



Akva Lux TDP-F

Direct flat station for one-family, semi-detached and terraced houses as well as flats

District heating flat station for direct heating and instantaneous domestic hot water.

Application

The Akva Lux TDP-F is a flat station featuring high performance and simple operation. The Akva Lux TDP-F is especially suitable for two-pipe systems. The Akva Lux 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 dwelling house.

District heating (DH)

The flat station is prefabricated with interconnecting components such as differential pressure control, fitting piece and sensor pockets for insertion of a heat meter and strainer. In addition several optional components can be supplied.

Heating (HE)

The heating side is designed for direct generation of heat in a 2-pipe system. The differential pressure control sets the optimum operating conditions for radiator thermostatic valves in order to en-

able individual temperature control in each room. In order to enable a time depending temperature control program a zone valve with actuator and a room thermostat can be included as an option.

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 DHW through the PT°C controller, thereby guaranteeing a constant DHW temperature at all times. The use of hydraulic regulation largely prevents the formation of lime scale and bacteria due to the fact, that the valve closes immediately when tapping is ended. Furthermore the combined control function ensures that variations in temperature in the DH network are reduced. A thermostatic by-pass enables tapping of hot water without any delay, ensuring the best possible efficiency and economy.

Construction

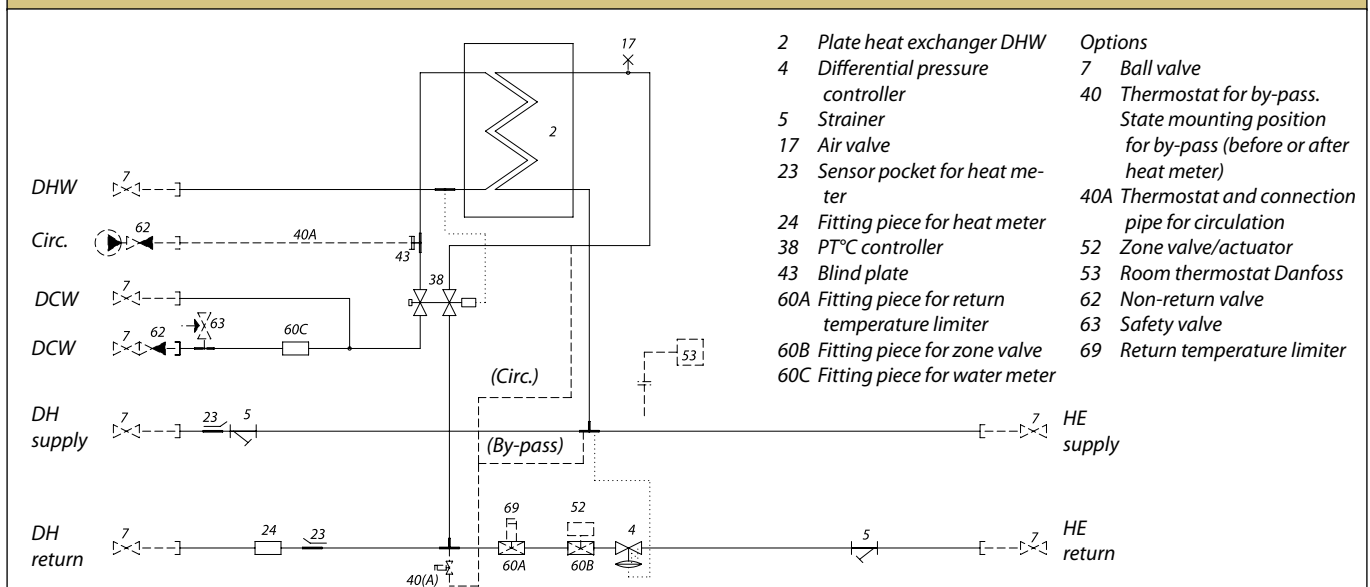
All pipes are made of stainless steel. The connections are made by nuts and gaskets. The Akva Lux TDP-F can be delivered with white-lacquered steel sheet cover.

FEATURES AND BENEFITS

- Flat station for district heating
- Direct heating, DHW heating based on flow principle
- Capacity: 15 kW heating, 35/50 kW domestic hot water
- Maximum hot water comfort supply
- Minimum space required for installation
- Pipes and plate heat exchanger made of stainless steel
- Minimized risk of lime scale and bacteria formation

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Circuit diagram - example



- 2 Plate heat exchanger DHW
 - 4 Differential pressure controller
 - 5 Strainer
 - 17 Air valve
 - 23 Sensor pocket for heat meter
 - 24 Fitting piece for heat meter
 - 38 PT°C controller
 - 43 Blind plate
 - 60A Fitting piece for return temperature limiter
 - 60B Fitting piece for zone valve
 - 60C Fitting piece for water meter
- Options**
- 7 Ball valve
 - 40 Thermostat for by-pass. State mounting position for by-pass (before or after heat meter)
 - 40A Thermostat and connection pipe for circulation
 - 52 Zone valve/actuator
 - 53 Room thermostat Danfoss
 - 62 Non-return valve
 - 63 Safety valve
 - 69 Return temperature limiter

Technical parameters:

Nominal pressure: PN 10
 DH supply temperature: $T_{max} = 90\text{ °C}$
 DCW static pressure: $p_{min} = 2,5\text{ bar}$
 Chloride compounds: Max. 300 mg/l

Weight incl. cover: 26,0 kg (incl. packing)

Cover: White-lacquered steel sheet

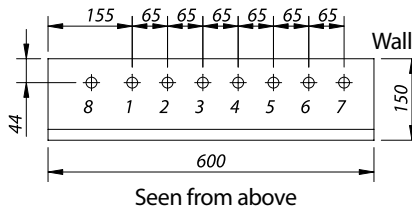
Dimensions (mm):

Without cover:
 H 640 x W 565 x D 110 (incl. ball valves)
 H 520 x W 565 x D 110 (excl. ball valves)

With cover:
 H 740 x W 600 x D 150

Connections:

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



Connections sizes:

DH + DCW + DHW: G 3/4" (int. thread)
 HE + optional circ.: G 3/4" (int. thread)

Options:

- Ball valves
- Thermostatic by-pass with return temperature limiter 10/50 °C for by-pass function (DH)
- Connection pipe for circ. with adjustable setting of DHW circ.
- Zone valve with actuator
- Return temperature limiter
- Connection rail with 7 connections G 3/4" (int. thread), insulated or non-insulated
- Flexible stainless steel connection pipes G 3/4" (int. thread) x G 3/4" (ext. thread)
- Room thermostat with day and/or week program
- Heat meter (DH supply)
- Cold water meter
- With white-lacquered stainless steel cover

DHW: Capacity examples, 10 °C/45 °C

DHW Capacity kW	Plate heat exchanger	Supply flow Primary °C	Return flow Primary °C	DHW Tap load l/min.	Pressure loss Primary *bar	Flow rate Primary l/h
35	CB20-26H	60	20	14,3	0,37	752
35	CB20-26H	70	17	14,3	0,22	569
35	CB20-26H	80	15	14,3	0,15	464
35	CB20-26H	90	14	14,3	0,11	396
50	CB20-40H	60	20	20,5	0,60	1076
50	CB20-40H	70	16	20,5	0,33	799
50	CB20-40H	80	14	20,5	0,22	652
50	CB20-40H	90	13	20,5	0,17	558

* Heat meter not incl.

Heating: Capacity examples

Heating Capacity kW	Heating circuit, Δt °C		Pressure loss Primary *bar	Flow rate primary l/h
	Primary	Secondary		
10	20	20	0,30	428
10	30	30	0,26	284
10	40	40	0,24	216
15	20	20	0,40	644
15	30	30	0,30	428
15	40	40	0,27	320

* Heat meter not incl. and differential pressure controller set on 0,2 bar working pressure

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