



Akva Lux VX

Indirect substation for one-family, semi-detached and terraced houses

District heating substation for indirect heating and instantaneous domestic hot water. Designed for wall-mounting.

Application

The Akva Lux VX is a substation featuring high performance and simple operation. The Akva Lux VX is especially suitable for two-pipe systems and systems with floor heating. The substation is available in two variants, either for 1-2 dwellings or for 3-4 dwellings.

District heating (DH)

The substation is prefabricated with interconnecting components such as differential pressure control, fitting piece and sensor pockets for insertion of a heat meter, as well as strainers, ball valves and pockets for pressure gauges.

Heating (HE)

The heating side consists of a stainless steel plate heat exchanger, safety valve, manometer, air valve, expansion vessel and circulation pump and heating can be controlled thermostatically or by electronic temperature controller with an outdoor temperature sensor. Depending on substation's application, different heat exchangers dimensioned for central or floor heating can be used.

Domestic hot water (DHW)

The domestic hot water is prepared in the heat exchanger based on the flow principle. Supreme ease of operation is obtained via the combined hydraulic and thermostatic regulation of domestic hot water through the PT°C controller, thereby guaranteeing a constant domestic hot water temperature at all times.

The use of hydraulic regulation widely prevents the formation of lime scale and bacteria due to the fact, that the valve closes immediately after the tapping is ended. Furthermore the combined control function ensures that variations in temperature in the district heating network are reduced. A thermostatic by-pass enables tapping of hot water without any delay, – ensuring the best possible efficiency and economy. The cold water connection includes a combined ball valve/non-return valve and safety valves.

Domestic hot water circulation

The Akva Lux VX is equipped with by-pass function as a standard, but it is prepared for DHW circulation. Switching to DHW circulation is possible from a constructional point of view, requiring no extra components.

Construction

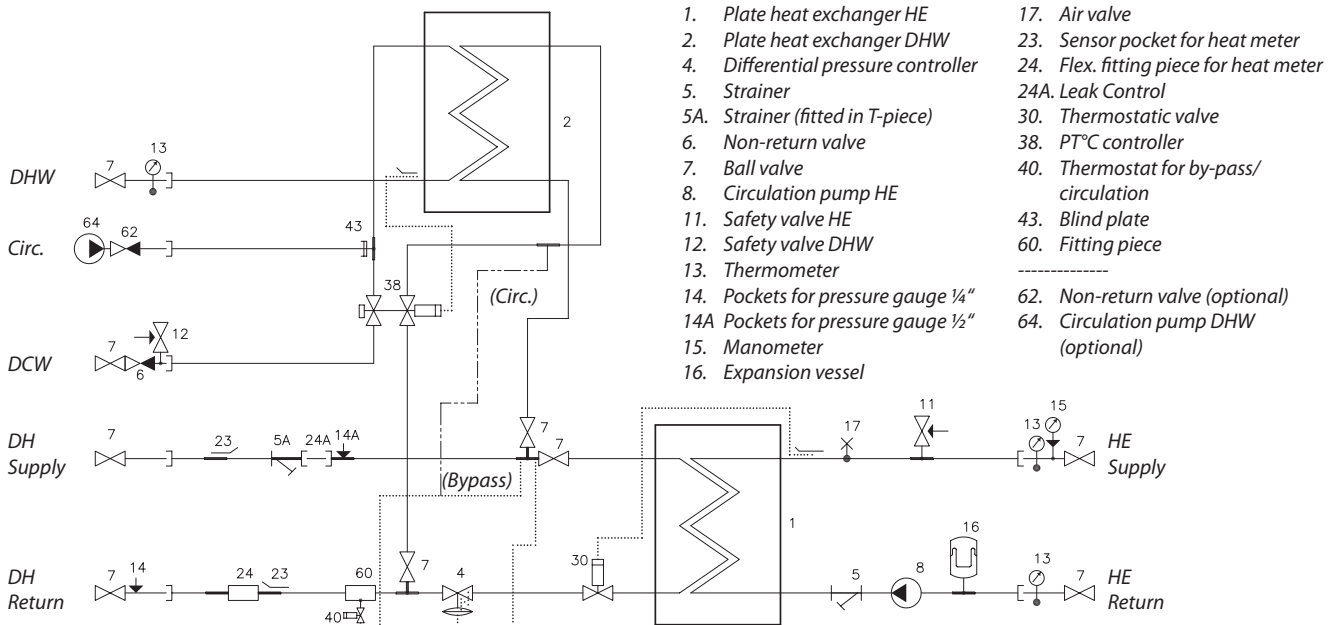
All pipes are made of stainless steel. The connections are made by nuts and gaskets. The Akva Lux VX can be delivered with white-lacquered steel cover.

FEATURES AND BENEFITS

- Substation for large one-family houses
- Indirect heating, DHW heating based on flow principle
- Thermostatic or electronic regulation of heating (HE) temperature
- Capacity: 19/31 kW heating, 41/53 kW domestic hot water
- Maximum hot-water comfort supply
- Minimum space required for installation
- Pipes and plate heat exchangers made of stainless steel
- Minimized risk of lime scale and bacteria formation

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Circuit diagram (example)



Technical parameters:

Nominal pressure: PN 16
 DH supply temperature: $T_{max} = 90^{\circ}C$
 DCW static pressure: $p_{min} = 2,5 \text{ bar}$
 Chloride compounds: Max. 300 mg/l

Weight incl. cover: 52 kg (incl. packing)

Cover: White-lacquered stainless steel

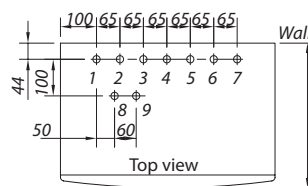
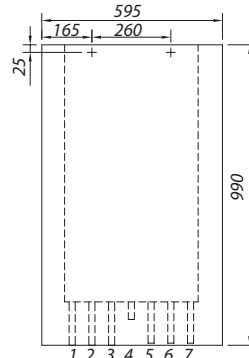
Electrical supply: 230 V AC

Dimensions (mm):

Without cover: H990 x W560 x D350
 With cover: H990 x W595 x D395

Connections sizes:

DH: G3/4" (ext. thread)
 DCW + DHW + HE: G3/4" (int. thread)
 Circulation: R1/2" (int. thread)



Connections:

1. District heating (DH) supply
2. District heating (DH) return
3. Domestic cold water (DCW)
4. Circulation
5. Domestic hot water (DHW)
6. Heating (HE) supply
7. Heating (HE) return
8. Floor heating (FH) supply (FH variant)
9. Floor heating (FH) return (FH variant)

Options:

- Flex. fitting piece for heat meter with 1" instead of 3/4"
- Additional fitting piece for heat meter in primary flow
- Electronic temperature controller
- Thermostat with safety monitor (STW) for floor heating (available only with electronic reg.)
- With white-lacquered steel sheet cover

DHW: Capacity examples, 10°C / 50°C

DHW Capacity kW	Plate heat exchanger	Supply flow Primary °C	Return flow Primary °C	D HW Tap load l/min	Pressure loss Primary *bar	Flow rate Primary l/h
41	XB06H-1 26	70	19	15	0,15	706
41	XB06H-1 26	80	16	15	0,10	562
41	XB06H-1 26	90	15	15	0,07	472
53	XB06H-1 40	70	18	19	0,19	882
53	XB06H-1 40	80	15	19	0,12	709
53	XB06H-1 40	90	14	19	0,09	601

Heating: Capacity examples

Heating Capacity kW	Plate heat exchanger	Heating circuit Primary	Heating circuit Secondary	Pressure loss Primary *bar	Flow rate Primary l/h
19	XB06H-1 26	70/40	35/60	0,35	547
19	XB06H-1 26	90/55	50/80	0,25	472
31	XB06H-1 40	70/40	35/60	0,54	889
31	XB06H-1 40	90/55	50/80	0,40	767
10	XB06L-1 24	70/31	30/35**	0,10	216
10	XB06L-1 24	90/31	30/35**	0,05	144

* Heat meter not incl.

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** Floor heating

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