

## Electrically Controlled Deluge Valve

### Model FP 400Y-3UM

The BERMAD model 400Y-3UM is an elastomeric, hydraulic, line pressure operated deluge valve, designed specifically for advanced fire protection systems, and the latest industry standards.

The 400Y-3UM is activated by a 3-way solenoid valve, which actuates a latching relay valve, to open the main valve. Once open the main valve will not close until locally reset.

The optional valve position indicator can include a limit switch suitable for Fire & Gas monitoring systems.

The 400Y-3UM is ideal for systems with open nozzles for water or foam discharge, available with electric components to suit any hazardous location.



(for Illustration Only)

### Benefits and Features

- **Safety and reliability**
  - Time proven, Simple, fail-safe actuation
  - Single piece, rugged elastomeric diaphragm seal - VRSD technology
  - Obstacle-free, uninterrupted flow path
  - No mechanical moving parts
  - Latches open: remains open until reset locally
  - Valve position limit switches (optional)
  - Local valve position indicator beacon (optional)
- **High performance**
  - Very high flow efficiency
  - Straight through flow 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 industry standards
- **Quick and easy maintenance**
  - In-line serviceable
  - Quick cover removal without detaching control trim\*
  - Swivel mounted drain valves for quick and efficient installation\*

\* not including 1½" & 2" valves

### Typical Applications

- Electric fire detection systems with control panels
- Automatic water spray systems
- Foam applications
- Corrosive water supplies

### Approvals



UL-Listed  
Special System Water Control  
Valves, Deluge Type (VLFT)



FM Approved  
for Deluge Sprinkler Systems



Det Norske Veritas  
Type Approval



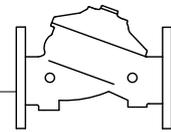
ABS  
American Bureau of Shipping  
Type Approval



Lloyd's Register  
Type Approval

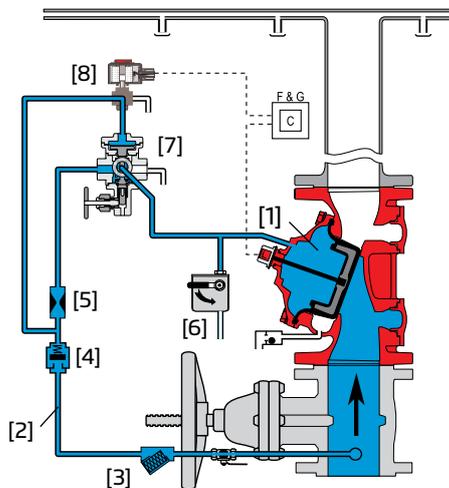
### Additional Features

- Valve position limit switches
- Local valve position indicator beacon
- Stainless steel seat ring
- Alarm pressure switch
- Sea water compatibility
- Drain valve/s inlet/outlet

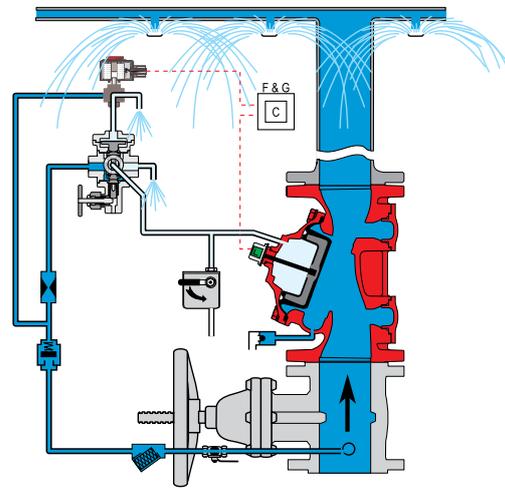


## Operation

(for Illustration Only)



**Valve Closed** (normal conditions)



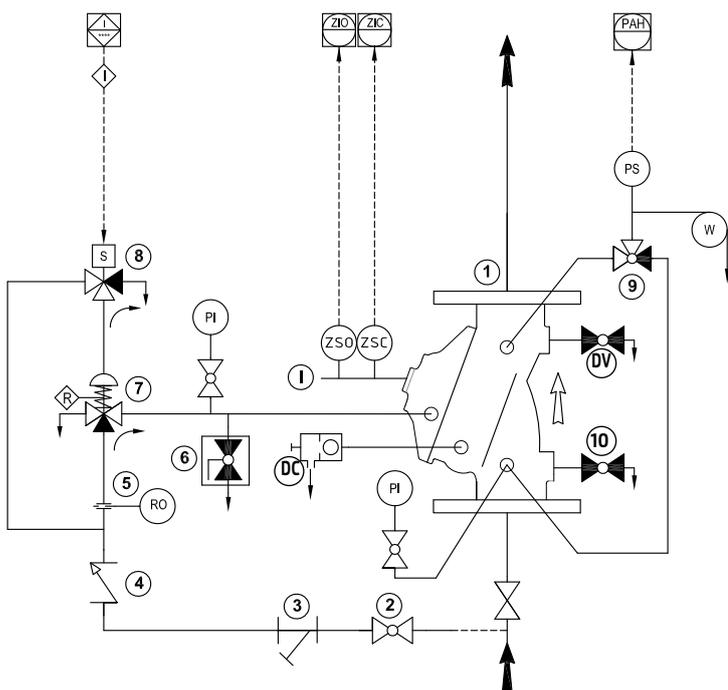
**Valve Open** (fire conditions)

The BERMAD model 400Y-3UM 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] and restriction orifice [5] and is then trapped in the control chamber by a check valve [4], manual emergency release [6], and a relay valve (URV-M) [7] that is held in the supply position by hydraulic pressure supplied through a three-way solenoid valve [8]. The water pressure trapped in the control chamber holds the diaphragm against the valve seat, sealing it drip-tight and keeping the system pipes dry.

Under FIRE conditions, water pressure is released from the control chamber, either with the manual emergency release, or by the URV-M switching to the release position in response to the solenoid valve being activated by the fire & gas control system [C]. This latches the 400Y-3UM deluge valve open, allowing water to flow into the system piping and the alarm device.

## System P&ID



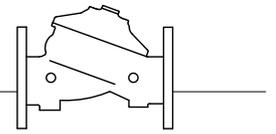
## Components

- 1 BERMAD 400Y Deluge Valve
- 2 Priming Ball Valve
- 3 Priming Strainer
- 4 Check valve
- 5 Restriction Orifice
- 6 Manual Emergency Release
- 7 URV-3-M Relay Valve
- 8 3-Way NO Solenoid Valve

## Optional System Items

- ZS Limit Switch Assembly
- I Visual Indicator
- DC Automatic Drip Check Valve
- DV Additional Drain Valve
- PI Pressure Indicator
- PS Pressure Switch\*
- W Water Motor Alarm\*
- 9 3-Way Alarm Valve \*
- 10 Drain Valve\*

\*Mandatory for FM approval  
(suffix A in code designations on page 4)



## System Installation

A typical installation of the BERMAD model 400Y-3UM features automatic actuation via a relay valve and three-way solenoid valve, triggered by a signal from a fire & gas control system or an on-site emergency pushbutton. When fitted with a limit switch, the valve can send a feedback signal to a remote valve position monitoring system.

## Optional System Items



Water Motor Alarm



Pressure Switch



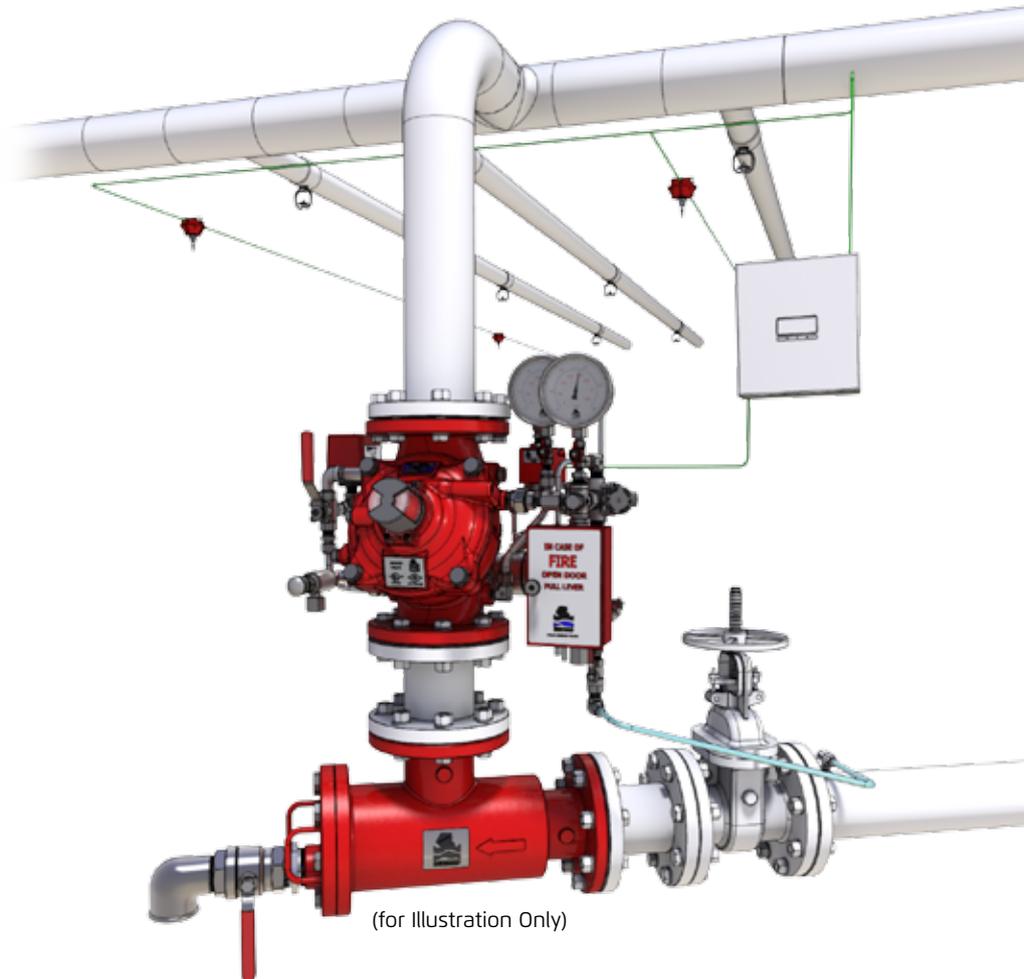
Valve Position Indicator



Limit Switch



Strainer



## Suggested Specifications

The deluge valve shall be UL-listed and FM-approved, 25-bar/365-psi rated, with a straight-through, Y-type-body. The valve shall have an unobstructed flow path, with no stem guide or supporting ribs.

Valve actuation shall be accomplished by a single-piece, rolling diaphragm bonded with a rugged radial seal disk. The diaphragm assembly shall be the only moving part.

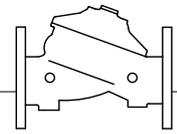
The deluge valve shall include a latching relay pilot valve, a 3-Way solenoid valve FM approved for 25 bar/365 psi working pressure with a tolerance of 35% below of the rated voltage, a Y-type strainer, a ball drain valve, an automatic drip-check with manual override, 4-inch pressure gauges, and a manual emergency release housed in a stainless steel box.

The valve shall be equipped with a protective-covered, dual-color, rotational position indicator visible readable 50 meters, and with two limit switches enclosed in a protective switch box.

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

The deluge valve and its entire control trim shall be supplied pre-assembled and hydraulically tested by a factory certified to ISO 9000 and 9001 quality assurance standards.

# BERMAD Fire Protection



Model FP 400Y-3UM

400Y Series

## Technical Data

### Available Sizes (inch)

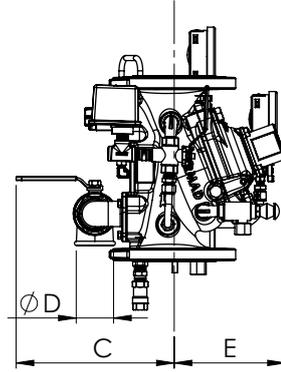
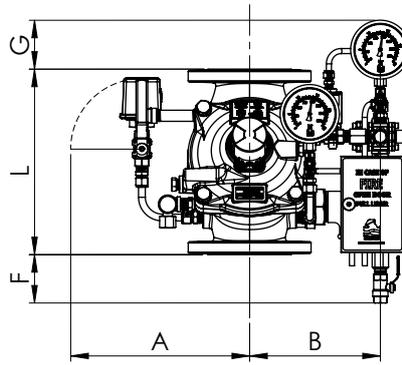
- Flanged - 1½, 2, 3, 4, 6, 8, 10, 12, 14 & 16"
- Grooved - 1½, 2, 3, 4, 6 & 8"
- Threaded - 1½ & 2"

### Pressure Rating

- ANSI#150 - 16 bar / 235
- ANSI#300 - 1½" to 10" 25 bar / 365 psi  
12" to 16" 20 bar / 300 psi
- Grooved - 25 bar / 365 psi
- Threaded - 25 bar / 365 psi

### Elastomer

- HTNR - Fabric Reinforced High Temperature Compound - See engineering data



| Valve Size                                       | 1½" DN40    | 2" DN50     | 3" DN80     | 4" DN100    | 6" DN150     | 8" DN200      | 10" DN250     | 12" DN300     | 14" DN350     | 16" DN400     |
|--|-------------|-------------|-------------|-------------|--------------|---------------|---------------|---------------|---------------|---------------|
| <sup>(1)</sup> L <sup>1</sup> ANSI #150 mm (in.) | 230(9.06)   | 230(9.06)   | 310(12.21)  | 350(13.79)  | 480(18.91)   | 600(23.64)    | 730(28.76)    | 850(33.49)    | 980(38.61)    | 1100(43.34)   |
| L <sup>2</sup> ANSI #300 mm (in.)                | 230(9.06)   | 238(9.37)   | 326(12.84)  | 368(14.50)  | 506(19.94)   | 626(24.66)    | 730(28.76)    | 888(34.96)    | 980(38.61)    | 1100(43.34)   |
| A mm (in.)                                       | 330(13.0)   | 330(13.0)   | 390(15.4)   | 398(15.7)   | 451(17.8)    | 481(18.9)     | 481(18.9)     | 594(23.4)     | 594(23.4)     | 594(23.4)     |
| B mm (in.)                                       | 249(9.8)    | 249(9.8)    | 307(12)     | 317(12.5)   | 372(14.64)   | 400(15.7)     | 400(15.7)     | 513(20.2)     | 513(20.2)     | 513(20.2)     |
| C mm (in.)                                       | 241(9.5)    | 241(9.5)    | 274(10.8)   | 290(11.4)   | 304(12.0)    | 320(12.6)     | 320(12.6)     | 383(15.1)     | 383(15.1)     | 408(16.1)     |
| ØD   | ¾"          | ¾"          | 1½"         | 2"          | 2"           | 2"            | 2"            | 2"            | 2"            | 2"            |
| E mm (in.)                                       | 167(6.6)    | 167(6.6)    | 191(7.5)    | 205(8.1)    | 273(10.7)    | 338(13.3)     | 338(13.3)     | 490(19.3)     | 490(19.3)     | 465(18.3)     |
| F mm (in.)                                       | 189(7.4)    | 189(7.4)    | 119(4.7)    | 92(3.6)     | 10(0.4)      | -             | -             | -             | -             | -             |
| G mm (in.)                                       | 121(4.8)    | 121(4.8)    | 111(4.4)    | 98(3.8)     | 49.5(1.9)    | 25(1)         | -             | -             | -             | -             |
| Kv m <sup>3</sup> /h (Cv gpm)                    | 68(79)      | 80(92)      | 190(219)    | 345(398)    | 790(912)     | 1160(1340)    | 1355(1565)    | 2370(2737)    | 2850(3292)    | 3254(3758)    |
| <sup>(2)</sup> Leq m (ft)                        | 2(7)        | 5(16)       | 7(23)       | 9(30)       | 15(49)       | 27(89)        | 62(203)       | 52(171)       | 59(194)       | 88(289)       |
| Weight, flanged kg (lbs)                         | 15.26(33.5) | 16.66(36.6) | 31.36(69.0) | 41.36(91.0) | 84.66(186.3) | 147.86(325.3) | 177.86(391.3) | 320.86(705.9) | 353.86(778.5) | 399.86(879.7) |

Notes: <sup>(1)</sup> L<sup>1</sup> Dimensions are for grooved, threaded and raised face flanged valves

<sup>(2)</sup> Leq (Equivalent Pipe Length) refers to turbulent flow in new steel pipe schedule 40, values given for general consideration only

<sup>(3)</sup> Dimensions for the trim envelope may vary with specific component positioning

## Valve Code Designations

| FP  | 6"       | 400Y-3UM | V        | C  | A5       | PR | 4DC              | NN | P79RI  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
|---|----------|----------|----------|----|----------|----|------------------|----|--|------------|------|-----|-------|----|-------|----|-------|----|--------|----|--------|----|--------|-----|--------|-----|--------|-----|--------|-----|--------|--|--------------|------|----------|---|------------|---|---|--------------------------------------|------|----------------------------------|---|------------------------------------|---|---------------------|---|-------------------------|---|-----------------------|---|---|---------|------|---------------|----|------------------|----|----------|----|---|-----------------|------|------------|----|------------|----|------------|----|----------|----|----------|----|------------------------------------|----|---|---------|------|---------------|----|------------------|----|----------|----|---|--|------|--------------|-----|--------------|-----|---------------|-----|---------------|-----|---------------|-----|-------------------|-----|-------------------|-----|-------------------|-----|-------------------|-----|---|------------------------|------|---|---|--|----|--|----|--------------------------------------|----|------------------------------------|-----|------------------------------------|------|--|---|---|----|-------------------------------|----|-------------------------------------|---|---------------------|---|-------------|----|---|---|------------------------|----|-----------------------|----|----------------------|---|--------------------------|----|--------------------|---|--------------------------|---|-------------------------------------|---|--------------------------|---|--|---|--|-------------------|------|---------------------|----|-----------|----|--------------|----|
| <table border="1"> <thead> <tr> <th>Category</th> <th>code</th> </tr> </thead> <tbody> <tr> <td>Standard</td> <td>FP</td> </tr> <tr> <td>Seawater</td> <td>FS</td> </tr> <tr> <td>Foam Concentrate</td> <td>FC</td> </tr> </tbody> </table> | Category | code     | Standard | FP | Seawater | FS | Foam Concentrate | FC | <table border="1"> <thead> <tr> <th>Valve Size</th> <th>code</th> </tr> </thead> <tbody> <tr> <td>1½"</td> <td>40 mm</td> </tr> <tr> <td>2"</td> <td>50 mm</td> </tr> <tr> <td>3"</td> <td>80 mm</td> </tr> <tr> <td>4"</td> <td>100 mm</td> </tr> <tr> <td>6"</td> <td>150 mm</td> </tr> <tr> <td>8"</td> <td>200 mm</td> </tr> <tr> <td>10"</td> <td>250 mm</td> </tr> <tr> <td>12"</td> <td>300 mm</td> </tr> <tr> <td>14"</td> <td>350 mm</td> </tr> <tr> <td>16"</td> <td>400 mm</td> </tr> </tbody> </table> | Valve Size | code | 1½" | 40 mm | 2" | 50 mm | 3" | 80 mm | 4" | 100 mm | 6" | 150 mm | 8" | 200 mm | 10" | 250 mm | 12" | 300 mm | 14" | 350 mm | 16" | 400 mm | <table border="1"> <thead> <tr> <th>Installation</th> <th>code</th> </tr> </thead> <tbody> <tr> <td>Vertical</td> <td>V</td> </tr> <tr> <td>Horizontal</td> <td>H</td> </tr> </tbody> </table> | Installation | code | Vertical | V | Horizontal | H | <table border="1"> <thead> <tr> <th>Material Body &amp; Cover <sup>(1)</sup></th> <th>code</th> </tr> </thead> <tbody> <tr> <td>Ductile Iron A356 <sup>(2)</sup></td> <td>C</td> </tr> <tr> <td>Steel ASTM A216 WCB <sup>(2)</sup></td> <td>S</td> </tr> <tr> <td>Stainless Steel 316</td> <td>N</td> </tr> <tr> <td>Nickel Al Bronze C95800</td> <td>U</td> </tr> <tr> <td>Super Duplex Grade 5A</td> <td>D</td> </tr> </tbody> </table> | Material Body & Cover <sup>(1)</sup> | code | Ductile Iron A356 <sup>(2)</sup> | C | Steel ASTM A216 WCB <sup>(2)</sup> | S | Stainless Steel 316 | N | Nickel Al Bronze C95800 | U | Super Duplex Grade 5A | D | <table border="1"> <thead> <tr> <th>Coating</th> <th>code</th> </tr> </thead> <tbody> <tr> <td>Polyester Red</td> <td>PR</td> </tr> <tr> <td>High Build Epoxy</td> <td>ER</td> </tr> <tr> <td>Uncoated</td> <td>UC</td> </tr> </tbody> </table> | Coating | code | Polyester Red | PR | High Build Epoxy | ER | Uncoated | UC | <table border="1"> <thead> <tr> <th>End Connections</th> <th>code</th> </tr> </thead> <tbody> <tr> <td>ANSI#150RF</td> <td>A5</td> </tr> <tr> <td>ANSI#150FF</td> <td>a5</td> </tr> <tr> <td>ANSI#300RF</td> <td>A3</td> </tr> <tr> <td>ISO PN16</td> <td>16</td> </tr> <tr> <td>ISO PN25</td> <td>25</td> </tr> <tr> <td>Grooved ANSI C606 16 bar / 235 psi</td> <td>VI</td> </tr> </tbody> </table> | End Connections | code | ANSI#150RF | A5 | ANSI#150FF | a5 | ANSI#300RF | A3 | ISO PN16 | 16 | ISO PN25 | 25 | Grooved ANSI C606 16 bar / 235 psi | VI | <table border="1"> <thead> <tr> <th>Coating</th> <th>code</th> </tr> </thead> <tbody> <tr> <td>Polyester Red</td> <td>PR</td> </tr> <tr> <td>High Build Epoxy</td> <td>ER</td> </tr> <tr> <td>Uncoated</td> <td>UC</td> </tr> </tbody> </table> | Coating | code | Polyester Red | PR | High Build Epoxy | ER | Uncoated | UC | <table border="1"> <thead> <tr> <th>Voltage <sup>(3)</sup> - Main Valve N.O or N.C</th> <th>code</th> </tr> </thead> <tbody> <tr> <td>24VDC - N.C.</td> <td>4DC</td> </tr> <tr> <td>24VDC - N.O.</td> <td>4DO</td> </tr> <tr> <td>24VDC - Latch</td> <td>4DS</td> </tr> <tr> <td>110VDC - N.C.</td> <td>5DC</td> </tr> <tr> <td>110VDC - N.O.</td> <td>5DO</td> </tr> <tr> <td>110-120/AC - N.C.</td> <td>5AC</td> </tr> <tr> <td>110-120/AC - N.O.</td> <td>5AO</td> </tr> <tr> <td>220-240/AC - N.C.</td> <td>2AC</td> </tr> <tr> <td>220-240/AC - N.O.</td> <td>2AO</td> </tr> </tbody> </table> | Voltage <sup>(3)</sup> - Main Valve N.O or N.C | code | 24VDC - N.C. | 4DC | 24VDC - N.O. | 4DO | 24VDC - Latch | 4DS | 110VDC - N.C. | 5DC | 110VDC - N.O. | 5DO | 110-120/AC - N.C. | 5AC | 110-120/AC - N.O. | 5AO | 220-240/AC - N.C. | 2AC | 220-240/AC - N.O. | 2AO | <table border="1"> <thead> <tr> <th>Factory Fitted Options</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>General Purpose NEMA-4 Pressure Switch <sup>(4)</sup></td> <td>P</td> </tr> <tr> <td>Ex Proof NEC, Div.1 Pressure Switch <sup>(4)</sup></td> <td>P7</td> </tr> <tr> <td>Ex d ATEX Pressure Switch <sup>(4)</sup></td> <td>P9</td> </tr> <tr> <td>Single Limit Switch, General Purpose</td> <td>RS</td> </tr> <tr> <td>Single Ex d Proximity limit Switch</td> <td>RS9</td> </tr> <tr> <td>Double Ex d Proximity Limit Switch</td> <td>RSS9</td> </tr> <tr> <td>Pressure Gauge Assembly <sup>(4)</sup></td> <td>6</td> </tr> <tr> <td>S.S Glycerin Pressure Gauge Assembly <sup>(4)</sup></td> <td>6n</td> </tr> <tr> <td>Monel Pressure Gauge Assembly</td> <td>6m</td> </tr> <tr> <td>Ex Proof NEC Class 1 Div 1 Solenoid</td> <td>7</td> </tr> <tr> <td>Ex. d Atex Solenoid</td> <td>9</td> </tr> <tr> <td>Drain Valve</td> <td>DV</td> </tr> <tr> <td>Water Motor Alarm Assembly <sup>(4)</sup></td> <td>W</td> </tr> <tr> <td>Special Elastomer EPDM</td> <td>E1</td> </tr> <tr> <td>Special Elastomer NBR</td> <td>E3</td> </tr> <tr> <td>Large Control Filter</td> <td>F</td> </tr> <tr> <td>Valve Position Indicator</td> <td>RI</td> </tr> <tr> <td>S.S Solenoid Valve</td> <td>K</td> </tr> <tr> <td>S.S 316 Trim Accessories</td> <td>N</td> </tr> <tr> <td>Pressure Transmitter <sup>(4)</sup></td> <td>Q</td> </tr> <tr> <td>316 Stainless Steel Seat</td> <td>T</td> </tr> <tr> <td>Drain and Indicating Components <sup>(5)</sup></td> <td>A</td> </tr> </tbody> </table> | Factory Fitted Options | Code | General Purpose NEMA-4 Pressure Switch <sup>(4)</sup> | P | Ex Proof NEC, Div.1 Pressure Switch <sup>(4)</sup> | P7 | Ex d ATEX Pressure Switch <sup>(4)</sup> | P9 | Single Limit Switch, General Purpose | RS | Single Ex d Proximity limit Switch | RS9 | Double Ex d Proximity Limit Switch | RSS9 | Pressure Gauge Assembly <sup>(4)</sup> | 6 | S.S Glycerin Pressure Gauge Assembly <sup>(4)</sup> | 6n | Monel Pressure Gauge Assembly | 6m | Ex Proof NEC Class 1 Div 1 Solenoid | 7 | Ex. d Atex Solenoid | 9 | Drain Valve | DV | Water Motor Alarm Assembly <sup>(4)</sup> | W | Special Elastomer EPDM | E1 | Special Elastomer NBR | E3 | Large Control Filter | F | Valve Position Indicator | RI | S.S Solenoid Valve | K | S.S 316 Trim Accessories | N | Pressure Transmitter <sup>(4)</sup> | Q | 316 Stainless Steel Seat | T | Drain and Indicating Components <sup>(5)</sup> | A | <table border="1"> <thead> <tr> <th>Tubing &amp; Fittings</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Stainless Steel 316</td> <td>NN</td> </tr> <tr> <td>Monel 400</td> <td>MM</td> </tr> <tr> <td>Super Duplex</td> <td>DD</td> </tr> </tbody> </table> | Tubing & Fittings | Code | Stainless Steel 316 | NN | Monel 400 | MM | Super Duplex | DD |
| Category  | code     |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Standard  | FP       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Seawater  | FS       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Foam Concentrate  | FC       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Valve Size  | code     |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 1½"   | 40 mm    |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 2"  | 50 mm    |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 3"  | 80 mm    |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 4"  | 100 mm   |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 6"  | 150 mm   |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 8"  | 200 mm   |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 10"   | 250 mm   |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 12"   | 300 mm   |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 14"   | 350 mm   |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 16"   | 400 mm   |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Installation  | code     |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Vertical  | V        |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Horizontal  | H        |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Material Body & Cover <sup>(1)</sup>  | code     |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Ductile Iron A356 <sup>(2)</sup>  | C        |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Steel ASTM A216 WCB <sup>(2)</sup>  | S        |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Stainless Steel 316   | N        |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Nickel Al Bronze C95800   | U        |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Super Duplex Grade 5A   | D        |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Coating   | code     |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Polyester Red   | PR       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| High Build Epoxy  | ER       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Uncoated  | UC       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| End Connections   | code     |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| ANSI#150RF  | A5       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| ANSI#150FF  | a5       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| ANSI#300RF  | A3       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| ISO PN16  | 16       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| ISO PN25  | 25       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Grooved ANSI C606 16 bar / 235 psi  | VI       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Coating   | code     |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Polyester Red   | PR       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| High Build Epoxy  | ER       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Uncoated  | UC       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Voltage <sup>(3)</sup> - Main Valve N.O or N.C  | code     |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 24VDC - N.C.  | 4DC      |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 24VDC - N.O.  | 4DO      |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 24VDC - Latch   | 4DS      |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 110VDC - N.C.   | 5DC      |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 110VDC - N.O.   | 5DO      |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 110-120/AC - N.C.   | 5AC      |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 110-120/AC - N.O.   | 5AO      |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 220-240/AC - N.C.   | 2AC      |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 220-240/AC - N.O.   | 2AO      |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Factory Fitted Options  | Code     |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| General Purpose NEMA-4 Pressure Switch <sup>(4)</sup>   | P        |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Ex Proof NEC, Div.1 Pressure Switch <sup>(4)</sup>  | P7       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Ex d ATEX Pressure Switch <sup>(4)</sup>  | P9       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Single Limit Switch, General Purpose  | RS       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Single Ex d Proximity limit Switch  | RS9      |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Double Ex d Proximity Limit Switch  | RSS9     |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Pressure Gauge Assembly <sup>(4)</sup>  | 6        |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| S.S Glycerin Pressure Gauge Assembly <sup>(4)</sup>   | 6n       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Monel Pressure Gauge Assembly   | 6m       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Ex Proof NEC Class 1 Div 1 Solenoid   | 7        |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Ex. d Atex Solenoid   | 9        |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Drain Valve   | DV       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Water Motor Alarm Assembly <sup>(4)</sup>   | W        |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Special Elastomer EPDM  | E1       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Special Elastomer NBR   | E3       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Large Control Filter  | F        |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Valve Position Indicator  | RI       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| S.S Solenoid Valve  | K        |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| S.S 316 Trim Accessories  | N        |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Pressure Transmitter <sup>(4)</sup>   | Q        |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| 316 Stainless Steel Seat  | T        |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Drain and Indicating Components <sup>(5)</sup>  | A        |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Tubing & Fittings   | Code     |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Stainless Steel 316   | NN       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Monel 400   | MM       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |
| Super Duplex  | DD       |          |          |    |          |    |                  |    |  |            |      |     |       |    |       |    |       |    |        |    |        |    |        |     |        |     |        |     |        |     |        |  |              |      |          |   |            |   |   |                                      |      |                                  |   |                                    |   |                     |   |                         |   |                       |   |   |         |      |               |    |                  |    |          |    |   |                 |      |            |    |            |    |            |    |          |    |          |    |                                    |    |   |         |      |               |    |                  |    |          |    |   |  |      |              |     |              |     |               |     |               |     |               |     |                   |     |                   |     |                   |     |                   |     |   |                        |      |   |   |  |    |  |    |                                      |    |                                    |     |                                    |      |  |   |   |    |                               |    |                                     |   |                     |   |             |    |   |   |                        |    |                       |    |                      |   |                          |    |                    |   |                          |   |                                     |   |                          |   |  |   |  |                   |      |                     |    |           |    |              |    |

### Notes:

- <sup>(1)</sup> Other materials available see engineering data
- <sup>(2)</sup> Coated internally and externally
- <sup>(3)</sup> Fm approved with 24VDC only
- <sup>(4)</sup> Supplied loose
- <sup>(5)</sup> Mandatory for FM approved valves



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