Scorpion SII-2205-1900 Motor Propeller Data

Motor Wind	Motor Kv	No-Load Current	Motor Resistance	I Max	P Max (3S)
28-Turn Delta	1900 RPM/Volt	Io = 0.58 Amps @ 10v	Rm = 0.128 Ohms	12 Amps	130 W

Outside Diameter	Body Length	Total Shaft Length	Shaft Diameter	Motor Weight
27.9 mm, 1.098in.	23.0 mm, 0.906 in.	42.0 mm, 1.654 in.	2.98 mm, 0.117 in.	35.4 gm, 1.25 oz

Prop Manf.	Prop Size	Input Voltage	Motor Amps	Watts Input	Prop RPM	Pitch Speed	Thrust Grams	Thrust Ounces	Thrust Eff. Grams/W
APC	5x4.5-E	7.4	5.84	43.2	11,466	48.9	194.5	6.86	4.50
APC	6x4-E	7.4	6.41	47.4	11,160	42.3	253.4	8.94	5.35
APC	6x5.5-E	7.4	8.17	60.5	10,251	53.4	226	7.97	3.74
APC	7x4-E	7.4	9.01	66.6	9,824	37.2	379.9	13.40	5.70
APC	7x4-SF	7.4	8.95	66.2	9,865	37.4	369.3	13.03	5.58
APC	7x5-E	7.4	10.56	78.1	9,007	42.6	354.7	12.51	4.54
APC	7x5-SF	7.4	10.36	76.6	9,118	43.2	371.3	13.10	4.84
APC	7x6-E	7.4	10.96	81.1	8,789	49.9	377.9	13.33	4.66
APC	7x6-SF	7.4	11.62	86.0	8,439	47.9	342.3	12.07	3.98
APC	8x3.8-SF	7.4	12.10	89.5	8,055	29.0	458.6	16.18	5.12
APC	8x4-E	7.4	11.45	84.7	8,521	32.3	446.9	15.76	5.27
APC	8x6-E	7.4	13.70	101.4	7,124	40.5	394.2	13.90	3.89
APC	8x6-SF	7.4	14.75	109.1	6,306	35.8	396.5	13.99	3.63
GEM	8x4.5-C	7.4	13.57	100.4	7,209	30.7	450.6	15.89	4.49
GWS	6x3-DD	7.4	4.66	34.5	12,088	34.3	242.2	8.54	7.03
GWS	6x3x3-DD	7.4	5.28	39.1	11,752	33.4	251.8	8.88	6.45
GWS	7x3.5-DD	7.4	6.28	46.4	11,235	37.2	316.6	11.17	6.82
GWS	7x3.5x3-DD	7.4	7.44	55.0	10,618	35.2	340.1	12.00	6.18
GWS	8x4-DD	7.4	9.97	73.8	9,334	35.4	449.9	15.87	6.10
GWS	8x4x3-DD	7.4	11.23	83.1	8,638	32.7	452.1	15.95	5.44
GWS	8x4.5-SF	7.4	13.57	100.4	7,209	30.7	450.6	15.89	4.49
GWS	8x6-HD	7.4	13.20	97.7	7,491	42.6	409.5	14.44	4.19
MAS	7x4x3	7.4	10.14	75.0	9,201	34.9	315.9	11.14	4.21
MAS	8x6x3	7.4	14.19	105.0	6,810	38.7	365.6	12.90	3.48

Prop Manf.	Prop Size	Input Voltage	Motor Amps	Watts Input	Prop RPM	Pitch Speed	Thrust Grams	Thrust Ounces	Thrust Eff. Grams/W
APC	4.4x4.1-E	11.1	6.17	68.4	17,632	68.5	249.2	8.79	3.64
APC	4.7x4.25-E	11.1	7.15	79.4	17,029	68.5	251.1	8.86	3.16
APC	4.75x4.75-E	11.1	7.88	87.4	16,572	74.5	246.4	8.69	2.82
APC	4.75x5.5-E	11.1	8.90	98.8	15,965	83.2	225.1	7.94	2.28
APC	5.5x4.5-E	11.1	9.93	110.2	15,345	65.4	352.2	12.42	3.20
APC	6x4-E	11.1	10.81	120.0	14,819	56.1	459.8	16.22	3.83
APC	6x5.5-E	11.1	13.09	145.3	13,417	69.9	397.7	14.03	2.74
APC	7x4-SF	11.1	14.86	164.9	12,255	46.4	610.4	21.53	3.70
GWS	5x3-DD	11.1	5.28	58.7	18,185	51.7	311.6	10.99	5.31
GWS	5x3x3-DD	11.1	6.50	72.2	17,410	49.5	337.7	11.91	4.68
GWS	5x4.3-DD	11.1	6.68	74.1	17,324	70.5	355.9	12.55	4.80
GWS	6x3-DD	11.1	7.98	88.5	16,491	46.8	458.1	16.16	5.17
GWS	6x3x3-DD	11.1	8.91	98.9	15,958	45.3	477.3	16.84	4.83
GWS	7x3.5-DD	11.1	10.58	117.4	14,941	49.5	583.9	20.60	4.97
GWS	7x3.5x3-DD	11.1	12.45	138.1	13,844	45.9	612.8	21.62	4.44

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.