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APPROVAL REPORT

Project No:	PR468993
Supplements Project No:	PR452315
Class:	1020, 1011/1012/1013
Product Name:	Model FDV and Model FPS Automatic Water Control Valves for Use in Deluge and Preaction Sprinkler Systems – (Modifications)
Product Type:	Automatic Water Control Valves
Name of Listing Company:	Raphael Valves Industries Ltd
Address of Listing Company:	16 Hailan St Or-Akiva 30600 Israel
Customer ID:	254518-1
Customer website	http://www.raphael-valves.com

Prepared by

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20 January 2026
Date of Approval

1 INTRODUCTION

1.1 Raphael Valves Industries Ltd requested the modifications of the Model FDV and FPS automatic water control valves for compliance with the standards listed in Section 1.3. The modifications included the addition of the following components:

- Rotex Solenoids:
  - 24134-UA-12-4R-B12-S0+III-24V-DC-87-MS-H-01U
  - 30206-UA-2.2-2R-B5-S10+II-24V-DC-87-MS-H-01U
- MADV-MB-N316/brass drain valve
- PAV-2 pneumatic actuator

1.2 This report may be freely reproduced only in its entirety and without modification.

1.3 Standards

1.3.1 FM Approvals Standards

Title	Number	Issue Date
Deluge and Preaction Systems	1011/1012/1013	December 2020
Automatic Water Control Valves	1020	December 2020

1.4 Listing

The Raphael Valves Industries Ltd Model FDV and FPS Deluge and Preaction Sprinkler System listings appear in the Approval Guide, an on-line resource of FM Approvals as shown in the Approval Guide Listing attachment to this report. New additions to the listing are shown in red.

2 DESCRIPTION

2.1 The scope of this Modification included examination and testing of the Rotex 24134 and 30206 solenoids, the MADV-MB-N316 drain valve, and the PAV-2 pneumatic actuator.

2.2 All deluge and preaction systems discussed in this report utilize Raphael Valves Industries Ltd Model FDV main control valve. The Model FDV valve is a diaphragm type, straight-through flow water control valve. The various trim configurations and release types covered in this report are described below

2.3 The Model FDV is available as a Deluge System with various release types detailed in the Listing Sheet attachment at the end of this report under the heading Automatic Sprinkler Systems, Sprinkler Systems, Deluge Sprinkler Systems. Release types include Electric, Pneumatic, Electro-pneumatic, Hydraulic, Hydraulic with Anti-columning and 3- way Hydraulic.

2.4 The Model FPS is available as a Single Interlock Preaction System with Electric and Pneumatic release types detailed in the Listing Sheet attachment at the end of this report under the heading Automatic Sprinkler Systems, Sprinkler Systems, Preaction Sprinkler Systems.

2.5 The Model FPS is available as a Double Interlock Preaction (Refrigerated Area) Sprinkler System with Electric/Electric and Electric/Pneumatic release types detailed in the Listing Sheet

attachment at the end of this report under the heading Automatic Sprinkler Systems, Sprinkler Systems, Refrigerated Area Sprinkler Systems.

2.6 The subject deluge and preaction systems in sizes 1-1/2, 2, 3, 4 and 8 have a maximum rated working pressure of 300 psi (2070 kPa) with those systems containing a pneumatic actuator limited to 250 psi (1720 kPa). The systems in sizes 6 and 10 have a maximum rated working pressure of 250 psi (1720 kPa). The rated working pressure of those configurations with electric release is limited to the maximum rated pressure of the FDV main control valve or release trim solenoid valve, whichever is lower.

2.7 The subject valve described in Section 2.2 is the main control valve for the products discussed in the following Approval Reports:

Approval Report ID	Issue Date
PR452315	December 17, 2019
PR453735	September 2, 2020

3 EXAMINATIONS AND TESTS

3.1 Samples were submitted for examination and testing. The samples were considered to be representative of the product line and were examined, tested, and compared to the manufacturer's drawings. All data is on file at FM Approvals along with other documents and correspondence applicable to this program.

3.2 All testing and analysis considered appropriate was conducted and verified to be in compliance with the Standards defined in Section 1.3.

4 MARKING

4.1 Body:

Casted in raised letters on the valve bodies is the follow pertinent information: the manufacturer’s logo, the valve size and directional flow arrow.

4.2 Access Cover

Attached to the valve access cover is a corrosion resistant nameplate which displays the following pertinent information: the manufacturer’s name and location, the valve model designation, the rated working pressure, the year of manufacture and the FM Approval Mark.

5 REMARKS

5.1 The FM Property Loss Prevention Data Sheets should be strictly adhered to when installing this product.

5.2 Installations shall comply with the latest edition of the manufacturer’s instructions manual.

5.3 General Limitations

The automatic water control valves discussed in this report, including all trim and wet pilot lines must be located in an environment with a minimum temperature of 40 F (4 C).

5.4 Wet Pilot Limitations

The maximum allowable height of the wet pilot line of the Model FDV-DH0, FDV-AH0, FDV-DH1, FDV-AH1, FDV-3W-DH1 and FDV-3W-AH1 deluge wet pilot release types discussed in this report, is equal to the actuator pressure, converted to feet, at the trip point divided by a safety factor of 1.5.

The height limitations are tabulated in the Wet Pilot Height which can be found in the report for project ID PR452315. The friction loss associated with fittings and piping has not been considered in establishing these limitations.

Model FDV-DA0 and FDV-AA0 deluge wet pilot release types equipped with anti-columning devices are not subject to the height limitations tabulated in the Wet Pilot Height Limitations at the end of this report.

5.5 Automatic Releases

Any FM Approved automatic release control panel for deluge, preaction and refrigerated area sprinkler systems, which are electrically compatible with the solenoid valve used in the system, may be used. This automatic release control panel shall include a standby power supply capable of providing the FM Approvals required 90 hours of emergency power in the event of primary power failure and fire detection circuitry capable of operation during open circuit fault condition.

6 SURVEILLANCE AUDIT

The design and manufacturing facilities at the following location(s) shall be visited on a routine basis. The facility processes and quality control procedures in place have been determined to be satisfactory to manufacture product identical to that tested and Approved. An FM Approved Products/Specification Tested Revision Request Form shall be submitted to FM Approvals for requesting to manufacture product at any additional or alternate manufacturing facilities which are not listed below. The products discussed in this report are FM Approved only when designed and manufactured at the following facilities:

Design
Raphael Valves Industries Ltd
16 Hailan St
Or-Akiva 30600
Israel

Manufacturing
Raphael Valves Industries Ltd
16 Hailan St
Or-Akiva 30600
Israel

7 MANUFACTURER'S RESPONSIBILITIES

7.1 Documentation that is applicable to this approval is on file at FM Approvals and listed in the Documentation File, Section 8, of this report. No changes of any nature shall be made unless notice of the proposed change has been given and written authorization obtained from FM Approvals. The FM Approved Products/Specification Tested Revision Request Form, shall be forwarded to FM Approvals as notice of proposed changes.

7.2 The Manufacturer is responsible for control of the product marking and installation / operation / maintenance instructions for the system.

7.3 The manufacturer shall provide installation / operation / maintenance instructions with each system.

7.4 In accordance with the Master Agreement, the manufacturer shall make full and immediate disclosure to FM Approvals of all information concerning any defect in, or potential hazard of, the product or service manufactured or provided by the Customer which is Approved by, or being examined by, FM Approvals. The manufacturer shall make all necessary arrangements for the investigation of complaints / anomalies applicable to this approval and shall keep records of all complaints / anomalies including actions taken.

7.5 Test Requirement No.1 – Seat Leakage Test

7.5.1 The manufacturer shall test 100% of production automatic water control valves at the rated working pressure for seat leakage. The test pressure shall be applied on the seat of a closed valve for a minimum of 30 seconds. Leakage shall not exceed 0.017 oz. (0.5 cm3) for metal seated valves; zero leakage is required for resilient-seated valves.

7.6 Test Requirement No.2 – Hydrostatic Test

7.6.1 The manufacturer shall hydrostatically test 100 percent of production automatic water control valves for body leakage at twice the rated working pressure. The pressure shall be held for a minimum of 30 seconds. No evidence of body leakage or distortion shall be permitted.

7.7 Test Requirement No. 3 – Operation Test

7.7.1 The manufacturer shall perform an operation test on 100 percent of production automatic water control valves following the above seat leakage and hydrostatic test. All valves shall be operated without evidence of sticking or binding.

8 DOCUMENTATION

See attached Blueprint Report.

9 CONCLUSION

The products described in Section 2, as shown in the listing referenced in Section 1.4 meet FM Approvals requirements. Since a duly signed Master Agreement is on file for this manufacturer, Approval is effective the date of this report.

PROJECT DATA RECORD:	PR468993
ATTACHMENTS:	Approval Guide Listings CDL Control Drawing Blueprint Report

Approval Guide Listings

Deluge Sprinkler Systems

Model FDV

Product Specification

Model No	Release Type	Valve Size		Rated Working Pressure		End Connection	Remarks
		in	(mm)	psi	(kPa)		
FDV-DE0, FDV-AE0	Electric, Local Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a, b, c, d, e, f, g, k
FDV-DE0, FDV-AE0	Electric, Local Reset	3, 4, 8	(80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a, b, c, d, e, f, g, k
FDV-DE0, FDV-AE0	Electric, Local Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, c, d, e, f, g, k
FDV-DP0, FDV-AP0	Pneumatic, Local Reset	1 1/2, 2	(40, 50)	250	(1720)	Threaded Grooved Flanged	a
FDV-DP0, FDV-AP0	Pneumatic, Local Reset	3, 4, 8	(80, 100, 200)	250	(1720)	Grooved Flanged Flanged X Grooved	a
FDV-DP0, FDV-AP0	Pneumatic, Local Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a
FDV-DC0, FDV-AC0	Electro-pneumatic, Local Reset	1 1/2, 2	(40, 50)	250	(1720)	Threaded Grooved Flanged	a, b, i, j
FDV-DC0, FDV-AC0	Electro-pneumatic, Local Reset	3, 4, 8	(80, 100, 200)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, i, j
FDV-DC0, FDV-AC0	Electro-pneumatic, Local Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, i, j

FDV-DH0, FDV-AH0	Hydraulic, Local Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a
FDV-DH0, FDV-AH0	Hydraulic, Local Reset	3, 4, 8	(80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a
FDV-DH0, FDV-AH0	Hydraulic, Local Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a
FDV-DA0, FDV-AA0	Hydraulic + Anticolumning, Local Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a
FDV-DA0, FDV-AA0	Hydraulic + Anticolumning, Local Reset	3, 4, 8	(80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a
FDV-DA0, FDV-AA0	Hydraulic + Anticolumning, Local Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a
FDV-DE1, FDV-AE1	Electric, Remote Reset	1 1/2, 2	(40, 50)	250	(1720)	Threaded Grooved Flanged	a, b, g, h, k
FDV-DE1, FDV-AE1	Electric, Remote Reset	3, 4, 8	(80, 100, 200)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, g, h, k
FDV-DE1, FDV-AE1	Electric, Remote Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, g, h, k
FDV-3W-DE1, FDV-3W-AE1	Electric, Remote Reset	1 1/2, 2	(40, 50)	250	(1720)	Threaded Grooved Flanged	a, b, g, h, j, k
FDV-3W-DE1, FDV-3W-AE1	Electric, Remote Reset	3, 4, 8	(80, 100, 200)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, g, h, j, k
FDV-3W-DE1, FDV-3W-AE1	Electric, Remote Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, g, h, j, k

FDV-DP1, FDV-AP1	Pneumatic, Remote Reset	1 1/2, 2	(40, 50)	250	(1720)	Threaded Grooved Flanged	a
FDV-DP1, FDV-AP1	Pneumatic, Remote Reset	3, 4, 8	(80, 100, 200)	250	(1720)	Grooved Flanged Flanged X Grooved	a
FDV-DP1, FDV-AP1	Pneumatic, Remote Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a
FDV-DC1, FDV-AC1	Electro-pneumatic, Remote Reset	1 1/2, 2	(40, 50)	250	(1720)	Threaded Grooved Flanged	a, b, g, h, j
FDV-DC1, FDV-AC1	Electro-pneumatic, Remote Reset	3, 4, 8	(80, 100, 200)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, g, h, j
FDV-DC1, FDV-AC1	Electro-pneumatic, Remote Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, g, h, j
FDV-DH1, FDV-AH1	Hydraulic, Remote Reset	1 1/2, 2	(40, 50)	300	(2065)	ThreadedGrooved Flanged	a
FDV-DH1, FDV-AH1	Hydraulic, Remote Reset	3, 4, 8	(80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a
FDV-DH1, FDV-AH1	Hydraulic, Remote Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a
FDV-3W-DH1, FDV-3W-AH1	3-way Hydraulic, Remote Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a

FDV-3W-DH1, FDV-3W-AH1	3-way Hydraulic, Remote Reset	3, 4, 8	(80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a
FDV-3W-DH1, FDV-3W-AH1	3-way Hydraulic, Remote Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a

Remarks:

a. Approved when supplied with a main control valve body constructed of Ductile Iron ASTM A-536, Cast Steel ASTM A-216 Grade WCB, Nickel Aluminum Bronze ASTM B148 UNS C95800 or Stainless-Steel ASTM A743, CF8M

b. The rated working pressure is limited to the maximum rated pressure of the FDV main control valve or release trim solenoid valve, whichever is lower

c. Approved when equipped with an ASCO Model 8210G207 two-way normally closed solenoid valve, 24 V dc, 10 W, 13 mm orifice, Rated Working Pressure of 175 psi (1210 kPa).

d. Approved when equipped with a Parker Model 73218BN4UNLVN0C111C2 two-way normally closed solenoid valve, 24 V dc, 10 W, 13 mm orifice, Rated Working Pressure of 175 psi (1210 kPa).

e. Approved when equipped with a Parker Model 73212BN4TNLVN0C322C2 two-way normally closed solenoid valve, 24 V dc, 10 W, 13 mm orifice, Rated Working Pressure of 300 psi (2070 kPa).

f. Approved when equipped with an ASCO Model 8210P007 two-way normally closed solenoid valve, 24 V dc, 2 W, 13 mm orifice, Rated Working Pressure of 300 psi (2070 kPa).

g. Approved when equipped with a Burkert Model 5282-A two-way normally closed solenoid valve, 24 V dc, 11 W, 13 mm orifice, Rated Working Pressure of 232 psi (1600 kPa).

h. Approved when equipped with a Burkert Model 6281EV two-way normally closed solenoid valve, 24 V dc, 11 W, 13 mm orifice, Rated Working Pressure of 232 psi (1600 kPa).

i. Approved when equipped with a Rotex Model 30201 three-way solenoid valve, 24 V dc, 8 W, 1.2 mm orifice, Rated Working Pressure of 250 psi (1720 kPa).

j. Approved when equipped with a Rotex Model 30206 three-way solenoid valve, 24 V dc, 13 W, 2.2 mm orifice, Rated Working Pressure of 300 psi (2070 kPa).

k. Approved when equipped with a Rotex Model 24134 two-way normally closed solenoid valve, 24V dc, 8W, 12 mm orifice, Rated Working Pressure of 300 psi (2070 kPa)

Company Name:	Raphael Valves Industries Ltd.
Company Address:	16 Hailan St., Or-Akiva, 3060000, Israel
Company Website:	http://raphael-valves.com
Listing Country:	Israel
Certification Type:	FM Approved
Class of Work:	1011-Deluge Sprinkler Systems

Deluge and Preaction Valves with Integrated Pressure Reducing Control Model FDV-P

Valves have an adjustable outlet pressure range of 50 to 200 psi (340 to 1380 kPa). The minimum required differential between inlet and outlet is 40 psi (280 kPa). By design, valves with pressure reducing control restrict the flow of water through the valve to obtain the desired outlet pressure. Please consult with the manufacturer and review FM Data Sheets prior to installation.

Product Specification

Model No	Release Type	Valve Size		Rated Working Pressure		End Connection	Remarks
		in	(mm)	psi	(kPa)		
FDV-PE0	Electric, Local Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a, b, c, d, e, f, g, k
FDV-PE0	Electric, Local Reset	1 1/2, 2, 3, 4, 8	(40, 50, 80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a, b, c, d, e, f, g, k
FDV-PE0	Electric, Local Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, c, d, e, f, g, k
FDV-PP0	Pneumatic, Local Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a
FDV-PP0	Pneumatic, Local Reset	1 1/2, 2, 3, 4, 8	(40, 50, 80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a
FDV-PP0	Pneumatic, Local Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a
FDV-PC0	Electro-pneumatic, Local Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a, b, i, j
FDV-PC0	Electro-pneumatic, Local Reset	1 1/2, 2, 3, 4, 8	(40, 50, 80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a, b, i, j
FDV-PC0	Electro-pneumatic, Local Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, i, j
FDV-PH0	Hydraulic, Local Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a

FDV-PH0	Hydraulic, Local Reset	1 1/2, 2, 3, 4, 8	(40, 50, 80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a
FDV-PH0	Hydraulic, Local Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a
FDV-PA0	Hydraulic + Anticolumning, Local Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a
FDV-PA0	Hydraulic + Anticolumning, Local Reset	1 1/2, 2, 3, 4, 8	(40, 50, 80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a
FDV-PA0	Hydraulic + Anticolumning, Local Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a
FDV-PE1	Electric, Remote Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a, b, g, h, k
FDV-PE1	Electric, Remote Reset	1 1/2, 2, 3, 4, 8	(40, 50, 80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a, b, g, h, k
FDV-PE1	Electric, Remote Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, g, h, k
FDV-PP1	Pneumatic, Remote Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a
FDV-PP1	Pneumatic, Remote Reset	1 1/2, 2, 3, 4, 8	(40, 50, 80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a
FDV-PP1	Pneumatic, Remote Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a
FDV-PC1	Electro-pneumatic, Remote Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a, b, g, h, j
FDV-PC1	Electro-pneumatic, Remote Reset	1 1/2, 2, 3, 4, 8	(40, 50, 80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a, b, g, h, j
FDV-PC1	Electro-pneumatic, Remote Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, g, h, j

FDV-PH1	Hydraulic, Remote Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a
FDV-PH1	Hydraulic, Remote Reset	2, 3, 4, 8	(50, 80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a
FDV-PH1	Hydraulic, Remote Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a

Remarks:

a. Approved when supplied with a main control valve body constructed of Ductile Iron ASTM A-536, Cast Steel ASTM A-216 Grade WCB, Nickel Aluminum bronze ASTM B148 UNS C95800 or Stainless steel ASTM A743, CF8M

b. The rated working pressure is limited to the maximum rated pressure of the FDV main control valve or release trim solenoid valve, whichever is lower

c. Approved when equipped with an ASCO Model 8210G207 two-way normally closed solenoid valve, 24 V dc, 10 W, 13 mm orifice, Rated Working Pressure of 175 psi (1210 kPa).

d. Approved when equipped with a Parker Model 73218BN4UNLVN0C111C2 two-way normally closed solenoid valve, 24 V dc, 10 W, 13 mm orifice, Rated Working Pressure of 175 psi (1210 kPa).

e. Approved when equipped with a Parker Model 73212BN4TNLVN0C322C2 two-way normally closed solenoid valve, 24 V dc, 10 W, 13 mm orifice, Rated Working Pressure of 300 psi (2070 kPa).

f. Approved when equipped with an ASCO Model 8210P007 two-way normally closed solenoid valve, 24 V dc, 2 W, 13 mm orifice, Rated Working Pressure of 300 psi (2070 kPa).

g. Approved when equipped with a Burkert Model 5282-A two-way normally closed solenoid valve, 24 V dc, 11 W, 13 mm orifice, Rated Working Pressure of 232 psi (1600 kPa).

h. Approved when equipped with a Burkert Model 6281EV two-way normally closed solenoid valve, 24 V dc, 11 W, 13 mm orifice, Rated Working Pressure of 232 psi (1600 kPa).

i. Approved when equipped with a Rotex Model 30201 three-way solenoid valve, 24 V dc, 8 W, 1.2 mm orifice, Rated Working Pressure of 250 psi (1720 kPa).

j. *Approved when equipped with a Rotex Model 30206 three-way solenoid valve, 24 V dc, 13 W, 2.2 mm orifice, Rated Working Pressure of 300 psi (2070 kPa).*

k. Approved when equipped with a Rotex Model 24134 two-way normally closed solenoid valve, 24V dc, 8W, 12 mm orifice, Rated Working Pressure of 300 psi (2070 kPa)

Company Name:	Raphael Valves Industries Ltd.
Company Address:	16 Hailan St., Or-Akiva, 3060000, Israel
Company Website:	http://raphael-valves.com
Listing Country:	Israel
Certification Type:	FM Approved
Class of Work:	1020-Automatic Water Ctrl Valves

Preaction Sprinkler System

Model FPS

Product Specification

Model No	Release Type	Valve Size		Rated Working Pressure		End Connection	Remarks
		in	(mm)	psi	(kPa)		
FPS-SIE0	Single Interlock, Electric, Local Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a, b, c, d, e, f, g, h, i
FPS-SIE0	Single Interlock, Electric, Local Reset	3, 4, 8	(80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a, b, c, d, e, f, g, h, i
FPS-SIE0	Single Interlock, Electric, Local Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, c, d, e, f, g, h, i
FPS-SIP0	Single Interlock, Pneumatic, Local Reset	1 1/2, 2	(40, 50)	250	(1720)	Threaded Grooved Flanged	a
FPS-SIP0	Single Interlock, Pneumatic, Local Reset	3, 4, 8	(80, 100, 200)	250	(1720)	Grooved Flanged Flanged X Grooved	a
FPS-SIP0	Single Interlock, Pneumatic, Local Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a
FPS-SIE1	Single Interlock, Electric, Remote Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a, b, g, h, i
FPS-SIE1	Single Interlock, Electric, Remote Reset	3, 4, 8	(80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a, b, g, h, i
FPS-SIE1	Single Interlock, Electric, Remote Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, g, h, i

Remarks:

a. Approved when supplied with a main control valve body constructed of Ductile Iron ASTM A-536, Cast Steel ASTM A-216 Grade WCB, Nickel Aluminum Bronze ASTM B148 UNS C95800 or Stainless Steel ASTM A743, CF8M

b. The rated working pressure is limited to the maximum rated pressure of the FDV main control valve or release trim solenoid valve, whichever is lower

c. Approved when equipped with an ASCO Model 8210G207 two-way normally closed solenoid valve, 24 V dc, 10 W, 13 mm orifice, Rated Working Pressure of 175 psi (1210 kPa).

d. Approved when equipped with a Parker Model 73218BN4UNLVN0C111C2 two-way normally closed solenoid valve, 24 V dc, 10 W, 13 mm orifice, Rated Working Pressure of 175 psi (1210 kPa).

e. Approved when equipped with a Parker Model 73212BN4TNLVN0C322C2 two-way normally closed solenoid valve, 24 V dc, 10 W, 13 mm orifice, Rated Working Pressure of 300 psi (2070 kPa).

f. Approved when equipped with an ASCO Model 8210P007 two-way normally closed solenoid valve, 24 V dc, 2 W, 13 mm orifice, Rated Working Pressure of 300 psi (2070 kPa).
g. Approved when equipped with a Burkert Model 5282-A two-way normally closed solenoid valve, 24 V dc, 11 W, 13 mm orifice, Rated Working Pressure of 232 psi (1600 kPa).
h. Approved when equipped with a Burkert Model 6281EV two-way normally closed solenoid valve, 24 V dc, 11 W, 13 mm orifice, Rated Working Pressure of 232 psi (1600 kPa).
i. Approved when equipped with a Rotex Model 24134 two-way normally closed solenoid valve, 24V dc, 8W, 12 mm orifice, Rated Working Pressure of 300 psi (2070 kPa)

Company Name:	Raphael Valves Industries Ltd.
Company Address:	16 Hailan St., Or-Akiva, 3060000, Israel
Company Website:	http://raphael-valves.com
Listing Country:	Israel
Certification Type:	FM Approved
Class of Work:	1012-Pre-Action Sprinkler Systems

Double-Interlock Preaction Systems / Refrigerated Area Sprinkler Systems

Model FPS

Product Specification

Model No	Release Type	Valve Size		Rated Working Pressure		End Connection	Remarks
		in	(mm)	psi	(kPa)		
FPS-DIE0	Double Interlock, Electric-Electric, Local Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a, b, c, d, e, f, g, h, i
FPS-DIE0	Double Interlock, Electric-Electric, Local Reset	3, 4, 8	(80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a, b, c, d, e, f, g, h, i
FPS-DIE0	Double Interlock, Electric-Electric, Local Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, c, d, e, f, g, h, i
FPS-DIC0	Double Interlock, Electric-Pneumatic, Local Reset	1 1/2, 2	(40, 50)	250	(1720)	Threaded Grooved Flanged	a, b, c, d, e, f, g, h, i
FPS-DIC0	Double Interlock, Electric-Pneumatic, Local Reset	3, 4, 8	(80, 100, 200)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, c, d, e, f, g, h, i
FPS-DIC0	Double Interlock, Electric-Pneumatic, Local Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, c, d, e, f, g, h, i
FPS-DIE1	Double Interlock, Electric-Electric, Remote Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a, b, g, h, i
FPS-DIE1	Double Interlock, Electric-Electric, Remote Reset	3, 4, 8	(80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a, b, g, h, i
FPS-DIE1	Double Interlock, Electric-Electric, Remote Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, g, h, i

Remarks:
a. Approved when supplied with a main control valve body constructed of Ductile Iron ASTM A-536, Cast Steel ASTM A-216 Grade WCB, Nickel Aluminum Bronze ASTM B148 UNS C95800 or Stainless Steel ASTM A743, CF8M
b. The rated working pressure is limited to the maximum rated pressure of the FDV main control valve or release trim solenoid valve, whichever is lower

c. Approved when equipped with an ASCO Model 8210G207 two-way normally closed solenoid valve, 24 V dc, 10 W, 13 mm orifice, Rated Working Pressure of 175 psi (1210 kPa).
d. Approved when equipped with a Parker Model 73218BN4UNLVN0C111C2 two-way normally closed solenoid valve, 24 V dc, 10 W, 13 mm orifice, Rated Working Pressure of 175 psi (1210 kPa).
e. Approved when equipped with a Parker Model 73212BN4TNLVN0C322C2 two-way normally closed solenoid valve, 24 V dc, 10 W, 13 mm orifice, Rated Working Pressure of 300 psi (2070 kPa).
f. Approved when equipped with an ASCO Model 8210P007 two-way normally closed solenoid valve, 24 V dc, 2 W, 13 mm orifice, Rated Working Pressure of 300 psi (2070 kPa).
g. Approved when equipped with a Burkert Model 5282-A two-way normally closed solenoid valve, 24 V dc, 11 W, 13 mm orifice, Rated Working Pressure of 232 psi (1600 kPa).
h. Approved when equipped with a Burkert Model 6281EV two-way normally closed solenoid valve, 24 V dc, 11 W, 13 mm orifice, Rated Working Pressure of 232 psi (1600 kPa).
i. Approved when equipped with a Rotex Model 24134 two-way normally closed solenoid valve, 24V dc, 8W, 12 mm orifice, Rated Working Pressure of 300 psi (2070 kPa)

Company Name:	Raphael Valves Industries Ltd.
Company Address:	16 Hailan St., Or-Akiva, 3060000, Israel
Company Website:	http://raphael-valves.com
Listing Country:	Israel
Certification Type:	FM Approved
Class of Work:	1013-Refrigerated Area Spklr Sys

Deluge and Preaction Valves with Integrated Pressure Reducing Control

Model FPS-DCE

Valves have an adjustable outlet pressure range of 50 to 200 psi (340 to 1380 kPa). The minimum required differential between inlet and outlet is 40 psi (280 kPa). By design, valves with pressure reducing control restrict the flow of water through the valve to obtain the desired outlet pressure. Please consult with the manufacturer and review FM Data Sheets prior to installation.

Product Specification

Model No	Release Type	Valve Size		Rated Working Pressure		End Connection	Remarks
		in	(mm)	psi	(kPa)		
FPS-DCE0	Double Interlock, Electric-Electric, Local Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a, b, c, d, e, f, g, i, j
FPS-DCE0	Double Interlock, Electric-Electric, Local Reset	1 1/2, 2, 3, 4, 8	(40, 50, 80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a, b, c, d, e, f, g, i, j
FPS-DCE0	Double Interlock, Electric-Electric, Local Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, c, d, e, f, g, i, j
FPS-DCE1	Double Interlock, Electric-Electric, Remote Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a, b, g, h, i, j
FPS-DCE1	Double Interlock, Electric-Electric, Remote Reset	1 1/2, 2, 3, 4, 8	(40, 50, 80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a, b, g, h, i, j
FPS-DCE1	Double Interlock, Electric-Electric, Remote Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, g, h, i, j

Remarks:

a. Approved when supplied with a main control valve body constructed of Ductile Iron ASTM A-536, Cast Steel ASTM A-216 Grade WCB, Nickel Aluminum bronze ASTM B148 UNS C95800 or Stainless steel ASTM A743, CF8M

b. The rated working pressure is limited to the maximum rated pressure of the FDV main control valve or release trim solenoid valve, whichever is lower

c. Approved when equipped with an ASCO Model 8210G207 two-way normally closed solenoid valve, 24 V dc, 10 W, 13 mm orifice, Rated Working Pressure of 175 psi (1210 kPa).

d. Approved when equipped with a Parker Model 73218BN4UNLVN0C111C2 two-way normally closed solenoid valve, 24 V dc, 10 W, 13 mm orifice, Rated Working Pressure of 175 psi (1210 kPa).

e. Approved when equipped with a Parker Model 73212BN4TNLVN0C322C2 two-way normally closed solenoid valve, 24 V dc, 10 W, 13 mm orifice, Rated Working Pressure of 300 psi (2070 kPa).

f. Approved when equipped with an ASCO Model 8210P007 two-way normally closed solenoid valve, 24 V dc, 2 W, 13 mm orifice, Rated Working Pressure of 300 psi (2070 kPa).

g. Approved when equipped with a Burkert Model 5282-A two-way normally closed solenoid valve, 24 V dc, 11 W, 13

mm orifice, Rated Working Pressure of 232 psi (1600 kPa).
h. Approved when equipped with a Burkert Model 6281EV two-way normally closed solenoid valve, 24 V dc, 11 W, 13 mm orifice, Rated Working Pressure of 232 psi (1600 kPa).
i. Must be installed with an FM Approved pressure relief valve size 1⁄2 inch or larger
j. Approved when equipped with a Rotex Model 24134 two-way normally closed solenoid valve, 24V dc, 8W, 12 mm orifice, Rated Working Pressure of 300 psi (2070 kPa)

Company Name:	Raphael Valves Industries Ltd.
Company Address:	16 Hailan St., Or-Akiva, 3060000, Israel
Company Website:	http://raphael-valves.com
Listing Country:	Israel
Certification Type:	FM Approved
Class of Work:	1020-Automatic Water Ctrl Valves

Deluge and Preaction Valves with Integrated Pressure Reducing Control Model FPS-SCE

Valves have an adjustable outlet pressure range of 50 to 200 psi (340 to 1380 kPa). The minimum required differential between inlet and outlet is 40 psi (280 kPa). By design, valves with pressure reducing control restrict the flow of water through the valve to obtain the desired outlet pressure. Please consult with the manufacturer and review FM Data Sheets prior to installation.

Product Specification

Model No	Release Type	Valve Size		Rated Working Pressure		End Connection	Remarks
		in	(mm)	psi	(kPa)		
FPS-SCE0	Single Interlock, Electric, Local Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a, b, c, d, e, f, g, i, j
FPS-SCE0	Single Interlock, Electric, Local Reset	1 1/2, 2, 3, 4, 8	(40, 50, 80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a, b, c, d, e, f, g, i, j
FPS-SCE0	Single Interlock, Electric, Local Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, c, d, e, f, g, i, j
FPS-SCE1	Single Interlock, Electric, Remote Reset	1 1/2, 2	(40, 50)	300	(2065)	Threaded Grooved Flanged	a, b, g, h, i, j
FPS-SCE1	Single Interlock, Electric, Remote Reset	1 1/2, 2, 3, 4, 8	(40, 50, 80, 100, 200)	300	(2065)	Grooved Flanged Flanged X Grooved	a, b, g, h, i, j
FPS-SCE1	Single Interlock, Electric, Remote Reset	6, 10	(150, 250)	250	(1720)	Grooved Flanged Flanged X Grooved	a, b, g, h, i, j

Remarks:

a. Approved when supplied with a main control valve body constructed of Ductile Iron ASTM A-536, Cast Steel ASTM A-216 Grade WCB, Nickel Aluminum bronze ASTM B148 UNS C95800 or Stainless steel ASTM A743, CF8M

b. The rated working pressure is limited to the maximum rated pressure of the FDV main control valve or release trim solenoid valve, whichever is lower

c. Approved when equipped with an ASCO Model 8210G207 two-way normally closed solenoid valve, 24 V dc, 10 W, 13 mm orifice, Rated Working Pressure of 175 psi (1210 kPa).

d. Approved when equipped with a Parker Model 73218BN4UNLVN0C111C2 two-way normally closed solenoid valve, 24 V dc, 10 W, 13 mm orifice, Rated Working Pressure of 175 psi (1210 kPa).

e. Approved when equipped with a Parker Model 73212BN4TNLVN0C322C2 two-way normally closed solenoid valve, 24 V dc, 10 W, 13 mm orifice, Rated Working Pressure of 300 psi (2070 kPa).

f. Approved when equipped with an ASCO Model 8210P007 two-way normally closed solenoid valve, 24 V dc, 2 W, 13 mm orifice, Rated Working Pressure of 300 psi (2070 kPa).

g. Approved when equipped with a Burkert Model 5282-A two-way normally closed solenoid valve, 24 V dc, 11 W, 13 mm orifice, Rated Working Pressure of 232 psi (1600 kPa).

h. Approved when equipped with a Burkert Model 6281EV two-way normally closed solenoid valve, 24 V dc, 11 W, 13 mm orifice, Rated Working Pressure of 232 psi (1600 kPa).
i. Must be installed with an FM Approved pressure relief valve size 1⁄2 inch or larger
j. Approved when equipped with a Rotex Model 24134 two-way normally closed solenoid valve, 24V dc, 8W, 12 mm orifice, Rated Working Pressure of 300 psi (2070 kPa)

Company Name:	Raphael Valves Industries Ltd.
Company Address:	16 Hailan St., Or-Akiva, 3060000, Israel
Company Website:	http://raphael-valves.com
Listing Country:	Israel
Certification Type:	FM Approved
Class of Work:	1020-Automatic Water Ctrl Valves

CDL Control Drawing Blueprint Report

Blueprint Report
Raphael Valves Industries Ltd 254518
Class No. 1020
Original Project I.D. 452315

Drawing No.	Revision Level	Drawing Title	Last Report	Electronic Drawing
11012	3	11012 DIAPHRAGM	RR223926	Yes (pdf)
11012GR 0-3	0	Diaphragm NR-70-75 shore 2"	PR452315	Yes (pdf)
11032-1_D	0	cover FDV 3"	PR452315	Yes (pdf)
11032-3_D	0	alternate cover FDV 3"	PR452315	Yes (pdf)
11033	4	11033 A_L DIAPHRAGM	RR223926	Yes (pdf)
11033GR 3-4	0	Diaphragm NR-70-75 shore 3"	PR452315	Yes (pdf)
11039-1_D	0	cover FDV 4"	PR452315	Yes (pdf)
11039-2_D	0	alternative cover FDV-4"	PR452315	Yes (pdf)
11040	5	11040 DIAPHRAGM	RR223926	Yes (pdf)
11040GR 4-6	0	Diaphragm NR-70-75 shore 4"	PR452315	Yes (pdf)
11105	5	11105 DIAPHRAGM	RR223926	Yes (pdf)
11106-1_D	0	cover FDV 6"	PR452315	Yes (pdf)
11106-2_D	0	alternative cover FDV-6"	PR452315	Yes (pdf)
11109-1_D	0	cover FDV 8"	PR452315	Yes (pdf)
11109-2_D	0	alternative cover FDV-8"	PR452315	Yes (pdf)
11110	4	11110_1 DIAPHRAGM	RR223926	Yes (pdf)
11110GR	0	Diaphragm NR-70-75 shore 8"	PR452315	Yes (pdf)
11234-1_D	0	body FDV FLXGR 4"	PR452315	Yes (pdf)
11234-2_D	0	body FDV GRXGR 4"	PR452315	Yes (pdf)
11234-3_D	0	body FDV FLXGR 4"	PR452315	Yes (pdf)
11236-1_D	0	body FDV FLXGR 6"	PR452315	Yes (pdf)
11236-3_D	0	body FDV GRXGR 6"	PR452315	Yes (pdf)
11236-4_D	0	body FDV FLXFL 6"	PR452315	Yes (pdf)
11244_D	0	body FDV GRXGR 3"	PR452315	Yes (pdf)
11244-2_D	0	body FDV FLXGR 3"	PR452315	Yes (pdf)
11244-3_D	0	body FDV FLXFL 3"	PR452315	Yes (pdf)
11245_1_D	0	body FDV GRXGR 2"	PR452315	Yes (pdf)
11245_2_D	0	body FDV FLXFL 2"	PR452315	Yes (pdf)
11245_D	0	body FDV THXTH 2"	PR452315	Yes (pdf)
11249_D	0	body FDV THXTH 1.5"	PR452315	Yes (pdf)
11249-1_D	0	body FDV GRXGR 1.5"	PR452315	Yes (pdf)
11255-1_D	0	body FDV GRXGR 8"	PR452315	Yes (pdf)
11255-2_D	0	body FDV FLXGR 8"	PR452315	Yes (pdf)
11255-3_D	0	body FDV FLXFL 8"	PR452315	Yes (pdf)
11392-1	0	cover FDV 10"	PR452315	Yes (pdf)
11392-1_D	0	alternative cover FDV-10"	PR452315	Yes (pdf)

11394	2	11394 DIAPHRAGM	RR223926	Yes (pdf)
11396_D_2	0	body FDV FLXFL 10"	PR452315	Yes (pdf)
11396_D_3	0	body FDV FLXFL 10"-ANSI-150	PR452315	Yes (pdf)
11408_D	0	Body Deluge valve 2.5" grooved machining D.I NPT	PR452315	Yes (pdf)
11409_D	0	alternative cover FDV-2.5"	PR452315	Yes (pdf)
21099-1_D	0	cover FDV 2"	PR452315	Yes (pdf)
21099-2_D	0	alternative cover FDV-2"	PR452315	Yes (pdf)
21100	4	21100 DIAPHRAGM	RR223926	Yes (pdf)
21100GR 2-25	0	Diaphragm NR-70-75 shore 2"	PR452315	Yes (pdf)
2896	0	Body pilot	PR452315	Yes (pdf)
2979-3_D	0	cover FDV 1.5"	PR452315	Yes (pdf)
2979-4_D	0	alternative cover FDV-1.5"	PR452315	Yes (pdf)
2980	4	2980 DIAPHRAGM RAF2	RR223926	Yes (pdf)
2980GR 15-2	0	Diaphragm NR-70-75 shore 2"	PR452315	Yes (pdf)
32285	3	cover pilot	PR452315	Yes (pdf)
32292	0	base pilot	PR452315	Yes (pdf)
32292NI	0	base pilot nickle plated	PR452315	Yes (pdf)
32767 v ring06	0	v ring 6"	PR452315	Yes (pdf)
32912 v ring08	0	v ring 8"	PR452315	Yes (pdf)
44227	0	diaphragm support	PR452315	Yes (pdf)
44228	0	seal	PR452315	Yes (pdf)
44228_P	0	seal support	PR452315	Yes (pdf)
44229	0	pilot diaphragm	PR452315	Yes (pdf)
44230	1	seat	PR452315	Yes (pdf)
44232	0	bottom plug	PR452315	Yes (pdf)
44236-1	0	support	PR452315	Yes (pdf)
44247	0	adaptor	PR452315	Yes (pdf)
44263	0	adaptor -pilot 181	PR452315	Yes (pdf)
44266	0	adjusting screw	PR452315	Yes (pdf)
44722	0	Natural Rubber Seal	PR452315	Yes (pdf)
45082	0	v ring 4"	PR452315	Yes (pdf)
45107-1	0	seal	PR452315	Yes (pdf)
45112-1	2	Seal Rod	PR452315	Yes (pdf)
45121_T316	1	HAV-3 & Actuators 1/4" Seal Lead.	PR452315	Yes (pdf)
45122_T316	1	Diaphragm Support for HAV-3 type actuators (SST 316)	PR452315	Yes (pdf)
45366	0	diaphragm FSV1-1/2"	PR452315	Yes (pdf)
45401	0	secure cup	PR452315	Yes (pdf)
45405	0	Spring for DPA1-1/2T & PA series actuators.	PR452315	Yes (pdf)
4871	0	spring	PR452315	Yes (pdf)
70002P	1	Manifold 4 x 1/2" NPT BRASS	PR452315	Yes (pdf)
70003P	0	Inlet Adaptor, 1/2" NPT Female BRASS	PR452315	Yes (pdf)
70005P	0	Push Button Spring Housing	PR452315	Yes (pdf)

70006S	0	Spring - Delta Elkon Cat. - C0300-035-0940S	PR452315	Yes (pdf)
70007	3	Push Rod SST 316 for PSA	PR452315	Yes (pdf)
70008P	0	Inlet Adaptor, 1/2" NPT Male BRASS	PR452315	Yes (pdf)
70009	0	Seal seat for PA-PTC STST316	PR452315	Yes (pdf)
70010-N316	0	Seal guide for PA-PTC series actuators, SST 316	PR452315	Yes (pdf)
70011P	0	Body for Pneomatic actuator brass, machined	PR452315	Yes (pdf)
70012P	0	Diaphragm support for PA-PTC	PR452315	Yes (pdf)
70013P	0	Cover for pneomatic actuator brass, machined	PR452315	Yes (pdf)
70015N-C	0	MEU coated Left door - Red polyester RAL3000	PR452315	Yes (pdf)
70016N-C	0	MEU coated Box - Red polyester RAL3000	PR452315	Yes (pdf)
70018S	1	Ball return Spring: 0.6*11.4*5 coils	PR452315	Yes (pdf)
70024P	0	Push Button Spring Housing for MADV, Brass	PR452315	Yes (pdf)
70030	0	label	PR452315	Yes (pdf)
70033	0	label PA-PTC	PR452315	Yes (pdf)
70035	0	label PSA	PR452315	Yes (pdf)
70038	0	label DCPV	PR452315	Yes (pdf)
70043	0	SST 316 Lable plate for 3-way ball valve.	PR452315	Yes (pdf)
70043LA-TST-E	0	for 3-way ball valve, Lable plate (after laser) for alarm test,	PR452315	Yes (pdf)
70044	0	Label plate ST316 for 2-way Emergency KIT, BK8N21SF22EMR-KIT (2-way ball valve + Label)	PR452315	Yes (pdf)
70044LA	0	Label plate (after laser) for emergency, for 2-way ball valve, ST304	PR452315	Yes (pdf)
70071B	1	Body Hydraulic Relay 3-way 1/4" Brass	PR452315	Yes (pdf)
70072B	0	Bottom Adapter for Hydraulic Relay 3-way 1/4" Brass	PR452315	Yes (pdf)
70073	0	ALUMINUM LABEL	PR452315	Yes (pdf)
70074	2	EMERGENCY Label for 2-way ball valve BK4N21SF22	PR452315	Yes (pdf)
70074LA-EMR	0	EMERGENCY Label for 2-way ball valve BK4N21SF22	PR452315	Yes (pdf)
70080P	0	MADV Body 1/2"-1/4" -NPT, Brass	PR452315	Yes (pdf)
ASK-B-C	0	Air supply kit	PR452315	Yes (pdf)
BK4N21SF22EMR-KIT	2	K4N21SF22 as Emergency valve, with laser marked SST 316 plate	PR452315	Yes (pdf)
BK8N21SF22EMR-KIT	0	Emergengy kit with Ball Valve 1/2 NPT,2-way, F-F, SST, Full port, Regular, Mounting pad	PR452315	Yes (pdf)

BK8N3T1SF21	0	Ball Valve 1/2 NPT 3-way, T type, all Female, Reduced port, SST 316, Anson Flow cat. - VB-S2CNRT-1C	PR452315	Yes (pdf)
BK8N3T1SF21TST-KIT	0	Alarm Test kit for Ball Valve 1/2NPT 3-way T type all F SST Full port	PR452315	Yes (pdf)
BK8NRS1SF20	0	Ball Valve, CF8M, 1/2 NPT, 2-way Revers Stem, Full port, regular handle 100mm, ISO 5211 Direct Mount. ANSON FLOW cat. No - VB-23ENF-1C-RS	PR452315	Yes (pdf)
DA0244A1A1	0	FDV 2", D.I. Diaph - NR, Fast - 4 x Galv. Steel, red Rilsan	PR452315	Yes (pdf)
DA0266A1A1	0	FDV 2", D.I. Diaph - NR, Fast - 4 x Galv. Steel, red Rilsan THXTH	PR452315	Yes (pdf)
DA0344A1A1	0	FDV 3", D.I. Diaph - NR, Fast - 4 x Galv. Steel, red Rilsan	PR452315	Yes (pdf)
DA0394A1A1	0	FDV 3", D.I. Diaph - NR, Fast - 4 x Galv. Steel, red Rilsan FLxGR	PR452315	Yes (pdf)
DA0399A1A1	0	FDV 3", DI, FLxFL ANSI#150, , Diaph. - NR, Fast. - Galv. Steel, red Rilsan	PR452315	Yes (pdf)
DA0444A1A1	0	FDV 4", D.I. Diaph - NR, Fast - Galv. Steel, red Rilsan	PR452315	Yes (pdf)
DA0494A1A1	0	FDV 4", D.I. Diaph - NR, Fast - Galv. Steel, red Rilsan FLxGR	PR452315	Yes (pdf)
DA0499A1A1	0	FDV 4", DI, FLxFL ANSI#150, , Diaph. - NR, Fast. - Galv. Steel, red Rilsan	PR452315	Yes (pdf)
DA0644A1A1	0	FDV 6", DI,GRxGR , , Diaph. - NR, Fast. - Galv. Steel, red Rilsan	PR452315	Yes (pdf)
DA0694A1A1	0	FDV 6", DI,FLxGR , , Diaph. - NR, Fast. - Galv. Steel, red Rilsan	PR452315	Yes (pdf)
DA0699A1A1	0	FLxFL ANSI150 FDV 6" R-RILSAN DI FST-A1	PR452315	Yes (pdf)
DA0844A1A1	0	FDV 8" R-RILSAN DI FST-A2 GRxGR	PR452315	Yes (pdf)
DA0894A1A1	0	FDV 8" R-RILSAN DI FST-A2 FLxGR	PR452315	Yes (pdf)
DA0899A1A1	0	FDV 8" R-RILSAN DI FST-A2 FLxFL	PR452315	Yes (pdf)
DA1099A1A1	0	FDV 10" R-RILSAN DI FST-A2 FLxFL	PR452315	Yes (pdf)
DA1544A1A1	0	FDV 1.5" R-RILSAN DI FST-A2 GRxGR	PR452315	Yes (pdf)
DA1566A1A1	0	FDV 1.5" R-RILSAN DI FST-A2 THxTH	PR452315	Yes (pdf)
DCPV	0	Drain Control Pilot Valve	PR452315	Yes (pdf)
FDV FL-FL - DIM	0	FDV deluge valve FLxFL dimension	PR452315	Yes (pdf)
FDV FL-GR - DIM	0	FDV deluge valve FLxGR dimension	PR452315	Yes (pdf)
FDV GR-GR - DIM	0	FDV deluge valve GRxGR dimension	PR452315	Yes (pdf)
FDV-3W-AE1	1	FDV-3W-AE1	PR468993	Yes (pdf)
FDV-3W-AE1-IOM	-	FDV-3W-AE1-IOM	PR468993	Yes (pdf)
FDV-3W-DE1	1	FDV-3W-DE1	PR468993	Yes (pdf)
FDV-3W-DE1-IOM	-	FDV-3W-DE1-IOM	PR468993	Yes (pdf)
FDV-3W-DH1	0	deluge system hydraulic actuation 3way	PR452315	Yes (pdf)
FDV-AC0	0	FDV-AC0	PR468993	Yes (pdf)
FDV-AC0-IOM	-	FDV-AC0-IOM	PR468993	Yes (pdf)

FDV-AC1	1	FDV-AC1	PR468993	Yes (pdf)
FDV-AC1-IOM	-	FDV-AC1-IOM	PR468993	Yes (pdf)
FDV-AE0	1	FDV-AE0	PR468993	Yes (pdf)
FDV-AE0-IOM	-	FDV-AE0-IOM	PR468993	Yes (pdf)
FDV-AE1	1	FDV-AE1	PR468993	Yes (pdf)
FDV-AE1-IOM	-	FDV-AE1-IOM	PR468993	Yes (pdf)
FDV-AH0	1	FDV-AH0	PR468993	Yes (pdf)
FDV-AH0-IOM	-	FDV-AH0-IOM	PR468993	Yes (pdf)
FDV-AP0	1	FDV-AP0	PR468993	Yes (pdf)
FDV-AP0-IOM	-	FDV-AP0-IOM	PR468993	Yes (pdf)
FDV-AP1	1	FDV-AP1	PR468993	Yes (pdf)
FDV-AP1-IOM	-	FDV-AP1-IOM	PR468993	Yes (pdf)
FDV-DA0	0	deluge system hydraulic actuation local system+anticouloming	PR452315	Yes (pdf)
FDV-DC0	1	FDV-DC0	PR468993	Yes (pdf)
FDV-DC0-IOM	-	FDV-DC0-IOM	PR468993	Yes (pdf)
FDV-DC1	1	FDV-DC1	PR468993	Yes (pdf)
FDV-DC1-IOM	-	FDV-DC1-IOM	PR468993	Yes (pdf)
FDV-DE0	1	FDV-DE0	PR468993	Yes (pdf)
FDV-DE0-IOM	-	FDV-DE0-IOM	PR468993	Yes (pdf)
FDV-DE1	1	FDV-DE1	PR468993	Yes (pdf)
FDV-DE1-IOM	-	FDV-DE1-IOM	PR468993	Yes (pdf)
FDV-DH0	0	deluge system hydraulic actuation local reset	PR452315	Yes (pdf)
FDV-DP0	1	FDV-DP0	PR468993	Yes (pdf)
FDV-DP0-IOM	-	FDV-DP0-IOM	PR468993	Yes (pdf)
FDV-DP1	1	FDV-DP1	PR468993	Yes (pdf)
FDV-DP1-IOM	-	FDV-DP1-IOM	PR468993	Yes (pdf)
FDV-PC0	1	FDV-PC0	PR468993	Yes (pdf)
FDV-PC0-IOM	-	FDV-PC0-IOM	PR468993	Yes (pdf)
FDV-PC1	1	FDV-PC1	PR468993	Yes (pdf)
FDV-PC1-IOM	-	FDV-PC1-IOM	PR468993	Yes (pdf)
FDV-PE0	1	FDV-PE0	PR468993	Yes (pdf)
FDV-PE0-IOM	-	FDV-PE0-IOM	PR468993	Yes (pdf)
FDV-PE1	1	FDV-PE1	PR468993	Yes (pdf)
FDV-PE1-IOM	-	FDV-PE1-IOM	PR468993	Yes (pdf)
FDV-PP0	1	FDV-PP0	PR468993	Yes (pdf)
FDV-PP0-IOM	-	FDV-PP0-IOM	PR468993	Yes (pdf)
FDV-PP1	1	FDV-PP1	PR468993	Yes (pdf)
FDV-PP1-IOM	-	FDV-PP1-IOM	PR468993	Yes (pdf)
FDV-SIP0-IOM	-	FDV-SIP0-IOM	PR468993	Yes (pdf)
FPS-DCE0	1	FPS-DCE0	PR468993	Yes (pdf)
FPS-DCE0-IOM	-	FPS-DCE0-IOM	PR468993	Yes (pdf)
FPS-DCE1	1	FPS-DCE1	PR468993	Yes (pdf)

FPS-DCE1-IOM	-	FPS-DCE1-IOM	PR468993	Yes (pdf)
FPS-DIC0	1	FPS-DIC0	PR468993	Yes (pdf)
FPS-DIC0-IOM	-	FPS-DIC0-IOM	PR468993	Yes (pdf)
FPS-DIE0	1	FPS-DIE0	PR468993	Yes (pdf)
FPS-DIE0-IOM	-	FPS-DIE0-IOM	PR468993	Yes (pdf)
FPS-DIE1	1	FPS-DIE1	PR468993	Yes (pdf)
FPS-DIE1-IOM	-	FPS-DIE1-IOM	PR468993	Yes (pdf)
FPS-DIP0	0	double interlock pre-action valve pneumatic actuation local reset	PR452315	Yes (pdf)
FPS-SCE0	1	FPS-SCE0	PR468993	Yes (pdf)
FPS-SCE0-IOM	-	FPS-SCE0-IOM	PR468993	Yes (pdf)
FPS-SCE1	1	FPS-SCE1	PR468993	Yes (pdf)
FPS-SCE1-IOM	-	FPS-SCE1-IOM	PR468993	Yes (pdf)
FPS-SIE0	1	FPS-SIE0	PR468993	Yes (pdf)
FPS-SIE0-IOM	-	FPS-SIE0-IOM	PR468993	Yes (pdf)
FPS-SIE1	1	FPS-SIE1	PR468993	Yes (pdf)
FPS-SIE1-IOM	-	FPS-SIE1-IOM	PR468993	Yes (pdf)
FPS-SIP0	1	FPS-SIP0	PR468993	Yes (pdf)
HAV-3-1_4-NC-P	0	3 way actuator, 4 x 1/4" NPT, N.C. Brass.	PR452315	Yes (pdf)
MADV-1_2-1_4P	0	Manual Automatic drain valve - Brass.	PR452315	Yes (pdf)
MEU	0	Emergency and Remote actuation valve box (SST & Polyester powder)	PR452315	Yes (pdf)
PA-PTC	0	Pneumatic actuator, N.O. ports 1/2" PTS, Brass	PR452315	Yes (pdf)
PF-S21-8-150-M	0	Nipple ½" stainless steel L= 6" (152.4mm)- after machining	PR452315	Yes (pdf)
PSA-4W-1_2FP	0	Pressure Supply Arrestor 4W 1/2 Brass Female Inlet	PR452315	Yes (pdf)