

Fume Exhaust Duct

FyreWrap® EZ 1.5 Duct Insulation – Single-Layer System

Introduction

Unifrax's FyreWrap® EZ 1.5 Duct Insulation is a single-layer flexible enclosure for 1- and 2-hour fire-rated commercial kitchen grease ducts and hazardous exhaust ducts including chemical fume ducts. This slim, compact design offers the lightest system available and results in significant weight, space and labor savings when compared to traditional fire-rated shafts or competitive wrap systems. FyreWrap EZ 1.5 provides the following features:

- Zero clearance to combustibles at all locations on wrap
- 1- and 2-hour fire endurance rating
- Alternate to fire-rated shaft enclosure
- Saves weight, space, labor
- Thinnest, lightest system available
- High-temperature, biosoluble insulation

Product Components

Core Material: FyreWrap EZ 1.5 incorporates Insulfrax® Thermal Insulation as its core material. Insulfrax is a high-temperature insulation made from a calcia, magnesnia, silica chemistry designed to enhance biosolubility. It provides excellent insulation in a noncombustible blanket product form.

Encapsulating Material: The core insulation blanket is completely encapsulated in an aluminum foil fiberglass reinforced scrim covering. This scrim provides additional handling strength as well as protection from grease and moisture absorption and tearing.

Typical System Properties

Intertek Laboratories (OPL) Listed

ICC Evaluation Service

New York City MEA Approval

California State Fire Marshal Listing

UL 1978 Internal Grease Duct Test (June 2002)

ASTM E-119 Full Scale Engulfment Test

ASTM E-814 Through-Penetration Firestop Test

ASTM E-84/UL 723, UL File R14514

Flame Spread Rating:

Smoke Developed Rating:

ASTM E-136 Non-combustibility Test

ASTM C-518 Durability Test

File 16341-4, Design Nos. GD 572 F, GD 573 F, GD 600F, CFD 510 F, Large Duct Size: 52" x 52" (UL1978), 70" x 70" (ASTM E-814)

Legacy Report NER-609

97-04-M

No: 2440-1478:100

Zero Clearance to Combustibles at All Locations on Wrap

2-hour Fire Endurance Rating

F-Rating = 2 hrs.; T-Rating = 2 hrs

Unfaced Blanket	Encapsulated
Zero	<25
Zero	<50
Passes	
Passes	



FyreWrap® EZ 1.5 Duct Insulation

Typical Product Parameters

Thickness	1.5"
Density	6pcf
Standard Product Form	Scrim Encapsulated
Product Availability	24"w x 25LF 48"w x 25LF



Data are average results of tests conducted under standard procedures and are subject to variation. Results should not be used for specification purposes.

Complies with : NFPA 96 (up through 2001 Edition), 90A, 90B, 101; 2000 and 2003 International Mechanical Code (IMC), 2000 and 2003 International Building Codes (IBC), BOCA National Building Code/1999, 1999 Standard Building Code, 1997 Standard Mechanical Code, and 1997 Uniform Building Code (UBC).



Installation

The FyreWrap EZ 1.5 Duct Insulation consists of a single-layer system applied directly on to the duct surface. Only encapsulated or scrim faced one side blanket should be utilized to ensure the outer surface of the insulation is protected. The insulation system may be installed at zero clearance to combustibles at all locations on the wrap, at material overlaps, and in the field between overlaps. Install insulation with a 3" minimum overlap on all joints. Seal all cut edges with aluminum foil tape. The longitudinal overlap of adjacent blanket may be installed using the following three techniques. See Figure 1 for details.

Telescoping Overlap Wrap Technique:

This wrap technique is the most common method of installing FyreWrap EZ 1.5 where each adjacent blanket has one edge exposed and one edge covered by the next blanket.

Checkerboard Overlap Wrap Technique:

This installation uses a 3" overlap pattern with both edges of each alternating blanket covered by each adjacent blanket whose edges are exposed. The overlap joints in alternate layers of blanket resemble a checkerboard pattern in the completed installation. This technique is often utilized when a small section of duct wrap must be repaired.

Butt Splice with Collar Wrap Technique:

This wrap technique permits installation with the blanket edges butted together and a 6" wide collar of blanket that is centered over the butt splice, overlapping each adjacent blanket 3". The collar can be field fabricated from FyreWrap EZ 1.5 rolls or purchased separately.

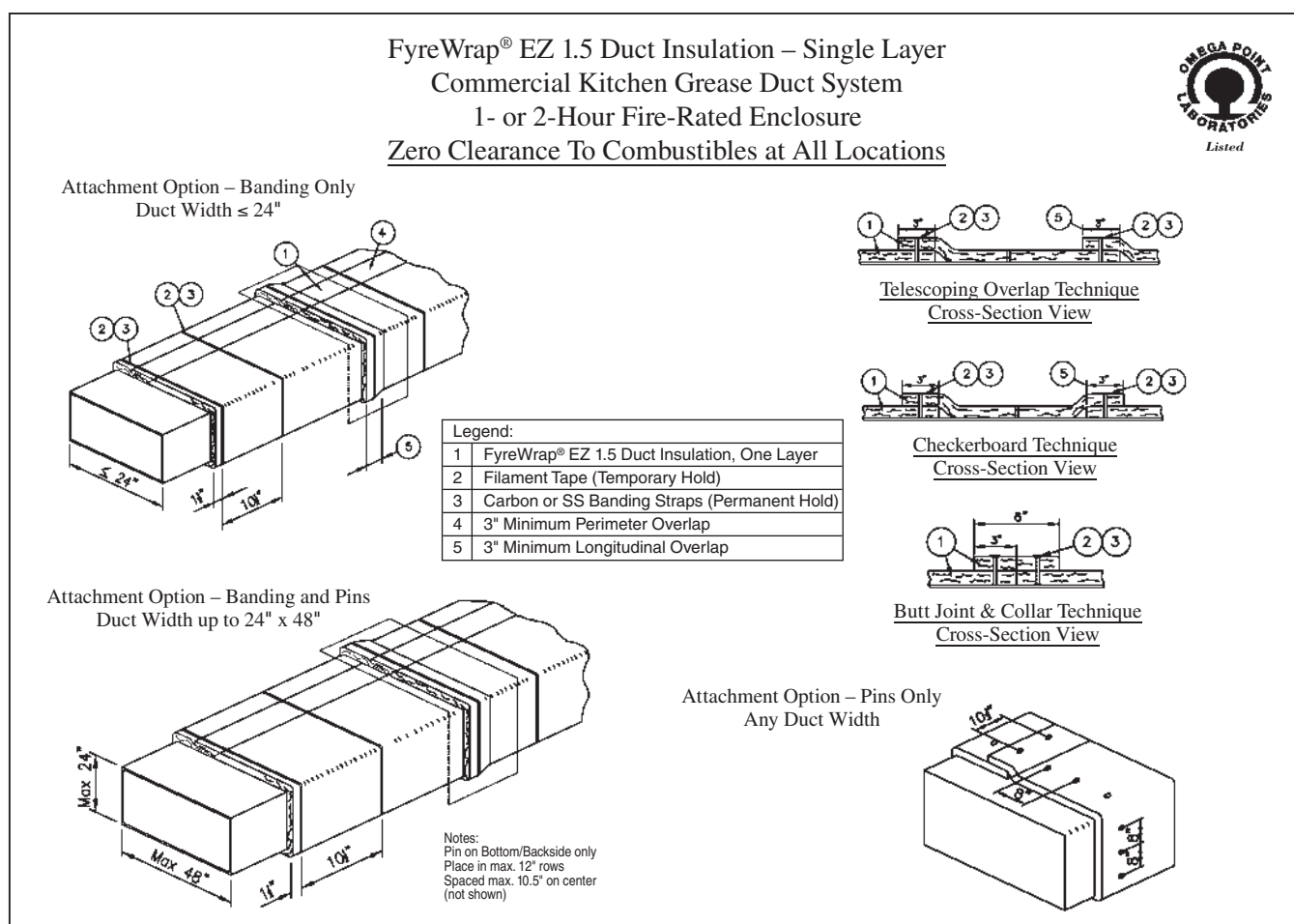


Figure 1. FyreWrap EZ 1.5 Single-Layer Installation Techniques

FyreWrap

Butt Splice with Pins Wrap Technique:

This wrap technique permits the blanket to be installed with 2" compression joints at all material seams and no material overlaps. This technique is allowed only when pins are used on all sides of the duct to attach the blanket. Pins shall be spaced in 8" rows and on 8" centers. The compression joint is made by overlapping the blanket a minimum two inches. The ends of the blanket are then raised to align the edges, then pushed down together so the ends of the two pieces are under compression and butted together. See Figure 2 for additional details.

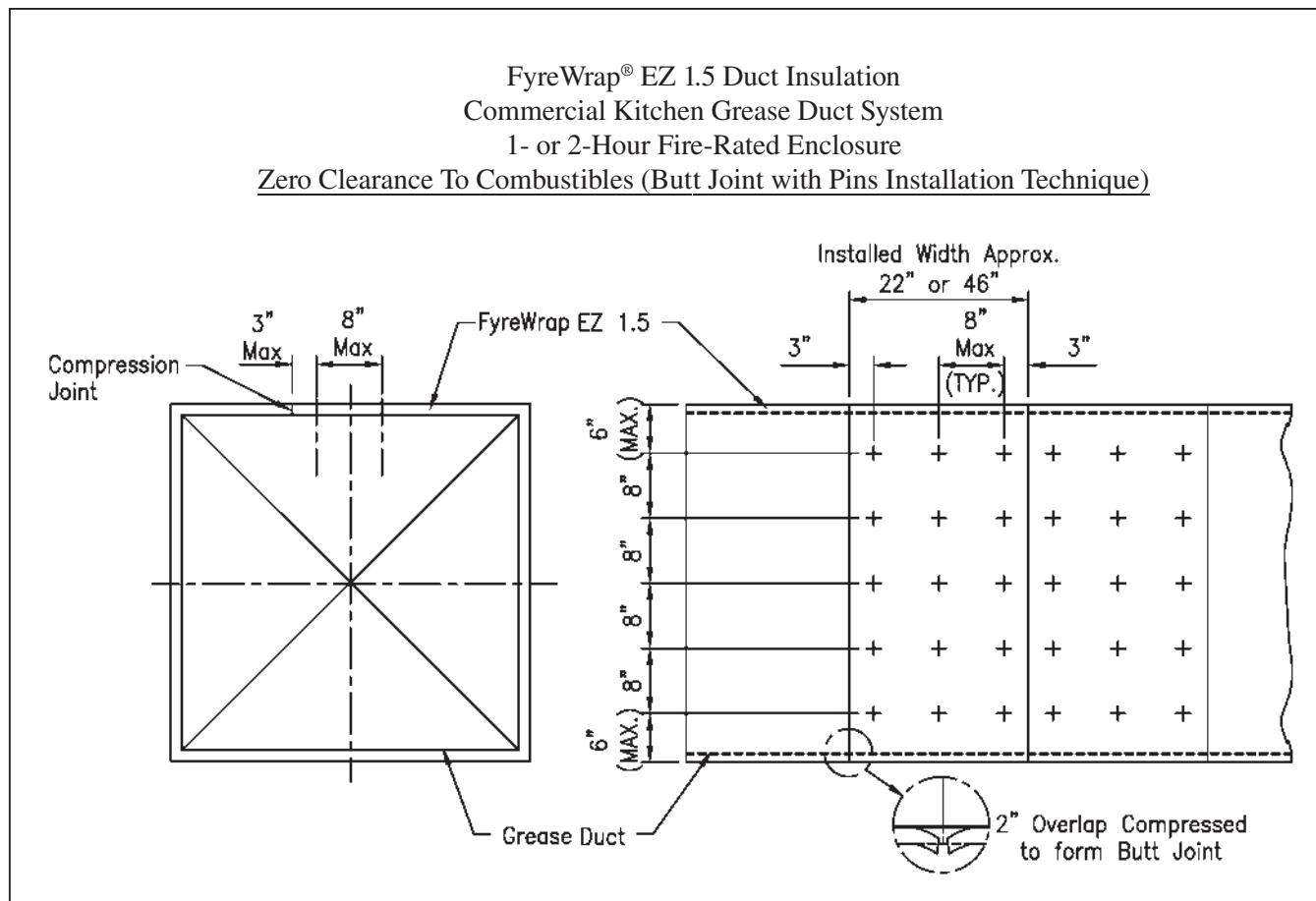


Figure 2. FyreWrap EZ 1.5 Butt Splice with Pins Wrap Technique

Vertical Duct Runs

For vertical duct runs, insulation may be applied to the duct in a continuous length parallel to the vertical length of the duct as opposed to wrapping around the duct. All overlaps shall be maintained at a minimum 3" and are to occur a minimum 6" from any corner of the duct. Pins spaced a maximum 8" on center are to be placed at the centerline of all vertically oriented overlaps. Pins may be pre-welded or cup head style pins. See Figure 3 for details.

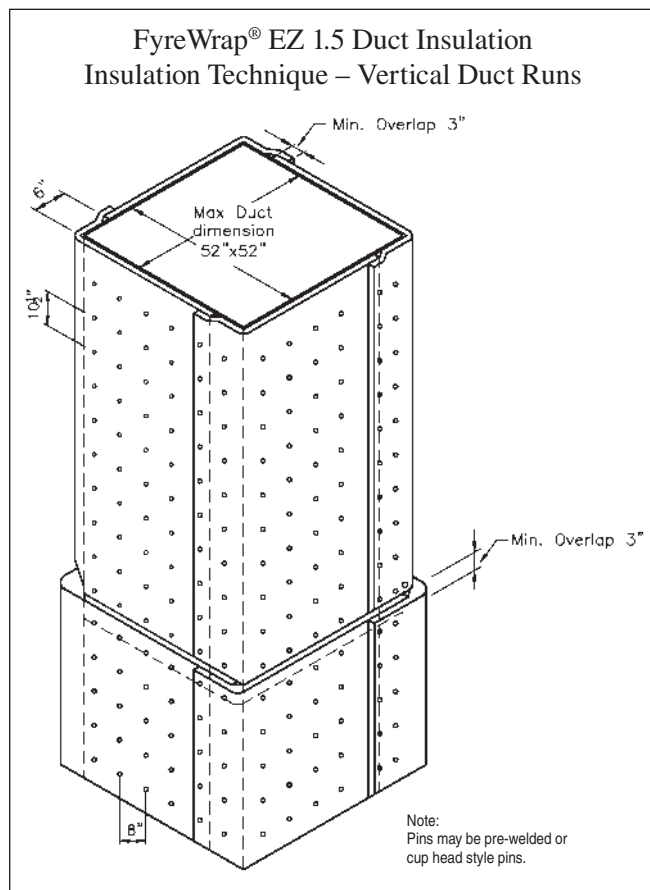


Figure 3. Optional Installation Technique – Vertical Duct Runs

Attachment Options

Three attachment options are available for installers. Choices are limited by the duct width dimension. Details on each option are provided below.

Banding Only: For Duct Widths 24" or Less

To temporarily secure the insulation, optional use of filament tape is permitted. Place carbon steel or stainless steel bands (min. ½" wide, nom. 0.015" thick) over joints and within the field around the wrap. Locate bands 1½" from each edge of the blanket, centered on the overlap, and on 10½" centers. Tighten banding to firmly hold the wrap system in place but not so tight as to cut or damage the blanket. Pins are NOT required when this banding technique is used.

Banding and Pins: For Duct Widths Up to 24" x 48"

Weld 12-gauge steel insulation pins to the underside of horizontal runs and backside of vertical runs. Place pins at maximum 12" rows and on maximum 10½" centers. To temporarily secure the insulation, optional use of filament tape is permitted. Impale FyreWrap EZ 1.5 over the pins and hold in place with 2½" square galvanized steel speed clips (washers). Turn down or cut off exposed ends of pins to eliminate safety hazards. Locate carbon steel or stainless steel bands (min. ½" wide, nom. 0.015" thick) 1½" from each edge of the blanket, centered on the overlap, and on 10½" centers. Tighten banding to firmly hold the wrap system in place but not so tight as to cut or damage the blanket. Cup head style pins are also permitted and shall be located at the same spacing as pre-welded pins.

Pins Only: For Any Duct Width

Weld 12-gauge steel insulation pins on all sides of the duct. Place insulation pins in rows (perpendicular to the length of the duct) spaced maximum 10½" on center. Pins in each row are maximum 6" from each duct edge and maximum 8" on center. Locate insulation overlaps so they are centered on the pins. Impale FyreWrap EZ 1.5 over the pins and hold in place with 2½" square galvanized steel speed clips (washers) to keep the system from sagging. Turn down or cut off exposed ends of pins to eliminate safety hazards. Cup head style pins are also permitted and shall be located at the same spacing as pre-welded pins.

Attachment Options (Summary Chart):

Duct Dimension	Banding Only	Banding & Pins (Pins on Bottom)	Pins Only (All Four Sides)
Width ≤ 24"	●	●	●
Width Up To 48"		●	●
Width > 48"			●

Access Door

Field fabricated and prefabricated grease duct access doors are permitted for use with FyreWrap EZ 1.5 Duct Insulation. Installation details are provided below and in Figure 4.

Field fabricated-access doors are protected with two layers of FyreWrap EZ 1.5 Duct Insulation. Cut away the one layer of FyreWrap EZ 1.5 already installed and covering the duct to a dimension that matches the door opening to be used. Mark and cut a clean-out access opening in the duct. Weld $\frac{1}{4}$ inch diameter threaded rod to each corner on the access door opening. Cover with hollow steel tubes (optional) for easy removal of blanket. Cut a 16 gauge cover plate with dimensions two inches larger than the opening. Drill holes in the door to match the rod pattern. Use a gasket of 0.5" thick unfaced FyreWrap or ceramic fiber blanket between the duct and the access door cover. Install the cover over the threaded rod overlapping the opening 1" on all sides. Weld at least four steel insulation pins to the outside of the door cover panel, approximately 1" from each corner. Cut a piece of FyreWrap EZ 1.5 that matches the door opening size and install over pins to fit within the insulation area cut away. Cut an additional piece of FyreWrap EZ 1.5 with perimeter dimensions that extend 1" beyond the layer below. Install over the insulation pins. Throughout the installation process, seal all cut edges with aluminum foil tape. Secure with washers and bend over excess pin lengths to eliminate safety hazards. Place washers on threaded rod and secure with nuts. Do not install banding over this area.

Prefabricated – Ductmate Ultimate and Ductmate F2-HT prefabricated access doors are permitted and must be installed in accordance with Ductmate Industries, Inc. installation instructions and the applicable code. The first layer of FyreWrap EZ 1.5 is cut to the size of the door. An additional layer is required and is sized to create an overlap of 1" beyond the lower layer. All edges of insulation blanket must be protected with aluminum foil tape. A No. 16 gauge outer plate the same dimension as the outer layer of insulation blanket is held in place over the insulation using threaded rod and wing nuts. The outer plate is provided with the Ultimate door, but must be site-fabricated for the F2-HT door system. Access doors are available from Ductmate Industries, Inc. Contact www.ductmate.com or 1-800-245-3188 for additional information or local distributors. Ask for the Access Door Product Line manager.

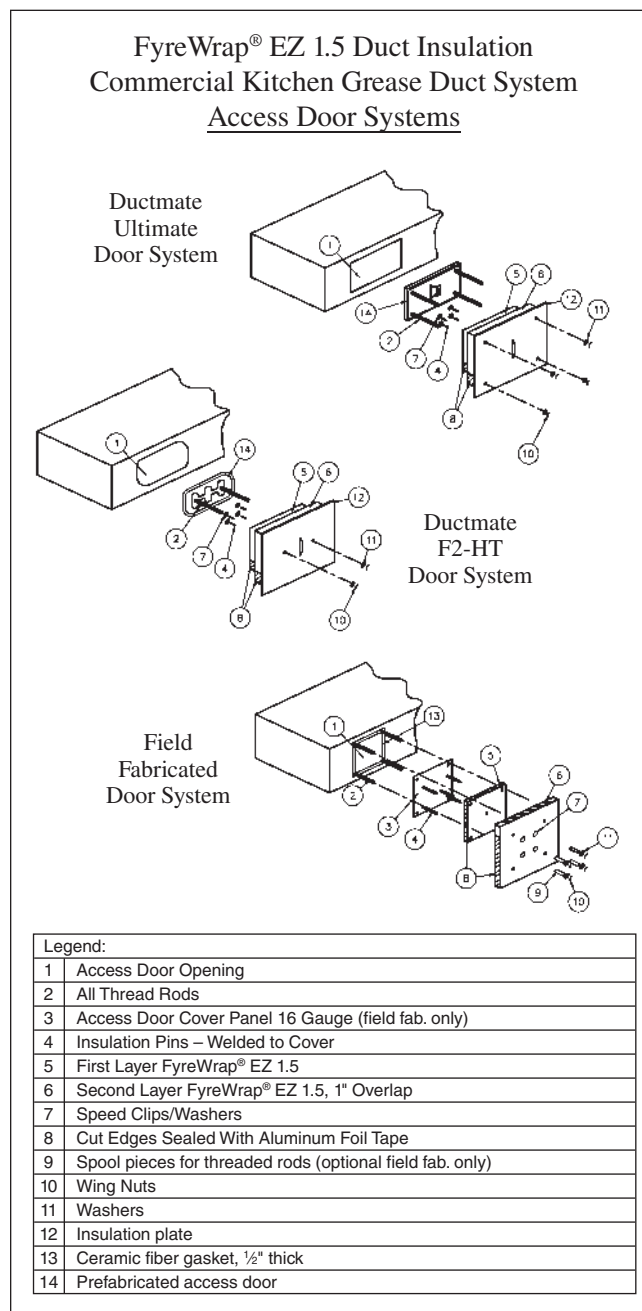


Figure 4. Access Door Installation

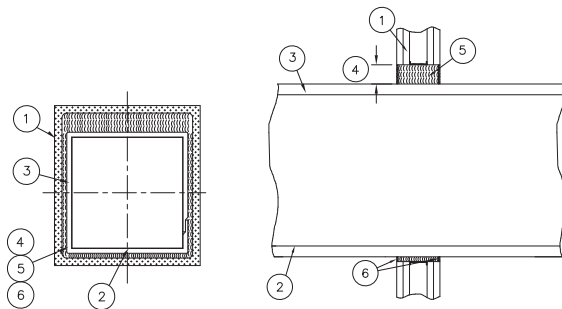
Duct Support

Horizontal duct support systems are not required to be insulated (wrapped) when constructed using a minimum 0.5" diameter uninsulated all-thread steel rod and 2" x 2" x 0.25" uninsulated steel angle spaced a maximum 120" on center along the length of the duct. A minimum clearance of 3" is required between the protected duct and the steel rod. For all other duct support configurations, a single layer of FyreWrap EZ 1.5 Duct Insulation is required on all components. Utilize a minimum 3" overlap (approximately a 1/4" turn) on all joints.

Firestop Systems

Refer to Figures 5, 6 and 7 for details. Contact Unifrax Application Engineering Group at 716-278-3888 or visit www.unifrax.com for the latest information on available firestop systems.

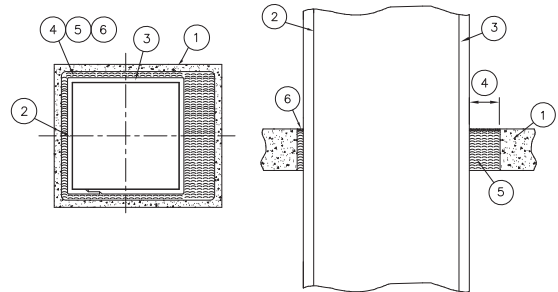
FyreWrap® EZ 1.5 Duct Insulation Through Penetration Firestop System Intertek (OPL) Design No. FS 589 W F-Rating = 2 hours, T-Rating = 2 hours



Legend:	
1	Gypsum Wallboard Assembly, 2 hr. rated
2	Grease Duct, 16 gauge, max. 50" x 50"
3	FyreWrap® EZ 1.5 Duct Insulation, One Layer
4	Annular Space - min. 3/4" to max. 3"
5	Mineral Wool (4 pcf), compressed 25% or Unfaced FyreWrap® EZ 1.5 blanket
6	Tremco Fyre-Sill Non-Sag, 1/4"-1/2" depth, both sides of wall and overlapped 1/2" onto duct and wall surfaces

Figure 5. Firestop Installation

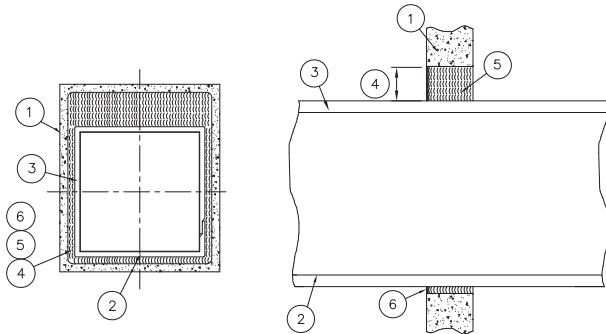
FyreWrap® EZ 1.5 Duct Insulation Through Penetration Firestop System Intertek (OPL) Design Nos. FS 590 F F-Rating = 2 hours, T-Rating = 2 hours



Legend:	
1	Concrete Floor Assembly, 4 1/2" depth
2	Grease Duct, 16 gauge, max. 50" x 50"
3	FyreWrap® EZ 1.5 Duct Insulation, One Layer
4	Annular Space - 1" to 5"
5	Mineral Wool (4 pcf), compressed 25% or Unfaced FyreWrap® EZ 1.5 blanket
6	Tremco Fyre-Sill Non-Sag, 3/8" depth, overlap onto concrete and duct insulation a nom. 1/2"

Figure 6. Firestop Installation

**FyreWrap® EZ 1.5 Duct Insulation
Through Penetration Firestop System
Intertek (OPL) Design No. FS 591 W
F-Rating = 2 hours, T-Rating = 2 hours**

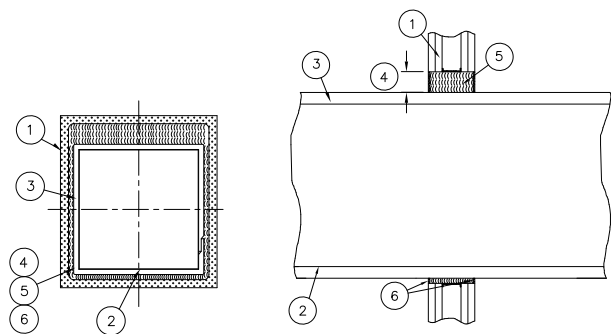


Legend:

- | | |
|---|--|
| 1 | Concrete or CMU block wall assembly, 5½" |
| 2 | Grease Duct, 16 gauge, max. 50" x 50" |
| 3 | FyreWrap® EZ 1.5 Duct Insulation, One Layer |
| 4 | Annular Space – ¾" to 3" |
| 5 | Mineral Wool (4 pcf), compressed 25% or Unfaced FyreWrap® EZ 1.5 blanket |
| 6 | Tremco Fyre-Sill Non-Sag, ¾" depth, overlap onto wall surface and duct insulation a nom. ½". |

Figure 7. Firestop Installation

**FyreWrap® EZ 1.5 Duct Insulation
Through Penetration Firestop System
Intertek (OPL) Design No. FS 121W
F-Rating = 2 hours, T-Rating = 2 hours**

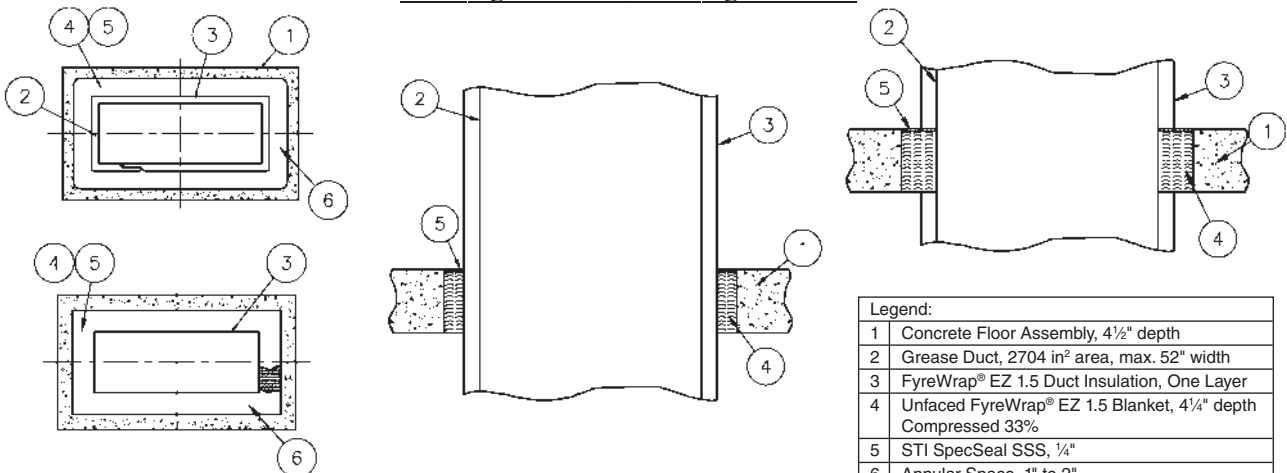


Legend:

- | | |
|---|---|
| 1 | Gypsum Wallboard Assembly, 2 hr. rated |
| 2 | Grease Duct, 16 gauge, max. 70" x 70" |
| 3 | FyreWrap® EZ 1.5 Duct Insulation, One Layer |
| 4 | Annular Space – 1¼" to max. 4¾" |
| 5 | Unfaced FyreWrap® EZ 1.5 blanket compressed 48%. |
| 6 | Specified Technologies spec seal SSS100 intumescent firestop sealant, ⅝" nominal depth, both sides of wall and overlapped ½" onto duct and wall surfaces. |

Figure 8. Firestop Installation

**FyreWrap® EZ 1.5 Duct Insulation
Through Penetration Firestop System
Intertek Design No. FS 600 F
F-Rating = 2 hours, T-Rating = 2 hours**



Legend:

- | | |
|---|--|
| 1 | Concrete Floor Assembly, 4½" depth |
| 2 | Grease Duct, 2704 in² area, max. 52" width |
| 3 | FyreWrap® EZ 1.5 Duct Insulation, One Layer |
| 4 | Unfaced FyreWrap® EZ 1.5 Blanket, 4¼" depth Compressed 33% |
| 5 | STI SpecSeal SSS, ¼" |
| 6 | Annular Space, 1" to 2" |

Figure 9. Firestop Installation

FyreWrap®

Other Fire Protection Products and Applications

Unifrax offers many UL-listed Fiberfrax® and FyreWrap® product forms and FyreWrap fire protection materials for passive fire protection applications, such as:

Product	UL File Number
FyreWrap® Duct Insulation	R14514
Insulfrax® 1800 Blanket	R14514
Fiberfrax® XFP® – Expanding Fyre Paper	R15435
Fiberfrax® Durablanket® Ceramic Fiber Blanket	R14514
Fiberfrax® Duraboard® Ceramic Fiber Board LD	E75289
Fiberfrax® Ceramic Fiber Papers (110/440)	E75289
Fiberfrax® Ceramic Fiber Papers (970)	MH7030
Fiberfrax® Lo-Con™ Felt	MH7030
Fiberfrax® Moist Pak-D®	E75289

Unifrax has a wide range of FyreWrap fire protection materials available to provide passive fire protection solutions in a variety of applications in the commercial building, industrial facility and transportation industries.

For additional information about product performance or to identify the recommended product for your fire protection application, please contact the Unifrax Application Engineering Group at 716-278-3888.

These products offer solutions in applications such as:

- Grease, HVAC Ducts
- Cable Trays, Conduit
- Control System Covers
- Above Ground Storage Tanks
- Marine Bulkheads, Decks
- Structural Steel
- Construction Joints
- Curtain Walls/Safing
- Circuit Protection
- Railroad Tank Cars
- Transit Cars
- Ships
- Expansion Joints
- Fire Door Seals
- Chimney Liners
- Ceiling Air Diffusers
- Hazardous Material Storage Containers





APPLIED FIRE PROTECTION

UNIFRAX CORPORATION
New Carlisle, IN.

Listing # 16341-4

FYREWAP® EZ 1.5
Maximum Density: 6 pcf

Tested per:
UL 1978 (June 2002) – Sec. 14 & 15 – Passed
ASTM E 119 – Fire Resistance Rating: 2 hr.
ASTM E 814 – T-Rating: 2 hr., F-Rating: 2 hr.
AC 101 (Engulfment) – Passed

Data are average results of tests conducted under standard procedures and are subject to variation. Results should not be used for specification purposes.

Refer to the product Material Safety Data Sheet (MSDS) for recommended work practices and other product safety information.

Form C-1439
Effective 9/07
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Printed in USA
Page 8 of 8

The following are registered trademarks of Unifrax: FyreWrap, Insulfrax, XFP, Lo-Con, Moist Pak-D, Fiberfrax, Durablanket, and Duraboard.

The test data shown are average results of tests conducted under standard procedures and are subject to variation. Results should not be used for specification purposes.

Product Information Sheets are periodically updated by Unifrax. Before relying on any data or other information in this Product Information Sheet, you should confirm that it is still current and has not been superseded. A Product Information Sheet that has been superseded may contain incorrect, obsolete and/or irrelevant data and other information.

FyreWrap®

Unifrax I LLC

Corporate Headquarters
2351 Whirlpool Street
Niagara Falls, New York 14305-2413
Telephone: 716-278-3800
Telefax: 716-278-3900
Internet: www.unifrax.com
Email: info@unifrax.com

Shop Drawing Submittal Review

Transmitted To: Cannon Design

Date: February 7, 2017

Attention: stl-cac@cannondesign.com

Contact Person / WTA Field Inspector:
Patrick Garner

Project Name: Webster University-**ISB**

Reviewed by: Mike Nolte

Project No. WT 14127.01

☐

UPS

☐

Courier

☒

Email

Copies	No.	Description
1 PDF	232500M01	(Submittal No.'s:) (R&B CxSRC)
		(Cannon #232500-001) - (Paric #15051-0453) - (WES #607)
		➤ Mechanical Insulation Product Data

***Remarks: See Review Comments on PAGE 2.**

c: Kelvin Patel
Kpatel@cannondesign.com

☐ Furnish as Submitted

☒ ***Furnish as Noted**

☐ Rejected

☐ Revise & Resubmit

☐ Reviewed

☐

Corrections or comments made on shop drawings during this review do not relieve contractor from compliance with requirements of drawings and specifications. This check is only for review of general conformance with the design concept of project and general compliance with information given in contract documents. Contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner.

Shop Drawing Submittal Review

***Submittal Review Comments**

1. Contractor responsible to verify that all adhesives, sealants and sealant primers meet the requirements of LEED Credit IEQ 4.1. Provide Product Data for Credit IEQ 4.1 for all adhesives, sealants and sealant primers, including printed statement of VOC content. The submittal does not appear to contain this information for all sealants submitted.
2. Provide aluminum jacketing on all exterior piping per Specification 232500-2.2-D-5: For insulation installed outdoors and insulation subject to water damage, provide an additional **0.016 inch** aluminum jacket with lock seam, longitudinal joint and gasketed bands for butted joints as required for a watertight installation. Jacket shall be complete with waterproof, laminated paper lining and shall be manufactured by ITW Insulation System or RPR Products.

14127.01 - 232500 M01
MTN TO REVIEW -
01/18/17

From: STL-CAC <STL-CAC@CANNONDESIGN.COM>
To: 'Patrick Garner' <pgarner@wmtao.com>, "WTASHOP (WTASHOP@wmtao.com)"
<WTA...
CC: "Patel, Kelvin" <kpatel@CANNONDESIGN.COM>
Date: 1/18/2017 3:01 PM
Subject: Webster ISB - 23 2500-001
Attachments: 232500-001 Mechanical Insulation Product Data.pdf

Attached for review.

Melissa Pirtle

[cid:image001.png@01D2719B.8CD710A0]
1100 Clark Ave
St. Louis, Missouri 63102
T 314.425.8797
cannondesign.com

SUBMITTAL IDENTIFICATION SHEET

To be completed by Contractor/CM

PROJECT NAME	
ADDRESS	
NUMBER	
OWNER	
ARCHITECT / ENGINEER	
SUBMITTED BY	
CONTRACTOR / CM SUBMITTAL NO.	CANNON DESIGN SUBMITTAL NO.
DRAWING / DETAIL REFERENCE	SPECIFICATION SECTION / PARAGRAPH
MANUFACTURER / SUPPLIER	ITEM / PRODUCT ID
REQUIRED DATE	PRIORITY
CRITICAL	☐

To be completed by Reviewer

CANNON DESIGN SUBMITTAL NUMBER
RECEIVED DATE

- ☐ **A. No Exceptions Taken**
No further review of submittal is required.
- ☐ **B. Make Corrections Noted**
Incorporate corrections in work;
resubmission is not required.
- ☐ **C. Revise and Resubmit**
Revise as noted, and resubmit for review.
- ☐ **D. Rejected**
Submittal is not in compliance with Contract Documents;
provide new submittal.
- ☐ **E. For Record / Information Only**
Submittal was reviewed for Record / Information
purposes only.
- ☐ **F. Not Required for Review**
Submittal is not required by Contract Documents
and has not been reviewed.

Review is for conformance with the design concept of this project and for general compliance with contract documents. Contractor is responsible for quantities, dimensions and compliance with contract documents and for information that pertains to fabrication processes, construction techniques and coordination of this work with all trades which will be affected thereby. This review is null and void if submittal deviates from contract documents and does not indicate or note deviations.

ITEM BEING SUBMITTED (check only one)

- ☐ Shop Drawings ☐ Certification / Qualifications ☐ Coordination Drawing
☐ Samples ☐ Record Documents ☐ Calculations
 (_____ copies) ☐ Product Data ☐ Schedules
☐ LEED Submittal ☐ O&M Manuals
☐ Other

ITEM BEING SUBMITTED FOR (check only one)

- ☐ Action ☐ Information Only ☐ Record

REMARKS OR DEVIATIONS

CONTRACTOR / CM CERTIFICATION
(SUBMITTALS NOT CERTIFIED WILL BE RETURNED WITHOUT REVIEW)



PARIC CORPORATION
SUBMITTAL STAMP

THIS SHOP DRAWING HAS BEEN REVIEWED BY PARIC CORPORATION

Subcontractor remains responsible for dimensions, quantities, coordination with other trades and compliance with contract documents.

Ry:

By:
Devin D. Gates

REVIEWED BY	DATE

A/E COMMENTS

- ☐
- See attached sheet(s) for additional comments

REVIEWED BY	DATE



77 Westport Plaza
Suite 250
St. Louis, MO 63146

TRANSMITTAL

No. 15051-0453

Paric Corporation

PROJECT: 15051-Webster University Interdisciplinary Science Building

DATE: 01/17/2017

TO: Cannon Design
1100 Clark Ave
St Louis MO 63102

Fax;
314-241-2203

RE: Mechanical insulation product data

ATTN: Kelvin Patel

JOB: 15051

WE ARE SENDING:		SUBMITTED FOR:	ACTION TAKEN:
☐ Shop Drawings		☒ Approval	☐ Approved as Submitted
☐ Letter		☐ Your Use	☐ Approved as Noted
☐ Prints		☐ As Requested	☐ Returned After Loan
☐ Change Order		☐ Review and Comment	☐ Resubmit
☐ Plans			☐ Submit
☐ Samples		SENT VIA:	☐ Returned
☐ Specifications		☐ Attached	☐ Returned for Corrections
☒ Other: Product Data		☐ Separate Cover Via:	☒ Due Date: 08/26/2016

Item	Package	Code	Rev.	Copies	Date	Description	Status
Submittal		232500-001	1		01/17/2017	Mechanical insulation product data	Submitted

NOTES:

CC:

Signed: _____
Devin Gates



Mechanical

LETTER OF TRANSMITTAL

TO: Paric Corporation

77 West Port Plaza #250

St. Louis, MO 63146

ATTN: Jason Szachnieski, Devin Gates

DATE: 1/16/17

JOB #: 5768

RE: Webster ISB

We are sending you

☒

Shop drawings

☐ Attached

☐ Prints

☐ Under separate cover

☐ Plans

☐ Samples

☐ Specifications

☐ Copy of letter

☐ Change order

☐ Other

COPIES	DATE	NO.	DESCRIPTION
1	1/16/17	232500	Mechanical Insulation

These are transmitted as checked below:

☐ For signature

☐ For your use

☐ As requested

☐ For bids due

☒

For review and comment

☐ Approved as submitted

☐ Approved as noted

☐ Returned for corrections

☐ Prints returned after loan to us

☐ Other

☐ Resubmit

☒ Submit

☐ Return

☐ copies for approval

☐ copies for distribution

☐ corrected prints

Remarks: Please return by 1/24/17

COPY TO: file

SIGNED:

Alex Chambers



Mechanical

Webster University ISB Webster Groves, MO

Submittal #:

232500

Submittal Description:

Mechanical Insulation

Return By:

1/24/17

Please Note: To avoid scheduling delays and equipment release delays, please submit by the "Return By" date.

CHECKED BY:			
DESIGNER:		ENGINEER: ☒	
☒	NO EXCEPTION TAKEN	☐	MAKE CORRECTIONS NOTED
☐	SUBMIT SPECIFIED ITEM	☐	REVISE AND RESUBMIT
☐	REJECTED	☐	
Checking is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Any action shown is subject to the requirements of the plans and specifications. Equipment supplier is responsible for: dimensions which shall be confirmed and correlated at the job site; fabrication processes and techniques of construction; coordination of his work with that of all other trades; and satisfactory performance of his work.			
		Job #:	5768
		Date:	1/16/17
		By:	ARC



TDK Mechanical Services

745 Merus Ct.
Fenton, Missouri 63026
636-600-1662 phone / fax

SUBMITTAL TRANSMITTAL

DATE: December 21, 2016

COMPANY: Trenholm Mechanical Insulation
ATTENTION TO: Audra Trenholm
EMAIL: audra@trenholm-insulation.com

FROM: Dan Esker
PHONE: (636) 290-3733 cell / (636) 600-1662 office
EMAIL: dan@tdkmechanical.com

PROJECT: Webster University Interdisciplinary Science E
St. Louis, MO
DESCRIPTION: _____

Mechanical System	Insulation	Thickness	Occurs at
Heating Hot Water	Fiberglass ASJ Pipe Covering	1"	Indoors - Pipe Sizes Under 4"
Heating Hot Water	Fiberglass ASJ Pipe Covering	1-1/2"	Indoors - Pipe Sizes 4" & Over
Chilled Water	PolyISO Pipe Covering	1"	Indoors - All Pipe Sizes
Chilled Water Equipment	Elastomeric Sheet Rubber	1"	Indoors - Mechanical Room
PCS/PCR	PolyISO Pipe Covering	1"	Indoors - All Pipe Sizes
Glycol Piping	Elastomeric Pipe Covering	1"	Indoors - All Pipe Sizes
Refrigeration Piping	Elastomeric Pipe Covering	1"	Indoors - All Pipe Sizes
Medium Pressure Supply Air Duct	FSK Fiberglass Duct Wrap	1-1/2" / 0.75#	Indoors - Concealed
Fume Exhaust Duct	Unifrax Fyre Wrap	(1) layer of 1-1/2"	Indoors - Concealed
Kitchen Exhaust Hood Duct	Unifrax Fyre Wrap	(2) layers of 1-1/2"	Indoors - Concealed
Outside Air Duct	FSK Fiberglass Duct Board	1-1/2" / 3#	Indoors - Concealed
All Duct Work Systems	Foil Tape	4"	Indoors - Concealed
PVC Fittings	Proto PVC Fittings	N/A	At Fiberglass & PolyISO Pipe Covering Fittings
Vimasco Adhesive	WC-5	N/A	At Fiberglass Pipe Covering
Armaflex Adhesive	Armaflex 520 Adhesive	N/A	At Elastomeric Pipe Covering
PolyISO Adhesive	Childer's CP-10	N/A	At PolyISO Pipe Covering

NOTES/CLARIFICATIONS:

Low Pressure Round Supply Air Duct. FSK Fiberglass Duct Wrap. 1-1/2" / 0.75#. Indoors - Concealed