

FRESH WATER STATIONS



CS FRESH Water Station

Fresh water station designed to supply instantaneous hot water through a plate heat exchanger with electronic temperature control, supplying hot water of the desired temperature at any flow. The flowrate, temperature and output are displayed on the integrated FWC3 controller. Domestic hot water passing through the fresh water station is heated from heating water in a thermal store that gets heated by a solar thermal system, heat pump or a wood-, pellet- or biomass boiler etc. It can be fitted with a DHW recirculation pump as an option.

Models

- CODE 9717 – incl. DHW recirculation
- CODE 9913 – no DHW recirculation

Technical Data

FLOW RATE	2 – 40 l/min
MAX. PERMISSIBLE PRESSURE	6 bar
WORKING TEMPERATURE	2 ÷ 95 °C
DHW PRESSURE DROP at 40 l/min. flow rate	0.5 bar
VOLTAGE	230 V 50 Hz
MAX. POWER INPUT	200 W
CONNECTION POINTS	3/4" M
DIMENSIONS	398 × 500 × 207 mm

Tankless water heating eliminates formation of Legionella bacteria and minimizes any heat loss.

Components



- **Plate heat exchanger** made of AISI 316 stainless steel. Thanks to a large heat transfer surface, a large amount of heat can be transferred. The heat exchanger can be dismantled easily for servicing or cleaning through the opening in the insulation on the right-hand side.
- Primary circuit **circulation pump** with special electronics that controls its speed, from the min. 12% speed to the max. selected speed, ensuring the desired temperature to be maintained (e.g. 45°C).
- **Momentary flow rate** is measured by the VFS digital flowmeter, and the pump speed is adjusted by the controller so that hot water of the desired temperature can be supplied by the fresh water station under any flow rate.

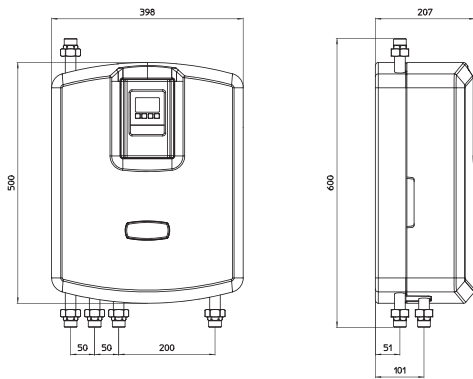
- **FWC3 Controller**
 - Clear graphic and text information
 - Simple display of measured values
 - Monitoring and analysis of system behaviour
 - Vast menu with interactive descriptions
 - Part of menu can be locked
 - Special functions for limiting heat loss through DHW recirculation
- Connection pipes
- Metal mounting plate
- Thermoinsulating case
- Recirculation pump (option)

TECHNICAL DATA FOR FWC3 CONTROLLER

CONSUMPTION	2 VA
SWITCHING OUTPUT	
ELECTRONIC RELAY R1	min. 20 W, max. 120 W for AC3
MECHANICAL RELAY R2	max. 460 W for C1 / 185 W for AC3
IP RATING	IP40
PROTECTION CLASS	II
SENSOR INPUTS	3x Pt1000, 1x flowmeter with a PT1000 sensor
DISPLAY	fully graphic, 128 × 64 dots

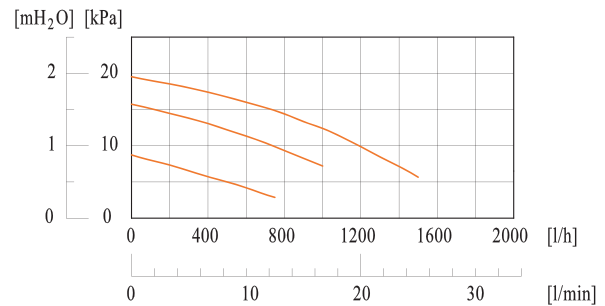
The Fresh Water Station can be installed directly on a tank or a nearby wall. The installation is quick and simple.

Dimensions

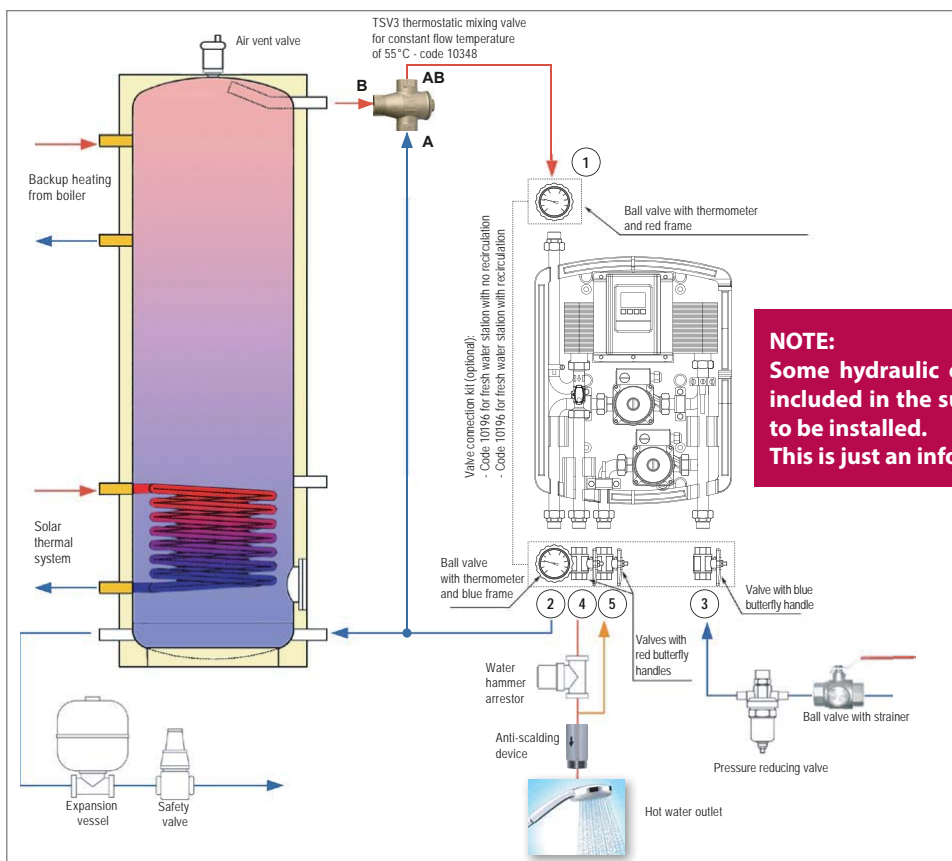


Pressure Drop Chart

- for optional recirculation pump



Connection Diagram



① Primary circuit inlet

The temperature into the storage tank must be at least by 5K higher than the desired DHW temperature. Higher temperature difference will allow to extend the delivery time of hot water. Do not let the tank flow temperature exceed 70°C (at the inlet into a pump station from a thermal store or from a thermostatic valve) in order to avoid limescale formation on the secondary side of the plate exchanger, or install a thermostatic valve with a max. flow temperature up to 70°C (recommended TSV3B 55°C – code 10348) if necessary.

② Primary circuit outlet

Due to the large plate heat exchanger and electronic pump speed control, the returning water is of low temperature. That increases the efficiency of the solar thermal system and the COP of the heat pump used. This all brings also bigger volumes of hot water available.

③ Secondary circuit inlet - cold water

④ Secondary circuit outlet - hot water

⑤ Recirculation (model code 9717 only)

