

ENERGY ENHANCING SOLUTIONS

Energy Analysis, Condition Based Monitoring
& Cooling System Solutions

WE MAKE IT WORK

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

ICS Cool Energy, part of Ingersoll Rand Inc, 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 with the best solution to meet your individual requirement.



OUR WIDE RANGE OF SOLUTIONS INCLUDE:

- Packaged Process Chillers from 1 to 469kW
- Energy-efficient cooling solutions up to 4MW
- Special process temperature control solutions
- Packaged Temperature Control Units (water and oil) up to 360kW (electric) and 1600kW (steam to water)
- Complete project management from site survey to commissioning
- Parts Direct - We can source parts from most manufacturers
- Aftersales – maintenance, 24/7 technical support, energy enhancements and hire contingency programmes



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





REDUCING YOUR ENERGY COSTS & EMISSIONS

Both large and small enterprises are under pressure to reduce energy consumption and improve the efficiency of plant to meet legislation, protect the environment and minimise running costs.

The Energy Efficiency Directive (EED) dictates that a Building Energy Audit is carried out every four years for large enterprises, along with regular air-conditioning inspections for capacities >12kW to meet the Energy Performance of Buildings Directive (EPBD).

ICS Cool Energy is committed to providing energy efficient solutions to improve and protect our customers' temperature control systems. We are dedicated to continuous improvement and best practice to deliver systems with the environment and our customers' profitability at the forefront.

Our technical expertise, energy analysis software and wide portfolio of solutions will help improve the energy efficiency of your systems and your temperature control whilst reducing your costs and minimising your risk of downtime.

ENERGY ANALYSIS

Understanding the efficiency and performance of your cooling systems is crucial to reducing your maintenance, operative and energy costs.

ICS Cool Energy can undertake an Energy Analysis of your existing temperature control system(s). A detailed overview and full report is produced containing equipment performance, efficiency and recommendations for system improvements including a payback period.

Benefits of Energy Analysis:

- Understand the performance and efficiency of your existing systems
- Understand your cooling and heating requirements
- Learn about available technologies to save energy and reduce running costs
- Receive accurate energy savings and payback periods for business cases


HEAT RECOVERY

Recycling waste heat from your cooling systems will help to increase the efficiency of your plant.

The waste heat that would have been rejected to the atmosphere, is recovered and reused for any number of process needs including heating or preheating water to use for either domestic hot water or process applications.

Benefits of Heat Recovery:

- Recover up to 70% of potentially wasted electrical heat energy
- Produce hot water up to 70°C
- Reduce energy consumption of your heating system(s)
- No footprint increase



ICS Cool Energy can retrofit your existing equipment with a dedicated heat recovery system.

ADIABATIC ENHANCEMENTS

ICS Cool Energy can offer fitment of adiabatic enhancements to new and existing equipment.

An adiabatic enhancement is a unique system that improves the performance, reliability and energy efficiency of all air-cooled equipment, without requiring energy to provide its cooling effect.

The adiabatic enhancement works by reducing the temperature of the ambient air by as much as 20°C. A reduction of 10°C alone can generate a 13% reduction in energy consumption – delivering immediate cost savings and environmental benefits.

Benefits of Adiabatic Enhancements:

- Reduction of system energy input
- Delivery of additional capacity for your process needs
- Delivery of design capacity without interruptions, even in higher ambient conditions
- Extension of equipment operating range beyond its original specifications
- Improved equipment lifecycle
- Filters air

VARIABLE SPEED FREQUENCY DRIVES (VSD)

Controlling the flow of air and water in process temperature control systems is an effective, permanent way to meet the ever-changing demands put on a system and enhance its efficiency.

ICS Cool Energy can install a Variable Speed Drive or VSD (an electrical/electronic system that provides infinitely variable speed control of AC induction motors). VSD's can be installed to meet varying system flow rate requirements or just to increase energy efficiency.

Payback on an installed system can be as little as 6 months.

Benefits of Variable Speed Drives:

- Energy savings
- Cost savings
- Trouble-free operation
- Meet system demands more easily



WATER TREATMENT

Water quality affects the longevity, efficiency and reliability of your process equipment.

It's essential that your system fluid is checked, maintained and treated regularly to avoid problems such as corrosion, bacteria and system fouling which will ultimately lead to equipment and process system failure, inconvenience and expense.

The first step to good quality water is to implement a water treatment plan. As part of our planned preventative maintenance contracts, ICS Cool Energy now carry out as standard, sampling and independent laboratory analysis. An easy to read report is issued, indicating any defects which fall outside of the recommended parameters.

A detailed action plan is then created and can be implemented for you – returning and maintaining the quality of your water to best practice standards.

Benefits of Water Treatment:

- Prevent system degradation by regular monitoring and treatment
- Increase system efficiency
- Increase the life of your system and equipment
- Reduce maintenance and repair costs
- Protect the quality of your process system

OIL ANALYSIS, REF-CLEANSE REFRIGERANT CIRCUIT CLEANING & RECYCLING

The only contents within a refrigerant system should be refrigerant and oil. Modern polyester oils are very hydroscopic. Every time intrusive work is carried out, moisture is inadvertently allowed to enter the system. Moisture mixed with polyester oil turns into acid, which leads to system degradation and component failures. Acid attacks the electrical insulation within compressor motor windings – eventually leading to an electrical compressor failure or what is commonly called a “burn-out”.

ICS Cool Energy can analyse the oil within your refrigeration circuit to identify early signs of potential failure, noting moisture, acid and metallurgy. We'll then make recommendations in line with the results.

Preventative action can increase the life of components and prevent expensive compressor failures if caught early.

Our highly qualified engineers utilise our Ref-Cleanse system which provides a cascade, triple filtration process. The system components are segregated, and refrigerant flushed through each area. All contaminants including oil, carbon, debris, sludge and any trace of moisture are completely removed from the circuit which is returned to an “as new” status.

Additionally, we can recycle contaminated refrigerant that would normally have to be disposed of, reducing impact on the environment and creating considerable savings.

Benefits of Ref-Cleanse:

- Extended lifecycle of equipment
- Prevent expensive component failures
- Avoids costly virgin refrigerant through recycling
- No need to use inferior solvents or cleaning agents
- System is quickly returned to full operating performance and efficiency



WHAT'S NEXT?

Book your no-obligation on-site consultation and Energy Analysis audit.

Our experienced engineers will be able to provide you with data to show how efficiently your equipment is operating and recommendations on how it can be improved with an expected payback period.

Discover how you can:

- Improve the energy efficiency of your temperature control equipment
- Reduce your energy and maintenance bills
- Improve the operation of your plant
- Increase your temperature control equipment lifecycle
- Improve your Corporate Social Responsibility profile
- Meet the demands of legislation



To book your consultation or find out more, call us on (UK & NI) **0800 774 7427** - (ROI) **+353 (0) 4692 52934**.



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THE TEMPERATURE CONTROL SPECIALISTS
SALES | HIRE | SERVICE

WE MAKE IT WORK



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