

# Enquiry Data Sheet

This form outlines the information needed to calculate the required motor torque and power needed to fulfil an application. Complete section 1.1 for wheeled vehicles or 1.2 for marine vessels or if you already know your motor requirements, skip to section 2. Not every part needs to be filled as estimates can be made but the more information you can provide us with the more accurate our recommendations will be.

<b>Date</b>	
<b>Customer Name</b>	
<b>Phone Number</b>	
<b>Email</b>	
<b>Application Brief</b> (tell us what vehicle type you are working on, how the motor will be used and ideal drive times/ cycles. How many systems do you need?) – i.e. a sail/speed boat used for leisure/racing, car/scooter/go-kart used for commuting/racing, motor needed to run a pump etc.	

## 1.1 – Wheeled Vehicle

<b>Driven Wheel Diameter [m]</b>	
<b>Vehicle Mass [kg]</b> (total including driver)	
<b>Target Maximum Speed [km/h, mph etc.]</b>	
<b>Desired Acceleration</b> (i.e. 0-60 mph in 10 seconds, 4.5 m/s <sup>2</sup> etc.)	
<b>Gear Ratio (if pre-existing gearbox)</b> If not, we can suggest suitable ratios/gearboxes	
<b>Desired Hill Capabilities</b> Maximum gradient vehicle needs to climb and maximum speed on the gradient	
<b>Front Facing Surface Area of Vehicle [m<sup>2</sup>]</b> Can be estimated or calculated more accurately by overlaying a photo with graph paper. See list of known values below	
<b>Coefficient of Drag (if known)</b> If unknown, online estimates for existing vehicles can be found. See table below for examples	

Additional info:

Example Values	Vehicle	Front Facing Surface Area	Coefficient of Drag
	Bicycle & Rider	0.6-0.7 m <sup>2</sup>	1.15
	Large Motorbike & Rider	0.94 m <sup>2</sup>	1.8
	Go-Kart	0.7 m <sup>2</sup>	0.27
	VW Polo	1.72 m <sup>2</sup>	0.4

## 1.2 – Marine Vessel

<b>Vessel Type</b>	
<b>Wetted Area [m]</b>	
<b>Target Cruising Speed [kts]</b>	
<b>Vessel Mass</b>	
<b>Coefficient of Drag (if known)</b> <small>If unknown, online estimates for existing vehicles can be found.</small>	
<b>Waterline Length [m]</b>	
<b>Beam [m]</b>	
<b>Mast Height [m]</b>	
Additional info:	

## 2 – Motor & Battery Information

<b>Required Continuous Operation of the Motor</b>	
Torque [Nm]	
Speed [RPM]	
Power [kW]	
<b>Required Peak Operation of the Motor</b>	
Torque [Nm]	
Speed [RPM]	
Power [kW]	
<b>Nominal Battery Voltage</b> (and minimum and maximum if you know it!)	
<b>Nominal Battery Capacity</b>	
<b>Battery Type and C rating</b>	
Additional Info:	

