

Watercare 1100

Domestic Rainwater Harvesting Control System

PRODUCT OPERATION

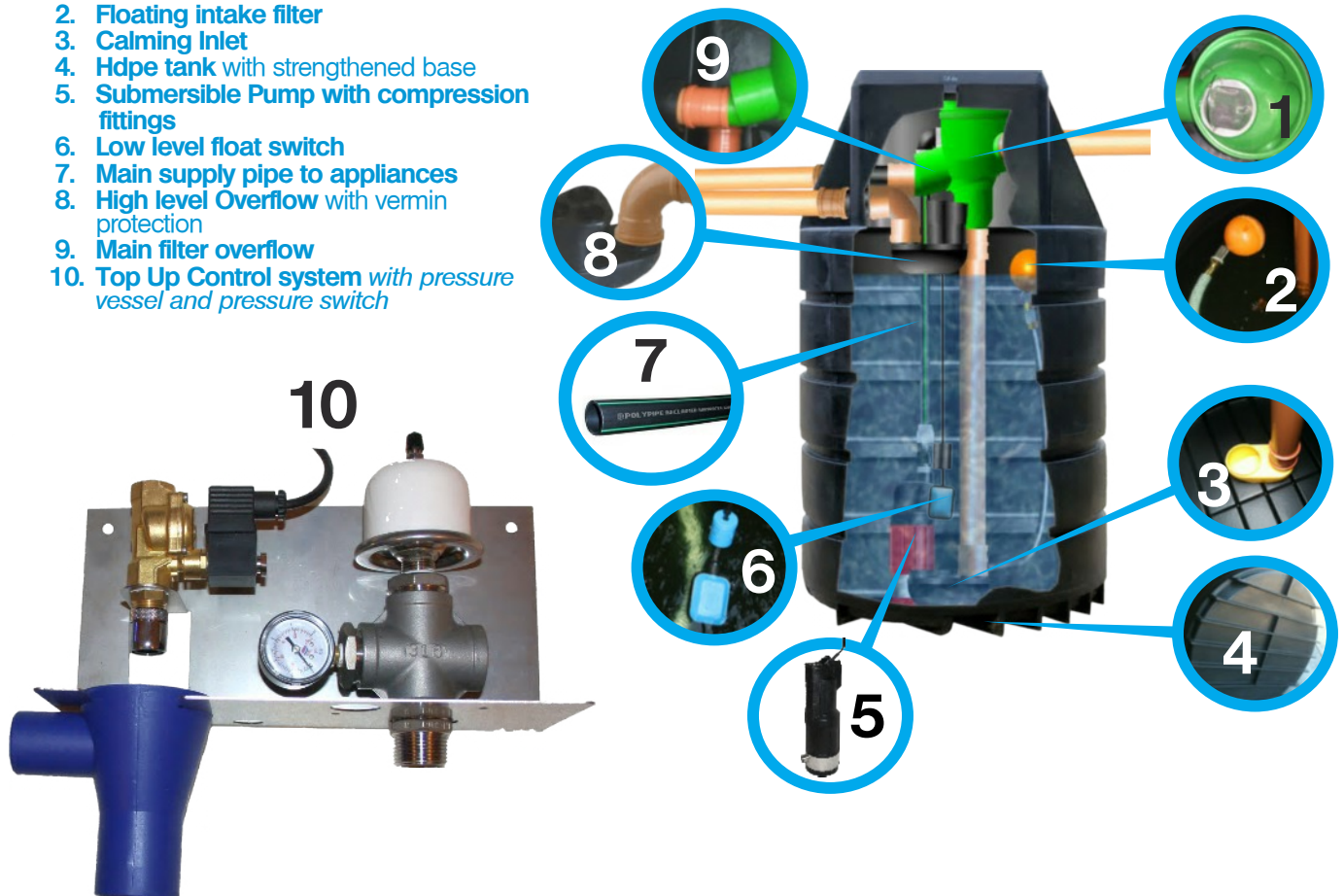
The rainwater distribution is via an intelligent pump system which distributes stored water from the tank to chosen appliances inside and outside the home.

When a connected appliance is used (e.g. flushing a toilet), a pressure switch inside the submersible pump activates the submersible pump which is located at the bottom of the storage tank. The pump then draws water from the cleanest part of the tank, via a floating filter intake, the pump continues to operate until the water in the system has been restored.

When the storage tank is full, it will overflow to surface water drain via the overflow at the top of the tank, however if the water level is low, the low level float in the tank will activate the controller solenoid valve to provide mains water back up and ensure a continuous supply of water in the tank to continue operation, but leaving considerable capacity in the tank to collect rainwater.

In the unlikely event of there being no water present in the tank, the system is equipped with dry run protection which automatically switches off the pump to prevent it from burning out.

1. Main rainwater filter
2. Floating intake filter
3. Calming Inlet
4. Hdpe tank with strengthened base
5. Submersible Pump with compression fittings
6. Low level float switch
7. Main supply pipe to appliances
8. High level Overflow with vermin protection
9. Main filter overflow
10. Top Up Control system with pressure vessel and pressure switch



General specification - Control Panel

- 160ml Hammer arrester
- Pressure Gauge
- Stainless Steel pipe fittings
- Plug in pump socket
- Plug in float switch socket
- 2 metres of mains cable

Technical specification - Control Panel

- Max. Working Pressure: 10 Bar
- Power Supply: 220 - 240V, 50 - 60Hz
- Max. Current: 10A
- Degree of Protection: IP55
- Water inlet: 1" BSP Male
- Water outlet: 1" BSP Female

General specification - Float Switch

- Max. Contact Voltage: 250Vac
- Max. Contact Current: 15A
- Casing Material: Polypropylene
- External Length: 103mm
- External Width: 81mm
- Cable Material: CPE Synthetic Rubber
- Cable Length: 15 Metres
- Max. Operating Temperature: 70°C
- Specific Gravity: 0.9 to 1.3
- Max. Submerged Depth: 20 Metres

General specification - Solenoid Valve

- Coil Voltage: 230Vac, 50Hz
- Min. Operating Temperature: -10°C
- Max. Operating Temperature: +90°C
- Inlet Connection: 1/2" BSP
- Min. Operating Pressure: 0.1 Bar
- Max. Operating Pressure: 15 Bar
- Flow Rate: 3.8 cu.m/hour (3,800 litres/hour)

General specification - Submersible Pump

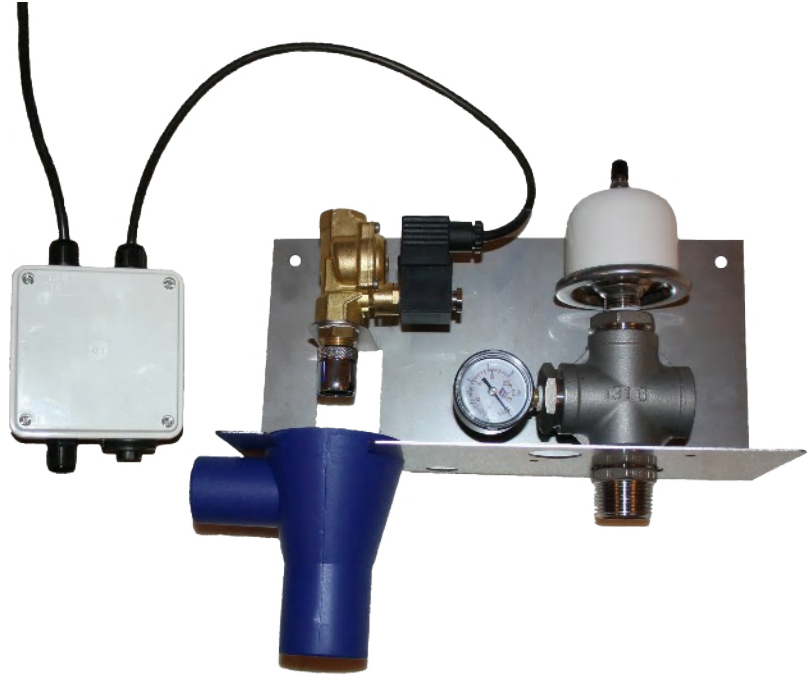
- Manufactured with non-corrosive and rust proof materials
- Ceramic shaft sleeve for long life and sand resistance
- Energy efficient motor with double ball bearing construction
- Stainless steel shaft and motor housing
- Built in electronic pressure switch and flow sensor
- Dry run protection
- Built in non return valve
- Perfect cooling allows running of pump even if partially submerged

Technical specification - Submersible Pump

- Power Supply: 230Vac, 50Hz
- Power Consumption: 0.75KW
- Nominal Current: 4.8A
- Degree of Protection: IP68
- Cable Length: 15 metres
- Rated Speed: 2,800 RPM
- Max. Fluid temperature: 35°C

Control Panel:

- Control Unit, pre mounted on a wall mounting stainless steel bracket.
- Tundish
- Mains water back up solenoid valve
- Pressure gauge
- Hammer arrester
- Stainless steel pipe fittings



Tundish: provides an air gap to prevent backflow into the mains water supply, meeting the requirements of BS EN 13076.

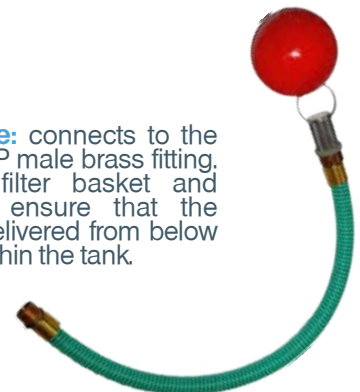
Float Switch: suspended near the base of the tank to detect low water levels and to activate the mains water top up. The float switch is supplied with an anchor weight, 15 metres of cable and a 2 pin plug which attaches to a socket on the underside of the control panel.



Submersible Pump: self priming and supplied with 15 metres of cable which terminates within the control panel.



Floating Inlet Hose: connects to the pump via the 1" BSP male brass fitting. Supplied with a filter basket and floatation ball to ensure that the cleanest water is delivered from below the surface water within the tank.



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