

Manual J Summer Calculations

Residential Load - Component Details (continued)

Judson Res

Project Title:
220783 Judson

Climate:FL_GAINESVILLE_REGIONAL_A

Lake City, FL

2022-06-30

Doors	Type			Area (sqft)	HTM	Load
1	Insulated - Exterior			16.0	12.0	192 Btuh
2	Insulated - Exterior			24.0	12.0	288 Btuh
3	Insulated - Garage			20.0	12.0	240 Btuh
4	Insulated - Exterior			8.0	12.0	96 Btuh
	Door Total			68 (sqft)		816 Btuh
Ceilings	Type/Color/Surface	U-Value	R-Value	Area(sqft)	HTM	Load
1	Unvented Attic/DarkShingle	0.241	0.0/22.0	2693.0	0.96	2596 Btuh
2	Knee Wall/DarkShingle	0.047	0.0/22.0	124.0	0.19	23 Btuh
	Ceiling Total			2817 (sqft)		2619 Btuh
Floors	Type		R-Value	Size	HTM	Load
1	Slab On Grade		0.0	2693 (ft-perimeter)	0.0	0 Btuh
	Floor Total			2693.0 (sqft)		0 Btuh
	Envelope Subtotal:					14615 Btuh
Infiltration	Type	Average ACH	Volume(cuft)	Wall Ratio	CFM=	Load
	Natural	0.17	24776	1	71.9	1495 Btuh
Internal gain		Occupants	Btuh/occupant		Appliance	Load
		4	X 230	+	3400	4320 Btuh
	Sensible Envelope Load:					20430 Btuh
Duct load	Average sealed, Supply(R6.0-Attic), Return(R6.0-Attic) (DGM of 0.138)					2823 Btuh
	Sensible Load All Zones					23253 Btuh

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WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	20430 Btuh
	Sensible Duct Load	2823 Btuh
	Total Sensible Zone Loads	23253 Btuh
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	23253 Btuh
	Latent infiltration gain (for 51 gr. humidity difference)	2481 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	1572 Btuh
	Latent occupant gain (4.0 people @ 200 Btuh per person)	800 Btuh
	Latent other gain	0 Btuh
	Latent total gain	4853 Btuh
	TOTAL GAIN	28106 Btuh

EQUIPMENT

1. Central Unit	#	42000 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(½))
 (Ornt - compass orientation)



Version 8