

Ultralight

Frequently Asked Questions & Video Answers



What are the different options?

1 HP
equivalent

Ultralight 403 A (1405-00) or **Ultralight 403 AC (1407-00)**. The only differences are the 403 A comes with the standard **320 watt-hour battery** with a total package cost of **\$1,799 USD (\$2410 CDN)** and the 403 AC comes with the extended range **915 watt-hour battery**, total package cost of **\$2,299 USD (\$3,080 CDN)**.

3 HP
equivalent

Ultralight 1103AC (1408-00) includes the **extended range 915 watt-hour battery** and has the following advantages over the 403 model: **greater speed and range, quiet direct drive operation, tough weedless propeller, immediate throttle response and a more robust housing**. Because of the higher horsepower, the bracket is 'beefier' than the 403 model and the 1103 motor lift assembly is designed to handle a more substantial 3 HP motor. Cost is **\$2,699 USD or (\$3,616 CDN)**.

Why does it cost so much?

Resources went into development and design to create what you get - unmatched speed, range and safety. Components include rare earth magnets, GPS modules, the best lithium cells available and an IP-67 rated waterproof exterior. The higher initial cost is more than equaled out when you look at the product longevity compared to brushed motors and when you weigh the features and benefits.

Torqueedo Technology Video: <https://youtu.be/sncOFv2uSGY>

Why Brushless Motors Are Different: https://youtu.be/C30hz_EPpV4

How fast can it make my kayak go?

This depends on the kayak and motor combination.

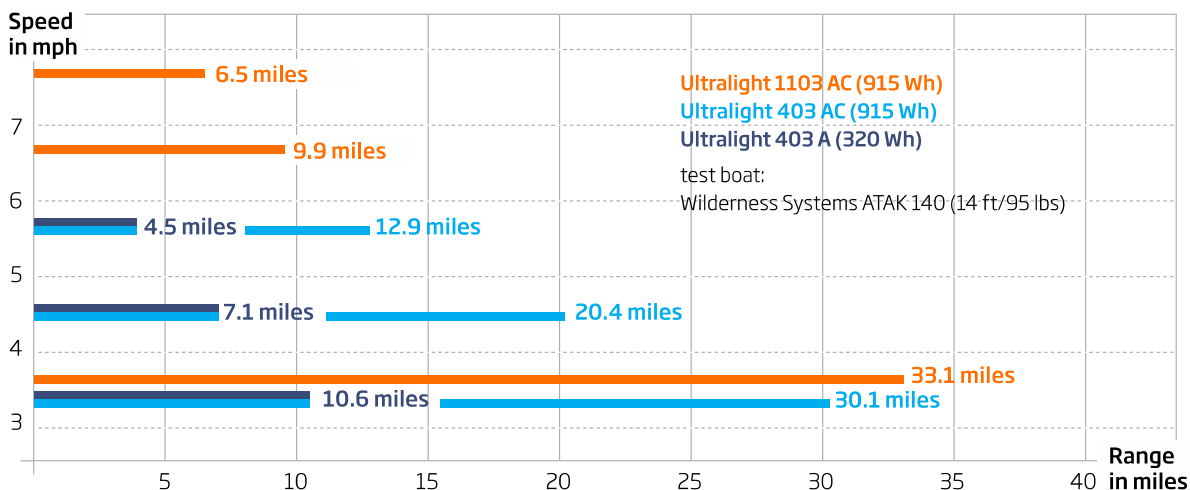
Here's an Ultralight 403 motor top speed of 5.7 mph on a Wilderness ATAK 140 and how to install: <https://www.youtube.com/watch?v=vo3c6bdJoGk>

Here's the Ultralight 1103AC top speed of 7.6 mph on a Wilderness Systems Thresher 155: <https://youtu.be/zhbQ-H-MJnQ>

How far can I go? How long does the battery last?

Range and runtimes depend on how hard you run the motor and which battery pack you have, but a day as long as 41.8 miles can be accomplished with a single 915 Wh battery. You always know how much remaining range you have at the specific throttle setting you are at by looking at the throttle display. The unit automatically calculates the remaining range based on speed, remaining battery percentage and watt draw being used to attain that speed.

Here's a 41.8 Miles on the Chesapeake Video: <https://youtu.be/0ZmpDnFt114>



What comes with the motor and what else might I need?

An Ultralight motor package includes the motor, a waterproof lithium battery (either 320 Wh or 915 Wh), a 90W charger, a throttle with data display, a motor mount with hardware, plus motor lift and reverse lock lines.

The motor bracket attaches to a “four bolt pattern” measuring 3.75” X 4.75”. On many kayaks there are threaded inserts molded into the hull. On kayaks without this pattern, an adapter plate may be needed.

Kayak manufacturers including Hobie and Wilderness Systems make **adapter plates**, or stern plates, to be able to mount “four bolt pattern” accessories such as the Power Pole Micro Anchor or a Torqeedo Ultralight. Innovative Sportsman fabricates many model specific adapter plates, including one that allows both the Ultralight and Power Pole to be installed on the same four bolt pattern. You can also mount directly to the hull, if there is access to the inside of the hull (a hatch) near the stern to drill holes and install using the provided hardware to secure the mounting bracket.

Besides an adapter plate, a 3rd party **throttle mount** or a **foot control steering kit** may be installed. YakAttack makes a Torqeedo Throttle Mount that can be secured on a variety of tracks. Wilderness Systems, Bonafide Kayaks, Apex Watercraft and Native Watercraft Kayaks all manufacture foot control steering kits specific to their models. Innovative Sportsman offers a non-model specific foot control steering kit and a flush-mount track throttle mount option.

Creating a field repair kit, including a spare propeller, shear pins and other parts, as seen in this video, is a good idea: <https://youtu.be/AaVWuRwt4yU>.

You may also want to purchase one of the **Utility Rock Guards** by Innovative Sportsman. The rock guard protects your motor from collision and cuts most of the vegetation that can wrap around your propeller during use: <https://youtu.be/TaxMUN3DfFE>

Kayak Model Specific Installation, Speed & Range Testing Videos

A

Apex Tyr foot control steering (not an install video, but a look at development of foot control steering kit): <https://youtu.be/tcw5MPYL2SA>

B

Blue Sky Boatworks Angler 360 uses existing chair mounted stick steer: <https://youtu.be/WWZhmvH57k4>

Bonafide SS127 current model Ultralight 403 AC, foot control steering:

<https://youtu.be/8T5i46dS1jE>

Bonafide SS127 original “ball-mount” Torqeedo Ultralight 403: <https://youtu.be/Y6NmilFJKc0>

C

Crescent Kayak Crew foot control steering and fabrication of custom stern plate using a polyethylene cutting board, a method that can apply to any number of kayaks without access to inside of hull, provided there are some threaded handle inserts and flat spaces for track near stern: <https://youtu.be/wVI-77Td4GY>

F

Feel Free Lure 13.5 foot control steering: <https://youtu.be/G9MQYQjxsqo>

H

Hobie Pro Angler foot control steering: <https://youtu.be/2PsTNFA87jq>

Hobie Pro Angler fixed steering triangle, steer with rudder: <https://youtu.be/Nhb-dHajZJU>

Hobie Outback (2019 and later) fixed steering triangle, steer with rudder:

<https://youtu.be/nyAdJ1X0wPo>

Hobie Outback (2019 and later) foot control steering: <https://youtu.be/i3LYfZONsAw>

Hobie Outback (2019 and later) connect steering triangle with rudder drum:

<https://youtu.be/bfujhl3Yjng?t=151>

Hobie Compass foot control steering: <https://youtu.be/GMvb5Mxot-w>

J

Jackson Kayak Big Rig FDHD foot control steering, custom chop of Ultralight 1103 profile for super shallow operation: <https://youtu.be/EuHNUdlAHVE>

Jackson Kayak Big Rig (older model) ball-mount Torqeedo Ultralight 403, foot control steering:

https://youtu.be/pAvS_8JVtdM

Jackson Kayak YuPiK foot control steering: <https://youtu.be/f1rqQV1Mh6s>

Jackson Kayak Kilroy HD – this is more about showing how weight balance forward in the kayak helps with speed and range, but shows foot control steering on this kayak

<https://youtu.be/LLpOINP68vg>

Jackson Kayak Coosa HD foot control steering: <https://youtu.be/ktVAFVYvLxw>

Jackson Kayak Liska foot control steering: <https://youtu.be/nZeQWESx900>

K

Kaku Kayak Wahoo, foot control steering (speed & range testing with 403AC/1103AC):

https://youtu.be/GliD_BMQN9Y

Kaku Kayak Zulu stick steer: <https://youtu.be/JtWDpXRw9R8>

N

Native Watercraft Slayer Max foot control steering (not an install video, but shows soon to be released kit): https://youtu.be/hf_2pZiaOvg

Native Watercraft Titan 13.5 foot control steering: https://youtu.be/ycB_q_3Nyw4

Native Watercraft Ultimate 14.5 foot control steering: <https://youtu.be/KPZU3FeoYTq>

NuCanoe Frontier 12 foot control steering: <https://youtu.be/2llhT4XFhTQ>

NuCanoe Pursuit Pivot Drive (stick steer), speed & range testing: <https://youtu.be/Pcj9V7xJIU0>

NuCanoe Pursuit foot control steering and Innovative Sportsman Adapter Plate:

<https://youtu.be/tdvkRED8Hq8>

O

Old Town Predator PDL rudder steering: https://youtu.be/RDrdVLR_XcI

Old Town Predator PDL foot control steering: <https://youtu.be/MzfPIXCBjic>

S

Star Rival Fish (Inflatable Kayak) foot control steering: <https://youtu.be/IUBcly7iHEo>

V

Vibe Seaghost 130 foot control steering: <https://youtu.be/E1JCbeWPRX8>

W

Wilderness Systems ATAK 120 (also works with ATAK 140 and both Radar models, foot control steering: <https://youtu.be/25-bo7CUBRE>

Wilderness Systems Recon 120 HD preserves pedal drive function:

<https://youtu.be/6EOyS7aUKdk>

Wilderness Systems Recon 120 foot control steering: <https://youtu.be/U9OfTSlybXA>

Wilderness Systems Thresher 155 foot control steering, use of Molly Bolts because of no access to inside of hull: <https://youtu.be/zhbQ-H-MJnQ>

Which Kayak performs the best with an Ultralight?

Kayak designs vary in their intended application. Wider kayaks have tremendous primary stability – great for standing up and sight fishing. Narrower kayaks have better speed. Lighter kayaks, long in length with the seat position as far forward as possible tend to have the best speed and range performance. That means that you get more miles out of each battery and can attain higher top end speeds. Here's a video that looks at a comparison of several different models, comparing speed and range results with length, weight and occupant seating position:

<https://youtu.be/NTEftvVhtmg>

I have no four bolt pattern on my kayak and no access to the inside of the hull of my kayak. How can I install the mounting bracket to my kayak to complete the Torqueedo Ultralight installation?

Several install videos on the list above show different methods of how to accomplish this. The Crescent Kayak Crew install video shows how to make a custom adapter plate with something you likely already own: a polyethylene cutting board. The Star Rival Fish install shows how to install on an inflatable kayak. The Wilderness Systems Thresher video shows how to use Molly Bolts to put the bracket on. It's a tough install to do as far as hand strength, and you need to order a special tool and molly bolts. The Native Ultimate 14.5 shows how to make a custom star board adapter plate that ties into existing threaded inserts for carrying handles. The Native Watercraft Titan 13.5 shows how to install a round hatch near the stern, so you can have access to the inside of the kayak for backing hardware.

The Ultralight 1103 AC is a heavy motor that is difficult to lift with the lift lines provided. Is there a trick for how the lift lines should be set up with the provided hardware?

Yes, the motor lift lines should be “doubled over” at front and back, so that a “pull toward your body” motion is used instead of a “pull forward, away from your body” motion. The beginning of this video shows Team Torqeedo Angler Cilla Johnson showing the correct rigging on her Bonafide SS127: <https://youtu.be/Up-mzJEF6i0>

I would like to steer with my kayak’s existing rudder, instead of installing foot control steering. What can I do?

If tight turning radius is not at all important to you, you may lock the steering triangle and steer with the rudder. Please understand that doing this at speed with the Ultralight 1103AC will be akin to trying to get your car to turn by rolling down the window and sticking your hand out the window. A rudder can not overcome the force generated by a 3 HP electric outboard. This video shows how to complete a “fixed steering” install: <https://youtu.be/Nhb-dHajZJU>

What maintenance should I be prepared to do?

The most important thing that you should do with your Ultralight on a regular basis is to remove the propeller and look for fishing line or vegetation wrapped around the shaft. This material can spin on and abrade the waterproof seal, allowing water to enter the pylon and destroy the motor. If fishing line is removed the same day it entered that area, the motor will be fine. If you leave it to spin on the seal for months, it will destroy the motor.

Here is a video that shows how to remove the propeller of an Ultralight 1103 AC (the operation is similar on the Ultralight 403): <https://youtu.be/us0ABrUPzN0>

Besides that, some WD-40 on the electrical connection plugs helps maintain good connection. Around year four of ownership, it’s a good idea to send in the pylon to a Torqeedo service center to have the O-ring gaskets replaced. Like any gasket, they can dry rot with time, and they keep water out of the pylon. Here’s the link to find a service center: <https://www.torqeedo.com/us/en-us/stores?service=true>

How do I learn what the different error codes are?

Error codes on a Torqeedo are the equivalent of your car’s “check engine” light, but better. Instead of saying, “There’s a problem, and only a trained mechanic can tell you what it is”, it says, “There’s a problem. Here’s a head start on trying to troubleshoot to get back on the water as quick as possible.” Do yourself a favor as soon as you get the motor: open the user manual to the error codes page and take a photo with your cell phone. That’s the easiest way to be able to quickly look up an error code. The less easy way is to bring the user manual with you every time you use it. Who does that? Almost nobody. Take the quick pic!

The “Torqeedo Ultralight Service” playlist on YouTube provides an explanation of error codes. Error code 30 is the most common. It lets you know that there is not a strong electrical connection. In most cases, a squirt of WD-40 on each terminal plug, plus making 100% certain that each IP-67 rated waterproof connection is not cross threaded, will clear this error. If you fully seat the plug first, lining up the pins, the ring should be able to thread on with one finger. If it

requires a firm grasp to twist on, you are likely cross threading. Restart and keep it straight as it threads on.

Torqeedo Ultralight Service Playlist:

<https://youtube.com/playlist?list=PLMmoKQnQqXQVwMSQTk0oqxfqISx7u-R8b>

My battery light never turns green when I charge it. What am I doing wrong?

You aren't doing anything wrong. The light will blink red as the battery takes a charge. It will turn solid red when it's fully charged.

How do I use reverse lock?

This video shows how: <https://youtu.be/udtleARXL24>

Will there ever be “spot lock” offered on a Torqeedo Ultralight?

That feature is not likely to be in the product development plans any time soon. If you want to be able to hold on a spot, the Ultralight rigged with foot control steering, combined with a waypoint on a depth finder chart is powerful enough to allow you to drop a 1 oz jig and soft plastic on a tight target for striped bass 52 feet deep with a 12 mph cross wind and a 3 mph outgoing tidal current. It will also allow you to place a jig on a brush pile 26 feet deep with an 8 mph cross wind to catch largemouth. These two videos below will show you how.

The computer between your two ears does an excellent job smoothly keeping you on point using the powerful Ultralight and depth finder waypoint as your tools. But if you want to do that by pushing a button and being jerked around without warning, you'll need a different product.

Jigging for Striped Bass: <https://youtu.be/JPEtFIDF3D4>

Targeting Deep Brush Piles for Largemouth: <https://youtu.be/Up-mzJEF6i0>

I have an Ultralight 403A/403AC and would like to own the more powerful 1103AC. Can't I just get the new motor and stick it in the mount I have and use my existing throttle and battery?

The Ultralight 1103 AC looks similar in many ways to the 403 A/AC. But it's a heavier and more powerful motor. For those reasons, the bracket, rocker, motor lift hardware, trim adjustment pin, steering triangle and other smaller parts needed to be made stronger or of different design. The 403 AC battery and throttle are exactly the same, but the mounting parts are different. Offering a “pylon only” upgrade would be negligent on our part. A 3 HP motor in the 403 A/AC mount and motor lifting components would not only not allow the heavier motor to be lifted, it would put the user in unsafe situations since parts designed for a 1 HP electric outboard could fail under the weight and power of a 3 HP electric outboard. We only sell the Ultralight 1103 AC

as a complete product. Our suggestion: sell your 403 A/AC and use the proceeds to purchase the more powerful 1103 AC. They carry their value well.

Powering Jon Boats and Multiple Angler Vessels

In addition to the Ultralight series, Torqeedo offers the **Travel 603 (2 HP)** and **Travel 1103 (3 HP)** traditional transom mount motors with integrated lithium batteries and the **Cruise series (5, 8 or 20 HP)** of motors which use external 24V or 48V battery banks. These motors are great for boats larger than kayaks including jon boats, pontoon boats and inflatables.

This list of videos will help you find an electric propulsion solution for a larger vessel:

Cruise 10.0 (20 HP) on **jon boat**, 17.4 mph top speed: <https://youtu.be/UUEoG-DcQt4>

Cruise 4.0 (8 HP) on 16 foot **inflatable**, 10.4 mph top speed: <https://youtu.be/XunIoTvG7vU>

Cruise 2.0 (5 HP) on **jon boat**, 6.4 mph top speed (fully rigged for tournament fishing, two anglers): https://youtu.be/i_OJea7j4WE

Travel 1103 (3 HP) on **jon boat**, 6.5 mph top speed (tested with empty hull pre-boat build, 1 occupant): https://youtu.be/lwqTEp_trT0

Three-part **jon boat** build with Travel 1103 motor and 3rd party stick steer rigging:

Part 1: <https://youtu.be/pWjNihQD6BQ>

Part 2: <https://youtu.be/bZeA5zPdIZk>

Part 3: <https://youtu.be/x-ZOZUa2gPA>

Travel motor as **kicker** for 3,000 lb walleye boat: <https://youtu.be/G0ALrFyo1sU>

Cruise 4.0 (8 HP) on **pontoon boat**: <https://youtu.be/JDTZn8GXxCo>

Visit [Torqeedo.com](https://www.torqeedo.com/us/en-us) for additional information: <https://www.torqeedo.com/us/en-us>