



## TECHNICAL DATA

### WET PIPE LOW FLOW FOAM/WATER MANIFOLD SYSTEM

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

With the Wet Pipe Low Flow Foam/Water Manifold System, multiple risers can be supplied from a single proportioning device. A riser manifold is installed with various riser types and sizes that are to supply foam solution to their hazard areas. A proportioning device is located upstream of the riser manifold. Foam solution is supplied to any or all risers where a water flow is present. If the desire is to install a completely mechanical proportioning system, an alarm check valve will be required upstream of the proportioning device.

A Viking Low Flow Foam system utilizing a bladder tank can supply foam concentrate to an individual in-line balanced proportioning assembly (ILBP) serving multiple risers in a manifold. A single proportioning device supplying multiple risers can be an economical method of providing foam risers.

#### 2. LISTINGS AND APPROVALS

- As a Complete Viking System
  - UL Listed - Guide GHXV
  - FM Approved - Low Expansion Foam Systems
- Alarm Check Valve and Trim
  - UL Listed - Guide VPLX
  - FM - Waterflow Alarm Valves
- In-line Balanced Pressure Proportioner (ILBP)
  - UL Listed - Guide GFGV
  - FM Approved - Low Expansion Foam Systems
- Halar<sup>®</sup> Coated Concentrate Control Valve (CCV)
  - UL Listed - Guide VLFT
  - FM Approved - Automatic Water Control Valve as standard deluge valve. No formal approval available for coating.
- Viking Bladder Tank ASME Sect. VIII Certified
  - UL Listed - Guide GHXV
  - FM Approved - Low Expansion Foam Systems
- Pilot Operated Pressure Control Valve
  - UL Listed - Guide VLMT
  - FM Approved (with this system) - Low Expansion Foam Systems
- Foam Concentrate
  - UL Listed - Guide GFGV
  - FM Approved - Low Expansion Foam Systems

**NOTE:** The Listings and Approvals for the Viking Low Flow Foam System are based on a complete system as indicated and described in this technical data page. Any alterations to the system configuration will void the listings and approvals as well as any Viking warranty.

#### 3. TECHNICAL DATA

##### Specifications:

Refer to individual component technical data sheet.

##### Material Standards:

Refer to individual component technical data sheet.

##### Ordering Information:

Refer to Tables 1 through 3.

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.

#### 4. INSTALLATION

##### A. Discharge Devices

Discharge devices will differ for different types of systems. In general, wet systems, dry systems, and preaction systems will utilize automatic sprinklers and hose reels as discharge devices. Deluge systems have a wider range of discharge devices, which include open sprinkler heads, foam chambers, foam makers, fixed monitors, oscillating monitors, and open spray nozzles.

Listed discharge devices are tested with specific concentrates and may have different listed densities than what is listed in various NFPA standards. AR-AFFF foam concentrates are listed with specific discharge devices and the fuels they are to protect.



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#### B. General Instructions and Warnings

1. Refer to Warnings and General Notes on page 2a-d in the "Foam Design" section of the *Viking Foam Systems Engineering and Design Data* book.
2. Refer to specific technical data sheets, acceptable installation standards, codes and Authority Having Jurisdiction for additional installation, operation, and maintenance instructions.
3. Inspections – It is imperative that the system is inspected and tested on a regular basis. See Section 6 - Inspections, Tests, and Maintenance.
4. **Warning** – Any system maintenance or testing that involves placing a control valve or detection system out of service may eliminate the fire protection of that system. Prior to proceeding, notify all Authorities Having Jurisdiction. Consideration should be given to employment of a fire patrol in the effected area.
5. The valve, trim, and assembly must be installed in an area not subject to freezing temperatures or physical damage.

#### C. Design and Installation

**Warning:** Locate all portions of the foam/water system subject to freezing in a heated area.

1. Refer to the Special Notes section on page 15d and Warnings and General Notes on page 2a-d in the "Foam Design" section of the Viking foam data book.
2. Install the alarm valve and trim (A) in accordance with *Viking Engineering and Design Data* book.
3. Install the proportioning device, the ILBP assembly (B), in the riser at least 5 pipe diameters past the alarm valve. (The ILBP assembly must be installed 5 pipe diameters of straight piping past a valve or change of direction. The same 5 pipe diameters of straight pipe are required on the discharge side of the ILBP as well to ensure proper proportioning)
4. Install the solution test header isolation valve (4) and solution test header (5). These valves are required to facilitate annual foam proportioning tests. The solution test header isolation valve (4) is in the normally closed position when the system(s) are in operation. The solution test header (5) has its individual test valves closed when the system(s) are in operation. When the system is to be tested annually for proportioning, the solution test header isolation valve (4) is opened to allow foam water solution to enter the solution test header (5). The solution test header (5) test valves are opened when discharge tests are to be performed. The solution test header is normally sized the same size as the manifold piping to accept the design flow of the system(s). The discharge of the solution test valve is normally piped to a test header with 2½" angle valves to aid in controlling the discharge of affluent.
5. Install the hydraulically actuated Halar® coated concentrate control valve (D) and associated trim as indicated on trim charts or technical data pages.
6. A concentrate shut-off valve (8) located upstream of the Halar® coated concentrate control valve (D) is required to isolate the Halar® coated concentrate control valve when setting up the system or when repairs are to be made to the downstream manifold risers.
7. Install the bladder tank and concentrate discharge piping from discharge head of bladder tank to concentrate shut-off valve.

#### D. Placing the System in Service

1. Verify that the water supply control valve (1) is closed, then place pilot pressure regulating valve and alarm valve (A) in service. (See instructions on the Viking technical data page.) Open the system isolation valve (5) if closed. Close solution test valve (4) if open.
2. Prime the Halar® coated concentrate control valve (D) by opening the ½" ball valve located on the priming connection. The priming connection for the Halar® coated concentrate control valve (D) should be supplied upstream of the alarm check valve water supply control valve. Water will pass through the ½" priming valve, ½" Y strainer, ½" swing check valve, 1/8" restricted orifice, PORV valve to the priming chamber of the Halar® coated concentrate control valve (D). Priming pressure will be present on the priming pressure gauge located as part of the concentrate control valve trim package. Bleed off any air pressure trapped in the priming line (3) to the Viking Halar® coated concentrate control valve (D) by opening the 3-way pressure gauge valve .
3. Open the water supply control valve (1) to the alarm valve after the Halar® coated concentrate control valve (D) has been primed. The PORV isolation valve (6) should be in the closed position when filling the sprinkler manifold with water, closing this valve will ensure that the concentrate control valve is not opened due to water flowing through the system. The alarm shut-off valve may be closed during this time as well to eliminate activation of alarms or the water motor alarm.
4. Place the foam bladder tank in service. The concentrate shut-off valve (8) will be in the closed position until foam bladder tank is placed in service. After filling the bladder tank in accordance with the Viking bladder tank installation instructions, the bladder tank water supply control valve will be opened and foam concentrate pressure will be indicated on the foam concentrate pressure gauge (7) located upstream of the of the concentrate shut-off valve (8). Once pressure is indicated on concentrate pressure gauge (7), slowly open foam concentrate shut-off valve.



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5. Once the foam concentrate shut-off valve (8) is opened, verify that foam concentrate is not passing by the Halar<sup>®</sup> coated concentrate control valve (D) by opening the ½" foam concentrate auxiliary drain valve (9). If foam concentrate appears, close concentrate shut-off valve (8) immediately. If foam concentrate is passing by the Halar<sup>®</sup> coated concentrate control valve (D), the valve is not seating and is most likely fouled. Debris must be removed from seat of Halar<sup>®</sup> coated concentrate control valve (D).

**NOTE:** The concentrate piping from the bladder tank must be compatible with the foam concentrate supplied to the proportioning device. Refer to the design notes of the Viking foam data book for more information.

#### E. Removing the System From Service

1. Close the water supply control valve (1).
2. Close the concentrate shut-off valve (8).
3. Open the main drain valve on the alarm valve.
4. Refer to instructions for removing alarm valve (A) from service in the *Viking Engineering and Design Data* book.
5. Perform maintenance and service on the system and riser piping.
6. If maintenance is required to be performed on concentrate piping, close the bladder tank water supply control valve (2) and open the shell vent valve on the bladder tank. This will relieve the pressure from the foam concentrate manifold piping. Open the concentrate manifold drain valve to drain concentrate from manifold piping. It is important to remember to capture the foam concentrate drained from the concentrate piping. If disposal is required of the foam concentrate, check with local authorities for the acceptable method in which to do so.

**NOTE:** If repairs or modifications are required on the foam concentrate supply piping, the sprinkler system may be kept in service for protection while repairs to the foam system concentrate piping are performed.

## 5. OPERATION

Once a water flow is present in one of the risers located in the manifold, the alarm valve opens, exposing the ported seat, allowing water to enter the alarm trim piping. The PORV located in the priming connection of the Halar<sup>®</sup> coated concentrate control valve (D) is pressurized on its sensing side, opening the priming line of the Halar<sup>®</sup> coated concentrate control valve (D) to open drain. Once the concentrate control valve priming line is vented, the Halar<sup>®</sup> coated concentrate control valve (D) will open and foam concentrate will flow into the inlet of the ILBP assembly. The water supply flowing through the riser is regulated down by a minimum of 15 psi (1.03 bar) by the pilot pressure regulating control valve (C). The bladder tank will provide foam concentrate at a higher pressure than the water pressure passing through the riser because the water pressure supplying the bladder tank is not regulated down. The pressures will be balanced by the spool balancing valve that is integral to the ILBP. Once water starts flowing into the manifold riser(s), water is flowing into the bladder tank to displace the foam concentrate required at the concentrate controller. The water being supplied into the tank is equal to the foam concentrate being metered into the water stream at the concentrate controller.

Once water passes through the ILBP assembly, foam concentrate is discharged into the concentrate controller through an orifice listed and approved for the foam concentrate to be utilized. The foam and water mix and create a foam/water solution. Generally the foam solution has a proportion of 1% or 3% of foam concentrate to water.

A foam blanket is created once the solution has discharged through the discharge device(s). A foam blanket is produced through one of two actions, agitation similar to what would happen when discharged through a standard sprinkler head, or aeration similar to what would happen when discharged through a foam chamber or foam maker. The foam blanket that is created by the discharge device is part of the listing or approval obtained with the foam concentrate testing.

## 6. INSPECTIONS, TESTS, AND MAINTENANCE

**NOTICE:** The owner is responsible for maintaining the fire protection system and devices in proper operating condition. For minimum maintenance and inspection requirements, refer to recognized standards such as those produced by NFPA, LPC, and VdS, which describe care and maintenance of sprinkler systems. In addition, the Authority Having Jurisdiction may have additional maintenance, testing, and inspection requirements that must be followed.

**WARNING:** Any system maintenance or testing that involves placing a control valve or detection system out of service may eliminate the fire protection of that system. Prior to proceeding, notify all Authorities Having Jurisdiction. Consideration should be given to employment of a fire patrol in the affected area.

**Inspections:** It is imperative that the system be inspected and tested on a regular basis. The following recommendations are minimum requirements. The frequency of the inspections may vary due to contaminated or corrosive water supplies and corrosive atmospheres. In addition, the alarm devices or other connected equipment may require more frequent inspections. Refer to the technical data, system description, applicable codes, and Authority Having Jurisdiction for minimum requirements. Prior to testing the equipment, notify appropriate personnel.



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#### 7. AVAILABILITY

The Wet Pipe Low Flow Foam/Water Manifold System 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.

#### SPECIAL NOTES

- A. Provide a minimum of 5 pipe diameters of straight pipe on the inlet and outlet of the concentrate controller (B) to minimize turbulence inside the concentrate controller. Exception: The outlet for the tank water supply control valve (2) may be connected nearer to the inlet of the concentrate controller and should not cause excessive turbulence. However, if the outlet to the foam solution test valve (4) is located closer than 5 pipe diameters, there may be turbulence at high flow rates.
- B. The combined total equivalent length of pipe (pipe length, plus equivalent lengths for fittings and valves) including both the water supply inlet piping and the foam concentrate discharge piping should not exceed 50 equivalent feet (15.2 meters). This will allow both pipes to be the same size as the foam liquid inlet to the concentrate controller. If the total equivalent length must exceed 50 feet (15.2 meters), then refer to the "Proportioning Equipment" section of this data book for the method of calculating these pipe sizes.
- C. The CCV (D) and swing check valve must be connected adjacent to the concentrate controller using pipe nipples as short as possible.
- D. The Alarm Check Valve must be installed using the variable pressure trim and retard chamber to minimize false operation of the CCV (D). The releasing PORV (1) for the CCV (D) is activated by the operation of the alarm valve.
- E. The water supply ball valve must be left in the open position, except when conducting alarm or flow test. Failure to close the ball valve before running an alarm or flow test will result in the unwanted discharge of foam concentrate. Once the test is completed, ball valve must be returned to the open position, or the foam CCV (D) will not operate, and the foam concentrate will not flow to the concentrate controller. **WARNING!** (Turning off the alarm test shut-off valve during a fire may cause the concentrate control valve to close, stopping the flow of foam concentrate. The installing contractor should post a sign stating the same at alarm shut-off valve and/or install a monitor switch on the alarm shut-off valve.
- F. The suggested location for a water flow switch, should one be required, is between the outlet of the alarm check valve (A) and the inlet to the concentrate controller.
- G. Figures 1-3 are general schematics of the required piping arrangement. Refer to the appropriate technical data page for specific information regarding the valve, tank, and related trim and devices.
- H. The technical information, statements, and recommendations contained in this manual are based on information and tests which, to the best of our knowledge, we believe to be dependable. It represents general guidelines only, and the accuracy or completeness thereof, are not guaranteed since conditions of handling and usage are outside our control. The purchaser should determine the suitability of the product for its intended use and assumes all risks and liability whatsoever in connection therewith.
- I. A strainer is not required in the foam concentrate discharge piping of bladder tank systems per NFPA Standards.
- J. The foam deluge CCV (D) does not require any trim except for a 1/2" priming line, 1/2" auxiliary drain valve, and and gauge with 3-way valve (11). Plug all remaining valve trim outlets. Refer to the "Valves" section of this data book to find the correct trim kit part number for the corresponding size of foam concentrate control Halar® coated deluge valve (D) required.



# TECHNICAL DATA

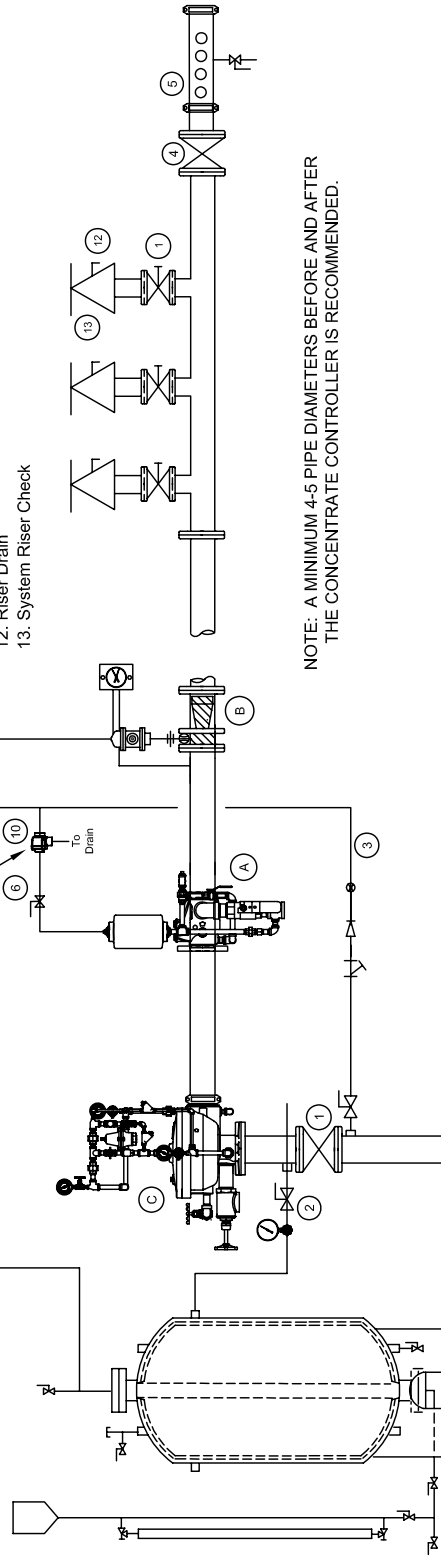
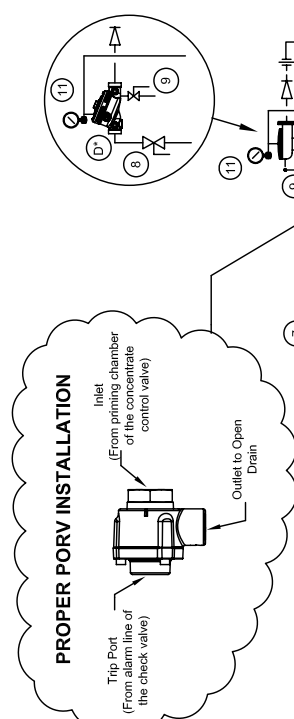
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### LOW FLOW MANIFOLD

- A. Alarm Check Valve and Trim
- B. In-line Balanced Pressure Control Valve Proportioner
- C. Pilot Operated Pressure Control Valve Assembly
- D. Halar Coated Concentrate Control Valve (\*Angle Style or Straight Thru Style CCV available.)
- 1. Water Supply Control Valve
- 2. Bladder Tank Water Supply Valve
- 3. Priming Line
- 4. Solution Test Valve
- 5. Solution Test Header
- 6. P.O.R.V. Isolation Valve
- 7. Foam Concentrate Pressure Gauge
- 8. Foam Concentrate Shut-off Valve
- 9. Foam Concentrate Auxiliary Drain Valve
- 10. P.O.R.V.
- 11. CCV Priming Pressure Gauge
- 12. Riser Drain
- 13. System Riser Check



NOTE: A MINIMUM 4-5 PIPE DIAMETERS BEFORE AND AFTER THE CONCENTRATE CONTROLLER IS RECOMMENDED.

Figure 1



# TECHNICAL DATA

## WET PIPE LOW FLOW FOAM/WATER MANIFOLD SYSTEM

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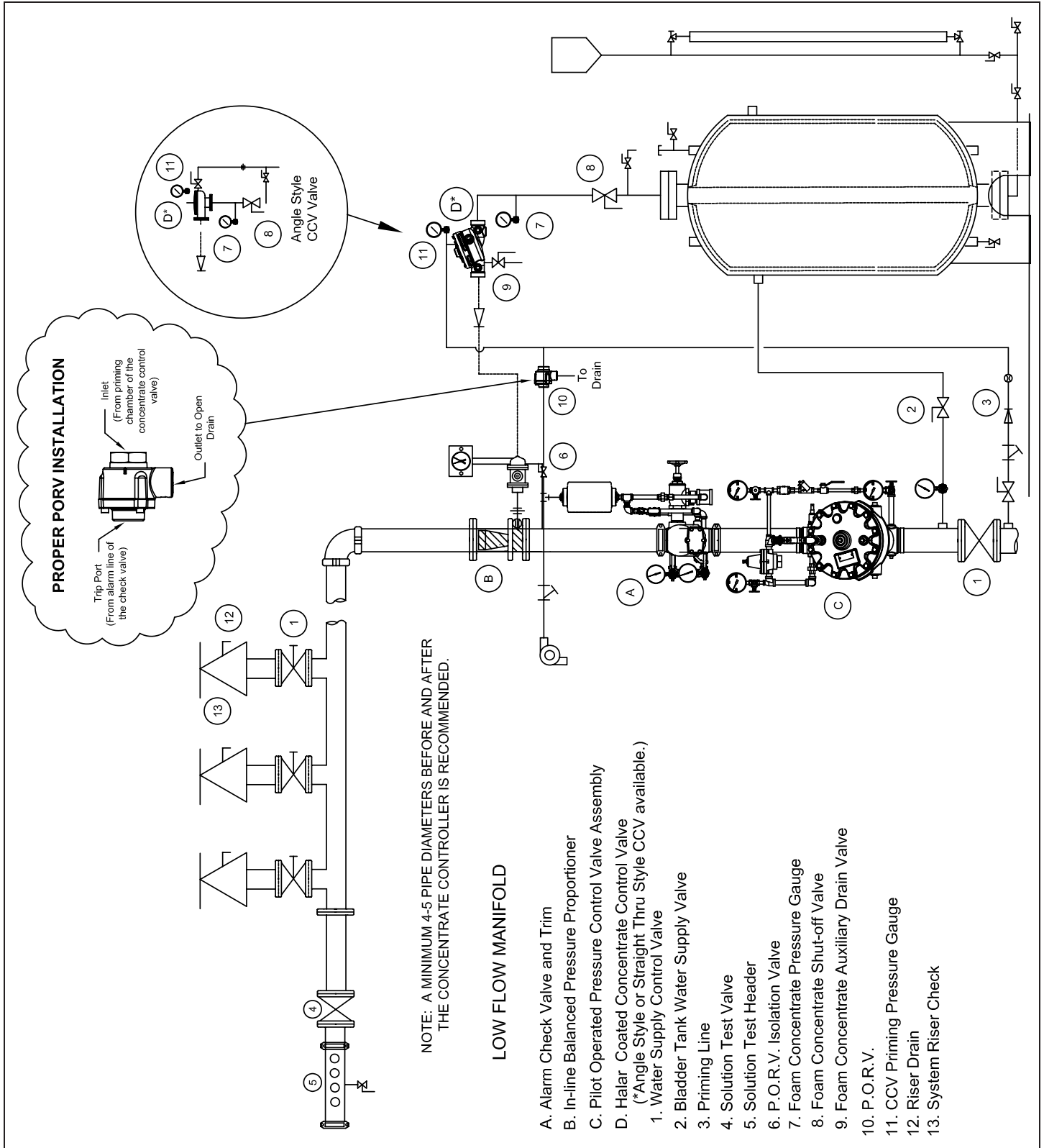


Figure 2



# TECHNICAL DATA

## WET PIPE LOW FLOW FOAM/WATER MANIFOLD SYSTEM

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### LOW FLOW MANIFOLD

- A. Alarm Check Valve and Trim
  - B. In-line Balanced Pressure Proportioner
  - C. Pilot Operated Pressure Control Valve Assembly
  - D. Helar Coated Concentrate Control Valve  
(\*Angle Style or Straight Thru Style CCV available.)
1. Water Supply Control Valve
  2. Bladder Tank Water Supply Valve
  3. Priming Line
  4. Solution Test Valve
  5. Solution Test Header
  6. P.O.R.V. Isolation Valve
  7. Foam Concentrate Pressure Gauge
  8. Foam Concentrate Shut-off Valve
  9. Foam Concentrate Auxiliary Drain Valve
  10. P.O.R.V.
  11. CCV Priming Pressure Gauge
  12. Riser Drain
  13. System Riser Check

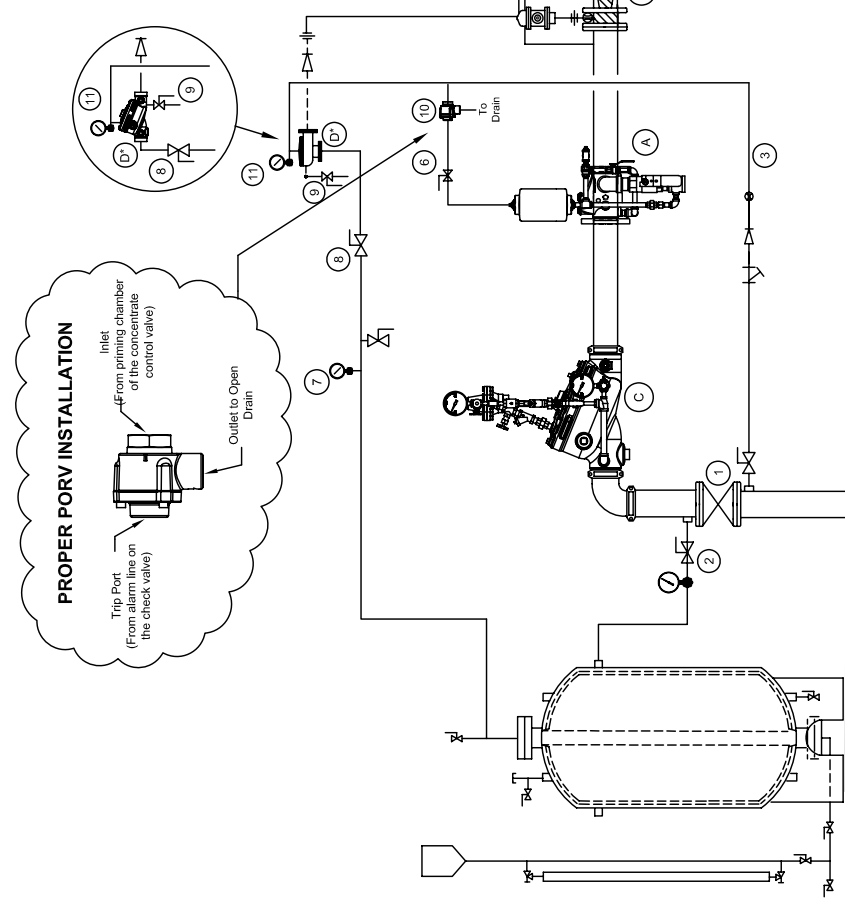


Figure 3



# TECHNICAL DATA

## WET PIPE LOW FLOW FOAM/WATER MANIFOLD SYSTEM

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For complete Wet Pipe Low Flow Foam/Water Manifold System, select Alarm Valve and Trim, Retard Chamber and Circuit Closer Vent Trim, Pilot Operated Pressure Control Valve, Foam Concentrate Control Valve and Trim, Foam Concentrate and ILBP, Bladder Tank and Accessories.

DESCRIPTION	NOMINAL SIZE	PART NUMBER	DATA PAGE	
<b>ALARM CHECK VALVE</b>				
Flange/ Flange	Flange Drilling	Model J-1		
	ANSI	3"	08235	
	ANSI	4"	08238	
	ANSI	6"	08241	
	ANSI	8"	08244	
	PN10/16	DN80	09108	<a href="#">26 a-g</a>
	PN10/16	DN100	09109	
	PN10/16	DN150	09110	
	PN10	DN200	09111	
	PN16	DN200	12388	
Flange/ Groove	Flange Drilling / Pipe O.D.	Model J-1		
	ANSI / 89 mm	3"	08236	
	ANSI / 114 mm	4"	08239	
	ANSI / 168 mm	6"	08242	
	ANSI / 219 mm	8"	08245	
	PN10/16 / 89 mm	DN80	09535	<a href="#">26 a-g</a>
	PN10/16 / 114 mm	DN100	09536	
	PN10/16 / 168 mm	DN150	09874	
	PN10 / 219 mm	DN200	09877	
	PN16 / 219 mm	DN200	12389	
Groove/ Groove	Pipe O.D.	Model J-1		
	89 mm	3" / DN80	08237	
	114 mm	4" / DN100	08240	
	165 mm	DN150	09405	<a href="#">26 a-g</a>
	168 mm	6" / DN150	08243	
	219 mm	8" / DN200	08246	
<b>MODEL J-1 ALARM VALVE TRIM BRASS</b>				
Vertical	3" / DN80	11428		
	4" / DN100	11429		
	6" / DN150	11430	<a href="#">27 a-c</a>	
	8" / DN200	11431		
Horizontal	3" / DN80	11432		
	4" / DN100	11433		
	6" / DN150	11434	<a href="#">28 a-c</a>	
	8" / DN200	11435		

DESCRIPTION	NOMINAL SIZE	PART NUMBER	DATA PAGE
<b>CIRCUIT CLOSER VENT BRASS TRIM</b>		08220	
<b>MODEL C-1 RETARDING CHAMBER</b> (not included in the trim)		05904B	<a href="#">38 a-b</a>

<b>FOAM CONCENTRATE CONTROL VALVE HALAR® COATED</b>			
<b>Angle Style</b>			
Threaded NPT	Model & Pipe O.D.		
	Model E-4 48 mm	1½" / DN40	09890Q/B
	Model E-2 60 mm	2" / DN50	08361Q/B
<b>Straight Through</b>			
Threaded NPT	Pipe O.D.	Model F-2	
	NPT 65 mm	2½"	12402Q/B
Groove/ Groove	Pipe O.D.	Model F-2	
	48 mm	1½" / DN40	12127Q/B
	60 mm	2" / DN50	12058Q/B
	73 mm	2½" / DN65	12404Q/B

<b>FOAM CONCENTRATE CONTROL VALVE TRIM</b>			
Use with Angle Style Valve	<b>Galvanized</b>		
	1½" / DN40	08098	
	2" / DN50	08099	
	<b>Brass</b>		
	1½" / DN40	09694	
	2" / DN50	09695	
Use with Straight Through Valves	<b>Galvanized</b>		
	1½" / DN40	12848-1	<a href="#">61 a-f</a>
	2" / DN50	12848-1	
	2½" / DN65	12929-1	
	<b>Brass</b>		
	1½" / DN40	12848-2	
	2" / DN50	12848-2	
	2½" / DN65	12929-2	

DESCRIPTION	TANK SIZE	PART NUMBER	DATA PAGE
<b>HORIZONTAL BLADDER TANK</b>	50 - 4500 Gallon	CHBT2-xxxx *	<a href="#">240 a-h</a>
<b>VERTICAL BLADDER TANK</b>	25 - 4500 Gallon	CVBT2-xxxx *	
* Where xxxx is the tank size			

Table 1



	<h1 style="margin: 0;">TECHNICAL DATA</h1>	<h2 style="margin: 0;">WET PIPE LOW FLOW FOAM/WATER MANIFOLD SYSTEM</h2>
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DESCRIPTION	NOMINAL SIZE	PART NUMBER	DATA PAGE
<b>FOAM CONCENTRATE SWING CHECK VALVE</b>			
	1½" / DN40	99S-0150	-
	2" / DN50	99S-0200	-
	2½" / DN65	05497C	<a href="#">803 a-d</a>
<b>FOAM SOLUTION TEST VALVE</b>			
<b>Grooved Butterfly Valve</b>	2½" / DN65	01G-0250	-
	3" / DN80	01G-0300	
	4" / DN100	01G-0400	
	6" / DN150	01G-0600	
	8" / DN200	01G-0800	
<b>SYSTEM ISOLATION VALVE</b>			
<b>Grooved Butterfly Valve</b>	2½" / DN65	01G-0250	-
	3" / DN80	01G-0300	
	4" / DN100	01G-0400	
	6" / DN150	01G-0600	
	8" / DN200	01G-0800	
<b>WATER SUPPLY CONTROL VALVE</b>			
<b>OS &amp; Y</b>	2½" / DN65	8068A-0250	-
	3" / DN80	8068A-0300	
	4" / DN100	8068A-0400	
	6" / DN150	8068A-0600	
	8" / DN200	8068A-0800	
<b>FOAM CONCENTRATE SHUT-OFF VALVE</b>			
<b>Ball Valve</b>	1½" / DN40	T595Y66-0150	-
	2" / DN50	T595Y66-0200	
<b>ACCESSORIES FOR FOAM/WATER SPRINKLER SYSTEMS</b>			
<b>MODEL D-1 PORV 1/8" / 3 mm RESTRICTED ORIFICE SOFT SEAT CHECK VALVE Y STRAINER BALL VALVE</b>	½" / DN15	13598	<a href="#">287 a-b</a>
	½" / DN15	06555A	-
	½" / DN15	03945A	-
	½" / DN15	01054A	-
	½" / DN15	10355	-
<b>CONCENTRATE CONTROL VALVE PRIMING CONNECTION PKG.</b>			
Required to connect priming chamber		10985	-
<b>BLADDER TANK WATER SUPPLY CONTROL VALVE</b>			
<b>Ball Valve Ball Valve OS &amp; Y OS &amp; Y</b>	1½" / DN40	WBV-0150	-
	2" / DN50	WBV-0200	
	2½" / DN65	8068A-0250	
	3" / DN80	8068A-0300	

FOAM CONCENTRATES AND ILBP ASSEMBLIES					
FOAM CONCENTRATE			ILBP ASSEMBLY		
DESCRIPTION	BASE PART NUMBER	FOAM CONCENTRATE DATA PAGE	NOMINAL SIZE	VIKING PART NUMBER	ILBP DATA PAGE
1% AFFF C103	F14969	<a href="#">100 a-b</a>	2½"	F15006/A	<a href="#">171 a-d</a>
			3"	F15012/A	
			4"	F15018/A	
			6"	F15025/A	
3% AFFF C303	F14970	<a href="#">101 a-b</a>	8"	F15032/A	
			2½"	F15006/B	
			3"	F15012/B	
			4"	F15018/B	
3% AFFF MS C303	F14970	<a href="#">101 a-b</a>	6"	F15025/B	
			8"	F15032/B	
			2½"	F15006/C	
			3"	F15012/C	
3% AFFF MS C301 MS	F14971	<a href="#">102 a-b</a>	4"	F15018/C	
			6"	F15025/C	
			8"	F15032/C	
			2½"	F15006/D	
3% - 6% AFFF @ 3% C363	F14973	<a href="#">103 a-b</a>	3"	F15012/D	
			4"	F15018/D	
			6"	F15025/D	
			8"	F15032/D	
3% - 6% AFFF @ 3% C363	F14973	<a href="#">103 a-b</a>	2½"	F15006/E	
			3"	F15012/E	
			4"	F15018/E	
			6"	F15025/E	
3% AR-AFFF CUG	F14972	<a href="#">104 a-b</a>	8"	F15032/E	
			2½"	F15006/J	
			3"	F15012/J	
			4"	F15018/J	
2% Hi Ex C2	F14974	<a href="#">105 a-b</a>	6"	F15025/J	
			8"	F15032/J	
			2½"	F15006/H	
			3"	F15012/H	
			4"	F15018/H	
			6"	F15025/H	
			8"	F15032/H	

Table 2



# TECHNICAL DATA

## WET PIPE LOW FLOW FOAM/WATER MANIFOLD SYSTEM

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

DESCRIPTION	NOMINAL SIZE	PART NUMBER	DATA PAGE
<b>PILOT OPERATED PRESSURE CONTROL VALVES</b>			
<b>ANGLE STYLE VALVES (INCLUDES MODEL A-2 GALVANIZED TRIM. BRASS OR STAINLESS STEEL ALSO AVAILABLE)</b>			
Threaded	Pipe O.D.		
	60 mm	2" / DN50	10793
Flange/ Flange	Flange Drilling		
	ANSI	3" / DN80	10801
	ANSI	4" / DN100	10795
	ANSI	6" / DN150	10807
	PN10/16	DN80	10801FFPN1016
	PN10/16	DN100	10795FFPN1016
	PN10/16	DN150	10807FFPN1016
Flange/ Groove	Flange Drilling / Pipe O.D.		
	ANSI / 89 mm	3" / DN80	10800
	ANSI / 114 mm	4" / DN100	10794
	ANSI / 168 mm	6" / DN150	10806

534 a-f

DESCRIPTION	NOMINAL SIZE	PART NUMBER	DATA PAGE
<b>PILOT OPERATED PRESSURE CONTROL VALVES</b>			
<b>STRAIGHT THROUGH VALVES (INCLUDES MODEL B-1 GALVANIZED TRIM. BRASS OR STAINLESS STEEL ALSO AVAILABLE)</b>			
<b>Horizontal Arrangement</b>			
Threaded	Pipe O.D.		
	48 mm	1½" / DN40	12774
	60 mm	2" / DN50	12776
	65 mm	2½" / DN65	12778
Flange/ Flange	Flange Drilling		
	ANSI	3" / DN80	12782
	ANSI	4" / DN100	12785
	ANSI	6" / DN150	12788
	ANSI	8" / DN200	12790
Flange/ Groove	Flange Drilling / Pipe O.D.		
	ANSI / 89 mm	3" / DN80	12781
	ANSI / 114 mm	4" / DN100	12784
	ANSI / 168 mm	6" / DN150	12787
Groove/ Groove	Pipe O.D.		
	48 mm	1½" / DN40	12775
	60 mm	2" / DN50	12777
	73 mm	2½" / DN65	12779
	89 mm	3" / DN80	12780
	114 mm	4" / DN100	12783
	168 mm	6" / DN150	12786
	219 mm	8" / DN200	12789
<b>Vertical Arrangement</b>			
Threaded	Pipe O.D.		
	48 mm	1½" / DN40	12791
	60 mm	2" / DN50	12793
	65 mm	2½" / DN65	12795
Flange/ Flange	Flange Drilling		
	ANSI	3" / DN80	12799
	ANSI	4" / DN100	12802
	ANSI	6" / DN150	12805
	ANSI	8" / DN200	12807
Flange/ Groove	Flange Drilling / Pipe O.D.		
	ANSI / 89 mm	3" / DN80	12798
	ANSI / 114 mm	4" / DN100	12801
	ANSI / 168 mm	6" / DN150	12804
Groove/ Groove	Pipe O.D.		
	48 mm	1½" / DN40	12792
	60 mm	2" / DN50	12794
	73 mm	2½" / DN65	12796
	89 mm	3" / DN80	12797
	114 mm	4" / DN100	12800
	168 mm	6" / DN150	12803
	219 mm	8" / DN200	12806

536 a-i

536 a-i

Table 3