

# QSMOTOR

*powered by SiAECOSYS*



**QSMOTOR**

V1.8

# 1. Generally Introduction

## 1.1 Company information

Taizhou Quanshun Electric Drive Technology Co., Ltd. (used name Taizhou Quanshun Motor Co., Ltd., brand name “**QSMOTOR**”), located in Taizhou, Zhejiang, who is the leading manufacturer for high power & quality Electric Bike/Scooter/Motorcycle/E-car in-wheel hub motor (500W to 14kW, 48V-120V, 30km/h-150km/h), and IPM mid drive motor (1000W-4000W) in China since 2006.

SiAECOSYS (short for SIA) is sub-brand of QSMOTOR, who work on electric motor & motor kits as electric powertrain of electric 2/3/4 wheelers, focus international market only.



# History of QSMOTOR



2000

Quanshun Aluminum Co., Ltd  
Product: Wheel rim, aluminum  
mould



2003

Quanshun Vehicle Accessories Co., Ltd  
Products: Aluminum wheels, motor covers,  
supplier of Bosch. Start to develop hub  
motors.



Quanshun Motor Co., Ltd  
Products: 500w-14000w BLDC  
hub motors



2006



2013



Set up a subsidiary  
"SiAECOSYS", start to  
expand international  
market and offer e-  
power train.

Develop PMSM motor and assembly,  
change name to Taizhou Quanshun  
Electric Drive Technology Co., Ltd.



2016-2017

Move into new factory  
to expand production  
capacity.



2021

# 1. Generally Introduction

## 1.1 Company information

**Main Products:** Brushless DC electric in wheel hub motor 500w-14kw(speed 30km/h~150km/h),  
IPM PMSM MOTOR 1000W-9000W (45km/h-130km/h)

**Production capacity:** 900,000/year

**Area:** 10,000m<sup>2</sup>

**Production line:** 4 (plan to 5)

**Employees:** 170+

**Engineer:** 10+

**QC:** 7+

**Annual Sales:** 25 million Dollars

**Certification:** CE(Lvd & EMC),, TS16949, CCC, ISO9001

**Locations:** Taizhou City, Zhejiang Province, PRC.



# 1.2 Management System & Production Certification

## Product Certification CE(EMC & LVD),CCC

## Management System Certification ISO9001, TS16949

### Certificate of Compliance

No. 38180202.TQEQQ25  
Test Report no. 182CTE0129001ZER

Certificate's Holder: Taizhou Quanshun Electric Drive Technology Co., Ltd.  
Jin Bei Avenue, Lin's Village, Jinqing Town, Luqiao District, Taizhou City, Zhejiang Province, P.R. China.

Certification ECM Mark:  Type Approved

Product: Motor  
Model(s): QS-0.25kW, QS-0.5kW, QS-0.6kW, QS-0.8kW, QS-1kW, QS-1.2kW, QS-1.5kW, QS-2kW, QS-2.5kW, QS-3kW, QS-3.5kW, QS-4kW, QS-5kW, QS-6kW, QS-7kW, QS-8kW, QS-10kW, QS-12kW, QS-14kW, QS-16kW, QS-18kW, QS-20kW.

Verification to: Standard: EN 61000-6-3:2007+A1:2011, EN 61000-4-2:2009, EN 61000-4-3:2006+A1:2008+A2:2010  
related to CE Directive(s): 2014/30/EU (Electromagnetic Compatibility)

**Remark:** The product(s) has been verified on a voluntary basis. The product(s) satisfies the requirements of the Certification Mark of ECM, in reference to the above listed Standard(s). The above Compliance Mark can be affixed on the product(s) accordingly to the ECM regulation about its release and its use. The regulation can be found at [www.entecma.it](http://www.entecma.it). This Certificate of Compliance can be checked for validity at [www.entecma.it](http://www.entecma.it). This verification doesn't imply assessment of the production of the product(s).

**CE** We attest that a TCF for the CE marking process is in place. Whereas the Manufacturer is Responsible to start the CE Marking Certification Procedure and to perform all the necessary activities, as required by the Directive before placing the CE Mark on the product(s).

Date of issue 02 February 2018 Expiry date 01 February 2023  
Chief Manager:  Deputy Manager:   
Ente Certificazione Macchine Srl  
Via Co' Bella, 243 - Loc. Castello di Serravalle - 40053 Valmaggia (BO) - ITALY  
☎ +39 051 6705141 ☎ +39 051 6705156 ✉ info@entecma.it ✉ www.entecma.it

### Certificate of Compliance

No. 38180202.TQEQQ26  
Test Report no. 182CT50129003ZLR

Certificate's Holder: Taizhou Quanshun Electric Drive Technology Co., Ltd.  
Jin Bei Avenue, Lin's Village, Jinqing Town, Luqiao District, Taizhou City, Zhejiang Province, P.R. China.

Certification ECM Mark:  Type Approved

Product: Motor  
Model(s): QS-0.25kW, QS-0.5kW, QS-0.6kW, QS-0.8kW, QS-1kW, QS-1.2kW, QS-1.5kW, QS-2kW, QS-2.5kW, QS-3kW, QS-3.5kW, QS-4kW, QS-5kW, QS-6kW, QS-7kW, QS-8kW, QS-10kW, QS-12kW, QS-14kW, QS-16kW, QS-18kW, QS-20kW.

Verification to: Standard: EN 60034-1:2010  
related to CE Directive(s): 2014/35/EU (Low Voltage)

**Remark:** The product(s) has been verified on a voluntary basis. The product(s) satisfies the requirements of the Certification Mark of ECM, in reference to the above listed Standard(s). The above Compliance Mark can be affixed on the product(s) accordingly to the ECM regulation about its release and its use. The regulation can be found at [www.entecma.it](http://www.entecma.it). This Certificate of Compliance can be checked for validity at [www.entecma.it](http://www.entecma.it). This verification doesn't imply assessment of the production of the product(s).

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☎ +39 051 6705141 ☎ +39 051 6705156 ✉ info@entecma.it ✉ www.entecma.it



### CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

CERTIFICATE NO.: 2018010401053637

NAME AND ADDRESS OF THE APPLICANT  
Taizhou Quanshun Electric Drive Technology Co., Ltd.  
Linjia Village, Jinqing Town, Luqiao District, Taizhou, Zhejiang

NAME AND ADDRESS OF THE MANUFACTURER  
Taizhou Quanshun Electric Drive Technology Co., Ltd.  
Linjia Village, Jinqing Town, Luqiao District, Taizhou, Zhejiang

NAME AND ADDRESS OF THE FACTORY  
Taizhou Quanshun Electric Drive Technology Co., Ltd.  
Linjia Village, Jinqing Town, Luqiao District, Taizhou, Zhejiang

PRODUCT NAME, MODEL AND SPECIFICATION  
Permanent Magnet Brushless Motor for Bicycle  
See appendix

THE STANDARDS AND TECHNICAL REQUIREMENTS FOR THE PRODUCTS  
GB/T12350-2009

This is to certify that the above mentioned product(s) complies with the requirements of implementation rules for compulsory certification(REFNO.CNCA-C04-01:2014).

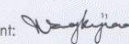
Valid from: May.18.2018 Valid until: Mar.19.2023

The validity of the certificate is subject to positive result of the regular follow up inspection by issuing certification body until the expiry date.

Date of original issued: Mar.19.2018

The certificate information is available through CNCA's website: [www.cnca.gov.cn](http://www.cnca.gov.cn)



President:   
Wang Kejiao



CHINA QUALITY CERTIFICATION CENTRE

<http://www.cqc.com.cn>

Section 9, No.188, Nanshan Xilu, Beijing 100070 P.R. China

Tel: +86 10 88986666



### Kaixin Certification (Beijing) Co., Ltd. Certificate of Registration

Registration No.: 06915Q10857R0M

This is to certify that

TAIZHOU QUANSHUN MOTOR CO., LTD.

Organization Code: 56097212-3

Address: Lin's Village, Jinqing Town, Luqiao District, Taizhou City, Zhejiang Province, 318098, China.

The Management system is in conformity with

GB/T19001-2008 / ISO9001:2008 standard

Scope: Design, Production (within Qualification Scope) and Sale of Brushless Motor for Electric Vehicle

Issue Date : 2015-07-02  
Term of Validity : 2018-07-01

**NOTE:** Starting from 2016-07-03, the certificate is valid only with a corresponding Notification of Maintaining Registration Qualification. This certificate can be found in CNCA website [www.cnca.gov.cn](http://www.cnca.gov.cn) or check via KCB website [www.kcb-china.com](http://www.kcb-china.com)



MANAGEMENT SYSTEM  
CNAS C069-Q

Users can login [www.cnca.gov.cn](http://www.cnca.gov.cn) or [www.kcb-china.com](http://www.kcb-china.com) to check the certificate status.  
To confirm by means of [kcb@kcb-china.com](mailto:kcb@kcb-china.com) or scanning the QR code.  
Address: Room 105, Xinhong Building, Xinhong Street, Dongcheng District, Beijing 100027, China.  
Tel: +8610-6553 5910/11/12/13 Fax: +8610-6551 1969



### Certificate of Registration

This certifies that the Quality Management System of

Taizhou Quanshun Motor Co., Ltd.

South of Shugang Road, Jinqing Town, Luqiao District, Taizhou City, Zhejiang Province, China 318058

has been assessed by NSF-ISR and found to be in conformance to the following standard(s):

ISO/TS 16949:2009

Having been audited in accordance with the "Rules for assessing and maintaining ISO registration 4th Edition"

Scope of Registration:  
Design and Manufacturing of Brushless Motor for Electric Vehicle

IAF Certificate Number: R181253  
Certificate Number: CN15011580  
Certificate Issue Date: 16-APR-2014  
Registration Date: 17-APR-2014  
Expiration Date: 16-APR-2017



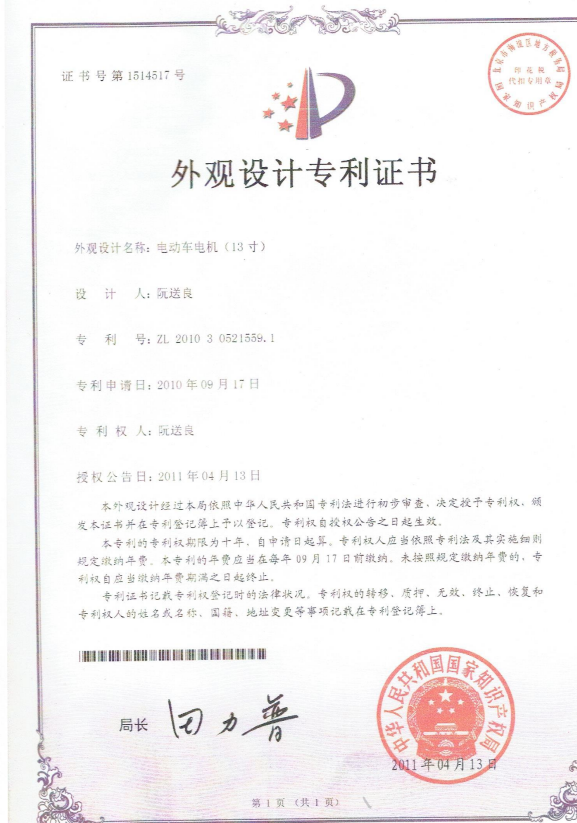
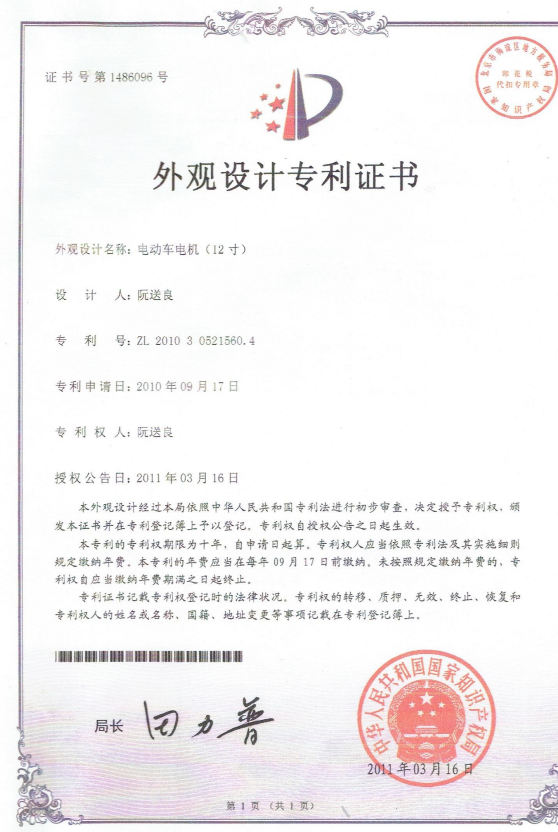
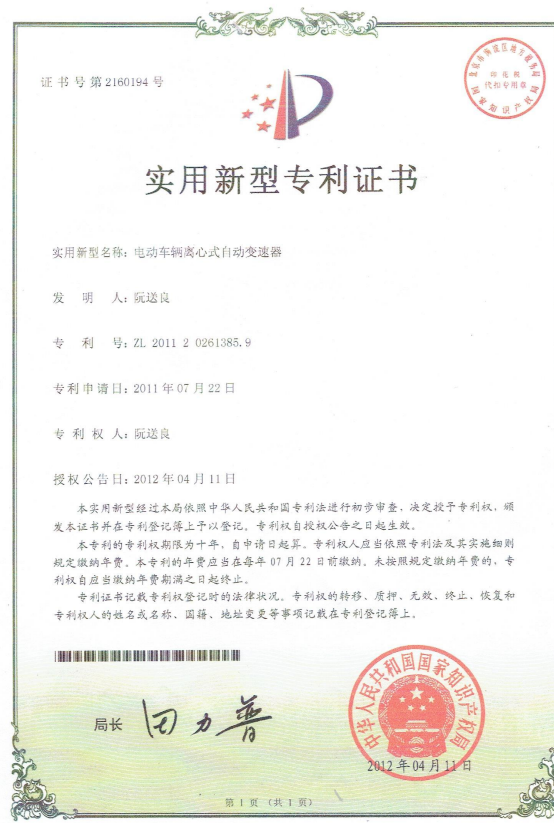
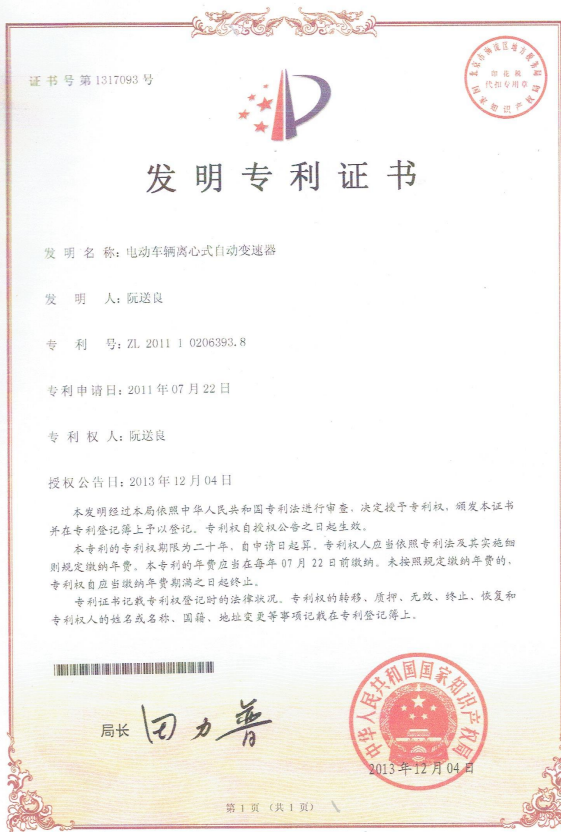
Carl Black,  
Vice President, Technical  
Operations, NSF-ISR, Ltd.

NSF International Strategic Registrations  
789 North Dobson Road, Ann Arbor, Michigan 48106 | (888) NSF-9000 | [www.nsf-iso.org](http://www.nsf-iso.org)



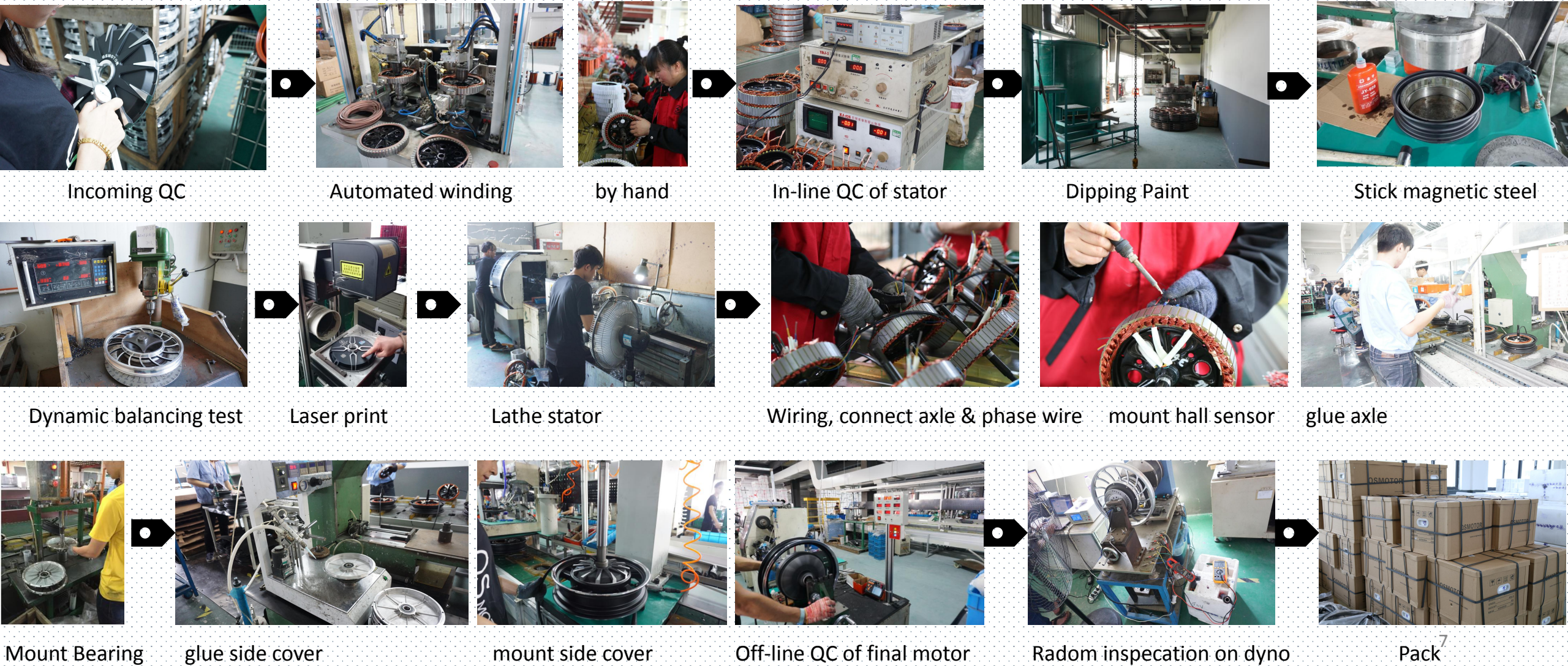
## Patent Certificate

## 1.2 Management System & Production Certification



# 1. Generally Introduction

## 1.3 Production Process



# 1. Equipments

## 1.4 Production Capacity



Fluxgraph



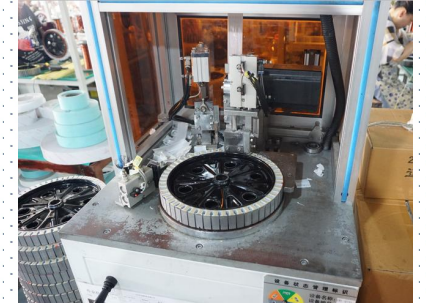
Electrothermal blowing dry box



Hardness tester



Laser marking machine



Automated winding machine



Pull-off tester



Wheel dynamic balancing machine



Dynamometer



Chassis dynamometer




# 2. Products Catalogue


## 2.1 Main Products

NEW

IPM Mid Drive Motor

1000w-9000w






E-Scooter/Motorcycle Motor

10inch-17inch

500w-14kw

Spoke Hub Motor

500w-8000w






E-Car Hub Motor

1000w-12000w

E-Single Shaft Motor

20inch&10inch-17inch

500-8000w



# 2. Products Catalogue

## 2.1 Main Products

### IPM MID-DRIVE MOTOR KITS



3000W 138 V1 IPM Motor (spline/belt)



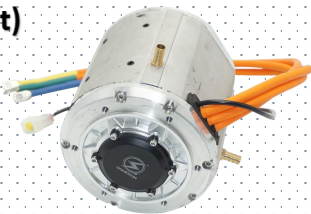
4000W 138 IPM Motor



3000W 138 V2 IPM Motor(spline/belt)



3000W 138 V3 IPM Motor (spline)



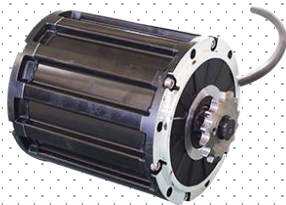
4000W 138 Water Cooled  
available



8000W 180 IPM Motor Motor  
available



1000W 90 V2 IPM Motor  
belt/sprocket adapter



2000W 120 V1 IPM Motor  
belt/sprocket adapter/spline



EM150/2 EM150SP  
48V 2700RPM 57N.m  
72V 6200RPM 54N.m



138 4kw Mid-Drive Moto  
72V 7000RPM 63N.m



EM350SP  
72V 7000RPM 100N.m



EM100SP  
72V 4600RPM 49N.m



EM50SP  
72V 3900RPM 26.6N.m

Controllers provided by SiAECOSYS

## 2. Products Catalogue

### 2.1 Main Products

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## IPM MID-DRIVE MOTOR KITS



**5000W 165 IPM Motor (belt)**  
165 V2 motor under developing



# 2. Products Catalogue

## 2.1 Main Products



**10inch 90 1KW IPM Motor Kits**

48V 38km/h  
60V 45km/h  
72V50km/h



**12X3.5inch 138 3KW PMSM Motor Kits**

48V 70km/h  
72v 95-100km/h



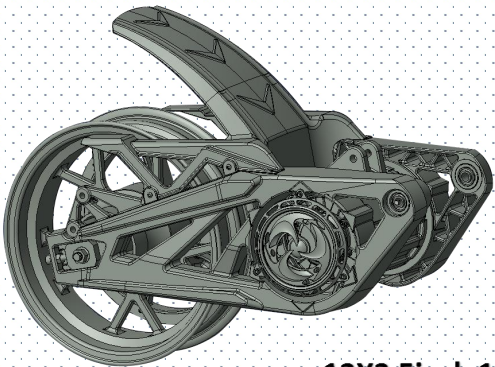
**12X3.5inch 120 2KW PMSM Motor Kits**

48V 58km/h  
72V 72km/h



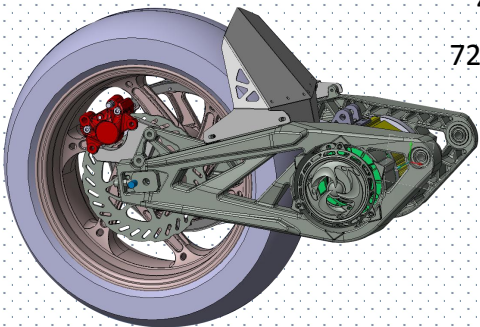
**14X6.0inch 138 3KW PMSM Motor Kits**

avaiable soon  
72v 95-100km/h



**12X3.5inch 138 4KW PMSM Motor Kits**

48V 70km/h  
72v 95-100km/h



**14X6.0inch 138 4KW PMSM Motor Kits**

avaiable soon  
72v 95-100km/h

## MID-DRIVE MOTOR KITS

# 2. Products Catalogue

## 2.1 Main Products

### ELECTRIC SCOOTER HUB MOTOR



**10X2.15inch 205 Hub Motor**  
**10X3.5inch 205 Hub Motor**  
1000w-4000w



**10X2.15inch 212 Hub Motor**  
500w-2000w  
new 45H 50H 60H 70H V4 available.



**10X7.0inch 212 Hub Motor**  
500w-2000w



**12X2.5inch 260 Hub Motor**  
800w-3000w  
**12X3.5inch 260 Hub Motor**  
800w-12000w



**12X3.0inch 260 Hub Motor(racing)**  
800w-7500w, no water proof



**12X5.0inch 260 Hub Motor**  
800w-10000w  
**12X5.0inch 260 Hub Motor**  
800w-6000w



**12x7.0 260 Hub Motor**



**13X3.5inch 260 Hub Motor**  
800w-6000w



**13X4.25inch 260 Hub Motor**  
800w-6000w



**13X3.5inch 273 Hub Motor**  
2000w-12000w



**273 liquid cooling**  
not available

# 2. Products Catalogue

## 2.1 Main Products

### ELECTRIC Motorcycle

### HUB MOTOR

						
<b>14X1.85inch 205 Motor</b> 1000W-1500W under developing	<b>14X2.5inch 260 Motor</b> 800W-4000W	<b>14X3.5inch 260 Motor</b> 800w-6000w	<b>14X4.25inch 260 Motor</b> 1500w-5000w	<b>14X1.6inch 273 Motor</b> 1500W-2000W <b>14X2.75inch 273 Motor</b> 1500-2000w	<b>16X3.5inch 260 Hub Motor</b> 2000w-8000w	<b>16X3.0inch 273 Hub Motor</b> 1500w-8000w
						
<b>17X1.6inch 260 Motor</b> 800w-2000w	<b>17X1.85inch 260 Motor</b> 800w-6000w (private mold)	<b>17X2.5inch 260 Motor</b> 800-2000W (private mold)	<b>17X3.5inch 260 Motor</b> 800w-6000w	<b>17X3.5inch 273 Motor</b> 2000w-8000w	<b>17X4.5inch 273 Motor (liquid cooling)</b> 12kw-14kw not available	<b>17X6.0inch 273 Motor</b> 2000w-12000w 17X6.0 273 motor



## 2. Products Catalogue

### 2.1 Main Products

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**9000W 269 V5 Hub Motor**

# 2. Products Catalogue

## 2.1 Main Products



**212 Bike Spoke Hub Motor**  
500w-1200w drop-outs 135mm  
for 3 speed freewheel(under developing)



**205 Bike Spoke Hub Motor**  
1000w-3000w  
drop-outs 150/155/175mm



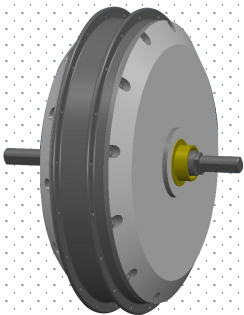
**205 Bike Spoke Hub Motor**  
**(customs mized)**  
1000w-3000w  
drop-outs 190mm



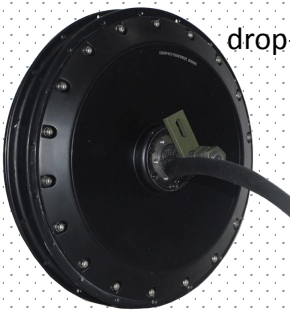
**205 Hub Motor Wheel Set**  
Front: 19x1.6"  
Rear: 17x1.6"  
18x1.6"  
18x1.85"  
19x1.6"



**205 Scooter Spoke Hub Motor**  
1000w-3000w  
drop-outs 190-200mm



**260 Bike Spoke Hub Motor**  
3000w  
drop-out 155mm  
under development



**273 Bike Spoke Hub Motor**  
3000w-4000w  
drop-outs 152mm



**273 Scooter Spoke Hub Motor**  
3000w-8000w  
drop-outs 200mm

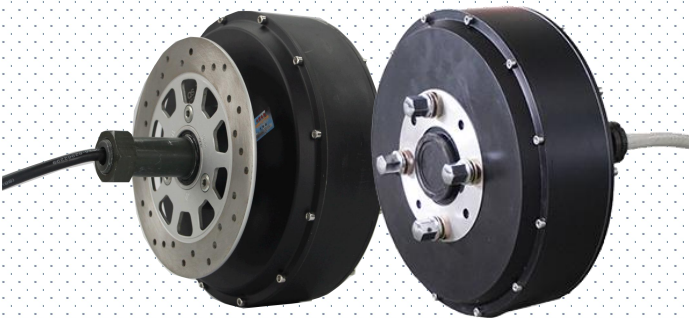
# 2. Products Catalogue

## 2.1 Main Products

### ELECTRIC CAR HUB MOTOR



**205 E-car Hub Motor**  
1000w-3000w



**260 E-car Hub Motor**  
1500w-6000w  
new 8000w coming soon



**273 E-car Hub Motor**  
3000w-8000w



**273 E-car Hub Motor**  
8000w-12000w

PCD and CB can be customized according to your reuquirements.

# 2. Products Catalogue

## 2.1 Main Products

### ELECTRIC SINGLE SHAFT HUB MOTOR



**20inch 205 Bike Hub Motor**  
1000w-1500w



**10inch 205 Hub Motor**  
1000w-4000w



**12inch 205 Hub Motor**  
1000w-3000w(not available)



**12inch 260 Hub Motor**  
800w-6000w



**12inch 260 Hub Motor**  
800w-6000w



**13inch 273 Hub Motor**  
2000w-12000w



**13inch 273 Hub Motor**  
2000w-8000w(not available)

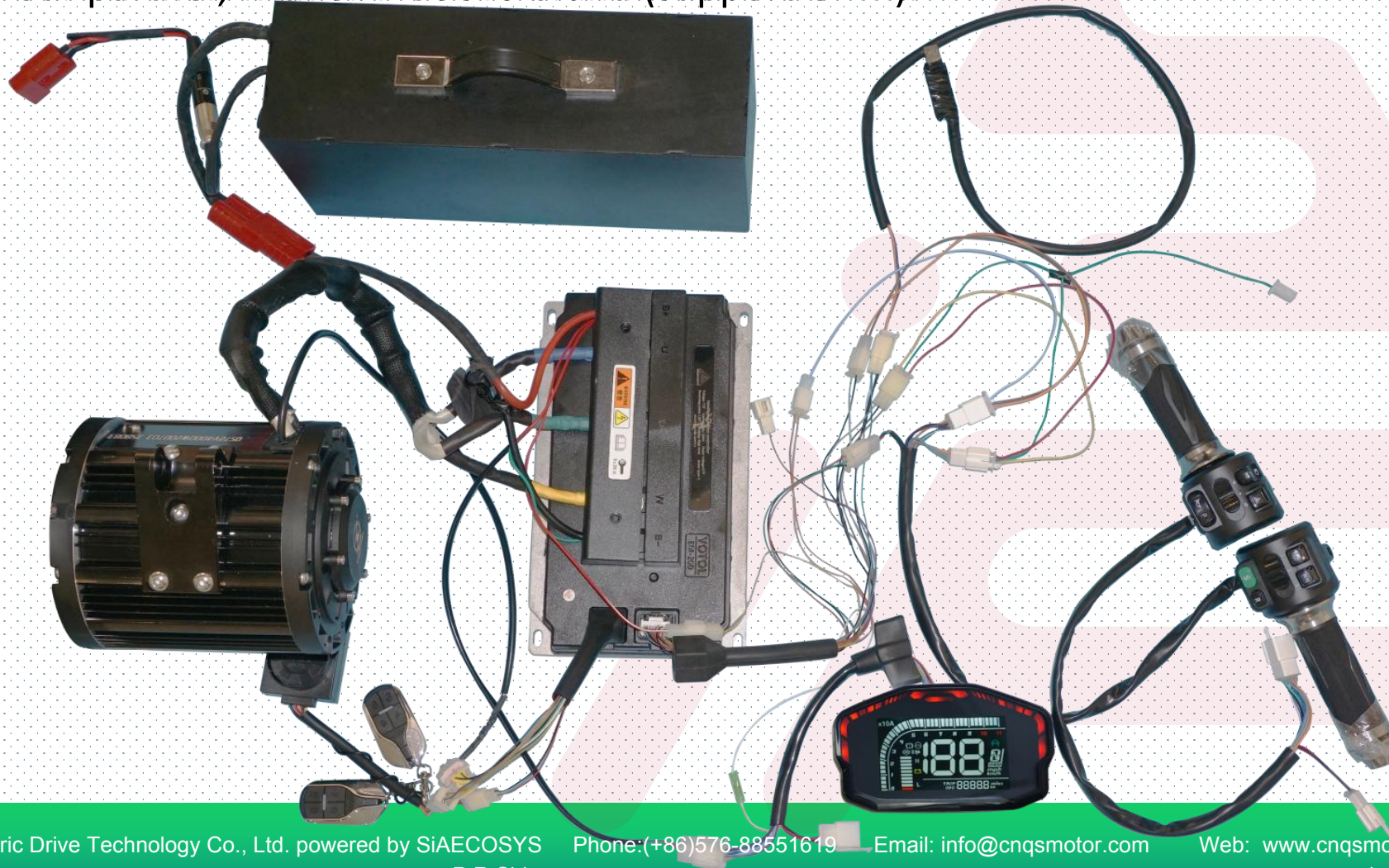


**17inch 273 Hub Motor**  
2000w-8000w

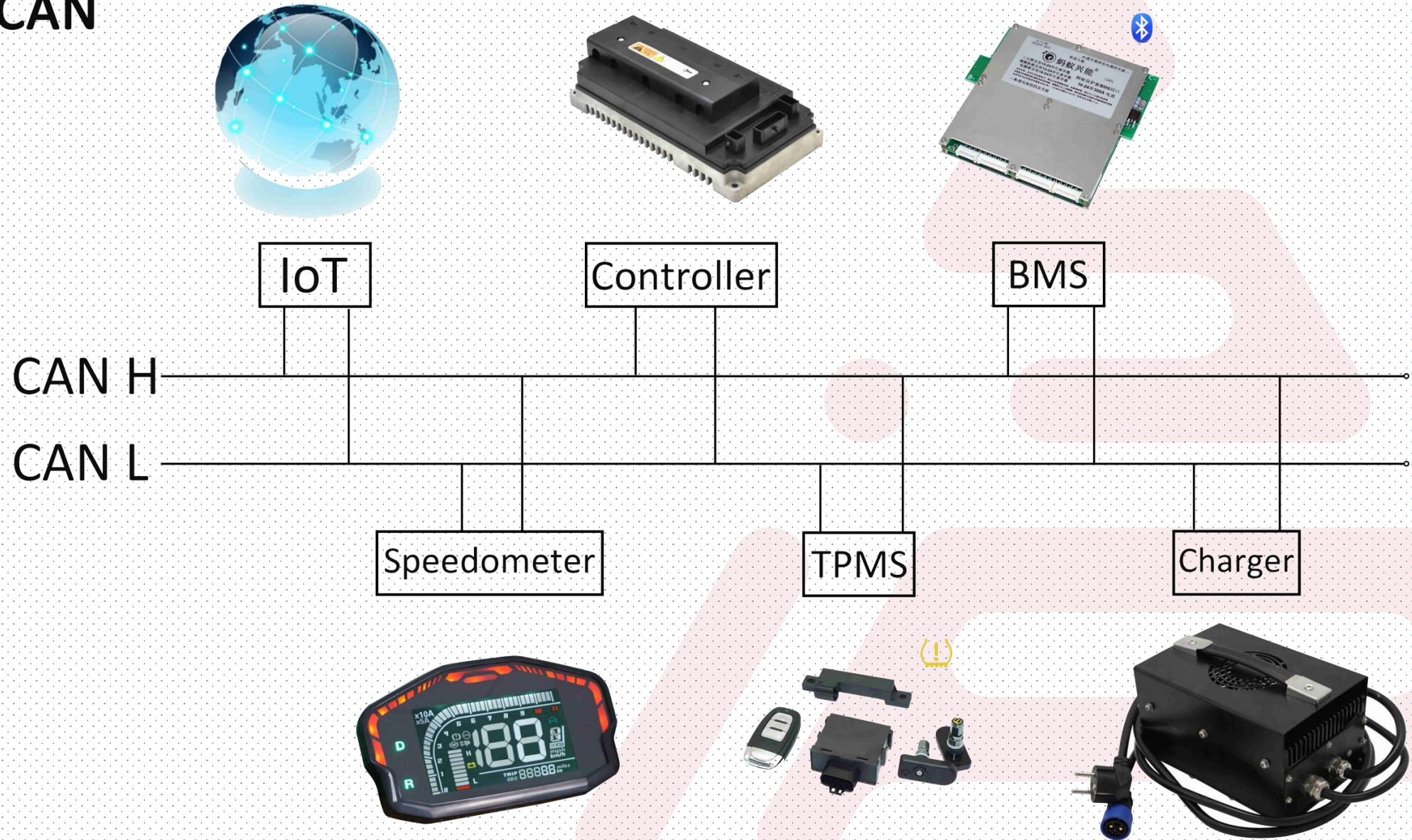
# Electric Powertrain by SiAECOSYS

Besides motor, SIA could offer controller and other accessories, e.g. , speedometer, throttle.

Manufactured by our partner, with SiAECOSYS brand (support OEM).



# CAN



## 2. Products Catalogue

### 2.2 Application & Solutions

Electric motorbike

e.g.

Z6 electric motorbike

E-motorbike weight: 115kg+2\*80kg

Speed: 95-100km/h

Gear ratio: 1:4.77

Climbing slope: 30° @190kg

Battery: 72V40h NCM lithium battery

Tire: 130/70-12

PS. Kit with CAN BUS, ABS(under developing).



## 2. Products Catalogue

### 2.2 Application & Solutions

Electric dirt bike

E.g.

E-bike weight: 100kg+80kg

Speed: 100-110km/h

Gear ratio: Pending

Climbing slope: 30° @140kg

Battery: 72V40h NCM lithium battery

Tire: 17inch

PS. Kit with CAN BUS .



## 2. Products Catalogue

### 2.2 Application & Solutions

Electric dirt bike

E.g.

E-bike weight: 100kg+80kg

Speed: 100-110km/h

Gear ratio: Pending

Climbing slope: 30° @140kg

Battery: 72V40h NCM lithium battery

Tire: 17inch

PS. Kit with CAN BUS .



## 2. Products Catalogue

### 2.2 Application & Solutions

Electric Motorscooter

E.g.

E-bike weight: 100kg+2\*80kg

Speed: 45/70 km/h

Climbing slope: 12° @180kg

Battery: 48V NCM lithium battery

Tire: 120/70-12

PS. Kit with CAN BUS .



## 2. Products Catalogue

### 2.2 Application & Solutions

Electric Motorbike

E.g.

E-bike weight: 69kg+2\*80kg

Speed: 45-50km/h

Climbing slope: 12° @180kg

Battery: 48V lithium battery

Tire: 17inch

PS. Kit with CAN BUS .



## 2. Products Catalogue

### 2.2 Application & Solutions

Electric Motorcycle

E.g.

E-Motorcycle weight: 180kg+2\*80kg

Speed: 120-130km/h

Climbing slope: 24° @260kg

Battery: 96V 90Ah lithium battery

Tire: 140/70-17

PS. Kit with CAN BUS .



## 2. Products Catalogue

### 2.2 Application & Solutions

Electric Super Power Motorcycle

E.g.

E-Motorcycle weight: 182kg+2\*80kg

Speed: 150km/h

Climbing slope: 24° @262kg

Battery: 96V 90Ah lithium battery

Tire: 160/60ZR17

PS. Kit with CAN BUS .



## 2. Products Catalogue

### 2.2 Application & Solutions

Electric High Power Bike

E.g.

E-Bike weight: 47kg+80kg

Speed: 70-80km/h

Climbing slope: 25° @127kg

Battery: 72V 40Ah lithium battery

Tire: 17inch



## 2. Products Catalogue

### 2.2 Application & Solutions

Electric Light Car

E.g.

E-car weight, approx 300kg+350kg

Tire: 205/65R15

Speed: continuous 38km/h @48V by 4wd,

Climbing slope: 10° @650kg by 4wd

Battery: 48V lithium



## 2. Products Catalogue

### 2.2 Application & Solutions

Electric Light Car

E.g.

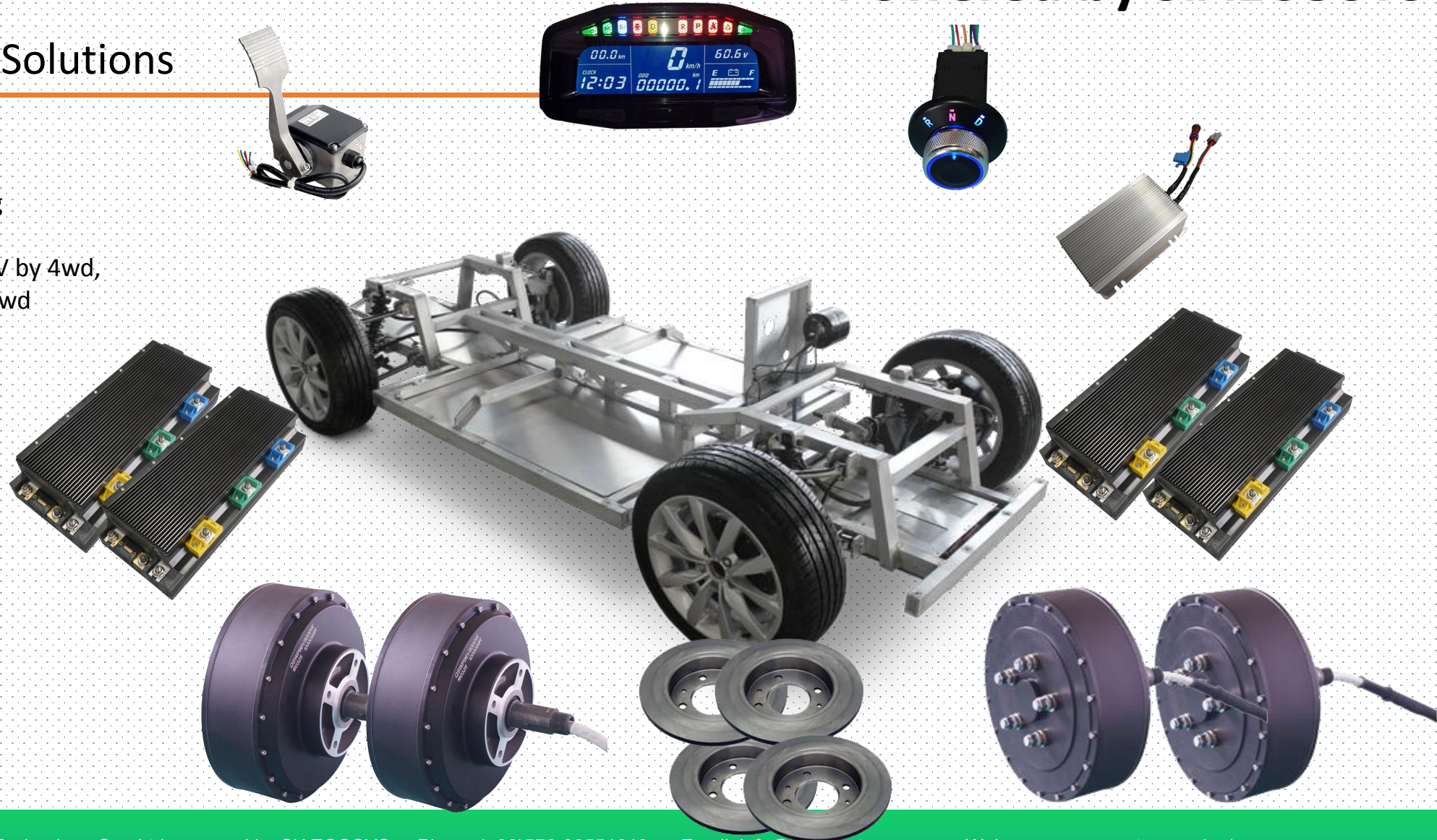
E-car weight, approx 815kg+285kg

Tire: 185/65 R14

Speed: continuous 120km/h @96V by 4wd,

Climbing slope: 30° @895kg by 4wd

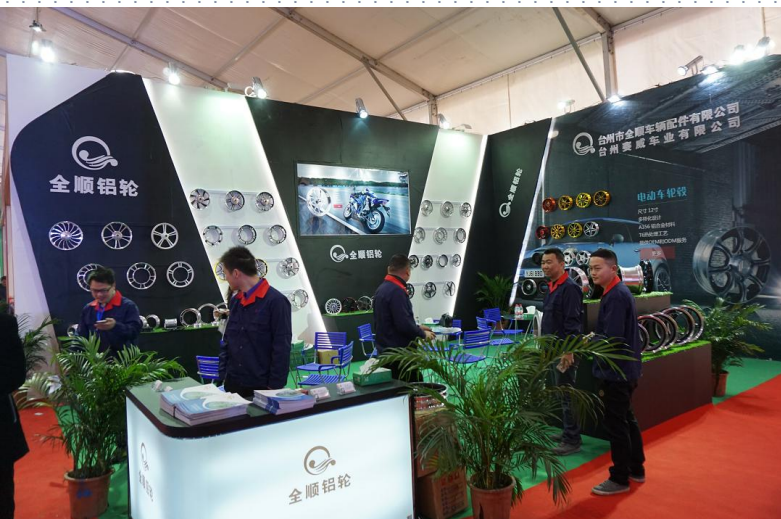
Battery: 96V200Ah or 110V200Ah  
lithium(with more speed)



# Racing event



# Domestic Exhibition



13th Taizhou Electric Vehicle Parts Exhibition



123th Canton Fair



CIMAMotor 2018



124th Canton Fair



# International Exhibition



INTERMOT 2016



Saigon Autotech & Accessories 2017



EICMA 2017



Indian EvExpo 2018



EV Trend Korea 2019



# Our Clients

---

Domestic



# Our Clients

International



# Customer Visit



# Visit Client



## 2. Products websites



**More Products, pls. check our web site.**

Official web: [www.cnqsmotor.com/en/](http://www.cnqsmotor.com/en/)

Official web: [www.siaecosys.com](http://www.siaecosys.com)

<https://www.aliexpress.com/store/5079180?spm=a2g1y.12024536.1000001.12.2f086d1fukyWH1>



<https://qsmotorfactory.aliexpress.com/store/1389549?spm=a2g0o.detail.1000061.1.14a415f5ZS9DGR>

<https://qs-motordrive.aliexpress.com/store/4393030?spm=a2g0o.detail.1000061.1.18f2715esBJvb5>



<https://www.amazon.com/s?marketplaceID=ATVPDKIKX0DER&me=A1DU8ODBU0RHWH&merchant=A1DU8ODBU0RHWH&redirect=true>

<https://tzxiya.en.alibaba.com/?spm=a2700.icbuShop.88.13.7bd67e01JBNEHc>



<https://qsdrive.en.alibaba.com/?spm=a2700.7756200.1998619056.7.739371d2WJWiOf>

<https://qsmotor.en.alibaba.com/>

<https://tzquanshun.en.alibaba.com/>



<https://www.facebook.com/Quanshunmotor/>



[https://endless-sphere.com/forums/search.php?search\\_id=egosearch](https://endless-sphere.com/forums/search.php?search_id=egosearch)

# 2. Products Catalogue

## 2.3 Motor Details

### 2.3.1 Configuration V1 V2 V3

There are three types, Normal/V1 type (low cost), Export/V2 type (Cost-effective) and Extra/V3 type (Best Performance).

#### 1). Difference between V1 & V2

Holder: Iron(V1), Aluminum (V2)

Hall: One hall with Normal connector(V1), Two halls with Waterproof connector(V2)

Stator: V2 have a stronger configuration, more copper, thicker section surface, energy saving in usage.

Magnetic Steel Grade:  $V2 \geq V1$

Efficiency: 84~87%(V1) 86~88%(V2)

In short, normal type is standard configuration, while export type is high configuration. The price differs because of the cost of raw materials.

#### 2). Difference between V2 & V3

The raw materials are alike, main difference in inner construction. For V3 (16 Pole Pairs): stronger configuration than V2, wider lamination, more copper wire /thicker Cross-sectional area section, bear more current in usage. Higher torque at same current, lower temperature rise, more stable in high current. Magnetic Steel: V3 is wider and thicker. Efficiency: 86~88%(V2) 88~92%(V3); Thus, V3 have best performance.

PS. for the same V1 steel/iron stator motors, QS Motor performance better on lifetime & stability because of good raw material. So the cost is more than normal hub motor in the market.



## Configurable Update to V4 in 2017

### Silicon Steel Sheet Comparison:

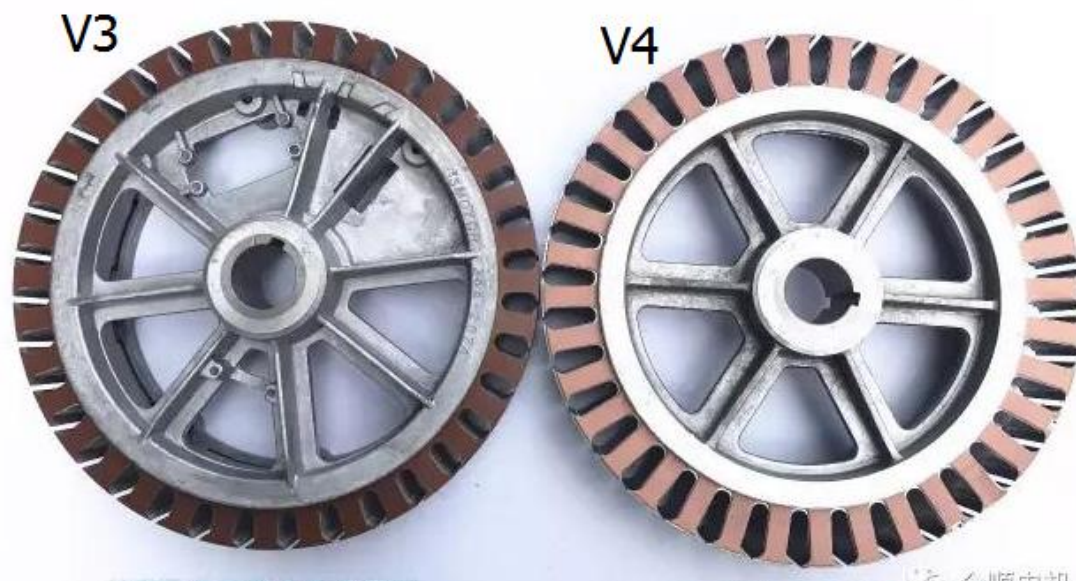
Left is V3 type, right part is V4 type, select high quality of silicon steel raw materials, customized and enlarged groove make more copper wire into motor, produce more powerful magnetic force.

### Wire comparison:

Left part is V4, Right is V3.

More active area and twice quality of the high temp wire than V3.

**Advantage of the V4:** powerful, temp lower, effective higher, more stable with high loading and over voltage. Other parts Upgrade: More wire cutting area, enameled wire upgrade, hall model upgrade, magnetic steel performance upgrade.



### 2.3.2 Three Phase & Hall

For V2 and V3 hub motor, there will be two hall plugs, one for spare.

For V1 hub motor, only support one hall,

全顺双霍尔 QS Motor Two Hall			
位置 Position	霍尔 Hall 1	霍尔 Hall 2	定义 Defination
1	红 Red	橙 Orange	VCC5V
2	透明 Transparent	透明 Transparent	热敏电阻 Thermistor
3	黑 Black	黑 Black	地 GND
4	黄 Yellow	灰 Gray	霍尔信号 HA
5	绿 Green	紫 Purple	霍尔信号 HB
6	蓝 Blue	白 White	霍尔信号 HC



### 2.2.3 Temp Sensor

For high power hub motor(more than 1000w), Temp Sensor Options: KTY84/130, KTY83/122, 10K@25C NTC(model MF58-103F3950).

When you add temp sensor of motor, pls. make sure controller with same model, otherwise it will not on work.

## QSMOTOR customized logo & SN



Remove QSMOTOR logo (sunken)

Firstly, for mass production, we could try to remove QSMOTOR logo on side covers (some might not able to remove).

For example, regarding 12inch 260 hub motors, there is QSMOTOR logo on flat side cover, which is made on mould. We could lathe the logo, refer to below picture.

Meanwhile, customized logo on motor is available base on MOQ 50pcs.

QS could laser print customer' s logo within below information, generally with no extra cost.

- Certificate of Trademark Registration
- Brand Letter of Authorization.
- Please provide high definition logo in AI format.
- Please advise the position & Size of your logo on side cover.

### 2.3.3 The Life Time of motor depends on usage.

For general usage, it's about 2-5 years, and it could be 5-7 years if it work in good condition. For testing and abusing usage, the lifetime will decrease accordingly. E.g., For 3kW V2/V3 motor, the max. power could be 6kW (2 times of rated power).

---

#### Situation 1:

We suggest max. 70-80A battery current for general usage (72V). It's most stable configuration & longest life time.

Some EV enthusiast adjust it to be 150A, the output power is far more than 6kW max. QS Motor could also work, which might not as stable as former situation. For a long time in high current/power, the motor might over heat & even burnt.

We strongly suggest to install Thermic Probe (e.g. KTY 83/122), so that controller will protect motor due to the temp inside of motor.

#### Situation 2:

The max. speed of 1pc 3kW motor is 80KPH in 72V(for e-scooter). Some EV enthusiast adjust it to be 96V, the max speed might be 100KPH, the continuous output power is far more than 3kW rated (maybe equal to 5-6kW).

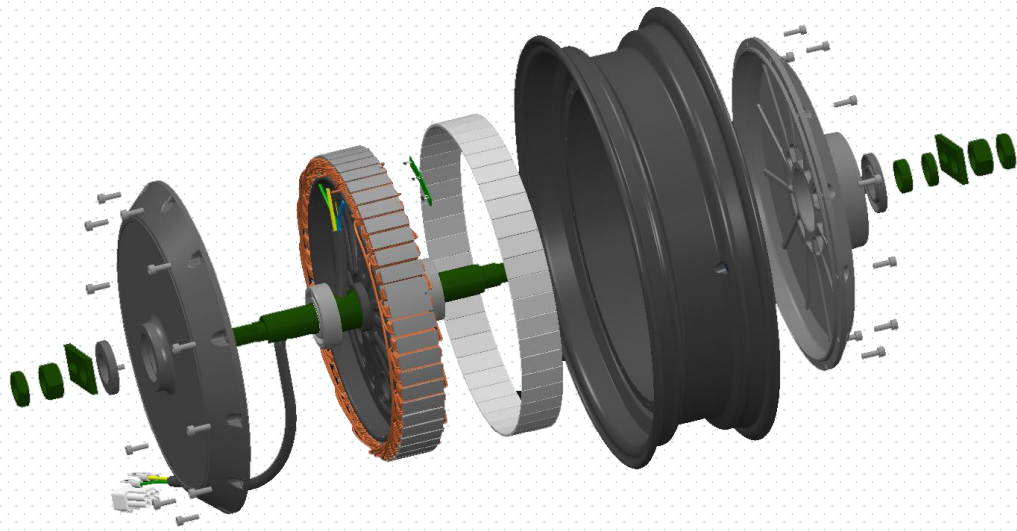
QS Motor could also work, which might not as stable as it in 72V. We call it over voltage/abusing usage, the life time might be shorter, and V3 will work better than V2.

For high power hub motor(more than 1000w), Temp Sensor Options: KTY84/130, KTY83/122, 10K@25C NTC(model MF58-103F3950).

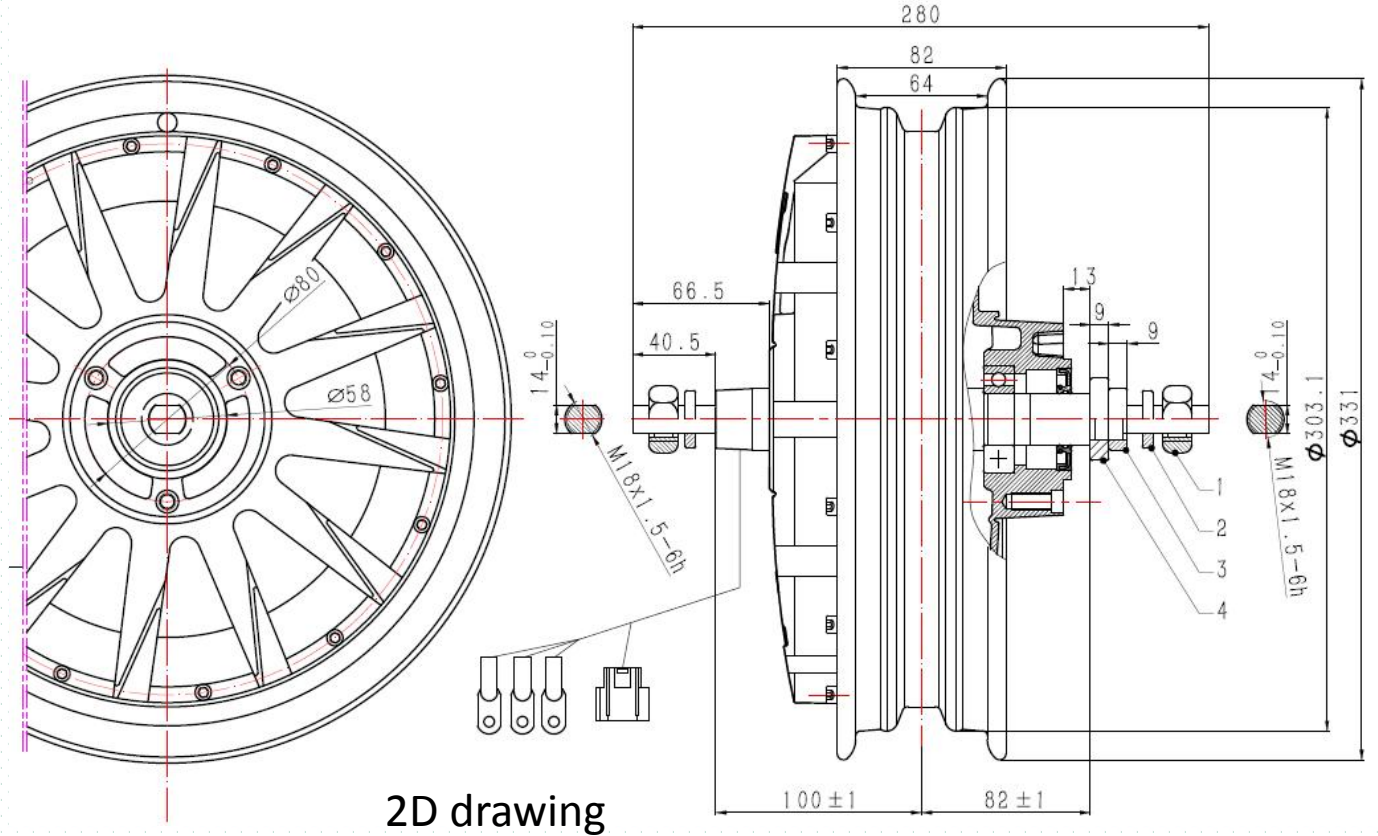
When you add temp sensor of motor, pls. make sure controller with same model, otherwise it will not on work.

## 2.2.4 Drawing & Test Report

They're available for general motors, here is one sample below(12x2.5inch Hub Motor).

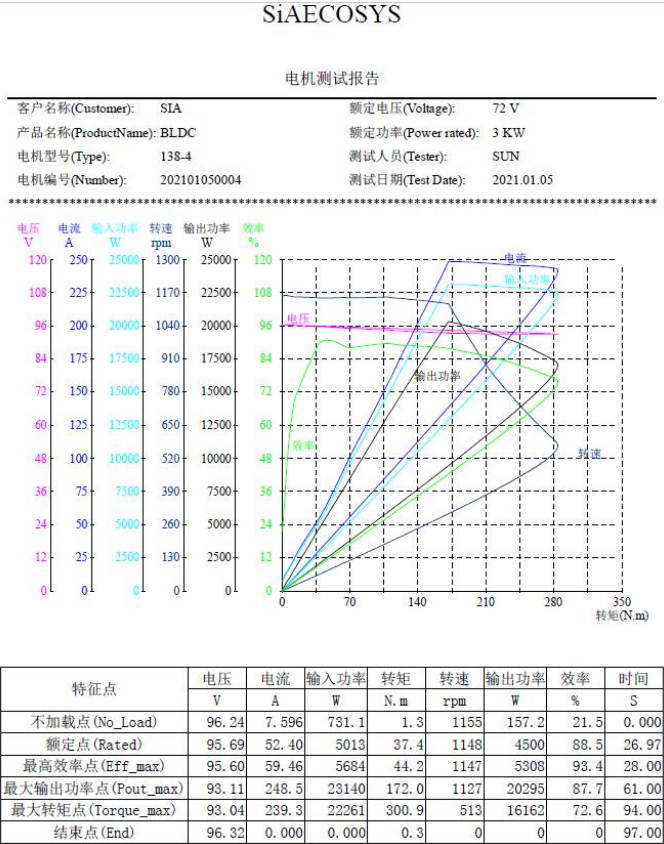


3D drawing



2D drawing

2.2.4 Drawing & Test Report



序号	电压 V	电流 A	输入功率 W	转矩 N.m	转速 rpm	输出功率 W	效率 %	时间 S
1	96.24	7.596	731.1	1.3	1155	157.2	21.5	0.000
2	96.24	7.548	726.4	1.4	1155	169.3	23.3	4.000
3	96.22	10.27	988.6	2.7	1158	327.4	33.1	7.000
4	96.20	11.12	1069	2.7	1160	327.9	30.7	10.00
5	96.16	14.48	1392	5.8	1159	703.8	50.5	13.00
6	96.11	18.22	1751	8.8	1157	1066	60.9	16.00
7	96.04	24.32	2336	13.4	1154	1619	69.3	19.00
8	95.97	30.06	2885	17.4	1152	2099	72.8	22.00
9	95.86	38.99	3737	24.6	1151	2965	79.3	25.00
10	95.69	52.40	5013	37.4	1148	4500	88.5	26.97
11	95.60	59.46	5684	44.2	1147	5308	93.4	28.00
12	95.16	91.44	8702	63.7	1151	7676	88.2	31.00
13	95.04	99.48	9454	69.3	1148	8330	88.1	34.00
14	94.95	106.7	10133	74.0	1148	8894	87.8	37.00
15	94.79	118.4	11223	82.9	1149	9973	88.9	40.00
16	94.34	156.2	14736	109.2	1153	13183	89.5	43.00
17	94.20	168.0	15822	117.7	1146	14122	89.3	46.00
18	94.04	179.4	16871	124.4	1148	14952	88.6	49.00
19	93.90	189.1	17758	132.0	1142	15784	88.9	52.00
20	93.75	201.2	18866	139.2	1144	16674	88.4	55.00
21	93.38	228.9	21372	159.7	1132	18928	88.6	58.00
22	93.11	248.5	23140	172.0	1127	20295	87.7	61.00
23	93.09	248.4	23123	186.0	1032	20097	86.9	64.00
24	93.08	247.6	23048	199.5	949	19822	86.0	67.00
25	93.06	247.2	23006	212.3	878	19516	84.8	70.00
26	93.02	246.8	22962	224.6	819	19259	83.9	73.00
27	93.03	245.8	22870	236.1	766	18935	82.8	76.00
28	93.01	245.5	22833	247.6	717	18587	81.4	79.00
29	93.01	245.1	22799	258.7	673	18229	80.0	82.00
30	93.01	244.5	22746	269.5	632	17834	78.4	85.00
31	92.99	243.1	22606	280.4	592	17381	76.9	88.00
32	92.99	242.5	22546	291.3	556	16958	75.2	91.00
33	93.04	239.3	22261	300.9	513	16162	72.6	94.00
34	96.32	0.000	0.000	0.3	0	0	0	97.00



QS 8000W 273 V4 Hub Motor with APT96600

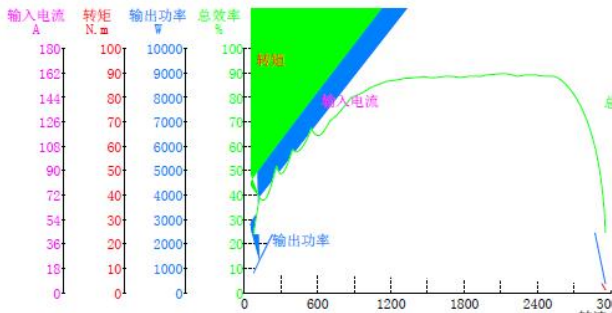
Dynamometer

2.2.4 Drawing & Test Report

台州蓝德电子科技有限公司

电机测试报告

客户名称(Customer): 全顺 额定电压(Voltage): 72V  
产品名称(ProductName): 永磁同步电动机 额定功率(Power rated): 3KW  
电机型号(Type): QS-138-三代减速 测试人员(Tester):  
电机编号(Number): 202011130003 测试日期(Test Date): 2020.11.13



特征点	输入电压 V	输入电流 A	输入功率 W	电机电压 V	电机电流 A	电机功率 W	电机功率因数	电机频率 Hz	转矩 N.m	转速 rpm	输出功率 W	控制效率 %	电机效率 %	总效率 %	时间 S
不加载点(No_Load)	71.93	30.87	1534	56.53	102.6	1376	0.137	583.0	1.22	2955.0	377.5	89.7	27.4	24.6	0.000
最高效率点(Eff_max)	70.21	156.0	10704	53.32	137.8	10489	0.824	437.3	43.04	2134.7	9620	98.0	91.7	89.9	9.016
最大输出功率点(Pout_max)	70.21	156.0	10704	53.32	137.8	10489	0.824	437.3	43.04	2134.7	9620	98.0	91.7	89.9	9.016
最大转矩点(Torque_max)	71.41	48.26	3349	20.01	278.9	2778	0.287	49.70	98.26	126.5	1301	83.0	46.8	38.9	29.02
结束点(End)	71.41	48.26	3349	20.01	278.9	2778	0.287	49.70	95.14	80.6	802.9	83.0	28.9	24.0	29.52

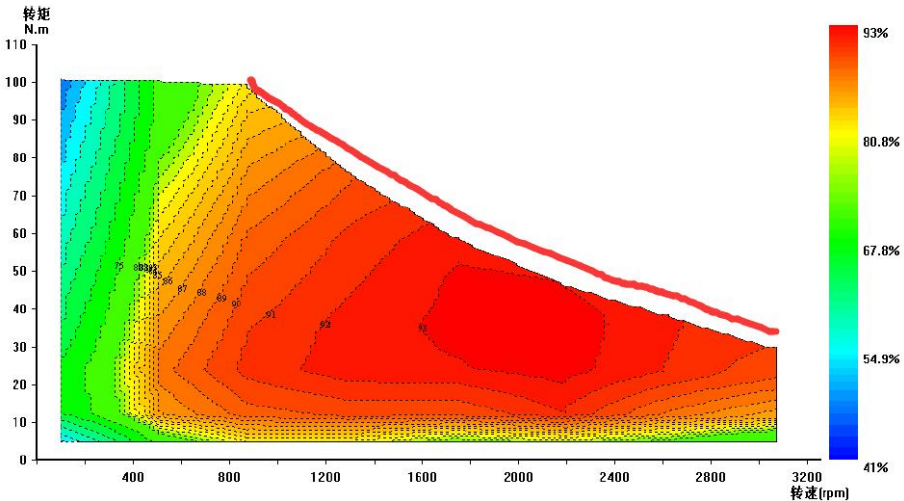
台州蓝德电子科技有限公司

电机测试报告

客户名称(Customer): 全顺 额定电压(Voltage): 72V  
产品名称(ProductName): 永磁同步电动机 额定功率(Power rated): 3KW  
电机型号(Type): QS-138-三代减速 测试人员(Tester):  
电机编号(Number): 202011130003 测试日期(Test Date): 2020.11.13

序号	输入电压 V	输入电流 A	输入功率 W	电机电压 V	电机电流 A	电机功率 W	电机功率因数	电机频率 Hz	转矩 N.m	转速 rpm	输出功率 W	控制效率 %	电机效率 %	总效率 %	时间 S
1	71.93	30.87	1534	56.53	102.6	1376	0.137	583.0	1.22	2955.0	377.5	89.7	27.4	24.6	0.000
2	71.93	30.87	1534	56.53	102.6	1376	0.137	583.0	1.22	2955.0	377.5	89.7	27.4	24.6	0.000
3	70.20	157.1	10609	54.46	145.9	10572	0.768	531.81	34.80	2193.4	9476	97.8	89.6	87.7	4.516
4	70.20	157.1	10609	54.46	145.9	10572	0.768	531.81	35.88	2142.1	9551	97.8	90.3	88.4	5.016
5	70.20	157.1	10609	54.46	145.9	10572	0.768	531.81	36.70	2091.5	9574	97.8	90.6	88.6	5.516
6	70.20	155.9	10790	54.65	138.0	10587	0.811	499.58	37.38	2440.7	9552	98.1	90.2	88.5	6.016
7	70.20	155.9	10790	54.65	138.0	10587	0.811	499.58	38.40	2388.7	9608	98.1	90.8	89.0	6.516
8	70.20	155.9	10790	54.65	138.0	10587	0.811	499.58	39.26	2338.6	9613	98.1	90.8	89.1	7.016
9	70.21	154.9	10748	54.67	132.6	10562	0.841	468.39	40.08	2287.6	9680	98.3	90.9	89.3	7.516
10	70.21	154.9	10748	54.67	132.6	10562	0.841	468.39	40.82	2236.4	9711	98.3	90.7	88.7	8.016
11	70.21	154.9	10748	54.67	132.6	10562	0.841	468.39	41.96	2185.2	9680	98.3	90.9	89.3	8.516
12	70.21	156.0	10704	53.32	137.8	10489	0.824	437.35	43.04	2134.7	9620	98.0	91.7	89.9	9.016
13	70.21	156.0	10704	53.32	137.8	10489	0.824	437.35	43.92	2083.7	9582	98.0	91.4	89.1	9.516
14	70.21	156.0	10704	53.32	137.8	10489	0.824	437.35	44.88	2032.7	9552	98.0	91.1	89.2	10.02
15	70.21	158.8	10704	51.44	147.9	10431	0.792	405.56	46.00	1981.7	9544	97.4	91.5	89.5	10.52
16	70.21	158.8	10704	51.44	147.9	10431	0.792	405.56	46.86	1930.7	9472	97.4	90.8	88.5	11.02
17	70.21	158.8	10704	51.44	147.9	10431	0.792	405.56	48.22	1880.2	9492	97.4	91.0	88.7	11.52
18	70.21	158.6	10691	49.81	155.8	10383	0.773	374.37	49.46	1829.3	9477	97.1	91.3	88.6	12.02

19	70.21	158.6	10691	49.81	155.8	10383	0.773	374.37	50.46	1778.5	9477	97.1	91.3	88.6	12.52
20	70.21	158.6	10691	49.81	155.8	10383	0.773	374.37	51.20	1727.8	9477	97.1	91.3	88.6	13.02
21	70.21	158.6	10691	49.81	155.8	10383	0.773	374.37	52.96	1677.4	9477	97.1	91.3	88.6	13.52
22	70.21	156.2	10670	48.18	163.8	10343	0.757	343.38	53.52	1621.9	9477	97.1	91.3	88.6	14.02
23	70.21	156.2	10670	48.18	163.8	10343	0.757	343.38	56.94	1571.0	9477	97.1	91.3	88.6	14.52
24	70.21	156.2	10670	48.18	163.8	10343	0.757	343.38	58.56	1524.3	9449	96.9	90.4	87.6	15.02
25	70.23	150.7	10553	46.47	170.4	10238	0.746	313.35	60.44	1473.3	9323	96.9	91.2	88.3	15.52
26	70.23	150.7	10553	46.47	170.4	10238	0.746	313.35	62.32	1423.7	9294	96.9	90.8	88.0	16.02
27	70.23	150.7	10553	46.47	170.4	10238	0.746	313.35	64.46	1372.0	9260	96.9	90.5	87.7	16.52
28	70.23	149.9	10520	44.44	185.1	10153	0.711	280.82	66.72	1322.5	9238	96.5	91.0	87.8	17.02
29	70.23	149.9	10520	44.44	185.1	10153	0.711	280.82	69.00	1270.5	9178	96.5	90.4	87.2	17.52
30	70.23	149.9	10520	44.44	185.1	10153	0.711	280.82	71.54	1219.7	9136	96.5	90.0	86.8	18.02
31	70.23	149.6	10492	42.37	204.3	10067	0.672	250.76	74.06	1169.9	9071	95.9	90.1	86.5	18.52
32	70.23	149.6	10492	42.37	204.3	10067	0.672	250.76	76.66	1118.3	8978	95.9	89.3	85.7	19.02
33	70.23	149.6	10492	42.37	204.3	10067	0.672	250.76	79.46	1068.2	8887	95.9	88.3	84.7	19.52
34	70.24	149.2	10461	40.36	226.3	9964	0.630	222.13	81.86	1016.3	8710	95.2	87.4	83.3	20.02
35	70.24	149.2	10461	40.36	226.3	9964	0.630	222.13	84.24	965.5	8516	95.2	85.5	81.4	20.52
36	70.24	149.2	10461	40.36	226.3	9964	0.630	222.13	87.84	915.6	8430	95.2	84.6	80.6	21.02
37	70.23	149.2	10435	38.60	250.2	9874	0.591	196.16	90.82	876.9	8338	94.4	84.4	79.8	21.52
38	70.23	149.2	10435	38.60	250.2	9874	0.591	196.16	92.98	831.3	8198	94.4	80.0	75.5	22.02
39	70.23	149.2	10435	38.60	250.2	9874	0.591	196.16	94.96	789.1	7947	94.4	76.4	72.2	22.52
40	70.33	141.4	9915	36.25	271.0	9263	0.544	169.89	94.42	766.2	6981	93.4	75.4	70.4	23.02
41	70.33	141.4	9915	36.25	271.0	9263	0.544	169.89	95.10	694.5	6517	93.4	70.4	65.7	23.52
42	70.33	141.4	9915	36.25	271.0	9263	0.544	169.89	95.50	607.0	6069	93.4	65.1	61.2	24.02
43	70.61	117.6	8263	32.91	272.9	7640	0.491	138.42	96.14	551.2	5552	92.5	72.7	67.2	24.52
44	70.61	117.6	8263	32.91	272.9	7640	0.491	138.42	95.76	519.8	5213	92.5	68.2	63.1	25.02
45	70.61	117.6	8263	32.91	272.9	7640	0.491	138.42	95.62	473.0	4535	92.5	59.4	54.9	25.52
46	70.82	96.56	6918	29.96	274.0	6308	0.444	110.52	96.78	303.2	3072	91.2	48.7	44.4	26.02
47	70.82	96.56	6918	29.96	274.0	6308	0.444	110.52	96.78	303.2	3072	91.2	48.7	44.4	26.52
48	70.82	96.56	6918	29.96	274.0	6308	0.444	110.52	96.78	303.2	3072	91.2	48.7	44.4	27.02
49	71.11	73.80	5182	25.64	275.0	4603	0.377	78.17	96.86	208.3	2113	88.8	45.9	40.8	28.02
50	71.11	73.80	5182	25.64	275.0	4603	0.377	78.17	97.72	172.0	1589	88.8	39.9	35.1	28.52
51	71.41	48.26	3349	20.01	278.9	2778	0.287	49.70	98.26	126.5	1301	83.0	46.8	38.9	29.02



QS 3000W 138 V3 IPM Mid drive motor with EM150-2, Dyno Test & MAP

Dynamometer

## 2.2.4 Drawing & Test Report

### → Testing Equipment

## E-bike Test Equipment: Chassis Measuring Equipment

Max Speed Test

Acceleration Test (0~100m. 00~100km/h)

Road Condition Test

Loading Testing

Wind Function



## 2.3 Package & Shipping



### Package(standard export packing)

- 1). Polyfoam box + carton box (for sample)
- 2). polyfoam box + carton box + wooden box (for special sample)
- 3). polyfoam box + carton box + pallet (for mass order)
- 4). Or according to customer's requirements.

### Shipping

- 1). Samples can be shipped by Express(like DHL, FedEx, UPS, EMS, TNT etc.), sometimes by sea and by air also optional.
- 2). Mass order can be shipped by sea and by air.
- 3). Or you can pick the good from our factory.



# 3. Distributor

**Firstly, thank you for your support on QS Motor.**

If you tested QS Motor, and interest to be the dealer for better price & service. Meanwhile, able to do some maintenance of hub motor (e.g. change hall sensors).

Welcome to be QS Motor Dealer. For QS Motor, there are different grade of dealer as follow.

---

## 3.1 Potential Distributors

No MOQ limited, annual order above USD 10000.0 (seats limited).

For potential distributors, the price will be much cheaper which base on the Dealer Quotation Regularition (e.g. offer 20-29pcs quotation for < 20pcs, even for sample).

We don't have to sign the dealer contract, the setas limited (5 customers for each saler).

Moreover, we support wholesale, if your customer/friend need motors, we could send the motor from our warehouse & do transaction with you. In this way, you could help your friend to save money.

Validity: 1 Year since 1st order with new price.

Advantages:

- 1).Better price on Motor & Other Kits we could offer
- 2).If deliver some motors together by express, air cargo or sea shippment, the delivery cost per motor will be much less than 1pc by express. In this way, you will have better price than us for local market (consider the delivery cost).

# 3. Distributor

## 3.2 Official Dealer

The quotation will be much better base on different MOQ & annual quantity, refer to the Dealer Quotation Regulation for details.

- 1)MOQ 15-29pcs, annual 100pcs
- 2)MOQ 30-49pcs, annual 120pcs
- 3)MOQ 50pcs, annual above 120pcs
- 4)MOQ 50pcs, annual above 500pcs.

Validity: 1 Year

Advantages:

- 1).Official dealer have all right of the Potential Distributors.
- 2).Dealer could leave some motors in our warehouse, if their customer need samples, we could send from our warehouse.

Please don't hesitate to contact with us if any interest!

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### Hereby, We declare QS Motor's Official Dealer as below.

· Polywarm Deutschland GmbH, VECTOR

Web: <http://www.vectorebike.com/>

Add: Germany,80798 Munich,Zieblandstr 35, Polywarm GMBH

Phone: +49 157 56507678

E-mail: [info@vectorebike.com](mailto:info@vectorebike.com)

· Michael Moser

Web: [https://www.facebook.com/picassoe?ref=br\\_rs](https://www.facebook.com/picassoe?ref=br_rs), on facebook

Add: 3855 Blair Mill rd. Apt 226-A Horsham PA 19044, USA

Phone: +1-484-522-0695

E-mail: [m2faux@gmail.com](mailto:m2faux@gmail.com)

## 4. Trade Details

### 4.1 Producing Time

For normal motors, it will takes 12-13 business days (6 business per week).

For customized motor & single shaft motor, it takes 17-18 business days.

For some accessories, the producing time normally no more than 10days, and sometimes can be send out within 2days if we have it in stock.

For special customized products, pls. expand to the time to we talked.

### 4.2 Payment

Wire Transfer/TT, Money Gram,Western Union, Paypal  
100% in advance(for sample)

Generally,we prefer T/T, Money Gram,Western Union  
100% in advance (for sample).



## 5. Warranty

Motor Warranty: 15months(since the date of producing)

Other parts Warranty: 12months(since the date of producing)

- 1). We only do after-sales service for the customers who buy products from us directly, not from other agencies.
  - 2). Warranty period for motor and other parts: 15 months (since the production time)
  - 3). If any after-sales issue, pls. contact us with detailed pictures or videos, we will reply you with reasonable solutions once we confirm the issue.  
E.g: if there is quality issue for our products when you received and confirmed by both parties, we will send you free accessories or whole motor on your next order. If the products damaged during shipping, pls.contact us and Express within 24h, then we will send you new one for free.
  - 4). Destructive test/abusing usage due to test purpose, we could not do after-sale issue for free.
- Your feedback is very important for us, not only positive feedback but also negative; we try our best to satisfy you as much as possible. Meanwhile, if you are satisfied with our products, your five star feedback online would be highly appreciated.

# QSMOTOR International Sales SiAECOSYS Team



# Thank you !

## Taizhou Quanshun Electric Drive Co., LTD.

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Province, P.R China

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-Email: [info@cnqsmotor.com](mailto:info@cnqsmotor.com)

-Web: [www.cnqsmotor.com/en/](http://www.cnqsmotor.com/en/)

[www.siaecosys.com](http://www.siaecosys.com)

