Westlake
Royal Window Solutions™

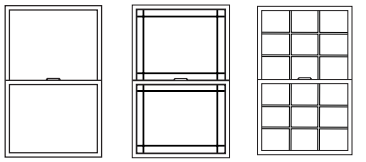
Legacy Collection

250 Series – New Construction



- All welded frame and sash
- Integral nail fin
- Aesthetically pleasing exterior frame design
- Intermediate jamb for continuous head and sill products
- Exterior glazed equal and unequal sash
- Optimum designed aluminum sash reinforcement
- Multi-chambered vinyl profiles for thermal efficiency
- Dual weatherstripping
- DP 35 performance levels
- Full family of products: hung, slider, and picture windows.





ONE LITE | 5/8" PRAIRIE | 5/8" COLONIAL



SIMULATED DIVIDED LITE



GRILLE BETWEEN GLASS



WHITE | PEBBLESTONE | CLAY

CARDINAL IG

For the complete list of Energy Star options please visit WestlakeRoyalWindows.com

NFRC PERFORMANCE RATINGS

(3/4" overall IG with Quanex Duralite spacer)

SINGLE HUNG	Glass Type Exterior + Interior	Gap Fill	Grid Option	NFRC Performance Ratings			EnergyStar® v7 Climate Zone Compliance		
				U-F	SHGC	VT	Southern	S.Central	N.Central
Standard	LoE-366 + Clear	Air	no Grid	0.33	0.23	0.53	No	No	No
		Air	with Grid	0.33	0.21	0.47	No	No	No
		Argon	no Grid	0.29	0.23	0.53	Yes	No	No
		Argon	with Grid	0.29	0.20	0.47	Yes	No	No

HORIZONTAL SLIDER	Glass Type Exterior + Interior	Gap Fill	Grid Option	NFRC Performance Ratings			EnergyStar® v7 Climate Zone Compliance		
				U-F	SHGC	VT	Southern	S.Central	N.Central
Standard	LoE-366 + Clear	Air	no Grid	0.33	0.23	0.53	No	No	No
		Air	with Grid	0.33	0.21	0.47	No	No	No
		Argon	no Grid	0.29	0.22	0.53	Yes	No	No
		Argon	with Grid	0.29	0.20	0.47	Yes	No	No

PICTURE WINDOW	Glass Type Exterior + Interior	Gap Fill	Grid Option	NFRC Performance Ratings			EnergyStar® v7 Climate Zone Compliance		
				U-F	SHGC	VT	Southern	S.Central	N.Central
Standard	LoE-366 + Clear	Air	no Grid	0.30	0.25	0.58	Yes	No	No
		Air	with Grid	0.30	0.23	0.52	Yes	No	No
		Argon	no Grid	0.26	0.24	0.58	No	No	No
		Argon	with Grid	0.26	0.22	0.52	Yes	Yes	No

Unless specified, the NFRC values & Energy Star compliance are for double glazed, SSB (3/32") glass thickness. For glass thicknesses above this, contact your sales representative for ratings information.

You may qualify for a tax credit when you replace your existing windows. For more information, go to energystar.gov

ENERGY STAR PARTNER

NFRC National Fenestration Rating Council® CERTIFIED

WestlakeRoyalWindows.com

1813 Kelly Blvd. • Carrollton, TX • PH: 972.996.5165 • FX: 972.996.5194

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Westlake
Royal Window Solutions™

Westlake Royal Windows LLC

Multi- Family Construction Projects

LIFETIME LIMITED WARRANTY ("WARRANTY")

Vinyl (frame) Windows manufactured by Westlake Royal Windows LLC ("Westlake Royal") are free of defects in design, materials, and workmanship and fit for reasonable purposes for which intended at the time of shipment from our plants in Dallas, Carrollton, Houston, Texas and Baldwin, GA, as set out below.

WHAT WILL WE DO

Any Warranty claim should be presented to Westlake Royal in a timely manner. Thereafter, Westlake Royal will inspect the alleged defect. If the claim is within the Warranty, Westlake Royal will at its option, repair, or replace any defective component without charge. The cost of removing the defective products or installing a repaired or replaced product is not covered unless claim is made within one year of original purchase. Any Warranty claim approved cannot exceed in value more than the original purchase.

WHAT WE COVER AND FOR HOW LONG

Vinyl and or aluminum used in the frames of the Westlake Royal units are warranted to the original purchaser/ developer exclusively for the original ten (10) years of use. This Warranty covers material from blistering, corroding, flaking, or rot under conditions of normal wear and use. Hardware is covered by this Warranty from all defects in design, materials and workmanship for a period of one (1) year from purchase date. Insulated Glass (10 year) from the date of purchase is warranted against defects in materials and workmanship resulting in material obstruction in vision from film formation, moisture, or dust collection between the interior glass surfaces. Specialty glass (tinted, obscure or decorative) is warranted against such defects for a period of ten years from the date of purchase. If a stress crack (glass fracture) is NOT present upon delivery to the construction site, the development of any stress crack is not a result of a manufacturing defect but results from either a handling or installation issue and is not warranted. The cost of removing the defective product or installing a repaired or replaced product is not covered unless the Warranty claim is made within one (1) year after the date of initial purchase.

WHAT WARRANTY DOES NOT COVER

1. Defects or damages attributable to external cases, such as defects caused by (a) installation, soil retention, or normal weathering; (b) accidents, fire, flood , or other acts of God, vandalism, riot or civil disorder, misuse, or abuse; (c) harmful fumes, vapors, or chemical pollutants in the atmosphere, or use of non-approved heat caused by cleaning agents; (d) mildew; (e) building settlement or structural failure of the walls or foundations; (f) stresses resulting from localized heat which cause excessive temperature differentials over glass surfaces or edges; (g) use above 6,000 feet above sea level without capillary breather tubes; (h) use in an environment subject to high vibration (e.g. swimming pool), excess salinity; or other unusual conditions; or (i) any other use or occurrence beyond Westlake Royal's control.
2. Condensation on products which occurs as the natural results of humidity within the house or building area or differences between interior orexterior temperatures does not indicate a defect in the product and is not covered by this Warranty.
3. Changes in the appearance of the hardware that are attributed to normal aging and wear do not indicate a manufacturing defect and are notcovered by this Warranty.
4. Any defects resulting from installation such as but not limited to security system installation, caulk over weep holes in the frame are not covered. It also does not cover any cost of removal or installation of a product or component part.
5. Surface imperfections are inherent in the product and if they are not noticeable within three feet of the surface and do not impact the function of the product, they are not manufacturing defects and are not covered by the Warranty
6. Westlake Royal reserves the right to discontinue or change any component. If the component of the window and patio door originally installed is not available and Westlake Royal determines to make replacement, Westlake Royal may substitute a component designated by Westlake Royal that is equal quality and value.
7. Westlake Royal has no liability beyond repair or replacement of applicable products, and repair or replacement is your sole remedy for Westlake Royal's breach of this Warranty. Westlake Royal will have no liability for any lost time, inconvenience, loss of use, personal injury, property damage, or any other incidental or consequential damage.
8. No sales representative or distributor is authorized to modify this Warranty or to extend any other Warranty on Westlake Royal products.
9. Color change due to normal weathering is excluded from this Warranty. Normal weathering is defined as any exposure to ultraviolet (sun) light, weather and atmospheric conditions which will cause any colored or painted surface to fade, darken, chalk or acquire a surface accumulation of dirt and stains. The severity of these conditions depends on air quality, location of your home and other local conditions.
10. This Warranty is the only one Westlake Royal makes and Westlake Royal expressly disclaims any other express or implied warranty, including any warranty of merchantability or fitness for a purpose.

STATE LAW RIGHTS

Some states do not allow the limitation on how long a warranty lasts or the exclusion or limitation of incidental or consequential damages, so the limitations or exclusions in paragraphs 7 and 10 may not apply to you. This Warranty gives you specific rights, and you may also have other rights which vary from state to state.

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FIELD TESTING- In the event *Westlake Royal Windows,* (Seller), windows and/or doors are subject to "Field-Testing" as a conditional requirement of the supply agreement, the following conditions are required from the Buyer:

A) Requirement of fenestration product "Field-Testing" from buyer must be provided inwriting prior to execution of any supply agreement from seller.
B) Project specification for fenestration design pressures must be provided from buyer and included in all executable documents prior to execution of any supply agreement from seller.
C) "Field-Testing" must be performed as per AAMA 502 protocol for the "Voluntary Specification for Field Testing of Newly Installed Fenestration Products"
D) Product design pressure will be determined based on the specifics of the project, not the product designation of the window.
E) All "Field-Testing" equipment must be properly calibrated and testing agency must provide proof of equipment compliance upon request
F) No more than (3) fenestration openings will be subject to "Field-Testing" unless otherwise noted and approved by Seller.
G) "Field-testing" pressures should never exceed 2/3 of the project specifications for fenestration products
H) Seller must be notified in writing two-weeks prior to any scheduled "Field-testing"
I) Buyer agrees to allow the Seller the opportunity to apply remediation on any failed fenestration products
J) Seller is not responsible for the cost or reimbursement of any related "Field-testing" fees
K) Seller is not responsible and cannot be held liable for failures on fenestration products due to installation practices that deviate from tested and accepted installation techniques

Buyer Signature _____ Date _____

Printed Name _____

Company Name _____

For additional information on AAMA (American Architectural Manufacturer's Association) see fgiaonline.org

3950 Bastille Rd Suite 100
Dallas, Texas 75212

Westlake
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Krestmark® Collection

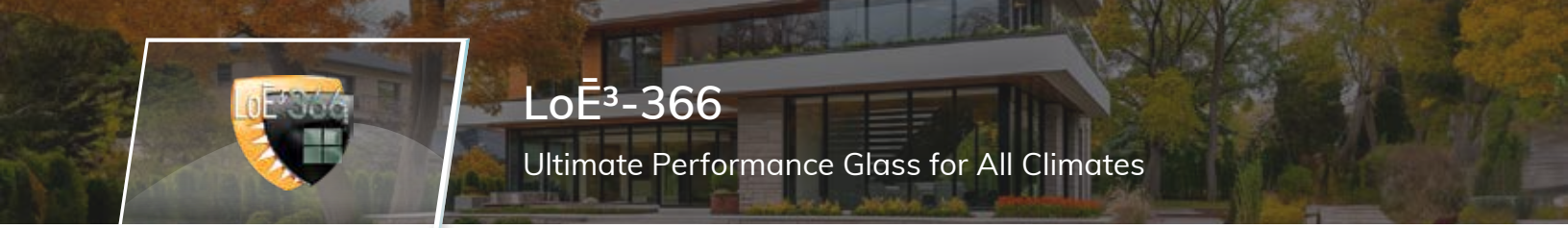
AAMA PERFORMANCE DATA

INDUSTRY STANDARD TABLE OF EQUIVALENT WIND VELOCITIES

PERFORMANCE CLASS Product performance class codes and minimum performance for window	Residential (R)											
	Light Commercial (LC)											
	Commercial (C)											
DESIGN PRESSURE RATINGS (DP RATING) The Design Pressure (DP) is the pressure measured in Pounds per Square Foot (PSF) that a building or building componet should be designed to accommodate without failure.	15	20	25	30	35	40	45	50	55	60	65	70
STRUCTURAL TEST PRESSURE IN PSF Structural Test Pressure = 1.5 x Design Pressure (DP Rating). The higher the number, the greater the amount of wind the window can sustain. This number varies with window size; be sure comparisons are with same size windows.	22.5	30	37.5	45	53.5	60	67.5	75	82.5	90	97.5	105
EQUIVALENT WIND VELOCITY IN MPH	77	88	99	108	117	125	133	140	147	153	159	165
WATER TEST PRESSURE IN PSF Water test pressure measures the windows ability to resist water penetration under specific pressure. Water test pressure = 15% of Design Pressure (DP Rating). The greater the rating, the greater the ability of the window to resist water penetration	2.86	3	3.75	4.5	5.25	6	6.75	7.5	8.25	9	9.75	10.5

3950 Bastille Road, Suite 100 • Dallas, TX 75212 • PH: 214.237.5055 • WestlakeRoyalWindows.com

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LoĒ³-366

Ultimate Performance Glass for All Climates

Cardinal LoĒ³-366® glass offers optimal solar control and high visibility, ensuring year-round comfort and energy savings. Its advanced triple-layer coating provides exceptional heat rejection and fading protection without compromising the view, making it the most popular LoĒ product.

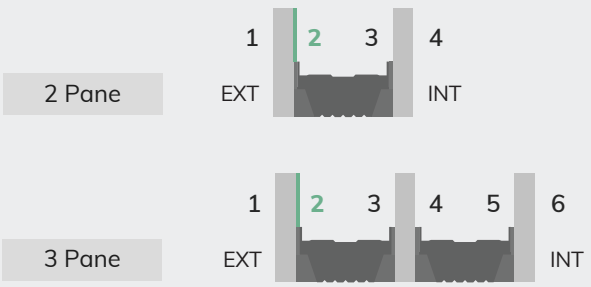
65%
Vis Trans

0.27
SHGC

0.24
U-Factor

5%
UV Transmission

Coating Position:



Data is produced using LBNL Window 7.8. 2-pane IG units have 13mm airspace and filled to 90% argon.

Benefits of LoĒ³-366

- **High Visible Light w/Solar Heat Gain**
- **Excellent UV blocking**
- **All Season Comfort**
- **Enhanced Visual Comfort**

The superior insulating capability of LoĒ³-366 is a key factor in the construction of comfortable windows for cold & warm climates. The dramatic comfort improvement from LoĒ³-366 glass also means the relative humidity of the indoor air can be controlled and maintained properly. It lets more unobstructed light in and protects from unwanted exterior air, keeping your home comfortable.

High energy efficiency	Custom shapes & sizes	Neutral color
Laminated options	Thicknesses: 2.2 to 6mm	Max dimensions: 96” x 144”

Note: LoĒ³-366 is available as annealed, heat-strengthened or tempered glass.

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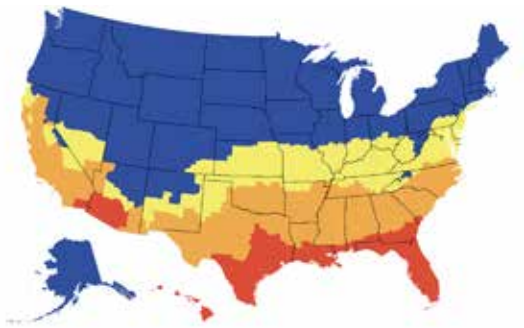
ENERGY STAR 7.0

ENERGY STAR® is a program run by the U.S. Environmental Protection Agency (EPA) that promotes energy efficiency in consumer products, including windows. ENERGY STAR 7.0 is the latest version of the ENERGY STAR program's requirements for windows.

LoĒ³-366 can be used to meet the criteria for **all four climate zones**. In the **Northern** climate zone, choose LoĒ³-366 with a triple pane IG unit.

Whole-Window Performance Criteria

	U-Factor	SHGC	
▸ Northern	≤0.22	≥0.17	Prescriptive
	=0.23	≥0.35	Equivalent Energy Performance
	=0.24		
	=0.25	≥0.40	
	=0.26		
▸ North-Central	≤0.25	≤0.40	
▸ South-Central	≤0.28	≤0.23	
▸ Southern	≤0.32	≤0.23	



3/4" Dual Pane with 3mm Glass ● 1" Triple Pane with 3mm Glass ● 90% Argon

Center-of-Glass Performance

		VISIBLE LIGHT		FADING			U-FACTOR	
		Transmission	Exterior	UV	ISO	SHGC	Air Fill IP / SI	Argon Fill IP / SI
Dual Pane	▸ LoĒ³-366 / Clear	65%	11%	5%	43%	0.27	0.29 / 1.65	0.24 / 1.37
	▸ LoĒ³-366 / LoĒ-i89	63%	11%	5%	42%	0.27	0.23 / 1.30	0.20 / 1.11
Triple Pane	▸ LoĒ³-366 / Clear / LoĒ-180	57%	15%	2%	36%	0.24	0.16 / 0.90	0.13 / 0.72
	▸ LoĒ³-366 / LoĒ-180 / LoĒ-i89	56%	15%	2%	35%	0.24	0.14 / 0.73	0.11 / 0.63

LBNL Window 7 per NFRC100 conditions. LoĒ³-366 is intended for the 2nd surface on an insulating glass unit.

ENGINEERING THE FUTURE OF GLASS

Contact Cardinal CG to learn more about LoĒ³-366 and other Cardinal glass products.

775 Prairie Center Drive, Eden Prairie, MN 55344

www.cardinalcorp.com

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Westlake
Royal Window Solutions™

AAMA PERFORMANCE DATA, 07-16-2026

Plant	Type	Series	CHS	Frame	Transom	Impact	Size	Rating	FBC 2023
KRESTMARK	SH	200/275		FIN			48x60	R-50	FL 12398-R14.04
KRESTMARK	SH	220		FINLESS			44x72	R-50	FL 12398-R14.16
KRESTMARK	SH	200/275		FIN			44x72	R-50	FL 12398-R14.06
KRESTMARK	SH	220		FINLESS			48x72	R-45	FL 12398-R14.15
KRESTMARK	SH	200/275		FIN			48x72	R-45	FL 12398-R14.01
KRESTMARK	SH	220		FINLESS			36x84	R-50	FL 12398-R14.14
KRESTMARK	SH	200/275		FIN			36x84	R-40	FL 12398-R14.07
KRESTMARK	SH	200/275		FIN			36x84	R-55	FL 12398-R14.05
KRESTMARK	SH	200/275		FIN			48x84	R-30	FL 12398-R14.02
KRESTMARK	SH	200/275		FIN			48x84	R-35	FL 12398-R14.03
KRESTMARK	SH	200/275		FIN			48x96	R-30	
KRESTMARK	SH-SH	200/275	TWIN	FIN			71x72	R-50	FL 12398-R14.12
KRESTMARK	SH-SH	220	TWIN	FINLESS			71x72	R-50	FL 12398-R14.17
KRESTMARK	SH-SH	200/275	TWIN	FIN			87x72	R-40	
KRESTMARK	SH-SH	200/275	TWIN	FIN			72x84	R-35	FL 12398-R14.11
KRESTMARK	SH-SH-SH	200/275	TRIPLE	FIN			108x72	R-50	FL 12398-R14.09
KRESTMARK	SH/PW	200/275		FIN	3860		44x96	R-35	
KRESTMARK	PW/SH	200/275		FIN	3820		44x96	R-50	FL 12398-R14.08
KRESTMARK	PW/SH-SH	200/275	TWIN	FIN	6020		72x96	R-50	FL 12398-R14.13
KRESTMARK	PW/SH-SH-SH	200/275	TRIPLE	FIN	8010		96x84	R-50	FL 12398-R14.10
KRESTMARK	HS	200/275		FIN			72x44	R-45	
KRESTMARK	HS	200/275		FIN			72x48	R-35	FL 13418-R7.1
KRESTMARK	PW	200/275		FIN			48x72	LC-70	FL 13195-R8.02
KRESTMARK	PW	200/275		FIN			72x72	LC-60	FL 13195-R8.03
KRESTMARK	PW	200/275		FIN			84x72	R-50	
KRESTMARK	PW	200/275		FIN			48x84	R-80	FL 13195-R8.05
KRESTMARK	PW	200/275		FIN			72x84	R-50	FL 13195-R8.04
KRESTMARK	PW-PW	200/275	TWIN	FIN			71x83	LC-50	
KRESTMARK	PW-PW-PW	200/275	TRIPLE	FIN			132x84	R-40	FL 13195-R8.06
KRESTMARK	PW/PW-PW	200/275	TWIN	FIN	6830		80x108	R-30	FL 13195-R8.07
KRESTMARK	PW/PW-PW	220	TWIN	FINLESS	6830		80x108	R-30	FL 13195-R8.08
KRESTMARK	SH	420		FINLESS			48x72	R-50	FL 12398-R14.25
KRESTMARK	SH	400		FIN			48x72	R-50	FL 12398-R14.19
KRESTMARK	SH	400		FIN			36x84	R-50	FL 12398-R14.18
KRESTMARK	SH	400		FIN			40x84	R-40	
KRESTMARK	SH	400		FIN			48x84	R-35	FL 12398-R14.20
KRESTMARK	SH-SH	400	TWIN	FIN			72x72	R-50	FL 12398-R14.24
KRESTMARK	SH-SH	400	TWIN	FIN			80x72	R-50	
KRESTMARK	SH-SH	400	TWIN	FIN			72x84	R-40	FL 12398-R14.23

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AAMA PERFORMANCE DATA, 07-16-2026

KRESTMARK	SH-SH-SH	400	TRIPLE	FIN			108x72	R-40	FL 12398-R14.21
KRESTMARK	SH-SH-SH	400	TRIPLE	FIN			108x72	R-35	FL 12398-R14.22
KRESTMARK	PW/SH	400		FIN	4020		48x96	R-50	WIN-1429.1
KRESTMARK	HS	400		FIN			72x44	R-50	FL 13418-R7.2
KRESTMARK	HS	400		FIN			72x48	R-45	FL 13418-R7.3
KRESTMARK	HS	400		FIN			72x60	R-30	
KRESTMARK	HS XOX	400		FIN			108x72	R-15	
KRESTMARK	PW	400		FIN			72x72	LC-60	FL 13195-R8.09
KRESTMARK	PW	400		FIN			48x84	R-65	FL 13195-R8.10
KRESTMARK	PW	400		FIN			72x84	R-50	FL 13195-R8.11
KRESTMARK	PW-PW	400	TWIN	FIN			88x84	R-50	
KRESTMARK	PW-PW	420	TWIN	FINLESS			88x84	R-50	
KRESTMARK	PW-PW-PW	400	TRIPLE	FIN			108x84	R-30	FL 13195-R8.12
KRESTMARK	PW/PW	400		FIN	4020		48x72	R-50	
KRESTMARK	PW/PW	400		FIN	6030		72x96	R-40	
KRESTMARK	PW/PW-PW	400	TWIN	FIN	6830		80x108	R-35	FL 13195-R8.13
KRESTMARK	PW/PW-PW	400	TWIN	FINLESS	6830		80x108	R-35	FL 13195-R8.13
KRESTMARK	SH	4000		FIN		IMPACT	36x72	R-60	FL 17660-R5.6
KRESTMARK	SH	4000		FIN		IMPACT	44x72	R-55	FL 17660-R5.3
KRESTMARK	SH	4000		FIN		IMPACT	48x72	R-50	FL 17660-R5.2
KRESTMARK	SH	4000		FINLESS		IMPACT	48x72	R-50	FL 17660-R5.1
KRESTMARK	SH	4000		FIN		IMPACT	36x84	R-50	FL 17660-R5.7
KRESTMARK	SH-SH	4000	MULL	FIN		IMPACT	80x72	R-50	FL 17660-R5.4
KRESTMARK	PW/SH-SH	4000	MULL	FIN	6030	IMPACT	72x108	R-50	FL 17660-R5.5
KRESTMARK	HS	4000		FIN		IMPACT	72x44	R-50	FL 43938-R1.1
KRESTMARK	PW	4000		FIN		IMPACT	72x48	R-60	
KRESTMARK	PW	4000		FIN		IMPACT	84x48	R-50	
KRESTMARK	PW	4000		FIN		IMPACT	48x72	R-60	FL 17148-R6.2
KRESTMARK	PW	4000		FIN		IMPACT	48x84	R-50	FL 17148-R6.1
KRESTMARK	CA	250		FIN			36x72	R-60	WIN-1376.1
KRESTMARK	CA	250		FIN			36x72	LC-50	
KRESTMARK	CA	250		FINLESS			36x72	LC-60	
KRESTMARK	AW	250		FIN			48x32	LC-50	
KRESTMARK	AW	250		FINLESS			48x32	LC-50	
KRESTMARK	PW	250		FIN			48x48	CW-80	
KRESTMARK	PW	250		FIN			60x60	CW-70	
KRESTMARK	PW	250		FIN			76x70	CW-50	
KRESTMARK	SGD XO	800		FIN			73x97	LC-40	FL 47517.01
KRESTMARK	SGD XO	800		FIN			97x97	LC-25	FL 47517.01
KRESTMARK	SGD XO	800		FIN			72x80	LC-50	FL 47517.02

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AAMA PERFORMANCE DATA, 07-16-2026

KRESTMARK	SGD XO	800		FIN			96x80	LC-40	FL 47517.03
KRESTMARK	SGD XO	800		FIN			96x96	LC-25	FL 47517.03
KRESTMARK	SGD OXO	800		FIN			108x80	R-50	FL 47517.04
KRESTMARK	SGD OXO	800		FIN			109x97	LC-40	FL 47517.05
KRESTMARK	SGD OXXO	800		FIN			143x80	R-30	FL 47517.06
LEGACY	SH	700		FIN			40x63	LC-50	
LEGACY	SH	700		FIN			36x72	R-50	
LEGACY	SH	700		FIN			44x72	R-45	
LEGACY	SH	700		FIN			44x72	LC-35	
LEGACY	SH	700		FIN			48x72	R-35	
LEGACY	SH	700		FIN			36x84	LC-50	
LEGACY	SH	700		FIN			36x84	LC-45	
LEGACY	SH	700		FIN			44x84	LC-25	
LEGACY	SH	700		FIN			48x84	R-35	
LEGACY	SH	700		FIN			44x96	R-35	
LEGACY	SH	700		FIN			48x96	R-30	
LEGACY	SH	700		FIN			48x96	R-15	
LEGACY	SH-SH	700	TWIN	FIN			72x72	R-40	
LEGACY	SH-SH	700	TWIN	FIN			72x72	R-50	
LEGACY	SH-SH	700	TWIN	FIN			72x84	R-30	
LEGACY	SH-SH-SH	700	TRIPLE	FIN			108x72	R-30	
LEGACY	SH-SH-SH	700	TRIPLE	FIN			108x72	R-30	
LEGACY	SH-SH-SH	700	TRIPLE	FIN			108x84	R-20	
LEGACY	PW/SH	700		FIN	4030		48x96	R-35	
LEGACY	PW-PW/SH-SH	700	TWIN	FIN	6030		72x96	R-40	
LEGACY	PW-PW-PW/SH-SH-SH	700	TRIPLE	FIN	9030		108x96	R-30	
LEGACY	HS	700		FIN			60x36	R-30	
LEGACY	HS	700		FIN			60x44	R-50	
LEGACY	HS	700		FIN			60x48	R-45	
LEGACY	HS	700		FIN			72x48	R-30	
LEGACY	HS XOX	700		FIN			96x48	R-25	
LEGACY	HS XOX	700		FIN			96x48	R-20	
LEGACY	PW	700		FIN			48x60	R-50	
LEGACY	PW	700		FIN			72x72	LC-50	
LEGACY	PW	700		FIN			72x84	CW-50	
LEGACY	PW	700		FIN			72x84	CW-60	
LEGACY	PW	700		FIN			48x96	R-45	
LEGACY	PW	700		FIN			60x96	LC-50	
LEGACY	PW-PW	700	TWIN	FIN			72x84	R-50	
LEGACY	PW-PW-PW	700	TRIPLE	FIN			108x60	R-50	

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AAMA PERFORMANCE DATA, 07-16-2026

LEGACY	**PW-PW-PW**	700	TRIPLE	FIN			108x72	R-50	
LEGACY	**PW**	7000		FIN			48x72	R-50	
LEGACY	**PW**	7000		FIN			39x84	R-50	
LEGACY	**PW**	7000		FIN		**IMPACT**	48x72	R-50	
LEGACY	**PW**	7000		FIN		**IMPACT**	39x84	R-50	
LEGACY	**SH**	250		FIN			44x72	R-35	
LEGACY	**SH**	250		FIN			36x84	R-35	
LEGACY	**SH**	250		FIN			48x96	LC-30	
LEGACY	**SH-SH**	250	TWIN	FIN			72x84	R-35	
LEGACY	**HS**	250		FIN			72x72	LC-25	
LEGACY	**HS XOX**	250		FIN			108x72	R-15	
LEGACY	**PW**	250		FIN			72x72	R-50	
LEGACY	**PW-PW**	255	TWIN	FIN			72x72	R-45	
LEGACY	**PW-PW**	255	TWIN	FIN			72x84	R-45	
LEGACY	**PW-PW-PW**	255	TRIPLE	FIN			108x60	R-45	
LEGACY	**PW-PW-PW**	255	TRIPLE	FIN			108x72	R-45	
MAGNOLIA	**SH**	400		FIN			40x63	R-35	FL 16475-R10.02
MAGNOLIA	**SH**	400		FIN			40x66	R-50	FL 16475-R10.06
MAGNOLIA	**SH**	400		FIN			36x72	R-35	FL 16475-R10.04
MAGNOLIA	**SH**	400		FIN			36x72	R-50	FL 16475-R10.05
MAGNOLIA	**SH**	400		FIN			48x72	R-20	FL 16475-R10.07
MAGNOLIA	**SH**	400		FIN			48x72	R-25	FL 16475-R10.03
MAGNOLIA	**SH**	400		FIN			48x72	R-35	FL 16475-R10.08
MAGNOLIA	**SH**	400		FIN			30x76	R-35	FL 16475-R10.03
MAGNOLIA	**SH**	400		FIN			48x84	R-20	FL 16475-R10.16
MAGNOLIA	**SH**	4000		FINLESS			48x84	R-20	FL 16475-R10.16
MAGNOLIA	**SH**	400		FIN			48x84	R-30	FL 16475-R10.06
MAGNOLIA	**SH**	4000		FINLESS			48x84	R-30	FL 16475-R10.06
MAGNOLIA	**SH-SH**	400	TWIN	FIN			80x63	R-35	FL 16475-R10.14
MAGNOLIA	**SH-SH**	400	TWIN	FIN			72x72	R-50	FL 16475-R10.15
MAGNOLIA	**SH-SH-SH**	400	TRIPLE	FIN			108x63	R-35	FL 16475-R10.11
MAGNOLIA	**SH-SH-SH**	400	TRIPLE	FIN			108x72	R-35	FL 16475-R10.10
MAGNOLIA	**SH-SH-SH**	400	TRIPLE	FIN			108x72	R-50	FL 16475-R10.12
MAGNOLIA	**SH-SH-SH**	4000	TRIPLE	FINLESS			108x84	R-20	FL 16475-R10.13
MAGNOLIA	**SH-SH-SH**	400	TRIPLE	FIN			108x84	R-20	FL 16475-R10.09
MAGNOLIA	**PW/SH**	400		FIN	2820		32x96	R-40	FL 16475-R10.01
MAGNOLIA	**PW/SH**	400		FIN	4020		48x96	R-30	FL 16475-R10.01
MAGNOLIA	**HS**	400		FIN			63x44	R-30	FL 16476-R6.1
MAGNOLIA	**HS**	400		FIN			72x60	R-15	
MAGNOLIA	**HS**	4000		FINLESS			72x60	R-15	

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MAGNOLIA	**PW**	400		FIN			72x48	R-45	FL 16474-R7.3
MAGNOLIA	**PW**	4000		FINLESS			72x60	R-35	FL 16474-R7.8
MAGNOLIA	**PW**	400		FIN			72x60	R-35	FL 16474-R7.8
MAGNOLIA	**PW**	400		FIN			72x60	R-50	FL 16474-R7.1
MAGNOLIA	**PW**	400		FIN			48x84	R-35	FL 16474-R7.2
MAGNOLIA	**PW-PW**	400	TWIN	FIN			96x84	R-25	FL 16474-R7.7
MAGNOLIA	**PW-PW-PW**	400	TRIPLE	FIN			108x72	R-35	FL 16474-R7.4
MAGNOLIA	**PW-PW-PW**	400	TRIPLE	FIN			108x72	R-50	FL 16474-R7.6
MAGNOLIA	**PW-PW-PW**	4000	TRIPLE	FINLESS			108x84	R-20	FL 16474-R7.9
MAGNOLIA	**PW-PW-PW**	400	TRIPLE	FIN			108x84	R-20	FL 16474-R7.5
MAGNOLIA	**SGD XO**	800		FIN			73x97	LC-40	FL 47518.01
MAGNOLIA	**SGD XO**	800		FIN			97x97	LC-25	FL 47518.01
MAGNOLIA	**SGD XO**	800		FIN			72x80	LC-50	FL 47518.02
MAGNOLIA	**SGD XO**	800		FIN			96x80	LC-40	FL 47518.03
MAGNOLIA	**SGD XO**	800		FIN			96x96	LC-25	FL 47518.03
MAGNOLIA	**SGD OXO**	800		FIN			108x80	R-50	FL 47518.04
MAGNOLIA	**SGD OXO**	800		FIN			109x97	LC-40	FL 47518.05
MAGNOLIA	**SGD OXXO**	800		FIN			143x80	R-30	FL 47518.06

Installation Instructions for New Construction: Single Hung and Picture Windows

Inspect all windows carefully. DO NOT INSTALL if damaged or defective.

FIG. 1

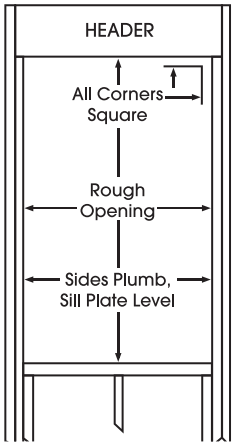
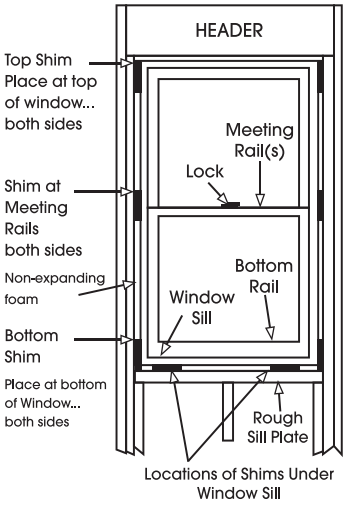


FIG. 2 INTERIOR VIEW



Window Opening
The rough opening must be plumb, level and square and slightly larger than window size in width and height, not including the nailing fins (see fig. 1). Close and lock the sash to aid in keeping the window square during installation. All packaging materials including wood support for bottom nailing fin, cardboard and aluminum shipping angles for mulled combinations need to be removed prior to installation of the window.

Apply a ⅜" continuous bead of Sealant caulking to the interior surface of the nailing fin covering the holes in the fin, to seal the window's fin to the sheathing or house wrap. If the rough opening is larger than the window unit by more than ½" also apply the caulk to the sheathing or house wrap, making sure the bead is no more than¼" from the edge of the rough opening, so that It Is covered by the nailing fin when the window is Installed.

Setting Shims (if necessary)
The sill of the window must be supported In a straight and level position at a minimum of three points, at either end and in the middle. Windows wider than 30" should be supported at a maximum of every 12" (see fig. 2). Shims should be used when applicable.

Placing Shims
Place¼" shims on the sill plate of the window opening spaced as described above. Multiple twin or triple windows should have a support under each mullion (see fig. 2).

Setting Window
Set window on the shims and adjust side clearance to be equal on both sides. Tack one upper comer of the fin to keep window in place. Check sill with a level and adjust thickness of shims as required to level sill. Readjust side clearance as necessary. Shims must be cut to exact thickness to fit snug and not fall out but do not force shims into place, pushing the sill upward out of level. Shim both sides of window (see fig. 2) and adjust thickness of shims to make diagonal measurements equal with the window plumb and square.

If the above has been done correctly the width across the top, middle and bottom will measure the same. Clearance between the sash stile and jamb main frame will be equal. The meeting rail and lock rail will align evenly at the top and clearance between the sash stile and Jamb mainframe will have parallel sight lines. The sweep latches should lock smoothly.

Fastening Windows with Nail Fins
Selection of fasteners are the responsibility of the installer. Structure and load requirement should be taken Into account with regard to selection. The windows shall be secured to the framing through the nail fin. Fasteners are corrosion resistant as specified in the International Building Code (IBC), International Residential Code (IRC) and the Texas Revisions. To achieve published test results #8-1 ½" truss head screw or equivalent should be used.

Fasteners shall be spaced approximately 2" from each corner and approximately 12" on center around the perimeter of the window. The fasteners shall be long enough to penetrate a minimum of 1-½" into the wall framing. Mulled or multiple window units must be fastened directly at the mull and approximately 6" on either side of the mullion. On mulled combination windows place a small piece of self-adhesive flexible flashing tape to seal the 1" void between nailing fins. Make sure head and sill are not bowed up or down. Check side jambs are not bowed in or out

Flashing Recommendations
Use self adhesive flexible flashing (minimum 4" wide and meets local requirements) which has a self-adhering surface on one side, approved for use on vinyl, aluminum and other substances such as house wrap. This flashing material must meet a minimum water resistance of 24 hours in accordance with ASTM-D779 and MMA Certified Installation Guidelines.

(see fig. 3) Sill flashing is applied first up against the bottom of the window sill extending beyond the sides of the window jamb fin and side flashing at least 2" Apply jamb flashing next over the jamb-nailing fin, continuing over and beyond the sill flashing, 2" below. Apply head flashing similarly, extending 2" past either side of the jamb flashing, to complete the window flashing detail.

(see fig.2) Install non-expanding foam or insulation between the window and rough opening. It is very important that these openings are not overstuffed and bow the frame. Do NOT use expanding foam.

FIG. 3 EXTERIOR VIEW

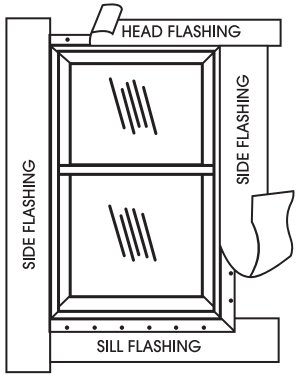
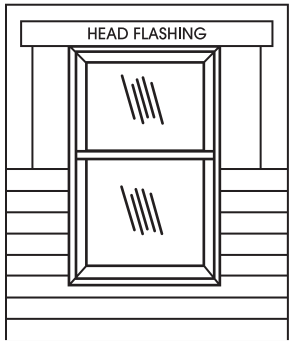


FIG. 4 EXTERIOR VIEW



CAUTIONS

Do not use large razor knives, metal scrapers or razor blades to clean glass. Never scrape dry glass!
Do not remove shipping clips from lock rail until window is installed.
Do not lay windows flat or store in sun. The heat will shrink the plastic wrapping and ward the frame.
Do not caulk or plug weep holes.
Do not drill into or through the sill of the window.
Protect the window during construction and plastering.
Do not lift window by top of frame, only by jambs.
Protect vinyl sill from traffic and damage.

These recommended guidelines are based on Industry accepted practices, however there are other accepted methods. Knowing, understanding and satisfying local code requirements is the sole responsibility of the installer.

Check with local building codes for particular installation and performance requirements.

For updated information on approvals and/or Installation guidelines, go to

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WESTLAKE ROYAL WINDOWS
TEST REPORT

SCOPE OF WORK
AAMA/WDMA/CSA 101/I.S.2/A440 TESTING ON 250 SINGLE HUNG, PVC SIDE LOAD SINGLE HUNG WINDOW

REPORT NUMBER
D5924.06-501-47 R1

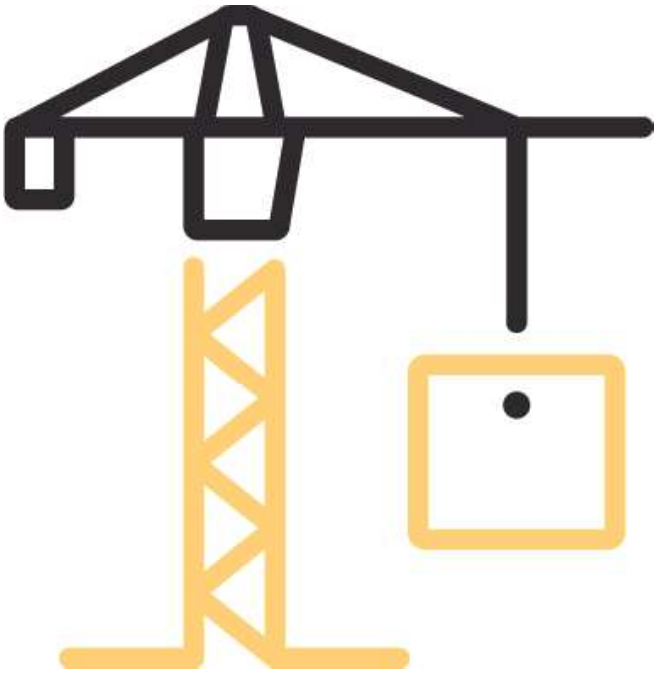
TEST DATE
03/03/14

ISSUE DATE
06/23/25

REVISION DATE
06/26/25

PAGES
10

DOCUMENT CONTROL NUMBER
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TEST REPORT FOR WESTLAKE ROYAL WINDOWS

Report No.: D5924.06-501-47 R1
Date: 06/23/25
Revision 1: 06/26/25

REPORT ISSUED TO

WESTLAKE ROYAL WINDOWS
6410 Langfield Road Bldg. D
Houston, TX 77092

SECTION 1
SCOPE

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by Veka Inc., 100 Veka Drive Fombell, Pennsylvania 16123-0250 to perform testing in accordance with AAMA/WDMA/CSA 101/I.S.2/A440 on their SSH10WW, PVC Side Load Single Hung Window. This test report is a reissue of the original Report No. D5924.01-501-47. This report is issued in the name of Westlake Royal Windows on their 250 Single Hung, PVC Side Load Single Hung Window through written authorization of Veka Inc. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at the Veka Inc. test facility in Fombell, Pennsylvania.

For INTERTEK B&C:

COMPLETED BY:	Matthew Hollinger	**REVIEWED BY:**	Stephen D. Shank, FMPC
TITLE:	Project Manager – Field & Laboratory Testing	**TITLE:**	Regional Manager – Field & Laboratory Testing Building and Construction
SIGNATURE:	Digitally Signed by:Matthew Hollinger	**SIGNATURE:**	Digitally Signed by: Stephen Shank
DATE:	06/26/25	**DATE:**	06/26/25

COMPLETED BY:	Joseph E. Allison	**REVIEWED BY:**	Lynn George
TITLE:	Senior Technician	**TITLE:**	Director – Regional Operations
SIGNATURE:	*Original Signatures on File*	**SIGNATURE:**	*Original Signatures on File*
DATE:	06/26/25	**DATE:**	06/26/25

JEA:sld/asm/jlc

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TEST REPORT FOR WESTLAKE ROYAL WINDOWS
Report No.: D5924.06-501-47 R1
Date: 06/23/25
Revision 1: 06/26/25

SECTION 2
SUMMARY OF TEST RESULTS

TITLE	RESULTS
Primary Product Designator	Class LC-PG30 1207 x 2426 (48 x 96)-H
Design Pressure	±1440 Pa (±30.08 psf)
Air Infiltration	0.3 L/s/m^2 (0.06 cfm/ft^2)
Water Penetration Resistance Test Pressure	260 Pa (5.43 psf)

Reference must be made to Intertek B&C Report No. D5924.01-501-47, dated 03/14/14 for complete test specimen description and detailed test results.

SECTION 3
TEST SPECIFICATION(S)/METHOD(S)

The specimens were evaluated in accordance with the following:

AAMA/WDMA/CSA 101/I.S.2/A440-11, *NAFS - North American Fenestration Standard /Specification for Windows, Doors, and Skylights*

AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard /Specification for Windows, Doors, and Skylights*

SECTION 4
MATERIAL SOURCE/INSTALLATION

Test specimen 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 Spruce-Pine-Fir wood buck. The rough opening allowed for a 1/8" shim space and the exterior perimeter of the specimen was sealed to the test buck.

LOCATION	ANCHOR DESCRIPTION	ANCHOR SPACING
Nailing fin	#8 x 2” truss head screws	9” on center beginning at each corner

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TEST REPORT FOR WESTLAKE ROYAL WINDOWS
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Date: 06/23/25
Revision 1: 06/26/25

SECTION 5
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Doug Merry	Veka Inc.
Cornell Charles	Veka Inc.
Joe Allison	Architectural Testing, Inc.

SECTION 6
TEST SPECIMEN DESCRIPTION

Product Type: PVC Side Load Single Hung Window
Series/Model: 250 Single Hung

Product Size(s):

Test Specimen #1

OVERALL AREA:	WIDTH		HEIGHT	
2.9 m^2 (31.5 ft^2)	millimeters	inches	millimeters	inches
Overall size	1207	47-1/2	2426	95-1/2
Sash size	1149	45-1/4	1213	47-3/4
Screen	1168	46	1187	46-3/4

Unless otherwise noted the following descriptions apply to all specimens.

Frame Construction:

MEMBER	MATERIAL	DESCRIPTION
Head, sill, jambs, fixed rail	PVC	Extruded

	JOINERY TYPE	DETAIL
All corners	Mitered	Thermally welded
Fixed rail	Square-cut and coped	Fastened with four #8 x 2” truss head screws, two at each end. Each end was sealed with a silicone sealant.

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Sash Construction:

MEMBER	MATERIAL	DESCRIPTION
All rails and stiles	PVC	Extruded

	JOINERY TYPE	DETAIL
All corners	Miltered	Thermally welded

Reinforcement: *No reinforcement was utilized.*

Weatherstripping:

DESCRIPTION	QUANTITY	LOCATION
0.187” backed by 0.220” high center fin pile	1 Row	Sash stiles, sash rails, fixed rail

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
3/4" IG	Rectangular shaped steel, single sealed	1/8” annealed	1/8” annealed	The sash and fixed lite were exterior glazed. The glass was set against a double-sided adhesive tape and secured with rigid vinyl glazing beads.

LOCATION	QUANTITY	DAYLIGHT OPENING		GLASS BITE
		millimeters	inches	
Sash	1	1067 x 1130	42 x 44-1/2	1/2"
Frame	1	1133 x 1130	44-5/8 x 44-1/2	1/2"

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Drainage:

METHOD	SIZE	QUANTITY	LOCATION
Weepslot	1/2" wide by 1/8" high	2	Exterior sill face, one 3” in from each end
Weepslot	3/4" wide by 3/16" high	2	Interior sill track, one at each end
Weepslot	1/2" wide by 1/8" high	2	Intermediate sill wall, one 3” in from each end
Weepslot	3/8" wide by 1/8"deep	2	Bottom rail, one at each end

Hardware:

DESCRIPTION	QUANTITY	LOCATION
Metal sweep lock and keeper	1	Lock rail, at midspan
Block and tackle balance	2	One per jamb
Metal balance clip	2	One per jamb

Screen Construction:

FRAME MATERIAL	CORNER CONSTRUCTION	MESH TYPE	MESH ATTACHMENT METHOD
Roll-formed aluminum	Square-cut and secured with snap-in plastic corner keys	Fiber	Flexible vinyl spline

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TEST REPORT FOR WESTLAKE ROYAL WINDOWS
Report No.: D5924.06-501-47 R1
Date: 06/23/25
Revision 1: 06/26/25

SECTION 7
TEST RESULTS

The temperature during testing was 18°C (65°F). The results are tabulated as follows:

Test Specimen #1:

TITLE OF TEST	RESULTS	ALLOWED	NOTE
Operating Force, per ASTM E2068	Initiate Motion: 178 N (40 lbf) Maintain Motion: 173 N (39 lbf) Locks: 22 N (5 lbf)	Report only 180 N (40 lbf) max 100 N (22.5 lbf) max	
Air Leakage, Infiltration per ASTM E283 at 75 Pa (1.57 psf)	0.3 L/s/m^2 (0.06 cfm/ft^2)	1.5 L/s/m^2 (0.3 cfm/ft^2) max.	1
Water Penetration, per ASTM E547	N/A	N/A	3
Uniform Load Deflection, per ASTM E330	N/A	N/A	3
Uniform Load Structural, per ASTM E330	N/A	N/A	3
Forced Entry Resistance, per ASTM F588, Type: A - Grade: 10	Pass	No entry	
Thermoplastic Corner Weld	Pass	Meets as stated	
Deglazing, per ASTM E987 Operating direction, 320 N (70 lbf)	Pass	Meets as stated	
Remaining direction, 230 N (50 lbf)	Pass	Meets as stated	

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TEST REPORT FOR WESTLAKE ROYAL WINDOWS
Report No.: D5924.06-501-47 R1
Date: 06/23/25
Revision 1: 06/26/25
Test Specimen #1:

TITLE OF TEST	RESULTS	ALLOWED	NOTE
OPTIONAL PERFORMANCE			
Water Penetration, per ASTM E547 at 260 Pa (5.43 psf)	Pass	No leakage	2
Uniform Load Deflection, per ASTM E330 Deflections taken at the fixed meeting stile +1440 Pa (+30.08 psf) -1440 Pa (-30.08 psf)	 22.6 mm (0.89") 16.8 mm (0.66")	 Report only	 4,5,6
Uniform Load Structural, per ASTM E330 Permanent set taken at the fixed meeting stile +2160 Pa (+45.11 psf) -2160 Pa (-45.11 psf)	 2.0 mm (0.08") 0.3 mm (0.01")	 4.6 mm (0.18") max. 4.6 mm (0.18") max.	 5,6

Note 1: The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.

Note 2: With and without insect screen.

Note 3: The client opted to start at a pressure higher than the minimum required. Test results are reported under Optional Performance.

Note 4: The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440 for this product designation. The deflection data is recorded in this report for special code compliance and information only.

Note 5: Loads were held for 10 seconds.

Note 6: 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 8
ALTERATIONS

No alterations were required.

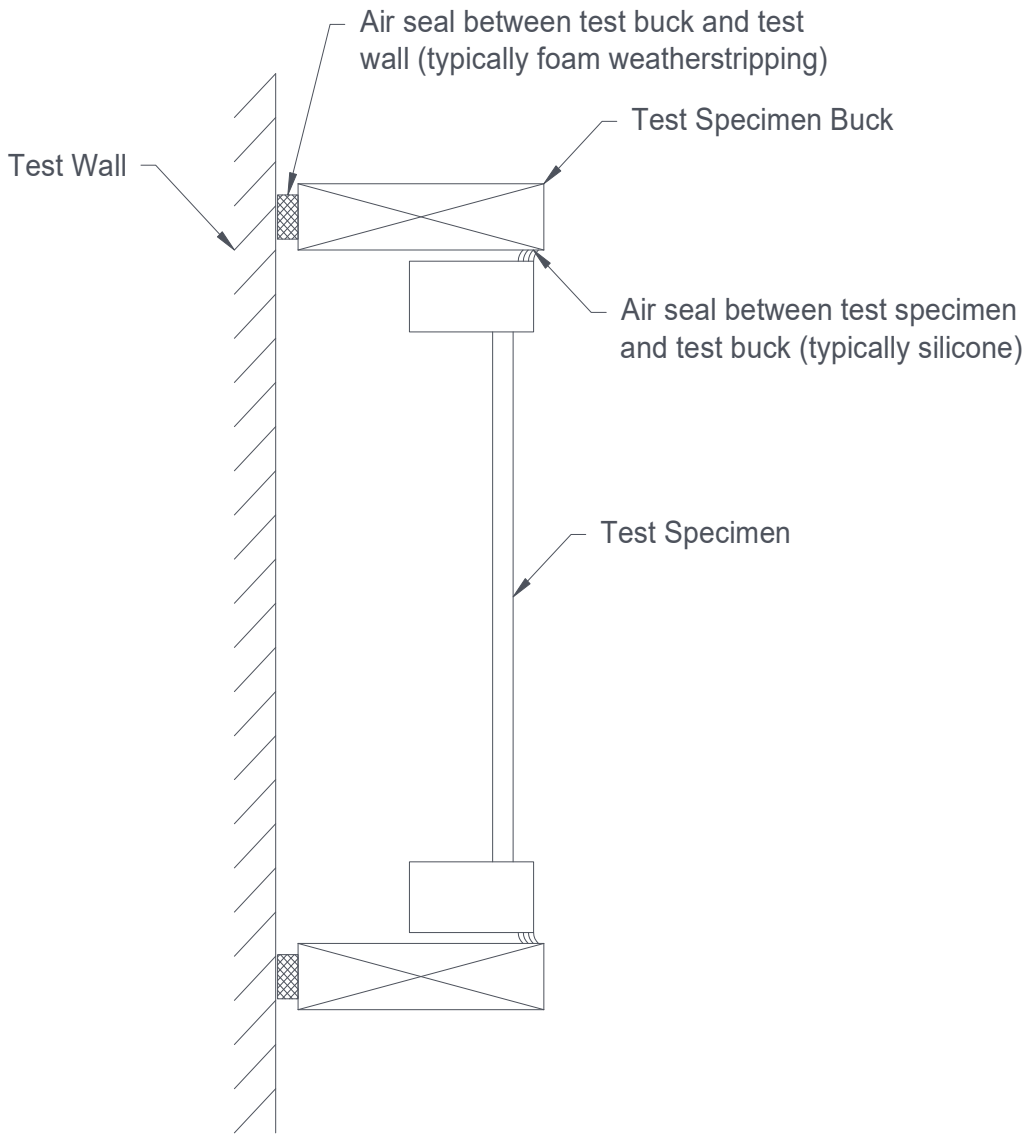
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SECTION 9

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 10
CONCLUSION

The specimen tested successfully met the performance requirements for a **Class LC-PG30 1207 x 2426 (48 x 96)-H** rating.

This report is reissued in the name of Westlake Royal Windows through written authorization from Veka Inc. to whom the original report was rendered. This original Veka Inc. Report No. is D5924.01-501-47.

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 11
DRAWINGS

***Note**: Complete drawings packet on file with Intertek B&C.*

SECTION 12
REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	06/23/25	N/A	Original Report Issue – Reissued Report No. D5924.06-501-47 in the name of Westlake Royal Windows
1	06/26/25	1	Corrected testing date year

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WESTLAKE ROYAL WINDOWS
TEST REPORT

SCOPE OF WORK

AAMA/WDMA/CSA 101/I.S.2/A440-11 TESTING ON SERIES: 250
PVC PICTURE WINDOW

REPORT NUMBER
J4146.01-801-44 R2

TEST DATE(S)
06/29/19

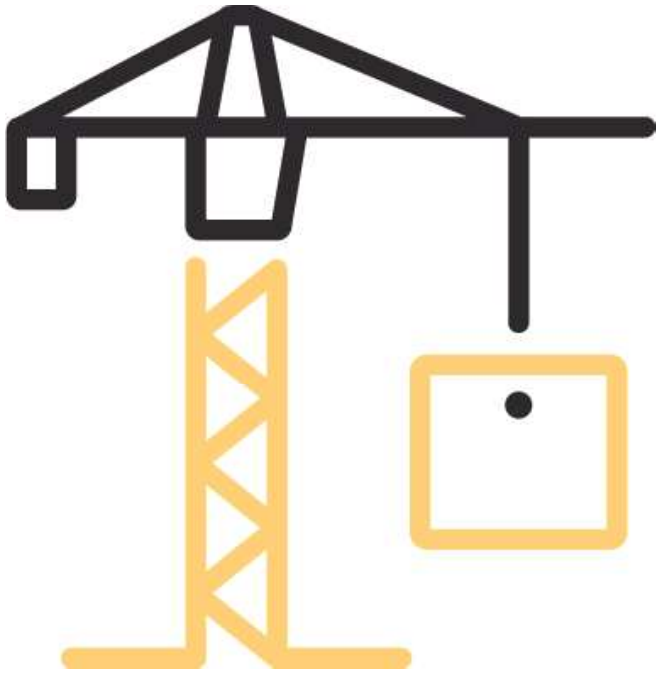
ISSUE DATE 09/30/19

REISSUE DATE 06/25/25

RECORD RETENTION END DATE
06/29/23

PAGES
16

DOCUMENT CONTROL NUMBER
ATI 00438 (07/24/17)
RT-R-AMER-Test-2804
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TEST REPORT FOR WESTLAKE ROYAL WINDOWS
Report No.: J4146.01-801-44 R2
Date: 09/30/19

REPORT ISSUED TO
WESTLAKE ROYAL WINDOWS
6410 LANGFIELD ROAD, BLDG. D
HOUSTON, TX 77092

SECTION 1
SCOPE

Architectural Testing Inc, an Intertek Company dba Intertek Building & Construction (B&C) was contracted by Westlake Royal Windows to perform testing in accordance with AAMA/WDMA/CSA 101/I.S.2/A440-11 - *North American Fenestration Standard/Specification for Windows, Doors, and Skylights* on their Series 250 PVC Picture 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.

For INTERTEK B&C:

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

JC:cm

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SECTION 2
SUMMARY OF TEST RESULTS

TITLE	SERIES 250 PICTURE WINDOW
AAMA/WDMA/CSA 101/I.S.2/A440-11	Class R-PG50-FW 1829 x 1829 (72 x 72)
Design Pressure	+/-2400 Pa (+50.13 psf)
Air Infiltration	<0.05 L/s/m^2 (<0.01 cfm/ft^2)
Water Penetration Resistance Test Pressure	360 Pa (7.52 psf)

***General Note**: An asterisk (*) next to the size designation indicates that the size tested for optional performance was smaller than the Gateway test size for the product type and class.*

SECTION 3
TEST METHOD(S)

The specimens were evaluated in accordance with the following:

AAMA/WDMA/CSA 101/I.S.2/A440-11, *NAFS 2011 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

SECTION 4
MATERIAL SOURCE/INSTALLATION

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

The specimen was installed into a Spruce-Pine-Fir wood buck. The rough opening allowed for a 1/8" shim space. The nail fin perimeter of the window was sealed to the wood test buck with silicone sealant. Installation of the tested product was performed by the client.

LOCATION	ANCHOR DESCRIPTION	ANCHOR LOCATION
Integral nail fin	#6 x -1-5/8" screws	2" from each end and 12" max O.C.

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TEST REPORT FOR WESTLAKE ROYAL WINDOWS
Report No.: J4146.01-801-44 R2
Date: 09/30/19

SECTION 5
EQUIPMENT

Control Panel: 63467
Weather Station: 63305

SECTION 6
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Clint Barnett	Krestmark Industries, LP
Randy James	Intertek B&C
Jeffrey Crump	Intertek B&C

SECTION 7
GATEWAY

Reference Intertek B&C Report No. J4146.01-501-44, dated 09/20/19 for complete *Gateway* test specimen description and test results.

SECTION 8
TEST SPECIMEN DESCRIPTION

Product Type: PVC Picture Window
Series/Model: 250

Product Size(s):

Test Specimen

OVERALL AREA:	**WIDTH**		**HEIGHT**	
3.7 m² (36 ft²)	**millimeters**	**inches**	**millimeters**	**inches**
Overall size	1829	72	1829	72
Fixed DLO	1746	68-3/4	1746	68-3/4

Frame Construction:

FRAME MEMBER	MATERIAL	DESCRIPTION
Head, sill and jambs	PVC	Extruded

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TEST REPORT FOR WESTLAKE ROYAL WINDOWS
Report No.: J4146.01-801-44 R2
Date: 09/30/19

	JOINERY TYPE	DETAIL
All corners	Mitered	Thermally welded

Reinforcement: *Reinforcement was not utilized*

Weatherstripping: *Weatherstripping was not utilized*

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	Duraseal	5/32" annealed	5/32" annealed	Interior glazed with back bedding compound at the exterior face of glass and vinyl glazing bead at the interior face of glass.

LOCATION	QUANTITY	DAYLIGHT OPENING		GLASS BITE
		millimeters	inches	
Frame	2	1746 x 1746	68-3/4 x 68-3/4	1/2"

Drainage:

DRAINAGE METHOD	SIZE	QUANTITY	LOCATION
Weepslot with flap	1" wide by 1/4" high	2	Exterior sill face, one 3-1/2" in from each end
Weephole	1-1/4" deep by 5/8" wide	2	Sill/jamb intersection, one at each end

Hardware: *Hardware was not utilized*

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TEST REPORT FOR WESTLAKE ROYAL WINDOWS
Report No.: J4146.01-801-44 R2
Date: 09/30/19

SECTION 9
TEST RESULTS

The temperature during testing was 21.1°C (70°F). The results are tabulated as follows:

Test Specimen: #1

TITLE OF TEST	RESULTS	ALLOWED	NOTE
Air Leakage, Infiltration per ASTM E283 at 75 Pa (1.57 psf)	<0.05 L/s/m^2 (<0.01 cfm/ft^2)	1.5 L/s/m^2 (0.3 cfm/ft^2) max.	1, 2
Air Leakage, Exfiltration per ASTM E283 at 75 Pa (1.57 psf)	<0.05 L/s/m^2 (<0.01 cfm/ft^2)	1.5 L/s/m^2 (0.3 cfm/ft^2) max.	1, 2
Water Penetration, per ASTM E547 @ 360 Pa (7.52 psf)	Pass	No leakage	
Uniform Load Deflection, per ASTM E330 +2400 Pa (+50.13 psf) -2400 Pa (-50.13 psf)	 <0.10 mm (<0.01") <0.10 mm (<0.01")	 N/A N/A	6, 7
Uniform Load Structural, per ASTM E330 +3600 Pa (+75.19 psf) -3600 Pa (-75.19 psf)	 <0.10 mm (<0.01") <0.10 mm (0.01")	 1.3 mm (0.05") 1.3 mm (0.05")	6, 7
Forced Entry Resistance, per ASTM F588, Type: D - Grade: 10	 Pass	 No entry	
Thermoplastic Corner Weld	Pass	Meets as stated	

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Note 1: The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.

Note 2: Test Date 06/19/19

Note 3: With and without insect screen(s).

Note 4: The client opted to start at a pressure higher than the minimum required. Test results are reported under Optional Performance.

Note 5: The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440 for this product designation. The deflection data is recorded in this report for special code compliance and information only.

Note 6: Loads were held for 10 seconds.

Note 7: 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 10
ALTERATIONS

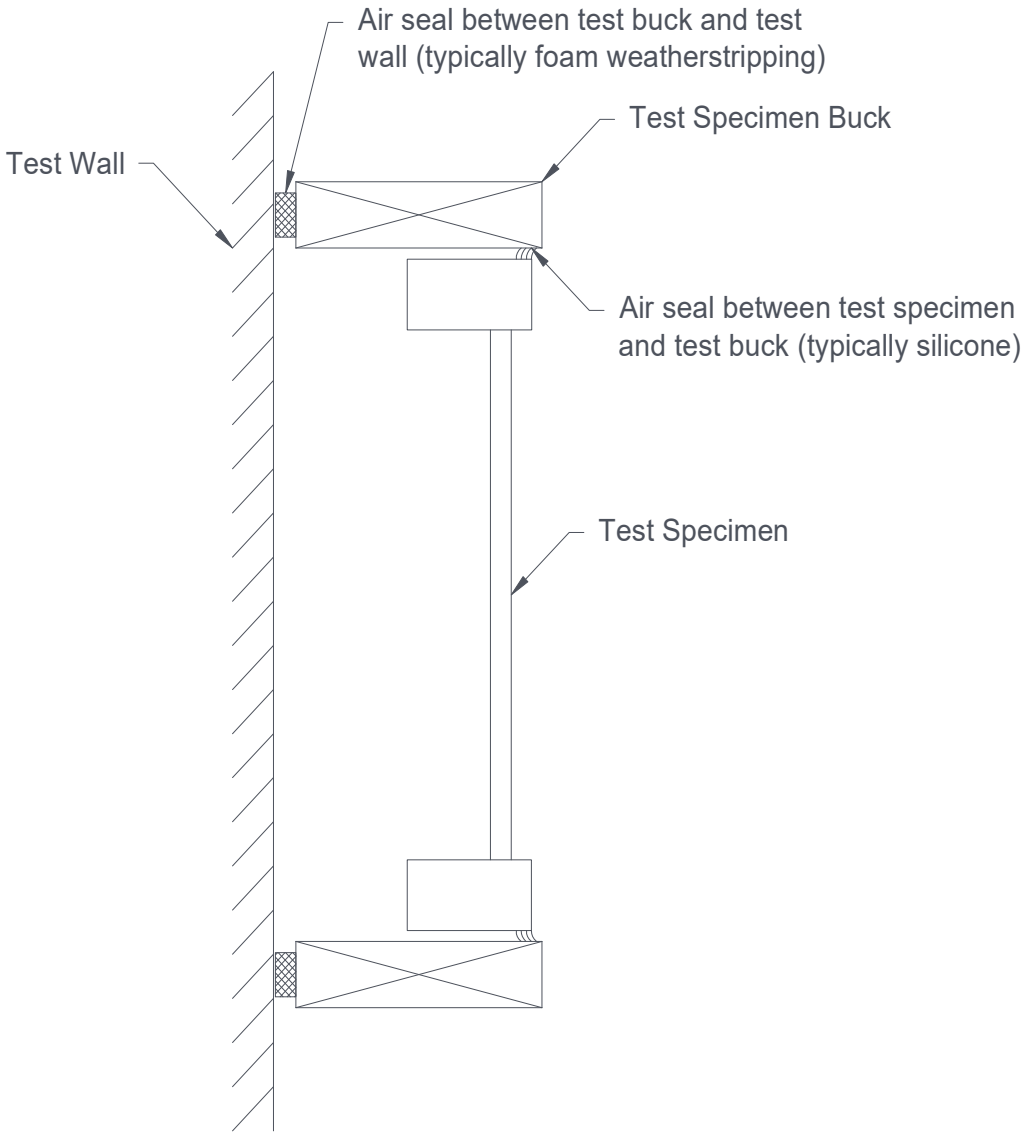
No alterations were required.

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SECTION 11
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 12
CONCLUSION

The specimens tested successfully met the performance requirements for the following ratings:

TEST SPECIMEN(S)	TITLE	SUMMARY OF RESULTS
1	101/I.S.2/A440-11	Class R-PG50-FW

Reference Intertek-ATI Report No. J4146.01-501-47, dated 09/20/19 for complete *Gateway* test specimen description and test results.

***General Note**: An asterisk (*) next to the size designation indicates that the size tested for optional performance was smaller than the Gateway test size for the product type and class.*

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SECTION 13
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.

***Note**: Complete drawings packet on file with Intertek B&C.*

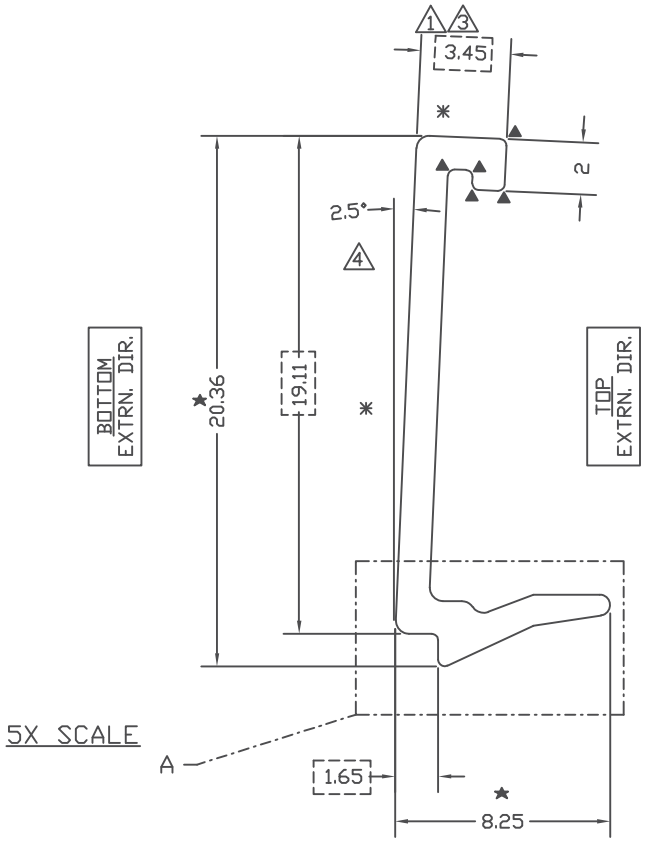
Frame Width (in) 72
Frame Height (in) 72

250 Picture Window BOM

Report #:	J4146.01-801-44
Date:	09/20/19
Verified by:	J. Crump

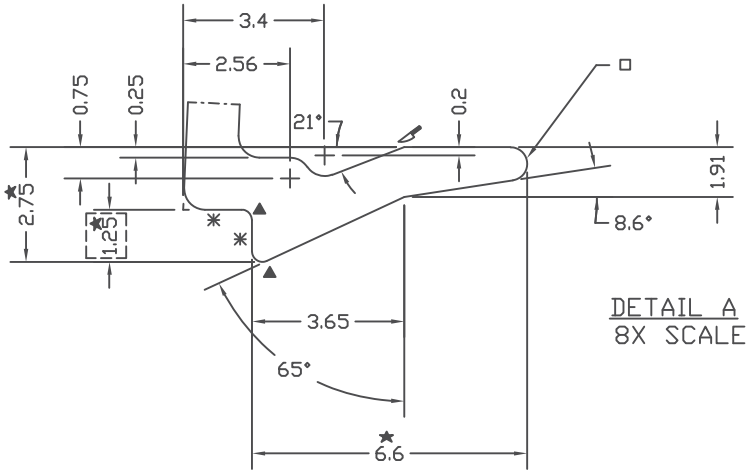
	Part Number	Description	Quantity
Vinyl	PE131	PW Head	1
	PE131	PW Jamb	2
	PE131	PW Sill	1
	BV51	Glazing bead	As Req
	SS29290	CHS Mull	As Req
Alum. Rein.	2480	CHS T-Mull	As Req
Hardware	CS-59-375	Common Jamb Bracket	As Req
	Fast Spec VW6-1625	Weep Covers	As Req
Glass	DSB	DSB Glass Top Lite	1
	MXO1500	Glazing Leg	As Req
Fasteners	NA	#6 x 1” Phillips Head TEK Screw	As Req
	NA	#8 x 3 Square Head Screw-CHS	As Req
Misc.	NA	Setting Block	6
	AAMA Gold Label	Certification Label	1
	NFRC Label	Energy Label	1
	NA	Foam Gasket- CHS	As Req

FILLETS:
=SHARP
▲ =R0.25
□ =0.4

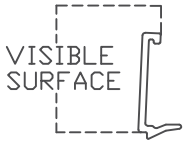


Report #:	J4146.01-801-44
Date:	09/20/19
Verified by:	J. Crump

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DETAIL A
8X SCALE



FULL SCALE

★ = DIMENSION TAKEN FROM FURTHEST POINT ON RADIUS

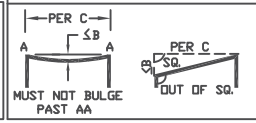
MATERIAL: RIGID PVC

DIMENSIONS IN MILLIMETERS

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

=CRITICAL DIMENSION

* = FLATNESS & SQUARENESS CRITICAL



B @ ≤.0154	PER C PER 10MM
≤.20mm.	130mm.
≤.16mm.	105mm.
≤.07mm.	45mm.

4	ANGLED WALL 2.5° 20.4 TO 20.36, 19.15 TO 19.11	1 DEC 98 (TJF)
3	4.15 TO 3.45	1 DEC 98 (TJF)
2.	REVISE AREA/ WEIGHT	26 MAR 98, 1 DEC 98
1.	REVISE DIM. 3.45 TO 4.15	26 MAR 98
	REVISIONS	DATE

EXTRUDER SIZE: CM-35 EXTRUDER SPEED: 10.0 m/min

WEIGHT: 0.036 lb/ft AREA: 36.89mm² 2

UNSPECIFIED WALL THICKNESS 1.25mm

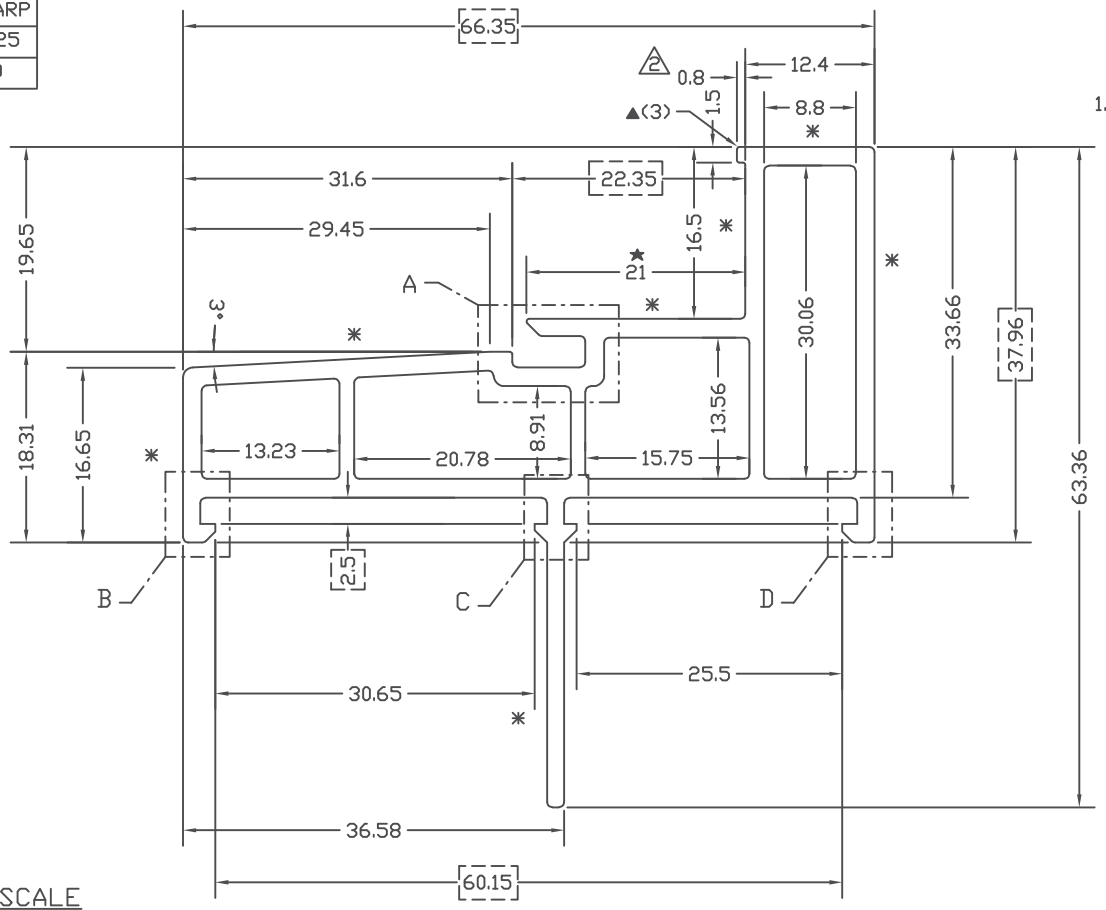
UNSPECIFIED RADII 0.5mm UNSPECIFIED TOLERANCE ±0.2mm

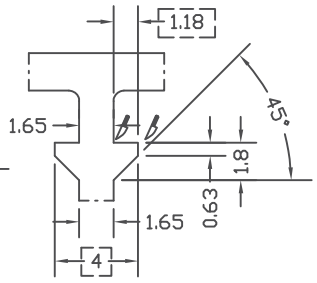
VEKA INC.
100 VEKA DRIVE
FOMBELL, PA 16123

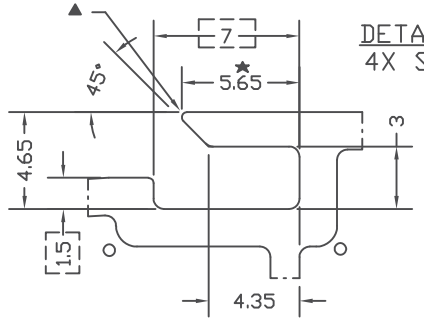
DRAWN: JMN	DATE: 7 NOV 94	SCALE: AS NOTED
CHK'D:	DATE:	APPV'D:
TITLE GLAZING BEAD 3/4" GLASS		DWG. # BV51

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FILLETS:
=SHARP
▲ =R0.25
○ =R1.0

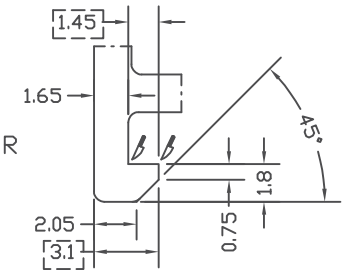


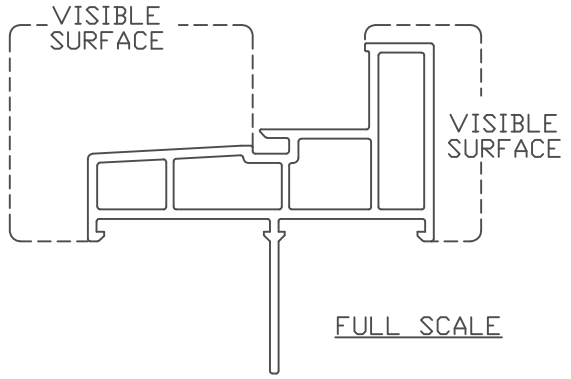




Report #:	J4146.01-801-44
Date:	09/20/19
Verified by:	J.Crump

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=CRITICAL DIMENSION

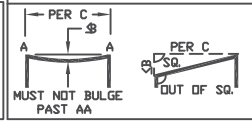
★ = DIMENSION TAKEN FROM FURTHEST POINT ON RADIUS

MATERIAL: RIGID PVC

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

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* = FLATNESS & SQUARENESS CRITICAL



B @ ≤.0154	PER C PER 10MM:
≤.20mm.	130mm.
≤.16mm.	105mm.
≤.07mm.	45mm.

1.	ADD GLAZING NUB, REV. AREA/ WEIGHT	21 MAY 04
1.	CHANGE EXTRUDER SIZE FROM C80 TO CM55	11 AUG 95
	REVISIONS	DATE

WEIGHT: 0.465lb/ft	AREA: 475.18mm² (2)		
UNSPECIFIED WALL THICKNESS OUTER	1.8mm	INNER 1.4mm	
UNSPECIFIED RADII 0.5mm	UNSPECIFIED TOLERANCE ±0.2mm		

VEKA INC.
100 VEKA DRIVE
FOMBELL, PA 16123

DRAWN: JMN	DATE: 20 APR 95	SCALE: AS NOTED
CHK'D:	DATE:	APPV'D:
TITLE PICTURE WINDOW MASTER FRAME		DWG. # PE131

BILL OF MATERIALS

WELDED PICTURE WINDOW (PE13W)

NOTE: **THIS BILL OF MATERIALS REFLECTS THE SYSTEM AS TESTED. DEVIATION FROM THE BILL OF MATERIALS IS NOT RECOMMENDED BY VEKA INC. AND MAY REDUCE THE PERFORMANCE OF THE FINISHED PRODUCT.**

PVC PROFILES:	PART #	# PER UNIT	SOURCE
FRAME	PE131	4	VEKA
GLAZING BEAD (3/4" GLASS)	BV50T or BV51	4	VEKA

REINFORCING PROFILES: **NOTE:** **Reinforcing is mandatory in all bronze profiles. For other cases, refer to test reports in technical manual.**

FRAME (PE131)		A/R	VEKA

HARDWARE:

INSTALLATION HOLE PLUG	9946 **	A/R	ASHLAND

GLAZING:

DOUBLE FACE TAPE	1/16" x 1/2" AWT**	A/R	ARLON
	1/16" x 1/2"	A/R	ADHESIVE RESEARCH
	1/16" x 1/2"	A/R	VENTURE
GLAZING SHIMS (3/4" GLASS)	3/4" x 3/4" x 1/16"	A/R	TREMCO
LIQUID BACK BEDDING	SBC1M150	A/R	NOVAGUARD
(SILICONE)	896	A/R	PECORA
	5733	A/R	SCHNEE MOREHEAD
	899	A/R	DOW CORNING

SCREWS: **NOTE:** **All screws are zinc plated or stainless steel sheet metal type, unless otherwise noted.**

INSTALLATION	#8 x 2-1/2" PHP	A/R	MERCHANTS

**** = COLOR**
A/R = AS REQUIRED

04/19/01

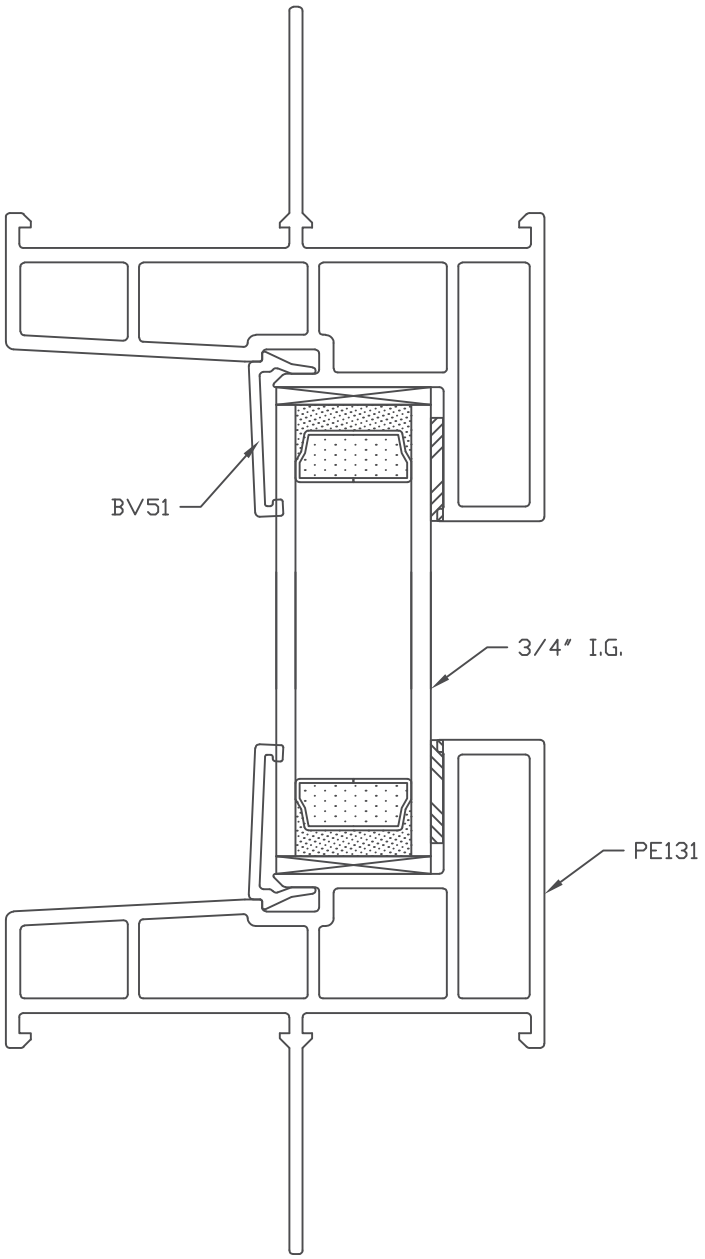
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Date:	09/20/19
Verified by:	J. Crump

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Date:	09/20/19
Verified by:	J. Crump



NOTE:
FOR OTHER PROFILE, GLAZING BEAD, & GLASS OPTIONS, PLEASE SEE THE LINEAL PROFILE CHARTS FOR THIS SYSTEM.

	REVISIONS	DATE

VEKA INC.
100 VEKA DRIVE
FOMBELL, PA 16123

DRAWN: BJF	DATE: 12 OCT 16	SCALE: FULL
CHK'D:	DATE:	APPV'D:
TITLE: PICTURE WINDOW PE13W TYPICAL ASSEMBLY		DWG. # PE13WASM

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SECTION 14
REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	09/30/19	N/A	Original Report Issue
1	02/24/20	4	Change mm to match inches
2	06/25/25	Cover, 2	Changed customer name to Westlake Royal Windows

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WESTLAKE ROYAL WINDOWS
TEST REPORT

SCOPE OF WORK
AAMA/WDMA/CSA 101/I.S.2/A440 TESTING ON 250 SINGLE SLIDER, PVC HORIZONTAL SLIDING WINDOW, TYPE XO

REPORT NUMBER
D5922.06-501-47 R1

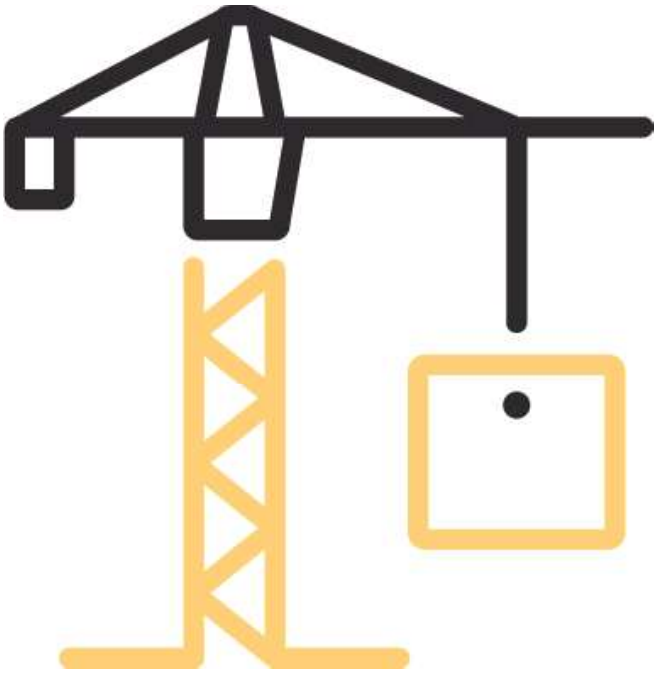
TEST DATE
03/03/14

ISSUE DATE
06/23/25

REVISION DATE
06/26/25

PAGES
10

DOCUMENT CONTROL NUMBER
RT-R-AMER-Test-2804 (06/21/24)
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Springdale, Pennsylvania 15144

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TEST REPORT FOR WESTLAKE ROYAL WINDOWS

Report No.: D5922.06-501-47 R1
Date: 06/23/25
Revision 1: 06/26/25

REPORT ISSUED TO

WESTLAKE ROYAL WINDOWS
6410 Langfield Road Bldg. D
Houston, TX 77092

SECTION 1
SCOPE

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by Veka Inc., 100 Veka Drive Fombell, Pennsylvania 16123-0250 to perform testing in accordance with AAMA/WDMA/CSA 101/I.S.2/A440 on their SS10WW, PVC Horizontal Sliding Window, Type XO. This test report is a reissue of the original Report No. D5922.01-501-47. This report is issued in the name of Westlake Royal Windows on their 250 Single Slider through written authorization of Veka, Inc. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at the Veka Inc. test facility in Fombell, Pennsylvania.

For INTERTEK B&C:

COMPLETED BY:	Matthew Hollinger	**REVIEWED BY:**	Stephen D. Shank, FMPC
TITLE:	Project Manager – Field & Laboratory Testing	**TITLE:**	Regional Manager – Field & Laboratory Testing Building and Construction
SIGNATURE:	Digitally Signed by:Matthew Hollinger	**SIGNATURE:**	Digitally Signed by: Stephen Shank
DATE:	06/26/25	**DATE:**	06/26/25
COMPLETED BY:	Joseph E. Allison	**REVIEWED BY:**	Lynn George
TITLE:	Senior Technician	**TITLE:**	Director – Regional Operations
SIGNATURE:	*Original Signatures on File*	**SIGNATURE:**	*Original Signatures on File*
DATE:	06/26/25	**DATE:**	06/26/25

IEA:sld/asm/jlc

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TEST REPORT FOR WESTLAKE ROYAL WINDOWS
Report No.: D5922.06-501-47 R1
Date: 06/23/25
Revision 1: 06/26/25

SECTION 2
SUMMARY OF TEST RESULTS

TITLE	RESULTS
Primary Product Designator	Class LC-PG25 1816 x 1816 (72 x 72)-HS
Design Pressure	±1200 Pa (±25.06 psf)
Air Infiltration	0.3 L/s/m^2 (0.06 cfm/ft^2)
Water Penetration Resistance Test Pressure	180 Pa (3.76 psf)

Reference must be made to Intertek B&C Report No. D5922.01-501-47, dated 03/14/14 for complete test specimen description and detailed test results.

SECTION 3
TEST SPECIFICATION(S)/METHOD(S)

The specimens were evaluated in accordance with the following:

AAMA/WDMA/CSA 101/I.S.2/A440-11, *NAFS - North American Fenestration Standard /Specification for Windows, Doors, and Skylights*

AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard /Specification for Windows, Doors, and Skylights*

SECTION 4
MATERIAL SOURCE/INSTALLATION

Test specimen 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 Spruce-Pine-Fir wood buck. The rough opening allowed for a 1/8" shim space and the exterior perimeter of the specimen was sealed with a silicone sealant.

LOCATION	ANCHOR DESCRIPTION	ANCHOR SPACING
Integral nailing fin	#8 x 2” truss head screws	Nominally spaced at 9” on center, and beginning at each corner

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SECTION 5
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Doug Merry	Veka Inc.
Cornell Charles	Veka Inc.
Joe Allison	Architectural Testing, Inc.

SECTION 6
TEST SPECIMEN DESCRIPTION

Product Type:
Series/Model: 250 Single Slider

Product Size(s):

Test Specimen #1

OVERALL AREA:	WIDTH		HEIGHT	
3.3 m^2 (35.5 ft^2)	millimeters	inches	millimeters	inches
Overall size	1816	71-1/2	1816	71-1/2
Sash size	908	35-3/4	1759	69-1/4
Screen	892	35-1/8	1772	69-3/4

Unless otherwise noted the following descriptions apply to all specimens.

Frame Construction:

MEMBER	MATERIAL	DESCRIPTION
Head, sill, jambs, fixed stile	PVC	Extruded

	JOINERY TYPE	DETAIL
All corners	Mitered	Thermally welded
Fixed stile	Square-cut and coped	Fastened with four #8 x 2” truss head screws, two at each end. Each end was sealed with a silicone sealant.

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Sash Construction:

MEMBER	MATERIAL	DESCRIPTION
All rails and stiles	PVC	Extruded

	JOINERY TYPE	DETAIL
All corners	Mitered	Thermally welded

Reinforcement:

DRAWING NUMBER	LOCATION	MATERIALS
RFSH1004AOM	Fixed stile	Extruded aluminum
RFSHS24SOM	Lock stile	Formed steel

Weatherstripping:

DESCRIPTION	QUANTITY	LOCATION
0.187” Backed x 0.220” high center fin pile	1 Row	Sash stiles, sash rails, fixed stile

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
3/4" IG	Rectangular shaped steel, single sealed	5/32” annealed	5/32” annealed	The sash and fixed lite were exterior glazed. The glass was set against a double-sided adhesive tape and secured with rigid vinyl glazing beads.

LOCATION	QUANTITY	DAYLIGHT OPENING		GLASS BITE
		millimeters	inches	
Sash	1	826 x 1676	32-1/2 x 66	1/2"
Frame	1	816 x 1740	32-1/8 x 68-1/2	1/2"

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Drainage:

METHOD	SIZE	QUANTITY	LOCATION
Weepslot	1/2" wide by 1/8" high	2	Exterior sill face, one 3” in from each end
Weepslot	3/4" wide by 3/16" high	2	Interior sill track, one at each end
Weepslot	1/2" wide by 1/8" high	2	Intermediate sill wall, one 3” in from each end
Weepslot	3/8" wide by 1/8" deep	2	Bottom rail, one at each end

Hardware:

DESCRIPTION	QUANTITY	LOCATION
Metal sweep lock and keeper	1	Lock stile, at midspan
Dual metal rollers with plastic housing	2	Bottom rail, one at each end

Screen Construction:

FRAME MATERIAL	CORNER CONSTRUCTION	MESH TYPE	MESH ATTACHMENT METHOD
Roll-formed aluminum	Square-cut and secured with snap-in plastic corner keys	Fiber	Flexible vinyl spline

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SECTION 7
TEST RESULTS

The temperature during testing was 18°C (65°F). The results are tabulated as follows:

Test Specimen #1:

TITLE OF TEST	RESULTS	ALLOWED	NOTE
Operating Force, per ASTM E2068	Initiate Motion: 89 N (20 lbf) Maintain Motion: 80 N (18 lbf) Locks: 22 N (5 lbf)	Report only 90 N (20 lbf) max 100 N (22.5 lbf) max	
Air Leakage, Infiltration per ASTM E283 at 75 Pa (1.57 psf)	0.3 L/s/m^2 (0.06 cfm/ft^2)	1.5 L/s/m^2 (0.3 cfm/ft^2) max.	1
Water Penetration, per ASTM E547	N/A	N/A	3
Uniform Load Deflection, per ASTM E330	N/A	N/A	3
Uniform Load Structural, per ASTM E330	N/A	N/A	3
Forced Entry Resistance, per ASTM F588, Type: A - Grade: 10	Pass	No entry	
Thermoplastic Corner Weld	Pass	Meets as stated	
Deglazing, per ASTM E987 Operating direction, 320 N (70 lbf)	Pass	Meets as stated	
Remaining direction, 230 N (50 lbf)	Pass	Meets as stated	

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Test Specimen #1:

TITLE OF TEST	RESULTS	ALLOWED	NOTE
OPTIONAL PERFORMANCE			
Water Penetration, per ASTM E547 at 180 Pa (3.76 psf)	Pass	No leakage	2
Uniform Load Deflection, per ASTM E330 Deflections taken at the fixed meeting stile +1200 Pa (+25.06 psf) -1200 Pa (-25.06 psf)	 53.3 mm (2.10") 43.0 mm (1.69")	 Report only	 4, 5, 6
Uniform Load Structural, per ASTM E330 Permanent set taken at the fixed meeting stile +1800 Pa (+37.59 psf) -1800 Pa (-37.59 psf)	 2.8 mm (0.11") 1.3 mm (0.05")	 7.1 mm (0.28") max. 7.1 mm (0.28") max.	 5, 6

Note 1: The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.

Note 2: With and without insect screen.

Note 3: The client opted to start at a pressure higher than the minimum required. Test results are reported under Optional Performance.

Note 4: The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440 for this product designation. The deflection data is recorded in this report for special code compliance and information only.

Note 5: Loads were held for 10 seconds.

Note 6: 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 8
ALTERATIONS

No alterations were required.

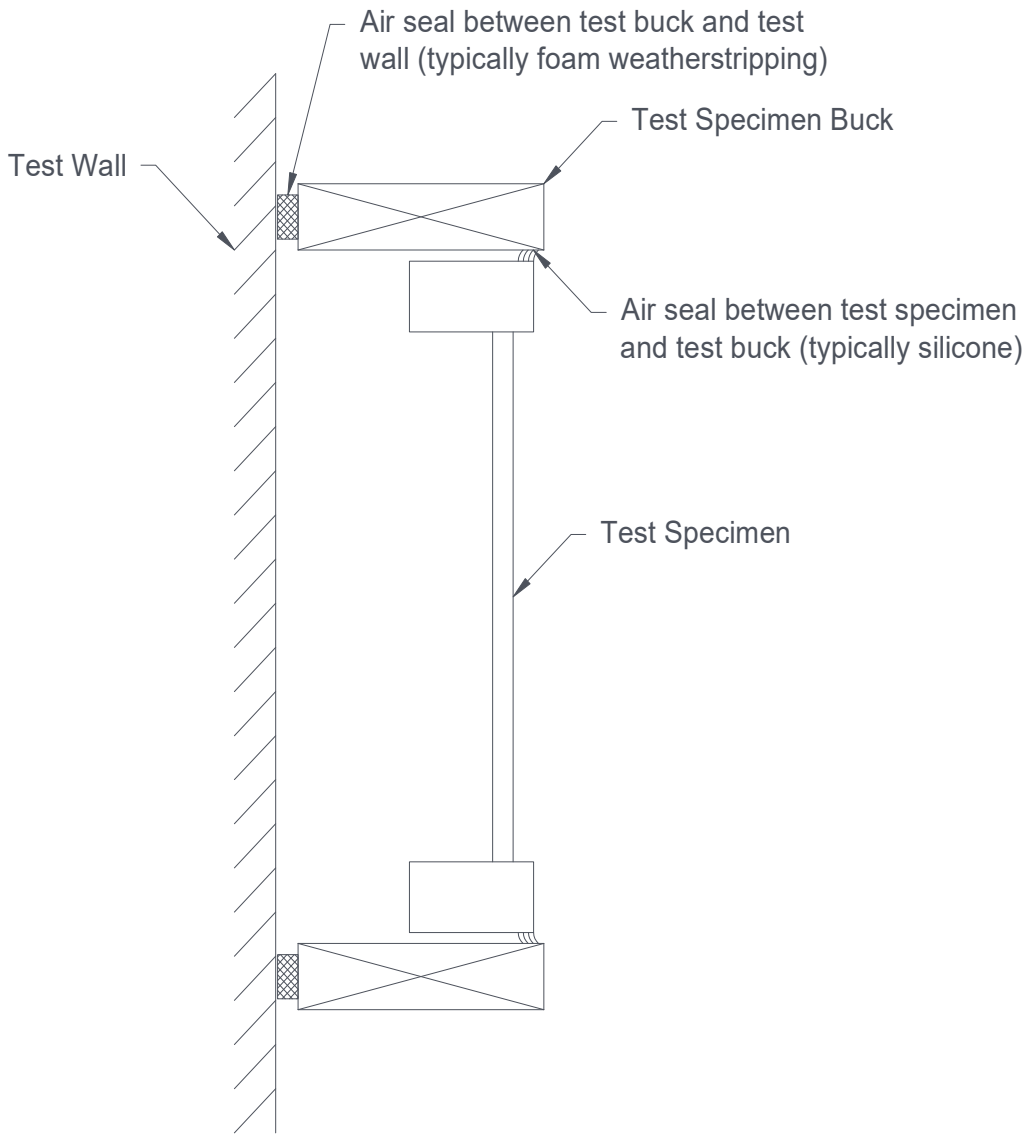
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SECTION 9

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 10
CONCLUSION

The specimen tested successfully met the performance requirements for a **Class LC-PG25 1816 x 1816 (72 x 72)-HS** rating.

This report is reissued in the name of Westlake Royal Windows through written authorization from Veka Inc. to whom the original report was rendered. The original Veka Inc. Report No. is D5922.01-501-47.

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 11
DRAWINGS

***Note**: Complete drawings packet on file with Intertek B&C.*

SECTION 12
REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	06/23/25	N/A	Original Report Issue-Reissued Report No. D5922.06-501-47 in the name of Westlake Royal Windows
1	06/26/25	1	Corrected test date year