

BioTecture Ltd

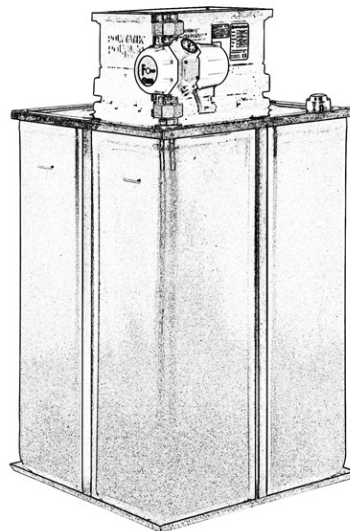
Irrigation Specification: Living Walls 100m² to 500m²

Components

1. WRAS Compliant Break Tank
2. Irrigation Pump & Pressure Device
3. Nutrient Tank
4. Dosing Unit
5. Solenoid Valves
6. Control Unit & Remote Sensing / Control
7. Supply Pipework & Compression Fittings
8. Delivery Pipework & Pressure Compensated Drippers

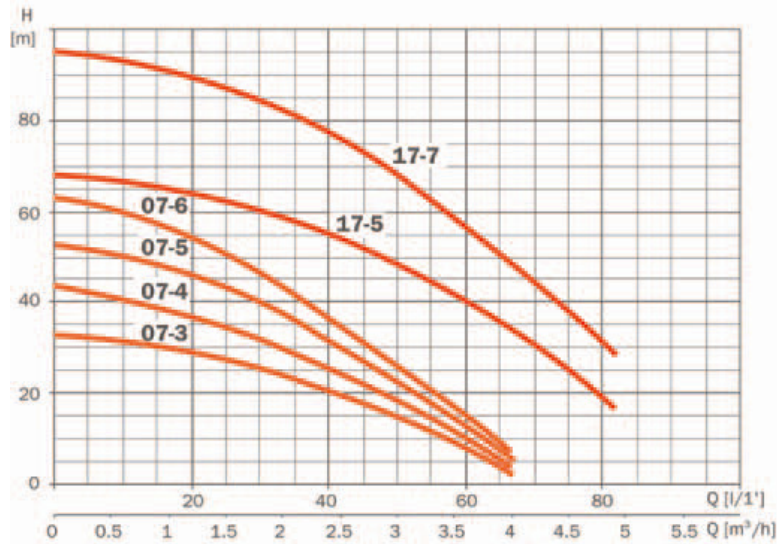
1. WRAS Compliant Break Tank

- ❖ High Density Polyethylene (HDPE) break tank to BS4213
- ❖ Minimum capacity of 200 litres
- ❖ Byelaws 30 top tank fitted with 1/2" ball valve complying with (byelaw 11) type "AB" air gap, protecting incoming mains supply from class 5 designated risk of contamination (byelaws 25)
- ❖ Example as shown below - typical size 590mm x 590mm x 1120mm high



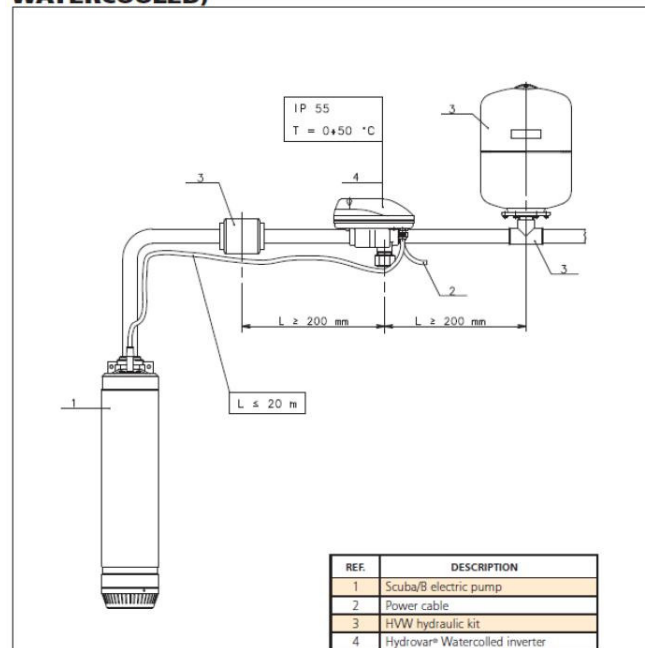
2. Irrigation Pump and Pressure Device

- ❖ Suitably sized pump to accommodate flow rate and pressure requirements from either the ESPA or LOWRA range. ESPA pump curve range shown below



- ❖ Pump power rating 0.55kW to 1.10kW
- ❖ Pump control will be managed by an in-line inverter with built-in pressure transducer. Electronics prevent starting without water. This combination installation supplies water at a constant pressure (nominally 3 bar pressure). An example of this combination installation based on a LOWRA pump is as below:

INSTALLATION EXAMPLE OF A SUBMERSIBLE PUMP CONTROLLED BY AN INVERTER (HYDROVAR® WATERCOOLED)



3. Nutrient Tank

- ❖ Suitably sized irrigation tank; 200 litres example as shown here
- ❖ Tank will be corrosion resistant industrial strength MDPE



4. Dosing Unit

- ❖ A Dosatron D3 GL-2 will be installed in line to add the nutrients via continuous proportional injection
- ❖ Dosing Rate: 0.2% to 2.0%
- ❖ Flow rate: 10 to 3,000 litres per hour
- ❖ Operating Pressure: 0.3 Bar to 6.0 Bar



5. Solenoid Valves

- ❖ Zone control to maintain living wall irrigated zones to a maximum of 2,000 litres per hour to be provided by Bermad or similar globe solenoid valves
- ❖ Valves complete with self cleaning orifice and flow control handles
- ❖ Valves complete with manual solenoid override opening in case of power failure or for manual test



6. Control Unit

- ❖ City Gal central irrigation controller complete with built in cellular communication to the control centre (see details on the following page)
- ❖ Web based control centre allowing access from any PC or PDA using secure access (see details on the following page)
- ❖ Alarm to Email and mobile devices
- ❖ Internal battery operates the unit for up to 10 years
- ❖ Input via water meter (moisture sensors optional if required)
- ❖ Frost protection programme

7. Supply Pipework and Fittings

- ❖ Pipes to be suitably sized black LDPE pipe marked with a continuous greenline to denote irrigation water
- ❖ Fittings to be Kosmos compression fittings designed to a minimum of 6 atmospheres



8. Delivery Pipework & Pressure Compensated Drippers

- ❖ Techland Pressure Compensated Non- Drain Anti-Siphon 16mm dripline by Metzerplas complete with integral internal drippers
- ❖ Vardit Internal drippers only at a spacing of 150mm (4 drippers per panel)
- ❖ Outlet rate = 1.6 litres per hour
- ❖ Drippers to be self compensating and self continuously cleaning



PCND Driplines installed @ Buckingham Gate