



RAINHARVESTING SYSTEMS

# OPERATION AND MAINTENANCE

## RainSava GRP underground Storage Tank

### Submersible Pump

#### Description

The pump serving the rainwater harvesting system is located in the rainwater storage tank and is of the submersible multi-stage type.

It stands vertically on the flat platform provided in the base of the tank, with the lifting rope secured in an accessible location just inside the tank inspection cover.

The pump has a maximum flow rate of 95 litres per minute and a maximum total head of 36 metres (3.6 bar).

The pump is fitted with built-in integrated electronics which automatically start and stop the pump. The pump is also equipped with dry-run protection and a non-return valve.

#### Normal operation

The pump is completely automatic; i.e. – switched on and off as required by the integral electronics. This means that when a tap is opened, the resulting drop in pressure will cause the pump to start running. Conversely, when the tap is closed the resulting cessation in the flow of water will make the pump stop.

Note that there is delay of a few seconds after closing the tap before the pump stops.

#### Priming cycle

The pumps' in-built electronics also protect it against dry-running.

When the pump starts it will perform the following operation until it is primed:

- 4 priming trials of 30 seconds duration with 3-second intervals.
- If there is no water (i.e. the priming trials fail), then the pump will stop for one hour before repeating the exercise.
- If this also fails, the pump will then wait a further 5 hours before trying again.
- If the lack of water persists, the pump will attempt to prime itself every 24 hours until successful.



## MAINTENANCE AND CLEANING

To ensure the proper operation of the pump, it is important to comply with the following recommendations:

- The pump must only be used when it is immersed in water.
- The pump must be placed in a stable position inside the tank.
- The lifting cord attached to the top of the pump should be loosely tied off near the top of the tank.
- The pump must NEVER be lifted by its cable.
- Periodically, it is advisable to make sure that no dirt has accumulated around the base of the pump and that the stainless steel mesh screen is clear.

## REMOVING THE PUMP FROM THE TANK

There should be a lifting cord located just inside the tank opening, this is attached to the top of the pump. This can be used to lift the pump if necessary. Note that the pipework attached to the pump may restrict how far the pump can be raised. If necessary the elbow connection part way down the access shaft can be uncoupled to assist in removing the pump.

## N.B.

It is absolutely essential to prevent any risk of the pump freezing. In the event of freezing temperatures, remove the pump from the liquid, empty it and keep it in a place where it cannot freeze. The pump must be disconnected from the mains power supply before any cleaning operation is performed. The pump is maintenance free.