

SETTING THE PACE IN THERMAL INNOVATION



SPIRIT OF CHALLENGE

HEAT TRANSFER TECHNOLOGIES
FOR EMERGING CHALLENGES





**WHEN THE
HEAT
IS ON, COUNT
ON US**



ENABLED BY TECHNOLOGY,
SHAPED BY IMAGINATION,
AND INSPIRED BY A DREAM,
WE CHARGE AHEAD.



Alkraft was founded over 30 years ago with a dream to build world-class heat transfer systems with Indian engineering ingenuity. Throughout its history, Alkraft has endeavoured to live that dream by challenging status quo, by pushing conventional boundaries, and by addressing the toughest challenges that drive change in the industry.

From a small R&D unit that designed and developed India's first Aluminium Heat Exchanger to a well-integrated system supply partner to the automotive, industrial, power generation, renewable energy, agri-equipment, and defence product industries, Alkraft's journey is testament to its innovative spirit and core engineering strength.

At this time of rapid change and constantly emerging new challenges, Alkraft continues to explore, experiment, innovate and pioneer. With our thinking shaped by imagination, actions guided by our values, and our vision inspired by a cherished dream, we charge ahead.



THERMAL MANAGEMENT SOLUTIONS FOR A BETTER TOMORROW

BS 6 COMPLIANT PRODUCTS

Alkraft's range of heat transfer systems feature proprietary geometric parameters at their core that make them amongst the most efficient, best performing, and lightweight products in the market. This focus on efficiency and performance across the system is closely intertwined with Alkraft's ability to be at the forefront addressing the toughest challenges that drive change in the industry.

The design approach at Alkraft is focused on integrating all elements of thermal management into a seamless system, which brings into play a harmony that results in super-efficient and consistent heat transfer performance. The systems comprise of multiple heat exchangers and secondary components arranged in custom configurations. These modular systems feature optimal packaging for lower cost and higher performance, and are ready for installation on the OEM's assembly line.

The combination of Thermal Performance, durability, smart packaging and mounting design of Alkraft's BS6 Heat Transfer System for Commercial Vehicles resulted in the product achieving 100% on-field reliability and target life expectancy.



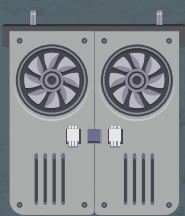
THERMAL MANAGEMENT FOR ELECTRIC POWERTRAINS AND ALTERNATIVE FUEL VEHICLES

Alkraft offers EV OEMs and Systems Aggregators comprehensive thermal management solutions for EV Batteries, Traction Motor, and Power Electronics. Alkraft's BTMS is a complete Plug and Play solution for battery thermal management that includes various heat exchangers, electrical and electronics components including sensors and actuators, and the wiring and hoses, all of which are contained within a compact case. The BTMS controller regulates the functioning of the BTMS and connects to the vehicle master control unit through a CAN 2.0 interface.

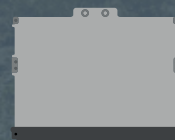
The BTMS is connected to a Cold Plate that is placed beneath the battery, and in contact with the battery cells. The BTMS and Cold Plate together perform the critical function of keeping the battery within its optimal operating temperature range of 15°C to 35°C. The Cold Plate is designed for high temperature uniformity, surface flatness and structural rigidity as these factors are crucial for heat transfer performance and durability of the Cold Plate.

Alkraft's EV solutions also comprise Traction Motor and Power Electronics Cooling Systems that typically consist of a brazed aluminium heat exchanger paired with an electrical fan. Both BTMS & Traction Cooling System are designed to operate at very low noise levels and are also highly energy efficient.

All of Alkraft's products are tested and validated for a wide range of parameters through accelerated life tests, thus ensuring best-in-class thermal performance, reliability and durability.



Plug and Play
Battery Thermal
Management
Systems



Brazed
Aluminium
Cold Plates



Traction Motor &
Power Electronics
Cooling Systems

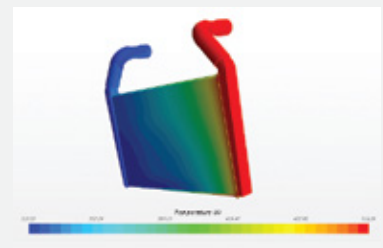
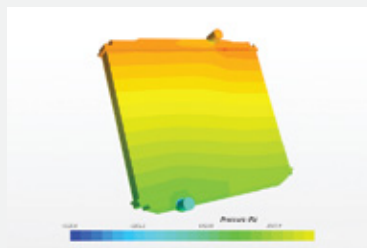
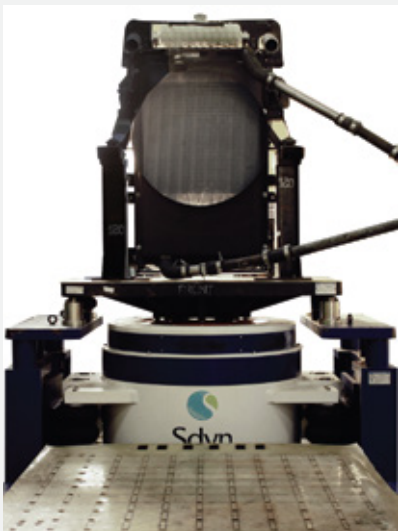


Solutions for
CNG & Other
Alternative Fuel
Vehicles

PRODUCT DEVELOPMENT

Alkraft engineers have pioneered innovative thermal management solutions for a diverse range of end-use applications and varying degrees of complexity. These solutions are testament to the depth of Alkraft's capabilities in developing core geometries that enable better performance-to-weight ratio, alternative packaging strategies, and better system integration.

Alkraft's products are designed in compliance with APQP process guidelines with its proprietary thermal design software, duly validated by CFD/CAE techniques, and rigorously tested for thermal performance, structural durability, thermal fatigue, pressure, shock, and resistance to corrosion. The products are built using the highest grade materials including super long-life alloys and high-temperature plastics. These products have become industry benchmarks for durability and reliability even in extreme end use environments.



OPERATIONAL EXCELLENCE

Alkraft's core engineering and product development strengths are complemented by its dedication to operational excellence that enables consistent, near-flawless execution. The supply chain, diligently developed over two decades, is made up of local and global partners that share the same commitment to excellence. The well integrated nature of the supply chain and logistical efficiency enables Just in Time production.

Seamless integration in operations planning between customer order, vendor delivery schedule, production planning, manufacturing performance, inventory management, and logistics has given Alkraft the edge to cut through wastages and inefficiencies in a systematic manner, thus ensuring daily on-time-in-full deliveries to every customer in an exceedingly volatile demand environment.

All production and assembly plants are governed by TPM principles, and an activated, engaged workforce tightly manages every facet of the company's operations to maximise efficiency and pursue excellence. Alkraft's approach towards manufacturing excellence integrates TPM, Quality Assurance Systems and Lean Manufacturing. The HR excellence programmes lay emphasis on performance measurement and reward, competency development, multi-skilling, collaboration strategies, and leadership development, to build a uniquely capable workforce that performs to global standards on a continuing basis.



WHAT DRIVES US

OUR VISION

To be the most dynamic thermal management company that customers will count on to drive sustainable change through pioneering leadership.

OUR MISSION

Continually challenge status quo and create new paths in pursuit of customer success by delivering differentiated heat transfer solutions, and services that enhance value.

OUR CORE VALUES

INTEGRITY

We do the right thing and honour our commitments. We take responsibility for our actions.

HUMILITY

We are humble and appreciative.

RESPECT

We treat each other fairly and foster a culture of openness and collaboration.

INNOVATION

We do things differently to deliver the best value to our customers.

QUALITY

We strive for first time quality in all that we do.

SAFETY

We are accountable for own safety and for each other's safety and we will not compromise safety for anything else.

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