

Dalatanken with stratifying pipes

STRATIFIED STORAGE TANK FOR SOLAR ENERGY • WOOD • PELLETS • HEAT PUMPS • GAS • OIL

Stratifying pipes for quick access to hot water



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For solar systems the stratifying pipes give a shorter time for the production of hot water and improved efficiency of the system. There are also advantages when loading a tank from a boiler, as all hot water rises inside the stratifying pipe while the surrounding water is standing still. In a traditional tank the hot water is supplied directly into the surrounding water, creating a turbulence that mixes cold and hot water.

The new stratifying pipe technology makes it possible to have a minimum of connections, which gives easier installation, less risk of incorrect connections and minimized heat losses.

Another advantage is the possibility to combine different heat sources to the same connection on the tank. Traditional tanks need a separate connection for each heat source, placed at an approximate height in the tank.

Maximal stratification

It is important to maximize the stratification, as it is more efficient to have 10 °C at the bottom and 60 °C in the top than 45 °C in the whole tank. The energy amount is the same, but the amount of useable energy is greater.

Our stratifying pipe technology creates and maintains a maximal stratification in the tank, which gives a maximum return of the energy input.

Design

The tank has two stratifying pipes, one for loading heat and one for unloading heat. The stratifying pipe for loading is placed in the lower part of the tank and has a stainless steel coil on the inside for the solar system connection.

The stratifying pipe for unloading the tank is placed in the upper part of the tank and has a stainless steel coil on the inside for hot tap water.

The stratifying pipes are designed as column pipes with a number of equally divided outlet holes, which distribute the water at the right level.



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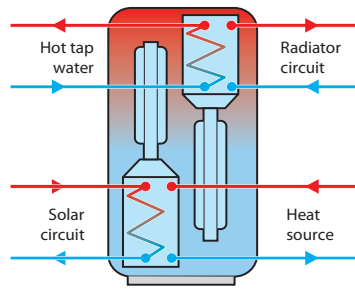
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Function - Principle for loading

Solar The heat from the solar system passes through the coils inside the stratifying pipe and heats the surrounding water. The hot water rises by the thermal force. Depending on the water temperature the stratifying pipe distributes the water at the right level.

Loading with a boiler

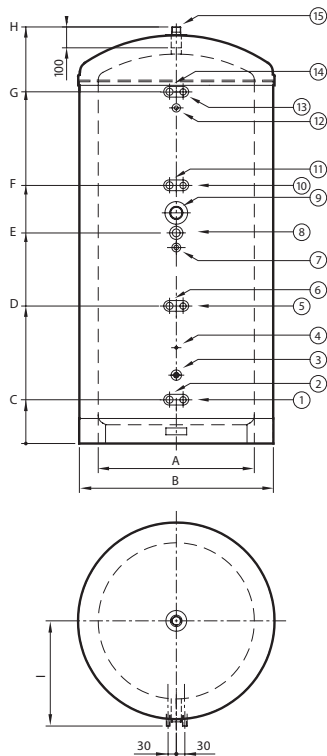
The hot water passes directly into the stratifying tank. The hot water rises and the stratifying pipe takes care of the rest.



Principle for unloading from the tank

The tap water passes through a stainless steel coil. The incoming cold water is heated up by the surrounding hot water. The cold water sinks. Due to the water temperature, the water will be distributed to the lower part of the tank. When the radiator system is unloading the tank, the return water is supplied into the stratifying pipe, the cold water will sink to the lower part of the tank and be distributed by the stratifying pipe.

Dimensions

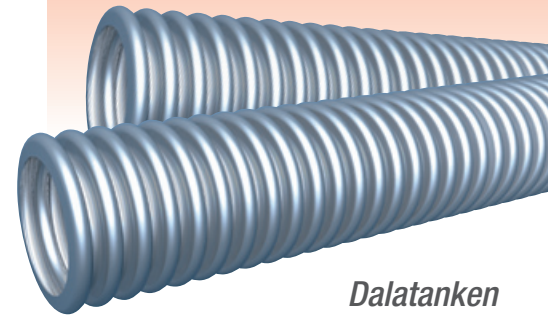


1. Loading return to heat source..... DN25
2. Solar circuit, out DN20
3. Thermometer connection DN15
4. Connection for solar sensor Ø14/8
5. Loading from heat source DN25
6. Solar circuit, in DN20
7. Thermometer connection DN15
8. Loading DN25
9. Electric heater DN50
10. Cold water inlet DN20
11. Radiator circuit return DN25
12. Thermometer connection DN15
13. Hot water inlet DN20
14. Radiator outlet..... DN25
15. Ventilation..... DN32

Model	A	B	C	D	E	F	G	H	I
500-S	Ø 600	Ø 780	223	674	1005	1192	1643	1970	410
750-S	Ø 750	Ø 930	200	651	1005	1229	1680	2000	485
950-S	Ø 750	Ø 930	200	651	1455	1679	2130	2420	485

Technical data

Volume	500, 750 and 950 litres
Max working pressure	1.5 bar
Max working temperature.	100 °C
Material	Steel P235GH
Hot water coil	2.6 m ²
Solar coil	2.6 m ²
Weight	500-S 160 kg
	750-S..... 190 kg
	950-S..... 210 kg



*Dalatanken
has hot water coils
of stainless steel*

Distributor:

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