

TEST REPORT

For

Eco Supply

2115 Westmoreland Street
Richmond, VA 23230
Bart Bettencourt / 718-233-1365

Sound Transmission Loss Test

ASTM E 90 – 09 / E 413 – 10 / E 1332-10a

On

Bildau and Bussman IV 79 Window

Report Number: NGC 2017163

Assignment Number: G-1461

Test Date: 10/04/2017

Report Approval Date: 10/24/2017

Submitted by:


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Test Technician

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Director

The results reported above apply to specific samples submitted for measurement. No responsibility is assumed for performance of any other specimen. The laboratory's accreditation or any of its test reports in no way constitute or imply product certification, approval, or endorsement by NVLAP or any agent of the U.S. Government. This report may not be reproduced except in full, without written approval of the laboratory.

Revision Summary:

Date	SUMMARY
Approval Date 10/24/2017	Original issue date. 10/24/2017 Original NGCTS report NGC 2017163

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Test Method: This test method conforms explicitly with the American Society for Testing and Materials Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements / Rating Outdoor-Indoor Sound Attenuation - Designations: E 90 - 09 / E 413 – 10 / E 1332-10a.

Specimen Description: The test specimen was a window, identified by the client as: Bildau and Bussman IV 79
 Standard direction of sound from Source Room (Room 1) to Receiving Room (Room 2).

The wall system was constructed in the test opening and was observed to consist of the following.
 All measured weights and dimensions are averaged:

From Room 1 to Room 2.

- Filler wall. This Filler wall had a measured STC of 60
- The window was identified by the client as: Bildau and Bussman IV 79

Glass Thickness:	4	mm
Air Space Thickness:	12	mm Krypton
Glass Thickness:	4	mm
Air Space Thickness:	12	mm Krypton
Glass Thickness:	4	mm
Method of Glazing:	Not specified by client	

- The window was measured to be: 1231.9 mm x 1377.95 mm (48-1/2 in. x 54-1/4 in.).
- The buck of the window was sealed with caulk into the 1317.6 mm x 1473.2 mm (51-7/8 in. x 58 in) rough opening in the Filler wall.

Total weight of the window with the buck was 43.65 kg/m² (8.94 PSF).

The perimeter of the test assembly was sealed with acoustical caulk and exposed wallboard joints were taped.

Specimen size: Filler wall: 3657 mm x 2743.2 mm (12 ft. x 9 ft.) with rough opening cut for the door and frame.

Area of the window: 1.93 m² (20.78 ft²)

Conditioning: The window was tested as received from the client, no adjustments were made.

Test Results: The results of the tests are given on pages 4 and 5 of the report.

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Sound Transmission Loss Test Data							
Test: ASTM E 90 - 09 / ASTM E 413 - 10 / ASTM E 1332 - 10a							
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Specimen Size [m ²]: 1.9							
Source room				Receiving room			
Volume [m ³]: 90.44				Volume [m ³]: 98.61			
Rm Temp [°C]: xx				Rm Temp [°C]: 24			
Humidity [%]: xx				Humidity [%]: 64			
Sound Transmission Class STC [dB]:				33			
Sum of Unfavorable Deviations [dB]: 26							
Max. Unfavorable Deviation [dB]: 7				at 3150 Hz			
Frequency	STL	L1	L2	d	Corr.	u.Dev.	ΔSTL
[Hz]	[dB]	[dB]	[dB]	[dB/s]	[dB]	[dB]	
100	24	106.0	78.4	17.6	-3.6		0.0
125	27	104.7	75.2	15.9	-2.5		1.3
160	22	104.2	80.0	12.3	-2.2		1.6
200	20	103.5	80.8	12.1	-2.7	3	1.1
250	21	102.0	78.7	12.3	-2.3	5	0.9
315	24	100.9	74.3	13.0	-2.6	5	0.5
400	28	101.3	70.5	13.0	-2.8	4	0.5
500	34	102.8	66.8	12.3	-2.0		0.3
630	37	103.5	64.6	12.4	-1.9		0.2
800	38	102.9	62.1	13.6	-2.8		0.1
1000	38	102.7	61.8	14.6	-2.9		0.1
1250	38	100.7	58.9	16.4	-3.8		0.0
1600	40	97.6	54.5	18.9	-3.1		0.0
2000	38	96.8	54.1	21.7	-4.7		0.0
2500	35	97.3	57.3	25.4	-5.0	2	0.0
3150	30	96.3	60.7	27.6	-5.6	7	0.0
4000	34	94.7	54.5	30.9	-6.2	3	0.0
5000	39	93.8	47.7	35.8	-7.1		0.0

STL = Sound Transmission Loss, dB
 L1 = Source Room Level, dB
 L2 = Receiving Room Level, dB
 d = Decay Time, dB/second
 Δ STL = Uncertainty for 95% Confidence Level

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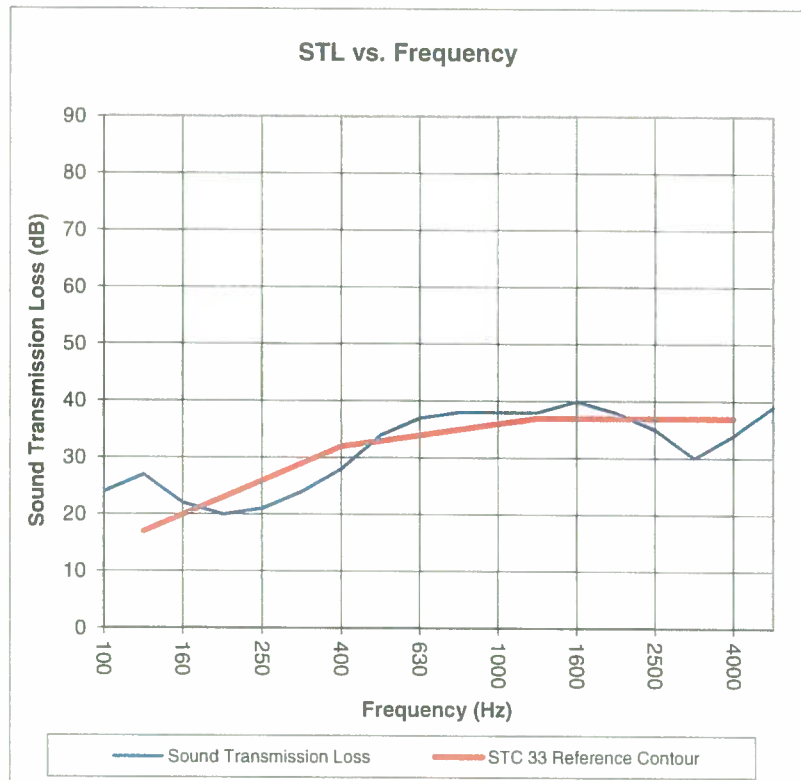
Sound Transmission Loss Test Data

Per: ASTM E 90 - 09 / ASTM E 413 - 10 / ASTM E 1332 - 10a

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 Test Date: 10/4/2017
 Specimen Size [m²]: 1.9

Sound Transmission Class STC = 33 dB

Frequency [Hz]	STL [dB]	ΔSTL
100	24	1.6
125	27	1.1
160	22	0.9
200	20	0.5
250	21	0.5
315	24	0.3
400	28	0.2
500	34	0.1
630	37	0.1
800	38	0.0
1000	38	0.0
1250	38	0.0
1600	40	0.0
2000	38	0.0
2500	35	0.0
3150	30	0.0
4000	34	0.0
5000	39	0.0



* Due to high insulating value of specimen, background levels limit results at these frequencies.

STL = Sound Transmission Loss, dB
 Δ STL = Uncertainty for 95% Confidence Level

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