



Pneumatic Division North America
Richland, Michigan 49083

Installation & Service Instructions
V-297EP

42 Series Inline Valve
2-Position Manual Operators

ISSUED: September, 2000

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ECN# P27805

⚠ WARNING

To avoid unpredictable system behavior that can cause personal injury and property damage:

- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
- Operate within the manufacturer's specified pressure, temperature, and other conditions listed in these instructions.
- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
- Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

Introduction

Follow these instructions when installing, operating, or servicing the product.

Application Limits

These products are intended for use in general purpose compressed air systems only.

Operating Pressure Range:

	kPa	psig	bar
Maximum	1030	150	10.3

Ambient Temperature Range: -18°C to 71°C (0°F to 160°F)

Installation:

1. Valve will operate mounted in any position.
2. **Piping Instructions:**
 - Single Pressure, Dual Exhaust Model:**
 1. INLINE VALVE – connect supply pressure to Port “1”.
 2. STACKING VALVE – connect supply pressure to “IN” Port of end plate.
 - Dual Pressure, Common Exhaust Model:**
 1. INLINE VALVE – connect supply pressures to Port “5” and Port “3”.
 2. STACKING VALVE – connect supply pressure to both “Exh” Ports.
3. Cylinder speed for inline models can be controlled by restricting the exhaust ports of the valve with exhaust port flow controls. For stacking valves use inline flow controls.
4. Filtration requirements: Filter with 40 micron rated filter element.
5. Recommended lubrication: F442 oil.

6. Other recommended lubricant specification: Petroleum based oil of 100 to 200 SSU viscosity at an aniline point greater than 200°F.

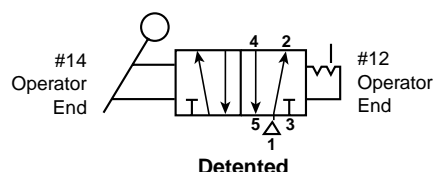
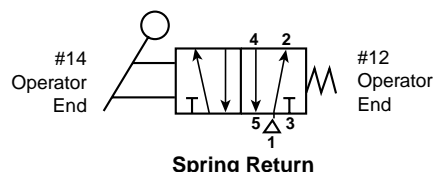
⚠ **CAUTION:** DO NOT use oils with additives, compounded oils containing solvents, graphite, detergents, or synthetic oils. Valve may stick.

⚠ **CAUTION:** Foot operated valves must be protected against inadvertent operation that can cause serious bodily injury. Use of a pedal guard, service kit PS2043, is strongly recommended as it will reduce the likelihood of inadvertent operation. If this is not suitable in your application, utilize equivalent protection.

Valve should be installed with reasonable accessibility for service whenever possible – repair service kits are available. Keep pipe or tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe – never into the female port. Do not use PTFE tape to seal pipe joints – pieces have a tendency to break off and lodge inside the unit, possibly causing malfunction.

Air applied to the valve must be filtered to realize maximum component life.

Symbol:



⚠ WARNING

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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Maintenance Hints & Troubleshooting:

Slow Air Leakage Through Exhaust Ports:

- 1. Check for internal leakage in the cylinder being operated by the valve.
- 2. Check condition of seals on spool and the valve body bore.
- 3. Check for missing, damaged or incorrectly assembled seals and o-rings.

Valve Service Procedure:

CAUTION: Always shut off air supply and depressurize all air lines connected to the valve.

PREPARATION: Lightly lubricate all rubber soft goods (o-ring, gaskets, and spool seals) with the grease found in the valve body service kit.

CAUTION: DO NOT use synthetic oils such as esters or fire retardant type compressor oils.

Servicing Valve Body:

- 1. Remove the manual operator and end cap by loosening the end mounting screws.
- 2. Disassemble and replace all items identified in the valve body service kits.
- 3. Inspect the valve body bore surface for nicks, voids, pits, and deep scratches.
- 4. Reassemble and tighten the mounting screws to 3.4 to 4.5Nm (30 to 40 in. lbs.) torque.

Service Kits:

	Single Pressure	Dual Pressure
Valve Body Service Kits, Consisting of Items - 1, 2, 3, 4, 5, 6, 7	PS2038P	PS2039P

