

# CR LAURENCE CO., INC. COMPUTER SIMULATION REPORT

## SCOPE OF WORK

PALISADES S90 BI-FOLDING DOOR - AAMA 507 SIMULATIONS TO DETERMINE U-FACTOR,  
SOLAR HEAT GAIN COEFFICIENT, AND VISIBLE TRANSMITTANCE RATINGS

## REPORT NUMBER

L4172.02-116-45 R2

## TEST DATE

11/20/20

## ISSUE DATE

11/20/20

## REVISED DATE

1/20/2021

## RECORD RETENTION END DATE

11/20/25

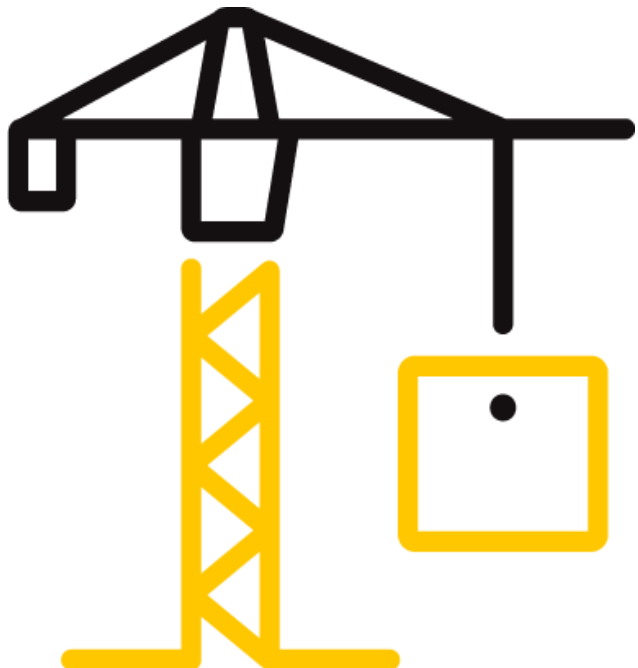
## PAGES

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## DOCUMENT CONTROL NUMBER

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## TEST REPORT FOR CR LAURENCE CO., INC.

Report No.: L4172.02-116-45 R2

Date: 01/20/21

### REPORT ISSUED TO

**CR LAURENCE CO., INC.**

2100 East 38th Street

Vernon, California 90058

### SECTION 1

#### SUMMARY

#### **SERIES/MODEL: Palisades S90 Bi-Folding Door**

Intertek Building & Construction (Intertek B&C) was contracted to perform AAMA 507 computer simulations utilizing thermal modeling computer software developed by Lawrence Berkeley National Laboratory (LBNL). Results obtained are simulated values and were secured using the designated test methods.

Intertek B&C is an NFRC accredited simulation laboratory and all simulations were conducted in full compliance with NFRC approved procedures and specifications.

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

For INTERTEK B&C:

**COMPLETED BY:** Eric S. Leitner  
Manager - Thermal  
**TITLE:** Testing & Simulations  
**SIGNATURE:**  
**DATE:** 01/20/21

**REVIEWED BY:** Allison M. Ford  
**TITLE:** Simulation Technician  
**SIGNATURE:**  
**DATE:** 01/20/21

ESL:esl

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**SECTION 2**

**TEST METHODS**

The products were evaluated in accordance with the following:

*AAMA 507-15, Standard Practice for Determining the Thermal Performance Characteristics of Fenestration Systems Installed in Commercial Buildings*

*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>	WINDOW 7.4.14
<b>SPECTRAL DATA LIBRARY</b>	IGDB 75.0
<b>NFRC MATERIALS LIBRARY</b>	NFRC 101-2020 [E0A1]

**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) This product is available in either a painted or anodized finish. These two finish types may be grouped in accordance with ANSI/NFRC 100-2017, Section 4.2.1.L. The painted finish was simulated since it is the worst case (highest emissivity).

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### SECTION 4

#### SIMULATION SPECIMEN DESCRIPTION

<b>SERIES/MODEL</b>	Palisades S90 Bi-Folding Door
<b>PRODUCT TYPE</b>	Swinging Door - Double
<b>FRAME MATERIAL</b>	AT - Aluminum w/ Thermal Breaks - All Members
<b>SASH MATERIAL</b>	AT - Aluminum w/ Thermal Breaks - All Members

GLAZING OPTIONS					
	<i>OUTER PANE</i>	<i>MIDDLE PANE</i>	<i>INNER PANE</i>	<i>GAP SIZES</i>	<i>IG OVERALL</i>
GL1	1/4"	N/A	1/4"	0.500"	1"
GL2	1/4"	Heat Mirror	1/4"	0.250"	1"

GL1: Dual glazed IG unit (COG=0.48 - COG=0.20)

GL2: Dual glazed IG unit w/ heat mirror (COG=0.18 - COG=0.10)

SPACER OPTIONS				
	<i>TYPE</i>	<i>PRIMARY SEAL</i>	<i>SECONDARY SEAL</i>	<i>CODE</i>
	Aluminum Dual Seal Spacer	PIB	Silicone	A1-D

### SECTION 5

#### MEASURED SIMULATION DATA

U-FACTOR CALCULATIONS	
Exterior Air Temperature	-0.4°F
Exterior Wind Velocity	12.3 mph (Perpendicular Flow)
Interior Air Temperature	69.8°F

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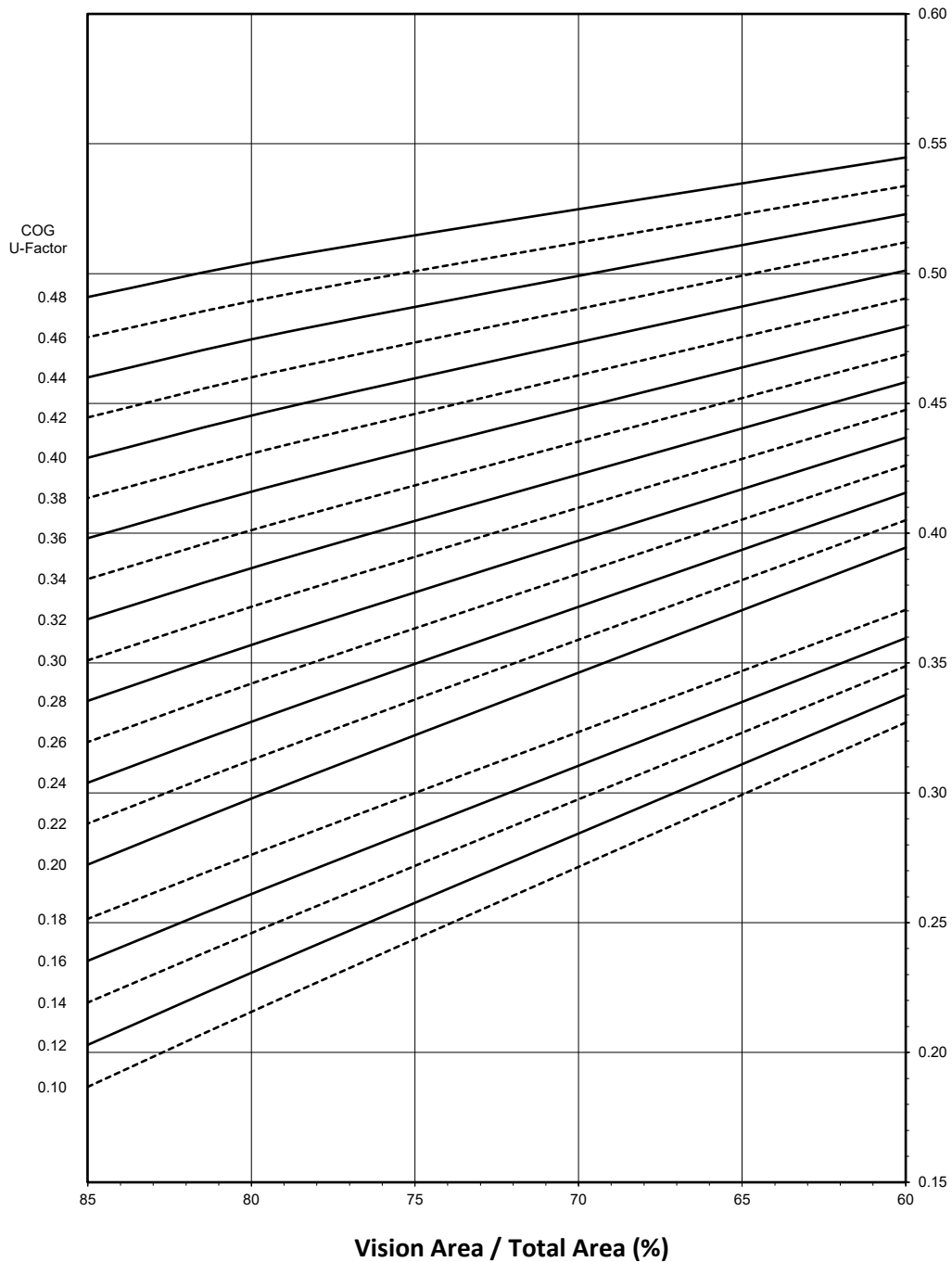
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### SECTION 6

### SIMULATION RESULTS

#### U-FACTOR CALCULATIONS: System U-Factor vs. Percentage of Vision Area



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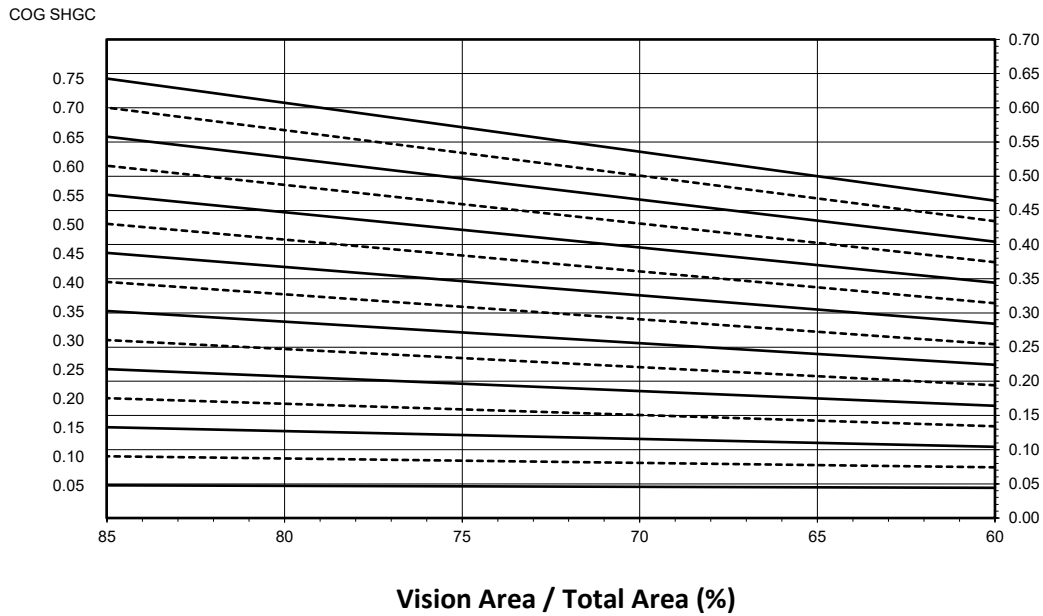
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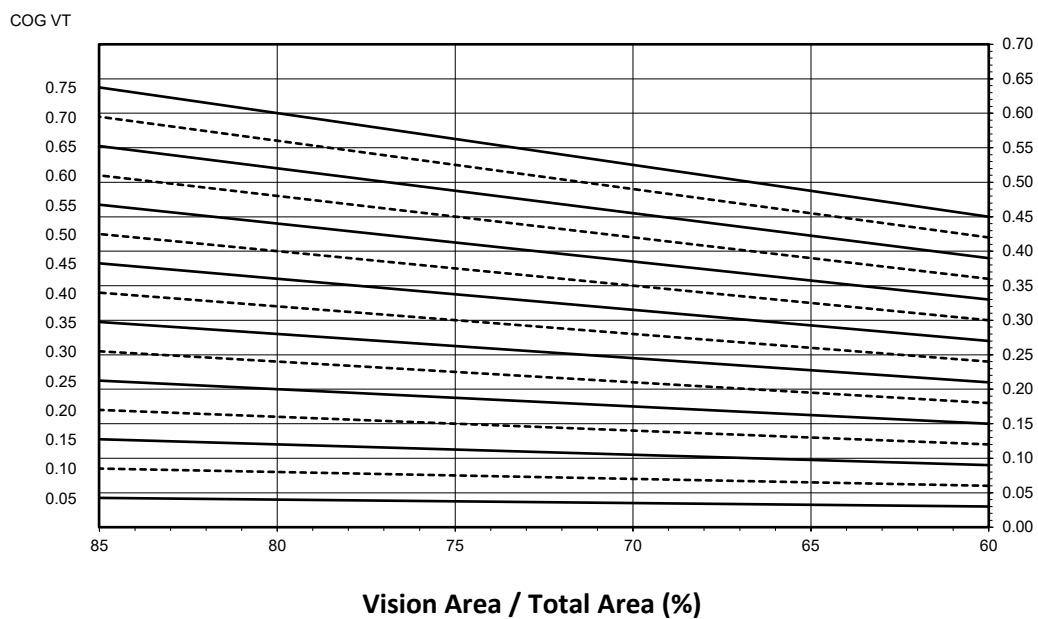
### SECTION 6

### SIMULATION RESULTS

#### SHGC CALCULATIONS: System SHGC vs. Percentage of Vision Area



#### VT CALCULATIONS: System VT vs. Percentage of Vision Area



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**SECTION 6**

**SIMULATION RESULTS**

<b>U-FACTOR CALCULATIONS (Palisades S90 Bi-Folding Door)</b>		
<b>Size Specific U-Factor Matrix*</b>		
<b>Glazing Option</b>	<b>Center-of-Glass U-Factor</b>	<b>Overall U-Factor</b>
1	0.48	0.51
2	0.46	0.49
3	0.44	0.48
4	0.42	0.46
5	0.40	0.45
6	0.38	0.44
7	0.36	0.42
8	0.34	0.41
9	0.32	0.39
10	0.30	0.38
11	0.28	0.36
12	0.26	0.35
13	0.24	0.33
14	0.22	0.32
15	0.20	0.31
16	0.18	0.28
17	0.16	0.27
18	0.14	0.25
19	0.12	0.24
20	0.10	0.23

\*The size specific U-Factor matrix is based on the Swinging Door - Double NFRC specimen size of 1920mm x 2090mm (75.50 in x 82.375 in). This represents 78.3% Vision Area / Total Area.

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**SECTION 6**

**SIMULATION RESULTS**

<b>SHGC/VT CALCULATIONS (Palisades S90 Bi-Folding Door)</b>			
<b>Size Specific SHGC Matrix*</b>		<b>Size Specific VT Matrix*</b>	
<b>Center-of-Glass SHGC</b>	<b>Overall SHGC</b>	<b>Center-of-Glass VT</b>	<b>Overall VT</b>
0.75	0.60	0.75	0.59
0.70	0.56	0.70	0.55
0.65	0.52	0.65	0.51
0.60	0.48	0.60	0.47
0.55	0.44	0.55	0.43
0.50	0.40	0.50	0.39
0.45	0.36	0.45	0.35
0.40	0.32	0.40	0.31
0.35	0.28	0.35	0.27
0.30	0.24	0.30	0.24
0.25	0.20	0.25	0.20
0.20	0.16	0.20	0.16
0.15	0.13	0.15	0.12
0.10	0.09	0.10	0.08
0.05	0.05	0.05	0.04

\*The size specific SHGC and VT matrices are based on the Swinging Door - Double NFRC specimen size of 1920mm x 2090mm (75.50 in x 82.375 in). This represents 78.3% Vision Area / Total Area.



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**SIMULATION RESULTS**

<b>TOTAL PRODUCT CALCULATIONS (Palisades S90 Bi-Folding Door)</b>									
Option Number	COG U-Factor	COG Temperature	Cross Section	Frame Height	Frame U-Factor	Edge U-Factor	Total Product U-Factor		
							60.00% Vision Area	NFRC 100-2017	85.00% Vision Area
1	0.48	43.7°F	Ext. Head	3.1464	0.6280	0.4982	0.5447	0.5078	0.4910
			Int. Head	3.1745	0.5911	0.4892			
			Ext. Jamb	3.1464	0.6280	0.4982			
			Int. Jamb	4.9232	0.6822	0.4894			
			Mtg. Rail	3.1745	0.5911	0.4892			
			Ext. Sill	3.3779	0.6614	0.4996			
			Int. Sill	3.3779	0.6614	0.4996			
2	0.46	44.8°F	Ext. Head	3.1464	0.6269	0.4839	0.5338	0.4934	0.4755
			Int. Head	3.1745	0.5898	0.4748			
			Ext. Jamb	3.1464	0.6269	0.4839			
			Int. Jamb	4.9232	0.6805	0.4750			
			Mtg. Rail	3.1745	0.5898	0.4748			
			Ext. Sill	3.3779	0.6604	0.4854			
			Int. Sill	3.3779	0.6604	0.4854			
3	0.44	45.8°F	Ext. Head	3.1464	0.6258	0.4698	0.5229	0.4790	0.4600
			Int. Head	3.1745	0.5885	0.4606			
			Ext. Jamb	3.1464	0.6258	0.4698			
			Int. Jamb	4.9232	0.6789	0.4607			
			Mtg. Rail	3.1745	0.5885	0.4606			
			Ext. Sill	3.3779	0.6594	0.4713			
			Int. Sill	3.3779	0.6594	0.4713			
4	0.42	46.8°F	Ext. Head	3.1464	0.6247	0.4560	0.5121	0.4646	0.4446
			Int. Head	3.1745	0.5873	0.4467			
			Ext. Jamb	3.1464	0.6247	0.4560			
			Int. Jamb	4.9232	0.6773	0.4468			
			Mtg. Rail	3.1745	0.5873	0.4467			
			Ext. Sill	3.3779	0.6585	0.4575			
			Int. Sill	3.3779	0.6585	0.4575			

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**SIMULATION RESULTS**

<b>TOTAL PRODUCT CALCULATIONS (Palisades S90 Bi-Folding Door)</b>									
Option Number	COG U-Factor	COG Temperature	Cross Section	Frame Height	Frame U-Factor	Edge U-Factor	Total Product U-Factor		
							60.00% Vision Area	NFRC 100-2017	85.00% Vision Area
5	0.40	47.9°F	Ext. Head	3.1464	0.6237	0.4418	0.5011	0.4502	0.4291
			Int. Head	3.1745	0.5860	0.4324			
			Ext. Jamb	3.1464	0.6237	0.4418			
			Int. Jamb	4.9232	0.6757	0.4326			
			Mtg. Rail	3.1745	0.5860	0.4324			
			Ext. Sill	3.3779	0.6576	0.4434			
			Int. Sill	3.3779	0.6576	0.4434			
6	0.38	48.9°F	Ext. Head	3.1464	0.6227	0.4281	0.4904	0.4359	0.4136
			Int. Head	3.1745	0.5848	0.4186			
			Ext. Jamb	3.1464	0.6227	0.4281			
			Int. Jamb	4.9232	0.6742	0.4188			
			Mtg. Rail	3.1745	0.5848	0.4186			
			Ext. Sill	3.3779	0.6567	0.4297			
			Int. Sill	3.3779	0.6567	0.4297			
7	0.36	50.0°F	Ext. Head	3.1464	0.6217	0.4143	0.4796	0.4215	0.3981
			Int. Head	3.1745	0.5837	0.4047			
			Ext. Jamb	3.1464	0.6217	0.4143			
			Int. Jamb	4.9232	0.6727	0.4049			
			Mtg. Rail	3.1745	0.5837	0.4047			
			Ext. Sill	3.3779	0.6558	0.4160			
			Int. Sill	3.3779	0.6558	0.4160			
8	0.34	51.0°F	Ext. Head	3.1464	0.6207	0.4005	0.4689	0.4070	0.3824
			Int. Head	3.1745	0.5825	0.3909			
			Ext. Jamb	3.1464	0.6207	0.4005			
			Int. Jamb	4.9232	0.6713	0.3910			
			Mtg. Rail	3.1745	0.5825	0.3909			
			Ext. Sill	3.3779	0.6550	0.4022			
			Int. Sill	3.3779	0.6550	0.4022			

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<b>TOTAL PRODUCT CALCULATIONS (Palisades S90 Bi-Folding Door)</b>									
Option Number	COG U-Factor	COG Temperature	Cross Section	Frame Height	Frame U-Factor	Edge U-Factor	Total Product U-Factor		
							60.00% Vision Area	NFRC 100-2017	85.00% Vision Area
9	0.32	52.0°F	Ext. Head	3.1464	0.6198	0.3868	0.4582	0.3927	0.3669
			Int. Head	3.1745	0.5814	0.3771			
			Ext. Jamb	3.1464	0.6198	0.3868			
			Int. Jamb	4.9232	0.6699	0.3773			
			Mtg. Rail	3.1745	0.5814	0.3771			
			Ext. Sill	3.3779	0.6542	0.3886			
			Int. Sill	3.3779	0.6542	0.3886			
10	0.30	53.1°F	Ext. Head	3.1464	0.6189	0.3733	0.4475	0.3782	0.3511
			Int. Head	3.1745	0.5803	0.3635			
			Ext. Jamb	3.1464	0.6189	0.3733			
			Int. Jamb	4.9232	0.6685	0.3636			
			Mtg. Rail	3.1745	0.5803	0.3635			
			Ext. Sill	3.3779	0.6534	0.3751			
			Int. Sill	3.3779	0.6534	0.3751			
11	0.28	54.2°F	Ext. Head	3.1464	0.6180	0.3598	0.4368	0.3638	0.3354
			Int. Head	3.1745	0.5793	0.3499			
			Ext. Jamb	3.1464	0.6180	0.3598			
			Int. Jamb	4.9232	0.6672	0.3500			
			Mtg. Rail	3.1745	0.5793	0.3499			
			Ext. Sill	3.3779	0.6526	0.3616			
			Int. Sill	3.3779	0.6526	0.3616			
12	0.26	55.2°F	Ext. Head	3.1464	0.6172	0.3462	0.4262	0.3492	0.3196
			Int. Head	3.1745	0.5782	0.3363			
			Ext. Jamb	3.1464	0.6172	0.3462			
			Int. Jamb	4.9232	0.6659	0.3364			
			Mtg. Rail	3.1745	0.5782	0.3363			
			Ext. Sill	3.3779	0.6518	0.3482			
			Int. Sill	3.3779	0.6518	0.3482			

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<b>TOTAL PRODUCT CALCULATIONS (Palisades S90 Bi-Folding Door)</b>									
Option Number	COG U-Factor	COG Temperature	Cross Section	Frame Height	Frame U-Factor	Edge U-Factor	Total Product U-Factor		
							60.00% Vision Area	NFRC 100-2017	85.00% Vision Area
13	0.24	56.3°F	Ext. Head	3.1464	0.6163	0.3328	0.4156	0.3348	0.3039
			Int. Head	3.1745	0.5772	0.3229			
			Ext. Jamb	3.1464	0.6163	0.3328			
			Int. Jamb	4.9232	0.6646	0.3230			
			Mtg. Rail	3.1745	0.5772	0.3229			
			Ext. Sill	3.3779	0.6511	0.3348			
			Int. Sill	3.3779	0.6511	0.3348			
14	0.22	57.3°F	Ext. Head	3.1464	0.6156	0.3193	0.4050	0.3204	0.2882
			Int. Head	3.1745	0.5763	0.3093			
			Ext. Jamb	3.1464	0.6156	0.3193			
			Int. Jamb	4.9232	0.6635	0.3094			
			Mtg. Rail	3.1745	0.5763	0.3093			
			Ext. Sill	3.3779	0.6504	0.3213			
			Int. Sill	3.3779	0.6504	0.3213			
15	0.20	58.4°F	Ext. Head	3.1464	0.6148	0.3060	0.3945	0.3060	0.2724
			Int. Head	3.1745	0.5754	0.2960			
			Ext. Jamb	3.1464	0.6148	0.3060			
			Int. Jamb	4.9232	0.6623	0.2960			
			Mtg. Rail	3.1745	0.5754	0.2960			
			Ext. Sill	3.3779	0.6498	0.3081			
			Int. Sill	3.3779	0.6498	0.3081			
16	0.18	59.5°F	Ext. Head	3.1464	0.5875	0.2809	0.3705	0.2841	0.2515
			Int. Head	3.1745	0.5502	0.2716			
			Ext. Jamb	3.1464	0.5875	0.2809			
			Int. Jamb	4.9232	0.6299	0.2714			
			Mtg. Rail	3.1745	0.5502	0.2716			
			Ext. Sill	3.3779	0.6277	0.2837			
			Int. Sill	3.3779	0.6277	0.2837			

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<b>TOTAL PRODUCT CALCULATIONS (Palisades S90 Bi-Folding Door)</b>									
Option Number	COG U-Factor	COG Temperature	Cross Section	Frame Height	Frame U-Factor	Edge U-Factor	Total Product U-Factor		
							60.00% Vision Area	NFRC 100-2017	85.00% Vision Area
17	0.16	60.6°F	Ext. Head	3.1464	0.5867	0.2673	0.3596	0.2693	0.2353
			Int. Head	3.1745	0.5492	0.2579			
			Ext. Jamb	3.1464	0.5867	0.2673			
			Int. Jamb	4.9232	0.6286	0.2577			
			Mtg. Rail	3.1745	0.5492	0.2579			
			Ext. Sill	3.3779	0.6244	0.2697			
			Int. Sill	3.3779	0.6244	0.2697			
18	0.14	61.6°F	Ext. Head	3.1464	0.5861	0.2527	0.3488	0.2546	0.2193
			Int. Head	3.1745	0.5485	0.2433			
			Ext. Jamb	3.1464	0.5861	0.2527			
			Int. Jamb	4.9232	0.6277	0.2431			
			Mtg. Rail	3.1745	0.5485	0.2433			
			Ext. Sill	3.3779	0.6240	0.2552			
			Int. Sill	3.3779	0.6240	0.2552			
19	0.12	62.7°F	Ext. Head	3.1464	0.5852	0.2392	0.3377	0.2397	0.2030
			Int. Head	3.1745	0.5445	0.2296			
			Ext. Jamb	3.1464	0.5852	0.2392			
			Int. Jamb	4.9232	0.6264	0.2296			
			Mtg. Rail	3.1745	0.5445	0.2296			
			Ext. Sill	3.3779	0.6232	0.2417			
			Int. Sill	3.3779	0.6232	0.2417			
20	0.10	63.9°F	Ext. Head	3.1464	0.5844	0.2256	0.3271	0.2250	0.1868
			Int. Head	3.1745	0.5436	0.2160			
			Ext. Jamb	3.1464	0.5844	0.2256			
			Int. Jamb	4.9232	0.6252	0.2160			
			Mtg. Rail	3.1745	0.5436	0.2160			
			Ext. Sill	3.3779	0.6225	0.2282			
			Int. Sill	3.3779	0.6225	0.2282			



Total Quality. Assured.

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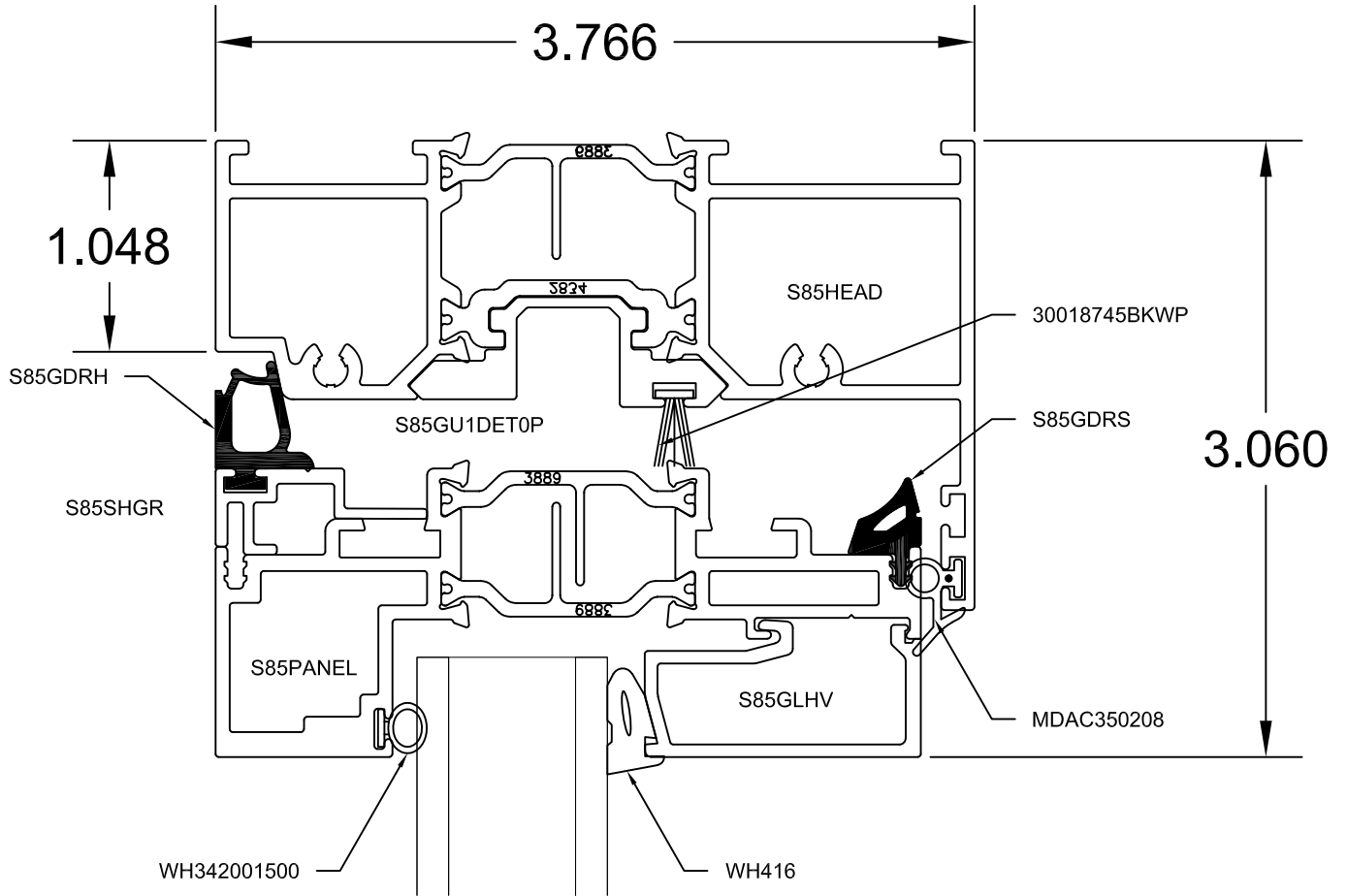
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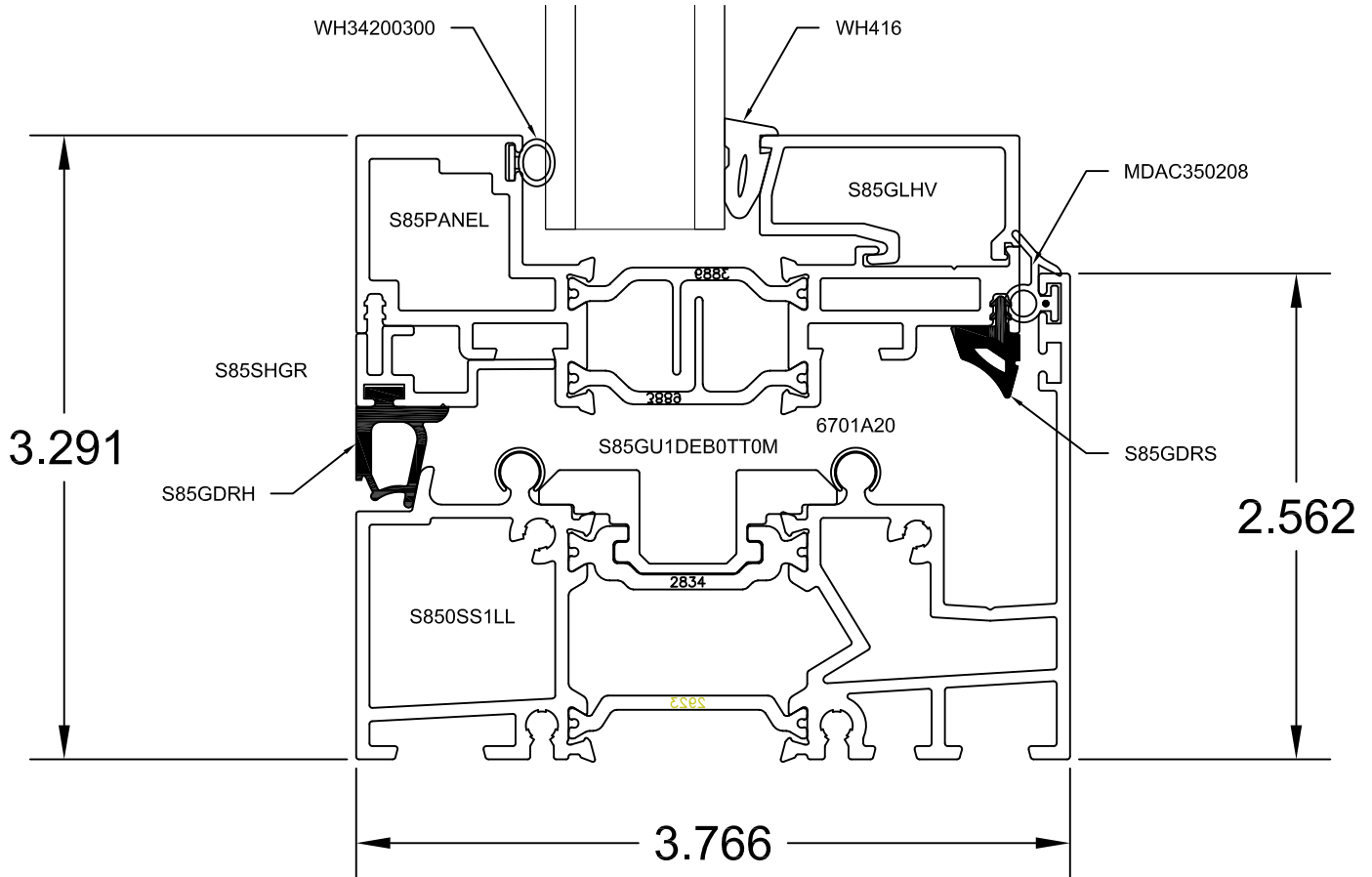
**SECTION 7**

**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.

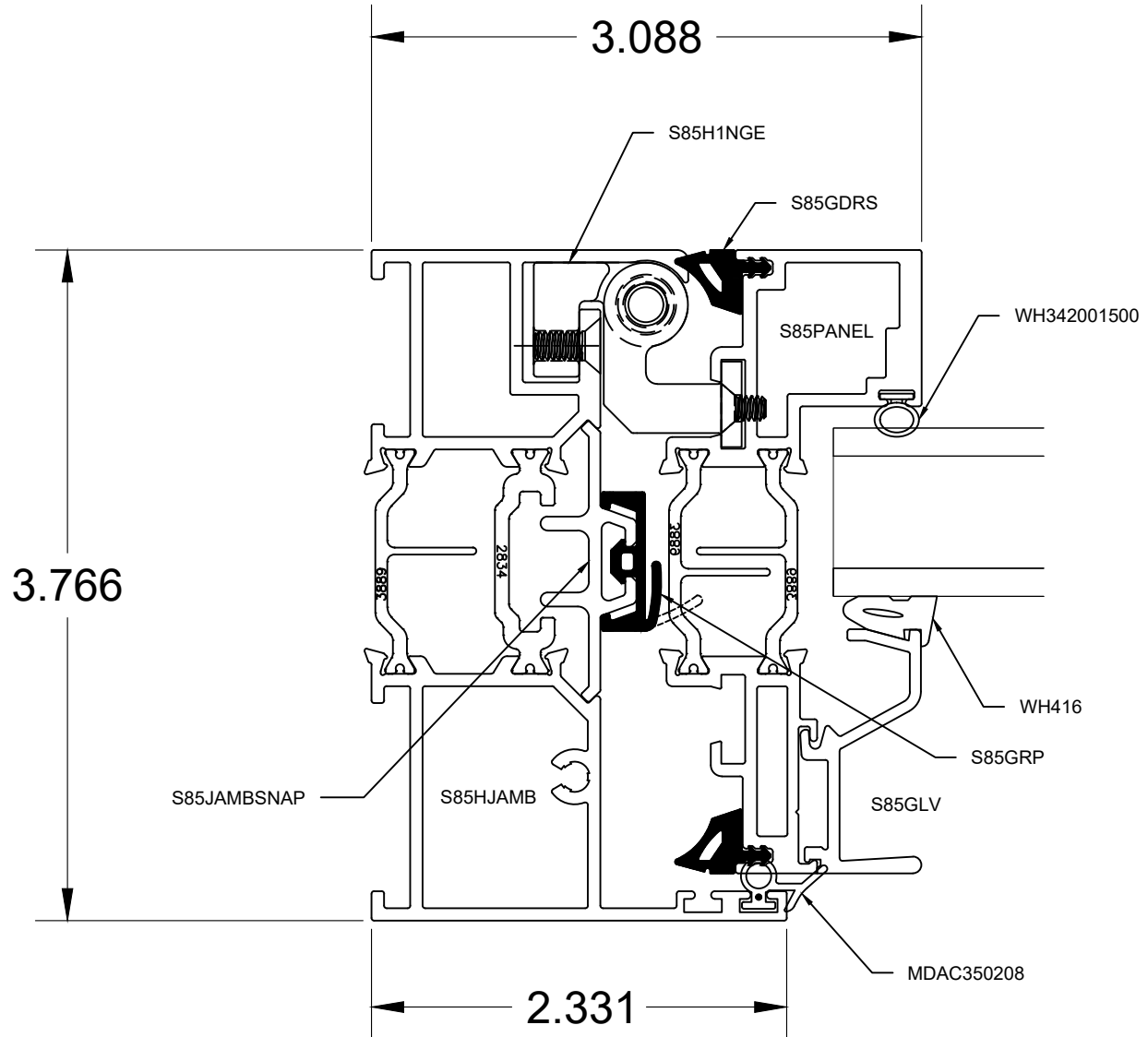


# Palisades S90 Head Outswing

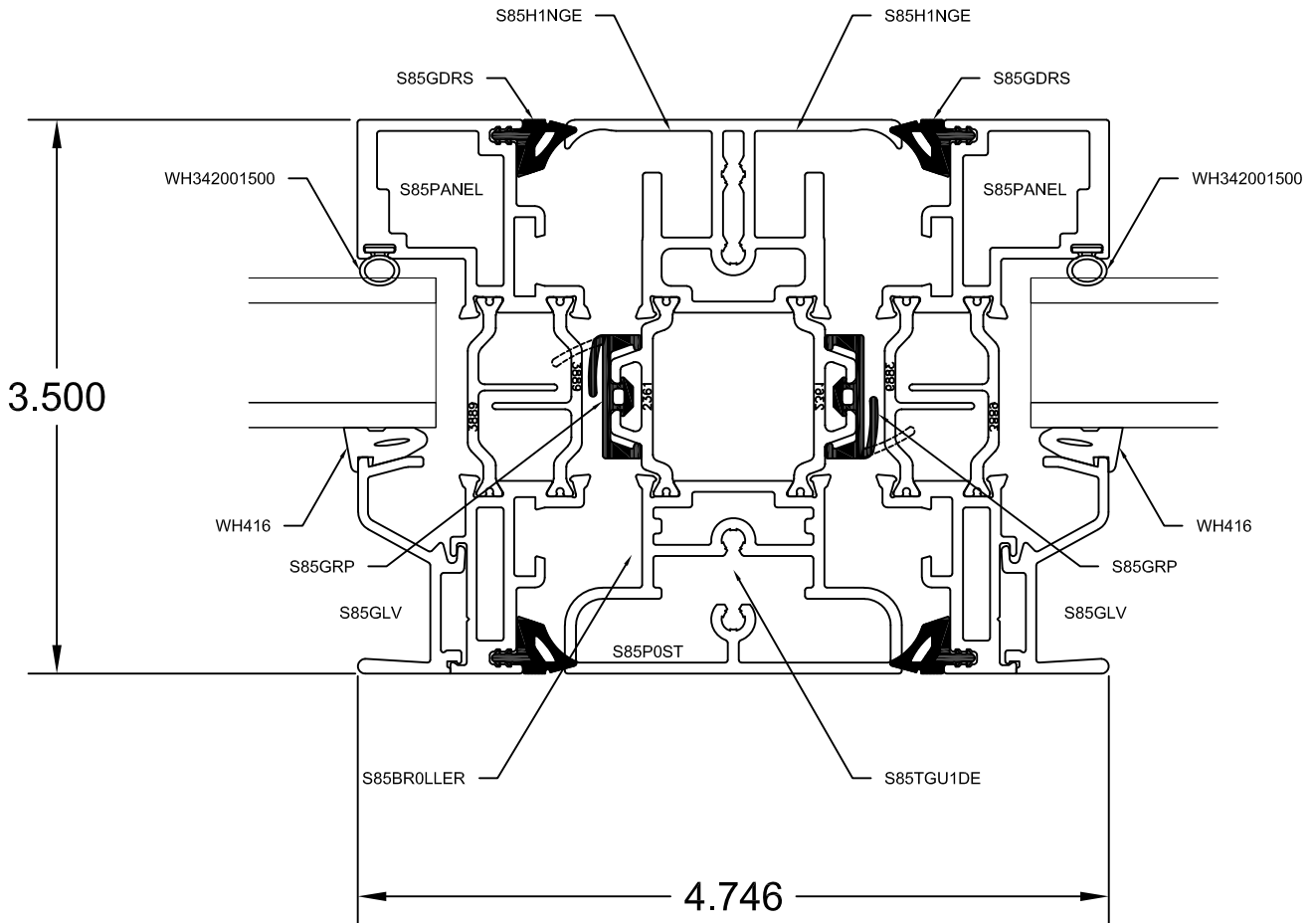


# Palisades S90 Sill Outswing





# Palisades S90 Jamb Outswing



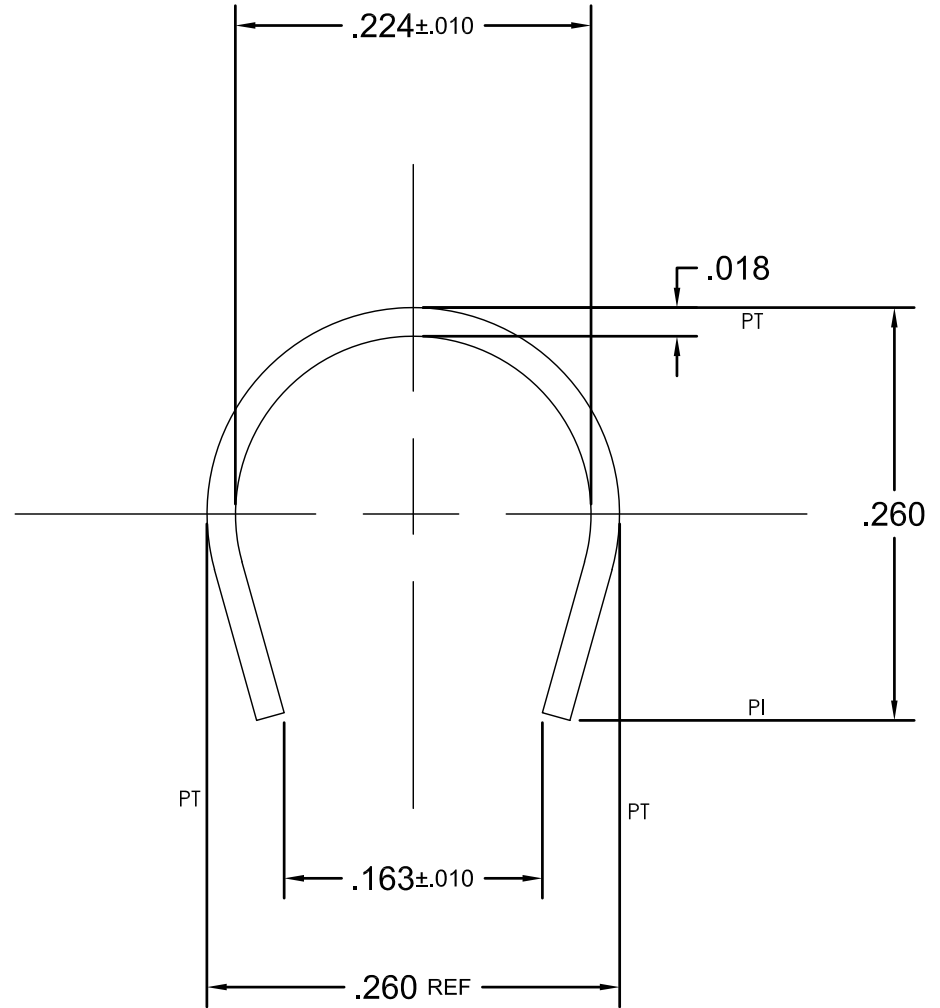
# Palisades S90 Vertical Mullions

 <small>Total Quality. Assured.</small>	Report #:	L4172-116-45
	Date:	11/20/2020
	Verified by:	

**Company Name: CR Laurence Co., Inc.**

Series/Model: Palisades S90 Bi-Fold Door

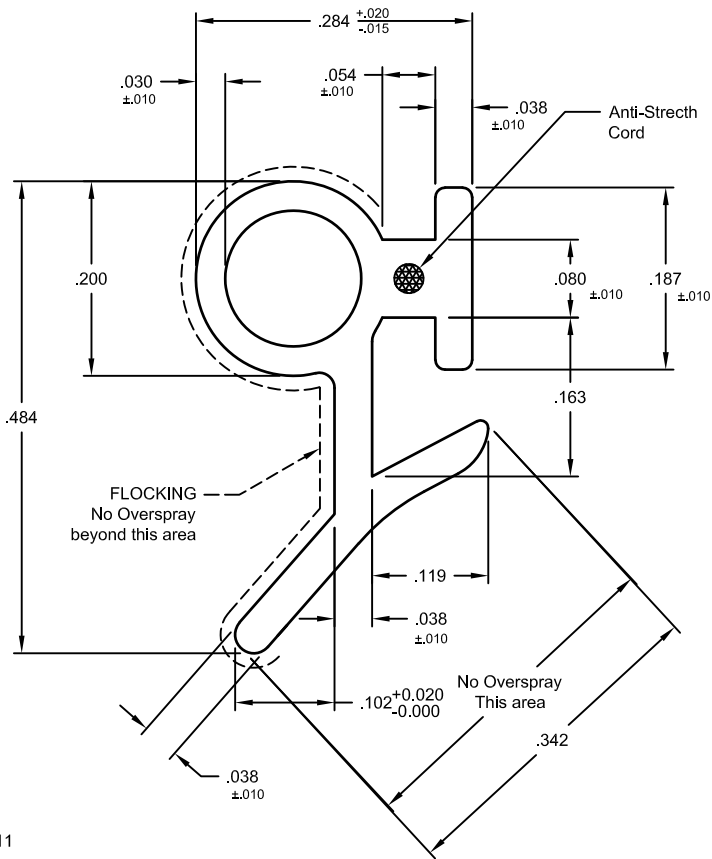
Part #	Part Description	Material	Finish
CS223	-	Stainless Steel	-
MDAC350208	-	EPDM	-
S851NTEXTCC	-	Aluminum	Painted and Anodized
S85GDRH	-	EPDM	-
S85GDRS	-	EPDM	-
S85GLHV	-	Aluminum	Painted and Anodized
S85GLV	-	Aluminum	Painted and Anodized
S85GRP	-	Aluminum	Painted and Anodized
Thermal Break #1	-	Polyamide	-
Thermal Break #2	-	Polyamide	-
S85HEAD	-	Aluminum	Painted and Anodized
S85HJAMB	-	Aluminum	Painted and Anodized
Thermal Break #3	-	Polyamide	-
S851NTPANEL	-	Aluminum	Painted and Anodized
S851NTEXTS1LL	-	Aluminum	Painted and Anodized
S85SHGR	-	Aluminum	Painted and Anodized
S850SS1LL	-	Aluminum	Painted and Anodized
PS-1127S	-	Silicone	-
WH34200300	-	Polypropolene	-
3889	-	Ensinger Insulbar	-
3057	-	Ensinger Insulbar	-
2923	-	Ensinger Insulbar	-
2834	-	Ensinger Insulbar	-



<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE IS: Frac ± 1/16 .XX ± .XXX ± ANGLES ± RADIAL</p> <p>○ IDENTIFIES CRITICAL CHARACTERISTICS FOR CRL INSPECTION</p> <p>----- IDENTIFIES EXPOSED AREA</p>	REV	DESCRIPTION	DATE	APP'D	 <b>C.R.LAURENCE CO.</b> 2503 E. Vernon Avenue, Los Angeles, C.A 90058-1897 PH (800)-421-6144 FX: 800-587-7501 www.crlaurence.com
PART DESCRIPTION: SS TRACK CAP					
BRAND: U.S. ALUMINUM 2000 SLIDING DOOR      DWG #: CS223					
NOTES: .018 SS NORTHSTAR NS-787 OR EQUAL FITS WITH CS224					

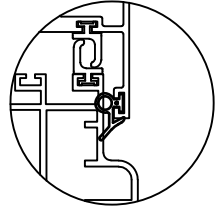
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DO NOT COPY



FULL SCALE

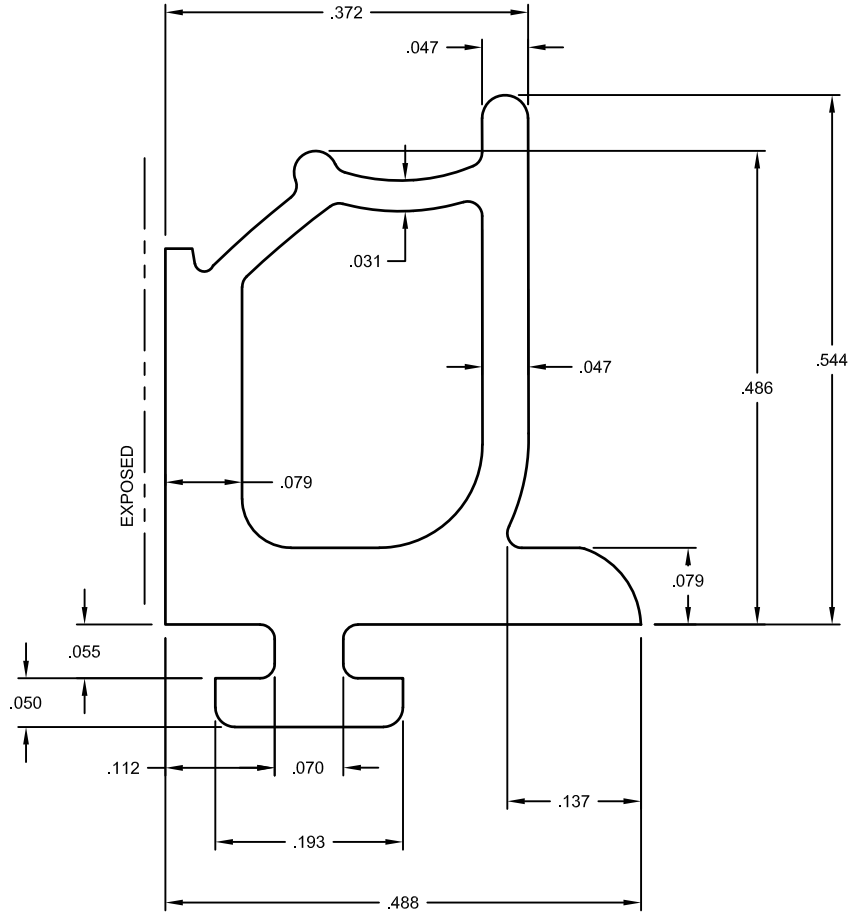
SETUP DIFFICULTY  
**2**



Print date: 10/20/2020 11:54:11

AM  
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1	10/7/19	Increase base thickness (was .028)	EJT
A	8/1/19	Add overspray notes	EJT
No.	Date	Description	By
<b>TREMCO</b>		1451 Jacobson Ave Ashland, Ohio 44805 U.S.A.	Phone : 800-321-6357 Fax : 419-289-6645
Customer:		Customer Part No.	
CR Laurence		MDAC350208	
Project:			Rev No.
Drawn by:	E. TANGO	Scale:	10X
Date:	5/9/2019	Compound:	PEROX, EPDM
Designed F.C.:	.108	Drawing No.:	
Diameter:	70 ±5	Area:	.0422
			TR-25626P

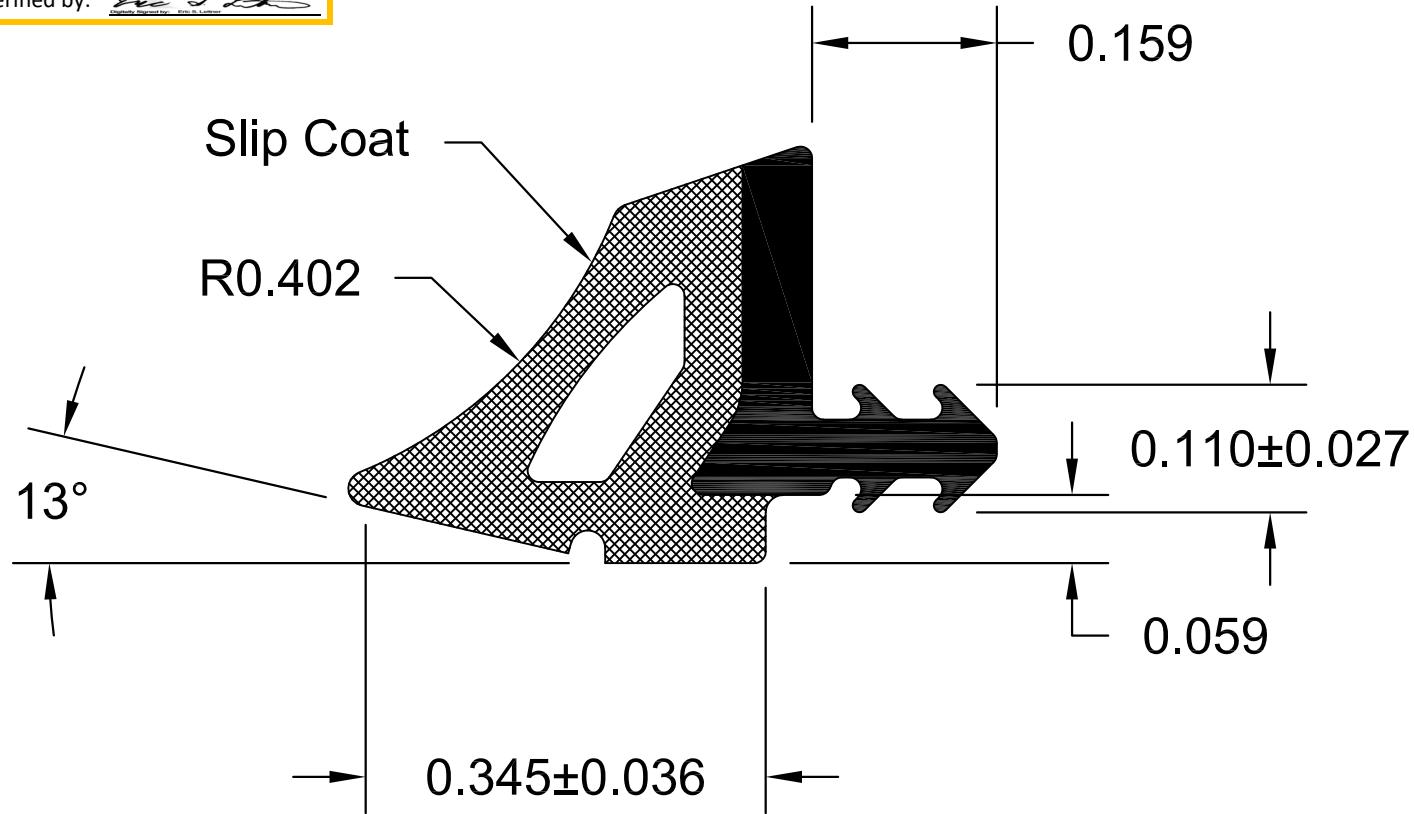


FULL SCALE

Print date: 10/20/2020 11:55:40

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A	11/14/19	CONVERT TO UNCOMPRESSED PROFILE	EJT
No.	Date	Description	By
<b>TREMCO</b> <small>SEALANT - RESISTOR PRODUCTS DIVISION</small>		1451 Jacobson Ave Ashland, Ohio 44805 U.S.A.	Phone : 800-321-6357 Fax : 419-289-6645
Customer:		Customer Part No.	
CR Laurence		S85GDRH	
Project:		Rev No.	
Bi-Folding Door			
Drawn by:	E Tango	Scale:	10X
Date:	10/15/2019	Designed F.C.:	XXX
Compound:	Perox, EPDM	Drawing No.:	
Durometer:	60 ±5	Area:	.1079
			TX-26001P

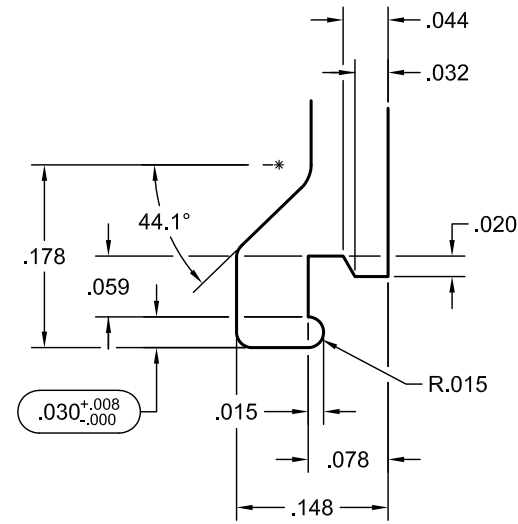
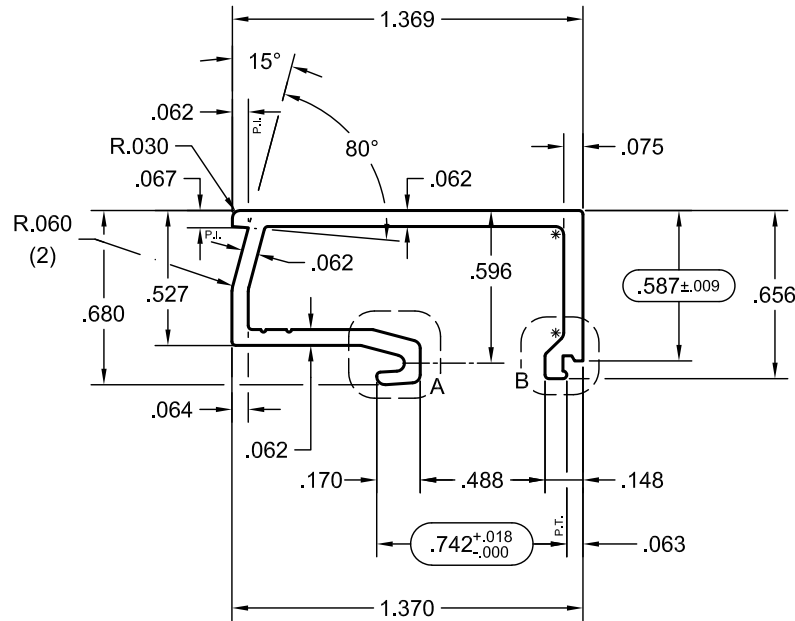
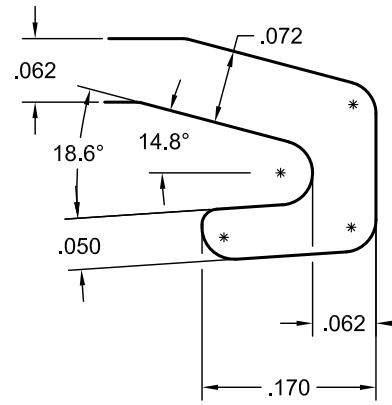
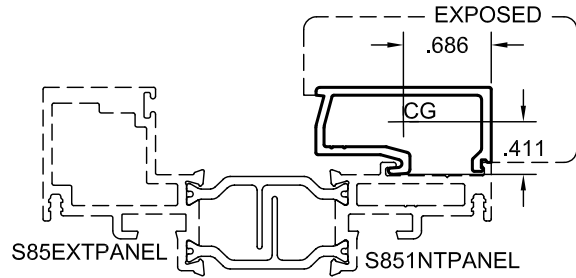


**Make-Up:**

**Base Material:** 70 Durometer Dense EPDM Rubber (1.200 G/CM<sup>3</sup>)

**Material:**

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE IS:  Frac ± N/A .XX ± .015 .XXX ± .006 ANGLES ± .5° RADIAL 6%						<b>C.R. Laurence Co., Inc</b> 2100 E. 38TH STREET VERNON, CA 90058 PHONE: (323) 588-1281 FAX: (323) 232-2523			
						DRAWN BY: MS SCALE: 4:1 DATE: 4/16/20 PART NUMBER: S85GDRS			
	REV.	DESCRIPTION	DATE	BY	PART: Gasket; Door Rail Stile PRODUCT: Monterey S85				
	THIS DRAWING AND THE DESIGN SHOWN THEREIN IS THE PROPERTY OF C.R.LAURENCE CO., INC. AND USE OR COPIES THEREOF CANNOT BE MADE WITHOUT WRITTEN CONSENT.					NOTE: MATERIAL: See Note Above	DRAWING NUMBER 1		



ALLOY & TEMPER: 6063-T6	SO IN	DATE	APPD
ESTIMATED AREA: .218	IN		
ESTIMATED WEIGHT / FT: .261	IN		
ESTIMATED PERIMETER: 6.818	IN		
EXP/PAINTED PER: 1.966 IN	IN		
CLASS: SOLID	IN		
SECTION PROPERTIES:	IN		
IN: .011	IN		
IN: .028	IN		
IN: .072	IN		

UNLESS OTHERWISE SPECIFIED: ANSI H35.2-2009 TOLERANCES FOR ALUMINUM EXTRUSIONS APPLY	DATE	SCALE	2 X SIZE
UNSPECIFIED CORNER RADIUS: .015 IN	APPROVED BY:	DATE	12/28/2020
UNSPECIFIED WALL THICKNESS: $\frac{3}{16}$ IN	DATE	SCALE	2 X SIZE
IDENTIFIES CRITICAL CHARACTERISTICS FOR CRL INSPECTION	DATE	SCALE	2 X SIZE
IDENTIFIES EXPOSED AREA	DATE	SCALE	2 X SIZE

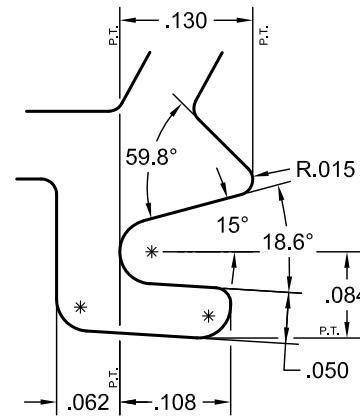
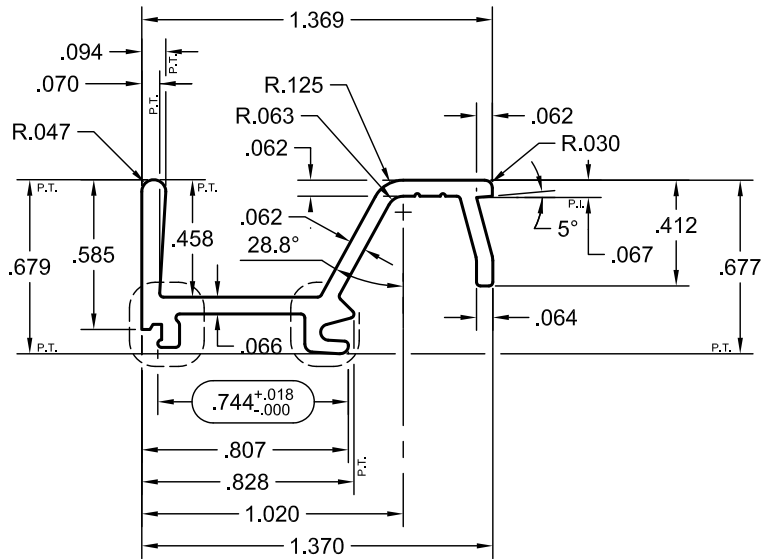
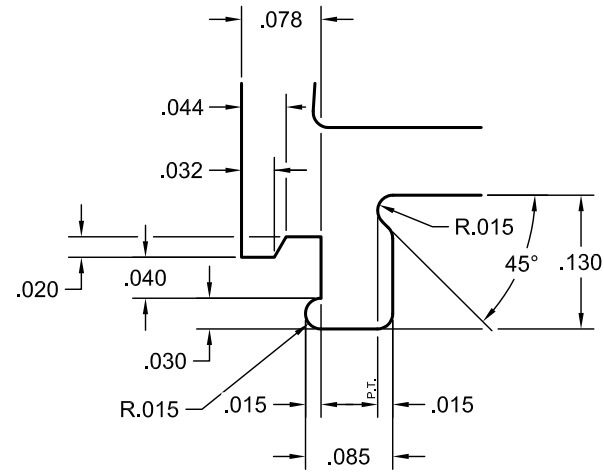
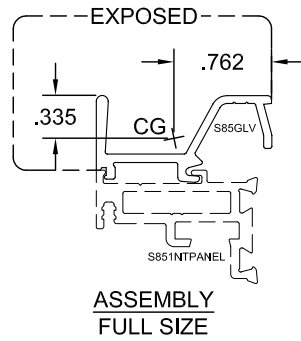
DRWING #:	S85GLHV
DATE:	12/28/2020
SCALE:	2 X SIZE
PART DESCRIPTION:	S85 GLAZING STOP FOR 1"
BRAND:	S85 MONTEREY
NOTES:	ASSEMBLES WITH S851NTPANEL

C. LAURENCE CO. 2503 E. Verdugo Ave., Anaheim, CA 92805-1897 PH (800)-421-4144 FX (909)-597-7301 www.clarence.com
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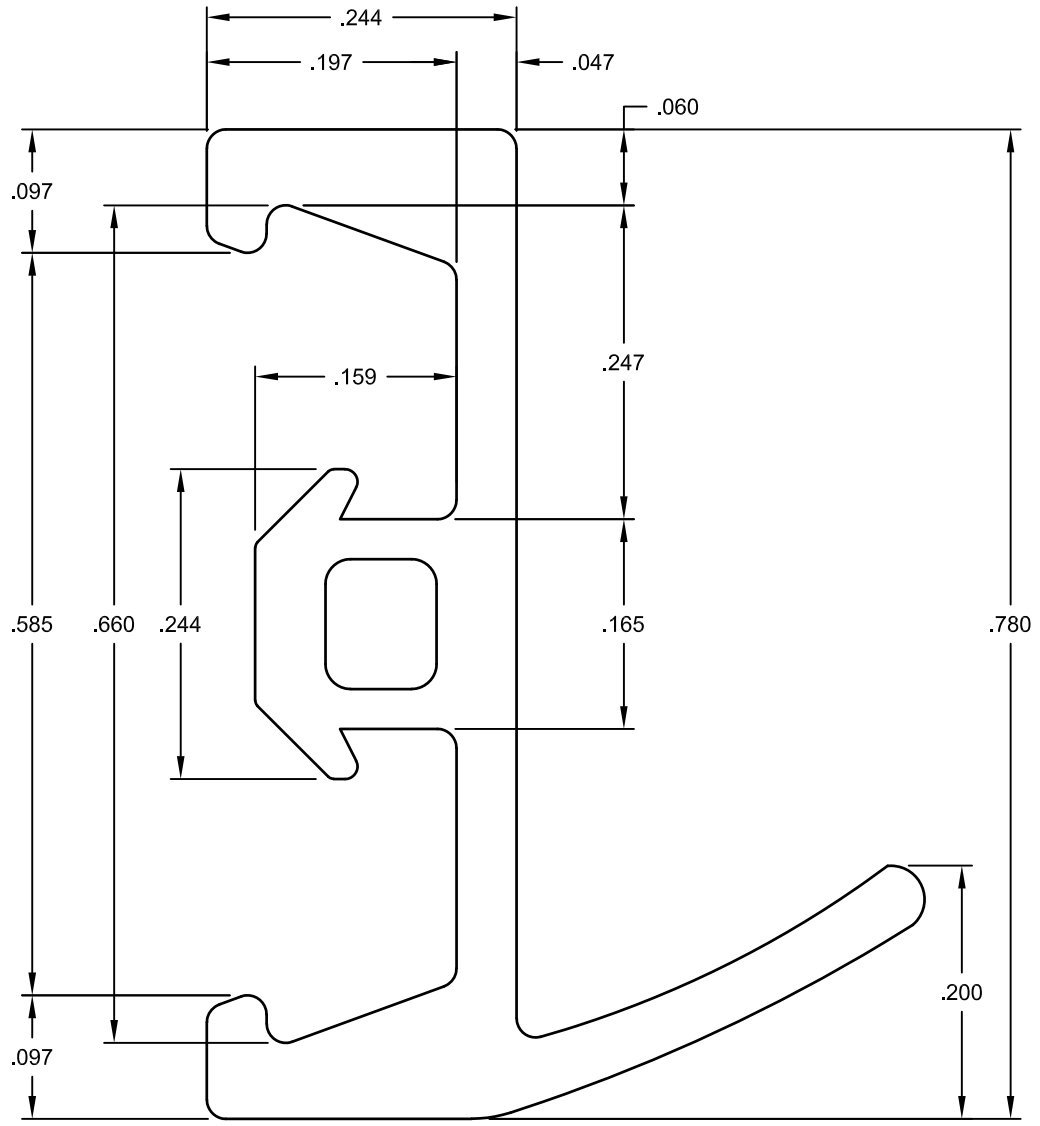
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- R.010
- △ R.012
- ⊕ R.015
- × R.020
- ~ R.025
- ◇ R.031
- ◇ R.040
- R.062
- R.094

<b>CL LAURENCE CO.</b> 2503 E. Verdugo Ave., Suite 100, Burbank, CA 91506-1897 PH (800)-421-4144 FX (800)-597-7301 www.cl-laurence.com <b>A CRN COMPANY</b>		DRAWN BY: [Blank] APPROVED BY: [Blank] DATE: 11/20/2020 SCALE: 2 X SIZE PART NO: S85GLV PART DESCRIPTION: S85 GLASS STOP FOR 1" GLAZING PULL HANDLE BRAND: MONTEREY S85 DIMS #: S85GLV NOTES: ASSEMBLES WITH S85INTPANEL	
REV	DESCRIPTION	DATE	APP'D
UNLESS OTHERWISE SPECIFIED: ANS1 H55-2-2009 TOLERANCES FOR ALUMINUM EXTRUSIONS APPLY UNSPECIFIED CORNER RAD: .015 IN. UNSPECIFIED WALL THICKNESS: C/A IN. IDENTIFIES CRITICAL CHARACTERISTICS FOR CR1 INSPECTION ○ IDENTIFIES EXPOSED AREA			
ALLOY & TEMPER:	6063-T6	SO IN	IN
ESTIMATED AREA:	.188	LB	IN
ESTIMATED WEIGHT / FT:	.237	IN	IN
ESTIMATED PERIMETER:	5.831	IN	IN
EXP/PAINTED PER:	2.860	IN	IN
CLASS:	SOLID	CIRCLE SIZE:	1.603
SECTION PROPERTIES:	IN <sup>2</sup>	IN <sup>2</sup>	IN <sup>2</sup>
I <sub>x</sub>	.023	I <sub>y</sub>	.023
I <sub>xy</sub>	.055	I <sub>z</sub>	.042



FULL SCALE

NO EXPOSED SURFACES

No.	Date	Description	By
-	-	-	-
<b>TREMCO</b> <small>SEALANT / WEATHERPROOFING DIVISION</small>		1451 Jacobson Ave Ashland, Ohio 44805 U.S.A.	Phone : 800-321-6357 Fax : 419-289-6645
Customer:		Customer Part No.	
CR Laurence		S85GRP	
Project:			Rev No.
Bi-Folding Door			
Drawn by:	E Tango	Scale:	10X
		Date:	10/15/2019
Compound:	PEROX. EPDM	Designed F.C.	-
		Drawing No.	
Durometer:	70 ±5	Area:	.1062
			<b>TX-26002P</b>

Print date: 10/20/2020 11:57:19

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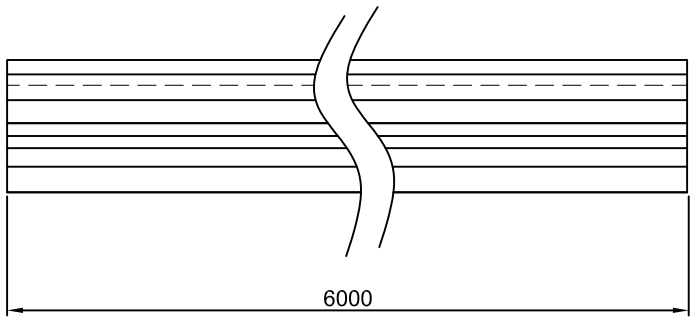
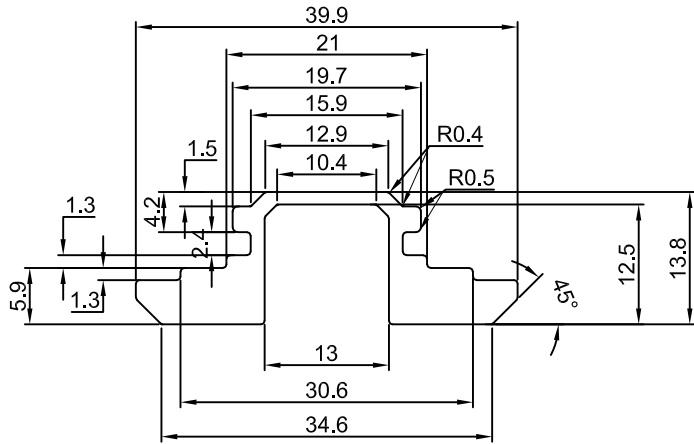
治具、模具、工具名	
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成型方式	PG

**intertek**  
Total Quality. Assured.

Report #: L4172-116-45  
Date: 11/20/2020  
Verified by: *[Signature]*

版次	日期
Lần thay đổi	Ngày tháng

Thermal Break #1



- 注: 1、未注公差以“線性尺寸的极限偏差数值表” 为准  
2、未注圆角R0.2  
3、去除油污。

注意: 表面黑色(抗 UV)

線性尺寸的极限偏差数值表(mm) GB/T1804-2000-M级							生产流程
0.5>3	3>6	6>30	30>120	120>400	>400~1000	1000>2000	PG >ZZ
±0.1	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2	

客戶 Khách hàng	CRL	繪圖 Thiết kế	賴春長 Lại Xuân Trường	日期 Ngày tháng	20.02.06		
品名 Tên sản phẩm	S85GU1DEBOTTOM-236	審核 Thẩm tra		日期 Ngày tháng			
圖號 Mã bản vẽ	AA07200042	核准 Phê duyệt		日期 Ngày tháng			
圖別 Loại bản vẽ	零件图 B. Vẽ linh kiện	材質 Vật liệu	PA66	比例 Tỉ lệ	1:1		
角法 Phép chiếu		重量 Trọng lượng	1300g	單位 Đơn vị	MM	修改者 Thay đổi	修改内容 Nội dung thay đổi

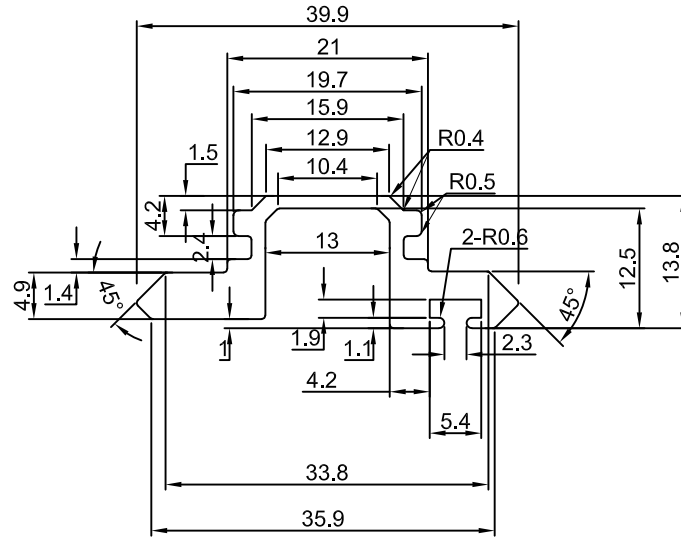
**VTAC** 越南德鑫五金精密铸造有限公司  
VIETNAM TACTICIAN INDUSTRIAL CO.LTD

治具、模具、工具名	
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成型方式	PG

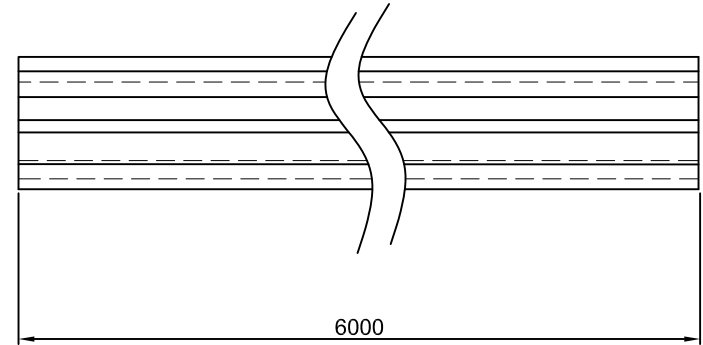


Report #: L4172-116-45  
 Date: 11/20/2020  
 Verified by: *[Signature]*

版次	日期
Lần thay đổi	Ngày tháng



Thermal Break #2



- 注: 1、未注公差以“線性尺寸的极限偏差数值表” 为准  
 2、未注圆角R0.2  
 3、去除油污。

注意：表面黑色(抗 UV)

線性尺寸的极限偏差数值表(mm) GB/T1804-2000-M级

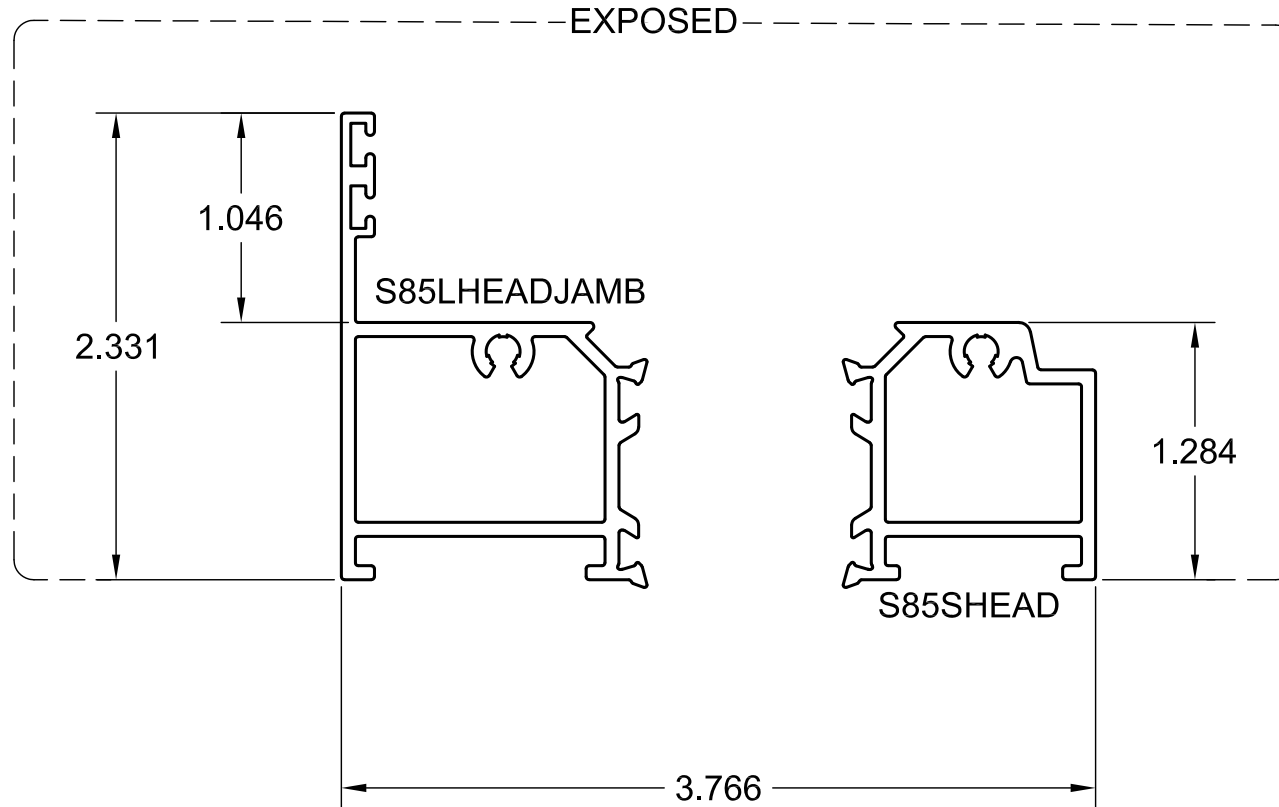
0.5>3	3>6	6>30	30>120	120>400	>400~1000	1000>2000
±0.1	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2

生产流程

PG > ZZ

客戶 Khách hàng	CRL	繪圖 Thiết kế	賴春長 Lại Xuân Trường	日期 Ngày tháng	20.02.06		
品名 Tên sản phẩm	S85GU1DETOP-236	審核 Thẩm tra		日期 Ngày tháng			
圖號 Mã bản vẽ	AA07200041	核准 Phê duyệt		日期 Ngày tháng			
圖別 Loại bản vẽ	零件图 B. Vẽ linh kiện	材質 Vật liệu	PA66	比例 Tỉ lệ	1:1		
角法 Phép chiếu		重量 Trọng lượng	1150g	單位 Đơn vị	MM	修改者 Thay đổi	修改内容 Nội dung thay đổi

**VTAC** 越南德鑫五金精密铸造有限公司  
 VIETNAM TACTICIAN INDUSTRIAL CO.LTD



ALLOY & TEMPER: 6063-T6	
ESTIMATED AREA: 1.211	SQ. IN.
ESTIMATED WEIGHT / FT: 1.267	LB
ESTIMATED PERIMETER: 34.179	IN.
EXP/PAINTED PER: 9.787 IN.	OUT_ PER: 14.998 IN.
CLASS: SOLID	CIRCLE SIZE: IN.
SECTION PROPERTIES:	
xxx	IN. <sup>4</sup> xxx IN. <sup>3</sup>
yyy	IN. <sup>4</sup> yyy IN. <sup>3</sup>

UNLESS OTHERWISE SPECIFIED:  
ANSI H35.2-2009 TOLERANCES FOR ALUMINUM EXTRUSIONS APPLY  
UNSPECIFIED CORNER RAD: .015 IN.  
UNSPECIFIED WALL THICKNESS: N/A IN.

IDENTIFIES CRITICAL CHARACTERISTICS FOR CRL INSPECTION  
----- IDENTIFIES EXPOSED AREA

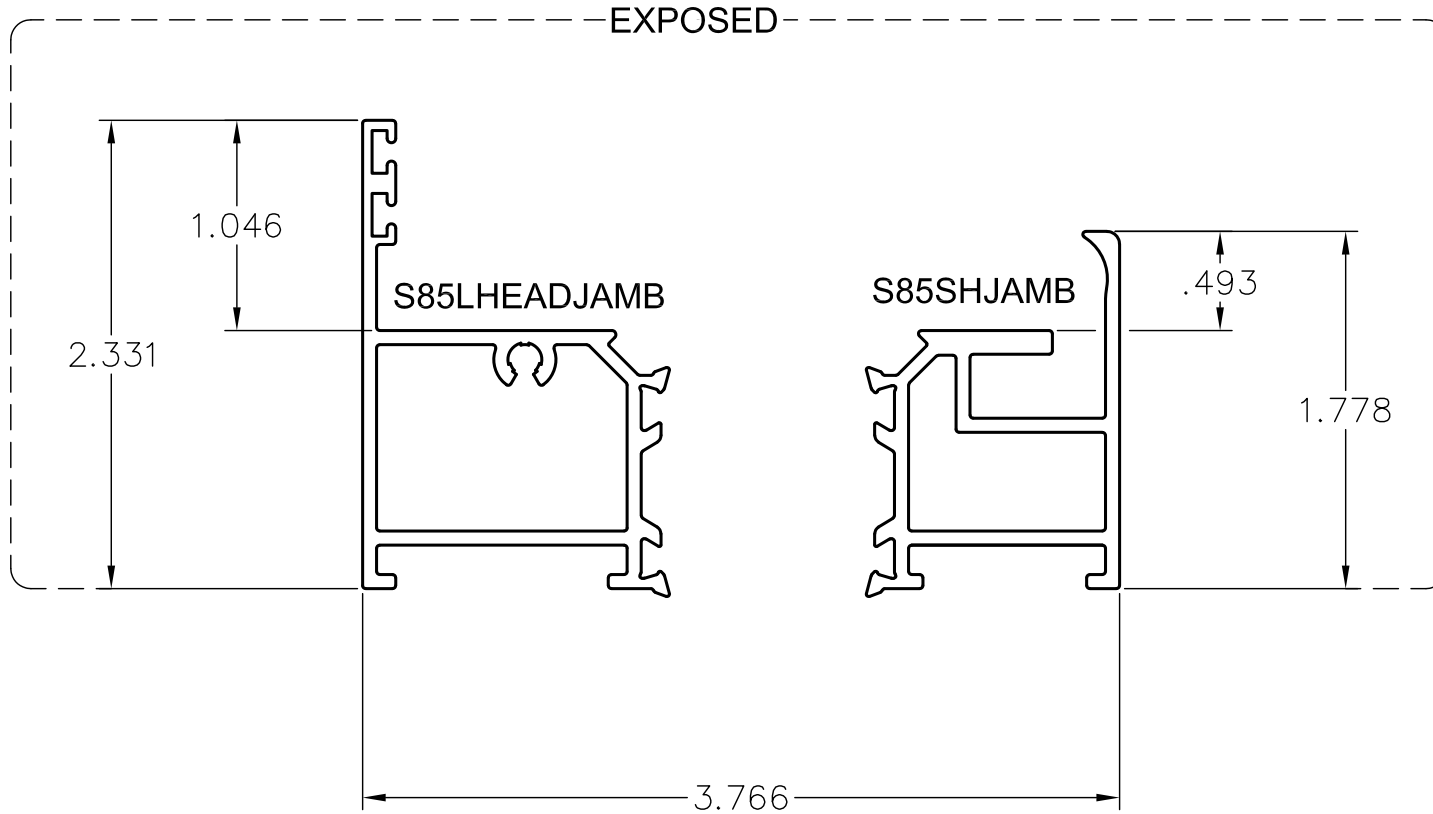
REV	DESCRIPTION	DATE	APP'D

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PH (800)-421-6144 FX: 800-587-7501  
www.crlaurence.com

DRAWN BY: VM	APPROVED BY: MS	SCALE: FULL SIZE	DATE: 6-18-2020	EXTRUSION BASE PART NO: S85HEAD
PART DESCRIPTION: S85 TOP TRACK				DWG #: S85HEAD
BRAND: MONTEREY S85				
NOTES: ASSEMBLES WITH S85LHEADJAMB S85SHEAD ENSINGER 2834 ENSINGER 3889				




ALLOY & TEMPER: 6063-T6	
ESTIMATED AREA: 1.304	SQ. IN.
ESTIMATED WEIGHT / FT: 1.379	LB
ESTIMATED PERIMETER: 36.384	IN.
EXP/PAINTED PER: 12.627 IN.	OUT_PER: 17.838 IN.
CLASS: SOLID	CIRCLE SIZE: IN.
SECTION PROPERTIES:	
IN <sub>x</sub>	IN <sub>y</sub>
IN <sub>x</sub>	IN <sub>y</sub>

UNLESS OTHERWISE SPECIFIED:  
ANSI H35.2-2009 TOLERANCES FOR ALUMINUM EXTRUSIONS APPLY  
UNSPECIFIED CORNER RAD: .015 IN.  
UNSPECIFIED WALL THICKNESS: N/A

○ IDENTIFIES CRITICAL CHARACTERISTICS FOR CRL INSPECTION  
- - - - - IDENTIFIES EXPOSED AREA

REV	DESCRIPTION	DATE	APP'D

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www.crlaurence.com

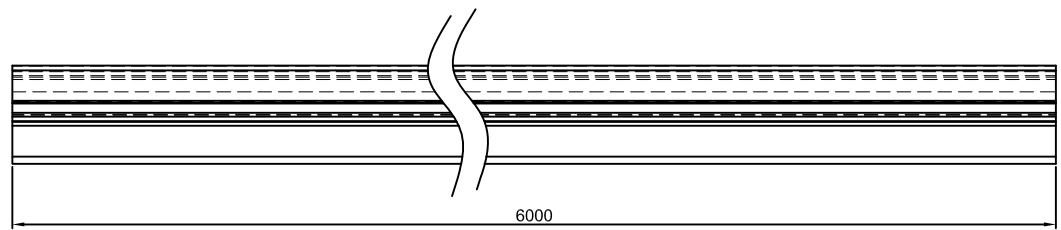
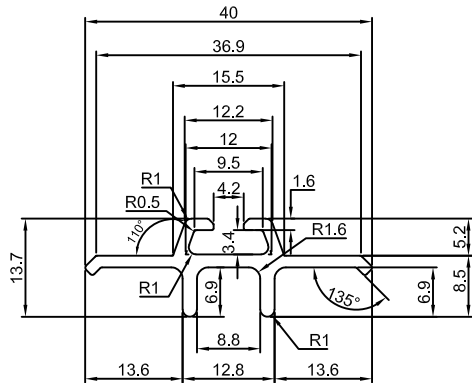
DRAWN BY: VM	APPROVED BY: MS	SCALE: FULL SIZE	DATE: 6-18-2020	EXTRUSION BASE PART NO: S85HJAMB
PART DESCRIPTION: LATERAL FRAME HINGED JAMB				
BRAND: MONTEREY S85				DWG #: S85HJAMB
NOTES: ASSEMBLES WITH S85LHEADJAMB S85SHJAMB ENSINGER 2834 ENSINGER 3889				

治具、模具、工具名	
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成型方式	PG

**intertek**  
Total Quality. Assured.

Report #: L4172-116-45  
Date: 11/20/2020  
Verified by: *[Signature]*

版次 Lần thay đổi	日期 Ngày tháng



**Thermal Break #3**

- 注: 1、未注公差以“線性尺寸的极限偏差数值表” 为准  
2、未注圆角R0.2  
3、去除油污。

注意: 表面黑色(抗 UV)

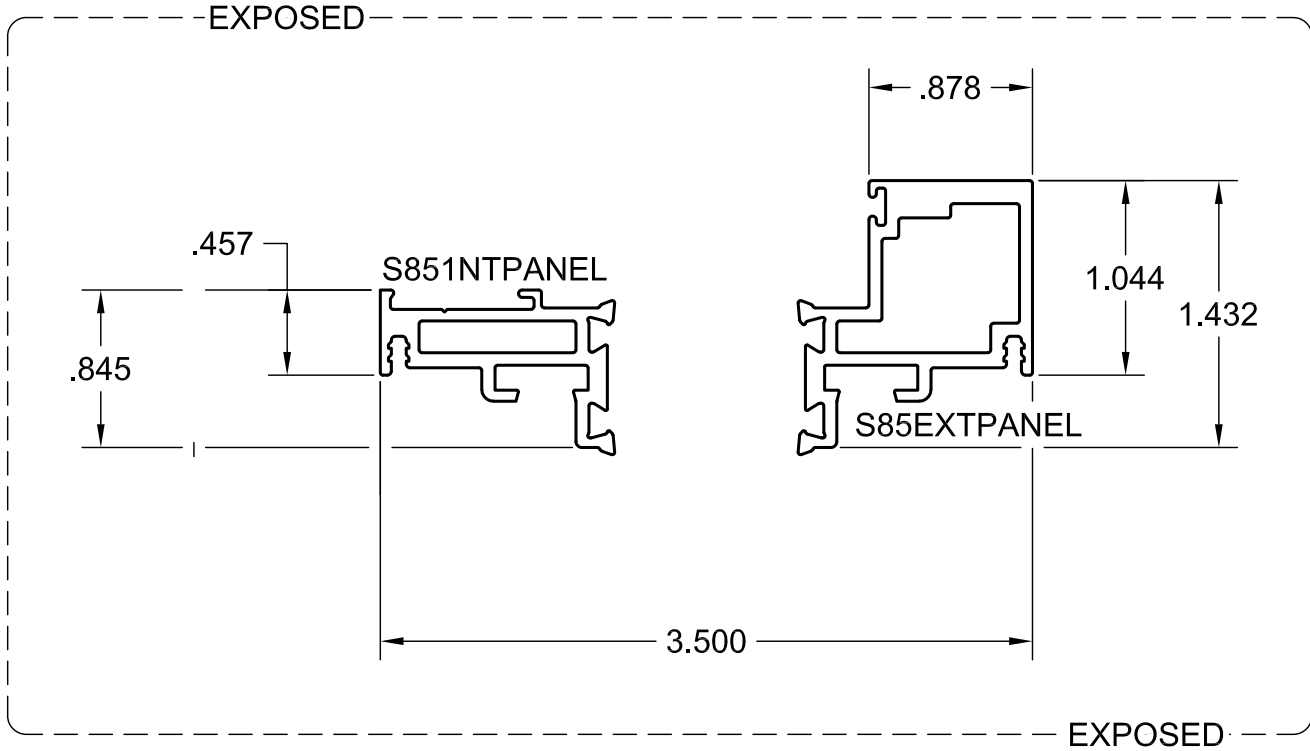
線性尺寸的极限偏差数值表(mm) GB/T1804-2000-M级						
0.5>3	3>6	6>30	30>120	120>400	>400~1000	1000>2000
±0.1	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2

生产流程

PG > ZZ

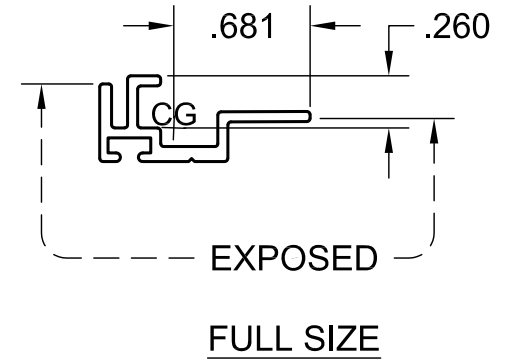
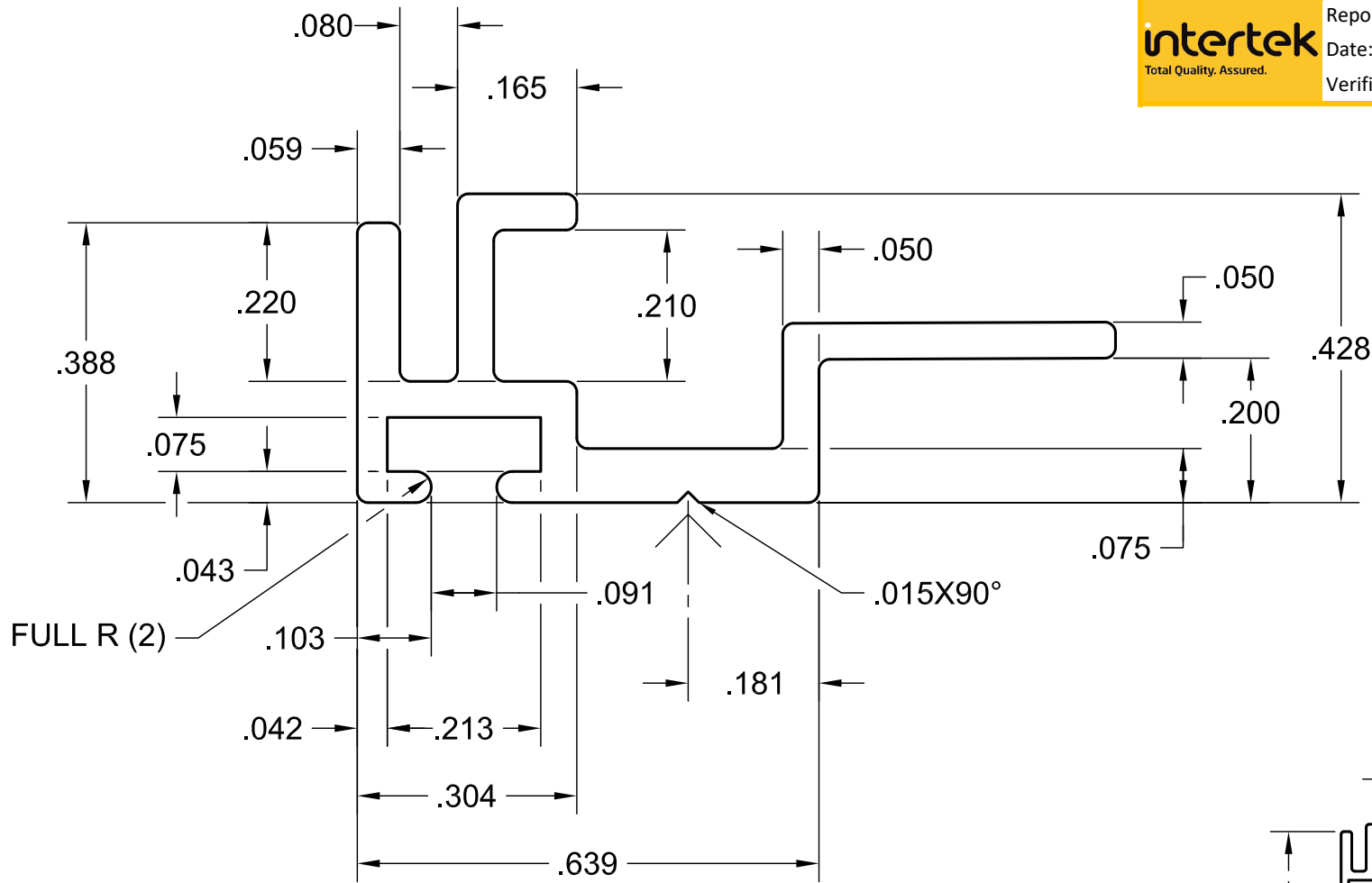
客戶 Khách hàng	CRL	繪圖 Thiết kế	賴春長 Lại Xuân Trường	日期 Ngày tháng	19.11.22		
品名 Tên sản phẩm	S85JAMBSNAP-1	審核 Thẩm tra		日期 Ngày tháng			
圖號 Mã bản vẽ	AA07200040	核准 Phê duyệt		日期 Ngày tháng			
圖別 Loại bản vẽ	零件图 B. Vẽ linh kiện	材質 Vật liệu	PA66	比例 Tỉ lệ	1:1		
角法 Phép chiếu		重量 Trọng lượng	684g	單位 Đơn vị	MM	修改者 Thay đổi	修改内容 Nội dung thay đổi

**VTAC** 越南德鑫五金精密铸造有限公司  
VIETNAM TACTICIAN INDUSTRIAL CO.LTD





- R.010
- △ R.012
- ⊖ R.015
- × R.020
- ~ R.025
- \* R.031
- ◇ R.040
- R.062
- R.094



ALLOY & TEMPER: 6063-T6		
ESTIMATED AREA: .117	SQ. IN.	
ESTIMATED WEIGHT / FT: .140	LB	
ESTIMATED PERIMETER: 4.313	IN.	
EXP/PAINTED PER: 2.067 IN.	OUT_PER: 4.318 IN.	
CLASS: SOLID	CIRCLE SIZE: 1.208 IN.	
SECTION PROPERTIES:		
box .002	IN. 4 box .006	IN. 3
typ .010	IN. 4 typ .014	IN. 3


UNLESS OTHERWISE SPECIFIED:  
ANSI H35.2-2009 TOLERANCES FOR ALUMINUM EXTRUSIONS APPLY

UNSPECIFIED CORNER RAD: .015 IN.  
UNSPECIFIED WALL THICKNESS: .050 IN.

○ IDENTIFIES CRITICAL CHARACTERISTICS FOR CRL INSPECTION  
----- IDENTIFIES EXPOSED AREA

REV	DESCRIPTION	DATE	APP'D

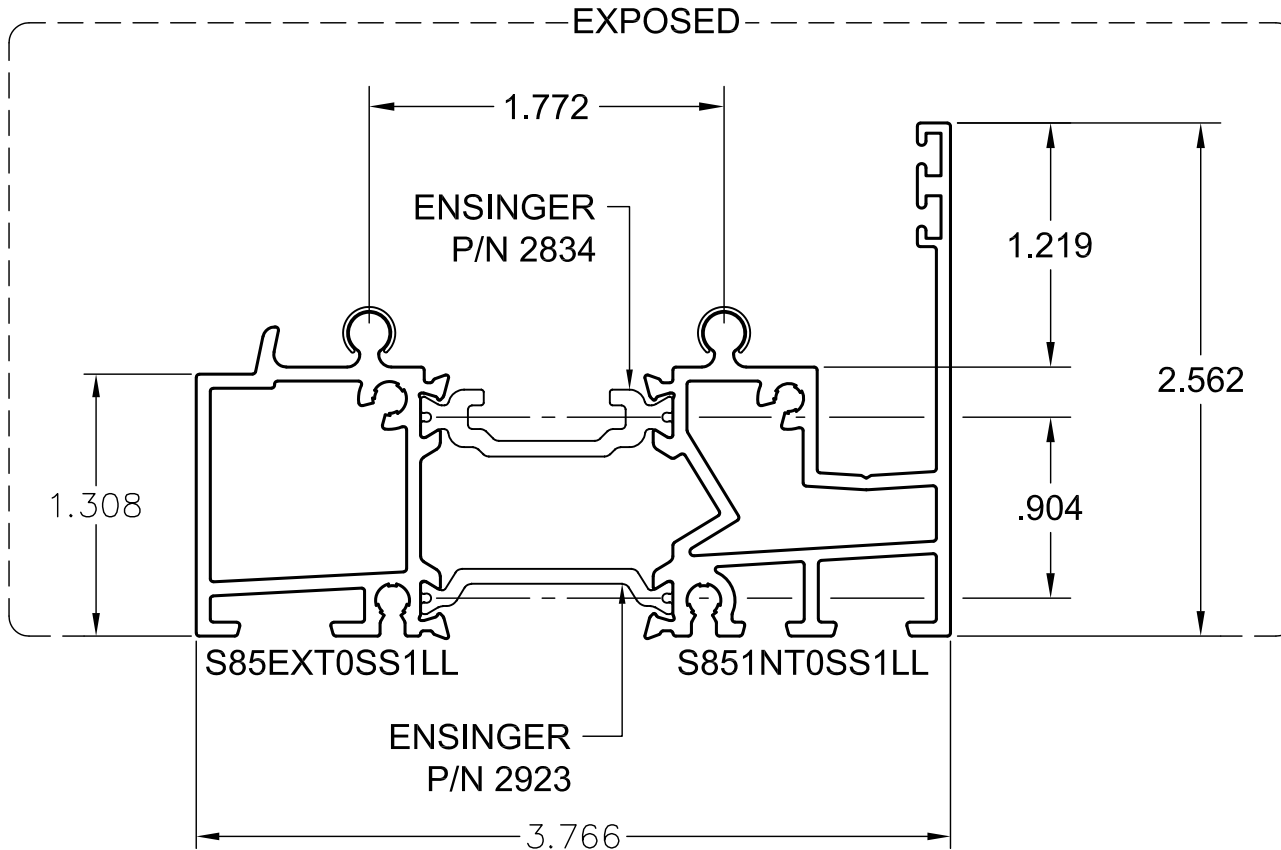
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A CRH COMPANY

**C.R.LAURENCE CO.**  
2503 E. Vernon Avenue, Los Angeles, C.A 90058-1897  
PH (800)-421-6144 FX: 800-587-7501  
www.crlaurence.com

DRAWN BY: VM	APPROVED BY: MS	SCALE: 4 X SIZE	DATE: 3-4-2020	EXTRUSION BASE PART NO: S85SHGR
PART DESCRIPTION: SASH HORIZONTAL GASKET RETAINER				DWG #: S85HRGR
BRAND: MONTEREY S85				NOTES:




ALLOY & TEMPER: 6063-T6	
ESTIMATED AREA: 1.475	SQ. IN.
ESTIMATED WEIGHT / FT: 1.592	LB
ESTIMATED PERIMETER: 39.447	IN.
EXP/PAINTED PER: 12.570 <sup>IN.</sup>	OUT_PER:20.808 <sup>IN.</sup>
CLASS: SOLID	CIRCLE SIZE: IN.
SECTION PROPERTIES:	
xxx	IN. <sup>4</sup> xxx IN. <sup>3</sup>
yyy	IN. <sup>4</sup> yyy IN. <sup>3</sup>

UNLESS OTHERWISE SPECIFIED:  
ANSI H35.2-2009 TOLERANCES FOR ALUMINUM EXTRUSIONS APPLY  
UNSPECIFIED CORNER RAD: .015 IN.  
UNSPECIFIED WALL THICKNESS: N/A

○ IDENTIFIES CRITICAL CHARACTERISTICS FOR CRL INSPECTION  
----- IDENTIFIES EXPOSED AREA

REV	DESCRIPTION	DATE	APP'D

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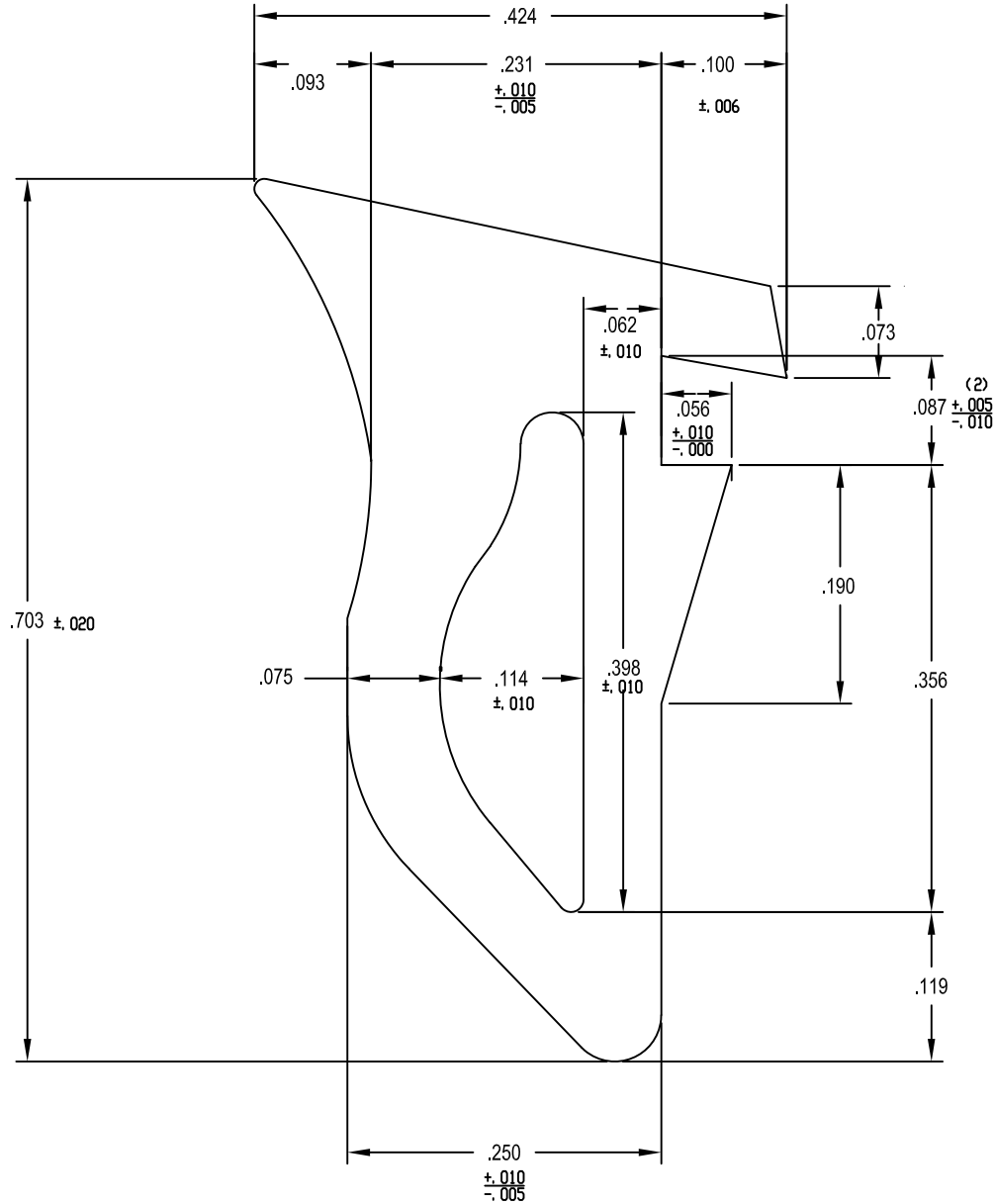
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PH (800)-421-6144 FX: 800-587-7501  
www.crlaurence.com

DRAWN BY: VM	APPROVED BY: MS	SCALE: FULL SIZE	DATE: 6-16-2020	EXTRUSION BASE PART NO: S850SS1LL
PART DESCRIPTION: SURFACE MOUNT OUTSWING SILL BOTTOM TRACK				
BRAND: MONTEREY S85				DWG #: S850SS1LL
NOTES: ASSEMBLES WITH S85EXT0S1LL S851NT0S1LL ENSINGER 2834 ENSINGER 2923				



FULL SCALE

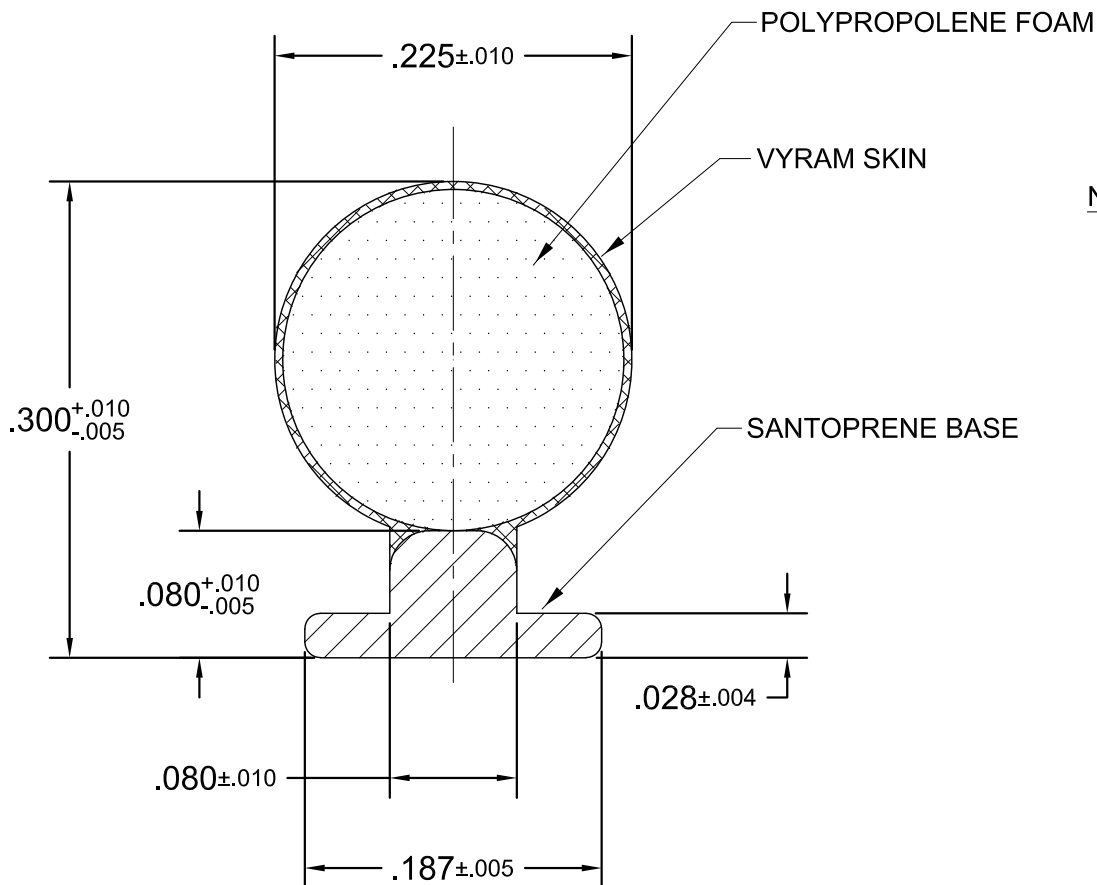


NO.	DATE	DESCRIPTION	BY
		<b>TREMCO.</b>	1451 JACOBSON AVE. ASHLAND, OH 44805 U. S. A.
TREMCO STD.			
DRAWN BY	LR	SCALE	10X
DATE	5-15-95	DESIGNED F.C.	.250
COMPILING	SILICONE	AREA	.128
DURABILITY	70±5	DRAWING NO.	PS-1127S

THE DESIGN OF THE GASKET SHOWN HEREIN IS THE PRODUCT OF TREMCO, INC. NO REPRODUCTION OR USE OF THIS DESIGN IS AUTHORIZED WITHOUT THE CONSENT OF TREMCO.



ACTUAL SIZE



**NOTE:**

1. FACE CLEARANCE = .125
2. MATERIALS: POLYPROPYLENE  
SANTOPRENE™  
VYRAM™
3. AMESBURY 32007 or EQUAL

MATERIAL & COLOR: AS NOTED	
ESTIMATED AREA:	SQ. IN.
ESTIMATED OUTSIDE PERIMETER:	IN.
ESTIMATED INSIDE PERIMETER:	IN.
FINISH: N/A	

UNLESS OTHERWISE SPECIFIED:  
RMA MO-1 (2005) TOLERANCES FOR  
RUBBER EXTRUSIONS APPLY

○ IDENTIFIES CRITICAL CHARACTERISTICS  
FOR CRL INSPECTION

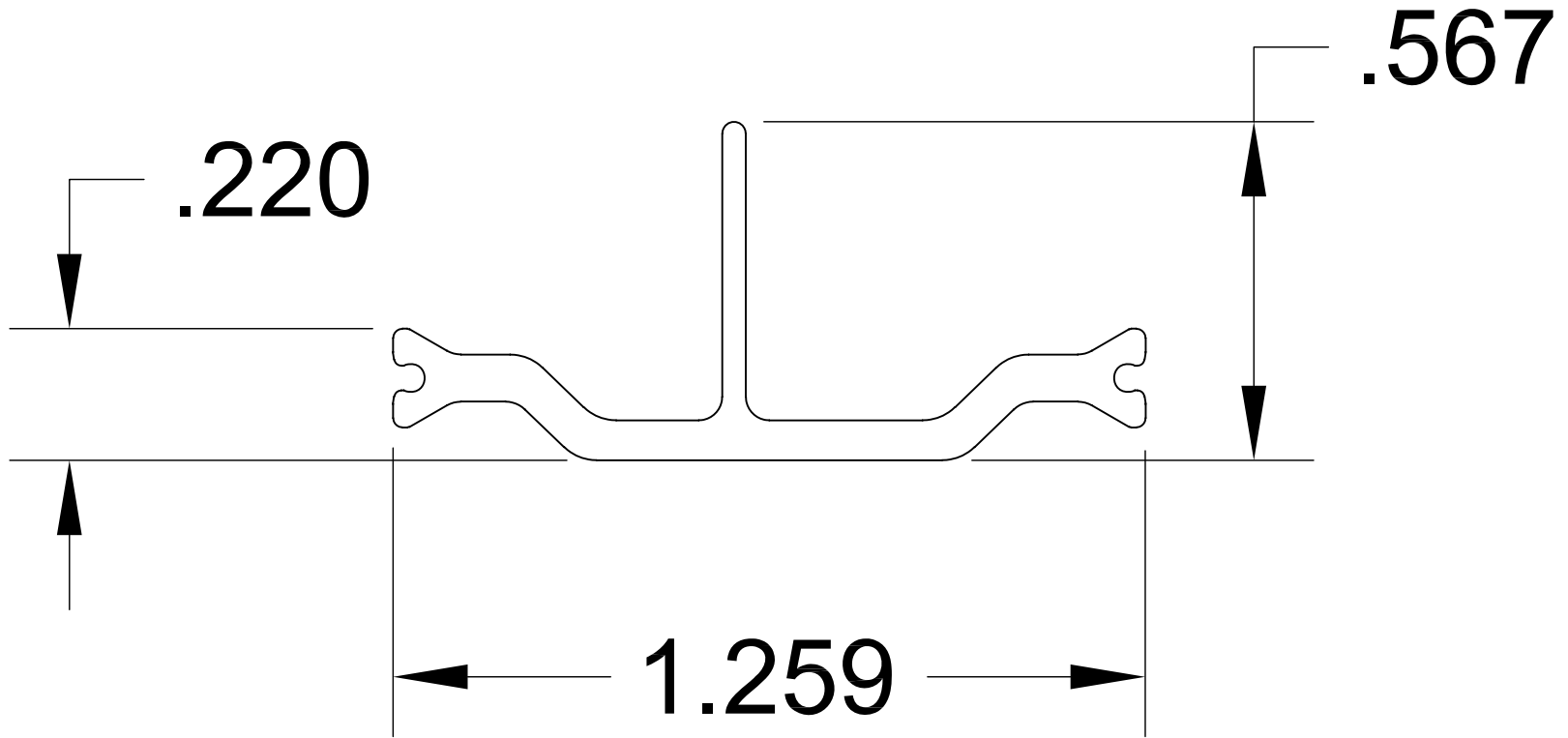
----- IDENTIFIES EXPOSED AREA

REV	DESCRIPTION	DATE	APP'D

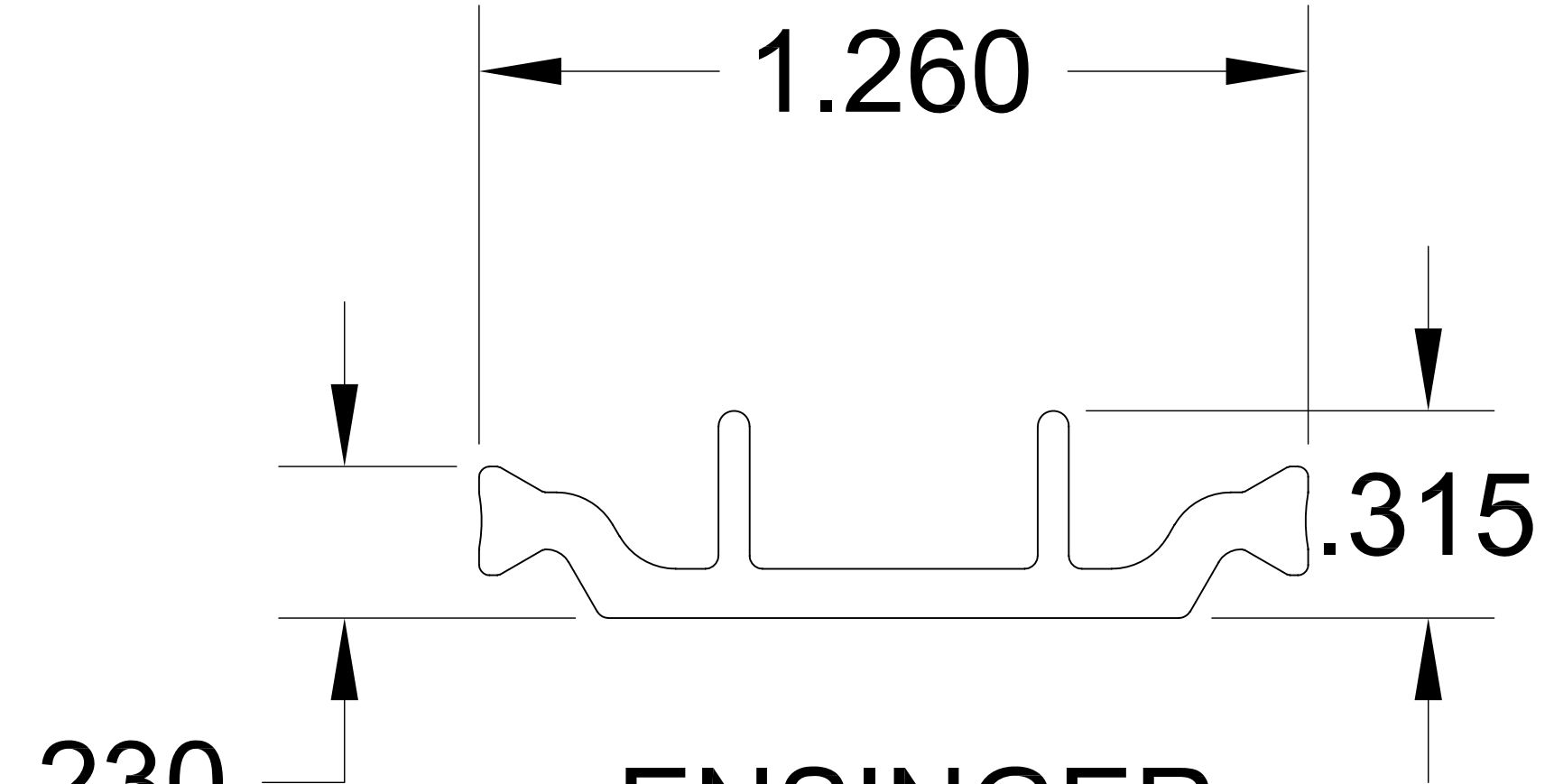
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www.crlaurence.com

DRAWN BY: RJ	APPROVED BY:	SCALE: 8:1	DATE: 5/29/18	PART NO: WH34200300
PART DESCRIPTION: BULB GASKET FOR 7200-7400 WINDOWS				DWG #: WH34200300
BRAND: US ALUMINUM				NOTES: BASE PART WH342

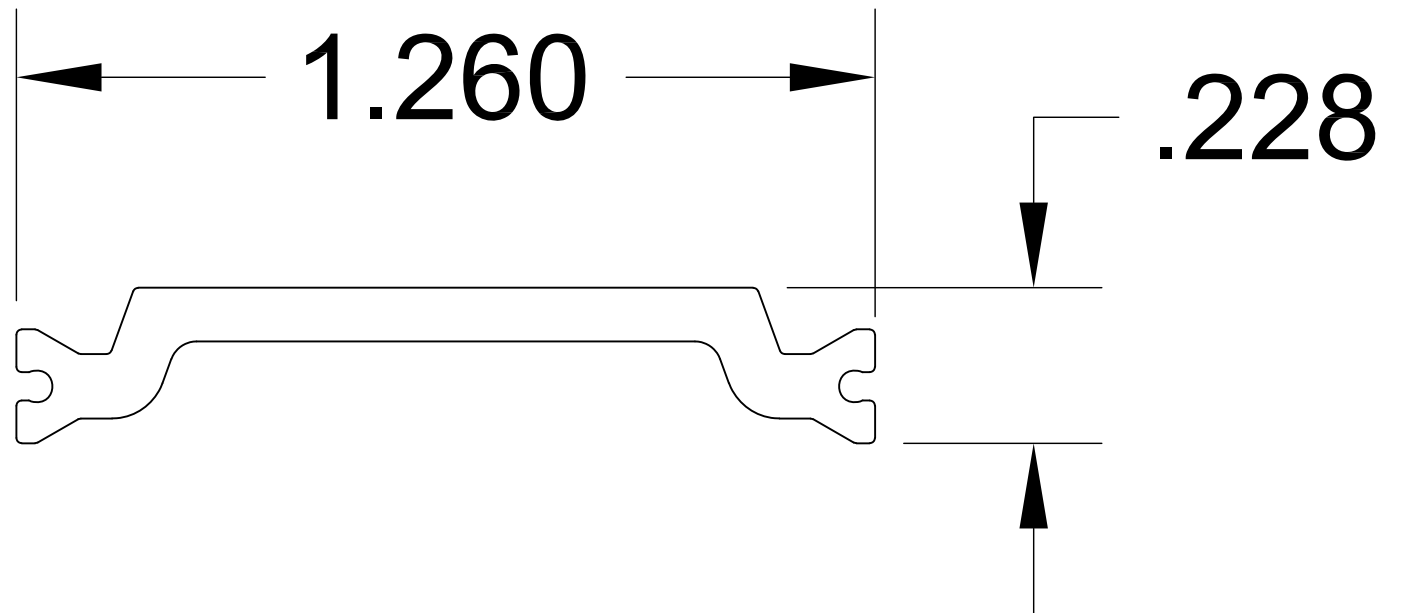


**ENSINGER**  
**P/N 3889**



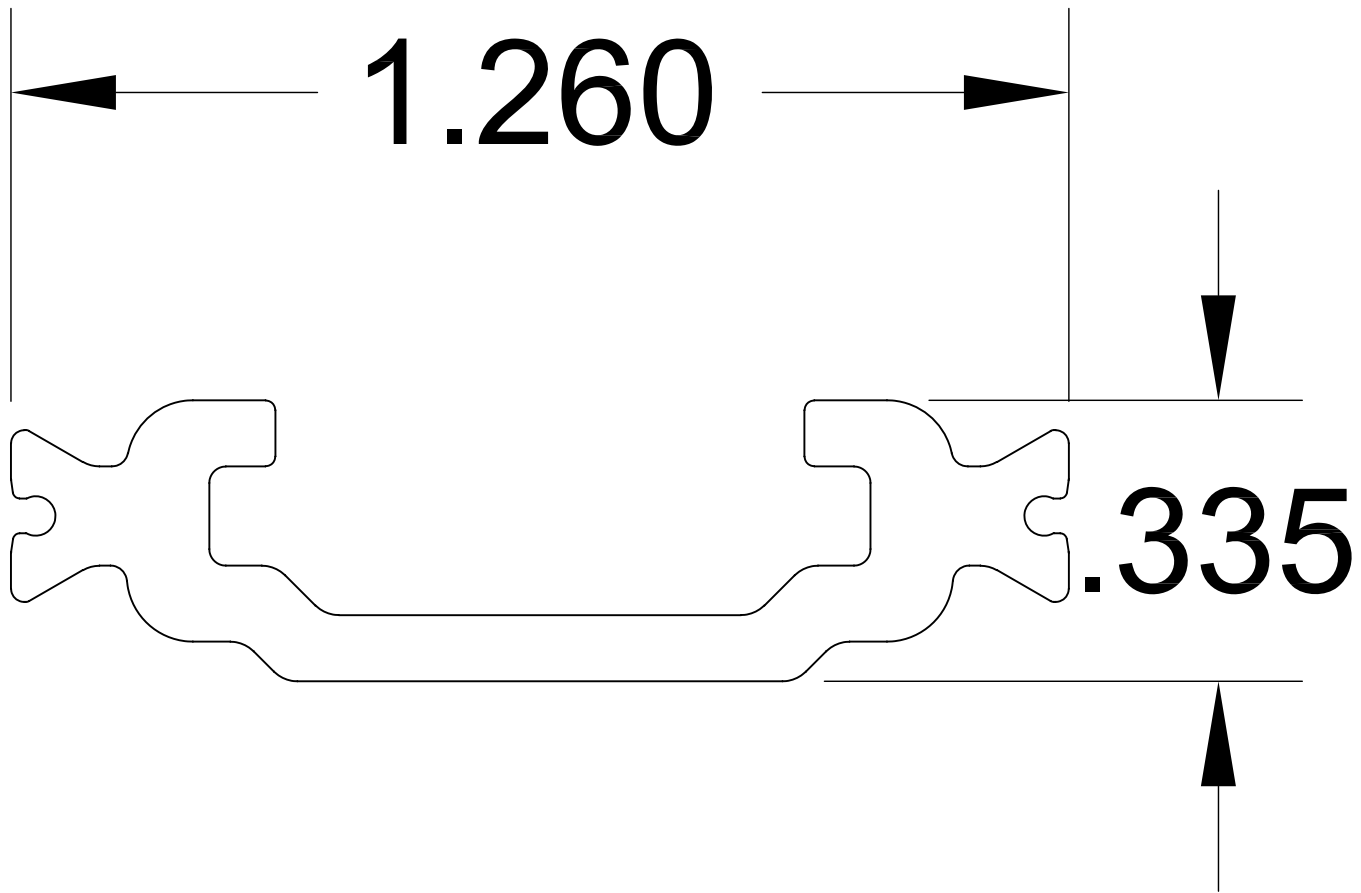
**ENSINGER**  
**P/N 3057**

# ENSINGER P/N 2923

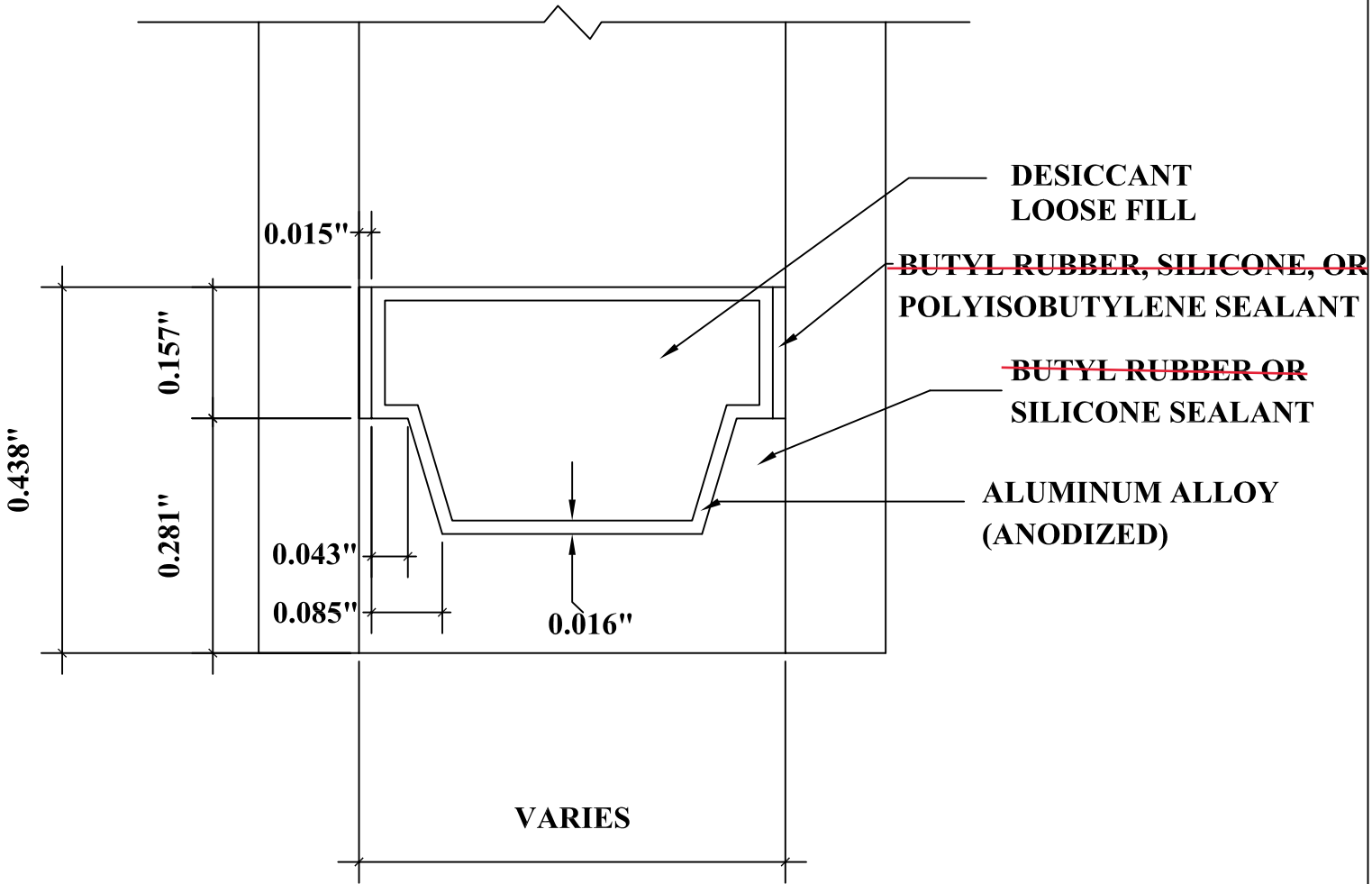


# ENSINGER

## P/N 2834







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Facsimile: 717-764-4129  
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**TEST REPORT FOR CR LAURENCE CO., INC.**

Report No.: L4172.02-116-45 R2

Date: 01/20/21

**SECTION 8**

**REVISION LOG**

REVISION #	DATE	PAGES	REVISION
.01R0	11/20/20	N/A	Original Report Issued to CR Laurence Co.,
.01R1	12/17/20	N/A	Update Series/model; update print package
.01R2	01/20/21	N/A	Update drawing package per CRL