

## TEST REPORT

FOR: Panelfold, Inc.

Sound Transmission Loss Test  
RAL™-TL03-128

ON: Panelfold Steel Faced Operable Wall

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CONDUCTED: 31 March 2003

RESULT: STC 49

### TEST METHOD

Unless otherwise designated, the measurements reported below were made with all facilities and procedures in explicit conformity with the ASTM Designations E90-02 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 manufacturer as a Panelfold steel faced operable wall. The specimen was fully operable and was comprised of interlocking panels arranged in a flat configuration and supported by an overhead track. The nominally 108 mm (4.25 in.) thick panels were constructed of 0.61 mm (0.0239 in.) thick (24 gauge) steel faces with metal frames and interior sound retarding material. The abutting edges between panels consisted of interlocking vertical stiles incorporating vertical sound seals. A continuous vinyl seal installed on each side of each panel closed the clearance between the top of the panels and the soffit. A mechanical seal in each panel closed the clearance between the bottom of the panels and the floor. An expanding panel provided final closure. The manufacturer installed the specimen directly into the laboratory's 4.27 m (14 ft) wide by 2.74 m (9 ft) high wood-lined frame. Each panel was 108 mm (4.25 in.) thick by 1.27 m (50 in.) wide by 2.59 m (102 in.) high including seals. Each panel weighed an average of 119 kg (263 lbs), or 35.7 kg/m<sup>2</sup> (7.3 lbs/ft<sup>2</sup>), including trolley. The expanding panel was nominally 330 mm (13 in.) wide by 2.59 m (102 in.) high and weighed 96.6 kg (213 lbs). The overall dimensions of the test specimen installed and tested as measured were 4.27 m (168 in.) wide by 2.57 m (101 in.) high and nominally 108 mm (4.25 in.) thick. The weight of the entire specimen as measured was 508 kg (1,119 lbs), an average of 46.4 kg/m<sup>2</sup> (9.5 lbs/ft<sup>2</sup>). The transmission area used in the calculations was 11 m<sup>2</sup> (118 ft<sup>2</sup>). The source and receiving room temperatures at the time of the test were 21±1°C (71±3°F) and 60±3% relative humidity. The source and receive reverberation room volumes were 179 m<sup>3</sup> (6,298 ft<sup>3</sup>) and 177 m<sup>3</sup> (6,255 ft<sup>3</sup>), respectively. Laboratory personnel performed a full inspection on the test specimen. A detailed description is on file and has been intentionally withheld from this report in order that the manufacturer may control full proprietary rights regarding its product. The operable wall was opened and closed at least five times, and the test was conducted with no further adjustments.

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### 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 E90-02.

<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	20	0.83		800	54	0.59	
125	30	0.50	3	1000	56	0.63	
160	31	0.50	5	1250	56	0.70	
200	35	0.58	4	1600	57	0.81	
250	39	0.35	3	2000	59	0.76	
315	41	0.34	4	2500	56	0.78	
400	44	0.23	4	3150	51	0.70	2
500	47	0.34	2	4000	53	0.64	
630	51	0.26		5000	59	0.58	

STC=49

### 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

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

Dean Victor  
Senior Experimentalist

David L. Moyer  
Laboratory Manager

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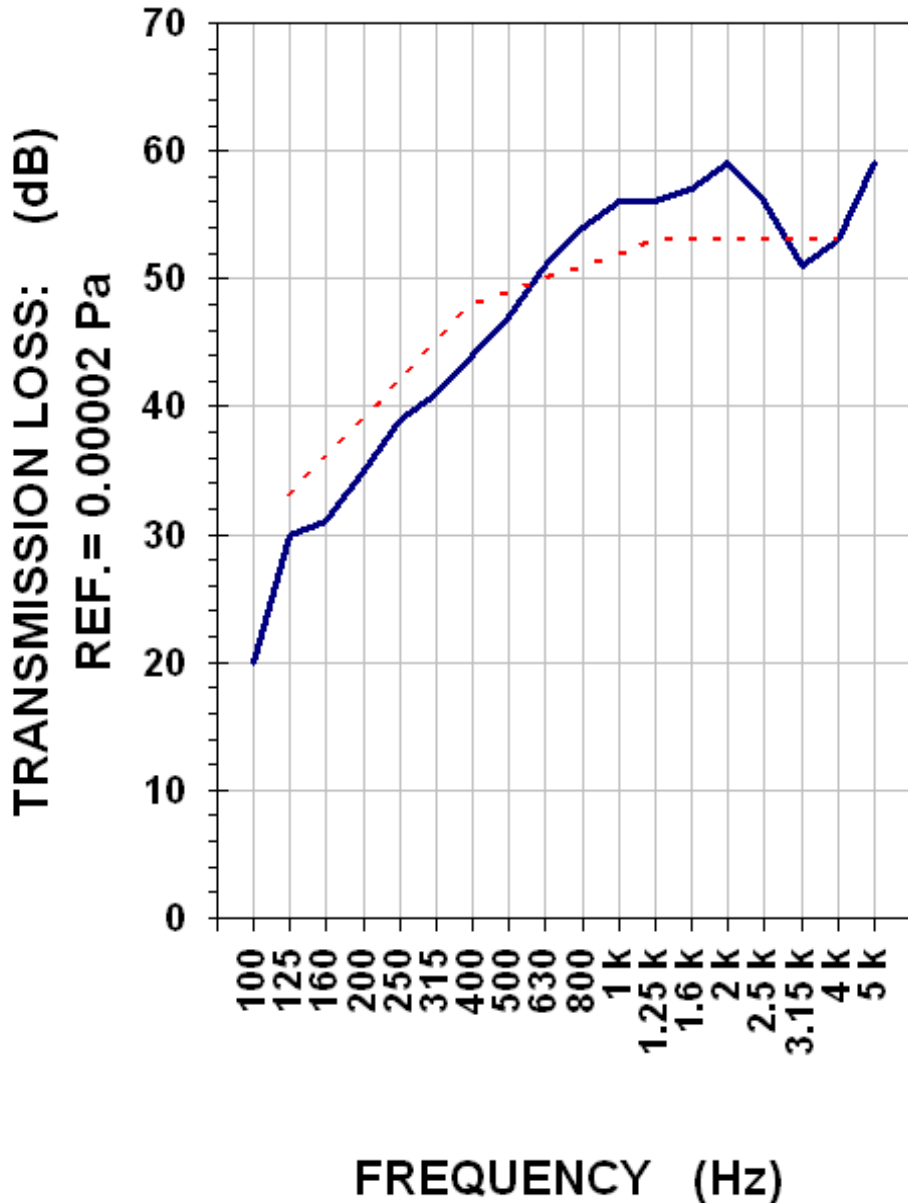
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**TEST REPORT**

**TRANSMISSION LOSS REPORT  
TL03-128**



— TRANSMISSION LOSS  
- - - SOUND TRANSMISSION CLASS CONTOUR

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