



### Thermoelectric cooling unit for medical and industrial applications

The Liquid-to-Air Series thermoelectric assembly (TEA) offers dependable, compact performance by cooling objects via liquid to transfer heat. Heat is absorbed through a liquid heat exchanger and dissipated thru a high density heat sink equipped with an air ducted shroud and brand name fan. The thermoelectric modules are custom designed to achieve a high coefficient of performance (COP) to minimize power consumption. This product series is available in a wide range of cooling capacities and voltages. Custom configurations are available, however, MOQ applies.

#### FEATURES

- Compact form factor
- Precise temperature control
- Reliable solid-state operation
- DC operation
- RoHS compliant

#### APPLICATIONS

- Medical Diagnostics
- Industrial Lasers
- Medical Lasers
- Analytical Instrumentation

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Europe: +46.31.420530

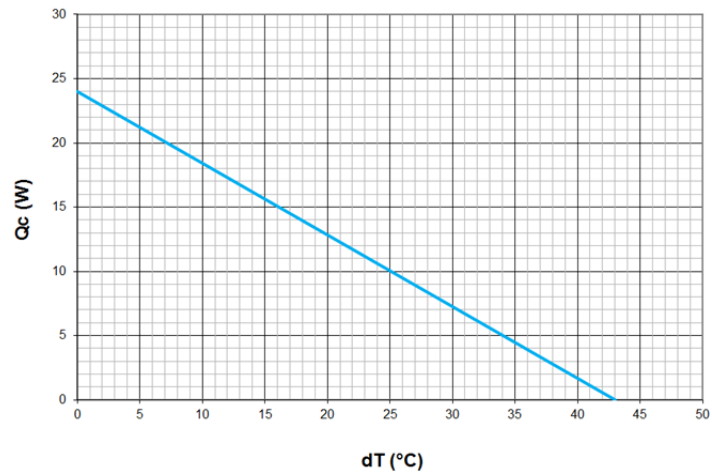
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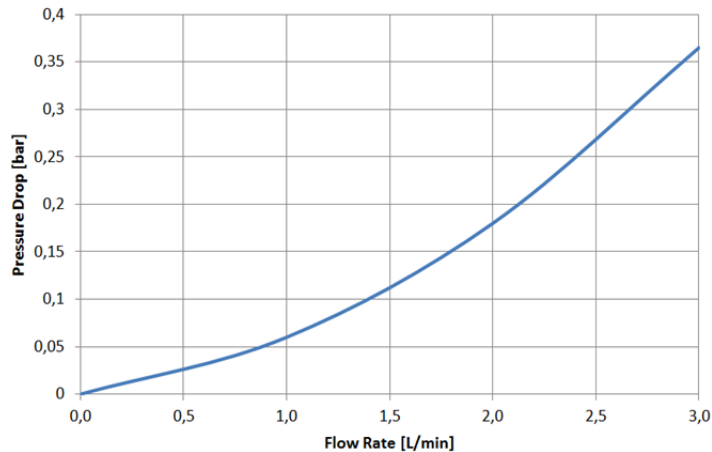
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Liquid-to-Air Thermoelectric Assembly

Qc vs dT



Pressure Drop vs Flow Rate



**SPECIFICATIONS**

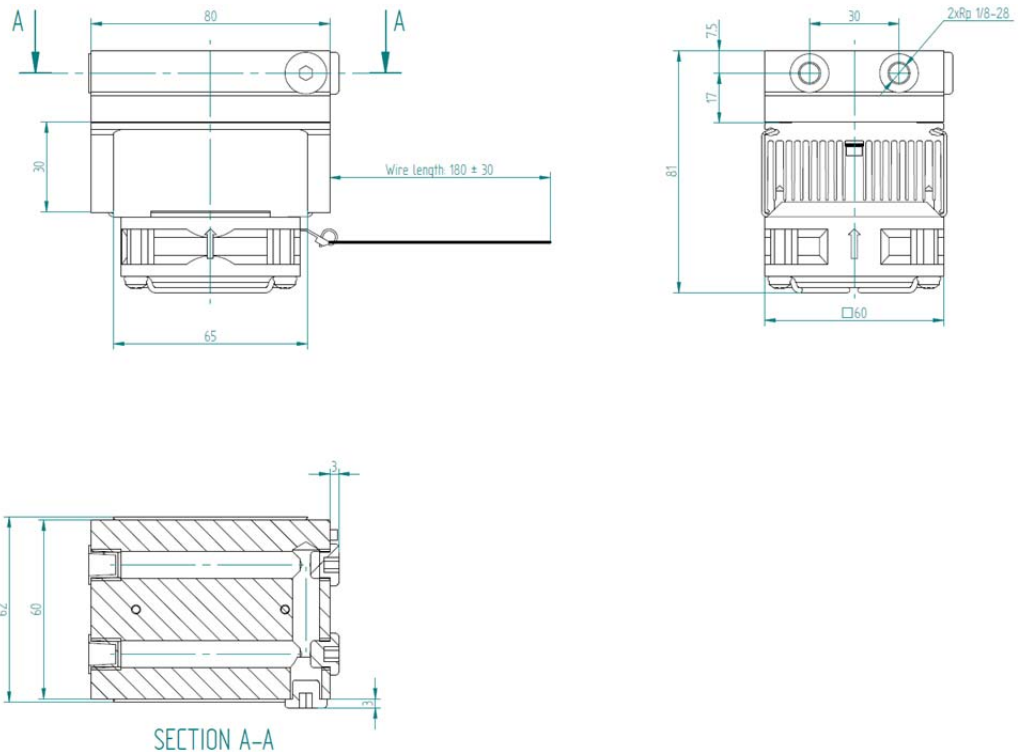
**TECHNICAL**

|  |                      |
|--|----------------------|
| Technology                                   | Thermoelectric based |
| Cooling at $\Delta T = 0^\circ\text{C}$      | 24 W                 |
| Voltage (nominal / maximum) <sup>1</sup>     | 12/15 VDC            |
| Current draw, $\pm 10\%$ (nominal / startup) | 2.2/2.8 A            |
| Weight                                       | 0.5 kg               |
| MTBF (fans)                                  | 50,000 hours         |
| Performance Tolerance                        | $\pm 10\%$           |

**ENVIRONMENTAL**

|                   |  |
|-------------------|--|
| Temperature range | $-10^\circ\text{C}$ to $+48^\circ\text{C}$ |
|-------------------|--|

**MECHANICAL DRAWING**



**Note:**

- For indoor use only
- Turbulators are mounted inside liquid channels to turbulate flow
- Cold block requires insulation to minimize moisture buildup under dew point conditions.

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