



QUICK EXHAUST VALVES



PRODUCT CATALOG

Quick Exhaust Heavy-Duty Valves 18 Series

Product Overview

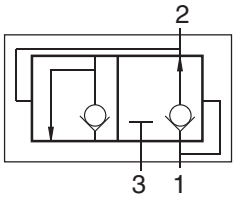
Quick Exhaust Function

ROSS quick exhaust valve function is to provide a rapid exhaust of controlled air when placed directly onto an air cylinder after the control valve.



Illustration example.

Valve Schematic



Quick cylinder reversal can be a problem if the control valve is at a distance from the cylinder or otherwise restricts the exhaust flow. A ROSS quick exhaust valve near the cylinder opens as soon as the controls valve begins exhausting, and thus allows quick reversal of the cylinder.

VALVE FEATURES

Poppet Design	Dirt-tolerant, self-cleaning poppet design. Available in alternate materials for extreme temperature applications.
Tight-Seal Design	Provides efficiency and durability
Rugged Construction	Made with corrosion-resistant materials

Specifications

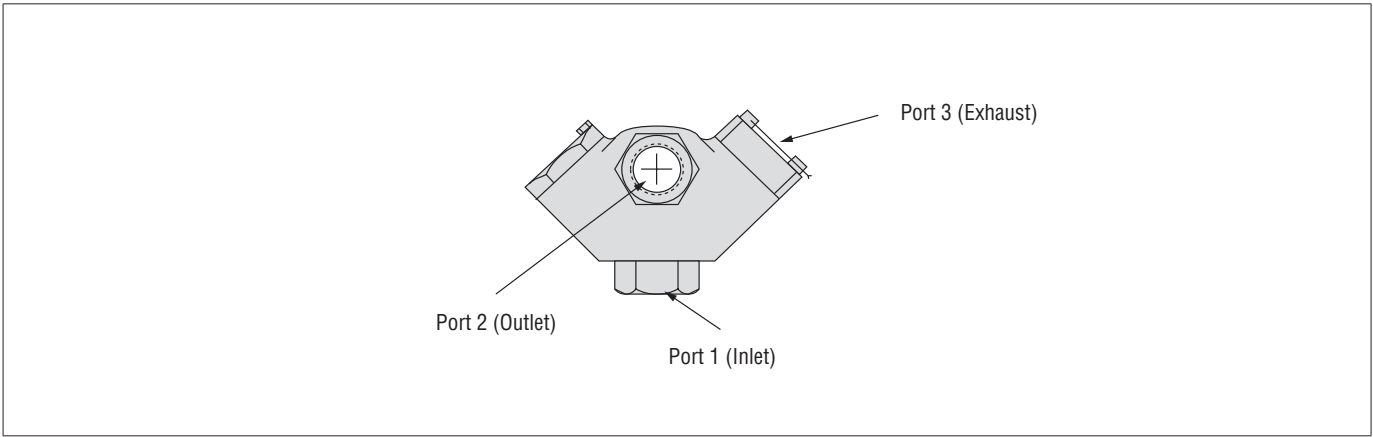
STANDARD SPECIFICATIONS					
GENERAL	Function		3/2 Valve		
	Construction Design		Poppet		
	Actuation		Pneumatic		
	Mounting	Type	Inline		
		Orientation	Any		
	Connection		Threaded Port	NPT	
G					
OPERATING CONDITIONS	Temperature	Ambient/Media	-40° to 175°F (-40° to 80°C)		
			For temperatures below 40° F (4° C) air must be free of water vapor to prevent formation of ice.		
			For temperatures below -40° F (-40° C), consult ROSS.		
	Flow Media		Filtered air		
	Operating Pressure		150 psi (10.3 bar)		
			Signal Pressure	Must be equal to or greater than inlet	
CONSTRUCTION MATERIAL	Valve Body		Cast Aluminum		
	Poppet		Acetal and Stainless Steel		
	Seals		Buna-N		
IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.					

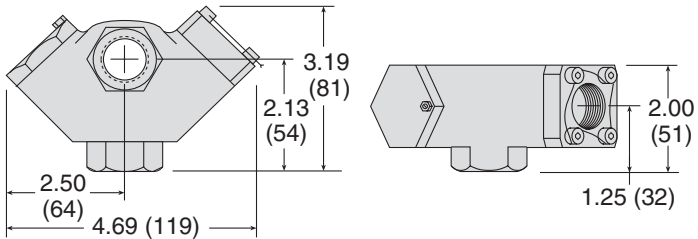
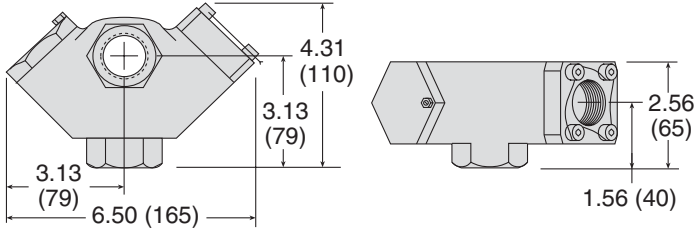
PRODUCT CREDENTIALS	
Declaration of Conformity	
	

Ordering Information

QUICK EXHAUST VALVES				3-Way Valves
Body Size	Port Size		Valve Model Number	
	In-Out	Exhaust	NPT Thread	G Thread
1/2	3/8	1/2	1868A3005	D1868A3005
	1/2	1/2	1868A4005	D1868A4005
1	3/4	1	1868A5005	D1868A5005
	1	1	1868A6005	D1868A6005

Size		Flow C _v (NI/min)		Weight ≈ lb (kg)
Port 1, 3	Exhaust	1-2	2-3	
3/8	1/2	0.8 (790)	3.4 (3300)	1.0 (0.5)
1/2				
3/4	1	2.0 (2000)	10 (9800)	2.5 (1.1)
1	1	3.0 (3000)		



DIMENSIONS	Inches (mm)
Body Size 1/2	 <p>Technical drawing of Body Size 1/2 valve showing front and side views with dimensions:</p> <ul style="list-style-type: none"> Front View Dimensions: <ul style="list-style-type: none"> Top width: 3.19 (81) Bottom width: 2.50 (64) Overall width: 4.69 (119) Height from bottom to top center: 2.13 (54) Side View Dimensions: <ul style="list-style-type: none"> Overall height: 2.00 (51) Overall width: 1.25 (32)
Body Size 1	 <p>Technical drawing of Body Size 1 valve showing front and side views with dimensions:</p> <ul style="list-style-type: none"> Front View Dimensions: <ul style="list-style-type: none"> Top width: 4.31 (110) Bottom width: 3.13 (79) Overall width: 6.50 (165) Height from bottom to top center: 3.13 (79) Side View Dimensions: <ul style="list-style-type: none"> Overall height: 2.56 (65) Overall width: 1.56 (40)
Downloadable CAD models available.	

EXHAUST SILENCERS

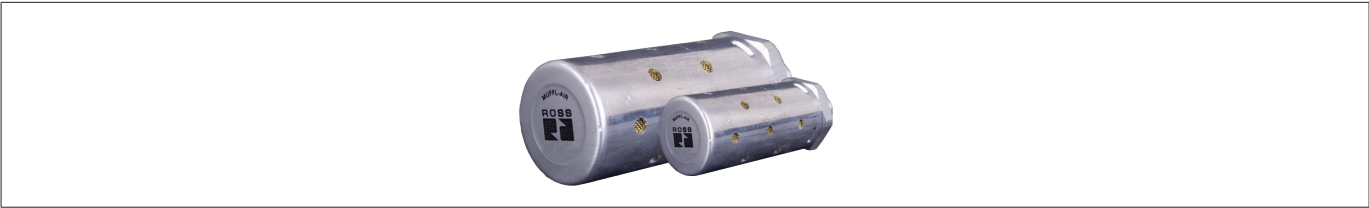



Illustration example.

Silencers	SPECIFICATIONS		Silencer Material		Pressure Range psig (bar)		Schematic	
			Aluminum		0-290 (0-20) maximum			
	Port Size	Thread Type	Flow C _v (NI/min)	Model Number		Dimensions inches (mm)		Weight lb (kg)
				NPT Thread	R/Rp Thread	Length	Hex Size (D)	
	1/2	Male	6.8 (6700)	5500A4003	D5500A4003	3.6 (9)	1.25 (32)	0.2 (0.1)
	1	Male	18 (18000)	5500A6003	D5500A6003	5.4 (14)	2.0 (51)	0.9 (0.4)

CAUTIONS, WARNINGS And STANDARD WARRANTY



ROSS OPERATING VALVE, ROSS CONTROLS®, ROSS DECCO®, and AUTOMATIC VALVE INDUSTRIAL, collectively the “ROSS Global Family”.

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 Global Family 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 Global Family 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 Global Family location.
4. Each ROSS Global Family Product should be used within its specification limits. In addition, use only ROSS Group components to repair ROSS Global Family 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 Global Family recommends a filter with a 5-micron rating for normal applications.
2. All standard ROSS Global Family 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: *Failure to follow these instructions can result in personal injury and/or property damage.*


STANDARD WARRANTY

All products sold by the ROSS Global Family are warranted for a one-year period [with the exception of Filters, Regulators and Lubricators (“FRLs”) which are warranted for a period of seven (7) years] from the date of purchase. All products are, during their respective warranty periods, warranted to be free of defects in material and workmanship. The ROSS Global Family's obligation under this warranty is limited to repair, replacement or refund of the purchase price paid for products which the ROSS Global Family has determined, in its sole discretion, are defective. All warranties become void if a product has been subject to misuse, misapplication, improper maintenance, modification or tampering. Products for which warranty protection is sought must be returned to the ROSS Global Family freight prepaid.

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



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