

RESEARCH LABORATORY STANDARD DATA—AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS
Result of Cooperative Work With U. S. Bureau of Mines Experiment Station, Pittsburgh, Pa.
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TABLE 8. HEAT EMITTED BY DIRECT RADIATION—CONVERSION FACTORS

PRESSURE		TEMP. OF STEAM IN DEG. FAHR.	TEMPERATURE OF ROOM IN DEG. FAHR.					
Vacuum In. Hg.	Lb. Absolute		80 deg. fahr.	75 deg. fahr.	70 deg. fahr.	65 deg. fahr.	60 deg. fahr.	50 deg. fahr.
23.4	3.71	150	2.188	2.053	1.934	1.828	1.733	1.572
19.7	4.75	160	1.898	1.795	1.701	1.621	1.546	1.412
15.3	5.99	170	1.669	1.590	1.517	1.451	1.391	1.285
12.3	7.51	180	1.488	1.425	1.364	1.311	1.261	1.175
8.7	9.33	190	1.339	1.287	1.239	1.195	1.155	1.081
6.5	11.52	200	1.215	1.172	1.135	1.095	1.060	0.999
Lb. GAGE								
1	15.7	215	1.064	1.029	1.000	0.971	0.943	0.894
2	16.8	219	1.030	1.000	0.970	0.941	0.915	0.870
3	17.8	222	1.004	0.976	0.947	0.921	0.897	0.851
4	18.9	225	0.982	0.954	0.929	0.902	0.878	0.835
5	19.6	227	0.964	0.936	0.909	0.887	0.864	0.822
6	20.8	230	0.943	0.917	0.892	0.869	0.847	0.806
8	22.8	235	0.907	0.883	0.860	0.839	0.818	0.781
10	24.9	240	0.875	0.853	0.831	0.810	0.791	0.756

These conversion factors multiplied by the heat loss from any radiator, operating under the indicated conditions, give the heat loss by the same radiator operating at 215 deg. fahr. in a room at 70 deg. fahr.

TABLE 9. HEAT EMISSION OF DIRECT CAST IRON RADIATION FOR HOT WATER—SINGLE COLUMN RADIATORS

Main Water Temperature at 170 deg. fahr.		Room Temperature at 70 deg. fahr.									
LENGTH INCHES	NUMBER OF SECTIONS	45 In.	38 In.	32 In.	26 In.	23 In.	20 In.				
		Rated Surface Sq. Ft. S	Total B.t.u. per Hr. SR	Rated Surface Sq. Ft. S	Total B.t.u. per Hr. SR	Rated Surface Sq. Ft. S	Total B.t.u. per Hr. SR	Rated Surface Sq. Ft. S	Total B.t.u. per Hr. SR	Rated Surface Sq. Ft. S	Total B.t.u. per Hr. SR
5	1	...	740	2.5	630	1.66	430	1.5	390	1.5	390
10	2	...	1220	7.0	1045	3.33	850	3.3	670	3.3	670
15	3	...	1800	10.0	1570	5.00	1270	5.0	1020	5.0	1020
20	4	...	2180	12.5	1870	6.66	1530	6.6	1170	6.6	1170
25	5	...	2660	15.0	2290	8.33	1870	8.3	1430	8.3	1430
30	6	...	3140	17.5	2705	10.00	2190	10.0	1690	10.0	1690
35	7	...	3620	20.0	3120	11.66	2550	11.6	1950	11.6	1950
40	8	...	4100	22.5	3535	13.33	2890	13.3	2210	13.3	2210
45	9	...	4580	25.0	3950	15.00	3270	15.0	2470	15.0	2470
50	10	...	5060	27.5	4365	16.66	3570	16.6	2730	16.6	2730
55	11	...	5540	30.0	4780	18.33	3910	18.3	3070	18.3	3070
60	12	...	6020	32.5	5195	20.00	4250	20.0	3350	20.0	3350
65	13	...	6500	35.0	5610	21.66	4590	21.6	3630	21.6	3630
70	14	...	6980	37.5	6025	23.33	4930	23.3	3910	23.3	3910
75	15	...	7460	40.0	6440	25.00	5270	25.0	4190	25.0	4190
80	16	...	7940	42.5	6855	26.66	5610	26.6	4470	26.6	4470
85	17	...	8420	45.0	7270	28.33	5950	28.3	4750	28.3	4750
90	18	...	8900	47.5	7685	30.00	6290	30.0	5030	30.0	5030
95	19	...	9380	50.0	8100	31.66	6630	31.6	5310	31.6	5310
100	20	...	9860	52.5	8515	33.33	6970	33.3	5590	33.3	5590
TWO-COLUMN RADIATORS											
5	1	5	1050	3.33	860	2.66	725	2.33	640	2	540
10	2	10	1640	6.66	1375	5.33	1145	4.66	1020	4	865
15	3	15	2230	10.00	1890	8.00	1565	7.00	1380	6	1195
20	4	20	2820	13.33	2405	10.66	1985	9.33	1760	8	1520
25	5	25	3420	16.66	2920	13.33	2410	11.66	2135	10	1850
30	6	30	4010	20.00	3435	16.00	2830	14.00	2515	12	2170
35	7	35	4600	23.33	3950	18.66	3250	16.33	2885	14	2500
40	8	40	5190	26.66	4465	21.33	3670	18.66	3260	16	2825
45	9	45	5780	30.00	4980	24.00	4080	21.00	3635	18	3150
50	10	50	6375	33.33	5495	26.66	4500	23.33	4015	20	3475
55	11	55	6970	36.66	6010	29.33	4920	25.66	4380	22	3800
60	12	60	7560	40.00	6525	32.00	5340	28.00	4760	24	4120
65	13	65	8150	43.33	7040	34.66	5770	30.33	5130	26	4440
70	14	70	8740	46.66	7555	37.33	6190	32.66	5500	28	4760
75	15	75	9330	50.00	8070	40.00	6610	35.00	5870	30	5080
80	16	80	9920	53.33	8585	42.66	7030	37.33	6250	32	5400
85	17	85	10510	56.66	9100	45.33	7450	39.66	6620	34	5720
90	18	90	11100	60.00	9615	48.00	7870	42.00	7000	36	6040
95	19	95	11690	63.33	10130	50.66	8290	44.33	7370	38	6360
100	20	100	12280	66.66	10645	53.33	8710	46.66	7750	40	6680