

Rain Water Harvesting Product Guide



Gamma Rainwater Harvesting Range

Gamma Gravity System

The Gravity System is ideal for domestic applications. It has a major advantage in that in the event of a power failure on site (or the rain stocks running dry) the system will automatically switch to mains water supply to ensure a continuity of service.

The gravity system requires a header tank to complete the package. Kingspan Klargester supply a header tank as an optional extra which contains two independent valves operating both the mains and rainwater supply (we recommend a Kingspan Klargester header tank is used). The water from the header tank will flow by gravity to the serviced appliances. The system will always draw from the rainwater supply first.

Uses

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

Gamma 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 homes that have converted attic spaces and no room for a header tank. Therefore filtered rainwater is pumped direct from the holding tank to the various appliances.

If the storage tank has a low level of rainwater, there is a small automatic charge of mains water into the tank to ensure the system never runs dry. The main advantage of this system is that rainwater is delivered to the appliances at mains pressure or higher.

Uses

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

Choosing and ordering your Gamma System made simple

Model	Tank Dimensions					
	Capacity	Standard Overall Height	Standard Inlet Invert	Standard Outlet Invert	Length	Width
Gravity System						
GRW080	2,350 Ltrs	1,768mm	720mm	750mm	3,000mm	1,800mm
GRW080	3,100 Ltrs	2,257mm	720mm	750mm	2,480mm	1,130mm
GRW080	4,600 Ltrs	2,257mm	720mm	750mm	3,360mm	1,215mm
Direct System						
GRW080	2,350 Ltrs	1,768mm	720mm	750mm	3,000mm	1,800mm
GRW080	3,100 Ltrs	2,257mm	720mm	750mm	2,480mm	1,130mm
GRW080	4,600 Ltrs	2,257mm	720mm	750mm	3,360mm	1,215mm

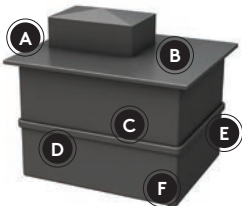
* Includes tank neck - adjustable to suit required invert.



Optional Extra - Header Tank

When ordering your system to make the gravity system complete you will require a header tank. Kingspan Klargester offers a header tank with weir, ballcock and float valve which allows the switch over to mains, the weir provides the mandatory air gap. Order code: HT 050

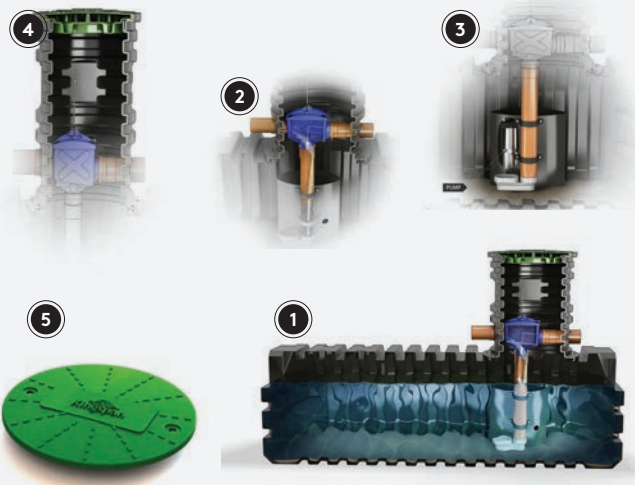
- A Mains Input
- B Rainwater Input
- C Water Regulations Compliant Mandatory Air Gap
- D Overflow Point
- E Rainwater Level Control
- F Mains Level Control



Packaged Components

- 1 Kingspan Gamma Rainwater Storage Tank suitable for 60m2 to 200m2 roof areas. Suitable for pea shingle backfill in dry site conditions. (Note for larger roof areas, suitable tanks are available on request).
- 2 Internal Self Cleaning Rainwater Filter.
- 3 Intelligent Pressure Pump - SBA 3-23M with integral filter.

- 4 Kingspan Gamma Extensible neck.
- 5 Manhole cover.
- Other Fixture & Fittings**
 - Solenoid Valve (regulates the supply of mains water in the direct system)
 - Tundish (provides the mandatory air gap in the direct system).



Aquabank Below Ground - Rainwater Storage and Delivery System



Rainwater for Watering the Garden

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.

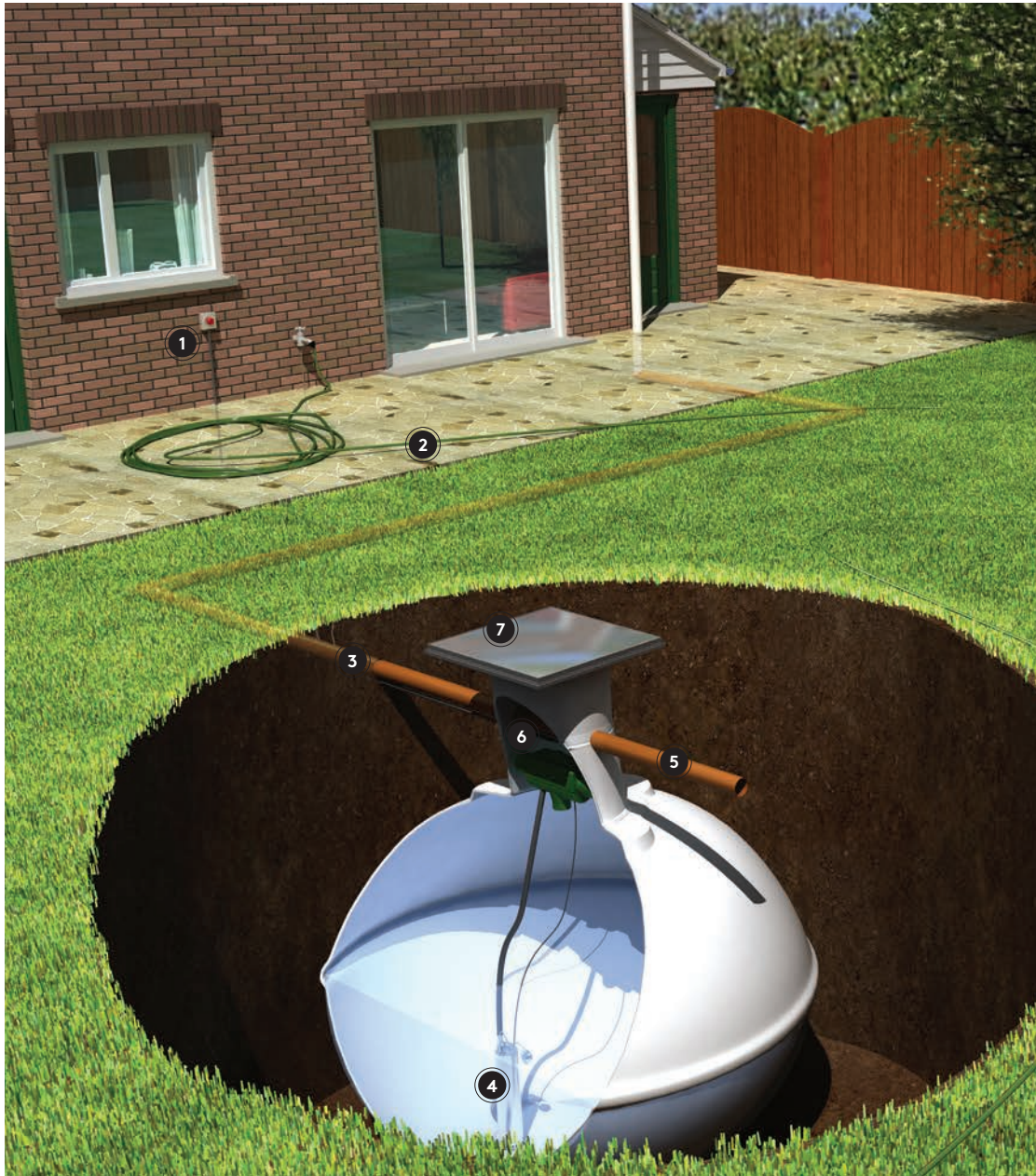
The RainTrap has many advantages over traditional garden waterbutts. In addition to being able to store far larger quantities of water, it removes the need to carry water around and does not flood when full, since the excess water exits via a soakaway or surface water drain.

The Benefits

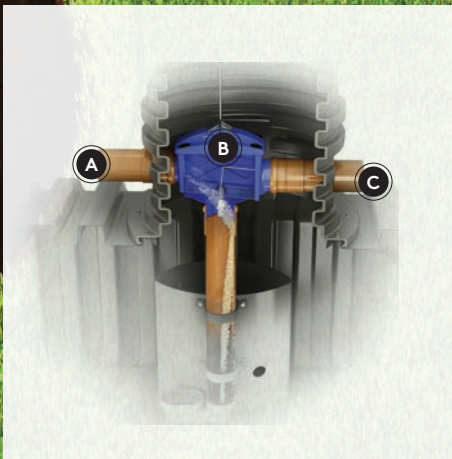
- Easy to install
- Inexpensive
- Simple on/off operation
- Suitable for existing and new homes
- Automatic rainwater diversion when tank reaches full capacity
- Available in a variety of sizes from 2,800-4,600 litres
- Internal self-cleaning leaf filter
- Designed and manufactured in the UK

Uses

- Garden watering
- Horticultural sprinkling
- Small vehicle washing Applications
- Domestic
- Horticulture
- Garden centres



- 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

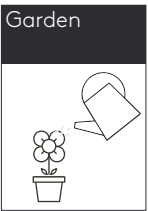


- A Rainwater flows into the filter.
- B The filter cartridge cleans the rainwater; filtered water falls into the storage tank.
- C Leaves and debris are flushed out of the filter periodically by excess rainwater.

Technical specifications - Aquabank

Ordering Code	Capacity (Ltrs)
AQB010GK SW	1,000
AQB028GK SW	2,800
AQB038GK SW	3,800
AQB048GK SW	4,600
AQB060GK SW	6,000

Benefits of Installing the Domestic Aquabank



Save up to **50%**

Kingspan Klargester Aquabank 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 Regulation

Aids Planning Application

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

The System that Pays for Itself

Money saved through reduced water bills means Aquawater 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

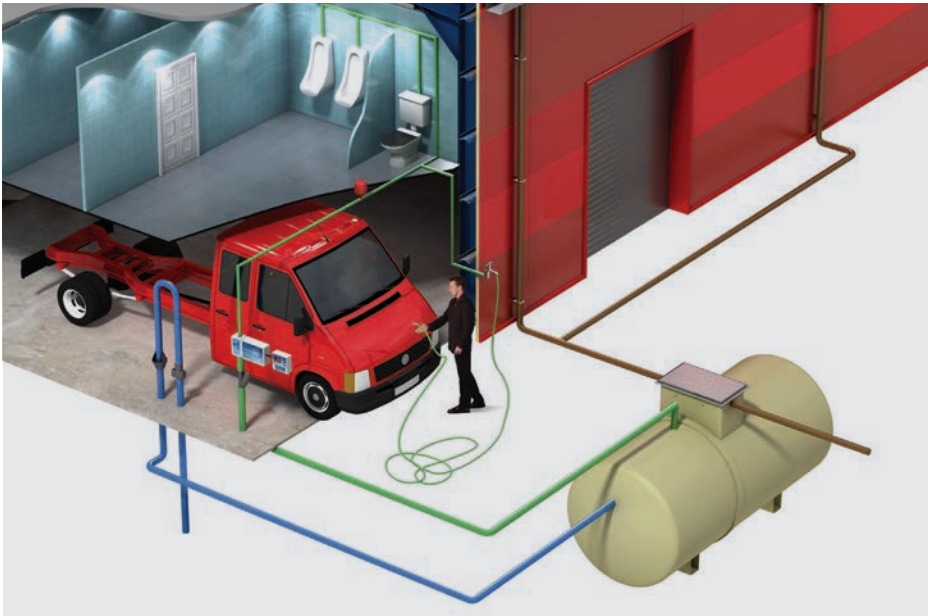
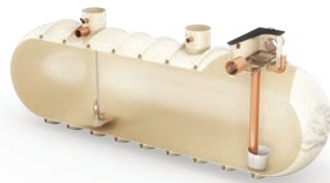
From experienced technical sales engineers.

Service contracts available for ongoing maintenance

from our own Kingspan Environmental Service Department

Helps to **Future Proof** domestic installations

Aquabank below ground rainwater harvesting system for commercial and rural use



Aquabank features and benefits

- Made from tough, durable GRP
- Capacities range from 6,000 – 79,000 litres within a single tank
- Multiple tanks can be joined to cater for larger volumes
- Can be installed under trafficked areas (with reinforced concrete support)
- Packaged units delivered directly to site.

Kingspan’s Aquabank commercial range is a fully integrated, intelligent rainwater harvesting solution suitable for new housing developments requiring multiple systems.

Aquabank provides a secure solution for any size of building project from 6000 litres up to 79000 litres in a single tank. For larger capacities of water, multiple tanks may be connected together to meet storage requirements.

It is available as either a gravity or direct system, depending on specific site requirements.

Water Conservation – Drivers in the UK and Ireland

- BREEAM (BRE Environmental Assessment Method)
- Future proof against water shortages
- Climate Change and Environmental Awareness
- Reduction in water costs
- Green agenda globally
- Building differentiation



Each Kingspan large installation is carefully sized and selected, taking into consideration the following factors:

- Roof water yield
- Projected water consumption
- Groundwork criteria (prevailing water table, soil conditions, requirements or traffic access)
- Suitable filters and pumps to match system specifications, ensuring the water is kept at an optimum level of clarity and supply pressure).



Rhino Rainwater Harvesting Range - Commercial and Rural



Fully Compliant Range

- Tested in accordance with AS/ NZS1170:2007. (Structural Design Actions)
- Tested in accordance with AS/ NZS 1554:2008 (Structural Steel Welding)
- Tested in accordance with AS/ NZS 1170:2007 (Structural Design Action)
- Tested in accordance with AS/NZS 4680:2006 (Hot Dip Galvanized Zinc Coatings on Fabricated Ferrous Articles).

Kingspan’s Rhino Range is fully compliant and tested against the toughest environmental conditions.

Our Kingspan Rhino corrugated commercial tanks are built tough in ZINCALUME® steel and come in ZINCALUME® and the full range of COLORBOND® colours.

Tanks range from 26,000 litres up to 2.3 million litres. All tanks have a reinforced food grade 5-layer polyethylene liner, making them ideal for rural and industrial applications.

We also offer Permastore Glass-fused-to-Steel Industrial tanks for applications that corrugated lined tanks cannot service. Permastore tanks offer solutions for mass storage in desalination, effluent, municipal and many other areas.

Kingspan’s Rhino commercial tanks are manufactured in our Western Australian factory under a quality management system certified to ISO 9001. Kingspan Rhino steel tanks are available in capacities ranging from 20,000 - 500,000 litres.

Features and Benefits

- Corrugated Wall Profile - Manufactured from quality, genuine ZINCALUME® steel, the wall structure of our tanks is composed of corrugated Blue-Orb sheeting, providing increased strength and durability.
- Roofing - The roof structures of all Kingspan commercial tanks carry dead and live loads in accordance with AS/NZS 1170:2007 (Structural Design Actions).
- Welding - All welding and other manufacturing involved in the production of Kingspan Rhino commercial tanks is in accordance with AS/NZS 1554:2008 (Structural Steel Welding).
- Structure - All Kingspan Rhino commercial tanks can be specifically engineered for cyclonic regions in accordance with Australian Standards for wind loads AS/ NZS1170:2007 (Structural Design Action).
- Corrosion protection - All structural components of Kingspan Rhino commercial tanks are hot dipped galvanized to meet AS/NZS 4680:2006 (Hot Dip Galvanized [Zinc] Coatings on Fabricated Ferrous Articles).

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