

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	4532
					Sault Ste. Marie	4049	6575
Ark.	Fort Smith	329	1478	Minn.	Duluth	4419	6774
	Little Rock	278	1188		Minneapolis	3309	5417
					Moorhead	4795	6572
					St. Paul	2497	5497
Cal.	Eureka		1328				
	Fresno	3	718	Miss.	Vicksburg		458
	Independence	519	1930				
	Los Angeles		17	Mo.	Columbia	1252	2939
	Red Bluff	24	822		Hannibal	1635	3231
	Sacramento	3	803		Kansas City	1463	2980
	San Diego		26		St. Louis	1186	2745
	San Francisco		384		Springfield	982	2423
	San Luis Obispo		230				
Col.	Denver	1548	3440	Mont.	Hayre	3736	5874
	Grand Junction	1757	3433		Helena	2843	5071
	Pueblo	1499	3281		Kalispell	2874	5131
Conn.	Meriden		734	Neb.	Lincoln	3023	3850
	New Haven	1769	3237		North Platte	2291	4152
					Omaha	2284	3982
D. C.	Washington	1041	2487		Valentine	2833	4801
Fla.	Pensacola		127	Nev.	Winnemucca	1670	3468
Ga.	Atlanta	109	1165	N. H.	Concord	2646	4640
	Augusta		661	N. J.	Atlantic City	1123	2904
	Macon		711	N. M.	Sante Fe	1634	3106
	Savannah		231				
Idaho	Boise	1045	2814	N. Y.	Albany	2018	4302
	Lewiston	1034	2588		Binghamton	2073	4296
	Pocatello	2161	4140		Buffalo	2359	4318
					Ithaca	2412	4923
Ill.	Cairo	749	2119		New York	1098	3029
	Chicago	1969	3743		Oswego	2274	4263
	Springfield	1677	3289		Rochester	2341	4231
Ind.	Evansville	799	2335	N. C.	Charlotte	172	1388
	Indianapolis	1397	2829		Hatteras		718
					Raleigh	229	1080
Ia.	Charles City	3370	5293		Wilmington		729
	Davenport	2296	4142	N. D.	Bismarck	3831	6468
	Des Moines	2440	4180		Williston	4616	6399
	Dubuque	1628	4468				
	Keokuk	1926	3579	Ohio	Cincinnati	1376	3003
	Sioux City	2894	4732		Cleveland	1525	3795
Kan.	Concordia	1652	2690		Columbus	1600	3255
	Dodge City	1385	2902		Dayton	1487	3147
	Topeka	1518	1811		Sandusky	1949	3425
	Wichita	1152	2587		Toledo	1990	3757
Ky.	Lexington		2557	Okla.	Oklahoma City	600	1835
	Louisville	1073	2294				
La.	New Orleans		30	Ore.	Baker	2321	4307
	Shreveport		565		Portland	373	1911
					Roseburg	272	1868
Me.	Eastport	2956	5236	Pa.	Erie	2337	3837
	Portland	2530	4572		Harrisburg	1565	3236
Md.	Baltimore	986	2491		Philadelphia	1122	2695
Mass.	Boston	1787	3803		Scranton	1938	3755
	Nantucket	1514	3419		Pittsburgh	1377	3023
Mich.	Alpena	3131	5499	R. I.	Block Island	871	3388
	Detroit	2240	4089	S. C.	Charleston		336
	Escanaba	3699	5918		Columbia		759
	Grand Haven	2405	3435		Greenville	297	1502
	Grand Rapids	2332	4177				

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	3162	5334		Northfield	3552	7121
	Rapid City	2590	4828	Va.	Lynchburg	554	1926
	Yankton	2898	6045		Norfolk	260	1496
					Richmond	549	1895
Tenn.	Chattanooga	242	1398	Wash.	North Head	184	2062
	Knoxville	431	1741		Seattle	408	2185
	Memphis	166	1284		Spokane	1741	3672
	Nashville	419	1878		Tacoma	507	2385
					Walla Walla	993	2565
Tex.	Abilene		915	W. Va.	Elkins	1506	3327
	Amarillo	780	2220		Parkersburg	1147	2784
	El Paso	52	919				
	Fort Worth		754	Wis.	Green Bay	3318	5331
	Galveston		43		La Crosse	3034	3992
	Houston		110		Madison	3067	4850
	Palestine		484		Milwaukee	2657	4617
	San Antonio		305				
Utah	Modena	1978	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.