ics cool energy

PROCESS TEMPERATURE CONTROL SOLUTIONS

FULLY PACKAGED UNITS & ENERGY EFFICIENT SOLUTIONS

-40°C to 400°C | 1kW to 4MW

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All images used in this brochure are for illustrative purposes. Please check with your Sales Engineer in respect of specific units.

WE MAKE IT WORK

When temperature control is critical to your operation, you need an experienced and reliable partner, to provide effective solutions and keep your processes running efficiently.

ICS Cool Energy is a process temperature control specialist. Our technically trained engineers will work in partnership with you to provide the most efficient temperature control solutions for the demands of your process, constraints of your site and budget.

Through one point of contact, we develop, manufacture, deliver, install, hire and service high quality, energy efficient and reliable temperature control solutions from -40°C to 400°C for your applications.

For over 30 years', we've been providing technical advice and solutions to leading manufacturers world-wide, helping them to meet compliance, improve their product quality and cycle times whilst reducing their energy consumption and operative costs.

We offer the widest range of cost-effective temperature control solutions in the industry – enabling us to provide you the with the best solution to meet your individual requirement.

OUR WIDE RANGE OF SOLUTIONS INCLUDE:

- Packaged Process Chillers from 1 to 505kW
- Packaged Temperature Control Units (water and oil) up to 360kW (electric) and 1600kW (steam to water)
- Energy-efficient cooling solutions up to 4MW
- Special process temperature control solutions
- Complete project management from site survey to commissioning
- Aftersales – maintenance, 24/7 technical support and hire contingency programmes

Read on to discover more about our wide range of solutions or call us **(UK & NI) 0800 774 7427 - (ROI) +353 (0) 4692 52934** to discuss your temperature control needs.

ENERGY EFFICIENCY

Sustainability and environmental responsibility is fundamental to ICS Cool Energy and our customers. We operate to ISO9001, 14001 and OHSAS18001, which in practical terms means we are committed to compliance, quality, environmental management and sustainability.

Our Carbon Trust accreditation means our solutions meet international standards for design specification and energy performance. Our accreditation also means we can support SME's for project funding through the Green Business Directory.

ECODESIGN COMPLIANCE

Any new industrial cooling equipment must meet new minimum energy performance standards (MEPS). Process chillers must meet new Seasonal Energy Performance Ratio (SEPR) metrics and comfort chillers must meet new Seasonal Energy Efficiency Ratio (SEER) values.

When investing in new cooling solutions, we'll provide you with peace of mind that your new equipment meets the latest legislation.

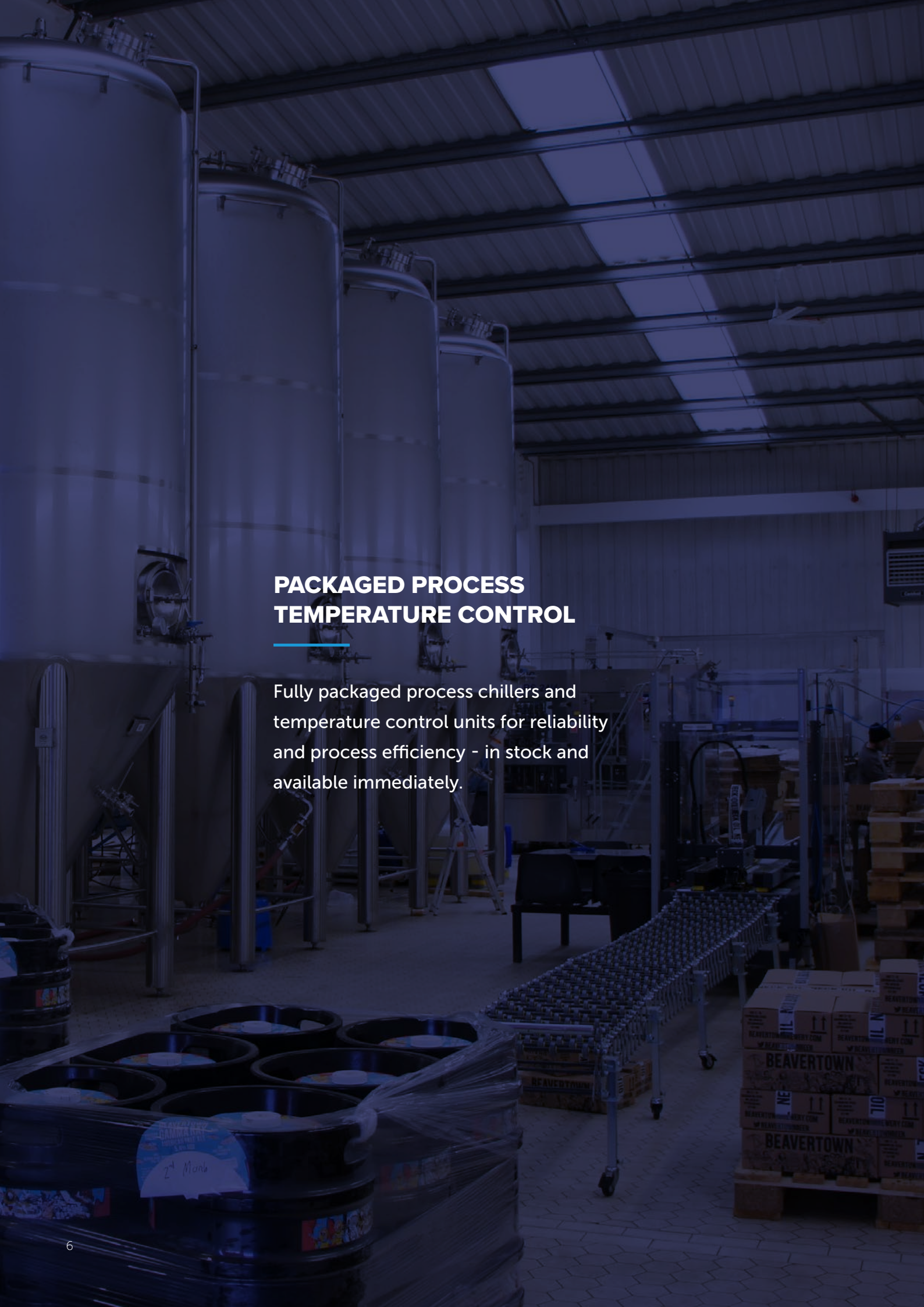
FREE ENERGY ANALYSIS

To ensure you're able to compare all scenarios and make an informed decision; whether you're looking to improve the energy efficiency of your existing equipment or replace it, we'll carry out a site survey and energy analysis to demonstrate how much energy you could save with the considerations of your site footprint and operation.

Using our software, we'll compare configurations of chillers with integrated free cooling or standard chillers with Dry Air or Adiabatic Coolers, your existing equipment (no matter which manufacturer), internal and external locations, so you can see clearly how much energy you will save, and which option is best for your project and budget. We will also provide you with an expected payback period which is on average within 2 years for the majority of our customers.

EcoDesign Compliant

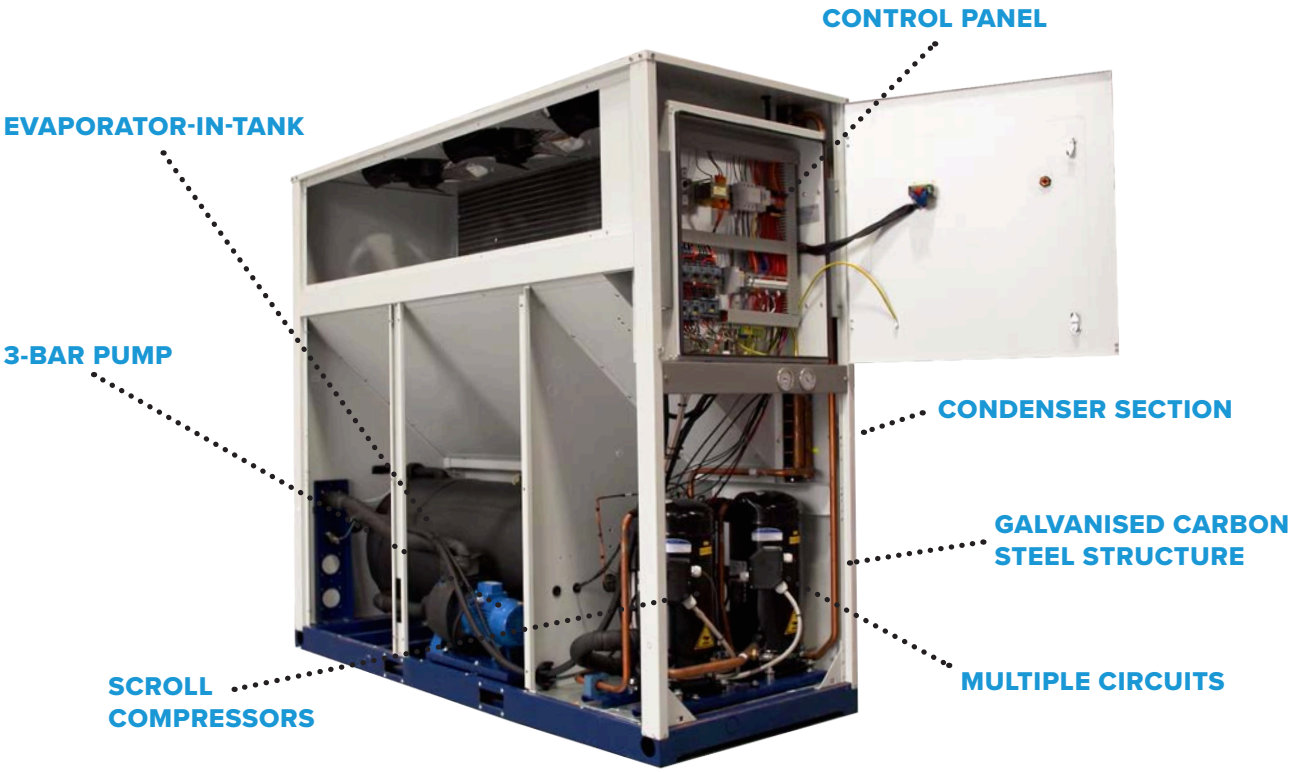
CARBON TRUST ACCREDITED SUPPLIER



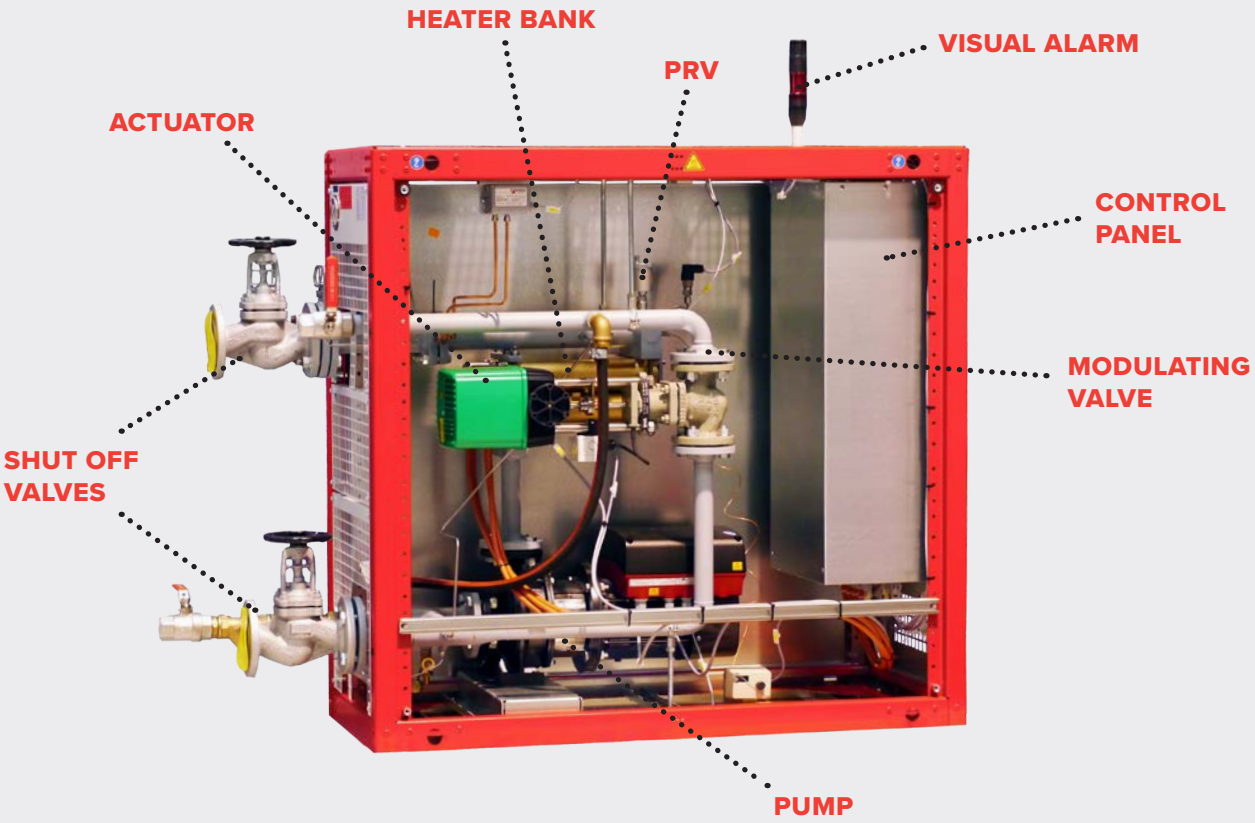
PACKAGED PROCESS TEMPERATURE CONTROL

Fully packaged process chillers and temperature control units for reliability and process efficiency - in stock and available immediately.

i-CHILLER



i-TEMP



PACKAGED PROCESS TEMPERATURE CONTROL

i-CHILLER

-10°C to 30°C | 1.7 to 505kW

The fully packaged, EcoDesign compliant, air-cooled i-Chiller range is designed specifically for reliable and efficient process cooling.

The unique evaporator is immersed within a generously sized storage tank. This design ensures safe and reliable operation even during large fluctuations in cooling demand – something often encountered within various industrial applications.

Each unit comes with a 3-bar pump as standard with the option to customise with a 5-bar pump – allowing for demanding industrial applications.

i-CHILLER COMPACT
0°C to 30°C

Process cooling duties from 1.7 to 4.7kW

4 sizes

DUAL FREQUENCY (50/60HZ) VERSION
-10°C to 30°C

Cooling duties from 7 to 65kW

i-CHILLER
-10°C to 30°C

Process cooling duties from 7.2 to 233kW

19 sizes

i-CHILLER MAX
-10°C to 20°C

Process cooling duties from 243 to 505kW

8 sizes

- **ECO-DESIGN COMPLIANT**
- **STOCK AVAILABLE IMMEDIATELY**
- **FAST CUSTOMISATION OF STANDARD MODELS**
- **INDIVIDUALLY FACTORY TESTED**
- **EFFICIENT R410A REFRIGERANT**
- **UP TO 5-YEAR WARRANTY**
- **3-BAR PUMP AS STANDARD**

For more information on the i-Chiller range call:
(UK & NI) 0800 774 7427 | (ROI) +353 (0) 4692 52934
www.icscoolenergy.com

i-TEMP

-20°C to 400°C

Electric
up to 360kW

-20°C to 220°C

Steam to water
up to 1600kW

The i-Temp range of temperature control units are simple to install and offer unrivalled temperature control on applications such as jacketed vessels, jacketed pipework and moulding machines.

With direct and indirect cooling options available, the water, steam to water and oil temperature control units are provided with advanced controllers for the ultimate control and repeatability for process temperatures up to 400°C.

i-TEMP COMPACT
Indirect and direct water TCUs up to 160°C

Heating capacities from 6 to 36kW

Cooling capacities from 23 to 600kW

i-TEMP
Indirect and direct water, pressurised water and oil TCUs up to 350°C

Heating capacities from 4 to 72kW

Cooling capacities from 23 to 600kW

i-TEMP MAX
Indirect and direct water, oil and thermal oil TCUs up to 400°C

Electric heating capacities from 9 to 360kW

Steam heating capacities up to 1600kW

Cooling capacities from 92 to 1600kW

- **STANDARD AND COMPACT VERSION IN STOCK AND AVAILABLE IMMEDIATELY**
- **FAST CUSTOMISATION OF STANDARD MODELS**
- **ADVANCED CONTROLLER WITH LCD SCREEN**
- **INTERFACE OPTIONS INCLUDING ETHERNET AND PROFIBUS**
- **DATA CAPTURE TO SD CARD**
- **FLOW MANIFOLD ATTACHMENT FOR GREATER TEMPERATURE DISTRIBUTION**

For more information on the i-Temp range call:
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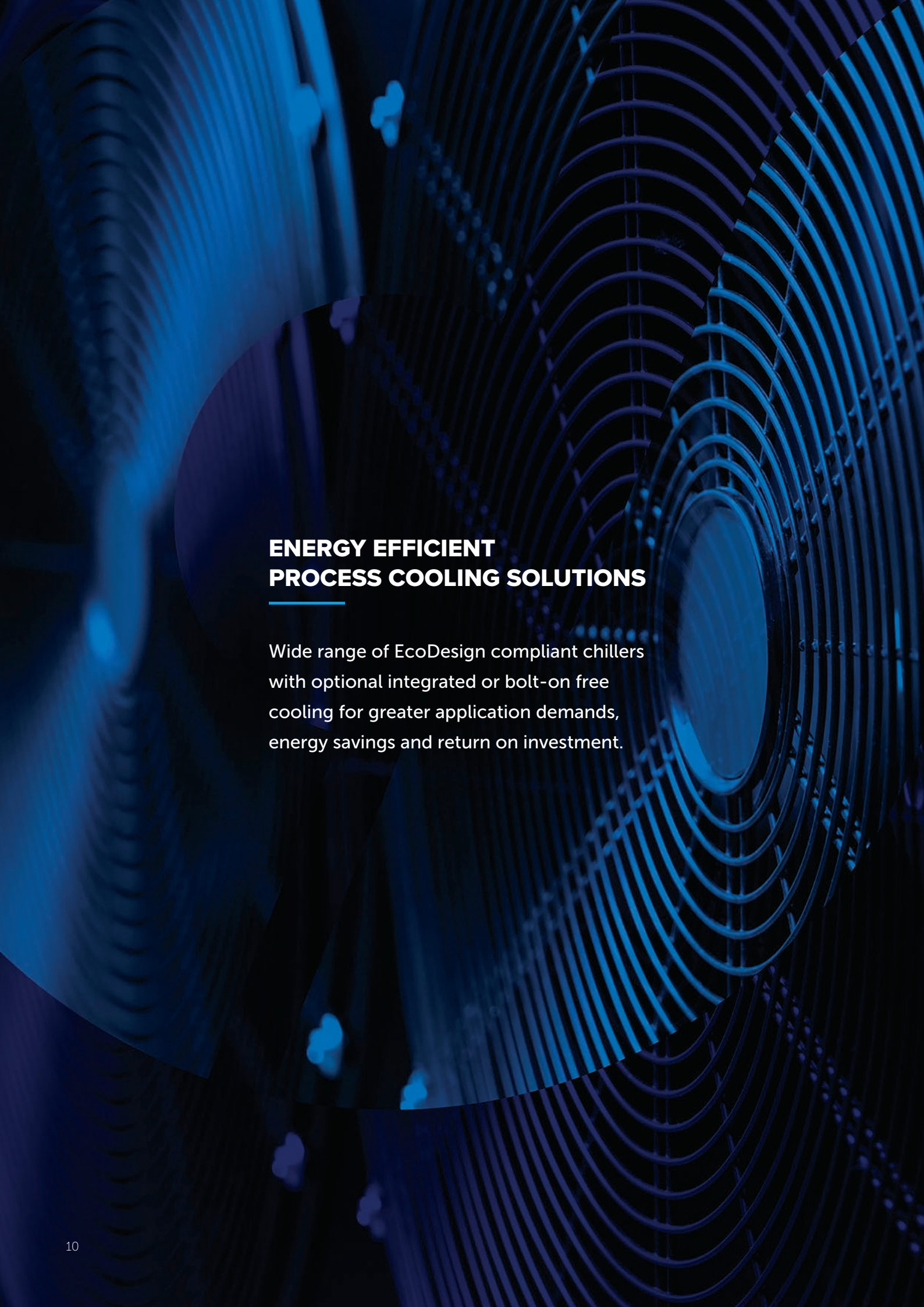

ENERGY EFFICIENT PROCESS COOLING SOLUTIONS

Wide range of EcoDesign compliant chillers with optional integrated or bolt-on free cooling for greater application demands, energy savings and return on investment.

APTUS

-12°C to 20°C | 17 to 689kW

The Aptus range of EcoDesign compliant chillers has been specifically designed for process cooling applications from 17 to 689kW. With scroll compressor technology and optional EC fans, the Aptus range provides excellent energy efficiency.
Energy efficiency is enhanced further with the High Efficiency version thanks to the generous sizing of the refrigerant exchange surface areas and greater control of the fans.
The heat exchanger on the partial and total heat recovery versions is large enough to recover heat to produce medium to high water temperatures – further reducing your overall energy consumption and increasing the sustainability of your plant.

Features:

- Semi-hermetic scroll compressors
- Optional EC fans for high SEPR levels
- Plate heat exchangers
- Micro-channel condenser (Cooling only)
- Electronic expansion valves for better control and increased efficiency
- Integral pump(s) & buffer tank - Optional Inverter
- Adaptive control philosophy
- Efficient R410A refrigerant
- No need for anti-freeze on free cooling version without glycol
- Galvanised epoxy powder coated steel for durability

Versions available:

- Air Cooled
- Water Cooled
- Condenserless
- Reversible Air Cooled
- Simultaneous Heat/ Cool Air Source (Multipipe)
- Free cooling
- Internal Air Cooled
- Partial Heat Recovery
- Full Heat Recovery
- Low Noise
- Extra Low Noise
- Standard Efficiency (Compact)
- High Efficiency
- Extra High Efficiency
- High Seasonal Efficiency (Inverter - Multipipe only)

For more information on the Aptus range call:
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www.icscoolenergy.com

ENERGY EFFICIENT PROCESS COOLING SOLUTIONS

IMPERIUM

-12°C to 20°C | 209 to 3178kW

The Imperium range of EcoDesign compliant chillers has been specifically designed for process cooling applications from 209 to 3178kW. The range offers low noise emissions and high efficiency at full and partial loads. High Efficiency, Extra High Efficiency and Inverter versions provide extremely low running costs at full and part loads; ensuring a reduced life cycle cost.

Features:

- Semi-hermetic screw compressors
- Optional EC fans for high SEPR levels
- Low refrigerant charge flooded evaporator
- Micro-channel condenser
- Electronic expansion valves for better control and increased efficiency
- Integral pump(s) - Optional Inverter
- Adaptive control philosophy
- Efficient, cost-effective, low GWP R513A refrigerant
- More environmentally friendly R1234ze refrigerant option available
- No need for anti-freeze on free cooling version without glycol
- Galvanised epoxy powder coated steel for durability

Versions available:

- Air Cooled
- Water Cooled
- Condenserless
- Reversible Water Cooled
- Free Cooling
- Partial Heat Recovery
- Full Heat Recovery
- Low Noise
- Extra Low Noise
- Standard Efficiency (Compact)
- High Efficiency
- Extra High Efficiency
- High Seasonal Efficiency (Inverter)
- High Seasonal Compact (Inverter)
- Low GWP Versions (R513A / R1234ze)

For more information on the Imperium range call:
(UK & NI) 0800 774 7427 | (ROI) +353 (0) 4692 52934
www.icscoolenergy.com

MAGNUS

5°C to 20°C | 453 to 2737kW

The high efficiency, EcoDesign compliant, air-sourced Magnus chiller range is a flexible and reliable solution which adapts to different thermal load conditions thanks to the precise temperature regulation and inverter technology. The turbocor compressor allows impressive partial load efficiency levels to be reached.

Versions available:

- Air Cooled
- Water Cooled
- Reversible Water Cooled
- Free Cooling
- Low Noise
- Extra Low Noise
- High Efficiency
- Extra High Efficiency
- Low GWP Versions (R1234ze)

Features:

- Turbocor compressor
- EC fans for high SEPR levels
- Low refrigerant charge flooded evaporators
- Micro-channel condenser
- Electronic Expansion Valves
- Integral pump(s) - Optional Inverter
- More environmentally friendly R1234ze refrigerant option available
- Galvanised epoxy powder coated steel with increased thickness

For more information on the Magnus range call:
(UK & NI) 0800 774 7427 | (ROI) +353 (0) 4692 52934
www.icscoolenergy.com

ENERGY EFFICIENT PROCESS COOLING SOLUTIONS

DRY AIR COOLERS

50kW to 4MW

Our EcoDesign compliant Dry Air Coolers are widely used in industrial and process cooling applications. They are offered on their own or as a package with our chillers to provide free cooling.

With various coil and fan technologies available and design configurations, we can build them to meet your needs whether low, medium or high temperature application or footprint constraints.

ADIABATIC COOLERS

50kW to 4MW

Adiabatic Coolers are a cost-effective and environmentally friendly alternative to Cooling Towers – requiring significantly less maintenance, reduced legionella risk and operational costs. They require no ongoing chemical treatment or registration with local authorities and use less than 0.5% of traditional Cooling Tower water usage.

Our Adiabatic Coolers are designed to meet your requirements including footprint, acoustics and construction materials. Overall, they offer significant energy and operational savings – helping you to boost productivity and efficiency of your site.

Features:

- Variable speed EC and AC fan technology
- Easy-to-use PLC control panel
- WI-FI and 3G connectivity for BMS integration
- Multiple fixed fan speeds
- Inverter speed control
- Free Cooling available
- Coatings for extreme external environments
- Up to 5-year warranty

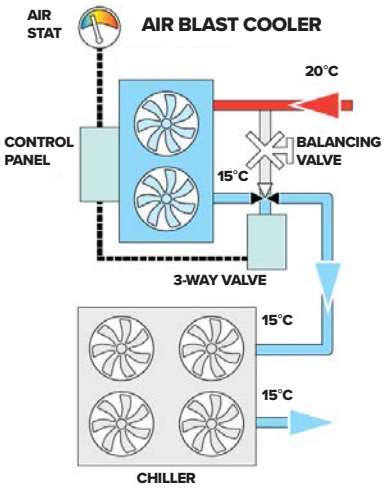
For more information on Ambient Cooling call:
(UK & NI) 0800 774 7427 | (ROI) +353 (0) 4692 52934
www.icscoolenergy.com

REDUCE YOUR ENERGY CONSUMPTION WITH FREE COOLING

Free cooling utilises external ambient temperatures below your process operating temperature to reduce your energy costs by up to 70%.

We offer chillers across all our ranges with integrated free cooling. In addition, our wide range of Dry Air & Adiabatic Coolers provide a bolt-on free cooling option and even greater efficiency due to the larger surface area - enabling you to improve the energy efficiency of your existing or new chiller.

FULL FREE COOLING

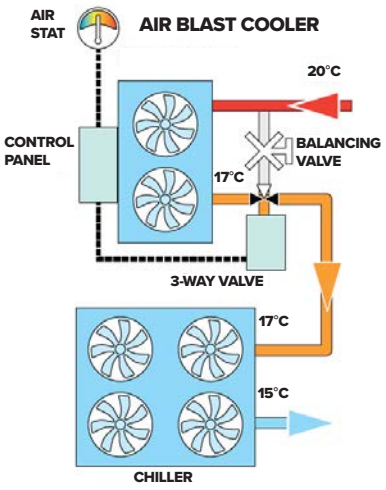


Total power consumption 10.4kW
Power saving 83%

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

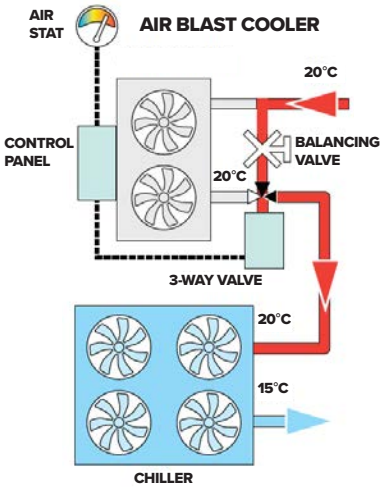


Total power consumption 34.4kW
Power saving 43%

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

For more information on Free Cooling call:
(UK & NI) 0800 774 7427 | (ROI) +353 (0) 4692 52934
www.icscoolenergy.com

SPECIAL PROCESS TEMPERATURE CONTROL SOLUTIONS

Designed to meet your unique requirements and compliance standards.

TECHNICAL EXPERTS

We have the technical and manufacturing capability to design a solution to meet your exact needs whether that's building a bespoke unit from scratch or adapting a standard solution – avoiding the need for engineered skids and saving you valuable project time and budget.

Our breadth of capabilities includes:

- Low temperature Chillers to -40°C
- ATEX rated Chillers and Temperature Control Units
- Special fluid Chillers and Temperature Control Units
- Specification led projects
- Solutions for dimensional constraints

To discuss your special project call:
(UK & NI) 0800 774 7427
(ROI) +353 (0) 4692 52934
www.icscoolenergy.com

YOUR PROJECT DELIVERED ON TIME, ON BUDGET AND HASSLE-FREE

FULL TURNKEY PROJECTS

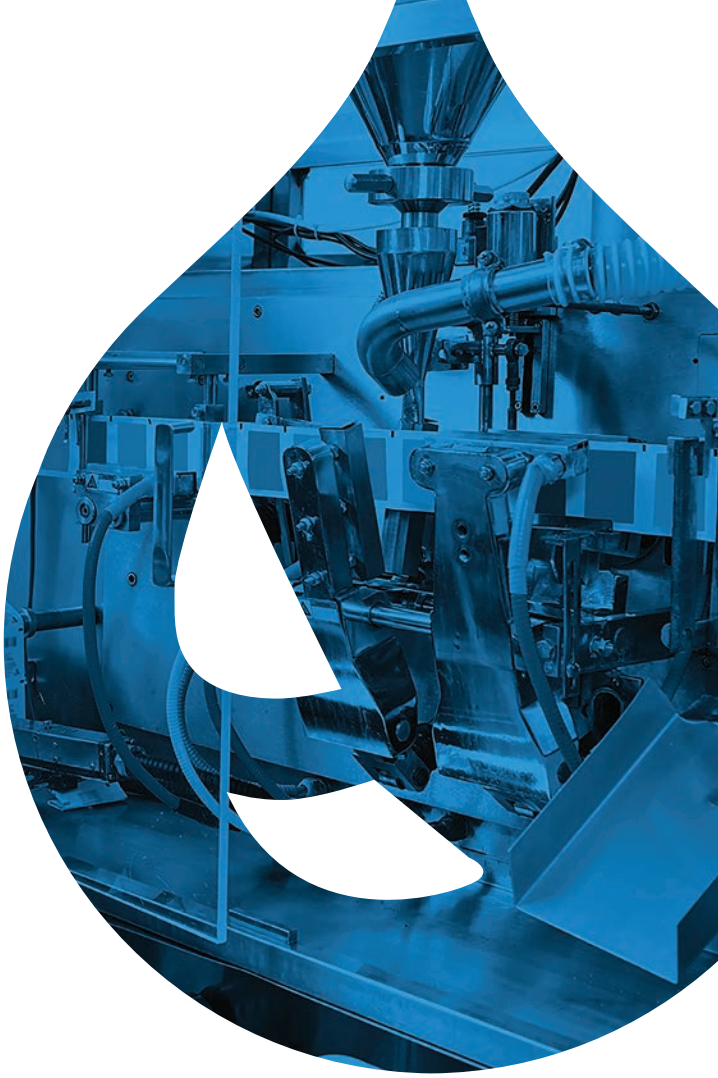
> We'll fully manage your project through one point of contact from initial site survey through to commissioning of your equipment.

Our comprehensive site survey includes assessing your existing equipment, location, logistics and application. With our extensive knowledge and experience in manufacturing process applications, we'll then design a system to meet your exact requirements and budget.

We'll arrange the delivery, installation and commissioning of your equipment at a time that suits you – day or night, weekday or weekend to ensure operational downtime is minimised.

Your dedicated Regional Contract Manager will attend your site as often as required to manage project teams and we'll liaise with your BMS partners too – ensuring your equipment is integrated for easy management and monitoring.

We can provide schematic drawings and training too – ensuring your documentation is up to date and simple maintenance tasks can be undertaken.



PRE-COMMISSIONING WATER ANALYSIS

Before your equipment is installed and commissioned, we carry out analysis of your system water to ensure that your new equipment isn't being subjected to poor quality water which could cause problems and reduce the lifespan of your equipment.

COMMISSIONING

Our 100-point full electrical, mechanical and hydraulic system commissioning of your equipment is carried out by our factory trained, F-Gas and Institute of Refrigeration qualified technicians.

To ensure you can use your equipment immediately, they'll configure it to meet your exact requirements – enabling you to focus on production.

FULLY DOCUMENTED FACTORY ACCEPTANCE & SITE ACCEPTANCE TESTS

For our customers with stringent compliance procedures, we offer fully documented FATs and SATs, carried out by our technical and QHSE team.

With an agreed test criterion, we replicate flow, temperature and fluid in a live test environment at our site with witnesses to guarantee the equipment meets compliance and specification before it reaches our customer's site.

Once the FAT is complete, we carry out the SAT with our technical and QHSE team at our customer's site under their process load conditions.

Full documentation is provided in line with our customer's requirements to guarantee their equipment and process and provide longevity for future projects.

PROTECTING YOUR INVESTMENT AND MINIMISING THE RISK OF DOWNTIME

PLANNED PREVENTATIVE MAINTENANCE

Depending on how frequently your equipment is used, you'll need a comprehensive maintenance programme to suit. We can tailor a planned preventative maintenance programme with numbers of visits to meet your usage – ensuring your equipment stays working as efficiently as the day it was installed.

Our 100-point comprehensive planned preventative maintenance programmes are carried out by our team of factory trained, F-Gas and Institute of Refrigeration qualified technicians.

Programmes include as standard:

- F-Gas compliance certification
- Extended warranty
- Water quality check
- Oil analysis
- Glycol concentration check
- Priority 24/7/365 technical and technician support
- Discounted spare parts
- Traffic light condition based monitoring report

TAILORED SERVICE LEVELS

We understand that every customer has unique needs and reliance on their temperature control equipment which is why we can tailor our maintenance programme SLAs to meet your desired response times, frequency of maintenance visits and requirements.

EMERGENCY BREAKDOWN 24/7

Prevention is better than cure, so we would always advise that a maintenance programme is followed to avoid breakdowns and disruption, however if the unforeseen arises, our highly qualified, factory trained technicians are available 24/7/365 to protect your process from downtime.

At the forefront of our breakdown service is our manned technical desk to provide remote support and quickly identify and rectify the cause.

If a visit is required, our technicians' vans are well stocked – enabling fast repairs onsite to reduce equipment down time.

AFTERSALES

ENERGY ENHANCEMENTS

Our Energy Enhancement plan reviews your existing temperature control system(s) and recommends ways to improve your overall system performance reducing your energy consumption.

The analysis service carries out a full overview of your equipment performance in real time, providing a detailed report to ensure accurate recommendations and a benchmark to measure Energy Enhancements.
Just a few of the ways we can improve your existing system:

- Retrofitting adiabatic systems to reduce head pressure and thus energy consumption
- Upgrading components such as compressors, fitting Variable Speed Drives and controls to improve performance and energy efficiency
- Retrofitting heat recovery systems utilising free heat energy for other processes (such as hot water or heating a space).
- Carrying out one off or ongoing water treatment plans, improving system performance and extending equipment life

WATER TREATMENT

As part of our planned preventative maintenance programmes, our technicians carry out water quality checks. If your water is outside of the correct parameters, we can take samples away for laboratory water analysis.

We'll then provide a step-by-step remedial and maintenance plan to restore the water quality of your system, extend the life span of your systems and equipment and mitigate the risk of unplanned downtime.

GLYCOL

Our specially formulated, industry recommended FlowCool glycol range incorporates organic inhibitors and meets the BS5117 standard for use within two-way cooling and heating processes.

The range includes high temperature inhibited glycol (up to 220°C), NSF approved low oral toxicity food safe glycol for food and beverage applications and bio-degradable glycol – all in stock for next-day delivery, with free delivery for orders over 100l.

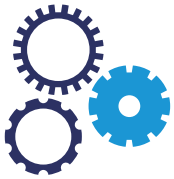
REMOTE MONITORING

Our cloud-based, multiple chiller monitoring platform is the perfect solution for minimising process downtime and creating efficiencies.

By reporting on trends, energy consumption and chiller conditions, our software enables our technical team and/or your technical team to be alerted to issues before they affect your operation.

The online portal can be branded with your logo and live alarm data can be provided via email and/or SMS.

REPLACEMENT PARTS & SPARES



We stock a comprehensive range of spare parts for a wide variety of equipment and manufacturers for next-day delivery. Our service technicians replenish van stock overnight too – ensuring your downtime is minimised.

KEEPING YOUR OPERATION RUNNING

Our dedicated hire division can support you with a wide range of equipment on a short or long-term hire basis. We can have equipment to you in a matter of hours to protect your production from technical problems and downtime.

Our wide range of hire equipment includes industrial boilers with fuel management, chillers, ambient coolers, TCUs and space heating or cooling.

CONTINGENCY PLANNING

Having a back-up plan is crucial to avoid process downtime. We can create a contingency plan to meet your exact requirements.

We'll compile an asset register to remove the need of a site survey when a back-up is needed – saving you valuable time and minimising disruption. We can adapt your system in advance too, so that it's ready for hire equipment to be used immediately.

WHERE WE MAKE IT WORK

PLASTICS, RUBBER, PACKAGING

FOOD

BEVERAGE

CHEMICAL & PHARMACEUTICAL

METAL WORKS

ENGINEERING & OTHER MANUFACTURING

MEDICAL & SCIENTIFIC

LEISURE

HVAC & BUILDING SERVICES

WHAT OUR CUSTOMERS SAY

ICS Cool Energy has been pivotal in helping us to improve our factory cooling systems. The energy savings achieved each year have been more than original estimates, allowing us to further invest in the development of plant.

Nathan Oades,
Technical Manager,
LINPAC Packaging

It's reassuring to have a team of experts you can rely on to keep your equipment working effectively as well as taking care of new equipment as our business needs change. We also use ICS Cool Energy for equipment hire and know that if any equipment was to fail, we'd have a back-up ready immediately.

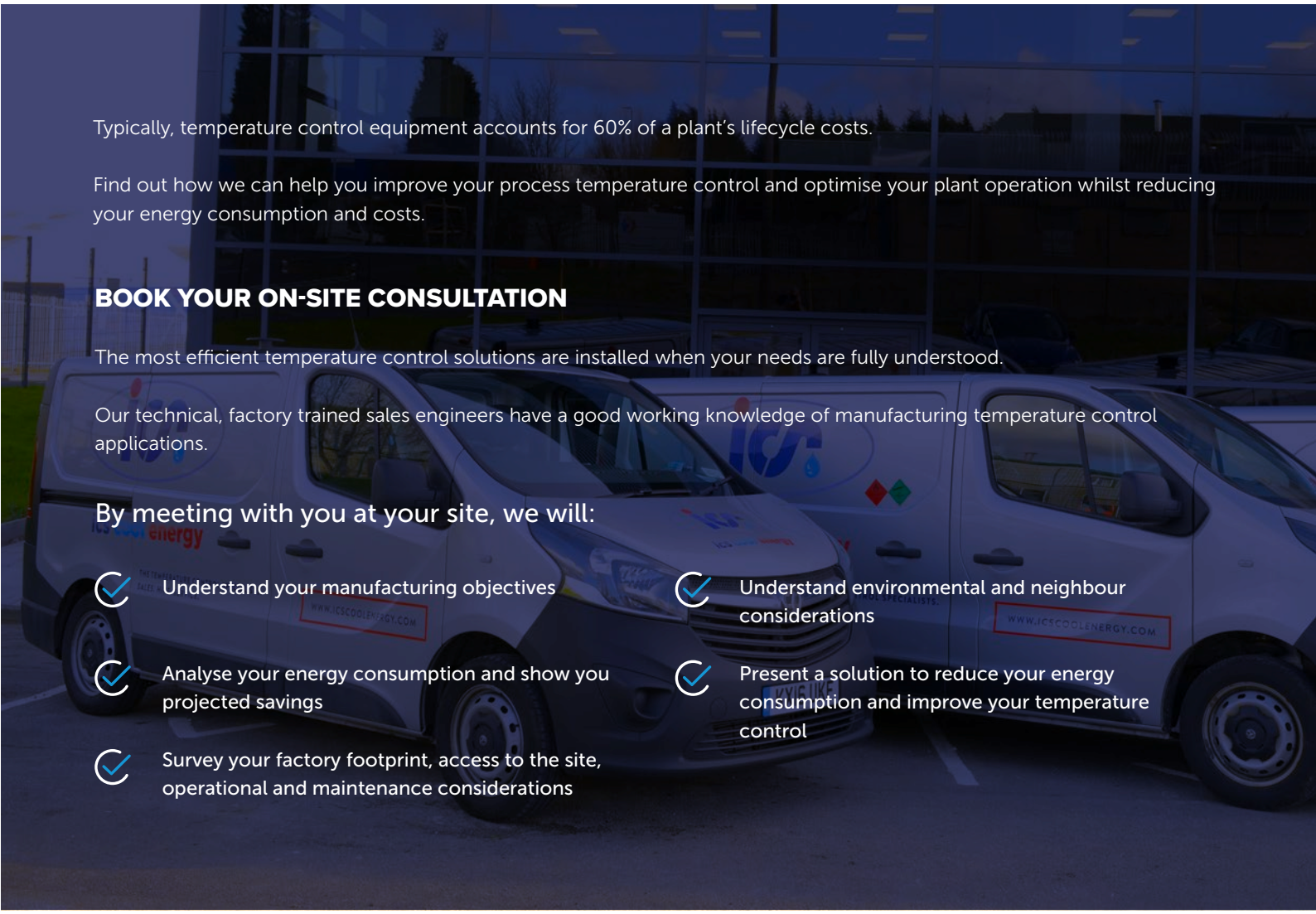
Pete Spencer,
Maintenance Manager,
International Automotive Components

ICS Cool Energy offered us consolidation of all our equipment, a single point of contact, excellent response and account management.

Steven Buchan,
Chief Engineer,
BMI Healthcare

ACCREDITATIONS

WHAT'S NEXT?



Typically, temperature control equipment accounts for 60% of a plant's lifecycle costs.

Find out how we can help you improve your process temperature control and optimise your plant operation whilst reducing your energy consumption and costs.

BOOK YOUR ON-SITE CONSULTATION

The most efficient temperature control solutions are installed when your needs are fully understood.

Our technical, factory trained sales engineers have a good working knowledge of manufacturing temperature control applications.

By meeting with you at your site, we will:

- Understand your manufacturing objectives
- Understand environmental and neighbour considerations
- Analyse your energy consumption and show you projected savings
- Present a solution to reduce your energy consumption and improve your temperature control
- Survey your factory footprint, access to the site, operational and maintenance considerations

CALL US

(UK & NI) **0800 774 7427** | (ROI) **+353 (0) 4692 52934**
to book your no-obligation, on-site consultation with an experienced ICS Cool Energy engineer today.

THE TEMPERATURE CONTROL SPECIALISTS
SALES | HIRE | SERVICE

WE MAKE IT WORK

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