

# Installation Instructions



Centrotherm  
solutions beyond

## InnoFlue® Single Wall, Flex, Concentric Vent System

The installation instructions should be kept with the appliance for maintenance.

Examine all components for possible shipping damage prior to installation.

Do not mix products or instructions from multiple manufacturers.

Different manufacturers utilize different methods for joining vent sections. Proper joint assembly is essential for a safe installation. Follow these instructions exactly as written. Check integrity of joints upon completion of assembly.

InnoFlue® must be free to expand and contract and must be supported in accordance with these instructions.

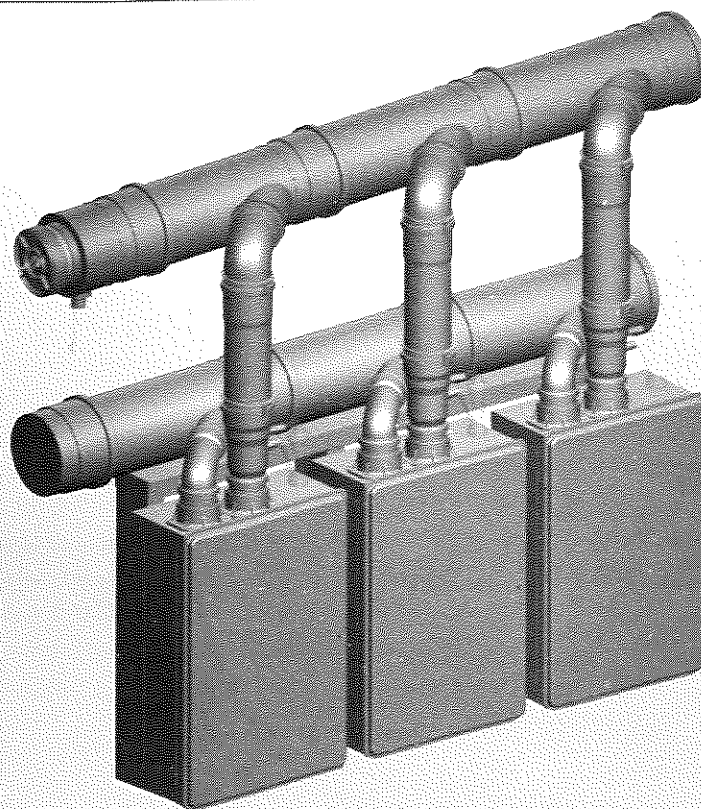
Check for unrestricted vent movement through walls, ceilings, and roof penetrations.



We are proud that InnoFlue®  
conforms to:

UL-1738

ULC-S636

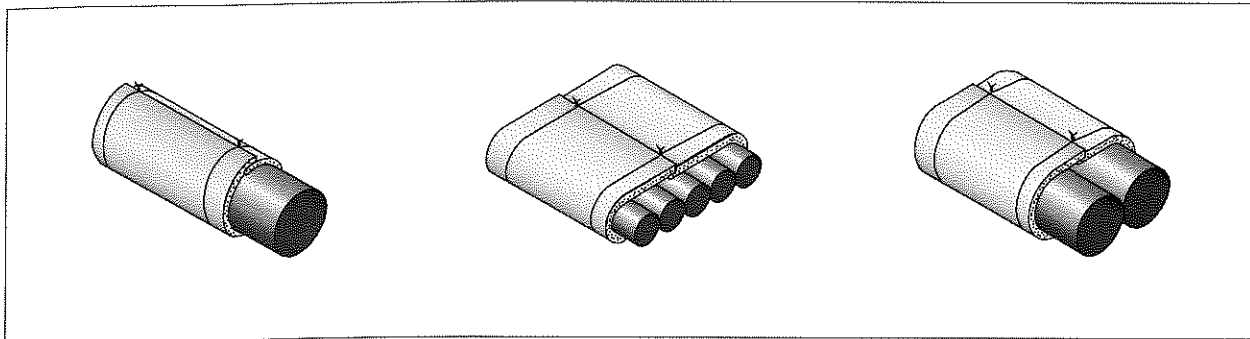


## INNOFLUE® FLAME & SMOKE SPREAD RATING ASSEMBLY INSTRUCTIONS

InnoFlue® meets flame spread index and smoke developed index of <25 / <50 per UL-723, ASTM E-84 and ULC-S102. To meet these standards, InnoFlue® must be wrapped with a UL-723, ASTM E-84 or ULC-S102 listed material designed for use with plastic piping.

**MATERIAL:** Friendly Feel® Duct Wrap with *ECOSE® Technology*, 3M™ Fire Barrier Plenum Wrap 5A+, Unifrax FyreWrap® 0.5 Plenum Insulation or equivalent.

Generic installation instructions are included. **Please follow the specific pipe wrap manufacturer's installation instructions.**



### INSTALLATION INSTRUCTIONS:

- Follow Centrotherm's InnoFlue® standard installation instructions.
- Vent supports are installed after the pipe has been wrapped.
- Install Wrap with facing to the outside.
- Butt all insulation joints firmly together. Longitudinal seam of the vapor retarder must be overlapped a minimum of 2" (51 mm). A 2" (51 mm) tab is provided for the circumferential seam and must be overlapped.
- Where vapor retarder performance is necessary, all penetrations, joints, seams and damage to the facing should be sealed with an FSK, PSK or foil tape or glass fabric and mastic prior to system startup.
- Pressure sensitive tapes should be a minimum of 3" (76 mm) wide and be applied with moving pressure using an appropriate sealing tool.
- Closure systems should have a 25/50 F.H.C. per UL 723.
- Unfaced Duct Wrap should be overlapped with a minimum of 2" (51 mm) and secured with a wire or banding system. Care must be taken to avoid damaging the duct wrap. Refer to diagram for butt-joint method.

## INNOFLUE® FIRE RATED WALL/CEILING PENETRATION ASSEMBLY

InnoFlue® Single Wall Polypropylene Vent Systems can be used in areas that require a one or two hour fire rating per ASTM E-814, UL 1479 or ULC S115 when used with a listed passive fire protection system. Approved passive fire protection system manufacturers include PFP Partners and 3M. The Passive Fire Protection System Manufacturer's installation instructions should be followed at all times.

### PFP PARTNERS:

InnoFlue® 2" through 6" diameter single wall venting has been tested and listed with PFP Partners Passive Fire Stopping Products for a 2 hour fire rating.

### Passive Fire Protection Partners

1412 Derwent Way  
Delta BC, Canada V3M-6H9  
**Phone: (800) 810-1788**  
**Email: firestop@firesstop.com**

### SINGLE PENETRATIONS W/ PFP PARTNERS

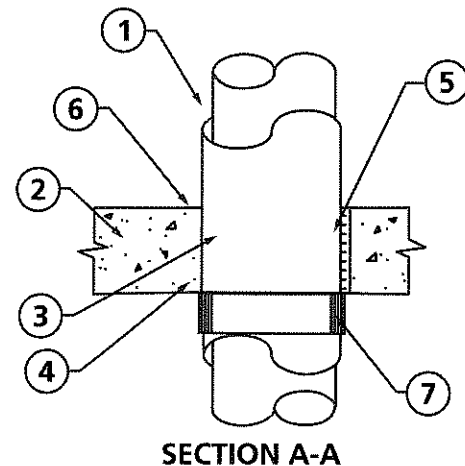
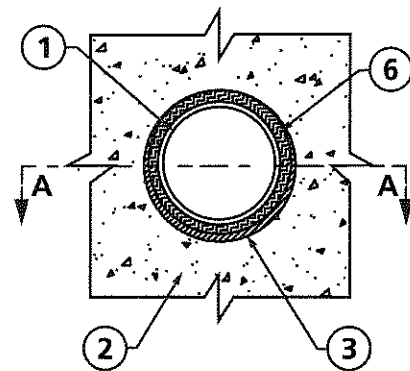
Horizontal (Floor/Ceiling)

Test Standards: ASTM E-814, UL 1479, ULC S115-M05

Test Furnace Internal Positive Pressure Differential – 50 Pa (0.2 in. of Water)

Penetrating Material & Size	Max. Hole Size	Annular Space	Fire "F" Rating	Fire/Hose "FH" Rating	Temp Rating "FTH" Rating
InnoFlue® SW 2"–6" (O.D.)	8" (203mm)	1/8 – 1" (3 – 25mm)	Up to 2 Hr	Up to 2 Hr	Up to 2 Hr

①	<b>Penetrating Item</b>	InnoFlue® SW 2" through 6" vent lengths can be Centered or offset in hole, see table above. Single penetrations only, maximum hole size not to exceed table above.
②	<b>Floor/Wall Assembly</b>	Code conforming 2 hour rated floor or wall assembly having a min. nominal 4 1/2" (115mm) thick lightweight or normal weight concrete or hollow-core concrete. Wall may also be constructed of nominal 8" (203mm) thick concrete blocks (filled or unfilled).
③	<b>InnoFlue Covering Material</b>	Friendly Feel® Duct Wrap with ECOSE® Technology, 3M™ Fire Barrier Plenum Wrap 5A+, Unifrax FyreWrap® 0.5 Plenum Insulation or equivalent fiberglass insulation with foil – Single layer of 1/2" (12 mm) thick fiberglass insulation installed as per third party agencies Flame Spread and Smoke Development listed installation instructions. Insulation to be tightly butted to top and bottom of collar for both floor or wall assemblies. All seams longitudinal and transverse joints to be sealed with min 2 inch (51mm) wide aluminum foil tape.
④	<b>Intumescent Strip</b>	PFP Partners – WS1 Wrap Strip* – Nominal 1/8" (3 mm) thick intumescent material supplied in 2" (50mm) wide strips. Min 1 layer of strip to be wrapped tightly round InnoFlue and fastened in place with aluminum foil tape. Wrap strip to be flush with bottom surface of floor or both sides of the wall.
⑤	<b>Mineral Wool Insulation</b>	Filler material, mineral rock wool insulation with a minimum density of 4-6 PCF (68 kg/m3) compressed a minimum of 25% into the annular space at a minimum depth of 2" (51mm) on each side of the floor or wall assembly. Recess filler material 1/2" (13mm) for sealant placement, not required for wall assemblies. For walls, filler material to be flush with both sides of the assembly.
⑥	<b>Fire Rated Sealant</b>	PFP Partners – Firestop 3600EX*, 4100NS*, 4100SL*, or 4800DW* installed at a minimum thickness of 1/2" (13mm) within the annulus on top surface of floor assembly, not required for wall assemblies. On 0 – 1/4" (0 – 6 mm) annular spaces, a 1/2" (13 mm) diameter fillet bead must be placed around InnoFlue® Vent System.
⑦	<b>Plastic Pipe Collar</b>	PFP Partners – Plastic Pipe Collar* (PPC) specifically sized for diameter of InnoFlue. PPC secured to floor/ceiling assembly or wall assembly using 1/4" (6mm) diameter by 1-1/4" (32mm) long steel masonry anchors over fender washers. For walls, the system shall be symmetrical, with PPC installed on each side of the assembly and fixed in the manner as described for floor penetrations.



**3M™:**

InnoFlue® 2" through 4" diameters can be used with 3M™ Fire Protection Products to achieve 1 or 2 hr fire rating. Engineering Judgments for 2 hour fire ratings are available from 3M™ for 6" through 12" diameter InnoFlue® Single Wall Vent Systems. Contact Centrotherm or 3M™ for more information on commercial diameter fire ratings.

**Ryan D. Fenstermaker**  
**3M Building & Commercial Services /**  
**Fire Protection Products**  
**Mobile: 732.921.1503 | Fax: 732.432.0616**  
**rfenstermaker@mmm.com**

**SINGLE PENETRATIONS W/ 3M™**

Horizontal (Floor/Ceiling)

Test Standards: ASTM E- 814, UL 1479, ULC S115-M05

Penetrating Material & Size	Max. Hole Size	Fire "F" Rating	Fire/Hose "FH" Rating	Temp Rating "FTH" Rating
InnoFlue® SW 2"-12" (O.D.)	14" (356mm)	Up to 2 Hr	Up to 2 Hr	Up to 2 Hr

①	<b>Penetrating Item</b>	InnoFlue® SW 2" through 12" vent lengths can be Centered or offset in hole, see table above. Single penetrations only, maximum hole size not to exceed table above.
②	<b>Floor/Wall Assembly</b>	Code conforming 2 hour rated floor or wall assembly of concrete or gypsum.
③	<b>InnoFlue Covering Material</b>	3M™ Fire Barrier Plenum Wrap 5A+ – Single layer of 1/2" (12 mm) thick fiberglass insulation installed per third party agencies Flame Spread and Smoke Development listed installation instructions. Insulation to be tightly butted to top and bottom of collar for both floor or wall assemblies. All seams longitudinal and transverse joints to be sealed with min 2 in. (51mm) wide aluminum foil tape.
④	<b>Intumescent Strip</b>	3M™ – FS-195+ Wrap Strips: Tightly wrap the proper number of FS-195+ Wrap Strips around InnoFlue foil side out. Secure with tape or tie wire. Make sure FS-195+ Wrap Strip or PPD butts securely against the concrete with a 3/16" minimum overlap over the edge of the penetrating opening. When using more than one wrap, stagger the butted seams.
⑤	<b>Plastic Pipe Collar</b>	3M™ – RC-1 Restricting Collar: Remove enough RC-1 Restricting Collar to make one wrap around the applied FS-195+ Wrap Strip with a minimum 1" overlap. Bend the mounting tabs away from the pipe at right angles, flush with the bottom floor surface. Warning: Edges of RC-1 Restricting Collar are sharp. Handle with care. Tightly secure the RC-1 Restricting Collar around the pipe with a steel hose clamp centered on the RC-1 Restricting Collar assembly. Two bands of 16 gauge steel tie wire placed 1/2 from the ends of the RC-1 Restricting Collar assembly may be used instead of the hose clamp. Secure the collar to the slab with 1/4" x 1 1/2" masonry fasteners. Use 1 1/4" diameter fender washers on the mounting tabs.
⑥	<b>Fire Rated Sealant</b>	3M™ – CP 25WB+ Caulk: Seal the system with 1/4" bead of 3M™ Fire Barrier CP 25WB+ Caulk or Moldable Putty+ at the concrete and collar assembly interface.

