



Smart Sanitation System

User Manual

EN

Original User Manual

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1. Introduction

This is the user manual for the Thetford iNDUS smart sanitation system. Read the safety instructions and information on use carefully before continuing. Retain this manual for future reference.

For the latest version of this manual, please visit www.thetford.com.

2. Symbols

Key to symbols:



Warning. Risk of serious injury and/or damage.



Caution. Risk of injury and/or damage.



Attention. Important information.



Note. Information.

3. Safety



Do not allow children to play with the system. Do not allow children to clean or maintain the system without supervision.



This system can be used by children aged 8 years or older and persons with reduced physical, sensory or mental capabilities and/or lack of experience and knowledge only if they are supervised or have been given instructions on the safe use of this system and understand the potential hazards.



Children younger than 8 years should be under constant supervision when using the system.



Always disconnect the system and its components from the power supply before starting work on the system.



Do not modify this system and its components, unless the modification is authorised by the manufacturer.



Use only original and Thetford approved parts and materials.



The iNDUS system is an integrated domestic wastewater management system for leisure vehicles. It must not be used for any other purpose than the collection, storage, treatment, reuse and discharging of domestic wastewater produced by human habitation activities in the leisure vehicle.



Human fecal wastewater contains substances that can be hazardous to your health, such as bacteria, viruses and fungi. Always treat fecal wastewater from human activities as hazardous liquid, and use appropriate personal protection equipment when performing work in areas contaminated by wastewater. Leakages of wastewater outside of the system should be cleaned up and disinfected promptly.



Use appropriate protection equipment to avoid contact with skin and eyes, when working with the iNDUS additives or additive tubes.



The class III appliances must only be supplied at safety extra low voltage corresponding to the marking on the appliance.



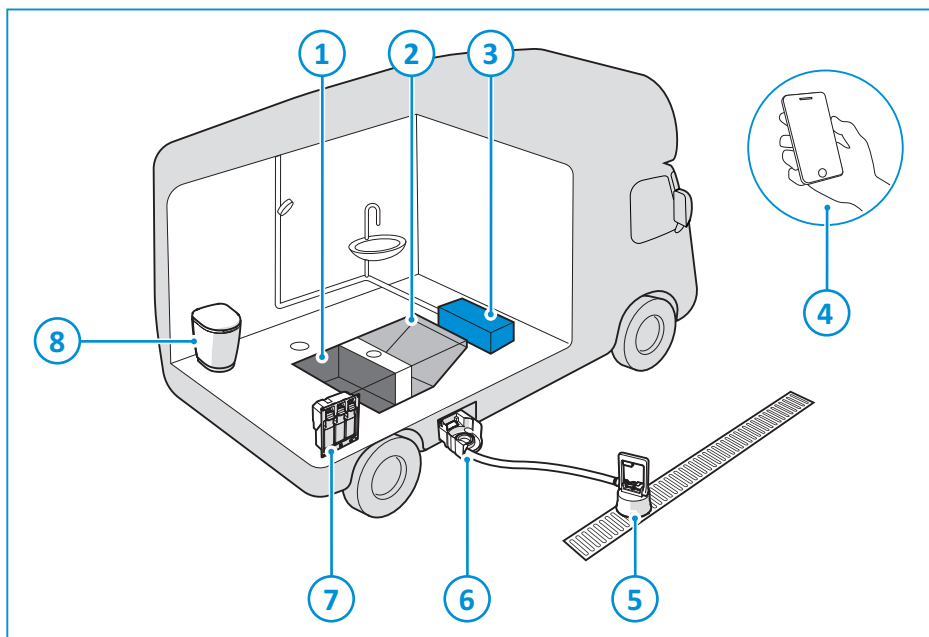
If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similar qualified persons in order to avoid a hazard.



When positioning the appliance, ensure the supply cord is not trapped or damaged.

4. Main components

The complete iNDUS system consists of the following components: Toilet, Tanks, Dosing module, Discharge module and communication.



1. Black water tank
2. Grey water tank
3. Fresh water tank
4. Communication (via Thetford iNDUS app or vehicle board control)
5. Discharge device
6. Discharge storage bin
7. Dosing module with additive cartridges
8. Toilet
9. Wiring (not present in drawing)
10. Tubing (not present in drawing)

The wastewater from the kitchen or bathroom (grey water) is transported to the remote grey water tank. The tank filters the grey water and additives are automatically added to treat the water so it can be reused for flushing the toilet. If there is not [enough] grey water available, fresh water is used for flushing the toilet. When using the toilet, the sanitary wastewater (black water) is pumped from the toilet to the remote black watertank.

Via the dosing module, three separate additives are automatically added to the water for treating the wastewater and maintaining the system. The cartridges with additives are connected to the Thetford iNDUS app on your mobile device to give you live information on – for example – the tank levels and additives levels.

The system will cycle 4 times a day in order to keep the system operating correctly. You can set the period in which the system cycles via the Thetford iNDUS app.

When the tank is full, the wastewater is discharged at an appropriate discharge location with the discharge device.

5. Before use

The dosing module contains three separate cartridges with additives. The additives are added automatically based on the actual demand of the system. The additives each have their specific function and work synergistically with each other. The cartridges are not interchangeable and cannot be refilled. Please store the cartridges in a cool and dry place, out of direct sunlight, and at temperatures above 0°C. The cartridges work optimally at ambient temperatures between 0°C and 45°C.

- Cartridge with iNDUS Grey (grey water additive)
- Cartridge with iNDUS Flush (flush water additive)
- Cartridge with iNDUS Black (black water additive)



You must use iNDUS additives for a safe, correct and hygienic use of the iNDUS system. If the system is used without additives, the reuse of grey water would become unsafe, the growth of microorganisms would be uncontrolled with unacceptable odours from the tanks and the discharge would be hazardous to your health. Thetford does not honour warranty claims for damage to the iNDUS system that was caused by incorrect or non-use of the iNDUS additives.



Use appropriate personal protection equipment when cleaning up spills of additives and wastewater.

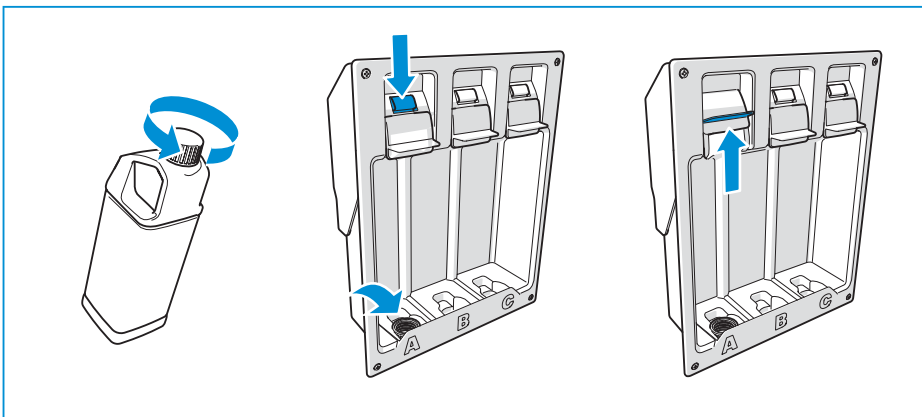


Refer to the hazard information and safety instructions on the cartridge label when handling the cartridges.

Before using the system, you should:

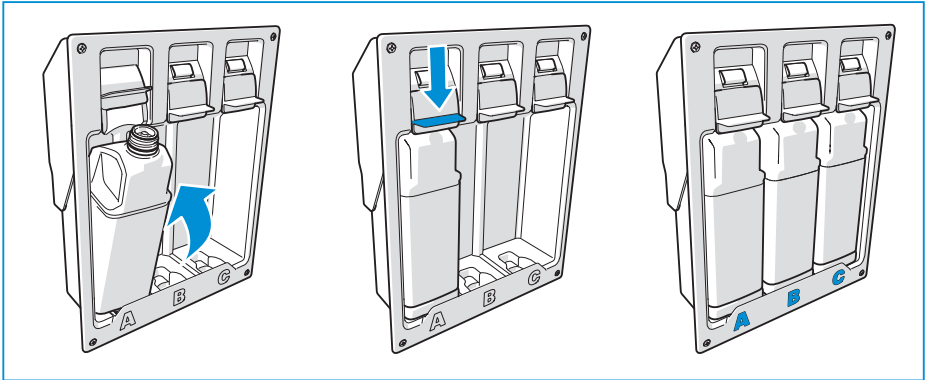
1. Place the cartridge in the cartridge holder.
2. Connect the system to the Thetford iNDUS app.

Place the cartridges in the cartridge holder



1. Push and turn the cap to open the cartridge.
2. Place the cap in the storage compartment in the cartridge holder.
3. Push the button on the slide to release.

4. Push the slide upwards to open.



5. Place the cartridge.

6. Push the slide down to close until you hear the click. If the cartridge is placed correctly, a blue light will be shown. Otherwise, a red light will be shown.

7. Place all cartridges in the correct sequence: A, B and C (refer to the corresponding symbols on the label).

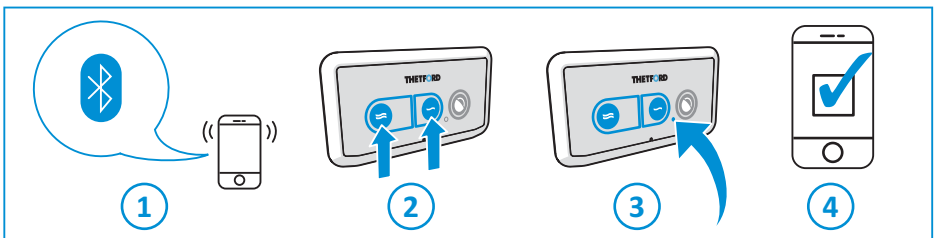
How to clean in case of spills of additives:

- Avoid contact with eyes and skin. Wear protective gloves and eye protection.
- Absorb large amounts of spilled additives with paper towels, and dispose of these in regular household waste.
- Clean up any remaining residue with warm water and a mild detergent.
- Do not eat or drink during cleaning up.
- Make sure to wash your hands with plenty of soap and water afterwards.

Connect the system to the Thetford iNDUS app

The iNDUS system needs to be connected to the Thetford iNDUS app to get information on the additives and tank levels and - for example - the nearby discharge locations.

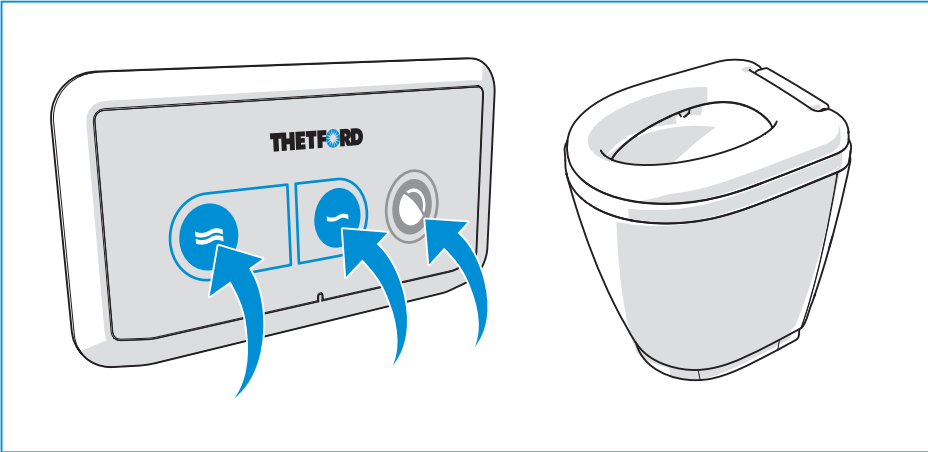
First, download the Thetford Thetford iNDUS app on your mobile phone.



1. Turn on the Bluetooth connection on your mobile phone.
2. Hold the two buttons (big and small flush) on your toilet control panel for 5 seconds.
3. A blue light on the toilet control panel starts blinking to indicate the system is pairing.

- When the pairing is complete, a message is shown in your Thetford iNDUS app and the light turns blue for 10 seconds on your toilet control panel.

6. Use of the toilet



The iNDUS toilet is a macerating toilet and operates with a control panel. The control panel has three buttons: big flush, small flush and bowl valve opener. When flushing, the bowl valve will open and close automatically. No additional action is needed. By default, the bowl valve is closed. If preferred, the bowl valve can be opened manually before using the toilet by pushing the blade valve opener button.



Do not dispose any sanitary waste (for example, ladies tampon or cotton cloths) into the toilet, as these items will block the toilet system.



There is a serious injury risk when touching the sharp macerator knives located below the toilet bowl valve. The macerator is disabled when the bowl valve is open. Use extreme caution when removing obstructions out of the macerator house.

The system reuses the treated grey water for flushing the toilet, to further reduce water consumption of the system. In case the grey water level is insufficient, fresh water is used for flushing the toilet.

The toilet can be cleaned with Thetford toilet bowl cleaner.



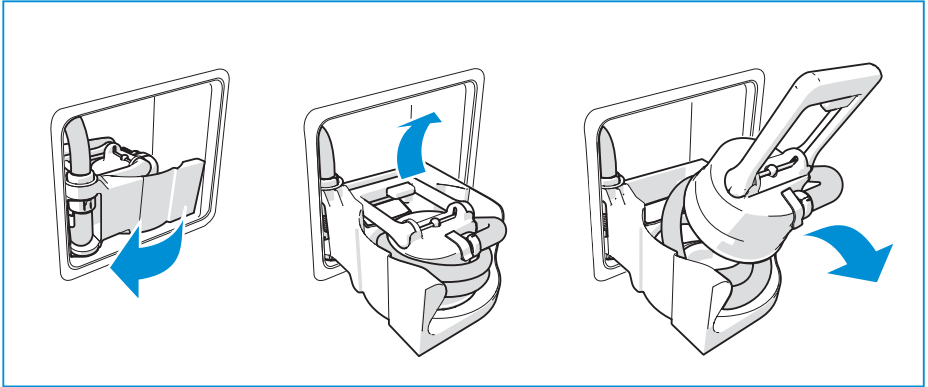
Never use active chlorine based cleaning agents that could end up in the waste water tanks. It could damage the toilet or system.

7. Discharge the system

The discharge device is used to empty both your black water and grey water tank in one go. During this discharge cycle, the toilet and the tanks are rinsed automatically. First, the water from the toilet water tank is being pumped out. This means the toilet is flushed by an automatic flush sequence. The treated grey water is used to rinse the black water circuits in the system. After that, the water from the grey and black water tanks is being pumped out.

You can discharge the INDUS wastewater at most existing grey water discharge locations as long as they are connected to the general sewage infrastructure, unless specific rules or regulations for discharging black water are indicated. If that is the case, use the discharge point for black water. You can check the nearest discharge location via the Thetford iNDUS app.

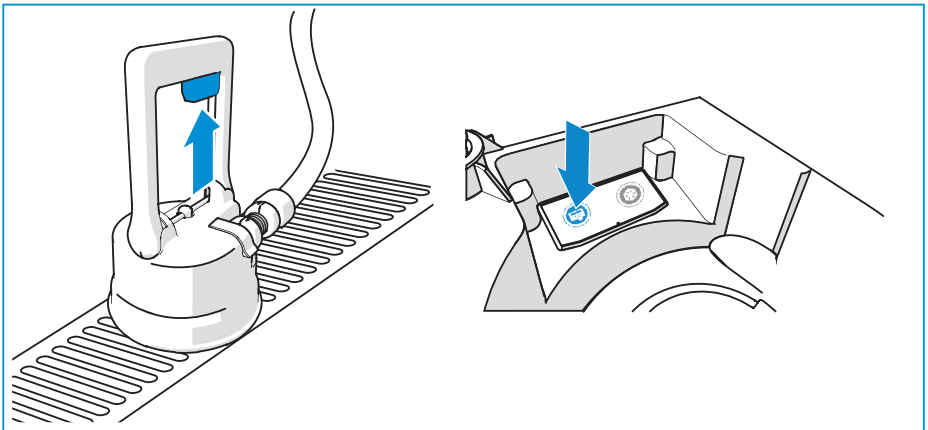
To discharge your iNDUS wastewater, follow the next steps:



1. Pull the handle of the discharge device up.
2. Take out the discharge device and unwind the hose.
3. Take out the discharge device and unwind the hose.
4. Place the discharge device directly above the grid of the discharge location.

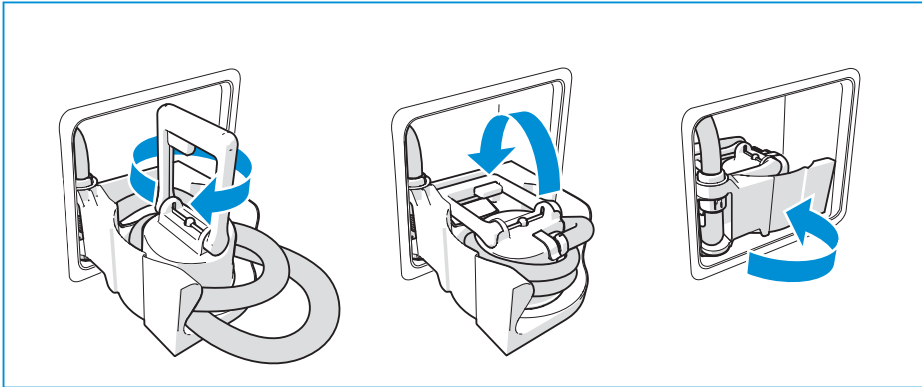


When positioning the discharge device not directly above the grid, it could lead to spills of wastewater. If that is the case, please rinse the grid with grey water and/or fresh water.



5. Press the button on the handle to unlock the discharge device.
6. Push the blue button on the discharge control panel to start the discharge cycle.

7. Wait for all the wastewater to be pumped out. The discharge cycle is ready when the blue light on the discharge control panel turns off. To cancel the process, press the discharge button again.



8. Press the button on the handle again to lock the discharge device.
9. Place the discharge device back in the holder and rotate it so that the hose coils around it. To clean the discharge device holder, take out the insert and clean it with water.
10. Fold the handle into the discharge device holder. If the handle cannot be folded, the valve could still be open.
11. Slide the discharge device holder into the storage bin and close the storage door.

8. Maintenance and cleaning

Replace the cartridges when empty

In case one of the cartridges is empty, it should be replaced. For information on the additives levels per cartridge, use the Thetford iNDUS app or look at the indicator lights on the cartridge holder. To replace the cartridge:

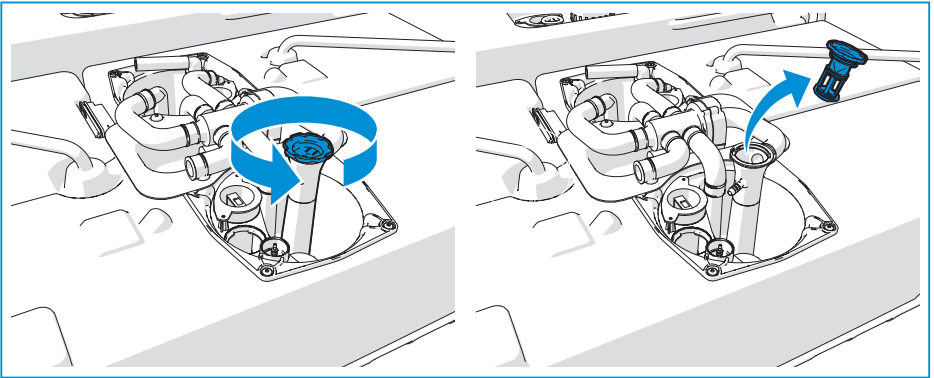
1. Lift the slide up for the cartridge you want to replace.
2. Remove the empty cartridge.
3. Replace the cartridge as described in Before use.

How to dispose the cartridge:

- Turn back the cap on the bottle.
- Dispose the bottle in regular household waste.
- Do not let any spills of additives come into the environment.

Clean the grey water filter

A filter is installed in the area above the tank to filter the grey water for flushing the toilet. The filter is self-cleaning, so it does not need to be replaced. In the unlikely case the filter gets clogged, the system will take fresh water. The filter might need to be cleaned. In that case, follow the next steps:



1. On the control board of the vehicle, turn off the main electronics switch. To check if the 12V is turned off completely, press the bowl valve button on the toilet.
2. Open the floor hatch.
3. Turn the filter counterclockwise to unlock.
4. Clean the filter with soap and water. Then brush it gently and reinstall the filter. It is recommended to use gloves when cleaning the filter.

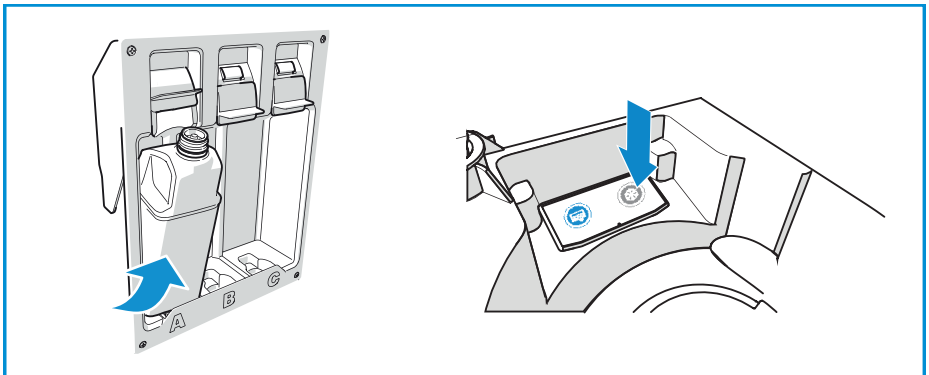


Make sure the filter is reinstalled correctly (until you hear a click) to avoid damage to the system.

9. Prepare for winter storage

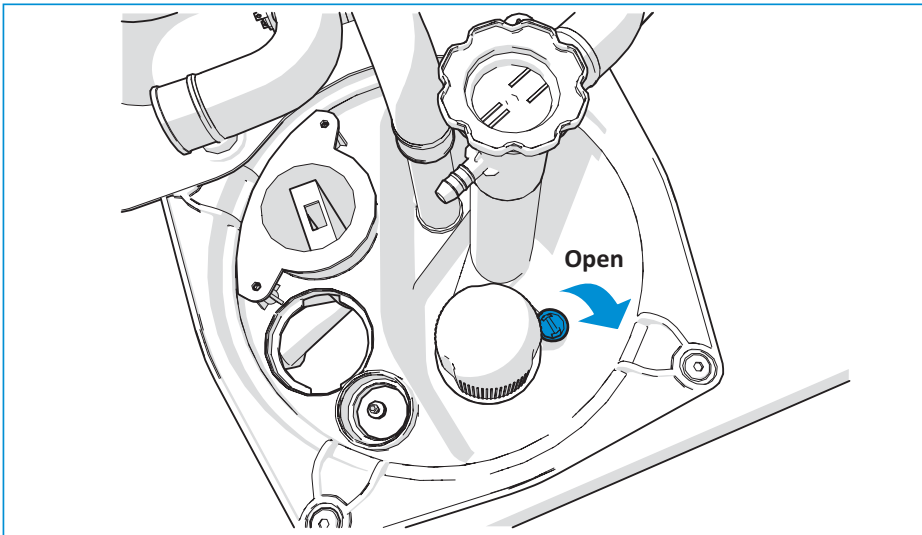
To protect the system from damage due to frost, use the winter storage button to empty the tanks and drain all parts. When you are not using the system for a longer period and the ambient temperature could drop below 0 °C, the system should be drained entirely.

Follow the next steps:



1. Remove all three cartridges from the cartridge holder. Turn the cap on the cartridges and place them in a frost free environment.

2. Push the winter storage button on the discharge control panel to start the discharge cycle. If you don't remove the cartridges, the system cannot be winterized and a red light will be shown on the discharge control panel.



3. Drain the residual water via the manual valves:
 - a. Open the floor hatch.
 - b. Open the drainage valves for both the black and the grey water tank, using a tool.
4. After draining, don't forget to close the valves again for next use.

After the winter storage, reinstall the cartridges again. As soon as the toilet is flushed, the iNDUS system is operational again. After the winter storage, the first flush will have a delay of approx. 10 seconds.

10. Troubleshooting

If you have questions about your product, parts, accessories or authorised services:

- Please contact Thetford Customer Service.
- Send an e-mail to indus@thetford.eu or find further contact details in the Thetford iNDUS app.

Overview Indication lights

Toilet control panel

- A light blue blinking light indicates the system is pairing with the Thetford iNDUS app.
- A light blue light (10 seconds) indicates the system has been connected successfully.
- A blue light (10 seconds) indicates the flushing process is operational.
- An orange light indicates a warning. Action is advised. Refer to the notifications in the iNDUS app.

- A red light indicates an error. Immediate action must be taken. Refer to the notifications in the iNDUS app.

Dosing module

- A blue light (10 seconds) indicates the cartridge is placed correctly.
- A orange light indicates the cartridge is almost empty.
- A red light indicates the cartridge is empty, not present or not placed correctly.

Discharge control panel

- A blue light indicates that the discharge process has started.
- An orange light indicates a warning. For example, the tank temperature is below 0°C.
- A red light indicates an error situation. Try to start the discharge cycle again. If the error returns contact Thetford Customer Service.

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