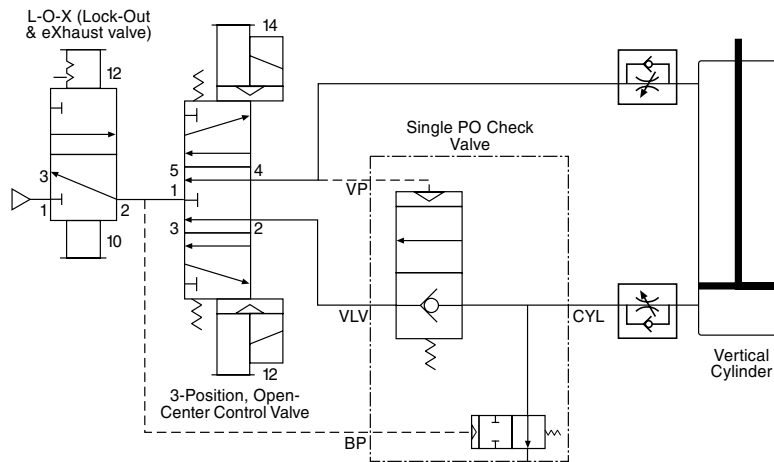


New Product Information

Single Pilot-Operated Check Valves With Trapped Pressure Relief



| Port Size | Model Number | Average C_v | Weight Lb (kg) |
|-----------|--------------|---------------|----------------|
| 3/8 NPT | 2751A3922 | 2.6 | 1.8 (0.8) |
| G 3/8 | D2751A3922 | 2.6 | 1.8 (0.8) |
| 1/2 NPT | 2751A4922 | 2.8 | 1.8 (0.8) |
| G 1/2 | D2751A4922 | 2.8 | 1.8 (0.8) |
| 3/4 NPT | 2751A5917 | 9.2 | 2.9 (1.3) |

STANDARD SPECIFICATIONS

Ambient/Media Temperature:

40° to 175° F (4° to 80° C).

Flow Media: Filtered air.

Inlet Pressure: 15 to 150 psig (1 to 10 bar).

Pilot Pressure: Must be equal to or greater than inlet pressure.

Pilot operated check valves with trapped pressure relief can be used to control vertically mounted pneumatic cylinders in the following ways.

- Maintaining a vertical cylinder in a stationary position. Even upon loss of electrical power.
- Jogging a vertical cylinder.
- Relieving pressure trapped between check valve and cylinder.

CIRCUIT FEATURES:

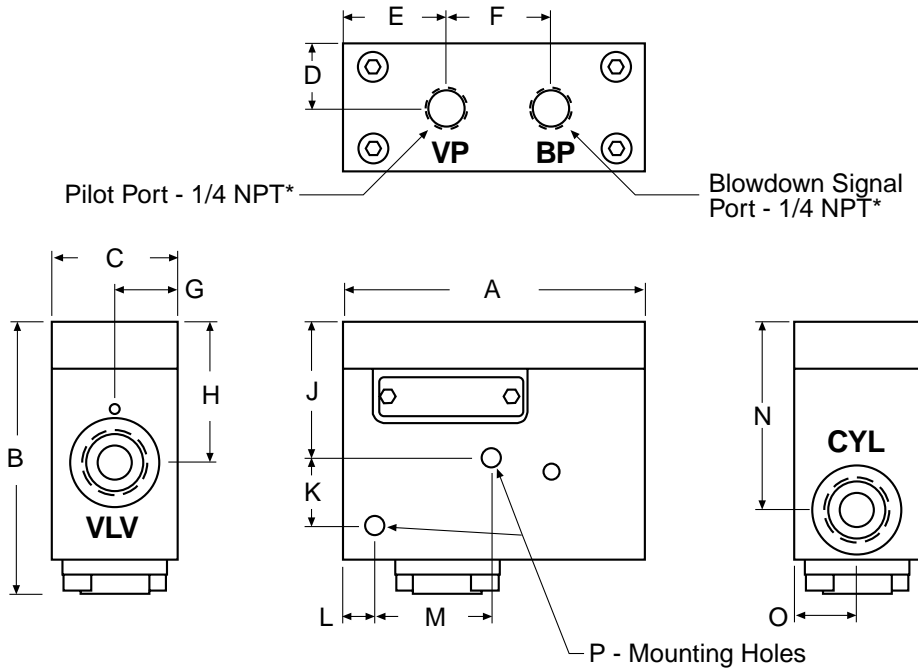
- Trapped pressure between check valve and cylinder is exhausted when the air supply at the Blowdown Signal Port (BP) is lost or locked out.
- Cylinder moves as long as the control valve solenoid is energized. Use for continuous motion or jogging.
- Cylinder remains stationary if neither control valve solenoid is energized, or if electrical signal is lost.

IMPORTANT NOTES and CAUTIONS:

- Cylinder movement may occur when inlet pressure is lost. The cylinder's movement is slowed only by the restrictions of the flow control valves, and by the exhaust capacity of the check valve relief flow capacity.
- For best response, flow control valves should be installed between the check valve and the cylinder.
- Pressurizing the system after supply air has been off may cause rapid movement of the cylinder because cylinder air was exhausted while the supply air was off.



Dimensions – inches (mm)



| Dimensions inches(mm) | | |
|-----------------------|--------------------------|--------------------|
| | Port Sizes* 3/8 & 1/2 | Port Sizes* 3/4 |
| A | 3.9 (100) | 4.3 (110) |
| B | 3.5 (89) | 4.2 (107) |
| C | 1.7 (44) | 2.2 (56) |
| D | 0.8 (21) | 1.1 (28) |
| E | 1.3 (34) | 1.6 (41) |
| F | 1.4 (36) | 1.7 (44) |
| G | 0.8 (21) | 1.1 (28) |
| H | 1.8 (46) | 2.1 (54) |
| J | 1.7 (43) | 1.6 (41) |
| K | 0.9 (23) | 1.5 (38) |
| L | 0.4 (10) | 0.4 (10) |
| M | 1.5 (38) | 2.1 (53) |
| N | 2.4 (61) | 2.8 (72) |
| O | 0.8 (21) | 1.1 (28) |
| P | 0.27 (6.9) | 0.34 (8.7) |

* All ports have G (metric) threads on model numbers with D prefix, e.g. D2751A3922.

Installation and Troubleshooting

INSTALLATION

- Locate the check valve as close to the cylinder as possible. This will minimize cylinder bounce and drift.
- Use non-expandable hose between check valve and cylinder. The expandability of thin-wall flexible hose can magnify cylinder bounce and drift.
- To install threaded pipe or fittings, engage threads one turn, apply thread sealant (tape not recommended) to threads, and tighten pipe or fitting fully.
- After system is pressurized, check all connections with soapy water to ensure that there are no leaks. Drifting can occur if leaks are present between the check valve and the cylinder.
- Pressure at port BP must be equal to or greater than the pressure in the cylinder and greater than the minimum operating pressure of the control valve.
- Do not restrict the exhaust of the control valve.

TROUBLESHOOTING TIP

The most common cause of unsatisfactory performance is leaky connections. Always check for leaks before undertaking any other repair procedures.

WARRANTY and CAUTIONS

Standard ROSS warranty and cautions apply, available upon request.



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