Scorpion SII-3008-1220 Motor Propeller Data

Motor Wind	Motor Kv	No-Load Current	Motor Resistance	I Max	P Max (3S)
20-Turn Delta	1220 RPM/Volt	Io = 0.97 Amps @ 10v	Rm = 0.042 Ohms	32 Amps	425 W

Outside Diameter	Body Length	Total Shaft Length	Shaft Diameter	Motor Weight
37.5 mm, 1.476in.	33.7 mm, 1.327 in.	62.5 mm, 2.461 in.	4.98 mm, 0.197 in.	95 gm, 3.33 oz

Prop Manf.	Prop Size	Input Voltage	Motor Amps	Watts Input	Prop RPM	Pitch Speed	Thrust Grams	Thrust Ounces	Thrust Eff. Grams/W
APC	7x4-SF	11.1	12.36	137.2	12,803	48.5	666.1	23.50	4.85
APC	7x5-E	11.1	15.44	171.4	12,385	58.6	700.4	24.71	4.09
APC	7x6-E	11.1	16.03	177.9	12,303	69.9	750	26.46	4.22
APC	7x6-SF	11.1	18.76	208.2	11,960	68.0	695.5	24.53	3.34
APC	8x3.8-SF	11.1	21.04	233.5	11,653	41.9	1052.1	37.11	4.51
APC	8x4-E	11.1	18.09	200.8	12,047	68.4	945.6	33.35	4.71
APC	8x6-E	11.1	26.17	290.5	10,974	62.4	1047.3	36.94	3.60
APC	8x6-SF	11.1	33.06	366.9	9,972	56.7	1061.5	37.44	2.89
APC	8x8-E	11.1	32.61	362.0	10,057	76.2	894.1	31.54	2.47
APC	9x3.8-SF	11.1	27.22	302.2	10,771	38.8	1331.1	46.95	4.41
APC	9x4.5-E	11.1	24.58	272.8	11,159	47.6	1282	45.22	4.70
APC	9x4.7-SF	11.1	24.97	277.2	11,084	49.3	1304.1	46.00	4.70
APC	9x7.5-E	11.1	37.53	416.6	9,274	65.9	1131.4	39.91	2.72
APC	10x5-E	11.1	31.64	351.2	10,146	48.0	1469.6	51.84	4.18
GEM	9x4.7-C	11.1	25.69	285.1	10,962	48.8	1319.6	46.55	4.63
GEM	10x4.5	11.1	36.49	405.1	9,396	40.0	1566.2	55.25	3.87
GEM	10x4.5-C	11.1	35.08	389.4	9,108	38.8	1558.4	54.97	4.00
GWS	8x4-DD	11.1	13.91	154.4	12,591	47.7	851.7	30.04	5.52
GWS	8x4x3-DD	11.1	17.03	189.0	12,191	46.2	943.8	33.29	4.99
GWS	9x5-DD	11.1	23.99	266.3	11,264	53.3	1288.6	45.45	4.84
GWS	9x5x3-DD	11.1	29.57	328.2	10,494	49.7	1365.4	48.16	4.16
GWS	10x6-DD	11.1	30.51	338.6	10,348	58.8	1463.2	51.61	4.32
GWS	10x6x3-DD	11.1	36.71	407.4	9,361	53.2	1622.3	57.22	3.98
MAS	8x6x3	11.1	25.11	278.7	11,076	62.9	1147.9	40.49	4.12
MAS	9x7x3	11.1	35.35	392.3	9,633	63.9	1434.3	50.59	3.66
MAS	10x5x3	11.1	32.62	362.0	9,980	47.3	1543.6	54.45	4.26

Prop Manf.	Prop Size	Input Voltage	Motor Amps	Watts Input	Prop RPM	Pitch Speed	Thrust Grams	Thrust Ounces	Thrust Eff. Grams/W
APC	7x4-E	14.8	19.88	294.3	16,158	61.2	1119.8	39.50	3.81
APC	7x5-E	14.8	24.68	365.2	15,491	73.3	1110.6	39.17	3.04
APC	7x6-E	14.8	25.67	379.8	15,323	87.1	1180.1	41.63	3.11
APC	8x4-E	14.8	28.88	427.5	14,878	56.4	1461.5	51.55	3.42
APC	9x4.5-E	14.8	37.98	562.1	13,387	57.0	1915.8	67.58	3.41

Propeller Chart Color Code Explanation

The prop is to small to get good performance from the motor. (Less than 50% power)

The prop is sized right to get good power from the motor. (50 to 80% power)

The prop can be used, but full throttle should be kept to short bursts. (80 to 100% power)

The prop is too big for the motor and should not be used. (Over 100% power)

PLEASE NOTE:

The data contained in this prop chart is based on actual measurements taken in a controlled test environment. The test voltages used are based on a properly sized Li-Po battery for the current draw of the motor being tested. If you are using a larger than normal capacity battery, or a very high C-Rated battery, your actual voltages will be higher than those shown in this chart, and this will result in higer current draw for each prop used. You should always test your power system with a watt meter whenever a prop is used to ensure that you are not exceeding the recommended rating of the motor being used. The prop recommendations in this chart are based on the motor receiving adequate cooling throughout its operation. If your motor is being used inside a cowl, you must provide adequate cooling to the motor and make sure that the motor is not getting too hot during operation.