

PO Box 970 Lake City, FL 32056 Phone 386-7544085

**Project Information**

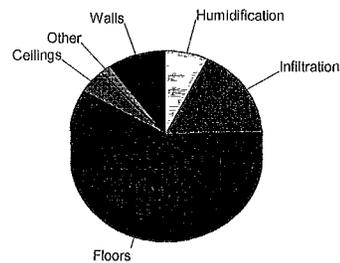
For: Monsta Clothing

**Design Conditions**

<b>Location:</b> Gainesville, FL, US Elevation 151 ft Latitude 30°N	<b>Indoor:</b> Indoor temperature (°F) Design TD (°F) Relative humidity (%) Moisture difference (gr/lb)	<b>Heating</b> 70 37 40 32.8	<b>Cooling</b> 75 15 50 52.0
<b>Outdoor:</b> Dry bulb (°F) Daily range (°F) Wet bulb (°F) Wind speed (mph)	<b>Heating</b> 33 - - 15.0	<b>Cooling</b> 90 19 ( M ) 76 7.5	<b>Infiltration:</b> Method Construction quality
		Simplified	Average

**Heating**

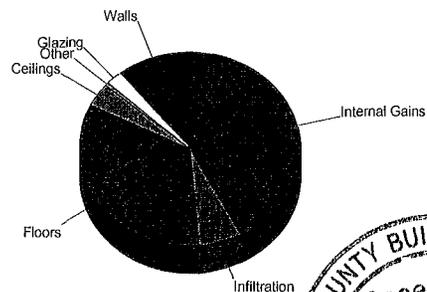
Component	Btuh/ft²	Btuh	% of load
Walls	2.8	6373	9.9
Glazing	20.4	488	0.8
Doors	12.2	684	1.1
Ceilings	1.3	3043	4.7
Floors	16.1	38019	58.9
Infiltration	140.1	11212	17.4
Ducts		0	0
Piping		0	0
Humidification		4720	7.3
Ventilation		0	0
Adjustments		0	0
<b>Total</b>		<b>64540</b>	<b>100.0</b>



**Cooling**

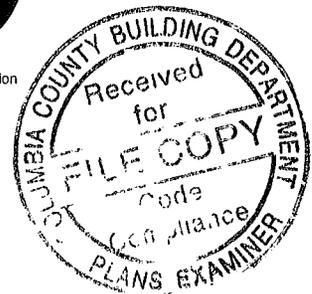
Jul 1500 LDT

Component	Btuh/ft²	Btuh	% of load
Walls	2.4	5597	10.8
Glazing	49.8	1196	2.3
Doors	4.8	271	0.5
Ceilings	0.9	2031	3.9
Floors	7.4	17468	33.7
Infiltration	41.4	3310	6.4
Ducts		0	0
Ventilation		0	0
Internal gains		21936	42.3
Blower		0	0
Adjustments		0	0
<b>Total</b>		<b>51809</b>	<b>100.0</b>



Latent Cooling Load = 12062 Btuh  
 Overall U-value = 0.185 Btuh/ft²·°F

WARNING: window to floor area ratio = 1.0% - less than 5%





**Component Constructions**  
**Entire House**  
 Crews Engineering Service

Job:  
 Date: Oct 17, 2013  
 By:  
 Plan: 2013-015

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**Project Information**

For: Monsta Clothing

**Design Conditions**

	Htg	Clg		Htg	Clg
Outside db (°F)	33	90	Inside db (°F)	70	75
Outside RH (%)	80	55	Inside RH (%)	40	50
Outside wb (°F)	31	76	Inside wb (°F)	56	63
Daily range (°F)	-	19	Design TD (°F)	37	15
Moisture diff (gr/lb)	32.8	52.0			

**Construction descriptions**

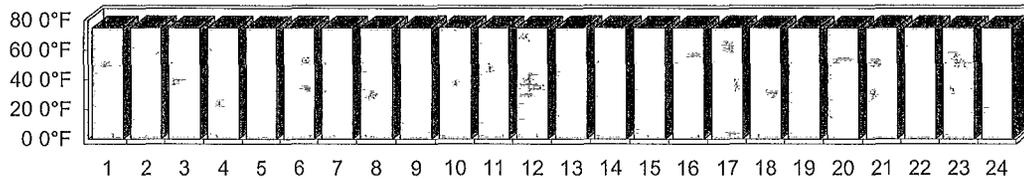
Construction descriptions	Or	Area ft²	U-value (Btu/h/ft²·°F)	UA (Btu/h/°F)	Loss (Btu/h)	Gain (Btu/h)
<b>Walls</b>						
Frm wall, mtl ext, r-19 cav ins, 5/8" gypsum board int fnsh, 2"x4" wood frm	n	510	0.08	38.4	1419	821
	e	614	0.08	46.2	1709	1180
	s	510	0.08	38.4	1419	1271
	w	656	0.08	49.3	1826	2326
	all	2290	0.08	172	6373	5597
<b>Partitions</b> (none)						
<b>Windows</b>						
2 glazing, dr outr, air gas, wd frm mat, dr innr, 1/4" gap, 1/8" thk	e	24	htg / clg 0.55 / 0.55	htg / clg 13.2 / 13.2	488	1196
<b>Doors</b>						
Door, wd sc type	e	42	0.33	13.9	513	203
	w	14	0.33	4.6	171	68
	all	56	0.33	18.5	684	271
<b>Ceilings</b>						
Attic ceiling, mtl roof mat, r-18 roof ins, r-30 cell ins, suspended, acoustical int fnsh, return air plnm		2368	0.03	82.2	3043	1015
<b>Floors</b>						
Fir floor, 140 lb/ft³ concrete flr, 4" thkns, carpet flr fnsh, amb ovr		2368	0.43	1028	38019	17468



Crews Engineering Service

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Clg75 - Cooling set point





**Right-Suite® Universal 2012 Short Form**  
**Entire House**  
 Crews Engineering Service

Job:  
 Date: Oct 17, 2013  
 By:  
 Plan: 2013-015

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**Project Information**

For: Monsta Clothing

		Htg	Clg			Htg	Clg
Outside db	(°F)	33	90	Inside db	(°F)	70	75
Outside RH	(%)	-	55	Inside RH	(%)	-	50
Outside wb	(°F)	-	76	Inside wb	(°F)	-	63
Daily range	(°F)	-	19	Design TD	(°F)	37	15
Moisture diff	(gr/lb)	-	52				

**Heating Equipment**

**Cooling Equipment**

Make  
 Model  
 Type Elec strip  
 Efficiency 100 EFF  
 Heating Input 13.6 kW  
 Heating Output 46.5 MBtuh  
 Humidifier 12.6 gpd  
 Leaving Air Temp 88.3 °F  
 Actual Heating Fan 2323 cfm

Make  
 Model  
 Type Split AC  
 COP / EER / SEER 13.0  
 Sensible Cooling 0 MBtuh  
 Latent Cooling 0 MBtuh  
 Total Cooling 0 MBtuh  
 Leaving Air Temp 55.0 °F  
 Actual Cooling Fan 2323 cfm

Equipment Location Entire House  
 System Type PEAKCV  
 Fan Motor Heat Type PACKAGE  
 Fan & Motor Combined Efficiency 0 %  
 Static Pressure Across Fan 0 in H2O

NAME	Area ft²	Heat Loss	Sensible Gain	Latent Gain	Htg cfm	Clg cfm	Time
Break	121	3982	1899	371	147	92	Jul 1500 LDT
Mens RR	77	2645	1529	376	98	66	Jul 1500 LDT
Womens RR	77	2621	1490	368	97	75	Jul 1500 LDT
Printing	574	15102	10834	3172	548	468	Jul 1500 LDT
Asst Manager	140	3965	7642	744	145	345	Jul 1500 LDT
Manager	224	5562	3232	1395	201	136	Jul 1500 LDT
Hall	175	639	362	0	0	0	Jul 1500 LDT
Transfer	242	7620	3237	829	280	152	Jul 1500 LDT
Shipping	220	6494	13961	3205	238	640	Jul 1500 LDT
Business	520	15911	7937	1602	570	348	Jul 1500 LDT
Entire House	2370	64540	52123	12062	2323	2323	Jul 1500 LDT



**Right-Suite® Universal 2012 Load Summary**  
**Entire House**  
**Crews Engineering Service**

Job.  
 Date: Oct 17, 2013  
 By:  
 Plan: 2013-015

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**Project Information**

For Monsta Clothing

Zone: Entire House

**COOLING LOAD**

1. DESIGN CONDITIONS	at Jul 1500 LDT	Peak load at Jul 1700 LDT		
Inside	75 °F	Outside 90 °F	TD	15 °F
RH	55 %	MoistDiff 52.0 gr/lb	Mult	0
				Ins wb 63 °F
				Sensible Latent
2. SOLAR RADIATION THROUGH GLASS				1210 -
3. TRANSMISSION GAINS	Sensible			21174 -
Walls.	4493			- -
Glass	167			- -
Doors.	234			- -
Partitions	0			- -
Floors	15355			- -
Ceilings	926			- -
4. INTERNAL HEAT GAIN	Sensible	Latent		21936 5804
Occupants	4801	5804		- -
Lights.	14744	-		- -
Motors:	0	-		- -
Appliances	2390	0		- -
5. INFILTRATION:	Outside air cfm	178		2910 6258
6. SUBTOTAL: Space load	Sensible	Latent		47230 12062
Envelope	47230	12062		- -
Less external	0	-		- -
Redistribution	0	0		- -
7. SUPPLY DUCT				0 -
8. SUBTOTAL: Space load + supply duct				47230 -
Actual cfm	2323 at supply TD	20		- -
9. VENTILATION:	Make-up air cfm	0		0 0
10. RETURN AIR LOAD:	Lighting + plenum (net)			4893 -
11. RETURN DUCT				0 -
12. TOTAL LOADS ON EQUIPMENT				52123 12062

**HEATING LOAD**

13. DESIGN CONDITIONS		Mult	0
Inside	70 °F	TD	37 °F
Outside	33 °F		
14. TRANSMISSION LOSSES			48608
Walls	6373		-
Glass:	488		-
Doors	684		-
Partitions.	0		-
Floors	38019		-
Ceilings:	3043		-
15. INFILTRATION:	Outside air cfm	277	11212
16. SUBTOTAL: Space load			59820
Envelope	59820		-
Less external	0		-
Less transfer	0		-
Redistribution	0		-
17. SUPPLY DUCT:			0
18. VENTILATION:	Make-up air cfm.	0	0
19. HUMIDIFICATION			4720
Piping			0
20. RETURN DUCT			0
21. TOTAL HEATING LOAD ON EQUIPMENT			64540

