



Fire Protection Solutions

for offshore and onshore applications



chemical storage



power plants



refineries and industrial facilities



offshore platforms



commercial high-rise



railway and road tunnels



mining operations



aviation facilities



**Deluge • Pressure Relief
Pressure Reducing • Level Control
Solenoid Control • Air Release and Check Valves**

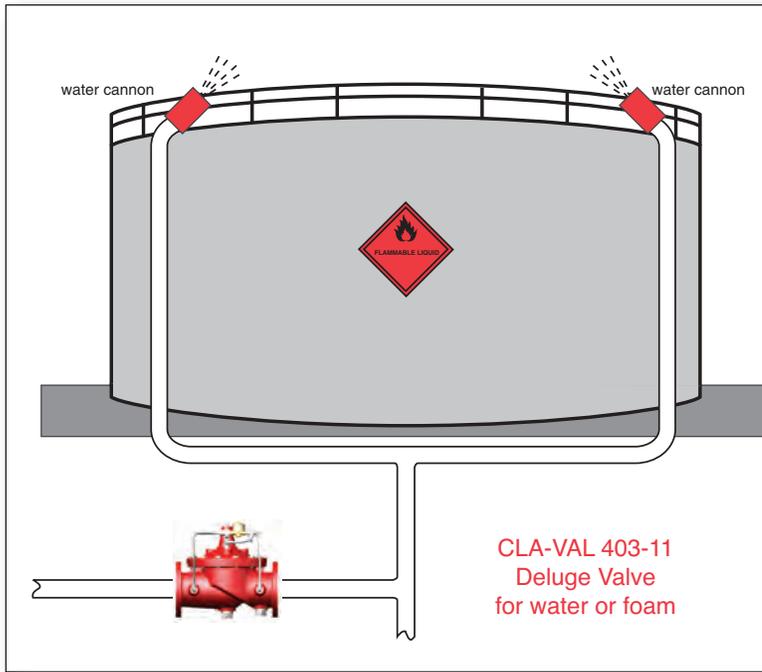
Deluge Valve Applications

Cla-Val Deluge Valves are available in a variety of configurations and sizes, providing highly accurate performance in the most demanding of fire protection applications.

- Hydraulic, Pneumatic or Electronic-Controlled Operation
- Fast-Acting, Drip-Tight Closure
- Available in a wide range of materials to meet unique application requirements

Industrial Fire Protection Deluge Valve Applications

Water Cannon for Flammable Materials Storage



Typical Applications



Chemical and flammable materials storage



Helicopter Landing Pads



Rail and roadway tunnels



Water curtain systems



Mining Operations



Power Plants

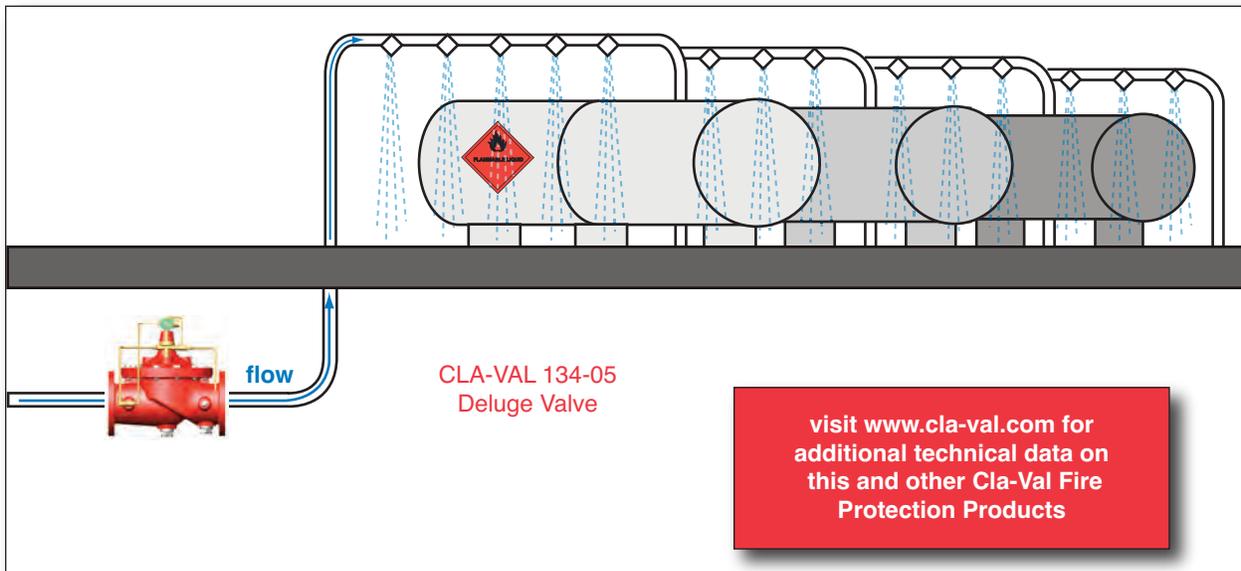


Aviation facilities



Refineries

Water Curtain for Flammable Materials Storage



visit www.cla-val.com for additional technical data on this and other Cla-Val Fire Protection Products

134 Series Solenoid Operated Deluge Valve



Model 134-05

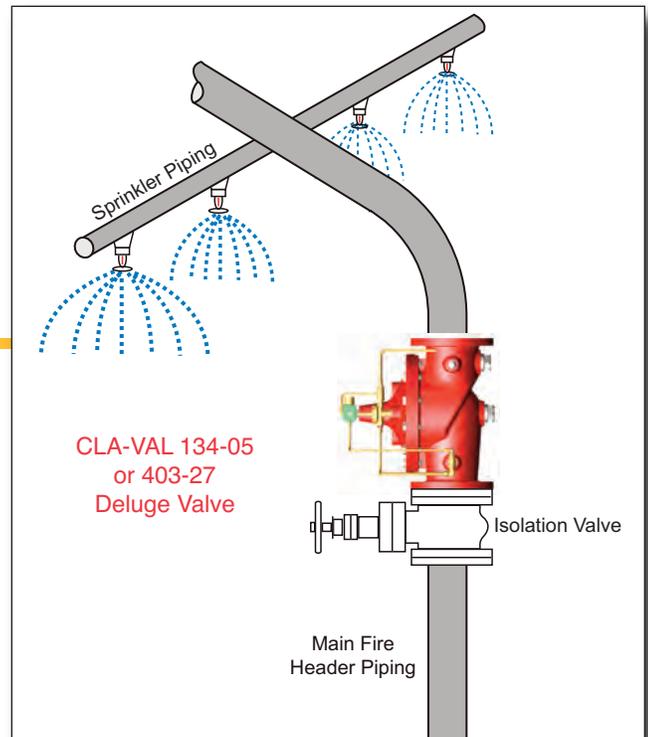
- Fast acting solenoid control
- Reliable drip-tight shut-off
- Utilizes a three-way solenoid to open or close the valve
- Globe or angle patterns
- 150 and 300 Class
- UL Listed 3" - 10"
- For water or foam

400 Series Pneumatically Operated Remote Control Deluge Valve



Model 403-27

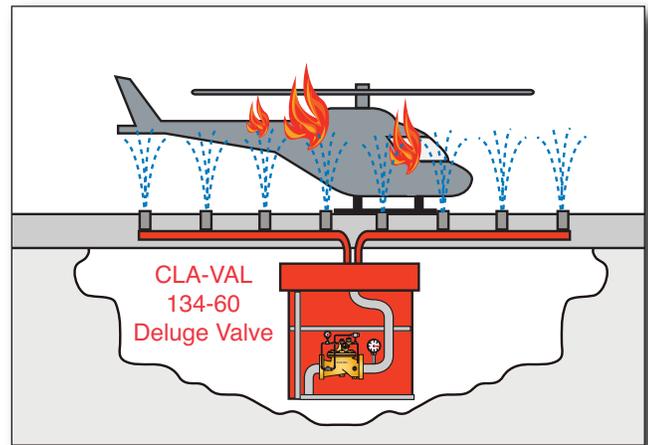
- Reliable deluge service for fresh or seawater applications
- Quick response to remote control operation
- 150 and 300 Class
- Ideal for pressure up to 400 psi
- Main Valve UL Listed 3" - 10"
- For water or foam



Deck Integrated Fire Fighting System (DIFFS) for Helipads



The DIFFS utilizes the Cla-Val Model 134-60 Automatic Deluge Control Valve to quickly dispense foam or water, extinguishing flames in less than 15 seconds.

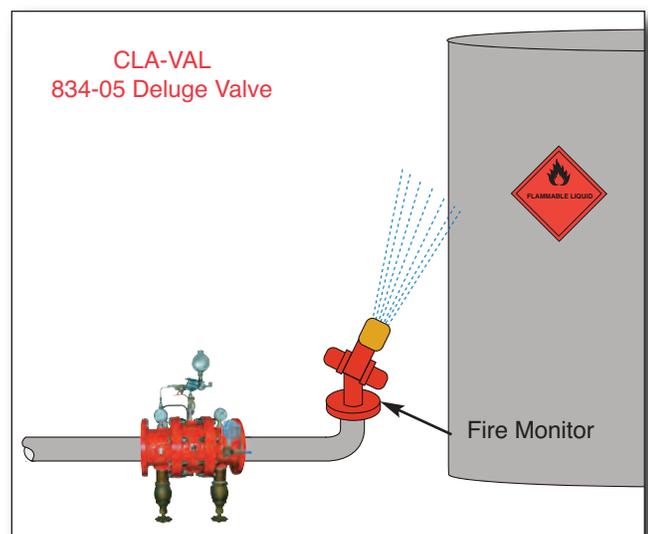


800 Series Tubular Diaphragm Fire Deluge Valve



Model 834-05

- Pressure operated in-line axial valve ideal for fire deluge applications
- Unique tubular diaphragm valve
- Cast and stainless steel construction for long service life
- FM Approved Components 4" - 10"
- For water or foam



Pressure Reducing and Pressure Relief Valve Applications

Cla-Val Pressure Reducing Valves are available in a variety of configurations. Their superior design provides highly accurate and reliable performance in fire protection piping systems.

- Flanged, Threaded or Grooved Ends
- Available in a wide range of materials to meet unique application requirements

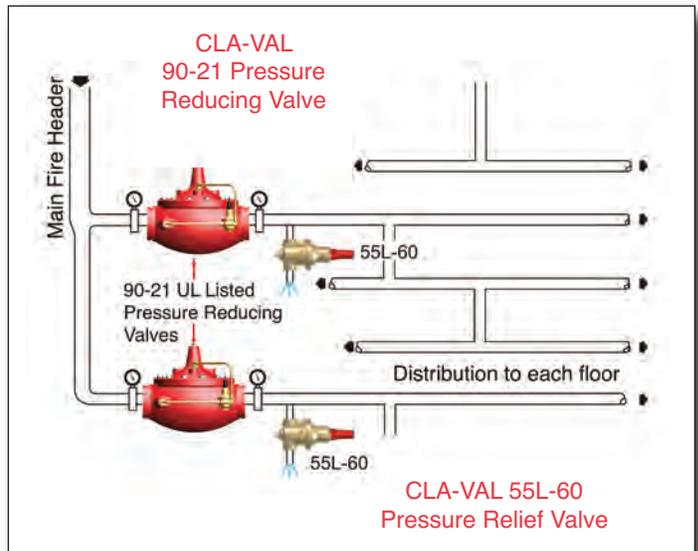
55L Series Pressure Relief Valve



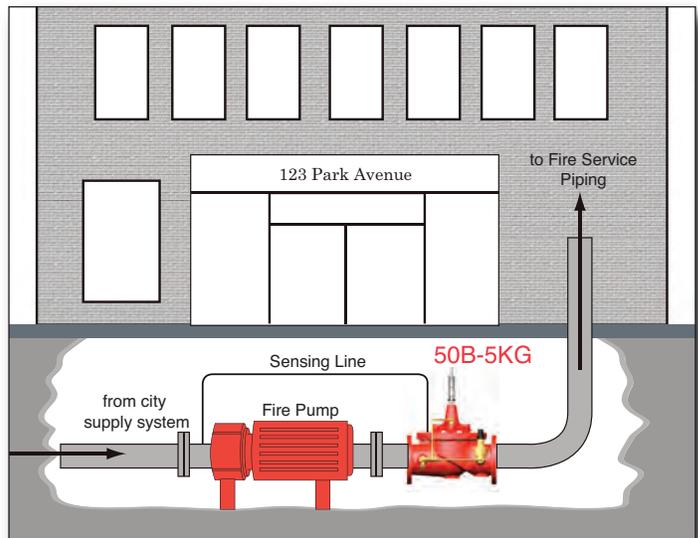
Model 55L-60

- Direct acting for precise pressure control
- May be installed in any position, making it ideal for tight locations
- Operates within very close pressure limits
- UL Listed, FM Approved 1/2" and 3/4"
- UL Listed/FM Approved for use as a fire pump casing relief valve

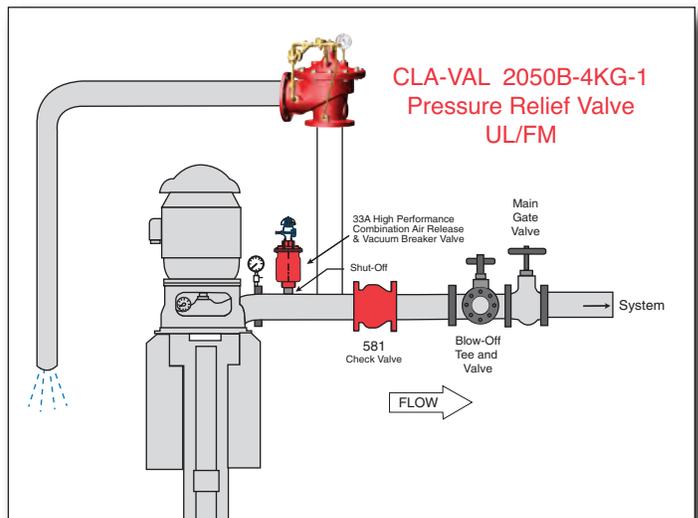
Pressure Reducing/Pressure Relief Valve Application



Fire Pump Suction Control Valve Application



Fire Pump Pressure Relief Valve Application



Typical Applications



High-Rise buildings



Tunnels and underground railways



High pressure sprinkler systems



Manufacturing plants



Fire Hydrant Supply



Ports, harbors and cargo storage areas

Pressure Reducing and Pressure Relief Valves

90 Series Hydraulic Pressure Reducing Valve



Model 90-21

The valve automatically reduces a higher inlet pressure to a steady, lower outlet pressure, regardless of flow or inlet pressure fluctuations.

UL Listed 1-1/2" - 8"



Model 90-21 Grooved

Cla-Val Fire Protection Products are available in a wide range of standard and special alloys

50 Series Fire Pump Pressure Relief Valve



Model 50B-4KG-1

Modulates upon fire pump start-up to relieve excess capacity, while maintaining positive system pressure at the pump discharge and preventing surge.

UL & ULC Listed, FM Approved

50 Series Pump Suction Relief Valve

Modulates to prevent pump suction pressure from dropping below a pre-set minimum, ensuring that the pump draw does not exceed the available water supply.

FM Approved 3" - 8"



Model 50B-5KG

750 Series Pressure Relief Valve



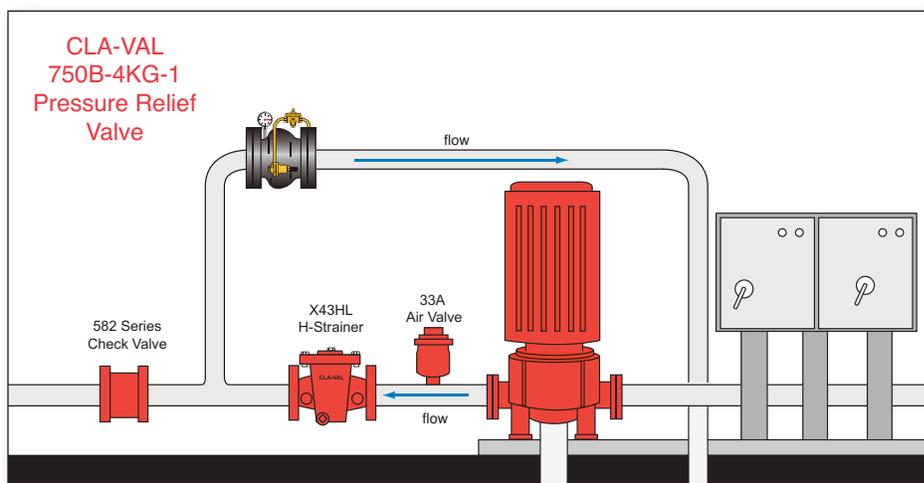
Model 750B-4KG-1

UL Listed 3" - 10"

FM Approved 3" & 4"

Automatically relieves excess pressure in fire protection pumping applications, while maintaining constant system pressure at the pump discharge.

- 316 SST construction • Compact



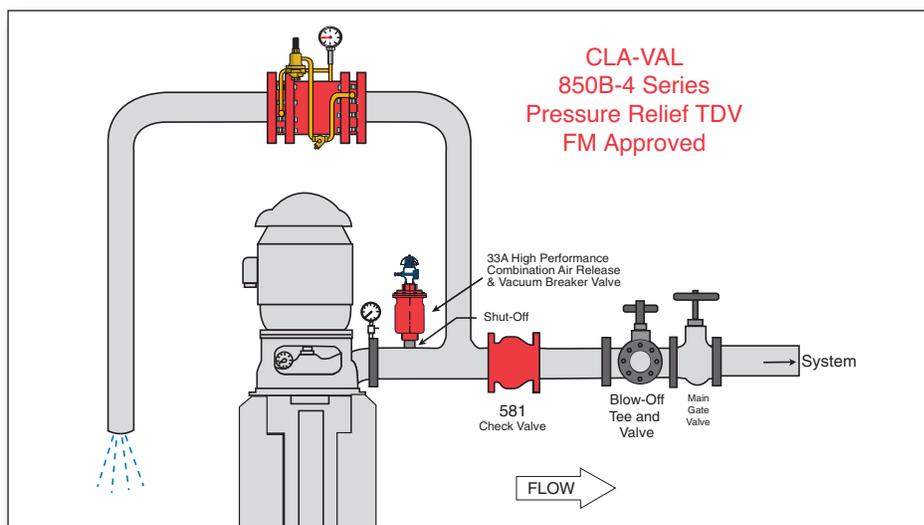
850 Series Tubular Diaphragm Fire Relief Valve



Model 850B-4

FM Approved 3" - 10"

Unique tubular diaphragm design with built-in protection against cavitation provides fast-acting deluge service with very low head loss.



Automatic Breach Control Valve

Typical Applications



High-Rise buildings



Public buildings



High pressure
sprinkler systems



Historical
landmarks

Model 85-09-1 Automatic Breach Control Valve

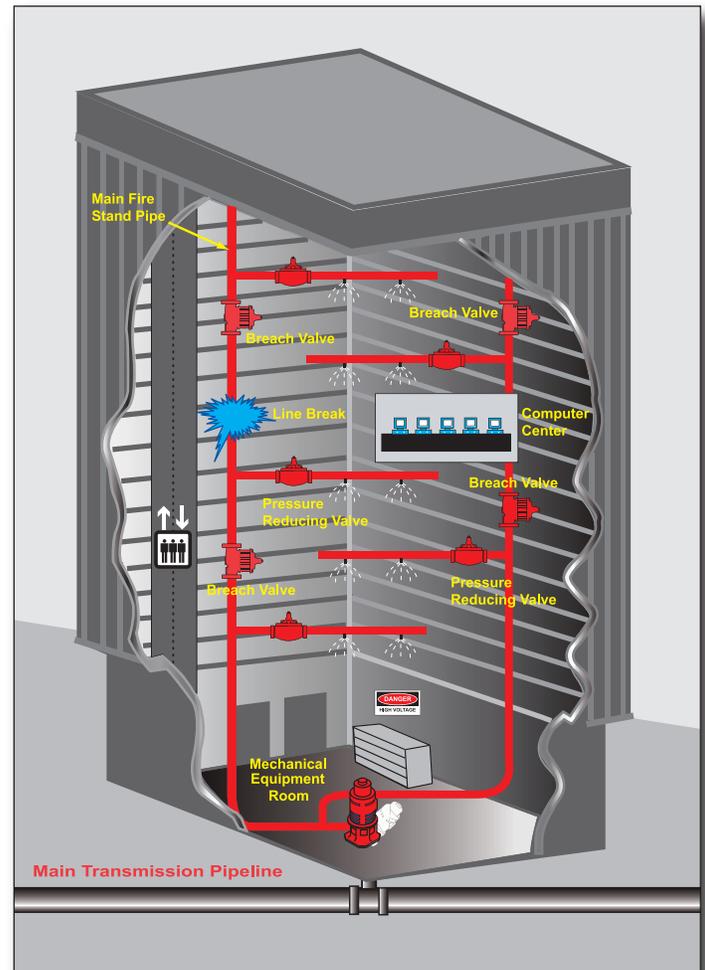


85-09-1 Breach Containment Valve Application: High Rise Fire Protection Systems

The Cla-Val Automatic Breach Containment Valve (ABCV) isolates portions of distribution piping when catastrophic downstream breaches occur. The ABCV is ideal in commercial building water distribution systems, including fire protection, potable water service, or chilled water circulation.

Strategically located to isolate portions of water systems, the ABCV prevents significant water losses and resultant damage, while allowing limited continued service when distribution systems are damaged or out of service.

Cla-Val Automatic Breach Control Valve installation - one of the tallest high-rise buildings in the United States (1,776 ft)



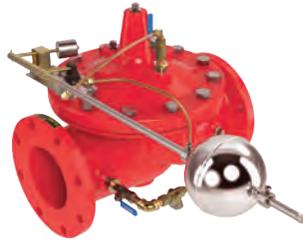
Fire Water Storage Tank Level Control Valves

124 Series Float Control Valve



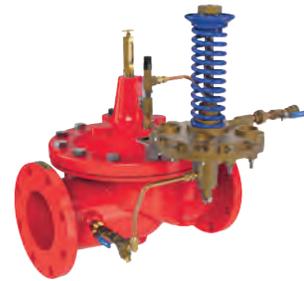
The 124 Series Float Valve provides an effective means of controlling the liquid level in fire water reserve tanks, opening or closing when the liquid level reaches its pre-set low and high points.

129 Series Float Control Valve



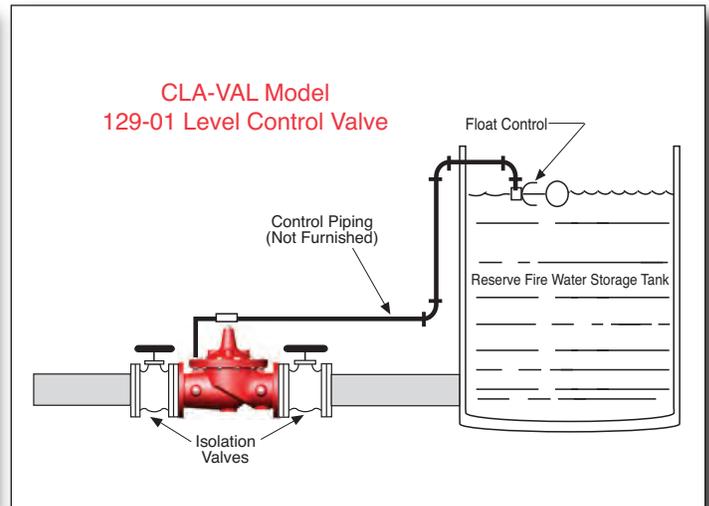
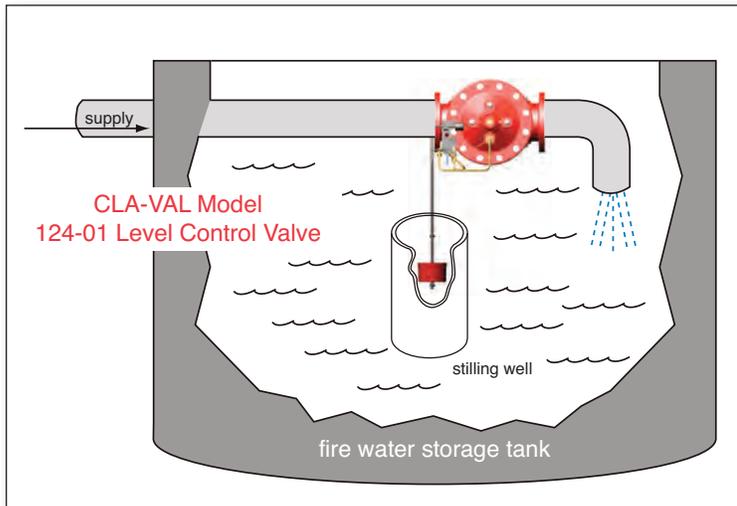
The highly accurate 129 Series Float Valve maintains a consistent level in large diameter fire water storage tanks and reservoirs by admitting flow into the tank in direct proportion to flow out of the tank.

210 Series Altitude Control Valves

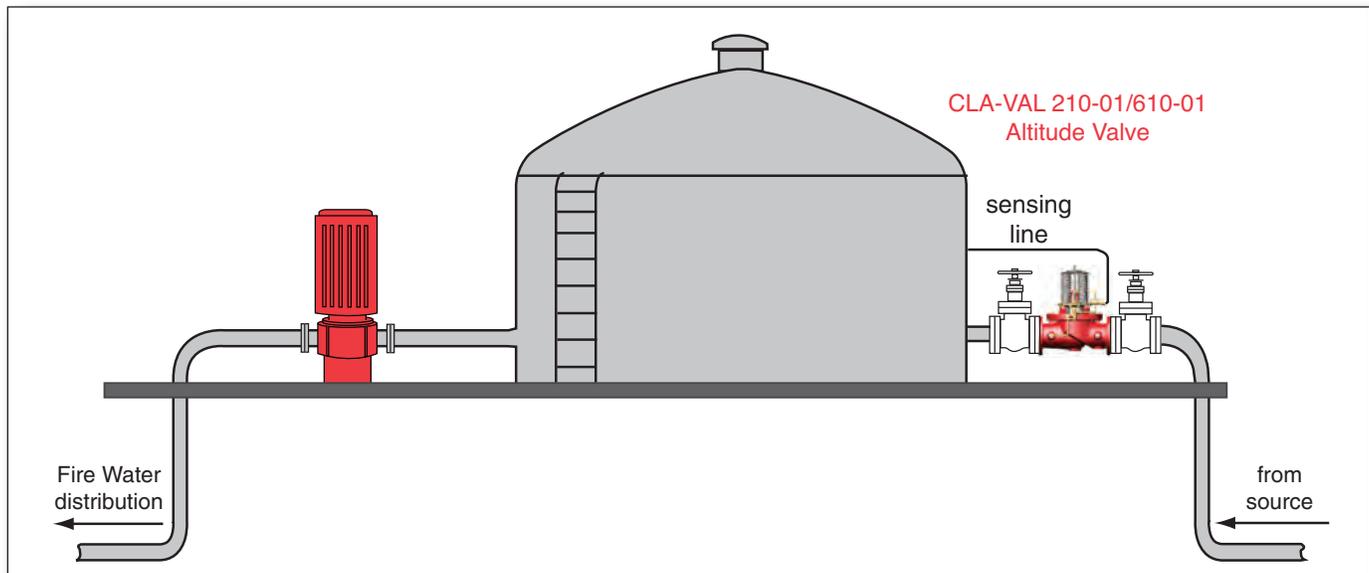


The 210 Series Altitude Valve is commonly used at reservoirs where water is withdrawn through a separate line or through a bypass line. The valve opens to refill the reservoir when the water reaches a point below the pre-set shut-off level. It is available in a variety of configurations including those designed for one-way flow and combination altitude and back pressure control.

Level Control Valve Applications



Altitude Valve Application



Air Release Valves • Check Valves • Strainers

33 Series Air Release and Vacuum Breaker Valves

1" - 6"



Model 33A
Flanged



Model 33A
Threaded

34 Series Air Release Valve

1/2" - 2"



Model 34
Threaded

500 Series Silent Check Valves



Model 580 Wafer
Check Valve
- FM Approved



Model 581 Globe
Check Valve
- FM Approved



Model 582 Globe
Check Valve - UL
Listed/FM Approved

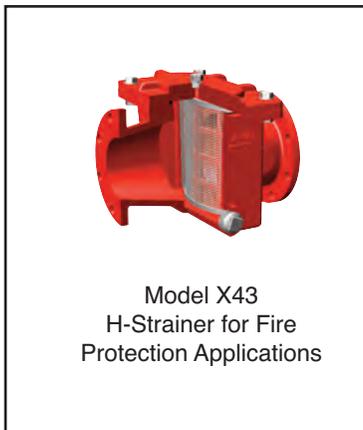
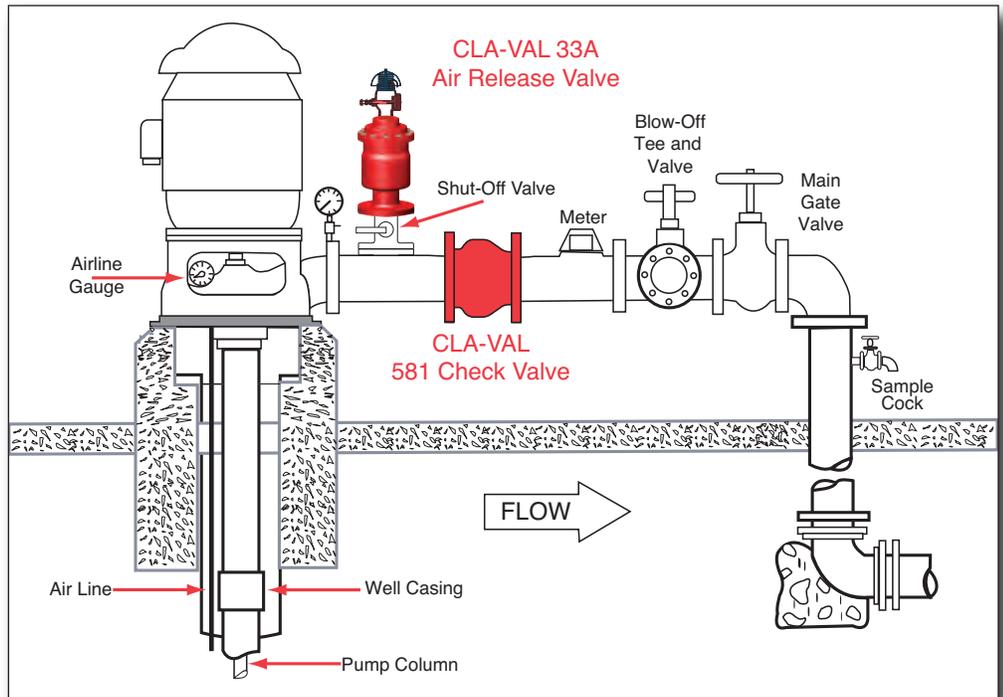
Air Release and Check Valve Application - Industrial Pump House:

- 33A High Performance Combination Air Release & Vacuum Breaker Valve with Series TD Throttling Air Control Device
- 500 Series Check Valve

33 Series High Performance Combination Air Release and Vacuum Breaker Valves protect pipelines from air lock and vacuum collapse. Its large venting orifice and float clearances freely exhaust or admit air during pipeline filling or draining.

34 Series Air Release Valves vent entrained air that collects at high points in a pipeline, preventing against decreased flow capacity and the possibility of complete air blockage and pipe rupture caused by excessive air accumulation.

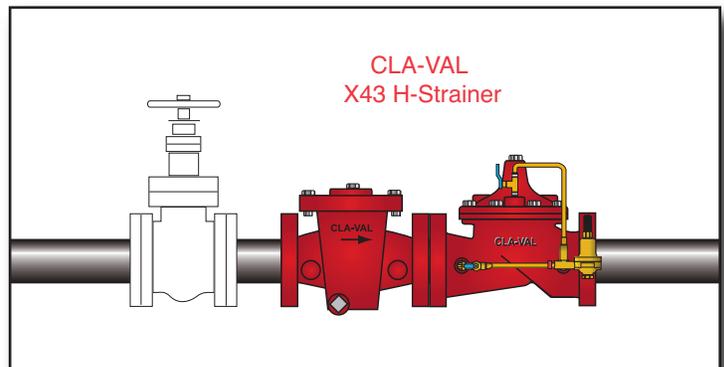
500 Series Check Valves protect against flow reversal and water hammer. They are available in silent wafer, silent globe and two-door wafer check configurations as well as a broad range of materials.



The X43 H-Style Strainer offers an effective means of removing unwanted particles or debris in pipeline flow. Ideal for mounting to directly to any Cla-Val Automatic Control Valve, the H-Strainers large flow area ensures a low pressure drop.

Its unique design enables maintenance personnel to service or clean the strainer by simply removing the top cover.

X43 H-Strainer Typical Application - Protecting system equipment from pipeline debris





Model 100GS/2100GS

Seawater Service Deluge Valve

- UL Listed - Sizes 3" - 10"
- Globe and angle patterns
- Aluminum Nickel Bronze
- Controls water flow to deluge, pre-action or foam-water type sprinkler systems
- Ideal for seawater service
- UL/ULC Listed Models 100G/2100G also available for freshwater service

Cla-Val Fire Deluge Valves for offshore and seawater applications are manufactured in the USA

Special alloy castings are poured in company-owned foundries in the USA.



Model 100GS Ti

Seawater Service Deluge Valve

- UL Listed - Sizes 3" - 10"
- Globe and angle patterns
- Aluminum Nickel Bronze
- Controls water flow to deluge, pre-action or foam-water type sprinkler systems
- Ideal for seawater service
- UL/ULC Listed Models 100G/2100G also available for freshwater service



Model 134-60

Solenoid Control Valve for Seawater Deluge Service

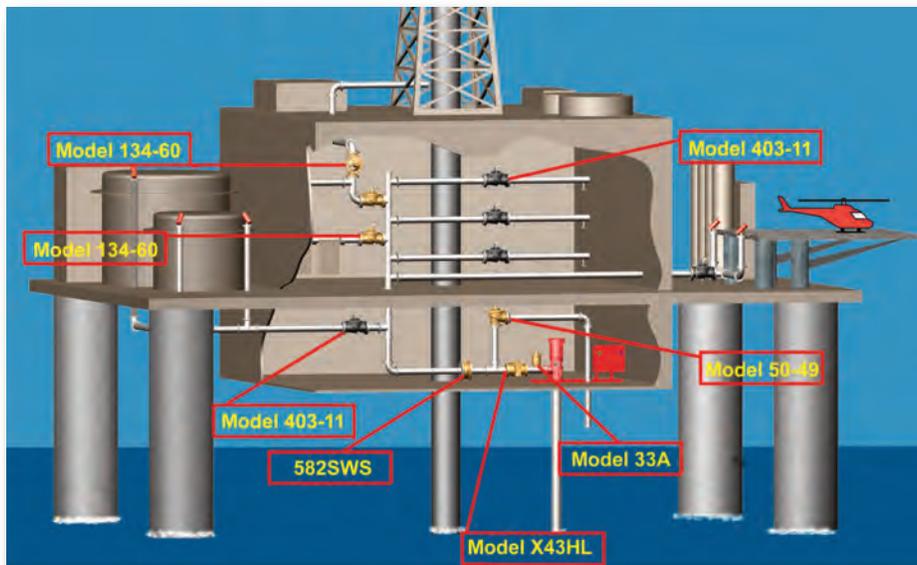
- UL Listed - Sizes 3" - 10"
- Opens or closes upon receipt of an electrical signal
- Ideal for applications where remote on-off control is required
- Suitable for seawater service



Model 403-11

Pneumatically Operated Deluge Valve

- UL Listed - Sizes 3" - 10"
- Globe and angle patterns
- Ideal for applications where remote on-off control is required
- Suitable for freshwater or seawater service





Model 134-05/403-11

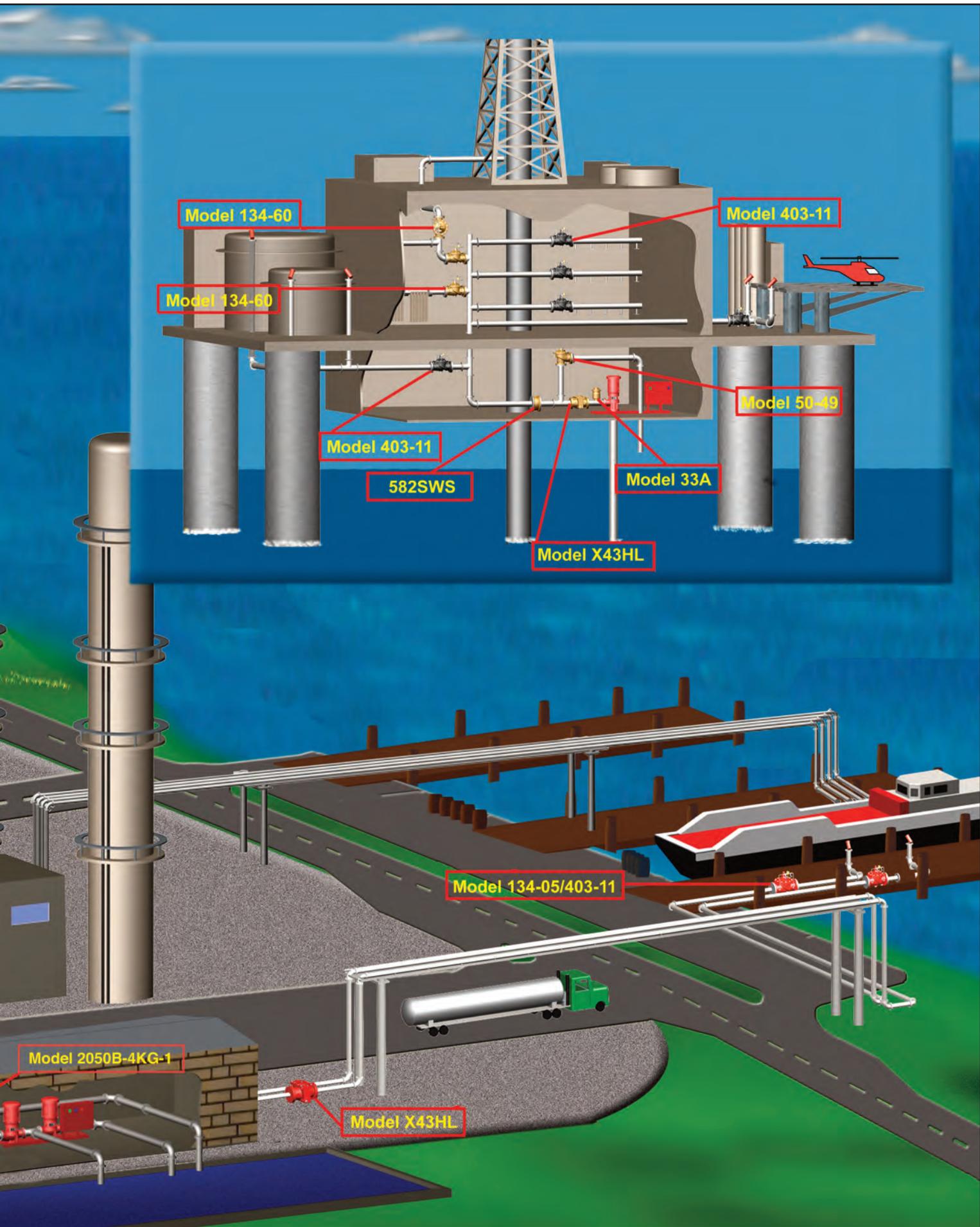
Model 403-11

Model 134-05

Model X43HL

582SWS

Series 34



Offshore Applications



Model 50-20

Seawater Service Pressure Relief Valve

- Sizes 1-1/4" - 24"
- Automatically relieves excess pressure in pumping systems
- Fast opening to maintain steady line pressure
- Closes gradually to prevent surge
- Adjustable pressure settings, unaffected by pressure at valve discharge



visit www.cla-val.com to download additional technical documents



Model 33A

High Performance Combination Air Release/Vacuum Breaker Valve

- Sizes 1" - 6", threaded or flanged
- Installed at vertical turbine pump discharge and pipeline high points for air release
- Protects pipeline from air lock and vacuum collapse during filling or draining
- Available with AC throttling air control device



Model 50-49

Seawater Service Pump Start Pressure Relief Valve

- Sizes 1-1/4" - 24"
- Provides pump and pipeline protection during pump start sequence
- Protects pump when discharge rises to unsafe levels
- Adjustable pressure sensitive opening



Model 90-42

Seawater Service Pressure Reducing Valve

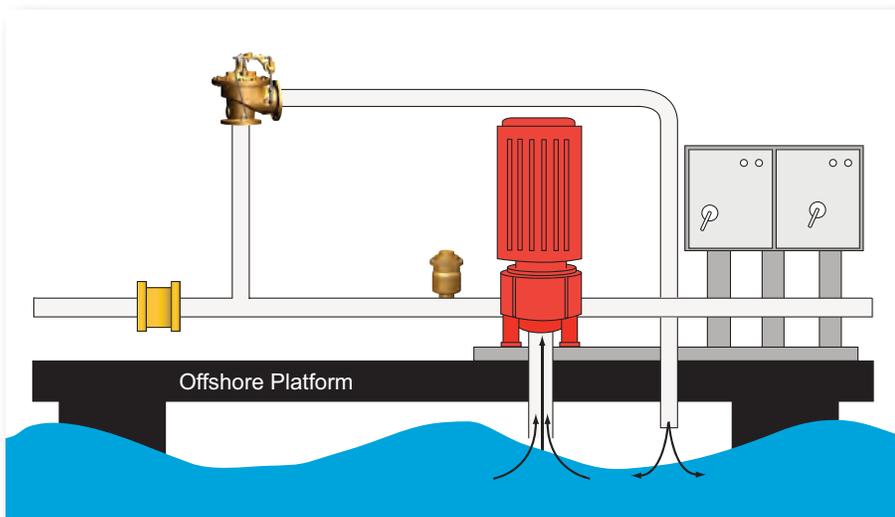
- Sizes 1-1/4" - 24"
- Automatically reduces higher inlet pressure to a steady, lower outlet pressure



Model X43-HL

H Style Strainer with Rapid Purge

- UL Listed - Sizes 2" - 8"
- Low pressure drop
- Ductile iron fusion bonded epoxy coated body with 316 SS strainer or Nickel Aluminum Bronze with Titanium strainer
- Large flow area H-style design
- Service without removal from line



Series 582SWS

Two-Door Check Valve

- Sizes 4" - 24"
- FM Approved sizes 4" - 12"
- Aluminum Bronze or Super Duplex Stainless Steel for corrosion resistance
- Prevents reverse flow

Value Added Products and Accessories

KO Anti-Cavitation Trim Retrofit Kit



Retrofittable to any Cla-Val Automatic Control Valve without removal from the pipeline

CRD Pressure Reducing Pilot Control



Automatically reduces higher inlet pressure to a lower output pressure. Can be retrofitted to an existing valve for added control.

100G/2100G Deluge Valve (Globe or Angle)



Designed for use in controlling water flow to deluge, pre-action or foam-water type fire protection sprinkler systems.

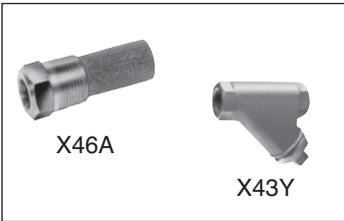
UL Listed in sizes 3" - 10".

CRL-60 Pressure & Casing Relief Pilot Control



The direct-acting CRL-60 Pressure and Casing Relief Pilot Control is a highly accurate means of maintaining desired pressure in the most critical of fire protection applications.

X46 and X43 Strainers



X46 and X43 Series Strainers prevents passage of foreign particles larger than .015 inches from entering pilot system tubing.

Solenoid Valve



Direct Acting High Flow/High Pressure Valves are available in normally closed, normally open, and either AC or DC operated with brass or SS bodies.

All classes of service: general purpose to hazardous location.

Water Gong Alarm



Durable and rugged, the hydraulically operated water gong outdoor alarm is ideal for use with fire protection system water flow detection valves.

X141 Pressure Gauge

The Stainless Steel X140 Pressure Gauge, available in sizes 2.5 and 4-inches, is an easily retrofittable solution in applications where visual pressure indication is desired.



Limit Switch Assembly



The X105L Limit Switch Assembly is a rugged, dependable and positive-acting switch actuated by the opening or closing of a Cla-Val Automatic Control Valve.

Waste Cone



The Fire Pump Discharge Relief Waste Cone is manufactured in accordance with NFPA 20 requirements

Pressure Switch



This durable, explosion proof Pressure Switch is used to signal that a deluge valve has opened. It can be specified on a new valve or easily retrofitted to an existing valve in the field.

Automatic Air Maintenance Panel



The Automatic Air Maintenance Panel automatically maintains the air or nitrogen pressure within preset limits in a dry pipe sprinkler system or a dry pilot line which actuate Deluge or Pre-action system.

Experience & Capabilities

For more than 50 years, Cla-Val has supplied top quality automatic control valves for fire applications in facilities throughout the world. Typical applications include pressure regulation, pressure relief, rate of flow control, pump suction control, liquid level control and foam or water deluge.

Cla-Val control valves provide years of trouble-free operation and require minimal maintenance, backed by the assurance that comes from using the industry's most trusted fire protection valves.

Cla-Val is a global company, headquartered in Southern California, with production facilities and offices in the US, Canada, Europe, and New Zealand, supported by a network of technical experts around the world.



Cla-Val USA - So. California
20-acre foundry and
manufacturing operation



Cla-Val Europe - Switzerland



Cla-Val Canada



Cla-Val United Kingdom



Cla-Val France

**Cla-Val Pacific -
New Zealand**

**Global Presence
Local Capabilities**

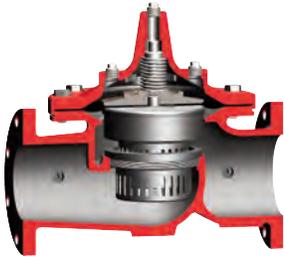
Certifications, Approvals and Quality Assurance



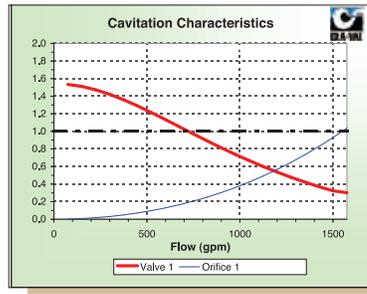
Canadian Standards Association (CSA)
NYC Material & Equipment Acceptance Division (MEA)
Underwriter's Laboratories (UL)
Underwriter's Laboratories Canada (ULC)
FM Global Technologies LLC (FM)
Technical Standards & Safety Authority
Public Utilities Board Singapore
Department of the Navy
Soundcast Company: TUV Approval
International Organization for Standardization (ISO)
American Bureau of Shipping (ABS)

**When protecting life and property, you can count on
Cla-Val Fire Protection Products.**

- Cla-Val's proprietary CLA-CAV software is an ideal way to analyze your distribution system to determine the potential for cavitation.
- Any Cla-Val automatic control valve can be equipped with KO Anti-Cavitation trim to minimize or alleviate cavitation damage.



patented



Product Advantages

- Significantly reduces noise and vibration
- Eliminates valve body and internal trim cavitation
- Provides drip-tight, positive sealing
- KO trim can be installed in existing valves without removal of the valve from pipeline

In-house Foundry Capabilities



Cla-Val automatic control valves can be provided in a wide variety of metals to meet any application challenge.

By having our own on-site sand casting and investment foundries, we are able to provide fire protection valves in over 50 different metals and special alloys, making Cla-Val's product offering one of the most extensive in the valve industry. Combined with our state-of-the-industry manufacturing capabilities, we can exercise maximum control over the quality of the valves we produce -- from start to finish.

Contact factory for a complete list of available metals and special alloys

Sample of Available Materials

• ASTM B367, Grade C2 Titanium	• Monel QQ-N-288 Comp B
• ASTM A536-65 Ductile Iron	• ASTM A216 WCB Cast Steel
• ASTM B148 Alloy C95800 NI. Alum. Bronze	• ASTM B61 Naval Bronze
• UNS S31254 Super Austenitic Stainless Steel	• UNS S32760 Duplex Stainless Steel
• UNS J93404 Super Duplex Stainless Steel	• ASTM A-743 GR CF 8M 316 SS

Cutting Edge Manufacturing Technology

The production processes at Cla-Val's factories are a unique combination of the latest in machining technologies and more than 75 years of manufacturing know-how. Never content to rest on our laurels, Cla-Val continually reinvests in machines, processes and our people to ensure that each valve we produce is of the highest quality possible.



When protecting life and property, depend on Cla-Val.



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