

LOCALLY OPERATED MONITOR VALVE

Model FP-400Y-11

The BERMAD model 400Y-11 is an elastomeric hydraulic, line pressure operated deluge valve, designed specifically for advanced fire protection systems and the latest industry standards. The 400Y-11 is activated manually by opening the local Manual Release Valve on the control trim. The 400Y-11 is well suited for installation directly before high capacity water/foam monitors as a type approved quick opening water control valve. The standard trim features the release valve positioned locally on the valve, optionally the release valve can be positioned remotely, enabling valve operation from a distance. As an option the 400Y-11 can feature a quarter turn valve position indicator available with limit switches suitable for fire & gas installations for remote valve position monitoring.



Features & Benefits

- Safety and reliability
 - Time proven, simple Fail Open design
 - Single piece rugged elastomer, VRSD technology
 - No mechanical moving parts
 - Valve position limit switches (optional)
 - Local valve position indicator beacon (optional)
- High performance
 - Very high flow efficiency
 - Straight through Y type body
 - Approved for PN25 / 365 psi
- Specifically-designed for fire protection
 - Face-to-face length standardized to ISO 5752 EN 558-1
 - Meets the requirements of the industry standards
- Quick and easy maintenance
 - In-line serviceable
 - Fast and easy cover removal

Typical Applications

- Remote Control Monitors
- Oil & Gas storage tanks
- Petrochemical facilities

Approvals



ABS
American Bureau of Shipping
Type Approval
Sizes 1½" - 12"



Det Norske Veritas
Type Approval
Sizes 1½" to 12"

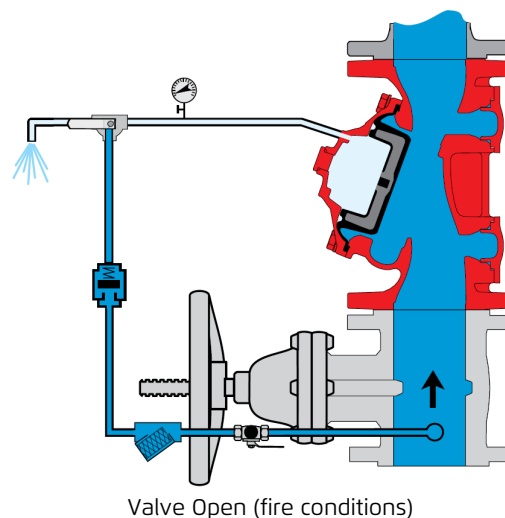
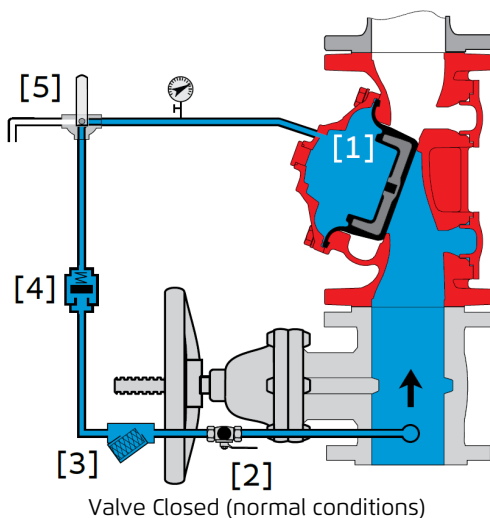


Lloyd's Register
Type Approval
Sizes 1½" - 10"

Additional Features

- Valve position limit switches
- Local valve position indicator beacon
- Seawater compatibility
- Remote manual release station
- Corrosion resistant zinc based high build epoxy coating

Operation

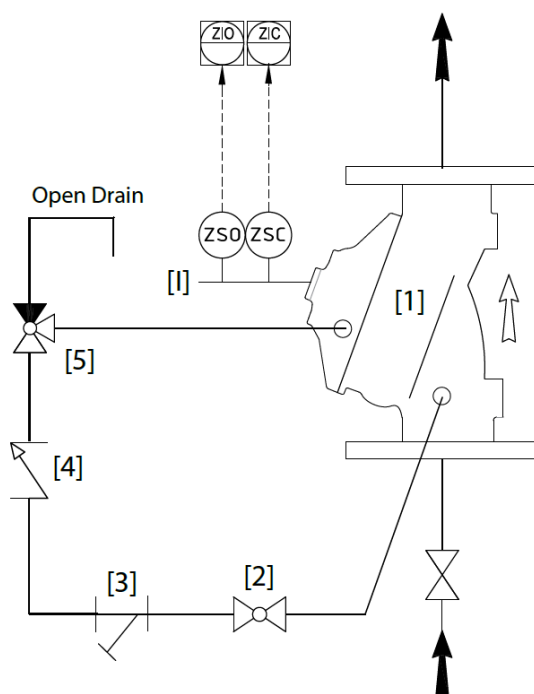


The BERMAD model 400Y-11 is held closed by water pressure in the control chamber [1]. Upon release of pressure from the control chamber, the valve opens.

Under NORMAL conditions, water pressure is supplied to the control chamber via the priming line [2] strainer [3]. The water pressure is then trapped in the control chamber by the check valve [4].

Under FIRE conditions, water pressure is released from the control chamber, by opening the local manual release [5] or, when fitted, opening by the hydraulic remote Manual Release station. This opens the deluge valve allowing water to flow into the system piping and to the fire extinguishing devices.

System P&ID



Components	
1	Bermad 400Y deluge valve
2	Priming ball valve
3	Priming strainer
4	Check valve
5	3W Ball valve

Optional System Items	
ZS	Limit Switch Assembly
I	Visual Valve Position indicator

System Installation

A typical installation of the BERMAD model 400Y-11 features manual actuation via a 3 way release valve positioned either remotely or on the control trim of the main valve. When fitted with a limit switch the valve can send a status feedback signal to a remote valve position monitoring system.

Optional System Items



Pressure Gauge



Visual Position Indicator



Rotating Limit Switch Box



Exd Pressure Switch - Stainless Steel Enclosure for Harsh Environments



Basket Strainer - 60F



Suggested Specifications

The deluge valve shall be 365-psi/25-bar rated, with a straight-through Ytypebody.

The valve shall have an unobstructed flow path, with no stem guide or supporting ribs.

The deluge valve shall have no mechanical moving parts, and the actuation shall utilize a single-piece diaphragm assembly of VRSD technology.

The valve shall be coated internally and externally with UV protection. Optional: C5-VH grade of ISO-12944 standard against corrosive conditions.

The valve control trim shall include a Y-type strainer and a 3-Way ball valve.

A valve position indicator shall be provided, and equipped with two proximity limit switches.

Removing the valve cover for full inspection and maintenance shall be in-line and not require removal of the control trim.

The deluge valve and control trim shall be pre-assembled and hydraulically tested by a UL/FM and ISO 9000, 9001 certified factory.

Technical Data

Available Sizes:

Flanged- 1½, 2, 2½, 3, 4, 6, 8, 10, 12, 14 & 16"

Grooved- 1½, 2, 2½, 3, 4, 6, 8 & 10"

Pressure Rating:

ANSI#150 - 17.2 bar | 250 psi

ANSI#300 - 1½" to 10" - 25 bar | 365 psi

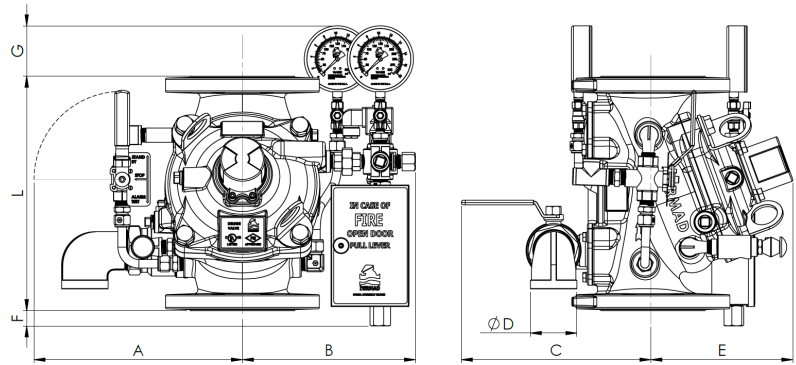
ANSI#300 - 12" to 16" - 20 bar | 300 psi

Grooved - 17.2 / 25 bar | 250 / 365 psi

Elastomer:

HTNR - Fabric Reinforced High Temperature

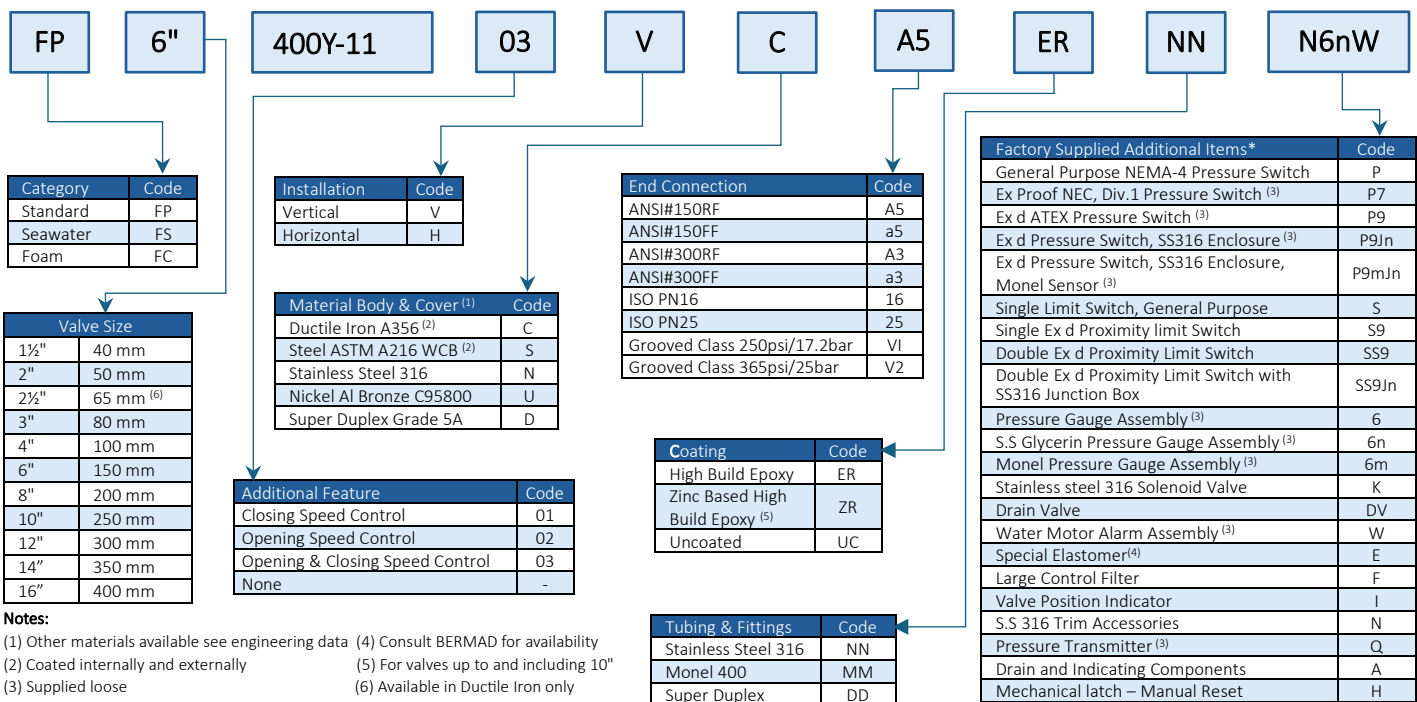
Compound - See engineering data



Valve Size	L #150 mm in	L Grooved mm in	L #300 mm in	A mm in	B mm in	C mm in	ØD in	E mm in	F mm in	G mm in	Weight #150 kg lb	Weight #300 kg lb
DN40 1½"	230 9.1	230 9.1	230 9.1	293 11.5	210 8.3	177 7	¾"	215 8.5	133 5.2	178 7	19 35.2	21 46.2
DN50 2"	230 9.1	230 9.1	238 9.3	293 11.5	210 8.3	177 7	¾"	215 8.5	133 5.2	178 7	20 44	22 48
DN65 2½"	235 9.3	235 9.3	241 9.5	296 11.7	210 8.3	183 7.2	1½"	215 8.5	131 5.2	157 6.2	24 53	29 64
DN80 3"	310 12.2	310 12.2	326 12.8	313 12.3	269 10.6	221 8.7	1½"	186 7.3	64 2.5	88 3.5	37 81	42 92
DN100 4"	350 13.8	320 12.6	368 14.5	343 13.5	278 11	287 11.3	2"	199 7.8	37 1.5	135 5.3	51 112	58 128
DN150 6"	480 18.9	480 18.9	506 19.9	358 14	331 13	302 11.9	2"	234 9.2	-	27 1	99 218	119 262
DN200 8"	600 23.6	600 23.6	626 24.6	392 15.4	390 15.3	317 12.5	2"	301 11.9	-	2 1	168 370	188 414
DN250 10"	730 28.7	730 28.7	730 28.7	406 16	390 15.4	317 12.5	2"	301 11.9	-	-	201 442	236 519
DN300 12"	850 33.5	-	888 35	478 18.8	473 18.6	380 15	2"	441 17.4	-	-	358 788	408 898
DN350 14"	980 38.6	-	980 38.6	478 18.8	473 18.6	379 14.9	2"	441 17.4	-	-	394 867	473 1041
DN400 16"	1100 43.3	-	1100 43.3	478 18.8	473 18.6	405 15.9	2"	417 16.4	-	-	445 979	565 1243

IMPORTANT: Dimensions for the trim envelope or extents refer to a vertical orientation and may vary with specific component positioning - Apart from the "L" dimension, allow a tolerance of at least ±15%

Valve Code Designations



Notes:

- (1) Other materials available see engineering data (4) Consult BERMAD for availability
 (2) Coated internally and externally (5) For valves up to and including 10"
 (3) Supplied loose (6) Available in Ductile Iron only