

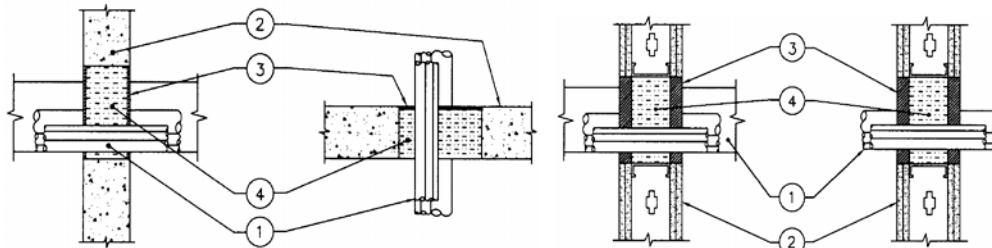
Grabber Construction Products, Inc.
Design No. JWA/PHV 120-06
Horizontal or Vertical Floor/Ceiling and Wall Assembly, Single and Multiple Penetrations
GrabberGard EFC, GrabberGard IFC, and GrabberGard EFS
Test Standards: ASTM E814, UL 1479, ULC S115
Test Furnace Internal Positive Pressure Differential – 2.5 Pa (0.01 in. of water) Minimum
Rating: 2 Hour

Configuration 1

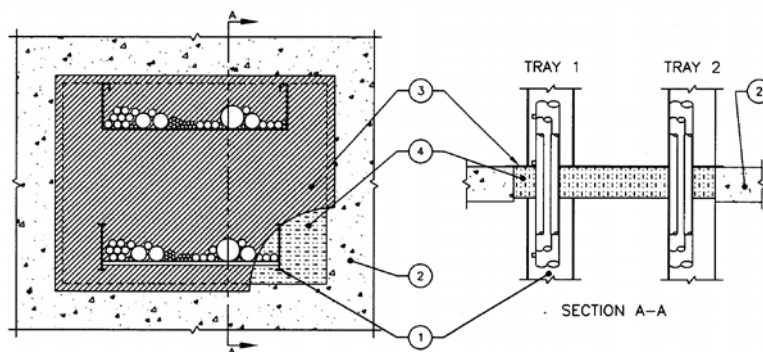
Penetrating Material & Size	Annular Space	E814 & UL 1479		CAN/ULC S115		
		Fire "F" Rating	Temp "T" Rating	Fire "F" Rating	Fire/Hose "FH" Rating	Temp Rating "FTH" Rating
EMT/Steel Conduit and Pipe (1/2 to 1) Sch 10 & up	0" - 3"	Up to 2 Hour	90 Min	Up to 2 Hour	Up to 2 Hour	90 Min
EMT/Steel Conduit and Pipe (1-1/4 to 6) Sch 40	0" - 3"	Up to 2 Hour	25 Min	Up to 2 Hour	Up to 2 Hour	25 Min
Copper Pipe and Tubing up to 2" ID	0" - 3"	Up to 2 Hour	55 Min	Up to 2 Hour	Up to 2 Hour	55 Min
Multiple BX/Teck Cable to 3-3/8 OD	0" - 3"	Up to 2 Hour	45 Min	Up to 2 Hour	Up to 2 Hour	45 Min

Configuration 2

L Rating At Ambient – 7.1 CFM L Rating At 400° F – 5.8 CFM						
Penetrating Material & Size	Annular Space	E814 & UL 1479		CAN/ULC S115		
		Fire "F" Rating	Temp "T" Rating	Fire "F" Rating	Fire/Hose "FH" Rating	Temp Rating "FTH" Rating
Cable Trays	See Item 1	Up to 2 Hour	15 Min	Up to 2 Hour	Up to 2 Hour	15 Min
EMT/Steel Conduit and Pipe (1/2 to 4) Sch 10 & up	See Item 1	Up to 2 Hour	15 Min	Up to 2 Hour	Up to 2 Hour	15 Min
EMT/ Flexible Steel Conduit (1/2 to 4)	See Item 1	Up to 2 Hour	15 Min	Up to 2 Hour	Up to 2 Hour	15 Min
Insulated Copper Pipe and Tubing up to 4" ID	See Item 1	Up to 2 Hour	90 Min	Up to 2 Hour	Up to 2 Hour	90 Min
Multiple BX/Teck Cable to 3-3/8 OD	See Item 1	Up to 2 Hour	15 Min	Up to 2 Hour	Up to 2 Hour	15 Min



Configuration 1



Configuration 2



CONFIGURATION 1

1. PENETRATING ITEM:

- a. Steel cable tray 4 in. x 30 in. (100mm x 750mm) filled to a max. of 50% with any of the items in the table above or;
- b. Bundled cables, tubing, conduits, and pipes listed in table above installed within the opening such that aggregate cross-sectional area of penetrants in the opening is max. 58% of the cross-sectional area of the opening in assembly. The annular space between penetrants and the periphery of the opening are to be min. 0 in. (point contact) to max. 3 in. (75mm).
- c. The max. opening is 480 in² (0.31 m²). All penetrating items must be reliably supported.

2. FLOOR/CEILING OR WALL ASSEMBLIES: 1 and 2 hour rated ASTM E-119 or CAN/ULC S101 wall or floor/ceiling assemblies as follows:

- a. Metal or wood framed gypsum wall board (GWB) wall assemblies with opening within the wall assembly completely framed to form a rectangular box or;
- b. Cast in place, normal or light density, concrete floor/ceiling assemblies having a min. cross-section thickness of 4-1/2 in. (112mm) or;
- c. Cast in place concrete wall assemblies having a min. cross-section thickness of 6 in. (150mm) or;
- d. Hollow or concrete filled unit masonry (concrete block) wall assemblies laid up with mortar having a min. cross-section thickness of 8 in. (200mm).

3. FIRESTOP SYSTEM COMPONENT 1: Grabber Construction Products, Inc. –

- a. GrabberGard EFC* or GrabberGard IFC* for vertical or horizontal applications. Each

product must be installed at a min. wet film thickness of 1/4 in. (6mm).

- b. GrabberGard EFS* (mastic) for vertical or horizontal applications, sprayed into place with a min. wet film thickness of 1/8 in. (3mm). Always overlap GrabberGard EFS* onto the surface of the substrate a min. of 1/2 in. (13mm). Do not thin GrabberGard EFS* firestop mastic when spraying, use equipment capable of applying material as supplied.

4. FIRESTOP SYSTEM COMPONENT 2: Filler Material, mineral rock wool or ceramic fiber insulation, with a min. density of 4-6 PCF (68 kg/m³), compressed a min. of 25% into the annular space at a min. depth of 4 in. (100mm). Recess filler material 1/4 in. (6mm) for GrabberGard EFC* or GrabberGard IFC* sealant placement. Do not recess filler material for GrabberGard EFS* applications.

CONFIGURATION 2

1. PENETRATING ITEM:

- a. CABLE TRAY – Max. 2 cable trays per opening. Maximum 24 in. wide by 6 in. steel, aluminum or stainless steel cable tray solid back or ladder type. Cable tray spacing to be minimum 6 in. to a maximum 11 in. apart. The cable trays are to be installed a minimum of 0 in. (point contact) to max 6 in. from the periphery of the opening. Maximum cable tray fill to be 40% by area. All penetrating items must be reliably supported. Cable trays to may be filled with any combination of the following:
 - Cables: Communication or power cables, single or in bundles, and installed with rigid support on both sides of opening.



- Steel Conduit/EMT: Nominal 4 in. diameter or smaller flexible steel or steel tubing. Steel conduit or EMT to be installed such that a min. 1/2 in. annular space is maintained between steel conduit/EMT and other penetrants.
 - Insulated Metallic Pipes: Max. 4 in. diameter (or smaller) copper piping or tubing. Pipes to be insulated with nominal 1 in. thick mineral wool pipe insulation.
- 2. FLOOR/CEILING OR WALL ASSEMBLIES:** 1 and 2 hour rated ASTM E-119 or CAN/ULC S101 wall or floor/ceiling assemblies having a max. opening size 884 sq. in. with max. dimension of 34 in. as follows:
- a. Cast in place, normal or light density, concrete floor/ceiling assemblies having a min. cross-section thickness of 4-1/2 in. (112mm) or;
 - b. Cast in place concrete wall assemblies having a min. cross-section thickness of 6 in. (150mm) or;
 - c. Hollow or concrete filled unit masonry (concrete block) wall assemblies laid up with mortar having a min. cross-section thickness of 8 in. (200mm).
- 3. FIRESTOP SYSTEM COMPONENT 1:** Grabber Construction Products, Inc. –
- a. GarbberGard EFC* or GrabberGard IFC* for vertical or horizontal applications. Each product must be installed at a min. wet film thickness of 1/4 in. (6mm).
 - b. GrabberGard EFS* (mastic) for vertical or horizontal applications, sprayed into place with a min. wet film thickness of 1/8 in. (3mm). Always overlap GrabberGard EFS* onto the surface of the substrate a min. of 1/2 in. (13mm). Do not thin GrabberGard EFS* firestop mastic when spraying, use equipment capable of applying material as supplied.
- 4. FIRESTOP SYSTEM COMPONENT 2:** Filler Material, mineral rock wool or ceramic fiber insulation, with a min. density of 4-6 PCF (68 kg/m³), compressed a min. of 25% into the annular space at a min. depth of 4 in. (100mm). Recess filler material 1/4 in. (6mm) for GrabberGard EFC* or GrabberGard IFC* sealant placement. Do not recess filler material for GrabberGard EFS* applications.

*WH Labeled Component