ROSS®

PRODUCT INFORMATION

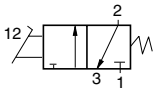
FOOT OPERATED VALVES

36 & RM SERIES

ROSS CONTROLS

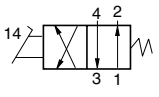
3-Way 2-Position Valves, Pedal, Spring Return

Port Size	Valve Model Number		C_v	Average Response Constants** F		Weight lb (kg)
	NPT Threads	G Threads		1-2	2-3	
1/4	3643A2002	D3643A2002	1.2	1.66	1.43	1.3 (0.6)



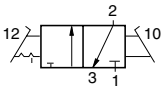
4-Way 2-Position Valves, Pedal, Spring Return

Port Size	Valve Model Number		C_v	Average Response Constants** F		Weight lb (kg)
	NPT Threads	G Threads		1-2, 1-4	4-3, 2-3	
1/4	3646A2002	D3646A2002	1.2	1.66	1.43	2.8 (1.3



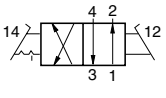
3-Way 2-Position Valves, Treadle, Detented

Port Size	Valve Model Number		C_v	Average Response Constants** F		Weight lb (kg)
	NPT Threads	G Threads		1-2	2-3	
1/4	3643A2001	D3643A2001	1.2	1.66	1.43	1.3 (0.6)



4-Way 2-Position Valves, Treadle, Detented

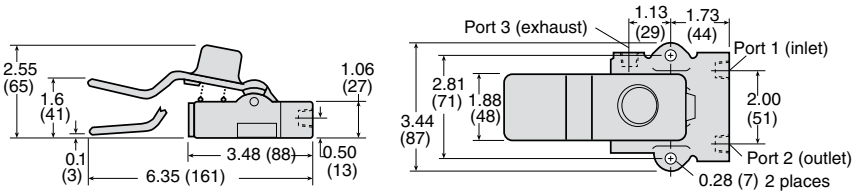
Port Size	Valve Model Number		C_v	Average Response Constants** F		Weight lb (kg)
	NPT Threads	G Threads		1-2, 1-4	4-3, 2-3	
1/4	3646A2001	D3646A2001	1.2	1.66	1.43	2.8 (1.3



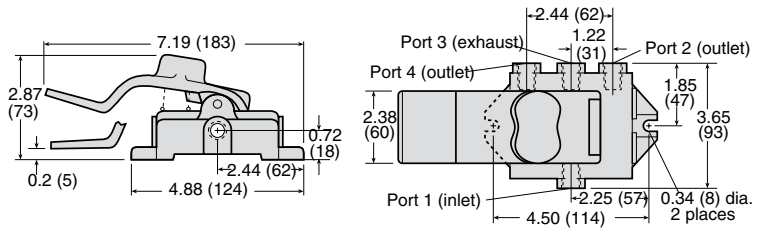
** **Valve Response Time** – Response Time (msec) = M + (F • V). This is the average time required to fill a volume V (cubic inches) to 90% of supply pressure or to exhaust it to 10% of supply pressure. F values are given in the chart above. M values for manually operated valves depend on the speed of actuation, and may be taken as zero for most practical applications.

Valve Dimensions – inches (mm)

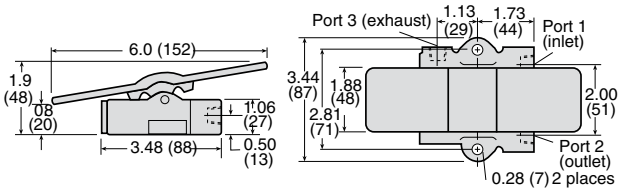
3/2 Pedal



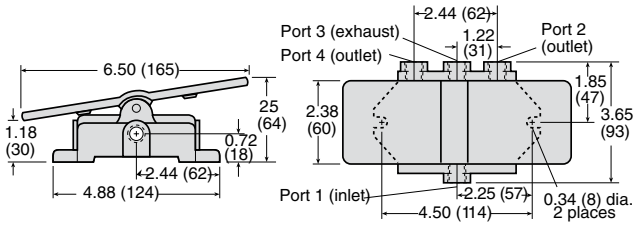
4/2 Pedal



3/2 Treadle



4/2 Treadle



STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Poppet
Mounting Type	Line
Temperature	Ambient/Media: -30° to 175°F (-34° 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 -30°F (-34°C), consult ROSS.

Flow Media	Filtered air
Operating Pressure	5 to 150 psig (0.3 to 10 bar)
Construction Material	**Valve Body:** Cast Aluminum

Note: The 3/2 and 4/2 treadle valves are not designed to be used to actuate clutch/brake mechanisms on mechanical power presses.

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

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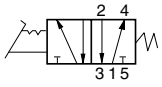
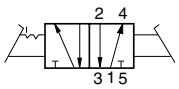
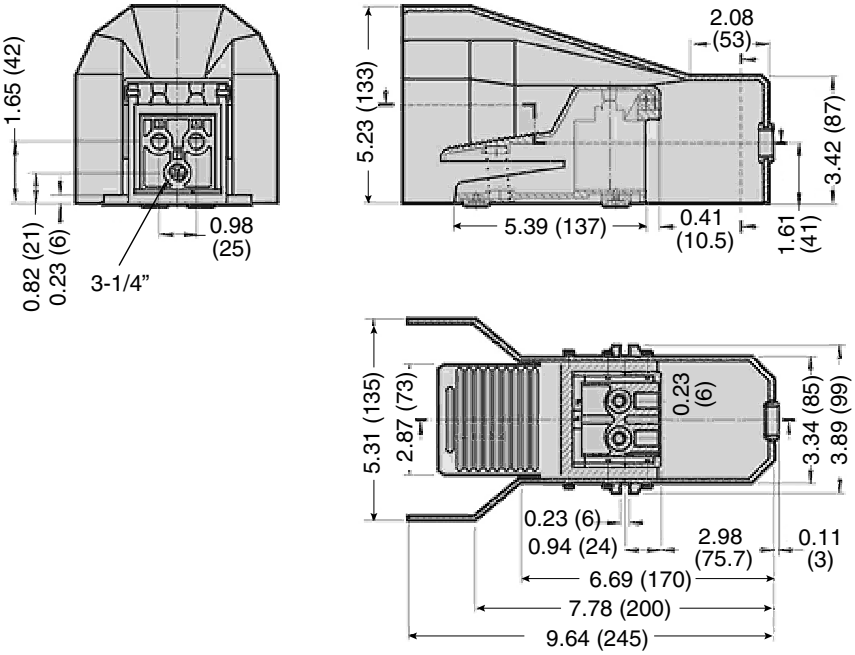
5-Way 2-Position Valves, Pedal				
Port Size	**Operators**	**Valve Model Number** NPT Threads	C_v	**Weight** lb (kg)
1/4	Non-locking foot pedal	RM4F210-08G	0.5	2.1 (0.9)
	Locking foot pedal	RM4F210-08LG	0.5	2.1 (0.9)
 **5/2 Spring Return without Lock**		 **5/2 Detented with Lock**		

Valve Dimensions – inches (mm)



Convertible to a 3-Way function.

Note: Designed to meet OSHA 1910.217 Mechanical power presses, with protective guard to prevent accidental actuation.

STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Poppet
Mounting Type	Line
Temperature	Ambient/Media: 23° to 140°F (-5° to 60°C)
Flow Media	Filtered air

Operating Pressure	0 to 120 psig (0 to 8.2 bar)
Construction Material	**Valve Body:** Aluminum **Guard:** Plastic

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

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. Safety 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 safety 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 Group 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 Group's obligation under this warranty is limited to repair, replacement or refund of the purchase price paid for products which the ROSS Group 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 Group freight prepaid.

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Other literature is available for engineering, maintenance, and service requirements.

If you need products or specifications not shown in this catalog, please visit ROSS' website, contact ROSS or your ROSS distributor. The ROSS Support Team 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' at rosscontrols.com.

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