

HEAT LOSS ESTIMATING CHART

BTU/HR/FT²

Sq. Ft.	Building Data	METAL BUILDING with 3" insulation in roof and walls.							CONCRETE BUILDING with built-up roofing with 3" insulation.						
		<i>Btu/hr per Sq. Ft. Based on Temperature Differential</i>							<i>Btu/hr per Sq. Ft. Based on Temperature Differential</i>						
		35°ΔT	45°ΔT	55°ΔT	65°ΔT	75°ΔT	85°ΔT	95°ΔT	35°ΔT	45°ΔT	55°ΔT	65°ΔT	75°ΔT	85°ΔT	95°ΔT
1,500	Ceiling Height = 16' Est. Air Change/Hr. = 1 Overhead Doors = 1, 12'x12' Skylights = 2, 3'x4'	40	51	63	74	85	97	108	67	86	105	124	144	163	182
3,200	Ceiling Height = 18' Est. Air Change/Hr. = 1 Overhead Doors = 1, 14'x14' Skylights = 4, 3'x4'	31	40	49	57	66	75	84	53	68	83	98	113	128	143
4,800	Ceiling Height = 18' Est. Air Change/Hr. = 1 Overhead Doors = 2, 14'x14' Skylights = 4, 3'x4'	28	36	44	52	60	68	76	45	58	71	84	97	110	123
5,000	Ceiling Height = 17' Est. Air Change/Hr. = 1 Overhead Doors = 2, 12'x14' Skylights = 4, 3'x4'	27	34	42	50	57	65	73	44	56	68	81	93	106	118
8,000	Ceiling Height = 18' Est. Air Change/Hr. = 1 Overhead Doors = 2, 12'x14' Skylights = 4, 3'x4'	23	30	37	43	50	57	63	37	48	58	69	79	90	101
10,000	Ceiling Height = 16' Est. Air Change/Hr. = 0.75 Overhead Doors = 3, 12'x16' Skylights = 6, 3'x4'	21	28	34	40	46	52	58	35	45	55	65	75	85	95
18,000	Ceiling Height = 20' Est. Air Change/Hr. = 0.5 Overhead Doors = 4, 12'x16' Skylights = 6, 3'x4'	16	21	25	30	34	39	43	27	34	42	49	57	65	72

DIRECTIONS: To estimate the heat loss of a building, locate the line that is closest to the square footage of the building. Follow the line across to the column that corresponds to the temperature differential (the desired inside design temperature less the outside design temperature) for the type of building (i.e., metal or concrete). Multiply the area of the building by the Btu/hr per sq. ft. listed in that column. **EXAMPLE:** 30' x 50' metal building with 3" insulation in the roof and walls, located in Columbus, Ohio. Inside Design Temperature of 65°F; Outside Design Temperature of 0°F. For a 1500 sq. ft. building, the Metal Building Chart indicates 74 Btu/hr per sq. ft. at a Temperature Differential of 65°. The estimated building heat loss would be 111,000 Btu/hr (30' x 50' x 74 Btu/hr per sq. ft.); therefore, an infrared heating system equal to or exceeding 111,000 Btu/hr should be selected.

Note: Both charts assume 500 CFM exhaust and one personnel door.