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Code Compliance Research Report CCRR-1081

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DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION

Section: 07 81 33 – Mineral-Fiber Fireproofing

REPORT HOLDER:

Van-Packer Company, Incorporated
302 Mill Street
Buda, IL 61314
(309) 895-1151
www.vpstack.com

REPORT SUBJECT:

Van-Packer Model GRZ Series Prefabricated Grease Duct Enclosure System

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes:

- 2015, 2012, and 2009 *International Building Code*® (IBC)
- 2015, 2012, and 2009 *International Mechanical Code*® (IMC)

NOTE: This report references 2015 Code sections with [2012, 2009] Code sections shown in brackets where one or both differ.

1.2 The Van-Packer Model GRZ Series prefabricated grease duct enclosure system has been evaluated for the following properties:

- Durability
- Fire Resistance
- Non-combustibility
- Surface Burning Characteristics
- Mechanical Strength
- Leakage

1.3 The Van-Packer Model GRZ Series prefabricated grease duct enclosure system has been evaluated for the following uses:

- An alternative to the factory-built grease duct assemblies specified in IMC Section 506.3.11 [2009 - 506.3.10]
- Use as a zero-clearance, fire resistance rated grease duct enclosure assembly, having a one-hour fire-resistance rating, and serving Type I kitchen hoods
- Use in plenums in accordance with IMC Section 602.2.1.

2.0 STATEMENT OF COMPLIANCE

The Van-Packer Model GRZ Series prefabricated grease duct enclosure system complies with the Codes listed in Section 1.1, for the properties stated in Section 1.2, and uses stated in Section 1.3, when installed as described in this report, including the Conditions of Use stated in Section 5.

3.0 DESCRIPTION

3.1 Van-Packer Model GRZ Series:

This report covers the Van-Packer Model GRZ Series with mild steel inner liner. The system consists of an inner grease duct liner of minimum 0.0575 in. mild steel, an outer shell of minimum No. 24 gauge aluminized steel, galvanized steel, or stainless steel (minimum No. 20 gauge for ducts with outside dimensions greater than 36 in.), and an intervening layer of alkaline earth silicate insulation. See Appendix A. The ducts are manufactured with maximum inside width of 48 in. and maximum inside height of 27 in. The maximum inside cross-sectional area permitted is 1296 in², with maximum width to height ratio of 6:1.

The Van-Packer Model GRZ Series is also available with a stainless steel liner, which is recognized in Intertek Listing Report "[Van-Packer GRZ Series \(with Stainless Steel Inner Liner\) Pre-fabricated Grease Duct System](#)".

3.2 Duct Joints:

The duct joints consist of the duct inner liner flanges; Accumetric, LLC, Boss® 315 Clear, RTV 100% Professional Grade Sealant; nuts and bolts to connect the flanges; joint insulation; and a draw band. The joints are assembled in the field using the above-noted components, all of which are supplied by Van-Packer Company, Incorporated.

3.3 Access Doors:

Grease duct access doors, factory built for a maximum 20 in. by 20 in. opening, or Ductmate F2 for a maximum 24 in. by 18 in. opening, are factory installed. See Appendix A.

4.0 INSTALLATION

4.1 General:

The grease duct system must be installed in accordance with IMC Section 506.3, the manufacturer's instructions, Intertek Listing Report [Van-Packer GRZ Series \(with Mild Steel Inner Liner\) Pre-fabricated Grease Duct System](#), and this Research Report.

The Van-Packer Model GRZ Series prefabricated grease duct enclosure system may be installed with zero clearance between the exterior surface of the duct and combustible construction, and may be used where a grease duct enclosure is required by IMC Section 506.3.11 [2009 - 506.3.10] for up to 1-hour fire-resistance-rated construction. The system is recognized for penetrations of fire-resistance-rated assemblies when the construction is as described in Section 4.2 of this report.

Duct sections are connected by applying a continuous 1/8 in. bead of Accumetric, LLC, Boss® 315 Clear, RTV 100% Professional Grade Sealant to each of the inner liner mating flanges, then bolting the flange assemblies together.

The joints are protected with three layers of nominal 1 in. thick insulation or two layers of nominal 1-1/2 in. thick insulation of the same type and density as the insulation used in the annular space of the duct, and covered with a sheet metal draw band.

Ducts must be supported as described in the manufacturer's instructions and Intertek Design No. VPC/FMF 60-01.

All the components required for construction of the duct are supplied by Van-Packer Company, Incorporated.

4.2 Through-Penetrations:

4.2.1 General: Penetrations through minimum 3.2 in. thick concrete floor-ceiling assemblies complying with IBC Table 721.1(3) [2009 - 720.1(3)], or minimum 3.2 in. thick concrete wall assemblies complying with IBC Table 721.1(2) [2009 - 720.1(2)], or minimum 8 in. thick concrete masonry unit walls complying with IBC Table 721.1(2) [2009 - 720.1(2)], must be protected as described in Intertek Design No. VPC/FMF 60-01. See Appendix A.

5.0 CONDITIONS OF USE

5.1 The enclosure system must be constructed and installed in accordance with this Research Report. In the event of a conflict between this report and the manufacturer's instructions, this report governs.

5.2 The enclosure system is limited to 1-hour fire-rated construction.

5.3 The duct sections and components are manufactured in Buda, IL, under a quality control program with inspections by Intertek Testing Services NA, Inc. (AA-647).

6.0 SUPPORTING EVIDENCE

6.1 Data in accordance with the ICC-ES Acceptance Criteria for Grease Duct Enclosure Assemblies: Segmented Grease Duct Systems (AC101.2), dated June 2012.

6.2 Testing in accordance with applicable sections of UL 1978.

6.3 Quality documentation.

7.0 IDENTIFICATION

Each Van-Packer Model GRZ Series prefabricated grease duct section is permanently marked with the following: the report holder's name (Van-Packer Company, Incorporated), the product name, the Code Compliance Research Report number (CCRR-1081) and the wording "Install and Use Only in Accordance with Van-Packer Company, Model GRZ Zero Clearance Grease Duct Installation Instructions."

A label stating "Zero Clearance to Combustibles" shall be placed on every grease duct section.

The grease duct shall also be labeled at regular intervals with the wording "FIRE-RESISTIVE ENCLOSURE, DO NOT REMOVE". This label shall be visible when installed.

Sealants used for through-penetration firestops must be labeled with the sealant manufacturer's name and the product name.

8.0 OTHER CODES

This section is not applicable.

9.0 CODE COMPLIANCE RESEARCH REPORT USE

9.1 Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

9.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

9.3 Reference to the <https://bpdirectory.intertek.com> is recommended to ascertain the current version and status of this report.

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Appendix A

Intertek Design No. VPC/FMF 60-01

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Van-Packer Company, Incorporated
Design No. VPC/FMF 60-01
Model GRZ Series Grease Duct
ICC-ES AC101.2 - Pass
1-Hour Fire Resistance Rated Construction
ASTM E814
F-Rating – 1 Hour
T-Rating – 1 Hour

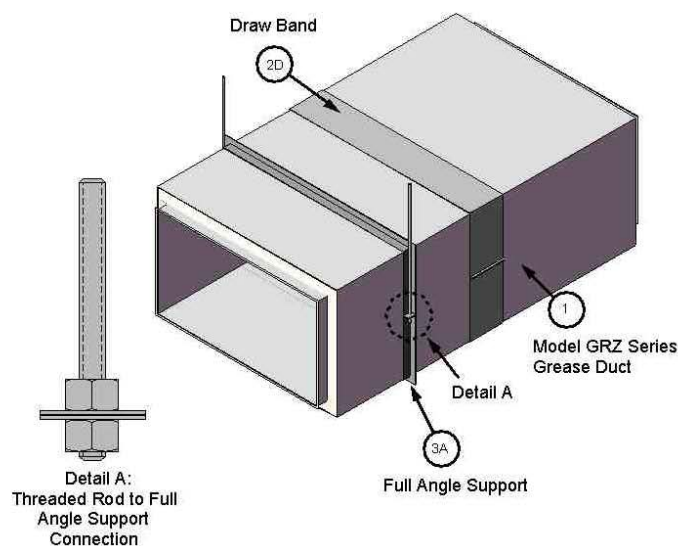


Figure 1. Model GRZ Series Grease Duct

1. CERTIFIED MANUFACTURER:
Van-Packer Company, Incorporated

CERTIFIED PRODUCT: Pre-Fabricated Grease Duct

CERTIFIED MODEL: GRZ Series

Reference Figure 1. Install Pre-Fabricated Grease Duct in compliance with the requirements of NFPA 96, the International Mechanical Code (IMC), or other regulatory requirement, as applicable. Install at a slope not less than one-fourth unit vertical in 12 units horizontal toward the hood or toward a grease reservoir. Where horizontal ducts exceed 75 ft. in length, the slope shall be not less than one unit vertical in 12 units horizontal. Use the Intertek-certified Pre-Fabricated Grease Duct identified above

and having the following features and/or specifications:

- A. GREASE DUCT SIZE –
 - Max. Interior Cross-Section Area: 1296 in²
 - Max. Interior Dimension: 48 in.
 - Min. Interior Dimension: 4 in.
 - Max. Interior Width to Height Ratio: 6:1
- B. INNER LINER – Min. 16 GA mild steel
- C. OUTER SHELL – Min. 24 GA aluminized steel, galvanized steel, or stainless steel for ducts with outside dimensions less than or equal to 36 in., and min. 20 GA aluminized steel, galvanized steel, or stainless steel for ducts with outside dimensions greater than 36 in.

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- D. ACCESS DOOR – Reference Figure 2. When required, use a Pre-Fabricated Grease Duct section pre-equipped by manufacturer with an access door assembly having a max. 20 in. x 20 in. opening at the inner access panel and three layers of nominal 1 in. thick insulation, or two layers of nominal 1-1/2 in. thick insulation of the same

type and density as the insulation used in the annular space of the duct. In lieu of the manufactured inner access door, a Ductmate F2 access door having a max. 24 in. x 18 in. opening at the access panel may be installed according to the manufacturer's installation instructions.

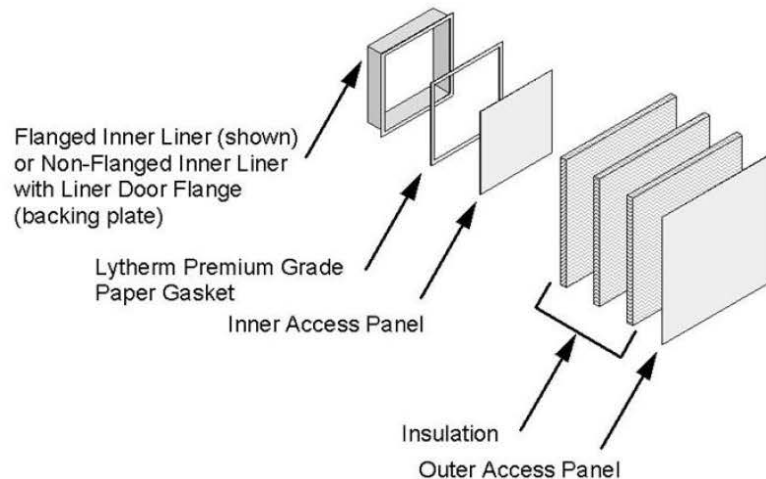


Figure 2. Access Door

- E. PIPE FITTINGS – When required, use Pre-Fabricated Grease Duct sections pre-equipped with pipe fittings including those used for fire extinguishing systems, drain systems, and test ports. Maintain min. Code required clearance to combustibles or limited combustibles at pipe fitting locations.
2. JOINTS: Join the Pre-Fabricated Grease Duct (Item 1) sections using the following components and methods:
- A. JOINT SEALANT – Apply a continuous 1/8 in. bead of Accumetric, LLC, Boss® 315 Clear, RTV 100% Professional Grade Sealant to each of the inner liner mating flanges. Ensure that the liner flanges are clean and degreased.
- B. FASTENERS – Butt the flanged ends and fasten with supplied 1/4-20 nuts and bolts, tightened to a torque of

approximately 4 ft-lb, and per bolt manufacturer's recommended specifications. Remove excess sealant on the inside of the duct and allow sealant to cure 7 days before use.

- C. JOINT INSULATION – Use the supplied nominal 6 in. wide, and nominal 1 in. thick or nominal 1-1/2 in. thick, joint insulation strip of the same type and density as the insulation used in the annular space of the Pre-Fabricated Grease Duct (Item 1). Wrap the insulation strip around the connection three times or two times, respectively, depending on the nominal thickness, so as to create a 3 in. thickness of insulation; add a min. 2 in. overlap at the final turn. Ensure the joint insulation completely fills and is compressed into the un-insulated void at the joint.

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- D. **DRAW BAND** – Use the supplied Draw Band (single band or two half-bands) to cover the Joint Insulation (Item 2C). Fasten the Draw Band using supplied 1/4-20 Philips pan-head screw and square nuts. On vertical lengths of duct, also use No. 6, 1/4 in. long, Philips head, sheet metal screws to secure the draw band to the outer shell at the midpoints of each side, top, and bottom.
- E. **PLATE SUPPORT ASSEMBLY (PLS)** – When required for structural support

applications, install the supplied PLS steel plate between the two joint flanges. Follow all other standard joint requirements, except that the joint insulation (Item 2C) is half the width and installed from both sides of the PLS. Use draw bands (Item 2D) on both sides of the PLS. Maintain min. Code required clearance to combustibles or limited combustibles at PLS locations.

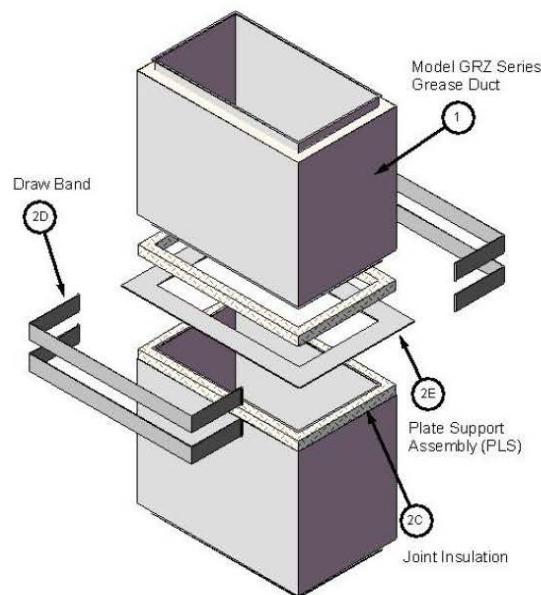


Figure 3. Plate Support Assembly (PLS)

3. **SUPPORTS:** Rigidly support the Pre-Fabricated Grease Duct (Item 1) as specified below or in accordance with IMC, NFPA 96, or other regulatory requirements as applicable, when those requirements are greater or not covered herein. Follow the requirements for horizontal and vertical supports in Items 3A, 3B, and 3C below.
- A. **HORIZONTAL SUPPORTS** – Support the Pre-Fabricated Grease Duct (Item 1) using supplied 2 x 2 x 3/16 in. steel, full-angle supports (See Figure 1) (two halves required); 2 x 2 x 3/16 in. steel

angle trapeze style support; or P1000 steel Unistrut® trapeze style support with open side facing away from the duct. For the steel angle and Unistrut® options, extend these supports a min. of 2 in. from each side of the Pre-Fabricated Grease Duct (Item 1). Use min. 1/2 in. diameter threaded steel rods. Attach the threaded steel rods to the Floor/Ceiling Assembly (Item 4A) by way of through-holes sized appropriately for the nominal threaded rod diameter and secured on top side with appropriately sized flat washer and

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double nut. Place one threaded steel rod on each side of the Pre-Fabricated Grease Duct (Item 1) and fasten to the support member with appropriately sized nuts (see Figure 1, Detail A). Install the rods at a max. of 1 in. from each side of the Pre-Fabricated Grease Duct (Item 1). Space horizontal supports a max. of 12 ft. on center (oc). Reduce the support spacing for larger ducts to ensure that the load on each hanger (set of two threaded rods and support member) does not exceed 500 lb. Alternatively, use manufacturer-supplied, min. 2 in. wide, min. 11 GA, steel Hanger Bands (BHB) as the supporting member, and reduce the max. load per hanger to 420 lb.

- B. VERTICAL SUPPORTS – Reference Figures 3, 4, and 5. Where the Pre-Fabricated Grease Duct (Item 1) is installed vertically, use the Plate Support Assembly (PLS), Flange Support Assembly (FSA), and/or Wall Brackets (WBR) as specified below.

- i. SUPPORTING CONSTRUCTION – Use supporting construction determined by the responsible structural project engineer as appropriate to support four times the load of the Pre-Fabricated Grease Duct (Item 1) and meeting the requirements of the IMC, NFPA 96, or other applicable regulatory requirement. See the manufacturer's weight specifications to determine weight for the corresponding duct sizes.
- ii. PLATE SUPPORT ASSEMBLY (PLS) – Secure the Pre-Fabricated Grease Duct (Item 1) sections joined with the PLS (reference Figure 3) to the supporting construction (supplied by others). Ensure the PLS is supported continuously on all sides. Fasten the PLS to the supporting construction at

min. on each of the four corners using appropriate type fasteners for the intended construction and as specified by the responsible design professional. Ensure that the supports are spaced such as not to exceed a max. load of 2,400 lb.

- iii. FLANGE SUPPORT ASSEMBLY (FSA) – Secure the Pre-Fabricated Grease Duct (Item 1) sections with integral FSA (reference Figure 4) to the supporting construction (supplied by others). Ensure the FSA is supported continuously on all sides. Fasten the FSA to the supporting construction at min. on each of the four corners using appropriate type fasteners for the intended construction and as specified by the responsible design professional. Ensure that the supports are spaced such as not to exceed a max. load of 3,400 lb.
- iv. HALF FLANGE SUPPORT ASSEMBLY (HFS) – The Half Flange Support Assembly is similar to the Flange Support Assembly except it is only intended to support the duct on two opposite flanges; the non-supporting flanges are shorter. Secure the Pre-Fabricated Grease Duct (Item 1) sections with integral HFS to the supporting construction (supplied by others). Ensure the HFS is supported continuously on two opposite sides (the sides with the wider flanges). Fasten the FSA to the supporting construction at min. on each of the four corners using appropriate type fasteners for the intended construction and as specified by the responsible design professional. Ensure that the supports are spaced such as not to exceed a max. load of 2,500 lb.

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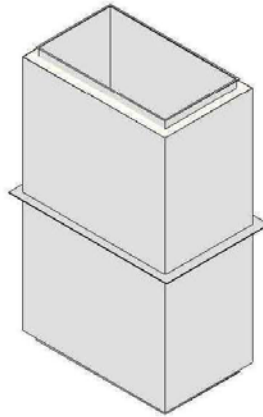


Figure 4. Flange Support Assembly (FSA)

- v. WALL BRACKETS (WBR) – Secure the wall brackets (Reference Figure 5) to supporting construction using a min. of six 1/2 in. bolts/anchors (three per bracket). Use appropriate type fasteners for the intended construction and as specified by the responsible design professional. Mount the Pre-Fabricated Grease Duct (Item 1) to the wall brackets using either the Plate Support Assembly (Item 3Bii) or the Flange Support Assembly (Item 3Biii) using min. 3/8 in. bolts and nuts.

Use a min. of three bolts per wall bracket for ducts with nominal inside dimension less than 18 in. on the mounting side. Add a fourth bolt for larger ducts. Ensure that the supports are spaced such as not to exceed a max. load as shown below:

- Nominal Duct Size \leq 32 in.; Max. 1312 lb.
- Nominal Duct Size $>$ 32 in.; Max. 902 lb.

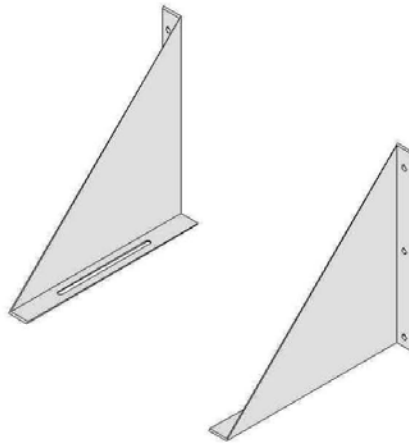


Figure 5. Wall Bracket (WBR)

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C. **FLOOR/CEILING PENETRATION SUPPORT** – Where the Pre-Fabricated Grease Duct (Item 1) penetrates a fire-rated floor/ceiling (Item 4A), use the Plate Support Assembly (PLS) (Item 2E) or the Flange Support Assembly (FSA) (Item 3Biii). Follow the manufacturer's installation instructions and the requirements indicated below:

- i. Use appropriate non-combustible supporting construction (Item 3Bi) as determined by the responsible design professional. Ensure that the supporting construction provides continuous support on all sides of the Plate Support Assembly (Item 2E) or the Flange Support Assembly (Item 3Biii).
- ii. When required, use the Plate Support Assembly (Item 2E) joint method to join the penetrating section of duct to the next duct section above the floor/ceiling assembly.
- iii. Secure the Plate Support Assembly (Item 2E) or the Flange Support Assembly (Item 3Biii) to the supporting construction by welding or mechanically fastening using min. 1/2 in. steel bolts, nuts, and washers. Use a min. of one bolt or one 1-1/2 in. long weld at each of the four corners.

4. **FLOOR/CEILING PENETRATION FIRESTOP:** When required to penetrate a fire-rated floor/ceiling assembly, install the firestop system described in Items 4A to 4E (reference Figure 6).

A. **FLOOR/CEILING ASSEMBLY** – Penetrate a one-hour fire-rated, solid concrete floor/ceiling assembly made from reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete, and having a min. thickness of 3.2 in. Create a rectangular through-opening in the floor/ceiling assembly so that the opening dimensions are greater than the outside dimensions by 1 in. to 4 in. The size of the through-opening shall not exceed 40-1/4 in. x 61-1/4 in. Position the Pre-Fabricated Grease Duct (Item 1) concentrically or eccentrically in the

through-opening so that the annular space ranges from min. 1 in. to max. 4 in.

B. **BOTTOM FIRESTOP PLATE** – Use the supplied bottom firestop plate (two halves required) consisting of 3 in. x 6 in. x 1/8 in. steel angle. Position the Bottom Firestop Plate around the Pre-Fabricated Grease Duct with the 6 in. leg positioned against the underside of the floor/ceiling assembly (Item 4A). Secure the Bottom Firestop Plate to the concrete floor/ceiling assembly (Item 4A) using 1-3/4 in. long, 1/4 in. concrete screws. Use all the pre-drilled holes on the Bottom Firestop Plates. Secure the Bottom Firestop Plate to the Pre-Fabricated grease Duct (Item 1) using No. 6, 3/4 in. long, hex washer, sheet metal screws. Use 3M™ Fire Barrier Sealant CP 25WB+ or other approved firestop sealant to fill any gaps between the Bottom Firestop Plate and the floor/ceiling assembly or the duct.

C. **PACKING MATERIAL** – Fill the annular space between the Pre-Fabricated Grease Duct (Item 1) and the floor/ceiling assembly (Item 4A) with insulation supplied by the duct manufacturer, which is nominal 1 in. or 1-1/2 in. thick, and of the same type and density as the annular insulation used in the Pre-Fabricated Grease Duct. Install insulation in horizontal layers, staggering joints at the corners, and compressed to a min. 36%. Recess the packing material nominal 3/8 in. from the top of the floor/ceiling assembly (Item 4A).

D. **CERTIFIED COMPANY** – 3M Company
 • **CERTIFIED PRODUCT** – Sealant
 • **MODEL** – 3M™ Fire Barrier™ Water-Tight 1000-NS Silicone, 1000-SL Silicone, 2000+ Silicone, or CP 25WB+

CERTIFIED COMPANY – Tremco Incorporated

- **CERTIFIED PRODUCT** – Sealant
- **MODEL** – TREMstop Silicone Fyre-Sil® GG and Fyre-Sil® SL

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LISTED COMPANY – Specified Technologies Incorporated (STI)
 • **LISTED PRODUCT** – Sealant
 • **MODEL** – SpecSeal® Series SSS

LISTED COMPANY – HILTI
 • **LISTED PRODUCT** – Sealant
 • **MODEL** – FS-ONE

FILL, VOID, OR CAVITY MATERIAL – Use one of the sealants listed above. Fill the nominal 3/8 in. recess created over the packing material and screed the sealant flush with the top surface of the floor/ceiling assembly (Item 4A). Overlap the sealant a min. of 1/2 in. onto the face of the Pre-Fabricated Grease Duct (Item 1) and onto the floor/ceiling assembly. Allow the sealant to skin-over prior to proceeding to the next installation step.

E. **TOP FIRESTOP PLATE** – Use the supplied top firestop plate (two halves required) consisting of a 1/8 in. thick, T-shaped steel form used to create a 4 in. wide and 5 in. deep collar around the perimeter of the Pre-Fabricated Grease Duct (Item 1). Secure the Top Firestop Plate to the top of the floor/ceiling assembly with 1-3/4 in. long, 1/4 in. concrete screws. Use all the pre-drilled holes on the Top Firestop Plates. Fill the cavity created by the Top Firestop Plate with insulation supplied by the duct manufacturer, which is nominal 1 in. or 1-1/2 in. thick, and of the same type and density as the annular insulation used in the Pre-Fabricated Grease Duct. Install insulation in horizontal layers with staggered joints at the corners and min. 1-1/2 in. widthwise compression. Install cover plate over exposed insulation (optional).

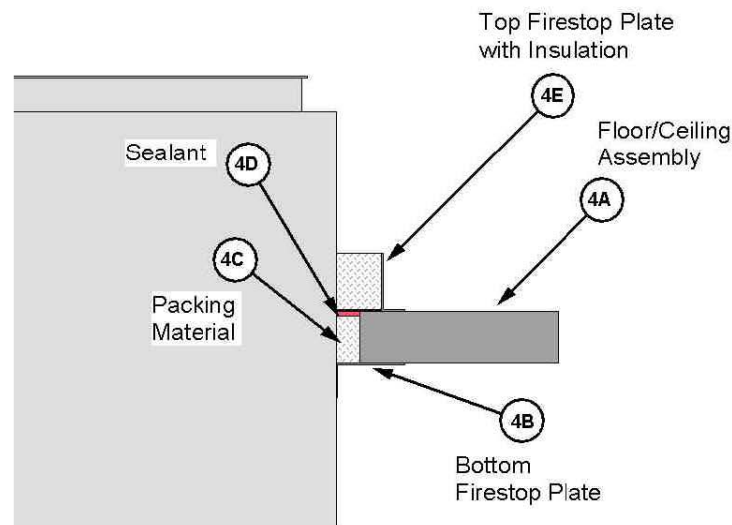


Figure 6. Floor/Ceiling Firestop

5. **WALL PENETRATION FIRESTOP:** When required to penetrate a fire-rated wall assembly, install the firestop system described in Items 5A to 5D (reference Figure 7).

A. **WALL ASSEMBLY** – Penetrate a min. one-hour fire-rated wall assembly of one of the following constructions listed below in Items 5Ai through 5Aii. Form, cut, or frame, as applicable, a rectangular through-opening in the wall assembly so that the opening

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dimensions are greater than the outside dimensions by 1 in. to 4 in. The size of the through-opening shall not exceed 40-1/4 in. x 61-1/4 in. Position the Pre-Fabricated Grease Duct (Item 1) concentrically or eccentrically in the through-opening so that the annular space ranges from min. 1 in. to max. 4 in.

- i. **CONCRETE** – Penetrate a symmetrical, solid concrete, wall assembly made from reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete, and having a min. thickness of 3.2 in.
- ii. **MASONRY** – Penetrate a symmetrical nominal 8 in. x 8 in. x 16 in. (203 mm x 203 mm x 406 mm) concrete masonry unit (CMU) wall assembly, made from lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Use solid block around the through-penetration opening.
- B. **PACKING MATERIAL** – Fill the annular space between the Pre-Fabricated Grease Duct (Item 1) and the wall assembly (Item 5A) with insulation supplied by the duct manufacturer, which is nominal 1 in. or 1-1/2 in. thick, and of the same type and density as the annular insulation used in the Pre-Fabricated Grease Duct. Install insulation in layers, staggering joints at the corners, and compressed to a min. 36%. Recess the packing material nominal 5/8 in. from each side of the wall assembly (Item 5A).
- C. **CERTIFIED COMPANY** – 3M Company
 - CERTIFIED PRODUCT – Sealant
 - MODEL – 3M™ Fire Barrier™ Water-Tight 1000-NS Silicone, 2000+ Silicone, or CP 25WB+

CERTIFIED COMPANY – Tremco Incorporated
 • CERTIFIED PRODUCT – Sealant
 • MODEL – TREMstop Silicone Fyre-Sil® GG

LISTED COMPANY – Specified Technologies Incorporated (STI)
 • LISTED PRODUCT – Sealant
 • MODEL – SpecSeal® Series SSS

LISTED COMPANY – HILTI
 • LISTED PRODUCT – Sealant
 • MODEL – FS-ONE

FILL, VOID, OR CAVITY MATERIAL – Use one of the sealants listed above. Fill the nominal 5/8 in. recesses created over the packing material from each side of the wall assembly (Item 5A) and screed the sealant flush with the wall assembly. Overlap the sealant a min. of 1/2 in. onto the face of the Pre-Fabricated Grease Duct (Item 1) and onto the wall assembly. Allow the sealant to skin-over prior to proceeding to the next installation step.

- D. **WALL FIRESTOP PLATE** – Use the supplied Wall Firestop Plates (two halves required for each side of wall) consisting of a 1/8 in. thick, T-shaped steel form used to create a 4 in. wide and 5 in. deep collar around the perimeter of the Pre-Fabricated Grease Duct (Item 1). Secure the Wall Firestop Plates to each side of the wall assembly (Item 5A) with 1-3/4 in. long, 1/4 in. concrete or masonry screws, or 2 in. long, 1/4 in. self-drilling screws. Use all the pre-drilled holes on the Wall Firestop Plates. Fill the cavity created by the Wall Firestop Plate with insulation supplied by the duct manufacturer, which is nominal 1 in. or 1-1/2 in. thick, and of the same type and density as the annular insulation used in the Pre-Fabricated Grease Duct. Install insulation in layers with staggered joints at the corners and min. 1-1/2 in. widthwise compression. Install cover plate over exposed insulation (optional).

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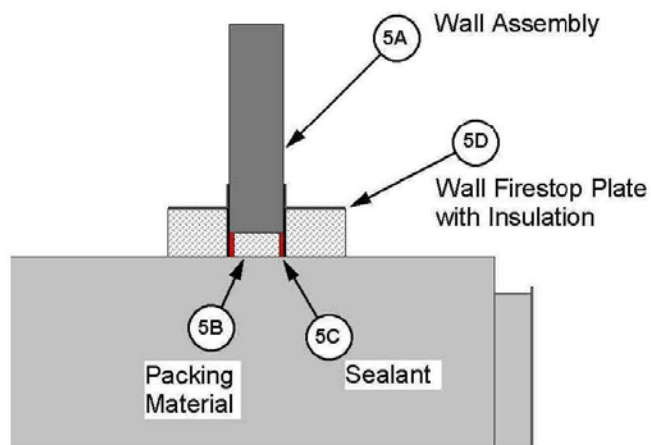


Figure 7. Wall Firestop

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