

Akva Lux II TDP-F

Flat station for single-family, semi-detached and terraced houses as well as flats

District heating flat station for direct heating and instantaneous domestic hot water. Designed for wall mounting or built in wall mounting.

Application

The Akva Lux II TDP-F is a flat station featuring high performance and simple operation. The Akva Lux II TDP-F is especially suitable for two-pipe systems. The Akva Lux II TDP-F is developed for flat systems supplied from a secondary connected district heating system, a block heating system or a centrally located boiler system in a block of flats. The Akva Lux II TDP-F is available as built-in variant with a recess box or as wall-mounted variant and is prepared for implementation with the Danfoss Redan distribution systems for floor heating or radiator heating.

District heating (DH)

The flat station is prefabricated with interconnecting components such as differential pressure controller, strainer, thermostatic bypass FJVR, sensor pockets and fitting piece for insertion of a heat meter.

Heating (HE)

The heating side is designed for direct generation of heat in a two-pipe system. The differential pressure controller sets the optimum operating conditions for radiator thermostatic valves in order to enable individual temperature control in each room. In order to enable a time depending temperature control program the Akva Lux II TDP-F can be equipped

with zone valve and actuator. A return temperature limiter, type FJVR, for automatic regulation of the return temperature from the radiators or the floor heating system can be mounted (not part of the delivery).

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 self-acting controller with integrated differential pressure controller - the PTC2 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 bypass enables tapping of hot water without any delay, – ensuring the best possible efficiency and economy. The bypass can be mounted before or after heat meter. For registration of the cold water consumption the Akva Lux II TDP-F is equipped with a fitting piece for mounting of a cold water meter in the DCW inlet.

Domestic hot water circulation

The Akva Lux II TDP-F is equipped with bypass function as a standard, but it is prepared for DHW circulation. Equipment for DHW circulation is optional and must be ordered separately.

Construction

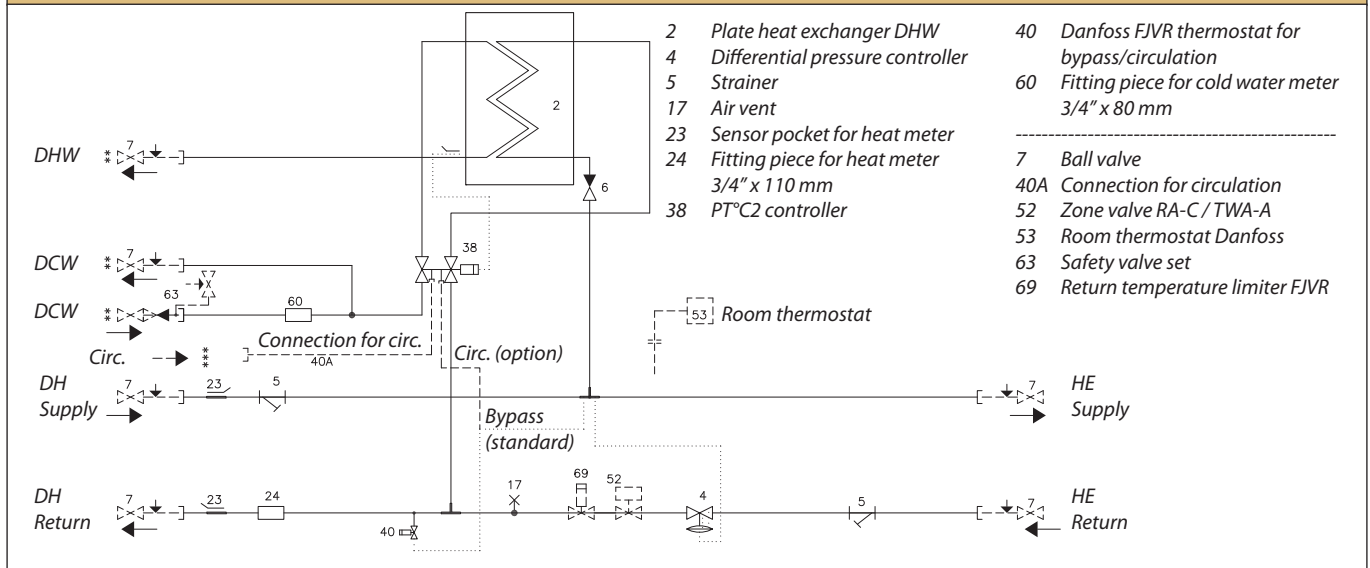
All pipes are made of stainless steel. The connections are made by nuts and gaskets. The Akva Lux II TDP-F can be delivered with white-lacquered steel cover for recess mounting or for wall mounting.

FEATURES AND BENEFITS

- Flat station for district heating
- Direct heating, DHW heating based on flow principle
- Capacity: 15 kW HE, 55 kW DHW
- Minimum space required for installation built-in or wall-mounted variant
- Service-friendly
- Pipes and plate heat exchanger made of stainless steel
- Minimized risk of lime scale and bacteria formation

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Circuit diagram - example



Technical parameters:

Nominal pressure: PN 10
 Max supply temperature: 90 °C
 DCW static pressure: $p_{min} = 2.0 \text{ bar}$
 Brazing material (HEX): Copper

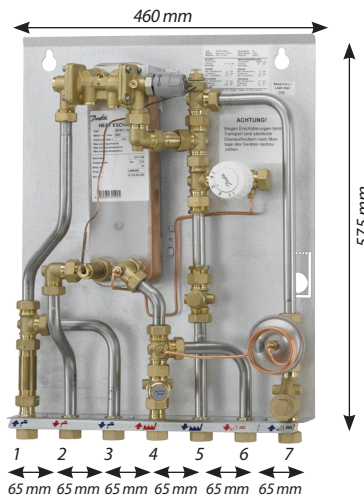
Weight excl. cover: 25 kg

Cover: White-lacquered steel

Electrical supply: 230 V AC

Dimensions (mm):
 Without cover: H 575 x W 460 x D 150

Connections size:
 DH, HE, DHW, DCW: G 3/4" (int. thread)
 Circ: R1/2" (ext. thread)



Connections:

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

Options:

- White cover for wall-mounted variant, closed or open at the bottom or white recess box for built-in variant
- Return temperature limiter Danfoss FJVR
- Room thermostat
- Water meter
- Ball valves
- Insulation sets
- Circulation sets

DHW: Capacity examples

DHW capacity kW	Plate heat exchanger	Temperature primary °C	Temperature secondary °C	Flow rate primary l/h	Flow rate secondary l/h	Pressure loss primary *kpa
35	XB 06H-1 26	65/18.8	10/45	650	860	19
45	XB 06H-1 26	65/20.2	10/45	860	1110	34
35	XB 06H-1 40	65/16.5	10/45	620	860	15
45	XB 06H-1 40	65/17.6	10/45	820	1110	25
55	XB 06H-1 40	65/18.6	10/45	1020	1350	39
35	XB 06H-1 26	65/22.0	10/50	700	750	22
45	XB 06H-1 26	65/23.7	10/50	940	970	40
35	XB 06H-1 40	65/19.3	10/50	660	750	16
45	XB 06H-1 40	65/20.6	10/50	870	970	29
55	XB 06H-1 40	65/21.8	10/50	1090	1180	45

* Heat meter not incl.

Heating: Capacity examples

Heating capacity	Heating circuit Δt °C	Total pressure loss primary *kpa	Flow rate primary l/h
2.5	15	26	143
5.0	15	28	287
10.0	15	36	573
2.5	20	26	108
5.0	20	27	215
10.0	20	29	430
15.0	20	41	645

Calculated at DHW capacity of 45 kW with heat exchanger XB06H-1 40 at a district heating supply temperature of 65 °C (DHW 10/45°C).

* Heat meter not incl.

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