

# HERTZ International Call Centre

Turnkey replacement of two old R22 units with new 1000 KW Chillers units



**sirus**

“As part of the HERTZ chillers replacement project Sirus carried out Payback Analysis and Life Cycle Cost Analysis based on collected energy data...”

The cooling system in Hertz facility is on call every day, resulting in a total possible run hours per year of a little over 3,562 hours, however cooling demand of the HERTZ facility was assessed across a range of ambient conditions.

Sirus used a full-time-equivalent (FTE) hours system to express the chiller load for the selected conditions.

A base load figure of 800 FTE hours was selected as the cooling load for a ‘cool’ year. This equates to an average duty factor of 0.16. A load factor of 16% for much of the year is quite plausible considering that the Hertz facility is densely occupied, has a lot of IT gear and needs to be kept cool for worker comfort, even if ambient temperatures are low.

The old R22 chillers were replaced with new environmentally friendlier HITACHI Samurai Chillers (which mount standard semi-hermetic screw compressors), with equivalent performances and much better energy efficiency.

Hitachi is a leading manufacturer of chiller equipment using the energy efficient screw compressor. Hitachi’s cost effectiveness, high levels of reliability and efficient operation have established them firmly in the Irish market place.

Building Energy Solutions

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[www.sirusinternational.com](http://www.sirusinternational.com)

## CLIENT

Hertz Europe Service Centre

## LOCATION

Swords, Co. Dublin, Ireland.

## SERVICES PROVIDED

Supply, Installation and Commissioning of two 1000 KW each Air Cooled Chillers, Upgrade of primary pump set Simple Payback Analysis, Life Cycle Cost Analysis, Recovering and disposal of old R22 units, Installation of new pump-sets, pipework and electrical components.

## DURATION

March – April 2014

## REFERENCE CONTACT

Mr. Pat Bolger, Senior Manager  
Hertz International Facilities & Construction  
Tel: +353 (0) 1 4573890

## PARTNERS

Hitachi Ireland,  
MKF Property Services.

## HEALTH + SAFETY

PSCS + Contractor

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The new chiller models provide modular, individual refrigeration and hydraulic circuits utilizing low noise and vibration, modulating compressor technology and high efficiency plate heat exchangers, optimized for use with ozone friendly refrigerants R407c.

The units provide close leaving water temperature control by means of state of the art microprocessors, which also offer fault finding analysis and indication.

The new units were individually craned into position and installed over two weeks, without any impact or downtime of the chilled water system.

Throughout the project Sirus ensured that all the works, right up to final commissioning, were carried out swiftly and with little or no disruption to HERTZ’s operations.

## Energy Consumption and savings since install (2 months):

Cooling Load	303,681 kWh
New Chillers – Elec. In	89,318 kWh
Old Chillers – Elec. In	138,037 kWh
Energy Saving	40,599 kWh
Cost Savings since install	4,871.89

Annual Energy Saving:	205,094 kWh
Annual Cost saving:	24,611.25

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