MGM Industries

SIMULATION PERFORMANCE &
SOLAR HEAT GAIN REPORT

Series "8005"
Sliding Glass Door

NCTL-110-10909-01

NATIONAL CERTIFIED TESTING LABORATORIES

FIVE LEIGH DRIVE • YORK, PENNSYLVANIA 17406 • TELEPHONE (717) 846-1200
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Simulation Performance, Solar Heat Gain Coefficient, Visible Transmittance and Condensation Resistance Calculation Report

REPORT NO: *NCTL-110-10909-01*
SIMULATION DATE: *09/20/07*
REPORT DATE: *09/20/07*

Client: *MGM Industries*
287 Freehill Road
Hendersonville, TN 37075

Product Line: *MGM Industries' Series "8005" Sliding Glass Door*

Specification: *NFRC 100-2004: "Procedure for Determining Fenestration Product U-Factors".*
NFRC 200-2004: "Procedure for Determining Fenestration Product Solar Heat Gain Coefficients and Visible Transmittance at Normal Incidence".
NFRC 500-2004: "Procedure for Determining Fenestration Product Condensation Resistance Values".
Therm 5.x / Window 5.x NFRC Simulation Manual (Approved at test date)

Procedures and Compliance: *All U-factor, Solar Heat Gain Coefficients, Visible Transmittance and Condensation Resistance values were calculated using the following characteristics: a default value of 0.30 solar absorptance for all products other than window glazed wall and sloped glazing which have a solar absorptance of 0.50. The best glazing option was used as the configuration for SHGC and VT specialty products table. NCTL is a NFRC accredited simulation laboratory and this simulation was conducted in full compliance with NFRC requirements. This report does not constitute an opinion or endorsement by the laboratory. Ratings values included in this report are for submittal 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. Rounding per IEEE/ASTM SI 10-1997 except section 5.4.1.3.*

PRODUCT LINE DESCRIPTION

General: *The product line modeled is MGM Industries' Series "8005" Sliding Glass Door.*

Model Size Simulations: *2000mm x 2000mm (78.740" x 78.740")*

Note: All product drawings are included in Attachment A.

Weatherseals:

Location	Weather Seal Description
Left Head	(2) single strips of weather-strip
Left Jamb	(2) single strips of weather-strip
Left Sill	(2) single strips of weather-strip
Meeting Stile	(2) single strips of weather-strip
Right Head	(2) single strips of weather-strip
Right Jamb	(2) single strips of weather-strip
Right Sill	(2) single strips of weather-strip

Reinforcement: *A U-Shaped piece of extruded aluminum was modeled in both the active and fixed meeting stiles.*

Finish: *Vinyl with painted aluminum sill*

Dividers: *Where applicable, dividers were not modeled because the gap between dividers and lites were greater than 3mm. For Solar Heat Gain and Visual Light Transmittance default dividers less than 1" and greater or equal to 1" and default patterns were used for simulations.*

Modeling Assumptions and Comments Deemed Important:

Sealing Rules:

All cavities that are opened to the exterior within a frame section shall be modeled according to ISO 15099, Section 6.7.1, which states that cavities greater than 2mm but equal to or less than 10 mm shall be modeled as "slightly ventilated air cavities". For physical testing purposes the product is sealed at the inside surface with tape or equivalent to prevent air infiltration. Air cavities created by this sealing technique must be simulated with the standard NFRC "Frame Cavity" material. If cavities on the frame are sealed (covered) to the surround panel with tape or equivalent, those cavities are also filled with NFRC "Frame Cavity" material within the simulation model. If the frame is not covered or sealed, those areas are left hollow or opened within the simulation model.

Continuous elements:

All elements continuous within the product line are identified from the Bill-of-Materials and detailed drawings via the referenced dimensions and cut lengths as compared to the overall size of the product.

General Notes:

The Condensation Resistance results obtained from this procedure are for controlled laboratory conditions and do not include the effects of air movement through the specimen, solar radiation, and the thermal bridging that may occur due to the specific design and construction of the fenestration system opening.

Miscellaneous assumptions:

1. *The screen extrusions were not modeled.*
2. *All radii are simulated at angles.*
3. *Any spacer simulated using a spacer system from the Frame Spacer Library match the required configurations for this manufacturer's spacer system.*
4. *The modeling was performed in accordance with the manufacturer's assembly drawing from a DXF file.*

Component Area and Frame Heights:

Frame heights, calculated areas, area weighted values for U-factor, SHGC, and VT, and center –of-glazing are located in approved NFRC simulation programs for all individual products.

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 5.2. The method gives overall product SHGC and VT indexed on center of glass properties.*

SHGC	No Dividers	Dividers <1"	Dividers ≥1"
0.00	0.004	0.007	0.010
1.00	0.793	0.698	0.609

VT	No Dividers	Dividers <1"	Dividers ≥1"
0.00	0.000	0.000	0.000
1.00	0.789	0.691	0.599

$$SHGC = SHGC_0 + SHGC_{COG} (SHGC_1 – SHGC_0)$$

$$VT = VT_0 + VT_{COG} (VT_1 – VT_0)$$

NCTL Therm Section Filename Methodology

Filename Codes Example: CU_HD2_003.THM	
CU	Spacer (Intercept)
HD	Frame Section (Head)
2	Glass Size (2.5mm)
003	Glazing ID #3

Individual Product Descriptions and Model Size Matrix of U-Factors, SHGC, VT & CR

All U-factors are given in BTU/HR/ft²/°F

Product Description	Product Number	Pane ID (Exterior)	Pane ID (Interior)	Pane Thickness (Exterior)	Pane Thickness (Interior)	Gap	Gap Fill	% of Gap Fill	Emissivity Surface 2	Emissivity Surface 3	U-factor C-O-G	SHGC C-O-G	VT C-O-G	Spacer	Grid Type	Tint	U-factor	Condensation Resistance	Solar Heat Gain Coefficient (ND)	Visual Transmittance (ND)	Solar Heat Gain Coefficient (<1")	Visual Transmittance (<1")
CLR_SS_AIR	**001**	885	885	0.098	0.098	0.553	AIR				0.50	0.80	0.83	CU-D	N,G	CL	**0.49**	**40**	**0.64**	**0.66**	**0.56**	**0.57**
TiAC36#2_SS_AIR	**002**	964	885	0.098	0.098	0.553	AIR		0.034		0.30	0.37	0.69	CU-D	N,G	LE	**0.36**	**49**	**0.29**	**0.54**	**0.26**	**0.48**
TiAC36#2_DS_AIR	**003**	965	887	0.118	0.118	0.514	AIR		0.034		0.29	0.37	0.68	CU-D	N,G	LE	**0.35**	**49**	**0.29**	**0.54**	**0.26**	**0.47**

A baseline product test in accordance with the "NFRC 102: Test Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems" is required in order to validate the "Model Size Matrix of U-Values" as previously indicated. Per Section 1.4.3 of NFRC 100-2004, "the baseline product is the individual product selected for validation testing". ***The individual product selected as the baseline product shall be the lowest simulated individual product or an individual product having a simulated U-factor within 0.60 W/(m²*K) (0.10 BTU/HR/ft²/ºF) or 20% of the listed lowest simulated U-factor.***

Note:

1. *For lowest U-factor listings where multiple individual products are shown, validation testing can be conducted on any of the configurations listed.*
2. *Actual simulated individual products are required for product line validation testing.*
3. *All individual products in the product line were simulated using the approved NFRC THERM program.*

For the purposes of validation testing, production line units and sizes shall be used to represent the baseline product. Per the client, the model size is manufactured as part of their product line; therefore the previously listed model size can be used for baseline product validation testing.

Copies of this report and the detailed product drawings will be retained by NCTL for a period of four (4) years. This report may not be reproduced, except in full, without the approval of NCTL. The results only to the fenestration product simulated. The attached diskette(s) contain(s) all required NFRC data and software files.

NATIONAL CERTIFIED TESTING LABORATORIES

JUSTIN M. ROBINSON
NFRC Accredited Simulator
Simulator–In–Responsible–Charge

STEVEN H. COBLE
NFRC Accredited Simulator
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Attachments

Report Log

Product Line: *MGM Industries' Series "8005" Sliding Glass Door*

Date:
09/20/07 *- Original Report issued to MGM Industries and Inspection Agency*

NFRC CODES

Door

Code	Description
EM	Embossed
FL	Flush
LF	Full Lite
LH	1/2 - Lite
LQ	1/4 - Lite
LT	3/4 - Lite
N	Not Applicable
RP	Raised Panel

Grid

Code	Description
G	Grids between the glass
N	No Muntins
S	Simulated Divided Lites
T	True Muntins

Sealant

Code	Description
D	Dual Seal Spacer System
N	Not Applicable
S	Single Seal Spacer System

Gap Fill

Code	Description
AIR	Air
AR3	Argon/Krypton/Air Mixture
ARG	Argon
KRY	Krypton
N	Not Applicable

Glass Tint

Code	Description
AZ	Azurlite
BG	Blinds between the Glazing
BL	Blue
BZ	Bronze
CL	Clear
DV	Dynamic Glazing (Variable)
DY	Dynamic Glazing (Non-Variable)
EV	Evergreen
GC	Gold (reflective coating)
GD	Gold
GR	Green
GY	Gray
LE	Low 'e' Coating
OT	Other (use comment field)
RC	Solar or Reflective Coating
RG	Roller shades between Glazing
RS	Silver (reflective coating)
SF	Suspended Polyester Film
SR	Silver

Spacer

Code	Type	Definition
A1-D	Aluminum	Aluminum spacer system - dual sealed.
A1-S	Aluminum	Aluminum spacer system - single sealed.
A2-D	Aluminum (thermally-broken)	Thermally improved aluminum spacer system - dual sealed.
A2-S	Aluminum (thermally-broken)	Thermally improved aluminum spacer system - single sealed.
A3-D	Aluminum-reinforced polymer	Polymer spacer material with aluminum substance - dual sealed.
A3-S	Aluminum-reinforced polymer	Polymer spacer material with aluminum substance - single sealed.
A4-D	Aluminum/Wood	Composite spacer system of two materials - dual sealed.
A4-S	Aluminum/Wood	Composite spacer system of two materials - single sealed.
A5-D	Aluminum-reinforced butyl	Butyl spacer material with aluminum substrate - dual sealed.
A5-S	Aluminum-reinforced butyl	Butyl spacer material with aluminum substrate - single sealed.
A6-D	Aluminum/Foam/Aluminum	Two aluminum spacers separated by foam-type material - dual sealed
A6-S	Aluminum/Foam/Aluminum	Two aluminum spacers separated by foam-type material - single sealed
A7-D	Aluminum U-shaped	U-shaped spacer system embedded in sealant - dual sealed.
A7-S	Aluminum U-shaped	U-shaped spacer system embedded in sealant - single sealed.

Spacer		
Code	**Type**	**Definition**
A8-D	Aluminum-Butyl Composite	Exposed corrugated aluminum spacer with butyl - dual sealed.
A8-S	Aluminum-Butyl Composite	Exposed corrugated aluminum spacer with butyl - single sealed.
CS-D	Coated Steel	Coated Steel (galvanized or tinplated) - Dual seal
CS-S	Coated Steel	Coated Steel (galvanized or tinplated) - Single seal
CU-D	Coated Steel U-Shaped	Coated Steel (galvanized or tinplated) U-shaped spacer system embedded in sealant - Dual sealed
CU-S	Coated Steel U-Shaped	Coated Steel (galvanized or tinplated) U-shaped spacer system embedded in sealant - Single sealed
ER-D	EPDM Reinforced Butyl	EPDM reinforced butyl spacer system - dual sealed.
ER-S	EPDM Reinforced Butyl	EPDM reinforced butyl spacer system - single sealed.
FG-D	Fiberglass	Fiberglass - dual sealed.
FG-S	Fiberglass	Fiberglass - single sealed.
GL-S	Glass	Welded glass edge condition at glazing perimeter.
N	Not Applicable	
OF-D	Organic Foam	Organic-based foam spacer system - dual sealed.
OF-S	Organic Foam	Organic-based foam spacer system - single sealed.
P1-D	Polycarbonate- Butyl Composite	Exposed corrugated polycarbonate spacer with butyl - dual sealed.
P1-S	Polycarbonate- Butyl Composite	Exposed corrugated polycarbonate spacer with butyl - single sealed.
PU-D	Polyurethane foam	Polyurethane foam - dual sealed.
PU-S	Polyurethane foam	Polyurethane foam - single sealed.
S2-D	Steel (thermally-broken)	Stainless steel spacer with urethane thermal break - dual sealed.
S2-S	Steel (thermally-broken)	Stainless steel spacer with urethane thermal break - single sealed.
S3-D	Steel/Foam/Steel	Two steel spacers separated by foam-type material - dual sealed.
S3-S	Steel/Foam/Steel	Two steel spacers separated by foam-type material - single sealed.
S5-D	Steel reinforced butyl	Butyl spacer material with stainless steel substrate - dual sealed.
S5-S	Steel reinforced butyl	Butyl spacer material with stainless steel substrate - single sealed.
S6-D	Steel U-channel w/ thermal cap	U-shaped steel spacer system with a thermal cap - dual sealed.
S6-S	Steel U-channel w/ thermal cap	U-shaped steel spacer system with a thermal cap - single sealed.
SS-D	Stainless Steel	Stainless Steel - Dual Seal
SS-S	Stainless Steel	Stainless Steel - Single Sealed
SU-D	Stainless Steel U-Shaped	Stainless Steel U-shaped spacer system embedded in sealant - Dual sealed
SU-S	Stainless Steel U-Shaped	Stainless Steel U-shaped spacer system embedded in sealant - Single sealed
TP-D	Thermo-plastic	Thermo-plastic - dual sealed.
TP-S	Thermo-plastic	Thermo-plastic - single sealed.
TS-D	Thermo-plastic	Thermoplastic spacer with stainless steel substrate - dual-sealed
TS-S	Thermo-plastic	Thermoplastic spacer with stainless steel substrate - single-sealed
WD	Wood	Wood spacer system
ZF-D	Silicone Foam	Silicone foam spacer system - dual sealed.
ZF-S	Silicone Foam	Silicone foam spacer system - single sealed.
ZS-D	Silicone/Steel	Combination of two separate spacers: a steel spacer and silicone spacer - dual sealed.
ZS-S	Silicone/Steel	Combination of two separate spacers: a steel spacer and silicone spacer - single sealed.

ATTACHMENT A

Product Drawings

TEST SPECIMEN COMPLIES
WITH THESE DETAILS.
ANY DEVIATION IS NOTED.
TEST COMPLETE: 09/20/07
NCTL #10-10909-01

Bill of Materials Listing

Print Date: Aug 17, 2007

Product: 8005 Type: PD

Assembly Code	Part #	Description	Qty	<---Deducts---> Height	Width	Unit Code	Vert Hor	Sub Assy	Add Color	Fixed Length	W/Nailing Fin
ASSCR1	8X1PH	Assembly Screw #1	7.00			EA		IA	Y		
GLASS	2CT-ST1	Default Glass Type	1.00	6.2500	3.7500	SF		IA	N		2CT-ST1
GLSSPC	SWGG-1/2	Glass Spacer	2.00		3.7500	LI	W	IA	N		SWGG-1/2
GLSSPC	SWGG-1/2	Glass Spacer	2.00	6.2500		LI	H	IA	N		SWGG-1/2
GLVNLH	V-185	Glazing Vinyl(H)	2.00		3.4375	LI	W	IA	Y		V-185
GLVNLV	V-185	Glazing Vinyl(V)	2.00	7.2500		LI	H	IA	Y		V-185
HEADER	M-2000	Frame Top Extrusion	1.00		-.5000	LI	W	IA	Y		M-2000
INTERL	2001	Interlock	1.00	-1.3750		LI	H	IA	Y		2001
LJAMB	M-2000	Left Side Extrusion	1.00	2.1250		LI	H	IA	Y		M-2000
MISC	120951121	Bug Flap	1.00			EA	H	IA	Y		
MISC	SR-2188S	Patio Door Roller	2.00			EA	H	IA			
RJAMB	M-2000	Right Side Extrusion	1.00	2.1250		LI	H	IA	Y		M-2000
SILL	M-2000	Bottom Extrusion	1.00		-.5000	LI	W	IA	Y		M-2000
End of Subassembly IA		**********									
ASSCR3	10X5/8TRUSS	Door Roller Screws	4.00			EA		IB			
GLASS	2CT-ST1	Default Glass Type	1.00	6.2500	3.7500	SF		IB	N		2CT-ST1
GLSSPC	SWGG-1/2	Glass Spacer	2.00		3.7500	LI	W	IB	N		SWGG-1/2
GLSSPC	SWGG-1/2	Glass Spacer	2.00	6.2500		LI	H	IB	N		SWGG-1/2
GLSSPC	SWGG-1/2	Glass Spacer	2.00		4.3125	LI	W	IB	N		SWGG-1/2
GLSSPC	SWGG-1/2	Glass Spacer	2.00	4.2500		LI	H	IB	N		SWGG-1/2
GLVNLH	V-185	Glazing Vinyl(H)	2.00		3.4375	LI	W	IB	Y		V-185
GLVNLV	V-185	Glazing Vinyl(V)	2.00	7.2500		LI	H	IB	Y		V-185
HEADER	M-2000	Frame Top Extrusion	1.00		-.5000	LI	W	IB	Y		M-2000
INTERL	2001	Interlock	1.00	1.3750		LI	H	IB	Y		2001
LJAMB	M-2000	Left Side Extrusion	1.00	2.0000		LI	H	IB	Y		M-2000
LOCK	555	Patio Door Lock	1.00		.0000	EA		IB	N		

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NCTE-110-10909-01

Bill of Materials Listing

Print Date: Aug 17, 2007

Product: 8005 Type: PD

Assembly Code	Part #	Description	Qty	<---Deducts---> Height	Width	Unit Code	Vert Hor	Sub Assy	Add Color	Fixed Length	W/Nailing Fin
MULSET	1	Setting From Top	1.00	.1250		LI	H	IB			
MUNCLP	10946-002	Muntin Clips	1.00			EA		IB	N		10946-002
MUNTNH	536006	Muntin Bar Horizontl	1.00		4.1875	LI	W	IB	Y		536006
MUNTNV	536006	Muntin Bar Vertical	1.00	4.1875		LI	H	IB	Y		536006
REBAR	MGM-JC-73	HyGrade Reinf Bar	3.00			EA		IB	N		
REBAR	MGM-JC-73P	HyGrade Reinf Bar	1.00			EA		IB	N		
RJAMB	M-2000	Right Side Extrusion	1.00	2.0000		LI	H	IB	Y		M-2000
SCAULK	100	SILICONE Caulk #1199	3.00			EA		IB	N		100
SILL	M-2000	Bottom Extrusion	1.00		-.5000	LI	W	IB	Y		M-2000
End of Subassembly IB	**********										
ASSCR1	8X1PH	Assembly Screw #1	6.00			EA		MF	N		8X1PH
ASSCR2	8X3/4FH	Assy Screw #2	1.00			EA		MF	Y		8X3/4FH
HEADER	V-665	Frame Top Extrusion	1.00		-.2500	LI	W	MF	Y		V-665
LJAMB	V-665	Left Side Extrusion	1.00	-.1250		LI	H	MF	Y		V-665
MISC	NGN-060-704A	Sill Gasket	2.00		.0000	EA		MF	Y		
MISC	S1140	Door Handle And Lock	1.00			EA		MF	N		S1140
MISC	NSB85D	1/8x3/4x1-1/2 Set Bl	4.00			EA		MF			
MISC	NSB85D	1/16x13/16x1 Set Blk	3.00			EA		MF			
PEDSTL	M-2006	Pedestal	1.00		.2500	LI	W	MF	Y		
RJAMB	V-665	Right Side Extrusion	1.00	-.1250		LI	H	MF	Y		V-665
SILL	42043	Bottom Extrusion	1.00		1.1875	LI	W	MF	N		42043
WTSTPV	W21-305NW	Weather Strip(V)	1.00			LI	W	MF	N		
WTSTPV	W21-305NW	Weather Strip(V)	4.00			LI	H	MF	N		
End of Subassembly MF	**********										
HEADER	PATIOSCREEN	HyGrade Reinf Bar	1.00			LI		SC	N		
End of Subassembly SC	**********										

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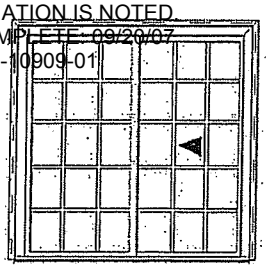

Series 8005PD

Vinyl Sliding Patio Door

Size	1-Lite	GBG*	Low-E	Screen	Rough Opening
5-0 x 6-8	870.97	1032.26	317.87	96.77	60" x 80"
6-0 x 6-8	967.74	1129.03	382.32	96.77	72" x 80"
8-0 x 6-8	1141.93	1351.61	508.56	96.77	96" x 80"
9-0 x 6-8	1267.80	1486.77	564.17	96.77	111" x 80"

*GBG Grid Patterns:
5-0: 2 Vertical & 4 Horizontal Bars
6-0: 2 Vertical & 4 Horizontal Bars
8-0: 3 Vertical & 4 Horizontal Bars
9-0: 2 Vertical & 4 Horizontal Bars (3 Panels)

Standard Features

- Designed for New Home Construction
- Maintenance Free Exterior
- Vinyl Brick Mould with Integral "J" Channel
- Integral Nailing Fin
- 3/4" Insulated Glass
- Durable Thermal Break Aluminum Threshold
- Tandem Ball-Bearing Rollers for Smooth Operation
- 3/4" Profiled Grille Bar on GBG Units
- **Full 4-9/16" Vinyl Jamb**
- All Hardware Included
- **Available in White, Eurowhite and Tan**

When ordering a door with a transom, sidelights, etc. please specify whether it should be shipped mulled or mull prep.

Please refer to the Slider Information page 1-6 and specify Standard or Reverse when ordering

Standard is X O with X as operating panel
Reverse is O X with X as operating panel

Options

- Tan Color: Add 10% to List Price
- Brass Hardware Upgrade: $228.50
- **Custom Size Doors up to 96" x 96" : $11.00/United Inch**
- Custom Size Screen (All Heavy Duty Aluminum): $2.10/United Inch
- **Heavy Duty Extruded Aluminum Screen, Standard Sizes: $161.29**
- Custom Size doors : Low-E (net pricing) $6.00/sqft
- 6-9/16" Jamb Extension: $30.00 (net)
- $75.00 Net factory mull charge for transoms. Uses Series 8010 transoms (pages 8010-7 and 7A)

MGM Industries
287 Freehill Road
Hendersonville, TN 37075
Office 1-800-476-5584
Fax 1-615-822-6581

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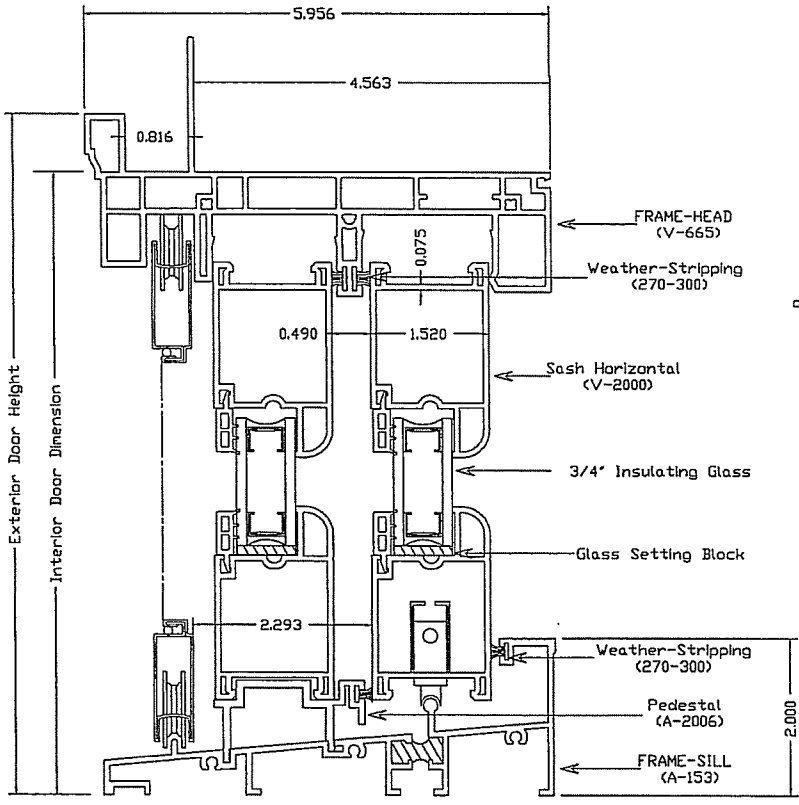

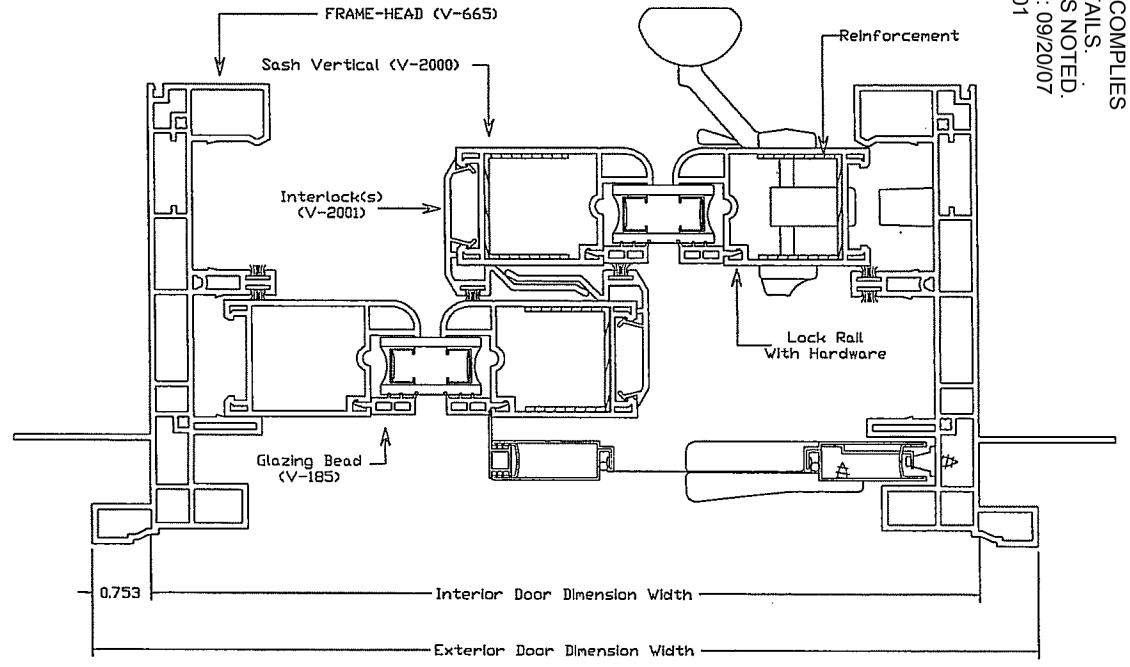

EGRESS: 6/0 (71 1/2") DOOR WIDTH = 29 1/8" ** With 4 1/8" Sash Stop.
EGRESS: 6/0 (71 1/2") DOOR WIDTH = 30 7/8" ** Sash Stop Removed.
77 3/4 DOOR WIDTH = 34"HCA ** With 2" Sash Stop. .

TITLE: Vertical and Horiziontal Cross-Section	
SERIES#: 8005 Patio Door	DATE: 10/12/03
MGM INDUSTRIES 287 Freehill Road Hendersonville, Tn. 37075 Ph. (615) 824-6572 Fx. (615) 822-6581	DRAWN BY: RGraves
	SCALE: Do Not Scale

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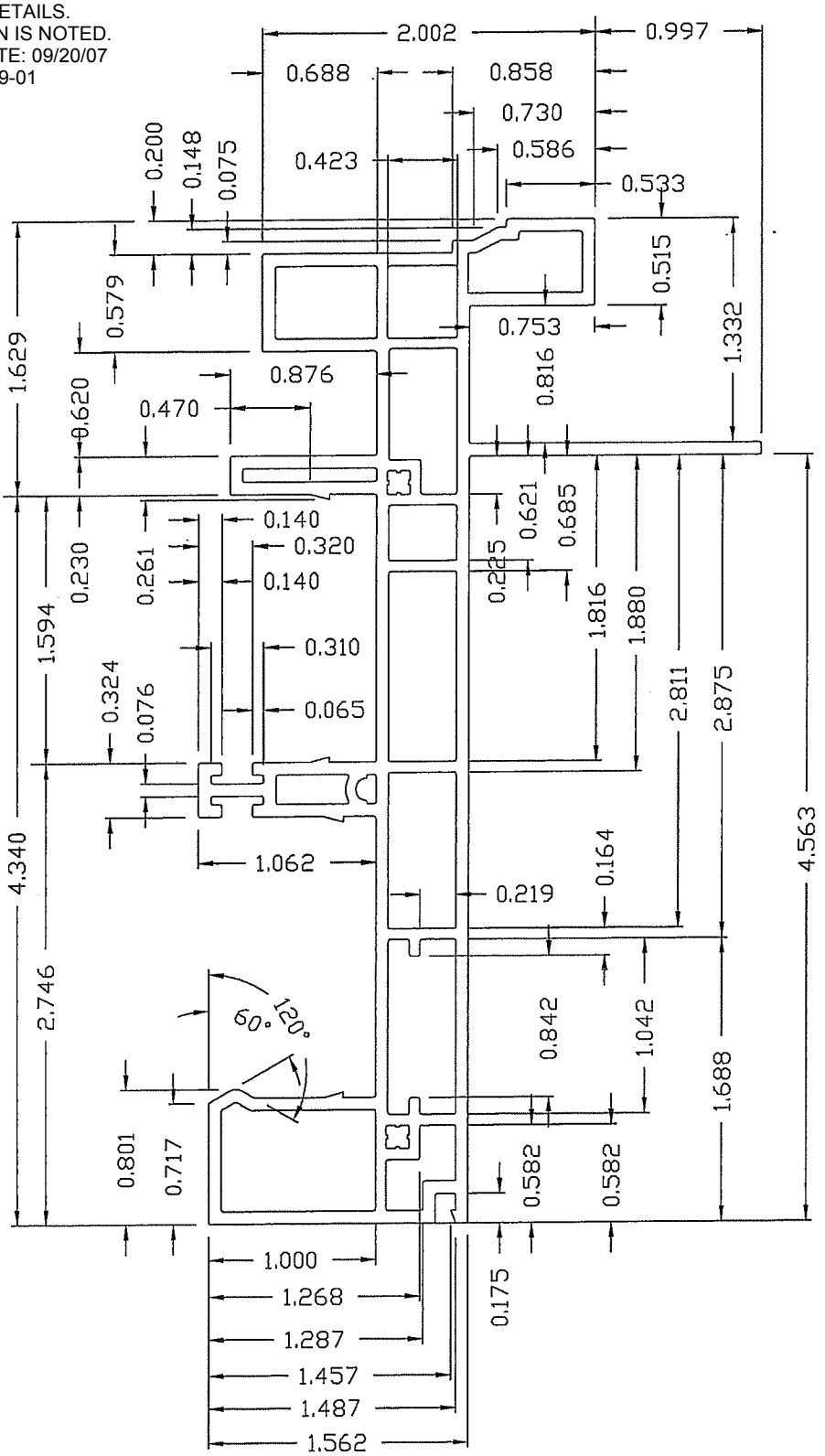

ALL RADI TO BE 0.015. ALL WALL THKS TO BE 0.075 UNLESS OTHERWISE SPECIFIED. INTERNAL WALLS .064.

MGM INDUSTRIES 287 FREEHILL ROAD HENDERSONVILLE,TN 37075	DESCRIPTION: Head & Jamb Mainframe DO NOT SCALE DRAWING	SERIES#: 8005-PD		DWG. NO.: V-665	REV.:
		WEIGHT: 1.3114	AREA: 2.1016	BY: RGraves DATE: 10/04/03	

TEST SPECIMEN COMPLIES
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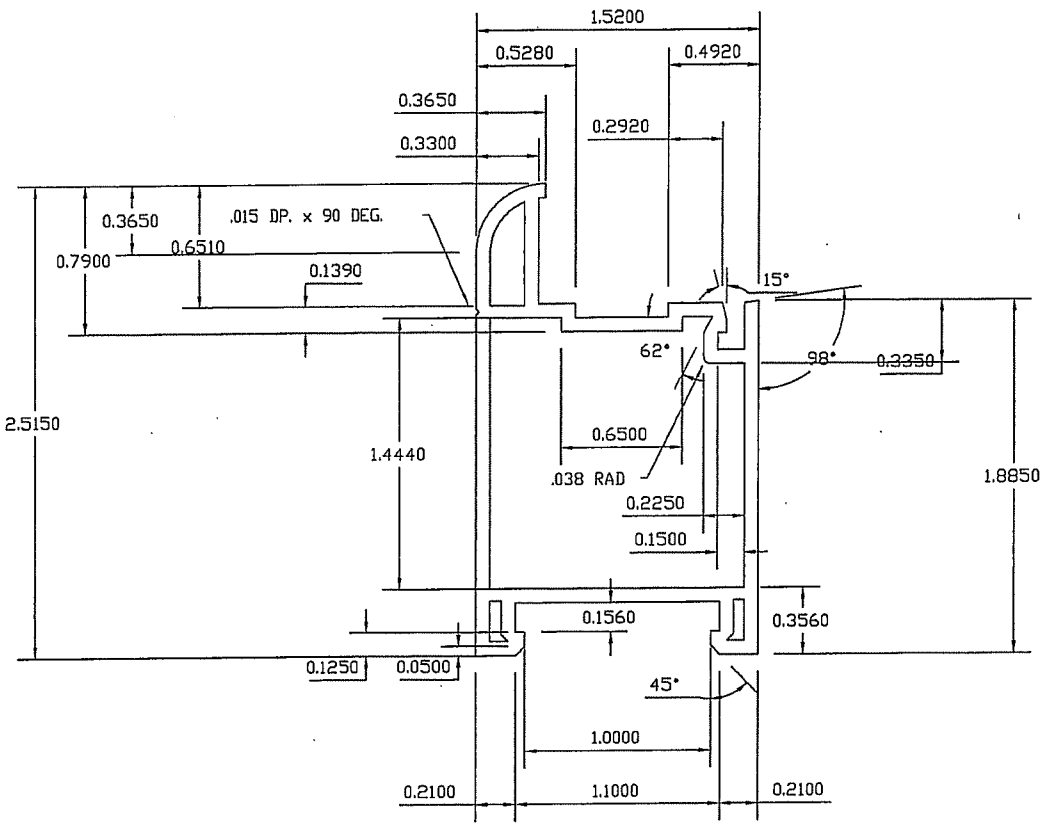
NCTL-110-10909-01

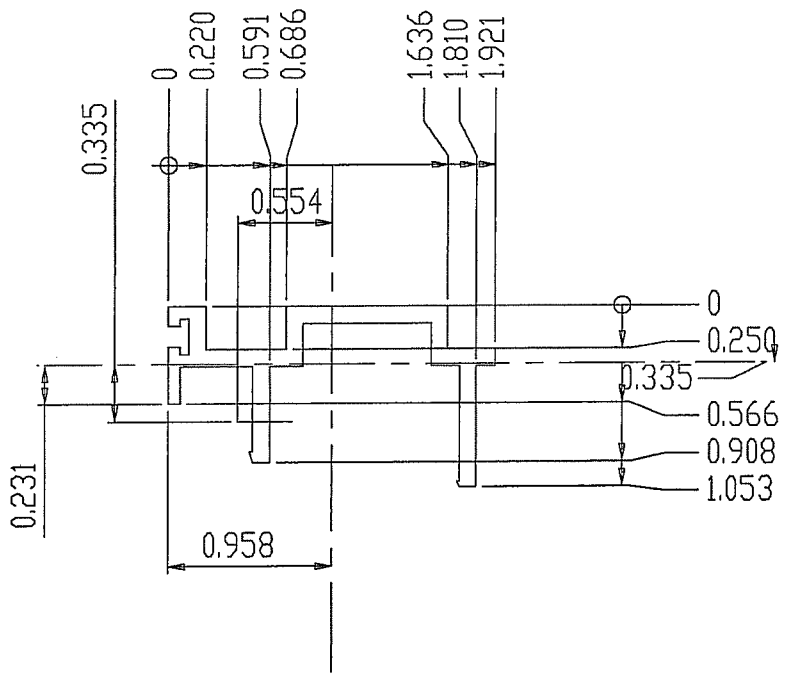


ALL RADI TO BE 0.015, ALL WALL THKS TO BE 0.075 UNLESS OTHERWISE SPECIFIED.

MGM INDUSTRIES 287 FREEHILL ROAD HENDERSONVILLE,TN 37075	DESCRIPTION: Sash Rail DO NOT SCALE DRAWING	SERIES#: 8005-PD	DWG. NO.: V-2000	REV.:	
		WEIGHT: .426 LB./FT.	AREA: .678 SQ. IN.	BY: RGraves DATE: 10/04/03	

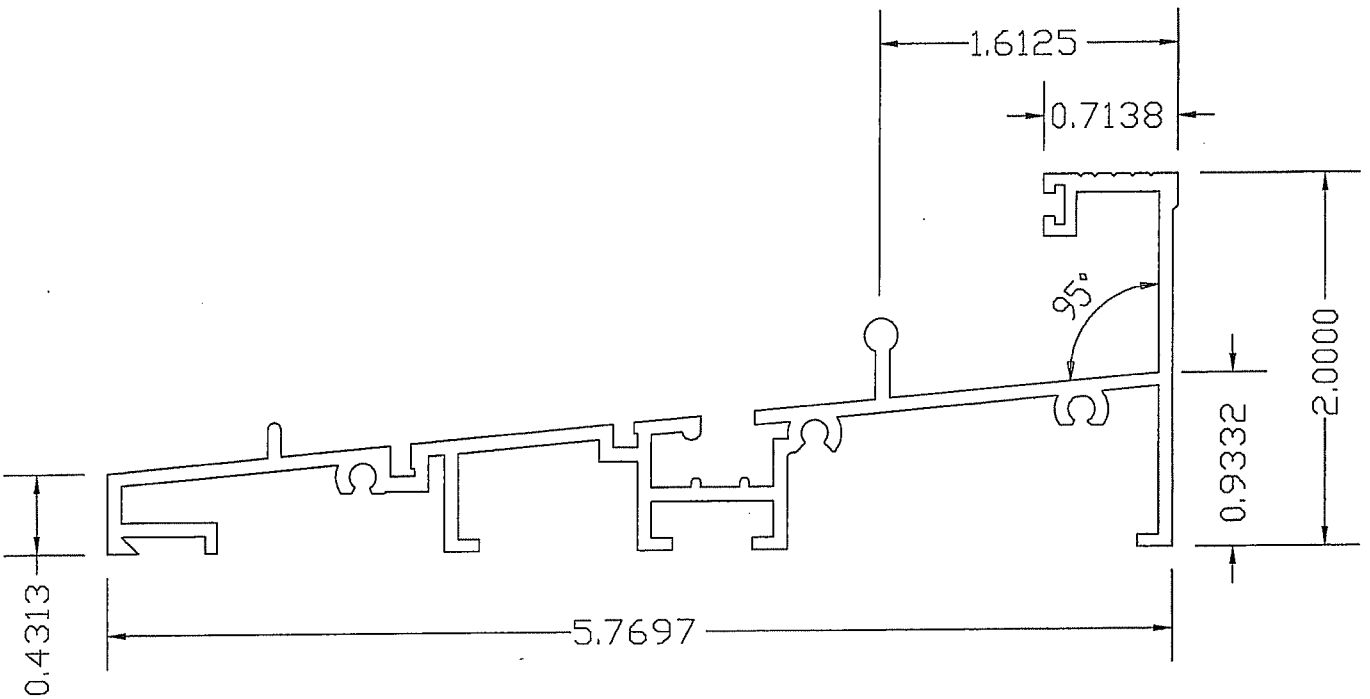
TEST SPECIMEN COMPLIES
WITH THESE DETAILS.
ANY DEVIATION IS NOTED.
TEST COMPLIANCE LOG #
NCTL-110-10909-01

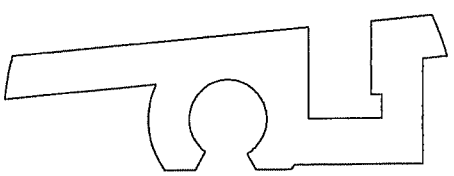
APPLICATION		REVISIONS			
NEXT ASSY.	USED ON	REV.	DESCRIPTION	DATE	APPROVED



MGM INDUSTRIES 287 FREEHILL ROAD HENDERSONVILLE,TN 37075	DESCRIPTION: Patio Door Pedestal		DWG. NO. M-2006	REV.
DO NOT SCALE DRAWING	DATE 10/29/01	WEIGHT	AREA	BY: ABG

TEST SPECIMEN COMPLIES
WITH THESE DETAILS.
ANY DEVIATION IS NOTED.
TEST COMPLETE: 09/20/07
NCTL-110-10909-01





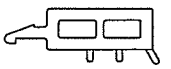
A (3 : 1)

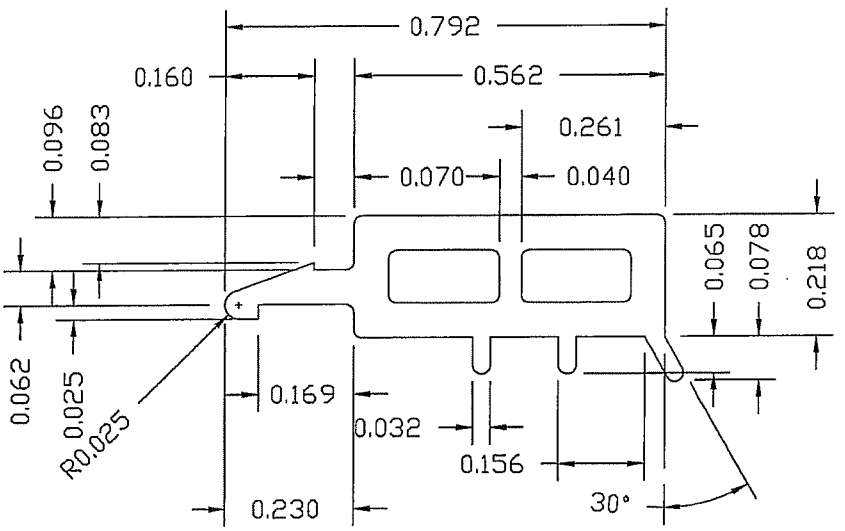
altec number 42046

MGM INDUSTRIES 287 FREEHILL ROAD HENDERSONVILLE,TN 37075	DESCRIPTION: 80005 PD Extended sill		DWG. NO. A-153	REV.	
DO NOT SCALE DRAWING	DATE 06/12/01	WEIGHT 1.3231	AREA 1.1018 sq in	BY: ABG	

TEST SPECIMEN COMPLIES
WITH THESE DETAILS.
ANY DEVIATION IS NOTED.
TEST COMPLETE: 09/20/07
NCTL-110-10909-01

Full Size



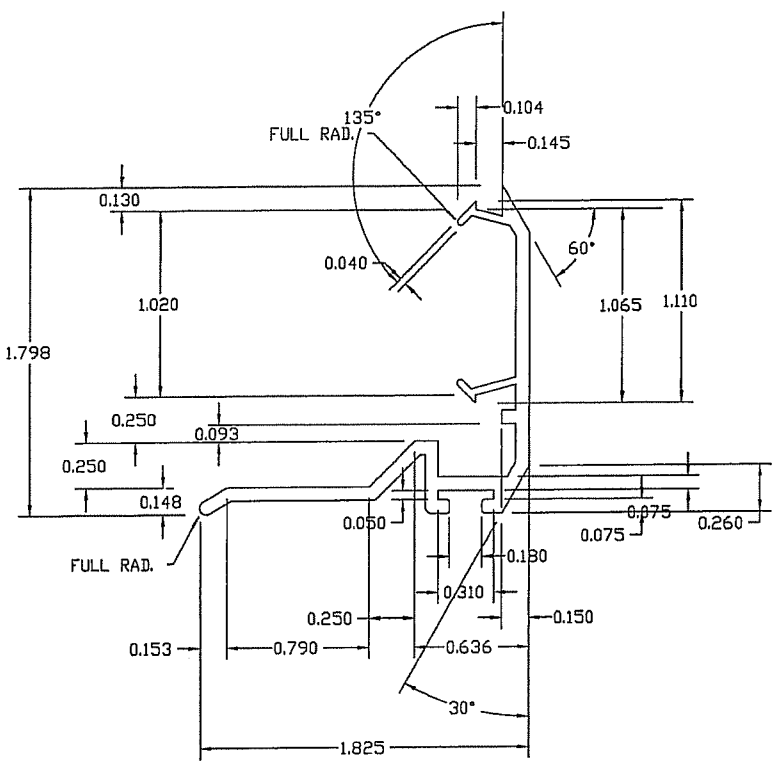


NOTE:	WT/FT:	AREA:
RIGID	.061	.098
FLEX	.004	.007

ALL RADI TO BE 0.015. ALL WALL THKS TO BE 0.062 UNLESS OTHERWISE SPECIFIED.

MGM INDUSTRIES 287 FREEHILL ROAD HENDERSONVILLE,TN 37075	DESCRIPTION: Glazing Bead 5000 5600-6000-7006 7010-8006-8010 DO NOT SCALE DRAWING	SERIES#:	DWG. NO.: V-185	REV.:
		WT/FT: .066	AREA: .106	BY: RGraves
				DATE: 10-06-01

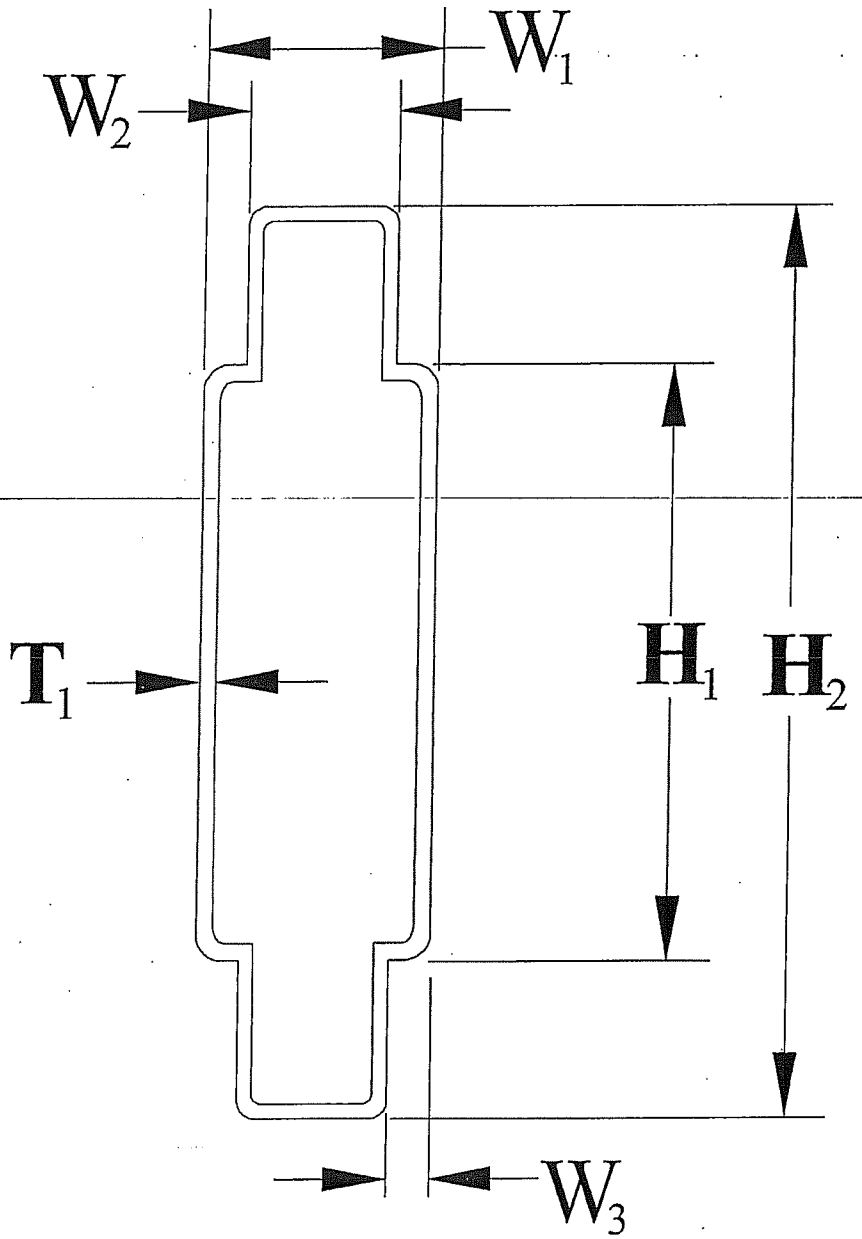
TEST SPECIMEN COMPLIES
WITH THESE DETAILS.
ANY DEVIATION IS NOTED.
TEST COMPLETE: 09/20/07
NCTL-110-10909-01



ALL RADI TO BE 0.015. ALL WALL THKS TO BE 0.075 UNLESS OTHERWISE SPECIFIED.

MGM INDUSTRIES 287 FREEHILL ROAD HENDERSONVILLE,TN 37075	DESCRIPTION: Inter-Lock DO NOT SCALE DRAWING	SERIES#: 8005-PD	DWG. NO.: V-2001	REV.:	
		WEIGHT: .209 LB./FT.	AREA: .332 SQ. IN.	BY: RGraves DATE: 10/04/03	

TEST SPECIMEN COMPLIES
WITH THESE DETAILS.
ANY DEVIATION IS NOTED.
TEST COMPLETE: 09/20/07
NCTL-110-10909-01

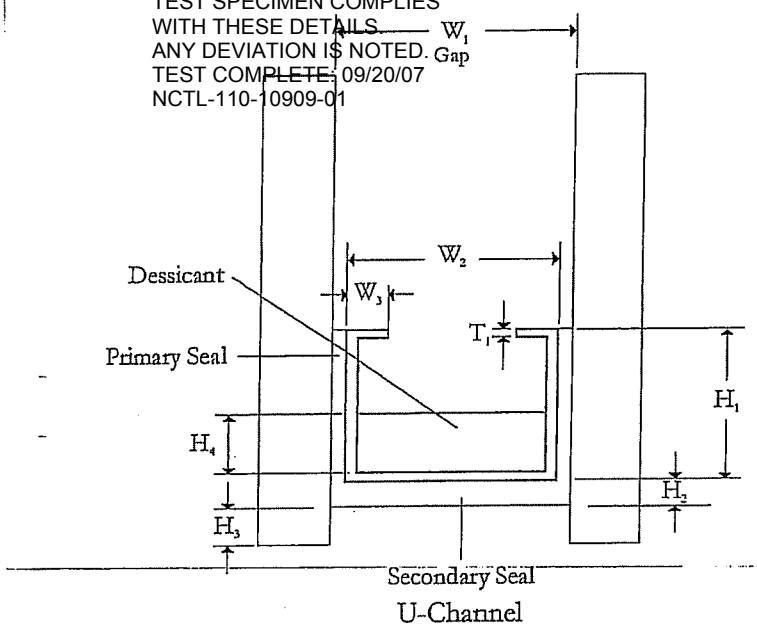


Decorative

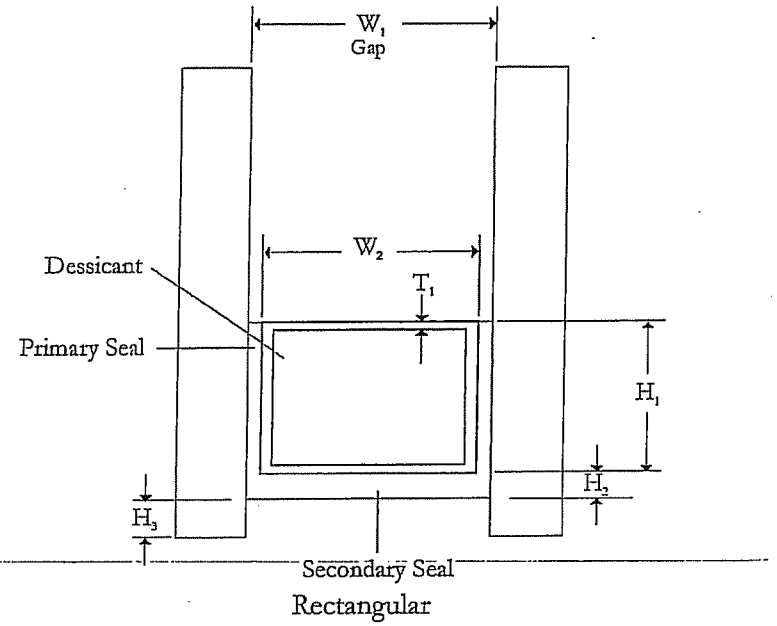
Divider Dimensions -Fill dimensions where applicable - Please fill out a divider sheet for each divider size used.

Dimensions			Material		
☐ W_1 .215 "	☐ W_2 .151 "	☐ W_3 .064 "	☑ Aluminum	☐ Steel - Galvanized	☐ Other _____
☐ H_1 .360 "	☐ H_2 .715 "	☐ T_1 .120 "	☐ Steel - Mild	☐ Steel - Stainless	

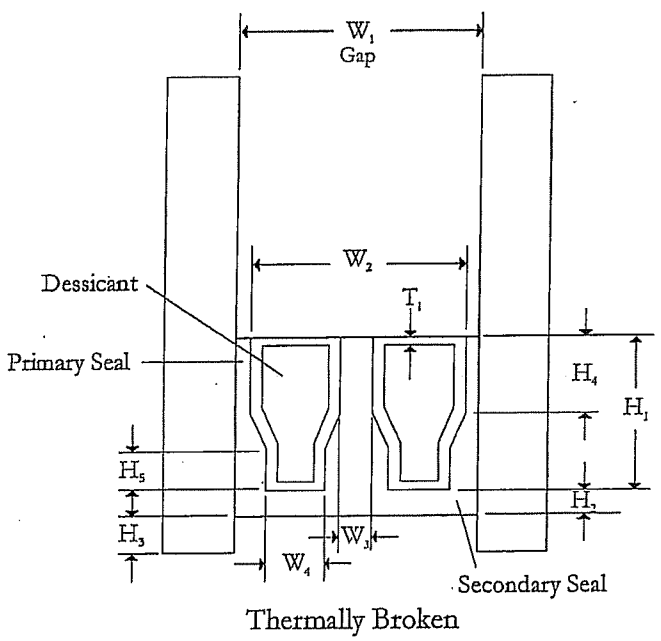
TEST SPECIMEN COMPLIES
WITH THESE DETAILS
ANY DEVIATION IS NOTED.
TEST COMPLETE: 09/20/07
NCTL-110-10909-01



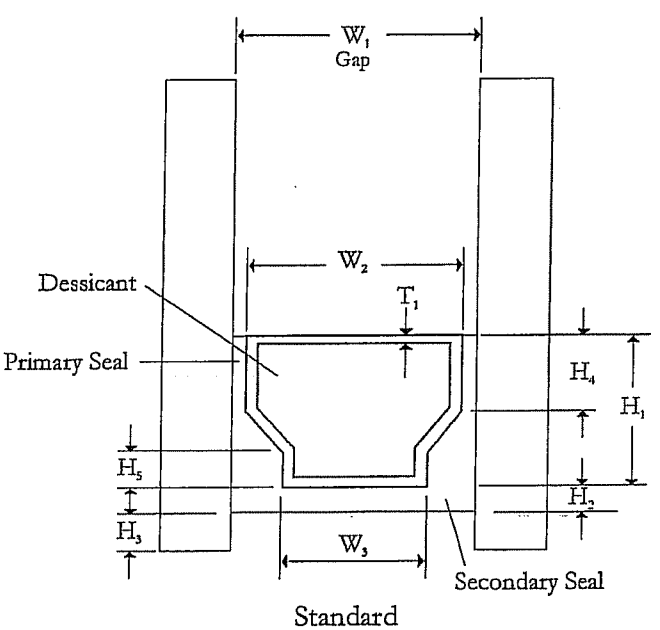
U-Channel



Rectangular



Thermally Broken



Standard

Spacer Dimensions -Fill dimensions where applicable - Please fill out a spacer sheet for each spacer used whether spacer type or size.

Gap	Primary Seal	Secondary Seal	Material	Fill
☐ W_1 .1576 "	☑ Butyl	☑ Butyl	☐ Aluminum	☑ Dessicant
☐ W_2 .1526 "	☐ PIB	☐ PIB	☐ Steel - Mild	☐ Air
☐ W_3 .0776 "	☐ Polysulphide	☐ Polysulphide	☐ Steel - Stainless	☐ Other _____
☐ W_4 _____ "	☐ Silicone	☐ Silicone	☑ Steel - Galvanized	
☐ H_1 .300 "	☐ Urethane	☐ Urethane	☐ Vinyl	
☐ H_2 .1045 "	☐ None	☐ None	☐ Foam _____	
☐ H_3 .108 "	☐ Other _____	☐ Other _____	☐ Other _____	
☐ H_4 .0984 "				
☐ H_5 _____ "				
☐ T_1 .613 "				