



## Akva Vita 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 Vita TDP-F is a flat station featuring high performance and simple operation. The Akva Vita TDP-F is especially suitable for two-pipe systems. The Akva Vita 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 enable 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 hydraulic regulation of domestic hot water through a proportional valve – the PM controller, thereby guaranteeing a constant domestic hot water 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. A thermostatic by-pass enables tapping of hot water without any delay, ensuring the best possible efficiency and economy.

#### Construction

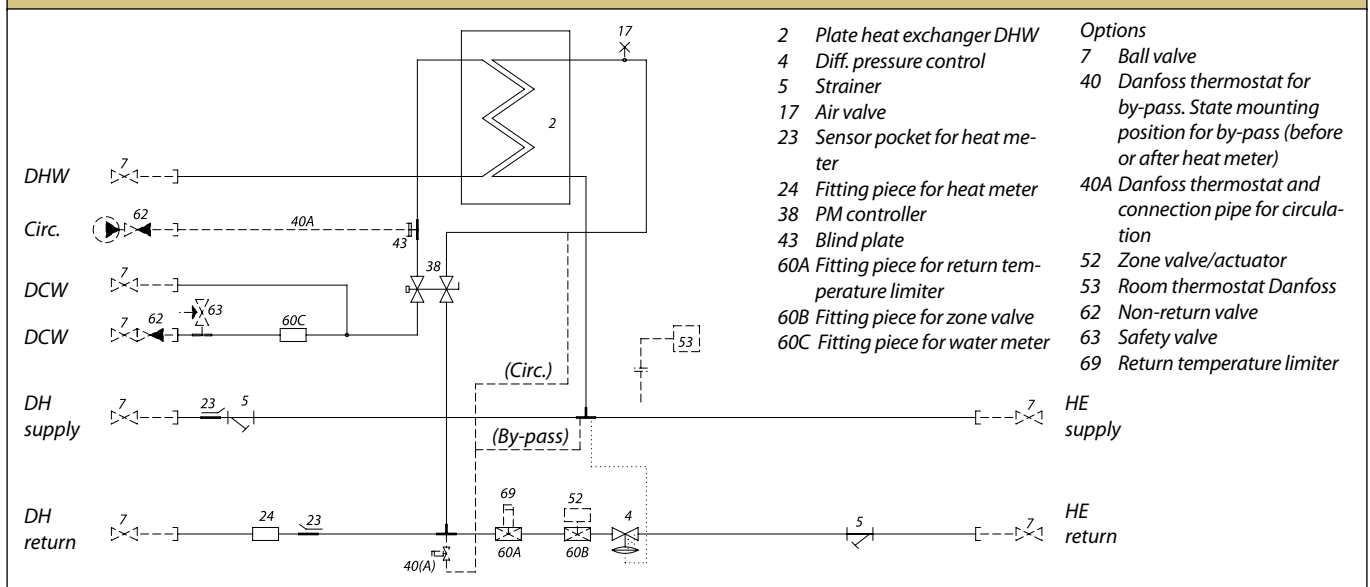
All pipes are made of stainless steel. The connections are made by nuts and gaskets. The Akva Vita TDP-F can be delivered with white-lacquered steel sheet cover.

### FEATURES AND BENEFITS

- Flat station for district heating
- Direct heating, DHW heating based on flow principle
- Capacity: 15 kW heating, 35 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

# Akva Vita TDP-F

## Circuit diagram - example



### 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

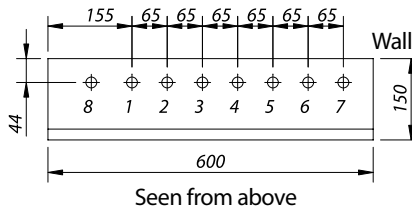
### Dimensions (mm):

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:

- District heating (DH) supply
- District heating (DH) return
- Domestic cold water (DCW) inlet
- Domestic cold water (DCW) outlet
- Domestic hot water (DHW)
- Heating (HE) supply
- Heating (HE) return
- 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	WP22-22	60	30	14,3	0,40	1064
35	WP22-22	70	25	14,3	0,18	662
35	WP22-22	80	21	14,3	0,10	511
35	WP22-22	90	19	14,3	0,07	421

\* Heat meter not incl.

### Heating: Capacity examples

Heating Capacity kW	Heating circuit, Δt		Pressure loss Primary *bar	Flow rate primary l/h
	Primary °C	Secondary °C		
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

**Danfoss Redan A/S** · District Heating Controls · Sindalsvej 33-35 · DK-8240 Risskov · Denmark  
 Phone: +45 87 43 89 43 · Fax: +45 87 43 89 44 · redan@danfoss.com · www.redan.danfoss.dk

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without consequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.