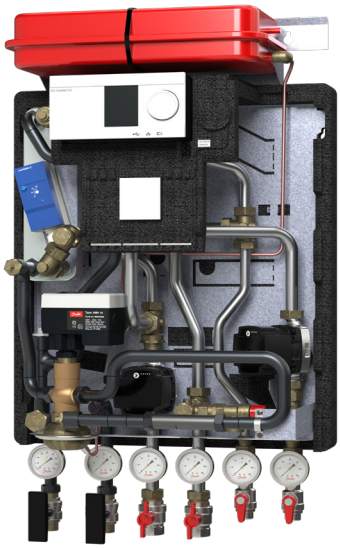
ENGINEERING
TOMORROW

Fact Sheet

VXe Solo HWS HT fully insulated substation

For indirect heating with 1 HE circut, secondary connection for DHW cylinder for single-family, semi-detached and terraced houses



Application
The VXe Solo HWS HT (ECL 310/A337) is a fully insulated substation for indirect heating with one heating circuit and secondary connection for DHW cylinder featuring high performance and simple operation. VXe Solo HWS HT is especially suitable for two-pipe systems such as systems with radiator or floor heating. Designed for wall-mounting with pipes connection in bottom. The heating circuit and the cylinder temperature is controlled by electronic temperature controller Danfoss (ECL 310/A337).
VXe Solo HWS HT station can be connected either in high temperature or low temperature district heating networks.

District heating (DH)
The substation is prefabricated with interconnecting components such as fitting piece and sensor pockets for insertion of a heat meter mounted in the DH return line, as well as strainer, thermometer and ball valves.
The heating temperature and the inlet temperature for the DHW cylinder is controlled by an electronic ECL 310/A337 controller with weather compensation.

Heating (HE)
The heating side consists of a stainless steel plate heat exchanger and the VXe Solo HWS HT substation is available with heat exchanger type XB 06H-26, XB 06H-40 for radiator heating. The heating side also features safety valve, expansion vessel, strainer, thermometers, manometer, energy-efficient circulation pump and ball valves.

The HE circuit is controlled by the district energy class pressure independent control valve AVQM together with the AMV actuator with or without safety function, the temperature by means of an electronic temperature controller (ECL 310/A337).

Mounting of heat meter
The substation is equipped with 3/4" fitting pieces in the DH return flow for fitting of a heat meter.

Domestic hot water
The VXe Solo HWS HT is supplied with connection pipes for domestic hot water cylinder on the secondary side, and the temperature in the cylinder is controlled by the Danfoss ECL controller in combination with a control valve and actuator.
VXe Solo HWS HT with connection pipes for domestic hot water cylinder on the secondary side is delivered with a factory installed circulation pump.

Design
The design emphasizes the user-friendly placement of all components.
The VXe Solo HWS HT is supplied with an elegant insulation cover and a removable cover plate in the front insulation.

Service and maintenance
The substation is very service-friendly and easy to install. It is mounted on the wall and as all pipes are placed in pipe bracket distance, it is possible to establish a nice piping.

The removable cover plate in the front allows easy access to the specially designed chamber, where the most frequently used components such as ECL310 are located.
The easy access chamber enables faster commissioning and maintenance without removing the whole cover of the substation.

FEATURES AND BENEFITS

- Connectivity with LeanHeat Monitor for monitoring and remote setting
- Fully insulated with very low heat losses
- Indirect heating, 1 HE circuit
- Secondary connection for DHW cylinder
- Ensuring the lowest return temperature by special Danfoss technologies exclusively developed for substations
- Customer-specific solutions, specially adapted to the applicable technical regulations
- Advanced electronic control of heating (HE) with weather compensation and remote access possibility
- Capacity: 25 - 47 kW HE
- Minimum space required for installation
- Primary pipes are welded. All other pipes and plate heat exchanger are made of stainless steel AISI316/314, connections with EPDM gaskets.
- Dezincification-free brass CuZn39Pb3
- Electrical wiring from factory - Plug & Play
- Applicable for high or low temperature district heating networks (T_{max} = 130°C)

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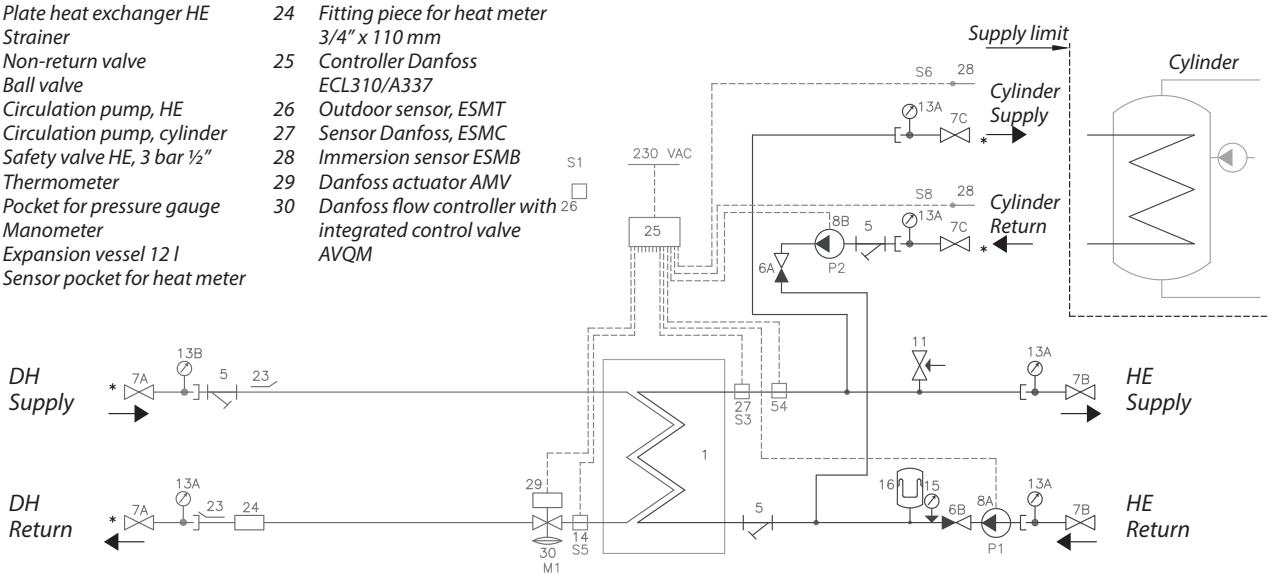
CIRCUIT DIAGRAM (EXAMPLE)

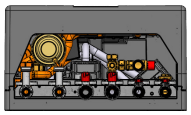
1	Plate heat exchanger HE	24	Fitting piece for heat meter 3/4" x 110 mm
5	Strainer	25	Controller Danfoss ECL310/A337
6	Non-return valve	26	Outdoor sensor, ESMT
7	Ball valve	27	Sensor Danfoss, ESMC
8	Circulation pump, HE	28	Immersion sensor ESMB
8A	Circulation pump, cylinder	29	Danfoss actuator AMV
11	Safety valve HE, 3 bar ½"	30	Danfoss flow controller with integrated control valve AVQM
13	Thermometer		
14	Pocket for pressure gauge		
15	Manometer		
16	Expansion vessel 12 l		
23	Sensor pocket for heat meter		

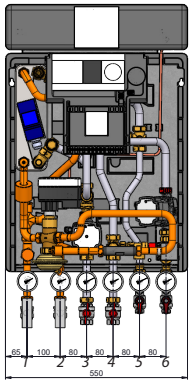


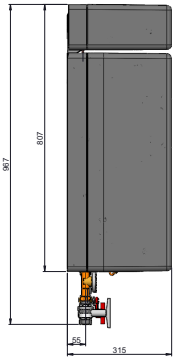
Design specifications:

Nominal pressure (prim/sec.):	PN 25/PN 6
Max. supply temperature:	130 °C (design temp.)
Min. ΔP:	See capacity examples
Brazing material (HEX):	Copper
Weight:	Max. 55 kg
Insulation:	Polypropylene EPP λ 0.039
Electrical supply:	230 V AC
Dimensions (mm):	
with insulation:	H 967 x W 550 x D 315
Connections sizes:	
DH, Cylinder:	G ¾" ET (ext. thread)
HE:	G 1" IT (int. thread)

Dimensional sketch:







Connections:
1. District heating (DH) supply
2. District heating (DH) return
3. Heating (HE) return
4. Heating (HE) supply
5. Cylinder supply
6. Cylinder return

Basic type VXe Solo HWS HT	Code No
Type 1, fully insulated	145F4476
Type 2, fully insulated	145F4477
Type 1, fully insulated, safety function*	145F4492
Type 2, fully insulated, safety function*	145F4493
Type 3, fully insulated, safety function*	145F4478

*Safety function = AMV13 / Jumo safety thermostat

HEATING: CAPACITY EXAMPLES

Plate heat exchanger HEX	HE capacity [kW]	HE circuit primary [°C]	HE circuit secondary [°C]	Pressure loss primary [*kPa]	Flow rate primary [**l/h]	Flow rate secondary [l/h]	Residual pressure UPM3 15-75 [kPa]
XB06H-1 26 Type 1	25	75/46	40/65	34	717	860	65
	25	80/50	45/70	32	717	860	65
	25	90/52	50/70	20	566	1075	56
	25	130/46	45/70	9	252	860	65
	25	130/47	50/70	9	267	860	58
XB06H-1 40 Type 2	47	75/45	40/65	39	1347	1617	36
	47	80/50	45/70	41	1347	1617	36
	47	90/52	50/70	24	1064	2021	11
	47	130/46	45/70	6	476	1617	36
	47	130/51	50/70	6	505	2021	11

* Heat meter and PHW capacity not incl. ** DHW capacity not incl.

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