TECHNICAL DATA

3” - 8” (DN80 - DN200) VERTICAL SOLENOID OPERATED DELUGE VALVE

Maximum 250 PSI WWP

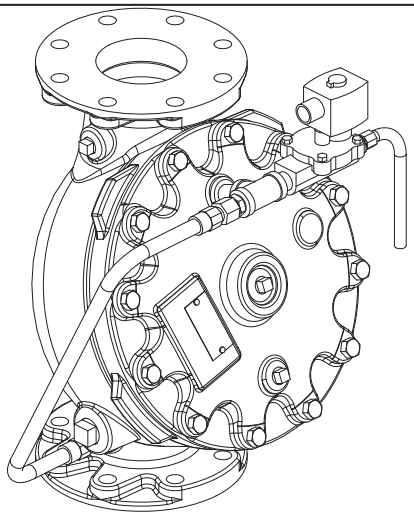
The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

1. DESCRIPTION

The Viking Vertical Pilot Deluge System is a simple pilot control system that utilizes a straight through Model F-1 Deluge Valve, operated with a solenoid valve. The deluge valve is a quick opening, differential diaphragm flood valve with one moving mechanism. It is held closed by water pressure trapped in the priming chamber; keeping the outlet chamber and downstream piping dry. The solenoid valve is a normally closed control valve that energizes open upon receiving power applied to the solenoid coil. When the pilot control system operates, pressure is released from the priming chamber of the deluge valve. This opens the clapper to allow water to flow into the piping. The solenoid operated deluge valve can be remotely operated.

Features:

1. Simple design with easy installation and maintenance
2. Designed for remote resetting and activation
3. Deluge valve-field replaceable diaphragm and seat rubbers



Available since 2012.

Figure 1

2. LISTINGS AND APPROVALS:

c UL us **cULus Listed:** Guide No. VLFT

3. TECHNICAL DATA

Deluge Valve Specifications:

Maximum Working Water Pressure: 250 PSI (17.4 bar)
Factory tested: to 500 psi (34.5 bar)
Valve differential: 2:1 (priming chamber to inlet chamber)
Color of valve: Red
Friction loss and C_V Factor: Refer to Table 1.

Deluge Valve Material Standards:

Main Valve Body and Cover: Ductile Iron, Grade 65-45-12, Brass UNS-C84400 or UNS-C83600

Main Trim Material Standards:

Nipples and fittings: Galvanized steel
Drain Tube: 7” (177.8 mm) copper tube

Flexible Hose Specifications and Material Standards:

3/8” ID Stainless Steel braided corrugated tube
Lengths: 18” (457 mm) for the 3” (DN80) valve, 24” (610 mm) for the 4” (DN100) valve, 31” (787 mm) for the 6” (DN150) valve, and 37” (940 mm) for the 8” (DN200) valve +/- 1/2” (12.7 mm).
NOTE: 1-1/2” (38.1 mm) minimum bend radius

Solenoid Valve Specifications:

NEMA 1,2,3,3S,4,4X general purpose, watertight
24 VDC, Wattage: 9.0 DC, DC Current: 338mA
Operating Pressure: Max. 250 psi (17.2 bar), Min. 5 psi (0.35 bar)
Coil: Class H, Continuous Duty
Maximum ambient temperature: 130 °F (54 °C)
C_V Factor: 4.0

Solenoid Valve Material Standards:

Body: Brass
Seals and Discs: Buna N
Core Tube: 305 Stainless Steel
Core and Plugnut: 430F Stainless Steel
Springs: 302 Stainless Steel

Ordering Information:

Part Numbers: Refer to Table 1.
Replacement Solenoid Valve Part Number: 11601

$$Q = C_V \sqrt{\frac{\Delta P}{S}}$$

Q = Flow
C_V = Flow Factor (GPM/1 PSI ΔP)
ΔP = Pressure Loss through Valve
S = Specific Gravity of Fluid

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Table 1: Part Numbers

Valve Size	Friction Loss*	C_V Factor*	Part Nos. (Galvanized**)				
			F/F (ANSI)	F/F (PN10)	F/F (PN16)	G/G	Pipe O.D.
3” (DN80)	12 ft. (3.6 m)	155	18063	18064		18058	89 mm
4” (DN100)	21 ft. (6.4 m)	428	18065	18066		18059	114 mm
6” (DN150)	39 ft. (11.9 m)	839	18067	18068		18060	168 mm
165 mm	39 ft. (11.9 m)	839	--	--		18061	165 mm
8” (DN200)	57 ft. (17.4 m)	1577	18069	18070	18071	18062	219 mm

* Values are for the flow control valve only. Friction loss is expressed in equivalent length of Schedule 40 pipe based on Hazen & Williams C = 120.

**Standard Trim consists of galvanized nipples and fittings.

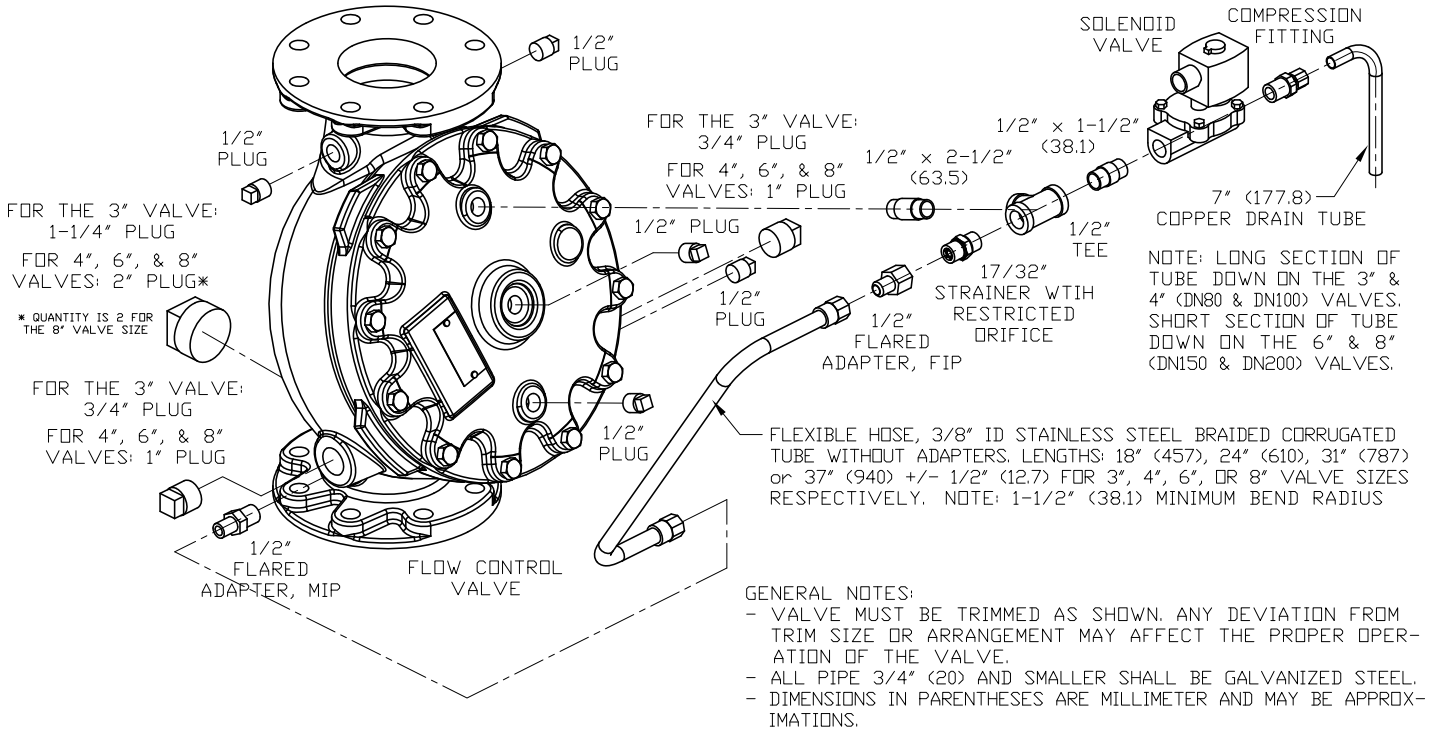

Figure 2