Kingspan Water

RAINWATER HARVESTING SYSTEMS

FOR DOMESTIC APPLICATIONS

ADUR & WORTHING
PLANNING SERVICES
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Kingspan Environmental

The **KingspanWater** portfolio of Rainwater Harvesting products offer economical solutions for water conservation in the home and garden. Detailed in this brochure are the most effective, practical and competitive solutions on the market.

Domestic Envireau - Integrated Rainwater Harvesting

The **Domestic Envireau Rainwater Harvesting system** has been designed as a low cost installation for self-build projects and residential developments. Envireau works by taking the rain from your roof gutters, filtering out leaves and debris and storing the water in an underground tank.

This is then pumped into the house to be used for non-potable applications such as toilet flushing and washing machines. If the tank runs empty, the system automatically switches to mains supply. **Simple.**

Benefits

Easy to install, simple to maintain, automatic in operation; the Domestic Envireau System has been developed to provide the homeowner with a 'fit-and-forget' system, ensuring an automatic supply of harvested rainwater.

Designed to be as user-friendly as possible, the system utilises much of the existing pipework within the building. The main requirement being the installation of a rainwater storage tank with internal pump, selected to meet the roof areas water catchment yield and household requirements.

The BS8515 : 2009 Rainwater Harvesting Systems - Code of Practice protects the public by ensuring consistency of quality, installation, testing and maintenance of rainwater harvesting systems for non-potable (non-drinkable) water applications in the UK. The Envireau product ensures total compliance with BS8515 : 2009.

System Options

The Envireau System has two primary options:

1. The **Gravity System** which uses an elevated header tank to store filtered water after the main tank.
2. The **Direct System** pumps water from the main storage tank and is used where a header tank is impractical.

Single House



Self-build. Uses: Toilet flushing, washing machines, garden irrigation and car washing.

Multiple Housing Sites



Housing developments and housing associations. Uses: Toilet flushing, washing machines, garden irrigation and car washing.

Benefits of Installing the Domestic Envireau

Save up to **50%** KingspanWater Envireau can reduce water consumption in domestic applications by up to 50%.

Code for Sustainable Homes/ Part G Building Regulations

Achieves credits that are required for compliance with the Code for Sustainable Homes. Also reduced mains water use fulfils the new Part G 2009 Building Regulations.

Aids Planning Applications

Authorities increasingly expect applications to demonstrate Sustainable Drainage (SUDS).

The System that Pays for Itself

Money saved through reduced water bills means Envireau can pay back its purchase costs.

Continuous water supply in times when mains water is taken for granted

Alternatively if there is a lack of rainfall the mains water will supply the applications.

Technical advice & guidance support available

from experienced technical sales engineers.

Service contracts available for ongoing maintenance

from our own Kingspan Environmental Service Department.

Helps to **Future Proof** domestic installations

Envirogen Gravity System

Gravity System is ideal for domestic applications. It has a major advantage in that operating both the mains and rainwater supply is the event of a power failure on site (we recommend a Klargester Header Tank which is used). The rainwater from the header tank will flow by gravity to the service appliances in the rain stocks which in turn will automatically switch to mains water supply if the rainwater supply runs dry.

The system will always draw from the rainwater supply first.

To ensure a continuity of service, the gravity system requires a header tank which supply & header tank as an optional extra to complete the package. Klargester Header Tanks are available in two independent valves

Uses
- WC and urinal flushing
- Irrigation and landscape watering
- Garden watering
- Vehicle washing
- Domestic laundry

Envirogen Direct System

The **Direct System** is also suitable for domestic applications. This system is used where it is impractical to have a header tank for example in flats or multi-storey buildings.

The rainwater is drawn directly from the storage tank by the booster pump set to ensure adequate flow and pressure to the appliances at all times.

The mains water is delivered to the rainwater tank through a non-return valve to prevent back flow of rainwater into the mains supply.

Uses
- WC and urinal flushing
- Irrigation and landscape watering
- Garden watering
- Vehicle washing
- Domestic laundry

1	Water main
2	Storage tank
3	Envirogen control panel
4	Level display unit
5	In-line filter 120 microns
6	Internal rainwater filter
7	Submersible pump
8	External tap
9	Adjustable tank neck
10	Roof rainwater feed
11	Filtered rainwater feed
12	Waveguide Depth Sensor

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Control Panel
(Refer to key 3 on both the Gravity and Direct Systems)

Display Unit
(Refer to key 4 on both the Gravity and Direct Systems)

Fully CE Approved and BMS Compatible, the new Envirogen control panel has improved functionality and additional benefits.

It greatly simplifies the installation and commissioning process and has been designed with future enhancements in mind.

Packaged Components

The Envirogen can be configured as a direct or gravity system from the box

1. Klargester Polyethylene underground storage tank suitable for 2m, 3m, 4m, 5m, 6m, 7m, 8m, 9m or 10m* deep access. Suitable for pedestrian and vehicular traffic.
2. Rainwater Self Cleaning Inlet Filter.
3. Submersible Stage Multi-stage pump with 1m, 3m or 5m Cable Length.
4. 50m Cable Length as standard.
5. Envirogen Control and Display panel, (provides the monitoring and control of the pump).
6. Waveguide tank neck - adjustable to suit required invert depth and one box of connectors including a manhole cover.

Other Features & Fittings
- Solenoid Valve (regulates the supply of mains water in the direct system).
- Trunkfish (provides the mandatory air gap in the direct system).

Envirogen Gravity System

Envirogen Direct System

Choosing and ordering your Envirogen System made simple

Code	Recommended Roof Size	Diameter	Height*	Tank Dimensions Length	Inlet & Outlet Invert
Gravity System					
EMVGA06012W	**60m²**	1320mm	2222mm	1700mm	500 - 800mm
EMVGA10012W	**100m²**	1780mm	2424mm	2000mm	500 - 900mm
EMVGA15012W	**150m²**	1780mm	2424mm	2400mm	500 - 900mm
EMVGA20012W	**200m²**	2070mm	2929mm	2400mm	500 - 900mm
Direct System					
EMVDA06012W	**60m²**	1320mm	2222mm	1700mm	500 - 800mm
EMVDA10012W	**100m²**	1780mm	2424mm	2000mm	500 - 900mm
EMVDA15012W	**150m²**	1780mm	2424mm	2400mm	500 - 900mm
EMVDA20012W	**200m²**	2070mm	2929mm	2400mm	500 - 900mm

* Includes tank neck - adjustable to suit required invert. Depth = dia + adjustable neck + one box of connectors including a manhole cover.

Optional Extra - Header Tank

When ordering your system to make the gravity system complete you will require a Header tank. Klargester's Header tank with ball valve and float provides a head of mains water over the rainwater tank to prevent back flow of rainwater into the mains supply which is mandatory. Order code: HT 050

RainTrap Below Ground
Rainwater Storage and Delivery System

RainTrap Below Ground -
Rainwater Storage and Delivery System

An economical Rainwater Harvesting system designed to make garden watering simple. The RainTrap system comprises of a filter, an underground storage tank and a pump. Rainwater runs down the roof and into the guttering and downpipes in the normal way before passing through the filter, which removes any leaves or debris. Rainwater is stored in the underground tank from which it is pumped at a constant pressure to a garden sprinkler or hose as required.

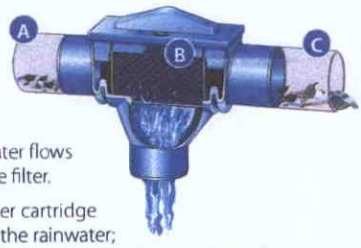
The RainTrap has many advantages over traditional garden waterbutts. In addition to being able to store far larger quantities of water, it removes the need to carry water around and does not flood when full, since the excess water exits via a soakaway or surface water drain.

The Benefits
- Easy to install
- Inexpensive
- Simple on / off operation
- Suitable for existing and new homes
- Automatic rainwater diversion when tank reaches full capacity
- Available in a variety of sizes from 2,800-4,600 litres
- Internal self-cleaning leaf filter
- Designed and manufactured in the UK

Uses
- Garden watering
- Horticultural sprinkling
- Small vehicle washing

Applications
- Domestic
- Horticulture
- Garden centres

Rain Trap			
	RT2800	**RT3800**	**RT4600**
Capacity	2,800 Ltr	3,800 Ltr	4,600 Ltr
Diameter	1,905mm	2,070mm	2,080mm
Height (Base to outlet)	1,565mm	1,795mm	2,035mm



A Rainwater flows into the filter.

B The filter cartridge cleans the rainwater; filtered water falls into the storage tank.

C Leaves and debris are flushed out of the filter periodically by excess rainwater.



1. Pump power switch
2. Pumped water to required application, e.g. garden hose, power washer, sprinkler system
3. Rainwater inlet (110mm)
4. Submersible pump
5. Waste water / overflow outlet (110mm)
6. Leaf filter
7. Safety manhole lid

Kingspan Water Solutions

Kingspan Water

- Domestic Envireau Fully Integrated Rainwater Harvesting Systems
- RainTrap Below Ground Storage and Delivery System
- Potable and Non-potable Water Storage Tanks
- Above Ground Rainwater Harvesting Systems for Existing Building
- Domestic RainStore Waterbutts
- Filters, Monitoring and Accessories







Kingspan Environmental portfolio includes:

Kingspan Klargester

- Sewage Treatment Plants
- Package Pump Stations
- Oil / Water Separators
- Septic and Storage Tanks
- Stormwater Attenuation



Kingspan TITAN

- Bunded Oil and Fuel Storage
- Biofuel Storage and Dispensing
- AdBlue Storage and Dispensing
- Chemical and Water Treatment
- Spill Containment Solutions
- Recycling Banks
- Grit and Solid Fuel Containers
- Potable Water Tanks



Kingspan Sensor Systems

- Domestic Tank Level Monitoring
- Industrial Tank Level Monitoring
- Tank Management Systems
- Tank Alarm Systems
- Overfill Prevention Devices
- Refrigeration Control Panels



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FSC Mixed Sources

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