

Table HC7.4 Air conditioning in U.S. homes, by number of household members, 2020

Number of housing units (million)

	Number of household members					
	Total U.S. ^a	1 member	2 members	3 members	4 members	5 or more members
All homes	123.53	33.59	45.31	18.27	15.56	10.81
Air-conditioning equipment						
Uses air-conditioning equipment	108.92	28.64	40.83	16.07	13.85	9.54
Does not use air-conditioning equipment	14.61	4.94	4.48	2.20	1.71	1.27
Apartment primarily air conditioned by equipment that serves multiple units in the building						
Yes	6.85	3.09	2.06	0.79	0.49	0.42
No	20.04	8.86	6.45	2.05	1.61	1.07
Does not use air-conditioning equipment	5.29	2.52	1.32	0.70	0.48	0.26
Not asked (single family and mobile homes)	91.35	19.11	35.49	14.72	12.97	9.06
Main type of air-conditioning equipment used						
Central air-conditioning equipment (including central heat pump)	82.12	20.05	31.69	12.31	10.72	7.35
Ductless heat pump (mini-split)	1.76	0.47	0.64	0.27	0.22	0.16
Window or wall air conditioner	21.40	7.15	7.12	2.96	2.38	1.78
Portable air conditioner	2.68	0.74	0.95	0.39	0.42	0.17
Evaporative or swamp cooler	0.95	0.23	0.43	0.13	0.10	0.06
Does not use air-conditioning equipment	14.61	4.94	4.48	2.20	1.71	1.27
Main air-conditioning equipment age						
Less than 2 years old	15.63	3.54	5.75	2.58	2.22	1.55
2 to 4 years old	21.76	5.27	8.20	3.35	3.04	1.89
5 to 9 years old	29.49	7.62	11.03	4.44	3.62	2.78
10 to 14 years old	20.49	5.59	7.49	2.94	2.62	1.85
15 to 19 years old	11.01	3.21	4.30	1.53	1.23	0.75
20 or more years old	10.55	3.42	4.05	1.24	1.11	0.72
Does not use air-conditioning equipment	14.61	4.94	4.48	2.20	1.71	1.27
Secondary type of air-conditioning equipment used						
No other equipment used	99.58	26.92	37.46	14.48	12.36	8.36
Central air-conditioning equipment (including central heat pump)	0.86	0.09	0.40	0.12	0.13	0.11
Ductless heat pump (mini-split)	0.81	0.10	0.34	0.11	0.18	0.07
Window or wall air conditioner	4.62	0.91	1.58	0.82	0.74	0.57
Portable air conditioner	2.64	0.55	0.91	0.46	0.37	0.36
Evaporative or swamp cooler	0.41	Q	0.14	Q	0.06	Q
Does not use air-conditioning equipment	14.61	4.94	4.48	2.20	1.71	1.27

Table HC7.4 Air conditioning in U.S. homes, by number of household members, 2020

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	Total U.S. ^a	1 member	2 members	3 members	4 members	5 or more members
All homes	123.53	33.59	45.31	18.27	15.56	10.81
Number of ductless heat pump indoor units						
One	1.21	0.25	0.50	0.19	0.18	0.09
Two	0.64	0.15	0.27	0.07	0.11	Q
Three	0.32	0.10	0.11	Q	Q	Q
Four or more	0.41	0.07	0.10	0.12	0.06	0.06
Does not use a ductless heat pump	106.35	28.07	39.85	15.68	13.44	9.30
Number of window or wall air conditioners used						
One	11.89	4.93	3.74	1.31	1.20	0.70
Two	8.24	2.31	3.12	1.18	0.89	0.73
Three	3.72	0.61	1.26	0.82	0.55	0.48
Four or more	2.18	0.21	0.58	0.46	0.49	0.44
Does not use window or wall air conditioners	82.89	20.58	32.13	12.29	10.72	7.18
Number of portable air conditioners used						
One	3.64	0.92	1.32	0.62	0.49	0.28
Two	1.28	0.34	0.43	0.19	0.20	0.13
Three	0.29	Q	0.09	Q	0.06	0.09
Four or more	0.10	Q	Q	Q	Q	Q
Does not use portable air conditioners	103.60	27.35	38.96	15.22	13.06	9.01
Has thermostat						
Yes	109.35	28.82	40.80	16.30	13.97	9.45
Smart or internet-connected thermostat	12.78	1.53	4.65	2.51	2.65	1.44
Programmable thermostat	52.49	12.88	20.04	7.83	6.89	4.86
Non-programmable thermostat	44.08	14.42	16.12	5.97	4.43	3.15
No	12.73	4.16	4.18	1.80	1.43	1.16
Does not use heating or air-conditioning equipment	1.45	0.61	0.33	0.16	0.16	0.20

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		1 member	2 members	3 members	4 members	5 or more members
All homes	123.53	33.59	45.31	18.27	15.56	10.81
Air-conditioning equipment control						
Sets one temperature and leaves it there most of the time	45.50	12.02	16.98	6.73	5.56	4.21
Manually adjusts the temperature	25.20	7.18	9.69	3.63	2.80	1.89
Programmable or smart thermostat automatically adjusts the temperature	16.59	2.58	6.52	2.81	2.95	1.72
Turns equipment on or off as needed	18.56	6.15	6.56	2.39	2.06	1.40
Household does not have control over the air-conditioning equipment	3.04	0.71	1.06	0.49	0.46	0.32
Controls air-conditioning equipment some other way	Q	N	Q	N	Q	N
Does not use air-conditioning equipment	14.61	4.94	4.48	2.20	1.71	1.27
Summer indoor daytime temperature when someone is home						
69 degrees or less	22.99	6.12	7.39	3.75	3.42	2.29
70 degrees	18.41	4.77	6.57	2.98	2.31	1.78
71 to 73 degrees	23.68	5.71	9.51	3.62	3.03	1.81
74 to 76 degrees	27.09	7.22	10.69	3.66	3.19	2.33
77 to 79 degrees	11.68	3.23	4.84	1.43	1.32	0.86
80 degrees or more	5.07	1.59	1.82	0.63	0.58	0.47
Does not use air-conditioning equipment	14.61	4.94	4.48	2.20	1.71	1.27
Summer indoor daytime temperature when no one is home						
69 degrees or less	18.96	5.20	6.03	3.07	2.83	1.83
70 degrees	14.13	3.71	4.91	2.38	1.73	1.40
71 to 73 degrees	17.00	4.14	6.74	2.57	1.98	1.57
74 to 76 degrees	27.10	6.97	10.97	3.89	3.19	2.08
77 to 79 degrees	15.04	3.83	6.15	2.01	1.86	1.19
80 degrees or more	16.69	4.79	6.03	2.14	2.25	1.47
Does not use air-conditioning equipment	14.61	4.94	4.48	2.20	1.71	1.27

Table HC7.4 Air conditioning in U.S. homes, by number of household members, 2020

	Number of housing units (million)					
	Number of household members					
	Total U.S. ^a	1 member	2 members	3 members	4 members	5 or more members
All homes	123.53	33.59	45.31	18.27	15.56	10.81
Summer indoor temperature at night						
69 degrees or less	30.19	7.98	10.55	4.65	4.27	2.74
70 degrees	19.70	4.99	7.11	3.20	2.54	1.86
71 to 73 degrees	22.74	5.46	9.03	3.43	2.94	1.88
74 to 76 degrees	23.06	6.25	9.08	3.19	2.54	1.99
77 to 79 degrees	9.07	2.71	3.54	1.03	1.12	0.67
80 degrees or more	4.15	1.25	1.52	0.56	0.43	0.39
Does not use air-conditioning equipment	14.61	4.94	4.48	2.20	1.71	1.27
Air-conditioned basement						
Yes	17.18	2.67	6.83	2.83	2.83	2.02
No	16.26	3.41	6.57	2.66	2.23	1.39
Not asked (air-conditioned homes with no basement)	42.54	8.74	16.89	6.86	6.01	4.04
Not asked (un-air-conditioned homes, apartments, and mobile homes)	47.55	18.77	15.02	5.92	4.49	3.35
Air-conditioned attic						
Yes	2.22	0.34	0.68	0.43	0.48	0.31
No	49.78	9.30	20.13	8.14	7.46	4.75
Not asked (air-conditioned homes with no attic)	23.97	5.18	9.48	3.79	3.13	2.40
Not asked (un-air-conditioned homes, apartments, and mobile homes)	47.55	18.77	15.02	5.92	4.49	3.35
Air-conditioned attached garage						
Yes	1.64	0.22	0.62	0.32	0.28	0.21
No	45.97	7.93	18.49	7.67	7.17	4.71
Not asked (air-conditioned homes with no attached garage)	28.37	6.68	11.18	4.37	3.62	2.53
Not asked (un-air-conditioned homes, apartments, and mobile homes)	47.55	18.77	15.02	5.92	4.49	3.35
Dehumidifier usage						
Uses a dehumidifier	20.53	3.81	8.73	3.32	2.82	1.84
Uses only occasionally	2.95	0.42	1.02	0.65	0.61	0.25
Uses only during summer months	8.30	1.84	3.59	1.30	0.98	0.59
Uses about half of the year	3.14	0.50	1.42	0.41	0.47	0.34
Uses all or almost all of the year	6.11	1.05	2.69	0.95	0.75	0.66
Does not use a dehumidifier	103.00	29.77	36.58	14.95	12.73	8.97

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	Number of housing units (million)					
	Total U.S. ^a	Number of household members				
		1 member	2 members	3 members	4 members	5 or more members
All homes	123.53	33.59	45.31	18.27	15.56	10.81
Fan types used (more than one may apply)						
Ceiling fans	89.45	21.80	34.06	13.61	11.72	8.26
Floor or window fans	54.39	13.85	19.50	8.57	7.30	5.17
Whole house fans	7.99	1.41	2.87	1.29	1.30	1.12
Attic fans	10.72	1.89	4.49	1.76	1.50	1.08
Number of ceiling fans used						
0	34.08	11.79	11.25	4.66	3.84	2.55
1	19.94	6.86	6.96	2.56	2.02	1.53
2	19.42	5.76	7.11	2.63	2.27	1.66
3	16.02	3.79	6.65	2.42	1.89	1.28
4 or more	34.07	5.39	13.34	6.00	5.54	3.80
Most used ceiling fan usage						
Uses a ceiling fan	89.45	21.80	34.06	13.61	11.72	8.26
Uses only occasionally	28.83	8.18	10.84	4.28	3.24	2.30
Uses only during summer months	22.13	5.47	8.63	2.90	3.15	1.98
Uses about half of the year	9.56	2.30	3.84	1.49	1.11	0.82
Uses all or almost all of the year	28.92	5.85	10.75	4.95	4.22	3.15
Does not use a ceiling fan	34.08	11.79	11.25	4.66	3.84	2.55
Number of floor or window fans used						
0	69.14	19.74	25.81	9.70	8.26	5.64
1	24.53	8.27	9.27	3.08	2.43	1.49
2	18.85	4.11	7.09	3.41	2.54	1.71
3	7.04	1.05	2.10	1.42	1.42	1.04
4 or more	3.96	0.43	1.04	0.66	0.91	0.93

Source: U.S. Energy Information Administration, Office of Energy Demand and Integrated Statistics, Form EIA-457A of the *2020 Residential Energy Consumption Survey*

Notes: Because of rounding, data may not sum to totals. See RECS Terminology for the definitions of terms used in these tables.

^a *Total U.S.* includes all primary occupied housing units in the 50 states and the District of Columbia. Vacant housing units, seasonal units, second homes, military houses, and group quarters are excluded.

Q = Data withheld because either the relative standard error (RSE) was greater than 50% or fewer than 10 households were in the reporting sample.

N = No households in reporting sample.

Preliminary data release date: May 2022

Relative standard errors (RSEs) for Table HC7.4 Air conditioning in U.S. homes, by number of household members, 2020

RSEs for number of housing units

	Number of household members					
	Total U.S. ^a	1 member	2 members	3 members	4 members	5 or more members
All homes	0.00	1.25	1.15	1.87	2.08	3.13
Air-conditioning equipment						
Uses air-conditioning equipment	0.36	1.39	1.14	1.96	2.12	3.46
Does not use air-conditioning equipment	2.70	5.04	5.26	6.56	8.31	8.46
Apartment primarily air conditioned by equipment that serves multiple units in the building						
Yes	4.12	6.74	7.12	13.97	15.23	16.22
No	1.64	2.86	3.75	6.08	8.51	12.52
Does not use air-conditioning equipment	3.88	6.76	9.97	12.93	16.24	25.72
Not asked (single family and mobile homes)	0.00	1.81	1.22	1.99	2.35	3.03
Main type of air-conditioning equipment used						
Central air-conditioning equipment (including central heat pump)	0.57	1.88	1.41	2.40	2.45	3.53
Ductless heat pump (mini-split)	6.82	16.19	11.42	17.31	20.49	22.43
Window or wall air conditioner	2.05	3.83	3.44	4.39	5.79	8.99
Portable air conditioner	5.77	12.14	9.81	15.59	16.18	19.39
Evaporative or swamp cooler	8.39	15.27	12.77	20.02	22.99	36.51
Does not use air-conditioning equipment	2.70	5.04	5.26	6.56	8.31	8.46
Main air-conditioning equipment age						
Less than 2 years old	2.46	5.60	3.64	6.30	6.88	8.22
2 to 4 years old	1.90	3.42	3.62	4.96	4.90	7.55
5 to 9 years old	1.35	2.69	2.58	4.59	4.76	5.09
10 to 14 years old	1.99	3.75	3.91	5.22	5.43	8.21
15 to 19 years old	2.71	4.99	4.32	7.69	8.23	9.30
20 or more years old	3.06	5.39	5.05	7.95	7.21	11.15
Does not use air-conditioning equipment	2.70	5.04	5.26	6.56	8.31	8.46

Relative standard errors (RSEs) for Table HC7.4 Air conditioning in U.S. homes, by number of household members, 2020**RSEs for number of housing units**

	Number of household members					
	Total U.S. ^a	1 member	2 members	3 members	4 members	5 or more members
All homes	0.00	1.25	1.15	1.87	2.08	3.13
Secondary type of air-conditioning equipment used						
No other equipment used	0.48	1.48	1.13	2.05	2.31	3.75
Central air-conditioning equipment (including central heat pump)	9.79	33.43	14.47	24.48	27.30	25.72
Ductless heat pump (mini-split)	10.68	29.55	14.31	22.62	21.73	35.80
Window or wall air conditioner	4.16	9.59	8.61	9.61	10.58	14.50
Portable air conditioner	5.52	13.19	8.96	14.06	14.13	19.79
Evaporative or swamp cooler	15.63	38.89	28.04	35.83	30.56	45.76
Does not use air-conditioning equipment	2.70	5.04	5.26	6.56	8.31	8.46
Number of ductless heat pump indoor units						
One	9.21	25.51	13.98	19.14	21.82	31.66
Two	10.49	24.48	14.85	33.87	23.34	49.84
Three	16.59	30.55	24.23	54.10	36.09	43.28
Four or more	13.67	33.55	25.98	24.13	34.71	32.68
Does not use a ductless heat pump	0.38	1.34	1.10	2.02	2.21	3.41
Does not use air-conditioning equipment	2.70	5.04	5.26	6.56	8.31	8.46
Number of window or wall air conditioners used						
One	2.63	4.52	4.62	8.75	9.97	11.32
Two	3.21	6.41	5.19	8.11	8.86	11.62
Three	4.52	14.79	7.97	9.44	11.74	14.32
Four or more	6.10	21.81	11.01	12.05	14.98	14.52
Does not use window or wall air conditioners	0.58	1.79	1.32	2.33	2.46	3.52
Does not use air-conditioning equipment	2.70	5.04	5.26	6.56	8.31	8.46
Number of portable air conditioners used						
One	4.80	9.25	8.26	12.33	14.10	22.81
Two	9.08	19.40	14.32	21.25	20.79	26.40
Three	15.80	49.10	28.88	54.10	34.63	31.61
Four or more	23.68	100.18	44.17	74.30	45.56	43.88
Does not use portable air conditioners	0.43	1.57	1.17	1.95	2.14	3.61
Does not use air-conditioning equipment	2.70	5.04	5.26	6.56	8.31	8.46

Relative standard errors (RSEs) for Table HC7.4 Air conditioning in U.S. homes, by number of household members, 2020

RSEs for number of housing units

	Number of household members					
	Total U.S. ^a	1 member	2 members	3 members	4 members	5 or more members
All homes	0.00	1.25	1.15	1.87	2.08	3.13
Has thermostat						
Yes	0.34	1.37	1.16	1.88	2.08	3.50
Smart or internet-connected thermostat	2.22	7.25	4.07	5.87	4.62	7.57
Programmable thermostat	0.88	2.59	2.06	2.94	3.32	4.49
Non-programmable thermostat	1.29	1.91	2.32	3.31	3.75	6.56
No	2.69	5.06	4.71	7.51	8.55	10.10
Does not use heating or air-conditioning equipment	8.80	16.23	14.98	27.98	29.83	25.52
Air-conditioning equipment control						
Sets one temperature and leaves it there most of the time	1.23	2.73	2.01	3.74	3.76	5.30
Manually adjusts the temperature	1.60	2.93	2.79	4.81	5.27	6.41
Programmable or smart thermostat automatically adjusts the temperature	1.72	4.33	3.48	5.67	4.09	7.74
Turns equipment on or off as needed	2.02	3.51	3.73	5.74	7.02	7.93
Household does not have control over the air-conditioning equipment	5.17	11.59	9.53	15.38	15.44	18.03
Controls air-conditioning equipment some other way	59.14	0.00	71.74	0.00	100.40	0.00
Does not use air-conditioning equipment	2.70	5.04	5.26	6.56	8.31	8.46
Summer indoor daytime temperature when someone is home						
69 degrees or less	1.60	3.57	3.09	4.26	4.59	7.05
70 degrees	2.03	4.03	3.58	5.56	5.95	6.66
71 to 73 degrees	1.51	3.69	2.56	3.95	4.79	5.59
74 to 76 degrees	1.49	3.41	2.25	4.79	5.00	6.76
77 to 79 degrees	2.57	5.59	4.44	8.71	8.68	9.79
80 degrees or more	3.78	7.42	6.94	13.32	10.59	15.82
Does not use air-conditioning equipment	2.70	5.04	5.26	6.56	8.31	8.46

Preliminary data release date: May 2022

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RSEs for number of housing units

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All homes	0.00	1.25	1.15	1.87	2.08	3.13
Summer indoor daytime temperature when no one is home						
69 degrees or less	1.89	4.05	3.35	4.37	5.29	6.88
70 degrees	2.28	4.86	3.66	6.38	8.04	8.11
71 to 73 degrees	1.80	3.36	3.05	4.92	5.68	7.29
74 to 76 degrees	1.51	3.02	2.88	4.60	4.40	6.68
77 to 79 degrees	2.07	4.36	4.18	5.68	7.26	9.97
80 degrees or more	2.14	4.35	3.60	6.58	6.59	7.97
Does not use air-conditioning equipment	2.70	5.04	5.26	6.56	8.31	8.46
Summer indoor temperature at night						
69 degrees or less	1.29	3.12	2.47	3.96	4.13	5.87
70 degrees	2.02	3.74	3.03	5.49	5.35	7.02
71 to 73 degrees	1.73	3.72	2.59	4.73	4.72	6.81
74 to 76 degrees	1.55	3.80	3.00	5.41	5.52	7.32
77 to 79 degrees	3.09	5.77	5.46	9.76	9.34	13.16
80 degrees or more	4.89	8.30	8.58	13.76	15.29	19.61
Does not use air-conditioning equipment	2.70	5.04	5.26	6.56	8.31	8.46
Air-conditioned basement						
Yes	1.74	5.81	2.66	4.89	4.73	6.19
No	1.80	4.51	2.89	4.44	5.18	7.74
Not asked (air-conditioned homes with no basement)	0.62	2.79	1.69	3.62	3.86	4.90
Not asked (un-air-conditioned homes, apartments, and mobile homes)	0.58	1.84	2.24	3.81	5.01	5.68
Air-conditioned attic						
Yes	5.62	14.96	9.34	15.42	12.11	15.83
No	0.76	2.84	1.60	2.61	3.32	4.02
Not asked (air-conditioned homes with no attic)	1.56	4.12	2.26	4.63	5.46	4.63
Not asked (un-air-conditioned homes, apartments, and mobile homes)	0.58	1.84	2.24	3.81	5.01	5.68

Relative standard errors (RSEs) for Table HC7.4 Air conditioning in U.S. homes, by number of household members, 2020

RSEs for number of housing units

	Number of household members					
	Total U.S. ^a	1 member	2 members	3 members	4 members	5 or more members
All homes	0.00	1.25	1.15	1.87	2.08	3.13
Air-conditioned attached garage						
Yes	6.88	17.15	11.49	14.70	14.28	25.04
No	0.67	2.79	1.71	2.98	3.34	3.75
Not asked (air-conditioned homes with no attached garage)	1.37	3.72	2.75	4.41	4.99	5.82
Not asked (un-air-conditioned homes, apartments, and mobile homes)	0.58	1.84	2.24	3.81	5.01	5.68
Dehumidifier usage						
Uses a dehumidifier	1.57	4.67	2.91	4.56	6.19	6.82
Uses only occasionally	5.43	15.54	8.09	12.77	13.42	18.10
Uses only during summer months	2.63	7.17	4.74	7.14	9.30	11.79
Uses about half of the year	5.38	11.12	7.48	15.14	12.62	14.68
Uses all or almost all of the year	3.33	7.73	5.82	8.47	10.98	9.83
Does not use a dehumidifier	0.31	1.26	1.32	2.32	2.44	3.51
Fan types used (more than one may apply)						
Ceiling fans	0.49	1.77	1.26	2.39	2.33	3.37
Floor or window fans	0.71	2.19	2.07	3.20	3.07	4.65
Whole house fans	2.75	8.69	5.26	8.26	6.92	8.22
Attic fans	2.19	5.93	3.88	7.34	5.61	7.81
Number of ceiling fans used						
0	1.30	2.91	2.46	4.07	4.69	6.37
1	1.98	3.57	3.60	6.52	6.33	7.48
2	1.63	3.49	2.68	5.56	6.17	7.14
3	1.95	4.66	3.32	6.17	8.03	7.33
4 or more	1.16	3.45	2.38	3.34	3.05	4.58
Most used ceiling fan usage						
Uses a ceiling fan	0.49	1.77	1.26	2.39	2.33	3.37
Uses only occasionally	1.31	3.08	2.87	3.86	5.12	5.90
Uses only during summer months	1.76	3.52	2.99	4.90	4.72	6.95
Uses about half of the year	3.28	6.26	4.57	7.54	7.62	11.08
Uses all or almost all of the year	1.36	3.35	2.59	3.88	4.14	5.48
Does not use a ceiling fan	1.30	2.91	2.46	4.07	4.69	6.37

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Relative standard errors (RSEs) for Table HC7.4 Air conditioning in U.S. homes, by number of household members, 2020

RSEs for number of housing units

	Number of household members					
	Total U.S. ^a	1 member	2 members	3 members	4 members	5 or more members
All homes	0.00	1.25	1.15	1.87	2.08	3.13
Number of floor or window fans used						
0	0.56	1.71	1.45	2.72	2.95	3.90
1	1.82	3.23	3.32	5.53	6.05	8.37
2	2.24	4.59	3.80	5.20	6.39	7.74
3	3.51	10.75	7.13	7.41	7.62	9.49
4 or more	4.98	17.20	10.10	9.92	8.61	11.55

Source: U.S. Energy Information Administration, Office of Energy Demand and Integrated Statistics, Form EIA-457A of the *2020 Residential Energy Consumption Survey*

Notes: Because of rounding, data may not sum to totals. See RECS Terminology for the definitions of terms used in these tables.

^a *Total U.S.* includes all primary occupied housing units in the 50 states and the District of Columbia. Vacant housing units, seasonal units, second homes, military houses, and group quarters are excluded.