

Air Purifier Sizing Chart

This Air Purifier or Air Cleaner sizing chart is based off the metrics used by AHAM in calculating the CADR values. The CADR values are based on 5 air changers per hour (ACH) and an 8-foot (2.4m) ceiling. The chart has two major columns, one based on Air Changes per Hour and the other based on ceiling height.

PORTABLE AIR PURIFIER / CLEANER SIZING CHART																
ROOM SIZE		CADR (CFM based on ACH)							CADR (CFM based on Ceiling height at 5 ACH)							
Square Meter (m2)	Square Feet (Ft2)	AIR CHANGES PER HOUR (ACH)							CEILING HEIGHT (Feet & Inches)							
		3	4	5	6	8	10	12	7'-0" (2.1m)	7'-6" (2.3m)	8'-0" (2.4m)	8'-6" (2.6m)	9'-0" (2.7m)	9'-6" (2.9m)	10'-0" (3.0m)	11'-0" (3.4m)
4.6	50	20	27	34	40	54	67	80	29	32	34	36	38	40	42	46
9.3	100	40	53	67	80	107	133	160	58	63	67	71	75	79	83	92
13.9	150	60	80	101	120	161	200	240	87	95	101	107	113	119	125	138
18.6	200	80	106	134	160	214	266	320	116	126	134	142	150	158	166	184
23.2	250	100	133	168	200	268	333	400	145	158	168	178	188	198	208	230
27.9	300	120	159	201	240	321	399	480	174	189	201	213	225	237	249	276
37.2	400	160	212	268	320	428	532	640	232	252	268	284	300	316	332	368
46.5	500	200	265	335	400	535	665	800	290	315	335	355	375	395	415	460
55.7	600	240	318	402	480	642	798	960	348	378	402	426	450	474	498	552
65.0	700	280	371	469	560	749	931	1,120	406	441	469	497	525	553	581	644
74.3	800	320	424	536	640	856	1,064	1,280	464	504	536	568	600	632	664	736
83.6	900	360	477	603	720	963	1,197	1,440	522	567	603	639	675	711	747	828
92.9	1000	400	530	670	800	1,070	1,330	1,600	580	630	670	710	750	790	830	920

The maximum allowable CADR that can be measured by the AC-1 method in the chamber is 450, so the maximum room size that the standard can confidently predict performance would be a room of 698 ft² (64.8 m²).

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Step 1. Measure the size of the room. Length and Width.

Step 2. Multiply the Length by the Width to determine the Square Footage or Square Meters.

Step 3. Find your room size in the first two Columns based on Ft2 or M2.

Step 4. Move across horizontally on the chart until you intersect the darken column in grey under 5 Air changers per hour and the size of your room.

Step 5. This is the CADR value for the Smoke Rating on the Air Purifier you want to look for.

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