ATS ADVANCED THERMAL SOLUTIONS, INC.
Innovations in Thermal Management®

IGBT Cold Plates

High Performance

Image for illustration purposes only

ATS-CP-1000

ATS IGBT cold plates have unmatched thermal performance because of their mini-channel fin design. The ATS-CP-1000 cold plate, at a flow rate of 4 L/min, can transfer 1kW of heat at 5.5°C temperature difference between the cold plate base and inlet fluid temperature. If the coolant has particles, a #60 filter or finer is recommended to remove possible particles in the liquid.

FEATURES AND BENEFITS

- More than 30% improvement in thermal performance compared to commercially available cold plates
- Compatible with industry accepted coolants
- 1/4 NPT threaded input and output
- Low pressure drop
- Lightweight for ease of transportation
- Provides uniform cold plate surface temperature when IGBTs are installed
- Leak tested at 100 psi
- **Applications:** Automotive Industry, Uninterruptible Power Supplies, Wind Turbines, Photovoltaic Inverters, Power Electronics, Induction Heaters, Motor Devices, Utility Vehicles, Anywhere power devices are used

DIMENSIONS (L X W X H)
202 X 130 X 20 mm
(7.9 X 5.1 X 0.8")

INLET/OUTPUT PORTS
1/4 – 18 NPT

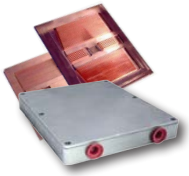
MATERIAL
1ALUMINUM, UNFINISHED

WEIGHT
1,200g

ADDITIONAL COMPONENTS DEPLOYED IN LIQUID COOLING LOOPS

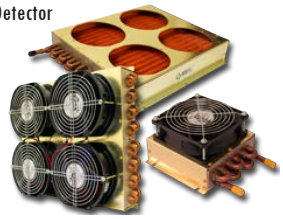
Flow Meter

Leak Detector



Cold Plates

Chillers



Heat Exchangers

ATS has the products needed to design a complete liquid cooling loop: **Cold Plates** to transfer and remove the heat from the source, **Heat Exchangers** to transfer heat from the liquid to the air with or without a fan, and **Chillers** to circulate and condition the fluid in the system. In addition, ATS offers **Flow Meters** to instantaneously measure the volumetric flow rate of the fluid in the system and **Leak Detectors** to notify users of any leaks in the system.

ATS COLD PLATES

- **Innovative Technology**
  Superior heat transfer, flexible design platform
- **Compact Design**
  Designed to fit standard IGBT and other power electronics applications
- **Easy Connections**
  Industry standard threaded hole sizes allows for hassel-free connection options
- **Safe & Reliable**
  Leak Free (100% tested:100 psi)
- **Custom Options**
  Choose from various options, i.e; fitting types, material types, device mounting and more. Contact ATS for additional information

» Customization Available!
ATS will customize any of the cold plates to fit into your application

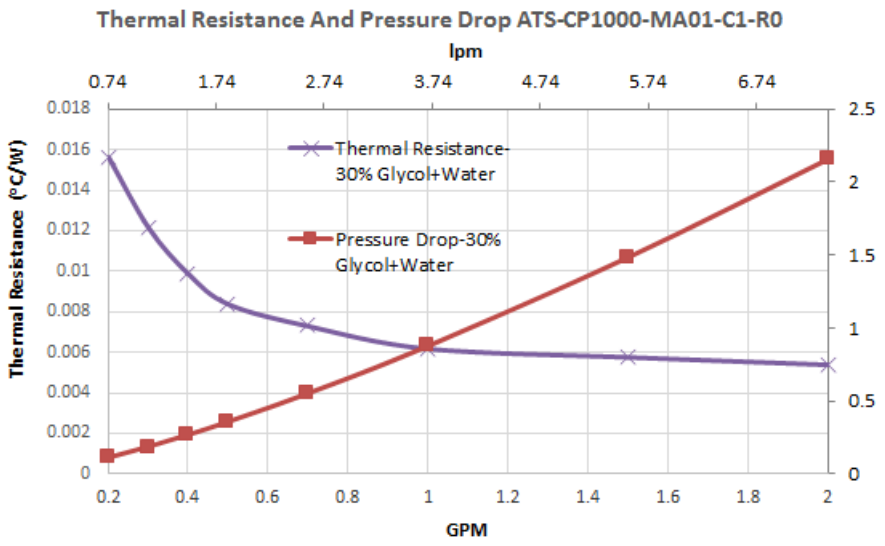
IGBT COMPATIBILITY

- Semikron SemiTRANS® Case D56
- Infineon 62mm Pkg
- Fuji Semiconductor M127 M234 and M235 Pkg
- Powerex 62mm Pkg
- Other IGBTs or high power devices

RoHS COMPLIANT

ATS-CP-1000

PERFORMANCE CURVES



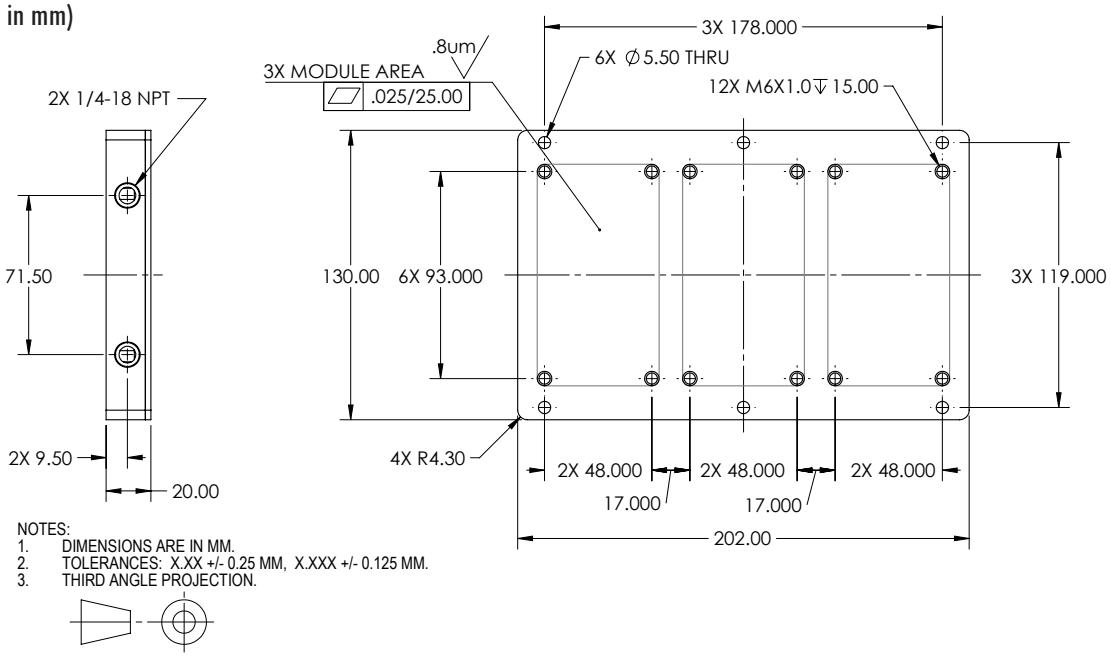
ATS Cold Plate Family			
Part Number	Dimensions* (L x W x H)	Flow Rate (L/min)	ΔT @ 1kW
ATS-CP-1000	202 x 130 x 20	4 L/min	5.50°C
ATS-CP-1001	198 x 147 x 20	4 L/min	5.00°C
ATS-CP-1002	162 x 136 x20	4 L/min	7.00°C
ATS-CP-1003	162 x 147 x 20	4 L/min	6.80°C
ATS-CP-1004	162 x 172 x 20	4 L/min	5.90°C

Flow rate (gallon/min)**	R (°C/W)	DeltaP (psi)
2	0.0051	1.07
1	0.0058	0.43
0.5	0.0078	0.18
0.2	0.0146	0.05

* All Dimensions in mm
** Note: To convert to l/min, multiply by 3.7

MECHANICAL SPECIFICATIONS

(all dimensions in mm)



NOTES:
1. DIMENSIONS ARE IN MM.
2. TOLERANCES: X.XX +/- 0.25 MM, X.XXX +/- 0.125 MM.
3. THIRD ANGLE PROJECTION.