VIKING®

# TECHNICAL DATA

# PREACTION FOAM/WATER SYSTEM SUPPLIED BY FOAM A PUMP

**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

A Preaction Foam/Water System Supplied by a Foam Pump is a standard preaction system capable of discharging foam/water solution automatically through any discharge device supplied from the preaction system piping. A preaction foam/water system with a hydraulically actuated Halar® coated concentrate control valve consists of the following: a Viking deluge valve complete with standard deluge trim, riser check valve, supervisory air supply, detection and releasing devices on the water supply line, an In-line Balanced Proportioner Assembly (proportioning device), which includes a concentrate controller, listed orifice plate, spool balancing valve and swing check valve, hydraulically actuated Halar® coated concentrate control valve on foam concentrate line, a foam concentrate atmospheric tank and trim and foam concentrate agent.

## 2. LISTINGS AND APPROVALS

No formal approval as a system. Main component approvals listed below.

- Deluge Valve and Trim
  UL Listed - Guide VLFT
  FM - Automatic Water Control Valves
- EZR Swing Check Valve and Trim
  UL Listed - Guide HMER
  FM - Single Check 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.
- Foam Concentrate
  UL Listed - Guide GFGV
  FM Approved - Low Expansion Foam Systems

## 3. TECHNICAL DATA

### Specifications:

Refer to individual component technical data page.

### Material Standards:

Refer to individual component technical data page.

### Ordering Information:

Refer to Tables 1 through 4.

**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
- Hose reels and hand lines
- 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.

### B. General Instructions and Warnings

1. Refer to Warnings and General Notes on pages 2a-d in the "Foam 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.
3. Inspections – It is imperative that the system is inspected and tested on a regular basis. See Section 6 - Inspections, Tests, and Maintenance.
   **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.
4. The valve, trim ,and assembly must be installed in an area not subject to freezing temperatures or physical damage.



Revised page replaces page Foam 41a-k, dated June 1, 2008. (Updated Release Trim and TrimPac Part Nos. in Table 2 and replaced ratio flow controllers with ILBP info. in Table 4.)

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## 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 41d and Warnings and General Notes on pages 2a-d in the "Foam Design" section of the Viking foam data book.
2. Install the deluge valve and trim (A) in accordance with *Viking Engineering and Design Data* book. The preaction system will be limited to systems that operate as wet pipe systems. The choice for preaction systems that operate as wet pipe systems would be limited to single interlocked preaction systems.
3. Install the proportioning device, ILBP assembly (B), in the riser at least 5 pipe diameters past the riser check valve (2). (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 is required on the discharge side of the ILBP as well to ensure proper proportioning)
4. Install foam solution test valve (8) and system isolation valve (9). These valves are required to facilitate annual foam proportioning tests. The system isolation valve (9) is in the normally open position when the system is in operation. The solution test valve (8) is in the normally closed position when the system is in operation. When the system is to be tested annually for proportioning, the system isolation valve (9) is closed to eliminate foam water solution from entering the system piping. The solution test valve (8) is opened once a flow rate is established in the riser. The solution test valve is normally sized the same size as the riser piping to accept the design flow of the system. The discharge of the solution test valve is normally piped to a test header with 2 ½" angle valves to aid in controlling the discharge of affluent.
5. Install the hydraulically actuated Halar® coated concentrate control valve valve (C) and associated trim as indicated on trim charts or technical data pages.
6. A concentrate shut-off valve (5) located upstream of the Halar® coated concentrate control valve valve (C) is required to isolate the Halar® coated concentrate control valve when setting up the system or when repairs are to be made to the foam/preaction system.
7. Install the foam pump skid assembly and atmospheric storage tank in accordance with manufacturer's instructions.
   a. Install the foam pump skid and foam atmospheric storage tank. Install the concentrate piping from the discharge of the foam pump skid to the concentrate shut-off valve (5). Locate the concentrate shut-off valve as close as practical to the ILBP assembly. Note: Allow enough room around the foam pump and atmospheric storage tank for service.
   b. Allow access to atmospheric storage tank for filling from barrels of foam concentrate.
   c. All valves and devices should be located for easy access for operation and maintenance.

## D. Placing System in Service

1. Verify that the water supply control valve (1) is closed, then place preaction system ( C) in service as follows (see instructions on Viking Technical Data Sheet). Open System isolation valve (9) if closed. Close solution test valve (8) if open.
2. Set preaction release system according to installation instructions for type of preaction system used.
3. Prime both the Viking Deluge valve and Halar® coated concentrate control valve valve (A & C) by opening the priming valve on the deluge valve trim. Bleed off any air pressure trapped in the priming line (3) to the Viking Halar® coated concentrate control valve (C) by opening the 3-way pressure gauge valve (7).
4. Ensure that all outlets on sprinkler system piping are closed. Place supervisory air pressure on system piping.
5. Open the water supply control valve (1) after the deluge valve has been primed. There should not be any water flowing from trim outlets. If water is discharging from trim outlets, refer to Viking technical data pages for trouble shooting and proper installation of trim piping.
6. Place foam pumping system in service. The concentrate shut-off valve (5) will be in the closed position until foam pump system is placed in service. Foam concentrate pressure will be indicated on the foam concentrate pressure gauge (4) located upstream of the of the concentrate shut-off valve (5). Once pressure is indicated on concentrate pressure gauge (4), slowly open foam concentrate shut-off valve.
7. Once foam concentrate shut-off valve (5) is opened, verify that foam concentrate is not passing by the Halar® coated concentrate control valve valve by opening the ½" foam concentrate auxiliary drain valve (6). If foam concentrate appears, close concentrate shut-off valve (5) immediately. If foam concentrate is passing by the Halar® coated concentrate control valve valve(C), the valve is not seating and is most likely fouled. Debris must be removed from seat of Halar® coated concentrate control valve valve (C).

## E. Removing the System from Service

1. For system and riser piping maintenance and service.
   a. Close water supply control valve (1).
   b. Close concentrate shut-off valve (5).
   c. Close air supply valve to system piping.

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d. Open drain valve on system riser to remove air pressure from riser piping.
e. Open all drain valves on deluge system.
f. Leave system isolation valve (9) open.
g. Refer to instructions for removing deluge valve (A) from service in the *Viking Engineering and Design Data* book.
h. Perform maintenance and service on system and riser piping.
i. If maintenance is required to be performed on concentrate piping, remove foam pump and foam jockey pump if applicable from service. Open concentrate drain valve (10) to relieve pressure from concentrate supply piping.

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

## 5. OPERATION

Actuation of the release system of the pre-action system relieves the priming pressure of the deluge valve and the priming pressure present in the Halar® coated concentrate control valve valve. Once the deluge valve opens, water passes through the concentrate controller of the ILBP (In-Line Balanced Proportioner). The foam pump will provide foam concentrate at a higher pressure than the water pressure passing through the riser. The pressures will be balanced by the spool balancing valve that is integral to the ILBP. The foam pump is normally started on a pressure loss in the concentrate piping line. The foam pump may also start through the water pressure switch on the deluge valve trim. If more than fifty feet of overhead concentrate piping is present on the discharge side of the foam pump or if any of the piping is installed underground, a means of checking the tightness of the piping is required per NFPA. This necessitates a foam jockey pump to maintain the pressure on the concentrate line.

Once water passes through the ILBP, foam concentrate is discharged into the ILBP through an orifice listed and approved for the foam concentrate to be utilized. The foam and water mix and create a foam/water solution. A foam blanket is created once it has discharged through the discharge device(s). A foam blanket is produced through one of two actions, agitation as what would happen when discharged through a standard sprinkler head, or aeration as 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 is inspected and tested on a regular basis. Refer to NFPA 25 for the standard 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.

## 7. AVAILABILITY

The Preaction Foam/Water System Supplied by a Foam Pump 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.

# TECHNICAL DATA

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### SPECIAL NOTES

A. Provide a minimum of 5 pipe diameters of straight pipe on the inlet and outlet of the in-line balanced pressure proportioner (ILBP) (B) to minimize the turbulence inside the ILBP. WARNING! If the outlet to the foam solution test valve (5) is located closer than 5 pipe diameters, there may be turbulence at high flow rates.

B. The release of the Halar® coated concentrate control valve (C) and the flow control valve (A) must NOT be combined. The concentrate control valve must be primed and released separately from the pressure regulating deluge valve to ensure open position of the concentrate control valve clapper.

C. Figures 1-3 are 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.

D. 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.

E. A strainer is not required in the foam concentrate discharge piping of bladder tank systems per NFPA Standards.

F. The foam concentrate control deluge valve (C) does not require any trim, except for a ½" priming line, ½" auxiliary drain valve (29), and gauge with 3-way valve. 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 Halar® coated concentrate control valve (C) required.

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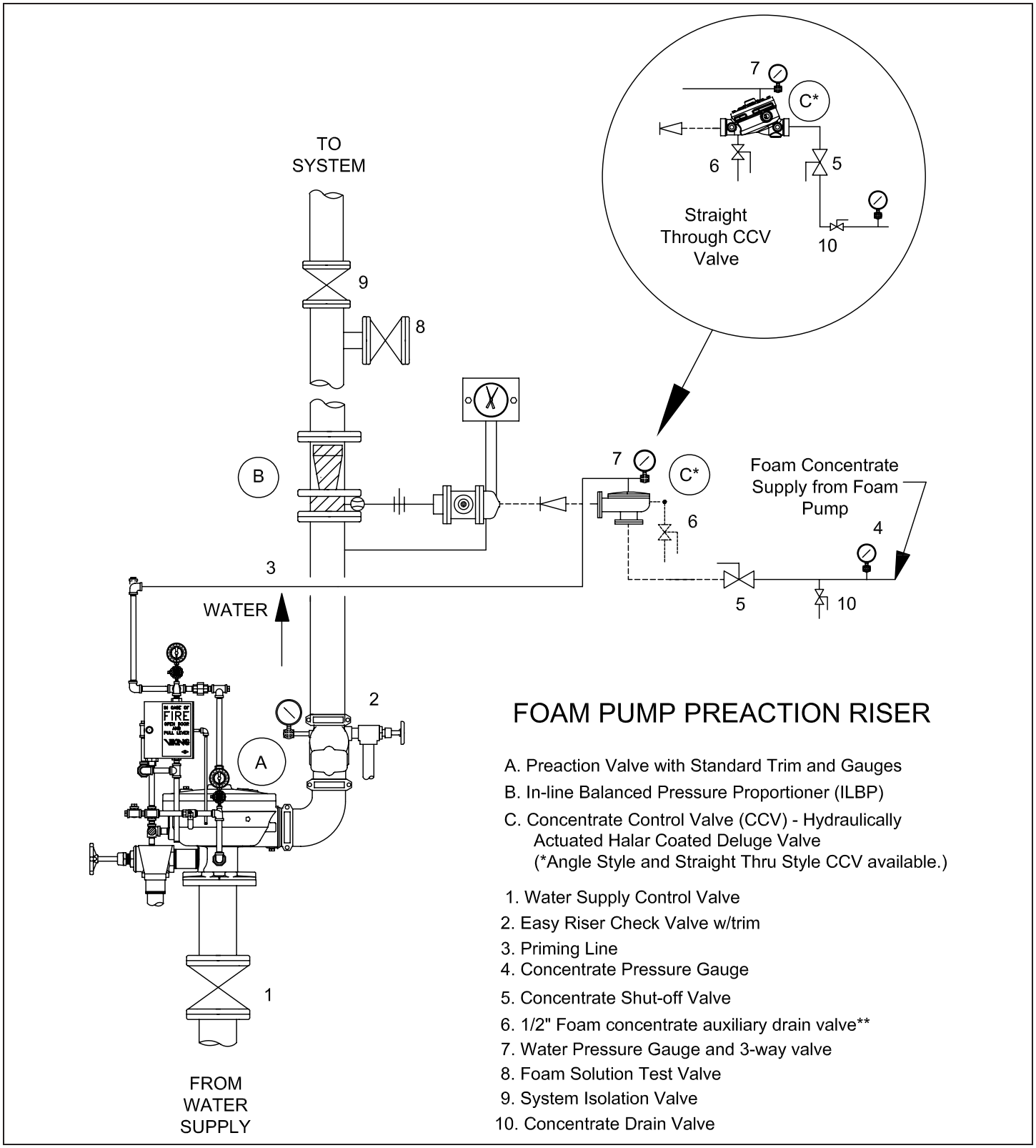


## FOAM PUMP PREACTION RISER

A. Preaction Valve with Standard Trim and Gauges
B. In-line Balanced Pressure Proportioner (ILBP)
C. Concentrate Control Valve (CCV) - Hydraulically Actuated Halar Coated Deluge Valve
(*Angle Style and Straight Thru Style CCV available.)

1. Water Supply Control Valve
2. Easy Riser Check Valve w/trim
3. Priming Line
4. Concentrate Pressure Gauge
5. Concentrate Shut-off Valve
6. 1/2" Foam concentrate auxiliary drain valve**
7. Water Pressure Gauge and 3-way valve
8. Foam Solution Test Valve
9. System Isolation Valve
10. Concentrate Drain Valve

**Figure 1**

# TECHNICAL DATA

## PREACTION FOAM/WATER SYSTEM SUPPLIED BY A FOAM PUMP

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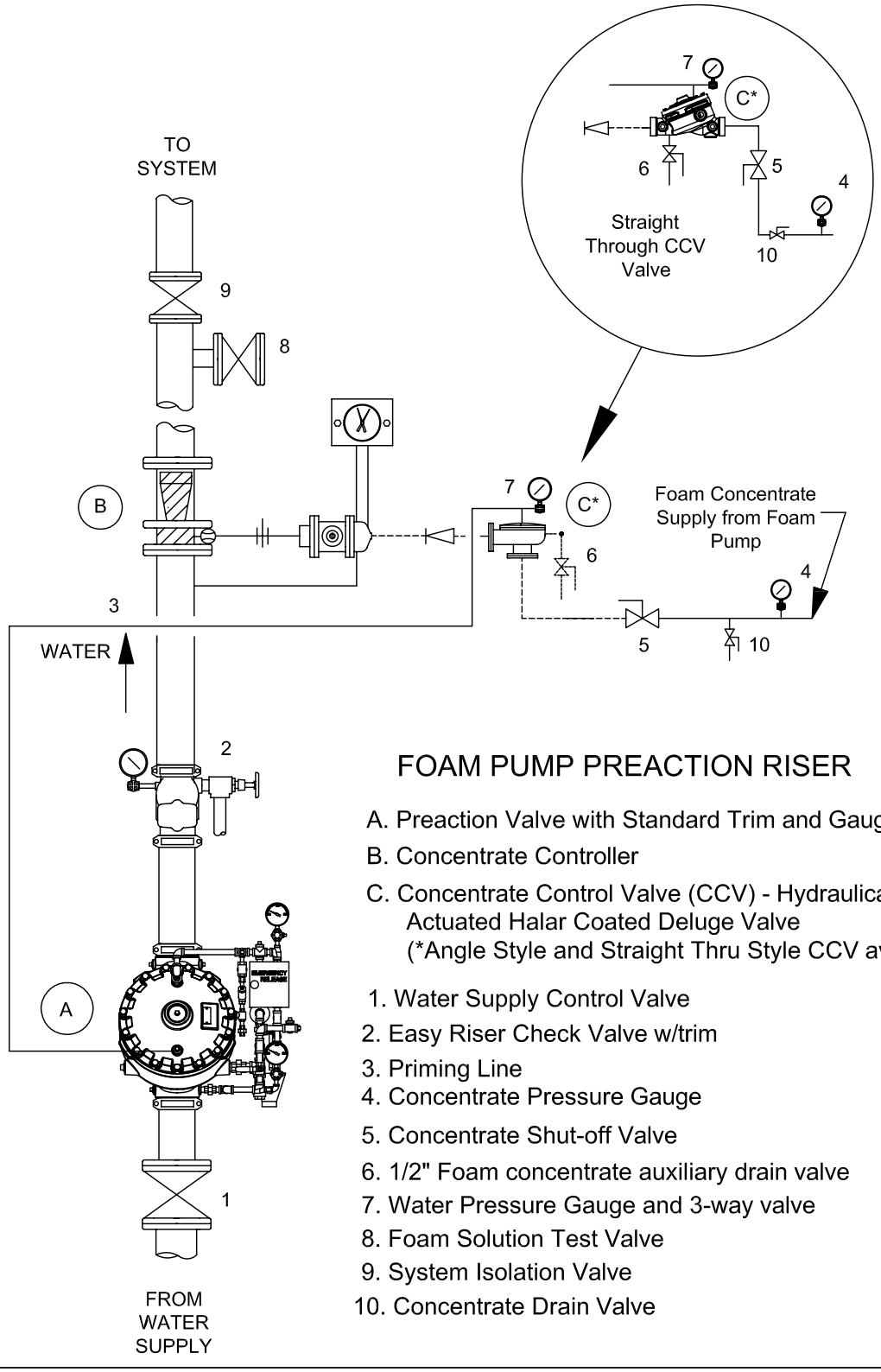


### FOAM PUMP PREACTION RISER

A. Preaction Valve with Standard Trim and Gauges
B. Concentrate Controller
C. Concentrate Control Valve (CCV) - Hydraulically Actuated Halar Coated Deluge Valve (*Angle Style and Straight Thru Style CCV available.)

1. Water Supply Control Valve
2. Easy Riser Check Valve w/trim
3. Priming Line
4. Concentrate Pressure Gauge
5. Concentrate Shut-off Valve
6. 1/2" Foam concentrate auxiliary drain valve
7. Water Pressure Gauge and 3-way valve
8. Foam Solution Test Valve
9. System Isolation Valve
10. Concentrate Drain Valve

**Figure 2**

# TECHNICAL DATA

## PREACTION FOAM/WATER SYSTEM SUPPLIED BY FOAM A PUMP

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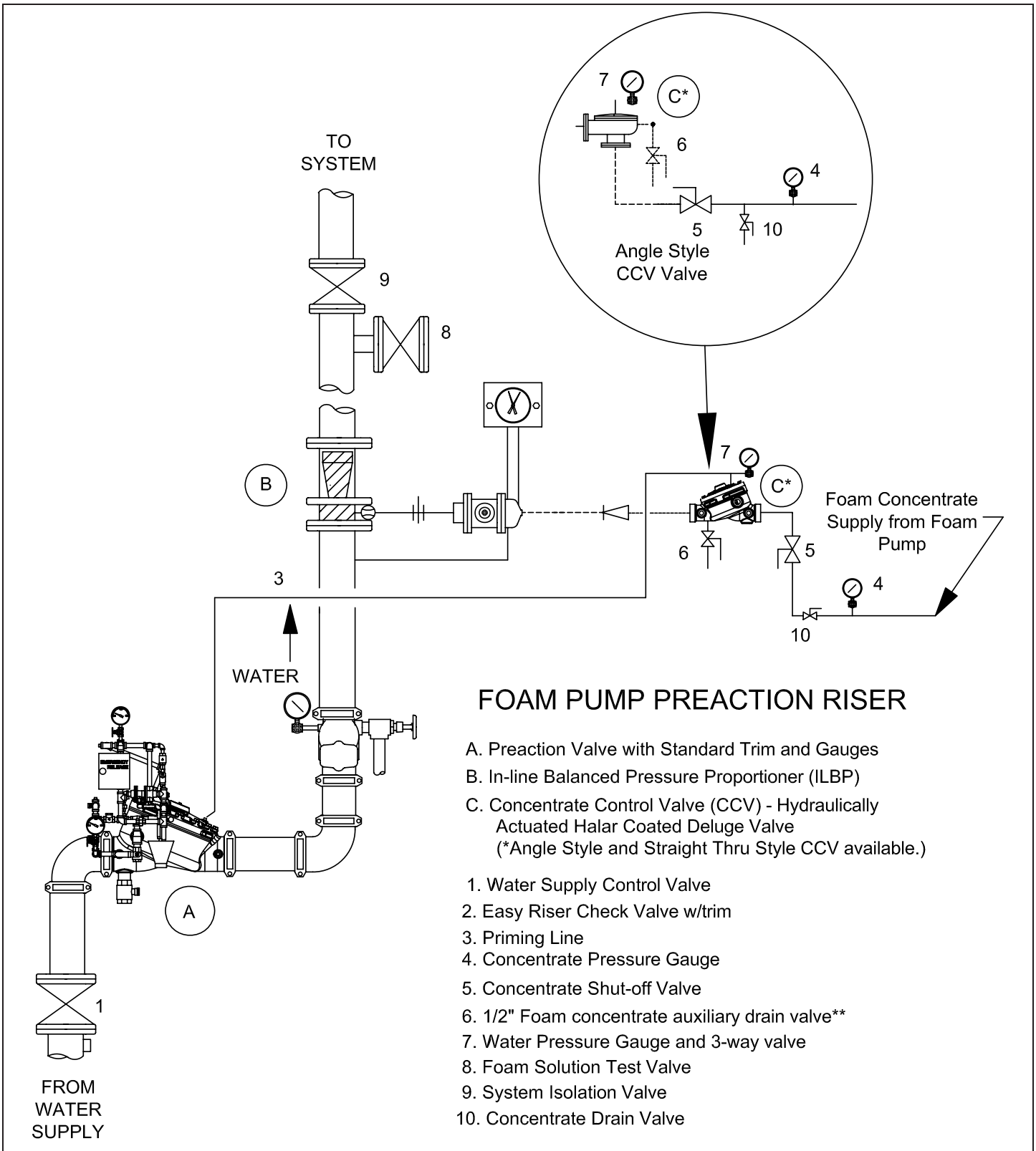


## FOAM PUMP PREACTION RISER

A. Preaction Valve with Standard Trim and Gauges
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C. Concentrate Control Valve (CCV) - Hydraulically Actuated Halar Coated Deluge Valve (*Angle Style and Straight Thru Style CCV available.)

1. Water Supply Control Valve
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3. Priming Line
4. Concentrate Pressure Gauge
5. Concentrate Shut-off Valve
6. 1/2" Foam concentrate auxiliary drain valve**
7. Water Pressure Gauge and 3-way valve
8. Foam Solution Test Valve
9. System Isolation Valve
10. Concentrate Drain Valve

**Figure 3**

# TECHNICAL DATA

## PREACTION FOAM/WATER SYSTEM SUPPLIED BY A FOAM PUMP

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For complete Preaction Foam/Water System Supplied by Foam Pump, select Deluge Valve and Trim, Release Trim, Foam Concentrate Control Valve and Trim, Easy Riser® Swing Check Valve and Trim, Foam Concentrate, ILBP, and Accessories.

| DESCRIPTION | | NOMINAL SIZE | PART NUMBER | DATA PAGE |
|---|---|---|---|---|
| **Deluge Valves - Angle Style** | | | | |
| Threaded | **Model & Pipe O.D.** | | **Painted Red** | |
| | Model E-3 48 mm | 1½" / DN40 | 09889 | 209 a-h |
| | Model E-1 60 mm | 2" / DN50 | 05852C | 210 a-h |
| | **Model & Pipe O.D.** | | **Halar® Coated** | |
| | Model E-4 48 mm | 1½" / DN40 | 09890Q/B | 212 a-j |
| | Model E-2 60 mm | 2" / DN50 | 08361Q/B | 213 a-j |
| Flange/ Flange | **Flange Drilling** | **Model E-1** | **Painted Red** | |
| | ANSI | 3" | 05912C | 211 a-h |
| | ANSI | 4" | 05909C | |
| | ANSI | 6" | 05906C | |
| | ANSI/Japan | 6" | 07136 | |
| | PN10/16 | DN80 | 08626 | |
| | PN10/16 | DN100 | 08629 | |
| | PN10/16 | DN150 | 08631 | |
| | **Flange Drilling** | **Model E-2** | **Halar® Coated** | |
| | ANSI | 3" | 08362Q/B | 213 a-j |
| | ANSI | 4" | 08363Q/B | |
| | ANSI | 6" | 08364Q/B | |
| | PN10/16 | DN80 | 08862Q/B | |
| | PN10/16 | DN100 | 08863Q/B | |
| | PN10/16 | DN150 | 08864Q/B | |
| Flange/ Groove | **Flange Drilling / Pipe O.D.** | **Model E-1** | **Painted Red** | |
| | ANSI / 89 mm | 3" | 05835C | 211 a-h |
| | ANSI / 114 mm | 4" | 05839C | |
| | ANSI / 168 mm | 6" | 05456C | |
| | PN10/16 / 89 mm | DN80 | 09539 | |
| | PN10/16 / 114 mm | DN100 | 09540 | |
| | PN10/16 / 168 mm | DN150 | 05456C | |
| | **Flange Drilling / Pipe O.D.** | **Model E-2** | **Halar® Coated** | |
| | ANSI / 89 mm | 3" | 11064Q/B | 213 a-j |
| | ANSI / 114 mm | 4" | 11065Q/B | |
| | ANSI / 168 mm | 6" | 11001Q/B | |
| | PN10/16 / 168 mm | DN150 | 11001Q/B | |

| DESCRIPTION | | NOMINAL SIZE | PART NUMBER | DATA PAGE |
|---|---|---|---|---|
| **Deluge Valves - Straight Through** | | | | |
| Threaded | **Pipe O.D.** | **Model F-1** | **Painted Red** | |
| | NPT 48 mm | 1½" | 12126 | 214 a-f |
| | NPT 60 mm | 2" | 12059 | |
| | NPT 65 mm | 2½" | 12401 | 218 a-j |
| | BSP 48 mm | DN40 | 12682 | |
| | BSP 60 mm | DN50 | 12686 | |
| | **Pipe O.D.** | **Model F-2** | **Halar® Coated** | |
| | NPT 65 mm | 2½" | 12402Q/B | 219 a-k |

| DESCRIPTION | | NOMINAL SIZE | PART NUMBER | DATA PAGE |
|---|---|---|---|---|
| **Deluge Valves - Straight Through** | | | | |
| Flange/ Flange | **Flange Drilling** | **Model F-1** | **Painted Red** | |
| | ANSI | 3" | 12014 | 218 a-j |
| | ANSI | 4" | 11953 | |
| | ANSI | 6" | 11955 | |
| | ANSI | 8" | 11991 | |
| | ANSI/Japan | 6" | 11964 | |
| | PN10/16 | DN80 | 12026 | |
| | PN10/16 | DN100 | 11965 | |
| | PN10/16 | DN150 | 11956 | |
| | PN10 | DN200 | 11995 | |
| | PN16 | DN200 | 11999 | |
| | **Flange Drilling** | **Model F-2** | **Halar® Coated** | |
| | ANSI | 3" | 12015Q/B | 219 a-k |
| | ANSI | 4" | 11960Q/B | |
| | ANSI | 6" | 11962Q/B | |
| | ANSI | 8" | 11992Q/B | |
| | PN10/16 | DN80 | 12027Q/B | |
| | PN10/16 | DN100 | 11966Q/B | |
| | PN10/16 | DN150 | 11963Q/B | |
| | PN10 | DN200 | 11996Q/B | |
| | PN16 | DN200 | 12000Q/B | |
| Flange/ Groove | **Flange Drilling / Pipe O.D.** | **Model F-1** | **Painted Red** | |
| | ANSI / 89 mm | 3" | 12018 | 218 a-j |
| | ANSI / 114 mm | 4" | 11952 | |
| | ANSI / 168 mm | 6" | 11954 | |
| | PN10/16 / 89 mm | DN80 | 12030 | |
| | PN10/16 / 114 mm | DN100 | 11958 | |
| | PN10/16 / 165 mm | DN150 | 12640 | |
| | PN10/16 / 168 mm | DN150 | 11954 | |
| | **Flange Drilling / Pipe O.D.** | **Model F-2** | **Halar® Coated** | |
| | ANSI / 89 mm | 3" | 12019Q/B | 219 a-k |
| | ANSI / 114 mm | 4" | 11959Q/B | |
| | ANSI / 168 mm | 6" | 11961Q/B | |
| | PN10/16 / 89 mm | DN80 | 12644Q/B | |
| | PN10/16 / 114 mm | DN100 | 12645Q/B | |
| | PN10/16 / 165 mm | DN150 | 12641Q/B | |
| | PN10/16 / 168 mm | DN150 | 11961Q/B | |
| Groove/ Groove | **Pipe O.D.** | **Model F-1** | **Painted Red** | |
| | 48 mm | 1½" / DN40 | 12125 | 214 a-f |
| | 60 mm | 2" / DN50 | 12057 | |
| | 73 mm | 2½" / DN65 | 12403 | 218 a-j |
| | 76 mm | DN80 | 12729 | |
| | 89 mm | 3" / DN80 | 12022 | |
| | 114 mm | 4" / DN100 | 11513 | |
| | 165 mm | DN150 | 11910 | |
| | 168 mm | 6" / DN150 | 11524 | |
| | 219 mm | 8" / DN200 | 11018 | |
| | **Pipe O.D.** | **Model F-2** | **Halar® Coated** | |
| | 48 mm | 1½" / DN40 | 12127Q/B | 219 a-k |
| | 60 mm | 2" / DN50 | 12058Q/B | |
| | 73 mm | 2½" / DN65 | 12404Q/B | |
| | 76 mm | DN80 | 12730Q/B | |
| | 89 mm | 3" / DN80 | 12023Q/B | |
| | 114 mm | 4" / DN100 | 11514Q/B | |
| | 165 mm | DN150 | 11911Q/B | |
| | 168 mm | 6" / DN150 | 11525Q/B | |
| | 219 mm | 8" / DN200 | 11118Q/B | |

**Table 1**

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| DESCRIPTION | | NOMINAL SIZE | PART NUMBER | | DATA PAGE |
|---|---|---|---|---|---|
| **Deluge Valve Trim** | | | | | |
| | | | Galvanized | Brass | |
| Use with Angle Style Valves | | 1½" / DN40 | 14629-1 | 14629-2 | 225 a-c |
| | | 2" / DN50 | 14630-1 | 14630-2 | 226 a-c |
| | | 3" / DN80 | 14631-1 | 14631-2 | 227 a-c |
| | | 4" / DN100 | 14632-1 | 14632-2 | |
| | | 6" / DN150 | 14633-1 | 14633-2 | |
| Use with Straight Through Valves | Horizontal | 1½" / DN40 | 14635-1 | 14635-2 | 235 a-c |
| | | 2" / DN50 | | | |
| | | 2½" / DN65 | 14637-1 | 14637-2 | 239 e-g |
| | | 3" / DN80 | | | |
| | | 4" / DN100 | 14638-1 | 14638-2 | 240 a-c |
| | | 6" / DN150 | 14640-1 | 14640-2 | 241 a-c |
| | | 8" / DN200 | 14643-1 | 14643-2 | 242 a-c |
| | Vertical | 1½" / DN40 | 14634-1 | 14634-2 | 235 e-g |
| | | 2" / DN50 | | | |
| | | 2½" / DN65 | 14636-1 | 14636-2 | 239 e-g |
| | | 3" / DN80 | | | |
| | | 4" / DN100 | 14639-1 | 14639-2 | 240 e-g |
| | | 6" / DN150 | 14641-1 | 14641-2 | 241 a-c |
| | | 8" / DN200 | 14643-1 | 14643-2 | 242 e-g |

| DESCRIPTION | | PART NUMBER | | DATA PAGE |
|---|---|---|---|---|
| **RELEASE TRIM PACKAGES** | | | | |
| | | Galvanized | Brass | |
| Use with Angle or Straight Through Valves | Pneumatic Release | 10809 | 10811 | 265 b |
| | Electric Release | 10830 | 10832 | 265 a |
| | Electric / Pneumatic Release | 12661-1 | 12661-2 | 266 a |
| | Pneumatic / Pneumatic Release | 12662-1 | 12662-2 | 266 b |

| DESCRIPTION | NOMINAL SIZE | PART NUMBER | | DATA PAGE |
|---|---|---|---|---|
| **Trimpac®** | | | | |
| Includes Conventional Trim, Release Trim, and Flexible Hose Kit | **Single Interlock** | | | |
| | | Galvanized | Brass | |
| | Electric Release | 13792B-3 | 13792B-3B | 248 a-s |
| | Pneumatic Release | 13793B-4 | 13793B-4B | 249 a-t |
| | **Double Interlock** | | | |
| | | Galvanized | Brass | |
| | Electric/Pneumatic Release | 13794B-5 | 19794B-5B | 250 a-s |
| | Electric/Pneu-lectric Release | 13796B-6 | 13796B-6B | 251 a-s |
| **Drain Package** | | | | |
| Use with TrimPac (above) | 1½" / DN40 | 11894-1 | | See Trimpac Data Pages |
| | 2" / DN50 | 11894-2 | | |
| | 2½" / DN65 | 11894-3 | | |
| | 3" / DN80 | 11894-3 | | |
| | 4" / DN100 | 11894-4 | | |
| | 6" / DN150 | 11894-4 | | |
| | 8" / DN200 | 11894-4 | | |

| DESCRIPTION | | NOMINAL SIZE | PART NUMBER | DATA PAGE |
|---|---|---|---|---|
| **FOAM CONCENTRATE CONTROL VALVE HALAR® COATED** | | | | |
| **Angle Style** | | | | 61a-f |
| Threaded NPT | Model & Pipe O.D. | | | |
| | Model E-4 48 mm | 1½" / DN40 | 09890Q/B | |
| | Model E-2 60 mm | 2" / DN50 | 08361Q/B | |
| **Straight Through** | | | | |
| 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 | |

| DESCRIPTION | NOMINAL SIZE | PART NUMBER | DATA PAGE |
|---|---|---|---|
| **FOAM CONCENTRATE CONTROL VALVE TRIM** | | | |
| Use with Angle Style Valve | **Galvanized** | | 61a-f |
| | 1½" / DN40 | 08098 | |
| | 2" / DN50 | 08099 | |
| | **Brass** | | |
| | 1½" / DN40 | 09694 | |
| | 2" / DN50 | 09695 | |
| Use with Straight Through Valves | **Galvanized** | | |
| | 1½" / DN40 | 12848-1 | |
| | 2" / DN50 | 12848-1 | |
| | 2½" / DN65 | 12929-1 | |
| | **Brass** | | |
| | 1½" / DN40 | 12848-2 | |
| | 2" / DN50 | 12848-2 | |
| | 2½" / DN65 | 12929-2 | |

**Table 2**

# TECHNICAL DATA

## PREACTION FOAM/WATER SYSTEM SUPPLIED BY A FOAM PUMP

**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 |
|---|---|---|---|---|
| **Easy Riser® Swing Check Valve** | | | | |
| **Flange/ Flange** | **Flange Drilling** | **Model F-1** | | |
| | ANSI | 3” | 08505 | |
| | ANSI | 4” | 08508 | |
| | ANSI | 6” | 08511 | |
| | ANSI/Japan | DN100 | 09039 | |
| | ANSI/Japan | DN150 | 09385 | |
| | ANSI/Japan | DN200 | 14023 | |
| | PN10/16 | DN80 | 08796 | |
| | PN10/16 | DN100 | 08797 | |
| | PN10/16 | DN150 | 08835 | |
| | PN10 | DN200 | 08836 | |
| | PN16 | DN200 | 12355 | |
| **Flange/ Groove** | **Flange Drilling / Pipe O.D.** | **Model F-1** | | 815 a-g |
| | ANSI / 89 mm | 3” | 08506 | |
| | ANSI / 114 mm | 4” | 08509 | |
| | ANSI / 168 mm | 6” | 08512 | |
| | ANSI / 219 mm | 8” | 08515 | |
| | PN10/16 / 89 mm | DN80 | 12648 | |
| | PN10/16 / 114 mm | DN100 | 12649 | |
| | PN10/16 / 165 mm | DN150 | 12652 | |
| | PN10/16 / 168 mm | DN150 | 08512 | |
| | PN10 / 219 mm | DN200 | 12651 | |
| | PN16 / 219 mm | DN200 | 12650 | |
| **Groove/ Groove** | **Pipe O.D.** | **Model E-1** | | |
| | 73 mm | 2½” / DN65 | 07929 | |
| | 76 mm | DN65 | 13516 | |
| | **Pipe O.D.** | **Model F-1** | | |
| | 89 mm | 3” / DN80 | 08507 | |
| | 114 mm | 4” / DN100 | 08510 | |
| | 165 mm | DN150 | 12356 | |
| | 168 mm | 6” / DN150 | 08513 | |
| | 219 mm | 8” / DN200 | 08516 | |

| DESCRIPTION | NOMINAL SIZE | PART NUMBER | | DATA PAGE |
|---|---|---|---|---|
| **Easy Riser® Swing Check Trim** | | | | |
| | | **Galvanized** | **Brass** | |
| Model E-1 | 2½” / DN65 | 07236 | 07236-1 | |
| | 3” / DN80 | 07236 | 07236-1 | |
| Model F-1 | 4” / DN100 | 07237 | 07237-1 | |
| | 6” / DN150 | 07237 | 07237-1 | |
| | 8” / DN200 | 07237 | 07237-1 | |

Table 3

# TECHNICAL DATA

## PREACTION FOAM/WATER SYSTEM SUPPLIED BY FOAM A PUMP

**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 |
|---|---|---|---|
| **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" / 3 mm 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 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 | 100 a-b | 2½" | F15006/A | 171 a-d |
| | | | 3" | F15012/A | |
| | | | 4" | F15018/A | |
| | | | 6" | F15025/A | |
| | | | 8" | F15032/A | |
| 3% AFFF C303 | F14970 | 101 a-b | 2½" | F15006/B | |
| | | | 3" | F15012/B | |
| | | | 4" | F15018/B | |
| | | | 6" | F15025/B | |
| | | | 8" | F15032/B | |
| 3% AFFF MS C301 MS | F14971 | 102 a-b | 2½" | F15006/C | |
| | | | 3" | F15012/C | |
| | | | 4" | F15018/C | |
| | | | 6" | F15025/C | |
| | | | 8" | F15032/C | |
| 3% - 6% AFFF @ 3% C363 | F14973 | 103 a-b | 2½" | F15006/D | |
| | | | 3" | F15012/D | |
| | | | 4" | F15018/D | |
| | | | 6" | F15025/D | |
| | | | 8" | F15032/D | |
| 3% - 6% AFFF @ 3% C363 | F14973 | 103 a-b | 2½" | F15006/E | |
| | | | 3" | F15012/E | |
| | | | 4" | F15018/E | |
| | | | 6" | F15025/E | |
| | | | 8" | F15032/E | |
| 3% AR-AFFF CUG | F14972 | 104 a-b | 2½" | F15006/J | |
| | | | 3" | F15012/J | |
| | | | 4" | F15018/J | |
| | | | 6" | F15025/J | |
| | | | 8" | F15032/J | |
| 2% Hi Ex C2 | F14974 | 105 a-b | 2½" | F15006/H | |
| | | | 3" | F15012/H | |
| | | | 4" | F15018/H | |
| | | | 6" | F15025/H | |
| | | | 8" | F15032/H | |

**Table 4**

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