



TECHNICAL DATA

3" - 8" (DN80 - DN200) VERTICAL SOLENOID OPERATED FLOW CONTROL VALVE

Maximum 250 PSI WWP

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

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1. DESCRIPTION

The Viking Vertical Pilot Deluge System is a simple pilot control system that utilizes a straight through Model J-1 Flow Control Valve, operated with a solenoid valve. The flow control valve is a quick opening, differential diaphragm flood valve with a spring-loaded floating clapper. 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 flow control valve. This opens the clapper to allow water to flow into the piping. The solenoid operated flow control valve can be remotely operated for on-off applications.

Features:

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

2. LISTINGS AND APPROVALS:

cULus Listed: Guide No. VLFT

3. TECHNICAL DATA

Flow Control 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.

Flow Control 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

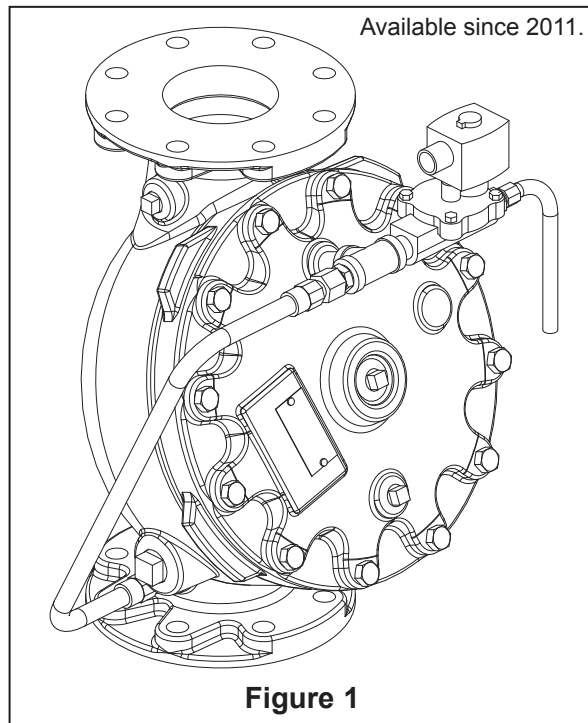


Figure 1

Table 1: Part Numbers					
Valve Size	Friction Loss*	C _v Factor*	Part Nos. (Galvanized**)		
			F/F (ANSI)	G/G	Pipe O.D.
3" (DN80)	22 ft. (6.7 m)	198	17354	17350	89 mm
4" (DN100)	21 ft. (6.4 m)	416	17355	17351	114 mm
6" (DN150)	39 ft. (11.9 m)	884	17356	17352	168 mm
8" (DN200)	57 ft. (17.4 m)	1500	17357	17353	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.

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

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



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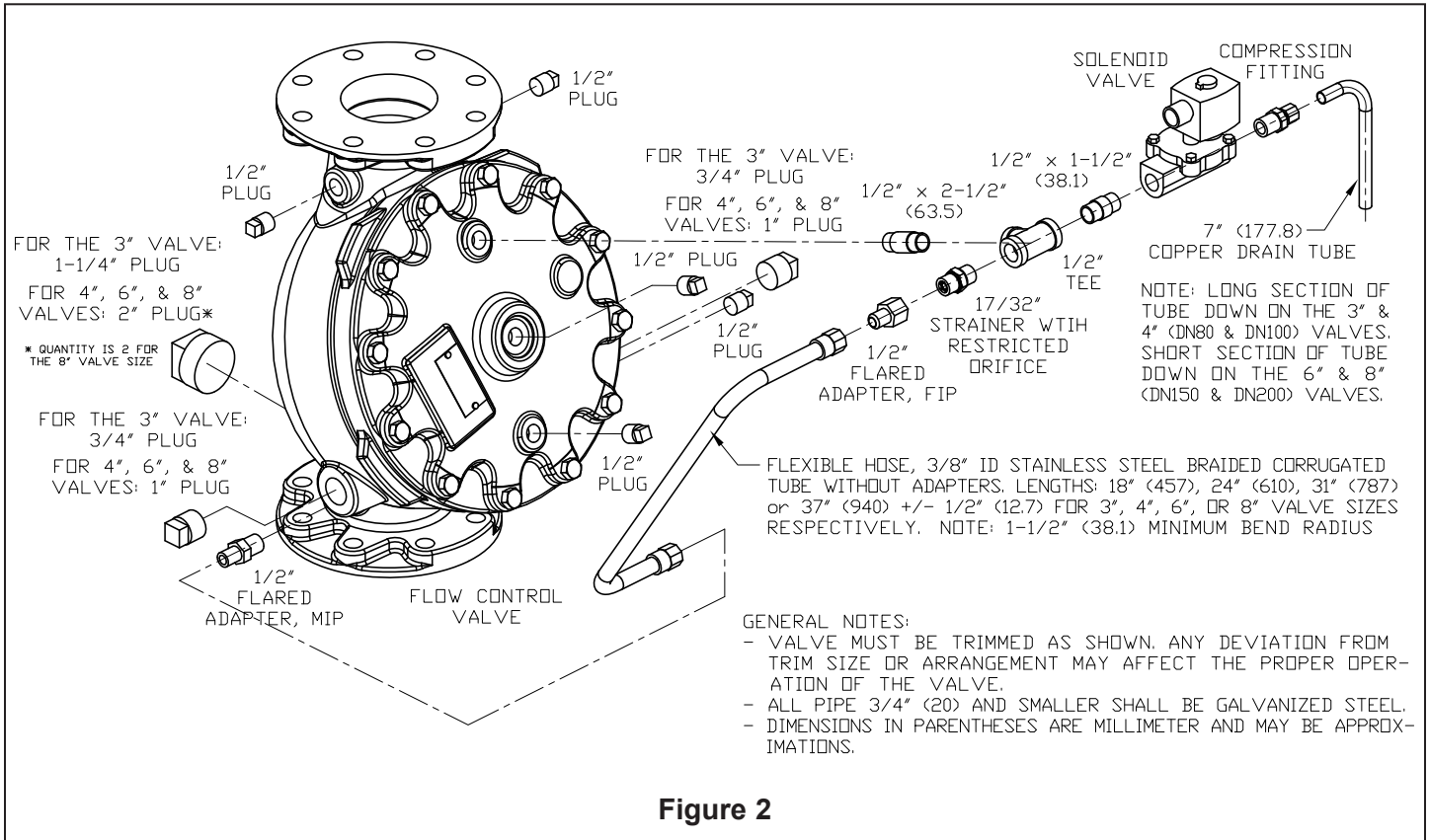


Figure 2