

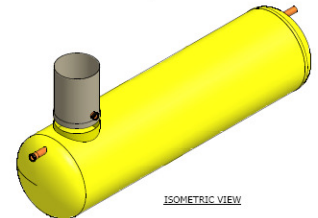
Microstrain Rain Harvesting Systems

System Overview

The rainwater is taken off the roof via the gutters and piped into a filter that removes leaf litter and other particles. There are a number of Wisy filters based on the roof area and water flow. The efficiency of the Wisy filter is class leading at 90%. The screen options are 440 micro or 280 micron.



The rainwater is stored in a below ground GRP tank until it is needed by the building. The calmed inlet into the tank ensures that there is minimal turbulence in the tank so that the water harvested is as clear as possible. Microstrain can help you in tank sizing based on yield from the roof available using local rainfall data and Ciria design assumptions.



During periods of heavy rainfall the GRP tank will overflow into the Stormwater system on site. The siphon overflow ensures that water can leave the GRP tank but cannot back-up from the storm or combined foul pipe network. In this way it protects the harvested water from contamination. There is also vermin protection built in to the unit.



The water is pumped back into the building by a submersible Multigo pump in the GRP tank. Sized based on the height of the outlet relative to the pump and the desired flow. The class leading pump runs almost silently. Mounted on the pump there is a floating inlet filter. This takes water from just below the surface where it is purest. If the tank is empty the pump's dry run protection switches the pump off until rainwater fill the tank once more.



The harvested water is either pumped direct to the outlets or to a header/break tank in the attic. Termed direct or header system respectively the key difference between the two is that on the direct system, the mains top up tundish is placed in the GRP tank below ground whereas with the header system the mains top up is in the attic. The direct system has the advantage of not needing a header tank thus saving space but the header system defends against a potential pump failure as the building will still have water from the mains in the attic. The direct system would not. On average the header system is more popular for this reason.



We would be delighted to discuss further the many advantages of harvesting rain water and to design a system that is suitable for your development.

