

CHARTERS ASCOT

PROJECT DETAILS

Client:	Sabre Developments
Location:	Ascot, Berkshire, England, UK
Completion Date:	October 2008
Contract Scope:	Design, Supply, Installation
Applications:	Underfloor heating; hot water temperature maintenance
Technology:	nVent RAYCHEM HWAT-M, T2Red and T2Reflecta systems, T2QuickNet mats



KEY CHALLENGES

This luxury residential development demanded the highest quality solutions for water heating and for comfort heating throughout both private and communal areas. The water heating system had to be easy to install and responsive. Underfloor heating was to be provided for all living areas to supplement the air conditioning system, with the need to keep floor heights to a minimum and be compatible with the high grade wooden floors that feature throughout. There was the need for an underfloor solution to wet areas, from bathrooms to the on-site health spa with each element linked to a centralized building management system.

SOLUTION

nVent provided the solutions for all areas by combining products from their RAYCHEM range. To provide high quality instantaneous hot water, the developers were persuaded to move away from a conventional recirculation system to the higher efficiency of a single-pipe solution based around RAYCHEM HWAT-M self-regulating cabling. The new system was installed efficiently using the RayClic connection system.

For underfloor heating to the main living areas the RAYCHEM T2Red and T2Reflecta system provided the ideal solution. The self-regulating technology of the T2Red cabling meant that it could provide responsive heating without the risk of overheating and damaging the high quality wooden flooring.

The pre-grooved, thermally insulated, aluminium-covered Reflecta plates ensured even heat distribution across the entire floor surface and at only 13mm deep had minimal effect on floor to ceiling heights.



Heating to wet areas was effected through the installation of RAYCHEM T2QuickNet radiant heating mats which are simple to install and only 3mm deep. In total some 2000 metres of T2Red cabling and 326 T2QuickNet mats were installed, with each element integrated with the development's BMS.

The ease of use that comes with the T2Reflecta underfloor heating product meant a substantial reduction in installation time and hence a reduction in onsite costs for the contractors.

PRODUCTS

RAYCHEM HWAT are self-regulating heating cables that adjust their power output to compensate for variations in water and ambient temperatures. They replace supply-pipe heat losses at the point where the heat loss occurs, providing continuous, energy-efficient hot water temperature maintenance and eliminating the need for a recirculation system.

The RAYCHEM T2Reflecta and T2Red floor heating system consists of an insulated aluminium profile T2Reflecta and the self-regulating T2Red heating cable. It combines the advantages of both elements, resulting in a 20% extra energy saving compared to a T2Red system alone.

The surface of the T2Reflecta plate enables even heat distribution across the floor and, due to its low profile, it is the ideal system for installations where floor to ceiling height is an issue.

T2Red is a self-regulating floor heating cable for low profile installations. Its self-regulating technology means that the cable can be applied under any type of floor surface without a risk of overheating.

RAYCHEM T2QuickNet heating mats provide warm comfort to both tile and wood floors. The heating cable is pre-terminated and pre-spaced in the self-adhesive mesh to simplify installation. The thermostat is fully programmable, provides multiple control options and has a built-in Class A 5-mA GFCI (ground-fault circuit interrupter) for safety.



BENEFITS

- Faster and more economical DHWS system to install than recirculation systems
- Overall reduction in running and maintenance costs
- Exceptionally energy efficient UFH systems
- Compatible with sensitive floor coverings
- Low profile
- Simple installation

Charters Ascot is a development of luxury private residences created by the conversion of a grade 2 listed mansion house into high specification apartments with onsite amenities including a swimming pool, gym and health spa. The main contractor was Broadway Malyan; M&E consultant Upton McGougan and the hot water and underfloor heating systems were supplied through nVent' distribution partner Jointing Technologies.

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