September 16, 2013 Trimpac 518a



TECHNICAL DATA

TRIMPAC® FLOW CONTROL WITH ELECTRIC RELEASE

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

TRIMPAC® is a factory assembled trim package for a Flow Control System with an electric release module in a metal enclosure. The standard trim normally required on a Flow Control System has been preassembled into a single cabinet. TRIMPAC® provides access doors for the Emergency Release (B.1) and Alarm Test Valve (B.7) for manual operation of these trim valves. TRIMPAC® is equipped with priming water pressure and water supply gauge view-ports for easy monitoring of water pressures. TRIMPAC® eliminates the installation of alarm trim piping and release trim piping at the Flow Control Valve (A.1). The enclosure protects trim valves from inadvertent operation. Piping (or optional stainless steel hose package) from the valve body to the enclosure assembly allows the assembly to be installed remote of the sprinkler system riser. A valve drain package is required and is ordered based on the flow control valve size. See Figures 14 and 15 for drain trim charts.



2. LISTINGS AND APPROVALS

c(UL)us UL listed: VLTR & VLTR7

FM Approved: Deluge Sprinkler Systems

3. TECHNICAL DATA

Specifications:

Rated Water Working Pressure: 250 psi (17.2 bar)

Gauges: 0-300 PSI (0-20.7 bar) Weight: 34 lbs. (15.4 kg.)

Dimensions: 16-1/8" (409 mm) high x 29-1/8" (748 mm) wide x 8-25/32" (223 mm) deep

U.S. Patent Number: 6,848,513

Material Standards:

Enclosure: 16 gauge steel, painted Red: Epoxy Powder Coat

Solenoid Valves (1 NO, 1 NC): Brass Body ½" (1.27 cm), 24 Volt DC, 250 psi (17.2 bar) NEMA Rated 1, 2, 3, 3S, 4 or 4X, 9 Watt

Ball valves: 1/2" NPT female ends

Strainer: Brass Body, 1/2" NPT inlet and outlet, 50 mesh stainless steel screen Restricted Orifice: Brass Body, 1/2" NPT male inlet and outlet, 0.0625" orifice Spring Loaded Check Valve: Brass Body, 1/2" NPT female inlet and outlet

Drain Check Valve: Brass Body, 1/2" NPT female inlet and outlet, EPDM clapper rubber

Hoses (4): Flexible braided stainless steel hoses with steel fittings and connectors, PTFE lined

Drain Hose (1): PVC Hose 60" long with brass hose connector x 1/2" NPT

Trim Piping: 1/2" Galvanized or 1/2" Brass

Fittings: 1/2" Galvanized **Ordering Information:**

Part No. - Galvanized 12252C-1

Part No. - Brass 12252C-1B (Brass available by special order only.)

Accessories:

a. Vertical Mounting Plate Kit - Part No. 11900

b. Horizontal Mounting Plate Kit - Part No. 11901

- c. Hose Assembly Kit (Includes (4) Stainless Steel Hoses and (1) PVC Drain Hose) Part No. 12072
- d. Individual 5'-0" Stainless Steel & PTFE Hose: Part No. 16558 (4) (included with Part Nos. 12252C-1 and 12252C-1B)
- e. Individual PVC Hose: Part No. 12071 (1) (included with Part Nos. 12252C-1 and 12252C-1B)

f. Drain Package

i. Galvanized: 1-1/2" - 11894-1 Brass: 1-1/2" - 11894-5 ii. Galvanized: 2" - 11894-2 Brass: 2" - 11894-6 Brass: 2-1/2" & 3" - 11894-7 iii. Galvanized: 2-1/2" & 3" - 11894-3

iv. Galvanized: 4", 6" & 8" - 11894-4 Brass: 4", 6" & 8" - 11894-8 Viking Technical Data may be found on

The Viking Corporation's Web site at

http://www.vikinggroupinc.com.

The Web site may include a more recent

edition of this Technical Data Page.

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- 4. INSTALLATION (Refer to Figures 3 12 for identification of trim components. Refer to Figure 13 for wall mounting.)
 - 1. TRIMPAC® Trim Assemblies may be installed with angle style Model H Flow Control Valves in sizes 1-1/2", 2", 3", 4", and 6", as well as straight through style Model J Flow Control Valves in sizes 1-1/2", 2", 2-1/2", 3", 4", 6", and 8".
 - 2. The TRIMPAC® trim assembly and valve must be installed in an area not subject to freezing.
 - 3. The TRIMPAC® trim assembly must be installed to facilitate drainage.
 - 4. The TRIMPAC® trim assembly must be installed above the elevation of the Drip Check Valve (C.2).
 - 5. The TRIMPAC® can be installed with the hose package or ½" non-corrosive metallic piping. The maximum distance the TRIMPAC® may be installed away from the Flow Control Valve (A.1) is 5'-0".
 - 6. The Flow Control Valve (A.1) equipped with TRIMPAC® must be installed in accordance with Viking Technical Data. The required drain package must be installed in accordance with Figures 14 and 15.
 - a. Remove all plastic thread protectors from the openings of the Flow Control Valve (A.1) and the TRIMPAC® trim assembly.
 - b. Apply a small amount of pipe-joint compound or tape to the external threads of all pipe connections required. Take care not to allow any compound, tape, or other foreign matter inside any of the nipples or openings of the valve or trim components.
 - c. Verify that all system components are rated for the water working pressure of the system.

Hydrostatic Test:

The Viking Flow Control Valve (A.1) is manufactured and listed for use at a maximum Water Working Pressure of 250 PSI (17.2 bar). The valve is factory tested at 500 PSI (34.5 bar). The Viking Flow Control Valve (A.1) may be hydrostatically tested at 300 PSI (20.7 bar) and/or 50 PSI (3.5 bar) above the normal Water Working Pressure, for limited periods of time (2 hours) for the purpose of acceptance by the Authority Having Jurisdiction. If air testing is required, DO NOT exceed 40 PSI (2.8 bar) air pressure.

Trim Note (Refer also to System Data and/or Trim Chart.)

Discharge piping from the Auxiliary Drain Valve (C.1), the Flow Test Valve (C.4), and all system drains should be kept separate. DO NOT connect the outlet of the Drip Check (C.2) to any other drain.

- 7. Placing The System In Service (Refer to Figures 3 12.)
 - a. Verify:
 - i. The system Main Water Supply Control Valve (E.1) is closed and the Flow Control Valve (A.1) is trimmed according to current Viking Trim Charts and schematic drawings for the system used.
 - ii. The system has been properly drained.
 - iii. The Auxiliary Drain (C.1) is open.
 - iv. The Emergency Release (B.1) is closed. **Note:** The Emergency Release (B.1) is closed when the handle is in line with the pipe. This allows the door to close when the valve is in the normal position.
 - v. The system water supply piping is pressurized up to the closed Main Water Supply Control Valve (E.1) and the priming line is pressurized up to the closed Priming Valve (B.2).
 - b. Open the Flow Test Valve (C.4).
 - c. Partially open the Main Water Supply Control Valve (E.1).
 - d. When full flow develops from the Flow Test Valve (C.4), close the Flow Test Valve.
 - e: Verify that there is no flow from the open Auxiliary Drain (C.1).
 - f. Close the Auxiliary Drain (C.1).
 - g. Fully open and secure the Main Water Supply Control Valve (E.1).
 - h. Verify that the Alarm Shut-off Valve (B.10) is open and that all other valves are in their normal operating position.
 - i. Depress the plunger of Drip Check (C.2). No water should flow from the Drip Check (C.2) when the plunger is pushed.
 - j. Check for and repair all leaks.
 - k. On new installations, those systems that have been placed out of service or where new equipment has been installed, trip test the system to verify that all equipment functions properly. Refer to the Flow Control Valve (A.1) data page for maintenance of the valve.

CAUTION! Performing a trip test results in operation of the Flow Control Valve (A.1). Water will flow into the sprinkler piping. Take necessary precautions to prevent damage.

I. After completing a trip test, perform SEMI-ANNUAL maintenance.

NOTE: For Flow Control Valves (A.1) installed on Viking Firecycle® Systems, refer to Firecycle® Technical Data.

Automatic Resetting (Refer to Figures 3 - 12 for identification of trim components.)

- m. To automatically reset the Flow Control Valve (A.1) after it has operated:
 - i. DO NOT close the water supply main control valve (E.1). The priming valve (B.2) must be OPEN.
 - ii. Automatically or manually reset the electric release system.
 - iii. System supply pressure will enter the priming chamber through the restricted priming line connected to the priming chamber inlet.

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- iv. When the combined force of spring pressure and system supply pressure entering the priming chamber overcomes the velocity pressure of water flowing through the valve, the clapper will close.
- v. Flow through the valve will stop.
- vi. To reactivate the system, open a releasing device. Priming water will escape from the priming chamber faster than it is replaced through the restricted priming line, allowing the Flow Control Valve (A.1) to open.
- n. Valve Removed From Service.

NOTE: When a valve has been removed from service and is subject to freezing or will be out of service for an extended period of time, all water must be removed from the priming chamber, trim piping, water supply piping and other trapped areas.

5. OPERATION (Refer to Figures 3 - 12.)

The Model H-1 Flow Control Valve (A.1) has an inlet chamber, an outlet chamber, and a priming chamber. The inlet chamber and outlet chamber are separated from the priming chamber by the clapper and diaphragm. System pressure enters the priming chamber through a restricted priming line (trim) equipped with a check valve. In the SET position, system pressure is trapped in the priming chamber to hold clapper on seat due to area differential of the clapper, and spring pressure. The clapper separates the inlet from from the outlet, keeping the system piping dry.

In fire conditions:

When the release system operates, pressure is released from the priming chamber faster than it is supplied through the restricted priming line. Water supply pressure in the inlet chamber forces the clapper off from seat, allowing water to flow through the outlet and into the system piping and alarm devices. To automatically reset, flow of water out of the priming chamber is stopped. This can be done manually (by closing a valve in the hydraulic release piping), or electrically (by closing a solenoid valve in the hydraulic release piping). When the combined force of spring pressure and system supply pressure entering the priming chamber overcomes the velocity pressure of water flowing through the valve, the clapper will close. Flow through the valve will stop. To return the system to "Normal" conditions, drain the system piping and replace any sprinklers that may have operated. Replace any releases that have been damaged. Re-establish system air pressure by following the steps in section 4. INSTALLATION, Step 7 Placing the System in Service.

6. INSPECTIONS, TESTS, AND MAINTENANCE

It is imperative that the system is inspected and tested on a regular basis. The frequency of the inspections may vary due to contaminated water supplies, corrosive water supplies, or corrosive atmospheres. Also, the alarm devices, detection systems, or other connected trim may require a more frequent schedule. For minimum maintenance and inspection requirements, refer to NFPA 25. In addition, the Authority Having Jurisdiction may have additional maintenance, testing, and inspection requirements that must be followed. Refer to the specific Viking Flow Control Valve (A.1) data page for periodic testing.

Maintenance:

TRIMPAC® should be inspected, tested, and maintained in accordance with the latest edition of NFPA 25, The Standard for Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, and in accordance with the Authority Having Jurisdiction.

NOTICE: THE OWNER IS RESPONSIBLE FOR MAINTAINING THE FIRE PROTECTION SYSTEM AND DEVICES IN PROPER OP-ERATING CONDITION. THE FLOW CONTROL VALVE MUST BE KEPT FROM FREEZING CONDITIONS AND PHYSICAL DAM-AGE THAT COULD IMPAIR ITS OPERATION. WHERE DIFFICULTY IN PERFORMANCE IS EXPERIENCED, THE VALVE MANU-FACTURER OR AUTHORIZED REPRESENTATIVE SHALL BE CONTACTED IF ANY FIELD ADJUSTMENT IS TO BE MADE.

AWARNING

Any system maintenance that involves placing a control valve or detection system out of service will impair the fire protection capabilities of that system. Prior to proceeding, appropriate impairment procedures per NFPA 25 shall be followed with the notification of all Authorities Having Jurisdiction. Consideration should be given to employment of a fire patrol in the affected areas.

Failure to follow these instructions could cause improper system operation, resulting in serious personal injury and/or property damage.

After Each Operation:

- 1. Sprinkler systems that have been subjected to a fire must be returned to service as soon as possible. The entire system must be inspected for damage, and repaired or replaced as necessary.
- 2. Flow Control Valves (A.1) and TRIMPAC® that have been subjected to brackish water, salt water, foam, foam/water solution, or any other corrosive water supply should be flushed with good quality fresh water before being returned to service. Refer to specific Flow Control Valve (A.1) for a maintenance schedule.

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TECHNICAL DATA

TRIMPAC® FLOW CONTROL WITH ELECTRIC RELEASE

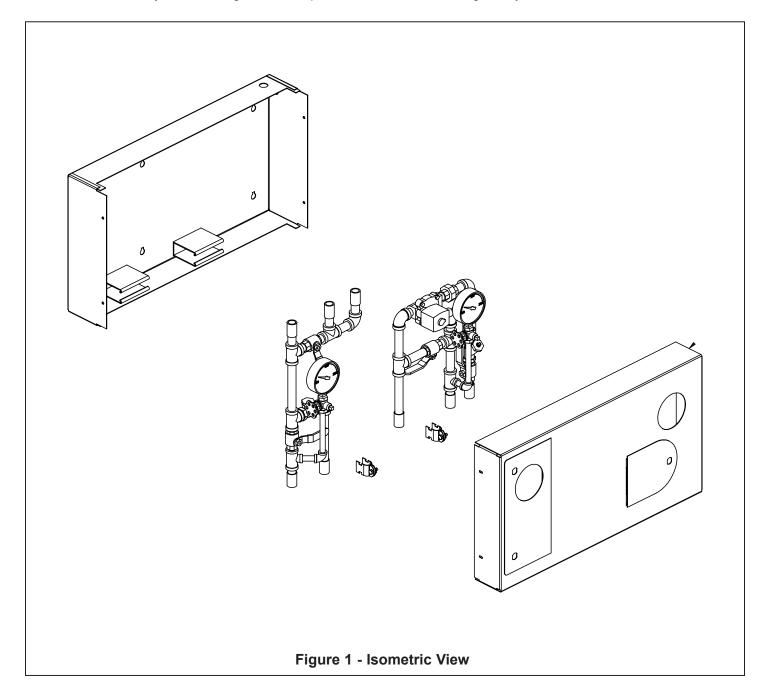
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Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

7. AVAILABILITY

The Viking TRIMPAC® is available through a network of domestic and international distributors. See the Viking Corp. Web site for closest distributor or contact The Viking Corporation.

8. GUARANTEE

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.

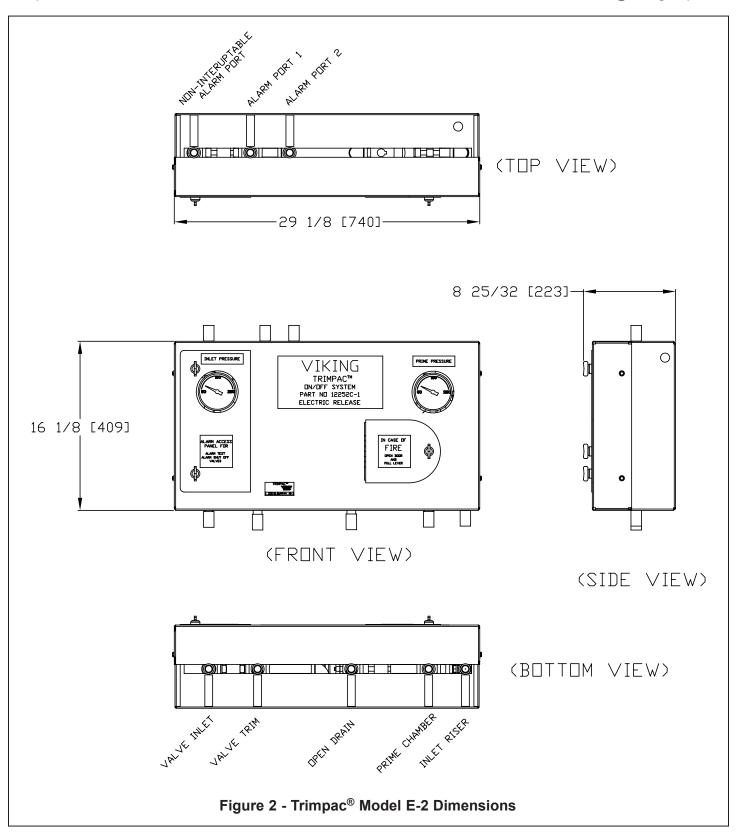


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TECHNICAL DATA

TRIMPAC® FLOW CONTROL WITH ELECTRIC RELEASE



Trimpac 518f September 16, 2013



TECHNICAL DATA

TRIMPAC® FLOW CONTROL WITH ELECTRIC RELEASE

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	Component	Description	Part Numbers		Corresponding Data Pages					
Α		System	m Valve	Valve Various 500 through 5						
A	A.1	Flow Control Valve	Various		500 through 508					
В		Trimpac		12252C-1B (Brass)	518a-r					
	B.1 - B.12	- B.12 Trimpac Components Refer to Figure								
С	Trimpac Drain Package									
	C.1	Auxiliary Drain Valve (NC)			5100 r					
	C.2	Drip Check Valve								
	C.3	Drain Cup			310d-I					
	C.4	Flow Test Valve (NC)	4", 6" & 8" - 11894-4 or 11894-8							
		Water Flow Al	Alarm Equipment							
D	D.1	Alarm Pressure Switch		-						
	D.2	Water Motor Alarm (F-2) (Optional)		711a-d						
	D.3	Strainer	()1489A	-					
	D.4	Electric Alarm Bell		-						
Е	Riser									
	E.1	Water Supply Control Valve		-						
F	Release System									
	F.1	Model VFR-400 Release Panel	1	290a-h						
	F.2	Electrical Detection System (Heat Detector Shown for Clarity)	,	Various	-					
		Table 1 - Trimpac Sys	tem Compon	ents						
Refer to Figures 3 through 12 for component identification.										

NOTE: When viewing this data page online, blue text represents hyperlinks and will open the desired data page when clicked.

Dotted lines indicate electrical system wiring required but not listed in "System Components" Table. For additional wiring requirements refer to technical data for components used.

Dashed lines indicate pipe required but not included with TRIMPAC trim packages. Minimum 1/2" nominal piping recommended.

Smaller diameter hoses are the (4) included flexible braided stainless steel hoses. Also available as a kit (P/N) 12072

Larger diameter hose is the included PVC Drain Hose. Also available separately (P/N 12071).

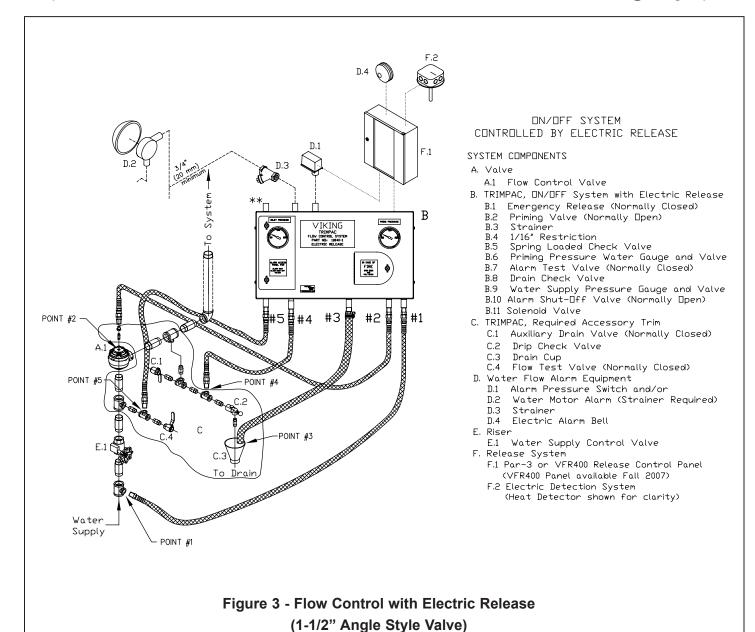
** 1/2" (15 mm) NPT for non-interruptible Alarm Pressure Switch (Optional)

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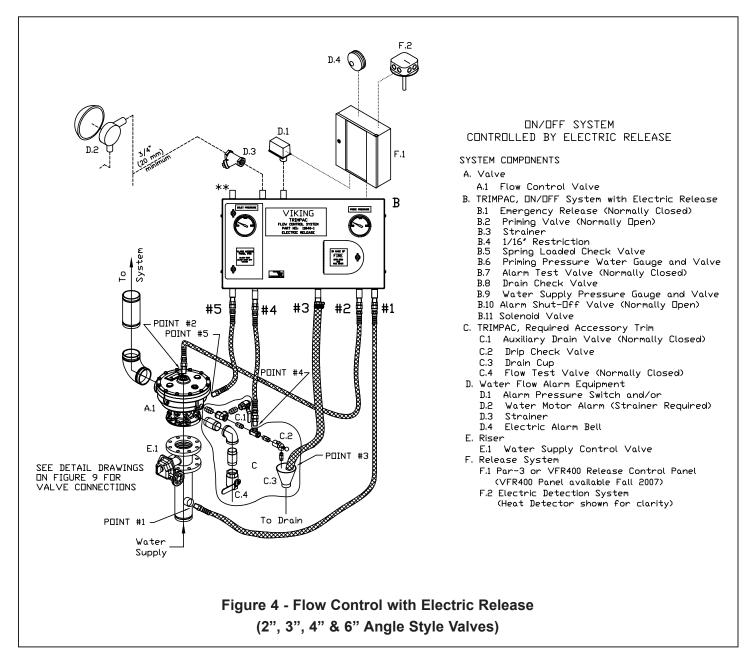


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TECHNICAL DATA

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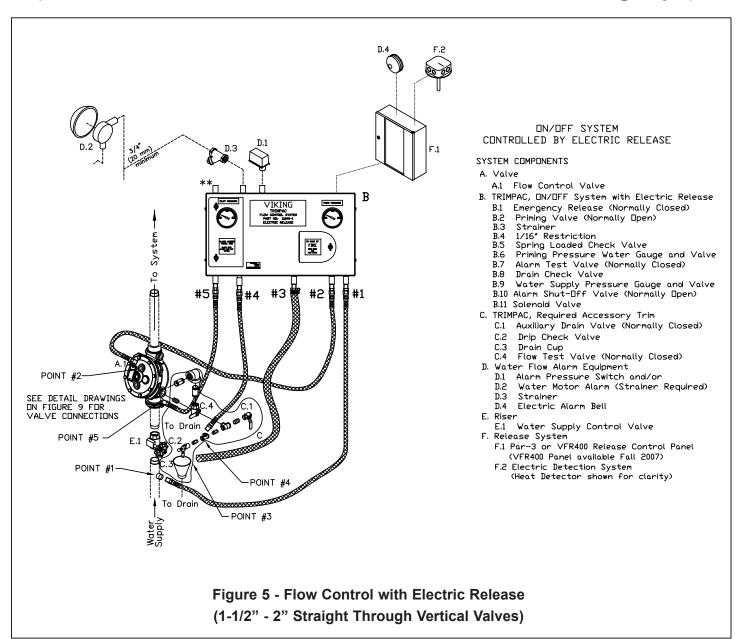


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TECHNICAL DATA

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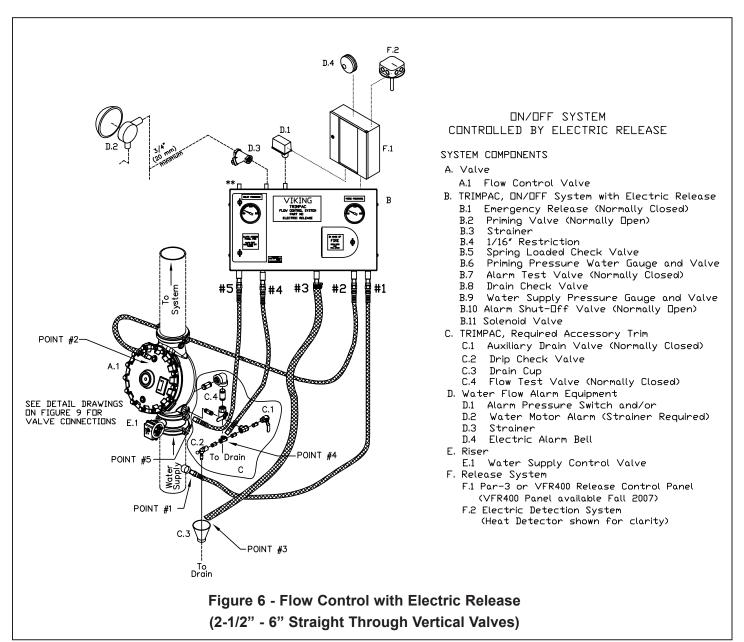


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TECHNICAL DATA

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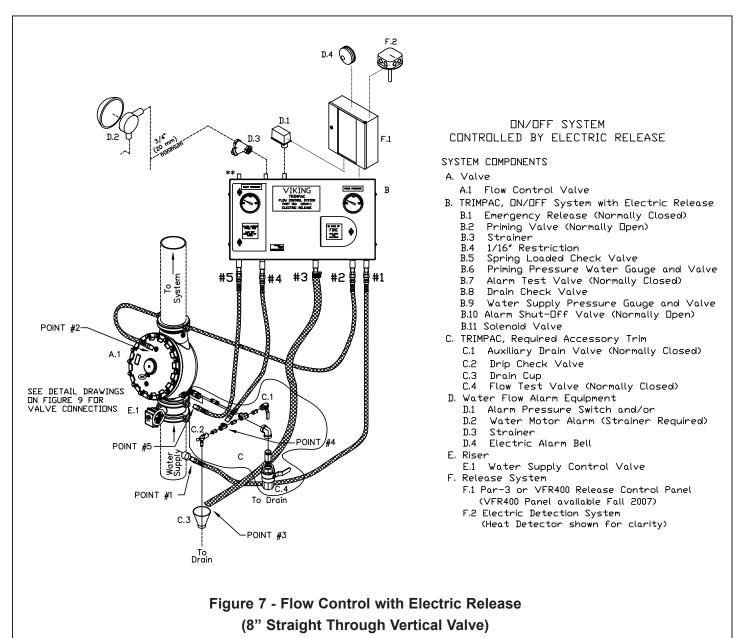


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TECHNICAL DATA

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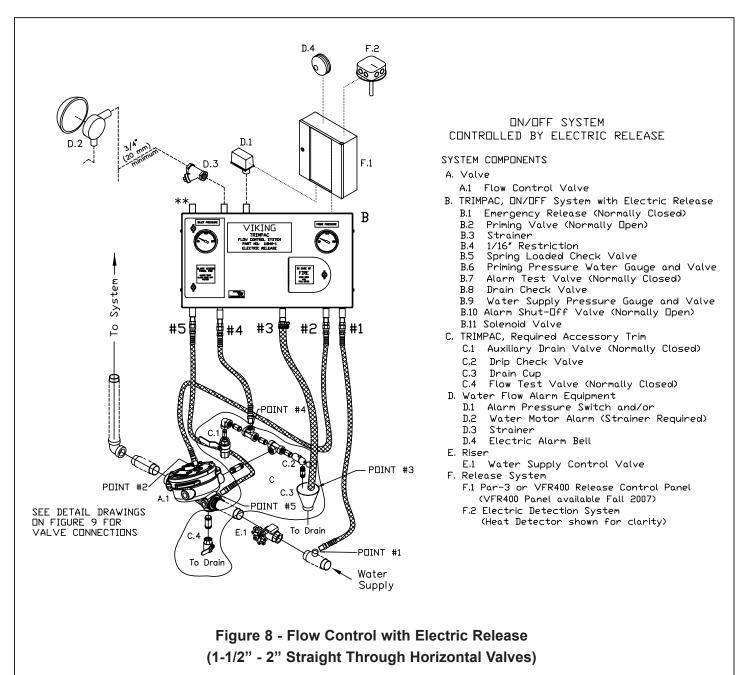


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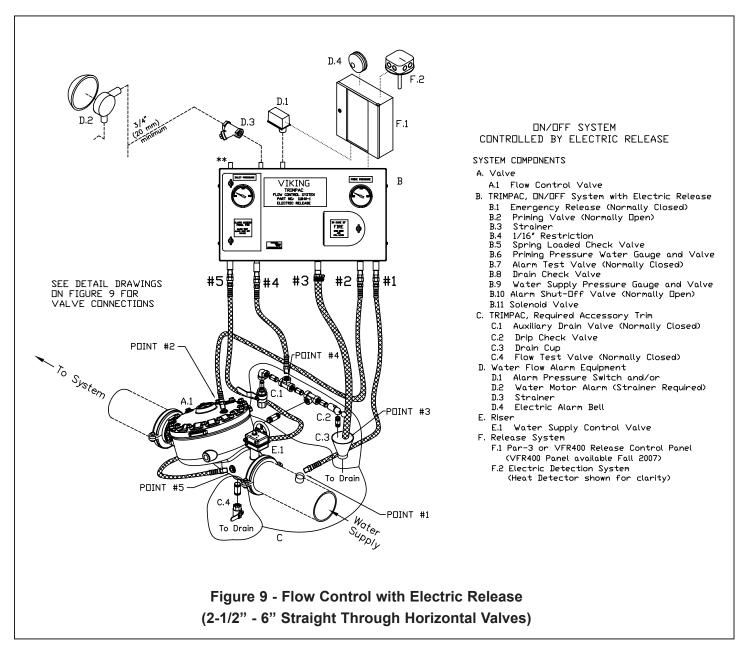


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TECHNICAL DATA

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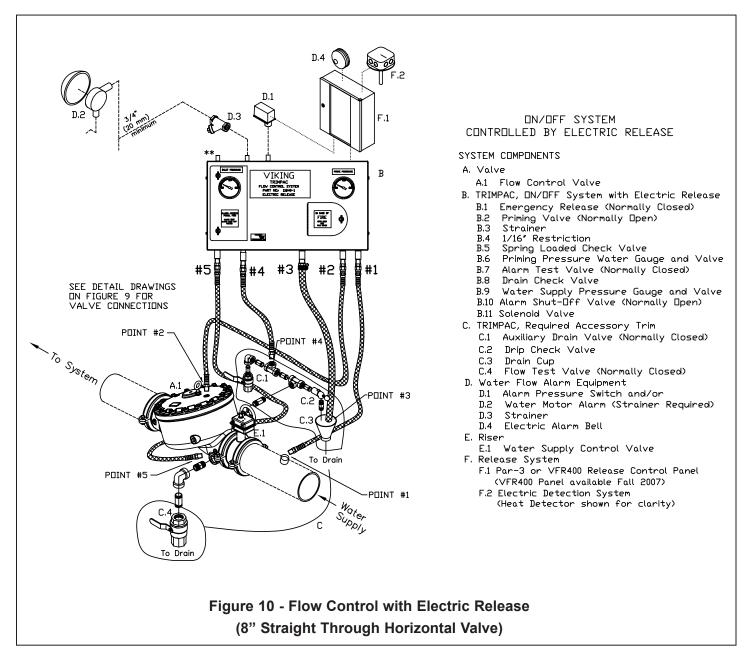


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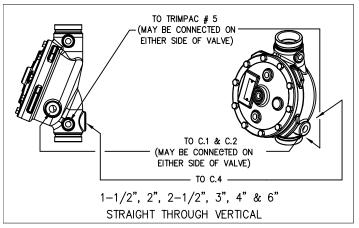


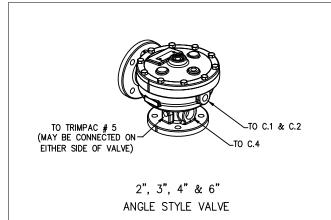
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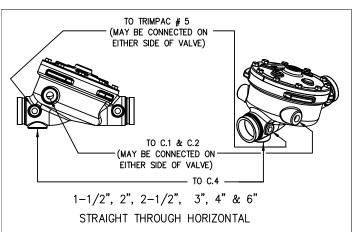


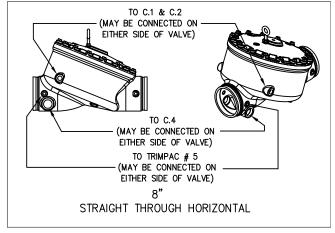
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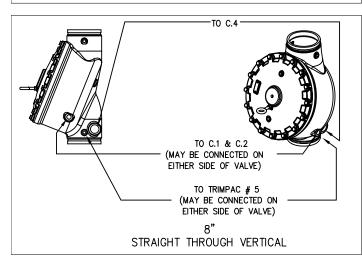
TRIMPAC® FLOW CONTROL WITH ELECTRIC RELEASE











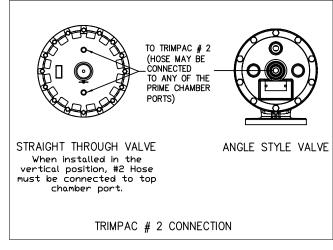


Figure 11 - Valve Connections

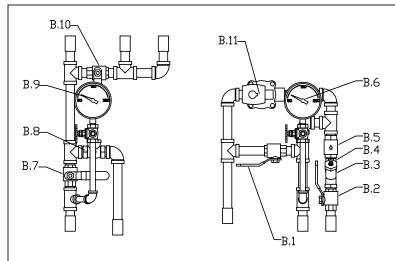
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TECHNICAL DATA

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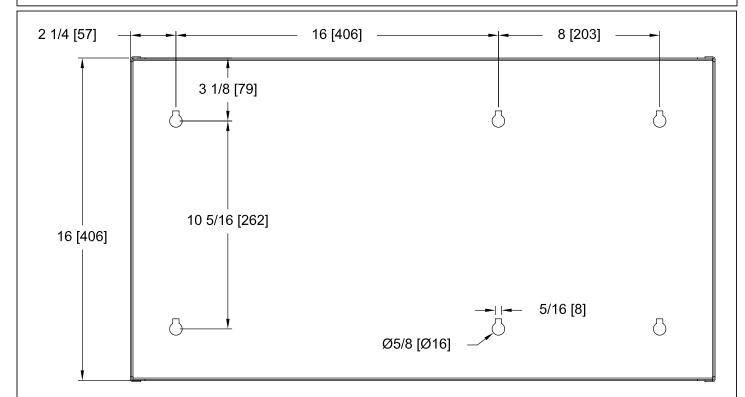
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- B. TRIMPAC, DN/DFF System with Electric Release
 - B.1 Emergency Release (Normally Closed)
 - B.2 Priming Valve (Normally Open)
 - B.3 Strainer
 - B.4 1/16" Restriction
 - B.5 Spring Loaded Check Valve
 - B.6 Priming Pressure Water Gauge and Valve
 - B.7 Alarm Test Valve (Normally Closed)
 - B.8 Drain Check Valve
 - B.9 Water Supply Pressure Gauge and Valve
 - B.10 Alarm Shut-Off Valve (Normally Open)
 - B.11 Solenoid Valve

NOTE: The Emergency Release (B.1) is closed when the handle is in line with the pipe. This allows the door to close when the valve is in the normal position.

Figure 12 - Trimpac[®] Components (Items B.1 - B.13)



Wall Mounting Notes:

- 1. Mounting Fasteners are supplied by the contractor.
- 2. Recommended Fasteners Minimum ¼" x 1-1/2 Lg. Hex Head lag screws with washers.
- 3. When installing into concrete, drywall or metal, use typical grommet.
- 4. Approximate Weight of TRIMPAC® and Flexible Hoses: 34 lbs. (15.4 kg)

Figure 13 - Mounting Dimensions

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TRIMPAC® FLOW CONTROL WITH ELECTRIC RELEASE

TRIMPAC® D	DRAIN PACKAGI	PART NUMB	ERS
Valve	Size	Galvanized	Brass
Angle	1-1/2" (DN40)	11894-1	11894-5
Straight	1-1/2" (DN40)	11894-2	11894-6
Angle & Straight	2" (DN50)	11894-2	11894-6
Straight	2-1/2" (DN65)	11894-3	11894-7
Angle & Straight	3" (DN76)	11894-3	11894-7
Angle & Straight	4" (DN100), 6" (DN150), & 8" (DN200)	11894-4	11894-8
	1-1/2" (DN	40)	Drip Ch
	Angle Style	Valve	1/2″× 2″ (50,8)
Drain Package Trim Chart			
			Drain (Cup
	rip Jeck		
	3/4" × 2"	2// 0 2	,
1/2" × 2" (50,8)	(50,8)	4" & 6	2"
	/4" × 3/4" 1/2" Tee	1" × (50,8	2" _ 🐚
Drain Cup	3/4" × (50,8		
Salp	2″ & 4″, 6″ -	3" - 3/4"	1"
	2" - 3/4"	Tee	2" & 3"
3* 4*	' - 1-1/4" & 6" - 2" Elbow		3/4" × 4" & 6" 1" × 2
	2,000		(50,8)
2" - 3/4" × 3" - 1-1/4" ×	4" (101,6)	3" - 1-1/4	
4" & 6" - 2" ×		4″ & 6″ -	2" × 4" ·
3"	- 3/4" 1-1/4"		
	6" - 2" Il Valve		
			F

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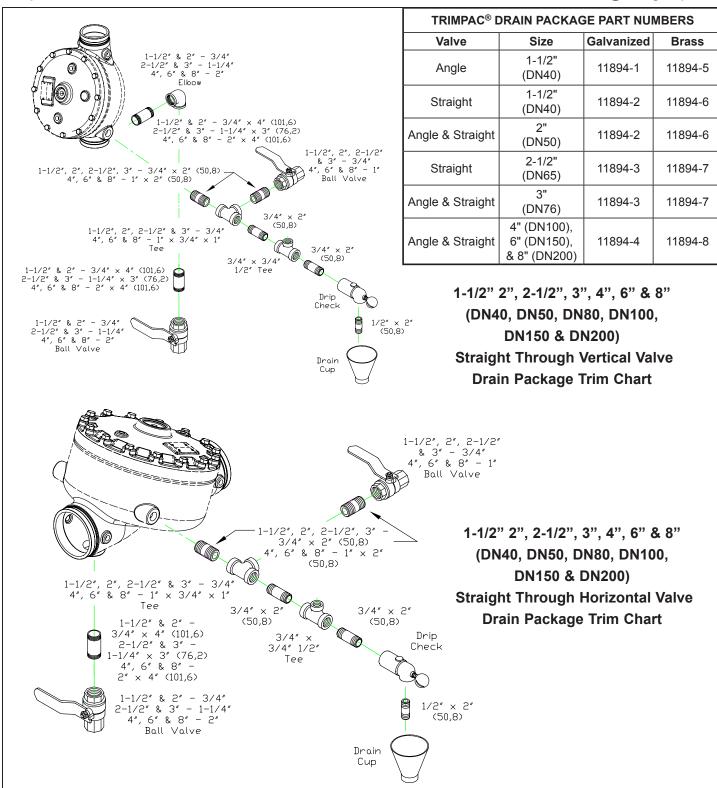


Figure 15