PCV—Pneumatic Check Valve

Date of last Review : 25/05/2016

Installation, Operation & Maintenance Instructions

OPB0019 Rev 1

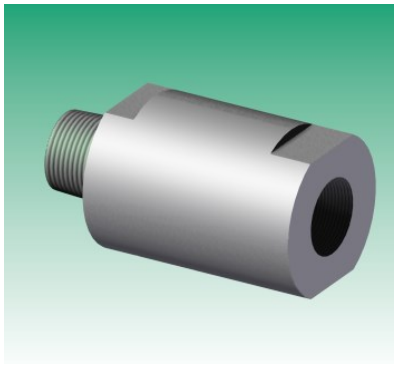

Fig. 1

The following procedures apply to all in-line mounting, pneumatic or low pressure liquid service, check valves.
Refer to the specific valve installation drawings for the operating parameters.

The PCV—Pneumatic Check Valve shall only be used in accordance with the requirements of this document. Please read all details carefully prior to installation.

Models Covered by this instruction:

PCV/04x
PCV/06x
PCV/08x
PCV/12x
PCV/16x

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1.0 General

PCV—Pneumatic Check Valves are manufactured from 316L Stainless Steel. Viton seals are fitted as standard, with alternative elastomers available for extreme conditions.

2.0 Installation

Selection, installation, operation, and maintenance must only be carried out by qualified, trained, authorised, and competent personnel in accordance with the relevant codes, rules, and regulations. Good engineering practice must be carried out during installation, operation, and maintenance, in accordance with any local legislation.

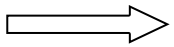
Check that the connecting tube fittings and / or valve have a compatible thread form. Standard valves have an NPT thread—this taper thread requires the use of a thread sealant. NB It is not a dry-seal thread form.
Bifold Fluidpower strongly recommend that tube fittings are sealed into the fluid ports using thread sealant, Loctite 577 or equivalent, and that PTFE tape is not used.

Valves can be mounted in any attitude.

Particular attention should be paid to ensure the correct fluid port connections are made;

1 = Inlet 2 = Outlet

A direction of flow arrow is clearly marked on the valve body.



2.2 Schematic Layout

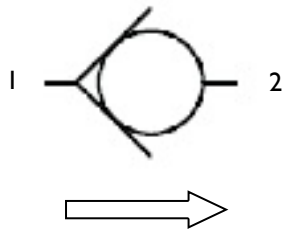


Fig. 2

3.0 Maintenance

A PCV—Pneumatic Check Valve used in an emergency shutdown system is a safety critical item. Maintenance not carried out by Bifold personnel may compromise the function and any applicable Safety Integrity Level of the product and invalidate the warranty and certification.
The operating media must be de-pressurised and secured against re-activation before carrying out any maintenance.

No annual maintenance is necessary on pneumatic or low pressure hydraulic service check valves.

4.0 Testing

Valves are supplied tested at 1.1 times the maximum working pressure marked on the valve body. Do not exceed this pressure during system proof pressure testing, or the stated working pressure under normal operating conditions.

NOTE The maximum permissible working pressure varies according to the valve model number.

The control element is generally a poppet with an integral elastomer O-ring to a metal seat. The sealing integrity of the valve element is exceptionally good provided high standards of fluid cleanliness are maintained. However, as for all poppet valves, the control element is susceptible to damage from fluid borne particulate matter. Bifold Fluidpower recommends that all tubing is thoroughly flushed or blown through prior to the valve being installed, and that for liquid service a fluid cleanliness level equal to or better than NAS 1638 Class 9 / ISO 4406 Class 18/15 is maintained.