

TACOTHERM FRESH FEMTO

FRESH HOT WATER STATION



Connection-ready transfer station for heating drinking water

DESCRIPTION

The TacoTherm Fresh Femto is a highly efficient, thermally insulated and sound-proofed transfer station for supplying hot drinking water in a domestic setting. The station has an integrated proportional flow controller with connecting piping and a plate heat exchanger.

INSTALLATION POSITION

The station is intended for surface mounting in a domestic setting or in installation shafts or built-in cabinets.

OPERATION

Drinking water is heated to the required dispensing temperature in the TacoTherm Fresh Femto via the plate heat exchanger in accordance with the cyclical flow principle. The energy required to prepare the hot water is taken from the heating distribution network. The integrated pressure-controlled proportional flow controller regulates heating of the drinking water up to a maximum dispensing rate of 18 l/min.

A constant hot water temperature can be ensured by means of downstream NovaMix Value or Standard (optional) thermal mixing valves.

ADVANTAGES

Compact

- Comes equipped with all the necessary valves and components
- Space-saving because a drinking water storage tank is not required

Secure

- Protection against Legionella by avoiding water stagnation

Simple

- System is easy to install in refurbishments
- Station is completely pre-assembled and connection-ready

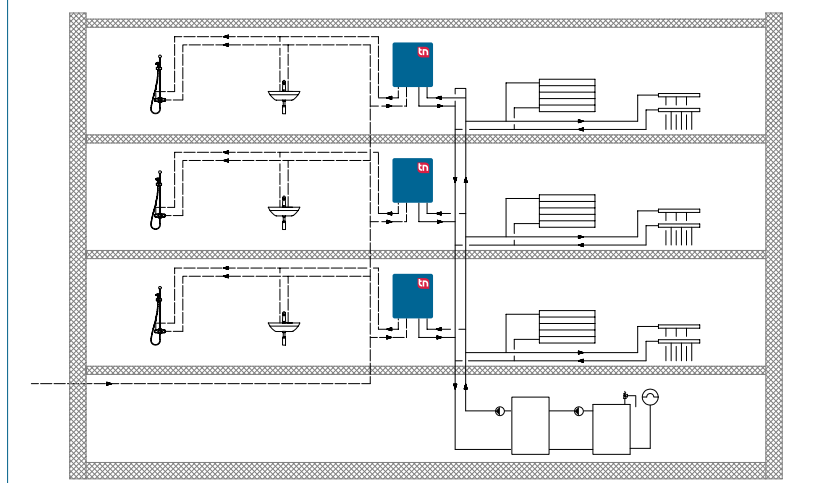
Efficient

- Reduced energy costs through regulation of the hot water temperature without auxiliary electric energy

BUILDING CATEGORIES

- Apartment blocks
- Single family dwellings
- Multiple dwelling units
- Office and commercial buildings

SYSTEM/BASIC DIAGRAM



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SPECIFICATION TEXT

See www.taconova.com

TECHNICAL DATA

General

- Weight: 11 kg
- Overall dimensions:
W 340 mm × H 540 mm × D 215 mm
- Dispensing range: 2.5 – 18 l/min
A pressure differential of 330 mbar must be available via the proportional flow controller on the primary side.
- Inner thread Rp (cylindrical) in accordance with ISO 7-1

Primary side

- Operating temperature $T_{0 \text{ max}}$: 95 °C
- Operating pressure $P_{0 \text{ max}}$: 3 bar
- Ball valves: DN 20, inner thread $\frac{3}{4}$ "
- DN18 pipes
- K_{VS} primary: 2,22

Secondary side

- Operating temperature $T_{0 \text{ max}}$: 95 °C
- Operating pressure $P_{0 \text{ max}}$: 10 bar
- DN20 ball valves, inner thread $\frac{3}{4}$ "
- DN18 pipes
- Opening flow: 2,3 l/min
- K_{VS} secondary: 1,56

Material

- Valve housing for controller: Brass
- Pipes : 1.4404
- Heat exchanger: 1.4401 approved for drinking water
- Heat exchanger solder: Copper 99.9 %
- Valves and screw connectors: Brass or plastic approved for drinking water
- Seals: AFM 34, flat sealing
- Carrier/hood: EPP
- Mounting material: Steel or plastic

Fluids

- Heating water
(VDI 2035; SWKI BT 102-01;
ÖNORM H 5195-1)
- Cold water according to DIN
1988200:2012-05

APPROVALS / CERTIFICATES

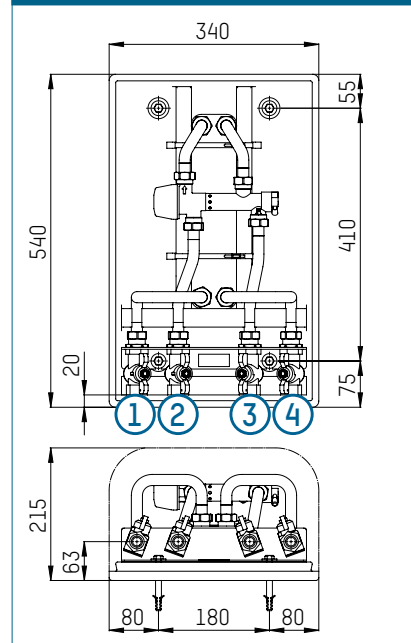
- Components in contact with potable water comply with UBA Evaluation Criteria 26/03/2018 and Directive (EU) 2015/1535

TYPE OVERVIEW

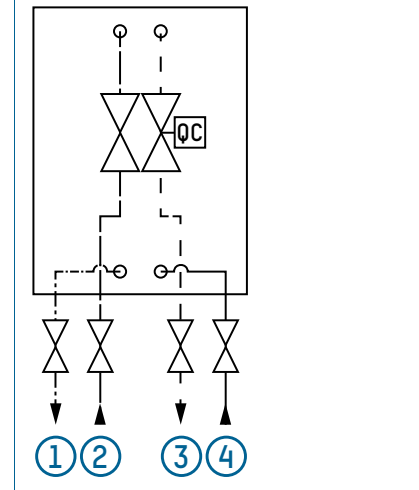
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Order no.	Rp	Dispensing range
272.0013.000	$\frac{3}{4}$ " internal thread	2,5 – 18 l/min

DIMENSIONAL DRAWING



HYDRAULIC DIAGRAM



- 1 Secondary hot water outlet
- 2 Secondary cold water inlet
- 3 Primary heating system return
- 4 Primary heating system flow

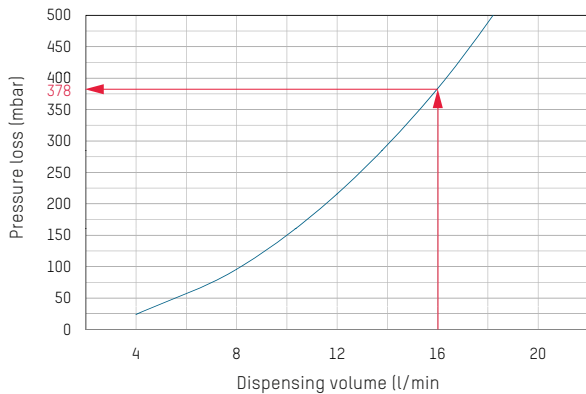
NOTE

REQUIREMENTS FOR FLOW MEDIA

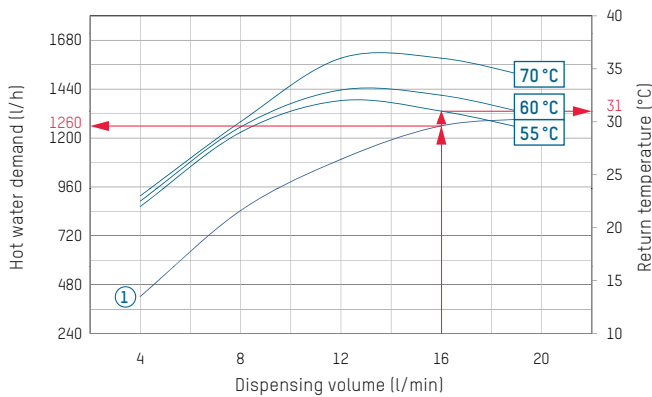
The stations heat interface units use a copper-soldered stainless steel plate heat exchanger as standard. It must be checked prior to use in the framework of system planning whether the issues of corrosion protection and scale formation have been sufficiently taken into account in accordance with DIN 1988200 and current drinking water analyses according to DIN EN 8065. See datasheet „Plate Heat Exchanger Requirements - Limit Values for Drinking Water Quality“.

FLOW AND PRESSURE LOSS DIAGRAMS

C) Secondary pressure loss

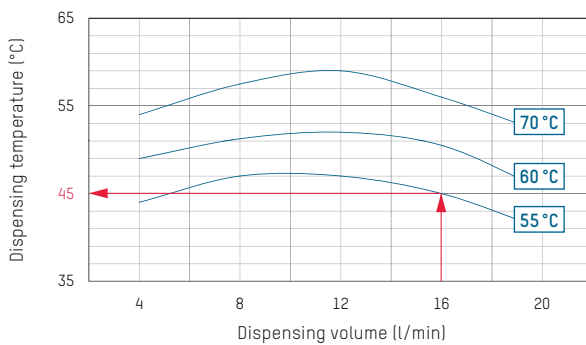


B) Hot water demand and return flow temperatures for dp 300 mbar and flow temperatures of 55°C / 60°C / 70°C



1 Hot water demand

A) Dispensing temperature °C for dp 300 mbar and flow temperatures of 55°C / 60°C / 70°C



EXAMPLE OF INTERPRETING THE FLOW RATE AND PRESSURE LOSS DIAGRAMS

<p>Given</p> <ul style="list-style-type: none"> Hot water dispensing volume 16 l/min Primary heating flow temperature: 55 °C Differential pressure 300 mbar <p>Sought</p> <ul style="list-style-type: none"> Hot water demand Primary heating return temperature 	<p>in °C</p> <ul style="list-style-type: none"> Secondary pressure loss in mbar <p>Approach</p> <ul style="list-style-type: none"> In Diagram A) a dispensing temperature of 45 °C can be read at the intersection point between the given hot water dispensing volume (16 l/min), the flow temperature (55 °C) and a differential pressure 	<p>(flow/return) of 300 mbar.</p> <ul style="list-style-type: none"> In Diagram B) consequently, a hot water demand of 1260 l/min as well as return temperature of 31 °C can be read. Diagram C) shows the system pressure loss on the secondary side.
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Subject to modification. 11/2018

CONTACT AND FURTHER INFORMATION **TACONOVA.COM**

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