



Cabinet Cooler Sizing

Determining Requirements for Sizing Correct Cabinet Cooler

1. Size the heat load area of the cabinet using the following formula:
(2 x W + 2 x D) Height = square feet of cabinet
Example: 3' wide, 1' deep, 4' high = 32 square feet
2. Determine inside temperature reading for maximum hotter outside temperatures:
Example: If reading is taken on a 70°F day and the temperature reads 110°F, add 25°F if the electronics will be operating during a summer day temperature of 95°F or add more if it will get hotter.
3. 90°F (32°C) is a safe operating temperature for most electronics to reduce heat stress on the controls and drying of the wafer boards.
4. Subtract the temperature of 90°F as the desired temperature inside the cabinet from the temperature reading in step 2 to determine the temperature difference, or Delta T.
5. Use the square area of your cabinet readings on the left side of the scale and match it with the temperature difference from step 4 on the top of the sizing chart.
6. The intersection of these two numbers give you the BTUs required to maintain the desired 90°F inside temperature.
7. Match the BTU reading with the proper AIRTIX Cooler.

Cabinet size	Sq Ft	BTU Requirements for Cooling Inside temperature drop needed to safe 90°F (32°C)				
		90°F	70°F	50°F	30°F	10°F
2' H x 2' W x 2' D	16	500	350	150	50	50
3' H x 3' W x 2' D	30	1100	800	450	150	100
4' H x 3' W x 1' D	32	1300	900	550	150	100
5' H x 3' W x 1' D	40	1600	1100	700	150	100
5' H x 4' W x 1' D	50	2200	1400	900	300	150
5' H x 4' W x 2' D	60	2600	1800	1100	500	200
5' H x 5' W x 2' D	70	3000	2100	1300	600	200
6' H x 4' W x 2' D	72	3100	2200	1400	700	200
6' H x 5' W x 2' D	84	3600	2600	1600	750	200
6' H x 6' W x 2' D	96	4200	3000	1900	900	200
7' H x 6' W x 2' D	112	4800	3500	2200	1000	200
7' H x 7' W x 2' D	126	5800	4100	2600	1300	250
8' H x 7' W x 8' D	144	6500	4600	2900	1450	300
8' H x 8' W x 2' D	160	7000	5200	3300	1650	350
8' H x 10' W x 2' D	192	8800	6400	5200	2100	450

NEMA Type 4,12	NEMA Type 12,4x	NEMA Type 4,12	
Alum	SS	SS	Description
75008	70008x	70008	600 BTU/H Cooler and ducting kit, muffler
75108	70108x	70108	600 BTU/H Cooler and ducting kit, muffler and 5 micro auto drain filter
75308	70308x	70308	600 BTU/H thermostatic system includes: Cooler, auto drain filter, ducting kit, muffler, thermostat, solenoid valve
75105	70105x	70105	1100 BTU/H Cooler and ducting kit, muffler
75115	70115x	70115	1100 BTU/H Cooler and ducting kit, muffler and 5 micro auto drain filter
75315	70315x	70315	1100 BTU/H thermostatic system includes: Cooler, auto drain filter, ducting kit, muffler, thermostat, solenoid valve
75025	70025x	70025	1800 BTU/H Cooler and ducting kit, muffler
75125	70125x	70125	1800 BTU/H Cooler and ducting kit, muffler and 5 micro auto drain filter
75325	70325x	70325	1800 BTU/H thermostatic system includes: Cooler, auto drain filter, ducting kit, muffler, thermostat, solenoid valve
75035	70035x	70035	2800 BTU/H Cooler and ducting kit, muffler
75135	70135x	70135	2800 BTU/H Cooler and ducting kit, muffler and 5 micro auto drain filter
75335	70335x	70335	2800 BTU/H thermostatic system includes: Cooler, auto drain filter, ducting kit, muffler, thermostat, solenoid valve
75370	70370x	70370	5600 BTU/H thermostatic system includes: 2 Coolers (model 70035), auto drain filter, ducting kit, muffler, thermostat, solenoid valve

Square meters	50°C	39°	28°C	17°C	6°C
1.49	126	88	38	13	13
2.79	280	202	113	38	25
2.97	330	227	139	38	25
3.72	405	280	176	38	25
4.65	555	353	227	75	38
5.6	655	454	280	126	50
6.50	756	530	328	151	50
6.69	781	555	353	176	50
7.80	907	655	403	189	50
8.92	1058	756	480	227	50
10.40	1210	882	554	252	50
11.71	1462	1033	655	328	63
13.38	1638	1159	730	365	76
14.86	1764	1310	832	416	88
17.84	2218	1612	1310	530	113