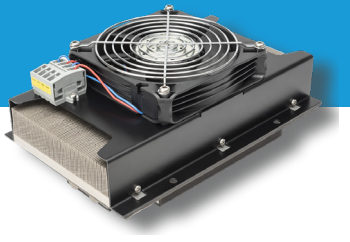


Thermal Management for

Analytical Applications

Q-FLEX

www.q-flex.fi info@q-flex.fi

+358 2 4894 500

Laird™

THERMAL SYSTEMS

Analytical Applications Cooling

Laird Thermal Systems offers a broad range of thermal management solutions delivering precise temperature control for laboratory equipment. Our product portfolio ranges from solid-state thermoelectric coolers and assemblies, to integrated temperature controllers, ambient liquid cooling systems and recirculating chillers.

We design and manufacture cooling components and systems for the top companies in laboratory industries. With unmatched thermal management expertise, our global engineering team uses advanced thermal modeling and management techniques to solve complex heat and temperature control problems in analytical applications including:

Incubator Chambers
Centrifuges
Liquid Chromatography
Electron Microscopes
Digital Microscopes
Mass Spectrometry
Bath Cooling
PCR Thermal Cycling

Learn about our thermal management capabilities for analytical applications here.

Laird™
THERMAL SYSTEMS

Incubator Chambers

Incubator chambers create the ideal environment for cell and tissue cultivation by maintaining precise temperature control of 37°C. Excursions above and below the optimum mammalian body temperature will negatively impact cell health.

Precise temperature control will ensure
Proper cell growth

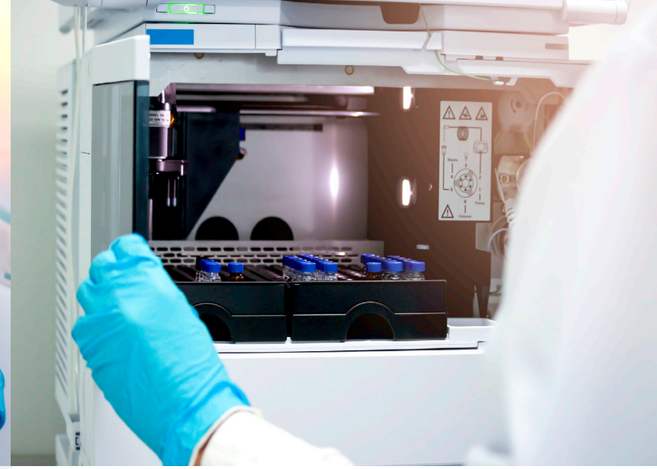
Learn more about Incubator Chambers

Centrifuges

Centrifuges utilize high-speed centrifugal force to separate liquid mixtures used for analysis in research laboratories. Active cooling is required to remove heat generated by the spinning centrifuge and maintain samples at a constant temperature.

Thermal management will ensure
Proper reactions
Sample viability

Learn more about Centrifuges



Liquid Chromatography

Temperature control plays a major role in High-performance liquid chromatography (HPLC) by influencing the sample separation process. HPLC utilizes Peltier technology to cool or heat the sample tray and separation column for optimized performance.

Thermoelectrics will ensure
Faster separation processes
Superior resolution

Learn more about Liquid Chomatography

LAIRD THERMAL SYSTEMS PRODUCTS AND SOLUTIONS

Thermoelectric Coolers
HiTemp ETX Series
PowerCycling PCX Series

Thermoelectric Assemblies
SuperCool Series
PowerCool Series
Tunnel Series

Temperature Controllers
PR-59
SR-54

Custom Refrigeration Systems

Thermoelectric coolers
HiTemp ETX Series
UltraTEC™ UTX Series
CP Series

Temperature Controllers
PR-59
SR-54

Custom Refrigeration Systems

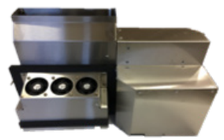
Thermoelectric Coolers
HiTemp ETX Series
SuperCool Series

Thermoelectric Assemblies
PowerCool Series
Tunnel Series

Temperature Controllers
PR-59
SR-54

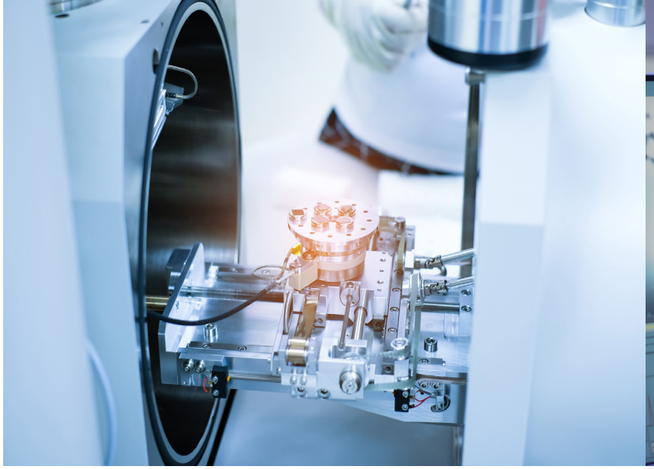
Why Refrigeration Systems?

- High Coefficient of Performance (COP)
- High reliability
- Increased uptime



Why Thermoelectrics?

- Precise temperature control
- Compact form factor
- Solid-state construction providing long life and low maintenance



Electron Microscopes

Temperature control plays a dynamic role in ensuring the proper operation of advanced electron microscopes. Thermal fluctuations can deteriorate image quality and have a negative impact on samples during examination.

Precise temperature control will ensure
Maximum image Quality
Proper operation

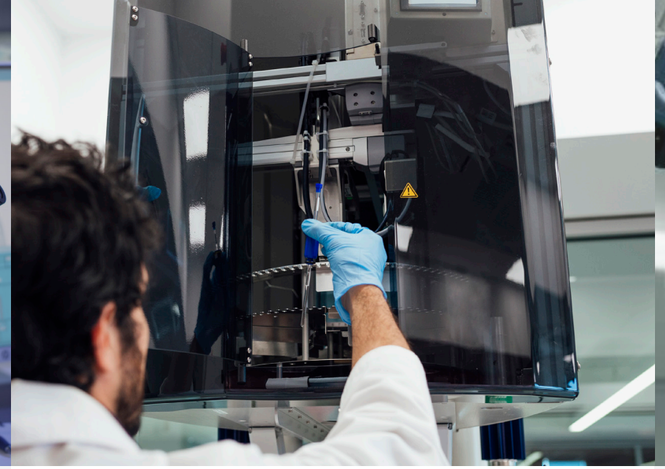
Learn more about **Electron Microscopes**

Digital Microscopes

Digital microscopes allow scientists to view and analyze cell cultures in real-time. Temperature and humidity must be kept under controlled conditions during imaging to obtain crisp images and avoid changes in the cells.

Precise temperature control will ensure
Cell viability
Optimized image quality

Learn more about **Digital Microscopes**



Mass Spectrometry

Mass spectrometry tools utilize an ion source, mass analyzer and detector to determine the chemical composition of a sample. The process of generating plasma and creating electron beams generate large amounts of heat that must be quickly dissipated.

Temperature stabilization will ensure
System reliability
Accurate results

Learn more about **Mass Spectrometry**

Bath Cooling

Cooling baths need to maintain a steady temperature as fluctuations can influence the chemical reactions. Chillers are used to quickly remove the large amount of heat caused by reactions and maintain precise temperature control below ambient.

Thermal management will ensure
Proper reactions

Learn more about **Bath Cooling**

LAIRD THERMAL SYSTEMS PRODUCTS AND SOLUTIONS

Nextreme™ Recirculating Chillers

Nextreme™ Recirculating Chillers

Nextreme™ Recirculating Chillers

Nextreme™ Recirculating Chillers

Why Liquid Cooling Systems?

Precise temperature control

No harmful refrigerants

High reliability

Low noise

High coefficient of performance (COP)

PCR Thermal Cycling

PCR systems require a high number of thermal cycling steps to create thousands of strands of DNA sequencing for analysis. Rapid thermal cycling and precision temperature control is crucial to speed up DNA amplification.

Thermoelectric coolers will
Shorten time to obtain result
Ensure reliability of PCR cyclers

Learn more about PCR Thermal Cycling

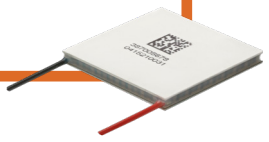
PRODUCTS AND SOLUTIONS

Thermoelectric Coolers
PowerCycling PCX Series

Custom
Thermoelectric Cooler Assemblies

Why Thermoelectrics?

- Faster ramp rates
- Precise temperature control
- Compact form factor
- Solid-state construction for high reliability



Laird™
THERMAL SYSTEMS

About Laird Thermal Systems

Laird Thermal Systems designs, develops and manufactures thermal management solutions for demanding applications across global medical, industrial, transportation and telecommunications markets.

We manufacture one of the most diverse product portfolios in the industry ranging from active 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. We have more than 50 years of experience in the design, manufacture and servicing of thermal management solutions with millions of installations in operation today.

Contact us for a solution to your next thermal management challenge.

Learn more by visiting www.lairdthermal.com

LTS-BRO-ANALYTICAL-APPLICATIONS 100121

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