

# The Bio-Pure

Simple solution sewage systems

## Manufacturers of the innovative Bio-Pure Sewage Treatment Plant

- **UK Manufactured** ● Typical 5 year emptying interval achieves 95% solids digestion ● **Odourless** no smelly primary settlement tank ● **25 year tank warranty** on all GRP parts of the tank. The compressor has a 2yr warranty
- **Affordable** high quality product ● **One of the lowest running costs** of any sewage treatment plant ● **Lowest Visual Impact**
- **Cheap and Easy Installation** no concrete needed unless preferred ● **Unique Anti-floatation Lugs** allow the option for nominal concrete anchoring if preferred

**NEW**

Bio-Pure E Range with power consumption typically 50% of any competition

Unique sludge return system for low usage periods ideal for holiday homes

Units available with integrated pumped outlet with intelligent self diagnostic alarm

Also available low profile septic tanks, septic tank conversion units and raw sewage pump stations

**1 to 50 persons**

CE MARKED & TESTED TO BS EN 12566-3



What is

## The Bio-Pure

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system?

The Bio-Pure sewage treatment range is designed to serve both domestic and commercial properties that have no access to mains drainage. The units are independently tested and certificated to BS EN 12566-3 and clean the final effluent to a standard far better than the normal British Standards of 20 mg/l Biological Oxygen Demand (BOD) 30 mg/l Suspended Solids and 20 mg/l Ammonia on a 95 percentile basis.

The standard range caters for between 1 and 50 persons with bespoke units catering for up to 300 persons.



The unit offers a very discreet solution to on-site sewage treatment as the small lid is flush with the ground and unlike its rivals, the compressor housing is under the lid with no visually intrusive kiosk. Unique sludge return system designed and tested for low usage periods, offering unparalleled effluent quality in holiday home usage. The Bio-Pure itself is craftsman built, superb quality (using thicker fibreglass than its rivals), very robust and carries a 25yr guarantee on all GRP parts of the tank.

The Bio-Pure is the answer if you are looking for a top quality, discreet unit with low running costs. It offers outstanding value for money.

Benefits of

## The Bio-Pure

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- **UK Manufactured** top quality construction
- **Typical 3-5 year emptying interval** achieves 95% solids digestion
- **Odourless** no smelly primary settlement tank
- **25 year tank warranty** on all GRP parts of the tank. The compressor has a 2 yr warranty
- **Affordable** high quality product
- **One of the lowest running costs** of any sewage treatment plant
- **Lowest visual impact** all contained under one lid
- **Lowest cost installation** solid construction means concrete not needed unless preferred
- **Unique sludge return system** further aids digestion of solids and performance during low usage periods
- **Available with integrated pumped outlet** with intelligent self-diagnostic alarm
- **Bio-Pure E Range available** with power consumption 50% less
- **All standard units ex stock**
- **Nationwide service agreements** with factory trained technicians
- **Free telephone support** with trained technicians



How does

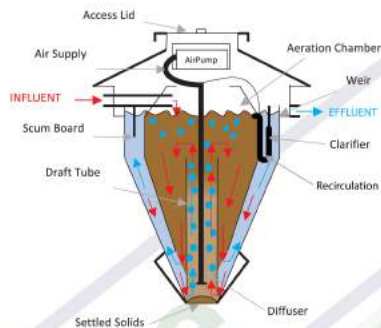
## The Bio-Pure

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work?

The Bio-Pure is a two-chamber unit and consists of a conical tank that contains an inner tank aeration chamber, which is open at the base. The space between the inner and outer tank is the clarifier chamber. A draft tube, positioned 100mm from the base of the clarifier, extends up into the aeration chamber.

Air from the compressor housed under the lid is piped to a diffuser in the draft tube. Raw sewage enters the aeration chamber and air surging up from the draft tube aerates the sewage, causing an aerobic bacterial colony to establish and digest the organic matter. As more raw sewage enters the chamber, an equal amount of effluent displaces through the open bottom into the clarifier. The quiet conditions in the clarifier allow all the suspended solids to sink to the base of the clarifier. They are drawn back up the draft tube by the upward flow of air, for further digestion in the aeration chamber. A small quantity of settled effluent from the top of the outer clarifying chamber is drawn back into the centre aeration chamber by a simple air lift system, for further digestion. The clear effluent rises to the top of the clarifier and passes over a weir into the outlet pipe. The Bio-Pure constantly recycles the sewage via gravity and the airlift system and achieves near total solids digestion. Unlike all other extended aeration plants the unit will function during low usage periods making the unit suitable for holiday lets and other infrequent usages. Unlike other sewage treatment plants that are three stage systems, the Bio-Pure does without a primary settlement tank and so can achieve extended intervals of up to 3 to 5 years without emptying.



TESTED AND CERTIFICATED TO BS EN 12566-3

## Technical Specifications

Model	Bio-Pure 1	Bio-Pure 2	Bio-Pure 3	Bio-Pure 4	Bio-Pure 5	Bio-Pure 6	Bio-Pure 7	Bio-Pure 8	Bio-Pure 9	Bio-Pure 10
No. of persons	1 to 5	1 to 7	5 to 13	10 to 16	14 to 22	20 to 27	25 to 32	30 to 36	35 to 42	40 to 55
Max. average daily flow	750 ltr	1050 ltr	1800 ltr	2400 ltr	3300 ltr	4050 ltr	4800 ltr	5400 ltr	6000 ltr	8250 ltr
Max. BOD/day	300 g	420 g	780 g	960 g	1320 g	1620 g	1820 g	2160 g	2520 g	3300 g
In ground depth	2.25 m	2.25 m	2.44 m	2.74 m	2.74 m	2.98 m	2.98 m	2 x 2.74 m	2 x 2.74 m	2 x 2.98 m
Outside Diameter	1.85 m	1.85 m	2.10 m	2.10 m	2.10 m	2.55 m	2.55 m	2 x 2.10 m	2 x 2.10 m	2 x 2.53 m
Inlet invert	570 mm	570 mm	700 mm	700 mm	700 mm	820 mm	820 mm	700 mm	700 mm	820 mm
Outlet invert	670 mm	670 mm	800 mm	800 mm	800 mm	920 mm	920 mm	900 mm	900 mm	1020 mm
Weight empty	125 kgs	125 kgs	200 kgs	230 kgs	230 kgs	350 kgs	350 kgs	460 kgs	460 kgs	800 kgs
Total capacity	2270 ltr	2270 ltr	3000 ltr	3975 ltr	3975 ltr	5610 ltr	5610 ltr	7950 ltr	7950 ltr	11220 ltr
Power consumption	44 w	74 w	92 w	148 w	184 w	184 w	240 w	332 w	368 w	424 w
E-Range	27 w	42 w	65 w	84 w	130 w	130 w	210 w	230 w	280 w	280 w

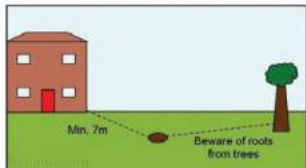
The unit can be adapted to allow for ANY inlet or outlet invert level.

## DIY Installation of

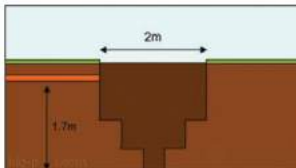
### The Bio-Pure

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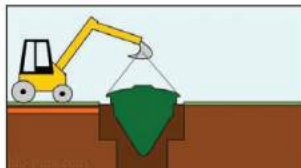
The Bio-Pure is simple, quick and easy to install as the Bio-Pure is made from high quality, thick GRP, it's construction needs no re-enforcement from concrete. Installation in a high water table can be achieved by either using a simple ground anchoring kit or a small amount of concrete.



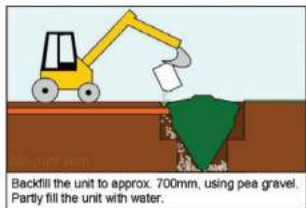
The Bio-Pure should be at least 7m from a dwelling and not too close to trees, because of the roots.



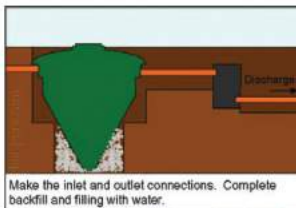
Excavate a hole 2 m wide x 1.7 m below invert. Ensure the hole is tapered at the bottom.



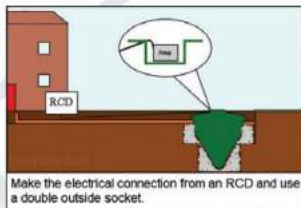
Lower the Bio-Pure into the ground using the digger. Install anchoring kit now, if required.



Backfill the unit to approx. 700mm, using pea gravel. Partly fill the unit with water.



Make the inlet and outlet connections. Complete backfill and filling with water.



Make the electrical connection from an RCD and use a double outside socket.

## Approved Installation of

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Full factory approved installations are available either directly or through factory approved installation companies, offering unparalleled service and value for money. Our approved installers can supply and install a Bio-Pure sewage treatment plant to suit your specific requirements, please ask for list of approved installers in your area. Above shows a simple installation but all installations are site specific. For more detail refer to our installation brochure.

## Maintenance of

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The Bio-Pure is designed for ease of operation. It is supplied with the market's leading linear air pump and is designed to function automatically. The Bio-Pure requires one service per year with typical de-sludge intervals of 3-5 years.

Service agreements are available either directly or through approved service providers. Factory trained technicians can undertake service requirements of your Bio-Pure sewage treatment plant to achieve its full potential.

