

FireLock™ *Fire-Pac*

Series 745



1.0 PRODUCT DESCRIPTION

Available Sizes

- 1 ½ – 8"/DN40 – DN200

Application

- The Victaulic FireLock™ Series 745 *Fire-Pac* is a completely pre-assembled and tested fire protection valve with trim and optional components enclosed in a metal cabinet.
- The FireLock™ *Fire-Pac* include a water supply shutoff valve, the sprinkler system fire protection valve, alarm line pressure switches, air supervisory pressure switches, a valve position supervisory switch, and pressure gauges that are easily viewed through a window in the cabinet door.
- All electrical connections from inside the *Fire-Pac* to the control panel are pre-wired. Electrical connections are accessed inside the cabinet in a wiring panel box. Bulkhead fittings are factory provided for external hook-ups. All electrical component literature is included with the *Fire-Pac* cabinet.
- The manual pull station, mounted on the front of the *Fire-Pac* cabinet, is accessible through a sealed door. Once the door to the manual pull station is opened, the valve can be manually tripped.
- The pipe feed and drain connections can be located on either the left side, right side, or bottom of the enclosure. For ease of maintenance, the side and back panels of the cabinet can be removed for easy access to service equipment.
- Use with Victaulic FireLock™ grooved pipe couplings and fittings.

Installation Options

- **The FireLock™ *Fire-Pac* can incorporate any of the following available valve configurations:**
 - Wet
 - Dry – Actuated and/or Accelerated
 - Deluge – Wet pilot, dry pilot, and electric actuation
 - Preaction – Non-interlock, Single Interlock, and Double-Interlock
 - Preaction – AutoConvert preaction to dry

ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.

1.0 PRODUCT DESCRIPTION (CONTINUED)

Installation Options

- If required, the system can be supplied with an additional shutoff valve installed above the sprinkler system fire protection valve. This additional shutoff valve can provide greater system integrity during trip tests. NOTE: All shutoff valves are pre-wired for supervisory alarms.
- When system air pressure is required, a compressor, Series 7G7 Nitrogen Fill Kit, or other external air/gas source can be supplied with an optional air tank and air maintenance device for complete system integration.
- The Notifier RP-2001 conventional releasing panel is the standard releasing panel, a compact single enclosure, containing the power supply, standby batteries and a battery charger as well as connections for the detectors, waterflow and tamper switches, and the solenoid valve. The Notifier RP-2001 conventional releasing panel is software-programmed for field setting as two area or single area cross-zoned control. Mounting slots are provided for optional module boards.
- The *Fire-Pac* is for indoor or outdoor use (outdoor use when ordered with the optional weatherproofing). Optional weatherproofing is available when the enclosure is constructed for indoor or outdoor use to provide a degree of protection for the equipment inside the enclosure against the ingress of solid foreign objects or water, and that will be undamaged by the external formation of ice on the enclosure.
- Optional heater and insulation available. Heater trips at 50°F (10°C), while a temperature alarm switch will activate at 40°F (4.5° C). 20°F (-6.7°C) minimum ambient operating temperature. R3.2 ½" foil faced insulation is applied to all enclosure sides.

2.0 CERTIFICATION/LISTINGS



3.0 SPECIFICATIONS - MATERIAL

Cabinet Specifications

Configuration:

16-fold frame

Door(s) with foamed-in-place polyurethane gasket

4-pt locking system

Roof and rear wall

Material:

Sheet steel

Frame, roof, rear wall, floor: 16 gauge (1.5mm)

Door: 14 gauge (2.0mm)

Finish:

Frame: Dipcoat-primed

Door, roof, rear wall: Dipcoat-primed, powder-coated in textured RAL 3020 (traffic red)

Device Specifications

Body: Ductile iron, ASTM A536 Grade 65-45-12

Clapper: Aluminum bronze UNS-C95500

Shafting: Shafts are 17-4 stainless steel

Latch: Aluminum bronze UNS-C95500

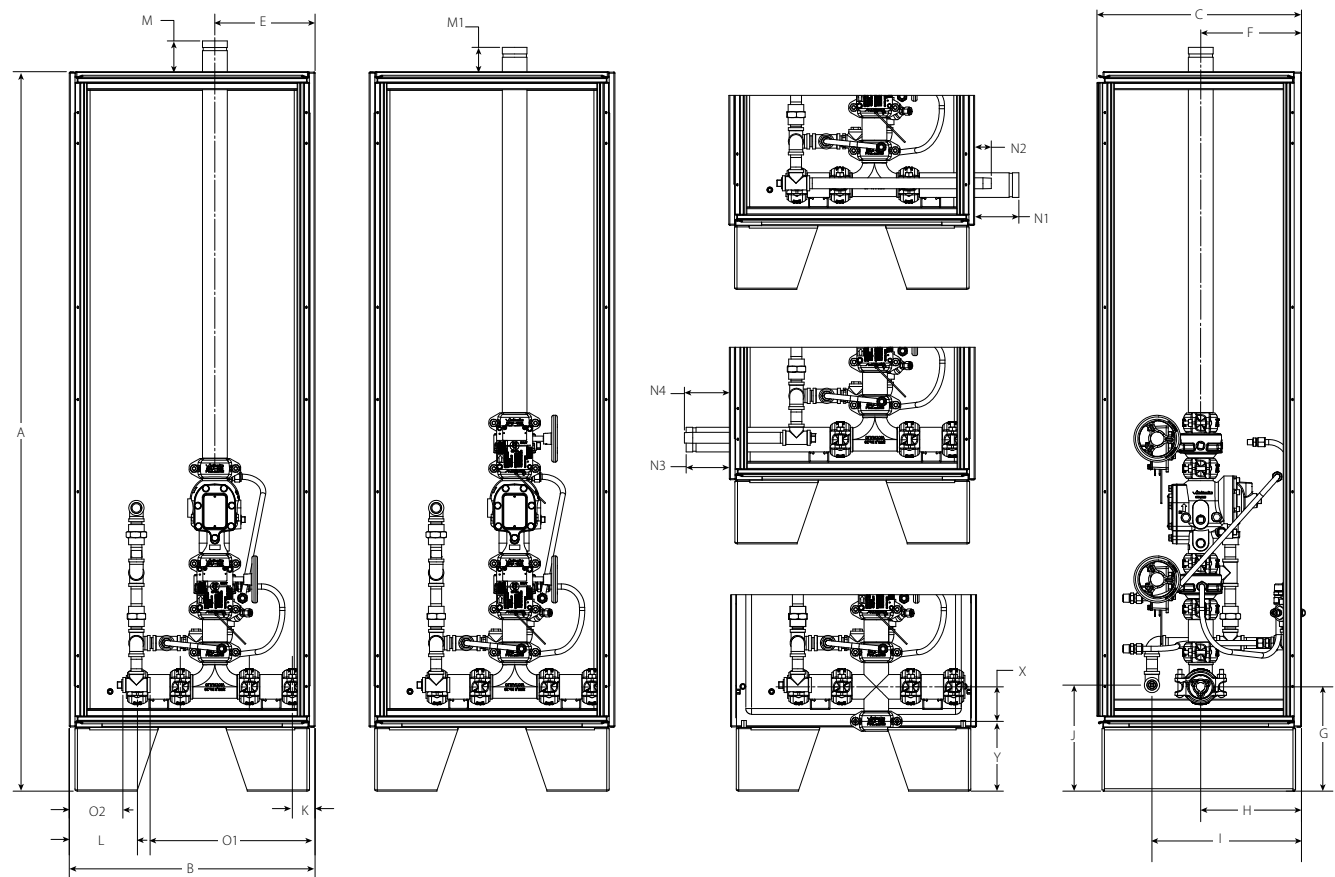
Clapper Seal: EPDM, ASTM D2000

Seat and Bushing Seals: Nitrile

Springs: Stainless steel (300 Series)

4.0 DIMENSIONS

Fire-Pac Cabinets Containing 1½ – 2"/DN40 – DN50 Valve Sizes



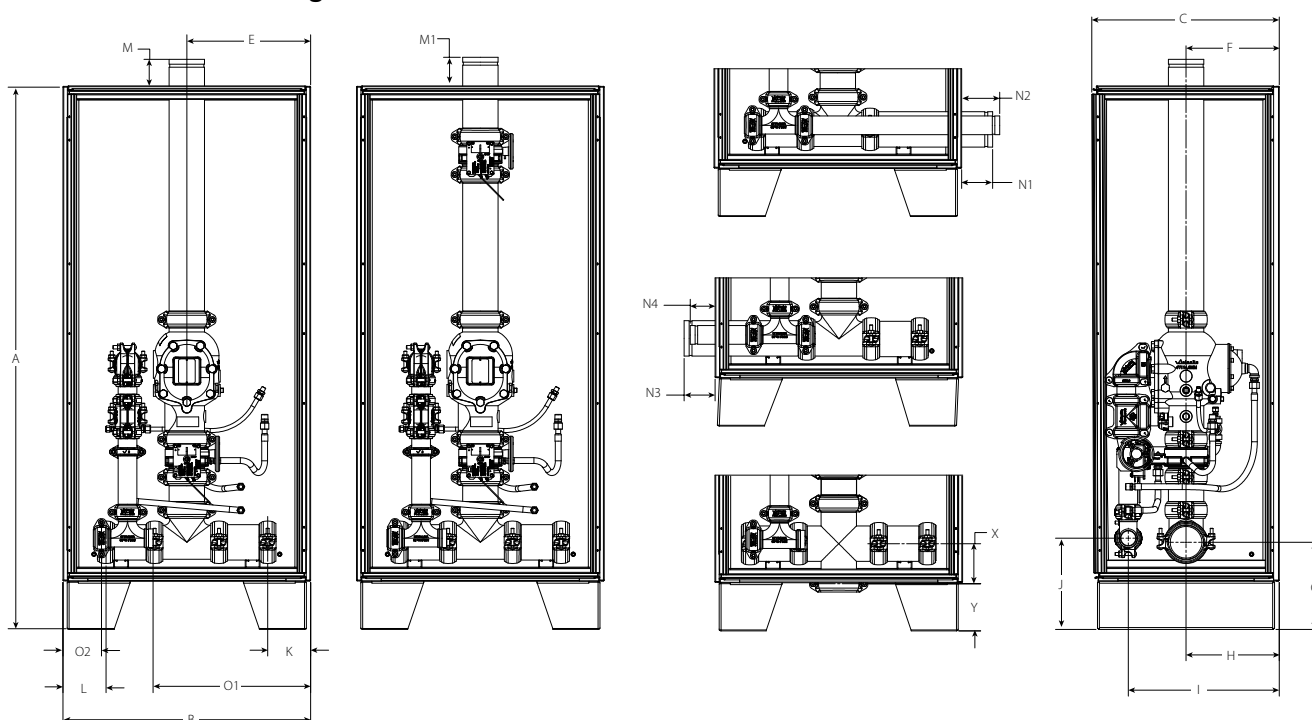
Nom. Valve Size inches DN	Dimensions																				Weight				
	A	B	C	E	F	G	H	I	J	K	L	M Riser Only		M1 With Added Control Valve		N1	N2	N3	N4	O1	O2	P ¹	X	Y	Approx. (Each) lb kg ²
												Tee Supply	Cross Supply	Tee Supply	Cross Supply										
1 ½ DN40	69.1 1755	23.6 599	19.9 505	9.6 244	9.7 246	9.8 249	9.7 246	14.4 366	10.4 264	2.7 69	7.1 180	4.5 114	4.5 114	4.5 114	4.5 114	4.2 107	3.6 91	4.4 112	4.3 109	13.8 351	7.2 183	12.1 307	7.1 178	7.0 178	430.0 195
2 DN50	69.1 1755	23.6 599	19.9 505	9.6 244	9.7 246	10.0 254	9.7 246	14.4 366	10.2 259	2.2 56	6.5 165	2.9 74	2.9 74	2.3 58	2.3 58	4.3 109	1.6 41	4.1 104	4.3 109	15.9 404	5.1 130	12.1 307	3.3 84	6.7 170	470.0 213

¹ Dimension P applies only to the cabinet with nitrogen bracket option.
² Approximate weight applies only to *Fire-Pac* cabinets that do not contain the nitrogen option.

- NOTES**
- Dimensions may vary due to tolerances during manufacturing and assembly.
 - The nitrogen cylinder is not provided with the nitrogen fill kit.
 - Bolt hole placement 4 ½" in from the sides, and 2" in from the front and back with ⅝" diameter.

4.0 DIMENSIONS (CONTINUED)

Fire-Pac Cabinets Containing 2½ – 8" / 73.0 mm – DN200 Valve Sizes



Nom. Valve Size inches DN	Dimensions																								Weight
	A	B	C	E	F	G	H	I	J	K	L	M Riser Only		M1 With Added Control Valve		N1	N2	N3	N4	O1	O2	P ¹	X	Y	Approx. (Each) lb kg ²
												Tee Supply	Cross Supply	Tee Supply	Cross Supply										
2 ½	69.1 1755	31.5 800	23.8 605	15.8 401	11.8 300	10.3 262	11.8 300	19.2 488	12.6 320	4.6 117	4.6 117	3.1 79	3.8 97	3.1 79	3.9 99	3.9 99	4.4 112	3.9 99	3.8 97	19.2 488	6.7 170	12.1 307	3.8 97	6.5 165	516.0 234
3 DN80	69.1 1755	31.5 800	23.8 605	15.8 401	11.8 300	10.6 269	11.8 300	19.2 488	12.8 325	5.2 132	5.2 132	3.8 97	4.6 117	3.8 97	4.7 119	4.0 102	4.4 112	4.0 102	3.8 97	19.2 488	6.7 170	12.1 307	4.3 109	6.3 160	522.0 237
4 DN100	69.1 1755	31.5 800	23.8 605	15.8 401	11.8 300	11.1 282	11.8 300	19.2 488	11.6 295	5.5 140	5.5 140	3.4 86	4.4 112	3.6 91	4.6 117	3.9 99	4.9 124	3.9 99	3.2 81	20.0 508	4.9 124	12.1 307	5.1 130	6.0 152	600.0 272
165.1 mm	69.1 1755	31.5 800	23.8 605	15.8 401	11.8 300	12.1 307	11.8 300	19.2 488	12.4 315	4.0 102	4.0 102	4.9 124	5.9 159	4.7 119	5.7 145	5.7 145	6.2 157	5.7 145	5.1 130	19.9 505	5.0 127	12.1 307	6.6 168	5.5 140	660.0 299
	69.1 1755	31.5 800	23.8 605	15.8 401	11.8 300	12.2 310	11.8 300	19.2 488	12.5 318	4.1 102	4.1 104	6.3 160	7.3 185	6.6 168	7.6 193	5.7 145	5.7 145	5.7 145	5.6 142	20.4 518	4.5 114	12.1 307	6.6 168	5.6 142	660.0 299
8 DN200	69.1 1755	31.5 800	23.8 605	15.5 394	11.8 300	13.2 335	11.8 300	19.2 488	12.5 318	2.5 64	2.5 64	4.6 117	5.4 137	4.7 119	5.5 140	5.6 142	4.9 124	5.6 142	4.7 119	21.3 541	3.7 94	12.1 307	7.9 201	5.3 135	940.0 426

¹ Dimension P applies only to the cabinet with nitrogen bracket option.

² Approximate weight applies only to Fire-Pac cabinets that do not contain the nitrogen option.

NOTES

- Dimensions may vary due to tolerances during manufacturing and assembly.
- The nitrogen cylinder is not provided with the nitrogen fill kit.
- Bolt hole placement 4½" in from the sides, and 2" in from the front and back with ⅝" diameter.

5.0 PERFORMANCE

Compressor Requirements

115V, 60 HZ

Model	HP	Voltage	Gallons W/O Vent 0 – 18 PSIG	Gallons W/O Vent 0 – 30 PSIG	Gallons W/Vent 0 – 18 PSIG	Gallons W/Vent 0 – 30 PSIG	Open Flow	Avg. CFM 18 PSIG	Avg. CFM 30 PSIG	Amps @ Open Flow	Amps @ 18 PSIG	Amps @ 30 PSIG
VIC16A	1/8	115/230/60/50	276	164	187	127	1.6	1.4	1.2	2.4	2.9	3.0
VIC25A	1/4	115/230/60/50	406	237	256	177	2.3	2.0	1.7	2.9	3.3	3.5
VIC50A	1/2	115/230/60/50	600	338	456	291	3.3	2.9	2.6	2.7	3.5	3.8
VIC75A	3/4	115/230/60/50	840	500	675	440	4.4	4.1	3.8	6.7	7.8	8.5
VIC100A	1.0	115/230/60/50	1170	690	1020	610	6.0	5.6	5.3	7.5	8.5	9.2

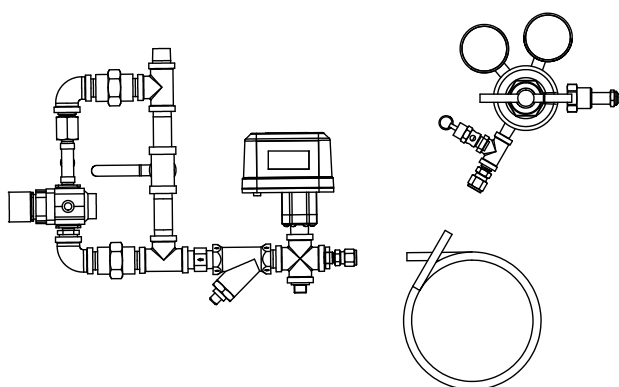
230V, 50 HZ

Model	HP	Voltage	Gallons W/O Vent 0 – 18 PSIG	Gallons W/O Vent 0 – 30 PSIG	Gallons W/Vent 0 – 18 PSIG	Gallons W/Vent 0 – 30 PSIG	Open Flow	Avg. CFM 18 PSIG	Avg. CFM 30 PSIG	Open Flow Amps	Amps @ 18 PSIG	Amps @ 30 PSIG
VIC16A	1/8	115/230/60/50	231	135	140	91	1.3	1.2	1.0	0.9	1.2	1.3
VIC25A	1/4	115/230/60/50	315	184	200	140	1.9	1.7	1.4	1.0	1.3	1.5
VIC50A	1/2	115/230/60/50	490	275	330	220	2.7	2.4	2.0	1.2	1.5	1.7
VIC75A	3/4	115/230/60/50	680	400	500	320	3.5	3.2	2.9	2.5	2.7	2.9
VIC100A	1.0	115/230/60/50	940	550	830	490	4.7	4.4	4.1	2.9	3.1	3.4

NOTES

- Installations for 1/4 hp compressors can only be configured as base mounted or with a switch; air maintenance trims with tank options are not available.
- VIC25A and VIC25AC have maximum pressure of 30 PSIG. All other compressors are rated at 60 PSIG Maximum.

Nitrogen Requirements



13 psi fill Victaulic:	Freezer Temperature (Deg F)					
System Size (gallons)						Approx. Fill Time (minutes)
	20	0	-20	-40	-60	
	Nitrogen Supply (lbs)					
250	5.0	5.3	5.5	5.8	6.0	1
500	10.1	10.5	11.0	11.5	12.1	2
750	15.1	15.8	16.5	17.3	18.1	3
1000	20.2	21.0	22.0	23.0	24.2	4

NOTES

- 7G7 Nitrogen requirements when nitrogen is fed to 745 by N2 high pressure cylinders (This does not apply totally to nitrogen regen system integration).
- For Nitrogen Regeneration systems with a tank, utilize 757 Air Maintenance Device. Option 2 under "Air Maintenance Selection" in order sheet on page 6.

6.0 NOTIFICATIONS

WARNING

- The FireLock™ Fire-Pac must be installed and maintained in accordance with the installation, maintenance, and testing manual for the fire protection valve.
- Installation must conform to NFPA standards and any additional requirements of the local authority having jurisdiction.
- The owner is responsible for the proper maintenance of the fire protection system.

Failure to follow these instructions could cause improper valve operation, resulting in serious personal injury and/or property damage.

7.0 REFERENCE MATERIALS

Series 745 FireLock™ Fire-Pac Panel Options

[illegible]

7.1 REFERENCE MATERIALS

FireLock™ Fire-Pac Fire Alarm Control Panel (FACP) Options

Option ⁵	Panel Design	Description
A	NO PANEL	This option includes a terminal block for wiring connections only.
B	NOTIFIER ³ RP-2001 ⁴ Panel with Two 12-Volt, 12AH Batteries ⁶	This option includes the base panel with two 12AH batteries. The base panel provides the alarm and trouble relays. The alarm indicates when the valve trips, and the trouble indicates a technical difficulty (ie. Loss of power, loose wire, etc.). Three programmable relay contacts are provided for remote signaling.
C	NOTIFIER ³ RP-2001 ⁴ Panel with 4XTM	This option includes option "B", plus a supervised output for local energy municipal box transmitter and alarm and trouble reverse polarity.
D	NOTIFIER ³ RP-2001 ⁴ Panel with 4XTM/ANN-80	This option includes option "C", plus a remote LCD annunciator that mimics the information displayed on the FACP LCD display.
E	NOTIFIER ³ RP-2001 ⁴ Panel with 4XTM/ANN-I/O	This option includes option "C", plus an LED driver that can be used as an interface with the FACP to drive most customized graphic annunciators.
F	NOTIFIER ³ RP-2001 ⁴ Panel with 4XTM/ANN-RLY	This option includes option "C", plus 10 additional, programmable Form-C relays.
G	NOTIFIER ³ RP-2001 ⁴ Panel with 4XTM/ANN-80/ANN-I/O	This option combines the features of option "D" and option "E".
H	NOTIFIER ³ RP-2001 ⁴ Panel with 4XTM/ANN-80/ANN-RLY	This option combines the features of option "D" and option "F".
I	NOTIFIER ³ RP-2001 ⁴ Panel with 4XTM/ANN-I/O/ANN-RLY	This option combines the features of option "E" and option "F".
J	NOTIFIER ³ RP-2001 ⁴ Panel with ANN-80	This option includes option "B", plus a remote LCD annunciator that mimics the information displayed on the FACP LCD display.
K	NOTIFIER ³ RP-2001 ⁴ Panel with ANN-80/ANN-I/O	This option includes option "B", plus a remote LCD annunciator that mimics the information displayed on the FACP LCD display and an LED driver that can be used as an interface with the FACP to drive most customized graphic annunciators.
L	NOTIFIER ³ RP-2001 ⁴ Panel with ANN-80/ANN-RLY	This option includes option "B", plus a remote LCD annunciator that mimics the information displayed on the FACP LCD display and 10 additional, programmable Form-C relays.
M	NOTIFIER ³ RP-2001 ⁴ Panel with ANN-80/ANN-I/O/ANN-RLY	This option includes option "K", plus 10 additional, programmable Form-C relays.
N	NOTIFIER ³ RP-2001 ⁴ Panel with ANN-I/O	This option includes option "B", plus an LED driver that can be used as an interface with the FACP to drive most customized graphic annunciators.
P	NOTIFIER ³ RP-2001 ⁴ Panel with ANN-RLY	This option includes option "B", plus 10 additional, programmable Form-C relays.
Q	NOTIFIER ³ RP-2001 ⁴ Panel with ANN-I/O/ANN-RLY	This option combines the features of option "K" and option "P".
R	NOTIFIER ³ NFS-320 with Addressable Panel	This option includes a NOTIFIER ³ NFS-320 addressable panel capable of networking with 318 intelligent devices through the NOTI-FIRE-NET protocol and contains two, 12AH batteries. All of the trouble and supervisory alarms are discretely wired and factory programmed to alert to specific issues with the Fire-Pac. Any applicable solenoid releases are factory wired for release. Commissioning and programming of this option shall be completed by a NOTIFIER ³ approved contractor. Contact Victaulic for additional information.
S	Secondary Addressable-Ready Unit (No Panel, NOTIFIER ³ XP10-M Ten-Input Monitor Module)	This option has all of the trouble and supervisory alarms discretely wired to a NOTIFIER ³ XP10-M board. It is ready to interface to a contractor-supplied NOTIFIER ³ NFS-320 or compatible addressable panel through its Signaling Line Circuit (SLC) loop. In addition, any applicable solenoid releases are factory wired for release. Commissioning and programming of this option shall be completed by a NOTIFIER ³ approved contractor. Contact Victaulic for additional information.

³ NOTIFIER is a registered trademark of the Honeywell International Inc.

⁴ RP-2001 is designated as RP-2001C for Canada, and RP-2001E for Europe.

⁵ This designation corresponds with the "Panel Design" section of the Figure Number System chart.

⁶ It is the sole responsibility of the Fire Alarm system designer, Licensed electrician, or Certified installer to properly calculate the detection, maximum devices per circuit, and the battery requirements in accordance with NFPA 72 and all other applicable National, State, and local codes in accordance with the AHJ's requirements. For calculating battery size, you need to add a 2.35mA draw for the electrical components in the cabinet to your overall calculations.

NOTES

- **FACP** – Fire Alarm Control Panel
- **LCD** – Liquid Crystal Display
- **LED** – Light Emitting Diode
- **Class B** – 2-wire configuration
- **Class A** – 4-wire configuration
- This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

7.1 REFERENCE MATERIALS (CONTINUED)

FireLock™ Fire-Pac Fire Alarm Control Panel (FACP) Options

Option ⁵	Panel Design	Description
T	Notifier NFS-320C Addressable Canadian Panel	This option includes a NOTIFIER* NFS-320C addressable panel capable of networking with 318 intelligent devices through the NOTI-FIRE-NET protocol and contains two, 12AH batteries. All of the trouble and supervisory alarms are discretely wired and factory programmed to alert to specific issues with the Fire-Pac. Any applicable solenoid releases are factory wired for release. Commissioning and programming of this option shall be completed by a NOTIFIER* approved contractor. Contact Victaulic for additional information.
U	Notifier NFS-320E - Addressable European panel 220V 50 Hz	This option includes a NOTIFIER* NFS-320E addressable panel capable of networking with 318 intelligent devices through the NOTI-FIRE-NET protocol and contains two, 12AH batteries. All of the trouble and supervisory alarms are discretely wired and factory programmed to alert to specific issues with the Fire-Pac. Any applicable solenoid releases are factory wired for release. Commissioning and programming of this option shall be completed by a NOTIFIER* approved contractor. Contact Victaulic for additional information.
9	Special	

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⁴ RP-2001 is designated as RP-2001C for Canada, and RP-2001E for Europe.

⁵ This designation corresponds with the "Panel Design" section of the Figure Number System chart.

⁶ It is the sole responsibility of the Fire Alarm system designer, Licensed electrician, or Certified installer to properly calculate the detection, maximum devices per circuit, and the battery requirements in accordance with NFPA 72 and all other applicable National, State, and local codes in accordance with the AHJ's requirements. For calculating battery size, you need to add a 2.35mA draw for the electrical components in the cabinet to your overall calculations.

NOTES

- **FACP** – Fire Alarm Control Panel
- **LCD** – Liquid Crystal Display
- **LED** – Light Emitting Diode
- **Class B** – 2-wire configuration
- **Class A** – 4-wire configuration
- This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

7.2 REFERENCE MATERIALS

Series 745 FireLock™ Cabinet Options

Option ⁷	Cabinet Options/Color Selector	Description
1	Red	Pipe feed and drain on the right side of the cabinet.
2	Weatherproofing, Pipe feed and drain left	Weatherproof enclosures constructed for either indoor or outdoor use to provide a degree of protection of the equipment inside the enclosure against ingress of solid foreign objects (falling dirt and windblown dust); to provide a degree of protection with respect to harmful effects on the equipment due to the ingress of water (rain, sleet, snow); and that will be undamaged by the external formation of ice on the enclosure. Pipe feed and drain will be located on the left side of the enclosure.
3	Weatherproofing, Pipe feed and drain right	This option includes option "2" but pipe feed and drain will be located on the right side of the enclosure.
4	Weatherproofing, Pipe feed and drain bottom	This option includes option "2" but pipe feed and drain will be located on the bottom of the enclosure. Factory provided panel skirts and insulation from floor to bottom of the cabinet shall also be provided.
5	Pipe feed and drain bottom	Pipe feed and drain will be located on the bottom of the cabinet.
A	Red, pipe feed, and drain left	Pipe Feed and drain will be located on the left side of the enclosure.
B	Insulated and Heated, Weatherproofing, Pipe feed and drain bottom	This option includes option "4", plus a heater and insulation. Heater trips at 50°F (10°C), while a temperature alarm switch will activate at 40°F (4.5°C). 20°F (-6.7°C) minimum ambient operating temperature. R3.2 ½" foil faced insulation is applied to all enclosure sides.
L	Insulated and Heated, Weatherproofing, Pipe feed and drain left	This option includes option "2", plus a heater and insulation. Heater trips at 50°F (10°C), while a temperature alarm switch will activate at 40°F (4.5°C). 20°F (-6.7°C) minimum ambient operating temperature. R3.2 ½" foil faced insulation is applied to all enclosure sides.
R	Insulated and Heated, Weatherproofing, Pipe feed and drain right	This option includes option "3", plus a heater and insulation. Heater trips at 50°F (10°C), while a temperature alarm switch will activate at 40°F (4.5°C). 20°F (-6.7°C) minimum ambient operating temperature. R3.2 ½" foil faced insulation is applied to all enclosure sides.
9	Special	Any other color and/or special options
N	NFPA 72 Bypass Test Switch Option	

⁷ This designation corresponds with the "Cabinet Options/Color Selector" section of the Figure Number System chart.

7.0 REFERENCE MATERIALS

[30.01: Victaulic FireLock™ Alarm Check Valve and European Alarm Check Valve Stations Series 751](#)

[30.84: Victaulic FireLock NXT™ Actuated Valve with Preaction AutoConvert Trim](#)

[31.80: Victaulic FireLock NXT™ Dry Valve Series 768N](#)

[31.82: Victaulic FireLock NXT™ Preaction Trim Series 769N](#)

[I-745: Victaulic Series 745 FireLock™ Fire-Pac for FireLock NXT™ Valves](#)

User Responsibility for Product Selection and Suitability

Each user bears final responsibility for making a determination as to the suitability of Victaulic products for a particular end-use application, in accordance with industry standards and project specifications, and the applicable building codes and related regulations as well as Victaulic performance, maintenance, safety, and warning instructions. Nothing in this or any other document, nor any verbal recommendation, advice, or opinion from any Victaulic employee, shall be deemed to alter, vary, supersede, or waive any provision of Victaulic Company's standard conditions of sale, installation guide, or this disclaimer.

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Note

This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

Installation

Reference should always be made to the Victaulic installation handbook or installation instructions of the product you are installing. Handbooks are included with each shipment of Victaulic products, providing complete installation and assembly data, and are available in PDF format on our website at www.victaulic.com.

Warranty

Refer to the Warranty section of the current Price List or contact Victaulic for details.

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