

Project Number: ESP025396P-16

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Report Date: 7/6/2017

ACOUSTIC

**SOUND TRANSMISSION CLASS
TEST REPORT****Series/Model: Forgent Series T780 Teutonic
Sliding Patio Door**

Prepared for:

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TESTING CERT #1479.01

AIRBORNE SOUND TRANSMISSION LOSS (STC) ASTM E90-09

INTRODUCTION:

This report presents the sound transmission results of a:

Forgent Series T780 Teutonic Sliding Patio Door

The testing and data analysis were completed on: Thursday, May 18, 2017

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The results stated in this report represent only the specific construction and acoustic conditions present at the time of the test. Measurements performed in accordance with this standard on nominally identical constructions and acoustical conditions may produce different results.

Summary of Results

Forgent Series T780 Teutonic Sliding Patio Door

Glazing Description		Test Results		
		STC	Def	OITC
Glass Type:	1" (25.3 mm) Insulated Glass Unit (IG)	29	32	23
Exterior Lite:	5/32" (3.9mm)			
Gap / Airspace:	11/16" (17.5 mm)			
Interior Lite:	5/32" (3.9mm)			

SPECIMEN DESCRIPTION:
Manufacturer: Kolbe & Kolbe MillworkCo., Inc.

Specimen: Patio Door

Model # / Series: Forgent Series T780 Teutonic

Material: Vinyl

Size: 71.50" W x 79.50" H

Area: 39.5 -ft²
Weight: -lbs

Weight (psf): 0.0 -lb/ft²
Glazing Details:
(Measured Thickness)
1" (25.3 mm) Insulated Glass Unit (IG)

Exterior Lite:	5/32" (3.9mm)
Space/Gap:	11/16" (17.5 mm)
Interior Lite:	5/32" (3.9mm)

Sash Size: Active Panel: 36 3/8" x 75 1/2"

Daylight Opening: Each Panel: 29 1/2" x 69"

Additional Details: Forgent Series T780 Teutonic Sliding Door

Hardware: Handle Lock

Drainage: Sloped Sill, Weep

Weatherstripping:

Component	Location	Weatherstrip Type	Height, in	Qty
<i>Frame</i>	Head @ meeting rail	Pile Pads	1/4"	1
<i>Frame</i>	Jamb	Pile	1/8"	2
<i>Panel</i>	Meeting Rail	Pile	1/8"	1
<i>Panel</i>	Stile	Pile	3/16"	2
<i>Panel</i>	Upper Rail	Pile	3/16"	2

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TEST METHOD:**Sound Transmission Test**

ASTM:E90(09), "Laboratory Measurement of Airborne Sound Transmission of Building Partitions," was followed in every respect. The STC value was obtained by applying the Transmission Loss (TL) values to the STC reference contour of ASTM: E413(16), "Determination of Sound Transmission Class." The actual transmission loss at each frequency was calculated by the following equations:

$$TL = NR + 10 \log S - 10 \log A_2$$

where: TL = Transmission Loss (dB)

NR = Noise Reduction (dB)

S = Surface area common to both sides (sq. ft.)

A₂ = Sound absorption of the receiving room with the sample in place (sabins)

OITC Procedure

ASTM:E1332(16), "Determination of Outdoor-Indoor Transmission Class", was followed in every respect. Basically, the OITC was calculated by using the sound transmission loss values in the 80 to 4000 Hz range as measured in accordance with ASTM E-90(09). These transmission loss data are then used to determine the A-weighted sound level reduction of the specimen for the reference source spectrum specified in Table 1 of ASTM E1332(16). The appropriate calculations were made to determine the OITC value. TL measurements were obtained in a single direction, from Source Room to the Receiving room. The source room has a volume of 2948-ft³ (83-m³) and the receiving room has a volume of 5825-ft³ (165-m³).

Windows & Doors: Windows and Doors are operated at least 5-times prior to testing. The test unit is operational unless otherwise stated. The temperatures and relative humidity of the termination room met the requirements of the standard during and after the test. All frequencies met the requirements for 95% confidence established by the standard unless noted. Noise reduction measurements were performed in a single direction (source room to receiving room).

TEST EQUIPMENT:

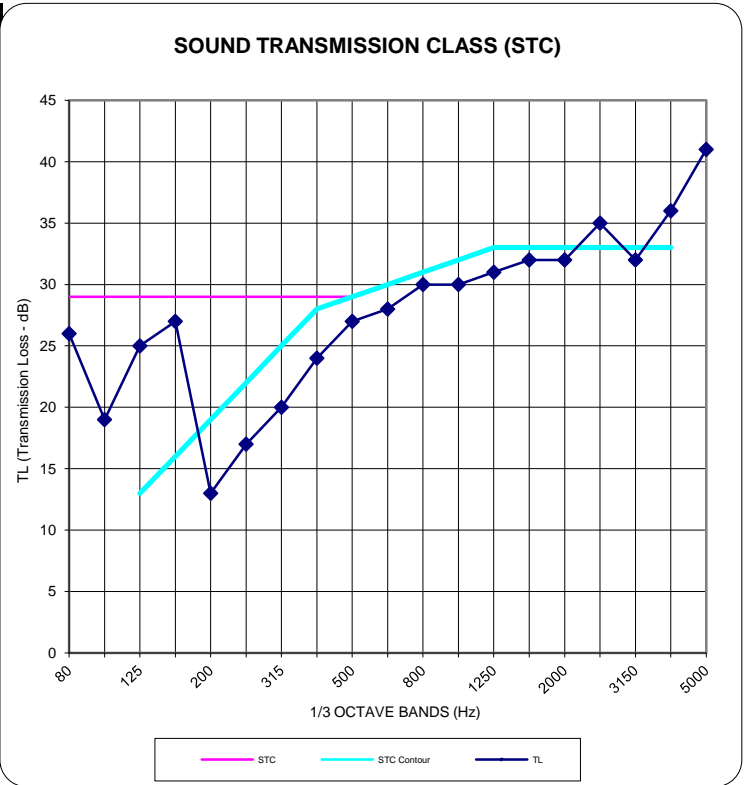
Item Description	ID#	Manufacturer/Model	Serial #	Cal. Due	Location
1/2" Pressure Condensor Mic	PT-162-075	GRAS/40AD	19220-1244	5/25/2017	Reverberation Chamber
1/2" Pressure Condensor Mic	PT-162-216	BSWA/MP253	450005	9/27/2017	Source Chamber
Microphone Calibrator	PT-162-107	Norsonic/1251	29144	5/25/2017	N/A
Data Acquisition Module	PT-162-107	National Instruments/NI9234	1735986-1893EB3	6/8/2017	Control Center
Temp/Humidity Sensor	PT-162-077	Dwyer/Series RH	M90714-e4SV-Y	6/1/2017	Reverberation Chamber
Temp/Humidity Sensor	PT-162-079	Dwyer/Series RH	m93237-E09w-A	6/1/2017	Source Chamber

REMARKS:

The test sample will be retained for a period of 10-days and then discarded if no written return-request received.

TEST RESULTS

1/3 Oct. Band, Hz	L ₁ (dB)	L ₂ (dB)	Bkgd (dB)	A _v (m ² Sabins)	TL (dB)	Def (dB)	95% Conf.	Notes	
								1	2
80	97.3	70.4	45.4	4.7	26	-	3.3		
100	101.5	80.2	45.0	5.6	19	-	2.4		
125	103.9	77.8	41.6	4.3	25	0	2.2		
160	99.3	72.7	37.7	3.7	27	0	1.8		
200	95.4	81.0	38.0	4.6	13	6	1.0		
250	100.7	82.8	38.4	4.5	17	5	1.0		
315	101.2	80.1	36.5	4.5	20	5	0.7		
400	102.0	76.8	34.1	4.5	24	4	0.8		
500	104.4	76.1	33.8	4.6	27	2	0.5		
630	103.1	72.9	30.1	5.4	28	2	0.4		
800	101.0	69.5	27.3	5.8	30	1	0.4		
1000	98.7	66.8	26.0	5.6	30	2	0.3		
1250	97.1	63.5	25.0	6.3	31	2	0.4		
1600	98.0	63.4	23.0	7.2	32	1	0.3		
2000	97.2	61.6	22.2	7.8	32	1	0.2		
2500	95.2	56.7	20.7	8.5	35	0	0.3		
3150	90.9	54.4	20.1	9.8	32	1	0.3		
4000	88.1	47.3	20.8	11.5	36	0	0.3		
5000	89.3	42.5	21.6	14.7	41	-	0.3		



STC Rating: 29

TL = Transmission Loss (dB)
Def = Deficiencies (below STC contour)

Deficiency: 32

Note #1: Noise Level was less than 10dB above ambient.

Note #2: Confidence Level Exceeded

OITC Rating: 23

Test Conditions:

Laminated Glass Temp(°C):
Exterior: N/A
Interior: N/A

Temp(°C): % RH: ATM (hPa)
Source Room: 21.7 50 977
Receive Room: 21.6 51 977

SPECIMEN IDENTIFICATION:

Type: Patio Door
Series: Forgent Series T780 Teutonic Sliding Patio Door
Size: 71.50" W x 79.50" H **Area:** 39.5 -ft²
Depth: 6"
Mass: 0 -lbs **Mass (psf):** 0.0 -lb/ft²

Test Date: 18-May-17
Time Stamp: 10:45 AM
Tested by: JAB

Glazing Description

1" (25.3 mm) Insulated Glass Unit (IG)

Exterior Lite: 5/32" (3.9mm)
Gap / Space: 11/16" (17.5 mm)
Interior Lite: 5/32" (3.9mm)



* As stated by Manufacturer.