

ENGINEERING  
TOMORROW



Case story

# Lower energy bills at Indescon Court in the **London docklands**

London, United Kingdom.

## SAVE

energy with flat stations

from Danfoss. They are more energy efficient than a traditional boiler, because hot water are delivered on demand.

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# Energy efficient heating with individual billing

The 364 new apartments placed in 5 different blocks next to the shopping and business area Canary Wharf in East London are attractive for several reasons.



A reason why the substations are more energy efficient than a traditional boiler, which would be the alternative, is that it is without a hot water cylinder. Here you only have hot water on demand and don't store any water", Ian Stripp explains.

Mr. Ian Stripp, Project Manager from SAV Systems



The private residential units at Indecon Court have been designed to meet the most demanding standards and maximize the abundant light and space both within and around the development. At the same time the blocks are being supplied with heat and hot water in a most energy efficient way, so that the residents' energy bills will be kept on a minimum level - also at higher energy market prices in the future.

Indecon Court consists of two tower blocks of 14 and 16 stories, and 3 lower blocks of 6 and 7 stories. An extra quality to the apartments in the towers is the great view of the Financial District at Canary Wharf and of the London Docklands area, which used to be one of the busiest docks in the world. The

private apartments were all sold fully fitted long time in advance, according to the developer Galliard Homes. The apartments vary in size from small studios of around 33 square meters (350 square feet) to 4-bedroom flats of up to 120 square meters (over 1200 square feet).

## Energy efficient heating

A decentralized heating system with individual flat stations per apartment is designed and constructed specifically for Indecon Court in a cooperation between the company SAV Systems that specializes in the British energy market and Danfoss. This co-operation has taken place in new housing areas for several years all over Great Britain. The composition of detailed market

### Overview of the Installation: 2 sizes of substations/flat stations:

- Termix VMTD-F-1 (up to 5 kW heating / 40 & 58 DHW)
- Termix VVX-1-1 (up to 5 kW heating / 40 & 58 DHW)

#### Technical data:

- Pressure Level: PN 16
- Differential pressure: 0.7bar
- Design temperatures for heating: 80/50C-75/55C (radiator heating)
- Design temperatures for DHW: 70/28C-50/10C



knowledge and high quality energy efficient products has proven great results according to Ian Stripp, project manager from SAV Systems at the Indecon Court project. "Each apartment is equipped with a prefabricated flat station from Danfoss and connected to a central gas fired boiler, which is providing the heat in the decentralized heating system. The energy system is modified to Indecon Court and configured to the specific requirements of the project by SAV Systems", Ian Stripp says.

### Huge development area

Indecon Court is situated only about 3 miles from the center of London and the London Tube and the light rail bring you to

at hand. One of the lower blocks is run by a public housing association. Here you can rent pretty spacious apartments at an affordable price. Non-private flats like these are actually moving the market forward at a time when the economy is in recession, according to Ian Stripp.

### Individual billing according to consumption

SAV Systems made the specific design together with a consultancy engineering company and the main contractor O'shea. According to Ian Stripp there were no serious challenges to the project. The only topic was the question regarding direct or indirect district heating units. The original

ers to control consumption and secure fair billing.

### Hot water on demand saves energy

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Indirect versions (Termix VVX flat stations) feature a second heat exchange module, which works as an interface between the hot water main supply from the central boiler and the circuit within the dwelling.



the center in only 10-15 minutes. Alternatively the commuter river Thames service takes you from Canary Wharf to London Bridge in around 9 minutes. The London Docklands has been under development for the last 15 years and contains big perspectives for people, who want to live close to the center of London in new constructed apartments - with all the comfort this offers you. The development is placed in a huge area with upper residential schemes. A phase 2 and 3 of Indecon Court is planned to follow. However, due to the current economic situation it will probably not happen until 2011. There seems to be no doubt, that the area is attractive for investments both in the short and long term. For those with not so deep pockets, alternative options are

scheme design was all direct units (type Termix VMTD), but this was later changed on the 2 tower blocks (Blocks B & E) due to the static pressure of the building. All units up to the 8th floor were changed to indirect units (type Termix VVX). The Termix VMTD flat station from Danfoss is constructed, so that the primary flow of cold water enters at the top of the unit, whereas the hot water and secondary heating (the apartment heating) exits at the bottom of the unit. The installed Danfoss flat stations are all equipped with a heat meter (type Sonometer 1000®) enabling individual billing according to actual consumption. In times with increasing energy costs and high focus on energy savings this enables the flat own-

In this way heat energy can be taken efficiently from the central boiler, while maintaining a "sealed system" condition for the individual apartment. Finally, the substation takes up less space in the flat than an old boiler system. The installer Malden Plumbing & Heating Limited took care of all mechanical installations and all flat stations are now fully installed. The electrical installations are done as well. Total completion of the project is scheduled to be at the end of 2009.

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**2** Supplier of solutions with a wide product range



**3** A strong and dedicated business partner

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