WASTEWATER TREATMENT

For Single Dwellings & Small Communities

Single tank with a compact filter up to 9 EH/PE

TRICEL

GENERATIONS OF INNOVATION

# Tricel® Seta Simplex

**Model discontinued - replaced by Tricel Filtro**

Simple

Robust

Reliable

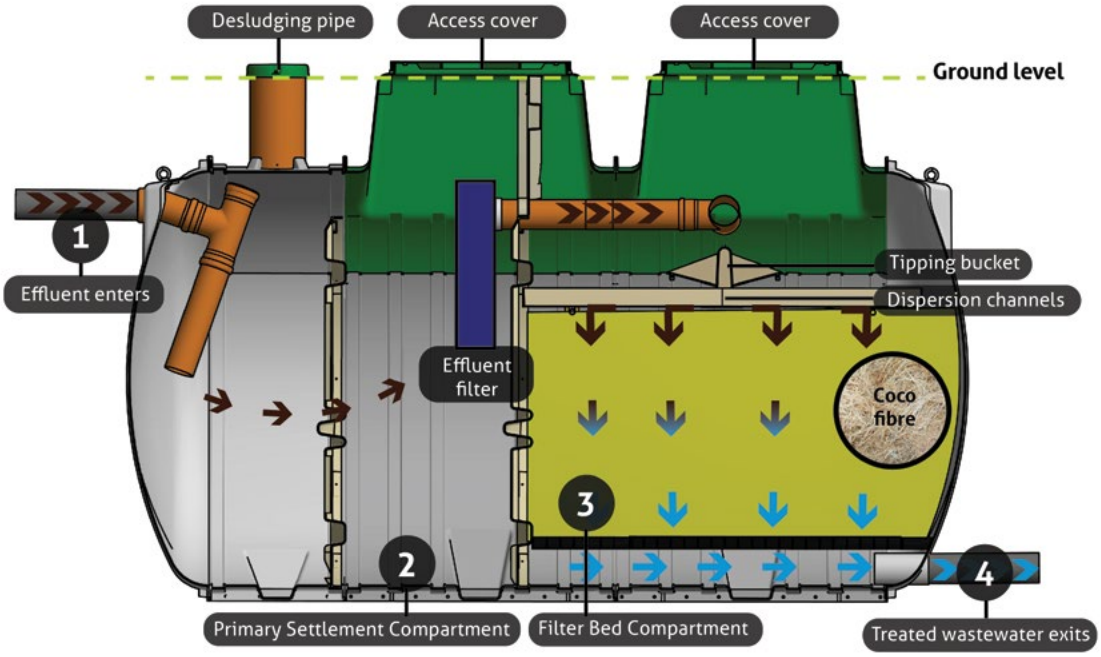
www.tricel.fr

# How a Tricel Seta Simplex works

**Tricel Seta Simplex compact filter is suitable for individual applications for permanent use (main residence) and for intermittent use (secondary house/holiday home). It is also adapted for "small communities" such as restaurants, hotels, campsites, group dwellings etc. The technologies on which it is built, provide users with exceptional reliability and lowest maintenance costs.**

**Tricel Seta Simplex compact filter consists of a single tank with two compartments: a primary settlement compartment for the primary treatment of the wastewater, and a filter bed compartment for secondary treatment.**

Tricel Seta Simplex FR9/4200




**1st phase: Primary treatment**

Primary treatment takes place in the Primary Settlement compartment, where the wastewater from sinks, showers, toilets enters... The Primary Settlement compartment slows the effluent's velocity, allowing solids and heavy sludge to settle at the bottom of the tank, while lighter substances (fats) float to the top of the tank to create a scum. The prefilter fixed at the end of the Primary Settlement compartment prevents solids/scum passing thorough to the Filter bed compartment. Anaerobic bacteria, naturally present in the effluent, develop in the Primary Compartment and liquefy sludge and solids by digesting the organic components they contain.

**2nd phase : Secondary treatment**

The pre-treated effluent then proceed to the filter bed. The primary treated effluent is then evenly dispersed by a bespoke dispersion system ensuring the equal distribution of effluent over the entire filter bed, thus guaranteeing the optimum treatment of the wastewater.

Tricel Seta Simplex compact filter technology is made of coconut fibre ("coir"), which serves both as a filtering medium and bacterial support. Coconut fibre is a generic term for the natural plant fibre which, made of fibrous mesocarp, surrounds and protects the coconut. These fibres are lignin-rich, which gives them great rigidity, makes them resistent to water and gives them excellent resistance to decomposition - resulting in a long lifespan.

As the effluent passes down through the coconut fibres, it undergoes two types of secondary treatment:

- physical filtration thanks to the coconut fibre, and
- biological purification, mainly thanks to the aerobic bacterial flora that develops there naturally. Anaerobic bacteria also kill nitrates.

At the outlet of the compact filter, the wastewater has been treated in accordance with current legislation in force and may discharge to the sewer network.

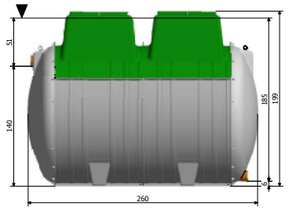
Coconut fibre

| Tricel Seta Simplex Compact Filter | | FR4/1800 up to 4 EH/PE | FR4/3500 up to 4 EH/PE | FR5/2350 up to 5 EH/PE | FR5/3200 up to 5 EH/PE | FR6/3400 up to 6 EH/PE | FR6/4200 up to 6 EH/PE | FR9/4200 up to 9 EH/PE |
|---|---|---|---|---|---|---|---|---|
| French Ministerial decree number | | 2016-004-mod02-ext01 | 2016-004-mod02-ext02 | 2016-004-mod02-ext03 | 2016-004-mod02-ext04 | 2016-004-mod02-ext06 | 2016-004-mod02-ext07 | 2016-004-mod02-ext09 |
| Treatment Capacity and number of inhabitants | EH/PE | 4 | 4 | 5 | 5 | 6 | 6 | 9 |
| Hydraulic load | l/day | 600 | 600 | 750 | 750 | 900 | 900 | 1350 |
| Organic load | $BOD_5$ kg/d | 240 | 240 | 300 | 300 | 360 | 360 | 540 |
| Primary settlement compartment volume | L | 1850 | 3500 | 2350 | 3200 | 3350 | 4250 | 4250 |
| Total length | Cm | 260 | 360 | 310 | 360 | 410 | 460 | 560 |
| Total width | Cm | 164 | 164 | 164 | 164 | 164 | 164 | 164 |
| Total height | Cm | 199 | 199 | 199 | 199 | 199 | 199 | 199 |
| Height between base and ground level | Cm | 191 | 191 | 191 | 191 | 191 | 191 | 191 |
| Inlet/outlet diameter | Mm | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| The distance between inlet invert and base | Cm | 140 | 140 | 140 | 140 | 140 | 140 | 140 |
| The distance between ground level and inlet invert | Cm | 51 | 51 | 51 | 51 | 51 | 51 | 51 |
| Max. the distance between ground level to inlet invert | Cm | 101 | 101 | 101 | 101 | 101 | 101 | 101 |
| Max. distance between base and ground level | Cm | 241 | 241 | 241 | 241 | 241 | 241 | 241 |
| The height of available risers | Cm | 25-50 | 25-50 | 25-50 | 25-50 | 25-50 | 25-50 | 25-50 |
| The height of max. backfill above sup. generator | Cm | 81 | 81 | 81 | 81 | 81 | 81 | 81 |
| Number of access covers/risers | units | 2 | 2 | 2 | 2 | 3 | 3 | 4 |
| Number of drain chimneys | Units | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| Tank weight | kg | 350 | 450 | 450 | 500 | 600 | 600 | 800 |

(1) The "treatment capacity and a number of inhabitants" of a device is its reported treatment capacity in EH/PEs.
This device is adapted to treat the effluents of any dwelling having a number of main rooms (which include bedrooms, living rooms, office/library) less than or equal to this EH/PE number.
For example, a Tricel Seta Simplex FR5 / 3200 can treat the wastewater of any house with a number of main rooms less than or equal to 5.

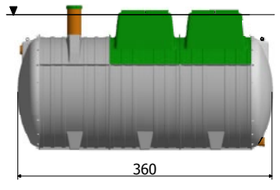
**Departmental approvals from 1 to 9 EH/PE**

Ground level



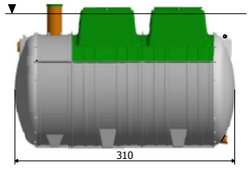

**Tricel Seta Simplex FR4/1800**

Ground level



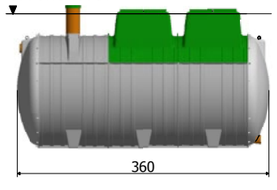

**Tricel Seta Simplex FR4/3500**

Ground level



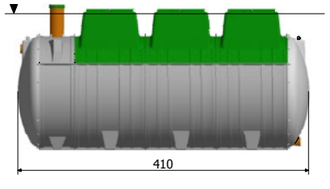

**Tricel Seta Simplex FR5/2350**

Ground level



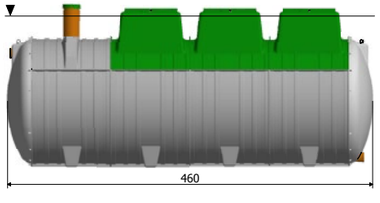

**Tricel Seta Simplex FR5/3200**

Ground level



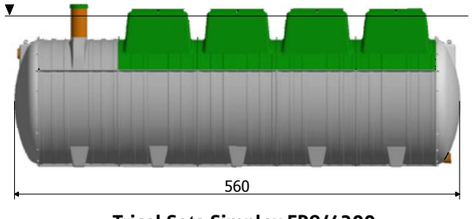

**Tricel Seta Simplex FR6/3400**

Ground level




**Tricel Seta Simplex FR6/4200**

Ground level




**Tricel Seta Simplex FR9/4200**

# Why choose a Tricel Seta Simplex

## Installation

- Ideal for new builds, especially in cases of limited space as well as for renovations: the Tricel Seta Simplex filter is ultra-compact, with a footprint (site coverage) of less than 5 m2 for 4 EH/PE and less than 15 m2 for 9 EH/PE (to be compared with the 40 to 200m2 of a traditional installation).
- Lightweight and compact single tank easy to transport and handle.
- The Tricel system is delivered ready to install for fast and easy installation, with minimal site adjustments except for those made by the exclusive Tricel partner during the installation, thus reducing the risk of on-site errors.
- Extremely robust GRP tank moulded by heat compression: backfilled with sand or gravel, 81 cm of height of backfill allowed above the crown of the tank, resistant to groundwater.
- Manhole risers available in 25 and 50 cm for the filter bed.

## Results

- A complete range of products from 1 to 9 EH/PE with different volumes of Primary Settlement compartments to meet the specificities of all of your projects.
- Underground installation is carried out for minimal interference with the surrounding landscape.
- Gravity functioning without power consumption.
- Eligible for zero interest eco-loan (eco-PTZ).
- No noise nuisance.
- Excellent purification performance, as demonstrated by the 38 weeks of intensive tests carried out at the PIA in Aachen (Germany).

## Maintenance

- Extremely reliable, thanks to a simple and robust design.
- No electro-mechanical components, no electronic components, eliminates risk of system failure.
- Filter media made out of ecological, sustainable and natural coconut fibre.
- Excellent performance in overloading, under loading and no load conditions, even prolonged ones. Suitable for permanent use (main residences) and for intermittent use (second homes).
- No system adjustment, whatever the conditions of use.
- Low maintenance for customer peace of mind and minimal maintenance costs
- Annual maintenance contracts available from Tricel's network of exclusive Partners
- Visual indicator placed next to one of the access covers to alert in the event of an above normal water-level inside the tank.
- Desludging frequencies observed at full load in real conditions of use: every 18 months to 5 years depending on the type of station. Desludging frequency is obviously more spaced out when the compact filter operates at reduced load. For example, an FR4/3500 (sized for 1 to 4 PE) receiving effluent from 2 permanent occupants has a statistical emptying frequency of 5 to 8 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 better customer service.
- 20-year warranty on the GRP structure and 2-year warranty on the electro-mechanical components.
- Tricel: more than 15 years of experience in wastewater treatment systems for single dwellings and over 35,000 devices installed.

Tricel is an established and world recognised global supplier of high-performance solutions for Water, Environment, Construction and Distribution. Over the last 45 years, we have built our company ethos "Generations of Innovation", around three interlinking themes: Innovation, Quality and Heritage. We manufacture and deliver industry-leading innovative solutions that our customers fully trust. Our factories located in over 5 countries allow us to differentiate ourselves in terms of production capacities, versatility and adaptability, and thus to provide a full range of products in over 50 countries across the world.

## Tricel France is:

2 factories in France with dedicated technical services and a head office based near Poitiers, for greater proximity to our customers and 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 for single dwellings (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.

A network 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: >35,000 Tricel wastewater treatment systems installed across the world in all types of soil and under all climates.ts.

For more information or to get a free quote
contact your Partner Tricel:

or contact us on +33 (0) 5 17 03 00 00 (Monday to Friday from 8:30 to 17:30) or on www.tricel.fr/contact

**Ministerial Decree**

**1 à 4-5-6-9 PE**

**n°2016-004**
**mod02-ext. 01 to 10**

CE

**conf. NF EN 12566-3+A2**

MADE IN FRANCE

Seta Simplex 1122229/rev 4-FR-Mars2024

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

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