



APPROVED
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PREACTION-PAC GENERATION 3

FEATURES

- **FM Approved**
- **NYC FD Certificate of Approval #6148**
- **CSFM Listing No. 7080-2143.0100**
- Includes preaction valve with optional control panel and supervisory pressure source
- Fully factory assembled, programmed, and tested
- No field assembly required
- Just connect water supply, drain, sprinkler piping, power, and electrical devices

BENEFITS

- Saves assembly, programming, and installation time
- Installation drawings available
- Quicker commissioning – just place, connect, and it's ready
- Easy inspection and maintenance

DESCRIPTION

The **FM Approved UNITED Fire Systems PREACTION-PAC™** is a fully assembled preaction fire suppression system, including preaction valve, trim, and optional control panel, providing one complete zone of preaction water sprinkler fire protection. All components are contained in two (2) red powder-coated steel enclosures assembled one above the other. The system pressure gauges are mounted on the front of the mechanical enclosure. The system detection and control panel is mounted behind a door on the electrical enclosure with a clear polycarbonate window allowing examination of the system visual indicators. Lockable latches on both doors permit restricted access to connections and components. A manual release valve is located behind a non-locking door on the mechanical enclosure. Gasketing provides sealing of the enclosure doors. Knockouts permit easy attachment of external electrical raceways.

Precision Valve

The preaction valve assembled in the **PREACTION-PAC™** uses a diaphragm to separate the system water supply from the system piping. The valve uses the supply water pressure in the diaphragm chamber to hold the diaphragm closed against the water supply pressure. When the water pressure in the diaphragm chamber is released, the valve actuates. The diaphragm style design of the preaction valve allows for external resetting. Re-pressurizing the diaphragm chamber resets the valve.

Valve Interlock Designated As "P1"

PREACTION-PAC™ assemblies with "P1" in the part number designation (refer to Ordering Information) may be field-configured to operate in either of two (2) ways:

- **Single Interlock:** The preaction valve opens upon actuation of a fire detector connected to the system control panel, allowing water into the sprinkler pipe.
- **Double Interlock Electric / Electric:** The preaction valve opens upon actuation of a fire detector connected to the system control panel AND when the system control panel receives a low air signal from the supervisory switch attached to the valve trim (due to an open sprinkler head). [NOTE – Operation of the low air switch without actuation of a fire detector results in a low air supervisory signal and does not open the preaction valve.]

For additional information, refer to **UNITED Fire Systems** manual supplement 10-500008-002.

- Lower left or right side water inlet and drain connections
- Attractive, rugged, powder-coated metal enclosures
- Separate, lockable mechanical and electrical enclosures
- Easy-to-see pressure gauges on enclosure front
- Manual actuation valve behind separate non-locking door
- Space for required spare sprinkler heads and wrench
- Easy-to-follow instructions on enclosure front
- 2 inch, 3 inch, and 4 inch valve options
- Addressable control panel options

- Finished appearance allows placement in or near protected space
- Rapid access to manual release handle without a key
- Reliable, dependable protection that functions as designed
- Expert in-house field and technical support



Valve Interlock Designated As "P2"

PREACTION-PAC™ assemblies with "P2" in the part number designation (refer to Ordering Information) are factory-configured to operate as Double Interlock Pneumatic / Electric. Open sprinkler head actuation is sensed by a pneumatic actuator connected to the valve trim. This is a different device from the low air supervisory switch.

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Piping

Water inlet and drain connections are located on the lower left and right side of the mechanical enclosure. The unused inlet is left plugged. The outlet connection is on the top surface of the mechanical enclosure, behind the electrical enclosure. Grooved pipe is used for the inlet and outlet connections.

Detection & Control Panel

Optional control panels allow for a choice between three different brands of fully programmable and networkable addressable systems. All necessary internal wiring connections are factory-assembled and tested.

Wiring

Power for the control panel is factory-connected to come from the same 115 VAC 60 Hz single-phase source as the built-in compressor, or jumpers may be removed to permit two (2) separate power sources to be used. External wiring is brought to a terminal strip in the electrical enclosure. No access to the inside of the valve enclosure is necessary to complete the wiring installation. All necessary internal wiring for waterflow, tamper, and supervisory switches, plus solenoid activation, is factory-installed and tested.

Options (refer to Ordering Information)

- Choice of preaction valve size (2 inch, 3 inch, and 4 inch available)
- Choice of compressor size - Refer to **Table B**
- Choice of control panel (3 addressable panels available)
- Installed **FM Approved** Model NAMD-1 pressure maintenance device, making the assembly ready for external supervisory pressure source
- Integrated nitrogen-based corrosion inhibiting system (refer to Data Sheet UFS-110B)

Specifications

- Maximum Service Pressure: 300 PSIG (2065 kPa gauge)
- Supervisory Pressure: 15 ± 2 PSIG (103 ± 3 kPa gauge)
- Electrical Enclosure: 14 gauge steel with continuous welded seams
- Mechanical Enclosure: 12 gauge steel with continuous welded seams
- Access Doors: Full hinge with oil-resistant gaskets
- External Power Requirement: 115 VAC 60 Hz, single-phase, (1) or (2) circuits. Maximum current draw 7.2 A

Ordering Information

GENERATION	
VALVE SIZE	
SYSTEM TYPE	
PRESSURE SOURCE	
CONTROL PANEL	

G3 - XX - PX - X - X

MFR	MODEL	TYPE	STATUS
A	POTTER 4410-RC	CONV	DISCONTINUED
B	NOTIFIER NFS2-640	ADDR	CURRENT
C	NOTIFIER RP-2001	CONV	DISCONTINUED
D	FENWAL FN-6000	ADDR	DISCONTINUED
E	KIDDE ARIES-SLX	ADDR	CURRENT
F	POTTER ARC-100	ADDR	CURRENT
G	POTTER 4410G3	CONV	CURRENT
N	NO CONTROL PANEL		CURRENT

CONV = Conventional Detection -- ADDR = Addressable Detection

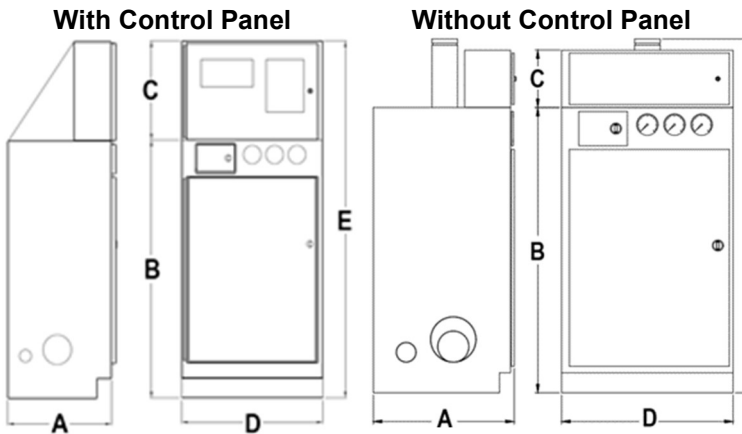
1	1/6 HP COMPRESSOR
2	1/3 HP COMPRESSOR
3	1/2 HP COMPRESSOR
N	NITROGEN-READY WITH MODEL NAMD-1

P1	PREACTION - SINGLE INTERLOCK =OR= DOUBLE INTERLOCK ELEC / ELEC
P2	PREACTION - DOUBLE INTERLOCK PNEUMATIC / ELECTRIC

20	2 INCH
30	3 INCH
40	4 INCH

G3 GENERATION 3 - TYCO VALVE

Dimensions – Refer to Table A



Dimension	With or Without Control Panel	With 1-1/2" thru 3" Valves	With 4" and 6" Valves
A - Depth	Both	22	24
B – Mechanical Enclosure	Both	52	52
C – Electrical Enclosure	With	20	20
	Without	10	10
D - Width	Both	30	30
E - Height	With		
	Without		

NOTE: All dimensions are in inches.

Table A - Dimensions

Compressor HP	Maximum Sprinkler Pipe Volume - Gallons
1/6	220
1/3	430
1/2	670

Maximum sprinkler pipe volume is for initial-fill with air to 18 PSIG in 30 minutes to satisfy NFPA 13

Table B – Built-In Compressor Capacity