

VIKING PRODUCT SPECIFICATIONS

11. MODEL E-3 1½” DELUGE VALVE Page 218g
Deluge or preaction system requiring a deluge valve smaller than 2” in size shall utilize a 90° pattern type of deluge valve 1½” in size. Deluge valve shall be externally resettable by hydraulic means. Deluge valve shall employ a pressure operated relief valve venting device on the priming line to ensure that the deluge valve will not prematurely reset. Inlet and outlet connections of deluge valve shall be 1½” national pipe thread (female) connection. Deluge valve shall be UL Listed and Factory Mutual Approved with a ductile iron body. Deluge valve shall have a working pressure up to 250 PSI (17 BAR). Valve trim shall be galvanized, compatible and installed following the manufacturer’s specifications. The equivalent friction loss for deluge valve shall be no greater than 10’-0” equivalent feet of 1½” Schedule 40 steel pipe. Deluge Valve manufacturer to be The Viking Corporation. Deluge Valve Model shall be E-3.

12. MODEL E-1 2” DELUGE VALVE Page 219a
Deluge or preaction systems requiring a deluge valve smaller than 2½” in size shall utilize a 90° pattern type of deluge valve 2” in size. Deluge valve shall be externally resettable by hydraulic means. Deluge valve shall employ a pressure operated relief valve venting device on the priming line to ensure that the deluge valve will not prematurely reset. Inlet and outlet connections of deluge valve will be 2” national pipe thread (female) connection. Deluge valve shall be UL Listed and Factory Mutual Approved with a ductile iron body. Deluge valve shall have a working pressure up to 250 PSI. Valve trim shall be galvanized, compatible and shall be installed following the manufacturer’s specifications. The equivalent friction loss for deluge valve shall be no greater than 18’-0” equivalent feet of 2” Schedule 40 steel pipe. Deluge Valve manufacturer to be The Viking Corporation. Deluge Valve Model to be E-1.

13. MODEL E-1 3”- 6” DELUGE VALVE Page 220a
Deluge or preaction systems shall utilize a 90° pattern type of deluge valve. Deluge valve shall be externally resettable by hydraulic means. Deluge valve shall employ a pressure operated relief valve venting device on the priming line to ensure that the deluge valve will not prematurely reset. Inlet and outlet connections of deluge valve can be flanged by flanged or flanged by grooved, respectively. Deluge valve shall be UL Listed and Factory Mutual Approved with a ductile iron body. Deluge valve shall have a working pressure up to 250 PSI. Valve trim shall be galvanized, compatible and shall be installed following the manufacturer’s specifications. Deluge Valve manufacturer to be The Viking Corporation. Deluge Valve Model to be E-1.

14. MODEL E-4 1½” HALAR COATED DELUGE VALVE
Deluge or preaction system requiring a deluge valve smaller than 2” in size and subject to brackish or salt water shall utilize a 90° pattern type of deluge valve 1½” in size manufactured with a corrosive resistant coating. Corrosive resistant coating shall be Halar. Deluge valve shall be externally resettable by hydraulic means. Deluge valve shall employ a pressure operated relief valve venting device on the priming line to ensure that the deluge valve will not prematurely reset. Inlet and outlet connections of deluge valve shall be 1½” national pipe thread (female) connection. Deluge valve shall be UL Listed and Factory Mutual Approved with a ductile iron body. Deluge valve shall have a working pressure up to 250 PSI (17 BAR). Valve trim shall be galvanized, compatible and installed following the manufacturer’s specifications. The equivalent friction loss for the deluge valve shall be no greater than 10’-0” equivalent pipe feet of 1½” Schedule 40 steel pipe. Deluge Valve manufacturer to be The Viking Corporation. Deluge Valve Model shall be E-4.

15. MODEL E-2 2”-6” HALAR COATED DELUGE VALVE Page 222a
Deluge or preaction systems subject to corrosive atmospheres or which are to be supplied by brackish or salt water shall utilize a 90° pattern type of deluge valve manufactured with a corrosive resistant coating. Deluge valve shall be externally resettable by hydraulic means. Deluge valve shall employ a pressure operated relief valve venting device on the priming line to ensure that the deluge valve will not prematurely reset. Inlet and outlet connections of deluge valve can be flanged by flanged, flanged by grooved or threaded by threaded, respectively. Deluge valve shall have a working pressure up to 250 PSI with a ductile iron body. Valve trim shall be galvanized, compatible and shall be installed following the manufacturer’s specifications. Deluge Valve manufacturer to be The Viking Corporation. Deluge Valve to be Halar Coated Model E-2.

16. MODEL F-1 4”-8” DELUGE VALVE.....Page 260a-260g
Deluge or preaction systems shall utilize a straight-through pattern type of deluge valve. Deluge valve shall be externally resettable by hydraulic means. Deluge valve shall be capable of installation in the vertical or horizontal

position. The inlet and outlet connections of deluge valve shall be grooved by grooved. The deluge valve shall be UL Listed and Factory Mutual Approved with a ductile iron body. Deluge valve shall have a working pressure up to 250 PSI. Valve trim shall be galvanized, compatible and shall be installed following the manufacturer's specifications. The Deluge Valve manufacturer to be The Viking Corporation. The Deluge Valve Model to be F-1.

17. MODEL F-2 4"-8" HALAR COATED DELUGE VALVEPage 261a-261g

Deluge or preaction systems subject to corrosive atmospheres or which are to be supplied by brackish or salt water shall utilize a straight-through pattern type of deluge valve manufactured with a corrosive resistant coating. The Deluge valve shall be externally resettable by hydraulic means. The deluge valve shall be capable of installation in the vertical or horizontal position. The inlet and outlet connections of deluge valve shall be grooved by grooved. Deluge valve shall have a working pressure up to 250 PSI with a ductile iron body. Valve trim shall be stainless steel, compatible and shall be installed following the manufacturer's specifications. Deluge Valve manufacturer to be The Viking Corporation. The Deluge Valve to be Halar Coated Model F-2.

18. MODEL B-1 PAR-3 RELEASE PANEL Page 210a

System release panel shall be capable of a dual hazard split release, dual hazard combined release, single hazard cross-zone release, single hazard two-zone release. Release panel shall be equipped with a local tone alarm to annunciate loss of A/C power, system trouble, circuit trouble and low auxiliary D/C power supply. Panel shall be UL Listed and Factory Mutual Approved and will provide power for compatible detectors and auxiliary devices used. Release panel shall be capable of supervising trouble and alarm audible alarms. Trouble and alarm audible alarms shall be able to be silenced at release panel. Release panel shall be housed in a vented enclosure with ambient temperature compatibility of 32°F to 120°F. Panel enclosure shall be of adequate size to house auxiliary D/C power supply. Auxiliary D/C power supply shall consist of (2) 12-volt lead acid batteries of the same ampere hour rating. Actual ampere hour rating to be established by auxiliary D/C power requirement. Main power supply to be a dedicated 110v / 60Hz circuit. Release Panel shall be a Viking B-1 Par-3 Panel.

19. SOLENOID VALVE Page 217a

Electrically activated deluge valve or flow control valve priming water release device shall utilize an electrically operated solenoid valve. Solenoid valve shall be constructed of a ½" brass body with a stainless steel core tube, core, plugnut and springs. Solenoid valve shall have a maximum working pressure of 250 PSI (17 BAR). Solenoid valve shall be UL Listed for its intended use. Solenoid valve shall be listed for use with Viking Model E Deluge Valves and Viking Model H Flow Control Valves.

20. MODEL C-1 PRESSURE OPERATED RELIEF VALVE Page 227

Deluge, preaction or pressure regulation systems (regardless of the releasing method) shall employ a positive venting, pressure operated relief valve. Pressure operated relief valve (PORV) shall prevent the interruption of system operation if detectors prematurely reset. The pressure operated relief valve shall be UL Listed and Factory Mutual Approved for use with the deluge valve installed. Pressure Operated Relief Valve manufacturer to be The Viking Corporation. Pressure Operated Relief Valve Model to be C-1.

21. DEHYDRATOR..... Page 231

When air supplies for dry pipe or preaction sprinkler systems are subject to moisture or condensation into the system piping, an air dehydrator shall be installed in the air supply piping to the system. The air dehydrator shall be equipped with a means of visually indicating if the medium used to remove moisture is saturated. Air dehydrator shall have a drying capacity of 4400 sc ft of air at -45°F and be capable of maximum air flow of 10 sc ft/min at 100 PSI. Air Dehydrator manufacturer shall be The Viking Corporation, part number 01285A.

22. MODEL A-1 RELEASE LINE AIR SUPPLY ASSEMBLY Page 233a

Preaction or deluge systems utilizing pneumatic release detectors shall utilize an air pressure restricting assembly between the air supply and the detector zone. The air pressure restricting assembly shall be equipped with air on the supply side and detector zone side of the air pressure restricting orifice. The air pressure restricting assembly shall be equipped with an air supervisory switch for monitoring the detector zone for a low air pressure condition and signal an audible alarm or a central station alarm. Release Line Air Supply Assembly manufacturer to be The Viking Corporation. Release Line Air Supply Assembly Model to be A-1.

23. EXPLOSION PROOF RELEASE LINE AIR SUPPLY ASSEMBLY Page 234a

Where preaction or deluge systems utilizing pneumatic release detectors are installed in explosive environments, they shall utilize an air pressure restricting assembly between the air supply and the detector zone. Such device shall be listed and approved as an explosion proof device. The air pressure restricting assembly shall be equipped with air gauges on the supply side and detector zone side of the air pressure restricting orifice. The air pressure

restricting assembly shall be equipped with an air supervisory switch for monitoring the detector zone for a low air pressure condition and signal an audible alarm or a central station alarm. Release Line Air Supply Assembly manufacturer to be The Viking Corporation. Release Line Air Supply Assembly Model to be Explosion Proof.

24. MODEL H-1 PNEUMATIC ACTUATOR Page 237a

Preaction or deluge systems utilizing a pneumatic release system shall employ a pneumatically actuated device between the detection and the operating systems. The pressure in the pneumatic release system shall be set in accordance with manufacturer's instructions. Such device shall actuate a release of water pressure in the deluge valve priming chamber upon release of the detection system. The actuator of the pneumatic release system shall be UL Listed and Factory Mutual Approved for use with the deluge valve installed. Pneumatic Actuator manufacturer to be The Viking Corporation. Pneumatic Actuator Model to be H-1.

25. MODEL A-1 PRIME SHUT-OFF VALVE (PSOV)..... Page 238

Deluge, preaction or pressure regulation systems (regardless of the releasing method) shall employ a positive shut-off to the priming water supply. Prime shut-off valve (PSOV) shall prevent the interruption of system operation if detectors prematurely reset. The prime shut-off valve shall be UL Listed and Factory Mutual Approved for use with the deluge valve installed. Prime Shut-off Valve manufacturer to be The Viking Corporation. Prime Shut-off Valve Model (PSOV) to be A-1.

26. MODEL C-1 THERMOSTATIC RELEASE Page 241a

Preaction or deluge systems utilizing pneumatic or hydraulic release of the deluge valve prime water pressure shall employ a rate-of-rise release detector. Rate-of-rise detector shall activate release when a rise of temperature of 15°F over the period of one minute is experienced. Rate-of-rise release shall have a means of installing a 155°F fixed temperature release on the device. Rate-of-rise release shall be automatically resetting. Rate of rise release shall be listed and approved for water working pressures of not less than 250 PSI (1724 kPa). Device shall be UL Listed and Factory Mutual Approved. Systems, utilizing nitrogen as an air supply, shall be factory tested for such application. Rate-of-Rise Release manufacturer to be The Viking Corporation. Rate-of-Rise Model to be C-1.

27. MODEL C-2 THERMOSTATIC RELEASE Page 241e

Preaction or deluge systems utilizing pneumatic or hydraulic release of the deluge valve prime water pressure shall employ a rate-of-rise release detector. Rate-of-rise detector shall activate release when a rise of temperature of 15°F over the period of one minute is experienced. Rate-of-rise release shall have a means of installing a fixed temperature release on the device. Rate-of-rise release shall be automatically resetting. Rate-of-rise release shall be corrosion resistant. Rate of rise release shall be listed for water working pressures of not less than 250 PSI (1724 kPa). Device shall be UL Listed. Systems, utilizing nitrogen as an air supply, shall be factory tested for such application. Rate-of-rise Release manufacturer to be The Viking Corporation. Rate-of-Rise Model to be C-2.

28. THERMOSTATIC RELEASE ACCESSORIES..... Page 242a

Preaction or deluge systems utilizing Viking Model C-1 or C-2 Rate-of-Rise Releases shall be provided with a visual means of indicating operation of the release device. This operation indicator shall be installed in the drain outlet provided on the device. The Release Operation Indicator shall be manufactured by The Viking Corporation and installed to the manufacturer's installation guidelines.

The rate-of-rise release detectors shall be substantially supported from the sprinkler piping in the hazard area. The method of attaching the release device to the sprinkler piping shall be in conformance with the manufacturer's installation guidelines. Preaction or deluge systems utilizing Viking Model C-1 or C-2 Rate-of-Rise Releases shall be provided with a release setting tool kit per system. The release setting tool kit shall not be altered or modified from the manufacturer's supply list.

29. MODEL C-1 EMERGENCY RELEASE..... Page 243a

All deluge valves or flow control valves installed shall have a means of an emergency release of the priming chamber water pressure. The emergency release shall be installed on the valve trim located at or near the system riser. If required by the approving authority, an additional emergency release shall be located near the system's inspectors test connection. Emergency release shall be housed in a stainless steel enclosure assembly with a hinged door. Enclosure shall be painted red for identification. Hinged door of enclosure assembly shall be labeled with the words "in case of fire open door and pull lever". For compatibility, emergency release shall be of the same manufacturer as deluge or flow control valve. Emergency Release manufacturer to be The Viking Corporation. Emergency Release Model to be C-1.

30. MICROFASTHP HIGH PRESSURE FIXED TEMPERATURE RELEASE Page 246a

Preaction or deluge systems utilizing fixed temperature pilot line release systems shall incorporate a fixed temperature release device as part of the zone detection. If the pilot line release is to utilize non-variable temperature detection, listed and approved fixed temperature releases shall be installed according to the manufacturer's specifications and installation guidelines. Fixed Temperature Release shall be UL Listed and FM Approved for water working pressures of not less than 250 PSI (1 724 kPa). Fixed Temperature Release (formerly Model M) shall be Viking SIN VK800.