Hummingbird 0802 25000KV

NewBeeDrone brushless motors, set of 4
Installation and user manual



Disconnect the battery and remove the propellers before any work on the motors. The motors get hot during operation – do not touch them after a flight until they have cooled down.

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1. Product description

1.1 Intended use

The set contains four **Hummingbird 0802** brushless motors rated at **25,000 KV** from the manufacturer NewBeeDrone. They are designed for lightweight whoop-style micro drones powered by a single-cell (1S) battery and are suitable for both racing and freestyle flying.

The motors are connected to the electronic speed controllers (ESC) on the drone's flight controller (FC). The manufacturer supplies them with soldered-on wires terminated with a JST 1.0 connector. The propeller is pressed onto the 1 mm shaft, and the motor is attached to the frame with screws through the holes in its base.



Hummingbird 0802 25000KV motor

1.2 Specifications and package contents

Product designation	Hummingbird 0802 25000KV (manufacturer code 02AC32)
Manufacturer	NewBeeDrone
Motor size	0802
KV rating	25,000 KV
Power supply	1S (one Li-Po / LiHV cell)
Shaft diameter	1 mm
Connection	wires soldered to the motor solder pads, JST 1.0 connector (3 pins)
Cable length	25 mm
Pieces in the set	4

▶ Package contents

- 4× Hummingbird 0802 25000KV motor with soldered-on wire and JST 1.0 connector
- screws for mounting the motors to the frame
- plastic box

▶ Not included

Propellers, flight controller (FC) with electronic speed controllers (ESC), frame, battery, spare connectors and spare screws. Spare connectors and screws are offered separately by the manufacturer.



Package contents

2. Use

2.1 What else you need

- a micro drone frame for 0802 size motors – the holes in the motor base must line up with the holes in the frame,
- a flight controller (FC) with electronic speed controllers (ESC) for 1S power, ideally with JST 1.0 motor connectors,
- four propellers with a 1 mm shaft hole, sized to suit the frame (two clockwise and two counter-clockwise),
- a single-cell (1S) battery and a suitable charger,
- a computer with a flight controller configurator (e.g. Betaflight) and an ESC configurator,
- a small Phillips or hex screwdriver to suit the screw heads, possibly a soldering iron.

2.2 Mounting on the frame

① Disconnect the battery and remove the propellers from the drone.

② Place the motor on the frame arm so that the holes in the base line up with the holes in the frame and the wire points towards the centre of the drone.

③ Fasten the motor with the screws from the set. Tighten them gradually and gently – do not overtighten them.

④ Route the wire so that it does not touch the rotating motor bell and does not rub against the edges of the frame.

※ Use the screws supplied with the set. A screw that is too long can reach the motor windings and damage them.

2.3 Connecting to the flight controller

Plug the JST 1.0 connector on the motor wire into the motor connector on the flight controller (FC) or electronic speed controller (ESC). Connect each motor to the position that matches its location on the frame according to the diagram in the configurator (in Betaflight, the *Motors* tab).

If your flight controller has no motor connectors, the connector can be cut off and the wires soldered directly to the ESC solder pads. The order of the three motor wires does not affect the function, it only determines the direction of rotation.



Wires soldered to the motors and terminated with a JST 1.0 connector

2.4 Motor check and direction of rotation

Always carry out the check **without propellers fitted**.

① Connect the drone to the computer and open the *Motors* tab in Betaflight.

② Connect the battery and confirm the safety warning.

③ Spin up each motor in turn at low throttle and check that the correct motor spins in the correct direction according to the diagram.

④ Reverse any motor spinning the wrong way in the ESC configurator (reverse motor direction). With soldered motors, the direction can also be changed by swapping any two of the three wires.

2.5 Mounting the propellers

- Push the propeller straight onto the 1 mm shaft and press it home. Support the motor while doing so so that the shaft does not bend and the mounting does not loosen.
- The direction of the propeller must match the direction of rotation of the motor – do not mix up clockwise and counter-clockwise propellers.
- The motor manufacturer does not specify particular propellers. Choose them according to the frame size and the frame manufacturer's recommendations.

2.6 Operation

- The motors are designed for **1S** power. Do not use them with a battery with a higher cell count.
- Before flying, insert a **fully charged** battery: Li-Po 4.20 V, LiHV 4.35 V.
- End the flight at the latest when the voltage drops to 3.5 V.
- After the first flights, check the motor temperature. A very hot motor indicates overload, damage or an unsuitable propeller.
- If a motor is blocked (propeller in grass, impact), Disarm (switch off the motors) immediately.

3. Safety and maintenance

3.1 Safety instructions

- The product is not a toy and is not intended for children under 14. Keep screws and small parts out of the reach of children.
- Installation requires basic experience with building and setting up FPV drones.
- Rotating propellers and the motor bell can cause injury. Carry out all tests and work on the drone without propellers and with the battery disconnected, unless the procedure explicitly requires otherwise.
- With the battery connected, keep fingers, hair and loose clothing away from the propellers.
- The motors get hot during operation. Do not touch them after a flight until they have cooled down.
- The current of a blocked motor can destroy the motor and the electronic speed controller (ESC) or cause a fire. Switch off a blocked motor immediately (Disarm).
- Charge Li-Po and LiHV batteries only with a suitable charger, under supervision and on a non-flammable surface. Do not continue to use a damaged, swollen or overheated battery.

3.2 Maintenance and motor replacement

- After every flight, inspect the motors and remove hair, grass and dirt from the shaft and bell.
- After a crash, check that the motor rotates freely and the shaft is not bent. Replace a motor with a bent shaft.
- Check that the wire insulation is not damaged and that the connector is held firmly.
- Motor replacement: disconnect the battery, remove the propeller, unplug the connector from the flight controller, loosen the screws and mount the new motor according to chapter 2.2.
- Store an unused drone in a dry place, with the battery disconnected and charged to the storage voltage of 3.8 V.

3.3 Troubleshooting

Problem	Possible cause and solution
Motor does not spin	The connector is not plugged in or the wire is damaged. Check the connection and the wire.
Motor spins in the wrong direction	Change the direction of rotation in the ESC configurator (chapter 2.4).
Drone flips over on take-off	Wrong motor order, direction of rotation or swapped propellers. Check everything according to chapters 2.3–2.5.
Motor grinds or vibrates	Dirt in the bell or a bent shaft. Clean the motor or replace it.
Motor is very hot after a flight	Blocked or damaged motor, unsuitable propeller. Check the motor and replace it if necessary.

4. Information for the EU and Czech Market

4.1 Importer and responsible person in the EU

The product is placed on the European Union market by the importer stated below, who is at the same time the responsible person within the meaning of Article 16 of Regulation (EU) 2023/988 of the European Parliament and of the Council on general product safety (GPSR).

Importer / responsible person in the EU	Rotorama, s.r.o.
Company ID (IČO)	051 57 692
VAT ID (DIČ)	CZ05157692
Registered office	Okrajová 1351, 674 01 Třebíč, Czech Republic
E-mail	info@rotorama.cz
Phone	+420 252 252 098
Website	www.rotorama.com

4.2 Disposal of electrical equipment



- The crossed-out wheeled bin symbol on the product, its packaging or in the documentation means that at the end of its service life the product **must not be disposed of together with mixed municipal waste**.
- Hand it over at a take-back point for electrical equipment – at a collection yard, at a take-back point of a collective system, or at the retailer when purchasing a new equivalent product. Take-back is free of charge for the end user.
- The obligations under Act No. 542/2020 Coll., on end-of-life products, are fulfilled by the importer through a collective take-back system.
- Proper disposal helps prevent negative impacts on the environment and human health and contributes to the reuse of secondary raw materials.

Through its contractual partner **ASEKOL a.s.**, the company ensures the take-back of waste electrical equipment from households and the separate collection of waste electrical equipment, batteries and accumulators in accordance with the applicable legislation. The customer is entitled to hand over old electrical equipment or a battery or accumulator at any collection point of the above contractual partner. The addresses of these take-back points are listed at www.asekol.cz, www.ecobat.cz and also https://visoh2.mzp.cz/RegistrMistZO/RegistrMistZOPublic/MapaMistZpetOdberu.

5. Warranty and rights arising from defective performance

The rights and obligations of the contracting parties are governed by Czech law, in particular by Act No. 89/2012 Coll., the Civil Code, and Act No. 634/1992 Coll., on consumer protection.

- The seller is liable to the buyer for the product being free of defects on receipt. If the buyer is a consumer, a defect may be notified **within two years of receipt** of the product (Section 2165 of the Civil Code).
- If a defect appears within **one year** of receipt, the product is deemed to have been defective already at the time of receipt (Section 2161(5) of the Civil Code).
- When purchasing online, a consumer has the right to **withdraw from the contract within 14 days** of receiving the goods without giving a reason (Section 1829 of the Civil Code).
- Claims should be made with the retailer from whom you purchased the product. The importer's contact details are given in Chapter 4.1.
- The competent body for out-of-court settlement of consumer disputes is the **Czech Trade Inspection Authority**, Štěpánská 796/44, 110 00 Prague 1, www.coi.cz.