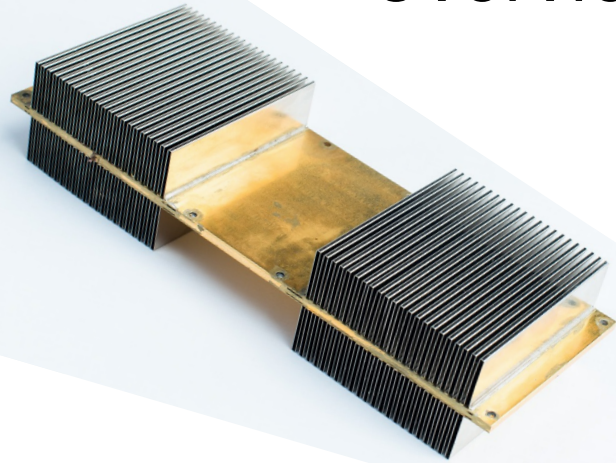


# Company Overview



ThermAvant Technologies designs, develops and manufactures high efficiency thermal-mechanical solutions for aero-defense and advanced technology applications seeking both higher power density and lower Size, Weight, and Power plus Cost (SWaP-\$).

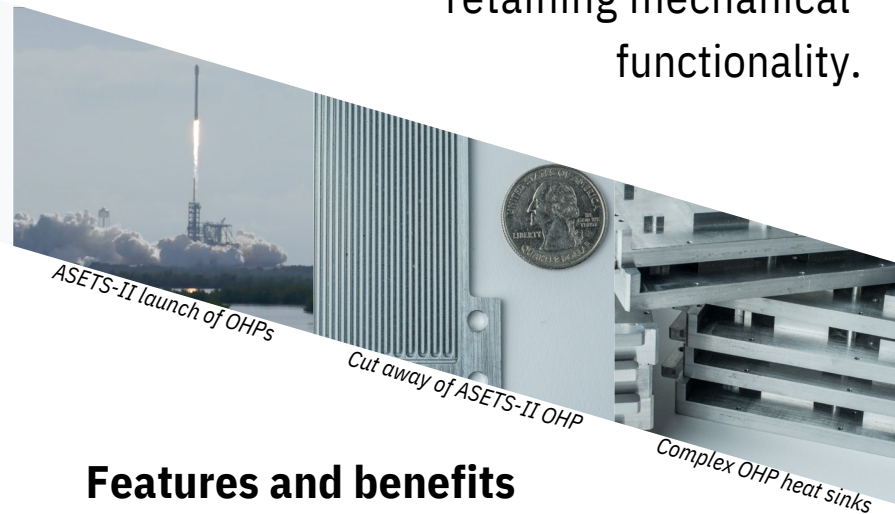
## Customers engage ThermAvant for

- Spacecraft thermal control
- Radar, RF device heat spreaders
- Opto-electronics heat sinks
- Li-ion battery packages
- Compact heat exchangers
- Design, engineering and analysis

# Oscillating Heat Pipe

Oscillating heat pipe (OHP) is a passive two-phase heat transfer technology.

We build OHPs into materials of virtually any shape or size to raise their thermal conductivities up to 100x while retaining mechanical functionality.

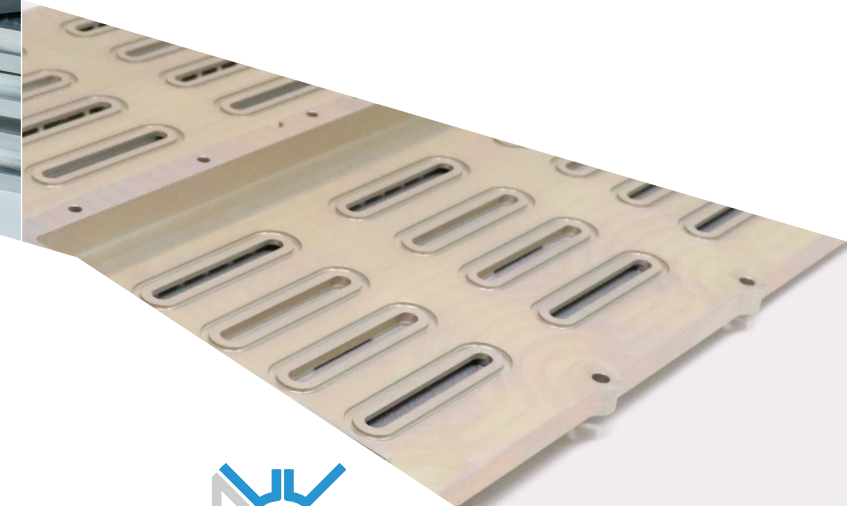


## Features and benefits

- Producible in many shapes, sizes (<1mm thick to >1m long)
- High heat load (>10kW) and heat flux capabilities (300W/cm<sup>2</sup>)
- Designable for adverse gravity operation (0g to 10g)
- Wide range of materials, fluids and temperatures (cryogenics to liquid metal)

# Custom Cold Plates

When customers have pumped coolant available, ThermAvant designs and manufactures custom micro-channel cold plates. Using AS9100-certified materials and processes, ThermAvant provides custom cold plates to aero-defense and IT, medical and industrial customers with temperature sensitive, mission-critical devices in densely packaged systems.



**ThermAvant®**  
TECHNOLOGIES

# CAPABILITIES

## PRODUCTION & QUALITY MANAGEMENT

- High-speed CNC machining centers
- Vacuum and controlled atmosphere brazing furnaces
- Turbo-molecular pumped vacuum ovens
- TIG, MIG and laser welding stations
- Ultrasonic cleaning stations
- Heat pipe fluid charging stations
- Thermoelectric characterization stations
- Digital height gauges, 3D optical scanner, stereo microscope, and calibrated calipers, weight gauges, micrometers and profilometers



## ANALYTICAL AND TESTING

- SolidWorks, MasterCam, AutoDesk, ANSYS, LabView, BenchView, and more
- Liquid-cooled thermal test vehicles
- Thermal-vacuum test stations
- Closed-loop thermal-air flow test stands
- Variable 1-g thermal fluidic test beds
- Dozens of thermal simulators to characterize customers' opto-electronic, battery or other temperature sensitive devices

# LEARN MORE ABOUT US

Our team of scientists, engineers and technicians have decades of experience designing, manufacturing and validating single- and two-phase fluid heat transfer systems. Read more at

[www.thermavant.com/team](http://www.thermavant.com/team)



**Winner  
of R&D 100's  
"Most technologically  
significant new  
product"**



2508 Paris Road  
Columbia, MO 65202

phone: 573 397 6912

email: [info@thermavant.com](mailto:info@thermavant.com)

website: [www.thermavant.com](http://www.thermavant.com)

YouTube: [bit.ly/thermavant](https://bit.ly/thermavant)

LinkedIn: [linkedin.com/company/thermavant](https://linkedin.com/company/thermavant)



**ThermAvant<sup>®</sup>**  
TECHNOLOGIES

ThermAvant Technologies is the leading AS9100D designer and manufacturer of oscillating heat pipe, micro-channel and two-phase thermal-mechanical solutions for aerospace, defense and most advanced technology applications.