

Case Study

4-star boutique hotel upgrades to a more efficient air conditioning system



When the 4-star boutique Leopold hotel in Sheffield needed to replace its aging air conditioning, the owners wanted a modern, energy efficient system that would deliver the comfort that guests expect while also helping reduce energy bills and lower carbon emissions.

Consultants, Shearstone Mechanical Ltd called in Exclusive Distributor Kooltech to explore available options, using existing refrigerant pipework. Greenhill Air Conditioning won the tender to install Mitsubishi Electric City Multi VRF air conditioning with key additional elements from Kooltech's K-con range.

The result is a modern solution that will not only keep hotel rooms at the right temperature for guests, but also brings advanced control for hotel staff and helps minimise disruption during routine maintenance schedules.

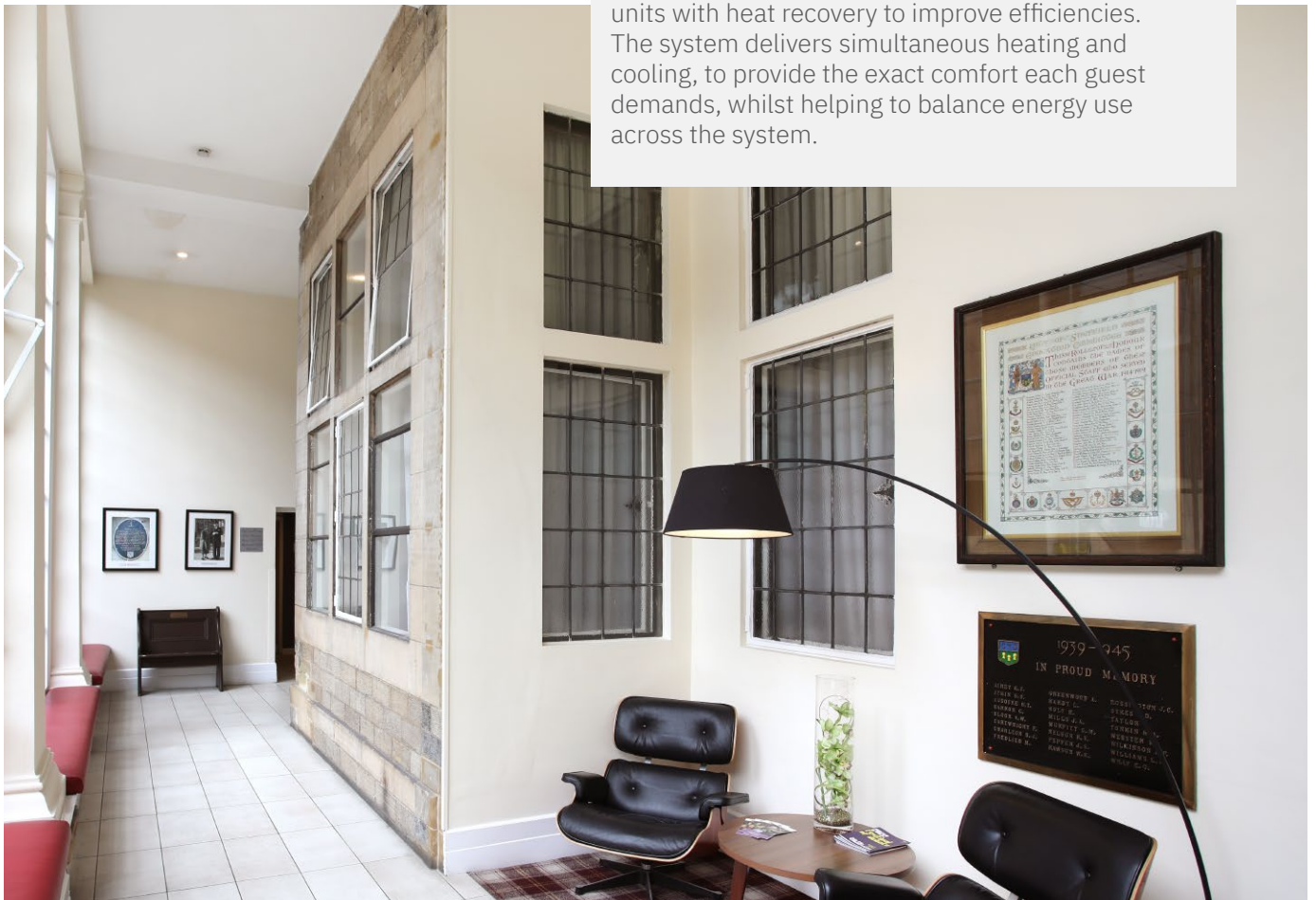


Stylish and elegant, Leopold Hotel is situated right in the heart of Sheffield city centre, in the sophisticated surroundings of Leopold Square, amongst an array of upmarket bars and eateries.

Originally a 19th century grammar school, the building has been sympathetically transformed over the years by the Prem Hotel Group and now brings together stunning historical architecture and period features with modern design to create a unique hotel with a wonderful sense of light and space.

“We’ve completed a number of successful projects with Kooltech, so the project seemed a perfect fit for their expertise,” explained Tim Shearstone Director of Shearstone Mechanical.

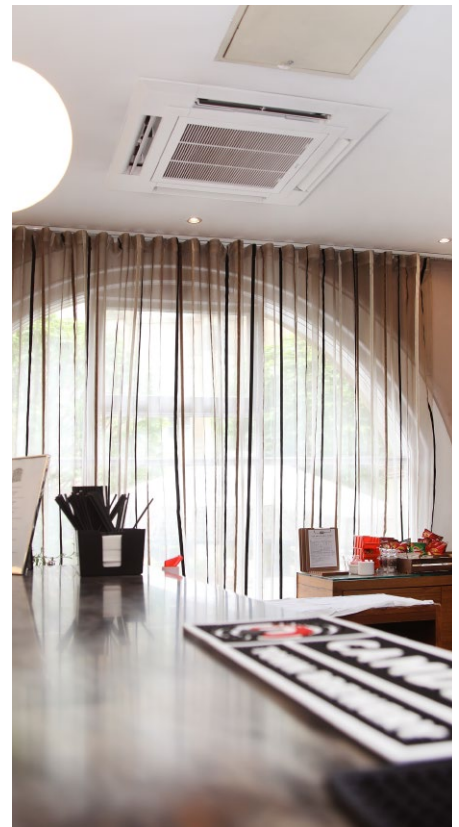
For the refurbishment of the Leopold Hotel, the previous air conditioning system has now been replaced with seven new City Multi R2 VRF outdoor units with heat recovery to improve efficiencies. The system delivers simultaneous heating and cooling, to provide the exact comfort each guest demands, whilst helping to balance energy use across the system.



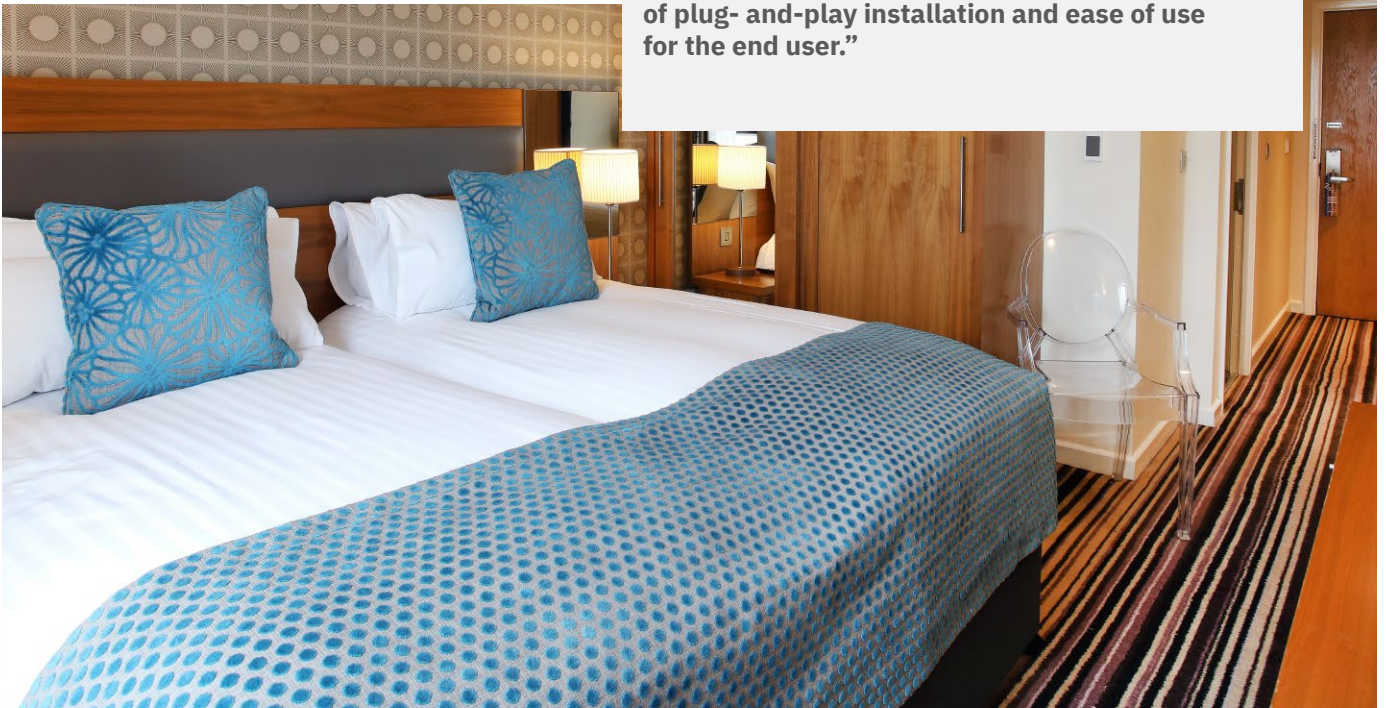
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Leopold Hotel Sheffield, UK

Installer, Greenhill Air Conditioning were also the ideal partner for the project. Their status as a Diamond Quality Partner (DQP) with Mitsubishi Electric means that they are able to offer the Prem Hotel Group a 10-year warranty.



PEFY-P VMS slimline ducted indoor units have been fitted into the bulkhead of the 90 individual bedrooms, with each indoor unit linking back to a Branch Controller (BC) Box, which then sends heating or cooling to each room as required by guests.



These BC boxes have been factory-fitted with Kooltech's K-con port isolation valves making future service and maintenance to individual rooms easy without the need to shut down the complete system. Greenhill's skilled installation team were able to enclose the slimline ducted in-door units, so that guests get the comfort they expect without compromising the style and quality of the room décor.

“Our engineers also installed Mitsubishi Electric’s unique Plasma Quad technology to the indoor fan coils in each bedroom to improve guest comfort and give reassurance on the back of the Covid pandemic,” explained Ian Hunter, Director at Greenhill AC.

This award-winning technology improves air quality by neutralising irritants such as pollen, bacteria, dust and viruses, and microscopic particles down to PM2.5, as well as inhibiting SARS-CoV-2.

“Each room has its own controller so that guests can find their own perfect temperature, and we also worked with Kooltech to install a K-con ECP-03 environmental control panel that connects the air conditioning system with an Hotel Interface,” added Mr Hunter.

“This gives hotel staff a high level of control via an AE-200 front end with the increased benefit of plug- and-play installation and ease of use for the end user.”

With exceptionally high standards of service, as one would expect in a top-class hotel, guests now benefit from 90 luxurious rooms, with full room control and the reassurance of modern air filtration.

This is replicated throughout the hotel's restaurant and conference rooms, the new fitness suite, and the atmospheric bar overlooking the vibrant Leopold Square.

The installation of advanced City Multi air conditioning alongside the bespoke additions from the K-con range are helping ensure that the Leopold Hotel is delivering the luxurious comfort that guests expect, while minimising energy use and keeping emissions to a minimum.



Installation Summary

Outdoor Units:

- 1 x PURY-EP400YNW
- 6 x PURY-P300YNW-A1



CITY MULTI

Indoor Units:

- 2 x PEFY-M100VMA-A
- 1 x PEFY-M50VMA-A
- 3 x PLFY-M50VEM-E
- 1 x PEFY-M20VMA-A
- 1 x PLFY-M63VEM-E
- 1 X PEFY-P20VMS1



CITY MULTI

Controls:

Master BC and Sub BC
with K-Con port isolation
valves

K-con ECP-03 environmental control panel

100 x Plasma Quad Connect

AE-200 Centralised controller

PAR-CT01MAA



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Note: Refer to 'Installation Manual' and 'Instruction Book' for further 'Technical Information'. The fuse rating is for guidance only and please refer to the relevant databook for detailed specification. It is the responsibility of a qualified electrician/electrical engineer to select the correct cable size and fuse rating based on current regulation and site specific conditions. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a fluorinated greenhouse gas, R410A (GWP:2088), R32 (GWP:675), R407C (GWP:1774), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), R1234ze (GWP:7) or R1234yf (GWP:4). *These GWP values are based on Regulation (EU) No 517/2014 from IPCC 4th edition. In case of Regulation (EU) No.626/2011 from IPCC 3rd edition, these are as follows. R410A (GWP:1975), R32 (GWP:550), R407C (GWP:1650) or R134a (GWP:1300).

Effective as of August 2022

