



Company Profile

Leading Heat Exchanger Manufacturer

V-Type Radiators · Horizontal Remote Radiators · Vertical Remote Radiators · Mechanical Driven Radiators ·
Gas Turbine Inlet Coils · Heating Module / Skid Frame

www.tecshx.com

TECS ENGINEERING

Heat Exchangers For Power And Industry

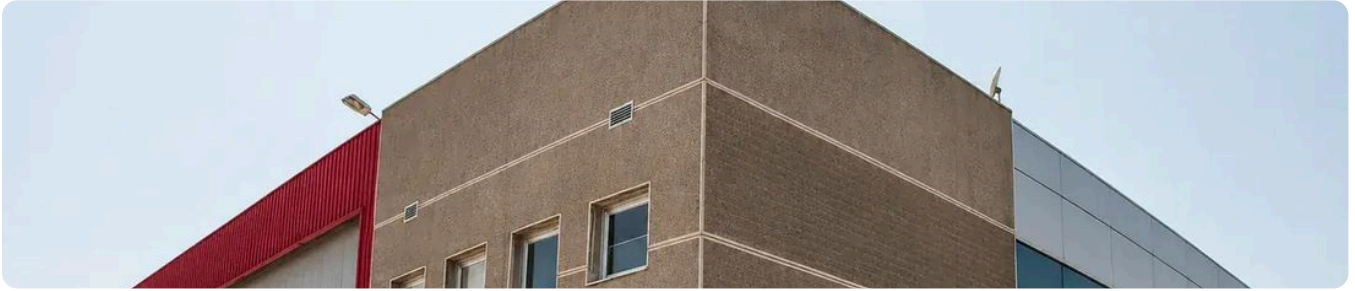
TECS Engineering, one of the Karcioğlu Group companies, manufactures LT/HT radiators for gas and diesel engine generator sets, cogeneration systems and power plants, together with heating and cooling coils for gas turbine air inlets.

Our project-based approach treats each enquiry as a new product. The customer's expectations, the system requirements, the ambient conditions and the site obligations are reviewed in detail, and the design that gives the client the best technical and commercial result is offered. Products are designed from 1 m up to 13 m in length; fan quantity and diameter follow the duty.

TECS units are built with **Eurovent-certified coils**.

Our product portfolio includes:

- Horizontal radiators, single circuit and LT/HT
- Vertical remote radiators with electric fans
- V-type radiators
- Mechanical driven radiators for generator sets
- Gas turbine inlet air heating and cooling coils
- Oil coolers and fuel coolers
- Plate and shell-and-tube heat exchangers
- Expansion tanks in SS304L / SS316L
- Control panels, junction boxes and heating modules



WHO WE ARE

Karcioğlu Group

Karcioğlu Group is a diversified industrial group with decades of experience across engineering, manufacturing, construction and industrial solutions. With an annual turnover exceeding EUR 70 million and a workforce of more than 750 employees, the Group has built a strong industrial presence across multiple sectors. Through its companies TECS, AXON, TERMOKAR, KARMAK and KAR CONSTRUCTION, Karcioğlu Group delivers reliable solutions to customers across a wide range of industries worldwide.

Operating in power generation, heat transfer technologies, industrial manufacturing, construction and turnkey engineering, the Group combines the expertise of its companies to provide integrated, high-quality solutions for complex industrial requirements, managing the project lifecycle from design and manufacturing to installation, commissioning and after-sales support.

TECS
Engineering of HX**AXON**
TECHNIC**TERMOKAR****K**
KARMAK**KAR**
İNŞAAT



01 / COMPACT HEAT EXCHANGE LAYOUT

V-Type Radiators

V-type radiators combine two inclined coils under a common row of top-mounted fans. The arrangement carries large capacities on a short footprint and suits power plants, data centers and chiller economiser circuits where many units stand side by side.

- Single-circuit or LT/HT V-type units with the coil angle, fan diameter and fan count chosen for the duty and the sound limit.
- Common frame with lifting points, pipework and junction boxes prepared for fast site installation.
- EC fans with speed control for part-load operation and low night-time sound levels.
- Materials and coatings for coastal, desert and industrial atmospheres.

APPLICATIONS

Power Plants

Data Centers

Chiller Economisers



02 / REMOTE HEAT REJECTION

Horizontal Remote Radiators

Horizontal radiators reject the heat of engines, cogeneration circuits and processes to ambient air where the equipment must be positioned away from the heat source. Each unit is sized for its duty: heat exchange surface, fan quantity, airflow and sound level are selected together for the required capacity and the design ambient.

- Single-circuit units and combined LT/HT units for gas and diesel generator sets, with separate low- and high-temperature circuits built into one casing.
- Finned-tube coils in copper tube / aluminium fin as standard; AlMg2.5 fins, epoxy-coated fins and coated casings for dusty, coastal, offshore and other demanding environments.
- EC or AC axial fans with the required IP rating and motor class; speed control, fan diffusers and silencers where the sound limit asks for them.
- Delivered with support legs, expansion tank, coolant level switch, junction box or control panel and the pipe connections defined for the project.

APPLICATIONS

Power Generation

Cogeneration

Power Plants

Data Centers

Chiller Economisers



03 / ELECTRIC FAN CONFIGURATIONS

Vertical Remote Radiators

Vertical remote radiators move the cooling duty away from the engine when the engine room, the noise limit or the plant layout does not allow an engine-mounted radiator. The coil stands upright and the electric fans blow or draw the air horizontally, so the unit fits against a wall, a louvre or a duct.

- Single-circuit or LT/HT coils with the circuit arrangement matched to the engine manufacturer's flow, temperature and pressure-drop requirements.
- Electric fan sets selected for the airflow, the external pressure drop of ducts and louvres, the ambient temperature and the sound level.
- Frame, fan guards, pipe connections and junction box built as one factory-tested unit ready for installation.
- Suitable for container installations, power plants and multi-engine stations with many identical units.

APPLICATIONS

Power Generation

Power Plants



04 / ENGINE-DRIVEN COOLING

Mechanical Driven Radiators

Mechanical driven radiators take their fan power from the engine crankshaft through a belt drive or a shaft. They are the compact, self-contained cooling solution for generator sets where no electric fan power is wanted and the radiator sits in front of the engine.

- Single-circuit and LT/HT radiator packages with fan, fan drive, guards, frame and pipework built around the engine interfaces.
- Fan diameter, blade angle and speed matched to the engine fan-drive power and the airflow restriction of the installation.
- Charge-air cooler, oil cooler and fuel cooler sections integrated into the same core where the engine needs them.
- Designed for the engine manufacturer's coolant flow, heat rejection and allowable pressure drop at the site ambient.

APPLICATIONS

Power Generation



05 / INLET AIR CONDITIONING

Gas Turbine Inlet Coils

The output and efficiency of a gas turbine follow the density of the inlet air. Heating coils protect the inlet against icing and improve part-load behaviour in winter; cooling coils recover output on hot days. TECS designs both for the inlet house geometry, the airflow and the air-side pressure drop the turbine allows.

- Heating and cooling coils in copper or stainless-steel tube with aluminium, AlMg2.5 or coated fins.
- Coil geometry, row count and face velocity selected for the duty with the lowest air-side pressure drop.
- Frames, headers and connections built to the inlet house dimensions and the fluid circuit of the plant.
- Drain pans, droplet eliminators and access for cleaning and inspection defined with the inlet system.

APPLICATIONS

Gas Turbines



06 / INTEGRATED SOLUTIONS

Heating Module / Skid Frame

Where the project asks for more than the heat exchanger, TECS supplies the heating module or pump skid that completes the circuit: pumps, three-way valves, expansion tank, instrumentation and pipework on one frame, factory assembled and pressure tested.

- LT/HT heating modules for gas-engine stations with pumps, control valves and heat exchangers mounted on a common skid.
- Skid frames and support structures for radiators and auxiliary equipment.
- Plate heat exchangers, shell-and-tube heat exchangers, oil and fuel coolers selected for the circuit.
- Expansion tanks in SS304L or SS316L, control panels and junction boxes.

APPLICATIONS

Power Generation

Cogeneration

COMPLEMENTARY EQUIPMENT

Selected With The Cooling System



Plate Heat Exchangers

Compact heat transfer between separate fluid circuits.



Shell & Tube Heat Exchangers

Tube-bundle exchangers for the fluid conditions and the project duty.



Oil & Fuel Coolers

Fan-mounted oil and fuel coolers manufactured in our factory.



Expansion Tanks

SS304L / SS316L tanks sized for the circuit volume and temperature.



Control Panels & Junction Boxes

Electrical interfaces for fans, isolation and project-specific controls.

Documentation

Every unit is delivered with its technical datasheet, dimensional drawing, fan curve and acoustic data, the test records of the factory pressure and function tests, and the installation, operation and maintenance manual. General arrangement drawings in PDF and DXF are issued for the project engineering, and the datasheet states the design point the unit was calculated for.

HOW WE WORK

From Enquiry To Delivery

01 Enquiry Heat duty, fluid data, ambient conditions, sound and space limits - from your datasheet or the engine manufacturer's data.	02 Thermal Design Coil, fan and circuit selection in TECS's own design software, checked against the limits of the site.	03 Proposal Technical datasheet, dimensional drawing and price - usually within a few working days.	04 Manufacturing & Testing Coils, headers and casings made in-house; every circuit pressure tested, fans and electrics function tested.	05 Delivery & Support Packed for road or sea transport, with installation drawings, documentation and after-sales support.
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WHY TECS

What You Get With A TECS Unit

Designed For Your Duty, Not Picked From A Table

Every unit is calculated for the heat rejection, flow, temperatures, ambient, altitude and sound limit of the project. The datasheet you receive states that design point, and the drawing is the unit that was calculated.

The Engine Manufacturer's Figures Are The Law

Coolant pressure drop, flow rate and temperatures are kept inside the limits of the engine maker's data sheet - the radiator is sized around the engine, never the other way round.

Honest Sound Figures

Sound pressure levels at the distances you specify are calculated from the measured sound power of the delivered fans with a safety margin, and verified on request. Quiet sites get EC fans, lower speeds or diffusers, not optimistic numbers.

Built For The Site Atmosphere

Coastal, offshore, desert, dusty or chemical: fins, coatings, casings and tanks are specified to the corrosion category of the site, and the fin pitch is chosen so the coil stays clean between services.

One Factory, One Responsibility

Coils, headers, casings and frames are made and assembled in Menemen. Pressure tests, fan and electrical function tests and the final inspection happen before the unit leaves.

Complete Packages

Expansion tanks, level switches, control panels, oil and fuel coolers, plate heat exchangers, pump skids and heating modules come with the unit, so the cooling circuit arrives as one coordinated system.

APPLICATIONS

Where Our Coolers Work



Data Centers

Radiators for liquid-cooled IT loads



Power Generation

Radiators for diesel and gas generator sets



Cogeneration

Emergency coolers and heating modules for CHP plants



Power Plants

Cooler banks for multi-engine stations



Gas Turbines

Inlet air heating and cooling coils



Chiller Economisers

Free-cooling radiators in chilled-water circuits

SOME OF PROJECTS

Projects



One Of The Biggest Datacenter In Europe With 72 Unit TECS Radiators



HFO Power Plant With TECS Radiators



Radiators For The Customer In Japan



When You Need, We Offer The Complete Solution



Cooling Solution With Well-Known Engine Manufacturers



Industrial Power Station



Contact Us

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