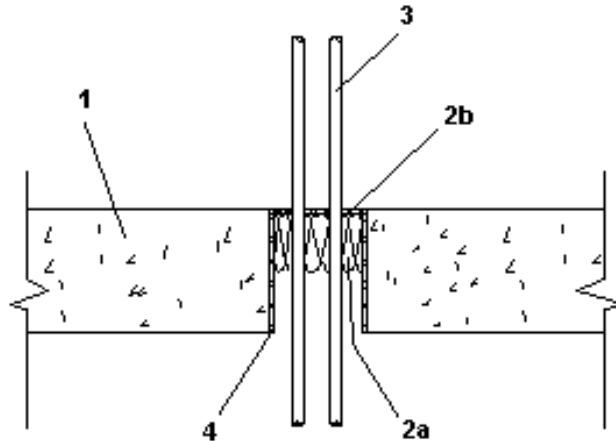


ITS DESIGN NO. AD/PHV 180-12

Horizontal or Vertical (Floor or Wall),
F RATING - 3 HOURS,

T RATING - No Penetrations - 3 HOURS, With Penetrations - 10 MINUTES
TEST PRESSURE DIFFERENTIAL - 5 Pa (0.02 in. of water) minimum



1. **Floor:** 7" (178 mm thick), normal density concrete slab. Maximum size of opening 9" (227 mm) diameter.
2. **Firestop Components:**
 - a. Type "A/D Firebarrier" or other Mineral Wool of minimum 4 pcf ($65 \text{ kg/m}^3 \pm 1/2 \text{ pcf}$ (8 kg/m^3 compressed a minimum of 33% between pipe and perimeter of opening at a minimum depth of 4" (100 mm). Minimum $13/64$ " (5 mm) deep space to be left above Mineral Wool for installation of seal 2(b).
 - b. Type "A/D Firebarrier Seal"* or "A/D Firebarrier Seal NS"* (vertical only) - applied over Mineral Wool to a minimum thickness of $16/64$ " (5 mm). For vertical applications apply to both sides of the assembly.
3. **Copper Pipe:** Nominal $1/2$ " (13 mm) diameter with a wall thickness of $1/32$ " (0.85 mm). Minimum clearance of $2-3/4$ " (70 mm) between pipe and perimeter of through opening. Minimum $1-13/32$ " (36 mm) clearance between pipes.
4. PVC Pipe Sleeve (Optional) - 9" (227 mm) O.D. or smaller $1/2$ " (13 mm) wall thickness.

*Component bearing the Warnock Hersey Certification Mark