



TECHNICAL DATA

**WET PIPE
FOAM/WATER SYSTEM
SUPPLIED BY BLADDER TANK**

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

Telephone: 269-945-9501 Technical Services 877-384-5464 Fax: 269-945-4495 Email: techsvcs@vikingcorp.com

1. DESCRIPTION

A Wet Pipe Bladder Tank Foam/Water System is a standard wet pipe automatic sprinkler system capable of discharging a foam/water solution automatically through any sprinklers that operate. A Wet Pipe Bladder Tank Foam/Water System with a hydraulically actuated Viking Halar® Deluge Concentrate Control Valve (CCV) consists of a standard wet pipe sprinkler system using a Viking Alarm Check Valve complete with variable pressure trim, a concentrate controller proportioning device with appropriately sized orifice, a hydraulically actuated Viking Halar® Deluge Valve, a foam concentrate bladder tank and trim and foam agent.

2. LISTINGS AND APPROVALS

- Alarm Check Valve and Trim
 - UL Listed - Guide VPLX
 - FM - Waterflow Alarm Valves
- Concentrate Controller (Proportioner)
 - UL Listed - Guide GFGV
 - FM Approved - Low Expansion Foam Systems
- Halar® 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
- Foam Concentrate
 - UL Listed - Guide GFGV
 - FM Approved - Low Expansion Foam Systems

3. TECHNICAL DATA

Specifications:

Refer to individual component technical data pages.

Material Standards:

Refer to individual component technical data pages.

Ordering Information:

Refer to Tables 1 through 2.

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

- Standard spray sprinklers
- Non-aspirating spray nozzles
- Manual monitors
- Hose reels and hand lines
- and other dispensing devices

B. General Instructions And Warnings

1. Refer to the Warnings and General Notes on page 2 a-d in the Design section of the Viking Foam Data Book.
2. Refer to specific technical data sheets, acceptable installation standards, codes and Authority Having Jurisdiction for additional installation, operation and maintenance instructions. The Alarm check valve (C) must be installed using the variable pressure trim to minimize false operation of the CCV (D).
3. Inspections - It is imperative that the system be inspected and tested on a regular basis. See Section 6 - Inspections, Tests and Maintenance.
4. **WARNING** - Any system maintenance or testing which 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.



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5. The valve, trim and assembly must be installed in an area not subject to freezing temperatures or physical damage.

C. Installation

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

1. Refer to the Special Notes on page 10f and the Warnings and General Notes on pages 2a-d in the Design Notes section of the Viking Foam Data Book.
2. Install the alarm check valve and trim (C) in accordance with the Viking Engineering and Design Data Book.
3. Install foam solution test valve (25) and system isolation valve (26). These valves are used to conduct foam/water solution tests and are required.
4. Install hydraulically actuated Halar[®] coated Viking Deluge CCV (D) and associated trim as indicated in Figure 1, trim charts or technical data pages.
5. Install bladder tank (A) in accordance with the manufacturer's instructions with connections as shown on Figure 1 and herein described.
 - a. Locate the tank as close as practical to the system riser. (See Special Note B on Page 10e)
 - b. Allow enough room around the tank to service the bladder.
 - c. Allow access to the tank for filling from barrels of foam concentrate
 - d. Install the pipe from the riser to the tank as indicated on Figure 1. The connection at the riser which supplies the bladder tank (A) should be installed higher than or level with the top of the bladder tank (A) unless the water supply is supplied by a manifold supplying multiple risers. This will prevent the accidental draining of the bladder tank (A) water supply piping and tank, when performing maintenance on the sprinkler riser. Install the piping from the tank (A) to the concentrate controller (B) as straight as possible.
 - e. All valves and devices should be located for easy access for operation and maintenance.
6. All valves should be closed, including the water supply control valve (8), the P.O.R.V. water supply ball valve (14), the tank water supply control valve (15), the 1/2" ball valve (21), the concentrate control shut-off valve (22***), the foam solution test valve (25), and the alarm test shut-off valve on the alarm check valve (C) trim.
7. Pressurize System
 - a. Open the system isolation valve (26), if so equipped, and remote inspectors test.
 - b. Partially open the water supply control valve (8) to slowly fill system. When full stream of water appears at the inspectors test connection, close inspectors test valve. Fully open and secure the water supply control valve (8).
 - c. When the system piping is pressurized and has stabilized, prime the Halar[®] coated Viking Deluge CCV (D) by opening and securing the 1/2" ball valve (21) in the open position. When the pressure on the priming chamber water pressure gauge (27) equals the supply water pressure, the deluge valve will close.
 - d. Check for and repair any leaks in the foam/water discharge system pipe.
8. When system is completely pressurized, follow tank manufacturer's filling sequence.
9. To place the bladder tank (A) in service:
 - a. Refer to bladder tank manufacturer's instructions for placing the tank in service, except to slowly open concentrate control shut-off valve (22***) to allow foam concentrate to flow slowly to the Halar[®] coated Viking Deluge CCV (D). Place the alarm test shut-off valve on the Viking alarm check valve (C) trim, in the alarm position. When system pressure has stabilized, open the P.O.R.V. water supply ball valve (14).
 - b. Verify normal valve positions and secure in proper position. (See system components table.)
 - c. Check for and repair any leaks.
10. Testing the foam concentrate swing check valve: After a flow test or proportioning test has been conducted, the foam concentrate swing check valve (24) should be checked to insure that it maintains a positive seal between the concentrate control deluge valve (D) and the wet system riser, by following the procedure outlined below.
 - a. Bleed off any pressure which may have been trapped between the outlet of the chamber of the concentrate control deluge valve (D) and the swing check valve (24) by placing a container under the foam concentrate auxiliary drain valve (29) and opening the valve slowly.
 - b. Drain excess foam concentrate into container. Should the leakage continue, check the priming pressure gauge (27) on the Viking Concentrate Control deluge valve to insure that the valve is primed and closed.
 - c. If the foam concentrate auxiliary drain valve (29) continues to leak foam concentrate, then the concentrate control valve must be checked for proper operation and repaired if necessary. Follow the procedure as indicated in Section 4-D for repair.
 - d. Should water continue to leak from the foam concentrate auxiliary drain valve (29), the foam concentrate swing check valve (24) clapper rubber and seat should be maintained. Follow the procedure as indicated in Section 4-D for repair.



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D. Placing The System In Service Or Removing The System From Service

WARNING: See Warning on Page 10e, Item 6, Inspections, Tests and Maintenance.

1. For sprinkler and riser piping maintenance and service:

- a. Close the water supply control valve (8).
- b. Close the P.O.R.V. water supply ball valve (14), the tank water supply control valve (15) and the concentrate control shut-off valve (22***).
- c. Leave the system isolation valve (26) open.
- d. Open the main drain on alarm check valve (C).
- e. Open all sprinkler system auxiliary drain valves and remote inspectors test valve to vent system.
- f. Perform required maintenance and service on sprinkler and riser piping.
- g. To return to service, partially open the water supply control valve (8).
- h. As water appears, close the main drain, auxiliary drain valves and remote inspectors test connection valve.
- i. Verify Halar[®] coated Viking Deluge CCV (D) is closed by checking water pressure gauge (27) to insure that it is the same as or higher than the system pressure.
- j. Fully open and secure the water supply control valve (8). Open tank water supply valve (15) and concentrate control shut-off valve (22***). Place alarm test shut-off valve on alarm check valve (C) trim, in the alarm position. When system pressure has stabilized, open P.O.R.V. water supply ball valve (14).
- k. Verify normal valve positions and secure in proper position. (See system components table)

2. For riser only maintenance and service:

- a. Close the water supply control valve (8).
- b. Close the P.O.R.V. water supply ball valve (14), the tank water supply control valve (15) and the concentrate control shut-off valve (22***).
- c. Close the system isolation valve (26).
- d. Open the main drain on alarm check valve (C). After the pressure on riser is reduced to zero, open the foam solution test valve (25) to vent water in riser.
- e. Perform maintenance and service on riser.
- f. To return to service, partially open the water supply control valve (8).
- g. As water appears, close the main drain and close the foam solution test valve (25).
- h. Verify Halar[®] coated Viking Deluge CCV (D) is closed.
- i. Fully open and secure water supply control valve (8).
- j. Open and secure the system isolation valve (26).
- k. Open the tank water supply control valve (15), and slowly open the concentrate control shut-off valve (22***). Place the alarm test shut-off valve on alarm check valve (C) trim, in the alarm position. When the system pressure has stabilized, open the P.O.R.V. water supply ball valve (14).
- l. Verify normal valve positions and secure in proper position. (See system components table)

3. For bladder tank (A) maintenance and service - While leaving sprinkler system in service

- a. Close the P.O.R.V. water supply ball valve (14), the tank water supply control valve (15) and the concentrate control shut-off valve (22***).
- b. Follow tank manufacturer's procedures for removing tank from service, along with maintenance procedures.
- c. To return to service, follow tank manufacturer's procedure, except to slowly open the concentrate control shut-off valve (22***) to allow foam concentrate to flow slowly to the Halar[®] coated Viking Deluge CCV (D).
- d. Verify that the alarm test shut-off valve on the Viking alarm check valve (C) trim is in the alarm position.
- e. When the system pressure has stabilized, open the P.O.R.V. water supply ball valve (14).
- f. Verify normal valve positions and secure in proper position. (See system component table)

4. For total system maintenance and service

- a. Close water supply control valve (8).
- b. Close the P.O.R.V. water supply ball valve (14), the tank water supply valve (15), the 1/2" ball valve (21) and the concentrate control shut-off valve (22***).
- c. Open the main drain on alarm check valve (C).
- d. Open all sprinkler system auxiliary drain valves and remote inspector's test valve to vent system.
- e. Relieve pressure on deluge valve priming line (28) through the three way gauge valve (27).
- f. Follow tank manufacturer's instructions for removing the bladder tank (A) from service.
- g. Perform the required maintenance and service on the riser, system pipe, and bladder tank (A). Follow all of the manufacturer's procedures for maintenance and service and refer to the Special Notes on page 10f and the Warnings and General



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Notes in the Design Notes section of the Viking Foam Data Book.

- h. To return to service - Close the concentrate control shut-off valve (22***), the tank water supply control valve (15), and verify that the P.O.R.V. water supply ball valve (14) is closed.
- i. Open system isolation valve (26) and remote inspector's test valve.
- j. Partially open the water supply valve (8) to slowly fill system. As water appears, close main drain, all auxiliary drain valves and remote inspectors test valve. Fully open and secure water supply control valve (8).
- k. When the system piping is pressurized and has stabilized, prime the Halar® coated Viking Deluge CCV (D) by opening and securing the 1/2" ball valve (21) in the open position. When the pressure on the priming chamber water pressure gauge (27) equals the supply water pressure, the deluge valve will close.
- l. Return the bladder tank (A) to service by following manufacturer's instructions, except to slowly open concentrate control shut-off valve (22****) to allow foam concentrate to flow slowly to the Halar® coated Viking Deluge CCV (D).
- m. Place the alarm test shut-off valve in the alarm position on the alarm check valve (C) trim. When system pressure has stabilized, open the P.O.R.V. water supply ball valve (14).
- n. Verify normal valve positions and secure in proper position. (See system components table.)
- o. Check for and repair any leaks.

E. Troubleshooting

1. For operating and maintenance instructions pertaining to Viking manufactured equipment, refer to the appropriate section of the Viking Engineering and Design Data Book.
2. For operating and maintenance instructions pertaining to foam equipment manufactured for Viking, refer to the appropriate section of the Viking Foam Data Book.
3. For operation and maintenance instructions for all other equipment, refer to appropriate equipment data.

F. Emergency Instructions

1. During and after a fire:
 - a. Make sure the fire is OUT! Make a complete inspection of all areas covered by this system including areas not involved in the fire. Place a fire watch in the entire area until the system is back in service. **NOTE:** If the fire is not out, do not turn the alarm off by placing the alarm test shut-off valve in the off position, as this will shut-off the supply of foam concentrate to the CCV.
 - b. Close the system water supply control valve (8) and the tank water supply valve (15). Post a person at the valve ready to turn them back on, should the fire rekindle.
 - c. Replace all operated and damaged sprinklers with the same type and temperature rating as were removed. Open main drain if necessary.
 - d. Check the level of foam concentrate and refill the foam concentrate bladder tank (A) by following tank manufacturer's instructions. Always replace the foam concentrate with the same brand and type as that being used currently.
Note: Never intermix different types or brands of foam concentrate, as this could cause them to gel or solidify, and render the concentrate useless.
 - e. Return the complete system to service by following the procedure listed in Section 4D, Steps h through o.
 - f. Perform quarterly test. See Special Note E on Page 10f for special instructions.
 - g. Fire can damage piping and supports, so call your Viking Representative for assistance in obtaining a complete inspection and additional replacement sprinklers. For additional details, see technical data sheets for specific device.

NOTE: If replacement foam concentrate is not immediately available, activate the wet pipe portion of the foam/water system until the replacement foam concentrate arrives.

2. If the discharge system is damaged and the system is flowing water:
 - a. Close the water supply control valve (8) to shut off the water supply
 - b. Close the concentrate control shut-off valve (22****) to eliminate the flowing of the foam concentrate to the hydraulically actuated Halar® coated Viking Deluge CCV (D) and the concentrate controller (B)
 - c. Close the tank water supply control valve (15) to reduce the pressure on the bladder tank (A)
 - d. Close the system isolation valve (26), to stop the flow of water/foam solution into the discharge system
 - e. Place the alarm test shut-off valve on the Viking alarm valve (C) trim in the off position to close the hydraulically actuated Halar® coated Viking Deluge CCV (D)
 - f. Repair the damaged portion of the discharge system
 - g. Return the riser and the foam system to service, following the procedure listed above in section 4D, Steps h through o
3. If the foam concentrate pipe system is damaged:
 - a. Close the concentrate control shut-off valve (22****) to eliminate the flowing of the foam concentrate to the hydraulically



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actuated Halar® coated Viking Deluge CCV (D) and the concentrate controller (B)

- b. Close the tank water supply control valve (15) to reduce the pressure on the bladder tank (A)
- c. Repair the damaged portion of the foam concentrate pipe system
- d. Return the foam concentrate system to service. Follow the procedure listed above in section 6C, Steps 3 through 6.

NOTE: If there are no damaged sections of the distribution system, the wet pipe portion of the sprinkler system may be kept in service for protection while repairs to the foam concentrate system are performed.

5. OPERATION

Actuation of a sprinkler head allows system water to flow causing the Alarm Check Valve (C) clapper to open. The retard chamber and alarm line (13) are filled, pressurizing the P.O.R.V. (17) and connected alarm devices. Operation of the P.O.R.V. (17) relieves pressure from the priming chamber of the Halar® coated Viking Deluge CCV (D) allowing the valve to open. The bladder tank (A) is already pressurized by the water supply piping (16). System water pressure in the space between the flexible bladder and the inside surface of the steel tank, causes the bladder to collapse, forcing the foam concentrate out through the foam concentrate discharge piping (23), Halar® coated Viking Deluge CCV (D) and metering orifice of the concentrate controller (B), into the venturi (low pressure) area of the concentrate controller (B). The foam concentrate is proportioned (usually 3% or 6%), with the main water supply, sending foam solution to the sprinklers and foam/water discharge devices downstream.

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 which must be followed.

WARNING: Any system maintenance or testing which 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.

- A. Alarm Test - Please refer to Special Note E, Page 10f before performing an alarm test, otherwise, an unwanted release of foam concentrate will occur. At least quarterly, test all connected alarm devices by opening the remote inspectors test valve.
- B. Riser Flow Test - Please refer to Special Note E, Page 10f and Section 4-D, before performing the riser flow test, otherwise, an unwanted release of foam concentrate will occur. At least quarterly, perform a riser flow test. Observe and record the supply pressure gauge reading. Open the main drain valve fully. Again, observe and record the supply pressure gauge reading. Close the main drain valve. If the readings vary significantly from those previously established or from normal, check the main supply line for obstructions or closed valves and correct any problems found.
- C. General - Visually inspect the valve, trim, piping, alarm devices and connected equipment for physical damage, freezing, corrosion or other conditions that may inhibit the proper operation of the system.

7. AVAILABILITY

The Wet Pipe Foam/Water System is available through a network of domestic and international distributors. See the Viking Corporation 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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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 (15) 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 (25) 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 (16) and the foam concentrate discharge piping (23), 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 Device Design Data located in the Design Section of this data book for the method of calculating these pipe sizes.
- C. The CCV (D) and swing check valve (24) 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 (30) to minimize false operation of the CCV (D). The releasing PORV (17) for the CCV (D) is activated by the operation of the alarm valve.
- E. Ball Valve (14) must be left in the open position, except when conducting alarm or flow test. Failure to close ball valve (14) before running an alarm or flow test will result in the unwanted discharge of foam concentrate. Once the test is completed, ball valve (14) 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 (C) and the inlet to the concentrate controller.
- G. Figure 1 is a general schematic 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 (23) 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 (28), 1/2" auxiliary drain valve (29) and gauge with 3 way valve (27). Plug all remaining valve trim outlets. Refer to the Equipment section of this data book under Valves, to find the correct trim kit part number for the corresponding size of foam concentrate control Halar® coated deluge valve (D) required.



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WET PIPE FOAM/WATER SYSTEM

- A. Foam Concentrate Bladder Tank complete with Items 1-7
 - 1. Water Drain/Fill Valve - NORMALLY CLOSED
 - 2. Fill Line Master Shut-off Valve - NORMALLY CLOSED
 - 3. Concentrate Drain/Fill Valve - NORMALLY CLOSED
 - 4. Fill Cup/Sight Gauge Shut-off Valve - NORMALLY CLOSED
 - 5. Sight Gauge Assembly - The trim for this assembly varies with the type of foam concentrate to be used. Refer to Tank Manufacturer's O & M Manual for specific details.
 - 6. Tank Water Vent Valve - NORMALLY CLOSED
 - 7. Diaphragm Concentrate Vent Valve - NORMALLY CLOSED with Integral Orifice
- B. Proportioning Device - Concentrate Controller
- C. Type of System - Alarm Check Valve with Variable Pressure Trim including Retard Chamber
 - 8. Water Supply Control Valve - NORMALLY OPEN
 - 12. Water Motor Alarm and Strainer or Alarm Pressure Switch with circuit closer vent trim
- D. Concentrate Control Valve (CCV) - Hydraulically actuated Halar Coated Viking Angle Style Deluge Valve (*Angle Style and Straight Thru Style CCV available.)
 - 14. 1/2" P.O.R.V. - Water Supply Ball Valve - NORMALLY OPEN
 - 17. P.O.R.V.
 - 18. Restricted Orifice .125"
 - 19. 1/2" Soft Seat Check Valve
 - 20. 1/2" Strainer
 - 21. 1/2" Ball Valve - NORMALLY OPEN
 - 27. Water Pressure Gauge and 3 way valve and remainder of CCV special trim
 - 29. 1/2" foam concentrate auxiliary drain valve
- E. Accessory Trim - (Order each item separately)
 - 9. Check Valve*
 - 10. Fire Department Connection with Ball Drip Valve*
 - 11. 1/2" Soft Seat Check Valve*
 - 13. Alarm Line Piping
 - 15. Tank Water Supply Control Valve - NORMALLY OPEN
 - 16. Water Supply Piping to Bladder Tank
 - 22. Concentrate Control Shut-off Valve - NORMALLY OPEN ***
 - 23. Foam Concentrate Discharge Piping
 - 24. Foam Concentrate Swing Check Valve
 - 25. Foam Solution Test Valve - NORMALLY CLOSED
 - 26. System Isolation Valve - NORMALLY OPEN
 - 28. 1/2" Priming Line

* Optional (Not required if a Fire Department Connection is located elsewhere)
 *** Full Port Bronze Body with 316 Stainless Steel Trim and Ball (2" and under).
 Cast Iron Body OS & Y with Bronze Trim and seats (over 2")

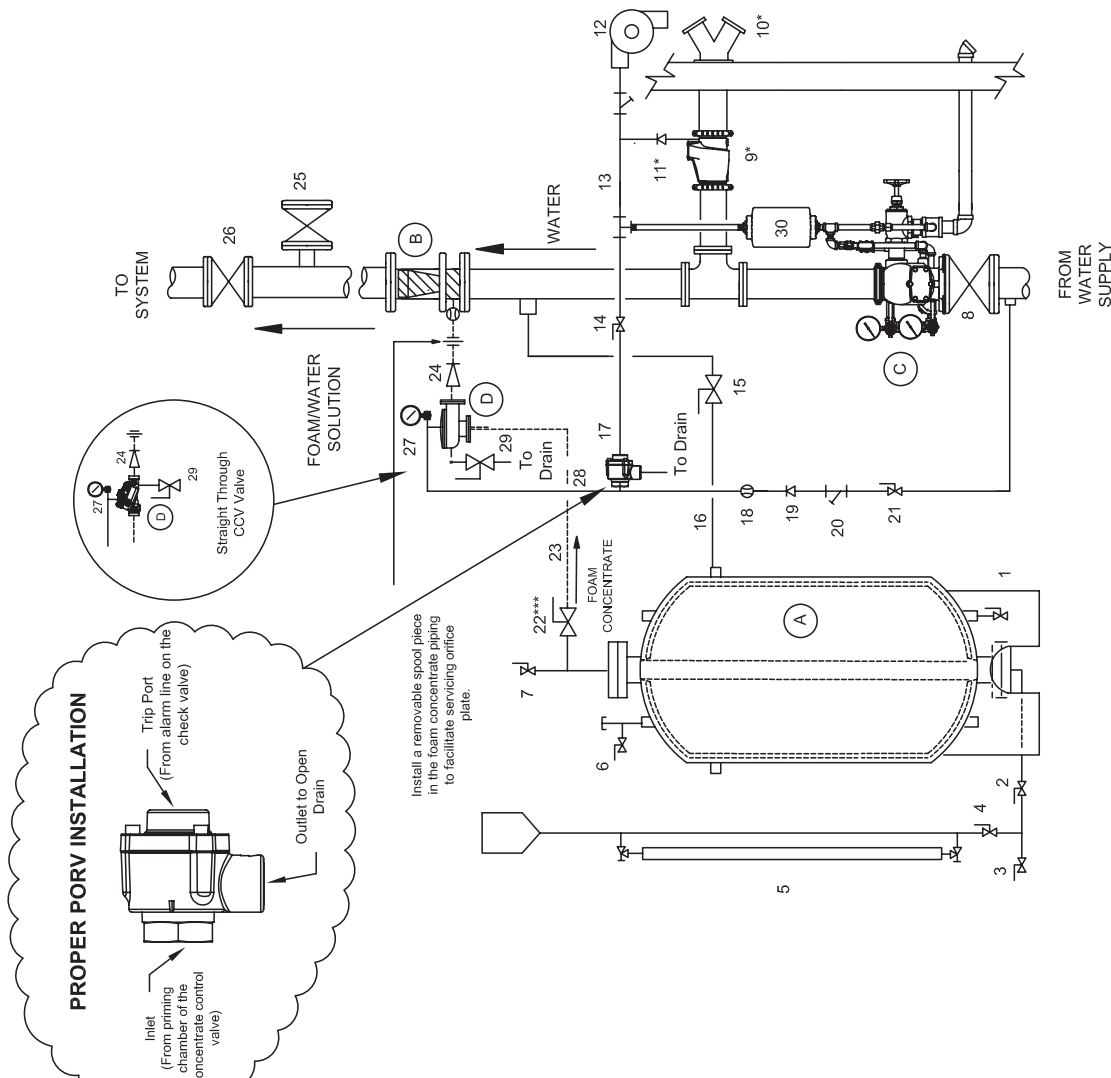


Figure 1

	<h1 style="margin:0;">TECHNICAL DATA</h1>	<p>WET PIPE FOAM/WATER SYSTEM SUPPLIED BY BLADDER TANK</p>
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For complete Wet Pipe Low Flow Foam Water 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, Controller, Bladder Tank and accessories.

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

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

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

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

DESCRIPTION	TANK SIZE	PART NUMBER	DATA PAGE
HORIZONTAL BLADDER TANK	50 - 4500 Gallon	CHBT2-xxxx *	240 a-h
VERTICAL BLADDER TANK	25 - 4500 Gallon	CVBT2-xxxx *	
* Where xxxx is the tank size			

Table 1



TECHNICAL DATA

**WET PIPE
FOAM/WATER SYSTEM
SUPPLIED BY BLADDER TANK**

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

Telephone: 269-945-9501 Technical Services 877-384-5464 Fax: 269-945-4495 Email: techsvcs@vikingcorp.com

For complete Wet Pipe Low Flow Foam Water 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, Controller, Bladder Tank and accessories.

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

FOAM CONCENTRATES AND RATIO FLOW CONTROLLERS					
FOAM CONCENTRATE			RATIO FLOW CONTROLLER		
DESCRIPTION	PART NUMBER	DATA PAGE	SIZE	PART NUMBER	DATA PAGE
1% AFFF C103	F14969	100 a-b	2-1/2" (65 mm) Threaded 1" NPT	F15001/A	-
			3" (80 mm) Wafer 1-1/4" NPT	F15007/A	
			4" (100 mm) Wafer 1-1/2" NPT	F15013/A	
			6" (150 mm) Wafer 2" NPT	F15019/A	
			8" (200 mm) Wafer 2-1/2" NPT	F15026/A	
3% AFFF C303	F14970	101 a-b	2-1/2" (65 mm) Threaded 1" NPT	F15001/B	-
			3" (80 mm) Wafer 1-1/4" NPT	F15007/B	
			4" (100 mm) Wafer 1-1/2" NPT	F15013/B	
			6" (150 mm) Wafer 2" NPT	F15019/B	
			8" (200 mm) Wafer 2-1/2" NPT	F15026/B	
3% AFFF MS C301 MS	F14971	102 a-b	2-1/2" (65 mm) Threaded 1" NPT	F15001/C	-
			3" (80 mm) Wafer 1-1/4" NPT	F15007/C	
			4" (100 mm) Wafer 1-1/2" NPT	F15013/C	
			6" (150 mm) Wafer 2" NPT	F15019/C	
3% AR-AFFF CUG	F14972	104 a-b	2-1/2" (65 mm) Threaded 1" NPT	F15001/J	170 a-d
			3" (80 mm) Wafer 1-1/4" NPT	F15007/J	
			4" (100 mm) Wafer 1-1/2" NPT	F15013/J	
			6" (150 mm) Wafer 2" NPT	F15019/J	
			8" (200 mm) Wafer 2-1/2" NPT	F15026/J	
3% / 6% AR-AFFF @ 3% C363	F14973	103 a-b	2-1/2" (65 mm) Threaded 1" NPT	F15001/D	-
			3" (80 mm) Wafer 1-1/4" NPT	F15007/D	
			4" (100 mm) Wafer 1-1/2" NPT	F15013/D	
3% / 6% AR-AFFF @ 6% C363	F14973	103 a-b	6" (150 mm) Wafer 2" NPT	F15022	-
			2-1/2" (65 mm) Threaded 1" NPT	F15001/E	
			3" (80 mm) Wafer 1-1/4" NPT	F15007/E	
			4" (100 mm) Wafer 1-1/2" NPT	F15013/E	
2% High Ex C2	F14974	105 a-b	6" (150 mm) Wafer 2" NPT	F15019/D	-
			2-1/2" (65 mm) Threaded 1" NPT	F15001/H	
			3" (80 mm) Wafer 1-1/4" NPT	F15007/H	
			4" (100 mm) Wafer 1-1/2" NPT	F15013/H	
			6" (150 mm) Wafer 2" NPT	F15019/H	

Table 2

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