Sewage Treatment Systems

IRL6 - IRL50

tricel®

www.tricel.ie

European Certification required for sewage treatment systems

Achieving European Standard EN12566-3

The Tricel® Sewage Treatment Systems have successfully passed these tests and is now approved to the New European standard EN 12566-3 Small wastewater treatment systems for up to 50 PT-Part 3: Packaged and/or site assembled domestic wastewater treatment plants.

The Tricel® system was placed through a rigorous 38-week test, by the certifier laboratory PIA GmbH-Testing Institute for Wastewater Technology in Aachen, Germany. The Biological tests carried out in Aachen on the Tricel® system provides us the knowledge that our product is still the best in the business with a treatment efficiency of 95.9% for BOD5 and 95.3% for S:S. Structural testing (leak test, crush test & durability test) was carried out by PIA staff at our headquarters in Killarney and the range of tanks upto P50 successfully passed all of the required tests.

CE

CE performance requirements: 20/30/20

Tricel results: 11/16/8

TRICEL®	
I.S. EN 12566-3 Packaged domestic wastewater treatment plant for treatment of domestic wastewater	
Product's reference code:	"Tricel IRL6"
Material:	GRP
Effectiveness of treatment:	
Treatment efficiency ratios	BOD_5: 95.9 % SS: 95.3 % NH_4 -N*: 79.9 %
** determined for temperatures ≥ 12˚C in the bioreactor*	
Treatment capacity (nominal designation):	
Nominal organic daily load (BOD_5)	0.36 kg/d
Nominal hydraulic daily flow (QN)	1.2 m^3/d
Watertightness:	Pass
Crushing resistance:	Pass
Durability:	Pass

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.

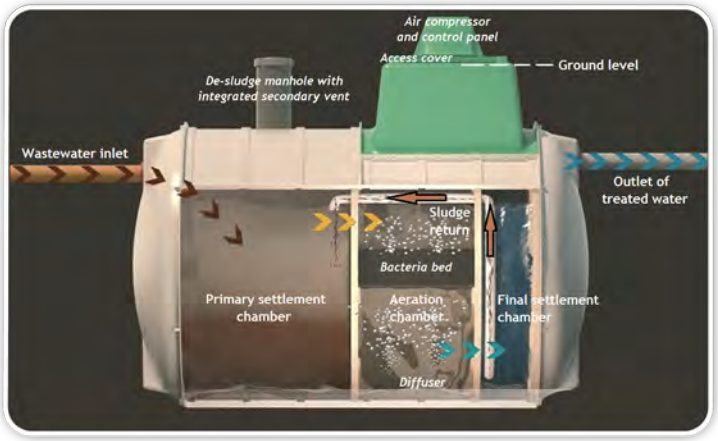
Stage 2: Aeration / Oxygenation

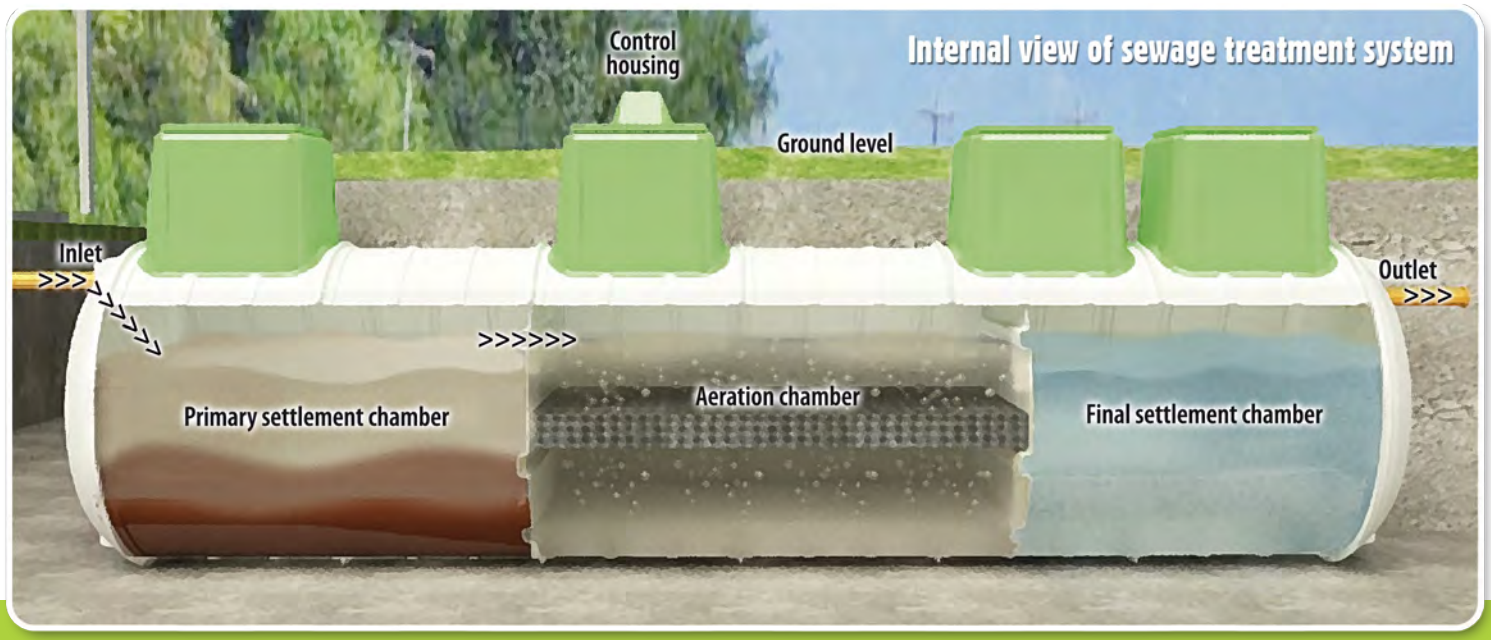
Stage 2 takes place in the aeration chamber where masses of naturally forming bacteria inhabit a specially designed honeycomb bed and aerobic breakdown occurs. These bacteria are sustained with air, which is continuously supplied from a purpose built air compressor in the top section of the unit.

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

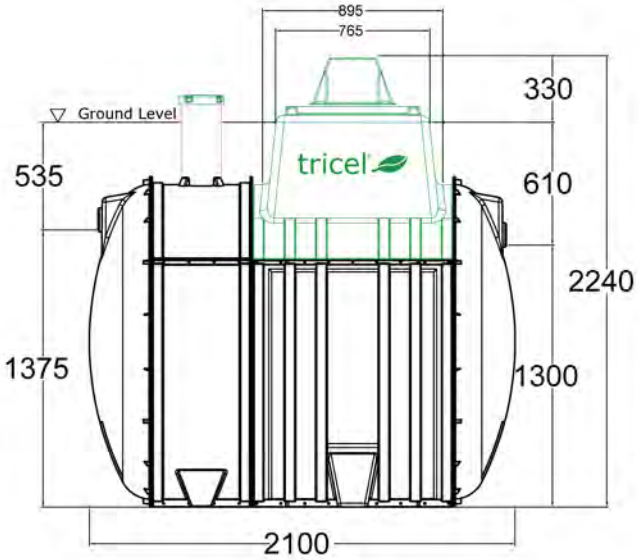
Stage 3: Final Settlement / Clarification

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.

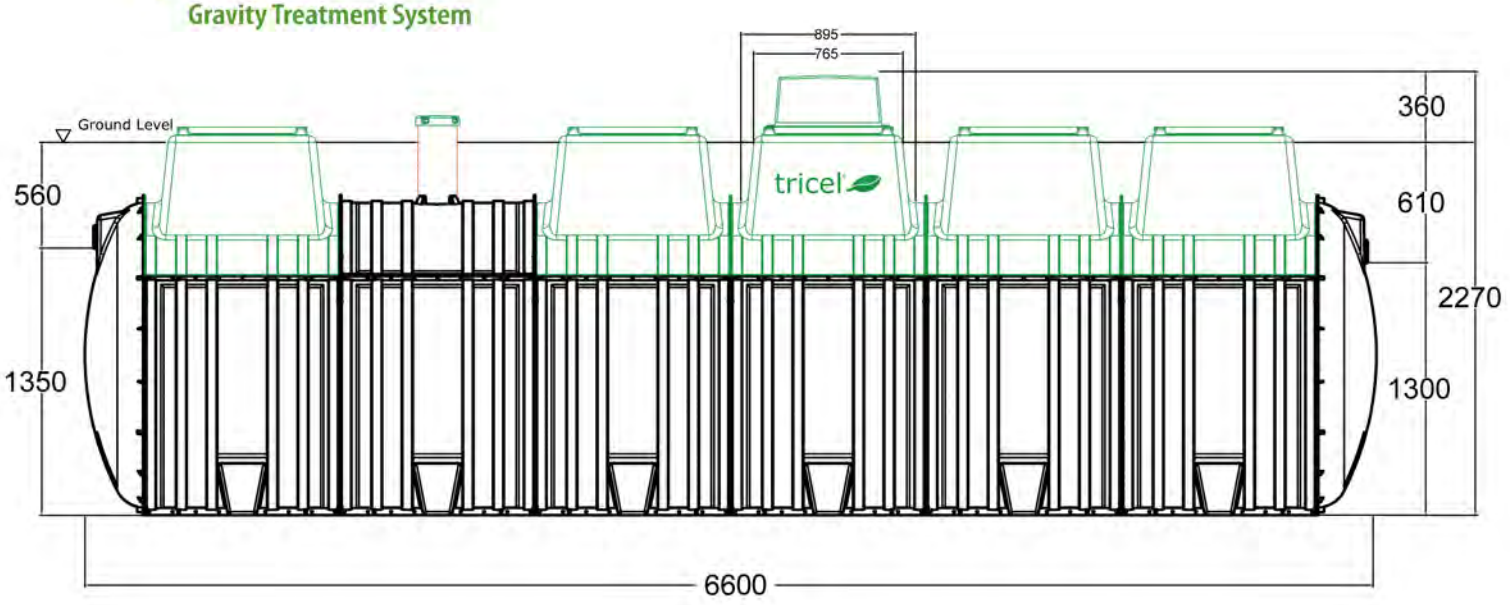




TRICEL IRL6 Gravity Treatment System



TRICEL IRL30 Gravity Treatment System



TRICEL® IRL6-50 SEWAGE TREATMENT SYSTEMS - PRODUCT INFORMATION

Design population		IRL6	IRL6+	IRL8	IRL10	IRL12	IRL18	IRL24	IRL30	IRL36		IRL42		IRL50	
										Tank A	Tank B	Tank A	Tank B	Tank A	Tank B
Nominal inlet/outlet pipe diameter	mm	110	110	110	110	110	110	150	150	150	150	150	150	150	150
Overall length	m	2.1	2.6	2.6	3.1	3.6	4.6	5.6	6.6	2.6	5.6	3.6	5.6	3.6	6.6
Overall width	m	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64
Overall height	m	2.24	2.24	2.24	2.24	2.27	2.27	2.27	2.27	2.0	2.27	2.0	2.27	2.0	2.27
Weight empty*	kg	250	300	300	350	400	500	600	700	300	600	400	600	400	700
BOD load	litres/day	0.36	0.36	0.48	0.6	0.72	1.08	1.44	1.8	2.16		2.52		3.0	
Inlet invert to base	kg/day	1.375	1.375	1.375	1.375	1.375	1.375	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35
Outlet invert to base	m	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Inlet invert to ground level	m	0.535	0.535	0.535	0.535	0.535	0.535	0.56	0.56	0.46	0.56	0.46	0.56	0.46	0.56
Outlet invert to ground level	m	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.51	0.61	0.51	0.61	0.51	0.61
Air blower rating (mean)	watts	60	60	100	100	100	200	200	200	200+80		200x2		200	
Thickness (minimum)	mm	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Retention time	hours	80	106	80	76.8	74	63.8	58.7	55.6	42.5		41		42.2	

**allow an extra 100kgs for lifting purposes*

Range of environmental solutions available

Your exclusive Tricel® Partner:

IRISH WATER
Treatment Association

IRISH ONSITE WASTERWATER ASSOCIATION

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www.tricel.ie

CE
Certified to European Standard EN12566-3

In accordance with the KMG Group normal policy of product development these specifications are subject to change without notice. Manufactured by KMG Group.