

Quality Accuracy Assurance

# Fenestration Testing Laboratory, Inc.

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Lab. Number 2367  
June 30, 1999  
Report Number 8  
File Number 99-102  
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## OFFICIAL TEST REPORT

<b>MANUFACTURER:</b>	Kinco Limited	<b>DESIGNATION:</b>	SGD-C55 (241 x 96)
<b>ADDRESS:</b>	P.O. Box 6398 Jacksonville, Florida 32236	<b>SPECIFICATIONS:</b>	AAMA/NWWDA 101/I.S.2-97

## DESCRIPTION OF UNIT

**Model Designation:** Mark 3 XHP; Aluminum Sliding Glass Door.  
**Overall Size:** 20' 7/8" (240 7/8") by 8' 0" (96") high by 4.344" deep.  
**Configuration:** OXXX  
**No. & Size of Panels:** Four extruded aluminum panels, size of each 5' 1 1/2" (61 1/2") by 7' 11" (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 1.250"; frame sill 0.562" by 4.746" 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) 0.870" by 2.515" 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:** 5/8" overall insulated using two lights of 3/16" tempered glass with 1/4" air space in between the two lights of glass.

**Method:** Panels are channel glazed with 1/2" glazing penetration using a flexible vinyl glazing channel.

**Daylight Opening:** Clear opening of each panel, 57 1/8" by 91" high.

### Weatherstripping:

Quantity	Description	Location
Double row	pile with integral plastic fin, Ultrafab	at each frame jamb, female astragal stile, 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, Amesbury	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
Two	neoprene bumper	one at the female astragal stile and 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 interlock stile.

**Sealants:** Frame corners, panel corners and installation screws in frame sill and frame jambs were sealed with a white colored sealant, Schnee Morehead 5504.

**Pads:** One 2" by 1 5/16" adhesive back pile pad in frame sill below each exterior interlock stile. One 2" by 1" adhesive back pile pad in frame head and sill above and below the female astragal stile, (total of four 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 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 in frame head, frame sill and frame jambs. 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 left, 6", 30 1/4", 54 1/4", 66 1/2", 89 3/4", 114 1/4", 126 5/8", 150 7/8", 174", 185 7/8", 210 1/2" and 234 3/4"; frame jambs from the bottom, 7", 38 1/8" 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	0.29 cfm/sq.ft. (1.62 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

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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	82.5 psf (3950 pa)	45.0 (2155) minimum
		<b>Deflection</b>	<b>Permanent Set</b>
	Frame head	0.411" (10.45 mm)	0.020" (0.51 mm)
	Frame jamb	0.299" (7.60 mm)	0.016" (0.41 mm)
	Astragal stiles	2.410" (61.29 mm)	0.060" (1.53 mm) 0.380 (9.66) maximum
	Interlock stiles	1.310" (33.31 mm)	0.056" (1.42 mm) 0.380 (9.66) maximum
2.1.4.2	Uniform Structural Load Test: (ASTM E330-96)		Passed
	Negative Load	82.5 psf (3950 pa)	45.0 (2155) minimum
	Frame head	0.419" (10.66 mm)	0.026" (0.66 mm)
	Frame jamb	0.311" (25.74 mm)	0.021" (0.53 mm)
	Astragal stiles	2.501" (63.60 mm)	0.076" (1.93 mm) 0.380 (9.66) maximum
	Interlock stiles	1.410" (35.86 mm)	0.060" (1.53 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
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*Note:* Forced entry resistance test was performed with one 3/16" steel security lock in at interlock stiles, 60" from bottom. *Pin is not required for a two panel door.*

2.2.19.5.1			Passed
	Break Away Force:	19 pounds (84 n)	30 (133) maximum
	Opening Motion Force:	16 pounds (71 n)	20 (89) maximum
	Closing Motion Force:	14 pounds (62 n)	20 (89) maximum

2.2.19.5.2			Passed
	Deglazing Test: (ASTM E987-88)		
	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

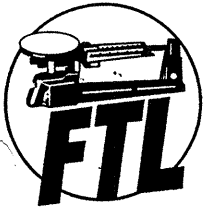
**SECTION 4, OPTIONAL PERFORMANCE CLASS:**

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
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*Note:* 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)		
	Positive Load	82.5 psf (3950 pa)	52.5 (2514) minimum
		<b>Deflection</b>	<b>Permanent Set</b>
	Frame head	0.411" (10.45 mm)	0.020" (0.51 mm)
	Frame jamb	0.299" (7.60 mm)	0.016" (0.41 mm)
	Astragal stiles	2.410" (61.29 mm)	0.060" (1.53 mm) 0.380 (9.66) maximum
	Interlock stiles	1.310" (33.31 mm)	0.056" (1.42 mm) 0.380 (9.66) maximum

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**OFFICIAL TEST RESULTS**

**SECTION 4, OPTIONAL PERFORMANCE CLASS:**

Paragraph Number	Title of Test	Measured	Allowed
4.4.2	Uniform Structural Load Test: (ASTM E330-96) Negative Load	82.5 psf (3950 pa)	Passed 52.5 (2514) minimum
		<b>Deflection</b>	<b>Permanent Set</b>
	Frame head	0.419" (10.66 mm)	0.026" (0.66 mm)
	Frame jamb	0.311" (25.74 mm)	0.021" (0.53 mm)
	Astragal stiles	2.501" (63.60 mm)	0.076" (1.93 mm) 0.380 (9.66) maximum
	Interlock stiles	1.410" (35.86 mm)	0.060" (1.53 mm) 0.380 (9.66) maximum

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

**Test Began - June 9, 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. Dan Duet

**FENESTRATION TESTING LABORATORY, INC.**

**Manny Sanchez**  
 President

Laboratory Technicians:  
 Roque Zavala  
 Roberto Robleto  
 Gilbert Gonzalez

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