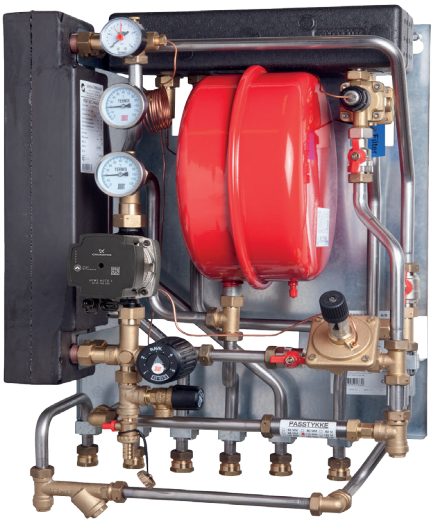
ENGINEERING
TOMORROW

Fact sheet

Termix VVX-I

District heating substation for direct heating and instantaneous domestic hot water with flow-compensated temperature controller.



Application

The Termix VVX-I is a complete solution for hot water and space heating with optimal safety, efficient energy transfer, service-friendly construction and a compact design. The substation 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 substation is prefabricated with a differential pressure controller, fitting piece and sensor pockets for insertion of an energy meter as well as strainers and ball valves

Heating (HE)

The heating side consists of a plate heat exchanger, safety valve, manometer, drain valve, air valve, expansion vessel and 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 heat exchanger cools the DH water very efficiently, thereby creating an excellent operating economy. The Danfoss 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 Termix VVX-I 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. The Termix VVX-I is completed by a white steel cover in modern and attractive design.

FEATURES AND BENEFITS

- Substation for single and multi-family houses
- Indirect heating, DHW temperature regulation with a thermostatic control valve
- Thermostatic or electronic regulation of heating (HE) temperature
- Capacity: 45 kW heating, 33-55 kW DHW
- 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
- Optimum temperature regulation up to DH supply temperature 100 °C

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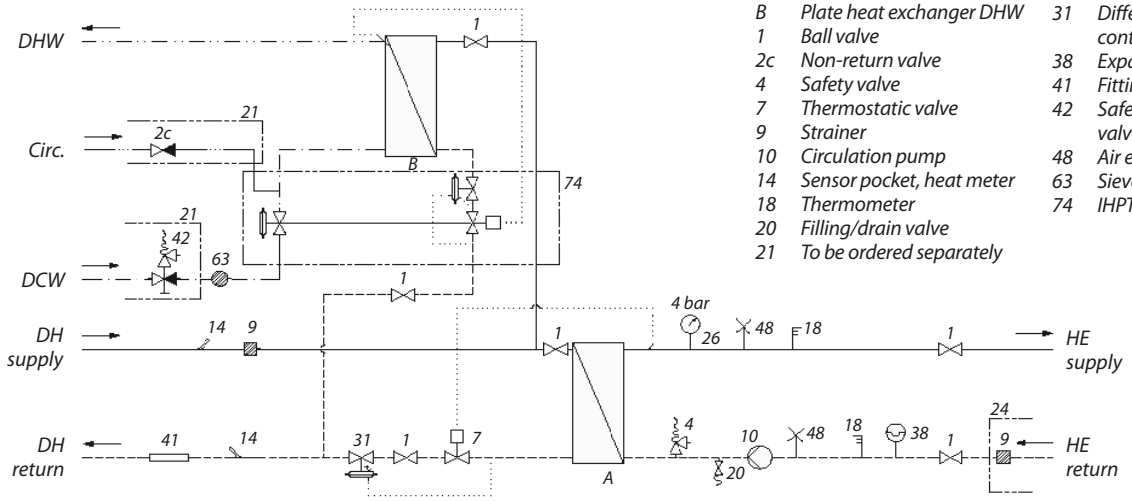
CIRCUIT DIAGRAM - EXAMPLES



A	Plate heat exchanger HE	26	Manometer
B	Plate heat exchanger DHW	31	Differential pressure controller
1	Ball valve	38	Expansion vessel
2c	Non-return valve	41	Fitting piece, energy meter
4	Safety valve	42	Safety valve/non-return valve
7	Thermostatic valve	48	Air escape, manual
9	Strainer	63	Sieve
10	Circulation pump	74	IHPT valve
14	Sensor pocket, heat meter		
18	Thermometer		
20	Filling/drain valve		
21	To be ordered separately		

Technical parameters:

Nominal pressure: PN 10*
DH supply temperature: Tmax = 120°C
DCW static pressure: pmin = 1 bar
Brazing material (HEX): Copper
* PN 16 versions are available on enquiry

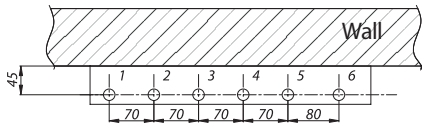
Weight incl. cover: 29 kg (incl. packing)

Cover: White-lacquered steel sheet

Dimensions (mm):
Without cover:
H 750 × W 505 × D 430
With cover:
H 800 × W 540 × D 430

Connections:

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



Seen from above

Connections sizes:

DH + HE: G ¾" (int. thread)
DCW + DHW: G ¾" (int. thread)

Options:

- Booster pump (increases DH flow)
- Separate mixing circuit
- White-lacquered steel cover
- Safety valve and non-return valve (10 bar)
- Safety valve with thermostatic circulation set
- Thermostatic circulation set
- Pressure compensation valve (GTU)
- Electronic controller
- Room thermostat
- Zone valve with actuator
- Air screw (DH supply)
- Connection for circulation

DHW: Capacity examples

Substation type	DHW Capacity kW	Supply/ Return flow primary °C	DHW °C	Pressure loss Primary kPa*	DHW Tap load l/min
VVX-I-1	32,3	60/19	10/45	22	13,3
	40,3	60/20	10/45	32	16,6
	36,5	70/18	10/50	20	13,2
	55	70/21	10/50	39	19,8
VVX-I-2	32,3	55/19	10/45	22	13,3
	38	55/20	10/45	30	15,7
	32,3	60/16	10/45	18	13,3
	47	60/18	10/45	32	19,4
	39,5	70/16	10/50	20	14,3
	59	70/19	10/50	33	21,3

* heat meter not included.

Heating: Capacity examples

Substation type	Heating Capacity kW	Supply / Return flow primary °C	Heating circuit °C	Flow rate primary l/h	dp min kPa	Flow rate secondary l/h
VVX-I x-1	12	70/40	60/35	353	30	418
	24	90/45	70/40	470	45	699
VVX-I x-2	19	70/40	60/35	553	30	662
	35	90/45	70/40	674	45	1019
VVX-I x-3	31	70/40	60/35	906	30	1080
	50	90/45	70/40	956	45	1455

Gemina Termix A/S · Member of the Danfoss Group · Navervej 15-17 · DK-7451 Sunds · Denmark
Tel.: +45 9714 1444 · Fax: +45 9714 1159 · mail@termix.dk · www.heating.danfoss.com