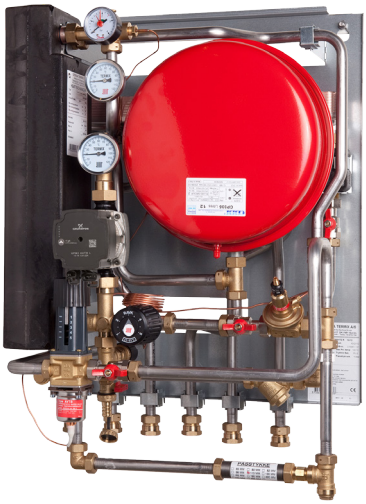
ENGINEERING
TOMORROW

Fact sheet

Termix VVX-B

District heating substation for indirect heating and instantaneous domestic hot water with thermostatic control.



Application

The Termix VVX-B 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 a heat meter as well as strainers and ball valves.

Heating (HE)

The heating side consists of a plate heat exchanger, safety valve, manometer, thermometers, ball valves, 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 underfloor heating can be used.

Domestic hot water (DHW)

The domestic hot water is prepared in the heat exchanger and the temperature is regulated with a thermostatic control valve. The patented sensor accelerator accelerates the closing of the Danfoss AVTB valve and protects the heat exchanger against overheating and lime scale formation. The sensor accelerator helps to ensure a stable hot water temperature by varying loads, flow temperatures and differential pressure without the need for readjusting the valve. The heat exchanger cools the DH water very efficiently, thereby creating a very good operating economy. The sensor accelerator and AVTB valve also works as a bypass keeping the house supply line warm. This shortens the waiting periods during summer when the heating system is in reduced operation

Options

The water heater can be supplied with built in nonreturn valve and safety valve mounted in the cold water supply. The water heater 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-B is completed by a white steel cover in modern and attractive design.

FEATURES AND BENEFITS

- Substation with high efficiency brazed plate heat exchangers for properties of between 1 to 30 apartments, made from acid-proof stainless steel
- Wall-mounted construction
- Suitable for new buildings as well as renovation projects
- Small, lightweight, compact construction
- Electronic controllers for heating and domestic hot water systems
- Advanced gasket system - primary side
- Fast and reliable delivery
- Danfoss substations and heat exchangers are manufactured according to European Pressure Directive PED 9979797/23/WE

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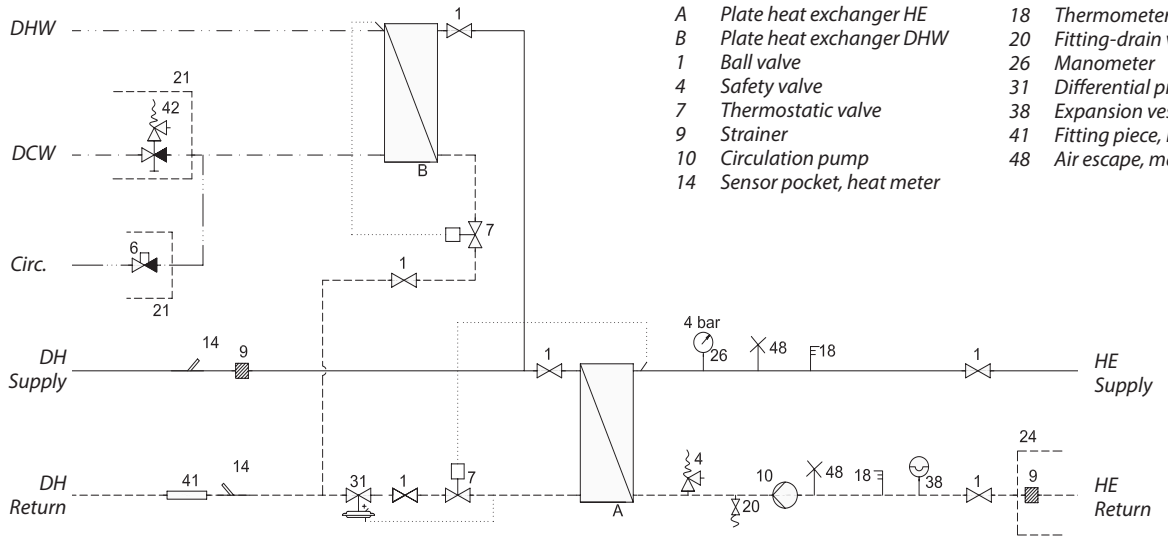
CIRCUIT DIAGRAM - EXAMPLE



A	Plate heat exchanger HE	18	Thermometer
B	Plate heat exchanger DHW	20	Fitting-drain valve
1	Ball valve	26	Manometer
4	Safety valve	31	Differential pressure controller
7	Thermostatic valve	38	Expansion vessel
9	Strainer	41	Fitting piece, heat meter
10	Circulation pump	48	Air escape, manual
14	Sensor pocket, heat meter		

Technical parameters:

Nominal pressure:	PN 10*
DH supply temperature:	Tmax = 120 °C
DCW static pressure:	Pmin = 0.5 bar
Brazing material (HEX):	Copper

*PN 16 versions are available on enquiry

Weight incl. cover: 35 kg (incl. packing)

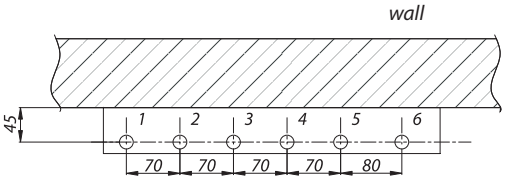
Cover: White-lacquered steel

Dimensions (mm):

Without cover:	H 810 × W 525 × D 360
With cover:	H 810 × 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)



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Connections sizes:

DH + HE:	G¾" (int. thread)
DCW + DHW:	G¾" (int. thread)

Options:

- Cover, white-lacquered steel (Design Jacob Jensen)
- Safety valve
- GTU Pressure equalizer
- Circulation set, Danfoss MTCV and check valve
- Booster pump (increases DH flow)
- Pipe insulation
- Mixing circuits for under floor heating
- Underfloor heating manifold system
- Safety thermostat surface type
- Weather compensation, electronic controls
- Filling line, refill from DH for heating circuit
- Room thermostat
- Zone valve with actuator
- Air screw (DH supply)

DHW: CAPACITY EXAMPLES, 10°C / 50°C

Substation type	DHW capacity [°C]	Supply flow primary [°C]	Return flow primary [°C]	DCW/DHW [°C]	Pressure loss primary [kPa]	Flow rate secondary [l/h]
VVX 1-x	33	60	20	10/45	25	810
	40	70	20	10/45	40	1228
VVX 2-x	50	60	20	10/45	40	1228
	58	70	20	10/45	40	1247
VVX 3-x	65	60	20	10/45	40	1597
	75	70	20	10/45	40	1612

HEATING: CAPACITY EXAMPLES

Substation type	Heating capacity [kW]	Heating circuit primary [°C]	Heating circuit secondary [°C]	Pressure loss primary [kPa]	Flow rate secondary [l/h]
VVX x-1	18	70/40	35/60	25	650
	20	80/45	40/70	25	603
	24	90/45	40/70	25	724
VVX x-2	30	70/40	35/60	35	1084
	34	80/45	40/70	35	1025
	40	90/45	40/70	35	1206
VVX x-3	45	70/40	35/60	45	1629
	50	80/45	40/70	45	1509
	54	90/45	40/70	45	1629

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