

# 6 DEALER MANUAL FOR M560 (MM G5300.500/750.C)

---



## CONTENT

---

<b>6.1 Safety Instruction</b> .....	<b>2</b>	<b>6.3.2 Install the Drive Unit</b> .....	<b>6</b>
<b>6.2 Production Description</b> .....	<b>3</b>	<b>6.3.3 Connect the Components</b> .....	<b>8</b>
6.2.1 Basic Information.....	3	<b>6.3.4 Install the Motor Housing</b> .....	<b>9</b>
6.2.2 Technical Specification.....	3	<b>6.3.5 Install the Chainwheel</b> .....	<b>12</b>
6.2.3 Overall Dimension.....	4	<b>6.3.6 Install Cranks</b> .....	<b>13</b>
<b>6.3 Installation</b> .....	<b>5</b>	<b>6.4 Operation</b> .....	<b>14</b>
6.3.1 List of Tools to be Used.....	5	<b>6.5 Maintenance</b> .....	<b>14</b>

# 6.1 SAFETY INSTRUCTION

---



For safety, be sure to read this manual thoroughly before use, and follow it for correct use.

Save all safety warnings and instructions for future reference.

- **Observe all national regulations which set out the approved use of e-bikes.**

- **Do not attempt to change the performance of the product. Especially increase the power of the drive unit or the maximum speed that it supports.**

Doing this may put yourself and others at risk, and you may also breach statutory regulations.

- **Do not disassemble the drive unit yourself. The drive unit must only be repaired by qualified personnel using only original spare parts.**

This will ensure that the safety of the drive unit is maintained. Unauthorised opening of the drive unit will render warranty claims null and void.

- **Be sure to follow the instructions in the manuals when installing the product.**

Only use Bafang original components and spare parts. If a component or spare part is incorrectly assembled or adjusted, it can lead to product failure or accident.

- **In order to protect the electric parts, before disassembling the product, switch off the system power first by pressing the control unit of HMI and then disconnect the power cable.**

When installing the product, fix the parts first, then connect the power cable, and finally switch on the system power by pressing the control unit of HMI.

- **After a ride, do not allow your unprotected hands or legs to come into contact with the motor housing.**

Under extreme conditions, such as continuously high torques at low travel speeds, or when riding up hills or carry loads, the housing may reach a very high temperature.

- **Be sure to also inform users of the following safety information and instructions.**

- Observe the instructions in the user manual in order to ride safely.

- Observe the appropriate rules and regulations of the country, state or region in which you use the e-bikes.

- Use the product under the supervision of someone responsible for safety, and only as instructed. - Do not allow anyone (including children) with reduced physical, sensual, or mental capacity, or those without experience or knowledge, to use the product.

- Do not allow children to play near the product.

- Never modify the performance parameters. Doing so may cause a system error or legal question.

- If any malfunction or trouble occurs, consult the place of purchase.

- For any questions regarding methods of installation and maintenance of the product, consult the place of purchase.

- Products are not guaranteed against natural wear and deterioration from normal use and aging.

## 6.2 PRODUCT DESCRIPTION

### 6.2.1 Basic Information

- **Model**

MM G5300.500/750.C

- **Appearance**



- **Nameplate**

The following figure shows the laser mark and/or QR code label on the motor housing.



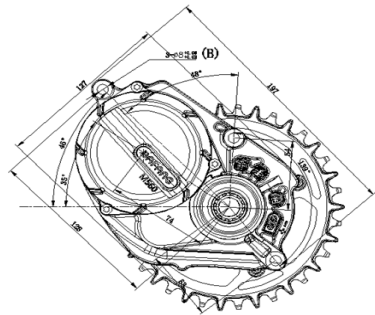
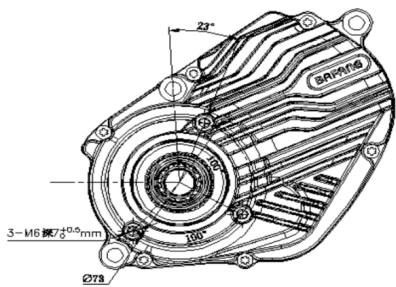
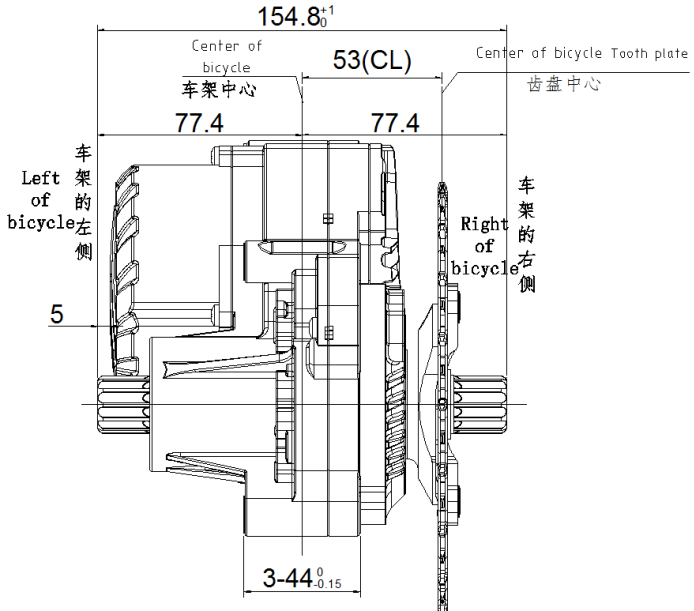
#### ⚠ WARNING

It is forbidden to maliciously erase, polish, stain the laser mark and QR code label, otherwise no after-sales service will be provided.

### 6.2.2 Technical Specification

Item	Parameters	
Rated Voltage	48V	48V
Rated Power	500W	750W
Max. Torque	130N.m	140N.m
Operating Temperature	-20~45°C	-20~45°C
Storage Temperature	-10~40°C	-10~40°C
Protection Rating	IPX6	IPX6
Weight (approx.)	3.3kg	3.3kg






## 6.2.3 Overall Dimension



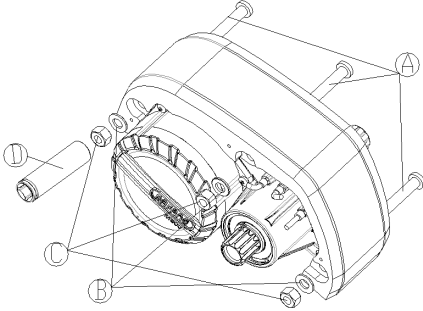

## 6.3 INSTALLATION

---

### 6.3.1 List of Tools to be Used

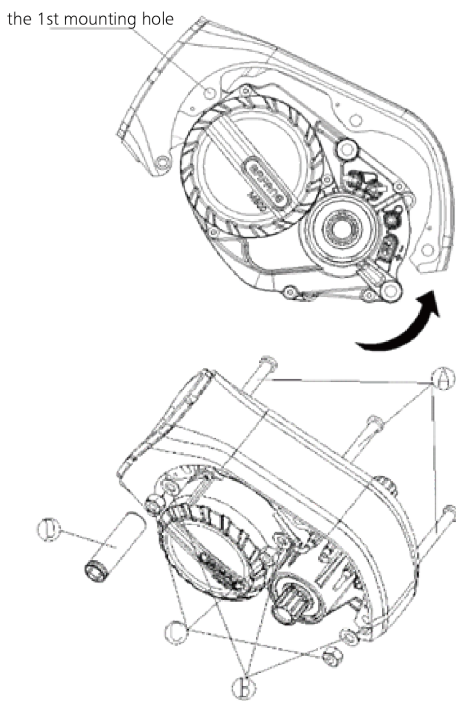
Diagram	Name
	5mm hex wrench
	T10 torx wrench
	14mm socket
	BBT-18 (ParkTool)
	Bafang tool (for connectors)

## 6.3.2 Install the drive unit

Install the drive unit - connection plate (common)	
1A	 <p>(A) M8 specialized bolt (B) M8 flat washer - A (C) M8 lock nut</p>
<ul style="list-style-type: none"> <li>- Align the 3 mounting holes of the motor with the mounting holes of the frame connection plate.</li> <li>- Insert 3 M8 special bolts into the 3 mounting holes respectively from the right side of the frame and out from the left side of the frame.</li> <li>- Screw 3 sets of M8 standard lock hexagon nuts (13 * 13) and M8 flat washers onto the bolt on the left side of the frame and tighten them.</li> </ul>	<p>Tool</p>  <p>14 mm</p>
	<p>Tightening torque</p> <p>35 N.m</p>

## Install the drive unit - connection plate (battery)

1B



- (A) M8 specialized bolt
- (B) M8 flat washer - A
- (C) M8 lock nut

- Align the leftmost M8 screw hole in the motor to the leftmost mounting hole in the connection plate. Rotate the motor clockwise using this hole as a pivot point to align the other 2 mounting holes in the motor with the connection plate mounting holes.

- Insert 3 M8 special bolts into the 3 mounting holes respectively from the right side of the frame and out from the left side of the frame.

- Screw 3 sets of M8 standard lock hexagon nuts (13 \* 13) and M8 flat washers onto the bolt on the left side of the frame and tighten them.

Tool

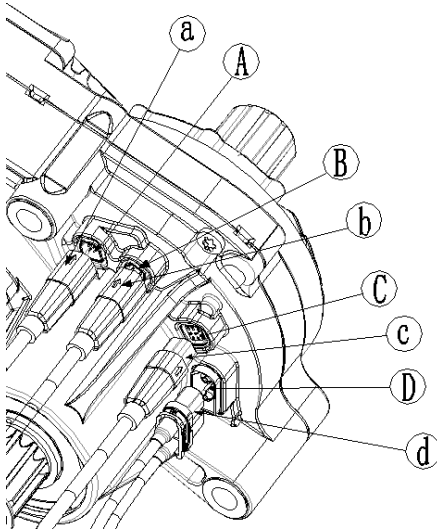


Tightening torque

35 N.m

### 6.3.3 Connect the components

Connect the components.



A 8-core cable male connector (motor)

a 8-core cable female connector

A 6-core cable male connector (motor)

b 6-core cable female connector

C 8-core cable female connector (motor)

c 8-core cable male connector

D Power cable male connector (motor)

d Power cable female connector

- Insert 8-core cable female connector into 8-core cable male connector (motor).

- Insert 8-core cable male connector into 8-core cable female connector (motor).

- Insert power cable female connector into power cable male connector (motor).

(The step that insert 6-core cable female connector into 6-core cable male connector (motor) is required or not depends on the customer's functional requirements.)

Tool





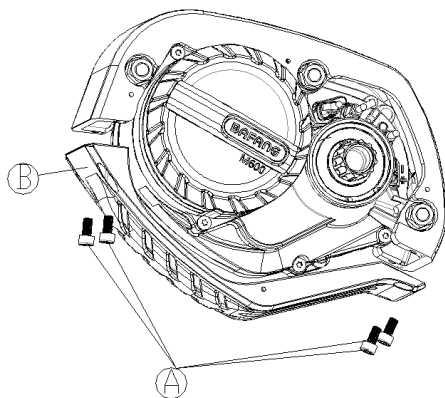
How to use Bafang tool (for connectors):

1. Grasp the cable connector with your left hand. Use your right hand to insert the tool into the bottom of the cable connector.
2. Turn the tool clockwise to lock the two together.
3. Insert the assembly into the appropriate position on the motor, snap it into place, and then turn the tool counterclockwise.
4. Remove the tool when the two are disengaged.

## 6.3.4 Install the motor housing

Install the bash guard - for connection plate (common)

1A



(A) M5\*8 hex socket head cap screw

(B) Bush guard

Tighten 4 M5\*8 hex socket head cap screws through the mounting holes in the bash guard to the connection plate.

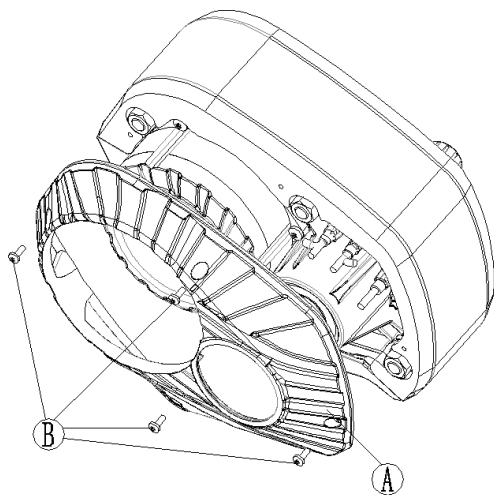
Tool



Tightening torque

4 N.m

Install the motor housing - for connection plate (common)



- (A) Motor housing
- (B) M3\*8 torx pan head screw

Tighten the 4 M3\*8 torx pan head screws through the mounting holes to the connection plate and the bash guard.

Tool

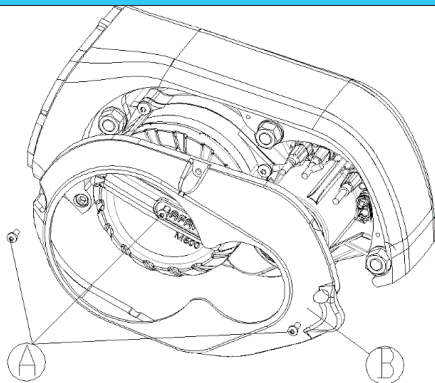


Tightening torque

1 N.m

## Install the motor housing - for connection plate (battery)

1B



(A) M3\*8 torx pan head screw

(B) Motor housing

Tighten 3 M5\*8 torx pan head screws through the mounting holes in the motor housing to the connection plate.

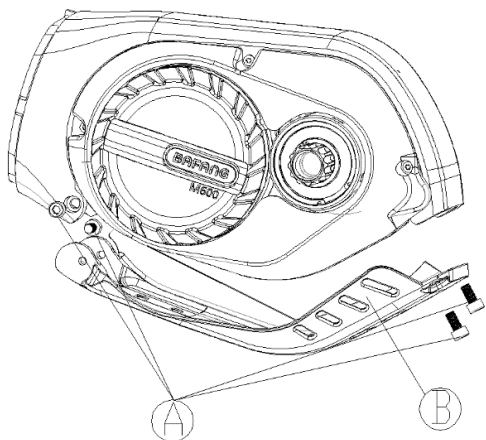
Tool



Tightening torque


1 N.m

## Install the bash guard - for connection plate (battery)

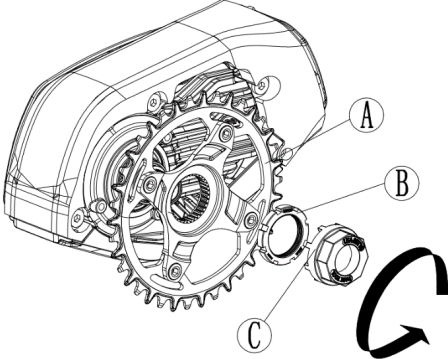



(A) M5\*8 socket head cap screw

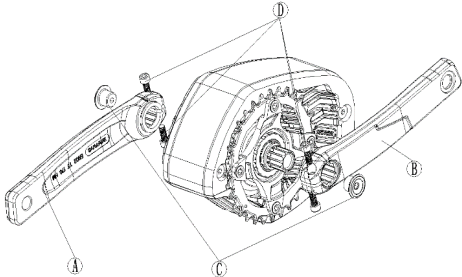

(B) Bash guard

<ul style="list-style-type: none"> <li>- Tighten 2 M5*8 hex socket head cap screws through the mounting holes in the bash guard to the connection plate (right side of the picture).</li> <li>- Tighten 2 M5*8 hex socket head cap screws through the mounting holes in the connection plate to the bash guard (left side of the picture).</li> </ul>	Tool
	
	Tightening torque
	4 N.m

### 6.3.5 Install the chainwheel

Install the chainwheel and the lock ring, and tighten it with the Park Tool.	
1	
Align the spline teeth on the chainwheel with the grooves on the motor, insert the chainwheel, and tighten the lock ring onto the motor counterclockwise.	Tool
	
	Tightening torque
	35 N.m

## 6.3.6 Install cranks

Install the left and right cranks.		
1		<p>(A) Left crank            (B) Right crank            (C) Screw (matching with cranks)            (D) M5*8 hex socket head cap screw</p>
<p>Install the right crank onto the motor axle from the right side, then lock the screw C onto the motor axle with a hex wrench (tightening torque: 1.5 N.m), and tighten the two M6*20 hex socket head cap screws alternately with the hex wrench.</p>		Tool
		
		Tightening torque
		C: 1.5 N.m  D: 15 N.m
<p><b>Note:</b> Ensure that the left and right cranks are parallel when installing. Do not tighten at once from one side.</p>		

## 6.4 OPERATION

---

- Environmental conditions for operation:
  - a) Operating temperature:  $-20^{\circ}\text{C}$ – $45^{\circ}\text{C}$ ;
  - b) Relative humidity: (20–90)%RH;
  - c) Atmospheric pressure: (86–106)kPa;
  - d) No seriously corrosive gas or no medium affecting the electrical insulation around.
- Be sufficiently familiar with how to start the drive unit before riding on busy streets, otherwise the unexpected start may result in an accident.
- Avoid water immersion during operation.
- Avoid violent impact during operation.
- Prohibit overload for a long time.
- Avoid direct touch of hands or legs with products that have been running for a long time without protection to prevent heat burns.
- Observe the appropriate rules and regulations of the country, state or region in which you use the e-bikes.

## 6.5 MAINTENANCE

---

- Maintenance must be carried out by Bafang authorized personnel with the correct equipment.
- Do not disassemble the product.
- It is recommended to regularly check whether the end cap nuts on both sides of the product are loose, whether the connector is loose, whether the shape is deformed or whether the power cord is broken.
- The components are designed to be fully waterproofed to withstand wet weather riding conditions. However, do not deliberately place them into water.
- Power off the ebike system before cleaning the product by pressing the On/Off button of HMI.
- Do not clean the product with a high-pressure washer. If water seeps into the electrical components, operating problems or corrosion may result.
- Use a damp, well wrung out cloth, when cleaning the motor housing and cover.