

Rainwater Harvester

Step 1

Filter

The first cleaning step in the rainwater system is the filter. The rainwater flows from the roof to the filter. Here dirt particles and debris are separated from the water. The cleaned water flows to the tank. The dirt is washed to the sewer or soakaway with a small amount of rainwater. All new Intus rainwater filters have stainless steel inserts, which are easy to remove and to clean. Their many different working principles and connection possibilities afford their use in many different installation situations.

Step 2

Calmed Inlet

By using an underground tank, the water is stored in dark and cool conditions. Here the second cleaning step takes place. In the water column, any residual dirt particles sink to the base of the tank. The rainwater Calmed Inlet prevents any disturbance of the sedimentation layer. At the same time the lower layers of the stored water are supplied with oxygenated water. This oxygen rich water prevents anaerobic reducing conditions forming in the storage tank and the water stays fresh.

Step 3

Overflow siphon

Any particles that are lighter than water (e.g. flower pollen) float slowly to the water surface. The expertly designed new Intus overflow siphon, with a skimmer effect, removes this floating layer. The regular overflow from the storage tank is important to get the best water quality. It prevents souring of the water. The floating layer could otherwise prevent oxygen diffusion at the water surface, which could lead to anaerobic reducing conditions in the tank, and the onset of odour problems.

Step 4

Floating pump intake

The pump intake floats suspended just below the water surface where the cleanest water lies. From this position the water is abstracted by the pump. A ball float, filled with air, suspends the intake valve, which has a further filter. Usually the Floating Pump Intake has a check valve

Step 5

Submersible Pump

The Submersible pump can pump the water directly to the point of use, or pump up to a header tank in the attic. The pump will keep the pressure at 1 BAR and up to a maximum of 4 BAR. The pump will start operating automatically as the pressure in the line drops i.e. when a tap is turned on, then the pump will restore the pressure in the pipe. The pump will pump 20-80 litres/min up to a maximum head of 30m.

Step 6

Mains Top Up

The function of the mains top up is to allow mains water, where available, to top up the tank when the water level drops to a minimum level. The system will allow approximately 200 litres at a time into the tank until rainwater enters the tank again. The mains

top up system also prevents any water being syphoned out of the rainwater tank which can happen in other rainwater systems.

