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WINDOW TECHNOLOGY, INC.
TEST REPORT

SCOPE OF WORK

AAMA 1701.2 AND AAMA 1704 TESTING ON SERIES V21 VINYL SINGLE HUNG TILT WINDOW

REPORT NUMBER
T1656.01-801-44 R1

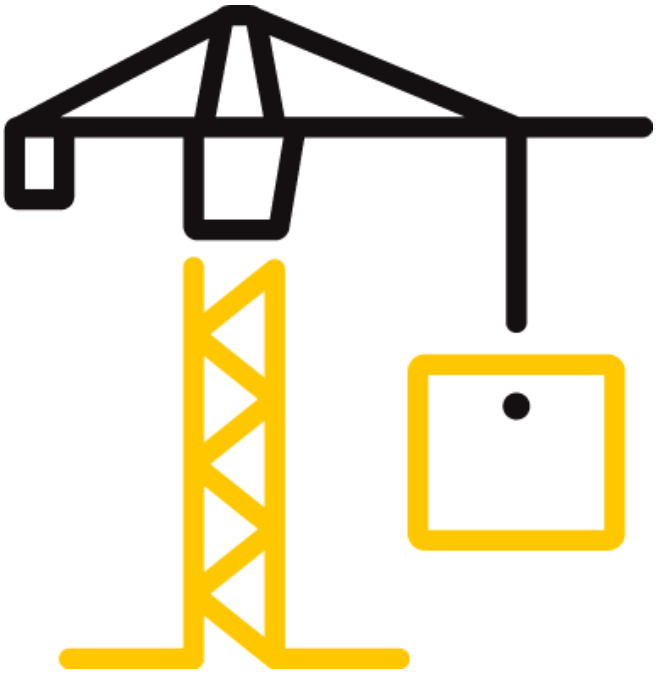
TEST DATE(S)
10/22/25 - 10/23/25

ISSUE DATE **REISSUE DATE**
10/30/25 11/06/25

RECORD RETENTION END DATE
10/16/29

PAGES
22

DOCUMENT CONTROL NUMBER
ATI 00497 (06/24/24)
RT-R-AMER-Test-2878



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Plano, Texas 75074

Telephone: 469-814-0687
www.intertek.com/building

TEST REPORT FOR WINDOW TECHNOLOGY, INC.
Report No.: T1656.01-801-44 R1
Date: 10/30/25

REPORT ISSUED TO

WINDOW TECHNOLOGY, INC. DBA WINTECH
201 Industrial Dr.
P.O. Box 480
Monett, MO 65708

SECTION 1

SCOPE

Architectural Testing, Inc. (an Intertek company), dba Intertek Building & Construction (B&C) was contracted by Window Technology, Inc. to perform testing in accordance with AAMA 1701.2 and AAMA 1704 on their V21 Vinyl Single Hung Tilt Window. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at Intertek test facility in Plano, TX.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule also called “Shared Risk approach,” of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

SECTION 2

SUMMARY OF TEST RESULTS

Product Type: Vinyl Single Hung Tilt Window
Series/Model: V21
The sample tested successfully met the performance requirements listed in the referenced specifications.

For INTERTEK B&C:

COMPLETED BY:	Alexei Buruian	**REVIEWED BY:**	Jeffrey Crump, FMPC
TITLE:	Technician – Building & Construction	**TITLE:**	Laboratory Manager
SIGNATURE:	Digitally Signed by: Alexei Buruian	**SIGNATURE:**	Digitally Signed by: Jeffrey Crump
DATE:	11/06/25	**DATE:**	11/06/25

JC:cm

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SECTION 3
TEST METHOD(S)

The specimens were evaluated in with the following:

AAMA 1701.2-17, *Voluntary Standard for Utilization in Manufactured Housing for Primary Windows and Sliding Glass Doors*

AND

AAMA 1704-17, *Voluntary Standard for Egress Window Systems for Utilization in Manufactured Housing*

ASTM E283-04(2012), *Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen*

ASTM E330/E330M-14, *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*

ASTM E547-00(2016), *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference*

24 CFR 3280.305(c), *Manufactured Home Construction and Safety Standards,* Code of Federal Regulations, Subpart D, dated January 14, 1994.

SECTION 4
MATERIAL SOURCE/INSTALLATION

Test specimens was provided by the client. Representative samples of the test specimen will be retained by Intertek B&C for a minimum of four years from the test completion date.

The specimen was installed into a pine buck. The rough opening allowed for a 1/8" shim space. The exterior perimeter of the door was sealed with sealant. Installation of the tested product was performed by the client.

LOCATION	ANCHOR DESCRIPTION	ANCHOR LOCATION
Exterior nail fin	#12-14 x 1" HWH-Tek 410 screw	3" from each end and 10" O.C.

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.

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Date: 10/30/25

SECTION 5
EQUIPMENT

Console: 004829
Calibration due: 01/16/26

SECTION 6
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Jeffrey Crump	Intertek B&C
Alexei Buruian	Intertek B&C

SECTION 7
TEST SPECIMEN DESCRIPTION

Product Type: Vinyl Single Hung Tilt Window
Series/Model: V21

Product Size(s):

Test Specimen #1

OVERALL AREA:	WIDTH		HEIGHT	
1.8 m² (19.17 ft²)	millimeters	inches	millimeters	inches
Overall Size	1168	46	1524	60
Interior Sash	1124	44-1/4	767	30-3/16
Screen	1137	44-3/4	737	29

Frame Construction:

FRAME MEMBER	MATERIAL	DESCRIPTION
Frame head, sill, jambs and fixed interlock	PVC	Extruded PVC

	JOINERY TYPE	DETAIL
All Corners	Weld	Mitered and welded
Fixed interlock	Mechanical	Each end attached with two (2) #8 x 3" PP screws

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Date: 10/30/25

Sash Construction:

SASH MEMBER	MATERIAL	DESCRIPTION
Rails and stiles	PVC	Extruded PVC

	JOINERY TYPE	DETAIL
All Corners	Weld	Mitered and welded

Reinforcement:

DRAWING NUMBER	LOCATION	MATERIALS
AF-5570	Sash rails and stiles	6063-T5 Aluminum
AF-5569	Fixed Interlock	6063-T5 Aluminum

Weatherstripping:

DESCRIPTION	QUANTITY	LOCATION
Wool Pile	2 per stile	Lateral and exterior face of sash stiles and bottom rail
Wool Pile	1	Interior face of fixed interlock

Glazing: No *conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimen(s) can be made.*

GLASS TYPE	SPACER TYPE	INTERIOR LITE	EXTERIOR LITE	GLAZING METHOD
5/8" IG	3/8" Quanex Duralite Spacer	1/8" clear annealed	1/8" clear annealed	Exterior glazed with glazing sealant at the interior face of glass and vinyl bead at the exterior face of glass.

LOCATION	QUANTITY	DAYLIGHT OPENING		GLASS BITE
		millimeters	inches	
Sash rails and stile	1	1064 x 689	41-7/8 x 27-1/8	5/8
Frame head, jambs and fixed interlock	1	1108 x 683	43-5/8 x 26-7/8	5/8

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Date: 10/30/25

Drainage:

DRAINAGE METHOD	SIZE	QUANTITY	LOCATION
Weepslot	1" wide by 1/8" high	2	3" from each end of frame sill exterior face

Hardware:

DESCRIPTION	QUANTITY	LOCATION
Sweep locks	2	4" from each end, attached with two (2) #8 x 3/4" screws
Tilt latch/pivot bar	2 each	Sash top rail/sash bottom rail
Balances	2	1 per sash stile

Screen Construction:

FRAME MATERIAL	CORNER CONSTRUCTION	MESH TYPE	MESH ATTACHMENT METHOD
Aluminum	Corner key	T105N	Spline

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Date: 10/30/25

SECTION 8
TEST RESULTS

The temperature during testing was 21°C (72°F). The results are tabulated as follows:

Test Specimen #1:

TITLE OF TEST	RESULTS	ALLOWED	NOTE
Structural Performance per ASTM E330 +1190 Pa (+25.0 psf) -595 Pa (-12.5 psf)	Pass	No damage.	2, 3
Air Leakage, Infiltration per ASTM E283 at 75 Pa (1.57 psf)	1.3 L/s/m^2 (0.26 cfm/ft^2)	1.5 L/s/m^2 (0.30 cfm/ft^2) max.	
Air Leakage, Exfiltration per ASTM E283 at 75 Pa (1.57 psf)	1.35 L/s/m^2 (0.27 cfm/ft^2)	1.5 L/s/m^2 (0.30 cfm/ft^2) max.	
Water Penetration, per ASTM E547 at 135 Pa (2.86 psf)	Pass	No leakage	1
Safety Drop Test 0.0 mm (0.00") drop distance	Pass	No damage	
Latch Position per AAMA 1701.2	102 mm (4.00")	25 mm (1.0") min. 100 mm (4") max.	
Clear Opening Width per AAMA 1704	1108 mm (43.625")	510 mm (20")	
Clear Opening Height per AAMA 1704	679 mm (26.75")	610 mm (24")	
Clear Opening Area per AAMA 1704	0.75 m^2 (8.10 ft^2)	0.46 m^2 (5 ft^2)	
Locks and Latches per AAMA 1704	18 N (4 lbf)	90 N (20 lbf) max.	
Locks and Latches on Removable Screens per AAMA 1704	n/a	20 N (5 lbf) max.	
Operable Sash per AAMA 1704	54 N (12 lbf)	90 N (20 lbf) max.	
Removable Screen per AAMA 1704	67.5 N (15 lb)	90 N (20 lb) max.	

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OPTIONAL PERFORMANCE – 24 CFR 3280.305(c)			
TITLE OF TEST	**RESULTS**	**ALLOWED**	**NOTE**
Uniform Load Deflection, per ASTM E330 Deflections taken at +1824 Pa (+38.09 psf) -1824 Pa (-38.09 psf)	 12.7 mm (0.50") 15.7 mm (0.62")	 Report only	 2, 3
Uniform Load Deflection, per ASTM E330 Deflections taken at +2304 Pa (+48.12 psf) -2304 Pa (-48.12 psf)	 17.3 mm (0.68") 19.8 mm (0.78")	 Report only	 2, 3
Uniform Load Deflection, per ASTM E330 Deflections taken at +2784 Pa (+58.15 psf) -2784 Pa (-58.15 psf)	 20.8 mm (0.82") 23.1 mm (0.91")	 Report only	 2, 3

Note 1: With and without insect screen.

Note 2: Loads were held for 10 seconds.

Note 3: 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.

SECTION 9
CONCLUSION

The specimen(s) tested met the performance requirements set forth in the referenced test procedures.

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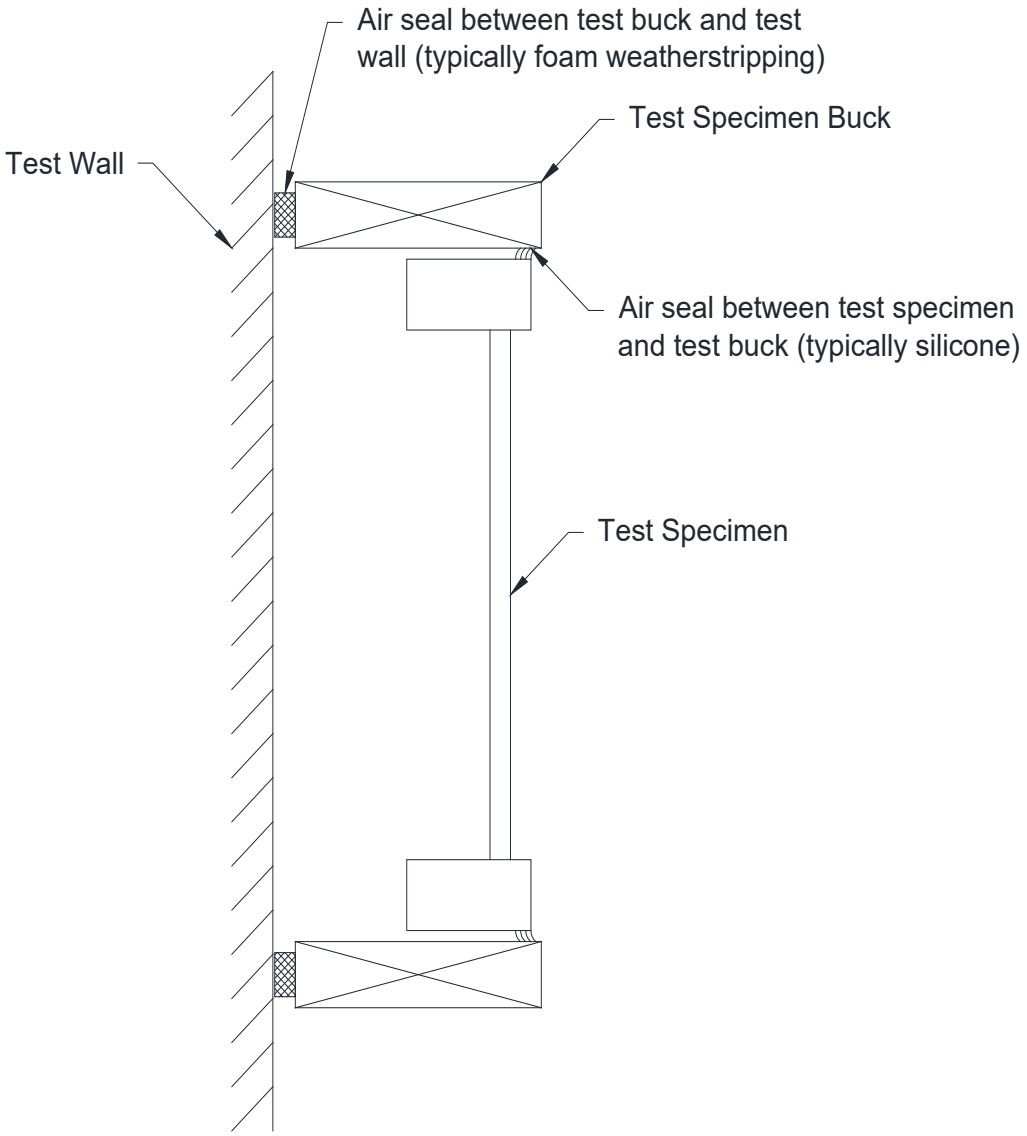
SECTION 10
LOCATION OF AIR SEAL

The air seal between the test specimen and the test wall is detailed below. The seal is made of foam weatherstripping and is attached to the edge of the test specimen buck. The test specimen buck is placed against the test wall and clamped in place, compressing the weatherstripping and creating a seal.



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SECTION 11
PHOTOGRAPHS

Photo No. 1
V21 Single Hung

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SECTION 12
DRAWINGS

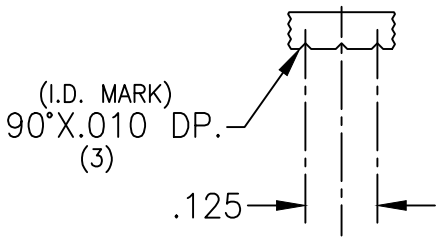
The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

* STRUCTURAL AND/OR HEAT STREAKS ARE POSSIBLE IN THIS AREA AND MAY NOT BE REASON FOR REJECTION.

FINISH()
2PC()

DIE NO.
M-15271
X" PRESS
BKR. NO.
BOLS. NO.
FDR. PLT.
EXT. RATIO

.058 R.-(◇) (4)
.063 R.-(△) (1)



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Date: 10/23/25
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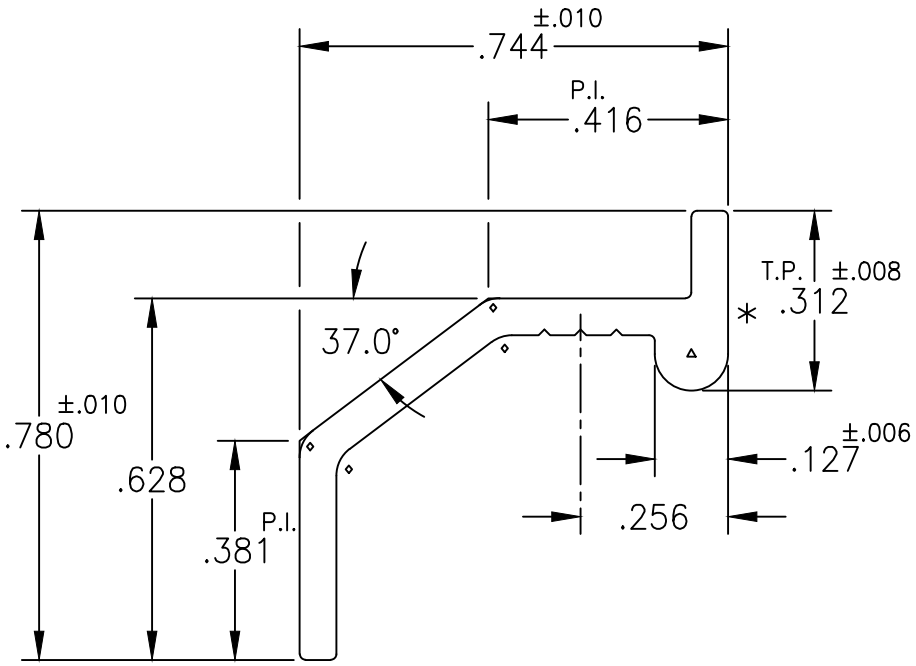
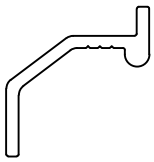




ACTUAL SIZE

Q1

NOTES: ±.006
1. .064 TYP. WALL THKN. EXCEPT AS NOTED.
2. BREAK SHARP CORNERS AT .010 R.
3. NO EXPOSED SURFACES

REVISION		

ALUMINUM ASSOCIATION STANDARD TOLERANCES TO APPLY UNLESS OTHERWISE SPECIFIED

EST. AREA	.094	TOTAL PERIM. 2.866	DATE: 06-23-20	DRAWN BY: S. BATALLA
EST. WT/FT.	.113	CIRCLE SIZE 1.07	HOLES	PREF. PRESS
OUTSIDE PERIM.	2.866	FACTOR 25	DIE SIZE	SCALE 3:1

TOWER EXTRUSIONS, LTD.
WYLIE, TX

NAME
POCAHONTAS

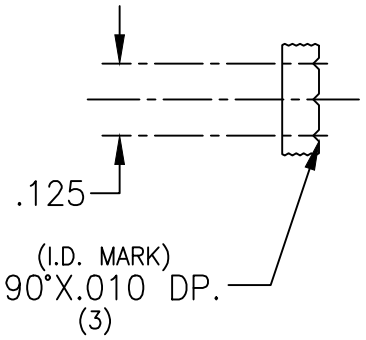
PART NO.	DWG. NO.
AF-5569	D-062320-01

END USE
STIFFNER FOR FIXED INTERLOCK

CLASS	ALLOY	CAVITY	DIE NO.
SOLID	6063-T5		M-15271

FINISH()
2PC()

DIE NO.
M-15272
X" PRESS
BKR. NO.
BOLS. NO.
FDR. PLT.
EXT. RATIO
.058 R.-(◇) (6) .122 R.-(△) (6)



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Report #: T1656.01-801-44-r0
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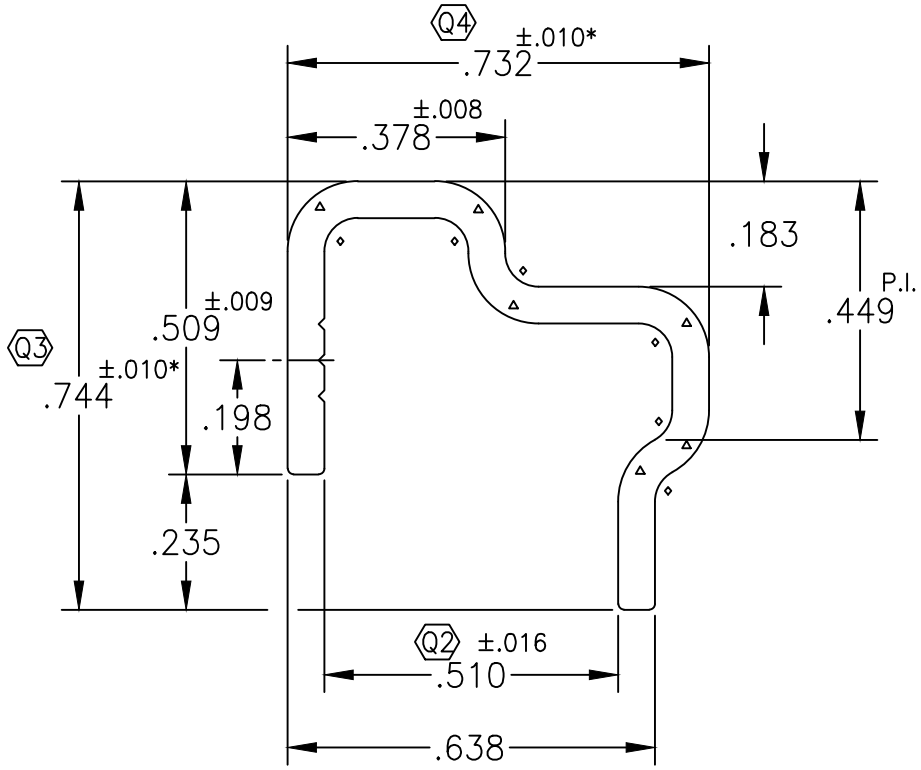
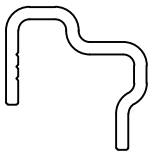
Verified by: J.Crump





ACTUAL SIZE

Q1

NOTES: ±.006
1. .064 TYP. WALL THKN. EXCEPT AS NOTED.
2. BREAK SHARP CORNERS AT .010 R.
3. NO EXPOSED SURFACES

REVISION		

ALUMINUM ASSOCIATION STANDARD TOLERANCES TO APPLY UNLESS OTHERWISE SPECIFIED

EST. AREA	.111	TOTAL PERIM. 3.611	DATE: 06-23-20	DRAWN BY: S. BATALLA			
EST. WT/FT.	.133	CIRCLE SIZE 0.93	HOLES	PREF. PRESS			
OUTSIDE PERIM.	3.611	FACTOR 27	DIE SIZE	SCALE 3:1	P		

TOWER EXTRUSIONS, LTD.
WYLIE, TX

NAME
POCAHONTAS

PART NO.	DWG. NO.
AF-5570	D-062320-02

END USE
STIFFNER FOR LOCK RAIN

CLASS	ALLOY	CAVITY	DIE NO.
SOLID	6063-T5		M-15272

PN 0343200-1

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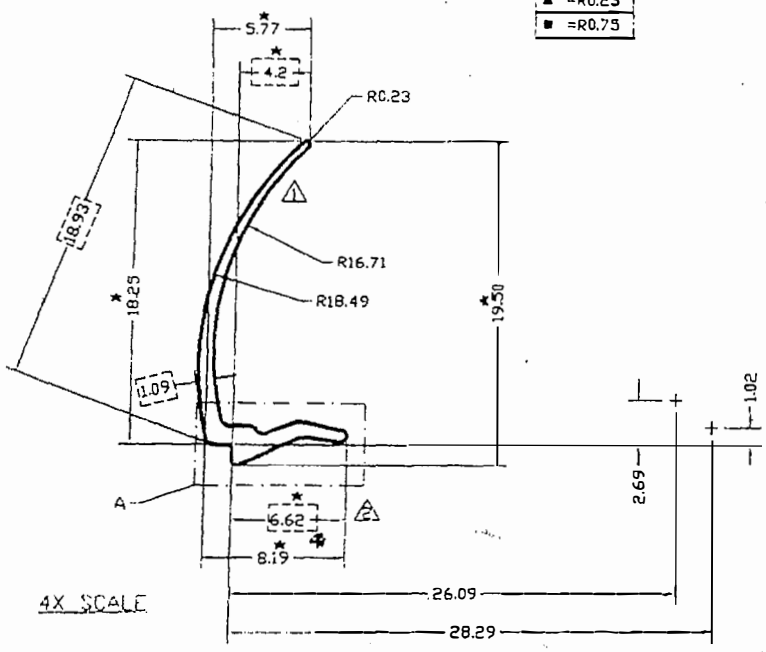
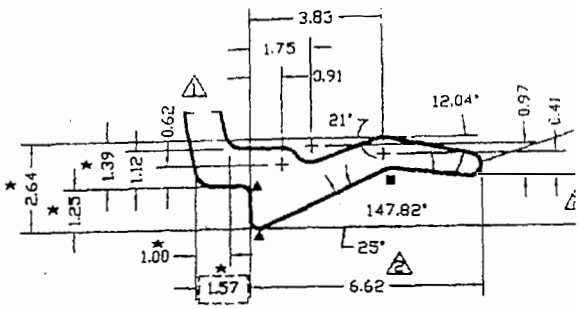
Report #: T1656.01-801-44-r0
Date: 10/23/25
Verified by: J.Crump

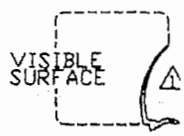
FILLETS:
▲ =R0.25
■ =R0.75



4X SCALE



DETAIL A
8X SCALE



FULL S

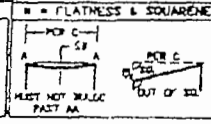
DIMENSIONS ARE IN MILLIMETERS.

NOTE: ALL DIMENSIONS CAN BE ASSUMED AS ORIGINATING FROM SHARP CORNERS, UNLESS NOTED OTHERVISE

[ ] =CRITICAL DIMENSION

★ = DIMENSION TAKEN FROM FURTHEST POINT ON RADIUS

■ = FLATNESS & SQUARENESS CRITICAL



2.	REVISE LENGTH OF LEG, 6.92 TO 6.62	8 DEC 2010
1.	UPDATED BLOCK, WEIGHT AND AREA	1 SEPT 2010
	REVISIONS	DATE

WEIGHT: 0.022 lb/ft AREA: 22.322mm²

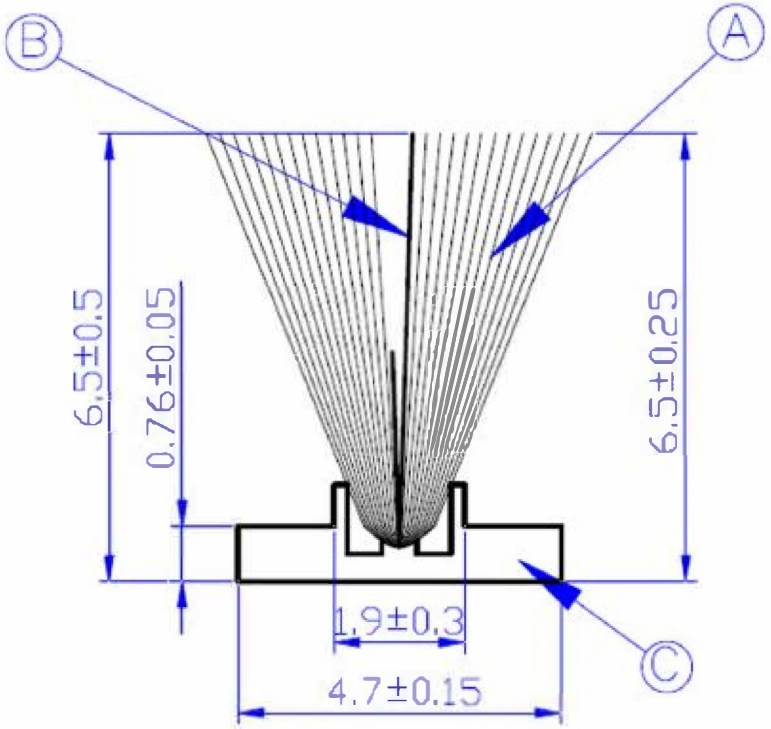
UNSPECIFIED WALL THICKNESS N/A

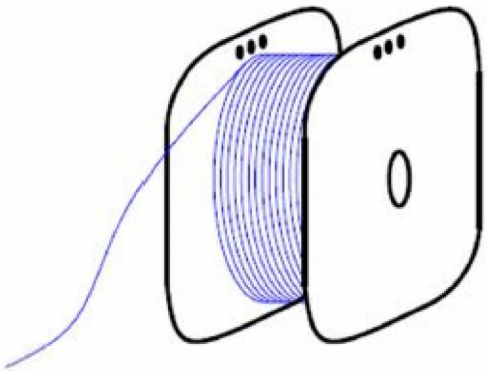
UNSPECIFIED RADII 0.5mm UNSPECIFIED TOLERANCE ±0.2mm

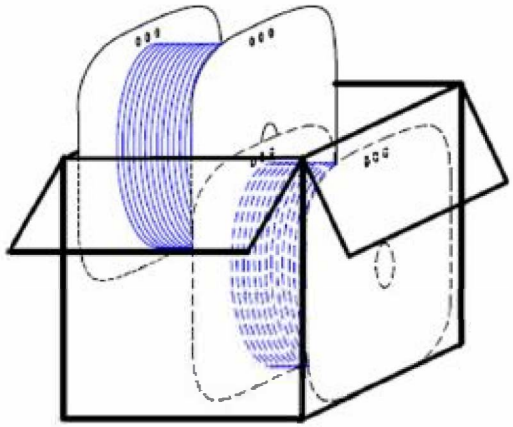
DRAWN: JHN DATE: 17 FE

CHK'D: DATE:

TITLE 3/4" GLAZING BEAD







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字号Code	材质 Material						
A	BCF纱线 BCF yarn	硅化 Silicone ☑ 非硅化 Non-Silicone ☐ UV ☑	黑 Black ☐	灰 Grey ☑	白 White ☐		
B	弹性塑料片 Elastic film ☑	标准 Standard ☐	黑 Black ☐	白 White ☑			
	无纺布 Non-woven fabrics ☐	涂塑 Plastic coating	Yes ☐ No ☐	黑 Black ☐	灰 Grey ☐	白 White ☐	
C	PP塑料底板 Plastic base	半透明 Translucent ☑	灰 Grey ☐	白 White ☐			
量控制点	焊接拉力每厘米大于30N Welding tension moxe than 30N per centimeter Quality Control point 产品底板弧度每米小于4cm Base radian less than 4cm per meter						
特殊说明 cial remark							

4.7×6.5×6.5

包装说明 Package	750米一卷，两卷每箱（750M per roll , 2 rolls one canon） 每卷米数偏差正负2%，最大不超±5米 more or less ±2% per roll.less than 5M per roll			
	纸箱材质 Carton material: BE	纸箱规格 Carton size:45*57*45		
编制 Editor:	姓名 Name:	日期 Date: 20211008	审核 Auditor:	姓名 Name: 日期 Date: 20211009
审批 Approver:	姓名 Name: 程伟	日期 Date: 20211009	图纸状态 Drawing status:	图纸编号 Drawing No.: E001
产品截面缩放比例(Drawing scale): 8:1			产品米克重(product gram weight): 7.3±0.	
版本号(Format): A-5	页数(Sheet): 1/1		类型:PP 密封条 Title: Brush seal , PP	

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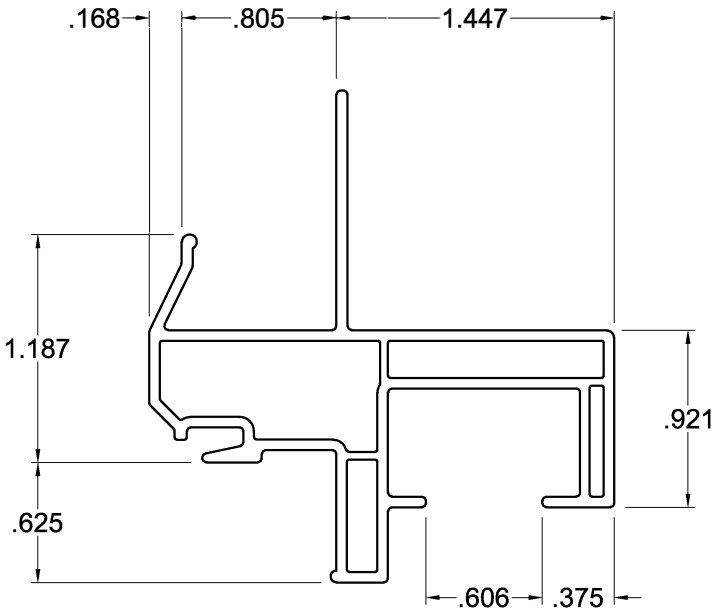
	Date:	10/23/25
	Verified by:	J.Crump



PART NO.	MATERIAL
SHL21	PVC
END USE	
FRAME HEAD & JAMBS	
NOTE(S)	
TYP. WALL THICKNESS = 0.055"	

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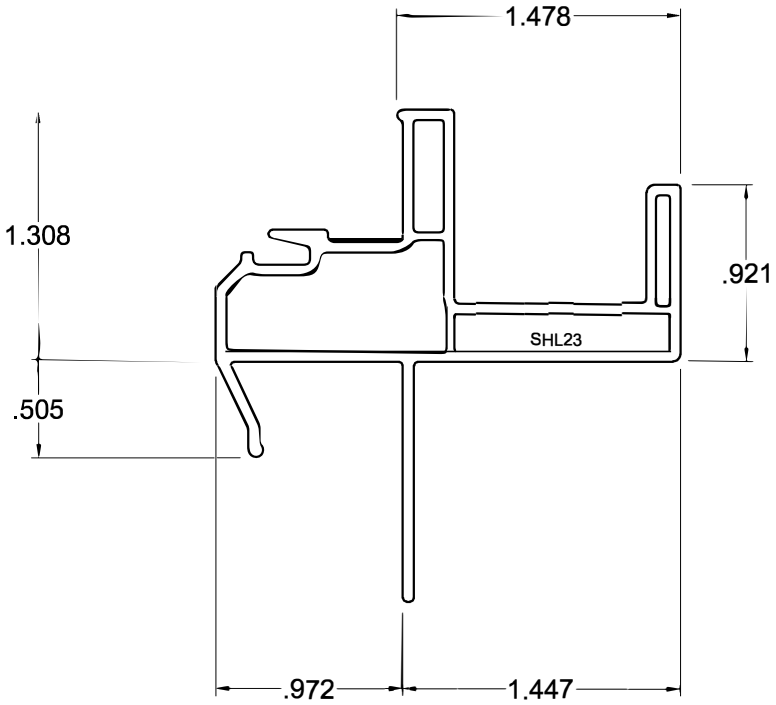

PART NO.	MATERIAL
SHL23	PVC
END USE	
FRAME SILL	
NOTE(S)	
TYP. WALL THICKNESS = 0.055"	

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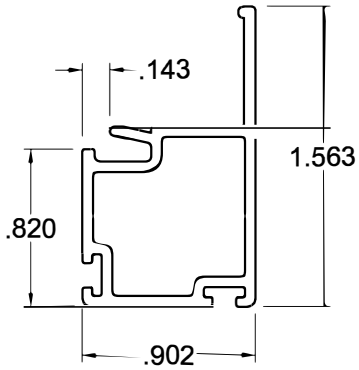
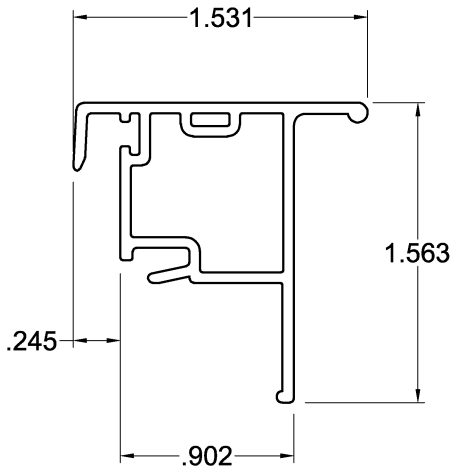


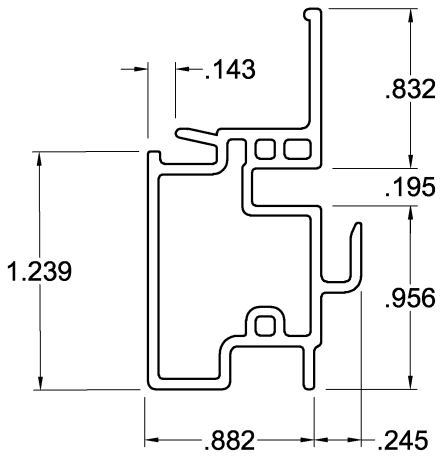
PART NO.	MATERIAL
SHS25	PVC
END USE	
SASH SIDE & BOTTOM RAILS	
NOTE(S)	
TYP. WALL THICKNESS = 0.055"	

intertek Total Quality. Assured.	Report #:	T1656.01-801-44-r0
	Date:	10/23/25
	Verified by:	J.Crump



PART NO.	MATERIAL
SHS26	PVC
END USE	
SASH LOCK RAIL	
NOTE(S)	
TYP. WALL THICKNESS = 0.055"	

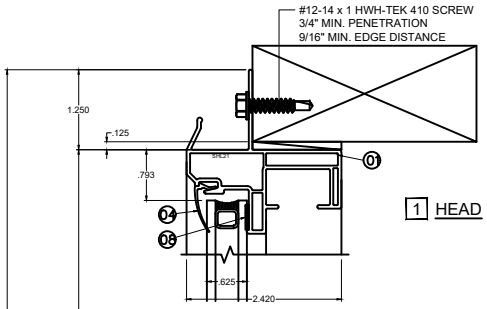
intertek Total Quality. Assured.	Report #:	T1656.01-801-44-r0
	Date:	10/23/25
	Verified by:	J.Crump



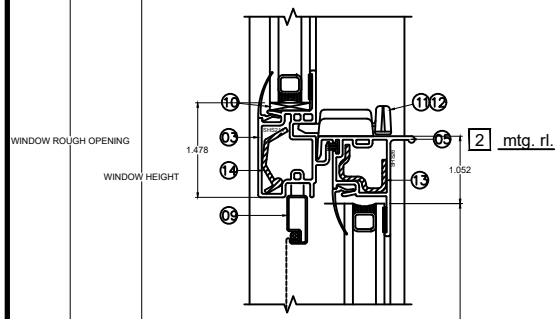
PART NO.	MATERIAL
SHS214	PVC
END USE	
FRAME MEETING RAIL	
NOTE(S)	
TYP. WALL THICKNESS = 0.055"	

BILL OF MATERIALS

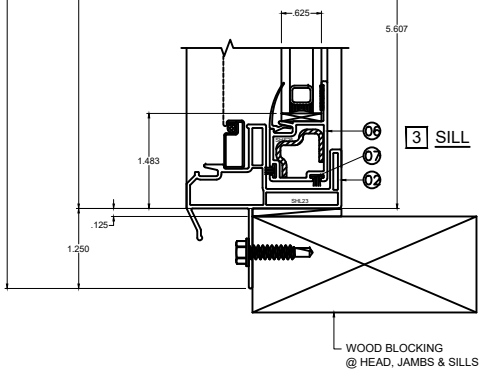
BOM#	QTY	PART#	DESCRIPTION	VENDOR
01	3	SHL21	HEAD & JAMB FRAME	VEKA
02	1	SHL23	SILL FRAME	VEKA
03	1	SHS214	MEETING RAIL	VEKA
04	AS REG'ED	3200-1	GLAZING BEAD	WALTECH
05	1	SHS26	SASH LOCK RAIL	VEKA
06	3	SHS25	SASH STILES & BOTTOM RAIL	VEKA
07	AS REG'ED	E0017	WOOL PILE	ASIA SOURCING
08	AS REG'ED	0319200502	GLAZING SEALANT	LOEFFLER SUPPLY SUPPLY
09	1	-	SCREEN ASSEMBLY	PAC
10	16	0056001	1/8 X 5/8 X 5/8 TPE SET BLOCK	SECON
11	2	00531621	SWEEP LOCK	ASIA SOURCING
12	4	0358A061	8X3/4 (SWEEP LOCK SCREWS)	MERCHANTS
13	4	AF-5570	RAIL STIFFNER	TOWER
14	1	AF-5569	STIFFNER FOR FIXED INTERLOCK	TOWER
15				
16				
17				



1 HEAD

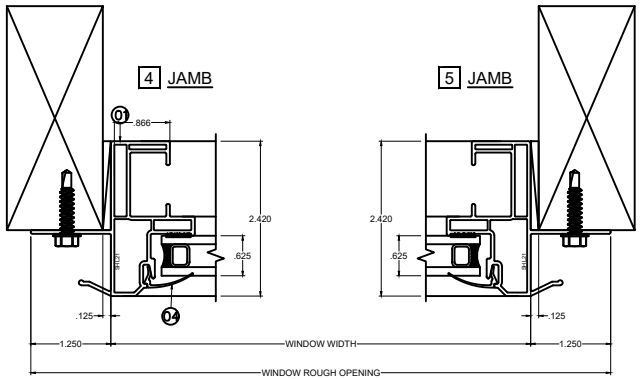


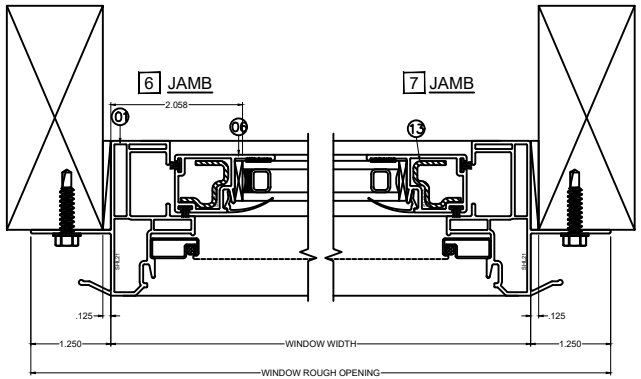
2 mtg. rl.

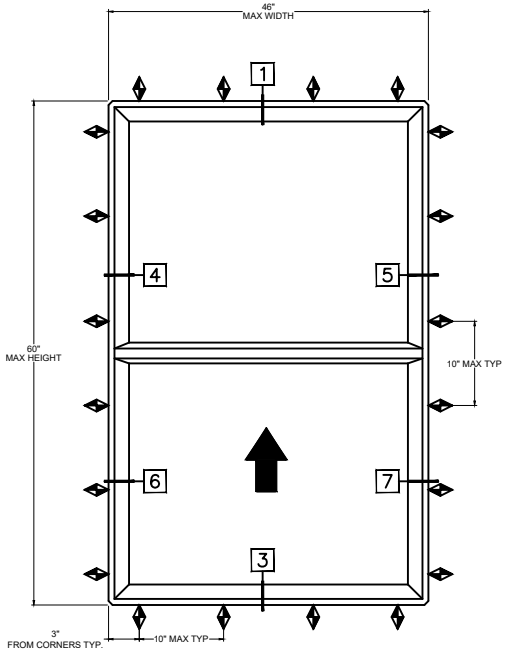


3 SILL

Glass Description
5/8" IGU--DSB, 3/8" Air, DSB







intertek
Total Quality. Assured.

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Date: 10/23/25
Verified by: J.Crump

POCAHONTAS ALUMINUM COMPANY
2001 INDUSTRIAL DRIVE
POCAHONTAS, AR 72455
POCAHONTASALUMINUM.COM
P: 870-892-3689

TITLE
V21 SINGLE HUNG

DRAWN BY:	DATE:
NDD	02/11/2025
CHECKED BY:	SCALE:
JH	

1909 10th Street, Suite 100
Plano, Texas 75074

Telephone: 469-814-0687
www.intertek.com/building

TEST REPORT FOR WINDOW TECHNOLOGY, INC.
Report No.: T1656.01-801-44 R1
Date: 10/30/25

SECTION 13
REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	10/30/25	N/A	Original Report Issue
1	11/06/25	Drawing	Drawing SHS 214 Missing from report