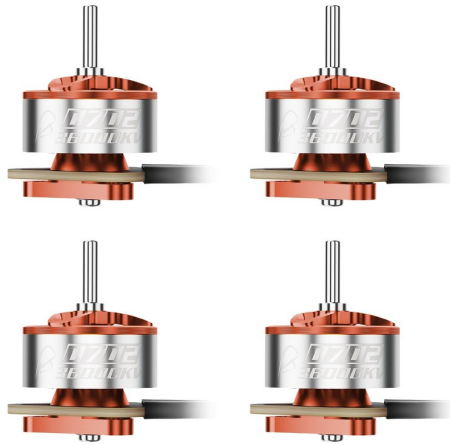




0702 36000KV Champion

BETA FPV 0702 Brushless Motors (2026)

Set of 4 brushless motors for 1S micro FPV drones



This manual covers the Champion (36000KV) version only. Read it carefully before installation and first use and keep it for future reference.

Contents

1. Safety instructions

2. Product description

3. Legal requirements for drone operation in the Czech Republic and the EU

4. Installation

5. Connection and setup

6. Operation

7. Maintenance and troubleshooting

8. Information for the EU and Czech market

9. Warranty and rights arising from defective performance

1. Safety instructions

1.1 Before you start

The BETAFPV 0702 36000KV Champion motors are parts intended for building or repairing a micro FPV drone (whoop) powered by a single cell (1S). They are not a toy. Installation and operation require basic knowledge of building FPV drones, soldering or plugging in connectors, and working with the configuration software of the flight controller (FC).

- The product is not intended for children. Keep small parts (screws) out of the reach of children – risk of inhalation or swallowing.
- Use the motors only with an electronic speed controller (ESC) designed for brushless motors and with a 1S power supply.
- Do not modify the motors and do not use a motor that is mechanically damaged.

1.2 Rotating parts and propellers

- The motor reaches very high speeds. The rotating rotor bell, shaft and propeller can cause injury, especially to eyes and fingers.
- **Keep the propellers removed during any work on the drone (installation, setup, checking the direction of rotation)**, unless the procedure explicitly requires otherwise.
- Always disconnect the battery before fitting the propellers. Never hold the drone in your hand with the propellers fitted while the battery is connected.
- Do not use cracked, bent or otherwise damaged propellers.

1.3 Power supply and batteries

- According to the manufacturer, the rated voltage of the motor is **4.2 V (1S)**. Do not apply a higher voltage.
- Handle Li-Po batteries according to their manufacturer's instructions: do not charge them unattended, do not use swollen or damaged cells and do not short-circuit them.
- Always plug and unplug connectors with the battery disconnected.

1.4 Heat and operating environment

- The motor heats up during operation. Do not touch it after a flight until it has cooled down.
- A blocked motor (e.g. caught on an obstacle or wrapped in hair) overheats quickly and may be damaged. After a crash, Disarm (switch off the motors) as soon as possible.
- Protect the motors from water, moisture, sand and metal filings – the rotor magnets attract small metal particles.

2. Product description

The BETA FPV 0702 Brushless Motors (2026) in the Champion version are size 0702 brushless motors with a KV rating of 36000KV. According to the manufacturer, they are designed for the BETA FPV Air65 II whoop and intended for racing. The stator is made of 0.10 mm laminations, the rotor runs in dual ball bearings, and the manufacturer specifies a reinforced rotor bell and shaft design for higher crash resistance.

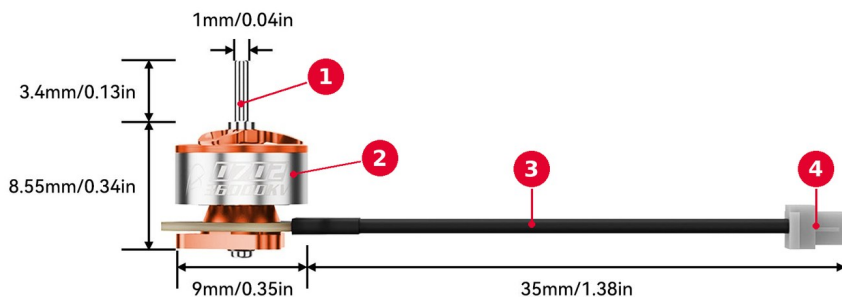
2.1 Package contents

- 4× BETA FPV 0702 36000KV brushless motor (Champion)
- 12× M1.4×3 screw



Package contents

2.2 Parts description



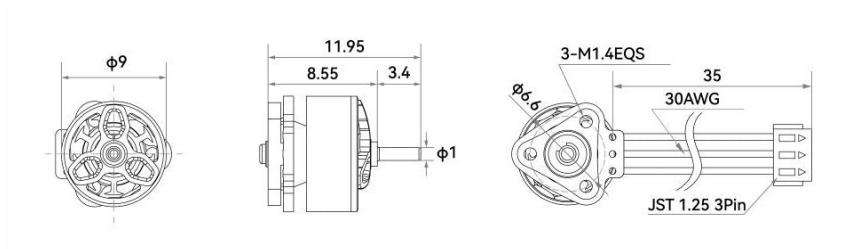
0702 36000KV Champion motor (dimensions according to the manufacturer)

- ① Shaft $\varnothing 1.0$ mm, length 3.4 mm – for mounting the propeller
- ② Rotor bell marked 0702 / 36000KV
- ③ Lead wires 30AWG, length 35 mm
- ④ JST1.25 connector, 3 pins – for connection to the flight controller / ESC

2.3 Technical data

Parameter	Value
Manufacturer	BETA FPV
Type	0702 Brushless Motors (2026) – Champion
KV rating	36000KV
Maximum power	27.53 W
Maximum current	7.17 A
Rated voltage	4.2 V (1S)
Rotor bearings	dual ball bearings
Weight (1 motor)	1.59 g
Shaft diameter	Ø1.0 mm
Shaft length	3.4 mm
Wires	30AWG, length 35 mm
Connector	JST1.25, 3 pins
Mounting	3× M1.4, Ø6.6 mm hole circle
Dimensions	Ø9 mm × 8.55 mm (without shaft), overall height 11.95 mm
Stator lamination thickness	0.10 mm

2.4 Dimensional drawing



Dimensions in mm. Mounting 3× M1.4 on a Ø6.6 mm hole circle.

2.5 Load performance

The measured values are given by the manufacturer for the 0702 36000KV Champion motor with a GF 1207-3P propeller.

Voltage (V)	Throttle (%)	Current (A)	Thrust (g)	Efficiency (g/W)	Input (W)	Speed (RPM)
3.92	20	0.74	2.0	0.69	2.90	5602
3.92	30	1.15	6.4	1.42	4.51	25866
3.91	40	1.93	11	1.46	7.54	33792
3.90	50	2.75	15.7	1.46	10.72	40248
3.89	60	3.48	20.6	1.52	13.53	45775
3.88	70	4.24	25.5	1.55	16.43	51074
3.87	80	5.13	30.5	1.54	19.83	55825
3.85	90	6.03	34.8	1.50	23.21	59947
3.84	100	7.17	39.3	1.43	27.53	63597

According to the manufacturer, the data represent the test samples only.

2.6 Recommended parts

The manufacturer recommends the following parts for the 0702 36000KV Champion motors:

Propellers	GF 1207 3-B Props (three-blade, for 1.0 mm shaft)
Frame	Air65 II Frame, Air65 Champion Frame
Flight controller (FC)	Matrix 1S 5IN1 II
Battery	LAVA II 1S 280mAh / 320mAh

3. Legal requirements for drone operation in the Czech Republic and the EU

3.1 The law of the country where you fly applies

Regulations (EU) 2019/947 and 2019/945 apply in all member states of the European Union, but the national implementing rules differ from state to state – registration portals, minimum pilot age, geographical zones, mandatory insurance, permitted frequency bands and maximum transmit power. The information in this chapter describes the situation in the Czech Republic. If you operate the drone in another country, you must follow the regulations of the state in which you fly.

3.2 The motor as part of a drone

The motor itself is not an unmanned aircraft. However, the operating rules apply to the drone in which you install the motors. A drone built or repaired from individual parts usually has no class C0–C4 and is operated as a privately built unmanned aircraft system in the open category (subcategory A1 with a take-off mass below 250 g, otherwise A3).

- If the drone has a camera, its operator must **register** – in the Czech Republic with the Civil Aviation Authority (ÚCL) – and display the registration number on the drone, even with a mass below 250 g.
- Fly no higher than 120 m above ground, within visual line of sight and never over assemblies of people. Respect geographical zones.
- In the open category, flying with FPV goggles is only possible with an **observer** standing next to the pilot and watching the drone directly with their own eyes.
- We recommend taking out liability insurance for damage caused by operating the drone.

4. Installation

4.1 What you will need

- a frame for 0702 motors with 3× M1.4 mounting on a Ø6.6 mm hole circle (see chapter 2.6),
- a flight controller (FC) with an integrated 1S electronic speed controller (ESC) and sockets for JST1.25 motor connectors,
- a suitable screwdriver for M1.4 screws and propellers for a 1.0 mm shaft,
- a computer with the flight controller configuration software (e.g. Betaflight Configurator).

4.2 Mounting the motor on the frame

- ① Disconnect the battery and remove the propellers.
- ② Place the motor on the motor mount of the frame so that the holes in the motor base line up with the holes in the frame and the wire points towards the flight controller.
- ③ Fasten the motor with three M1.4×3 screws from the package. Tighten the screws gently and crosswise – the threads in the motor base are small and strip easily.
- ④ Route the wire so that it cannot touch the propeller or the rotating bell and is neither stretched nor sharply bent.

✖ Do not use screws longer than those supplied in the package. A screw that is too long may touch the stator windings and damage the motor.

4.3 Connecting to the flight controller

Plug the JST1.25 connector into the socket of the corresponding motor on the flight controller. The order and positions of the motors (M1–M4) are given in the flight controller manual and in the configuration software. Insert the connector straight and without force; when unplugging, pull the connector body, not the wires.

5. Connection and setup

5.1 Checking the motors without propellers

- ① The propellers must be removed. Connect the drone to the computer and start the configuration software.
- ② Connect the battery and, on the *Motors* tab, after confirming the safety notice, briefly spin up each motor individually.
- ③ Check that the correct motor spins (position M1–M4) and that it runs smoothly, without rubbing or unusual noise.

5.2 Direction of rotation

Each motor must rotate in the direction prescribed for its position by the flight controller configuration (diagram on the *Motors* tab). With a motor connected via a connector, the direction cannot be changed by swapping wires; change it in the electronic speed controller (ESC) configuration or by setting the reversed motor direction in the configuration software.

5.3 Fitting the propellers

- The manufacturer recommends **GF 1207 3-B Props** propellers for a 1.0 mm shaft.
- Fit each motor with the propeller matching its direction of rotation (CW / CCW) according to the propeller and frame instructions.
- Push the propeller on straight and without force so that the shaft does not bend.
- Fit the propellers only after all checks are complete and always with the battery disconnected.

6. Operation

6.1 Pre-flight check

- Use a **fully charged** 1S battery (Li-Po 4.20 V).
- All motors are firmly screwed on, the screws are not loose.
- The rotor bell turns freely by hand, without rubbing, play or foreign objects (hair, grass, dirt).
- The propellers are undamaged, correctly fitted and match the direction of rotation of the motor.
- The wires are undamaged and cannot get into the propeller.

6.2 During and after the flight

- Land when the battery voltage drops to **3.5 V** per cell (1S).
- After an impact or crash, Disarm immediately so that blocked motors do not overheat.
- After landing, check the temperature of the motors. A clearly different temperature of one motor compared to the others indicates a problem (damaged propeller, bearing, dirt, configuration error).
- Store batteries that you will not use for a longer time at a storage voltage of **3.8 V** per cell.

7. Maintenance and troubleshooting

7.1 After every flight

- Remove dust, grass and especially hair or fibres wound around the shaft under the rotor bell.
- Check that the shaft is not bent – a bent shaft causes vibrations and propeller wobble.
- Check the tightness of the screws and the condition of the wires and connectors.

7.2 Replacing a motor

Replace a damaged motor (bent shaft, faulty bearing, damaged winding or wire). Before replacing it, disconnect the battery, remove the propeller, unplug the motor connector and remove the three mounting screws. Install the new motor according to chapter 4 and check it according to chapter 5. We do not recommend disassembling the motor.

7.3 Storage

Store the motors in a dry place, in the original box or otherwise protected from dust and metal particles, out of the reach of children.

7.4 Troubleshooting

Problem	Possible cause and solution
Motor does not spin	The connector is not plugged in or is plugged into another position – check the wiring. Check the ESC protocol setting in the configuration software.
Motor spins in the wrong direction	Change the direction in the ESC configuration or by setting the reversed motor direction (chapter 5.2).
Motor rubs, stutters or is noisy	Dirt or hair under the bell, damaged bearing, bent shaft – clean the motor or replace it.
Motor overheats	Damaged or unsuitable propeller, blocked rotor, dirt, unsuitable flight controller settings – remove the cause and check the temperature again after a short flight.
Drone vibrates	Damaged propeller, bent shaft, loose motor screw – check and replace the damaged part.
Drone flips over on take-off	Wrong motor order, reversed direction of rotation or swapped CW/CCW propellers – check according to chapter 5.

8. Information for the EU and Czech Market

8.1 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@rotorاما.cz
Phone	+420 252 252 098
Website	www.rotorاما.cz

8.2 Product conformity



- The product bears the **CE** marking and complies with the requirements of the applicable European Union harmonisation legislation.
- A copy of the **EU Declaration of Conformity** is available from the importer at the address stated above or at the e-mail address info@rotorاما.cz.
- **Product identification:** the type designation (0702 36000KV) is marked on the rotor bell of each motor; the full designation (BETAFPV 0702 Brushless Motors (2026) – Champion) is given on the packaging or in the documents accompanying the product and in this manual.

8.3 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>.

9. 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 8.1.
- 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.