



Checklist Solar Filling Stations

Price is what you pay – Value is what you get. Do not look for a low price only when buying a solar filling station – focus on quality!

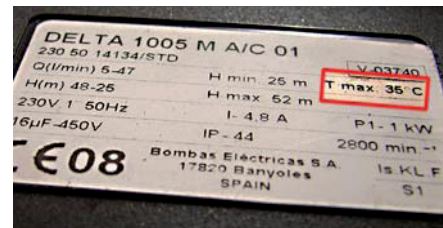
Please consider the following points when you are looking for a device that definitely saves time and makes your job on site easier.

1. Flow rate and maximum pressure of the pump?

A high flow rate is a main feature of a good pump as it mainly influences the performance when it comes to remove air enclosures from the collector. A powerful pump also speeds up the filling process and thus saves time

2. How high is the tolerated temperature of the liquid?

Tolerable media temperature should be at least 60°C. Installations and most maintenance works are completed in conditions with warm or hot Glycol. This threshold should be valid for pump and hoses.



hose clamp

3. Hoses – are they stable and perfectly armed?

Soft hoses buckle and reduce the flow, especially at the entrance of the tank. Crimp fitted hose ends are by far safer than hose clamps. A secure hold even under high temperatures and maximum pressures prevents the emersion of liquid which can cause scalding.



filter inside tank

4. Easy access to the particle filter?

The particle filter should be easily accessible for cleaning – not only after the job is done but also during work. The ideal solution is a filter with vision panel. This way the degree of pollution can be permanently controlled. A filter within the tank (see photo to the left) is most unsuitable as the operator has to reach into the liquid to clean the filter.

5. Pressure relief for the filling hose?

When the job is done the filling hose is under pressure and therefore difficult to remove from the fill and drain valve. A pressure relief valve or a similar installation avoid spraying of liquid when the hose is disconnected.



filter ahead of and pressure relieve valve behind the pump

6. Remains liquid in pump or tank after operation end?

In case various types of glycols are used it is important that only a small quantity of liquid remains inside the device. In a simple garden pump with injector one to two litres of liquid may remain in the pump body. With centrifugal pumps it is a fact that the smaller the pump body the lesser the amount of liquid remaining inside. Impeller pumps are draining completely. The pump should also drain the container completely. It is a time consuming process to manually empty the pump prior to each change of media. Remainders can also leak out during transport.

7. Is the tank removable?

A removable tank can be cleaned easily and is most convenient if various types of heat transfer media are used.

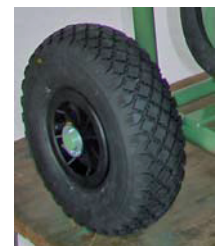
8. Has the tank a level indicator with good visibility?

9. How about the manoeuvrability of the device?

Trolleys with wide, inflatable wheels are much easier to handle in rough terrain or in stairways than trolleys equipped with plastic wheels. Sufficient clearance height adds to comfortable transport. Are both hands required for manoeuvring the filling unit or can it be pulled/pushed with one hand only (which leaves to other hand to carry a tool box or similar)?



wheels made of foamed material



inflatable pneumatic wheels

10. Can the unit be transported in a horizontal position?

Smaller service cars sometimes don't provide sufficient space for upright transport. Therefore the system must be absolutely tight for horizontal transport.

11. What else to look for?

- The return hose should reach to the bottom of the tank to prevent frothing of the media.
- Spare parts – are they available and for how many years?
- After sales service – is there any?

After comparing all these paragraphs it should be easy to decide for the right tool – get a ZUWA. It's as simple as that!



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