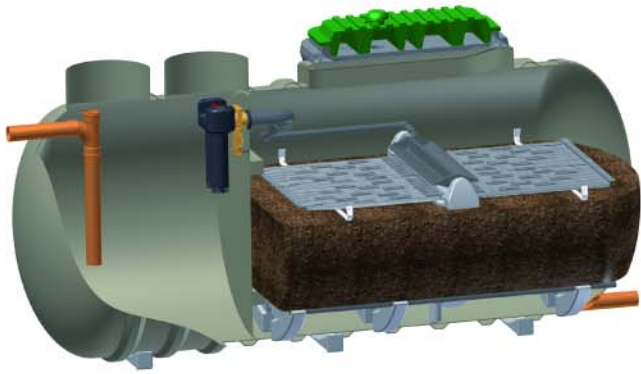


BISON ECO range



New for
2012



the BISON ECO range of **ZERO** energy package sewage treatment plants

clereflo™ ECO



demand special treatment

EPS Bison has partnered with Premier Tech Aqua of Canada and Premier Tech Aqua Purflo of France to introduce the Premier Tech Compact Coco Filter - zero energy sewage treatment plant - to the Irish market.

In standard configuration the plants offer treatment to a standard of better than 20mg/l BOD; 30mg/l SS and 20mg/l NH₃ effluent quality. The treatment plants require zero energy.

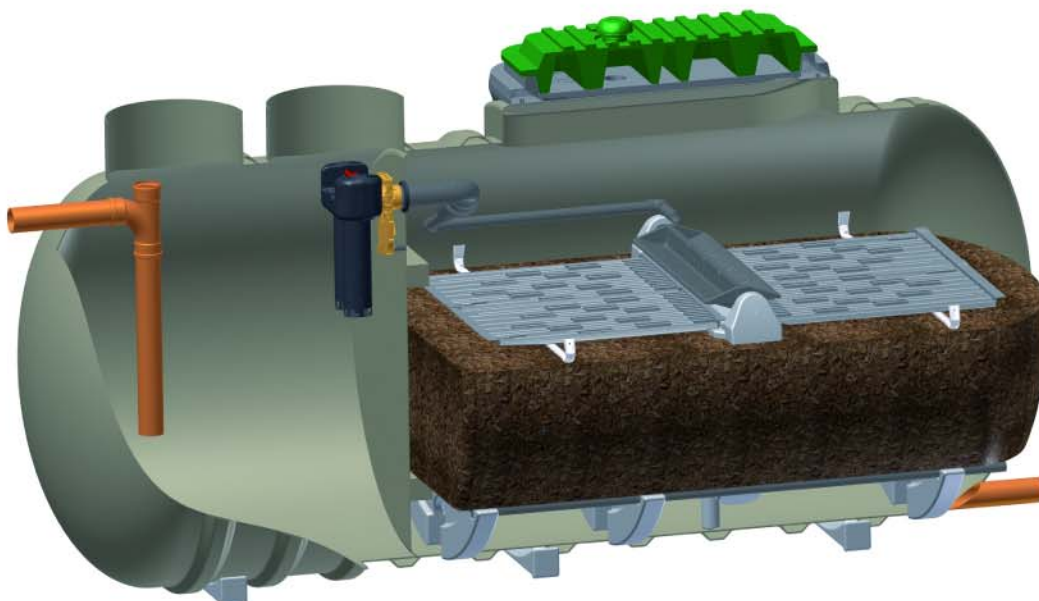
Designed and tested in accordance with EN 12566-3:2005 and sized to the EPA Code of Practice for Flows and Loads, the Clereflo ECO will serve a population range up to 12 persons. It is suitable for residential and commercial projects where mains drainage is not available. Typical applications include single dwellings, small communities or developments, refurbishments and rural self build.

For homeowners and self-builders the key features of the new Clereflo ECO are its zero energy requirement, discreet below ground operation and the low ongoing maintenance costs. For builders and developers, as well as being price competitive, the Clereflo ECO's compact design offers a low-cost, easy installation process.

FEATURES AND BENEFITS

- Zero energy
- Easy to install single tank design - reduced installation costs
- Independently tested to EN 12566-3:2005
- Value for money
- Completely below ground installation
- Proven technology with reliable performance, over 50,000 worldwide installations
- Quiet, odourless operation
- Effluent Standard better than: 20mg/l BOD: 30mg/l SS; 20mg/l NH₃
- Average effluent results under test 3.5mg/l BOD: 4.7mg/l SS: 6.2mg/l NH₃
- Suitable for discharge to ground or watercourse - subject to relevant exemption / consent / licence
- Low energy pumped discharge option for where gravity discharge is not possible

All applications should be specified to comply with the EPA Code of Practice for Flows and Loads. Further advice and assistance is available from our experienced internal and external sales teams. Site visits and assessments are recommended to ensure the correct plant is proposed for each application.



process and plant description

The Clereflo ECO zero energy treatment plants comprise of a single GRP tank. Within the tank there are two treatment stages: primary settlement and biological treatment / filtration. The flow through the plant is by gravity.

The technology utilised in the Clereflo ECO treatment plants has been developed and patented by Premier Tech Aqua who have been successfully marketing the Premier Tech Compact organic Filter for over 15 years with more than 50,000 completed installations.

The incoming wastewater is received in the primary settlement zone. The purpose of this zone is to remove the majority of the settleable material reducing the biological load to be treated.

Flow from the primary zone passes forward into the biological treatment / filtration section. In this section, transformed coco husk residues provide a highly stable and open textured filter material.

The primary settled effluent is distributed evenly over the surface of the media by a tipping plate mechanism. The effluent then trickles downwards through the coco media.

The combination of the extremely high surface area and open structure of the coco media promotes the growth of bacteria and micro organisms which treat the wastewater.

The nature of the coco media retains and degrades the pollutants to an extremely low level leading to a fully treated effluent being discharged from the plant.

The air required for the treatment process is introduced into the plant through a patented natural ventilation system meaning that no forced air ventilation is required. Therefore no energy is required for the treatment process.

Sustainable wastewater treatment



PRODUCT SELECTOR

Product Reference	Max Flow per Day	Max Load per Day	
		BOD g	NH3 g
ECO01	900	277	44
ECO02	1,200	369	59
ECO03	1,500	462	73
ECO04	1,800	554	88

Installation & Maintenance

INSTALLATION

EPS Bison advises the use of a suitably experienced and qualified installation company to install any of its products.

Care should be taken to fully assess the site ground conditions prior to commencement of installation. The Clereflo ECO requires a relatively low cost installation using either a granular (pea shingle) or concrete backfill.

Detailed installation instructions are available.

MAINTENANCE

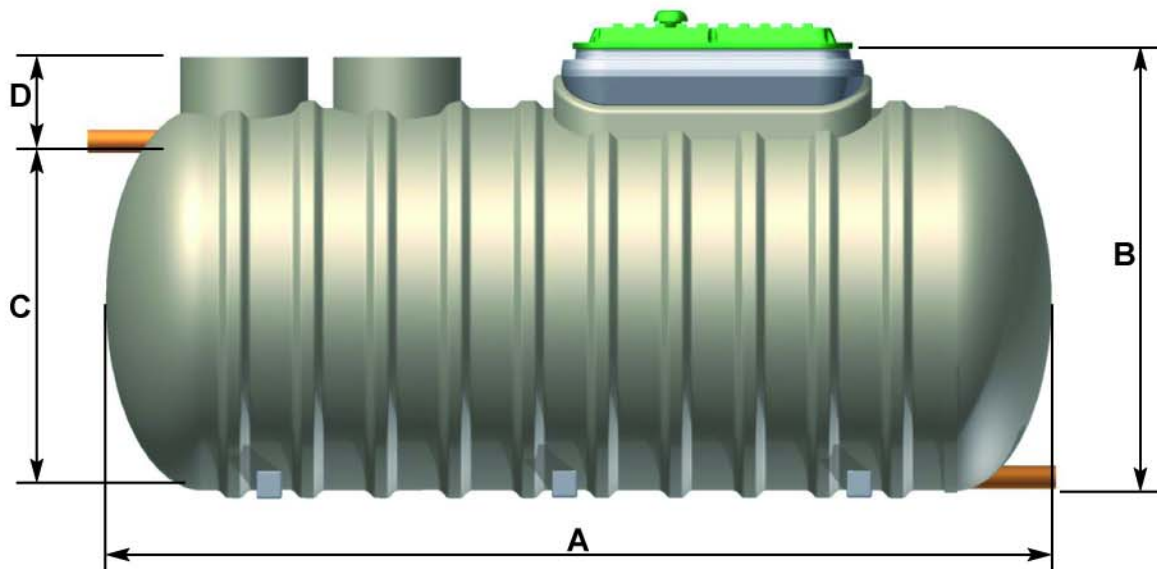
Package sewage treatment plants are installed to treat wastewater and to protect the environment. They must be cared for and maintained so that they can continue to operate effectively. Failure to do this will undoubtedly lead to pollution of the water environment, which is an offence and may result in prosecution.

For the Clereflo ECO, Bison recommends that a maintenance agreement is taken out to service the plant as indicated in the EPA Code of Practice. This maintenance agreement should be with a competent service provider using accredited service engineers.

Annual maintenance is important for the proper functioning of the coco filter. This will include visual inspection of all components, maintenance and verification of the correct operation of filter material.

A plant de-sludge (emptying of the primary settlement zone) should be carried at a frequency of between 1 and 3 years (depending on the plant loading).

Specification



Clereflo ECO	ECO01	ECO02	ECO03	ECO04
Tank Diameter (mm)	1800	1800	1800	1800
Inlet / Outlet Pipe Diameter (mm)	110	110	110	110
Overall Length (mm) A	4500	5825	6940	8055
Overall Height to ground (mm) B	2090	2090	2090	2090
Standard Inlet Invert (mm) C	1610	1610	1610	1610
Standard Inlet Invert depth (mm) D	450	450	450	450

Bison clereflo ECO technology partners

Premier Tech Aqua

Premier Tech Aqua has been marketing the Premier Tech Compact organic Filter in North America for more than 15 years. Used individually or in clusters, Ecoflo® Biofilter has been successfully meeting the needs of homeowners, small businesses and small communities, all the while protecting the environment.



Premier Tech Aqua Purflo

Premier Tech Aqua Purflo is a French manufacturer of high-capacity polyethylene and fibreglass tanks. The company targets industrial, construction, public works, wastewater treatment, storage and pumping applications. It provides today's leading decentralised wastewater treatment technology for residential and small business applications.



about EPS Bison

Protecting the water environment has been the mission of EPS, since it was established in 1968. Our full capability extends beyond our successful range of 'sealed-design' commodity products, to providing expert consultancy and design for hi-specification bespoke solutions across all areas of wastewater pollution control.

EPS Bison works closely with engineers, architects, specifiers, developers and self-builders. Providing support from detailed site surveys, plant selection, full technical proposals and liaison with regulatory bodies where necessary, we will ensure that our client achieves the most environmentally sound and cost-effective solution.

- EPS Bison is a strategic business division with the specific purpose of the design, supply, installation, commissioning, operation and servicing of packaged treatment solutions.
- EPS Bison has a diverse product range for the following applications:
 - Packaged treatment plants
 - Packaged sewage pumping stations
 - Attenuation/storage/sprinkler systems
 - Fuel/oil separators
 - Septic tank retrofit systems
 - Rain water harvesting systems
 - Above ground engineered vessels
- EPS Bison has continued to meet the ever increasing demand for the provision of environmental products and has now become one of the leading suppliers of GRP products in Ireland.

Quality Assurance

- The EPS group and its divisions have been accredited with the following standards and operates an independently and externally assessed and registered Quality Management System:
 - BS EN ISO 9001
 - BS EN ISO 14001
 - OSHAS 18001
 - CE Equal
 - UVDB™ Verification with Achilles
 - Irish Agreement Board Certification
 - CE Marking for Relevant Products
 - Ethos Partnership

let us make your environment
a better place to be...
demand special treatment



ASP 6-25pe Package Sewage Treatment Plant



NSAF 8-50pe



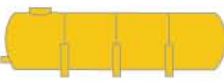
Clereflo Eco 6-10pe



Techflo SAF 60-600pe
single-stream and
multi-stream up to 1800pe



MBR Membrane Technology
Package Sewage Treatment
Systems (up to 5000pe)



General Underground
Storage Tanks



For product enquiries, specification advice, project assessments
or further information, please contact the Bison team on:



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Attenuation & Storm
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Bucket Lift Elevators

Screenpack CSOs

Above Ground Engineered Vessels

Sprinkler Tanks

