

# 18 x Schuco Solar Thermal Panels

## New Building in Middlesbrough



### 18 x Flat Roof Mounted Schuco Solar Thermal Panels

We were contacted by CAD21, a mechanical and electrical consultancy and asked to help deliver a renewable energy solution for one of their forward thinking clients.

After working closely with CAD21 we arrived at a sustainable solution which was reliable and of high quality. The installation is able to meet the majority of the building's energy requirements via a renewable method which provides domestic hot water.

The Schuco Solar Thermal System of 44m<sup>2</sup> (in collector size) provides approximately 1800 litres of hot water per day. The Schuco designed panels are the ultimate in flat plate solar technology and are a robust and very neat and compact in design.

All systems are high quality German engineered parts, made from coated aluminium or stainless steel making it the obvious sustainable choice.



Above: the aerial image shows the building with 5 No Air Source Heat Pumps on the roof plant deck along with 18 Solar roof mounted thermal panels

Left: showing a close up of the Schuco Solar thermal Panels Heat Pumps

## Solar Thermal How Do they Work?

The solar collectors on the roof transfer the radiated heat from the sun through a copper bonded back plate and into an anti-freeze based fluid that flows in copper pipes, this fluid is then pumped through a solar coil in the hot water cylinder.

This heats up the water in the cylinder and switches off when the water is up to temperature. A system should provide 50 to 70% of the domestic hot water needs per year.

The beauty of a solar thermal system means that your boiler doesn't need to be on in the summer for domestic water needs.

## How much hot water will you get?

When this system was commissioned on the 2nd of March 2010 it was a bright sunny day with an out side air temperature of 5°C, we observed panel temperatures of 93.2°C and stored water temperatures of 72.5°C.

The system has been designed to produce about 60 to 70% of the hot water requirements.



Above left: Plant room showing 1800L thermal storage for the renewable energy systems

Above Right: shows the renewable energy controllers and BMS interfaces

### Further information

[www.revolutionpower.co.uk](http://www.revolutionpower.co.uk) or

(01325) 320910 / 07823 771234

[www.lowcarbonbuildings.org.uk](http://www.lowcarbonbuildings.org.uk)