

ARIES i50

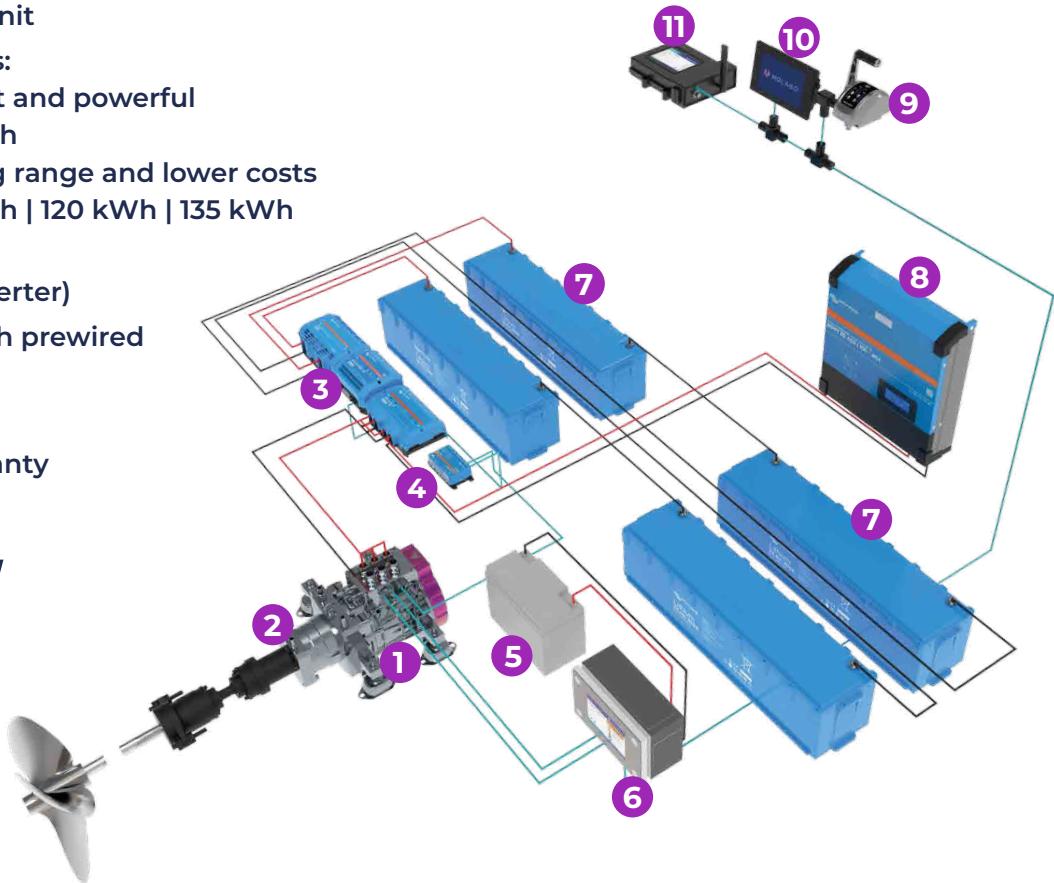
ELECTRIC INBOARD SYSTEM

For motorboats up to 12 m (40 ft) and displacers up to 15 m (50 ft) or 12 t also available for larger boats as a twin installation

THE WORLD'S MOST
POWERFUL
48 V
SAFE-TO-TOUCH
ELECTRIC DRIVE

- No high-voltage safety measures necessary
- Motor + controller in one unit
- Modular LFP battery banks:
 - MASTERVOLT® – compact and powerful
36 kWh | 48 kWh | 60 kWh
 - VICTRON ENERGY® – long range and lower costs
45 kWh | 60 kWh | 90 kWh | 120 kWh | 135 kWh
- High system efficiency of 94 % (97 % motor, 97 % inverter)
- Plug & play system through prewired MOLAConnect box
- Comprehensive service
- Extended worldwide warranty

50
kW



ARIES i50 - system overview with VICTRON ENERGY® components

- 1 **ARIES i30 Electric Inboard Motor** –
30 kW rated power,
48 V safe-to-touch voltage
- 2 **Planetary Gearbox (4:1)** –
Compact and efficient torque conversion
- 3 **VICTRON ENERGY® Battery Management & DC Distribution** –
Reliable control and safety for energy flow
- 4 **VICTRON ENERGY® Battery Controller** –
Advanced monitoring of system health and performance
- 5 **12 V Battery** (not included) –
System start-up
- 6 **MOLAConnect S** –
Central connection hub for streamlined installation
- 7 **VICTRON ENERGY® LFP Lithium Battery Bank** –
Modular configuration for flexible storage and space optimization
- 8 **VICTRON ENERGY® Charger** –
Plug & play charging solution for efficient energy replenishment
- 9 **Throttle Control** –
Available in side-mount or top-mount options
- 10 **Display Unit** –
Real-time performance data and system status
- 11 **MOLALink (IoT Gateway)** –
Cloud-connected data interface for remote diagnostics and updates

Specifications ARIES i50

Mechanical power	50 kW
Nominal voltage	48 V (44–54 V operating range)
Max. voltage	58 V
Logic supply voltage	12 V
Weight motor incl. controller	44 Kg
Weight gearbox 4:1	15 kg
Nominal speed	4,350 rpm
Nominal speed with gear 4:1	1,087 rpm
Max. speed	6,500 rpm
Max. speed with gear 4:1	1,625 rpm

Nominal torque	110 Nm (with 4:1 gearbox: 440 Nm)
Dimension motor incl. controller	Ø 254 mm; L: 265.5 mm
Dimension with gear 4:1	Ø 254 mm; L: 457.5 mm
Motor type	PM-assisted synchronous reluctance motor
Communication	CAN-Bus
Protection class	IP67
Max. drive efficiency	94 % overall (97 % motor, 97 % inverter)
Water cooling	Dual-circuit cooling, max. 35 °C flow temperature

Range tables ARIES i50

Range ARIES i50 with 36 kWh LFP battery bank (6 x 6 kWh modules)*

	Speed in knots (km/h)	Running time in hh:mm	Range in nm (km)
Eco	6.0 (11.1)	07:15	up to 43.5 (80.6)
Cruise	13.5 (25)	01:20	up to 18.1 (33.5)
Full Speed	24.5 (45.4)	00:30	up to 12.6 (23.4)

* Measured on motorboat, length: 7.10 m, weight approx. 1,150 kg. Depending on boat model, load, propeller and local conditions; speed and range information without guarantee.

Range ARIES i50 with 48 kWh LFP battery bank (8 x 6 kWh modules)*

	Speed in knots (km/h)	Running time in hh:mm	Range in nm (km)
Eco	5.8 (10.7)	09:40	up to 55.9 (103.6)
Cruise	13.1 (24.2)	01:47	up to 23.3 (43.2)
Full Speed	23.7 (43.8)	00:41	up to 16.2 (30.1)

* Measured on motorboat, length: 7.10 m, weight approx. 1,244 kg. Depending on boat model, load, propeller and local conditions; speed and range information without guarantee.

Range ARIES i50 with 60 kWh LFP battery bank (10 x 6 kWh modules)*

	Speed in knots (km/h)	Running time in hh:mm	Range in nm (km)
Eco	5.6 (10.3)	12:06	up to 67.3 (124.6)
Cruise	12.6 (23.4)	02:13	up to 28.2 (52.2)
Full Speed	22.7 (42.1)	00:51	up to 19.5 (36.1)

* Measured on motorboat, length: 7.10 m, weight approx. 1,344 kg. Depending on boat model, load, propeller and local conditions; speed and range information without guarantee.

Charging times

Shortest charging time 20 - 80 % with three chargers of 3 kW each*

36 kWh battery bank: approx. 2.2 hours
48 kWh battery bank: approx. 2.9 hours
60 kWh battery bank: approx. 3.7 hours

* Calculation of the shortest charging time refers to the charging process of 80 % of the nominal capacity.