

# TALIS FP RANGE



# TALIS FP RANGE

**TALIS is a leading global provider of premium valves, hydrants and control solutions for water flow control and Fire Protection Systems**

With a varied range of products, Talis Group offer comprehensive solutions for the entire Fire Protection valve cycle, from isolation to control, pressure management and service to hydrants. Our experience, innovative technology, global expertise and individual consultation process, form the basis for developing sustainable solutions for the fire protection systems. With over nine strong manufacturing brands, and 28 Global entities, with exceptionally strong presence in Europe TALIS is a solid supplier of valve technology.

## MARKET CHALLENGES

- Provide The Petrochemical, Oil & Gas, Offshore and Marine with its unique Special Hazard environment and Rapid Fire Spreads an array of advanced Fire Protection Control valve solutions.
- Reliable service in the most critical working conditions, and dependable availability at any time.
- Compatibility with both local and global regulations and standards, including Offshore and Marine classification agencies.



## TALIS ANSWERS

- The choice of materials, as well as the particularly severe tests to which we subject our products, allow us to guarantee their operation in even the most critical of environments and working conditions.
- Our products are compatible with the standards of the markets for which they are intended, and benefit from approvals and quality marks recognized in the world.



## BEFORE SALES

- Specification
- Custom solutions
- Design
- Technical studies

## AFTER SALES

- Commissioning
- Technical assistance
- Manufacturer warranty
- Asset management
- Spare parts



ООО «ТИ-СИСТЕМС» ИНЖИНИРИНГ И ПОСТАВКА ТЕХНОЛОГИЧЕСКОГО ОБОРУДОВАНИЯ

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Телефоны: +7 (495) 7774788, 7489626, (925) 5007155, 54, 65 Эл. почта: [info@tisys.ru](mailto:info@tisys.ru) [info@tisys.kz](mailto:info@tisys.kz) [info@tisys.by](mailto:info@tisys.by)

# Fire Protection Control Valve

TALIS FP Range valves are used for fixed fire suppression systems, in Petrochemical, Oil & Gas, Offshore and Marine, with water, foam and seawater based flow control, in manual or remote on-off applications. Especially designed to provide fail safe, Reliable solutions for suppression systems of Rapid Fire Spreads.

TALIS Fire Protection valves are elastomeric diaphragm type, open fail safe, streamlined, globe & angle pattern valves. Featuring direct resilient diaphragm seal, with no wetted spring or metallic wet moving parts inside the valve body. Talis FP Range valves operate with a patented reinforced diaphragm, which eliminates the need for a compensating metal spring. The special elastic design enables gradual and precise opening or drip tight smooth closing of the valve without vibration, preventing water hammer.

TALIS FP Range automatic control valves are designed for installation in horizontal or vertical position.



## ADVANTAGES

**Only three parts:** body, diaphragm & cover plate, no wet metal spring inside the control chamber. Full bore unobstructed.

**Simple automatic or manual reset** of FDV valve to standby position without draining or opening the valve itself, neither closing OS&Y or other valves in the system.

**250 psi (17 BAR) seal test 25.5 BAR** to DIN3230 ANSI FCI 70-2 CLASS VI Bubble-Tight.

**Protected Enclosure:** Optional Explosion Proof Enclosure according to ATEX/IEC/NEMA.

## CHARACTERISTICS

**FDV hydro-dynamic pattern design** ensures high flowrates with minimum head loss.

**Elastomeric direct seal diaphragm actuator**, being the only moving wet part of the FDV control chamber.

**Open fail safe valve maintained in stand-by closed position**, the valve trips open automatically upon release of water pressure from its control chamber. Soft and gradual, yet fast opening prevents water hammer. Opening speed of FDV valves can be controlled.

**Low maintenance cost**, the valve is serviced in-line, only one replaceable part, the long-life elastomeric diaphragm.

**Tested and approved for Fire testing**, according to ISO-6182:5

**Conforms with Inspection, Testing, and Maintenance Std.** of water-based Fire Protection Systems, NFPA 25.

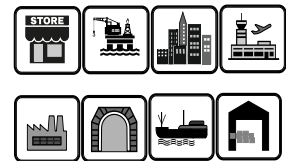


**Soft closing upon pressurization of FDV control chamber**, by line pressure or other independent water source, prevents surges. Closing speed of FDV valves can be controlled.

**FDV resets to stand-by close position** again by pressurizing its control chamber with system water.

All FDV valves are designed and built for **on/off and modulating applications**.

## MARKETS



## TECHNICAL DATA

### Fluid:

Water, Brackish water, Sea Water

### Size range:

40mm to 400mm (1 1/2" to 16")

### Available connection ends:

Flanged, Grooved, Threaded

### Nominal pressure:

250PSI (17.2 bar)

### Body material:

- Ductile iron ASTM A-536
- Cast Steel ASTM A-216 WCB
- Stainless Steel ASTM A-351 CF8
- Stainless Steel ASTM A-351 CF8M
- Nickel Aluminum Bronze B-148 C95800

### Fasteners material:

- Galvanized steel
- Stainless steel A-304 #A2
- Stainless steel A-316 #A4
- Nickel Alloy (seawater service)

### Coating:

- Rilsan Polyamid based (Nylon 11)
- Polyester based EPC
- High built Epoxy FBE
- Vitrious Enamel DIN3475 (internal only)

### Elastomers:

- NR, Fabric reinforced natural rubber
- EPDM, Fabric reinforced EPDM
- NBR, Fabric reinforced nitrile rubber

## APPROVALS



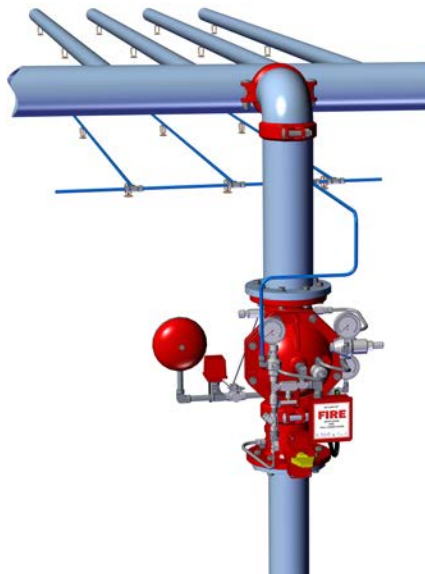
ООО «ТИ-СИСТЕМС» ИНЖИНИРИНГ И ПОСТАВКА ТЕХНОЛОГИЧЕСКОГО ОБОРУДОВАНИЯ

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## Deluge Systems

Used to protect against rapid fire spread in special hazard locations, deluge systems are used in fixed fire protection systems, to provide large volumes of water to an open head sprinkler system. Deluge systems are designed to operate in designated areas, applying water or foam solutions uniformly, until triggered off manually, through a local or remote command. A Deluge valve is located in the main riser of each deluge system, separating the water column from the open sprinkler systems, until commanded to open, locally or remotely. Commanded by Electric, Hydraulic, Pneumatic signals, or a combination of above, the FDV deluge valve will open gradually to provide large volumes of water with a minimum headloss.



## Monitor Systems



Used to protect against rapid fire spread in high risk areas, monitor systems are designed to provide large volumes of water to a target location, or a sector. Monitor systems are fast acting, versatile and can be set to extinguish fire by projecting water or foam solutions from large distances, either by manual or remote control devices.

A monitor valve is attached to each monitor to enable its operation. Controlled by Electric, Hydraulic or Pneumatic signals, the FDV-R Monitor valve can be controlled locally or remotely, according to the end user's needs. The valves are built to deliver fast response and large flows, with minimum headloss to the monitor system.

## Hydraulic Hydrants

Used to provide a connection interface from general purpose water systems to firefighting devices, providing large volumes of water. Hydrants are used to connect fire hoses, fire engines and other mobile extinguishing devices operated by fire fighters and fire brigades, to a water source. Hydraulic Hydrants, are hydraulically operated Hydrant valves, specifically designed to allow local and remote controlled opening of the Hydrant, with optional pressure control at the Hydrant's outlet.



## PRESSURE CONTROL VALVES

Used to manage and control water pressure levels, by creating differentiated pressure zones in water and foam fire extinguishing systems. Pressure Control valves are used to either reduce high pressure to a lower, preset desired pressure, or to limit maximum pressure from rising above a preset undesired pressure rate.

FDV-R Pressure control valves are hydraulically operated, pilot controlled, diaphragm valves, especially designed to reliably operate for many years, with minimum maintenance levels. FDV-R Pressure Control Valves include Pressure Reducing Valves and Fire Pump Pressure relief Valves.



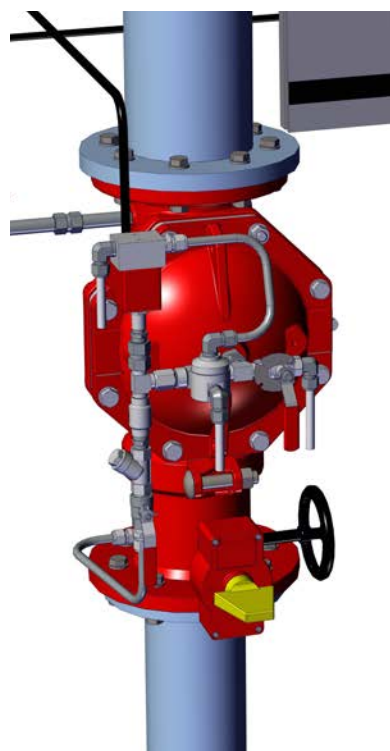
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## ISOLATION VALVES

Used to administrate the flow of water and foam solution to and from given locations. Isolation valves allow or prevent water flow, usually for maintenance or safety purposes, at specific sections of the fixed fire protection pipework, according to the variable needs.

For Safety reasons, Fire Protection Isolation valves are specifically designed to visually indicate their position. Built for long life and drip tight operation, the valves are designed for minimum headloss and low torque operation.

The range of Isolation valves include Centric Butterfly valves, resilient seated OS&Y, as well as Non rising stem Gate valves, in a variety of connection ends.



## On/Off Valves

### Remote Electric Actuated Monitor Valve

### FDV-R- ME1

The FDV-R-ME1 is an electric controlled On-Off Fire Protection Monitor valve, designed to control the opening and closing of fire Monitors, in special hazard fire protection systems. Assembled in horizontal or vertical position, the FDV-R-ME1 Monitor valve is commanded to open/close from a control panel or control room, by a solenoid valve. The Solenoid in turns, commands the valve by pressurizing or de-pressurizing the main valve's control chamber, enabling a quick and effortless operation

The globe pattern, line pressure operated FDV-R-ME1 valve, features a direct elastomeric diaphragm seal, with no balancing spring or internal metallic wet components in the valve body. The hydrodynamic pattern design, ensures high flow rates with minimum head loss.



#### MARKETS



Marine



P.O.G.



Airports



Industry



Storage

#### TECHNICAL DATA

##### FLUID:

Water, Brackish water, Sea water, Foam

##### SIZE RANGE:

50mm to 200mm (2" to 8")

##### AVAILABLE CONNECTIONS ENDS:

Flange\*Flange, Groove\*Groove,  
Thread\*Thread

##### PRESSURE NOMINAL:

250 psi (17.2 bar)

#### ADVANTAGES

- Only three parts: body, diaphragm & cover plate, no wet metal spring inside the control chamber
- 3 way control principle ensure fast and reliable opening
- Open fail safe valve in high ambient temperatures
- Maintained in stand-by closed position
- Low maintenance cost: the valve is serviced in-line and only one replaceable part - the long-life elastomeric diaphragm
- Conforms with inspection, Testing and Maintenance Standard of water-based Fire Protection Systems, NFPA 25

#### CHARACTERISTICS

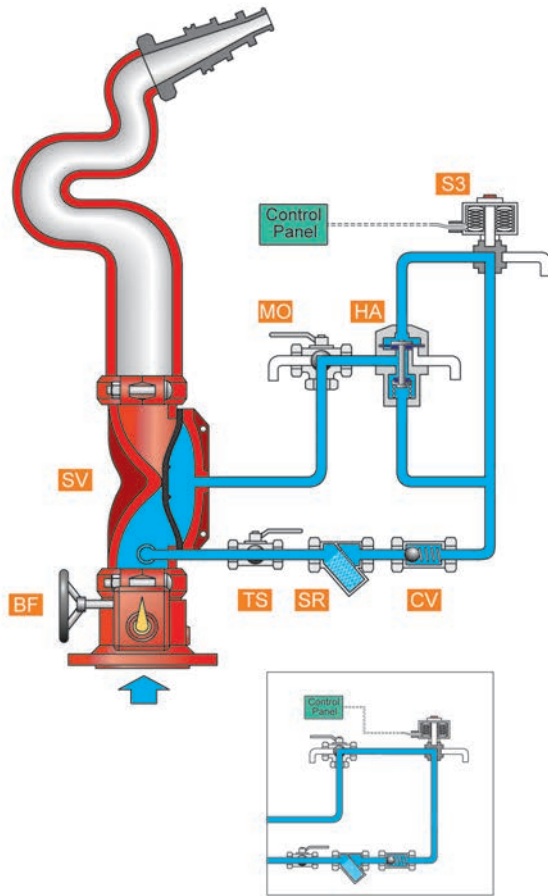
- Hydro-dynamic pattern design ensures high flowrates with minimum head loss
- The valve trips open automatically upon a gradual release of water pressure from its control chamber
- The trip is actuated by a solenoid (DN50 - DN100 valves) or indirectly, by a solenoid operating an actuator (DN150 - DN200 valves)
- Soft closing by controlled pressurization of the valve's control chamber, prevents surges

#### APPROVALS

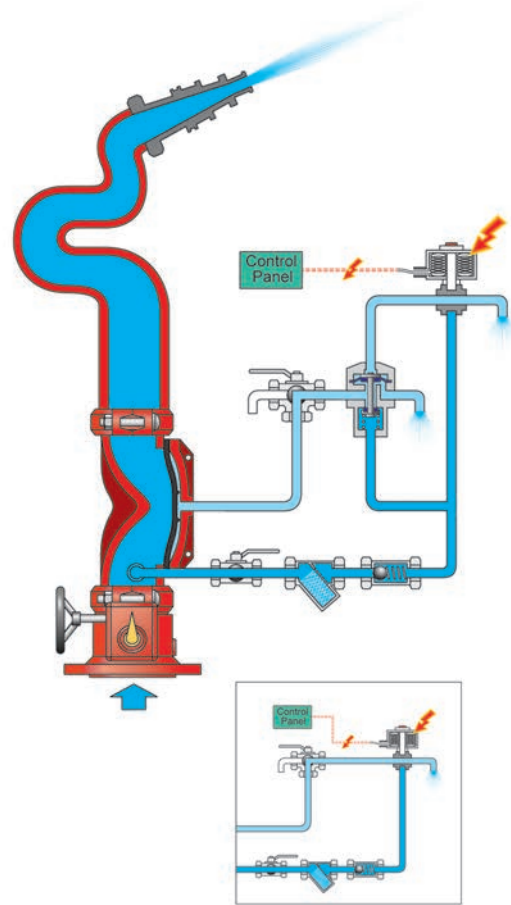


## Schematic drawing

### Set position



### Fire position



**SV** - FDV-R-Service Valve

**TS** - Trim supply valve

**SR** - "Y" strainer

**CV** - "Check valve

**S3** - Solenoid valve (3 way)

**MO** - Manual Operation valve (3 way)

**HA** - Hydraulic Actuator Valve (3 way)

**PF** - Butterfly valve

## OPERATION

### SET position

Pressurized water in the valve's control chamber (SV) is trapped by the Check Valve (CV), forces the valve's diaphragm against its seat and maintains the FDV-R valve close.

### FIRE situation

(DN50-DN100 valves) An electric signal transmitted, commands the 3 way solenoid valve (S3) to open and drain the FDV-R's control chamber. The valve opens and admits water to the monitor pipeline.

(DN150-DN200 valves) An electric signal transmitted, commands the 3 way solenoid valve (S3) to open and drain the Hydraulic actuator's control chamber. Consequently, the actuator change state and drains the FDV-R's Control Chamber. The valve opens and admits water to the monitor pipeline.

Opening the Manual Operation valve (MO), bypasses all term, drains the FDV-R's control chamber and opens the valve.

### RESET position

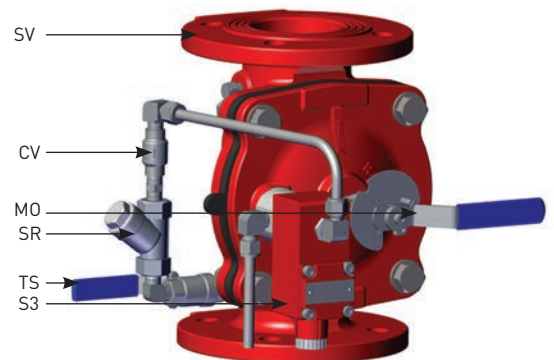
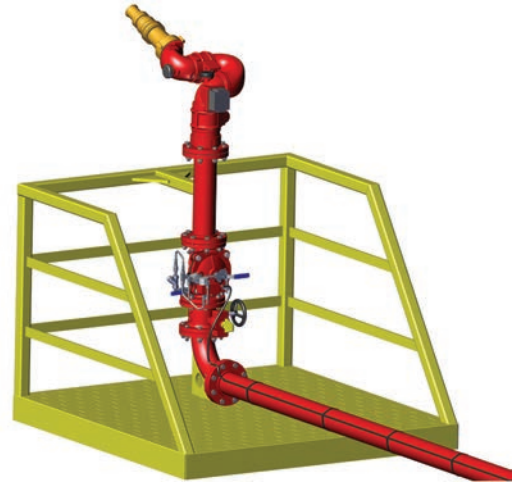
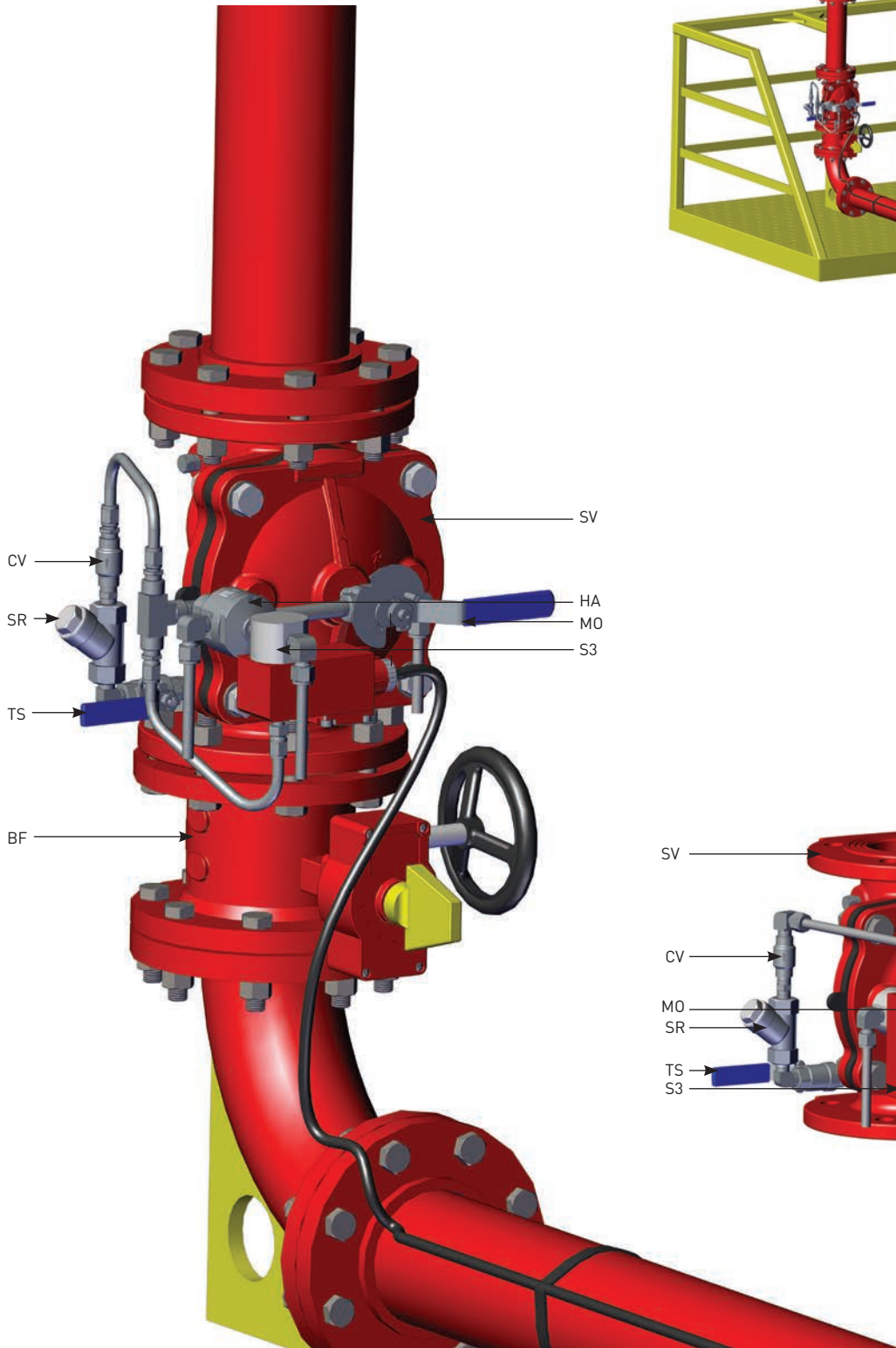
(DN50-DN100 valves) An electric signal transmitted, commands the 3 way solenoid valve (S3) to open and drain the FDV-R's control chamber. The valve opens and admits water to the monitor pipeline.

(DN150-DN200 valves) An electric signal transmitted, commands the 3 way solenoid valve (S3) to open and drain the Hydraulic actuator's control chamber. Consequently, the actuator change state and drains the FDV-R's Control Chamber. The valve opens and admits water to the monitor pipeline.

Opening the Manual Operation valve (MO), bypasses all term, drains the FDV-R's control chamber and opens the valve.

# FDV-R - ME1

## Typical installation



**SV** - FDV-R-Service Valve

**TS** - Trim supply valve

**SR** - "Y" strainer

**CV** - "Check valve

**S3** - Solenoid valve (3 way)

**MO** - Manual Operation valve (3 way)

**HA** - Hydraulic Actuator Valve (3 way)

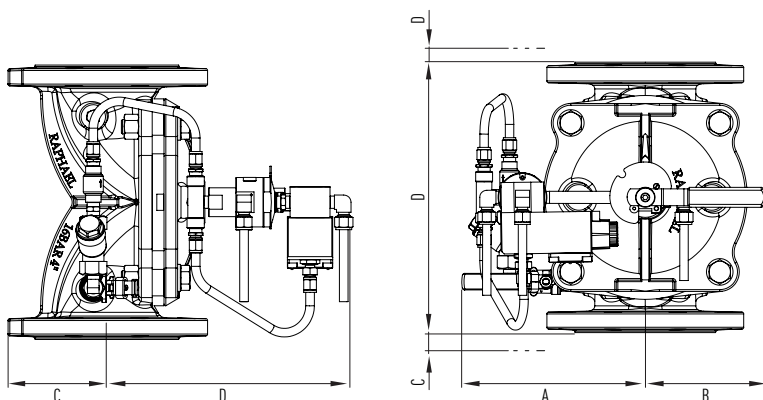
**PF** - Butterfly valve



## Dimensions Table

### Vertical

Size	2"		2.5"		3"		4"		6"		8"	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch
A	197	7.8	215	8.5	219	8.6	170	6.7	236	9.3	247	9.7
B	83	3.3	93	3.7	100	3.9	115	4.5	151	5.9	177	7
C	17	0.7	4	0.2	-	-	-	-	-	-	-	-
D	190	7.5	215	8.5	283	11.1	305	12	406	16	470	18.5
E	82	3.2	70	2.8	13	0.5	7	0.3	-	-	-	-
F	82	3.2	8.9	3.5	100	3.9	109	4.3	142	5.6	160	6.3
G	188	7.4	201	7.9	214	8.4	265	10.4	348	13.7	418	16.5
Kg/lb	10.2	22.5	12.6	27.8	19.2	42.3	25.5	56.2	51.4	113.3	68.8	151.7



### Factory Standard

#### MAIN VALVE:

##### BODY & COVER

- Ductile iron
- Cast Steel WCB
- Stainless Steel CF8
- Stainless Steel CF8M
- Nickel Aluminum Bronze

##### ELASTOMERS:

- NR, 3 layer reinforced natural rubber
- EPDM, 3 layer reinforced

##### COATING:

- Rilsan Polyamide based (Nylon 11)
- Polyester based EPC
- High built Epoxy FBE
- Vitreous Enamel (internal only)

#### TRIM

##### PIPING & TUBING:

- Stainless Steel 316
- Copper/Brass
- Cupro-Nickel
- Monel®

##### FITTINGS:

- Stainless Steel 316
- Brass
- Super Duplex
- Cupro-Nickel
- Monel®

##### ACCESSORIES:

- Brass Nickel plated
- Nickel Aluminium bronze
- Stainless steel CF8M
- Monel®
- Cupro-Nickel

#### PLEASE SPECIFY

- Working Media
- Ambiental conditions
- Min/Max operating flow
- Min/Max operating pressure
- Energize to Open/Close valve
- Solenoid Voltage
- Solenoid Enclosure
- Solenoid Protection
- System installation orientation
- Additional accessories needed

For more detailed technical information, please refer to chapter Engineering Data.

## On/Off Valves

### Local Hydraulic Actuated Monitor Valve

### FDV-R- MH0

The FDV-R-MH0 is a manually operated On-Off Fire Protection Monitor valve, designed to control the opening and closing of fire Monitors, in special hazard fire protection systems.

Assembled in horizontal or vertical position, the FDV-R-MH0 Monitor valve is locally commanded to open/close by a manual emergency valve that commands the main valve by pressurizing or de-pressurizing its control chamber, enabling a quick and effortless operation

The globe pattern, line pressure operated FDV-R-MH-0 valve, features a direct elastomeric diaphragm seal, with no balancing spring or internal metallic wet components in the valve body.

The hydrodynamic pattern design, ensures high flow rates with minimum head loss.

This valve can be supplied upon request in a PRV configuration, were the monitor's pressure is reduced, to satisfy the system's design.



#### MARKETS



Marine



P.O.G.



Airports



Industry



Storage

#### TECHNICAL DATA

##### FLUID:

Water, Brackish water, Sea water, Foam

##### SIZE RANGE:

50mm to 200mm (2" to 8")

##### AVAILABLE CONNECTIONS ENDS:

Flange\*Flange, Groove\*Groove,  
Thread\*Thread

##### PRESSURE NOMINAL:

250 psi (17.2 bar)

#### ADVANTAGES

- Only three parts: body, diaphragm & cover plate, no wet metal spring inside the control chamber
- 3 way control principle ensure fast and reliable opening
- Open fail safe valve in high ambient temperatures
- Maintained in stand-by closed position
- Low maintenance cost: the valve is serviced in-line and only one replaceable part - the long-life elastomeric diaphragm
- Conforms with inspection, Testing and Maintenance Standard of water-based Fire Protection Systems, NFPA 25

#### CHARACTERISTICS

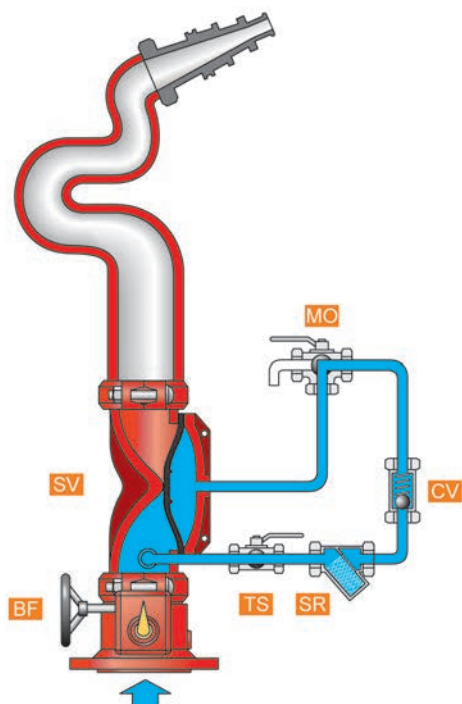
- Hydro-dynamic pattern design ensures high flowrates with minimum head loss
- The valve trips open by manually opening a 3 way ball valve and draining the valve's control chamber
- Closing the manual ball valve stops the control chamber's drainage and pressurizes it. By that, the monitor valve closes
- Soft closing controlled pressurization of the valve's control chamber, prevents surges

#### APPROVALS

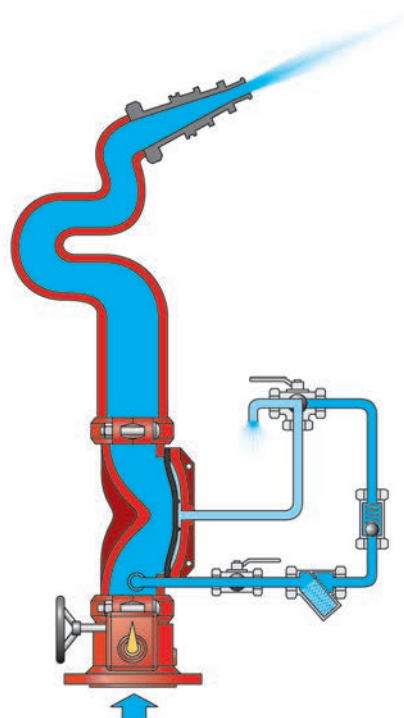


## Schematic drawing

### Set position



### Fire position



**SV** - FDV-R-Service Valve

**TS** - Trim supply valve

**SR** - "Y" strainer

**CV** - "Check valve

**MO** - Manual Operation valve (3 way)

**BF** - Butterfly valve

## OPERATION

### SET position

Pressurized water in the valve's control chamber (SV) is trapped by the Check Valve (CV), forces the valve's diaphragm against its seat and maintains the FDV-R valve close.

### FIRE situation

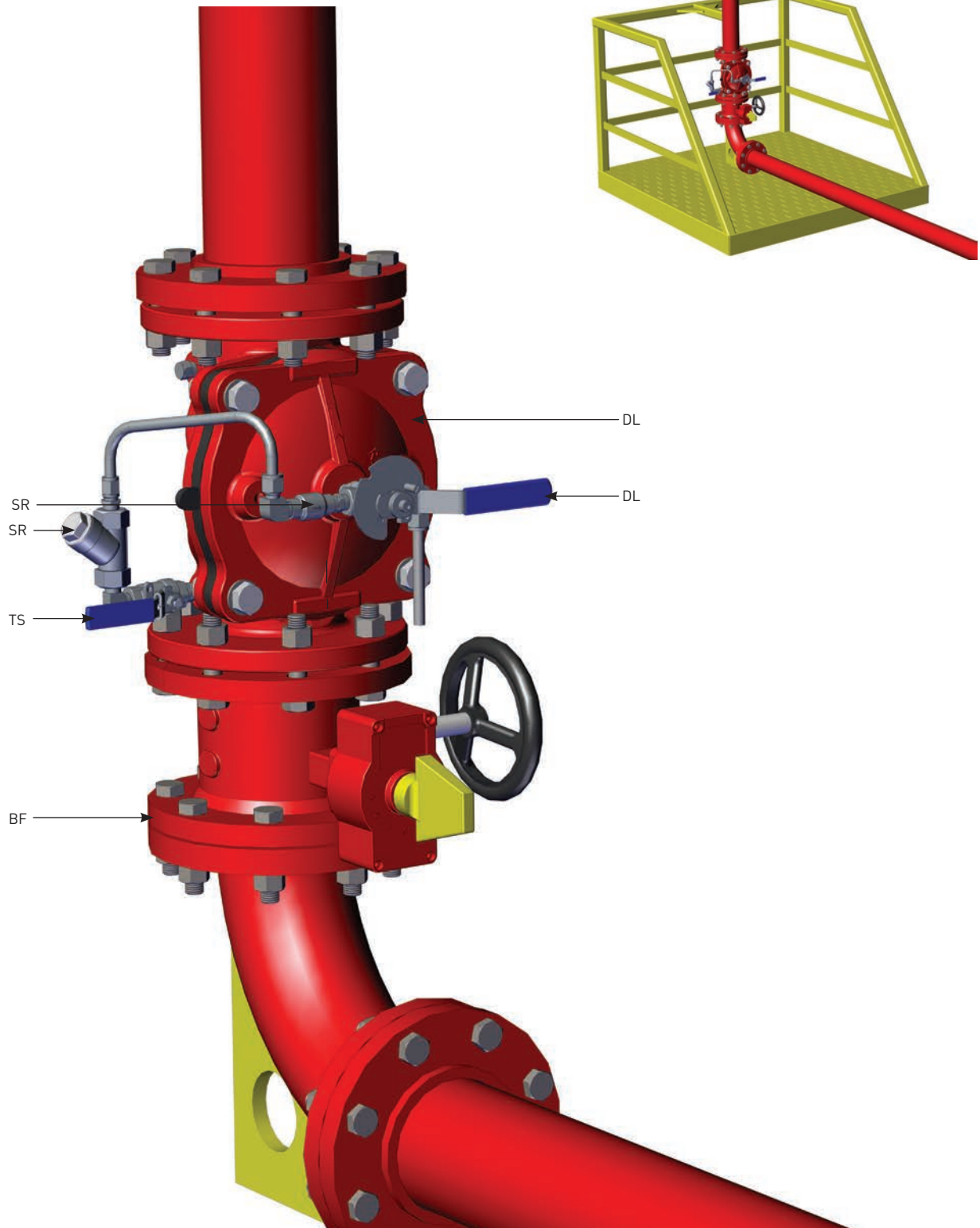
Opening the Manual Operation valve (MO), drains the FDV-R's control chamber and opens the valve.

### RESET position

Closing the Manual Operation valve, stops the FDV-R's control chamber drainage and admits upstream pressure and pressurizes it. Consequently, the valve's diaphragm is forced to its seat and the valve closes.

# FDV-R - MHO

## Typical installation



**SV** - FDV-R-Service Valve

**TS** - Trim supply valve

**SR** - "Y" strainer

**CV** - "Check valve

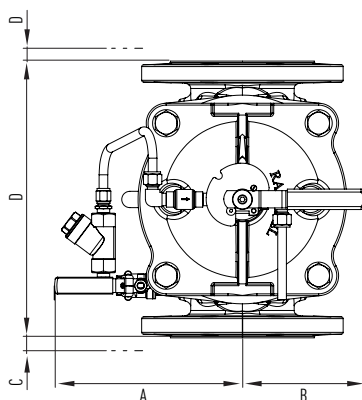
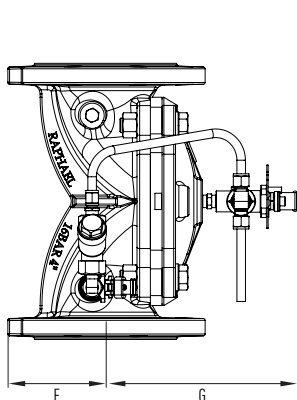
**MO** - Manual Operation valve (3 way)

**BF** - Butterfly valve

## Dimensions Table

### Vertical

Size	2"		2.5"		3"		4"		6"		8"	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch
A	196	7.7	204	8	212	8.3	231	9.1	282	11.1	283	11.1
B	82	3.2	93	3.7	100	3.9	111	4.4	158	6.2	178	7
C	16	0.6	7	0.3	-	-	-	-	-	-	-	-
D	190	7.5	215	8.5	283	11.1	305	12	406	16	470	18.5
E	8	0.3	-	-	-	-	-	-	-	-	-	-
F	82	3.2	89	3.5	100	3.9	109	4.3	142	5.6	160	6.3
G	187	7.4	201	7.9	214	8.4	233	9.2	288	11.3	356	14
Kg/lb	8.8	19.4	11.1	24.5	17.6	38.8	23.8	52.5	48.5	106.9	106.9	114.8



### Factory Standard

#### MAIN VALVE:

##### BODY & COVER

- Ductile iron
- Cast Steel WCB
- Stainless Steel CF8
- Stainless Steel CF8M
- Nickel Aluminum Bronze

##### ELASTOMERS:

- NR, 3 layer reinforced natural rubber
- EPDM, 3 layer reinforced

##### COATING:

- Rilsan Polyamide based (Nylon 11)
- Polyester based EPC
- High built Epoxy FBE
- Vitreous Enamel (internal only)

#### TRIM

##### PIPING & TUBING:

- Stainless Steel 316
- Copper/Brass
- Cupro-Nickel
- Monel®

##### FITTINGS:

- Stainless Steel 316
- Brass
- Super Duplex
- Cupro-Nickel
- Monel®

##### ACCESSORIES:

- Brass Nickel plated
- Nickel Aluminium bronze
- Stainless steel CF8M
- Monel®
- Cupro-Nickel

#### PLEASE SPECIFY

- Working Media
- Ambiental conditions
- Min/Max operating flow
- Min/Max operating pressure
- System installation orientation
- Additional accessories needed

For more detailed technical information, please refer to chapter Engineering Data.

## On/Off Valves

### Remote Hydraulic Actuated Monitor Valve

## FDV-R- MH1

The FDV-R-MH1 is a hydraulic controlled On-Off Fire Protection Monitor valve, designed to control the opening and closing of fire Monitors, in special hazard fire protection systems.

Assembled in horizontal or vertical position, the FDV-R-MH1 Monitor valve is commanded to open/close from a control panel or control room, by a hydraulic actuator. The actuator in turns, commands the valve by pressurizing or de-pressurizing the main valve's control chamber, enabling a quick and effortless operation.

The FDV-R-MH1 incorporates an emergency valve, bypassing all terms for a manual operation.

The globe pattern, line pressure operated FDV-R-MH1 valve features a direct elastomeric diaphragm seal, with no balancing spring or internal metallic wet components in the valve body. The hydrodynamic pattern design, ensures high flow rates with minimum head loss.



#### MARKETS



Marine



P.O.G.



Airports



Industry



Storage

#### TECHNICAL DATA

##### FLUID:

Water, Brackish water, Sea water, Foam

##### SIZE RANGE:

50mm to 200mm (2" to 8")

##### AVAILABLE CONNECTIONS ENDS:

Flange\*Flange, Groove\*Groove,  
Thread\*Thread

##### PRESSURE NOMINAL:

250 psi (17.2 bar)

#### ADVANTAGES

- Only three parts: body, diaphragm & cover plate, no wet metal spring inside the control chamber
- 3 way control principle ensure fast and reliable opening
- Open fail safe valve in high ambient temperatures
- Maintained in stand-by closed position
- Low maintenance cost: the valve is serviced in-line and only one replaceable part - the long-life elastomeric diaphragm
- Conforms with inspection, Testing and Maintenance Standard of water-based Fire Protection Systems, NFPA 25

#### CHARACTERISTICS

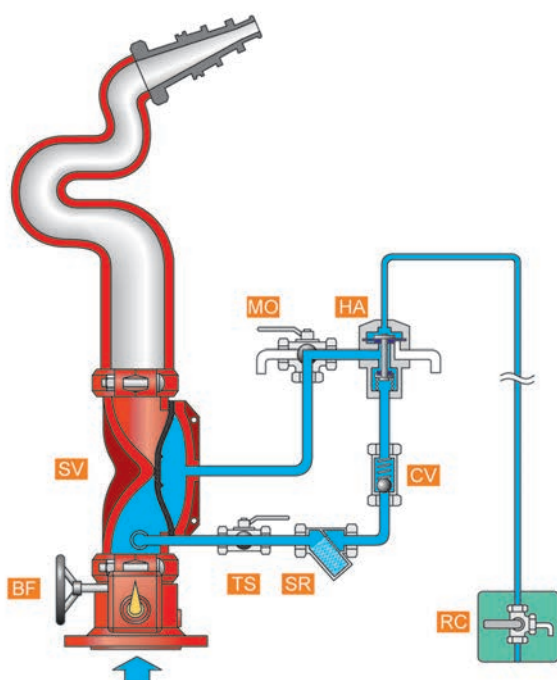
- Hydro-dynamic pattern design ensures high flowrates with minimum head loss
- The valve trips open automatically upon a gradual release of water pressure from its control chamber
- The trip is actuated by a hydraulic command pressure transferred by a pilot pipeline, operating a 3 way actuator
- Soft closing by controlled pressurization of the valve's control chamber, prevents surges

#### APPROVALS

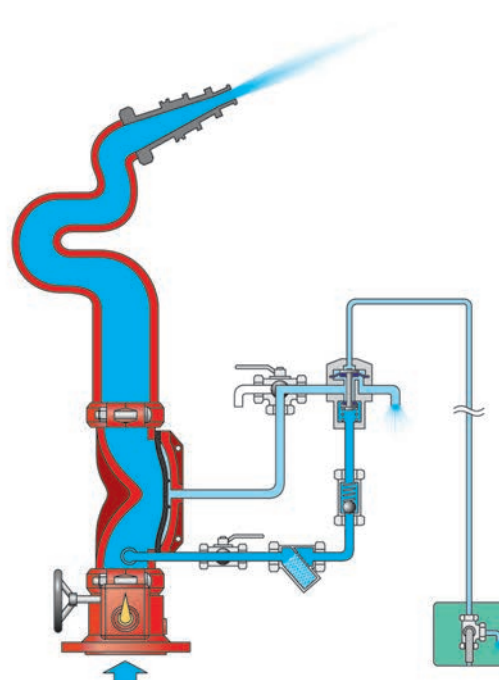


## Schematic drawing

### Set position



### Fire position



**SV** - FDV-R-Service Valve

**TS** - Trim supply valve

**SR** - "Y" strainer

**CV** - "Check valve

**MO** - Manual Operation valve (3 way)

**HA** - Hydraulic Actuator Valve (3 way)

**BF** - Butterfly valve

## OPERATION

### SET position

Pressurized water in the valve's control chamber (SV) is trapped by the Check Valve (CV), forces the valve's diaphragm against its seat and maintains the FDV-R valve close.

### FIRE situation

A remote hydraulic command transferred by a pilot pipeline, pressurizes the Hydraulic Actuator valve's control Chamber (HA).

Consequently, the actuator change state and drains the FDV-R's Control Chamber. The valve opens and admits water to the monitor pipeline.

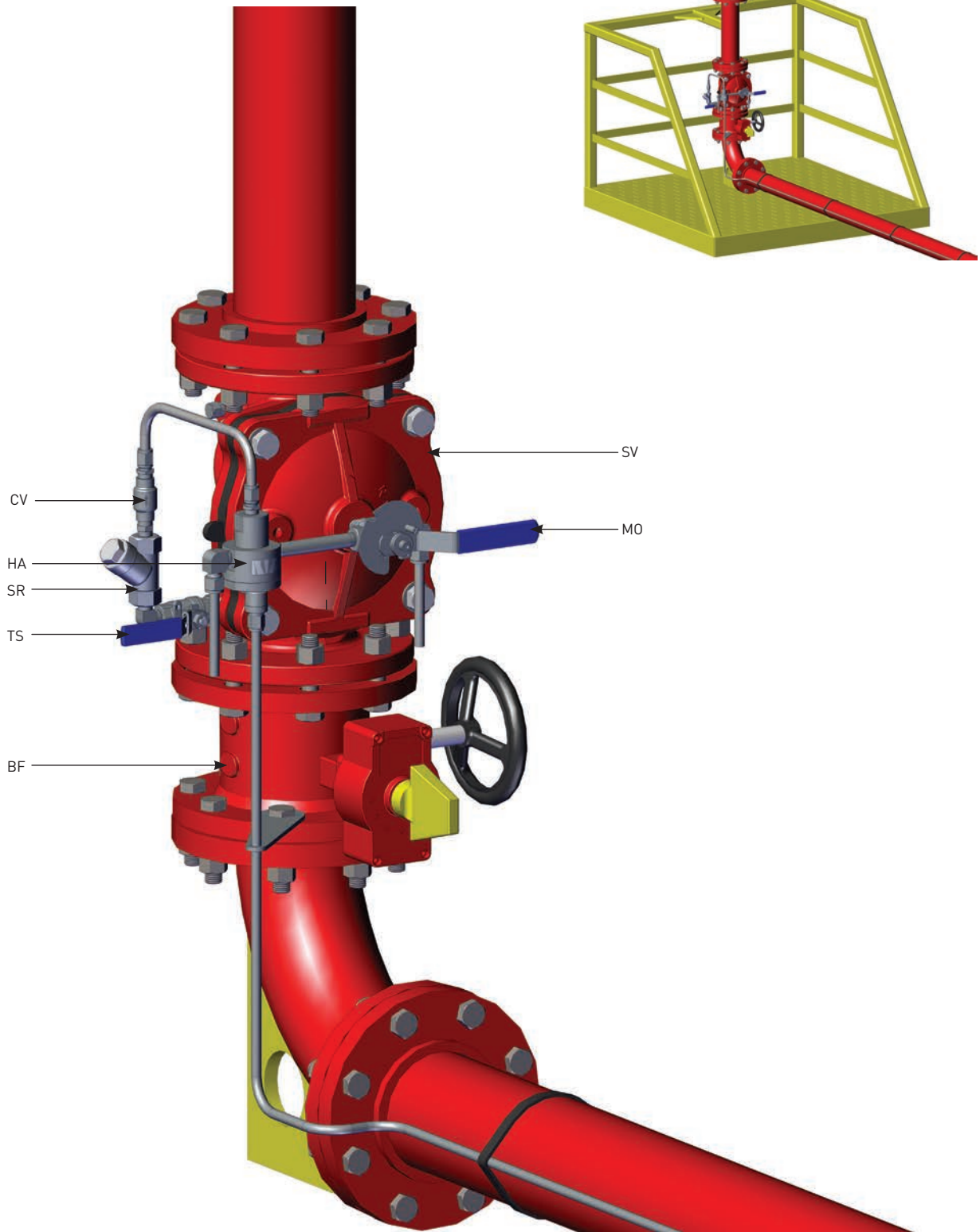
Opening the Manual Operation valve (MO), bypasses all term, drains the FDV-R's control chamber and opens the valve.

### RESET position

As the pilot pipeline command pressure drops, the Hydraulic Actuator stops the FDV-R's control chamber drainage, admits upstream pressure and pressurizes it. Consequently, the valve's diaphragm is forced to its seat and the valve closes.

# FDV-R - MH1

## Typical installation



**SV** - FDV-R-Service Valve

**TS** - Trim supply valve

**SR** - "Y" strainer

**CV** - "Check valve

**MO** - Manual Operation valve (3 way)

**HA** - Hydraulic Actuator Valve (3 way)

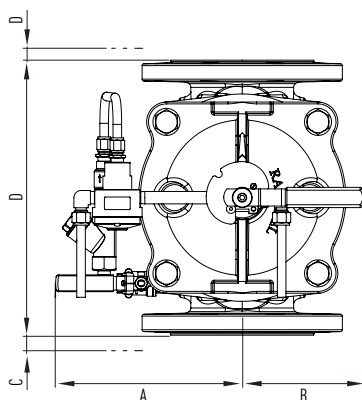
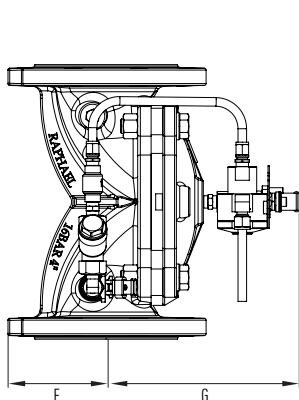
**BF** - Butterfly valve



## Dimensions Table

### Vertical

Size	2"		2.5"		3"		4"		6"		8"	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch
A	196	7.72	204	8.03	212	8.35	232	9.13	216	8.51	242	9.53
B	82	3.23	93	3.66	100	3.94	11	0.43	142	5.59	177	7.01
C	18	0.71	4	0.16	-	-	-	-	-	-	-	-
D	190	7.48	215	8.46	283	11.14	305	12.01	406	16.0	470	18.51
E	90	3.54	77	3.03	13	0.51	-	-	-	-	-	-
F	82	3.23	89	3.50	106	4.17	109	4.29	142	5.59	160	6.30
G	188	7.40	202	7.95	208	8.19	232	9.13	288	11.34	356	14.02
Kg/lb	9.9	21.8	12.3	27.2	18.8	41.5	24.9	54.9	49.4	108.9	66.7	147



### Factory Standard

#### MAIN VALVE:

##### BODY & COVER

- Ductile iron
- Cast Steel WCB
- Stainless Steel CF8
- Stainless Steel CF8M
- Nickel Aluminum Bronze

##### ELASTOMERS:

- NR, 3 layer reinforced natural rubber
- EPDM, 3 layer reinforced

##### COATING:

- Rilsan Polyamide based (Nylon 11)
- Polyester based EPC
- High built Epoxy FBE
- Vitreous Enamel (internal only)

#### TRIM

##### PIPING & TUBING:

- Stainless Steel 316
- Copper/Brass
- Cupro-Nickel
- Monel®

##### FITTINGS:

- Stainless Steel 316
- Brass
- Super Duplex
- Cupro-Nickel
- Monel®

##### ACCESSORIES:

- Brass Nickel plated
- Nickel Aluminium bronze
- Stainless steel CF8M
- Monel®
- Cupro-Nickel

#### PLEASE SPECIFY

- Working Media
- Ambiental conditions
- Min/Max operating flow
- Min/Max operating pressure
- System installation orientation
- Additional accessories needed

For more detailed technical information, please refer to chapter Engineering Data.

# Hydraulic Hydrants

## Hydraulic Actuated pressure reduction Hydrant Valve

## FDV-Ra- HHP

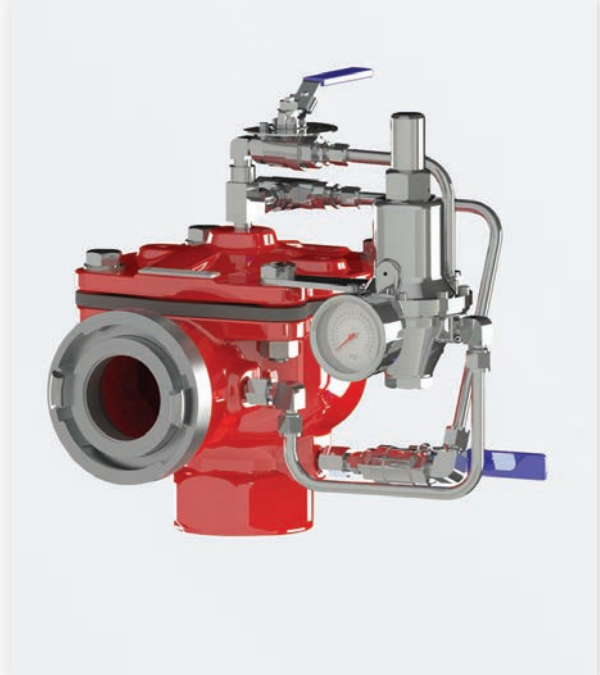
The FDV-R-HHP is a hydraulic controlled On-Off Fire Hydrant, designed to connect a pressurized fixed water supply network to a mobile extinguishing unit, through a fire brigade's quick coupling adapter.

Mounted on a breakage device or directly onto a standpipe, the FDR-R-HHP Hydraulic Hydrant is locally commanded to open/close by a manual emergency valve.

The manual emergency valve commands by pressurizing or de-pressurizing the Hydraulic Hydrant's control chamber, enabling a quick and effortless operation of the Hydraulic Hydrant.

Once commanded to open, the FDR-R-HHP valve acts as a pressure reducing valve, reducing the inlet water pressure to a pre-set desired outlet pressure. The outlet pressure is maintained constant regardless of fluctuations in flow rate and changes in main pipeline pressure.

Designed for vertical installation, the Angle pattern, line pressure operated FDV-R-HHP Hydraulic Hydrant features a direct elastomeric diaphragm seal with no balancing spring or internal metallic wet components in the valve body. The hydrodynamic pattern design ensures high flow rates with minimum head loss.



### MARKETS



Marine



P.O.G.



Airports



Industry



Storage



Tunnels

### TECHNICAL DATA

#### FLUID:

Water, Brackish water, Sea water

#### SIZE RANGE:

50mm to 200mm (2" to 8")

#### AVAILABLE CONNECTIONS ENDS:

Flange\*Hose Coupling, Groove\*Hose Coupling,  
Thread\*Hose Coupling

#### PRESSURE NOMINAL:

250 psi (17.2 bar)

#### REGULATION RATIO:

5:1

#### SENSITIVITY:

1.45 psi (0.1 Bar)

#### ACCESSORIES UPON REQUEST

Pressure gauge, Stand pipe, Breakage device

### ADVANTAGES

- Only three parts: body, diaphragm & cover plate, no wet metal spring inside the control chamber
- 3 way control principle ensure fast and reliable opening
- Open fail safe valve in high ambient temperatures
- Maintained in stand-by closed position
- Low maintenance cost: the valve is serviced in-line and only one replaceable part - the long-life elastomeric diaphragm
- Conforms with inspection, Testing and Maintenance Standard of water-based Fire Protection Systems, NFPA 25

Upon request:

A large selection of stand pipes, offered in various sizes, materials and coatings.  
A brakeage device for water outlet prevention, in case of mechanical damage.

### CHARACTERISTICS

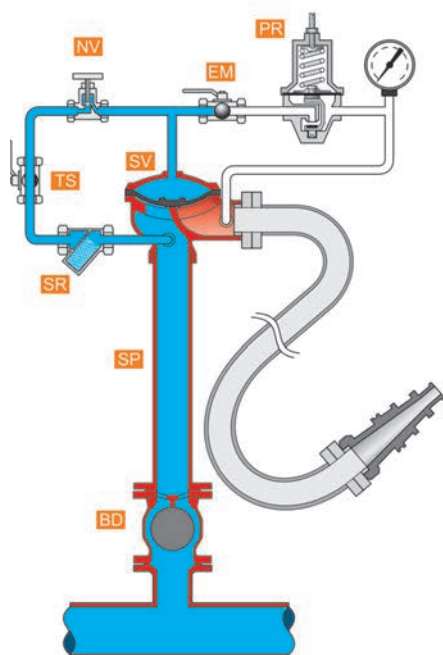
- Hydro-dynamic pattern design ensures high flowrates with minimum head loss
- Simple and reliable design
- Quick respond and fast opening of the valve at emergency situation
- Pressure reducing to a predetermined set of outlet pressure

### APPROVALS

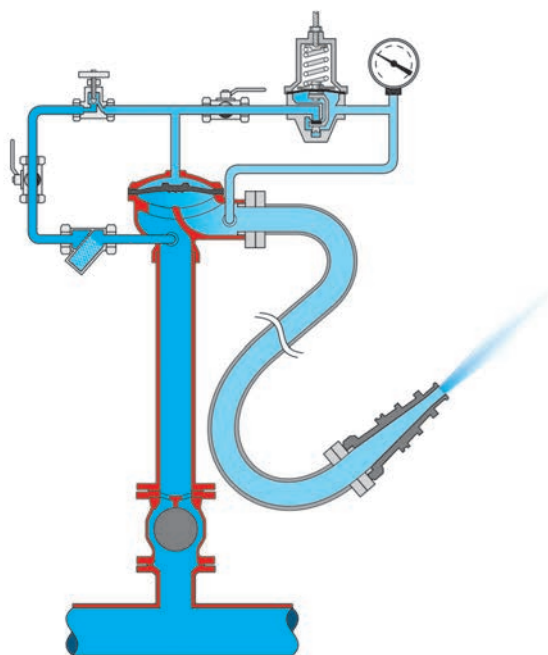


## Schematic drawing

### Set position



### Fire position



**PR** - PRDV-pressure reducing pilot vane

**EM** - Manual Operation valve (2 way)

**NV** - Needle valve

**TS** - Trim supply valve

**SR** - Strainer

**SV** - FDV-R Valve

**SP** - Standpipe

**BD** - Breakage device

## OPERATION

### SET position

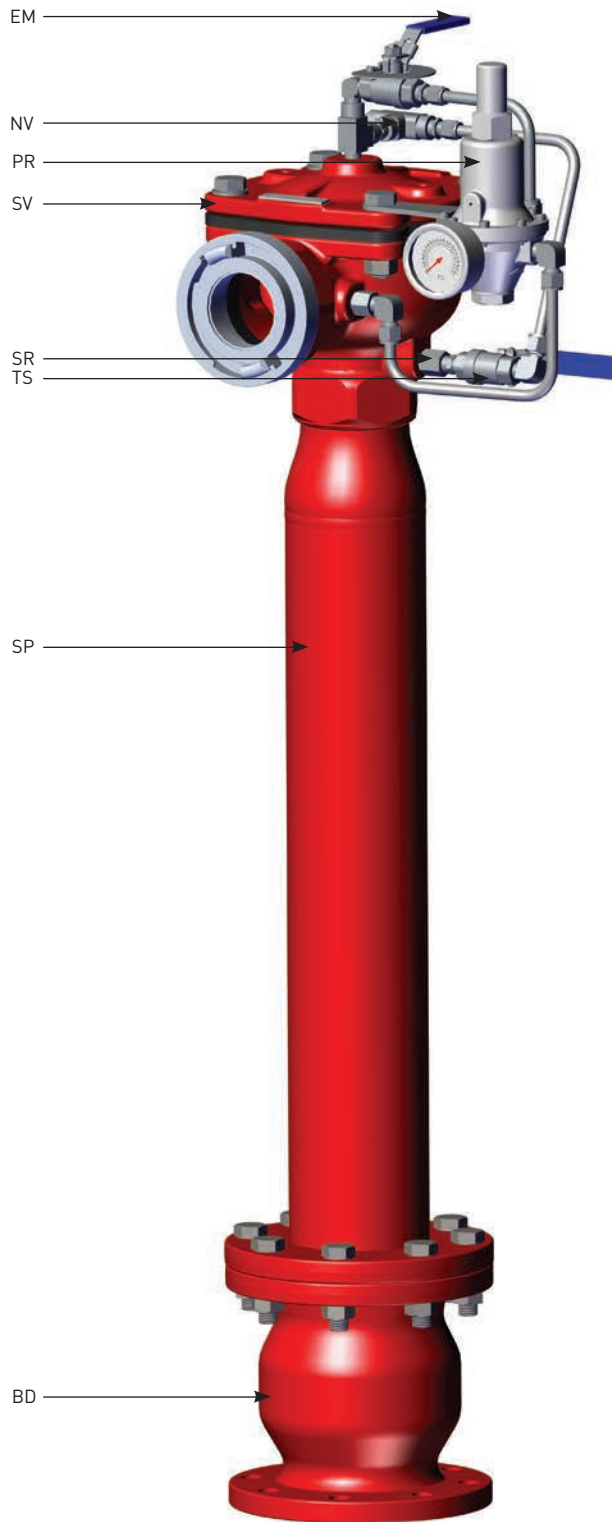
Pressurized water in the valve's control chamber (SV) is trapped by the 2 way manual emergency valve (MO), forces the valve's diaphragm against its seat and maintains the FDV-Ra valve close.

### FIRE situation

Opening the Emergency Manual Operation valve (EM), drains the FDV-Ra's control chamber through the pressure reducing pilot (PR) and opens the valve, maintaining a fixed outlet set pressure.

# FDV-Ra- HHP

## Typical installation



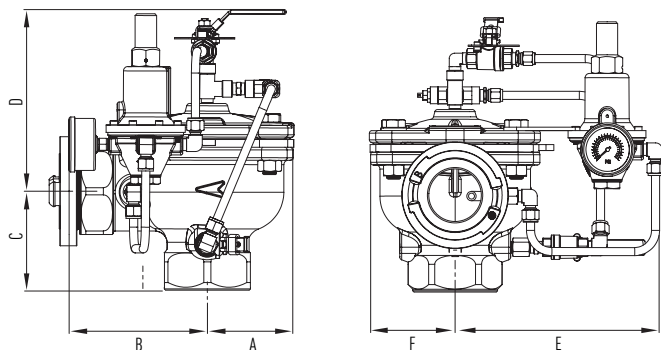
**PR** - PRDV-pressure reducing pilot vane  
**EM** - Manual Operation valve (2 way)  
**NV** - Needle valve

**TS** - Trim supply valve  
**SR** - Strainer  
**SV** - FDV-R Valve

**SP** - Standpipe  
**BD** - Breakage device

## Dimensions Table

Size	2"		3"		4"		6"		8"	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch
A	98	3.9	100.0	3.9	107.0	4.2	136.0	5.4	175.0	6.9
B	92	3.6	149.0	5.9	175.0	6.9	212.0	8.3	221.0	8.7
C	83	3.3	114.0	4.5	108.0	4.3	142.0	5.6	169.0	6.7
D	178	7.0	210.0	8.3	227.0	8.9	284.0	11.2	348.0	13.6
E	210	8.3	245.0	9.6	257.0	10.1	303.0	11.9	328.0	12.9
F	63	2.5	101.0	4.0	114.0	4.5	151.0	5.9	179.0	7.0
Kg/lb	8.5	18.7	17.0	37.4	28.0	61.6	50.0	110.0	74.0	162.8



## Factory Standard

### MAIN VALVE:

#### BODY & COVER

- Ductile iron
- Cast Steel WCB
- Stainless Steel CF8
- Stainless Steel CF8M
- Nickel Aluminum Bronze

#### ELASTOMERS:

- NR, 3 layer reinforced natural rubber
- EPDM, 3 layer reinforced

#### COATING:

- Rilsan Polyamide based (Nylon 11)
- Polyester based EPC
- High built Epoxy FBE
- Vitreous Enamel (internal only)

### TRIM

#### PIPING & TUBING:

- Stainless Steel 316
- Copper/Brass
- Cupro-Nickel
- Monel®

#### FITTINGS:

- Stainless Steel 316
- Brass
- Super Duplex
- Cupro-Nickel
- Monel®

#### ACCESSORIES:

- Brass Nickel plated
- Nickel Aluminium bronze
- Stainless steel CF8M
- Monel®
- Cupro-Nickel

### PLEASE SPECIFY

- Working Media
- Ambiental conditions
- Min/Max operating flow
- Min/Max operating pressure
- Downstream set pressure
- Hose Connection type
- Additional needed accessories

For more detailed technical information, please refer to chapter Engineering Data.

## Basic Deluge systems

### Electric Actuated with Remote Reset Deluge Valve

### FDV - AE1

The FDV-AE1 is a Fire Protection control valve for Deluge fire sprinkler systems, designed for installations in hazardous environments.

The FDV-AE1 Deluge system actuates electrically and resets remotely.

The sensors connected to the fire detection Panel, activate an electric signal transmitted to a solenoid valve and commands the valve to open.

The Deluge system incorporates an emergency valve, bypassing the fire detection panel for manual operation. Designed for vertical or horizontal installation, a globe pattern, line pressure operated FDV-AE1 valve features a direct elastomeric diaphragm seal. It has no balancing spring or internal metallic wet components in the valve body. The hydrodynamic pattern design, ensures high flow rates with minimum head loss.



#### MARKETS



P.O.G.



Marine



Air ports



Tunnels



Storage

#### TECHNICAL DATA

##### FLUID:

Water, Brackish water, Sea water, Foam

##### SIZE RANGE:

40mm to 250mm (1½" to 10")

##### AVAILABLE CONNECTIONS ENDS:

Flange\*Flange, Groove\*Groove,  
Flange\*Groove, Groove\*Flange,  
Thread\*Thread

##### PRESSURE NOMINAL:

250 psi (17.2 bar)

#### APPROVALS



#### ADVANTAGES

- Only three parts: body, diaphragm & cover plate, no wet metal spring inside the control chamber
- Full bore unobstructed
- Simple reset of the valve to standby position without draining or opening the valve itself, neither closing OS&Y or other valves in the system Open
- Open fail safe valve, maintained in stand-by closed position
- Low maintenance cost: the valve is serviced in-line and only one replaceable part which is long life elastomeric diaphragm
- Conforms with inspection, testing and maintenance standard of water-based fire protection systems, NFPA 25

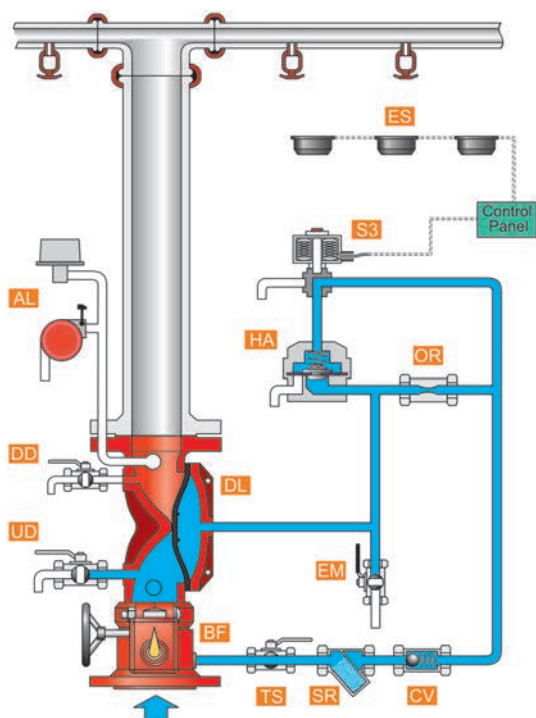
#### CHARACTERISTICS

- Hydro-dynamic pattern design ensures high flowrates with minimum head loss
- The valve trips open automatically upon a gradual release of water pressure from its control chamber when electric signal is conveyed to the valve's solenoid
- Soft closing upon pressurization of the valve's control chamber, by line pressure or other independent water source to prevents surges

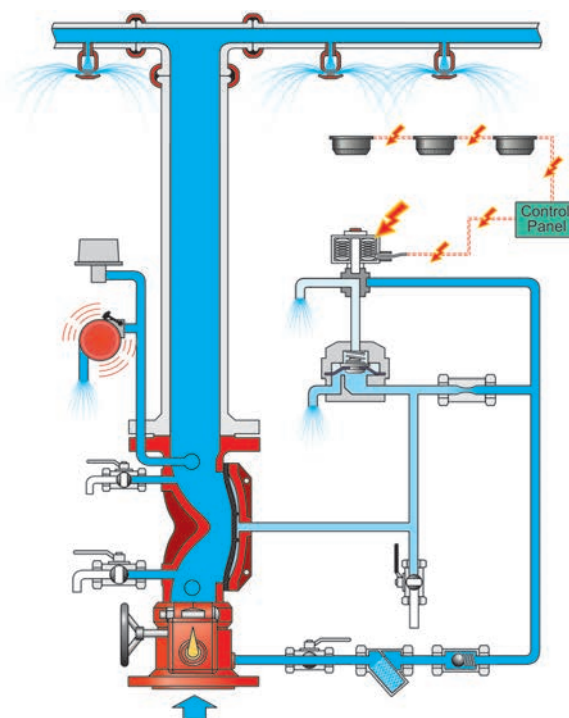
The FDV-AE1 resets to stand-by close position by de-energizing the alarm system solenoid's coil through the main control panel.

## Schematic drawing

### Set position



### Fire position



**BF** - Butterfly valve

**DL** - FDV Deluge valve

**AL** - Acoustic & Electric alarms

**TS** - Trim supply valve

**SR** - "Y" strainer

**CV** - Check valve

**OR** - Orifice

**TV** - Alarm test valve

**EM** - Emergency valve

**HA** - HAV-2 – Hydraulic Actuator Valve (2 way)

**S3** - Solenoid 3 way

## OPERATION

### SET position

Pressurized water in the valve's control chamber is trapped by the check-valve (CV), by the closed HAV-2 actuator (HA) and by the closed emergency valve (EM), maintaining the deluge valve in closed position.

The 3 way solenoid pressurizes the HAV-2, holding it in its close position.

### FIRE situation

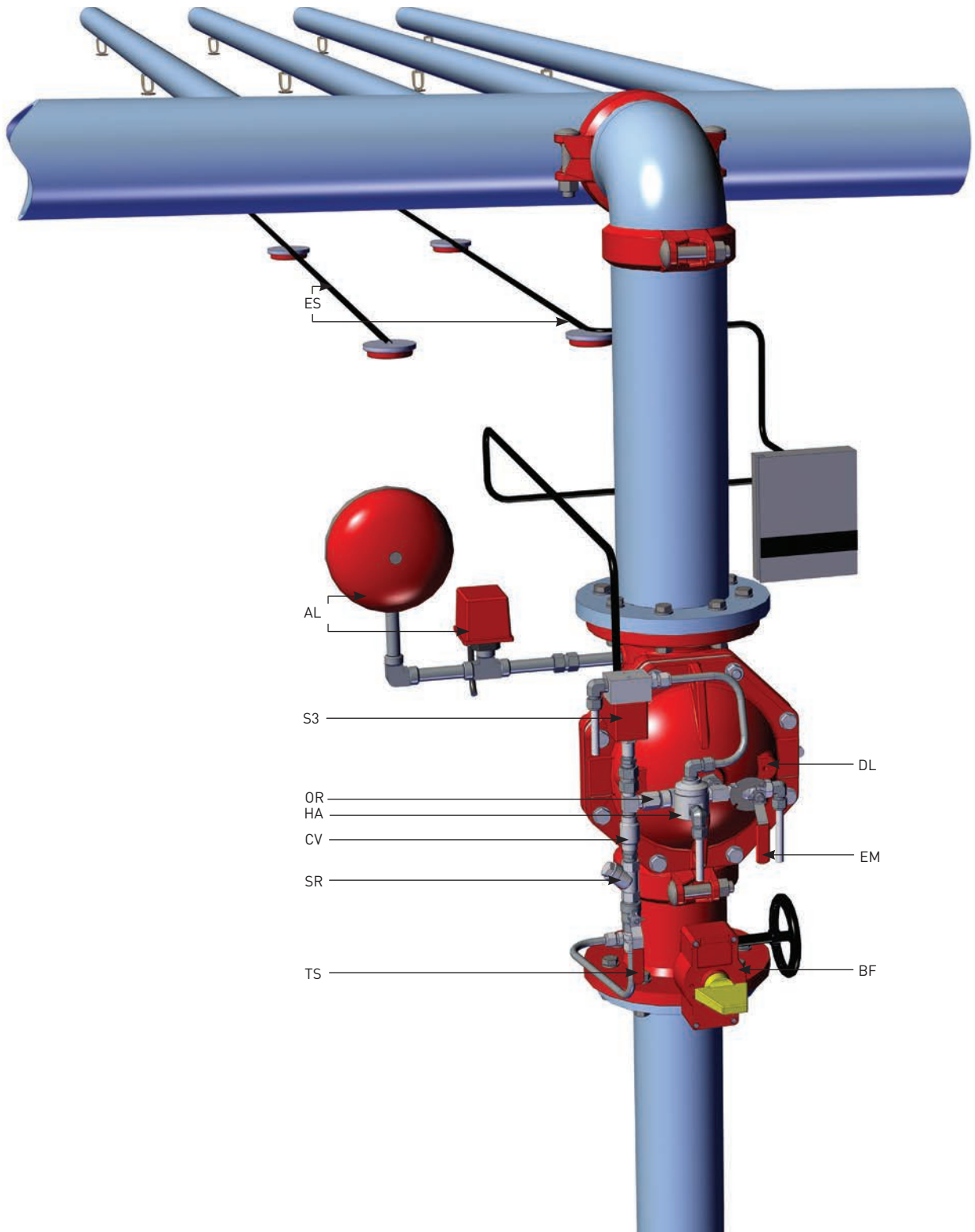
When one or more of the electric heat or flame sensor detects fire, it signals the control panel that in turns, energizes the 3 way solenoid (S3). The solenoid commands the HAV-2 to open and the actuator drains the FDV's control chamber to the atmosphere. The FDV deluge valve opens and water flow into the spray sprinklers pipe line. It manually opening the Emergency valve (EM), drains the FDV control chamber and open the valve immediately.

### RESET position

When the control panel de-energizes the solenoid, the upstream supply pressurizes the HAV-2's control chamber, commanding it to close. The upstream pressure flows through the orifice (OR) to the FDV valve's control chamber and the valve closes, returning to Set position.

# FDV - AE1

## Typical installation



**BF** - Butterfly valve

**DL** - FDV Deluge valve

**AL** - Acoustic & Electric alarms

**TS** - Trim supply valve

**SR** - "Y" strainer

**CV** - Check valve

**OR** - Orifice

**TV** - Alarm test valve

**EM** - Emergency valve

**HA** - HAV-2 - Hydraulic Actuator Valve (2 way)

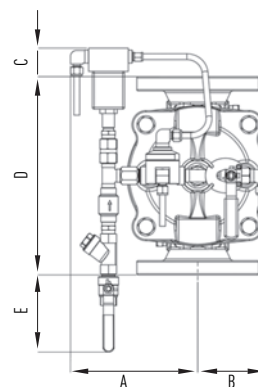
**S3** - Solenoid 3 way



## Dimensions Table

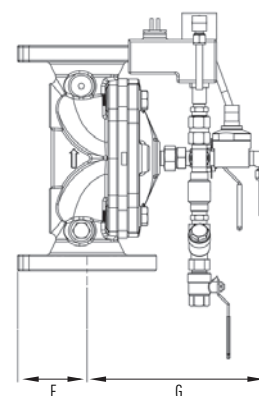
### Vertical

Size	1 1/2" 2"		3"		4"		6"		8"	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch
A	209	8.3	208	8.2	208	8.2	209	8.2	251	9.9
B	165	6.5	165	6.5	165	6.5	194	7.6	-	-
C	96	3.8	47	1.8	7	0.3	-	-	-	-
D	224	8.8	325	12.8	400	15.7	462	18.2	580	22.8
E	178	7	126	5	91	3.6	61	2.4	-	-
F	74	2.9	92	3.6	113	4.5	143	5.7	174	6.8
G	242	9.5	272	10.7	295	11.6	367	14.5	397	15.7
Kg/lb	14	30.8	26.4	50.2	43.2	95.2	61.8	136.2	101.2	223.1



### Horizontal

Size	1 1/2" 2"		3"		4"		6"		8"	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch
A	221	8.7	223	8.8	231	9	219	8.6	326	12.8
B	167	6.6	172	6.8	204	8	223	8.8	277	10.9
C	96	3.8	47	1.8	7	0.3	-	-	-	-
D	224	8.8	325	12.8	400	15.7	462	18.2	580	22.8
E	178	7	126	5	91	3.6	61	2.4	-	-
F	74	2.9	92	3.6	113	4.5	143	5.6	164	6.4
G	242	9.5	271	10.7	305	12	368	14.5	398	15.7
Kg/lb	14	30.8	26.4	58.2	43	94.8	61.6	135.8	101.3	223.3



## Factory Standard

### MAIN VALVE:

#### BODY & COVER

- Ductile iron
- Cast Steel WCB
- Stainless Steel CF8
- Stainless Steel CF8M
- Nickel Aluminum Bronze

#### ELASTOMERS:

- NBR, 3 layer reinforced natural rubber
- EPDM, 3 layer reinforced

#### COATING:

- Rilsan Polyamide based (Nylon 11)
- Polyester based EPC
- High built Epoxy FBE
- Vitreous Enamel (internal only)

### TRIM

#### PIPING & TUBING:

- Stainless Steel 316
- Copper/Brass
- Cupro-Nickel
- Monel®

#### FITTINGS:

- Stainless Steel 316
- Brass
- Super Duplex
- Cupro-Nickel
- Monel®

#### ACCESSORIES:

- Brass, Nickel plated
- Nickel Aluminium bronze
- Stainless steel CF8M
- Monel®
- Cupro-Nickel

### PLEASE SPECIFY

- Working Media
- Ambiental conditions
- Min/Max operating flow
- Min/Max operating pressure
- Energize to Open/Close valve
- Solenoid Voltage
- Solenoid Protection
- System installation orientation
- Additional accessories needed

For more detailed technical information, please refer to chapter Engineering Data.

## Basic Deluge systems

### Hydraulic Actuated with Remote Reset Deluge Valve

## FDV - AH1

The FDV is a Fire Protection control valve for Deluge fire sprinkler systems, designed for installations in hazardous environments.

The FDV-AH1 Deluge system actuates hydraulically and resets remotely. When a Wet Pilot detection line is exposed to flame or heat, the automatic fire sprinklers shatter-open. The water pressure in the detection line drops and commands the deluge valve to open.

The Deluge system incorporates an emergency valve, bypassing the fire detection systems for manual operation. Designed for vertical or horizontal installation, a globe pattern, line pressure operated FDV-AH1 valve features a direct elastomeric diaphragm seal. It has no balancing spring or internal metallic wet components in the valve body. The hydrodynamic pattern design, ensures high flow rates with minimum head loss.



#### MARKETS



Marine



P.O.G.



Airports

#### TECHNICAL DATA

##### FLUID:

Water, Brackish water, Sea water, Foam

##### SIZE RANGE:

40mm to 250mm (1½" to 10")

##### AVAILABLE CONNECTIONS ENDS:

Flange\*Flange, Groove\*Groove,  
Flange\*Groove, Groove\*Flange,  
Thread\*Thread

##### PRESSURE NOMINAL:

250 psi (17.2 bar)

#### APPROVALS



#### ADVANTAGES

- Only three parts: body, diaphragm & cover plate, no wet metal spring inside the control chamber
- Full bore unobstructed
- Simple reset of the valve to standby position without draining or opening the valve itself, neither closing OS&Y or other valves in the system
- Open fail safe valve, maintained in stand-by closed position
- Low maintenance cost: the valve is serviced in-line with only one replaceable part which is long life elastomeric diaphragm Conforms with inspection, Testing
- Conforms with inspection, testing and maintenance standard of water-based fire protection systems, NFPA 25

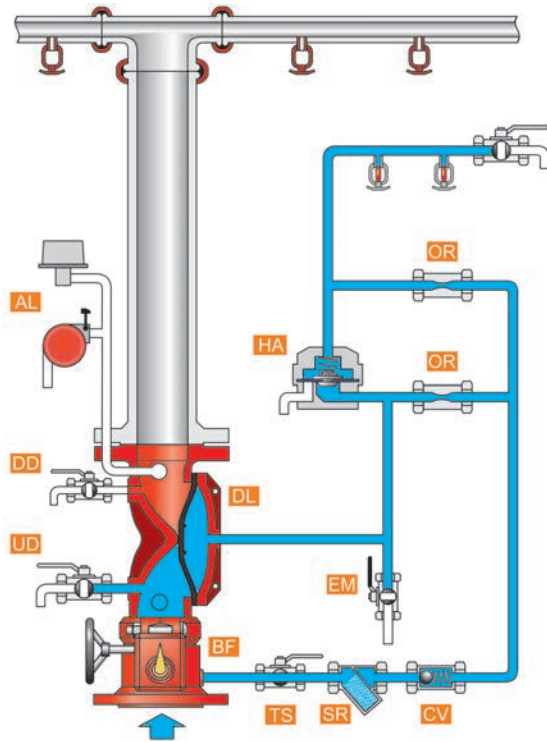
#### CHARACTERISTICS

- Hydro-dynamic pattern design ensures high flowrates with minimum head loss
- The valve trips open automatically upon a gradual release of water pressure from its control chamber when electric signal is conveyed to the valve's solenoid
- Soft closing upon pressurization of the valve's control chamber, by line pressure or other independent water source to prevents surges

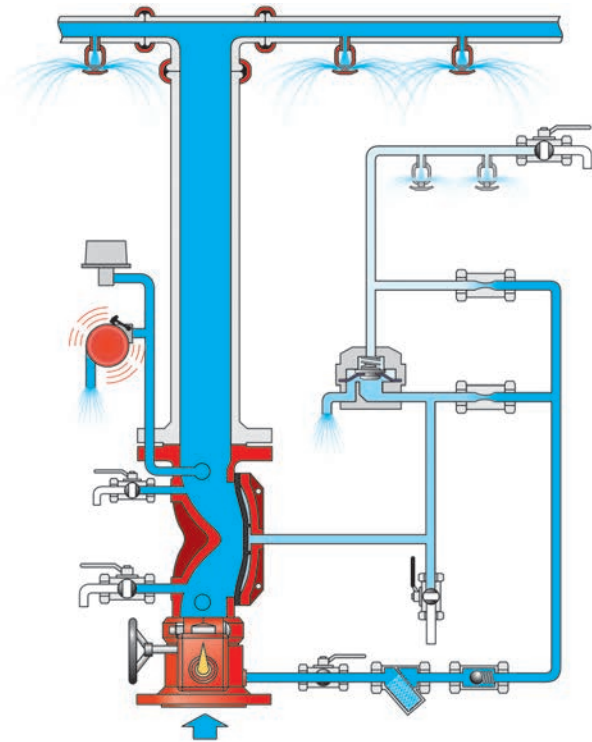
The FDV-AH1 resets to stand-by close position by re-pressurizing the Dry Pilot Line.

## Schematic drawing

Set position



Fire position



**BF** - Butterfly valve  
**DD** - Downstream drain valve  
**AL** - Acoustic & Electric alarms

**TS** - Trim supply valve  
**SR** - "Y" strainer  
**CV** - Check valve

**OR** - Orifice  
**EM** - Emergency valve  
**HA** - HAV-2 – Hydraulic Actuator Valve (2 way)

## OPERATION

### SET position

Pressurized water in the valve's control chamber is trapped by the check-valve (CV), by the closed HAV-2 actuator (HA) and by the closed emergency valve (EM). The hydraulic pressure in the Wet pilot detection line, keeps the HAV-2 actuator in closed position maintaining the FDV deluge close.

### FIRE situation

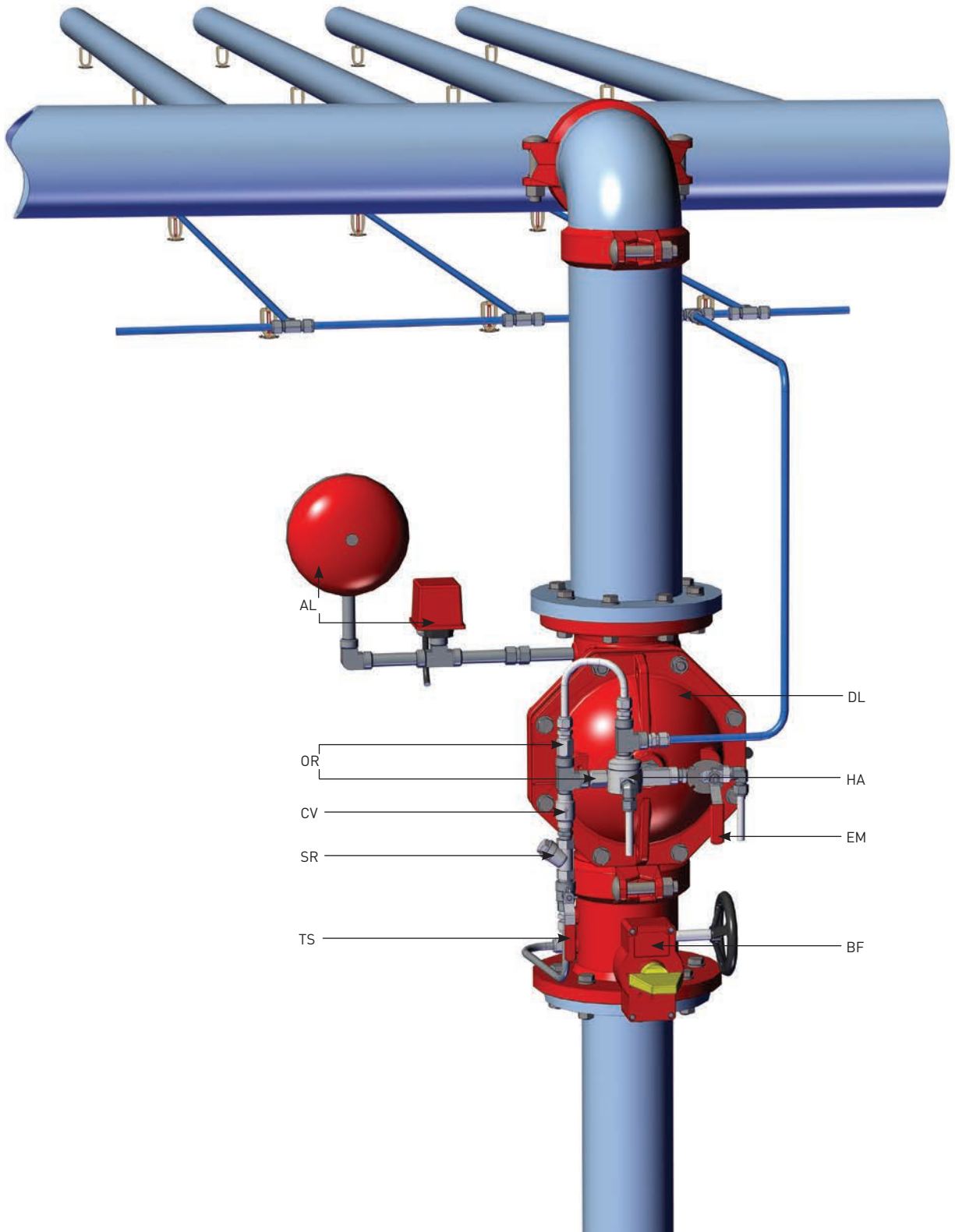
When some of the Wet Pilot detection line automatic fire sprinklers are subjected to the predetermined temperature levels, and shutter open, the pilot detection line depressurizes, opening the HAV-2 actuator. The HAV-2 opens and drains the deluge valve's control chamber. The FDV Deluge valve opens and admits water to the spray sprinklers line.

### RESET position

System reset requires the replacement of all shattered-open Fire sprinklers in the Wet Pilot detection line. The Wet Pilot detection line is then pressurized to reset the HAV-2 actuator commanding the FDV deluge valve to close.

# FDV - AH1

## Typical installation



**BF** - Butterfly valve

**DD** - Downstream drain valve

**AL** - Acoustic & Electric alarms

**TS** - Trim supply valve

**SR** - "Y" strainer

**CV** - Check valve

**OR** - Orifice

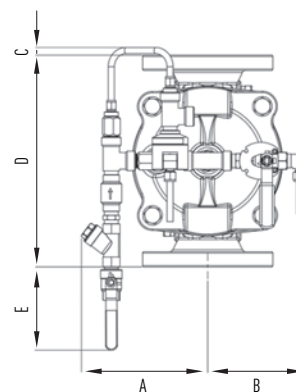
**EM** - Emergency valve

**HA** - HAV-2 - Hydraulic Actuator Valve (2 way)

## Dimensions Table

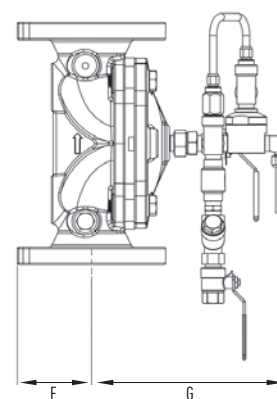
### Vertical

Size	1 1/2" 2"		3"		4"		6"		8"	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch
A	196	7.7	196	7.7	196	7.7	195	7.7	251	9.9
B	166	6.5	166	6.5	167	6.6	194	7.6	-	-
C	118	4.6	68	2.7	56	2.2	25	1	-	-
D	224	8.8	325	12.8	400	15.7	462	18.2	580	22.8
E	122	4.8	71	2.8	35	1.4	6	0.2	-	-
F	74	2.9	92	3.6	113	4.5	143	5.6	174	6.8
G	240	9.5	270	10.6	301	11.8	365	14.4	395	15.5
Kg/lb	13	28.6	25.4	56	42.2	93	60.8	134	100.2	220.1



### Horizontal

Size	1 1/2" 2"		3"		4"		6"		8"	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch
A	225	8.8	239	9.4	247	9.7	234	9.2	285	11.2
B	166	6.5	169	6.6	220	8.7	236	9.3	280	11
C	118	4.6	69	2.7	56	2.2	25	1	-	-
D	224	8.8	325	12.8	400	15.7	462	18.2	580	22.8
E	122	4.8	71	2.8	35	1.4	6	0.2	-	-
F	74	2.9	92	3.6	113	4.5	143	5.6	174	6.8
G	240	9.5	269	10.6	303	11.9	366	14.4	396	15.6
Kg/lb	12.9	28.5	25.3	55	42.2	93.1	60.8	134	100	220.6



## Factory Standard

### MAIN VALVE:

#### BODY & COVER

- Ductile iron
- Cast Steel WCB
- Stainless Steel CF8
- Stainless Steel CF8M
- Nickel Aluminum Bronze

#### ELASTOMERS:

- NBR, 3 layer reinforced natural rubber
- EPDM, 3 layer reinforced

#### COATING:

- Rilsan Polyamide based (Nylon 11)
- Polyester based EPC
- High built Epoxy FBE
- Vitreous Enamel (internal only)

### TRIM

#### PIPING & TUBING:

- Stainless Steel 316
- Copper/Brass
- Cupro-Nickel
- Monel®

#### FITTINGS:

- Stainless Steel 316
- Brass
- Super Duplex
- Cupro-Nickel
- Monel®

#### ACCESSORIES:

- Brass Nickel plated
- Nickel Aluminium bronze
- Stainless steel CF8M
- Monel®
- Cupro-Nickel

### PLEASE SPECIFY

- Working Media
- Ambiental conditions
- Min/Max operating flow
- Min/Max operating pressure
- Energize to Open/Close valve
- Wet Pilot's height
- System installation orientation
- Additional accessories needed

For more detailed technical information, please refer to chapter Engineering Data.

## Basic valve systems

### Pneumatic Actuated with Remote Reset Deluge Valve

### FDV - AP1

The FDV is a Fire Protection control valve for Deluge fire sprinkler systems, designed for installations in hazardous environments.

The FDV-AP1 Deluge system actuates pneumatically and resets remotely. When a pneumatic pressure accumulated in the Dry Pilot detection line is exposed to a predetermined temperature level, the automatic fire sprinklers shatter-open, venting the air pressure from the detection line. The drop in pressure opens the pneumatic actuator that in turn commands the Deluge valve to open.

The Deluge system incorporates an emergency valve, bypassing the fire detection systems for manual operation. Designed for vertical or horizontal installation, a globe pattern, line pressure operated FDV-AP1 valve features a direct elastomeric diaphragm Seal. It has no balancing spring or internal metallic wet components in the valve body. The hydrodynamic pattern design, ensures high flow rates with minimum head loss.



#### MARKETS



Commercial



Industry



Marine



P.O.G.



Residential



Air ports

#### TECHNICAL DATA

##### FLUID:

Water, Brackish water, Sea water, Foam

##### PNEUMATICS:

Air, Nitrogen

##### SIZE RANGE:

40mm to 250mm (1½" to 10")

##### AVAILABLE CONNECTIONS ENDS:

Flange\*Flange, Groove\*Groove,  
Flange\*Groove, Groove\*Flange,  
Thread\*Thread

##### PRESSURE NOMINAL:

250 psi (17.2 bar)

#### APPROVALS



#### ADVANTAGES

- Only three parts: body, diaphragm & cover plate, no wet metal spring inside the control chamber
- Full bore unobstructed
- Simple reset of the valve to standby position without draining or opening the valve itself, neither closing OS&Y or other valves in the system
- Open fail safe valve, maintained in stand-by closed position
- Low maintenance cost: the valve is serviced in-line with only one replaceable part which is long life elastomeric diaphragm
- Conforms with inspection, testing and maintenance standard of water-based fire protection systems, NFPA 25

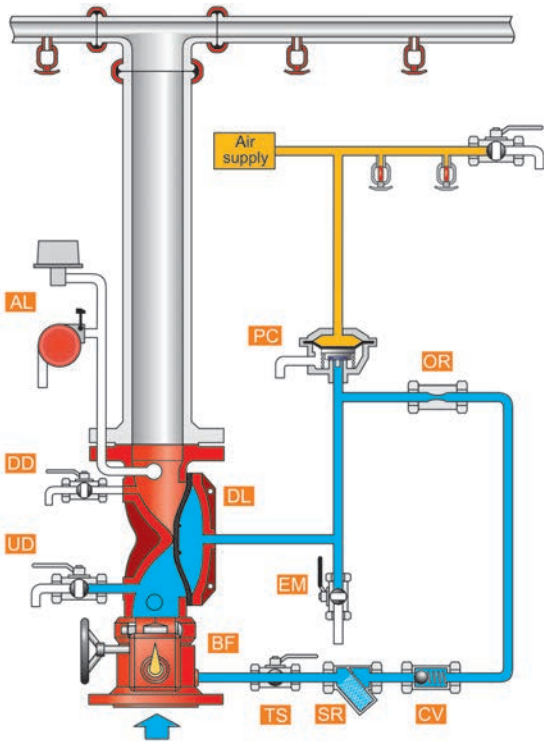
#### CHARACTERISTICS

- Hydro-dynamic pattern design ensures high flowrates with minimum head loss
- The valve trips open automatically upon a gradual release of water pressure from its control chamber. The valve is actuated by the Dry Pilot Line's pneumatic pressure release due to its automatic sprinklers exposure to flame heat
- Soft closing upon pressurization of the valve's control chamber, by line pressure or other independent water source to prevents surges

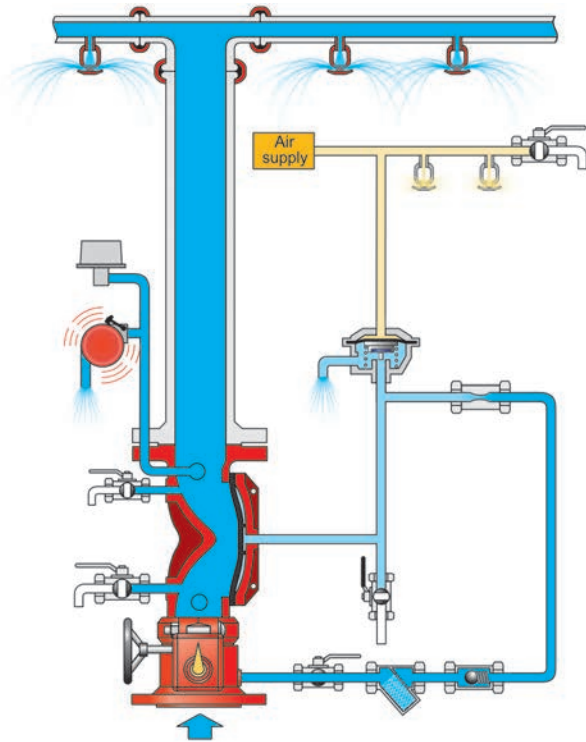
The FDV-AP1 resets to stand-by close position by re-pressurizing the Dry Pilot Line.

## Schematic drawing

### Set position



### Fire position



- |  |                             |
|--|-----------------------------|
| <b>BF</b> - Butterfly valve            | <b>SR</b> - "Y" strainer    |
| <b>DL</b> - FDV Deluge valve           | <b>CV</b> - Check valve     |
| <b>AL</b> - Acoustic & Electric alarms | <b>OR</b> - Orifice         |
| <b>TS</b> - Trim supply valve          | <b>EM</b> - Emergency valve |

## OPERATION

### SET position

Pressurized water in the valve's control chamber is trapped by the check-valve (CV), by the closed HAV-2 actuator (HA) and by the closed emergency valve (EM), maintaining the deluge valve in closed position.

The 3 way solenoid pressurizes the HAV-2, holding it in its close position.

### FIRE situation

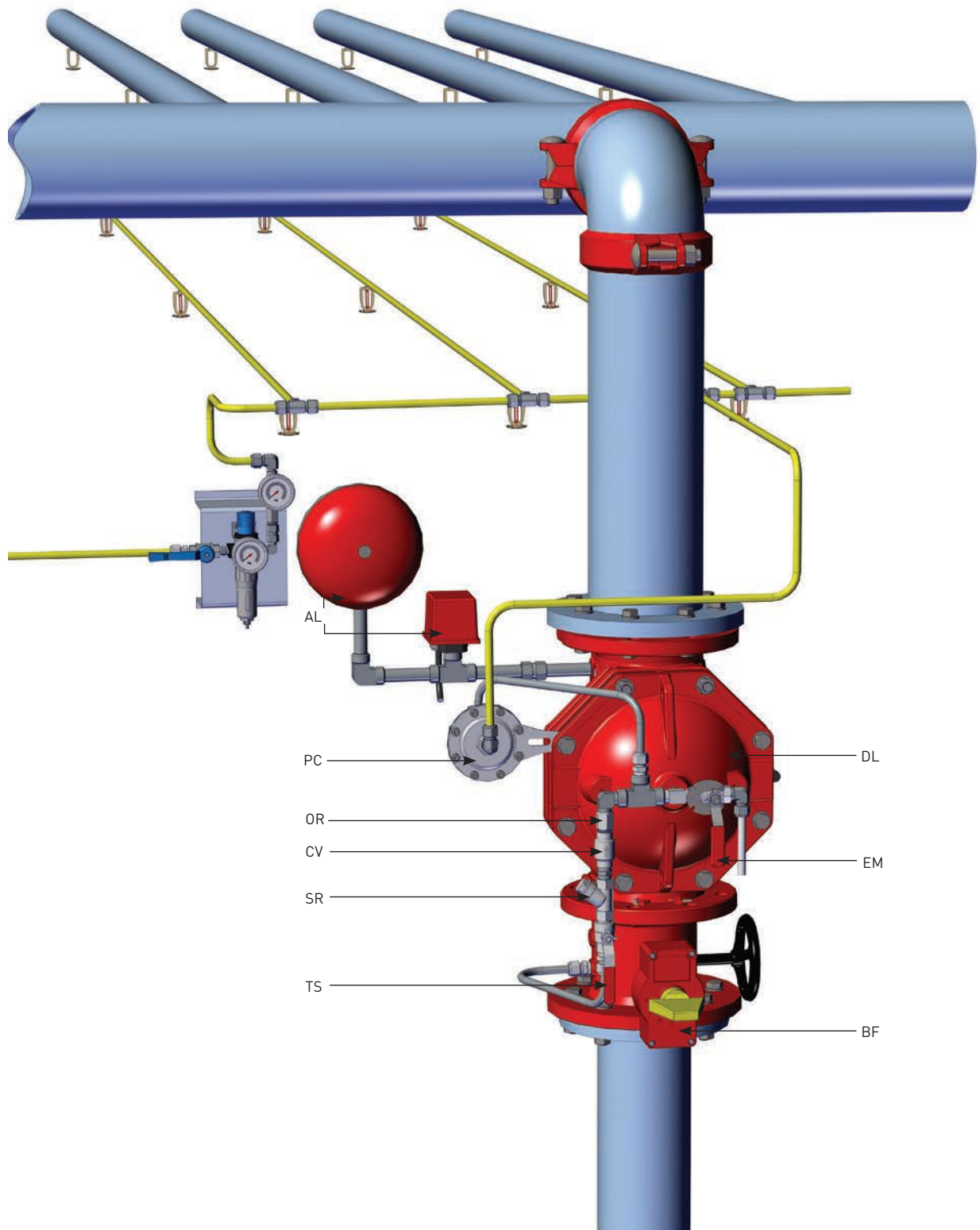
When one or more of the electric heat or flame sensor detects fire, it signals the control panel that in turn, energizes the 3 way solenoid (S3). The solenoid commands the HAV-2 to open and the actuator drains the FDV's control chamber to the atmosphere. The FDV deluge valve opens and water flow into the spray sprinklers pipe line. Manually opening the Emergency valve (EM), drains the FDV control chamber and opens the valve immediately.

### RESET position

When the control panel de-energizes the solenoid, upstream supply pressurizes the HAV-2's control chamber, commanding it to close. The upstream pressure flows through the orifice (OR) to the FDV valve's control chamber and the valve closes, returning to Set Position.

# FDV - AP1

## Typical installation



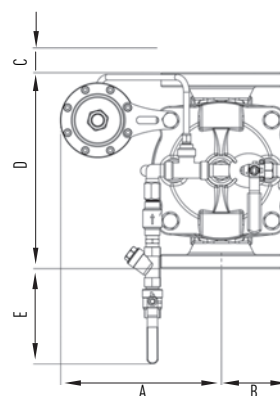
- |  |                             |
|--|-----------------------------|
| <b>BF</b> - Butterfly valve            | <b>SR</b> - "Y" strainer    |
| <b>DL</b> - FDV Deluge valve           | <b>CV</b> - Check valve     |
| <b>AL</b> - Acoustic & Electric alarms | <b>OR</b> - Orifice         |
| <b>TS</b> - Trim supply valve          | <b>EM</b> - Emergency valve |



## Dimensions Table

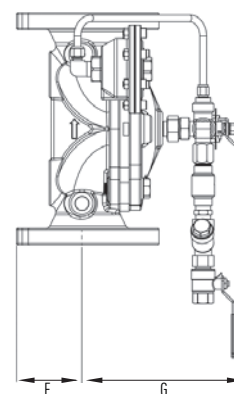
### Vertical

Size	1 1/2" 2"		3"		4"		6"		8"	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch
A	208	8.2	267	10.5	312	12.3	340	13.4	403	15.9
B	165	6.5	165	6.5	165	6.5	-	-	-	-
C	-	-	-	-	-	-	-	-	-	-
D	224	8.8	325	12.8	400	15.7	462	18.2	580	22.8
E	209	8.3	158	6.2	123	4.8	94	3.7	32	1.2
F	74	2.9	92	3.6	113	4.5	143	5.6	174	6.8
G	205	8	234	9.2	265	10.4	328	12.9	361	14.2
Kg/lb	14	30.7	26.2	57.8	43.7	95.2	61.8	136.2	101.2	223.2



### Horizontal

Size	1 1/2" 2"		3"		4"		6"		8"	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch
A	208	8.2	267	10.5	312	12.3	312	12.3	402	15.8
B	169	6.6	182	7.1	223	8.8	223	8.8	292	11.5
C	-	-	-	-	-	-	-	-	-	-
D	224	8.8	325	12.8	400	15.7	462	18.2	580	22.8
E	209	8.3	158	6.2	123	4.8	93	3.7	32	1.2
F	74	2.9	92	3.6	113	4.5	143	5.6	174	6.8
G	205	8	234	9.2	265	10.4	328	12.9	360	14.2
Kg/lb	14.1	31	26.2	57.8	43.2	95.4	61.9	136.4	101.4	223.6



## Factory Standard

### MAIN VALVE:

#### BODY & COVER

- Ductile iron
- Cast Steel WCB
- Stainless Steel CF8
- Stainless Steel CF8M
- Nickel Aluminum Bronze

#### ELASTOMERS:

- NBR, 3 layer reinforced natural rubber
- EPDM, 3 layer reinforced

#### COATING:

- Rilsan Polyamide based (Nylon 11)
- Polyester based EPC
- High built Epoxy FBE
- Vitreous Enamel (internal only)

### TRIM

#### PIPING & TUBING:

- Stainless Steel 316
- Copper/Brass
- Cupro-Nickel
- Monel®

#### FITTINGS:

- Stainless Steel 316
- Brass
- Super Duplex
- Cupro-Nickel
- Monel®

#### ACCESSORIES:

- Brass Nickel plated
- Nickel Aluminium bronze
- Stainless steel CF8M
- Monel®
- Cupro-Nickel

### PLEASE SPECIFY

- Working Media
- Ambiental conditions
- Min/Max operating flow
- Min/Max operating pressure
- Energize to Open/Close valve
- Pneumatic working pressure
- System installation orientation
- Additional accessories needed

For more detailed technical information, please refer to chapter Engineering Data.



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