

# Thetford launches 'game changing' sanitation system

Following more than five years in development Thetford has launched a truly ground breaking sanitation system. Christened 'iNDUS', it combines the fresh, grey and black tanks into a single integrated system, managed via a smartphone app. Thetford claims it allows users to be 'off grid' for up to a week at a time whilst, offering convenience, hygiene and freedom.

Words Terry Owen



The macerating toilet

Two to three-year roll out of iNDUS has now begun. Aimed initially at motorhomes, it features a macerating toilet. This allows the black tank to be mounted remotely, wherever convenient. It also allows black waste discharge via a hose – of which, more later.

Research undertaken by Thetford showed that users of current systems often empty their tanks more frequently than they need to. Norbert van Noesel, Marketing Manager at Thetford explains: "Our research shows that people empty their tanks, both grey and black water, in many cases because they think they are full, but in fact they don't really know. Another reason to discharge is the fact that there is a discharge location nearby." iNDUS is designed to address this problem through larger tank sizes and comprehensive monitoring.

#### Comprehensive monitoring

The iNDUS app takes away the guesswork by providing full level monitoring combined

with a 'time left off grid' prediction. There are also percentage readings for each of the tanks and their respective cartridge additives. Using low energy Bluetooth, the user is only warned when action is required. For example, an automatic alert advises of the nearest discharge location when the tanks are full. This is achieved by dovetailing into the very popular Campercontact app that is free for iPhone and Android users. It claims to have Europe's biggest database of motorhome sites, covering more than 50 countries. Some 30,000 sites are listed along with extensive reviews and assessments.

#### Automatic dosing

To maximise hygiene and minimise smells iNDUS has a fully automatic dosing system comprising three different additives referred to as 'A, B & C'. The first is for grey water, the second for the flush water and the third for treatment of the black waste. Van Noesel: "By the way, iNDUS makes efficient use of additives, dosing automatically exactly



Above:  
Norbert van Noesel

From the left:  
the dosing module and  
the discharge module

Below:  
the easy waste discharge procedure

the required amount". Thetford says they last for four weeks and have a replacement cost of around €30 for the three. Cartridges can also be purchased individually.

### Stylish macerator toilet

Weighing in at just 7.5 kg, the toilet itself is of a very modern design with a soft close lid. Building on proven technology from its marine division, the two-stage macerator is very quiet, with water usage comparable to that of current cassette toilets. To minimise water usage, grey water is used for flushing or, if not available, fresh water is used. Both large (500ml) and small (200ml) flush functions are built in. Van Noesel adds: *"Just to compare, at home we use 3 to 10 litres per flush. And by re-using grey water for toilet flushing, people save on average 112 litres of fresh water per four weeks and therefore also the same amount of waste water!"*

### Waste discharge

As well as freeing the toilet position from that of its black tank, maceration means that the waste can be discharged as a liquid into any campsite discharge point, provided it is part of the main sewage infrastructure. For most sites this will not be a problem, as many grey water discharge points empty into the same sewer system as those for black water, it is just the different connection methods that separate them.

In this way, the not-so-pleasant task of emptying the black waste cassette is banished for good - a major plus point for many RV owners. In practice the black waste is discharged first, followed by the grey. This leaves everything clean and without any nasty smells.

Drainage is via a special hatch on the side of the motorhome. This hides a hinged drawer containing the discharge device at the end of a two-metre hose. This takes away the difficult task of having to position a fixed discharge point exactly over the drain aperture. The device, which is shaped a bit like an inverted cup, is simply placed over the discharge grid and hides the contents being discharged. There is no need to hold it in place. To start the discharge, a valve on the device is opened and a button pressed inside the



hatch. The app notifies the user when the process is complete.

**Installation**

Tank sizes and positioning are installation specific. Much depends on the space and payload available in the individual motorhome. However, the objective always will be to offer 'off grid' camping for up to a week at a time, where possible. iNDUS can be fitted in both single and dual floor motorhomes and possibly even in some larger campervans.

For individuals wishing to stay more than one week on a particular campsite Thetford is looking at providing a portable tank, or hose extension, to transport the waste water to the discharge point. This will avoid the need to drive the RV to the discharge point.

**CI BUS compatibility**

Thetford says iNDUS is CI-BUS compatible with limited information and settings available to integrate into OEM master displays. Full functionality, remains available via the Thetford iNDUS app.

**Costs**

Clearly a complete smart sanitation system will be more expensive for RV builders than a standard cassette toilet but Thetford believes the benefits will always outweigh the costs.



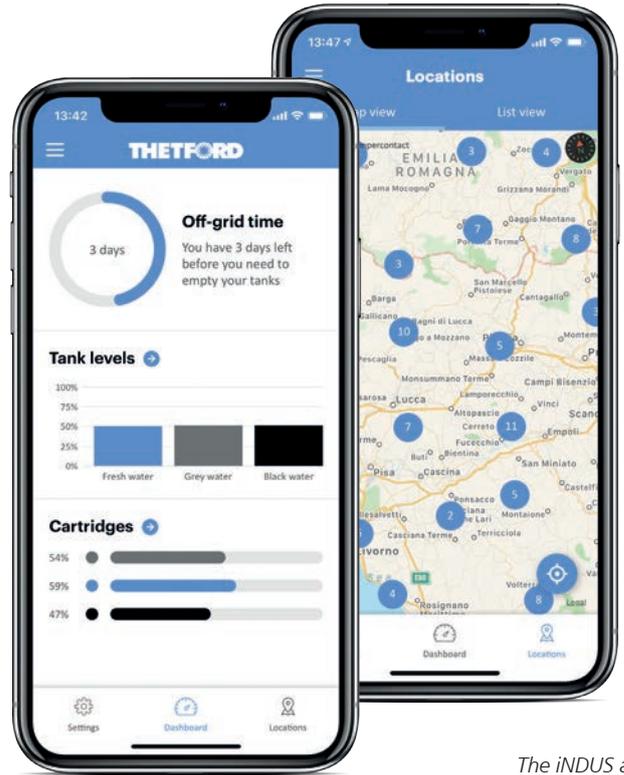
*The Thetford iNDUS macerating toilet with its control panel*

**Retro fit?**

Due to the fact that iNDUS system is a fully integrated smart sanitation system, Thetford really sees iNDUS as being incorporated into new motorhomes rather than as a retro fit. However, it is possible that some components, such as the automatic dosing module, may eventually become available to the aftermarket.

**Adoption**

The first RV builder to adopt iNDUS is Bürstner, where it features in their 2021 Elegance A-Class motorhome. Other builders are expected to follow soon.



*The iNDUS app*

**Touring caravans**

Although Thetford is initially concentrating on the motorhome market it has not ruled out producing a version of iNDUS for some larger touring caravans. Much could depend on the take up within the motorhome market.

**Why 'iNDUS'?**

Thetford says name 'iNDUS' was chosen as a tribute to the Indus Valley Civilisation who, as long ago as 2000 BC was one of the first civilisations to introduce sanitation. This took the form of a network of sewers and toilets flushed with water for their dwellings. It also helps that the name iNDUS associates with words like innovative, informative, individual, etc.

**Conclusion**

Every once in a while, something genuinely new pops up that has the power to change the way we use our RV's. Thetford's CEO, Stéphane Cordeille, calls such innovation 'jumping the curve'. It's a subject he's passionate about.

As far as sanitation goes the last major innovation (for my money at least) was Thetford's introduction of the cassette toilet way back in 1988. It meant that, for the first time, the toilet could be fully serviced from outside the RV, a much more hygienic and convenient solution to previous arrangements. It was such a success that, by 2007, some three million cassette toilets had been sold.

Now Thetford has done it again by eliminating the need for the black waste cassette to be taken to a dedicated service point for emptying. What's more, its smart sanitation system is fully integrated with the RV, re-uses grey water, and very easy to operate – even manual dosing is eliminated. It deserves to be a big winner.



*Stéphane Cordeille*