

main house


# EMS HVAC Load Calculator

[www.hvacloadcalculator.com](http://www.hvacloadcalculator.com)

Date: Tue Feb 25  
2025 09:59am

Loaded Document: spicer personal

Welcome - frank l

Company Info		Client Information	
Company	southern air sales and ser	Name	paul spicer {personal}
Preparer	frankl	Address1	lake city
Phone	(352) 494-2252	Address2	
Email	perkins318@cox.net	Address3	
		Phone	(386) 590-1040
		Email	spicerbuilders@gmail.com
		Date	24-Feb-2025 

*This HVAC load calculation has been performed using sound engineering principles as prescribed by Manual J eighth edition and ASHRAE Handbook of Fundamentals. Duct sizing has been performed as prescribed by Manual D.*

## 1. Design Conditions(Temp. F)

☐ Check If Using Celcius

	INDOOR	OUTDOOR	TEMP DIFF	Front of Building is Facing	North	▼
WINTER	70	30	40			

SUMMER	73	95	22	Total Conditioned Area	2480	Sq.Ft
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2. Summer Humidity

Very Humid    ▾    60    Grains  
Difference

3. How Tight is Structure

Average-over 1500 Sq. Ft.	▾	Winter	Summer
Air/Changes/Hr.		0.7	0.35

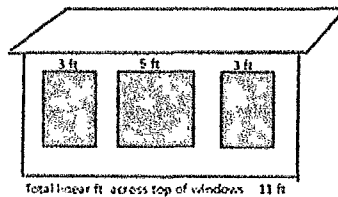
4. Fireplace Evaluation

Number		Evaluation		CFM
none	▾	Tight	▾	0

5. Number of Occupants

generally equals number of bedrooms + 1	4
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## Overhang Characteristics



Enter all measurements decimally

1" = 1      7" = 6

2" = 2      8" = 7

3" = 3      9" = .8

4" = 3      10" = 8

5" = 4      11" = 9

6" = 5

Example- 2 ft. 8 in. = 2.7 ft

	EAST	WEST	S/SE/SW	N/NE/NW
Distance of OH from top of window (A)	2	2	2	2
Length of overhang (B)	2	2	2	2
Total linear ft. across top of windows located below overhang	8.5	8.5	9	14

## Solar Gain Through Glass

☐ Check this box if using manufacturer specifications and enter the latitude, U-value and SHGC

Latitude	U-Value	SHGC				
Facing	Area(sq ft)	Type Glass	HTM	Unshaded	Shaded	BTUH
North or Shaded	27.25	Tripl or Lc ▼	20.00	0	56	1,121
NE/NW	0	▼	0.00	0	0	0
South	72	Tripl or Lc ▼	33.00	43	29	1,426
SE/SW	0	▼	0.00	0	0	0
East	22.5	Tripl or Lc ▼	65.00	23	0	1,463

West	37.5	Tripl or Lc	▼	65.00	38	0	2,438
Does glass have reflective coating?		No	▼	1			6,447
Skylight	0		▼	0			0
Total Solar Gain							6,447

## DUCTS OR PIPES

Location(Heating)	Trunk and br	▼	Duct Loss	0.11
Location(Cooling)	Trunk and br	▼	Duct Gain	0.23
Duct/Pipe Insulation	R-6	▼		
Duct Leakage	sealed	▼		
Area of Attic or Floor Where Duct is Located	0			
Attic Temperature(If ducts located in attic)	130	▼		

## Load Calculation

Elements of Load	Area or Lin. Ft	Insulation/R-value	U-Value	Heat Loss Btuh	Heat Gain Btuh	Latent Btuh
Solar Gain from Glass					6,447	
Gross Wall	1491					
Glass 1	159	Triple/Lo	0.42	2,675		
Skylight	0		0.00	0		
Doors	81	Single Wo	0.56	1,814	998	
Net Wall	1,251	R-19	0.07	3,402	1,871	
Ceiling	1875	R-38	0.03	1,950	2,194	
<b>Floor</b>						
Over Crawl or Unheated Basement	1875	R-19	0.05	1,838	0	
Open-Beach House Above Carport	0		0.00	0	0	
Slab On Grade - enter-linear ft	0		0.00	0	0	
Infiltration-Enter cubic-ft of building	15000			7,700	2,118	
		People			920	800
		Appliances		<input type="checkbox"/> Enter Value	1200	

Sub Total	19,379	15,747	
Duct Loss/Gain	2,205	3,543	1,362
Total Sensible Load	21,585	19,290	
Latent Load			3,570
Total Latent Load			5,732

**SUMMARY**

Heating Load	Sensible Cooling	Latent Cooling	Total Cooling Load	*Nominal Tons
21,585	19,290	5,732	25,022	2.14

OUTDOOR AIR FLOW RATE 54.8

**\* CAUTION - The cooling capacity of the air conditioner must meet both, sensible and latent loads. It is recommended a Manual S calculation be performed. Using manufacturer's specs. The nominal tons assume .75 S/T ratio at the chosen outdoor design temperature.**

**Summary Including Basement**

Heating Load	Sensible Cooling	Latent Cooling	Total Cooling Load	Nominal Tons
21,585	19,290	5,732	25,022	2.14

Whole House (Block Load) Completed

Scroll to top For Additional Options ➔

Basement

# EMS HVAC Load Calculator

www.hvacloadcalculator.com

Date: Mon Feb 24  
2025 15:41pm

Loaded Document:

Welcome - frank l

Company Info		Client Information	
Company	southern air sales and ser	Name	spicer personal 2
Preparer	frank	Address1	lake city
Phone	(352) 494-2252	Address2	
Email	perkins318@cox.net	Address3	
		Phone	(386) 590-1040
		Email	spicerbuilders@gmail.com
		Date	24-Feb-2025 

*This HVAC load calculation has been performed using sound engineering principles as prescribed by Manual J eighth edition and ASHRAE Handbook of Fundamentals. Duct sizing has been performed as prescribed by Manual D.*

## 1. Design Conditions(Temp. F)

☐ Check If Using Celcius

	INDOOR	OUTDOOR	TEMP DIFF	Front of Building is Facing	North	▼
WINTER	70	30	40			

SUMMER

73

95

22

Total  
Conditioned  
Area

920

Sq.Ft

## 2. Summer Humidity

Very Humid ▼ 60 Grains  
Difference

## 3. How Tight is Structure

Very tight-under 1500 Sq. Ft. ▼

Winter

Summer

Air/Changes/Hr.

0.35

0.175

## 4. Fireplace Evaluation

Number

Evaluation

CFM

none ▼

Tight ▼

0

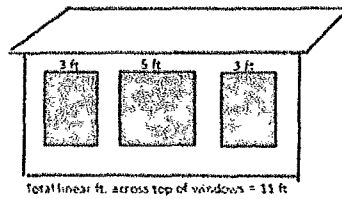
## 5. Number of Occupants

generally equals number of bedrooms +  
1

2



## Overhang Characteristics



Enter all measurements decimally

1" = 1

7" = 6

2" = .2

8" = .7

3" = 3

9" = 8

4" = 3

10" = .8

5" = 4

11" = .9

6" = 5

Example- 2 ft 8 in = 2.7 ft.

	EAST	WEST	S/SE/SW	N/NE/NW
Distance of OH from top of window (A)	0	5	5	0
Length of overhang (B)	0	2	2	0
Total linear ft. across top of windows located below overhang	0	3	12	0

## Solar GainThrough Glass

☐ Check this box if using manufacturer specifications and enter the latitude, U-value and SHGC

Latitude	U-Value	SHGC				
Facing	Area(sq ft)	Type Glass	HTM	Unshaded	Shaded	BTUH
North or Shaded	0	Tripl or Lc ▼	20.00	0	2	48
NE/NW	0	▼	0.00	0	0	0
South	60	Tripl or Lc ▼	33.00	58	2	1,901
SE/SW	0	▼	0.00	0	0	0
East	0	▼	0.00	0	0	0

West	6	Tripl or Lc	▼	65.00	6	0	390
Does glass have reflective coating?		No	▼	1			2,339
Skylight	0		▼	0			0
Total Solar Gain							2,339

## DUCTS OR PIPES

Location(Heating)	Conditioned	▼	Duct Loss	0.00
Location(Cooling)	Conditioned	▼	Duct Gain	0.00
Duct/Pipe Insulation		▼		
Duct Leakage		▼		
Area of Attic or Floor Where Duct is Located	0			
Attic Temperature(If ducts located in attic)		▼		

## Load Calculation

Elements of Load	Area or Lin. Ft	Insulation/R-value	U-Value	Heat Loss Btuh	Heat Gain Btuh	Latent Btuh
Solar Gain from Glass					2,339	
Gross Wall	400					
Glass 1	66	Triple/Low	0.42	1,109		
Skylight	0		0.00	0		
Doors	40.5	Single Wood	0.56	907	499	
Net Wall	294	R-19	0.07	798	439	
Ceiling	828	R-38	0.03	861	969	
<b>Floor</b>						
Over Crawl or Unheated Basement	0		0.00	0	0	
Open-Beach House Above Carport	0		0.00	0	0	
Slab On Grade - enter-linear ft	0		0.00	0	0	
Infiltration- Enter cubic-ft of building	6624			1,700	468	
		People			460	400
		Appliances		<input type="checkbox"/> Enter Value	1200	

Sub Total	5,376	6,373	
Duct Loss/Gain	0	0	505
Total Sensible Load	5,376	6,373	
Latent Load			788
Total Latent Load			1,694

**SUMMARY**

Heating Load	Sensible Cooling	Latent Cooling	Total Cooling Load	*Nominal Tons
5,376	6,373	1,694	8,067	0.71

OUTDOOR AIR FLOW RATE 24.200000000000003

***\* CAUTION - The cooling capacity of the air conditioner must meet both, sensible and latent loads. It is recommended a Manual S calculation be performed. Using manufacturer's specs. The nominal tons assume .75 S/T ratio at the chosen outdoor design temperature.***

**Summary Including Basement**

Heating Load	Sensible Cooling	Latent Cooling	Total Cooling Load	Nominal Tons
5,376	6,373	1,694	8,067	0.71

Whole House (Block Load) Completed  
 Scroll to top For Additional Options →