



REVISIONS:


DATE:  
AUGUST 28, 2012

DRAWN BY:  
AMB

SHEET TITLE:  
DETAILS -  
PLUMBING

SHEET NO:  
**P3.2**

**System No. C-AJ-1302**  
November 03, 2008  
F Ratings - 2 and 3 Hr (See Item 3)  
T Rating - 0 Hr

SECTION A-A  
CONFIGURATION A

SECTION A-A  
CONFIGURATION B

SECTION A-A  
CONFIGURATION C

SECTION A-A  
CONFIGURATION D

Reproduced courtesy of Underwriters Laboratories, Inc.  
See UL Fire Resistance Directory for additional information. (UL/CUL)

The firestop system shall consist of the following:  
Configuration A  
A. Packing Material - Min 4-1/4 in thickness of 4 pcf mineral wool batt insulation firmly packed into opening as a permanent. Packing material to be recessed from top surface of floor or top end of sleeve or from both surfaces of wall and hollow-core precast concrete units or ends of sleeve as required to accommodate the required thickness of fill material.  
B. Fill, Void or Cavity Material\* - Caulk - Min 1/4 in. of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall and hollow-core precast concrete units or ends of sleeve.  
The F Rating of the firestop system is 2 hr when the FyreCaulk sealant (Item 3B) is used.  
Configuration B  
A. Packing Material - Foam backer rod firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or both surfaces of wall and hollow-core precast concrete units as required to accommodate the required thickness of fill material.  
B. Fill, Void or Cavity Material\* - Caulk - Min 1 in. thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall and hollow-core precast concrete units. A min 1/4 in. bead of fill material shall be applied at point contact location on top surface of floor and both surfaces of wall or hollow-core precast concrete units.  
Configuration C  
A. Packing Material - Min 3-3/4 in. thickness of 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material shall be recessed 3/4 in. from bottom of floor or both surfaces of wall or ends of sleeve to accommodate the required thickness of fill material.  
B. Fill, Void or Cavity Material\* - Caulk - Min 3/4 in. of fill material applied within the annulus, flush with bottom surface of floor or with both surfaces of wall or ends of sleeve.  
The F Rating of the firestop system is 2 hr when FyreCaulk sealant (Item 3B) is used.  
Configuration D  
A. Packing Material - Foam backer rod firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or both surfaces of wall and hollow-core precast concrete units as required to accommodate the required thickness of fill material.  
B. Fill, Void or Cavity Material\* - Caulk - Min 1/2 in. thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall and hollow-core precast concrete units. A min 1/4 in. bead of fill material shall be applied at point contact location on top surface of floor and both surfaces of wall or hollow-core precast concrete units.  
\*Bearing the UL Classification Mark

1 UNINSULATED STEEL, IRON OR COPPER PIPE PENETRATION THROUGH CONCRETE FLOOR OR CONCRETE/CMU WALL (3 of 3)  
SCALE: NONE

**System No. C-AJ-1302**  
November 03, 2008  
F Ratings - 2 and 3 Hr (See Item 3)  
T Rating - 0 Hr

1. Floor or Wall Assembly - Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete floor or min 4-1/2 in. thick reinforced lightweight or normal weight concrete wall. The min thickness of the wall is dependent upon the firestop configuration as shown in Item 3. Wall may also be constructed of any UL Classified Concrete Blocks\*. Floor may also be constructed of any min 6 in. thick UL Classified hollow-core Precast Concrete Units\*. If the firestop system is installed within a hollow-core precast concrete unit, max diam of opening shall be 7 in. Otherwise, max diam of opening is 15-1/4 in.  
See Concrete Blocks (CAZT) and Precast Concrete Units (CFTV) categories in the Fire Resistance Directory for names of manufacturers.  
1A. Metallic Sleeve - (Optional - Not Shown) - Nom 14 in. diam (or smaller) Schedule 10 (or heavier) steel sleeve cast or grouted into floor or wall assembly, flush with floor or wall surfaces. As an option, sleeve may extend max. 2 in. above top surface of floor or beyond one or both surfaces of wall. The use of the steel sleeve is dependent upon the firestop configuration as shown in Item 3.  
2. Through Penetrants - One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening is dependent upon the type and max diam of through penetrant and the firestop configuration as shown in Item 3. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:  
A. Steel Pipe - Nom 12 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.  
B. Iron Pipe - Nom 12 in. diam (or smaller) cast or ductile iron pipe.  
C. Conduit - Nom 4 in. diam (or smaller) steel electrical metallic tubing or nom 6 in. diam (or smaller) steel conduit.  
D. Copper Tubing - Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.  
E. Copper Pipe - Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.  
3. Firestop System - The F Rating of the firestop system is 2hr when the FyreCaulk sealant (Item 3b) is used. Further, the F Rating is dependent upon the min thickness of the wall, type and max nom diam of the through penetrant, min and max annular space within the firestop system and the firestop configuration as shown in the table below:

Min Thickness of Wall,	Type of Through Penetrant	Max Nom Diam of Through Penetrant,	Use of Steel Sleeve	Min., Max. Annular, Inches	Firestop Configuration	F Hr Rating,	Material
4 3/4"	Steel Pipe & Iron Pipe	12"	Optional	0, 2	A	2	FC
4 3/4"	Steel Conduit, Copper Tube & Copper Pipe	6"	Optional	0, 2	A	2	FC
4 3/4"	Steel EMT	4"	Optional	0, 2	A	2	FC
4 3/4"	Steel Pipe & Iron Pipe	12"	Optional	0, 2	A	3	IA+,IA
4 3/4"	Steel Conduit, Copper Tube & Copper Pipe	6"	Optional	0, 2	A	3	IA+,IA
4 3/4"	Steel EMT	4"	Optional	0, 2	A	3	IA+,IA
4 1/2"	Steel Pipe & Iron Pipe	12"	N/A	0, 2	B	2	IA+,IA,FC
4 1/2"	Steel Conduit, Copper Tube, & Copper Pipe	6"	N/A	0, 2	B	2	IA+,IA,FC
4 1/2"	Steel EMT	4"	N/A	0, 2	B	2	IA+,IA,FC
5 1/4"	Steel Pipe & Iron Pipe	8"	Optional	0, 2	C	2	FC
5 1/4"	Steel Conduit, Copper Tube, Copper Pipe & Steel EMT	4"	Optional	0, 2	C	2	FC
5 1/4"	Steel Pipe & Iron Pipe	8"	Optional	0, 2	C	3	IA+,IA
5 1/4"	Steel Conduit, Copper Tube, Copper Pipe & Steel EMT	4"	Optional	0, 2	C	3	IA+,IA
4 1/2"	Steel Pipe & Iron Pipe	8"	N/A	0, 7/8	D	2	2
4 1/2"	Steel Conduit, Copper Tube, Copper Pipe & Steel EMT	4"	N/A	0, 7/8	D	2	2

Reproduced courtesy of Underwriters Laboratories, Inc.  
See UL Fire Resistance Directory for additional information. (UL/CUL)

1 UNINSULATED STEEL, IRON OR COPPER PIPE PENETRATION THROUGH CONCRETE FLOOR OR CONCRETE/CMU WALL (2 of 3)  
SCALE: NONE

**System No. C-AJ-1302**  
November 03, 2008  
F Ratings - 2 and 3 Hr (See Item 3)  
T Rating - 0 Hr

SECTION A-A  
CONFIGURATION A

SECTION A-A  
CONFIGURATION B

SECTION A-A  
CONFIGURATION C

SECTION A-A  
CONFIGURATION D

Reproduced courtesy of Underwriters Laboratories, Inc.  
See UL Fire Resistance Directory for additional information. (UL/CUL)

1 UNINSULATED STEEL, IRON OR COPPER PIPE PENETRATION THROUGH CONCRETE FLOOR OR CONCRETE/CMU WALL (1 of 3)  
SCALE: NONE