Architectural Testing

NFRC U-FACTOR, SHGC / VT, CONDENSATION RESISTANCE COMPUTER SIMULATION REPORT

Rendered to:

EARTHWISE GROUP, L.L.C.

SERIES/MODEL: 143.000 PW
145.000 PW

Baseline Product for Validation Testing

Series Model: ***143.000 PW***

Unit Size: Width: 23.625" Height: 59"

Simulated U-Factor: 0.310

Glazing Information

Layer 1:	SS Guardian RLE 71/38 (e=0.027,#2)
Gap 1:	0.234" Edgetech Super Spacer (ZF-S) - Air Fill
Layer 2:	SS Guardian RLE 71/38 (e=0.027,#4)
Gap 2:	0.234" Edgetech Super Spacer (ZF-S) - Air Fill
Layer 3:	SS Clear

Reinforcement Option Description

Location	*Material*
None	

Report No.: 56109.02-116-45
Report Date: 04/01/05
Expiration Date: 03/23/09
Revision Date: 04/28/05

130 Derry Court
York, PA 17402-9405
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Architectural Testing

NFRC U-FACTOR, SHGC / VT, CONDENSATION RESISTANCE
COMPUTER SIMULATION REPORT

Rendered to:

EARTHWISE GROUP, L.L.C.
107 Pierce Road
Clifton Park, New York 12065

Report No.:	56109.02-116-45
Simulation Date:	03/23/05
Report Date:	04/01/05
Expiration Date:	03/23/09
Revision Date:	04/28/05

Project Summary: Architectural Testing, Inc. (ATI) was contracted to perform U-Factor, Solar Heat Gain Coefficient, Visible Transmittance, and Condensation Resistance* computer simulations in accordance with the National Fenestration Rating Council (NFRC). The products were evaluated in full compliance with NFRC requirements to the standards listed

**NFRC's Condensation Resistance rating is NOT equivalent to a Condensation Resistance Factor (CRF) determined in accordance with AAMA 1503.*

Standards:

NFRC 100-2004: *Procedure for Determining Fenestration Product U-Factors*
NFRC 200-2004: *Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence*
NFRC 500-2004: *Procedure for Determining Fenestration Product Condensation Resistance Values*

Software:

Frame and Edge Modeling: THERM 5.2.14
Center-of-Glass Modeling: WINDOW 5.2.17
Total Product Calculations: WINDOW 5.2.17
Spectral Data Library: 14.1

Simulation Specimen Description:

Series/Model:	143.000 PW	145.000 PW
Type:	Fixed	
Frame Material:	Vinyl (VY)	
Sash Material:	Not Applicable (N)	
Width:	1200 mm	
Height:	1500 mm	

130 Derry Court
York, PA 17402-9405
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Technical Interpretations:

U-factor: None
SHGC: None

Modeling Assumptions:

U-factor:
1. The 143.000 PW and the 145.000 PW are individual product lines and can be grouped within the same validation matrix according to NFRC 100-2004 Section 4.2.1 (J).
2. The 3/16" X 9/16", 3/16" X 5/8", 3/16" X 3/4", 1/4" X 5/8" Rectangular Muntins, 5.5mm X 18mm, 8mm X 18mm, 8mm X 25mm, 0.313" X 0.725" Contour Muntins, 7/16" X 3/8" Square Muntin, 5.9mm X 7.95mm Brass Caming Muntins were grouped for simulation purposes. The 7/16" X 3/8" Square Muntin was the group leader.
3. Tempered glass is simulated as clear annealed per NFRC 100-2004.

SHGC:
1. Tempered glass is simulated as clear annealed per NFRC 200-2004.

Specialty Products Table: The specialty products method allow 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.

143.000 PW	No Dividers	Dividers < 1"	Dividers >= 1"
$SHGC_0$	0.004	0.007	0.010
$SHGC_1$	0.823	0.739	0.660
VT_0	0.000	0.000	0.000
VT_1	0.818	0.732	0.650

145.000 PW	No Dividers	Dividers < 1"	Dividers >= 1"
$SHGC_0$	0.004	0.007	0.010
$SHGC_1$	0.823	0.739	0.660
VT_0	0.000	0.000	0.000
VT_1	0.819	0.732	0.651

$$SHGC_c = SHGC_0 + SHGC_c (SHGC_1 - SHGC_0)$$
$$VT_c = VT_0 + VT_c (VT_1 - VT_0)$$

Appendices: The following appendices contain material required by NFRC 100-2004, NFRC 200-2004, and NFRC 500-2004.

A. Drawings and Bills of Material used in simulation

Spacer Option Description

	Sealant		
Spacer Type	*Primary*	*Secondary*	*Dessicant*
PPG Intercept Spacer	Butyl Rubber	Butyl Rubber	Yes
Edgetech Super Spacer	Butyl Rubber	None	No
TruSeal DuraSeal Spacer	Butyl Rubber	Butyl Rubber	No
Aluminum Swiggle Spacer	Butyl Rubber	Butyl Rubber	No
Cardinal XL Edge Spacer	Silicone	PIB	Yes

Grid Option Description

Grid Size	*Grid Type*	*Grid Pattern*
3/16" X 9/16"	Allmetal Rectangular Muntin	4H x 3V
3/16" X 5/8"	Allmetal Rectangular Muntin	4H x 3V
3/16" X 3/4"	Allmetal Rectangular Muntin	4H x 3V
1/4" X 5/8"	Allmetal Rectangular Muntin	4H x 3V
5.5mm X 18mm	Allmetal Contour Muntin	4H x 3V
8mm X 18mm	Allmetal Contour Muntin	4H x 3V
8mm X 25mm	Allmetal Contour Muntin	4H x 3V
0.313" X 0.725"	Allmetal Contour Muntin	4H x 3V
7/16" X 3/8"	Square Muntin	4H x 3V
5.9mm X 7.95mm	Brass Caming Muntin	4H x 3V

Reinforcement Option Description

Location	*Material*
None	

Gas Filling Technique Description

Fill Type	*Method*
90% Argon	Single Probe
95% Argon	Dual Probe
90% Krypton	Dual Probe

Edge-of-Glass Construction

Interior Condition	PVC glazing bead with flexible vinyl fin against glass
Exterior Condition	Foam tape between sash leg and glass

Weatherstripping

Type	*Qty.*	*Location*
None		

Finish

Interior Condition	White PVC
Exterior Condition	White PVC

Hardware *(If modeling is required, continuous items are listed below)*

Type	*Qty.*	*Location*
None		

Sealing Rules *(To prevent air infiltration)*

Tape was applied to all interior sash crack locations.

U-Factor / CR

143.000 PW

		PPG Intercept Spacer			
		No Grids		Grids	
	Option Description	U-Factor	CR	U-Factor	CR
1	Clear / Clear - SS,DS - 3/4" IG	0.47	44	0.48	44
2	SS Clear / DS Clear - 3/4" IG	0.47	44	0.49	44
3	Clear / Clear - 5m - 3/4" IG	0.48	42	0.51	42
4	035 / Clear - SS,DS - 3/4" IG	0.33	56	0.35	56
5	035 / Clear - 5m - 3/4" IG	0.35	52	0.39	52
6	035 / Clear w/ 90% Argon - SS,DS - 3/4" IG	0.29	59	0.31	59
7	035 / Clear w/ 90% Argon - 5m - 3/4" IG	0.30	55	0.34	56
8	041 / Clear w/ 90% Argon - DS - 3/4" IG	0.29	58	0.32	58
9	041 / Clear w/ 90% Argon - 5m - 3/4" IG	0.30	55	0.34	55
10	027 / Clear - SS,DS - 3/4" IG	0.32	56	0.34	56
11	027 / Clear - 5m - 3/4" IG	0.34	52	0.39	52
12	027 / Clear w/ 90% Argon - SS,DS - 3/4" IG	0.29	59	0.30	59
13	027 / Clear w/ 90% Argon - 5m - 3/4" IG	0.30	56	0.34	56

U-Factor / CR

143.000 PW

	Option Description	Super Spacer			
		No Grids		Grids	
		U-Factor	CR	U-Factor	CR
14	Clear / Clear - SS,DS - 3/4" IG	0.46	46	0.48	46
15	DS Clear / SS Clear - 3/4" IG	0.46	45	0.48	45
16	DS Clear / SS Clear w/ 90% Argon - 3/4" IG	0.44	47	0.46	47
17	Clear / Clear - 5m - 3/4" IG	0.48	44	0.50	44
18	204 / Clear - 5m - 3/4" IG	0.38	50	0.42	50
19	204 / Clear w/ 90% Argon - 5m - 3/4" IG	0.34	54	0.37	54
20	154 / Clear - DS - 3/4" IG	0.35	54	0.38	54
21	154 / Clear - 5m - 3/4" IG	0.37	51	0.41	51
22	154 / Clear w/ 95% Argon- DS - 3/4" IG	0.31	58	0.34	58
23	154 / Clear w/ 95% Argon - 5m - 3/4" IG	0.33	55	0.36	55
24	035 / Clear - SS,DS - 3/4" IG	0.32	58	0.34	58
25	035 / Clear - 5m - 3/4" IG	0.34	53	0.38	54
26	035 / Clear w/ 90% Argon- SS,DS - 3/4" IG	0.28	61	0.30	61
27	035 / Clear w/ 90% Argon - 5m - 3/4" IG	0.29	57	0.33	57
28	041 / Clear - SS,DS - 3/4" IG	0.32	57	0.34	57
29	041 / Clear - 5m - 3/4" IG	0.34	53	0.38	53
30	041 / Clear w/ 90% Argon- SS,DS - 3/4" IG	0.29	61	0.30	61
31	041 / Clear w/ 90% Argon - 5m - 3/4" IG	0.30	57	0.33	57
32	027 / Clear - SS,DS - 3/4" IG	0.32	58	0.34	58
33	027 / Clear - 5m - 3/4" IG	0.34	54	0.38	54
34	027 / Clear w/ 90% Argon - SS,DS - 3/4" IG	0.28	61	0.30	61
35	027 / Clear w/ 90% Argon - 5m - 3/4" IG	0.29	58	0.33	58
36	027 / 027 w/ 90% Argon - SS,DS - 3/4" IG	0.28	62	0.29	62

U-Factor / CR

143.000 PW

		Duraseal Spacer			
		No Grids		*Grids*	
	Option Description	**U-Factor**	**CR**	**U-Factor**	**CR**
37	Clear / Clear - SS,DS - 3/4" IG	0.47	45	0.48	45
38	Clear / Clear - 5m - 3/4" IG	0.48	43	0.50	43
39	044 / Clear - SS,DS - 3/4" IG	0.33	57	0.35	57
40	044 / Clear - 5m - 3/4" IG	0.35	53	0.39	53
41	044 / Clear w/ 90% Argon - SS,DS - 3/4" IG	0.29	61	0.31	61
42	044 / Clear w/ 90% Argon - 5m - 3/4" IG	0.30	57	0.34	57
43	041 / Clear - SS,DS - 3/4" IG	0.32	57	0.35	57
44	041 / Clear - 5m - 3/4" IG	0.34	53	0.38	53
45	041 / Clear w/ 90% Argon - SS,DS - 3/4" IG	0.29	61	0.31	61
46	041 / Clear w/ 90% Argon - 5m - 3/4" IG	0.30	57	0.34	57
47	027 / Clear w/ 90% Argon - DS - 3/4" IG	0.28	60	0.31	60
48	027 / Clear w/ 90% Argon - 5m - 3/4" IG	0.29	58	0.33	58

		Aluminum Swiggle Spacer			
		No Grids		*Grids*	
	Option Description	**U-Factor**	**CR**	**U-Factor**	**CR**
49	Clear / Clear - SS,DS - 3/4" IG	0.47	45	0.48	45
50	041 / Clear - SS,DS - 3/4" IG	0.33	56	0.35	56
51	041 / Clear w/ 90% Argon - SS,DS - 3/4" IG	0.29	60	0.31	60
52	027 / Clear - SS,DS - 3/4" IG	0.32	57	0.34	57
53	027 / Clear w/ 90% Argon - SS,DS - 3/4" IG	0.29	60	0.30	60

U-Factor / CR

143.000 PW

		Cardinal XL Edge Spacer			
		No Grids		*Grids*	
	Option Description	**U-Factor**	**CR**	**U-Factor**	**CR**
54	Clear / Clear - DS - 3/4" IG	0.46	44	0.49	44
55	Clear / Clear - 5m - 3/4" IG	0.48	43	0.50	43
56	041 / Clear w/ 90% Argon - DS - 3/4" IG	0.29	59	0.31	59
57	041 / Clear w/ 90% Argon - 5m - 3/4" IG	0.30	56	0.34	56

		Triple Glazed Super Spacer			
		No Grids		*Grids*	
	Option Description	**U-Factor**	**CR**	**U-Factor**	**CR**
58	Clear / Clear / Clear - SS - 3/4" IG	0.39	52	-	-
59	027 / Clear / Clear - SS - 3/4" IG	0.33	58	-	-
60	027 / Clear / Clear w/ 90% Argon - SS - 3/4" IG	0.29	62	-	-
61	027 / 027 / Clear - SS - 3/4" IG	0.29	61	-	-
62	027 / 027 / Clear w/ 90% Argon - SS - 3/4" IG	0.25	66	-	-

U-Factor / CR

143.000 PW

	Option Description	Super Spacer Foam Filled			
		No Grids		Grids	
		U-Factor	CR	U-Factor	CR
63	035 / Clear w/ 90% Argon- SS,DS - 3/4" IG	0.26	61	0.28	61
64	035 / Clear w/ 90% Argon - 5m - 3/4" IG	0.27	57	0.31	57
65	027 / Clear w/ 90% Argon - SS,DS - 3/4" IG	0.26	61	0.28	61
66	027 / Clear w/ 90% Argon - 5m - 3/4" IG	0.27	57	0.31	57

Notes :

1. All options available with bronze and grey tints on exterior surface.
2. "5m" stands for 3/16" glass thickness
3. Low-E's used:
   - 0.035 = PPG Solarban 60
   - 0.041 = Cardinal E172
   - 0.027 = Guardian RLE 71/38
   - 0.204 = AFG Comfort E2
   - 0.154 = LOF Advantage
   - 0.044 = Guardian PPII

U-Factor / CR

145.000 PW

		PPG Intercept Spacer			
		No Grids		*Grids*	
	Option Description	**U-Factor**	**CR**	**U-Factor**	**CR**
1	Clear / Clear - SS,DS - 3/4" IG	0.47	44	0.48	44
2	SS Clear / DS Clear - 3/4" IG	0.47	44	0.48	44
3	Clear / Clear - 5m - 3/4" IG	0.48	42	0.51	42
4	035 / Clear - SS,DS - 3/4" IG	0.32	56	0.34	56
5	035 / Clear - 5m - 3/4" IG	0.34	52	0.39	52
6	035 / Clear w/ 90% Argon - SS,DS - 3/4" IG	0.29	59	0.31	59
7	035 / Clear w/ 90% Argon - 5m - 3/4" IG	0.30	55	0.34	55
8	041 / Clear w/ 90% Argon - DS - 3/4" IG	0.29	58	0.32	58
9	041 / Clear w/ 90% Argon - 5m - 3/4" IG	0.30	55	0.34	55
10	027 / Clear - SS,DS - 3/4" IG	0.32	56	0.34	56
11	027 / Clear - 5m - 3/4" IG	0.34	52	0.38	52
12	027 / Clear w/ 90% Argon - SS,DS - 3/4" IG	0.29	59	0.30	59
13	027 / Clear w/ 90% Argon - 5m - 3/4" IG	0.29	56	0.33	56

U-Factor / CR

145.000 PW

		Super Spacer			
		No Grids		Grids	
	Option Description	U-Factor	CR	U-Factor	CR
14	Clear / Clear - SS,DS - 3/4" IG	0.46	46	0.48	46
15	DS Clear / SS Clear - 3/4" IG	0.46	45	0.48	45
16	DS Clear / SS Clear w/ 90% Argon - 3/4" IG	0.44	47	0.46	47
17	Clear / Clear - 5m - 3/4" IG	0.48	44	0.50	44
18	204 / Clear - 5m - 3/4" IG	0.38	50	0.41	50
19	204 / Clear w/ 90% Argon - 5m - 3/4" IG	0.34	54	0.37	54
20	154 / Clear - DS - 3/4" IG	0.35	54	0.38	54
21	154 / Clear - 5m - 3/4" IG	0.37	51	0.41	51
22	154 / Clear w/ 95% Argon- DS - 3/4" IG	0.31	58	0.34	58
23	154 / Clear w/ 95% Argon - 5m - 3/4" IG	0.32	55	0.36	55
24	035 / Clear - SS,DS - 3/4" IG	0.32	58	0.34	58
25	035 / Clear - 5m - 3/4" IG	0.34	54	0.38	54
26	035 / Clear w/ 90% Argon- SS,DS - 3/4" IG	0.28	61	0.30	61
27	035 / Clear w/ 90% Argon - 5m - 3/4" IG	0.29	57	0.33	57
28	041 / Clear - SS,DS - 3/4" IG	0.32	57	0.34	57
29	041 / Clear - 5m - 3/4" IG	0.34	53	0.38	53
30	041 / Clear w/ 90% Argon- SS,DS - 3/4" IG	0.28	61	0.30	61
31	041 / Clear w/ 90% Argon - 5m - 3/4" IG	0.29	57	0.33	57
32	027 / Clear - SS,DS - 3/4" IG	0.32	58	0.34	58
33	027 / Clear - 5m - 3/4" IG	0.34	54	0.38	54
34	027 / Clear w/ 90% Argon - SS,DS - 3/4" IG	0.28	61	0.30	61
35	027 / Clear w/ 90% Argon - 5m - 3/4" IG	0.29	58	0.33	58
36	027 / 027 w/ 90% Argon - SS,DS - 3/4" IG	0.27	62	0.29	62

U-Factor / CR

145.000 PW

		Duraseal Spacer			
		No Grids		*Grids*	
	Option Description	**U-Factor**	**CR**	**U-Factor**	**CR**
37	Clear / Clear - SS,DS - 3/4" IG	0.46	45	0.48	45
38	Clear / Clear - 5m - 3/4" IG	0.48	43	0.50	43
39	044 / Clear - SS,DS - 3/4" IG	0.32	57	0.34	57
40	044 / Clear - 5m - 3/4" IG	0.34	53	0.38	53
41	044 / Clear w/ 90% Argon - SS,DS - 3/4" IG	0.29	60	0.30	60
42	044 / Clear w/ 90% Argon - 5m - 3/4" IG	0.28	57	0.33	57
43	041 / Clear - SS,DS - 3/4" IG	0.32	57	0.34	57
44	041 / Clear - 5m - 3/4" IG	0.34	53	0.38	53
45	041 / Clear w/ 90% Argon - SS,DS - 3/4" IG	0.29	61	0.30	61
46	041 / Clear w/ 90% Argon - 5m - 3/4" IG	0.29	57	0.33	57
47	027 / Clear w/ 90% Argon - DS - 3/4" IG	0.28	60	0.31	60
48	027 / Clear w/ 90% Argon - 5m - 3/4" IG	0.29	58	0.33	58

		Aluminum Swiggle Spacer			
		No Grids		*Grids*	
	Option Description	**U-Factor**	**CR**	**U-Factor**	**CR**
49	Clear / Clear - SS,DS - 3/4" IG	0.47	45	0.48	45
50	041 / Clear - SS,DS - 3/4" IG	0.32	56	0.34	56
51	041 / Clear w/ 90% Argon - SS,DS - 3/4" IG	0.29	60	0.31	60
52	027 / Clear - SS,DS - 3/4" IG	0.32	57	0.34	57
53	027 / Clear w/ 90% Argon - SS,DS - 3/4" IG	0.28	60	0.30	60

U-Factor / CR

145.000 PW

		Cardinal XL Edge Spacer			
		No Grids		*Grids*	
	Option Description	**U-Factor**	**CR**	**U-Factor**	**CR**
54	Clear / Clear - DS - 3/4" IG	0.46	44	0.49	44
55	Clear / Clear - 5m - 3/4" IG	0.48	43	0.50	43
56	041 / Clear w/ 90% Argon - DS - 3/4" IG	0.28	59	0.31	59
57	041 / Clear w/ 90% Argon - 5m - 3/4" IG	0.30	56	0.33	56

		Triple Glazed Super Spacer			
		No Grids		*Grids*	
	Option Description	**U-Factor**	**CR**	**U-Factor**	**CR**
58	Clear / Clear / Clear - SS - 3/4" IG	0.39	52	-	-
59	027 / Clear / Clear - SS - 3/4" IG	0.33	58	-	-
60	027 / Clear / Clear w/ 90% Argon - SS - 3/4" IG	0.29	62	-	-
61	027 / 027 / Clear - SS - 3/4" IG	0.29	61	-	-
62	027 / 027 / Clear w/ 90% Argon - SS - 3/4" IG	0.25	66	-	-

U-Factor / CR

145.000 PW

	Option Description	Super Spacer Foam Filled			
		No Grids		Grids	
		U-Factor	CR	U-Factor	CR
63	035 / Clear w/ 90% Argon- SS,DS - 3/4" IG	0.26	61	0.28	61
64	035 / Clear w/ 90% Argon - 5m - 3/4" IG	0.27	57	0.31	57
65	027 / Clear w/ 90% Argon - SS,DS - 3/4" IG	0.26	61	0.28	61
66	027 / Clear w/ 90% Argon - 5m - 3/4" IG	0.27	57	0.31	57

Notes :

1. All options available with bronze and grey tints on exterior surface.
2. "5m" stands for 3/16" glass thickness
3. Low-E's used:
   - 0.035 = PPG Solarban 60
   - 0.041 = Cardinal E172
   - 0.027 = Guardian RLE 71/38
   - 0.204 = AFG Comfort E2
   - 0.154 = LOF Advantage
   - 0.044 = Guardian PPII

SHGC/VT

143.000 PW

		SHGC			VT		
	Option Description	**No Grids**	**<1**	**>1**	**No Grids**	**<1**	**>1**
1	Clear / Clear - SS,DS	0.65	0.58	0.52	0.67	0.60	0.53
2	Solar Bronze / Clear - SS,DS	0.52	0.47	0.42	0.50	0.44	0.39
3	Solar Gray / Clear - SS,DS	0.48	0.43	0.39	0.45	0.40	0.36
4	Clear / Clear - 5m	0.62	0.56	0.50	0.66	0.59	0.52
5	Solar Bronze / Clear - 5m	0.46	0.42	0.37	0.43	0.38	0.34
6	Solar Gray / Clear - 5m	0.42	0.38	0.34	0.37	0.33	0.29
7	035 / Clear - SS,DS	0.32	0.29	0.26	0.59	0.53	0.47
8	Clear / 035 - SS,DS	0.38	0.35	0.31	0.59	0.53	0.47
9	Solar Bronze / 035 - SS,DS	0.31	0.28	0.25	0.44	0.39	0.35
10	Solar Gray / 035 - SS,DS	0.29	0.26	0.24	0.40	0.35	0.31
11	035 / Clear - 5m	0.32	0.29	0.26	0.58	0.52	0.46
12	Clear / 035 - 5m	0.37	0.34	0.30	0.58	0.52	0.46
13	Solar Bronze / 035 - 5m	0.28	0.26	0.23	0.38	0.34	0.30
14	Solar Gray / 035 - 5m	0.26	0.24	0.21	0.33	0.29	0.26
15	041 / Clear - SS,DS	0.34	0.31	0.28	0.59	0.53	0.47
16	Clear / 041 - SS,DS	0.41	0.37	0.33	0.59	0.53	0.47
17	Solar Bronze / 041 - SS,DS	0.33	0.30	0.27	0.44	0.39	0.35
18	Solar Gray / 041 - SS,DS	0.31	0.28	0.25	0.39	0.35	0.31
19	041 / Clear - 5m	0.34	0.31	0.28	0.58	0.52	0.46
20	Clear / 041 - 5m	0.40	0.36	0.32	0.58	0.52	0.46
21	Solar Bronze / 041 - 5m	0.30	0.27	0.24	0.38	0.34	0.30
22	Solar Gray / 041 - 5m	0.27	0.25	0.22	0.33	0.29	0.26
23	027 / Clear - SS,DS	0.32	0.29	0.26	0.58	0.52	0.46
24	Clear / 027 - SS,DS	0.40	0.36	0.32	0.58	0.52	0.46
25	Solar Bronze - 027 - SS,DS	0.32	0.29	0.26	0.43	0.38	0.34
26	Solar Gray / 027 - SS,DS	0.30	0.27	0.24	0.39	0.35	0.31
27	027 / Clear - 5m	0.32	0.29	0.26	0.57	0.51	0.45
28	Clear / 027 - 5m	0.39	0.35	0.31	0.57	0.51	0.45
29	Solar Bronze / 027 - 5m	0.29	0.26	0.24	0.37	0.33	0.30
30	Solar Gray / 027 - 5m	0.27	0.24	0.22	0.32	0.29	0.25
31	204 / Clear - 5m	0.53	0.47	0.42	0.61	0.54	0.48

SHGC/VT

143.000 PW

		SHGC			VT		
	Option Description	**No Grids**	**<1**	**>1**	**No Grids**	**<1**	**>1**
32	Clear / 204 - 5m	0.58	0.52	0.47	0.61	0.54	0.48
33	Solar Bronze / 204 - 5m	0.42	0.38	0.34	0.40	0.36	0.32
34	Solar Gray / 204 - 5m	0.38	0.34	0.31	0.34	0.31	0.27
35	154 / Clear - SS,DS	0.54	0.48	0.43	0.61	0.55	0.49
36	Clear / 154 - SS.DS	0.59	0.53	0.47	0.61	0.55	0.49
37	Solar Bronze / 154 - SS,DS	0.47	0.42	0.38	0.45	0.41	0.36
38	Solar Gray / 154 - SS,DS	0.43	0.39	0.35	0.41	0.37	0.33
39	154 / Clear - 5m	0.52	0.47	0.42	0.61	0.54	0.48
40	Clear / 154 - 5m	0.56	0.50	0.45	0.61	0.54	0.48
41	Solar Bronze / 154 - 5m	0.42	0.37	0.34	0.40	0.36	0.32
42	Solar Gray / 154 - 5m	0.37	0.34	0.30	0.34	0.31	0.27
43	044 / Clear - SS,DS	0.34	0.31	0.28	0.56	0.50	0.45
44	Clear / 044 - SS,DS	0.39	0.35	0.32	0.56	0.50	0.45
45	Solar Bronze - 044 - SS,DS	0.32	0.29	0.26	0.42	0.37	0.33
46	Solar Gray / 044 - SS,DS	0.30	0.27	0.24	0.38	0.34	0.30
47	044 / Clear - 5m	0.34	0.30	0.27	0.56	0.50	0.44
48	Clear / 044 - 5m	0.38	0.34	0.31	0.56	0.50	0.44
49	Solar Bronze / 044 - 5m	0.29	0.26	0.23	0.36	0.32	0.29
50	Solar Gray / 044 - 5m	0.26	0.24	0.22	0.31	0.28	0.25
51	Clear / Clear / Clear - SS	0.59	0.53	0.47	0.62	0.56	0.49
52	027 / Clear / Clear - SS	0.31	0.28	0.25	0.54	0.48	0.43
53	027 / 027 / Clear - SS	0.26	0.24	0.22	0.46	0.41	0.37

Notes :

1. "5m" stands for 3/16" glass thickness
3. Low-E's used:
   - 0.035 = PPG Solarban 60
   - 0.041 = Cardinal E172
   - 0.027 = Guardian RLE 71/38
   - 0.204 = AFG Comfort E2
   - 0.154 = LOF Advantage
   - 0.044 = Guardian PPII

SHGC/VT

145.000 PW

		SHGC			VT		
	Option Description	**No Grids**	**<1**	**>1**	**No Grids**	**<1**	**>1**
1	Clear / Clear - SS,DS	0.65	0.58	0.52	0.67	0.60	0.53
2	Solar Bronze / Clear - SS,DS	0.52	0.47	0.42	0.50	0.44	0.39
3	Solar Gray / Clear - SS,DS	0.48	0.43	0.39	0.45	0.40	0.36
4	Clear / Clear - 5m	0.63	0.56	0.50	0.66	0.59	0.52
5	Solar Bronze / Clear - 5m	0.46	0.42	0.37	0.43	0.38	0.34
6	Solar Gray / Clear - 5m	0.42	0.38	0.34	0.37	0.33	0.29
7	035 / Clear - SS,DS	0.32	0.29	0.26	0.59	0.53	0.47
8	Clear / 035 - SS,DS	0.38	0.35	0.31	0.59	0.53	0.47
9	Solar Bronze / 035 - SS,DS	0.31	0.28	0.25	0.44	0.39	0.35
10	Solar Gray / 035 - SS,DS	0.29	0.26	0.24	0.40	0.35	0.31
11	035 / Clear - 5m	0.32	0.29	0.26	0.58	0.52	0.46
12	Clear / 035 - 5m	0.37	0.34	0.30	0.58	0.52	0.46
13	Solar Bronze / 035 - 5m	0.28	0.26	0.23	0.38	0.34	0.30
14	Solar Gray / 035 - 5m	0.26	0.24	0.21	0.33	0.29	0.26
15	041 / Clear - SS,DS	0.34	0.31	0.28	0.59	0.53	0.47
16	Clear / 041 - SS,DS	0.41	0.37	0.33	0.59	0.53	0.47
17	Solar Bronze / 041 - SS,DS	0.33	0.30	0.27	0.44	0.39	0.35
18	Solar Gray / 041 - SS,DS	0.31	0.28	0.25	0.39	0.35	0.31
19	041 / Clear - 5m	0.34	0.31	0.28	0.58	0.52	0.46
20	Clear / 041 - 5m	0.40	0.36	0.32	0.58	0.52	0.46
21	Solar Bronze / 041 - 5m	0.30	0.27	0.24	0.38	0.34	0.30
22	Solar Gray / 041 - 5m	0.27	0.25	0.22	0.33	0.29	0.26
23	027 / Clear - SS,DS	0.32	0.29	0.26	0.58	0.52	0.46
24	Clear / 027 - SS,DS	0.40	0.36	0.32	0.58	0.52	0.46
25	Solar Bronze - 027 - SS,DS	0.32	0.29	0.26	0.43	0.38	0.34
26	Solar Gray / 027 - SS,DS	0.30	0.27	0.24	0.39	0.35	0.31
27	027 / Clear - 5m	0.32	0.29	0.26	0.57	0.51	0.45
28	Clear / 027 - 5m	0.39	0.35	0.31	0.57	0.51	0.45
29	Solar Bronze / 027 - 5m	0.29	0.26	0.24	0.37	0.33	0.30
30	Solar Gray / 027 - 5m	0.27	0.24	0.22	0.32	0.29	0.25
31	204 / Clear - 5m	0.53	0.47	0.42	0.61	0.54	0.48

SHGC/VT

145.000 PW

		SHGC			VT		
	Option Description	**No Grids**	**<1**	**>1**	**No Grids**	**<1**	**>1**
32	Clear / 204 - 5m	0.58	0.52	0.47	0.61	0.54	0.48
33	Solar Bronze / 204 - 5m	0.42	0.38	0.34	0.40	0.36	0.32
34	Solar Gray / 204 - 5m	0.38	0.34	0.31	0.34	0.31	0.27
35	154 / Clear - SS,DS	0.54	0.48	0.43	0.61	0.55	0.49
36	Clear / 154 - SS.DS	0.59	0.53	0.47	0.61	0.55	0.49
37	Solar Bronze / 154 - SS,DS	0.47	0.42	0.38	0.45	0.41	0.36
38	Solar Gray / 154 - SS,DS	0.43	0.39	0.35	0.41	0.37	0.33
39	154 / Clear - 5m	0.52	0.47	0.42	0.61	0.54	0.48
40	Clear / 154 - 5m	0.56	0.50	0.45	0.61	0.54	0.48
41	Solar Bronze / 154 - 5m	0.42	0.37	0.34	0.40	0.36	0.32
42	Solar Gray / 154 - 5m	0.37	0.34	0.30	0.34	0.31	0.27
43	044 / Clear - SS,DS	0.34	0.31	0.28	0.57	0.51	0.45
44	Clear / 044 - SS,DS	0.39	0.35	0.32	0.57	0.51	0.45
45	Solar Bronze - 044 - SS,DS	0.32	0.29	0.26	0.42	0.37	0.33
46	Solar Gray / 044 - SS,DS	0.29	0.27	0.24	0.38	0.34	0.30
47	044 / Clear - 5m	0.34	0.30	0.27	0.56	0.50	0.44
48	Clear / 044 - 5m	0.38	0.34	0.31	0.56	0.50	0.44
49	Solar Bronze / 044 - 5m	0.29	0.26	0.23	0.36	0.32	0.29
50	Solar Gray / 044 - 5m	0.26	0.24	0.22	0.31	0.28	0.25
51	Clear / Clear / Clear - SS	0.59	0.53	0.47	0.62	0.56	0.49
52	027 / Clear / Clear - SS	0.31	0.28	0.25	0.54	0.48	0.43
53	027 / 027 / Clear - SS	0.26	0.24	0.22	0.46	0.41	0.37

Notes :

1. "5m" stands for 3/16" glass thickness
3. Low-E's used:
   - 0.035 = PPG Solarban 60
   - 0.041 = Cardinal E172
   - 0.027 = Guardian RLE 71/38
   - 0.204 = AFG Comfort E2
   - 0.154 = LOF Advantage
   - 0.044 = Guardian PPII

This report is reissued in the name of Earthwise Group, L.L.C. through written authorization of Dayton Technologies to whom the original report was rendered. The original Dayton Report No. is 56109.01-116-45.

This simulation method does not include procedures to determine the Condensation Resistance due to either air movement through the specimen or solar radiation effects. As a consequence, the Condensation Resistance results obtained do not reflect performance which may be expected from field installations because they do not account for solar radiation, air leakage effects, and the thermal bridge effects that may occur due to the specific design and construction of the fenestration system opening. Therefore, it should be recognized that the Condensation Resistance results obtained from this simulation method are for controlled laboratory conditions and should only be used for fenestration product comparisons and as input to condensation resistance performance analyses, which also include solar, air leakage and thermal bridge effects.

Ratings included in this report are for submittal to an NFRC-licensed IA for certification purposes and are not meant to be used for labeling purposes. Only those values identified on a valid Certification Authorization Report (CAR) are to be used for labeling purposes.

Detailed drawings, simulation data disks, and a copy of this report will be retained by ATI for a period of four years. The above results are the exclusive property of the client so named herein and are applicable to the sample simulated. ATI is an NFRC accredited simulation laboratory and all simulations were conducted in full compliance with NFRC approved procedures and specifications. The NFRC procedure requires that the computational results be verified through actual test results. This report does not constitute an opinion or endorsement by this laboratory. This report may not be reproduced except in full without the approval of ATI.

For ARCHITECTURAL TESTING, INC.:

SIMULATED BY:

Eric Leitner
Simulation Technician

REVIEWED BY:

Michael J. Thoman
Director - Simulations & Thermal Testing
Simulator In Responsible Charge

EL:ssr
56109.02-116-45

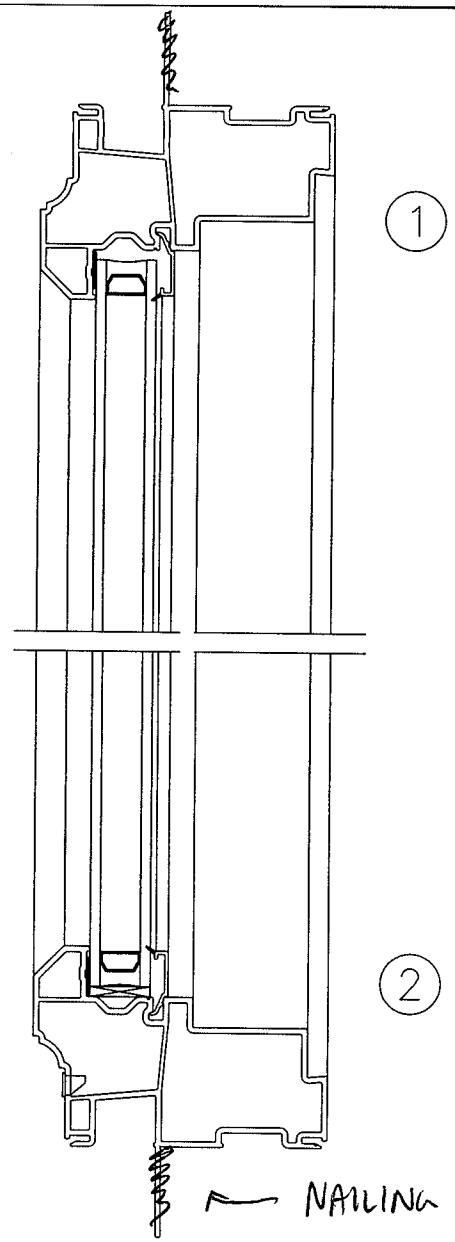
Revision Log

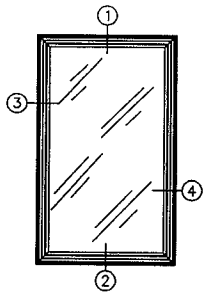
Rev. #	Date	Page(s)	Revision(s)
0	4/1/2005	All	Reissue .01 report to Earthwise Group, L.L.C. with only their glazing options
1	4/21/2005	All	Update Spectral Data to 14.1; Correct SHGC values
2	4/28/2005	Summary Pages	Correct grid info

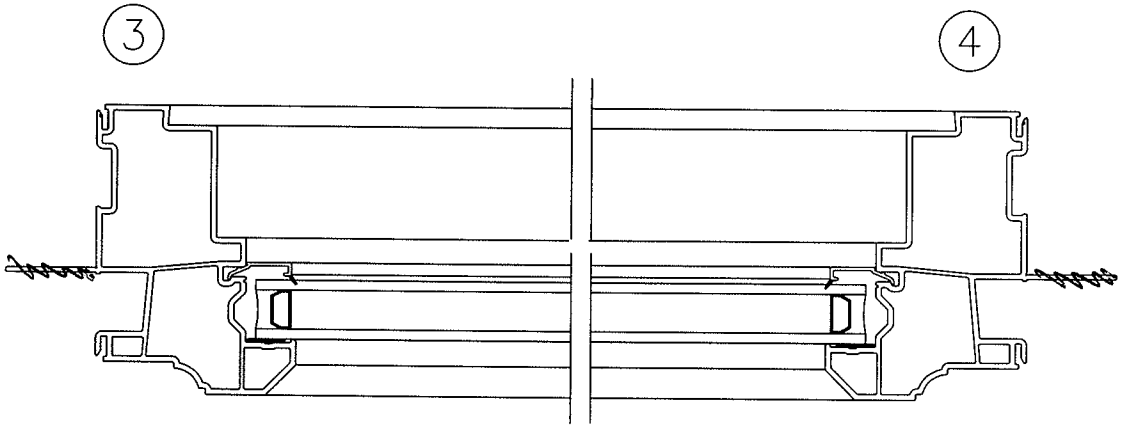
All drawings and Bills of Material used in simulating this product are enclosed in this Appendix.

APPENDIX A

REV.	DATE	DESCRIPTION	BY







NAILING FIN NOT MODELED (TYP.)

NOTES:
1. This print contains proprietary information. Do not copy without express written consent of DAYTON TECHNOLOGIES.
2. DAYTON TECHNOLOGIES reserves the right to change specifications.
3. Assembly prints are intended to be guidelines only. See detail prints for actual construction.

DAYTON TECHNOLOGIES		
MONROE, OHIO		Copyright 2000
NAME	143.000 Picture Window	
DRAWN BY	CRB	DATE 10/28/99
CHECKED BY		DATE
SCALE	1 : 1 "C"	
PART DWG. NO	143000PW	

Architectural Testing

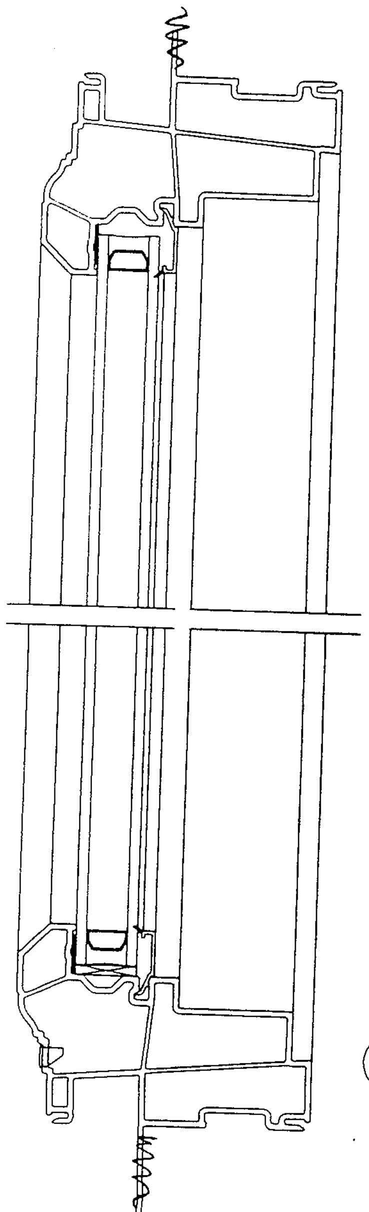
Test sample complies with these details.
Deviations are noted.

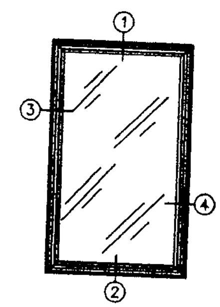
Report# 58109

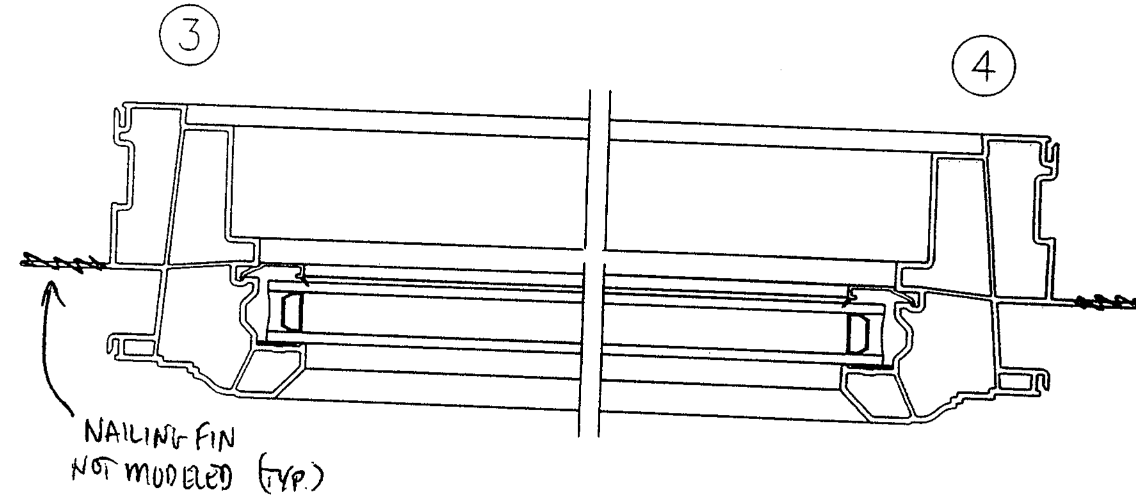
Date 3/30/05 Tech ESL

MAINTAINED. CHANGES SHALL BE
?PORATED BY THE DESIGN ACTIVITY.

REV STATUS		REVISION HISTORY			
REV	SH	REV.	DESCRIPTION	DATE	APPROVED
A	1	A	UPDATED FRAME	03/08/01	TJH
-	-				







LAYOUT DRAWING

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UNLESS OTHERWISE SPECIFIED
DIM ARE IN INCHES
TOL ON ANGLE ± 1°
2 PL: ± .01 3 PL: ± .005
INTERPRET DIM AND TOL PER
ASME Y14.5M - 1994
THIRD ANGLE PROJECTION

DESIGN BY:	CRB
DATE:	03/03/12
DRAWN BY:	CRB
DATE:	03/03/31
AUTH:	
DATE:	
FILENAME:	pd/assembly/145000PV-A...

Dayton deceuninck

NAME: 145000 PICTURE WINDOW

C DWG. NO 145000PW REV A

Architectural Testing

Te... ...with these details.
...noted.

Report# 56109

Date 3/30/05 Tech EBL

143.000 PW FRAME - BILL OF MATERIALS

ITEM NO.	DESCRIPTION	QUANTITY	PART NO.	FAB DWG. NO	SOURCE
1	HEAD	1	P8687	P8687F01	A
2	SILL	1	P8687	P8687F02	A
3	JAMB	2	P8687	P8687F01	A
4	HORIZONTAL GLAZING BEAD	2	P8127	P8127F01	A
5	VERTICAL GLAZING BEAD	2	P8127	P8127F01	A
6					
7					
8	3/4" INSULATED GLASS	1			T
9	GLAZING TAPE	AS REQ'D	SBC2150		W
10	SETTING BLOCKS (Refer to IG Supplier Guidelir	AS REQ'D	1/8" x 3/4"		
11					
12	WEEP COVER	2	97-03-00-00		R/R
13					
14	INSTALLATION PLUGS (R & R Only)	4	9946		D
15	INSTALLATION SCREWS (R & R Only)	4	#8 x 3" PPH		D
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

Rev	Date	Description	By

DAYTON TECHNOLOGIES
MONROE, OH

NAME:	143.000 PW
DWN BY:	CRB
CHKD BY:	
DWG NO:	143000PW
	8/9/2000

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 56109

Date 3/30/05 Tech BL

145.000 PW FRAME - BILL OF MATERIALS

ITEM NO	DESCRIPTION	QUANTITY	PART NO.	FAB DWG. NO	SOURCE
1	HEAD	1	10008656	10008656F01	A
2	SILL	1	10008656	10008656F02	A
3	JAMB	2	10008656	10008656F01	A
4	HORIZONTAL GLAZING BEAD	2	10008127	P8127F01	A
5	VERTICAL GLAZING BEAD	2	10008127	P8127F01	A
6					
7					
8	3/4" INSULATED GLASS	1			T
9	GLAZING TAPE	AS REQ'D	SBC2150		W
10	SETTING BLOCKS (Refer to IG Supplier Guidelir	AS REQ'D	1/8" x 3/4"		
11					
12	WEEP COVER	2	97-03-00-00		RRR / D
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

Rev	Date	Description	By

DAYTON TECHNOLOGIES
MONROE, OH

NAME:	145.000 PW
DWN BY:	CRB
CHKD BY:	
DWG NO:	145000PW
	10/1/2003

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 56109

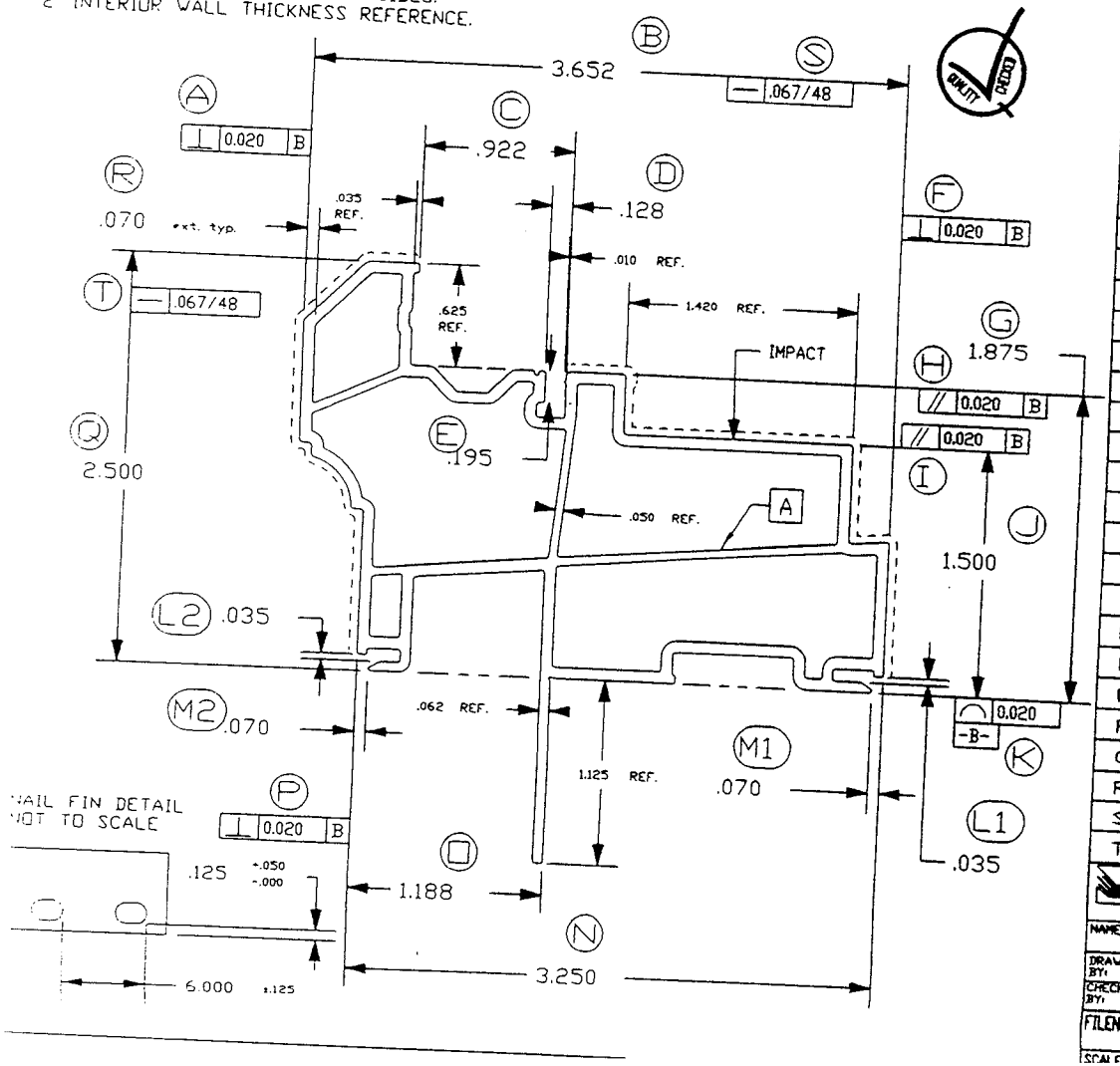
Date 3/30/05 Tech BL

ALESS OTHERVISE	THE FOLLOWING TOLERANCES APPLY		
.001 - .100	±.005	1.001 - 1.500	±.020
.101 - .500	±.010	1.501 - 2.000	±.025
.501 - 1.000	±.015	2.001 - & UP	±.030
SPECIFIED ANGLES	±1°	- WOODGRAIN SURFACES ADD .007"	
- - - - EXPOSED SURFACE		—— WOODGRAIN SURFACE	

COLOR ☒ WH ☒ DS ☐ EB ☐ ☐ OTH CREME WHITE

PART WT. (LBS/FT)	RIGID	CAP	FLEX	ALUM	STEEL	TOTAL
	.772					.772

NOTES:
1 EXTERIOR WALL THICKNESS CRITICAL: TO BE MEASURED ON ALL 4 SIDES.
2 INTERIOR WALL THICKNESS REFERENCE.



PROFILE: P8687

REVISIONS

REV	DESCRIPTION	DATE	ENG.
A	ADDED INTERNAL WALL	09/06/01	TAW

FITS WITH: P8686, P8127, P5470

IMPACT AREA: NOTED

CONTROL DIMENSIONS

DIM	METH	MIN	ENG	MAX	DIM	METH	MIN	ENG	MAX
A	V		⊥ .020 B		U				
B	V	3.630	3.652	3.690	V				
C	V	.902	.922	.942	W				
D	V	.118	.128	.138	X				
E	V	.180	.195	.205	Y				
F	V		⊥ .020 B		Z				
G	V	1.855	1.875	1.895	AA				
H	V		// 0.020 B		BB				
I	V		// 0.020 B		CC				
J	V	1.480	1.500	1.520	DD				
K	V		⌒ .020		EE				
L(2)	V	.025	.035	.045	FF				
M(2)	V	.050	.070	.090	GG				
N	V	3.220	3.250	3.280	HH				
O	V	1.168	1.188	1.208	II				
P	V		⊥ .020 B		JJ				
Q	V	2.470	2.500	2.530	KK				
R	V	.060	.070	.080	LL				
S	G		— .067/48		MM				
T	G		— .067/48		NN				

NAME: HEAD FRAME - SH (143.000 PW FRAME)

DRAWN BY: CRB DATE: 5/12/00

CHECKED BY: DATE:

FILENAME: /pd/cad/parts/10008687-A

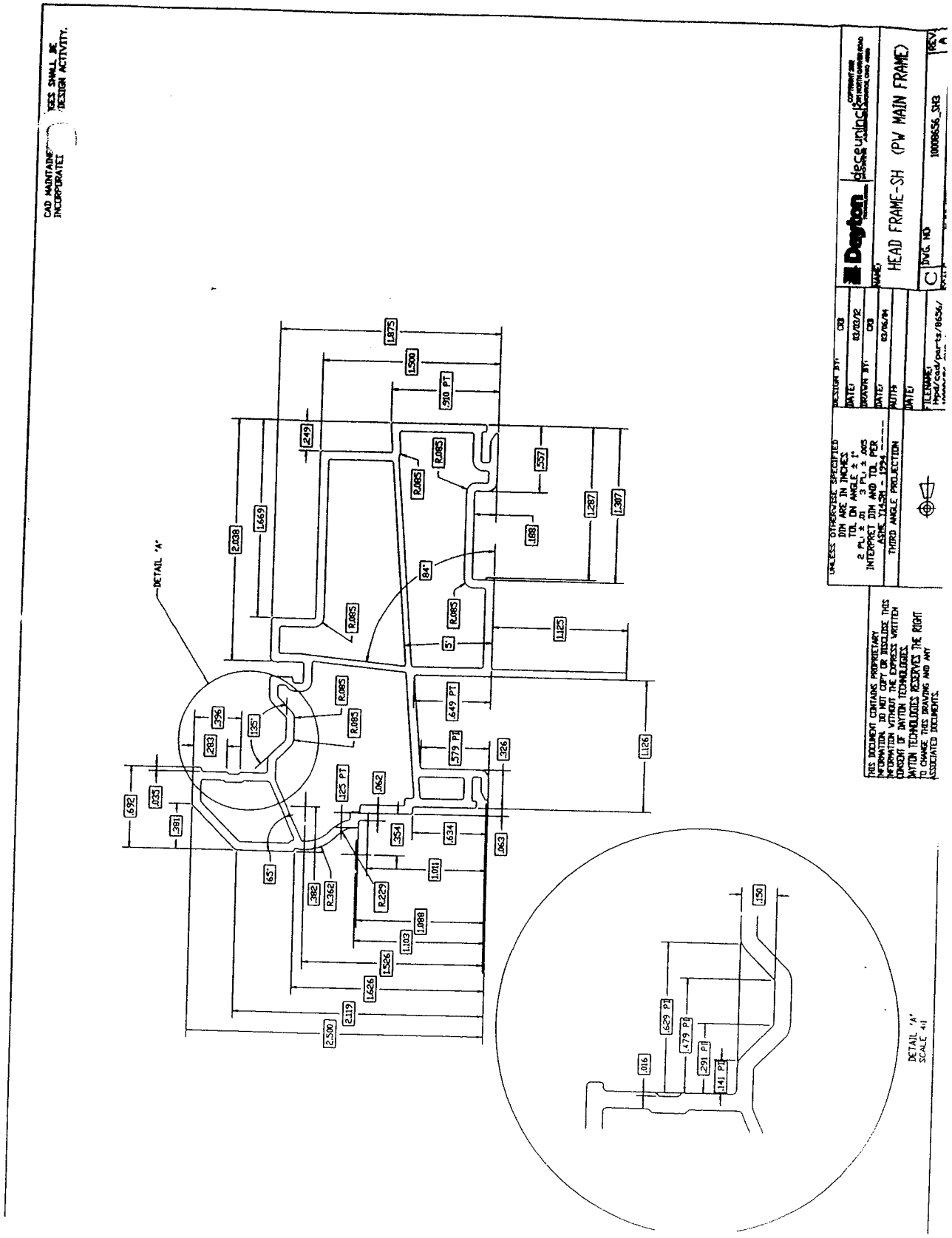
SCALE:

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 56109

Date 3/30/05 Tech BK

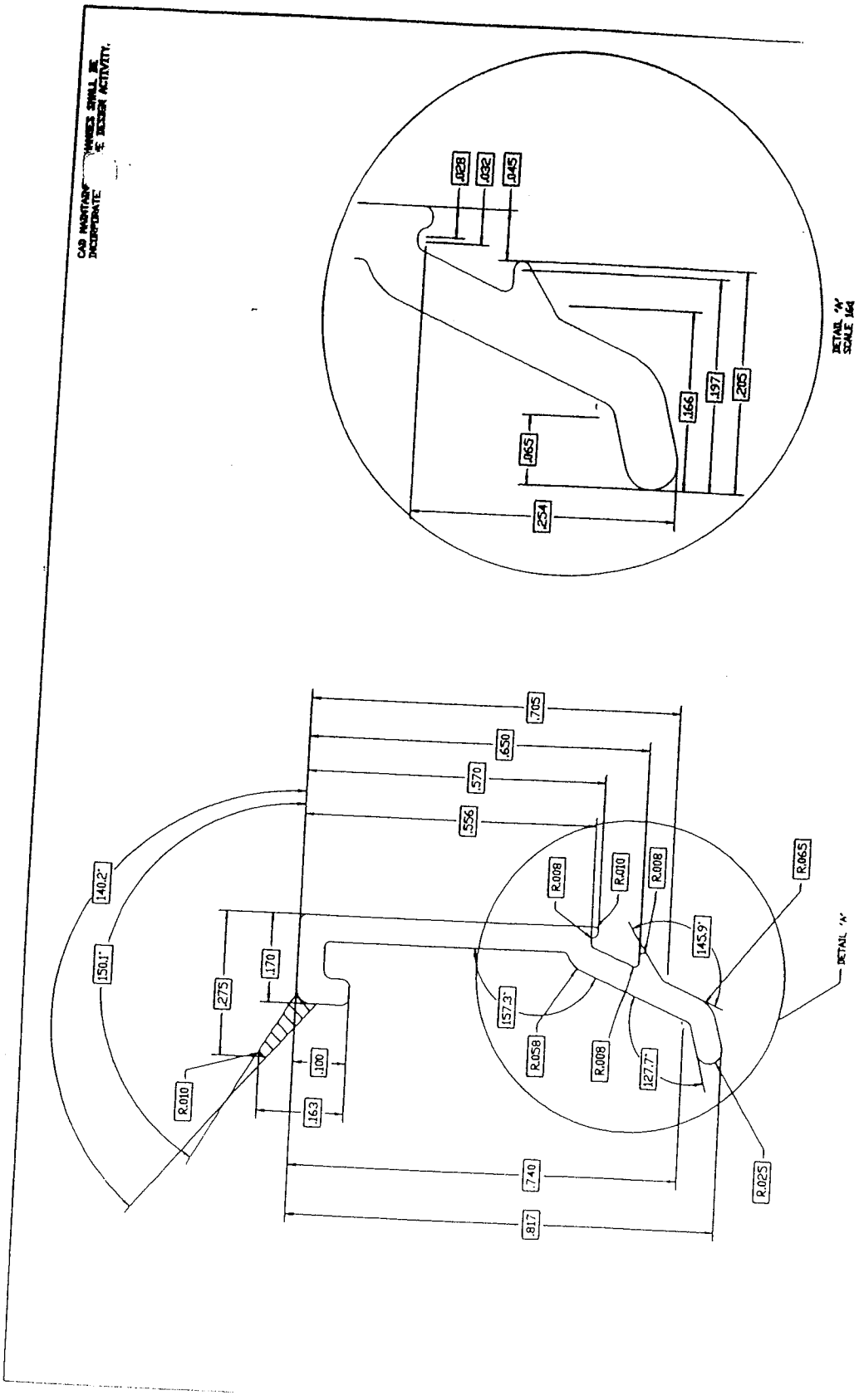


Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 56109

Date 3/30/05 Tech ESL



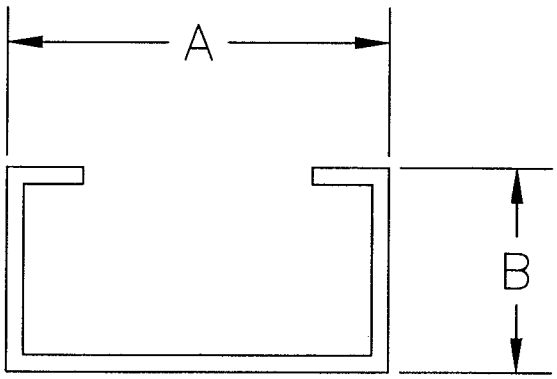
Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 56/04

Date 3/30/05 Tech BL

SPACER



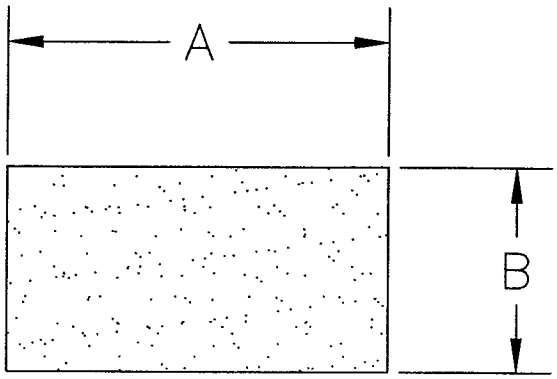
Material: STEEL
Width (A): 0.512", 0.45", 0.325"
Height (B): 0.300"
Wall Thickness: .010"

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 56109
Date 3/30/05 Tech EZ

SPACER



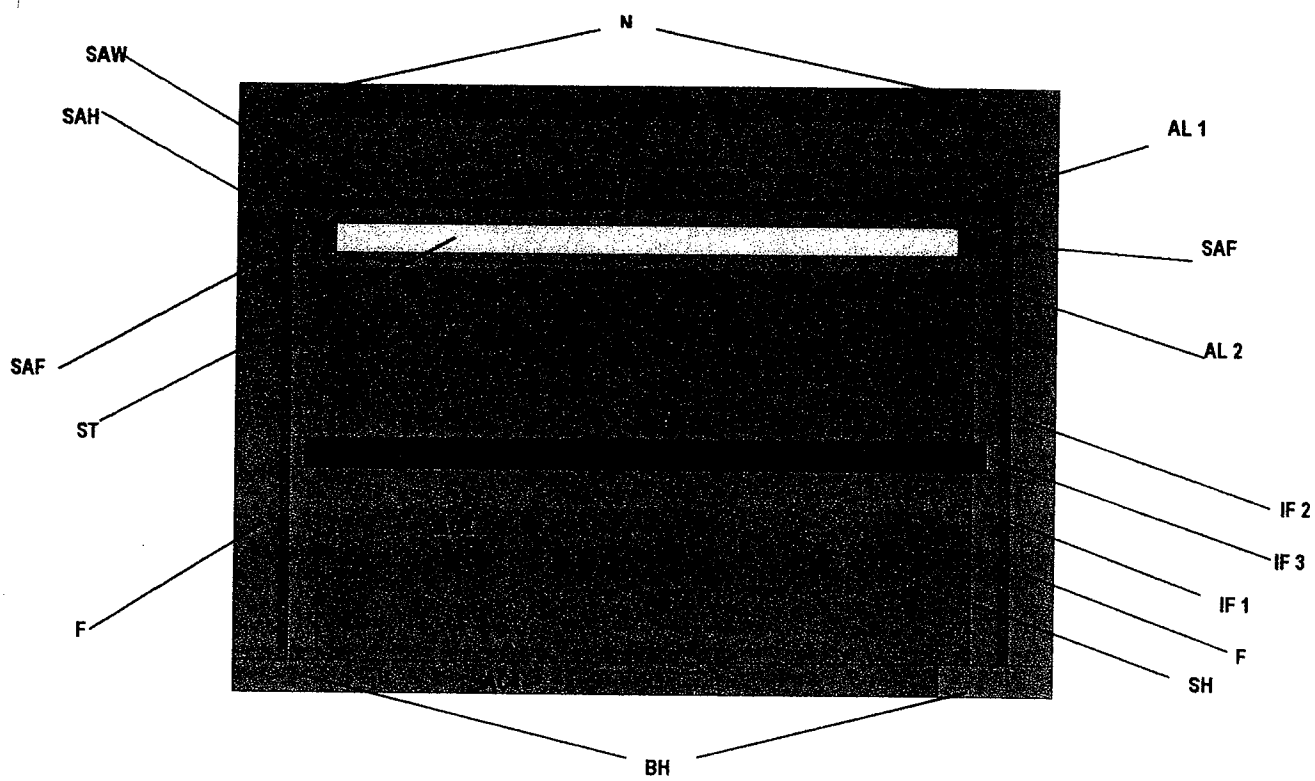
Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 5609
Date 3/30/05 Tech BL

Material: SILICONE FOAM
Width (A): 0.563, 0.500, 0.375"
Height (B): 0.188"
Wall Thickness: N/A

Legend



	Description	Material and Conductivity Imp	SI
N	71X	Butyl 1.603 Btu in/hr ft^2 °F	0.231 W/m/°C
BH	71X	Butyl 1.603 Btu in/hr ft^2 °F	0.231 W/m/°C
TL	71X	Butyl 1.603 Btu in/hr ft^2 °F	0.231 W/m/°C
SAW	Moisture vapour barrier	Default polyethylene	Default polyethylene
SAH	Moisture vapour barrier	Default polyethylene	Default polyethylene
ST	Stiffener	Polypropylene 1.53 Btu in/hr ft^2 °F	0.221 W/m/°C
SH	Shim	Default aluminum	Default aluminum
AL 1 2	Adhesive	Butyl 1.603 Btu in/hr ft^2 °F	0.231 W/m/°C
AC 1 3 4	**Default cavity**	**Default cavity**	
AC 2	**still air**	**still air – default conductivity**	**default still air***
SAF	Adhesive	Butyl 1.603 Btu in/hr ft^2 °F	0.231 W/m/°C
IF 1 2 3	Adhesive	Butyl 1.603 Btu in/hr ft^2 °F	0.231 W/m/°C
F	Adhesive	Butyl 1.603 Btu in/hr ft^2 °F	0.231 W/m/°C

*** Corrected from previous version**

If there are questions regarding this document please call

Rich Warren
Technical Service
TruSeal Technologies
416 438 1858
888 257 7610

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 56109

Date 3/30/05 Tech BL

Airspace	PROD. CODE	Imperial				Metric			
		Decimal Airspace	Bw	W	H	Decimal Airspace	Bw	W	H
3/16	18B	0.188	1.173	0.188-0.217	0.291-[illegible]	4.80	4.38	4.80-5.51	7.38-7.62
15/64	23B	0.234	0.210	0.234-0.263	0.291-[illegible]	6.00	5.64	5.94-6.45	7.38-7.62
1/4	25B	0.250	0.235	0.250-0.279	0.283-[illegible]	6.40	6.87	6.35-7.08	7.18-7.42
5/16	31B	0.313	0.298	0.313-0.342	0.283-[illegible]	7.90	7.56	7.95-8.68	7.18-7.42
11/32	34B	0.344	0.329	0.344-0.373	0.283-[illegible]	8.70	8.35	8.73-9.47	7.18-7.42
3/8	37B	0.375	0.360	0.375-0.404	0.283-[illegible]	9.50	9.14	9.53-10.26	7.18-7.42
13/32	41B	0.406	0.407	0.406-0.435	0.283-0.292	10.30	10.54	10.31-11.05	7.18-7.42
7/16	43B	0.438	0.423	0.438-0.467	0.283-0.292	11.10	10.73	11.12-11.86	7.18-7.42
15/32	47B	0.469	0.448	0.469-0.498	0.283-[illegible]	11.90	11.49	11.91-12.65	7.18-7.42
31/64	48B	0.484	0.469	0.490-0.505	0.283-[illegible]	12.30	11.43	12.11-12.93	7.18-7.42
1/2	50B	0.500	0.485	0.500-0.529	0.283-[illegible]	12.70	12.32	12.70-13.45	7.18-7.42
17/32	53B	0.531	0.515	0.531-0.560	0.291-[illegible]	13.50	13.08	13.49-14.22	7.38-7.62
9/16	56B	0.563	0.548	0.563-0.592	0.291-[illegible]	14.30	13.91	14.30-15.04	7.38-7.62
39/64	61B	0.609	0.595	0.609-0.638	0.291-[illegible]	15.50	15.24	15.47-16.21	7.38-7.62
5/8	62B	0.625	0.610	0.625-0.654	0.291-[illegible]	15.90	15.49	15.88-16.61	7.38-7.62
11/16	68B	0.688	0.672	0.688-0.717	0.291-[illegible]	17.50	17.08	17.46-18.21	7.38-7.62
13/16	81B	0.813	0.798	0.813-0.842	0.291-[illegible]	20.60	20.26	20.65-21.39	7.38-7.62
This Usage:									

GENERAL NOTES:

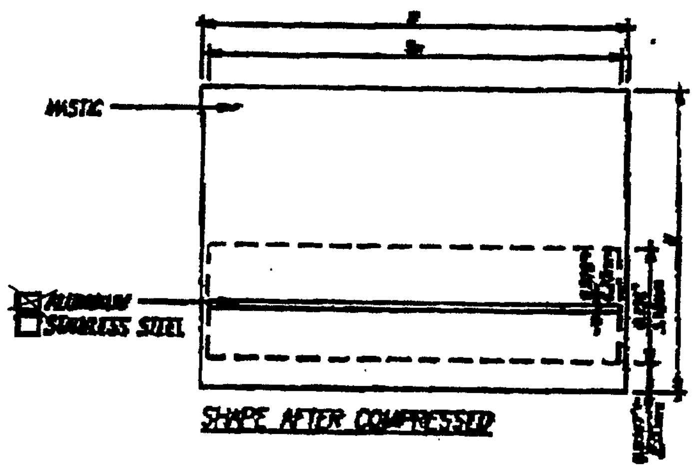
* THIS IS THE THICKNESS USED FOR MODELING.

Architectural Testing

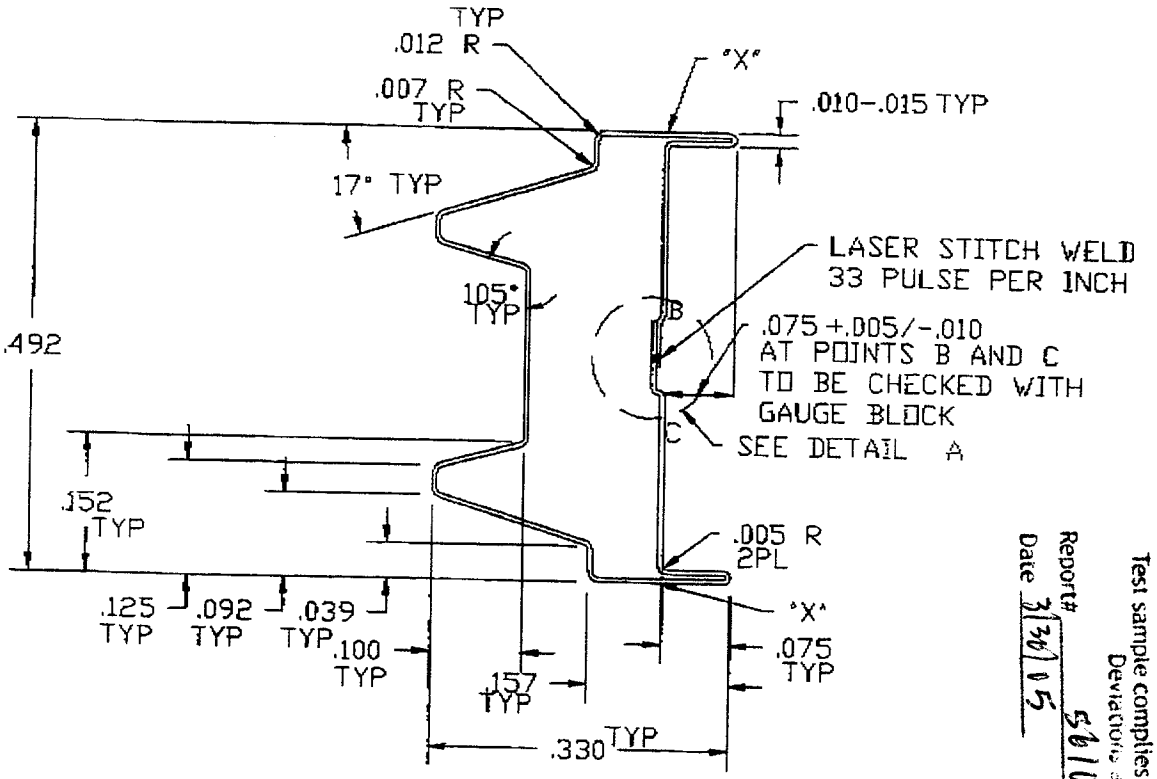
Test sample complies with these details.
Deviations are noted.

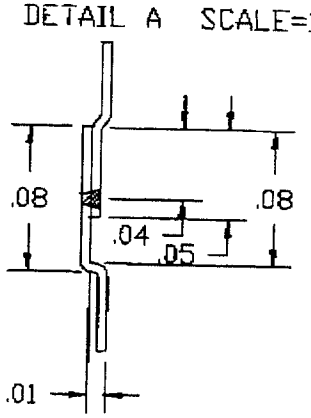
Report# 56109

Date 3/30/05 Tech BL



TRUSEAL Technologies	PROJECT NAME: SPACER LIBRARY FOR SIMULATORS	DRAWING TYPE: SWIGGLE SINGLE SEAL	DRAWN BY: E.A.E.	DATE: 29 SEPT 00	PROJECT NO.: TRU005W
			CHECKED BY: M.H.	SCALE: N.T.S.	DRAWING NO.: 1





Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 56101
Date 3/30/95
Tech. RL

NOTE:
1. MATERIAL: 201 STAINLESS STEEL, .0050 +/-.00025 WALL THICKNESS, ANNEALED TEMPER, 1 CBA FINISH.
2. LASER STITCH WELD 33 PULSE PER INCH, NO EXTERIOR FLASH, NO THROUGH BURNS.
3. SURFACES LABELED "X" MUST BE PARALLEL TO EACH OTHER.
4. SPACER MUST BE CLEAN AND FREE OF DIRT AND OILS.

REV.	DATE	DESCRIPTION	BY
C	12/9/93	REDRAWN	VAZ
B	3/12/93	P/N WAS 30-130	VAZ
A	2/8/93	P/N WAS 130 SST U-BACK	VAZ
—	1/10/91	RELEASED	VAZ

CARDINAL IG

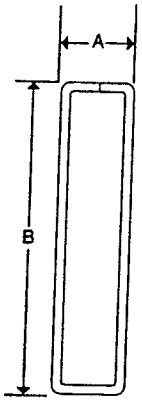
TITLE	13.0mm SST U SPACER
SCALE	5X
DATE	1/10/91
DRAWN BY	SC
APPROV	
TOLERANCES	.XXX=+/-.005
PART	33-130

ALLMETAL

ıntin Bar

Painted, Mill Finish and Anodized Aluminum

TOLERANCE
A, ± .005 .127mm
B, ± .005 .127mm



The seller hereby expressly disclaims all warranties either expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose. Products are sold "As Is" and on the condition that the purchasers shall make their own tests to determine the merchantability of such products and their fitness for any particular purpose. The liability of ALLMETAL, INC. for special, indirect or consequential damages for injury to a property for any reason or for any other loss resulting from a product defect or failure shall be limited to the purchase price of the product.

SPECIAL NOTICE
Cleaning and Handling of Muntin Bar

We recommend muntin bar to be wiped clean before installation into an insulating glass unit. A household grade liquid cleaner may be used for this purpose.

To avoid breakdown of painted surfaces, do not use M.E.K., Triethane, Alcohol or like substances for the cleaning of painted muntin bar.

When machining and processing muntin bar in your plant, keep saw tables and work areas free of saw cut filings to avoid scratching the painted surfaces.

FRACTIONAL
DECIMAL IN INCHES

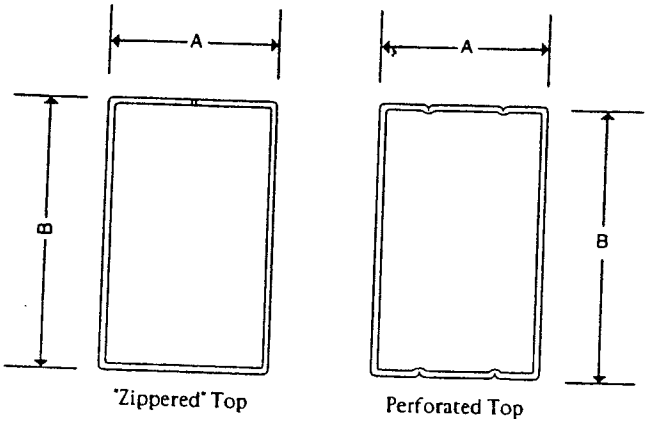
Size	A	B
3/16x1/2	.187	.500
3/16x9/16	.187	.551
3/16x5/8	.187	.630
* 3/16x.610	.187	.610
3/16x3/4	.187	.775
3/16x13/16	.187	.801
3/16x1	.187	1.000
1/4x5/16	.235	.313
1/4x9/16	.235	.562
1/4x5/8	.235	.625
1/4x3/4	.235	.765
1/4x1	.235	1.000
3/8x5/8	.325	.625
3/8x3/4	.325	.750
3/8x7/8	.325	.875
3/8x1	.325	1.000
1/2x3/4	.500	.750
1/2x1/2	.500	.500
1/2x1	.500	1.000
7/16x3/8	.425	.375
7/16x5/8	.438	.625
7/16x1	.438	1.000
5/8x5/8	.625	.625

* Available in Tutone

N ıtin Bar-ZT & PT – Laser-Welded

Mill Finish and Anodized Aluminum

TOLERANCE



Muntin Bar Profiles

FRACTIONAL
DECIMAL IN INCHES

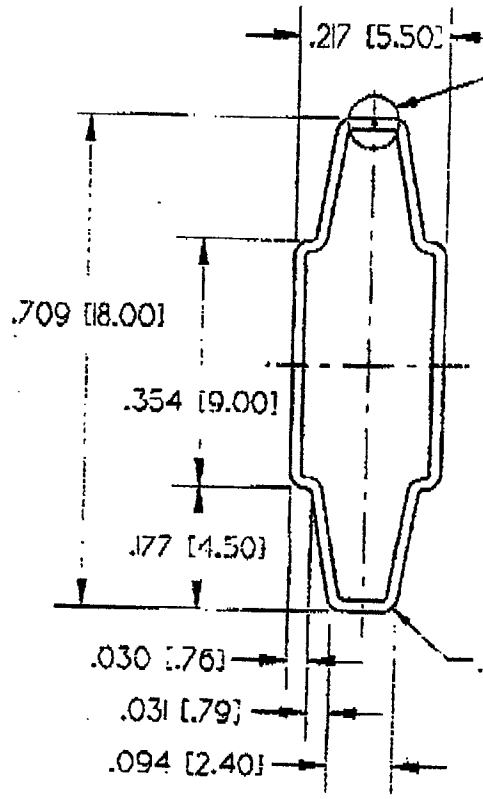
Size	A	B
.187 x .500	.187	.500
.187 x .625	.187	.625
.187 x .750	.187	.750
.187 x 1.00	.187	1.00
.235 x .500	.235	.500
.235 x .625	.235	.625
.235 x 1.00	.235	1.00
.250 x .750	.250	.750
.312 x .500	.312	.500
.312 x .625	.312	.625
.325 x .500	.325	.500
.325 x .625	.325	.625
.325 x .750	.325	.750
.325 x .875	.325	.875
.325 x 1.00	.325	1.00
.375 x .500	.375	.500
.375 x .625	.375	.625
.437 x .500	.437	.500
.500 x .500	.500	.500
.437 x .625	.437	.625
.625 x .625	.625	.625

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 56109
Date 3/30/06 Tech BS

NOTE: ALL DIMENSIONS IN [] BRACKETS ARE MM UNLESS NOTED



ACTUAL PART SIZE

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 5609

Date 3/30/05 Tech EL

11-27-00 04:34

DATE	SYM.	REVISION	AUTH.	DRN.	CK.
4/17/97		Weld note changed. Title block changed		GRM	
12/9/92		Initial Release		GRM	

ALLMETAL

TOLERANCES EXCEPT AS NOTED
DECIMAL INCHES .XX ±.01 .XXX ±.005 .XXXX ±.0002
DECIMAL MM .XX ±.13 .XXX ±.06
ANGULAR ± 1°

TITLE: 5.5 x 18mm Contour Muntin Bar (CMB)

MATL. .016" [.41mm] 3105 Aluminum

FINISH FULL RANGE (MILL, ANOD., PAINTED)

SCALE 4:1

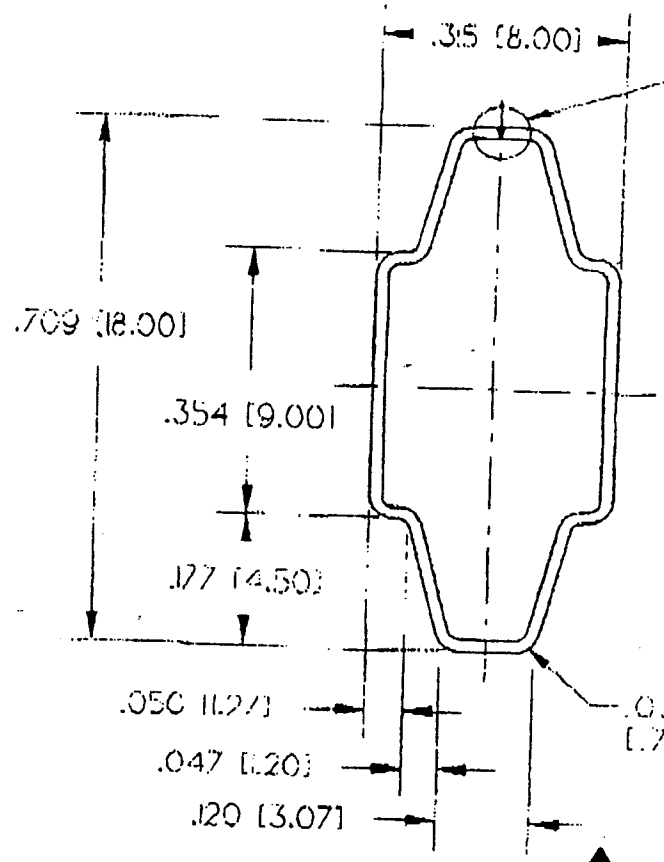
DATE 4/17/97

DWG. NO. 10203010 10XX255

DRN. BY G. Matthews
CK. BY
APPR. BY
S.O. NO.

FILENAME:CMB5518J

NOTE: ALL DIMENSIONS IN [] BRACKETS ARE MM UNLESS NOTED



ACTUAL PART SIZE

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 56109

Date 3/30/05 Tech BL

REPORT #

DATE

DRAWING

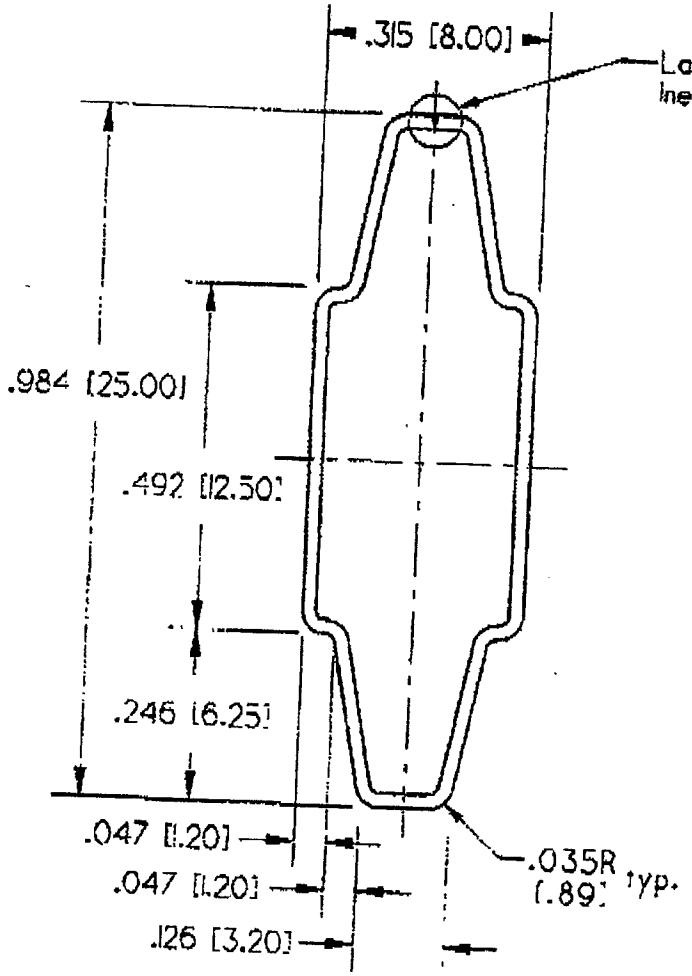
DATE	SYM.	REVISION	AUTH.	DRN.	CK.
4/17/97		Weld note changed, Title block changed		GRM	
12/9/92		Initial Release		GRM	

ALLMETAL

TOLERANCES EXCEPT AS NOTED DECIMAL INCHES .XX ±.01 .XXX ±.005 .XXXX ±.0002 DECIMAL MM .XX ±.13 .XXX ±.06 ANGULAR ± 1°	TITLE: 8 x 18mm Contour Muntin Bar (CMB)		DRN. BY G. Matthews CK. BY APPR. BY S.O. NO.
	MATL. .016" [.41mm] 3105 Aluminum	FINISH FULL RANGE (MILL, ANOD., PAINTED)	
	SCALE 4:1	DATE 4/17/97	DWG. NO. 1020301010XX280

FILENAME:CM8818J

NOTE: ALL DIMENSIONS IN [ ] BRACKETS ARE MM UNLESS NOTED



ACTUAL PART SIZE

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 56109

Date 3/30/05 Tech GL

DATE	SYM.	REVISION	AUTH.	DRN.	CK.
4/17/97		Weld note changed. Title block changed		GRM	
4/1/95		Gauge changed from .016 to .020		GRM	
12/9/92		Initial Release		GRM	

ALLMETAL

TOLERANCES EXCEPT AS NOTED
DECIMAL INCHES .XX ±.01 .XXX ±.005 .XXXX ±.0002
DECIMAL MM .XX ±.13 .XXX ±.05
ANGULAR ±1°

TITLE: 8 x 25mm Contour Muntin Bar (CMB)

MATL. .020" [.51mm] 3105 Aluminum

FINISH FULL RANGE (MILL, ANOD., PAINTED)

SCALE 4:1

DATE 4/17/97

DRG. NO. 10203010I0XX380

DRN. BY G. Matthews

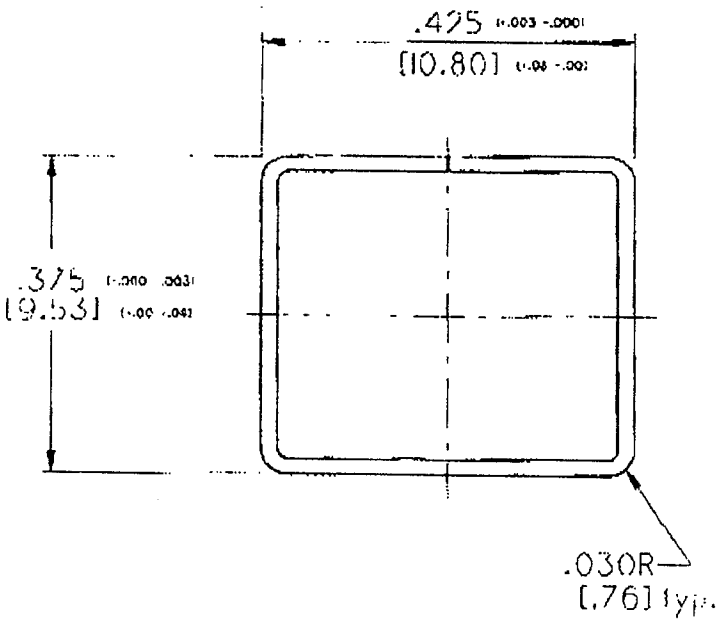
CK. BY

APPR. BY

S.O. NO.

FILENAME:CMB825J

NOTE: ALL DIMENSIONS IN [] BRACKETS ARE MM UNLESS NOTED



Architectural Testing

Test sample complies with these details. Deviations are noted.

Report# 56109

Date 3/30/05 Tech BL

ACTUAL PART SIZE

DATE	SYM.	REVISION	AUTH.	DRN.	CK.

ALLMETAL

FILENAME: \MB\0185\716X38

TOLERANCES EXCEPT AS NOTED

DECIMAL INCHES .XX .XXX .XXXX ± .01 .005 .0002

DECIMAL MM .XX .XXX ± .13 .06

ANGULAR ± 1°

TITLE: 7/16 x 3/8 MB (Muntin Bar)

MATL.: .0185 [.47mm] 3105-H24 Aluminum

FINISH: ALL BUT ANODIZED

SCALE: 5:1

DATE: 11/15/01

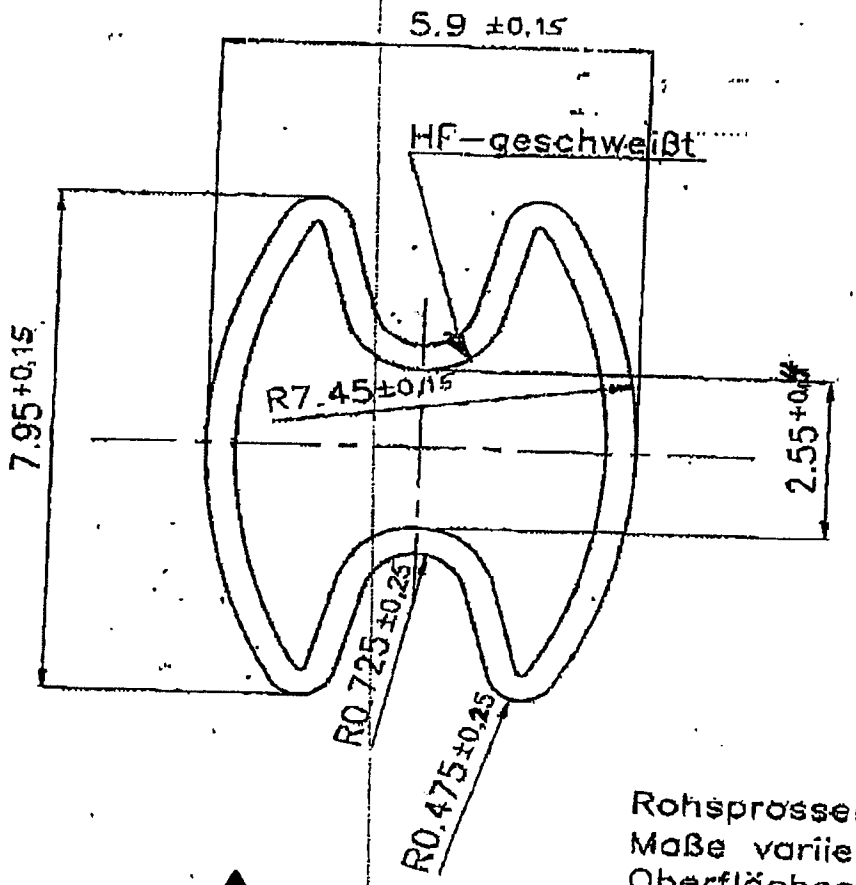
DWG. NO.: 10201080 18XX124

DRN. BY G. Matthews

CK. BY

APPR. BY

S.O. NO.



Rohsprosse!
Maße variieren je nach Oberflächenbehandlung

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 56109

Date 3/30/05 Tech BR

Verteiler: BTL
GM
Produktion
AV

Ä-Nr.	Art der Änderung	Datum	Nam	Gepr.
1	Höhe u. Breite geändert	04.07.96	Höf.	

Werkstoff: Bd 0,4 +0,04 −0,03 Al 99,85–ähnlich EN 1085/WN wahlweise EN AW–3003

	Tag	Name
1996		
Bearb.	24.01.	Hölinghoff
Gepr.		

Helmut Lingemann GmbH & Co. Aluminium–Preß und Walzwerk Am Deckershäuschen 62 42111 Wuppertal

Maßstab: 10:1

Benennung: Einbausprosse, geschweißt

Maße ohne Tol.–Angabe: DIN 7168–m

Zeichnungsnummer: KP 8x1,5G

Ersatz für: KP8 0x1,5G Ä1

Ersetzt durch:

Sach–Nr. 1