

**AAMA/WDMA/CSA 101/LS.2/A440-05
TEST REPORT**

Rendered to:

POCAHONTAS ALUMINUM COMPANY, INC.

SERIES/MODEL: DD 100

PRODUCT TYPE: Insulated Side-Hinged Door

Title	Summary of Results
Primary Product Designator	SHD-R15 914 x 2032 (36 x 80)
Design Pressure	± 720 Pa (± 15.04 psf)
Air Infiltration	0.7 L/s/m ² (0.13 cfm/ft ²)
Water Penetration Resistance Test Pressure	140 Pa (2.92 psf)
Uniform Load Structural Test Pressure	± 1080 Pa (± 22.56 psf)
Forced Entry Resistance	Pass

Test Completion Date: 11/05/09

Reference must be made to Report No. 95615.01-801-44, dated 11/05/09 for complete test specimen description and data.

	Document Title:	Doc No:	FRM B1-02	
	Structural Performance Certification Authorization Report	Rev No: 7	Page: 1	Of: 1
Required By: PRO B1-03				

CAR & Product ID Number: 757 - 101.0
 Issue Date: 3/3/2010
 Revision Date: 3/19/2019
 Expiration Date: 11/5/2022
 Company Code: 757

This Certification Authorization Report (CAR) is issued by Keystone Certifications, Inc. (KCI) after full validation review, and is based on a standardized evaluation of the product conducted by an independent accredited laboratory in accordance with the specified referenced standard. Actual fenestration product performance may vary based on many factors, including installation, condition of the wall/roof substrate and the age of the product and installation components.

This report indicates the product is eligible for the application of Keystone Certification Program certification labels. Licensee stipulates in affixing certification labels to products, that those products are representative of the specimen evaluated and documented for certification authorization. Only products bearing such a certification label shall be considered certified. The information in this report can be verified at www.keystonecerts.com.

Licensee Information:	Product Information:
Pocahontas Aluminum Company, Inc. 2001 Industrial Drive, PO Box 756 Pocahontas, AR 72455 USA	Model: DD 100 Insulated Side-Hinged Door Operator Type: SHD Config: AH/Lock Stile Max Width: 36 Max Height: 80

Referenced Standard:	Product Rating:
AAMA/WDMA/CSA 101/IS2/A440-05	LW-SHD-R25 914x2032 (36x80) WTP=2.9 psf

Qualifying Test Information:	
Test Report No:	ATI-95615.01-801-44-R2
Test Report Expiration:	11/5/2022

Authorized Signature:



Aaron Shultz
 2020.01.15 07:08:16
 -05'00'

Keystone Certifications, Inc.
 145 Limekiln Rd. Suite 100B
 New Cumberland, Pennsylvania 17070
 Phone: 717-932-8500
 Fax: 717-932-8501



AAMA/WDMA/CSA 101/I.S.2/A440-05 TEST REPORT

Rendered to:

POCAHONTAS ALUMINUM COMPANY, INC.
2001 Industrial Drive, PO Box 756
Pocahontas, Arkansas 72455

Report No.: 95615.01-801-44
Revision 2: 03/03/10
Test Dates: 10/21/09
Through: 11/05/09
Report Date: 11/05/09
Expiration Date: 11/05/13

Project Summary: Architectural Testing, Inc. was contracted by Pocahontas Aluminum Company, Inc. to perform testing on a Series/Model DD 100, insulated side-hinged door. The sample tested successfully met the performance requirements for a SHD-R15 914 x 2032 (36 x 80) rating. Test specimen description and results are reported herein. The sample was provided by the client.

Test Specification: The test specimen was evaluated in accordance with AAMA/WDMA/CSA 101/I.S.2/A440-05, *Standard/Specification for Windows, Doors, and Unit Skylights*.

Test Specimen Description:

Series/Model: DD 100

Product Type: Insulated Side-Hinged Door

Overall Size: 914 mm (36") wide by 2032 mm (80") high

Rough Opening Size: 921 mm (36-1/4") wide by 2038 mm (80-1/4") high

Leaf Size: 924 mm (36-3/8") wide by 2042 mm (80-3/8") high

Overall Area: 1.86 m² (20 ft²)

Test Specimen Description: (Continued)

Finish: Mill finish aluminum with white fiberglass skin

Frame Construction: The door frame was constructed of extruded aluminum with mitered and welded corners.

Leaf Construction: The 1-1/2" thick leaf was constructed of 1-3/8" thick foam with 1-3/8" wide by 3/4" high solid reinforcement along top and bottom rails and stiles. The reinforcement along the lock stile was made of wood, with the remaining reinforcements made of cellular pvc. A 1/16" thick embossed fiberglass skin was utilized on the exterior and interior and was secured to the foam with glue. Leaf frame was formed from extruded aluminum members. Frame corners were coped, butted, and mechanically fastened using two #6 x 1" pan head Phillips screws. The interior of the exterior leg of the frame had vinyl fin weatherstripping inserted into it. The exterior leg of the frame was secured to the fiberglass skin with a sealant compound. A cellular PVC lock block was 4-1/4" x 15" x 1-3/8" thick.

Weatherstripping:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>	<u>Joinery</u>	<u>Method</u>
0.110" x 0.160" vinyl bulb	4 Rows	Interior of exterior leg of leaf frame	Kerf	Staked
0.187" x 0.250" vinyl bulb	4 Rows	Interior of exterior leg of frame	Kerf	Staked
0.187" x 0.250" vinyl bulb	4 Rows	Interior face of frame	Kerf	Staked

Glazing Details: No glazing was utilized.

Drainage: No drainage was utilized.

Test Specimen Description: (Continued)

Hardware: Hinges were secured to the leaf using three #8 x 3/4" Hex head screws, and to the jamb's continuous pin.

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Handle with lock	1	Midpoint of leaf locking stile
Strike plate	1	Midpoint of lock jamb
Single barrel hinge	6	On center from interior corner of sill at 4-1/2", 12", 36", 43-1/2", 67-1/2", and 75"

Reinforcement: Reinforcement listed in Leaf Construction.

Installation: The unit was installed into a 2 x 6 SPF test buck. Unit was secured through the nail fin with #6 x 1-5/8" flat head Phillips screws at 4" on center spacing from outside jamb corners with remaining at 8" spacing thereafter, and 3" on center spacing from outside head and sill corners with remaining at 8" spacing thereafter. Sealant was applied full perimeter under nail fin.

Test Results: The temperature during testing was 23.8°C (75°F). The results are tabulated as follows:

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
5.3.1.2	Force to Latch Side-Hinged Door System per ANSI/BHMA A156.2 Force to latch Deadbolt	13 N (3 lbf) No Deadbolt Present	67 N (15 lbf) max.
5.3.2.1	Air Leakage Resistance per ASTM E 283 75 Pa (1.57 psf)	0.7 L/s/m ² (0.13 cfm/ft ²)	1.5 L/s/m ² (0.3 cfm/ft ²) max.
<i>Note #1: The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440-05 for air leakage resistance.</i>			
5.3.3.1	Water Penetration Resistance per ASTM E 547 140 Pa (2.92 psf)	No leakage	No leakage
5.3.4.2	Uniform Load Deflection per ASTM E 330 (Deflections were taken on the corners and midpoint on lock stile) (Loads were held for 10 seconds) 720 Pa (15.04 psf) (positive) 720 Pa (15.04 psf) (negative)	1 mm (0.02") 8 mm (0.33")	See Note #2 See Note #2.
5.3.4.3	Uniform Load Structural per ASTM E 330 (Permanent sets were taken on the corners and midpoint on lock stile) (Loads were held for 10 seconds) 1080 Pa (22.56 psf) (positive) 1080 Pa (22.56 psf) (negative)	1 mm (0.02") <1 mm (<0.01")	8 mm (0.31") max. 8 mm (0.31") max.

Note #2: The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440-05 for this product designation. The deflection data is recorded in this report for special code compliance and information only.

Test Results: (Continued)

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
5.3.5	Forced Entry Resistance per AAMA 1304 1334 N (300 lbf) point load		
	Top lock stile corner	No entry	No entry
	Bottom lock stile corner	No entry	No entry
	Above lock	No entry	No entry
5.3.6.10	Operation/Cycling Performance per AAMA 920 25,000 CYCLES	Meets as stated	Meets as stated
5.3.6.11	Vertical Loading Resistance per AAMA 925		
	Pre-load - 200 N (45 lbf)		
	Maximum vertical deflec.	1 mm (0.04")	N/A
	Residual vertical deflec.	<1 mm (<0.01")	N/A
	Test load - 667 N (150 lbf)		
	Maximum vertical deflec.	4 mm (0.14")	N/A
	Residual vertical deflec.	<1 mm (0.01")	N/A
	Diagonal deformation	2242 mm (88-1/4")	N/A
	Force to latch	13 N (3 lbf)	65 N (15 lbf) max.

Optional Performance

4.4.2.6	Uniform Load Deflection per ASTM E 330 (Deflections were taken on the corners and midpoint on lock stile) (Loads were held for 10 seconds)		
	1819 Pa (38.0 psf) (positive)	2 mm (0.08")	See Note #2
	1819 Pa (38.0 psf) (negative)	21 mm (0.81")	See Note #2
4.4.2.6	Uniform Load Structural per ASTM E 330 (Permanent sets were taken on the corners and midpoint on lock stile) (Loads were held for 10 seconds)		
	1819 Pa (38.0 psf) (positive)	<1 mm (<0.01")	8 mm (0.31") max.
	1819 Pa (38.0 psf) (negative)	1 mm (0.04")	8 mm (0.31") max.

Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.

Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimen reported herein.

List of Official Observers:

<u>Name</u>	<u>Company</u>
Larry Rose	Pocahontas Aluminum Company, Inc.
Tom Klein	Architectural Testing, Inc.
Evan McCoppin	Architectural Testing, Inc.

Detailed drawings, data sheets, representative samples of test specimens, a copy of this report, or other pertinent project documentation will be retained by Architectural Testing, Inc. for a period of four years from the original test date. At the end of this retention period, such materials shall be discarded without notice and the service life of this report will expire.

Results obtained are tested values and were secured by using the designated test methods. If test specimen contains glazing, no conclusions of any kind regarding the adequacy or inadequacy of the glass in the test specimen can be made. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.



Digitally Signed for: Thomas Klein by Andy Cost

Tom Klein
Technician



Digitally Signed by: Andy Cost

Andy Cost
Laboratory Manager

TK:ac

Attachments (pages): This report is complete only when all attachments listed are included.

Appendix-A: Alteration Addendum (1)

Appendix-B: Test Equipment (1)

Appendix-C: Drawings (7)

Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
0	11/05/09	N/A	Original report issue
1	11/24/09	1, 2, and 6	Changed series DD to DD 100 and added Optional Performance
2	03/03/10	2	Added lock block detail

Appendix A

Alteration Addendum

Note: No alterations were required.

Appendix B**Test Equipment**

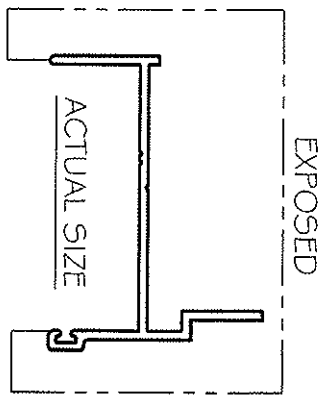
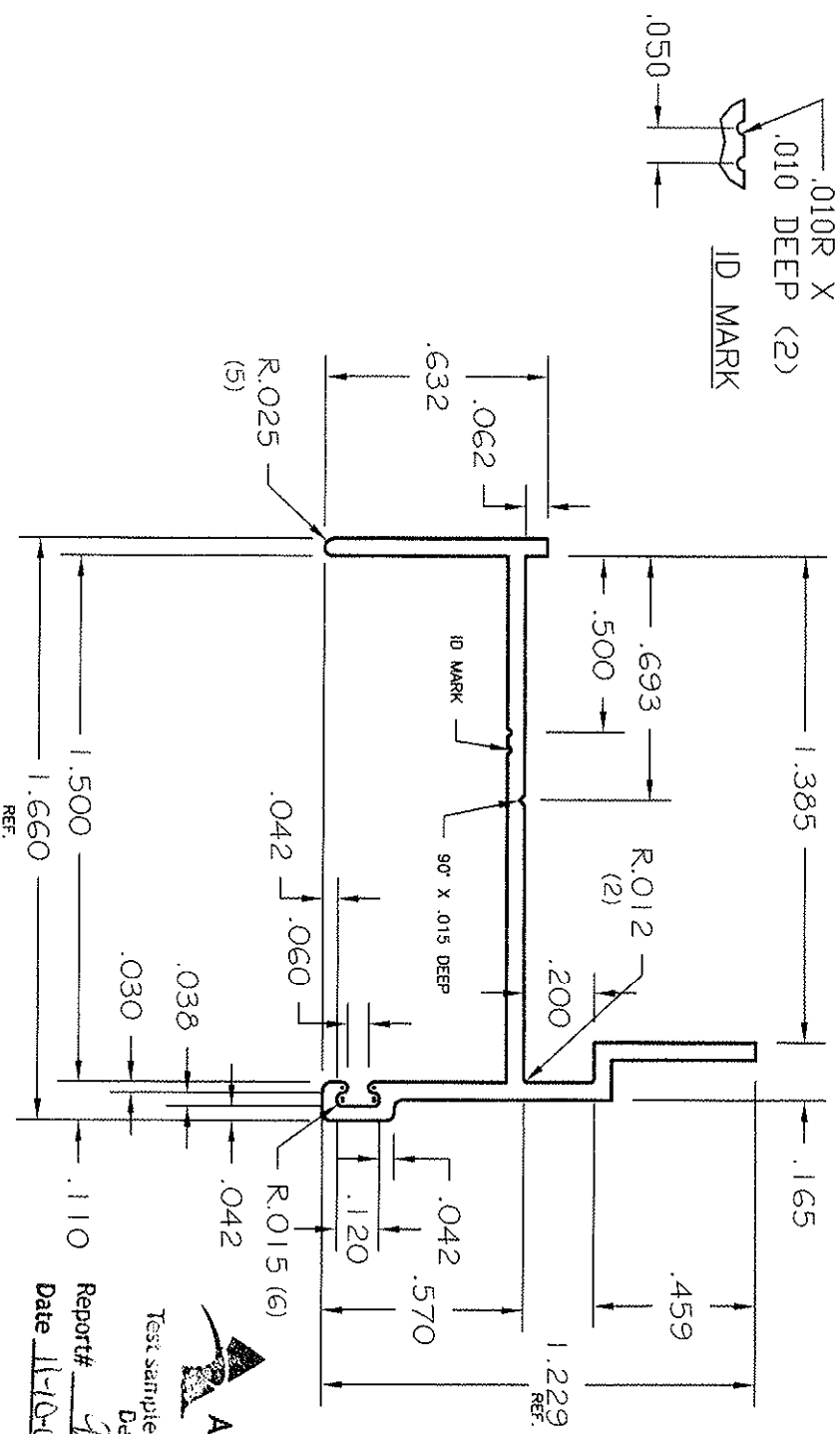
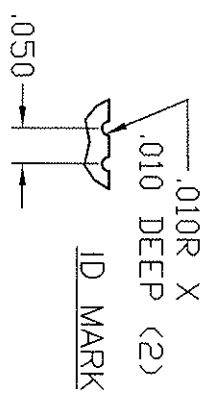
Instrument	Manufacturer	Asset #
Control Panel	Architectural Testing, Inc.	4168
Spray Rack	Architectural Testing, Inc.	3233
Linear Transducer	Celesco	3269
Linear Transducer	Celesco	3755
Linear Transducer	Celesco	62194
Load cell 250	Transcell	3558
Micro Mule	Architectural Testing, Inc.	5302
Spring scale 220#	Taylor	62104

Appendix C

Drawings

ALUMINUM ASSOCIATION STD TOLERANCES APPLY UNLESS NOTED
 .050 TYP. WALL EXCEPT AS SHOWN. BREAK SHARP CORNERS .015R

DIE NO. S-3212



Architectural Testing

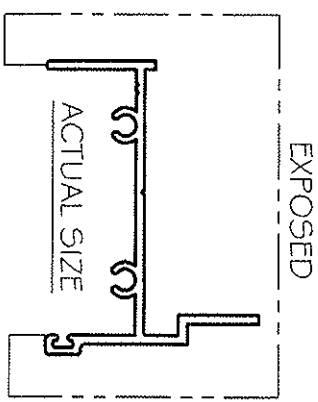
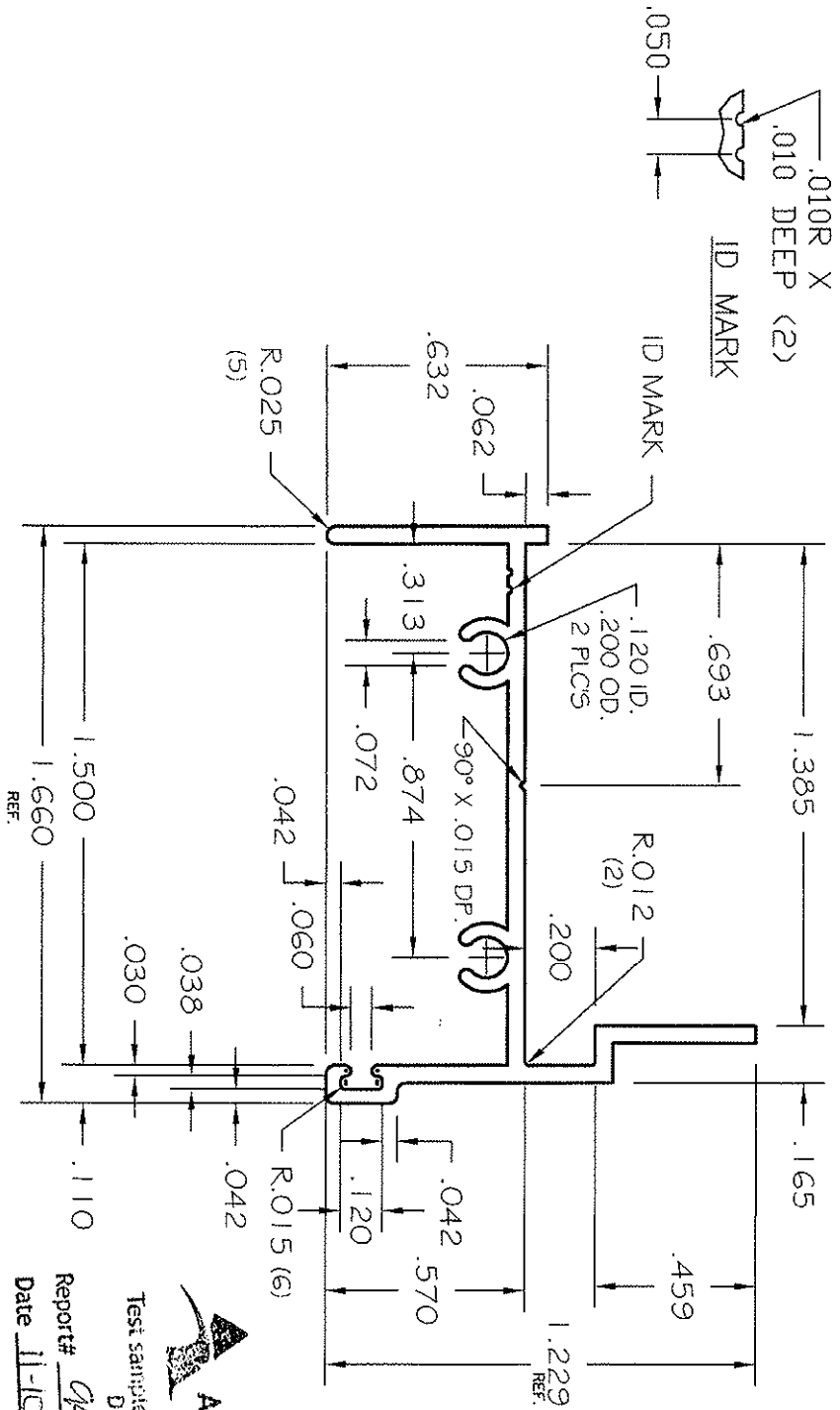
Test sample complies with these details.
 Deviations are noted.

Report# 35015.01-801.44
 Date 11-10-09 Tech AK

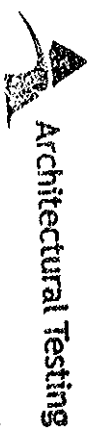
<input checked="" type="checkbox"/> SOLID <input type="checkbox"/> SOLID HOLLOW <input type="checkbox"/> HOLLOW GLASS		JORDAN		CUSTOMER POCAHONTAS ALUMINUM	
AREA .179 SQ. IN. WT./FT. .215 LBS.		ALLOY G06G3T5 C.C.D. 1.9		PART NO. DOOR INNER FRAME	
FORM 7.337 IN. CAVITY SIZE OUTSIDE .734 IN. CAVITY AREA		SCALE 2:1 DMC NO. 07062201 POC		P.O. BOX 18377 MEMPHIS, TN, 38118 PHONE (901) 363-2121	
END USE DATE 6/22/07		DMC NO. 07062201 POC		DIE NO. S-3212	
REVISIONS					

ALUMINUM ASSOCIATION STD TOLERANCES APPLY UNLESS NOTED
 .050 TYP. WALL EXCEPT AS SHOWN. BREAK SHARP CORNERS .015R

DIE NO. S-3213



Test sample complies with these details.
 Deviations are noted.



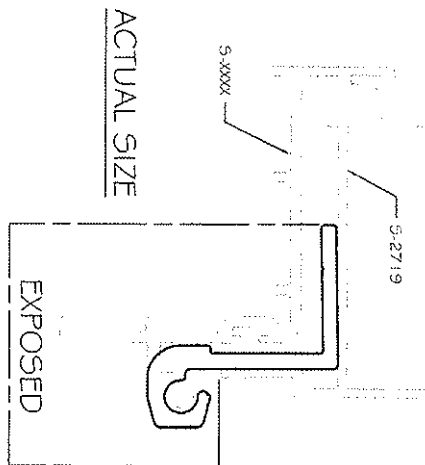
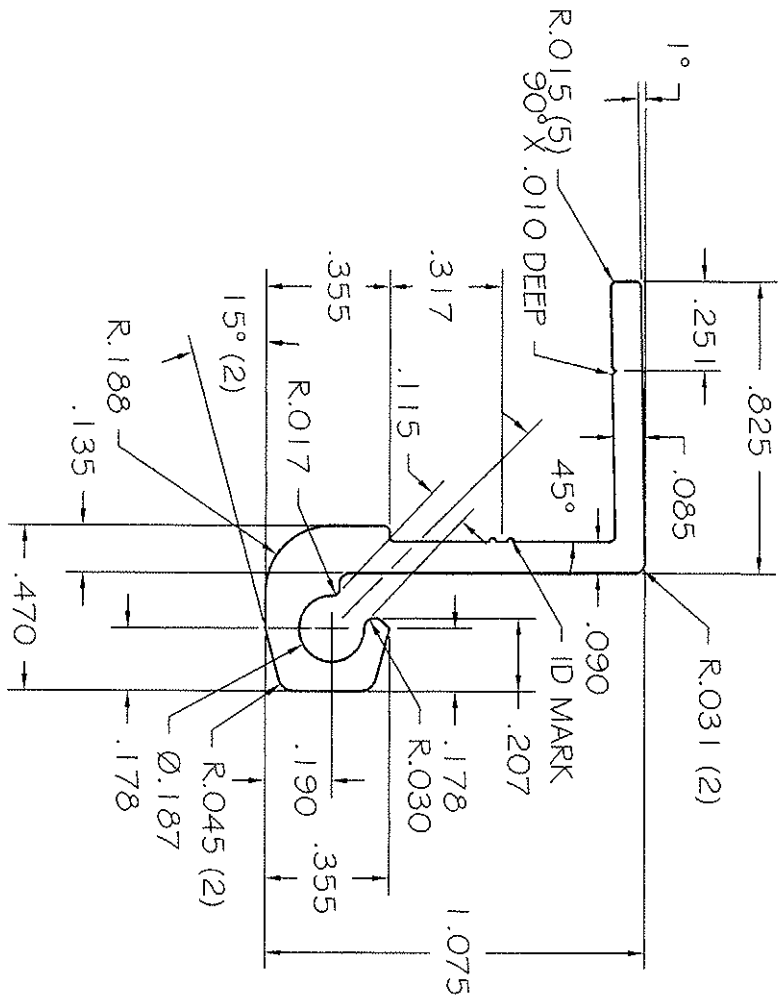
Report# 05215-A-861-44
 Date 11-10-05 Tech [Signature]

KEY-S-I-O-N-S		<input checked="" type="checkbox"/> SOLID <input type="checkbox"/> SEAL HOLLOW <input type="checkbox"/> HOLLOW CLASS		JORDAN P.O. BOX 18377 MEMPHIS, TN, 38118 PHONE (901) 363-2121	
AREA	.203	SO. IN.	ALLOT	CUSTOMER	POCAHONTAS ALUMINIUM
WT/FT	.244	LBS.	C.C.D.	PART NO.	
FORM	8.412	IN.	CAVITY	END USE	INNER FRAME TOP AND BOTTOM
OUTSIDE FORM		IN.	SIZE	SCALE	2:1
		IN.	DRY	DWG. NO.	07062601 POC
		IN.	DRY	DATE	6/26/07
				Q.E. NO.	S-3213

REF: S-2720

ALUMINUM ASSOCIATION STD TOLERANCES APPLY UNLESS NOTED
 TYP. WALL EXCEPT AS SHOWN. BREAK SHARP CORNERS .010R

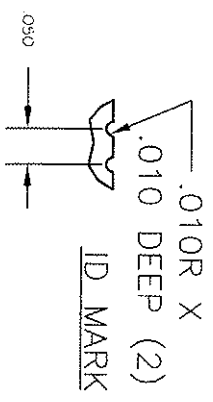
DIE NO. S-3105



Architectural Testing

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 Deviations are noted.

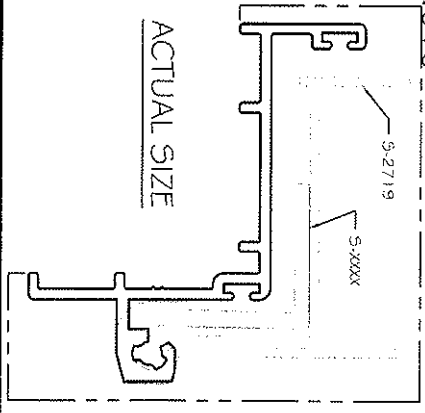
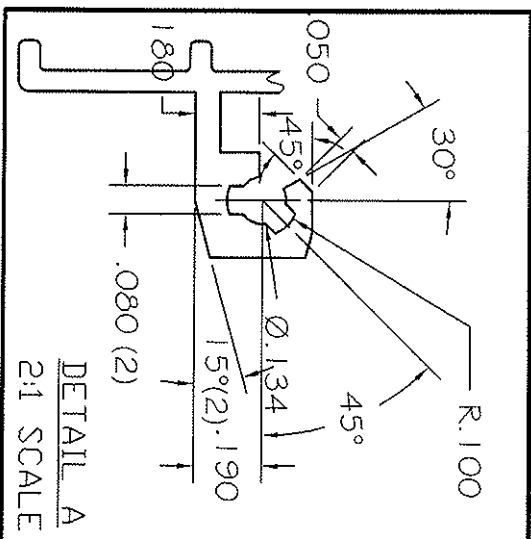
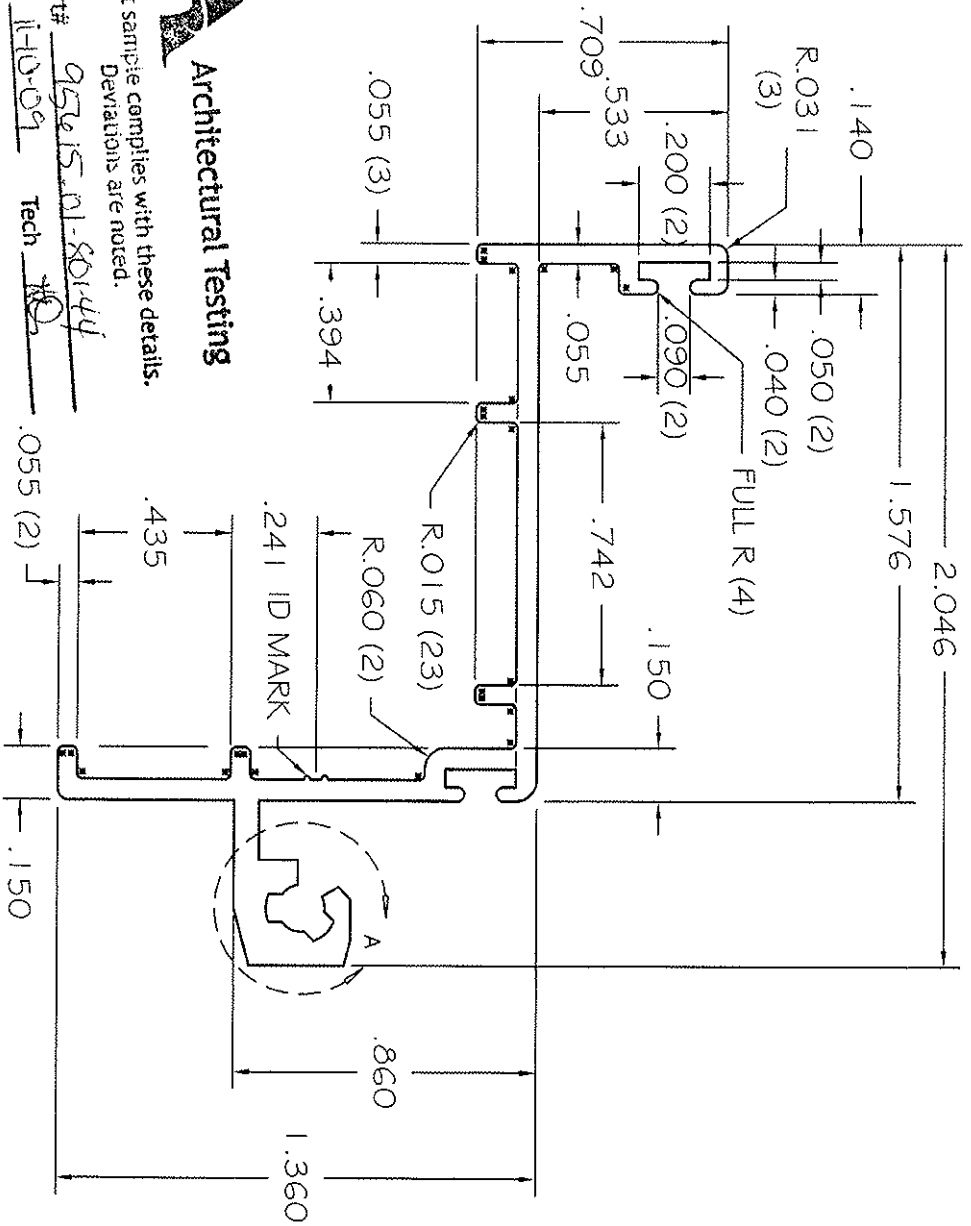
Report# 95615.0180144
 Date 11-10-01 Tech [Signature]



REV-S-ONS		<input checked="" type="checkbox"/> SOLID <input type="checkbox"/> SOL HOLLOW <input type="checkbox"/> HOLLOW GLASS		CUSTOMER POCAHONTAS ALUMINUM	
JORDAN		P.O. BOX 18377 MEMPHIS, TN, 38118 PHONE (901) 363-2121		PART NO. HINGE	
AREA	.234	SQ. IN.	6063T6	SCALE	2:1
W/T	.281	IN.	1.5	DATE	3/18/06
WEIGHT	4.927	LB.	06031803 POC	DATE	5/18/06
QUANTITY		EA.	POC	DIE NO.	S-3105

ALUMINUM ASSOCIATION STD TOLERANCES APPLY UNLESS NOTED
 .060 TYP. WALL EXCEPT AS SHOWN. BREAK SHARP CORNERS

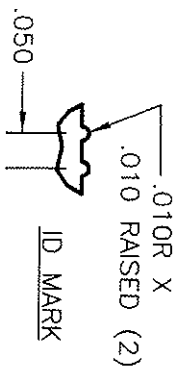
DIE S-3103
 NO. EXPOSED
 R E



Architectural Testing

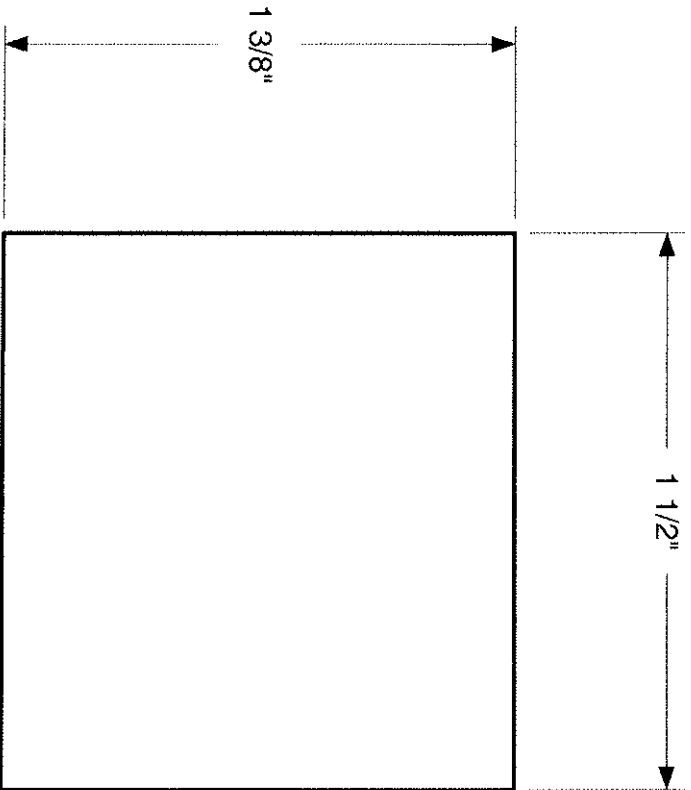
Test sample complies with these details.
 Deviations are noted.

Report# 95615-01-80144
 Date 11-0-09 Tech 10



REVISONS		<input checked="" type="checkbox"/> SOLID <input type="checkbox"/> SEMI HOLLOW <input type="checkbox"/> HOLLOW CLASS		CUSTOMER POCOCHONTAS	
AREA .328 WT/FT .394 PERM 10.579		SQ. IN. 6063T5 ALLOY 6063T5 GAGE 2.5		PART NO. OUTER FRAME	
REFERENCE DIE S-3015		SCALE 2:1 DATE 5/11/05		P.O. BOX 18377 MEMPHIS, TN, 38118 PHONE (901) 363-2121	
		QTY. 06031801 POC		DIE NO. S-3103	

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED
	WOOD LOCK STILE		



Test sample completed with DREG SYSTEM
 Deviations are noted:
 Report# 05615 Tech Q
 Date 3/3/10

Note.
 1. Use spruce or equivalent.

SIZE	CAGE CODE	DWG NO	REV
A			
SCALE	SHEET		

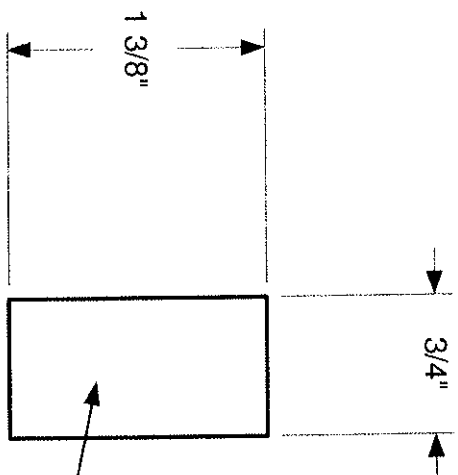
REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED
	PVC		



Architectural Testing

Test sample complies with these details.
 Deviations are noted.

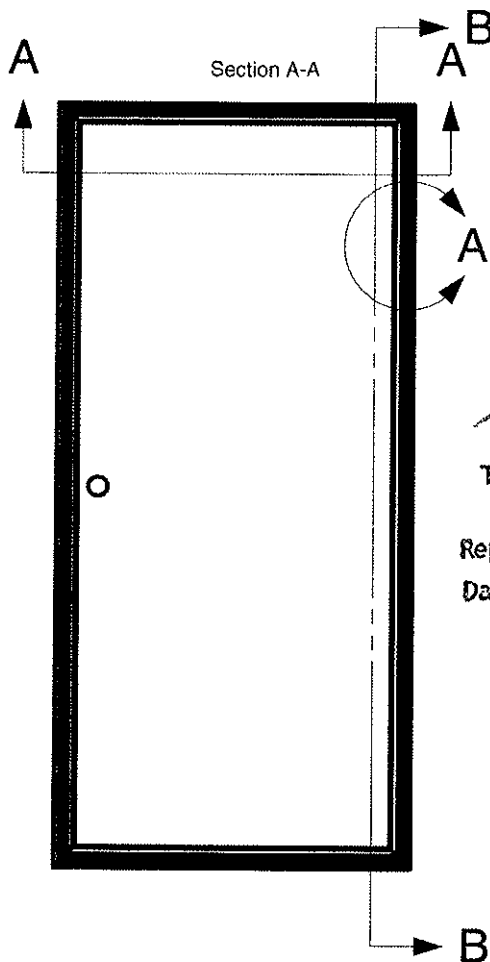
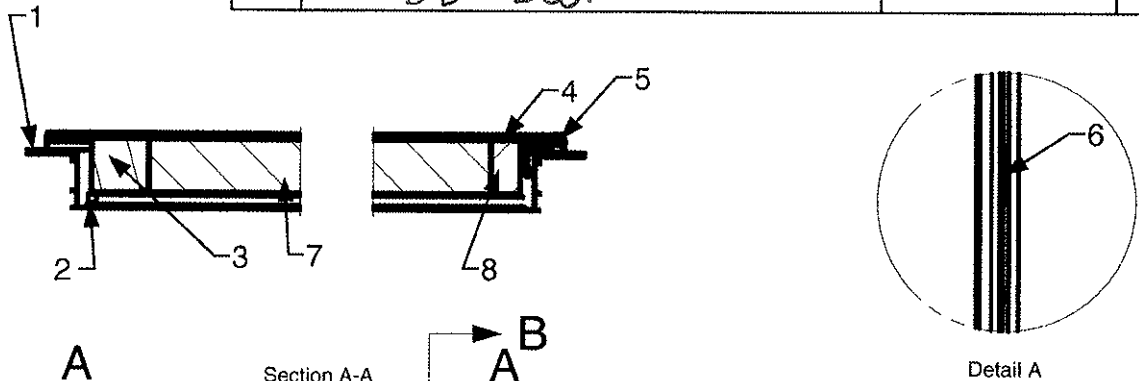
Report# 98015.01-801-44
 Date 3/3/0 Tech [Signature]



CELLULAR PVC

SIZE	CAGE CODE	DWG NO	REV
A			
SCALE	SHEET		

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED
	DD Door		



Test sample complies with these details.
 Deviations are noted.
 Report# 93615.01-801-44
 Date 3/3/10 ¹⁰² Tech [Signature]

ITEM #	Part #	QTY	Description	Supplier
1	DIE 3212	2	INSIDE FRAME SIDES	JORDAN ALUMINUM
2	1-1/2"X1-3/8"	1	SPRUCE	RIDOUT LUMBER
3	0051286	40.7'	1/4" VINYL BULB	WALTECH
4	0342785	20'	VINYL	WALTECH
5	006080	1	GALV. HINGE ROD	WIRE PRODUCTS
6	0062913	6	HINGE ASSEMBLY	ASIA SOURCING
7	001507012	2	PVC TOPS AND BOTTOMS	GOOSEN CORP
8	0015077	1	PVC SIDE	GOOSEN CORP
9	DIE 3213	2	INSIDE FRAME T&B	JORDAN ALUMINUM

Section B-B

SIZE A	CAGE CODE	DWG NO PAC	REV
SCALE		SHEET	