

## PS\UL

### Pressure Relief Valve

An automatic, pilot controlled, pressure relief valve, actuated by the pipeline pressure. The valve modulates to maintain a steady, predetermined pressure in the network. Should the upstream pressure exceed the required set point, the valve opens, releasing the excessive pressure. When the pressure falls below the set value, the valve closes drip tight.



\* General representation of valve

### CERTIFICATION & COMPLIANCE



- ANSI FCI 70-2 Class VI seat leakage class
- UL listed under QXZQ category
- Lloyd's type approval

### FEATURES & BENEFITS

- Simple field adjustable pressure setting; no special tools or system downtime
- Superior design featuring low pressure losses at high flow rates
- Low lifelong maintenance costs due to unique frictionless internal trim design
- High flows and working pressures (PN25/375psi)

- Maintains a steady preset system pressure, regardless of fluctuating supply
- Protects the system by accurately limiting maximum pressure
- Out of the box fully assembled & tested valves
- Extensive valve and trim materials selection and corrosion protection coating
- Stainless Steel seat as standard

### TYPICAL APPLICATIONS



Pump & Water Tanks



Fire Suppression Systems



Petrochemical, Oil & Gas Installations



Tunnels



Power Generation, Transformer & Transmission Plants



Onshore / Offshore



Mining

## OPERATION

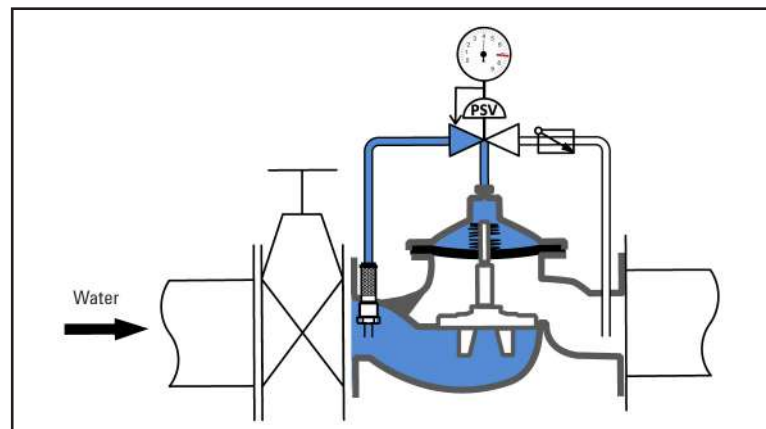
The 30-PS\UL is a pilot controlled, pressure relief valve, actuated by the pipeline pressure. The valve accurately maintains a set pipeline pressure regardless of pump start and stop conditions. The relief pressure can easily be set and modified by use of the adjustment bolt on the pressure relief pilot's cover.

When the system's upstream pressure exceeds the required set point, the valve modulates to maintain a steady, predetermined pressure in the network. When pressure falls below the set value, the valve closes drip tight.

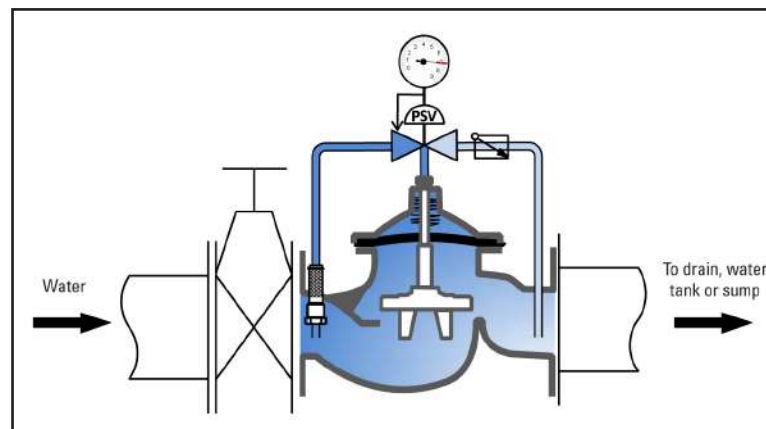
The CXPS pressure relief pilot, contains an integral and adjustable Stainless Steel needle valve which enables high pilot accuracy and control of the valve's closing speed.

The valve's low friction internal trim design utilizes an LTP® (Linear Throttling Plug) guide and a preshaped reinforced diaphragm. The standard and simple single chamber valve allows easy assembly, improved longevity and reduces periodic inspections and maintenance. When required, maintenance is easily done on site and inline.

Closed Position



Pressure Relief



Resetting, maintenance and periodic testing instructions must be followed as described in detail in the applicable OCV IOM (Installation, Operation & Maintenance) Manual.

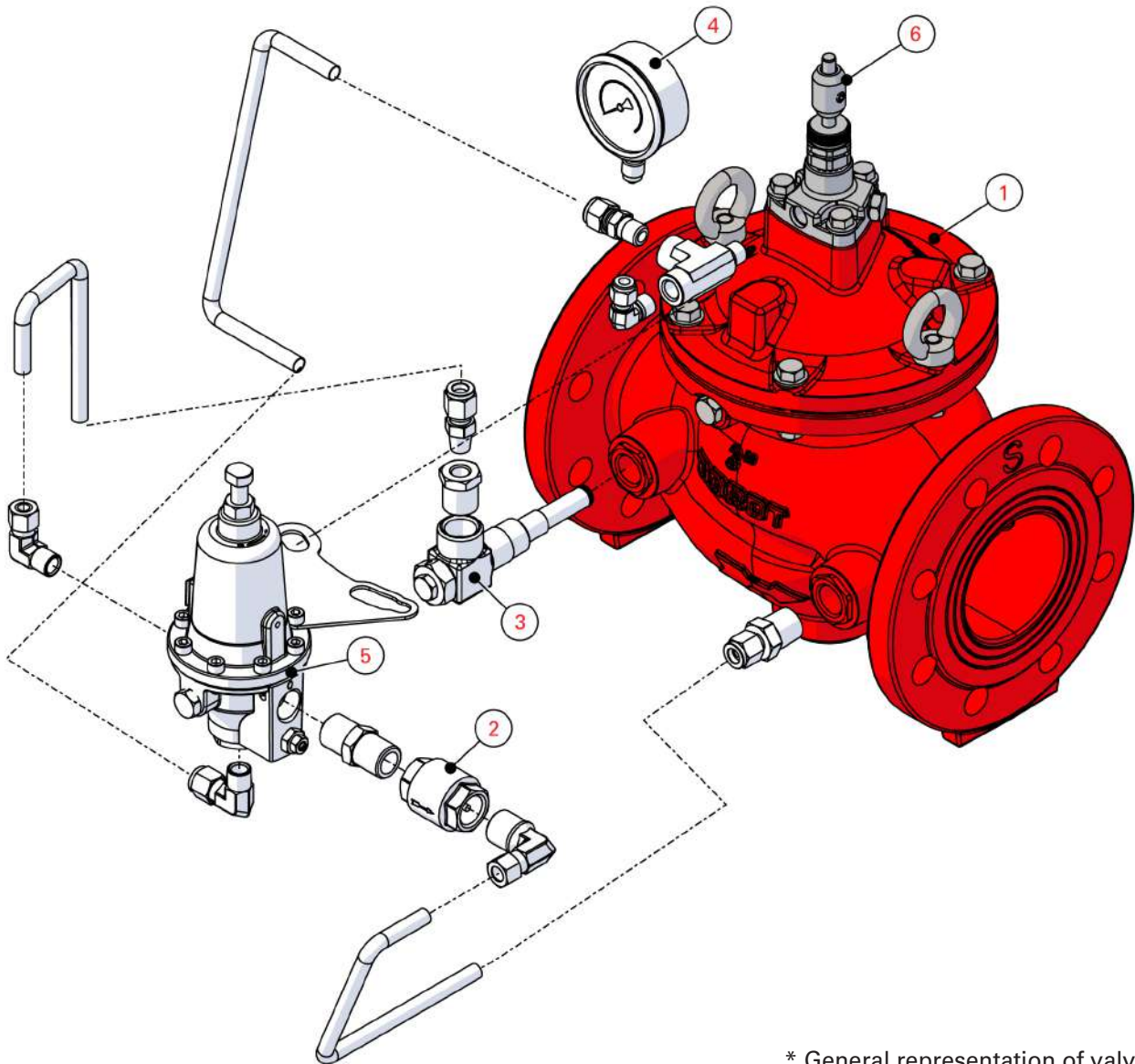
TYPICAL MATERIALS

ID	Description	Standard	POG <sup>(1)</sup> Applications
1	Valve Body	See Series 300 Engineering Data <sup>(2)</sup>	
2	Check Valve	Brass	Stainless Steel 316
3	Inline Strainer	Brass, Stainless Steel Screen	Stainless Steel 316
4	Pressure Gauge	Brass	Stainless Steel 316
5	Pressure Relief Pilot	Brass, Stainless Steel 316 Seat	Stainless Steel 316
6	Position Indicator	Stainless Steel 316	Stainless Steel 316

(1) Petrochemical, Oil & Gas

(2) Refer to materials selection guidelines, Engineering Data - Materials:

Ductile Iron A-536 65-45-12; Cast Steel A-216 WCB; Cast Steel A-352 LCB; Austenitic Stainless Steel A-351/CF8M; Super Duplex 2507; Nickel-Aluminum-Bronze B-148 UNS C95800

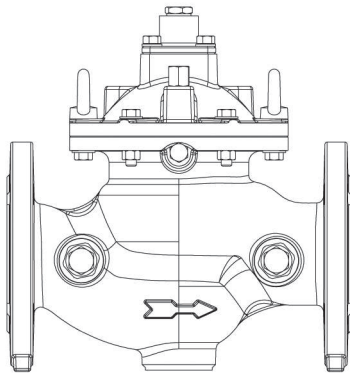
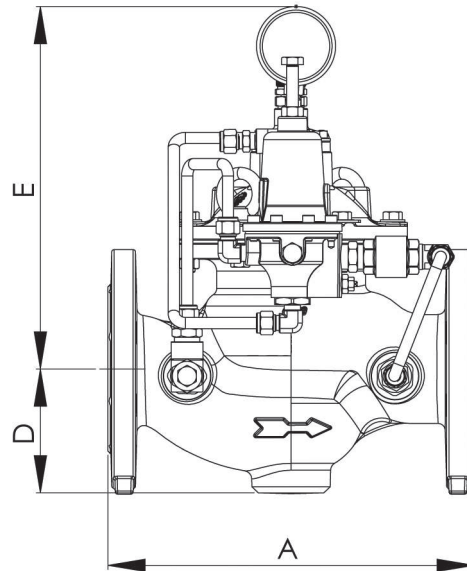
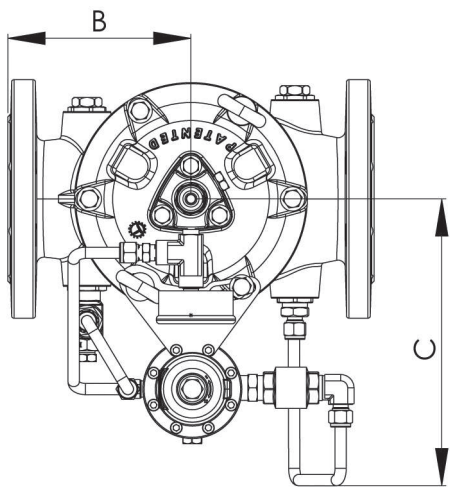


\* General representation of valve

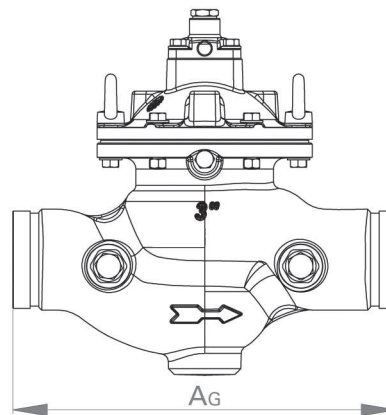
**GENERAL ARRANGEMENT & DIMENSIONS**

Valve	2" (50)		2.5" (65)		3" (80)		4" (100)		6" (150)		8" (200)		10" (250)	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
A	9 1/8	230	11 3/16	290	12 3/16	310	13 13/16	350	18 7/8	480	28 13/16	600	28 13/16	730
A <sup>G</sup>	8 1/2	215	8 1/2	215	13 13/16	350	14 13/16	376	20 1/2	520	27 5/8	703	N/A	N/A
B	5 1/2	140	5 11/16	145	6 1/8	155	6 7/8	175	9 1/2	240	11 13/16	300	14 3/8	365
C	8 1/8	206	8 1/8	240.5	9 1/2	240.5	10 3/16	259.5	12 1/8	307	13 11/16	348.5	16	405.5
D	3 5/16	82.5	3 5/8	92.5	3 7/8	100	4 5/16	110	5 5/8	142.5	6 13/16	172.5	8 1/8	205
E	9 11/16	246	9 11/16	246	12	305	12 1/2	317	15 13/16	400	18 3/16	462	22 7/8	582

\* Approximate dimensions



Flanged



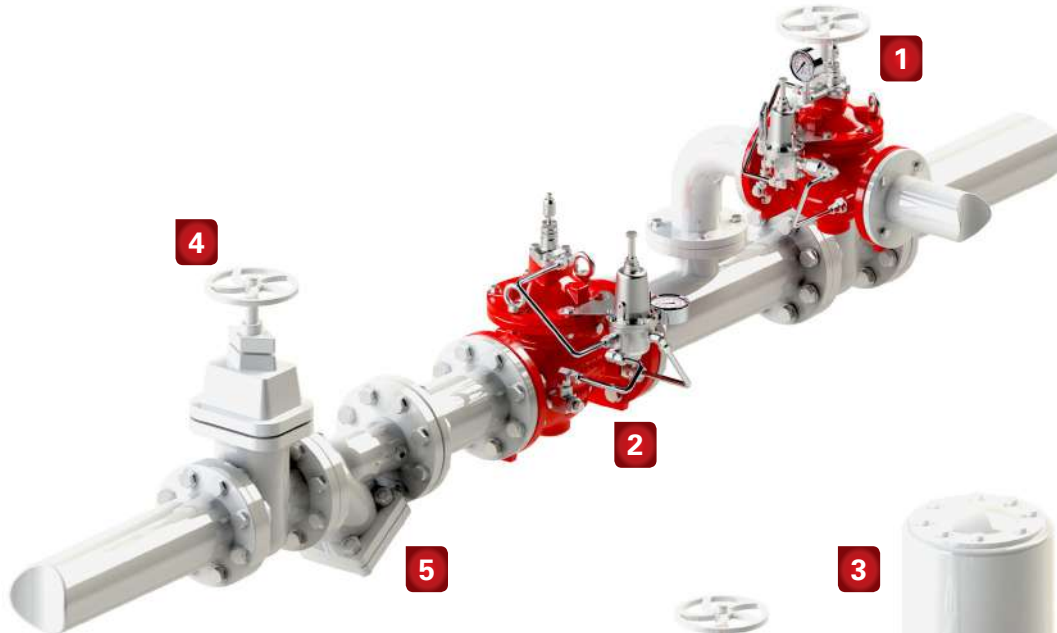
Grooved

\* General representation of valve

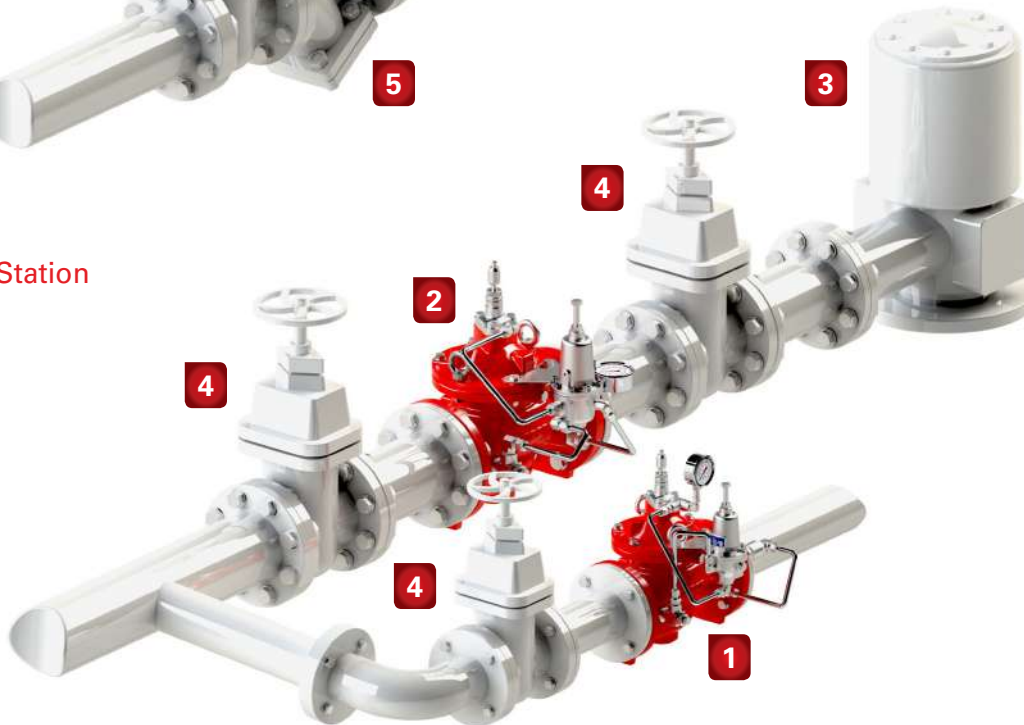
TYPICAL INSTALLATION

Typical System Layout

Pressure Reducing Station Layout including Downstream Pressure Relief Valve



Fire Pump Station



- 1** 30-PS\UL Pressure Relief Valve
- 2** 30-PR\UL Pressure Reducing Valve
- 3** Pump
- 4** Isolation Valve
- 5** Strainer



## TECHNICAL DATA

### Temperature:

- Media up to 80°C = 176°F
- Elastomers suitable for extreme climates available upon request

### Sizes:

- UL listed sizes: 2" - 6"
- Lloyd's type approved sizes

### End Connections:

- Flanged:  
ISO-PN16 & ISO-PN25  
ANSI B16.42 & B16.5 Class #150 & #300  
Additional options available upon request
- Grooved

### Pressure Rating:

- 250 psi for Class #150
- 375 psi for Class #300

### Body and Cover Material:

- Ductile Iron
- Cast Steel
- Stainless Steel
- NAB

### Trim Material:

- Brass - Copper
- Stainless Steel

### Optional Components:

- Pressure Switch
- Limit Proximity Switch

### Items to Specify:

- Control trim material other than standard
- Required standards, certifications and approvals

### UL Listed Downstream Pressure Relief Setting Range:

- 2" up to 205 psi & 3" - 6" up to 375 psi

### Other Certified (non UL) Downstream Pressure Relief Setting Range:

- 2" - 12" up to 375 psi

## ENGINEERING SPECIFICATIONS

The pressure relief valve shall contain a fabric reinforced rubber diaphragm, elastic & resilient through its entire surface without vulcanized radial discs. The seat shall be stainless steel and interchangeable. The valve shall maintain a constant predetermined upstream pressure regardless of fluctuating demands. Maintenance, disassembly and reassembly of all the valve's components shall be made possible on-site and in-line, without the need to remove the valve from the line. The valve shall be fully trimmed, hydrostatically and operationally tested at the factory and set to a maximum relief pressure of up to 375 psi. Change of factory preset pressure setting can always be performed in-line following simple IOM instructions, without special tools or system down time. Standard material valves such as Ductile Iron and Cast Steel should be coated with high-built fusion-bonded epoxy (FBE). Naval quality/very high corrosivity protection grade conforming to EN12944 C5M is available upon request. Additional coatings and special materials are available upon request. The valve shall be a Model 30 PS\UL, UL listed under QXZQ category for fire protection service.

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