

RD-M-X8.1 UAV BLDC MOTOR



RD-M-X8.1 (8120) Specifications	
Motor Type	Outrunner
KV Rating	115 KV
Maximum Thrust	16.64 KG
Stator Poles / Magnet Poles	36 / 42
No load Current	3.2A
Motor Efficiency	90.99%
Weight (Including Cable)	680 grams
Voltage Range	44.4 V (12S LIPO - 4.2V/ pc)
Peak Current (30 Sec)	90 A
Peak Power (30 Sec)	3996 W
Motor Diameter	91.0 mm
Motor Length	55.0 mm
Shaft Diameter (Internal)	5.70 mm
Magnet Temperature Rating	150 °C
Cable Type / Length	14AWG / 100mm
Copper wire Temperature Rating	150 °C
Winding material	100% Copper
IP Rating	IP34
Maximum Operating Temperature	60 °C
Recommended Propeller	30*95 (Folding)

PERFORMANCE DATA

TEST SETUP :

Motor:

RD-M-X8.1

ESC :

RD-X-FC-080-12-E-BTC

Operating Temperature:

-20 °C~ 60 °C

Voltage	Propeller	Throttle (%)	Thrust (g)	Ampere (A)	Power (W)	Efficiency (g/W)
44.4V (12S)	30*95	50%	4330	8.8	391	11.08
		60%	6820	16.6	737	9.25
		70%	9650	27.5	1221	7.90
		85%	14570	51.7	2295	6.35
		100%	15490	56.1	2491	6.22

Multicopter design recommendations with RD-M-X8.1:

Recommended Propeller: **30*95** (Folding)

Recommended ESC: **RD-X-FC-080-12-E-BTC** or similar

- **Quad-copter:**
 - Maximum take-off weight for the drone: 30 KG
- **Hex-copter:**
 - Maximum take-off weight for the drone: 46 KG
- **Oct-copter:**
 - Maximum take-off weight for the drone: 60 KG

Test Video: [ESC 112 - RD:M:X8.1 - 12S - 65A.mp4](#)