

# SailServo

HK 22MB 10Y 11AYMB

## Test Equipment

[Test Rig www.youtube.com/watch?v=x-auOHbFBwU](http://www.youtube.com/watch?v=x-auOHbFBwU)

Transmitter/Receiver:- Spectrum Dx5e/AR500 Rudder Ch4 Hi Mode Output 1.16 / 1.88ms =0.72ms 3.5/9v 5A

7.2v battery supply

- Measured drum rotation and travel at no load
- Short** Distance drum does not rotate back to zero when pulled in
- Long** Drum rotation increases as more load is applied
- Time to pull in 100mm cord. Sec/100mm

Full travel achieved	Circumference	Drum
Upto 4mm +/- travel	94.3 mm	30
5 - 10mm +/- travel		
11 - 25mm +/- travel		

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Speed Drop Band
Drop 10% = 0 - 10% speed drop
Drop 20% = 10 -20%
Drop 30% = 20 - 30%
Drop 40% = 30 - 40%

22MB		7.2v Stall torque 11Kg.cm Speed 0.6/100mm									Running				Hold				
Kg .cm	Load	Short deg mm	Turns deg	Travel mm	Long deg mm	Total Travel	Time	sec/ 100mm	Band	%	V	CA	W	%	V	CA	W		
0.0	0.0			1260	342			342	1.9	0.6		100	7.58	0.20	1.5	12	7.25	0.03	0.2
0.8	0.5			1260	342			342	2.0	0.6	10%	95	7.49	0.40	3.0	24	7.64	0.25	1.9
1.5	1.0			1260	342			342	2.1	0.6		90	7.46	0.55	4.1	33	7.57	0.30	2.3
2.3	1.5			1260	342			342	2.3	0.7	20%	80	7.38	0.70	5.2	42	7.40	0.63	4.7
3.0	2.0			1260	342			342	2.6	0.8	30%	65	7.27	0.90	6.5	53	7.33	0.65	4.8

10Y		7.2v Stall torque 12.0Kg.cm Speed 0.8/100mm									Running				Hold				
Kg .cm	Load	Short deg mm	Turns deg	Travel mm	Long deg mm	Total Travel	Time	sec/ 100mm	Band	%	V	CA	W	%	V	CA	W		
0.0	0.0			1200	342			342	3.0	0.9		0	7.26	0.20	1.5	61	7.34	0.02	0.1
0.8	0.5			1260	342			342	3.1	0.9	10%	6	7.20	0.33	2.4	100	7.26	0.20	1.5
1.5	1.0			1260	342			342	3.2	0.9	20%	13	7.18	0.42	3.0	127	7.23	0.24	1.7
2.3	1.5			1260	342			342	3.3	1.0		19	7.09	0.52	3.7	155	7.18	0.35	2.5
3.0	2.0			1260	342			342	3.5	1.0	40%	31	7.03	0.65	4.6	192	7.13	0.39	2.8

11AYMB		7.2v Stall torque 50Kg.cm Speed 0.75/turn = 0.8/100mm 0.4/0.5A										Running				Hold			
Kg	Load	Short		Turns	Travel	Long		Total	Time	sec/	Load	%	V	CA	W	%	V	CA	W
.cm		deg	mm	deg	mm	deg	mm	Travel		100mm									
0.0	0.0			1280	340			340	3.1	0.9		0	7.34	0.44	3.2	16	7.49	0.03	0.2
0.8	0.5			1260	342			342	3.2	0.9		1	7.31	0.55	4.0	20	7.49	0.02	0.1
1.5	1.0			1260	342			342	3.4	1.0		4	7.27	0.64	4.7	23	7.50	0.02	0.2
2.3	1.5			1260	342			342	3.5	1.0	10%	6	7.23	0.75	5.4	27	7.50	0.03	0.2
3.0	2.0			1260	342			342	3.6	1.1		7	7.19	0.88	6.3	31	7.50	0.03	0.2
3.8	2.5			1260	342			342	3.7	1.1		8	7.10	0.95	6.7	33	7.40	0.10	0.7
4.5	3.0			1260	342			342	3.8	1.1		10	7.12	1.06	7.5	37	7.38	0.30	2.2
5.3	3.5			1260	342			342	3.9	1.1		11	7.02	1.20	8.4	41	7.28	0.70	5.1
6.0	4.0	-10	-3	1250	339			339	4.0	1.2		13	7.00	1.31	9.2	45	7.30	0.90	6.6
6.8	4.5	-10	-3	1250	339			339	4.3	1.3	20%	17	6.96	1.45	10.1	49	7.34	1.10	8.1
7.5	5.0	-10	-3	1250	339			339	4.4	1.3		18	6.92	1.60	11.1	54	7.00	1.30	9.1
8.3	5.5	-10	-3	1250	339			339	4.5	1.3		20	6.85	1.75	12.0	59	7.08	1.45	10.3
9.0	6.0	-20	-5	1240	337			337	4.7	1.4	30%	23	6.83	1.95	13.3	65	6.95	1.60	11.1
9.8	6.5	-20	-5	1240	337			337	5.2	1.5		30	6.70	2.20	14.7	72	6.80	1.75	11.9
10.5	7.0	-20	-5	1240	337			337	5.6	1.7	40%	36	7.60	2.40	18.2	89	6.84	1.80	12.3