

ENG



# TEMO

## TEMO·450

MODE D'EMPLOI / USER MANUAL

*À lire avant toute première utilisation  
Read before first use*

## TABLE OF CONTENTS

---

<b>INTRODUCTION</b> .....	<b>34</b>	
1. Welcome note	34	
2. Sea user charter	35	
3. Partnership with the SNSM	36	36
<b>INTRODUCTION</b> .....	<b>38</b>	
1. Presentation of the instructions manual	38	38
2. Graduation of safety instructions	38	
3. Meaning of the symbols	39	
<b>DEVICE OVERVIEW</b> .....	<b>40</b>	
1. Composition	40	
2. General features	41	
3. Characteristics of the Lithium-Ion battery	41	
4. Serial plate	42	
<b>GETTING STARTED</b> .....	<b>42</b>	
1. TEMO-450 framework of use	42	
2. First charge	43	
3. Description of the TEMO-450 components	45	
5. Intrinsic safety features	47	
6. Additional safety features	47	
7. General safety instructions	48	
<b>TRANSPORT</b> .....	<b>49</b>	
<b>INSTALLATION ON BOARD</b> .....	<b>50</b>	
1. Installation of the oarlock	50	
2. Mounting the TEMO-450 onto the oarlock	51	
3. Use without the oarlock	51	
4. Extension adjustment and handle rotation	52	
<b>OPERATION/ NORMAL USE</b> .....	<b>53</b>	
1. Starting the TEMO-450 and forward navigation mode	53	
2. Navigation in reverse	55	
3. Shutdown	55	
4. Once at destination	56	
<b>FAILURES AND ERROR MESSAGES</b> .....	<b>57</b>	
<b>MAINTENANCE AND SERVICE</b> .....	<b>58</b>	
1. Rinsing the equipment	58	
2. Protection of equipment and special maintenance	58	
3. Battery charge level	58	
4. Removing the propeller	59	
5. Removing the propeller tunnel	59	
6. Battery replacement	60	
<b>RECHARGING</b> .....	<b>60</b>	
1. Recharging on shore	61	
2. Recharging on board	61	
<b>THE TEMO WARRANTY</b> .....	<b>62</b>	
1. Conditions for implementing the warranty	62	
<b>ADDITIONAL INFORMATION</b> .....	<b>63</b>	
<b>DISPOSAL AND ENVIRONMENT</b> .....	<b>64</b>	
<b>DECLARATION OF CONFORMITY</b> .....	<b>64</b>	

## INTRODUCTION

---

### 1. WELCOME NOTE

Dear Captain,

Thank you for choosing TEMO to power your boat. We wish you as much pleasure in using it as we enjoyed designing and producing it.

We wanted it to be light, user-friendly, ergonomic, and manufactured in France. It required several thousand hours of research, development, and testing both in the factory and in real conditions. The **TEMO-450** was designed in Nantes and manufactured in Carquefou, in the "Pays de la Loire" region.

Named TEMO, as a nod to the Latin root of the «timon» (long old time tiller handle), it is intended to facilitate your outings on the water. It is like having a free companion; you can head in any direction with no hassle. Galley hardships are past history; now **TEMO-450** is in your hands.

Prior to navigation, one last recommendation: while our thruster has been developed to be reliable and very easy to use, it still needs to be handled with care. We invite you to read this manual carefully to ensure your safety and that of your passengers. Following our instructions will also contribute to increasing the product's lifespan.

Please note that our team is continuously working on the development of new products and accessories. We are committed to expanding our range in order to meet your needs, and your opinion matters. Do not hesitate to share your first impressions, and all your comments or ideas for improvement, when sailing with TEMO. You can do this from our website or directly on Google. We are genuinely motivated and committed to offering you simple, fun and responsible solutions for full enjoyment during solo navigation or with family and friends.



#### **Any doubts? Any questions?**

We remain at your disposal by phone at **+33 (0)2 85 52 26 42** or by mail at: [hello@temofrance.com](mailto:hello@temofrance.com).

So that boating remains a pleasure and that nothing stops your call of the sea!

Thank you for adopting TEMO, excellent navigation, and see you soon.

*The TEMO team*

## 2. SEA USER CHARTER

*The sea is alive,  
it is a fragile environment.  
An invaluable resource.*

TO PROTECT IT, PLEASE:

- > Respect the sea and rivers.
- > Do not navigate in protected areas.
- > Limit your fishing to authorised species and sizes.
- > Observe the animals without touching or disturbing them.
- > Before anchoring, take into account the nature of the sea bottom in order to avoid its degradation.
- > Preferably use mooring buoys.
- > Please dispose of household waste in the containers, and toxic, solid and liquid waste in the dedicated harbour containers.
- > Please use the harbour sanitary facilities and empty the black water tank(s) at the pumping stations. Please use the most environmentally friendly detergents
- > Please ensure that all maintenance (boat, equipment) is carried out in an environmentally-friendly manner.
- > Dispose carefully of all liquids that may pollute.



ENG

### 3. PARTNERSHIP WITH THE SNSM

As a French nautical company, based in Loire-Atlantique, the TEMO team is committed to the safety of leisure boaters. Right from the start of our adventure, we have been involved in supporting the actions of the SNSM (The National Society for Rescue at Sea) by donating € 10 to the Pornic station, for each **TEMO-450** sold in France.

This close partnership with the Ligerian branch will make it possible to finance concrete actions on the field and forge lasting bonds with the sea-rescuers in Pornic.

TEMO donations will help to finance the global actions of the Pornic SNSM and also aim to actively participate in the prevention of risks associated with tender navigation. A cause that makes particular sense for TEMO whose purpose is precisely to facilitate navigation on small boats.

*"We regularly intervene in incidents that have occurred with dinghies. Users fall overboard trying to start or install their motor. These are heavy, bulky, and cause imbalance on small boats. This new portable and very light motor plays an active role in risk prevention".*

**CHRISTOPHE MOREL,**

Christophe Morel, president of the SNSM station in Pornic, Pays de Retz.





# 1. PRESENTATION OF THE INSTRUCTIONS MANUAL

This manual describes all the functions of the **TEMO-450** thruster.

It contains all the information you need to use the **TEMO-450** efficiently and safely.

It includes:

- The characteristics of the system.
- System design information.
- Information on potential risks and their consequences, in order to avoid any danger.
- Information concerning the use of the device's functions during its period of use.

This manual should help you to know the **TEMO-450** better and to use it correctly, taking into consideration the risks, in the case of inappropriate use.

Any new user of this thruster must read and understand this manual. This manual should always be kept handy in case of need.

If the instructions specified in this manual are followed, you will:

- Avoid risks.
- Reduce repair costs.
- Increase the lifespan of the thruster.

# 2. GRADUATION OF SAFETY INSTRUCTION

The safety instructions are reproduced in this document, using standard layout and symbols. Follow the instructions given. The categories of risks described are given according to the probability of occurrence and severity of the consequences.

## DANGER

*Indicates the presence of an extreme intrinsic risk that may result in a high probability of death or permanent injury, if proper precautions are not taken.*

## CAUTION

*Indicates the presence of a risk of injury or death if proper precautions are not taken.*

## WARNING

*Indicates a reminder of safety-related practices, or warns against dangerous practices that could result in personal injury or damage to the boat, its components or the environment.*

### 3. MEANING OF THE SYMBOLS



*Read the manual carefully*



*Wear lifejackets*



*Wear gloves*



*Keep cardiac simulators and other medical implants at a distance of 50 cm min.*



*Prohibited for children under 15 years of age*



*The consumption of drugs and alcohol is prohibited*



*Magnetic field hazard*



*Risk of electrocution*



*Risk of cuts*



*Risk of burns*



*Risk of drowning*



*Risk of falling overboard*



*Fire hazard*



# 1. COMPOSITION

DESIGNATION:

- > 1 Control handle (see chapter: Getting started .3)
- > 2 Extension and battery compartment (tube up)
- > 3 Thruster oarlock fitting
- > 4 Clamp
- > 5 Electric motor
- > 6 Protection tunnel
- > 7 Propeller
- > 8 Oarlock
- > 9 220 V charger
- > 10 Magnetic key and wrist strap

Overview of the **TEMO-450** with its two configurations.  
You will also find additional equipment on the web site  
[www.temofrance.com](http://www.temofrance.com)



## 2. GENERAL FEATURES

DESIGNATION, TYPE	TEMO 450	UNIT
Max. motor input power	450	W
Max. propulsive power	200	W
Max. overall efficiency	44	%
Max. theoretical propeller weight	500	kg
Built-in battery	290	Wh
Rated voltage	25 / 29	V
Battery operating temperature	-20 / +60	°C
Battery charging temperature	0 - 45	°C
Dimensions of TEMO-450 retracted	130 x 21 x 21	cm
Dimensions of TEMO-450 deployed	170 x 21 x 21	cm
Propeller	3-blades, diam. 17.5 cm	
Protection class	IP67	
Weight of the TEMO-450	5 kg	

## 3. CHARACTERISTICS OF THE LITHIUM-ION BATTERY

DESIGNATION, TYPE	TEMO 450	UNIT
Capacity	290	W
Operating temperature	-20 / +60	°C
Storage temperature (Period > 3 months / years)	5 / 25	°C
Charging status for optimal storage	50% to be checked every six (6) months	
Charging time	5	Hours
Ambient charging temperature	0 / 45	°C
Theoretical lifespan	800	cycles
Battery autonomy (approx.)		
At full power	40	min
Normal use	60	min

## 4. SERIAL PLATE

Each **TEMO-450** thruster is equipped with a serial plate, on which the general characteristics are shown in accordance with the applicable regulations.

The TEMO serial plate is located below the clamping collar:



## GETTING STARTED

### 1. TEMO FRAMEWORK OF USE

Special safety instructions may apply for certain operations. They appear in the corresponding chapters of this manual. Safety and accident prevention instructions specific to the place of use should also be observed.

TEMO designs and manufactures its models with the utmost care in order to increase user safety. The product was subjected to all regulatory controls during its development.

Inappropriate use of the thruster can be hazardous to the life or physical integrity of the user or third parties, or cause material damage.



#### WARNING

*Read and observe the following safety instructions and warnings specified in this manual. Read this manual carefully before operating the TEMO-450.*



#### DANGER

*Never use the TEMO-450 if you are tired or under the influence of drugs, alcohol or medication. Any moment of inattention while using the TEMO-450 increases the risk of serious, permanent injuries or death.*



#### DANGER

*Never leave children alone with the TEMO-450.*

### CAUTION

*This product is not designed to be used by persons (including children) with reduced physical, sensory or mental capabilities, lack of experience or ability, unless they are supervised by another person responsible for their safety.*

### WARNING

*Supervision is necessary for all inexperienced users.*

### WARNING

*Failure to follow the safety instructions in this manual may result in personal injury or material damage. TEMO accepts no liability for damage caused by non-compliance with these instructions.*

### WARNING

*The TEMO-450 is a propulsion device designed for small boats. Any other use is considered as non-conforming.*

## 2. FIRST CHARGE

Prior to first use, charge the TEMO-450 at 100% with the supplied charger following the procedure described in chapter: RECHARGING.

**Warning:** the TEMO-450 cannot be used when it is charging.



**DANGER**

*Take all the necessary precautions when connecting the TEMO-450 to its 220V charger. First connect the TEMO-450 to the charger and then connect the unit to the shore power.*

**DANGER**

*The charger supplied with the device is not waterproof. Charging of the motor must, therefore, be conducted away from humidity and splashing water.*

**DANGER**

*Do not continue charging the TEMO-450 beyond its full charge. This could cause a fire in case of overload.*

**CAUTION**

*Do not open the battery compartment. Protect the battery compartment from any impact that could open it. In the event of damage to this compartment:*

- Stop using the battery.
- Do not charge the battery any more.
- Do not short circuit the battery.
- If electrolyte leaks from the battery, avoid any skin contact and direct gas inhalation.
- Contact TEMO's After Sales Service

**CAUTION**

*When the motor is not charging, the cap must always be in place on the charger connector.*

**WARNING**

- Do not charge the motor without adult supervision.
- Charge the battery when the temperature is between 0°C and 45°C.

**CAUTION**

*Do not charge the TEMO-450 when the magnetic key is in its slot. The charging indicator light is located on the charger.*

### 3. DESCRIPTION OF THE TEMO-450 COMPONENTS

#### A. THE AMBIDEXTROUS HANDLE

The **TEMO-450** is designed to be used equally with both the right and left hand. Its handle is adjustable to use the **TEMO-450** comfortably according to your position on the boat.

You will find tutorials on the installation and use of the **TEMO-450** on our website, [www.temofrance.com](http://www.temofrance.com) or on our youtube channel, **TEMO France**.



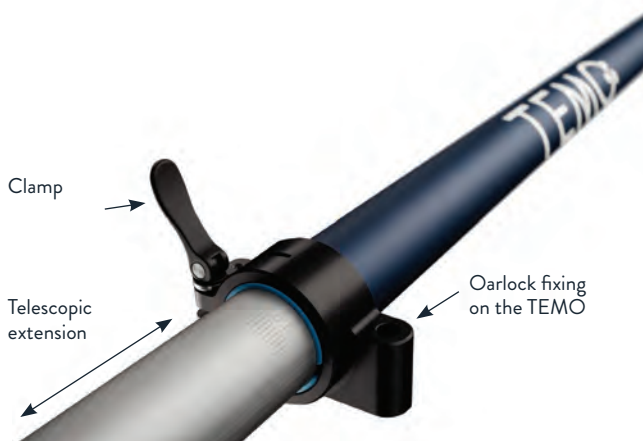
#### B. THE TELESCOPIC HANDLE AND THE CLAMP

The **TEMO-450** has a telescopic handle allowing the helmsman to position him/herself correctly on the boat. This telescopic handle is held in position by the clamp.

#### C. THE OARLOCK FITTING

The **TEMO-450** comes with an oarlock to connect it to the boat, maximize efficiency and ensure navigation safety.

If the installation of the oarlock is not possible, precautions should be taken. (See chapter: *Installation on board*).



#### D. THE PROPELLER AND ITS PROTECTION TUNNEL

Opposite the handle, the **TEMO-450** is equipped with a motor, a propeller with its tunnel providing protection for the user, passengers, and the propeller itself.



## 4. INTRINSIC SAFETY FEATURES

SAFETY FEATURE	FUNCTION
Magnetic key	The disconnection of the magnetic key causes the immediate interruption of the motor's electrical supply so it shuts down.
Electronic protection	This integrated device is designed to protect the motor from overcurrent, overvoltage, reverse polarity and motor overheating.
Progressive trigger	The progressive trigger allows the rotation speed of the propeller to be regulated over its entire power range.
Protection tunnel	This tunnel protects the propeller from impact and minimises physical injury.
Charging socket cap	It protects the connection from the charger to the TEMO-450 from water penetration into the connectors during navigation.

## 5. ADDITIONAL SAFETY FEATURES

ADDITIONAL SAFETY DESIGNATION	FUNCTION
Life jacket	During boat trips, wearing a life jacket is mandatory.
Oars / Paddles	Go to sea with your safety equipment (oars or paddles).
Oarlock	The thruster oarlock allows you to navigate in the best conditions, enabling the boat be powered as serenely as possible.



## 6. GENERAL SAFETY INSTRUCTIONS

ENG



**DANGER**

Never use the TEMO-450 in a swimming area or within 3 meters of any person swimming around the tender. Doing so will cause serious risks of bodily injury which could result in death.



**DANGER**

Only operate the TEMO-450 when the motor is in the water to ensure adequate cooling. Prolonged use out of water could cause risks of burns and fire.



**DANGER**

Never attach the TEMO-450 directly to the user. This could cause drowning in the case of a fall overboard.



**DANGER**

Operate the TEMO-450 only in a seated position. Its use in an unstable position could result in a fall overboard.



**CAUTION**

The wrist strap and magnetic key are provided to ensure the safety of the captain.

The magnetic key and its strap must be attached to the captain's wrist, so that in the case of a fall overboard, this immediately shuts down the engine.

The strap should never be attached to the TEMO-450.



**CAUTION**

Spread the weight adequately on board your tender in order to stabilise it and prevent falls overboard.

**CAUTION**

Do not exceed the power capacity of the boat transom.

This information can be found on the boat's serial plate.

**CAUTION**

The purchaser is solely responsible for the choice of propulsion adapted to his/her boat, wind and sea conditions.



**WARNING**

*During boat trips, wearing a life jacket is mandatory.*

**WARNING**

*Manage your speed according to the environment with the progressive power trigger.*

**WARNING**

*Having oars or paddles on board, in addition to the TEMO-450, is mandatory.*

**PRACTICAL INFORMATION:**

*The TEMO-450 is designed to power a tender with 3-4 persons on board or a 500 kg sailing boat for harbour manoeuvres.*

## TRANSPORT

We recommend that you retract the telescopic handle and pay attention to the thruster appendages (propeller protection tunnel, propeller and handle) when transporting it, with or without a bag provided for this purpose.

**CAUTION**

*During transport and storage of the TEMO.450, always be sure to disconnect the magnetic key to prevent an unintentional start of the motor.*

**PRACTICAL INFORMATION:**

*Since 2009, it has been prohibited to transport batteries with a capacity of more than 160 Wh. by commercial plane. As the TEMO-450 has a 290 Wh battery, it cannot be carried in hand luggage or checked-in luggage on commercial flights.*

## INSTALLATION ON BOARD

The oarlock supplied in the **TEMO-450** kit enables maximal motor efficiency, while keeping the installation secure.

### WARNING

*Only use the TEMO oarlock.*

## 1. INSTALLATION OF THE OARLOCK

The oarlock is designed to optimise the use of your **TEMO-450** and make it easier and safer to handle. We highly recommend its use.

Warning: some transoms have watertightness properties. Be careful never to drill a surface that must remain watertight.

The installation must be fixed on a flat surface, vertical or horizontal. On a clean dry and solid surface (aluminium, wood, polyester), screw on your TEMO oarlock by following the instructions below:

- Take your boat out of the water and position it on a stable, flat surface.
- Get into your boat and stretch out your arm to be in a comfortable position. Mark the appropriate positioning point adapted to your arm length and your position on the boat.
- Your oarlock does not have to be fitted on the centerline of your boat.
- Screw the oarlock fitting onto the exterior of the transom, using the screws provided;
- The lower section of the oarlock's metallic axle must be aligned with the top of the transom. The **TEMO-450** must be able to be raised to the horizontal position.
- If possible, place the oarlock so that the **TEMO-450** is at about 30 cm above the water. The optimal angle between the **TEMO-450** and the

water surface is 30° max.

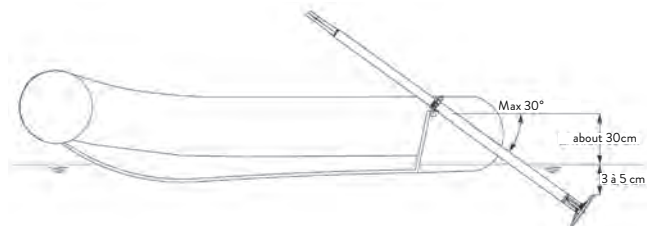
If there is no transom, the oarlock can be fixed on the sides of the tender.

You can also find information on the installation of this oarlock on our website, [www.temofrance.com](http://www.temofrance.com) or on our Youtube channel, youtube TEMO France.

Dimension of the oarlock



Installation diagram



## 2. MOUNTING THE TEMO-450 ONTO THE OARLOCK

To mount the **TEMO-450** onto the oarlock, you must:

1. Unscrew its head.
2. Fit the motor on the axle.
3. Carefully screw the oarlock head back on.



Fixing nut of the TEMO-450 on the oarlock fitting

### CAUTION

*When installing the TEMO-450 on your dinghy at sea, you will need to move around the boat. Extra vigilance is required in order to avoid falling overboard.*

### WARNING

*Before each use of the TEMO-450, check the condition of the oarlock fitting and the robustness of its fixation on the support surface.*

## 3. USE WITHOUT THE OARLOCK

The **TEMO-450** can be used without its oarlock, but precautions must be taken when using it.



### DANGER

*Without the oarlock fitting, the risk of instability is greater and can cause a fall overboard. Extra vigilance is required.*

### WARNING

*When using without an oarlock fitting, be careful to gradually control the TEMO-450's power.*

## 4. EXTENSION ADJUSTMENT AND HANDLE ORIENTATION

The clamp allows the telescopic arm to be extended or retracted to suit any normal use of the **TEMO-450**.

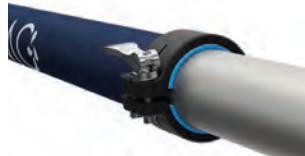
To adjust the position of the extension, you must:

1. Open the flange.
2. Unscrew by a quarter turn, if necessary.
3. Adjust to the desired length.
4. Position the handle and the tube to adjust them to your position in the vessel.
5. Screw a quarter turn if you have unscrewed the flange.
6. Tighten the flange.

Opening and adjusting the clamp



Closing the clamp



Before using the **TEMO-450**, please check that the clamp is sufficiently tightened and that the telescopic tube does not move

### CAUTION

*Do not deploy the extension beyond the mark on the tube, indicated by the stop mark and the red band.*



STOP mark on the TEMO-450

## 1. STARTING THE TEMO-450 AND FORWARD NAVIGATION MODE

To start the **TEMO-450**, you need the magnetic key and the thruster.

Then proceed as follows:

1. Install the **TEMO-450** on its oarlock fitting.
2. Attach the strap to your wrist.
3. Insert the magnetic key.
4. Wait a few seconds and then pull the trigger.

The **TEMO-450** will not start without its magnetic key.



### DANGER

*Before heading to sea, check the TEMO-450's operating capacity and its battery's autonomy to ensure that you do not risk running out of propulsion power before reaching your destination.*



### DANGER

*Never use the TEMO-450 in a swimming area or within 3 meters of any person swimming around the tender. Doing so will cause serious risks of bodily injury which could result in death.*



### DANGER

*Only operate the TEMO-450 when the motor is in the water to ensure adequate cooling. Prolonged use out of water could cause risks of burns and fire.*



### DANGER

*Never attach the TEMO-450 directly to the user. This could cause drowning in the case of a fall overboard.*



### CAUTION

*The rotating propeller can cut or sever a member when it is in motion. Keep your hands away from the propeller.*

**CAUTION**

During navigation, keep a 360° field of vision as much as possible.

**CAUTION  
CAUTION**

*The wrist strap and magnetic key are provided to ensure the safety of the captain.*

*The magnetic key and its strap must be attached to the captain's wrist, so that in the case of a fall overboard, this immediately shuts down the engine.*

*The strap should never be attached to the TEMO.450.*

**CAUTION**

*Spread the weight adequately on board your tender, in order to stabilise it and prevent falls overboard.*

**WARNING**

*During boat trips, wearing a life jacket is mandatory.*

**WARNING**

*If the trigger is fully pressed when starting up, you run the risk of great instability of the boat and of falling overboard. Press it gradually.*

**WARNING**

*When the motor is not being charged, the cap must always be in place on the charger, in order to avoid any water splashing into the socket.*

**PRACTICAL INFORMATION:**

*Adjust the handle according to your position on the boat.*

**PRACTICAL INFORMATION:**

*The trigger is gradual and controls the propeller rotation proportionally. This enables you to adjust your speed.*

## 2. NAVIGATION IN REVERSE

To navigate in reverse, press the button located above the handle, then pull the trigger.

1. Press the reverse button.
2. Pull the trigger gradually.



### PRACTICAL INFORMATION:

*Keep the reverse button pressed down during the entire manoeuvre. If you release the button, the TEMO-450 will switch back to forward gear.*

## 3. SHUTDOWN

You can stop the **TEMO-450** in two ways:

-**“Normal” shutdown:** release the trigger. The motor will stop instantly, but it will still be powered for future use.

-**“Emergency” shutdown:** remove the magnetic key. The motor stops instantly, but is no longer powered. To restart it, you will have to reinsert the magnetic key into its slot.

“Normal” shutdown



1 - Release the trigger

“Emergency” shutdown



1 - Remove the magnetic key



## 4. ONCE AT DESTINATION

Once you have finished using the **TEMO-450**, remove it from its oar-lock fitting and store it in its carrying bag (optional).

### CAUTION

*Before any dismantling, disconnect the magnetic key from the TEMO-450.*

ENG



### WARNING

*When dismantling the TEMO-450 at sea, you will have to move around the boat. Extra vigilance is required in order to avoid falling overboard.*

## FAILURES AND ERROR MESSAGES

SYMPTOM	POSSIBLE CAUSE	ACTION TO BE TAKEN
Motor shutdown	High motor temperature	Disconnect the magnetic key Let the motor cool down for about 10 minutes. Reconnect the magnetic key and operate the trigger. If nothing happens, contact the TEMO customer service: <a href="mailto:support@temofrance.com">support@temofrance.com</a>
Motor shutdown	Propeller jamming	Disconnect the magnetic key. Remove anything that could block the propeller. Check the correct rotation of the propeller by operating it by hand for 1 turn. Reconnect the magnetic key and operate the trigger.
Motor shutdown	Voltage too low	Check the battery gauge. Charge the TEMO-450.
Impossible to start up	Empty battery	Check the battery gauge. Charge the TEMO-450.
Cannot be started	Bad connection of the magnetic key	Disconnect the magnetic key. Clean the magnetic key slot. Reconnect the magnetic key and operate the trigger. If nothing happens, contact the TEMO customer service: <a href="mailto:support@temofrance.com">support@temofrance.com</a>
Battery overheating	Battery	Disconnect the magnetic key Let the TEMO motor cool down for about 10 minutes. Reconnect the magnetic key and operate the trigger. If nothing happens, contact the TEMO customer service: <a href="mailto:support@temofrance.com">support@temofrance.com</a>
Battery overheating	Battery	Disconnect the TEMO-450 from the charger. Let the TEMO-450 cool down for about 10 minutes. Contact TEMO's customer service: <a href="mailto:support@temofrance.com">support@temofrance.com</a>
Battery explosion	Overload and outgassing of the battery	Disconnect the magnetic key and contact the TEMO customer service: <a href="mailto:support@temofrance.com">support@temofrance.com</a>

**DANGER**

*Before cleaning or servicing of the equipment, disconnect the magnetic key from its socket.*

## 1. RINSING THE EQUIPMENT

After each use of the **TEMO-450**, rinse the submerged part of the thruster with fresh water. Spray fresh water into the openings designed for flushing out the remaining salt from the tube. Then, wipe with a rag. This will increase the lifespan of the equipment.

## 2. PROTECTION OF EQUIPMENT AND SPECIAL MAINTENANCE

Use a protective spray every two months to maintain the electronic contacts in the charging socket and the openings of the lower tube. Lightly spraying is sufficient. Let it dry before any new use or recharge.

Every 5 years, change the lip seal of the engine block. Contact your nearest After Sales Service center in order to carry out this operation. Visit the "distributors" rubric on our website: [www.temofrance.com](http://www.temofrance.com).

## 3. BATTERY CHARGE LEVEL

To increase the battery life, be sure to store your equipment in a ventilated storage place at the appropriate ambient temperature (15 to 25 °C).

For prolonged storage, you must observe the following battery load levels: Keep your **TEMO-450** charged at 50%. Check the charge level every 6 months and adjust it if required.



**WARNING**

*Wearing gloves is required when changing equipment on the TEMO-450.*

## 4. REMOVING THE PROPELLER

Changing the propeller can be easily done, if necessary. See our tutorial video called « TEMO Tutorial:

How to change the propeller and the tunnel of your hand-held electric motor. » on our YouTube channel TEMO France for a demonstration.

Follow the steps below:

1. Remove the screw that holds the propeller.
2. Remove the washer.
3. Remove the damaged propeller.  
from the shaft without losing the pin.
4. Place the new propeller in line with the pin to ensure that the propeller is correctly fitted to the shaft.
5. Place the new washer.
6. Sufficiently tighten the screw supplied in the pack .  
Use thread locker.

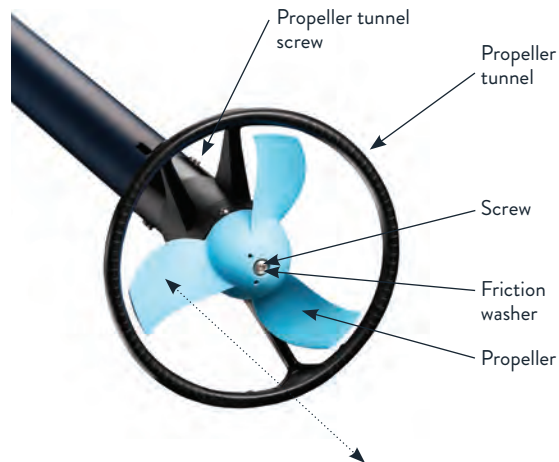
It is advised to remove the propeller for optimal rinsing, before wintering the thruster.

## 5. REMOVING THE PROPELLER TUNNEL

Changing the propeller tunnel can also be easily done, if necessary.

You just need to:

1. Remove the propeller screw (see above).
2. Remove the screws that hold the propeller tunnel (x3).
3. Remove the damaged propeller tunnel.
4. Place the new propeller tunnel in the same position as the damaged one.
5. Screw on the propeller tunnel in the 3 existing holes, with the screws provided .
6. Reinstall the propeller by following the steps in the previous paragraph.



## 6. BATTERY REPLACEMENT


The battery is an integral part of the TEMO-450. If you need to change it, you must contact the TEMO customer service directly: [support@temofrance.com](mailto:support@temofrance.com)

	<p><b>DANGER</b></p>	<p>Do not charge the motor without adult supervision. There is a risk of electric shock or fire in the case of overvoltage or overload.</p>
---	----------------------	---


<p><b>CAUTION</b></p>	<p>Do not open the battery compartment to change the battery yourself. In the event of damage to this compartment: Stop using the battery. Do not charge the battery any more. Do not short circuit the battery. If electrolyte leaks from the battery, avoid any skin contact and direct gas inhalation. Call the TEMO customer service if you have any problems.</p>
-----------------------	--

<p><b>CAUTION</b></p>	<p>If battery outgassing occurs, unplug the TEMO-450, allow the battery to cool down and contact the TEMO Customer Service.</p>
-----------------------	---

	<p><b>DANGER</b></p>	<p>Take all the necessary precautions when connecting the TEMO-450 to its charger. First connect the TEMO-450 to the charger and then connect the unit to the shore power.</p>
---	----------------------	--

	<p><b>DANGER</b></p>	<p>The charger supplied with the device is not waterproof. Charging of the motor must, therefore, be conducted away from humidity and splashing water.</p>
---	----------------------	--

	<p><b>DANGER</b></p>	<p>Charge the battery when the temperature is between 0°C and 45°C.</p>
---	----------------------	---

	<p><b>DANGER</b></p>	<p>Do not continue charging the TEMO-450 beyond its full charge. This could cause a fire in case of overload.</p>
---	----------------------	---

<p><b>CAUTION</b></p>	<p>When the motor is not charging, the cap must always be in place on the charger connector.</p>
-----------------------	--

<p><b>PRACTICAL INFORMATION:</b> Always charge the TEMO-450 with the dedicated charger for this equipment. The use of other charger types may result in damage to the device which is not covered by the warranty. Keeping the TEMO-450's original packaging will make it easier to return to our After Sales Service.</p>
--

## 1. RECHARGING ON SHORE

To charge the **TEMO-450**, use only the TEMO charger and follow these steps :

1. Remove the magnetic key.
2. Turn the rotating ring located at the base of the handle to uncover the charger inlet.
3. Insert the charger cable into the socket.
4. Connect the charger to the shore power.

Please note: during the charging process, the battery level cannot be read on the luminous gauge located on the handle of the **TEMO-450** (as the key is disconnected, the motor and the luminous gauge are no longer powered).

To check the charging status, refer to the luminous gauge on the charger. It is red for the duration of the charge and turns green when the charge is completed.

Once the battery is charged, disconnect the charger, check turn the rotating ring to cover and protect the charger inlet. Insert the magnetic key into its slot to check the battery level displayed on the handle gauge.

## 2. RECHARGING ON BOARD

The **TEMO-450** can be charged on a boat equipped with a 220V installation or with the 12V TEMO charger, available as an optional accessory in the accessories rubric at [www.temofrance.com](http://www.temofrance.com).



## THE TEMO WARRANTY

---

TEMO SAS (TEMO) guarantees your product, the **TEMO-450** against any defect in parts and workmanship, for a period of 2 (two) years from the date of delivery to the first user.

Under the Warranty, TEMO carries out, at its own expense, the repair or replacement of the defective product, and if appropriate, proceeds with the reimbursement. In the case of repair, defective spare parts are replaced by new or reconditioned parts. Replaced spare parts are the property of TEMO, while replacement spare parts become the property of the user.

ENG

### THE WARRANTY DOES NOT COVER:

- a The upkeep of the product and its maintenance as a result of normal wear.
- b Any adaptation of the product that would be necessary for the purposes of compliance with the technical or safety standards applicable in a country other than that for which the product was originally designed and manufactured.
- c Deterioration of the product resulting from:
  1. Improper use or installation of the product (use not conform with that for which the product is intended, installation or use that does not comply with TEMO's instructions, or the technical or safety standards in force in the country where it is used, etc.).
  2. Product maintenance not in accordance with TEMO's instructions or negligence in product maintenance.
  3. Improper handling or treatment of the product (inappropriate operation, dropping, shocks etc.) or inappropriate environment (poor ventilation, vibrations, exposure to excessive heat, inadequate power supply etc.).
  4. Use of the product with an incompatible or defective product or accessory.
  5. Modification or repair of the product was not carried out by a

service provider approved by TEMO.

6. A case of force majeure, disaster (fire, flood, etc.), lightning, etc.

The Warranty applies exclusively in the territory of delivery of the TEMO products distributed by TEMO SAS or in the country of registration of its distributors' head office.

### CONDITIONS FOR IMPLEMENTING THE WARRANTY

If the case of online purchases on the TEMO website or from a distributor, please contact: [support@temofrance.com](mailto:support@temofrance.com).

The following information / elements are required for the implementation of the Warranty:

- The reference of your product.
- The serial number of your product.
- A description of the dysfunction encountered.
- Proof of purchase of your product.
- Photos, if applicable.

In addition to the rights under this warranty, the buyer has legal warranty rights against the distributor which are not restricted by this warranty.

## ADDITIONAL INFORMATION

---

### A. EXPLOSION-PRONE ENVIRONMENTS AND OTHER ATMOSPHERIC CONDITIONS

It may be dangerous to charge or use the **TEMO-450** in areas where there is a risk of explosion, such as those where the air contains a high level of chemicals, vapours or flammable particles. Respect all signs and instructions.

### B. INTERFERENCE WITH MEDICAL DEVICES

The **TEMO-450** contains components that emit electromagnetic fields. The **TEMO-450** also contains magnets. These electromagnetic fields and magnets can interfere with medical devices such as pacemakers and defibrillators. Consult your doctor and the medical device manufacturer for specific information related to your medical apparatus and regarding the safety distance to be maintained between your medical device and the **TEMO-450**.

### C. PROLONGED EXPOSURE TO HEAT

Keep the **TEMO-450** and its power adapter in a well ventilated area when using or recharging it.

### D. CHARGING

Recharge the **TEMO-450** with the supplied cable and its AC adapter. Using damaged cables or chargers, or recharging in the presence of moisture may cause fire, electric shock, injury, or damage to the **TEMO-450** or other property. When using the AC adapter to charge your device, make sure the cable is fully engaged in the adapter before plugging it into a socket. It is important to keep the **TEMO-450** and its charger in a well-ventilated area when using them or recharging.

### E. BATTERY

Do not replace the **TEMO-450** battery yourself. The **TEMO-450** lithium-ion battery must be replaced at an authorised TEMO service centre. Incorrect replacement or repair could damage the battery and cause overheating or injuries. The battery must be recycled or disposed of separately from household waste. Do not incinerate the battery.

### F. DISTRACTION

Using the **TEMO-450** in certain circumstances can distract you and lead to dangerous situations (for example, the propeller sticking out of the water or accidentally activating the motor out of the water). Follow the instructions and precautions in the manual to avoid any problems.

### G. HANDLING

Handle the **TEMO-450** with care. Made of metal and plastic, it contains sensitive electronic components. The **TEMO-450** or its battery can be damaged if they are dropped, burned, punctured, scratched, crushed, or if they come into contact with liquid on non-watertight parts. If you suspect that the **TEMO-450** or its battery may be damaged, stop using the **TEMO-450**, as this may damage the battery and cause overheating and injury.

### H. REPAIR

Do not open the **TEMO-450** and do not try to repair the device yourself. Disassembling the **TEMO-450** may damage it and affect its resistance to splashing and water, or cause injury. If the **TEMO-450** is damaged or does not work properly, contact the TEMO customer service: [support@temofrance.com](mailto:support@temofrance.com).



## DISPOSAL AND ENVIRONMENT

The **TEMO-450** is manufactured in accordance with the EC 2002/96 directive. This directive regulates the disposal of electrical and electronic products for sustainable environmental protection.

According to local regulations, you can return the motor to a collection point. From there, it will be transported to specialised processing facilities.



ENG

## DECLARATION OF CONFORMITY

### DECLARATION OF CONFORMITY

#### Written declaration of conformity

G6

Name of manufacturer : TEMO  
 Address : 2 rue Alfred Kastler  
 Town : Nantes Post code : 44300 Country : France

Equipment Trade Name : TEMO  
 Type or model : TEMO.450

Harmonised standards or other reference documents used	Harmonised standards, CE marking	Harmonised standards, CE marking	Other reference documents, CE marking	Other reference documents, CE marking	Other reference documents, CE marking
Directive 2013/53/UE du 20/11/2013 - relating to pleasure craft and nautical motor vehicles				✓	
Norm EN ISO 25197: 2020 - Small craft - Electrical/electronic control systems for steering, shift and throttle		✓			
Norm EN ISO 16315: 2016 - Small craft - Electric propulsion system		✓			
Directive 2006/42/CE du 16/05/2006 - relating to machines			✓		
Norm EN ISO 12100: 2010 - Safety of machinery General principles for design Risk assessment and risk reduction	✓				
Directive 2014/30/UE du 26/02/2014 - relating to the harmonization of the laws of the member states concerning electromagnetic compatibility			✓		
Norm NF EN 60945: 2003 - Maritime navigation and radiocommunication equipment and systems - General specifications - Test methods and required results	✓				
Norm EN 55014-1: 2017 - Mains-powered devices - Requirements for household appliances, electrical tools and similar devices - Emission	✓				
Norm EN 55014-2: 1997 / A1: 2001 / A2: 2008 * - Category 4 device (F > 15 MHz) Requirements for household appliances, electrical tools and similar devices - Immunity	✓				
Norm EN 61000-3-2: 2014 - Limits for harmonic current emissions (current drawn by devices ≤ 16 A per phase)	✓				
Norm EN 61000-3-3: 2013 - Limitation of voltage fluctuations and flicker in low voltage networks for equipment with a rated current ≤ 16 A per phase and not subject to conditional connection.	✓				

This declaration of conformity is issued under the sole responsibility of the manufacturer. It is valid for all copies manufactured according to the plans and specifications forming part of the technical documentation required in the regulatory framework. I, Alexandre SEUX, acting as President of TEMO France says the manufacturer, the equipment mentioned above conforms to the essential requirements of standards and reference materials, as mentioned above.

Signed up on 08/12/2020, in Nantes  
 Name and function : Alexandre SEUX - President  
 Stamp & Signature :

TEMO SAS  
 2 rue Alfred Kastler  
 44300 Nantes  
 Enregistrée sous le numéro 844724021  
 au RCS de Nantes



TEMO

VILLAGE BY CA ATLANTIQUE VENDÉE

140 Route de Paris, 44300 Nantes

Tel : +33 (0)2 85 52 26 42

E-mail : [hello@temofrance.com](mailto:hello@temofrance.com)

*Document non contractuel / Non-contractual document*