

## 30 min FTP Test | Background

The inclusion of the 30 min Open Rate has been intentional and aimed specifically at determining the rower's Functional Threshold Power (FTP: <https://goo.gl/HmbHDT>). FTP has a high degree of relevance to events with a duration of 2-15 min. Improvements in FTP have been shown to correlate highly with improvements in both maximal aerobic power and rowing performance. This means that we can use these measures to re-focus training intensity thresholds as well as infer changes in 2000m performance. The training intensities thresholds will be most specific to ergometer training but will cross over with a high degree of transfer to most other training modalities as well (i.e rowing, running, cycling).

The most basic and simplest way to calculate FTP is to average power output, HR and stroke rate from min 6 to min 28 of the 30 min test. These data then become very accurate and valid measures of Anaerobic Threshold training HR, power output, stroke rate. Upper and lower HR and power output training zones can then be determined from these two measured variables as long as the 30 min test is performed as an "all-out" maximal test. It is very possible that the 30 min all-out measure could be done frequently (every 8-12 weeks). This has the value of regularly assessing training induced changes with a valid and reliable tool of which the output can be used to immediately reshape training workloads.

## 30 min Open Rate Test Administration

### Preparation

#### Equipment Checklist

- Concept IID or IIE rowing ergometer (Stationary)
- Heart rate monitor
- Data recording sheet (download from here: <https://goo.gl/wyhGbk>)

Athletes will be allowed to individualise their warm-up prior to the measurement but are asked to replicate as closely as possible the same specific warm-up adopted for each distance the next time they undertake the test.

The following list represents the order in which each test should be completed.

1. The athlete should weigh-in
2. Attach a heart rate monitor (mandatory) and ensure it is working correctly and the data is being recorded (minimum of 1 min intervals) on the Concept II work monitor as well as the athletes watch (if possible)
3. Adjust the ergometer drag factor to that specific of your routine ergometer training
4. Undertake an individual warm-up
5. Select 30 min on the Concept work monitor and ensure the data is being recorded at 1 min intervals for later analysis
6. Start rowing when ready
7. Complete as much distance in the 30 min allocated time as possible (there is no rating cap)

8. At the end of the test, record the relevant data from the work monitor on the supplied data template (Minute 10 to Minute 30 (20 time points): av. power, av. stroke rate, av. heart rate. Full 30 minutes: distance covered, RPE, blood lactate, av. power, av. stroke rate, av. heart rate)

Note: I am frequently asked if you should go hard for the first 10 minutes. The answer is yes. Go hard for the entire 30 minutes. But be aware that most people doing this test go too hard the first few minutes and then gradually slow down for the remainder. That will give you inaccurate results. The more times you do this test the more accurate your FTP is likely to become as you will learn to pace yourself better at the start.

		Heavyweight Men			Lightweight Men		Heavyweight Women			Lightweight Women	
		Junior	Under 23	Senior	Under 23	Senior	Junior	Under 23	Senior	Under 23	Senior
30 min $R_{open}$ (m)	Primary	8911	9337	9525	8802	9040	7722	8096	8400	7767	7950
	Secondary	8629	9158	9337	8576	8802	7545	7906	8096		7767
30 min $R_{open}$ (W)	Primary	340	391	415	327	355	221	255	285	225	241
	Secondary	308	369	391	303	327	206	237	255		225
30 min $R_{open}$ ( $W/kg^{0.75}$ )	Primary	11.4	13.2	14.0	13.0	14.1	8.6	9.9	11.1	10.4	11.2
	Secondary	10.4	12.4	13.2	12.0	13.0	8.0	9.2	9.9		10.4

**Use the following guide to establish each zone by sport.**

#### Rowing and Running Zones

Zone 1 Less than 85% of FTP HR

Zone 2 85% to 89% of FTP HR

Zone 3 90% to 94% of FTP HR

Zone 4 95% to 99% of FTP HR

Zone 5 100% to 106% of FTP HR

#### Cycling Zones

Zone 1 Less than 81% of FTP HR

Zone 2 81% to 89% of FTP HR

Zone 3 90% to 93% of FTP HR

Zone 4 94% to 99% of FTP HR

Zone 5 100% to 106% of FTP HR