Residential System Sizing Calculation

Mark & Marilyn Hunter Sun Valley Road , FL Summary Project Title: 610056HunterMark&Marilyn

Class 3 Rating Registration No. 0 Climate: North

11/1/2006

				1/2000				
Location for weather data: Gainesville - Defaults: Latitude(29) Altitude(152 ft.) Temp Range(M)								
Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(54gr.)								
Winter design temperature	33		Summer design temperature	92	-			
Winter setpoint	70	F	Summer setpoint	75	F			
Winter temperature difference	37		Summer temperature difference	17	F			
Total heating load calculation	24355		Total cooling load calculation	17220	Btuh			
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh			
Total (Electric Heat Pump)		28000	Sensible (SHR = 0.75)	165.7	21000			
		28000	Latent	154.0	7000			
Heat Pump + Auxiliary(0.0kW)	115.0	20000	Total (Electric Heat Pump)		28000			

WINTER CALCULATIONS

Winter Heating Load (fo	r 1634 sqft)		
Load component			Load	
Window total	105	sqft	3380	Btuh
Wall total	1271	sqft	4174	Btuh
Door total	20	sqft	259	Btuh
Ceiling total	1674	sqft	1973	Btuh
Floor total	172	sqft	7510	Btuh
Infiltration	174	cfm	7060	Btuh
Duct loss			0	Btuh
Subtotal			24355	Btuh
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			<u>24355</u>	Btuh



Summer Cooling Load (for 1634 sqft) Load Load component 3973 Btuh sqft 105 Window total 2651 Btuh 1271 sqft Wall total Btuh 196 Door total 20 saft 2772 Btuh 1674 sqft Ceiling total Btuh Floor total 0 Btuh 1703 92 Infiltration cfm Btuh 1380 Internal gain Btuh 0 Duct gain cfm 0 Btuh 0 Sens. Ventilation 12676 Btuh Total sensible gain 0 Btuh Latent gain(ducts) Btuh 3344 Latent gain(infiltration) Btuh 0 Latent gain(ventilation) 1200 Btuh Latent gain(internal/occupants/other) Btuh 4544 **Total latent gain** 17220 Btuh TOTAL HEAT GAIN



For Florida residences only





EnergyGauge® System Sizing PREPARED BY: 5000 DATE: 1000

EnergyGauge® FLR2PB v4.1

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Mark & Marilyn Hunter Sun Valley Road , FL

100

Project Title: 610056HunterMark&Marilyn Class 3 Rating Registration No. 0 Climate: North

Reference City: Gainesville (Defaults) Winter Temperature Difference: 37.0 F This calculation is for Worst Case. The house has been rotated 315 degrees. 11/1/2006

Window	Panes/SHGC/Frame/U	Orientation	Area(sqft) X	HTM=	Load	
1	2, Clear, Metal, 0.87	NW	15.0	32.2	483 Btuh	
2	2, Clear, Metal, 0.87	NE	15.0	32.2	483 Btuh	
3	2, Clear, Metal, 0.87	SE	45.0	32.2	1449 Btuh	
4	2, Clear, Metal, 0.87	SW	30.0	32.2	966 Btuh	
	Window Total		105(sqft)		3380 Btuh	
Walls	Туре	R-Value	Area X	HTM=	Load	
1	Frame - Wood - Ext(0.09)	13.0	1271	3.3	4174 Btuh	
	Wall Total		1271		4174 Btuh	
Doors	Туре		Area X	HTM=	Load	
1	Insulated - Exterior		20	12.9	259 Btuh	
	Door Total		20		259Btuh	
Ceilings	Type/Color/Surface	R-Value	Area X	HTM=	Load	
1	Vented Attic/D/Shin)	30.0	1674	1.2	1973 Btuh	
	Ceiling Total		1674		<u>1973Btuh</u>	
Floors	Туре	R-Value	Size X	HTM=	Load	
1	Slab On Grade	0	172.0 ft(p)	43.7	7510 Btuh	
	Floor Total		172		7510 Btuh	
		Z	17295 Btuh			
Infiltration	Туре	ACH X	Zone Volume	CFM=		
	Natural	0.80	13072	174.3	7060 Btuh	
Ductload	Average sealed, R6.0, Supply(Attic), Return(Attic) (DLM of 0.00)				0 Btuh	
Zone #1	Sensible Zone Subtotal 24355 Btu					

WHOLE HOUSE TOTALS

Subtotal Sensible	24355 Btuh
Ventilation Sensible	0 Btuh
Total Btuh Loss	24355 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Mark & Marilyn Hunter Sun Valley Road , FL Project Title: 610056HunterMark&Marilyn Class 3 Rating Registration No. 0 Climate: North

Key: Window types (SHGC - Shading coefficient of glass as SHGC numerical value or as clear (Frame types - metal, wood or insulated metal) (U - Window U-Factor or 'DEF' for default) (HTM - ManualJ Heat Transfer Multiplier)

Key: Floor size (perimeter(p) for slab-on-grade or area for all other floor types)



For Florida residences only

System Sizing Calculations - Winter

Residential Load - Room by Room Component Details

Mark & Marilyn Hunter Sun Valley Road , FL Project Title: 610056HunterMark&Marilyn Class 3 Rating Registration No. 0 Climate: North

Reference City: Gainesville (Defaults) Winter Temperature Difference: 37.0 F This calculation is for Worst Case. The house has been rotated 315 degrees. 11/1/2006

Component L	oads for Zone #1: Main						
Window	Panes/SHGC/Frame/U	Orientation	Area(sqft)	K HTM=	Load		
1	2, Clear, Metal, 0.87	NW	15.0	32.2	483 Btul		
2	2, Clear, Metal, 0.87	NE	15.0	32.2	483 Btul		
3	2, Clear, Metal, 0.87	SE	45.0	32.2	1449 Btul		
4	2, Clear, Metal, 0.87	SW	30.0	32.2	966 Btul		
	Window Total		105(sqf	t)	3380 Btul		
Walls	Туре	R-Value	Area X	HTM=	Load		
1	Frame - Wood - Ext(0.09)	13.0	1271	3.3	4174 Btul		
	Wall Total	all Total 1271					
Doors	Туре		Area X	HTM=	Load		
1	Insulated - Exterior		20	12.9	259 Btul		
	Door Total		20		259Btuł		
Ceilings	Type/Color/Surface	R-Value	Area X	HTM=	Load		
1	Vented Attic/D/Shin)	30.0	1674	1.2	1973 Btul		
	Ceiling Total		1674		1973Btuł		
Floors	Туре	R-Value	Size X	HTM=	Load		
1	Slab On Grade	0	172.0 ft(p) 43.7	7510 Btuł		
	Floor Total		172		7510 Btul		
		Z	one Envelope	e Subtotal:	17295 Btuh		
Infiltration	Туре	ACH X	Zone Volume	e CFM=			
	Natural	0.80	13072	174.3	7060 Btuł		
Ductload	Average sealed, R6.0, Sup	Average sealed, R6.0, Supply(Attic), Return(Attic) (DLM of 0.00)					
Zone #1		Sensible Zone Subtotal					

WHOLE HOUSE TOTALS

Subtotal Sensible	24355 Btuh
Ventilation Sensible	0 Btuh
Total Btuh Loss	24355 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Mark & Marilyn Hunter Sun Valley Road , FL Project Title: 610056HunterMark&Marilyn Class 3 Rating Registration No. 0 Climate: North

Key: Window types (SHGC - Shading coefficient of glass as SHGC numerical value or as clear (Frame types - metal, wood or insulated metal) (U - Window U-Factor or 'DEF' for default) (HTM - ManualJ Heat Transfer Multiplier)

Key: Floor size (perimeter(p) for slab-on-grade or area for all other floor types)



For Florida residences only

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

Mark & Marilyn Hunter Sun Valley Road , FL Project Title: 610056HunterMark&Marilyn Class 3 Rating Registration No. 0 Climate: North

11/1/2006

Reference City: Gainesville (Defaults) Summer Temperature Difference: 17.0 F This calculation is for Worst Case. The house has been rotated 315 degrees.

Component Loads for Whole House Overhang Window Area(sqft) HTM Type* Load Window Pn/SHGC/U/InSh/ExSh/IS Hgt Shaded Unshaded Len Shaded Unshaded Ornt Gross 2, Clear, 0.87, None, N, N NW 22ft. 5.5ft. 15.0 0.0 15.0 29 60 901 Btuh 2, Clear, 0.87, None, N, N Oft. 29 Btuh 1.5ft. 15.0 0.0 15.0 60 901 2 NE 3 2, Clear, 0.87, None, N, N SE 8ft. 5.5ft. 45.0 45.0 0.0 29 63 1303 Btuh 4 2, Clear, 0.87, None, N, N SW 1.5ft. Oft. 30.0 30.0 0.0 29 63 869 Btuh Window Total 105 (sqft) 3973 Btuh Walls R-Value/U-Value Area(sqft) HTM Load Type Frame - Wood - Ext 13.0/0.09 1271.0 2.1 2651 Btuh 1 Wall Total 1271 (sqft) 2651 Btuh Doors HTM Type Area (sqft) Load Insulated - Exterior 20.0 9.8 196 Btuh 1 196 Btuh Door Total 20 (sqft) Ceilings Type/Color/Surface **R-Value** Area(sqft) HTM Load Vented Attic/DarkShingle 1674.0 2772 Btuh 1 30.0 1.7 2772 Btuh **Ceiling Total** 1674 (sqft) Floors **R-Value** Load Туре HTM Size Slab On Grade 0 Btuh 1 0.0 172 (ft(p)) 0.0 Floor Total 0 Btuh 172.0 (sqft) Zone Envelope Subtotal: 9593 Btuh Infiltration Type ACH Volume(cuft) CFM= Load 1703 Btuh SensibleNatural 0.42 13072 91.5 Internal Occupants Btuh/occupant Appliance Load 230 1380 Btuh gain 6 Х 0 + DGM = 0.00 Duct load Average sealed, R6.0, Supply(Attic), Return(Attic) 0.0 Btuh Sensible Zone Load 12676 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

Mark & Marilyn Hunter Sun Valley Road , FL

Project Title: 610056HunterMark&Marilyn

Class 3 Rating Registration No. 0 Climate: North

11/1/2006

WHOLE HOUSE TOTALS

	Sensible Envelope Load All Zones	12676	Btuh
	Sensible Duct Load	0	Btuh
	Total Sensible Zone Loads	12676	Btuh
	Sensible ventilation	0	Btuh
	Blower	0	Btuh
Whole House	Total sensible gain	12676	Btuh
Totals for Cooling	Latent infiltration gain (for 54 gr. humidity difference)	3344	Btuh
	Latent ventilation gain	0	Btuh
	Latent duct gain	0	Btuh
	Latent occupant gain (6 people @ 200 Btuh per person)	1200	Btuh
	Latent other gain	0	Btuh
	Latent total gain	4544	Btuh
	TOTAL GAIN	17220	Btuh

*Key: Window types (Pn - Number of panes of glass) (SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint) (U - Window U-Factor or 'DEF' for default) (InSh - Interior shading device: none(N), Blinds(B), Draperies(D) or Roller Shades(R)) (ExSh - Exterior shading device: none(N) or numerical value) (BS - Insect screen: none(N), Full(F) or Half(H)) (Ornt - compass orientation)



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System Sizing Calculations - Summer

Residential Load - Room by Room Component Details

Mark & Marilyn Hunter Sun Valley Road , FL Project Title: 610056HunterMark&Marilyn Class 3 Rating Registration No. 0 Climate: North

Reference City: Gainesville (Defaults) Summer Temperature Difference: 17.0 F This calculation is for Worst Case. The house has been rotated 315 degrees. 11/1/2006

Component Loads for Zone #1: Main

	Type*		Over	hang	Wind	dow Are	a(sqft)	F	ITM	Load	
Window	Pn/SHGC/U/InSh/ExSh/IS	Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded		
1	2, Clear, 0.87, None,N,N	NW	22ft.	5.5ft.	15.0	0.0	15.0	29	60	901	Btuh
2	2, Clear, 0.87, None,N,N	NE	1.5ft.	Oft.	15.0	0.0	15.0	29	60	901	Btuh
3	2, Clear, 0.87, None,N,N	SE	8ft.	5.5ft.	45.0	45.0	0.0	29	63	1303	Btuh
4	2, Clear, 0.87, None,N,N	sw	1.5ft.	Oft.	30.0	30.0	0.0	29	63	869	Btuh
	Window Total				105 (3973	Btuh
Walls	Туре		R-Va	alue/U	-Value	Area	(sqft)		HTM	Load	
1	Frame - Wood - Ext			13.0/	0.09	127	71.0		2.1	2651	Btuh
	Wall Total					127	71 (sqft)			2651	Btuh
Doors	Туре					Area	(sqft)		HTM	Load	
1	Insulated - Exterior					20	0.0		9.8	196	Btuh
	Door Total					2	20 (sqft)			196	Btuh
Ceilings	Type/Color/Surface		R-Va	alue			(sqft)		HTM	Load	
1	Vented Attic/DarkShingle			30.0			74.0		1.7	2772	Btuh
	Ceiling Total					167	4 (sqft)			2772	Btuh
Floors	Туре		R-Va	alue			ze		HTM	Load	
1	Slab On Grade			0.0		1	72 (ft(p))		0.0	0	Btuh
	Floor Total					172	.0 (sqft)			0	Btuh
			Zone Envelope Subtotal:					9593	Btuh		
Infiltration	Туре		А	СН		Volum	e(cuft)		CFM=	Load	
	SensibleNatural			0.42			072		91.5	1703	Btuh
Internal		(Occup	oants		Btuh/o	cupant	A	Appliance	Load	
gain				6	2	X 23	0 +		0	1380	Btuh
Duct load	Average sealed, R6.0, S	Supply	(Attic)	, Reti	ırn(Atti	c)		DGM	= 0.00	0.0	Btuh
	Sensible Zone Load							12676	Btuh		

Manual J Summer Calculations

Residential Load - Component Details (continued)

Mark & Marilyn Hunter Sun Valley Road , FL Project Title: 610056HunterMark&Marilyn Class 3 Rating Registration No. 0 Climate: North

11/1/2006

WHOLE HOUSE TOTALS

	Sensible Envelope Load All Zones	12676	Btuh
	Sensible Duct Load	0	Btuh
	Total Sensible Zone Loads	12676	Btuh
	Sensible ventilation	0	Btuh
	Blower	0	Btuh
Whole House	Total sensible gain	12676	Btuh
Totals for Cooling	Latent infiltration gain (for 54 gr. humidity difference)	3344	Btuh
	Latent ventilation gain	0	Btuh
	Latent duct gain	0	Btuh
	Latent occupant gain (6 people @ 200 Btuh per person)	1200	Btuh
	Latent other gain	0	Btuh
	Latent total gain	4544	Btuh
	TOTAL GAIN	17220	Btuh

*Key: Window types (Pn - Number of panes of glass)

(SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint) (U - Window U-Factor or 'DEF' for default) (InSh - Interior shading device: none(N), Blinds(B), Draperies(D) or Roller Shades(R)) (ExSh - Exterior shading device: none(N) or numerical value) (BS - Insect screen: none(N), Full(F) or Half(H)) (Ornt - compass orientation)



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Residential Window Diversity

Mark & Marilyn Hunter Sun Valley Road , FL MidSummer Project Title: 610056HunterMark&Marilyn

Class 3 Rating Registration No. 0 Climate: North

11/1/2006

Weather data for: Gainesville - Def	aults		
Summer design temperature	92 F	Average window load for July	3487 Btuh
Summer setpoint	75 F	Peak window load for July	4309 Btuh
Summer temperature difference	17 F	Excusion limit(130% of Ave.)	4533 Btuh
Latitude	29 North	Window excursion (July)	None

WINDOW Average and Peak Loads



The midsummer window load for this house does not exceed the window load excursion limit. This house has adequate midsummer window diversity.

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EnergyGauge® System Sizing for Florida residences only PREPARED BY: 13M 1999	



EnergyGauge® FLR2PB v4.1

Davy Edgling

X Glazed Inswing Unit

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COP-WL-JH4141-02

WOOD-EDGE STEEL DOORS



MINIMUM ASSEMBLY DETAIL:

Compliance requires that minimum assembly details have been followed – see MAD-WL-MA0001-02 and MAD-WL-MA0041-02.

MINIMUM INSTALLATION DETAIL:

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



*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,



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X Glazed Inswing Unit

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WOOD-EDGE STEEL DOORS



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 glazed with insulated glass mounted in a rigid plastic lip lite surround.

Frame constructed of wood with an extruded aluminum threshold.

PRODUCT COMPLIANCE LABELING:



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).

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





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Test Data Review Certificate #302647A and CDP/Test Report Validation Matrix #3026447A-000 provides additional information - available from the ITS/WH website (www.etisemko.com), the Masonite veobite (www.emsonite.com) or the Masonite technical center.

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COP-WL-JH4142-02

XX Glazed Inswing Unit

WOOD-EDGE STEEL DOORS

APPROVED ARRANGEMENT:



Narnack Hersey

Test Data Review Certificate #3026447A and CDP/Test Report Validation Matrix #3026447A-001 provides additional information - available from the TTS/WH website (www.etisemko.com), the Masonite uestite (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 $3'0'' \times 6'8''$.

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:

Johnson

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.



"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.



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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 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



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

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PREMICIAL INTERNAL Prenkum Guality Doort Masonite International Corporation

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WOOD-EDGE STEEL DOORS

APPROVED ARRANGEMENT:



Note: Units of other sizes are covered by this

Single Door with 2 Sidelites um 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 addition required.

MINIMUM ASSEMBLY DETAIL:

Gompliance 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.







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129 Series

















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680 Series



304 Series

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



June 17, 2002

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Exclusively from 9 PREMICONCollection rasomte U Lity Door Masonite International Corporation

108 Series



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report as long as the panels used do not exceed 3'0" x 6'8".

OXO Glazed Inswing Unit

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COP-WL-JH4144-02

WOOD-EDGE STEEL DOORS

APPROVED DOOR STYLES: FULL GLASS: 3/4 GLASS: 1910 Car 15 <u>e</u>l 90 152 Series 149 Series 300 Series 114, 120, 122 410 Series 150 Series 109 Senes 404 Series Series **APPROVED SIDELITE STYLES:** University of C. Martin F ÷. 0 ſ 241 450 Series 152 Series 149 Series 109 Series 120 122 Series 300 Series 12R, 12L, 23R 200 Series 680 Series 129 Series 23L 24R 24L Sanes

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



June 17, 2002

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Test Data Review Cartilicate #3025447A and CDP/Test Report Validation Matrix #3025447A-001 provides additional information - available from the ITS/WH website (www.nctisentko.com), the Macanitiv vehibite (www.ncaonite.com) or the Masonite technical centar.

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OXXO Glazed Inswing Unit

COP-WL-JH4145-02

WOOD-EDGE STEEL DOORS

Note:

APPROVED ARRANGEMENT:



Double Door with 2 Sidelites Maximum unit size = 12'0" x 5'8"

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

Large Missile Impact Resistance



Test Data Review Certificate 33028447A and CDP/Test Report Validation Matrix 53028447A-000 provides additional information - available (room the TTS/WH website (www.ellsemko.com), the Masonite website (www.essonile.com) or the Masonite technical center.

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

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:

Johnson

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



"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,

XX Opaque Inswing Unit

COP-WL-JH4102-02

WOOD-EDGE STEEL DOORS

Units of other sizes are covered by this report as long as the panels used do not

APPROVED ARRANGEMENT:





Test Dola Roview Certificate #3026447A and CDP/Test Roport Validation Mattin #3020447A-001 provers edditional information - assistant isovers of the TIGANA wothing (envised and the Tigana) Matsenite work attempts.com), the Matsenite work attempts.com) Matsenite work attempts.com) Matsenite work attempts.com) or the Macroniae works can let.

Daubis Door Maximum unit stat = 617 x 677 Design Pressure

+45.0/-45.0

Emiliati water unions exectal threatons design is need. Large Missile Impact Resistance

Hurricane protective system (shutters) is NOT REQUIRED.

Actual design pressure and impact resistor requirements for a specific building design and geographic location is determined by ASCE 7-pational, stary of local building cades specify the eakion required.

exceed 3'0" x 6'8".

Nole:

MINIMUM ASSEMBLY DETAIL:

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

MINIMUM INSTALLATION DETAIL:

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





WOOD-EDGE STEEL DOORS



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 glazed with insulated glass mounted in a rigid plastic lip lite surround.

Frame constructed of wood with an extruded aluminum threshold.

PRODUCT COMPLIANCE LABELING:



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).

Isath

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-DU1 provides additional information - available from the ITS/WH website (www.ethermko.com), the Masoniav vesibile (www.ensanchie.com) or the Masonia technical center.

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June 17, 2002 Our centinging program of product improvement makes specifications, design and product debit subtret to change without notice.

ф. Exclusively from PREMDOR lasomte° V Alaty Bane Masonite International Corporation

Derey Edgleer

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	$0.13 \mathrm{cfm/ft^2}$
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.

Joh A

Mark A. Hess, Technician

MAH:nlb



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:	01-41134.01
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 foars 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

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01-41134.01 Page 2 of 5

Test Specimen Description: (Continued)

Weatherstripping:

Description	Quantity	Location
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 $#8 \times 1"$ 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 $#8 \times 1-1/2$ " 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:

Description	Quantity	Location
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 hottom rail and a substitute

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 $#8 \times 1-5/8"$ 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:

Paragraph	Title of Test - Test Method	Results	Allowed
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 cfin/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 : (with and without screen) WTP = 2.86 psf	547-00) 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.

2.1.4.2Uniform Load Structural (ASTM E 330-97)
(Measurements reported were taken on the meeting rail)
(Loads were held for 10 seconds)
@ 38.9 psf (positive)0.02"
0.02"@ 52.1 psf (negative)0.02"0

0.18" max. 0.02" 0.18" max auttich: A PROVIN HQ, 1237 allen M. Recon 1 APRIL 2002

Test Specimen Description: (Continued)

<u>Paragraph</u>	Title of Test - Test Method	Results	Allowed
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 enter	
	Test A7	No entry No entry	No entry
		ino enu y	No entry
	Lock Manipulation Test	No entry	No entry
Optional Perfo	mance		
4.3	Water Resistance (ASTM E 547-0) (with and without screen)	0)	
	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 i	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" 0.18" that STATE OF @ 70.8 psf (negative) 0.05" 0.18" that STATE OF Culler M. Remention of Comparison of Compari

01-41134.01 Page 5 of 5

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:

A. la

Mark A. Hess Technician

MAH:nlb 01-41134.01

allen M. Rin

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



New Construction Subterranean Termite Soil Treatment Record

This form is completed by the licensed Pest Control Company.

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. This information is mandatory and is required to obtain benefits. HUD may not collect this information, and you are not required to complete this form, unless it displays a currently valid OMB control number.

Section 24 CFR 200.926d(b)(3) requires that the sites for HUD insured structures must be free of termite hazards. This information collection requires the builder to certify that an authorized Pest Control company performed all required treatment for termites, and that the builder guarantees the treated area against infestation for one year. Builders, pest control companies, mortgage lenders, homebuyers, and HUD as a record of treatment for specific homes will use the information collected. The information is not considered confidential.

This report is submitted for informational purposes to the builder on proposed (new) construction cases when soil treatment for prevention of subterranean termite infestation is specified by the builder, architect, or required by the lender, architect, FHA, or VA.

All contracts for services are between the Pest Control Operator and builder, unless stated otherwise.

#25351

Section 1: General Information (Treating Company Information) Company Name: Asban Pest Control. Inc. Company Address: 221 N.W. Cole Terrace, Suite 107 City Loire City State _ Zip ___ FHA/VA Case No. (if any) _____ Section 2: Builder Information Company Phone No. _____ Company Name: _ Section 3: Property Information Location of Structure(s) Treated (Street Address or Legal Description, City, State and Zip) Type of Construction (More than one box may be checked) 🛛 Slab Basement Crawl Other _____ Type of Fill _____ Inside ____/ Z Approximate Depth of Footing: Outside _____ Section 4: Treatment Information Date(s) of Treatment(s) Brand Name of Product(s) Used EPA Registration No. ______ Approximate Final Mix Solution % Approximate Size of Treatment Area: Sq. ft. _____2 Size 2 Z____ Linear ft. _____2 Zize 2 Zize Linear ft. of Masonry Voids _____2 Zize 2 Approximate Total Gallons of Solution Applied _____ Was treatment completed on exterior? No No 🕑 Yes Service Agreement Available? Note: Some state laws require service agreements to be issued. This form does not preempt state law. Attachments (List) Comments Treated Marabady have + 1 Porch Name of Applicator(s) ______ Certification No. (if required by State law) ______ The applicator has used a product in accordance with the product label and state requirements. All treatment materials and methods used comply with state and federal regulations. Authorized Signature _ Date ____ Warning: HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. (18 U.S.C. 1001, 1010. 1012; 31 U.S.C. 3729, 3802)

Form NPCA-99-B may still be used

form HUD-NPCA-99-B (04/2003)