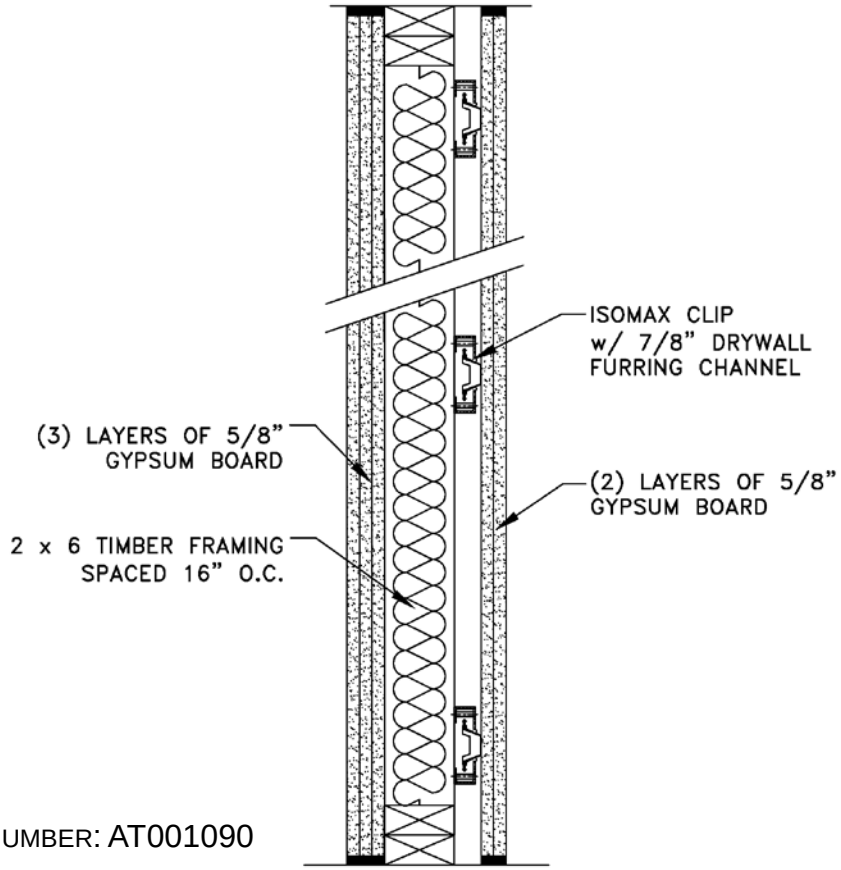
KINETICS NOISE CONTROL TEST REPORT #AT001090

- **KINETICS NOISE CONTROL PRODUCTS:**
  - ISOMAX CLIPS

- **ACOUSTICAL RATINGS:**
  - STC 65

- **TESTING AGENCY & REPORT NUMBER:**
  - RIVERBANK ACOUSTICAL LABORATORIES
  - RAL TL02-46



KINETICS DRAWING NUMBER: AT001090

KINETICS Noise Control

6300 IRELAN PLACE, DUBLIN OH
PHONE: 800.959.1229
FAX: 614.889.0540
WEB: WWW.KINETICSNOISE.COM
EMAIL: ARCHSALES@KINETISNOISE.COM

RIVERBANK ACOUSTICAL LABORATORIES
OF
IIT RESEARCH INSTITUTE
1512 S. BATAVIA AVENUE
GENEVA, ILLINOIS 60134
630/232-0104
FOUNDED 1918 BY
WALLACE CLEMENT SABINE

REPORT

FOR: Kinetics Noise Control

Sound Transmission Loss Test
RAL™-TL02-46

ON: Kinetics Wall Isolation Clip on 2 x 6 Timber Framing 16 Inches on Center With Double Layer 5/8 Inch Gypsum Board on Clips and Triple Layer 5/8 Inch Gypsum Board on Direct

CONDUCTED: 27 February 2002

REVISION: 15 May 2002

TEST METHOD

Unless otherwise designated, the measurements reported below were made with all facilities and procedures in explicit conformity with the ASTM Designations E90-99 and E413-87, 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. A description of the measuring technique is available separately.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the client as Kinetics Wall Isolation Clip on 2 x 6 timber framing 16 inches on center with double layer 5/8 inch gypsum board on clips and triple layer 5/8 inch gypsum board on direct. The overall dimensions of the specimen as measured were 4.27 m (168 in.) wide by 2.74 m (108 in.) high and 254 mm (10 in.) thick. The specimen was installed 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 test specimen consisted of a two-by-six wood stud wall assembly with 159 mm (6.25 in.) thick R-19 fiberglass and a triple layer of 16 mm (0.625 in.) Type X gypsum board on the receive side. Kinetics Wall Isolation Clips and hat track were used on the source side with a double layer of 16 mm (0.625 in.) Type X gypsum board. A more complete description follows.

Floor and Ceiling Plates: The two 140 mm (5.5 in.) wide by 38 mm (1.5 in.) thick and 4.27 m (168 in.) long SPF wood plates were attached to the top and bottom of the test frame with 16d nails on 610 mm (24 in.) centers.

Studs: The twelve 140 mm (5.5 in.) wide by 38 mm (1.5 in.) thick and 2.67 m (105 in.) long SPF wood studs and runners were spaced on 406 mm (16 in.) centers. The studs were attached to the frame with 8d nails.

Kinetics Noise Control

RAL™-TL02-46

27 February 2002

REVISION: 15 May 2002

Insulation: The cavities formed by the studs were friction fit with R-19 unfaced fiberglass insulation batts measuring 159 mm (6.25 in.) thick and 381 mm (15 in.) wide.

Kinetics Wall Isolation Clips and Hat Track: On the source side of the wall, Kinetics Wall Isolation 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 51 mm (2 in.) long coarse thread drywall screws. A total of thirty clips were used. The hat track 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.

Gypsum Wallboard: A double layer of 16 mm (0.625 in.) Type X gypsum board was applied to the hat track on the source side of the wall. The base layer was applied horizontally and the face layer was applied vertically with fasteners on 305 mm (12 in.) centers. The gypsum board was attached using 25 mm (1 in.) and 41 mm (1.625 in.) long Type S bugle head drywall screws, respectively. A triple layer of 16 mm (0.625 in.) Type X gypsum board was applied to the studs on the receive side of the wall. Each layer was installed vertically and attached using 32 mm (1.25 in.), 41 mm (1.625 in.) and 64 mm (2.5 in.) Type W bugle head drywall screws, respectively, on 305 mm (12 in.) centers. All joints were treated with an acoustical caulk in the joints and covered with aluminum faced tape. Screw heads were covered with tape.

The weight of the specimen as measured was 850.5 kg (1,875 lbs.), an average of 72.7 kg/m^2 (14.9 lbs/ft^2). The transmission area used in the calculations was 11.7 m^2 (126 ft^2). The source and receiving room temperatures at the time of the test were 21±2°C (69±2°F) and 58±3% relative humidity. The source and receive reverberation room volumes were 179m^3 (6,298 ft^3) and 177 m^3 (6,255 ft^3), respectively.

RIVERBANK ACOUSTICAL LABORATORIES
OF
IIT RESEARCH INSTITUTE
1512 S. BATAVIA AVENUE
GENEVA, ILLINOIS 60134
630/232-0104
FOUNDED 1918 BY
WALLACE CLEMENT SABINE

REPORT

Kinetics Noise Control

RAL™-TL02-46

27 February 2002

REVISION: 15 May 2002

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 E90-99.

FREQ.	T.L.	C.L.	DEF.	FREQ.	T.L.	C.L.	DEF.
100	38	0.20	0	800	67	0.34	0
125	43	0.27	6	1000	68	0.33	0
160	48	0.30	4	1250	68	0.24	1
200	52	0.37	3	1600	65	0.25	4
250	57	0.37	1	2000	64	0.15	5
315	62	0.33	0	2500	69	0.17	0
400	63	0.36	1	3150	73	0.14	0
500	64	0.31	1	4000	76	0.10	0
630	65	0.33	1	5000	79	0.09	0

STC=65

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
STC = SOUND TRANSMISSION CLASS

Tested by_____ Approved by_____

Dean Victor
Senior Experimentalist

David L. Moyer
Laboratory Manager

RIVERBANK ACOUSTICAL LABORATORIES

OF

IIT RESEARCH INSTITUTE

1512 S. BATAVIA AVENUE
GENEVA, ILLINOIS 60134

630/232-0104

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

REPORT

TRANSMISSION LOSS REPORT
RAL-TL02-46