

CLA-VAL

*Automatic Control Valves
for Waterworks Applications*



Cla-Val Automatic Control Valves

Pressure Reducing Valves



90 Series Pressure Reducing Valve

- Automatically reduce a higher inlet pressure to a steady lower downstream pressure, regardless of changing flow rate and/or varying inlet pressure using a CRD pilot control
- End Connections: Threaded, Flanged and Grooved
- Sizes 1-inch through 36-inches
- Model 690-01 is the reduced port version of the 90-01

92 Series Combination Pressure Reducing and Pressure Sustaining Valve

- Performs two independent functions in a waterworks system:
 - 1) Maintains a constant downstream pressure
 - 2) Sustains the upstream pressure to a pre-determined minimum
- End Connections: Threaded, Flanged and Grooved
- Sizes 1-inch through 36-inches
- Model 692-01 is the reduced port version of the 92-01



93 Series Combination Pressure Reducing and Solenoid Shut-Off Valve

- Holds downstream pressure to a pre-determined delivery pressure, and reduces high transmission line pressures to lower distribution system requirements
- End Connections: Threaded, Flanged and Grooved
- Sizes 1-inch through 36-inches
- Model 693-01 is the reduced port version of the 93-01



94 Series Combination Pressure Reducing and Surge Valve

- Automatically reduces a higher inlet pressure to a steady lower downstream pressure and prevent a rapid pressure rise downstream
- End Connections: Threaded, Flanged and Grooved
- Sizes 1-inch through 36-inches
- Model 694-01 is the reduced port version of the 94-01



Pressure Relief Valves



50 Series Pressure Relief and Pressure Sustaining Valve

- The valve is actuated by line pressure through the CRL-60 pilot control, opening fast to maintain steady line pressure but closing gradually to prevent surges
- End Connections: Threaded, Flanged and Grooved
- Sizes 1-inch through 36-inches
- Model 650-01 is the reduced port version of the 50-01

50 Series Excess Pressure Safety Shut-Off Valve

- The valve automatically protects downstream distribution piping and fixtures or municipal systems from experiencing excess, unsafe pressures
- End Connections: Threaded, Flanged and Grooved
- Sizes 1-inch through 36-inches
- Model 650-33 is the reduced port version of the 50-33



52 Series Pressure Relief and Surge Anticipator Valve

- During pump starts and stops, the control valve opens on the initial low pressure wave, anticipating and diverting the returning high pressure wave from the system
- End Connections: Threaded, Flanged and Grooved
- Sizes 2-1/2-inches through 18-inches
- Model 652-03 is the reduced port version of the 52-03

58 Series Combination Back Pressure and Solenoid Shut-Off Valve

- Performs three independent functions in a waterworks system:
 - 1) Maintains a constant back pressure by discharging excess pressure downstream
 - 2) Opens when the inlet pressure is greater than the CRL-60 pilot control setting, modulating to maintain back pressure
 - 3) Closes when a solenoid is activated
- End Connections: Threaded, Flanged and Grooved
- Sizes 1-inch through 36-inches
- Model 658-01 is the reduced port version of the 58-01



Electronic Control Valves

VC-22D



131 Series Electronic Control Valve with VC-22D Controller

- The valve is a hydraulically operated with solenoid pilot controls, actuated by electrical signals from the VC-22D Electronic Valve Controller anywhere remote control is desired
- End Connections: Threaded, Flanged and Grooved
- Sizes 1-inch through 36-inches
- Model 631-01 is the reduced port version of the 131-01

340 Series Electronic Rate of Flow Control Valve

- The valve controls flow by limiting flow to a pre-selected maximum rate (within a four to one ratio), regardless of changing line pressure using the Cla-Val Model CDHS-34 actuated pilot control
- End Connections: Threaded, Flanged and Grooved
- Sizes 1-1/2-inch through 36-inches
- Series 6340 is the reduced port version of the 340 Series valve



350 Series Electronic Pressure Sustaining Control Valve

- The 350 Series valve is a hydraulically operated, pilot controlled, modulating valves designed to maintain constant upstream pressure within close limits using the CRL-34 pilot control,
- End Connections: Threaded, Flanged and Grooved
- Sizes 1-inch through 36-inches
- Series 6350 is the reduced port version of the 350 Series valve



390 Series Electronic Pressure Reducing Control Valve

- The valve is an accurate, pilot-operated regulator capable of holding downstream pressure to a pre-determined limit utilizing the CRD-34 Electronic Actuated Pilot Control
- End Connections: Threaded, Flanged and Grooved
- Sizes 1-inch through 36-inches
- Series 6390 is the reduced port version of the 390 Series valve



Solenoid Control Valves



136-01 Solenoid Control Valve

- The 136-01 valve is an on-off control valves that either opens or closes upon receiving an electrical signal to the solenoid pilot control
- End Connections: Threaded, Flanged and Grooved
- Sizes 1/2-inch through 4-inches
- Model 636-01 is the reduced port version of the 136-01 valve

136-03 Solenoid Control Valve

- The 136-03 valve consists of a Hytrol main valve, a three way solenoid and a high capacity three-way pilot valve
- End Connections: Threaded, Flanged and Grooved
- Sizes 4-inches through 36-inches
- Model 636-03 is the reduced port version of the 136-03 valve



Pump Control Valves



- 60 Series Booster Pump Control Valves are installed on the discharge of booster pumps to eliminate pipeline surges caused by the starting and stopping of the pump
- 60 Series Valves are specifically designed for larger sized pump stations
- End Connections: Threaded and Flanged
- Sizes 10-inches through 16-inches
- Reduced port valve: 660 Series



- 61 Series Deep Well Pump Control Valves are designed to protect pipelines from surges caused by the starting and stopping of deep well pumps
- Separate adjustable flow control valves in the pilot system regulate the opening and closing rates
- End Connections: Threaded and Flanged
- Sizes 2-1/2-inches through 24-inches
- Reduced port valve: 661 Series

Altitude, Level and Float Valves



- 210 Series Valves control the high water level in reservoirs
- The valves remain fully open until the shut-off point is reached
- End Connections: Threaded, Flanged and Grooved
- Sizes 1-inch through 36-inches
- Reduced port valve: 610 Series



- 124 Series Non-Modulating Float Valves accurately control the liquid level in water storage tanks and reservoirs
- End Connections: Threaded, Flanged and Grooved
- Sizes 1/2-inch through 6-inches
- Reduced port valve: 624 Series



- 428 Series Float Valves modulate to maintain a constant liquid level in a storage tank
- End Connections: Threaded, Flanged and Grooved
- Sizes 1/2-inch through 6-inches
- Reduced port valve: 628 Series

Rate-of-Flow Control Valves



- 40 Series Flow Control Valves prevent excessive flow by limiting flow to a pre-selected maximum rate, the CDHS18 pilot control
- End Connections: Threaded, Flanged and Grooved
- Sizes 1-1/2-inch through 36-inches
- Reduced port valve: 640 Series



- 43 Series Combination Rate of Flow Controller and Solenoid Shut-Off Valves limit the maximum flow rate,
- End Connections: Threaded, Flanged and Grooved
- Sizes 1-1/2-inch through 36-inches
- Reduced port valve: 643 Series



- 49 Series Rate of Flow and Pressure Reducing Valves reduces a higher inlet pressure to a steady lower outlet pressure
- End Connections: Threaded, Flanged and Grooved
- Sizes 1-1/2-inch through 36-inches
- Reduced port valve: 649 Series

Electronic Accessories

Cla-Val is known for a wide range of electronic accessories that add multiple functionality to our automatic control valves, including but limited to the following innovative products.



<p>PID Control Used to maintain a control value at a setpoint, multiple PID loops can be programmed with each of these allowing local or remote adjustment. An analog output may be used to regulate valve response and the valve valve response. Programmable support ramping, pressure hydraulic stroke.</p>	
<p>Control Curves Used to create a relationship between two system variables. Using graphical functions, the user defines the control curve relationship being produced. Can have control and control on the control curve. Up to four control curves allowing independent pump control valve opening and closing or related indicating level control.</p>	
<p>Actions Used to take "action" (or alarm) when programmable conditions (up to 2) are met by having an output delay interval. An output delay interval can be used to send an alarm to SCADA. Up to four actions can be programmed including watchdog.</p>	
<p>Retransmission Used to retransmit digital signal, variable, or variable to a SCADA system. Up to four digital signals such as pressure, flow, or level can be retransmitted through the built-in module.</p>	
<p>DP Metering A built-in function to calculate flowrate based on valve position and DP. The amount flow valve can be measured and controlled remotely. Requires flow meter. An existing ValvApp with the feature is included in the standard feature set. All elements can be valve base curves are included.</p>	
<p>Totolizer Amount of total volume as a function of time. Configurable into 16 total functionality allow for simplified set-up and configuration. Can be used for volume or batch control applications limiting water volume taken from reservoir per day or other limit factor.</p>	
<p>Data Logging and Log File All data with output signal are logged according to a programmable schedule. Detailed logging is stored in memory but can be set to log to a USB or a customized memory. A 128 MB memory allows greater than 80,000,000 volume storage. Data is stored in MS Excel (CSV) readable format. Transfer is by USB.</p>	

VC-22D Electronic Valve Controller

- Provides remote or local set-point control for valves in a variety of fluid applications
- Available versions: IP-68, IP-65 and Panel Mount
- Supplied with pre-loaded ValvApps™ for most common valve functions
- Custom ValvApps™ can be created for unique applications

PC-22D Pump Control Panel

- Pre-programmed Valve Controller
- Suitable for all Booster Pump and Deep Well Applications
- Electronically Control Open/Closing Speed of Control Valve
- Indicator Lights Monitor System Status
- NEMA 4X Rated Enclosure
- Local visual indication of pump and control valve status
- Easy to adjust sequence timers
- Displays time for system to build pressure and for valve to open
- Contacts provided for remote or automatic start signal



CRA-34



CRD-34



CRL-34

Cla-Val 34 Series Electronic Actuated Pilot Control

- Provides simplified remote valve set-point adjustment
- Enables accurate downstream control using any SCADA-type control system using an analog 4-20mA signal
- 12-24VDC input power
- Available configurations:
 - CRD-34 Pressure Reducing Electronic Pilot Control
 - CDHS-34 Rate-of-Flow Electronic Pilot Control
 - CRL-34 Pressure Sustaining Electronic Pilot Control



X144D e-FlowMeter

- Retrofittable
- Built-In LCD Touch Screen
- Mounts on either inlet body tapping of a Cla-Val Control Valve

X143IP Intermediate Turbine Power Generator

- Uses the hydraulic energy of the system to generate power
- Retrofits to an existing Cla-Val Control Valve
- Can be specified on a new valve
- Ideal for isolated locations and confined spaces
- Generates up to 14 watts of power to operate onsite equipment without tying into the grid





Services and Capabilities

Cla-Val Field Service provides expert on-site maintenance and repair services for valves installed in waterworks, wastewater, fire protection systems, aviation fueling, marine and industrial applications throughout the US, Canada and beyond.

For more than 30 years, we have provided the following categories of services:

- Start-up assistance
- Troubleshooting
- Periodic maintenance
- Valve repairs
- Field retrofits
- Actuator repair and maintenance



Our experienced Field Service Technicians and service vehicles stocked with replacement parts ensure that on-site maintenance and repair services are executed in a timely manner. Our dedicated Regional Service Centers in the Western US, as well as factory authorized Sales Agents throughout North America offering similar field services, help to ensure that a solution to your operational challenges is never more than a phone call away.

A quick visit to our website **Field Service Finder** allows you to click on your state or province to find the field service professional nearest you to meet emergency or periodic service needs.

Visit www.cla-val.com/field-service.html



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