



Reaching around the
world to bring you
the future in
THERMOELECTRICS

TE  **TECHNOLOGY, INC.**

CUSTOM AND STANDARD THERMOELECTRIC ASSEMBLIES

TE Technology, Inc. provides all aspects of thermoelectric assembly design, manufacturing, testing and production under one roof. We offer the best solutions with the highest quality, competitive prices and fast turn-around.



Engineering Assistance

When you call TE Technology you talk with an engineer - not a salesperson. We work with you on every project and become important members of your design team.

Manufacturing Excellence

Forty years of thermoelectric experience go into every product. We provide reliable, durable, cost-effective systems, and we provide them on-time. Our large inventory and vast global resources provide added versatility.

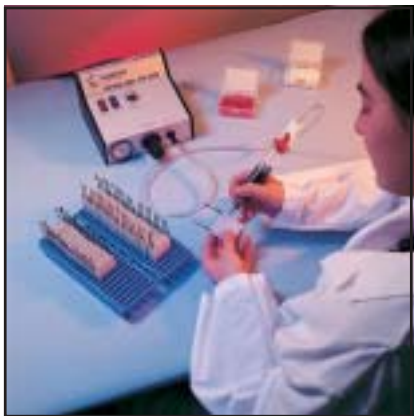


MISSION STATEMENT

Serve our customers through quality, cost-effective, on-time thermoelectric assembly production. Remain at the forefront of thermoelectric technology and development on a global basis, and use our thermoelectric expertise, materials and equipment to give our customers a competitive edge.



TE Technology software confirms assemblies are optimized according to your needs.



Our unique TE potting compound seals out water vapor and adds mechanical strength.



Our assembly area adapts to large and small production orders.

WHY TE TECHNOLOGY IS A LEADER

EXPERIENCE

Technical expertise in all relevant disciplines and the most design experience in the industry.

LEADERSHIP

Autorship of many technical papers published around the world, and participation in global research and development.

DESIGN EXPERTISE

Proprietary modeling software combined with experience reduces development costs.

MOISTURE PROTECTION

Proprietary sealing technology provides durability and a hermetic seal from water vapor.

VALUE

Sources from all over the world provide the best performance-to-cost ratio.

UNIQUE TESTING

Exclusive series of testing methods and equipment to ensure top performance.

COMPLETE SERVICE

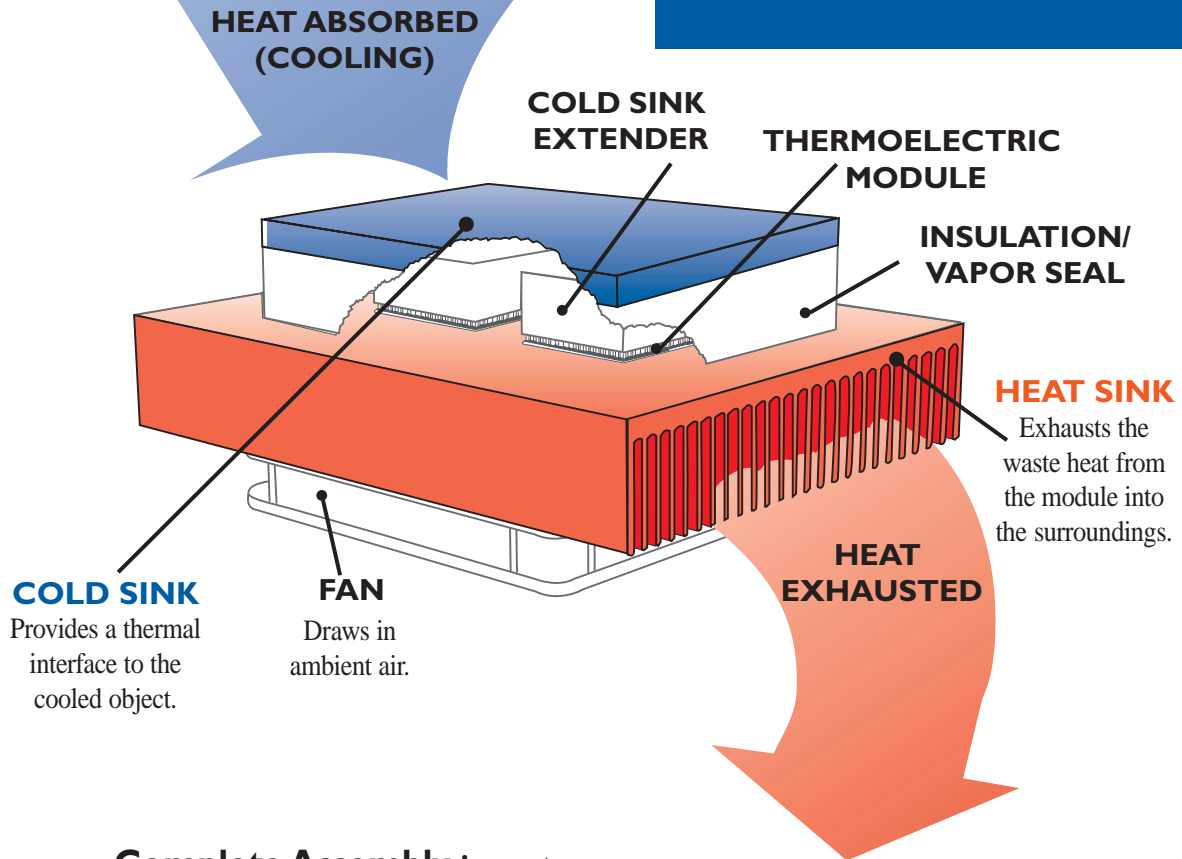
Design, manufacturing and testing under one roof.

more information
on TE Technology, Inc.

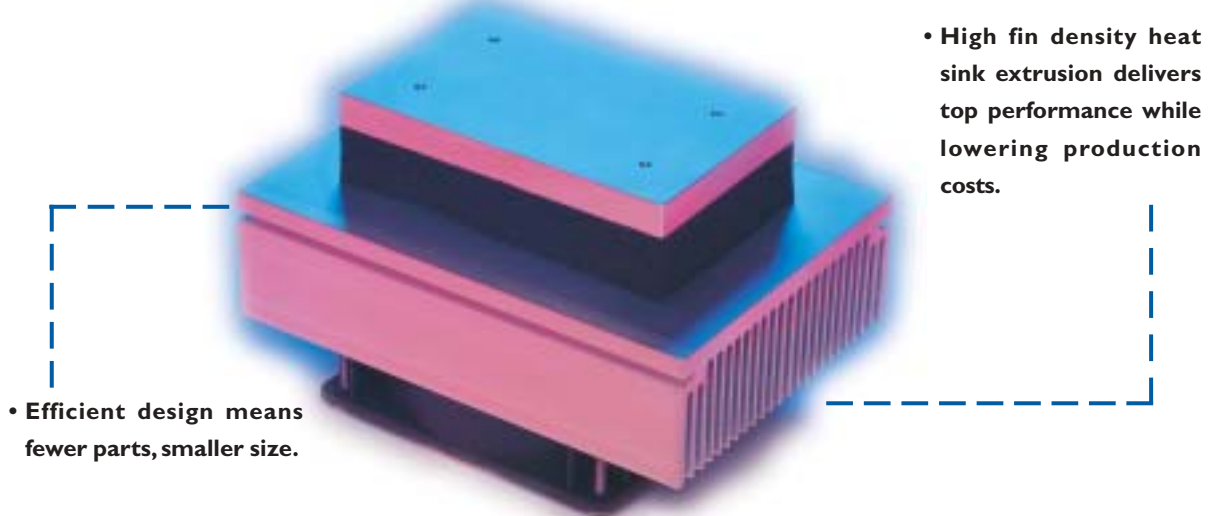
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WHAT ARE THERMOELECTRIC ASSEMBLIES?



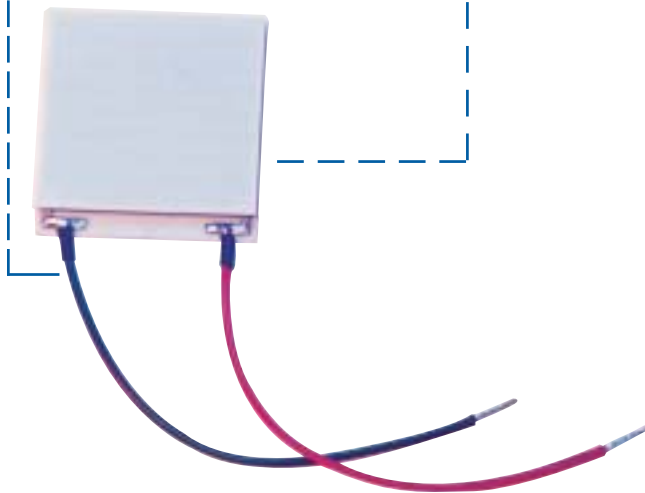
Complete Assembly is custom designed to your application's requirements: temperature, size, weight and power consumption.



Thermoelectric assemblies are solid-state heat pumps that extract or add heat to an object. These assemblies can be used for cooling, heating and power generation. Thermoelectric assemblies consist of a cold sink, modules, heat sink, fan and vapor sealing material.

Thermoelectric Module uses electrical current to pull heat from the cold sink and push it into the heat sink.

- Unique TE modules vapor sealed with TE Technology's proprietary compound provides unparalleled reliability, durability and protection against moisture.
- Global selection process of module components improves performance-to-cost ratio.



Advantages of using Thermoelectrics:

- Precise temperature control
- Vibration free
- Low maintenance
- Small
- Silent
- CFC free, no "green house" effect
- Operational in high ambient temperatures
- Operational in any orientation

SUPERIOR PROCESSES PRODUCE SUPERIOR PRODUCTS

WHY SHOULD TE TECHNOLOGY DESIGN YOUR THERMOELECTRIC COOLER?

EXPERIENCE

Forty years of experience goes into every design. Performance, size, manufacturability, budget - we optimize all of these and give you exactly what you need.

COMPETITIVE EDGE

An exclusive line of heat sinks, modules, vapor seals, and special optimization ensures that your competition will not surpass you.

SHORT DESIGN CYCLES

We eliminate guesswork and risky assumptions and make the prototype right the first time.

LOWEST COST

A custom thermoelectric assembly gives the capacity and features needed without increased cost for anything extra. It's the lowest cost solution!

downloadable technical papers
www.tetech.com



PLATE-TO-PLATE

Typical Applications:

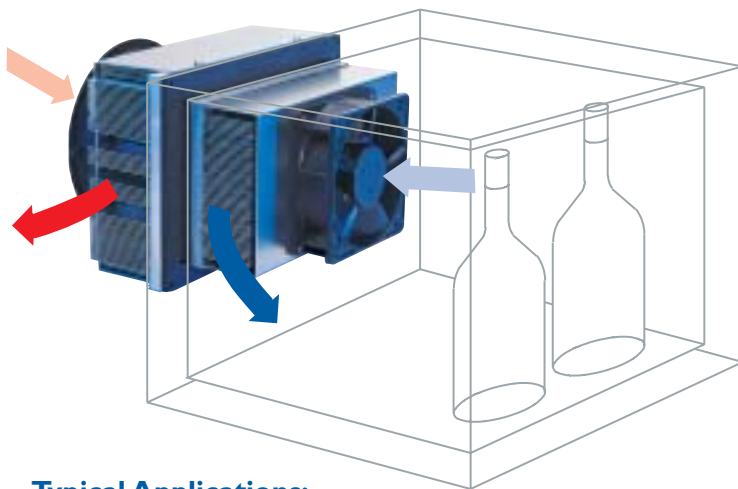
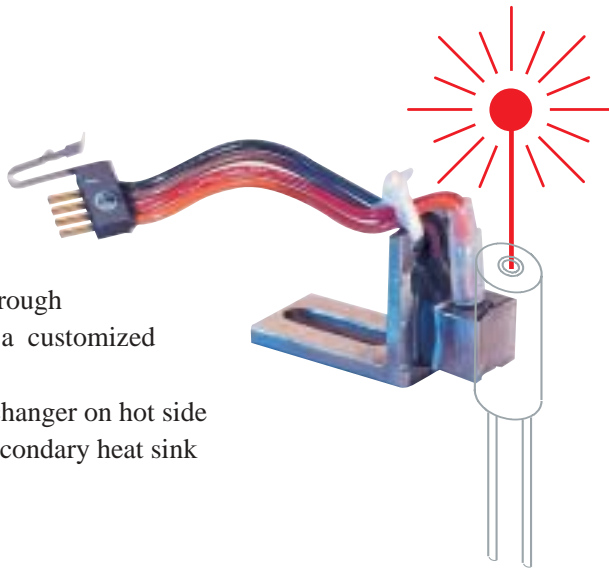
- Detectors
- Sensors
- CCD's
- Small laser diodes
- Integrated circuits
- Lamps

How It Works:

- Object is cooled through direct contact with a customized cold plate
- Plate style heat exchanger on hot side attaches to other secondary heat sink

System Benefits:

- Ability to control temperature with high precision



Typical Applications:

- Electronic enclosures
- Medical cabinets
- Small refrigerators
- Environmental chambers
- Battery boxes
- Minibars
- Picnic boxes
- Vending machines

How It Works:

- Air is cooled as it is recirculated within the enclosure and through the cold sink

System Benefits:

- Effective cooling of multiple objects

AIR-TO-AIR

PLATE-TO-AIR

Typical Applications:

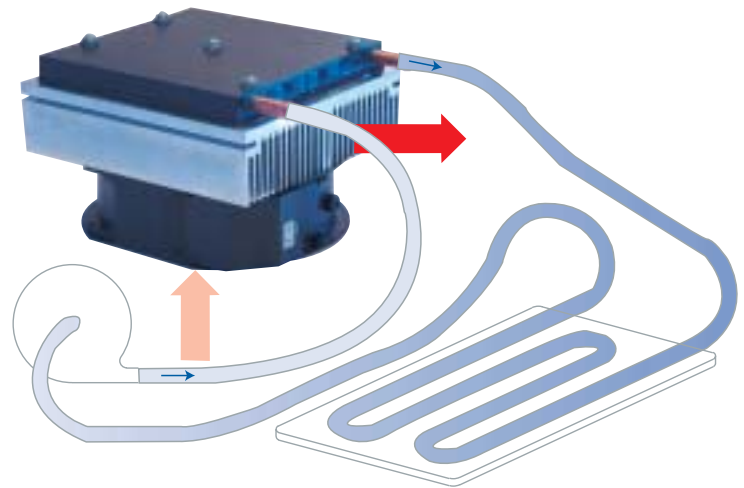
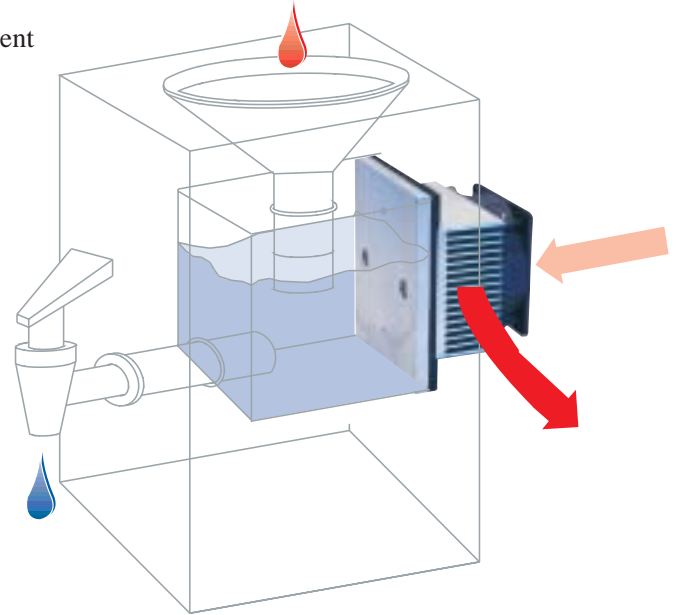
- Laser diodes
- CPU coolers
- Liquid reservoirs
- Temperature baths
- Water coolers
- Gene cloning equipment
- Aquariums
- Beverage coolers

How It Works:

- Object is cooled through direct thermal and mechanical contact with cold plate

System Benefits:

- Cooling can be applied exactly where needed



Typical Applications:

- Therapy pads for medical treatments
- Laser chillers
- Cooling process fluids
- Temperature baths
- Semiconductor processing equipment

How It Works:

- Serpentine liquid channel on cold side
- Object is cooled via contact with a secondary liquid loop

System Benefits:

- Effective cooling in areas remote to the cooler

LIQUID-TO-AIR

TE TECHNOLOGY, INC.

EXPERIENCE

GLOBAL SOURCES

TECHNOLOGY

cooling
assemblies

www.tetech.com

MANUFACTURING

We do not just “inspect” the quality of our assemblies, we build it in. We control all aspects of assembly to ensure stringent quality standards are achieved. In addition, our in-house machine shop utilizes computer controlled equipment to build components according to exact specifications.

Superior Test Capability

TE Technology is the ONLY thermoelectric manufacturer that designs and sells a wide range of test equipment. This unique equipment provides complete characterization of materials, modules and systems at only seconds per test. TE Technology’s exclusive series of tests assures that all assemblies are top performers.

Best Value

From your initial call to final production, TE Technology is relentless in achieving the optimal balance of size, weight, cost and performance for your specific needs.



Assembler inspects solder joints on an air cooler.



Engineer tests the thermal performance of a prototype refrigerator for the food service industry.

Call TE Technology

to get the

best solution

for your

thermoelectric needs.

Highly trained manufacturing specialists build air cooling assemblies for the telecommunications industry.

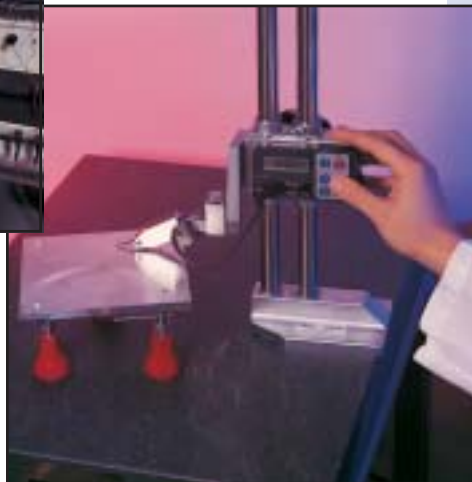




A state-of-the-art machining center provides manufacturing precision and efficiency.



Every assembly is thoroughly checked for performance.



Inspector checks flatness of a machined heat sink plate. Quality flatness promotes good thermal contact, resulting in optimum thermal transfer.

MANUFACTURING EXCELLENCE

QUALITY ASSURANCE

In addition to ISO, we build to meet military, medical, aerospace, and NASA standards.

AUTOMATION

Our in-house machine shop utilizes the latest in equipment, software, and CNC machining.

TRAINING

Manufacturing specialists are continually NASA trained and certified in soldering and inspection.

ON-TIME DELIVERY

We maintain a large inventory of raw materials to expedite your orders.

VERSATILITY

TE Technology accommodates everything from single piece prototypes to large scale manufacturing.

thermoelectric test systems

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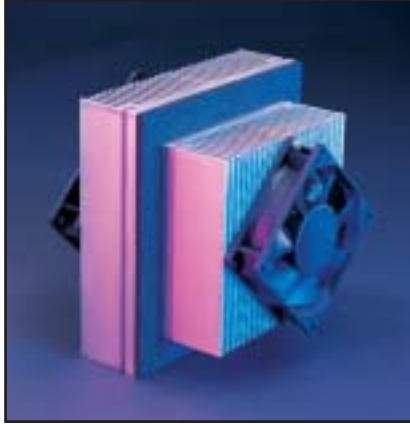


STANDARD PRODUCTS

TE Technology's standard products allow you to quickly and inexpensively evaluate thermoelectrics for your application. We stock a wide range to meet your cooling needs, so you can begin testing immediately. Standard products can also act as a starting point for future customization. No matter how you use them, you gain extensive savings on engineering and development costs and time!



The CP-065, a medium sized plate-to-air exchanger, easily interfaces with your apparatuses.



The AC-045 air-to-air exchanger cools electronic enclosures and similar environments.



ARE STANDARD PRODUCTS RIGHT FOR YOU?

- **Low cost**
- **Quick turn-around**
- **Wide range of inventory**
- **Can be modified to meet your needs**
- **Great for low volume production**

more standard products

www.tetech.com

The TC-1600 temperature controller may be wired to some of our standard products for turnkey operation.

HOW TO APPLY THERMOELECTRICS IS UP TO YOU...

Used in CONSUMER applications to keep beverages cold.



Used in SPACE to grow protein crystals in AIDS research.



Photo Credit: NASA

Applied in the MEDICAL field to cool laser diodes in surgical instruments.



...THE POSSIBILITIES ARE ENDLESS

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