

TEST REPORT

For

Applied Comfort Products Carver Inc.

1210 Balmoral Road
Cambridge, Ontario Canada N1T 1A5
Michael Brown / 519-740-3600

Sound Transmission Loss Test

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

On

RKSC

Report Number: NGC 2017047

Assignment Number: G-1411

Test Date: 05/11/2017

Report Approval Date: 05/19/2017

Submitted by:


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Test Technician

Reviewed by:


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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, NIST or any agency of the Federal Government. This report may not be reproduced except in full, without written approval of the laboratory.

Revision Summary:

Date	SUMMARY
Approval Date: 05/19/2017	Original issue date: 05/19/2017 Original NGCTS report: NGC 2017047

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Report Number NGC 2017047

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: Sample was identified by client as, RKSC

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.
All measured weights and dimensions are averaged:

From Room 1 to Room 2.

- The Filler Wall constructed for this test had a measured STC of 56.
- The air conditioner was mounted into a rough opening 406.4mm x 939.8 mm (16 in. x 37 in.) in the Filler wall, a 1/4 in. gap was noted on all sides of the unit.
- The unit was identified by client as: RKSC. The unit was tested as received from client.
- Weights of each part of the unit were identified by client as:

RKSC unit: 153.1 lbs.
Enclosure: 42.1 lbs.
- The perimeter of the unit was caulked to the rough opening in the Filler Wall

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

The overall weight of the air conditioner was 231.80 kg/m² (47.48 PSF)

Specimen size: 3657.6 mm x 2743.2 mm (12 ft. x 9 ft.)

Conditioning: Unit was tested as received.

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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Date: 5/11/2017

Specimen Size [m²]: 0.4

Source room

Volume [m³]: 90.44

Rm Temp [°C]: 22

Humidity [%]: 53

Receiving room

Volume [m³]: 98.61

Rm Temp [°C]: 22

Humidity [%]: 53

Sound Transmission Class STC [dB]: 31

Outdoor-Indoor Transmission Class OITC [dB]: 21

Sum of Unfavorable Deviations [dB]: 28

Max. Unfavorable Deviation [dB]: 7 at 160 Hz

Frequency	STL	L1	L2	d	Corr.	u.Dev.	ΔSTL
[Hz]	[dB]	[dB]	[dB]	[dB/s]	[dB]	[dB]	
80	14	100.6	74.8	22.3	-11.8		1.2
100	13	105.9	81.7	18.4	-11.2		1.2
125	12	102.8	81.8	13.8	-9.0	3	2.2
160	11	102.7	81.3	14.8	-10.4	7	0.4
200	16	102.4	76.9	14.0	-9.5	5	0.8
250	20	102.0	71.4	14.3	-10.6	4	0.3
315	27	101.5	65.0	13.6	-9.5		0.3
400	29	100.8	62.1	14.0	-9.7	1	0.1
500	29	102.7	64.6	13.6	-9.1	2	0.1
630	30	103.2	63.5	13.4	-9.7	2	0.1
800	31	102.0	60.7	14.6	-10.3	2	0.1
1000	32	102.5	60.5	15.7	-10.0	2	0.0
1250	36	100.1	53.8	16.9	-10.3		0.0
1600	38	96.8	48.5	20.0	-10.3		0.0
2000	42	96.4	44.1	23.2	-10.3		0.0
2500	42	96.9	43.6	25.9	-11.3		0.0
3150	44	95.7	40.0	27.9	-11.7		0.0
4000	47	94.5	34.6	32.2	-12.9		0.0
5000	47	93.6	33.0	37.0	-13.6		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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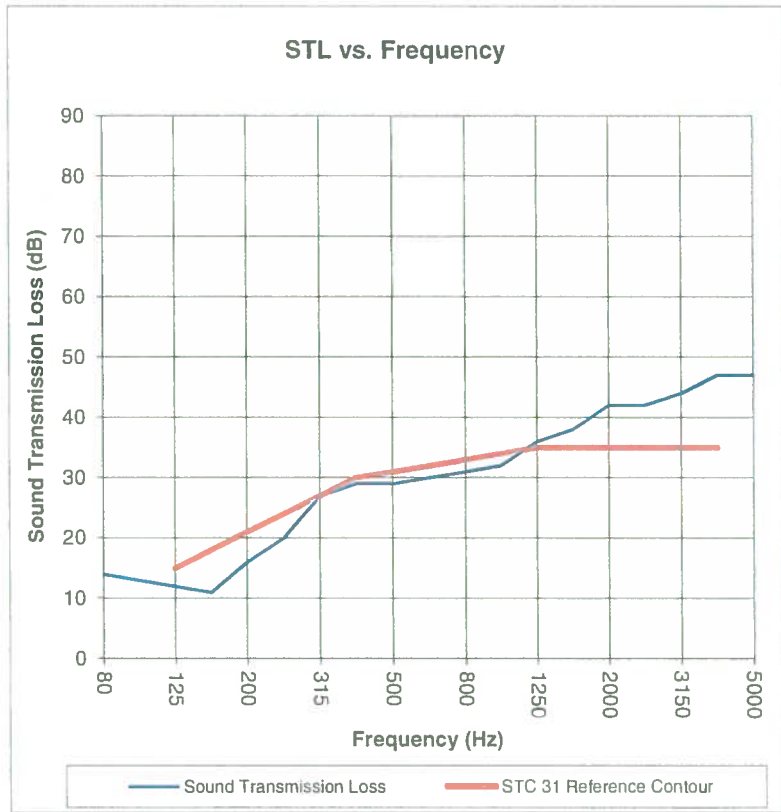
Sound Transmission Loss Test Data

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

Test Report: NGC 2017047
 Test Date: 5/11/2017
 Specimen Size [m²]: 0.39

Sound Transmission Class STC [dB]: 31 dB
Outdoor-Indoor Transmission Class OITC [dB]: 21 dB

Frequency [Hz]	STL [dB]	ΔSTL
80	14	1.2
100	13	1.2
125	12	2.2
160	11	0.4
200	16	0.8
250	20	0.3
315	27	0.3
400	29	0.1
500	29	0.1
630	30	0.1
800	31	0.1
1000	32	0.0
1250	36	0.0
1600	38	0.0
2000	42	0.0
2500	42	0.0
3150	44	0.0
4000	47	0.0
5000	47	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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