

# 390-02

(Full Internal Port)

MODEL

# 3690-02

(Reduced Internal Port)

## Electronic Actuated Pressure Reducing Valve



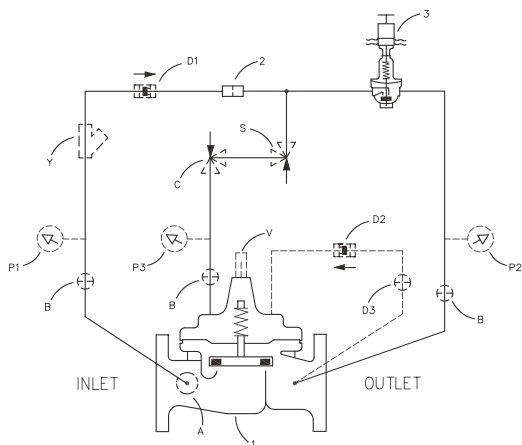
- Simplified Remote Valve Set-Point Control
- Isolated Input
- Ideal for Pressure Management
- 12-24VDC Input Power
- Reverse Polarity Protection
- IP-68 Submersible
- Use with the VC-22D Electronic Controller

### Schematic Diagram

Item	Description
1	100-01 Hytrol Main Valve
2	X58C Restriction Fitting
3	CRD-34 Electronic Pressure Reducing 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 Flow Control (Opening)
V	X101 Valve Position Indicator



The Cla-Val Model 390-02/3690-02 Electronic Actuated Pressure Reducing Control Valve combines precise control of field proven Cla-Val hydraulic pilots and simple, remote valve control. The Cla-Val Model 390-02/3690-02 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. This valve is an accurate, pilot-operated regulator capable of holding downstream pressure to a pre-determined limit. The valve uses a CRD-34 pilot control, consisting of a hydraulic pilot and integral controller, that accepts a remote set-point command input and makes set-point adjustments to the pilot.

The recommended control method is simple remote set-point change from an RTU (Remote Telemetry Unit) to the CRD-34 where the 4-20 mA command signal is ranged to specific pressure range. Very accurate control can be achieved when span does not exceed 100 psi. Since the CRD-34 is pre-ranged to the full spring range, some on-site calibration may be necessary when this control method is used. Free downloadable software is available from Cla-Val website for this purpose. The CRD-34 can also accommodate control systems where the RTU compares pressure transmitter signal to the remote set point command signal. The RTU adjusts the CRD-34 with 4-20 mA command signal containing an adequate deadband to prevent actuator dithering after the two signals agree.

Internal continuous electronic monitoring of actuator position results in virtually instantaneous position change with no backlash or dithering when control signal is changed. In the event of a power or control input failure, the CRD-34 pilot remains in hydraulic control virtually assuring system stability under changing conditions. If check feature ("D") is added, and pressure reversal occurs, the valve closes to prevent return flow.

### Product Dimensions Data:

For the 390-02 Main Valve (100-01) dimensions, see pages 17.  
For the 3690-02 Main Valve (100-20) dimensions, see pages 29.

### Typical Applications

The Cla-Val 390 Series valves that maintain downstream pressure and require this pressure to be changed from a remote location. It can be an effective solution for lowering costs associated with "confined space" requirements by eliminating the need for entry in valve structure for set-point adjustment. It is also ideal for pressure management, and can be programmed to minimum night time and optimum daytime pressures. Optional profiler can be used to create custom correlation between pressure and flow information.

Flow information can also be provided from the main valve, see 133VF. Additional pilot controls, hydraulic and/or electronic, are also available to perform multiple functions to fit exact system requirements.

