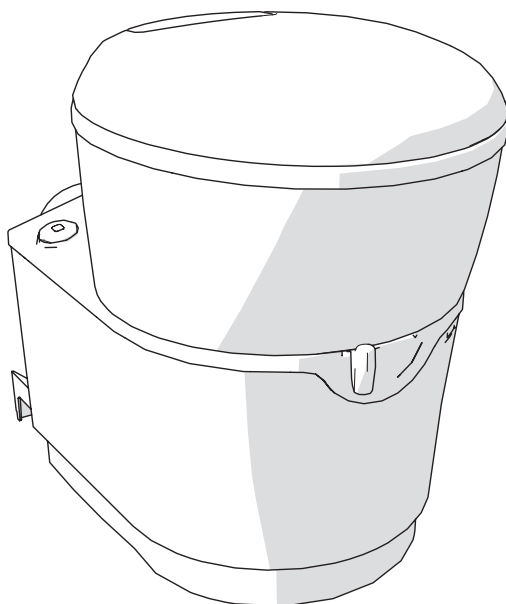




Cassette Toilet C220 Series Model C223-S

**Installation Manual
for use in EN, DE, NL**

We: THETFORD B.V.

Address: Nijverheidsweg 29, 4879 AP, Etten-Leur, Netherlands

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Declare that

Product Types; Cassette toilet

Model Number/Description; C220 Series

Satisfies the essential requirements of the following directives:

- 2011/65/EU RoHS 2

- Automotive EMC Directive 2004/104/EC

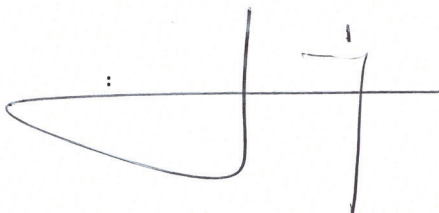
Based on the following standards applied:

- EN 50498:2010 EMC aftermarket Electronic equipment in vehicles

The products concerned have no immunity related functions in accordance with the Automotive EMC Directive 2004/104/EC

Name	: S.P. Cordeille
Title/Position	: Chief Executive Officer
Place & Date of Issue	: Etten-Leur, 12 February 2016

Signature

: 

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Original Installation Manual

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1. Introduction

This is the installation manual for the Thetford C223-S toilet. The manual is meant for qualified installers who will install the toilet in a mobile leisure vehicle. Read the information and instructions carefully and follow them strictly to install the toilet safely and correctly.

Also read the warnings in the user manual before testing the toilet after installation.

Our policy is one of continuous development and improvement. Specifications and illustrations may change subsequent to publication.



If the appliance is not installed in accordance with national and European regulations, rules and standards this will void the warranty and may lead to criminal prosecution.

2. Symbols

Key to symbols:



Warning. Risk of injury and/or damage.



Attention. Important information.



Note. Additional information.

3. Regulations and standards



Do not modify this appliance, unless the modification is authorised and carried out by the manufacturer or their agent.



Use only genuine and approved parts and materials.



Wear the correct Personal Protective Equipment during the installation. Also follow the applicable safety regulations.

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4. Installation audit form

Thetford offers an additional service by auditing the installation of its products. This means that before a Thetford product is installed a Thetford local service representative will carry out a specific audit based on the Thetford installation instructions. The audit is meant as a reference for the specific model to ensure correct installation. In any case the Thetford local service representative can be contacted for any additional support related to the installation of the product.

5. Serviceability

The installer of Thetford products is responsible for proper installation to ensure the correct functionality and serviceability of the appliance. In terms of serviceability, this means that a dealer or an authorised Thetford service partner must be able to de-install and re-install the Thetford products within the time that is allowed according to the Thetford time-list, using standard tools and equipment.

This is to claim any warranty during the period of 3 years after purchase date. The serviceability of the product is also included in the audit. In case of any queries on this subject, please contact the Thetford local service representative before installing the product.

6. Designation codes, drawings and models

Each product has a specific identification code, the designation code. The designation code can be found on the data badge. See Servicing for the location of the data badge. The different positions of the code stand for different variations of the toilet. In these instructions, the designation will be used as reference.

Table 1: Designation example C22 3 S – N 062 X 30 C 01

C22	3	S	– N	062	X	30	C	01
	Type of water supply	Type of console			Slide out direction waste-holding tank		Type of level indication	

Table 2: Available drawings and models

Designation	Description	2D drawing	3D file
C224CW – x xxx x xx x xx	C224-CW	LE1242	LE1242
C223S – x xxx x xx x xx	C223-S	LE1243	LE1243
C223CS – x xxx x xx x xx	C223-CS	LE1244	LE1244
N/A	Waste-holding tank C220 series	LE1245	LE1245

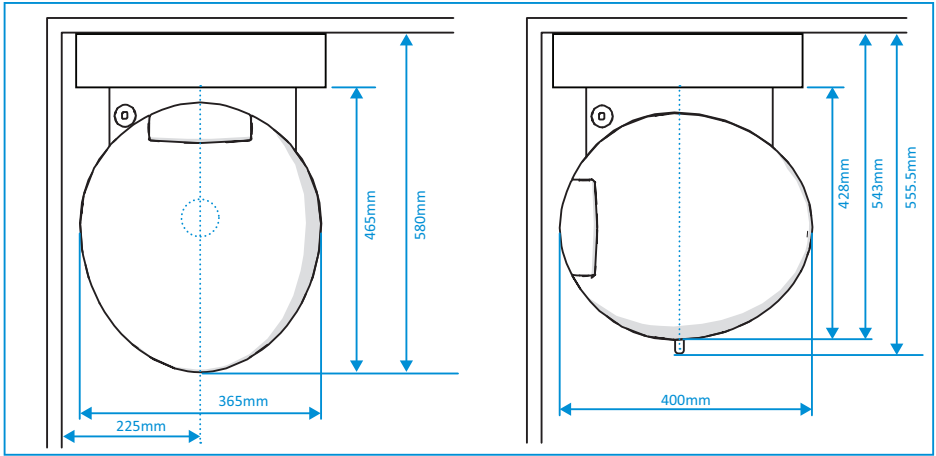
7. Packaging

Table 3: Packaging

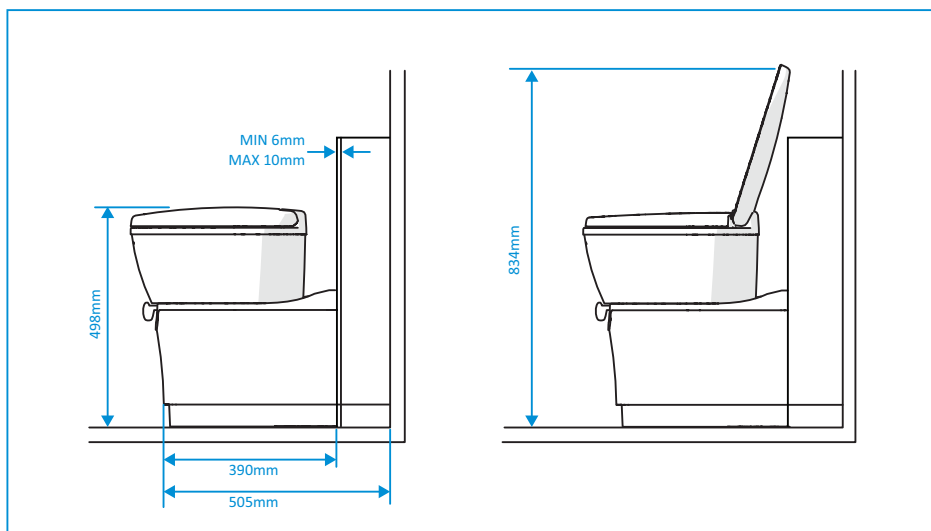
Type of packaging	Pallet packaging
Amount of toilets on a pallet	8
Maximum stack height	3 pallets high
Pallet size	80x120cm

8. Position and placement

- The main bathroom dimensions:

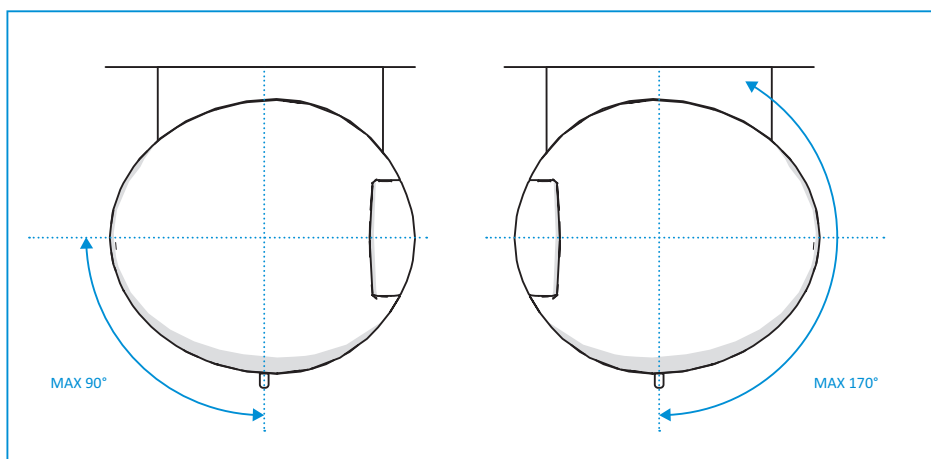


■ The other dimensions:

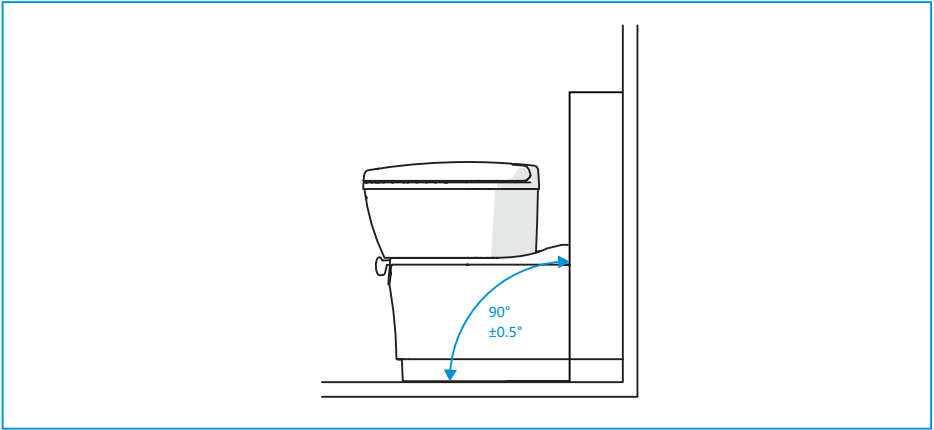


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■ The bowl rotation:



- The floor-wall angle:



- Create the inside wall.



See Designation codes, drawings and models for drawings of the cut-out dimensions.

- Create the wall cut-outs for the service door or flush door.



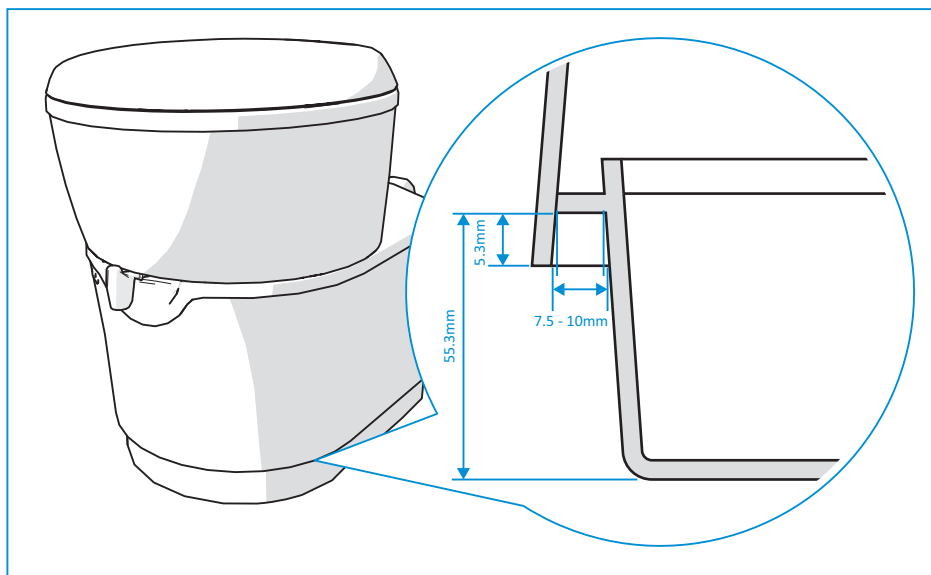
See Designation codes, drawings and models for drawings of the cut-out dimensions.

- Install the service door or flush door.
- For further instructions, see the installation instructions of the door.



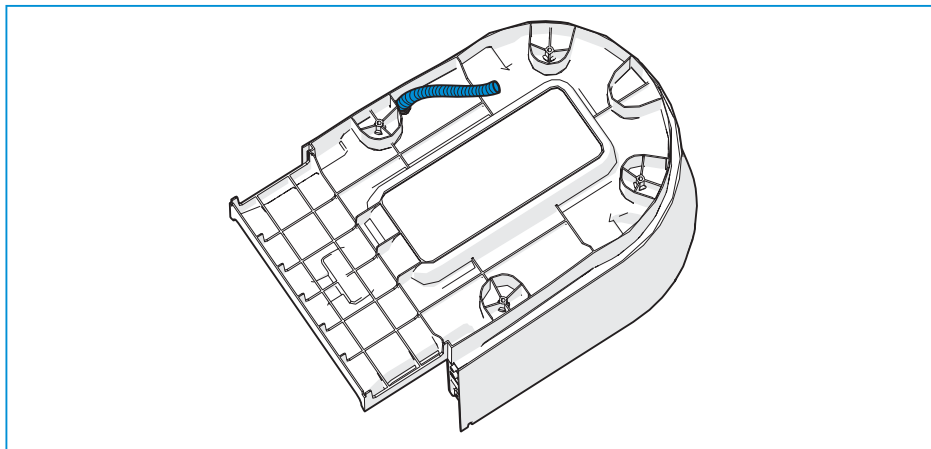
The wall thickness needs to be between 23mm and 39mm for a service door or between 28mm and 40mm for a flush door. Contact Thetford if the vehicle wall thickness is outside this range.

- Install the shower tray, if applicable.



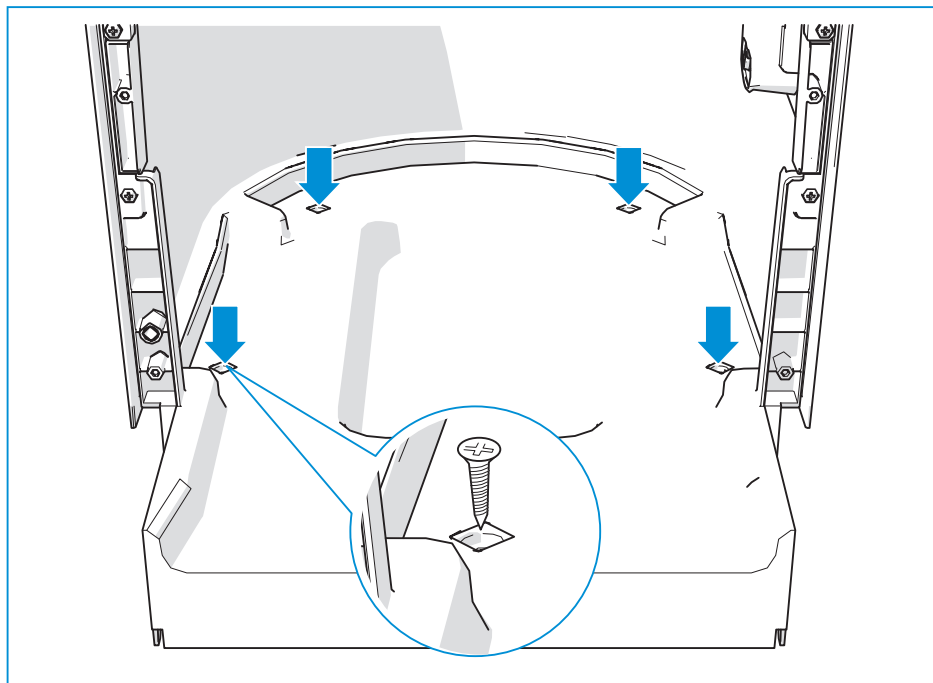
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- Install the passive outside vent by guiding the tube to the outside, if applicable.



Outside diameter tube: 16mm.
Length tube: 600mm.

- Mount the toilet to the floor with four screws.



Required torque: $1.2 \pm 0.3\text{Nm}$ for a Plywood floor.

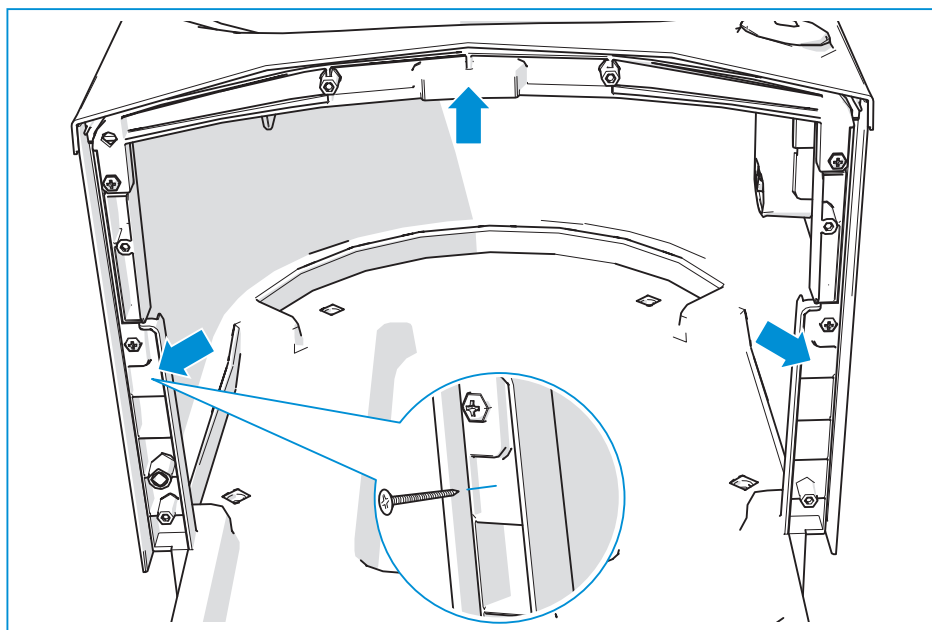


Screws are supplied by Thetford. If these are not used, use stainless steel screws.



Torque may differ if the floor is made from a different material.

- Connect the toilet to the inside wall with three screws.



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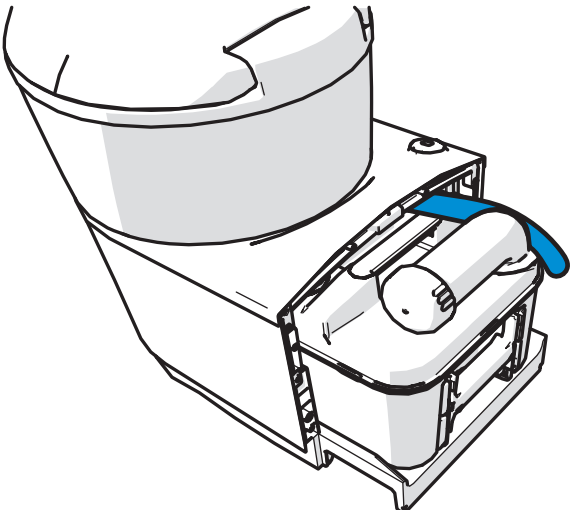


Required torque: 0.9Nm.



Use stainless steel screws.

- Connect the water hose.

Diameter	Inside: 10mm Outside: 16mm
Length and position	105mm from the last fixed point on the toilet 
Required pressure remote pump at the toilet inlet	Min. 0.35bar at 4.2L/min Max. 0.70bar at 7.1L/min
Maximum allowable pressure on hose	Europe: 4bar AUS/China/US: 8bar



Make sure that after routing the water hose, the waste-holding tank can still be removed from the toilet.



Meet the required pressure for the remote pump at the toilet inlet to ensure correct flush. If the pressure is too high, install a flow reducer.

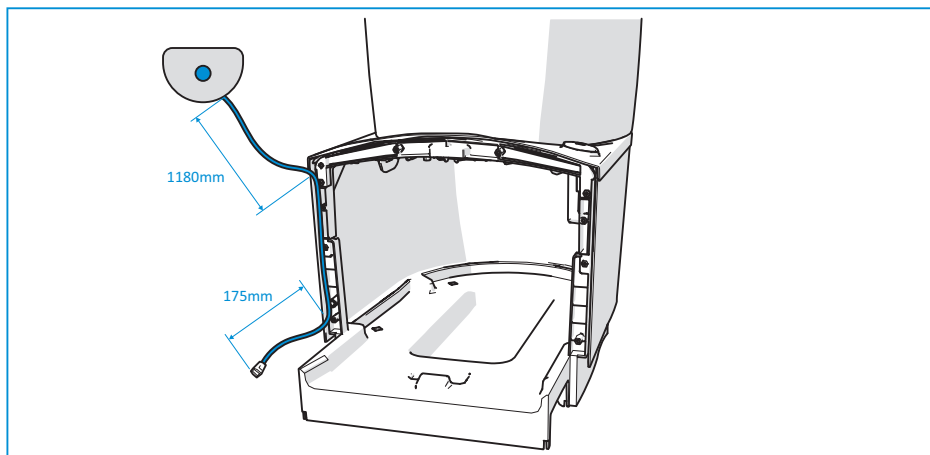
- Install the control panel at the desired location.



See [Connecting electricity](#) for more information about the control panel, including maximum cable lengths.

9. Connecting electricity

- Connect the cable according to the following position.

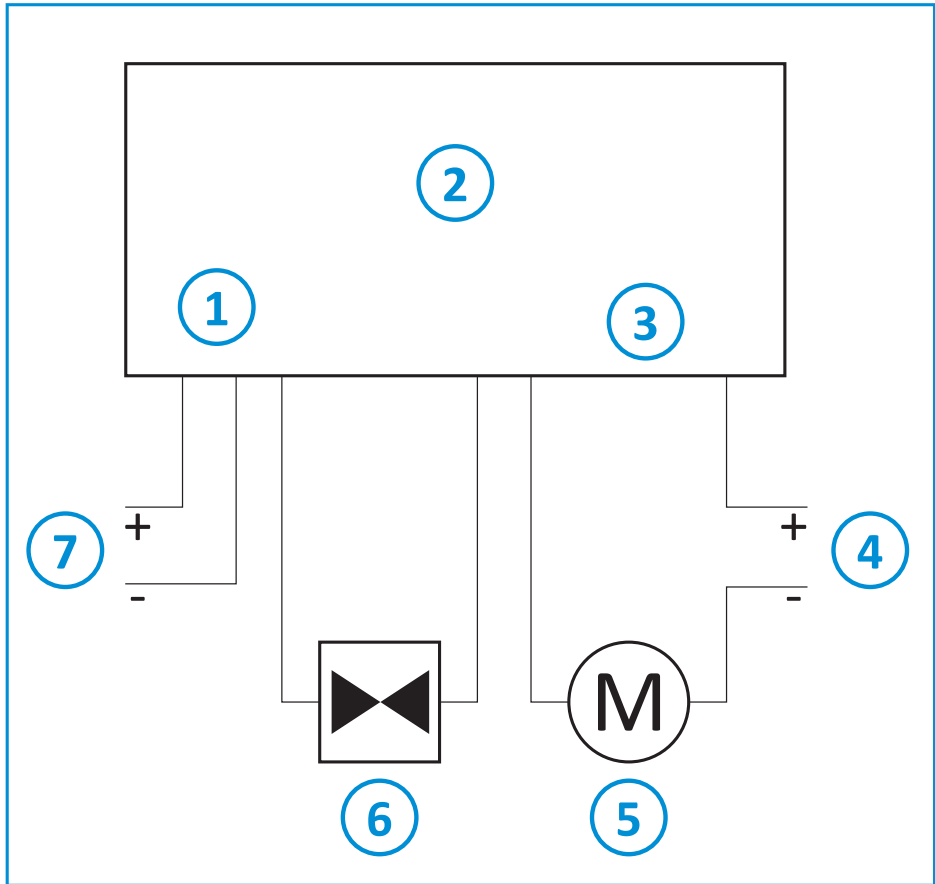


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- Use the following values to connect the power supply.

Remote pump	Grey and purple are used for remote pump relais. Minimum voltage and wattage as indicated on the pump must be respected.
Connection	4 pole tab housing
Position wiring in tab housing	
4 pole connector on toilet	TYCO/AMP 180901
4 pole connector counter part	TYCO/AMP 180900
Thickness	Black/red: 0.5mm ² Grey/purple: 0.75mm ²

■ Wiring diagram:



1. Overcurrent protections: 3A PTC on PCBA
2. Control PCBA
3. Output relay on PCBA
4. 12V DC power supply
5. External flush pump (OEM)
6. Internal flush valve
7. 12V DC power supply

10. After installation

- Ensure that all packaging materials have been removed.
- Check if the toilet flushes correctly.
- Check if the level indication works.
- Test all piping and connections and make sure they do not leak.

11. Technical specifications

Table 4: Dimensions and weight

	C223-S toilet		
Dimensions	H	W	D
mm	495	365	580
Empty weight	6.8kg		
Capacity waste-holding tank	18L		

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12. Servicing

All servicing must be carried out by an approved competent person.

For service, please contact your authorised local Service Centre giving details of the model and serial number on the data badge plus date of purchase.

The data badge can be found on the base of the toilet.



13. Questions / customer service

- Visit www.thetford-europe.com.
- Contact Customer Service Thetford in your country. See the addresses on the back.