MP JET ELECTROMOTOR AC 28/7-60 D 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
- special version for direct drive of big three blade 330 mm dia propellers
- designed especially for Vough V-173 (Zimmermann "Flying Pancake") and e.t.c.
- with external rotor
- FeNdB magnets
- winding impregnated high-temperature epoxy resin
- dual ball bearing with long life grease
- high speed ball bearings
- rotor turned from bar stock on CNC machine
- heat treated shaft 3 mm dia
- the version Mk2 make easy the change of damaged shaft
- recommended connectors MP JET 2,5 mm size (MPJ 21021)
- the possibility to use the motor mount in two position

Recommend regulator: three-phase, sensorless (with EMF detection version), suitable version 12A.

MOUNTING DRIVE UNIT TO MODEL KIT

The electromotor mounting on the firewall with three Pan Head screws 2,2x6,5. The motor mount is possible to use in two position. In position from the producer of the electromotor is the distance of the propeller from firewall longer. It is good for models with motor cover. In second position (reverse) it has the same mounting sizes like electromotor MP JET AC 25/25-26 with gearbox for troublefree change. The firewall must be rigid and with the holes for cables from electromotor to ESC. Please make the holes in the front of the motor cover for air ventilation for cooling the electromotor.

The mounting of the propeller:
Recommended solution is custom blade holder with tilted propeller blades. For better starting characteristic of power unit set please in your ESC soft starting characteristic set.

CONNECTING ELECTROMOTOR TO REGULATOR

The electromotor has a soldering points for direct soldering of the cables from ESC. The second possibility is use MP JET connectors and cables set (MPJ 20221). The soldering must be under temperature control, power heating of the soldering point can damage rear cover. Recommended temperature is under 280°C and short cycle (the same condition like soldering of electronic chips). 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). For change of the direction of run change please two from three cables between ESC and electromotor.

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. For this change is recommended MPJ 20308. Avoid penetration of magnetic parts, 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 flexible propeller mount is not suitable for high power.
- 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-authorised services or the customer himself

Number of cells LiPol	2
RPM per Volt	520
Maximum recommend speed (min^{-1})	12000
Maximum speed (min^{-1})	15000
Maximum efficiency (%)	approx. 78
Current for maximum efficiency (A)	to 8
Short time current (A)	12
Internal resistance (mΩ)	300
Dimensions - diam./ length/length with shaft (mm)	35,5/35/43
Shaft diameter (mm)	3
Number of turns	60
Weight of electromotor (g)	58,5
Recommend propeller range	threeblades 13"
Recommend weight of maket V-173 (g) (two electromotors)	to 600g

Notice: do not use more than 2 cells with maximum capacity to 1500 mAh, permited only series cell circuit (not paralel type).

Cat.No.		Description	Qty.
MPJ	20220	Motor mount for AC 28/7 - standard	1 pc
MPJ	20221	Cables for AC 28/7	1 set
MPJ	20222	Motor mount for AC 28/7 - small	1 pc
MPJ	20223	Motor mount for AC 28/7 - for carbon tube 10 mm dia	1 pc
MPJ	0450	Hexagon socket set screw M3x3	4 pcs
Spare parts			
MPJ	20300	Rotor for 28/7-35 D Mk2 complete	1 pc
MPJ	20301	Rotor for 28/7-30 D Mk2 complete	1 pc
MPJ	20302	Stator for 28/7-35 D complete	1 pc
MPJ	20303	Stator for 28/7-30 D complete	1 pc
MPJ	20304	Shaft for 28/7 Mk2 long (for collet prop adapter)	1 pc
MPJ	20306	Shaft for 28/7 Mk2 long (for collet prop adapter) + ball bearings	1 set
MPJ	20308	Ball bearings 3x7x3	2 pcs

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