

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Common Work results for HVAC Section 23 05 00
- .2 Ductwork Accessories Section 23 31 10
- .3 Fire Rated Assemblies Division 01

1.2 PRODUCT OPTIONS AND SUBSTITUTIONS

- .1 Refer to Division 01 for requirements pertaining to product options and substitutions.

1.3 SHOP DRAWINGS AND PRODUCT DATA

- .1 Comply with requirements of Section 01 33 10.
- .2 Submit shop drawings and installation instructions for the following information:
 - .1 Pipe sleeve assemblies through rated floors and walls.
 - .2 Rated fire stop device for PVC or CPVC plastic pipe.

1.4 SCOPE OF WORK

- .1 The Construction Manager will supply and install all fire rated caulking.
- .2 The Mechanical Sub-Contractor shall be responsible for the supply and installation of all sleeves and fire stop devices.

Part 2 Products

2.1 PIPE SLEEVE ASSEMBLY THROUGH FIRE RATED FLOORS & WALLS

- .1 Up to 100 mm nominal pipe diameter: factory packaged sleeve assembly consisting of: 0.32 mm thick, 316 stainless steel outer sleeve extending 25 mm from each face of wall or floor with two pre-moulded elastomeric rings.
- .2 150 mm and larger: 0.32 mm thick stainless steel outer metal flange with pre-moulded elastomeric lining to fit over the pipe on each side of the wall.
- .3 Rating: labelled with 2 hour rating to CAN4 S115 and ASTM E814.
- .4 Manufacturer: Fyre Sleeve (up to 100 mm diameter); Fyre Flange (150 mm diameter and larger); Hilti.

2.2 RATED FIRE STOP DEVICE FOR PVC, CPVC PLASTIC PIPE

- .1 Materials tested to CAN4-S115; tested at Warnock Hersey or Underwriters Laboratories; UL listed.
- .2 Intumescent Collars suitable for use for PVC or CPVC pipe penetrating a 1 hr or 2 hr rated wall or floor.
- .3 Approved manufacturer: 3M Fire Stop Devices; Spec Seal (Ken Mar Electrical Sales Ltd.), Hilti; Flamesafe (Grace Construction Products).

2.3 ESCUTCHEONS

- .1 Material: chrome or nickel plated brass or 302 stainless steel.
- .2 Construction: solid type with set screws for ceiling or wall mounting.

2.4 FLASHING

- .1 Steel Flashing: minimum 0.6 mm galvanized steel.
- .2 Caps: steel 0.8 mm thickness minimum, 1.6 mm thickness at fire resistance structures.

Part 3 Execution

3.1 INSTALLATION

- .1 General
 - .1 Provide and set sleeves in position on pipe passing through new poured concrete construction.
 - .2 Core drill openings for pipes in new poured concrete construction where sleeves have been omitted.
 - .3 Mark openings for pipe in existing masonry or poured concrete walls for core drilling.
 - .4 Size sleeves to allow minimum 6 mm clearance between pipe or duct and sleeve or between finished insulated surface and sleeve.
 - .5 Set sleeves through floors to extend 25 mm above finished floor. Floors on grade to be set flush with finished floor.
 - .6 Set sleeves through walls to be flush with finished surfaces.
 - .7 Ensure no contact between copper pipe and ferrous sleeves.

.2 Escutcheons

- .1 Provide escutcheons on pipes passing through finished walls, partitions, floors and ceilings.
- .2 Size escutcheons for inside diameter to fit around finished pipe or insulation and for outside diameter to completely cover opening on sleeve.

.3 Caps

- .1 Install tight fitting metal caps on both sides where piping or duct has penetrated walls, ceilings or floors; install caps after void between pipe and sleeve has been filled.

.4 Counterflashing

- .1 Counterflash where mechanical equipment passes through weather and waterproofed walls, floors and roofs. Refer to Section Division 07.
- .2 Counterflash vent and soil pipes projecting 75 mm minimum above roof membrane with lead worked 25 mm minimum into hub, 200 minimum clear on sides with minimum 600 x 600 mm sheet size. Refer to Division 07. For pipes through outside walls turn flange back into wall and caulk.
- .3 Counterflash floor drains over finished areas with lead 250 mm clear on sides with minimum 920 x 920 mm sheet size. Fasten flashing to drain clamp device.

.5 Fire Rated Penetrations

- .1 Install factory fabricated pipe sleeve assembly on all pipes penetrating fire rated walls and floors. Install factory fabricated sleeves in strict accordance with manufacturers instructions, requirements, specifications, details, and shop drawings.
- .2 Install rated fire stop device on all plastic pipe penetrations through rated walls or ceilings. Install in strict accordance with manufacturer's instructions, requirements, specifications, details and shop drawings.
- .3 Install fire dampers on all ducts penetrating fire rated walls and floors. Refer to Section 23 31 30, Ductwork Accessories.
- .4 Refer to architectural series of drawings to confirm rated walls, ceilings and floors.

END OF SECTION