

GENERAL BENEFITS

- 60% IMPROVED PERFORMANCE
- POOL WATER HEATING



Heat Exchangers

Stainless steel corrugated pipe





Heat Exchangers

For swimming pools

Solarico helical coil heat exchangers were primarily designed for the production of domestic hot water of Thermal Tank UniQube storage tanks. In order to get the most efficient hot water production, we put a lot of effort into the research and development of our heat exchangers.

We produced our design of helical coil heat exchanger, by using corrugated stainless steel pipe, as the most compact and efficient one. The tests show that these types of heat exchangers may be produced in various versions and transfer powers, for lots of applications especially in pool water heating.

CE PED

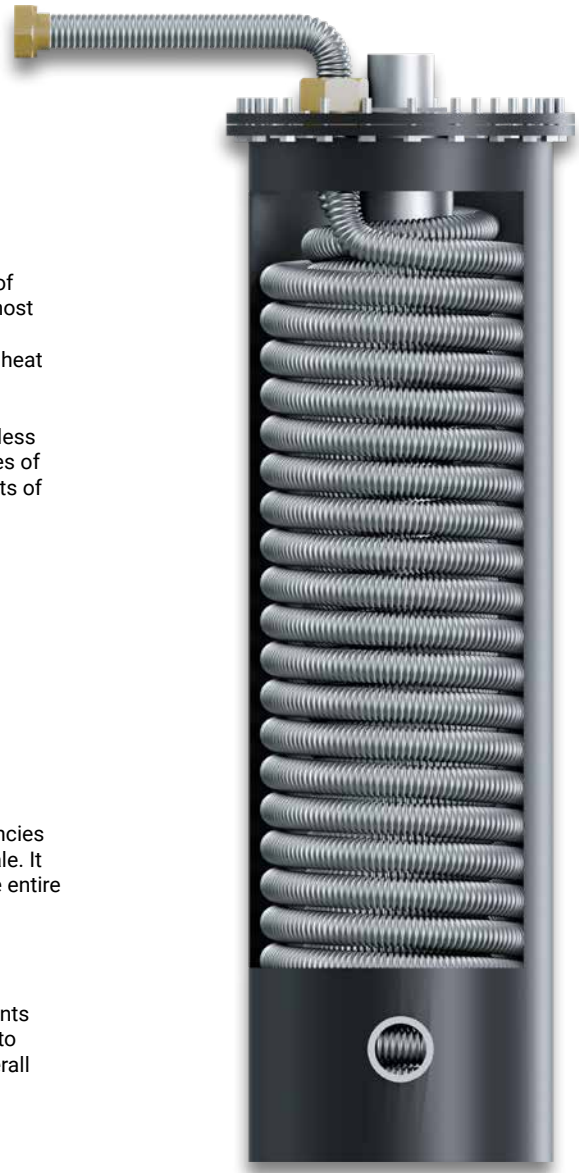


SELF-CLEANING, LESS MAINTENANCE

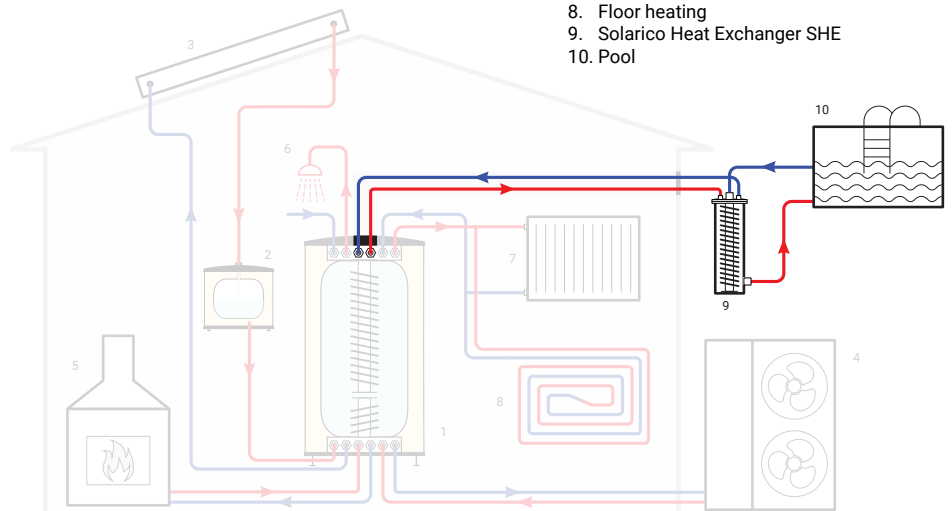
The material used is mirror surface finish Inox 316L. In combination with turbulencies and swirlings inside, the polished surface does not support deposits and limescale. It ensures a constant high performance and minimum maintenance throughout the entire service life.

CUSTOM DESIGN

We provide all the experience, knowledge, and manufacturing capacity to our clients for their specific designs and projects. The heat exchangers may be customized to meet the most varied requirements and applications. The length, fittings, and overall dimensions may be customized on request.



1. Thermal Tank UniQube 6C SQ-BPSW
2. UniQube Drain Back Tank
3. Solar collectors UniPlate 2.5 SB
4. Heat pump
5. Boiler fireplace
6. DHW
7. Radiator heating
8. Floor heating
9. Solarico Heat Exchanger SHE
10. Pool

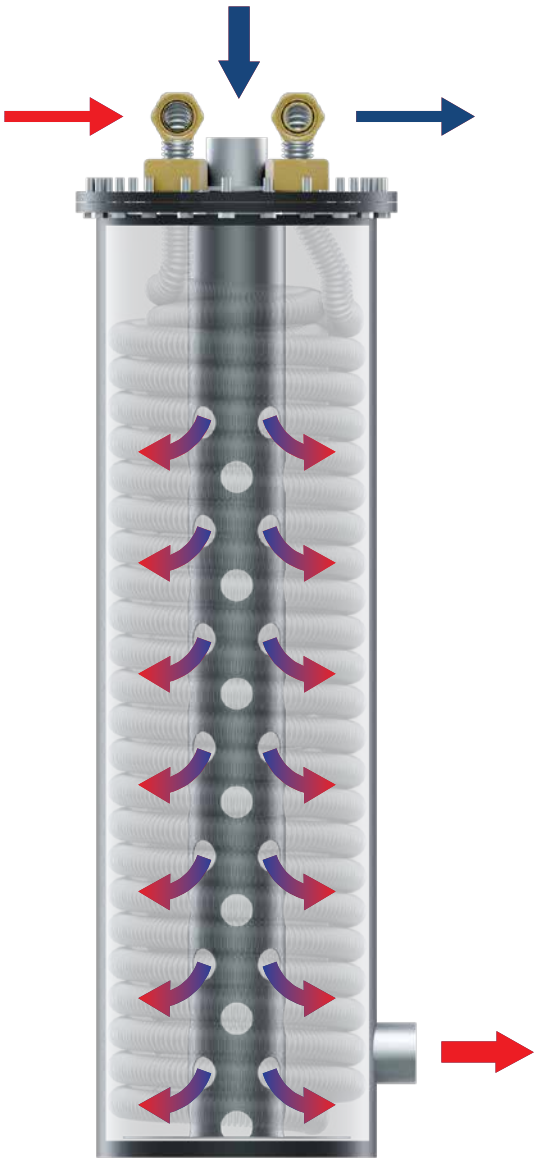


INCREASED HEAT TRANSFER RATE

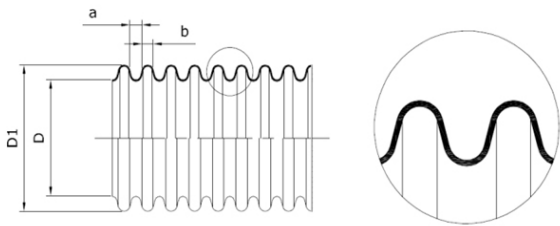
Corrugated pipe heat exchangers, provide up to 60% improved performance, compared to conventional flat-plate heat exchangers, because of:

- **Innovative fluid dynamics design** - There is a stratification tube inside, used in combination with a decentralized inlet and outlet for the pipe-surrounding fluid.
- **Geometrical design** - Choosing the right helical coil diameter, pipe diameter, and pitch dimensions are crucial to the heat exchanger performance. As the number of turns in the coil increases, the temperature drops of hot fluid also increased. The increase in the number of turns resulted in a higher rate of heat transfer.
- **Physics** - Pipe corrugations cause continuous disturbance of the boundary layer of the tube side fluid, increase the amount of turbulence, mix the thermal layers, and lower the flow speed in the middle of the pipe. These effects increase the overall rate at which heat is transferred compared to laminar flow heat exchangers.

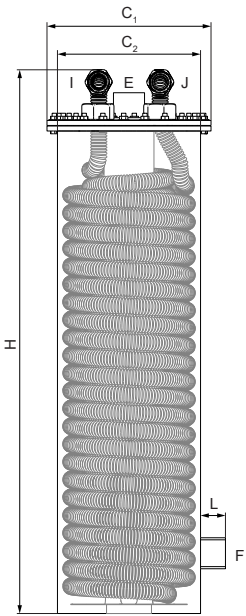
The stratification tube inside leads the primary fluid into complete contact with the heat transfer surface, **improving efficiency by 20%**.



CORRUGATED PIPE



Solarico Heat Exchangers					
Corrugated pipe					
D	(mm)	25,20			
D ₁	(mm)	31,60			
a	(mm)	3,20			
b	(mm)	2,00			
Tolerance		±0,30			
Operating pressure	(bar)	11			
Surface area per meter	(m²/m)	0,191			
Min. section area	(mm²)	498,76			
Volume	(m³/m)	0,6335			
Material		Inox 316L			
Heat exchanger		310U	310D	440U	440D
C ₁ (diameter)	(mm)	300	300	300	300
C ₂ (diameter)	(mm)	250	250	250	250
H (height)	(mm)	910	380	1140	600
L (length)	(mm)	40	40	40	40
Total surface area	(m²)	5,10	1,00	6,80	1,40
Total pipe length	(m)	26,50	5,00	35,50	7,50
Total volume	(l)	14,68	4,64	19,31	7,73
Power (up to)	(kW)	25	7	35	10
Approx. weight	(kg)	39	22	46	29
Nominal flow rate	(l/min)	20			
Maximum flow rate	(l/min)	30			
Connections E,F		6/4"			
Connections E,F - material		Stainless steel			
Connections I,J		5/4"			
Connections I,J - material		Brass			



Solarico®

INNOVATIVE
PLASTIC COMPOSITE
NEW GENERATION

HYGIENIC WATER HEATER
DRAINBACK SOLAR STORAGE TANK
STRATIFIED SEPARATOR ACCUMULATOR



- Solar Thermal Collectors
- Multi-Functional Storage Tanks and Hygienic Water Heaters
- Drain Back Reservoirs
- Expansions Vessels
- Pressure Vessels
- Heat Exchangers



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