



# CLA-VAL PRODUCT GUIDE





# PRODUCT GUIDE

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# CLA-VAL

## ABOUT US



### **It's not about the parts we make. It's about the part we play.**

Since 1936, Cla-Val has been known as the leading manufacturer of automatic control valves and has built a well-earned reputation for providing superior quality products designed for mission-critical water distribution solutions throughout the United States and around the world.

### **From humble beginnings**

From the first hydraulic actuated globe valve in the late 1930s to our latest advanced electronic and hydraulic control systems, Cla-Val has been a pioneer in control valve design. Three generations of family leadership later, our commitment to solving customer problems has established us as a trusted partner for municipal utilities, contractors, military bases, and major oil companies worldwide.



**“As facilities grow and pressures rise, our engineers develop advanced electronic and hydraulic control systems to meet today’s complex challenges.”**

### **State-of-the-art foundries and production facilities**

Cla-Val established its headquarters in Costa Mesa, California, in 1954 and is now the only valve manufacturer with two in-house foundries. This allows us to offer a wide range of valve patterns in over fifty metal varieties, ensuring prompt delivery of high-quality products.

Additionally, we have facilities in Canada, Switzerland, France, the UK, and New Zealand, each with dedicated training centers and expert sales teams to support our global customers.



### **Our latest innovations become tomorrow’s standards**

When you choose Cla-Val products, you benefit from over 90 years of expertise in demanding applications. As facilities grow and pressures rise, our engineers develop advanced electronic and hydraulic control systems to meet today’s complex challenges.

Our in-house engineering team collaborates closely with customers from initial design to performance testing and post-installation support, delivering tailored solutions for every application.



Check out our  
**Factory Tour?**  
Scan QR Code



# Automatic Control

## VALVES



### QUICK OVERVIEW

Automatic control valves are devices used to regulate the flow of fluids in a system without manual intervention. They automatically adjust the flow rate, pressure, or other parameters based on feedback from sensors or controllers.

Cla-Val automatic control valves operate through a hydraulically piloted control system rather than traditional motorized actuators. Key components include the main diaphragm-operated valve, precision pilot controls, and sensing points that monitor system conditions such as pressure, flow, or level. The pilot system continuously interprets these conditions and modulates the valve position accordingly. This self-contained hydraulic automation delivers highly reliable, accurate, and responsive control—enhancing efficiency, stability, and safety in fluid management systems without the need for external power or complex actuators.

#### Main Valve

- 100-01 Hytrol Valve
- 100-01K0 Anti-Catitation Hytrol Valves
- 100-02 Powertrol Valves
- 100-03 Power Check Valves
- 100-04 Hy Check Valves
- 100-42 Roll Seal Valves
- 100-43 Tubular Diaphragm Valves
- 100-46 Stainless Steel Valves

#### Pressure Control Valve

- 90-01 Pressure Reducing Valves
- 90-01K0 Anti-Catitation Pressure Reducing Valves
- 92-01 Pressure Reducing and Sustaining Valves
- 92-03 Pressure Reducing and Solenoid Shut off Valves
- 92-07 Pressure Reducing, Sustaining and Solenoid Valves
- 90-05 Pressure Reducing Valve with Return Flows
- 90-48 Pressure Reducing with Low Flow Bypass
- 94-01 Pressure and Surge Control Valves
- 95-01 Ratio Control Valves

#### Flow Control Valve

##### Hydraulic Flow Control Valves

- 40-01 Rate of Flow Valves
- 49-01 Rate of Flow and Pressuring Reducing Valves
- 40-25 Rate of Flow and Pressuring Sustaining Valves
- 43-01 Rate of Flow and Solenoid Shut-Off Valves

##### Electronic Flow Control Valve

- 131-01 Electronic Control Valves
- 131-73 Electronic Interface Valve - Industrial Services
- 133-01 Metering Valves
- 133-AV Multi-Function Electronic Interface Valves
- 136-01 Solenoid Control Valves
- 340-07 Electronic Rate of Flow Valves



How Do  
**Automatic Control Valve** work?  
Scan QR Code

## Altitude and Level Control Valve

### Hydraulic and Level Control Valves

- 124-01 Float Valves
- 210-01 Altitude Valve for One-Way Flows
- 210-01K0 Altitude Valve with Anti-Cavitation Trims
- 210-16 Altitude Valve for Two-Way Flows
- 210-27 Altitude and Solenoid Shut-Off Valve with

### Returns

- CDS Altitude Pilot Controls
- 427 Modulalating Float Valves
- CFC2 Float Control for Closed Tanks
- CFI-C1 Float Control for Opened Tanks

### Electronic Altitude & Level Control Valves

- 131-01 Electronic Control Valves
- 131-73 Electronic Interface Valves - Industrial Services
- 136-01 Solenoid Control Valves

## Pump Control Valve

### Hydraulic Pump Control Valves

- 60-BT Booster Pump Control Valve with High-Capacity Solenoids
- 60-11 Booster Pump Control Valves
- 60-19 Booster Pump Control Valve with High-Capacity Pilots
- 61-02 Deep Well Pump Control Valves
- 61-47 Deep Well Pump Control Valve with High-Capacity Solenoids
- 60-08 Deep Well Pump Control Valve with High-Capacity Pilots

### Electronic Pump Control Valves

- 131-01 Electronic Control Valves
- 131-22 Electronic Interface Valves
- 131-66 Electronic Interface Valve with Controllers
- 131-73 Electronic Interface Valve - Industrial Services

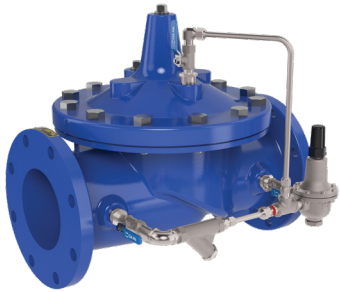


# REFERENCE SHEET

## MODEL EXAMPLES

### Pressure Reducing Valve

---



Body Pattern  
"Globe Style"

Ductile Iron  
Body Material

Bronze  
Internal Trim

**6" 90G-01BYKC D/B 150 CL FLANGE**

Ball Valves

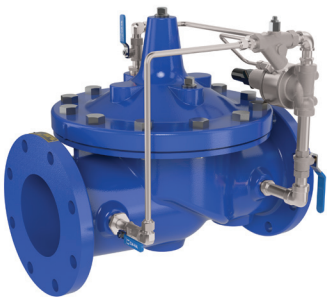
Wye Strainer

Epoxy Coating

ANSI Rating

### Pressure Sustaining / Relief Valve

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Body Pattern  
"Angle Style"

Remote  
Sensing

303 Stainless Steel  
Internal Trim

**10" 50A-01BSFKD D/S 300 CL FLANGE**

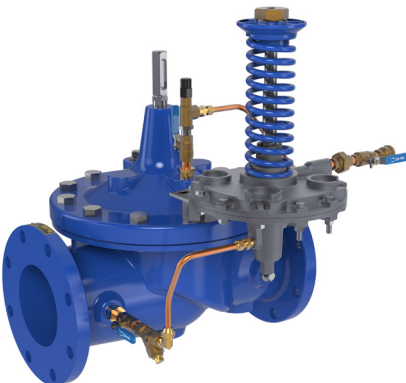
Opening Speed Control

DURA-KLEEN Stem

ANSI Rating

### Altitude Control Valve

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Flow Clean  
Strainer

316 Stainless Steel  
Internal Trim

**16" 210-01ABCKCG D/T 150 CL FLANGE**

Closing Speed Control

Epoxy Coating and  
Delrin Sleeved Stem

# REFERENCE SHEET



## SUFFIX / OPTIONS

<b>A</b>	X46 Flow Clean Strainer
<b>Y</b>	X43 "Y" Pattern Strainer
<b>B</b>	CK2 Isolation Valves
<b>F</b>	Independent Operating Pressure
<b>C</b>	CV Closing Speed Control
<b>D</b>	Check Valves with Isolation Valves
<b>E</b>	X117D Valve Position Transmitter
<b>H</b>	Atmospheric Drain
<b>N</b>	VC-22D Electronic Controller
<b>M</b>	X144D Flow Meter
<b>S</b>	CV Opening Speed Control
<b>P</b>	Inlet/Outlet Pressure Gauges
<b>V</b>	X101D Valve Position Indicator
<b>KC</b>	Epoxy Coating (Main Valve)
<b>KD</b>	Dura-Kleen® Stem
<b>KE</b>	Motorized Pilot Valve
<b>KG</b>	Delrin Stem Sleeve
<b>KO</b>	Anti-Cavitation Trim
<b>KR</b>	Reverse Flow (Main Valve)
<b>KB</b>	KB Viton Rubber Parts
<b>X</b>	Extra/Unique, i.e. Adders

## APPLICATION CATEGORIES

## SERIES

Rate of Flow (Flow Limiting)	40 - 49
Pressure Relief/Sustaining	50 - 59
Pump Control (Booster/Deep Well)	60 - 69
Check	80 - 89
Pressure Reducing	90 - 99
Float (Modulating & Non-Modulating)	120 - 129
Solenoid /Electronic & Metering	130 - 139
Altitude (Level Control)	206 - 210
Differential Relief	250 - 259
Float (Modulating Only)	420 - 429

## PILOT MATERIAL OPTIONS

Copper/Brass Tubing, Fitting and Pilots - Standard  
 SST Tubing and Fitting with Brass Pilots  
 SST Tubing, Fitting, and Pilots  
 SST Flex Tubing  
*Other materials available upon request*

## Important Valve Information to Know:

What is the valve's function?  
 What are the current upstream and downstream pressures?  
 What are the min. and max. system flowrates?  
 What is the spring range on the pilot(s)?

**100-01 Full Port Example:** 10" Flanges with 10" Body

**100-20 Reduced Port Example:** 10" Flanges with 8" Body

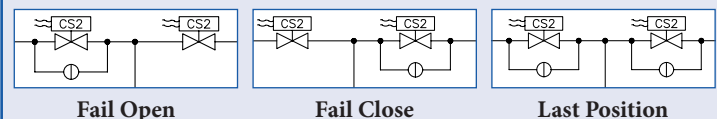
## CS3 (3-Way) Solenoid Operation

**NO** = Normally Open Solenoid.  
 Energize to open valve or power fail close.

**NC** = Normally Closed Solenoid.  
 Energize to close valve or power fail open.

## Electronic Flow Control Valve (131 Series)

What do you want the valve to do on power failure?



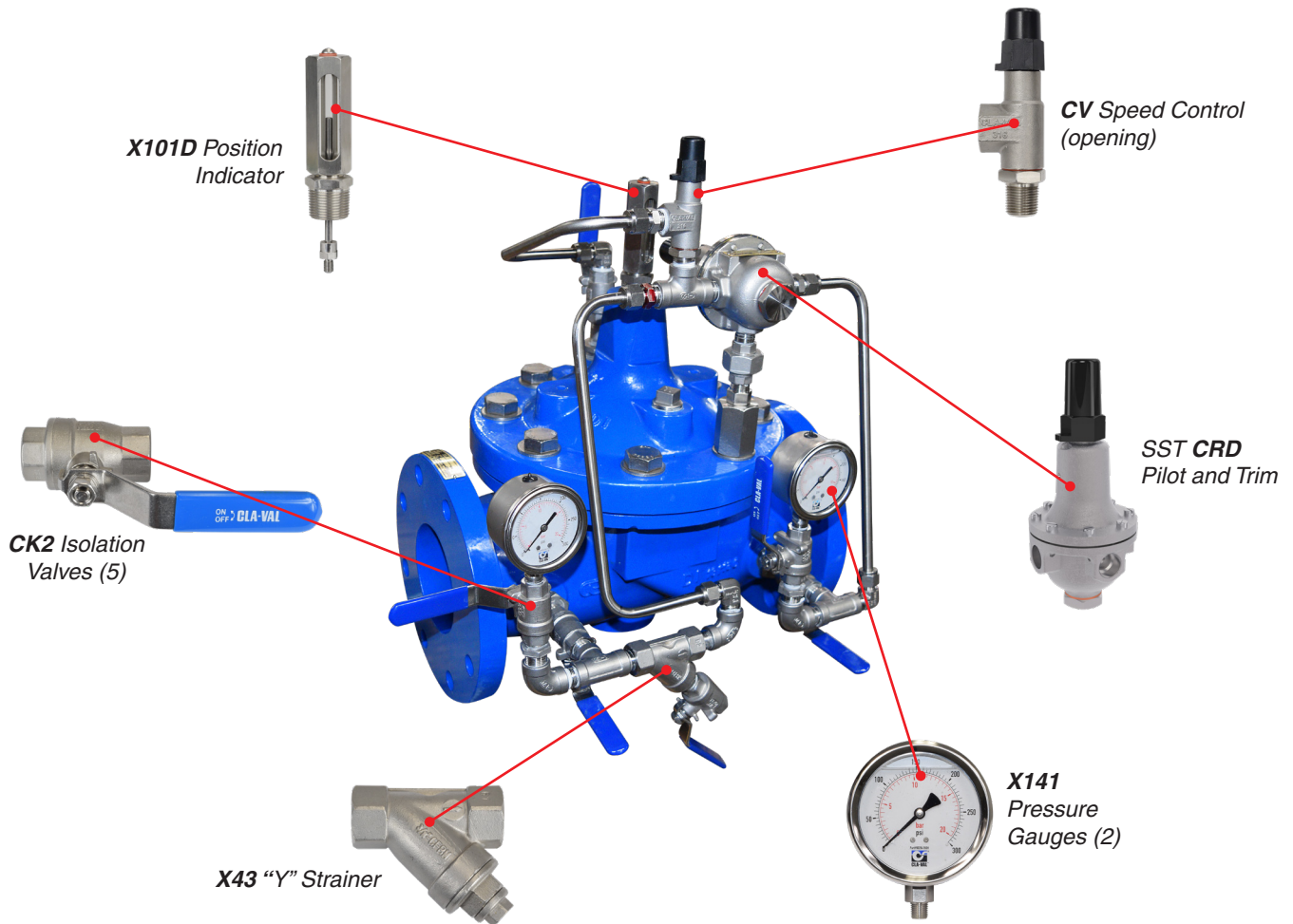
**Voltages:** 120/60VAC, 24VAC, 24VDC, 24/60VAC

# Stocked Valves

## 90-01 Pressure Reducing Valve

Boxed, on shelf, same day Shipping/Pick up

Item	Size	Description
20868930B	2	<b>90-01BPSVYKX D/S, Class 150lb Flanges</b> <b>Equipped with:</b> <ul style="list-style-type: none"> <li>• Isolation Valves</li> <li>• Pressure Gauges</li> <li>• Opening Speed Control</li> <li>• "Y" Strainer</li> <li>• Epoxy Coating</li> <li>• SST Pilot System and Trim</li> </ul> <i>0-300 Inlet/0-200 Outlet Gauges. 30-300 PSI Range - <u>No Substitutions</u></i>
20868931A	3	
20868923A	4	
27490727E	6	
20868932K	8	
20868924K	10	
20868965K	12	



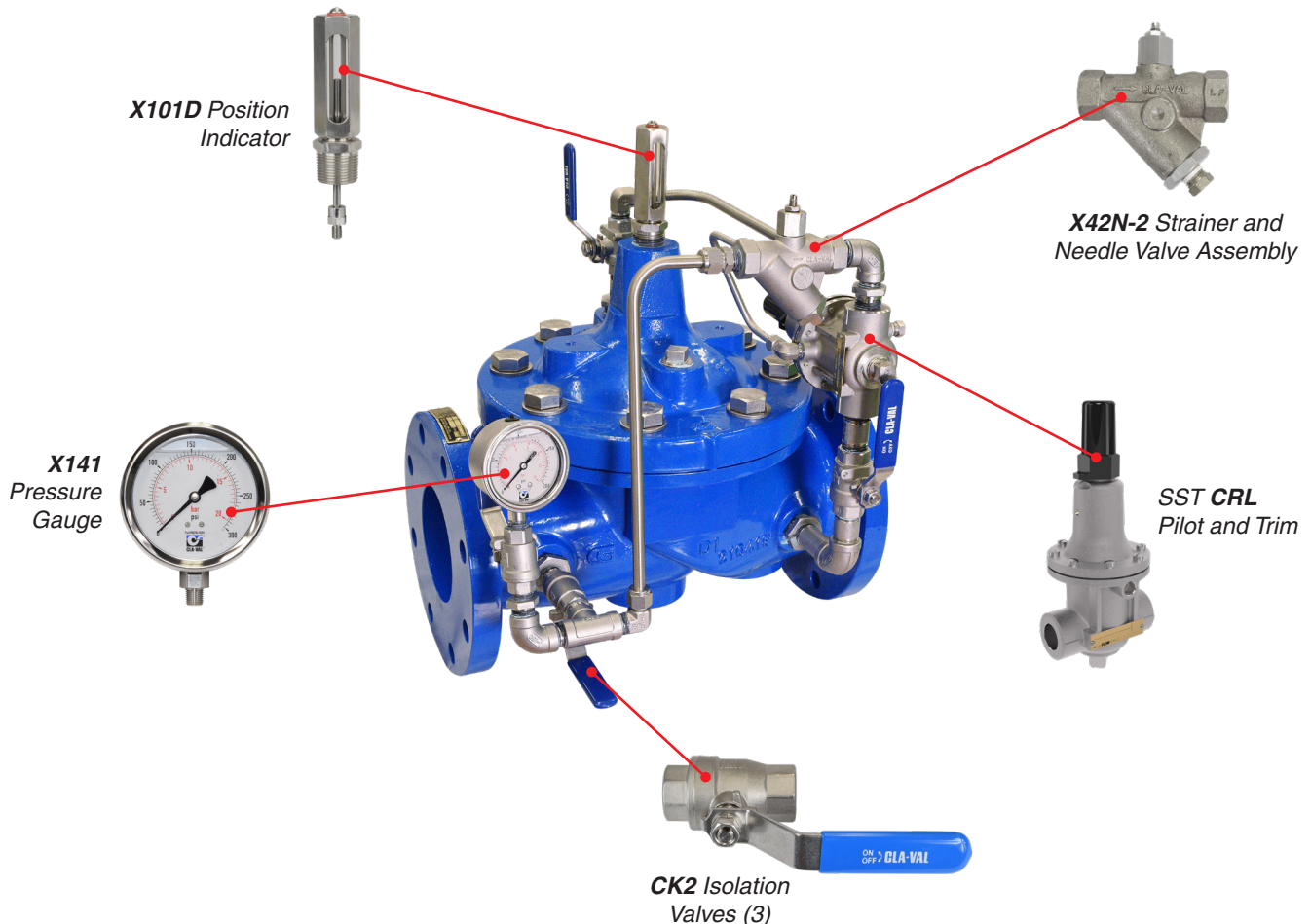
# Stocked Valves

## 50-01 Pressure Relief Valve

Boxed, on shelf, same day Shipping/Pick up



Item	Size	Description
21387207H	2	<b>50-01</b> <b>Equipped with:</b> <ul style="list-style-type: none"> <li>• Isolation Valves</li> <li>• Pressure Gauges</li> <li>• Strainer and Needle Valve Assembly</li> <li>• Epoxy Coating</li> <li>• SST Pilot System and Trim</li> </ul>
21387208G	3	
21387209F	4	
21387210C	6	
27509371A	8	
27509372K	10	



# Intelligent VALVES



## QUICK OVERVIEW

**Flow & Data Acquisition:** Control valves have evolved beyond simple open-and-close functions. By incorporating pressure transmitters for real-time pressure data and digital valve position transmitters, we can calculate real-time flow through our on-board computer module.

**Electronic Control:** Traditionally operated with hydraulic actuators and mechanical pilots, control valves now feature dual electronic solenoid controls, managed by our stand-alone Electronic Valve Controller. By integrating pressure transmitters, these valves handle pressure sustaining, relief, or reduction, and with level signals from sensors, they provide precise level control. This smart control system allows valves to perform multiple functions, prioritizing based on system requirements.

**Valve Control Automation:** Hydraulically operated control valves typically use mechanical pilots with manual settings. Electrically actuated motors can be added for remote operation and local or SCADA-based adjustments, improving network efficiency by enabling dynamic setpoint changes. These controllers are widely used in pressure management to reduce pressure, addressing issues like leaks and non-revenue water. Combining the controller with a motor-operated pilot offers versatile control in one unit.

### Flow and Data Acquisition

XP2F-X35 Data Acquisition & Flow Meter Package

### Calm Networks

63-01 Pump Control Valves

### Electronic Control

133-AW Multi-Function Electronic Interface Valves

### Link2Valves

### Electronic Pilot Controls

- CRD-34 & CRA-34 Electronic Actuated Pilot Controls
- CRL-34 Electronic Actuated Pressure Sustaining Pilot Controls
- CDHS-34 Electronic Actuated Rate of Flow Pilot Controls
- CTC-33 Timer Controls



How Do  
**Intelligent Valve** work?  
Scan QR Code

# Check VALVES

## QUICK OVERVIEW



Cla-Val check valves are high-performance flow control devices designed to allow fluid to flow in one direction while preventing reverse flow, ensuring system protection. They are built with durable materials to handle a variety of applications, including waterworks, industrial processes, and fire protection systems. Known for their reliability and minimal maintenance requirements, Cla-Val check valves provide efficient and long-lasting performance in demanding environments.

### Check Valve

- 581 Silent Globe Check Valves
- 580 Silent Wafer Check Valves
- 81-01 Check Valves
- 501A Wafer Swing Check Valves
- 585 Swing Check Valves
- 584 Flex-Check Valves
- 587 Surge Blocker





CLA-VAL CO., NEWPORT BEACH, CALIF.  
CAT. NO. 100G  
STOCK NO. 27487843K  
FOR USE IN HYDRAULICALLY  
CALCULATED SYSTEMS  
FRICTION LOSS EQUIV. TO 116 ft. OF  
4 in. PIPE  
UL LISTED  
DELUGE VALVE  
199L

# Fire VALVES

## QUICK OVERVIEW



In addition to being installed aboard nearly every ship in the US Navy's fleet, helping to keep our country's servicemen safe in the event of a fire, our globally proven fire protection products can be found in nearly any type of facility on or offshore, including oil platforms, FPSOs, refineries, power plants, chemical storage facilities, mines, tunnels, aviation facilities, high-rise office and residential buildings, hospitals and historic landmarks.

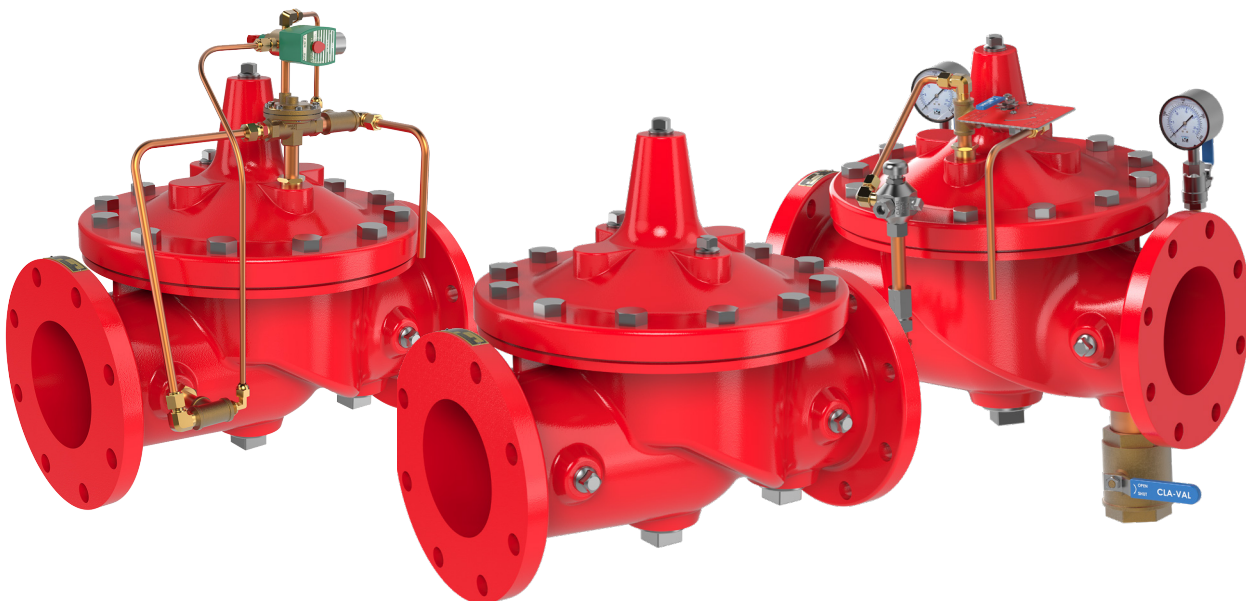
No matter how challenging your requirements are, Cla-Val has the fire protection product you need to protect lives and property. Cla-Val fire products are UL and ULC listed and have Factory Mutual approval along with other industry approvals and certifications.

### Deluge Valve

- 100GS & 2100GS Seawater Valves
- 834-05, 836-60, & 800GS Tubular Diaphragm Deluge Valves
- 134-05 Solenoid Control Valves
- 134-60 Solenoid Deluge Valve with Manual Bypass
- 134-61 Deluge Solenoid & Remote Control Valves
- 134-BP Solenoid Operated & Pressure Control Valves
- 403-11 Pneumatic Remote Control Valves
- 100-GS Ti Titanium Deluge Valves

### Reducing/Relief

- 50B-4KG1 & 2050B-4KG1 Pressure Relief Valve
- 50-20 Seawater Pressure Relief Valve
- 50-49 Pump Start Pressure Relief Valve
- 55L & 55L-60 Pressure / Pump Casing Relief Valve
- 50B-4KG1KOL & 2050B-4KG1KOL Pressure Relief Valve
- KO Anti-Cavitation Trim



# Air

# VALVES



## QUICK OVERVIEW

Cla-Val Air Release and Combination Air Release/Vacuum Breaker Valves protect water systems by automatically eliminating air pockets and preventing vacuum buildup during filling or draining. Excess air can reduce system capacity, increase pump power demand, and even cause line breaks. Installing Cla-Val valves at high points, near pumps, along long pipe runs, and at deep well installations helps prevent these issues and ensures smooth system operation.

### Air Valve

- 33 Air Release and Vacuum Breaker Valves
- 33VB Vacuum Breaker Valves
- 34 Air Release Valves
- 34WW Wastewater Air Release Valves
- 35 Air and Vacuum Breaker Valves
- 36 Series Combination Air Valves
- 35WW Wastewater Air and Vacuum Valves
- 36WW Combination Wastewater Air Release Valves
- 39 Triple Acting Air Valves



How Do  
**Air Valve** work?  
Scan QR Code

# Duckbill VALVES



## QUICK OVERVIEW

Cla-Val RF-DB Rubber-Flex™ Duckbill Check Valves are a flexible sleeve design made of quality fabric-reinforced elastomer materials for maximum resistance to corrosion and wear caused by continuous operation with abrasive slurries, sludge, or effluent. The flexible sleeve provides maximum flow with a minimum pressure drop across the valve at all times.

The “duckbill” concept check valve has been in use for more than 100 years in waterworks and commonly accepted for use in industrial process piping systems and in waste and stormwater or sewer piping systems.

### Duckbill Valves

RF-DBF Flanged DuckBill Check Valves

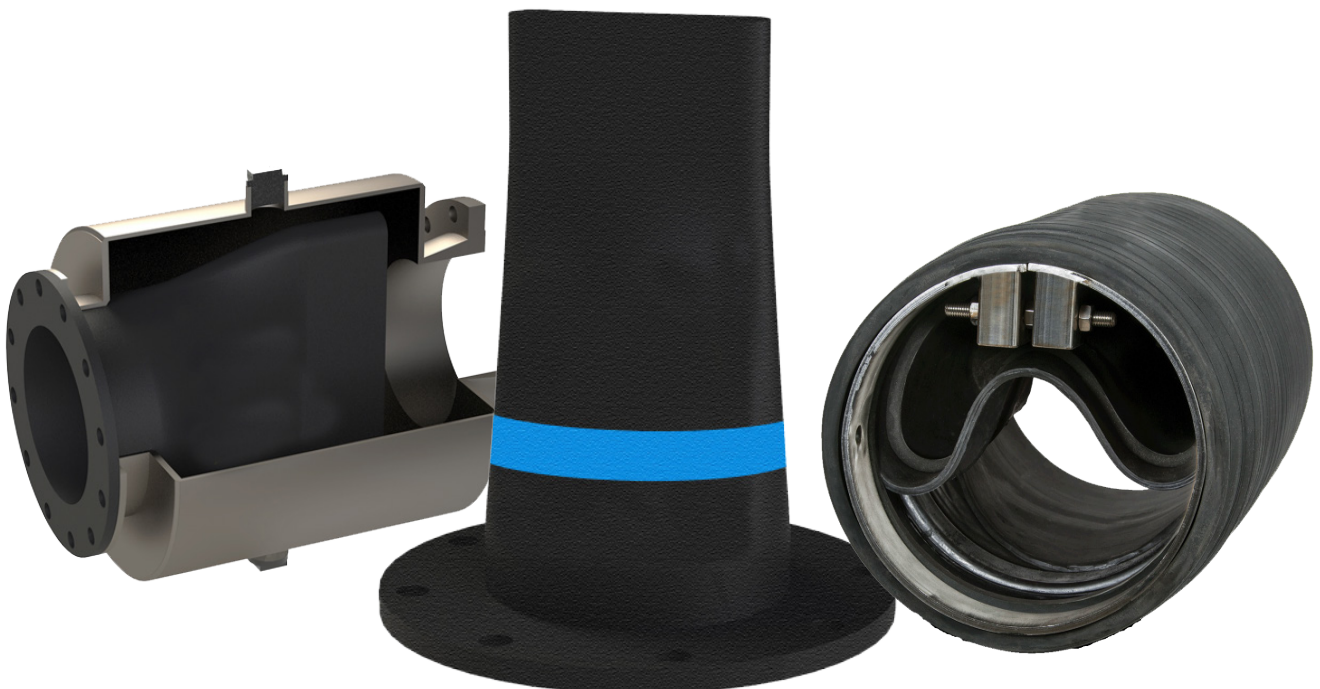
RF-DBF-SB Sloped Bottom DuckBill Check Valves

RF-DBI In-Line DuckBill Check Valves

RFI-DBI-LH Low Head Loss In-Line DuckBill Check Valves

RF-DBJ Jacket Style DuckBill Check Valves

RF-DBO Slip-On DuckBill Check Valves



# ESI

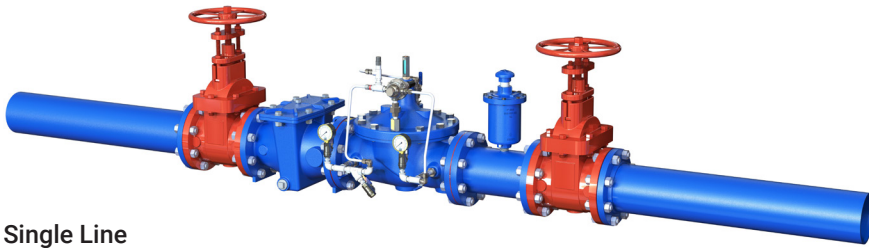
# PACKAGED STATIONS



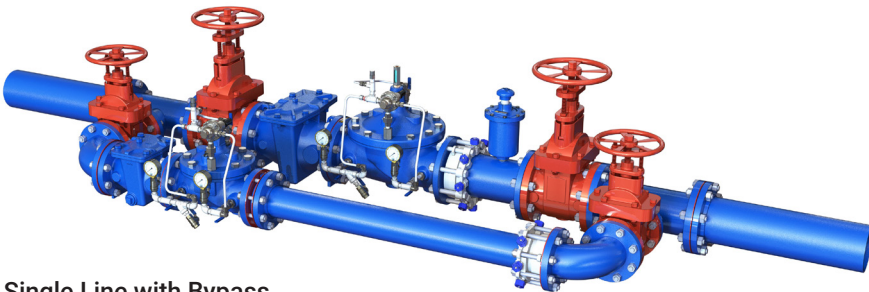
## QUICK OVERVIEW

Cla-Val Engineered Piping Systems can offer complete fabricated piping systems for any application. These custom systems offer the convenience and flexibility of a customized solution to replacements, upgrades or new installations of valves and equipment.

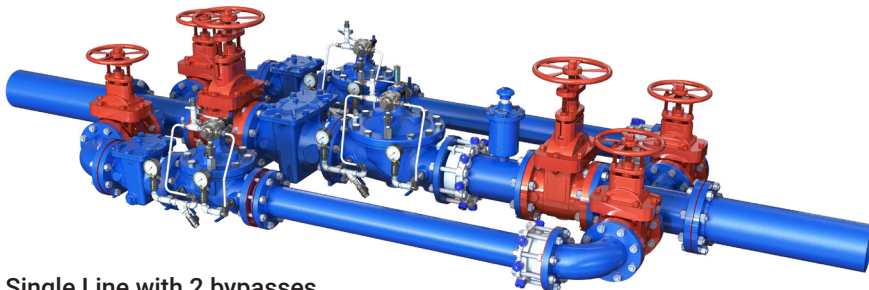
Each station is designed and manufactured to the highest standard to provide years of operation with minimum maintenance and maximum system protection. Engineered with customer input and meeting their specific requirements and is provided with AutoCAD drawings and files for their records.



Single Line



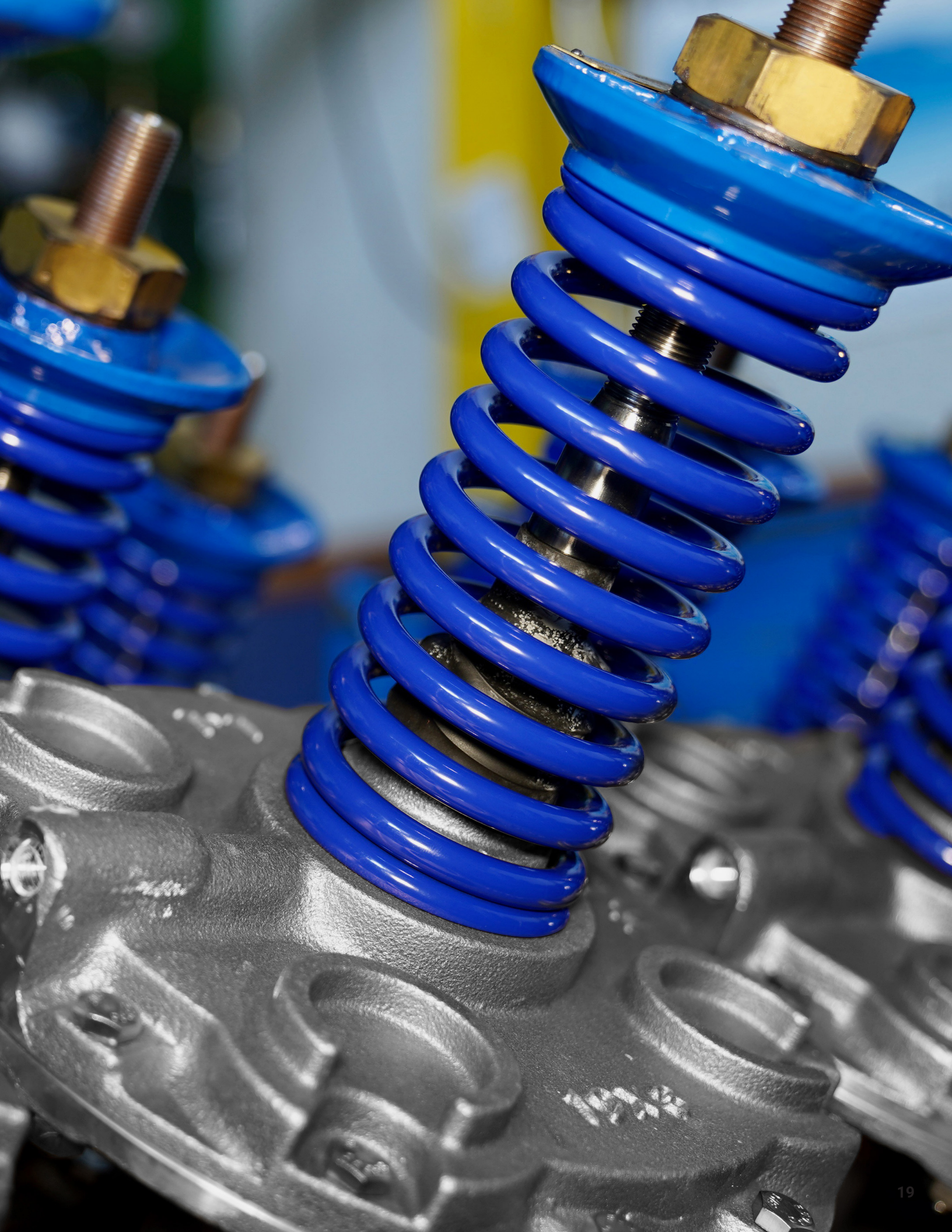
Single Line with Bypass



Single Line with 2 bypasses



How Do  
**Packages Stations** work?  
Scan QR Code







# CLA-COVER

## QUICK OVERVIEW

Cla-Cover aluminum enclosures are specifically designed for Cla-Val control valves. Winter cold or summer heat, Cla-Val and Cla-Cover together provide superior performance and peace of mind for Cla-Val customers anywhere in the world, regardless of climate.

### Available Sizes:

- 3" - 16"

### Available Materials:

- Roof, floor, and wall panels – 5052-H32 marine grade aluminum (.050/18 gauge), mill finish, ASTM B209 outside
- Stainless steel drain.
- Insulation 1½" (9 "R" value) minimum thickness polyisocyanurate foam laminated to a glass fiber reinforced facer (each side), non-wicking
- Mounting hardware to attach to piping system
- Insulated patch panels, hinged roof, and removable door



# LINK2VALVES



## QUICK OVERVIEW

### What is Link2Valve?

Managing all of the assets of a water system is a complex and daunting task. Tracking maintenance schedules and ensuring things are kept in good working order gets increasingly difficult with tighter budgets and reduced labor available.

We at Cla-Val appreciate that this is a tough task and have developed what we consider a very useful tool to assist in this endeavor. Introducing Link2Valves as an aid to water utilities, service personnel, anyone who has to maintain and keep records for their automatic control valves.

### Link2Valves User interface

All recent versions of major browsers are compatible with the Link2Valves user interface.

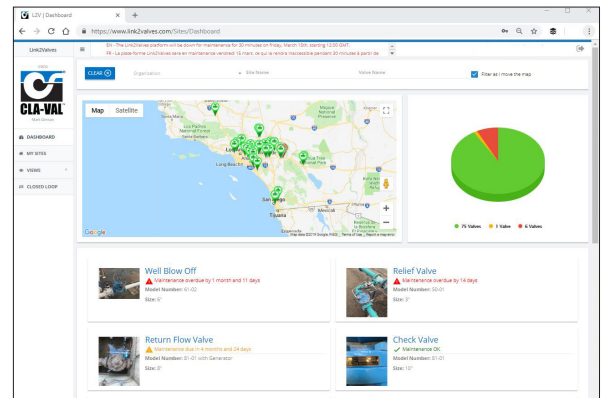
### Viewing Options

- Display of data in the time zone of your choice
- Download or export regular data in .csv format

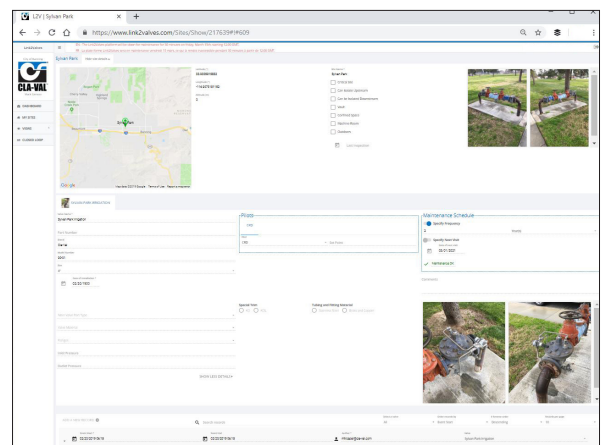
### Security

The Link2Valves platform offers a fully secure system environment:

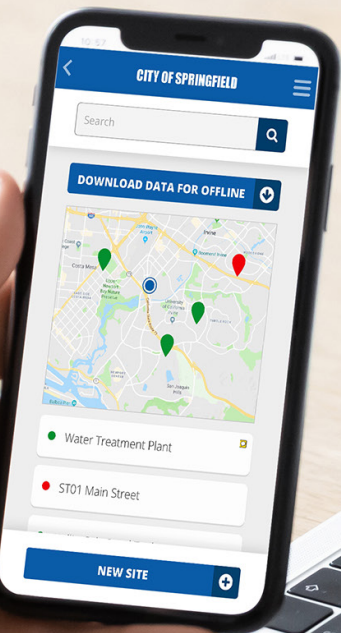
- Accounts are protected against brute force attacks
- HTTPS connection with verified certificates
- Servers secured physically in Cla-Val owned facility
- Two Factor Authentication Available



Scan QR code at the top of the page to Download the Link2Valves App



How Do  
**Link2Valves** work?  
Scan QR Code



# FIELD SERVICES



## QUICK OVERVIEW

Cla-Val Field Service is there when you need it, backed by more than 90 years of valve design and manufacturing experience.

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, backed by dedicated sales representatives ready to answer any and all questions.

Our experienced Blue Seal Field Service Technicians can help you with:

- Start-up assistance
- Troubleshooting
- Periodic maintenance
- Valve repairs
- Field retrofits



How Do  
**Field Service** work?  
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# CLA-TOOLS

## QUICK OVERVIEW



### Hydraulic System Analysis

To make better informed decisions regarding your water systems, you need to do some analysis. The Cla-Tools Software Suite allows any user to analyze their current or future planned water systems. Analyze everything from VFD Pump Flow and Controllability to PRV Station or Check Valve design. Regardless of your needs, Cla-Tools can provide unique insights into numerous aspects of your water system.

Access our secure tools from your browser to perform real time analysis for any number of situations.

You will have immediate access to:

- **Cla-CAV** tool for analyzing pilot operated control valves for the potential of cavitation
- **Cla-Station** models PRV Station performance based on flow and pressure parameter inputs
- **Cla-Power** power consumption calculator
- **Cla-Blend** modeling tool for blending applications
- **Cla-Reg** design tool for the CRD-L and 90 Series pilot pressure reducing valves
- **ComparFlow** programs for gravity flow, pumping flow and pumping flow with VFDs focusing on valve installed “controllability” within each system
- **Pump ComparFlow** program illustrates that reducing surge can be equal to or greater in importance to small energy savings with low loss type valves
- **VFD ComparFlow** are used there is also a hazard of surges because the relationship of motor speed with flow
- **Cla-Fire** sizing analysis of the direct acting Factory Set series of Pressure Regulating Valves
- **Cla-Fire ADJ** adjustable direct acting series PRVs
- **Cla-Check** aids the user in selecting a Cla-Val Check Valve based on numerous parameters
- **Cla-Quick** valve sizing tool based on published information in the engineering datasheets
- **Cla-Relief** tool for determining optimum relief valve sizes upstream of pumps and valves
- **CV Rubber Flex & CV RF-DBI-LH** provide sizing and performance information
- **Cla-AV** software provides visual design of air valve placement and sizing





# CLA-VAL UNIVERSITY

## QUICK OVERVIEW



**CVU-101 is an excellent choice for individuals who are new to the industry or as a refresher course for experienced Operators**

Developed specifically for Waterworks System Operations and Maintenance personnel, CVU-101 is an excellent choice for individuals who are new to the industry or as a refresher course for experienced Operators and Maintenance Personnel. This class focuses on basic valve operation along with hands-on training for various applications. This course qualifies for 13 contact hours.

**CVU-201 Hands-on training related to valves that perform more than one function**

This one-day class was developed for Waterworks System Operations and Maintenance personnel to provide hands-on training related to valves that perform more than one function in a single valve and where installation, set-up, and operation require more in-depth technical understanding and direction. We will also cover the operation and maintenance of various pump control valves. Maximum of 5 persons from a company, please. This course qualifies for 6 contact hours.

**CVU-101/201 is an excellent choice for individuals who want to advance quickly in their training**

Developed specifically for Waterworks System Operations and Maintenance personnel, CVU-101 is an excellent choice for individuals who are new to the industry or as a refresher course for experienced Operators and Maintenance Personnel. This class focuses on basic valve operation along with hands-on training for various applications. CVU-201 class was developed to provide hands-on training related to valves that perform more than one function in a single valve and where installation, set-up, and operation require more in-depth technical understanding and direction. We will also cover the operation and maintenance of various pump control valves. This course qualifies for 18 contact hours.



*Scan QR code at the top of the page to Sign Up for our Courses!*



# Global Locations



## Global Headquarters

1701 Placentia Avenue  
Costa Mesa, CA 92627  
949-722-4800  
800-942-6326  
info@cla-val.com  
[www.cla.val.com](http://www.cla.val.com)

**Western USA**  
800-942-6326

**Central USA**  
800-533-8181

**Eastern USA**  
800-451-3030

**Cla-Val Canada**  
905-563-4963  
sales@cla-val.ca

## Cla-Val Latin America

52-(33)-80007565  
info@cla-val.com  
[www.cla-val-latinamerica.com](http://www.cla-val-latinamerica.com)

## Cla-Val Europe

Chemin Des Mesanges 1  
CH-1032 Romanel/Lausanne  
Switzerland  
41-21-643-15-55  
cla-val@cla-val.ch

## Cla-Val United Kingdom

44-1892-514-400  
info@cla-val.co.uk

## Cla-Val France

33-4-72-25-92-93  
cla-val@cla-val.fr

## Cla-Val Asia Pacific

+ 64-3-9644860  
info@cla-valpacific.com  
[www.cla-valpacific.com](http://www.cla-valpacific.com)

## Cla-Val UAE

+ 971 4 5667665  
cla-val@cla-val.ch

## Cla-Val Singapore

+65 91798177  
wktan@cla-val.com

## Cla-Val China

info@cla-valpacific.com