Electrical drive system for FRP boats



SEAGÖ

Redefining Marine Mobility

Electric Out board motors for FRP boats up to 90 HP

- Introduction
- Technical data

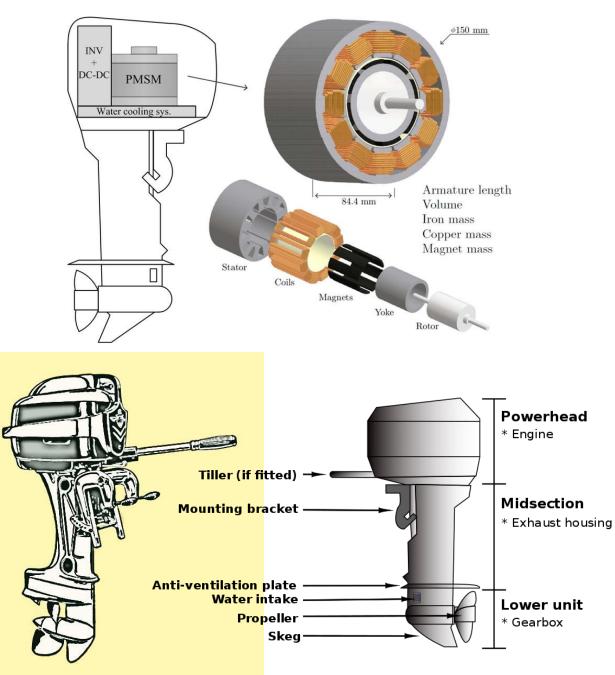
Technical offer



Specification	3-90 HP OB Electric engines
System voltage	48/72/96 VDC and tailor made voltages
Battery power	50 to 400 AH
Motor capacity	3HP to 90 HP
Power transmission	Direct vertical gear transmission
Expected milage	Based on Battery capacity
Indicators	Motor performance and battery status and mobile phone connectivity
Reversing	Possible
Battery system	LiFePo4 with BMS and mobile connect Application
Throttle	Hand throttle and front control options
Battery charging time	3-4 Hours

Design view



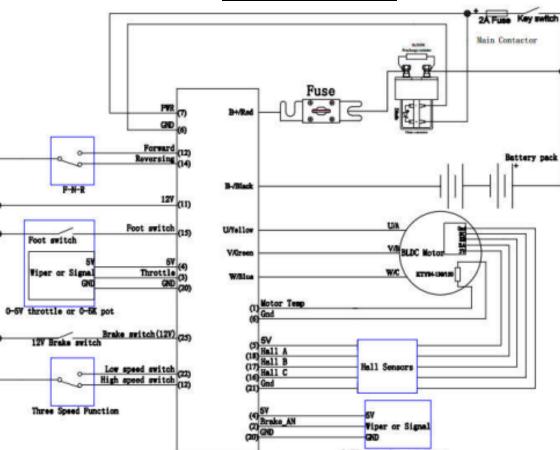


10 HP outboard

Outboard transmission system has

following subcomponents

- Battery Controller Motor –
 Power transfer system
- A dedicated battery management system will monitor the battery properties at all the times
- An E-stop electrical system can hold the motion at any time
- Power transmission is made on stainless, so corrosive free operation
- Battery is the new form of "fuel" for electric propulsion outboards, you never need to go to gasoline station to refuel your outboard anymore. You only need to recharge your batteries at home or docking place.
- Water cooling construction
- Regenerative braking
- Reversing is possible
- Lighting for fishing can be fed from battery



0-5V throttle or 0-5K pot

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10 HP outboard

Operating hours may vary based on throttle condition and pay load conditions



Specification	10 HP Electric engine	
System voltage	72 VDC	
Motor capacity	7300W / 4300 RPM	
Power transmission	Vertical gear transmission	
Expected torque and Max torque	17.8 NM/ 26 NM	
Speed range	5-7 Nautical miles	
Mileage with 100AH	20-25 KM per charge	
Indicators	Motor performance and battery status	
Reversing	Possible	
Braking	Hand braking	
Throttle	Hand throttle & front control optional	
Battery Life	2000 – 5000 Cycles options	
Battery charging time	3 to 4 Hours	
Battery power 100% throttle with 100AH	60 Mins	
Battery power 75% throttle	85 Mins	
Battery power 50% throttle	125 Mins	
Battery power 25% throttle	190 Mins	

20 HP outboard

Operating hours may vary based on throttle condition and pay load conditions



Specification	20 HP Electric engine	
System voltage	96 VDC	
Motor capacity	1500W / 5500 RPM	
Power transmission	Vertical gear transmission	
Expected torque and Max torque	26.3 NM/ 32.6 NM	
Speed range	5-7 Nautical miles	
Mileage with 200AH	20-25 KM per charge	
Indicators	Motor performance and battery status	
Reversing	Possible	
Braking	Hand braking	
Throttle	Hand throttle & front control optional	
Battery Life	2000 – 5000 Cycles options	
Battery charging time	3 to 4 Hours	
Batterypower100%throttle with 200AH	75 Mins	
Battery power 75% throttle	115 Mins	
Battery power 50% throttle	165 Mins	
Battery power 25% throttle	220 Mins	

Battery recommendation

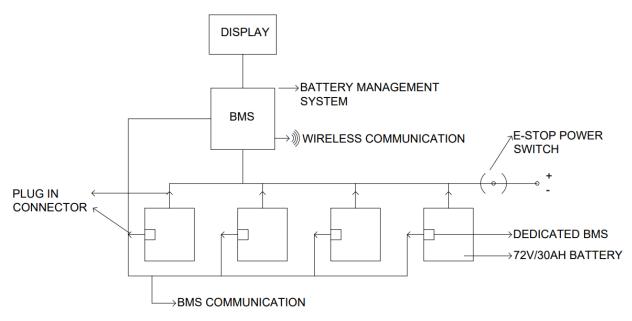


Horse power	Battery Voltage	Minimum AH required
5.0 HP	48 VDC	50 AH
7.5 HP	48 VDC	80 AH
10 HP	72 VDC	100 AH
15 HP	96 VDC	180 AH
20 HP	96 VDC	220 AH
30 HP	Tailor made 115 – 220 VDC	150 AH
40 HP	Tailor made 115 – 220 VDC	200 AH

Battery Configuration



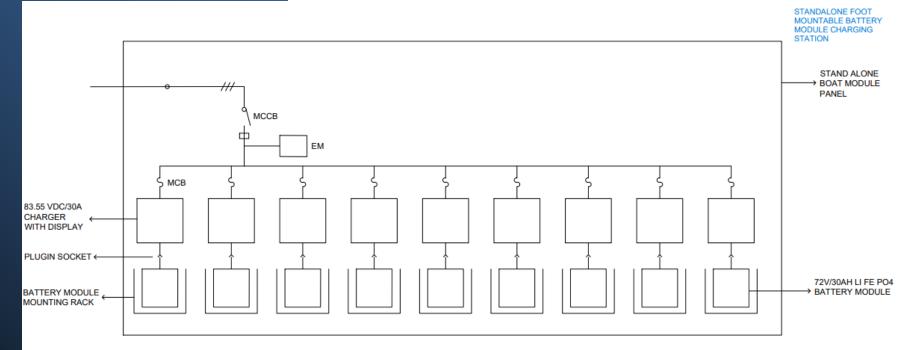
Battery configuration



- Every module 30AH modules connected in parallel
- Click fit connectors for easy termination
- Dedicated BMS for every Battery module
- Overall BMS for load sharing and protection
- IP 65 enclosure for outdoor usage
- Single point E-stop for power isolation
- Wireless communication with mobile App for remote monitoring
- Module weight is 15 kg and easy to handle for charging

Inland & Floating battery charging station

Battery Charger Configuration





- Inland & floating battery charging station can have multiples of 30AH charging modules
- Plug and charge No termination required
- Protection against over charging, spikes and voltage variations
- Remote monitoring