

FIRESTOP LISTINGS



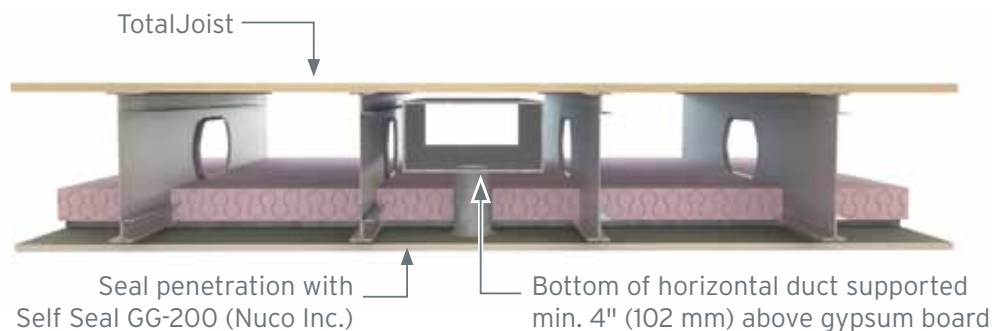
ALLOWABLE PENETRATION DETAILS

The National Building Code of Canada and applicable provincial codes allow TotalJoist to have penetrations in the gypsum board ceiling for common ducts and outlets without sacrificing the fire resistance rating. Details should always be approved by local code officials to ensure acceptance in your region. Details and descriptions of typical penetrations are provided in Penetration Details 1 through 5.

Pipe, conduit and cables may also penetrate the TotalJoist assembly provided listed firestops are used. For pipe, conduit, and cable penetrations, see the Rated Firestops for Pipes, Conduit, and section for UL Listed installation details.

PENETRATION DETAIL 1

DUCT PENETRATION, UNPROTECTED



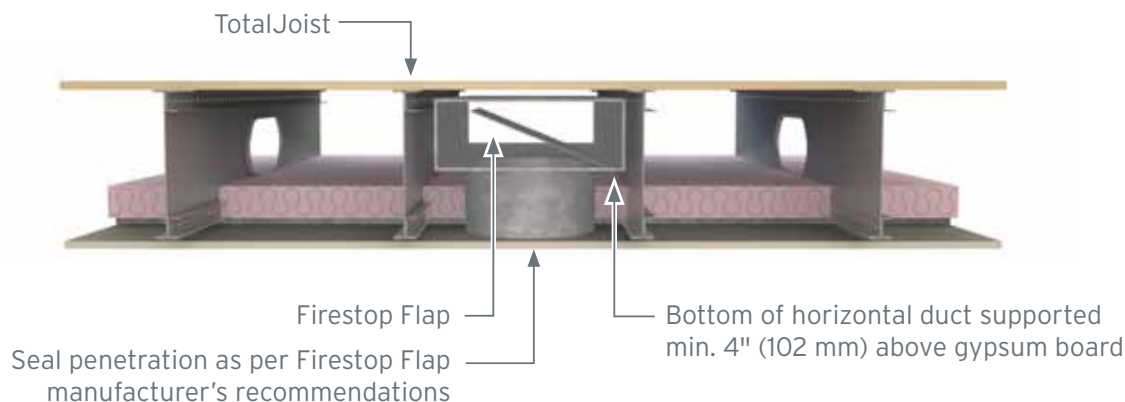
ADDITIONAL INSTALLATION NOTES:

- Opening area shall not exceed 20 sq. in. (130 cm²)
- No dimension of an opening shall exceed 12" (305 mm), and support (not shown) shall be provided for openings 6" (150mm) or greater
- Aggregate area of openings shall not exceed 1% of ceiling area
- Minimum 78" (2 m) spacing between adjacent duct openings

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PENETRATION DETAIL 2

DUCT PENETRATION, PROTECTION OPTION 1

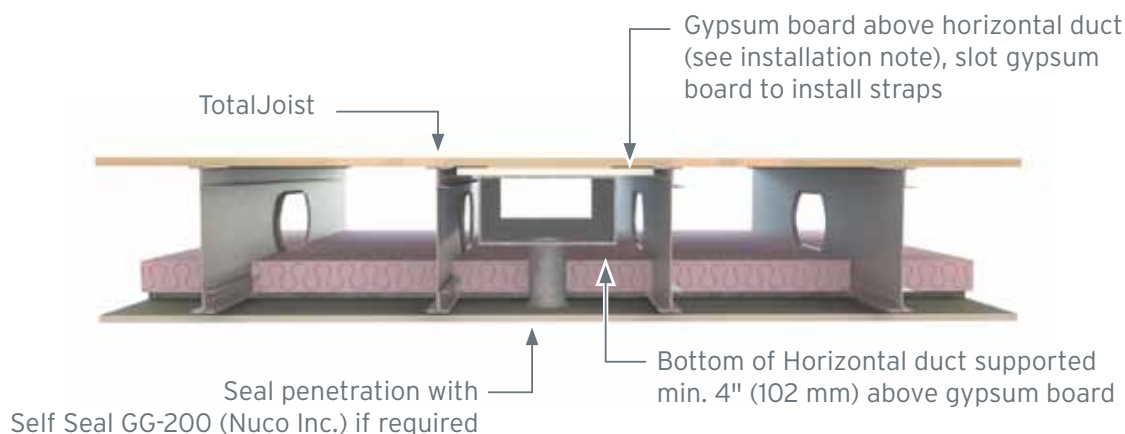


ADDITIONAL INSTALLATION NOTES:

- All conditions from unprotected duct apply except the following:
 - Opening area shall not exceed 144 sq. in. (930 cm²)
 - Firestop flap shall be tested in accordance with CAN4-S112.2

PENETRATION DETAIL 3

DUCT PENETRATION, PROTECTION OPTION 2



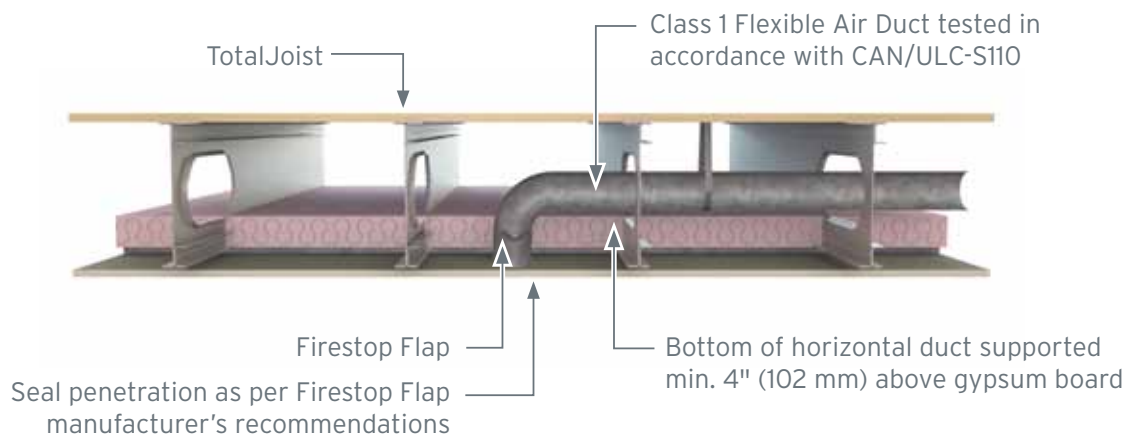
ADDITIONAL INSTALLATION NOTES:

- All conditions from unprotected duct apply except the following:
 - Opening shall not exceed 144 sq. in. (930 cm²)
 - 5/8" [15.9mm] CGC / USG FireCode C Gypsum Board shall be mechanically fastened to top of duct and extended min. 8" (203mm) past all edges of opening

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PENETRATION DETAIL 4

FLEXIBLE DUCT PENETRATION



ADDITIONAL INSTALLATION NOTES:

- All conditions from unprotected duct apply except the following:
 - Opening shall not exceed 144 sq. in. (930 cm²)
 - Firestop flap shall be tested in accordance with CAN4-S112.2

PENETRATION DETAIL 5

ELECTRICAL OUTLET BOX PENETRATION



ADDITIONAL INSTALLATION NOTES:

- Individual outlet box openings shall not exceed 16 sq. in. (103 cm²)
- Aggregate area of openings shall not exceed 100 sq.in. (645 cm²) per 100 sq.ft (9.30 m²)
- Clearance between box and gypsum board shall not exceed 1/8" (3 mm)
- Electric box shall be UL Listed with metallic or non-metallic cover plate
- Please refer to your local building code and/or designer of record for detailed requirements

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RATED FIRESTOPS FOR PIPES, CONDUIT, AND CABLES

Firestop details 1 through 9 illustrate how pipe, conduit, or cable penetrations can be accomplished using firestop systems that are UL Listed for Canada, a summary of which is presented in Table 1. For detailed installation information, see the associated UL listing.

TABLE 1. FIRESTOP DESIGNS, UL LISTED FOR CANADA



Penetrant	Max. Size	Ratings (Hours)						Listing
		F	FT	FH	FTH	L ^{AT} AMBIENT	L ^{AT} 400° F	
ABS Pipe	2" Ø	1	0	1	0	<1	<5	F-C-2406
	3" Ø	1	1	1	1	<1	<1	F-C-2405***
	4" Ø	1	0	1	0	<1	<5	F-C-2025
Cable Bundle*	2" Ø	1	1	1	1	-	-	F-C-3100
Copper Pipe	4" Ø	1	0	1	0	<1	<3	F-C-1151
Copper Tubing	4" Ø	1	0	1	0	<1	<3	F-C-1151
CPVC Pipe	2" Ø	1	0	1	0	<1	<5	F-C-2406
	3" Ø	1	1/4	1	1/4	-	-	F-C-2028
	3" Ø	1	1	1	1	<1	<1	F-C-2405***
	4" Ø	1	0	1	0	<1	<5	F-C-2025
	4" Ø	1	1	1	1	-	-	F-C-2023
Iron Pipe (Cast or Ductile)	4" Ø	1	0	1	0	<1	<3	F-C-1151
PEX Tubing	2" Ø	1	0	1	0	<1	<5	F-C-2406
PVC Pipe	2" Ø	1	0	1	0	<1	<5	F-C-2406
	3" Ø	1	1/4	1	1/4	-	-	F-C-2028
	3" Ø	1	1	1	1	<1	<1	F-C-2405***
	4" Ø	1	0	1	0	<1	<5	F-C-2025
	4" Ø	1	1	1	1	-	-	F-C-2023
Rigid Non-metallic Conduit	2" Ø	1	0	1	0	<1	<5	F-C-2406
	3" Ø	1	1/4	1	1/4	-	-	F-C-2028
	4" Ø	1	0	1	0	<1	<5	F-C-2025
	4" Ø	1	1	1	1	-	-	F-C-2023
Steel Pipe	4" Ø	1	0	1	0	<1	<3	F-C-1151
Steel Tubing (Conduit)	4" Ø	1	0	1	0	<1	<3	F-C-1151
XFR Pipe	3" Ø	1	1	1	1	<1	<1	F-C-2405***
	4" Ø	1	0	1	0	<1	<5	F-C-2025

F - Fire Rating
 FT - Fire and Temperature Rating
 FH - Fire and Hose Rating
 FTH - Fire, Temperature, and Hose Rating
 L - Leakage Rate (CFM/SQ FT)

NOTES
 * See detail for allowable cables.
 ** Numerous listings are available, contact iSPAN Systems LP for more information
 *** Branch pipe optional

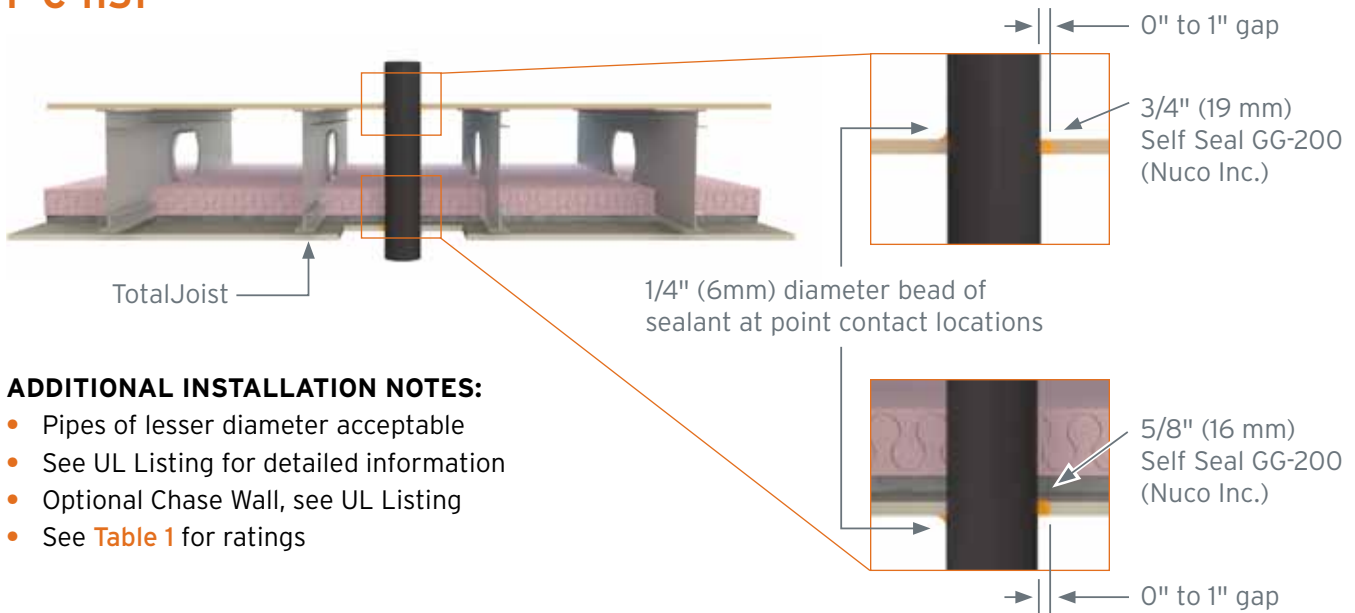
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PENETRATION DETAILS

FIRESTOP DETAIL 1

4" COPPER, STEEL, EMT, IRON PIPE

F-C-1151



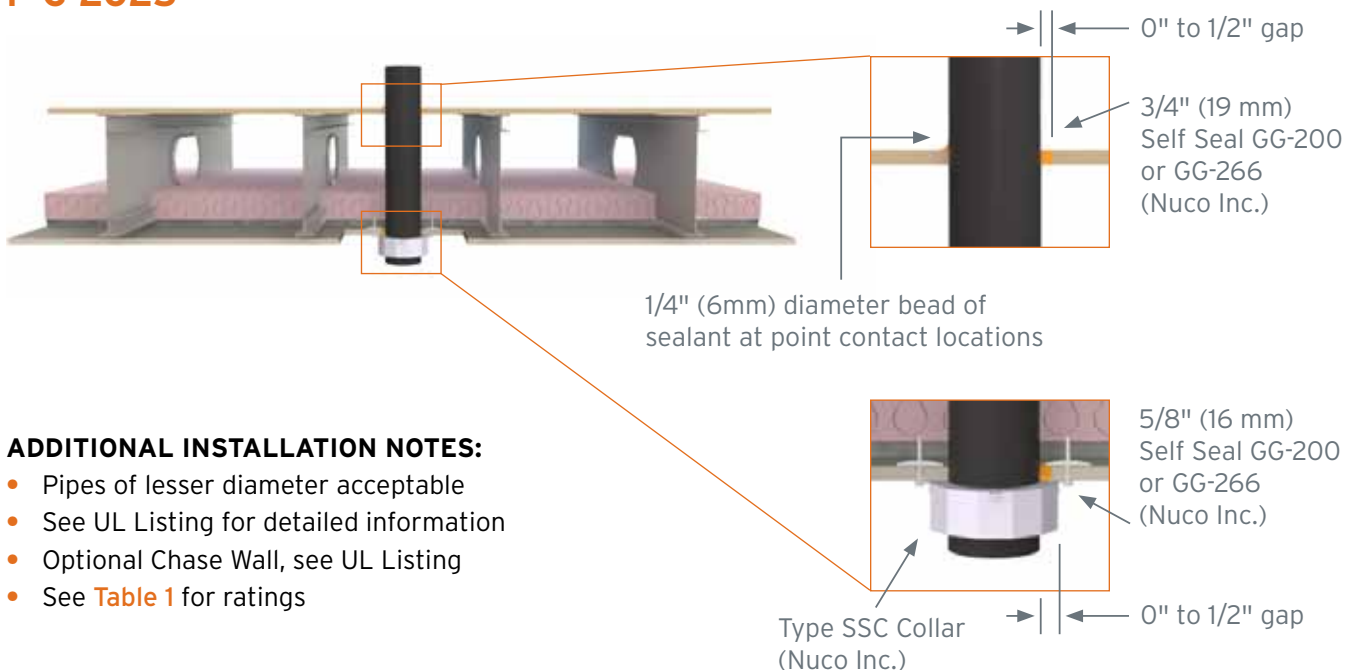
ADDITIONAL INSTALLATION NOTES:

- Pipes of lesser diameter acceptable
- See UL Listing for detailed information
- Optional Chase Wall, see UL Listing
- See [Table 1](#) for ratings

FIRESTOP DETAIL 2

4" PVC, XFR, ABS, CPVC PIPE

F-C-2025



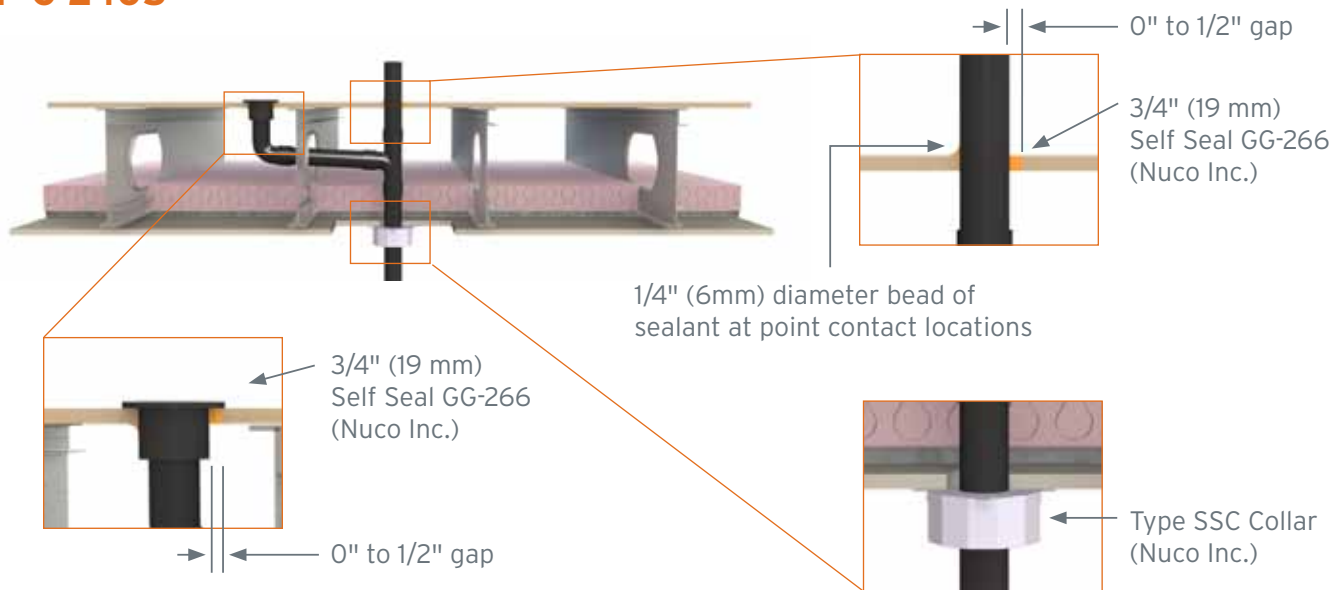
ADDITIONAL INSTALLATION NOTES:

- Pipes of lesser diameter acceptable
- See UL Listing for detailed information
- Optional Chase Wall, see UL Listing
- See [Table 1](#) for ratings

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FIRESTOP DETAIL 3

3" PVC, CPVC, ABS OR XFR PIPE WITH 3" BRANCH (2" P-TRAP OPTIONAL) F-C-2405

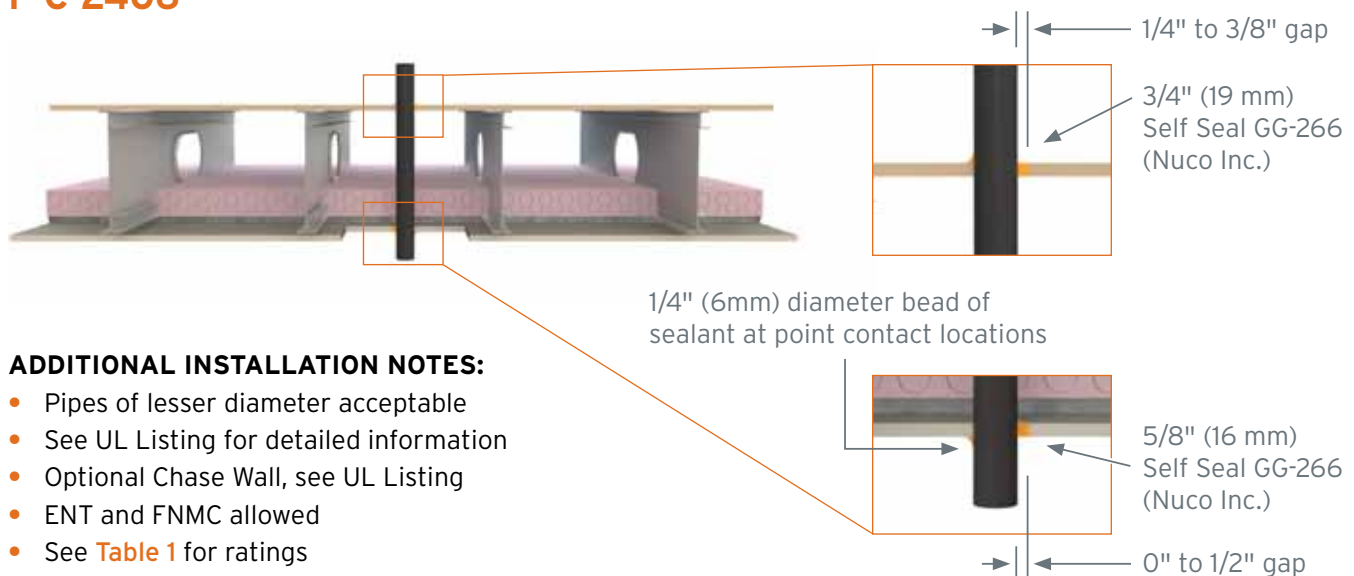


ADDITIONAL INSTALLATION NOTES:

- Pipes of lesser diameter acceptable
- See UL Listing for detailed information
- Optional Chase Wall, see UL Listing
- See [Table 1](#) for ratings

FIRESTOP DETAIL 4

2" PEX, PVC, CPVC OR ABS PIPE F-C-2406



ADDITIONAL INSTALLATION NOTES:

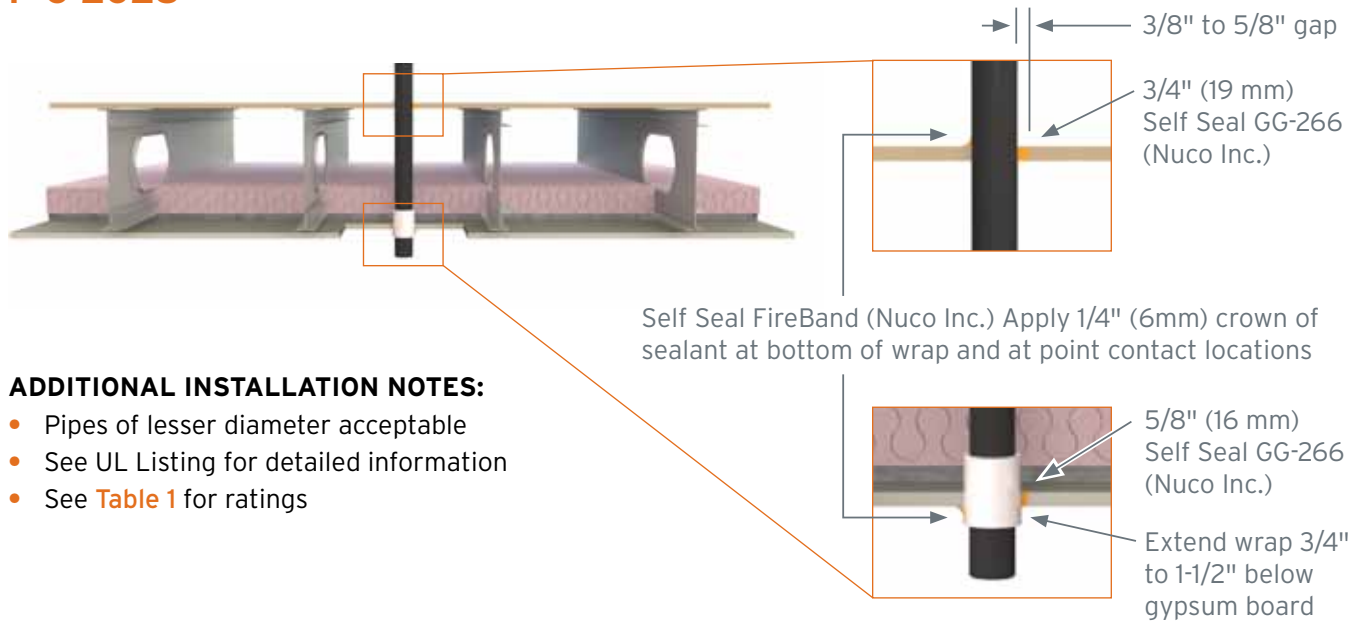
- Pipes of lesser diameter acceptable
- See UL Listing for detailed information
- Optional Chase Wall, see UL Listing
- ENT and FNMC allowed
- See [Table 1](#) for ratings

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FIRESTOP DETAIL 5

3" PVC, CPVC PIPE

F-C-2028



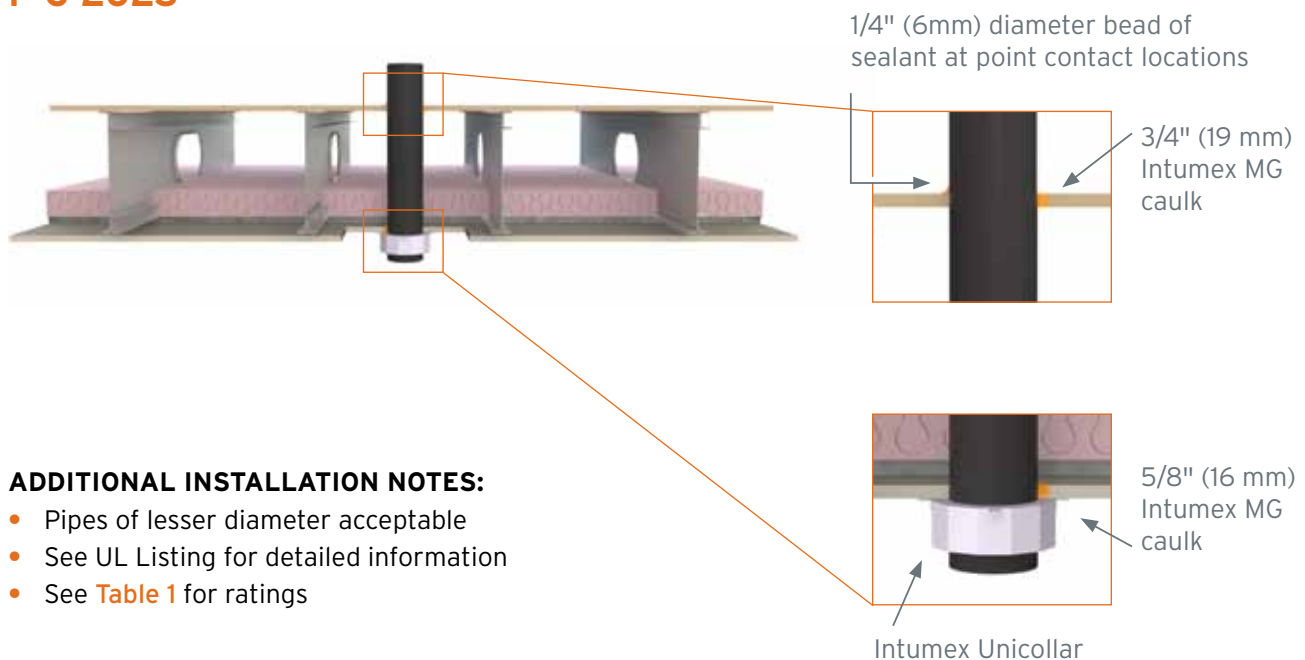
ADDITIONAL INSTALLATION NOTES:

- Pipes of lesser diameter acceptable
- See UL Listing for detailed information
- See [Table 1](#) for ratings

FIRESTOP DETAIL 6

4" PVC, CPVC PIPE

F-C-2023



ADDITIONAL INSTALLATION NOTES:

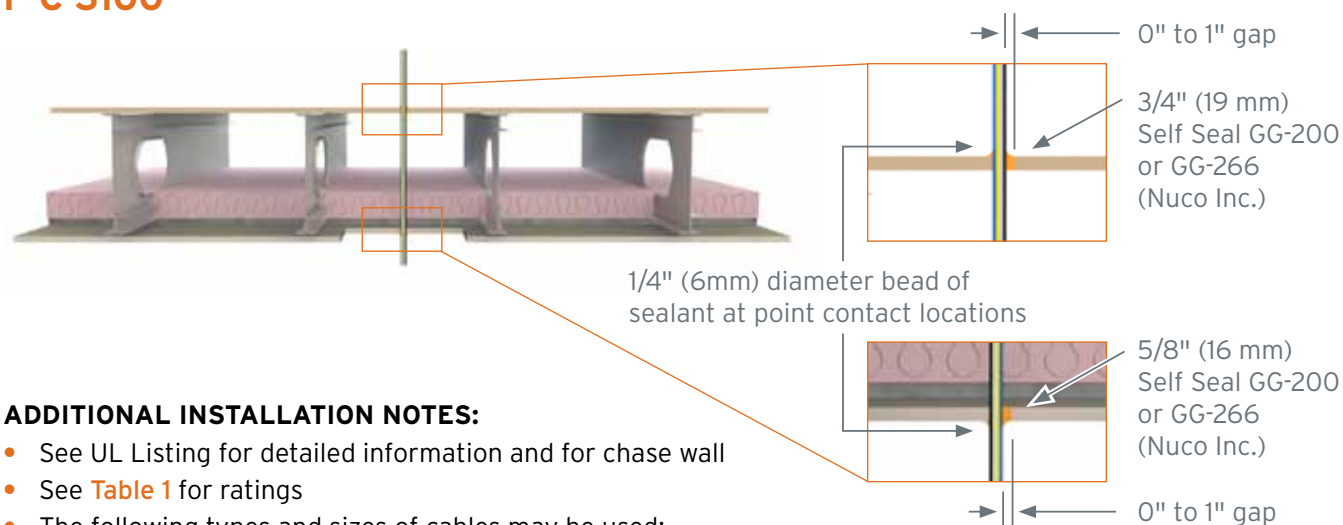
- Pipes of lesser diameter acceptable
- See UL Listing for detailed information
- See [Table 1](#) for ratings

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FIRESTOP DETAIL 7

ELECTRIC CABLES

F-C-3100



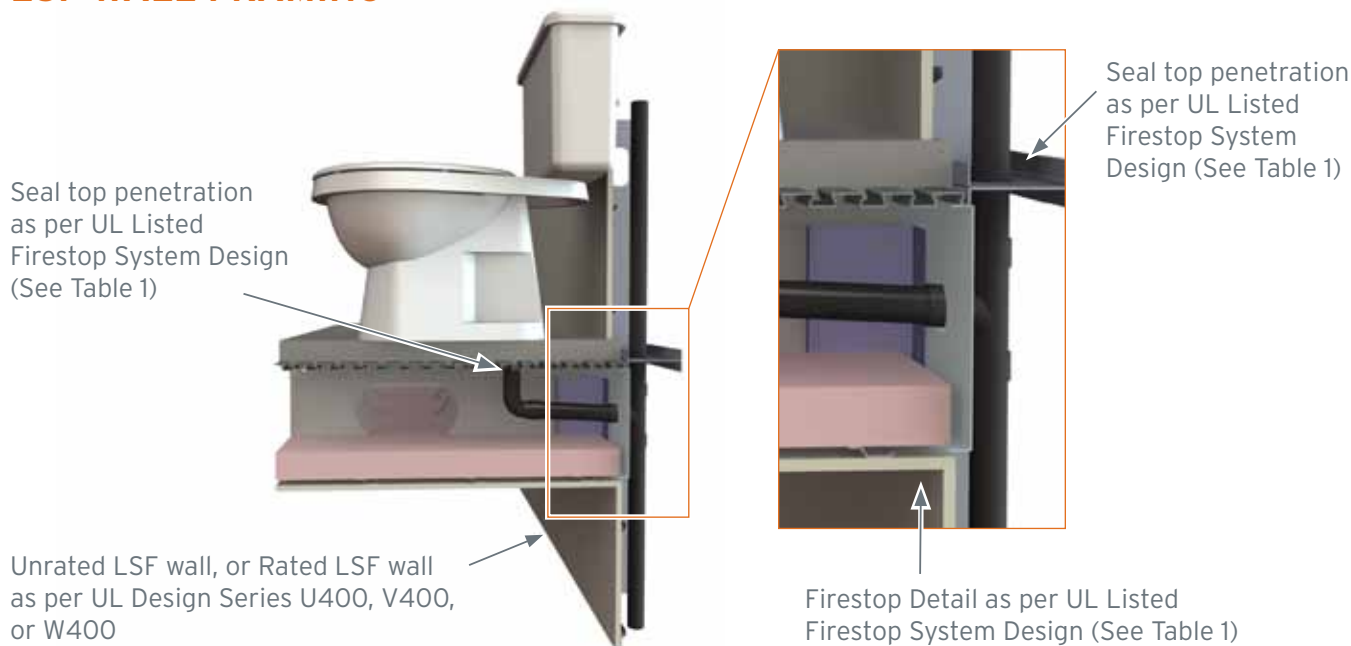
ADDITIONAL INSTALLATION NOTES:

- See UL Listing for detailed information and for chase wall
- See [Table 1](#) for ratings
- The following types and sizes of cables may be used:
 - Max 25 pair No. 22 AWG (or smaller) copper conductor with polyvinyl chloride (PVC) insulation and jacketing material.
 - Max 7/C No. 12 AWG (or smaller) copper conductor power and control cables with XLPE or PVC insulation with XLPE or PVC jacket.
 - Max 4/C No. 10 AWG (or smaller) copper conductor, aluminum clad or steel clad (BX) cable.
 - Max 110/125 fiber optic (F.O.) cable with PVC insulation and jacket.
 - Max 3/C with ground No. 12 AWG (or smaller) copper conductor NM cable with PVC insulation and jacket.
 - Type RG/U coaxial cable with fluorinated ethylene insulation and jacket.

FIRESTOP DETAIL 8

CHASE WALL SCHEMATIC

LSF WALL FRAMING



FIRESTOP LISTINGS

FIRESTOP DETAIL 9 CHASE WALL SCHEMATIC WOOD WALL FRAMING

