torqeedo

Cruise 3.0 R/T, 6.0 R/T

Translation of the original operating instructions

Foreword

Dear customer,
We are delighted that you have chosen our motor concept. Your Torqeedo Cruise system is state-of-the-art in terms of drive technology and drive efficiency.
It has been designed and manufactured with the utmost care and attention to comfort, user-friendliness and safety, and thoroughly tested before delivery.
Please take the time to read this operating manual thoroughly so that you can use the system properly and enjoy it for a long time to come.
We strive to continuously improve Torqeedo products. Therefore, if you have any comments on the design and use of our products, please do let us know.
You are welcome to contact us at any time with any questions you may have about Torqeedo products. You will find the contact details for this on the back. We hope you enjoy using this product.
Your Torqeedo Team

1 Introduction

1.1 General information about these instructions

Follow these instructions for proper and safe use. Keep for future reference

These instructions describe all the essential functions of the Cruise system.
This includes:

- Imparting knowledge about the structure, function and properties of the Cruise system.
- Information on possible dangers, their consequences and measures to avoid a hazard.
- Detailed information on the execution of all functions during the entire life cycle of the Cruise system.

These instructions are intended to make it easier for you to learn about the Cruise system and to use it safely in accordance with its intended use. Every user of the Cruise system should read and understand the instructions. For future use, these instructions must be kept handy and close to the Cruise system at all times. Make sure you always use an up-to-date version of these instructions. The current version of these instructions can be downloaded from www.torqeedo.com under the tab “Service Center”.
Software updates may lead to changes to these instructions.
If you follow these instructions carefully, you can:

- Avoid dangers.
- Reduce repair costs and downtime.
- Increase the reliability and service life of the Cruise system.

1.2 Version and validity

This operating manual is valid for the following Torqeedo motors:

Motor type	Steering	Shaft length	Item numbers
Cruise 3.0	Remote	all	1260-00
			1261-00
Cruise 3.0	Tiller	all	1264-00
			1265-00
Cruise 6.0	Remote	all	1262-00
			1262-10
			1263-00
			1263-10
Cruise 6.0	Tiller	all	1266-00
			1267-00

1.2.1 Digital operating manual

You can also download the current version of the operating manual from the Service Center on our homepage. www.torqeedo.com

2 Explanation of symbols

The following symbols, warnings and mandatory signs can be found in the Cruise system manual or on your product:


Magnetic field


Attention: fire hazard


Read the instructions carefully


Do not tread on or place under load


Attention: hot surface


Attention: electric shock


Attention - rotating parts hazard


Do not dispose of in household waste


Persons with cardiac pacemakers or other medical implants must maintain a distance of 50 cm to the system.

2.1 Warning types

Warning notices are presented in this manual in a standardised manner and with standardised symbols. Observe the instructions. Depending upon the probability of occurrence and the severity of the consequence, the declared hazard classes are used.

Warnings

DANGER

Immediate hazard with high risk. Death or serious bodily injury may result if the risk is not avoided.

WARNING

Possible hazard with medium risk. Death or serious bodily injury may result if the risk is not avoided.

CAUTION

Hazard with low risk. Minor or moderate bodily injury may result if the risk is not avoided.

Instructions

NOTE! Instructions which must be observed to avoid material damage.

TIP! User tips and other useful information.

2.2 About this operating manual

The following topics in this operating manual list the components of your Cruise system and explain their function in more detail.

Handling instructions
The steps to be carried out are shown as a numbered list. The order of the steps must be followed.
Example:

1. Action step
2. Action step

Results of an action instruction are presented as follows:

» Arrow
» Arrow

Enumerations
Enumerations that have no compulsory order are shown as a list with bullet points.
Example:

- Item 1
- Item 2

3 Safety

3.1 Intended use and foreseeable misuse

Intended use:
Drive system for marine craft.
The Cruise system must be operated in chemical-free waters with sufficient depth.

Intended use also includes:
- The fastening of the Cruise system at the attachment points provided for this purpose and compliance with the prescribed torques.
- Observing all the instructions in these instructions.
- Adherence to the maintenance and service intervals.
- The exclusive use of original replacement parts.

Foreseeable misuse:
Any use other than or exceeding the use specified under "Intended use" is considered unintended use. The operator bears sole responsibility for damage resulting from unintended use and the manufacturer accepts no liability whatsoever.

Among other things, the following are considered unintended use:
- Underwater deployment of the Cruise system.
- Operation in waters to which chemicals are added.
- The use of the Cruise system outside of marine craft.

3.2 Safety features

The Cruise system and accessories have many safety features.

Safety features	Function
Emergency stop magnetic chip	Immediately disconnects the energy supply to the motor. The propeller comes to a standstill, the system remains switched on.
Kill switch cord or emergency kill switch	Immediately disconnects the power supply and switches off the Cruise system. The propeller comes to a standstill.
Fuses (in Power 48-5000 and Power 24-3500 battery)	To prevent fire/overheating in the event of a short circuit.
Electronic accelerator lever or tiller	Prevents uncontrolled start-up of the Cruise system after switching on. To drive, the gas accelerator lever /tiller must first be moved to the neutral position and the emergency stop magnetic chip must be applied or the emergency kill switch/kill switch cord must be moved to the position for normal operation.
Electronic fuse	Secures the motor against overcurrent, overload and reverse polarity.
Overtemperature protection	Automatically reduces the power of the electronics or the motor to prevent overheating.
Motor protection	Protects the motor from thermal and mechanical damage if the propeller is blocked, e.g. by ground contact, retracted cords or similar.

3.3 General safety regulations

- Be sure to read and observe the safety and warning instructions in this manual!
- Read these instructions carefully before operating the Cruise system.
- Observe local laws and regulations as well as required certificates of competence.

Failure to observe these instructions may result in personal injury or material damage. Torqeedo accepts no liability for damage caused by actions that contradict these instructions.

3.3.1 Basics

Local safety and accident prevention regulations must also be observed when operating the Cruise system.
The Cruise system has been designed and manufactured with the utmost care and attention to comfort, user-friendliness and safety, and thoroughly tested before delivery.
Nevertheless, if the Cruise system is not used as intended, dangers to life and limb of the user or third parties as well as extensive material damage may occur.

3.3.2 Before use

- The Cruise system may only be operated by persons with the appropriate qualifications and who demonstrate the required physical and mental aptitude. Observe the applicable national regulations.
- Instruction in the operation and safety regulations of the Cruise system is provided by the boat builder or by the dealer or seller.
- As the boat's operator, you are responsible for the safety of the persons on board and for all marine craft and persons in your vicinity. Therefore, be sure to observe the basic rules of boating conduct and read these instructions thoroughly.
- Particular caution is required when people are in the water, even when driving at slow speed.
- Observe the boat manufacturer's instructions on the permissible motorisation of your boat. Do not exceed the specified load and power limits.
- Check the condition and all functions of the Cruise system (including emergency stop) before each trip at low power, see chapter "Service intervals".
- Familiarise yourself with all the controls of the Cruise system. Above all, you must be able to stop the Cruise system quickly when necessary.

3.4 General safety information

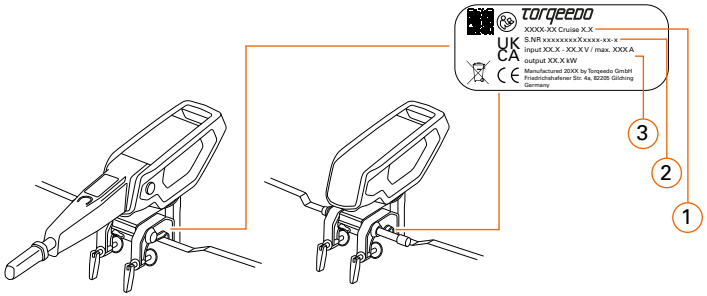
- Observe all safety information for batteries in the instructions from the respective battery manufacturer.
- Do not use the Cruise system if the battery, cables, housings or other components are damaged and inform Torqeedo Service.
- Do not store any flammable objects near the Torqeedo system.
- Only use charging cables that are suitable for outdoor use.
- Always unroll cable drums completely.
- Switch off the Cruise system immediately at the battery main switch in case of overheating or smoke development.
- Do not touch any motor or battery components during or immediately after driving.
- Avoid strong mechanical forces on the batteries and cables of the Cruise system.
- Attach the emergency stop magnetic chip cord to the skipper's wrist or lifejacket.
- Do not carry out any independent repair work on the Cruise system.
- Never touch frayed or cut cables or obviously defective components.
- If a defect is detected, switch off the Cruise system immediately at the battery main switch and do not touch any metal parts.
- Avoid contact with electrical components in the water.
- Always switch off the Cruise system via the on/off button and the battery main switch during installation and disassembly work.
- Do not wear loose clothing or jewellery near the drive shaft or propeller. Tie up loose, long hair.
- Switch off the Cruise system if people are in the immediate vicinity of the drive shaft or the propeller.
- Do not carry out any maintenance or cleaning work on the drive shaft or propeller while the Cruise system is switched on.
- Only operate the propeller under water.
- Take off metallic jewellery and watches before starting work on or near batteries.
- Always place tools and metallic objects away from the battery.
- When connecting the battery, make sure that the polarity is correct and that the connections are tight.
- Battery terminals must be clean and corrosion-free.
- Do not store batteries in a box or drawer, e.g. an inadequately ventilated locker, in a dangerous manner.
- Only connect identical batteries (manufacturer, capacity and age).
- Only connect batteries with identical states of charge.

- Secure the boat to the landing stage or berth so that it cannot break free.
- There must always be one person on the boat at the time of calibration.
- Watch out for people in the water.
- Only use original Torqeedo cable sets.
- Power cables must not be extended and must not be laid in bundles.
- Find out about the intended travel area before you set off and observe the forecast weather and sea conditions.
- Depending on the size of the boat, always have the necessary safety equipment ready (anchor, paddle, means of communication, auxiliary drive if necessary).
- Check the system for mechanical damage before starting to drive.
- Only drive with a system that is in perfect working order.
- Familiarise yourself with the travel area before setting off, as the range shown in the onboard computer does not take into account wind, current and direction of travel.
- Plan enough buffer for the required range.
- When operating with external batteries that do not communicate with the data bus, carefully enter the connected battery capacity.
- Stay at a distance from the propeller.
- When working on the propeller, always switch off the system via the battery main switch and remove the emergency stop magnetic chip.
- Observe the safety regulations.
- Do not lift the Cruise system alone and use suitable lifting gear.
- Do not connect other loads (e.g. fish finders, lights, radios, etc.) to the same battery bank that powers the motors.
- While driving, make sure that there is no danger of the propeller touching the ground.
- Always switch off the system via the main switch when working on batteries.
- When connecting the batteries, make sure to connect the red positive cable first and then the black negative cable.
- When disconnecting the batteries, make sure to remove the black negative cable first and then the red positive cable.
- Never reverse the polarity.
- The emergency stop magnetic chip can erase magnetic data carriers.
- Keep the emergency stop magnetic chip away from magnetic data carriers.

4 Product description

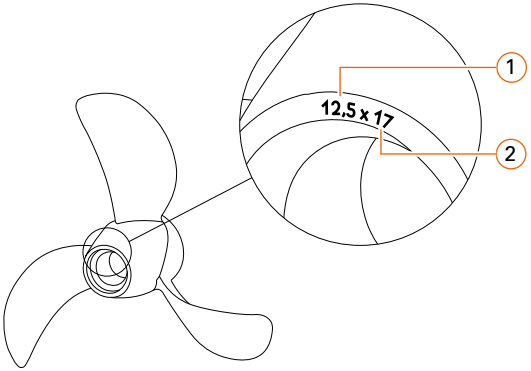
4.1 Name plate and identification

Motor identification



1 Item number and motor type
2 Serial number
3 Nominal input voltage/max. input current/ nom. wave output power/weight

Propeller identification



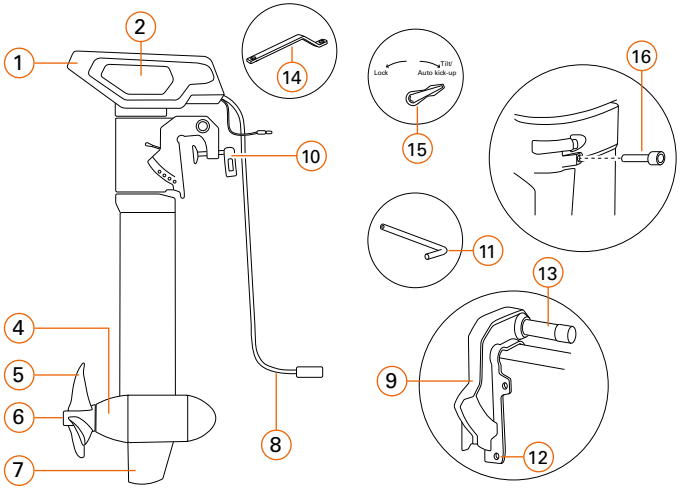
1 Diameter (inch)
2 Pitch (inch)

Propeller types

Abbreviation	Propeller type
WDR	Wide range, universal propeller
THR	Thrust propeller
HSP	High speed-propeller
WDL	Resistant to fouling propeller
FLD	Folding propeller
KRT	Kort nozzle

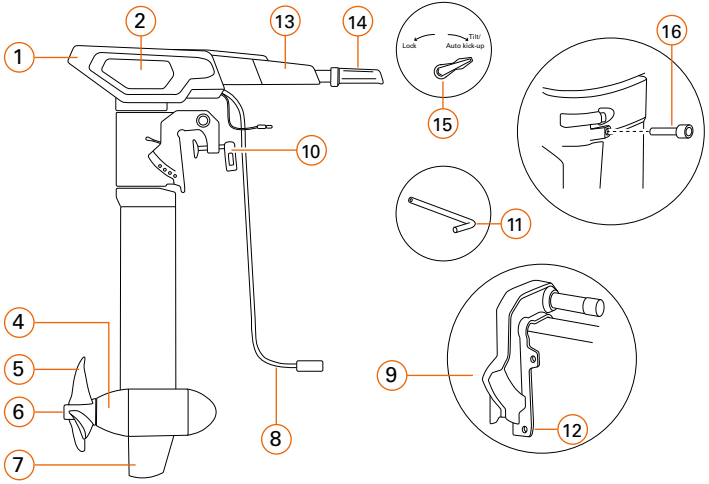
4.2 Controls and components

Cruise remote models



1	Motor head	9	Transom bracket
2	GPS receiver in the motor head	10	Transom clamp bolt
3	Shaft	11	Trim rod
4	Pylon	12	Mounting hole
5	Propeller	13	Steering tube for remote steering
6	Galvanic anode	14	Steering link arm remote steering connection
7	Fin	15	Tilt lever
8	Power cable with plug connection	16	Motor locking screw

Cruise tiller models



1	Motor head	9	Transom bracket
2	GPS receiver in the motor head	10	Transom clamp bolt
3	Shaft	11	Trim rod
4	Pylon	12	Mounting hole
5	Propeller	13	Tiller
6	Galvanic anode	14	Accelerator lever
7	Fin	15	Tilt lever
8	Power cable with plug connection	16	Motor locking screw

4.3 Scope of delivery

Check that the scope of delivery is complete.

- 1x motor complete with pylon, shaft and transom bracket (with steering tube for remote steering)
- 1x propeller with mounting kit
- 1x shaft anode AL
- 1x steering link arm and small parts for connecting the steering (Cruise R only)
- 1x tiller (Cruise T only)
- 1x emergency stop magnetic chip (Cruise T only)
- 1x cable set with main switch
- 1x operating manual
- 1x warranty form
- 1x service booklet

5 Technical data

Technical data

	Cruise 3.0	Cruise 6.0
Continuous input power	3 kW	6 kW
Rated voltage	24 V	48 V
Nominal shaft power*	2300 W	4900 W
Weight (motor with propeller and cable set to battery)	18.9 kg (RS), 19.4 kg (RL), 20.6 kg (TS), 21.0 kg (TL)	20.6 kg (RS), 21.0 kg (RL), 21.3 kg (TS), 21.8 kg (TL)
Shaft length	62.5 cm (RS, TS), 75.5 cm (RL, TL)	62.5 cm (RS, TS), 75.5 cm (RL, TL)
Propeller rotational speed at max. rotational speed	1100 rpm	1130 rpm
Control	Accelerator lever (RS, RL) (accessories) Tiller (TS, TL)	Accelerator lever (RS, RL) (accessories) Tiller (TS, TL)
Steering	Connection to standard remote steering prepared; steering angle lockable (RS, RL)	Connection to standard remote steering prepared; steering angle lockable (RS, RL)
	No steering angle limitation; steering angle lockable (TS, TL)	No steering angle limitation, steering angle lockable (TS, TL)
Tilt adjustment	Manual	Manual
Installation angle (motor tilted up)	61.3°	61.3°
Trim mechanism	Manual 4-stage	Manual 4-stage
Stepless forwards/reverse motion	Yes	Yes

RS=Remote short shaft, RL=Remote long shaft, TS=Tiller short shaft, TL=Tiller long shaft
*Reaching maximum power and maximum rotational speed depends on the boat-motor-propeller combination. Depending on the application, the maximum motor power may not be reached.

Protection class according to DIN EN 60529

Component	Protection class
Motor Pylon	IPx9K
Accelerator lever	IP67
Cable set to main switch/plug connection	IP67
Main switch with plug connection	IP23

Motor operating conditions

	Cruise 3.0	Cruise 6.0
Water temperature	-2 °C to +40 °C	
Air temperature	-10 °C to +50 °C	

NOTE! For detailed information on operating conditions of system components such as the battery, charger unis, etc., please refer to the operating manual for the respective component.

5.1 Notes on conformity according to battery type

NOTE:
Observe all national regulations and laws.
Torqeedo systems with Cruise 6.0 motors and Power 48-5000 batteries meet all European requirements in terms of electric drive systems for marine craft in the low-voltage range.
Please note that operating a Torqeedo Cruise 6.0 motor with 2 batteries of type Power 24-3500 connected in series does not comply with EU conformity, as the voltage level is above 50 volts.

6 Installation

6.1 Templates for installation

Several installation templates are available for planning and installing your Cruise system.
You can find the templates in the Service Center section of our website: www.torqeedo.com

6.2 Prerequisites for installation

Observe the following points to ensure safe and correct installation of your Torqeedo system:

- Only carry out assembly work on land and not when the boat is in the water.
- Ensure that the boat to which the Torqeedo system is to be mounted is secure.
- Boats standing on a trailer must be secured against tipping.
- The boat and all components must be separated from electrical power sources.
- The boat, the transom bracket and the condition of the transom bracket, must be suitable for the operation of the Torqeedo system; observe the manufacturer's specifications for the maximum permissible power (kW) and the maximum permissible weight.
- Use suitable lifting gear to lift heavy components.

6.2.1 Planning the installation location of the system components

We recommend that you plan the installation of the Torqeedo system in detail. This prevents delays during installation.
Read this operating manual carefully before installation. If you have any unanswered questions during planning, clarify these with knowledgeable personnel or contact Torqeedo Service.

All components

Keep the following points in mind when planning:

- Power cables between the motor and battery may only be extended with Torqeedo extension cables. Use a maximum of one extension per motor.
- TorqLink stub lines must not be extended.
- The Torqeedo system operates with high electrical power, so plan the installation location of the components so that sensitive electrical devices such as radios or sensitive measuring devices such as compasses will not be affected. If necessary, reposition the affected devices.
- Plan the installation of components with cable connections so that the connections point downwards to avoid standing water in the plug.

Batteries

It is important to mount and fix the batteries correctly to ensure safe operation of the boat, regardless of whether you operate your Torqeedo system with Power 24, Power 48 or external batteries. During planning and installation, ensure that the batteries are securely fastened at every stage. When using external batteries, additional measures may be necessary, e.g. fuses, ventilation, heating etc. Clarify the measures necessary for the marine sector with your battery supplier. Torqeedo batteries are specially designed for installation and use in marine applications.

Keep the following points in mind when planning:

- Batteries must be able to be fixed mechanically.
- If mechanical fastening is not possible (e.g. inflatable boats without a solid floor or with a high-pressure air floor), check fastening options with a strap (tank bracket) or by wedging in narrow stowage spaces.
- It must be possible to install the ventilation adapter in closed storage rooms or cabins (Power 48-5000 only).
- Select a location that corresponds to the IP protection class of the battery; information on this can be found in the respective charger unit operating manual.
- Make sure that the intended installation location offers sufficient space for the wiring.

Charger units

NOTE! To charge the batteries in the boat, a land connection in the boat with galvanic isolator is required according to applicable national requirements (e.g. DIN EN ISO 13297, ABYC E-11).

Keep the following points in mind when planning:

- Torqeedo recommends using one charger unit per battery.
- Choose a place in the boat where there is no stagnant air to ensure cooling of the charger unit.
- Select a location that corresponds to the IP protection class of the charger unit; information on this can be found in the respective charger unit operating manual.
- Make sure that the intended installation location offers sufficient space for the wiring.

Accelerator lever

If you use a Cruise R, you need an accelerator lever to control the motor.

Keep the following points in mind when planning:

- The accelerator lever must be easily accessible and operable from the control position.
- The display must be easy to read from the control position.
- The accelerator lever must have enough space to be operated without restriction.

Emergency kill switch, kill switch, drive enable, on/off switch

Depending on the configuration of your Torqeedo system, you can install different components.

Keep the following points in mind when planning:

- Kill switches must be installed near the steering position, this is the only way the driver can be connected to the kill switch with the rip cord.
- Emergency kill switches must be installed in such a way that they are easily accessible at all times.
- Plan the installation location of the emergency kill switch so that it cannot be triggered accidentally (e.g. in downward gradients)
- Plan the installation location of the on/off switch so that there is no danger of injury (e.g. by getting caught on the key switch)
- Plan the installation location of the switches so that they cannot be accidently actuated.

6.2.2 External loads

Torqeedo recommends that loads that do not affect the Torqeedo system, such as radios, lighting, etc., should be operated via a separate onboard power supply. When using external batteries, the energy consumption of auxiliary loads s not taken into account when calculating the range.
When using auxiliary loads, the additional power consumption must be taken into account and the battery bank must be designed according to the total power consumption.

6.2.3 Wiring

The wiring of your Torqeedo system depends on the components installed. You can find the connection diagram for your system in the Service Center section of our website: www.torqeedo.com

Keep the following points in mind when planning:

- An earthing point is required for your Torqeedo system. Take into account the connection and the cables required for this in your planning. The required cable cross-sections can be found in the section Tools, equipment and material.
- First determine and plan the installation positions of all components.

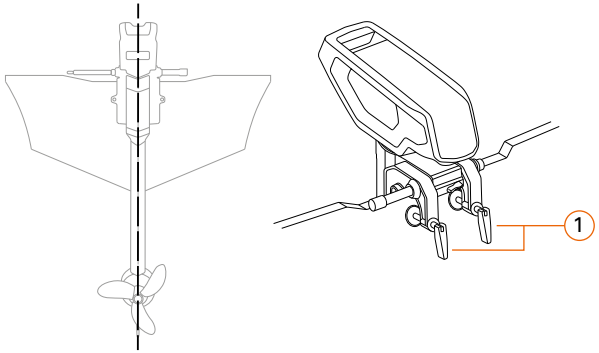
- Measure the required length of the TorqLink-Backbone.
- Measure the lengths of all required stub lines (cable connection between component and TorqLink-Backbone).
- When planning, please note that TorqLink stub lines must not be extended. If necessary, plan the TorqLink-Backbone so that the components can be connected through the TorqLink stub line without an extension. If necessary, extend the TorqLink-Backbone to connect a component that is far away; you can find corresponding extensions in our accessories catalogue.
- Cables must be fixed every 400 mm, plan attachment material. In places where fastening is not possible, a scuff guard must be fitted.
- Openly laid cables (e.g. inflatable boat) must be protected with chafing protection, plan sufficient material.
- When planning, please note not to bundle power cables with data or antenna cables (e.g. radios) for other loads.
- Observe the minimum bending radii of the cables when planning.
- If a second earthed onboard power system is available, ensure that both systems use a common earthing point.
- Live parts must be fitted or installed with protection against accidental contact; the necessary installation space must be taken into account during the planning stage.

6.3 Tools, equipment and material

Tool	Used for
Spanner SW13 or socket wrench SW13	Battery cable to battery terminals
Socket wrench SW17	Anode replacement
Spanner SW13 or socket wrench SW13	Attaching the transom bracket to the transom;
Hexagon socket size 6	Motor locking screw
Spanner SW17 or socket wrench SW17	Propeller assembly
Torque key	Fastening screws and nuts
Lubricant, if necessary salt water resistant for salt water use	Mounting the remote steering system and maintenance work
Drill bit 8.5 mm	Preparing the transom mounting
Sealant	Sealing the drill holes in the transom
Cable ties in various sizes	Cable routing and mounting
M5 mounting screws, length as required	Installing the battery main switch
M5 mounting screws, length as required	Installing the charger unit
M6 mounting screws, length as required	Installing the fast charger
M6 mounting screws, length as required	Installing the accelerator lever
Attachment material	Attaching the power cable and data cable
Abrasion protection	Installing/routing power cables
Earthing cable 25 mm^2 cross-section	Installing the earthing cable

6.4 Mounting the motor to the boat

6.4.1 Mounting the motor with transom clamp bolts



1. Position the motor on the transom of the boat.
2. Tighten the transom clamp bolts (1) ensuring the motor can still be moved.
3. Align the motor with the centre line of the boat.
4. Tighten the transom clamp bolts firmly.

6.4.2 Mounting the motor permanently

Prepare the motor for installation

TIP! First mount all components of the Torqeedo system in the boat and only then carry out the wiring.

CAUTION

Danger of crushing due to uncontrolled tilting of the transom bracket. This can result in minor or moderate bodily injuries.

- Set the tilt lock lever to the "Lock" position to lock the transom bracket.

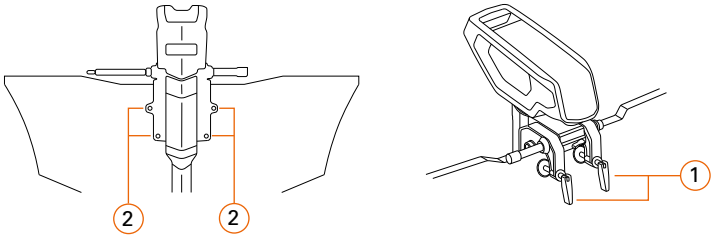
1. Open the transom clamp bolts of the transom bracket.

Align the motor and prepare the transom

CAUTION

Danger of injury due to boat tipping. This can result in minor or moderate bodily injuries.

- Make sure that the boat is positioned safely and stably.



1. Position the motor on the transom of the boat.
2. Tighten the transom clamp bolts (3) ensuring the motor can still be moved.
3. Align the motor with the centre line of the boat.
4. Tighten the transom clamp bolts hand-tight.
5. Mark the attachment lugs (2).
6. Open the transom clamp bolts and mount the motor.

TIP! Do not drill the holes for the fastening through the transom bracket as this will damage the lacquer coating and cause corrosion.

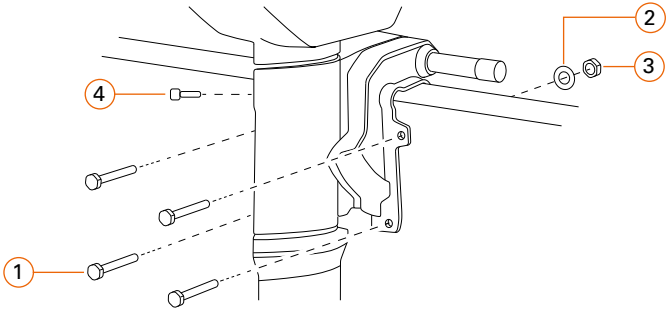
7. Drill the holes for the transom bracket according to the markings, use a drill

with 8.5 mm diameter.
8. Seal the inner surfaces of the drill holes to protect the core of the transom against water penetration.

TIP! Secure the motor with M8 screws.

Permanently attach the motor to the transom bracket

Use M8 mounting screws with washers and nuts (not included) for installation. The length of the screws depends on the installation configuration of your boat.



1. Position the motor on the transom of your boat.
2. Treat the M8 mounting screws (1) with a suitable sealant before installation to prevent water penetration.

TIP! Torqeedo recommends sealants that do not harden and can be easily removed during subsequent disassembling, e.g. butyl tape.

3. Install and tighten the M8 mounting screws (1) with the washers (2) and the nuts (3).
4. Remove the motor locking screw (4) and keep it for later use if you want to operate the motor without locking.

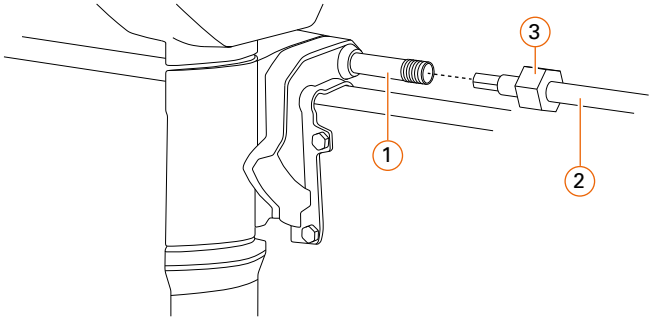
TIP! Protect the thread from water penetration with something such as household petroleum jelly if you have removed the motor locking screw.

6.4.4 Installing the propeller

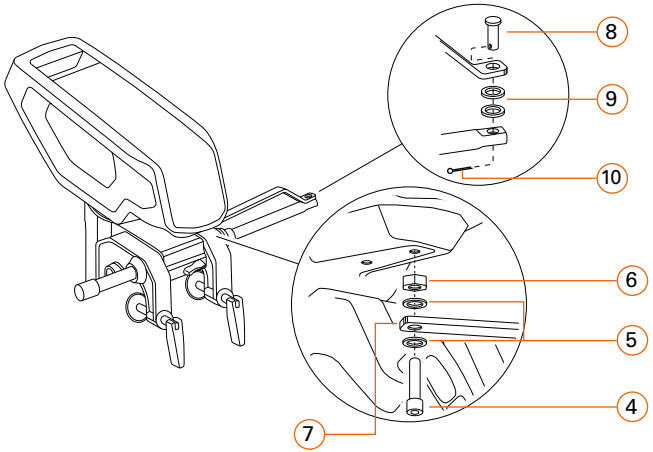
1. Install the propeller and galvanic anode, see chapter:
   - Propeller
   - Galvanic anode

6.4.5 Connecting the remote steering

The Torqeedo system is designed for commercially available remote steering systems.

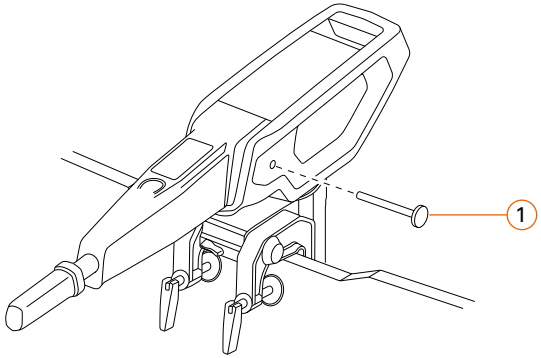


1. Treat the inside of the steering tube (1) with suitable lubricant before installing the remote steering; be sure to use lubricant suitable for salt water if you use your Torqeedo system in salt water or brackish water.
2. Guide the remote steering (2) into the steering tube, catch escaping lubricant with a rag.
3. Fasten the remote steering with the union nut (3) and tighten it to the specified torque; see manufacturer's instructions for the remote steering.



4. Install the screw (4), washers (5) and nut (6) into the steering link arm (7), do not tighten the nut.
5. Position the steering link arm with the screw on the motor head and screw the screw into the motor head until the nut rests against the motor head.
6. Tighten the nut so that the screw is locked and the steering link arm is able to move.
7. Position the other end of the steering link arm, the bolt (8) and the washers (9) in the remote steering and install the securing cotter pin (10).
8. Check the steering for function, paying attention to:
   - Free movement of the system during steering
   - Free movement in all tilt positions

6.4.6 Fitting the tiller (only Cruise with Tiller)



1. Fit the tiller to the motor.
2. Install the tiller lock screw (1) and tighten by hand.

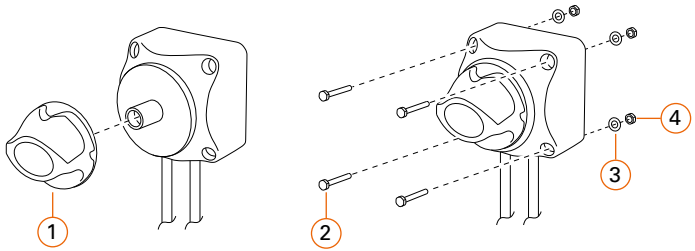
6.4.7 Installing the battery main switch

Use M5 screws (not included) for installation. The length of the screws depends on the installation configuration of your boat.

WARNING

Risk of injury from electrical voltage. This can result in moderate or severe bodily injuries.

- Main switches and cable connections must be provided with protection against accidental contact (e.g. lugsulation) or be installed so that they are safe to touch.



1. Prepare the boat for the installation of the battery main switch.
2. Position the battery main switch on the boat and secure it with M5 screws (2), washers (3) and nuts (4). Make sure that the cables are pointing downwards.
3. **IMPORTANT!** After installation, set the main switch to the “Off” position and secure it against unintentional operation by pulling off the switch handle (1).

6.5 Installing and securing the batteries

During planning and installation, ensure that the batteries are securely fastened at every stage.

Synchronising battery state of charge
If you use more than one battery in your Torqeedo system, you must charge each battery to a state of charge of 100 % before installation and especially before commissioning. This prevents high charge equalisation of the batteries during wiring.

1. Charge each battery for at least 12 hours to ensure a state of charge of 100 %.

Installing batteries
Prepare the mounting location for the batteries and ensure that the intended location

- provides a flat surface for mounting,
- is protected against splash water,
- is not in a wet environment such as bilges.

1. Place the battery in the designated location in the boat and use the designated points for attachment.

NOTE! For more information on the battery and mounting, see the battery operating manual.

6.6 Installing and fixing other components

TIP! Use the appropriate drilling template for installation. You can find the drilling template in the Service Center at www.torqeedo.com.

1. Prepare your boat for the installation of the component.
2. Position the component on the boat and fasten it with appropriate attachment material.

NOTE! For further information on the component and mounting, please refer to the relevant operating manual.

6.7 Wiring

DANGER

Danger of injury or death from electric shock. This can result in sever injuries or death.

- Make sure that the overall system is de-energised during installation. Batteries and external power sources must be disconnected from the onboard power supply.

WARNING

Risk of injury from electrical voltage. This can result in moderate or severe bodily injuries.

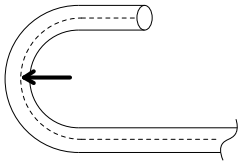
- Power cables, data cables, plug connections and screw connections must not be laid in wet areas (e.g. bilges).
- Follow the connection sequence according to the work instructions.

Before wiring, make sure you have the correct wiring diagram. You can find the

appropriate connection diagram for your system in the Service Center at www.torqeedo.com
Wiring and connection of the system components are done in a specific order. Follow the sequence to wire the system safely and correctly.

1. Data cable
2. Power cable
3. Earth cable
4. Charger unit (optional)
5. Insulation monitor (optional)
6. Land connection (optional)

Observe the minimum bending radius when laying all cables:



Torqeedo data cable	8 x diameter
Torqeedo power cable	8 x diameter
Earth cable	see cable manufacturer's specifications
Other power cables	see cable manufacturer's specifications

Data cable/network cable

1. Lay the data cables according to your plans and fasten them in the designated places, making sure that you lay and fasten data cables and network cables separately from power cables.
2. Note the minimum bending radius.
3. Make sure that the cables are laid without tension or load.

NOTE! Possible damage to components. The connector plugs of the TorqLink data cables must not be connected by force or with great effort.

TIP! The plug turns several turns in the thread before it becomes tight. If the plug becomes tight after the first 1 to 2 turns, stop turning immediately to avoid damage to the plug or component. Unplug the plug and start again from the beginning.

NOTE! Always connect the data cables to the battery last.

4. Position the connector plugs on the corresponding port of the component, making sure that the nose of the plug slides into the groove of the component.
5. Screw the connection plug hand-tight.
6. Connect all the data network connectors.
7. Roll up the excess cable and secure it. (e.g. with cable ties).

Power cable

1. Lay the system power cables.
2. Attach the power cables to the designated places according to your plans.
3. Note the minimum bending radius.
4. Make sure that the cables are laid without tension or load.
5. Make sure that the battery main switch is in the "OFF" position and secured against being switched on again by pulling off the switch handle.
6. Connect the red positive power cable to the positive terminal of the battery, observing the tightening torque - see connection diagram.
7. Connect the black negative power cable to the negative terminal of the battery, observing the tightening torque - see connection diagram.
8. Connect the plug connection of the power cables and fix them in the designated place according to your plans.

NOTE! Observe the sequence when disconnecting the power cables, e.g. if you want to disconnect for storage, see chapter “Storage”.

NOTE! Power cables must not be coiled.

Earth cable

NOTE: If a second earthed on-board power system is available, make sure that both systems use a common earthing point, see connection diagram.

1. Observe the required cable cross-section of the earthing cable.
2. Lay the earth cable according to your plans and fasten it. Note the minimum bending radius of the earth cable used.

NOTE! For more information on the earth cable, see the corresponding connection diagram.

Charger unit

DANGER

Danger of injury or death from electric shock. This can result in sever injuries or death.
- Make sure that the charger unit is disconnected from the power source.

1. Lay the charger unit cables according to your diagrams and fix them in the designated places.
2. Connect the red positive cable of the charger unit to the positive terminal of the battery, observing the tightening torque - see connection diagram.
3. Connect the black negative cable of the charger unit to the negative terminal of the battery, observing the tightening torque - see connection diagram.

NOTE! For further information on the component and mounting, please refer to the relevant operating manual.

6.8 Operation with external batteries

DANGER

Danger of injury or death due to improper installation. This can result in sever injuries or death.
- All national laws and regulations must be observed during installation.

WARNING

Danger of injury due to overheating. This can result in moderate or severe bodily injuries.
- Only use original Torqeedo cable sets.
- Power cables may only be extended with Torqeedo cable extensions.
- Do not connect any other loads to the power cables.

NOTE! External batteries may only be installed by qualified persons.

Observe the following points when using external batteries:

1. Use the cable set with eyelets of the Cruise 6.0 motor for the connection to a current bus bar of your battery bank.
2. For direct connection to your battery bank, use the cable set with battery pole terminals of the Cruise 3.0 motor.
3. If you use lead batteries (gel/AGM), we recommend batteries with at least 150 Ah per battery. For connection and wiring of the batteries, see connection diagram.
4. Always use a separate battery/battery bank for external loads.
5. Installing systems with external batteries may only be carried out by a specialist in compliance with all national regulations (such as ISO 16315 or ABYC E-11).
6. Lay the cables according to your plans and fix them in the designated places.
7. Connect the motor's cable set to the boat's power bus bar, observing the requirements for circuit protection, see connection diagram.

NOTE! For further information on the component and mounting, please refer to the relevant operating manual.

6.9 Installation and wiring checklist

NOTE! Make sure that the battery main switch is in the "Off" position.
NOTE! Do not start the system test until you have ensured the following points:

Motor
- Motor correctly positioned and fastened.

- Motor locking screw removed or installed as required.
- Propeller mounted.
- Remote steering connected, lubricated and free to move.

Battery main switch
- Main switch mounted and splash-proof.
- Installation position adhered to.
- Main switch in “Off” position.

Batteries (Torqeedo)
- Batteries installed so that they are splash-proof, fastened and/or secured against slipping.

Other components
- Other components installed according to specifications.

Wiring
- Connect all data cables to the components according to the respective connection diagram.
- Connect all power cables to the components according to the respective connection diagram.
- Power cable connected to components in correct polarity.
- All cables laid tension- and load-free.
- All cable abrasion points eliminated.
- Cable plug of the power cables correctly connected.
- All cable ties cut off without burrs.
- Excess data cables coiled up and fastened.
- Excess power cables fixed and not coiled.

Charger unit
- Charger unit mounted in splash-proof manner.
- Charging cable of the charger unit correctly attached.
- Charger units properly connected and properly earthed.

External batteries
- Connect all power cables between the motor and the power busbar or battery bank according to the respective connection diagram.
- Wiring, interconnection, and fusing of the battery bank carried out in accordance with operating conditions and national laws and regulations.
- Power cable connected to components in correct polarity.
- Earthing of the external batteries correctly established and checked.

6.10 System test

DANGER

Danger of injury or death from rotating propeller. This can result in sever injuries or death.
- No people or objects are allowed in the area of the propeller.
- Seal off the area against entry and remove objects.

NOTE! Material damage due to overheated components. The motor of the Torqeedo system is only intended for operation in water. Prolonged turning of the propeller on land or in the dry will cause component damage. The motor may only be rotated for a short time for the system test to determine the direction of rotation.

TIP! Ask someone to help you determine the direction of rotation of the propeller during propulsion.

1. Make sure that the propeller can rotate freely.
2. Make sure that no persons or objects can get near the propeller.
3. Set the accelerator lever to the neutral position.
4. Remove the emergency stop magnetic chip (if present).
5. Set the emergency kill switch to the position for normal operation or connect the kill switch cord to the kills witch (if present).
6. Switch on the battery main switch.
7. Switch on the system.

» The system starts within a few seconds and the display shows the main menu.

8. Insert the emergency stop magnetic chip (if present).
9. Give a slight forward push.

» The propeller rotates clockwise.

10. Give a slight backward push.

» The propeller rotates counter-clockwise.

11. Set the accelerator lever to the neutral position and switch off the system.
12. Switch the battery main switch to the “OFF” position.

» System test was completed successfully.

NOTE! Correct Torqeedo propeller direction of rotation: clockwise, (direction of rotation viewed from behind propeller: clockwise).

If the propeller turns in the wrong direction, carry out the following points:

1. Set forwards/reverse motion, see chapter Set forwards/reverse motion.

If the system does not start as prescribed, check the following points and then start the system test again:

- Is the battery main switch switched on?
- If necessary, is the emergency kill switch or kill switch in the position for normal operation?
- Are the batteries sufficiently charged?
- Are all data cables connected correctly?
- Are all power cables connected correctly?
- Have the fuses tripped (in the case of external batteries)?

If the system starts but the propeller does not turn despite being given propulsion, check the following points and then start the system test again:

- Is the emergency stop magnetic chip on or the kill switch in the position for normal operation?
- Are all data cables connected correctly?
- Are all power cables connected correctly?

If you are unable to successfully complete the system test despite checking all points, contact your dealer support or Torqeedo Service.

6.11 Motor trim adjustment

CAUTION

Danger of crushing due to uncontrolled tilting of the transom bracket. This can result in minor or moderate bodily injuries.

- Do not grasp the tipping area of the motor during tipping.

TIP! The optimum trimming position depends on the boat's loading condition. Make the most of the Torqeedo system's performance and efficiency by adjusting the trimming setting to the load.

Test ride

1. Carry out a test ride and observe the behaviour of your boat.

The bow of the boat rises too high out of the water during travel

- Steering becomes unsteady
- Poor course retention

» Move the trim rod downwards.

The bow of the boat sinks too far down during travel

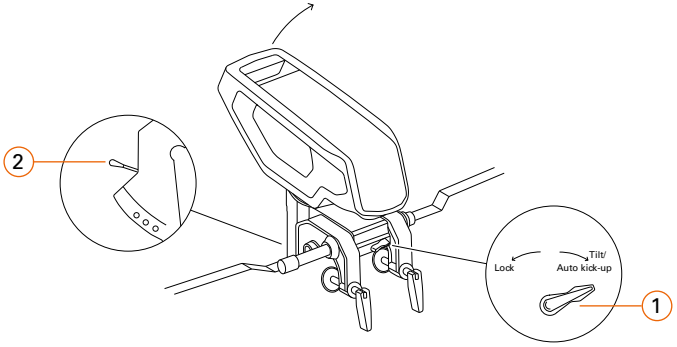
- The maximum speed decreases.

» Move the trim rod upwards.

Optimum trim is achieved when

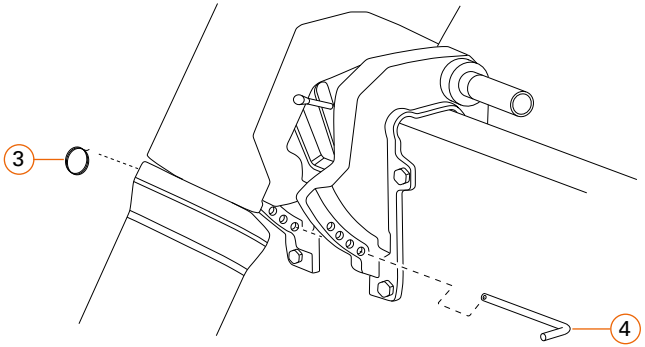
- the motor shaft is perpendicular to the water surface while driving
- and the waterline of the boat is parallel to the water surface.

Changing the trim setting



1. Finish the ride.
2. Set the battery main switch to the “OFF” position to ensure that the propeller cannot turn.
3. Set the tilt lever (1) to the “Tilt / Auto kick up” position.
4. Tilt the motor upwards by pulling the tilt lever (2) and then tilt the motor to

the highest position.



5. Remove the locking ring (3) of the trim rod (4).
6. Pull out the trim rod and reposition it.
7. Fit the locking ring of the trim rod.
8. Tilt the motor down - to do this lift the motor and then pull the tilt lever. Slowly lower the motor until the end position is reached.
9. Set the tilt lock lever to the “Lock” position.

» The trim angle of the motor is set.

7 Commissioning

7.1 Settings

7.1.1 Setting the battery type and units of measurement

The battery types and units of measurement are set via the on-board computer on all Torqeedo systems. On Cruise models with Tiller, the settings can be made via the on-board computer in the Tiller.

Notes on setting the battery type
When using external batteries, note that you are specifying the actual usable capacity of your battery bank.

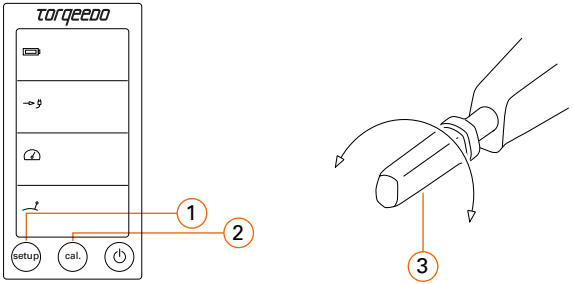
TIP! If you use external batteries and a battery monitor (not included), you can adjust the age-related capacity change of your battery bank once per season. To do this, charge the empty battery bank to 100 %. Read the charged ampere hours (Ah) on the battery monitor and correct the original value in the system.

NOTE! The following setting only applies to Cruise models with Tiller. For the setting on all other Cruise models, please refer to the operating manual for the respective accelerator lever.

You can choose from the following units of measurement:

Range	Kilometre (km) American miles (mi) Nautical miles (nm) Hours (h)
Speed	Kilometres per hour (km/h) Miles per hour (mi/h) Knots (kn)
Battery state of charge display (SOC)	Percent (%)

Setting the battery type and units of measurement (Cruise models with Tiller only)



NOTE! When setting the battery bank size, note that, for example, a battery bank with 2 serially connected batteries of 12 volts and 200 Ah each has a total capacity of 200 Ah at 24 volts (and not 400 Ah).

1. Switch on the system, see chapter “Switching on and off”.
2. Press the “setup” button (1) to enter the set-up menu.
» The unit for the remaining range is displayed.

3. Select the desired unit with the CAL button (2) and confirm your selection with the “setup” button.
» The selection is saved and the menu automatically switches to the speed indicator setting.

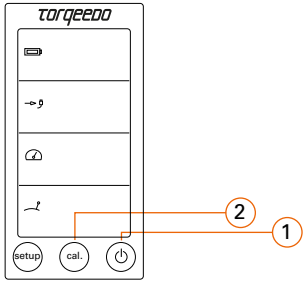
4. Select the desired unit with the CAL button and confirm your selection with the set-up button.
» The selection is saved and the menu automatically switches to the battery status display setting.

5. Select the desired unit with the CAL button and confirm your selection with the set-up button.
» The selection is saved and the menu automatically switches to the battery bank size setting.

6. Set the size of the battery bank (Ah) by turning the accelerator lever of the tiller (3) and confirm your selection with the “setup” button.
» The selection is saved and the set-up menu is closed.
» Settings completed.

NOTE! The capacity display in percent and the remaining range are only possible after the first battery calibration.

7.1.2 Enumerating the battery (Torqeedo batteries only)



Only for Cruise 3.0 and 6.0 models with the following item numbers:
1260-00, 1261-00, 1262-10, 1263-10, 1264-00, 1265-00, 1266-00, 1267-00, 1268-00.

To set up communication between the battery and the outboard motor, the batteries must be registered once with the system.

1. Turn the battery main switch of your system to the “ON” position.
2. Switch the system on to turn on the batteries.
3. Switch off the system, taking care not to press the ON/OFF button (1) for more than 1 second so as not to switch off the batteries again.
4. Press the “ON/OFF” button (1) first and then the CAL button (2) in quick succession. The CAL button must be pressed while the system is booting up. In this phase, the display shows all symbols simultaneously.
» The components of the system connect to each other. The display shows ENU (for enumeration), the progress in percent and the number of batteries found.
» Enumeration is completed when progress reaches 100%.

5. Restart the system.
» The motor and batteries now communicate directly with each other. You can, among other things, read the state of charge of the batteries on the display.

NOTE! When using the Cruise system with a different battery bank, the enumeration must be carried out again.

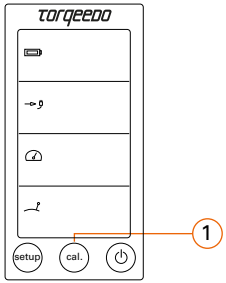
NOTE! Torqeedo Power 48-5000 will be displayed as 2 batteries.

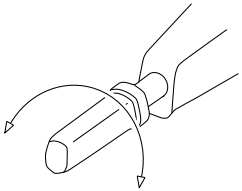
7.1.3 Setting forwards/reverse motion

You can adjust the direction of tiller/accelerator lever rotation for forwards/reverse motion according to your needs.

NOTE! Depending on the configuration and the accelerator lever used, the settings menus differ for the Cruise models without tiller. The corresponding information can be found in the operating manual for the respective accelerator lever.

Setting forwards/reverse motion (only Cruise models with tiller)





1. Press the CAL button (1) for 10 seconds.
» “cal up” is displayed.
2. Turn the tiller forward to full throttle in the desired direction of rotation.
3. Press the CAL button.
» “cal stp” is displayed.
4. Turn the tiller to the neutral position (N).
5. Press the CAL button.
» “cal dn” is displayed.
6. Turn the tiller backward to full throttle in the desired direction of rotation.
7. Press the CAL button.
» Setting forwards/reverse motion is completed.

8 Operation

WARNING

Danger to life due to boat not being manoeuvrable! This can result in moderate or severe bodily injuries.

- Find out about the intended travel area before you set off and observe the forecast weather and sea conditions.
- Depending on the size of the boat, always have the necessary safety equipment ready (anchor, paddle, means of communication, auxiliary drive if necessary).
- Check the system for mechanical damage before starting to drive.
- Only drive with a system that is in perfect working order.

8.1 Operation in emergency situations

You can stop your Torqeedo motor in several ways in an emergency. The system has appropriate safety features for this purpose. Depending on the configuration, the system has either an emergency stop magnetic chip or a kill switch cord with switch or an emergency kill switch.
Please note that the type of stop impacts the restart.

- Set the remote throttle/tiller to the neutral position to stop the motor.
» To continue travelling, you can simply give forwards/reverse motion again.

- Pull off the emergency stop magnetic chip to stop the motor.
» To continue travelling, replace the emergency stop magnetic chip.

» Set the accelerator lever/tiller to the neutral position.

NOTE! Pressing the emergency skill switch or pulling the kill switch cord switches the system off. To put it back into operation, it must be restarted.

NOTE! Do not use the emergency kill switch or pull the kill switch line cord switch off the system regularly if there is no emergency situation.

- Press the emergency kill switch or pull the kill switch cord.
» To continue travelling, reset the emergency kill switch or reinsert the kill switch cord.
» Set the accelerator lever/tiller to the neutral position.
» Start the Torqeedo system.

- Set the battery main switch to the “OFF” position to switch off the system.
» To continue the journey, put the accelerator lever/tiller into the neutral position.
» Reset the emergency kill switch or insert the kill switch cord (if present).
» Set the battery main switch to the ON position.
» Start the Torqeedo system.
» Insert the emergency stop magnetic chip (if present).

8.2 Operation

8.2.1 Tilting motor up/down and shallow water position

You can tilt the motor up or down to several positions for sailing in shallow waters, or to take the motor out of the water when not in use.

CAUTION

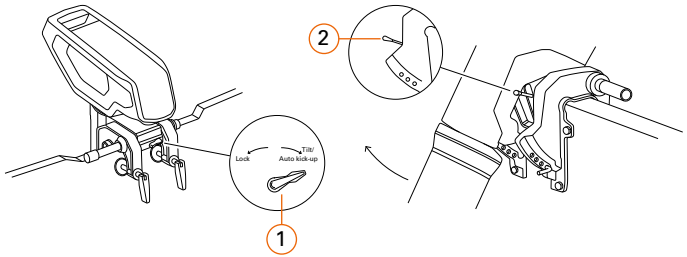
Danger of crushing due to uncontrolled tilting of the transom bracket. This can result in minor or moderate bodily injuries.
- Do not grasp the tipping area of the motor during tipping.

CAUTION

Danger of accident due to reduced braking effect caused by the motor tilting upwards. This can result in minor or moderate bodily injuries.
- After using a shallow water position or the highest bearing position, always set the Lock / Tilt lever to the “Lock” position and ensure that the motor cannot tip up.

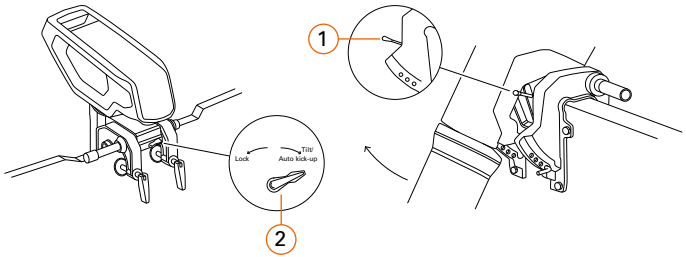
NOTE! Material damage due to overheated components. The motor of the Torqeedo system is only intended for operation in water. Prolonged spinning of the propeller on land or in dry conditions will result in component damage. Always use a shallow water position with the propeller below the water surface.

Tilting up the motor



1. Set the tilt lever (1) to the “Tilt / Auto kick-up” position.
2. Tilt the motor upwards by pulling the tilt lever (2) and then tilt the motor to the desired position.

Tilting down the motor

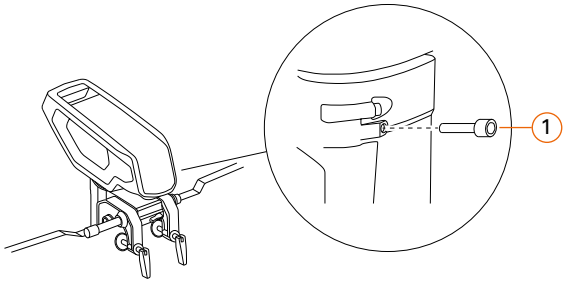


NOTE! Only set the tilt lock lever to the “Lock” position after tipping down.

1. Tilt the motor downwards, to do this lift the motor and then pull the tilt lever (1). Slowly lower the motor until the end position is reached.
2. Set the tilt lock lever to the “Lock” position.

8.2.2 Motor locking

If you want to operate your Torqeedo motor without steering function, e. g. as a drive for sailboats, you can lock it in place.
Use the supplied ISO4762 M8x100 A2 70 screw for locking.



1. Set the motor to the desired position.
2. Install and tighten the M8x100 screw (1).
» The motor is locked.

3. Remove the screw to be able to move the motor freely again.

TIP! Protect the thread from water penetration with e.g. some household petroleum jelly when you have removed the screw.

8.2.3 Before travelling

Observe the following points before each use of your Torqeedo system to ensure a safe trip.

- Familiarise yourself with the travel area before setting off, as the range shown in the onboard computer does not take into account wind, current and direction of travel, and plan a sufficient buffer for the required range.
- If there is visible damage to components or cables, the Cruise system must not be switched on.
- Ensure that everyone on board is wearing a lifejacket.
- Attach the emergency stop magnetic pin lanyard or kill switch cord to the skipper's wrist or lifejacket before launching.
- The battery state of charge must be checked at all times while on the move.
- Only apply the emergency stop magnetic chip or the kill switch cord when there are no more people in the water (e.g. after bathing breaks), or remove it immediately if people fall into the water to stop the drive.
- Also observe all information from the “Safety” and “Before use” sections.

8.2.4 Switching on/off Cruise models with Tiller

Switch on
1. Set the battery main switch to the ON position.
2. Press the “ON/OFF” button on the Tiller for 1 second to switch on the system.

Switching the system off
1. Press the “ON/OFF” button for approx. 1 second to switch off the system.
» The system shuts down, the battery remains switched on.
2. Set the battery main switch to the off position.
» A small self-discharge takes place.

Switching the system and battery off
1. Press the “ON/OFF” button for approx. 5 seconds to switch off the system and the battery.
» The system shuts down, the battery is switched off; only a very small self-discharge takes place.
2. Set the battery main switch to the off position.

8.2.5 Switching on/off on Cruise models with remote accelerator lever

Switching on with Power 48-5000 batteries
Only for Cruise 3.0 and 6.0 models with the following item numbers:
1262-00, 1263-00, 1269-00.
1. Set the battery main switch to the ON position.
2. Depending on the configuration, press the “ON/OFF” button or operate the key switch to switch on the system.

Switching off the system and batteries with Power 48-5000 batteries
Only for Cruise 3.0 and 6.0 models with the following item numbers:
1262-00, 1263-00, 1269-00.
1. Depending on the configuration, press the “ON/OFF” button or operate the key switch to switch off the system.
» The system shuts down.
» The battery is switched off, only a very small self-discharge takes place.
2. Set the battery main switch to the off position.

Switching on with Power 24-3500 batteries
1. Set the battery main switch to the ON position.
2. Depending on the configuration, press the “ON/OFF” button or operate the key switch to switch on the system.

Switching off system and batteries with Power 24-3500 batteries
NOTE! Power 24-3500 batteries cannot be switched off manually without the additional on/off switch for Power 24-3500.
1. Depending on the configuration, press the “ON/OFF” button or operate the key switch to switch off the system.
» The system shuts down, the battery remains switched on.
2. Set the battery main switch to the off position.
3. The battery switches off automatically after 48 hours if it is not used.

8.2.6 Switching on Cruise models with remote accelerator lever and additional on/off switch for Power 24-3500 batteries

Switch on
1. Set the battery main switch to the ON position.
2. Press the additional on/off switch to switch on the batteries.
3. Depending on the configuration, press the “ON/OFF” button or operate the key switch to switch on the system.

Switching the system off
1. Depending on the configuration, press the “ON/OFF” button or operate the key switch to switch off the system.
» The system shuts down, the battery remains switched on.
2. Set the battery main switch to the off position.
» A small self-discharge takes place.

Switching the system and battery off
1. Depending on the configuration, press the “ON/OFF” button or operate the key switch to switch off the system.
» The system shuts down, the battery remains switched on.
2. Set the battery main switch to the off position.
3. Press the additional on/off switch for approx. 5 seconds to switch off the battery.
» The battery is switched off, only a very small self-discharge takes place.

TIP!
- Switch off the system if you want to, for example, take a break from driving or stop for a swim.
- Switch off the system and the battery if you are not going to use or store the system for a long time.
- Leave the battery switched on when you want to charge it.

NOTE! To protect the battery from deep discharging, the system switches off automatically after 1 hour and the battery after 48 hours if it is not used.

8.2.7 Driving

1. Switch on the Torqeedo system.
2. Set the tiller/accelerator lever to the neutral position.
3. Place the emergency stop magnetic chip or connect the kill switch line to the switch, make sure the emergency stop magnetic chip or kills witch cord is connected to the skipper.
4. Turn the tiller/accelerator lever in the appropriate direction.

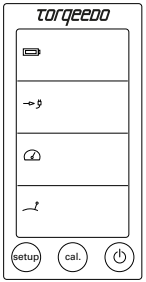
NOTE! Take your Cruise motor out of the water if your Cruise motor is not driving the boat (e.g. under sail) and your boat exceeds a speed of 10 knots through water (STW).

8.2.8 Multifunction display

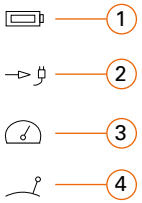
The tiller or accelerator lever is equipped with an internal or external display. It shows all the important data about your trip.
You can adjust the units according to your needs, see chapter “Setting the battery type and units of measurement" or the operating manual for the accelerator lever.

NOTE! Depending on the configuration and the accelerator lever used, the multifunction displays differ on the Cruise models without Tiller. The corresponding information can be found in the operating manual for the respective accelerator lever.

Multifunction display (only Cruise models with Tiller)

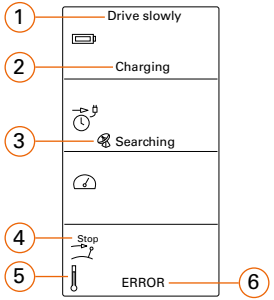


Normal operation



1 Battery charge state in percent
2 Remaining range at current speed
3 Speed over ground
4 Current power consumption in watts

Special displays



1 Drive slowly
2 Charging
3 GPS symbol
4 Stop position symbol
5 Overtemperature symbol
6 Error

Drive slowly: Appears when the battery capacity is <30 %.

Charging: Displayed during charging
(only with Torqeedo Power batteries).

GPS symbol: The integrated GPS module searches for satellite signals to determine the current speed. If no GPS signal is received, the display in the second field shows the "remaining run time at current speed" (time indication) and a clock symbol is displayed. If the remaining run time is greater than 10 hours, the remaining run time is displayed in whole hours.

Stop position symbol: This symbol appears when the tiller or accelerator lever must be moved to the centre position (neutral position). This is necessary before you can travel.

Overtemperature symbol: Appears if the motor or batteries are overheated (when operating with Power 24-3500). In this case, the motor automatically reduces the power.

Error: In the event of an error, the "Error" symbol appears in the lowest field and an error code is displayed. The code shows the triggering component as well as the error of the component. Details on the error codes can be found in the chapter "Errors and troubleshooting"

Audible signal: When the state of charge drops below 30 %, a beep sounds 3 times (only for Cruise models with Tiller). The beep is repeated when the state of charge drops below 20 % or 10 %. If the state of charge is below 30% when the unit is switched on, the beep will sound.

8.2.9 Ending the trip

1. Set the tiller/accelerator lever to the neutral position.
2. Remove the emergency stop magnetic chip or the kill switch cord.
3. Switch off the system.
4. Tilt the motor upwards to take it out of the water.
5. Rinse the motor with fresh water if you have used it in salt or brackish water.

8.3 Hydrogeneration

NOTE: Hydrogeneration is only available on Cruise 6.0 models with the following item numbers and in conjunction with Power 48-5000 batteries: 1262-00, 1263-00.

NOTE! Torqeedo recommends only using hydrogeneration when the battery charge state is below 95 %.

NOTE! Hydrogeneration is only possible with Torqeedo Power 48-5000 batteries. Hydrogeneration is not possible with external batteries.

8.3.1 Starting hydrogeneration

1. Switch on the Torqeedo system.
2. Set the accelerator lever to the neutral position.
3. Place the emergency stop magnetic chip or connect the kill switch line to the switch, make sure the emergency stop magnetic chip or kills witch cord is connected to the skipper.
4. Travel at a speed of at least 4 knots (travel through water, STW).
5. Set the accelerator lever in forward drive to the range 1 - 30 %.

» Hydrogeneration is started.
» "Charging" appears in the display.
» The battery is being charged.
» The charging power generated is shown in the accelerator lever display.

8.3.2 Switching off hydrogeneration

Automatic switch off
Hydrogeneration is automatically switched off when

- the speed over ground (SOG) is below 4 kn for more than 30 seconds or no positive power is produced.
- the speed over ground (SOG) is above 10 kn for more than 30 seconds; take the motor out of the water when the maximum speed of 10 kn is reached.
- the state of charge (SOC) of the battery has reached 100%.

» The "Charging" indicator in the display goes out.

NOTE! Hydrogeneration does not start automatically after switching off. Start hydrogeneration manually again if necessary.

Manual switch off
1. Set the accelerator lever to the neutral position.
» Hydrogeneration is ended.
» The “Charging” indicator in the display goes out.

8.4 Charging

The charging process of your Torqeedo system differs depending on the configuration and components used.
The corresponding information can be found in the operating manual for the respective charger unit.

NOTE! Only use Torqeedo charger units for Torqeedo batteries.

NOTE! To charge the batteries in the boat, a land connection in the boat with galvanic isolator is required according to applicable national requirements (e.g. DIN EN ISO 13297, ABYC E-11).

NOTE! Never use mains power cables coiled up to avoid overheating of the cables.

8.4.1 Charging with Power 24 batteries

Charging

1. Switch on the batteries or the system.
2. Plug in the charger unit.
3. The charging process starts automatically.
4. “Charging” is shown in the display.
5. Fully charge the batteries.

Ending charging
1. Unplug the charger unit.
2. Switch off the system or the battery.

8.4.2 Charging with Power 48 batteries

Charging
1. Switch off the Torqeedo system.
2. Plug in the charger unit.
3. The charging process starts automatically.
4. “Charging” is shown in the display.
5. Fully charge the batteries.

Ending charging
1. Unplug the charger unit.

8.4.3 Charging with external batteries

Charging
1. Switch off the Torqeedo system.
2. Fully charge your battery bank according to your battery and charger unit manufacturer's instructions.

Stopping charging (only Cruise models with tiller)
1. Unplug the charger unit.
2. Switch on the Torqeedo system.
3. Press the “cal” button 2x within 1 second to confirm that the state of charge in the system is 100%.

End loading (Cruise models with remote accelerator lever)
1. Unplug the charger unit.
2. Switch on the Torqeedo system.
3. Confirm the charge level of 100 % in the system, see operating manual for the remote accelerator lever.

9 Storage and transport

9.1 Transporting in assembled condition (towing)

CAUTION

Danger of accident due to non-secured or insufficiently secured load. This can result in minor or moderate bodily injuries.

- Only transport your boat and all associated parts and accessories with appropriate load securing.
- Attach your Torqeedo motor firmly to the transom of your boat at the designated points when transporting your boat with the motor mounted.

When transporting the boat with the outboard motor mounted, the motor should be fully tilted down if this is possible without the risk of touching the ground (take into account the influence of uneven ground). If, with the motor tilted down, the risk of contact with the ground during travel cannot be ruled out, the outboard motor is tilted up for transport

NOTE! Observe the respective country-specific regulations for the transport of boats.

NOTE! Damage to the Cruise system during transport! This can result in material damage.

- During transport, ensure that there is no danger of the propeller or fin touching the ground.
- During transport, use a suitable support such as squared timbers or similar to secure the shaft.

9.2 Transport

Observe the following points to protect your Torqeedo motor from damage during transport.

- Always disconnect the motor from the battery and all other components when transporting it.
- Clean the motor.
- Dismantle the propeller.
- Lock the motor in the neutral position by installing the motor lock.

TIP! Keep the original packaging so that you can ship the motor safely, (e. g. e.g. for service or repair purposes).

9.2.1 Storage (entire system)

The storage conditions of your Torqeedo system are largely determined by the battery. Observe the operating conditions in the technical data when storing the components separately from each other.

The optimal storage location for your Torqeedo system

- Protected from direct sunlight
- In a dry environment
- Temperatures between 5 °C and 20 °C.

During storage, pay particular attention to the battery's state of charge to ensure safe storage.

TIP! Check and, if necessary, replace the galvanic anode of your Torqeedo system before storage. This means you can end storage at any time and your Torqeedo system will be ready for use immediately after charging.

NOTE! Note that long-term storage requires recharging of the batteries to prevent deep discharging and avoid damage to the battery.

NOTE! Please note that the storage information does not apply to external batteries. You will find corresponding information in the your battery manufacturer’s specifications.

Storage

1. Rinse the motor with fresh water.
2. Clean the motor and any dirty components.
3. Make sure that the battery's state of charge is between 30% and 40% to ensure optimal storage conditions for the battery.
4. Check the battery state of charge every 6 months and recharge if necessary.
5. Only fully charge the batteries after storage has ended and shortly before the first ride.

Disconnecting the battery

NOTE! Observe the disconnection sequence when removing the battery for storage or disconnecting the battery terminals.

1. Switch off the batteries.
2. Set the battery main switch to the off position.
3. Disconnect the black negative power cable from the negative terminal of the battery.
4. Disconnect the red positive power cable from the positive terminal of the battery.
5. Disconnect the bridge cables between the batteries when using more than one battery.

10 Maintenance and repair

10.1 User qualifications

Repairs and maintenance not described in this operating manual may only be carried out by qualified expert personnel from Torqeedo Service or a Torqeedo service partner. Service must be carried out at the specified intervals or after the specified operating hours by Torqeedo Service or by a Torqeedo service partner. Failure to carry out or document the prescribed maintenance intervals will result in loss of warranty and guarantee. Make sure that the maintenance carried out is documented in your service booklet.

10.2 Service intervals

Service activities	Check before each use	Check every six months or after 100 operating hours	Service every 5 years or after 700 operating hours (whichever comes first)
Electronic accelerator lever	Check stability; check function		
Replace O-rings and shaft seals			Have replaced by a certified service partner
Gear shaft		Visual inspection	Have inspected by a certified service partner
Batteries and battery cables		Check cable for damage; visual inspection; secure against slipping and tipping over; check tightness of threaded cable connection	
Galvanic anode		Visual inspection; change if necessary	
Power cable plug connection		Visual inspection	
Propeller	Visual inspection		

10.3 Cleaning

WARNING

Danger of injury from propeller! This can result in moderate or severe bodily injuries.

- Observe the safety regulations.
- Watch out for people in the water.
- Always switch off the system via the battery main switch when working on the propeller or other components.

Cleaning after each trip
- Rinse the motor with fresh water after each use if you have used it in salt water.

Cleaning the system components
- Rinse the motor with fresh water before cleaning.
- Clean the motor only with PH-neutral plastic cleaners and follow the manufacturer's instructions for use.
- Only clean Torqeedo power batteries with a cloth moistened with water.
- Clean other components only with PH-neutral plastic cleaners and follow the manufacturer's instructions for use.
- Dispose of cleaning agents in an environmentally friendly manner.

10.3.1 Corrosion protection

Materials were selected with a high degree of corrosion resistance. Most of the materials used in the Cruise are classified as "sea water resistant", as is usual for maritime products in the leisure sector, not as "sea waterproof".
Follow the points below for optimum protection of your Torqeedo system against corrosion:
- Tilt the motor upwards to take it out of the water.
- Rinse the motor with fresh water if you have used it in salt or brackish water.
- Check the galvanic anode regularly and replace it if necessary.
- Only store the motor in a dry condition.
- Regularly maintain all electrical contacts and plug connections.
- Observe the points in the sections on "Maintenance, care and repair" and "Maintenance intervals", as well as the information in the service booklet.

10.4 Maintenance, care and repair

CAUTION

Risk of injury from electrical voltage. This can result in minor or moderate bodily injuries.
- When carrying out maintenance work or troubleshooting, live parts must be disconnected from the power supply and secured against being switched on again throughout the work.

10.4.1 Maintaining electrical contacts and plug connections

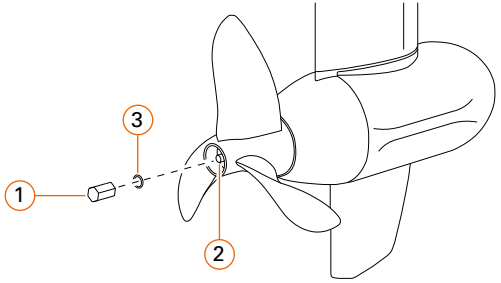
1. Set the battery main switch to the "OFF" position and secure it against being switched on again by pulling off the switch handle.
2. Always disconnect only one contact or plug connection to avoid confusion.
3. Treat the contact surfaces with contact spray.
4. Reconnect the contact or the plug connection.

10.4.2 Checking and cleaning power and data cables

1. Set the battery main switch to the "OFF" position and secure it against being switched on again by pulling off the switch handle.
2. Check all cables for damage and abrasion.
3. Check contacts and screw connections regularly for tightness.
4. Only clean cables with a soft cloth and mild cleaning agents suitable for plastics (e.g. washing-up liquid). Do not use chemicals or solvents for cleaning.

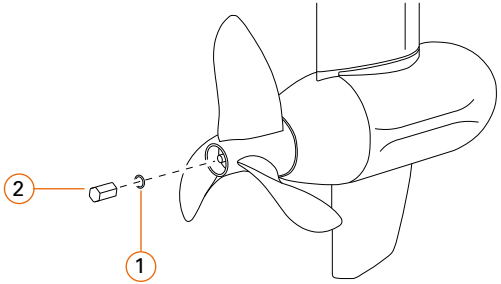
10.4.3 Galvanic anode

Disassembly



1. Loosen the galvanic anode (1) with a socket wrench SW17 and unscrew it from the motor shaft (2).
2. Remove the O-ring (3).
3. Clean the thread of the motor shaft.

Installation



1. First position a new O-ring (1) on the motor shaft.

NOTE! Component damage due to thread locking varnish. Do not use locking varnishes or additives.

2. Screw the new galvanic anode (2) onto the motor shaft and tighten it.
- Galvanic anode: 7+/- 1 Nm, 62+/- in-lbs

10.4.4 Propeller

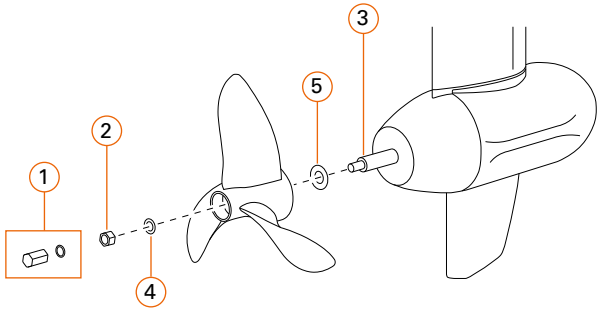
DANGER

Danger of injury or death from rotating propeller. This can result in sever injuries or death.
- Switch off the system at the battery main switch and secure it against being switched on again by pulling off the switch handle to prevent the propeller from starting.

Checking

1. Switch off the system at the battery main switch and secure it against being switched on again by pulling off the switch handle.
2. Check the propeller for damage such as cracks, chipping and deformation.
3. Check the gap between the pylon and the propeller for foreign objects, e.g. fishing lines, seaweed, etc. Wear gloves when doing this to avoid injury.
4. Dismantle the propeller to remove any contamination.

Disassembly



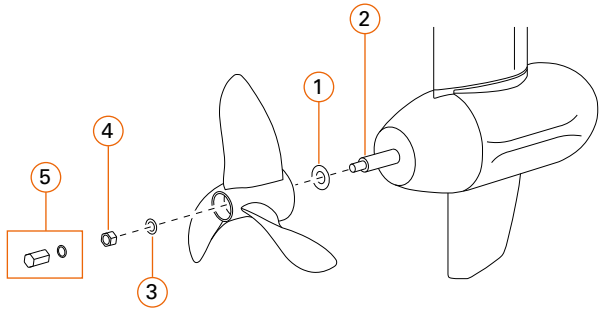
TIP! Remove the propeller when the motor is attached to the boat and the boat is safely on land.

1. Ensure that the motor is securely fastened and secured against falling (e.g. e.g. on the boat or on a workbench).
2. Remove the galvanic anode (1).
3. Loosen the lock nut (2) with a socket wrench SW17 and unscrew it from the motor shaft (3).
4. Remove the washer (4).

NOTE! Component damage due to incorrect tool. Do not use force or tools such as hammers to remove the propeller.

5. Pull the propeller off the motor shaft, move the propeller in different directions to make it easier to pull off.
6. Remove the thrust washer (5).
7. Clean the motor shaft.
8. Clean the thread of the motor shaft.

Installation



1. Position the thrust washer (1) on the motor shaft (2).
2. Position the propeller on the motor shaft, noting the installation direction.
3. Position the washer (3) on the motor shaft.

NOTE! Component damage due to thread locking varnish. Do not use locking varnishes or additives.

4. Screw the lock nut SW17 (4) onto the motor shaft and tighten it.
- Lock nut: 11+/- 1 Nm, 97+/-1 in-lbs
5. Install the galvanic anode (5).

10.4.5 Anti-fouling coating

NOTE! Observe national regulations on the processing, application, use and disposal of anti-fouling coatings. Follow the manufacturer's instructions and processing instructions.

General instructions
To keep your Cruise system free of fouling, you can do the following:

- Remove the Cruise system from the water after each use and clean it.
- Regularly clean all components of the Cruise system that are permanently below the water surface.
- Use an anti-fouling coating.

Cleaning the components under the water surface
- Before cleaning work, switch off the Cruise system at the main switch and secure it against being switched on again by pulling off the switch handle.
- Do not use tools with sharp edges or abrasive surfaces that may damage the Cruise system's paintwork.

Using anti-fouling coatings
When using anti-fouling paints, we recommend treating all parts of the Cruise system that are permanently below the water surface.

1. Clean the surfaces of the Cruise system that you want to treat.

NOTE! Do not use abrasives to roughen the surface, otherwise the protective coating will be damaged.

2. Thoroughly mask the anodes and, if necessary, the motor shaft.
3. Observe the processing instructions and the manufacturer's instructions on personal protective equipment for the respective anti-fouling coating.

Permitted anti-fouling coatings
- International Trilux 33 in combination with primer Primocon Sperrgrund
- Hempel Silic One in combination with Hempel Light Primer and Hempel Silic One Tiecoat

NOTE! Do not use metal-containing anti-fouling coatings e.g. products containing copper.

11 Errors and troubleshooting

11.1 Error messages and errors

Display	Cause	Troubleshooting
E02	Stator overtemperature (motor overheated)	After a short waiting time (approx. 10 minutes), the motor can be operated slowly. Contact Torqeedo Service.

Display	Cause	Troubleshooting
E05	Motor/propeller blocked	Set the main switch to the “OFF” position. Release the blockage and turn the propeller one turn further by hand. Reconnect the motor cable.
E06	Voltage at motor too low	Low battery state of charge. If necessary, the motor can be driven slowly from the stop position.
E07	Overcurrent at the motor	Continue driving with low power. Contact Torqeedo Service.
E08	Circuit board overtemperature	After a short waiting time (approx. 10 minutes), the motor can be operated slowly. Contact Torqeedo Service.
E21	Faulty calibration of tiller / remote throttle	Set forwards/reverse motion
E22	Magnetic sensor defective	Set forwards/reverse motion
E23	Value range wrong	Set forwards/reverse motion
E30	Motor communication error; error in the power supply to the motor	Contact Torqeedo Service; Check that the main switch is in the “ON” position.
E32	Tiller communication error / remote throttle	Check the plug connections of the data cables and cables.
E33	General communication error	Check the plug connections and the cables. Switch the motor off and on again.
E34	Emergency kill switch or kill switch actuated	Make sure that the cause of the error has been eliminated, set the emergency kill switch or the kill switch to the position for normal operation and restart the system.
E43	Battery empty	Charge the battery. If necessary, the motor can be driven slowly from the stop position.
Other error codes	Defect	Contact Torqeedo Service.
No indication in the display	No voltage or defective	Check power source, main fuse and main switch. If the power supply is okay: Contact Torqeedo Service.

Display	Cause	Troubleshooting
Motor cannot be tilted; tilt lock lever cannot be moved	Trim rod bent	Check trim rods, replace if necessary.

11.2 Error messages for Torqeedo power batteries

Display	Cause	Troubleshooting
E70	Over/under temperature during charging	Remove the reason the temperature has gone out of range. If necessary, remove the charger unit to cool down. Switch the battery off and on.
E71	Over/under temperature during discharge	Remove the reason the temperature has gone out of range. If necessary, do not use the battery temporarily to allow it to cool down. Switch the battery off and on.
E72	Overtemperature battery FET	Let the battery cool down. Switch the battery off and on.
E73	Overcurrent during discharge	Remove cause of overcurrent. Switch the battery off and on.
E74	Overcurrent during charging	Remove the charger unit. Only use a Torqeedo charger unit. Switch the battery off and on.
E75	Activating the Pyroswitch	Contact Torqeedo Service.
E76	Battery undervoltage	Charge the battery.
E77	Overvoltage during charging	Remove the charger unit. Only use a Torqeedo charger unit. Switch the battery off and on.
E78	Battery overcharge	Remove the charger unit. Only use a Torqeedo charger unit. Switch the battery off and on.
E79	Battery electronic fault	Contact Torqeedo Service.
E80	Deep discharging	Contact Torqeedo Service.

Display	Cause	Troubleshooting
E81	Activating the water sensor	Ensure that the battery environment is dry. If necessary, clean the battery including the water sensor. Switch the battery off and on.
E82	Disbalancing between several batteries	Fully charge all batteries individually.
E83	Battery software version error	Batteries with different software versions were connected to each other. Contact Torqeedo Service.
E84	Battery count does not match enumeration	Check the connections of the batteries (expected number of batteries is shown in the display below the error code). If necessary, perform enumeration again.
E85	Disbalancing of a battery	During the next charging process, do not disconnect the charger unit from the battery after it has reached full charge. Leave the charger unit connected for at least 24 hours after the charging process is complete.

12 General warranty conditions

12.1 Warranty and liability

The statutory warranty is 24 months and covers all components of the Cruise system.
The warranty period starts from the day of delivery of the Cruise system to the end customer.

12.2 Scope of warranty

Torqeedo GmbH, Friedrichshafener Straße 4a D-82205 Gilching, Germany, guarantees to the end customer of a Cruise system that the product will be free from defects in material and workmanship during the period of coverage specified below. Torqeedo shall exempt the end customer from the costs of remedying a defect in material or workmanship. This obligation of indemnification does not apply to all incidental costs caused by a warranty claim and all other financial disadvantages (e.g. costs for towing, telecommunication, food, accommodation, lost use, lost time, etc.).
The warranty ends two years after the date of delivery of the product to the end customer. Products that are used - even temporarily - for commercial or official purposes are excluded from the two-year warranty. The statutory warranty applies to these. The warranty claim expires six months after discovery of the defect.
Torqeedo decides whether defective parts are repaired or replaced. Distributors and dealers who carry out repair work on Torqeedo motors have no authority to make legally binding declarations on behalf of Torqeedo. Wearing parts and routine maintenance are excluded from the warranty.

Torqeedo is entitled to refuse warranty claims if

- the warranty has not been properly submitted (in particular, contacting us before sending in the claimed goods, submitting a fully completed warranty form and proof of purchase, refer to the warranty process).
- there has been improper handling of the product.
- the safety, handling and care instructions in the manual have not been followed.
- prescribed maintenance intervals were not observed and documented.
- the purchased item has been converted, modified or equipped with parts or accessories in any way that are not part of the equipment expressly approved or recommended by Torqeedo.
- previous maintenance or repairs have not been carried out by companies authorised by Torqeedo or if anything other than original replacement parts have been used. This applies unless the end customer can prove that the facts justifying the rejection of the warranty claim did not favour the development of the defect.

In addition to the claims arising from this warranty, the end customer has statutory warranty claims arising from his purchase contract with the respective dealer, which are not restricted by this warranty.

12.3 Warranty process

Compliance with the warranty process described below is a prerequisite for the fulfilment of warranty claims.

For the smooth processing of warranty claims, we ask you to take the following instructions into account:

- Please contact Torqeedo Service in the event of a complaint. They will give you an RMA number if necessary.
- In order for Torqeedo Service to process your complaint, please have your service check folder, your proof of purchase and a completed warranty form to hand. The warranty form is enclosed with these instructions. The information on the warranty form must include contact details, details of the product being claimed, serial number and a brief description of the problem.
- When transporting products to Torqeedo Service, please note that improper transport is not covered by warranty or guarantee.

If you have any queries about the warranty process, please contact us using the details on the reverse.

13 Accessories and replacement parts

Item no.	Product	Description
1905-00	Galvanic anode AL	Aluminium galvanic anode for all Cruise models
1991-00	Motor cable extension Cruise 3.0 and 6.0, 2 m	Motor cable extension of the cables, 2 m length, complete with two high-current plugs
1994-00	Twin-Cruise connecting rod	Connecting rod for twin motor Cruise 3.0 R and 6.0 R models
1984-00	Propeller 12 x 10.5 WDR for Cruise 3.0	Standard propeller for Cruise 3.0
1987-00	Propeller 12.5 x 17 HSP for Cruise 6.0	Highspeed propeller for Cruise 6.0; (standard propeller)
1986-00	Propeller 12x13 THR	Propulsion propeller for Cruise 6.0
1924-00	TorqTrac	Smartphone app for Travel 503/1003, Cruise T/R and Ultralight models. Enables larger display of the onboard computer, range display on the map and many other advantages. Requires Bluetooth Low Energy® enabled smartphone.

Item no.	Product	Description
2106-00	Power 24-3500	Lithium high performance battery, including battery management system with integrated protection against overcharging, short circuit, deep discharging, reverse polarity, overheating and submersion; waterproof IP67
2206-20	Charger unit 350 W for Power 24-3500	Charging power 350 W, charges the Power 24-3500 from 0 to 100 % in approx. 11 hours, waterproof IP65
2207-00	Solar charge controller for Power 24-3500	Solar charge controller specially adapted to Power 24-3500. Enables safe solar charging of the Power 24-3500. (Solar modules not included in the scope of delivery.) Integrated MPPT optimises the energy yield of the solar modules for the charging process, very high efficiency. Output power max. 232 watts (8 A, 29.05 V)
2210-00	Fast charger 1700 W for Power 24-3500	Charging current 60 A, charges the Power 24-3500 from 0 to 100 % in approx. 2.5 hours (at 230 V input voltage), waterproof IP65
2304-00	On/off switch for Power 24-3500	Switch for activating and deactivating the Power 24-3500, IP67, with LED indication on/off status
1921-00	Cable extension for accelerator lever, 1.5 m 5-pin	Extension cable for accelerator lever/tiller and motor, allows greater distance between components
1922-00	Cable extension for accelerator lever, 5 m 5-pin	Extension cable for accelerator lever/tiller and motor, allows greater distance between components
1958-00	Cable extension TorqLink 0.5 m 8 Pin	Extension cable for the TorqLink Backbone
1956-00	Cable extension TorqLink 3 m 8 Pin	Extension cable for the TorqLink Backbone
1957-00	Cable extension TorqLink 5 m 8 Pin	Extension cable for the TorqLink Backbone
1981-00	Cable extension TorqLink 15 m 8 Pin	Extension cable for the TorqLink Backbone

Item no.	Product	Description
1990-00	Cable set external batteries Cruise 6.0 TorqLink	Cable set for operating a Cruise 6.0 TorqLink motor with external batteries. Cable set for the power supply of the TorqLink-Backbone
1919-00	Long tiller arm	Longer tiller arm with 60 cm length

14 Disposal and environment

Torqeedo motors are manufactured in accordance with the WEEE Directive 2012/19/EU. This directive regulates the disposal of electrical and electronic equipment for the sustainable protection of the environment. In accordance with regional regulations, you can hand in the motor at a collection point. From there, it is sent for proper disposal.

Disposal of waste electrical and electronic equipment

For customers in EU countries
The Cruise System is subject to the European Directive 2012/19/EU on Waste Electrical and Electronical Equipment (WEEE) and the corresponding national laws. The WEEE Directive forms the basis for the EU-wide treatment of waste electrical and electronic equipment. The Cruise System is marked with the symbol of a crossed-out waste bin, see above. Waste electrical and electronic equipment must not be disposed of with normal waste, otherwise pollutants may be released into the environment that have adverse health effects on humans, animals and plants and accumulate in the food chain as well as in the environment. In addition, valuable raw materials are lost in this way. Therefore, please dispose of your old equipment in an environmentally friendly manner in a separate collection and contact your Torqeedo Service or your boat builder.

For customers in other countries
The Cruise System is subject to the European Directive 2012/19/EU on waste electrical and electronic equipment. We recommend that the system is not disposed of with the normal waste, but in a separate collection in an environmentally friendly manner. Your national laws may also require you to do so. Please therefore ensure proper disposal of the system in accordance with the regulations in force in your country.

Disposal of batteries
Dismantle a used battery immediately and follow the instructions below for special disposal information about batteries or battery systems: For customers in EU countries, batteries are subject to the European Directive 2006/66/EC on (waste) batteries and the corresponding national laws. The Battery Directive forms the basis for the EU-wide treatment of batteries and accumulators. Our batteries or accumulators are marked with the symbol of a crossed-out waste bin, see "Fig. 28: crossed-out waste bin". Below this symbol is the name of the pollutant contained, if applicable ("Pb" for lead, "Cd" for cadmium and "Hg" for mercury. Old batteries must not be disposed of with the normal waste, as otherwise pollutants may be released into the environment that have adverse health effects on humans, animals and plants and accumulate in the food chain and in the environment. In addition, valuable raw materials are lost in this way. Therefore, please only dispose of your old batteries via specially set up collection points, your dealer or the manufacturer; the drop-off is free of charge.

For customers in other countries
Batteries are subject to the European Directive 2006/66/EC on (waste) batteries. Batteries are marked with the symbol of a crossed-out waste bin, see "Fig. 28: crossed-out waste bin". Below this symbol is the name of the pollutant contained, if applicable ("Pb" for lead, "Cd" for cadmium and "Hg" for mercury. We recommend that the batteries are not disposed of with the normal waste, but in a separate collection. Your national laws may also require you to do so. Please therefore ensure proper disposal of the batteries in accordance with the regulations in force in your country.

15 Declaration of conformity

NOTE! The declaration of conformity can be downloaded from www.torqeedo.com.

16 Copyright

Warranty form

Dear customer,
We are committed to ensuring that you are satisfied with our products. If a product is found to be defective despite all the care we take in production and testing, it is important to us to help you quickly and efficiently.
In order to check your warranty claim and to be able to process warranty cases smoothly, we need your assistance:

- Please fill out this warranty form completely.
- Please provide a copy of your proof of purchase (receipt, invoice).
- Find a Service Centre near you at www.torqeedo.com/service-center/service-standorte, where there is a full list of all addresses. If you send your product to the Torqeedo Service Centre in Gilching, you will need a transaction number, which you can request by telephone or email. Without a transaction number, your shipment cannot be accepted there. If you are sending your product to another Service Center location, please discuss the procedure with the respective service partner before shipping.
- Please ensure appropriate transport packaging.
- Attention when shipping batteries: Batteries are declared as UN Class 9 dangerous goods. Shipping by transport companies must be carried out in accordance with the dangerous goods regulations and in the original packaging!
- Please observe the warranty conditions listed in the respective instructions for use.

Patents

The product(s) is/are protected by one or more patents.
You can find a list of these patents at:
www.torqeedo.com/us/en-us/technology-and-environment/patents.html

Contact details

First name	Name
Street	Country
Phone	Postcode, place
Email	Mobile phone
If available: Customer no.	

Complaint information

Exact product name	Serial number
Purchase date	Operating hours (approx.)
Dealer from whom the product was purchased	Address of the dealer (postcode, city, country)
Detailed description of the problem (including error message, in which situation the error occurred etc.)	
Transaction number (required when sending to the Torqeedo Service Center in Gilching, otherwise the shipment cannot be accepted)	

Thank you for your cooperation, your Torqeedo Service.

Torqeedo Service Centre

Europe, Middle East, Africa

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