HYDRANT SYSTEMS
MODEL HY, HY\PR1

HY

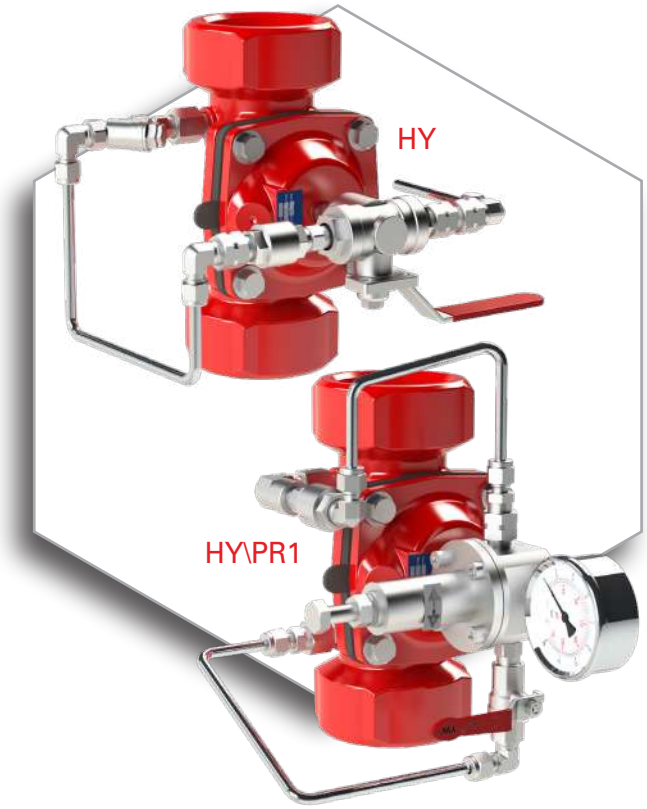
Hydrant Valve

Manually controlled hydrant valve, actuated by the pipeline pressure. When the activation valve is turned to the open position, it opens gradually to prevent a sudden pressure rise in the hose. It closes drip tight when the activation valve is turned back to the closed position, reducing the risk of water hammer damage.

HY\PR1

Hydraulic Pressure Reducing Hydrant Valve

Manually controlled, pressure reducing hydrant valve, actuated by the pipeline pressure. When the activation ball valve is turned to the open position, it opens gradually to prevent sudden pressure rise in the hose, up to a predetermined set point. It closes drip tight when the activation valve is turned back to the closed position, reducing the risk of water hammer damage.



* General representation of valves

CERTIFICATION & COMPLIANCE

Lloyd's Register

- ANSI FCI 70-2 Class VI seat leakage class
- Lloyd's type approval

FEATURES & BENEFITS

- Effortless open/close actuation
- Controlled response
- Straightforward & reliable design
- Easy installation & maintenance
- Applicable for water, seawater & foam

TYPICAL APPLICATIONS

- Automatic or Manual Actuated Fire Suppression Systems
- Petrochemical, Oil & Gas Installations
- Power Generation, Transformer & Transmission Plants
- Flammable Storage
- Hangars
- Onshore / Offshore

OPERATION

The basic control valve [1] used in this hydrant system is a direct-sealing elastomeric diaphragm, hydraulically operated control valve engineered specifically for fire protection systems.

In the standby position, the hydrant valve is held closed by the upstream water pressure, trapped in the valve's control chamber.

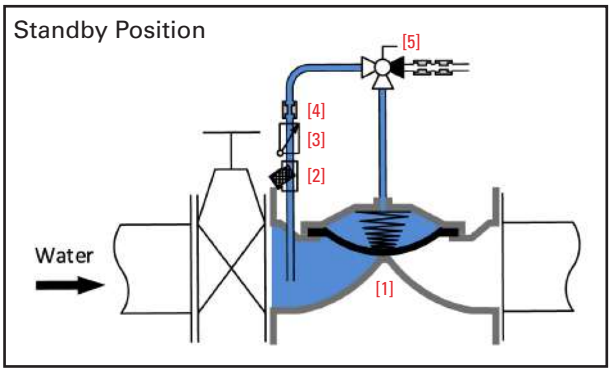
Model HY: The water pressure enters the control chamber through a Y-type strainer [2], a check valve [3], a restrictor [4] and 3-way ball valve [5].

Model HY\PR1: The water pressure enters the control chamber through an inline strainer [7], a priming line ball valve [8], check valve [3], a restrictor [4] and a pressure reducing pilot [9].

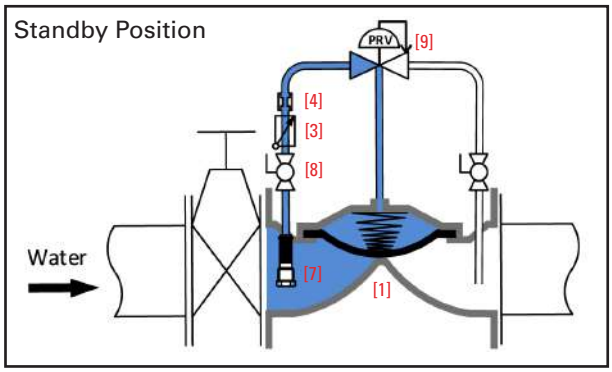
Under fire conditions, the hydrant valve is actuated manually by:
Model HY – The 3-way ball valve is manually opened.
Model HY\PR1 – The pressure reducing pilot's adjustment bolt is tightened using a wrench and set to the required downstream pressure.

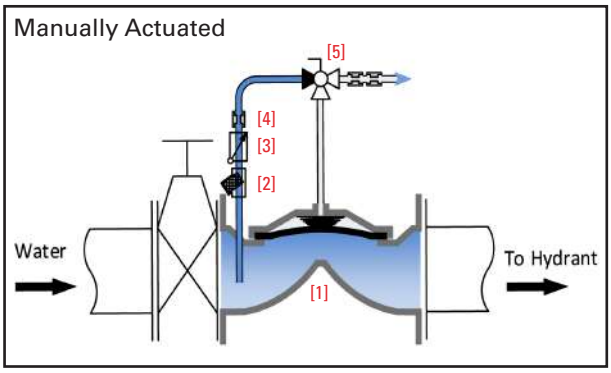
When actuated the hydrant valve opens instantly. When model HY\PR1 is actuated, the hydrant valve opens, regulating a steady preset downstream pressure regardless of upstream pressure or flow rate fluctuations.

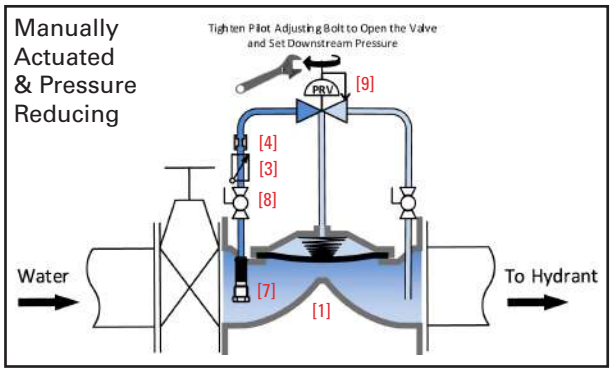
HY



HY\PR1







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

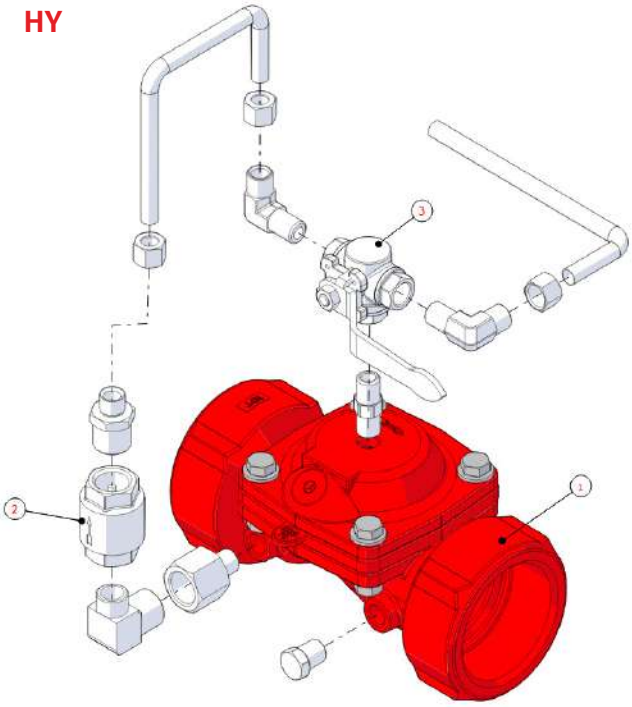
TYPICAL MATERIALS

ID	Description	Standard	POG (1) Applications
1	Valve Body	See Series 100 Engineering Data (2)	
2	Check Valve	Brass	Stainless Steel 316
3	3 Way Ball Valve	Brass	Stainless Steel 316
4	Inline Strainer	Brass, Stainless Steel Screen	Stainless Steel 316
5	Pressure Gauge	Brass	Stainless Steel 316
6	Pressure Reducing Pilot	Brass	Stainless Steel 316
7	On/Off Selector Ball Valve	Brass	Stainless Steel 316

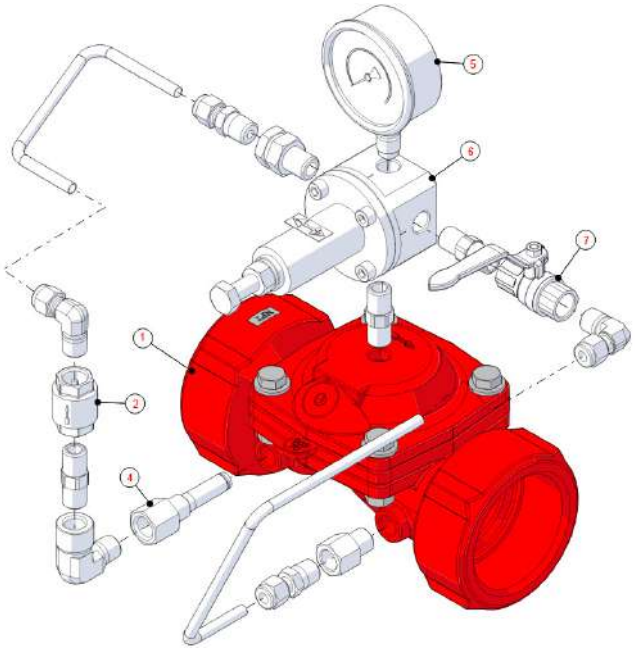
(1) Petrochemical, Oil & Gas
(2) Refer to materials selection guidelines, Engineering Data - Materials: Ductile Iron A-536 65-45-12; Cast Steel A-216 WCB; Cast Steel A-352 LCB; Austenitic Stainless Steel A-351/CF8M; Super Duplex 2507; Nickel-Aluminum-Bronze B-148 UNS C95800

Model 44 Shown Below

HY



HY\PR1



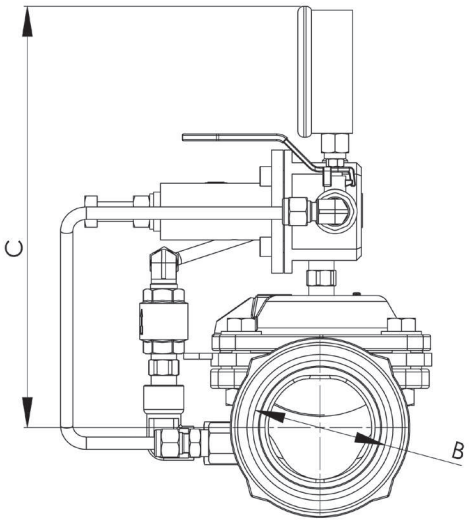
* General representation of valve

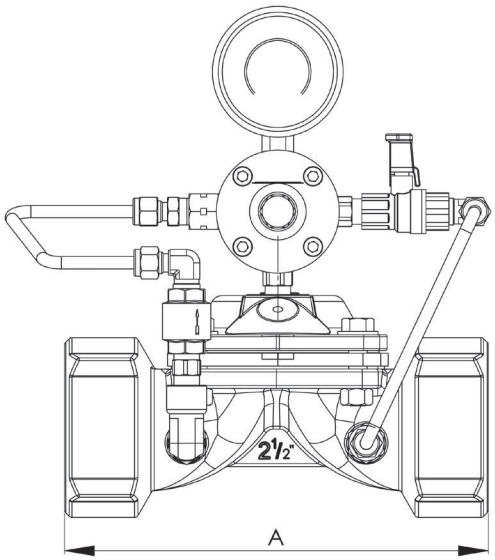
HYDRANT SYSTEMS
MODEL HY, HY\PR1

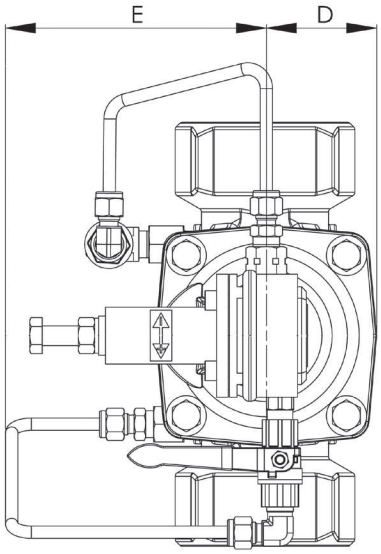
GENERAL ARRANGEMENT & DIMENSIONS

Valve	2"		2.5"		3"		4" (Flanged)	
	inch	mm	inch	mm	inch	mm	inch	mm
A	7 3/8	188	8 5/8	219	12 3/8	316	12	305
B	2	50	3	65	3 1/8	80	4	100
C	8 5/16	210	8 5/16	212	8 3/8	214	10 3/16	260
D	2 3/16	56	2 3/16	56	2 5/16	59	2 3/16	56
E	5 1/8	130	5 1/8	130	5 5/16	136	5 1/8	130

* Approximate dimensions for Model 44-HY\PR1







* General representation of valve

TYPICAL INSTALLATION

* Not all items pictured reflect products sold by OCV

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TECHNICAL DATA

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

Sizes:
- Straight Flow: 2″- 24″
- Lloyd's type approved sizes:
  Model 68 (Flanged): 2″ - 10″
  Model 77 (Flanged): 2″ - 24″
  Model 44 (Threaded): 1″ - 3″

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:
- 250 psi for Class #150
- 375 psi for Class #300
- Models 44 & 77: up to 16 bar / 230 psi
- Model 68: up to 25 bar / 375 psi

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

Trim Material:
- Bronze/Brass - Copper
- Stainless Steel
- Monel

Optional Components:
- Pressure Switch
- Limit Proximity Switch
- Upstream Drain Valve

Items to Specify:
- Electrical features other than standard (24VDC, IP65/NEMA4)
- If explosion proof accessories are required such as pressure switches, etc., please define classification
- Control trim material other than standard
- Required standards, certifications and approvals

ENGINEERING SPECIFICATIONS

The hydrant 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 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. The hydrant valve shall be fully trimmed, hydrostatically and operationally tested at the factory. 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. Main valve body and bonnet standard material shall be Ductile Iron or Cast Steel. Main valve body and bonnet surfaces shall include a fire red epoxy coating. Other materials and coatings available upon request. The hydrant valve shall be a Series 100 Model HY or HY\PR1, Lloyd's type approved.

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