

SONNENKRAFT FWM30I-CU/VA-C2-4 FRESH WATER MODULE CASCADE



EASY

Small and light, convenient for transport to heating room. Easy extension of cascade is possible in case of increased hot water demand.

EFFICIENT

Precise sizing to real hot water demand, intelligent self-learning circulation pump and highly efficient pump with up to 80% less energy demand than standard pumps.

EXTRA

Secure hot water supply even during maintenance.

FWM30I-CU/VA-C2-4

The new FWMi-Cascade allows for parallel installation of up to 4 FWM30i modules. It is the optimum solution for secure production of hygienic, fresh hot water on demand for all middle to large scaled projects up to ~120 l/min delivery rate. Based on the size of the hot water circulating system a circulation pump can be connected to each module. A complete variety of mounting options allows for tank, wall or mixed tank/wall installation.

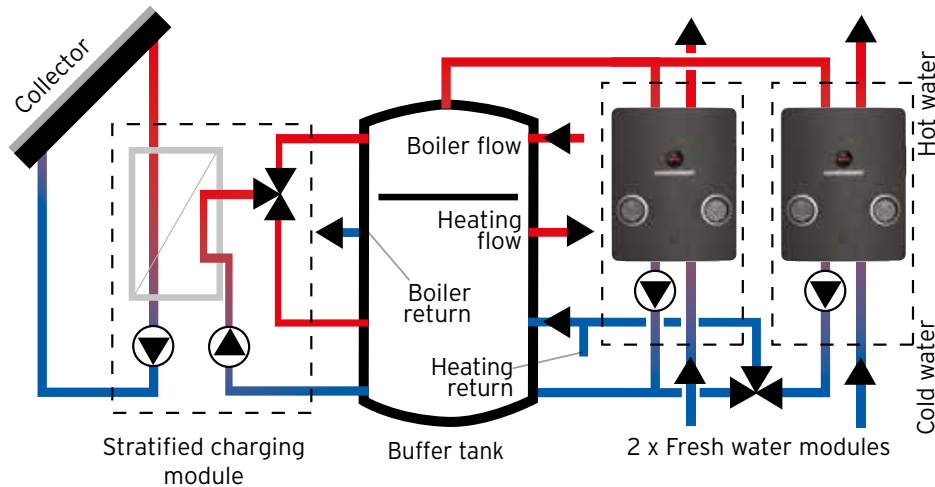
WHAT IT DOES

The FWMi cascade uses stored solar energy from the tank to supply hygienic, freshly prepared hot water whenever it is needed and in the exact quantity demanded. Additional modules (up to a total of 4) are engaged via motor valves according to the current hot water demand, up to a maximum of 120 l/min hot water at a temperature of 65°C. Circulation systems are charged by the intelligent and self learning circulation pump(s) from which one to four can be connected to the FWMi cascade.

HOW IT WORKS

An electronic sensor measures the flow rate and the temperature in the hot fresh-water pipe. A speed-controlled high efficiency pump regulates the flow of hot water from the storage tank accordingly, assuring a defined temperature of the hot tap water. At increased demand, up to 4 fresh water modules can run parallel. Modules with a circulation pump run continuously when the circulation is in operation and all modules run time balanced to assure a long life time of each module.

A diverter valve at the primary side assures a stratified return flow to the buffer tank when a circulation pump is in operation.



FITS WITH THE FOLLOWING TANKS:

PSR-E



PSC-E



YOUR BENEFITS AS AN INSTALLER



EASY

The FWMi is small and light, easing transport into the heating room, and allowing for tank, wall or mixed tank/wall installation.

EFFICIENT

Precise sizing according to the actual hot water demand avoids (in comparison to large single modules) oversizing and high return flow temperatures to the buffer tank.

EXTRA

Special FWMi-VA modules with stainless steel plate heat exchangers and VA brazing for very harsh water qualities prevents problems with lime and corrosion.

YOUR BENEFITS AS A CUSTOMER



EASY

A possible increase in hot water demand could easily be covered by extending the cascade at any later moment.

EFFICIENT

The number of operating FWMi modules is adjusted to the demand, and their high efficiency pumps reduce the operating energy demand by up to 80% compared to standard pumps.

EXTRA

The FWMi-Cascade assures a secure production of hygienic, fresh hot water, even during maintenance, since the remaining modules keep operating when one is taken out of service.

SECURITY OF SUPPLY

FWMi cascade offers a reliable hot water production for large sized systems with high hot water consumption.

- Alternating operation (balanced running times) of all modules reduces operating time of each single module and thus assures long life time of the complete system
- Remaining modules keep operating and delivering hot water even when one is out of service due to maintenance.
- A precise sizing up to the actual hot water demand avoids damaging lime and corrosion.

OUTSTANDING EFFICIENCY

The efficiency of the FWMi cascade helps keep the cost of hot water production as low as possible.

- Contrary to a large single module the FWMi Cascade assures an efficient sizing which is perfectly adapted to the real hot water demand
- Very high efficiency at any time - only as many modules are in operation as the actual hot water demand requires
- The high efficiency pumps save up to 80% energy compared to standard pumps.
- The intelligent circulation pump registers the household's hot-water consumption pattern, adjusting the required recirculation accordingly.
- A diverter valve at the primary side assures a stratified return flow to the buffer tank when a circulation pump is operating.



TECHNICAL SPECIFICATIONS

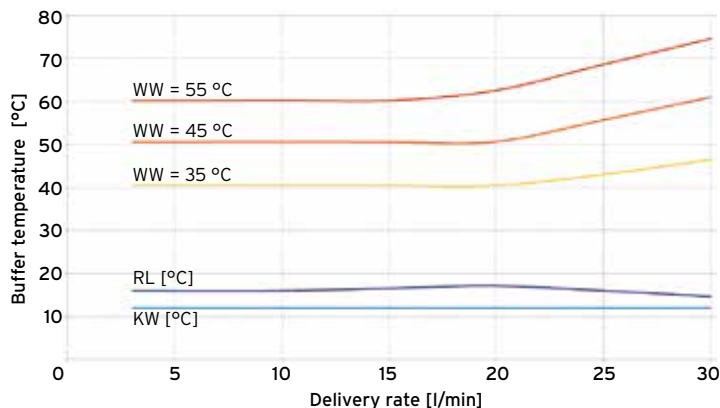
TECHNICAL DATA	2 x FWM30i	3 x FWM30i	4 x FWM30i
WALL MOUNTING			
Art. no. - FWM30i-CU Cascade, without circulation	131 124	131 125	131 126
Art. no. - FWM30i-CU Cascade, with circulation	131 121	131 122	131 123
TANK MOUNTING			
Art. no. - FWM30i-CU Cascade, without circulation	131 130	131 131	131 132
Art. no. - FWM30i-CU Cascade, with circulation	131 127	131 128	131 129
Sets with FWM30i-VA (VA brazed plate heat exchanger)	On request		
Sets with 2 - 4 circulation pumps	On request		
Dimensions (H x W x D, per single module)	465 x 568 x 312 mm		
Delivery rate (65 °C)	2 - 60 l/min	2 - 90 l/min	2 - 120 l/min
Weight without insulation, per single module	15,7 kg		
Temperature range	30 - 65°C (80 °C) ²⁾		
Maximum allowable temperature in tank	90°C		
Maximum allowable pressure in tank	3 bar		
Maximum allowable temperature of fresh warm water (°C)	65°C (80 °C) ²⁾		
Minimum pressure in fresh cold water supply line	2 bar ¹⁾		
Maximum allowable pressure in fresh cold water supply line	10 bar		
Additional installation options	mixed tank-/wall-installation		

- 1) The minimum pressure of 2 bar is required to achieve the specified delivery rate
 2) In case of disinfection

Note: For a quick material selection "CU- or VA-soldering of the heat exchanger plates" use the detailed overview on the product data sheet FWMi.

PERFORMANCE DIAGRAM FWM30i (PER SINGLE MODULE)

Required Buffer tank temperature at different delivery rates and hot water set-point temperatures



Contact your SONNENKRAFT sales representative today. The sun will rise again tomorrow.

MOUNTING OPTIONS

Wall mounting



FWMI-C-WM with circ. pump

FWMI-C-WM without circ. pump

Tank mounting



RECIRCULATION-PUMP PERFORMANCE CURVES FWM15i-CFK/ FWM30i-CFK

