



— MODEL — **81-01/681-01**
Check Valve

INTRODUCTION

The Cla-Val Model 81-01/681-01 Check Valve is an automatic valve designed to close drip tight when outlet pressure exceeds inlet pressure. It is a hydraulically operated, pilot controlled, diaphragm type globe or angle valve. In operation higher outlet pressure is directed into the cover of the valve through the control tube line and the valve closes tight. When inlet pressure exceeds the outlet pressure the disc lifts from the seat as fluid in the cover chamber is expelled into discharge end of the valve causing the valve to open.

INSTALLATION

1. Allow sufficient room around the valve to make adjustments and for disassembly.
2. It is recommended that gate or block valves be installed on both ends of the 81-01/681-01 to facilitate isolating the valve for preventive maintenance.

NOTE: BEFORE VALVE IS INSTALLED, PIPE LINES SHOULD BE FLUSHED OF ALL CHIPS, SCALE, AND FOREIGN MATTER.

3. Place the valve in the line with flow through the valve in the direction indicated on the inlet nameplate or by flow arrows. Check all fittings and hardware for proper makeup and that no apparent damage is evident. Be sure main valve cover nuts/bolts are tight.
4. Cla-Val Valves operate with maximum efficiency when mounted in horizontal piping with the cover UP; however, other positions are acceptable. Due to size and weight of cover and internal components of six inch valves and larger, installation with the cover up is advisable. This makes periodic inspection of internal parts readily accessible
5. Caution must be taken in the installation of this valve to insure that galvanic and/or electrolytic action does not take place. The proper use of dielectric fittings and gaskets are required in all systems using dissimilar metals.

OPERATION AND START-UP

1. A Cla-Val X101 Valve Position Indicator may be installed in the cover center port to provide a visual indication of the stem position during start-up.
2. Slowly open the gate or block valves on both ends of the Cla-Val Check Valve. Carefully loosen the center cover plug of the Hytrol Valve, or the vent valve of X101 Valve Position Indicator (if installed), and bleed air from valve. Retighten cover plug or vent valve after all air is expelled.
3. To check the operation of the valve, lower the pressure at the valve inlet and the valve will close. Return the inlet pressure to a higher pressure than the outlet pressure and the valve will open.

MAINTENANCE

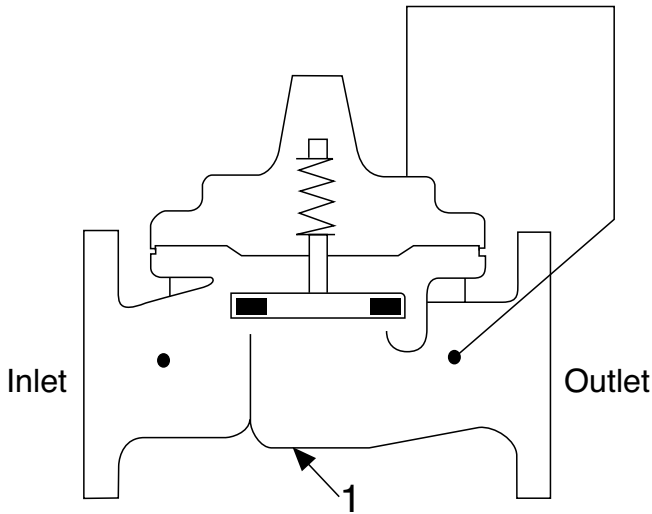
1. Cla-Val Valves require no lubrication or packing and a minimum of maintenance. However, a periodic inspection schedule should be



established to determine how the fluid handled is affecting the efficiency of the valve assembly. Minimum of once per year.

2. Repair and maintenance procedures of the Cla-Val Hytrol valve and control components are included in a more detailed IOM manual. It can be downloaded from our web site (www.cla-val.com) or obtained by contacting a Cla-Val Regional Sales Office.
3. 3/8", 1/2" and 3/4" size Cla-Val Model 81-01/681-01 Check Valves are internally ported for control fluid flow. After servicing these valves be sure that small hole in body, diaphragm and cover line up together.
4. **When ordering parts always refer to the catalog number and stock number on the valve nameplate.**

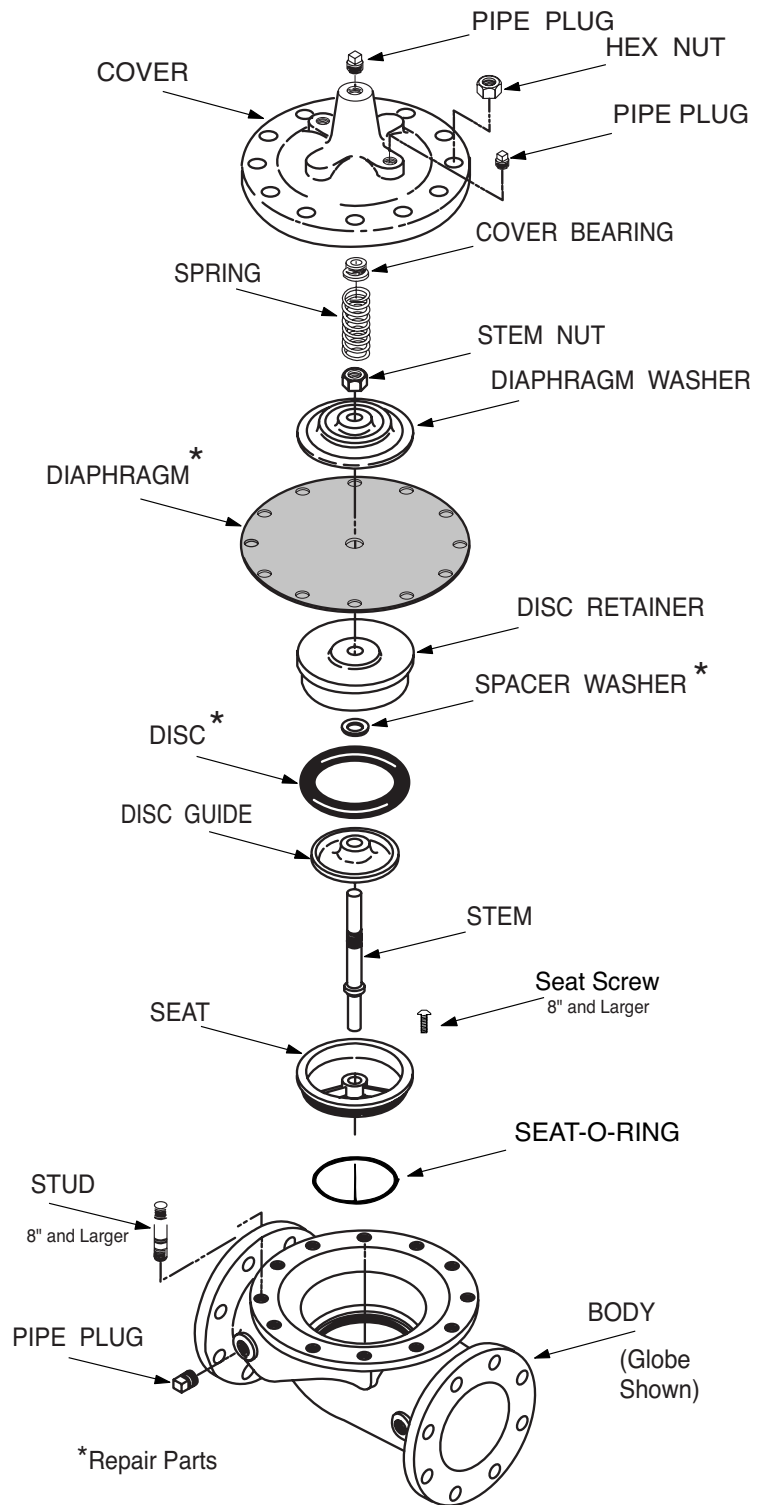
SYMPTOM	PROBABLE CAUSE	REMEDY
Fails to close	Lack of cover chamber pressure	Check upstream and downstream pressure, tubing for restrictions
	Diaphragm damaged	Replace diaphragm
	Diaphragm assembly inoperative. Corrosion or excessive scale build up on valve stem	Clean and polish stem Replace any defective part damaged, badly eroded
	Mechanical obstruction Object lodged in valve	Remove obstruction
	Worn disc	Replace disc
	Badly scored seat	Replace seat
Fails to open (Valve is designed to fail closed on a diaphragm failure)	Insufficient line pressure	Check pressure
	Diaphragm assembly inoperative Corrosion on valve stem	Clean and polish stem Replace any defective part damaged, badly eroded
	Diaphragm damaged	Replace Diaphragm



BASIC COMPONENTS

- 1 100-01 Hytrol (Reverse Flow)
- 100-20 600 Series Hytrol (Reverse Flow)

1. **100-01 Hytrol Reverse Flow Main Valve**



For a more detailed IOM Manual go to www.cla-val.com or contact a Cla-Val Regional Sales Office.