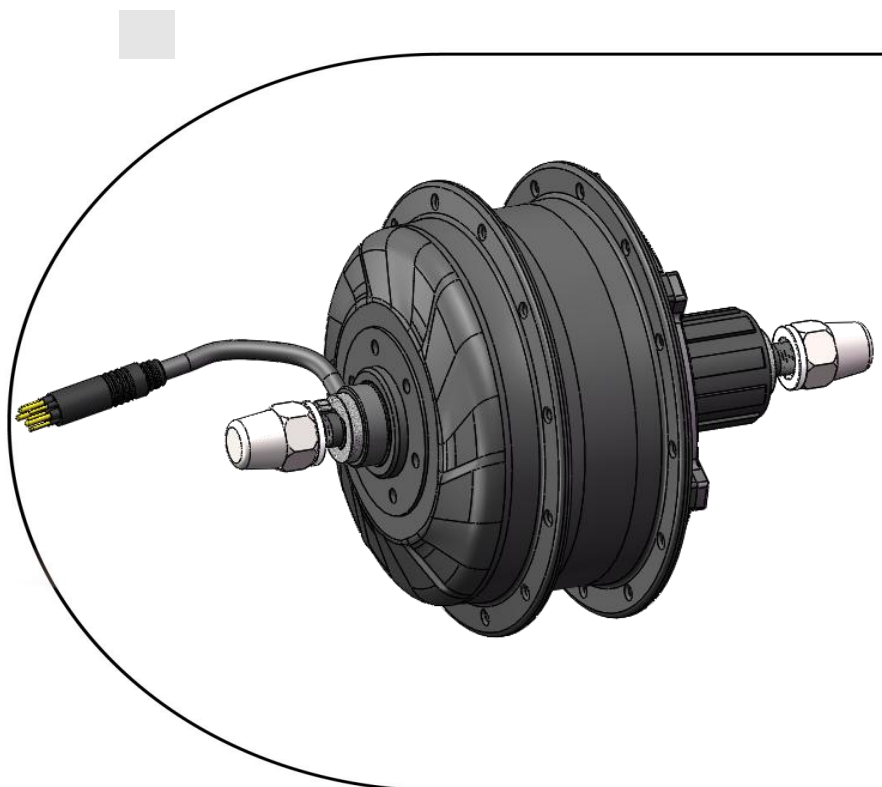


RM G311.250.DC product specification



Product category: PMSM Brushless Rear Motor

Product line: H400

Product model: RM G311.250.DC

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审核:

批准:

编制日期: 2023-09-06

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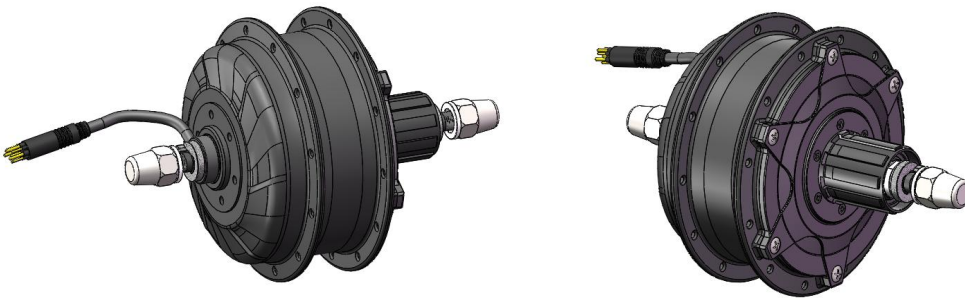
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I. Product Introduction

1. Appearance



2. Category and Line

PMSM Brushless Rear Motor-H400

3. Product Model

RM G311.250.DC

4. Scope of Application

The vehicles equipped with the motor can be used on:
flat urban roads;
concrete roads and asphalt roads;

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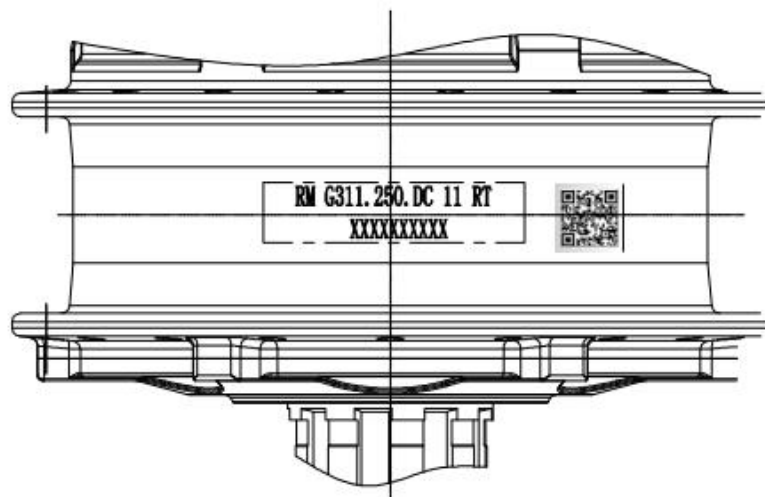
crushed stone roads;
Means of power assistance
scale power drive;

5. Features

- ① Brushless. Long service life of bearing. Free from maintenance;
- ② Small in size、light weight、high power, concise structure;
- ③ Nice starting up performance. no hysteresis damping kinetic energy consumption, strong climbing ability;
- ④ No spark. No electromagnetic interference;
- ⑤ High efficiency, low power consumption, and long range;
- ⑥ High cost performance;
- ⑦ Excellent waterproof performance;
- ⑧ The motor is equipped with speed sensor (6PCS);

6. Identification

There is a laser engraved nameplate on the housing, as shown in the following figure:



| | | | |
|-------|------------|-------|-------|
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A、 Upper code:

RM G311.250.DC 11 RT

RM G311.250.DC : product model ;

13:number of turns;

RT: thermistor

B、 Lower code:

F2R3200006

F2: production line;

R320: manufacturing date, March 20, 2017;

0006: serial number, from 0000 to 9999,0006 indicates the 6th ;

NOTE: the laser engraved numbers and QR code cannot be maliciously erased, polished or defaced, otherwise no after-sales service will be provided

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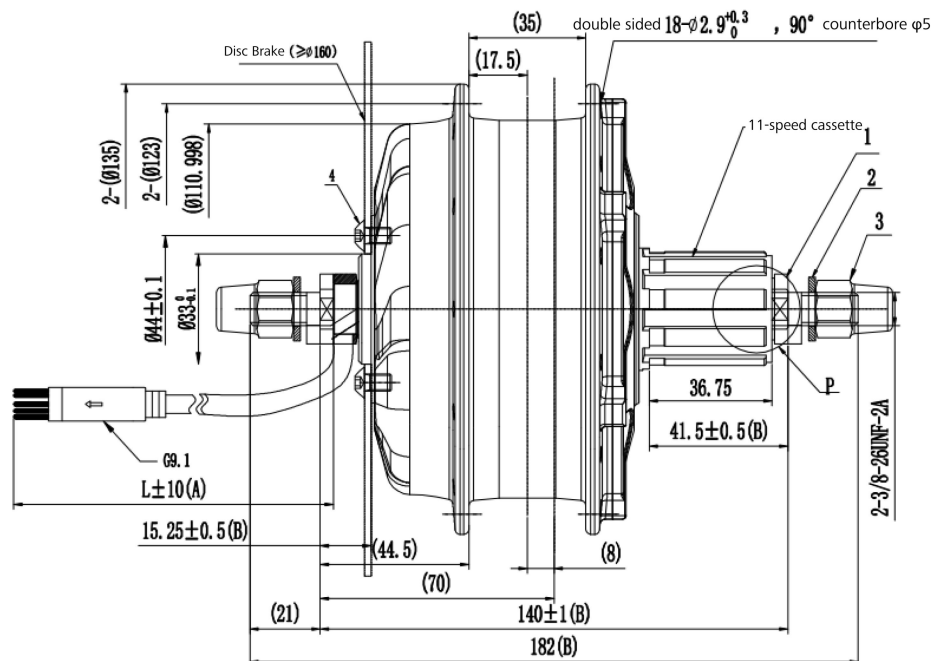
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II.Product performance and requirement

1. Technical data

1) Overall dimension

RM G311.250.DC (3/8) motor



A.shaft length=182, OLD=140;

B.Lead wire: "L" according to the order

NOTE: Transition connection lines are not included in the product, taking into account differences in customer models. If the customer needs to be matched, it can be proposed separately in the order, and the cost is calculated separately.

2) Performance parameter


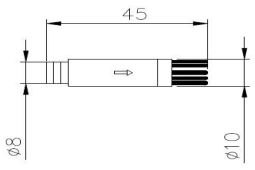
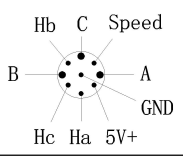
- ① Model RM.G311.250.DC
- Rate power 250W
- Rated voltage 36V
- Rated efficiency $\geq 75\%$
- No-load current $< 1.3A$
- Rated current $< 9.5A$
- No-load speed $245 \pm 10RPM$
- Rated speed $205 \pm 10RPM$
- Rated torque $> 9 N \cdot m$
- Max torque $30N \cdot m$
- Brake Disc brake
- Noise level $< 55dB$
- Waterproof level IPX6
- Operating environment $-20^{\circ}C \sim 45^{\circ}C$

NOTE: please learn the latest data before matching, as the product performance is continuously improved.

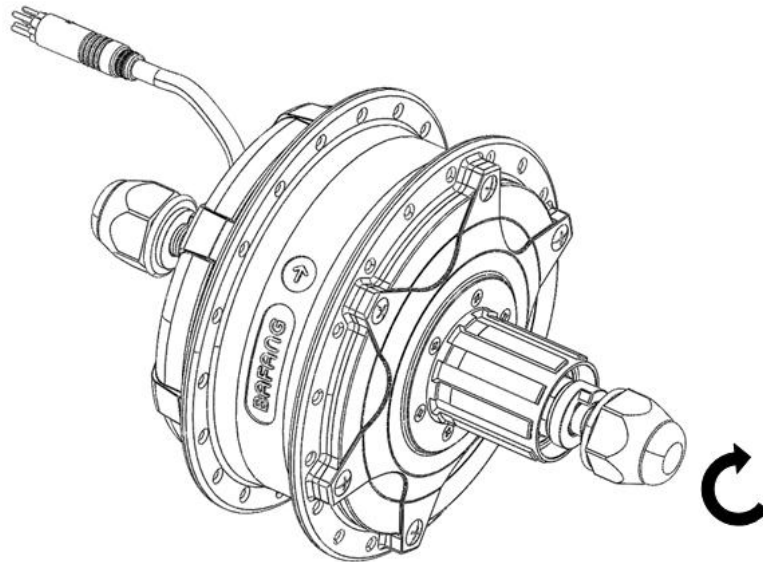
3) Surface treatment

Shockproof black coating

4) Connector

| | | | | | |
|-------------|--------------------|---|---|---|--------|
| G9.1 | |  |  |  | |
| Power cable | | | Signal cable | | |
| A | 1.5mm ² | blue | Ha | 0.2mm ² | Blue |
| B | 1.5mm ² | green | Hb | 0.2mm ² | Green |
| C | 1.5mm ² | yellow | Hc | 0.2mm ² | Yellow |
| | | | hall+ | 0.2mm ² | Red |
| | | | GND | 0.2mm ² | Black |
| | | | Speed signal | 0.2mm ² | White |

5) Rotating direction



2. Anti-corrosion performance

Salt spray test was conducted according to the standard GB/T2423.17. After continuous spraying for 96 hours with a 5% NaCl solution, salt spray temperature of 35.5°C and saturated barrel temperature of 37.5°C at normal temperatures, the surface oxygen corrosion met the standard, and there was no water seepage in the motor.

3. Caution

- ① The bicycle should be placed in a well-ventilated and dry warehouse, instead of a damp place, a place with acid or alkali, or a place with magnetic stuff.
- ② The product shall not be overloaded for a long time;
- ③ It shall not come into contact with or be immersed in water when in use.

4. Operating environment

The motor shall be able to operate normally under the following conditions:

- ① Ambient temperature: $-20^{\circ}\text{C}\sim 45^{\circ}\text{C}$;
- ② Relative humidity: (15-95) %RH;
- ③ The altitude shall not exceed 1500 m or atmospheric pressure is 86 -106 Pa
- ④ There is no seriously corrosive gas or medium that affects the electrical insulation performance.

5. Relevant attachment

- ① Attachment:

| Name | Material No. | Specification | Qty. (PCS) |
|---------------|---------------|-----------------|------------|
| Washer | 1401060000105 | stainless steel | 2 |
| Stop pin | 1401050000042 | Dacromet | 2 |
| BC3/8 cap nut | 1401080000122 | stainless steel | 2 |

- ② The installed disc brake is not included in the product, and customer needs to purchase it separately.

- ③ Wheel rim:

26inch, hub 1.75~2.125 (Recommend model: HF026)

700C, hub 1.75~2.125 (Recommend model: HF026)

28inch, hub 1.75~2.125 (Recommend model: HF026)

Spoke length=224mm (26 inch)

Spoke length=252mm (700C)

Tire:

26 inch/700C/28inch \times 1.75~2.125






III.Packaging and transportation

Packaging requirement, storage requirement, and transportation requirement
(by sea and by air)

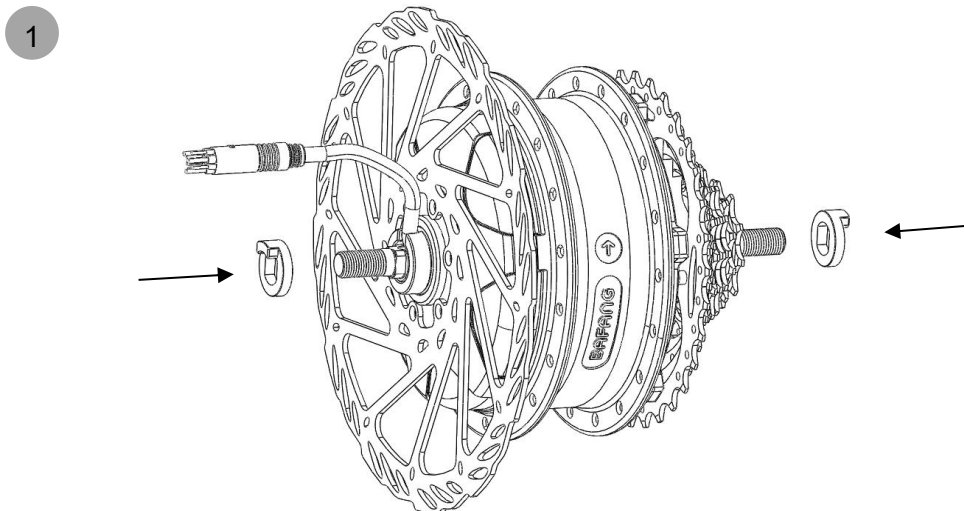
| Dimension of outer box (mm) | Material of liner | Qty. | Gross weight | Dimension of pallet | Stacking method |
|-----------------------------|-------------------|------|--------------|---------------------|------------------------------------|
| 535*340*215 | foam | 6 | 19.4kg | 1.06m*1.06m*0.135m | 7 boxes/layer 5 layers in total |

VI. Motor installation

1. List of tools to be used

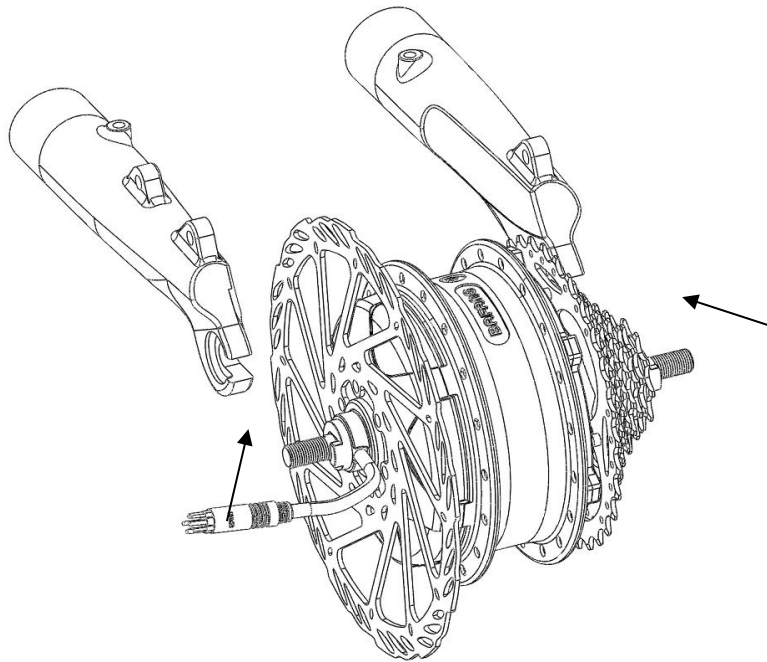
| Use of the Tools | Tools |
|---|--|
| To tighten/loosen the BC3/8 cap nut (RM G311.250.DC (3/8)) |  15 mm Open-end wrench |
| To tighten/loosen the M12 flange nut (RM G311.250.DC(M12)) |  19 mm Open-end wrench |
| To tighten/loosen the disk brake. |  4 mm Internal hex wrench |

2. Installation Step



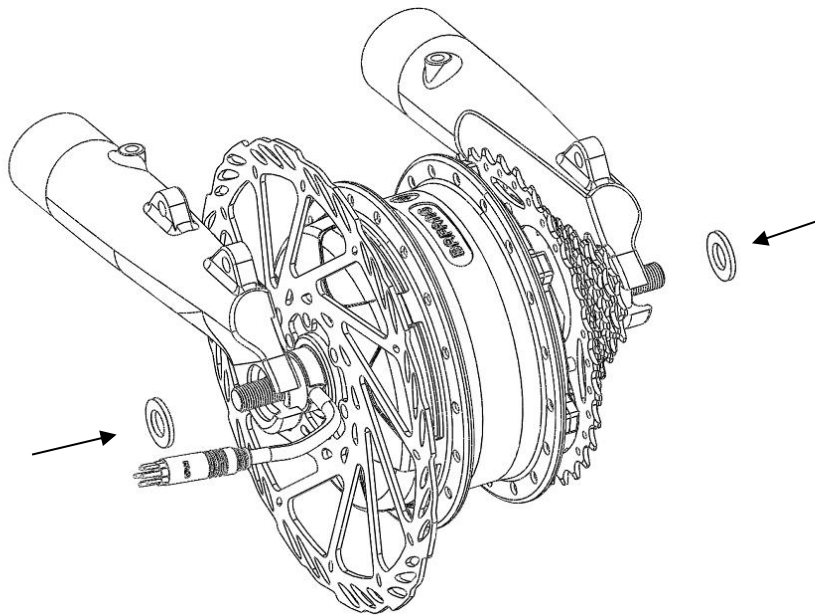
Place the disc brake on left side of motor (with motor cable) and the freewheel on the other side; then mount the stop pins on both side respectively

2



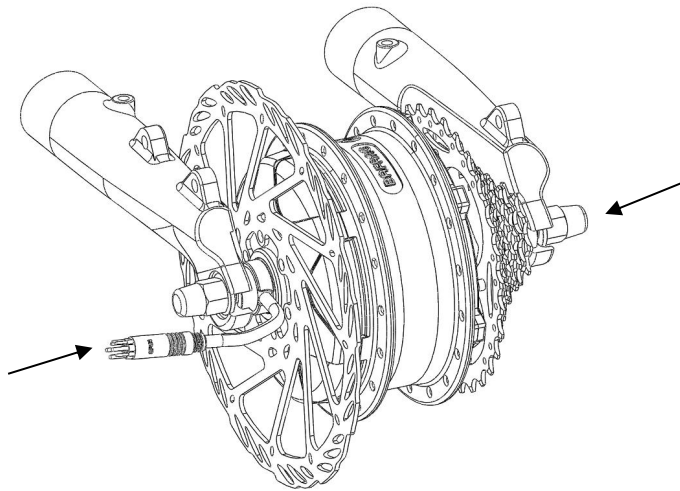
Insert the motor into the frame

3



Mount the 2mm washer on both sides of the frame.

4



Tighten the BC3/8 cap nuts with open spanner on both sides of the motor (torque requirement: 30-36N.m)

V. Copyright statement

For questions about your electric bicycle, please contact your supplier first, unless you are the manufacturer of electric bicycle.

Bafang Motor reserves the right to modify the technical data without prior notice.

Content and picture owner:

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Website: www.bafang-e.com

Legal inspection shall be conducted by a law firm specializing in intellectual property business.

The user manual complies with the requirements and regulations in the mechanical standard ISO 4210:2014 and EN 15194.

If this product is delivered or used outside the European Union, the electric bicycle manufacturer must provide you with the user manual required by that country.