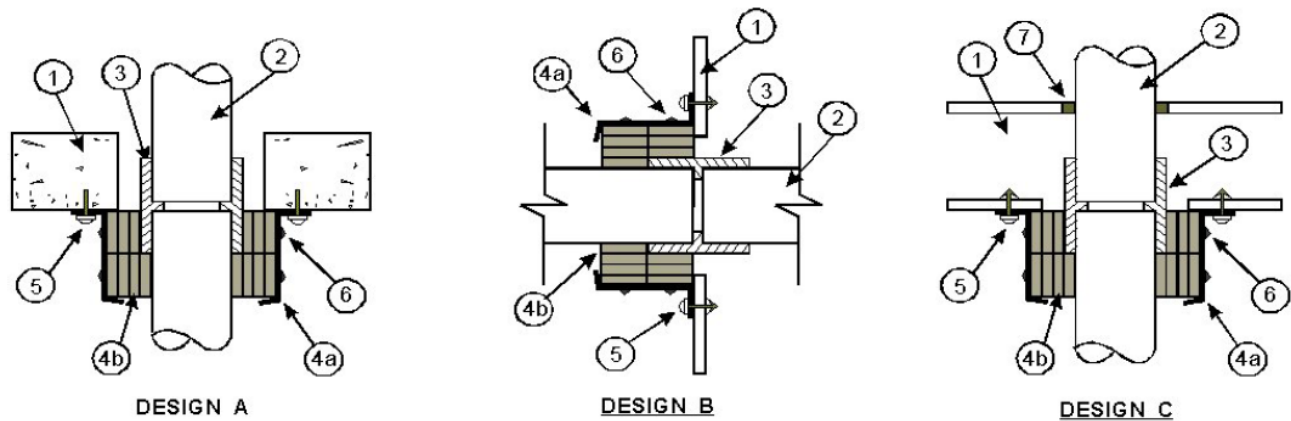**3M Company**
Design No. 3M/PHV 120-10
Through Penetration
3M™ Fire Barrier RC-1 Collar
3M™ Fire Barrier FS-195+ Wrap Strip
3M™ Fire Barrier IC 15WB+
3M™ Fire Barrier CP 25WB+
3M™ Fire Barrier 3000WT

CAN/ULC-S115, ASTM E814
Rating: See Table 1
Pressure Differential: Positive, 50 Pa (0.20 in. w.g.)

TABLE 1. RATINGS

| Penetrating Item | Pipe Size (inches) | DESIGN A | | | | DESIGN B & C | | | |
| | | CAN/ULC-S115 | | ASTM E814 | | ASTM E814 | | | |
		F, FH	FT, FTH	F	T	F, FH	FT, FTH	F	T
ccPVC	1-1/2 to 4	2 Hr	2 Hr	2 Hr	2 Hr	1 & 2 Hr	1 & 2 Hr	1 & 2 Hr	1 & 2 Hr
PVC	1-1/2 to 4	2 Hr	2 Hr	2 Hr	2 Hr	1 & 2 Hr	1 & 2 Hr	1 & 2 Hr	1 & 2 Hr
CPVC	1-1/2 to 4	2 Hr	2 Hr	2 Hr	2 Hr	1 & 2 Hr	1 & 2 Hr	1 & 2 Hr	1 & 2 Hr
ccABS	1-1/2 to 4	2 Hr	2 Hr	2 Hr	2 Hr	1 & 2 Hr	1 & 2 Hr	1 & 2 Hr	1 & 2 Hr
ABS	1-1/2 to 4	2 Hr	2 Hr	2 Hr	2 Hr	1 & 2 Hr	1 & 2 Hr	1 & 2 Hr	1 & 2 Hr
FRPP	1-1/2 to 4	2 Hr	0 Hr	2 Hr	0 Hr	1 & 2 Hr	0 Hr	1 & 2 Hr	0 Hr

Figure 1. Penetration Detail

1. **FLOOR OR WALL ASSEMBLY:**
   Design A:
   Code conforming 2-hour fire-rated floor or wall assembly, nominal 2-1/2-in. thickness, normal or low density cast concrete, hollow core concrete or Q-Deck. Wall may also be constructed of nominal 8-in. thick concrete blocks (filled or unfilled).

   Design B:
   Code conforming 1- or 2-hour fire-rated wall, nominal 2 x 4 steel/wood framed gypsum wallboard, wall assembly.

   Design C:
   Code conforming 1 or 2 hour fire-rated floor/ceiling assembly, framed with nominal 2 x 10 solid sawn or manufactured wood joists, topping optional (not shown).

2. **PENETRATING ITEMS:** (See Table 1) Nominal 4-in. diameter, Schedule 40, PVC, CPVC, ABS, ccABS, and FRPP pipe with couplings for use in DWV (Drain, Waste & Vent) or Closed (Process & Supply) piping systems. Install with maximum 1/4-in. annular space. Ratings achieved will equal that of substrate assembly.

3. **COUPLING FITTING:** Manufactured of a material similar to that of the pipe.

4. **FIRESTOP SYSTEM COMPONENTS:**
   a) **Certified Product:**
      3M™ Fire Barrier RC-1 Collar
      Cut to length 1-in. larger than OD of wrapped pipe and secured in place with a hose clamp. The second collar mounting tabs are placed under the hose clamp (Item 6) of the first collar and bent over to lock in place.

b) **Certified Product:**
3M™ Fire Barrier FS-195+ Wrap Strip
Install wrap strip around coupling and pipe with butted seams staggered.
Stack: Each stack consists of layers of Wrap Strip (Item 4b) covered with a Collar (Item 4a). The first stack is secured to the substrate with an appropriate fastener (Item 5). The second stack, if required is attached to the first stack by placing the mounting tabs under the hose clamp of the first stack and bending over the mounting tab.

Table 2. Size Chart

Pipe Size/Coupling	First Stack - Layers	Second Stack - Layer
1-1/2 in.	2-1/2 in.	2
2 in.	3 in.	2
3 in.	4 in.	3
4 in.	5 in.	4

5. **FASTENERS:** As detailed with 1-1/4-in. diameter fender washers.
Design A – Concrete: 1/3-in. x 1-1/4-in. steel masonry fasteners, wedge anchors or Tapcon®
Design B – Gypsum: 1/4-in. diameter hollow dry wall anchors, length as required for substrate thickness.
Design C – Wood: 1-1/4-in. long dry wall screws

6. **HOSE CLAMP:** 1/2-in. wide stainless steel hose clamp or equivalent, sized appropriately.

7. **CERTIFIED PRODUCTS: Sealant**
   - **3M™ Fire Barrier CP 25WB+**
   - **3M™ Fire Barrier IC 15WB+**
   - **3M™ Fire Barrier 3000WT**

Fill annular space around pipe to 3/4-in. thickness through wood floor or sole plate (not shown).

CPVC Pipe – Use only 3M™ Fire Barrier IC 15WB+ Sealant.

Consult the listing report on the Directory of Building Products (https://bpdirectory.intertek.com) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.