



▲ Model 71 DE/PORV/PR

OPERATION

This pneumatically actuated pressure reducing deluge valve is designed for fire protection systems controlled and actuated by an air or nitrogen dry pilot line. The basic control valve type used in this deluge system is a direct sealing elastomeric diaphragm, hydraulically operated control valve engineered specifically for fire protection systems.

In the standby position, the deluge valve is held closed drip tight by the upstream water pressure, trapped in the valve's control chamber. The water pressure enters the control chamber through the priming line ball valve (2), a Y-type strainer (3), a check valve (4) and a Tee restrictor (5).

Under fire conditions, one (or more) of the automatic sprinklers on the dry (pneumatically-pressurized) pilot-line burst. This causes the pressure in the relay valve (9) to drop, causing it to open and allowing the water to begin to drain from the deluge valve's control chamber through the pressure reducing pilot (10). The deluge valve opens instantly, regulating to a steady, preset downstream pressure, regardless of upstream pressure or flow rate fluctuations. This allows water to flow into the pipeline and through the open sprinklers over the protected area.

Manual emergency actuation is enabled by opening the emergency manual activation valve (6). When connected through the pressure reducing pilot (10) (optional), manual actuation causes the deluge valve to regulate the downstream pressure regardless of upstream pressure or flow rate fluctuations. If unspecified, the manual activation valve (6) is drained to the atmosphere, thus allowing the deluge valve to open fully. When actuated, the deluge valve opens instantly and allows water to flow into the pipeline and through the open sprinklers over the protected area.

Resetting, maintenance, and periodic testing instructions must be followed as described in detail in the relevant OCV DE/PORV/PR model's O&M (Operation & Maintenance) manual.

OCV's DE/PORV/PR, pneumatically actuated pressure reducing deluge valve is held shut drip-tight in its standby position. When one (or more) of the automatic sprinklers on the pilot-line burst, the valve will open and regulate the downstream pressure to a preset set point regardless of upstream pressure or flow rate fluctuations.

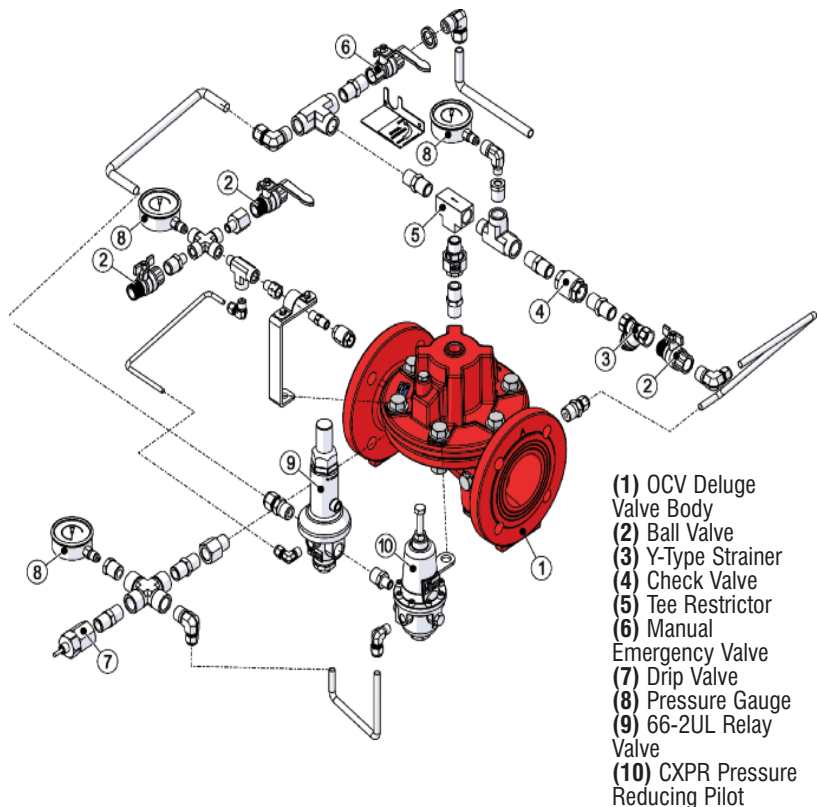
DESIGNED FOR

- ▶ High-pressure (375psi/PN25), high-flow deluge systems
- ▶ Regulating downstream pressure regardless of upstream pressure and flow fluctuations
- ▶ Automatic or manual emergency actuation
- ▶ Hazardous-flammable and explosion classified area fire suppression
- ▶ Onshore & Offshore, Naval, Industrial, Commercial & Residential fire suppression

FEATURES

- ▶ Superior design featuring exceptionally low pressure losses at high flow rates
- ▶ Simple field adjustable pressure setting with no special tools or system downtime
- ▶ Low to negligible lifelong maintenance
- ▶ Simple, comprised of 3 main parts, no expertise required for maintenance
- ▶ Fresh or Brackish water, seawater and foam
- ▶ Out of the box fully assembled & tested valves
- ▶ All valves are factory trimmed for both vertical & horizontal installations without modification
- ▶ Extensive valve & trim material selection and corrosion protection coating

PARTS & MATERIALS



- (1) OCV Deluge Valve Body
- (2) Ball Valve
- (3) Y-Type Strainer
- (4) Check Valve
- (5) Tee Restrictor
- (6) Manual Emergency Valve
- (7) Drip Valve
- (8) Pressure Gauge
- (9) 66-2UL Relay Valve
- (10) CXPR Pressure Reducing Pilot

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Global performance. Personal touch.

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Model 71 DE/PORV/PR Pneumatically Actuated Pressure Reducing Deluge Valve

Model 71 DE/PORV/PR



Technical Data:

- Media up to 176°F (80°C)
- Elastomers suitable for extreme climates are available upon request.

Sizes:

- Straight Flow: 2"-24"
- Angle: 1.5" - 8"

Basic Valve Material Options:

Ductile Iron A-536 65-45-12; Cast Steel WCB A-216; Cast Steel A-352 LCB; Austenitic Stainless Steel A-351/CF8M; Super Duplex 2507; Nickel-Aluminum-Bronze B-148 UNS C95800 (3) Refer to solenoid selection guidelines

End Connections:

- Flanged: ISO PN10, ISO-PN16 & ISO-PN25 ANSI B16.42 Class # 150 and # 300
- Grooved: Sizes: 2"-8"

Pressure Rating:

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

UL Listed Sizes:

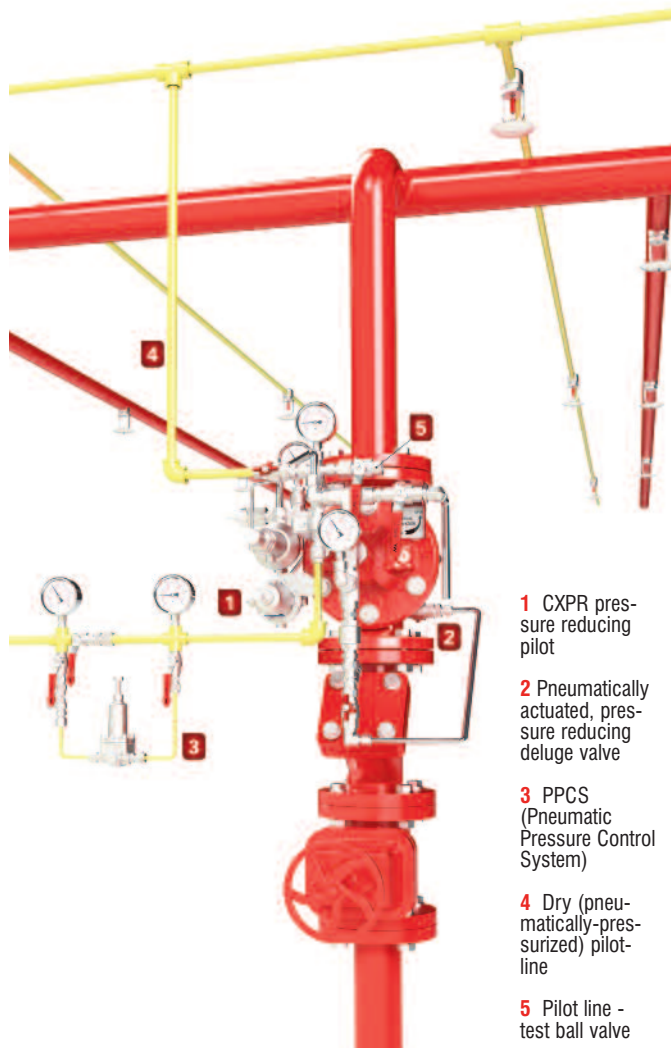
- 2"-10"

Please specify in addition to the above:

- Control trim material other than standard (Brass/Copper)
- Required standards, certifications and approval

SPECIFICATIONS

The deluge valve shall be hydraulically operated, direct elastomeric diaphragm-seal, single chamber weir type. The valve shall consist of three major components: the body, cover and the diaphragm assembly. The diaphragm 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 be no 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 discs and/or reinforcements. The diaphragm 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. Standard material valves such as Ductile Iron (ASTM A-536 65-45-12) and Cast Steel (WCB A-216) should be coated with epoxy, followed by a coat of fire red enamel paint. Special considerations should be made for deluge valve being used in sea-water supply systems. The valve should be UL listed under category VLFT for fire protection service.



- 1 CXPR pressure reducing pilot
- 2 Pneumatically actuated, pressure reducing deluge valve
- 3 PPCS (Pneumatic Pressure Control System)
- 4 Dry (pneumatically-pressurized) pilot-line
- 5 Pilot line - test ball valve

OCV pressure control valves are UL/ULC Listed for mounting in the horizontal or vertical position. Space should be taken into consideration when mounting valves and their pilot systems.

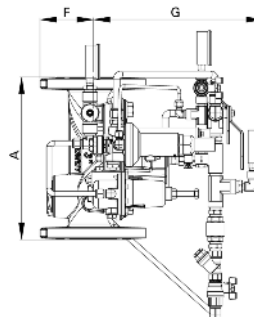
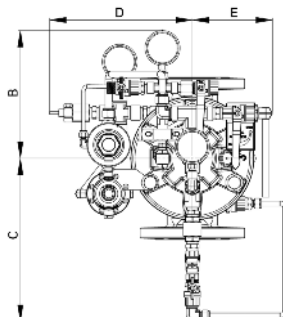
A routine inspection & maintenance program should be established and conducted yearly by a qualified technician. Consult our factory @ 1-888-628-8258 for parts and service.

When ordering your

71 DE/PORV/PR, please provide: Series Number - Valve size - Globe or Angle - Flanged 150#, 300# ANSI, screwed or grooved ends - Trim Material - Special needs / or Installation Requirements

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	9 3/16	233	12 3/16	310	14	356	17 7/16	436	20 7/8	530	25 1/8	636
B	12 5/16	311	12 5/16	311	12 5/16	311	12 5/16	311	12 5/16	311	12 5/16	311	12 1/2	318
C	9 5/8	244	9 5/8	244	9 5/8	244	9 5/8	244	9 5/8	244	10 3/8	265	12 1/2	318
D	10 3/8	264	10 3/8	264	10 1/8	277	11 5/16	288	12 3/8	320	13 7/16	338	14 5/16	364
E	6 11/16	170	6 11/16	170	7 3/16	183	7 5/8	194	8 7/8	226	9 5/8	244	10 5/8	270
F	3 5/16	85	3 5/8	92.5	4 1/8	105	14	120	5 7/8	150	7 1/8	180	8 1/2	215
G	10 5/8	268	9 3/16	268	12 3/16	324	12 5/16	324	16 1/8	409	18 5/8	472	19 1/2	494
Approx. Weight	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg
	33	15	36	16.5	77	35	95	43	176	80	282	128	430	195

* Approximate dimensions



QUALITY SYSTEM
REGISTERED TO
ISO 9001



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