Scorpion SII-2212-1070 Motor Propeller Data

Motor Wind	Motor Kv	No-Load Current	Motor Resistance	I Max	P Max (3S)
18-Turn Delta	1070 RPM/Volt	Io = 0.59 Amps @ 10v	Rm = 0.091 Ohms	15 Amps	160 W

Outside Diameter	Body Length	Total Shaft Length	Shaft Diameter	Motor Weight
27.9 mm, 1.098in.	23.0 mm, 1.181 in.	49.0 mm, 1.929 in.	2.98 mm, 0.117 in.	58.0 gm, 2.05 oz

Prop Manf.	Prop Size	Input Voltage	Motor Amps	Watts Input	Prop RPM	Pitch Speed	Thrust Grams	Thrust Ounces	Thrust Eff. Grams/W
APC	8x8-E	7.4	8.67	64.2	5,979	45.3	**306.5**	10.81	4.78
APC	9x4.7-SF	7.4	7.20	53.3	6,345	28.2	438	15.45	8.22
APC	9x6-E	7.4	7.41	54.8	6,289	35.7	**404.3**	14.26	7.37
APC	9x6-SF	7.4	10.37	76.7	5,528	31.4	**483.5**	17.05	6.30
APC	9x7.5-E	7.4	9.93	73.4	5,653	40.1	**393.6**	13.88	5.36
APC	9x7.5-SF	7.4	11.75	87.0	5,197	36.9	**450.8**	15.90	5.18
APC	9x9-E	7.4	11.60	85.8	5,210	44.4	**356.3**	12.57	4.15
APC	10x3.8-SF	7.4	9.59	71.0	5,730	20.6	538.8	19.01	7.59
APC	10x4.7-SF	7.4	10.40	77.0	5,522	24.6	563.9	19.89	7.33
APC	10x5-E	7.4	8.33	61.6	6,050	28.6	493.3	17.40	8.00
APC	10x6-E	7.4	9.24	68.4	5,814	33.0	**511.4**	18.04	7.48
APC	10x7-E	7.4	10.41	77.1	5,538	36.7	**503.9**	17.77	6.54
APC	10x7-SF	7.4	12.89	95.4	4,911	32.6	**565.3**	19.94	5.93
APC	10x10-E	7.4	13.64	100.9	4,726	44.8	**381.5**	13.46	3.78
APC	11x3.8-SF	7.4	10.51	77.8	5,508	19.8	593.9	20.95	7.64
APC	11x4.7-SF	7.4	12.16	90.0	5,070	22.6	638.6	22.53	7.10
APC	11x7-E	7.4	12.03	89.0	5,119	33.9	**608.2**	21.45	6.83
APC	11x7-SF	7.4	14.69	108.7	4,401	29.2	**645.8**	22.78	5.94
APC	11x8-E	7.4	12.83	94.9	4,910	37.2	**521.6**	18.40	5.49
APC	11x8.5-E	7.4	13.22	97.8	4,825	38.8	**577.8**	20.38	5.91
APC	11x10-E	7.4	14.99	110.9	4,346	41.2	**432.6**	15.26	3.90
APC	12x3.8-SF	7.4	13.35	98.8	4,763	17.1	683.6	24.11	6.92
APC	12x6-E	7.4	12.36	91.5	5,015	28.5	**669.6**	23.62	7.32
APC	12x6-SF	7.4	15.81	117.0	4,086	23.2	**711**	25.08	6.08
APC	12x8-E	7.4	14.37	106.3	4,503	34.1	**570.2**	20.11	5.36
APC	12x10-E	7.4	15.92	117.8	4,084	38.7	**493.3**	17.40	4.19
APC	13x4-E	7.4	11.56	85.5	5,217	19.8	680.9	24.02	7.96
GEM	8x4.5	7.4	6.72	49.8	6,476	27.6	383.3	13.52	7.70
GEM	8x4.5-C	7.4	6.53	48.4	6,374	27.2	379.7	13.39	7.85
GEM	9x4.7	7.4	7.71	57.0	6,208	27.6	451.7	15.93	7.92
GEM	9x4.7-C	7.4	7.56	56.0	6,131	27.3	453	15.98	8.10
GEM	10x4.5	7.4	10.17	75.2	5,582	23.8	545.6	19.25	7.25
GEM	11x4.7-C	7.4	12.19	90.2	5,097	22.7	644.6	22.74	7.15
GEM	12x4.5-C	7.4	13.63	100.9	4,708	20.1	637.2	22.48	6.32
GWS	8x4x3-DD	7.4	4.55	33.6	7,029	26.6	298.6	10.53	8.88
GWS	8x4.3-SF	7.4	5.12	37.9	6,873	28.0	323.6	11.41	8.54
GWS	8x6-SF	7.4	6.72	49.8	6,474	36.8	**367.4**	12.96	7.38
GWS	9x4.7-SF	7.4	7.61	56.3	6,233	27.7	453.9	16.01	8.06
GWS	9x5-DD	7.4	6.34	46.9	6,575	31.1	413.4	14.58	8.81
GWS	9x5x3-DD	7.4	7.70	57.0	6,219	29.4	449.9	15.87	7.89
GWS	9x7-SF	7.4	10.33	76.4	5,551	36.8	**451.4**	15.92	5.91
GWS	9x7.5-HD	7.4	9.41	69.6	5,803	41.2	**401.6**	14.17	5.77
GWS	10x4.7-SF	7.4	10.63	78.7	5,466	24.3	579.2	20.43	7.36
GWS	10x6-DD	7.4	8.22	60.8	6,078	34.5	**492.7**	17.38	8.10
GWS	10x6x3-DD	7.4	10.28	76.1	5,587	31.7	**564.2**	19.90	7.42
GWS	10x8-HD	7.4	11.81	87.4	5,210	39.5	**479.6**	16.92	5.49
GWS	10x8-SF	7.4	13.07	96.7	4,862	36.8	**539.2**	19.02	5.57
GWS	11x4.7-SF	7.4	12.25	90.7	5,087	22.6	648.1	22.86	7.15
GWS	11x7-DD	7.4	11.23	83.1	5,346	35.4	**624.6**	22.03	7.52
GWS	12x8-DD	7.4	14.10	104.3	4,608	34.9	**675.9**	23.84	6.48
MAS	8x6x3	7.4	7.17	53.0	6,351	36.1	312.1	11.01	5.88
MAS	9x7x3	7.4	9.95	73.6	5,636	37.4	419.3	14.79	5.69
MAS	10x5x3	7.4	9.01	66.6	5,883	27.9	501.2	17.68	7.52
MAS	10x7x3	7.4	11.77	87.1	5,193	34.4	530.6	18.72	6.09
MAS	11x7x3	7.4	12.98	96.0	4,840	32.1	612.7	21.61	6.38
MAS	11x8x3	7.4	13.65	101.0	4,651	35.2	**610.7**	21.54	6.04
MAS	12x6x3	7.4	13.88	102.7	4,596	26.1	658.2	23.22	6.41
MAS	12x8x3	7.4	16.21	120.0	3,940	29.8	**674.2**	23.78	5.62

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**	**11.1**	**6.28**	**69.8**	**10,535**	**39.9**	**442.3**	**15.60**	**6.34**
APC	**7x4-SF**	**11.1**	**6.34**	**70.4**	**10,520**	**39.8**	**423**	**14.92**	**6.01**
APC	7x5-E	11.1	7.92	88.0	10,088	47.8	454	16.01	5.16
APC	7x5-SF	11.1	7.74	85.9	10,138	48.0	462.2	16.30	5.38
APC	7x6-E	11.1	8.33	92.4	9,969	56.6	489.7	17.27	5.30
APC	7x6-SF	11.1	9.33	103.5	9,673	55.0	456.6	16.11	4.41
APC	8x3.8-SF	11.1	10.17	112.9	9,443	34.0	658.2	23.22	5.83
APC	**8x4-E**	**11.1**	**9.03**	**100.2**	**9,753**	**36.9**	**600.7**	**21.19**	**5.99**
APC	8x6-E	11.1	12.11	134.4	8,904	50.6	661.5	23.33	4.92
APC	8x6-SF	11.1	14.97	166.1	8,024	45.6	674.5	23.79	4.06
APC	8x8-E	11.1	15.11	167.8	7,974	60.4	555.5	19.59	3.31
APC	9x3.8-SF	11.1	12.96	143.9	8,619	31.0	798.5	28.17	5.55
APC	**9x4.5-E**	**11.1**	**11.97**	**132.8**	**8,933**	**38.1**	**793.2**	**27.98**	**5.97**
APC	**9x4.7-SF**	**11.1**	**12.84**	**142.5**	**8,675**	**38.6**	**817.8**	**28.85**	**5.74**
APC	9x6-E	11.1	13.66	151.6	8,440	48.0	759.3	26.78	5.01
APC	9x7.5-E	11.1	17.05	189.2	7,344	52.2	709.1	25.01	3.75
GEM	**8x4.5**	**11.1**	**12.35**	**137.1**	**8,816**	**37.6**	**730.6**	**25.77**	**5.33**
GEM	**8x4.5-C**	**11.1**	**11.64**	**129.2**	**8,641**	**36.8**	**708.3**	**24.98**	**5.48**
GEM	9x4.7-C	**11.1**	13.02	144.5	8,252	36.7	809.8	28.56	5.61
GEM	10x4.5	11.1	16.67	185.0	7,128	30.4	944.8	33.33	5.11
GWS	8x4-DD	11.1	7.23	80.2	10,274	38.9	552.1	19.47	6.88
GWS	8x4x3-DD	11.1	8.73	96.9	8,611	32.6	607.8	21.44	6.28
GWS	9x5-DD	11.1	11.70	129.9	9,006	42.6	794.5	28.02	6.12
GWS	9x5x3-DD	11.1	14.04	155.8	7,303	34.6	838.9	29.59	5.38
GWS	9x7.5-DD	11.1	16.38	181.8	7,520	53.4	703.8	24.83	3.87
GWS	10x6x3-DD	11.1	17.23	191.2	6,394	36.3	981.8	34.63	5.13
MAS	7x4x3	11.1	7.38	81.9	10,217	38.7	423	14.92	5.17
MAS	8x6x3	11.1	12.80	142.1	8,706	49.5	641.8	22.64	4.52
MAS	9x7x3	11.1	16.78	186.2	7,412	49.1	809.1	28.54	4.34

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.