



MP JET ELECTROMOTOR AC 25/35-20 Mk2

We thank you for having bought our product and hope that it will quite comply with your requirements. We recommend you to study this instruction. Observance of the directions stated here will ensure you operating without problems, achieving of a good output and a corresponding service life of the engine.

TECHNICAL SPECIFICATION OF ELECTROMOTOR

- three-phase AC brushless motor
- dual ball bearing with long life grease
- high speed ball bearings
- two pole rotor - single piece FeNdB type
- FeNdB magnet
- toroidal windings
- winding directly under aluminium body for better cooling
- one part body turned from bar stock on CNC machine
- black anodized surface
- heat treated shaft
- high quality MP JET gold 2,5 mm connectors

Recommend regulator: three-phase, sensorless (with EMF detection version), suitable version 30A, 18A partially.

Recommend gearbox: MP JET BB 4,1:1 for AC 25/35 (MPJ 8200) or BB 3:1 for AC 25/35 (MPJ 8204)

ASSEMBLING ELECTROMOTOR WITH GEARBOX

It is not necessary to adjust the length of the output shaft of the driving electromotor.

For glueing the pinion wheel use the small green package added to the gearbox. It is necessary to remove the grease from both parts (the pinion wheel and shaft) by acetone or benzine. The glue is hardened without air access and by the contact with metal surfaces in a small gap. The glue does not harden on a free surface but only after putting the pinion wheel on the shaft due to the catalytic effect of the metal. The pinion wheel could be manipulated after half an hour and the hardening is finished after 12 hours. The position of the front of the pinion wheel should fit the frontal part of the shaft. Maximum distance between the parts can be 0,1 mm. In case of repeated glueing all scraps of the glue should be removed. The metal surface should stay clean to keep the bind fixed. Put the electromotor with the pinion wheel into the gearbox to the backstop. Attach electromotor to gearbox with three screws M2x5 (put in packet). Use only this screws, (the screws longer than 5 mm can damage the winding or the rotor). Electric wires should be protected from vibrations, press or pulling should be omitted and the bends should display the radius of at least 15 mm.

MOUNTING DRIVE UNIT TO MODEL KIT

The electromotor with gearboxes mounting on the firewall with three PAN HEAD screws 2,2x13. The other possibility is using the front adapter MPJ 8037. The firewall must be rigid with cooling holes.

The gearboxes could be mounted using two methods:

1. standard mounting on the firewall with three radial lugs.
2. like standard electromotor - dismount three PAN HEAD screws 2,2 x6,5, put the front adapter MPJ 8037, use the PAN HEAD screws 2,2x9,5. The complete gearbox with the front adapter is mounted like the standard electromotor on the firewall in the side fuselage.

Please make the holes in the front of the fuselage for air ventilation for cooling the electromotor.

The mounting of the propeller:

For folding propeller use one of the propeller spinners with a collet 3 mm dia, for non folding propeller a collet prop adapter MPJ 8030 or 8031 – select the type of the collet directly for your propeller (MPJ 8030 for APC - narrow hub, MPJ 8031 for other - wide hub).

CONNECTING ELECTROMOTOR TO REGULATOR

The electromotor has cable wires or terminal connectors with male part of connectors (MPJ 21020). Female parts with shrinking isolations are included

in the package and must be soldered to regulator output cables. Connectors must be disconnected by being pulled from the connector parts, without applying any force on the cable (or being pulled from the motor unit).

COOLING

It is necessary to ensure cooling - inlet and outlet holes. The outlet holes must be approx. 1,5 bigger than the inlet ones.

MAINTENANCE OF ELECTROMOTOR

The ball bearings have a longlife high quality grease, they can be changed if necessary. Avoid penetration of dirt or water into the electromotor.

IMPORTANT SAFETY ADVICE

- the propeller must be undamaged and balanced
- propeller driver must be all metal, collet type. The type with socket head screws is not recommended.
- make sure that the onlookers stay at a safe distance when the motor runs
- use only propellers recommended for this power
- first switch on your transmitter, check the position of the throttle stick (and related switches if there are any). Only then connect your power pack to the speed controller and switch on the receiver.
- follow the manual of your regulator
- do not use the motor for other applications (non modeling use).
- this position product and this manual are subject to change without notice

GUARANTEES

All electromotors are controlled and tested before purchase. Full guarantee for manufacturing and material defects is valid one year from the purchase date. The guarantee covers none of the following:

- improper mounting and overheating
- using the motor for other purposes than recommended
- periodic maintenance and repair or replacement of parts due to normal wear
- repair costs by non-authorized services or the customer himself

NOTICE

The electromotor has a relative high rpm per Volt. Therefore, do not connect this motor without load to voltage bigger then 15 V because it could be damaged easily when exceeding maximum rpm.

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| Number of cells | 6-10 |
| RPM per Volt | 2650 |
| Maximum recommend speed (min ⁻¹) | 40000 |
| Maximum speed (min ⁻¹) | 45000 |
| Maximum efficiency (%) | approx. 82 |
| Current for maximum efficiency (A) | 7-15 |
| Short time current (A) | 25 |
| Internal resistance (mΩ) | 100 |
| Dimensions - diameter/ length (mm) | 25/35 |
| Shaft diameter (mm) | 3 |
| Number of turns | 20 |
| Weight of electromotor (g) | 74 |
| Weight of drive unit (g) | 96 |
| Recommend gearboxes | MPJ 8200, 8204 |
| Recommend propeller range with gearbox 4,1:1 | APC 8/4 - 12/8 |
| Recommend propeller range with gearbox 3:1 | APC 7/4 - 11/6 |
| Maximum weight of glider (g) | 1000 |
| Maximum weight of acrobatic model (g) | 750 |