

NEW

PRODUCT DATA SHEET INFORMATION

RSe Series Control Reliable Double Valves



Safety Exhaust (Dump) and Safe Cylinder Return Sub-base Mounted Valves

Designed For External Monitoring

Port Size 1/8, 1/4, & 1/2



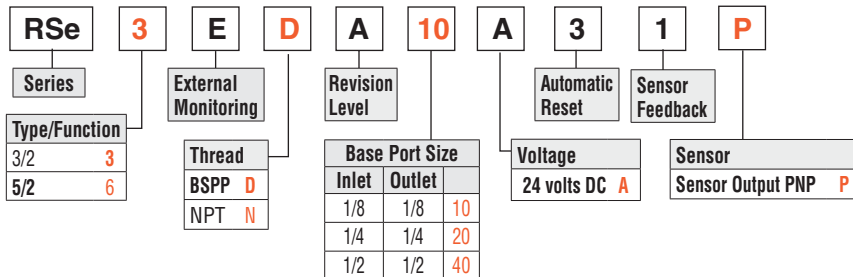
The RSe Series double valves are redundant 3/2 and 5/2 valves for external monitoring, that are designed to meet the needs and requirements of safe air supply/exhaust (3/2 Valves) and safe cylinder return (5/2 Valves) applications for machinery with pneumatic controls.

FEATURES & BENEFITS:

- Rapid response for minimum actuating time
- Status indicator provides valve condition (ready-to-run) feedback
- Position sensors for valve fault monitoring – external monitoring device required
- Well-proven spool valve design for reliable, smooth function
- Pressure range: 40 to 145 psig (3 to 10 bar), external pilot supply port is a standard feature
- Base-mounting design

HOW TO ORDER

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



up to CAT 4, PL e
(certification pending)

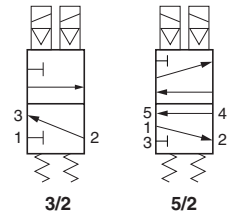


(Certifications pending)

3/2 Valves			
Port Size	C _v		Weight lb (Kg)
	1-2	2-3	
1/8	0.44	1	2.9 (1.3)
1/4	0.7	1.47	3.7 (1.7)
1/2	1.9	3.85	6.6 (2.99)

5/2 Valves					
Port Size	C _v				Weight lb (Kg)
	1-2	1-4	2-3	4-5	
1/8	0.85	0.58	0.49	0.75	2.9 (1.3)
1/4	0.98	0.79	0.69	0.85	3.7 (1.7)
1/2	2.07	1.54	1.51	1.81	6.6 (2.99)

Simplified Schematics



APPLICATIONS: Category 4 applications - e.g., 3/2 safe exhaust (dump) & 5/2 safe cylinder return applications.

Standard Specifications

Construction: Spool and sleeve.
Mounting Type: Base.
Actuation: Solenoid pilot operated with spring return.
 One solenoid per valve element – both to be operated synchronously.
Pilot Solenoid: Version as per VDE 0580. Rated for continuous duty.
 Electrical connection according to EN 175301-803 Form C. Enclosure rating according to DIN 400 50 IP 65.
Standard Voltages: 24 volts DC.
Power Consumption (each solenoid): 1.2 watts on DC.
Proximity Sensors (2 per valve): PNP.
Current Consumption (each sensor): <23mA.
Ambient/Media Temperature: 40° to 120°F (4° to 50°C).

Flow Media: Compressed, filtered air according to ISO 8573-1 Class 7:4:4.
Inlet Pressure:
With Internal Pilot Supply: 43 to 145 psig (3 to 10 bar).
With External Pilot Supply: 0 to 145 psig (0 to 10 bar).
Pilot Pressure: Must be equal to or greater than inlet pressure.
Mounting Orientation: Any, preferably vertical.
Monitoring: Dynamic, cyclical, external with customer supplied equipment. Monitoring should check state of both valve pressure sensors with any and all changes in state of valve control signals.
Functional Safety Data: Pending.

This valve is not designed for controlling clutch/brake mechanisms on mechanical power presses, see DM2® Series D double valves for mechanical power press applications.



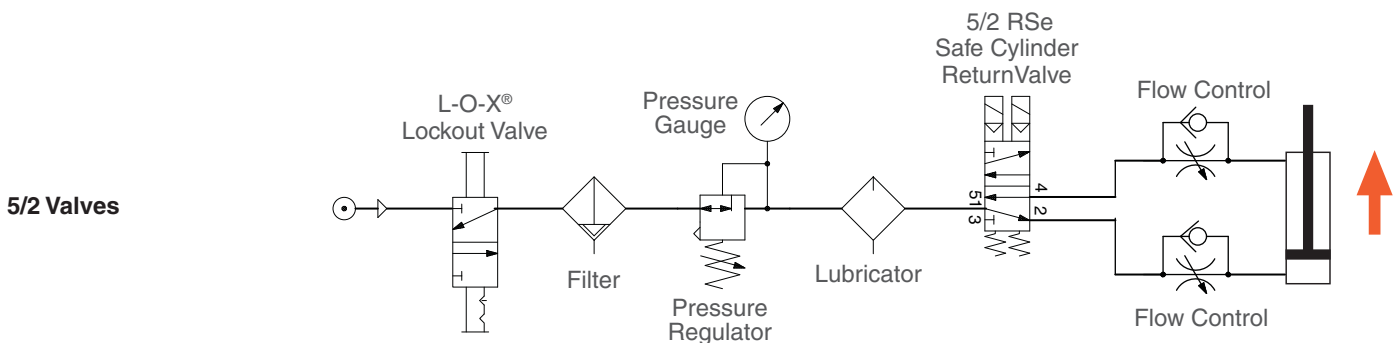
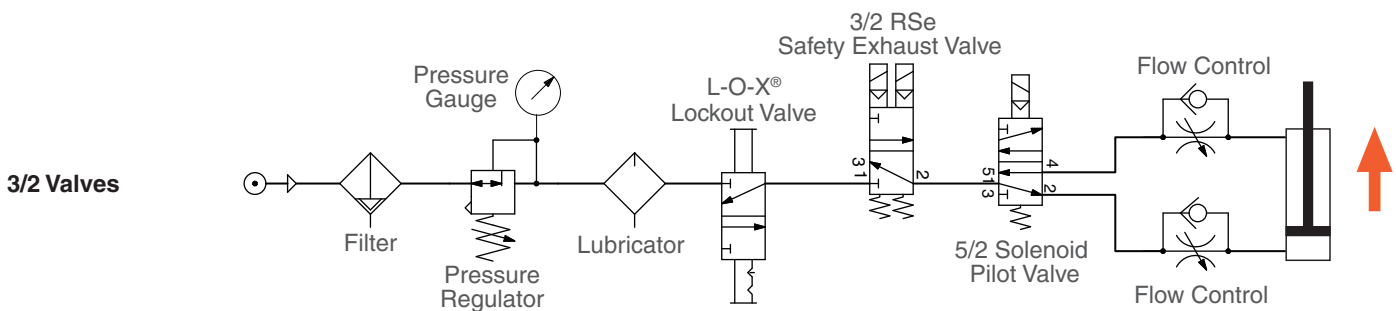
The 3/2 RSe Series valve is designed to supply air to a zone or entire machine/system until signaled to shut off and exhaust residual downstream pneumatic energy from the machine. Thus, reducing the hazards associated with the presence of residual energy during employee access and/or minor servicing. The safety function of the 3/2 RSe Series valve is to shut off supply of pneumatic energy and to exhaust any pneumatic energy from downstream of the valve.

Note: The 3/2 RSe Series valve cannot exhaust pneumatic energy from downstream of obstructions such as check valves and closed center function valves.

The 5/2 RSe Series valve is designed to control the direction of air flow into and out of a double-acting cylinder or other pneumatic actuator in order to drive the cylinder forward or backward to suit the requirements of the machine operation. However, the RSe Series does this with the same level of control expected of the machine's/system's safety circuit. The safety function of the RSe Series valve is to return the cylinder/actuator to its home "safe" position whenever a fault occurs within the valve. Such a monitoring system must be capable of inhibiting the operation of the valve.

The RSe Series valves are designed for external monitoring for safe, redundant operation of the valves. The RSe Series valves are constructed of redundant, 3/2 or 5/2 spool type valves, and have an overall function of a single solenoid pilot-operated, spring return valve. Each single valve in the RSe Series is equipped with a PNP proximity sensor. Monitoring both of these sensors on each actuation and de-actuation of the RSe Series valve provides a diagnostic coverage of 99%. Monitoring of these sensors is to be done by an external monitoring system.

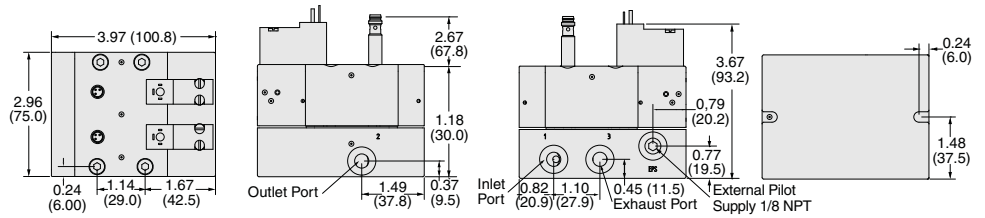
Application Examples



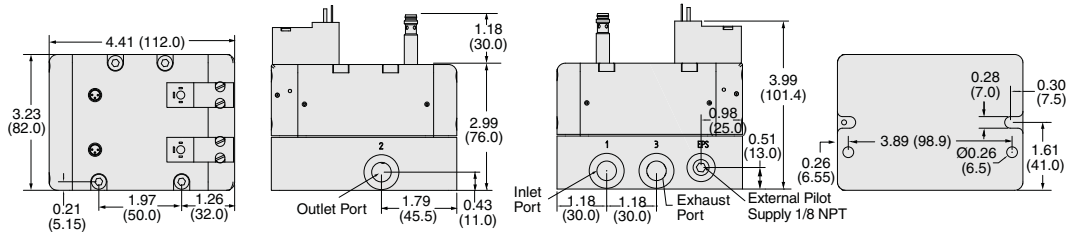
3/2 Valves

Valve Dimensions – inches (mm)

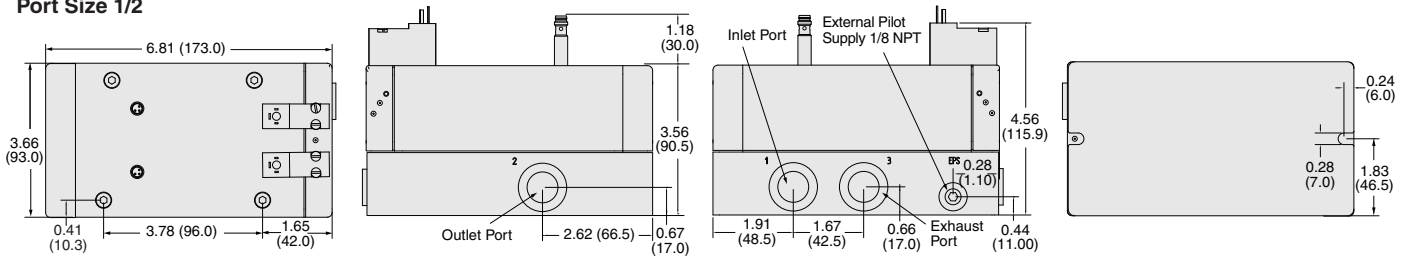
Port Size 1/8



Port Size 1/4

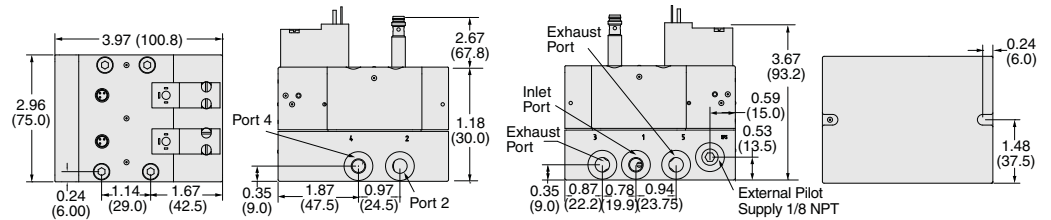


Port Size 1/2

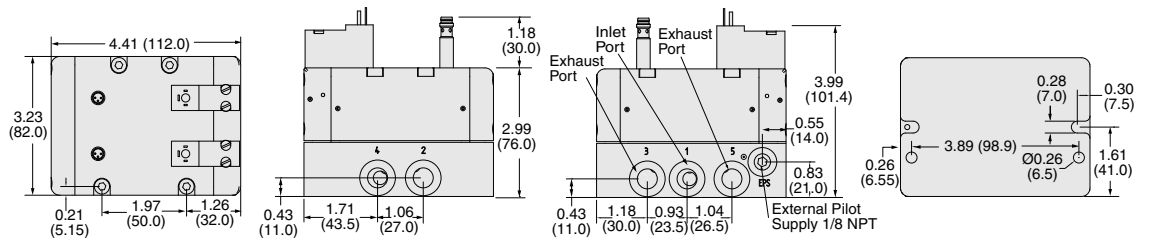


5/2 Valves

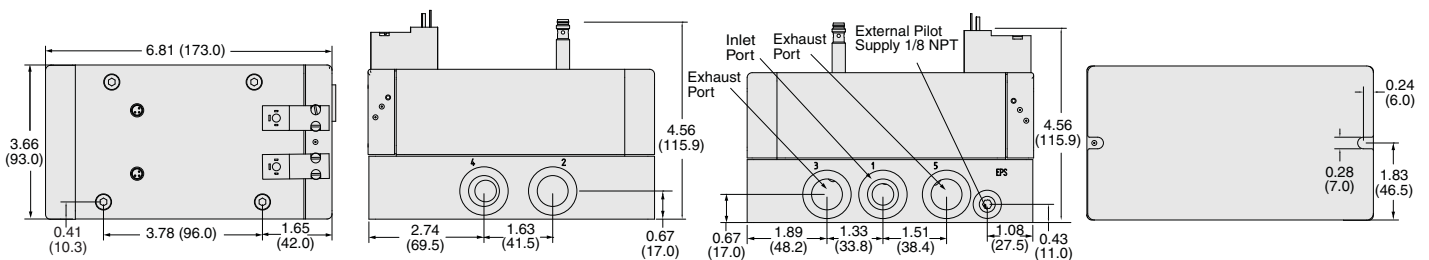
Port Size 1/8



Port Size 1/4

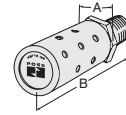


Port Size 1/2



Silencers							
Port Size	Thread Type	Model Number		Avg. C _v	Dimensions inches (mm)		Weight lb (kg)
		NPT Threads	BSPT Threads		A	B	
1/8	Male	5500A1003	D5500A1003	1.2	0.9 (21)	2.0 (51)	0.1 (0.1)
1/4	Male	5500A2003	D5500A2003	2.1	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)

Pressure Range: 0 to 300 psig (0 to 20.7 bar) maximum. Flow Media: Filtered air.



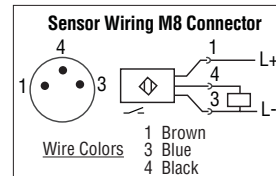
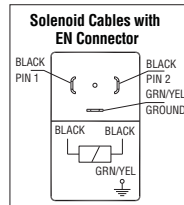
Electrical Connectors						
Connection	Electrical Connector Form	Electrical Connector Type	Cord Length meters (feet)	Cord Diameter	Model Number	
					Without Light	Lighted Connector 24 Volts DC
Solenoid	EN 175301-803 Form C	Prewired Connector (18 gauge)	3 (10)	8-mm	2449K77	2450K77-W
		Connector Only	—	—	2452K77	2453K77-W
Feedback Sensor	M8 Connector (sensing)	Prewired Connector	2 (6.5)	—	249L74	—

CAUTIONS: Do not use electrical connectors with surge suppressors, as this may increase valve response time when de-actuating the solenoids.



Preassembled Wiring Kits		
Connector Type	Model Number*	Length meters (feet)
	Lighted Connector	
EN 175301-803 Form C (solenoids) M8 (sensors)	2657B77	2 (6.5)

* Each cable has one connector. Kits include 2 cables for the sensors (M8), and 2 cables (EN 175301-803 Form C) with connector plus a cord grip for each.



FLUID POWER PRODUCTS FOR PNEUMATIC SOLUTIONS:

- Base Mounted Valves and Sub-Bases
- Line Mounted Valves
- Manual & Mechanical Valves
- Flow Control Products
- Air Preparation Products (F-R-L's)
- Safety-Related Products
- Press Safety Products
- ROSS/FLEX® Solution
- ROSS Integrated Systems

Your local ROSS distributor is: