

**ANSI/AAMA/NWWDA 101/I.S.2-97
TEST REPORT**

Rendered to:

DECEUNINCK NORTH AMERICA, LLC

**SERIES/MODEL: 3100 Sashlite
PRODUCT TYPE: PVC Sliding Glass Door**

Title	Summary of Results
Rating	SGD-R30 96 x 80
Operating Force	18 lbf max.
Air Infiltration	0.13 cfm/ft ²
Water Resistance Test Pressure	4.5 psf
Uniform Load Structural Test Pressure	±45.0 psf
Forced Entry Resistance	Grade 10

Reference should be made to ATI Report No. 61565.01-122-47 for complete test specimen description and data.

ANSI/AAMA/NWWDA 101/I.S.2-97 TEST REPORT

Rendered to:

DECEUNINCK NORTH AMERICA, LLC
351 North Garver Road
Monroe, Ohio 45050

Report No.: 61565.01-122-47
Test Date: 12/13/05
And: 12/14/05
Report Date: 02/23/06
Expiration Date: 12/14/09

Project Summary: Architectural Testing, Inc. (ATI) was contracted by Deceuninck North America, LLC to witness testing on a Series/Model 3100 Sashlite, PVC sliding glass door at the Deceuninck test facility in Oakland, New Jersey. The sample tested successfully met the performance requirements for a SGD-R30 96 x 80 rating. Test specimen description and results are reported herein.

Test Specification: The test specimen was evaluated in accordance with ANSI/AAMA/NWWDA 101/I.S.2-97, *Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors*.

Test Specimen Description:

Series/Model: 3100 Sashlite

Product Type: PVC Sliding Glass Door

Overall Size: 7' 11-3/4" wide by 6' 7-1/2" high

Panel Size (2): 3' 11-3/4" wide by 6' 5" high

Daylight Opening Size: 3' 6-7/8" wide by 6' 0-1/8" high

Screen Size: 3' 11-5/8" wide by 6' 5-3/4" high

Overall Area: 52.9 ft²

Finish: All vinyl was white.

Test Specimen Description: (Continued)

Glazing Details: Both the operable and fixed lites were glazed with two sheets of 1/8" thick clear, tempered glass in a Sashlite configuration. Each piece of glass was set against a bed of Sashseal glaze on a glazing tower extruded with the panel members and was secured with snap-fit vinyl glazing beads.

Weatherstripping:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
0.210" high by 0.187" backed polypile with center fin	4 Rows	Interior and exterior track around perimeter
1" by 1" by 0.410" high polypile dust plug	2	Ends of interlock on fixed meeting stiles

Frame Construction: The frame was constructed of extruded vinyl with mitered and welded corners. The fixed panel was secured to the frame with #8 x 1-1/2" long screws through the jamb stile into the frame jamb located 12" from the sill and 12" on center.

Panel Construction: The panel was constructed of extruded vinyl with mitered and welded corners.

Screen Construction: The screen frame was constructed of extruded aluminum members with mitered and plastic keyed corners. The corners were secured with two #6 x 5/8" long screws and two #8 x 1/2" screws. One of the #8 screws also secured the single roller assembly at each bottom corner. The screen mesh was secured with a flexible vinyl spline.

Hardware:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Dual metal roller assembly	2	2" from end of operable panel
Handle with sweep lock	1	38-1/2" from top of operable panel
Single metal roller assembly	2	Ends of screen bottom rail

Test Specimen Description: (Continued)

Drainage:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
1/4" high by 1" long weephole	2	3" from jamb (interior sill track)
1/4" high by 1" long weephole	2	3" from jamb (exterior sill track)
1" wide by leg height	2	3" from jamb, screen track exterior leg

Reinforcement: Aluminum reinforcement was utilized in all panel members (Part No. A031h003) in both panels.

Installation: The door was installed into a Spruce-Pine-Fir wood buck with #12 x 2" screws spaced 6" from the corners and 16" on center at the head and jambs. Blind stops were utilized on the interior and were secured with brad nails 12" on center. The exterior and interior perimeter was sealed with urethane.

Test Results: The results are tabulated as follows:

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
2.2.19.5.1	Operating Force		
	Initiate motion	20 lbf	30 lbf max.
	Maintain motion	18 lbf	20 lbf max.
2.1.2	Air Infiltration per ASTM E 283 1.57 psf (25 mph)	0.13 cfm/ft ²	0.3 cfm/ft ² max.
2.1.3	Water Resistance per ASTM E 547 (with and without screen)		See Note #2
2.1.4.1	Uniform Load Deflection per ASTM E 330		See Note #2
2.1.4.2	Uniform Load Structural per ASTM E 330		See Note #2

Note #1: *The tested specimen meets (or exceeds) the performance levels specified in ANSI/AAMA/NWDA 101/I.S.2-97 for air infiltration.*

Note #2: *The client opted to start at a pressure higher than the minimum required. Those results are listed under "Optional Performance".*

Test Results: (Continued)

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
2.2.19.5.2	Deglazing Test per ASTM E 987 In operating direction - 70 lbs		
	Lock stile	0.03"/6%	0.50"/100%
	Meeting stile	0.03"/6%	0.50"/100%
	In remaining direction - 50 lbs		
	Top rail	0.03"/6%	0.50"/100%
	Bottom rail	0.03"/6%	0.50"/100%
2.1.7	Welded Corner Test	Meets as stated	Meets as stated
2.1.8	Forced Entry Resistance per ASTM F 842		
	Type: A	Grade: 10	
A2.1	Disassembly test	No entry	No entry
A2.4.2	Test A1	No entry	No entry
A2.4.3	Test A2	No entry	No entry
A2.4.4	Test A3	No entry	No entry
A2.4.5	Test A4	No entry	No entry
A2.4.6	Test A5	No entry	No entry
A2.4.7	Test A6	No entry	No entry
A2.4.9	Lock/Panel Manipulation Test	No entry	No entry

Optional Performance

4.3	Water Resistance per ASTM E 547 (with and without screen)		
	4.5 psf	No leakage	No leakage
4.4.2	Uniform Load Structural per ASTM E 330 (Permanent sets reported were taken on the meeting stile) (Loads were held for 10 seconds)		
	45.0 psf (positive)	0.16"	0.30" max.
	45.0 psf (negative)	0.28"	0.30" max.

Detailed drawings, representative samples of the test specimen, and a copy of this report will be retained by ATI for a period of four years from the original test date. The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the above referenced specification. This report does not constitute certification of this product, which may only be granted by the certification program administrator. This report may not be reproduced, except in full, without the approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC:

Steven M. Urich, P.E.
Senior Project Engineer

Joseph A. Reed, P.E.
Director - Engineering Services/Product Testing

SMU:tla

Attachments (pages):
Appendix-A: Drawings (11)

Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
0	02/23/06	N/A	Original report issue

Appendix A

Drawings

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317B005

ASSEMBLY DRAWING 371A005

BILL OF MATERIALS & SOURCES

ITEM	NAME	SIZE	REQ	PROCESS.NO.	P/N OR MATERIAL/SOURCE	ITEM	NAME	SIZE	REQ	PROCESS.NO.	P/N OR MATERIAL/SOURCE
1	Head		1	031P002	10003121 / DNA	35	Roller Trk. Cap	8'	1		8081201/Nichols-Homesh.
2	Sill		1	031P003	10003121 / DNA	36	Rollers		2	1" Wheel	D4020S/F4312 / A-1 Components
3	Jamb		2	031P004	10003121 / DNA	37	Wstrp.Frame	0.15	A/R		15027045WHWF (for white)/Amesbury
4	Jamb Filler	6"	3		10003105 / DNA	38	Wrstrp. Sash	0.250	A/R		25027045WHWF (for white)/Amesbury
5	Sill Filler		1	031P020	10003105 / DNA	39	Draft Plug	1 1/4" x 1 3/8" sq.	2		P5035W 1-1/4"long / Ultrafab
6	Door Track		1	031P021	10003106 / DNA	40	Setting Blocks		A/R		
7	Screen Track		1	031P010	10003107 / DNA	41	Plug Buttons	3/8"	12		9946/Ashland
8	Sill Cover		2	031P038	10003104 / DNA	42	GLASS	1/8"	4		
9	Door stop		2	031P084	10003104 / DNA	43	Silicone Glazing		A/R		Silglaze II SCS2811-D1/GE; Pecora 896
10	Moving Panel:					44	DESICCANT MATRIX		A/R		
11	Lock Stile		1	031P132	10003175 / DNA	45	ADHESIVE		A/R		
12	Interlock Rail		1	031P135	10003176 / DNA	46	Optional Item:		A/R		
13	Top Rail		1	031P133	10003175 / DNA	47	Rollers		2	1" Wheel	S3792SSS / A-1 Components
14	Bottom Rail		1	031P133	10003175 / DNA	48	Misc. Screws:				
15						49	Installation	#12 x 3"	18		Phil Fl.Hd.wood 4/10 SS
16	Fixed Panel:					50	Fix.Pan.to jamb	#8A x 3/4"	4		Phil Pan Hd. - painted
17	Side Rail		1	031P135	10003175 / DNA	51	Rollers	#8A x 1/2"	4		Phil Pan Hd. 410SS
18	Interlock Rail		1	031P135	10003176 / DNA	52	Alum. to panel	#8A x 1"	12		Phil Flt. Hd. 410SS
19	Top Rail		1	031P133	10003175 / DNA	53	Draft Plug	#6A x 1/2"	4		Phil F Hd paint, self thread.
20	Bottom Rail		1	031P133	10003175 / DNA	54	Interlock 3110	#8A x 1/2"	A/R		Phil Pan Hd. 410SS
21						55					
22	Glazing Stop		8	031P136	10003177 / DNA	56	Cor.Gasket Frame		2		G-A306-L1-G143/H-O Prod.
23	Aluminum Insert		1	031P011	S20214/Keymark/Lock Rail	57	Cor.Gasket Nail Fin		2		G-A302-L1-G144/H-O Prod.
24	Aluminum Insert		A/R	031P018	Top/Bottom Rails	58					
25						59					
26	Handle Set		1		756 / Sash Controls	60					
27	Outside Pull		1		684 / Sash Controls	61					
28	Inside Pull		1		2057 / Sash Controls	62	Lock Screws:				
29	Keeper		1		2315 / Sash Controls	63	Lock screws	FH #10x1.750	2	10/15/05	Phil Pan Hd. 410SS
30	Keeper Shim		1		1947 / Sash Controls	64	Keeper screws	PH #10x0.625	2	2/23/06	Phil Pan Hd. 410SS
31	Cylinder		1		288 / Sash Controls	<div style="text-align: center;"> Deceuninck® NORTH AMERICA SERIES 3100 PATIO DOOR WELDED FRAME, PANELS. 3175 SASH 2-PANEL UNIT </div>					
32	Mortise Lock		1		555 / Sash Controls						
33											
34	Roller Trk. Cap		6'		8081069/Nichols-Homesh.	<div style="text-align: right;"> <i>Rev. 10/26/04 ~CC</i> 317B005 </div>					

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 101565
Date 2/23/06

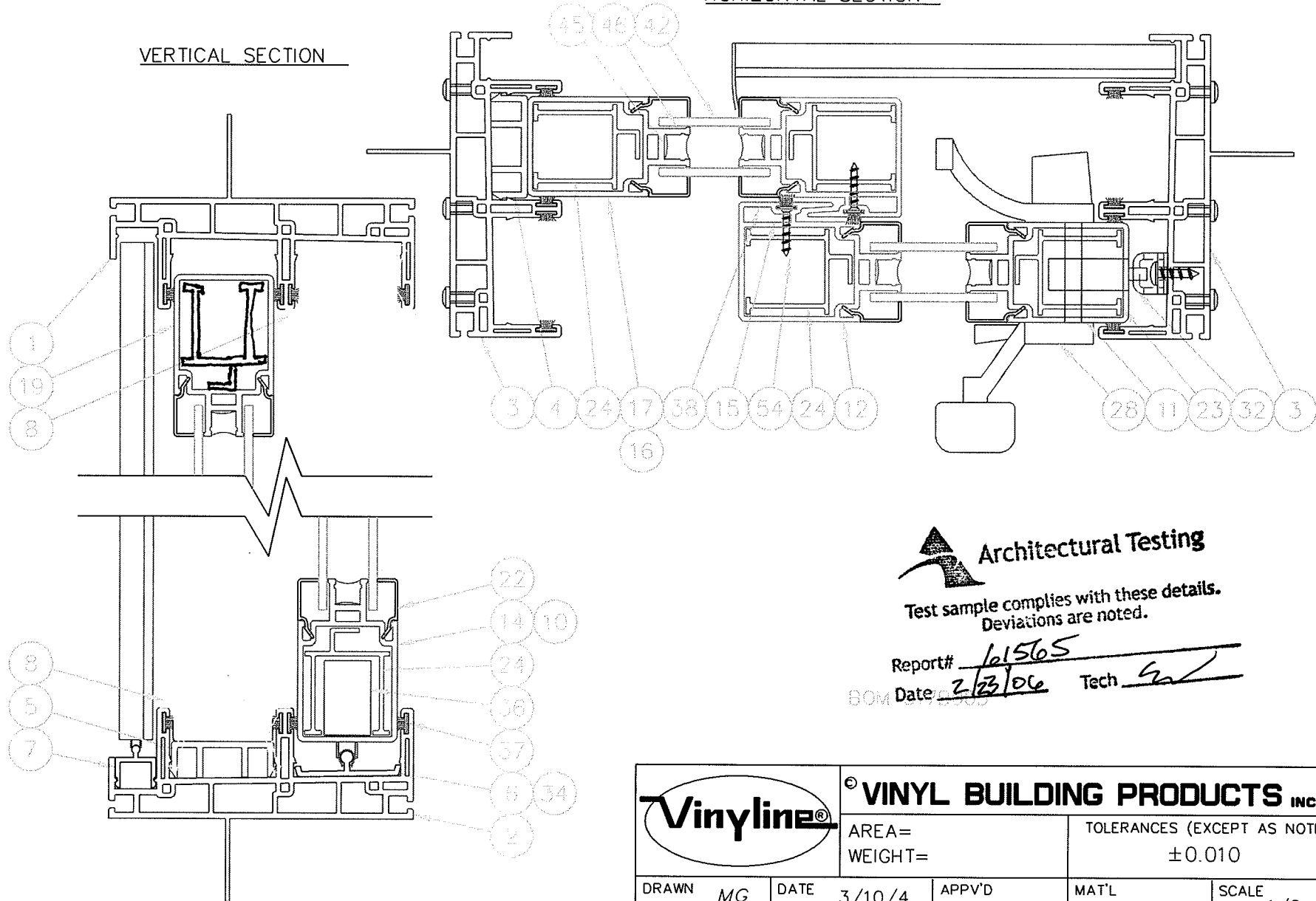
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A

317A005

HORIZONTAL SECTION

VERTICAL SECTION

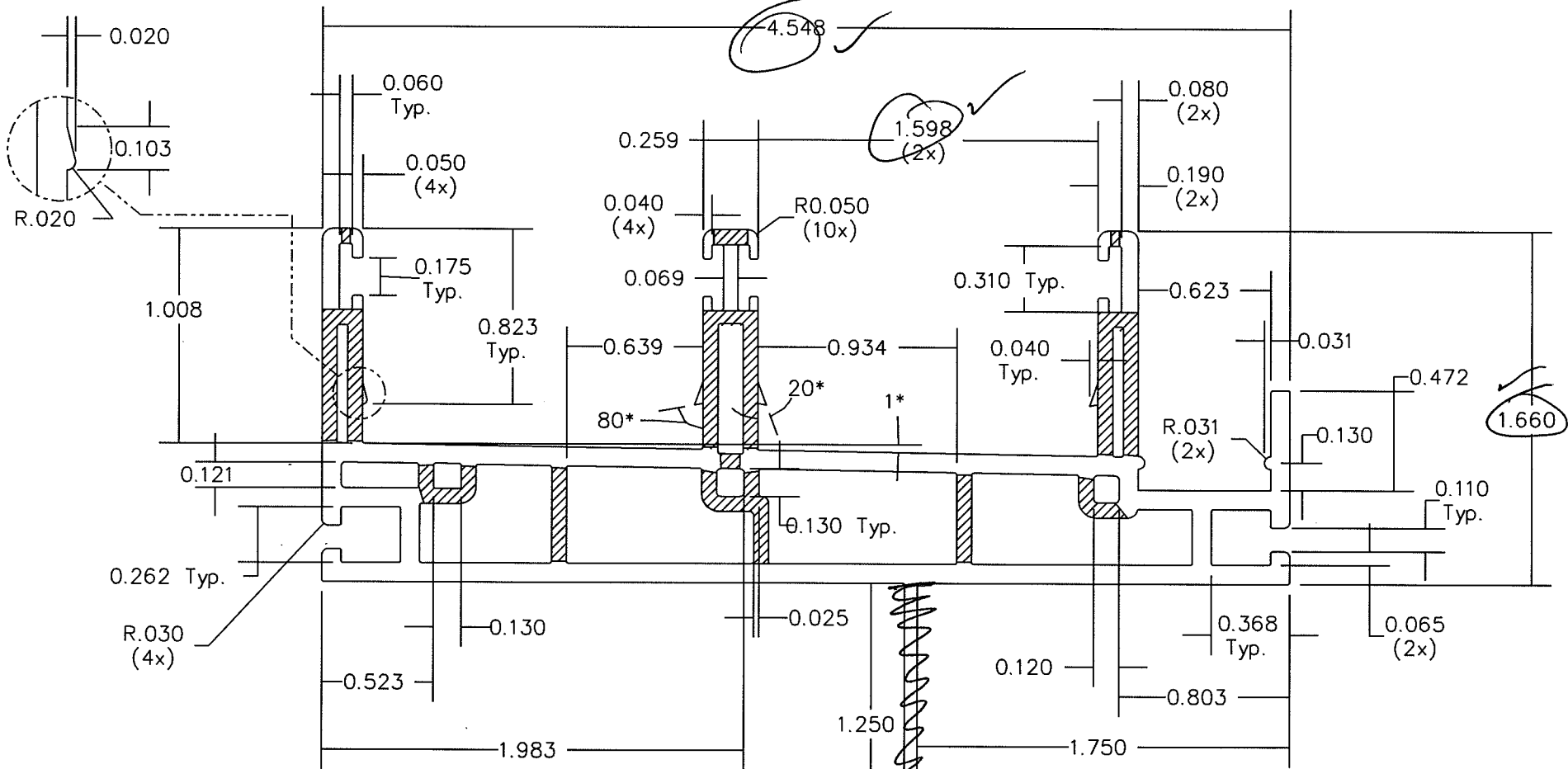


Test sample complies with these details.
Deviations are noted.

Report# 161565
BOM Date 2/23/06 Tech Gal

		© VINYL BUILDING PRODUCTS INC.		
		AREA= WEIGHT=	TOLERANCES (EXCEPT AS NOTED) ±0.010	
DRAWN MG	DATE 3/10/4	APPV'D	MAT'L	SCALE 1/2
3100 PATIO DOOR 3175 SASH & 3176 INTERLOCK			317A005	

A	AL		4/29/04	UPDATED DWG WITH REV. B INTERLOCK
REV	BY	APPV'D	DATE	CHANGE



NOTES:

1. WALL THICKNESS:



2. UNSPECIFIED RADII ARE 0.010



Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 61565
Date 2/23/06 Tech SW



Deceuninck® NORTH AMERICA/Oakland NJ.

AREA= 1.687 sq in. TOTAL WEIGHT= 1.067 lb/ft. TOL: ± 0.010

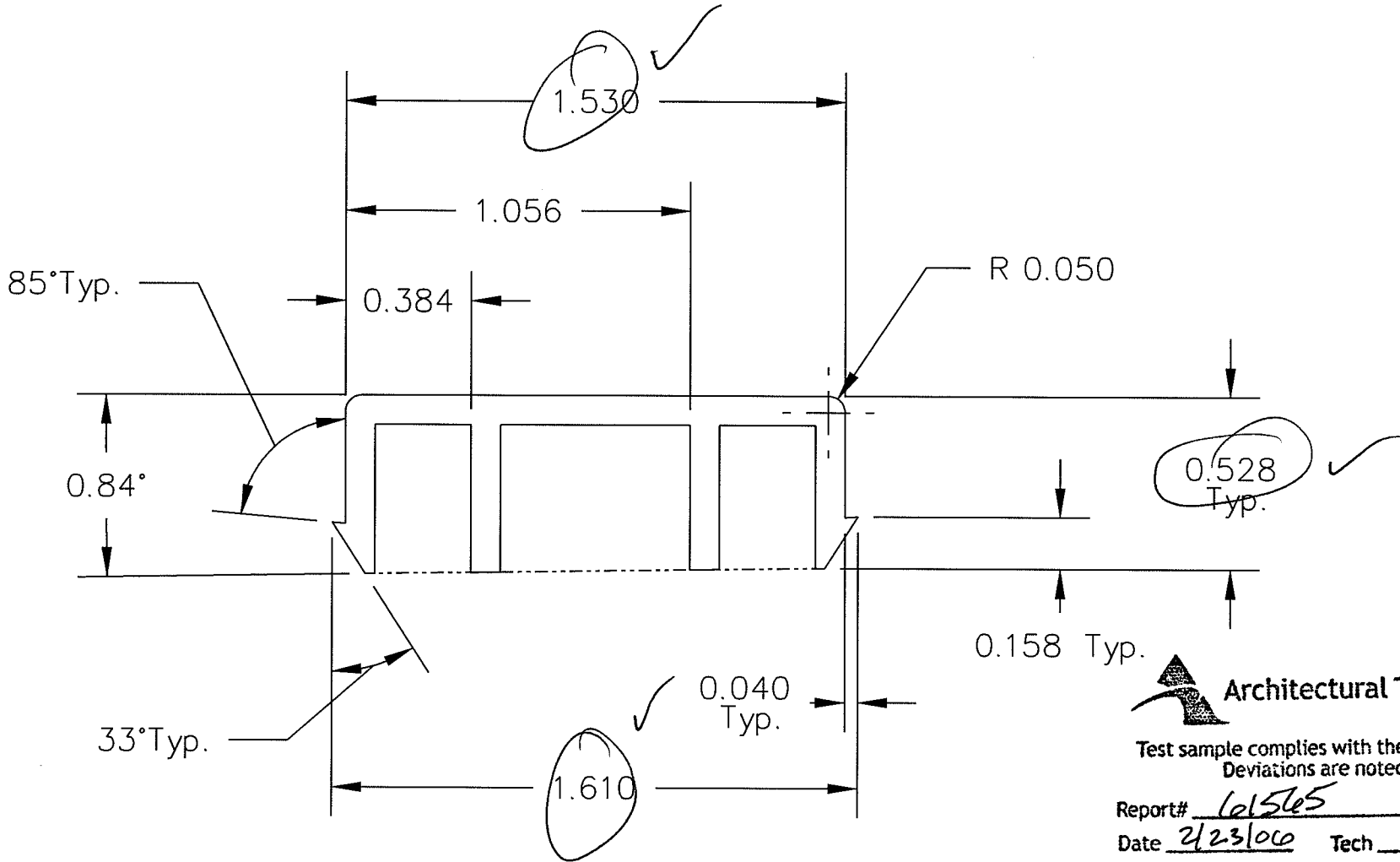
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BY CTC	DATE 9/19/05	MATL PVC	SCALE 4:3
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FRAME


10003121

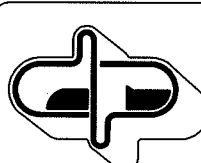
REV	BY	APP'VD	DATE	CHANGE



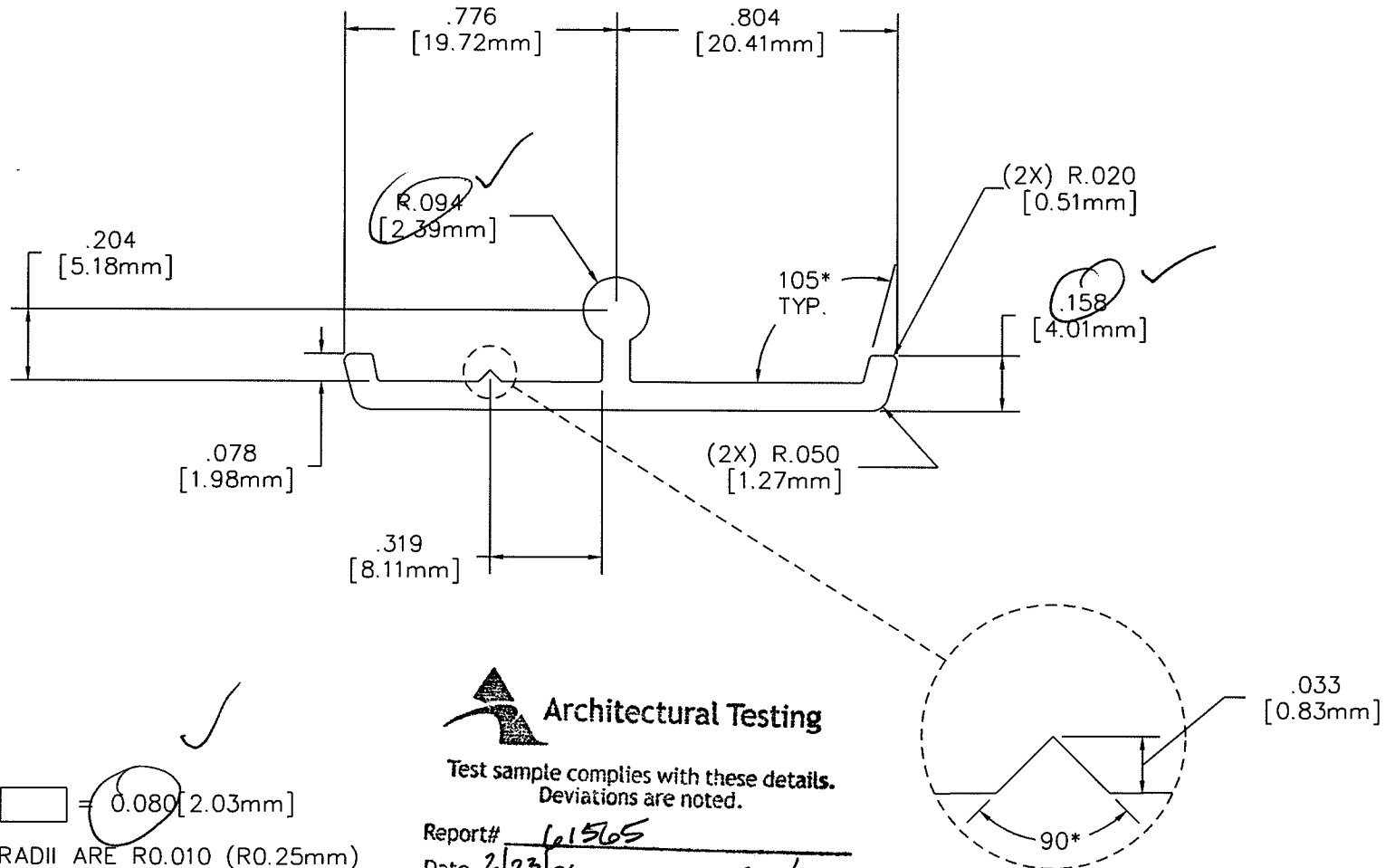
Architectural Testing
 Test sample complies with these details.
 Deviations are noted.
 Report# 161565
 Date 2/23/00 Tech SW

NOTES:

(1) WALL THICKNESS
 = 0.090

 deceuninck		Deceuninck® NORTH AMERICA/Oakland NJ.	
		AREA= .295 sq in. TOTAL WEIGHT= .186 lb/ft.	TOL: ± 0.010
FILENAME: path			
BY CTC	DATE 8/31/05	MATL PVC	SCALE 2:1
TRACK FILLER			10003105

REV	BY	APPV'D	DATE	CHANGE



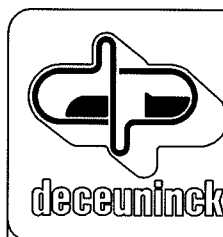
NOTES:

1: WALL THICKNESS = 0.080 [2.03mm]

2: ALL UNSPECIFIED RADII ARE R0.010 (R0.25mm)

Architectural Testing
 Test sample complies with these details.
 Deviations are noted.

Report# 101565
 Date 2/23/06 Tech ml



Deceuninck® NORTH AMERICA/Oakland NJ.

AREA= .1725 sq in. TOTAL WEIGHT= .109 lb/ft. TOL: ± 0.010

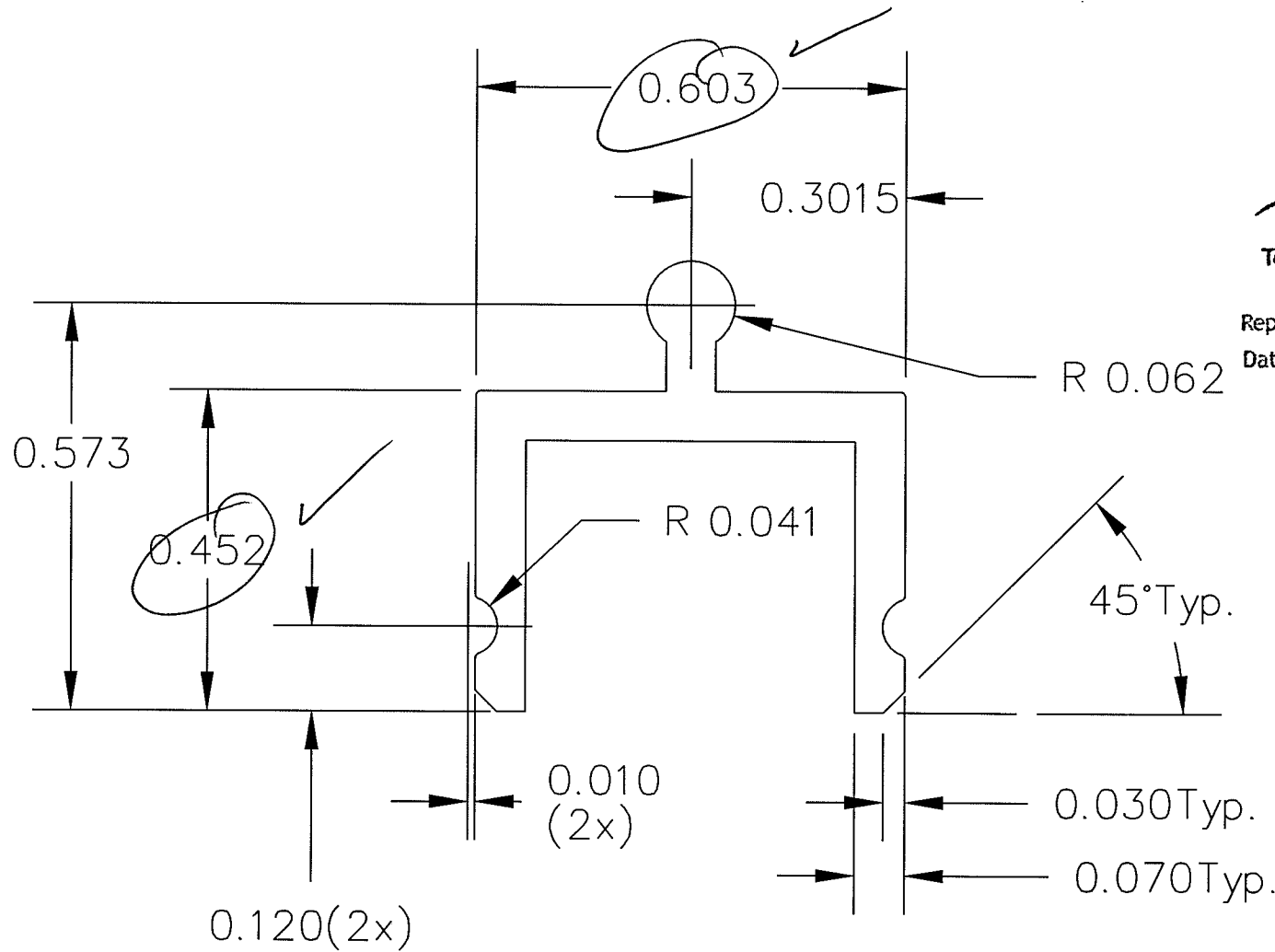
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BY CTC DATE 8/30/05 MAT'L PVC SCALE 2:1

ROLLER TRACK

10003106


REV	BY	APPV'D	DATE	CHANGE

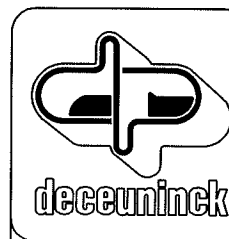


Architectural Testing
 Test sample complies with these details.
 Deviations are noted.
 Report# 61565
 Date 2/23/06 Tech SW

NOTES:

(1) WALL THICKNESS

 = 0.070



Deceuninck® NORTH AMERICA/Oakland NJ.

AREA= .107 sq in.

TOTAL WEIGHT= .068 lb/ft.

TOL:
± 0.010

FILENAME:
path

BY
CTC

DATE
8/30/05

MAT'L
PVC

SCALE
4:1

SCREEN TRACK

10003107

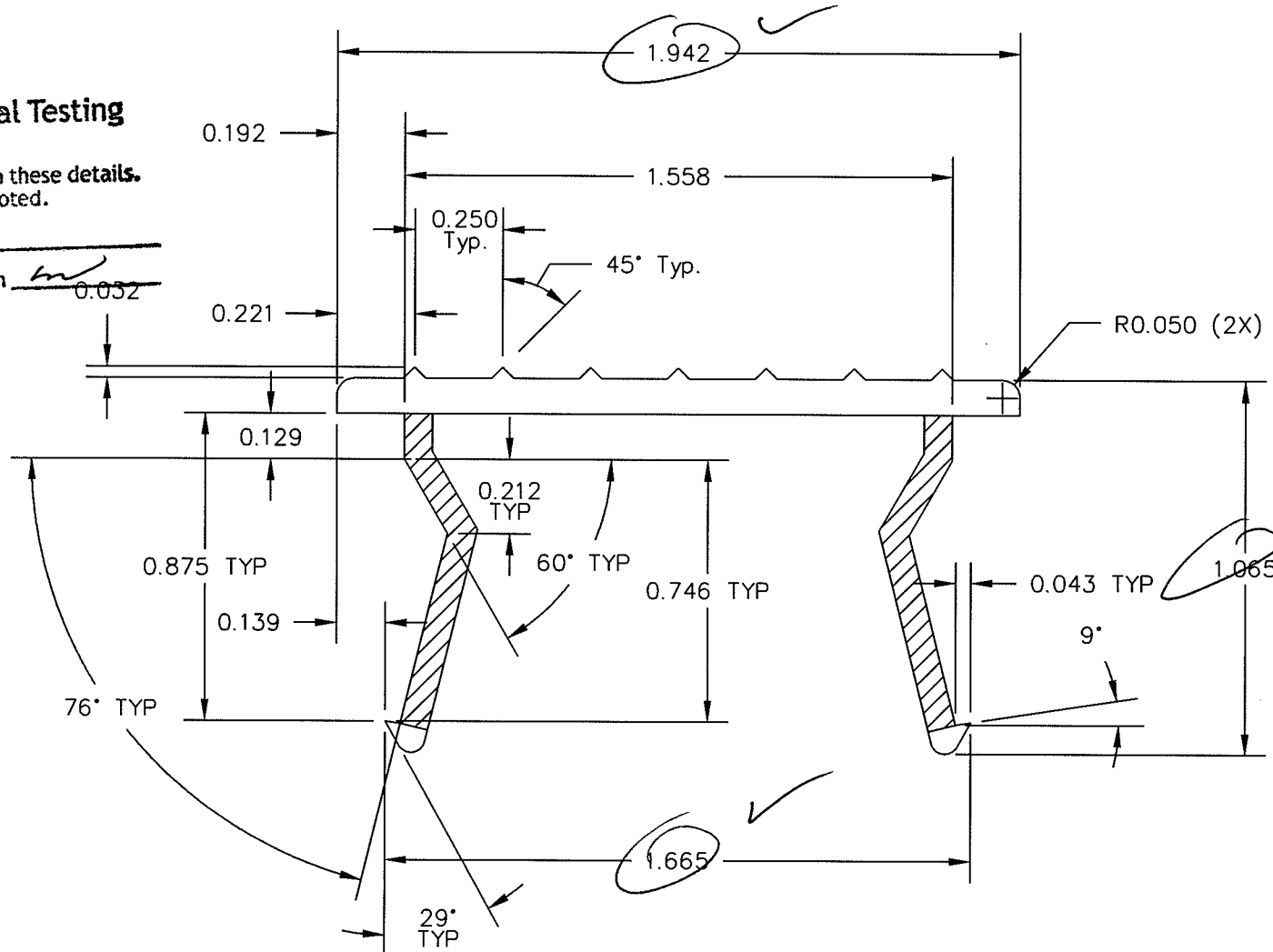
REV	BY	APP'V'D	DATE	CHANGE



Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 61505
Date 2/23/06 Tech [Signature]
0.052



NOTES:

(1) WALL THICKNESS:

= 0.100

= 0.080



Deceuninck® NORTH AMERICA/Oakland NJ.

AREA= .364 sq in.

TOTAL WEIGHT= .230 lb/ft.

TOL:
± 0.010

FILENAME:
path

BY
CTC

DATE
8/30/05

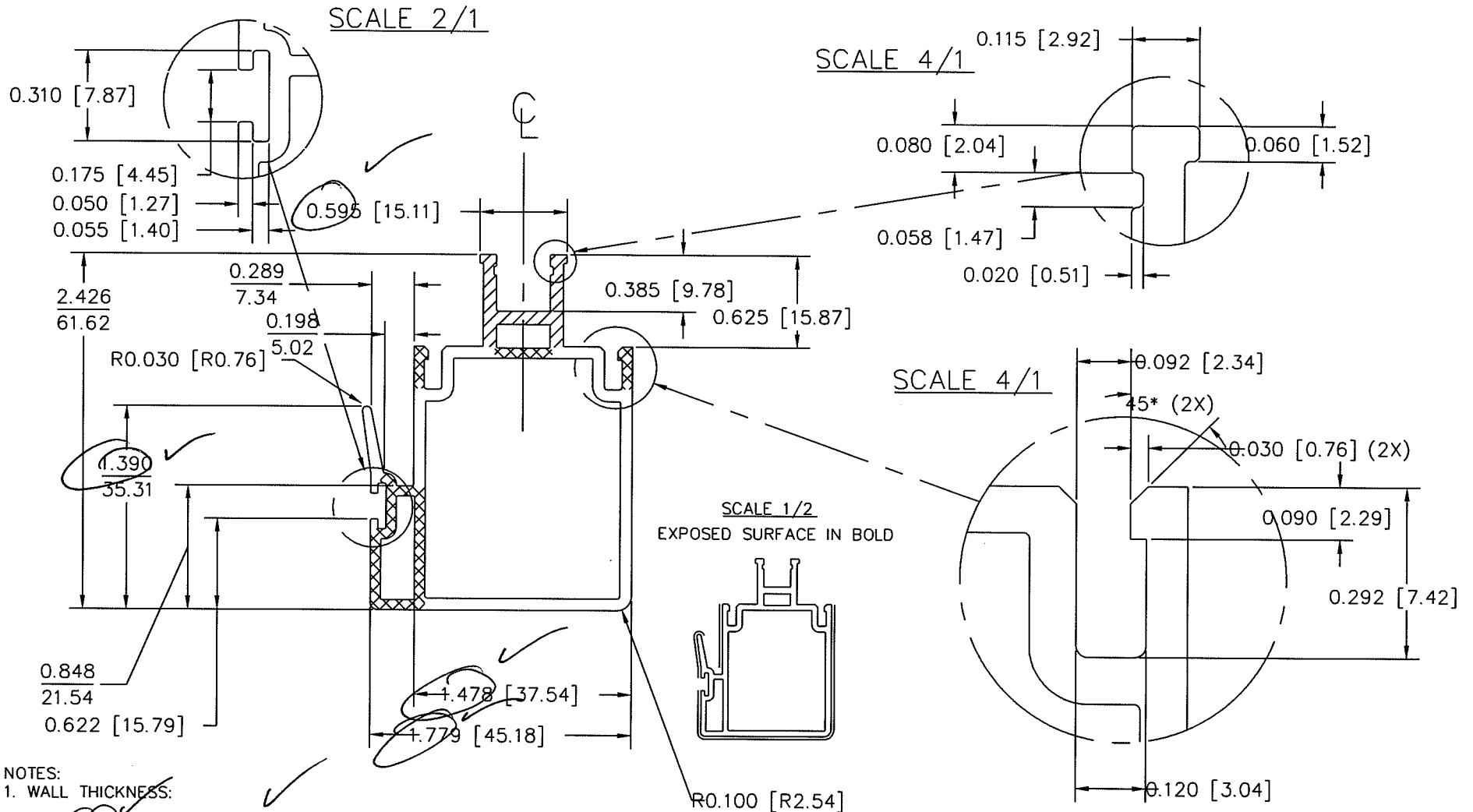
MAT'L
PVC

SCALE
2:1

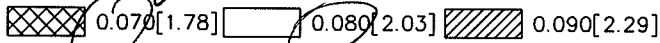
SILL COVER

10003104

REV	BY	APPV'D	DATE	CHANGE



NOTES:
1. WALL THICKNESS:



2. ALL UNSPECIFIED RADII 0.010 [0.25].
3. DIMENSIONS IN [] ARE IN MM.
4. EXPOSED SURFACE IN BOLD.



Test sample complies with these details.
Deviations are noted.

Report# 615105
Date 2/23/06 Tech lw



Deceuninck® NORTH AMERICA/Oakland NJ.

AREA= 0.815 sq.in. TOTAL WEIGHT= 0.515 lb/ft. TOL: ± 0.010

FILENAME: path

BY CTC	DATE 2/14/06	MATL PVC	SCALE 1:1
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SASHLITE INTERLOCK

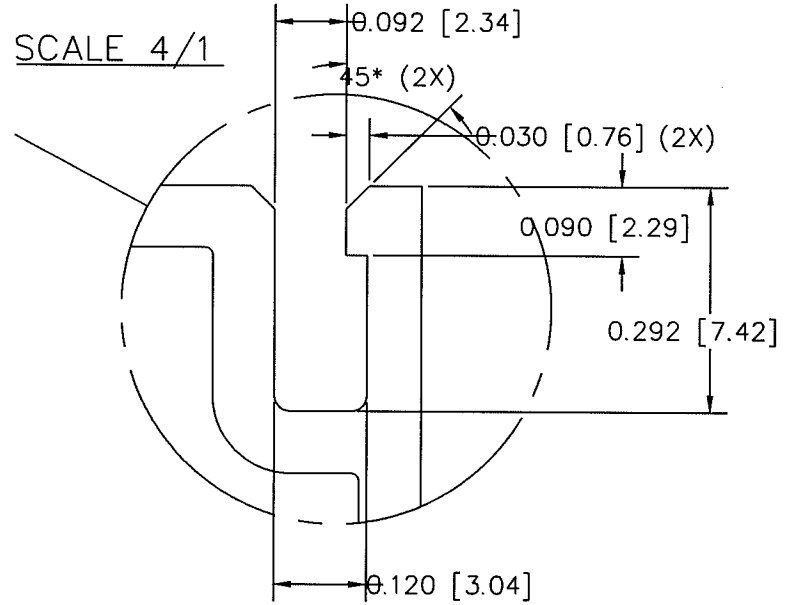
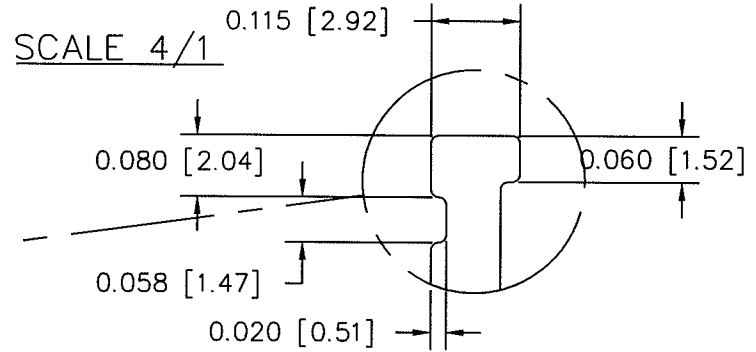
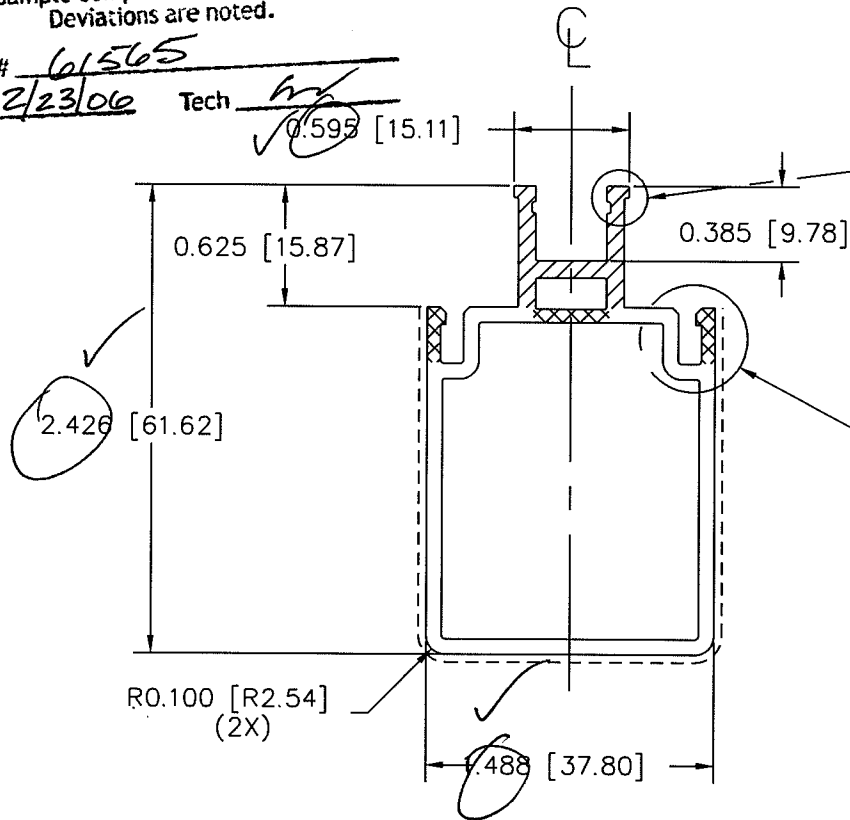
10003176

REV	BY	APPV'D	DATE	CHANGE
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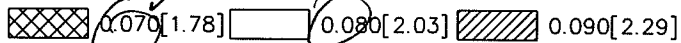
Test sample complies with these details.
Deviations are noted.

Report# 61565
Date 2/23/06 Tech [Signature]



NOTES:

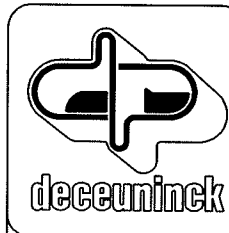
1. WALL THICKNESS:



2. ALL UNSPECIFIED RADII 0.010 [0.25].

3. DIMENSIONS IN [] ARE IN MM.

4. EXPOSED SURFACE IN BOLD.



Deceuninck

NORTH AMERICA/Oakland NJ.

AREA= 0.679 sq.in.

TOTAL WEIGHT= 0.429 lb/ft.

TOL:
± 0.010

FILENAME:
path

BY
CTC

DATE
2/14/06

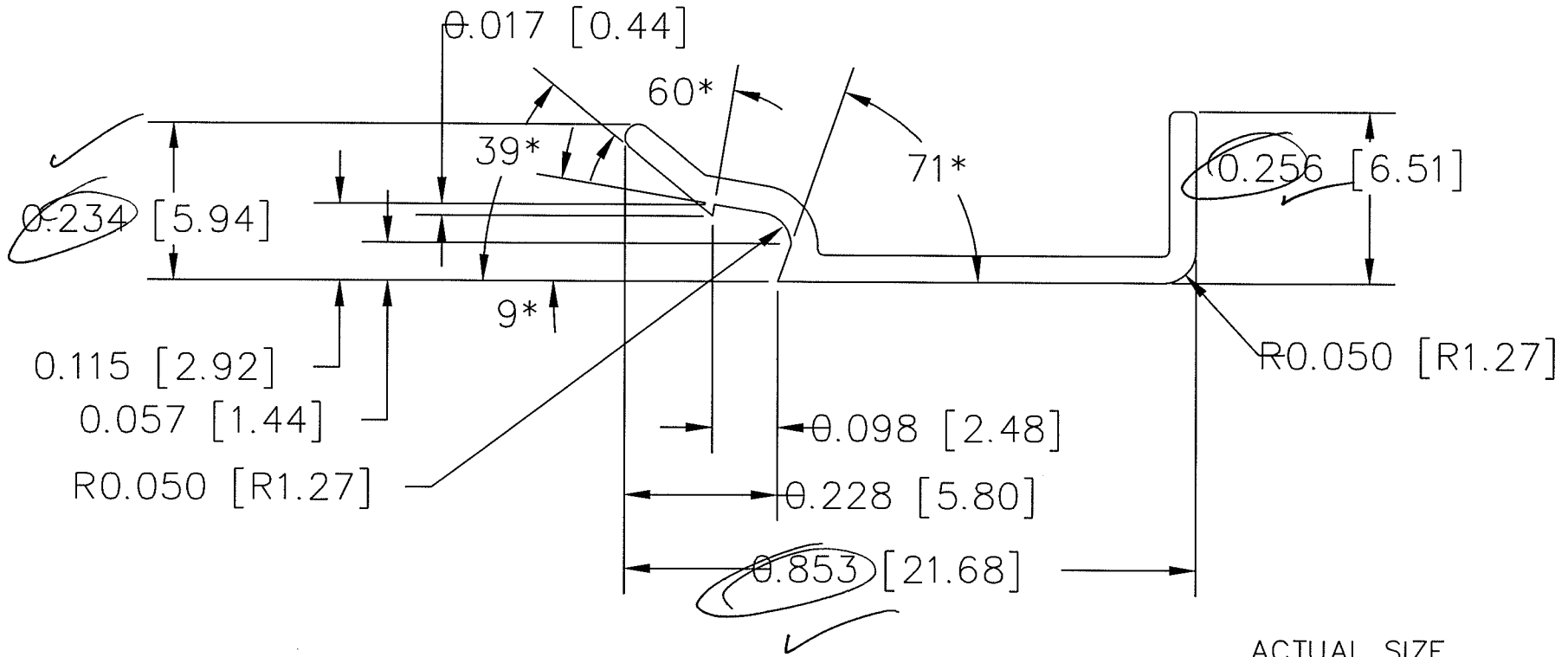
MAT'L
PVC

SCALE
1:1

SASH

10003175

REV	BY	APRV'D	DATE	CHANGE



NOTES:

1. WALL THICKNESS 0.040[1.02].
2. UNSPECIFIED RADII 0.010[0.25].
3. DIMENSIONS IN [] ARE IN MM.

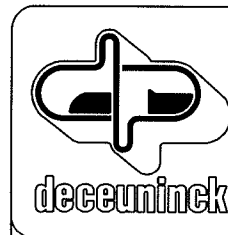
ACTUAL SIZE
EXPOSED SURFACE IN BOLD



Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 61565
Date 2/23/06 Tech kw



Deceuninck® NORTH AMERICA/Oakland NJ.

AREA= 0.047 sq.in. TOTAL WEIGHT= 0.030 lb/ft. TOL: ± 0.010

FILENAME: path

BY CTC DATE 2/14/06 MAT'L PVC SCALE 4:1

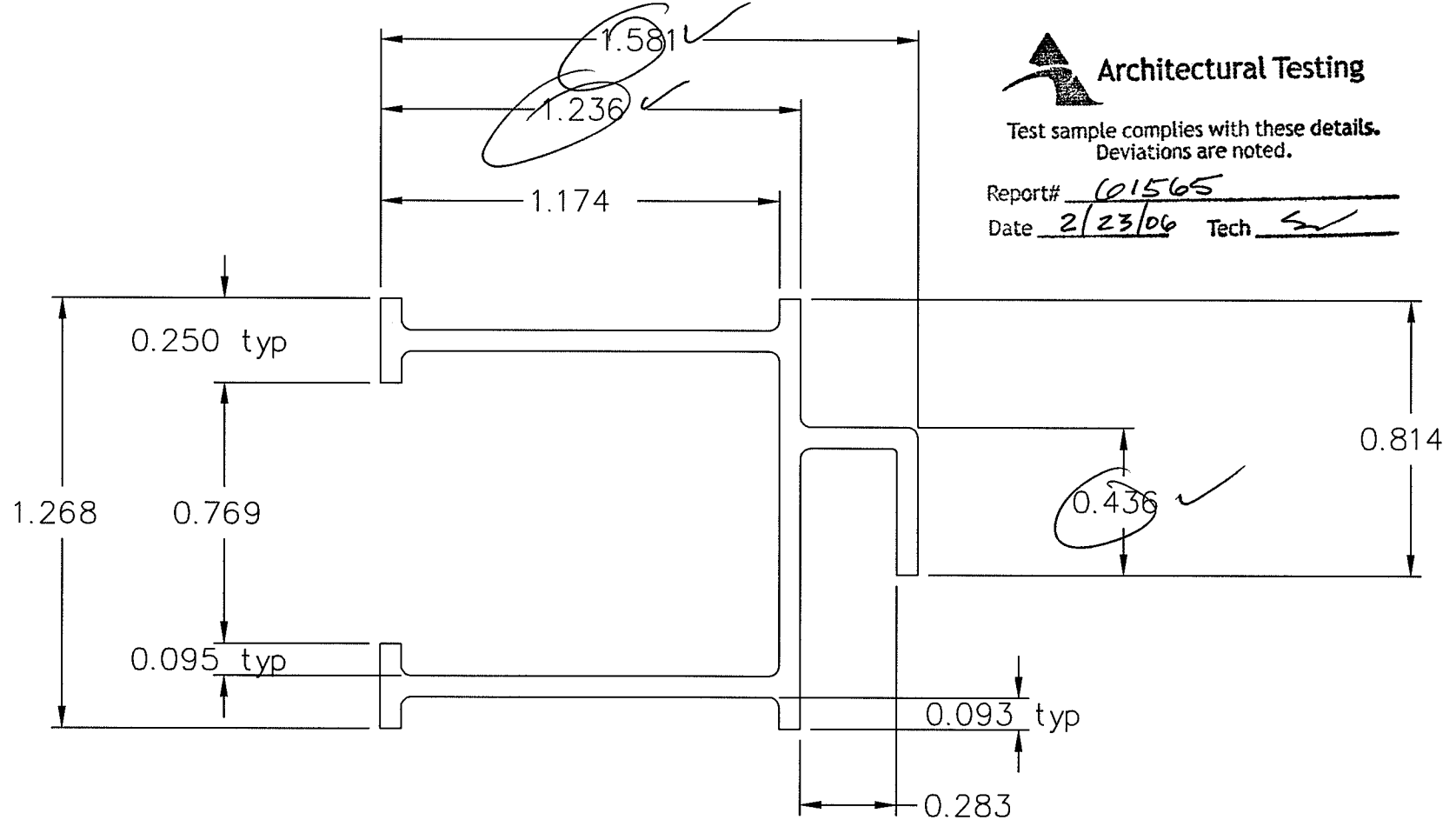
GLASS STOP

10003177

REV	BY	APPV'D	DATE	CHANGE

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A A031h003



Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 01565

Date 2/23/06 Tech SW

NOTES:

- 1). Wall thickness = .062 ✓
- 2). Mat'l = 6061-T6, 6105-T5, OR 6005-T5 ⚠

		VINYL BUILDING PRODUCTS INC.		
		AREA= .294 sq. in WEIGHT= .345 lb/ft	TOLERANCES (EXCEPT AS NOTED) DEC: *.010 [.25MM]	
DRAWN <u>GBS</u>	DATE <u>9/29/92</u>	APP'VD	MAT'L -	SCALE <u>2-1</u>
Insert			A031h003	

A	SA	06-08-06	ADDED NOTE #2
REV	BY	APP'VD	DATE
			CHANGE