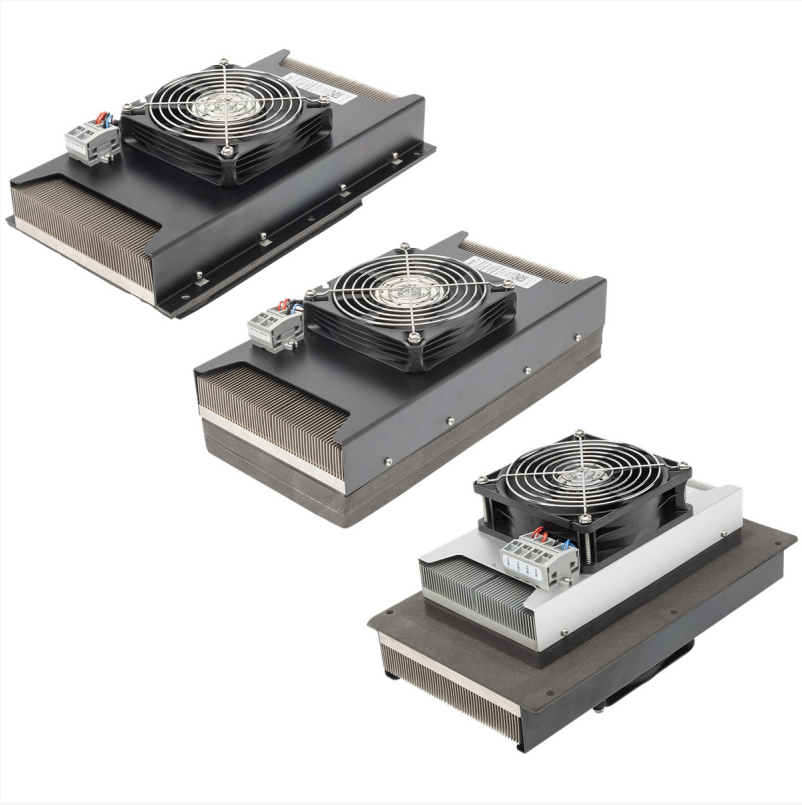
Laird Thermal Systems Launches the SuperCool X Series with Next-Gen Thermoelectric Cooling Technology

Refrigerant-free, Thermoelectric Cooler Assemblies boost cooling performance in enclosures, chambers and cabinets without increasing form factor ...



SuperCool X Series

DURHAM, NORTH CAROLINA, USA, June 3, 2024 /EINPresswire.com/ -- Laird Thermal Systems, the leading global manufacturer of thermal management solutions, has launched a new high-performance thermoelectric cooler assembly series that utilizes next-generation thermoelectric coolers with advanced semiconductor materials. This enhancement boosts cooling performance by up to 10% over previous models. In combination with a high-performance heat sink and fan shroud assembly, the ultra-compact SuperCool X Series can transfer heat to ambient environments more rapidly than legacy systems. The SuperCool X Series is designed for sample storage compartments commonly found in analytical instrumentation or medical diagnostic chambers with tight geometric space constraints.

At the center of every SuperCool X cooler assembly is an array of high-performance thermoelectric coolers. These high-performance thermoelectric coolers are manufactured with advanced thermoelectric materials that provide increased cooling capacity for the SuperCool X assembly. The next generation thermoelectric coolers maintain a high coefficient of performance (COP) to minimize the amount of input power required for operation and reduce the heat rejection requirement on the hot side.

> The SuperCool X Series addresses the market needs for shrinking form factors, higher cooling capacities and environmentally friendly solutions with no global warming potential."
>
> *Andrew Dereka, Product Director*

The SuperCool X Series contains three model types that provide design engineers with several heat transfer mechanisms on the control side. Heat can be absorbed via convection (air-to-air), conduction (direct-to-air), or liquid (liquid-to-air). The Liquid-to-Air Models SLAX have a cooling capacity of up to 400 Watts, while the Direct-to-Air Models SDAX have up to 220 Watts and the Air-to-Air Model SAAX have up to 175 Watts of heat pumping capacity. All cooling capacities were measured at ΔT=0°C and Tamb = 35ºC with a nominal operating voltage of 24 VDC. These compact, refrigerant-free thermoelectric cooler assemblies provide an environmentally friendly alternative to compressor-based systems for precise temperature control.

"The SuperCool X Series is a high performance and ultra-compact thermoelectric cooler assembly for medical diagnostics chambers and analytical instrument sample storage compartments," said Andrew Dereka, Product Director at Laird Thermal Systems. "This product series addresses the market needs for shrinking form factors, higher cooling capacities and environmentally friendly solutions with no global warming potential."

Depending on the application, SuperCool X thermoelectric assemblies can be used for heating or cooling. Custom configurations are available upon request.

For more information, access SuperCool X Series datasheets and application notes.

About Laird Thermal Systems
Laird Thermal Systems designs, develops, and manufactures thermal management solutions for demanding applications across medical, industrial and telecommunications markets. We manufacture one of the most diverse product portfolios in the industry, ranging from thermoelectric coolers and assemblies to temperature controllers and liquid cooling systems. With unmatched thermal management expertise, our engineers use advanced thermal modeling and management techniques to solve complex heat and temperature control problems. By offering a broad range of design, prototyping and in-house testing capabilities, we partner closely with our customers across the entire product development lifecycle to reduce risk and accelerate time-to-market. Our global design, manufacturing and support resources help customers shorten their product design cycle, maximize productivity, uptime, performance, and product quality. Laird Thermal Systems is the optimum choice for standard or custom thermal solutions.

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