



# MM<sup>®</sup> Pyro-Flex / PF Series

## Floor Fire Barrier Protection System

### DESCRIPTION

The Pyro-Flex Floor Fire Barrier Protection System is an engineered high performance fire resistive system for sealing expansion joint openings. The system is comprised of a flexible, high purity ceramic fiber blanket, stainless steel foil and a matrix of fire resistive cloth as required to achieve a specified protection and endurance rating. System is secured top-down directly to the joint opening.

### BASIC USE

PF is a fire resistive sealing system designed for sealing expansion joint openings in buildings, stadiums and parking structures.

### PERFORMANCE STANDARDS

- UL 2079-Class I, II and III
- ASTM E-1966
- ASTM E- 1399

### CODE COMPLIANCE

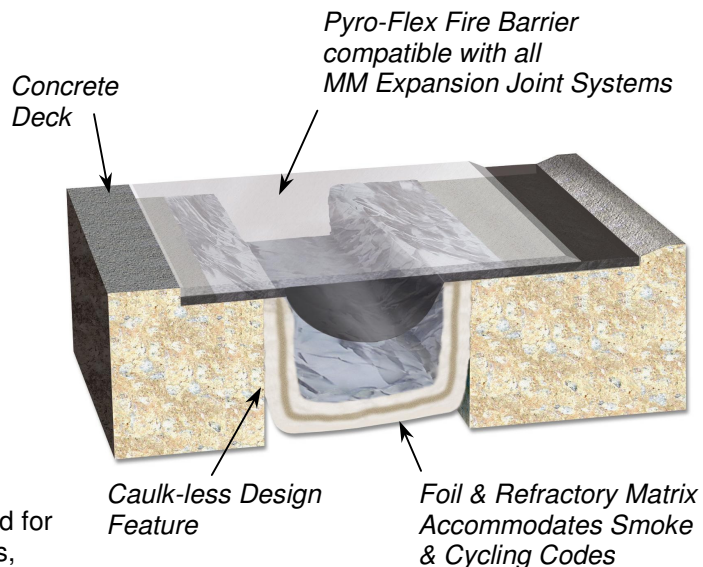
- UBC, SBC, BOCA
- International Building Code

### FEATURES

- Designed to provide the required fire endurance rating of 2 through 4 hours.
- Up to 48" fire resistance ratings.
- Listed with an accredited independent laboratory.
- Accommodates dynamic movement without stress or degradation to its components.
- Minimizes passage of smoke.

### SPECIAL FEATURES

- Design compatible with most expansion joints.
- No fire resistive caulks required.
- Accommodates seismic lateral shear.



**Thermal, Seismic & Shear Rated Designs Available**

### PACKAGING

Pyro-Flex supplied in 12.5 and 25-foot lengths shipped on wooden pallets or cardboard cartons.

Metal retainers supplied in 10-foot lengths shipped on wooden pallets or cardboard cartons.

Hardware and other accessories packaged in cardboard cartons.

### STORAGE & PROTECTION

All materials should be stored in a completely dry location prior to use. Fire Barrier must be kept dry before, during and after installation.

### LIMITATIONS

- Expansion joint openings must be parallel and straight to achieve fire-resistive seal.
- Adjacent construction must have fire-resistive ratings equal to or greater than the rating of the fire barrier systems.

### PRECAUTIONS

Use protective goggles and gloves. Read and follow labels and Material Safety Data Sheet before use.

# MM Pyro-Flex / PF Floor Series

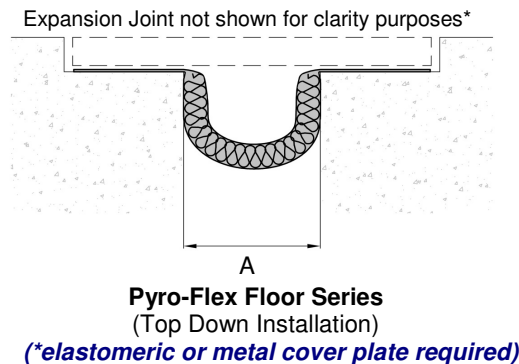
## SELECTION GUIDE

Model Number	Total Movement		Joint Opening "A"					
			Min.		Nominal		Max.	
PF-2018F-SC-1-1	1.0	25	1.0	25	1	25	2.00	51
PF-2018F-SC-2-1	2.0	51	1.0	25	2	51	3.00	76
PF-2018F-SC-3-1.5	3.0	76	1.5	38	3	76	4.50	114
PF-2018F-SC-4-2	4.0	102	2.0	51	4	102	6.00	152
PF-2018F-SC-5-2.5	5.0	127	2.5	64	5	127	7.50	191
PF-2018F-SC-6-3	6.0	152	3.0	76	6	152	9.00	229
PF-2018F-SC-7-3.5	7.0	177	3.5	88	7	177	10.5	266
PF-2018F-SC-8-4	8.0	203	4.0	102	8	203	12.0	305
PF-2018F-SC-12-6	12.0	305	6.0	152	12	305	18.0	457

Contact MM Systems for larger sizes and project specific designs.  
 PF Series requires some form of expansion joint or cover over the fire barrier.

## IBC TABLE 721.2.2.1 MINIMUM SLAB THICKNESS (inches)

Concrete Type	FIRE-RESISTANCE RATING (hour)		
	2	3	4
Carbonate	4.6	5.7	6.6
Sand-lightweight	3.8	4.6	5.4
Lightweight	3.6	4.4	5.1



## INSTALLATION

1. Remove and repair all unsound concrete in and around the joint. opening. All spalls must be repaired with compatible patching material.
2. Uncoil fire barrier and fold into a "U" shape configuration.
3. Install fire barrier into expansion joint opening.
4. Attach expansion joint system per Installation Guideline.
5. Install anchors at specified intervals.
6. Refer to the PF Floor Installation Guideline for detailed step-by-step instructions.

MM Systems reserves the right to amend or withdraw information contained herein, without notice, and will not be liable for any inaccuracy or ambiguity of said information.

## LIMITED WARRANTY

MM Systems warrants the MM Pyro-Flex System to be free of defects in material and conform to technical data listed. We make no warranty as to color or appearance. Since methods of application can affect performance and on site conditions are beyond our control, MM Systems makes no other warranty, expressed or implied, including warranties of MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. MM Systems sole obligation shall be, at its option, to replace, or to refund the purchase price of the quantity of system proved to be defective. In no event shall MM Systems be liable for any special, incidental, consequential, loss of profits or punitive damages. Other warranties may be available when installed by a MM Certified Contractor.

## TESTING COMPLIANCE

1. Certified and listed by an accredited third party witnessing agency.
2. Tested in accordance with International Building Code Section 713.3, ASTM E1966 and UL 2079 at a maximum listed expansion joint opening as defined by ASTM E1399.
3. Minimizes passage of smoke.
4. Cycle tested full length incorporating splice transitions. Pyro-Flex fire barrier system meets or exceeds the following dynamic movement requirements (cpm equals cycles per minute):  
 Type IV: 100 cycles at 30 (cpm), followed by 400 cycles at 10 (cpm).



**MM**  
 MM SYSTEMS

Current Issue 2-01-11

**Spec Data**

50 MM Way, Pendergrass, GA 30567 • 800.241.3460 • www.mmsystemscorp.com

## CERTIFICATE OF LISTING

*Omega Point Laboratories, Inc., (Omega Point) is an independent, third-party Quality Assurance and Inspection Agency that provides Listing & Follow-Up (Certification) Services for building products, materials and assemblies for compliance with safety standards and standards referenced in building and fire codes.*

**MM Systems Corporation**  
50 MM Way  
Pendergrass, GA 30567  
(770) 824-7500 / FAX (770) 824-7501

**Expansion Joint Seal**  
**Division 05 Metals, Category #05800, Listing #8637-3**

As part of an ongoing Quality Assurance Program arranged between Omega Point Laboratories and MM Systems Corporation, the product(s) referenced below have been accepted into the Listing and Follow-Up Program. The manufacturer is authorized to use this certificate as proof of compliance with the requirements of Omega Point Laboratories' Listing and Follow-Up Program for this product.

*Only those products which bear the appropriate listing mark shown below should be considered covered under Omega Point Laboratories' Listing and Labeling Program.*

	<b>EXPANSION JOINT SEAL</b>
	<b>MM Systems Corporation</b> 50 MM Way Pendergrass, GA 30567 Product ID #8637-3 <b>Pyro-Flex® PF-2018F-SC Series</b> (formerly Pyro-Flex® PF-2018F Series) ICC-ES Legacy Report: ICBO ES ER-4292 Tested per: ASTM E1966 Fire Tests for Fire-Resistive Joint Systems UL 2079 Fire Tests for Fire-Resistive Joint Systems ASTM E119 Fire Tests of Building Construction and Materials ASTM E1399 Standard Test Method for Cyclic Movement and Measuring the Minimum and Maximum Joint Widths of Architectural Joint Systems Fire Resistance Rating: 2 hr. Cover Plate Required: Yes

**Listed**

*Omega Point Laboratories  
(NER QA337 & ICBO ES AA-657)  
Reference Directory of Listed  
Building Products, Materials  
& Assemblies for Specifics*

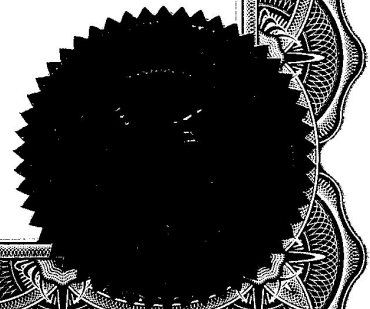
*Omega Point Laboratories makes no warranty, either expressed or implied, regarding any Listed Product against defects, failure to perform under actual fire or other service conditions.*



Deggary N. Priest  
President & Chief Technical Officer



William E. Fitch  
Ex. V.P. & Chief Fire Protection Engineer



<b>MM Systems Corporation</b> 50 MM Way Pendergrass, Georgia 30567 (706) 824-7500 / Fax (706) 824-7501	<b>Category:</b>	<b>05800</b> Expansion Control Fire Resistive Joint Systems
<b>Product: Pyro-Flex® PF-2018F Series</b> <b>(formerly Pyro-Flex® PF-2000F Series)</b>	<b>Listing:</b>	<b>8637-3</b>

These asymmetrical expansion joint assemblies consist of various designs made up of two parts. The fire resistive Pyro-Flex® portion consists of flexible ceramic fiber blanket of varying sizes and thicknesses; and the architectural joint system portion, also called an architectural cover plate, which is metallic, and is able to slide open and close. These fire resistive joint systems are recognized for use in horizontal assemblies, as well as at the junction or connection point. The horizontal Pyro-Flex® consists of a fire blanket system, which spans to each face of the floor assembly, forming protection from the underside of the floor assembly.

**Tests**

**ANSI/UL 2079, ASTM E 119, & ASTM E 1966**

**Reference Listed Design Section**

Design No.	Rating
CEJ 501 F	2 hour

**ASTM E 1399**

**Reference Listed Design Section**

Design No.	Cycles per Minute	Cycles
CEJ 501 F	30	5000