

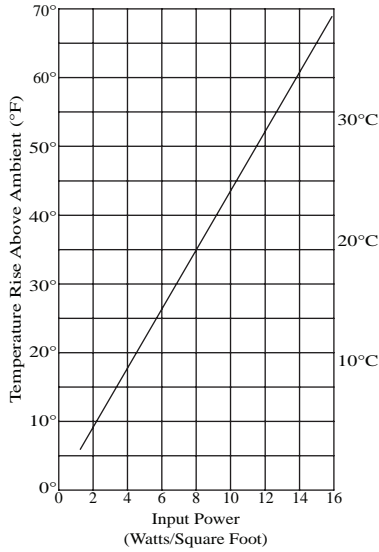
Thermal Management Chart

Enclosure Temperature Rise Heat Dissipation in Electrical Enclosures

Surface Area = 2[(Height x Width)+(Height x Depth)+(Width x Depth)]÷144
 Input Power = Watts ÷ Total Sq. Ft.

Example:

Surface Area = 2[(48 x 36) + (48 x 16) + (36 x 16)] ÷ 144 = 42 Sq. Ft.
 Input Power = 300 ÷ 42 = 8.1 Watts per Sq. Ft.



EXAMPLE

An enclosure generates 550 Watts of internal heat. Maximum temperature inside the enclosure is 100°F. The maximum temperature outside the enclosure is 85°F.

Step 1: 550 Watts

Step 2: 100°F - 85°F = 15°F
 (internal temperature difference)

Step 3: Plot application.

Step 4: Select best combination for filter and fan package(s) and exhaust grille kit(s).

Alternate Method of Selection:

Step 1: Choose a filter fan package.

Step 2: Draw a vertical line from the fan package.

Step 3: Draw a horizontal line from the internal heat load in Watts.

Step 4: The point of intersection is the approximate internal temperature difference using the selected fan package.

SCE-FA/N12FA (Fan Package)

Filter, Fan & Grille

SCE-CF (Cooling Fan)

Fan Motor & Finger Guard

SCE-BP (Blower Package)

Step 1: Determine the internal heat load in Watts.

Step 2: Determine temperature difference between the maximum temperature outside the enclosure and the maximum allowable temperature inside the enclosure.

Step 3: Plot your application on the chart.

a) Find the internal heat load in Watts. (vertical scale)

b) Draw a horizontal line to the point of intersection with the diagonal line representing temperature difference.

c) From that point, extend a vertical line down to the horizontal scale to determine your CFM requirement.

d) Continue the vertical line to the table to identify applicable filter fan package(s).

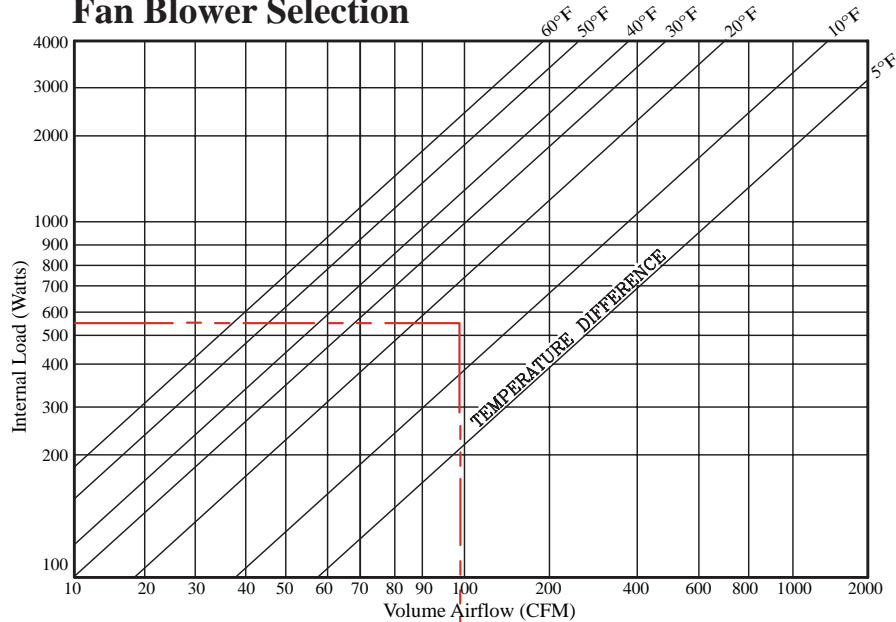
Step 4: Select the filter fan package and exhaust grille kit which best fits the application.

Help Notes - Electronic Conversions:

1 Watt = 3.413 BTU/hr

Volts x Amps = Watts

Fan Blower Selection



SCE-CF4	95/115 CFM
SCE-CF4-230	
SCE-CF6	203/238 CFM
SCE-CF6-230	
SCE-CF10	600/665 CFM
SCE-CF10-230	
SCE-FA44	63/75 CFM
SCE-FA44-230	
SCE-FA66	135/158 CFM
SCE-FA66-230	
SCE-FA1010	400/440 CFM
SCE-FA1010-230	
SCE-FA66-24VDC	155 CFM
SCE-FA1010-24VDC	425 CFM
SCE-BP115	190/230 CFM
SCE-BP230	
SCE-N12FA44	
SCE-N12FA44-230	
SCE-N12FA44LG	26/29 CFM
SCE-N3RFA44	
SCE-N3RFA44-230	
SCE-N12FA66	
SCE-N12FA66-230	135/159 CFM
SCE-N12FA66LG	
SCE-N3RFA66	
SCE-N3RFA66-230	
SCE-N12FA1010	
SCE-N12FA1010-230	
SCE-N12FA1010LG	306/341 CFM
SCE-N3RFA1010	
SCE-N3RFA1010-230	
SCE-N12FA10HF	
SCE-N12FA10HF-230	483/547 CFM
SCE-N12FA10HF-460	
SCE-N12FA44-24VDC	27 CFM
SCE-N12FA44-24VDCLG	
SCE-N12FA66-24VDC	
SCE-N12FA66-24VDCLG	132 CFM
SCE-N3RFA10HF	
SCE-N3RFA10HF-230	435/494 CFM