Fire Protection Solutions for onshore applications

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

chemical storage

power plants

refineries and industrial facilities

ports and harbors

commercial high-rise

railway and road tunnels

mining operations

aviation facilities
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 Solenoid-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**

**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**

![Diagram of water curtain system]

**Water Cannon for Flammable Materials Storage**

![Diagram of water cannon system]

visit www.cla-val.com for additional technical data on this and other Cla-Val Fire Protection Products
### 134 Series Solenoid Operated Deluge Valve

- 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

- 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

- 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 4” - 10”
- For water or foam
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

- 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

Model 55L-60

### Typical Applications

- High-Rise buildings
- Tunnels and underground railways
- High pressure sprinkler system
- Manufacturing plant
- Fire Hydrant Supply
- Ports, harbors and cargo storage areas
### 90 Series Hydraulic Pressure Reducing Valve

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](image1)

![Model 90-21 Grooved](image2)

### 50 Series Fire Pump Pressure Relief Valve

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

Model 50B-4KG-1

### 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

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

- 316 SS construction
- Compact

UL Listed 3” - 10”

FM Approved 3” & 4”

Model 750B-4KG-1

### 850 Series Tubular Diaphragm Fire Relief Valve

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

FM Approved 3” - 10”

Model 850B-4

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

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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 - tallest high-rise building in the United States (1,776 ft)
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.

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.

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 Application**

**Altitude Valve Application**
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.

Level Control Valve Application

CLA-VAL Model 124-01 Level Control Valve

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.

Altitude Valve Application

CLA-VAL Model 129-01 Level Control Valve

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.

CLA-VAL 210-01/610-01 Altitude Valve
**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 Pressure & Casing Relief Pilot Control**
The direct-acting Model 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 Preaction 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.

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.
Cavitation Protection

- 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.

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.

Sample of Available Materials

<table>
<thead>
<tr>
<th>Sample of Available Materials</th>
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<tbody>
<tr>
<td>• ASTM B367, Grade C2 Titanium</td>
</tr>
<tr>
<td>• ASTM A536-65 Ductile Iron</td>
</tr>
<tr>
<td>• ASTM B148 Alloy C95800 Ni. Alum. Bronze</td>
</tr>
<tr>
<td>• UNS S31254 Super Austenitic Stainless Steel</td>
</tr>
<tr>
<td>• UNS J93404 Super Duplex Stainless Steel</td>
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</tbody>
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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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