



## MP JET ELECTROMOTOR AC 25/35-20 Mk2 - version with gearbox

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 synchro 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.

### TECHNICAL SPECIFICATION OF GEARBOX

- single stage gearbox with inner-driven gear construction
- closed type gearbox
- the gear ratio 4,1:1 (MPJ 8200) or 3:1 (MPJ 8204)
- hardened main shaft in two ball bearings
- metal pinion wheel
- two possibilities of mounting (front adapter or lugs)
- outside shape like standard MP JET gearboxes size 400, 480

### 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.

### MAINTENANCE OF GEARBOX

Lubricate the ball bearings with light machine oil, for gears quality machine grease is recommended. Please do not use the silicone type grease (or with PTFE), it would shorten the durability of the metal pinion wheel. Keep the gearboxes clean from dust.

### 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 than 15 V because it could be damaged easily when exceeding maximum rpm.

Number of cells	6-10
RPM per Volt	2650
Maximum recommend speed (min <sup>-1</sup> )	40000
Maximum speed (min <sup>-1</sup> )	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

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