Part #	Q_{max} (Watts)	Volts
ATL-150-24	150	24

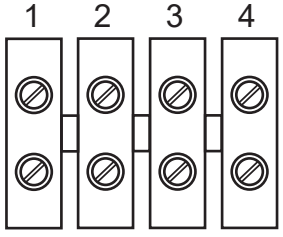
Specification	
Part #	ATL-150-24
Description	Air to Liquid Assembly
Cooling Capacity	150 Watts
Input Voltage	24 Volts DC
Working Range	-10 to 70°C
TEC Current (running)	8.2 amps
TEC Current (start)	9.8 amps
Fan Current	0.35 amps
Fan Current	NA
Weight	3.1 Kg (6.83 lbs)
Connectors	1/8-27 NPT, female 2X

The ATL-150-24 is a thermoelectric based liquid chiller. Six 40x40mm Peltier devices cool a single water block with 3 TECs mounted to each side. The thermoelectric devices are then cooled by a pair of high quality high fin density skived aluminum heat sinks. Air to Liquid (ATL) chillers are used when objects must be cooled with a liquid based recirculation system. Liquid cooling systems are compact and highly efficient. Features:

- Compact and lightweight.
- Can be mounted in any orientation.
- No fluorocarbons or compressor.
- Virtually maintenance free.
- Simple quick installation.
- Includes mounting gasket.

WIRING DIAGRAM

Position	Description
1	TEC +
2	TEC -
3	Fan +
4	Fan -



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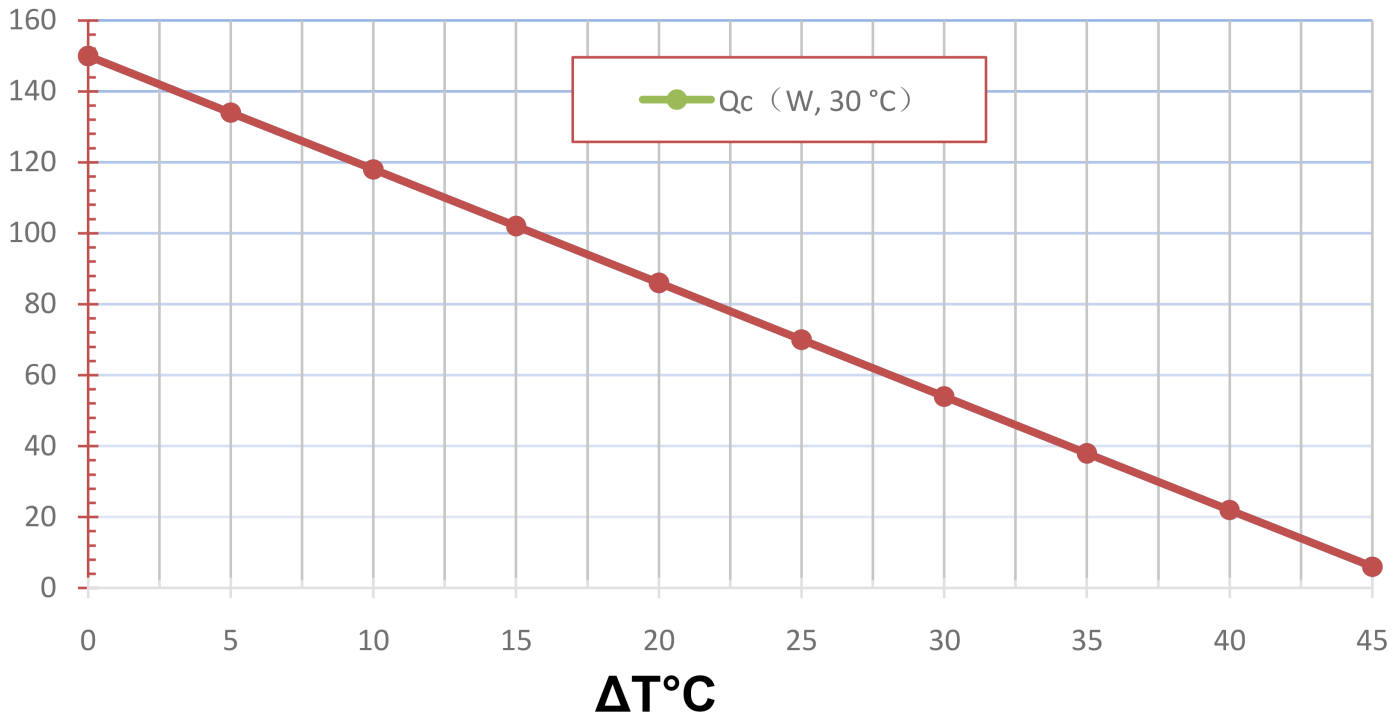
 REV. 3-30-2020

Thermal Performance Graph



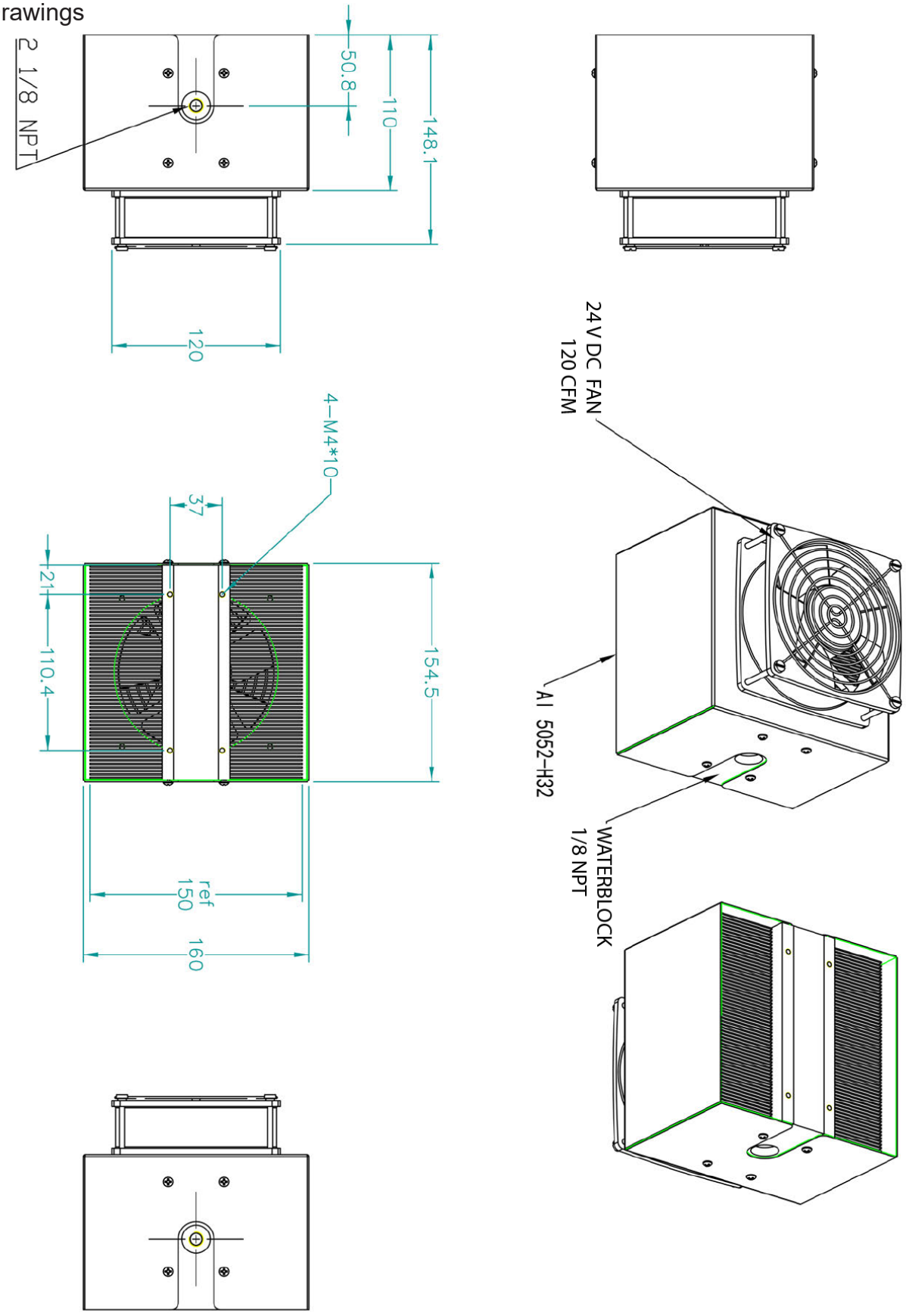
How to use the graph:
On the horizontal axis is the desired delta T in Celsius. This is the difference in temperature between the desired liquid temperature and the ambient outside temperature, Delta T = $T_{ambient}$-T_{out}.

On the vertical axis is the required heat pumping in watts.
There ia a diagonal line that represent an outside ambient air temperature of 30C (77F).

Example:
You have a high power LED circuit board (PCB) that generates 80 watts of heat that must be removed or else the LED circuit will destroy itself. The ambient temperature is 30C. The circuit is mounted to a liquid exchanger (water block) and you are recirculating the water between the water block and this chiller in a closed loop water path. You would like to keep the circuit board at 25C or below. Does this ATL device have the capacity to do this?
The desired delta T is 30C - 25C = 5C. The heat load (heat to be removed) is 80 watts. Look at the left hand vertical axis and locate the 80 watts line. Follow a horizontal line at this point so that it intersects with the 30C ambient diagonal line. At the intersection point, draw a vertical line down to the horizontal axis. If you read the bottom horizontal axis where this line intersects, you should find a value around ~21.8C. This means that you could reach a 21.8C delta T while pumping (removing) 80 watts. You only need a 5C delta T, so this device has the capacity to to get the job done easily.

The maximum amount of heat that can be removed at a 5C delta T would be ~135 watts.

Dimensioned Drawings



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