

P115M 动力套装技术参数

P115M Integrated thrust system specification

动力套参数 Integrated thrust system specification

产品型号 Model	P115M	最大拉力 Max Thrust	236 kg
最大单轴起飞重量 Max single-axis takeoff weight	115 kg	最大单轴起飞重量点力效 Efficiency of max single-axis takeoff weight	6.1 g/W
电压范围 Input voltage	500~850 V	额定电压 Rated voltage	720 V
适用机臂直径 Tube outer diameter	Φ80 mm (适配2~5 mm壁厚, 推荐3 mm、5 mm) Φ80 mm (Suitable for wall thickness of 2~5 mm, recommend 3 mm and 5 mm)		
动力套重量 (含线) Weight (with cable)	18.7 kg±100 g	线材规格 Cable specification	电源线: 12AWG*2000 mm 信号线: 2200 mm Power cable: 12AWG*2000 mm Signal cable:2200 mm
适用环境温度 Operating temperature	-35~55 °C	防尘防水等级 Ingress protection	IPX5
线序定义 Pinout	蓝-CAN GND、红-CANH、棕-CANL、黑-Shielded、绿-PWM、灰-PWM GND、橙-DCIN 24V+、黄-DCIN GND Blue-CAN GND, Red-CANH, Brown-CANL, Black-Shielded, Green-PWM, Gray-PWM GND, Orange-DCIN 24V+, Yellow-DCIN GND		
额定输出功率 (最大持续功率) Rated output power (Max continuous)	18.3 kW		

电调技术参数 ESC specification

额定电压 Rated voltage	720 V	通讯方式 Communication protocol	CAN (可定制RS485) CAN (customizable RS485)
电调尺寸 ESC size	211 mm*104 mm*67 mm (不含插头) 211 mm*104 mm*67 mm (Without plug)	重量 (含线) Weight (with cable)	1880±50 g
最大电流 (10s) Peak current (10 seconds)	45 A	持续电流 Continuous current	15 A
防尘防水等级 Ingress Protection	IP67	双油门 Double throttle signal	CAN+RS485 / CAN+PWM / RS485+PWM
PWM脉宽 Operating pulse width	1100~1940 μs	黑匣子 Black box	2~48h 实时数据 2~48h log
油门行程校准 Throttle Range Calibration	固化不需校准, 软件可修改范围 Solidified and cannot be calibrated(Can be changed via Datalink software)		

电机技术参数 Motor specification

KV值 KV	5 KV	槽极数 Slot& Pole	36槽42极 36N42P
电机尺寸 Motor size	Φ167.1±0.1 mm (含风扇209.9±0.1 mm) Φ167.1±0.1 mm (With fan 209.9±1 mm)	电机重量(含线) Weight (with cable)	6090 g
防尘防水等级 Ingress Protection	IPX5	单电机额定输出功率 (最大持续功率) single motor Rated output power (Max continuous)	8.5 kW

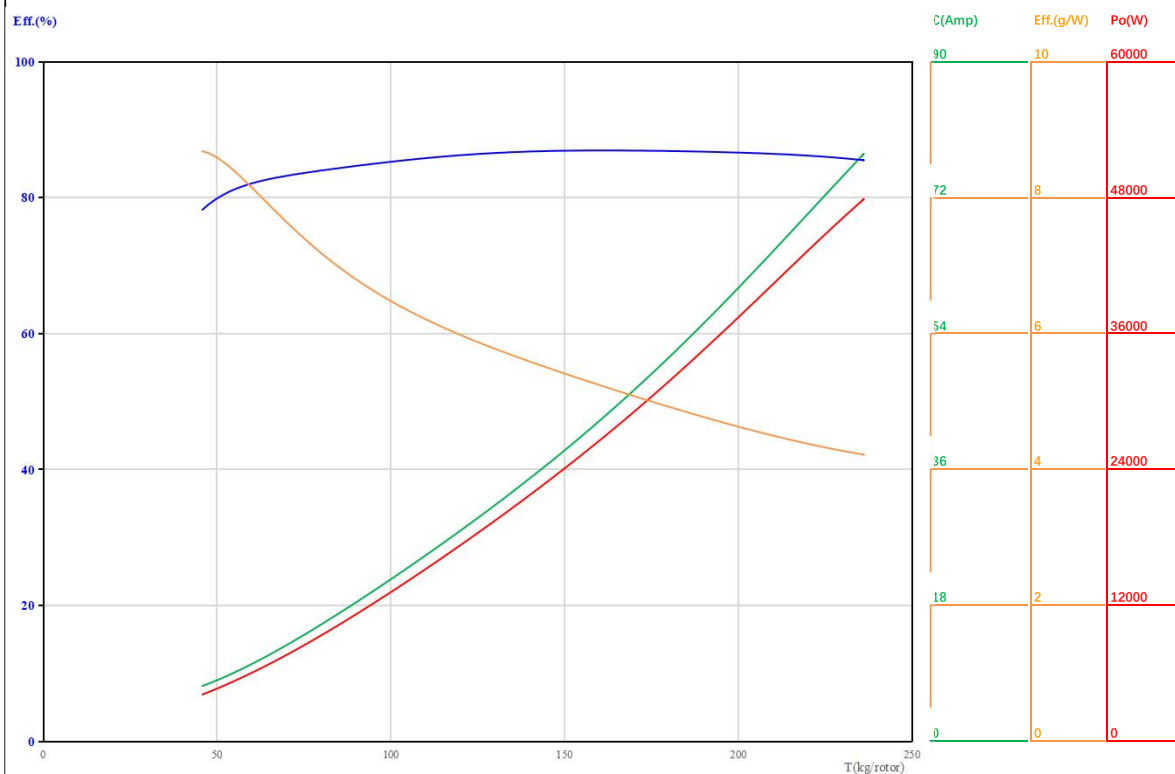
桨叶参数 Propeller specification

产品型号 Model	MSC 73x21-P	单支重量 Weight	1254 g
主要材质 Material of Props	碳纤维复合材料 Carbon fibre composite material	安装尺寸 Mounting dimensions	D60-6*M6, 中心孔 D20 D60-6*M6, centre hole D20

共轴负载性能参数 (720)

Load Performance Parameters of Coaxial (720V)

曲线图 Graph



拉力数据表 Thrust Test Data

Voltage(V) 工作电压	Propeller 螺旋桨	Throttle(%) 油门	Thrust(kg) 拉力	Current(A) 电流	Power Input(kW) 输入功率	Efficiency(%) 效率	Efficiency(g/W) 力效	Power Output(kW) 输出功率	Temperature(°C) 温度
720V	MSC 73x21 -P	38%	65.5	11.6	8.3	82.78	7.9	6.9	/
		40%	72.6	13.4	9.7	83.43	7.5	8.1	
		42%	79.8	15.4	11.1	83.98	7.2	9.3	
		44%	87.1	17.6	12.6	84.48	6.9	10.7	
		46%	94.6	19.8	14.2	84.95	6.6	12.1	
		48%	102.0	22.1	15.9	85.39	6.4	13.6	
		50%	109.5	24.5	17.6	85.78	6.2	15.1	
		52%	117.0	26.9	19.4	86.12	6.0	16.7	
		54%	124.5	29.4	21.1	86.40	5.9	18.3	
		56%	131.9	31.9	23.0	86.61	5.7	19.9	
		58%	139.2	34.5	24.8	86.77	5.6	21.6	
		60%	146.4	37.2	26.8	86.87	5.5	23.2	
		62%	153.6	39.9	28.7	86.92	5.4	25.0	
		64%	160.6	42.6	30.7	86.94	5.2	26.7	
		66%	167.4	45.4	32.7	86.93	5.1	28.4	
		68%	174.1	48.3	34.7	86.90	5.0	30.2	
		70%	180.6	51.1	36.8	86.85	4.9	31.9	
		72%	186.9	53.9	38.8	86.79	4.8	33.7	
		76%	198.8	59.5	42.8	86.64	4.6	37.1	
		80%	209.6	64.7	46.6	86.45	4.5	40.3	
		85%	221.2	70.4	50.7	86.14	4.4	43.6	
		100%	236.2	77.8	56.0	85.50	4.2	47.9	

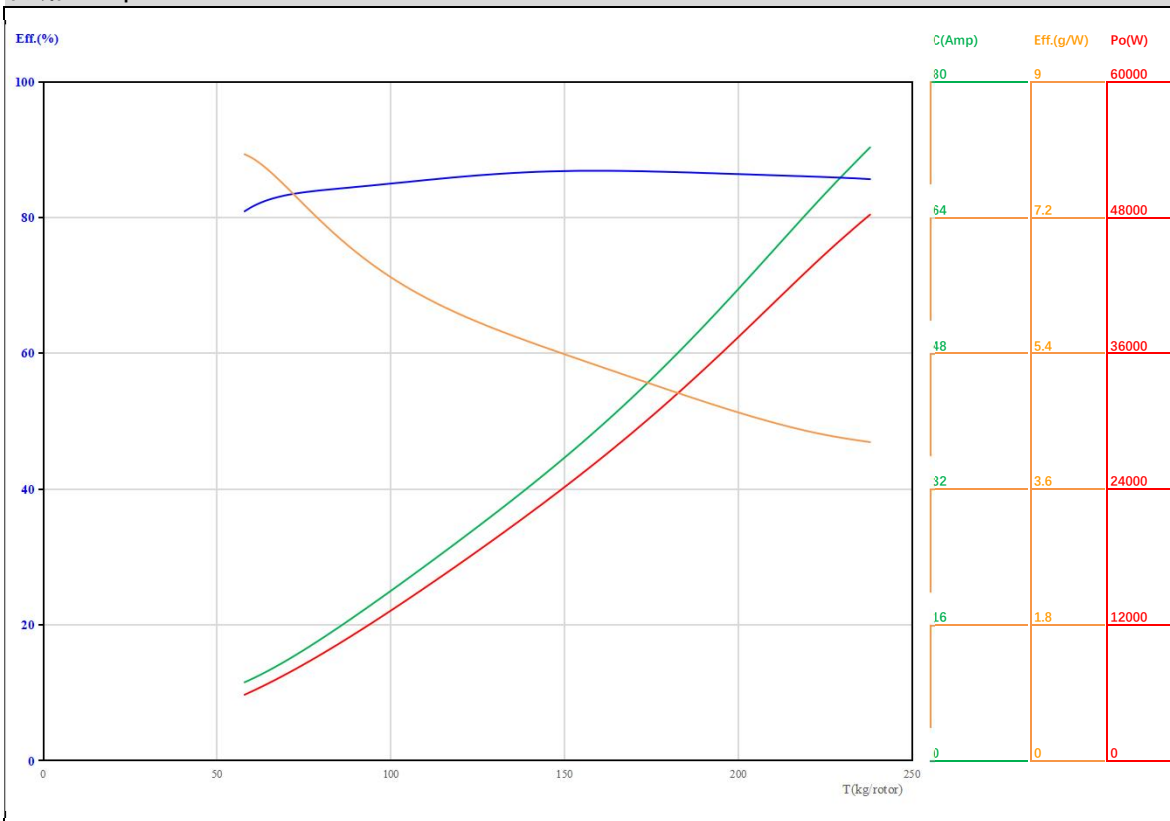
*以上数据为好盈实验室于室温 25°C、海平面高度，变化油门输入调节测得，仅供参考。

*The above data was measured by HOBBYWING Laboratory at room temperature 25°C, at sea level, with varying throttle input, for reference only.

共轴负载性能参数 (780V)

Load Performance Parameters of Coaxial (780V)

曲线图 Graph



拉力数据表 Thrust Test Data

Voltage(V) 工作电压	Propeller 螺旋桨	Throttle(%) 油门	Thrust(kg) 拉力	Current(A) 电流	Power Input(kW) 输入功率	Efficiency(%) 效率	Efficiency(g/W) 力效	Power Output(kW) 输出功率	Temperature(°C) 温度
780V	MSC 73x21 -P	38%	78.9	14.1	11.0	83.95	7.2	9.2	/
		40%	84.6	15.6	12.2	84.24	6.9	10.3	
		42%	90.1	17.2	13.4	84.51	6.7	11.3	
		44%	95.6	18.7	14.6	84.77	6.5	12.4	
		46%	101.0	20.3	15.8	85.05	6.4	13.5	
		48%	106.7	22.0	17.1	85.34	6.2	14.6	
		50%	112.6	23.8	18.5	85.63	6.1	15.9	
		52%	118.7	25.6	20.0	85.93	5.9	17.2	
		54%	125.2	27.6	21.5	86.21	5.8	18.6	
		56%	131.9	29.7	23.2	86.45	5.7	20.0	
		58%	138.8	32.0	24.9	86.65	5.6	21.6	
		60%	146.0	34.3	26.8	86.79	5.5	23.2	
		62%	153.3	36.8	28.7	86.87	5.3	25.0	
		64%	160.6	39.5	30.8	86.88	5.2	26.7	
		66%	168.0	42.2	32.9	86.85	5.1	28.6	
		68%	175.2	45.1	35.1	86.77	5.0	30.5	
		70%	182.3	47.9	37.4	86.68	4.9	32.4	
		72%	189.2	50.8	39.6	86.57	4.8	34.3	
		76%	201.7	56.3	43.9	86.36	4.6	37.9	
		80%	212.4	61.2	47.7	86.18	4.5	41.1	
		85%	222.6	65.7	51.3	86.00	4.3	44.1	
		100%	237.9	72.3	56.3	85.64	4.2	48.3	

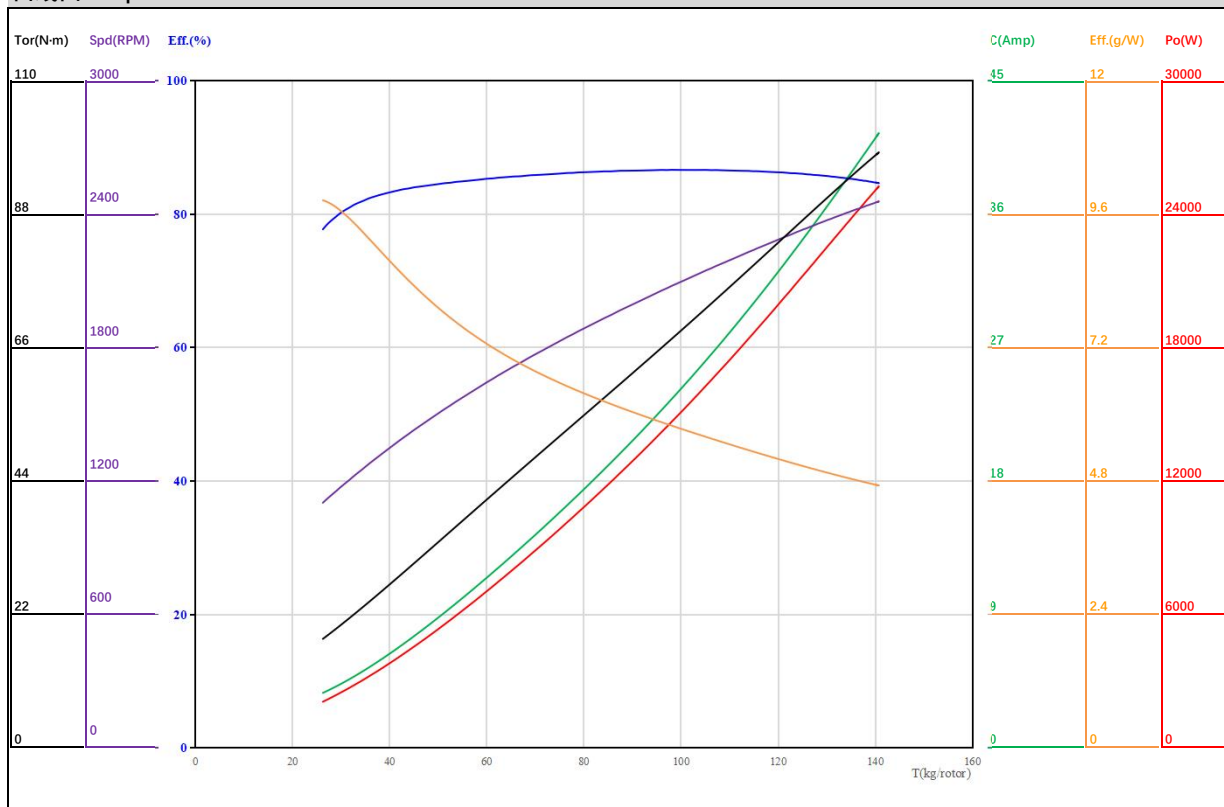
*以上数据为好盈实验室于室温 25°C、海平面高度，变化油门输入调节测得，仅供参考。

*The above data was measured by HOBBYWING Laboratory at room temperature 25°C, at sea level, with varying throttle input, for reference only.

上轴负载性能参数 (720V)

Load Performance Parameters of Upper Rotor of Coaxial (720V)

曲线图 Graph



拉力数据表 Thrust Test Data

Voltage(V) 工作电压	Propeller 螺旋桨	Throttle(%) 油门	Thrust(kg) 拉力	Current(A) 电流	Power Input(kW) 输入功率	Speed(RPM) 转速	Efficiency(g/W) 力效	Torque (N-m) 扭矩	Power Output(kW) 输出功率	Temperature(°C) 温度
720V	MSC 73x21-P	38%	37.7	5.8	4.2	1310	9.0	25.37	3.5	/
		40%	41.8	6.8	4.9	1378	8.6	28.18	4.1	
		42%	46.0	7.8	5.6	1444	8.2	31.11	4.7	
		44%	50.3	8.9	6.4	1508	7.9	34.11	5.4	
		46%	54.6	10.0	7.2	1570	7.6	37.17	6.1	
		48%	59.0	11.2	8.1	1630	7.3	40.25	6.9	
		50%	63.4	12.4	9.0	1688	7.1	43.33	7.7	
		52%	67.9	13.7	9.9	1743	6.9	46.41	8.5	
		54%	72.3	15.0	10.8	1796	6.7	49.47	9.3	
		56%	76.7	16.4	11.8	1848	6.5	52.52	10.2	
		58%	81.0	17.8	12.8	1897	6.3	55.55	11.0	
		60%	85.4	19.2	13.8	1944	6.2	58.55	11.9	
		62%	89.7	20.6	14.8	1990	6.0	61.54	12.8	
		64%	93.9	22.1	15.9	2034	5.9	64.50	13.7	
		66%	98.1	23.5	16.9	2077	5.8	67.43	14.7	
		68%	102.2	25.0	18.0	2117	5.7	70.34	15.6	
		70%	106.2	26.5	19.1	2156	5.6	73.21	16.5	
		72%	110.1	28.0	20.2	2193	5.5	76.03	17.5	
		76%	117.5	31.1	22.3	2262	5.3	81.45	19.3	
		80%	124.3	34.0	24.4	2323	5.1	86.44	21.0	
		85%	131.6	37.2	26.8	2385	4.9	91.77	22.9	
		100%	140.7	41.5	29.8	2456	4.7	98.15	25.2	

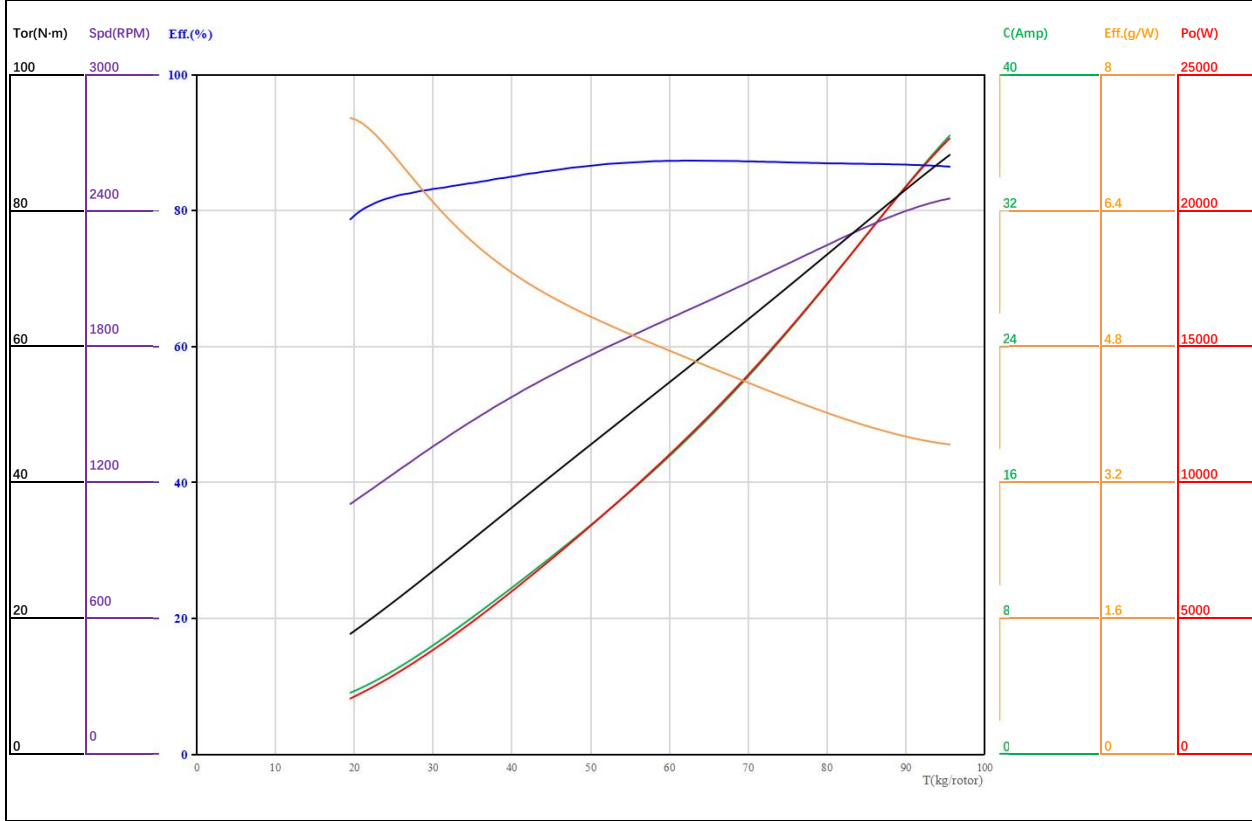
*以上数据为好盈实验室于室温 25°C、海平面高度，变化油门输入调节测得，仅供参考。

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下轴负载性能参数 (720V)

Load Performance Parameters of Lower Rotor of Coaxial (720V)

曲线图 Graph



拉力数据表 Thrust Test Data

Voltage(V) 工作电压	Propeller 螺旋桨	Throttle(%) 油门	Thrust(kg) 拉力	Current(A) 电流	Power Input(kW) 输入功率	Speed(RPM) 转速	Efficiency(g/W) 力效	Torque (N-m) 扭矩	Power Output(kW) 输出功率	Temperature(°C) 温度
720V	MSC 73x21-P	38%	27.8	5.7	4.1	1307	6.7	24.98	3.4	/
		40%	30.8	6.7	4.8	1377	6.4	27.69	4.0	
		42%	33.8	7.7	5.5	1446	6.1	30.50	4.6	
		44%	36.8	8.7	6.3	1512	5.9	33.35	5.3	
		46%	39.9	9.8	7.0	1576	5.7	36.22	6.0	
		48%	43.0	10.9	7.8	1636	5.5	39.10	6.7	
		50%	46.1	12.0	8.6	1693	5.3	41.96	7.4	
		52%	49.2	13.2	9.5	1747	5.2	44.79	8.2	
		54%	52.2	14.3	10.3	1799	5.1	47.58	9.0	
		56%	55.2	15.5	11.2	1847	4.9	50.34	9.7	
		58%	58.2	16.8	12.1	1895	4.8	53.05	10.5	
		60%	61.1	18.0	13.0	1940	4.7	55.71	11.3	
		62%	63.9	19.3	13.9	1985	4.6	58.33	12.1	
		64%	66.7	20.6	14.8	2029	4.5	60.90	12.9	
		66%	69.3	21.9	15.8	2072	4.4	63.40	13.8	
		68%	71.9	23.2	16.7	2115	4.3	65.85	14.6	
		70%	74.4	24.6	17.7	2156	4.2	68.23	15.4	
		72%	76.9	25.9	18.6	2196	4.1	70.52	16.2	
		76%	81.3	28.4	20.5	2270	4.0	74.83	17.8	
		80%	85.3	30.8	22.1	2333	3.9	78.68	19.2	
		85%	89.6	33.2	23.9	2393	3.8	82.70	20.7	
		100%	95.5	36.4	26.2	2453	3.6	88.20	22.7	

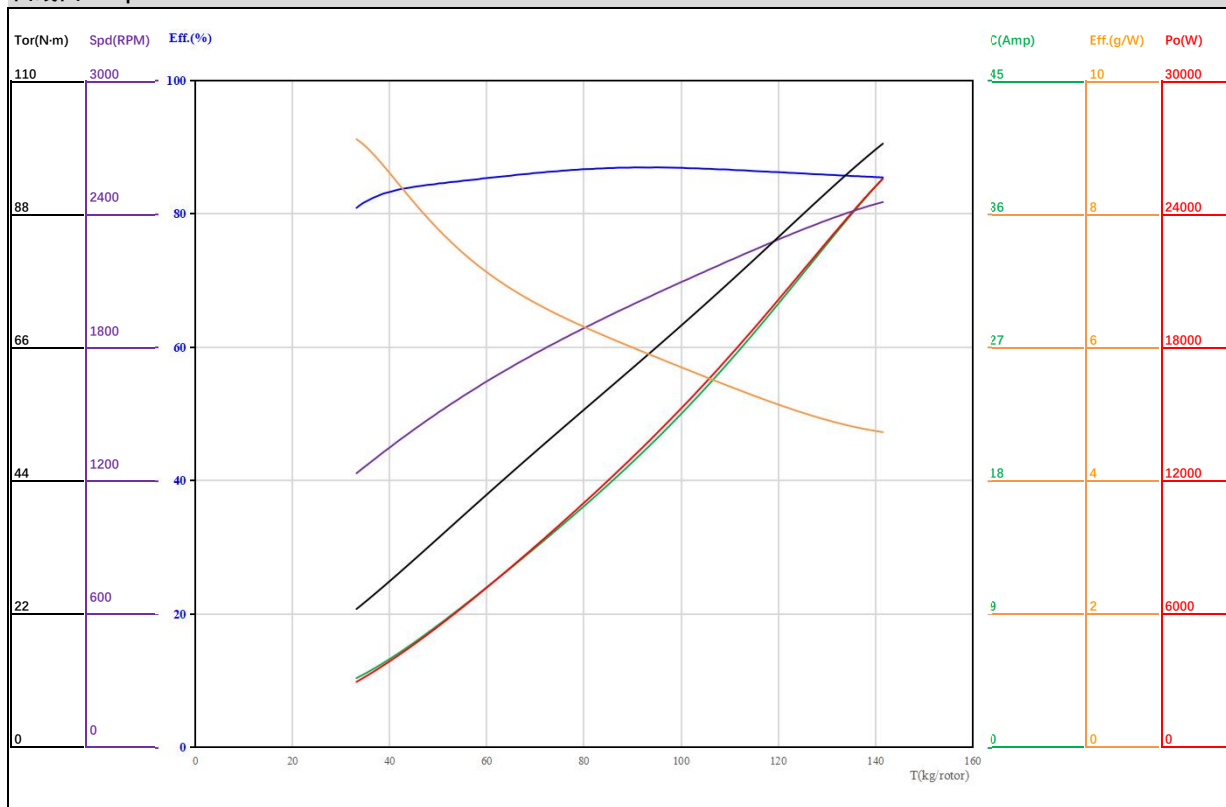
*以上数据为好盈实验室于室温 25°C、海平面高度，变化油门输入调节测得，仅供参考。

*The above data was measured by HOBBYWING Laboratory at room temperature 25°C, at sea level, with varying throttle input, for reference only.

上轴负载性能参数 (780)

Load Performance Parameters of Upper Rotor of Coaxial (780V)

曲线图 Graph



拉力数据表 Thrust Test Data

Voltage(V) 工作电压	Propeller 螺旋桨	Throttle(%) 油门	Thrust(kg) 拉力	Current(A) 电流	Power Input(kW) 输入功率	Speed(RPM) 转速	Efficiency(g/W) 力效	Torque (N-m) 扭矩	Power Output(kW) 输出功率	Temperature(°C) 温度
780V	MSC 73x21-P	38%	45.2	7.1	5.5	1433	8.2	31.08	4.7	/
		40%	48.6	7.9	6.2	1484	7.9	33.47	5.2	
		42%	51.8	8.7	6.8	1532	7.6	35.79	5.7	
		44%	55.0	9.5	7.4	1578	7.4	38.10	6.3	
		46%	58.2	10.3	8.1	1622	7.2	40.43	6.9	
		48%	61.6	11.2	8.7	1667	7.0	42.82	7.5	
		50%	65.1	12.1	9.5	1711	6.9	45.29	8.1	
		52%	68.7	13.1	10.2	1756	6.7	47.86	8.8	
		54%	72.5	14.2	11.0	1802	6.6	50.52	9.5	
		56%	76.5	15.3	11.9	1847	6.4	53.28	10.3	
		58%	80.7	16.5	12.8	1893	6.3	56.13	11.1	
		60%	84.9	17.7	13.8	1939	6.2	59.06	12.0	
		62%	89.3	19.0	14.8	1984	6.0	62.06	12.9	
		64%	93.7	20.4	15.9	2029	5.9	65.12	13.8	
		66%	98.1	21.9	17.0	2074	5.8	68.21	14.8	
		68%	102.5	23.3	18.2	2117	5.6	71.32	15.8	
		70%	106.8	24.9	19.4	2159	5.5	74.41	16.8	
		72%	110.9	26.4	20.6	2199	5.4	77.44	17.8	
		76%	118.7	29.4	22.9	2272	5.2	83.17	19.8	
		80%	125.4	32.1	25.0	2333	5.0	88.17	21.5	
		85%	132.0	34.7	27.1	2387	4.9	93.00	23.2	
		100%	141.5	38.4	29.9	2453	4.7	99.58	25.6	

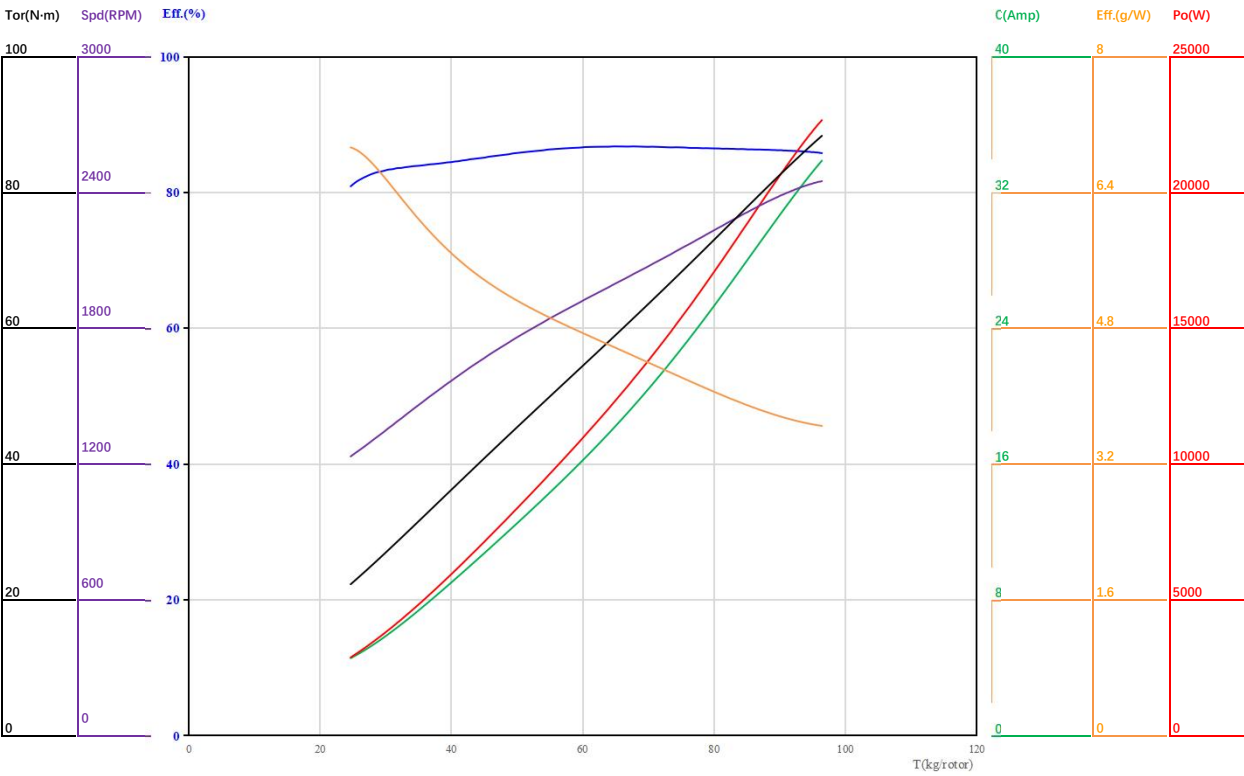
*以上数据为好盈实验室于室温 25°C、海平面高度，变化油门输入调节测得，仅供参考。

*The above data was measured by HOBBYWING Laboratory at room temperature 25°C, at sea level, with varying throttle input, for reference only.

下轴负载性能参数 (720V)

Load Performance Parameters of Lower Rotor of Coaxial (720V)

曲线图 Graph



拉力数据表 Thrust Test Data

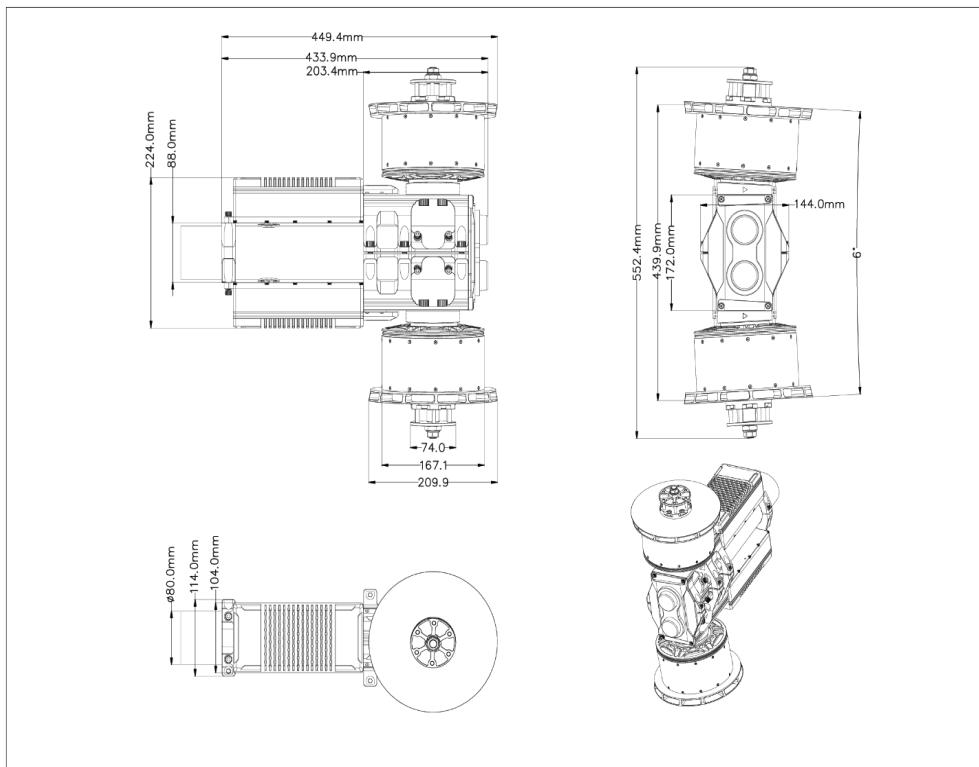
Voltage(V) 工作电压	Propeller 螺旋桨	Throttle(%) 油门	Thrust(kg) 拉力	Current(A) 电流	Power Input(kW) 输入功率	Speed(RPM) 转速	Efficiency(g/W) 力效	Torque (N-m) 扭矩	Power Output(kW) 输出功率	Temperature(°C) 温度
780V	MSC 73x21-P	38%	33.7	7.0	5.4	1431	6.2	30.32	4.5	/
		40%	36.1	7.7	6.0	1484	6.0	32.55	5.1	
		42%	38.3	8.5	6.6	1533	5.8	34.66	5.6	
		44%	40.6	9.2	7.2	1580	5.6	36.73	6.1	
		46%	42.8	10.0	7.8	1626	5.5	38.81	6.6	
		48%	45.1	10.8	8.4	1670	5.4	40.94	7.2	
		50%	47.5	11.6	9.1	1715	5.2	43.13	7.7	
		52%	50.0	12.5	9.8	1760	5.1	45.42	8.4	
		54%	52.6	13.4	10.5	1804	5.0	47.79	9.0	
		56%	55.3	14.4	11.3	1849	4.9	50.25	9.7	
		58%	58.2	15.5	12.1	1893	4.8	52.79	10.5	
		60%	61.1	16.6	13.0	1938	4.7	55.41	11.2	
		62%	64.0	17.8	13.9	1982	4.6	58.07	12.1	
		64%	66.9	19.1	14.9	2027	4.5	60.77	12.9	
		66%	69.9	20.4	15.9	2072	4.4	63.48	13.8	
		68%	72.8	21.7	16.9	2117	4.3	66.16	14.7	
		70%	75.6	23.1	18.0	2162	4.2	68.79	15.6	
		72%	78.2	24.4	19.0	2204	4.1	71.33	16.5	
		76%	83.0	26.9	21.0	2282	4.0	75.95	18.1	
		80%	87.0	29.1	22.7	2343	3.8	79.75	19.6	
		85%	90.6	31.0	24.2	2392	3.7	83.15	20.8	
		100%	96.4	33.9	26.4	2450	3.7	88.35	22.7	

*以上数据为好盈实验室于室温 25°C、海平面高度，变化油门输入调节测得，仅供参考。

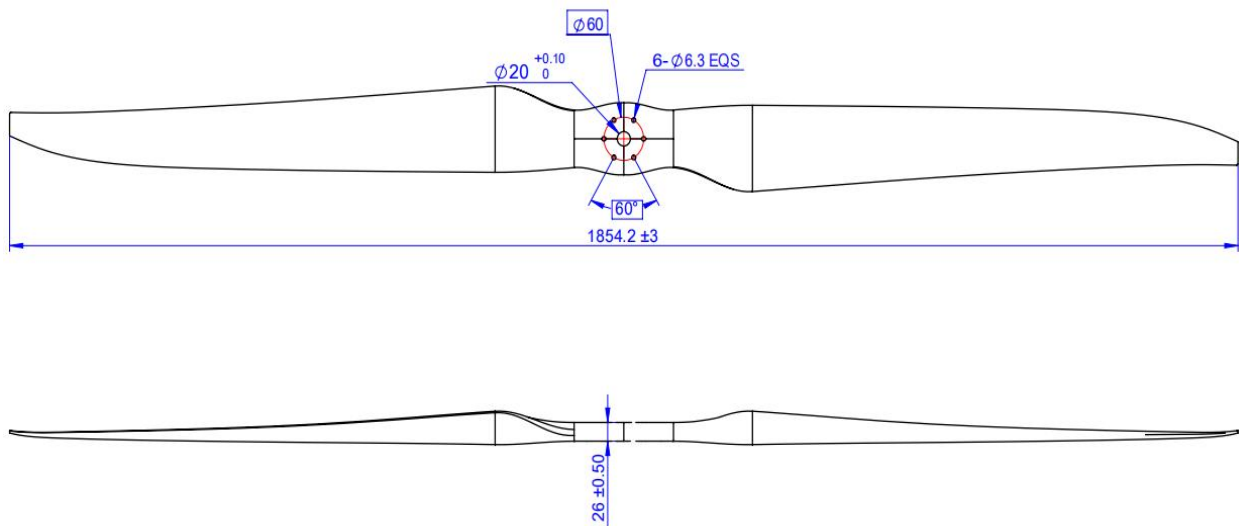
*The above data was measured by HOBBYWING Laboratory at room temperature 25°C, at sea level, with varying throttle input, for reference only.

尺寸图 Dimension figure

动力套装 All-in-one thrust system

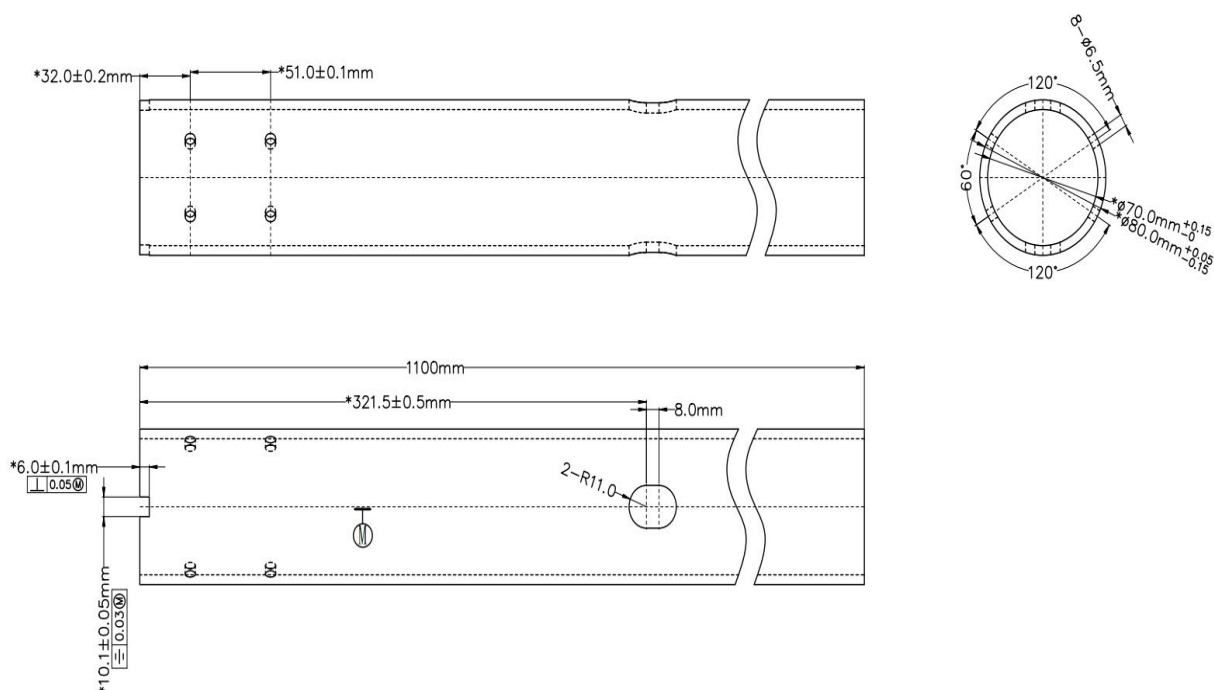


桨叶 Propeller MSC 73×21-P



安装示意图 Installation drawing

碳管加工示意



动力套装配示意

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17: 指示灯座装到管夹座上, 先上紧定位孔M4三组合螺丝涂螺丝胶, 螺丝扭力3±0.5N.m。 18: 再上紧腰槽孔M4三组合螺丝, 螺丝扭力3±0.5N.m。	19: 快拆桨夹座组件装到电机上, 对准螺丝孔位置。 20: 12颗M6螺丝涂中等强度螺丝胶, 用扭力扳手上紧, 扭力9±1N.m。装好后无特殊原因不用拆卸, 上下管夹座一样。	21: 桨叶装到快拆桨夹座上, 特别要注意桨叶转向。 22: 桨夹盖对准销钉, 压到桨叶上。	23: 上紧M16左旋螺母, 扭力20N.m, 不需要打螺丝胶。 24: 上紧M12右旋螺母, 扭力30N.m, 不需要打螺丝胶。																																																