

PR\UL

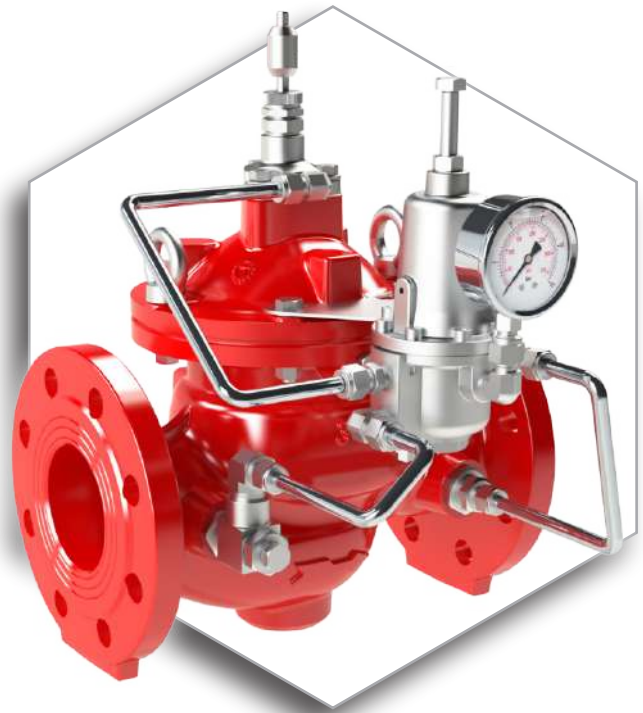
Pressure Reducing Valve

An automatic, pilot controlled, pressure reducing valve actuated by the pipeline pressure. The valve regulates to a steady, preset downstream pressure regardless of upstream pressure or flow rate fluctuations. In case of excessive downstream pressure, the valve closes drip tight.

CERTIFICATION & COMPLIANCE



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



* General representation of valve

FEATURES & BENEFITS

- Simple field adjustable pressure setting; no special tools & no 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 & working pressures (PN25/375psi)
- Stable regulation from near zero flow to maximum design flow
- Regulates at low flow and high pressure differential without bypass or U/V port design
- Out of the box fully assembled & tested valves
- Extensive valve & 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

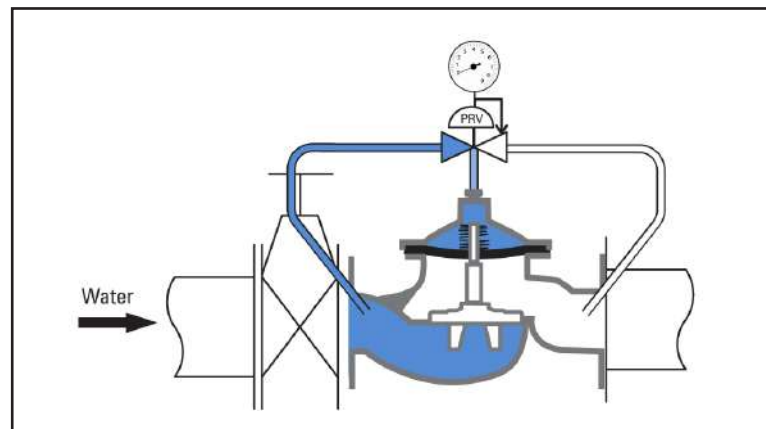
The 30-PR\UL is a pilot-controlled, pressure reducing valve, actuated by the pipeline pressure. The valve accurately regulates to a steady, preset downstream pressure, down to near-zero flow rates, regardless of upstream pressure fluctuations and valve size. In case of excessive downstream pressure, the valve closes drip tight. The valve's unique design eliminates the need for a special low flow plug design (such as V or U-ports), or the installation of additional smaller-sized bypass valves.

The valve's low-friction internal trim design utilizes an LTP® (Linear Throttling Plug) guide and a pre-shaped reinforced diaphragm. The standard and simple single-chamber valve allows easier assembly, improved longevity and reduces periodic inspections and maintenance. When required, maintenance is easily done onsite and in-line.

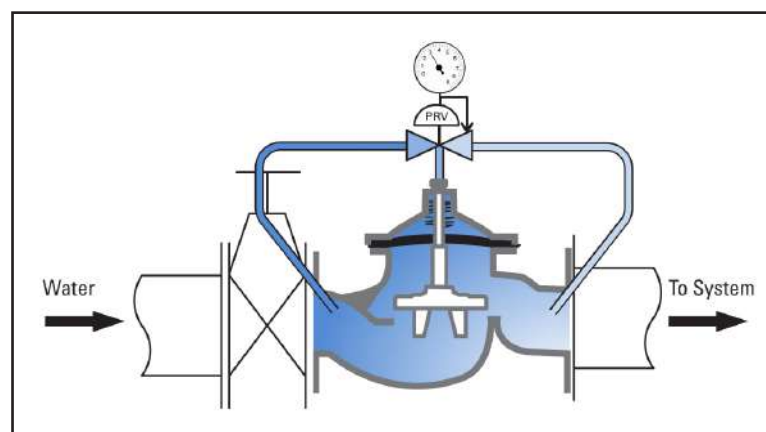
When planning operation and design, please consider the following:

- The valve should be suited to the maximum designed flow and allowed head loss.
- For added safety, installing a downstream pressure relief valve (30-PS\UL, 77-PS\UL, 44-PS\UL or 108FCA) is highly recommended.
- Large pressure differentials may cause cavitation damage. Consult OCV for unique solutions if such conditions are expected.

Closed Position



Regulating Position



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

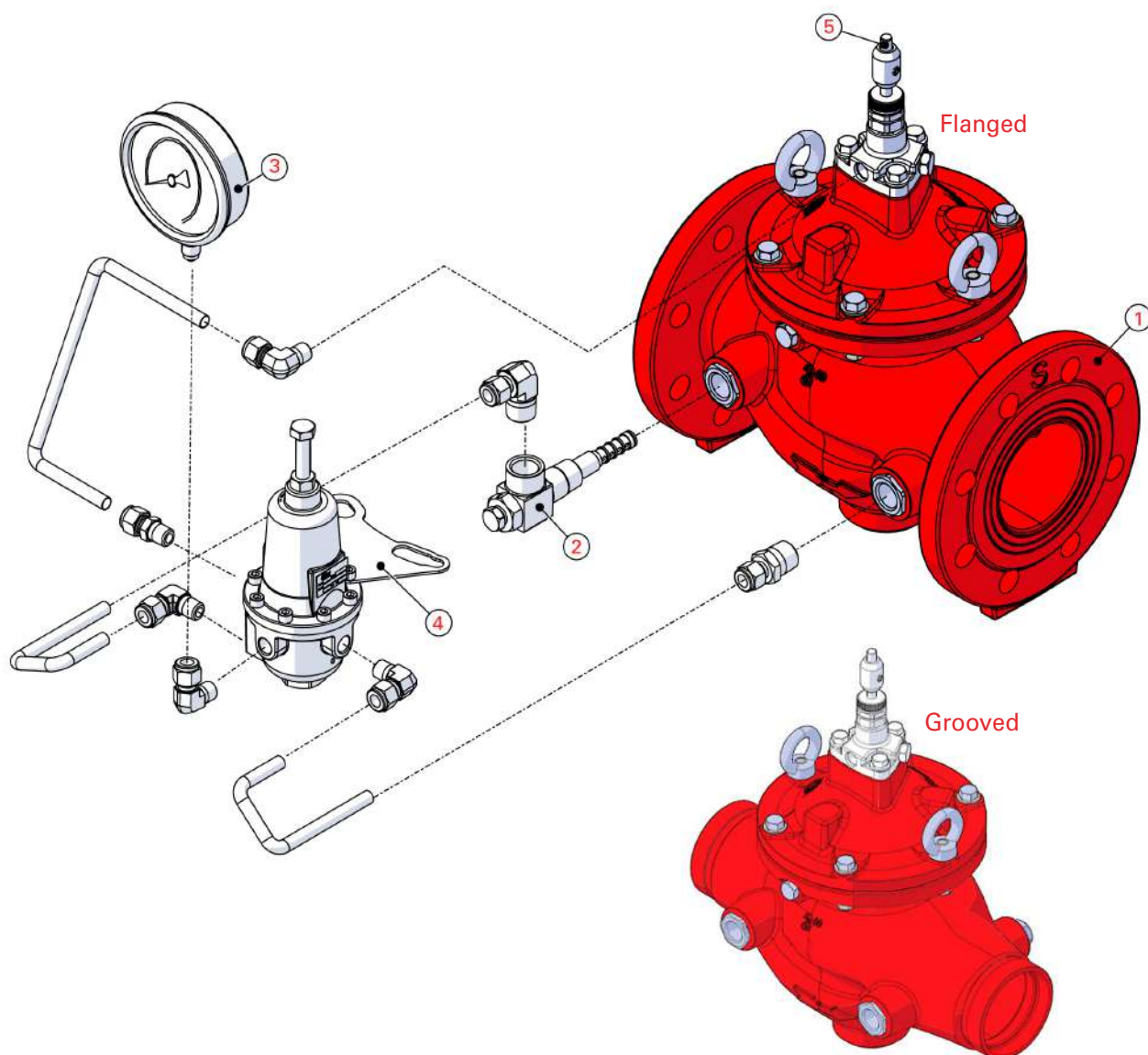
TYPICAL MATERIALS

| ID | Description | Standard | POG ⁽¹⁾ Applications |
|----|-------------------------|--|---------------------------------|
| 1 | Valve Body | See Series 300 Engineering Data ⁽²⁾ | |
| 2 | Inline Strainer | Brass, Stainless Steel Screen | Stainless Steel 316 |
| 3 | Pressure Gauge | Brass | Stainless Steel 316 |
| 4 | Pressure Reducing Pilot | Brass, Stainless Steel 316 Seat | Stainless Steel 316 |
| 5 | Position Indicator | Stainless Steel 316 | Stainless Steel 316 |

(1) Petrochemical, Oil & Gas

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

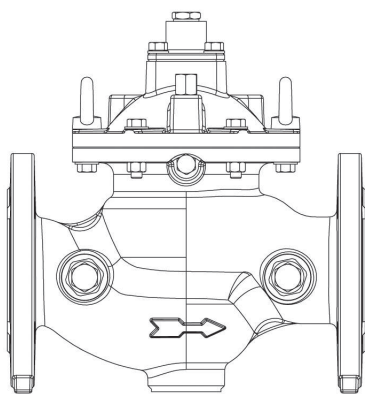
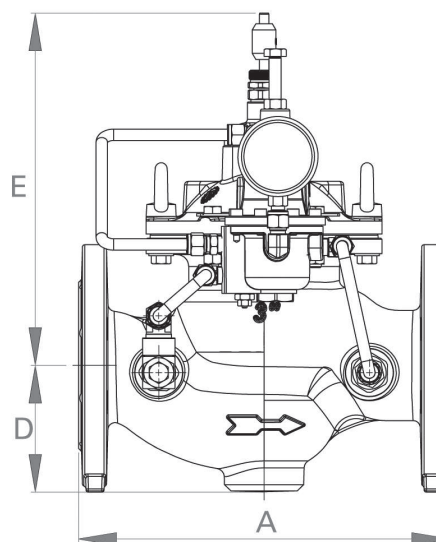
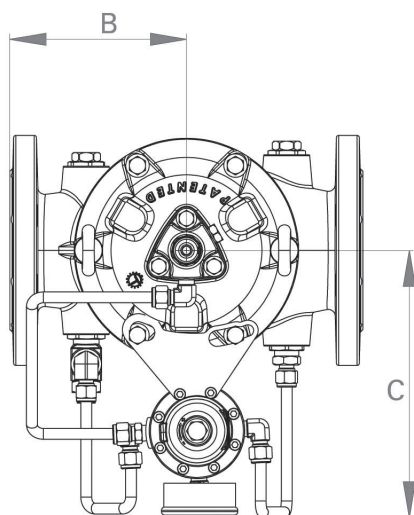
Ductile Iron A-536 65-45-12; Cast Steel A-216 WCB; Cast Steel A-352 LCB; Austenitic Stainless Steel A-351/CF8M; Super Duplex 2507; Nickel-Aluminum-Bronze B-148 UNS C95800



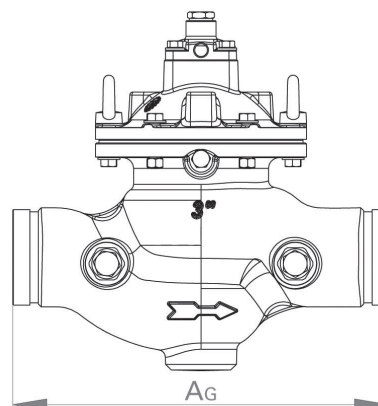
GENERAL ARRANGEMENT & DIMENSIONS

| Valve | 2" (50) | | 2.5" (65) | | 3" (80) | | 4" (100) | | 6" (150) | | 8" (200) | | 10" (250) | | 12" (300) | |
|----------------|---------|------|-----------|------|----------|-------|----------|-------|----------|-------|----------|-------|-----------|-------|-----------|-----|
| | inch | mm | 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 | 23 5/8 | 600 | 28 13/16 | 730 | 33 1/2 | 850 |
| A ^G | 8 1/2 | 215 | 8 1/2 | 215 | 13 13/16 | 350 | 14 13/16 | 376 | 20 1/2 | 520 | N/A | N/A | N/A | N/A | N/A | N/A |
| B | 6 1/8 | 155 | 6 1/8 | 155 | 6 1/8 | 155 | 6 7/8 | 175 | 9 1/2 | 240 | 11 13/16 | 300 | 14 3/8 | 365 | 16 11/16 | 425 |
| C | 7 7/8 | 200 | 7 7/8 | 200 | 9 3/16 | 234.5 | 10 | 253.5 | 11 7/8 | 301 | 13 1/2 | 342.5 | 15 11/16 | 399.5 | 17 3/16 | 436 |
| 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 | 9 1/8 | 230 |
| E | 9 5/16 | 236 | 9 5/16 | 236 | 11 5/8 | 295 | 12 1/8 | 307 | 15 3/8 | 390 | 17 13/16 | 452 | 22 1/2 | 572 | 26 5/16 | 668 |

* Approximate dimensions



Flanged



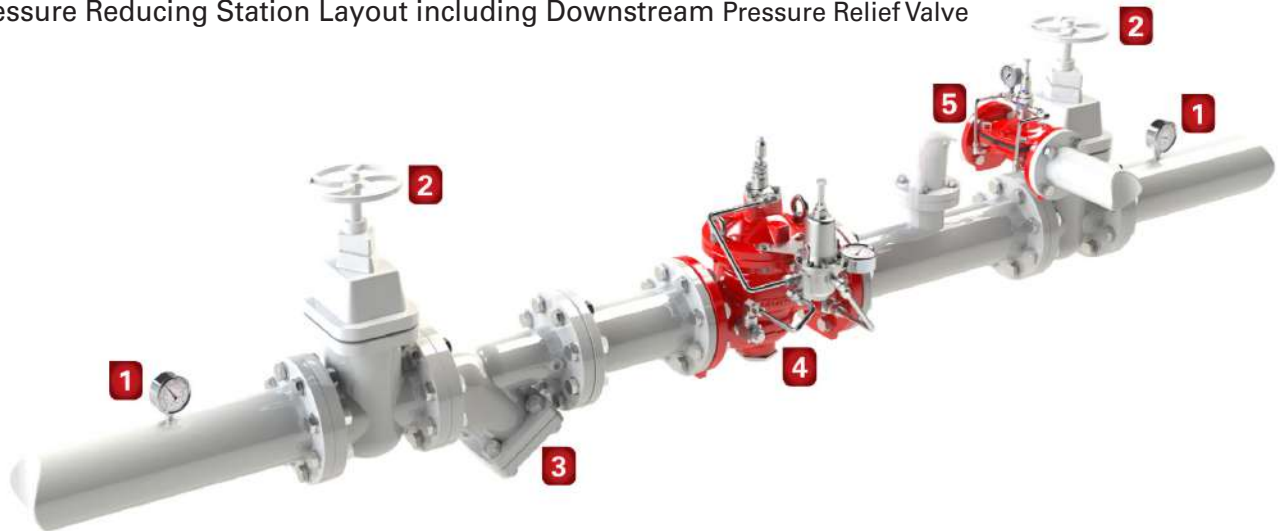
Grooved

* General representation of valve

TYPICAL INSTALLATION

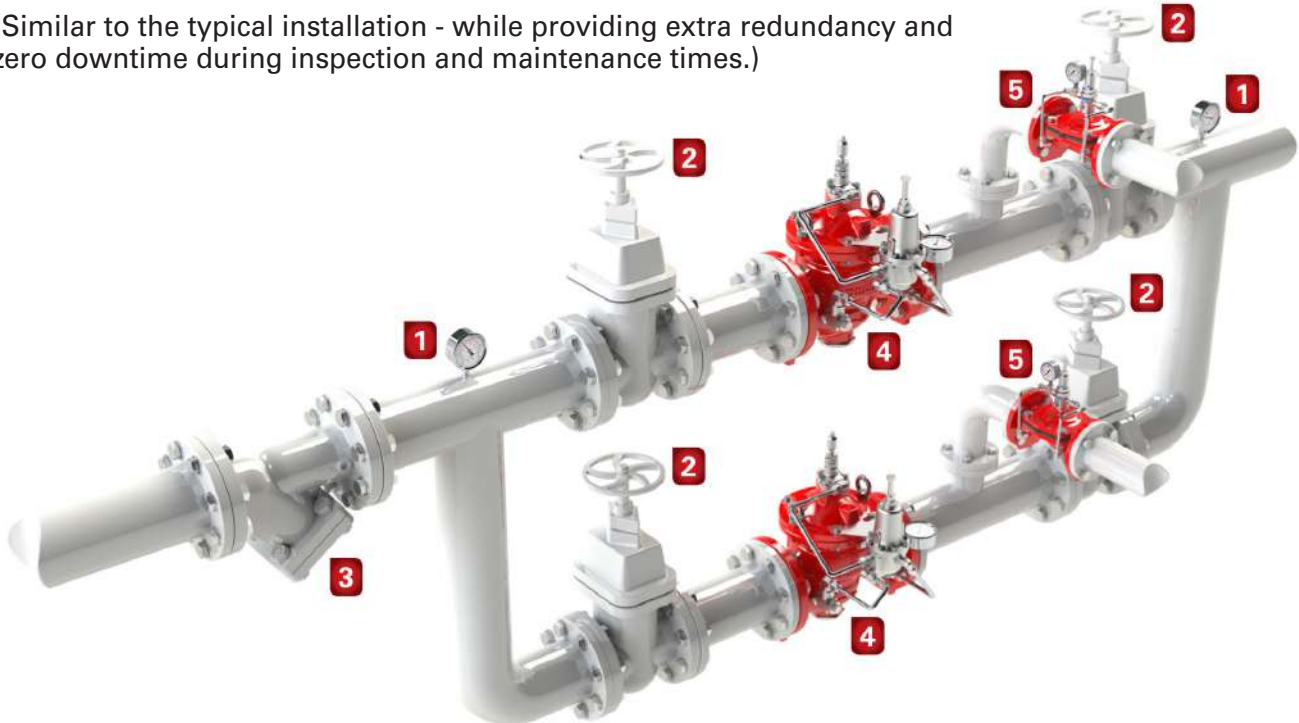
Typical System Layout

Pressure Reducing Station Layout including Downstream Pressure Relief Valve



Optional System Layout for Redundancy

(Similar to the typical installation - while providing extra redundancy and zero downtime during inspection and maintenance times.)



- 1** Pressure Gauge
- 2** Isolation Valve
- 3** Strainer

- 4** 30-PR\UL Pressure Reducing Valve
- 5** Recommended Models:
44, 77, 30 or 108FCA Pressure Relief Valves

* Not all items pictured reflect products sold by OCV

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
- Threaded

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 Setting Range:

- 2" - 6" = 30 - 165 psi

Other Certified (non UL) Downstream Pressure Setting Range:

- 2" - 8" = 30 - 360 psi
- 10" - 12" = 30 - 285 psi

ENGINEERING SPECIFICATIONS

The pressure control 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 downstream pressure regardless of upstream pressure or flow rate fluctuations. 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 fixed pressure. 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 pressure control valve shall be a Model 30 PR\UL, UL Listed under VLMT category for fire protection service.

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