

Manual J Winter Calculations

Residential Load - Component Details (continued)

Peeler

Lake City, FL

Project Title:
Norris Peeler
Building Type: User

7/26/2022

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss	29528 Btuh
	Ventilation Sens. Heat Loss (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Total Heat Loss	29528 Btuh

EQUIPMENT

1. Electric Heat Pump	#	60000 Btuh
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Key: Window types - NFRC (Requires U-Factor and Shading coefficient(SHGC) of glass as numerical values)
or - Glass as 'Clear' or 'Tint' (Uses U-Factor and SHGC defaults)
U - (Window U-Factor)
HTM - (ManualJ Heat Transfer Multiplier)



Version 8

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

Peeler

Lake City, FL

Project Title:
Norris Peeler

7/26/2022

Reference City: Gainesville, FL (Defaults)
Humidity difference: 47gr.

Temperature Difference: 17.0F(MJ8 99%)
Summer Setpoint: 75 °F (Required Manual J default)

Component Loads for Whole House

Window	Type*						Overhang		Window Area(sqft)			HTM		Load
	Panes	SHGC	U	InSh	IS	Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded	
1	2 NFRC	0.21, 0.33	B-L	No	N		1.5ft	2.0ft	9.0	0.0	9.0	8	8	69 Btuh
2	2 NFRC	0.21, 0.33	B-L	No	N		1.5ft	2.0ft	6.0	0.0	6.0	8	8	46 Btuh
3	2 NFRC	0.21, 0.33	B-L	No	N		1.5ft	2.0ft	15.0	0.0	15.0	8	8	115 Btuh
4	2 NFRC	0.21, 0.33	B-L	No	N		12.0ft	2.0ft	9.0	0.0	9.0	8	8	69 Btuh
5	2 NFRC	0.21, 0.33	B-L	No	E		1.5ft	2.0ft	30.0	0.0	30.0	8	19	565 Btuh
6	2 NFRC	0.21, 0.33	B-L	No	E		1.5ft	2.0ft	6.0	0.0	6.0	8	19	113 Btuh
7	2 NFRC	0.21, 0.33	B-L	No	S		10.0ft	2.0ft	45.0	45.0	0.0	8	9	346 Btuh
8	2 NFRC	0.21, 0.33	B-L	No	S		10.0ft	2.0ft	25.0	25.0	0.0	8	9	192 Btuh
9	2 NFRC	0.21, 0.33	B-L	No	S		10.0ft	2.0ft	3.0	3.0	0.0	8	9	23 Btuh
10	2 NFRC	0.21, 0.33	B-L	No	W		1.5ft	2.0ft	6.0	0.0	6.0	8	19	113 Btuh
Window Total									154 (sqft)					1651 Btuh
Walls	Type		U-Value		R-Value		Area(sqft)		HTM		Load			
					Cav/Sheath									
1	Frame - Wood	Ext	0.08		13.0/1.0		239.9		2.0		478	Btuh		
2	Frame - Wood	Ext	0.08		13.0/1.0		228.6		2.0		456	Btuh		
3	Frame - Wood	Ext	0.08		13.0/1.0		417.8		2.0		833	Btuh		
4	Frame - Wood	Ext	0.08		13.0/1.0		447.0		2.0		891	Btuh		
5	Frame - Wood	Ext	0.08		13.0/1.0		434.4		2.0		866	Btuh		
Wall Total							1768 (sqft)					3525 Btuh		
Doors	Type		U-Value		R-Value		Area (sqft)		HTM		Load			
1	Insulated - Exterior						33.3		12.9		429	Btuh		
2	Insulated - Exterior						20.0		12.9		258	Btuh		
3	Insulated - Exterior						13.3		12.9		172	Btuh		
Door Total							67 (sqft)					859 Btuh		
Ceilings	Type/Color/Surface		U-Value		R-Value		Area(sqft)		HTM		Load			
1	Vented Attic/Med/Metal		0.025		38.0/0.0		2696.2		1.07		2874	Btuh		
Ceiling Total							2696 (sqft)					2874 Btuh		
Floors	Type		U-Value		R-Value		Size		HTM		Load			
1	Slab On Grade				0.0		2696 (ft-perimeter)		0.0		0	Btuh		
Floor Total							2696.2 (sqft)					0 Btuh		
Envelope Subtotal:													8908 Btuh	
Infiltration	Type		Average ACH		Volume(cuft)		Wall Ratio		CFM=		Load			
	Natural		0.12		24266		1		49.8		928 Btuh			
Internal gain	Occupants		Btuh/occupant		Appliance		Load							
	3		X 230		+		1200				1890 Btuh			
Sensible Envelope Load:													11726 Btuh	
Duct load	Average sealed, Supply(R6.0-Attic), Return(R6.0-Attic)						(DGM of 0.564)						6613 Btuh	
	Sensible Load All Zones													18339 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

Peeler

Project Title:
Norris Peeler

Climate: FL_GAINESVILLE_REGIONAL_A

Lake City, FL

7/26/2022

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	11726 Btuh
	Sensible Duct Load	6613 Btuh
	Total Sensible Zone Loads	18339 Btuh
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Blower	0 Btuh
	Total sensible gain	18339 Btuh
	Latent infiltration gain (for 47 gr. humidity difference)	1585 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	1601 Btuh
	Latent occupant gain (3.0 people @ 200 Btuh per person)	600 Btuh
	Latent other gain	1200 Btuh
	Latent total gain	4987 Btuh
	TOTAL GAIN	23326 Btuh

EQUIPMENT

1. Central Unit	#	60000 Btuh
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*Key: Window types (Panels - Number and type of panes of glass)

(SHGC - Shading coefficient of glass as SHGC numerical value)

(U - Window U-Factor)

(InSh - Interior shading device: none(No), Blinds(B), Draperies(D) or Roller Shades(R))

- For Blinds: Assume medium color, half closed

For Draperies: Assume medium weave, half closed

For Roller shades: Assume translucent, half closed

(IS - Insect screen: none(N), Full(F) or Half(1/2))

(Ornt - compass orientation)



Version 8