



Rowing Australia | Beach Sprint 10 Stroke Peak Power Protocol (V1.0)

The start in Beach Sprint races is crucial for optimal performance and may be dependent on maximal anaerobic capacity and strength of the athlete. Greater force production and anaerobic contribution may be possible in rowing compared with other endurance sports as rowing is relatively short in duration and requires a slow muscle contraction velocity. Thus, measures of strength and anaerobic capacity are important objectives in rowing performance.

A short duration peak power test may measure strength and force production simply and add texture to the physiological capacity of the rowers as well as provide additional information for Strength and Conditioning staff on the shifts in functional rowing strength.

Ergometer Drag Factors for Test Effort 1 (10 Stroke Peak Power Test)

To maximise the result the test and replicate the gearing more inline with Beach Sprint athletes and their craft the ergometer drag factors outlined below are advised.

Category	Stationary Ergometer
Heavyweight Men	140
Heavyweight Women	120
Junior Men	120
Junior Women	100

10 Stroke Test Administration

The 10 stroke test can be administered as a stand-alone test, or completed after the warm up for any of the other measure. As it is a short duration test it should not induce significant fatigue that would affect performance in the following test.

1. Adjust the ergometer drag factor to that appropriate to the category (see Drag Factor Settings table above)
2. Undertake individual warm-up
3. Select 30 seconds on the Concept 2 work monitor and display power and SR in large font
4. The athlete uses the first 2-4 strokes to obtain the desired stroke rate of 40 s/min then performs the remaining strokes at maximal force production in line with a sound technical structure at a stroke rate less than or equal to 40 s/min
5. An assistant or fellow athlete counts and records the displayed power output (watts) for each stroke along with the stroke rate that is was achieved at (Note videoing the screen can be a simple way to ensure not data is missed)
6. 10 stroke mean peak power is calculated as the average power from the 5 highest consecutive readings with a stroke rate of 40 +/- 1 s/min

Below is an example of how to calculate the mean Peak Power



	A	B	C	D	E	F	G	H	I	J	K
1	Stroke	Power	Rate		Stroke	Power	Rate		Stroke	Power	Rate
2	1	242			1	196			1	248	
3	2	497	52		2	523	36		2	421	44
4	3	560	42		3	690	40		3	588	50
5	4	679	41		4	764	39		4	703	43
6	5	723	40		5	825	41		5	768	41
7	6	724	39		6	893	45		6	833	43
8	7	743	40		7	902	44		7	842	42
9	8	740	39		8	844	38		8	834	40
10	9	730	39		9	809	38		9	847	41
11	10	725	39		10	819	38		10	829	38
12		732	39.2			853	40.6			837	40.8