

TORQUEEDO
STARNBERG.GERMANY



2015

10 years of making a difference.

Making mobility more sustainable is a task for our generation.

We've taken on boating.

When we founded Torqeedo 10 years ago, many buzzwords of today's discussion on mobility were not yet coined. Nobody talked about electric mobility or about cleantech. But the fundamental drivers of electric mobility were clear as day, even then: An ever increasing world population, a doubling of the global middle class in our decade, limited oil with rising cost, efforts to reduce global warming and an increasing trend towards sustainable lifestyles.

It is not without pride that we are celebrating 10 years of Torqeedo in 2015. Our short history is a succession of industry firsts: the first brushless motors in the marine industry, the first lithium propulsion-batteries, the first outboards with integrated batteries, the lightest outboards on the market, the first GPS-based range calculation for outboards, the first smartphone app with real-time range information shown on a map and the first electric high power propulsion system from serial production, just to name the most significant.

Our pioneering role in electric boating was well rewarded in these 10 years: We have received the trust and the goodwill of tens of thousands of customers and decision-makers in the marine industry, making us by far the leading player in electric boating worldwide.

We are thankful for the trust and goodwill we have received from you for our work. Our international team is determined to continue setting the pace for electric boating – because making mobility more sustainable is a task for our generation. And because we are here to make a difference.



2009



4 Electric Boating

4 Torqeedo for pleasure

6 Torqeedo for professionals

8 Clean boating

10 Superior propulsive power and overall efficiency

12 Superior drive train engineering

14 Superior battery technology

16 Superior convenience

18 Motors & Batteries

20 Ultralight 403
≅ 1 HP

24 Travel 503 / 1003
≅ 1.5 - 3 HP

28 Cruise 2.0 / 4.0 **NEW**
≅ 5 - 8 HP

34 Power 26-104

38 Deep Blue
≅ 40 - 80 HP

46 Deep Blue Hybrid **NEW**
≅ 40 - 160 HP

50 Accessories

52 TorqTrac **NEW**

54 Sunfold 37 **NEW**

56 Travel Bags **NEW**

58 Information

58 Ordering information

60 Technical data

62 Contact

Highlights 2015

Deep Blue Hybrid 46

Cruise - New Generation 28

Deep Blue Tiller Version 38

New Travel Battery with USB Adapter 24

New Solar Charger Sunfold 37 for Travel 54



Torqueedo for pleasure

A clean and contemporary style of boating

With Torqueedo your marine leisure activity becomes a modern, clean, green, and safe pastime. Our electric motors are leading-edge high-tech design products propelled by the most powerful and safest high-performance batteries of their kind.

A man and a woman are on a wooden boat in a canal. The man is standing at the stern, wearing a white shirt and blue jeans, with a black harness. The woman is standing next to him, wearing a black jacket. They are looking towards the right. The canal is lined with green trees and buildings. In the background, a church tower is visible. The water is calm, reflecting the surroundings.

Join clean boating

- Simple operation
- Clean to run
- Safe to use
- Low carbon footprint
- Contemporary style



Join the Torqeedo fan community!

<https://www.facebook.com/torqeedo>

Torqeedo for professionals

The economic case for electric boating

- Save 100% of your gasoline or diesel cost
 - + Spend a fraction of your savings for electricity and battery cost recovery
 - + Profit from lower maintenance cost
 - + Enjoy high reliability
-

= **If you are out on the water 100 days per year or more, you may save money by going electric**

Protecting our waters and atmosphere is a bonus.

Our 80 HP equivalent **Deep Blue** models can help save you money if your gasoline or diesel costs amount to \$6,000 USD per year or more. See page 38 for more details.

If you are using 3 gallons of fuel per day while going at slow speeds, our 8 HP equivalent **Cruise** models may help you to save more than \$1,250 USD per year.

Contact us or your local Torqeedo dealer for details.



Leave nothing in
your wake – boat electric



Electric motors are kinder to the environment than combustion engines

- Zero emissions when underway
- No water pollution from exhausts
- Less noise - both at start-up and in use

Torqueedo motors have an exemplary carbon footprint

It's perfectly obvious that Torqueedo motors produce **no exhaust gases or carbon emissions** during use. What is more important is that they also offer excellent "well-to-wheel" efficiency - with an extremely small carbon footprint.

First, Torqueedo drive systems **conserve resources and protect the climate** thanks to their **lightweight construction**.

Second, their **outstanding efficiency** while **operating** ensures Torqueedo motors protect the environment and climate better than other drive systems.

A Torqueedo Travel, for example, can travel more than 10 nautical miles with a battery consumption equivalent to 8 teaspoons of gasoline.



Well-to-wheel analysis

A well-to-wheel analysis reveals the direct and indirect carbon dioxide emissions that are created during all stages of production and use of a vehicle. It provides a complete picture of the impact that a motor has on the earth's atmosphere.

One HP is one HP. Isn't it?

Standardization of power is nothing new; it goes back to James Watt, who defined horsepower in the 18th Century to demonstrate the performance of his steam engine. Since then, it's been measured uniformly in HP or, in honor of its inventor, in Watts. And with a clear unit of measure, comparing power should be easy, shouldn't it? Not completely! It depends where and how you measure.

The **most meaningful performance indicator** of a drive system is **propulsive power**, which indicates the performance actually delivered by the boat's motor, taking all losses, including propeller losses, into account. This method has been used in commercial shipping for nearly 100 years.

For gasoline, propane and conventional electric outboard motors the propulsive power is not normally revealed. Instead, less meaningful indicators are used, such as the **shaft power**, **input power** or even the **static thrust**.

That wouldn't be so bad if the differences between the various power ratings were minimal. But they aren't; they're very large. The propulsive power of a gas outboard with 4 HP shaft power, for example, is just 1 HP. The differences between outboards' efficiency are enormous. We'll shed some light on them.



Shaft power: Power rating of gas outboards, comparable with cars (torque x angular velocity). The rating is expressed in HP or kW but does not take propeller loss into account, which can vary between 30% and 80%.

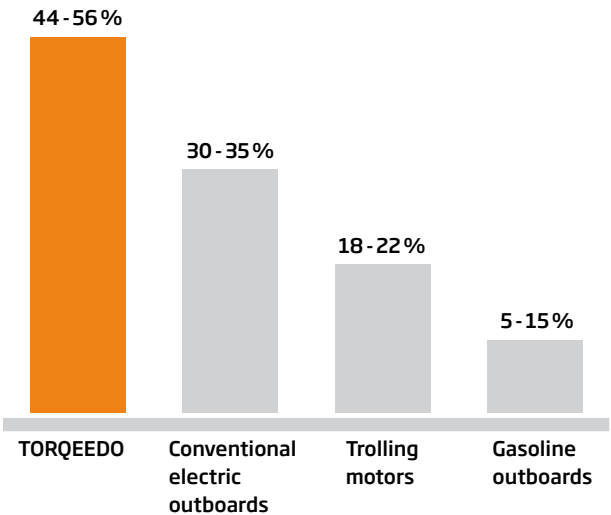
Superior propulsive power and superior overall efficiency

Our focus on optimizing propulsive power and use of the newest technologies means Torqeedo has the highest overall efficiency on the market. That means every Torqeedo drive converts its available battery power to propulsive power better than any other outboard. This is very important for electric drives because it means more power and range from limited battery capacity.

Input power: a drive's power consumption. Often used as a performance indicator for electric outboards (current x voltage), expressed in Watts or HP. Does not reflect any losses in the system.

Propulsive power: Performance indicator used by commercial shipping and Torqeedo (thrust x speed). It is expressed in HP or kW and takes all losses into account, including propeller loss, and clearly indicates the actual power delivered by the drive system for propulsion.

Overall efficiencies of various outboards

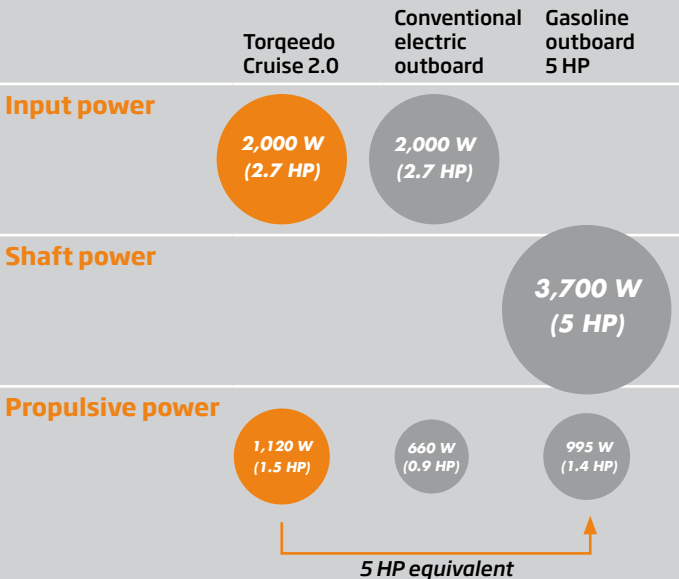


Comparing the power of electric and gas outboards - Torqeedo's HP equivalent

Electric motors can achieve the same propulsive power as combustion engines with significantly lower shaft power. The reason lies in the different torque curves of electric motors and gas or propane engines: While the torque curve of combustion engines features a prominent peak, with maximum torque being available only in a limited working point, electric motors feature a much flatter torque curve, with ample torque available at any rotational speed. This characteristic allows them to run substantially more efficient propellers than combustion engines. Propeller efficiencies in the lower horsepower class can vary by a factor of 3 between gas outboards and Torqeedo electric outboards.

To make the comparison easy for boaters accustomed to comparing the shaft power ratings of gasoline outboards, we always compare the actual propulsive power of our outboards versus gas outboards. On the following pages, a Torqeedo outboard specified as a "3 HP equivalent" provides the same propulsive power as a 3 HP gas outboard - even though its shaft power and input power may be substantially lower.

In the Technical Data section of this catalog, we provide all information on input power, propulsive power, overall efficiency and comparable gas outboards for your reference.



Superior drive train engineering

Superior propulsive power and overall efficiency don't just fall out of the sky. They come from in-house development that works uncompromisingly toward optimizing propulsive power and overall efficiency. It comes from using the newest technology for every component. It comes from using tailor-made components where appropriate, instead of off-the-shelf solutions. And it comes from carefully matching all components of the drive train for performance. That is what superior drive train engineering is about.

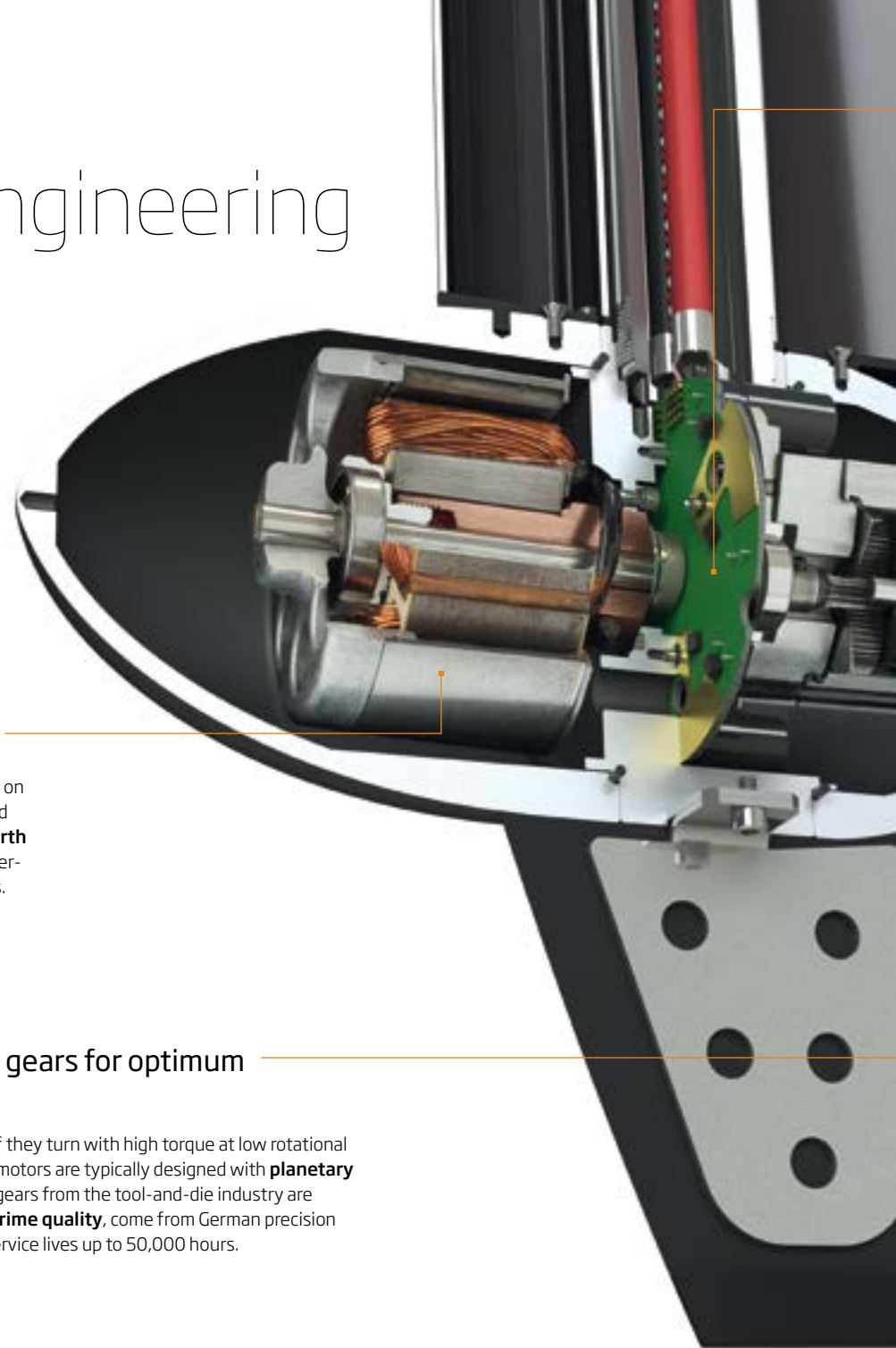
Torqueedo motors are real power packages

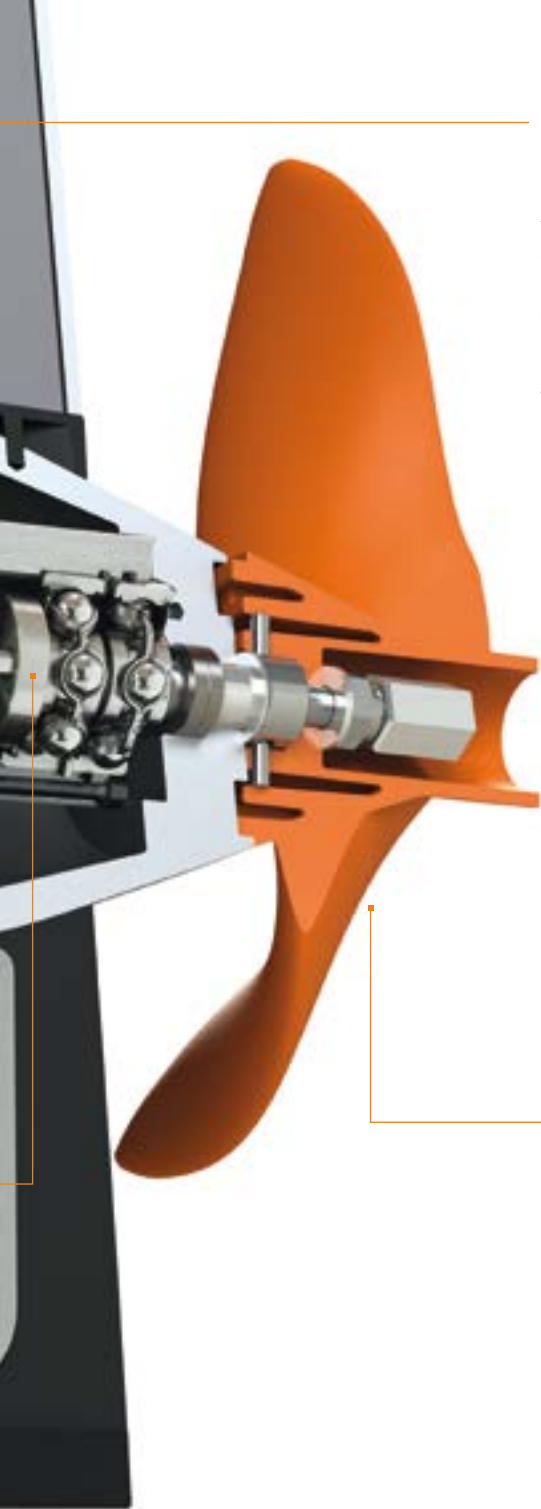
Different design, higher torque density – We have always concentrated on **brushless, electronically commutated motors**. Advanced design and superior materials assure better power development. By using **rare-earth magnets**, which have about 5 to 6 times the strength of regular hexaferrites, we obtain the maximum possible torque in the smallest of spaces.

*Drive train engineering
is our focus –
because efficiency
matters*

Carefully selected gears for optimum torque and speed

Propellers are most efficient if they turn with high torque at low rotational speed. That is why Torqueedo motors are typically designed with **planetary gears**. For Torqueedo motors, gears from the tool-and-die industry are typically used. They feature **prime quality**, come from German precision manufacturing and feature service lives up to 50,000 hours.





Maximum levels of efficiency from integrated power electronics

Torqeedo motors create the alternating current they need to run via contactless **electronic digital switching**, which requires no “brushes”. The power electronics system controls how the motor runs with extreme precision, achieving **maximum levels of efficiency** in the entire drive train. And because there are no brushes, no maintenance is required – there is no wear, no electromagnetic interference from “brush sparking”, no friction loss. The power electronics of Torqeedo motors are never an off-the-shelf product, they are always **tailor-made for highest efficiency and performance**.

Superior propeller design with methods from commercial shipbuilding

The biggest efficiency losses in a drive train typically occur in the propeller. Optimizing the motor and gears for high torque at all rpm levels minimizes propeller losses. **Applying state-of-the-art propeller design** by shaping all propeller geometries, not just diameter and pitch, and tailoring them to best suit the torque characteristics of the motor and the application further **minimizes these losses**.



Leading-edge propeller design

Leading-edge propeller design comes from following conventional wisdom and from applying advanced propeller calculation methods.

According to **conventional wisdom**, there are three main characteristics of efficient propellers:

1. Large diameter
2. High pitch
3. Low rotational speed

To spin large-diameter, high-pitch propellers slowly, motors need to deliver high torque along their entire rpm range. Motors with a suitable torque curve can work efficient propellers; motors with low torque or strongly curved torque characteristics can't. But conventional wisdom is not everything.

Many outboard propellers, especially in the low horsepower classes, look very similar. **Torqeedo propellers are different.** They are calculated with the same methods (and by the same experts) that are used to calculate propellers for the most advanced commercial ships and submarines.

Using **advanced propeller calculation methods**, all propeller parameters – diameter, chord length, pitch, skew, rake, thickness and camber – are calculated in a multidimensional process, over many thousands of iterations.

Superior battery technology

Safe performance – designed into every detail

Lithium-based batteries are the technology of choice for electric mobility applications: they store significantly more energy than other batteries, they deliver their capacity even under high loads – a very important benefit for electric propulsion; they don't lose their charge, work in the cold and have no memory effect. Plus, they deliver more cycles.

For 10 years, Torqeedo has continually led the way in marine lithium battery development. Improving our batteries every year, we have created the most comprehensive protection and safety concept for marine lithium batteries on the market – bringing together performance, safety and ease of use.

Intelligent Battery Management-System (BMS)

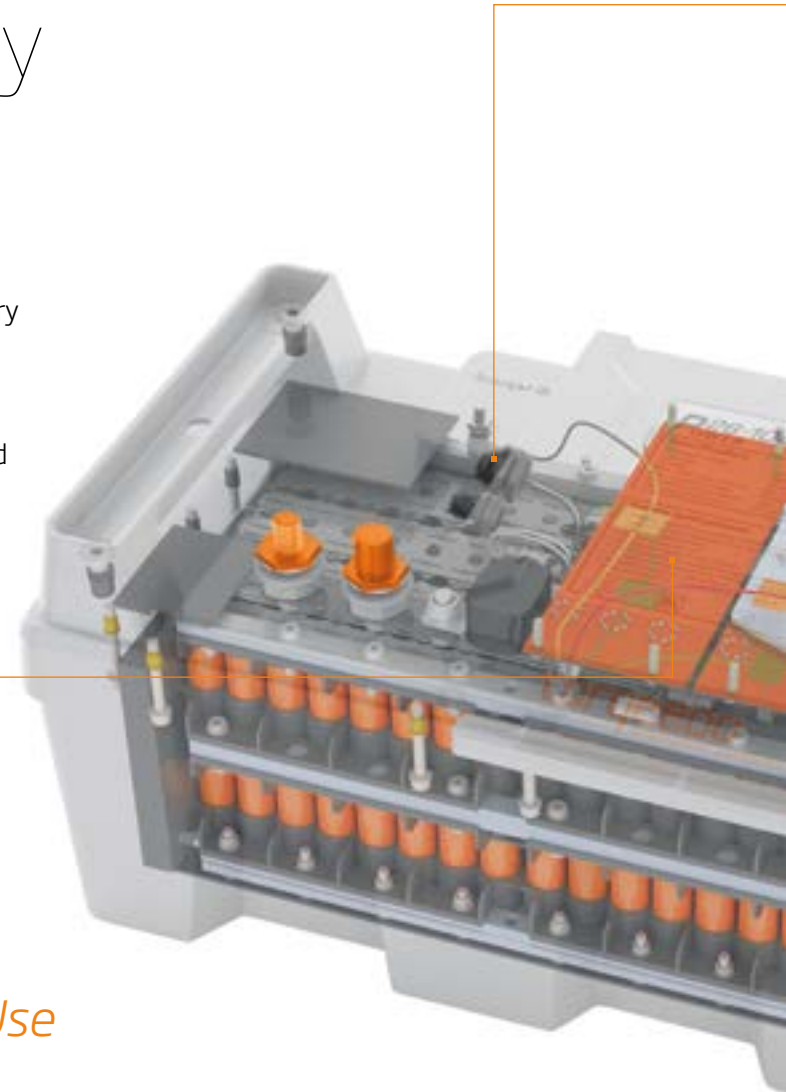
The BMS **monitors and protects Torqeedo batteries** against overcharging, overcurrent, deep discharge, short-circuit, overheating, wrong polarity, etc. They are constructed according to a **redundant safety principle**: any component with a safety-critical function is backed up by a component that duplicates the safety function. In addition, the BMS maximizes the battery's life expectancy with balancing and deep-sleep functionality.

Powerful performance

Easy to Use

Secure and easy transport

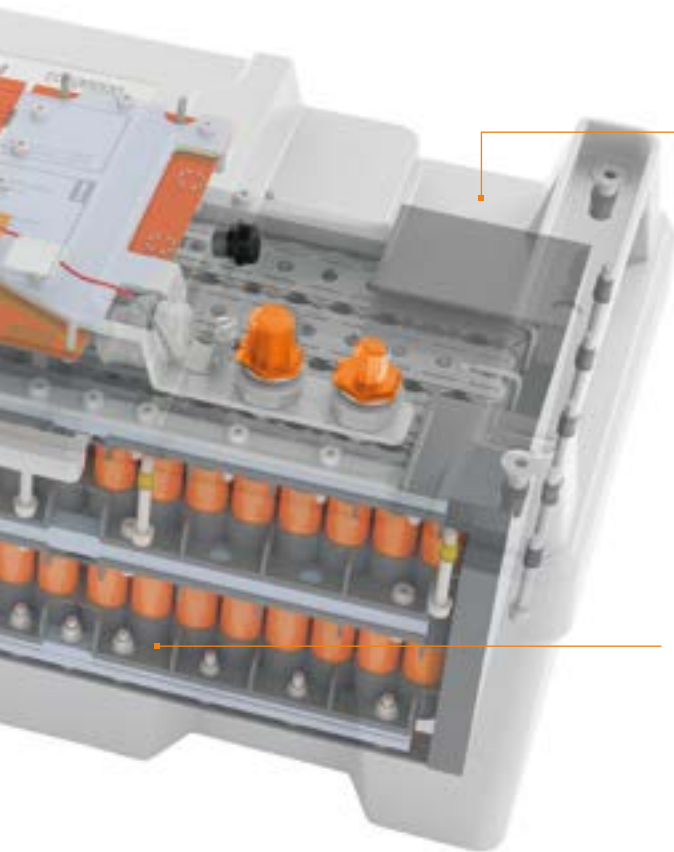
Thanks to the **high energy density** of lithium batteries, their volume and weight is up to 70% below comparable AGM- or lead-gel solutions. Our low-voltage batteries are easy to handle and light to carry. Plus: Torqeedo Power and Deep Blue batteries can be switched on and off, allowing them to be **safely transported and installed** and protecting them against unintentional discharge.



System communication

Detailed battery information is communicated to the on-board computer.

Highly reliable & safe



Completely waterproof

Waterproof housing (IP67). Even though battery submersion should be avoided, all Torqeedo batteries are completely waterproof. The waterproof characteristics of each battery are individually tested prior to delivery. **Waterproof data connections.** All cable connections are completely waterproof to IP67, whether connected or not.

High-quality safety cells

Three hardware mechanisms in every single cell provide additional safety. Torqeedo only uses cells from the clean, **precision production processes** of reputable manufacturers in Japan and the USA.



Lithium battery safety

Along with performance, safety is a key requirement for lithium batteries. From our point of view, there are **5 requirements that a safe lithium battery must fulfill:**

1. **Safe battery chemistry**, e.g. LiFePo or LiNMC. These are now commonplace.
2. **Safe packaging of individual cells:** Torqeedo only uses safety cells, i.e. welded steel cylinders equipped with multiple safety mechanisms. Other packaging – foil-welded cells – offers a reduced level of safety because it doesn't provide effective protection against internal short circuits (exceptions are foil-welded cells with ceramic separators, which provide safe packaging but are very expensive and very rare).
3. **Precise and clean production processes** at the cell manufacturer level. Torqeedo only uses cells produced by renowned manufacturers in Japan and the USA.
4. **Battery Management System (BMS) with redundant safety:** Unlike lead-based batteries, lithium batteries generally need a BMS to perform balancing and safety functions.
If the BMS fails, it can become a safety problem. Which is why, with Torqeedo, all safety-relevant components are duplicated. The same method is used in the automotive industry and medical technology.
5. **Waterproof IP67:** Water inside a lithium battery can cause numerous problems, including corrosion of the BMS and the development of detonating gas. Therefore, lithium batteries on-board must be waterproof.

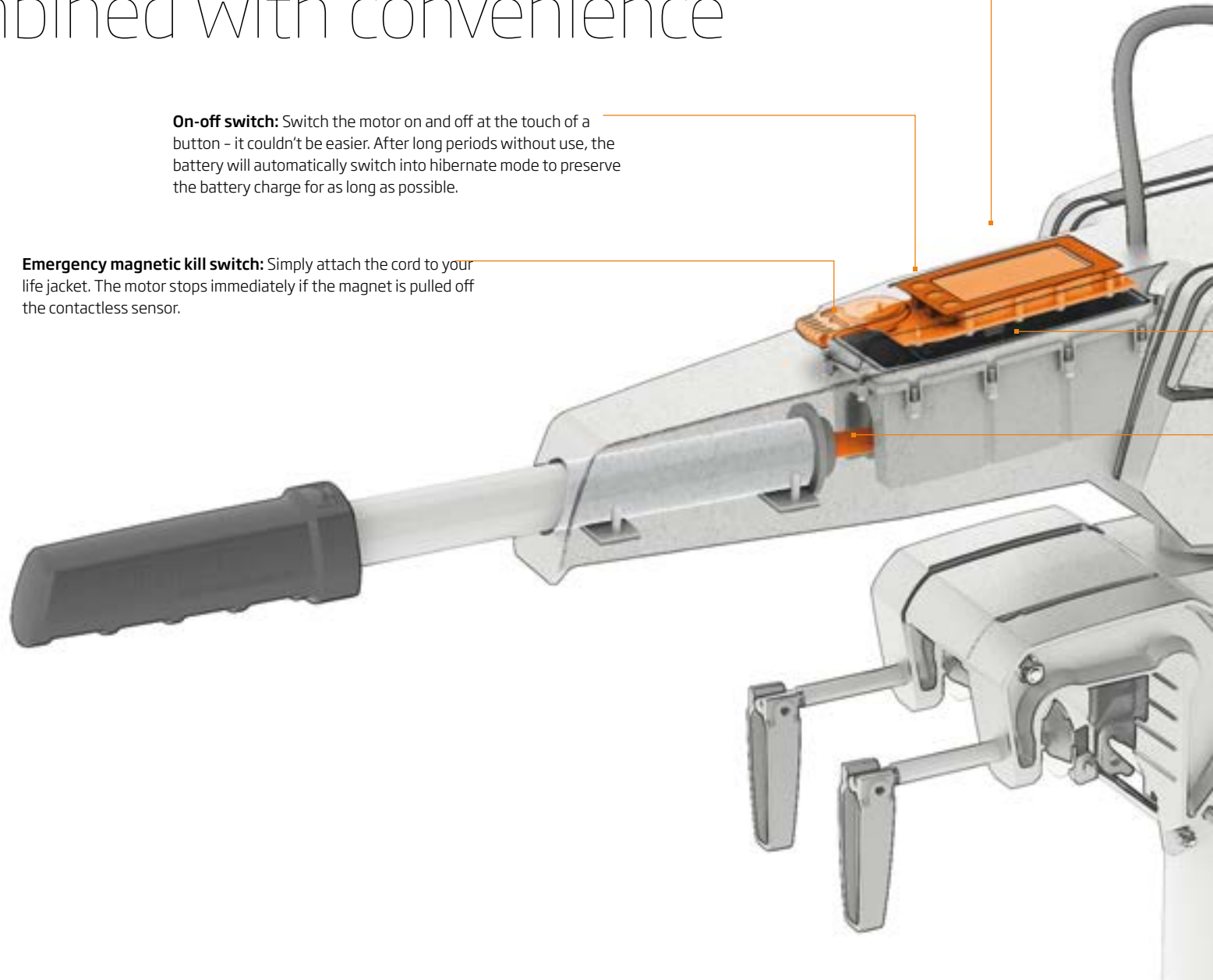
Superior convenience

Performance is best enjoyed when it's combined with convenience

Intuitive use

On-off switch: Switch the motor on and off at the touch of a button – it couldn't be easier. After long periods without use, the battery will automatically switch into hibernate mode to preserve the battery charge for as long as possible.

Emergency magnetic kill switch: Simply attach the cord to your life jacket. The motor stops immediately if the magnet is pulled off the contactless sensor.



Audible alarm: Just like in your car. The on-board computer will warn you by sounding an alarm when the power supply is getting low, alerting you it is time to head for the shore or reduce speed to increase range.

*Knowing it all.
All the time.*

Every Torqeedo motor has an **integrated on-board computer with GPS receiver.**

Navigating with TorqTrac: Enjoy a zoomable map view showing your exact GPS position and remaining range. Record your trips and see your estimated time of arrival. Just what you need for a day on the water.

Battery information: How much charge is left in the battery? What is the temperature of the battery? How much current is it delivering? The battery management system knows it all – and shares its knowledge. With you, and with the other components in the system.

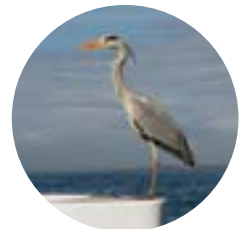
From the **information display** you can see the battery charge status, current speed over ground as well as remaining range and time. In real time, all the time, and in your preferred units of measure.

A clean adventure

Waterproof connections: When using the tiller throttle, control information is transmitted magnetically to a sensor in the control box. The **plug connectors on the data cables** are completely waterproof to IP67 – whether connected or unplugged.

No smells, no leaks: Whether in use or in storage, with Torqeedo motors there are no unpleasant oil smells or gas stains. Your hands and clothes will stay clean while you are handling the outboard. We are sure you will appreciate that.

Less noise: Torqeedo motors are significantly quieter than comparable combustion motors. You might even find a stowaway on board enjoying the peaceful planing over the water.



Motors & Batteries





- 20 Ultralight 403**
for kayaks and very light boats
≅ 1 HP
- 24 Travel 503 / 1003**
*for tenders, dinghies and
daysailers up to 1.5 tons*
≅ 1.5 - 3 HP
- 28 Cruise 2.0 / 4.0 **NEW****
*for motorboats and sailboats
up to 4 tons*
≅ 5 - 8 HP
- 34 Power 26-104**
*Lithium battery - leading-edge
in performance and safety*
- 38 Deep Blue**
*for commercial operators
and green boaters*
≅ 40 - 80 HP
- 46 Deep Blue Hybrid **NEW****
*for sailboats and for commercial
hybrid vessels*
≅ 40 - 160 HP

Ultralight 403

For kayaks and very light boats



Our extreme lightweight packs a powerful punch: maximum speed over 6 mph and a range up to 25 miles.

Free yourself from tired arms and the nearest power outlet. You can fill up anywhere with the solar charger. And since the Ultralight 403 is electric, you can motor on protected waters. Ultra-clean Ultralight 403.



A woman and a man are kayaking on a calm lake during sunset. The woman is in the foreground, wearing a red life vest and a white long-sleeved shirt, paddling a red and black kayak. The man is further ahead, also in a red life vest and paddling a similar kayak. The background features a dense forest of evergreen trees on a hillside, with mountains visible in the distance under a soft, golden sky. The sun is low on the right side, creating a warm glow and reflecting on the water.

☐ **Lightweight:**
16 lbs. including battery

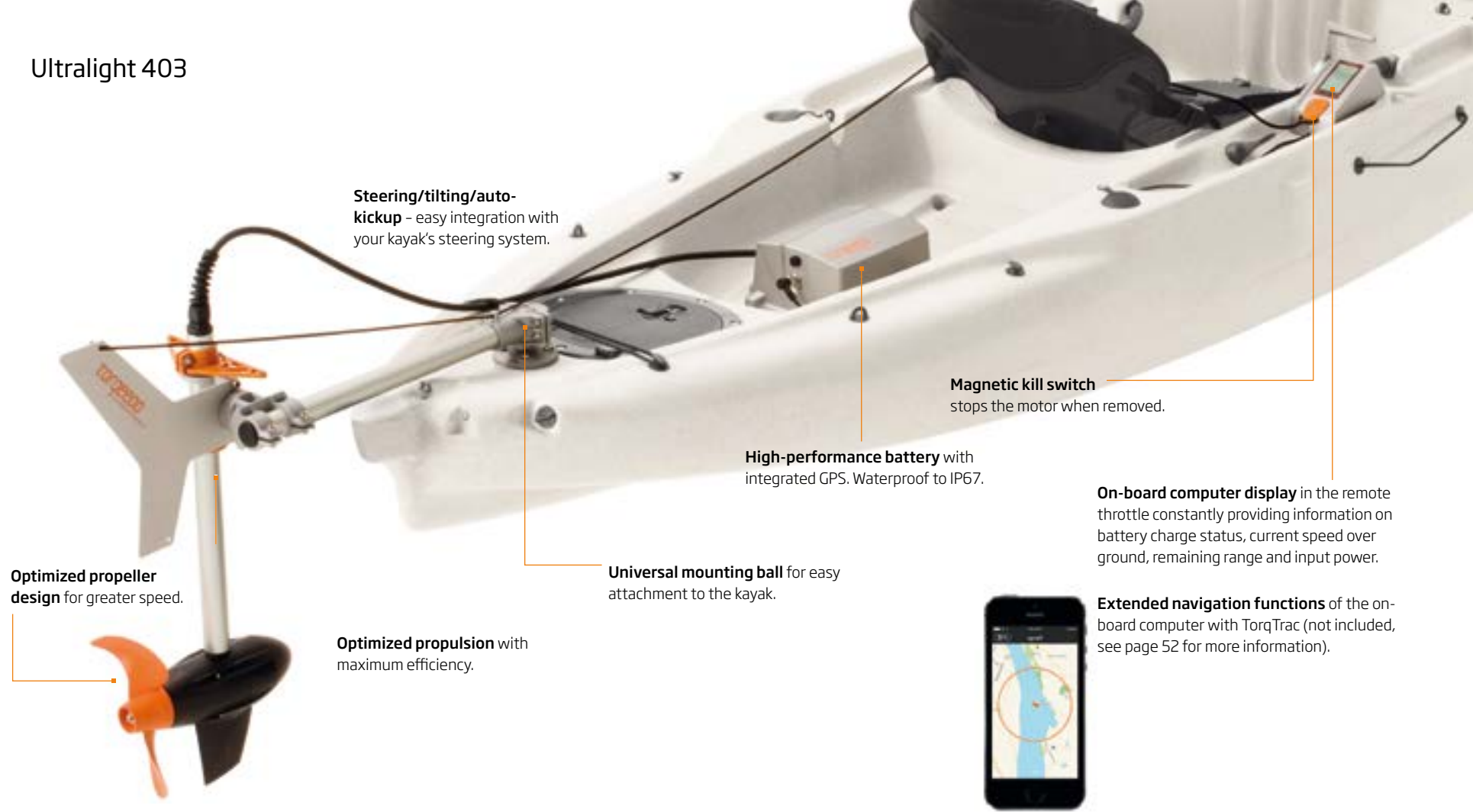
☐ **Tireless:**
up to 25 mile range

☐ **Intelligent:**
on-board computer with GPS

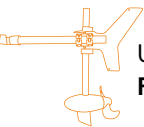
☐ **Communicative:**
connects to your smartphone

☐ **Fast:**
speed up to 6 mph

Ultralight 403

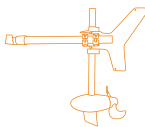


Performance: Speed and range



Ultralight 403 with lithium battery (29.6 V / 11 Ah)
Fishing kayak (13.5 ft./58 lbs., Model: Hobie Mirage Revolution)

		Speed in mph	Range in miles	Running time in hours : minutes
● ● ●	Slow	2.6	21.9	8:20
● ● ●	Half throttle	3.7	15.5	4:10
● ● ●	Full throttle	5.8	4.6	0:48



Ultralight 403 with lithium battery (29.6 V / 11 Ah)
Touring kayak (15.4 ft./51 lbs., Model: Prijon Prilite T470)

		Speed in mph	Range in miles	Running time in hours : minutes
● ● ●	Slow	2.6	26.1	10:00
● ● ●	Half throttle	3.9	16.2	4:10
● ● ●	Full throttle	6.1	4.8	0:48

Ordering information

Ultralight 403

Equipment included

- Ultralight outboard (1 hp equivalent*, weight including battery: 16 lbs.)
- High-performance lithium battery (320 Wh) with integrated computer and GPS
- Remote throttle with display
- Mounting ball
- Charger
- Magnetic kill switch
- Bag

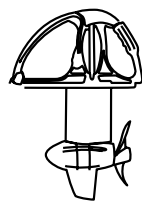
Part no. 1403-00



Accessories	Part no.
Spare battery	1413-00
Fast charger	1131-10
Solar charger 45 W	1130-00
Replacement charger	1127-00
TorqTrac NEW	1924-00
Motor cable extension 6.5 ft.	1920-00
Ultralight remote throttle extension cable 5 ft.	1921-00
Ultralight remote throttle extension cable 16 ft.	1922-00
Replacement propeller v10/p350	1912-00

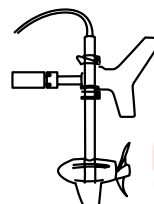
* Ultralight 403: Input power 400 W, propulsive power comparable to 1 HP gasoline outboard, see page 11.

Mounting



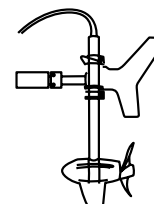
Use with Hobie kayaks:

We recommend the Hobie "eVolve" product (available from Hobie dealers).



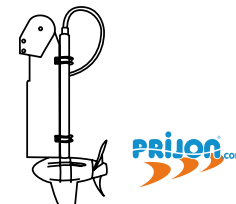
Use with Grabner kayaks:

Please use the Grabner mounting kit.



Use with Rotomod kayaks:

You can use the standard Ultralight mounting.



Use with Prijon kayaks:

Please use the Prijon rudder mounting.



All others: The Ultralight 403 can be mounted on just about any kayak using the mounting ball provided.

FAQ

How much power does the integrated battery deliver?

The battery has a capacity of 320 Wh, i.e. 11 Ah at 29.6 V.

How long does it take to recharge the battery?

When the battery is completely discharged it takes approx. 12 hours to fully recharge it. A full recharge using the fast charger (not included) only takes approx. 4 hours. With the 45 W solar charger (accessory) you can charge anytime, during travel and while the sun is out.

What useful life can I expect the lithium batteries to have?

The life expectancy of lithium batteries in recreational use is, more or less, independent of charging cycles. There is no memory effect, either: You can fully charge them after each trip regardless of the charge status shown in the display. Generally speaking, a capacity loss of approx. 4 % per year is to be expected. Capacity loss will, however, accelerate if the battery is exposed to high heat or stored while fully charged. There are no concerns with using the battery in high temperatures, but we recommend that you take the battery out of the sun and store it in a cool place after use. Your battery must be returned to a Torqeedo Service Center for service 8 years after the date of manufacture.

Can the Ultralight 403 be connected to the steering system?

Yes, the Ultralight 403 can be connected to your kayak's steering system. Please refer to your kayak's instructions and our information on mounting.

What happens if I capsize?

If the kayak capsizes, the motor stops automatically to prevent injury – provided the magnetic kill switch is attached to your wrist or life jacket. The motor only runs when the magnetic kill switch is placed in the prescribed position on the remote throttle. Should you fall overboard, the magnetic kill switch will go with you and the motor will stop immediately.

What is the warranty on the Ultralight 403?

The Ultralight 403 has a 2-year warranty from the date of purchase for recreational use.

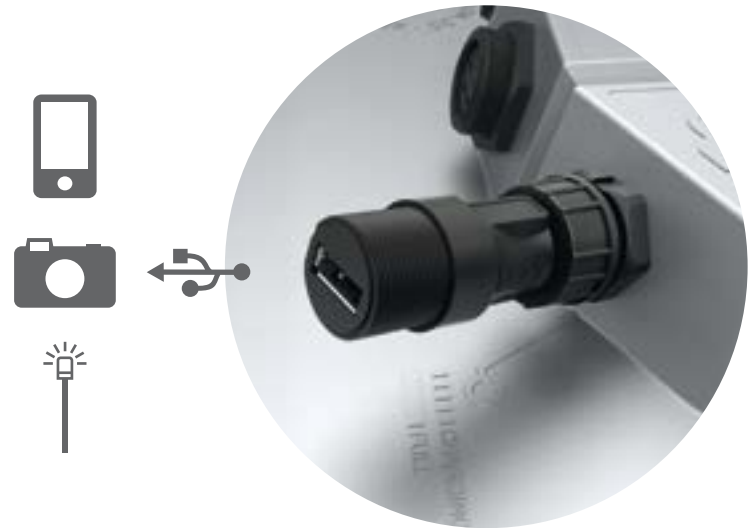
Travel 503/1003

For tenders, dinghies and daysailers up to 1.5 tons



There is an alternative to small combustion outboards which provides the same power and range as a gas motor with integrated tank, but has many distinct advantages.

NEW The lithium battery of the Travel now has a USB adapter, allowing you to charge your smartphone or power a light.



* Travel 503: Input power 500 W, propulsive power comparable to 1.5 HP gasoline outboard, see page 11.

**Travel 1003: Input power 1,000 W, propulsive power comparable to 3 HP gasoline outboard, see page 11.



☐ Solar chargeable

☐ Cleaner in every way: no fuel,
no oil, no leaks, no smell, no pollution

☐ Same propulsive power as a
1.5 or 3 HP gas outboard

☐ Comes with an on-board computer
and GPS-based range calculation

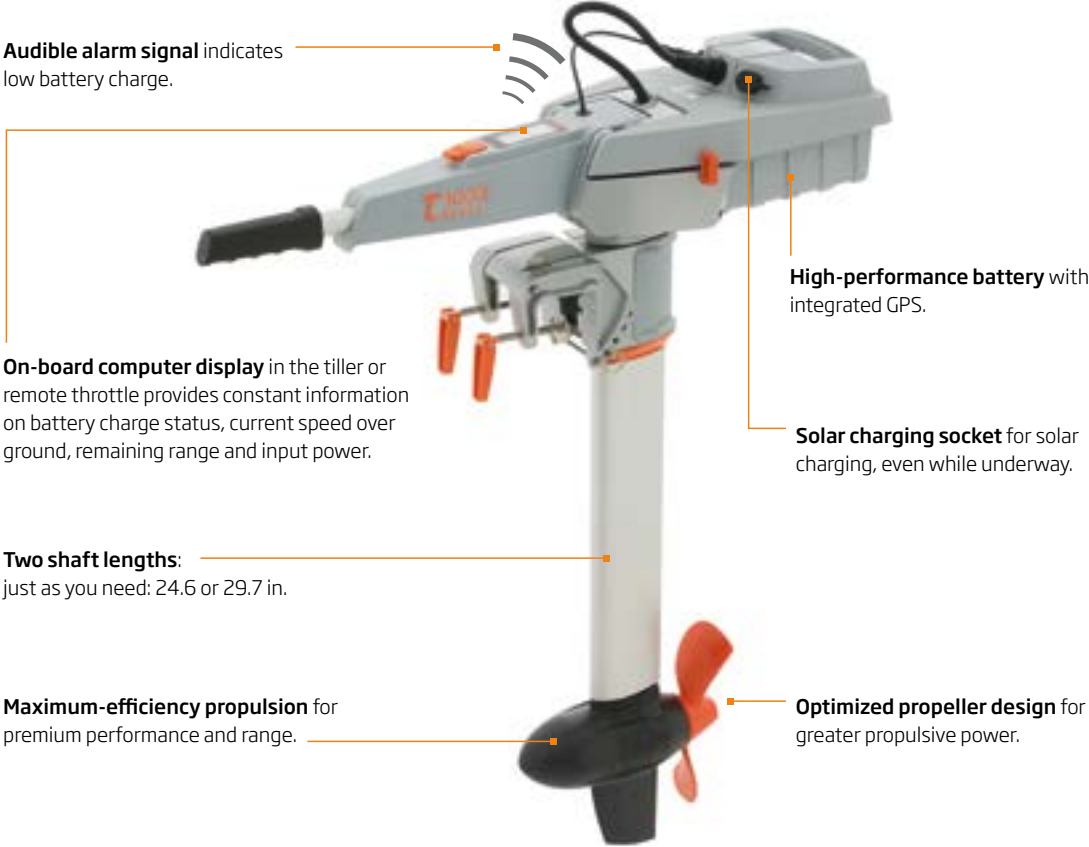
☐ Connects with your smartphone
to show range on map

☐ Always starts with the
push of a button

☐ Waterproof to IP67

☐ Easy handling: motor without
battery weighs <20 lbs.

Travel 503/1003



Audible alarm signal indicates low battery charge.

On-board computer display in the tiller or remote throttle provides constant information on battery charge status, current speed over ground, remaining range and input power.

Two shaft lengths: just as you need: 24.6 or 29.7 in.

Maximum-efficiency propulsion for premium performance and range.

High-performance battery with integrated GPS.

Solar charging socket for solar charging, even while underway.

Optimized propeller design for greater propulsive power.

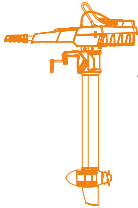


NEW USB adapter: Use your Travel battery as a power source for electronic devices (included in scope of delivery).



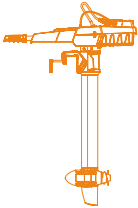
Extended navigation functions of the on-board computer with TorqTrac (not included, see page 52 for more information).

Performance: Speed and range



Travel 1003 (≅ 3 hp) with lithium battery (29.6 V / 18 Ah)
Inflatables, dinghies and daysailers up to 1.5 tons

		Speed in mph	Range in miles	Running time in hours : minutes
● ● ●	Slow	approx. 2.3	approx. 23.0	10:30
● ● ●	Half throttle	approx. 3.4	approx. 12.1	3:30
● ● ●	Full throttle	approx. 5.7	approx. 3.2	0:35



Travel 503 (≅ 1.5 hp) with lithium battery (29.6 V / 11 Ah)
Inflatables, dinghies and sailboats up to 1650 lbs.

		Speed in mph	Range in miles	Running time in hours : minutes
● ● ●	Slow	approx. 2.3	approx. 14.7	6:20
● ● ●	Half throttle	approx. 3.4	approx. 7.4	2:08
● ● ●	Full throttle	approx. 4.6	approx. 3.2	0:42

Ordering information

Travel 503/1003

Equipment included

- Outboard (Travel 503: 1.5 hp* / Travel 1003: 3 hp**) with display in tiller control
 - High-performance lithium battery (Travel 503: 320 Wh / Travel 1003: 530 Wh) with integrated on-board computer and GPS
 - Magnetic kill switch
 - Charger
 - USB adapter
-
- | | |
|-----------------|------------------|
| - Travel 503 S | Part no. 1140-00 |
| - Travel 503 L | Part no. 1141-00 |
| - Travel 1003 S | Part no. 1142-00 |
| - Travel 1003 L | Part no. 1143-00 |

Accessories	Part no.
Spare battery Travel 503 (320 Wh)	1146-00
Spare battery Travel 1003 / 503 (530 Wh)	1147-00
90W Charger (Check page 59 for compatibility)	1133-00
Sunfold 37 NEW	1132-00
TorqTrac NEW	1924-00
Travel bags (2-piece) NEW	1925-00
Travel battery bag NEW	1926-00
Outboard cover for Travel NEW	1931-00
Motor cable extension	1920-00
Remote throttle (including 5 ft. and 16 ft. connection cables)	1918-00
Remote throttle extension cable 5 ft.	1921-00
Remote throttle extension cable 16 ft.	1922-00
Replacement propeller v9/p790 (2-blade, for Travel 503 / 1003)	1917-00
Replacement propeller v8/p350 (for Travel 503 until production end 2014)	1901-00
Long tiller arm (23.6 in.)	1919-00

* Travel 503: Input power 500 W, propulsive power comparable to 1.5 HP gasoline outboard, see page 11.

**Travel 1003: Input power 1,000 W, propulsive power comparable to 3 HP gasoline outboard, see page 11.

Mounting

You can easily attach the Travel to the stern of your boat using the standard transom bracket - no special tools required.



FAQ

Which Travel for which boat?

Both models are suitable for inflatables and other small boats. For sailboats up to 1650 lbs. we recommend the Travel 503. The Travel 1003 easily propels up to 1.5 tons. Both models provide similar performance on the same boat at the same speed. However, the Travel 1003 has higher maximum power and offers over 60% more battery capacity, providing longer range.

And when the battery is empty, how long does it take before I can be on the move again?

That depends on which options you've chosen. You could of course, take a spare battery with you, which will ensure you can be on the move again immediately. Or you could connect a solar charger (accessory) and charge it while you're on the move. Or you could charge directly from the 12 V on-board power system. Or you could connect the battery to an electric socket using the charger provided - it will take approx. 5 hours to fully charge a Travel 503 or approx. 7 hours to charge a Travel 1003.

How does solar charging work?

Two different solar chargers are available for the Travel, depending on the model year. Check page 54 for details. Unfold the solar charger, attach its waterproof connector to the Travel and get started. You can use it during on the water operation or on land.

What is the life expectancy of lithium batteries?

The life expectancy of lithium batteries in recreational use is, more or less, independent of charging cycles. There is no memory effect, either: You can fully charge them after each trip regardless of the charge status shown in the display. Generally speaking, a capacity loss of approx. 4 % per year is to be expected. Capacity loss will, however, accelerate if the battery is stored in high heat or while fully charged. While it is okay to use the battery in high temperatures, we recommend that you take the battery out of the sun and store it in a cool place after use. Your battery must be returned to a Torqeedo Service Center for service 8 years after the date of manufacture.

Heat - can't batteries be damaged at high operating temperatures?

No, because we've built in a temperature protection mode. If the battery gets too hot, motor power is automatically reduced until the battery reaches a safe temperature. This function is represented in the display with a thermometer.

How much power does the integrated battery provide?

The Travel 503 battery has a capacity of 320 Wh, which means 11 Ah at 29.6 V. For the Travel 1003 this is an impressive 530 Wh, or 18 Ah at 29.6 V.

What is the warranty on the Travel?

There is a 2-year warranty on the Travel from the date of purchase for non-commercial use.

Cruise 2.0 / 4.0 **NEW GENERATION**

*For boats on Green Lakes, for sailboats
and for commercial users*



These lightweight power packs feature unrivalled overall efficiency – taking you further than any other outboard from a comparable battery supply.

Ruggedness taken seriously

The new 2015 models have been improved to meet the demanding challenges of every day commercial use; making them ready to take on the harshest environmental conditions.

Despite being tougher on the outside, the Cruise retains its core of high-tech and intelligent features that have made it so popular: its advanced power electronics, the integrated on-board computer displaying speed over ground and remaining range and the readiness to work with cool accessories like our smartphone app, TorqTrac.

* Cruise 2.0: Input power 2,000 W, propulsive power comparable to 5 HP gasoline outboard, see page 11.

** Cruise 4.0: Input power 4,000 W, propulsive power comparable to 8 HP gasoline outboard, see page 11.



☐ **Improved Ruggedness:**

- Improved protection from impact damage
- Improved protection against damage from fishing lines and debris
- Leading-edge corrosion protection for any environment
- Everything waterproof to IP67

☐ **Minimum weight,
maximum power**

☐ **Unrivalled overall efficiency:** more range or more power from limited battery supply than any other outboard

☐ **Intelligent:** on-board computer with GPS-based indication of remaining range

Cruise 2.0 / 4.0



On-board computer display in the tiller or the remote throttle constantly provides information on battery charge status, current speed over ground, remaining range and input power.

Two shaft lengths – just as you need: 24.6 (S) or 29.7 in. (L).

Record level of overall efficiency for unparalleled performance and range.

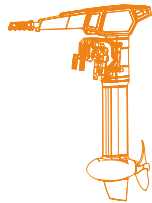
Solid aluminum housing protects against damage from running aground.

Optimized propeller design for a choice between more thrust or more speed.



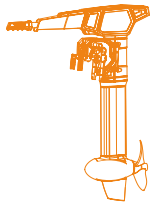
Extended navigation functions of the on-board computer with TorqTrac: featuring range on a map, waypoints and estimated time of arrival (not included, see page 52 for more information).

Performance: Speed and range



Cruise 2.0 with 2 x 12 V / 200 Ah AGM batteries (battery weight approx. 265 lbs., can also be powered with 1 or more Power 26-104)
Dinghies and sailboats up to 3 tons

	Speed in mph	Range in miles	Running time in hours : minutes
● ● ● Slow	approx. 3.1	approx. 31	10:00
● ● ● Full throttle	approx. 6.9	approx. 14	2:00



Cruise 4.0 with 2 x Power 26-104 (26 V / 104 Ah, battery weight 106 lbs.)
Motorboats and sailboats up to 4 tons

	Speed in mph	Range in miles	Running time in hours : minutes
● ● ● Slow	approx. 3.1	approx. 33.4	10:45
● ● ● Full throttle	approx. 8.1*	approx. 9.2	1:10

* **Planing with Cruise outboards** Light boats can reach planing speeds of up to 15 knots (17.3 mph) with single Cruise motors. For some boats, the use of Twin Cruise 4.0 motors allows for planing speeds.

Rock solid - The new protective design for the 2015 Cruise models

Solid aluminum housing protects against damage from running aground

Shaft sealant rings mounted in protected area on the inside of the pylon

Highest-grade seawaterproof aluminum (AlMgSi1), hard-anodized for long service life, even in the harshest conditions

Lubricant-free polymer plain bearings protect against damage from fishing lines or debris and provide improved mechanical support for propeller shaft

Comprehensive galvanic corrosion protection through careful matching of all materials and meticulous isolation of materials with different electrochemical properties

Aluminum fin coated in polyurethane foam provides additional protection from impacts



Energy supply – lithium or lead?

Cruise outboards can be operated from advanced lithium batteries or from conventional AGM- or lead-gel batteries.

Lithium batteries are the technology of choice if weight matters or if high performance is required. In electric boating applications, lithium batteries easily **save more than 70% of battery weight**. They feature a number of advantages:

- Substantially higher energy densities
- Ability to deliver their rated capacity at faster discharge rates (e.g. in 5 hours)
- Higher charge stability over time
- Better performance in the cold



Torqeedo's lithium battery **Power 26-104** connects with the Cruise motor's information system. This way, the on-board informaton system can provide visibility over the entire integrated drivetrain and provide meaningful information on battery charge and remaining range, automatically.



AGM- or lead-gel batteries are the technology of choice for lower-cost electric boating systems or if weight and volume are not critical. When equipping electric propulsion systems with AGM or lead-gel batteries, be sure to choose models with stated deep cycle capabilities. Batteries without deep cycle capabilities, such as most starter batteries, cannot withstand deep discharges. As deep discharges do happen in electric boating, these batteries can reach the end of their service life extremely quickly.

	Cruise 2.0		Cruise 4.0		Twin Cruise 4.0	
Battery options for Cruise	AGM / lead-gel batteries	Power 26-104 (lithium battery)	AGM / lead-gel batteries	Power 26-104 (lithium battery)	AGM / lead-gel batteries	Power 26-104 (lithium battery)
Required battery voltage	24 V	24 V	48 V	48 V	48 V	48 V
Number of batteries	2	1	4	2	8	4
Nominal charge Ah (20 hour discharge rate)	200	104	200	104	400	208
Nominal capacity kWh	4.8	2.7	9.6	5.4	19.2	10.8
Usable capacity (5 hour discharge rate; avoiding deep discharge damage)	60%	100%	60%	100%	60%	100%
Usable energy density (Wh/lb)	11	51	11	51	11	51
Usable energy for electric boating kWh	2.9	2.7	5.8	5.4	11.6	10.8
Battery bank weight (in lbs.)	265	53	530	106	1060	212

Ordering information

Cruise 2.0 / 4.0

Equipment included

- Cruise 2.0: 5 HP equivalent*
- Cruise 4.0: 8 HP equivalent**
- Integrated on-board computer with GPS and display
- Fuse and main switch
- Magnetic kill switch
- 4AWG cable set (9.8 ft.)
- Bridge cables for connection of batteries
- Tiller control (Cruise T models) or remote throttle (Cruise R models)
- Remote steering connector (Cruise R models)

- Cruise 2.0 TS	Part no. 1234-00
- Cruise 2.0 TL	Part no. 1235-00
- Cruise 2.0 RS	Part no. 1230-00
- Cruise 2.0 RL	Part no. 1231-00
- Cruise 4.0 TS	Part no. 1236-00
- Cruise 4.0 TL	Part no. 1237-00
- Cruise 4.0 RS	Part no. 1232-00
- Cruise 4.0 RL	Part no. 1233-00

Accessories	Part no.
Power 26-104	2103-00
TorqTrac NEW	1924-00
Remote throttle extension cable 5 ft.	1921-00
Remote throttle extension cable 16 ft.	1922-00
Motor cable extension Cruise	1204-00
Replacement propeller v19/p4000 (fast, efficient, weedless)	1916-00
Replacement propeller v30/p4000 (for high-speed applications)	1923-00
Replacement propeller v8/p350 (less speed, greater thrust)	1915-00
Long tiller arm, 23.6 in.	1919-00
Twin Cruise control set for twin motors	1217-00

* Cruise 2.0: Input power 2,000 W, propulsive power comparable to 5 HP gasoline outboard, see page 11.

** Cruise 4.0: Input power 4,000 W, propulsive power comparable to 8 HP gasoline outboard, see page 11.

Mounting

The only tool required to mount Cruise T models is a 13 mm wrench to fix the cable set to the battery terminals. Mounting Cruise R models also requires a 10 mm wrench and an open 28 mm wrench or, alternatively, a set of adjustable pliers to fix the steering.



FAQ

Which Cruise for which boat?

All Cruise models are suitable for inflatables and other small boats. For dinghies and sailboats up to 2.5 tons, we recommend the Cruise 2.0. The Cruise 4.0 easily propels up to 4 tons.

Is the on-board computer compatible with my lead batteries?

Yes, but with limitations. If the Cruise is operated with lead batteries the charge status indicator (and with it the remaining range indicator) is based on estimates derived from battery information entered during initial motor setup.

What are the advantages of the Power 26-104 lithium battery for the Cruise?

As a lithium battery, the Power 26-104 provides far greater performance with lower weight than conventional lead batteries. In other words, it does not weigh down your boat unnecessarily – and you benefit in terms of range and power. You can find more information on pages 34-37. Additionally, the integrated battery electronics of the Power 26-104 are designed to communicate with the on-board computer, meaning that the values provided by the battery, such as remaining range and capacity, are always exact.

What does the on-board computer do?

The on-board computer, which is integrated in the remote throttle with the Cruise R and in the tiller with the Cruise T, analyzes information from the motor and combines it with GPS data. Power consumption and GPS speed are always exact. When the Cruise is operated with the Power 26-104, range and remaining capacity information is also exact because both products communicate with each other. That is very convenient.

What requirements must my boat meet for twin motors – the Twin Cruise?

A **Twin Cruise outboard system** consists of two **Cruise models** (2.0 R or 4.0 R) and the **Twin Cruise control set**, which contains a dual throttle and tie bar. The tie bar is used to connect the two Cruise outboards to the same steering mechanism. The standard Twin Cruise mounting assumes a transom width of at least 30 in.

What is the warranty on the Cruise?

The Cruise models have 2-year warranty from the date of purchase for recreational use.


Power 26-104

*High performance lithium batteries for electric boating
and power supply on board*

When choosing lithium batteries, you are always choosing high performance. When choosing Power 26-104, you are also choosing professional safety. Power 26-104 is equipped with a comprehensive safety system designed to meet general safety requirements as well as marine-specific requirements.

Leading-edge performance and safety

- ✓ 4-level safety cut-off mechanism to protect against short-circuits and overcurrent integrated in battery
- ✓ 3-level protection against incorrect charging
- ✓ Protection against polarity reversal
- ✓ Individual cell voltage monitoring
- ✓ Cell temperature monitoring and battery electronics temperature monitoring
- ✓ Current interruption device and safety vent for each cell
- ✓ Deep discharge battery protection
- ✓ Waterproof IP67
- ✓ Automatic shutdown in the event of submersion



☐ Simple operation

☐ Saves up to 70% battery weight
vs. AGM or lead-gel batteries

☐ Waterproof to IP67

☐ State-of-the-art safety system
integrated in the battery

Power 26-104

Integrated information system: Identifies the battery and communicates with the Cruise on-board computer.

Waterproof housing and sockets (IP67): Waterproof whether connected or disconnected.

Plug & play with the Cruise on-board computer: Plug the data cable in, "electronic handshake", finished.

Water sensor: Notices when the battery is submerged and automatically switches the voltage off at the terminals. In the event that water gets into the boat, electrolysis and formation of detonating gas are prevented.

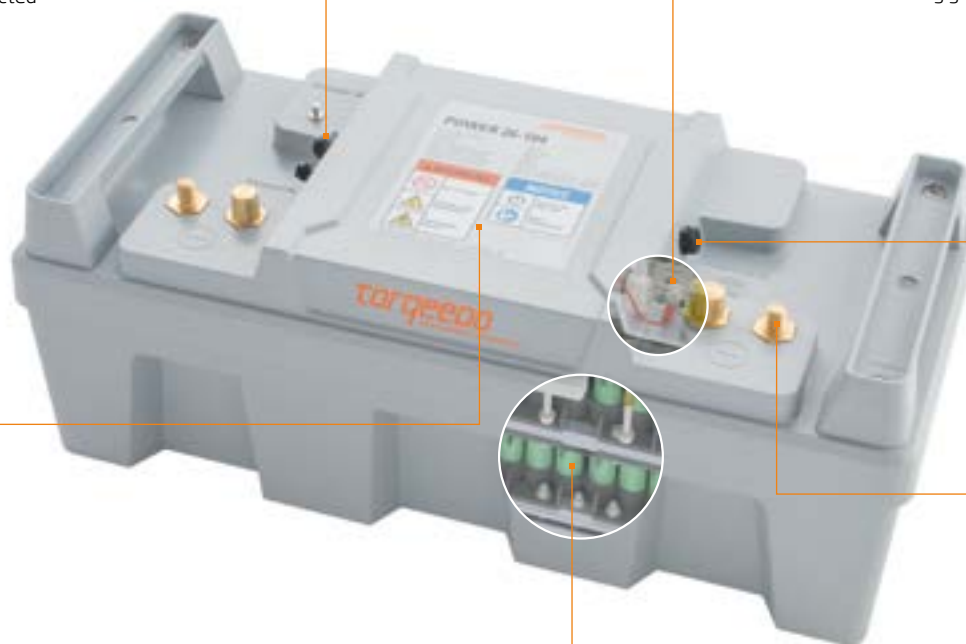
Waterproof vent: Handles temperature and pressure differences without compromising waterproofness.

Leading-edge battery management system (BMS): The BMS features numerous protective and balancing functions for a long battery life.

Voltage can be shut off from the terminals: For safe transport, installation and preventing unintentional discharge when stored for long periods.

High-performance lithium battery cells: Highest quality, from renowned Japanese manufacturers with comprehensive quality management and from fully automated production.

Safety cells offering hardware safety mechanisms on cell level: The individual battery cells consist of welded steel cylinders, each of which is equipped with several hardware safety mechanisms.



Ordering information

Power 26-104

Equipment included

- Lithium high-performance battery with 2,685 Wh (25.9 V / 104 Ah)
- Data cable for connection to Cruise drive system

Part no. 2103-00

Accessories

Part no.

On/off switch (required if the Power 26-104 is not operated with the Cruise R or T)

2304-00

Charger 350 W

2206-20

Charger 1,200 W **NEW**

2208-00

Solar charge controller

2207-00



Battery capacity rating: All Torqeedo battery capacity ratings refer to usable energy. We rate only the portion of the battery's capacity that you can safely use. Other manufacturers rate higher capacities which, if fully used, would damage the battery. We believe the capacity printed on the battery should be fully usable and available to you. When dealing with a Torqeedo battery rated at 2.7 kWh capacity, the energy you can use is 2.7 kWh.

Technical data summary

Capacity	2,685 Wh
Nominal voltage	25.9 V
Nominal charge	104 Ah
Weight	53 lbs.
Energy density (weight)	51 Wh/lb
Maximum discharge rate	180 A (4,500 W @ nominal voltage)
Dimensions	22.7 x 8.6 x 10 in.

Battery chemistry	Li NMC
Cycle lifetime	800 cycles at 100% depth of discharge at 77°F results in approx. 25% capacity loss
Average capacity loss per year	4 %
Max. connections	2S8P or 1S16P
Price-performance ratio	0.97 USD/Wh

FAQ

With which products can I use the Power 26-104?

Power 26-104 serves both as a power supply for electric boating and any 24 V on-board needs.

What is the life expectancy of the Power 26-104?

Life expectancy of a lithium battery is driven both by age and number of cycles. Generally, in recreational use, cycles play a minor role as high-usage cycles (> 500) are often never needed. Aging plays an important role, though, as lithium batteries age naturally after the date of production. Aging accelerates when a battery is exposed to high temperatures. Lithium batteries can be used in intense heat, but they should be kept cool whenever possible. On average, a capacity loss of 4% per year can be expected.

What temperatures must be taken into account during operation, when charging and for storage?

Operating temperatures can be between -4 °F and +140 °F, and for charging between 32 °F and +131 °F. Storage temperature can be between -22 °F and +131 °F, with room temperature or below having a positive effect on life expectancy. Power 26-104 is equipped with temperature monitoring, preventing damage from operation outside the specified temperatures.

I rarely use my battery and store it for long periods. Will this damage a Power 26-104?

2015 models of Power 26-104 come with an automatic switch-off mode. 48 hours after the last use, the battery

electronics are switched off and the battery goes into deep sleep mode. If the battery is charged to at least 30% it can be stored for 1 year in this mode. Nevertheless, when storing the batteries for long periods of time, charge status should be checked every second month. Batteries should not be stored when fully discharged. Storing empty lithium batteries will damage the cells and ruin the battery.

How long does the Power 26-104 take to fully recharge?

Charging takes approx. 11 hours using the 350 W charger (from fully discharged state).

Why does the battery have a power limit?

One of the advantages of lithium batteries is that they can deliver very high currents. The flipside of this is that lithium batteries can do substantial damage in a short circuit situation, if high short circuit currents are not prevented. In Power 26-104, this important safety feature is integrated into every battery, as part of the battery management system. If higher power limits are required, batteries can be connected in parallel and the maximum power limit can be multiplied.

What is the warranty on the Power 26-104?

Power 26-104 comes with a 2-year limited warranty for recreational use, starting with the date of purchase.

Deep Blue

For commercial operators and green boaters



Electric boating meets power. Deep Blue takes electric boating to a new level.




It is not just power and performance that make Deep Blue the first of its kind. It is unparalleled performance combined with full system integration and groundbreaking safety standards that set Deep Blue apart from all other electric propulsion systems on the market.

Waterproofing of all components, pilot lines along all high voltage cables and connections, insulation monitoring along the entire system, automotive-grade lithium batteries and many other safety features make Deep Blue unique in high power electric boating.

And if that weren't enough: Deep Blue also comes with a 9-year battery capacity warranty – making electric boating not only powerful and safe but also economical, especially for heavy users.

* Deep Blue 40: Input power 33 kW, propulsive power comparable to 40 HP gasoline outboard, see page 11.

** Deep Blue 80: Input power 66 kW, propulsive power comparable to 80 HP gasoline outboard, see page 11.



☐ World's first high-power electric drive system from serial production

☐ 9-year warranty on battery capacity

☐ Safety concept unique in electric boating

☐ Fully integrated system

☐ Marrying performance, safety and convenience

TORQUEEDO
STARNBERG GERMANY

Deep Blue System

The first electric high-power propulsion system from serial production. A fully integrated system in which all components are designed to match each other seamlessly and to work together perfectly on the water. A unique level of performance, safety and convenience.

12 V battery: Provides the power signal required to switch on the high-voltage batteries from sleep mode. Supplies 12 V for the on-board network and is automatically charged from the high-voltage battery, no additional 12 V charger required.

Charger: Advanced automotive charger. Waterproof to IP67. Charging rate can be controlled via the display. Up to three chargers may be used for each motor – for shorter charging times.



Automotive-grade high-voltage battery: Adapted for marine use. Waterproof to IP67 with unique venting and breathing seal combination. Completely integrated into the Deep Blue information and safety system. Comes with capacity warranty: 80% of battery capacity remaining after 9 years, even if used every day. See warranty conditions for details.



On-board computer with touchscreen display: Waterproof 5.7" display with 14 different screens. Shows real-time information on remaining range, waypoints, estimated time of arrival, compass heading, speed over ground, battery charge status, etc.

Electronic throttle with key switch and kill switch: including neutral lock. Outboard throttle includes power-trim-and-tilt functions. Activating the emergency stop will shut down entire system including high-voltage power supply, chargers, etc.

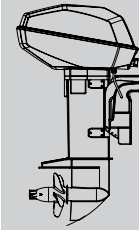
Connection box: This is where all electrical and signal cables come together. It provides connections for 1-4 batteries and includes a hardware-based safety system and water sensor. Waterproof to IP66.

High-voltage electric motor: Specially developed for the requirements of the Deep Blue system. Vector-controlled brushless motor with outstanding efficiency (98%). Suitable for salt water cooling. Waterproof to IP67. With CAN interface NMEA2000 / J 1939.

High-voltage cables and connectors with pilot lines and isolation monitoring: Standard safety feature for high-voltage equipment on land but uncommon in boating: Pilot lines and isolation monitoring covering the entire system protect from high-voltage dangers at all times.

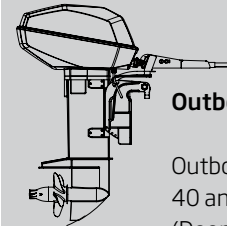


Deep Blue motor models



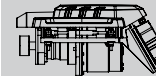
Outboard

Outboard motors for remote steering and throttle, 40 and 80 HP equivalents, various shaft lengths (Deep Blue 40 RL / RXL and 80 RL / RXL models).



Outboard tiller

Outboard motors for tiller steering and throttle, 40 and 80 HP equivalents, various shaft lengths (Deep Blue 40 TL / TXL and 80 TL / TXL models).



Inboard

Inboard shaft drive motors, 40 and 80 HP equivalents, various RPM levels (Deep Blue 40i 1400 and 1800 / Deep Blue 80 i 1400 and 1800 models).

Professional safety

Powerful electric propulsion systems require industrial-level safety and engineering. Developing high-voltage propulsion systems in adherence to recognized standards and developing appropriate new safety standards is a multi-year effort involving experts from various fields of technology.

With the groundbreaking development of Deep Blue, Torqeedo has set the standard for safety in high-power electric boating.

Other industries, such as high power machinery or automotive, offer well-established safety standards that can be applied to electric boating. But adopting these safety standards is not sufficient. Due to their unique characteristics, marine propulsion systems require a set of specific safety measures, not found in other industries.

Here are some examples of Deep Blue's comprehensive safety features. They represent essential safety aspects that all high power electric propulsion systems must contain.



Pilot Line: A pilot line covers the entire high-voltage system of Deep Blue. It runs through all the shielded high-voltage cables and through all the high-voltage connectors. It constantly monitors all cables and connectors for any irregularity, such as damaged cable insulation or loose connectors. If damaged cables or open plug connections are detected, the pilot line shuts off the system voltage immediately to prevent electric shock. Pilot lines are standard for high-voltage equipment in other industries but require a substantial investment in development, so one-off electric propulsion solutions usually do not have them.



Comprehensive insulation monitoring: Constantly monitors that the high-voltage battery and all components associated with the high voltage supply are completely insulated from the boat. Comprehensive insulation monitoring is a standard requirement for high-voltage equipment in other industries, but is not commonplace in high-power electric boats.



All components are waterproof: Components developed for industries other than boating are seldom waterproof. One-off electric propulsion solutions often use some components that are waterproof, while others are not. It should be obvious that all high-voltage components on a boat must be waterproof. Which is why at Torqeedo they are. All of them.



Automotive battery safety: As a result of the cooperation between Torqeedo and Johnson Controls, advanced automotive lithium batteries are available for the first time in the marine industry. The integration of an automotive battery into a propulsion system requires several man-years of R&D effort to embed the battery properly into the safety scheme of the propulsion system. For Deep Blue we have taken it a step further: over the course of the integration project, Johnson Controls' battery underwent additional development to meet the unique demands of marine use.




Battery venting: In the unlikely event that the redundant safety mechanisms of a battery fail, the individual cells inside Deep Blue's battery have their own additional hardware safety mechanisms. Among others, they can exhaust through a valve to vent excess gas and reduce their temperature in an emergency. The gases emitted in this unlikely situation are hot, toxic, flammable and heavier than air. In electric cars, batteries are positioned in a way that they simply vent to the streets. In electric boats, the gases must be channeled safely off the vessel. Torqeedo is the first company in the world to develop a safe venting system for boats.



Battery damping: Fast boats and seagoing boats can subject components to high levels of shock which can exceed 12 g. Typically, batteries and their battery management systems are not designed to withstand those repeated impacts. In cars and buses, batteries are mounted in the shock-protected area of the vehicle. In boats exposed to high shock levels, batteries must have their own shock-absorption (in addition to the shock-absorption mechanisms inside the battery). Torqeedo is the first company worldwide addressing this topic for marine use.



A person in a blue jacket is standing on a boat, next to a 'DEEP BLUE 80' outboard motor. The motor is white and black, with the brand name 'DEEP BLUE 80' clearly visible. The background shows the blue water of the sea.

Recognized safety – rewarded with its very own insurance tariff

Electric drive systems are gaining ground – on land and on the water. Many systems on the market, however, are one-off solutions from small companies without comprehensive engineering for safety. The result: A high rate of dangerous incidents on and damages to boats equipped with these systems.

Given this history, it is a real accolade that PANTAENIUS, Europe's leading specialist in yacht insurance, rewards Deep Blue with a special insurance tariff, setting it apart from damage-prone one-off systems. For owners of boats equipped with Deep Blue, PANTAENIUS now offers a special collective tariff, featuring improved protection and lower cost compared to the regular insurance tariff for high-power electric boats.

"A large number of claims received with respect to high-powered electric yachts in the last few years were the result of use of unsuitable components or based on the individual components in the drive system not fully matching each other. DEEP BLUE is the first system that, in our opinion, is convincing with coherent use of suitable components and professional overall system coordination. This was the reason why we have decided to offer a special tariff reflecting our assessment."

Holger Flindt, Managing Director, PANTAENIUS



PANTAENIUS
Yachtversicherungen

Sound cost calculation – no surprises

Is your fuel bill higher than \$6,000 USD per year? If it is, you may profit from going electric:

Deep Blue will save gasoline costs and protect you from expected fuel price increases. While saving money, you'll be setting an example for sustainability in boating. You won't pollute the water, you'll emit less noise and leave a smaller carbon footprint.

9-year capacity warranty on battery bank

A reliable battery lifespan is key for electric boating economics. That is why Deep Blue comes with a long-term battery capacity warranty: 9 years after commissioning, the batteries will still have 80 % of their original capacity, even if you use them every day.* Battery aging can be tracked by the user in the on-board computer at any time.

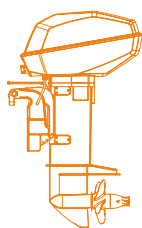
Lower maintenance cost

An electric drive system requires less maintenance than comparable combustion engines.

Model	Deep Blue 40	Deep Blue 80	Deep Blue 80	Deep Blue 80
Number of batteries	1	2	3	4
Battery bank capacity in kWh	12.8	25.6	38.4	51.2
Upfront investment				
Inboard / outboard system MSRP in USD (excluding batteries)	19,999	19,999	19,999	19,999
Battery bank MSRP in USD	16,499	32,998	49,497	65,996
Comparing battery and electricity cost vs. gasoline cost				
Annualized battery cost per year in USD**	2,125	4,250	6,375	8,500
Electricity cost per kWh in USD***	0.11	0.11	0.11	0.11
Cost per single charge (80%) in USD	1.41	2.82	4.23	5.64
Total battery & electricity cost per year @ 150 usage cycles per year	2,337	4,673	7,010	9,346
Total battery & electricity cost per year @ 200 usage cycles per year	2,407	4,814	7,221	9,628

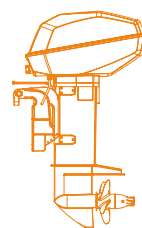
If annual gasoline costs are higher than values above, switching to electric propulsion may be profitable.

Speed and range performance examples



Deep Blue 80 with 2 batteries

	Speed in mph	Range in miles	Running time in hours : minutes
● ● ● Slow	4.6	25-75	5:20 - 16:00
● ● ● Full throttle	22-33	11-17	0:30



Deep Blue 40 with 1 battery

	Speed in mph	Range in miles	Running time in hours : minutes
● ● ● Slow	4.6	23-37	5:00 - 8:00
● ● ● Full throttle	20-28	10-14	0:30

* Adherence to warranty conditions required, see Deep Blue battery capacity warranty under www.torqeedo.com for details.

** Assuming financing with annual interest rate of 5%.

*** Florida electricity cost level.

Ordering information

Deep Blue

Equipment included

- Outboard or inboard motor system including power electronics
- Connection box
- Charger
- Remote throttle or tiller
- On-board computer with 5.7" touchscreen display
- Cabling
- Key switch & kill switch
- Inboard scope of delivery includes a cooling pump and a constant velocity joint (shaft and propeller are not included in inboard scope of delivery)

Models

Part no.

Deep Blue 40 RL	(=40 HP, 20" shaft, remote throttle)	3203-00
Deep Blue 40 RXL	(=40 HP, 25" shaft, remote throttle)	3204-00
Deep Blue 80 RL	(=80 HP, 20" shaft, remote throttle)	3201-00
Deep Blue 80 RXL	(=80 HP, 25" shaft, remote throttle)	3202-00
Deep Blue 40 TL	(=40 HP, 20" shaft, tiller control)	3207-00
Deep Blue 40 TXL	(=40 HP, 25" shaft, tiller control)	3208-00
Deep Blue 80 TL	(=80 HP, 20" shaft, tiller control)	3205-00
Deep Blue 80 TXL	(=80 HP, 25" shaft, tiller control)	3206-00
Deep Blue 40i 1800	(=40 HP, inboard 1,800 rpm)	3303-00
Deep Blue 40i 1400	(=40 HP, inboard 1,400 rpm)	3304-00
Deep Blue 80i 1800	(=80 HP, inboard 1,800 rpm)	3301-00
Deep Blue 80i 1400	(=80 HP, inboard 1,400 rpm)	3302-00

Battery

Deep Blue high-voltage battery	4101-00
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Mounting kits and throttle alternatives

Battery mounting kit, slim (suspension kit plus battery plates)	3931-00
Battery mounting kit, low (suspension kit plus battery plates)	3932-00
Suspension kit	3933-00
Additional charger for high-voltage battery	4201-00
Ground plates for suspension kit	3934-00
Top-mount throttle (replaces standard side mount throttle if ordered)	3903-00
Twin remote throttle (for Deep Blue Twin installations; replaces the drive system's standard remote throttle)	3904-00

*"Flat fee boating" –
electric boating is economical
for commercial operators
and frequent users*



Deep Blue Hybrid

*For sailboats between 40 and 80 ft.
and for commercial hybrid vessels*



Luxury meets sustainability

More luxury

- Enjoy air conditioning at night without generator noise
- Motor silently with only the sound of the water flow
- Enjoy abundant electric power on board; everything can be powered silently

More environmental friendliness

- No engine noise and pollution
- Renewable energy from the wind and sun provide power for on-board needs
- Quiet generator is used only when required

More simplicity

- Joystick docking takes all the stress out of maneuvering
- Only one type of fuel is needed - and less of it

More independence

- Less dependence on shore power
- Less need to come ashore to refuel

* Deep Blue 40: Input power 33 kW, propulsive power comparable to 40 HP gasoline outboard, see page 11.

** Deep Blue 80 / Twin Deep Blue 40: Input power 66 kW, propulsive power comparable to 80 HP gasoline outboard, see page 11.

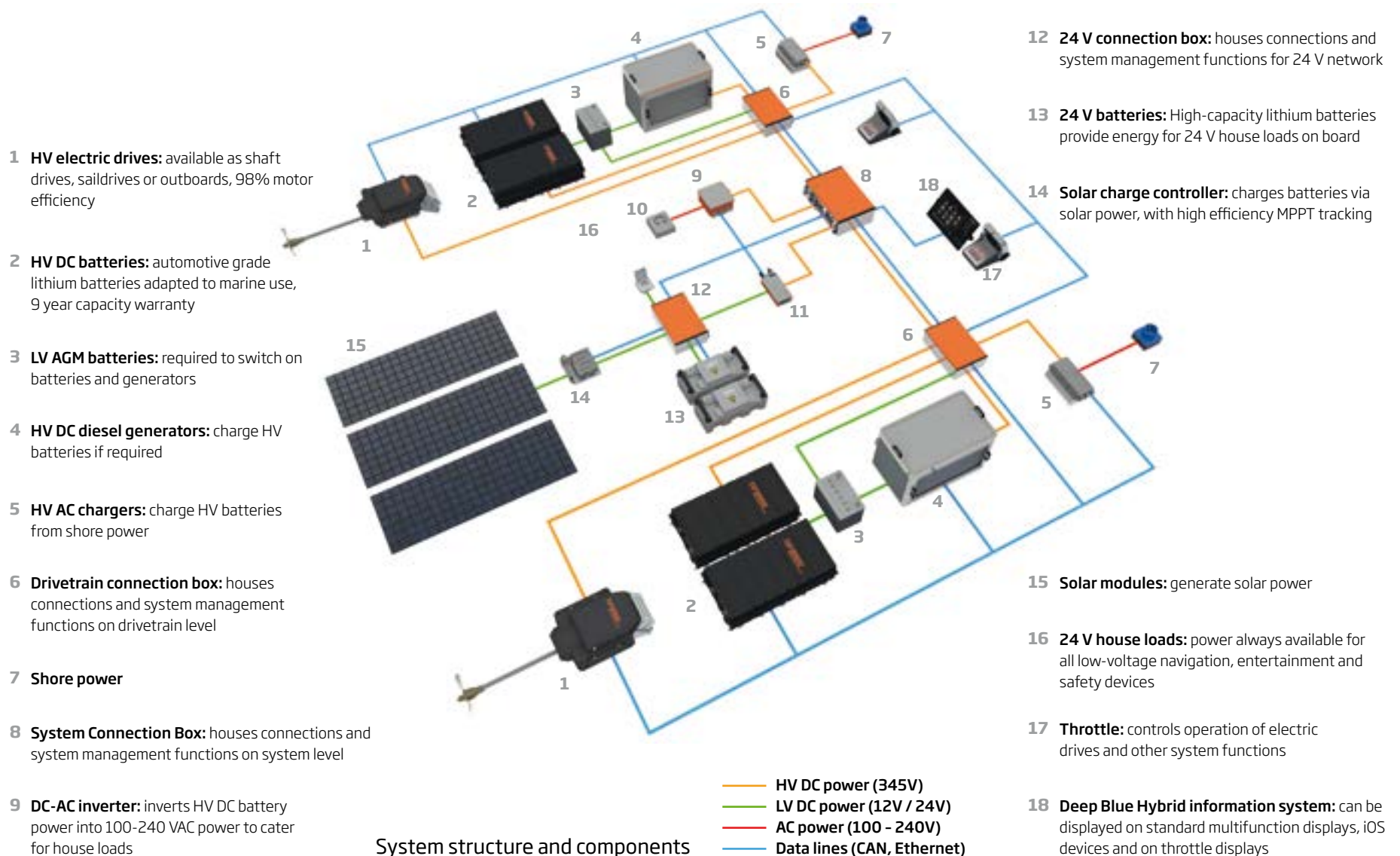
*** Twin Deep Blue 80: Input power 132 kW, propulsive power comparable to 160 HP gasoline outboard, see page 11.

The integrated solution
for hybrid propulsion and
complete energy
management on board



Deep Blue Hybrid

Deep Blue Hybrid is the first fully integrated system, offering hybrid propulsion and complete energy management on board.



System structure and components

Technical data summary

Motors	Single Deep Blue 40i	Twin Deep Blue 40i	Single Deep Blue 80i	Twin Deep Blue 80i
Peak power	33 kW	66 kW	66 kW	132 kW
Continuous power	25 kW	50 kW	50 kW	100 kW
Weight (incl. motor electronics)	194 lbs	388 lbs	194 lbs	388 lbs

Generators	20 kW
Peak power	25 kW
Continuous power	20 kW
Weight (incl. enclosure)	606 lbs

Additional power classes in development.

Batteries	High voltage DC	Low voltage
Capacity	12.8 kWh	2.7 kWh
Voltage	345 V	26 V
Weight	331 lbs	53 lbs

Power conversion	DC-DC converters	DC-AC inverters	Solar charge controller	HV AC charger	Connection box
Output power	3 kW	6 kW	0.2 kW	3 kW	n/a
Weight	11 lb	55 lbs	0.7 lbs	22 lbs (including 13 lb. heatsink)	55 lbs
Requirements	-	-	1 unit per solar module	-	1 unit per drivetrain plus 1 unit per system

All components can be fitted in multiple units.

Accessories

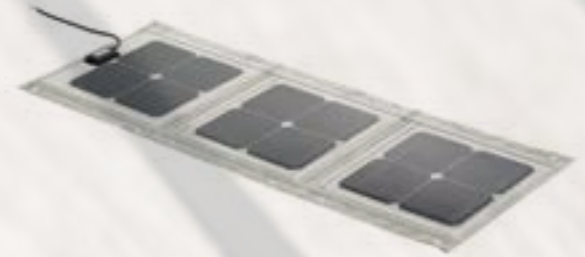




52 TorqTrac **NEW**



54 Sunfold 37 **NEW**



56 Travel Bags **NEW**



TorgTrac ^{NEW}

The upgrade for the on-board computer on your smartphone.
With convenient navigational functions and GPS data in real time.

For motor models Ultralight 403
Cruise 2.0 / 4.0
Travel 503 / 1003



Clearly arranged: Everything is easy to read on your smartphone display, even at night.



See how far you can still travel:
The remaining range is displayed on the map in real time.



Exact positioning: Call up your exact position with GPS data on the map.



Navigation just like in a car:
Use waypoints for navigation and estimated time of arrival, zoom in on the map and save your favorite places.

Ordering information

TorqTrac

Equipment included

- Bluetooth® transmitter module
- App (can be downloaded free of charge from the Apple and Google app stores)

Part no. 1924-00

System requirements

TorqTrac communicates wirelessly using a Bluetooth® transmitter module that you can purchase from your dealer. Your smartphone must support Bluetooth® 4.0 with LE (low energy) technology.



Check here to see whether your smartphone has Bluetooth® 4.0. Find out whether your device also supports the necessary Bluetooth® low-energy (BLE) technology by contacting your mobile phone provider or the manufacturer of the device.



Solar charging

Electric boats make it possible to use clean and renewable energy for marine propulsion. Start now and enjoy the simplicity and independence provided by Torqeedo's solar charging options. Making a statement for energy transition is rarely such a treat. Check page 59 for compatibility.

Solar Charger 45 W

Provides simple plug & play charging for Ultralight models. The rollable thin-film solar module is extremely weatherproof and was successfully tested even in full salt water immersion. Comes with protective case for transport and storage.

Nominal output power	45 W
Cells	Amorphous Silicium
Efficiency	Cell efficiency: 7% Module efficiency: 5.5%
Measures	39 x 6 in. rolled up 58 x 36 unfolded (14 sq. ft.)
Weight	2.9 lbs
Waterproof	IP65



Sunfold 37 **NEW**

Torqeedo's new solar panel folds into a handy briefcase format of 12 x 12 in. for easy transport and storage. Despite its small size, Sunfold 37 delivers plenty of energy for your Travel battery or other 12 V devices – thanks to its monocrystalline, high-performance solar cells.

Nominal output power	37 W
Cells	Monocrystalline high-performance
Efficiency	Cell efficiency: 22% Module efficiency: 16% Inverter efficiency: 97%
Measures	12 x 12 in. folded 36 x 12 in. unfolded (3 sq. ft.)
Weight	2.2 lbs
Waterproof	IP65
Usable for other 12 V devices	

☐ **Clean:**
run your outboard from
renewable energy

☐ **Independent:**
charge anywhere

☐ **Easy transport and storage**

☐ **Simple:**
plug in & charge

Charging time
from 40% to 100%
battery charge

**Ultralight 320 Wh
battery**

**Travel 320 Wh
battery**

**Travel 530 Wh
battery**



Sun

approx. 6 hours

approx. 6 hours

approx. 10 hours

Ordering information

Sunfold 37 **NEW**

Part no. 1132-00

Solar charger 45 W

Part no. 1130-00

Including protective cover for transport and storage

Travel Bags **NEW**

Securely packed and stowed away:
the travel bags for your Travel motor and
spare battery are indispensable companions
when traveling to the water.

For motor models Travel 503/1003
Travel spare battery



Ordering information

Travel Bags (2-piece)

Equipment included

- Carry bag for Travel motor
- Carry bag for Travel battery

Part no. 1925-00

Travel battery bag

Equipment included

- Carry bag for spare Travel battery

Part no. 1926-00

*Well packaged for easy transport:
Look sharp everywhere
with Travel bags.*



Ordering Information

Part no.	Product	Description	MSRP in USD
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Motors & Batteries

ULTRALIGHT

1403-00	Ultralight 403	Ultralight outboard, 1 HP equivalent, with integrated 320 Wh high-performance lithium battery, including charger, remote throttle, integrated on-board computer with GPS-based range calculation, magnetic kill switch and drybag	1,799.00
1413-00	Spare battery Ultralight 403	High-performance lithium battery with integrated GPS receiver, 320 Wh, 29.6 V, 11 Ah	599.00

TRAVEL

1140-00	Travel 503 S	High-efficiency outboard with integrated 320 Wh high-performance lithium battery, 1.5 HP equivalent, integrated on-board computer with GPS-based range calculation, magnetic kill switch, charger; short shaft version	1,699.00
1141-00	Travel 503 L	As part no. 1140-00, but with long shaft	1,699.00
1142-00	Travel 1003 S	High-efficiency outboard with integrated 530 Wh high-performance lithium battery, 3 HP equivalent, integrated on-board computer with GPS-based range calculation, magnetic kill switch, charger; short shaft version	1,999.00
1143-00	Travel 1003 L	As part no. 1142-00, but with long shaft	1,999.00
1146-00	Spare battery Travel 503 NEW	High-performance lithium battery with integrated GPS receiver, 320 Wh, 29.6 V, 11 Ah. New features: faster charging and USB-connector to power other electric devices	599.00
1147-00	Spare battery Travel 1003/503 NEW	High-performance lithium battery with integrated GPS receiver, 530 Wh, 29.6 V, 18 Ah. New features: faster charging and USB-connector to power other electric devices	699.00

CRUISE

1234-00	Cruise 2.0 TS NEW	High-efficiency outboard, 5-6 HP equivalent. With tiller control, integrated on-board computer with GPS-based range calculation, 4AWG cable set (10 ft.) including fuse and main switch; short shaft version. New features: improved robustness and corrosion protection	3,798.00
1235-00	Cruise 2.0 TL NEW	As part no. 1234-00, but with long shaft	3,848.00
1236-00	Cruise 4.0 TS NEW	High-efficiency outboard, 8-9.9 HP equivalent. With tiller control, integrated on-board computer with GPS-based range calculation, 4AWG cable set (10 ft.) including fuse and main switch; short shaft version. New features: improved robustness and corrosion protection	4,298.00
1237-00	Cruise 4.0 TL NEW	As part no. 1236-00, but with long shaft	4,348.00
1230-00	Cruise 2.0 RS NEW	High-efficiency outboard, 5-6 HP equivalent. Includes remote steering connector, remote throttle, integrated on-board computer with GPS-based range calculation, 4AWG cable set (10 ft.) including fuse and main switch; short shaft version. New features: improved robustness and corrosion protection	3,798.00
1231-00	Cruise 2.0 RL NEW	As part no. 1230-00, but with long shaft	3,848.00
1232-00	Cruise 4.0 RS NEW	High-efficiency outboard, 8 - 9.9 HP equivalent. Includes remote steering connector, remote throttle, integrated on-board computer with GPS-based range calculation, 4AWG cable set (10 ft.) including fuse and main switch, short shaft version. New features: improved robustness and corrosion protection	4,298.00
1233-00	Cruise 4.0 RL NEW	As part no. 1232-00, but with long shaft	4,348.00

Part no.	Product	Description	MSRP in USD
1217-00	Twin-Cruise Control Set	For twin applications with Cruise 2.0 R and 4.0 R models, consists of aluminum twin throttle lever with dual info display and 22 in. tie bar for connecting the two motors	799.00

POWER

2103-00	Power 26-104	High-performance lithium battery, 2,685 Wh, nominal voltage 25.9 V, charge 104 Ah, weight 53 lbs., including battery management system with integrated protection against overload, short-circuit, deep discharge, wrong polarity connection, overtemperature, and submersion, waterproof to IP67	2,599.00
2206-20	Charger 350 W for Power 26-104	Charge current 10 A, charges Torqeedo Power 26-104 from 0-100% in max. 11 hours, waterproof to IP65	599.00
2208-00	Charger 1200 W for Power 26-104 NEW	Charge current 40 A, charges Torqeedo Power 26-104 from 0-100% in max. 3 hours, waterproof to IP65	call for pricing
2304-00	On/off switch for Power 26-104	Switch to activate and deactivate Power 26-104, IP65, with LED indicator displaying on/off status, required if Power 26-104 is used without Cruise outboards	99.00
2207-00	Solar charge controller for Power 26-104	Solar charge controller tailored specifically to the characteristics of Power 26-104, Allows for safe and convenient charging of Power 26-104 from standard photovoltaic modules (PV modules not included in scope of delivery). Integrated MPPT ensures maximum possible power yield from the attached PV modules. Very high efficiency. Output power max 232 watts (8 A, 29.05 V)	call for pricing

DEEP BLUE

3201-00	Deep Blue 80 RL	Deep Blue outboard system, 66 kW peak power, 80 HP equivalent. Includes: outboard motor, connection box, charger, remote throttle, integrated on-board computer with touchscreen; long shaft version (high-power batteries not included)	19,999.00
3202-00	Deep Blue 80 RXL	As part no. 3201-00, but with extra long shaft	19,999.00
3205-00	Deep Blue 80 TL NEW	As part no. 3201-00, but with tiller control	19,999.00
3206-00	Deep Blue 80 TXL NEW	As part no. 3201-00, but with extra long shaft and tiller control	19,999.00
3203-00	Deep Blue 40 RL	Deep Blue outboard system, 33 kW peak power, 40 HP equivalent. Includes: outboard motor, connection box, charger, remote throttle, integrated on-board computer with touchscreen; long shaft version (high-power batteries not included)	19,999.00
3204-00	Deep Blue 40 RXL	As part no. 3203-00, but with extra long shaft	19,999.00
3207-00	Deep Blue 40 TL NEW	As part no. 3203-00, but with tiller control	19,999.00
3208-00	Deep Blue 40 TXL NEW	As part no. 3203-00, but with extra long shaft and tiller control	19,999.00
3301-00	Deep Blue 80i 1800	Deep Blue inboard system, 66 kW peak power, 80 HP equivalent (max. 1,800 rpm). Includes: inboard motor with motor electronics, constant velocity joint, connection box, charger, remote throttle, integrated on-board computer with touchscreen, cable set, cooling pump (high-power batteries, shaft and propeller not included)	19,999.00
3302-00	Deep Blue 80i 1400	As part no. 3301-00, but with 1,400 rpm propeller speed	19,999.00
3303-00	Deep Blue 40i 1800	Deep Blue inboard system, 33 kW peak power, 40 HP equivalent (max. 1,800 rpm). Includes: inboard motor with motor electronics, constant velocity joint, connection box, charger, remote throttle, integrated on-board computer with touchscreen, cable set, cooling pump (high-power batteries, shaft and propeller not included)	19,999.00
3304-00	Deep Blue 40 i 1400	As part no. 3303-00, but with 1,400 rpm propeller speed	19,999.00
4101-00	Deep Blue high-voltage battery	High-power lithium battery, usable energy 12.8 kWh, nominal voltage 345 V	16,499.00
4201-00	Charger for Deep Blue high-voltage battery	Additional charger for shorter charging times, 3 kW output power	call for pricing

Part no.	Product	Description	MSRP in USD
3903-00	Top-mount throttle	If chosen, replaces side-mount throttle included in the scope of delivery of the Deep Blue system package.	call for pricing
3904-00	Twin throttle	For Deep Blue twin installations. If chosen, replaces side-mount throttles included in the scopes of delivery of the Deep Blue system packages.	call for pricing
3931-00	High voltage battery mounting kit, slim NEW	Allows for shock-protected installation of one HV battery, includes 2 aluminum mounts and 4 heavy duty 3-axis metal dampers slim mounting option	call for pricing
3932-00	High voltage battery mounting kit, low NEW	Allows for shock-protected installation of one HV battery, includes 2 stainless steel mounts and 4 heavy duty 3-axis metal dampers for low mounting option	call for pricing
3933-00	Suspension kit NEW	Set includes 4 heavy duty 3-axis damping springs (for one battery at a time)	call for pricing

Accessories

ACCESSORIES

1925-00	Travel bags (2 pieces)	Bags for motor and battery of Travel models	169.00
1926-00	Travel battery bag	Bag for spare battery of Travel models	79.99
1931-00	Outboard cover for Travel NEW	For Travel 1003 and 503 models. Protects motor cable from UV fading and shaft head from dirt. 95% waterproof, 5% breathable	call for pricing
1924-00	TorqTrac NEW	Smartphone app with improved onboard computer functions. Suitable for Travel 503/1003, Ultralight, Cruise R and Cruise T models. Including data cable with bluetooth module to connect outboard and smartphone.	149.00
1905-00	Sacrificial anode for Cruise NEW	Sacrificial anode for all Cruise models	call for pricing

CHARGERS

1132-00	Sunfold 37 NEW	Foldable 37 W solar panel, small format, high efficiency, plug-and-play connections for watertight charging of Travel 503/1003, compatible only with batteries part no. 1146-00 and 1147-00.	749.00
1130-00	Solar charger 45 W	Solar module, can be rolled up, extremely weatherproof, built especially for use on water, plug-and-play connections for watertight charging of the Travel batteries part no. 1144-00 and 1145-00 and Ultralight battery part no. 1413-00. Including protective cover for easy transport and storage. Phased-out model - available while stocks last.	899.00
1127-00	Charger for Travel 503/1003 and Ultralight 403 batteries	40 watt charger for power outlets between 100-240 V and 50-60 Hz. Use only with Travel battery part no. 1144-00 and 1145-00 and Ultralight 403 battery.	69.99
1131-10	Fast charger for Travel 503/1003 and Ultralight 403 batteries	120 W charger for power outlets between 100-240 V and 50-60 Hz. Use only with Travel battery part no. 1144-00 and 1145-00 and Ultralight 403 battery.	129.00
1133-00	Charger 90 W for Travel 503/1003 battery NEW	90 W charger for power outlets between 100-240 V and 50-60 Hz. Use only with Travel battery part no. 1146-00 and 1147-00.	call for pricing

Part no.	Product	Description	MSRP in USD
PROPELLERS & FINS			
1912-00	Spare propeller v10/p350	For Ultralight 402 and 403 (Ø 7.9 in.)	99.99
1917-00	Spare propeller v9/p790	For Travel 503 and Travel 1003 (Ø 11.5 in.)	99.99
1915-00	Spare propeller v8/p350	For Cruise models with production year 2009 onwards (serial numbers >5000), slower speed, lower efficiency but higher thrust. (Ø 11.8 in.)	99.99
1916-00	Spare propeller v19/p4000	For Cruise models with production year 2009 onwards (serial numbers >5000), fast, efficient, weedless. (Ø 11.8 in.)	99.99
1923-00	Spare propeller v30/p4000	Highspeed propeller for Cruise models with production year 2009 onwards (serial numbers >5000), for planing applications with lighter boats. (Ø 12.6 in.)	219.99
1901-00	Spare propeller v8/p350	For the Travel models 401, 801, 503, BaseTravel models, and Cruise models of production years 2006-2008 (serial numbers <5000). (Ø 11.8 in.)	99.99
9145-00	Fin for Travel 503/1003 models	Protects the outboard against damage from running aground	29.99
9234-00	Fin for Cruise R and T models	Protects the outboard against damage from running aground, for Cruise models with article numbers 1209-00 to 1223-00	29.99
9258-00	Fin for Cruise R/T NEW	Aluminum fin coated with polyurethane (PU) foam for the Cruise models with part no. 1230-00 to 1237-00, improved protection against damage from running aground	call for pricing

THROTTLES & CABLES

1918-00	Remote throttle	Allows installation of Travel 503/1003 models with remote throttle instead of tiller, including integrated display with information about battery status, GPS-based speed and remaining range calculation, including 5 ft. and 16 ft. connection cable between motor and throttle. Use also as spare part for Cruise and Ultralight models.	299.99
1919-00	Long throttle arm	Longer tiller handle, 23,6 in. long, for Travel and Cruise T models	69.99
1920-00	Motor cable extension Travel and Ultralight models	Extension for cable connection between battery and motor for Ultralight 403 and Travel 503/1003 models. Allows for longer distance (6.5 ft.) between battery and motor, with waterproof plug/connectors	69.99
1204-00	Motor cable extension Cruise models	Extension for Cruise cable set, 6.5 ft. long, with high current plugs	129.99
1921-00	Throttle cable extension, 5 ft.	Extension cable connection for Travel 503/1003, Ultralight and Cruise T as well as Cruise R models. Allows for longer distance between the throttle/tiller and motor	34.99
1922-00	Throttle cable extension, 16 ft.	As part no. 1921-00, length 16 ft.	49.99
1914-00	Magnetic kill switch	Emergency-stop and immobilizer for Travel, Cruise and Ultralight models	29.99
1927-00	Spare parts kit Travel	Kit for Travel models consisting of magnetic kill switch, large battery fixing pin and small steering fixing pin	49.99
1128-00	Charging cable 12 V Travel and Ultralight models NEW	Allows charging of Travel 503/1003 and Ultralight 403 models from 12 V power supply.	call for pricing



2207-00



1931-00



1131-10



1914-00



1919-00



1918-00



1917-00



1413-00



9145-00

Technical Data

Outboards < 20 HP Equivalent

	ULTRALIGHT 403	TRAVEL 503 S/L	TRAVEL 1003 S/L	CRUISE 2.0 TS/TL	CRUISE 4.0 TS/TL	CRUISE 2.0 RS/RL	CRUISE 4.0 RS/RL	TWIN CRUISE 2.0 R	TWIN CRUISE 4.0 R
Input power in watts	400	500	1,000	2,000	4,000	2,000	4,000	4,000	8,000
Propulsive power in watts	180	220	480	1,120	2,240	1,120	2,240	2,240	4,480
Comparable combustion outboards (propulsive power)	1 HP	1.5 HP	3 HP	5 HP	8 HP	5 HP	8 HP	8 HP	15 HP
Comparable combustion outboards (thrust)	2 HP	2 HP	4 HP	6 HP	9.9 HP	6 HP	9.9 HP	12 HP	20 HP
Maximum overall efficiency in %	45	44	48	56	56	56	56	56	56
Static thrust in lbs*	33	40	68	115	189	115	189	230	378
Integrated battery	320 Wh Li-Ion	320 Wh Li-Ion	530 Wh Li-Ion	-	-	-	-	-	-
Nominal voltage	29.6	29.6	29.6	24	48	24	48	24	48
Final charging voltage	33.6	33.6	33.6	-	-	-	-	-	-
Total weight in lbs	16	28.4 (S) / 29.8 (L)	29.5 (S) / 30.8 (L)	38.5 (S) / 41 (L)	40.4 (S) / 42.8 (L)	33.7 (S) / 35.7 (L)	35.5 (S) / 37.5 (L)	68.3 (S) / 73 (L)	71.7 (S) / 76.1 (L)
Motor weight without battery in lbs	9.7	19.6 (S) / 20.9 (L)	19.6 (S) / 20.9 (L)	-	-	-	-	-	-
Weight of integrated battery in lbs	6.4	8.8	9.9	-	-	-	-	-	-
Shaft length in inch	17.7	24.6 (S) / 29.7 (L)	24.6 (S) / 29.7 (L)	24.6 (S) / 29.7 (L)	24.6 (S) / 29.7 (L)	24.6 (S) / 29.7 (L)	24.6 (S) / 29.7 (L)	24.6 (S) / 29.7 (L)	24.6 (S) / 29.7 (L)
Standard propeller (v = speed in km/h at p = power in watts)	v10/p350	v9/p790	v9/p790	v19/p4000	v19/p4000	v19/p4000	v19/p4000	v19/p4000	v19/p4000
Alternative propeller options	-	v8/p350	-	v8/p350 v30/p4000	v8/p350 v30/p4000	v8/p350 v30/p4000	v8/p350 v30/p4000	v8/p350 v30/p4000	v8/p350 v30/p4000
Maximum propeller speed in rpm	1,200	700	1,200	1,300	1,300	1,300	1,300	1,300	1,300
Control	Remote throttle	Tiller	Tiller	Tiller	Tiller	Remote throttle	Remote throttle	Remote throttle	Remote throttle
Steering	Provision to connect to kayak rudder; lockable	360° lockable	360° lockable	360° lockable	360° lockable	Provision to connect to standard remote steering; lockable	Provision to connect to standard remote steering; lockable	Provision to connect to standard remote steering; lockable	Provision to connect to standard remote steering; lockable
Tilting device	Manual with auto kick-up	Manual with auto kick-up	Manual with auto kick-up	Manual with auto kick-up	Manual with auto kick-up	Manual with auto kick-up	Manual with auto kick-up	Manual with auto kick-up	Manual with auto kick-up
Trim device	-	Manual, 4-step	Manual, 4-step	Manual, 4-step	Manual, 4-step	Manual, 4-step	Manual, 4-step	Manual, 4-step	Manual, 4-step
Stepless forward/reverse drive	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Integrated on-board computer with display	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

* Torqeedo static thrust measurement is based on internationally accepted ISO standards. Static thrust figures for conventional trolling motors are typically measured differently, which results in higher values. To compare Torqeedo static thrust data with conventional trolling motors, add approximately 50% to the Torqeedo static thrust values.

Outboards & Inboards 40 / 80 HP Equivalent

DEEP BLUE SYSTEM	DEEP BLUE 40 RL/RXL	DEEP BLUE 80 RL/RXL	DEEP BLUE 40 TL/TXL	DEEP BLUE 80 TL/TXL	DEEP BLUE 40i 1800/1400	DEEP BLUE 80i 1800/1400
Input power (peak) in kW	33	66	33	66	33	66
Input power (continuous) in kW	25	50	25	50	25	50
Propulsive power in kW	16.2	32.4	16.2	32.4	> 16.2	> 32.4
Comparable gasoline outboards (propulsive power)	40 HP	80 HP	40 HP	80 HP	40 HP	80 HP
Maximum overall efficiency in %	54	54	54	54	> 54	> 54
Usable energy in kWh	12.8	25.6 - 51.2	12.8	25.6 - 51.2	12.8	25.6 - 51.2
Nominal voltage	345 V	345 V	345 V	345 V	345 V	345 V
Final charging voltage	389 V	389 V	389 V	389 V	389 V	389 V
Motor weight without battery, including electronics, in lbs	306 (L) / 320 (XL)	306 (L) / 320 (XL)	320 (L) / 333 (XL)	320 (L) / 333 (XL)	176	176
Weight of 1 battery in lbs	328	328	328	328	328	328
Total system weight example in lbs (long shaft version, 1 charger, including connection box, display, throttle and cabling)	690 (with 1 battery)	1019 (with 2 batteries)	703 (with 1 battery)	1032 (with 2 batteries)	560 (with 1 battery)	904 (with 2 batteries)
Shaft length	20" / 51 cm (L) 25" / 63.5 cm (XL)	20" / 51 cm (L) 25" / 63.5 cm (XL)	20" / 51 cm (L) 25" / 63.5 cm (XL)	20" / 51 cm (L) 25" / 63.5 cm (XL)	-	-
Standard propeller	v50/p50k	v50/p50k	v50/p50k	v50/p50k	-	-
Maximum propeller speed in rpm	2,400	2,400	2,400	2,400	1,800 / 1,400	1,800 / 1,400
Steering	Standard remote steering	Standard remote steering	Tiller with throttle	Tiller with throttle	-	-
Tilting device	Electric from throttle	Electric from throttle	Tiller skewing and throttle	Tiller skewing and throttle	-	-
Trim device	Electric from throttle	Electric from throttle	Electric from tiller	Electric from tiller	-	-
Integrated on-board computer with touchscreen display	Yes	Yes	Yes	Yes	Yes	Yes

A global network

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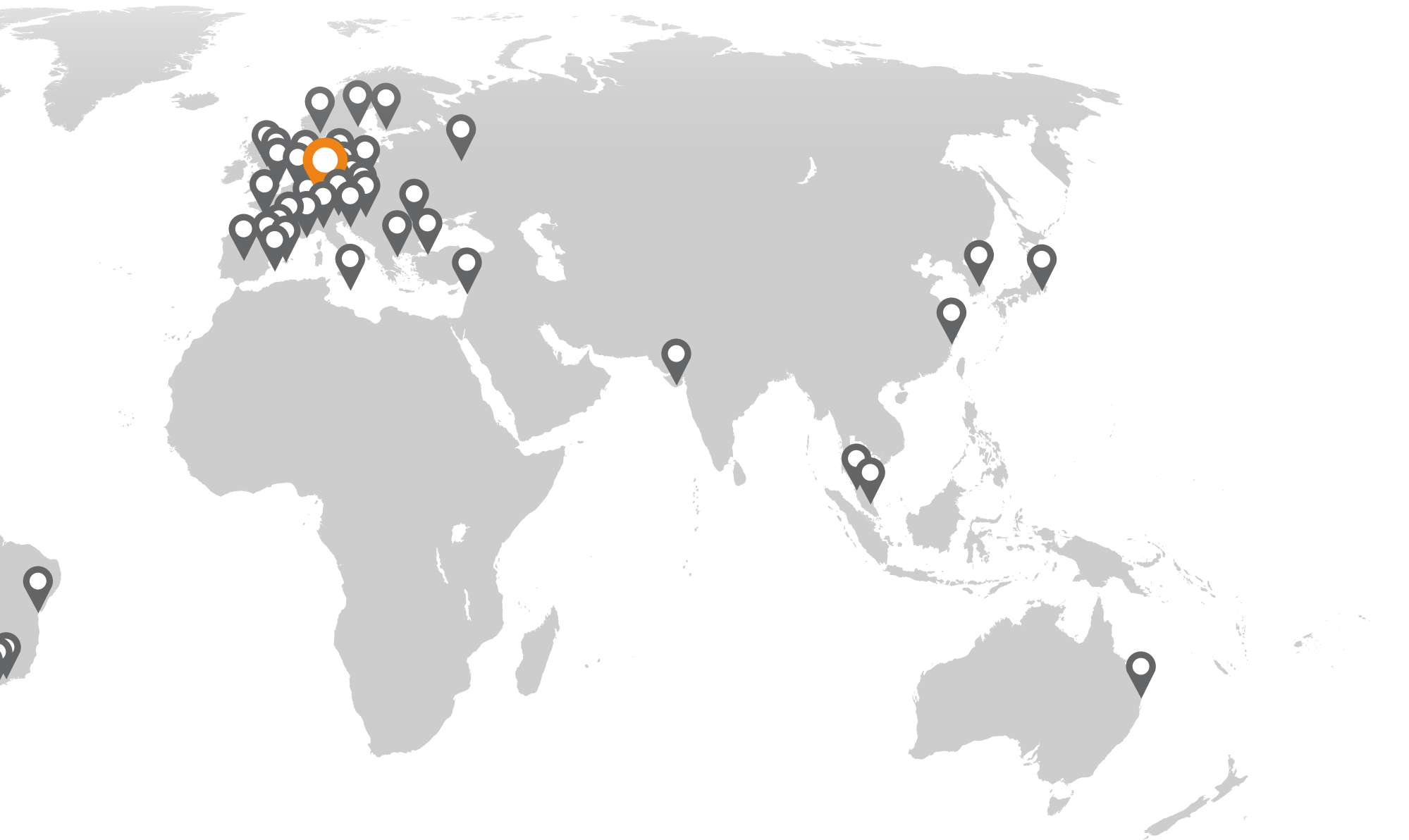
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