



RainDirector®

CONTROL RAIN WATER AROUND THE HOME

Header tank

Down pipe water flows
to storage tank

Water supply pipes
from header tank to
appliances (yellow)

Appliances to be fed
with rainwater

Mains water supply
(blue)

Control unit with 12 volt
bus microprocessors
control buttons and
indicator lights

Rainwater storage tank,
typically underground
2,000 - 10,000 litres

Submersible pump,
electric

Flush back to storage
tank (Yellow)

Rain water supply
(Green)

- Reliable mains backup
- Advanced functions
 - Energy savings
- Less pump and valve wear
- No brackish water



The Rain Director® ensures a constant head of clear rainwater for washing machines, toilets, the garden and other uses. A header tank in the home is controlled by electronic level sensors, valves and a control panel.

The Rain Director® has been developed to meet shortcomings in standard mains backup and pumping systems.

The advantages are:

- Variable rainwater level in the smart header tank eliminates pump cycling and reduces power consumption: the header tank only refills once it's completely empty (while normal rainwater systems make the pump start every time any amount of water is used) so wear on the pump and electricity usage are both reduced.

- Provides a constant flow of rainwater under gravity at any time, including during power cuts.

- Mains water backup is automated by level sensors not stop valve or ball cock.

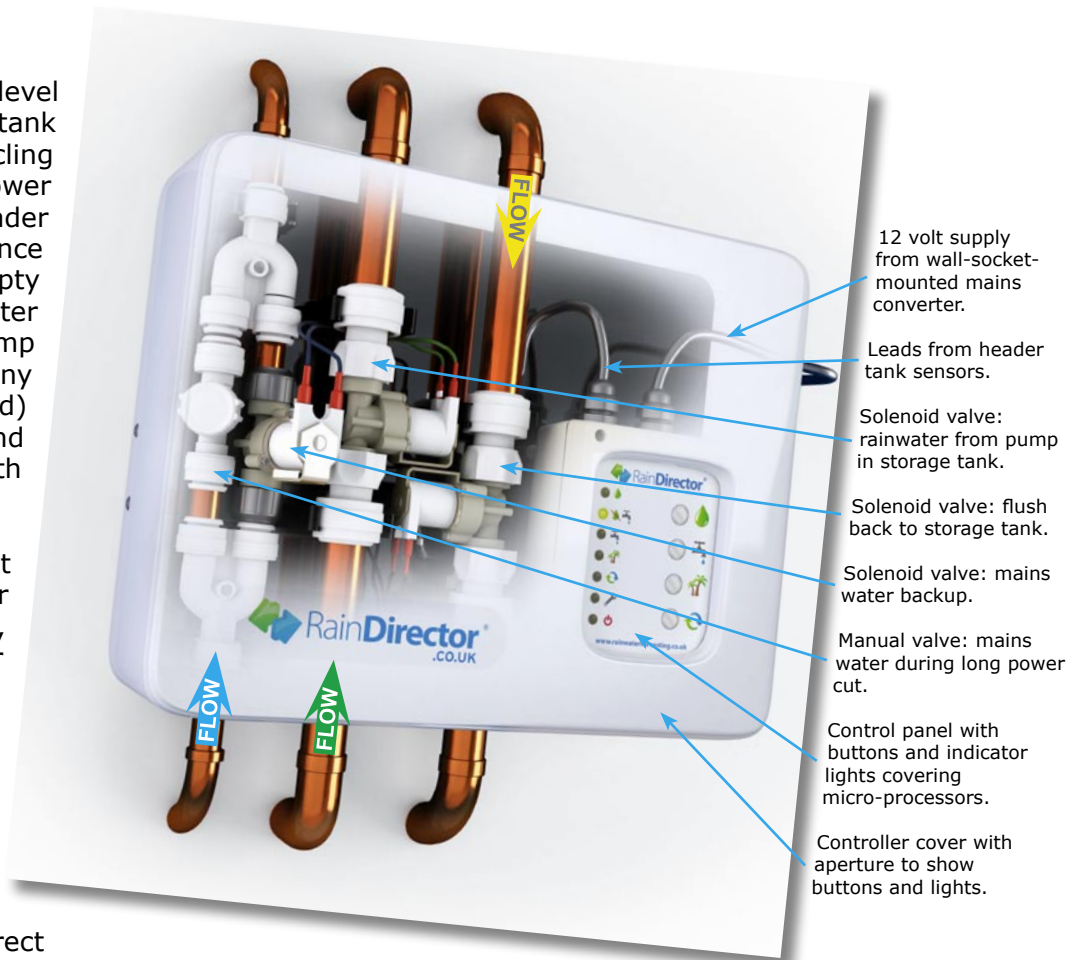
- Rain Director®'s dashboard indicates correct functioning and if rainwater is available or mains backup is on.

- Rain Director®'s auto-flush function detects when the occupant is away from home (for example, on holiday) and empties the header tank to avoid rainwater going brackish (dark coloured water and stained toilet bowl, to be avoided).

- On first fitting, Rain Director®'s set-up mode lets the control unit memorise the header tank size and the flow rate of the mains and rain water. This enables the time-out periods and operating water levels to be set.

- Price is lower than most rain managers and mini header tank systems.

- No pump noise. Most rain managers incorporate the pump into the unit installed in the house. This can be noisy. With the Rain Director®, the pump can be left in the underground storage tank.



12 volt supply from wall-socket-mounted mains converter.

Leads from header tank sensors.

Solenoid valve: rainwater from pump in storage tank.

Solenoid valve: flush back to storage tank.

Solenoid valve: mains water backup.

Manual valve: mains water during long power cut.

Control panel with buttons and indicator lights covering micro-processors.

Controller cover with aperture to show buttons and lights.

How the Rain Director® Saves Energy and Prolongs Pump Life

Typical rainwater systems have a pressure sensitive pump which maintains pressure on the rainwater pipe to toilets, washing machines and any non-drinking-water tap.

In these old systems, as pressure in the pipe run drops, the pump will start up again even when there has been no demand on the water supply. And the pump starts every time an appliance is used.

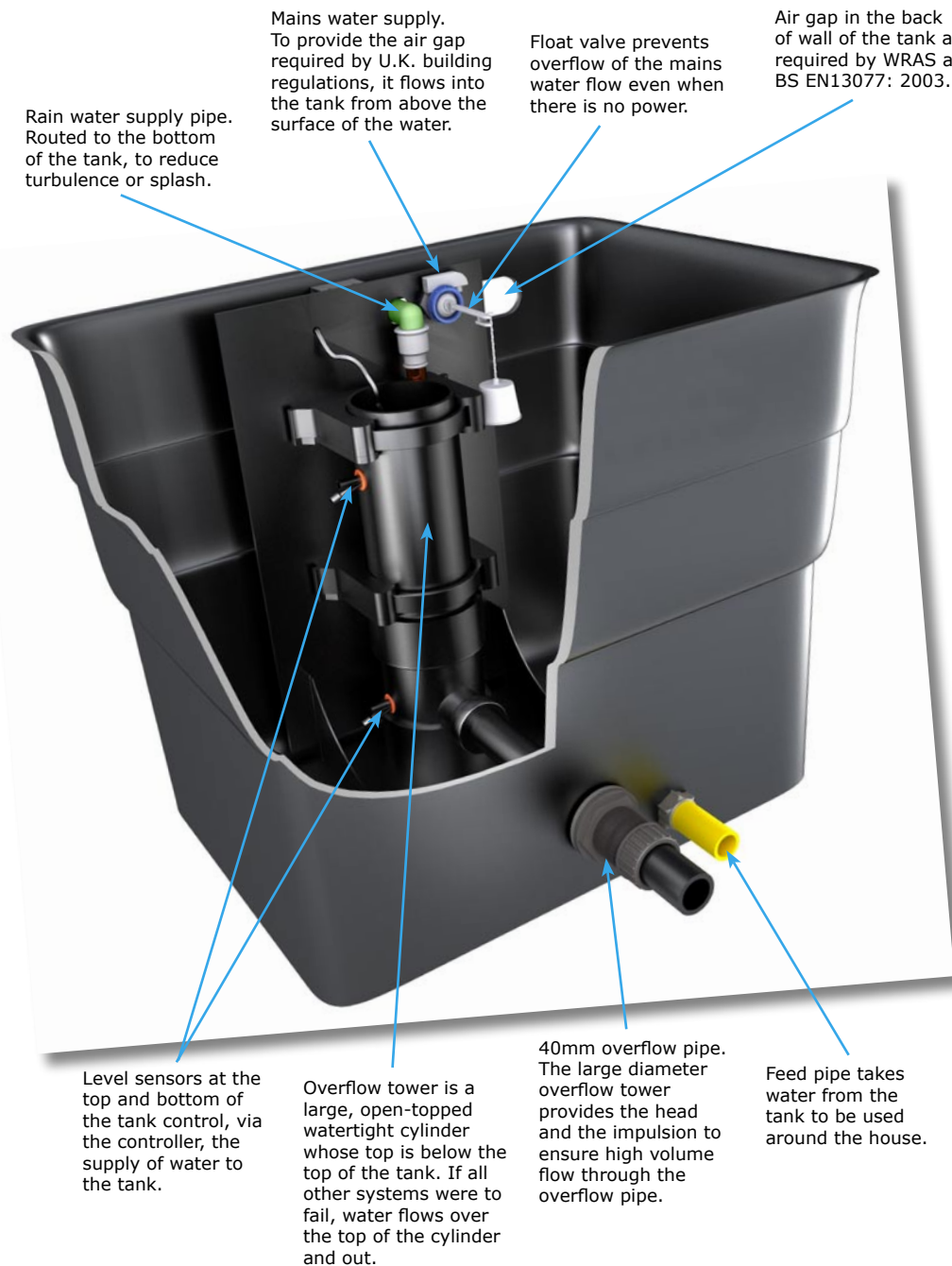
The pump turns itself on and off periodically, day and night. This effort accelerates the wear on the pump bearings, seals and motor. Also, because the pump starting up draws a peak surge in power, electricity use is unnecessarily high.


The Rain Director® solution: The sensor in the smart header tank will start the pump only when the water in the header tank has been used. No cycling every time a loo is flushed.

A 91 litre header tank will last for more than 10 full toilet flushes, or two clothes washing machine cycles.

In a typical home the pump would only cycle about once a day. Up to eight times less electricity is used. And there's much less wear on the pump.

- Fail-safe mains backup, smart header tank.
- Saves energy and prolongs pump life.
- Avoids brackishness in header tank.
- Assures water supply during a power cut.
- Indicates if rainwater supply not working.
- Automatic and user-controlled functions.
- Handy and stylish control panel.
- Price is lower than that of rain managers and other mini header-tank systems.
- No pump noise. Most rain managers incorporate the pump into the unit installed in the house. This can be noisy.



Winner of the Birmingham Telegraph Energy Saving Product of the Year Award for 2008. 

Featured in BBC TV's "It's Not Easy Being Green" with Dick Strawbridge and Channel 4's "Grand Designs" with Kevin McCloud.

How the Rain Director® Avoids Brackish Water in the Home

Bacterial Action above 8-15°C causes discolouration of water and, in extreme conditions, a health hazard.

Rainwater in an underground tank is cold enough to stay crystal clear. Rainwater in a normal header tank inside the roof space is subject to warm temperatures, bacterial action and discolouration. This is where the Rain Director comes in.

The Rain Director® solution: Rain Director®'s auto-empty function detects when the occupant is away from home (for example, on holiday), empties the header tank and fills it with chlorinated mains water, every three days.

Unused rainwater is returned to the underground rain water storage tank. When occupant returns home and starts using water, the system reverts to rain mode automatically.

CONTROL RAINWATER AROUND THE HOME

The Rain Director® can be bought separately or as part of a kit.

A typical rainwater harvesting system kit comprises:

- Underground rainwater storage tank
- Filter integrated into the top of the tank
- Telescopic lid and turret to the tank
- Overflow siphon and rodent barrier
- Calmed inlet to prevent new water disturbing any silt
- Floating pump intake to draw water from cleanest part
- Pump, either submerged in the tank or in the house
- Mains backup to supply your appliances when there's no more rainwater

There are three types of mains backup available from RainWaterHarvesting.co.uk:

- simple mains backup, a solenoid valve with float switch ("Standard").
- a rain manager incorporating mini tank and pump in one console in the home ("Premium").
- the new Rain Director® with smart header tank ("Pro"). "Pro" systems, including Carat Tank from Graf, accessories as listed above, submersible pump and the Rain Director, come in 4 sizes. Prices exclude VAT but include England and Wales delivery and are correct as at March 1 2009 – check web for current price.



2700 litres	£1884	L 2080 x W 1565 x H 2010mm
3750 litres	£2194	L 2280 x W 1755 x H 2200mm
4800 litres	£2373	L 2280 x W 1985 x H 2430mm
6500 litres	£2644	L 2390 x W 2190 x H 2710mm

The Rain Director® can be used with any rainwater system and is available with the submersible pump at £723.40. Please specify RD01 or RD02 (same price) on ordering:

RD01 Domestic and Garden: pressure sensitive pump, suitable for domestic and garden use because a spur to a garden tap or similar, before the header tank, is always under pressure and will feed a car wash hose, garden hose or irrigation system.

RD02 Domestic Super-Eco: pump is electrically switched and uses even less electricity. Sprinkler pressure for garden not available but a garden irrigation system or low-flow tap can be connected after the header tank for supply by gravity.

Price without pump and distribution terms available on request.

Rain Director® Components:

- Smart header tank for roof space, including two electric level sensors, float valve, overflow tower, inputs and outputs. 91 litres capacity. 736mm (L) x 584mm (W) x 533mm (H).
- Rain Director® controller with mode indicators, programming buttons, control valves, and 12v converter. Wall-mounted, ground floor. 325mm (W) x 260mm (H) x 95mm (D).
- Heavy duty submersible pump to fit in underground storage tank.

The Rain Director® is built in the UK to the highest standards for RainWaterHarvesting.co.uk. One year guarantee on all Rain Director® parts. All components have been designed to comply with WRAS (Water Regulations Advisory Scheme) and UK Building Regulations and should be installed to the standards of BSI 8515 February 2009. WRAS approval for the Rain Director® applied for. UK, European and Worldwide patents for the Rain Director® applied for. The trade mark Rain Director® is registered and protected. All rights reserved - RainWater Harvesting Limited © 2009.

Online and phone sales at: www.RainWaterHarvesting.co.uk Email: info@RainWaterHarvesting.co.uk www.raindirector.co.uk
Download the technical specifications for further details: www.RainWaterHarvesting.co.uk/downloads/raindirector_manual.pdf



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