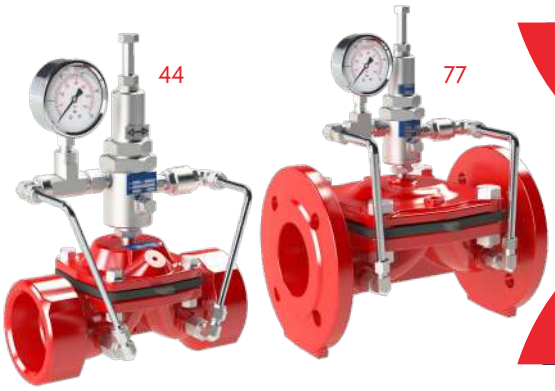
PRESSURE RELIEF
MODEL 44, 68 & 77 PS\UL

Aquestia USA
Directing the Flow



FIRE PROTECTION

General representation of valves

OCV 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.

CERTIFICATION & COMPLIANCE

- ANSI FCI 70-2 Class VI seat leakage class
- UL listed under QXZQ category
- Fire tested to EN ISO 6182-5:2006 (Model 68: 2"-6" only)
- Lloyd's & ABS approvals

FEATURES & BENEFITS

- Simple field adjustable pressure setting, requiring no special tools or system downtime
- Superior design featuring exceptionally low pressure losses at high flow rates
- Maintains a steady preset system pressure, regardless of fluctuating supply
- Automatically relieves overpressure should upstream pressure exceed the required set point
- Low lifelong maintenance costs due to straightforward design
- Applicable for fresh or brackish water, seawater & foam
- Out of box fully assembled & tested valves
- Factory trimmed for vertical or horizontal installations without modification
- Extensive valve & trim materials selection and corrosion protection coating
- High flows and working pressures (up to PN25/375 psi)

TYPICAL APPLICATIONS

- Pump & Water Tanks
- Fire Suppression Systems
- Petrochemical, Oil & Gas Installations
- Tunnels
- Power Generation, Transformer & Transmission Plants
- Onshore / Offshore
- Mining

OCV

PRESSURE RELIEF
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FIRE PROTECTION

OPERATION

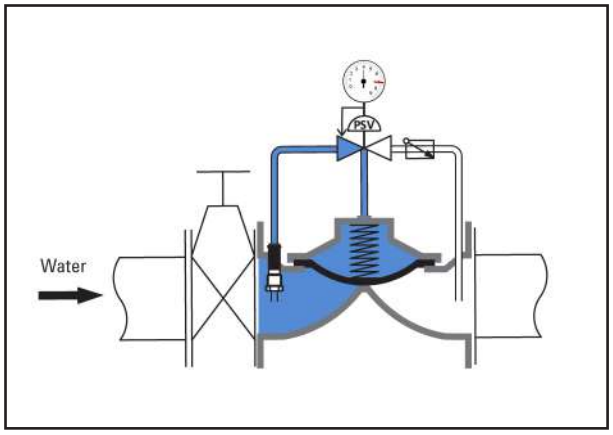
The OCV PS\UL is a pilot controlled, pressure relief valve, actuated by the pipeline pressure. The valve accurately maintains a set pipeline pressure regardless of pump start and stop conditions. The relief pressure can easily be set and modified by use of the adjustment bolt on the pressure relief pilot's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

When the pipeline 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.

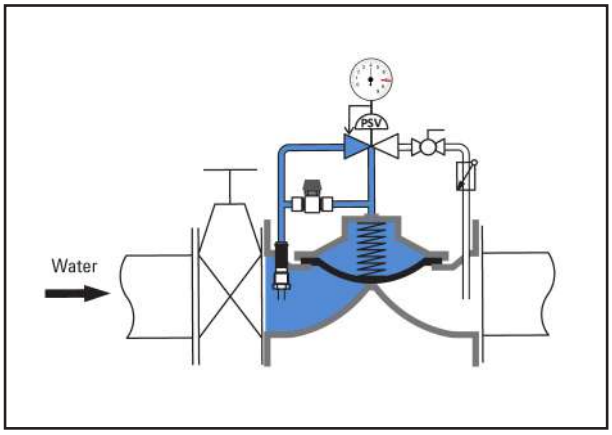
The OCV PS\UL's trim contains an integral and adjustable needle valve which enables high pilot accuracy and control of the valve's closing speed.

The valve's low friction design utilizes a pre-shaped reinforced diaphragm and provides exceptionally low pressure losses at high flows and an accurate, stable control from no flow to full flow conditions. The simple and reliable design allows easier assembly, improved longevity and reduces periodic inspections and maintenance. When required, maintenance is easily done on site and in-line.

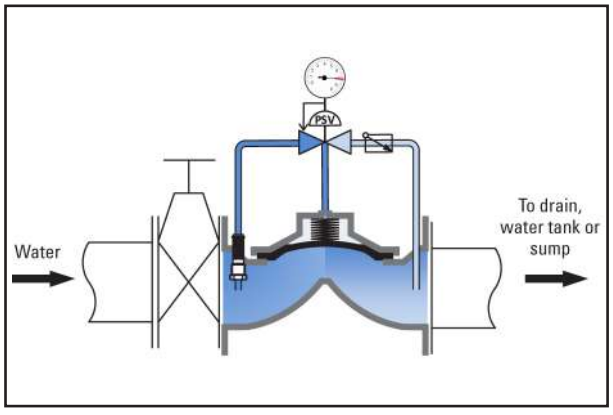
Closed Position - 2"- 3"



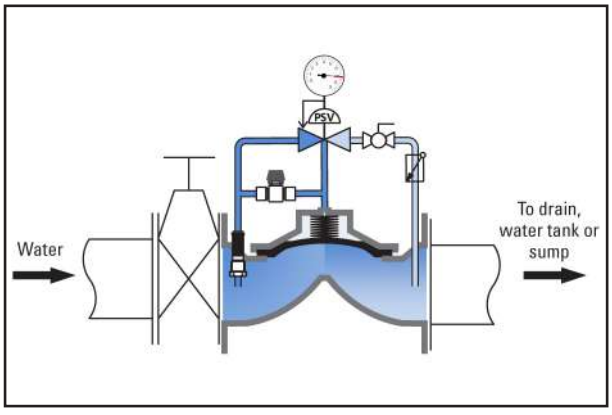
Closed Position - 4"- 8"



Pressure Relief - 2"- 3"



Pressure Relief - 4"- 8"



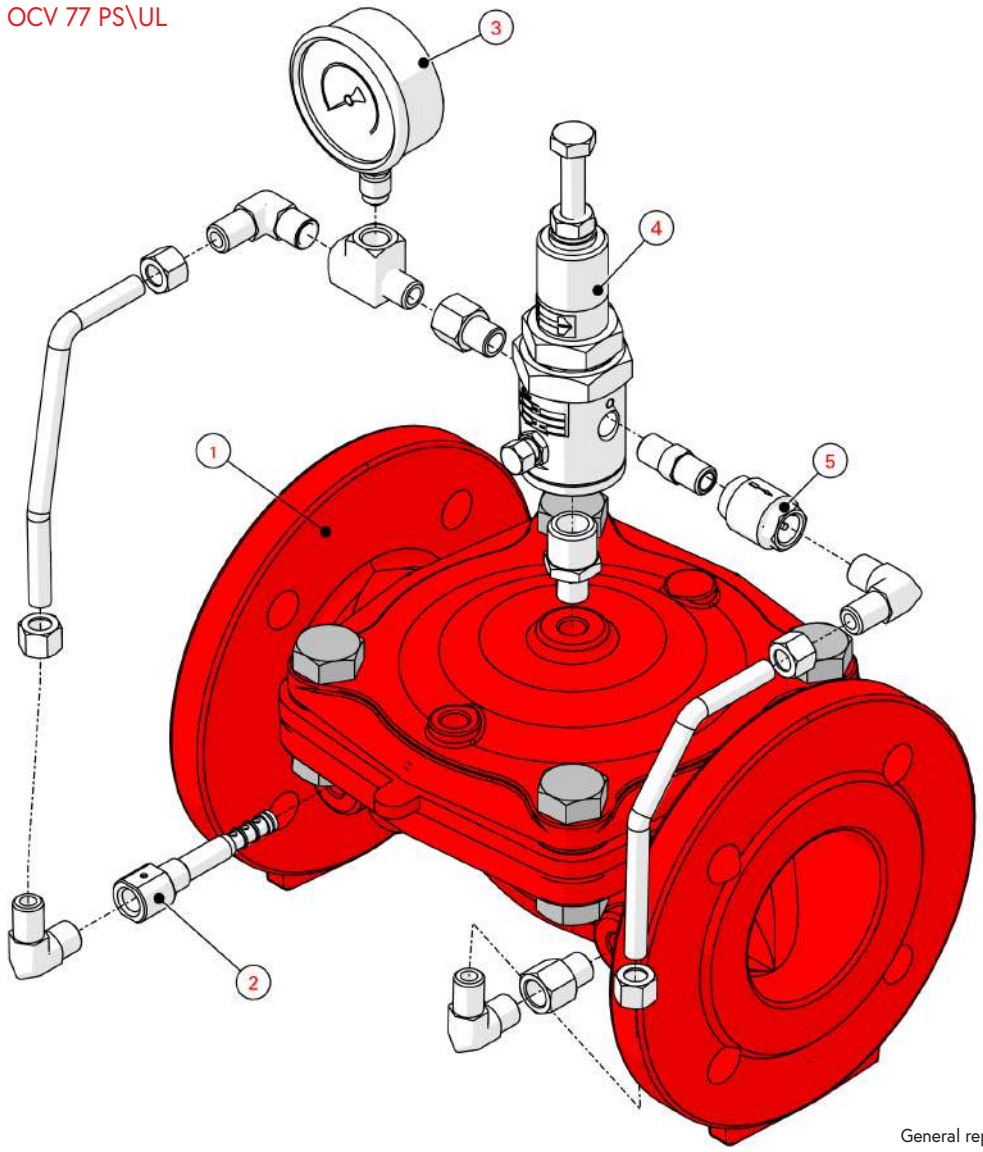
Resetting, maintenance and periodic testing instructions must be followed as described in detail in the applicable OCV IOM (Installation, Operation & Maintenance) Manual.

TYPICAL MATERIALS

ID	Description	Standard	POG [1] Applications
1	Valve Body	See Series 100 Engineering Data [2]	
2	Inline Strainer	Bronze, Stainless Steel Screen	Stainless Steel 316
3	Pressure Gauge	Brass Case, Stainless Steel Connection	
4	Pressure Relief Pilot	Brass	Stainless Steel 316
5	Check Valve	Brass	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

Illustration of 3" OCV 77 PS\UL

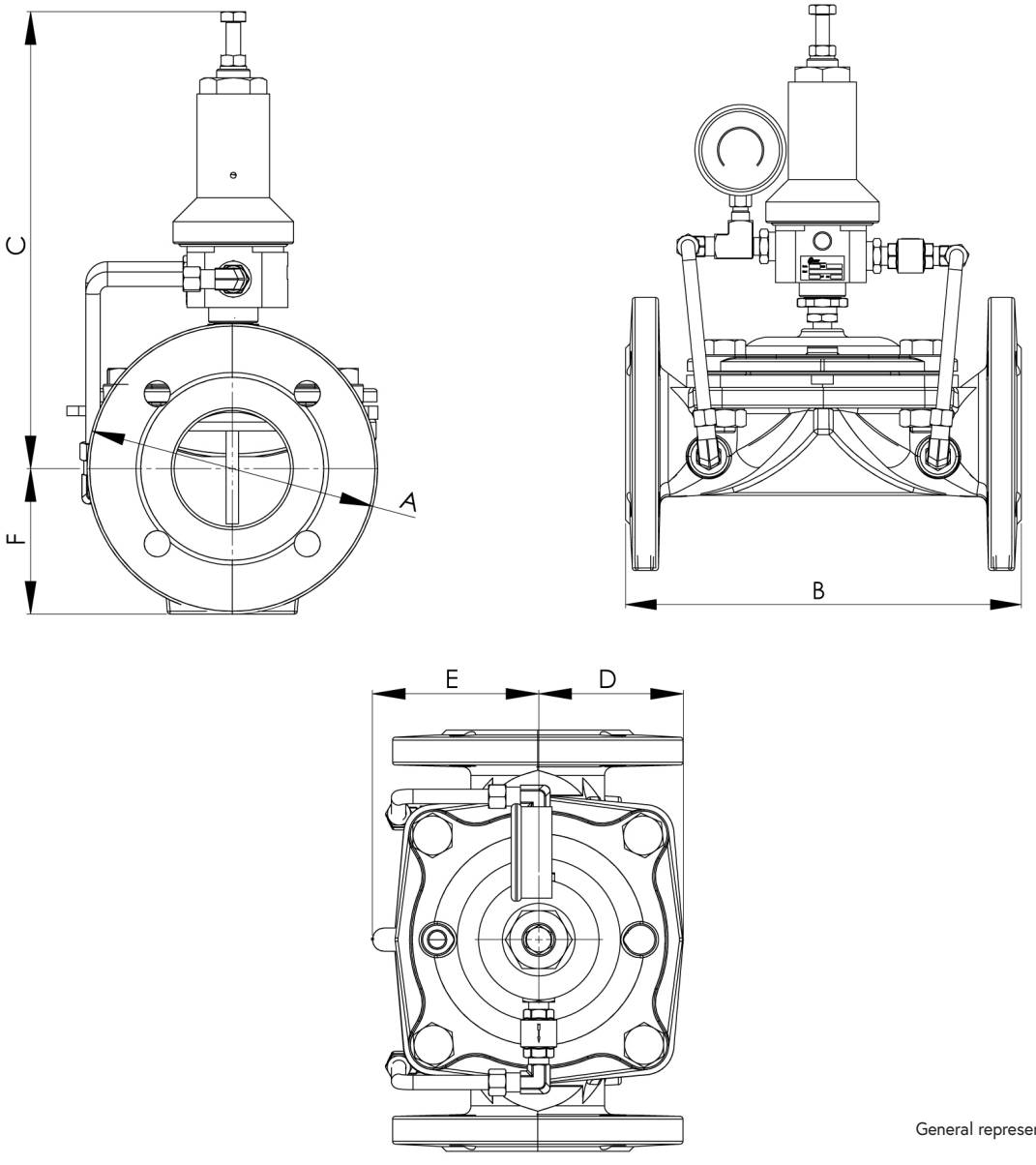


General representation of valve

GENERAL ARRANGEMENT & DIMENSIONS

Valve	2" (50)		3" (80)		4" (100)		6" (150)		8" (200)	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
A	6 1/2	166	7 13/16	200	9 1/8	230	11	280	13 1/2	342
B	8 1/8	206	11 3/8	290	12 1/8	309	15 1/2	393	18 5/16	466
C	10 3/16	260	10 3/8	265	12 3/8	315	14 1/8	360	15 1/2	393
D	4 1/8	104	4 1/8	104	4 1/2	115	5 1/2	141	7 5/16	185
E	3 3/16	83	4 1/8	106	4 1/2	115	5 13/16	148 1/2	7 1/2	192
F	3 3/16	83	3 7/8	100	4 1/2	115	5 1/2	140	6 11/16	171

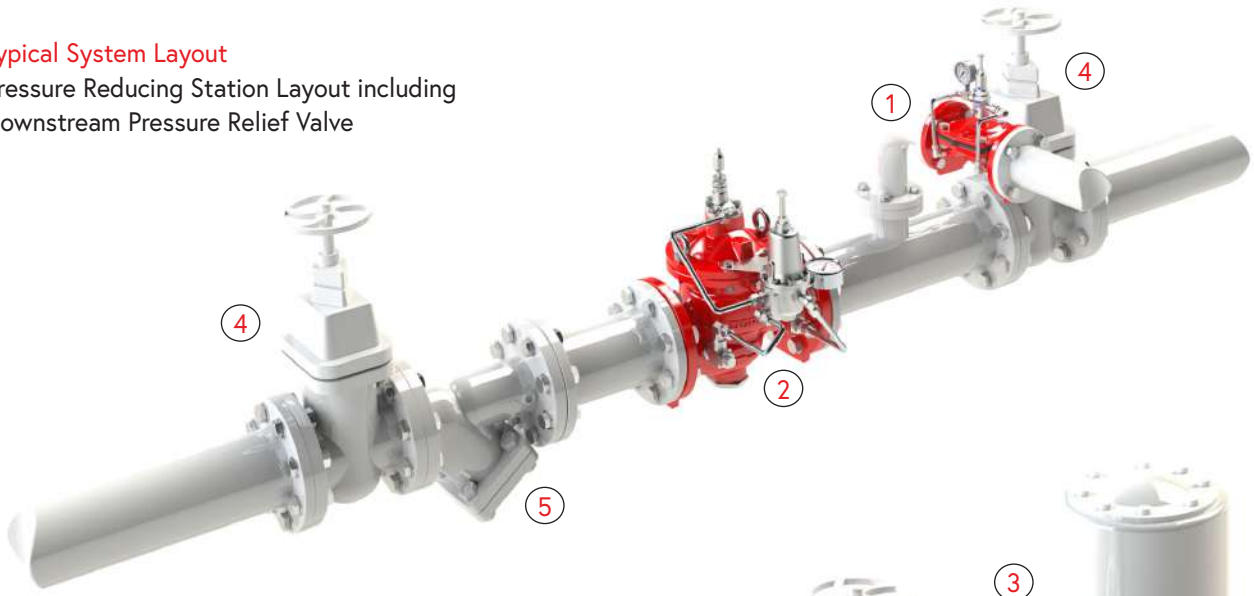
Approximate dimensions for OCV 77 PS\UL



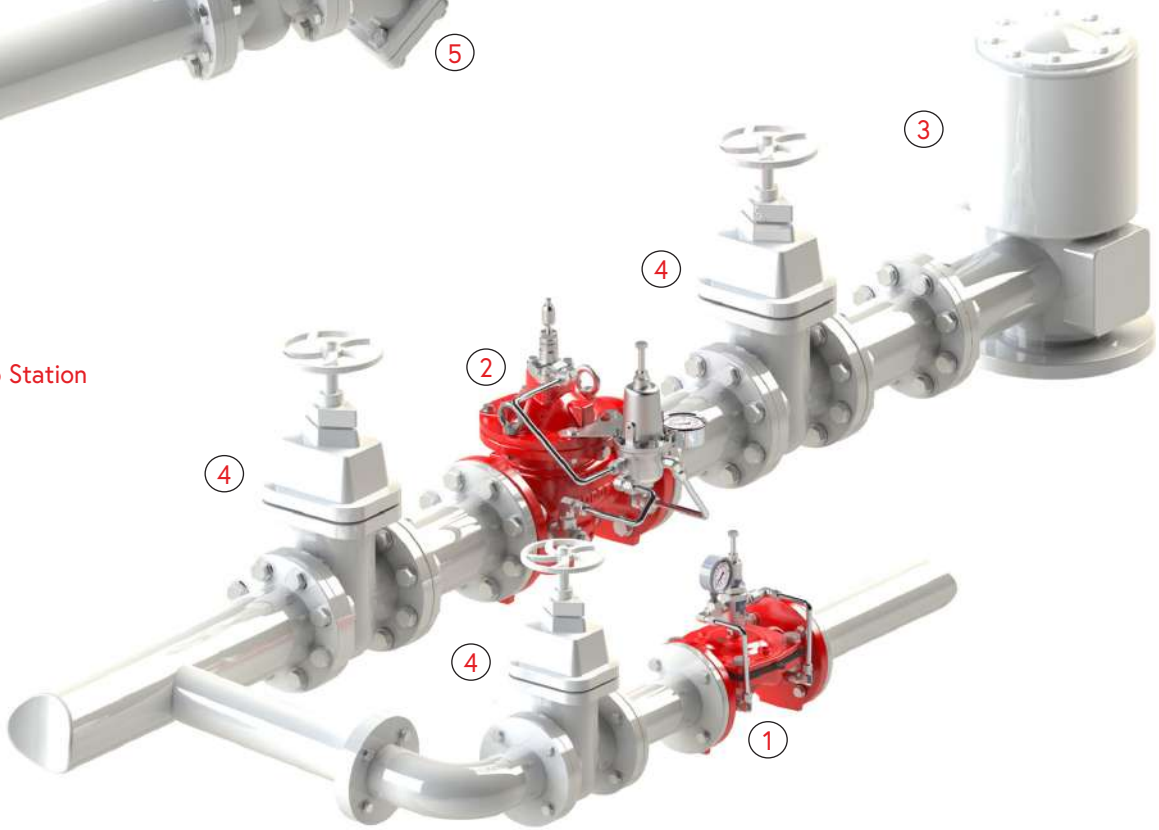
General representation of valve

TYPICAL INSTALLATION

Typical System Layout
Pressure Reducing Station Layout including Downstream Pressure Relief Valve



Fire Pump Station



1. OCV 77 PS\UL Pressure Relief Valve
2. Pressure Reducing Valve (OCV 30 PR\UL or OCV 129 FC)
3. Pump
4. Isolation Valve
5. Strainer

General representation of valve

OCV

PRESSURE RELIEF
MODEL 44, 68 & 77 PS\UL

FIRE PROTECTION

TECHNICAL DATA

Temperature:
- Media up to 85°C = 185°F
- Elastomers suitable for extreme climates available upon request

Sizes & Approvals:
- UL listed sizes:
  Model 77 (Flanged): 2", 3", 4", 6", 8"
  Model 44 (Threaded): 2" - 3"
- Lloyd's type approved sizes:
  Model 68: 2" - 10"
  Model 77: 2" - 24"
  Model 44 (Threaded): 1" - 3"
- ABS approval sizes:
  Model 68: 2", 3", 4", 6"

End Connections:
- Flanged: ISO-PN16 & ISO-PN25
  ANSI B16.42 & B16.5 Class #150 & #300
  Additional options available upon request
- Grooved: 2"-8"
- Threaded: 1"-3"

Pressure Rating:
- Models 44 & 77: up to 16 bar / 230 psi
- Model 68: up to 25 bar / 375 psi

UL Listed Pressure Relief Setting Range:
- 2" - 8" up to 175 psi

Body & Cover Material:
- Ductile Iron
- Stainless Steel
- Cast Steel
- NAB

Trim Material:
- Bronze/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

ENGINEERING SPECIFICATIONS

The pressure relief valve shall be hydraulically operated, direct elastomeric diaphragm-seal, single chamber weir type. The valve shall consist of three major components: the body, the cover and the diaphragm assembly. The diaphragm assembly shall be the only moving part. The diaphragm forms a sealed control chamber in the upper portion of the valve, separating operating pressure from line pressure. Packing glands, stuffing boxes and dynamic O-ring seals are not permitted and there shall not be shafts, discs, bearings or pistons operating the main valve. No hourglass shaped disc retainers shall be permitted, and no V-type, U-type or other slotted type disc guides shall be used. The valve shall contain a nylon reinforced rubber diaphragm, elastic & resilient through its entire surface without vulcanized radial seals and/or reinforcements. The diaphragm assembly shall not be guided by any shafts or bearings and shall not be in close contact with other valve parts except for its sealing surface. 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 relief 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 relief valve shall be an OCV 44 PS\UL, an OCV 68 PS\UL, or an OCV 77 PS\UL, UL listed under QXZQ category for fire protection service, as manufactured by OCV, Tulsa, OK, USA.

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