

## Space Design Load Summary for Packaged Rooftop AHU

Project Name: Example Problem  
Prepared by: Carrier Corporation

08/27/2002  
03:23PM

**TABLE 1.1.A. COMPONENT LOADS FOR SPACE " D101 - Typical Classroom " IN ZONE " D101 - Classroom "**

		DESIGN COOLING		DESIGN HEATING		
		COOLING DATA AT Jun 1600 COOLING OA DB / WB 88.0 °F / 72.0 °F OCCUPIED T-STAT 74.0 °F		HEATING DATA AT DES HTG HEATING OA DB / WB -6.0 °F / -7.2 °F OCCUPIED T-STAT 72.0 °F		
		Sensible	Latent			
SPACE LOADS	Details	(BTU/hr)	(BTU/hr)	Sensible	Latent	(BTU/hr)
Window & Skylight Solar Loads	72 ft²	3237	-	72 ft²	-	-
Wall Transmission	203 ft²	287	-	203 ft²	1332	-
Roof Transmission	908 ft²	1042	-	908 ft²	3946	-
Window Transmission	72 ft²	490	-	72 ft²	3645	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	908 ft²	0	-	908 ft²	1459	-
Partitions	0 ft²	0	-	0 ft²	0	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	2940 W	5800	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	0 W	0	-	0	0	-
People	25	4471	3000	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 10%	1533	300	20%	2076	0
<b>&gt;&gt; Total Zone Loads</b>	<b>-</b>	<b>16860</b>	<b>3300</b>	<b>-</b>	<b>12458</b>	<b>0</b>

**TABLE 1.1.B. ENVELOPE LOADS FOR SPACE " D101 - Typical Classroom " IN ZONE " D101 - Classroom "**

				COOLING	COOLING	HEATING
		Area	U-Value	TRANS	SOLAR	TRANS
		(ft²)	(BTU/(hr-ft²-°F))	(BTU/hr)	(BTU/hr)	(BTU/hr)
<b>E EXPOSURE</b>						
WALL	203	0.084	-	287	-	1332
WINDOW 1	72	0.649	0.820	490	3237	3645
<b>H EXPOSURE</b>						
ROOF	908	0.056	-	1042	-	3946

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TABLE 4.1.A. COMPONENT LOADS FOR SPACE " D104 - Classroom " IN ZONE " D104 - Classroom "						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Aug 1600 COOLING OA DB / WB 91.0 °F / 74.0 °F OCCUPIED T-STAT 74.0 °F			HEATING DATA AT DES HTG HEATING OA DB / WB -6.0 °F / -7.2 °F OCCUPIED T-STAT 72.0 °F		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(BTU/hr)	(BTU/hr)	Details	(BTU/hr)	(BTU/hr)
Window & Skylight Solar Loads	72 ft²	3033	-	72 ft²	-	-
Wall Transmission	533 ft²	725	-	533 ft²	3498	-
Roof Transmission	908 ft²	973	-	908 ft²	3946	-
Window Transmission	72 ft²	630	-	72 ft²	3645	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	908 ft²	0	-	908 ft²	2357	-
Partitions	0 ft²	0	-	0 ft²	0	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	2940 W	5800	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	0 W	0	-	0	0	-
People	25	4471	3000	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 10%	1563	300	20%	2689	0
>> Total Zone Loads	-	17196	3300	-	16135	0

TABLE 4.1.B. ENVELOPE LOADS FOR SPACE " D104 - Classroom " IN ZONE " D104 - Classroom "						
				COOLING	COOLING	HEATING
	Area	U-Value	Shade	TRANS	SOLAR	TRANS
	(ft²)	(BTU/(hr-ft²-°F))	Coeff.	(BTU/hr)	(BTU/hr)	(BTU/hr)
<b>E EXPOSURE</b>						
WALL	203	0.084	-	288	-	1332
WINDOW 1	72	0.649	0.820	630	3033	3645
<b>S EXPOSURE</b>						
WALL	330	0.084	-	437	-	2166
<b>H EXPOSURE</b>						
ROOF	908	0.056	-	973	-	3946

**NOTE**

**The remaining pages of this report  
have been left off so as to improve access times.**