



Thermal Space Ltd.

United States · thermal-space.com

4

PRODUCTS

5

SERVICES

1

WITH DATASHEETS

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as of 20 August 2026



Thermal Space Ltd.

Thermal Space Ltd. is an independent, solely US-based cryogenic and thermal-management engineering firm headquartered in Boulder, Colorado. The company provides thermal-management engineering and hardware solutions ranging from simple components such as thermal straps and heat pipes to complex custom cryostats and cooling systems. Its engineering staff averages 22 years of thermal-engineering experience and has delivered hardware and engineering services to organizations including NASA, Boeing, Honeywell, MIT Lincoln Laboratory, JAXA, Lockheed Martin, Ball Aerospace, Sandia National Laboratories, ESA, Raytheon, BAE Systems, the US Department of Energy, the US Department of Defense, CSA, Northrop Grumman, and Harris Corporation. Thermal Space specializes in passive and active thermal technologies: copper, aluminum, and graphene/graphite-based thermal straps, heat pipes and vapor chambers, thermoelectric (Peltier) coolers, vapor-compression refrigerators, regenerative and recuperative mechanical cryocoolers, cross/counter-flow heat exchangers, phase-change-material heat exchangers, flexible distributed cryogenic cooling loops, multi-layer insulation, and vacuum-insulated cryogen tanks. Core hardware such as straps and cold plates is custom-fabricated in-house in Boulder. The company's Quality Management System is written to conform to AS9100 Rev C, reflecting extensive aerospace quality-control experience including internal audits, management review, and customer audits.

This profile is generated from the live NewSpace Market catalogue. Specifications are as published by the manufacturer; every product links to a page where a request for quotation reaches the company directly.

SERVICES

Services

Complete thermal engineering services

Thermal Space offers comprehensive thermal engineering services, including design, analysis, detailed drawings, production, and verification plans for various thermal management solutions.

Cryogenic Thermal Vac Testing

Specialized thermal vacuum testing for cryogenic temperatures, utilizing liquid or gaseous nitrogen/helium to achieve temperatures down to 10 K and lower for precise thermal conduction measurements.

Thermal Conductance Testing

Testing conducted under vacuum to measure heat transport (W) per degree of temperature drop (K) across a thermal strap, including interface effects, over a temperature range of 400 K to 80 K.

Thermal Strap Verification Testing

Thermal Space offers comprehensive verification testing for thermal straps, including space flight qualification, specific performance tests, and complete qualification testing.

Thermal Vacuum (Thermal Vac) Testing

Thermal Vac Testing uses a custom chamber to control temperature and pressure for components and subsystems, evacuating to 10⁻⁶ torr and controlling temperatures from -190°C to 180°C.

Product catalogue



THERMAL SPACE LTD.

4C-PURE™ Cabled Copper Thermal Straps

Solderless, flexible copper thermal straps fabricated from 100% oxygen-free high-conductivity (OFHC) copper cable or braid, used to provide high thermal conductance with mechanical

Material	OFHC Copper (C101, C10100), 99.99% purity
Residual Resistivity Ratio (RRR)	Typically 100–200
Terminal hole diameter/location tolerance	0.001-inch or better
Metallization options	Gold (Au), Silver (Ag), Nickel (Ni), Tin (Sn)
Product lines	4C-PURE™ (standard), 4C-PURE-CRYO™ (low-temperature service with material certification an
Fabrication attachment method	No solders, adhesives, fillers, binders, or non-metallic coatings
Production capacity	Fabrication in quantities of thousands of units

price on request [datasheet](#)



THERMAL SPACE LTD.

Custom Cold Plates

Custom-designed and fabricated cold plates (thermal control/interface plates) for heat sinking at a specified temperature, built from copper, aluminum, AlSiC, or graphite.

Materials	Copper, aluminum, AlSiC, graphite
Cooling/heating methods	Refrigerant loops (HCFC/HFC/HC), cryogenic liquids (LN2, liquid methane), cryocoolers, the
Control inputs	Thermocouple, RTD, or thermistor
Communications	Serial, USB, or Ethernet
Control method	PID controller, push/pull heating/cooling

price on request



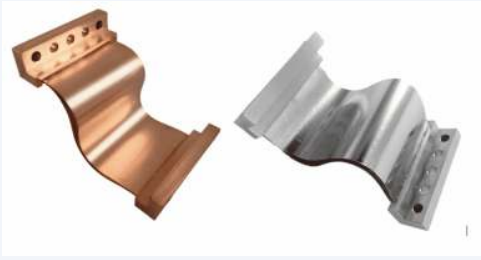
THERMAL SPACE LTD.

Thermal LyNX®

A solid-state graphene thermal strap technology offering superior thermal conductance-to-mass ratio, high flexibility, and NASA-approved low-outgassing materials for spacecraft the

Thermal conductivity-to-mass ratio	~2x better than other thermal strap types
Thermal conductivity vs. aluminum (at ~220 K)	16x per unit mass
Thermal conductivity vs. copper (at ~220 K)	27x per unit mass
Elastic modulus vs. graphite fiber	~20x lower (much more flexible)
Thermal conductivity-to-density ratio	>2x graphite fiber
Construction	Layered graphene foil with carbon-composite end fittings
Outgassing	NASA-approved low-outgassing materials, no particulate contamination

price on request



THERMAL SPACE LTD.

Thin Metal Foil Thermal Straps (TMF Series™)

The TMF Series™ Thin Metal Foil Thermal Straps, including Copper Foil Straps (CuFS™) and Aluminum Foil Straps (AlFS™), offer superior thermal and mechanical performance for various

Copper Type/Purity	Electrical Tough Pitch (ETP), C110/99.9%
RRR Range	50-100
Copper Type/Purity	Oxygen Free High Conductivity (OFHC), C101/99.99%
RRR Range	100-500
Copper Type/Purity	4N/99.99%
RRR Range	500-2,000
Copper Type/Purity	5N/99.999%

price on request

Contact Thermal Space Ltd.

Open the company profile on NewSpace Market to see full specifications and datasheets, and to send a request for quotation that reaches the manufacturer directly.

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