



## Enderby Social Club benefits from free hot water



### Case Study

Eaton-Williams® combined cellar cooler and heat recovery solution is reducing energy costs and emissions for Enderby Social Club in Leicestershire. When the club replaced its aged cellar cooler for a more energy efficient ECA (Enhanced Capital Allowance) from Eaton-Williams, it did not expect to receive free hot water as well, as Bob McKness, Club Secretary at Enderby Social Club explains:

“Our cellar cooler was getting on a bit, so we decided to replace it with an Eaton-Williams QUALITAIR® system. When their contractor Envtec Services said we could be benefitting from free hot water for the club, I thought they were joking!”

Following a site survey and analysing the club’s usage of hot water, Eaton-Williams’ Heat Recovery Unit (HRU) was recommended. The HRU is a compact and unobtrusive device which recovers heat from the cooling process of the cellar cooler that would normally be wasted, and then re-uses it to heat water. Initially sceptical, the club adopted an open mind and was willing to put the HRU through its paces to see if it could produce enough hot water to meet their needs.

“The start of the football season was an ideal time to start trialling the system,” says Bob.

Sure enough, the HRU produced more than enough hot water to run six showers at the same time and for two muddy teams. The club was so impressed that it asked Eaton-Williams to monitor the equipment and verify the savings.

### Monitoring

Readings were taken over a 15-day period to assess the effect of the unit on the hot water supply system. A sensor monitored various points to ensure balanced readings were achieved.

The temperatures for the cold water into and out of the cylinder were dependent on the water flowing (i.e. showers running) and assumed that the immersion heater was not running. The club confirmed that the immersion was switched off and that the system supplied hot water at 46°C.

### Benefits

- Reduced cost water heating
- Reduced power consumption
- Reduced emissions
- Reduced carbon footprint
- Compact and silent operation
- Retrofits to existing systems

Eaton-Williams HRU produced hot water from the discharge of the 220ltr cylinder via an unvented indirect closed water loop at temperatures in excess of 66°C. The system will continued to be monitored and assessed over the next 12 months to give a more comprehensive view of the energy savings.

“The proof was in the pudding, says Bob. “We have not used the twin 3kw immersions heaters at any point to provide sufficient hot water; the heat recovery system has proven to be a worthy investment”.

Eaton-Williams’ heat recovery systems are available in either 6kW or 10kW units. In addition to providing an energy efficient and environmentally friendly solution for re-using waste heat, users can benefit from an attractive payback.

For example a mid-range cellar cooler operating on average 18 hours per day (calculated using 2012 electricity tariffs) will recover the HRU’s purchase and installation costs within two years.

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"It no longer makes sense environmentally or commercially to waste resources," says Ron Pamplin, Product Manager, adding "whilst this was a new fit, our heat recovery unit can very easily be retro-fitted."

"In the catering and leisure industries, butchery, fishmonger and dairy sectors where there is a high usage of hot water, recycling waste heat can provide free hot water on demand for cleaning, dishwashers and laundry whilst helping to reduce energy bills."

The Communities Minister Don Foster believes that building homes and businesses to more stringent energy saving standards will help to drive down fuel bills.

"By experiencing the benefits first hand, Enderby Social Club can see the value of investing in long term solutions to reduce energy costs," says Ron Pamplin.

Although new legislation is strengthening building regulations, Part L will only affect new buildings, requiring offices, shops, warehouses and pubs to be more energy efficient. But it makes commercial sense for any business to take advantage of new technologies particularly when there is an attractive payback, redundancy, quiet and vibration free operation.

Eaton-Williams® latest Heat Recovery Unit (HRU) can boost energy efficiencies and increase cost, offering an easy to install solution that recovers heat from the cooling process and re-uses it to heat water up to 50°C.

Small and compact the unit can be retrofitted to existing cellar cooling systems. End users benefits from reduced water heating costs and lower power consumption.

*Eaton-Williams cellar coolers are all ECA approved and can help the pub trade to reduce their carbon emissions.*

*Both the ICC cellar coolers and ICUS condensing units offer unrivalled performance with the added benefit of increased energy efficiency.*

*Manufactured in the UK, the QUALITAIR® range of cellar coolers are very popular with leading retailers, major brewers and microbreweries.*

*Four models are available offering operating temperatures between 5°C - 23°C and are ideal for general keg, real ale storage areas and bottle cooling.*

*Manufactured from high-grade stainless steel, the systems can be easily cleaned to address hygiene issues and are robustly built to withstand knocks and scrapes that can occur within the confines of a heavily used cellar.*

