

# RSL, LLC

# COMPUTER SIMULATION REPORT

## SCOPE OF WORK

NOVATECH WOOD EDGE STEEL DOOR / GENERIC WOOD FRAME - NFRC SIMULATIONS TO DETERMINE U-FACTOR AND SOLAR HEAT GAIN COEFFICIENT

## REPORT NUMBER

M1809.03-116-45 R0

## TEST DATE

04/20/21

## ISSUE DATE

06/13/23

## RECORD RETENTION END DATE

04/20/26

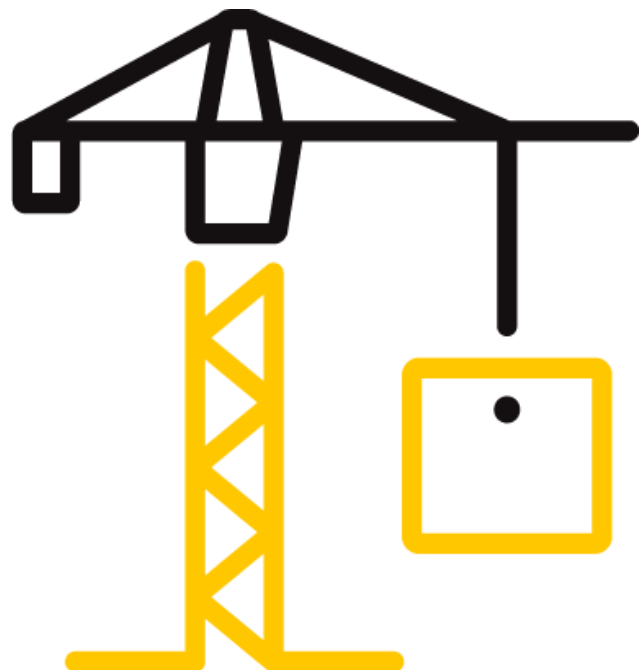
## PAGES

61

## DOCUMENT CONTROL NUMBER

RT-R-AMER-Test-3920 (09/04/18)

©2017 INTERTEK



## TEST REPORT FOR RSL, LLC

Report No.: M1809.03-116-45 R0

Date: 06/13/23

### REPORT ISSUED TO

**RSL, LLC**

3092 English Creek Drive

Egg Harbor Township, New Jersey 08234-5245

### SECTION 1

#### SUMMARY

#### **SERIES/MODEL: Novatech Wood Edge Steel Door / Generic Wood Frame**

Intertek Building & Construction (Intertek B&C) was contracted to perform U-Factor, Solar Heat Gain Coefficient, and Visible Transmittance simulations in accordance with the National Fenestration Rating Council (NFRC).

Ratings values included in this report are for submittals to an NFRC-licensed IA and are not meant to be used directly for labeling purposes. Only those values identified on a valid Certification Authorization Report (CAR) by an NFRC accredited Inspection Agency (IA) are to be used for labeling purposes. The ratings values were rounded in accordance with NFRC 601, NFRC Unit and Measurement Policy.

Intertek B&C is an NFRC accredited simulation laboratory and all simulations were conducted in full compliance with NFRC approved procedures and specifications. The values included in this report are not considered in compliance with ANSI/NFRC 100 and ANSI/NFRC 200 unless the associated validation test requirements have been satisfied as applicable.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

For INTERTEK B&C:

**COMPLETED BY:** Dale C. White  
Simulation Technician  
**TITLE:** NFRC Certified Simulator

**SIGNATURE:**

**DATE:** 06/13/23

DCW:dcw

**REVIEWED BY:** Eric S. Leitner  
Simulation Technician  
**TITLE:** Team Leader, SIRC

**SIGNATURE:**

**DATE:** 06/13/23

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample(s) tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

## TEST REPORT FOR RSL, LLC

Report No.: M1809.03-116-45 R0

Date: 06/13/23

### SECTION 2

#### TEST METHODS

The products were evaluated in accordance with the following:

*ANSI/NFRC 100-2020, Procedure for Determining Fenestration Product U-Factors*

*ANSI/NFRC 200-2020, Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence*

### SECTION 3

#### TEST PROCEDURE

The total product, including specific frame, spacer, and glass details, was modeled using NFRC approved software.

<b>FRAME AND EDGE MODELING</b>	THERM 7.4.4
<b>CENTER-OF-GLASS MODELING</b>	WINDOW 7.4.14
<b>TOTAL PRODUCT CALCULATIONS</b>	NFRC Approved Spreadsheet
<b>SPECTRAL DATA LIBRARY</b>	IGDB 91.0

#### Modeling Assumptions / Technical Interpretations

Any modeling assumptions and technical interpretations required to model this product are listed below.

- 1) To prevent air infiltration, tape was applied to all interior sash crack locations.
- 2) The NFRC default door frames, casing, and lite frames were used where applicable
- 3) The 3/16 x 5/8, and 3/16 x 13/16 muntins were grouped. 3/16 x 13/16 is the leader

## TEST REPORT FOR RSL, LLC

Report No.: M1809.03-116-45 R0

Date: 06/13/23

### SECTION 4

#### SIMULATION SPECIMEN DESCRIPTION

<b>SERIES/MODEL</b>	Novatech Wood Edge Steel Door / Generic Wood Frame
<b>PRODUCT TYPE</b>	Swinging Door - Single Leaf Entrance Door
<b>FRAME MATERIAL</b>	WD - Wood
<b>SASH MATERIAL</b>	ST - Steel
<b>STANDARD SIZE</b>	960mm x 2090mm (37.75 in x 82.375 in)
<b>NFRC CPD NUMBER</b>	N/A

SPACER OPTIONS			
TYPE	PRIMARY SEAL	SECONDARY SEAL	CODE
Aluminum Single Seal Spacer	Butyl Rubber		A1-S
Aluminum Dual Seal Spacer	Butyl Rubber	Silicone	A1-D
Intercept Spacer	Butyl Rubber	Butyl Rubber	CU-D
Decoseal Spacer	Butyl Rubber		A5-S

GRID OPTIONS		
GRID SIZE	GRID TYPE	GRID PATTERN
0.188" x 0.625"	Aluminum Flat Grid (Painted)	NFRC Standard
0.188" x 0.813"	Aluminum Flat Grid (Painted)	NFRC Standard
0.445" x 1.125"	PVC SDL Bar	NFRC Standard

REINFORCEMENT OPTIONS	
LOCATION	MATERIAL
None	-

GAS FILLING TECHNIQUE	
FILL TYPE	METHOD
90% Argon	Single Probe

EDGE-OF-GLASS CONSTRUCTION	
<b>INTERIOR CONDITION</b>	Polypropylene or CPVC glazing bead with silicone
<b>EXTERIOR CONDITION</b>	Polypropylene or CPVC glazing bead with silicone

WEATHERSTRIPPING		
TYPE	QUANTITY	LOCATION
Foam Rubber Weatherstrip	1	Jamb and Head Frames

## TEST REPORT FOR RSL, LLC

Report No.: M1809.03-116-45 R0

Date: 06/13/23

### SECTION 4

#### SIMULATION SPECIMEN DESCRIPTION

FRAME/SASH MATERIALS FINISH	
<b>INTERIOR</b>	Wood, Galv Steel
<b>EXTERIOR</b>	Wood, Galv Steel

VALIDATION MATRIX*	
<i>PRODUCT LINE</i>	<i>REPORT NUMBER</i>

*\*These products are part of a validation matrix. Only one is required for validation testing.*

## TEST REPORT FOR RSL, LLC

Report No.: M1809.03-116-45 R0

Date: 06/13/23

### SECTION 5

#### SPECIALTY PRODUCTS TABLE

The specialty products method allows the manufacturer to determine the overall product SHGC and VT for any glazing option. The center of glass SHGC and/or VT must be determined using WINDOW 7.4.14. This method gives overall product SHGC and VT indexed on center of glass properties. All values used in the calculations are truncated to six decimal place precision.

#### *1/4 Lite*

	NO DIVIDERS	DIVIDERS <1	DIVIDERS >1
SHGC0	0.006996	0.007436	0.007853
SHGC1	0.128081	0.115164	0.102945
VT0	0.000000	0.000000	0.000000
VT1	0.121085	0.107727	0.095091

#### *1/2 Lite*

	NO DIVIDERS	DIVIDERS <1	DIVIDERS >1
SHGC0	0.006755	0.007777	0.008727
SHGC1	0.242570	0.212630	0.184790
VT0	0.000000	0.000000	0.000000
VT1	0.235814	0.204853	0.176063

#### *3/4 Lite*

	NO DIVIDERS	DIVIDERS <1	DIVIDERS >1
SHGC0	0.006587	0.007954	0.009226
SHGC1	0.323222	0.283157	0.245890
VT0	0.000000	0.000000	0.000000
VT1	0.316635	0.275203	0.236665

#### *Full Lite*

	NO DIVIDERS	DIVIDERS <1	DIVIDERS >1
SHGC0	0.006362	0.008138	0.009796
SHGC1	0.430719	0.378661	0.330101
VT0	0.000000	0.000000	0.000000
VT1	0.424357	0.370522	0.320305

$$SHGC = SHGC0 + SHGCc (SHGC1 - SHGC0)$$

$$VT = VT0 + VTc (VT1 - VT0)$$

## TEST REPORT FOR RSL, LLC

Report No.: M1809.03-116-45 R0

Date: 06/13/23

### SECTION 5

#### SPECIALTY PRODUCTS TABLE

The specialty products method allows the manufacturer to determine the overall product SHGC and VT for any glazing option. The center of glass SHGC and/or VT must be determined using WINDOW 7.4.14. This method gives overall product SHGC and VT indexed on center of glass properties. All values used in the calculations are truncated to six decimal place precision.

##### *1/2 Lite BBG UP*

	NO DIVIDERS	DIVIDERS <1	DIVIDERS >1
SHGC0	0.009224		
SHGC1	0.210347		
VT0	0.000000		
VT1	0.201122		

##### *3/4 Lite BBG UP*

	NO DIVIDERS	DIVIDERS <1	DIVIDERS >1
SHGC0	0.009582		
SHGC1	0.283926		
VT0	0.000000		
VT1	0.274343		

##### *Full Lite BBG UP*

	NO DIVIDERS	DIVIDERS <1	DIVIDERS >1
SHGC0	0.010041		
SHGC1	0.382322		
VT0	0.000000		
VT1	0.372281		

	NO DIVIDERS	DIVIDERS <1	DIVIDERS >1
SHGC0			
SHGC1			
VT0			
VT1			

$$SHGC = SHGC0 + SHGCc (SHGC1 - SHGC0)$$

$$VT = VT0 + VTc (VT1 - VT0)$$

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
1	1/4 Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 1/2" IG	0.123		0.250	AIR	0.123						OT	A1-S	N	0.21	0.10	0.10				
2	1/4 Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 9/16" IG	0.123		0.313	AIR	0.123						OT	A1-S	G	0.21			0.09	0.09		
3	1/4 Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 9/16" IG	0.123		0.313	AIR	0.123						CL	A1-S	S	0.21					0.08	0.08
4	1/4 Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 1/2" IG	0.123	0.148(#2)	0.250	AIR	0.123						CL	A1-S	N	0.20	0.09	0.09				
5	1/4 Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 9/16" IG	0.123	0.148(#2)	0.313	AIR	0.123						CL	A1-S	G	0.20			0.08	0.08		
6	1/4 Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 9/16" IG	0.123	0.148(#2)	0.313	AIR	0.123						CL	A1-S	S	0.20					0.07	0.07
7	1/4 Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 1" IG	0.123		0.750	AIR	0.123						CL	A1-S	N,G	0.21	0.10	0.10	0.09	0.09		
8	1/4 Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 1" IG	0.123		0.750	AIR	0.123						CL	A1-S	S	0.21					0.08	0.08
9	1/4 Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 1" IG	0.123	0.148(#2)	0.750	AIR	0.123						CL	A1-S	N,G	0.19	0.09	0.09	0.08	0.08		
10	1/4 Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 1" IG	0.123	0.148(#2)	0.750	AIR	0.123						CL	A1-S	S	0.19					0.07	0.07
11	1/4 Lite: Injection Frame: Clear / Air / Clear (3mm/3mm) 1/2" IG	0.123		0.250	AIR	0.123						CL	CU-D	N	0.22	0.10	0.10				



**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
12	1/4 Lite: Injection Frame: Clear / Air / Clear (3mm/3mm) 9/16" IG	0.123		0.313	AIR	0.123						CL	CU-D	G	0.22			0.09	0.09		
13	1/4 Lite: Injection Frame: E272 / Air / Clear (3mm/3mm) 1/2" IG	0.117	0.042(#2)	0.250	AIR	0.118						CL	CU-D	N	0.20	0.06	0.09				
14	1/4 Lite: Injection Frame: E272 / Air / Clear (3mm/3mm) 9/16" IG	0.117	0.042(#2)	0.313	AIR	0.118						CL	CU-D	G	0.20			0.05	0.08		
15	1/4 Lite: Injection Frame: E272 / Argon / Clear (3mm/3mm) 1/2" IG	0.117	0.042(#2)	0.250	ARG90	0.118						CL	CU-D	N	0.19	0.06	0.09				
16	1/4 Lite: Injection Frame: E272 / Argon / Clear (3mm/3mm) 9/16" IG	0.117	0.042(#2)	0.313	ARG90	0.118						CL	CU-D	G	0.19			0.05	0.08		
17	1/4 Lite: Injection Frame: E272 / Air / Clear (3mm/3mm) 1" IG	0.117	0.042(#2)	0.750	AIR	0.118						CL	CU-D	N,G	0.19	0.06	0.09	0.05	0.08		
18	1/4 Lite: Injection Frame: E272 / Argon / Clear (3mm/3mm) 1" IG	0.117	0.042(#2)	0.750	ARG90	0.118						CL	CU-D	N,G	0.19	0.06	0.09	0.05	0.08		
19	1/4 Lite: Injection Frame: Lami / Air / Clear (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.118						CL	A1-S	N,G	0.21	0.09	0.09	0.08	0.08		
20	1/4 Lite: Injection Frame: Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.117	0.042(#3)					CL	CU-D	N,G	0.19	0.06	0.08	0.06	0.07		
21	1/4 Lite: Injection Frame: Lami / Air / ISE81-6 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.120	0.147(#3)					CL	A1-S	N,G	0.20	0.08	0.09	0.07	0.08		

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
22	1/4 Lite: Injection Frame: Lami / Air / YEA (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.126	0.162(#3)					CL	A1-S	N,G	0.20	0.08	0.09	0.07	0.08		
23	1/4 Lite: Impact Frame: Lami / Air / Clear (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.118						CL	A1-S	N,G	0.20	0.09	0.09	0.08	0.08		
24	1/4 Lite: Impact Frame: Lami / Air / ISE81-6 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.120	0.147(#3)					CL	A1-S	N,G	0.19	0.08	0.09	0.07	0.08		
25	1/4 Lite: Impact Frame: Lami / Air / CS73 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.123	0.148(#3)					CL	A1-S	N,G	0.19	0.08	0.09	0.07	0.08		
26	1/4 Lite: Impact Frame: Lami / Air / Deco / Air / Clear (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.324		0.270	AIR	0.225		0.270	AIR	0.123		CL	A1-D	G	0.19			0.07	0.08		
27	1/4 Lite: Impact Frame: Lami / Air / Deco / Air / Clear (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.324		0.270	AIR	0.225		0.270	AIR	0.123		CL	A5-S	G	0.19			0.07	0.08		
28	1/4 Lite: Injection Frame: Lami / Air / Clear (3mm 090PVB 3mm/3mm) 1" IG	0.324		0.550	AIR	0.118						CL	CU-D	N,G	0.21	0.09	0.09	0.08	0.08		

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
29	1/4 Lite: Injection Frame: Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1" IG	0.324		0.550	AIR	0.117	0.042(#3)					CL	CU-D	N,G	0.19	0.06	0.08	0.06	0.07		
30	1/4 Lite: Injection Frame: Lami / Air / YEA (3mm 090PVB 3mm/3mm) 1" IG	0.324		0.550	AIR	0.126	0.162(#3)					CL	A1-S	N,G	0.20	0.08	0.09	0.07	0.08		
31	1/4 Lite: Injection Frame: Lami / Air / ISE81-6 (3mm 090PVB 3mm/3mm) 1" IG	0.324		0.550	AIR	0.120	0.147(#3)					CL	A1-S	N,G	0.20	0.08	0.09	0.07	0.08		
32	1/4 Lite: Injection Frame: Clear / Air / Deco / Air / Clear (3mm/6mm/3mm) 1" IG	0.123		0.270	AIR	0.225		0.270	AIR	0.123		CL	A1-D	G	0.20			0.08	0.08		
33	1/4 Lite: Injection Frame: Clear / Air / Deco / Air / Clear (3mm/6mm/3mm) 1" IG	0.123		0.270	AIR	0.225		0.270	AIR	0.123		CL	A5-S	G	0.20			0.08	0.08		
34	1/2 Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 1/2" IG	0.123		0.250	AIR	0.123						CL	A1-S	N	0.27	0.19	0.19				
35	1/2 Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 9/16" IG	0.123		0.313	AIR	0.123						OT	A1-S	G	0.26			0.17	0.17		
36	1/2 Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 9/16" IG	0.123		0.313	AIR	0.123						CL	A1-S	S	0.26					0.15	0.14
37	1/2 Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 1/2" IG	0.123	0.148(#2)	0.250	AIR	0.123						CL	A1-S	N	0.24	0.16	0.18				

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
38	1/2 Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 9/16" IG	0.123	0.148(#2)	0.313	AIR	0.123						CL	A1-S	G	0.24			0.14	0.15		
39	1/2 Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 9/16" IG	0.123	0.148(#2)	0.313	AIR	0.123						CL	A1-S	S	0.24					0.12	0.13
40	1/2 Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 1" IG	0.123		0.750	AIR	0.123						CL	A1-S	N,G	0.25	0.19	0.19	0.17	0.17		
41	1/2 Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 1" IG	0.123		0.750	AIR	0.123						CL	A1-S	S	0.25					0.15	0.14
42	1/2 Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 1" IG	0.123	0.148(#2)	0.750	AIR	0.123						CL	A1-S	N,G	0.22	0.16	0.18	0.14	0.15		
43	1/2 Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 1" IG	0.123	0.148(#2)	0.750	AIR	0.123						CL	A1-S	S	0.22					0.12	0.13
44	1/2 Lite: Injection Frame: Clear / Air / Clear (3mm/3mm) 1/2" IG	0.123		0.250	AIR	0.123						CL	CU-D	N	0.28	0.19	0.19				
45	1/2 Lite: Injection Frame: Clear / Air / Clear (3mm/3mm) 9/16" IG	0.123		0.313	AIR	0.123						CL	CU-D	G	0.27			0.17	0.17		
46	1/2 Lite: Injection Frame: E272 / Air / Clear (3mm/3mm) 1/2" IG	0.117	0.042(#2)	0.250	AIR	0.118						CL	CU-D	N	0.24	0.11	0.17				
47	1/2 Lite: Injection Frame: E272 / Air / Clear (3mm/3mm) 9/16" IG	0.117	0.042(#2)	0.313	AIR	0.118						CL	CU-D	G	0.24			0.09	0.15		
48	1/2 Lite: Injection Frame: E272 / Argon / Clear (3mm/3mm) 1/2" IG	0.117	0.042(#2)	0.250	ARG90	0.118						CL	CU-D	N	0.23	0.11	0.17				

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
49	1/2 Lite: Injection Frame: E272 / Argon / Clear (3mm/3mm) 9/16" IG	0.117	0.042(#2)	0.313	ARG90	0.118						CL	CU-D	G	0.22			0.09	0.15		
50	1/2 Lite: Injection Frame: E272 / Air / Clear (3mm/3mm) 1" IG	0.117	0.042(#2)	0.750	AIR	0.118						CL	CU-D	N,G	0.22	0.10	0.17	0.09	0.15		
51	1/2 Lite: Injection Frame: E272 / Argon / Clear (3mm/3mm) 1" IG	0.117	0.042(#2)	0.750	ARG90	0.118						CL	CU-D	N,G	0.21	0.10	0.17	0.09	0.15		
52	1/2 Lite: Injection Frame: Lami / Air / Clear (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.118						CL	A1-S	N,G	0.26	0.16	0.18	0.14	0.16		
53	1/2 Lite: Injection Frame: Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.117	0.042(#3)					CL	CU-D	N,G	0.22	0.11	0.16	0.10	0.14		
54	1/2 Lite: Injection Frame: Lami / Air / ISE81-6 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.120	0.147(#3)					CL	A1-S	N,G	0.23	0.15	0.17	0.13	0.15		
55	1/2 Lite: Injection Frame: Lami / Air / YEA (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.126	0.162(#3)					CL	A1-S	N,G	0.23	0.15	0.17	0.14	0.15		
56	1/2 Lite: Injection Frame: Lami / Air / Clear (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.324		0.750	AIR	0.118						CL	A1-D	N	0.28	0.14	0.16				

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**  
**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
57	1/2 Lite: Injection Frame: Lami / Air / S83 (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.324		0.750	AIR	0.124	0.103(#3)					CL	A1-D	N	0.25	0.12	0.15				
58	1/2 Lite: Impact Frame: Lami / Air / Clear (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.118						CL	A1-S	N,G	0.25	0.16	0.18	0.14	0.16		
59	1/2 Lite: Impact Frame: Lami / Air / ISE81-6 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.120	0.147(#3)					CL	A1-S	N,G	0.22	0.15	0.17	0.13	0.15		
60	1/2 Lite: Impact Frame: Lami / Air / CS73 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.123	0.148(#3)					CL	A1-S	N,G	0.22	0.15	0.17	0.14	0.14		
61	1/2 Lite: Impact Frame: Lami / Air / Deco / Air / Clear (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.324		0.270	AIR	0.225		0.270	AIR	0.123		CL	A1-D	G	0.22			0.13	0.14		
62	1/2 Lite: Impact Frame: Lami / Air / Deco / Air / Clear (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.324		0.270	AIR	0.225		0.270	AIR	0.123		CL	A5-S	G	0.22			0.13	0.14		
63	1/2 Lite: Impact Frame: Lami / Air / Clear (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.324		0.750	AIR	0.118						CL	A1-D	N	0.26	0.14	0.16				

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft2-F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
64	1/2 Lite: Impact Frame: Lami / Air / S83 (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.324		0.750	AIR	0.124	0.103(#3)					CL	A1-D	N	0.23	0.12	0.15				
65	1/2 Lite: Injection Frame: Lami / Air / Clear (3mm 090PVB 3mm/3mm) 1" IG	0.324		0.550	AIR	0.118						CL	CU-D	N,G	0.26	0.16	0.18	0.14	0.16		
66	1/2 Lite: Injection Frame: Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1" IG	0.324		0.550	AIR	0.117	0.042(#3)					CL	CU-D	N,G	0.22	0.11	0.16	0.10	0.14		
67	1/2 Lite: Injection Frame: Lami / Air / YEA (3mm 090PVB 3mm/3mm) 1" IG	0.324		0.550	AIR	0.126	0.162(#3)					CL	A1-S	N,G	0.23	0.15	0.17	0.14	0.15		
68	1/2 Lite: Injection Frame: Lami / Air / ISE81-6 (3mm 090PVB 3mm/3mm) 1" IG	0.324		0.550	AIR	0.120	0.147(#3)					CL	A1-S	N,G	0.23	0.15	0.17	0.13	0.15		
69	1/2 Lite: Injection Frame: Clear / Air / Deco / Air / Clear (3mm/6mm/3mm) 1" IG	0.123		0.270	AIR	0.225		0.270	AIR	0.123		CL	A1-D	G	0.24			0.15	0.15		
70	1/2 Lite: Injection Frame: Clear / Air / Deco / Air / Clear (3mm/6mm/3mm) 1" IG	0.123		0.270	AIR	0.225		0.270	AIR	0.123		CL	A5-S	G	0.23			0.15	0.15		
71	1/2 Lite: Injection Frame: Clear / Air / Clear (3mm/3mm) BBG 1" IG	0.123		0.750	AIR	0.123						CL	A1-D	N	0.28	0.17	0.17				

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
72	1/2 Lite: Injection Frame: S83 / Air / Clear (3mm 3mm) BBG 1" IG	0.124	0.103(#2)	0.750	AIR	0.123						CL	A1-D	N	0.25	0.13	0.16				
73	3/4 Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 1/2" IG	0.123		0.250	AIR	0.123						CL	A1-S	N	0.30	0.26	0.26				
74	3/4 Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 9/16" IG	0.123		0.313	AIR	0.123						CL	A1-S	G	0.30			0.22	0.23		
75	3/4 Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 9/16" IG	0.123		0.313	AIR	0.123						CL	A1-S	S	0.30					0.20	0.19
76	3/4 Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 1/2" IG	0.123	0.148(#2)	0.250	AIR	0.123						CL	A1-S	N	0.27	0.21	0.24				
77	3/4 Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 9/16" IG	0.123	0.148(#2)	0.313	AIR	0.123						CL	A1-S	G	0.27			0.19	0.20		
78	3/4 Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 9/16" IG	0.123	0.148(#2)	0.313	AIR	0.123						CL	A1-S	S	0.27					0.16	0.18
79	3/4 Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 1" IG	0.123		0.750	AIR	0.123						CL	A1-S	N,G	0.29	0.26	0.26	0.22	0.23		
80	3/4 Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 1" IG	0.123		0.750	AIR	0.123						CL	A1-S	S	0.29					0.20	0.19
81	3/4 Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 1" IG	0.123	0.148(#2)	0.750	AIR	0.123						CL	A1-S	N,G	0.25	0.21	0.24	0.19	0.20		
82	3/4 Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 1" IG	0.123	0.148(#2)	0.750	AIR	0.123						CL	A1-S	S	0.25					0.16	0.18



**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
83	3/4 Lite: Injection Frame: Clear / Air / Clear (3mm/3mm) 1/2" IG	0.123		0.250	AIR	0.123						CL	CU-D	N	0.32	0.26	0.26				
84	3/4 Lite: Injection Frame: Clear / Air / Clear (3mm/3mm) 9/16" IG	0.123		0.313	AIR	0.123						CL	CU-D	G	0.31			0.22	0.23		
85	3/4 Lite: Injection Frame: E272 / Air / Clear (3mm/3mm) 1/2" IG	0.117	0.042(#2)	0.250	AIR	0.118						CL	CU-D	N	0.27	0.14	0.23				
86	3/4 Lite: Injection Frame: E272 / Air / Clear (3mm/3mm) 9/16" IG	0.117	0.042(#2)	0.313	AIR	0.118						CL	CU-D	G	0.27			0.12	0.20		
87	3/4 Lite: Injection Frame: E272 / Argon / Clear (3mm/3mm) 1/2" IG	0.117	0.042(#2)	0.250	ARG90	0.118						CL	CU-D	N	0.25	0.14	0.23				
88	3/4 Lite: Injection Frame: E272 / Argon / Clear (3mm/3mm) 9/16" IG	0.117	0.042(#2)	0.313	ARG90	0.118						CL	CU-D	G	0.25			0.12	0.20		
89	3/4 Lite: Injection Frame: E272 / Air / Clear (3mm/3mm) 1" IG	0.117	0.042(#2)	0.750	AIR	0.118						CL	CU-D	N,G	0.24	0.14	0.23	0.12	0.20		
90	3/4 Lite: Injection Frame: E272 / Argon / Clear (3mm/3mm) 1" IG	0.117	0.042(#2)	0.750	ARG90	0.118						CL	CU-D	N,G	0.23	0.14	0.23	0.12	0.20		
91	3/4 Lite: Injection Frame: Lami / Air / Clear (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.118						CL	A1-S	N,G	0.30	0.22	0.25	0.19	0.22		
92	3/4 Lite: Injection Frame: Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.117	0.042(#3)					CL	CU-D	N,G	0.24	0.15	0.22	0.13	0.19		

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
93	3/4 Lite: Injection Frame: Lami / Air / ISE81-6 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.120	0.147(#3)					CL	A1-S	N,G	0.26	0.19	0.22	0.17	0.19		
94	3/4 Lite: Injection Frame: Lami / Air / YEA (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.126	0.162(#3)					CL	A1-S	N,G	0.26	0.20	0.23	0.18	0.20		
95	3/4 Lite: Injection Frame: Lami / Air / Clear (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.324		0.750	AIR	0.118						CL	A1-D	N	0.31	0.19	0.21				
96	3/4 Lite: Injection Frame: Lami / Air / S83 (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.324		0.750	AIR	0.124	0.103(#3)					CL	A1-D	N	0.27	0.17	0.20				
97	3/4 Lite: Impact Frame: Lami / Air / Clear (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.118						CL	A1-S	N,G	0.28	0.22	0.25	0.19	0.22		
98	3/4 Lite: Impact Frame: Lami / Air / ISE81-6 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.120	0.147(#3)					CL	A1-S	N,G	0.24	0.19	0.22	0.17	0.19		
99	3/4 Lite: Impact Frame: Lami / Air / CS73 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.123	0.148(#3)					CL	A1-S	N,G	0.24	0.20	0.22	0.18	0.19		

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
100	3/4 Lite: Impact Frame: Lami / Air / Deco / Air / Clear (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.324		0.270	AIR	0.225		0.270	AIR	0.123		CL	A1-D	G	0.24			0.17	0.19		
101	3/4 Lite: Impact Frame: Lami / Air / Deco / Air / Clear (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.324		0.270	AIR	0.225		0.270	AIR	0.123		CL	A5-S	G	0.24			0.17	0.19		
102	3/4 Lite: Impact Frame: Lami / Air / Clear (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.324		0.750	AIR	0.118						CL	A1-D	N	0.30	0.19	0.21				
103	3/4 Lite: Impact Frame: Lami / Air / S83 (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.324		0.750	AIR	0.124	0.103(#3)					CL	A1-D	N	0.26	0.17	0.20				
104	3/4 Lite: Injection Frame: Lami / Air / Clear (3mm 090PVB 3mm/3mm) 1" IG	0.324		0.550	AIR	0.118						CL	CU-D	N,G	0.29	0.22	0.25	0.19	0.22		
105	3/4 Lite: Injection Frame: Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1" IG	0.324		0.550	AIR	0.117	0.042(#3)					CL	CU-D	N,G	0.24	0.15	0.22	0.13	0.19		
106	3/4 Lite: Injection Frame: Lami / Air / YEA (3mm 090PVB 3mm/3mm) 1" IG	0.324		0.550	AIR	0.126	0.162(#3)					CL	A1-S	N,G	0.26	0.20	0.23	0.18	0.20		

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft2-F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
107	3/4 Lite: Injection Frame: Lami / Air / ISE81-6 (3mm 090PVB 3mm/3mm) 1" IG	0.324		0.550	AIR	0.120	0.147(#3)					CL	A1-S	N,G	0.25	0.19	0.22	0.17	0.19		
108	3/4 Lite: Injection Frame: Clear / Air / Deco / Air / Clear (3mm/6mm/3mm) 1" IG	0.123		0.270	AIR	0.225		0.270	AIR	0.123		CL	A1-D	G	0.26			0.20	0.20		
109	3/4 Lite: Injection Frame: Clear / Air / Deco / Air / Clear (3mm/6mm/3mm) 1" IG	0.123		0.270	AIR	0.225		0.270	AIR	0.123		CL	A5-S	G	0.26			0.20	0.20		
110	3/4 Lite: Injection Frame: Clear / Air / Clear (3mm/3mm) BBG 1" IG	0.123		0.750	AIR	0.123						CL	A1-D	N	0.32	0.23	0.23				
111	3/4 Lite: Injection Frame: S83 / Air / Clear (3mm 3mm) BBG 1" IG	0.124	0.103(#2)	0.750	AIR	0.123						CL	A1-D	N	0.28	0.17	0.21				
112	Full Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 1/2" IG	0.123		0.250	AIR	0.123						CL	A1-S	N	0.35	0.34	0.35				
113	Full Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 9/16" IG	0.123		0.313	AIR	0.123						CL	A1-S	G	0.35			0.30	0.30		
114	Full Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 9/16" IG	0.123		0.313	AIR	0.123						CL	A1-S	S	0.35					0.26	0.26
115	Full Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 1/2" IG	0.123	0.148(#2)	0.250	AIR	0.123						CL	A1-S	N	0.31	0.28	0.32				
116	Full Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 9/16" IG	0.123	0.148(#2)	0.313	AIR	0.123						CL	A1-S	G	0.31			0.25	0.28		

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
117	Full Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 9/16" IG	0.123	0.148(#2)	0.313	AIR	0.123						CL	A1-S	S	0.31					0.22	0.24
118	Full Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 1" IG	0.123		0.750	AIR	0.123						CL	A1-S	N,G	0.33	0.34	0.35	0.30	0.30		
119	Full Lite: Cellular PVC Frame: Clear / Air / Clear (3mm/3mm) 1" IG	0.123		0.750	AIR	0.123						CL	A1-S	S	0.33					0.26	0.26
120	Full Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 1" IG	0.123	0.148(#2)	0.750	AIR	0.123						CL	A1-S	N,G	0.28	0.28	0.32	0.25	0.28		
121	Full Lite: Cellular PVC Frame: CS73 / Air / Clear (3mm/3mm) 1" IG	0.123	0.148(#2)	0.750	AIR	0.123						CL	A1-S	S	0.28					0.22	0.24
122	Full Lite: Injection Frame: Clear / Air / Clear (3mm/3mm) 1/2" IG	0.123		0.250	AIR	0.123						CL	CU-D	N	0.37	0.34	0.35				
123	Full Lite: Injection Frame: Clear / Air / Clear (3mm/3mm) 9/16" IG	0.123		0.313	AIR	0.123						CL	CU-D	G	0.36			0.30	0.30		
124	Full Lite: Injection Frame: E272 / Air / Clear (3mm/3mm) 1/2" IG	0.117	0.042(#2)	0.250	AIR	0.118						CL	CU-D	N	0.31	0.19	0.31				
125	Full Lite: Injection Frame: E272 / Air / Clear (3mm/3mm) 9/16" IG	0.117	0.042(#2)	0.313	AIR	0.118						CL	CU-D	G	0.31			0.16	0.27		
126	Full Lite: Injection Frame: E272 / Argon / Clear (3mm/3mm) 1/2" IG	0.117	0.042(#2)	0.250	ARG90	0.118						CL	CU-D	N	0.28	0.19	0.31				
127	Full Lite: Injection Frame: E272 / Argon / Clear (3mm/3mm) 9/16" IG	0.117	0.042(#2)	0.313	ARG90	0.118						CL	CU-D	G	0.28			0.16	0.27		

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
128	Full Lite: Injection Frame: E272 / Air / Clear (3mm/3mm) 1" IG	0.117	0.042(#2)	0.750	AIR	0.118						CL	CU-D	N,G	0.27	0.18	0.31	0.16	0.27		
129	Full Lite: Injection Frame: E272 / Argon / Clear (3mm/3mm) 1" IG	0.117	0.042(#2)	0.750	ARG90	0.118						CL	CU-D	N,G	0.25	0.18	0.31	0.16	0.27		
130	Full Lite: Injection Frame: Lami / Air / Clear (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.118						CL	A1-S	N,G	0.34	0.29	0.33	0.25	0.29		
131	Full Lite: Injection Frame: Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.117	0.042(#3)					CL	CU-D	N,G	0.27	0.20	0.29	0.18	0.25		
132	Full Lite: Injection Frame: Lami / Air / ISE81-6 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.120	0.147(#3)					CL	A1-S	N,G	0.29	0.26	0.30	0.23	0.26		
133	Full Lite: Injection Frame: Lami / Air / YEA (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.126	0.162(#3)					CL	A1-S	N,G	0.29	0.27	0.31	0.24	0.27		
134	Full Lite: Injection Frame: Lami / Air / Clear (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.324		0.750	AIR	0.118						CL	A1-D	N	0.36	0.26	0.29				

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**  
**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
135	Full Lite: Injection Frame: Lami / Air / S83 (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.324		0.750	AIR	0.124	0.103(#3)					CL	A1-D	N	0.31	0.22	0.27				
136	Full Lite: Impact Frame: Lami / Air / Clear (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.118						CL	A1-S	N,G	0.32	0.29	0.33	0.25	0.29		
137	Full Lite: Impact Frame: Lami / Air / ISE81-6 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.120	0.147(#3)					CL	A1-S	N,G	0.27	0.26	0.30	0.23	0.26		
138	Full Lite: Impact Frame: Lami / Air / CS73 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.324		0.750	AIR	0.123	0.148(#3)					CL	A1-S	N,G	0.27	0.27	0.30	0.24	0.26		
139	Full Lite: Impact Frame: Lami / Air / Deco / Air / Clear (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.324		0.270	AIR	0.225		0.270	AIR	0.123		CL	A1-D	G	0.27			0.22	0.26		
140	Full Lite: Impact Frame: Lami / Air / Deco / Air / Clear (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.324		0.270	AIR	0.225		0.270	AIR	0.123		CL	A5-S	G	0.27			0.22	0.26		
141	Full Lite: Impact Frame: Lami / Air / Clear (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.324		0.750	AIR	0.118						CL	A1-D	N	0.34	0.26	0.29				

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft2-F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
142	Full Lite: Impact Frame: Lami / Air / S83 (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.324		0.750	AIR	0.124	0.103(#3)					CL	A1-D	N	0.29	0.22	0.27				
143	Full Lite: Injection Frame: Lami / Air / Clear (3mm 090PVB 3mm/3mm) 1" IG	0.324		0.550	AIR	0.118						CL	CU-D	N,G	0.33	0.29	0.33	0.26	0.29		
144	Full Lite: Injection Frame: Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1" IG	0.324		0.550	AIR	0.117	0.042(#3)					CL	CU-D	N,G	0.26	0.20	0.29	0.18	0.25		
145	Full Lite: Injection Frame: Lami / Air / YEA (3mm 090PVB 3mm/3mm) 1" IG	0.324		0.550	AIR	0.126	0.162(#3)					CL	A1-S	N,G	0.29	0.27	0.31	0.24	0.27		
146	Full Lite: Injection Frame: Lami / Air / ISE81-6 (3mm 090PVB 3mm/3mm) 1" IG	0.324		0.550	AIR	0.120	0.147(#3)					CL	A1-S	N,G	0.29	0.26	0.30	0.23	0.26		
147	Full Lite: Injection Frame: Clear / Air / Deco / Air / Clear (3mm/6mm/3mm) 1" IG	0.123		0.270	AIR	0.225		0.270	AIR	0.123		CL	A1-D	G	0.30			0.26	0.27		
148	Full Lite: Injection Frame: Clear / Air / Deco / Air / Clear (3mm/6mm/3mm) 1" IG	0.123		0.270	AIR	0.225		0.270	AIR	0.123		CL	A5-S	G	0.29			0.26	0.27		
149	Full Lite: Injection Frame: Clear / Air / Clear (3mm/3mm) BBG 1" IG	0.123		0.750	AIR	0.123						CL	A1-D	N	0.37	0.30	0.31				



**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
150	Full Lite: Injection Frame: S83 / Air / Clear (3mm 3mm) BBG 1" IG	0.124	0.103(#2)	0.750	AIR	0.123						CL	A1-D	N	0.32	0.22	0.29				
151	1/4 Lite: Impact Frame: Gray Lami / Air / CS73 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.336		0.750	AIR	0.123	0.148(#3)					GY	A1-S	N	0.19	0.07	0.06				
152	1/4 Lite: Impact Frame: Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.336		0.750	AIR	0.117	0.042(#3)					CL	CU-D	N	0.18	0.06	0.08				
153	1/4 Lite: Impact Frame: Gray Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.336		0.750	AIR	0.117	0.042(#3)					GY	CU-D	N	0.18	0.05	0.06				
154	1/4 Lite: Impact Frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.336		0.750	AIR	0.118	0.02(#3)					CL	CU-D	N	0.18	0.05	0.08				
155	1/4 Lite: Injection Frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1" IG	0.336		0.550	AIR	0.118	0.02(#3)					CL	CU-D	N	0.19	0.05	0.08				
156	1/2 Lite: Impact Frame: Lami / Air / CL184 (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.336		0.750	AIR	0.124	0.121(#3)					CL	A1-D	N	0.23	0.13	0.15				

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
157	1/2 Lite: Impact Frame: Gray Lami / Air / CL184 (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.336		0.750	AIR	0.124	0.121(#3)					GY	A1-D	N	0.23	0.10	0.10				
158	1/2 Lite: Impact Frame: Gray Lami / Air / S83 (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.336		0.750	AIR	0.124	0.103(#3)					GY	A1-D	N	0.23	0.10	0.10				
159	1/2 Lite: Impact Frame: Gray Lami / Air / CS73 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.336		0.750	AIR	0.123	0.148(#3)					GY	A1-S	N	0.22	0.12	0.12				
160	1/2 Lite: Impact Frame: Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.336		0.750	AIR	0.117	0.042(#3)					CL	CU-D	N	0.21	0.12	0.17				
161	1/2 Lite: Impact Frame: Gray Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.336		0.750	AIR	0.117	0.042(#3)					GY	CU-D	N	0.21	0.09	0.11				
162	1/2 Lite: Impact Frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.336		0.750	AIR	0.118	0.02(#3)					CL	CU-D	N	0.20	0.09	0.15				
163	1/2 Lite: Injection Frame: CL184 / Air / Clear (3mm/3mm) BBG 1" IG	0.124	0.121(#2)	0.750	AIR	0.123						CL	A1-D	N	0.25	0.13	0.15				

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
164	1/2 Lite: Injection Frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1" IG	0.336		0.550	AIR	0.118	0.02(#3)					CL	CU-D	N	0.21	0.09	0.15				
165	3/4 Lite: Impact Frame: Lami / Air / CL184 (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.336		0.750	AIR	0.124	0.121(#3)					CL	A1-D	N	0.26	0.17	0.20				
166	3/4 Lite: Impact Frame: Gray Lami / Air / CL184 (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.336		0.750	AIR	0.124	0.121(#3)					GY	A1-D	N	0.26	0.13	0.14				
167	3/4 Lite: Impact Frame: Gray Lami / Air / S83 (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.336		0.750	AIR	0.124	0.103(#3)					GY	A1-D	N	0.25	0.13	0.14				
168	3/4 Lite: Impact Frame: Gray Lami / Air / CS73 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.336		0.750	AIR	0.123	0.148(#3)					GY	A1-S	N	0.24	0.16	0.16				
169	3/4 Lite: Impact Frame: Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.336		0.750	AIR	0.117	0.042(#3)					CL	CU-D	N	0.22	0.16	0.22				

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6  
SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
170	3/4 Lite: Impact Frame: Gray Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.336		0.750	AIR	0.117	0.042(#3)					GY	CU-D	N	0.22	0.12	0.15				
171	3/4 Lite: Impact Frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.336		0.750	AIR	0.118	0.02(#3)					CL	CU-D	N	0.22	0.12	0.20				
172	3/4 Lite: Injection Frame: CL184 / Air / Clear (3mm/3mm) BBG 1" IG	0.124	0.121(#2)	0.750	AIR	0.123						CL	A1-D	N	0.28	0.17	0.21				
173	3/4 Lite: Injection Frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1" IG	0.336		0.550	AIR	0.118	0.02(#3)					CL	CU-D	N	0.23	0.12	0.20				
174	Full Lite: Impact Frame: Lami / Air / CL184 (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.336		0.750	AIR	0.124	0.121(#3)					CL	A1-D	N	0.29	0.23	0.28				
175	Full Lite: Impact Frame: Gray Lami / Air / CL184 (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.336		0.750	AIR	0.124	0.121(#3)					GY	A1-D	N	0.29	0.18	0.19				
176	Full Lite: Impact Frame: Gray Lami / Air / S83 (3mm 090PVB 3mm/3mm) BBG 1-7/32" IG	0.336		0.750	AIR	0.124	0.103(#3)					GY	A1-D	N	0.29	0.18	0.19				

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
177	Full Lite: Impact Frame: Gray Lami / Air / CS73 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.336		0.750	AIR	0.123	0.148(#3)					GY	A1-S	N,G	0.27	0.21	0.21	0.19	0.18		
178	Full Lite: Impact Frame: Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.336		0.750	AIR	0.117	0.042(#3)					CL	CU-D	N,G	0.25	0.21	0.30	0.18	0.26		
179	Full Lite: Impact Frame: Gray Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.336		0.750	AIR	0.117	0.042(#3)					GY	CU-D	N,G	0.25	0.16	0.20	0.14	0.18		
180	Full Lite: Impact Frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.336		0.750	AIR	0.118	0.02(#3)					CL	CU-D	N,G	0.25	0.16	0.27	0.15	0.23		
181	Full Lite: Injection Frame: CL184 / Air / Clear (3mm/3mm) BBG 1" IG	0.124	0.121(#2)	0.750	AIR	0.123						CL	A1-D	N	0.32	0.23	0.28				
182	Full Lite: Injection Frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1" IG	0.336		0.550	AIR	0.118	0.02(#3)					CL	CU-D	N,G	0.26	0.16	0.27	0.15	0.23		
183	1/4 Lite: Injection Frame: E366 / Air / Clear (3mm/3mm) 1/2" IG	0.118	0.02(#2)	0.250	AIR	0.123						CL	CU-D	N	0.20	0.04	0.08				
184	1/4 Lite: Injection Frame: E366 / Air / Clear (3mm/3mm) 35/64" IG	0.118	0.02(#2)	0.313	AIR	0.118						CL	CU-D	N	0.20	0.04	0.08				

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft2-F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
185	1/4 Lite: Injection Frame: E366 / Air / Clear (3mm/3mm) 35/64" IG	0.118	0.02(#2)	0.313	AIR	0.118						CL	CU-D	G	0.20			0.04	0.07	0.03	0.06
186	1/4 Lite: Injection Frame: E366 / Argon / Clear (3mm/3mm) 1/2" IG	0.118	0.02(#2)	0.250	ARG90	0.118						CL	CU-D	N	0.19	0.04	0.08				
187	1/4 Lite: Injection Frame: E366 / Argon / Clear (3mm/3mm) 35/64" IG	0.118	0.02(#2)	0.313	ARG90	0.118						CL	CU-D	N	0.19	0.04	0.08				
188	1/4 Lite: Injection Frame: E366 / Argon / Clear (3mm/3mm) 35/64" IG	0.118	0.02(#2)	0.313	ARG90	0.118						CL	CU-D	G	0.19			0.04	0.07	0.03	0.06
189	1/4 Lite: Injection Frame: E272 / Air / Clear (3mm/3mm) 3/4" IG	0.117	0.042(#2)	0.500	AIR	0.118						CL	CU-D	N,G	0.19	0.06	0.09	0.05	0.08	0.05	0.07
190	1/4 Lite: Injection Frame: E272 / Argon / Clear (3mm/3mm) 3/4" IG	0.117	0.042(#2)	0.500	ARG90	0.118						CL	CU-D	N,G	0.18	0.06	0.09	0.05	0.08	0.05	0.07
191	1/4 Lite: Injection Frame: E366 / Air / Clear (3mm/3mm) 3/4" IG	0.118	0.02(#2)	0.500	AIR	0.118						CL	CU-D	N,G	0.19	0.04	0.08	0.04	0.07	0.03	0.06
192	1/4 Lite: Injection Frame: E366 / Argon / Clear (3mm/3mm) 3/4" IG	0.118	0.02(#2)	0.500	ARG90	0.118						CL	CU-D	N,G	0.18	0.04	0.08	0.04	0.07	0.03	0.06
193	1/4 Lite: Injection Frame: CL184 / Argon / Deco / Argon / Clear (3mm/6mm/3mm) 1" IG	0.124	0.121(#2)	0.270	ARG90	0.225		0.270	ARG90	0.123		CL	A1-D	G	0.19			0.06	0.07		
194	1/4 Lite: Injection Frame: Lami / Argon / E272 (3mm 090PVB 3mm/3mm) 1" IG	0.311		0.550	ARG90	0.117	0.042(#3)					CL	CU-D	N,G	0.18	0.06	0.09	0.06	0.08	0.05	0.07

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
195	1/4 Lite: Injection Frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1" IG	0.311		0.550	AIR	0.118	0.02(#3)					CL	CU-D	N,G	0.19	0.05	0.08	0.05	0.07	0.04	0.06
196	1/4 Lite: Injection Frame: Lami / Argon / E366 (3mm 090PVB 3mm/3mm) 1" IG	0.311		0.550	ARG90	0.118	0.02(#3)					CL	CU-D	N,G	0.18	0.05	0.08	0.05	0.07	0.04	0.06
197	1/4 Lite: Impact frame: Lami / Air / Deco / Air / E272 (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.311		0.270	AIR	0.225		0.270	AIR	0.117	0.042(#5)	CL	ZF-S	G	0.17			0.06	0.07		
198	1/4 Lite: Impact frame: Lami / Air / Deco / Air / CL184 (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.311		0.270	AIR	0.225		0.270	AIR	0.124	0.121(#5)	CL	A1-D	G	0.18			0.06	0.07		
199	1/4 Lite: Impact frame: Lami / Argon / Deco / Argon / CL184 (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.311		0.270	ARG90	0.225		0.270	ARG90	0.124	0.121(#5)	CL	A1-D	G	0.18			0.06	0.07		
200	1/4 Lite: Impact frame: Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	AIR	0.117	0.042(#3)					CL	A1-D	N,G	0.18	0.06	0.09	0.06	0.08	0.05	0.07

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
201	1/4 Lite: Impact frame: Lami / Argon/ E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	ARG90	0.117	0.042(#3)					CL	CU-D	N,G	0.18	0.06	0.09	0.06	0.08	0.05	0.07
202	1/4 Lite: Impact frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	AIR	0.118	0.02(#3)					CL	A1-D	N,G	0.18	0.05	0.08	0.05	0.07	0.04	0.06
203	1/4 Lite: Impact frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	AIR	0.118	0.02(#3)					CL	CU-D	N,G	0.18	0.05	0.08	0.05	0.07	0.04	0.06
204	1/4 Lite: Impact frame: Lami / Argon / E366 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	ARG90	0.118	0.02(#3)					CL	CU-D	N,G	0.17	0.05	0.08	0.05	0.07	0.04	0.06
205	1/2 Lite: Injection Frame: E366 / Air / Clear (3mm/3mm) 1/2" IG	0.118	0.02(#2)	0.250	AIR	0.123						CL	CU-D	N	0.24	0.07	0.15				
206	1/2 Lite: Injection Frame: E366 / Air / Clear (3mm/3mm) 35/64" IG	0.118	0.02(#2)	0.313	AIR	0.118						CL	CU-D	N	0.23	0.07	0.15				
207	1/2 Lite: Injection Frame: E366 / Air / Clear (3mm/3mm) 35/64" IG	0.118	0.02(#2)	0.313	AIR	0.118						CL	CU-D	G	0.24			0.07	0.13	0.06	0.11
208	1/2 Lite: Injection Frame: E366 / Argon / Clear (3mm/3mm) 1/2" IG	0.118	0.02(#2)	0.250	ARG90	0.118						CL	CU-D	N	0.23	0.07	0.15				
209	1/2 Lite: Injection Frame: E366 / Argon / Clear (3mm/3mm) 35/64" IG	0.118	0.02(#2)	0.313	ARG90	0.118						CL	CU-D	N	0.22	0.07	0.15				



**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
210	1/2 Lite: Injection Frame: E366 / Argon / Clear (3mm/3mm) 35/64" IG	0.118	0.02(#2)	0.313	ARG90	0.118						CL	CU-D	G	0.22			0.06	0.13	0.06	0.11
211	1/2 Lite: Injection Frame: E272 / Air / Clear (3mm/3mm) 3/4" IG	0.117	0.042(#2)	0.500	AIR	0.118						CL	CU-D	N,G	0.22	0.11	0.17	0.09	0.15	0.08	0.13
212	1/2 Lite: Injection Frame: E272 / Argon / Clear (3mm/3mm) 3/4" IG	0.117	0.042(#2)	0.500	ARG90	0.118						CL	CU-D	N,G	0.21	0.10	0.17	0.09	0.15	0.08	0.13
213	1/2 Lite: Injection Frame: E366 / Air / Clear (3mm/3mm) 3/4" IG	0.118	0.02(#2)	0.500	AIR	0.118						CL	CU-D	N,G	0.22	0.07	0.15	0.06	0.13	0.06	0.11
214	1/2 Lite: Injection Frame: E366 / Argon / Clear (3mm/3mm) 3/4" IG	0.118	0.02(#2)	0.500	ARG90	0.118						CL	CU-D	N,G	0.21	0.07	0.15	0.06	0.13	0.06	0.11
215	1/2 Lite: Injection Frame: CL184 / Argon / Deco / Argon / Clear (3mm/6mm/3mm) 1" IG	0.124	0.121(#2)	0.270	ARG90	0.225		0.270	ARG90	0.123		CL	A1-D	G	0.21			0.12	0.14		
216	1/2 Lite: Injection Frame: Lami / Argon / E272 (3mm 090PVB 3mm/3mm) 1" IG	0.311		0.550	ARG90	0.117	0.042(#3)					CL	CU-D	N,G	0.21	0.12	0.17	0.10	0.14	0.09	0.12
217	1/2 Lite: Injection Frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1" IG	0.311		0.550	AIR	0.118	0.02(#3)					CL	CU-D	N,G	0.21	0.09	0.15	0.08	0.13	0.07	0.11
218	1/2 Lite: Injection Frame: Lami / Argon / E366 (3mm 090PVB 3mm/3mm) 1" IG	0.311		0.550	ARG90	0.118	0.02(#3)					CL	CU-D	N,G	0.20	0.09	0.15	0.08	0.13	0.07	0.11

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
219	1/2 Lite: Impact frame: Lami / Air / Deco / Air / E272 (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.311		0.270	AIR	0.225		0.270	AIR	0.117	0.042(#5)	CL	ZF-S	G	0.20			0.10	0.13		
220	1/2 Lite: Impact frame: Lami / Air / Deco / Air / CL184 (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.311		0.270	AIR	0.225		0.270	AIR	0.124	0.121(#5)	CL	A1-D	G	0.21			0.12	0.14		
221	1/2 Lite: Impact frame: Lami / Argon / Deco / Argon / CL184 (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.311		0.270	ARG90	0.225		0.270	ARG90	0.124	0.121(#5)	CL	A1-D	G	0.20			0.11	0.14		
222	1/2 Lite: Impact frame: Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	AIR	0.117	0.042(#3)					CL	A1-D	N,G	0.21	0.12	0.17	0.10	0.14	0.09	0.12
223	1/2 Lite: Impact frame: Lami / Argon/ E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	ARG90	0.117	0.042(#3)					CL	CU-D	N,G	0.20	0.12	0.17	0.10	0.14	0.09	0.12
224	1/2 Lite: Impact frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	AIR	0.118	0.02(#3)					CL	A1-D	N,G	0.21	0.09	0.15	0.08	0.13	0.07	0.11

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft2-F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
225	1/2 Lite: Impact frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	AIR	0.118	0.02(#3)					CL	CU-D	N,G	0.20	0.09	0.15	0.08	0.13	0.07	0.11
226	1/2 Lite: Impact frame: Lami / Argon / E366 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	ARG90	0.118	0.02(#3)					CL	CU-D	N,G	0.19	0.09	0.15	0.08	0.13	0.07	0.11
227	3/4 Lite: Injection Frame: E366 / Air / Clear (3mm/3mm) 1/2" IG	0.118	0.02(#2)	0.250	AIR	0.123						CL	CU-D	N	0.27	0.10	0.21				
228	3/4 Lite: Injection Frame: E366 / Air / Clear (3mm/3mm) 35/64" IG	0.118	0.02(#2)	0.313	AIR	0.118						CL	CU-D	N	0.26	0.10	0.21				
229	3/4 Lite: Injection Frame: E366 / Air / Clear (3mm/3mm) 35/64" IG	0.118	0.02(#2)	0.313	AIR	0.118						CL	CU-D	G	0.27			0.09	0.18	0.08	0.15
230	3/4 Lite: Injection Frame: E366 / Argon / Clear (3mm/3mm) 1/2" IG	0.118	0.02(#2)	0.250	ARG90	0.118						CL	CU-D	N	0.25	0.10	0.21				
231	3/4 Lite: Injection Frame: E366 / Argon / Clear (3mm/3mm) 35/64" IG	0.118	0.02(#2)	0.313	ARG90	0.118						CL	CU-D	N	0.23	0.09	0.21				
232	3/4 Lite: Injection Frame: E366 / Argon / Clear (3mm/3mm) 35/64" IG	0.118	0.02(#2)	0.313	ARG90	0.118						CL	CU-D	G	0.24			0.08	0.18	0.07	0.15
233	3/4 Lite: Injection Frame: E272 / Air / Clear (3mm/3mm) 3/4" IG	0.117	0.042(#2)	0.500	AIR	0.118						CL	CU-D	N,G	0.24	0.14	0.23	0.12	0.20	0.11	0.17
234	3/4 Lite: Injection Frame: E272 / Argon / Clear (3mm/3mm) 3/4" IG	0.117	0.042(#2)	0.500	ARG90	0.118						CL	CU-D	N,G	0.22	0.14	0.23	0.12	0.20	0.11	0.17

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
235	3/4 Lite: Injection Frame: E366 / Air / Clear (3mm/3mm) 3/4" IG	0.118	0.02(#2)	0.500	AIR	0.118						CL	CU-D	N,G	0.24	0.09	0.21	0.08	0.18	0.07	0.15
236	3/4 Lite: Injection Frame: E366 / Argon / Clear (3mm/3mm) 3/4" IG	0.118	0.02(#2)	0.500	ARG90	0.118						CL	CU-D	N,G	0.22	0.09	0.21	0.08	0.18	0.07	0.15
237	3/4 Lite: Injection Frame: CL184 / Argon / Deco / Argon / Clear (3mm/6mm/3mm) 1" IG	0.124	0.121(#2)	0.270	ARG90	0.225		0.270	ARG90	0.123		CL	A1-D	G	0.23			0.15	0.19		
238	3/4 Lite: Injection Frame: Lami / Argon / E272 (3mm 090PVB 3mm/3mm) 1" IG	0.311		0.550	ARG90	0.117	0.042(#3)					CL	CU-D	N,G	0.22	0.16	0.22	0.14	0.19	0.12	0.17
239	3/4 Lite: Injection Frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1" IG	0.311		0.550	AIR	0.118	0.02(#3)					CL	CU-D	N,G	0.23	0.12	0.20	0.11	0.18	0.10	0.15
240	3/4 Lite: Injection Frame: Lami / Argon / E366 (3mm 090PVB 3mm/3mm) 1" IG	0.311		0.550	ARG90	0.118	0.02(#3)					CL	CU-D	N,G	0.22	0.12	0.20	0.11	0.18	0.10	0.15
241	3/4 Lite: Impact frame: Lami / Air / Deco / Air / E272 (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.311		0.270	AIR	0.225		0.270	AIR	0.117	0.042(#5)	CL	ZF-S	G	0.21			0.13	0.17		

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
242	3/4 Lite: Impact frame: Lami / Air / Deco / Air / CL184 (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.311		0.270	AIR	0.225		0.270	AIR	0.124	0.121(#5)	CL	A1-D	G	0.23			0.15	0.18		
243	3/4 Lite: Impact frame: Lami / Argon / Deco / Argon / CL184 (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.311		0.270	ARG90	0.225		0.270	ARG90	0.124	0.121(#5)	CL	A1-D	G	0.21			0.15	0.18		
244	3/4 Lite: Impact frame: Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	AIR	0.117	0.042(#3)					CL	A1-D	N,G	0.23	0.16	0.22	0.14	0.19	0.12	0.17
245	3/4 Lite: Impact frame: Lami / Argon/ E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	ARG90	0.117	0.042(#3)					CL	CU-D	N,G	0.21	0.16	0.22	0.14	0.19	0.12	0.17
246	3/4 Lite: Impact frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	AIR	0.118	0.02(#3)					CL	A1-D	N,G	0.23	0.12	0.20	0.11	0.18	0.10	0.15
247	3/4 Lite: Impact frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	AIR	0.118	0.02(#3)					CL	CU-D	N,G	0.22	0.12	0.20	0.11	0.18	0.10	0.15

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
248	3/4 Lite: Impact frame: Lami / Argon / E366 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	ARG90	0.118	0.02(#3)					CL	CU-D	N,G	0.21	0.12	0.20	0.11	0.18	0.10	0.15
249	Full Lite: Injection Frame: E366 / Air / Clear (3mm/3mm) 1/2" IG	0.118	0.02(#2)	0.250	AIR	0.123						CL	CU-D	N	0.31	0.13	0.27				
250	Full Lite: Injection Frame: E366 / Air / Clear (3mm/3mm) 35/64" IG	0.118	0.02(#2)	0.313	AIR	0.118						CL	CU-D	N	0.29	0.13	0.28				
251	Full Lite: Injection Frame: E366 / Air / Clear (3mm/3mm) 35/64" IG	0.118	0.02(#2)	0.313	AIR	0.118						CL	CU-D	G	0.30			0.11	0.24	0.10	0.21
252	Full Lite: Injection Frame: E366 / Argon / Clear (3mm/3mm) 1/2" IG	0.118	0.02(#2)	0.250	ARG90	0.118						CL	CU-D	N	0.28	0.13	0.28				
253	Full Lite: Injection Frame: E366 / Argon / Clear (3mm/3mm) 35/64" IG	0.118	0.02(#2)	0.313	ARG90	0.118						CL	CU-D	N	0.26	0.12	0.28				
254	Full Lite: Injection Frame: E366 / Argon / Clear (3mm/3mm) 35/64" IG	0.118	0.02(#2)	0.313	ARG90	0.118						CL	CU-D	G	0.27			0.11	0.24	0.10	0.21
255	Full Lite: Injection Frame: E272 / Air / Clear (3mm/3mm) 3/4" IG	0.117	0.042(#2)	0.500	AIR	0.118						CL	CU-D	N,G	0.27	0.18	0.31	0.16	0.27	0.14	0.23
256	Full Lite: Injection Frame: E272 / Argon / Clear (3mm/3mm) 3/4" IG	0.117	0.042(#2)	0.500	ARG90	0.118						CL	CU-D	N,G	0.25	0.18	0.31	0.16	0.27	0.14	0.23
257	Full Lite: Injection Frame: E366 / Air / Clear (3mm/3mm) 3/4" IG	0.118	0.02(#2)	0.500	AIR	0.118						CL	CU-D	N,G	0.26	0.12	0.28	0.11	0.24	0.10	0.21
258	Full Lite: Injection Frame: E366 / Argon / Clear (3mm/3mm) 3/4" IG	0.118	0.02(#2)	0.500	ARG90	0.118						CL	CU-D	N,G	0.24	0.12	0.28	0.11	0.24	0.10	0.21

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
259	Full Lite: Injection Frame: CL184 / Argon / Deco / Argon / Clear (3mm/6mm/3mm) 1" IG	0.124	0.121(#2)	0.270	ARG90	0.225		0.270	ARG90	0.123		CL	A1-D	G	0.26			0.20	0.25		
260	Full Lite: Injection Frame: Lami / Argon / E272 (3mm 090PVB 3mm/3mm) 1" IG	0.311		0.550	ARG90	0.117	0.042(#3)					CL	CU-D	N,G	0.24	0.21	0.30	0.18	0.26	0.16	0.23
261	Full Lite: Injection Frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1" IG	0.311		0.550	AIR	0.118	0.02(#3)					CL	CU-D	N,G	0.26	0.16	0.27	0.15	0.24	0.13	0.20
262	Full Lite: Injection Frame: Lami / Argon / E366 (3mm 090PVB 3mm/3mm) 1" IG	0.311		0.550	ARG90	0.118	0.02(#3)					CL	CU-D	N,G	0.24	0.16	0.27	0.15	0.24	0.13	0.20
263	Full Lite: Impact frame: Lami / Air / Deco / Air / E272 (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.311		0.270	AIR	0.225		0.270	AIR	0.117	0.042(#5)	CL	ZF-S	G	0.23			0.17	0.23		
264	Full Lite: Impact frame: Lami / Air / Deco / Air / CL184 (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.311		0.270	AIR	0.225		0.270	AIR	0.124	0.121(#5)	CL	A1-D	G	0.25			0.20	0.25		

**TEST REPORT FOR RSL, LLC**

Report No.: M1809.03-116-45 R0

Date: 06/13/23

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Novatech Wood Edge Steel Door / Generic Wood Frame)																					
Option Number	Description	Pane Thickness 1 (in.)	Low-e Pane 1	Gap Width 1 (in.)	Gap Fill 1	Pane Thickness 2 (in.)	Low-e Pane 2	Gap Width 2 (in.)	Gap Fill 2	Pane Thickness 3 (in.)	Low-e Pane 3	Tint	Spacer	Grid Type	U-Factor (Btu-in/hr-ft <sup>2</sup> -F)	SHGC - No Grids	VT - No Grids	SHGC - Grids < 1"	VT - Grids < 1"	SHGC - Grids > 1"	VT - Grids > 1"
265	Full Lite: Impact frame: Lami / Argon / Deco / Argon / CL184 (3mm 090PVB 3mm/6mm)/3mm 1-7/32" IG	0.311		0.270	ARG90	0.225		0.270	ARG90	0.124	0.121(#5)	CL	A1-D	G	0.23			0.20	0.25		
266	Full Lite: Impact frame: Lami / Air / E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	AIR	0.117	0.042(#3)					CL	A1-D	N,G	0.26	0.21	0.30	0.18	0.26	0.16	0.23
267	Full Lite: Impact frame: Lami / Argon/ E272 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	ARG90	0.117	0.042(#3)					CL	CU-D	N,G	0.23	0.21	0.30	0.18	0.26	0.16	0.23
268	Full Lite: Impact frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	AIR	0.118	0.02(#3)					CL	A1-D	N,G	0.25	0.16	0.27	0.15	0.24	0.13	0.20
269	Full Lite: Impact frame: Lami / Air / E366 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	AIR	0.118	0.02(#3)					CL	CU-D	N,G	0.25	0.16	0.27	0.15	0.24	0.13	0.20
270	Full Lite: Impact frame: Lami / Argon / E366 (3mm 090PVB 3mm/3mm) 1-7/32" IG	0.311		0.750	ARG90	0.118	0.02(#3)					CL	CU-D	N,G	0.23	0.16	0.27	0.15	0.24	0.13	0.20



**TEST REPORT FOR RSL, LLC**

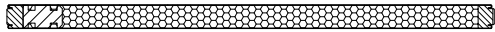
Report No.: M1809.03-116-45 R0

Date: 06/13/23

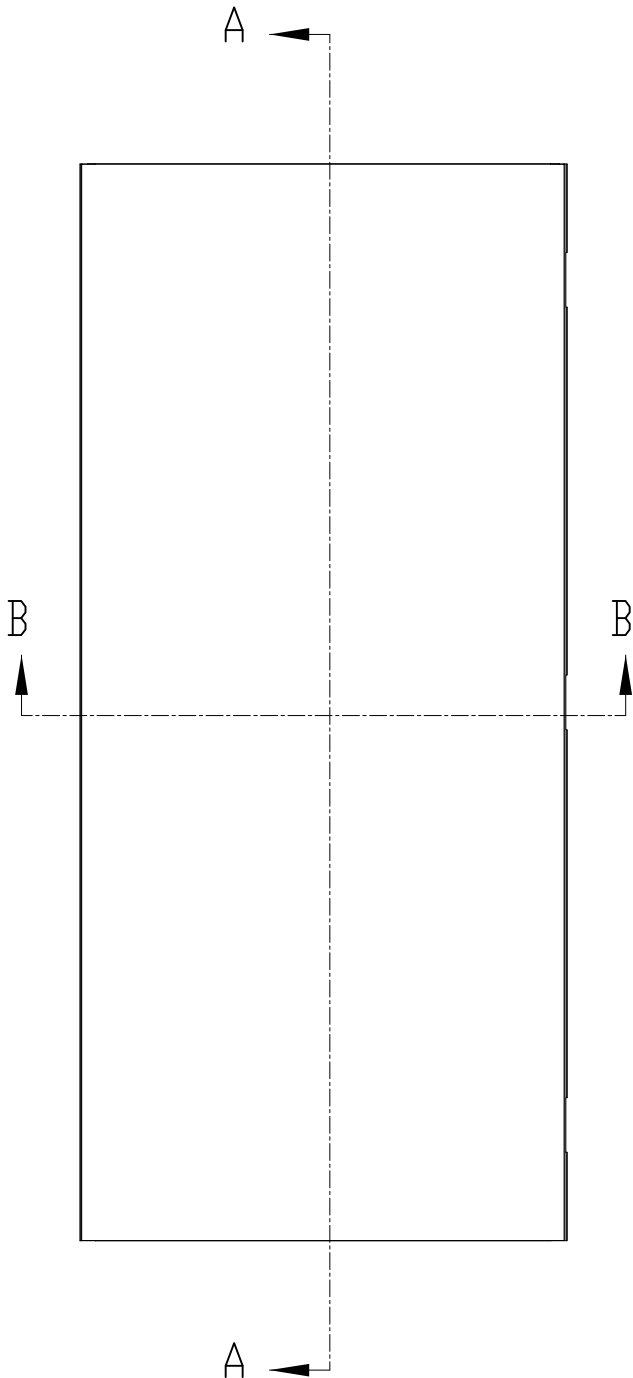
**SECTION 7**

**DRAWINGS / BILL OF MATERIALS**

The drawings which follow have been reviewed by Intertek B&C and are representative of the simulation result(s) reported herein. Any deviations are documented herein or on the drawings.



COUPE B-B



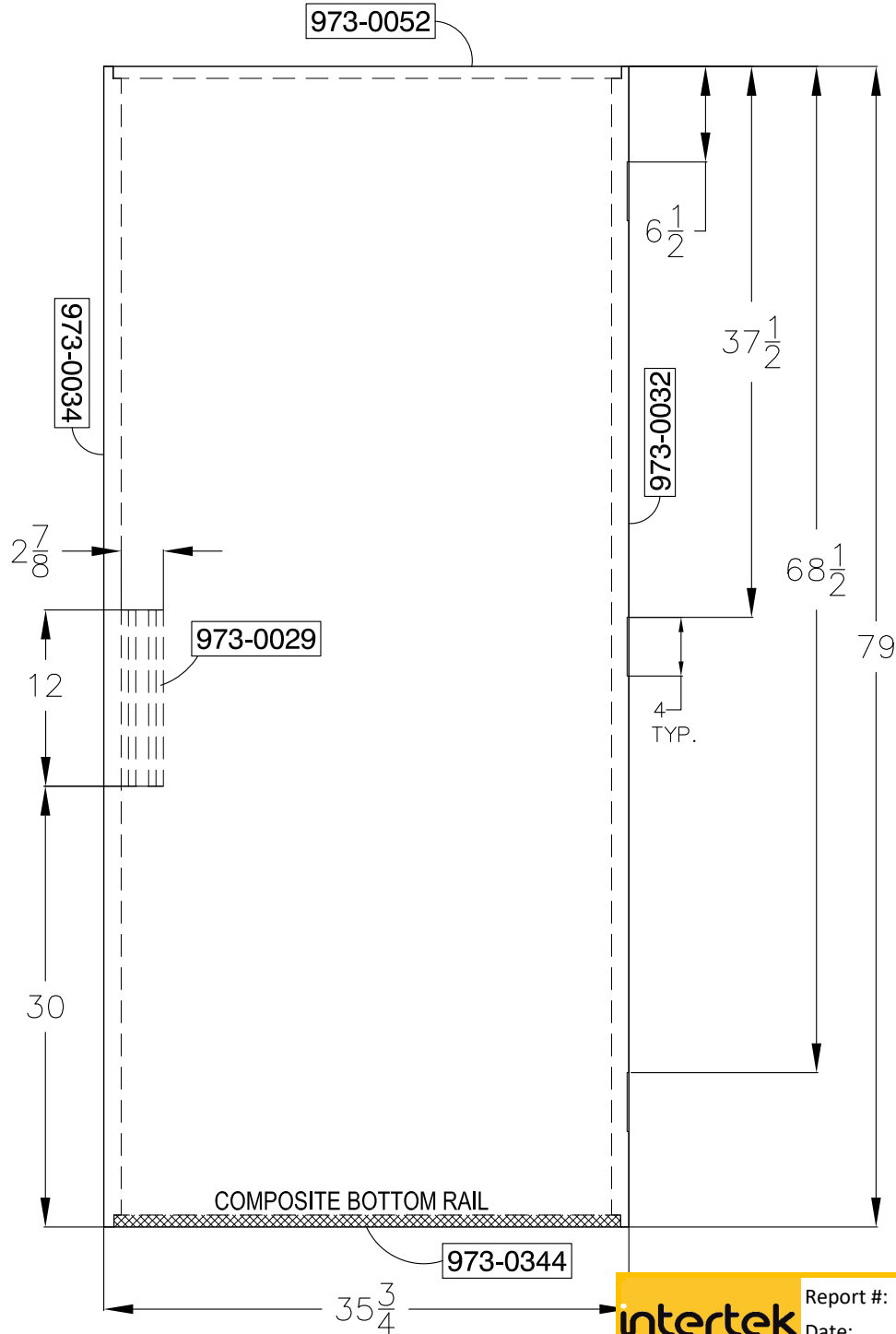
COUPE A-A

# N300-PS

FICHE TECHNIQUE

53-001-015-333-001

CHANGEMENTS



**intertek**  
Total Quality. Assured.

Report #: M1809-116-45  
Date: 4/13/2021  
Verified by: *[Signature]*

<p>POLITIQUE DE CONFIDENTIALITÉ</p> <p>Ce dessin et/ou documentation technique est la propriété de Groupe Verrier Novatech Inc. et est confidentiel, et ne peut pas être utilisé, copié ou reproduit d'aucune façon en tout ou en partie, sans avoir obtenu le consentement écrit de Groupe Verrier Novatech Inc.</p>	<p>DEPARTEMENT DE R&amp;D</p>
	<p>TITRE: N300 UNIE 35 3/4" x 79", PS</p>
	<p>DESSINÉ PAR: R.BISSON</p>
	<p>VÉRIFIÉ PAR: SUPP. PROD.</p>
	<p>ÉCHELLE: NTS FEUILLE: 1 de 1</p>
<p>DATE DE CRÉATION DU DESSIN: 2020-03-05</p>	

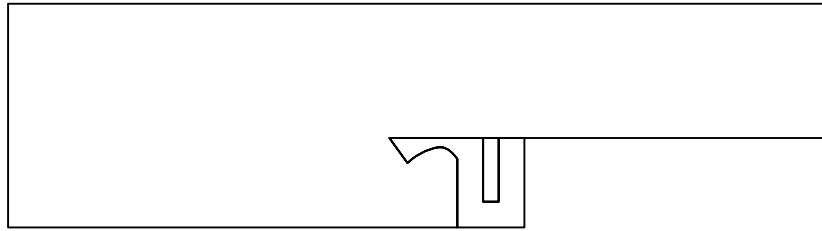
**Novatech**<sup>®</sup>

PORTES NOVATECH INC.  
1400 rue Marconi  
Sainte-Julie, Qc, Canada  
J3E 1Y2

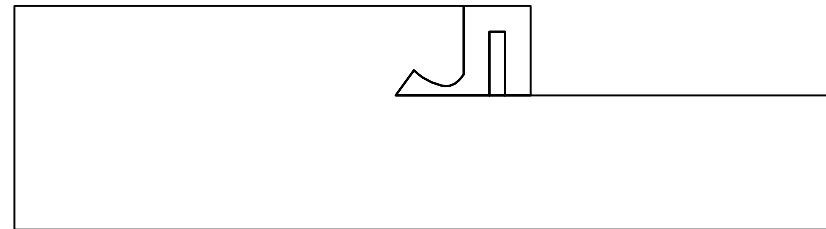
CODE ORACLE (NOM DU FICHIER):

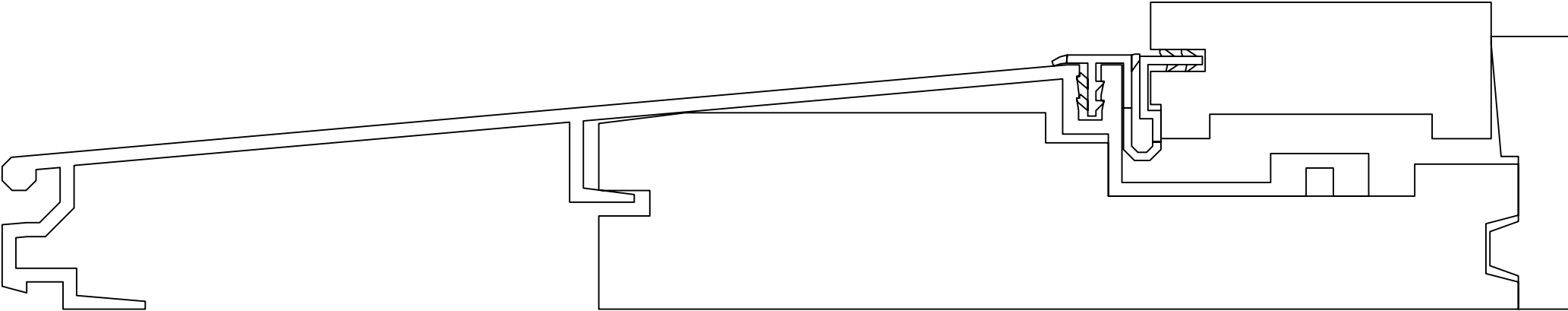
53-001-015-333-001

Head



Jambs



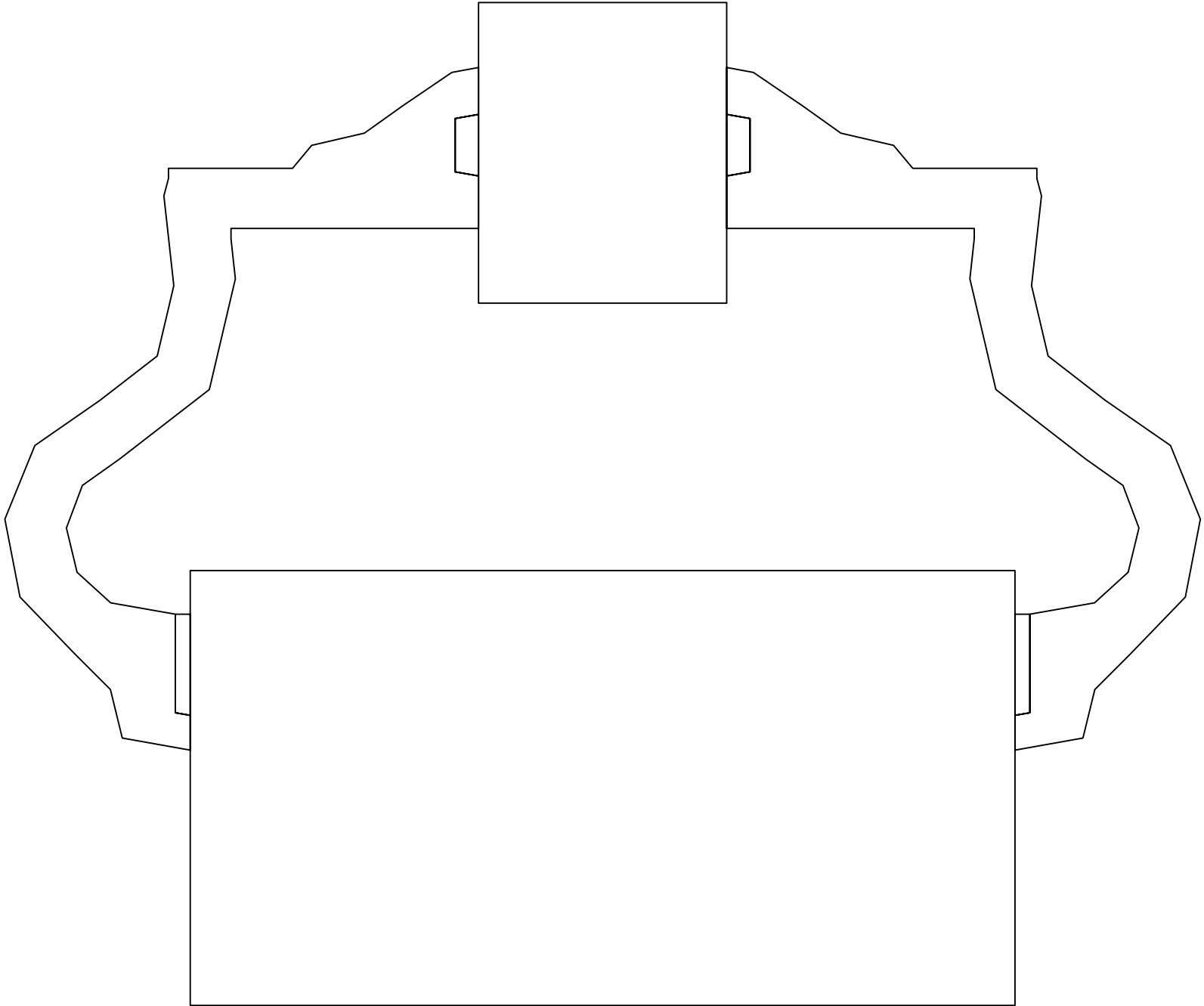


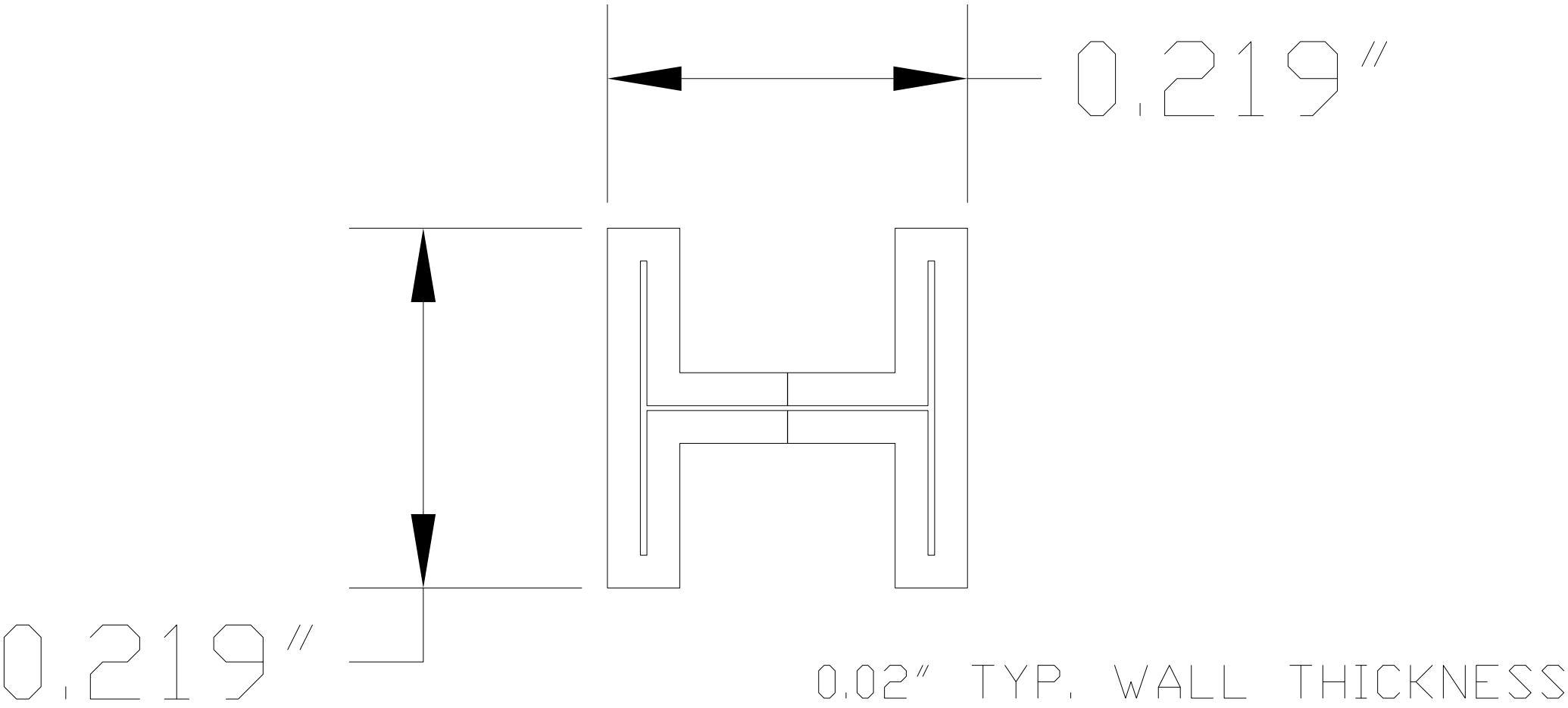
**intertek**  
Total Quality. Assured.

Report #: M1809-116-45

Date: 4/13/2021

Verified by: *[Signature]*

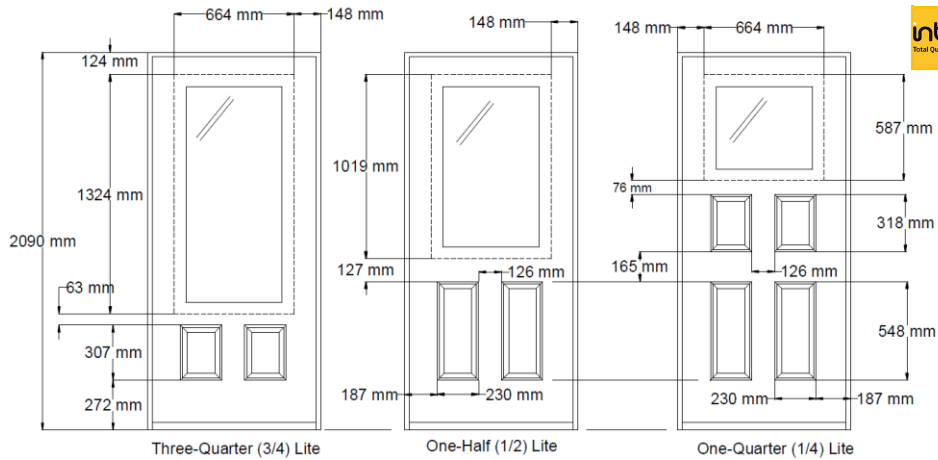




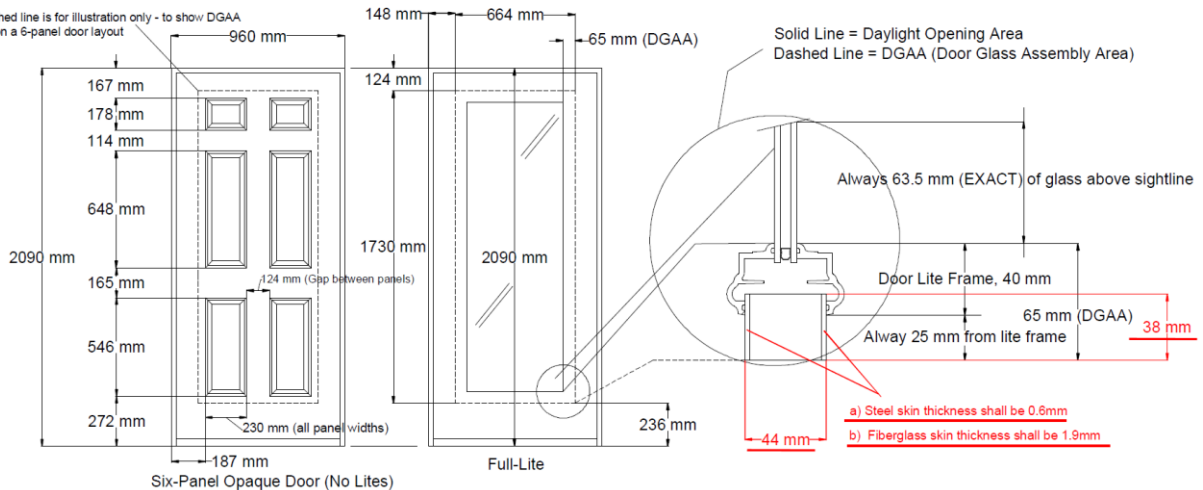
DEFAULT CAMMING PROFILE

MAT'L: BRASS

<b>intertek</b> Total Quality. Assured.	Report #:	M1809-116-45
	Date:	4/13/2021
	Verified by:	



This dashed line is for illustration only - to show DGAA overlay on a 6-panel door layout

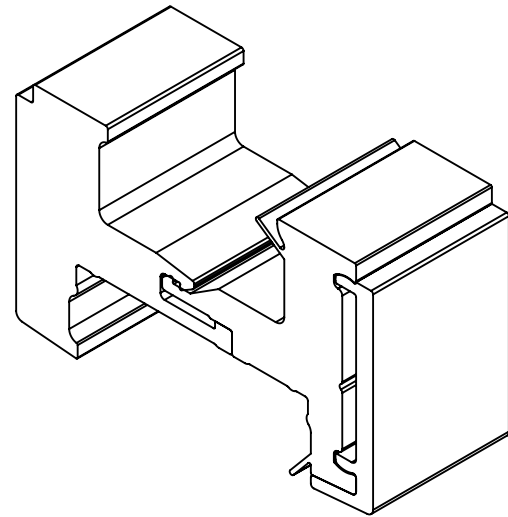




2

1

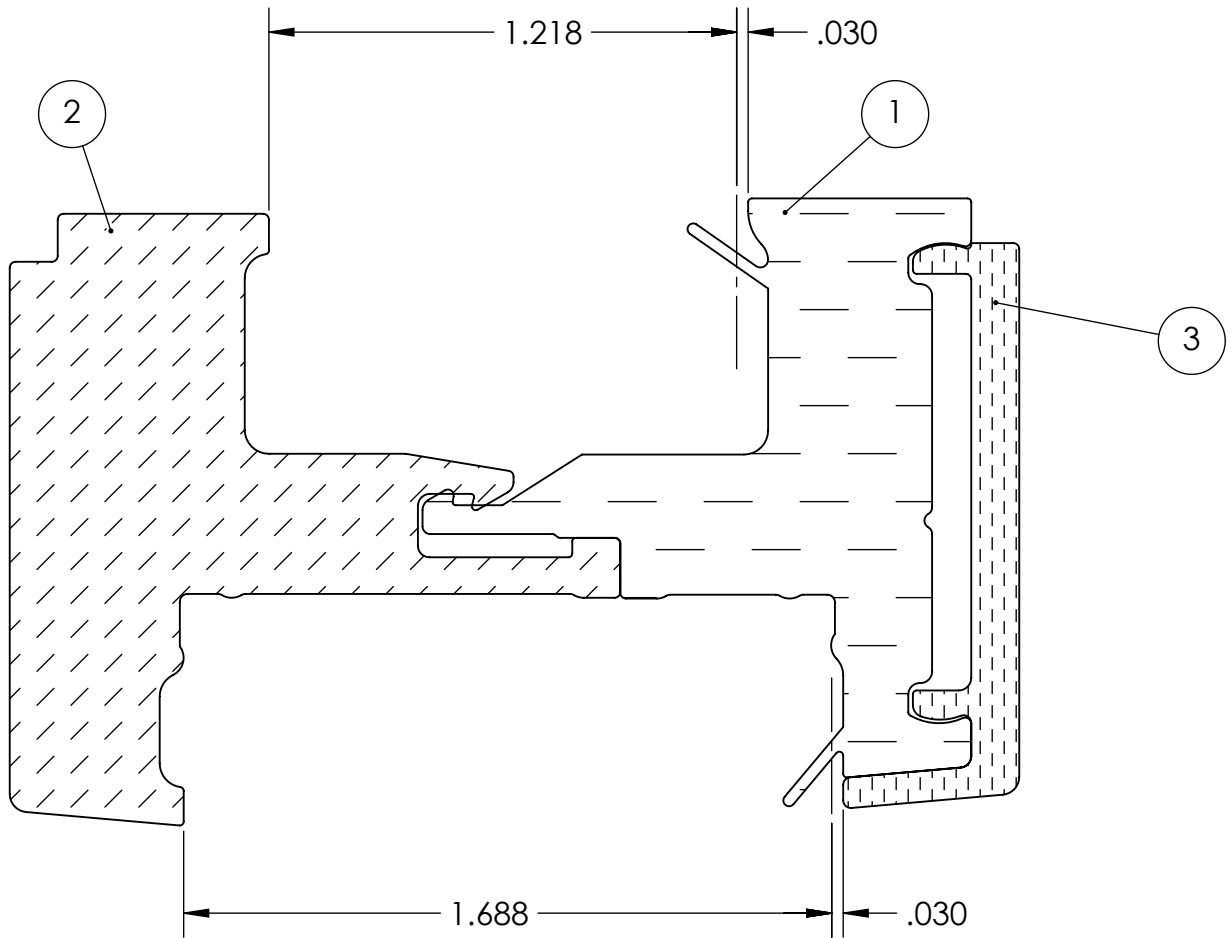
ITEM NO.	PART NUMBER	QTY.
1	7795 INTERIOR SHAKER IMPACT	1
2	7796 EXTERIOR SHAKER IMPACT	1
3	7797 SHAKER SCREW COVER	1



**Cellular PVC Impact Frame**

B

B



A

A

**PROPRIETARY AND CONFIDENTIAL**  
 THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF <COMPANY NAME>. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF <COMPANY NAME> IS PROHIBITED.

		DIMENSIONS ARE IN INCHES		NAME	DATE
		TOLERANCES:		DRAWN	DJM 3/15/19
		FRACTIONAL ±		CHECKED	
		ANGULAR: MACH ± BEND ±		ENG APPR.	
		TWO PLACE DECIMAL ±		MFG APPR.	
		THREE PLACE DECIMAL ±		Q.A.	
		MATERIAL		COMMENTS:	
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			

**SHAKER FULL ASSEMBLY DRAWING**

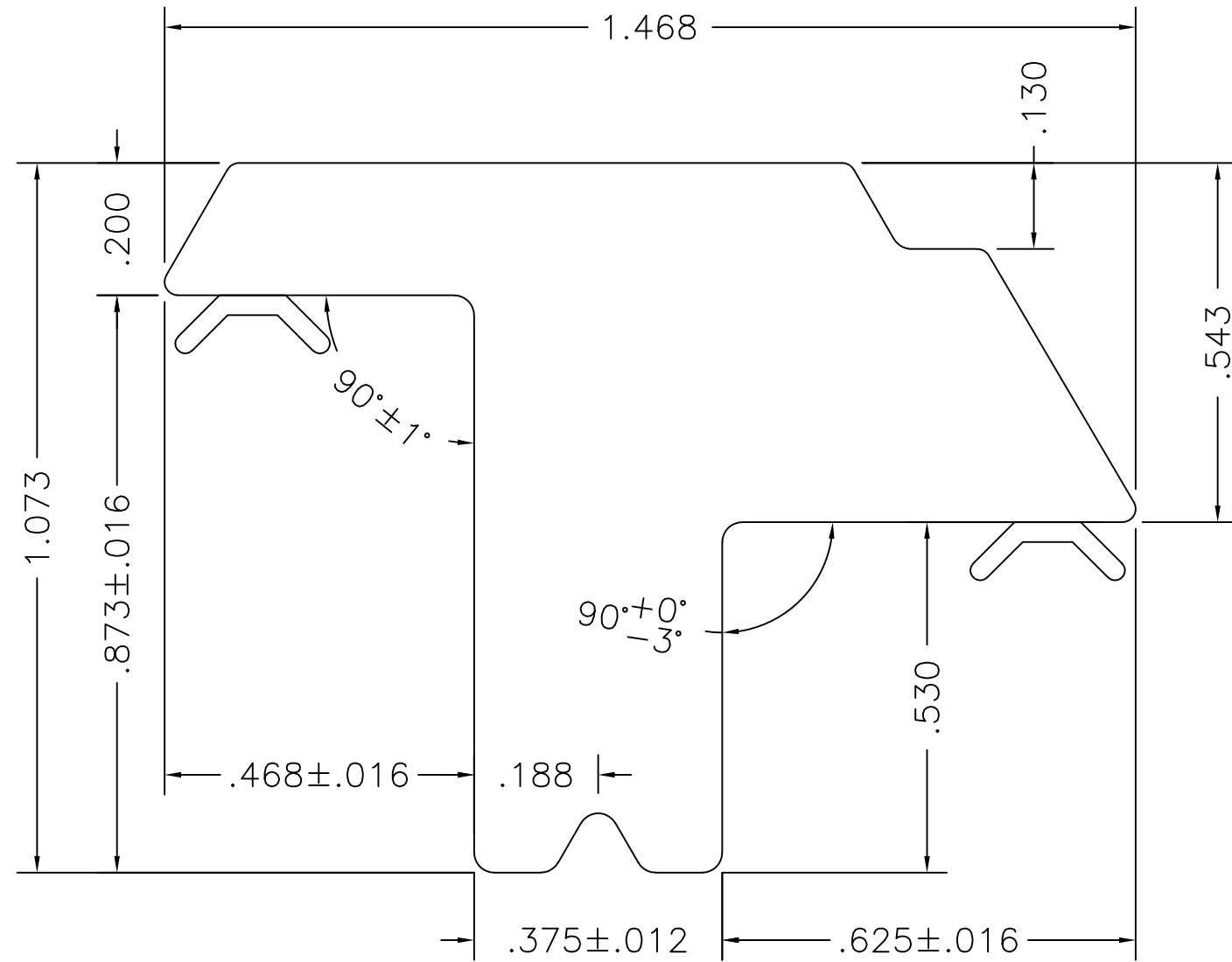
SIZE	DWG. NO.	REV.
<b>A</b>	SHAKER ASSEMBLY	
SCALE:2:1	WEIGHT:	SHEET 1 OF 1

2

1

# TUNER

## Cellular PVC Frame



CELLULAR PVC: @.7 SG

FLEX:

AREA = .723

AREA = .017

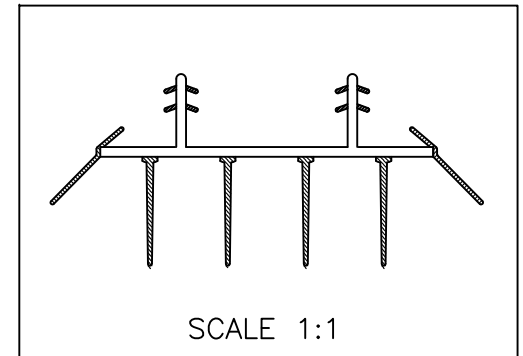
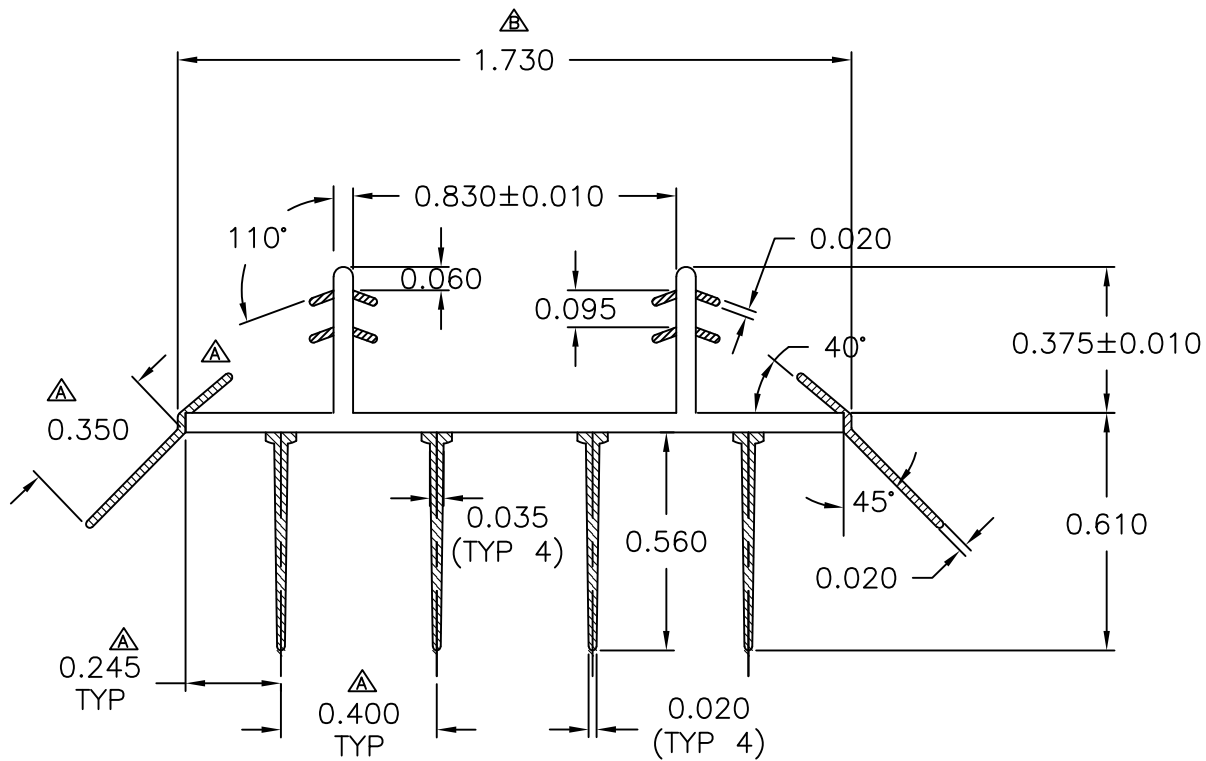
W.P.F. = .216

W.P.F. = .011

# VINYLTECH

N. JACKSON, OHIO

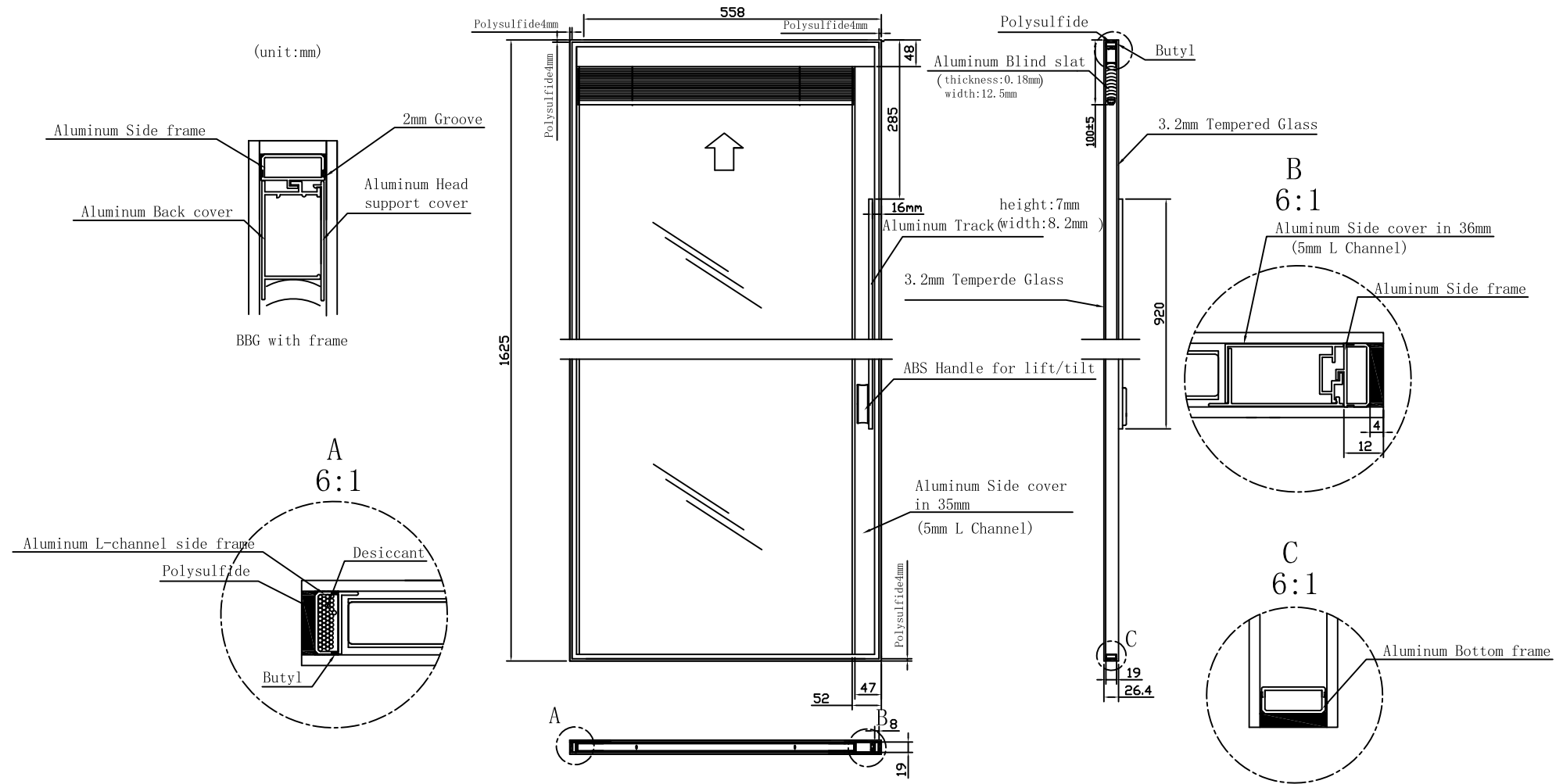
DATE 08-25-17	CUSTOMER RSL
SCALE N/A	PART NAME FLAT TOP PROFILE
	PART# VMF-2480
	MATERIAL FOAM PVC
DRAWN BY KAH	CHECKED BY
REVISED	JOB# V-1835
PROPERTY OF VINYLTECH	

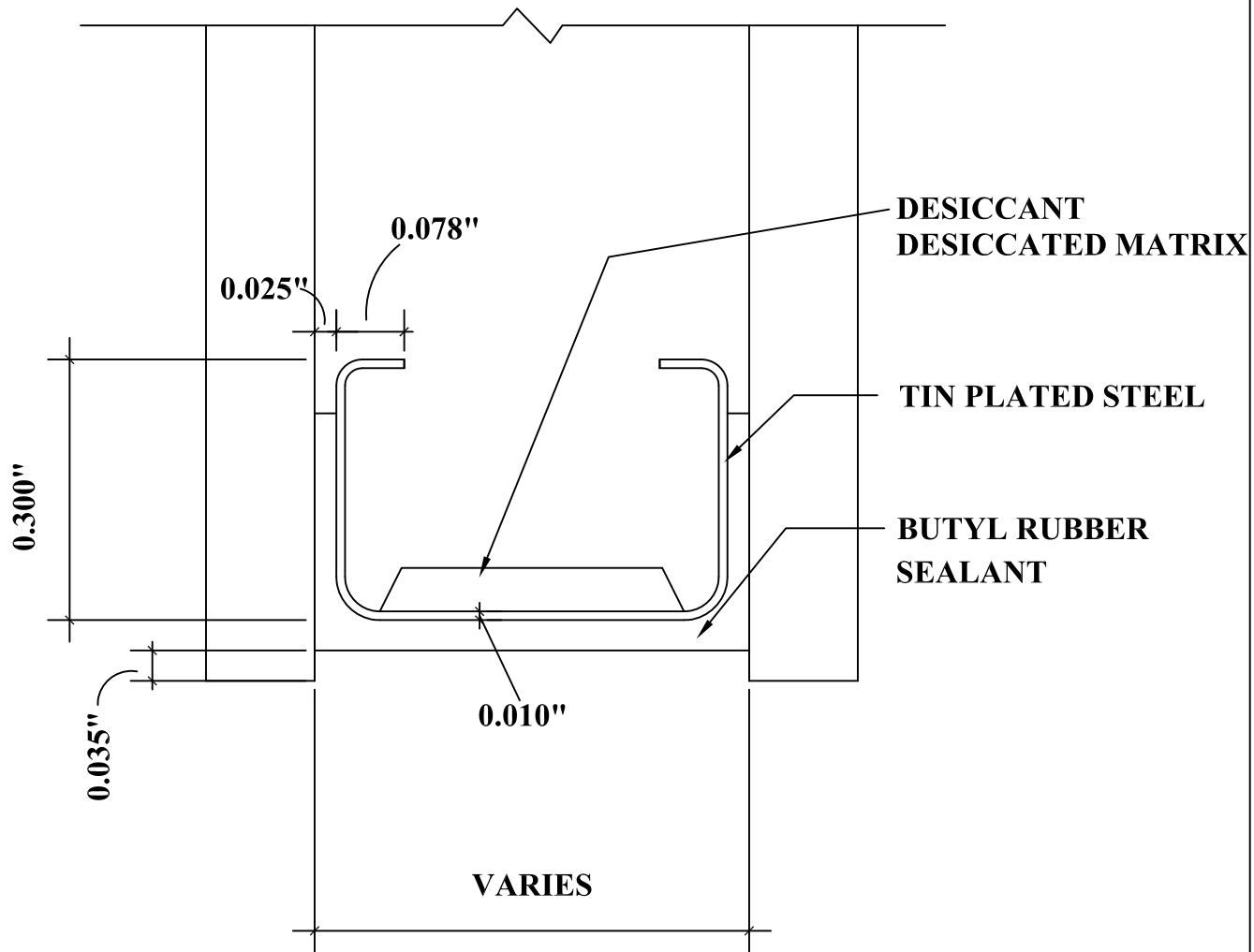


NOTES:

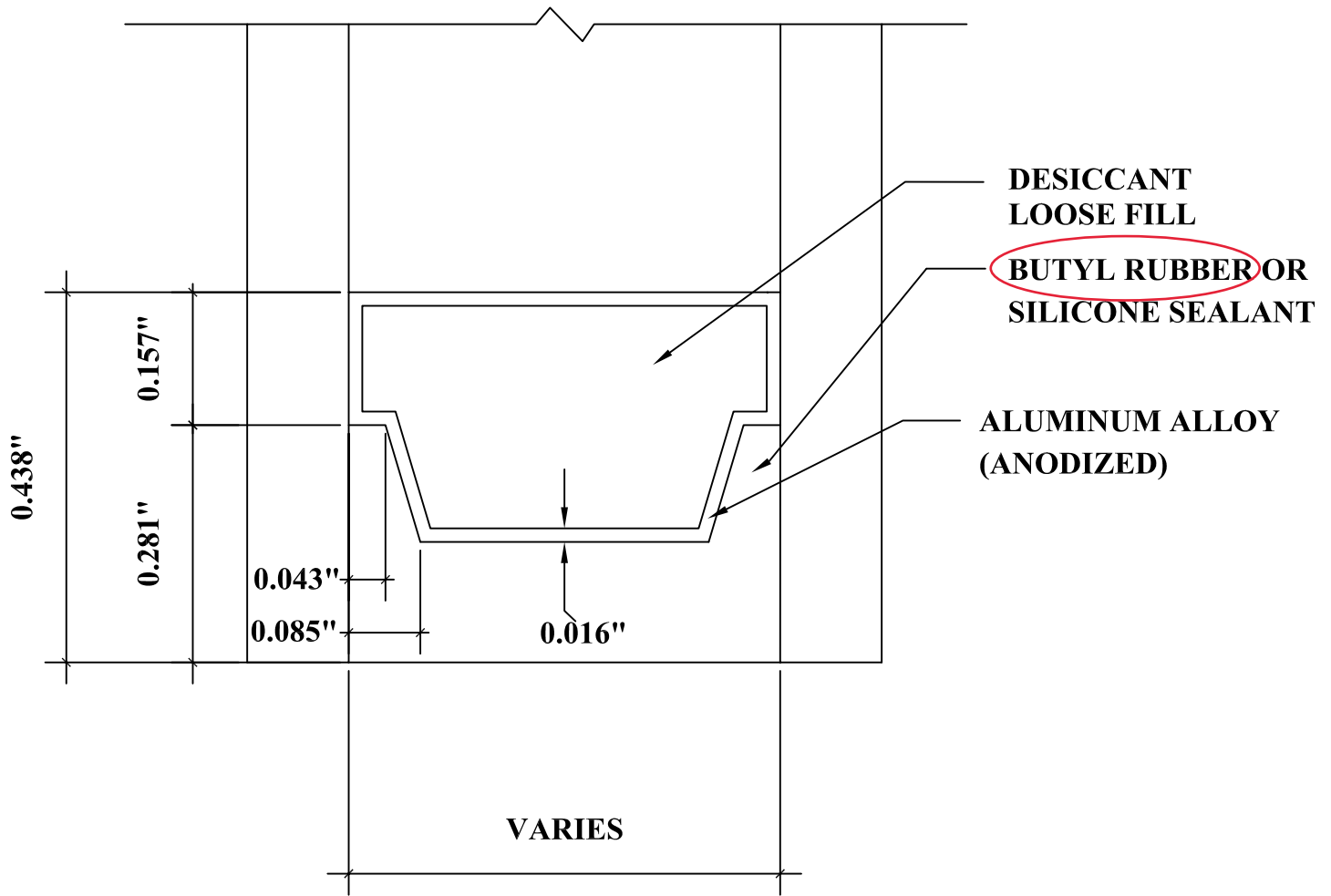
- \* ALL DIMENSIONS TOLERANCED TO  $\pm 0.015$ " UNLESS SPECIFIED
- \* WALL THICKNESS TOLERANCE:  $\pm 0.005$
- \* ANGULAR TOLERANCE:  $\pm 0.5^\circ$
- \* ALL UNSPECIFIED RADIUS: TO SUIT
- \* HATCHED AREA - SOFT CO-EXTRUSION LOW TEMP. TOLERANT, NOT TO EXCEED 55-65 DUROMETER

22X64 BBG Drawing

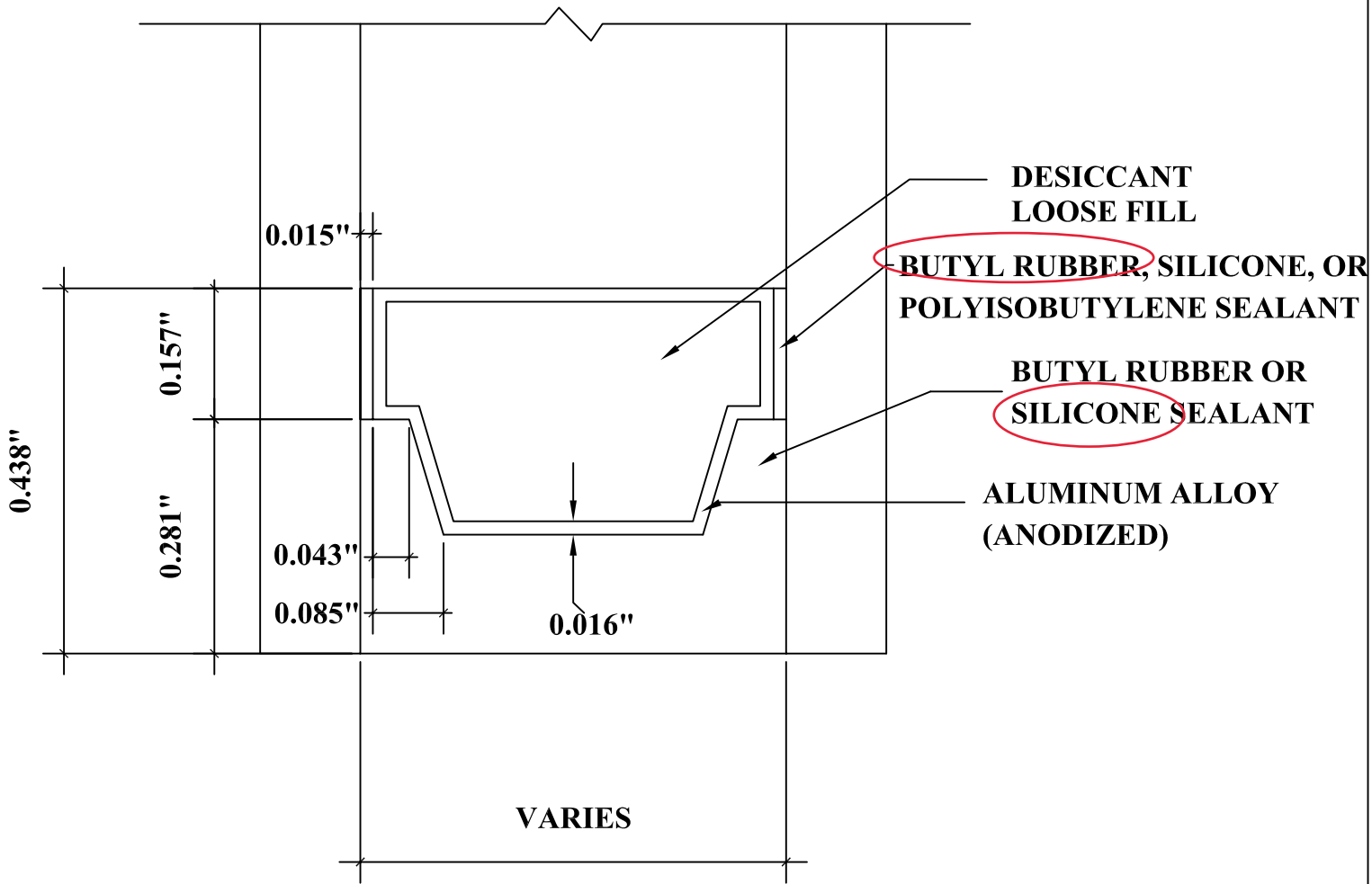




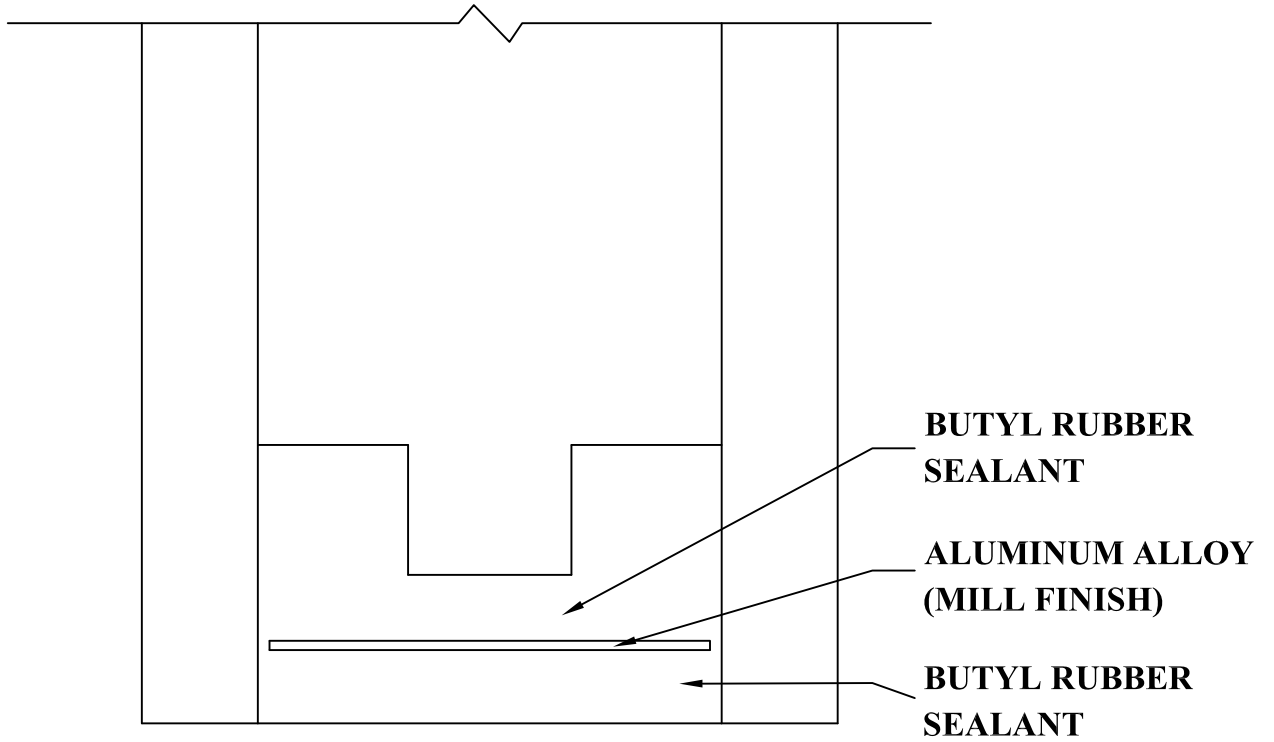
DETAIL FOR THERMAL MODELING OF  
GED INTERCEPT SPACER - STANDARD (CU-D)



DETAIL FOR THERMAL MODELING OF  
ALUMINUM SPACER (A1-S)



DETAIL FOR THERMAL MODELING OF  
ALUMINUM SPACER (A1-D)



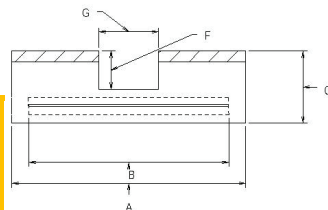
**\* SEE ATTACHED FOR PROPER DIMENSIONS \***

DETAIL FOR THERMAL MODELING OF  
QUANEX DECOSEAL SPACER (A5-S)



**Decoseal® Dimensions**

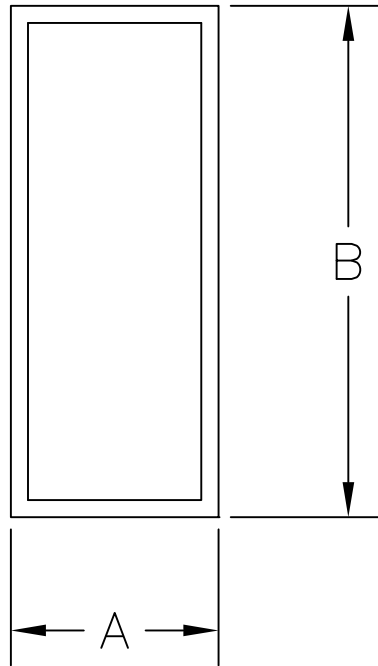
	Size	Air Space	Overall Width	Shim Width	Tape Height	Groove Depth	Groove Width
			A	B	C	F	G
<b>Inches</b>			-0.02	-0.003	-0.01	-0.015	-0.015
<b>Nominal</b>			+0.02	+0.003	+0.01	+0.015	+0.015
3/8	37T	0.375	0.485	0.360	0.250	0.125	0.176
3/8	37U	0.375	0.485	0.360	0.250	0.125	0.220
7/16	43W	0.438	0.548	0.423	0.250	0.125	0.280
1/2	50T	0.500	0.610	0.485	0.265	0.140	0.176
1/2	50W	0.500	0.610	0.485	0.265	0.140	0.280
9/16	56W	0.563	.673	0.548	0.265	0.140	0.280
5/8	62T	0.625	0.735	0.610	0.265	0.140	0.176
5/8	62W	0.625	0.735	0.610	0.265	0.140	0.280
3/4	75T	0.750	0.860	0.735	0.265	0.140	0.176
3/4	75U	0.750	0.860	0.735	0.265	0.140	0.220
3/4	75W	0.750	0.860	0.735	0.265	0.140	0.280
3/4	75A	0.750	0.860	0.735	0.265	0.120	0.409
3/4	75Z	0.750	0.860	0.735	0.265	0.140	0.325
			A	B	C	F	G
<b>Metric</b>			-0.51	-0.076	-0.25	-0.038	-0.038
<b>Nominal</b>			+0.51	+0.076	+0.25	+0.038	+0.038
9.5	37T	9.5	12.3	9.1	6.4	3.2	4.5
9.5	37U	9.5	12.3	9.1	6.4	3.2	5.6
11.0	43W	11.1	13.9	10.7	6.4	3.2	7.1
12.7	50T	12.7	15.5	12.3	6.7	3.6	4.5
12.7	50W	12.7	15.5	12.3	6.7	3.6	7.1
14.3	56W	14.3	17.1	13.9	6.7	3.6	7.1
16.0	62T	15.9	18.7	15.5	6.7	3.6	4.5
16.0	62W	15.9	18.7	15.5	6.7	3.6	7.1
19.0	75T	19.1	21.8	18.7	6.7	3.6	4.5
19.0	75U	19.1	21.8	18.7	6.7	3.6	5.6
19.0	75W	19.1	21.8	18.7	6.7	3.6	7.1
19.0	75A	19.1	21.8	18.7	6.7	3.05	10.4
19.0	75Z	19.1	21.8	18.7	6.7	3.6	8.3



**intertek**  
Total Quality. Assured.

Report #: M1809-116-45  
Date: 4/13/2021  
Verified by: *[Signature]*

# INTERNAL MUNTIN



Material: PAINTED ALUMINUM

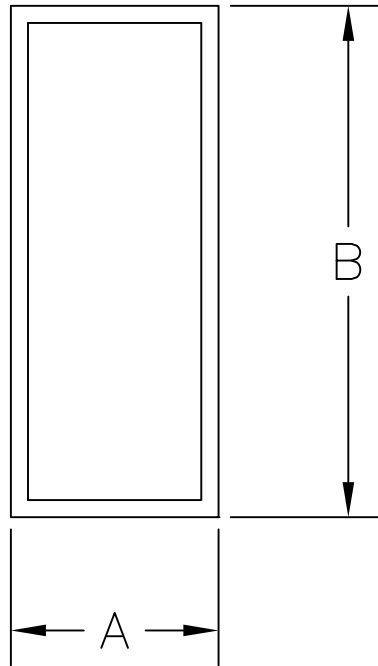
Width (A): 0.188"

Height (B): 0.625"

Wall Thickness: 0.020"

<b>intertek</b> Total Quality. Assured.	Report #:	<u>M1809-116-45</u>
	Date:	<u>4/13/2021</u>
	Verified by:	<u>[Signature]</u>

# INTERNAL MUNTIN



Material: PAINTED ALUMINUM

Width (A): 0.188"

Height (B): 0.813"

Wall Thickness: 0.020"

<b>intertek</b> Total Quality. Assured.	Report #:	<u>M1809-116-45</u>
	Date:	<u>4/13/2021</u>
	Verified by:	<u>[Signature]</u>

# PROFILE APPROVAL PRINT

APPROVED BY \_\_\_\_\_

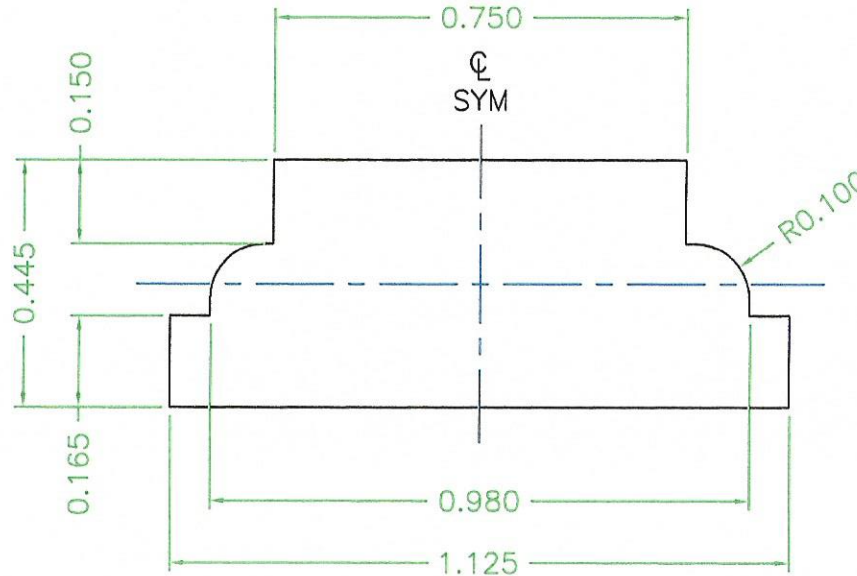
DATE \_\_\_\_\_

**intertek**  
Total Quality. Assured.


Report #: M1809-116-45

Date: 4/13/2021

Verified by: *[Signature]*



AREA = .421  
WT/FT = .268

 N JACKSON, OHIO	
DATE 04-13-18	CUSTOMER RSL, INC
SCALE N/A	PART NAME SDL BAR
	PART# -
	MATERIAL PVC
DRAWN BY KAH	CHECKED BY
REVISED	JOB# 041318
PROPERTY OF VINYLTECH	

**NOTE<S>:**

- ALL DIMENSIONS INDICATED IN INCHES <IN>
- STANDARD "INDUSTRY" TOLERANCES APPLY.
- DIMENSIONS TAKEN FROM ORIGINAL CUSTOMER GEOMETRY, UNLESS CALLED OUT.

## TEST REPORT FOR RSL, LLC

Report No.: M1809.03-116-45 R0

Date: 06/13/23

### SECTION 8

#### REVISION LOG

REVISION #	DATE	PAGES	REVISION
.01R0	04/20/21	N/A	Original Report Issue
.01R1	04/27/21	N/A	Revise U-factor and SHGC on select options
.02R0	02/25/22	N/A	Add options 151-182
.02R1	03/03/22	N/A	Revised low-e callout on 156, 165, 174.
.02R2	03/16/22	N/A	Add grids to 177,178,179,180, and 182.
.03R0	06/13/23	N/A	Add options 183-270.