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# ACEL Power: Shaping the Future of the Marine Industry

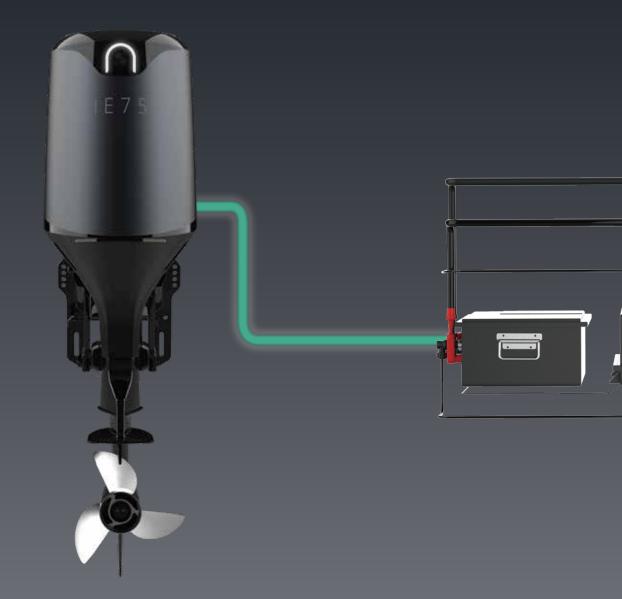
ACEL Power, headquartered in Vancouver, Canada, is a clean tech trailblazer that designs and manufactures electric outboard motors for the marine industry. Noted for its mass-produced 50Hp and 75Hp electric motors, ACEL is committed to shaping a sustainable future through the creation of a smart electric ecosystem that includes hardware, software, and charging infrastructure capabilities.

ACEL envisions a future deeply intertwined with software solutions, set to elevate boating experiences and redefine industry standards. Leveraging patented technology and advanced integration, ACEL Power is leading the industry with innovation, driving towards a cleaner, more efficient, and intelligently connected future.

To Revolutionize the Marine Industry through **Design** and **Technology**, Taking Experiences to Unprecedented Levels of Intelligence, Safety & Sustainability.

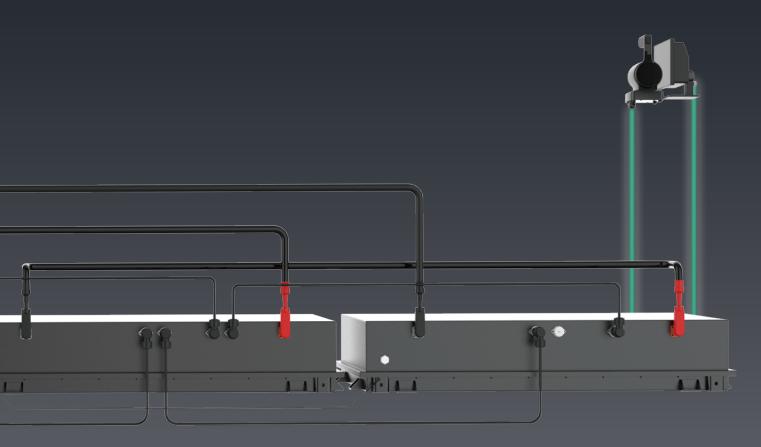
ACEL's design ethos revolves around user-centric ingenuity, shaping products with a focus on modernity and minimalism. Ushering in a new era of innovation, we are committed to reshaping conventional boating standards by delivering intuitive interfaces and seamless interactions through cutting-edge technology.

# Introducing ACEL Intelligent Electric (IE) Series



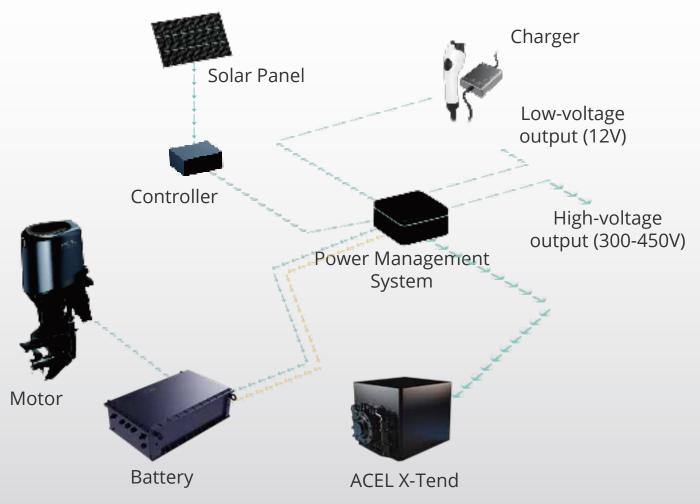
ACEL's Intelligent Electric (IE) Series presents a full spectrum of electric outboard propulsion systems, ranging from 50Hp to 450Hp, with the 50Hp and 75Hp models already on the market. Our customizable electric propulsion system can be tailored for pleasure craft, commercial, and defense applications. Ideal for pontoons, fishing boats, skiffs, and RIBs, our models are built for higher torque, instant acceleration, and efficiency. 150Hp and 250Hp coming soon to market.

# Silent. Efficient. A Comprehensive Electric Propulsion System



Our electric propulsion system comprises the outboard motor, battery pack, intelligent power supply, digital throttle, smart charger, smart key, and an onboard computer with an intuitive touch screen. The system incorporates our proprietary software, which integrates with the hardware to provide a unified solution. These intuitive features add a new dimension to your boat, transporting you into a truly digitized experience.

# **VERSATILE HYBRID SOLUTION**



### **Hybrid Solution: Built for Endurance**

Our Hybrid Solution seamlessly blends electric and conventional propulsion, delivering optimal efficiency, flexibility, and sustainability. ACEL's proprietary system intelligently switches between power sources based on operational needs, ensuring maximum performance across various vessel types. Designed for flexibility, it integrates effortlessly with various vessel types, enhancing both range and sustainability.

# Acel X-Tend

Now, with our ACEL X-Tend range extender, water taxis, sightseeing boats, and other passenger vessels can seamlessly transition to sustainable solutions. This gas range extender integrated with ACEL's electric propulsion system dramatically extends range, making the overall system viable for longer journeys and demanding operations. A compact generator with a power output of 110Kw, this system can now allow operators to achieve unparalleled efficiency, reduced fuel consumption, and significant cost savings, all while minimizing their environmental footprint.

# HIGH HORSEPOWER HIGH TORQUE ELECTRIC SERIES



# SMART BY DESIGN. NEXT-LEVEL ELECTRIC

ACEL promises to deliver an electric future, combining unmatched speed with precise control. Leveraging cutting-edge technology and top-tier suppliers, our electric propulsion system propels electric boating into the next generation.

Our innovative system allows for easy stacking of battery packs, creating a customizable solution that automatically adapts to the powertrain. Plus, our plug-and-play technology easily connects to any secondary power source, enabling a hybrid setup on the go.

# Understanding ACEL's Technological Excellence

The ACEL motor is meticulously engineered to deliver maximum torque at any RPM, ensuring instantaneous acceleration. An additional 30% torque is readily available when needed, providing performance beyond the initial output. The high-density motor, featuring flat-wired windings, enhances efficiency by optimizing heat dissipation and improving slot packing for a significant performance boost.

Concealed within the cowl, the Motor Logic Controller manages all electrical functions. It uses a magnetic field to provide feedback on the motor's tilt position and turning angle while also recording valuable data on the boat's mileage and motor usage. This unique controller paves the way for potential autonomous driving features in the future.

# **Setting New Standards**

Our patented cowl features sleek lines, haptic-triggered interactive lights, and a unique metal color tint, enhancing its distinctive look. It powers cameras, lights, and other electronics wirelessly, and includes a reverse camera with night vision for easier nighttime docking.

The innovative shifterless bi-directional gearbox, linked to the shaft, eliminates the need for a reverse gear, improving driver response and gearbox longevity. Software-enabled, it allows boaters to convert any motor into a counter-rotating motor with a single touch.

Our system seamlessly integrates with popular hydraulic or wired steering systems. The motor shaft comes in various lengths for customization, and the robust stainless steel propeller withstands high torque forces, ensuring exceptional performance and durability.



FASTER QUIETER NO-BRAINER

# **IE 50** 50Hp Electric Outboard Motor

Choosing electric doesn't mean compromising on performance. Experience the exhilaration with 2x peak power. The ACEL IE 50 features a 32 kWh battery pack, offers 95.8% powertrain efficiency, and is 20% lighter than traditional motors. ACEL motors require minimal maintenance and is easy to install and operate.

# **IE 75** 75Hp Electric Outboard Motor

### Engineered for Power and Efficiency

The groundbreaking ACEL 75Hp features a 43kWh battery pack and achieves 95.8% powertrain efficiency, similar to the 50Hp model. Designed with a minimalist, user-centric approach, it offers a perfect blend of power and speed while incorporating all the unique features of the 50Hp motor. Ideal for pontoons, skiffs, RIBs, and fishing boats, the battery packs can be customized to specific needs. Boaters will experience the thrill of 2x peak power with 30% more torque for nearly instant acceleration and faster planing speeds.



Sleek, Modern Design Haptic Feedback-Triggered Lights Camera Connected to the Onboard Computer for Live Experience Parking Assistance with Rear-View Camera





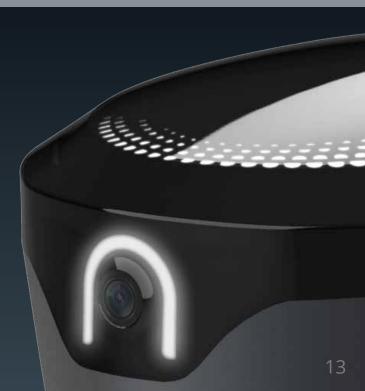
Customizable Battery Pack Software Integration Operate Tilt through the Interactive Onboard Computer Over-the-Air Updates and Notifications



# **IE 150** 150Hp Electric Outboard Motor

### The Robust, Silent Performer

ACEL's IE 150 electric motor will transform the boating landscape. Designed for diverse marine environments, it performs effortlessly in both fresh water and offshore settings. With a rated power of 150Hp (peak 200Hp) and an input voltage of 800Vdc, this motor promises to elevate electric boating. Stay tuned for groundbreaking features.



# **IE 250** 250Hp Electric Outboard Motor

### Turbocharged Might, Undisputed

Our most powerful motor ever promises unprecedented power from start to top speed. The IE 250, rated at 250Hp with a peak of up to 350Hp, combines compact design with an 800Vdc input and 4000 RPM rated speed for remarkable efficiency. With IP67 water resistance and efficient internal cooling, it ensures peak performance in all marine conditions. Prepare for an unparalleled boating experience.





Hybrid Integration

Software Integration

IOT & Autonomous

800V Extended Battery Packs

Programmable Throttle: 1:1, 1:Many, Many:1



# Battery: Two Advanced Options for Every Need

ACEL's battery is a cornerstone of our innovative propulsion system, featuring a patented design with a flexible voltage range of 400V to 800V. The stackable and customizable design ensures a tailored solution, while color-coded wiring and a wrong plug prevention control make installation easy and hassle-free. With approximately 3,000 charge cycles, ACEL battery options integrate seamlessly with a hybrid controller, enabling the use of alternate power sources for an on-the-go hybrid system. Designed with safety in mind, ACEL batteries are rated IP67 and include a proprietary heating and cooling system to manage temperature extremes. They also feature self-venting capabilities, optional liquid cooling for warm climates, and the ability to identify and isolate defective packs without affecting the drivetrain, ensuring enhanced safety and reliability.

### Semi-Solid State Battery: Lighter, Smaller, More Efficient



The next evolution in marine energy storage, our Semi-Solid State Battery is 30% lighter and smaller than traditional LFP batteries while delivering higher energy density, improved safety, and a longer lifespan. Designed for applications where compact battery sizes and weight considerations are critical, this advanced technology ensures premium performance without compromising on power.

### LFP Battery: Reliable, Durable, and Cost-Effective

A proven, ultra-reliable choice for marine applications, offering exceptional durability, thermal stability, and consistent power output. Perfect for boaters prioritizing safety, longevity, and cost efficiency. Available in packs, each with a minimum of 2 modules for 50Hp (32 kWh) or 3 modules for 75Hp (43 kWh), the battery offers around 2 hours of runtime per charge.



# Smart Charger

The ACEL Smart Portable Charger is a versatile solution for all your charging needs. Available in 120V/240V with options for 15A, 30A, and 50A, the standard pack includes a 15A charger for universal compatibility. The touch screen displays charging status, range, and consumption information, and with DC fast charging, a full charge can be completed in about one hour.

Weatherproof and safety-enhanced, the charger features automatic shutdown upon charging completion to optimize energy efficiency. The charging gun remains powerless until confirmation is received, ensuring secure power transfer and preventing contact with the boat until it's safe.





# **Intelligent Power Supply**

The Intelligent Power Supply (IPS) is the system's core, connecting the battery and motor. It delivers low voltage to all 12V electronics on the boat, eliminating the need for any additional 12V battery. Users can connect devices like speakers, lights, refrigerators, and microwaves. The IPS splits high and low voltage to ensure continuous power in emergencies and can also serve as a backup power source if the battery is damaged.

# **Digital Single & Twin Throttle**

Experience the ACEL Digital Throttle, a feature-rich system with an intuitive design. It includes NFC tap activation, LED indicators, sound alerts, and vibration feedback. The light display shows directional modes and operational states with multi-colored lighting, while tilt adjustments offer vibration feedback for power changes.

In emergencies, an override button bypasses software controls, and an emergency lanyard prevents overboard incidents. A warning buzzer alerts you to potential hazards. ACEL's advanced throttle system prioritizes safety with cutting-edge features.





# Smart Key

The ACEL Smart Key offers elegant, secure access to your ACEL-powered boat with NFC capabilities. It includes lost key protection and 2-factor authentication for enhanced security. Activation is as simple as a tap, and its float-on-water design combines functionality with a sleek, user-friendly look. Trust the ACEL Smart Key for seamless and effortless boating control.

# **Onboard Computer**



ACEL's Onboard Computer enhances the boating experience with its advanced digital features. The 10-inch display, available in various sizes, offers excellent visibility even in direct sunlight, with mounting options for flush, tilt, and swivel. Serving as the central hub, it provides comprehensive monitoring of charge levels, RPM, and system usage, while also supporting speed tracking, navigation, and anti-theft measures. Over-the-air updates, secure user profiles, and connectivity options like Wi-Fi, LTE, and Bluetooth ensure a connected and customizable experience. The system can also function as a Wi-Fi hotspot and lays the groundwork for future autonomous and IoT integration.

# More than Electric. Revolutionizing with Advanced Software Integration

Imagine a boating adventure where your vessel is a smart companion on the water. As you approach, the Anti-Theft Pro system ensures security, while Cellular Data keeps you connected in real-time. The IoT transforms your boat into an intelligent hub, allowing you to control and monitor it via a dedicated app. The Boat Tilt Detection feature provides real-time adjustments for a smoother ride, and Advanced Navigation offers maps with nearby restaurants and charging stations. Stay informed with the Charge Level and Consumption Calculator.

Enjoy entertainment with the Infotainment system and integrated audio player. The onboard App Store lets you customize your boat's features, and Assisted Docking ensures stress-free parking. With ACEL's autonomous features, your experience is smart, connected, and personalized.

# Innovating Tomorrow's Solutions

ACEL envisions a future rooted in software. At ACEL we believe we are not just electrifying the marine landscape, we are digitalizing it for a data driven, connected future. Anti-Theft Cellular Data (1GB) IOT App Monitoring & Control Boat Tilt Detection Navigation ++ Fuel Level Fuel Consumption Calculator Infotainment Audio Player APP Store

## Maintenance

ACEL propulsion system requires minimum regular maintenance . While the specific requirements may vary based on usage and environmental conditions, typical annual maintenance tasks include:

- Gear Oil Change: It is recommended to change the gear oil annually.
- Impeller (Water Pump) Replacement: The typical lifespan of the impeller is approximately 2-3 years or 200 hours. This is essential for maintaining proper cooling and water circulation within the system.
- Zinc Anodes Inspection and Replacement: In saltwater environments, zinc anodes should be inspected regularly, and they may need to be replaced annually. This helps prevent corrosion and ensures the system's durability.

### Customization

Interested in having a customized dashboard on the Onboard Computer or other customizations? Ask us how and we will be happy to help .

# Design, Engineering & Software Service

ACEL is committed to the highest quality service. When you onboard with us, our dedicated Design, Engineering, and Software teams collaborate with you to understand your unique requirements. We go beyond by assisting in the strategic placement of the propulsion system and ensuring it aligns with the necessary specifications to meet industry certifications. Partnering with ACEL is not just a transaction but a tailored, supportive experience from the very beginning.

# Support

We provide service support in multiple ways. With advanced diagnostics, we can identify and resolve most issues remotely. We offer in-person installation and technical support. We also offer service training to your technicians empowering you with the knowledge and skills needed to ensure the optimal performance and longevity of your ACEL propulsion system.

# Specifications

•	IE	50	IE 75
Peak Power	75	б НР	115 HP
Motor Weight	12	7 kg / 280 lb	140 kg / 309 lb
Tilt		ower	Power
Shaft Length*	50	.8 cm / 20 inch	50.8 cm / 20 inch
Battery Pack	21	Vodules	3 Modules
Battery Type	LF	P	LFP
Battery Capacity	، 32	kwh	43 kwh
Battery Weight	21	4.6 kg / 473 lb	309.4 kg / 682 lb
Battery Size	_10	3.0 cm × 59.0 cm × 19.0 cm	70.0 cm × 45.0 cm × 26.0 cm
	40	0.6" x 23.2" x 7.5"	27.6" × 17.7" × 10.2"
Battery Manage	ment System 57	'.0 cm × 35.6 cm × 18.0 cm	69.2 cm × 38.1 cm × 24.6 cm
, ,		.4" × 14.0" × 7.1"	27.2" × 15.0" × 9.7"
	IE	150	IE 250
Peak Power	2	200 HP	350 HP
Motor Weight	1	73 kg / 381lb	186 kg / 410 lb
Rated Speed		000 RPM	4000 RPM
Input Voltage	8	300 Vdc	800 Vdc
Cooling Mode		nternal Cooling	Internal Cooling
Battery Pack	4	Modules	6 Modules
Battery Type	S	emi-Solid State	Semi-Solid State
Battery Capacity	8	36 kwh	172 kwh
Semi-Solid State	e Battery	ps gr	Parameters
Rated Voltage			360V
Rated Capacity			76Ah
Voltage Range			264V~417.6V
Total Energy			27.36kWh
Battery Pack Dimensions (excluding connec		ectors)	106 cm × 65 cm × 16 cm
			41.7" × 25.6" × 6.3"
Onboard Computer	•Display:	pixels, WVGA Color/IPS	7 cm) Touch Screen, 1920x1080
	•Waterproof: •Mounting Options: •Connections: •Power Input:	IP67 Flush, Tilt/Swivel All-in-one cable (CAN, 3.5mm 12.3 Vdc	Aux) / Wi-Fi
	•Typical Current Draw	and the second se	
	•Max Current Draw:	1.5 A	

\*Available in 63.5 cm / 25 " and 76.2 cm / 30"

# **Specifications**

Smart Charger	•Size option available: 15A/30A/50A Max 6.6kw; DC fast charge (1 hour) •IP67 Portable Charger System		
DC Power Supply	•Dimension: 127.7 cm x 25.14 cm / 50.3" x 9.2" •Specification: 12V, 1000w Power supply		
Digital Throttle	<ul> <li>Digital Throttle (single / twin)</li> <li>2 Sensor options</li> <li>Able to control the entire system</li> <li>LED Lighting for visibility</li> </ul>	<ul> <li>Durable and waterproof</li> <li>Emergency (STOP)</li> <li>Emergency Power Control to override the system</li> </ul>	
Smart Key	<ul> <li>•NFC enabled</li> <li>•Designed for float</li> <li>•Onboarding Computer integration</li> <li>•Lost key protection</li> <li>•IP67 Rating</li> </ul>	Coco -	

# **Acel X-Tend Range Extender**

	400 V	800 V
Power Output	230 V - 490 V	510 V – 910 V
Rated Power	70 k	W
Peak Power	110	kW
Oil-to-Electricity Conversion Rate	3.6 kV	Vh/L
Motor Type	Permanent Magnet Synchronous	
Weight	200	kg

### Warranty

5 years	Battery (500 hours), Battery Control Module
3 years	Motor, All component in the Gear Box, Gears, Shaft, Inverter, Intelligent Power Supply, Motor Logic Controller, Hybrid Controller, Propeller, Relay, Pump, Hydraulic Tilt
1 years	Electronic Package: Onboard Computer, Screen, Digital Throttle, Smart Char- ger, Smart Key

No warranty for consumable parts (\*Impeller, zinc and gear oil)

# ACEL's Advantage

Choosing an ACEL propulsion system not only guarantees a serene and emissions-free boating experience but also reduces any concerns about range anxiety. Our safety-enabled features provide added peace of mind.

Hardware and software Integration	Our entire system seamlessly integrates hardware with software, providing a user-friendly solution for a hassle-free experience.
Pioneer In Higher Horsepower for Electric	ACEL stands as a pioneer in delivering higher horsepower electric propulsion, redefining performance standards in the marine industry.
One Vendor. A Complete Plug and Play System	ACEL streamlines your needs by providing a one-stop solution – a complete electric propulsion system, all from a single vendor.
True Horsepower	Our electric outboard motors offer 2x peak power than their nominal rating, ensuring better acceleration and performance when you need it.
User-Centric Design	User-friendly interface with real-time information on speed, range, and battery status at your fingertips.
Hybrid Integration	The ACEL patented technology allows the system to seamlessly link to any secondary power source, establishing a hybrid system on the go.
Predictive and remote maintenance	ACEL Power goes a step further with predictive and remote maintenance features, ensuring your system's reliability and minimizing downtime.

# **ACEL: Debunking Electric Myths**

### Is Range Anxiety a Concern with Electric Vehicles?

ACEL motors are designed to meet the typical needs of pleasure-craft boaters. The 50Hp (32 kWh) battery pack offers a range of about 30 miles, while the 75Hp (43 kWh) pack provides approximately 124 miles at 6 mph. ACEL's Onboard Computer continuously updates battery charge and time remaining, adjusting based on speed and water conditions. With ACEL motors, range anxiety is minimized.

### Are Electric Motors Expensive?

While the upfront cost of ACEL's electric propulsion system is higher, operating costs are just 1/10th of gas engines. Over time, savings on fuel and maintenance make electric motors more cost-effective, offering both an outboard motor and a complete digital system.

### Where Can I Charge the ACEL Motors?

ACEL motors come with a standard 110V/15A charger. Simply plug into a 120V outlet at a marina or dock to start charging. A full charge provides around 2 hours of runtime.

### Are Electric Motors Hard to Maintain?

ACEL electric motors are low-maintenance, with fewer moving parts compared to traditional engines. Basic upkeep includes cleaning, lubrication, and inspection. Equipped with zinc anodes, they resist corrosion in saltwater, extending motor life.

### What Is the Average Engine Life of ACEL Electric Motors?

ACEL electric motors are designed for long life, with batteries lasting up to 3,000 charge cycles. If charged 30 times per year, they can last up to 100 years.

# Built for safety, reliability and longevity

Our commitment to quality and safety is reflected in our certifications, including compliance with worldwide standards.

# Certifications





CE



FC

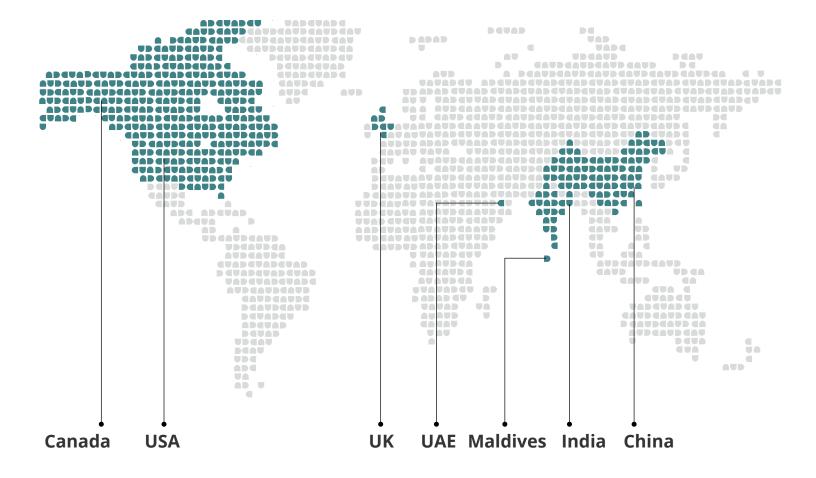
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# CHOOSE ACEL THE TIME FOR ELECTRIC IS NOW

At ACEL Power, we're committed to continuous innovation and enhancing our electric propulsion systems to meet the evolving needs of our customers and the marine industry. Some of the exciting innovations we're actively working on include: lighter batteries, V2L (Vehicle-to-Load) technology, programmable throttle, flush mount screens, low balancing solutions; and software control improvements including Autonomous driving.



# **ACEL's Footprint**



We are growing rapidly. Whether you're a seasoned boat builder or a dealer, we're eager to forge long term relationships. Let's build a sustainable future, one partnership at a time. Call us today!

### **Contact us**

info@acelpower.com (+1) 888-627-0771

# Have more questions. Reach out to our sales team info@acelpower.com

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