



High pressure Solar Water Heater



A Marvel of New Technology!

On a first glance the **Zemos High Pressure Solar Heater** looks like an ordinary solar water heater which is an “open system” without any water pressure. Because the water in ordinary water heaters is flowing through the solar heat absorber tubes which are made of glass the water cannot be under pressure. Therefore such water heaters have to be put on great height e.g, on top of a roof (ugly!), where the hot water pressure is generated by the height difference between the solar water heater and the user. If this height difference is not substantial, the water pressure will be insufficient or unsatisfactory. Also since the water in ordinary solar water heaters is circulating in the glass solar heat absorber tubes rubber seals are required which make them prone for having water leakage or breakage in areas with cold winter weather due to freezing.

The **Zemos High Pressure Solar Heater** is however working with a totally different principle of heat transfer: the all glass state of the art boro silicate solar heat absorber tubes are equipped with heat pipes made of copper which conduct the solar heat into the water tank. With this no water is circulating in the solar heat absorber tubes. Therefore no water leakage and no breaking of solar heat absorber tubes due to freezing weather. Also this principle of solar heat transfer allows that the water to be heated can be under mains pressure. The stainless steel water tank which is tested at 9 bar pressure and is equipped with an over-pressure safety valve is connected directly to the water main which means that the hot water coming from the Zemos High Pressure Solar Water Heater will have the same pressure as the main water pressure. With this there is total freedom of location to install the Zemos High Pressure Solar Water Heater. It can be installed e.g .in the garden or on top of a garage roof and the hot water will have sufficient pressure depending of the main water pressure in higher floors of a building. In areas with low water main pressure a small booster pump (e.g. Wilo or Grundfos) can be installed after the Zemos High Pressure Solar Water Heater to solve such problem.

The photo on the front page shows a typical example of an installed Zemos High Pressure Solar Water Heater on top of a garage which could not be done with an ordinary “open system” solar water heater, since the hot water of such heaters has no pressure. The hot water pressure in this example is excellent even in the higher floor of the building attached to the garage.

Summary of the advantages of the **Zemos High Pressure Solar Heater**:

- High pressure hot water storage tank (testing pressure: 9 bar)
- No vent required and therefore less heat loss as compared with low pressure systems
- No water circulating in the solar heat absorber tubes. Therefore no danger of freezing and no loss of heat transfer efficiency created by calcium deposits originating from the water
- High efficiency heat pipe technology
- No sealing rubbers required. Therefore no potential water leakage problems
- High quality all stainless steel construction
- Easy installation

The stand alone model of the **Zemos High Pressure Solar Heater** is available in different sizes as per the table below:

Model No.	Absorption Area (m2)	Absorber Tubes			Tank Capacity	Footprint L x D (cm)	Height (cm)
		Diameter	Length	No.			
ZHP-01-1858-18	1.44	58 mm	1.8 m	18	150 lit	178 x 189	164
ZHP-01-1858-20	1.60	58 mm	1.8 m	20	165 lit	194 x 189	164
ZHP-01-1858-24	1.92	58 mm	1.8 m	24	200 lit	226 x 189	164

Local Agent: