

Fact Sheet

VXe Solo HWP HT fully insulated substation

For indirect heating with 1 HE circuit & primary connection for DHW cylinder for single-family, semi-detached and terraced houses



Application

The VXe Solo HWP HT (ECL 310/A337) is a fully insulated substation for indirect heating with one heating circuit and primary connection for DHW cylinder featuring high performance and simple operation. VXe Solo HWP HT is especially suitable for two-pipe systems and 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 HWP 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 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 HWP HT substation is available with heat exchanger type XB 06H-26, XB 06H-40 for radiator heating and type XB 06L-1 26 for floor heating. The heating side also features safety valve, expansion vessel, strainer, thermometers, manometer, energy effi-

cient circulation pump and ball valves. The HE circuit is controlled by the primary side two way motorized control valve VM2 together with the actuator AMV 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 $\frac{3}{4}$ " fitting pieces in the DH return flow for fitting of a heat meter.

Domestic hot water

The VXe Solo HWP HT is supplied with connection pipes for domestic hot water cylinder on the primary side, and the temperature in the cylinder can be controlled by a self-acting thermostatic control valve or the Danfoss ECL controller.

Design

The design emphasizes the user-friendly placement of all components. The VXe Solo HWP HT is supplied with an elegant insulation cover and the removable cover plate in the front insulation allows easy access to components for regulation and maintenance purposes.

Service and maintenance

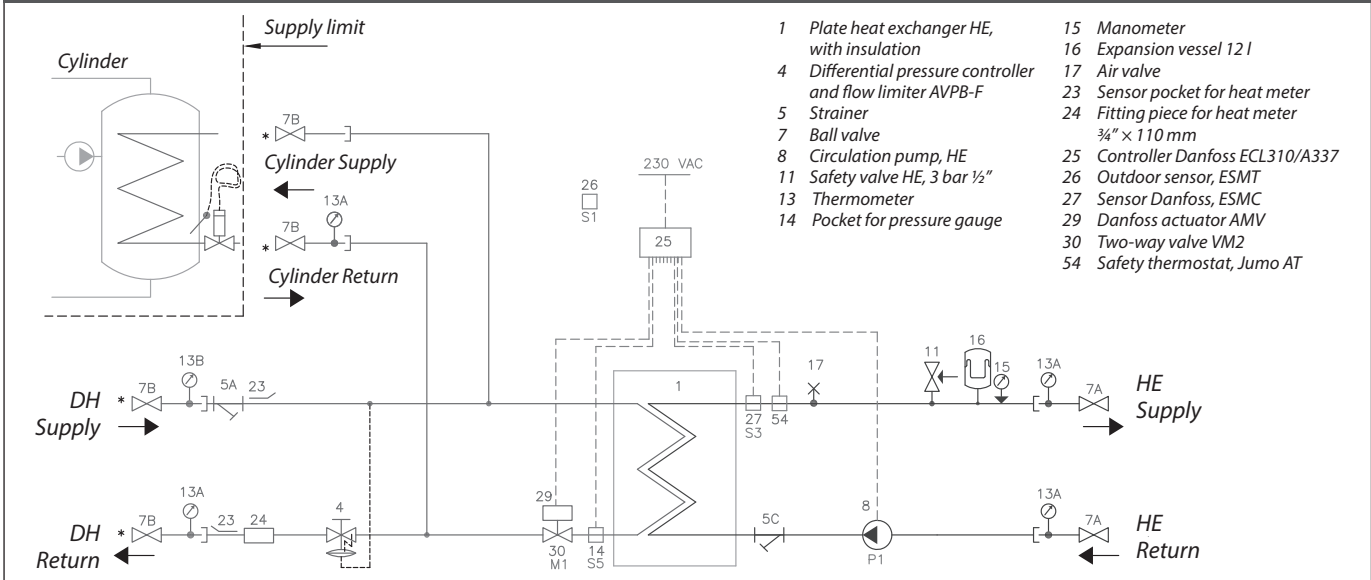
The substation is very service-friendly and easy to install. It is mounted on the wall and as all pipes are placed in pipe bracket distance, it is possible to establish a nice piping. The removable cover plate in the

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
- Primary 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
- Electronic control of heating (HE) temperature
- Capacity: 25 – 47 kW HE / 28 kW FH
- 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 ($T_{max} = 130^{\circ}\text{C}$)

CIRCUIT DIAGRAM (EXAMPLE)



- 1 Plate heat exchanger HE, with insulation
- 4 Differential pressure controller and flow limiter AVPB-F
- 5 Strainer
- 7 Ball valve
- 8 Circulation pump, HE
- 11 Safety valve HE, 3 bar 1/2"
- 13 Thermometer
- 14 Pocket for pressure gauge
- 15 Manometer
- 16 Expansion vessel 12 l
- 17 Air valve
- 23 Sensor pocket for heat meter
- 24 Fitting piece for heat meter 3/4" x 110 mm
- 25 Controller Danfoss ECL310/A337
- 26 Outdoor sensor, ESMT
- 27 Sensor Danfoss, ESMT
- 29 Danfoss actuator AMV
- 30 Two-way valve VM2
- 54 Safety thermostat, Jumo AT

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

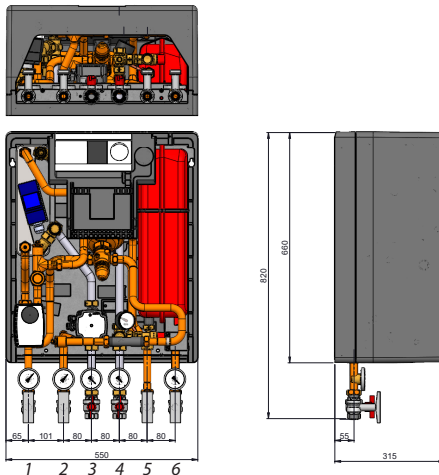
Insulation: Polypropylene
 EPP λ 0.039

Electrical supply: 230V AC

Dimensions (mm):
 with insulation: H 820 x W 550 x D 315

Connections sizes:
 DH + Cylinder: G 3/4" 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 HWP HT	Code No
Type 1, fully insulated	145F4485
Type 2, fully insulated	145F4486
Type 1, fully insulated, safety function*	145F4490
Type 2, fully insulated, safety function*	145F4491
Type 3, fully insulated, safety function*	145F4487

*Safety function = AMV13 / Jumo safety thermostat.

Options	Code No
Thermostatic valve RAVK/VMA for DHW	144B2021

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 FLEX AS 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	130/51	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
XB06L-1 26 Type 3	20	75/31	30/40	9	391	1720	33
	20	80/31	30/40	9	351	1720	33
	20	90/31	30/40	6	292	1720	33
	20	130/31	30/40	2	171	1720	33

* Heat meter and DHW capacity not incl.

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