TACOTHERM FRESH MEGA3 X (C/CL)

CENTRALISED HIU WITH HIGH-EFFICIENCY PUMPS

ADVANTAGES

Compact and versatile
- Models: with and without circulation pump, dual-zone return stratification
- Cascading possible

Secure
- Integration in building control system via optionally available eLink ModBus RTU interface
- Integrated safety subassembly and soft-close valves

Simple
- Valves and components are fully preassembled and ready for connection

Efficient
- Simple and fast commissioning

Centralised heat interface unit for hygienically heating drinking water in accordance with the continuous flow principle with innovative regulation technology

DESCRIPTION

The TacoTherm Fresh Mega3 X (C/CL) is a centralised heat interface unit used for on-demand preparation of domestic hot water in accordance with the continuous flow principle.
It retrieves the heat from the storage tank of an existing or new heating system, which uses solid-fuel boilers, heat pumps, solar systems, etc. as a heat source.
The station replaces the storage of hot drinking water and thus provides a high degree of protection against Legionella by avoiding water stagnation.

INSTALLATION POSITION

Vertical wall-mounting in the vicinity of the hot water storage tank or on the tank itself.

OPERATION

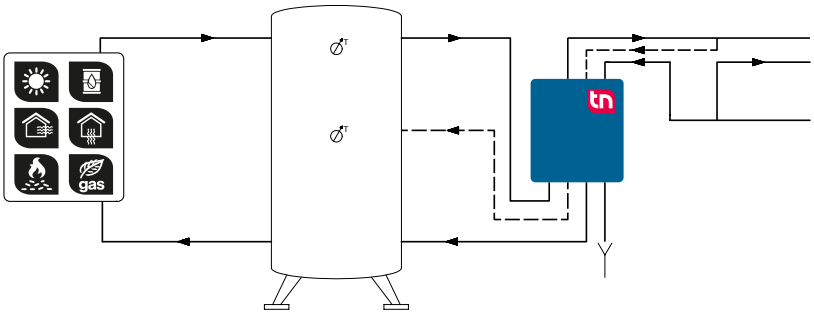
Drinking water is heated to the defined dispensing temperature in the TacoTherm Fresh Mega3 X (C/CL) in accordance with the continuous flow principle. The integrated heat exchanger is supplied with as little hot water from the storage tank as is required to maintain a constant dispensing temperature.

The latest pump and regulation technology is used. In recording the temperature difference and flow rate data, the electronic regulator simultaneously records and stores the quantity of heat consumed.
In addition to an additional circulation pump that can be installed, the TacoTherm Fresh Mega3 X (C/CL) can also be supplied with a switching valve for dual-zone return stratification.
The primary pump, circulation pump as well as load valve are controlled by the integrated regulator in accordance with specifications.

BUILDING CATEGORIES

- Apartment blocks
- Housing estates
- Multiple dwelling units
- Smaller public buildings
- Facilities with partial use – for example barracks, camping sites, etc.

SYSTEM/BASIC DIAGRAM



SPECIFICATION TEXT

See www.taconova.com

TECHNICAL DATA

General

- TacoTherm Fresh Mega3 X controller
- Weight (empty): 19.5 – 22 kg
- Overall dimensions (incl. hood): W 470 mm × H 685 mm × D 193 mm

Material

- Base plate: Galvanized sheet steel
- Rear panel and hood: EPP design insulation
- Pumps:
  - Primary: Cast steel
  - Secondary: PPS (plastic, approved for drinking water)
- Valve housing: Brass
- Pipes: DN 20 stainless steel 1.4404
- Plate heat exchanger:
  - Plates and connector pieces: Stainless steel 1.4401
  - Heat exchanger solder: 99.99 % copper (on request: stainless steel solder)
- Seals: AFM flush seal

Primary side

- Operating temperature $T_{0\,max}$: 95 °C
- Operating pressure $P_{0\,max}$: 10 bar
- Primary pump: Wilo ParaG 25-130/9-87/PWM1

Secondary side

- Operating temperature $T_{0\,max}$: 85 °C
- Operating pressure $P_{0\,max}$: 10 bar
- Safety valve (intrinsic safety): 10 bar
- Circulation pump: TacoFlow2 Pure C 15-40/130 C6

Electrical connection data

- Mains voltage: 230 VAC ± 10 %
- Mains frequency: 50...60 Hz
- Power consumption: max. 250 W
- 3.5 AT fuse
- eBus interface
- Protection type: IP 40

Flow media

- Heating water (VDI 2035; SWKI BT 102-01; ÖNORM H 5195-1)
- Cold water

APPROVALS / CERTIFICATES

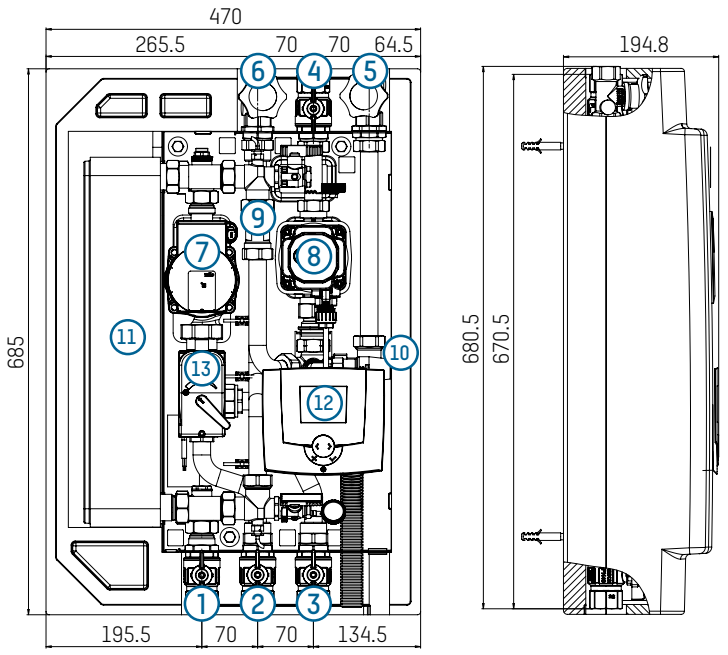
- Components in contact with potable water comply with UBA Evaluation Criteria 26/03/2018 and Directive (EU) 2015/1535
- SVGW: 1808-6783

TYPE OVERVIEW

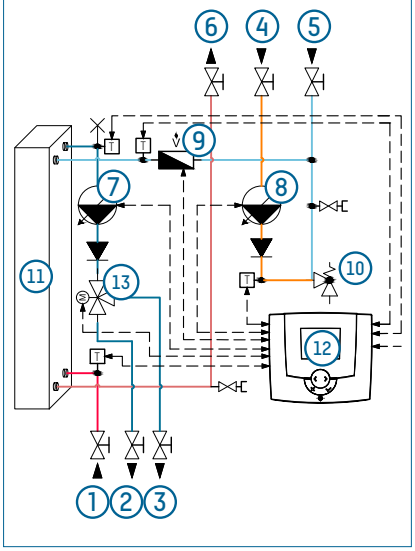
TacoTherm Fresh Mega3 X | Centralised heat interface unit

Order no.	Rp ¾"	Rp 1"	Version	Version
272.5076.000	⑤ ⑥	① ②	X	Without circulating pump, without dual-zone return stratification
273.5276.000	⑤ ⑥	① ③ ④	XC	With circulating pump, without dual-zone return stratification
273.5279.000	⑤ ⑥	①–④	XCL	With circulating pump and dual-zone return stratification

DIMENSIONAL DRAWING



PRODUCT DIAGRAM



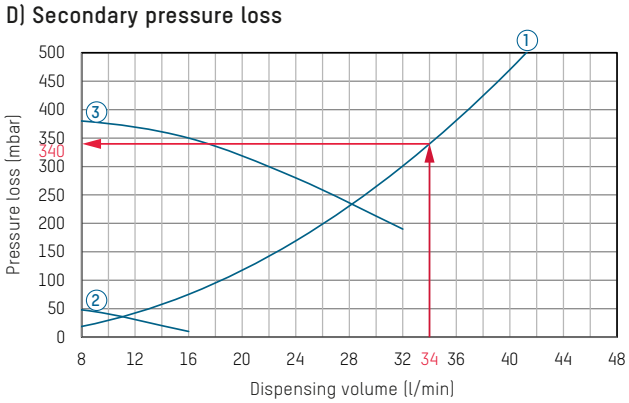
1 Primary hot water flow
2 Primary hot water return 1 (integration of storage tank in center in CL models)
3 Primary hot water return 2 (integration of storage tank below)
4 Circulation (C/CL version)
5 Cold water connection (¾")
6 Hot water connection
7 Primary pump
8 Circulation pump (C/CL version)
9 Flow rate sensor
10 Safety valve
11 Heat exchanger
12 Regulator
13 Switching valve (CL version)

NOTE

Recommended ΔTmax (T_{VL},prim – TWW): 15 K
When designing the system, appropriate measures must be taken to ensure compliance with this value.

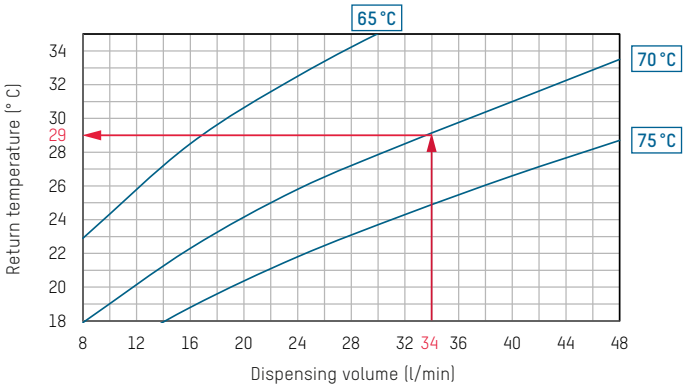
FLOW AND PRESSURE LOSS DIAGRAMS COLD WATER HEATING AT 50K (10 ... 60 °C)

D) Secondary pressure loss

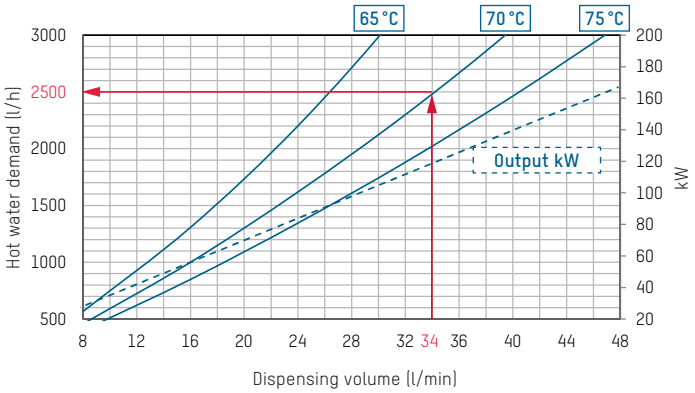


1 Pressure loss for cold water and circulation (secondary)
2 Circulation pump min
3 Circulation pump max
4 Primary pressure loss
5 Pump characteristic primary side

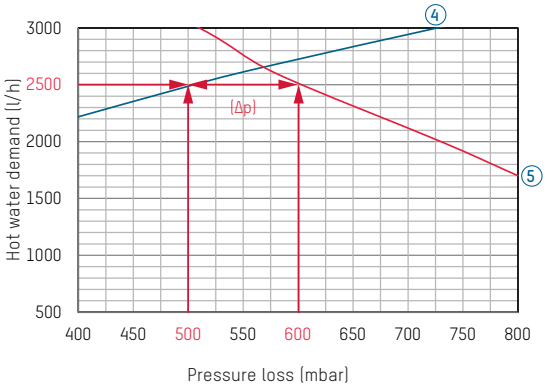
C) Return temperatures



A) Cold water heating at 50K



B) Residual head



EXAMPLE FOR INTERPRETING THE FLOW RATE AND PRESSURE LOSS DIAGRAMS

Given

- Hot water dispensing volume: 34 l/min
- Primary heating flow temperature: 70 °C

Sought

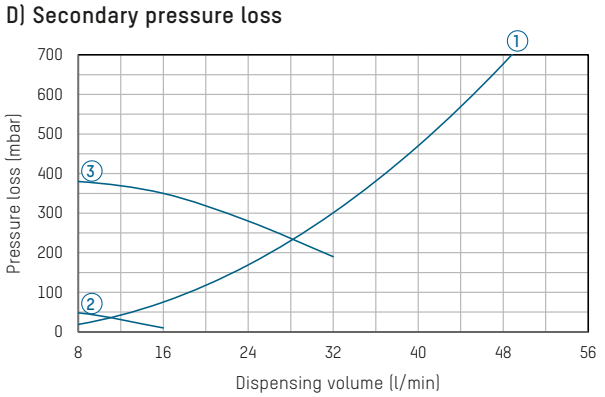
- Hot water demand (l/h)
- Primary heating return temperature in °C
- Secondary pressure loss in mbar
- Primary pressure loss in mbar

Approach

- In Diagram A) the hot water demand at the intersection point of the dispensing volume of 34 l/min and primary flow temperature of 70 °C is 2500 l/h.
- In Diagram B) the primary pressure loss for a hot water demand of 2500 l/h is 500 mbar. The pump delivery head is 600 mbar, discounting the pressure loss this gives rise to a residual pump head of 100 mbar (Δp).
- In Diagram C) the primary return temperature for a given dispensing volume of 34 l/min and the selected flow temperature of 70 °C is 29 °C.
- In Diagram D) the secondary pressure loss for the given data is 340 mbar.

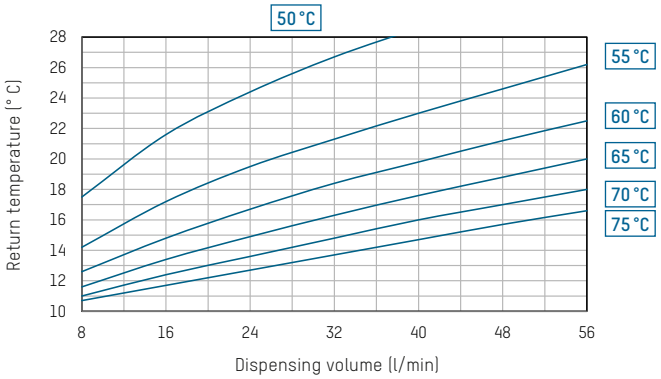
FLOW AND PRESSURE LOSS DIAGRAMS COLD WATER HEATING AT 35K (10 ... 45 °C)

D) Secondary pressure loss

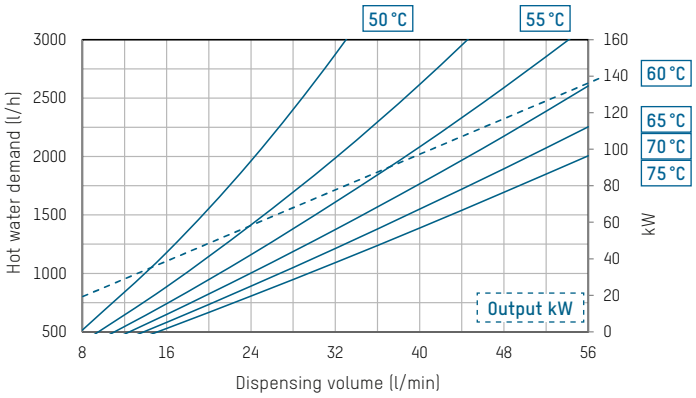


1 Pressure loss for cold water and circulation (secondary)
2 Circulation pump min
3 Circulation pump max
4 Primary pressure loss
5 Pump characteristic primary side

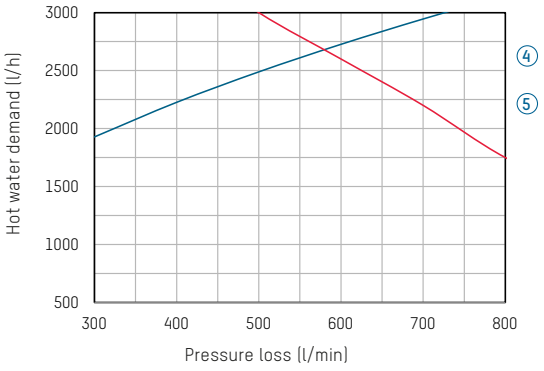
C) Return temperatures



A) Cold water heating at 35K



B) Residual head | Primary pressure loss



NOTE

REQUIREMENTS FOR FLOW MEDIA

The 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“.

ACCESSORIES

eLink

COMPONENTS FOR REMOTE ACCESS

Order no.	Rp	Description
296.7027.000		eLink ModBus RTU interface
296.7028.000		eLink RC7020 interface

ACCESSORIES FOR CASCADES

Order no.	Rp	Description
295.0500.000		Basic construction kit
295.0501.000		Extension kit
296.7024.000	1 ¼"	External storage restratification
296.7025.000	2"	External storage restratification
296.0502.000		External circulation

SAMPLE ORDER

CASCADE MODULE

With integrated circulation and storage stratification

Order no.	2-way cascade	3-way cascade	4-way cascade	5-way cascade
272.5076.000	1	2	3	4
273.5279.000	1	1	1	1
295.0500.000	1	1	1*	1*
295.0501.000	0	1	2*	3*

With external circulation and external storage stratification

Order no.	2-way cascade	3-way cascade	4-way cascade	5-way cascade
272.5076.000	2	3	4	5
295.0500.000	1	1	1*	1*
295.0501.000	0	1	2*	3*
296.7024.000	1*	0	0	0
296.7025.000	0	1	1	1
296.0502.000	1	1	1	1

* Attention: Note pressure losses in the cascade pipe sets and diverting valves.

CASCADE MODULE WITH TACOTHERM CIRC MEGA3 X CIRCULATION STATION

Cascade circuit with circulation module

Order no.	2-way cascade	3-way cascade	4-way cascade	5-way cascade
272.5076.000	2	3	4	5
272.0216.000	1	1	1	1
295.0500.000	1	1	1	1
295.0502.000	1	1	1	1
295.0501.000	0	1	2	3

Subject to modification. 10/2026

CONTACT AND FURTHER INFORMATION TACONOVA.COM

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