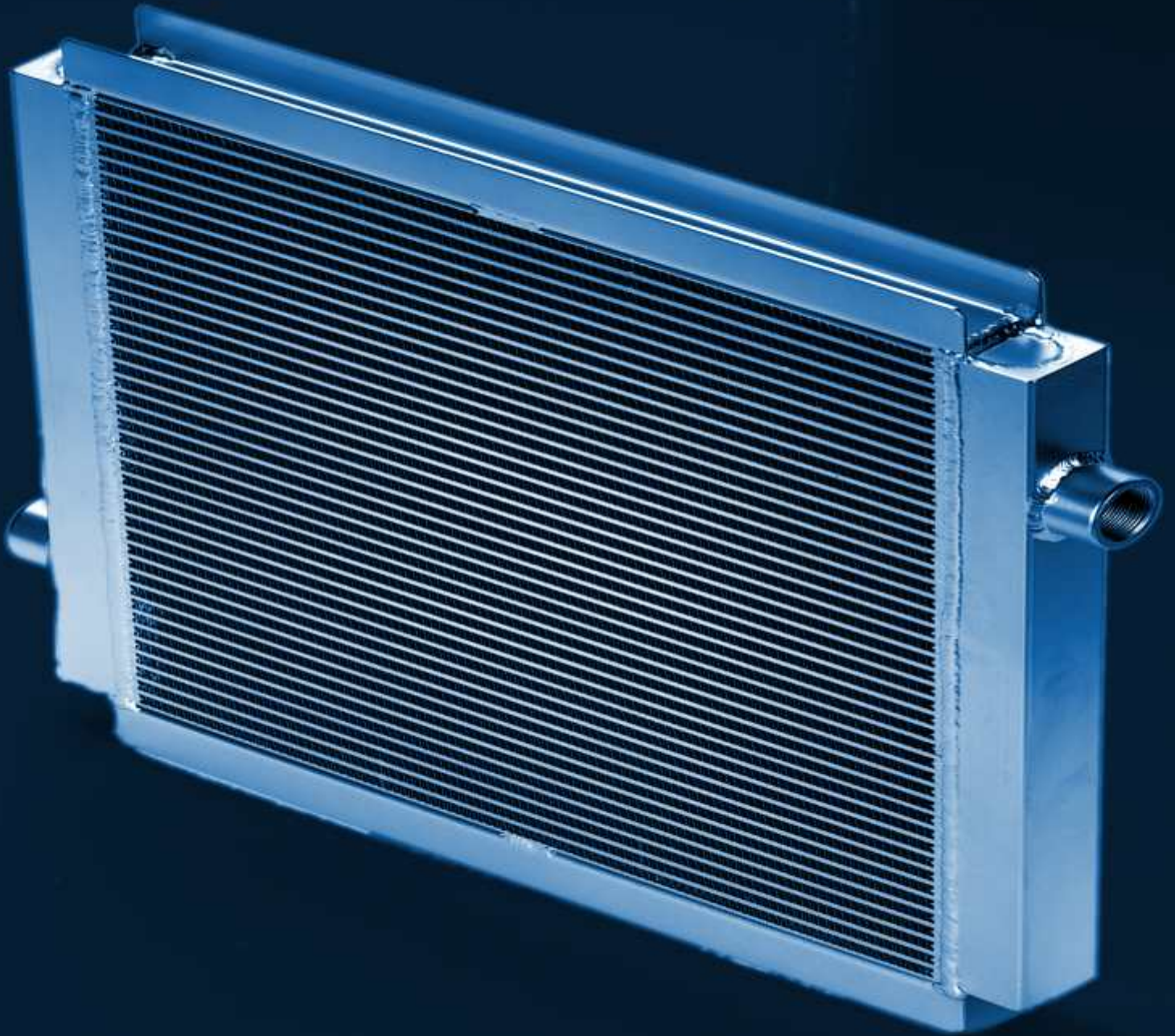
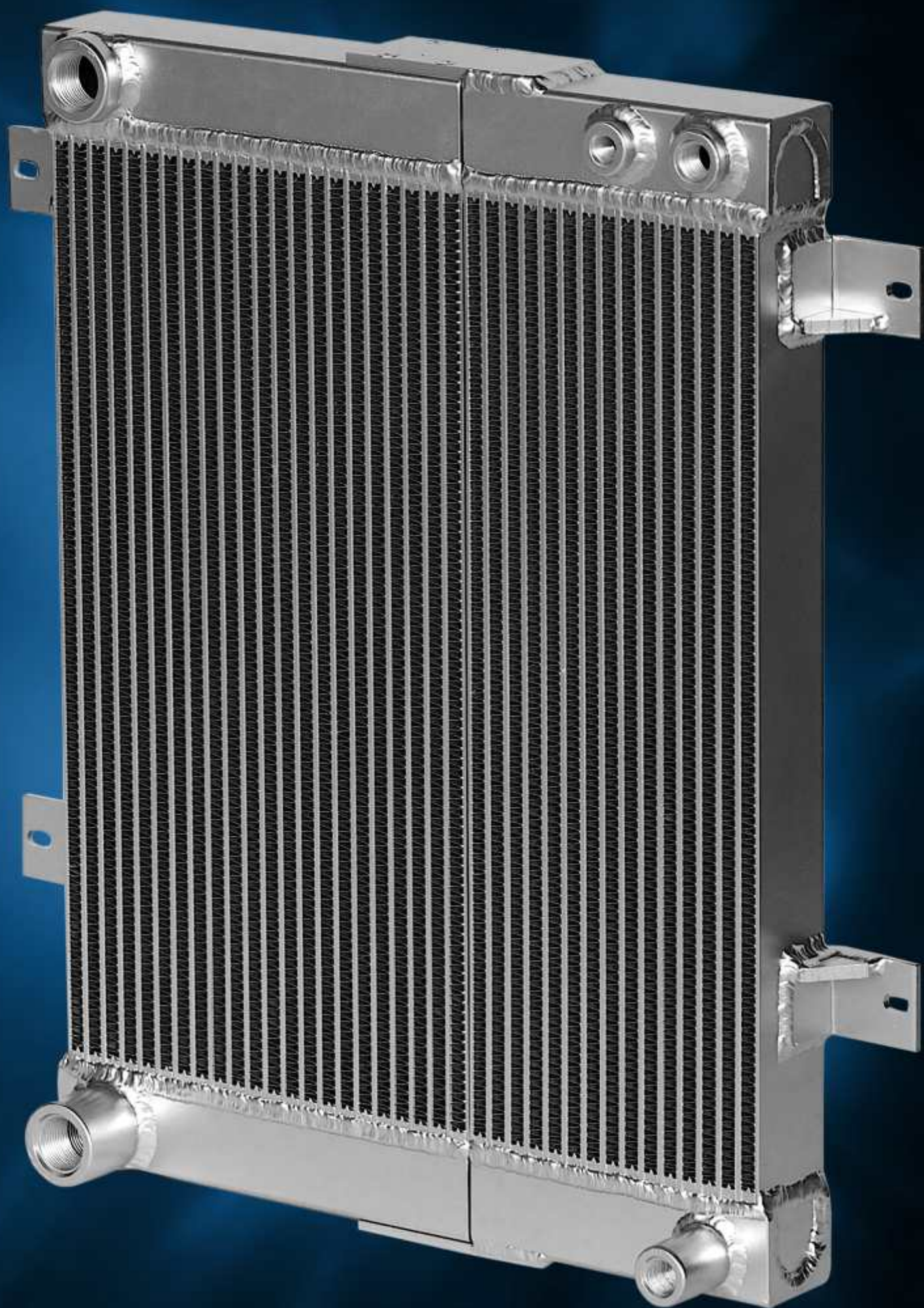


PLATE & BAR OIL COOLER







KASERA Heat Transfer Pvt. Ltd. was established in 1955. The high quality manufacture of Plate & Bar Oil Cooler products. In addition, repairs, Services & upgrading now has been added to the product portfolio at the Bhilwara site.

With more than 57 years experience in the design and fabrication of all major process cooling components, including tubing, headers, plenum chambers, sockets, bundle frames & structure, we are able to offer customers an unparalleled guarantee on the thermal and mechanical performance of our equipment.

It is always our ambition to exceed our customers expectations.

DESIGNING OF COOLER

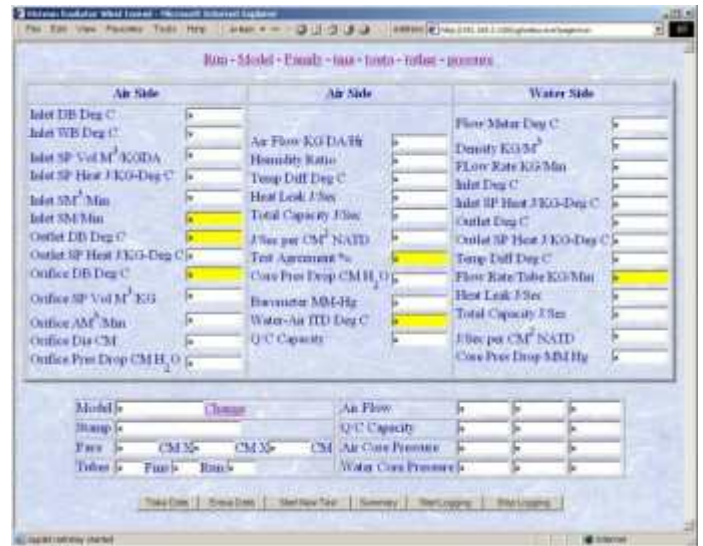
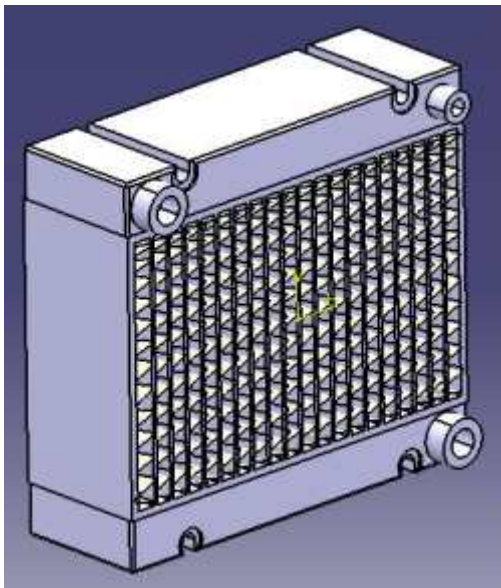
KASERA makes use of leading-HP computer equipment, including the latest computer Aided design systems, to ensure maximum efficiency in:

- Thermal design
- Mechanical design of headers and steel structure
- Noise level predictions
- Preparation of the specification sheet
- Preparation of the general outline drawings
- Preparation of proposals
- Price estimation

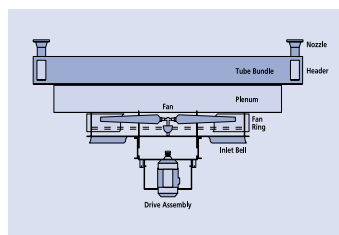
Typical Components of an Radiator & Cooler



Design



Engineering



CHOOSING THE HEADER

Plate and Bar Oil Coolers (oil-air)

KASERA “Plate and Bar” Air Cooled Oil Coolers are manufactured to exceed customers expectations and are available in a wide range of sizes and configurations to suit most customer requirements. A large selection of fin and turbulator configurations is available enabling us to adapt the design to customer's specific thermal and physical size requirements.

KASERA Air Cooled Oil Coolers are entirely manufactured from Aluminium alloys with a high resistance to physical vibration and mechanical stress. The alloy is also impervious to erosion and corrosion which ensures long life in severe environmental conditions.

KASERA's raw material suppliers are rigorously scrutinized and audited when required. Our raw material is subject to regular element composition testing and independent third party inspection to provide the customer with the best possible product.

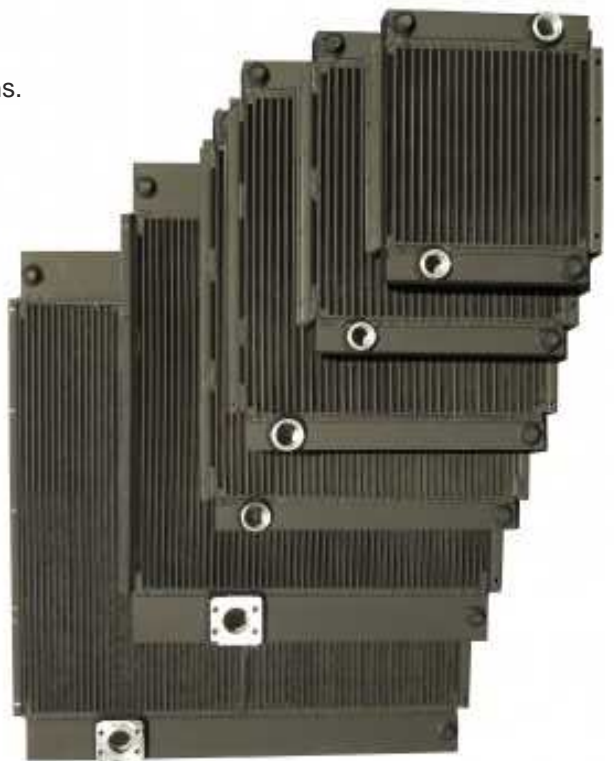
The components are bonded by the means of a modern computer controlled atmospheric brazing furnace and Tanks are welded to header plates by either MIG or WIG, adhering to relevant welding standards.

KASERA plate and bar Oil Coolers are designed for high thermal and fluid dynamic performances which is perfect for our very robust Oil Coolers.

Our Coolers are manufactured with an optimal relation between the heat rejection performances and pressure drop of the fluid passing through the unit.

Advantages

- Maximum corrosion resistance in severe environments conditions.
- High heat rejection and efficient fluid dynamic performances.
- Highly resistant to mechanical and thermal stresses.
- A very wide variety of sizes available.
- Short manufacturing and delivery times.
- Dimensional adaptability and flexibility.
- High efficiency.



CHOOSING THE HEADER

Oil Cooler Components

The turbulators can be positioned for medium or high turbulence, depending on the Customer's specifications i.e.: heat rejection, oil flows and pressure drops. The positioning of the turbulator will have a significant effect on the coolers performances.

Air fin	
Standard Values (mm)	
Fin Height	8.9, 10, 12.5
Pitch	5.08, 8.45
Fin type	Corrugated, Square
Fin thickness	0.125, 0.152

Turbulator	
Standard Values (mm)	
Fin Height	2.5, 3.5, 4.5
Pitch	4.5, 5.0
Fin type	Lance offset
Fin thickness	0.3

Other Fin configurations are also be available.

Sizes

Kasera can manufacture these units in larger sizes than stated and as per customer's specifications.

Configurations

The various Turbulator and Fin configurations allow the thermal performances and fluid dynamic characteristics to be optimized enhancing the efficiency and compact sizing of the Coolers.

Top and bottom tanks are generally manufactured from extruded Aluminium for integrity and TIG welded to the header plates. We also have the facility to provide Aluminium Cast Tanks when required or use existing tanks where salvageable. Connections will be as per original unit or to be advised by the Customer.

Design Concept

When designing the oil cooler system we consider the following entering temperature difference (ETD).

ETD is 30°C for 40°C Ambient & 25°C for 50 °C Ambient

$$ETD (T) = T_{oil} - T_{air}$$

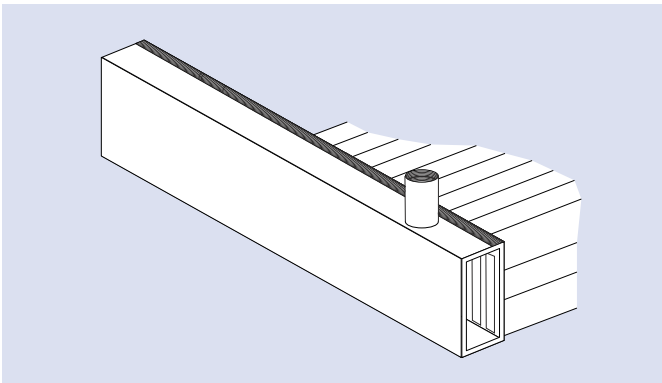
Typical Applications Include

- Construction Equipment
- Off-Highway Vehicles
- On-Highway Vehicles
- Hydraulic Circuits
- Hydraulic Motors
- Hydraulic Presses
- Compressor Aftercooling
- Machine Tools
- Gear Reduction

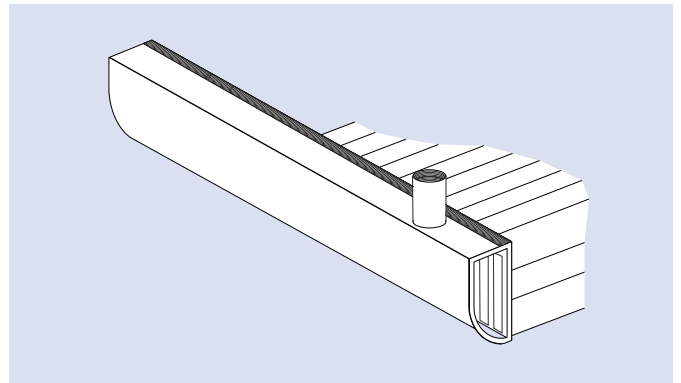


CHOOSING THE HEADER

Saucier Welded Header



Half Saucier Welded Header

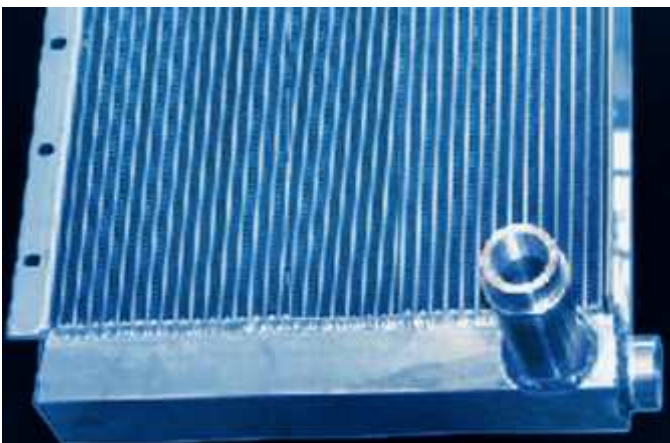


The welded bonnet header is used for special service as hydraulic oil cooler, and air coolers. The advantage of the design is the full welded construction which provide the perfect full welded construction which provide the perfect sealing required suitable for vacuum applications and it is easy for repair and service.

It also facilitates mechanical cleaning and plugging in case of leakage. For hydrogen service at high pressure, seal welding or strength welding can be provided.

The welds are heat treated and X-ray tested.

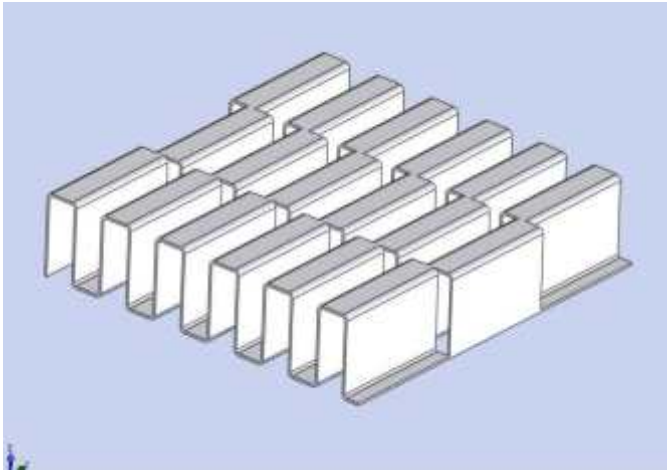
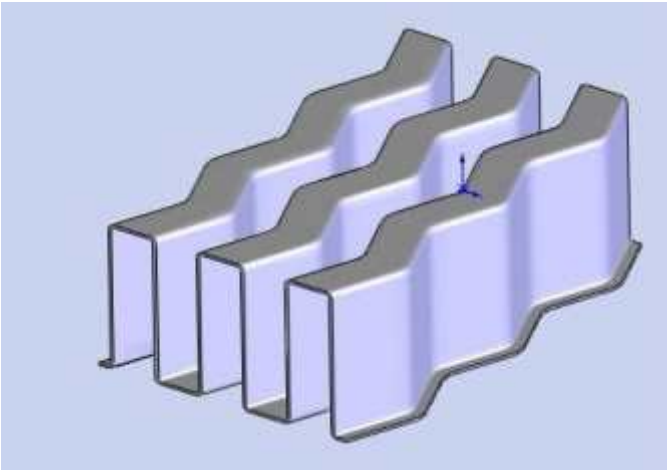
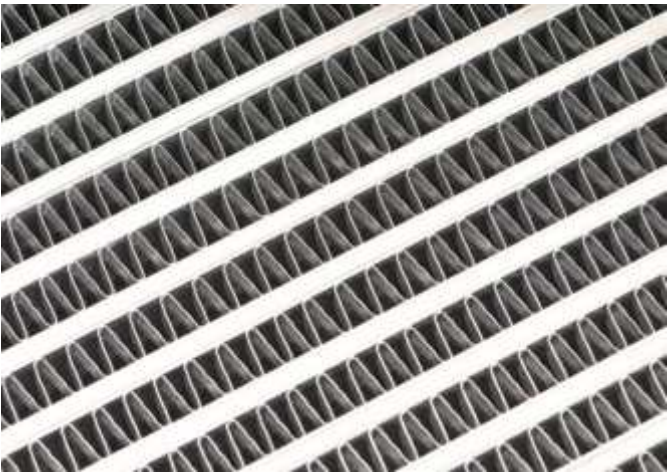
Also design are available as per costumer requirement.

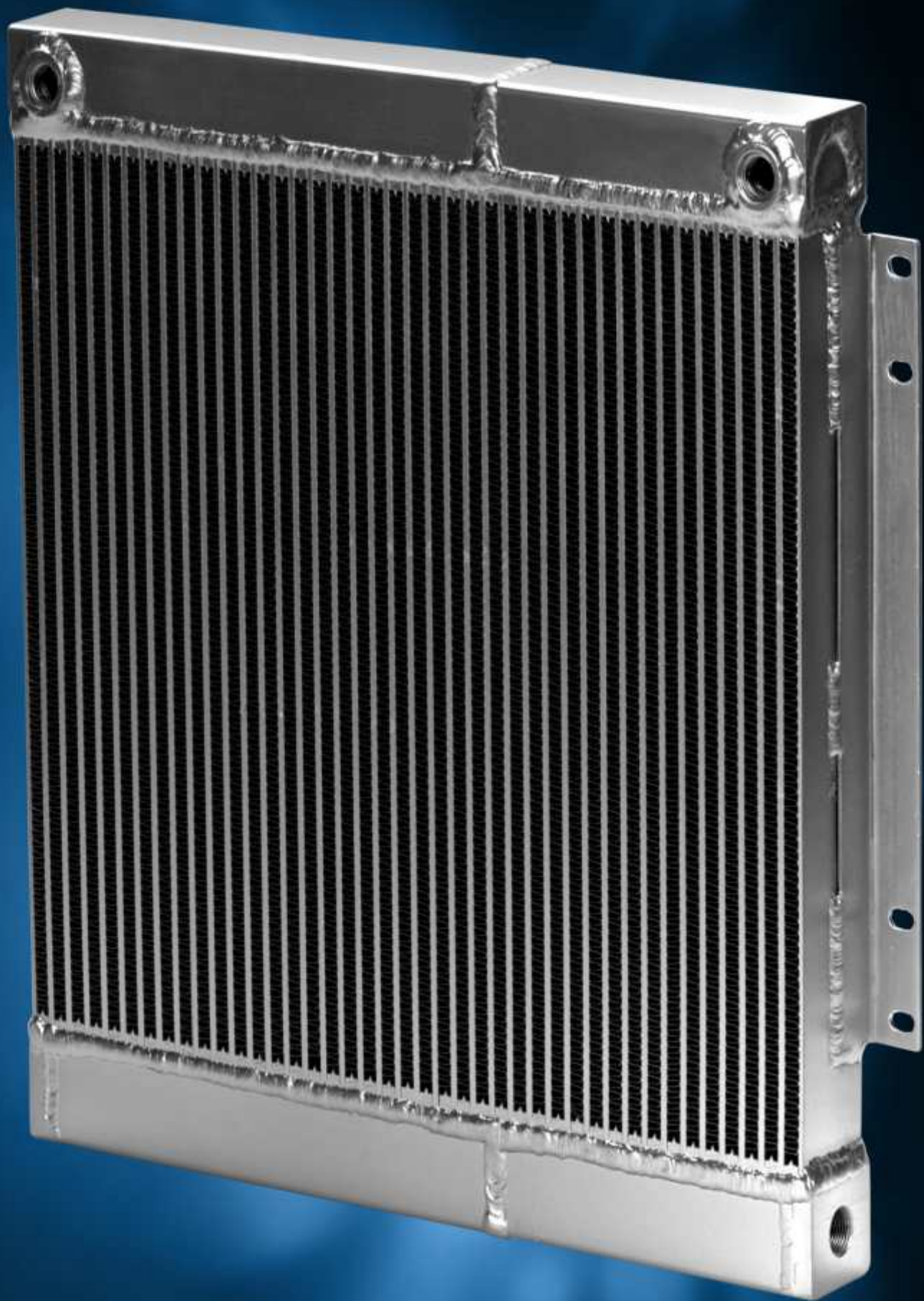


Change

CHOOSING THE FINNS

We have many types of fins, as well as the higher specification extruded fins, used for more demanding applications. Material, thickness and number per unit length will depend on the requirements of the application and standards needed by the client.





CHOOSING FANS, DRIVERS AND TRANSMISSIONS

Fan blades are made of either aluminium or G.R.P. The number of blades and tip speed depend on airflow and noise limitations. Fans are balanced according to code requirements.

Belt and pulley transmissions are used for up to 37kW. Pulleys are dynamically balanced. Belt types are:

- V belt
- Toothed belt (HTD)
- Chevron Belts

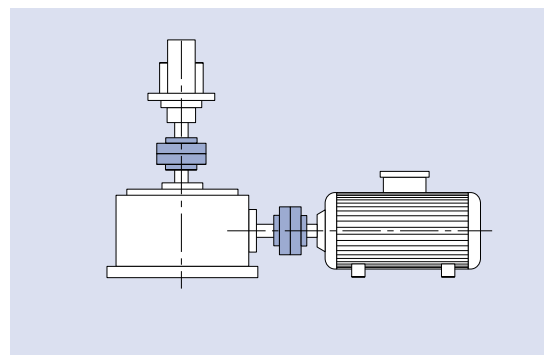
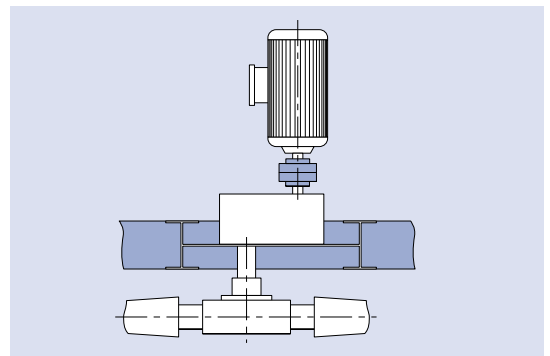
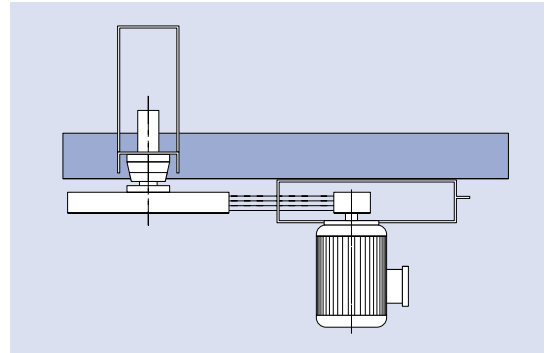
Gear drives are generally preferred for over 37kW and are:

- Parallel shaft
- Right-angle drive

Electric motors are generally used as drivers. However, steam turbines or hydraulic motors may also be used, as well as low-speed direct-drive electric motors.

Airflow can be controlled in one of the following ways:

- Louvres (manual or automatic)
- Two-speed electric motors
- Automatic variable pitch fan
- Variable-speed electric motors (variable frequency)
- Steam turbine drivers



DYNAMIC BALANCING

Boosting the Efficiency of Fan – Ensuring Long Life For Your Equipment

To avoid the serious hazards of shortened machine life – or even catastrophic failure – we can arrange dynamic balancing using state-of-the-art equipment.

This specialist service is one of the valuable ways we can help you anticipate problems before a breakdown actually occurs.

Dynamic balancing can be provided at your site for a wide range of rotating machinery – in particular fans, pumps, blowers and similar equipment. Our specially trained field staff are experts in the use of the latest portable microprocessor analyser-balancer machines.

Dangers of Imbalance

Imbalance has been found to be one of the commonest causes of vibration, generating powerful forces which may prove dangerous for the lifespan of the equipment. Imbalance can be defined as the unequal distribution of the weight or mass of a rotor about its rotating centreline. Although analysis of vibration data can highlight the presence of rotor mass imbalance, the problem can only be corrected through the specialised technique of dynamic balancing.

What is the Cause?

Assuming a good state of balance has been achieved during manufacture, the likeliest causes of imbalance developing during service are:

- Build-up of material deposits on rotor blades
- Erosion of rotor due to abrasive dust burden
- Uneven wear due to corrosion
- Distortion due to excessive heat
- Impact damage from a foreign body
- Bent shaft
- On-site repairs to any – or all – of these problems

If You Think You Have a Problem...

If you have any doubts about your equipment, please call us – we can offer rapid, expert diagnosis.

It is dangerous to ignore the warning signs!

Remember that the centrifugal force created by imbalance actually increases by the square of the rotor rpm. This means that, at speed, a small amount of unbalanced mass can be transformed into a huge – and potentially disastrous – weight.

UPGRADING

KASERA offers valuable expertise to operators who are considering an upgrade. This can often be the solution when process demands have outstripped the original specification and the space or funds are not available for a new installation.

Our thermal and mechanical assessment will establish the best and most cost-effective upgrade within the limitations of your budget – our vast experience with fans, drives and other aspects of radiator technology Can make this a surprisingly successful option.

Existing fans are often old, noisy or obsolete. By applying the correct engineering solution and using an updated drive with increased power electric motors, an outdated cooler can be modified to cope with a higher heat load while still meeting the ever more stringent industry standards for noise and vibration levels.



COOLING SYSTEMS

KASERA has a wealth of experience in designing and manufacturing Plate and Bar Oil Cooler for a multitude of cooling applications. Our Plate and Bar Oil Cooler provides a standardized, reliable, and self-contained solution for cooling requirements in both the Industrial and Mobile Markets. These compact, high-efficiency Oil Coolers and Aftercoolers can be the perfect answer for applications where cooling requirements are remotely located, cooling water is unavailable or impractical, or where coolants may be subject to freezing. These pre-engineered packages include an all-aluminum vacuum brazed bar & plate heat transfer core that provides superior durability in a cost-effective, compact, light-weight construction. Our vacuum brazing process allows the use of higher strength materials that result in a ruggedly bonded unitary core, assuring trouble-free operation even under the most challenging operating conditions.

KASERA Heat Transfer Pvt. Ltd. uses state-of-the-art computer modeling to develop high-efficiency process and ambient fin geometries that optimize turbulence to maximize heat transfer while minimizing pressure drop and power costs.

We employ a team of thermal engineers with extensive experience in solving the kind of problems likely to arise in this area of operations.

Quality Control

We have achieved full qualification to ISO 9001: 2000 in all stages of design and manufacture.

Every fan supplied as an integral part of our equipment is tested to ensure there are no inherent vibration problems, and that it complies with the appropriate specifications. In addition, noise levels can be measured if required.

Comprehensive certification is issued covering all stages of inspection and test.



SERVICE

- ? **Chemical Cleaning**
- ? **Mechanical Brush Cleaning (Straight Thru design)**
- ? **Steam Pressure Washing**
- ? **Individual Pressure Testing**
- ? **Onsite Cleaning Available**
- ? **Can repair or provide new Oil Coolers**



Standard turnaround time 3 days or less! Contact us at +91-9680808888

KASERA also has door to door service facilities across India.

KASERA's Goal is to be customer's one stop Center for all Oil Cooler needs offering complete service on all types of Oil Cooler. KASERA also offers a complete range of replacement Top and Bottom for all Type of Oil Cooler.

Your order is custom-designed by our team of professional engineers. Using advanced computer applications, we provide detailed drawings and supporting data sheets that will exactly, and economically, fit your application. In addition, a comprehensive quality control manual accompanies every shipment.

We offer you these services:

Welding, From a single tube up to a 15% tube Weld & Component replacement.

Component repair, leaks in top & bottom can be repaired by weld repair.

Ultrasonic thickness testing of Oil Cooler components.

We can supply new Engel, Frame, top and bottom.

Hydro testing of Oil Cooler.







ADDRESS:
KASERA HEAT TRANSFER PVT. LTD.
Shree Nath Tower, Near UIT, Ajmer Road,
Bhilwara, Rajasthan 311001 INDIA

TELEPHONE
Phone: +91 1482 238887
Fax: +91 1482 237887

Email ID :
For product information or assistance :
info@kaserahheattransfer.com / export@kaserahheattransfer.com

For after sale, service customer support or assistance:
service@kaserahheattransfer.com

Live Customer Care Center +91 9680808888
Monday to Saturday 10.00am to 6:00pm (Indian Time)

Also use our telephone support center to contact a service representative during regular business hours.
Sunday is holiday please leave a message. A customer representative will contact you within 1 hour of your call in working days.