

Technical Data Sheet: Model MA3 Pressure Operated Relief Valve (PORV)

1. DESCRIPTION

The Model MA3 Pressure Operated Relief Valve (PORV) is used in Minimax Fire Protection Deluge and Preaction Systems. Once tripped, it maintains a positive vent to prevent the deluge valve from automatically resetting prematurely. The device is automatically reset when the pressure is removed from the control diaphragm. The device is designed to trip when the trip port is pressurized with water from the intermediate chamber of the control valve, or when the water in the inlet is drained from the prime chamber of the control valve.

2. LISTINGS AND APPROVALS



cULus Listed - VLTR



FM Approved - Deluge and Preaction Sprinkler Systems

3. TECHNICAL DATA

Specifications

Pressure Differential: Approximately 10:1
 Maximum Operating Pressure: 250 psi (17.2 bar)
 Shipping weight: 2.5 lbs. (1.13 kg)

Material Standards

Refer to Figure 1.

Ordering Information

Part number: 61620

4. INSTALLATION

DO NOT plug the 1/2" (15 mm) outlet. Pipe drain outlet to open atmospheric drain. DO NOT connect drain outlet to any line that may be pressurized, as this may create back pressure on the Pressure Operated Relief Valve

5. OPERATION

The inlet side of the PORV is connected directly to the top chamber of the deluge valve. In the set position, pressure is supplied to the inlet. The pressure on the Push Rod prevents water from escaping. When the deluge valve operates, water is drained from the PORV inlet. When the 10:1 differential is overcome, the push rod opens, allowing the prime water to drain. If a release resets, priming water will continue to escape through the PORV, allowing the deluge valve to continue to operate until the system is reset.

6. INSPECTIONS, TESTS AND MAINTENANCE

NOTICE

The owner is responsible for maintaining the fire protection system and devices in proper operating condition.

WARNING

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

The Viking Pressure Operated Relief Valve should be tested for operation annually. Where difficulty in performance is experienced, the valve manufacturer or authorized representative shall be contacted if any field adjustment is to be made.

A. Test: Trip the deluge system at 10:1 system pressure. The PORV should operate, and water will flow from the outlet.

B. Disassembly: (Refer to Figure 1.)

1. Place the deluge system and the release system out of service.
2. Remove the PORV from the trim.
3. To remove the cover (5), remove each of the cover screws (6) using a 3/16" Allen wrench.
4. With the cover (5) removed, you can now remove the jam nut (9).
 - a. To remove the jam nut (9), place the flat head screwdriver through the bottom of the PORV to hold the push rod (8) in place.
 - b. Use a socket wrench with a 3/8" socket to remove the jam nut (9).
5. With the jam nut (9) removed, you can remove the washers (10, 11), diaphragm (4), support (7), spring (3) and the push rod (8).



WARNING: Cancer and Reproductive Harm-
www.P65Warnings.ca.gov

A. Installation of Repair Parts:

1. The first part to install is the spring (3) into the body (2).
2. Install the support (7) onto the spring (3).
3. Install one rubber washer (11) onto the support.
4. Install the diaphragm (4) onto the rubber washer (11) and support (7).
5. Install one rubber washer (11) onto the diaphragm (4).
6. Install washer (10) onto the rubber washer (11).
7. Install the push rod (8) through the bottom of the PORV until the end of the push rod (8) is through the washer (10).
8. Hand thread the jam nut (9) onto the push rod (8).
9. To keep the holes of the diaphragm (4) in-line with the holes of the body (2) when tightening the jam nut (9), replace the cover (5) and hand thread the cover screws (6) partially into the body (2).
10. Place a flat head Screwdriver into the push rod (8) through the bottom of the PORV and use a socket wrench with a 3/8" socket to tighten the jam nut (9).
11. Tighten the cover screws (6) using a 3/16" Allen wrench..

7. AVAILABILITY

The Model MA3 PORV is available through a network of domestic and international distributors. See the Minimax Fire Protection Web site for closest distributor or contact Minimax Fire Protection.

8. GUARANTEES

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

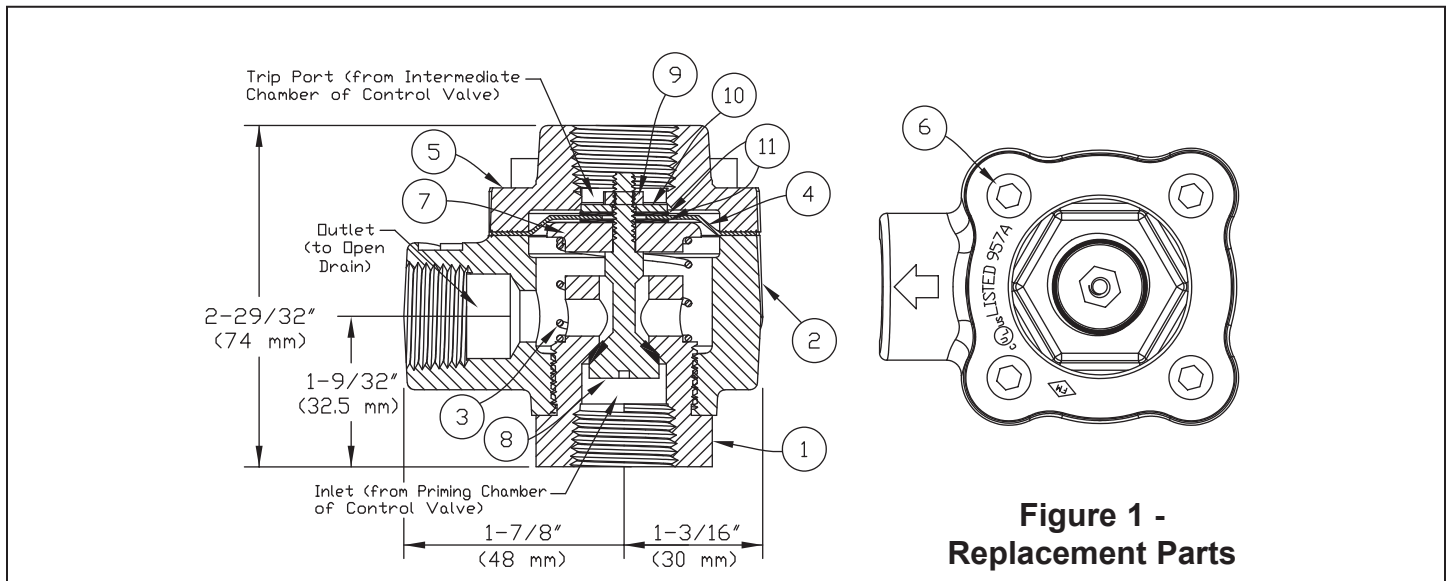


Figure 1 - Replacement Parts

Item	Part Number	Description	Material	Quantity
1	--	Seat	Brass, UNS-C36000	1
2	--	Body	Brass, UNS-C84400	1
3	61581	Spring	Stainless Steel, UNS - S30200	1
4	61660	Diaphragm	Polyester & EPDM	1
5	--	Cover	Brass, UNS-C84400	1
6	16972	Screw, SHC, #-1/4-20 x 1"	Stainless Steel, UNS-S31600	4
7	61659	Support	10% Glass filled Polycarbonate	1
8	61658	Push Rod	EPDM & Brass, UNS-C36000	1
9	01755A	Jam Nut, #10-24	Stainless Steel, UNS-S30400	1
10	13863	Washer, #10	Stainless Steel	1
11	16700	Rubber Washer, #10	EPDM, ASTM D2000	2
-- Indicates replacement part not available				
Sub-Assembly				
3, 4, 6-11	61657	Maintenance Kit		

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