ONE STEP AHEAD IN COOLING

PRIATHERM

www.priatherm.com
We are your Cooling Partner

Mission

PriaTherm provides reliable and innovative solutions in the electronic thermal management industry worldwide. We want to be your preferred partner by offering continuous improvement in business performance, processes, products and services.

Our business processes are designed for quickly reacting to market needs in order to increase our customer satisfaction, as basis for a long term business relationship.

Our value differentiators

- Solutions in demanding applications → we design and validate custom innovative solutions tailored for our customer needs
- Faster time to market → we work close to our customers with ‘right-first-time’ attitude
- Sustainable innovation → we help you in developing solutions for renewable energies applications and help you to stay ahead of competition
- Lower overall cost of ownership → We enable better control of supply chain, lower costs vs. performance ratio, optimized design

Our customers’ satisfaction is considered a fundamental value for the long term development of our company.

Quality is an essential item for the continuous success of PriaTherm
Cooling is our **core business**
Serving **markets** well is our focus

Our Team is **highly specialized** in thermal management solutions.

Our ** Thermal Solutions** fulfill the complete range of market needs and beyond.

Our competences and skills are well renowned by the international community.

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**Energy**

Renewables for power generation are the current trends. We help your industry in **better managing heat in power application** by offering:

- Outstanding performance in a variety of custom solutions
- High power density for space savings
- Design flexibility
- Low pressure drop for a lower consumption

**Transportation**

We support **energy savings and reduce CO₂ Footprint** through:

- **Outstanding thermal performances with our Liquid Solutions**
  - Greater power density allowed
  - Leak free
  - No risk of corrosion
  - Low pressure drop in the circuit for a lower energy consumption
  - High pressure withstand

- **State of the art Air Solutions**
  - Light and compact
  - High fin density
  - Can combine different materials
  - 3D Design for an optimized configuration

**Signal Processing**

Mobile communication, digital TV and Radio, Defense, Medical applications are all related to the signal processing market. Customers are constantly looking for **new reliable thermal management solutions** with:

- Design flexibility
- Outstanding performance
- Application made solutions
- High reliability
A complete range of solutions dedicated to air cooling applications for natural as well as forced convection.

**PT HIGH**
The most effective heat sink for forced ventilation. Metal on metal brazed joint.

*When extrusion isn’t anymore an option*

**PT MIX**
Optimal solution for heat concentration. Effective heat spreading combining brazing joint with heat pipes.

*Synergy among different technologies*

**PT BOARD**
A selection of the most popular standard board mounted heat sinks.

*Standard parts, delivered*

**PT CLICK**
Easy and cost effective. Avoiding CNC tooling, flexible to different applications.

*Neat, clean and effective*

**PT SINK**
Extruded heat sinks. The most popular mean to cool semiconductors in natural convection.

*Standard and customized profiles for your applications*
A complete range of liquid cold plates for IGBTs’ cooling, offering engineers the highest performance whilst maintaining design freedom and flexibility.

**PT ZED**
High performance LCP for electrically non isolated applications. Brazed cold plates with milled channels or lancet offset fins. Suitable for water, glycol or other cooling fluids.

*High performance, Optimized design*

**PT PIPE**
Cu pipe cold plate, available also with stainless steel pipe for special fluids applications.

*Simple and robust*

**PT FLOW**
Vacuum brazed LCP for deionized water application. Best for pure water in high voltage applications.

*Electrical isolation in fluid, guaranteed*
Breakthrough technology
at your service

PriaTherm is specialized in best-on-breed **Brazing Technologies**:
- CAB Brazing
- Vacuum Brazing

**Air Cooling**
- Fins can be placed only in the areas where they are really needed, saving weight, materials and machining costs and achieving better performance in terms of temperature distribution and pressure drop
- Robust metal joint between fins and base
- Increased efficiency under forced convection by creating greater surface area
- Wide dimensional range

**Liquid Cooling**
- We cool down devices by milling channels directly under heat sources
- Allowing very complex hole pattern
- Connectors can be directly brazed onto cold plates
- Rugged leak free seal make our LCPs suitable for any application
- No O-ring : cover and base plate metal to metal joint by brazing

Our brazing solutions enable **extreme flexibility in design** and **outstanding advantages** in performance
Priatherm infrastructure is **fully equipped** for fast prototyping, quick turn productions and volume manufacturing.

The principles of **lean manufacturing** and **forward planning** are implemented to support customers’ need in term of service and quality.

**Modular and scalable** design of our manufacturing system for meeting customers’ volume increase.

In house **technology and capabilities** are combined with a strongly integrated net of partners and specialists.

**Mechanical machining**
- Saw Cut
- CNC Machining
- Fins Preparation from Al 1050A coil

**Brazing & Assembly**
- Controlled atmosphere brazing (Nocolok® process)
- Vacuum brazing (via approved partners)
- Soldering batch oven

**Washing & degreasing**

**Surface treatments**
- Anodizing (black or colored)
- Iridite Coating
- Tin & Nickel plating
- Painting, powder coating

**Testing area – Lab**
- Sealing test
- Pressure drop measurement
- Life test (Cycle & Stress)
Design & Service

Capabilities

Services
• Latest CFD Modeling software fully integrated with CAD-CAM
• By carrying out simulations at heat sink or system level we are able to ascertain the critical issues and optimize the solution quickly and cost effectively to reach a prototype stage
• In house testing of prototypes in support of its CFD designs
• Dedicated training programs to personnel

Design Capabilities
• CAD: Mechanical design (3D applications)
• Thermal design by CFD software: SW Flow Simulation
• CAM

Outsourcing Consulting Services
• Thermodynamic analysis and modeling
• Thermal testing & pressure drop measurement
• Analysis and resolution of thermal challenges in running applications