

# VALUE WINDOWS & DOORS

## ACOUSTICAL PERFORMANCE TEST REPORT

**SCOPE OF WORK**

ASTM E90 SOUND TRANSMISSION LOSS TESTING ON A EUROTEK PICTURE WINDOW

**REPORT NUMBER**

J4888.01-303-11-R0

**TEST DATE**

03/15/19

**ISSUE DATE**

04/10/19

**RETENTION DATE**

04/10/23

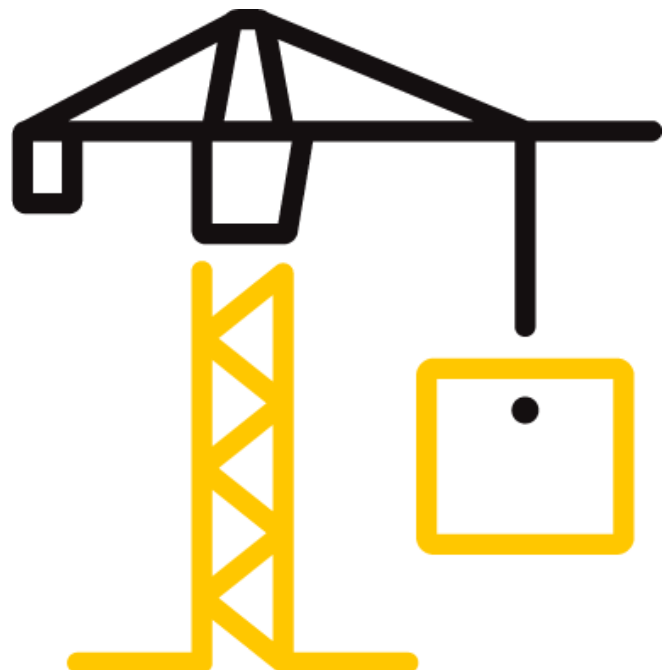
**PAGES**

11

**DOCUMENT CONTROL NUMBER**

RT-R-AMER-Test-2761 (01/24/19)

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## TEST REPORT FOR VALUE WINDOWS & DOORS

Report No.: J4888.01-303-11-R0

Date: 04/10/19

### REPORT ISSUED TO

#### VALUE WINDOWS & DOORS

1830 Flower Avenue

Duarte, California 91010

### SECTION 1

#### SCOPE

Intertek Building & Construction (B&C) was contracted by Value Window & Doors to conduct a sound transmission loss test. Results obtained are tested values and were secured by using the designated test methods. The complete test data is included herein. The client provided the test specimen. All measurements were conducted in the HT test chambers at Intertek B&C located in Lake Forest, California.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

For INTERTEK B&C:

<b>COMPLETED BY:</b>	Marco T. Santa Rosa
<b>TITLE:</b>	Technician II Acoustical Testing
<b>SIGNATURE:</b>	
<b>DATE:</b>	04/10/19

<b>REVIEWED BY:</b>	Leeland S. Hoover
<b>TITLE:</b>	Laboratory Manager Acoustical Testing
<b>SIGNATURE:</b>	
<b>DATE:</b>	04/10/19

MTSR:LSH:ab

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### SECTION 2

#### SUMMARY OF TEST RESULTS

<b>SERIES/MODEL</b>	Eurotek
<b>TYPE</b>	Picture Window
<b>GLAZING (Nominal Dimensions)</b>	1-7/16" IG ( 3/8" Exterior, 11/16" Air Space, 3/8" Interior) Glass Temperature 75°F
<b>DATA FILE NO.</b>	J4888.01A
<b>STC</b>	43
<b>OITC</b>	36

### SECTION 3

#### TEST METHODS

The specimens were evaluated in accordance with the following:

**ASTM E90-09 (2016)**, *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements*

**ASTM E413-16**, *Classification for Rating Sound Insulation*

**ASTM E1332-16**, *Standard Classification for Rating Outdoor-Indoor Sound Attenuation*

**ASTM E2235-04 (2012)**, *Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods*

### SECTION 4

#### SPECIMEN INSTALLATION

A sound transmission loss test was initially performed on a filler wall.

The specimen plug was removed from the filler wall assembly. The specimen was placed on an isolation pad in the test opening. Duct seal was used to seal the perimeter of the specimen to the test opening on both sides. The interior side of the specimen, when installed, was approximately 1/4" from being flush with the receive room side of the filler wall. A stethoscope was used to check for any abnormal air leaks around the test specimen prior to testing. Operable portions of the test specimen, if any, were cycled at least five times prior to testing.

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**SECTION 5  
EQUIPMENT**

The equipment listed below meets the requirements of the test methods stated in Section 3 of this report.

**EQUIPMENT**

INSTRUMENT	MANUFACTURER	MODEL	DESCRIPTION	ASSET #	CAL DATE
Data Acquisition Card	National Instruments	PXIe-4464	Data Acquisition Card	INT00392	10/17
Data Acquisition Card	National Instruments	PXIe-4464	Data Acquisition Card	INT00393	10/17
Data Acquisition Card	National Instruments	PXIe-4464	Data Acquisition Card	INT00397	10/17
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	INT00239	04/18
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	INT00240	05/18
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	INT00241	04/18
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	INT00242	04/18
Source Room Microphone	PCB piezotronics	378C20	Microphone and Preamplifier	INT00243	04/18
Receive Room Microphone	PBC Piezotronics	378C20	Microphone and Preamplifier	INT00234	04/18
Receive Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	INT00235	04/18
Receive Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	INT00236	04/18
Receive Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	INT00237	04/18
Receive Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	INT00238	04/18
Receive Room Environmental Indicator	Comet	T7510	Receive Room	INT00299	04/18
Source Room Environmental Indicator	Comet	T7510	Source Room	INT00300	04/18
Microphone Calibrator	Norsonic	1251	Acoustical Calibrator	Y002919	04/18

\*- Note: The calibration frequency for this equipment is every two years per the manufacturer's recommendation.

**TEST CHAMBER**

	VOLUME	DESCRIPTION
RECEIVE ROOM	231 m <sup>3</sup>	Rotating vane and stationary diffusers Temperature and humidity controlled Isolation pads under the floor
SOURCE ROOM	196 m <sup>3</sup>	Stationary diffusers only Temperature and humidity controlled

	MAXIMUM SIZE	DESCRIPTION
TL TEST OPENING	4.27 m wide by 3.05 m high	Vibration break between source and receive rooms

N/A-Not Applicable

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### SECTION 6

#### LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Marco T. Santa Rosa	Intertek B&C
Leeland S Hoover	Intertek B&C

### SECTION 7

#### TEST PROCEDURE

The sensitivity of the microphones was checked before measurements were conducted.

The transmission loss values were obtained for a single direction of measurement.

Two background noise sound pressure level and five sound absorption measurements were conducted at each of five microphone positions.

Two sound pressure level measurements were made simultaneously in receive and source rooms at each of five microphone positions.

The air temperature and relative humidity conditions were monitored and recorded during all measurements.

Data for flanking limit tests, repeatability measurements, and reference specimen tests are available upon request.

The specimen was returned per the client's request.

### SECTION 8

#### ACOUSTICAL TEST CALCULATIONS

Transmission loss (TL) at each 1/3 octave frequency is the average source room sound pressure level minus the average receive room sound pressure level, plus, 10 times the log of the specimen area divided by the sound absorption of the receive room with the sample in place.

#### STC Rating

To obtain the Sound Transmission Class (STC), read the TL of the contour curve at 500 Hz. The sum of the deficiencies below the contour curve must not exceed 32. The maximum deficiency at any one frequency must not exceed 8.

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### OITC Rating

The Outdoor-Indoor Transmission Class (OITC) is calculated by subtracting the logarithmic summation of the TL values from the logarithmic summation of the A-weighted transportation noise spectrum stated in ASTM E1332.

### SECTION 9

#### SPECIMEN DESCRIPTION

	FRAME
SIZE	47-1/4" by 59-1/8"
THICKNESS	2-3/4"
CORNERS	Mitered
FASTENERS	Welds
SEAL METHOD	N/A
MATERIAL	PVC
REINFORCEMENT	N/A
THERMAL BREAK MATERIAL	N/A
DAYLIGHT OPENING SIZE (X2)	41-5/8" by 53-1/4"

OVERALL INSULATION GLASS UNIT THICKNESS	1-7/16"
SPACER TYPE	N/A

	EXTERIOR SHEET	GAP	INTERIOR SHEET
THICKNESS	3/8"	11/16"	3/8"
MUNTIN PATTERN	N/A	N/A	N/A
MATERIAL	Laminated	Argon	Laminated
LAMINATE MATERIAL	PVB	N/A	PVB

GLAZING METHOD	Interior
GLAZING MATERIAL	Rubber Gasket
GLAZING BEAD MATERIAL	PVC

	TYPE	QUANTITY	LOCATION
WEATHERSTRIP	N/A		
HARDWARE	N/A		
DRAINAGE	1" by 1/4" Weep slots	2	Sill

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TOTAL WEIGHT (lbs)	AVERAGE WEIGHT (lbs/ft <sup>2</sup> )
194	10

\* - Stated per Client/Manufacturer, N/A-Not Applicable

A drawing of the test specimen is included in Section 12.

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### SECTION 10

#### TEST RESULTS

#### ASTM E90 AIRBORNE SOUND TRANSMISSION LOSS



TEST DATE	03/15/19				
DATA FILE NO.	J4888.01A				
CLIENT	Value Windows & Doors				
DESCRIPTION	Series/Model: Eurotek Picture Window With 1-7/16" IG ( 3/8" Exterior, 11/16" Air Space, 3/8" Interior) Glass Temperature 75°F				
SPECIMEN AREA	1.80 m <sup>2</sup>	RECEIVE TEMP.	18.7 °C	SOURCE TEMP	20.0 °C
TECHNICIAN	Marco T Sant	RECEIVE HUMIDITY	23%	SOURCE HUMIDIT	23%

FREQ (Hz)	BACKGROUND SPL (dB)	ABSORPTION (m <sup>2</sup> )	SOURCE SPL (dB)	RECEIVE SPL (dB)	SPECIMEN TL (dB)	95% CONFIDENCE LIMIT	NUMBER OF DEFICIENCIES
80	49.1	4.9	102	71	28	1.53	-
100	38.2	4.9	102	72	27	1.65	-
125	38.8	5.3	103	72	28	1.07	0
160	44.3	5.3	103	71	28	0.68	2
200	35.6	6.1	106	71	31	0.52	2
250	23.9	6.8	106	68	33	0.54	3
315	19.1	7.0	106	65	35	0.74	4
400	19.6	6.1	105	61	40	0.64	2
500	19.6	5.3	107	61	41	0.27	2
630	18.2	5.8	106	60	41	0.29	3
800	21.7	6.0	105	54	46	0.33	0
1000	9.9	6.4	107	54	48	0.16	0
1250	8.1	6.7	105	52	47	0.20	0
1600	6.5	7.8	103	50	46	0.27	1
2000	4.9	10.0	100	47	46	0.23	1
2500	3.9	12.5	100	48	43	0.09	4
3150	4.3	15.3	99	45	45	0.26	2
4000	4.7	20.4	96	33	52	0.25	0
5000	5.3	27.7	91	26	53	0.55	-
STC RATING	43 (Sound Transmission Class)						
DEFICIENCIES	26 (Sum of Deficiencies)						
OITC RATING	36 (Outdoor-Indoor Transmission Class)						

- Notes:**
- 1) Receive Room levels less than 5 dB above the Background levels are red.
  - 2) Specimen TL levels listed in red indicate the lower limit of the transmission loss.
  - 3) Specimen TL levels listed in green indicate that there has been a filler wall correction applied



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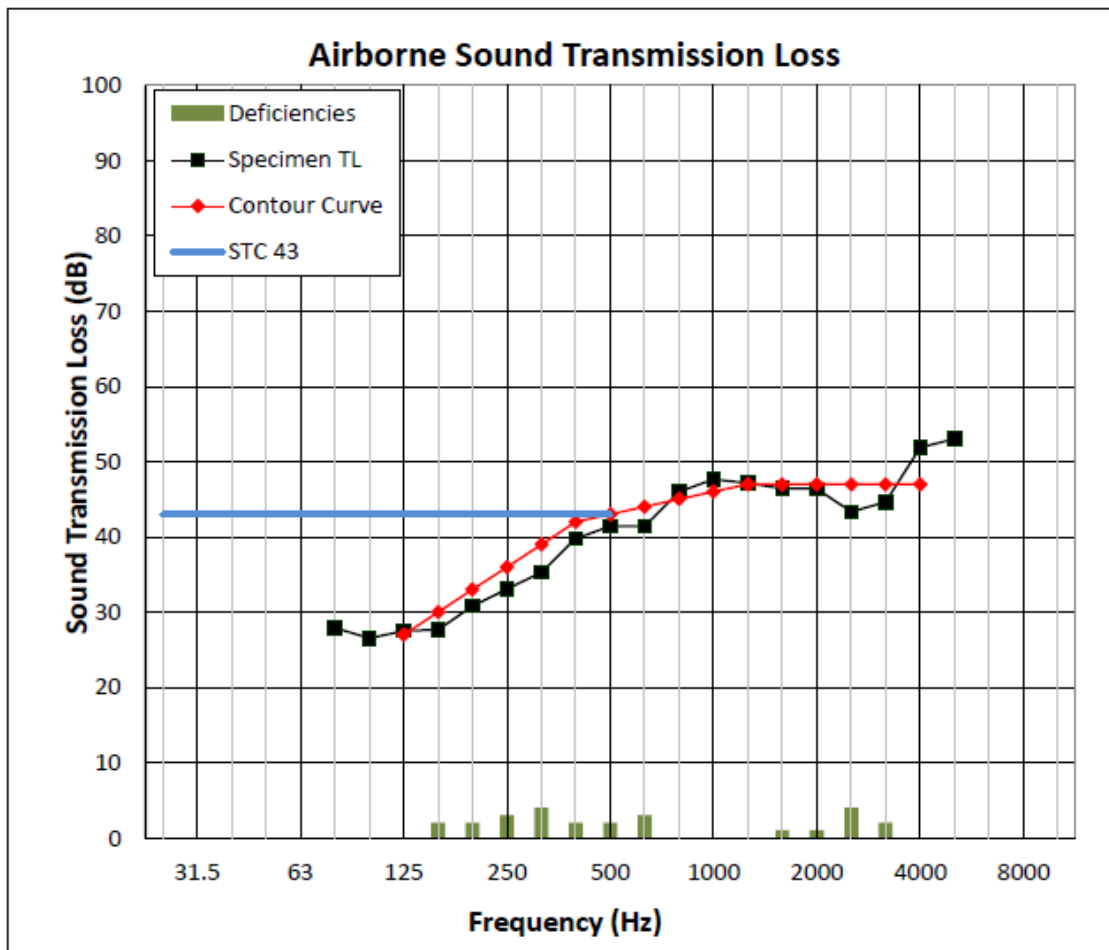
Report No.: J4888.01-303-11-R0

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### ASTM E90 AIRBORNE SOUND TRANSMISSION LOSS



<b>TEST DATE</b>	03/15/19				
<b>DATA FILE NO.</b>	J4888.01A				
<b>CLIENT</b>	Value Windows & Doors				
<b>DESCRIPTION</b>	Series/Model: Eurotek Picture Window With 1-7/16" IG ( 3/8" Exterior, 11/16" Air Space, 3/8" Interior) Glass Temperature 75°F				
<b>SPECIMEN AREA</b>	1.80 m <sup>2</sup>	<b>RECEIVE TEMP.</b>	18.7 °C	<b>SOURCE TEMP</b>	20.0 °C
<b>TECHNICIAN</b>	Marco T Sant	<b>RECEIVE HUMIDITY</b>	23%	<b>SOURCE HUMIDIT</b>	23%

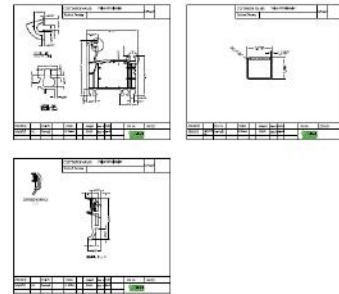
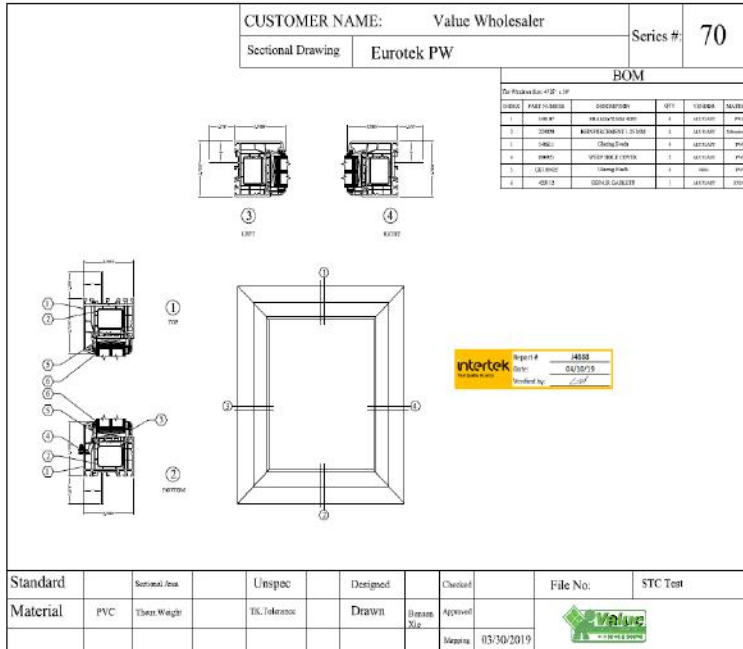


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### SECTION 11 DRAWING



Standard	Sectional Area	Unspec	Designed	Checked	File No.	STC Test
Material	PVC	Thin Weight	Drawn	Approved		
				Version		



Total Quality. Assured.

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### SECTION 12

#### REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	04/10/19	N/A	Original Report Issue