

40-01
(Full Internal Port)

640-01
(Reduced Internal Port)

MODEL _____



Rate of Flow Control Valve



- **Accurately Limits Flow Rate**
- **Completely Automatic Operation**
- **Includes Orifice Plate with Holder**
- **Optional Check Feature**
- **Easily Adjusted**

The Cla-Val Model 40-01/640-01 Rate of Flow Control Valve prevents excessive flow by limiting flow to a preselected maximum rate, regardless of changing line pressure. It is a hydraulically operated, pilot controlled, diaphragm valve. The pilot control responds to the differential pressure produced across an orifice plate installed downstream of the valve. Accurate control is assured as very small changes in the controlling differential pressure produce immediate corrective action of the main valve. Flow rate adjustments are made by turning an adjusting screw on the pilot control.

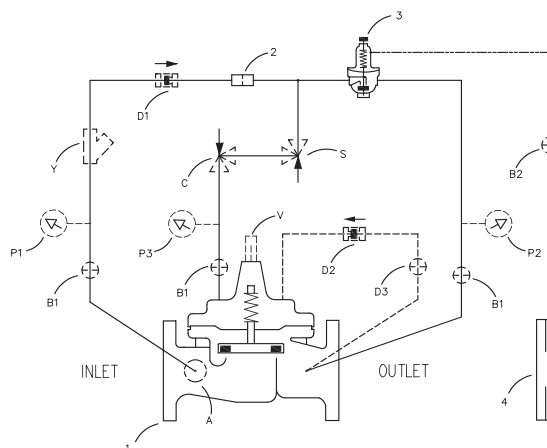
The Model 40-01/640-01 includes an orifice plate with a holder that should be installed one to five pipe diameters downstream of the valve. If the check feature option is added and a pressure reversal occurs, the downstream pressure is admitted into the main valve cover chamber and the valve closes to prevent return flow. See X52E data sheet for sizing selection.

Schematic Diagram

Item	Description
1	100-01 Hytrol Main Valve
2	X58C Restricting Fitting
3	CDHS18 Differential Control
4	X52E Orifice Plate Assembly

Optional Features

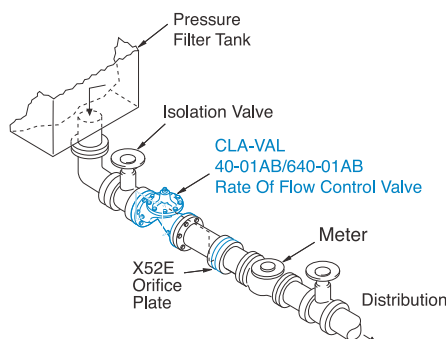
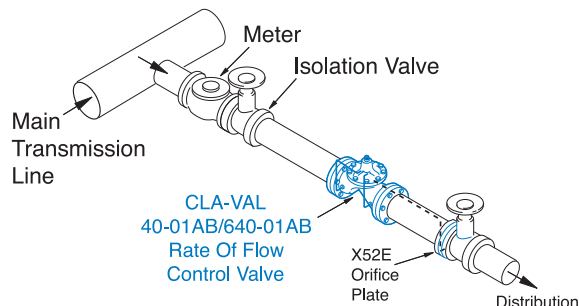
Item	Description
A	X46A Flow Clean Strainer
B	CK2 Isolation Valve
C	CV Flow Control (Closing)
D	Check Valves with Isolation Valve
P	X141 Pressure Gauge
S	CV Speed Control (Opening)
V	X101 Valve Position Indicator
Y	X43 "Y" Strainer



Product Dimensions Data:

For the 40-01 Main Valve (100-01) dimensions, see pages 17.
For the 640-01 Main Valve (100-20) dimensions, see pages 29.

Typical Applications



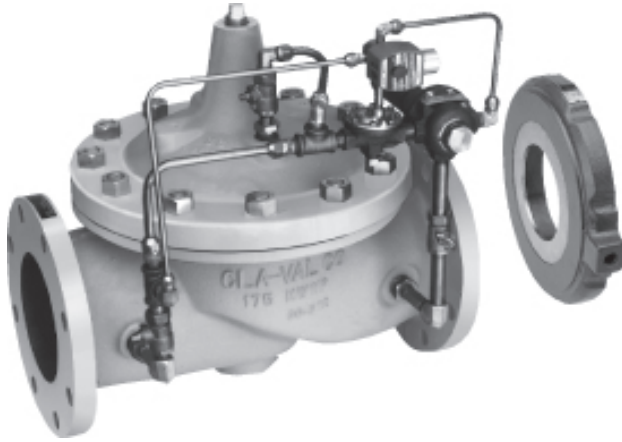
The 40-01/640-01 is typically installed where water supply to a system must be limited to a preset maximum flow rate. The valve is easily set to maintain the maximum allowable flow rate.

The 40-01/640-01 is typically installed as a pressure type filter effluent control valve where a constant flow rate is maintained as head loss through the filter varies.



43-01
(Full Internal Port)
MODEL
643-01
(Reduced Internal Port)

Combination Rate of Flow Control & Solenoid Shut-Off Valve



Schematic Diagram

Item	Description
1	100-01 Hytrol Main Valve
2	X58C Restriction Fitting
3	100-01 Hytrol (Reverse Flow)
4	CDHS18 Differential Control
5	CS3 Solenoid Control
6	X52E Orifice Plate Assembly

Optional Features

Item	Description
A	X46A Flow Clean Strainer
B	CK2 Isolation Valve
C	CV Flow Control (Closing)
D	Check Valves with Isolation Valve
H	Solenoid Drain to Atmosphere
P	X141 Pressure Gauge
S	CV Speed Control (Opening)
V	X101 Valve Position Indicator
Y	X43 "Y" Strainer

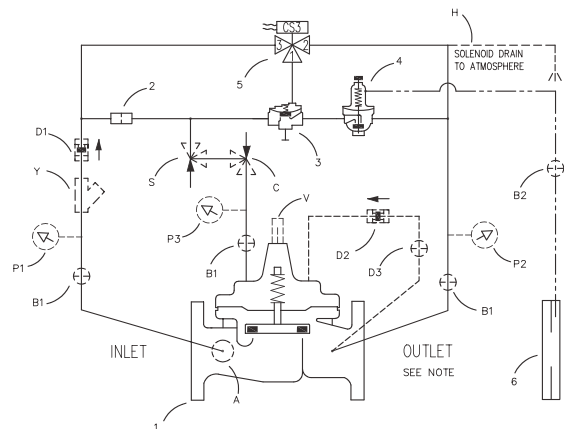
Product Dimensions Data:

For the 43-01 Main Valve (100-01) dimensions, see pages 17.
For the 643-01 Main Valve (100-20) dimensions, see pages 29.

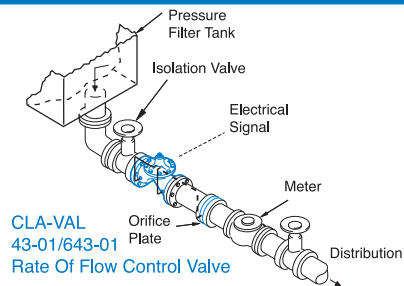
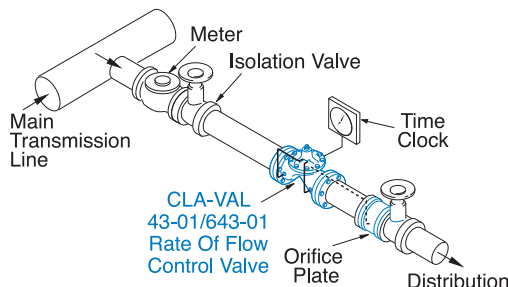
- Multi-functional Capability
- Includes Orifice Plate with Holder
- Optional Check Feature
- Easily Adjusted
- Every Valve Factory Tested

The Cla-Val Model 43-01/643-01 Combination Rate of Flow Control and Solenoid Shut-Off Valve limits the maximum flow rate, regardless of changing line pressure. It is a hydraulically operated, pilot controlled, diaphragm valve. The pilot control is actuated by the differential pressure produced across an orifice plate installed downstream of the valve. Accurate control is assured as very small changes in the controlling differential pressure produce immediate corrective action of the main valve. A solenoid control is provided to intercept the operation of the differential control and close the main valve.

The Model 43-01/643-01 includes a orifice plate with a holder that should be installed one to five pipe diameters downstream of the main valve. If the check feature option is added and a pressure reversal occurs, the downstream pressure is admitted into the main valve cover chamber and the valve closes to prevent return flow.



The "D" feature on a vertically installed 6" and larger valves must be horizontally installed.



The 43-01/643-01 is typically installed where water supply to a system must be limited to a pre-set maximum flow rate at certain times of day. The valve is easily set to maintain the maximum allowable flow rate and is to open or close on an electrical signal.

The 43-01/643-01 is typically installed as a pressure type filter effluent control valve where a constant flow rate is maintained as head loss through the filter varies. The valve opens or closes on an electrical signal.

49-01

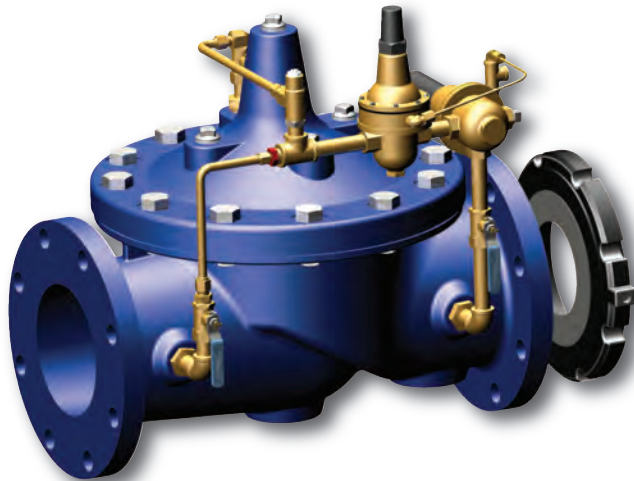
(Full Internal Port)

MODEL _____

649-01

(Reduced Internal Port)

Combination Rate of Flow & Pressure Reducing Valve



- Multi-Functional Capability
- Accurate and Immediate Control
- Includes Orifice Plate with Holder
- Optional Check Feature
- Easily Adjustable Controls

The Cla-Val Model 49-01/649-01 Rate of Flow and Pressure Reducing Valve automatically reduces a higher inlet pressure to a steady lower downstream pressure regardless of changing flow rate and/or varying inlet pressure, as long as the flow rate is below a preset maximum. It also prevents excessive flow by limiting flow to a preselected maximum rate.

This valve is a hydraulically operated, pilot controlled diaphragm valve. The pilot system includes a direct acting pressure reducing pilot and a rate of flow differential control. The pressure reducing pilot is responsive to slight variations in downstream pressure and immediately controls the main valve to maintain the desired line pressure.

The rate of flow control responds to the differential pressure produced across an orifice plate in the main line. Accurate control is assured as very small changes in the controlling differential pressure produce immediate corrective action by the main valve.

If the check feature option is added and a pressure reversal occurs, the downstream pressure is admitted into the main valve cover chamber and the valve closes to prevent return flow.

Schematic Diagram

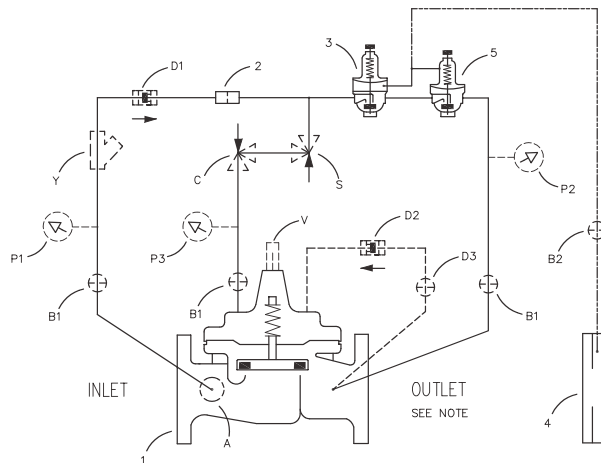
Item	Description
1	100-01 Hytrol Main Valve
2	X58A Restriction Fitting
3	CRA Pressure Reducing Control
4	X52E Orifice Plate Assembly
5	CDHS18 Differential Control



Optional Features

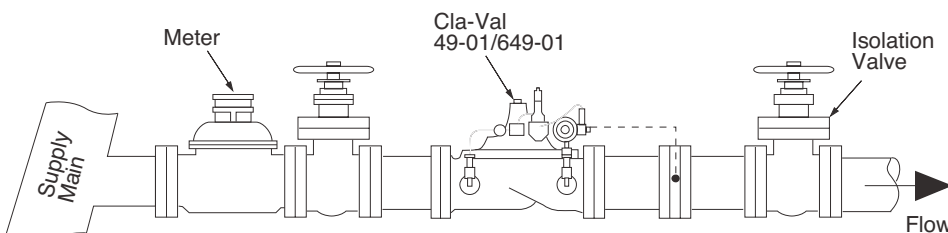
Item	Description
A	X46A Flow Clean Strainer
B	CK2 Isolation Valve
C	CV Flow Control (Closing)
D	Check Valves with Isolation Valve
P	X141 Pressure Gauge
S	CV Speed Control (Opening)
V	X101 Valve Position Indicator
Y	X43 "Y" Strainer

NSF/ANSI 372:
National Lead Free
Mandate "Reduction
of Lead in Drinking
Water Act"



Product Dimensions Data:

For the 49-01 Main Valve (100-01) dimensions, see pages 17.
For the 649-01 Main Valve (100-20) dimensions, see pages 29.



Typical Application

Installed where water supply to a system must be limited to a preset flow to prevent lowering the supply pressure. Easily set to maintain the maximum allowable flow rate.