

350-02
(Full Internal Port)

3650-02
(Reduced Internal Port)

MODEL —

Electronic Actuated Pressure Sustaining Control Valve



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

The Cla-Val Model 350-02/3650-02 Electronic Actuated Pressure Sustaining Control Valve combines precise control of field proven Cla-Val hydraulic pilots and simple, remote valve control. The Model 350-02/3650-02 is a hydraulically operated, pilot controlled, modulating valve designed to maintain constant upstream pressure within close limits. This valve can be used for pressure sustaining, back pressure or unloading functions in a by-pass system. The valve uses a CRL-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.

Schematic Diagram

Item	Description
1	100-01 Hytrol Main Valve
2	X42N-2 Strainer & Needle Valve
3	CRL-34 Electronic Pressure Sustaining Control

Optional Features

Item	Description
B	CK2 Isolation Valve
D	Check Valves with Isolation Valve
F	Remote Pilot Sensing
H	Drain to Atmosphere
P	X141 Pressure Gauge
S	CV Flow Control (Opening)
V	X101 Valve Position Indicator

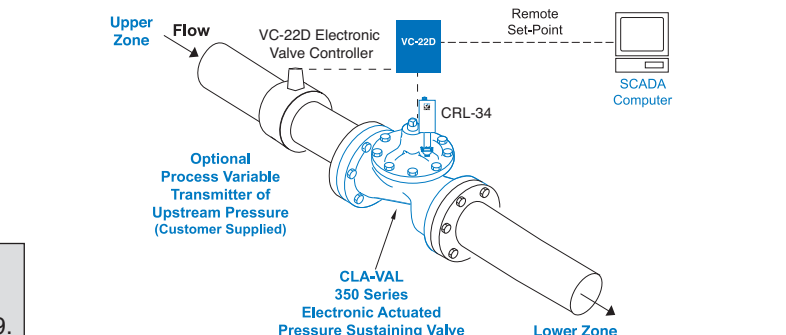
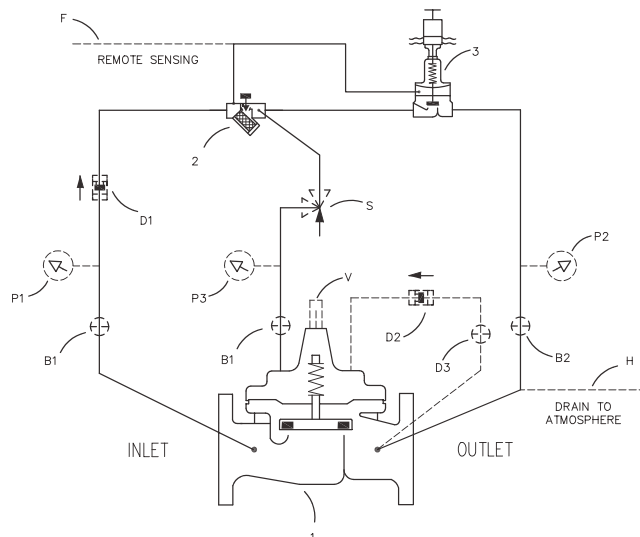
The recommended control method is simple remote set point change from an RTU (Remote Telemetry Unit) to the CRL-34 where the 4-20 mA command signal is ranged to specific pressure range. Very accurate control can be achieved when span does not exceed 100 psi. Since the CRL-34 is pre-ranged to the full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

Typical Applications

The valve is designed to be used with supervisory control systems (SCADA), having remote analog set-point output and process variable upstream pressure input. It is also an effective solution for lowering costs associated with "confined space" requirements by eliminating need for entry into valve structure for set-point adjustment.

Additional pilot controls, hydraulic and/or electronic, can be easily added to perform multiple control functions to fit exact system requirements.



Product Dimensions Data:

For the 350-02 Main Valve (100-01) dimensions, see pages 17.
For the 3560-02 Main Valve (100-20) dimensions, see pages 29.