GSE CASCADA HEAT EXCHANGER

The ultimate solution for the rapid heating of Domestic Hot Water (DHW) to the desired temperature, offering exceptional efficiency and minimal scale-buildup. It is the perfect choice for upgrading existing DHW systems into advanced Fresh Water (FW) solutions for the production of hygienic DHW.

System operation can be fully automated through an optimized PLC, providing real-time temperature control and visual display via either a touch screen or a PC.

The unit is available with a durable PVC synthetic leather casing for indoor settings or a weather-resistant stainless steel (INOX) casing for outdoor environments.

FRESH WATER

INOX

COUNTER FLOW

ENERGY SAVE

DEMOKRITOS

AVAILABLE MODELS

MODELS	GSE CASCADA HE FW-CF				
	1/2 INOX/ LR or SS	1/3 INOX/ LR or SS	2/2 INOX/ LR or SS	2/3 INOX/ LR or SS	3/3 INOX/ LR or SS
Nominal DWH Flow Rate (m^3/h)	2.0	3.0	4.0	6.0	9.0
Nominal Thermal Power (KW)*	70	105	140	210	315
Height [PVC SYTH. LETHER/INOX] (mm)	650/730	650/730	1250/1300	1250/1300	1830/1900
Diameter (mm)	810	810	810	810	810
Weight [PVC SYNTH. LEATHER/INOX] (Kg)	41/62	49/70	74/106	90/122	173/217

- All dimensions include the insulation of the product.
- Available with a PVC leatherette casing (for indoor use) or stainless steel (INOX) casing (for outdoor use).
- External polyurethane insulation.

* Primary circuit inlet temperature: 53°C, secondary circuit temperatures: 20-50°C.

A custom solution can be designed and implemented by integrating/combining the above autonomous systems, effectively addressing higher demands for the supply of hygienic Domestic Hot Water (DHW).

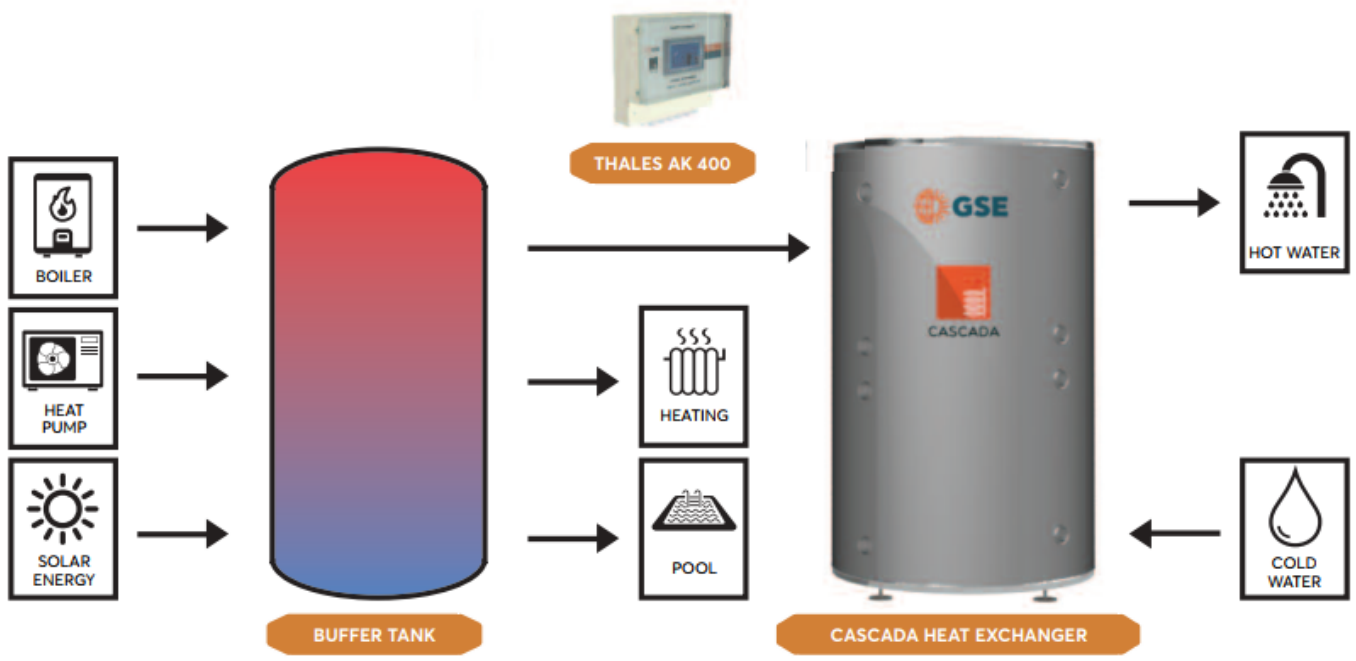
TECHNICAL SPECIFICATIONS FOR GSE CASCADA HE FW-CF		
GENERAL INFO	**Type**	Pipe-in-pipe spiral, corrugated, counterflow
	Material	Stainless-Steel 316L
	Insulation	Polyurethane
	Maximum Operating Temperature	95 °C
	Welding Type	Automated Circular Welding
	Outer Casing	PVC Synthetic Leather or Stainless-Steel 304
DHW Fresh Water Circuit (Secondary Circuit)	**Nominal Operating pressure**	6 bar
	Maximum Operating Pressure	12 bar
Energy Circuit (Primary Circuit)	**Nominal Operating pressure**	3 bar
	Maximum Operating pressure	6 bar

➢ Flow-Temperature Charging Diagrams and Pressure Drop-Flow Diagrams are available for each model in the technical brochure.

FEATURES

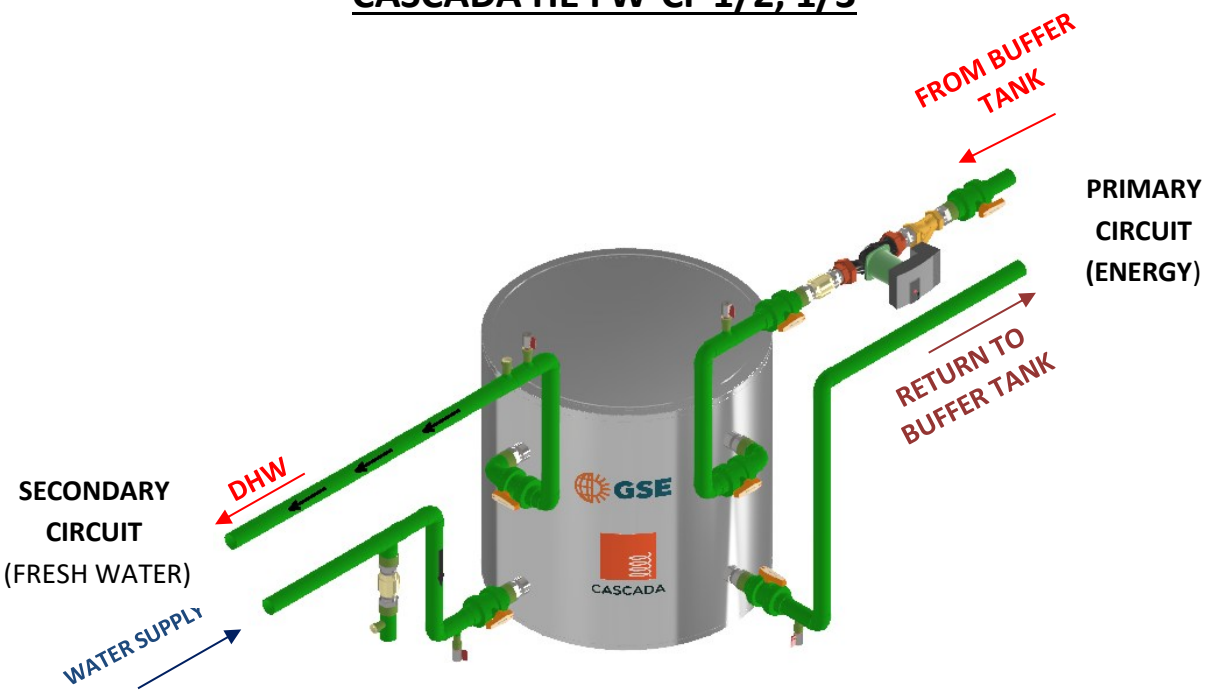
FEATURE	BENEFIT
In-Line water-heating.	• ***Prevents the growth of Legionella bacteria.*** • ***Enables the instant production of hygienic Domestic Hot Water (DHW).***
Small final temperature difference between the primary and secondary circuits.	• ***Energy Saving*** • ***Low operating cost***
Design supported by patent: Counterflow, innovative control.	• ***High efficiency.*** • ***Stable water supply at the desired temperature*** • ***Minimal pressure drop in the domestic water supply.***
Polyurethane insulation	• ***Reduced Thermal Loss*** • ***Energy Saving.***
Option for Stainless Steel outer Casing, suitable for outdoor use.	• ***Outdoor Installation Capability.***
Full compatibility with existing hot water and heating systems.	• ***Utilization of existing equipment***
Prevention of scale accumulation due to design	• ***Increased lifespan of the heat exchanger*** • ***Stable operation.*** • ***Easy and quick maintenance:*** *The heat exchanger's design and geometry enable scale removal through reverse flow cleaning, as well as complete drainage.*
Compact Design	• ***Easy installation and space-saving in mechanical rooms or hydrostations.***

CONNECTION DIAGRAM

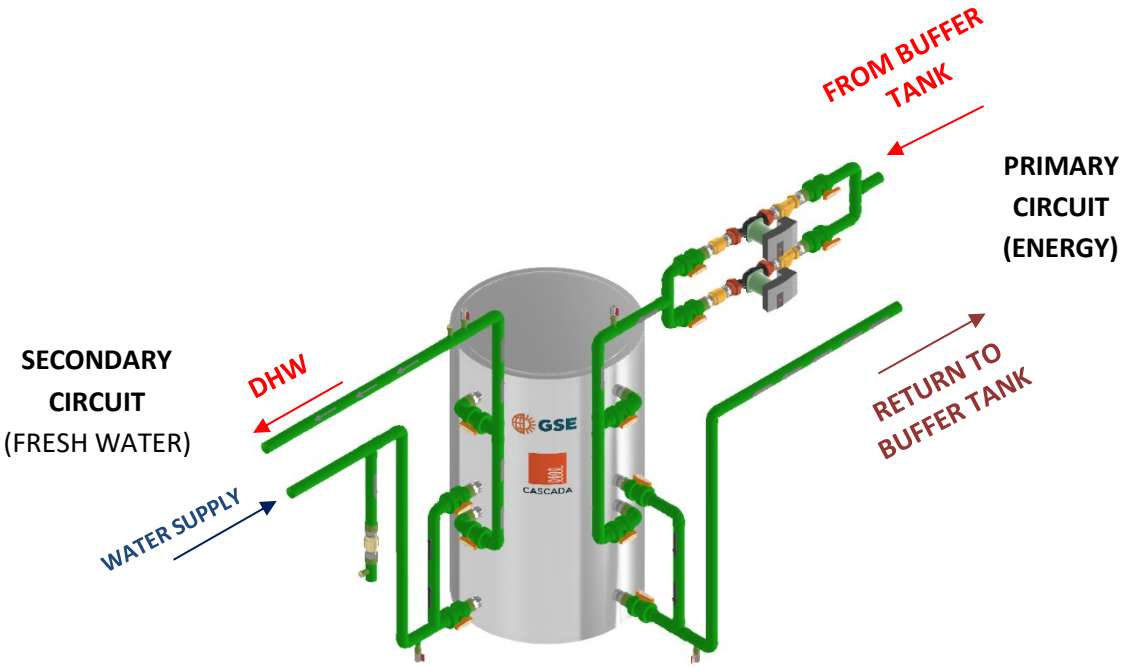


3D-CONNECTION DIAGRAMS

CASCADA HE FW-CF 1/2, 1/3



CASCADA HE FW-CF 2/2, 2/3



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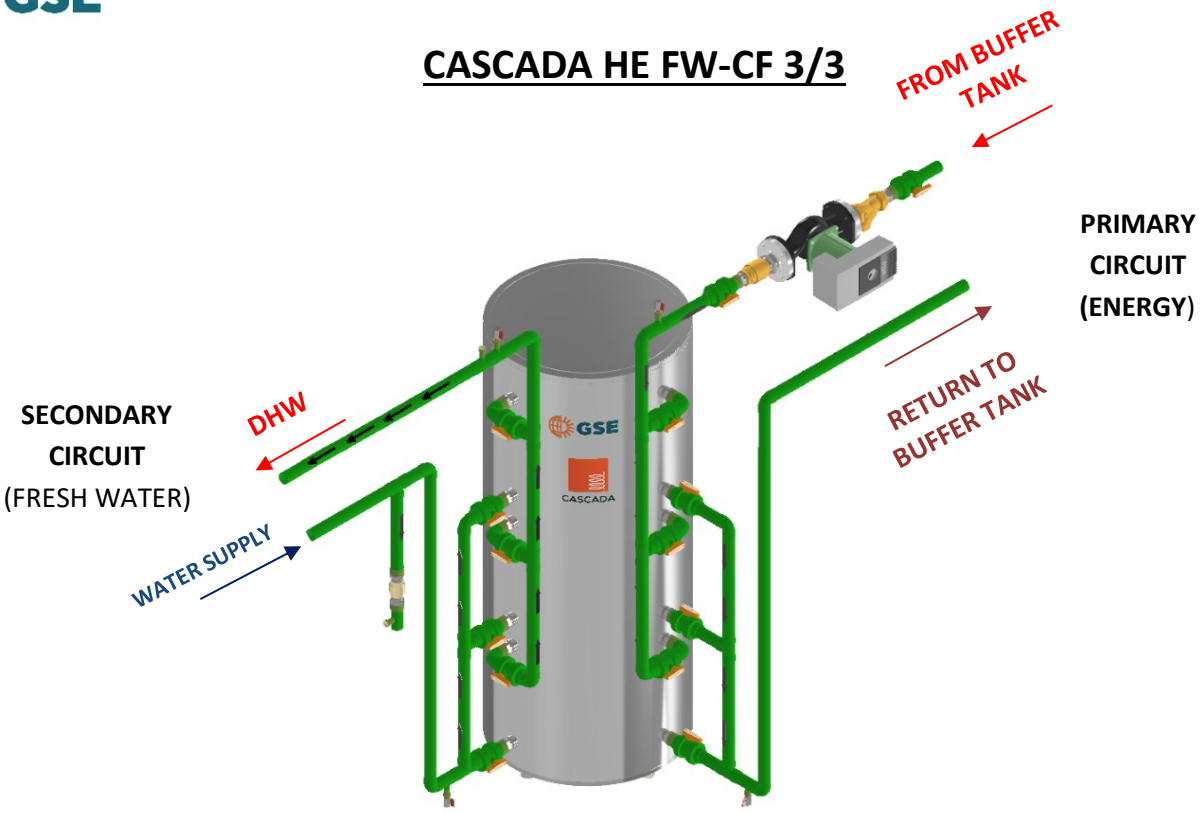
CASCADA HE FW-CF 3/3



AUTOMATION FUNCTIONS* THALES AK400

FUNCTION	PRESET	OPTION
Control and operation via integrated 4.3" touchscreen.	√	
Real-time system function visualization.	√	
Control of domestic hot water temperature (set point 1, schedule).	√	
Control of heat pump or boiler (Remote on/off, with schedule, temperature setting for tank set point 2).	√	
Control of electric resistance up to 3 kW (build-in relay with schedule, temperature setting for tank set point 3).	√	
Control of variable speed water pump (PWM/0-10V) for energy transfer.	√	
Recirculation control (on/off).		√
Solar field control with variable speed water pump (PWM/0-10V).		√
Future firmware upgrades		√

* Details for the automatic control systems are provided in the corresponding THALES brochure.