

Quality Accuracy Assurance

Fenestration Testing Laboratory, Inc.

1677 West 31st Place Hialeah, FL 33012 Phone: 305/819-7877 Fax 305/819-7998

Lab. Number 2392
June 30, 1999
Report Number 10
File Number 99-102
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OFFICIAL TEST REPORT

MANUFACTURER:	Kinco Limited	DESIGNATION:	SGD-C65 (193 X 96)
ADDRESS:	P.O. Box 6398 Jacksonville, Florida 32236	SPECIFICATIONS:	AAMA/NWDA 101/I.S.2.-97

DESCRIPTION OF UNIT

Model Designation: Mark 2 XHP; Aluminum Sliding Glass Door.

Overall Size: 16' 3/4" (192 3/4") by 8' 0" (96") high by 4.344" deep.

Configuration: OXXX

No. & Size of Panels: Four extruded aluminum panels, size from the left, 49 1/2" by 95" high; 49 1/2" by 95" high; 50 1/4" by 95" high; 49 1/2" by 95" high

MATERIAL CHARACTERISTICS

Frame Construction: Test unit has an equal leg type frame, butt joints and a white coated finish. Aluminum alloy is 6063-T6. Frame corners were not fastened with screws. Frame sill has a mill finish and a 2 1/2" overall interior sill flange. Size of frame members are as follows: frame head 0.812" by 4.510" by 1.375"; frame sill 0.562" by 4.996" by 2.500"; frame jambs 0.312" by 4.344". Frame members are solid extrusions with a typical wall thickness of 0.062".

Panel Construction: Panels have butt joints and a white coated finish. Aluminum alloy is 6063-T6. Panel corners at top were fastened with one No. 10 by 5/8" pan head sheet metal screw. Panel corners at bottom were fastened with one 12-20 by 3/8" truss head machine screw. Size of stiles and rails are as follows: jamb/lock stile 1.750" by 1.000"; top rails 1.250" by 1.500" by 0.875"; bottom rails (solid extrusions) 0.875" by 2.500" by 0.078" wall thickness; interlock stiles 1.405" by 2.438" by 1.000"; female astragal stile 1.485" by 2.468" by 1.000". Panel members are hollow extrusions, except where indicated. Panel extrusions have a typical wall thickness of 0.062", except where noted.

Glazing:

Material: 3/16" tempered glass.

Method: Panels are channel glazed with 0.450" glazing penetration using a flexible vinyl glazing channel.

Daylight Opening: Clear opening of each panel is 45 1/4" by 91 1/4" high.

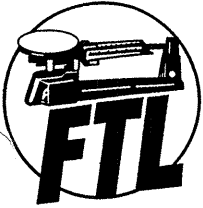
Weatherstripping:

Quantity	Description	Location
Double row	pile with integral plastic fin, Ultrafab	at each frame jamb, female astragal stile, panel top and bottom rails
Single row	pile with integral plastic fin, Ultrafab	at interlock stiles
Four	1 1/2" long strip of pile with integral plastic fin	at top of each interlock stile at the weatherstrip groove

Hardware:

Quantity	Description	Location
Two	flush mount metallic hook lock	one at each panel lock stile, 42" from bottom
Two	metallic keeper	one at the female astragal stile and right frame jamb, 40 3/8" from bottom

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MATERIAL CHARACTERISTICS

Hardware:

Quantity	Description	Location
Eight	adjustable steel wheels in steel housing	one at each end of each panel bottom rail
One	rubber bumper	one at the right frame jamb, 37 1/4" from bottom
Eight	3/4" by 1 3/4" long plastic guides	one at each panel top rail, 1 7/8" from each end, fastened with one No. 8 by 1/2" pan head sheet metal screw

Weepholes:

Quantity	Description	Location
Six	1 1/2" long weep notch	one at each end of each panel and screen track

Reinforcement: Two 3/8" by 1 1/4" by 91 1/4" long steel bars inside each panel interlock stile.

Sealants: Installation screws at frame sill and jambs, frame corners and panel corner seams were sealed with a white colored sealant, Schnee Morehead 5504.

Pads: One 1 1/8" by 2" long adhesive back pile pad in frame head and frame sill above and below the female astragal stile and one of same in frame sill below the right panel interlock (butt) stile. (Total of three pads).

Screen: Water resistance test performed with and without fiberglass mesh screen installed. Size of screen, 48 3/4" by 95" high.

Additional Description: One 90" long extruded aluminum "J" shaped stiffener, part No. KCO-237, was fastened to the interior side of the female astragal stile with eight No. 10 by 1" pan head sheet metal screws. Location of fasteners from the bottom, 3", 15", 27", 39", 51", 63", 75" and 87". The fixed panel was fastened to left frame jamb on the interior with one 1" by 1 3/8" by 0.050" by 1 3/8" long aluminum angle, 12" from top and 11 3/4" from bottom, each fastened to frame and panel with one No. 8 by 1/2" pan head sheet metal screw.

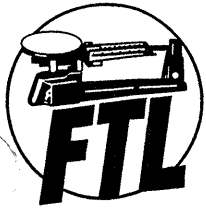
Unit Installation: Test unit installed in a 2 x 12 wood test buck using a 2 x 6 pressure treated buck strip. Frame installed with a double row of No. 10 by 1" pan head sheet metal screws in frame head, frame sill and frame jambs. Location of installation screws are as follows: frame sill and frame head from the right, 6 1/8", 27", 47 13/16", 72 5/16", 96 3/8", 120 3/4", 144 1/2", 165 1/4" and 187 5/8"; frame jambs from the bottom, 7", 25 7/8", 38 1/8", 50", 71" and 88 3/4".

Product markings: None

OFFICIAL TEST RESULTS

Paragraph Number	Title of Test	Measured	Allowed
2.1.2	Air Infiltration Test: (ASTM E283-96) at 1.57 psf	0.28 cfm/sq.ft. (1.56 cmh)	Passed 0.3 (1.67) maximum
<i>Note:</i> The tested specimen meets or exceeds the performance levels specified in specification referenced.			
2.1.3	Water Resistance Test: (ASTM E547-96/E331-96) with and without screen, no leakage at	9.75 psf (467 pa)	Passed 4.50 (215) minimum
<i>Note:</i> Water Resistance Test: (ASTM E547-96/E331-96) With a 3" high overall interior sill flange, with and without screen, no leakage at			
		12.00 psf (575 pa)	Passed

Sergio Alarcon
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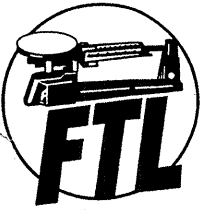
OFFICIAL TEST RESULTS

Paragraph Number	Title of Test	Measured	Allowed
2.1.4.2	Uniform Structural Load Test: (ASTM E330-96)		Passed
	Positive Load	97.5 psf (4668 pa)	45.0 (2155) minimum
		Deflection	Permanent Set
	Frame head	• 0.525" (13.35 mm)	0.029" (0.74 mm)
	Frame jamb	• 0.195" (4.96 mm)	0.023" (0.58 mm)
	Astragal stiles	• 3.872" (98.46 mm)	0.088" (2.24 mm) 0.380 (9.66) maximum
	Interlock stiles	• 4.037" (102.66 mm)	0.090" (2.29 mm) 0.380 (9.66) maximum
2.1.4.2	Uniform Structural Load Test: (ASTM E330-96)		Passed
	Negative Load	97.5 psf (4668 pa)	45.0 (2155) minimum
	Frame head	• 0.491" (12.49 mm)	0.043" (1.09 mm)
	Frame jamb	• 0.062" (1.58 mm)	0.032" (0.81 mm)
	Astragal stiles	• 3.981" (101.24 mm)	0.091" (2.31 mm) 0.380 (9.66) maximum
	Interlock stiles	• 3.750" (95.36 mm)	0.051" (1.30 mm) 0.380 (9.66) maximum
2.1.8	Forced Entry Resistance Test AAMA 1303.5-1976, Paragraph 3.1.1 Test A through 3.1.5 Test G	No entry	Passed None Allowed
<i>Note:</i>	Forced entry resistance test was performed with one 3/16" steel security lock in at interlock stiles, 60" from bottom. <i>Pin is not required for a two panel door.</i>		
2.2.19.5.1	Break Away Force:	• 19 pounds (84 n)	Passed 30 (133) maximum
	Opening Motion Force:	• 20 pounds (89 n)	20 (89) maximum
	Closing Motion Force:	• 17 pounds (75 n)	20 (89) maximum
2.2.19.5.2	Deglazing Test: (ASTM E987-88)		Passed
	No disengagement at:		
	Vertical Stiles	70 pounds (311)	70 (311) minimum
	Horizontal Rails	50 pounds (222)	50 (222) minimum
	Percent Deglazement	7 percent	99 maximum

SECTION 4, OPTIONAL PERFORMANCE CLASS:

4.3	Water Resistance Test: (ASTM E547-96/E331-96) with and without screen, no leakage at	• 9.75 psf (467 pa)	Passed 5.25 (251) minimum
<i>Note:</i>	Water Resistance Test: (ASTM E547-96/E331-96) With a 3" high overall interior sill flange, with and without screen, no leakage at		
		• 12.00 psf (575 pa)	Passed
4.4.2	Uniform Structural Load Test: (ASTM E330-96)		
	Positive Load	97.5 psf (4668 pa)	52.5 (2514) minimum
		Deflection	Permanent Set
	Frame head	0.525" (13.35 mm)	0.029" (0.74 mm)
	Frame jamb	0.195" (4.96 mm)	0.023" (0.58 mm)
	Astragal stiles	3.872" (98.46 mm)	0.088" (2.24 mm) 0.380 (9.66) maximum
	Interlock stiles	4.037" (102.66 mm)	0.090" (2.29 mm) 0.380 (9.66) maximum

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SECTION 4, OPTIONAL PERFORMANCE CLASS:

Paragraph Number	Title of Test	Measured	Allowed
4.4.2.	Uniform Structural Load Test: (ASTM E330-96)		Passed
	Negative Load	97.5 psf (4668 pa)	52.5 (2514) minimum
	Frame head	0.491" (12.49 mm)	0.043" (1.09 mm)
	Frame jamb	0.062" (1.58 mm)	0.032" (0.81 mm)
	Astragal stiles	3.981" (101.24 mm)	0.091" (2.31 mm) 0.380 (9.66) maximum
	Interlock stiles	3.750" (95.36 mm)	0.051" (1.30 mm) 0.380 (9.66) maximum

Note: At conclusion of above tests, there was no apparent damage to unit, glass or fasteners.

Test Began - May 5, 1999
 Test Completed - June 28, 1999
 Test Expires - June 28, 2003

Remarks: This test report does not constitute certification of this product, but only that the above test results were obtained using the designated test methods and they indicate compliance with the performance requirements (paragraph as listed) of the above referenced specifications. As per manufacturer, unit complies with section 3, material and component requirements.

Detailed assembly drawings showing wall thickness of all members, corner construction and hardware application are on file and have been compared to the sample submitted. A test sample will be retained at the test laboratory. A copy of this report has been forwarded to the validator.

Note: Test specimens were covered with a 1.5 mil plastic sheeting to seal from air leakage when load tests were performed, however this had no effect on the above tests results.

Witnessed by:
 Mr. Gilbert Diamond, P. E.
 Mr. Jay Wyrick
 Mr. David Gravby
 Mr. Dan Duett
 Mr. Allen Drozenko

FENESTRATION TESTING LABORATORY, INC.

Manny Sanchez
 President

Laboratory Technicians:
 Larry Zavala
 Gilbert Gonzalez

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Handwritten: Signed Alberto 7/16/99