

## Determining Requirements for Sizing Correct Cabinet Cooler

- Size the heat load area of the cabinet using the following formula:  
 **$(2 \times W + 2 \times D) \text{ Height} = \text{square feet of cabinet}$**   
*Example: 3' wide, 1' deep, 4' high = 32 square feet*
- 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.*
- 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.
- 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.
- 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.
- The intersection of these two numbers give you the BTUs required to maintain the desired 90°F inside temperature.
- Match the BTU reading with the proper AiRTX Cooler.

NEMA Type 4,12	NEMA Type 12,4x		NEMA Type 4,12		Description
	Alum	SS	SS	SS316	
75008	70008x	70008x-316ss	70008	70008-316ss	600 BTU/H Cooler and ducting kit, muffler
75108	70108x	70108x-316ss	70108	70108-316ss	600 BTU/H Cooler and ducting kit, muffler and 5 micro auto drain filter
75308	70308x	70308x-316ss	70308	70308-316ss	600 BTU/H thermostatic system includes: Cooler, auto drain filter, ducting kit, muffler, thermostat, solenoid valve
75105	70105x	70015x-316ss	70105	70015-316ss	1100 BTU/H Cooler and ducting kit, muffler
75115	70115x	70115x-316ss	70115	70115-316ss	1100 BTU/H Cooler and ducting kit, muffler and 5 micro auto drain filter
75315	70315x	70315x-316ss	70315	70315-316ss	1100 BTU/H thermostatic system includes: Cooler, auto drain filter, ducting kit, muffler, thermostat, solenoid valve
75025	70025x	70025x-316ss	70025	70025-316ss	1800 BTU/H Cooler and ducting kit, muffler
75125	70125x	70125x-316ss	70125	70125-316ss	1800 BTU/H Cooler and ducting kit, muffler and 5 micro auto drain filter
75325	70325x	70325x-316ss	70325	70325-316ss	1800 BTU/H thermostatic system includes: Cooler, auto drain filter, ducting kit, muffler, thermostat, solenoid valve

Sizing Chart	BTU Requirements for Cooling Inside temperature drop needed to safe 90°F (32°C)					
	Sq Ft	90°F	70°F	50°F	30°F	10°F
Cabinet size						
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

75035	70035x	70035x-316ss	70035	70035-316ss	2800 BTU/H Cooler and ducting kit, muffler
75135	70135x	70135x-316ss	70135	70135-316ss	2800 BTU/H Cooler and ducting kit, muffler and 5 micro auto drain filter
75335	70335x	70335x-316ss	70335	70335-316ss	2800 BTU/H thermostatic system includes: Cooler, auto drain filter, ducting kit, muffler, thermostat, solenoid valve
			70070	70070-316ss	5600 BTUH Thermostatic System includes: 2x 70035-316ss Stainless Steel 316 Coolers + Ducting Kit
75370	70370x	70370x-316ss	70370	70370-316ss	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