
SUMMIT
PROCESS COOLING
Keeping industry at
the optimum temperature
www.summitprocesscooling.co.uk

Unleashing excellence since 1989.

Summit Process Cooling, a sub-division of Summit Systems, has been a leader in the water-cooling industry for over 30 years. We specialise in solving cooling problems by supplying and installing a wide range of cooling equipment. With extensive experience in various cooling applications, we can offer well-engineered and cost-effective solutions to industries such as refrigeration, air conditioning, original equipment manufacturers, and end-users.

As part of Summit Systems, which has been serving the material handling market for plastics for over 35 years, Summit Process Cooling believes in understanding our industry and providing innovative ideas to support our customers' success.

Our product and service range includes the installation and commissioning of temperature control units, chillers, adiabatic coolers, free coolers, air blast coolers, and cooling towers. We are not limited to any specific brand or system, allowing us to offer the best process cooling and temperature control products available.

Summit Process Cooling also has an in-house design, installation, and project management team with extensive experience in chilled water systems. We are able to design, supply, install, and commission your new cooling system, providing a single point of contact, and ensuring consistent service throughout the project.

Your Reliable Cooling Solution Partner

"Thank you to the whole team at Summit Process Cooling, from my initial conversation, comprehensive advice and the required specification was given. A prompt installation date was strictly adhered to by an efficient team on site. I have no hesitation to recommend Summit Process Cooling to anyone."

Mark Wetherell
Wetherell Plastics

"The chiller is working as it should which means we can now run 2 furnaces together which has pleased the production guys! I have to thank you and your engineers for the sterling work in getting our chiller up and running in the time frame given, they completed the task professionally and are a credit to your company."

Steve Matthews
Collins Aerospace

"Recently purchased a chiller from yourselves to get us out of a sticky situation following a breakdown on our old machine. All staff we dealt with during the process were brilliant, very helpful, knowledgeable and responsive to all queries. We will have no issue recommending your company in future"

Brian & James
Redshift Laser Marking

PEERS QUALITY ASSURANCE LTD ISO 9001:2015 · UKAS MANAGEMENT SYSTEMS 9940 · REFCOM F-GAS CERTIFICATED · SafeContractor APPROVED · EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Over 30 years experience controlling temperature for the world's most demanding industries

After Sales

We are committed to providing exceptional after-sales service to all customers, regardless of whether you use our equipment or another manufacturer's. We offer some of the best solutions and rates for equipment from other manufacturers.

Emergency Assistance

We offer an Emergency Support Packages to our customers with a maintenance contract, with assistance available 24 hours a day, 7 days a week. Our engineers are stationed throughout the UK for occasions where phone or virtual assistance is not sufficient to resolve your problem.

Preventative Maintenance

We understand the importance of keeping your equipment running at maximum efficiency and minimising the risk of downtime, that's why we offer tailored maintenance contracts to suit the unique needs of every customer we work with.

Commissioning

It is good engineering practice to commission your new equipment. Our engineers will make sure all is operating to design, providing peace of mind, and ensuring your new cooling system gets off to the best possible start.

Pipework Installation

We can specify and install a wide variety of pipework materials to suit your process type, location, and budget. These materials include, ABS, PVC, both welded and pressfit stainless steel and galvanised steel. These materials have the advantage of speed of installation, immediate readiness for use, weight, and competitive overall cost.

Project Management

We have an inhouse, design, installation, and project management team with many years' experience with working on chilled water systems. After your Account Manager has gained the best understanding of your requirements, we are able to design, supply, install and commission your new cooling system.

Rental Equipment

We understand there are many different reason's companies will require hire equipment, and have rental equipment available to temporarily cover breakdowns, and for seasonal equipment which isn't needed for 12 months of the year. Alternatively, if you're just looking to spread the costs or for R&D purposes, we'll have the solution for you.

Stock Units

We understand how long lead times on equipment are not suitable for the process cooling market. We stock a wide range of air-cooled chiller units and Temperature Control Units to offer the fastest lead times possible. You can rely on our readily available inventory for swift and hassle-free access to top-quality equipment.

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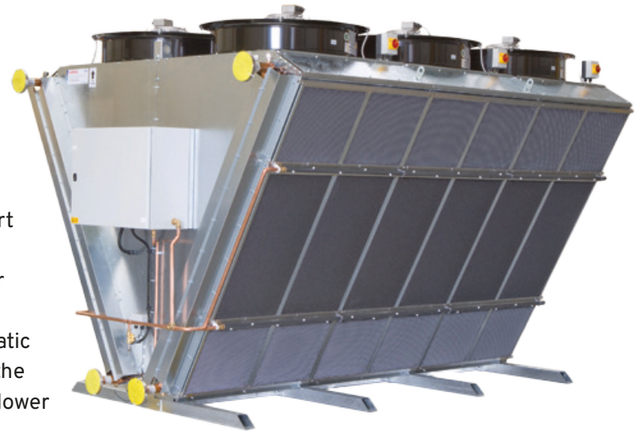
Adiabatic Coolers



Summit Process Cooling Adiabatic Coolers are the smart and cost-effective alternative solution to traditional evaporative Cooling Towers. Designed to provide similar water temperatures while mitigating health and safety concerns and minimising maintenance costs, our adiabatic coolers offer unparalleled performance. By leveraging the principle of adiabatic cooling, these coolers effectively lower the air inlet temperature that passes over the coil block.

Energy Saving Options:

The combination of an adiabatic system with either an inverter drive or EC fans, lowers the energy consumption of the unit and considerably reduces the sound pressure level.

Construction Options:

- Tubes: Copper, electro-tinned, steel, or stainless steel
- Fins: Aluminium, copper, electro-tinned, aluminium coated, steel, or stainless steel
- Fans: Axial type at various speeds to suit customer requirements
- Casework: Galvanised steel, external painting, aluminium, or stainless steel

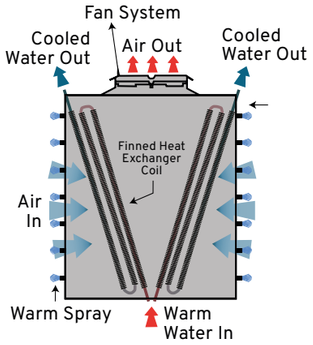
Adiabatic Cooler Benefits:

- No chemical water treatment
- No registration with local authorities
- Lower operating costs than cooling towers
- Lower water use than cooling towers
- Minimal maintenance
- Sealed cooling system
- Operate as a Dry Air Blast Cooler for 95%+ of the year
- No unsightly plumes of water vapour (premium range)
- Multiple fans unlike a typical tower with one fan
- Energy saving inverter or EC fans

V-TYPE

HALF V-TYPE

FLATBED



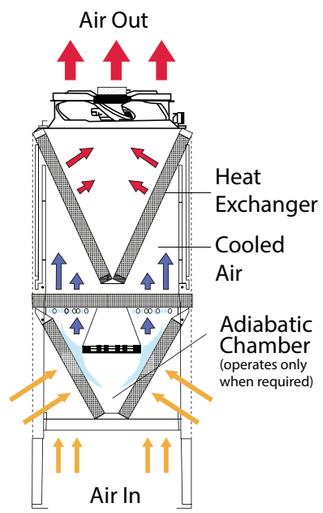
Cooling Principle:

On-coming air temperature is reduced allowing the Adiabatic Cooler to cool below ambient in warmer conditions. Through the creation of a fine mist at the air inlet, the oncoming air temperature is significantly reduced, enabling our coolers to supply cool water temperatures as low as 25°C even during hot summer periods. For the majority of the year the cooler operates as a dry air blast cooler reducing water costs to a minimum. With Summit Process Cooling Adiabatic Coolers, you can enjoy optimal cooling efficiency without compromising on safety or incurring excessive maintenance expenses.

Premium
Adiabatic Coolers

Unlike standard Adiabatic Coolers which operate with external aerosols via spray bar/nozzles running along the coil face, our Premium Adiabatic Coolers utilise an internationally patented Adiabatic chamber. This keeps the process within the unit itself so that the coil blocks remain dry eliminating scaling and avoiding the risk of proliferation of bacteria such as legionella, therefore, no eternal aerosols to give issue.

Save money by drastically reducing energy and water consumption, minimising the need for costly chemical consumption, completely eliminating chemical discharges, offering an economical installation, and eliminating the majority of maintenance compared to cooling towers and conventional adiabatic coolers.
Create a competitive advantage through better quality and more uptime, due to consistent, precise water temperature control.
Expand as you grow with our module approach which allows production facilities to install economical systems that can be easily expanded.
Improve environmental sustainability by saving extensive amounts of water and requiring zero chemical discharge.



How the Ecodry Closed-Loop Dry Cooling System Works:

By taking advantage of the ambient temperature and without the utilisation of compressors, the Ecodry system represents the simplest, most efficient, clean, safe, and affordable equipment for any water-cooling process.

Through a single set of uninsulated pipes, the water returning from the process is pumped into heat exchanges and cooled with ambient air flow. There is no process water evaporation in this closed system. As a result, it provides clean water at the right temperature to process machines year-round.

Premium Adiabatic Cooler Benefits:

- Extended life of coil blocks
- Low water use
- No chemical water treatment
- Minimal maintenance
- Low operating costs
- EC brushless fans
- No external spray – coils remain dry
- Elimination of heat exchanger scaling
- No registration with local authorities
- Smaller footprint than conventional units
- Dry cooler operation for most of the year avoids the risk of bacteria, such a legionella
- Stainless steel legs and panels for extended life

Why choose a Premium Adiabatic Cooler?

Conventional Adiabatic Air Blast Coolers spray a mist into the air alongside the heat exchangers to reduce on-coming air temperatures. This mist is pulled onto the heat exchangers by the fans. This creates scale on the heat exchanger surface both reducing cooler performance and creating a risk of proliferation of bacteria, such a legionella.

The Premium Adiabatic Cooler range has been designed to remove both these risks with its internationally patented Adiabatic Chamber.

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Air Blast Coolers

Air Blast Coolers, also known as Fin Fan Coolers or Air Cooled Heat Exchangers, are a type of cooling system commonly used in industrial applications.

These coolers utilise ambient air to remove heat from process fluids, such as water or oil, without the need for a water source. The process fluid is passed through a bundle of finned tubes while ambient air is blown over the tubes by a fan. This causes the fluid to lose heat to the air and become cooler.

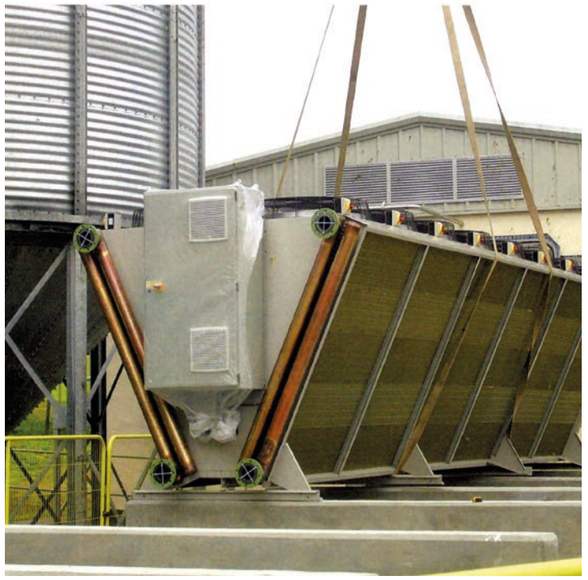
Air blast coolers are a popular choice because they are relatively easy to install, require less maintenance than water-based systems, and are often more cost-effective. They are used in a wide range of industries, including oil and gas, chemical processing, power generation, and food and beverage.

Advantages of our Air Blast Coolers

- Designed for the process industry
- Built with high quality leading brand components
- Long standing existing product line
- Proven repeat performance
- V-Type, Flat Bed and Compact fully packaged units available
- Bespoke designs available
- 24 month warranty
- Expert technical advice
- Rapid response through our service network
- Certified to ISO 9001: 2015
- All equipment is CE marked

Construction Options:

- Tubes: Copper, electro-tinned, steel, or stainless steel
- Fins: Aluminium, copper, electro-tinned, aluminium coated, steel, or stainless steel
- Fans: Axial type at various speeds to suit customer requirements
- Casework: Galvanised steel, external painting, aluminium, or stainless steel



BENEFITS OF ALL AIR BLAST COOLER MODELS

- Low operating costs
- Energy saving converters
- No chemical water treatment
- Minimal plan area
- Low operating noise levels
- No water loss through evaporation
- Sealed system
- No clean and chlorination
- Easy installation and maintenance

V-Type Air Blast Coolers

With their compact design and high cooling capacities ranging from 100kW upwards, V-Type Air Blast Coolers offer an efficient cooling solution for industrial applications, and their inclusion of a control panel, along with options for staged fan control or inverter drive, further contributes to reduced running costs and enhanced operational efficiency.

Packaged Air Blast Box Coolers

Packaged Air Blast Coolers are comprehensive cooling systems that come with a non-ferrous water tank, allowing for efficient heat exchange, and can be equipped with either a single or dual pump arrangement. Additionally, these coolers are equipped with a control panel, requiring only mains power and mechanical pipework connection to be operational. Cooling capacity ranges from 5kW-200kW.

Vertical Air Blast Coolers

Vertical Air Blast Coolers are designed with horizontal airflow to minimise their footprint while offering efficient cooling capabilities, ranging from 20kW upwards. They come equipped with a factory-fitted control panel that provides the option of staged or energy-saving inverter control, allowing for optimised cooling performance and reduced energy consumption in industrial applications.

Flatbed Air Blast Coolers

Flat Bed Air Blast Coolers ranging from 20kW upwards and come equipped with a factory-fitted control panel. The control panel offers options for staged or energy-saving inverter control, providing flexibility in managing the cooling process and optimising energy consumption based on the specific requirements of the application.

Free Coolers

Introducing a Free Cooler onto your chiller systems will drastically reduce your energy bills and carbon footprint.

Water chiller systems are selected to supply a constant water temperature in the summertime and to achieve this they utilise a high energy use compressor. As most of the year UK ambient temperatures are much cooler, chillers are inevitably oversized for over 70-80% of their operating time over the year, a Free Cooler will automatically dissipate the system heat allowing the higher energy consuming chiller to turn off.

By adding a retrofit Free Cooler to an existing chiller system, massive amounts of energy can be saved on chiller running costs. Return on investment is outstanding with payback from energy savings being achieved in as little as 6-12 months.

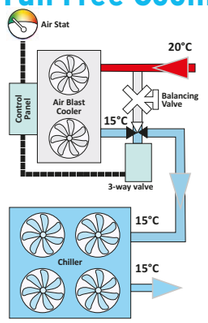
What is Free Cooling?

Free Cooling is the method of using external air temperatures to assist in the chilling of water, which can then be stored or used immediately. Chillers are oversized for over 70-80% of the year due to UK ambient temperature being much cooler, and Free Cooling will help alleviate these additional, unwanted energy expenses.

Why choose a Free Cooler?

- Huge savings in energy and running costs
- System payback in 12 months or less
- Compact plan area
- Automatic control included
- Extended life of chiller
- Simple retrofit units
- Lower carbon footprint
- Improve 'green profile'

Full Free Cooling

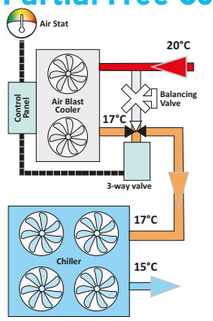


Total Power Consumption 10.4kW
Power Saving 83%

150kW Air Blast Cooler
Cooling Load 150kW
Power Consumption 10.4kW
12°C Ambient Air Temperature

150kW Chiller
Cooling Load 0kW
Power Consumption 0kW
12°C Ambient Air Temperature

Partial Free Cooling

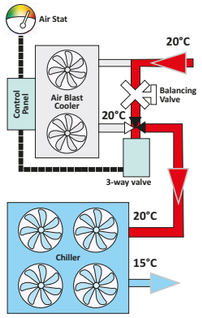


Total Power Consumption 34.4kW
Power Saving 43%

150kW Air Blast Cooler
Cooling Load 91kW
Power Consumption 10.4kW
15°C Ambient Air Temperature

150kW Chiller
Cooling Load 59kW
Power Consumption 24kW
15°C Ambient Air Temperature

No Free Cooling



Total Power Consumption 60kW
Power Saving 0%

150kW Air Blast Cooler
Cooling Load 0kW
Power Consumption 0kW
18°C Ambient Air Temperature

150kW Chiller
Cooling Load 150kW
Power Consumption 60kW
18°C Ambient Air Temperature

Industrial Chillers

We can supply and install a range of high duty industrial chillers which are designed for efficiency, reliability, and constant performance to meet manufacturing needs, with eco-friendly refrigerants. All standard chillers are factory tested prior to dispatch and incorporate all the necessary components for a quick and easy installation. Also available are small to medium duty, energy-saving, fully packaged chillers suitable for indoor and outdoor installations, with cooling capacities 1.5kW upwards.

- Can be customised to meet individual requirements
- Built with high quality leading brand components
- Generous sized internal water tank and pump options
- Rapid response through our Service Network
- Units are readily available
- Compact, fully packaged, and pre-wired
- Simple and rapid installation and commissioning

Optional Free Cooling

Our chillers are available in a Free Cooling version reducing electrical usage further by utilising low ambient air temperatures to cool the return water whenever possible. As units are selected against the highest ambient conditions the benefits of free cooling can be obtained for a substantial period of the year in the UK.

Air Cooled Scroll Chillers

- Cooling Capacities 1kW - 1,400kW
- Refrigerants R410a, R32, R455b, R290
- Non-Ferrous Hydraulic Circuit
- Free Cooler version available
- Industry leading ESEER efficiency
- EC Fan and Inverter Compressor Options
- Ductable fan option
- Full Heat Recovery option

Air Cooled Screw Chillers

- Cooling Capacity 160kW - 2,000kW
- Refrigerants R134a, R513a, R1234ze
- Non-Ferrous Hydraulic Circuit
- Free Cooler version available
- Industry leading ESEER efficiency
- EC Fan and Inverter Compressor Options
- Multiple refrigeration circuits
- Micro channel condenser coil

Water Cooled Chillers

- Cooling Capacity 17kW - 1,400kW
- Refrigerants R410a, R513a, R1234ze
- Non-Ferrous Hydraulic Circuit
- Modular design for expansion
- Industry leading ESEER efficiency
- Inverter Compressor Options

Propane Chillers

- Eco-friendly: Uses R290 refrigerant
- Minimises operational costs and energy use
- Easy installation and flexible application
- Reliable cooling for various industries
- Reduces carbon footprint
- Meets environmental regulations

Low GWP Chillers

- Eco-friendly: Utilises R454B refrigerant
- Reduces operational costs
- Boosts energy efficiency
- Available in various configurations & capacities
- Temperature control for optimal conditions
- Meets sustainability goals & regulatory standards

Blown Film Cooling Coils

- Cooling Capacity from 10 to 88 kW
- Cool the ambient air with 3° ΔT
- Energy efficient
- Easy temperature control
- Reduced electrical consumption
- Incl. pressure gauge, removable filter, 3-way valves, and optional water droplet separators

Temperature Control Units

Machine-side chilling and temperature control units (TCUs) for plastics and rubber offer precise cooling water delivery at specific temperatures to your moulds. Unlike central chillers, which consume substantial energy to maintain a consistent water temperature throughout the system, compact chiller units located at each machine optimise temperature control for every mould. This optimisation leads to enhanced part quality, reduced scrap, and remarkable cycle time improvements of up to 50%.

These portable water chillers are tailor-made to meet the unique requirements of your plastics application and operation, resulting in improved quality, reduced water consumption, and lower energy usage.

Microgel Syncro

This cutting-edge Microgel Syncro technology delivers remarkable benefits in the injection moulding process, including a substantial reduction in cycle time by up to 40%, ensuring the production of high-quality products. In perfect digital harmony with the mould, Microgel Syncro exclusively supplies cold water during the cooling phase, leading to a significant reduction in cooling time.

- **Boosted Efficiency:** Microgel Syncro technology increases production efficiency by up to 60% through precise temperature control.
- **Enhanced Quality:** Ensures better product quality with optimal temperature control, improving dimensional tolerances and overall finish.
- **Cost-Effective:** Offers excellent ROI with user-friendly configuration, no mould modifications needed, and intelligent energy consumption.

Microgel - 5°C to 90°C

The Microgel line offers a unique, space-saving approach that directly addresses the needs of plastic moulder. It is a super compact temperature control unit specifically designed for cooling cycle time reduction. This TCU uses a patented process with a much higher flow rate to ensure the temperature of each mould remains perfectly uniform and precise.

- **Save up to 30% of energy cost** compared to central chillers – especially when you take advantage of “free cooling” opportunities when conditions permit.
- **Prevent scrap** with repeatable, precise, machine-side temperature control and optimal pressure and flow for efficient, turbulent heat transfer.
- **Reduce equipment footprint** taking up to 1/3 of the space compared to using separate portable chillers & temperature control units.

Turbogel - up to 90/120°C

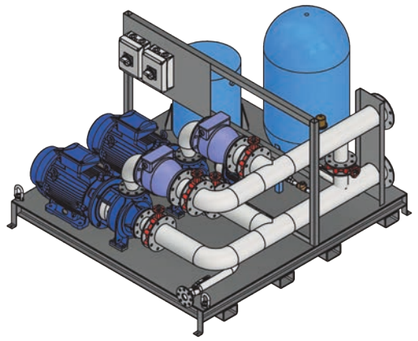
The Turbogel and Thermogel lines were specially designed for high water flows and an accurate temperature control, aiding in the delivery of a constant high pressure and flow to process, resulting in optimal heat transfer. Temperature Controllers are designed to control automatically and to keep diathermic fluids at the required temperatures in the industrial processes.

- **Thermoregulation unit** digitally synchronised with the moulding machine.
- **High heating capacity** with 6 models for the dual zone version and 8 models for the single zone version, with a heating capacity from 6 to 48 kW.
- **High reliability** with maximum integration between TCU, machine and operator.

Cooling Towers

Our cooling towers are available in open circuit or closed circuit configurations, constructed with galvanised steel, stainless steel, or GRP materials. They incorporate modern heat transfer packing and high-efficiency drift eliminators for optimal performance. The open circuit cooling towers feature high-efficiency packing, while the closed circuit models are equipped with tube bundles or plate type heat exchangers. They can be designed with induced draught or forced draught systems and offer options for axial or centrifugal fansets. Access doors and safety rail options for easy maintenance.

- Efficient heat dissipation
- Energy savings
- Cost reduction
- Environmental friendliness
- Process optimisation
- Versatile and adaptable



Pump Sets

Single and Dual Pump Stations offer a compact, cost-effective solution for water circulation, minimising on-site installation time. Designed for flexibility, they regulate the flow of water or recirculated water for refrigeration systems and adiabatic cooling units. Our in-house fabrication department ensures they are fully customisable to meet customer requirements.

- Fully automatic operation
- Modular design: mechanical, electrical, and hydraulic
- High energy efficiency, with optional inverter
- Easy installation with plug & play concept
- Process pumps: supply chilled water, optional automatic filtering
- Recirculation pumps: ensure constant flow for maximum efficiency

Heat Exchangers

Our heat exchangers, including plate type, brazed, and shell and tube models, are designed for fluids requiring separate cooling circuits. Gasket type units are compact, with options for 304, 316 stainless, or titanium plates, and a variety of gaskets to suit specific applications.

- Brazed Plate Heat Exchangers: Plates are manufactured from AISI 316 stainless steel with copper brazing. Brazed plate heat exchangers are in stock for immediate delivery.
- Gasketed Plate Heat Exchangers: Over 30 plate sizes from .04 to 2.5m2 are available to ensure the most economic design. Connection size from 25 to 500mm. Standard plate materials include AISI 304, 316 stainless steel, and titanium.
- Shell & Tube Heat Exchangers: Standard materials are cupro-nickel tubes, cast aluminium shell and cast iron end covers.

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SUMMIT
PROCESS COOLING

With three decades of expertise in the water-cooling industry, Summit Process Cooling offers reliable and energy-efficient solutions for a broad spectrum of process cooling applications.

Speak to the experts today

Quality of service and commitment are the foundations of Summit Process Cooling's success. We offer after sales service and set industry standards, continually investing in our engineering team to stay fresh and innovative.

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