

Why choose Tricel®:

Markings and Certifications:

- French "Agrément ministériel" approval for Tricel® 1 to 20 PE (population equivalent) as published in the *Journal Officiel* on the 22nd April 2011, 17th March 2012 and 3rd January 2013
- Conforms to the ministerial order "technical specifications" of 7th September 2009 and as modified by the 7th March 2012 order
- Tricel is CE marked from 1 to 50PE after undergoing 38 weeks of stringent testing to conform to EN 12566-3, carried out in PIA in Aachen in Germany. This demonstrates constant high quality treatment from the Tricel system

Installation:

- Ideal for new builds, especially in cases of limited space as well as for renovations: Tricel is a compact system with a footprint (site coverage) of less than 5m² for 6 PE and less than 11m² for 20 PE (to be compared with the 40 to 200m² of a traditional installation).
- Lightweight, single tank easy to transport and handle
- The Tricel system is delivered ready to install for an easy and fast installation, with minimal site adjustment reducing the risk of on-site error
- Extremely robust GRP tank moulded by heat compression: backfilled with sand or gravel (crushed 4/10 or rounded 4/16), 75cm backfill allowed above the crown of the tank, resistant to ground water
- Small excavation depth, high-level inlet and outlet to avoid deep trenches, with a height difference of 7.5cm only between the inlet and outlet
- A secondary vent is integrated directly into the de-sludge manhole cover
- Manhole risers available in 25cm, 50cm and 75cm
- Tricel systems are also available with an integrated submerged pump which removes the need for a pump station

The Result:

- Underground installation is carried out for minimal interference with the surrounding landscape
- Electro-mechanical equipment installed on the tank (as standard) or remote-located if required
- Extremely quiet whilst in operation with no odour
- Low running costs (electrical consumption < 50 €/year)
- Exceptional feature: in applications of restricted access or limited space it may be possible to assemble a Tricel system directly on location

Maintenance:

- Extremely reliable, with a strong simple design and high-quality components (ceramic quartz diffusers without membranes which do not get clogged, Medo air blowers without diaphragms etc.)
- We have designed our systems with few electro-mechanical components and no electronic components which ensures little or no breakdown risk as demonstrated by our 13 years experience
- No electro-mechanical part inside the tank avoiding the risk of corrosion
- Naturally forming and continually multiplying biomass on a fixed film, utilises a trickling filter and sludge return process to maintain performance during periods of under loading and non-use
- Excellent performance in overloading conditions
- No system adjustment regardless of influent levels
- Low maintenance for customer peace of mind and minimal maintenance costs
- Annual maintenance contracts available from Tricel's network of exclusive Partners
- Permanent and lifelong solution: the PVC "honeycomb" bacteria bed does not block or deteriorate over time
- Visual and acoustic alarm as standard
- All components visible, accessible and easy to remove if needed
- Easy de-sludging of the primary settlement chamber through the de-sludge manhole
- De-sludging frequency of 1 to 5 years (depending on model type) observed in real use conditions at full loading. De-sludging, which only concerns the primary settlement chamber, is less frequent when the wastewater treatment system functions at reduced load; e.g., an FR6/4000 (sized for 1 to 6 PE) with 3 permanent users requires an average de-sludge rate of 4 to 6 years

Quality Assurance:

- Tricel wastewater treatment system traceability and tracking ensured by Tricel France and its network of exclusive Partners
- Manufactured in France for greater proximity to our customers, ensuring a localised customer service
- 20 years guarantee on the GRP structure and 2 years on the electro-mechanical components

Tricel France is: 

tricel  assainissement

A factory with dedicated technical services and a head office based near Poitiers, for greater **proximity to our customers** and a **reactive customer service**.

A quality-orientated philosophy, offering what is probably the **best value for money** to our customers: all of our equipment is **robust** and of **high quality**, the water tightness of every single tank (not based on random samplings) is tested at the end of the production process, **traceability** is ensured on all of our wastewater treatment systems...

... for flawless **reliability** and **absolute peace of mind**.

A **network of exclusive distribution Partners, that are specialists in wastewater treatment systems** (see list on our website), who ensure specifications and sales as well as the start-up, maintenance and after-sales service on each Tricel wastewater treatment system installed.

Networks of installers selected by our Partners in their respective sectors to ensure the perfect installation of your wastewater treatment system.

Extensive **experience** in wastewater treatment systems: >15,000 Tricel wastewater treatment systems installed across the world in all types of and under all climates.

The support of a **strong Irish industrial group**, specialists in GRP, building and public works applications since 1973: **KMG – Killarney Manufacturing Group**.



Your exclusive Tricel® Partner:

17 avenue de la Naurais-Bachaud • 86530 Naintré • Email: tricel@tricel.fr • Tel: +33 (0)5 49 93 93 60



Wastewater Treatment Systems fixed-bed - 1 to 20 PE

tricel  assainissement

For a serene environment



Agréments ministériels
6-9-11-14-17-20 EH
n° 2011-006 – 2012-003
2011-006-ext.1 à 9

SIMPLE - ROBUST - RELIABLE

www.tricel.fr



The wastewater treatment process

The Tricel® unit is a complete domestic wastewater treatment system based on submerged aerated filter processes. This technology, based upon Tricel's expertise in wastewater treatment systems, guarantees a high-quality product and exceptional performance.

The fixed bed aeration process is based on 3 phases, which takes part in 3 distinct compartments of the wastewater treatment system:

Stage 1: Primary Settlement

Anaerobic breakdown occurs in the primary settlement chamber where the wastewater is introduced into the system. Heavy sludge and solids separate from the liquid and settle at the bottom of the tank. A scum, mainly made of grease, is formed at the surface of this liquid. Anaerobic breakdown begins to occur here and improve the water quality.

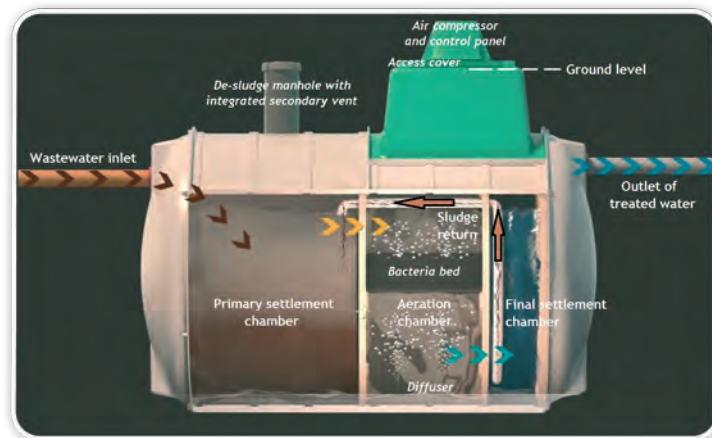
Stage 2: Aeration / Oxygenation

Stage 2 takes place in the aeration chamber where masses of naturally forming bacteria inhabit a specially designed honeycomb bed and aerobic breakdown occurs. These bacteria are sustained with air, which is continuously supplied from a purpose built air compressor in the top section of the unit.

As the liquid flows slowly through the honeycomb bed, the bacteria feed on the impurities, consume them, thus removing them from the liquid.

Stage 3: Final Settlement / Clarification

The liquid then flows from the aeration chamber into the final settlement chamber. Small quantities of bacteria called residual sludge are carried through with the liquid. This residual sludge settles to the bottom of the final settlement chamber from where a sludge return system, based on an airlift principal, returns them to the primary settlement chamber. The remaining treated liquid now meets the required standard and can be safely passed out of the Tricel system.



Volume/type of Tricel® system ⁽¹⁾	FR6/3000	FR6/4000	FR9/5000	FR9/6000	FR11/6000	FR11/7000	FR14/8000	FR14/9000	FR17/9000	FR17/10000	FR20/10000
French ministerial decree number	2011-006	2012-003	2011-006-ext1	2011-006-ext2	2011-006-ext3	2011-006-ext4	2011-006-ext5	2011-006-ext6	2011-006-ext7	2011-006-ext8	2011-006-ext9
Treatment capacity and number of inhabitants ⁽²⁾ Number of main rooms according to ministerial decree order 07/03/12	up to 6 PE	up to 6 PE	7 - 9 PE	7 - 9 PE	10 - 11 PE	10 - 11 PE	12 - 14 PE	12 - 14 PE	15 - 17 PE	15 - 17 PE	18 - 20 PE
Hydraulic load ⁽²⁾	l/day	150 - 900	150 - 900	1050 - 1350	1050 - 1350	1500 - 1650	1500 - 1650	1800 - 2100	1800 - 2100	2250 - 2550	2250 - 2550
Organic load ⁽²⁾	BOD ₅ kg/d	0,06 - 0,36	0,06 - 0,36	0,42 - 0,54	0,42 - 0,54	0,60 - 0,66	0,60 - 0,66	0,72 - 0,84	0,72 - 0,84	0,90 - 1,02	0,90 - 1,02
Total volume	l	3000	4000	4731	5546	5546	7176	7176	8806	8806	10436
Primary chamber capacity	l	1400	2400	2408	3223	2488	4118	3311	4941	4183	5813
Aeration chamber capacity	l	900	900	1377	1377	1695	1695	2249	2249	2755	3081
Final settlement chamber capacity	l	700	700	946	946	1363	1363	1616	1616	1868	2105
Total length (A)	cm	210	260	310	360	360	460	460	560	560	660
Total width (B)	cm	164	164	164	164	164	164	164	164	164	164
Total height (C)	cm	224	224	224	224	227	227	227	227	227	227
Inlet invert to base (D)	cm	137,5	137,5	137,5	137,5	137,5	137,5	137,5	137,5	137,5	135
Outlet invert to base (E)	cm	130	130	130	130	130	130	130	130	130	130
Inlet invert to ground level (F)	cm	53,5	53,5	53,5	53,5	53,5	53,5	53,5	53,5	53,5	56
Outlet invert to ground level (G)	cm	61	61	61	61	61	61	61	61	61	61
Height difference between inlet/outlet	cm	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	5
Height above ground level (H)	cm	33	33	33	33	36	36	36	36	36	36
Inlet/outlet diameter	mm	110	110	110	110	110	110	110	110	110	160
Number of access covers/risers		1	1	1	1	2	2	3	3	4	4
Weight empty ⁽³⁾	kg	275	300	375	400	400	500	500	600	600	700
Air compressor rating (actual)	W	64 (46)	64 (46)	74	74	120	120	148	148	215	215
Min. retention time (based on max PE)	h	80	106	84	99	81	104	82	101	83	98

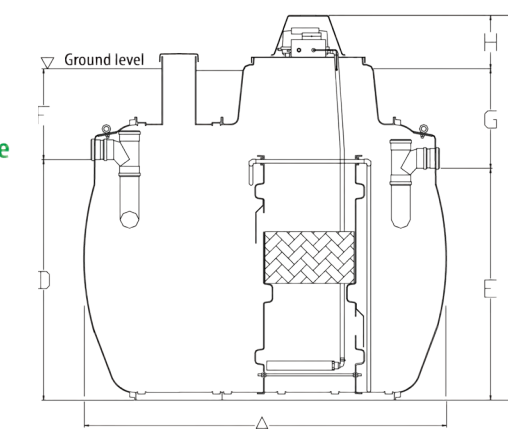
(1) Above 21 PE ("light commercial" or "grouped" wastewater treatment system range), contact us.

(2) It should be noted that a system designed for x to y PE will work perfectly with an actual number of users lower than this PE number (e.g. an FR14/8000, designed for 12 to 14 PE, will work effectively too for 7 or 10 actual users).

(3) Add 100 kg for lifting purposes.



Tricel® with gravity discharge



Tricel® with integrated pump discharge

