Effective Heating Solutions

Installed at Coventry Student Accommodation

January 2020

Client:

CLEGG CONSTRUCTION

Location:
Coventry

Featured Product Range:

Climex® Temporary Heating Solutions

Keeping Coventry Student Accommodation project on track with RVT's specialist heating solutions

Work is now underway on the latest student accommodation development in Coventry, which will provide living space for over 300 students. Clegg Construction has been appointed as the contractor for Kier Property on this project as part of a £17.1m contract which will run through until June 2020. The project schedule is a busy one, comprising of three new builds including one 5 storey block, the conversion of two existing listed buildings and the creation of a central courtyard and landscaping works.

The accommodation is being built on the site of the old Coventry and Warwickshire Hospital on Stoney Stanton Road, which was first closed in 2006 when services moved to University Hospital Coventry in Walsgrave. The old hospital first opened in 1867 but was badly damaged during the blitz in the Second World War. The attached nurses' home and outpatients' clinic, built in 1908 and 1909, survived the bombing and are now being refurbished for this development.

Case Study Key Facts

- Fourth student accommodation scheme Clegg Construction has worked on.
- Clegg's other schemes were built in Sheffield, Southwell and Birmingham.
- Clegg has delivered over 1,200 student rooms through these schemes.
- Project is set to finish in June 2020.
- Project is part new build and part refurbishment.
- 3 new builds, including one 5 storey block.
- Existing listed nurses' home and outpatients' clinic are being refurbished.
- Indirect oil-fired heaters were ideal for drying out the buildings.
- RVT's “Effective Drying Triangle” kept the project on track.

The Challenge

During winter of 2019, wet weather and damp air threatened to grind the project to a halt. At this stage, Blocks B (existing building) and C (five storey new building) were not water tight, so heating and drying equipment was required to keep the project on track. Tight deadlines and budget meant that a solution was needed urgently. However, as the site is situated in Coventry’s city centre and has limited access due to the busy and built up surroundings, the solution also had to be practical.

Another supplier proposed a solution which incorporated bigger heaters and extensive ducting. However, the size of the heaters raised logistical issues of how to get the equipment on site with the surrounding environment. There were also concerns that this solution would not generate enough pressure to effectively distribute heat across all five storeys of Block C. Therefore, RVT was contacted for an alternative solution.

The Solution

RVT proposed a solution whereby the buildings would be heated by two smaller 65kW Climex® indirect oil-fired heaters (Block B) and one 110 kW Climex® indirect oil heater (Block C). We also installed several air distribution kits to ensure that heat was evenly distributed without any loss of pressure.

To prevent unwanted heat loss on both buildings, access points were managed with temporary doors whilst all other external openings were closed up. Any lift shafts and risers were also closed up with board or polythene and stairway openings managed with screens or temporary doors.

For Block B, the 65kW Climex® indirect oil-fired heaters were placed by two separate ground level entrances. Ducting was led into the building and split from both heaters, feeding heat through the main corridors which then spread to the rest of the building.

For Block C, the 110 kW Climex® indirect oil heater was positioned outside at ground level. With steel splitters, ducting was installed up the side of the building and into the first four storeys, evenly distributing heat throughout these floors. As heat rises naturally, ducting was not required for the top storey.

Climex® Indirect Oil-Fired Heaters

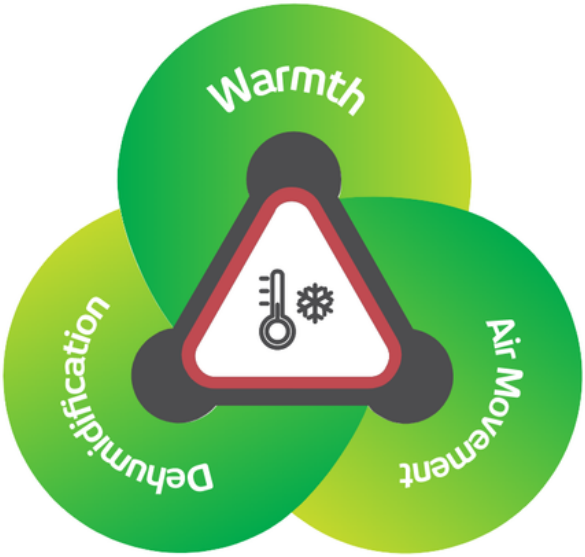
- Available in 65kW, 110kW, 150 kW and 200kW.
- Easy to install and operate.
- Mobile
- Provide fast and thorough drying.
- Supply warm, dry heat. This makes them much more suitable for drying out projects than gas heaters, which release moisture while heating, lengthening the drying process.

"RVT's Climex® system is working well and will assist in the drying out of the buildings; especially the old existing buildings."

Senior Project Manager, Clegg Construction

The Effective Drying Triangle

RVT Group have devised a proven methodology to ensure effective heating and drying-out, and we call this **The Effective Drying Triangle©**.



The three key principles of Effective Drying Triangle© are; **air movement, dehumidification** and **warmth**. Air movement across a substrate draws the water to the surface, where it evaporates. The heat then raises the room temperature, lowering the relative humidity of the air which allows the air to absorb more water from surrounding surfaces. Dehumidification extracts water from the air, to be transferred from the work area.

By carefully following and controlling this process, a building dries out and heats up gradually and evenly, and costly damages are prevented such as timber warping, plaster cracking and structural movement. This solution ensured that both buildings were effectively heated and dried out and that the project remained on track.

Click here or visit our website to see our heating solutions.