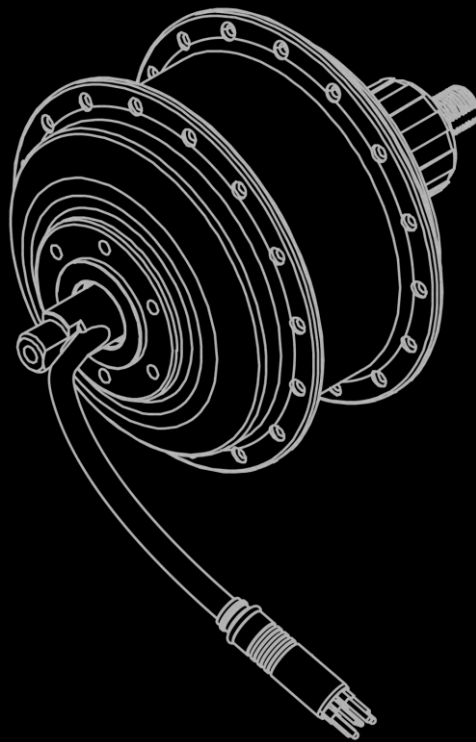




Product Manual

MRC-E250



Original Instruction

Version 221206

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Table of Contents

Introduction

Product Features

Product Description	1
Parts Description	1
Product Dimension	2

Technical Data

Function	4
Characteristic.....	4
Mounting Parameter	5
Connection.....	5
Certification.....	5

Mounting

Tool List	6
Accessory List.....	6
Mounting Instructions.....	7

Safety Instructions

Important Notice	9
Moving and Storage Instructions	9
Maintenance	9
Disposal	9



Introduction

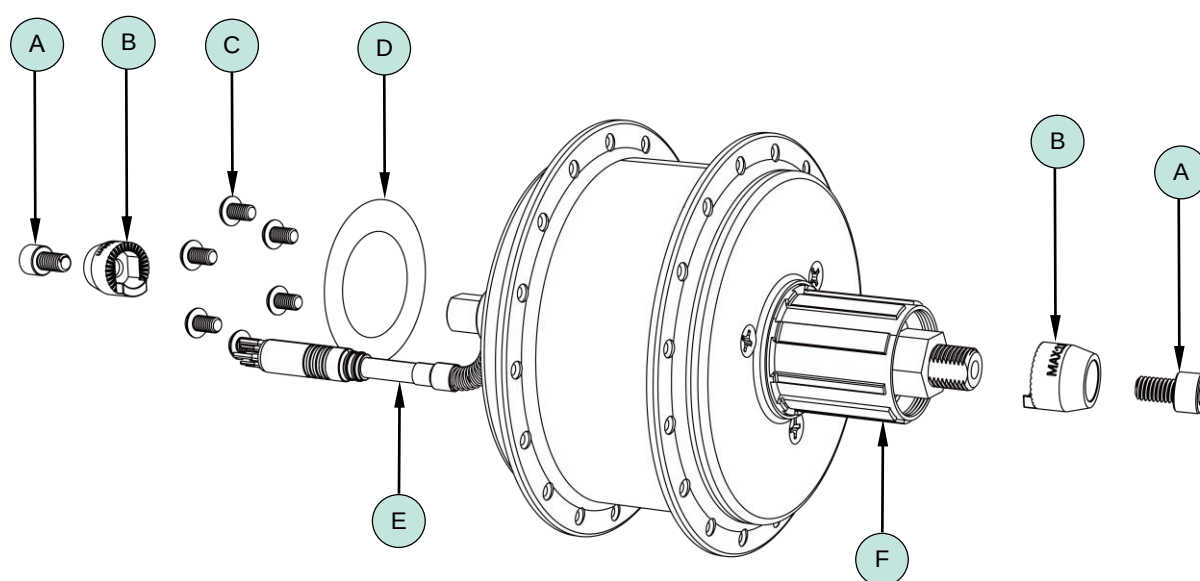
This manual is intended primarily for the trained technician to install, disassemble, or maintain the Hyena e-bike system only. Please read all the safety warnings and instructions carefully. Failure to follow the warnings and instructions may result in death or severe injuries. Save this manual for future reference.

Product Features

Product Description

The **MRC-E250** rear hub motor provides power for the e-bike. It features an amazingly lightweight, extra small size, and is maintenance-free.

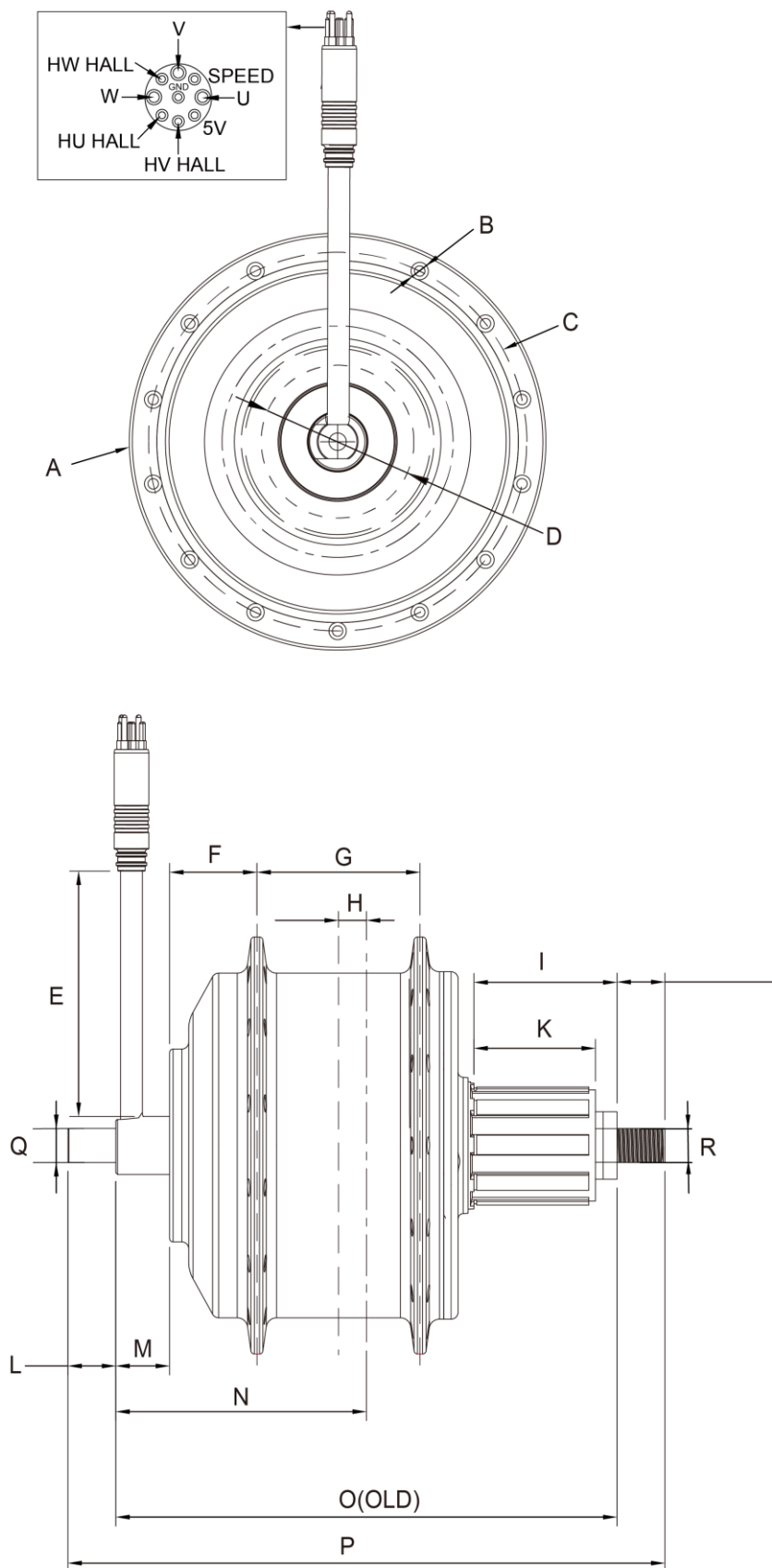
Parts Description



Item	Description	Item	Description
A	M6 Hex socket security bolt	D	Sticker (remove on install)
B	Anti-rotation flange nut	E	Cable (connect to controller)
C	M5 button-head hex socket screw	F	Cassette mounting base

Product Dimension

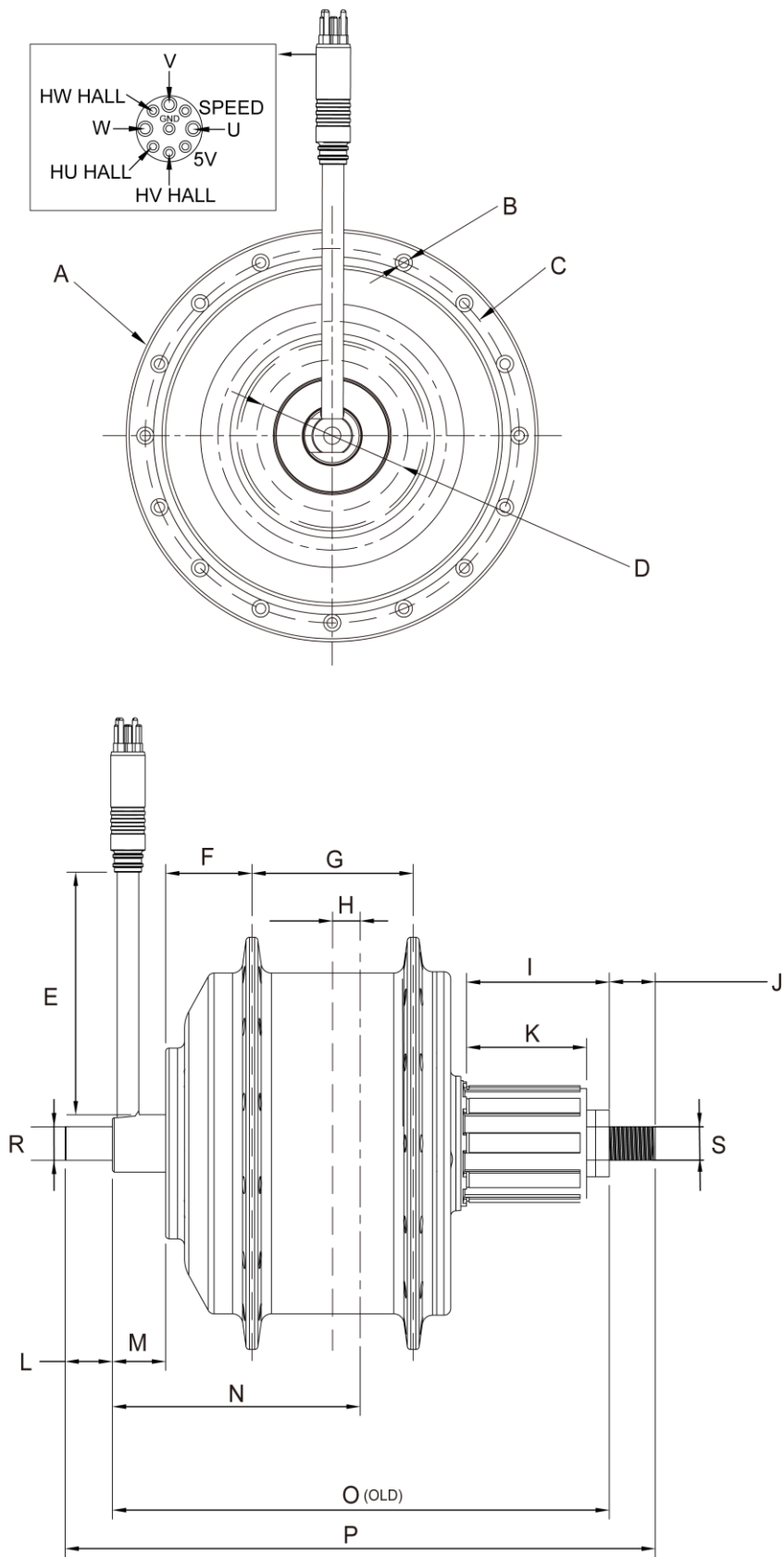
28H: 40010M20B-1



Item	Dimension
A	Φ120.0
B	Φ3.0, 28 Holes
C	PCD Φ109.0
D	PCD Φ44.0
E	Cable 220 ⁺¹⁰ ₋₀ mm
F	25.2
G	47.0
H	8.0
I	41.2
J	13.8±0.1
K	35.0
L	13.8±0.1
M	15.5
N	72.2
O	144.5±1
P	172±1
Q	10 ⁺⁰ _{-0.2}
R	10 ⁺⁰ _{-0.2}

Unit: mm

32H: 40010M20A-1



Item	Dimension
A	Φ120.0
B	Φ3.0, 32 Holes
C	PCD Φ109.0
D	PCD Φ44.0
E	Cable 220 ⁺¹⁰ ₋₀ mm
F	25.2
G	47.0
H	8.0
I	41.6
J	13.6±0.6
K	35.0
L	13.8±0.1
M	15.5
N	72.2
O	144.5±1
P	172±1
Q	10 ⁺⁰ _{-0.2}
R	10 ⁺⁰ _{-0.2}

Unit: mm

Technical Data

Function		
Rated power	250 W	
Rated voltage	36 V	
Wheel size	26 to 28 inches	
Max. torque	40 Nm	
No-load RPM	≥ 270 RPM	w/o loading
Max. current at n0 RPM	≤ 1.7 A	w/o loading
Max. noise at n0 RPM	< 60 dB	w/o loading
Rated RPM	250 ±5% RPM	
Max. efficiency	≥ 80 %	
Weight	2.2 Kg	
Waterproof level	IP54	
Hall sensor	Yes	
Speed sensor	Yes	1 Magnet

Characteristic		
Protocol	N/A	
Control type	Sine wave	
Reduction ratio	1:12.6	
Operating temperature	-10°C to +50°C 80%RH	
Storage temperature	-20°C to +70°C 80%RH	
Insulation	≥ 50 MΩ	



Mounting Parameter		
Mounting position	Rear Hub	
Outer dimension	120 mm	
Shaft length	197 mm	
O.L.D. (over-locknut dimension)	144.5 mm	
Axle type	10 mm	
Spoke hole	28H/32H	28H: 40010M20B-1 32H: 40010M20A-1
Spoke hole type	13G	
Brake type	Disk brake BCD 44 mm 6 bolts	
Derailleur	Cassette 8-11 speed	≥ 34T freewheel
Cable outlet	Non-drive side through the shell	
Cable length	220±10 mm	
Standard connector	CM-WP412-09M	

Connection		
N/A		

Certification		
EN 15194:2017	Yes	
CE	Yes	
RoHS	Yes	



Mounting

Tool List

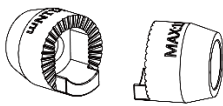
Torque wrench set

Hexagon key set

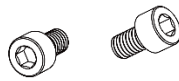
Freewheel tool

Accessory List

Anti-rotation flange nuts (2 pcs)

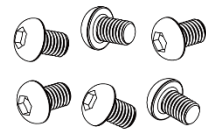


Hex socket security bolts (2 pcs)



M6xP1.0xt14mm

M5 button-head hex socket screws (6 pcs)



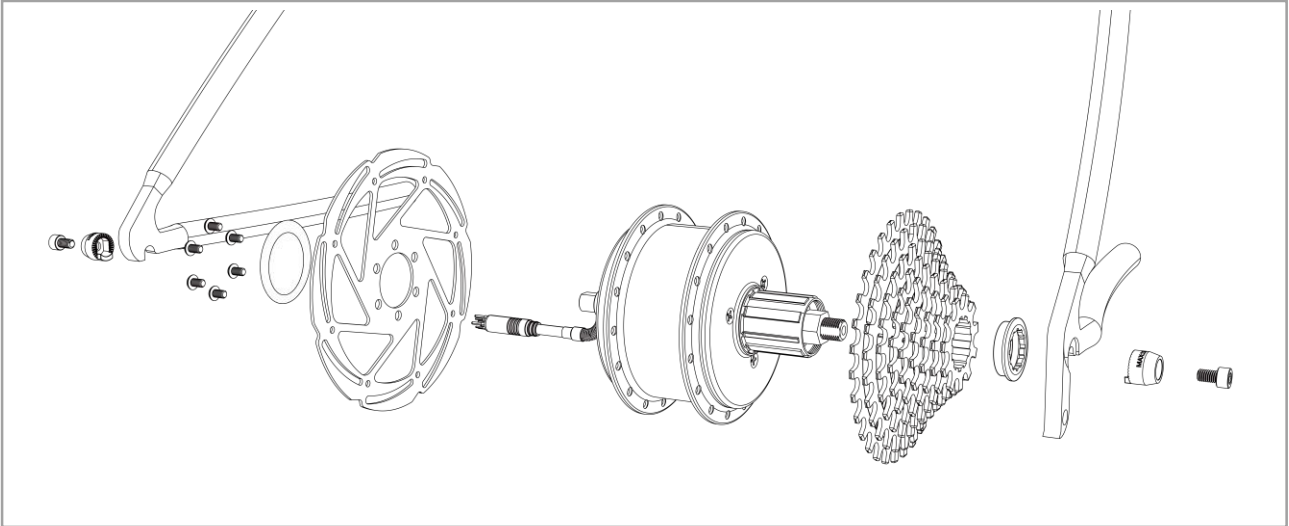
M5x7mm



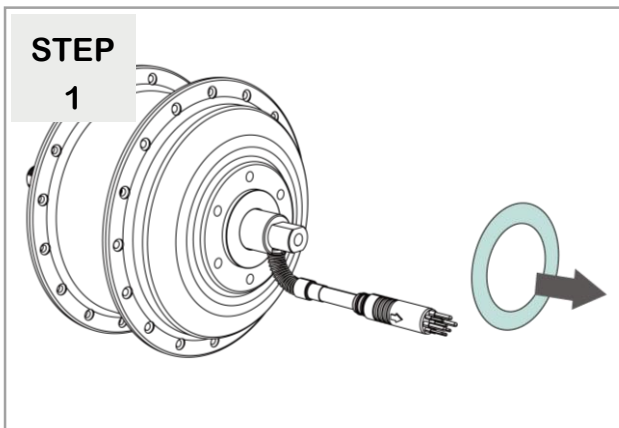
Mounting Instructions

- Use the proper bicycle tools during the installation or removal process.
- Carefully installing this product is necessary, do not strike it with any tool such as a hammer or wrenches.
- **CAUTION!** Please strictly follow these steps for assembly; otherwise, an incorrect assembly may cause permanent damage.
- **NOTE:** The bike image in the manual may be different from the actual bike, but will be enough to help you understand related instructions.

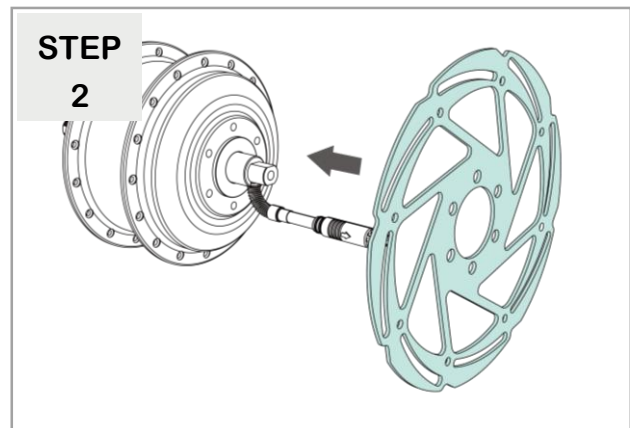
Exploded View of Assembly



Installation

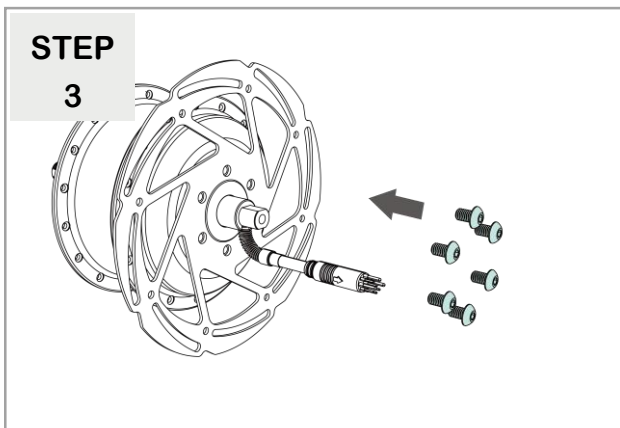


Peel the sticker away from the motor (left side).

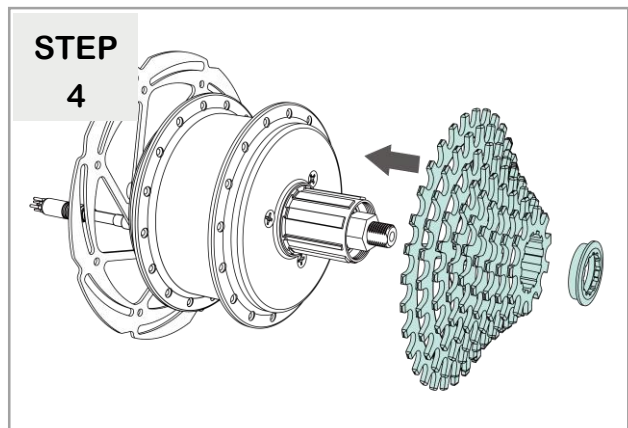


Install the disc.

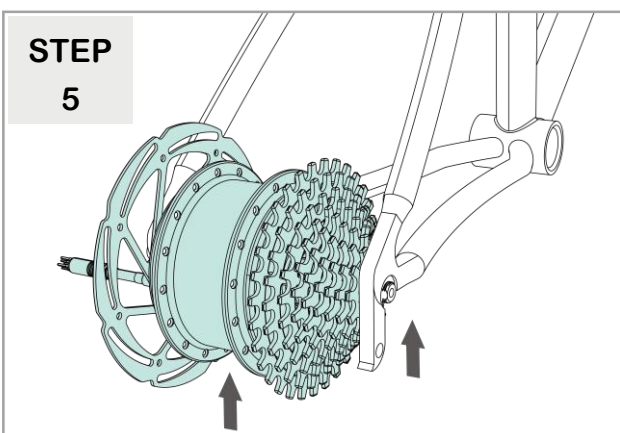




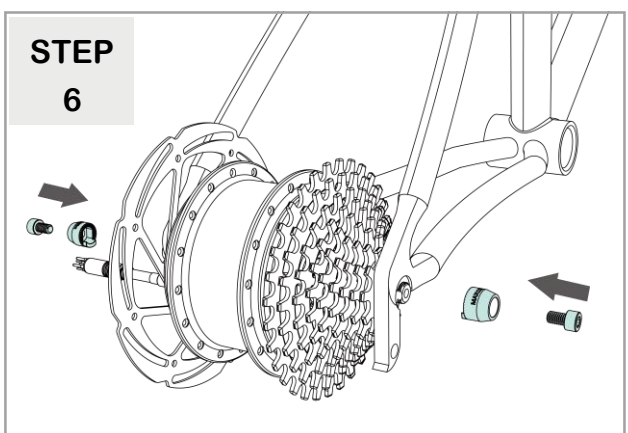
Fasten the screws (maximum torque 4.5 Nm).



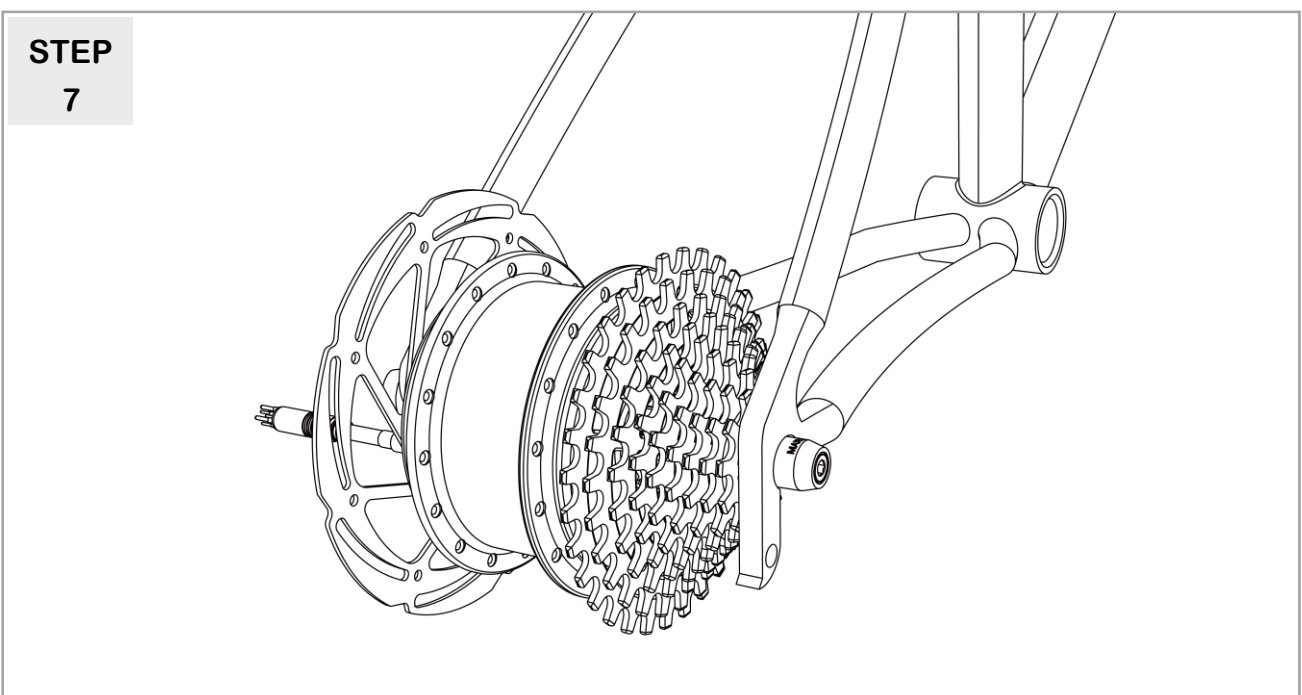
Install and fasten the cassette sprocket and cassette locking ring (right side).



Install the motor (rear wheel).



Insert the torque washer through the motor shaft (washer bulge aligns with the flat side of the shaft), then fasten the flange nut (maximum torque 11 Nm).



Completed.



Safety Instructions

Instructions Pertaining To A Risk Of Fire,

Electric Shock, Or Injury To Persons

WARNING - When using the **MRC-E250**, basic precautions should always be followed, including the following:

- Read all the instructions before using the product.
- Close supervision is necessary to reduce the risk of injury when using the product near children.
- Do NOT put fingers or hands into the product.
- Do NOT use this product if the flexible power cord or output cable is frayed, has broken insulation, or any other signs of damage.
- All the component leads shall use original Hyena components.
- This product is not intended to be used at ambient temperatures above 50°C (122°F) or less at ambient temperatures of -10°C (14°F).
- Do NOT immerse the product or any e-system component in water.
- Do NOT place the product or any e-system component near fire or heat.
- Always turn off the e-bike system and remove the battery before installing, disassembling, or modifying any components on the e-bike.

Important Notice

- This product manual is intended primarily for the trained technician to install, disassemble or maintain the e-bike.
- Users who are not professionally trained for bicycle assembly should not attempt to install, disassemble or modify the components themselves.
- All Hyena e-system manuals and technical documents are accessible online at “www.hyena-ebike.com”.
- The term “battery” is used in these instructions to mean all original Hyena e-Bike batteries.
- Read and observe the safety warnings and directions contained in all the Hyena e-bike system operating instructions and in the operating instructions of your e-bike.

Moving and Storage Instructions

- When possible, keep the product and all e-system components in their original package and keep tools or other metal objects away from them while storage and moving.
- If you did not keep the original packaging, they can be packed in solid cartons with proper packing materials such as bubble wrap or soft cloth, and label the cartons Fragile.
- Do NOT store the product at ambient temperatures above 70°C (158°F) or less at ambient temperatures of -20°C (-4°F).
- Cover the product to prevent sunlight damage if you keep it stored at any place for more than a week.

- Store the product on a fireproof surface without contact with water, heat, or sand.
- Do NOT place any heavy item on the product or any e-system component.
- Do NOT place the product or any e-system component in the car trunk for more than one day.
- Do NOT load or move the product in the rain whenever possible, and make sure it has no moisture or mildew before loading it.
- Do NOT drop the product from more than 30cm (11.81 inches) in height.

Maintenance

- Do NOT clean the product or any e-system component with detergent or organic solvent. Only clean the product with a water-dampened soft cloth.
- Do NOT clean the product or any e-system component with pressured water.

Disposal

- In accordance with Directive 2012/19/EU, electronic devices that are no longer usable and defective/drain batteries must be collected separately and recycled in an environmentally friendly manner.



This symbol is only valid within the European Union. Follow local regulations when disposing of used batteries. If you are not sure, consult the place of purchase or a bicycle dealer.

- The e-system drive unit, including the motor, controller, battery, speed sensor, HMI, accessories, and packaging, should be disposed of in an environmentally correct manner.
- Do NOT dispose of e-bikes and their components with household waste.

SAVE THESE INSTRUCTIONS

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