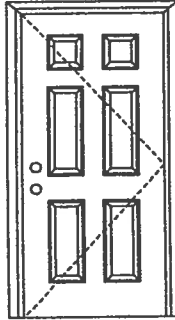


X

Opaque Inswing Unit

COP-WL-JH4101-02

WOOD-EDGE STEEL DOORS**APPROVED ARRANGEMENT:****Note:**

Units of other sizes are covered by this report as long as the panel used does not exceed 3'0" x 6'8".



Test Data Review Certificate #3026447A and COP/Test Report Validation Matrix #3026447A-001 provides additional information - available from the ITS/WH website (www.itsmko.com), the Masonite website (www.masonite.com) or the Masonite technical center.

Single Door

Maximum unit size = 3'0" x 6'8"

Design Pressure

+66.0/-66.0

limited water unless special threshold design is used.

Large Missile Impact Resistance

Hurricane protective system (shutters) is NOT REQUIRED.

Actual design pressure and impact resistant requirements for a specific building design and geographic location is determined by ASCE 7-national, state or local building codes specify the edition required.

MINIMUM ASSEMBLY DETAIL:

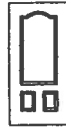
Compliance requires that minimum assembly details have been followed – see MAD-WL-MA0001-02.

MINIMUM INSTALLATION DETAIL:

Compliance requires that minimum installation details have been followed – see MID-WL-MA0001-02.

APPROVED DOOR STYLES:

Flush



Arch Top 3-panel



3-panel



6-panel



New England 4-panel



Eyebrow 4-panel



8-panel



9-panel



15-panel



5-panel



5-panel with scroll



Eyebrow 5-panel



Eyebrow 5-panel with scroll

Johnson™
EntrySystems

June 17, 2002
Our continuing program of product improvement makes specifications, design and product detail subject to change without notice.

PREMDOR Collection
Premium Quality Doors



Exclusively from

Masonite®

Masonite International Corporation

X

Opaque Inswing Unit

COP-WL-JH4101-02

WOOD-EDGE STEEL DOORS

CERTIFIED TEST REPORTS:

NCTL 210-2185-1, 2, 3

Certifying Engineer and License Number: Barry D. Portney, P.E. / 16258.

Unit Tested in Accordance with Miami-Dade BCCO PA201, PA202 and PA203.

Door panels constructed from 26-gauge 0.017" thick steel skins. Both stiles constructed from wood. Top end rails constructed of 0.041" steel. Bottom end rails constructed of 0.021" steel. Interior cavity of slab filled with rigid polyurethane foam core.

Frame constructed of wood with an extruded aluminum threshold.

PRODUCT COMPLIANCE LABELING:

TESTED IN ACCORDANCE WITH
MIAMI-DADE BCCO
PA201, PA202 & PA203

COMPANY NAME
CITY, STATE

To the best of my knowledge and ability the above side-hinged exterior door unit conforms to the requirements of the 2001 Florida Building Code, Chapter 17 (Structural Tests and Inspections).

Kurt L Balth

State of Florida, Professional Engineer
Kurt Balthazor, P.E. – License Number 56533

Warnock Hersey



Test Data Review Certificate #3026447A and COP/Test Report Validation Matrix #3026447A-001 provides additional information - available from the ITS/WH website (www.elsemko.com), the Masonite website (www.masonite.com) or the Masonite technical center.

2

Johnson™
EntrySystems

June 17, 2002
Our continuing program of product improvement makes specifications, design and product detail subject to change without notice.

PREMDOR^{Collection}
Premium Quality Doors



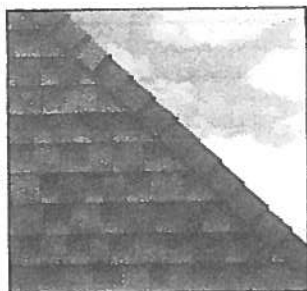
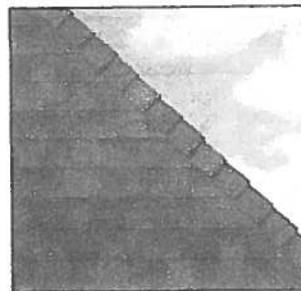
Exclusively from

Masonite®

Masonite International Corporation

**ELK**

ROOFING PRODUCTS SPECIFICATIONS – TUSCALOOSA, AL

**PRESTIQUE®
HIGH DEFINITION®****RAISED PROFILE®****Prestique Plus High Definition
and Prestique Gallery Collection™**

Product size _____ 13⅝" x 39⅝"
 Exposure _____ 5⅝"
 Pieces/Bundle _____ 16
 Bundles/Square _____ 4/98.5 sq.ft.
 Squares/Pallet _____ 11

50-year limited warranty period:
 5-7**years non-prorated coverage for
 shingles and application labor with
 prorated coverage for remainder of
 limited warranty period, plus an
 option for transferability*. 5-year
 limited wind warranty*. Wind
 Coverage: standard 80 mph, extended
 110 mph***

Raised Profile

Product size _____ 13⅝" x 38⅝"
 Exposure _____ 5⅝"
 Pieces/Bundle _____ 22
 Bundles/Square _____ 3/100 sq.ft.
 Squares/Pallet _____ 16

30-year limited warranty period:
 5-7**years non-prorated coverage for
 shingles and application labor with
 prorated coverage for remainder of
 limited warranty period, plus an
 option for transferability*. 5-year
 limited wind warranty*. Wind
 Coverage: standard 70 mph.

Prestique I High Definition

Product size _____ 13⅝" x 39⅝"
 Exposure _____ 5⅝"
 Pieces/Bundle _____ 16
 Bundles/Square _____ 4/98.5 sq.ft.
 Squares/Pallet _____ 14

40-year limited warranty period:
 5-7**years non-prorated coverage for
 shingles and application labor with
 prorated coverage for remainder of
 limited warranty period, plus an
 option for transferability*. 5-year
 limited wind warranty*. Wind
 Coverage: standard 80 mph, extended
 90 mph***

HIP AND RIDGE SHINGLES**Seal-A-Ridge® w/FLX™**

Size: 12" x 12"
 Exposure: 6⅝"
 Pieces/Bundle: 45
 Coverage: 4 Bundles =
 100 linear feet

Vented RidgeCrest™ w/FLX™

Size: 13" x 13⅝"
 Exposure: 9⅞"
 Pieces/Box: 26
 Coverage: 5 boxes =
 100 linear feet

Prestique High Definition

Product size _____ 13⅝" x 38⅝"
 Exposure _____ 5⅝"
 Pieces/Bundle _____ 22
 Bundles/Square _____ 3/100 sq.ft.
 Squares/Pallet _____ 16

30-year limited warranty period:
 5-7**years non-prorated coverage for
 shingles and application labor with
 prorated coverage for remainder of
 limited warranty period, plus an
 option for transferability*. 5-year
 limited wind warranty*. Wind
 Coverage: standard 80 mph.

Elk Starter Strip

52 Bundles/Pallet
 18 Pallets/Truck
 936 Bundles/Truck
 19 Pieces/Bundle
 1 Bundle = 120.33 linear feet

Available Colors (Check Availability): Antique Slate, Weatheredwood, Shakedown, Sablewood, Hickory, Barkwood, Forest Green, Wedgewood, Birchwood, Sandalwood.
 Gallery Collection: Balsam Forest™, Weathered Sage™, Sienna Sunset™.

All Prestique, Raised Profile and Seal-A-Ridge, and Prestique Starter Strip roofing products contain sealant which activates with the sun's heat, bonding shingles into a wind and weather resistant cover that resists blow-offs and leaks.

Check for availability with built-in StainGuard® treatment to inhibit the discoloration of roofing granules caused by the growth of certain types of algae.

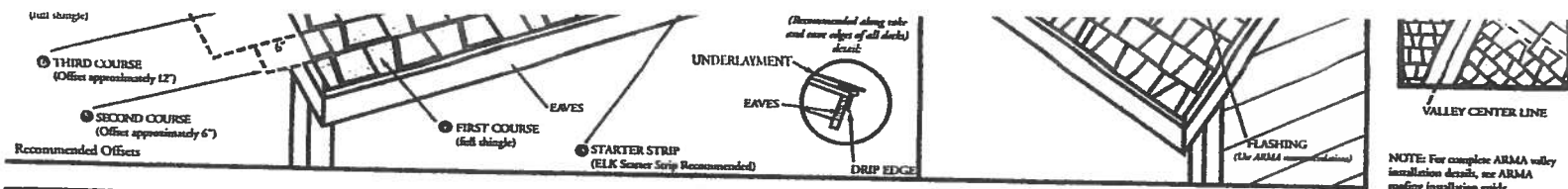
All Prestique and Raised Profile shingles meet UL® Wind Resistant (UL 997) and Class "A" Fire Ratings (UL 790);
 and ASTM Specifications D 3018, Type-I; D 3161, Type-I; E 108 and the requirements of ASTM D 3462.

All Prestique and Raised Profile shingles have approval from the Florida Building Code Commission, Metro-Dade County, ICBO, and Texas Department of Insurance.

*See actual limited warranty for conditions and limitations.

** Effective January 1, 2004, the seven year non-prorated Umbrella Coverage Period applies only when a full Elk Roof System is installed with the original installation of the Elk shingles, all in accordance with Elk's application instructions for each product. A full Elk roof system includes Elk Hip and Ridge shingles on all hips and ridges, Elk Starter Strip along all rake and eave edges, an Elk ventilation system, and Elk All-Climate Self-Adhering Underlayment in all valleys. Additionally, Elk All-Climate Self-Adhering Underlayment is required along the rake and eave edges of the roof in and north of the states of VA, KY, MD, KS, CO, UT, NV, & OR.

***For a limited Wind Warranty up to 110 mph for Prestique Gallery Collection, Prestique Plus, or 90 mph for Prestique I or Growné, at least six (6) properly placed NAILS and Elk Starter Strip shingles are required. See application instructions printed on the shingle wrapper for additional requirements.



NOTE: For complete ARMA valley installation detail, see ARMA roofing installation guide.

DIRECTIONS FOR APPLICATION

These application instructions are the minimum required to meet Elk's application requirements. Your failure to follow these instructions may void the product warranty. In some areas, the building codes may require additional application techniques or methods beyond our instructions. In these cases, the local code must be followed. Under no circumstances will Elk accept application requirements that are less than those printed here. Shingles should not be jammed tightly together. All attics should be properly ventilated. Note: It is not necessary to remove tape on back of shingle.

1 DECK PREPARATION

Roof decks should be dry, well-seasoned 1" x 6" boards or exterior grade plywood minimum 3/8" thick and conform to the specifications of the American Plywood Association or 7/16" oriented strandboard, or 7/16" chipboard.

2 UNDERLAYMENT

Apply underlayment (Non-Perforated No. 15 or 30 asphalt saturated felt). Elk Versashield® or self adhering underlayment is also acceptable. Cover drip edge at eaves only.

For low slope (2/12 up to 4/12), completely cover the deck with two plies of underlayment overlapping a minimum of 19". Begin by fastening a 19" wide strip of underlayment placed along the eaves. Place a full 36" wide sheet over the starter, horizontally placed along the eaves and completely overlapping the starter strip.

EAVE FLASHING FOR ICE DAMS (ASK A ROOFING CONTRACTOR, REFER TO ARMA MANUAL OR CHECK LOCAL CODES)

For standard slope (4/12 to less than 21/12), use coated roll roofing if no less than 50 pounds over the felt underlayment extending from the eave edge to a point at least 24" beyond the inside wall of the living space below or one layer of a self-adhered eave and flashing membrane.

For low slope (2/12 up to 4/12), use a continuous layer of asphalt elastic cement between the two plies of underlayment from the eave edge up roof to a point at least 24" beyond the inside wall of the living space below or one layer of a self-adhered eave and flashing membrane.

Consult the Elk Technical Services Department for application specifications over other decks and other slopes.

3 STARTER SHINGLE COURSE

SEAL AN ELK STARTER STRIP OR THE HEADLAP OF A STRIP SHINGLE WITH THE ADHESIVE STRIP POSITIONED AT THE EAVE DGE. With at least 3" trimmed from the end of the first shingle, start at the rake edge overhanging the eave and rake edges 1/2" to 3/4". Fasten 2" from the lower edge and 1" from each side.

4 FIRST COURSE

Start at rake and continue course with full shingles laid flush with a starter course. Shingles may be applied with a course alignment of 45° on the roof.

5 SECOND COURSE

Set the second course of shingles with respect to the first by approximately 6". Other offsets are approved if greater than 4".

6 THIRD COURSE

Set the next course by 6" with respect to the second course, consistent with the original offset.

7 FOURTH COURSE

Start at the rake and continue with full shingles across roof.

8 FIFTH AND SUCCEEDING COURSES.

Repeat application as shown for second, third, and fourth courses. Do not rack shingles straight up the roof. Offsets may be adjusted around valleys and penetrations.

9 VALLEY CONSTRUCTION

Open, woven and closed cut valleys are acceptable when applied by Asphalt Roofing Manufacturing Association (ARMA) recommended procedures. For metal valleys, use 36" wide vertical underlayment prior to applying metal flashing (secure edge with nails). No nails are to be within 6" of valley center.

10 RIDGE CONSTRUCTION

For ridge construction Elk recommends Class "A" Z-Ridge or Seal-A-Ridge® with formula FLX™ or RidgeCrest™ with FLX (See ridge package for installation instructions). Vented RidgeCrest or 3-tab shingles are also approved.

FASTENERS

While nailing is the preferred method for Elk shingles, Elk will accept fastening methods according to the following instructions.

Using the fastener line as a reference, nail or staple the shingle in the double thickness common bond area. For shingles without a fastener line, nails or staples must be placed between and/or in the sealant dots.

NAILS: Corrosive resistant, 3/8" head, minimum 12-gauge roofing nails. Elk recommends 1-1/4" for new roofs and 1-1/2" for re-roofs. In cases where you are applying shingles to a roof that has an exposed overhang, for new roofs only, 3/4" ring shank nails are allowed to be used from the eave's edge to a point up the roof that is past the outside wall line. 1" ring shank nails allowed for re-roof.

STAPLES: Corrosive resistant, 16-gauge minimum, crown width minimum of 15/16". Note: An improperly adjusted staple gun can result in raised staples that can cause a fish-mouthed appearance and can prevent sealing.

Fasteners should be long enough to obtain 3/4" deck penetration or penetration through deck, whichever is less. This product meets the requirements of the IRC 2003 code when fastened with 4 nails.

MANSARD APPLICATIONS

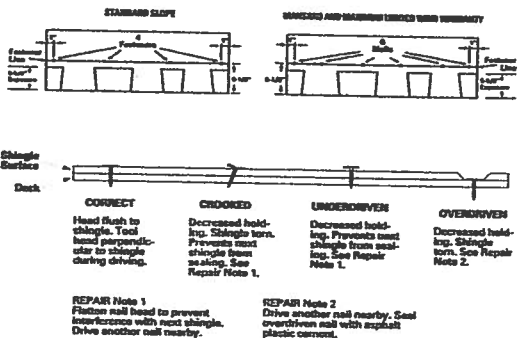
Correct fastening is critical to the performance of the roof. For slopes exceeding 60° (or 21/12) use six fasteners per shingle. Locate fasteners in the fastener area 1" from each side edge with the remaining four fasteners equally spaced along the length of the double thickness (laminated) area. Only fastening methods according to the above instructions are acceptable.

LIMITED WIND WARRANTY

- For a Limited Wind Warranty, all Prestique and Raised Profile™ shingles must be applied with 4 properly placed fasteners, or in the case of mansard applications, 6 properly placed fasteners per shingle.
- For a Limited Wind Warranty up to 110 MPH for Prestique Gallery Collection or Prestique Plus or 90 MPH for Prestique I, shingles must be applied with 6 properly placed NAILS per shingle. SHINGLES APPLIED WITH STAPLES WILL NOT QUALIFY FOR THIS ENHANCED LIMITED WIND WARRANTY. Also, Elk Starter Strip shingles must be applied at the eaves and rake edges to qualify Prestique Plus, Prestique Gallery Collection and Prestique I shingles for this enhanced Limited Wind Warranty. Under no circumstances should the Elk Shingles or the Elk Starter Strip overhang the eaves or rake edge more than 3/4 of an inch.

HELP STOP BLOW-OFFS AND CALL-BACKS

A minimum of four fasteners must be driven into the DOUBLE THICKNESS (laminated) area of the shingle. Nails or staples must be placed along – and through – the "fastener line" or on products without fastener lines, nail or staple between and in line with sealant dots. CAUTION: Do not use fastener line for shingle alignment.



Refer to local codes which in some areas may require specific application techniques beyond those Elk has specified. All Prestique and Raised Profile shingles have a U.L.® Wind Resistance Rating when applied in accordance with these instructions using nails or staples on re-roofs as well as new construction.

CAUTION TO WHOLESALER: Careless and improper storage or handling can harm fiberglass shingles. Keep these shingles completely covered, dry, reasonably cool, and protected from the weather. Do not store near various sources of heat. Do not store in direct sunlight until applied. DO NOT DOUBLE STACK. Systematically rotate all stock so that the material that has been stored the longest will be the first to be moved out.



TABLE 1

DOOR HEIGHT	STRUT SPACING (BASED ON RECOMMENDED SECTION CONFIGURATION)							TOP T
	A	B	C	D	E	F	G	
6' 6"	18 1/4"	36 1/4"	54 1/4"	72 1/4"	90 1/4"	108 1/4"	126 1/4"	144 1/2"
7'	18 1/4"	39 1/4"	60 1/4"					82 1/2"
7' 6"	18 1/4"	39 1/4"	60 1/4"					88 1/2"
8'	18 1/4"	36 1/4"	54 1/4"	72 1/4"				94 1/2"
8' 6"	18 1/4"	39 1/4"	60 1/4"	72 1/4"				100 1/2"
9'	15 1/4"	33 1/4"	51 1/4"	69 1/4"	87 1/4"			106 1/2"
9' 6"	18 1/4"	36 1/4"	54 1/4"	72 1/4"	90 1/4"			112 1/2"
10'	18 1/4"	39 1/4"	60 1/4"	78 1/4"	96 1/4"			118 1/2"
10' 6"	18 1/4"	39 1/4"	60 1/4"	78 1/4"	96 1/4"			124 1/2"
11'	18 1/4"	36 1/4"	54 1/4"	72 1/4"	90 1/4"	108 1/4"		130 1/2"
11' 6"	18 1/4"	36 1/4"	60 1/4"	78 1/4"	96 1/4"	114 1/4"		136 1/2"
12'	18 1/4"	39 1/4"	60 1/4"	81 1/4"	102 1/4"	120 1/4"		142 1/2"
12' 6"	18 1/4"	36 1/4"	60 1/4"	81 1/4"	102 1/4"	120 1/4"		148 1/2"
13'	18 1/4"	39 1/4"	60 1/4"	78 1/4"	96 1/4"	114 1/4"	132 1/4"	154 1/2"
13' 6"	18 1/4"	39 1/4"	60 1/4"	81 1/4"	102 1/4"	120 1/4"	138 1/4"	160 1/2"
14'	18 1/4"	39 1/4"	60 1/4"	81 1/4"	102 1/4"	123 1/4"	144 1/4"	166 1/2"

TABLE 2

DOOR HEIGHT	SECTION HEIGHTS							
	Btm	#2	#3	#4	#5	#6	#7	#8
14' 0"	21"	21"	21"	21"	21"	21"	21"	21"
13' 6"	21"	21"	21"	21"	21"	18"	18"	21"
13' 0"	21"	21"	21"	18"	18"	18"	18"	21"
12' 6"	21"	18"	18"	18"	18"	18"	18"	21"
12' 0"	21"	21"	21"	21"	21"	18"	21"	
11' 6"	21"	21"	21"	18"	18"	18"	21"	
11' 0"	21"	18"	18"	18"	18"	18"	21"	
10' 6"	21"	21"	21"	21"	21"	21"		
10' 0"	21"	21"	21"	18"	18"	18"	21"	
9' 6"	21"	18"	18"	18"	18"	18"	21"	
9' 0"	18"	18"	18"	18"	18"	18"		
8' 6"	21"	21"	21"	18"	21"			
8' 0"	21"	18"	18"	18"	21"			
7' 6"	18"	18"	18"	18"	18"			
7' 0"	21"	21"	21"	21"				
6' 6"	21"	18"	18"	21"				

TABLE 3

DOOR HEIGHT	TRACK ATTACHMENT							SPLICE S
	A	B	C	D	E	F	G	
6' 6"	10"	38"	58"					70"
7'	10"	38"	58"					76"
7' 6"	10"	38"	58"					82"
8'	10"	34"	58"	82"				88"
8' 6"	10"	34"	58"	82"				94"
9'	10"	34"	58"	82"				100"
9' 6"	10"	34"	58"	82"	106"			106"
10'	10"	34"	58"	82"	106"			112"
10' 6"	10"	34"	58"	82"	106"			118"
11'	10"	34"	58"	82"	106"			124"
11' 6"	10"	34"	58"	82"	106"	124"		130"
12'	10"	34"	58"	82"	106"	130"		136"
12' 6"	10"	34"	58"	82"	106"	130"	124"	142"
13'	10"	34"	58"	82"	106"	130"		148"
13' 6"	10"	34"	58"	82"	106"	124"	148"	154"
14'	10"	34"	58"	82"	106"	130"	154"	160"

TABLE 4

Section Width (ft)	Panel Type	Center Stile Location (Measured from Left Edge)	Max Design Loads Allowed	
			Positive (PSF)	Negative (PSF)
8' 0"	Short	48.000	25.5	30.1
8' 0"	Long	48.000	25.5	30.1
8' 2"	Short	49.000	25.0	29.5
8' 2"	Long	49.000	25.0	29.5
8' 4"	Short	50.000	24.5	28.9
8' 4"	Long	50.000	24.5	28.9
8' 6"	Short	51.000	24.0	28.3
8' 6"	Long	51.000	24.0	28.3
8' 8"	Short	52.000	23.6	27.8
8' 8"	Long	52.000	23.6	27.8
8' 10"	Short	53.000	23.1	27.3
8' 10"	Long	53.000	23.1	27.3
9' 0"	Short	54.000	22.8	26.9
9' 0"	Long	54.000	22.8	26.9

9x7 & 16x7



**AAMA/NWDA 101/I.S.2-97
TEST REPORT SUMMARY**

Rendered to:

MI HOME PRODUCTS, INC.


SERIES/MODEL: 650

TYPE: Aluminum Picture Window

Title of Test	Results
Rating	F-R45 60 x 80
Overall Design Pressure	+45.0 psf -47.2 psf
Air Infiltration	0.04 cfm/ft ²
Water Resistance	8.25 psf
Structural Test Pressure	+67.5 psf -70.8 psf
Forced Entry Resistance	Grade 10

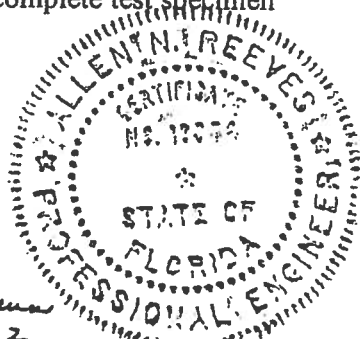
Reference should be made to Report No. 01-41135.01 dated 03/26/02 for complete test specimen description and data.

For ARCHITECTURAL TESTING, INC.



Mark A. Hess, Technician

MAH:nlb


Allen N. Reeves
1 APRIL 2002



Architectural Testing

AAMA/NWWDA 101/I.S.2-97 TEST REPORT

Rendered to

MI HOME PRODUCTS, INC.
650 West Market Street
P.O. Box 370
Gratz, Pennsylvania 17030-0370

Report No: 01-41135.01
Test Date: 03/07/02
Report Date: 03/26/02
Expiration Date: 03/07/06

Project Summary: Architectural Testing, Inc. (ATI) was contracted by MI Home Products, Inc. to perform tests on Series/Model 650, aluminum picture window at their facility located in Elizabethville, Pennsylvania. The samples tested successfully met the performance requirements for a F-R45 60 x 80 rating.

Test Specification: The test specimen was evaluated in accordance with AAMA/NWWDA 101/I.S.2-97, *Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors*.

Test Specimen Description:

Series/Model: 650

Type: Aluminum Picture Window

Overall Size: 5' 0" wide by 6' 8" high

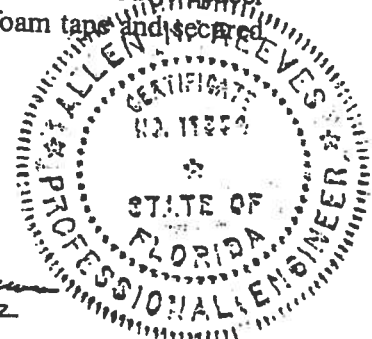
Daylight Opening Size: 4' 9-1/4" wide by 6' 5-1/4" high

Finish All aluminum was white.

Glazing Details: The test specimen utilized 7/8" thick, sealed insulating glass constructed from two sheets of 3/16" thick, clear annealed glass and a metal reinforced butyl spacer system. The glass was interior glazed against double-sided adhesive foam tape and secured with aluminum snap-in glazing beads.

130 Derry Court
York, PA 17402-9405
phone: 717.764.7700
fax: 717.764.4129
www.archtest.com

Allen M. Reeves
1 APR 12 2002





Test Specimen Description: (Continued)

Frame Construction: The frame was constructed of extruded aluminum with coped, butted, and sealed corners fastened with two #8 x 1" screws through the head and sill into each jamb screw boss.

Reinforcement: No reinforcement was utilized.

Installation: The test specimen was installed into a 2 x 8 #2 Spruce-Pine-Fir wood test buck. #8 x 2-1/2" installation screws were utilized 18" on center around the interior perimeter. Polyurethane was utilized to seal the exterior.

Test Results:

The results are tabulated as follows:

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
	Air Infiltration (ASTM E 283-91) @ 1.57 psf (25 mph)	0.04 cfm/ft ²	0.3 cfm/ft ² max.
<i>Note #1: The tested specimen meets the performance levels specified in AAMA/NWDA 101/I.S. 2-97 for air infiltration.</i>			
	Water Resistance (ASTM E 547-00) WTP = 2.86 psf	No leakage	No leakage
2.1.4.1	Uniform Load Deflection (ASTM E 330-97) (Measurements reported were taken on the jamb) (Loads were held for 33 seconds) @ 25.9 psf (positive) @ 34.7 psf (negative)	0.01" 0.01"	0.41" max. 0.41" max.
2.1.4.2	Uniform Load Structural (ASTM E 330-97) (Measurements reported were taken on the jamb) (Loads were held for 10 seconds) @ 38.9 psf (positive) @ 52.1 psf (negative)	0.0" 0.01"	0.29" max. 0.29" max.

Allen H. Reeves
1 APRIL 2002





Test Results: (Continued)

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
	Forced Entry Resistance (ASTM F 588-97)		
	Type: D		
	Grade: 10		
	Hand and Tool Manipulation Test	No entry	No entry
<u>Optional Performance</u>			
4.3	Water Resistance (ASTM E 547-00)		
	WTP = 8.25 psf	No leakage	No leakage
	Uniform Load Deflection (ASTM E 330-97)		
	(Measurements reported were taken on the jamb)		
	(Loads were held for 33 seconds)		
	@ 45.0 psf (positive)	0.02"	0.41" max.
	@ 47.2 psf (negative)	0.02"	0.41" max.
	Uniform Load Structural (ASTM E 330-97)		
	(Measurements reported were taken on the jamb)		
	(Loads were held for 10 seconds)		
	@ 67.5 psf (positive)	0.01"	0.29" max.
	@ 70.8 psf (negative)	0.02"	0.29" max.

Detailed drawings, representative samples of the test specimen, and a copy of this report will be retained by ATI for a period of four years. The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the above referenced specification. This report does not constitute certification of this product, which may only be granted by the certification program administrator.

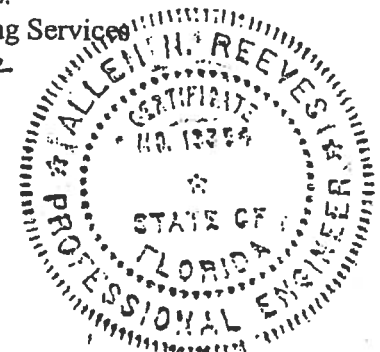
For ARCHITECTURAL TESTING, INC.

Mark A. Hess
Technician

MAH:nlb
01-41135.01

Allen N. Reeves, P.E.
Director - Engineering Services

1 APRIL 2002





**AAMA/NWWDA 101/I.S.2-97
TEST REPORT SUMMARY**

Rendered to:

MI HOME PRODUCTS, INC.

**SERIES/MODEL: 650 Fin
TYPE: Aluminum Single Hung Window**

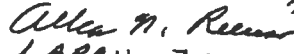
Title of Test	Results
Rating	H-R40 52 x 72
Overall Design Pressure	+45.0 psf -47.2 psf
Operating Force	11 lb max.
Air Infiltration	0.13 cfm/ft ²
Water Resistance	6.00 psf
Structural Test Pressure	+67.5 psf -70.8 psf
Deglazing	Passed
Forced Entry Resistance	Grade 10

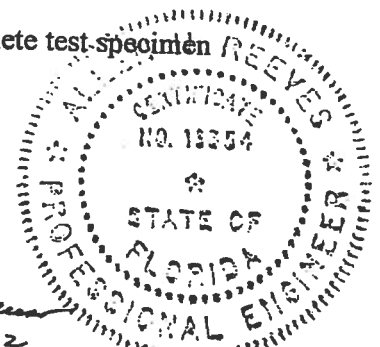
Reference should be made to Report No. 01-41134.01 dated 03/26/02 for complete test specimen description and data.

For ARCHITECTURAL TESTING, INC.


Mark A. Hess, Technician

MAH:nlb


1 APRIL 2002





AAMA/NWWDA 101/I.S.2-97 TEST REPORT

Rendered to

MI HOME PRODUCTS, INC.
650 West Market Street
P.O. Box 370
Gratz, Pennsylvania 17030-0370

Report No: 01-41134.01
Test Date: 03/07/02
Report Date: 03/26/02
Expiration Date: 03/07/06

Project Summary: Architectural Testing, Inc. (ATI) was contracted by MI Home Products, Inc. to perform tests on Series/Model 650 Fin, aluminum single hung window at their facility located in Elizabethville, Pennsylvania. The samples tested successfully met the performance requirements for a H-R40 52 x 72 rating.

Test Specification: The test specimen was evaluated in accordance with AAMA/NWWDA 101/I.S.2-97, *Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors*.

Test Specimen Description:

Series/Model: 650 Fin

Type: Aluminum Single Hung Window

Overall Size: 4' 4-1/4" wide by 6' 0-3/8" high

Active Sash Size: 4' 1-3/4" wide by 3' 0-5/8" high

Daylight Opening Size: 3' 11-3/8" wide by 2' 9-1/2" high

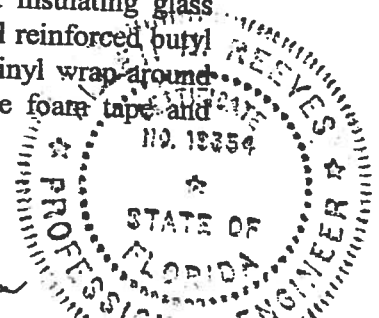
Screen Size: 4' 0-1/4" wide by 2' 11-1/8" high

Finish: All aluminum was white.

Glazing Details: The active and fixed lites utilized 5/8" thick, sealed insulating glass constructed from two sheets of 1/8" thick, clear annealed glass and a metal reinforced butyl spacer system. The active sash was channel glazed utilizing a flexible vinyl wrap around gasket. The fixed lite was interior glazed against double-sided adhesive foam tape and secured with PVC snap-in glazing beads.

130 Derry Court
York, PA 17402-9405
phone: 717.764.7700
fax: 717.764.4129
www.archtest.com

Allen N. Reeves
1 APRIL 2002



Test Specimen Description: (Continued)

Weatherstripping:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
0.230" high by 0.270" backed polypile with center fin	1 Row	Fixed meeting rail
0.250" high by 0.187" backed polypile with center fin	2 Rows	Active sash stiles
1/2" x 1/2" dust plug	4 Pieces	Active sash, top and bottom of stiles
1/4" foam-filled vinyl bulb seal	1 Row	Active sash, bottom rail

Frame Construction: The frame was constructed of extruded aluminum with coped, butted, and sealed corners fastened with two #8 x 1" screws through the head and sill into each jamb screw boss. End caps were utilized on the ends of the fixed meeting rail and secured with two 1-1/4" screws per cap. Meeting rail was secured to the frame utilizing two 1-1/4" screws.

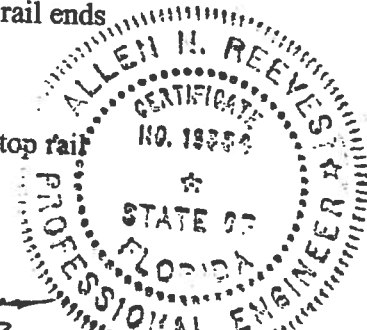
Sash Construction: The sash was constructed of extruded aluminum with coped, butted, and sealed corners fastened with two #8 x 1-1/2" screws through the rails into each jamb screw boss.

Screen Construction: The screen was constructed from roll-formed aluminum with keyed corners. The fiberglass mesh was secured with a flexible spline.

Hardware:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Metal cam lock with keeper		Midspan, active meeting rail with keeper adjacent on fixed meeting rail
Plastic tilt latch	2	Active sash, meeting rail ends
Metal tilt pin	2	Active sash, bottom rail ends
Balance assembly	2	One in each jamb
Screen plunger	2	4" from rail ends on top rail

Allen H. Reeves
1 APRIL 2007



Test Specimen Description: (Continued)

Drainage: Sloped sill

Reinforcement: No reinforcement was utilized.

Installation: The test specimen was installed into a 2 x 8 #2 Spruce-Pine-Fir wood test buck with #8 x 1-5/8" drywall screws every 8" on center around the nail fin. Polyurethane was used as a sealant under the nail fin and around the exterior perimeter.

Test Results:

The results are tabulated as follows:

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
2.2.1.6.1	Operating Force	11 lbs	30 lbs max
	Air Infiltration (ASTM E 283-91) @ 1.57 psf (25 mph)	0.13 cfm/ft ²	0.3 cfm/ft ² max

Note #1: The tested specimen meets the performance levels specified in AAMA/NWWDA 101/I.S. 2-97 for air infiltration.

	Water Resistance (ASTM E 547-00) (with and without screen) WTP = 2.86 psf	No leakage	No leakage
2.1.4.1	Uniform Load Deflection (ASTM E 330-97) (Measurements reported were taken on the meeting rail) (Loads were held for 33 seconds) @ 25.9 psf (positive) @ 34.7 psf (negative)	0.42"* 0.43"*	0.26" max. 0.26" max.

**Exceeds L/175 for deflection, but passes all other test requirements.*

2.1.4.2	Uniform Load Structural (ASTM E 330-97) (Measurements reported were taken on the meeting rail) (Loads were held for 10 seconds) @ 38.9 psf (positive) @ 52.1 psf (negative)	0.02" 0.02"	0.18" max. 0.18" max.
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Allen N. Reeves
1 APRIL 2002



Test Specimen Description: (Continued)

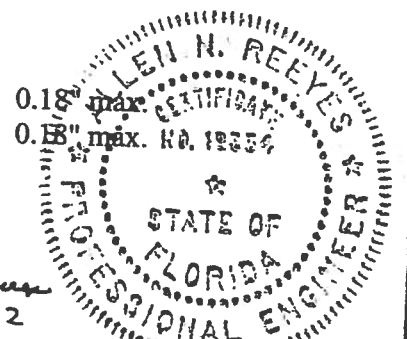
<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
2.2.1.6.2	Deglazing Test (ASTM E 987) In operating direction at 70 lbs		
	Meeting rail	0.12"/25%	0.50"/100%
	Bottom rail	0.12"/25%	0.50"/100%
	In remaining direction at 50 lbs		
	Left stile	0.06"/12%	0.50"/100%
	Right stile	0.06"/12%	0.50"/100%
	Forced Entry Resistance (ASTM F 588-97)		
	Type: A		
	Grade: 10		
	Lock Manipulation Test	No entry	No entry
	Tests A1 through A5	No entry	No entry
	Test A7	No entry	No entry
	Lock Manipulation Test	No entry	No entry

Optional Performance

4.3	Water Resistance (ASTM E 547-00) (with and without screen) WTP = 6.00 psf	No leakage	No leakage
	Uniform Load Deflection (ASTM E 330-97) (Measurements reported were taken on the meeting rail) (Loads were held for 33 seconds)		
	@ 45.0 psf (positive)	0.47"*	0.26" max.
	@ 47.2 psf (negative)	0.46"*	0.26" max.

**Exceeds L/175 for deflection, but passes all other test requirements.*

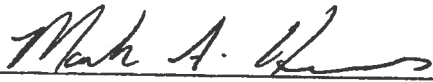
Uniform Load Structural (ASTM E 330-97) (Measurements reported were taken on the meeting rail) (Loads were held for 10 seconds)	
@ 67.5 psf (positive)	0.05"
@ 70.8 psf (negative)	0.05"



Allen N. Reeves
1 APRIL 2002

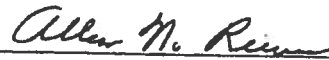
Detailed drawings, representative samples of the test specimen, and a copy of this report will be retained by ATI for a period of four years. The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the above referenced specification. This report does not constitute certification of this product, which may only be granted by the certification program administrator.

For ARCHITECTURAL TESTING, INC:



Mark A. Hess
Technician

MAH:nlb
01-41134.01

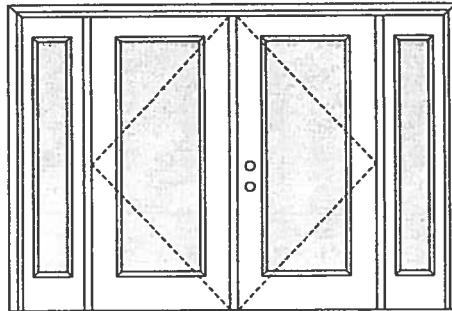


Allen N. Reeves, P.E.
Director - Engineering Services
1 APRIL 2002



WOOD-EDGE STEEL DOORS

APPROVED ARRANGEMENT:



Test Data Review Certificate #3026447A and COP/Test Report Validation Matrix #3026447A-001 provides additional information - available from the ITS/WH website (www.itswh.com), the Masonite website (www.masonite.com) or the Masonite technical center.

Note:

Units of other sizes are covered by this report as long as the panels used do not exceed 3'0" x 6'8".

Double Door with 2 Sidelites
Maximum unit size = 12'0" x 6'8"

Design Pressure
+40.5/-40.5

Limited water unless special threshold design is used.

Large Missile Impact Resistance

Hurricane protective system (shutters) is **REQUIRED**.

Actual design pressure and impact resistant requirements for a specific building design and geographic location is determined by ASCE 7-national, state or local building codes specify the edition required.

MINIMUM ASSEMBLY DETAIL:

Compliance requires that minimum assembly details have been followed – see MAD-WL-MA0005-02 or MAD-WL-MA0008-02 and MAD-WL-MA0041-02.

MINIMUM INSTALLATION DETAIL:

Compliance requires that minimum installation details have been followed – see MID-WL-MA0005-02.

APPROVED DOOR STYLES:

1/4 GLASS:



100 Series



133, 135 Series



136 Series



680 Series



822 Series

1/2 GLASS:



105 Series*



106, 160 Series*



129 Series*



200 Series*



12 R/L, 23 R/L, 24 R/L Series*



107 Series*



108 Series



304 Series

*This glass kit may also be used in the following door styles: 5-panel; 5-panel with scroll; Eyebrow 5-panel; Eyebrow 5-panel with scroll.

WOOD-EDGE STEEL DOORS

APPROVED DOOR STYLES:

3/4 GLASS:



404 Series



410 Series



450 Series

FULL GLASS:



109 Series



114, 120, 122
Series



152 Series



149 Series



300 Series

APPROVED SIDELITE STYLES:



680 Series



129 Series



200 Series



12R, 12L, 23R,
23L, 24R, 24L
Series



450 Series



152 Series



149 Series



109 Series



120, 122 Series



300 Series

CERTIFIED TEST REPORTS:

NCTL 210-1897-7, 8, 9, 10, 11, 12; NCTL 210-1861-4, 5, 6, 10, 11, 12; NCTL 210-2185-1, 2, 3

Certifying Engineer and License Number: Barry D. Portney, P.E. / 16258.

Unit Tested in Accordance with Miami-Dade BCCO PA202.

Evaluation report NCTL-210-2794-1

Door panels constructed from 26-gauge 0.017" thick steel skins. Both stiles constructed from wood. Top end rails constructed of 0.041" steel. Bottom end rails constructed of 0.021" steel. Interior cavity of slab filled with rigid polyurethane foam core. Slab and sidelite panels glazed with insulated glass mounted in a rigid plastic lip lite surround.

Frame constructed of wood with an extruded aluminum threshold.

PRODUCT COMPLIANCE LABELING:

TESTED IN
ACCORDANCE WITH
MIAMI-DADE BCCO PA202

COMPANY NAME
CITY, STATE

To the best of my knowledge and ability the above side-hinged exterior door unit conforms to the requirements of the 2001 Florida Building Code, Chapter 17 (Structural Tests and Inspections).

State of Florida, Professional Engineer
Kurt Balthazor, P.E. – License Number 56533

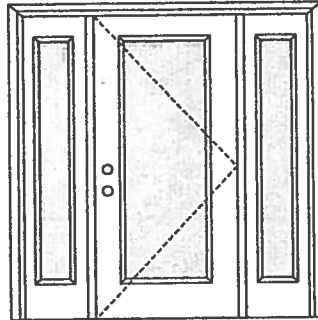


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WOOD-EDGE STEEL DOORS

APPROVED ARRANGEMENT:



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Note:
Units of other sizes are covered by this report as long as the panels used do not exceed 3'0" x 6'8".

Single Door with 2 Sidelites
Maximum unit size = 9'0" x 6'8"

Design Pressure
+40.5/-40.5
Limited water unless special threshold design is used.

Large Missile Impact Resistance
Hurricane protective system (shutters) is REQUIRED.

Actual design pressure and impact resistant requirements for a specific building design and geographic location is determined by ASCE 7-national, state or local building codes specify the edition required.

MINIMUM ASSEMBLY DETAIL:

Compliance requires that minimum assembly details have been followed – see MAD-WL-MA0004-02 or MAD-WL-MA0007-02 and MAD-WL-MA0041-02.

MINIMUM INSTALLATION DETAIL:

Compliance requires that minimum installation details have been followed – see MID-WL-MA0004-02.

APPROVED DOOR STYLES:

1/4 GLASS:



100 Series



133, 135 Series



136 Series



680 Series



822 Series

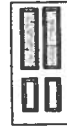
1/2 GLASS:



105 Series*



106, 160 Series*



129 Series*



200 Series*



12 R/L, 23 R/L, 24 R/L Series*



107 Series*



108 Series



304 Series

*This glass kit may also be used in the following door styles: 5-panel; 5-panel with scroll; Eyebrow 5-panel; Eyebrow 5-panel with scroll.

WOOD-EDGE STEEL DOORS

APPROVED DOOR STYLES: 3/4 GLASS:



404 Series



410 Series



450 Series

FULL GLASS:



109 Series



114, 120, 122
Series



152 Series



149 Series



300 Series

APPROVED SIDELITE STYLES:



680 Series



129 Series



200 Series



12R, 12L, 23R,
23L, 24R, 24L
Series



450 Series



152 Series



149 Series



109 Series



120, 122 Series



300 Series

CERTIFIED TEST REPORTS:

NCTL 210-1897-7, 8, 9, 10, 11, 12; NCTL 210-1861-4, 5, 6, 10, 11, 12; NCTL 210-2185-1, 2, 3

Certifying Engineer and License Number: Barry D. Portney, P.E. / 16258.

Unit Tested in Accordance with Miami-Dade BCCO PA202.

Evaluation report NCTL-210-2794-1

Door panels constructed from 26-gauge 0.017" thick steel skins. Both stiles constructed from wood. Top end rails constructed of 0.041" steel. Bottom end rails constructed of 0.021" steel. Interior cavity of slab filled with rigid polyurethane foam core. Slab and sidelite panels glazed with insulated glass mounted in a rigid plastic lip lite surround.

Frame constructed of wood with an extruded aluminum threshold.

PRODUCT COMPLIANCE LABELING:

TESTED IN
ACCORDANCE WITH
MIAMI-DADE BCCO PA202

COMPANY NAME
CITY, STATE

To the best of my knowledge and ability the above side-hinged exterior door unit conforms to the requirements of the 2001 Florida Building Code, Chapter 17 (Structural Tests and Inspections).

State of Florida, Professional Engineer
Kurt Balthazor, P.E. – License Number 56533



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Johnson™
EntrySystems

June 17, 2002
Our continuing program of product improvement makes specifications, design and product detail subject to change without notice.



Exclusively from
Masonite®
Masonite International Corporation

WOOD-EDGE STEEL DOORS

APPROVED DOOR STYLES:

3/4 GLASS:



404 Series



410 Series



450 Series

FULL GLASS:



109 Series



114, 120, 122
Series



152 Series



149 Series



300 Series

CERTIFIED TEST REPORTS:

NCTL 210-1897-7, 8, 9, 10, 11, 12; NCTL 210-1861-4, 5, 6, 10, 11, 12; NCTL 210-2185-1, 2, 3

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Evaluation report NCTL-210-2794-1

Door panels constructed from 26-gauge 0.017" thick steel skins. Both stiles constructed from wood. Top end rails constructed of 0.041" steel. Bottom end rails constructed of 0.021" steel. Interior cavity of slab filled with rigid polyurethane foam core. Slab glazed with insulated glass mounted in a rigid plastic lip lite surround.

Frame constructed of wood with an extruded aluminum threshold.

PRODUCT COMPLIANCE LABELING:

TESTED IN
ACCORDANCE WITH
MIAMI-DADE BCCO PA202

COMPANY NAME
CITY, STATE

To the best of my knowledge and ability the above side-hinged exterior door unit conforms to the requirements of the 2001 Florida Building Code, Chapter 17 (Structural Tests and Inspections).

State of Florida, Professional Engineer
Kurt Balthazor, P.E. – License Number 56533

Warnock Hersey

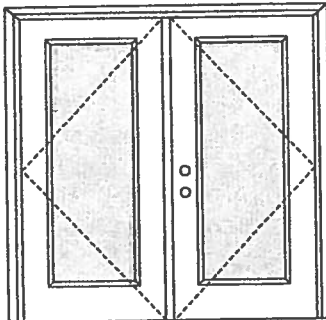


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XX

Glazed Inswing Unit

COP-WL-JH4142-02

WOOD-EDGE STEEL DOORS**APPROVED ARRANGEMENT:**

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Note:

Units of other sizes are covered by this report as long as the panels used do not exceed 3'0" x 6'8".

Double Door
Maximum unit size = 6'0" x 6'8"

Design Pressure**+40.5/-40.5**

Limited water unless special threshold design is used.

Large Missile Impact Resistance

Hurricane protective system (shutters) is REQUIRED.

Actual design pressure and impact resistant requirements for a specific building design and geographic location is determined by ASCE 7-national, state or local building codes specify the edition required.

MINIMUM ASSEMBLY DETAIL:

Compliance requires that minimum assembly details have been followed – see MAD-WL-MA0002-02 and MAD-WL-MA0041-02.

MINIMUM INSTALLATION DETAIL:

Compliance requires that minimum installation details have been followed – see MID-WL-MA0002-02.

APPROVED DOOR STYLES:**1/4 GLASS:**

100 Series



133, 135 Series



136 Series



680 Series



822 Series

1/2 GLASS:

105 Series*



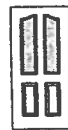
106, 160 Series*



129 Series*



200 Series*



12 R/L, 23 R/L, 24 R/L Series*



107 Series*



108 Series



304 Series

*This glass kit may also be used in the following door styles: 5-panel; 5-panel with scroll; Eyebrow 5-panel; Eyebrow 5-panel with scroll.

Johnson
EntrySystems™

June 17, 2002

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PREMDOR Collection
Premium Quality Doors



Exclusively from

Masonite®

Masonite International Corporation

** LAMAR BOOZER **
 900 EAST PUTNAM STREET
 LAKE CITY, FL 32055

PROJECT:
 CLIENT: FREDRICK PERRY C
 DATE: 1 23 06

RESIDENTIAL/LIGHT COMMERCIAL HVAC LOADS

DESIGNER: LAMAR BOOZER

CLIENT INFORMATION:

NAME: FREDRICK PERRY C
 ADDRESS:
 CITY, STATE: LAKE CITY, FLORIDA

TOTAL BUILDING LOADS:

BLDG. LOAD DESCRIPTIONS	AREA QUAN	SEN. LOSS	LAT. GAIN +	SEN. GAIN =	TOTAL GAIN
3-C WINDOW DBL PANE CLR GLS METL FR	108	3,524	0	7,820	7,820
8-O GLS DOOR DBL CLR GLS METL FR	40	1,305	0	2,896	2,896
12-E WALL R-11 +1/2"EXTPOLY BD(R-2.5)	935	3,156	0	1,725	1,725
11-C DOOR METAL POLYSTYRENE CORE	37	783	0	428	428
16-G CEILING R-30 INSULATION	1,934	1,699	0	1,699	1,699
22-A SLAB ON GRADE NO EDGE INSUL	140	5,103	0	0	0
SUBTOTALS FOR STRUCTURE:		6,211	15,570	0	14,568
PEOPLE	14	0	0	4,200	4,200
APPLIANCES	0	0	800	1,500	2,300
DUCTWORK	0	779	0	2,027	2,027
INFILTRATION W.CFM: 0.0 S.CFM: 0.0	0	0	0	0	0
VENTILATION W.CFM: 0.0 S.CFM: 0.0	0	0	0	0	0
SENSIBLE GAIN TOTAL				22,295	
TEMP. SWING MULTIPLIER				X 1.00	
BUILDING LOAD TOTALS		16,349	800	22,295	23,095

SUPPLY CFM AT 20 DEG DT: 1,013 CFM PER SQUARE FOOT: 0.885
 SQUARE FT. OF ROOM AREA: 1,934 SQUARE FOOT PER TON: 594.414

TOTAL HEATING REQUIRED WITH OUTSIDE AIR: 16.349 MBH
 TOTAL COOLING REQUIRED WITH OUTSIDE AIR: 2.925 TONS

CALCULATIONS ARE BASED ON 7TH EDITION OF ACCA MANUAL J.
 ALL COMPUTED RESULTS ARE ESTIMATES AS BUILDING USE AND WEATHER MAY VARY.
 BE SURE TO SELECT A UNIT THAT MEETS BOTH SENSIBLE AND LATENT LOADS.

