

51.2V 75AH OWNER'S MANUAL

NEWPORT[®]



LoPRO

51.2V 75AH

BLUETOOTH LOW PROFILE
LITHIUM BATTERY



Leading Innovator of **NEXT-GENERATION ELECTRIC** Fishing Systems

Newport is the leading innovator in next-generation electric small boat systems, providing anglers with powerful, reliable, and hassle-free solutions for over a decade.

From cutting-edge electric motors and high-performance lithium batteries to durable, purpose-built boats, Newport delivers a complete system designed for seamless integration and peak performance on the water.

Built for anglers who demand efficiency and reliability, Newport eliminates the noise, maintenance, and hassle of traditional setups so you can focus on what matters.

THE WAY FORWARD IS ELECTRIC.

Visit newportvessels.com ►

NEWPORT

📞 (866) 721-0002

✉ support@newportvessels.com

🌐 newportvessels.com

CONTENTS

Customer Support	5
1 Product Overview	5
2 General Information	5
3 User Guide	6
4 Battery-Pack Main Parameters	6
5 Notice Before Using	7
5.1 Long-Term Storage	7
6 Charging Methods	7-9
6.1 The Voltage when Charging & Discharging	7-8
6.2 Battery Charging Logic	8
6.2.1 LiFePO4 Battery Charging Mode	8
6.3 Method 1 Battery Charger	8
6.4 Method 2 Solar Panel(s) & Controller	8-9
6.4.1 Solar Panel	9
6.4.2 Controller Settings	9
6.5 Method 3 Alternator / Generator	9
7 Estimate the Battery Capacity	9
7.1 State of Charge (SOC)	9
8 Series / Parallel Connection	9
8.1 The Premise of Connection	9
9 Data Connection	10
10 What to do When the Battery Stops Working	10
11 App Setup	11



Please read and retain this manual before using this electric motor. This manual contains information that describes the procedure for safe operation and daily maintenance of your electric motor. Safe operation will prevent personal injury and damage to the product.

ⓘ **CAUTION:** Risk of Fire, Explosion or Burns, **DO NOT** Short Circuit, **DO NOT** Reverse connections from the charger to the battery, **DO NOT** Disassemble, **DO NOT** Throw into fire or incinerate, **DO NOT** Heat above 70°C/158°F

CUSTOMER SUPPORT

If you have questions that are not answered in this manual or troubleshooting is not successful, please contact Newport! Our US based customer service team is standing by to assist you.

8:30 AM - 7:00 PM ET

- 📞 (866) 721-0002
- ✉ support@newportvessels.com
- 🌐 newportvessels.com

1 PRODUCT OVERVIEW



2 GENERAL INFORMATION

Combination: 51.2V 75AH
Dimension: L 20.1" x W 20.1" x H 5.4"
Plastic Shell Color: Grey
Operating Voltage: 51.2V
Charging Voltage: 57.6V
Max Continuous Load Power: 3840W
Max Continuous Charge/Discharge Current: 80A

⚠ **CAUTION:** Risk of Fire, Explosion or Burns, **DO NOT** Short Circuit, **DO NOT** Reverse connections from the charger to the battery, **DO NOT** Disassemble, **DO NOT** Throw into fire or incinerate, **DO NOT** Heat above 70°C/158°F

⚠ **WARNING:** Battery Disposal - The electrodes of the waste battery should be wrapped with insulating paper to prevent fire and explosion.

⚠ **WARNING:** Prohibition of Disassembly - Never disassemble the cells. The disassembling may generate an internal short circuit in the cell, which may cause gassing, fire, explosion, or other problems. The electrolyte is harmful. Li-Fe battery should not have liquid from electrolyte flowing, but in case the electrolyte comes into contact with the skin, or eyes, physicians shall flush the electrolyte immediately with the fresh water and medical advice is to be sought. If any abnormal features of the cells are found such as damages in a plastic envelope of the cell, deformation of the cell packaging, smell of an electrolyte leakage and others, the cells shall not be used. The cells with a smell of electrolyte leakage shall be placed away from the heat to avoid fire or explosion.

⚠ **WARNING:** Prohibition of Dumping of Cells into Water - Do not soak the battery in liquid, like water, seawater and non-alcoholic drinks, fruit juice, coffee or other drinks.

⚠ **WARNING:** Prohibit use in Following Places - DO NOT use the battery in a place with a strong static electricity or strong magnetic field, otherwise, it may damage the battery safety protection device.

2 GENERAL INFORMATION

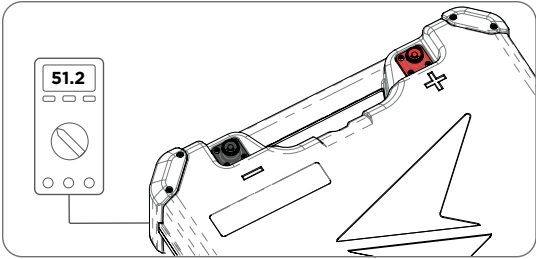
Combination: 51.2V 75AH
Dimension: L 20.1" x W 20.1" x H 5.4"
Plastic Shell Color: Grey
Operating Voltage: 51.2V
Charging Voltage: 57.6V
Max Continuous Load Power: 3840W
Max Continuous Charge/Discharge Current: 80A

3 USER GUIDE

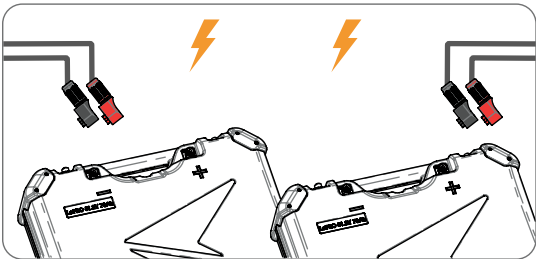


THE FIVE-YEAR WARRANTY

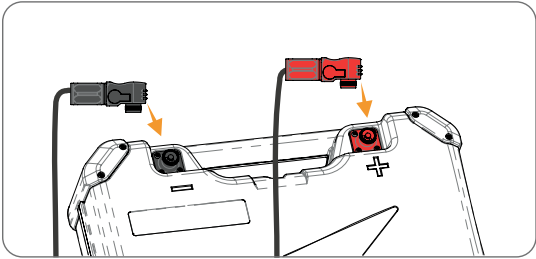
Contact us at support@newportvessels.com to activate



TEST the battery voltage with multimeter ≥ 51V to Next Step
< 51V Contact us at SUPPORT@NEWPORTVESSELS.COM to help solve the problem



FULLY CHARGE each battery separately
Refer to page 09 for battery charging methods



CONNECT TO USE After Removing Plastic Caps
DO NOT charge with plastic caps on

4 BATTERY-PACK MAIN PARAMETERS

1. The maximum continuous current that the battery can withstand.
2. The maximum continuous output power that the battery can support.

5 NOTICE BEFORE USING

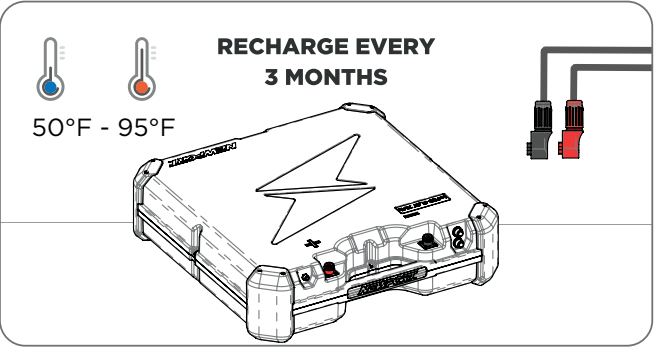
Cell: Pouch LiFePO4 Battery
Nominal Capacity: 75Ah
Usable Capacity: 75Ah
Nominal Voltage: 51.2V
Energy: 3840Wh
Charge Method: CC/CV
Charge Voltage: 58.4V
Recommend Charge Current: 35A
Battery Management System (BMS) Board: 80A
Max. Continuous Charge / Discharge Current ¹ : 80A
Max. Discharge Current 5 Seconds: 220A
Max. Continuous Load Power ² : 3840W
Cycle Life: ≥3000 times
Internal Impedance: ≤15mΩ
Battery Pack Case: Acrylonitrile Butadiene Styrene (ABS) Plastic
Protection Class: IP67
Dimension: L 20.1" x W 20.1" x H 5.4" L 510 x W 510 x H 137 CM
Temperature Range: Charge 32°F to 122°F 0°C to 50°C Discharge -4°F to 140°F -20°C to 60°C Storage 14°F to 122°F -10°C to 50°C

Charge the battery completely before initial use. This battery is not intended to be used to start any devices, please **DO NOT USE IT AS A STARTING BATTERY.**

5.1 LONG-TERM STORAGE

Temperature
The battery can be operated at a temperature of -4°F to 140°F | -20°C to 60°C, and temperature between 50°F to 95°F | 10°C to 35°C is ideal for long-term storage. Store in a fireproof container and away from children.

Capacity
For a longer-lasting product, it is best to store your battery at a 50% charge level and recharge every three months if it is not going to be used for a long time.

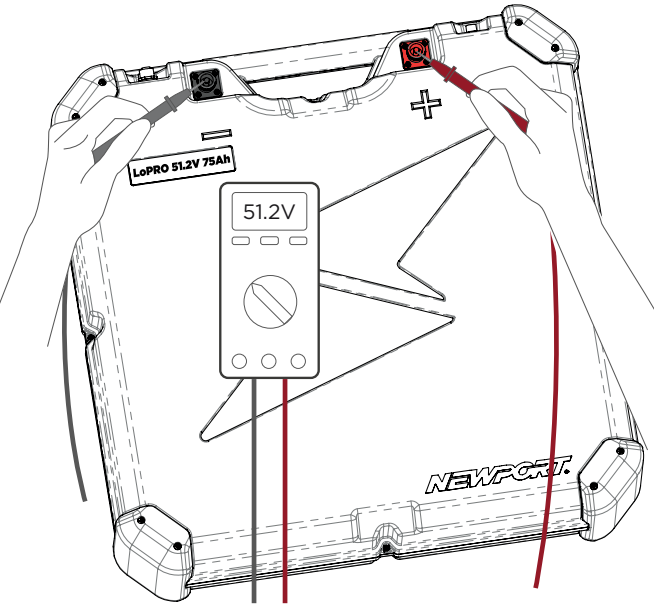


6 CHARGING METHODS

6.1 THE VOLTAGE WHEN CHARGING & DISCHARGING

Based on the characteristics of Lithium Iron Phosphate (LiFePO4) batteries, the voltage measured by all LiFePO4 batteries during charging/discharging is not the real voltage of the battery. Therefore, after charging/discharging and disconnecting the battery from power source, the voltage of the battery will gradually drop/increase to its real voltage.

If you need to test the voltage of the battery please disconnect all the connections to the battery and test its voltage after putting it aside for over 30 mins.



Tips When Testing The Battery Voltage with a Multimeter

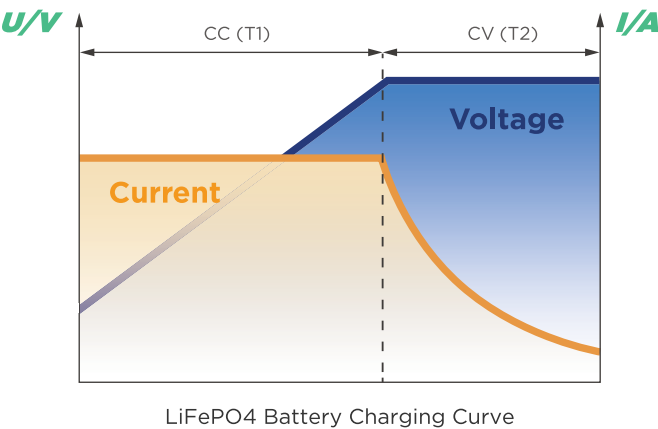
- Put the red probe (+) tightly on the positive terminal (not the post bolts), and the black probe (-) on the negative terminal.
- Do not touch the metal part of the probes with your hands during use.

6.2 BATTERY CHARGING LOGIC

The material characteristics of the LiFePO4 battery is determined that its charging curve is obviously different from that of a lead-acid battery. Compared with a lead-acid battery, the LiFePO4 battery has a simpler charging process and mode. Therefore, it is recommended to select LiFePO4 for your charging mode.

If LiFePO4 mode is not available, please refer to the recommended parameters on Page 12-13 for setting.

6.2.1 LiFePO4 Battery Charging Mode



CC (Constant Current) Phase (T1)

In the beginning, a discharged battery will be charged with a constant current and voltage will be climbing steadily until reaching the constant voltage set point which varies for different charging methods.

CV (Constant Voltage) Phase (T2)

The battery maintains a constant voltage during this phase while the current gradually decreases to 0.8A (0.02C) which is also known as tail current¹. At this point, the charging is cut off and the battery is fully charged.

1. Tail Current (A) = Battery Capacity* 0.02C. Eg,Ah*0.02C = 0.8A tail current

6.3 METHOD 1 | BATTERY CHARGER

Use 43.8V lithium iron phosphate (LiFePO4) battery charger to maximize the capacity.

- Recommended Charging Voltage: 58.4V
- Recommended Charging Current: 8A

8A (0.2C)	The battery will be fully charged in around 8.75 hrs to 100% capacity.
20A (0.5C)	The battery will be fully charged in around 3.5 hrs to around 97% capacity.

Tips

- Connect the charger to the battery before connecting it to the grid power in case of sparks.
- It's recommended to disconnect the charger from the battery after fully charging.

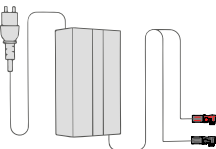
6.4 METHOD 2 | SOLAR PANEL(S) & CONTROLLER

6.4.1 Solar Panel

- Recommend Power > 400W

The battery can be fully charged in one day (with effective sunshine 9hrs/day) by 400W solar panels.

It may take more than one day to fully charge the battery by > 400W solar panels since the duration and intensity of light would be a great factor for their charging efficiency.



6.4.2 Controller Settings

- Recommended Charging Mode: 48V (58.4V) LI (LiFePO4)

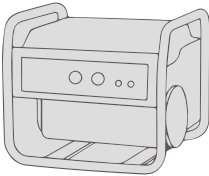
8A (0.2C)	The battery will be fully charged in around 5 hrs to 100% capacity.
20A (0.5C)	The battery will be fully charged in around 2 hrs to around 97% capacity.

Refer to the below parameters if you need to manually set up your controller. As different types of batteries have different charging modes (refer to Page 10-11), it is recommended to set only the following parameters for LiFePO4 batteries. The settings for other types of batteries do not apply to LiFePO4 batteries except for the following settings.

Charging	
Charge/Bulk/Boost Voltage	58.4V
Absorption Voltage	58.4V
Over Voltage Disconnect	59.2V
Over Voltage Reconnect	57.6V
Tail Current	0.8A (0.02C)
Discharging	
Under Voltage Warning	37.6V
Under Voltage Recover	37.6V
Low Voltage Disconnect	36V
Low Voltage Reconnect	37.6V

6.5 METHOD 3 | ALTERNATOR / GENERATOR

Newport Battery can be charged by an alternator or generator. If the alternator/generator supports DC output, a DC-to-DC charger needs to be added between the battery and the generator; if the alternator/generator supports AC output, please refer to the recommendations in “Battery Charger” above to add a suitable battery charger between the batter and the generator.



- Recommended Charging Voltage: 57.6V
- Recommended Charging Current: 8A

8A (0.2C)	The battery will be fully charged in around 8.75 hrs to 100% capacity.
20A (0.5C)	The battery will be fully charged in around 3.5 hrs to around 97% capacity.

7 ESTIMATE THE BATTERY CAPACITY

7.1 STATE OF CHARGE (SOC)

The battery capacity could be roughly estimated by its rest voltage (not charging/discharging voltage). As there are subtle difference in the voltages of each battery, the below parameters are for reference only.

Rest Voltage: The voltage needs to be tested at rest (with zero current) after 30 mins of disconnecting from the charger and loads.

Capacity	Charge Voltage
100%	56.80V
99%	53.55V
90%	53.28V
80%	53.26V
60%	53.15V
40%	51.50V
20%	52.26V
10%	51.52V
1%	47.20V (recommend low voltage disconnect voltage)
0%	44.80V

8 SERIES / PARALLEL CONNECTION

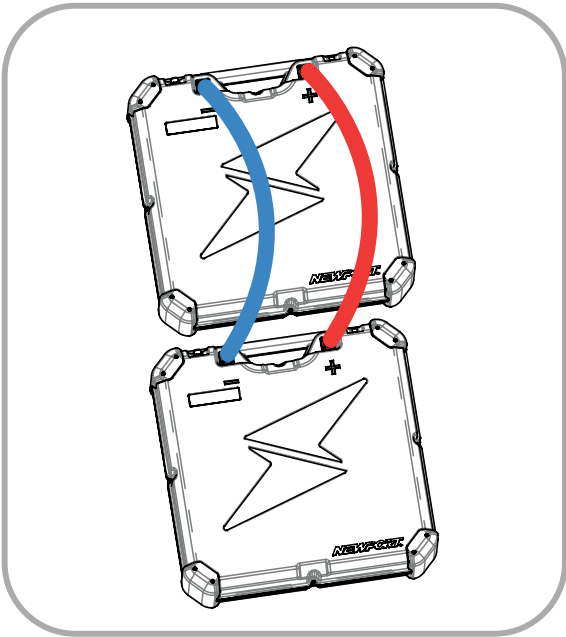
8.1 THE PREMISE OF CONNECTION

To connect in series or/and parallel, batteries should meet the below conditions:

- Identical batteries with the same battery capacity (Ah) and BMS (A);
- From the same brand (as lithium batteries from different brands have a unique BMS);
- Purchased in near time (within one month).

Limitation for Series/Parallel Connection

Supports connecting up to 4 identical batteries in parallel as a 280Ah battery. Does not support series connection.



Parallel Wiring

9 DATA CONNECTION

The 51.2V LoPRO battery is equipped with data connection ports to provide more accurate state of charge readings when in use and when wired in Parallel.

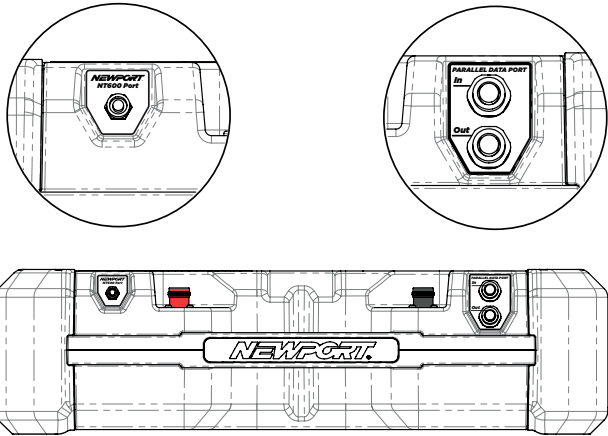
NT600 Connectivity:

Connect the data cable coming from the motor to the NT600 data port. If you need a longer length cable, data cable extensions are available for purchase from newportvessels.com

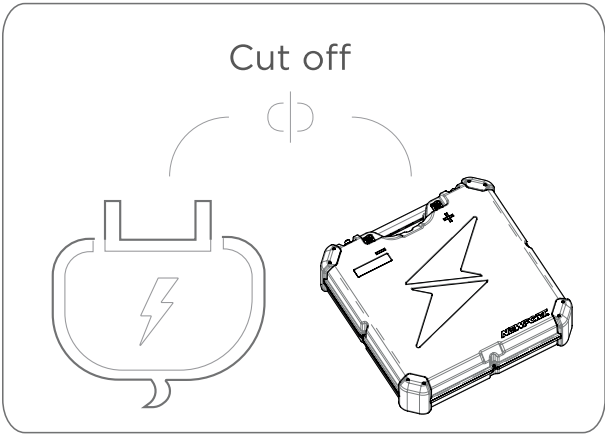
Parallel Connectivity:

When connecting two batteries in parallel, you can link them with a data cable to obtain combined battery capacity readings. The data cable for this function is available on Newport.com.

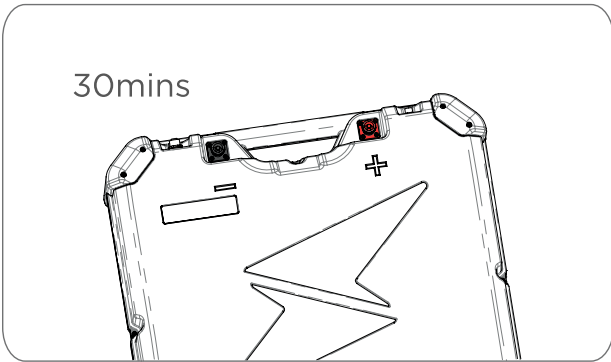
- Plug one data cable on Battery #1 into the DATA IN
- Plug the other end of the data cable into the DATA OUT on Battery #2



10 WHAT TO DO WHEN THE BATTERY STOPS WORKING



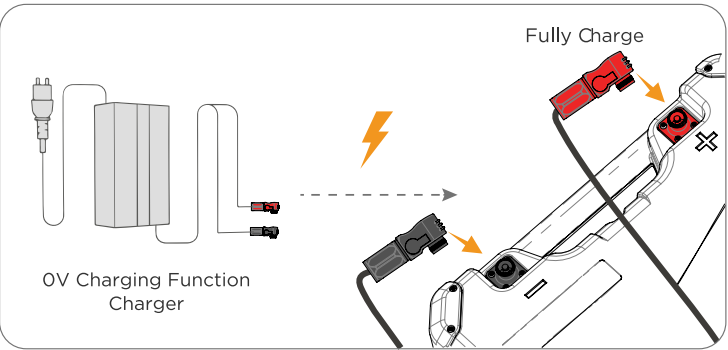
UNPLUG all the connections from the battery



LEAVE THE BATTERY ASIDE FOR 30MINS Then the battery will automatically return to normal voltage (>47V) and can be used after being fully charged.If the BMS has cut off the battery for protection, follow the below steps to activate it.

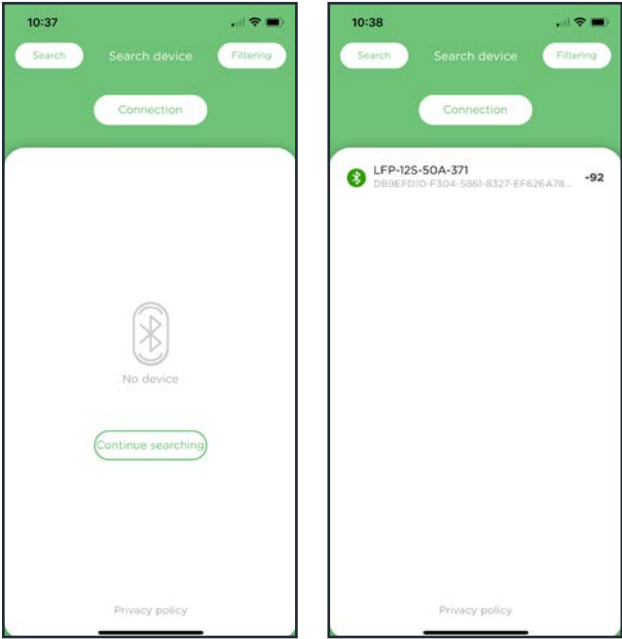
If the battery is unable to recover after the above steps, please try activating by the below methods: After activated (voltage > 47V) and fully charged by the normal charging method, it can be used normally.

Use a charger with a 0V charging function to fully charge the battery¹.



1. The charger can charge the battery starting from 0V.

11 APP SETUP



- 1. Launch the Newport Bluetooth App:** Download the Newport Bluetooth App from your app store. Open the app to begin connecting your battery.
- 2. Easy Battery Detection:** Upon opening the Newport Battery App, tap “Continue Searching.”If you don’t see any batteries appearing, ensure you’re close to the battery.
- 3. Seamless Battery Connection:** Your battery will be displayed on the screen. Match the last three digits of the displayed battery with the three serial numbers on top of your battery. If the numbers match, simply tap on the battery to establish the connection.

Voltage (V): Get a clear reading of your battery’s voltage, closely aligned with its intended voltage.

Rated Capacity: Discover your battery’s Amp Hours capacity, ensuring it matches your purchased battery.

SOC (State of Charge): Instantly see the current charge level of your battery as a percentage, allowing you to monitor battery life in real time.

Current (A): Understand the exact current your battery is delivering to your motor.

Cycle Count: Keep track of the number of times your battery has been charged, providing insights into its overall lifespan.



**THE WAY FORWARD IS
WITH ACCESSORIES**

NEWPORT®

Newport designs innovative accessories crafted to elevate your time on the water, propelling you further.



**Bow Mount
Plate Kit**

**NS130
Inflatable Skiff**

NS130 Seat

**NS130 Seat Frame
& Mounting Rail Kit**

**NT600 Electric
Outboard Motor**

NEWPORT®



**SHARE YOUR
ADVENTURES**

@newportvessels

THE WAY FORWARD IS *ELECTRIC*



REV FX18X259