AC-162 Peltier-Thermoelectric Air Cooler

- **Large capacity cooling in small space made possible by high-fin density heat sinks.**
- **High-efficiency cold sink keeps the temperature difference between the enclosure's air and the cold sink to a minimum. This is especially useful for cooling to enclosure temperatures near 0 °C where other, less efficient, cold sinks would allow condensation to freeze and restrict air flow.**
- **Maintains enclosure at NEMA 12 rating, but can be customized for NEMA 4.**
- **Ideal for refrigerators and biomedical equipment where cooling to near-freezing temperatures is desired. Also good for electronic enclosures.**
- **Can easily be customized for production-sized orders to meet your exact requirements.**
- **CE marked, RoHS compliant**

TE TECHNOLOGY, INC.
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www.tetech.com
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email: cool@tetech.com

AC-162 Specifications

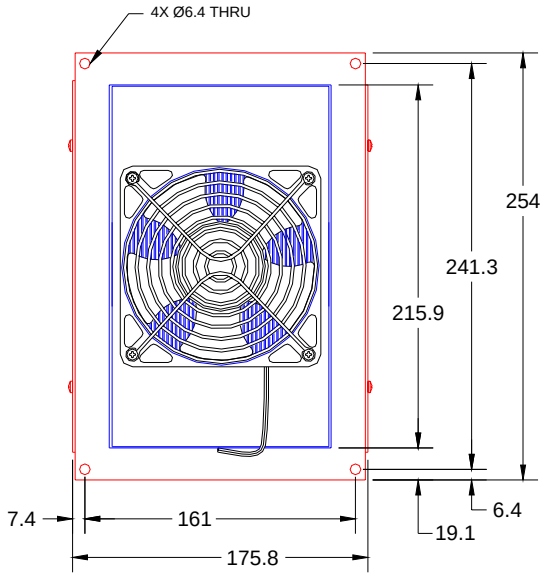
TE Power (typical)[1]:	24 VDC at 14.1 A	NEMA Rating:	12
TE Power (maximum)[2]:	24 VDC at 17.1 A		
Cold-side Fan Power:	24 VDC at 0.22 A	Weight (kg):	7.5
Hot-side Fan Power:	24 VDC at 1.0 A		

Please review the product manual: *Thermoelectric Cooling Assembly (TCA) Instruction Manual*, FAQ's and related technical information, and ordering information posted on our web site before purchasing or using this product.

Performance is based on unrestricted air flow to fans and from air-flow outlets. Do not operate if the ambient, enclosure air, heat sink, or cold sink temperatures exceed 70 °C. Do not operate fans at air temperatures below -10 °C.

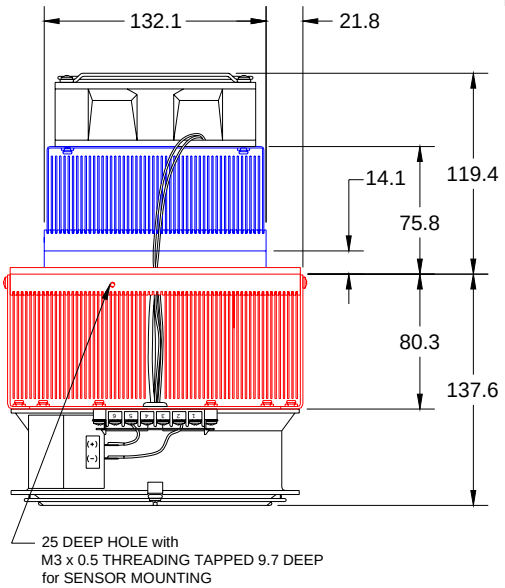
[1]Current, at steady state, is rated at +25 °C ambient, +25 °C internal, maximum heat removal. At -10 °C internal, the typical steady-state current is 13.8 A.

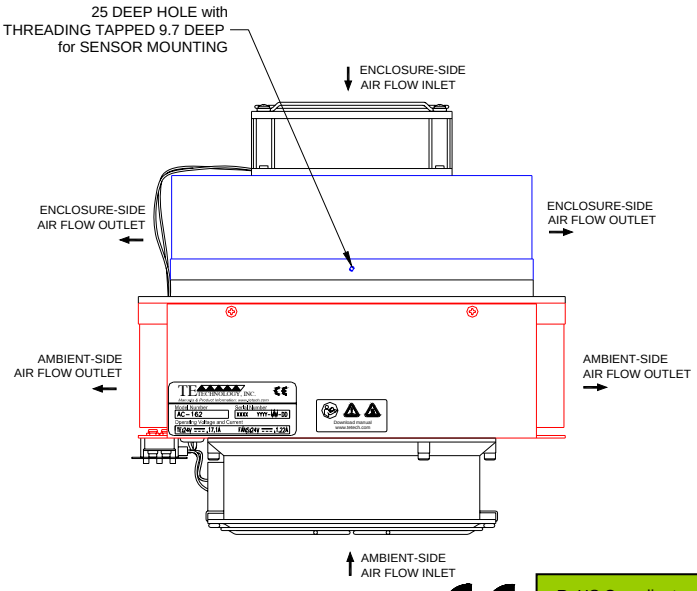
[2]Current, at steady-state operation under-worst case conditions, is rated at -10 °C ambient, +70 °C internal, maximum heat removal.



NOTE: 1. ALL DIMENSIONS IN MILLIMETERS
2. COLD SIDE SHOWN IN BLUE;
HOT SIDE SHOWN IN RED

A 3D PDF is also available from the website. Contact TE Technology for 3D solid models in STEP, SAT, or STL format.





RoHS Compliant
Directive 2002/95/EC

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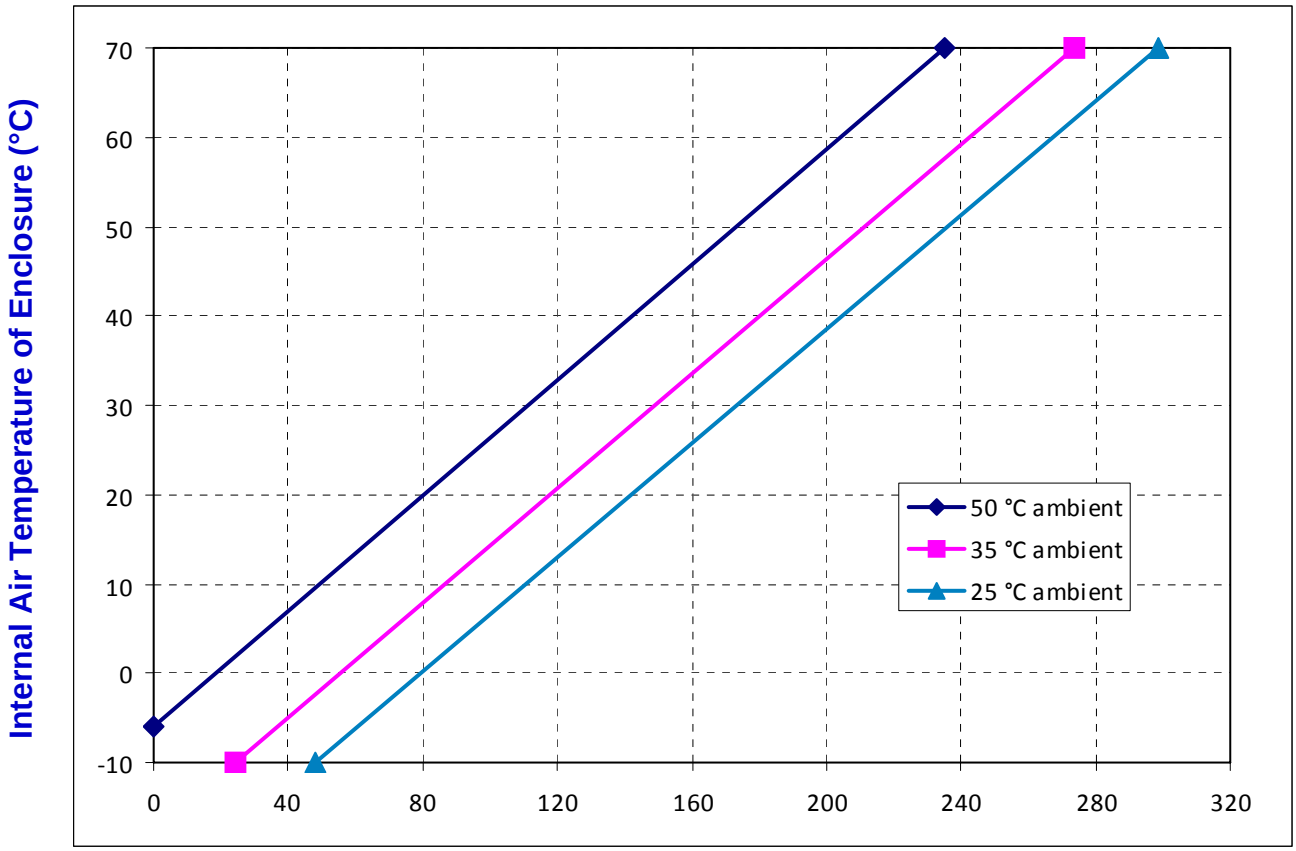
AC-162 Cooling Performance Graph

(removing heat from enclosure)



How to use the Performance Graph:

1. Select Performance Line.

The diagonal lines shown represent cooling performance at the indicated ambient air temperature (inlet to ambient-side fan). If the cooler is to operate at a different ambient, then you must sketch in a new performance line. This can be drawn parallel to one of the existing lines, using the distance between the existing lines as a scale to properly locate the new line.

2. Select Enclosure Temperature.

Draw a horizontal line on the graph corresponding to the desired internal air temperature of the enclosure until it intersects with the performance line corresponding to the ambient temperature at which the cooler is to operate.

NOTE: heating performance is not shown. Contact TE Technology, Inc. if you require this information.

3. Determine Cooling Capacity.

The maximum amount of heat that the cooler can remove from the enclosure is determined by the intersection point (determined in the previous step). *If the heat load exceeds the cooling capacity, then the cooler will not be able to maintain the desired enclosure temperature. If the heat load is less, then the cooler can operate with less input power.*

Example: You need to maintain the enclosure at 15 °C while in a 25 °C ambient. The cooler can remove a maximum of approximately 127 W of heat from the enclosure. If the heat load (internally generated heat plus the heat gain through insulation, solar, vapor condensation, etc.) in the enclosure exceeds this, you would need more coolers and/or a larger cooler.

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