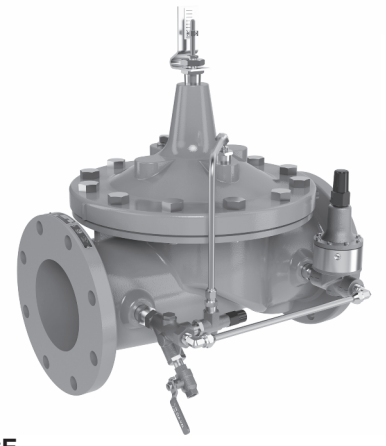
CLA-VAL®

—MODEL—

50B-5KG/2050B-5KG

Pump Suction Control Valve

The Model 50B-5KG/ 2050B-5KG Pump Suction Control Valve is designed specifically for Fire Pump Suction Control Service. It modulates to maintain the pump discharge in relation to the suction head available, thus assuring that the suction head pressure does not fall below the pre-set minimum.



FM APPROVED

INSTALLATION

1. Allow sufficient room around the valve assembly to make adjustments and for servicing.
2. It is recommended that gate or block valves be installed to facilitate isolating valve for preventative maintenance.

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

3. Place valve in line with flow through valve in direction indicated on inlet plate or flow arrows. Check all fittings and hardware for proper makeup and verify that no apparent damage is evident.

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 on six inch and larger valves, 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 dis-similar metals.

OPERATION AND START-UP

1. Prior to pressurizing the valve assembly make sure the necessary gauges to measure pressure in the system, are installed as required by the system engineer.

CAUTION: During start-up and test a large volume of water may be discharged downstream. Check that the downstream venting is adequate to prevent damage to personnel and equip- ment. All pilot adjustments should be made slowly in small increments. If the main valve closes too rapidly it may cause surging in upstream piping.

2. Remove cap from CRL-5A then loosen adjusting screw counterclockwise. This will allow the valve to open at low pressure relieving the full flow of the fire pump. Bleed all air from the valve at this time by carefully loosening the cover plug and tube fittings at the high points. Slowly turn the adjusting screw clockwise on the CRL-5A while watching the gauge between the valve and the pump until you reach the desired set-point. Tighten the jam nut on the CRL-5A and replace the cap.

DO NOT USE THE GAUGE PROVIDED ON THE VALVE TO SET THE VALVE. IT IS ONLY THERE TO INDICATE PRESSURE IN THE COVER.

MAINTENANCE

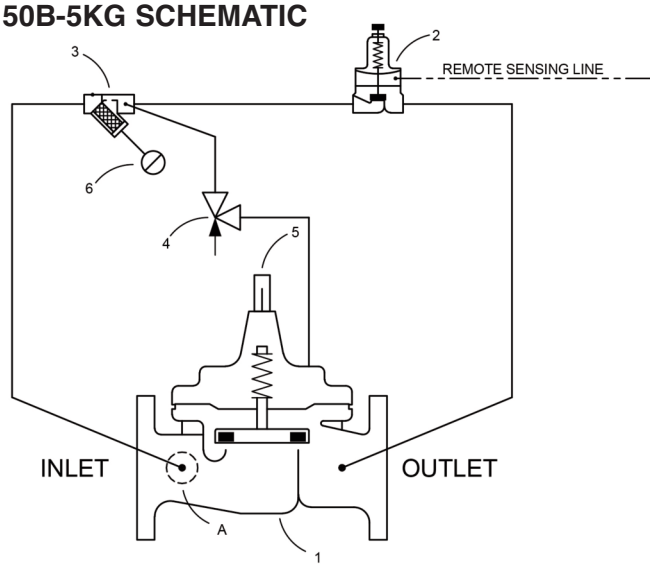
1. Cla-Val Valves and Controls require no lubrication or packing and a minimum of maintenance. However, a periodic inspection schedule should be established to determine how the fluid is affecting the efficiency of the valve assembly. Minimum of once per year.

2. Repair and maintenance procedures of the Hytrol Main Valve and control components are included in a more detailed Tech Manual. It can be downloaded from www.cla-val.com) or obtained by contacting a Cla-Val Regional Sales Office

3. When ordering parts always refer to the catalog number and stock number on the valve nameplate.

SYMPTOM	PROBABLE CAUSE	REMEDY
Main valve won't open	Inlet pressure is below setting of pilot valve.	Reset pilot valve. If change is from tampering, seal cap with wire and lead seal.
	Pilot valve is stuck closed: Mineral deposit or foreign material between disc retainer and stem guide.	Disassemble control and clean.
Water is coming out of vent hole in cover	Pilot valve diaphragm is ruptured or diaphragm nut is loose.	Disassemble and replace diaphragm. Tighten nut.
Main valve is stuck closed	Mineral build-up on stem. Stem damaged.	Disassemble main valve, clean parts and/or replace damaged part.
Main valve won't close	Inlet pressure is above setting of pilot valve.	Reset pilot valve
	Clogged orifice or strainer.	Disassemble and clean.
	Pilot valve is stuck open: Foreign material or mineral deposit under disc retainer or diaphragm assembly.	Disassemble and clean.
Main valve stuck open	Foreign material or mineral deposit between seat and disc assembly.	Disassemble and clean.
	Main valve diaphragm worn out.	Disassemble and replace.
Valve leaks continuously	Pilot valve disc worn out. Main valve disc worn or damaged.	Disassemble and replace.
	Set point too close to inlet pressure.	Reset pilot valve.

50B-5KG SCHEMATIC

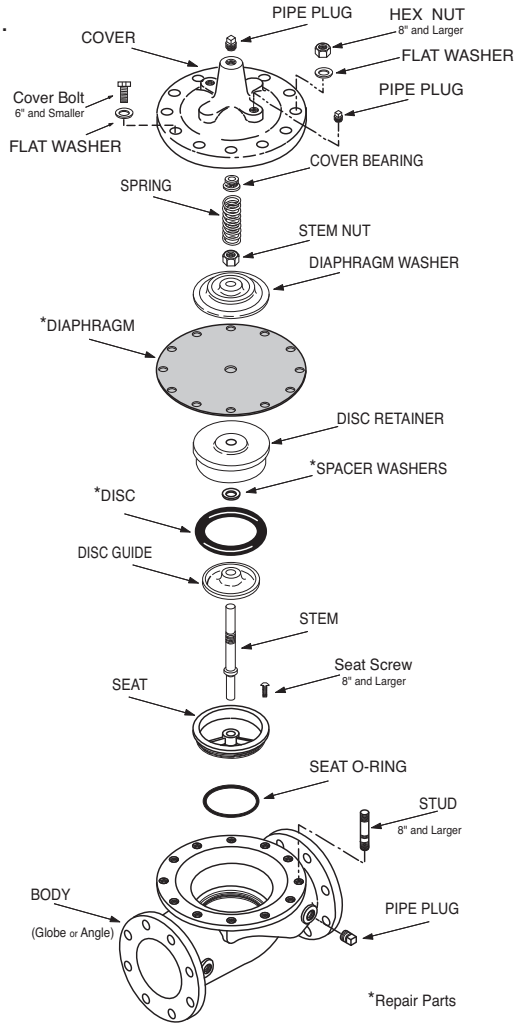


BASIC COMPONENTS

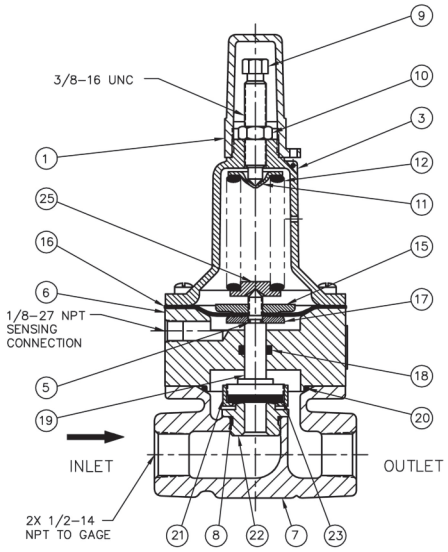
1 100-06 Hytrol Main Valve
2 CRL5A Pressure Relief Control
3 X44A Strainer & Orifice Assembly
4 CV Flow Control (Opening)
5 X101C Valve Position Indicator
6 CK2 Blow Off Valve

Hytrol Main Valve

1.



2. CRL5A PRESSURE RELIEF CONTROL



0–75, 5–25, 20–105 & 20–200 PSI
LOW PRESSURE DESIGN

CRL5A adjustment range (psi)	* Approximate Increase for Each Clockwise Turn of Adjusting Screw (Item #9)
0 - 75	8.5 PSI
5 - 55	4.0 PSI
20 - 105	13.0 PSI
20 - 200	28.0 PSI
100 - 300	19.0 PSI

* Approximate. Use gauge at valve inlet to set

CRL5A

2.

X44A Strainer & Orifice Strainer

3.

X101C Valve Position Indicator

5.

CV Flow Control

4.

CK2 Blow Off Valve

6.

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