



Controls Ltd.

Product Manual

OPERATION

The CVS 4057 3-Way Valves features modular construction and incorporates a sliding spool. The standard spool has a small center dead spot position and no valve port overlap. With the spool in the unlatched (rest position) as shown in the diagrams, Port 2 is open to Port 3 and Port 1 is closed. With the spool in the latched (actuated position), Port 2 is open to Port 1, and Port 3 is closed.

CVS offers two types of 4057 3-way valves:

CG: Pressure operated spring return

CP: Manual latch or pressure operated with spring return

SPECIFICATIONS

Body Material: Precision cast aluminium

Standard Spool Material: Aluminium

Standard Seal Material: Buna

Maximum Temperature:

- 40°C ~ 120°C (- 40°F ~ 250°F)

Flow Coefficient (equivalent to 9/32 dia. Port):

Cv = 1.2

Maximum Pressure at Ports 1, 2, or 3: *125psi (860 kPa)

Net Weight: 0.6 ~ 2.0 lbs. (0.3 ~ 0.9 kg)

150psi (1034 kPa) if a slight increase in operating force and pressure are acceptable.

Type 4057 3-Way Valve

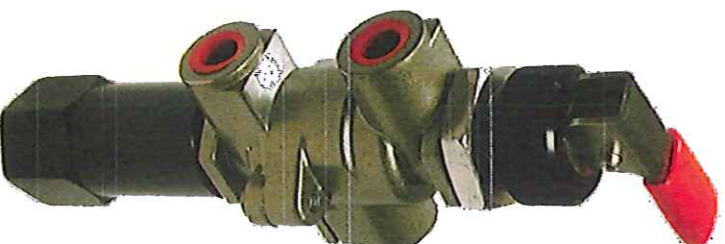


Fig. 1. CVS Series 4057
3-Way Valve CP Type



Fig. 1.1 CVS Series 4057
3-Way Valve CG Type

FEATURES

BALANCED FORCE DESIGN: Pressure can be applied to any port

CENTER DEAD SPOT: Standard

ARRANGED FOR PANEL OR BRACKET MOUNTING

HYDRAULIC FLUID CONTROL

ACTUATOR CONTROL

PNEUMATIC PANEL SYSTEMS

SAFETY CONTROL SYSTEMS

The CVS 4057 valve is for use in manual and automatic hydraulic or pneumatic control systems. They offer versatility in operating requirements and allowable pressure limits. For a 1/4" size control valve, they offer exceptional flow capacity.

These valves are suitable for use on clean air, natural gas, L.P. gases, petroleum-base lubricants, hydraulic oils, and many other fluids.

Each valve is carefully assembled, tested, and inspected to ensure that high quality standards are met. Valves are made from precious cast and machined aluminum. Standard construction permits valve pressure to 125psi.

The CVS 4057 offers a unique and dynamic characteristic for the oil and gas industry. For instance, the 4057 model CP has a manual reset latch which will automatically drop out upon the introduction of pilot pressure, and allows the return stroke on loss of pilot pressure.

INSTALLATION

All connections on 4057 Valves are made with 1/4" pipe thread fitting. Apply a quality thread sealant to pipe thread connections but do not permit it to enter the valve passage. Teflon thread sealing tape may be used but must be applied so that the threads of the tape do not enter the valve.

IMPORTANT

Avoid over tightening fittings on the valve port bosses as they may be cracked, especially when Teflon thread sealing tape is used.

MAINTENANCE

To check the seal rings, the valve spool can be removed. This is done on most versions by simply removing the end cap and pulling out the spool. Spools on panel mounted valves can be removed from in front of the panel without disconnecting any piping.

To replace O-rings, remove the spool, take off the old O-rings, thoroughly clean the grooves, and coat the grooves with Dow Corning No. 55 grease. Lightly coat the new rings with grease and install them. Remove excess grease and reinstall the piston.

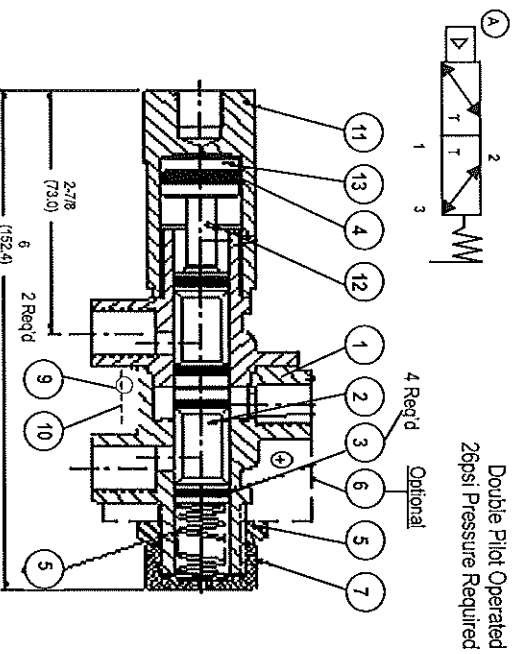
When these valves are used in safety control systems, it is recommended that the system be checked monthly for proper functioning.

When communicating with CVS sales representative regarding operation of a control, always give the Model No. and Serial No. If ordering service parts always include the description, Part No., and quantity desired.

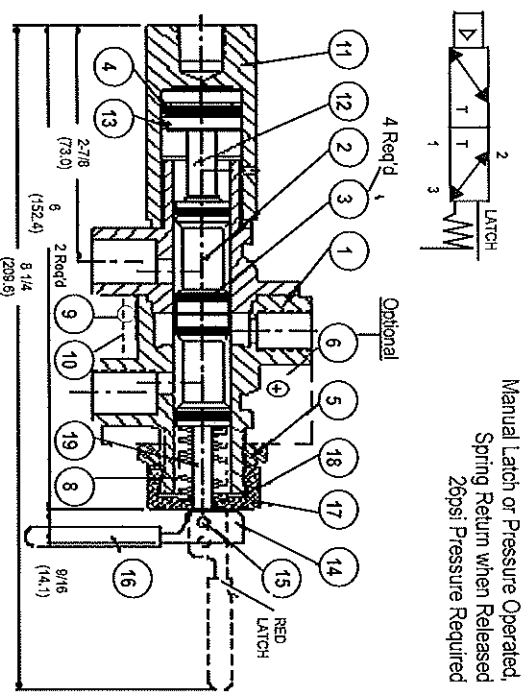
* - denotes recommended spare part

VALVE TYPE DESCRIPTION TABLE

TYPE CG



TYPE CP



Ref. #	Part #	Description
1	7909X001 - CG & CP	Body Assembly, NPT, Standard Finish
2	7893 - CG & CP	Spool, Center Dead Spot (Standard)
3	7896L001 - CG & CP	Seal Ring, Nitrile - (4 Required) *
4	7898L001 - CG & CP	Seal Ring, Buna N (Standard) *
5	3496 - CG & CP	Nut, Standard Finish
6	5186 - CG & CP	Bracket (Optional)
7	3626L004 - CG & CP	Cap, Standard Finish
8	7154L034 - CG & CP	Spring
9	705L001 - CG & CP	Drive Screw (Optional)
10	7895 - CG & CP	Name Plate
11	7923L001 - CG & CP	End Cap, NPT, Standard Finish
12	7865L001 - CG & CP	Stem
13	7899 - CG & CP	Piston
14	6492X - CP	Reset Latch Assembly, Standard Finish
15	236L001 - CP	Pin
16	3423 - CP	Latch Protector
17	3626L003 - CP	Cap, Standard Finish
18	6073 - CP	Spacer, Stainless Steel #416 (Standard)
19	6656L001 - CP	Rod



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