

Bal Tech, Inc

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Certified Test Report

SAFETY SEAL TRAVERSE CONNECTOR LEAKAGE TESTS

File Number
8393

prepared for

SHEET METAL CONNECTORS
5850 MAIN Street N.E.
Minneapolis, MN 55432
Tel.# 800-328-1966
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Prepared by:

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NEBB TAB Certified Professional
National Environmental Balancing Bureau
NEBB Certification No. 2483

Report Date
May 7, 2010

BTI FILE NUMBER: 8393
PROJECT: SAFETY SEAL
TRAVERSE CONNECTOR LEAKAGE TESTS

THE DATA PRESENTED IN THIS REPORT IS A RECORD OF SYSTEM
MEASUREMENTS AND FINAL ADJUSTMENTS THAT HAVE BEEN OBTAINED
IN ACCORDANCE WITH THE CURRENT ADDITION OF *THE NEBB PROCEDURAL
STANDARDS FOR TESTING ADJUSTING, AND BALANCING OF ENVIRONMENTAL
SYSTEMS* AND THE *SMACNA HVAC AIR DUCT LEAKAGE TEST MANUAL* .

References: www.nebb.org
www.smacna.org

SUBMITTED & CERTIFIED BY:

NEBB FIRM: BAL TECH, INC.
NEBB CERTIFIED PROFESSIONAL: MICHAEL L. LANCETTE

SIGNATURE:



REG. NO.: 2483
DATE: May 7, 2010



NEBB Certification Seal

Bal Tech, Inc.

General Information

BTI File Number: 8393
Project Name: SAFETY SEAL
TRVERSE CONNECTOR LEAKAGE TESTS

Project Address:

Supervisor Review Date: May 7, 2010
Completion Date: May 7, 2010

<u>Client information</u>		<u>Technician & Professional Qualifications</u>
SHEET METAL CONNECTORS 5850 MAIN Street N.E. Minneapolis, MN 55432 Tel.# 800-328-1966 Fax# 763-572-1100		Lead Technician: Michael Lancette Qualified Professional: Michael Lancette NEBB Exp. Date: 3/31/11
Contact: Jim Meyers		

Abbreviations

This is a list of abbreviations and their definitions used in this report

AHU	Air Handling Unit	LAT	Leaving air Temperature
BAS	Building Automation System	Lvg.	Leaving
BHP	Brake Horse Power	LWT	Leaving Water Temperature
BTI	Bal Tech Inc	M.A.	Mixed Air
CFLA	Corrected Full Load Amps	MAX	Maximum
CFM	Cub	MIN	Minimum
D.A.	Discharge Air	MTR	Motor
DB	Dry Bulb	N/A:	Not Applicable
DDC	Direct Digital Control	NEBB	National Environmental Balancing Bureau
EAT	Entering air Temperature	O.A.	Outside Air
EF	Exhaust Fan	OD	Outside Diameter
EFF	Efficiency	P.F.	Power Factor
Ent.	Entering	PSI	Pounds per Square Inch
EWT	Entering Water Temp	R.A.	Return Air
F.L.	Full Load	RF	Return Fan
FH	Flow Hood	RPM	Revolutions Per Minute
FPM	Feet Per Minute	RTU	Roof Top Unit
GPM	Gallons Per Minute	SF	Service Factor
HP	Horse Power	SP	Static Pressure
HVAC	Heating Ventilating And Air-conditioning	TAB	Test And Balance
HZ	Hertz	TSP	Total Static Pressure
IAQ	Indoor Air Quality	VAV	Variable Air Volume
KW	Kilowatt	W.G	Water Gage
L/s	Liters Per Second	W.C	Water Column

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Project Name:

SAFETY SEAL

TRAVERSE CONNECTOR LEAKAGE TESTS

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Bal Tech, Inc.

AIR DUCT LEAKAGE TEST SUMMARY

BTI File Number: 8393
 PROJECT NAME : SAFETY SEAL
 TRAVERSE CONNECTOR LEAKAGE TESTS

TRAVERSE JOINT: SAFETY SEAL
 TRAVERSE JOINT QTY: 6
 DUCT SECTION: 24 Gage Spiral
 DUCT SIZE:: 12" Round

SEAL CLASS A
 LEAKAGE CLASS (Cl) 3
 SPECIFIED TEST PRESSURE (Pi) 4
 DUCT CONSTRUCTION PRESSURE CLASS (Pc) 4
 Readings By: Michael Lancette

DESIGN DATA					FIELD TEST DATA RECORD						
SUBJECT	DUCT	SURFACE AREA IN FT ²	ALLOWABLE LEAKAGE		DIAMETER		PRESSURE "W.G.			ACTUAL CFM	
			FACTOR CFM/100 FT ²	CFM DIFF. (TEST SECTION)	ORIFICE	TUBE	DUCT	ACROSS ORIFICE	TEST DATE		
Positive Pressure		157	7.4	12	0.133	31.8	4	4.01	0.005	05/07/10	2.1
Negative Pressure		157	7.4	12	0.133	31.8	4	-4.02	0.006	05/07/10	2.5

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AIR DUCT LEAKAGE TEST SUMMARY

BTI File Number: 8393
 PROJECT NAME : SAFETY SEAL
 TRAVERSE CONNECTOR LEAKAGE TESTS

TRAVERSE JOINT: SAFETY SEAL
 TRAVERSE JOINT QTY: 6
 DUCT SECTION: 24 Gage Spiral
 DUCT SIZE:: 12" Round

SEAL CLASS A
 LEAKAGE CLASS (Cl) 3
 SPECIFIED TEST PRESSURE (Pi) 6
 DUCT CONSTRUCTION PRESSURE CLASS (Pc) 6
 Readings By: Michael Lancette

DESIGN DATA					FIELD TEST DATA RECORD						
SUBJECT	DUCT	SURFACE AREA IN FT ²	ALLOWABLE LEAKAGE		DIAMETER		PRESSURE "W.G.			ACTUAL CFM	
			FACTOR CFM/100 FT ²	CFM DIFF. (TEST SECTION)	ORIFICE	TUBE	DUCT	ACROSS ORIFICE	TEST DATE		
Positive Pressure		157	9.6	15	0.225	31.8	4	6.04	0.008	05/07/10	2.8
Negative Pressure		157	9.6	15	0.225	31.8	4	-6.09	0.010	05/07/10	3.1

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AIR DUCT LEAKAGE TEST SUMMARY

BTI File Number: 8393
 PROJECT NAME : SAFETY SEAL
 TRAVERSE CONNECTOR LEAKAGE TESTS

TRAVERSE JOINT: SAFETY SEAL
 TRAVERSE JOINT QTY: 6
 DUCT SECTION: 24 Gage Spiral
 DUCT SIZE:: 12" Round

SEAL CLASS A
 LEAKAGE CLASS (Cl) 3
 SPECIFIED TEST PRESSURE (Pi) 10
 DUCT CONSTRUCTION PRESSURE CLASS (Pc) 10
 Readings By: Michael Lancette

DESIGN DATA					FIELD TEST DATA RECORD						
SUBJECT	DUCT	SURFACE AREA IN FT ²	ALLOWABLE LEAKAGE		DIAMETER		PRESSURE "W.G.			ACTUAL CFM	
			FACTOR CFM/100 FT ²	CFM DIFF. (TEST SECTION)	ORIFICE	TUBE	DUCT	ACROSS ORIFICE	TEST DATE		
Positive Pressure		157	13.4	21	0.438	31.8	4	10.00	0.017	05/07/10	4.1
Negative Pressure		157	13.4	21	0.438	31.8	4	10.15	0.018	05/07/10	4.3

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AIR DUCT LEAKAGE TEST SUMMARY

BTI File Number: 8393
 PROJECT NAME : SAFETY SEAL
 TRAVERSE CONNECTOR LEAKAGE TESTS

TRAVERSE JOINT: SAFETY SEAL
 TRAVERSE JOINT QTY: 6
 DUCT SECTION: Rolled 20 Gage, Welded Seam
 DUCT SIZE:: 12" Round

SEAL CLASS A
 LEAKAGE CLASS (Cl) 3
 SPECIFIED TEST PRESSURE (Pi) 4
 DUCT CONSTRUCTION PRESSURE CLASS (Pc) 4
 Readings By: Michael Lancette

DESIGN DATA					FIELD TEST DATA RECORD						
SUBJECT	DUCT	SURFACE AREA IN FT ²	ALLOWABLE LEAKAGE		DIAMETER		PRESSURE "W.G.			ACTUAL CFM	
			FACTOR CFM/100 FT ²	CFM DIFF. (TEST SECTION)	ORIFICE	TUBE	DUCT	ACROSS ORIFICE	TEST DATE		
Positive Pressure		63	7.4	5	0.021	31.8	4	4.07	0.004	05/07/10	2.0
Negative Pressure		63	7.4	5	0.021	31.8	4	-4.00	0.008	05/07/10	2.9

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TRAVERSE JOINT: SAFETY SEAL
 TRAVERSE JOINT QTY: 6
 DUCT SECTION: Rolled 20 Gage, Welded Seam
 DUCT SIZE:: 12" Round

SEAL CLASS A
 LEAKAGE CLASS (Cl) 3
 SPECIFIED TEST PRESSURE (Pi) 6
 DUCT CONSTRUCTION PRESSURE CLASS (Pc) 6
 Readings By: Michael Lancette

DESIGN DATA					FIELD TEST DATA RECORD						
SUBJECT	DUCT	SURFACE AREA IN FT ²	ALLOWABLE LEAKAGE		DIAMETER		PRESSURE "W.G.			ACTUAL CFM	
			FACTOR CFM/100 FT ²	CFM DIFF. (TEST SECTION)	ORIFICE	TUBE	DUCT	ACROSS ORIFICE	TEST DATE		
Positive Pressure		63	9.6	6	0.036	31.8	4	5.98	0.006	05/07/10	2.5
Negative Pressure		63	9.6	6	0.036	31.8	4	-6.00	0.013	05/07/10	3.7

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TRAVERSE JOINT: SAFETY SEAL
 TRAVERSE JOINT QTY: 6
 DUCT SECTION: Rolled 20 Gage, Welded Seam
 DUCT SIZE:: 12" Round

SEAL CLASS A
 LEAKAGE CLASS (Cl) 3
 SPECIFIED TEST PRESSURE (Pt) 10
 DUCT CONSTRUCTION PRESSURE CLASS (Pc) 10
 Readings By: Michael Lancette

DESIGN DATA					FIELD TEST DATA RECORD						
SUBJECT	DUCT	SURFACE AREA IN FT ²	ALLOWABLE LEAKAGE		DIAMETER		PRESSURE "W.G.			ACTUAL CFM	
			FACTOR CFM/100 FT ²	CFM DIFF. (TEST SECTION)	ORIFICE	TUBE	DUCT	ACROSS ORIFICE	TEST DATE		
Positive Pressure		63	13.4	8	0.070	31.8	4	10.06	0.011	05/07/10	3.3
Negative Pressure		63	13.4	8	0.070	31.8	4	-10.07	0.024	05/07/10	4.9