

Website: [www.4qd.co.uk](http://www.4qd.co.uk)

Business: We sell motor speed controllers and related accessories, with many of our sales coming via the website, and we have a mix of UK and international customers.

Website traffic: The website has about 20,000 visitors per month and around 100 sales per month.

Website hosting: The website is a wordpress website and is hosted on Siteground (GoGeek account). We use the KeyCDN Cache Enabler html caching plugin for speed. We have a staging site that can be used for development by an external developer.

Requirement: We need an interactive html form to help customers select the correct motor controller for their application. The form should be mobile responsive.

Technical approach: We think the most appropriate solution will be a custom form, rather than a plugin, using javascript/php for implementing the interactive logic.

Design: The form layouts are provided to indicate the functionality required. The actual design should fit in with the website colours/style and we are happy to consider alternative layouts/features for the best user experience.

## Detailed Specification

### Choose a controller Page

This page has 3 tabs:

- Choose by application
- Choose by motor
- Let us choose

Each tab is a form. It should be possible to have hover over help text on the form field labels to explain the data required.

Choose by Application	<b>Choose by motor</b>	Let us choose

## Tabs

### Choose by application

#### Choose by Application

Application

Greenpower kart  
Electric vehicle  
Model loco  
Electric boat  
Other

#### Application Details

Loco size

5" scale  
7.25" scale  
10" scale

No. of passengers

10

Is reverse required?



Yes



No

Select

#### Suggested Controllers

##### PRO-160-S

Standard PRO-160. Select if heavy load will be occasional

##### PRO-160-HC

High current PRO-160. Select if loading will be heavy over a long period of time

#### Application Notes

*Please check our model loco page for details of accessories. The PRO-160 includes dead man handle and radio control*

## Data Entry Section

### 1. Application

A drop down box with the following application choices:

Industrial machine  
Model Loco  
Toylander  
Greenpower kart  
Electric boat  
Electric kart  
Golf buggy  
Robot

### 2. Application details

This section of the form will be shown if further application details are required, and the fields displayed will depend on the application chosen.

For example, the fields required for 'Model loco' are:

Fields:

Label	Values	Notes
Loco scale	5", 7.25", 10"	
No of passengers	1 – 10, 10-20, > 20	
Is reverse required	Yes/No	

The fields for each application will be provided later.

The user will then press the **Select** button to calculate the result.

## Results Section

### 1. Suggested controllers

The list of controllers will be selected based on the application selected, and the application details. The mapping for the controller models for each application will be provided later.

Fields:

Controller	Description	Notes
Controller name	Text description set from the application mapping	The controller name should be a hyperlink to the controller page

### 2. Application notes

These notes will be set according to the selection logic

Choose by motor

Choose by Motor Rating

Motor Details

Voltage	<div>12 24 36 48</div>
Nominal motor current (A)	<div>50</div>
OR	
Rated motor power(W)	<div></div>
No. of motors	<div>2</div>
Motor Type	<div>Brushed Series wound</div>
Is reverse required?	<div><input checked="" type="radio"/> Yes <input type="radio"/> No</div>

Select

Calculated load

Maximum motor current (A)	<div>50</div>
Stall motor current (A)	<div>150</div>

Suggested Controllers

<u>PRO-160-S</u>	Standard PRO-160. Select if heavy load will be occasional
<u>PRO-160-HC</u>	High current PRO-160. Select if loading will be heavy over a long period of time

## Data Entry Section

### Motor details

Fields:

Label	Values	Notes
Voltage	12,24,36,48,72,84	Discrete options or sliding scale/free format?
Rated motor current (Amps)	1 - 360	Either this field or the rated motor power field is required, if one is entered the other should be a no entry field
Rated motor power (Watts)	1 - 3000	Either this field or the rated motor current field is required, if one is entered the other should be a no entry field
No of motors	1-10	Default to 1
Motor Type	Brushed - permanent magnet Brushed - Series wound	Default to permanent magnet option
Is reverse required	Yes/No	Default to Yes

The user will then press the Select button to calculate the result.

## Results Section

### 3. Calculated Load

Fields:

Label	Values	Notes
Nominal motor current (Amps)	(Rated motor current * no. of motors) OR (Rated motor power / Voltage) * no. of motors	Use either rated current or power depending on what user entered in data entry section
Likely stalled motor current (Amps)	Maximum motor current * 3	Typically 3-5 times nominal current

### 4. Suggested controllers

The list of controllers will be selected based on the motor details entered. See table 1 for the mapping between voltage/current and controller options. There will be a text description to go with the controller model number.

Fields:

Controller	Description	Notes
Controller name	Set to text which will be provided later for each controller	The controller name should be a hyperlink to the controller page

## Let us choose

Let us choose

Application

Greenpower kart

Electric vehicle

Model loco

Electric boat

Other

Application Details

Loco size

5" scale

7.25" scale

10" scale

No. of passengers

10

Additional information

I will be replacing a Parkside controller and want to check that it is compatible

Motor Details

Voltage

12

24

36

48

Nominal motor current (A)

50

OR

Rated motor power(W)

No. of motors

2

Motor Type

Brushed

Series wound

Is reverse required?

☒ Yes ☐ No

Name

John Brown

Email

jbrown@gmail.com

Query

Can you please give me a call to discuss the best option

Send Query

This tab allows the user to submit their information to us via a form. The Application data entry fields are as on the 'Choose by application' tab, and the motor data entry fields are as on the 'Choose by motor tab'

There is a contact us section at the bottom of the form. The user should enter their name, email, and a question and these should be emailed to 4qd along with the details entered in the selection form. Protection should be in place to stop spam submissions, we use askimet on the contact form in the website footer.

Likely stall current	12-36V	36-48V	48-84V
> 250A	PRO-360-HC		PRO-360-HCV
> 200A	PRO-360-S		PRO-360-HV
> 140A	PRO-360-S PRO-160-HC		PRO-360-HV PRO-160-HCV
> 100A	PRO-160-S		PRO-160-HV
> 50A	PRO-160-S PRO-150 DNO-010 PT-10 (If reverse not required)	PRO-160-S PT-10 (If reverse not required)	PRO-160-HV
< 50A	PRO-160-S DNO-005 PT-05 (If reverse not required)	PRO-160-S PT-05 (If reverse not required)	PRO-160-HV

Table 1 – logic for controller selection by motor current and voltage