



# WESTERN ELECTRO - ACOUSTIC LABORATORY

A division of Veneklasen Associates, Inc.

TESTING • CALIBRATION • RESEARCH

25132 Rye Canyon Loop Santa Clarita, California 91355 Tel: (661) 775-3741 Fax: (661) 775-3742 www.weal.com

## SOUND TRANSMISSION LOSS TEST REPORT NO. TL09-240

CLIENT: **Therma Tru**  
1750 Indian Wood Circle  
Maumee, Ohio 43537  
TEST DATE: 16 March 2009

Page 1 of 2  
24 March 2009

### INTRODUCTION

The methods and procedures used for this test conform to the provisions and requirements of ASTM E 90-04, *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions*. Copies of the test standard are available at [www.astm.org](http://www.astm.org). The test chamber source and receiving room volumes are 204 and 148.4 cubic meters respectively. Western Electro-Acoustic Laboratory is accredited by NVLAP (National Voluntary Laboratory Accreditation Program) Lab Code 100256-0 for this test procedure. NVLAP is part of the United States Department of Commerce, National Institute of Standards and Technology (NIST). This test report relates only to the item(s) tested. Any advertising that utilizes this test report or test data must not imply product certification or endorsement by WEAL, NVLAP, NIST or the U.S. Government.

### DESCRIPTION OF TEST SPECIMEN

The test specimen was a Therma-Tru fiberglass Noise Reduction door assembly with a Therma-Tru Noise Reduction Lite Assembly. The frame was 3/4 inch (19.1 mm) inside / 1-1/2 inch (38.1 mm) outside by 4-9/16 inch (116 mm) wood on the sides and top. At the bottom was a Therma-Tru adjustable sill assembly. The specimen was installed by sliding it completely into the test chamber opening and capturing it with screws thru the frame. The specimen was sealed into the test chamber opening with a heavy duct seal putty around the entire perimeter on both sides. The door consisted of fiberglass skins with an engineered lumber core with the Therma-Tru Noise Reduction lite assembly. The vision lite was approximately 22 inches (559 mm) wide by 80 inches (2.03 m) high and consisted of a 1 inch (25.4 mm) dual glazed unit which was 3/8 inch (9.5 mm) laminated glass, 1/2 inch (12.7 mm) air space, and 1/8 inch (3.2 mm) double strength glass. The laminated glass consisted of 5/32 inch (4 mm) annealed glass, .090 inch (2.3 mm) PVB interlayer, and 1/8 inch (3 mm) annealed glass. The unit was sealed only on the exterior side with a glazing bead and was captured by screwing together the two glazing lite frame members. The overall thickness of the door panel was 1-11/16 inches (42.9 mm) and it was hung on four 4 inch (102 mm) hinges. The weather stripping used was Therma-Tru's Long Reach foam filled weather strip on the top and lock side jambs. The hinge side jamb used Q-Lon p/n QEBD-825 foam filled weather strip. The sealing on the bottom was the Therma-Tru double bulb PVC door bottom. An aluminum threshold with a 3/8 inch (9.5 mm) rise was located on the sill. The door panel was held in the closed position with a knobbed lockset. The net outside frame dimensions of the door assembly were 37-5/8 inches (953 mm) wide by 98 inches (2.49 m) high by 4-9/16 inches (116 mm) thick. The overall weight of the door assembly was 173 lbs. (78.5 kg). The dimensions of the door panel were 36 inches (914 mm) wide by 95-1/4 inches (2.42 m) high by 1-11/16 inches (42.9 mm) thick. The weight of the door panel was 149 lbs. (67.6 kg) for a calculated surface density of 5.82 lbs./ft<sup>2</sup> (28.4 kg/m<sup>2</sup>). The door was opened and closed five times immediately prior to the test.

### RESULTS OF THE MEASUREMENTS

One-third octave band sound transmission loss values are plotted and tabulated on the attached sheet. ASTM minimum volume requirements are met at 80 Hz and above. The Sound Transmission Class rating determined in accordance with ASTM E 413-04 was STC-36. The Outdoor-Indoor Transmission Class determined in accordance with ASTM E 1332-90(2003) was OITC-31. The Exterior Wall Rating was EWR 37.

Approved:

Gary E. Mange  
Laboratory Director

Respectfully submitted,  
Western Electro-Acoustic Laboratory

Raul Martinez  
Acoustical Test Technician

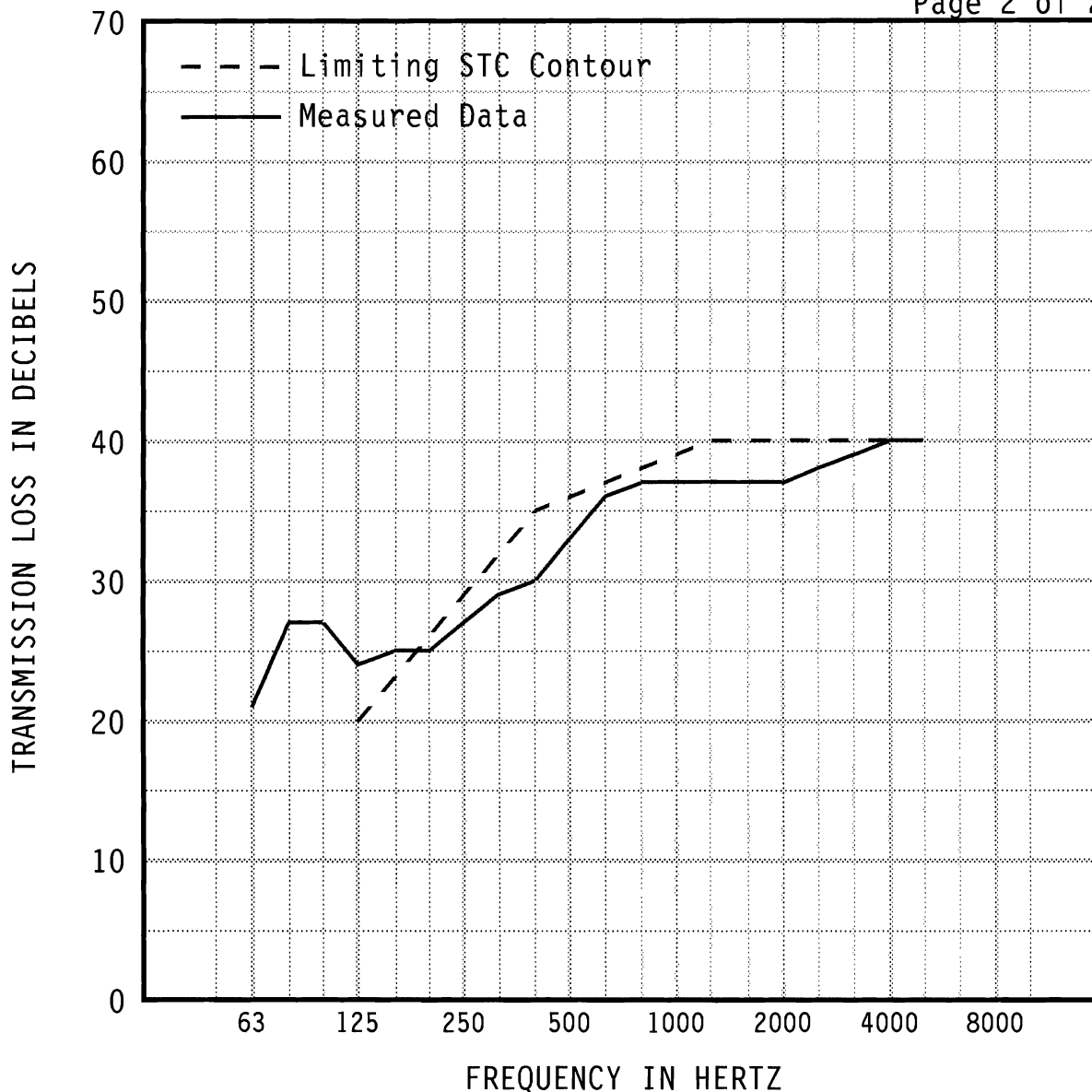
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NVLAP LAB CODE 100256-0

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1/3 OCT BND CNTR	FREQ	63	80	100	125	160	200	250	315	400	500
TL in dB		21	27	27	24	25	25	27	29	30	33
95% Confidence in dB deficiencies		1.42	1.92	2.07	1.47	0.89	0.76	0.80	0.52	0.36	0.38
							(1)	(2)	(3)	(5)	(3)
1/3 OCT BND CNTR	FREQ	630	800	1000	1250	1600	2000	2500	3150	4000	5000
TL in dB		36	37	37	37	37	37	38	39	40	40
95% Confidence in dB deficiencies		0.29	0.44	0.38	0.39	0.36	0.56	0.55	0.31	0.32	0.50
		(1)	(1)	(2)	(3)	(3)	(3)	(2)	(1)	(0)	

EWR	OITC	Specimen Area: 25.61 sq.ft. Temperature: 68 deg. F Relative Humidity: 36 % Test Date: 16 March 2009	STC
37	31		36
			(30)

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## SOUND TRANSMISSION LOSS TEST REPORT NO. TL09-241

CLIENT: **Therma Tru**  
1750 Indian Wood Circle  
Maumee, Ohio 43537

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TEST DATE: 16 March 2009

### INTRODUCTION

The methods and procedures used for this test conform to the provisions and requirements of ASTM E 90-04, *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions*. Copies of the test standard are available at [www.astm.org](http://www.astm.org). The test chamber source and receiving room volumes are 204 and 148.4 cubic meters respectively. Western Electro-Acoustic Laboratory is accredited by NVLAP (National Voluntary Laboratory Accreditation Program) Lab Code 100256-0 for this test procedure. NVLAP is part of the United States Department of Commerce, National Institute of Standards and Technology (NIST). This test report relates only to the item(s) tested. Any advertising that utilizes this test report or test data must not imply product certification or endorsement by WEAL, NVLAP, NIST or the U.S. Government.

### DESCRIPTION OF TEST SPECIMEN

The test specimen was a completely sealed, non-operable Therma-Tru fiberglass Noise Reduction door assembly with a Therma-Tru Noise Reduction Lite Assembly. The frame was 3/4 inch (19.1 mm) inside / 1-1/2 inch (38.1 mm) outside by 4-9/16 inch (116 mm) wood on the sides and top. At the bottom was a Therma-Tru adjustable sill assembly. The specimen was installed by sliding it completely into the test chamber opening and capturing it with screws thru the frame. The specimen was sealed into the test chamber opening with a heavy duct seal putty around the entire perimeter on both sides. The door consisted of fiberglass skins with an engineered lumber core with the Therma-Tru Noise Reduction lite assembly. The vision lite was approximately 22 inches (559 mm) wide by 80 inches (2.03 m) high and consisted of a 1 inch (25.4 mm) dual glazed unit which was 3/8 inch (9.5 mm) laminated glass, 1/2 inch (12.7 mm) air space, and 1/8 inch (3.2 mm) double strength glass. The laminated glass consisted of 5/32 inch (4 mm) annealed glass, .090 inch (2.3 mm) PVB interlayer, and 1/8 inch (3 mm) annealed glass. The unit was sealed only on the exterior side with a glazing bead and was captured by screwing together the two glazing lite frame members. The overall thickness of the door panel was 1-11/16 inches (42.9 mm) and it was hung on four 4 inch (102 mm) hinges. The door panel was held in the closed position with a knobbed lockset. The door panel was sealed with duct tape around the entire perimeter on both sides. The net outside frame dimensions of the door assembly were 37-5/8 inches (953 mm) wide by 98 inches (2.49 m) high by 4-9/16 inches (116 mm) thick. The overall weight of the door assembly was 173 lbs. (78.5 kg). The dimensions of the door panel were 36 inches (914 mm) wide by 95-1/4 inches (2.42 m) high by 1-11/16 inches (42.9 mm) thick. The weight of the door panel was 149 lbs. (67.6 kg) for a calculated surface density of 5.82 lbs./ft<sup>2</sup> (28.4 kg/m<sup>2</sup>).

### RESULTS OF THE MEASUREMENTS

One-third octave band sound transmission loss values are plotted and tabulated on the attached sheet. ASTM minimum volume requirements are met at 80 Hz and above. The Sound Transmission Class rating determined in accordance with ASTM E 413-04 was STC-38. The Outdoor-Indoor Transmission Class determined in accordance with ASTM E 1332-90(2003) was OITC-32. The Exterior Wall Rating was EWR 38.

Approved:

Respectfully submitted,  
Western Electro-Acoustic Laboratory

Gary E. Mange  
Laboratory Director

Kaul Martinez  
Acoustical Test Technician

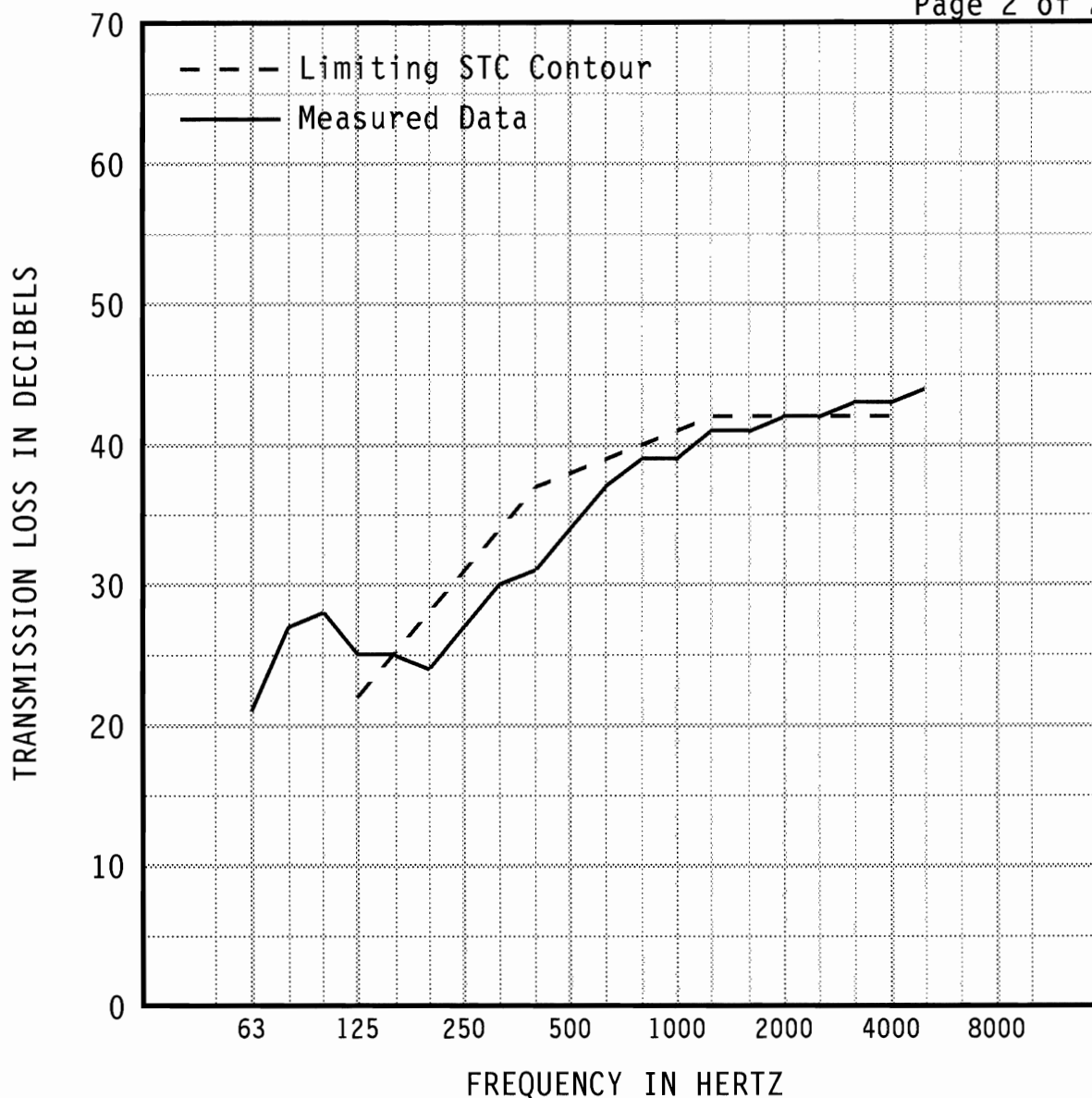
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1/3 OCT BND CNTR	FREQ	63	80	100	125	160	200	250	315	400	500
TL in dB		21	27	28	25	25	24	27	30	31	34
95% Confidence in dB deficiencies		1.42	1.92	2.07	1.47	0.89 (0)	0.76 (4)	0.80 (4)	0.52 (4)	0.36 (6)	0.38 (4)
1/3 OCT BND CNTR	FREQ	630	800	1000	1250	1600	2000	2500	3150	4000	5000
TL in dB		37	39	39	41	41	42	42	43	43	44
95% Confidence in dB deficiencies		0.29 (2)	0.44 (1)	0.38 (2)	0.39 (1)	0.36 (1)	0.56 (0)	0.55 (0)	0.31	0.32	0.50

EWR	OITC	Specimen Area: 25.61 sq.ft. Temperature: 68 deg. F Relative Humidity: 36 % Test Date: 16 March 2009	STC
38	32		38 (29)

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