

## Free Cooling – For “Long Term Rental”



Carrier Rental Systems has been providing bespoke hire solutions for Cooling, Heating & Power Rental for over 15 years and is now able to offer “Free Cooling” Rental as part of the package.



*“Temperature Control Rental gives so many of our client’s flexibility, fixed costs and is a smart financial option.” says Marc White Sales Director at Carrier Rental Systems.*

# Free Cooling – For “Long Term Rental”

Free Cooling is the fast and effective way to **reduce your energy costs** and your carbon footprint on refrigerated process, water cooling applications.

It's the smart choice for both the environment and your company's finances. Return on investment is outstanding, with payback in as little as six months.

**With Carrier Rental Systems' Free Cooling technology**, you can save massive amounts of energy compared to the traditional use of refrigerated equipment, especially during autumn, winter and spring. This is achieved by spring low energy, dry cooler and free cooling technology which can partially or fully reduce the chiller depending on the ambient air temperature (see graph A, overleaf).

Carrier Rental Systems have developed a **rental package** into a comprehensive and fully automated Free Cooling package for easy installation on chilled water systems.

Existing installations can also benefit from the same significant energy savings by retro-fitting the free cooling technology.

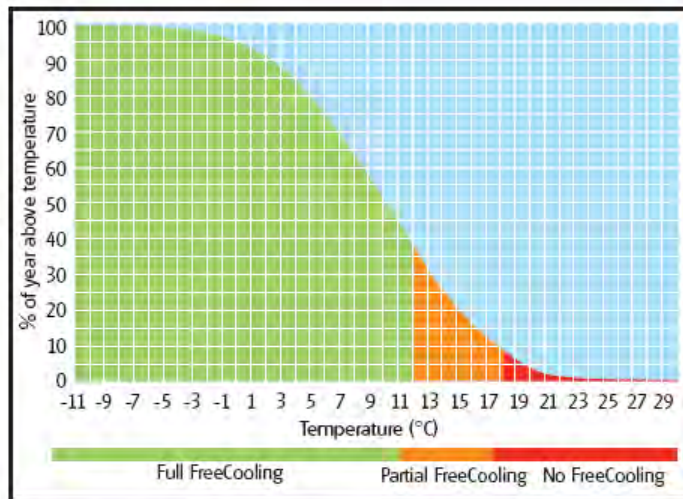


# Free Cooling – For “Long Term Rental”

- Reduced energy consumption
- Lower carbon footprint and improved 'green profile'
- Coefficient of performance equivalent to between 18 and 40
- Payback from as little as 6 months

- Substantial year on year savings
- Extended chiller lifespan and potential reduced servicing costs
- No cost - interest free loans from The Carbon Trust\*
- Improved profit margins

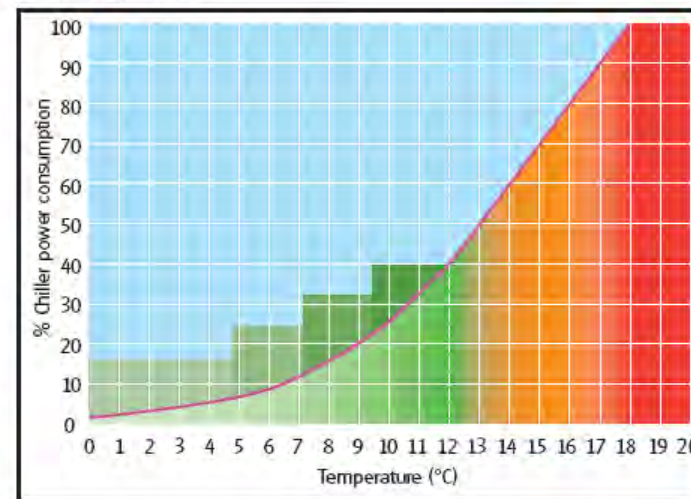
\*Subject to qualification



Average annual temperature distribution to demonstrate FreeCooling technology

Research\* clearly shows that the larger part of the year benefits from FreeCooling (green is where the chiller is inactive and orange is where there are still significant savings with partial FreeCooling). There is only a very small part of the year where no FreeCooling can be offered and the chiller operates without help from the air blast cooler.

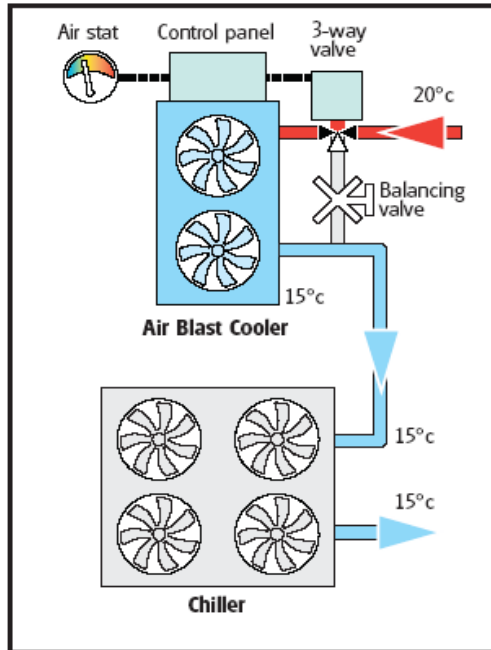
\*Temperature records taken from Coleshill, West Midlands, United Kingdom



Relative power consumption when using FreeCooling technology

This clearly shows the relative power consumption of Transtherm's FreeCooling technology and air blast cooler, operating from 0°C to 20°C ambient air temperature, compared to that of a chiller. Please note that both stage control and inverter control are shown, (inverter represented by the curved line). Transtherm's FreeCooling technology can also be fitted retrospectively to existing air blast coolers.

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## Full FreeCooling

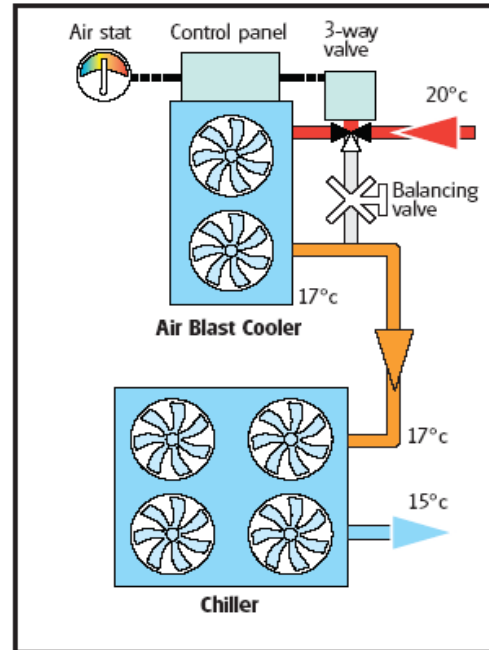
Total power consumption 10.4kW  
 Power saving 83%

### 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 FreeCooling

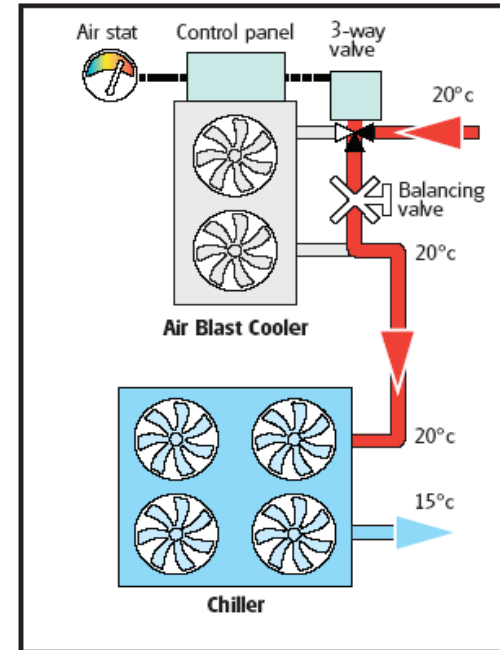
Total power consumption 34.4kW  
 Power saving 43%

### 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 FreeCooling

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

# TEMPERATURE CONTROL RENTAL



## The Complete Solution - Immediate Availability

- Fluid Chillers – *Process Cooling to 5,000kw*
- Air Conditioning – *Comfort or Process Cooling to 5,000kw*
- Dry Air Coolers – *Single or Multiple Unit Packages*
- Boilers & Space Heating – *Packages up to 5,000kw*
- Cold Storage, Generators & Ancillary Services
- Data Centre Cooling – *“Internal Down Flow Ahu’s”*
- Free Cooling - *“Cost Saving” Packages & Modulating Systems*
- Expert & Experienced Rental Team
- Bespoke Design to suit all applications
- Short, Medium & Long Term - Rental Packages

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**Rental Systems**