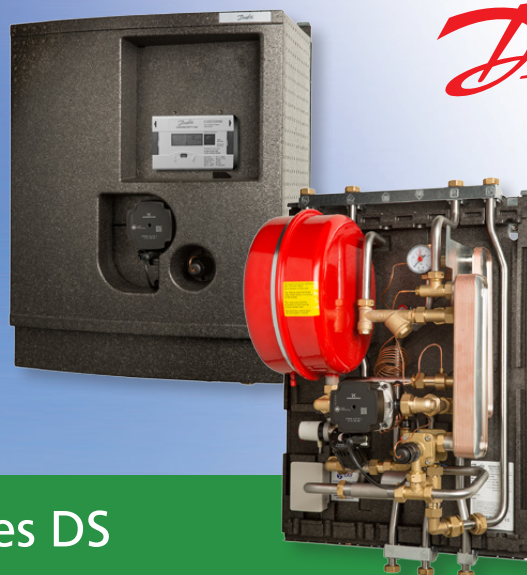




Danfoss

Danfoss FlatStations - 7 Series DS

Fully insulated

Indirect FlatStation for flats and single family houses

District heating FlatStation for indirect heating and instantaneous domestic hot water with flow-compensated temperature controller. Designed for wall-mounting.

Application

The fully insulated 7 Series DS is a complete solution for hot water and space heating with optimal safety, efficient energy transfer, service-friendly construction and a compact design. The FlatStation is used if a heat exchanger is required or on a conversion to district heating where the existing equipment is unsuitable for direct connection.

District heating (DH)

The fully insulated 7 Series DS is prefabricated with a differential pressure controller, fitting piece and sensor pockets for insertion of an energy meter as well as strainers.

Heating (HE)

The heating side consists of a plate heat exchanger, safety valve, manometer, drain valve, air valve, expansion vessel and an A-rated circulation pump. The temperature of the heating can be controlled thermostatically or by an electronic controller with an outdoor temperature sensor. Depending on the application, different heat exchangers dimensioned for central or floor heating will be used.

Domestic hot water (DHW)

The domestic hot water is prepared in the

heat exchanger and the temperature is regulated with a flow-compensated temperature controller with integrated differential pressure controller. The DH water is cooled very efficiently by the heat exchanger, thereby creating an excellent operating economy. The IHPT valve ensures a stable hot water temperature by varying loads, supply temperatures and by high and varying differential pressure without the need for readjusting the valve. This protects the heat exchanger against overheating and lime scale formation. Furthermore the IHPT valve has an integrated idle temperature controller, which keeps the house supply line warm. This shortens the waiting periods during summer when the heating system is in reduced operation, which is ideal where high comfort is requested.

Options

The fully insulated 7 Series DS can be supplied with a built-in safety valve mounted in the cold water supply. It can also be supplied with a thermostatic circulation valve.

Construction

All pipes are made of stainless steel. The connections are made by nuts and gaskets.

Insulation

The FlatStation comes complete with a fully insulated cover thus minimizing the heat loss both during tapping of domestic hot water but also when only space heating is required.

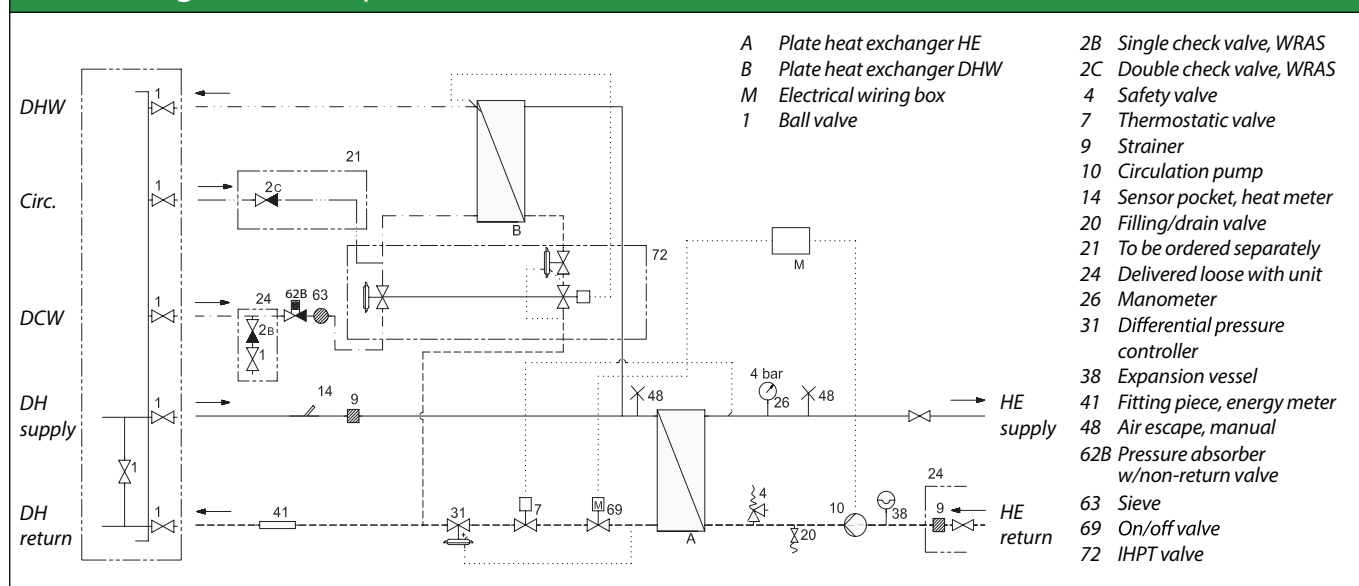
FEATURES AND BENEFITS

- Indirect heating, DHW temperature regulation with self-acting thermostatic control valve
- Thermostatic regulation of heating (HE) temperature
- Capacity: 30-59 kW DHW, 3.5-10 kW heating
- DHW in sufficient quantity
- Operates independently of differential pressure and flow temperature
- Minimum space required for installation
- Pipes and plate heat exchanger made of stainless steel
- Minimized risk of lime scale and bacteria formation
- Low heat loss
- Including pump with A-rated energy label
- Flushing By-Pass

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Circuit diagram - example



Technical parameters:

Nominal pressure: PN 10*
 DH supply temperature: $T_{max} = 120\text{ }^{\circ}\text{C}$
 DCW static pressure: $p_{min} = 1\text{ bar}$
 Brazing material (HEX): Copper
 * PN 16 versions are available on enquiry

Weight incl. cover: 29 kg
 (incl. packing)

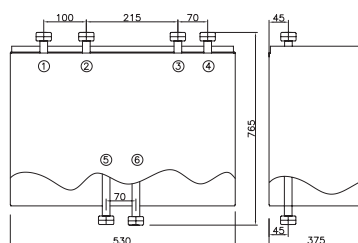
Insulation: Anthracite grey EPP

Dimensions (mm):

With insulation (mounted on wall variant):
 H 765 x W 530 x D 375

Connections:

- 1 District heating (DH) supply
- 2 District heating (DH) return
- 3 Domestic hot water (DHW)
- 4 Domestic cold water (DCW)
- 5 Heating (HE) supply
- 6 Heating (HE) return



Front view

Side view

Connections sizes:

All connections: G $\frac{3}{4}$ " (int. thread)

Options:

- Booster pump (increases DH flow)
- Safety valve (8 bar)
- Room thermostat
- Connection for circulation

DHW: Capacity examples

FlatStation type VVX-I-FI	DHW capacity [l/min]	DHW capacity [kW]	Supply flow Primary [°C]	Return flow Primary [°C]	CW/DHW [°C]	Flow rate Primary [l/m]	Pressure loss Primary* [kPa]
VVX-I-FI-1-x	12.5	30.6	60	20	10/45	11.1	20
		35.0	70	19.9	10/50	10.2	25
	15	42.0	70	20.9	10/50	12.5	35
		42.0	80	18	10/50	9.9	15
VVX-I-FI-2-x	21	42.0	60	23.1	10/50	16.6	45
		58.8	70	20	10/50	17.2	45
		58.8	80	17.2	10/50	13.8	30

* Energy meter not included

Heating: Capacity examples

FlatStation type VVX-I-FI	Heating capacity [kW]	Supply flow Primary [°C]	Return flow Primary [°C]	Heating circuit [°C]	Flow rate Primary [l/m]	Min. diff. pressure Primary* [kPa]	Flow rate Secondary [l/m]	Residual pump head Secondary [kPa]
VVX-I-FI-x-1	3.5	60	36.1	45/35	5.2	15	5.1	35
		70	36.6	60/30	1.7	15	1.7	30
		80	45.9	70/40	1.7	15	1.7	30
		80	53	70/50	2.5	15	2.5	30
VVX-I-FI-x-2	7	60	35.8	45/35	10.1	25	10.1	30
		70	39.7	60/30	3.4	25	3.4	45
		80	48.8	70/40	3.4	25	3.4	45
		80	55.3	70/50	5.1	3	5.1	40
VVX-I-FI-x-3	10	60	35.9	45/35	14.5	35	14.5	15
		70	39.7	60/30	4.8	35	4.8	40
		80	48.8	70/40	4.8	30	4.8	40
		80	55.4	70/50	7.3	45	7.3	35

* Energy meter not included