

Air America Heating & Cooling, Inc.

PO Box 298 High Springs, Fl. 32655
CMC1250300

Heat Load Summary Report for Bill and Stephanie Blanchard

Room Name	Square Ft.	Heating Loss BTUH	Hydronic Heat Linear Ft.	Latent / Sensible Gain BTUH	Cooling Gain BTUH	Cooling Tons	Cooling CFM
Living Rm	336	4824	8.04	701 / 6427	7128	0.59	238
Pantry	156	5549	9.25	1010 / 4446	5455	0.45	182
Bath	66	837	1.39	259 / 1317	1576	0.13	53
Bath 2	90	1291	2.15	281 / 1437	1718	0.14	57
Bedroom	196	2395	3.99	575 / 2401	2976	0.25	99
TOTALS	844	14895	24.83	2826 / 16028	18853	1.57	629

Disclaimer

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Heat Load Detail Report for Bill and Stephanie Blanchard

Room 1 of 5

Room Specifications: Living Rm

Room Length (Ft.) :	24	Sq. Ft windows facing NE & NW: --	Watts Incandescent Light:	200
Room Width (Ft.) :	14	Sq. Ft windows facing South: --	Watts Flourescent Light:	200
Room Height (Ft.) :	8	Sq. Ft windows facing SE & SW: --	Duct Length from A/H to room:	1
Exposed Wall Length (Ft.) :	48	Number of Exterior Doors: --	Number of Large Electric Motors: --	
Wall against unconditioned room (Ft.) : --		Sq. Ft. Exterior Doors: 21	Average Electric Motor Horsepower: --	
Sq. Ft windows facing North: --		Number of People in Room: 2	BTUH Appliance Sensible Heat: --	
Sq. Ft windows facing E & W: 18			BTUH Appliance Latent Heat: --	

Indoor/Outdoor Design Temperatures (degrees Farenheit)

Summer:		Winter:	
Inside (Thermostat setting) :	74	Inside (Thermostat setting) :	72
Outside (Above ground):	97	Outside (Above ground) :	20
Outside (Below ground):	65	Outside (Below ground) :	60
Unconditioned Space :	97	Unconditioned Space :	65
Above Ceiling (Attic/Crawl Space) :	130	Above Ceiling (Attic/Crawl Space) :	45
Concrete Slab (Ground temperature) :	80	Concrete Slab (Ground temperature) :	55
Unconditioned Basement :	60	Unconditioned Basement :	55
Below Floor Crawl Space :	85	Below Floor Crawl Space :	50

Applicable Temperatures: Above Ceiling: Attic or Crawl Space Below Floor: Concrete Slab Exposed Walls: Above Ground

Design Conditions

Occupant Sensible Load (BTUH per person) :	250
Occupant Latent Load (BTUH per person) :	200
Duct Insulation Factor :	1
Duct Temperature Difference (Summer) :	20
Duct Temperature Difference (Winter) :	45
Humidity Difference Inside/Outside % (Summer) :	20
Humidity Difference Inside/Outside %(Winter) :	15
Fresh Air Per Person (CFM) :	2
Air Change Factor (Air change per hour) :	.5
Space Shading Factor :	.4
Air Handler Design Cooling (CFM per ton) :	400
Hydronic Heat (BTUH per linear ft :	600

Insulation Values (U-Factors)

Exposed Walls (Above Ground) :	.080
Exposed Walls (Below Ground) :	.5
Partitions :	.075
Roof/Ceiling :	.055
Floor (Above basement) :	.083
Floor (Concrete slab) :	.001
Floor (Between conditioned spaces) :	.287
Doors :	.500
Windows :	.900

Calculated Room Results - Summer Heat Gains

Wall Heat Gain (BTUH) :	707	Appliance/Elec Motor Latent Heat Gain (BTUH) :	400
Ceiling or Roof Heat Gain (BTUH) :	1035	Appliance/Elec Motor Sensible Heat Gain (BTUH) :	2032
Floor Heat Gain (BTUH) :	2	Ventilation Latent Heat Gain (BTUH) :	301
Glass Heat Gain (BTUH) :	339	Ventilation Sensible Gain (BTUH) :	558
Exterior Door & North Window Heat Gain (BTUH) :	203	Summer Total Latent Heat Gain:	701
Solar Heat Gain (BTUH) :	1548	Summer Total Sensible Heat Gain (BTUH) :	6427
Total Transmission Heat Gain (BTUH) :	3834	TOTAL SUMMER COOLING LOAD (BTUH) :	7128

Calculated Room Results - Winter Heat Losses

Transmission Heat Losses (BTUH) :	3338	Latent Ventilation Heat Losses (BTUH) :	226
Sensible Ventilation Heat Losses (BTUH) :	1260	Hydronic Heat(Linear Ft.) :	8
		TOTAL WINTER HEATING LOAD (BTUH) :	4824

Calculated Totals for Entire Structure

Size of Structure (Sq. Ft.):	844	Total Sensible Heat Gain (BTUH):	16028
Total Heat Loss (BTUH):	14895	Total Cooling Gain (BTUH):	18853
Total Hydronic Heat (Linear Ft.):	24.83	Total Cooling Requirement (Tons):	1.57
Total Latent Heat Gain (BTUH):	2826	Total Cooling CFM:	629

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Heat Load Detail Report for Bill and Stephanie Blanchard

Room 2 of 5

Room Specifications: Pantry

Room Length (Ft.) :	12	Sq. Ft windows facing NE & NW:	--	Watts Incandescent Light:	--
Room Width (Ft.) :	13	Sq. Ft windows facing South:	--	Watts Fluorescent Light:	100
Room Height (Ft.) :	8	Sq. Ft windows facing SE & SW:	--	Duct Length from A/H to room:	--
Exposed Wall Length (Ft.) :	16	Number of Exterior Doors:	1	Number of Large Electric Motors:	--
Wall against unconditioned room (Ft.) :	16	Sq. Ft. Exterior Doors:	21	Average Electric Motor Horsepower:	--
Sq. Ft windows facing North:	--	Number of People in Room:	1	BTUH Appliance Sensible Heat:	500
Sq. Ft windows facing E & W:	6			BTUH Appliance Latent Heat:	--

Indoor/Outdoor Design Temperatures (degrees Farenheit)

Summer:		Winter:	
Inside (Thermostat setting) :	74	Inside (Thermostat setting) :	72
Outside (Above ground):	97	Outside (Above ground) :	20
Outside (Below ground):	65	Outside (Below ground) :	60
Unconditioned Space :	97	Unconditioned Space :	65
Above Ceiling (Attic/Crawl Space) :	130	Above Ceiling (Attic/Crawl Space) :	45
Concrete Slab (Ground temperature) :	80	Concrete Slab (Ground temperature) :	55
Unconditioned Basement :	60	Unconditioned Basement :	55
Below Floor Crawl Space :	85	Below Floor Crawl Space :	50

Applicable Temperatures: Above Ceiling: Attic or Crawl Space Below Floor: Concrete Slab Exposed Walls: Above Ground

Design Conditions

Occupant Sensible Load (BTUH per person) :	250
Occupant Latent Load (BTUH per person) :	200
Duct Insulation Factor :	1
Duct Temperature Difference (Summer) :	20
Duct Temperature Difference (Winter) :	45
Humidity Difference Inside/Outside % (Summer) :	20
Humidity Difference Inside/Outside % (Winter) :	15
Fresh Air Per Person (CFM) :	2
Air Change Factor (Air change per hour) :	.5
Space Shading Factor :	.4
Air Handler Design Cooling (CFM per ton) :	400
Hydronic Heat (BTUH per linear ft) :	600

Insulation Values (U-Factors)

Exposed Walls (Above Ground) :	.080
Exposed Walls (Below Ground) :	.5
Partitions :	.075
Roof/Ceiling :	.055
Floor (Above basement) :	.083
Floor (Concrete slab) :	.001
Floor (Between conditioned spaces) :	.287
Doors :	.500
Windows :	.900

Calculated Room Results - Summer Heat Gains

Wall Heat Gain (BTUH) :	456	Appliance/Elec Motor Latent Heat Gain (BTUH) :	200
Ceiling or Roof Heat Gain (BTUH) :	480	Appliance/Elec Motor Sensible Heat Gain (BTUH) :	1175
Floor Heat Gain (BTUH) :	1	Ventilation Latent Heat Gain (BTUH) :	810
Glass Heat Gain (BTUH) :	113	Ventilation Sensible Gain (BTUH) :	1501
Exterior Door & North Window Heat Gain (BTUH) :	203	Summer Total Latent Heat Gain:	1010
Solar Heat Gain (BTUH) :	516	Summer Total Sensible Heat Gain (BTUH) :	4446
Total Transmission Heat Gain (BTUH) :	1770	TOTAL SUMMER COOLING LOAD (BTUH) :	5455

Calculated Room Results - Winter Heat Losses

Transmission Heat Losses (BTUH) :	1548	Latent Ventilation Heat Losses (BTUH) :	607
Sensible Ventilation Heat Losses (BTUH) :	3393	Hydronic Heat (Linear Ft.) :	9
		TOTAL WINTER HEATING LOAD (BTUH) :	5549

Calculated Totals for Entire Structure

Size of Structure (Sq. Ft.):	844	Total Sensible Heat Gain (BTUH):	16028
Total Heat Loss (BTUH):	14895	Total Cooling Gain (BTUH):	18853
Total Hydronic Heat (Linear Ft.):	24.83	Total Cooling Requirement (Tons):	1.57
Total Latent Heat Gain (BTUH):	2826	Total Cooling CFM:	629

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Heat Load Detail Report for Bill and Stephanie Blanchard

Room 3 of 5

Room Specifications: Bath

Room Length (Ft.) :	11	Sq. Ft windows facing NE & NW:	--	Watts Incandescent Light:	--
Room Width (Ft.) :	6	Sq. Ft windows facing South:	--	Watts Fluorescent Light:	100
Room Height (Ft.) :	8	Sq. Ft windows facing SE & SW:	--	Duct Length from A/H to room:	--
Exposed Wall Length (Ft.) :	12	Number of Exterior Doors:	--	Number of Large Electric Motors:	--
Wall against unconditioned room (Ft.) :	11	Sq. Ft. Exterior Doors:	--	Average Electric Motor Horsepower:	--
Sq. Ft windows facing North:	--	Number of People in Room:	1	BTUH Appliance Sensible Heat:	--
Sq. Ft windows facing E & W:	--			BTUH Appliance Latent Heat:	--

Indoor/Outdoor Design Temperatures (degrees Farenheit)

Summer:		Winter:	
Inside (Thermostat setting) :	74	Inside (Thermostat setting) :	72
Outside (Above ground):	97	Outside (Above ground) :	20
Outside (Below ground):	65	Outside (Below ground) :	60
Unconditioned Space :	97	Unconditioned Space :	65
Above Ceiling (Attic/Crawl Space) :	130	Above Ceiling (Attic/Crawl Space) :	45
Concrete Slab (Ground temperature) :	80	Concrete Slab (Ground temperature) :	55
Unconditioned Basement :	60	Unconditioned Basement :	55
Below Floor Crawl Space :	85	Below Floor Crawl Space :	50

Applicable Temperatures: Above Ceiling: Attic or Crawl Space Below Floor: Concrete Slab Exposed Walls: Above Ground

Design Conditions

Occupant Sensible Load (BTUH per person) :	250
Occupant Latent Load (BTUH per person) :	200
Duct Insulation Factor :	1
Duct Temperature Difference (Summer) :	20
Duct Temperature Difference (Winter) :	45
Humidity Difference Inside/Outside % (Summer) :	20
Humidity Difference Inside/Outside % (Winter) :	15
Fresh Air Per Person (CFM) :	2
Air Change Factor (Air change per hour) :	.5
Space Shading Factor :	.4
Air Handler Design Cooling (CFM per ton) :	400
Hydronic Heat (BTUH per linear ft :	600

Insulation Values (U-Factors)

Exposed Walls (Above Ground) :	.080
Exposed Walls (Below Ground) :	.5
Partitions :	.075
Roof/Ceiling :	.055
Floor (Above basement) :	.083
Floor (Concrete slab) :	.001
Floor (Between conditioned spaces) :	.287
Doors :	.500
Windows :	.900

Calculated Room Results - Summer Heat Gains

Wall Heat Gain (BTUH) :	328	Appliance/Elec Motor Latent Heat Gain (BTUH) :	200
Ceiling or Roof Heat Gain (BTUH) :	203	Appliance/Elec Motor Sensible Heat Gain (BTUH) :	675
Floor Heat Gain (BTUH) :	0	Ventilation Latent Heat Gain (BTUH) :	59
Glass Heat Gain (BTUH) :	0	Ventilation Sensible Gain (BTUH) :	110
Exterior Door & North Window Heat Gain (BTUH) :	0	Summer Total Latent Heat Gain:	259
Solar Heat Gain (BTUH) :	0	Summer Total Sensible Heat Gain (BTUH) :	1317
Total Transmission Heat Gain (BTUH) :	532	TOTAL SUMMER COOLING LOAD (BTUH) :	1576

Calculated Room Results - Winter Heat Losses

Transmission Heat Losses (BTUH) :	545	Latent Ventilation Heat Losses (BTUH) :	44
Sensible Ventilation Heat Losses (BTUH) :	248	Hydronic Heat (Linear Ft.) :	1
		TOTAL WINTER HEATING LOAD (BTUH) :	837

Calculated Totals for Entire Structure

Size of Structure (Sq. Ft.):	844	Total Sensible Heat Gain (BTUH):	16028
Total Heat Loss (BTUH):	14895	Total Cooling Gain (BTUH):	18853
Total Hydronic Heat (Linear Ft.):	24.83	Total Cooling Requirement (Tons):	1.57
Total Latent Heat Gain (BTUH):	2826	Total Cooling CFM:	629

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Heat Load Detail Report for Bill and Stephanie Blanchard

Room 4 of 5

Room Specifications: Bath 2

Room Length (Ft.) :	10	Sq. Ft windows facing NE & NW: --	Watts Incandescent Light: --
Room Width (Ft.) :	9	Sq. Ft windows facing South: --	Watts Fluorescent Light: 100
Room Height (Ft.) :	8	Sq. Ft windows facing SE & SW: --	Duct Length from A/H to room: --
Exposed Wall Length (Ft.) :	9	Number of Exterior Doors: --	Number of Large Electric Motors: --
Wall against unconditioned room (Ft.) :--	--	Sq. Ft. Exterior Doors: 21	Average Electric Motor Horsepower: --
Sq. Ft windows facing North: --	--	Number of People in Room: 1	BTUH Appliance Sensible Heat: --
Sq. Ft windows facing E & W: --	--		BTUH Appliance Latent Heat: --

Indoor/Outdoor Design Temperatures (degrees Farenheit)

Summer:		Winter:	
Inside (Thermostat setting) :	74	Inside (Thermostat setting) :	72
Outside (Above ground):	97	Outside (Above ground) :	20
Outside (Below ground):	65	Outside (Below ground) :	60
Unconditioned Space :	97	Unconditioned Space :	65
Above Ceiling (Attic/Crawl Space) :	130	Above Ceiling (Attic/Crawl Space) :	45
Concrete Slab (Ground temperature) :	80	Concrete Slab (Ground temperature) :	55
Unconditioned Basement :	60	Unconditioned Basement :	55
Below Floor Crawl Space :	85	Below Floor Crawl Space :	50

Applicable Temperatures: Above Ceiling: Attic or Crawl Space Below Floor: Concrete Slab Exposed Walls: Above Ground

Design Conditions

Occupant Sensible Load (BTUH per person) :	250
Occupant Latent Load (BTUH per person) :	200
Duct Insulation Factor :	1
Duct Temperature Difference (Summer) :	20
Duct Temperature Difference (Winter) :	45
Humidity Difference Inside/Outside % (Summer) :	20
Humidity Difference Inside/Outside %(Winter) :	15
Fresh Air Per Person (CFM) :	2
Air Change Factor (Air change per hour) :	.5
Space Shading Factor :	.4
Air Handler Design Cooling (CFM per ton) :	400
Hydronic Heat (BTUH per linear ft :	600

Insulation Values (U-Factors)

Exposed Walls (Above Ground) :	.080
Exposed Walls (Below Ground) :	.5
Partitions :	.075
Roof/Ceiling :	.055
Floor (Above basement) :	.083
Floor (Concrete slab) :	.001
Floor (Between conditioned spaces) :	.287
Doors :	.500
Windows :	.900

Calculated Room Results - Summer Heat Gains

Wall Heat Gain (BTUH) :	132	Appliance/Elec Motor Latent Heat Gain (BTUH) :	200
Ceiling or Roof Heat Gain (BTUH) :	277	Appliance/Elec Motor Sensible Heat Gain (BTUH) :	675
Floor Heat Gain (BTUH) :	1	Ventilation Latent Heat Gain (BTUH) :	81
Glass Heat Gain (BTUH) :	0	Ventilation Sensible Gain (BTUH) :	149
Exterior Door & North Window Heat Gain (BTUH) :	203	Summer Total Latent Heat Gain:	281
Solar Heat Gain (BTUH) :	0	Summer Total Sensible Heat Gain (BTUH) :	1437
Total Transmission Heat Gain (BTUH) :	613	TOTAL SUMMER COOLING LOAD (BTUH) :	1718

Calculated Room Results - Winter Heat Losses

Transmission Heat Losses (BTUH) :	893	Latent Ventilation Heat Losses (BTUH) :	60
Sensible Ventilation Heat Losses (BTUH) :	338	Hydronic Heat(Linear Ft.) :	2
		TOTAL WINTER HEATING LOAD (BTUH) :	1291

Calculated Totals for Entire Structure

Size of Structure (Sq. Ft.):	844	Total Sensible Heat Gain (BTUH):	16028
Total Heat Loss (BTUH):	14895	Total Cooling Gain (BTUH):	18853
Total Hydronic Heat (Linear Ft.):	24.83	Total Cooling Requirement (Tons):	1.57
Total Latent Heat Gain (BTUH):	2826	Total Cooling CFM:	629

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Heat Load Detail Report for Bill and Stephanie Blanchard

Room 5 of 5

Room Specifications: Bedroom

Room Length (Ft.) :	14	Sq. Ft windows facing NE & NW:	--	Watts Incandescent Light:	--
Room Width (Ft.) :	14	Sq. Ft windows facing South:	18	Watts Flourescent Light:	100
Room Height (Ft.) :	8	Sq. Ft windows facing SE & SW:	--	Duct Length from A/H to room:	--
Exposed Wall Length (Ft.) :	14	Number of Exterior Doors:	--	Number of Large Electric Motors:	--
Wall against unconditioned room (Ft.) :	--	Sq. Ft. Exterior Doors:	--	Average Electric Motor Horsepower:	--
Sq. Ft windows facing North:	--	Number of People in Room:	2	BTUH Appliance Sensible Heat:	--
Sq. Ft windows facing E & W:	--			BTUH Appliance Latent Heat:	--

Indoor/Outdoor Design Temperatures (degrees Farenheit)

Summer:		Winter:	
Inside (Thermostat setting) :	74	Inside (Thermostat setting) :	72
Outside (Above ground):	97	Outside (Above ground) :	20
Outside (Below ground):	65	Outside (Below ground) :	60
Unconditioned Space :	97	Unconditioned Space :	65
Above Ceiling (Attic/Crawl Space) :	130	Above Ceiling (Attic/Crawl Space) :	45
Concrete Slab (Ground temperature) :	80	Concrete Slab (Ground temperature) :	55
Unconditioned Basement :	60	Unconditioned Basement :	55
Below Floor Crawl Space :	85	Below Floor Crawl Space :	50

Applicable Temperatures: Above Ceiling: Attic or Crawl Space Below Floor: Concrete Slab Exposed Walls: Above Ground

Design Conditions

Occupant Sensible Load (BTUH per person) :	250
Occupant Latent Load (BTUH per person) :	200
Duct Insulation Factor :	1
Duct Temperature Difference (Summer) :	20
Duct Temperature Difference (Winter) :	45
Humidity Difference Inside/Outside % (Summer) :	20
Humidity Difference Inside/Outside %(Winter) :	15
Fresh Air Per Person (CFM) :	2
Air Change Factor (Air change per hour) :	.5
Space Shading Factor :	.4
Air Handler Design Cooling (CFM per ton) :	400
Hydronic Heat (BTUH per linear ft :	600

Insulation Values (U-Factors)

Exposed Walls (Above Ground) :	.080
Exposed Walls (Below Ground) :	.5
Partitions :	.075
Roof/Ceiling :	.055
Floor (Above basement) :	.083
Floor (Concrete slab) :	.001
Floor (Between conditioned spaces) :	.287
Doors :	.500
Windows :	.900

Calculated Room Results - Summer Heat Gains

Wall Heat Gain (BTUH) :	206	Appliance/Elec Motor Latent Heat Gain (BTUH) :	400
Ceiling or Roof Heat Gain (BTUH) :	604	Appliance/Elec Motor Sensible Heat Gain (BTUH) :	925
Floor Heat Gain (BTUH) :	1	Ventilation Latent Heat Gain (BTUH) :	175
Glass Heat Gain (BTUH) :	339	Ventilation Sensible Gain (BTUH) :	325
Exterior Door & North Window Heat Gain (BTUH) :	0	Summer Total Latent Heat Gain:	575
Solar Heat Gain (BTUH) :	0	Summer Total Sensible Heat Gain (BTUH) :	2401
Total Transmission Heat Gain (BTUH) :	1150	TOTAL SUMMER COOLING LOAD (BTUH) :	2976

Calculated Room Results - Winter Heat Losses

Transmission Heat Losses (BTUH) :	1528	Latent Ventilation Heat Losses (BTUH) :	132
Sensible Ventilation Heat Losses (BTUH) :	735	Hydronic Heat(Linear Ft.) :	4
		TOTAL WINTER HEATING LOAD (BTUH) :	2395

Calculated Totals for Entire Structure

Size of Structure (Sq. Ft.):	844	Total Sensible Heat Gain (BTUH):	16028
Total Heat Loss (BTUH):	14895	Total Cooling Gain (BTUH):	18853
Total Hydronic Heat (Linear Ft.):	24.83	Total Cooling Requirement (Tons):	1.57
Total Latent Heat Gain (BTUH):	2826	Total Cooling CFM:	629

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