



Manual S Compliance Report

Boiler

Roltay Inc. Energy Services

Job:
Date: May 01, 2015
By:

98 Overbrook Road, Madison, CT 06443 Phone: 203-672-1330 Email: buck@roltay.com Web: www.Roltay.com

Project Information

For: Manual S Demo
West Haven, CT 06516

Cooling Equipment

Design Conditions

Outdoor design DB:	84.0°F	Sensible gain:	23490 Btuh	Entering coil DB:	75.7°F
Outdoor design WB:	73.0°F	Latent gain:	4385 Btuh	Entering coil WB:	62.8°F
Indoor design DB:	75.0°F	Total gain:	27876 Btuh		
Indoor RH:	50%	Estimated airflow:	1100 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split AC		
Manufacturer:	Bryant	Model:	123ANA030****C*+FX4DN(B,F)037L
Actual airflow:	1100 cfm		
Sensible capacity:	23574 Btuh	100% of load	
Latent capacity:	5099 Btuh	116% of load	
Total capacity:	28673 Btuh	103% of load	SHR: 82%

Heating Equipment

Design Conditions

Outdoor design DB:	7.0°F	Heat loss:	58557 Btuh	Entering coil DB:	70.0°F
Indoor design DB:	70.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Gas boiler		
Manufacturer:	Advantage	Model:	AG4-HN
Actual airflow:	0 cfm		
Output capacity:	88000 Btuh	150% of load	

The above equipment was selected in accordance with ACCA Manual S.



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Manual S Compliance Report

Furnace

Roltay Inc. Energy Services

Job:
Date: May 01, 2015
By:

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Project Information

For: Manual S Demo
West Haven, CT 06516

Cooling Equipment

Design Conditions

Outdoor design DB:	84.0°F	Sensible gain:	12703 Btuh	Entering coil DB:	75.2°F
Outdoor design WB:	73.0°F	Latent gain:	4308 Btuh	Entering coil WB:	63.7°F
Indoor design DB:	75.0°F	Total gain:	17010 Btuh		
Indoor RH:	50%	Estimated airflow:	587 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split AC		
Manufacturer:	Bryant	Model:	123ANA018****C*+CNPV*2417AL*++TDR
Actual airflow:	587 cfm		
Sensible capacity:	13059 Btuh	103% of load	
Latent capacity:	4305 Btuh	100% of load	
Total capacity:	17365 Btuh	102% of load	SHR: 75%

Heating Equipment

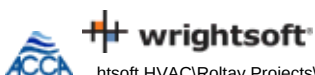
Design Conditions

Outdoor design DB:	7.0°F	Heat loss:	36351 Btuh	Entering coil DB:	68.8°F
Indoor design DB:	70.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Gas furnace		
Manufacturer:	York	Model:	TG8S100B12MP11
Actual airflow:	1149 cfm		
Output capacity:	80000 Btuh	220% of load	Temp. rise: 63 °F

The above equipment was selected in accordance with ACCA Manual S.





Load Short Form

Entire House

Roltay Inc. Energy Services

Job:
Date: May 01, 2015
By:

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Project Information

For: Manual S Demo
West Haven, CT 06516

Design Information

	Htg	Clg	Infiltration
Outside db (°F)	7	84	Method Simplified
Inside db (°F)	70	75	Construction quality Loose
Design TD (°F)	63	9	Fireplaces 1 (Semi-loose)
Daily range	-	M	
Inside humidity (%)	50	50	
Moisture difference (gr/lb)	48	40	

HEATING EQUIPMENT

Make	n/a
Trade	n/a
Model	n/a
AHRI ref	n/a
Efficiency	n/a
Heating input	
Heating output	0 Btuh
Low output baseboard	600 Btuh/ft
Total low baseboard	184 ft
High output baseboard	850 Btuh/ft
Total high baseboard	130 ft
Space thermostat	n/a

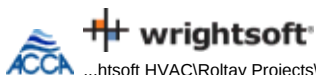
COOLING EQUIPMENT

Make	n/a
Trade	n/a
Cond	n/a
Coil	n/a
AHRI ref	n/a
Efficiency	n/a
Sensible cooling	0 Btuh
Latent cooling	0 Btuh
Total cooling	0 Btuh
Actual air flow	0 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0

ROOM NAME		Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Baseboard (ft) Low High	Clg AVF (cfm)
Boiler	d	1777	58557	23490	98 69	1100
Furnace	d	1145	36351	12703	61 43	587
Entire House	d	2922	94909	36195	158 112	1845
Other equip loads			0	0		
Equip. @ 1.00 RSM				36195		
Latent cooling				8693		
TOTALS		2922	94909	44888	158 112	1845

Bold/italic values have been manually overridden

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.





Load Short Form

Boiler

Roltay Inc. Energy Services

Job:
Date: May 01, 2015
By:

98 Overbrook Road, Madison, CT 06443 Phone: 203-672-1330 Email: buck@roltay.com Web: www.Roltay.com

Project Information

For: Manual S Demo
West Haven, CT 06516

Design Information

	Htg	Clg		Infiltration
Outside db (°F)	7	84	Method	Simplified
Inside db (°F)	70	75	Construction quality	Loose
Design TD (°F)	63	9	Fireplaces	1 (Semi-loose)
Daily range	-	M		
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	48	40		

HEATING EQUIPMENT

Make Advantage
Trade PurePro
Model AG4-HN
AHRI ref

Efficiency 83.8 AFUE
Heating input 105000 Btuh
Heating output 88000 Btuh
Low output baseboard 600 Btuh/ft
Total low baseboard 98 ft
High output baseboard 850 Btuh/ft
Total high baseboard 69 ft
Space thermostat

COOLING EQUIPMENT

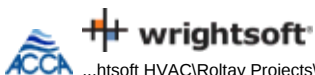
Make Bryant
Trade BRYANT HEATING AND COOLING SYS...
Cond 123ANA030****C*
Coil FX4DN(B,F)037L
AHRI ref 6937037

Efficiency 12.0 EER, 14.5 SEER
Sensible cooling 22022 Btuh
Latent cooling 6578 Btuh
Total cooling 28600 Btuh
Actual air flow 1100 cfm
Air flow factor 0.047 cfm/Btuh
Static pressure 0 in H2O
Load sensible heat ratio 0.84

ROOM NAME		Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Baseboard (ft)		Clg AVF (cfm)
					Low	High	
2nd Floor Zone	p	1145	30096	16567	50	35	773
Attic Zone	p	632	28461	9246	47	33	431
Boiler	d	1777	58557	23490	98	69	1100
Other equip loads			0	0			
Equip. @ 1.00 RSM				23490			
Latent cooling				4385			
TOTALS		1777	58557	27876	98	69	1100

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Load Short Form Furnace Roltay Inc. Energy Services

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Project Information

For: Manual S Demo
West Haven, CT 06516

Design Information

	Htg	Clg		Infiltration
Outside db (°F)	7	84	Method	Simplified
Inside db (°F)	70	75	Construction quality	Loose
Design TD (°F)	63	9	Fireplaces	1 (Semi-loose)
Daily range	-	M		
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	48	40		

HEATING EQUIPMENT

Make York
Trade Latitude TG8S
Model TG8S100B12MP11
AHRI ref

Efficiency 80 AFUE
Heating input 100000 Btuh
Heating output 80000 Btuh
Low output baseboard 600 Btuh/ft
Total low baseboard 61 ft
High output baseboard 850 Btuh/ft
Total high baseboard 43 ft
Space thermostat

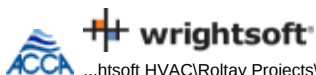
COOLING EQUIPMENT

Make Bryant
Trade BRYANT HEATING AND COOLING SYS...
Cond 123ANA018****C*
Coil CNPV*2417AL***TDR
AHRI ref 6359199
Efficiency 11.0 EER, 13 SEER
Sensible cooling 13200 Btuh
Latent cooling 4400 Btuh
Total cooling 17600 Btuh
Actual air flow 587 cfm
Air flow factor 0.046 cfm/Btuh
Static pressure 0 in H2O
Load sensible heat ratio 0.75

ROOM NAME		Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Baseboard (ft) Low High	Clg AVF (cfm)
1st Floor Zone	p	1145	36351	13868	61 43	641
Furnace	d	1145	36351	12703	61 43	587
Other equip loads			0	0		
Equip. @ 1.00 RSM				12703		
Latent cooling				4308		
TOTALS		1145	36351	17010	61 43	587

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Load Multizone Summary Report

Job:
Date: May 01, 2015
By:

Roltay Inc. Energy Services

98 Overbrook Road, Madison, CT 06443 Phone: 203-672-1330 Email: buck@roltay.com Web: www.Roltay.com

Infiltration Summary

ZONE NAME	Heating				Cooling			
	Volume ft³	ACH	AVF cfm	HTM Btuh/ft²	Volume ft³	ACH	AVF cfm	HTM Btuh/ft²
1st Floor Zone	9160	0.73	111	6.4	9160	0.35	54	0.4
2nd Floor Zone	9160	0.65	100	6.4	9160	0.32	48	0.4
Attic Zone	6703	1.12	125	6.4	6703	0.54	61	0.4
Entire House	25023	0.80	336	6.4	25023	0.39	163	0.4

Load and AVF Summary

ROOM NAME	Area ft²	Htg load Btuh	Clg load Btuh	Htg AVF cfm	Clg AVF cfm
Area3	543	17176	5328	543	246
Area1	377	11762	5214	372	241
Area2	225	7414	3326	234	154
1st Floor Zone	1145	36351	13868	1149	641
Area4	377	11260	6556	0	306
Area5	225	6824	4584	0	214
Area6	543	12013	5427	0	253
2nd Floor Zone	1145	30096	16567	0	773
Finished Attic	632	28461	9246	0	431
Attic Zone	632	28461	9246	0	431
Entire House	2922	94909	36195	1149	1845

Project Information

For: Manual S Demo
West Haven, CT 06516

Design Conditions

Location:			Indoor:	Heating	Cooling
New Haven AP, CT, US			Indoor temperature (°F)	70	75
Elevation: 30 ft			Design TD (°F)	63	9
Latitude: 41°N			Relative humidity (%)	50	50
			Moisture difference (gr/lb)	48.5	40.1
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	7	84	Method	Simplified	
Daily range (°F)	-	17 (M)	Construction quality	Loose	
Wet bulb (°F)	-	73	Fireplaces	1 (Semi-loose)	
Wind speed (mph)	15.0	7.5			

Construction descriptions

	Or	Area ft²	U-value Btuh/ft²-°F	Insul R ft²-°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
Walls								
12A-2sw: Frm wall, vnl ext, 1/2" wood shth, 1/2" gypsum board int	n	607	0.186	2.0	11.7	7109	4.09	2482
fnsh, r-2 ext bd ins, 2"x4" wood frm, 16" o.c. stud	ne	44	0.186	2.0	11.7	512	4.09	179
	e	862	0.186	2.0	11.7	10096	4.09	3526
	se	44	0.186	2.0	11.7	512	4.09	179
	s	661	0.186	2.0	11.7	7742	4.09	2704
	w	940	0.186	2.0	11.7	11016	4.09	3847
	all	3156	0.186	2.0	11.7	36986	4.09	12916
Partitions								
12A-0sw: Frm wall, vnl ext, 1/2" wood shth, 1/2" gypsum board int		99	0.240	0	15.1	1497	2.71	268
fnsh, 2"x4" wood frm, 16" o.c. stud								
Windows								
4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap,	n	14	0.470	0	29.6	418	8.08	114
1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 1 ft	e	28	0.470	0	29.6	837	29.8	842
overhang (5.3 ft window ht, 1 ft sep.); 6.67 ft head ht	w	28	0.470	0	29.6	837	29.8	842
	all	71	0.470	0	29.6	2092	25.4	1798
4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap,	n	15	0.470	0	29.6	447	8.08	122
1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 8 ft								
overhang (5.67 ft window ht, 1 ft sep.); 6.67 ft head ht								
4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap,	n	15	0.470	0	29.6	447	8.08	122
1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 6.67 ft	e	19	0.470	0	29.6	556	29.8	559
head ht	s	15	0.470	0	29.6	447	14.7	223
	w	49	0.470	0	29.6	1457	29.8	1466
	all	98	0.470	0	29.6	2908	24.1	2370
1C-c1ows: 1 glazing, clr glz, wd frm mat, 1/8" thk, clr strm; 50% blinds	ne	9	0.570	0	35.9	311	30.5	264
45°, medium; 100% outdoor insect screen; 1 ft overhang (4 ft w indow	se	9	0.570	0	35.9	311	36.5	316
ht, 1 ft sep.); 6.67 ft head ht	s	8	0.570	0	35.9	299	18.8	157
	w	17	0.570	0	35.9	599	44.0	734
	all	42	0.570	0	35.9	1520	34.8	1471

Bold/italic values have been manually overridden

4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap, 1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 1 ft overhang (4 ft window ht, 1 ft sep.); 6.67 ft head ht	ne	7	0.470	0	29.6	197	20.3	135
	se	7	0.470	0	29.6	197	24.5	163
	all	13	0.470	0	29.6	395	22.4	298
4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap, 1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 1 ft overhang (5.7 ft window ht, 1 ft sep.); 6.67 ft head ht	ne	12	0.470	0	29.6	352	20.3	241
	se	12	0.470	0	29.6	352	24.8	295
	all	24	0.470	0	29.6	703	22.5	535
4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap, 1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 1 ft overhang (4.5 ft window ht, 1 ft sep.); 6.67 ft head ht	e	12	0.470	0	29.6	355	29.8	357
4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap, 1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 1 ft overhang (5.67 ft window ht, 1 ft sep.); 6.67 ft head ht	e	15	0.470	0	29.6	447	29.8	450
4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap, 1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 5 ft overhang (5.67 ft window ht, 1 ft sep.); 6.67 ft head ht	e	30	0.470	0	29.6	895	18.1	547
	s	30	0.470	0	29.6	895	8.08	244
	all	60	0.470	0	29.6	1790	13.1	791
4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap, 1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 1 ft overhang (5.3 ft window ht, 5 ft sep.); 6.67 ft head ht	s	42	0.470	0	29.6	1255	14.7	624
4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap, 1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 1 ft overhang (5.33 ft window ht, 5 ft sep.); 6.67 ft head ht	s	14	0.470	0	29.6	421	14.7	209
4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap, 1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 1 ft overhang (5.33 ft window ht, 1 ft sep.); 6.67 ft head ht	w	18	0.470	0	29.6	526	29.8	530

Doors

11D0: Door, wd sc type	n	21	0.390	0	24.6	516	8.58	180
	s	21	0.390	0	24.6	516	8.58	180
	n	21	0.390	0	24.6	516	8.58	180
	all	63	0.390	0	24.6	1548	8.58	541

Ceilings

16B-11ad: Attic ceiling, asphalt shingles roof mat, r-11 ceil ins, 1/2" gypsum board int fnsh		513	0.081	11.0	5.10	2618	3.69	1891
18A-19ad: Rf/clg ceiling, asphalt shingles roof mat, frm cons, 1/2" gypsum board int fnsh, 6" thkns, r-19 ceil ins		926	0.051	19.0	3.21	2976	1.10	1016

Floors

19A-0bvhp: Flr floor, frm flr, 8" thkns, hrd wd flr fnsh, leaky bsmt ovr		1145	0.295	0	6.98	7994	1.00	1142
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Project Information

For: Manual S Demo
 West Haven, CT 06516

Design Conditions

Location:		Indoor:		Heating	Cooling
New Haven AP, CT, US		Indoor temperature (°F)		70	75
Elevation: 30 ft		Design TD (°F)		63	9
Latitude: 41°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		48.5	40.1
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	7	84	Method	Simplified	
Daily range (°F)	-	17 (M)	Construction quality	Loose	
Wet bulb (°F)	-	73	Fireplaces	1 (Semi-loose)	
Wind speed (mph)	15.0	7.5			

Construction descriptions

	Or	Area ft²	U-value Btuh/ft²-°F	Insul R ft²-°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
Walls								
12A-2sw: Frm wall, vnl ext, 1/2" wood shth, 1/2" gypsum board int	n	418	0.186	2.0	11.7	4897	4.09	1710
fnsh, r-2 ext bd ins, 2"x4" wood frm, 16" o.c. stud	ne	33	0.186	2.0	11.7	386	4.09	135
	e	606	0.186	2.0	11.7	7098	4.09	2479
	se	33	0.186	2.0	11.7	386	4.09	135
	s	487	0.186	2.0	11.7	5707	4.09	1993
	w	637	0.186	2.0	11.7	7468	4.09	2608
	all	2214	0.186	2.0	11.7	25941	4.09	9059
Partitions								
12A-0sw: Frm wall, vnl ext, 1/2" wood shth, 1/2" gypsum board int		99	0.240	0	15.1	1497	2.71	268
fnsh, 2"x4" wood frm, 16" o.c. stud								
Windows								
4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap,	n	14	0.470	0	29.6	418	8.08	114
1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 1 ft	e	28	0.470	0	29.6	837	29.8	842
overhang (5.3 ft window ht, 1 ft sep.); 6.67 ft head ht	w	28	0.470	0	29.6	837	29.8	842
	all	71	0.470	0	29.6	2092	25.4	1798
1C-c1ows: 1 glazing, clr glz, wd frm mat, 1/8" thk, clr strm; 50% blinds	ne	9	0.570	0	35.9	311	30.5	264
45°, medium; 100% outdoor insect screen; 1 ft overhang (4 ft w indow	se	9	0.570	0	35.9	311	36.5	316
ht, 1 ft sep.); 6.67 ft head ht	s	8	0.570	0	35.9	299	18.8	157
	w	17	0.570	0	35.9	599	44.0	734
	all	42	0.570	0	35.9	1520	34.8	1471
4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap,	ne	7	0.470	0	29.6	197	20.3	135
1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 1 ft								
overhang (4 ft window ht, 1 ft sep.); 6.67 ft head ht	se	7	0.470	0	29.6	197	24.5	163
	all	13	0.470	0	29.6	395	22.4	298
4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap,	e	12	0.470	0	29.6	355	29.8	357
1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 1 ft								
overhang (4.5 ft window ht, 1 ft sep.); 6.67 ft head ht								
4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap,	s	42	0.470	0	29.6	1255	14.7	624
1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 1 ft								
overhang (5.3 ft window ht, 5 ft sep.); 6.67 ft head ht								

Bold/italic values have been manually overridden

4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap, s 1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 1 ft overhang (5.33 ft window ht, 5 ft sep.); 6.67 ft head ht	14	0.470	0	29.6	421	14.7	209
4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap, w 1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 1 ft overhang (5.33 ft window ht, 1 ft sep.); 6.67 ft head ht	18	0.470	0	29.6	526	29.8	530

Doors

11D0: Door, wd sc type	n	21	0.390	0	24.6	516	8.58	180
------------------------	---	----	-------	---	------	-----	------	-----

Ceilings

16B-11ad: Attic ceiling, asphalt shingles roof mat, r-11 ceil ins, 1/2" gypsum board int fnsh	513	0.081	11.0	5.10	2618	3.69	1891
18A-19ad: Rf/clg ceiling, asphalt shingles roof mat, frm cons, 1/2" gypsum board int fnsh, 6" thkns, r-19 ceil ins	926	0.051	19.0	3.21	2976	1.10	1016

Floors

(none)

Bold/italic values have been manually overridden

Project Information

For: Manual S Demo
 West Haven, CT 06516

Design Conditions

Location:				Indoor:	Heating	Cooling
New Haven AP, CT, US				Indoor temperature (°F)	70	75
Elevation: 30 ft				Design TD (°F)	63	9
Latitude: 41°N				Relative humidity (%)	50	50
				Moisture difference (gr/lb)	48.5	40.1
Outdoor:	Heating	Cooling		Infiltration:		
Dry bulb (°F)	7	84		Method	Simplified	
Daily range (°F)	-	17 (M)		Construction quality	Loose	
Wet bulb (°F)	-	73		Fireplaces	1 (Semi-loose)	
Wind speed (mph)	15.0	7.5				

Construction descriptions

	Or	Area ft²	U-value Btuh/ft²-°F	Insul R ft²-°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
Walls								
12A-2sw: Frm wall, vnl ext, 1/2" wood shth, 1/2" gypsum board int	n	189	0.186	2.0	11.7	2212	4.09	772
fnsh, r-2 ext bd ins, 2"x4" wood frm, 16" o.c. stud	ne	11	0.186	2.0	11.7	126	4.09	44
	e	256	0.186	2.0	11.7	2999	4.09	1047
	se	11	0.186	2.0	11.7	126	4.09	44
	s	174	0.186	2.0	11.7	2035	4.09	711
	w	303	0.186	2.0	11.7	3548	4.09	1239
	all	943	0.186	2.0	11.7	11046	4.09	3857

Partitions

(none)

Windows

4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap, n		15	0.470	0	29.6	447	8.08	122
1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 8 ft								
overhang (5.67 ft window ht, 1 ft sep.); 6.67 ft head ht								
4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap, n		15	0.470	0	29.6	447	8.08	122
1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 6.67 ft	e	19	0.470	0	29.6	556	29.8	559
head ht	s	15	0.470	0	29.6	447	14.7	223
	w	49	0.470	0	29.6	1457	29.8	1466
	all	98	0.470	0	29.6	2908	24.1	2370
4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap, n		12	0.470	0	29.6	352	20.3	241
1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 1 ft								
overhang (5.7 ft window ht, 1 ft sep.); 6.67 ft head ht	se	12	0.470	0	29.6	352	24.8	295
	all	24	0.470	0	29.6	703	22.5	535
4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap, e		15	0.470	0	29.6	447	29.8	450
1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 1 ft								
overhang (5.67 ft window ht, 1 ft sep.); 6.67 ft head ht								
4A4-2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr low-e innr, 1/4" gap, e		30	0.470	0	29.6	895	18.1	547
1/8" thk; 50% blinds 45°, medium; 100% outdoor insect screen; 5 ft								
overhang (5.67 ft window ht, 1 ft sep.); 6.67 ft head ht	s	30	0.470	0	29.6	895	8.08	244
	all	60	0.470	0	29.6	1790	13.1	791

Bold/italic values have been manually overridden

Doors

11D0: Door, wd sc type

n	21	0.390	0	24.6	516	8.58	180
s	21	0.390	0	24.6	516	8.58	180
all	42	0.390	0	24.6	1032	8.58	360

Ceilings

(none)

Floors

19A-0bvhp: Flr floor, frm flr, 8" thkns, hrd wd flr fnsh, leaky bsmt ovr

1145	0.295	0	6.98	7994	1.00	1142
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Bold/italic values have been manually overridden





Project Summary

Entire House

Roltay Inc. Energy Services

Job:
Date: May 01, 2015
By:

98 Overbrook Road, Madison, CT 06443 Phone: 203-672-1330 Email: buck@roltay.com Web: www.Roltay.com

Project Information

For: Manual S Demo
West Haven, CT 06516

Notes: Heat loss calculation, post system replacement. No site visit. Loads developed from aerial map photos, appraisal documents and owner/agent photos.

Unable to determine full attic finished space from information provided.

Design Information

Weather: New Haven AP, CT, US

Winter Design Conditions

Outside db	7 °F
Inside db	70 °F
Design TD	63 °F

Summer Design Conditions

Outside db	84 °F
Inside db	75 °F
Design TD	9 °F
Daily range	M
Relative humidity	50 %
Moisture difference	40 gr/lb

Heating Summary

Structure	89714 Btuh
Ducts	5194 Btuh
Central vent (0 cfm)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	94909 Btuh

Sensible Cooling Equipment Load Sizing

Structure	33410 Btuh
Ducts	2786 Btuh
Central vent (0 cfm)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	y
Rate/swing multiplier	1.00
Equipment sensible load	36195 Btuh

Infiltration

Method	Simplified
Construction quality	Loose
Fireplaces	1 (Semi-loose)

	Heating	Cooling
Area (ft ²)	2922	2922
Volume (ft ³)	25023	25023
Air changes/hour	0.80	0.39
Equiv. AVF (cfm)	336	163

Latent Cooling Equipment Load Sizing

Structure	6235 Btuh
Ducts	2458 Btuh
Central vent (0 cfm)	0 Btuh
Equipment latent load	8693 Btuh
Equipment total load	44888 Btuh
Req. total capacity at 0.70 SHR	4.3 ton

Heating Equipment Summary

Make	n/a
Trade	n/a
Model	n/a
AHRI ref	n/a
Efficiency	n/a
Heating input	
Heating output	0 Btuh
Low output baseboard	600 Btuh/ft
Total low baseboard	184 ft
High output baseboard	850 Btuh/ft
Total high baseboard	130 ft
Space thermostat	n/a

Cooling Equipment Summary

Make	n/a
Trade	n/a
Cond	n/a
Coil	n/a
AHRI ref	n/a
Efficiency	n/a
Sensible cooling	0 Btuh
Latent cooling	0 Btuh
Total cooling	0 Btuh
Actual air flow	0 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0

Bold/italic values have been manually overridden

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.



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Page 1



Project Summary

Boiler

Roltay Inc. Energy Services

Job:
Date: May 01, 2015
By:

98 Overbrook Road, Madison, CT 06443 Phone: 203-672-1330 Email: buck@roltay.com Web: www.Roltay.com

Project Information

For: Manual S Demo
West Haven, CT 06516

Notes: Heat loss calculation, post system replacement. No site visit. Loads developed from aerial map photos, appraisal documents and owner/agent photos.

Unable to determine full attic finished space from information provided.

Design Information

Weather: New Haven AP, CT, US

Winter Design Conditions

Outside db	7 °F
Inside db	70 °F
Design TD	63 °F

Summer Design Conditions

Outside db	84 °F
Inside db	75 °F
Design TD	9 °F
Daily range	M
Relative humidity	50 %
Moisture difference	40 gr/lb

Heating Summary

Structure	55671 Btuh
Ducts	2887 Btuh
Central vent (0 cfm)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	58557 Btuh

Sensible Cooling Equipment Load Sizing

Structure	21130 Btuh
Ducts	2360 Btuh
Central vent (0 cfm)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	y
Rate/swing multiplier	1.00
Equipment sensible load	23490 Btuh

Infiltration

Method	Simplified
Construction quality	Loose
Fireplaces	1 (Semi-loose)

	Heating	Cooling
Area (ft ²)	1777	1777
Volume (ft ³)	15863	15863
Air changes/hour	0.85	0.41
Equiv. AVF (cfm)	225	109

Latent Cooling Equipment Load Sizing

Structure	3970 Btuh
Ducts	416 Btuh
Central vent (0 cfm)	0 Btuh
Equipment latent load	4385 Btuh
Equipment total load	27876 Btuh
Req. total capacity at 0.77 SHR	2.5 ton

Heating Equipment Summary

Make	Advantage
Trade	PurePro
Model	AG4-HN
AHRI ref	

Efficiency	83.8 AFUE
Heating input	105000 Btuh
Heating output	88000 Btuh
Low output baseboard	600 Btuh/ft
Total low baseboard	98 ft
High output baseboard	850 Btuh/ft
Total high baseboard	69 ft
Space thermostat	

Cooling Equipment Summary

Make	Bryant
Trade	BRYANT HEATING AND COOLING SYS...
Cond	123ANA030****C*
Coil	FX4DN(B,F)037L
AHRI ref	6937037
Efficiency	12.0 EER, 14.5 SEER
Sensible cooling	22022 Btuh
Latent cooling	6578 Btuh
Total cooling	28600 Btuh
Actual air flow	1100 cfm
Air flow factor	0.047 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0.84

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Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.



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Project Summary
Furnace
Roltay Inc. Energy Services

Job:
Date: May 01, 2015
By:

98 Overbrook Road, Madison, CT 06443 Phone: 203-672-1330 Email: buck@roltay.com Web: www.Roltay.com

Project Information

For: Manual S Demo
West Haven, CT 06516

Notes: Heat loss calculation, post system replacement. No site visit. Loads developed from aerial map photos, appraisal documents and owner/agent photos.

Unable to determine full attic finished space from information provided.

Design Information

Weather: New Haven AP, CT, US

Winter Design Conditions

Outside db	7 °F
Inside db	70 °F
Design TD	63 °F

Summer Design Conditions

Outside db	84 °F
Inside db	75 °F
Design TD	9 °F
Daily range	M
Relative humidity	50 %
Moisture difference	40 gr/lb

Heating Summary

Structure	34044 Btuh
Ducts	2307 Btuh
Central vent (0 cfm)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	36351 Btuh

Sensible Cooling Equipment Load Sizing

Structure	12280 Btuh
Ducts	423 Btuh
Central vent (0 cfm)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	y
Rate/swing multiplier	1.00
Equipment sensible load	12703 Btuh

Infiltration

Method	Simplified
Construction quality	Loose
Fireplaces	1 (Semi-loose)

	Heating	Cooling
Area (ft ²)	1145	1145
Volume (ft ³)	9160	9160
Air changes/hour	0.73	0.35
Equiv. AVF (cfm)	111	54

Latent Cooling Equipment Load Sizing

Structure	2265 Btuh
Ducts	2042 Btuh
Central vent (0 cfm)	0 Btuh
Equipment latent load	4308 Btuh
Equipment total load	17010 Btuh
Req. total capacity at 0.75 SHR	1.4 ton

Heating Equipment Summary

Make	York
Trade	Lattitude TG8S
Model	TG8S100B12MP11
AHRI ref	
Efficiency	80 AFUE
Heating input	100000 Btuh
Heating output	80000 Btuh
Low output baseboard	600 Btuh/ft
Total low baseboard	61 ft
High output baseboard	850 Btuh/ft
Total high baseboard	43 ft
Space thermostat	

Cooling Equipment Summary

Make	Bryant
Trade	BRYANT HEATING AND COOLING SYS...
Cond	123ANA018****C*
Coil	CNPV*2417AL*++TDR
AHRI ref	6359199
Efficiency	11.0 EER, 13 SEER
Sensible cooling	13200 Btuh
Latent cooling	4400 Btuh
Total cooling	17600 Btuh
Actual air flow	587 cfm
Air flow factor	0.046 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0.75

Bold/italic values have been manually overridden

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.



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Right-J® Worksheet

Entire House

Roltay Inc. Energy Services

Job:
Date: May 01, 2015
By:

98 Overbrook Road, Madison, CT 06443 Phone: 203-672-1330 Email: buck@roltay.com Web: www.Roltay.com

1	Room name						Furnace							
2	Exposed wall						149.6 ft							
3	Room height						8.0 ft				d			
4	Room dimensions													
5	Room area						1145.0 ft²							
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area or perimeter		Load	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12A-2sw	0.186	n	11.72	4.09	240	189	2212	772				
	G	4A4-2ov	0.470	n	29.61	8.08	0	0	0	0				
	G	4A4-2ov	0.470	n	29.61	8.08	15	0	447	122				
	G	4A4-2ov	0.470	n	29.61	8.08	15	0	447	122				
11	D	11D0	0.390	n	24.57	8.58	21	21	516	180				
	W	12A-2sw	0.186	ne	11.72	4.09	23	11	126	44				
	G	1C-c1ows	0.570	ne	35.91	30.50	0	0	0	0				
	G	4A4-2ov	0.470	ne	29.61	20.27	0	0	0	0				
	G	4A4-2ov	0.470	ne	29.61	20.27	12	0	352	241				
	W	12A-2sw	0.186	e	11.72	4.09	320	256	2999	1047				
	G	4A4-2ov	0.470	e	29.61	29.79	0	0	0	0				
	G	4A4-2ov	0.470	e	29.61	29.79	0	0	0	0				
	G	4A4-2ov	0.470	e	29.61	29.79	15	0	447	450				
	G	4A4-2ov	0.470	e	29.61	18.10	30	16	895	547				
	G	4A4-2ov	0.470	e	29.61	29.79	19	0	556	559				
	W	12A-2sw	0.186	se	11.72	4.09	23	11	126	44				
	G	1C-c1ows	0.570	se	35.91	36.49	0	0	0	0				
	G	4A4-2ov	0.470	se	29.61	24.48	0	0	0	0				
	G	4A4-2ov	0.470	se	29.61	24.81	12	1	352	295				
	W	12A-2sw	0.186	s	11.72	4.09	240	174	2035	711				
	G	1C-c1ows	0.570	s	35.91	18.83	0	0	0	0				
	G	4A4-2ov	0.470	s	29.61	14.73	0	0	0	0				
	G	4A4-2ov	0.470	s	29.61	14.73	0	0	0	0				
	G	4A4-2ov	0.470	s	29.61	8.08	30	30	895	244				
	G	4A4-2ov	0.470	s	29.61	14.73	15	0	447	223				
	D	11D0	0.390	s	24.57	8.58	21	21	516	180				
	W	12A-2sw	0.186	w	11.72	4.09	352	303	3548	1239				
	G	1C-c1ows	0.570	w	35.91	44.03	0	0	0	0				
	G	4A4-2ov	0.470	w	29.61	29.79	0	0	0	0				
	G	4A4-2ov	0.470	w	29.61	29.79	0	0	0	0				
	G	4A4-2ov	0.470	w	29.61	29.79	49	0	1457	1466				
	R	12A-0sw	0.240	-	15.12	2.71	0	0	0	0				
	D	11D0	0.390	n	24.57	8.58	0	0	0	0				
	C	16B-11ad	0.081	-	5.10	3.69	0	0	0	0				
	C	18A-19ad	0.051	-	3.21	1.10	0	0	0	0				
	F	19A-0bvhp	0.295	-	6.98	1.00	1145	1145	7994	1142				
6	c) AED excursion									0				
	Envelope loss/gain								26368	9628				
12	a) Infiltration								7676	531				
	b) Room ventilation								0	0				
13	Internal gains: Occupants @ 230						4			920				
	Appliances/other									1200				
	Subtotal (lines 6 to 13)								34044	12280				
	Less external load								0	0				
	Less transfer								0	0				
	Redistribution								0	0				
14	Subtotal								34044	12280				
15	Duct loads						7%	3%	2307	423				
	Total room load								36351	12703				
	Low/High Baseboard / Cool Air							61	43	587				

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.





Right-J® Worksheet
Boiler
Roltay Inc. Energy Services

Job:
Date: May 01, 2015
By:

98 Overbrook Road, Madison, CT 06443 Phone: 203-672-1330 Email: buck@roltay.com Web: www.Roltay.com

1	Room name						Boiler				2nd Floor Zone			
2	Exposed wall						239.9 ft				134.6 ft			
3	Room height						8.9 ft				8.0 ft			
4	Room dimensions						d				p			
5	Room area						1777.0 ft²				1145.0 ft²			
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12A-2sw	0.186	n	11.72	4.09	432	418	4897	1710	120	106	1241	433
.	G	4A4-2ov	0.470	n	29.61	8.08	14	0	418	114	14	0	418	114
.	G	4A4-2ov	0.470	n	0.00	0.00	0	0	0	0	0	0	0	0
.	G	4A4-2ov	0.470	n	0.00	0.00	0	0	0	0	0	0	0	0
11	D	11D0	0.390	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	12A-2sw	0.186	ne	11.72	4.09	48	33	386	135	23	16	187	65
.	G	1C-c1ows	0.570	ne	35.91	30.50	9	0	311	264	0	0	0	0
.	G	4A4-2ov	0.470	ne	29.61	20.27	7	0	197	135	7	0	197	135
.	G	4A4-2ov	0.470	ne	0.00	0.00	0	0	0	0	0	0	0	0
.	W	12A-2sw	0.186	e	11.72	4.09	646	606	7098	2479	320	280	3278	1145
.	G	4A4-2ov	0.470	e	29.61	29.79	12	0	355	357	12	0	355	357
.	G	4A4-2ov	0.470	e	29.61	29.79	28	0	837	842	28	0	837	842
.	G	4A4-2ov	0.470	e	0.00	0.00	0	0	0	0	0	0	0	0
.	G	4A4-2ov	0.470	e	0.00	0.00	0	0	0	0	0	0	0	0
.	G	4A4-2ov	0.470	e	0.00	0.00	0	0	0	0	0	0	0	0
.	W	12A-2sw	0.186	se	11.72	4.09	48	33	386	135	23	16	187	65
.	G	1C-c1ows	0.570	se	35.91	36.49	9	1	311	316	0	0	0	0
.	G	4A4-2ov	0.470	se	29.61	24.48	7	0	197	163	7	0	197	163
.	G	4A4-2ov	0.470	se	0.00	0.00	0	0	0	0	0	0	0	0
.	W	12A-2sw	0.186	s	11.72	4.09	552	487	5707	1993	240	183	2149	750
.	G	1C-c1ows	0.570	s	35.91	18.83	8	3	299	157	0	0	0	0
.	G	4A4-2ov	0.470	s	29.61	14.73	42	0	1255	624	42	0	1255	624
.	G	4A4-2ov	0.470	s	29.61	14.73	14	0	421	209	14	0	421	209
.	G	4A4-2ov	0.470	s	0.00	0.00	0	0	0	0	0	0	0	0
.	G	4A4-2ov	0.470	s	0.00	0.00	0	0	0	0	0	0	0	0
.	D	11D0	0.390	s	0.00	0.00	0	0	0	0	0	0	0	0
.	W	12A-2sw	0.186	w	11.72	4.09	700	637	7468	2608	352	306	3585	1252
.	G	1C-c1ows	0.570	w	35.91	44.03	17	0	598	734	0	0	0	0
.	G	4A4-2ov	0.470	w	29.61	29.79	28	0	837	842	28	0	837	842
.	G	4A4-2ov	0.470	w	29.61	29.79	18	0	526	530	18	0	526	530
.	G	4A4-2ov	0.470	w	0.00	0.00	0	0	0	0	0	0	0	0
.	R	12A-0sw	0.240	-	15.12	2.71	120	99	1497	268	120	99	1497	268
.	D	11D0	0.390	n	24.57	8.58	21	21	516	180	21	21	516	180
.	C	16B-11ad	0.081	-	5.10	3.69	513	513	2618	1891	513	513	2618	1891
.	C	18A-19ad	0.051	-	3.21	1.10	926	926	2976	1016	0	0	0	0
.	F	19A-0bvhp	0.295	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									0				1532
	Envelope loss/gain								40114	17703			20303	11400
12	a) Infiltration								15557	1077			6907	478
	b) Room ventilation								0	0			0	0
13	Internal gains: Occupants @ 230 Appliances/other						5			1150 1200	4			920 1200
	Subtotal (lines 6 to 13)								55671	21130			27209	13998
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								55671	21130			27209	13998
15	Duct loads						5%	11%	2887	2360	11%	19%	2887	2568
	Total room load								58557	23490			30096	16567
	Low/High Baseboard / Cool Air							98	69	1100		50	35	773

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.



98 Overbrook Road, Madison, CT 06443 Phone: 203-672-1330 Email: buck@roltay.com Web: www.Roltay.com

1	Room name					Attic Zone								
2	Exposed wall					105.3 ft								
3	Room height					10.6 ft					p			
4	Room dimensions													
5	Room area					632.0 ft²								
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area or perimeter		Load	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12A-2sw	0.186	n	11.72	4.09	312	312	3656	1277				
11	G	4A4-2ov	0.470	n	29.61	8.08	0	0	0	0				
	G	4A4-2ov	0.470	n	0.00	0.00	0	0	0	0				
	G	4A4-2ov	0.470	n	0.00	0.00	0	0	0	0				
	D	11D0	0.390	n	0.00	0.00	0	0	0	0				
	W	12A-2sw	0.186	ne	11.72	4.09	26	17	199	69				
	G	1C-c1ows	0.570	ne	35.91	30.50	9	0	311	264				
	G	4A4-2ov	0.470	ne	29.61	20.27	0	0	0	0				
	G	4A4-2ov	0.470	ne	0.00	0.00	0	0	0	0				
	W	12A-2sw	0.186	e	11.72	4.09	326	326	3820	1334				
	G	4A4-2ov	0.470	e	29.61	29.79	0	0	0	0				
	G	4A4-2ov	0.470	e	29.61	29.79	0	0	0	0				
11	G	4A4-2ov	0.470	e	0.00	0.00	0	0	0	0				
	G	4A4-2ov	0.470	e	0.00	0.00	0	0	0	0				
	W	12A-2sw	0.186	se	11.72	4.09	26	17	199	69				
	G	1C-c1ows	0.570	se	35.91	36.49	9	1	311	316				
	G	4A4-2ov	0.470	se	29.61	24.48	0	0	0	0				
	G	4A4-2ov	0.470	se	0.00	0.00	0	0	0	0				
	W	12A-2sw	0.186	s	11.72	4.09	312	304	3558	1243				
	G	1C-c1ows	0.570	s	35.91	18.83	8	3	299	157				
	G	4A4-2ov	0.470	s	29.61	14.73	0	0	0	0				
	G	4A4-2ov	0.470	s	29.61	14.73	0	0	0	0				
	G	4A4-2ov	0.470	s	0.00	0.00	0	0	0	0				
11	G	4A4-2ov	0.470	s	0.00	0.00	0	0	0	0				
	D	11D0	0.390	s	0.00	0.00	0	0	0	0				
	W	12A-2sw	0.186	w	11.72	4.09	348	331	3883	1356				
	G	1C-c1ows	0.570	w	35.91	44.03	17	0	598	734				
	G	4A4-2ov	0.470	w	29.61	29.79	0	0	0	0				
	G	4A4-2ov	0.470	w	29.61	29.79	0	0	0	0				
	G	4A4-2ov	0.470	w	0.00	0.00	0	0	0	0				
	R	12A-0sw	0.240	-	15.12	2.71	0	0	0	0				
	D	11D0	0.390	n	24.57	8.58	0	0	0	0				
	C	16B-11ad	0.081	-	5.10	3.69	0	0	0	0				
	C	18A-19ad	0.051	-	3.21	1.10	926	926	2976	1016				
F	19A-0bvhp	0.295	-	0.00	0.00	0	0	0	0					

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.



Right-J® Worksheet
Furnace
Roltay Inc. Energy Services

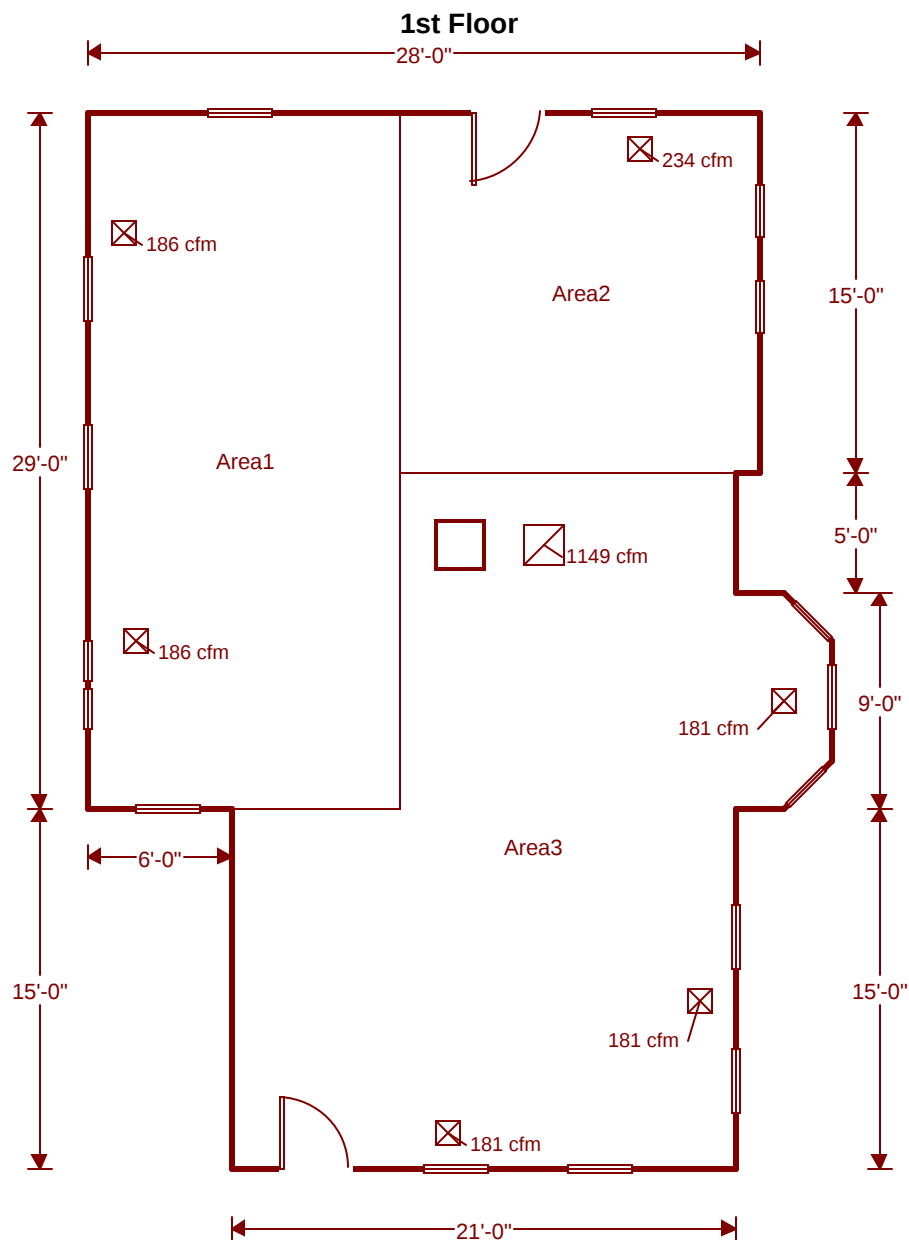
Job:
Date: May 01, 2015
By:

98 Overbrook Road, Madison, CT 06443 Phone: 203-672-1330 Email: buck@roltay.com Web: www.Roltay.com

1	Room name					Furnace				1st Floor Zone					
2	Exposed wall					149.6 ft				149.6 ft					
3	Room height					8.0 ft				8.0 ft					
4	Room dimensions					d				p					
5	Room area					1145.0 ft²				1145.0 ft²					
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)		
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12A-2sw	0.186	n	11.72	4.09	240	189	2212	772	240	189	2212	772	
.	G	4A4-2ov	0.470	n	0.00	0.00	0	0	0	0	0	0	0	0	
.	G	4A4-2ov	0.470	n	29.61	8.08	15	0	447	122	15	0	447	122	
.	G	4A4-2ov	0.470	n	29.61	8.08	15	0	447	122	15	0	447	122	
11	D	11D0	0.390	n	24.57	8.58	21	21	516	180	21	21	516	180	
.	W	12A-2sw	0.186	ne	11.72	4.09	23	11	126	44	23	11	126	44	
.	G	1C-c1ows	0.570	ne	0.00	0.00	0	0	0	0	0	0	0	0	
.	G	4A4-2ov	0.470	ne	0.00	0.00	0	0	0	0	0	0	0	0	
.	G	4A4-2ov	0.470	ne	29.61	20.27	12	0	352	241	12	0	352	241	
.	W	12A-2sw	0.186	e	11.72	4.09	320	256	2999	1047	320	256	2999	1047	
.	G	4A4-2ov	0.470	e	0.00	0.00	0	0	0	0	0	0	0	0	
.	G	4A4-2ov	0.470	e	0.00	0.00	0	0	0	0	0	0	0	0	
.	G	4A4-2ov	0.470	e	29.61	29.79	15	0	447	450	15	0	447	450	
.	G	4A4-2ov	0.470	e	29.61	18.10	30	16	895	547	30	16	895	547	
.	G	4A4-2ov	0.470	e	29.61	29.79	19	0	556	559	19	0	556	559	
.	W	12A-2sw	0.186	se	11.72	4.09	23	11	126	44	23	11	126	44	
.	G	1C-c1ows	0.570	se	0.00	0.00	0	0	0	0	0	0	0	0	
.	G	4A4-2ov	0.470	se	0.00	0.00	0	0	0	0	0	0	0	0	
.	G	4A4-2ov	0.470	se	29.61	24.81	12	1	352	295	12	1	352	295	
.	W	12A-2sw	0.186	s	11.72	4.09	240	174	2035	711	240	174	2035	711	
.	G	1C-c1ows	0.570	s	0.00	0.00	0	0	0	0	0	0	0	0	
.	G	4A4-2ov	0.470	s	0.00	0.00	0	0	0	0	0	0	0	0	
.	G	4A4-2ov	0.470	s	0.00	0.00	0	0	0	0	0	0	0	0	
.	G	4A4-2ov	0.470	s	29.61	8.08	30	30	895	244	30	30	895	244	
.	G	4A4-2ov	0.470	s	29.61	14.73	15	0	447	223	15	0	447	223	
.	D	11D0	0.390	s	24.57	8.58	21	21	516	180	21	21	516	180	
.	W	12A-2sw	0.186	w	11.72	4.09	352	303	3548	1239	352	303	3548	1239	
.	G	1C-c1ows	0.570	w	0.00	0.00	0	0	0	0	0	0	0	0	
.	G	4A4-2ov	0.470	w	0.00	0.00	0	0	0	0	0	0	0	0	
.	G	4A4-2ov	0.470	w	0.00	0.00	0	0	0	0	0	0	0	0	
.	G	4A4-2ov	0.470	w	29.61	29.79	49	0	1457	1466	49	0	1457	1466	
.	R	12A-0sw	0.240	-	0.00	0.00	0	0	0	0	0	0	0	0	
.	D	11D0	0.390	n	0.00	0.00	0	0	0	0	0	0	0	0	
.	C	16B-11ad	0.081	-	0.00	0.00	0	0	0	0	0	0	0	0	
.	C	18A-19ad	0.051	-	0.00	0.00	0	0	0	0	0	0	0	0	
.	F	19A-0bvhp	0.295	-	6.98	1.00	1145	1145	7994	1142	1145	1145	7994	1142	
6	c) AED excursion									0				1127	
	Envelope loss/gain								26368	9628			26368	10755	
12	a) Infiltration								7676	531			7676	531	
	b) Room ventilation								0	0			0	0	
13	Internal gains:					Occupants @	230	4		920	4		920		
						Appliances/other				1200			1200		
	Subtotal (lines 6 to 13)								34044	12280			34044	13406	
	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
	Redistribution								0	0			0	0	
14	Subtotal								34044	12280			34044	13406	
15	Duct loads							7%	3%	2307	423	7%	3%	2307	462
	Total room load								36351	12703			36351	13868	
	Low High Baseboard / Cool Air								61	43		61	43	641	

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.





Job #:
Performed for:
Manual S Demo
West Haven, CT 06516

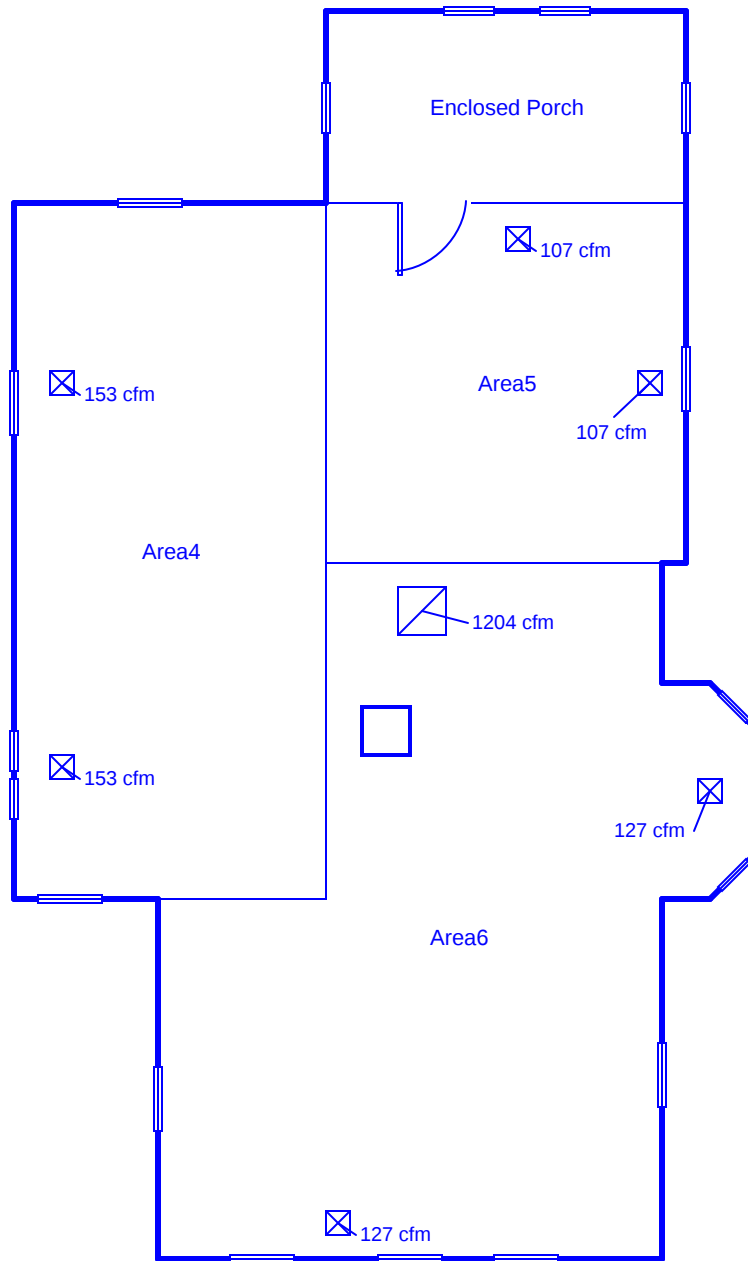
Roltay Inc. Energy Services

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www.Roltay.com buck@roltay.com

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2nd Floor



Job #:
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West Haven, CT 06516

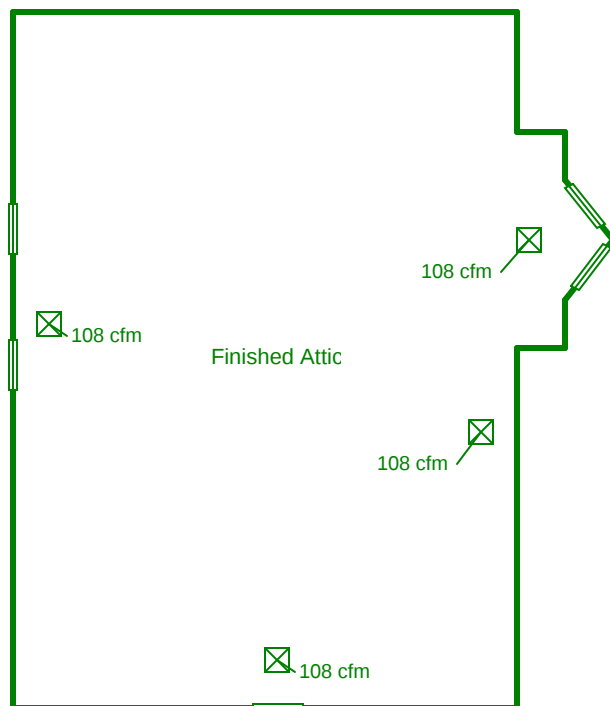
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3rd Floor



Job #:
Performed for:
Manual S Demo
West Haven, CT 06516

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