MAKING MODERN LIVING POSSIBLE

Individual hot water comfort and optimum energy efficiency

Danfoss flat station solution for decentralized systems

Meeting your requirements for a truly efficient domestic hot water system

Danfoss flat station solution for decentralized systems. Efficient - Reliable - Trouble-free

Increased requirements for energy efficiency, individual comfort and energy billing in multi-dwelling buildings demand an innovative installation concept.

The Danfoss flat station solution for decentralized heating systems comprises an installation, in which hydraulic interface units, supplied from a central energy source, are installed in each flat. The flat station offers individual temperature control and delivers instantaneous domestic hot water on demand, which contributes to ensure high comfort and maximum energy efficiency of the heating system.

The concept of the decentralized system is independent of the energy source. It is flexible and can be applied together with any energy source available in the building. Thus it is to be seen as an attractive and economically sound alternative to traditional heating systems with central boilers in the basement and/or with electrical water heaters.

All in all, the decentralized heating systems and usage of Danfoss flat stations offer a great number of advantages for you.

SYSTEM ADVANTAGES

Planning and installation

- Applicable for use in new building installations and for refurbishment.
- Minimum space requirements for installation in the flat - comprising possible integration in wall construction or shafts.
- Reduced installation time due to system construction with only 3 ascending pipes.

In operation

- Exact and individual energy billing for each flat or tenancy facilitated by central monitoring of consumption.
- Individual setting of room temperature and independent domestic hot water production.
- Minimized the risk of legionella bacteria.
- Maximum domestic hot water comfort (35-80 kW against 22 kW by traditional gas-fired water heaters).
- Increased energy efficiency through improved system operation and low operational temperatures.
- Reduced costs for maintenance and service due to simple and reliable system construction.

Independent of energy source

District heating

Central heating

Solar heating/Heat pump

Biomass/CHP system

Unite individual comfort, flexibility and design

The Danfoss flat station is a complete hydraulic interface unit - compact and ready-to-install

SYSTEM ELEMENTS

Main parts of the decentralized system include:

- One hydraulic interface unit per apartment
- A central heat source in the basement
- A buffer tank
- A charging pump and pump for the heating circuit
- Remote sensors for pump control
- Three ascending pipes

The correct combination of the above parts is the key to an efficient system

The flat station occupies a leading position in the decentralized system. It is a complete, ready-to-install, unit, with a compact and high efficient plate heat exchanger that delivers instantaneous domestic hot water on demand. Furthermore the unit can be delivered with connections and a differential pressure controller, which diverts and controls the heating flow to the tenants' radiator and/or floor heating installation.

The comprehensive product range from Danfoss fits all possible applications, system conditions and performance demands.

The units come with multiple control solutions for DHW control (temperature and pressure), direct or indirect connection for heating as well as mounting concepts i.e. on wall mounting, recess (built-in) mounting or shaft installation.

Danfoss flat stations can also be extended with a distribution system for floor heating. The distribution system can be tailor made and installed separately or directly connected to the unit. Thereby you get an easy and efficient distribution of domestic hot water and water for radiator and floor heating in the heating installation.

We want to offer you the highest possible flexibility in order to match system conditions with your individual demands for efficient and optimum system performance and comfort.

Cover for recess mounting

Termix VMTD-F

Akva Lux TDP-F
(with distribution system)

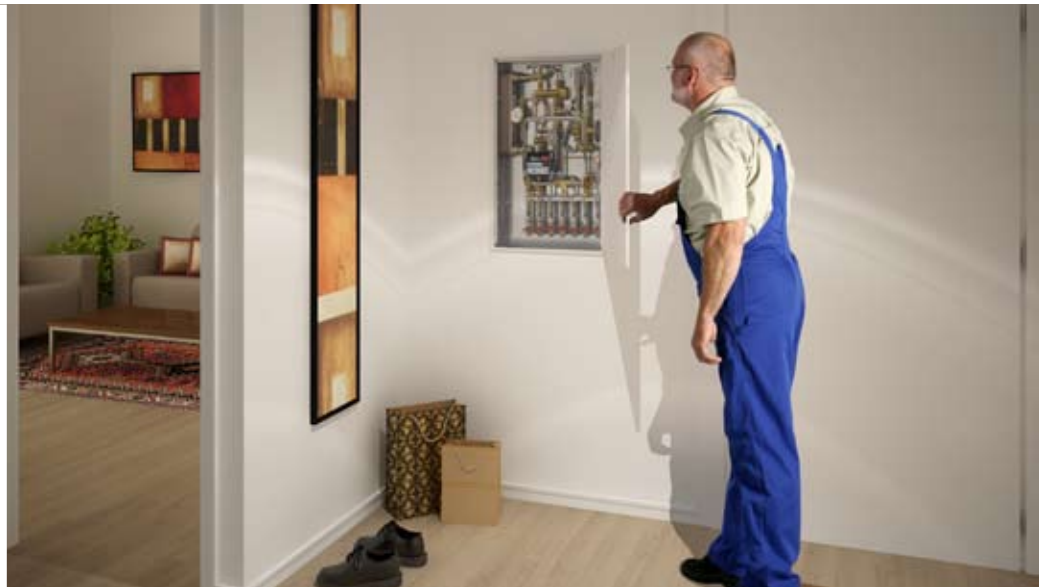
Akva Vita S

Termix VVX

Akva Vita TDP-F

Cover for on-wall mounting

Akva Vita TDP Shaft



REFERENCES

Akva Vita TDP-F

- Chrastany **Czech Republic**
- Olomouc **Czech Republic**
- Lublin **Poland**
- Wroclaw **Poland**
- Clydebank **United Kingdom**
- Bolaring, Salzburg **Austria**
- STW Giessen **Germany**

Akva Lux TDP-F

- Bratislava **Slovakia**
- Klaipeda **Lithuania**

Akva Multi TDP-F

- Zagreb **Croatia**
- Ljubljana **Slovenia**

Termix VMTD-F

- AGEA Ferrara **Italy**
- Walz **Austria**
- Rudnik **Slovenia**
- Ciprus Hause **Hungary**
- Dubecek **Czech Republic**
- Dublin **Ireland**

Termix VVX

- Barkentine **United Kingdom**

Akva Vita S

- Bloemendaal **The Netherlands**
- Carlsro Rødovre **Denmark**

Klaipeda, Lithuania

Walz, Austria

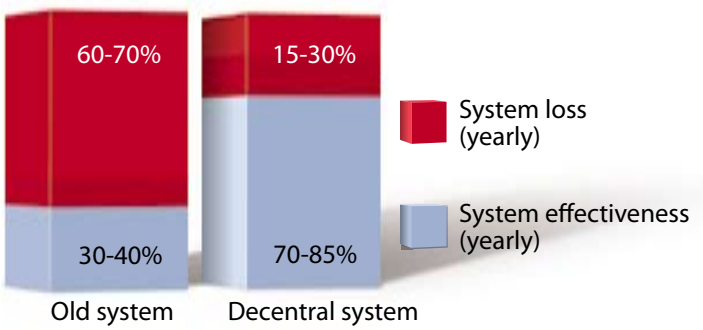
SolarCity, Austria

An installation concept.
Simple to install. Total cost reduction

In countries all over Europe thousands of Danfoss flat stations have already been installed. They are effectively in operation - trouble-free and giving high user satisfaction and comfort for house owners and tenants.

Based on north and central European energy prices in general there is a clear tendency towards the decentralized heating system concept generating a higher net value compared to the solution with a central boiler combined with electric water heaters in each apartment. Higher value and lower total cost of ownership are achieved due to:

- Simple and compact installation, which frees up space for other purposes in the building (investment costs) and requires less service (operation costs)
- Accurate billing per flat according to actual consumption (individual water and heat meter per flat)
- Significantly increased system effectiveness, due to reduced heat loss and return temperature (reduced operation cost)



System dimensioning with DanFlat

A central part of our offering is consultancy and dialogue about system dimensioning and selection. In order to secure optimum system performance, energy efficiency and individual comfort requests, dimensioning must be done competently.

The DanFlat dimensioning tool from Danfoss is our platform for a structured and well-documented dimensioning process, which covers all parts and elements of the decentralized system.

SYSTEM DIMENSIONING

As basis for a proper dimensioning of the decentralized system, these parameters must be taken into account:

- Heat loss per apartment - required heating (HE) capacity
- Required domestic hot water (DHW) capacity
- Primary and secondary supply and return temperatures (summer/winter)
- Domestic cold water temperature (fresh water supply)
- Required DHW temperature
- Number of flats in the system (multi-dwelling building)
- Additional heat loss in the system

Finding the right solution? Start the dialogue today

Consultancy and dialogue

Our industry leading position and years of experience mean that Danfoss is often the preferred advisor to consultants and contractors when specifying heating system solutions for new buildings as well as renovation projects.

Together with our customers, Danfoss shares a mutual interest in the investment in modern heating installations, which can contribute to energy and cost savings and allow you to develop a sound investment platform. Consequently, a customer specific dialogue is essential when establishing the right foundation for an optimum solution.

Want to know more?

We welcome you to visit the Danfoss Heating Portal. On the homepage you can learn more about our flat station solution for decentralized systems. This includes a tour in the decentralized heating system, information about reference projects as well as an overview of the comprehensive range of Danfoss flat stations. We look forward to getting in touch with you!

Learn more on:
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