

LP ROUND DUCT

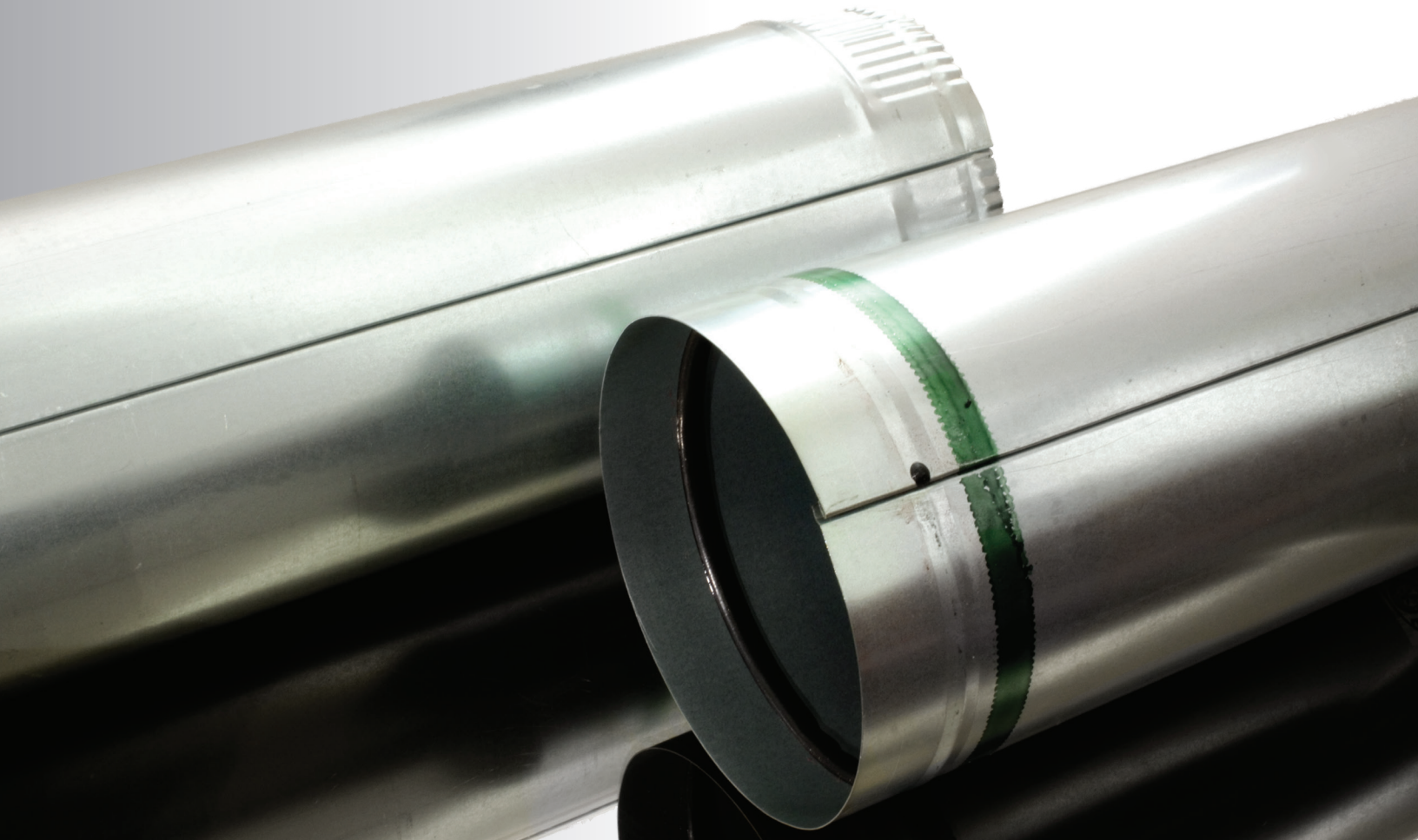
GREENSEAM[®]+

complete factory sealed snap-lock pipe system



Patent # 7,478,467 | Patent # 7,708,034
Additional Patents Pending

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Leakage Testing.....	4
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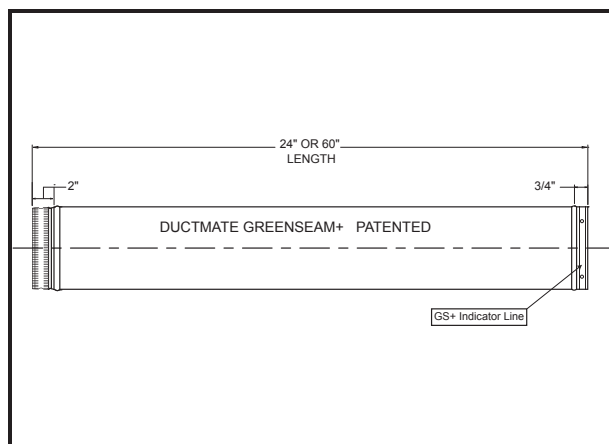
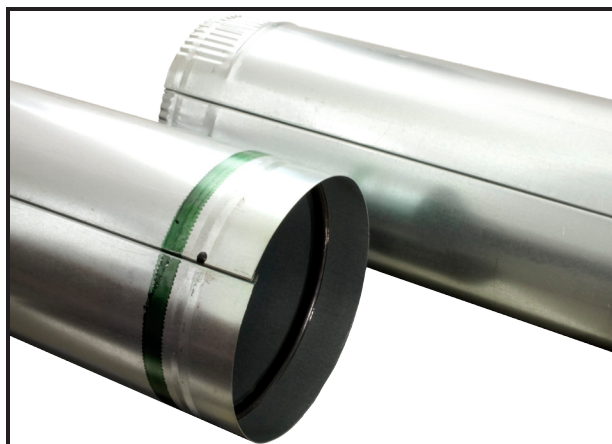


Submittal Package



GreenSeam® + Snap Lock Pipe

LP ROUND DUCT



Product Availability - 24" Lengths			
Size (Ød)	Gauge		
	28 Ga.	26 Ga.	24 Ga.
4"	Yes	Yes	-
5"	Yes	Yes	Yes
6"	Yes	Yes	Yes
7"	Yes	Yes	Yes
8"	Yes	Yes	Yes
9"	Yes	Yes	Yes
10"	Yes	Yes	Yes
12"	Yes	Yes	Yes
14"	-	Yes	Yes

Product Availability - 60" Lengths			
Size (Ød)	Gauge		
	28 Ga.	26 Ga.	24 Ga.
4"	Yes	Yes	-
5"	Yes	Yes	Yes
6"	Yes	Yes	Yes
7"	Yes	Yes	Yes
8"	Yes	Yes	Yes
9"	Yes	Yes	Yes
10"	Yes	Yes	Yes
12"	Yes	Yes	Yes
14"	-	Yes	Yes

Technical Data	
- Galvanized Steel (ASTM A653 and A924) - G-60 Galvanized Coating (ASTM A653 and ASTM A90) - Pressure Rating: -1" wg - +2" wg - Button Lock Pipe meets SMACNA RL-8	- Available in Specialty Metals: - Aluminum (ASTM B209 Alloy 3003 Temper H14) 304 Stainless Steel (ASTM A480 2B Finish) - Patent # 7,478,467, Patent # 7,708,034, and Patent # 7,992,904 Additional Patents Pending

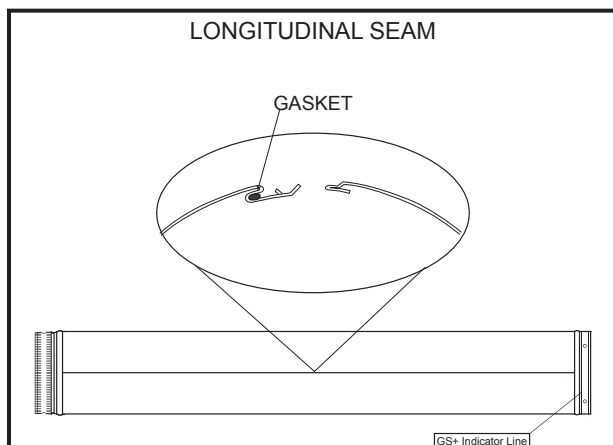
Part Number Schematic							
Example: 60SPBGP10GA26 = 60" long, 10" round GreenSeam®+ Snap Pipe in 26Ga. Galvanized Steel							
60 Pipe Length 24 - 2' 0" 60 - 5' 0" 48 - 4' 0" AL, S4 Only	SP Snap Pipe	B Lock Type B - Button	G GreenSeam	P PLUS	10 Pipe Diameter (Ød)	GA Material GA-Galvanized (Std.) AL - Aluminum, S4 - 304 S.S.	26 Gauge GA: 28, 26, 24 AL - 25 S4 - 26

Pre-Sealed Snap Lock Pipe

LP ROUND DUCT Gasket Specification

GREENSEAM⁺

complete factory sealed snap-lock pipe system



Longitudinal Gasket Composition

This material is made of butyl and E.P.D.M. rubbers, and proprietary co-polymer. It contains some process aids, antioxidants, fungicides, and adhesion promoters.

Test Data

Color: Black

Odor: None

Cold Temperature Flexibility: ASTM C765-73 — passes.

Water Resistance: ASTM D1056 — 0.01%

Shelf and Service Life: 20 years min.

Force to Compress: As measured when one cubic inch of $\frac{3}{8}$ " thick material is compressed to $\frac{3}{16}$ " thick material at 2" per min.

0°F — 60 psi

77°F — 30 psi

120°F — 15psi

Foamed at 50%

Aging Characteristics: ASTM D750-68 (1000 hrs.) on surface — slight haze

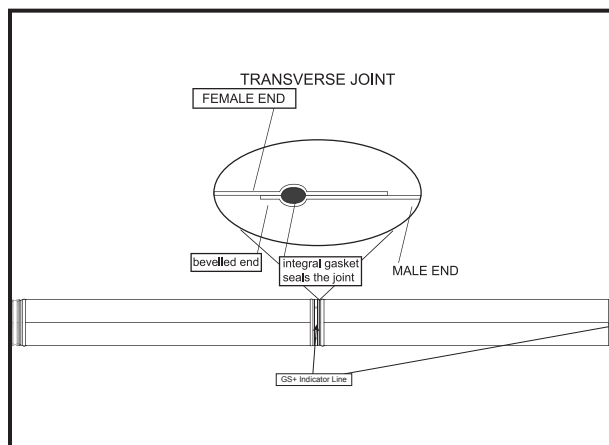
VOCs: 0

Surface Burning Characteristics: ASTM E-84 Test

Test Results: Flame Spread Index - 0

Smoke Developed Index - 30

Full test report available upon request



Transverse Gasket Composition

This material is a two-component polyurethane foamed gasket. The gasket is foamed directly onto the pipe by using FIPFG (formed-in-place foam gasket) technology. This produces a flexible tack-free foam gasket.

Test Data

Color: Black

Odor: None

Service Temperature: -40°F to 212°F

Tensile Strength: 290 psi

Elongation at Break: Up to 400 %

Shelf and Service Life: 20 years min.

VOCs: 0

Surface Burning Characteristics: ASTM E-84 Test

Test Results: Flame Spread Index - 0

Smoke Developed Index - 0

Full test report available upon request

Shop Drawing Submittal Review

Transmitted To: Cannon Design

Date: September 22, 2016

Attention: stl-cac@cannondesign.com

Contact Person / WTA Field Inspector:
Patrick Garner

Project Name: Webster University-**ISB**

Reviewed by: Mark Schaefer

Project No. WT 14127.01

☐

UPS

☐

Courier

☒

Email

Copies	No.	Description
1 PDF	238800M05	(Submittal No.'s) (R&B CxSRC)
		(Cannon #238800-008) - (Paric #15051-0203) - (WES #607)
		• Ductwork Product Data

***Remarks: Please see PAGE 2 for remarks.**

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. Replace material list for sheet metal with the following:

Webster University ISB Job # 5768

Ductwork Specification Submittal

DUCT SYSTEM	SHAPE	MATERIAL	JOINTS	NOTES
LOW PRESSURE SUPPLY	Round	G-60	Gasketed	1,7,8
	Rectangular	G-90	Slip & Drive	
RETURN, OUTDOOR AIR, RELIEF, EXHAUST	Round	G-90	Gasketed	1,7,8
	Rectangular	G-90	Slip & Drive	
MEDIUM PRESSURE SUPPLY DUCT	Round	G-90	Gasketed	2,7,8
	Rectangular	G-90	Slip & Drive	
RANGE HOOD KITCHEN EXHAUST DUCT (CONCEALED)	Round	16 Gauge Carbon Steel	Welded and Flanged	3
	Rectangular	16 Gauge Carbon Steel	Welded and Flanged	
RANGE HOOD KITCHEN EXHAUST DUCT (EXPOSED)	Round	14 Gauge 304 Stainless Steel	Welded and Flanged	3
	Rectangular	14 Gauge 304 Stainless Steel	Welded and Flanged	
ACID RESISTANT FUME HANDLING DUCT	Round	304L Stainless Steel	Welded and Flanged	4,5,6
	Rectangular	304L Stainless Steel	Welded and Flanged	

NOTES

1. ALL RETURN, EXHAUST, OUTDOOR AIR, MAKEUP, RELIEF, AND SUPPLY DUCT WORK DOWNSTREAM FROM VAVS SHALL BE CONSTRUCTED OF GAUGES AND REINFORCEMENT TO +/- 2" W.G.
2. ALL MEDIUM PRESSURE SUPPLY DUCTWORK, UNLESS SPECIFIED OTHERWISE, SHALL BE CONSTRUCTED OF GAUGES AND REINFORCEMENT TO 4" W.G. STATIC PRESSURE.
3. RANGE HOOD KITCHEN EXHAUST DUCTS WILL COMPLY WITH NFPA PAMPHLET 96. ALL JOINTS WILL BE LIQUID TIGHT EXTERNALLY WELDED AND FLANGED. DUCT SHALL SLOPE TOWARDS HOODS AND BE INSTALLED WITHOUT FORMING DIPS OR TRAPS. ACCESS PANELS SHALL BE PROVIDED AT
4. ALL ACID RESISTANT FUME EXHAUST BRANCHES FROM THE FUME HOODS TO THE EXHAUST MAINS SHALL BE CONSTRUCTED 304 STAINLESS STEEL WITH A NO. 4 FINISH. SEAMS AND JOINTS SHALL BE LIQUID TIGHT EXTERANALLY WELDED AND FLANGED. THE MATERIAL WITH TRANSITION TO GALVANIZED STEEL AT THE HEADER.
5. ALL BRANCH AND HEADER ACID RESISTANT FUME EXHAUST DUCTWORK IN CHEMISTRY LAB CLASSROOM 472 SHALL BE CONTRUCTED OF A
6. TURNING VANES FOR ACID RESISTANT FUME EXHAUST DUCTS SHALL BE FABRICATED OF 304 STAINLESS STEEL. VOLUME DAMPERS SHALL HAVE
7. ALL MEDUIM PRESSURE ROUND DUCTS SHALL HAVE SPIRAL SEAMS.
8. ALL ROUND AND RECTANGULAR DUCT SHALL USE PROSEAL SEALANT WHERE SEALANT IS REQUIRED.

2. Radius elbows with centerline radius equal to 1.5 x diameter is preferred. Only use the 1 x diameter if space is not available for the 1.5 x diameter elbow.
3. Mitered elbows shall not be used except if necessary for space constraints and have turning vanes.
4. Abrupt reducers shall not be used.
5. Do not use straight pressed or saddle taps for medium pressure ductwork.
6. Do not use bullhead tees, unless no other configuration is available.
7. Avoid use cross style tees.

WTASHOP - Webster ISB - 23 8800-008

From: STL-CAC <STL-CAC@CANNONDESIGN.COM>
To: 'Patrick Garner' <pgarner@wmtao.com>, WTASHOP <wtashop@wmtao.com>
Date: 9/1/2016 9:33 AM
Subject: Webster ISB - 23 8800-008
Cc: "Patel, Kelvin" <kpatel@CANNONDESIGN.COM>
Attachments: 238800-008 Ductwork Product Data.pdf

Attached for review.

Melissa Pirtle
Construction Admin

CANNONDESIGN

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St. Louis, Missouri 63102
T [314.425.8797](tel:314.425.8797) • M
cannondesign.com



77 Westport Plaza
Suite 250
St. Louis, MO 63146

TRANSMITTAL

No. 15051-0203

Paric Corporation

PROJECT: 15051-Webster University Interdisciplinary Science Building

DATE: 08/31/2016

TO: Cannon Design
1100 Clark Ave
St Louis MO 63102

RE: DuctWork 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:

Item	Package	Code	Rev.	Copies	Date	Description	Status
Submittal		238800-008	1		08/31/2016	DuctWork 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: 8/30/16

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	8/30/16	238800	Sheet Metal Duct Work

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 9/12/16

COPY TO: file

SIGNED:

Alex Chambers



Mechanical

Webster University ISB Webster Groves, MO

Submittal #:

238800

Submittal Description:

Sheet Metal Duct Work

Return By:

9/12/16

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:	8/30/16
		By:	ARC



Webster University ISB Job # 5768

Ductwork Specification Submittal

See revised list in WTA comments.

DUCT SYSTEM	SHAPE	MATERIAL	JOINTS	NOTES
LOW PRESSURE SUPPLY, RETURN, OUTDOOR AIR, RELIEF, EXHAUST	Round	G-60	Gasketed	1,7,8
	Rectangular	G-60	Slip & Drive	
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2. ALL MEDIUM PRESSURE SUPPLY DUCTWORK, UNLESS SPECIFIED OTHERWISE, SHALL BE CONSTRUCTED OF GAUGES AND REINFORCEMENT TO 4" W.G. STATIC PRESSURE.				
3. RANGE HOOD KITCHEN EXHAUST DUCTS WILL COMPLY WITH NFPA PAMPHLET 96. ALL JOINTS WILL BE LIQUID TIGHT EXTERNALLY WELDED AND FLANGED. DUCT SHALL SLOPE TOWARDS HOODS AND BE INSTALLED WITHOUT FORMING DIPS OR TRAPS.				
4. ALL ACID RESISTANT FUME EXHAUST BRANCHES FROM THE FUME HOODS TO THE EXHAUST MAINS SHALL BE CONSTRUCTED 304 STAINLESS STEEL WITH A NO. 4 FINISH. SEAMS AND JOINTS SHALL BE LIQUID TIGHT EXTERANALLY WELDED AND FLANGED. THE MATERIAL WITH TRANSITION TO GALVANIZED STEEL AT THE HEADER.				
5. ALL BRANCH AND HEADER ACID RESISTANT FUME EXHAUST DUCTWORK IN CHEMISTRY LAB CLASSROOM 472 SHALL BE CONSTRUCTED OF A MINIMUM 16 GAUGE THICKNESS.				
6. TURNING VANES FOR ACID RESISTANT FUME EXHAUST DUCTS SHALL BE FABRICATED OF 304 STAINLESS STEEL. VOLUME DAMPERS SHALL HAVE STAINLESS STEEL BEARINGS AND SHAFTS WITH EPOXY COATED BLADES.				
7. ALL ROUND DUCTS SHALL HAVE SPIRAL SEAMS.				
8. ALL ROUND AND RECTANGULAR DUCT SHALL USE PROSEAL SEALANT WHERE SEALANT IS REQUIRED.				