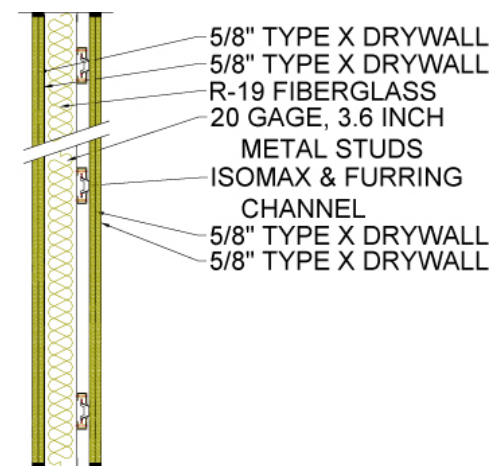


# KINETICS NOISE CONTROL TEST REPORT # 02154

- **KINETICS NOISE CONTROL PRODUCTS:**
  - MODEL ISOMAX
- **ACOUSTICAL RATINGS:**
  - STC 63
- **TESTING AGENCY & REPORT NUMBER:**
  - RIVERBANK ACOUSTICAL LABORATORIES
  - RAL-TL06-048



KINETICS DRAWING NUMBER: AA001785



6300 IRELAN PLACE, DUBLIN OH  
PHONE: 800.959.1229  
FAX: 614.889.0540  
WEB: [WWW.KINETICSNOISE.COM](http://WWW.KINETICSNOISE.COM)  
EMAIL: [ARCHSALES@KINETISNOISE.COM](mailto:ARCHSALES@KINETISNOISE.COM)

## TEST REPORT

FOR: Kinetics Noise Control, Inc.  
Dublin, OH

Sound Transmission Loss Test  
RAL™-TL06-048

ON: Insulated Steel Stud Wall, Kinetics IsoMax Clip One  
Side, Double Layer 5/8 Inch Gypsum Board Both Sides

Page 1 of 4

CONDUCTED: 17 February 2006

### TEST METHOD

Unless otherwise designated, the measurements reported below were made with all facilities and procedures in explicit conformity with the ASTM Designations E90-04 and E413-04, as well as other pertinent standards. Riverbank Acoustical Laboratories has been accredited by the U.S. Department of Commerce, National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) for this test procedure (NVLAP Lab Code: 100227-0). A description of the measuring technique is available separately.

### DESCRIPTION OF THE SPECIMEN

The test specimen was designated as insulated steel stud wall, Kinetics IsoMax clip one side, double layer 5/8 inch gypsum board both sides. The overall dimensions of the specimen as measured were nominally 4.27 m (168 in.) wide by 2.74 m (108 in.) high and 194 mm (7.625 in.) thick. The specimen was installed by the manufacturer directly into the laboratory's 2.74 m (9 ft) by 4.27 m (14 ft) wood-lined steel frame and was sealed on the periphery (both sides) with a dense mastic.

The description of the specimen was as follows: The wall consisted of 92 mm (3.625 in.) 20 gauge steel studs with 159 mm (6.25 in.) thick R-19 fiberglass batt insulation. Kinetics IsoMax Clips, drywall furring channel (DWC) and a double layer of 16 mm (0.625 in.) thick Type X gypsum board were installed on one side. The other side was finished with a double layer of 16 mm (0.625 in.) thick Type X gypsum board. A more complete description follows:

Floor and Ceiling Runners: Two 92 mm (3.625 in.) wide 20 gauge 4.26 m (168 in.) long steel runners were attached to floor and ceiling with 41 mm (1.625 in) Type S bugle head drywall screws 610 mm (24 in.) on centers.

Studs: Eight 92 mm (3.625 in.) wide 20 gauge 2.73 m (107.5 in.) long steel studs were spaced on 610 mm (24 in.) centers. The end studs were attached to the frame with 41 mm (1-5/8 in.) long bugle head drywall screws spaced on 610 mm (24 in.) centers. The remaining studs were attached to the top and bottom runners on both sides with 13 mm (0.5 in.) long S-12 pan head screws.

This report shall not be reproduced except in full, without the written approval of RAL.

THE RESULTS REPORTED ABOVE APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR MEASUREMENT. NO RESPONSIBILITY IS ASSUMED FOR PERFORMANCE OF ANY OTHER SPECIMEN.



ACCREDITED BY DEPARTMENT OF COMMERCE, NATIONAL VOLUNTARY LABORATORY  
ACCREDITATION PROGRAM FOR SELECTED TEST METHODS FOR ACOUSTICS.  
THE LABORATORY'S ACCREDITATION OR ANY OF ITS TEST REPORTS IN NO WAY CONSTITUTES  
OR IMPLIES PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NIST.

## TEST REPORT

Kinetics Noise Control, Inc.

RAL™-TL06-048

17 February 2006

Page 2 of 4

Insulation: The seven cavities formed by the runners and studs were lined with unfaced R-19 fiberglass insulation measuring 159 mm (6.25 in.) thick and 610 mm (24 in.) wide. The total weight of the insulation was 29 kg (13.2 lbs).

Direct Attached Gypsum Board: On one side of the wall a base layer of 16 mm (0.625 in.) Type X gypsum board was vertically attached to the studs with 16 mm (1 in.) long Type S bugle head drywall screws at 305 mm (12 in.) on centers. A face layer of 16 mm (0.625 in.) Type X gypsum board was applied vertically and attached using 41 mm (1.625 in.) Type S bugle head drywall screws on 305 mm (12 in.) centers. Total weight of the gypsum board as measured was 255 kg (563 lbs.). All joints and screw heads were sealed using tape and all purpose joint compound.

Kinetics IsoMax Clips, DWC and Gypsum Board: On the other side of the wall, Kinetics IsoMax Clips were attached to studs on 610 mm (24 in.) centers vertically and on 1.22 m (48 in.) centers horizontally. The bottom row of clips was installed 76 mm (3 in.) from the bottom of the test frame. Clips in subsequent rows were staggered 406 mm (16 in.) vertically from adjacent rows. All clips were attached to studs with two 41 mm (1.625 in.) long S-12 drywall screws. A total of thirty clips were used. The DWC was 25 gauge roll-formed furring channel which measured 22 mm (0.875 in.) deep by 65 mm (2.56 in.) wide. Six rows of track were mounted to the clips and were overlapped 152 mm (6 in.) and double wire tied with 18 gauge tie wire as necessary. A base layer of 16 mm (0.625 in.) Type X gypsum board was applied horizontally to the DWC track and attached using 25 mm (1 in.) Type S bugle head drywall screws on 305 mm (12 in.) centers. A face layer of 16 mm (0.625 in.) Type X gypsum board was applied vertically and attached using 41 mm (1.625 in.) Type S bugle head drywall screws on 305 mm (12 in.) centers. Total weight of the gypsum board as measured was 256 kg (564 lbs.). All joints and screw heads were sealed using tape and all purpose joint compound.

The weight of the specimen as measured was 599 kg (1,321 lbs.), an average of 51.2 kg/m<sup>2</sup> (10.5 lbs/ft<sup>2</sup>). The transmission area used in the calculations was 11.7 m<sup>2</sup> (126 ft<sup>2</sup>). The source and receiving room temperatures at the time of the test were 20±2°C (68±2°F) and 54±1% relative humidity. The source and receive reverberation room volumes were 178 m<sup>3</sup> (6,298 ft<sup>3</sup>) and 177 m<sup>3</sup> (6,255 ft<sup>3</sup>), respectively.

This report shall not be reproduced except in full, without the written approval of RAL.

THE RESULTS REPORTED ABOVE APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR MEASUREMENT. NO RESPONSIBILITY IS ASSUMED FOR PERFORMANCE OF ANY OTHER SPECIMEN.



ACCREDITED BY DEPARTMENT OF COMMERCE, NATIONAL VOLUNTARY LABORATORY  
ACCREDITATION PROGRAM FOR SELECTED TEST METHODS FOR ACOUSTICS.  
THE LABORATORY'S ACCREDITATION OR ANY OF ITS TEST REPORTS IN NO WAY CONSTITUTES  
OR IMPLIES PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NIST.

# RIVERBANK ACOUSTICAL LABORATORIES

1512 S. BATAVIA AVENUE  
GENEVA, ILLINOIS 60134

Alion Science and Technology

630/232-0104  
FOUNDED 1918 BY  
WALLACE CLEMENT SABINE

## TEST REPORT

Kinetics Noise Control, Inc.

RAL™-TL06-048

17 February 2006

Page 3 of 4

### TEST RESULTS

Sound transmission loss values are tabulated at the eighteen standard frequencies. A graphic presentation of the data and additional information appear on the following pages. The precision of the TL test data is within the limits set by the ASTM Standard E90-04.

<u>FREQ.</u>	<u>T.L.</u>	<u>C.L.</u>	<u>DEF.</u>	<u>FREQ.</u>	<u>T.L.</u>	<u>C.L.</u>	<u>DEF.</u>
100	32	0.98		800	66	0.15	
125	42	0.72	5	1000	67	0.12	
160	45	0.54	5	1250	67	0.14	
200	49	0.72	4	1600	68	0.14	
250	54	0.33	2	2000	62	0.12	5
315	59	0.39		2500	61	0.14	6
400	61	0.28	1	3150	65	0.10	2
500	62	0.18	1	4000	70	0.11	
630	63	0.24	1	5000	75	0.06	

STC=63

### ABBREVIATION INDEX

FREQ. = FREQUENCY, HERTZ, (cps)  
T.L. = TRANSMISSION LOSS, dB  
C.L. = UNCERTAINTY IN dB, FOR A 95% CONFIDENCE LIMIT  
DEF. = DEFICIENCIES, dB<STC CONTOUR (SUM OF DEF = 32)  
STC = SOUND TRANSMISSION CLASS

THIS ELECTRONIC COPY OF THIS REPORT IS PROVIDED AS A COURTESY BY THE  
ISSUING LABORATORY FOR REFERENCE AND INFORMATIONAL PURPOSES ONLY

Tested by \_\_\_\_\_ Approved by \_\_\_\_\_

Marc Sciaky  
Senior Technician

David L. Moyer  
Laboratory Manager

TO BE OFFICIALLY VALID, THIS DOCUMENT MUST CONTAIN ALL SIGNATURES INDICATED

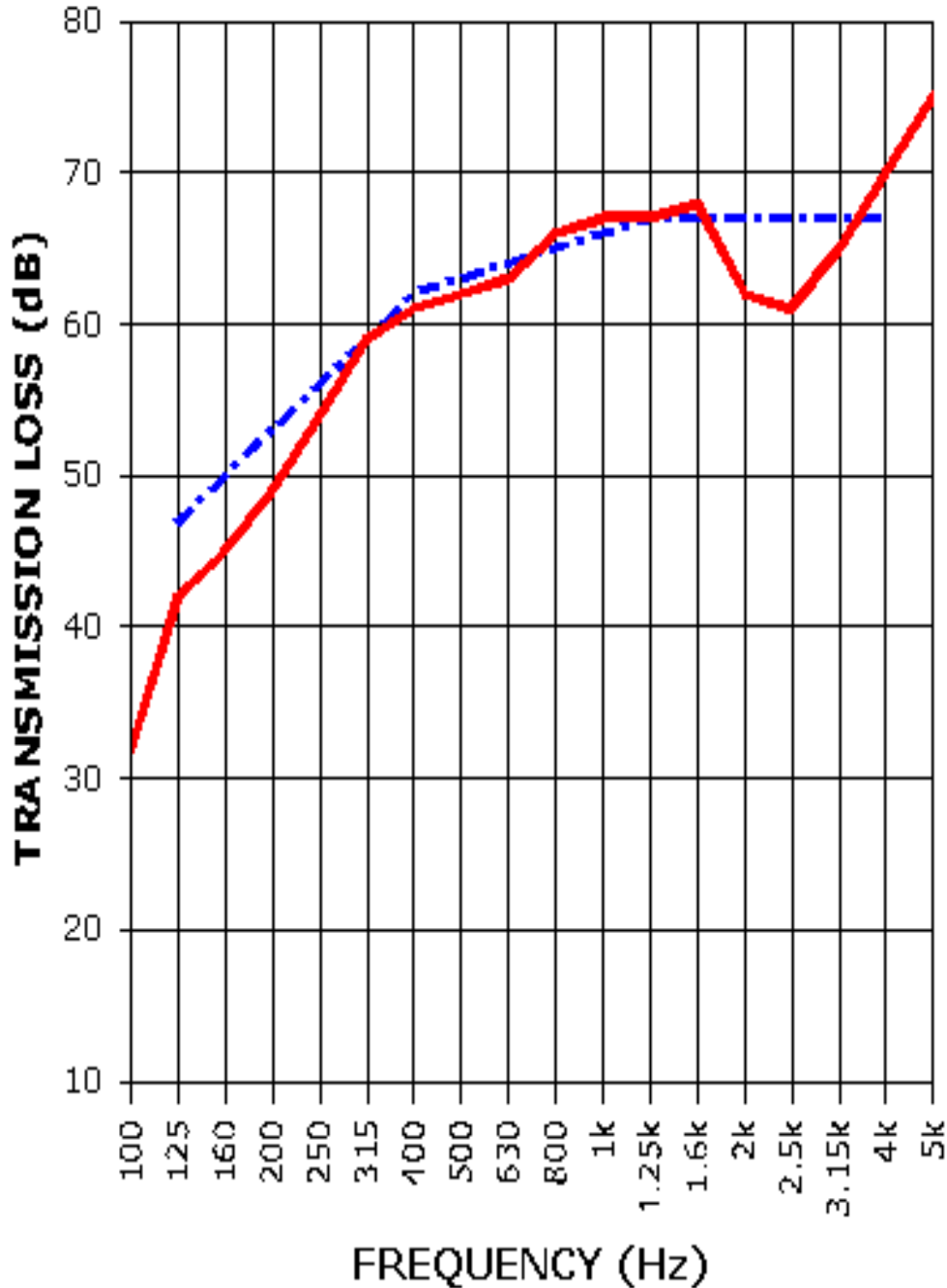
This report shall not be reproduced except in full, without the written approval of RAL.

THE RESULTS REPORTED ABOVE APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR MEASUREMENT. NO RESPONSIBILITY IS ASSUMED FOR PERFORMANCE OF ANY OTHER SPECIMEN.



ACCREDITED BY DEPARTMENT OF COMMERCE, NATIONAL VOLUNTARY LABORATORY  
ACCREDITATION PROGRAM FOR SELECTED TEST METHODS FOR ACOUSTICS.  
THE LABORATORY'S ACCREDITATION OR ANY OF ITS TEST REPORTS IN NO WAY CONSTITUTES  
OR IMPLIES PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NIST.

**TEST REPORT**  
SOUND TRANSMISSION REPORT  
RAL - TL06-048



STC= 63

— TRANSMISSION LOSS  
- - - SOUND TRANSMISSION LOSS CONTOUR

This report shall not be reproduced except in full, without the written approval of RAL.

THE RESULTS REPORTED ABOVE APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR MEASUREMENT. NO RESPONSIBILITY IS ASSUMED FOR PERFORMANCE OF ANY OTHER SPECIMEN.



ACCREDITED BY DEPARTMENT OF COMMERCE, NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM FOR SELECTED TEST METHODS FOR ACOUSTICS. THE LABORATORY'S ACCREDITATION OR ANY OF ITS TEST REPORTS IN NO WAY CONSTITUTES OR IMPLIES PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NIST.