Wasp – Spare Parts

Parts for the Rotorama Wasp frame
User manual



Read this manual before assembly and keep it for future reference.

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Contents

1. Product description

1.1 Intended use

1.2 Specifications and package contents

2. Parts overview

3. Use

3.1 Safety during assembly

3.2 Replacing the arms

3.3 Replacing plates and hardware

3.4 3D printed accessories

3.5 Inspection after assembly and after a crash

4. Information for the EU and Czech market

4.1 Importer and responsible person in the EU

4.2 Disposal

5. Warranty and rights arising from defective performance

1. Product description

1.1 Intended use

Rotorama Wasp – Spare Parts are spare and accessory parts for the **Rotorama Wasp** racing frame, designed by pilot Jakub Toman in cooperation with Petr Homolka. Carbon frame parts, hardware and 3D printed accessories are available. After a crash you replace only the damaged part, and you can assemble a complete frame from the parts according to your preferences.

The frame has a unique geometry: the front arms are *stretch X* shaped for 5" propellers, the rear arms are *true X* shaped and take up to 6" propellers. The rear motors and propellers therefore receive less turbulent airflow. The arms are split in pairs – if an arm breaks, just loosen two screws, slide the pair of arms out and replace it with a new one.



Assembled Rotorama Wasp frame

1.2 Specifications and package contents

Product designation	Rotorama Wasp – Spare Parts, type according to the selected variant (see chapter 2); for the Rotorama Wasp frame
Material	arms and plates: carbon; accessories: 3D print; hardware: metal screws, nuts and standoffs
Thickness	arms 5 mm, bottom plate 3 mm
Flight controller (FC) and ESC mounting	stacks with 30.5 × 30.5 mm and 20 × 20 mm hole spacing
Motors / camera	22XX / 23XX size motors, micro size camera
Propellers	front arms 5", rear arms (Arm 6") up to 6"
Weight of complete frame	59 g including hardware
Package contents	1× spare part according to the selected variant
Not included	other frame parts, electronics, motors, propellers, camera, battery, tools; hardware only with the “Hardware” variant

2. Parts overview

The picture shows all variants available to order. The numbers correspond to the table below the picture.



Rotorama Wasp frame part variants

No.	Variant	Use
1	Arm 5"	pair of arms made of 5 mm carbon, stretch X shape; front arms of the frame
2	Arm 6"	pair of arms made of 5 mm carbon, true X shape; rear arms of the frame, take up to 6" propellers
3	Bottom plate	carbon bottom plate of the frame
4	Top plate – Wide	wider top plate; better covers larger 30 × 30 mm stacks and makes it easier to place an HD camera mount
5	Top plate	standard carbon top plate
6	Hardware	screws, self-locking nuts and standoffs
7	Lollipop Mini Fin	3D printed fin with antenna mount
8	Camera mount – Micro	3D printed mount for a micro size camera
9	Lollipop Mini Mount	3D printed mount for a Lollipop Mini antenna
10	DJI FPV mount – red	3D printed parts for installing the DJI FPV digital system
11	SMA antenna mount	3D printed mount for an antenna with SMA connector

3. Use

3.1 Safety during assembly

- Before any work on the frame, **disconnect the battery** and remove the propellers.
- Carbon is **electrically conductive**. Wires and solder pads must not touch the edges of carbon parts – the insulation may chafe through and cause a short circuit. Route cables with clearance or protect them with heat shrink tubing or tape.
- Do not sand, drill or cut carbon parts without respiratory and eye protection. Carbon dust irritates the skin and airways and is conductive – it must not get into the electronics.
- The edges of carbon parts may be sharp; work carefully.
- The parts are not a toy. Keep them, especially small hardware, out of the reach of children.

3.2 Replacing the arms

The arms are split in pairs: the **Arm 5"** variant forms the front pair, the **Arm 6"** variant the rear pair. The Wasp frame in the H4S Edition uses only 5" arms and has a stretch X shape.

① Disconnect the battery, remove the propellers and unscrew the motors from the damaged arm. You do not need to desolder the motor wires if they can be freed without strain.

② Loosen the two screws that hold the pair of arms between the plates.

③ Slide the pair of arms out of the frame and insert a new one.

④ Tighten the screws, mount the motors and check that the motor wires are not pinched and do not touch the carbon edges.

⑤ Fit the propellers in the correct direction of rotation and carry out the inspection described in chapter 3.5.

3.3 Replacing plates and hardware

- The bottom plate carries the flight controller (FC) and ESC stack – hole spacing 30.5 × 30.5 mm or 20 × 20 mm. When replacing it, make sure the stack is oriented correctly.
- Choose the top plate according to your build: the **wide** one better covers larger 30 × 30 mm stacks and makes it easier to attach an HD camera mount.
- Always replace damaged, bent or stripped screws and standoffs with new ones. Self-locking nuts lose their locking function after repeated loosening – replace them in that case.
- Tighten screws with care: a loose screw causes vibrations, an overtightened one can damage the carbon part.

3.4 3D printed accessories

- The Camera mount – Micro holds a micro size camera between the frame plates.
- The antenna mounts (Lollipop Mini, SMA) and the Lollipop Mini Fin hold the video transmitter (VTX) antenna in a safe position out of reach of the propellers.
- The DJI FPV mount allows the DJI FPV digital system to be installed in the frame.
- Check printed parts after a crash; replace a cracked or deformed part so that the antenna or camera cannot come loose in flight.
- 3D models of the accessories are freely available for printing yourself: www.thingiverse.com/thing:3454412

3.5 Inspection after assembly and after a crash

- Inspect all carbon parts. **Replace** a cracked, frayed or delaminated arm or plate – do not glue it.
- Check that all screws are tight and the motors are firmly attached.
- Make sure that no wire, antenna or mount can get into the reach of the propellers.
- Before the first flight, test the motors without propellers and only then fit the propellers.

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

- The parts contain no electronics or batteries and are not electrical equipment.
- Dispose of unneeded carbon and 3D printed parts according to local waste rules, and take metal hardware to metal collection. Your municipal office or collection yard operator can provide information.
- Do not burn carbon parts.
- Sort the packaging by material into the appropriate recycling containers.

5. Warranty and rights arising from defective performance

Rights of the buyer under Czech law

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.