

PACKAGED FILTER SYSTEM

For Secondary and Tertiary Treatment

Tricel® Puraflo

For Single Dwellings & Small Communities

Innovative design for superior performance

UK*

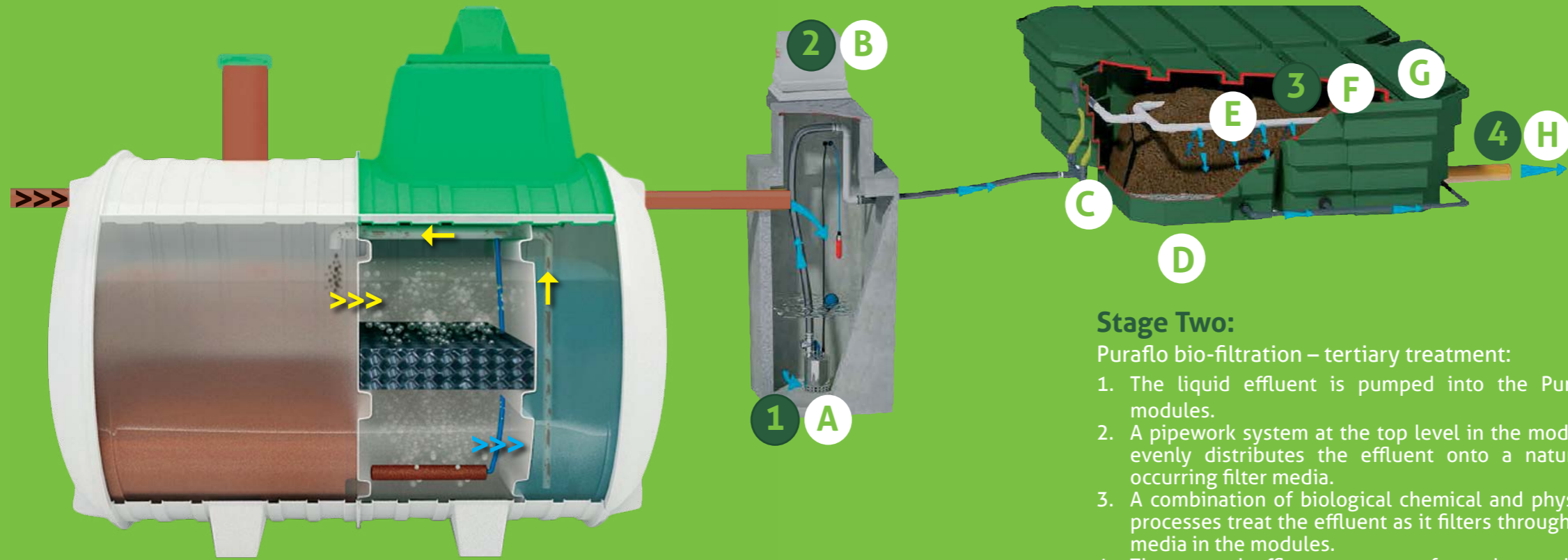
* EXCLUDING NORTHERN IRELAND



The Puraflo system *at work*

The Puraflo system is an advanced sustainable technology for the treatment of wastewater in domestic homes.

Tricel® Puraflo can be used as both a secondary treatment following a septic tank and as a tertiary treatment following a sewage treatment plant. The illustration below is a typical Puraflo installation as a tertiary treatment.



Stage One:

Primary and secondary treatment from sewage treatment plant.

Tricel® Puraflo

Can be used as:

- **SECONDARY TREATMENT**
Following a septic tank
- **TERTIARY TREATMENT**
Following a sewage treatment plant

DIAGRAM INDEX

- A. Pump chamber
- B. Control panel
- C. Inlet pipe
- D. Puraflo module
- E. Distribution pipework
- F. Biofibrous peat
- G. Sample chamber
- H. Outlet pipe

Stage Two:

Puraflo bio-filtration – tertiary treatment:

1. The liquid effluent is pumped into the Puraflo modules.
2. A pipework system at the top level in the modules evenly distributes the effluent onto a naturally occurring filter media.
3. A combination of biological chemical and physical processes treat the effluent as it filters through the media in the modules.
4. The treated effluent emerges from the modules through the outlet pipework for an approved disposal method.



The environmental advantages of Puraflo

- Puraflo is a 100% natural system that draws on the remarkable filtration properties of peat and uses no chemical additives in achieving exceptional results.
- Puraflo's unique bio-fibrous peat filter provides unsurpassed treatment of domestic water, reducing the risk of pollution whilst providing protection for homes, the environment and public health.
- Highly effective tertiary treatment when installed after a sewage treatment plant.
- Low carbon footprint.
- Up to 99.9% reduction in total coliforms.
- Up to 99.9% elimination of pathogenic bacteria.
- Micro-biological treatment of wastewater.
- Existing septic tank system can be easily upgraded to a high-performance treatment plant by adding Puraflo modules.
- The media covering the effluent distribution grid in the Puraflo module has odour absorption properties therefore suppressing sewage odours.



The Puraflo advantages for you

- Puraflo has minimal power requirements, costs typically averaging approximately £10 per annum.
- The modular design of Puraflo can be installed above or at ground level. Puraflo units do not require concrete backfill and can utilise the existing excavated material as backfill.
- The Puraflo bio-filters require no de-sludging or backwashing. Provided the tank and sump receive regular de-sludging, the system will continue to operate efficiently.
- The Puraflo system is an ideal solution for continuous or fluctuating load situations making it ideal for either main or holiday residence applications.
- The only mechanical device in the system is the pump, which works on an intermittent basis, which minimises potential mechanical problems over the life of the system.

Simple installation, minimum maintenance

While the Puraflo sewage treatment system is made up of a number of separate components, we understand the pressures to minimise installation costs while maintaining quality. Therefore, we design and manufacture the system to provide a packaged solution with ease of installation and reduced maintenance in mind.

Complementary products for the Puraflo residential system

- High Level Alarm(s)
- Sample Chambers
- Weatherproof GRP Enclosures & Kiosks

The Puraflo system has undergone a rigorous performance testing regime to achieve the highest results required. The tables below show the sizes and the wastewater treatment capability of a Puraflo. If you have any specific requirements, please contact the Tricel® sales team who will be able to assist you with your enquiry.

Secondary treatment

PARAMETER	EFFICIENCY	EFFLUENT
BOD5	98.20%	6 mg/l
COD	95.40%	31 mg/l
SS	97.70%	8 mg/l
NH4-N *	96.90%	0.6 mg/l

electrical consumption 0.1 KWh/d
* determined at temperatures of $\geq 12^\circ$ in the bioreactor

Puraflo module dimensions

Length	2,150mm
Height	760mm
Width	1,400mm
Weight (one Puraflo module)	250kg

Possible tertiary treatment levels*

PARAMETER	EFFICIENCY	EFFLUENT
BOD5	98.20%	< 1 mg/l
COD	95.40%	< 2 mg/l
SS	97.70%	< 1 mg/l
NH4-N **	96.90%	< 1 mg/l
Total Coliforms	> 99%	
Faecal Coliforms	> 99%	
Pathogenic bacteria	> 99.5%	

* based on 20/30/20 influent electrical consumption 0.1 KWh/d
** determined at temperatures of $\geq 12^\circ$ in the bioreactor

SEWAGE TREATMENT SIMPLIFIED

Sewage Treatment: Combination of physical and biological processes which breakdown the organic and inorganic sewage content which cause pollution to receiving waters.

Receiving Waters: All groundwaters and watercourses such as streams and rivers.

Population Equivalent (PE): A measure of the number of people the treatment plant serves.

Media: Bio-fibrous peat.

Sludge: The solids that settle to the bottom of the tank chambers.

BOD: Biological Oxygen Demand measured in milligrams per litre (mg/l) is a relative measure of how polluting the sewage is.

SS: Suspended Solids measured in milligrams per litre (mg/l) includes all suspended matter both organic and inorganic.

Coliform bacteria: A commonly used bacterial indicator of sanitary quality of foods and water.

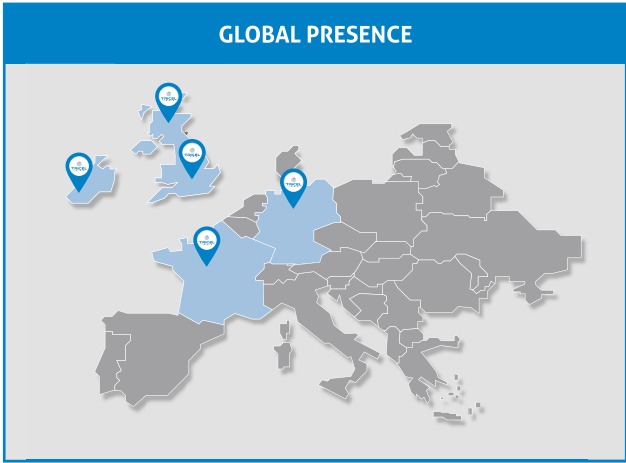
Pathogenic Bacteria: Pathogenic bacteria such as Streptococcus are bacteria which cause disease in humans and animals.

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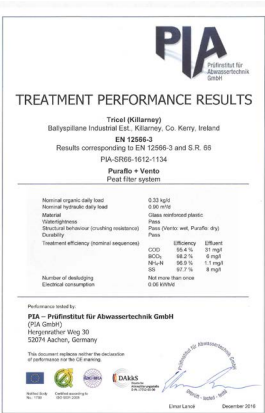
Tricel is a world recognised global provider of **high performance solutions**. Today, the company operates across multiple industries such as **Environmental, Construction, Water, and Distribution** including both composite materials and lubricants.

We are proud of being one of the largest manufacturers of wastewater treatment plants in Europe and are regarded by regulators as the standard setters within the industry.

Our company offers industry **leading innovative solutions** that our customers can trust, and with operations in 12 locations across Europe, we supply a comprehensive range of products to **over 50 countries worldwide**.



Membership of European governing bodies on wastewater treatment



Tricel wastewater treatment plants are fully tested and accredited to **European standards for CE certification**.

PIA (Prüfinstitut für Abwassertechnik GmbH) are the leading Test Institute in Europe for wastewater technology.

Tricel wastewater treatment plants meet with **EN12566-3** requirements which test both the quality of the components as well as the overall performance of the plant.



British Water is the leading association representing suppliers, manufacturers, contractors, consultants and others in the UK water industry supply chain.



Call us today for a Free Quote or details of your local partner

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In accordance with Tricel's normal policy of product development, these specifications are subject to change without notice.

