

Scorpion SII-2212-960 Motor Propeller Data										
Motor Wind 22-Turn Delta		Motor Kv 960 RPM/Volt		No-Load Current I <sub>0</sub> = 0.51 Amps @ 10v		Motor Resistance R <sub>m</sub> = 0.139 Ohms		I Max 13 Amps		P Max (3S) 140 W
Outside Diameter 27.9 mm, 1.098in.		Body Length 30.9 mm, 1.181 in.		Total Shaft Length 49.0 mm, 1.929 in.		Shaft Diameter 2.98 mm, 0.117 in.		Motor Weight 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	8x6-E	7.4	7.04	52.1	5,634	42.7	263.9	9.31	5.06	
APC	9x4-SF	7.4	5.90	42.9	5,942	26.4	384.5	13.56	8.95	
APC	9x6-E	7.4	5.99	44.4	5,892	33.5	359	12.66	8.09	
APC	9x6-SF	7.4	8.48	62.8	5,302	30.1	436.3	15.39	6.95	
APC	9x7.5-E	7.4	8.08	59.8	5,394	38.3	346.8	12.23	5.80	
APC	9x7.5-SF	7.4	9.69	71.7	5,018	35.6	411.7	14.52	5.74	
APC	9x9-E	7.4	9.73	72.0	5,006	42.7	329	11.61	4.57	
APC	10x3.8-SF	7.4	7.84	58.0	5,436	19.6	485.9	17.14	8.38	
APC	10x4.7-SF	7.4	8.61	63.7	5,271	23.5	515.2	18.17	8.09	
APC	10x5-E	7.4	6.69	49.5	5,718	27.1	431.2	15.21	8.71	
APC	10x6-E	7.4	7.62	56.4	5,509	31.3	461.2	16.27	8.18	
APC	10x7-E	7.4	8.56	63.4	5,277	35.0	455	16.05	7.18	
APC	10x7-SF	7.4	10.81	80.0	4,749	31.5	525.6	18.54	6.57	
APC	10x10-E	7.4	11.63	86.0	4,541	43.0	356.1	12.56	4.14	
APC	11x3.8-SF	7.4	8.64	63.9	5,254	18.9	540.5	19.07	8.45	
APC	11x4.7-SF	7.4	10.28	76.1	4,873	21.7	598.4	21.11	7.86	
APC	11x5.5-E	7.4	8.78	65.0	5,215	27.2	545.6	19.25	8.39	
APC	11x7-E	7.4	10.02	74.1	4,923	32.6	543.5	19.17	7.33	
APC	11x7-SF	7.4	12.54	92.8	4,290	28.4	609.9	21.51	6.57	
APC	11x8-E	7.4	10.97	81.1	4,705	35.6	483.3	17.05	5.96	
APC	11x8.5-E	7.4	11.17	82.7	4,644	37.4	534.5	18.85	6.46	
APC	11x10-E	7.4	12.86	95.2	4,222	40.0	408.6	14.34	4.27	
APC	12x3.8-SF	7.4	11.14	82.3	4,886	16.7	634.2	22.17	7.62	
APC	12x6-E	7.4	10.41	77.0	4,801	27.3	621.1	21.91	8.06	
APC	12x6-SF	7.4	13.62	100.8	4,004	22.8	676.8	23.87	6.72	
APC	12x8-E	7.4	12.24	90.5	4,366	33.1	536.1	18.91	5.92	
APC	12x10-E	7.4	13.80	102.1	3,941	37.3	461.1	16.26	4.51	
APC	13x4-E	7.4	9.61	71.1	4,998	18.9	616.4	21.74	8.67	
APC	13x6.5-E	7.4	12.61	93.3	4,276	26.3	680.3	24.00	7.29	
APC	13x8-E	7.4	13.28	98.3	4,081	30.9	666.5	23.51	6.78	
GEM	9x4.7-C	7.4	6.22	46.1	5,841	26.0	400.1	14.11	8.69	
GEM	10x4.5-C	7.4	8.36	61.8	5,331	22.7	490	17.28	7.82	
GEM	11x4.7-C	7.4	10.13	75.0	4,902	21.8	591.7	20.87	7.89	
GEM	12x4.5-C	7.4	11.53	85.3	4,548	19.4	589.8	20.80	6.91	
GWS	9x4.7-SF	7.4	6.14	45.5	5,853	26.1	398.1	14.04	8.76	
GWS	9x5-DD	7.4	4.99	36.9	6,128	29.0	353.8	12.48	9.58	
GWS	9x5x3-DD	7.4	6.15	45.5	5,853	27.7	390.9	13.79	8.59	
GWS	9x7-SF	7.4	8.54	63.2	5,278	35.0	413.4	14.58	6.54	
GWS	9x7.5-HD	7.4	7.66	56.7	5,493	39.0	362.8	12.80	6.40	
GWS	10x6-DD	7.4	6.69	49.5	5,721	32.5	440.5	15.54	8.90	
GWS	10x6x3-DD	7.4	8.39	62.1	5,312	30.2	500.7	17.66	8.06	
GWS	10x4.7-SF	7.4	8.77	64.9	5,226	23.3	522.8	18.44	8.05	
GWS	10x8-HD	7.4	9.85	72.9	4,989	37.8	438.8	15.48	6.02	
GWS	10x8-SF	7.4	11.99	81.3	4,886	35.5	504.2	17.75	8.20	
GWS	11x4.7-SF	7.4	10.14	75.0	4,899	21.8	597.3	20.72	7.63	
GWS	11x7-DD	7.4	9.31	68.9	5,106	33.8	564.2	19.90	8.19	
GWS	12x8-DD	7.4	11.83	87.5	4,455	33.8	620.4	21.88	7.09	
MAS	8x6x3	7.4	5.82	43.1	5,926	33.7	266.4	9.40	6.19	
MAS	9x7x3	7.4	8.28	61.2	5,338	35.4	362.4	12.78	5.92	
MAS	10x5x3	7.4	7.43	55.0	5,549	26.3	441.9	15.59	8.04	
MAS	10x7x3	7.4	9.88	73.1	4,965	32.9	458.2	16.16	6.27	
MAS	11x7x3	7.4	11.06	81.8	4,665	30.9	574.3	20.26	7.02	
MAS	11x8x3	7.4	11.62	86.0	4,516	34.2	566.1	19.97	6.58	
MAS	12x6x3	7.4	11.72	86.7	4,479	25.4	610.2	21.52	7.04	
MAS	12x8x3	7.4	14.27	105.6	3,869	29.3	656.5	23.16	6.22	
Prop Manf.	Prop Size	Input Voltage	Motor Amps	Watts Input	Prop RPM	Pitch Speed	Thrust Grams	Thrust Ounces	Thrust Eff. Grams/W	
APC	7x5-E	11.1	6.35	70.5	9,441	44.7	396.5	13.99	5.62	
APC	7x5-SF	11.1	6.21	69.0	9,485	44.9	407.1	14.36	5.90	
APC	7x6-E	11.1	6.72	74.6	9,337	53.1	432.1	15.24	5.79	
APC	7x6-SF	11.1	7.48	83.0	9,126	51.9	406.3	14.33	4.89	
APC	8x3.8-SF	11.1	8.18	90.8	8,924	32.1	590.3	20.47	6.39	
APC	8x4-E	11.1	7.26	80.6	9,181	34.8	529.1	18.66	6.56	
APC	8x6-E	11.1	10.05	111.6	8,412	47.8	581.5	20.51	5.21	
APC	8x6-SF	11.1	12.42	137.8	7,736	44.0	624.1	22.01	4.53	
APC	8x8-E	11.1	12.76	141.6	7,653	58.0	520.7	18.37	3.68	
APC	9x3.8-SF	11.1	10.65	118.3	8,250	29.7	733.1	25.86	6.20	
APC	9x4.5-E	11.1	9.81	108.9	8,480	36.1	704.4	24.85	6.47	
APC	9x4.7-SF	11.1	10.70	118.8	8,232	36.6	749.8	26.45	6.31	
APC	9x6-E	11.1	11.22	124.6	8,082	45.9	698.8	24.65	5.61	
APC	9x6-SF	11.1	15.52	172.2	6,788	38.6	768.4	27.10	4.46	
APC	9x7.5-E	11.1	14.37	159.5	7,164	50.9	662.7	23.38	4.15	
APC	10x3.8-SF	11.1	14.55	161.5	7,085	25.5	913.6	32.23	5.66	
APC	10x5-E	11.1	12.44	138.1	7,696	36.4	829	29.24	6.00	
APC	8x4.5	11.1	10.16	112.8	8,383	35.7	658.4	23.22	5.84	
GEM	9x4.7	11.1	11.40	126.5	8,022	35.7	763.7	26.94	6.04	
GEM	10x4.5	11.1	14.70	163.2	7,044	30.0	903.3	31.86	5.54	
GWS	7x3.5x3-DD	11.1	3.83	42.5	10,144	33.6	310.6	10.96	7.31	
GWS	8x4-DD	11.1	5.78	64.1	9,594	36.3	478.8	16.89	7.47	
GWS	8x4x3-DD	11.1	6.99	77.6	9,271	35.1	528.3	18.64	6.81	
GWS	8x6-HD	11.1	9.36	103.9	8,607	48.9	544.8	19.22	5.25	
GWS	9x5-DD	11.1	9.57	106.2	8,544	40.5	707.4	24.95	6.66	
GWS	9x5x3-DD	11.1	11.56	128.3	7,995	37.9	755	26.63	5.89	
GWS	9x7.5-HD	11.1	13.68	151.9	7,315	52.0	647	22.82	4.26	
GWS	10x6x3-DD	11.1	14.63	162.4	7,052	40.1	915.4	32.29	5.64	
MAS	7x4x3	11.1	5.97	66.3	9,543	36.1	350.2	12.35	5.29	
MAS	8x6x3	11.1	10.51	116.7	8,293	47.1	576	20.32	4.94	
MAS	9x7x3	11.1	14.23	158.0	7,190	47.7	731.5	25.80	4.63	
Prop Manf.	Prop Size	Input Voltage	Motor Amps	Watts Input	Prop RPM	Pitch Speed	Thrust Grams	Thrust Ounces	Thrust Eff. Grams/W	
APC	6x4-E	14.8	4.99	73.8	13,274	50.3	374.2	13.20	5.07	
APC	6x5.5-E	14.8	6.57	97.2	12,777	60.5	364.7	12.86	3.75	
APC	7x4-E	14.8	7.94	116.0	12,378	46.9	432.7	15.32	5.45	
APC	7x5-E	14.8	9.85	145.8	11,798	55.9	637.4	22.48	4.37	
APC	7x6-E	14.8	10.27	152.0	11,677	66.3	685.4	24.18	4.51	
APC	8x4-E	14.8	11.18	165.5	11,389	43.1	831.1	29.32	5.02	
APC	8x6-E	14.8	14.75	218.3	10,236	58.2	884.3	31.19	4.05	

**Propeller Chart Color Code Explanation**

- The prop is too 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 higher current draw for each prop use. 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 cow, you must provide adequate cooling to the motor and make sure that the motor is not getting too hot during operation.