

TOTALPAC® X description

The **TOTALPAC®X** integrated system consists of an integrated sprinkler riser assembly, totally pre-assembled, pre-wired and factory tested. All electrical and mechanical components of the system are contained in one single unit

System can be provided with a choice of air supplies to suit the project requirements.

Regular Dry Pipe systems are built around the Viking trim using Dry Pipe Valve Model F-1. The valves are rated up to a maximum of 175 psi WWP (1207 kPa) max. and are available in the following diameters:

- 4" (100 mm) 6" (150 mm)

Standard features

- NEMA 3 or NEMA 4 construction
- Factory assembled and tested under ISO-9001 standards
- Prewired to a terminal block
- Easy and compact installation
- Viking conventional trim rated at 175 psi (1206 kPa)
- Galvanized trim piping
- Serial number for easy reference
- Wide door for easy access
- Quarter turn door latches
- Lockable door to protect against tampering
- Lifting lugs provided for safe and easy handling
- Corrosion resistant paint finish
- Water supply and drain through the bottom center of the unit to avoid freeze-up potential
- Single drain connection

Cabinet

NEMA 3

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.

NEMA 4

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, splashing water, and hose directed water); and that will be undamaged by the external formation of ice on the enclosure.

NEMA 3X

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); that provides an additional level of protection against corrosion and that will be undamaged by the external formation of ice on the enclosure.

NEMA 4X

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 (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, splashing water, and hose directed water); that provides an additional level of protection against corrosion; and that will be undamaged by the external formation of ice on the enclosure.

COMPARISON OF SPECIFIC NON-HAZARDOUS APPLICATIONS

Provide a degree of protection against the following environmental conditions	Type of enclosure			
	3 ^a	3X ^a	4	4X
Incidental contact with enclosed equipment	•	•	•	•
Rain, snow and sleet	•	•	•	•
Hose down and splashing water			•	•
Corrosive agents		•		•
Ingress of solid foreign object (circulating or setting airborne dust, lint, fibers, and flyings) ^b			•	•
Ingress of solid foreign objects (winblown dust, lint, fibers, and flyings) ^b	•	•	•	•

^a : these cabinet may be ventilated.

^b : these fibers and flyings are non hazardous materials and are not considered class III type ignitable fibers or combustible flyings.

Sequence of operation

- 1 The activation of at least one automatic sprinkler head is necessary to cause the water discharge.
- 2 The activation of at least one automatic sprinkler head will open the dry valve and cause the system to fill the piping network with water and spray through all open sprinklers. This will activate alarm and water flow switch contacts connected to the building fire alarm panel and sound an alarm.
- 3 Pressure loss on the piping system will activate an auxiliary contact indicating same.

Systems hydraulic limitations

WARNING The information contained herewith is for estimation and evaluation purposes only. Its use remains the responsibility of the designer.

Designers should refer to the appropriate NFPA Standards and any other applicable codes for their final design. Also refer to FireFlex Systems Inc. appropriate user manuals and to manufacturer's data sheets for additional details.

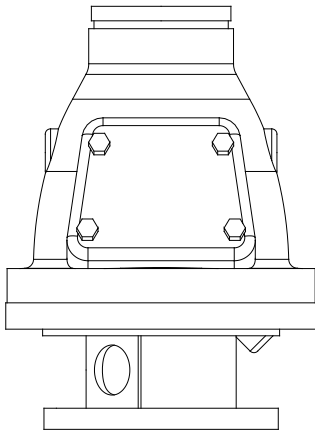
Systems limitations indicated below are nominal flow limitations.

System size (in.)	Usage Range (gpm)	Piping Equivalent Lengths w/o shut off valve	
		(m.)	(ft.)
4	250 – 1200	1.5	5
6	750 - 2800	14.9	49

Standard dry pipe system equipment

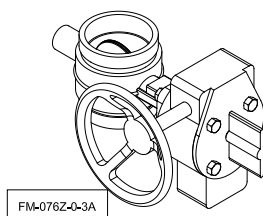
Dry valve

The Viking Model F-1 Dry Pipe Valve is a latching differential valve used to separate the water supply from the dry pipe sprinkler system. The valve combines a positive latching clapper and air plate assembly, with a differential air to water seat design. The latching clapper and air plate assembly provides a positive mechanical seal for the air pressure in the dry pipe system. The differential design allows an air supply of moderate pressure to control a higher water supply pressure. When the air pressure in the dry pipe system is lowered sufficiently to destroy the pressure differential, the valve opens allowing water to enter the dry pipe system.



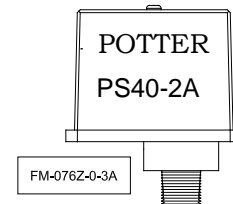
Water supply control valve

The water inlet control valve is a supervised, indicating butterfly valve. Purpose of this valve is to manually shutoff the preaction system.



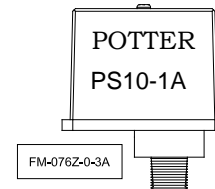
Low/High air supervisory switch

The low/high pressure switches monitors the pressure within the sprinkler piping should a loss or over pressure of the air occurs. The pressure switch contacts transfer indicating supervisory signal.



Alarm pressure switch

The alarm pressure switch monitors the water flow within the sprinkler piping. Should the Deluge Valve clapper opens to allow water to flow into the sprinkler piping. The alarm pressure switch will activate, indicating a water flow signal.



Optional equipment

Heater option

Heater option is recommended where ambient temperatures can drop below 40°F (4.5°C). The cabinet's electric heater temperature cut-out point is set at 50°F (10°C). The heater option is equipped with a low temperature sensor that will activate a supervisory signal when temperature drops below 40°±5°F (4.5°±3°C).

Heater option can be ordered in two supply voltage settings:

- 120Vac-60Hz. 400Watts.
- 220Vac-50Hz. 400Watts.

Insulated enclosure (standard with heater option)

Insulation is made on foam core 2" thick R13 and have a foil-faced sheathing board composed of a uniform closed cell polyisocyanurate foam core bonded on each side to a trimitate foil facer. One side has a foil reflective facer and the other side has a non-reflective foil facer.

Warning: TOTALPAC®X cabinet is rated to provide freeze protection down to a minimum temperature of 14°F (-10°C).

Low temperature sensor (standard with heater option)

The low temperature sensor will close the normally open contact when the temperature drops below 40°F (4,5°C).

The sensor will automatically reset to its normal state when the temperature rises above 40°F (4,5°C).

Light option

Optional fluorescent enclosure light is available for all cabinet configurations. Remote door switch activates the light when the door is opened.

Light option can be ordered in two supply voltage settings:

- 120Vac-60Hz.
- 220Vac-50Hz.

Air supply

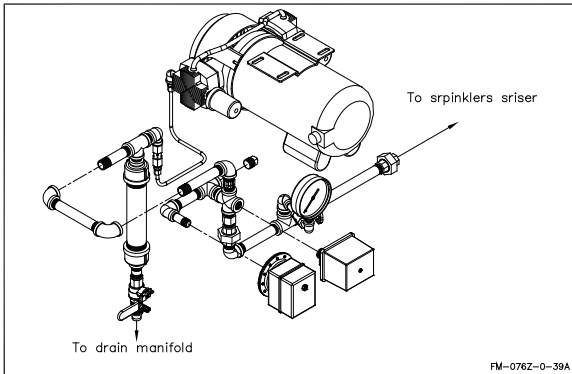
Direct air compressor (Style "A")

Used only for the sprinkler piping network of the preaction system. Air supply style "A" includes the air compressor mounted inside the **TOTALPAC®X** cabinet with its supervisory trim and options. Compressors are of the tankless, oilless piston type and are factory piped to the sprinkler system riser, all within the **TOTALPAC®X** cabinet.

Note: Direct air compressor is available only with NEMA 3, 3X cabinet.

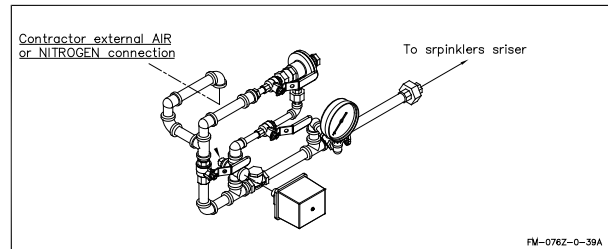
Compressors are available in four (4) sizes;

- 1/6HP 1/3HP
- 1/2HP 1HP



Air Pressure Maintenance Device (Style "B")

Used only for the sprinkler piping network of the preaction system, when an external air supply is provided by others (tank mounted compressor, plant air or dry nitrogen cylinders) and piped to the air inlet port of the unit. Air supply style "B" provides an Air Pressure Maintenance Device (APMD) trim, factory mounted in the **TOTALPAC®X** cabinet.



Direct air, external compressor (Style "D")

Mainly used with Preaction systems protecting refrigerated spaces and freezers, where a special dry external air supply unit is piped directly to the system riser inside the freezer itself, as shown in NFPA-13. Air supply Style "D" provides only an air supervisory and shut-off trim.

Note: The external air supply must be restricted to insure that it cannot replace air as fast as it escapes when a releasing device or sprinkler operates.

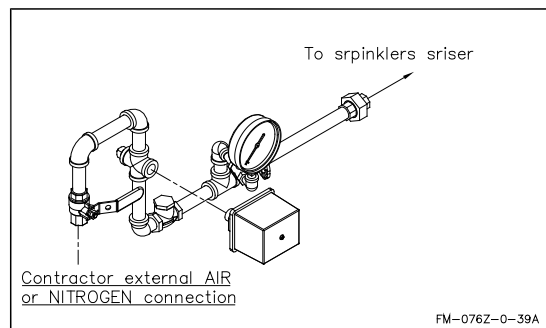
Warning: When air supplies style "B" or "D" is selected, the air supply should be provided and installed by the sprinkler contractor OUTSIDE of the **TOTALPAC®X** cabinet. It is NOT provided with the unit.

Air compressor selection Table:

H.P.	CFM @ 40 psi	120Vac System capacity (gallon) to Pump to 40 psi in 30 Minutes	220Vac System capacity (gallon) to Pump to 40 psi in 30 Minutes
1/6	1.33	110	90
1/3	2.61	215	170
1/2	4.06	335	270
1	7.40	610	400

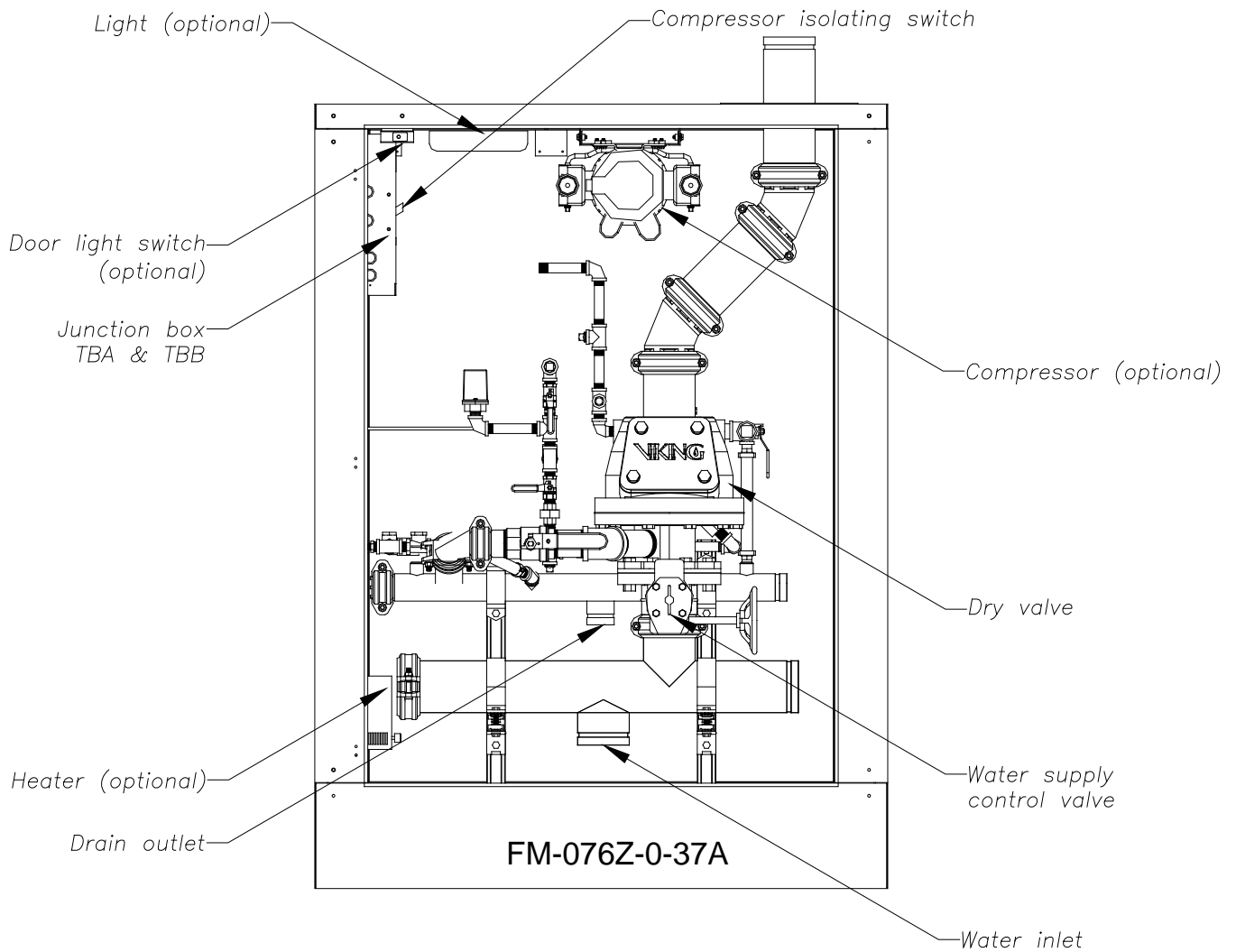
Compressor Amp rating

Compressor Size (HP)	Amp. Rating at 120Vac - 60Hz	Amp. Rating at 220Vac - 50Hz
1/6	6.6 A	3.3 A
1/3	6.6 A	3.3 A
1/2	8 A	4 A
1	12.4 A	6.2 A

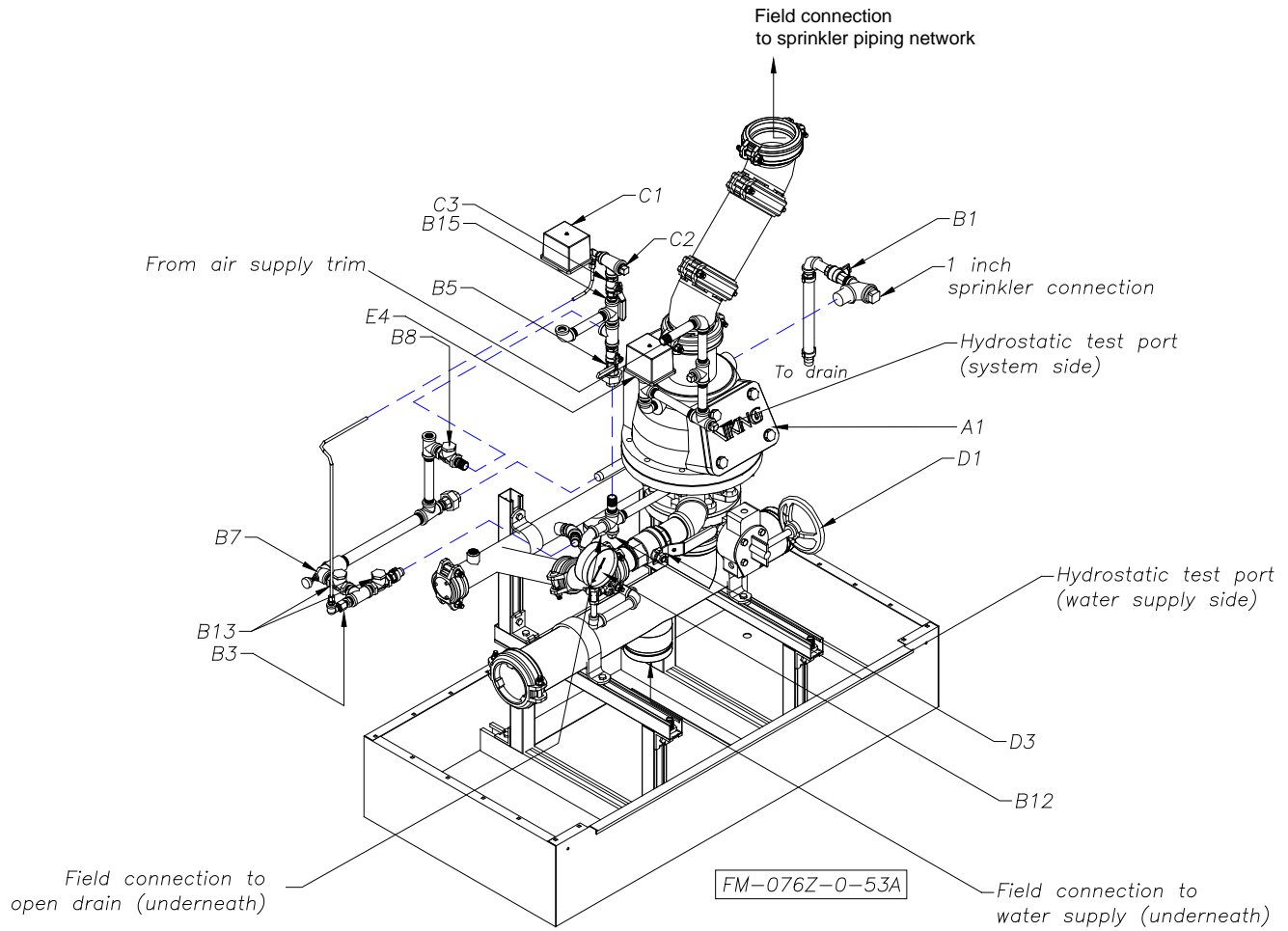


Details & field wiring diagrams

Cabinet with main components, shown without door



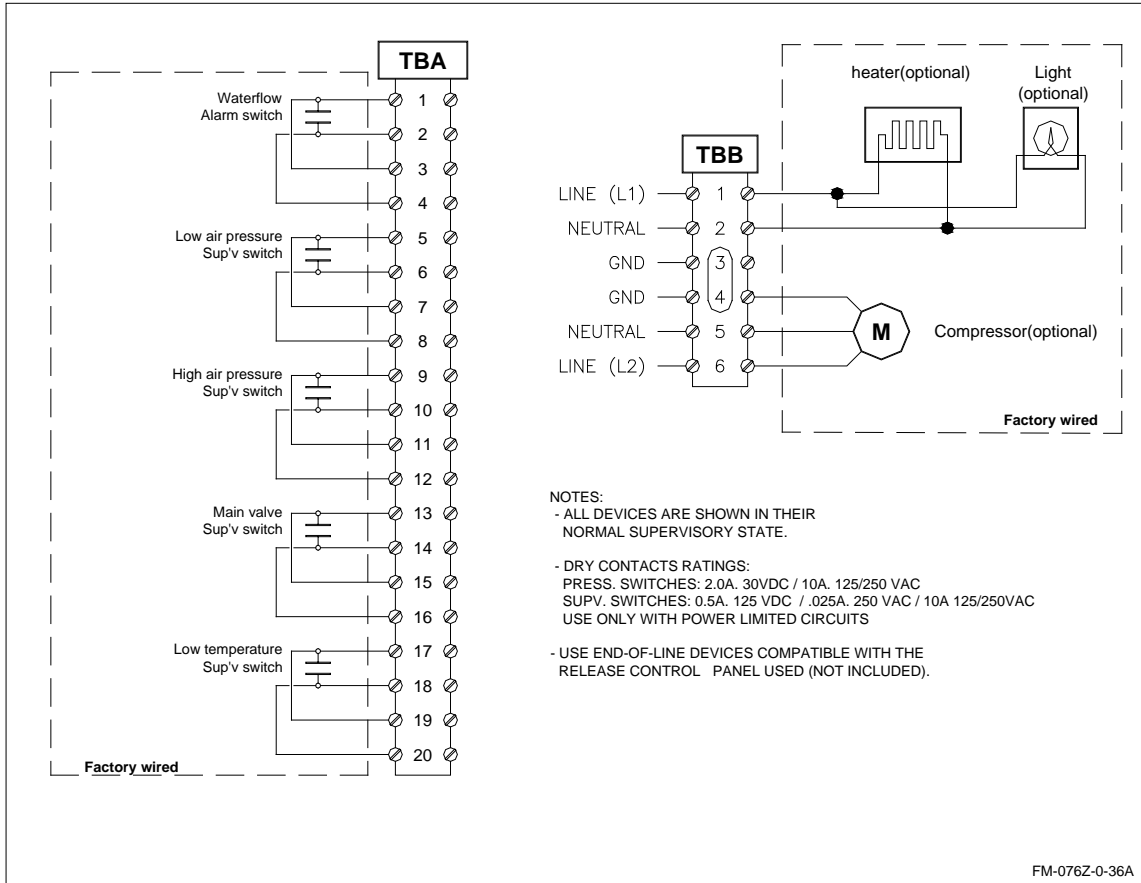
Trim diagram



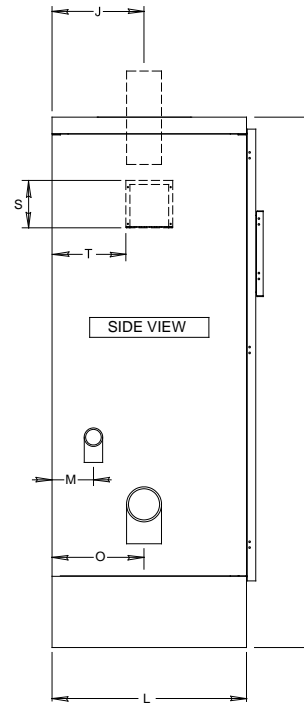
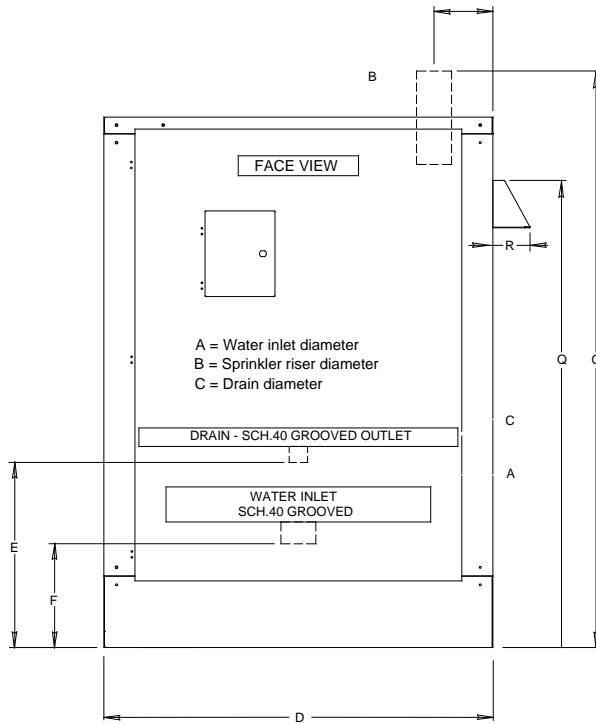
Components:

- | | | | |
|-----|-------------------------------------|----|--|
| A1 | Dry valve | C1 | Alarm pressure switch |
| B1 | Priming / water level valve | C2 | Connection to water motor gong (strainer supplied by contractor) |
| B3 | 1/16" Restricted orifice | C3 | Hydraulic alarm cut-off valve |
| B5 | Alarm test valve | D1 | Water supply control valve |
| B7 | Drip check valve | D3 | Main drain valve |
| B8 | Drain check valve | | |
| B12 | Water supply pressure gauge & valve | | |
| B13 | Clapper check valve | | |
| B15 | 7/32" Restricted orifice | | |

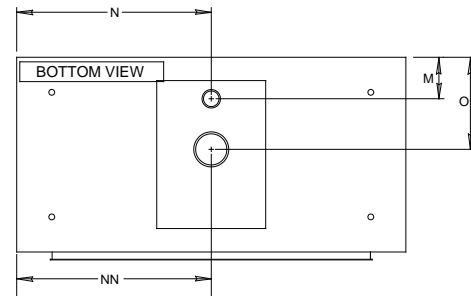
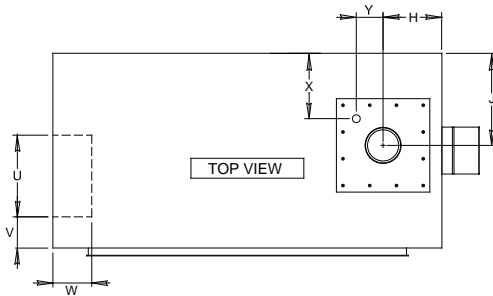
Wiring diagram



Dimensions

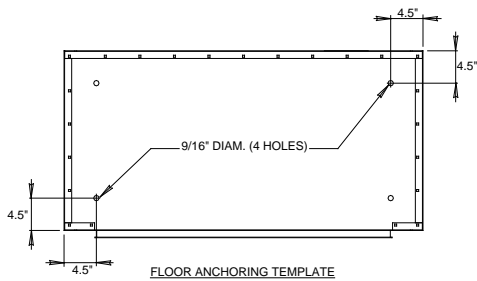


FM-076Z-0-54B



Dimensions are nominal and may vary $\pm 1/4"$.

Size	A	B	C	D	E	F	G	H	J	K	L	M	N	NN	O	Q	R	S	T	U	V	W	X	Y
4"	4"	4"	2"	50"	23"	12"	74"	9"	12	68"	25"	5"	25"	25"	12"	60"	4.75"	6"	9.5"	10.5"	4"	5"	9.5"	9"
6"	6"	6"	2"	50"	21"	12"	74"	9.5"	11.75	68"	25"	5"	25"	25"	11.75"	60"	4.75"	6"	9.5"	10.5"	4"	5"	9.5"	9"





ADVANCED INTEGRATED FIRE PROTECTION SYSTEMS

TotalPac®X
Dry system



ADVANCED INTEGRATED FIRE PROTECTION SYSTEMS

1935, Lionel-Bertrand Blvd.
Boisbriand QC Canada J7H 1N8
Tel.: 450-437-3473 • Fax: 450-437-1930
Toll Free: 866-347-3353

Email: info@fireflex.com • Web: www.fireflex.com