



STAR COOLERS & CONDENSERS

- ▶ REMOTE RADIATOR
- ▶ DRY / ADIABATIC COOLER & CONDENSERS
- ▶ WET / HYBRID COOLERS & CONDENSERS

we take the heat  you keep the cool

ABOUT COMPANY

Star Coolers & Condensers Pvt. Ltd. [SCCPL] established in Year 2000, is an INDO – BRITISH Joint Venture Company with Parent company as C & C Holdings.

SCCPL is spread over 3 large factories covering 1,20,000 sq. ft. in Jalgaon, Maharashtra. The wide product range includes Air Cooling Units , Blast Freezers, IQF's, Precooling units, Plate Freezers, Evaporative Condensers, Air Cooled Condensers which are popularly used in Food and Beverage Industry and RHVAC Applications.

SCCPL Parent company in the UK pioneered SS tube & AI fin coil technology which is now in widespread use world over. The company's vast experience has sharpened the technological edge resulting in product innovation and leadership in India with over 40,000 installations with high repeat customer index.

SCCPL is proud and happy to be associated with industry stalwarts, leading F & B & Process Industries, RHVAC Contractors, renowned System Integrators, Consultants and Start-up's providing technology with standard & Customised product range demonstrating Quality and efficiency resulting in Lowest Cost of Ownership to our Customers.

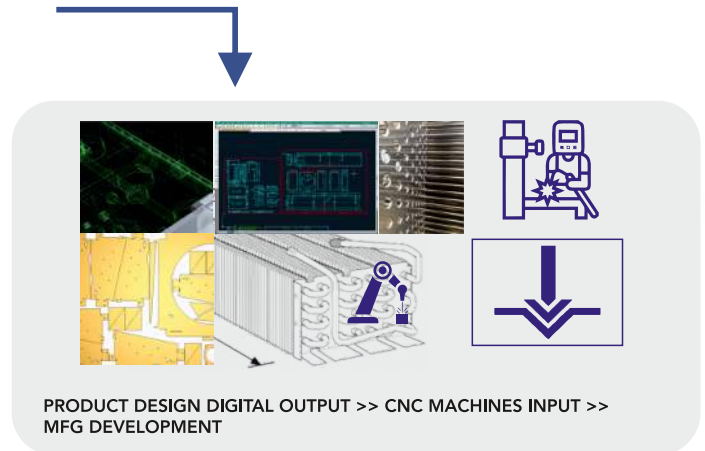
Star Coolers leadership & wide experience has resulted in successful expansion of product lines such as Dry, Wet & Adiabatic coolers, Remote Radiators, Closed Circuit Cooling Towers, Hybrid coolers catering to wide applications in Process & Manufacturing Industries.




DESIGN & MANUFACTURING CAPABILITY



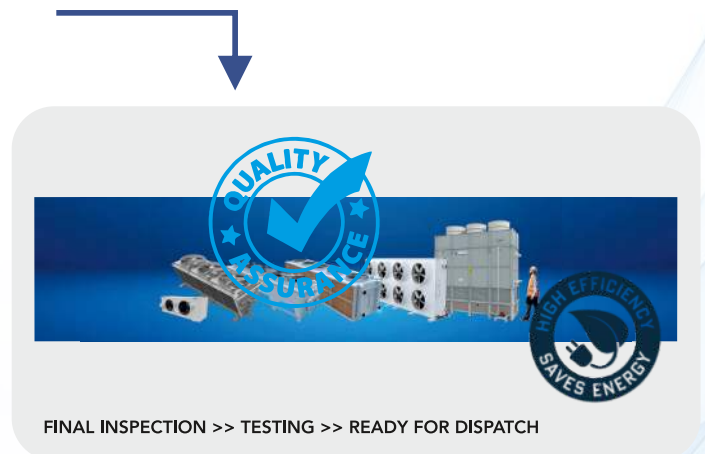
IN-HOUSE HEAT LOAD ASSESSMENT >> PRODUCT DESIGNING >> CUSTOMISATION



PRODUCT DESIGN DIGITAL OUTPUT >> CNC MACHINES INPUT >> MFG DEVELOPMENT



IN-HOUSE MANUFACTURING >>: SHEET METAL >> COIL >> ASSEMBLY >> STAGewise INSPECTION



FINAL INSPECTION >> TESTING >> READY FOR DISPATCH

Star Coolers & Condensers Pvt. Ltd. (SCCPL) in house designing and manufacturing set up is spread across 1,20,000 sq. ft. in three factories & warehouse. The factory is ISO 9001:2015 Certified & has modern and world class machinery set up for Sheet metal designing & manufacturing, Coil designing & manufacturing, Assembly and final Testing.

Product performance in Refrigeration applications depends on proper designing, manufacturing and an excellent build quality. SCCPL In house designing & manufacturing set up is in full control of all the key processes with stage wise inspection confirming the designed performance.

As the need be, Star Engineers verify and assist on process heat load to arrive at exact product or based on customer/contractor/consultant specification input. The product is selected through standard product selection range to choose from or customized new product design.

Once the design is ready Manufacturing starts with sheet Metal & Cooling coils development which is all done through Automatic Machine with stage wise inspection and final testing.



- ★ Steel Industry
- ★ Automobile Industry
- ★ Electronics Industry
- ★ Sand Blasting
- ★ Data Centre
- ★ Chemical Industry
- ★ Power plants
- ★ Textile Industry
- ★ Pharmaceutical Industry
- ★ Rotary UPS System (DRUPS)
- ★ Cement Industry
- ★ Glass Industry
- ★ Distilleries/Breweries
- ★ Data Mining

SALIENT FEATURES

COILS

- ★ Star Dry coolers with 4 different sound levels of (S) Standard, (L) Low (Q) Quiet, (E) Extremely Quiet, for outdoor installation.
- ★ Fans arranged in single rows from 1 to 8 and in double rows from 2 to 16.
- ★ Dry Coolers ranges from 25 to 1410 kW [Additional range as per Customers requirements]
- ★ All models with vertical and horizontal airflow.

OPTIONAL VARIANTS / ACCESSORIES

- ★ Fin Pitch : 2.11 to 3.175 mm
- ★ Fin Material - Coated aluminium fins - Aluminium magnesium alloy fins - Copper fins Complete epoxy coated coil
- ★ Stainless steel tube
- ★ Stainless steel casing
- ★ Stainless steel manifold
- ★ Different colour options for casing
- ★ Adiabatic cooling system options # Adiabatic pads # Eco mesh spray system - High (Fogging system) and low pressure direct spraying system
- ★ Threephase step control terminal box
- ★ Different speed control - Step control - Voltage control - Frequency control - EC Control
- ★ Vibration dampers
- ★ Different connection types/standards
- ★ Axitop / flowgrid
- ★ EC fan
- ★ Junction box
- ★ MODBUS communication protocol
- ★ Handrail / Ladder
- ★ High mounting legs
- ★ Other fan and motor options for high working pressure

FANS

- ★ High efficient axial, external rotor motor, Ziehl Abegg, Multiwing or equivalent fans with diameters 800-2000 mm are used in dry coolers. Fans are 415V 3 phase, 50Hz/60 Hz.
- ★ Variable fan speed regulation can be achieved by using frequency inverter with all pole sine filter. All external rotor motors are suitable for 100% speed control and equipped with internal protection [50°C to 65°C]. Due to operating conditions, temperature range may go up to +70°C according to fan type.
- ★ For high working temperatures different fans and motor options are available
- ★ Fans housing designed to maximize air flow rate.
- ★ Protecting guard grilles are standard. Motor protection class IP54; insulation class F & H
- ★ Each fan has safety switch suitable for outdoor conditions.

MOTORS

- ★ Direct drive, totally enclosed, continuously rated, weather proof conforming to IP.

CASING

- ★ Dry Coolers have their own self-supporting construction and do not require any extra accessories for installation on steel or concrete base.
- ★ Galvanized steel is used for casing. External surfaces are covered with polyester based electrostatically powder painting, which provides an excellent UV and corrosion protection.
- ★ Hot dip galvanized steel, magnelis or stainless steel can be used optionally.
- ★ Each fan chamber is separated by internal baffle plates to prevent induced windmilling effect during off-cycle fans.
- ★ All models are equipped with lifting eyes and mounting legs.

STAR DC (DRY COOLERS / CONDENSER)

STAR RR (REMOTE RADIATORS)



Remote Radiators



V type Dry Cooler/
Condenser



Horizontal [Single]
Dry Cooler/Condenser

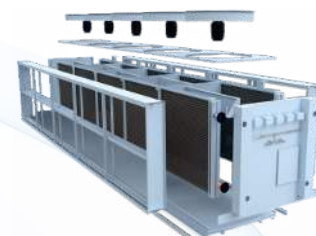


Horizontal [Parallel]
Dry Cooler/Condenser

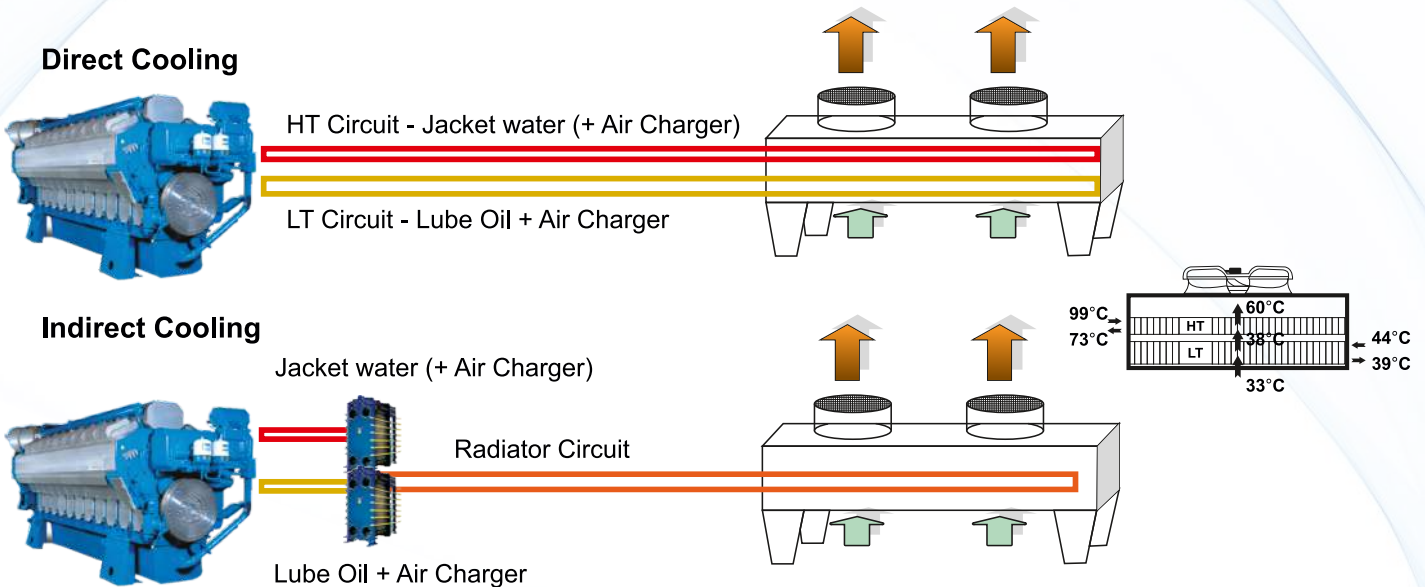
Dry Coolers/Remote Radiators are a closed-circuit fluid coolers which has hot fluid circulating through the tubes of the coil and air circulates over the coil to dissipate heat from the fluid to the atmosphere.

- ★ No Loss of fluid being closed circuit system.
- ★ No risk of contamination and scaling being closed circuit system.
- ★ Economical fluid cooling system at temperature above ambient.
- ★ Freely available ambient air which is the cooling medium with further advantage during night times and winters.
- ★ Copper and stainless steel tube coils with plain and variety of fin options.

Dry Coolers/Remote Radiators is equal to the combined effect of ' heat exchangers plus cooling towers', however they prove to be comparable OR many times efficient in terms of overall Total Cost of Ownership that is Capital Cost with Installation, Operation Cost and Maintenance Cost. Being a single equipment is easy to Install operate and maintenance. As scarcity of water grows day by day this is the best solutions which does not require water at all. As a maintenance it is all about periodic inspection and cleaning of the coil surface by low pressure compressed air.



Remote Radiator - Engine Cooling Circuit



STAR ADC (ADIABATIC DRY COOLER / CONDENSER)



Adiabatic Cooler / Condenser
Horizontal [Single]



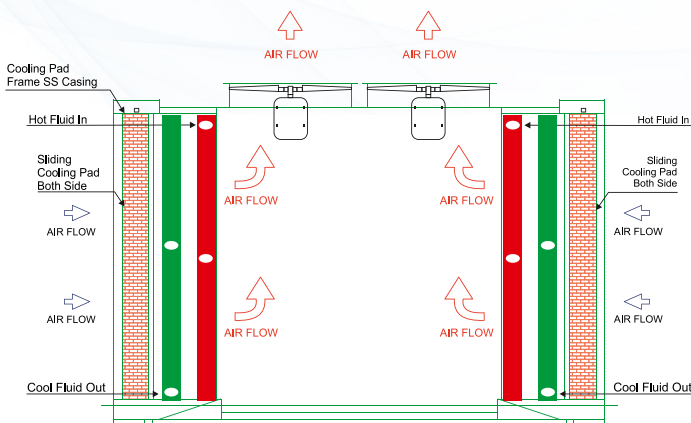
Adiabatic Cooler / Condenser
Horizontal [Parallel]

In Adiabatic Coolers Ambient air passes through a wet pad (see brown colour pads in the pic below) and gets adiabatically cooled to further pass over the coil which has the hot fluid circulating inside the coil tubes. This way it is possible to achieve the same fluid outlet temperatures as conventional cooling towers. Cooling pads (cellulose or celldek pads) are made of cellulose corrugated paper glued in opposite sequence which generates air passage inside pads. The cooling pads are energy saving, high water absorbing ability, environment friendly, economically viable and are specially treated to avoid disintegration.

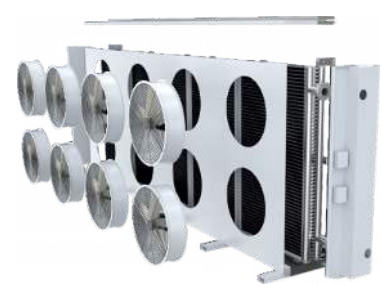
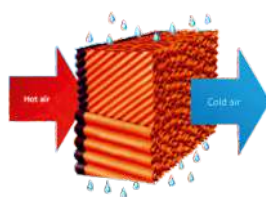
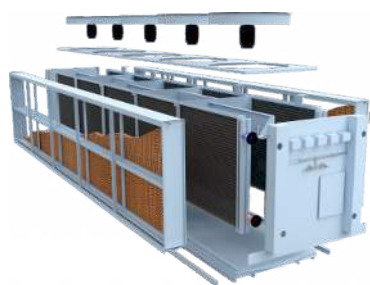
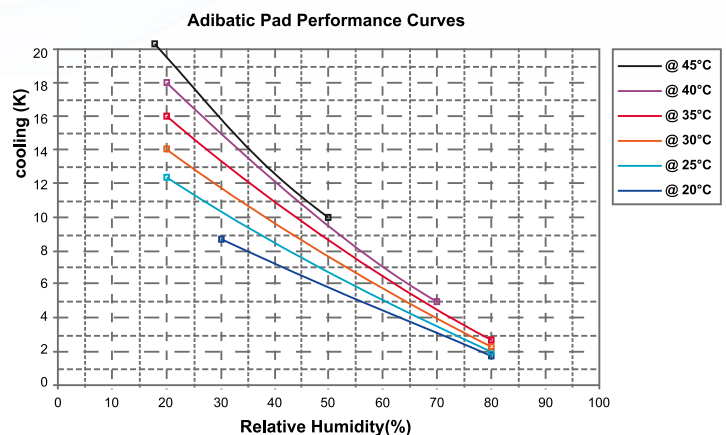
The working is simple and effective in which cooling pads receive controlled amount of water (depending on ambient temperature), the air passes through the wet cooling pad in which it becomes saturated with water and cools down before it passes over the tube-fin heat exchanger.

The Adiabatic Advantage:

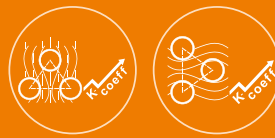
- ★ Closed Loop application eliminates the Cooling tower and its cost of huge water requirement, water treatments cost, fills cost, periodic maintenance downtimes.
- ★ The no maintenance Adiabatic Coolers just require low pressure fin cleaning and preservation of adiabatic pads and periodic replacement.
- ★ Environment friendly and over 85% water saving which is getting scarce and expensive day by day.



Sectional View Of Adiabatic Cooler



STAR WC (WET COOLERS),
STAR HC (HYBRID COOLERS),
STAR CCCT (CLOSED CIRCUIT COOLING TOWERS),
STAR EC (EVAPORATIVE CONDENSER)
STAR ACU (AIR COOLING UNITS)



Star Coolers & Condensers Pvt Ltd
AN INDO BRITISH JOINT VENTURE



Air Cooling Unit [ACU]



Wet/Hybrid Cooler
Evaporative Condenser

When water is used as the heat transfer medium, wet or evaporative cooling towers are used. Wet coolers rely on the latent heat of evaporation to exchange heat between the process medium and the air passing through the cooling tower. The Cooling tower may be an integral part of the process or may provide cooling via heat exchangers.

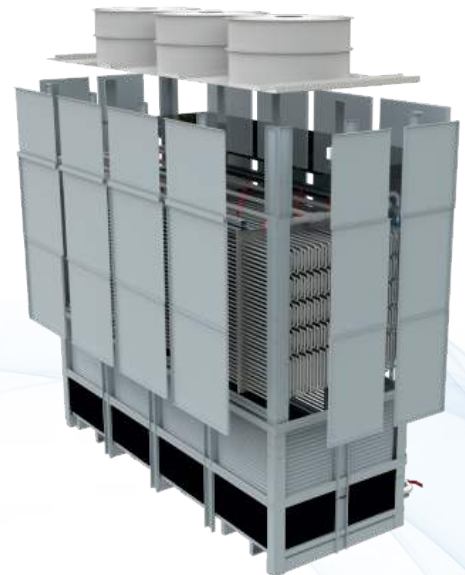
Heat transferred from process water is measured by moisture it contains and WBT [Wet bulb temperature] of the air leaving the wet coolers.

These fluid cooling and vapor condensing systems are optimized for industrial applications where rugged designs and cost effective, efficient closed-loop cooling and condensing duties are required.

Working Principle: The closed loop design ensures that the process liquid, vapor or gas flows inside of the heat exchanger tubes, with the cooling air and the spray water flow in the same direction on the outside of the tubes.

Salient Features:

- ★ Compact and easy for maintenance
- ★ Specially designed for fluctuating and seasonal load conditions
- ★ SS tube for the Coil
- ★ Inbuilt water tank as part of the coolers
- ★ Coil section and fan sections in galvanized steel and powder coated as
- ★ Standard in PCGI, optional in SS
- ★ Anticlog water spray nozzles to avoid chocking problems.
- ★ Easy maintenancen an cleaning.



Air Cooling Unit

There are several non food application which requires low temperature storage depending upon the commodity to be stored. Star Air Cooling units are available in wide variety in std as well as customised capacity.

The Units work on HFC/Ammonia in Single/Dual discharge with various mount options and SS/Copper tubes and different fin material and FPI options. Defrost arrangements are available in electric/hot gas / water as suitable. Casings are in PCGI/SS with Motor of IP55 grade and IE3 efficiency. Trays are special Double skinned and hi quality AC fans. Fans and motor can be separately removed.



★ **Product Enquiry**

INDO BRITISH JOINT VENTURE

- ★ INDIA
- ★ 4 Regions
- ★ 25+ Sales & Service Engineers

40,000+
Installations in India & Overseas



The Sales & Service Engineers covering North, East, West, South regions are located at Jalgaon, Pune, Indore, Ahmedabad, Delhi, Agra, Kolkata, Ranchi, Bhubaneshwar, Chennai, Bangalore, Hyderabad, Vizag

Overseas projects in Middle East, Africa, South East Asia exported from India by Contractors / System Integrators are equipped with Star Coolers & Condensers product besides direct exports from the company.

★ **Factory & Registered office:**

H-18/13 (Unit 2), MIDC Jalgaon - 425003, Maharashtra, INDIA.

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sales@starcooler.co.in

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As we are constantly endeavouring to improve our product / equipment , we reserve the right to make changes from time to time hence the product details and images may differ than presented in this brochure. For latest product information pl get in touch with Marketing HO or concerned branches / sales contact.



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