

TABLE 9. DEGREE-DAYS FOR INDUSTRIAL HEATING IN VARIOUS CITIES OF THE UNITED STATES*
Annual Totals for a Normal Heating Season.

STATE	CITY	DEGREE-DAYS		STATE	CITY	DEGREE-DAYS	
		45F Base	55F Base			45F Base	55F Base
Ala.	Birmingham	6	853	Mich.	Houghton	4029	6112
	Mobile		245		Lansing	2537	4444
	Montgomery		504		Marquette	3713	5842
Aris.	Phoenix		229		Port Huron	2630	4275
	Yuma		37		Saginaw	2312	4552
Ark.	Fort Smith	329	1478		Sault Ste. Marie	4049	6575
	Little Rock	276	1188	Minn.	Duluth	4419	6774
Cal.	Eureka		1328		Minneapolis	3309	5417
	Fresno	3	718		Moorhead	4786	6572
	Independence	519	1930		St. Paul	2497	5497
	Los Angeles	24	822	Miss.	Vicksburg		468
	Red Bluff	3	803	Mo.	Columbia	1252	2939
	Sacramento		26		Hannibal	1463	3231
	San Diego		384		Kansas City	1188	2745
	San Francisco		230		St. Louis	982	2423
	San Luis Obispo				Springfield		
Col.	Denver	1548	3440	Mont.	Havre	3736	5874
	Grand Junction	1757	3433		Helena	2843	5071
	Pueblo	1499	3261		Kalispell	2874	5131
Conn.	Meriden		734	Neb.	Lincoln	3023	3850
	New Haven	1769	3237		North Platte	2291	4152
D. C.	Washington	1041	2487		Omaha	2284	3982
Fla.	Pensacola		127		Valentine	2833	4801
Ga.	Atlanta	109	1165	Nev.	Winnemucca	1670	3468
	Augusta		661	N. H.	Concord	2646	4640
	Macon		711		Atlantic City	1123	2904
	Savannah		231	N. J.	Sante Fe	1634	3106
Idaho	Boise	1045	2814	N. M.	Albany	2018	4302
	Lewiston	1034	2688		Binghamton	2073	4296
	Pocatello	2161	4140	N. Y.	Buffalo	2359	4316
Ill.	Cairo	749	2119		Ithaca	2412	4023
	Chicago	1969	3743		New York	1098	3089
	Springfield	1677	3289		Oswego	2274	4363
Ind.	Eyansville	799	2335		Rochester	2341	4231
	Indianapolis	1397	2829	N. C.	Charlotte	172	1388
Ia.	Charles City	3370	5293		Hattiesburg	229	718
	Davenport	2296	4142		Raleigh		1080
	Des Moines	2440	4180		Wilmington		729
	Dubuque	1628	4468	N. D.	Bismarck	3831	6468
	Keokuk	1826	3579		Williston	4616	6399
	Sioux City	2894	4732	Ohio	Cincinnati	1376	3003
Kan.	Concordia	1652	2690		Cleveland	1525	3795
	Dodge City	1385	2962		Columbus	1800	3355
	Topeka	1518	1811		Dayton	1487	3147
	Wichita	1152	2587		Sandusky	1949	3425
Ky.	Lexington		2557		Toledo	1990	3757
	Louisville	1073	2294	Okla.	Oklahoma City	600	1835
La.	New Orleans		30		Baker	2321	4307
	Shreveport		565	Ore.	Portland	373	1911
Me.	Eastport	2956	5236		Roseburg	272	1868
	Portland	2530	4572	Pa.	Erie	2337	3837
Md.	Baltimore	986	2491		Harrisburg	1565	3226
Mass.	Boston	1787	3603		Philadelphia	1122	2695
	Nantucket	1514	3419		Seranton	1938	3755
Mich.	Alpena	3131	5499		Pittsburgh	1377	3028
	Detroit	2240	4089	R. I.	Block Island	871	3388
	Escanaba	3699	5918	S. C.	Charleston		336
	Grand Haven	2405	3435		Columbia		759
	Grand Rapids	2332	4177		Greenville	297	1502

TABLE 9. DEGREE-DAYS FOR INDUSTRIAL HEATING IN VARIOUS CITIES OF THE UNITED STATES (Continued)
Annual Totals for a Normal Heating Season.

STATE	CITY	DEGREE-DAYS		STATE	CITY	DEGREE-DAYS	
		45F Base	55F Base			45F Base	55F Base
S. D.	Huron	3743	5678	Vt.	Burlington	3014	4984
	Pierre	3163	5234		Northfield	3652	7121
	Rapid City	2590	4628	Va.	Lynchburg	554	1928
	Yankton	2898	6045		Norfolk	260	1496
Tenn.	Chattanooga	242	1398		Richmond	549	1895
	Knoxville	431	1741	Wash.	North Head	184	2062
	Memphis	195	1284		Seattle	408	2185
	Nashville	419	1678		Spokane	1741	3672
Tex.	Abilene		915		Tacoma	507	2365
	Amarillo	788	2220		Walla Walla	993	2565
	El Paso	32	919	W. Va.	Elkins	1506	3327
	Fort Worth		754		Parkersburg	1147	2784
	Galveston		43	Wis.	Green Bay	3318	5331
	Houston		110		La Crosse	3034	3992
	Palestine		484		Madison	3067	4850
	San Antonio		305		Milwaukee	2657	4617
Utah.	Modena	1678	3981	Wyo.	Cheyenne	2500	4700
	Salt Lake City	1475	3202		Lander	3208	5450

* From Degree-Day Handbook By C. Strock and C. H. B. Hotchkiss (The Industrial Press, pp. 132-134).

INDUSTRIAL DEGREE-DAYS

When estimating the heating requirements of warehouses, factories, and other buildings where the inside temperature to be maintained differs greatly from the usual inside temperature range of 68 to 72 F, it is common to use degree-days based on temperatures of 55 to 45 F. These are generally referred to as industrial degree-days, and are listed in Table 9 for a number of cities using both 55 F and 45 F as the base. In general, the degree-days (55 F base) are used when the temperature of the heated space is to be maintained at approximately 60 F. For an inside temperature of about 50 F, the degree-days calculated on a 45 F base should be used.

The industrial degree-days are useful for estimating fuel consumption by comparison between localities in which the difference in degree-days is not too great, and where the known fuel consumption of one building may be used to determine unit consumption per degree-day.

MAXIMUM DEMANDS AND LOAD FACTORS

In one form of district heating rates, a portion of the charge is based upon the maximum demand of the building. The maximum demand may be measured in several different ways. It may be taken as the instantaneous peak or as the rate of use during any specified interval. One method is to take the average of the three highest hours during the winter. These figures are shown for a number of buildings in Detroit in Table 10.¹²

These maximum demands were measured by an attachment on the condensation meter, and therefore represent the amounts of condensation passed through the meter in the highest hours, rather than the true rate at which steam is supplied. There might be slight differences in these two quantities due to time lag and to storage of condensate in the system, but wherever this has been investigated it has been found to be negligible.