

Table B41. Cooling Equipment, Floorspace for Non-Mall Buildings, 2003

	Total Floorspace (million square feet)									
	All Buildings*	Cooled Buildings	Cooling Equipment (more than one may apply)							
			Residential-Type Central Air Conditioners	Heat Pumps	Individual Air Conditioners	District Chilled Water	Central Chillers	Packaged Air Conditioning Units	Swamp Coolers	Other
All Buildings*	64,783	56,940	11,035	9,041	12,558	2,853	11,636	29,969	1,561	1,232
Building Floorspace (Square Feet)										
1,001 to 5,000	6,789	5,007	1,568	675	972	Q	Q	1,957	179	Q
5,001 to 10,000	6,585	5,408	1,523	563	1,012	Q	Q	2,741	207	Q
10,001 to 25,000	11,535	9,922	2,173	1,441	1,740	Q	456	5,260	378	Q
25,001 to 50,000	8,668	7,776	1,683	1,155	2,301	240	729	4,264	Q	Q
50,001 to 100,000	9,057	8,331	1,388	1,440	1,958	332	1,722	4,732	Q	Q
100,001 to 200,000	9,064	8,339	993	1,158	2,259	793	2,366	4,504	Q	Q
200,001 to 500,000	7,176	6,565	1,136	1,273	1,223	495	3,023	3,834	Q	Q
Over 500,000	5,908	5,591	569	1,334	1,095	822	3,278	2,678	Q	Q
Principal Building Activity										
Education	9,874	9,200	1,263	1,674	2,607	768	2,714	4,318	Q	Q
Food Sales	1,255	1,198	173	Q	Q	N	N	784	Q	Q
Food Service	1,654	1,583	468	217	234	Q	Q	988	Q	Q
Health Care	3,163	3,157	704	625	694	297	1,524	1,694	Q	Q
Inpatient	1,905	1,899	321	412	607	279	1,348	1,108	Q	Q
Outpatient	1,258	1,258	384	213	Q	Q	176	585	N	N
Lodging	5,096	4,841	1,102	1,172	2,306	Q	1,401	2,003	Q	Q
Retail (Other Than Mall).....	4,317	4,079	624	471	564	Q	Q	2,723	Q	Q
Office	12,208	12,032	1,669	1,854	1,201	730	3,839	6,171	Q	439
Public Assembly	3,939	3,477	532	473	951	458	423	1,684	Q	Q
Public Order and Safety	1,090	1,043	Q	Q	372	Q	Q	438	Q	N
Religious Worship	3,754	3,301	946	612	847	Q	Q	1,849	Q	Q
Service	4,050	3,261	1,071	496	802	N	Q	1,466	Q	N
Warehouse and Storage	10,078	7,295	1,861	981	1,440	Q	Q	4,453	Q	Q
Other	1,738	1,636	Q	Q	Q	Q	505	881	Q	Q
Vacant	2,567	836	Q	Q	Q	Q	Q	517	Q	N
Year Constructed										
Before 1920	3,769	2,891	722	Q	1,278	Q	392	1,198	Q	Q
1920 to 1945	6,871	4,919	1,573	653	1,534	Q	1,063	2,847	Q	Q
1946 to 1959	7,045	6,045	1,175	888	2,594	359	891	3,023	Q	Q
1960 to 1969	8,101	7,125	1,421	794	1,888	446	1,776	3,596	Q	Q
1970 to 1979	10,772	9,973	1,961	1,392	2,065	456	2,323	5,400	483	Q
1980 to 1989	10,332	9,836	1,397	2,055	1,342	531	2,801	4,855	324	Q
1990 to 1999	12,360	11,304	2,066	2,038	1,366	804	1,426	6,264	252	Q
2000 to 2003	5,533	4,848	720	1,064	492	Q	963	2,787	Q	Q
Census Region										
Northeast	12,905	10,954	2,391	1,270	3,687	620	1,852	6,000	Q	Q
Midwest	17,080	14,484	3,609	1,063	3,488	596	2,842	8,086	Q	330
South	23,489	21,553	3,854	4,923	3,635	1,150	4,854	10,401	Q	430
West	11,310	9,950	1,181	1,785	1,749	487	2,088	5,482	1,342	Q
Climate Zone: 30-Year Average										
Under 2,000 CDD and --										
More than 7,000 HDD	10,622	8,550	1,971	739	2,321	350	1,604	4,565	515	Q
5,500-7,000 HDD	17,335	14,524	3,078	1,542	3,633	698	2,658	7,740	468	336
4,000-5,499 HDD	11,504	10,946	2,207	1,998	2,786	514	2,473	6,076	Q	Q
Fewer than 4,000 HDD	15,739	13,977	2,056	3,398	2,565	659	2,695	7,703	346	Q
2,000 CDD or More and --										
Fewer than 4,000 HDD	9,584	8,943	1,723	1,365	1,253	633	2,205	3,884	Q	Q

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			Residential-Type Central Air Conditioners	Heat Pumps	Individual Air Conditioners	District Chilled Water	Central Chillers	Packaged Air Conditioning Units	Swamp Coolers	Other
All Buildings*	64,783	56,940	11,035	9,041	12,558	2,853	11,636	29,969	1,561	1,232
Number of Floors										
One	25,981	21,419	4,674	3,598	3,899	259	864	12,208	733	Q
Two	16,270	14,544	3,178	2,160	3,035	302	2,017	8,436	474	330
Three	7,501	6,437	1,190	1,118	2,004	262	1,433	3,189	Q	Q
Four to Nine	10,085	9,673	1,656	1,122	2,735	1,458	3,874	4,208	Q	Q
Ten or More	4,947	4,867	338	1,043	885	571	3,447	1,927	Q	Q
Number of Workers (main shift)										
Fewer than 5	15,492	9,591	2,630	1,303	2,342	Q	Q	3,964	349	Q
5 to 9	6,166	5,726	1,461	696	1,144	Q	Q	3,025	Q	Q
10 to 19	7,803	7,304	2,035	862	1,608	Q	294	4,059	Q	Q
20 to 49	10,989	10,566	2,129	1,485	2,680	327	1,243	5,941	410	Q
50 to 99	7,934	7,428	1,097	1,339	1,710	505	1,736	4,517	Q	Q
100 to 249	6,871	6,806	776	1,427	1,328	583	2,436	3,939	Q	Q
250 or More	9,528	9,519	906	1,929	1,746	1,219	5,590	4,524	Q	250
Weekly Operating Hours										
Fewer than 40	6,863	3,998	1,046	639	854	Q	267	1,758	Q	Q
40 to 48	11,622	10,508	2,414	1,542	2,362	Q	1,427	5,342	219	Q
49 to 60	15,723	13,757	2,603	1,971	2,723	658	2,636	7,124	319	Q
61 to 84	10,334	9,691	1,757	1,572	1,649	347	1,800	5,226	Q	Q
85 to 167	7,092	6,708	1,104	797	1,072	604	983	4,101	Q	Q
Open Continuously	13,149	12,277	2,110	2,519	3,897	753	4,523	6,417	418	357
Multibuilding Facility										
Not Part of a Multibuilding										
Facility	40,048	35,976	7,374	5,294	7,718	Q	6,043	20,580	1,009	542
College or University	3,480	3,277	Q	329	492	1,221	1,310	590	Q	Q
Primary or Secondary School	3,947	3,560	402	828	887	Q	1,077	1,687	Q	Q
Office Complex	2,712	2,591	336	451	Q	Q	502	1,473	Q	Q
Retail Complex	1,238	919	Q	Q	Q	N	Q	603	Q	Q
Religious Campus or Complex	2,347	2,089	806	340	487	Q	Q	1,267	Q	Q
Health Care Complex	2,303	2,295	435	537	686	297	1,316	1,129	Q	Q
Lodging or Resort Complex	912	907	Q	251	548	Q	Q	264	Q	Q
Government Complex	2,014	1,509	Q	Q	436	Q	405	682	Q	Q
Other	5,783	3,816	953	689	895	Q	570	1,693	Q	Q

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			Residential-Type Central Air Conditioners	Heat Pumps	Individual Air Conditioners	District Chilled Water	Central Chillers	Packaged Air Conditioning Units	Swamp Coolers	Other
All Buildings*	64,783	56,940	11,035	9,041	12,558	2,853	11,636	29,969	1,561	1,232
Renovations in Buildings Constructed Before 1980 (more than one may apply)										
Any Type of Renovation										
Since 1980	17,844	16,221	3,225	2,431	5,220	705	4,243	9,203	555	441
Addition or Annex	6,551	6,173	1,367	1,257	2,236	339	1,696	3,971	Q	Q
Reduction In Floorspace	1,012	1,012	Q	Q	Q	Q	428	664	Q	Q
Cosmetic Improvements	13,119	12,360	2,479	1,646	4,194	476	3,474	7,255	335	252
Wall or Roof Replacement	8,070	7,607	1,257	1,160	2,540	298	2,385	4,590	Q	Q
Interior Wall										
Re-Configuration	8,518	8,096	1,452	1,147	2,460	445	2,607	5,263	Q	Q
HVAC Equipment Upgrade	10,768	10,341	1,968	1,815	3,196	537	3,417	6,158	393	Q
Lighting Upgrade	10,275	9,718	1,914	1,452	3,133	527	3,052	5,762	353	Q
Window Replacement	6,354	5,875	1,162	782	2,521	Q	1,541	3,678	Q	Q
Plumbing System Upgrade	7,144	6,728	1,164	1,056	2,442	299	2,165	4,170	Q	Q
Insulation Upgrade	4,015	3,801	966	547	995	Q	983	2,326	Q	Q
Other Renovation	523	444	Q	Q	Q	N	Q	Q	Q	N
No Renovations Since 1980	18,714	14,732	3,626	1,452	4,138	707	2,202	6,861	414	Q
Building Newer than 1980	28,225	25,987	4,184	5,157	3,200	1,441	5,191	13,905	592	454
Energy Sources (more than one may apply)										
Electricity	63,307	56,925	11,035	9,041	12,558	2,853	11,636	29,969	1,561	1,217
Natural Gas	43,468	41,023	7,982	5,832	9,114	1,765	9,100	23,806	1,265	808
Fuel Oil	15,157	13,890	2,323	2,520	4,220	986	6,049	6,860	354	505
District Heat	5,443	4,653	Q	404	900	2,311	1,837	1,162	Q	Q
District Chilled Water	2,853	2,853	Q	251	439	2,853	Q	511	Q	Q
Propane	7,076	5,713	1,299	1,072	2,111	Q	754	3,083	299	Q
Other	1,401	1,225	255	Q	370	Q	361	602	Q	Q
Cooling Energy Sources (more than one may apply)										
Electricity	54,321	54,321	10,946	9,030	12,558	924	11,054	29,756	1,561	1,091
Natural Gas	1,018	1,018	Q	325	Q	Q	782	554	Q	Q
District Chilled Water	2,853	2,853	Q	251	439	2,853	Q	511	Q	Q
Energy End Uses (more than one may apply)										
Buildings with Space Heating	60,028	55,188	10,617	8,921	12,167	2,734	11,440	29,007	1,451	1,203
Buildings with Cooling	56,940	56,940	11,035	9,041	12,558	2,853	11,636	29,969	1,561	1,232
Buildings with Water Heating	56,478	53,232	10,156	8,586	11,642	2,655	11,589	28,255	1,526	1,198
Buildings with Cooking	22,237	21,451	4,013	4,239	6,186	1,274	7,320	11,986	678	584
Buildings with Manufacturing	3,138	2,655	690	286	596	Q	Q	1,701	Q	Q
Buildings with Electricity Generation	12,821	12,746	1,704	2,608	2,656	1,272	6,047	6,587	304	529
Percent of Floorspace Cooled										
Not Cooled	7,843	N	N	N	N	N	N	N	N	N
1 to 50	16,598	16,598	4,453	1,573	5,424	Q	462	8,900	489	Q
51 to 99	13,211	13,211	2,332	2,334	3,170	829	4,304	7,331	522	261
100	27,132	27,132	4,250	5,134	3,964	1,985	6,870	13,738	550	766

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	All Buildings*	Cooled Buildings	Cooling Equipment (more than one may apply)							
			Residential-Type Central Air Conditioners	Heat Pumps	Individual Air Conditioners	District Chilled Water	Central Chillers	Packaged Air Conditioning Units	Swamp Coolers	Other
All Buildings*	64,783	56,940	11,035	9,041	12,558	2,853	11,636	29,969	1,561	1,232
Heating Equipment (more than one may apply)										
Heat Pumps	8,814	8,780	1,356	8,366	2,049	Q	1,992	3,446	Q	Q
Packaged Heat Pumps	5,442	5,430	800	5,174	1,373	Q	1,310	2,526	Q	Q
Split-System Heat Pumps	2,581	2,559	901	2,452	589	Q	592	783	Q	Q
Individual Room Heat Pumps	2,691	2,691	478	2,610	963	Q	917	1,346	Q	Q
Furnaces	19,615	17,494	6,251	2,111	4,077	Q	1,352	9,995	718	Q
Individual Space Heaters	12,545	11,526	2,933	1,774	4,558	Q	2,175	6,288	611	Q
District Heat	5,166	4,376	Q	404	758	2,231	1,737	1,023	Q	Q
Boilers	20,423	19,051	3,352	2,919	5,926	391	7,857	9,946	620	596
Packaged Heating Units	18,021	17,745	2,812	3,065	3,722	370	2,703	14,747	347	Q
Other	3,262	2,961	495	381	579	Q	979	1,255	Q	Q
Cooling Equipment (more than one may apply)										
Residential-Type Central										
Air Conditioners	11,035	11,035	11,035	1,319	2,195	Q	1,342	3,057	211	Q
Heat Pumps	9,041	9,041	1,319	9,041	2,139	251	2,050	3,472	Q	Q
Packaged Heat Pumps	5,426	5,426	772	5,426	1,301	Q	1,258	2,442	Q	Q
Split-System Heat Pumps	2,606	2,606	914	2,606	632	Q	648	799	Q	Q
Individual Room Heat Pumps	2,940	2,940	471	2,940	1,052	Q	1,018	1,456	Q	Q
Individual Air Conditioners	12,558	12,558	2,195	2,139	12,558	439	1,896	5,678	436	Q
District Chilled Water	2,853	2,853	Q	251	439	2,853	Q	511	Q	Q
Central Chillers	11,636	11,636	1,342	2,050	1,896	Q	11,636	3,759	Q	Q
Packaged Air Conditioning										
Units	29,969	29,969	3,057	3,472	5,678	511	3,759	29,969	627	407
Swamp Coolers	1,561	1,561	211	Q	436	Q	Q	627	1,561	Q
Other	1,232	1,232	Q	Q	Q	Q	Q	407	Q	1,232
Main Equipment Replaced Since 1990 (more than one may apply)										
Heating	16,403	15,190	3,284	2,370	4,138	Q	2,388	8,431	488	Q
Cooling	20,995	20,995	4,305	3,352	6,419	Q	4,495	10,995	716	Q
Lighting Equipment Types (more than one may apply)										
Incandescent	38,528	36,075	7,231	6,153	9,229	1,768	9,518	18,592	1,019	798
Standard Fluorescent	59,688	55,117	10,670	8,862	12,036	2,784	11,452	29,192	1,528	1,199
Compact Fluorescent	27,571	26,790	4,684	5,151	6,158	1,909	9,374	13,867	622	781
High Intensity Discharge	20,643	19,054	3,627	4,048	4,427	1,040	6,081	10,844	583	490
Halogen	17,703	17,115	3,026	3,522	4,280	725	5,888	9,955	508	556
Other	269	269	Q	Q	Q	Q	Q	Q	N	N
HVAC Conservation Features (more than one may apply)										
Variable Air-Volume System	19,597	19,255	2,264	2,885	3,081	1,923	8,288	9,973	322	569
Economizer Cycle	21,108	21,108	2,559	3,708	3,267	1,930	8,488	12,414	528	438
HVAC Maintenance	51,163	47,935	8,670	7,946	9,884	2,795	11,430	26,294	1,323	1,167
Energy Management and Control System (EMCS)	15,630	15,358	1,632	2,852	2,191	1,771	7,114	7,308	238	418

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All Buildings*	64,783	56,940	11,035	9,041	12,558	2,853	11,636	29,969	1,561	1,232
Equipment Usage Reduced When Building Not In Full Use (more than one may apply)^a										
Heating	42,722	39,864	7,513	6,400	8,005	1,924	8,425	21,316	1,062	739
Cooling	43,205	43,205	8,376	6,789	8,952	2,264	8,619	22,962	1,148	748
Lighting	46,987	42,589	8,500	6,285	8,293	1,976	6,814	22,584	1,111	790
Office Equipment	19,397	17,749	3,912	2,441	4,170	751	2,242	9,069	289	Q

See "Guide to the Tables" or "Glossary" for further explanations of the terms used in this table. Both can be accessed from the CBECS web site - <http://www.eia.doe.gov/emeu/cbecs>.

* Figures in this table do not include enclosed malls and strip malls. Mall buildings add an estimated 213 thousand buildings comprising 6.9 billion square feet.

^a The definition for one or more of these row items has changed and may not be directly comparable with past CBECS estimates. See "Guide to the Tables" for discussion of the differences.

Q=Data withheld because the Relative Standard Error (RSE) was greater than 50 percent, or fewer than 20 buildings were sampled.

N=No responding cases in sample.

Notes: ● HVAC = Heating, Ventilation, and Air Conditioning. ● Due to rounding, data may not sum to totals.

Source: Energy Information Administration, Office of Energy Markets and End Use, Form EIA-871A of the 2003 Commercial Buildings Energy Consumption Survey.