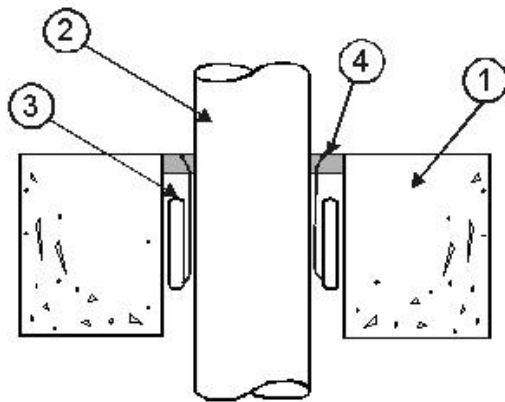
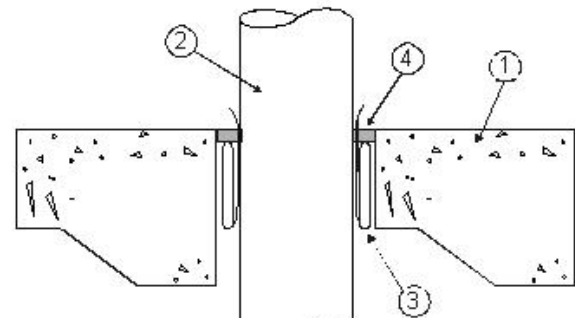


DESIGN NO. 3M/PHV 120-17
HORIZONTAL/VERTICAL (FLOOR/WALL); RATINGS - SEE TABLE BELOW;
HOLE SIZE - SEE ITEM 3
TEST PRESSURE DIFFERENTIAL - 2.5 Pa (0.01" OF WATER)

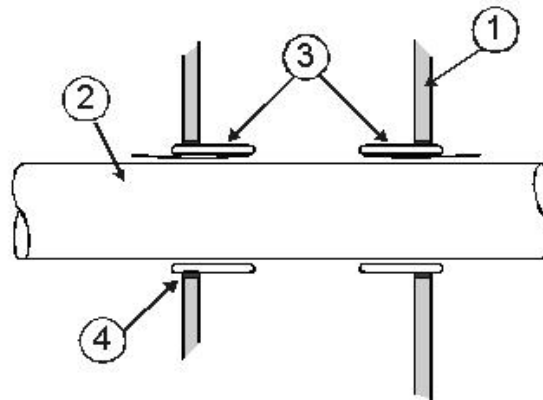
Penetrant	Design	Max. Pipe ID	CAN/ULC-S115 F & FH, FT & FTH
FRPP	A	3"	2 Hr
FRPP	B	3"	2 Hr
FRPP	C	3"	1 Hr
FRPP	C	3"	2 Hr



Design A



Design B



Design C

1. Floor/Wall Assembly:

Design A: Code conforming 2 hour fire-rated floor or wall assembly, nominal 4-1/2" thick, normal or low density cast concrete, or hollow core concrete. Wall may also be constructed of nominal 8" thick concrete blocks (filled or unfilled).

Design B: Code conforming 2 hour fire-rated floor assembly, nominal 2-1/2" concrete or Q Deck or Fluted Deck, normal or low density cast concrete.

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

2.	Penetrant (See table above): Schedule 40, FRPP (Fire-Rated Polypropylene Pipe) pipe for use in DWV (Drain, Waste & Vent) or Closed (Process & Supply) piping systems, ratings achieved will equal that of floor/wall assembly.								
3.	Firestop System Components: Design A: *3M™ FireStrap™: Install within opening, recessed 1-1/4" from either surface, according to the manufacturer's instructions. For Walls, apply firestop system to both sides. To reduce the opening diameter to the size listed, backfill with *3M™ Fire Barrier Mortar. Firestop is installed on both sides of the wall. Design B: *3M™ FireStrap™: Install within opening 1/2" below the floor surface of the concrete according to the manufacturer's instructions. Design C: *3M™ FireStrap™: Install with 1/4" of the firestop exposed outside the surface of the gypsum wall assembly according to the manufacturer's instructions. <table border="1"> <thead> <tr> <th>Pipe ID</th><th>Opening Size</th></tr> </thead> <tbody> <tr> <td>1-1/2"</td><td>2-1/2"</td></tr> <tr> <td>2"</td><td>3"</td></tr> <tr> <td>3"</td><td>4-1/2"</td></tr> </tbody> </table>	Pipe ID	Opening Size	1-1/2"	2-1/2"	2"	3"	3"	4-1/2"
Pipe ID	Opening Size								
1-1/2"	2-1/2"								
2"	3"								
3"	4-1/2"								
4.	Sealant: *3M™ Fire Barrier CP-25WB+ Caulk, *3M™ Fire Barrier IC 15WB+ Sealant or *3M™ FireDam FD-150+ Acrylic Caulk to fill the annular space at the pipe penetration as a smoke seal.								

Note: Metric conversion factor, inches x 25.4 = mm.

*Components bearing the Warnock Hersey Certification Mark.

Design conforms to NBC 1995, reference clause 3) of 3.1.5.15 "Combustible Piping Material".