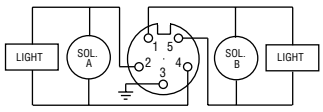


5-pin micro-connector (V AC)

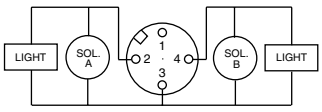


Ford Wired

5-pin mini-connector (all voltages)



4-pin micro-connector (V DC)



SAE Valves 84 Series
Product Overview

The ROSS® SAE valves 84 Series are base mounted poppet valves, designed to conform to the standards of the Society of Automotive Engineers (SAE), this makes the valves for SAE bases interchangeable.

These SAE Size 125, 250, and 500 valves are available as, 2-position, 5-ported 4-way solenoid pilot valves with either internal or external pilot supply.

SAE Size 125 & 250	SAE Size 500
	

Illustration examples.

VALVE FEATURES

Poppet Design	Highly tolerant of contaminated air and are self compensating for wear
Mounting Options	Individual sub-base or manifold base mounting
Pilot Supply	Internal or external
Pilot Operation	Provides high shifting force with low power consumption

SAE Size	Available Inlet Port Sizes					Functions		Actuation	Maximum Flow C_v (Nl/min)	Page
						5/2				
	1/4	3/8	1/2	3/4	1	Single	Double	Solenoid Control		
125	●	●				●	●	●	1.0 (980)	11 – 15
250		●	●	●		●	●	●	2.5 (2500)	
500			●	●	●	●	●	●	4.2 (4100)	
Sub-Bases & Manifold Bases										16 – 20
Accessories and Options										21

Specifications

STANDARD SPECIFICATIONS

GENERAL	Function	5/2 Valve		
	Construction Design	Poppet		
	Actuation	Electrical	Solenoid Pilot Controlled	
	Mounting	Base		
	Connection	Valve	Valve-to-base interface	
		Sub-Base, Manifold	Threaded	NPT
	Manual Override	Flush; rubber, non-locking		
	Solenoid Indicator Light	One per solenoid		

OPERATING CONDITIONS	Temperature	Ambient	40° to 120°F (4° to 50°C)
		Media	40° to 175°F (4° to 80°C)
	Flow Media	Filtered air	
	Operating Pressure	30 to 150 psig (2 to 10 bar)	
	Pilot Supply Pressure	Minimum 30 psig (2 bar)	
	External Pilot Supply	Must be equal to or greater than inlet pressure	

ELECTRICAL DATA FOR SOLENOID PILOT	Solenoids	SAE Size	Current Flow	Power Consumption	Operating Voltage (each solenoid)
		125 & 250	DC	24 volts	8 watts
			AC	100-120 volts, 50/60 Hz	8 VA inrush, 6 VA holding
				230-240 volts, 50/60 Hz	
		500	DC	24 volts	14 watts
			AC	100-120 volts, 50/60 Hz	87 VA inrush, 30 VA holding
				230-240 volts, 50/60 Hz	
		Rated for continuous duty			

CONSTRUCTION MATERIAL	Valve Body	Cast Aluminum
	Poppet	Rubber Coated Aluminum & Stainless Steel
	Seals	Buna-N

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

PRODUCT CREDENTIALS

Certificate of Compliance

Declaration of Conformity

Ordering Information

5/2 Single Solenoid Pilot Controlled Valves

SINGLE SOLENOID PILOT CONTROLLED VALVES — 5-Way 2-Position Valves

Wiring Type	Connector Type	SAE Size	Valve Model Number*		
			Voltage		
			24 V DC	120 V AC	230 V AC
Stellantis Wired Chrysler	Mini-connector 5-pin	125	8476C3341W	8476C3341Z	8476C3341Y
		250	8476C4341W	8476C4341Z	8476C4341Y
		500	8476B6341W	8476B6341Z	8476B6341Y
	Micro-connector 5-pin	125	8476C3321	8476C3311	–
		250	8476C4321	8476C4311	–
		500	8476B6321	8476B6311	–
Ford Wired	Mini-connector 5-pin	125	8476C3331W	8476C3331Z	8476C3331Y
		250	8476C4331W	8476C4331Z	8476C4331Y
		500	8476B6331W	8476B6331Z	8476B6331Y
	Micro-connector 4-pin	125	8476C3361	–	–
		250	8476C4361	–	–
		500	8476B6361	–	–
Hardwire		125	8476C3351W	8476C3351Z	8476C3351Y
		250	8476C4351W	8476C4351Z	8476C4351Y
		500	8476B6351W	8476B6351Z	8476B6351Y

For other voltages, consult ROSS.

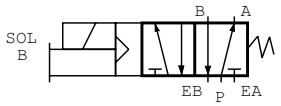
* **Sub-bases and manifold bases ordered separately. Please see Sub-Bases and Manifolds pages.**

Pressure Controlled Spool & Sleeve Valves for SAE available, consult ROSS.

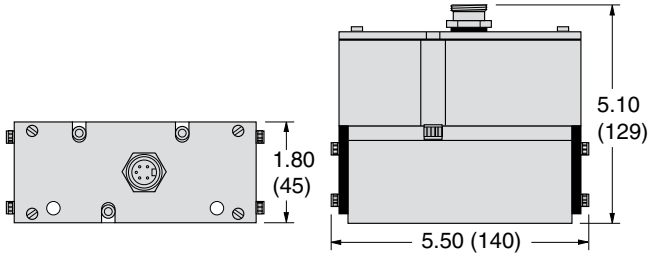
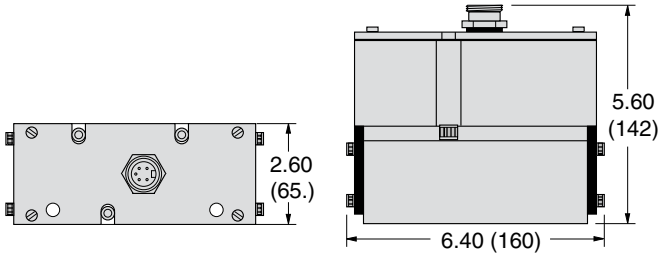
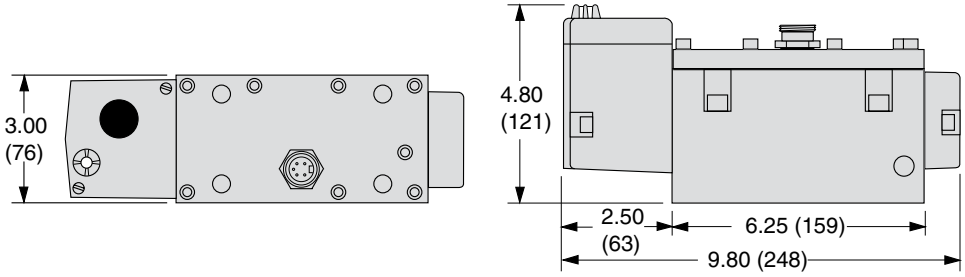
SAE Size	Flow C_v (Nl/min)	Average Response Constants*			Weight lb (kg)
		M	F		
	1-2		1-2	2-3	
125	1.8 (1800)	47	1.6	3.0	2.8 (1.3)
250	5.5 (5400)	60	0.6	0.8	5.2 (2.4)
500	7.9 (7800)	30	0.4	0.5	7.7 (3.5)

* **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.

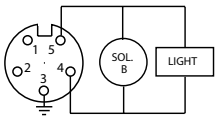
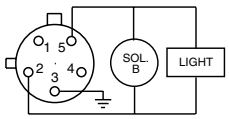
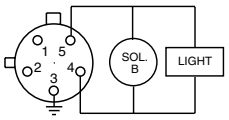
Valve Schematic

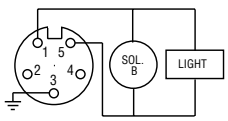
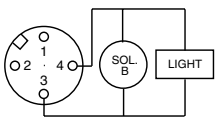


5/2 Single Solenoid Pilot Controlled Valves

DIMENSIONS	Inches (mm)
SAE Size 125	
SAE Size 250	
SAE Size 500	
Downloadable CAD models available.	

Wiring Diagrams

	5-pin mini-connector (all voltages)	5-pin micro-connector (V DC)	5-pin micro-connector (V AC)
Stellantis Wired Chrysler			

	5-pin mini-connector (all voltages)	4-pin micro-connector (V DC)
Ford Wired		

Ordering Information

5/2 Double Solenoid Pilot Controlled Valves

DOUBLE SOLENOID PILOT CONTROLLED VALVES — 5-Way 2-Position Valves

Wiring Type	Connector Type	SAE Size	Valve Model Number*		
			Voltage		
			24 V DC	120 V AC	230 V AC
Stellantis Wired Chrysler	Mini-connector 5-pin	125	8476C3342W	8476C3342Z	8476C3342W
		250	8476C4342W	8476C4342Z	8476C4342Y
		500	8476B6342W	8476B6342Z	8476B6342Y
	Micro-connector 5-pin	125	8476C3322	8476C3312	–
		250	8476C4322	8476C4312	–
		500	8476B6322	8476B6312	–
Ford Wired	Mini-connector 5-pin	125	8476C3331W	8476C3331Z	8476C3331Y
		250	8476C4331W	8476C4331Z	8476C4331Y
		500	8476B6331W	8476B6331Z	8476B6331Y
	Micro-connector 4-pin	125	8476C3362	–	–
		250	8476C4362	–	–
		500	8476B6362	–	–
Hardwire		125	8476C3352W	8476C3352Z	8476C3352Y
		250	8476C4352W	8476C4352Z	8476C4352Y
		500	8476B6352W	8476B6352Z	8476B6352Y

For other voltages, consult ROSS.

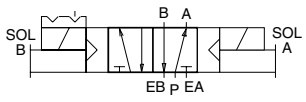
* **Sub-bases and manifold bases ordered separately. Please see Sub-Bases and Manifolds pages.**

Pressure Controlled Spool & Sleeve Valves for SAE available, consult ROSS.

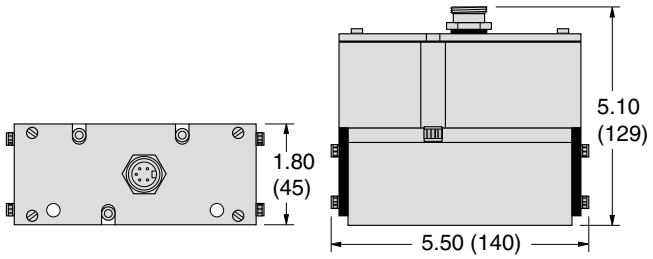
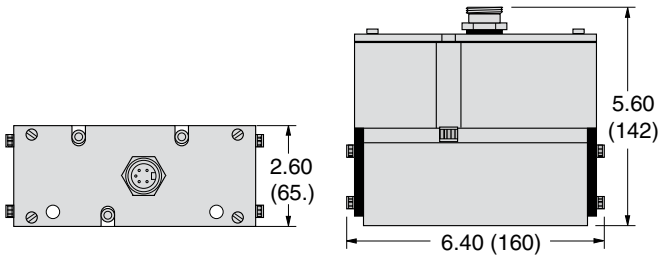
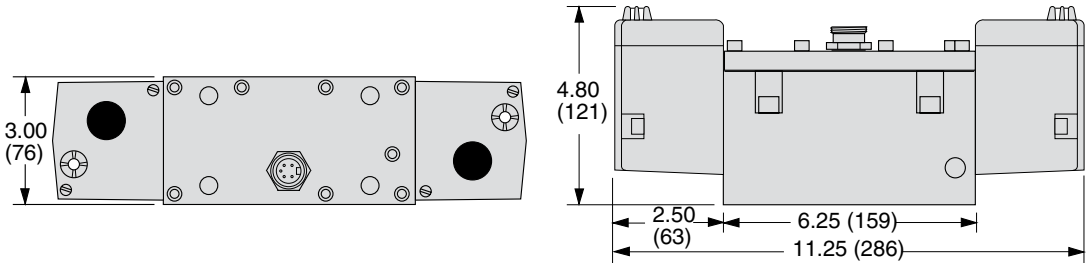
SAE Size	Flow C_V (Nl/min)	Average Response Constants*			Weight lb (kg)
		M	F		
	1-2		1-2	2-3	
125	1.8 (1800)	16	1.7	2.4	3.3 (1.5)
250	5.7 (5600)	20	0.6	0.8	5.7 (2.6)
500	7.6 (7500)	16	0.2	0.5	8.9 (4.1)

* **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.

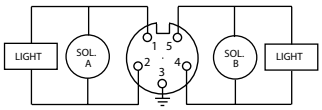
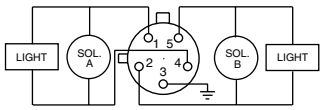
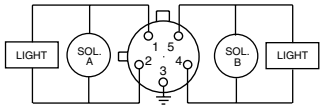
Valve Schematic

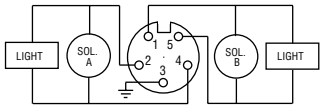
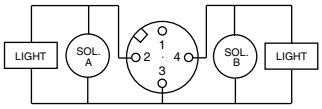


5/2 Double Solenoid Pilot Controlled Valves

DIMENSIONS	Inches (mm)
SAE Size 125	
SAE Size 250	
SAE Size 500	
Downloadable CAD models available.	

Wiring Diagrams

	5-pin mini-connector (all voltages)	5-pin micro-connector (V DC)	5-pin micro-connector (V AC)
Stellantis Wired Chrysler			

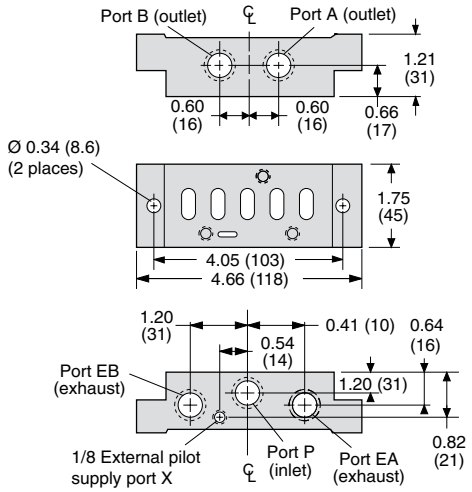
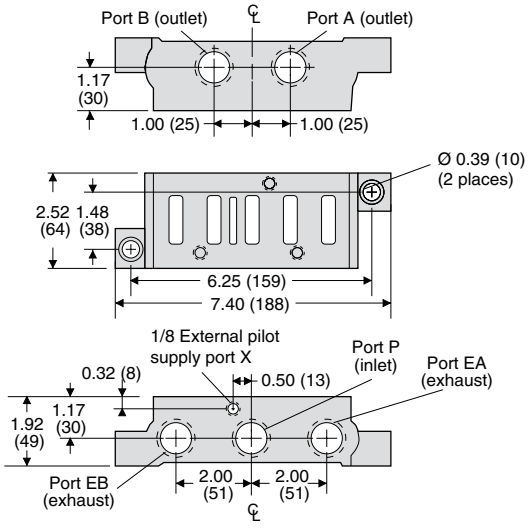
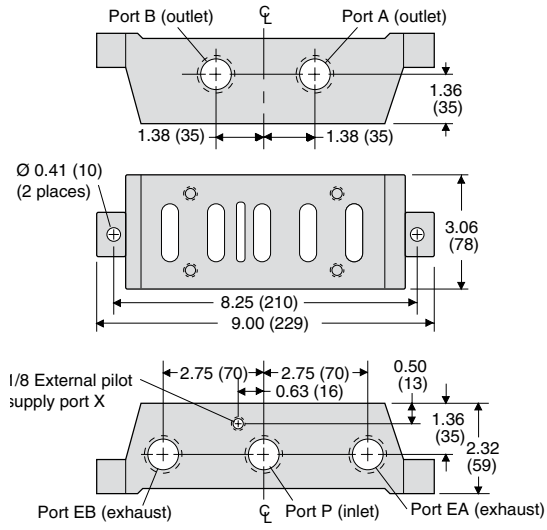
	5-pin mini-connector (all voltages)	4-pin micro-connector (V DC)
Ford Wired		

Sub-Bases – Side Ported Ordering Information

SIDE PORTED SUB-BASES

Size				Model Number*
SAE Size	**Inlet** (P)	**Outlet** (A, B)	**Exhaust** (EA, EB)	**NPT Thread**
125	1/4	1/8	1/4	577K91
	3/8	1/4	3/8	578K91
	3/8	3/8	3/8	579K91
250	3/8	1/4	3/8	539K91
	1/2	1/4	1/2	540K91
	1/2	3/8	1/2	541K91
	3/4	3/4	3/4	542K91
500	3/8	1/4	3/8	582K91
	1/2	3/8	1/2	728K91
	1/2	1/2	1/2	583K91
	3/4	3/4	3/4	584K91

*For SAE threads, consult ROSS.

DIMENSIONS	Inches (mm)
SAE Size 125	
SAE Size 250	
SAE Size 500	

Downloadable CAD models available.

Manifold Bases Ordering Information

MANIFOLD BASES

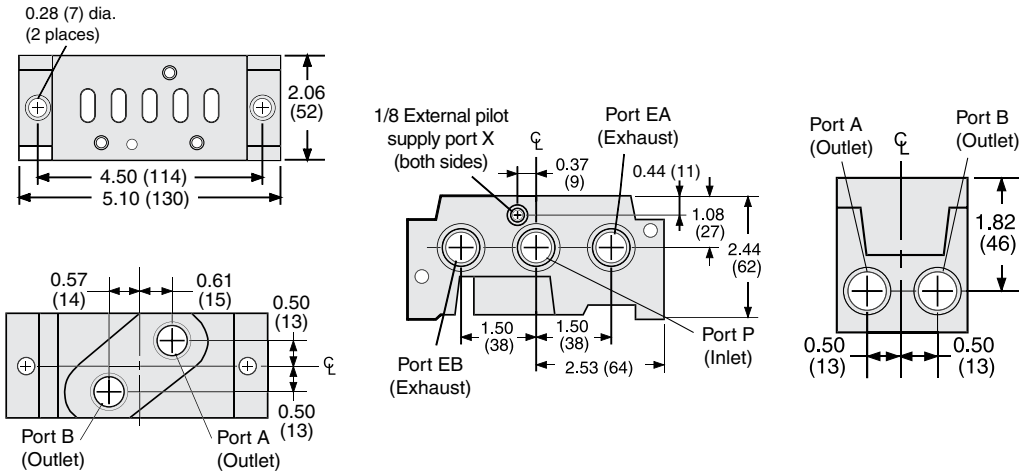
Size				Model Number*
SAE	**Inlet** (P)	**Outlet** (A, B)	**Exhaust** (EA, EB)	**NPT Thread**
125	3/8	1/4	3/8	580K91
	3/8	3/8	3/8	581K91
250	1/2	1/2	1/2	553K91
	3/4	3/4	3/4	554K91
	3/4	3/4	3/4	555K91
500	3/4	1/2	3/4	585K91
	1	3/4	1	586K91
	1	1	1	587K91

*For SAE threads, consult ROSS.

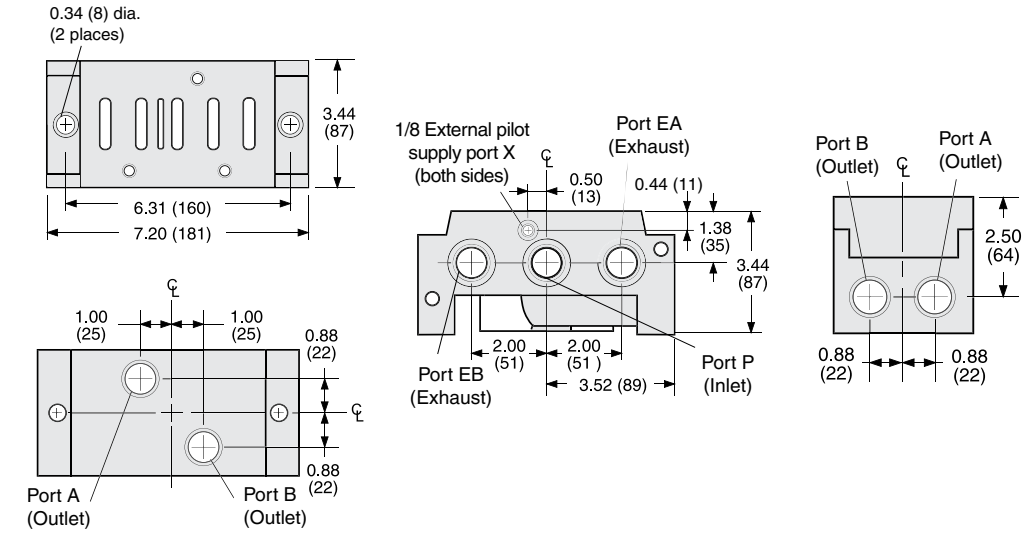
Manifold Stations	Each manifold station is supplied with all necessary seals and hardware for assembly. End plates are not required with these manifolds. Each station has all ports threaded to accept piping.

DIMENSIONS — Inches (mm)

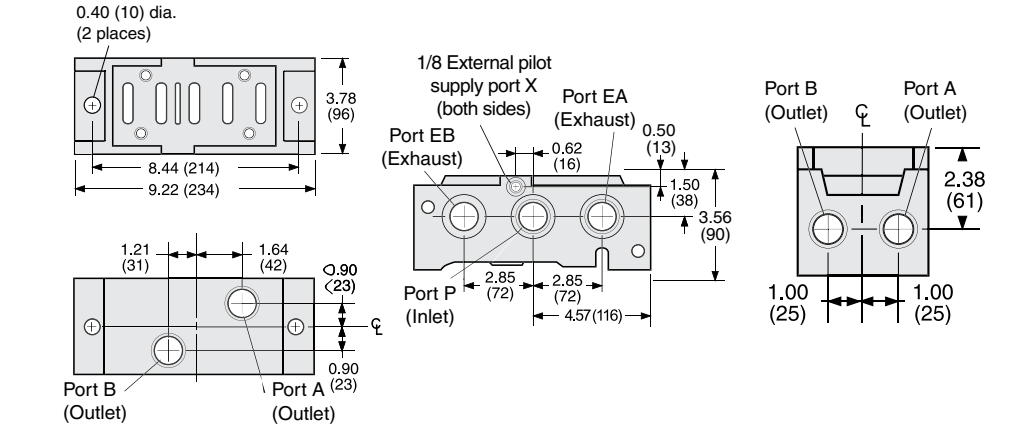
SAE Size 125



SAE Size 250



SAE Size 500



Downloadable CAD models available.

Accessories

MANIFOLD PLATES

Blanking Plates

SAE Size	Model Number
125	820K77
250	821K77
500	822K77

For manifold stations not occupied by a valve, blanking plates are available. These plates block the unused air passages.

SOLENOID PILOT OPTIONS

Manual Override Kits for SAE Size 500 Valves

Manual Override Type	Kit Number	
	Locking Type	Non-Locking Type
Flush Button	792K87	790K87
Extended Button	–	791K87
Extended Button with Palm	–	984H87

Flush flexible manual override buttons are standard on all SAE 500 solenoid pilot valves. Metal buttons as shown below can be installed in place of the standard flexible buttons. Both locking and non-locking metal buttons are available. Each button has spring-return action. The locking type button, however, can be kept in the actuated position by turning the slot in the top of the button with a screwdriver.

EXHAUST SILENCERS

Illustration example.

Silencers

SPECIFICATIONS	Silencer Material	Pressure Range psig (bar)	Schematic
	Aluminum	0-290 (0-20) maximum	

Port Size	Thread Type	Flow C_v (Nl/min)	Model Number		Dimensions inches (mm)		Weight lb (kg)
			NPT Thread	R/Rp Thread	Length	Hex Size (D)	
1/4	Male	2.3 (2300)	5500A2003	D5500A2003	2.2 (6)	0.81 (21)	0.07 (0.03)
3/8	Male	9.0 (8900)	5500A3013	D5500A3013	2.2 (6)	0.81 (21)	0.07 (0.03)
		4.9 (4800)	5500A3003	D5500A3003	3.5 (9)	1.25 (32)	0.2 (0.1)
1/2	Male	6.8 (6700)	5500A4003	D5500A4003	3.6 (9)	1.25 (32)	0.2 (0.1)
3/4	Male	7.2 (7100)	5500A5013	D5500A5013	3.6 (9)	1.25 (32)	0.2 (0.1)
		15 (15000)	5500A5003	D5500A5003	5.3 (14)	2.0 (51)	0.9 (0.4)
1	Male	18 (18000)	5500A6003	D5500A6003	5.4 (14)	2.0 (51)	0.9 (0.4)

INTERPOSED PRESSURE REGULATORS

Interposed Regulators

SAE Size	Regulator Type	Model Number	Regulated Pressure Range psig (bar)
		Single	
125	Single	593K91	10 to 130 (1 to 9)
	Dual	873H91	
250	Single	595K91	
	Dual	816H91	

A regulator is sandwiched between the valve and sub-base or manifold station and the valve is then bolted through the regulator to the sub-base or manifold station with the longer bolts provided.

Single pressure regulators supply the same regulated pressure at both outlet ports.

Dual pressure regulators allow the pressure at each outlet port to be set independently.

Use dual pressure regulators with 80 Series valves only. When using dual pressure regulators, the valve must be externally piloted. For external pilot supply conversion, see below.

Regulator-to-base gasket included.

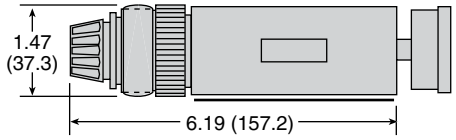
EXTERNAL PILOT SUPPLY CONVERSION

ROSS SAE Solenoid pilot valves are designed to use an internal pilot supply. However, they are easily converted for use with an external pilot supply. To make this conversion, remove the pipe plug on the bottom of the valve. The plug is located between the center port and an adjacent port. Install this plug in the threaded port at the end of the center port. This blocks the internal pilot supply. Connect the external pilot supply line to port X in the base. Pressure in the external supply line must not be less than that specified in the valve's Standard Specifications.

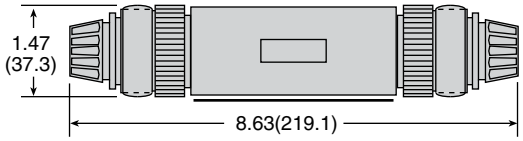
DIMENSIONS — Inches (mm)

SAE Size 125

Single

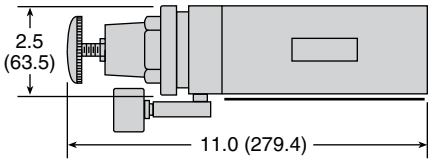


Double

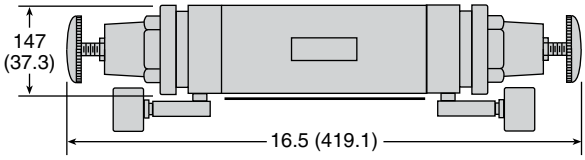


SAE Size 250

Single



Double



Downloadable CAD models available.

Notes

CAUTIONS, WARNINGS And STANDARD WARRANTY

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

PRE-INSTALLATION or SERVICE

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

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

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

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

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

FILTRATION and LUBRICATION

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

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

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

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

AVOID INTAKE/EXHAUST RESTRICTION

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

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

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

SAFETY APPLICATIONS

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

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

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

WARNINGS:
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