

VETUS E-DRIVE CONFIGURATION

STEP 1 LENGTH AT THE WATERLINE (LWL) AND DISPLACEMENT

Every boat is different. In this step-by-step plan, calculations are made using a basic vessel displacement model. What is the Length at the Waterline? What is the displacement including equipment and passengers?

_____ feet / _____ meters _____ lbs / _____ kg

STEP 2 DESIRED BOATING TIME OR DISTANCE

All day on the water! That won't mean all-day continuous use of the motor. Going for a swim, a drink, fishing, a bit of reading or sitting on a terrace will, of course, be part of it. Below is an indicative guide to determine the boating time using the motor for a full day on the water.

Locally	On a canal, lake or in a city. Short day trip.	up to 30 km	approx. 4 hours
Regionally	Longer day trips.	up to 60 km	approx. 5-6 hours
Nationally	Long boating days to cover greater distances.	up to 80 km	approx. 7-8 hours

Desired boating time = _____ hours

STEP 3 BOATING SPEED AND REQUIRED BATTERY CAPACITY

The preferred boating speed depends on the type of trip; to get from a to b as quickly as possible, or enjoy the surroundings at a more leisurely pace. In some boating areas, speed limits apply. The higher the desired speed, the greater the boat's energy consumption. This is true for a car, and it's certainly also true for a waterborne vessel.

The consumption or required power of the boat will have to be supplied from the batteries during the desired boating time. Boat consumption (kW) x desired boating time (hours) = net battery capacity required (kWh).

The data below are indicative for a basic vessel displacement model of _____ feet and _____ lbs.

Recreation	Leisurely boating	knots /	km/h	kW consumption boat	kWh net battery
Cruising speed	70% hull speed	knots /	km/h	kW consumption boat	kWh net battery
Hull speed	Max. speed	knots /	km/h	kW consumption boat	kWh net battery

E-DRIVE CHOICE

The data below are indicative for a basic vessel displacement model of feet and lbs.

Recreation	knots and	hours continuous boating; engine power required	kW and battery	kWh net cap.
Cruising speed	knots and	hours continuous boating; engine power required	kW and battery	kWh net cap.
Hull speed	knots and	hours continuous boating; engine power required	kW and battery	kWh net cap.

E-DRIVE model	Product code	Input power (kW) maximum	Peak input (kW) maximum	Motor suitable for this boat*
E-POD 100 48V	EPOD100	9.1	11.3	
E-LINE AIR 050 24V	EAIR05024	4.9	6.7	
E-LINE AIR 050 48V	EAIR050	5.0	7.9	
E-LINE AIR 070 48V	EAIR070	7.1	8.6	
E-LINE 060 48V	ELINE060	5.6	7.3	
E-LINE 080 48V	ELINE080	8.4	10.2	
E-LINE 110 48V	ELINE110	11.3	13.3	
E-LINE 220 48V	ELINE220	22	24	

* Results serve as an indication. Calculated based on assumed basic vessel model and conditions.

** Hull speed based on temporarily available Peak input power. Continuous input power is lower.

BATTERY SELECTION

AGM BATTERIES

Net capacity (kWh)	Battery type	Dimensions l x w x h (mm) (1 battery)	Total weight (kg)	Estimated boating time on one charge		
4.7	1 x 4 VEAGM170	513 x 223 x 223	164	hours @ 3.3 knt /	hours @	knt
7.4	1 x 4 VEAGM220	514 x 274 x 242	244	hours @ 3.3 knt /	hours @	knt
9.4	2 x 4 VEAGM140	513 x 189 x 223	164	hours @ 3.3 knt /	hours @	knt
11.4	2 x 4 VEAGM170	513 x 223 x 223	374	hours @ 3.3 knt /	hours @	knt
14.8	2 x 4 VEAGM220	514 x 274 x 242	487	hours @ 3.3 knt /	hours @	knt
17.1	3 x 4 VEAGM170	513 x 223 x 223	560	hours @ 3.3 knt /	hours @	knt
18.6	3 x 4 VEAGM185	514 x 274 x 242	675	hours @ 3.3 knt /	hours @	knt
22.2	3 x 4 VEAGM220	514 x 274 x 242	729	hours @ 3.3 knt /	hours @	knt
29.6	4 x 4 VEAGM220	514 x 274 x 242	972	hours @ 3.3 knt /	hours @	knt

DEEP CYCLE BATTERIES

Net capacity (kWh)	Battery type	Dimensions l x w x h (mm) (1 battery)	Total weight (kg)	Estimated boating time on one charge		
4.0	1 x 4 VEDC110TC	330 x 175 x 235	102	hours @ 3.3 knt /	hours @	knt
7.9	2 x 4 VEDC110TC	330 x 175 x 235	203	hours @ 3.3 knt /	hours @	knt
11.9	3 x 4 VEDC110TC	330 x 175 x 235	305	hours @ 3.3 knt /	hours @	knt
15.8	4 x 4 VEDC110TC	330 x 175 x 235	406	hours @ 3.3 knt /	hours @	knt
23.8	6 x 4 VEDC110TC	330 x 175 x 235	608	hours @ 3.3 knt /	hours @	knt
31.7	8 x 4 VEDC110TC	330 x 175 x 235	811	hours @ 3.3 knt /	hours @	knt

LITHIUM LFP BATTERIES

Net capacity (kWh)	Battery type	Motor power up to (kW)	Total weight (kg)	Estimated boating time on one charge		
9.6	1 set VELFP210A	10	81	hours @ 3.3 knt /	hours @	knt
19.2	1 set VELFP420A	20	185	hours @ 3.3 knt /	hours @	knt