

VSG Vessel Installation & Operations Guide





Installation & Maintenance Guide

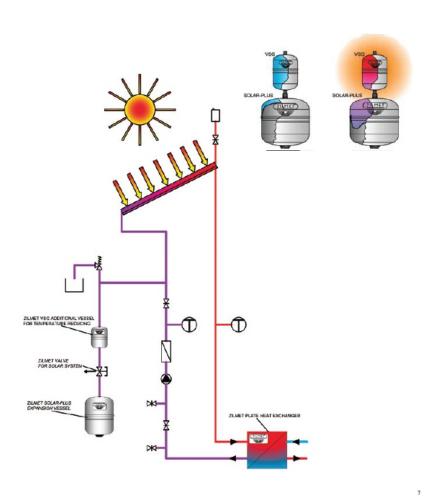
Operation

The VSG range of Vessels is specifically designed for Solar Thermal Systems to provide a buffer of un-circulated liquid. This buffer of cooler water is displaced during expansion and contraction of the fluid caused by heating and cooling of the system. Having this buffer means that it is the cooler un-circulated liquid which is in direct contact with the main expansion vessel, the lower temperature preserves the integrity of the membrane.

The correct size of vessel must be considered prior to installation and installed by appropriately trained engineers.

Installation Siting

It may be necessary to fit an Intermediate VSG Vessel between the Solar Thermal Circuit and the Primary Solar vessel in order to lower the temperature of the liquid in direct contact with the SOLAR PLUS membrane.





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Sizing

The appropriate sizing of an expansion vessel must be undertaken by qualified or appropriately trained engineers. The appropriate size of VSG Vessel is proportional to the main vessel. On the rare occasions when an unusually high acceptance factor is used for the main vessel, a larger intermediate vessel may be required.

| Main Solar Vessel Size | VSG Vessel Size | | |
|---------------------------|-----------------|--|--|
| 18 | 5 | | |
| 25 | 5 | | |
| 35 | 12 | | |
| 50 | 12 | | |
| 80 | 18 | | |
| 105 | 35 | | |
| 150 | 35 | | |
| 200 | 100 | | |
| 250 | 100 | | |
| 300 | 100 | | |
| 400 | 200 | | |
| 500 | 200 | | |
| 600 | 200 | | |

Maintenance

Because this vessel has no membrane, only a periodic visual inspection is necessary, the vessel has no pre-charge other than standard system cold fill pressure.



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Materials

Shell: Carbon Steel

Flange: Galvanised /plastic

Max Pressure: 10 Bar

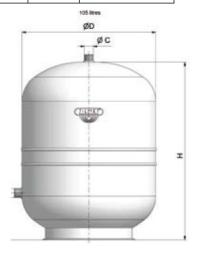
Colour: White

Operating Temperature: -10°C - 110°C

| Code | Capacity | Diameter | Height | Connection Height "E" | Pmax | Connection |
|------------|----------|------------|------------|--------------------------|------|------------|
| 11A0000512 | 5 | 160 | 270 | - | 10 | 3/4"G |
| 11A0000837 | 8 | 200 | 280 | - | 10 | 3/4"G |
| 11A0001216 | 12 | 270 | 264 | - | 10 | 3/4"G |
| 11A0001244 | 12 | 270 | 264 | - | 10 | 3/4"G |
| 11A0001836 | 18 | 270 | 349 | - | 10 | 3/4"G |
| 11A0003510 | 35 | 380 | 367 | 125 | 10 | 3/4"G |
| 11A0005022 | 50 | 380 | 505 | 146 | 10 | 3/4" G |
| 11A0010518 | 105 | 500 | 665 | 165 | 10 | 1" G |
| 11A0020013 | 200 | by request | by request | by request | 10 | 1" G |
| 11A0040017 | 400 | by request | by request | by request | 10 | 1" G |









Notes





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