

CHARGE AIR COOLERS

for Diesel or Gas
Engines



FARAD
HEAT EXCHANGERS

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...we work on quality

Charge Air Coolers for Diesel or Gas Engines

Function

Engine air downstream of the turbocharger is usually cooled from approximately 200 °C to 45 °C or lower.

Thus cool air is supplied to the engine inlet. A decrease in air intake temperature of the engine allows more air and fuel to be combusted per engine cycle, increasing the efficiency of the engine and decrease the emissions.

FARAD air coolers are suitable for all turbocharged engines with a power rating of 200 kW and more. They are suitable for seawater or freshwater cooling systems. Thousands of Air coolers have already been manufactured, installed and operate successfully.

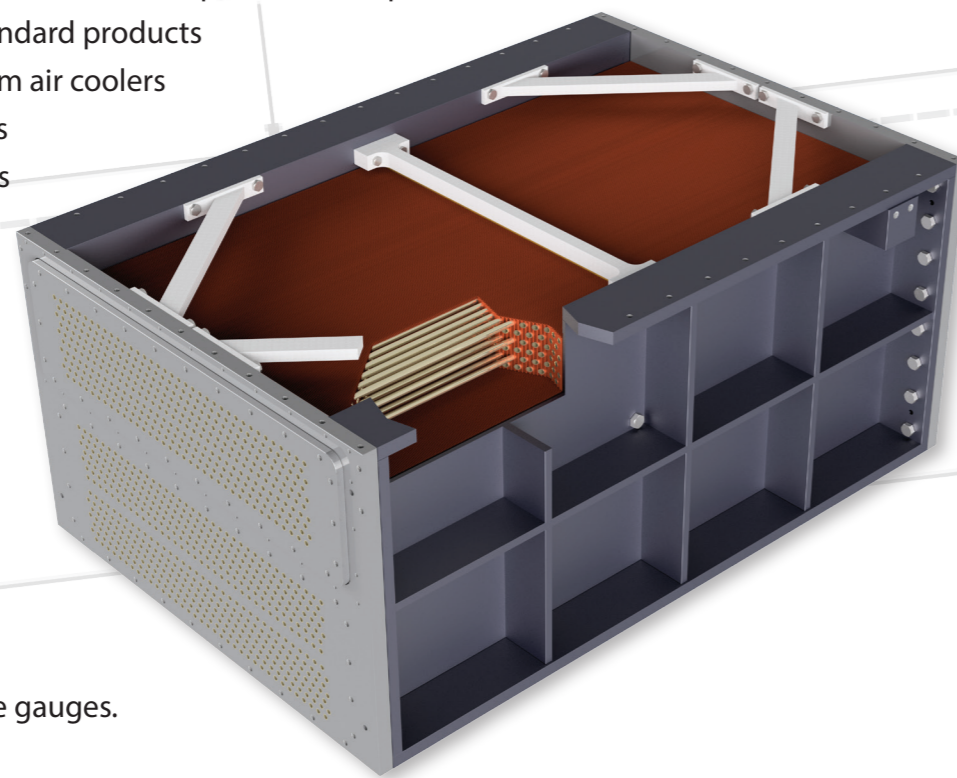
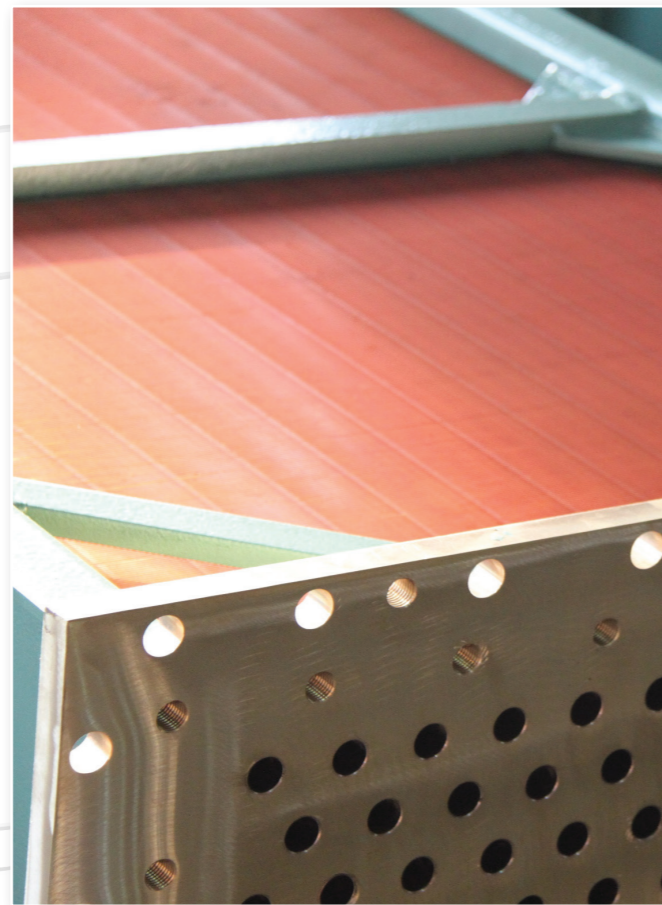
FARAD Air cooler series are proven to be an established range of products with extended use from our customers with verified prolonged life and excellent performance.

Advantages

- Compatible dimensions with engine models from all major engine builders
- Expert advice offered if refurbishment is possible for replacement costs reduction
- Fast delivery times on standard products
- Large variability on custom air coolers
- High efficiency Air coolers
- High quality raw materials

Optional accessories

- Air vent and drain valves.
- Temperature and pressure gauges.



Performance

Farad's special geometry fins, deliver high performance and low fouling characteristics. In all cases the fins are especially designed to be corrugated with a geometry specific to the tube arrangement. This specialized geometry ensures high heat transfer rates and long lasting operation.

Materials

Material selection is key for a long working life. Materials are sourced only from reputable EU based manufacturers and always accompanied with inspection certificates of type 3.1 or 3.2 as per EN10204. Material thickness is being chosen under established International standards while extra safety factors are applied for superior quality.

Fins

from commercial pure copper (Cu-DHP) achieving the greatest heat transfer coefficients and with fin default thickness at 0.2mm. Also available in tinned copper for special occasions.

Tubes

of Copper-Nickel 90/10 or Copper-Nickel 70/30 are used for high thermal efficiency and corrosion resistance.

Tube-sheets

are typically manufactured from Naval Brass plates, Steel (P265GH) and Copper-Nickel 90/10.

Headers

(covers) from cast iron, steel plate, copper nickels and elastomeric coating system (rubber lining).

Dimensions and design

Dimensions are usually determined by the engine type. By using sophisticated simulation software, air-side static pressure drop can be maintained as low as needed by properly varying the fin geometry and / or density, depending the needs. Special type wavy fins (such as louvered and corrugated type) are used for further increased efficiency.

Quality assurance

All workmanship along with the final inspection and testing is performed according to FARAD's quality system which incorporates the ISO 9001:2015 certification.

Furthermore, quality is assured by third party inspector who will be present at the final test. For marine installations the heat exchanger is approved by your preferred classification society. All major classification society approvals are available upon request.

Arrangement

Our design team will evaluate and choose the optimal size for each application. Tube sizes are available from 10mm-19 mm while fin thickness is set at 0.20 mm, for higher durability.

