Austria Email

BUFFER- & COMBI STORAGE TANK

Fresh water combination (4 bar)

ECO FRESH-E (EZ)

800/1.000 LITRE

- **Version with and without circulation pump**
- **A very energy-saving unit thanks to the lowest possible energy consumption and the greatest possible temperature spread**

Misprints and technical changes reserved!

TECHNICAL DATA

GENERAL

Max. Operating temperature - primary circuit	85 °C
Max. Operating pressure - primary circuit	10 bar
Max. operating temperature Max. operating temperature - secondary circuit	95 °C
Max. operating pressure - secondary circuit	9 bar
Safety valve, built-in for unit protection	10 bar
Weight without water content	22 kg

MATERIAL

Rohre	DN 20, stainless steel 1.4404
Heat exchanger	1.4401 stainless steel
Heat exchanger solder	copper 99,9 %
Insulation	EPP
Fittings	Brass

PUMP

Primary side	Wilo ParaG 25-130/9-87/PWM1
Circulation	TacoFlow 2 Pure C 15-40/130 C6

ELECTRICAL CONNECTION DATA

Mains voltage	230 VAC + 10 %
Mains frequency	50...60 H
Power consumption	max. 250 W
Internal fuse	2A träge 250 V
Protection class	IP40

FLOW MEDIA

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

TECHNISCHE DATEN FRISCHWASSERSTATION

2 JAHRE GARANTIE

Type	Article.no.	Designation	Dimensions in mm		
			H	B	T
ECO FRESH E	394120	ECO FRESH E fresh water station; without circulation	685	470	193,2
ECO FRESH EZ	394130	ECO FRESH EZ fresh water station; with circulation	685	470	193,2

Fortsetzung auf nächster Seite →

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HOW IT WORKS
FRESH WATER STATION

In the ECO FRESH-E (EZ), the drinking water is heated to the specified tapping temperature using the continuous flow principle. In the process, the integrated heat exchanger is always supplied with as little heating water from the buffer tank as is required to maintain a constant tapping temperature. Due to the special heat exchanger design, a low return temperature of the heating water to the buffer tank can be expected. By recording the temperature difference and volume flow data, the electronic control simultaneously determines and stores the consumed heat quantity. The ECO FRESH EZ fresh water station is equipped with a circulation connection incl. pump. This pump is controlled by the integrated control system using its own programme. The ECO FRESH-E fresh water station is equipped without a circulation connection.

BUFFER CYLINDER PZ/PZR

The buffer storage tank used comes from the proven PZ/PZR product line, which is suitable for all hot water central heating systems, regardless of whether solid fuel or oil-fired boilers, heat pumps, solar systems, gas or electric instantaneous water heaters.

For perfect corrosion protection, the buffer tanks are equipped with a stove-enamelled powder coating on the outside.

TECHNICAL DETAILS

- Operating pressure: 4 bar in the buffer, 10 bar in the pipe register
- Capacity 800 and 1,000 litres
- 100 mm ECO SKIN insulation
- Large-surface pipe register for PZR type
- 2 sensor channels for variable positioning of the sensors with PZ/PZR type
- Powder coating on the outside (colour deviation

ACCESSORIES

- Motbus interface (ECO FRESH) - The interface ZIF 180 processes the bidirectional data exchange between the controller of the ECO FRESH fresh water station and a building management system
- Cascade basic kit for FRIWA ECO FRESH - only possible for wall mounting
- Cascade extension kit for FRIWA ECO FRESH - only possible with wall mounting

TECHNICAL DATA FRESH WATER COMBINATION

Type	Article.no.	Dimensions in mm											Heat exch-anger area in m²	Tilt dimen-sion in mm	Heat exchan-ger content in l	Weight in kg
		H	H with insula-tion	Dø	Dø with insula-tion	A	B	C	E	F	G	J				
ECO FRESH EZ 800 PZ	A 347 35	1700	1785	790	990	260	365	630	1030	1430	-	855	-	1750	-	105
ECO FRESH EZ 800 PZR	A 347 36	1700	1785	790	990	260	365	630	1030	1430	845	855	2,4	1750	15,6	142
ECO FRESH EZ 1000 PZ	A 346 66	2050	2085	790	990	310	415	745	1250	1710	-	1030	-	2100	-	122
ECO FRESH EZ 1000 PZR	A 346 67	2050	2085	790	990	310	415	745	1250	1710	1030	1030	3,0	2100	19,2	162
ECO FRESH E 800 PZ	A 347 33	1700	1785	790	990	260	365	630	1030	1430	-	855	-	1750	-	105
ECO FRESH E 800 PZR	A 347 34	1700	1785	790	990	260	365	630	1030	1430	845	855	2,4	1750	15,6	142
ECO FRESH E 1000 PZ	A 346 64	2050	2085	790	990	310	415	745	1250	1710	-	1030	-	2100	-	122
ECO FRESH E 1000 PZR	A 346 65	2050	2085	790	990	310	415	745	1250	1710	1030	1030	3,0	2100	19,2	162

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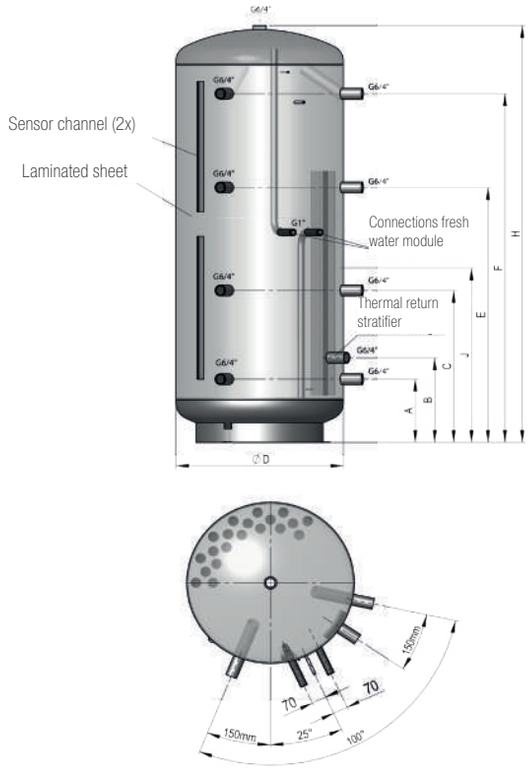
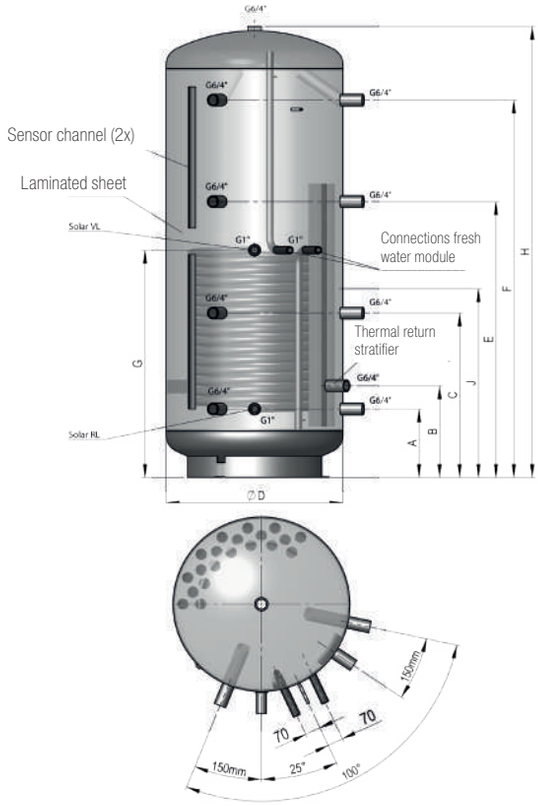
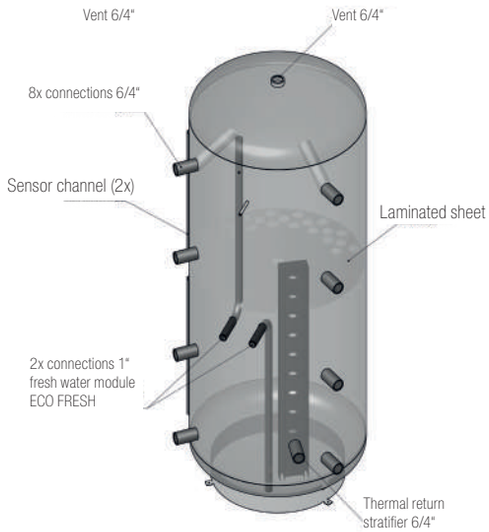
ECO FRESH PZ



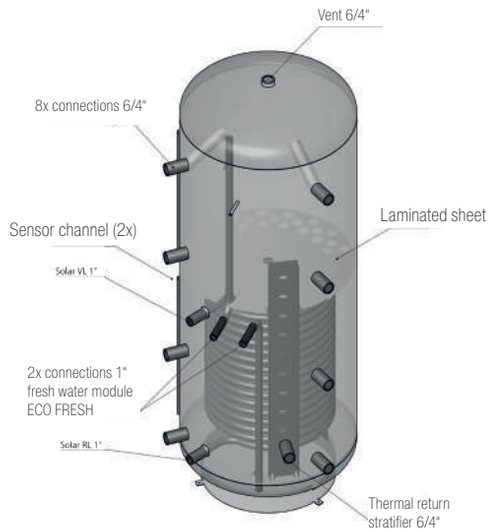
ECO FRESH PZR



ECO FRESH 800-1000 PZ



ECO FRESH 800-1000 PZR



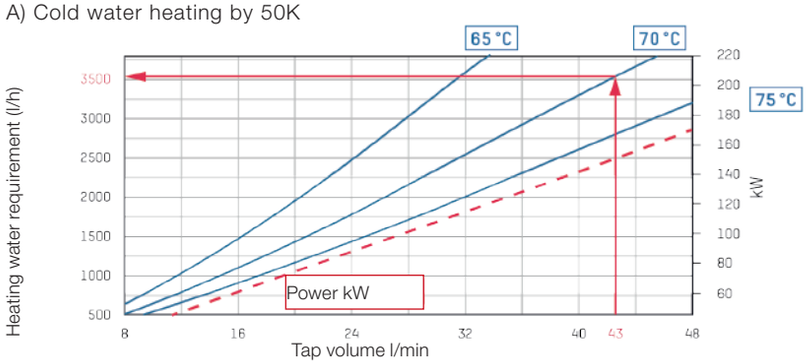
ECO DESIGN-LABELING

5 YEARS WARRANTY ON THE INNER BOILER

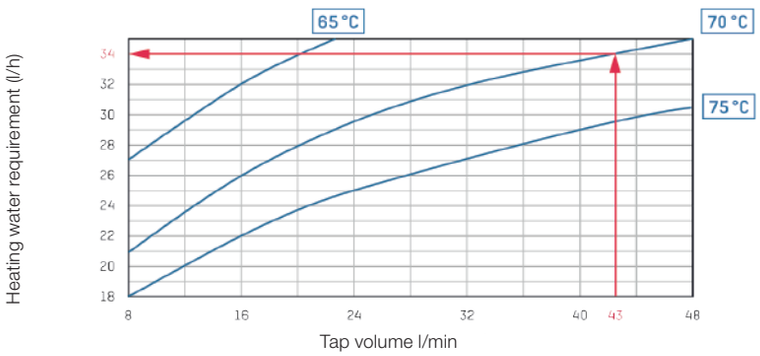
Type	Heat loss ccording to EN 12897		Tapping profile	Energy efficiency class
	in kWh/24h	S in watts		
PZ 800	2,59	107,9	3XL	C
PZR 800	2,59	107,9	3XL	C
PZ 1000	3,02	125,8	4XL	C
PZR 1000	3,02	125,8	4XL	C

Flow and pressure loss diagrams
Cold water heating by 50K (10...60°C)

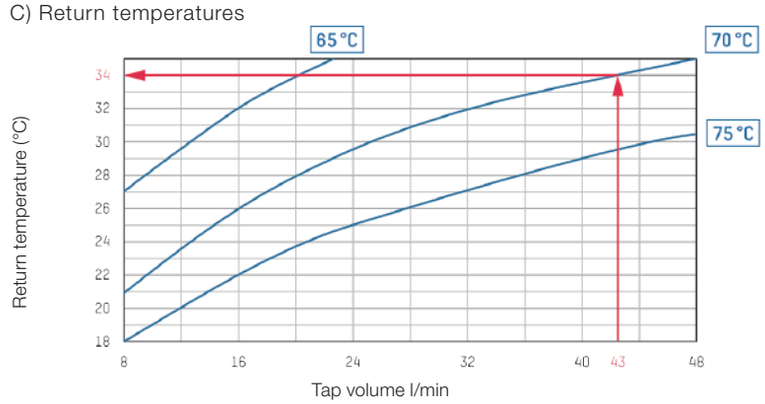
A) Cold water heating by 50K



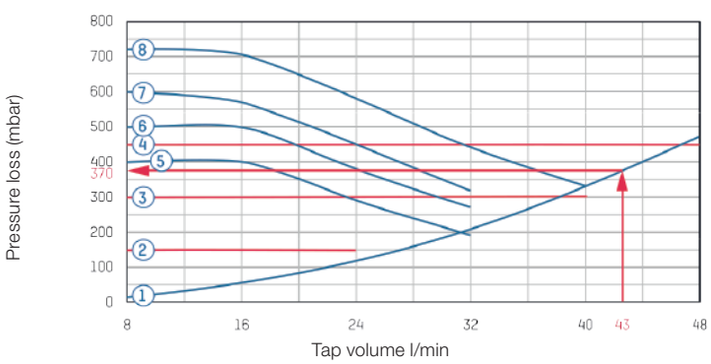
B) Residual head / pressure loss primary



C) Return temperatures



D) Pressure loss secondary



EXAMPLE FOR THE INTERPRETATION OF THE FLOW AND PRESSURE DROP DIAGRAMS

GIVEN

- Hot water tap flow rate: 43 l/min
- Heating flow temperature primary: 70 °C

SEARCHED

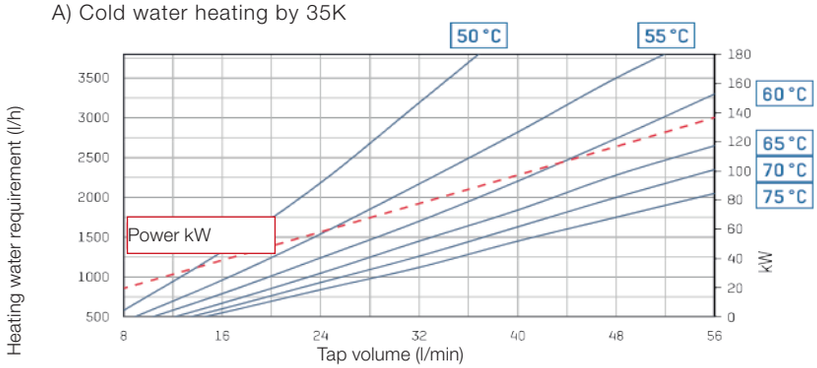
- Heating water demand in l/h
- Heating return temperature primary in °C
- Secondary pressure loss in mbar
- Primary pressure loss in mbar

SOLUTION

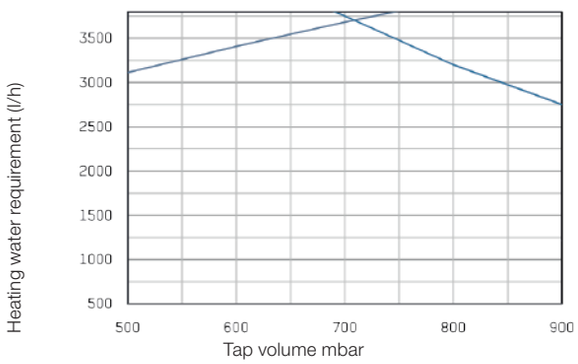
- In diagram A), the heating water requirement of 3,500 l/h is read at the intersection of the tap flow rate of 43 l/min and the primary flow temperature of 70 °C.
- In diagram B), a primary pressure loss of 640 mbar is read off at a heating water requirement of 3,500 l/h. The delivery head of the pump is 740 mbar, minus the pressure loss this results in a residual delivery head of the pump of 100 mba (Δp).
- In diagram C), the primary return temperature of 34 °C is read off at the given tap flow rate of 43 l/min and the selected flow temperature of 70 °C.
- In diagram D), the secondary pressure loss is read off at 370 mbar with the given data.

Misprints and technical changes reserved!

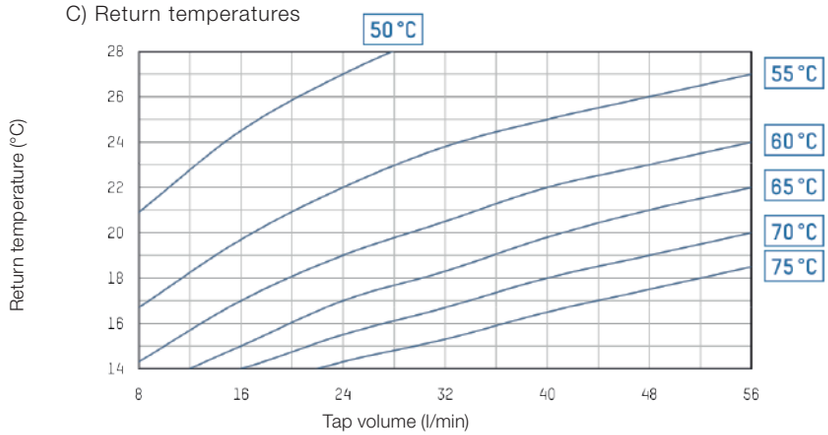
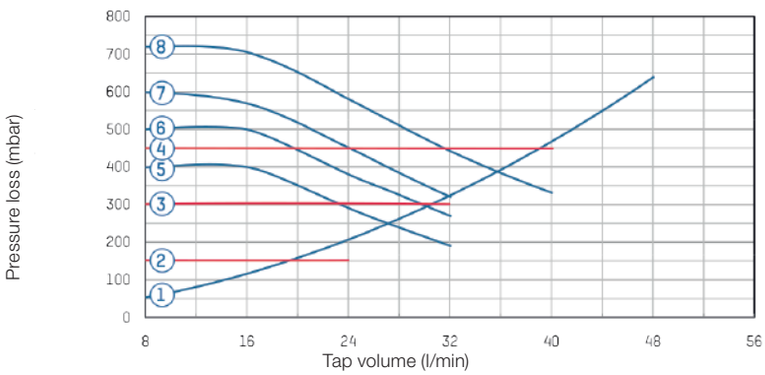
A) Cold water heating by 35K



B) Residual head / pressure loss primary



C) Return temperatures



D) Pressure loss secondary