

# **Tubed Cold Plates**

## **High-Performance Tubed Cold Plates**

The Tubed Cold Plate family is engineered as a cost effective and reliable solution for thermal management applications where liquid cooling of components is preferred over air.

The cold plates are manufactured in the USA using a continuous copper tube and a press fit attachment. This method maximizes heat transfer since the tubes are directly connected to the plate instead of through a bulky epoxy or other material that can act as thermal insulator.

#### **FEATURES AND BENEFITS**

- » Cost effective thermal management solution for component cooling where the heat load is low to moderate.
- » Compatible with industry accepted coolants
- » Continuous copper tubing for reliable liquid flow
- » Direct contact of copper pipe with the cold plate provides superior heat transfer
- Supplied with secure, push-to-connect tube fittings for a tight connection between the cold plate and inlet and outlet tubing
- » Maximum pressure: 200 psi

### ATS Tubed Cold Plate Family

(Performance Data based on 400 W, 20°C Inlet Temp, and Water as Fluid)

	Plate Dim. (mm)			Overall Length	# of Tube Pass-	Heated Side	Flow Rate 0.5 gpm		Flow Rate 1.0 gpm		Flow Rate 1.5 gpm		Flow Rate 2.0 gpm	
Part Number	(11111)												-	
Number	L	W	Н	(mm)	es	Side	R (°C/W)	PD (psi)	R (°C/W)	PD (psi)	R (°C/W)	PD (psi)	R (°C/W)	PD (psi)
ATS-TCP-1000	57	57	15	133	2	Tube	0.088	0.15	0.075	0.47	0.067	0.95	0.063	1.61
						Plate	0.150		0.135		0.125		0.121	
ATS-TCP-1001	152	127	15	229	4	Tube	0.021	0.52	0.016	1.57	0.013	3.07	0.012	5.10
						Plate	0.033		0.027		0.025		0.024	
ATS-TCP-1002	305	127	15	381	4	Tube	0.013	0.80	0.009	2.26	0.008	4.67	0.007	7.87
						Plate	0.018		0.014		0.013		0.012	
ATS-TCP-1003	152	178	15	241	6	Tube	0.015	0.81	0.011	2.32	0.009	4.65	0.008	7.82
						Plate	0.023		0.018		0.017		0.016	
ATS-TCP-1004	305	178	15	393	6	Tube	0.011	0.96	0.006	3.22	0.005	6.66	0.004	11.25
						Plate	0.013		0.010		0.008		0.008	
ATS-TCP-1005	610	178	15	698	6	Tube	0.007	1.78	0.004	5.99	0.003	12.47	0.003	20.77
						Plate	0.009		0.006		0.005		0.005	

\*Image for illustration purposes only

#### ATS COLD PLATES

#### » Innovative Technology

Superior heat transfer, flexible design platform

- » Compact Design
  - Designed to be used in a variety of liquid cooling applications
- **Easy Connections** Supplied with pushto-connect fittings
- for a quick, reliable, secure connection.

  >>> Safe & Reliable
- Continuos copper tubing with press fit manufacturing for a safe & reliable unit
- » Customization Available! ATS will customize any of our cold plates to meet any application need

#### **APPLICATIONS**

- » Automotive
- Instruments
- >> Uninterruptible Power Supplies
- Wind Turbines
- >> Photovoltaic Inverters
- Induction Heaters
- Motor Devices



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