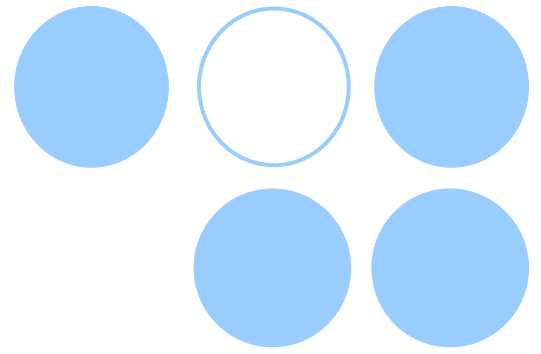


HiPAF

High Performance Aerated Filter



The WPL HiPAF is a tailor-made wastewater treatment system purposely designed to meet our customers' needs.

Combining versatility, efficient process design reliability and robust design, this plant meets Environment Agency standards, whilst minimising visual impact on the landscape.

With over 1,200 units installed throughout the United Kingdom and overseas, the HiPAF is specified by Water Plc's including United Utilities, Yorkshire Water, Anglian Water and Southern Water, whilst also being the preferred choice in many other commercial applications not connected to main drainage.

HiPAF Benefits

- Bespoke designs to meet customers individual requirements
- Minimal visual impact
- Flexible supply lead times
- Can be designed to provide a treatment quality up to 10:10:2 BOD:SS:NH⁴ as part of a package solution
- Unique Flow balancing in primary tank
- Copes with variable flows and loads
- Reliable operation and standby facility
- No internal moving parts, reducing the need for maintenance access
- Diffuser systems are accessible from the surface and the tank does not need emptying during maintenance on the air distribution system
- Large access covers
- Humus and primary sludges are stored in one place for simple tankering operation
- Specifier support service



TKS EnviroCare

HiPAF: Three Distinct Formats

Compact plant - 1-60 persons



Designed as a single cylindrical unit, containing primary, biological and secondary treatment modules. Can be used as a mobile unit to provide additional treatment to failing plants.

Midi Plant - 60-250 persons



An all in one unit containing primary, biological and secondary treatment sections, for larger applications.

Modular plant - 250-3,000 persons

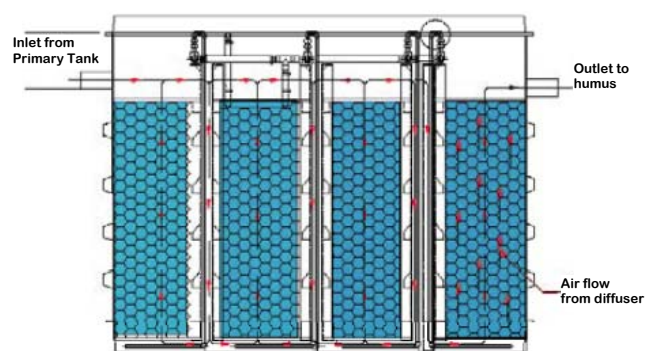
Individual primary, biological and secondary treatment units that can be used to construct very large treatment works.



The HiPAF Treatment Process

- The HiPAF treatment plant consists of a Primary Settlement Tank, Biological Treatment module and Secondary (humus) Settlement tank all fabricated in GRP and designed for below ground installation. The plant is fitted with large, gas strut assisted covers to give full access to all parts for maintenance and desludging. The package plant is supplied with a duty only air blower and control panel housed in a GRP kiosk, and 10m lengths of air hose.
- Primary settlement is in accordance with BS 6297 and the required hydraulic retention time. This ensures that 30% of the BOD will settle out in the primary tanks. Plants below 500pe will have sludge storage integral to the primary tanks. The primary settlement tank is equipped with baffles to prevent floating scum entering the biological phase of the treatment and WPL's unique forward feed system, which lowers the level in the tank during periods of low flow to provide a balancing volume for possible surges in the influent.
- After primary settlement the settled liquor is passed to the biological unit, either by displacement at a controlled rate or via the air lift forward feed. The biozone is segmented internally to eliminate the risk of shortcuts and mitigate process risks associated with variable loads. The biozone segments are filled with high voidage plastic media where both carbonaceous and nitrifying processes take place, eliminating the need for separate tanks. Air to oxidise the influent and to scour excess biomass from the filter media is introduced continuously below each chamber by a series of diffusers. Each diffuser is capable of being removed for maintenance without the necessity to shut down the plant.
- Following biological treatment the effluent flows into the secondary (humus) settlement tank where the excess biomass settles out. The humus tank is equipped with air lift pumps which are arranged to automatically transfer settled humus sludges to the primary tank for co-settlement.
- The treated effluent flows under gravity to the works outfall.
- Air to oxygenate the effluent in the biological treatment chamber and operate the various airlifts will be provided by a duty only or duty/standby air blower that is housed in a discrete acoustically lined kiosk, located above ground. This eliminates the need for any mechanical moving parts within the treatment plant and provides safe and clean working access for maintenance.
- A Form 1 control panel, also housed in the GRP kiosk, automatically controls the operation of the plant.

Flow Pattern Through Segmented Biozone



HiPAF: Optional Extras:

- Twin blowers for duty/standby operation
- Inlet invert depth from 0.5 to 1.5 metres
- Tertiary treatment options for onerous consents and failing plants
- Separate sludge handling and sludge digestion to minimise tankering costs
- Volt free telemetry contacts on control panel
- Upgrades of existing works to meet changing loads or new consent standards
- Complete turnkey service including initial site survey
- Service and post commissioning analytical facilities

Blower Installation

Each HiPAF comes complete with blower, control panel (wired in accordance with the 16th Edition), air distribution manifold and a weatherproof/ acoustic enclosure to protect it from outdoor conditions.

It can be supplied with either three-phase or single-phase electrics. Included is 10 metres of airline to connect between the blower and the tank.

If the blower is sited further than 10 metres from the plant, blower and airline hose upgrades are available. Please contact TKS EnviroCare for advice.

Guarantee

The HiPAF sewage treatment range comes with a comprehensive two year guarantee on the workmanship for the plant and twelve months on the blower.

The process guarantee is for the lifetime of the plant.

The unit's sturdy Glass Reinforced Plastic (GRP) construction and WPL's quality assurance procedures permit a minimum life expectancy of 25 years.

Availability

Deliveries within mainland England, Scotland and Wales can normally be guaranteed between 8 to 12 weeks depending on factory loading. Please contact TKS EnviroCare if you have specific requirements.

WPL Ltd. has a policy of continual product development and the above information may be subject to change without notice



Installation

TKS EnviroCare offers a full range of installation options including the full turnkey package whereby we carry out the full civil, mechanical and electrical installation of the system leaving you with a fully operational unit when we leave site.

Alternatively, we can supply an experienced engineer to oversee the installation of your chosen specialist system to ensure that it is installed in accordance with WPL's requirements. For full peace of mind we can carry out the final commissioning of the system so that you can rest assured that it is set up correctly from the outset.

Service & Maintenance

Once your system is operational and people are depending upon it every day, it is vital to ensure that it is serviced regularly and professionally. TKS EnviroCare offer a full range of Service Agreements to suit your requirements and to ensure that your system maintains its efficiency.



Caring for your environment

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