

System Checksums

By LIVE OAK CONSULTANTS

Noble HVAC System

Single Zone

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK				TEMPERATURES		
Peaked at Time:		Mo/Hr: 8 / 17		Mo/Hr: Sum of		Mo/Hr: Heating Design		Mo/Hr: Heating Design				Cooling	Heating	
Outside Air:		OADB/WB/HR: 93 / 78 / 122		OADB: Peaks		OADB: 27		OADB: 27				SADB	57.2	86.3
Space Sens. + Lat.	Plenum Sens. + Lat	Net Total	Percent Of Total (%)	Space Sensible	Percent Of Total (%)	Space Peak	Coil Peak	Percent Of Total	Space Sens	Tot Sens	Percent Of Total	Ra Plenum	80.6	63.0
Btu/h	Btu/h	Btu/h		Btu/h		Btu/h	Btu/h		Btu/h	Btu/h		Return	76.3	70.0
Envelope Loads				Envelope Loads								Ret/OA	76.3	70.0
Skylite Solar	0	0	0	0	0	Skylite Solar	0	0.00	Fn MtrTD	0.0	0.0	Fn BldTD	0.0	0.0
Skylite Cond	0	0	0	0	0	Skylite Cond	0	0.00	Fn Frict	0.0	0.0			
Roof Cond	0	1,013	4	0	0	Roof Cond	0	7.99						
Glass Solar	6,166	0	21	6,570	29	Glass Solar	0	0.00						
Glass/Door Cond	3,228	0	11	3,043	13	Glass/Door Cond	-7,923	38.11						
Wall Cond	3,894	1,052	17	3,876	17	Wall Cond	-3,799	22.97						
Partition/Door	0	0	0	0	0	Partition/Door	0	0.00						
Floor	23	0	0	41	0	Floor	-448	2.15						
Adjacent Floor	0	0	0	0	0	Adjacent Floor	0	0						
Infiltration	5,740	0	20	1,823	8	Infiltration	-4,536	21.82						
<i>Sub Total ==></i>	19,051	2,065	74	15,353	68	<i>Sub Total ==></i>	-16,706	93.04						
Internal Loads				Internal Loads										
Lights	404	1,616	7	404	2	Lights	0	0.00						
People	1,800	0	6	1,000	4	People	0	0.00						
Misc	3,754	0	13	3,754	17	Misc	0	0.00						
<i>Sub Total ==></i>	5,958	1,616	26	5,158	23	<i>Sub Total ==></i>	0	0.00						
Ceiling Load	2,103	-2,103	0	2,217	10	Ceiling Load	-2,637	0.00						
Ventilation Load	0	0	0	0	0	Ventilation Load	0	0.00						
Adj Air Trans Heat	0	0	0	0	0	Adj Air Trans Heat	0	0						
Dehumid. Ov Sizing	0	0	0	0	0	Ov/Undr Sizing	-1,448	6.96						
Ov/Undr Sizing	0	0	0	0	0	Exhaust Heat	0	0.00						
Exhaust Heat	0	-8	0	0	0	OA Preheat Diff.	0	0.00						
Sup. Fan Heat	0	0	0	0	0	RA Preheat Diff.	0	0.00						
Ret. Fan Heat	0	0	0	0	0	Additional Reheat	0	0.00						
Duct Heat Pkup	0	0	0	0	0	Underflr Sup Ht Pkup	0	0.00						
Underflr Sup Ht Pkup	0	0	0	0	0	Supply Air Leakage	0	0.00						
Supply Air Leakage	0	0	0	0	0									
Grand Total ==>	27,113	1,570	100.00	28,683	100.00	Grand Total ==>	-20,791	100.00						

AIRFLOWS		
	Cooling	Heating
Diffuser	1,145	1,145
Terminal	1,145	1,145
Main Fan	1,145	1,145
Sec Fan	0	0
Nom Vent	0	0
AHU Vent	0	0
Infil	95	95
MinStop/Rh	0	0
Return	1,151	1,151
Exhaust	6	6
Rm Exh	88	88
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS		
	Cooling	Heating
% OA	0.0	0.0
cfm/ft²	0.97	0.97
cfm/ton	479.02	
ft²/ton	495.35	
Btu/hr-ft²	24.23	-17.56
No. People	4	

COOLING COIL SELECTION										
	Total Capacity		Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR			Leave DB/WB/HR		
	ton	MBh			°F	°F	gr/lb	°F	°F	gr/lb
Main Clg	2.4	28.7	24.1	1,145	76.3	63.0	64.9	57.2	54.6	59.5
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.4	28.7								

AREAS			
	Gross Total	Glass	
		ft²	(%)
Floor	1,184		
Part	0		
Int Door	0		
ExFlr	621		
Roof	1,184	0	0
Wall	2,057	253	12
Ext Door	63	0	0

HEATING COIL SELECTION				
	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-20.8			