

RAINWATER HARVESTING

USE RAINWATER AS AN ALTERNATIVE TO
POTABLE WATER TO BOOST SUSTAINABILITY



YOUR SMARTEST CHOICE
IN WATER TECHNOLOGY

AN INTRODUCTION TO RAINWATER HARVESTING

MANY USES FOR RAINWATER

USE RAINWATER AS A SUSTAINABLE ALTERNATIVE TO POTABLE WATER

Reusing rainwater is an environmentally friendly practice that offers several benefits, such as:

- Conservation of freshwater resources

Rainwater harvesting helps reduce the demand for freshwater from traditional sources such as rivers, lakes, and underground aquifers. By reusing rainwater, we can decrease the strain on these resources and ensure their availability for future generations.

- Water and cost savings

Using rainwater for purposes such as irrigation, toilet flushing, and outdoor cleaning can significantly reduce the amount of treated tap water consumed with lower water bills and cost savings as result.

- Sustainable landscaping

Rainwater is ideal for plants and gardens due to its natural composition.

- Stormwater management

During heavy rainfall, stormwater runoff can overwhelm drainage systems and contribute to urban flooding. Harvesting rainwater can help manage stormwater by capturing and storing it for later use.

DOMESTIC APPLICATIONS

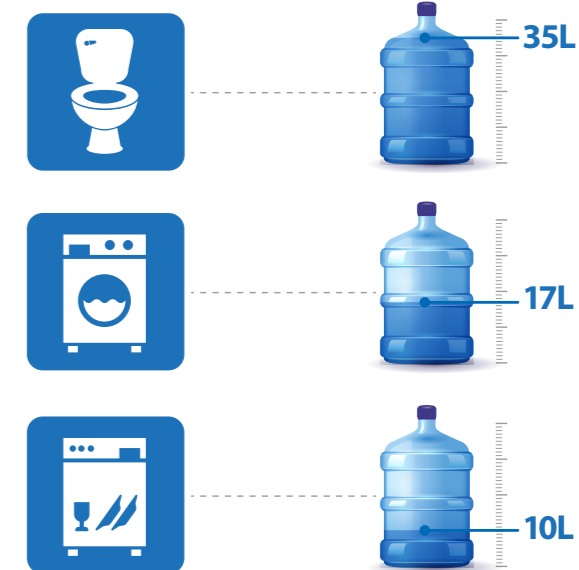
For a lot of domestic applications rainwater can be a perfect alternative to potable water. For example, laundry, flushing the toilet, gardening, filling the swimming pool, house cleaning and car washing.

Sometimes rainwater is even better than potable water, because deposits of lime scale are much lower. The table indicates the amount you can save by using rainwater. Other options include irrigation, washing your car, etc.

Please note that rainwater should not be consumed without proper treatment, as it may contain contaminants from the atmosphere or catchment surfaces.

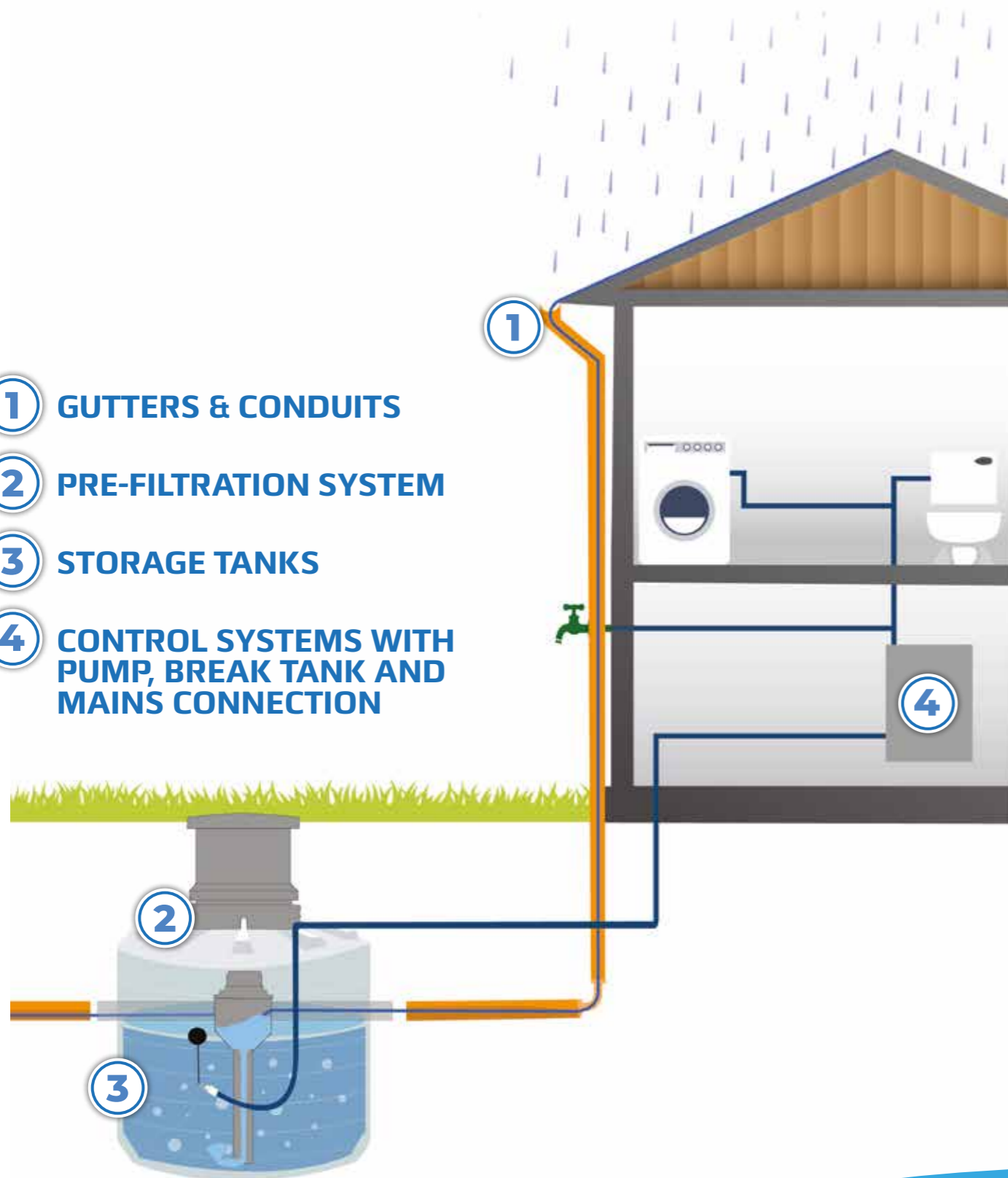
HOW MUCH CAN YOU SAVE?

Litre per person per day (European average)



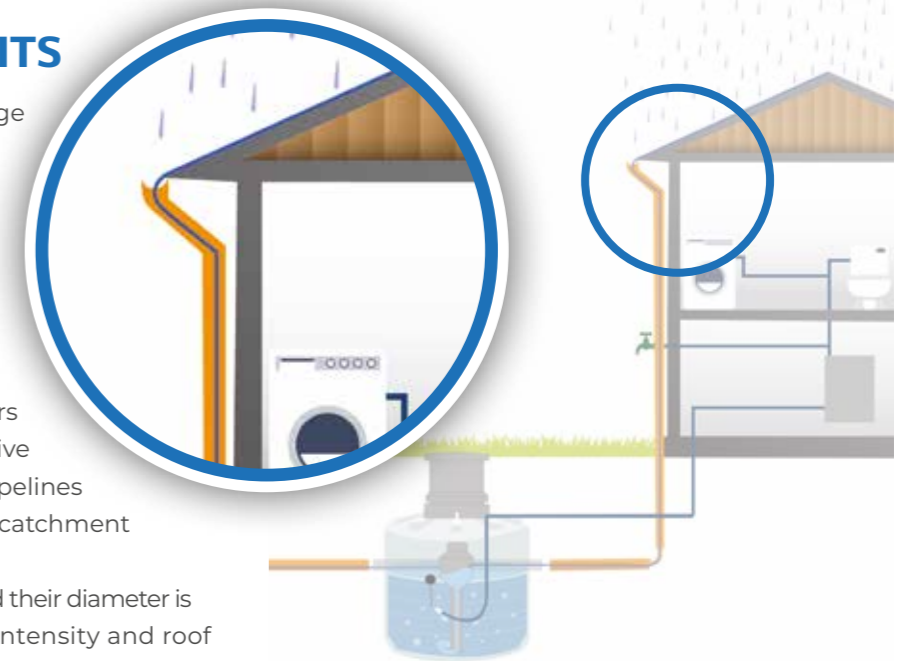
INSTALLING A RAINWATER HARVESTING SYSTEM

- ① GUTTERS & CONDUITS
- ② PRE-FILTRATION SYSTEM
- ③ STORAGE TANKS
- ④ CONTROL SYSTEMS WITH PUMP, BREAK TANK AND MAINS CONNECTION



① GUTTERS & CONDUITS

A rain gutter is attached to the edge of a sloping or flat roof to collect and transport rainwater to the storage tank. They can be semi-circular or rectangular. The required discharge capacity of the gutter is a factor of the maximum rainfall intensity and roof surface area. Polyvinyl chloride (PVC) rain gutters are preferred as they are inexpensive and easy to install. Conduits are pipelines that transport rainwater from the catchment to the harvesting system. The number of conduits and their diameter is determined by maximum rainfall intensity and roof surface area.



Our assortment showcases the best range of fittings for PVC rainwater pipes and gutters made out of PVC and PVC-U (unplasticised polyvinyl chloride). You can order leaf traps, bends of various dimensions, square gutters, T-pieces, gutter caps, gutter hoppers, connection pipes, end pieces, brackets with hinge, outside corners, round gutters, drainage click sleeves, roof bracket steels, and running outlet PVC-U inserts. These products are all designed to contribute to maximum efficiency and lifespan. Have a look below for more options.

SELECTION OF PRODUCTS

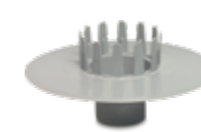
GUTTERING



Round gutter PVC-U



End piece PVC-U



Roof drain PVC-U



Gutter bracket PVC-U

RWA FITTINGS



T-piece 45° PVC-U



T-piece 90° PVC-U



Cap PVC-U



Socket PVC

ACCESSORIES



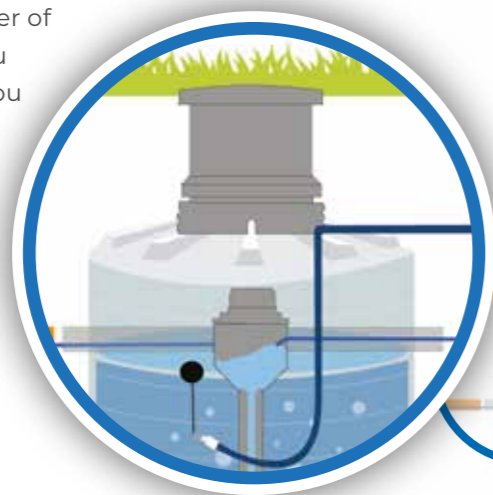
Leaf trap PP

2 PRE-FILTRATION SYSTEM

A filter is necessary to withhold a lot of debris that's coming from the roof. The filter keeps the rainwater in the tank as clean as possible. There are a number of different types of filters; you can choose a filter which you have to clean manually or a filter that cleans itself automatically.

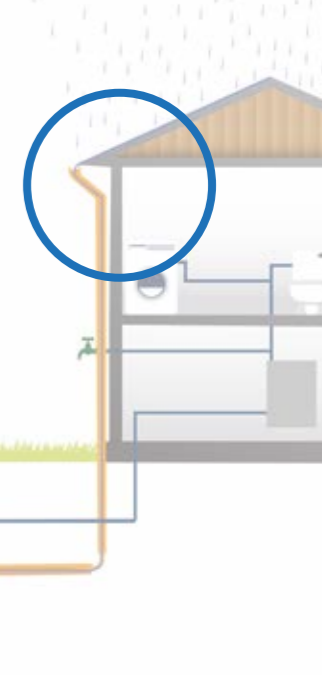
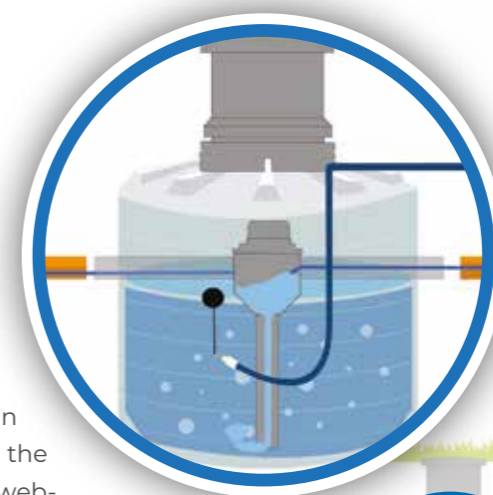
FEATURES

- Integrated skimmer
- Optional self-cleaning (during heavy rainfall)
- Minimal maintenance
- Integrated tank overflow



3 STORAGE TANK

The storage tank collects and stores the rainwater runoff from the conduits. The tanks could be above ground, partly underground or fully underground, depending on the space available. To determine the size of the storage tank which is most suitable for your application, you can make use of the guidance given in the FAQs on our rainwater harvesting web-page.



SELECTION OF PRODUCTS

PROFEC ROUND FILTER



Stainless steel round filter designed for inside tank installation with a diameter of 250 mm and DN 100 connection. Can be installed in an existing rainwater tank.



PROFEC AUTOMATIC FILTER RINSING UNIT FOR IN-TANK FILTER



Automatic filter rinsing unit for in-tank filter with a weekly flushing mode for 3 minutes.



PROFEC ROUND CENTRIFUGAL FILTER OUTSIDE TANK DN100/150



Underground pre-filter for rainwater collection, suitable for up to 440 m² collection area.



PROFEC INFILTRATION SIEVE FILTER INSERT



Sieve (stainless steel) filter insert for Profec round centrifugal filter outside tank DN 100/150.



SELECTION OF PRODUCTS

TANK LDPE BLACK, TYPE CU UNDERGROUND



Specially for underground installation. Note: do not place in areas with a high groundwater level.



TANK LDPE BLUE, TYPE CHO HORIZONTAL



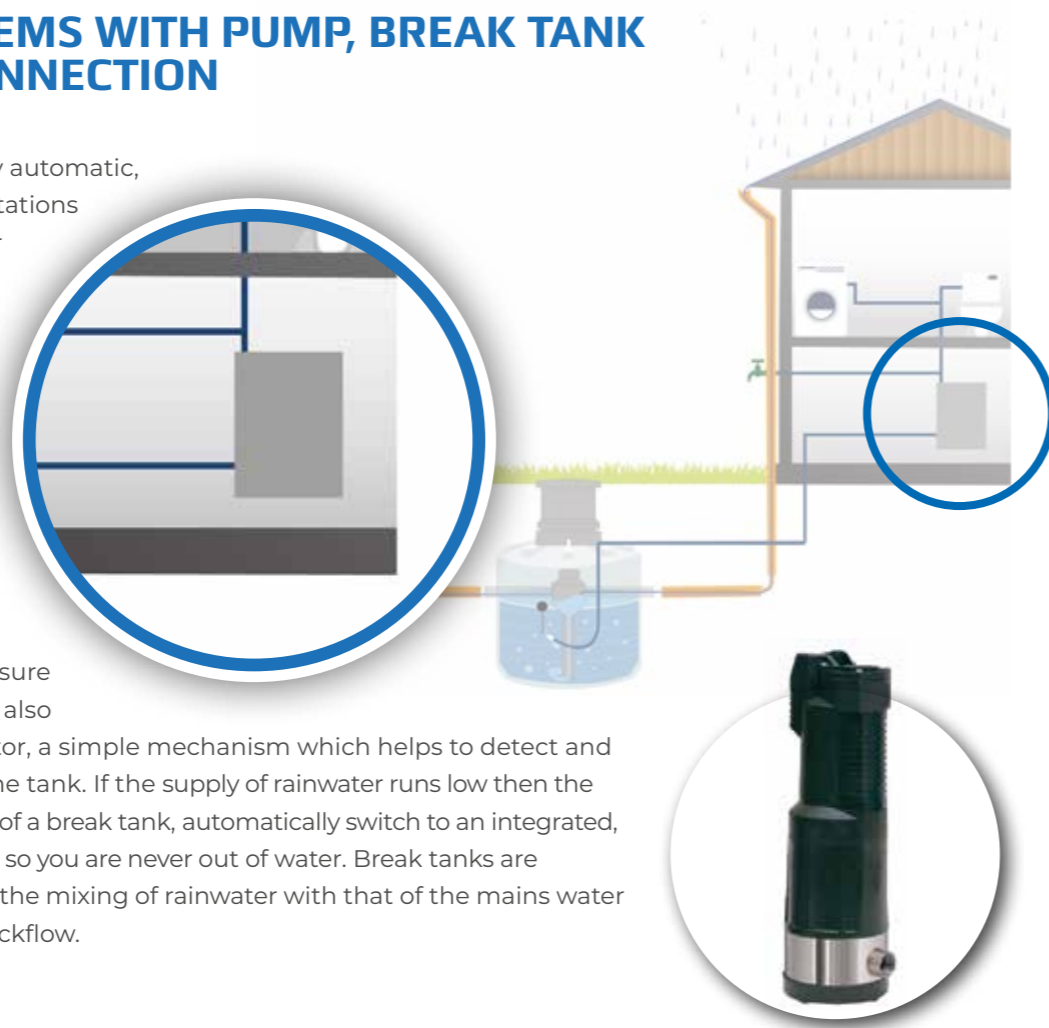
Advantages: light weight product that is easy to install.



4 CONTROL SYSTEMS WITH PUMP, BREAK TANK AND MAINS CONNECTION

The control systems are fully automatic, operating and monitoring stations combining pump, controller and integrated mains water top-up.

These innovative systems can easily be installed in the basement, garage or ground floor utility room of any building. The rainwater is pumped from a tank via a suction hose for the demanded usage. The pump is regulated via a pressure and flow control sensor. We also provide a water level indicator, a simple mechanism which helps to detect and indicate the water level in the tank. If the supply of rainwater runs low then the control systems, with the aid of a break tank, automatically switch to an integrated, certified mains water top-up, so you are never out of water. Break tanks are implemented in preventing the mixing of rainwater with that of the mains water supply and also prevents backflow.



PROFEC VARIABLE SUCTION PIPE WITH GUIDE PIPE

2.5 m suction hose.

PROFEC RAINWATER SUPPLY MANAGER, TYPE DUO RAIN SMART

This fully automatic rainwater supply system, features integrated drinking water replenishment and two self-priming pumps, making it a stand-alone unit.

PROFEC MOUNTING SET FOR RAINWATER SUPPLY MANAGER TYPE DUO

With backflow protection.



SELECTION OF ARTICLES

PROFEC RAINWATER SUPPLY MANAGER, TYPE MONO RAIN SMART

Complete and easy to connect solution for the needs-based make-up of drinking water in the consumer network when the rainwater tank is empty, with WiFi connection.

PROFEC MOUNTING SET FOR RAINWATER SUPPLY MANAGER

The assembly set with backflow protection offers a flexible connection system and sound interruption of lines for minimal disruption. It also comes with backflow protection.

PROFEC RAINWATER SUPPLY MANAGER, TYPE MONO RAIN BASIC

Complete and easy-to-connect solution for the needs-based make-up of drinking water in the consumer network when the rainwater tank is not full.



"Our eco-innovative control systems save energy by 75% when compared to conventional domestic systems for particularly energy-conscious consumers."

Our pump and control systems range in design, size and complexity to suit your needs. Our top line includes a speed controller which regulates the pump speed and adjusts the flow rate to the

required flow. This has great advantages for the user in terms of pump efficiency and power consumption. This rainwater unit is especially durable, quiet and economical.

PROFEC RAINWATER SUPPLY MANAGER TYPE SCUBA WITH SUBMERSIBLE PUMP



Fully automatic rainwater supply manager with submersible pump, flow monitor, and microprocessor control. Includes floating extraction, ball valve, manometer, and fastening material.



PROFEC FILLING SYSTEM



Filling system for cisterns with solenoid valve and stainless steel wall bracket.



PROFEC FILL LEVEL INDICATOR



This digital level indicator comes with a 20 m control line and fastening material, making it suitable for all tank types and shapes with a maximum water height of 3 m.



PROFEC PRESSURE SWITCH



Pressure switch for automatic pump control.



PROFEC WATER FILTER WITH CARTRIDGE AND KEY



3-stage water filter system with transparent 2L (10") filter housing for sediment and activated carbon filtration.



PROFEC CARTRIDGE



20 micron PP braided replacement filter for 10" type B housing for small particle filtration in multi-water treatment applications.



PROFEC FINE FILTER



3-stage filter system with sediment and activated carbon filtration for binding pollutants and pesticides.



PROFEC SAFETY DEVICE



This safety device automatically closes the drinking water supply line in the break tank during emergency overflows, pipe ruptures, and valve failure.



PROFEC WATER ALARM SENSOR



Automatic alarm sensor with email notification and automatic closure of supply line when connected to Profec safety device.



CHANGING TO RAINWATER

Below is an overview of the annual savings for a modal family of 4 people. The consumption for the garden will be a lot higher when you use a sprinkler system.



TYPE OF USAGE	USAGE/PERSON/DAY	NUMBER OF PERSONS	TOTAL USAGE
Toilets	35 L	4	140 L
Laundry	17 L	4	68 L
Cleaning	5 L	4	20 L
Garden	5 L	4	20 L
Total usage for a family on one day			248 L
Total usage in a year in L			90.520 L
Total usage in a year in m ³ /L			91 m ³ /L



Bosta UK Ltd
Reflection House
Olding Road
Bury St Edmunds
Suffolk
IP33 3TA

T +44 (0) 1284 716580
E enquiries@bosta.co.uk

www.bosta.com




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