

Rainwater Harvesting Tanks

Rainwater is part of the never-ending water cycle

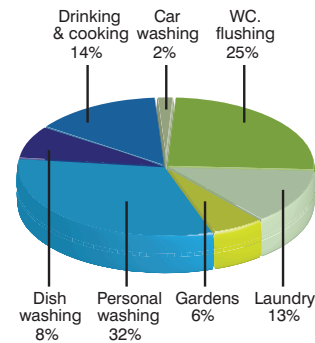
No single drop is lost or made in the continuous flow between seas, rivers, lakes and groundwater.

However, fresh water is an increasingly scarce, precious and expensive resource. Saving water is now an essential part of our drive to a sustainable society. Delivering clean tap water requires more and more effort, energy and expense.

For many everyday uses, however, we simply don't need to use expensively purified drinking water. Harvested roof rainwater is not only a free resource, but it is ideal for use in washing machines, toilet flushing and garden watering, in homes, in commerce, in public buildings and in industry.

Our products, with their individually proven designs, are available to meet the widest possible range of uses in rainwater harvesting and management.

Half of our future potable water demand can be saved without any increase in risk or effort. Clear benefits are there for the environment and us all: reduced flooding and overloading of sewers, prolonged appliance lifetimes, less detergent usage and, of course, green and blooming gardens.



GUIDELINES FOR SOME TYPICAL APPLICATIONS

APPLICATION	GALLON	LITRES
One (1) Person	50 / day	250 / day
Two (2) Person	80 / day	360 / day
Three (3) Person	145 / day	435 / day
Shower	200 / hr	15 / min
Fill Bath	30 / day	140 / ltrs
Flush Toilet	1 to 3 gal	5 to 15 ltrs
Sprinklers	180 / hr	14 / min
1/2" Tap @ 20psi	600 / hr	45 / min
3/4" Tap @ 20psi	1000 / hr	75 / min
Cattle per day	10 to 20	45 to 90 / day
Milking Cows	30 to 40	135 to 180 / day
Sheep / Pigs	1 to 2	4 to 9 / day

Choosing your tank volume

It is particularly important to ensure that your system fully meets your requirements and options. In general, you should collect as much rainwater as possible. You can use the following rule of thumb for the initial rough calculations:

For each person, you need a tank volume of at least 1500 litres. For a tank volume of 1000 litres, a roofed surface of 15m² is necessary.

More detailed calculations are available in the table below:

SYSTEMS FOR DOMESTIC SUPPLY AND GARDEN IRRIGATION

PERSONS	COVERED SURFACE M2	TOILETS	WASHING MACHINES	GARDEN	TANK VOLUME LITRES
1-2	50	Yes	Yes	50	4,000
2-3	80	Yes	Yes	100	5,000
3-4	100	Yes	Yes	200	7,000
4-6	120	Yes	Yes	400	10,000
6-7	>160	Yes	Yes	800	12,000

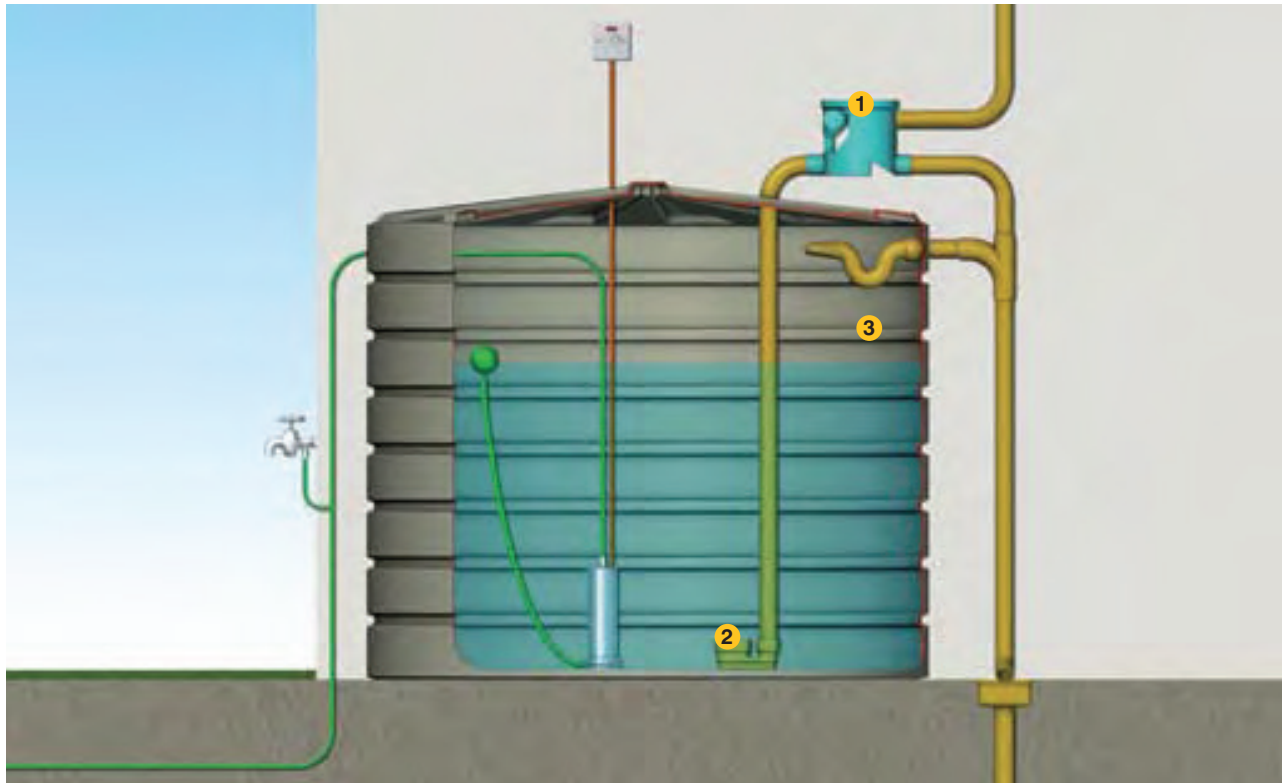
Did you know?...

Despite recent rainfall, groundwater levels are at their lowest for 20 years.

Each person in the UK uses about 160 litres of water a day, but only 22 litres for drinking and cooking.

RAINWATER HARVESTING TANKS

Rainwater Utilisation



The 3-stage cleaning process

With good planning and the right components a rainwater system can be nearly maintenance free and the rainwater quality is ideal for many uses, in both the home and the workplace. A professional system will have three stages of cleaning for the rainwater.

Roof areas

Only rainwater from roof areas should go into the storage tank. Smooth surfaced materials are the best (slate, tiles, glazed cement roofing slab). The rain yield from green roofs is 30-50% and whilst it can sometimes be a bit discoloured it is still suitable for toilet flushing and garden watering.

Cleaning step 1 - Filter

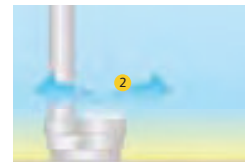
The first cleaning step in the rainwater system is the filter. The Rainwater flows from the roof to the filter. Here, dirt particles and debris are separated from the water. The cleaned water flows to the tank. The dirt is washed to waste or soak away with a small amount of rainwater.

All rainwater filters have colters, which are easy to remove and easy to clean. Their many different working principles and connection possibilities allow for their use in many different installation situations.



Cleaning step 2 - Calmed inlet

Here the second cleaning step takes place. In the water column, any residual particles settle to the bottom of the tank. The rainwater calmed inlet ensures that oxygenated water is introduced to the lower layers of the stored water in the tank. This oxygen rich water prevents anaerobic reducing conditions forming in the storage tank and ensures that the water stays fresh. It also allows water to enter the tank without disturbing the water that is already there.



Cleaning step 3 - Overflow siphon

Any particles that are lighter than water (e.g. flower pollen) float slowly to the water surface. The overflow siphon, with a skimmer effect, removes this floating layer. The overflow from the storage tank is important to get the optimum water quality. It prevents souring of the water. The floating layer could otherwise build up over time, and so reduce oxygen diffusion at the water surface, which in turn could lead to anaerobic reducing conditions in the tank.



RAINWATER FILTERS

How to get started...

Decide on the amount of rainwater you will need to have stored in reserve and also the amount of water you will be able to harvest from your roof.

1. Calculate your likely annual useage with the aid of your current water bill etc
2. Using the water catchment table on the previous page and the average annual rainfall for your area, calculate the amount of rainwater you will capture from your roof area. Add at least 10% capacity for the summer months. Now you can identify the capacity you will require
3. Identify your proposed tanks site and measure the space and height available.
4. Refer below for dimensions.

CODE	RAINWATER FILTER KIT	CAPACITY		DIAMETER	STANDARD
		LITRES	GALLONS	Ø X H (MM)	OUTLET FITTING
17220531+	A, B, or C	1250	275	1200 x 1200	1.5"
17221031+	A, B, or C	2500	550	1400 x 1800	1.5"
17221231+	A, B, or C	4000	881	1900 x 1650	2"
17221431+	A, B, or C	5500	1211	2600 x 1320	2"
17221531+	A, B, or C	5000	1100	1900 x 1960	2"
17221731+	A, B, or C	7000	1541	2400 x 1820	2"
17221831+	A, B, or C	8500	1872	2600 x 2063	2"
17222031+	A, B, or C	10000	2202	2400 x 2500	2"
17222531+	A, B, or C	12500	2753	2600 x 2600	2"
17223031+	A, B, or C	16800	3700	2600 x 3410	2"
17223531+	A, B, or C	20800	4580	2600 x 4150	2"

There is also an enhanced capital allowance scheme (ECA) available for business.

CALL FOR MORE DETAILS

5. Choose from the 3 filter kits below A, B or C.

Kit A; Will service a 200m² roof area and is better suited to general garden use and yard washdown - this filter should be cleaned several times a year depending on contamination. 100mm connections, 1mm poly mesh. This kit would generally be used on a tank between 1,250 - 10,000ltrs.

CODE	DESCRIPTION
254010	Rainwater harvesting Kit A contains filter, siphon overflow, claimed inlet and internal pipe



Kit B; Will service a 450m² roof area and is better suited for WC flush and a better quality of water filtered, this filter can also be used for general garden use, vehicle washdown, dairy and much more... This filter should be cleaned twice a year depending on contamination. 100mm connections, 0.65mm stainless steel mesh. This kit would generally be used on tanks between 5,500 - 20,000ltrs.

CODE	DESCRIPTION
254020	Rainwater harvesting Kit B contains filter, siphon overflow, claimed inlet and internal pipe



Kit C; Will service an 800m² roof area and has exactly the same filter mechanism as Kit B - again this filter should be cleaned twice a year. 100mm connections, 0.65mm stainless steel mesh. This kit would generally be used on tanks between 5,500 - 20,000ltrs.

CODE	DESCRIPTION
254030	Rainwater harvesting Kit C contains filter, siphon overflow, calmed inlet and internal pipe



All rain water filters are well over 90% efficient, some are at 100%. All filters are hydraulically safe for use in the UK at the given Connectable Roof Areas (based on a root rainfall intensity of 79mm/hour).

6. Place the order through your local dealer and arrange delivery...

RAINWATER FILTERS



CODE	DESCRIPTION
252005	Rainwater Filter (200m2 roof) - 110mm inlets
DIMENSIONS	490 L X 120 W x 330 H (MM)



CODE	DESCRIPTION
252010	Garden Filter (A) (200m2 roof) - 110mm inlets
DIMENSIONS	390 DIA X 515 H (MM)



CODE	DESCRIPTION
252050	VF1 Combi Filter (B) (450m2 roof) - 110mm inlets
DIMENSIONS	490 DIA X 451 H (MM)



CODE	DESCRIPTION
252055	Twin Filter (C) (800m2 roof) - 110mm and 150mm inlets
DIMENSIONS	680 L X 680 W X 873 H (MM)



CODE	DESCRIPTION
252020	Filter Collector (70m2 roof)
252022	1m Link Kit for above Filter Collector (70m2 roof)
DIMENSIONS	260 DIA x 270 H (MM)



CODE	DESCRIPTION
252070	Calmed Inlet



CODE	DESCRIPTION
252080	Uno Overflow Siphon Tube



CODE	DESCRIPTION
253040	4" 3m length Drain Pipe with single socket connector - one end