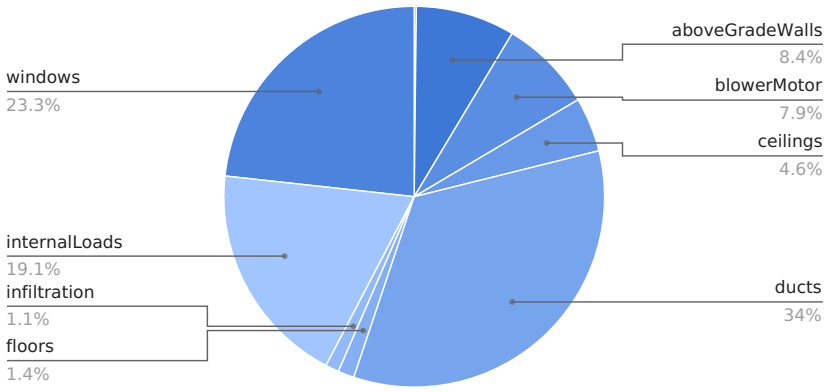
Project Name: [redacted]
Address: [redacted] Darien, CT
FormType: HVAC System
HVAC System Name: Upstairs

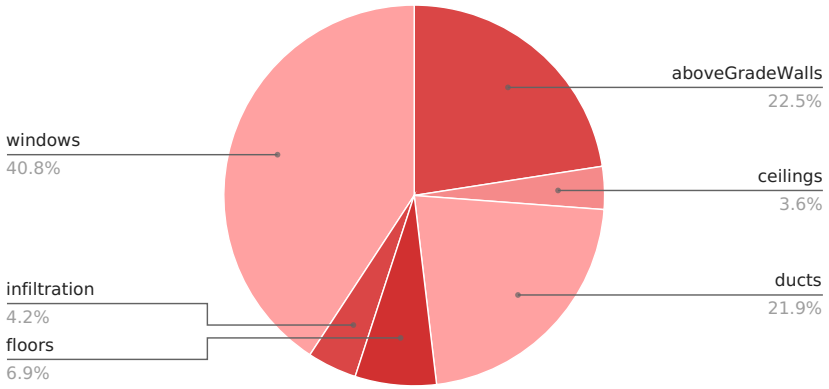
NORWALK, CT							
Summer Outdoor F:	84	Summer Indoor F:	75	Design Grains:	29	Daily Range:	Medium
Winter Outdoor F:	9	Winter Indoor F:	70	Cooling RH:	50%	Elevation (Ft):	397

LOAD CALCULATION TOTALS							
Heating BTU:	25771	Cooling BTU:	21603	SHR:	0.910	CFM:	995



Cooling Loads

Name	Area	Sensible	Latent
AEDExcursion	0.00	38.39	0.00
aboveGradeWalls	982.00	1819.35	0.00
belowGradeWalls	0.00	0.00	0.00
blowerMotor	0.00	1706.50	0.00
ceilings	404.00	997.88	0.00
ducts	0.00	6428.59	920.11
floors	404.00	297.95	0.00
infiltration	0.00	82.96	165.26
internalLoads	0.00	3320.00	800.00
skylights	0.00	0.00	0.00
ventilation	0.00	0.00	0.00
windows	198.00	5025.58	0.00
winterHumidification	0.00	0.00	0.00
Totals	-	19717.20	1885.36

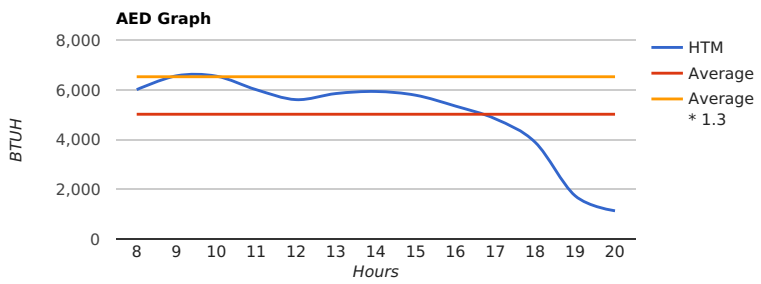


Heating Loads

Name	Area	Heat Loss
AEDExcursion	0.00	0.00
aboveGradeWalls	982.00	5810.49
belowGradeWalls	0.00	0.00
blowerMotor	0.00	0.00
ceilings	404.00	936.47
ducts	0.00	5654.37
floors	404.00	1777.60
infiltration	0.00	1084.47
internalLoads	0.00	0.00
skylights	0.00	0.00
ventilation	0.00	0.00
windows	198.00	10507.86
winterHumidification	0.00	0.00
Totals	-	25771.26

Warning (1): This application has glass areas that produced relatively large cooling loads for part of the day. Zoning may be required to overcome spikes in solar load for one or more rooms. A zoned system may be required, or some rooms may require zone control (provided by individual, motorized, thermostatically controlled dampers).

AED Graph



Approved ACCA MJ8 Calculations

Calculations are based on the ACCA Manual J 8th Edition and are approved by ACCA. All computed calculations are estimates on building use, weather data, and inputted values such a R-Values, window types, duct loss, etc. Equipment selections should meet both the latent and sensible gain as well as building heat loss. See Cool Calc Manual S Report for equipment sizing verification.

Project Name: [redacted]
Address: [redacted]Darien, CT
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COMPONENT LOADS

Above Grade Walls

Construction Nr.	Exposure	Area	Heating HTM	Cooling HTM	Heating BTU	Sensible BTU	Latent BTU
12B-0s w	N	126.00	5.92	1.85	745.54	233.44	0.00
12B-0s w	W	111.00	5.92	1.85	656.79	205.65	0.00
12B-0s w	N	45.00	5.92	1.85	266.26	83.37	0.00
12B-0s w	N	126.00	5.92	1.85	745.54	233.44	0.00
12B-0s w	E	144.00	5.92	1.85	852.05	266.79	0.00
12B-0s w	E	212.00	5.92	1.85	1254.40	392.77	0.00
12B-0s w	S	218.00	5.92	1.85	1289.91	403.89	0.00

Below Grade Walls

(none)

Blower Motor

Heating BTU	Sensible BTU	Latent BTU
0.00	1706.50	0.00

Ceilings

Construction Nr.	Area	Heating HTM	Cooling HTM	Heating BTU	Sensible BTU	Latent BTU
16A-25	90.00	2.32	2.47	208.62	222.30	0.00
16A-25	25.00	2.32	2.47	57.95	61.75	0.00
16A-25	120.00	2.32	2.47	278.16	296.40	0.00
16A-25	169.00	2.32	2.47	391.74	417.43	0.00

Ducts

EHLF	ESGF	ELG	Heating BTU	Sensible BTU	Latent BTU
0.28	0.49	920.11	0.00	0.00	0.00

Floors

Construction Nr.	Area	Heating HTM	Heating BTU	Sensible BTU	Latent BTU
19A-5p	90.00	4.40	396.00	66.38	0.00
19A-5p	25.00	4.40	110.00	18.44	0.00
19A-5p	120.00	4.40	528.00	88.50	0.00
19A-5p	169.00	4.40	743.60	124.64	0.00

Infiltration

NCFM Heating	NCFM Cooling	Heating BTU	Sensible BTU	Latent BTU
16.36	8.48	1084.47	82.96	165.26

Internal Loads

Heating BTU	Sensible BTU	Latent BTU
0.00	920.00	800.00
0.00	2400.00	0.00

Ventilation

(none)

Windows

Construction Nr.	Exposure	Area	Heating HTM	Heating BTU	Sensible BTU Avg.	Sensible BTU Peak	Latent BTU
1G	N	24.00	53.07	1273.68	313.96	433.87	0.00
1G	W	24.00	53.07	1273.68	804.00	1754.49	0.00
1G	E	36.00	53.07	1910.52	1038.09	2226.82	0.00
1G	N	24.00	53.07	1273.68	313.96	433.87	0.00
1G	E	12.00	53.07	636.84	346.03	742.27	0.00
1G	E	36.00	53.07	1910.52	1038.09	2226.82	0.00
1G	S	6.00	53.07	318.42	166.58	306.38	0.00
1G	S	36.00	53.07	1910.52	1004.86	1838.27	0.00

Winter Humidification

(none)

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ROOM LOADS

Room Name	Heating	Sensible	Latent	Cooling	CFM
Baby	6169.96	3471.40	39.91	3511.32	175.00
bathroom	475.57	166.72	6.30	173.03	8.00
boy	7547.11	3993.79	46.22	4040.01	201.00
main bedroom	11444.94	6338.45	72.83	6411.27	320.00