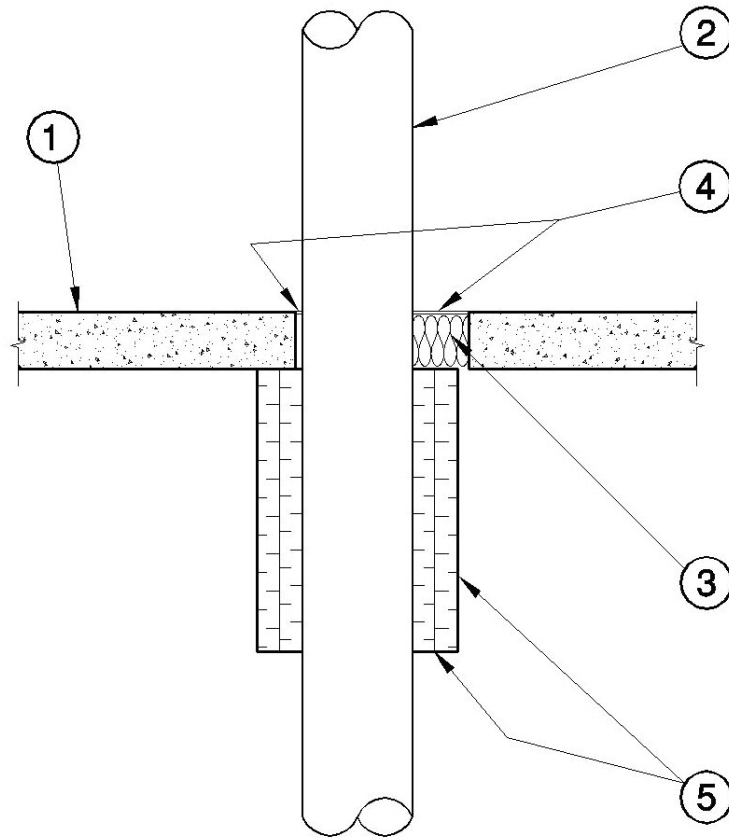


**DESIGN NO. 3M/PHV 120-18**  
**HORIZONTAL/VERTICAL (FLOOR/WALL); RATINGS: 2 HOUR F, FT, FTH**  
**TEST PRESSURE DIFFERENTIAL - 2.5 PA (0.01" OF WATER) MINIMUM**



1.	<b>Floor and Wall Assembly:</b> 2 Hour rated concrete with minimum 4-1/2" thickness. Maximum 12" hole size.
2.	<b>Penetrating Items:</b> Maximum 8" steel or cast iron Sch 10 or heavier, centered or offset in hole. Annular space: point contact to 3-3/8".
3.	<b>Mineral Wool:</b> Nominal 4 PCF mineral wool insulation tightly packed around the penetrating item to a depth of 4" minimum.
4.	<b>Firestop Sealant:</b> 3/8" depth bead of *3M™Fire Barrier 1000 Silicone Sealant No Sag or *3M™1003 Silicone Sealant Self Leveling installed on the mineral wool. For wall assemblies, 3/8" depth of *3M™Fire Barrier 1000 Silicone Sealant No Sag sealant shall be installed on both sides of the wall assembly.
5.	<b>Pipe Insulation:</b> To provide a 2 Hour T Rating, pipe shall be wrapped on both sides of a wall assembly on the underside of a floor/ceiling assembly with 2 layers of mineral wool for pipe insulation, 1" thickness, foil jacketed insulation for a length of 24". Joints shall be staggered and overlapped 2", and sealed with aluminum foil tape. The insulation shall be tightly butted to the underside of the slab and secured with stainless steel bands or screw clamps every 8". The integrity of the design is not compromised when the pipe penetration includes fittings or clamps, as long as the insulation thickness remains constant at 2".

Testing Standard(s): ASTM-E814, CAN/ULC-S115.