

Oldham Sixth Form College

Gas-Fired Replacement for Sports Block Water Heating



Oldham Sixth Form College is a prestigious government-funded college of further education in Oldham, Greater Manchester. The college boasts some 2400 students and takes pride in facilities which support the pursuit of vocational and academic goals, as well as the personal development of the students. Physical education plays an important role and the sports block is a key focal point for the student body.

Lakeside Mechanical & Electrical (M&E) Services Limited was contracted to replace the sports block's current water heating as it was no longer meeting the high demands of their facility. With the block in daily use a swift resolution was required to minimise downtime and resolve the increasing need for domestic hot water (DHW) supply to showers and basins.

Having completed previous refurbishment work at the College, Lakeside M&E Services contacted previous supplier and hot water specialists Advenco to source a replacement which would

meet the increased day-to-day demands of the sports block. The College wanted to ensure operational costs remained low but also needed assurance that they were gaining best value for the capital investment. With mains water in Oldham being soft, there were concerns over the corrosive nature of the water and the resultant life expectancy of any proposed replacement. The college, although committed to retaining gas-fired water heating, also wished to place greater focus on fuel consumption and resultant emissions from the building.



Recognising the success of the previous installation at the College, Advenco proposed using two ADplus units, commercial high-power gas-fired condensing water heaters each with a 140 kW output. The integrated 120-litre stainless steel water storage tank enables fast recovery for continuous and on-demand hot water typically required in leisure and gym facilities. Because of the nature of individual and team-based activities in the sports block, demand would fluctuate but can be relatively consistent throughout the opening hours. The ability of the ADplus to rapidly reload the built-in storage tank means operation is semi-instantaneous. Working on the assumption of DHW stored at 60°C and the incoming cold water is consistent at 10°C, ADplus can supply a DHW 10-minute peak of 543 Litres and a DHW recovery of 2534 litres/hour continuous at 50°C temperature rise.

As well as meeting the DHW demand for showers, washrooms and fitness areas of this extremely popular and constantly in use facility, the ADplus also addressed the other concerns including value of investment, operational costs and emissions.

Heat is provided by the patented Fecralloy premix burner with a high modulation ratio for excellent functionality at extremely high temperatures. It also offers maximum efficiency even during periods of low demand. With a consistent balanced air/gas ratio in each point of turndown, ADplus boasts high combustion efficiency (106%) requiring less gas, making it more cost-effective, plus reducing harmful NO_x and CO₂ emission.

Perfect for the sports block's on-demand needs, these ADplus units only heats what is necessary, with no ignition for smaller withdrawals providing considerable energy savings. When heat is required, the condensing technology provides up to 30% savings in fuel consumption helping to address ongoing operational costs.

The resilience to the local mains water conditions was also a key decision-making factor in terms of accepting the ADplus. It was pivotal to have an appliance that would be able to withstand the corrosive soft water elements. Lakeside M&E Services Ltd commended Advenco as "extremely helpful and knowledgeable" providing "better technical and sales help" with more in-depth information than they had found with other companies.

The advisory on water softness and calcium levels was particularly useful, as this was extremely detailed and helpful in and decision-making process with the College. The titanium-stabilised stainless-steel construction makes the ADplus heat exchangers highly resilient; as is the stainless-steel cylinder, protecting when in direct contact with chlorinated water and otherwise corrosive soft water. This helps to maximise the performance of the heat exchangers and reduce wear and tear extending the operational life, giving the college a good return on investment.

Taken together, the design of these ADplus units was the ideal choice for the Oldham Sixth Form College's sports block, providing high-quality construction with high-efficiency operation for lower on-going costs.

Lakeside M&E Services Ltd was able to deliver a speedy and straightforward installation, with "excellent work" from Advenco's commissioning team, which confirmed the correct and safe installation of this pair of ADplus units. Now, with these units successfully installed and with regular monitoring, these ADplus units are running just as well as the College's athletes.

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