

TRAVELODGE

FLAGSHIP CITY HOTEL DEMANDS EFFICIENT, ENVIRONMENTALLY FRIENDLY HOT WATER



Travelodge, the largest independent hotel chain in the country, recently completed its flagship 395-room London City hotel, featuring contemporary room design and on-site bar café.

With continual background electrical power use and large domestic hot water (DHW) demand, Travelodge committed to a system based on micro-combined heat and power (m-CHP) which, when compared to conventional hot water solutions, attains substantial improvements in energy efficiency and reduced carbon emissions.

Constructed in partnership with consultants MRB Ltd., Advenco Ltd. provided the domestic hot water system. Installed by Derry Ltd., the system features an Advenco TOTEM T25 micro-combined heat and power (m-CHP) unit and offers substantial improvements in energy efficiency and carbon emissions when compared to conventional hot water solutions.

Customer
Travelodge

Sector
Leisure

Location
City of London

Application
Cogeneration of hot water and power

Products
Advenco Totem T25 m-CHP
Advenco MSS buffer vessel
Advenco stainless steel calorifiers
A.O. Smith 572 Kw Upsilon boiler cascade



EXPERTLY ENGINEERED FOR YOU



BUSINESS CRITICAL HOT WATER AND POWER 24/7/365

m-CHP is the ideal technology when considering the hot water and electricity demands of the hotel. The Totem T25 m-CHP can operate at full capacity whenever the domestic hot water system requires pre-heat input. With the DHW demand of the building, the Totem can achieve high run hours which further increases its contribution to system efficiency and provides valuable energy savings to the business. These savings make the use of m-CHP the most practical and cost-effective method of satisfying Part L of the Building Regulations, further aiding sustainable and energy-efficient building design.

The TOTEM T25 was installed alongside six Adveco stainless steel calorifiers and a 572 kW A.O. Smith Upsilon boiler cascade. The m-CHP operates by pre-heating the system water via an Adveco MSS buffer vessel, which in turn feeds the indirect coils of the Adveco stainless steel calorifiers and is supported by the AO Smith boiler cascade.

The plant components supplied by Adveco Ltd. were installed into a rooftop plantroom and commissioned by Adveco's in-house team of engineers.

By choosing the TOTEM, Travelodge has significantly reduced the building's emissions of carbon and nitrogen oxides. With NO_x emissions at less than 10 mg/kWh, the TOTEM imparts the smallest effect on local air quality of any m-CHP on the market, the importance of which cannot be understated for this hotel located in the heart of the City of London.

TOTEM M-CHP

- Purpose-built for operation on natural gas
- Combined Heat and Power range with outputs of 10, 20, 25 and 50 kW
- Total cogeneration efficiency up to 107.4%
- Ultra-low emissions: NO_x at <12 mg/kWh and <10 mg/Nm³,
- CO at <10 mg/Nm³
- Unparalleled reliability.
- Eligible for full points under the revised POL02 category of the 2018 BREEAM New Construction Scheme, even when installed in high pollution urban areas.



With almost 50 years of industry experience, Adveco Ltd. is the trusted specialist provider of bespoke hot water, heating and power systems to the building services industry. Committed to partnering with its commercial and government customers, Adveco helps create comfortable, efficient, functional, safe and sustainable buildings through invaluable support in the design, supply, commissioning and service of business-critical hot water, heating and power. Headquartered in the UK, the company operates across Europe from offices in the Netherlands and Belgium.