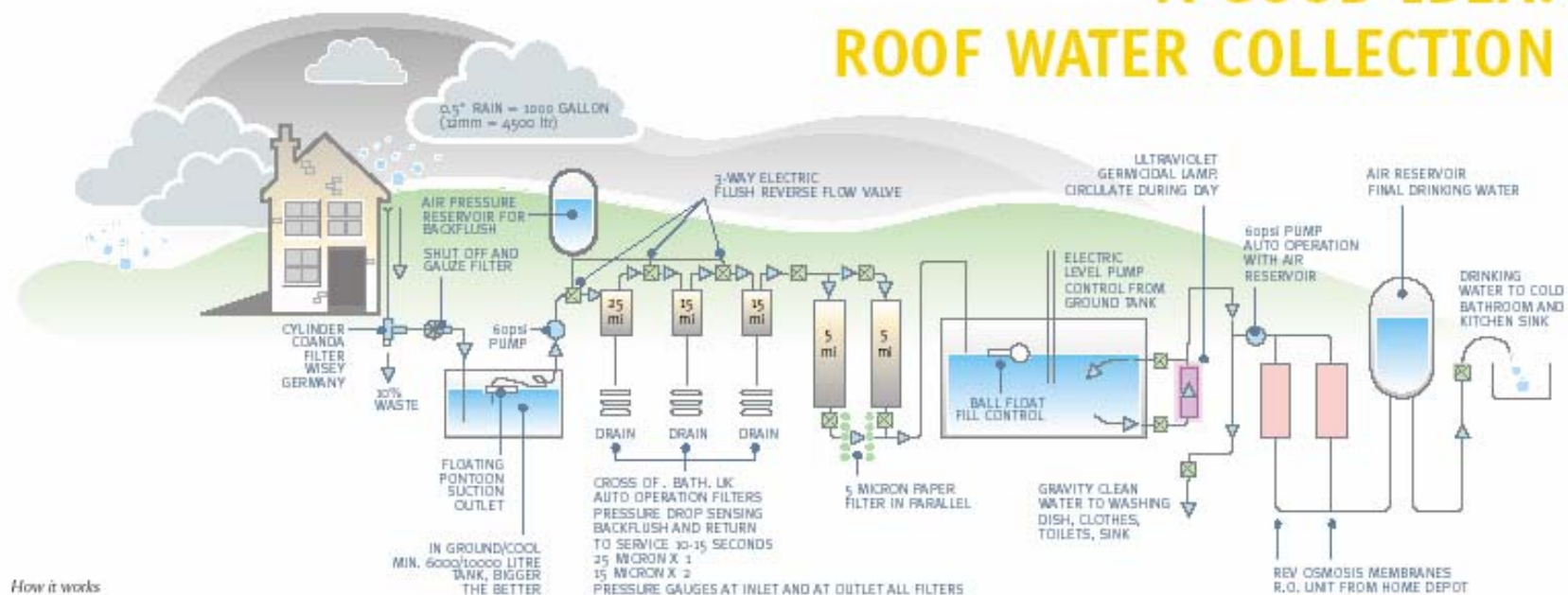


# A GOOD IDEA: ROOF WATER COLLECTION



How it works

Collection of water from roofs for use has many advantages:

- Self- sufficiency of good quality soft water without additives.
- Reduction of flash flood potential by delaying run off in urban areas.
- Reduction of embodied energy compared to purchased water.

This simple system has been in use for many years at the home and offices of a family in Leicestershire. Existing guttering collects rain that falls on the roof. A Wisey/Coanda screen self-

cleaning filter is located in the downright to remove all coarse visible dirt. Clean water is then collected in an underground tank of as large a size as possible (minimum 6,000 litres for two persons).

Water is pumped out of the tank to filters by a floating pontoon and through a 25 micron Cross / indented stainless steel metal ring filter. There are pressure sensors on the outlet and inlet, to reverse the flow for a few seconds when pressure differential calls for a back-flush. This back-flush can also be activated by a timer switch on every pump operation

command. The water is then further filtered through two parallel 15 micron Cross filters and then on to two (unparallel) 5 micron paper filters (changed once a year) before being delivered to the semi finished storage tank. The water in this tank is suitable for all needs in the house/office/factory, except drinking.

To purify water for drinking it is circulated through an ultra violet filter which runs during operational (daylight) hours, and fed to a simple reverse osmosis unit, which operates on mains (60 psi) pressure. Clean pure sterile

water is held in a pressured tank for delivery to the bathroom cold sink tap, kitchen cold sink tap and a refrigerator icemaker water dispenser.

In the future, water will be increasingly scarce due to population growth and climate change. This is a practical way of being self-sufficient, saving on CO<sub>2</sub> emission and reducing water charges.

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