

10. Why should you race with power meters?

In the previous paper we discussed the new opportunities that a power meter provides to optimize your training. In this paper we will discuss the potential advantages in races. In the next paper we will give you some tips and tricks for everyday use.

1. Perfect pacing throughout the race

A famous example of perfect pacing is professional cyclist Chris Froome. Uphill the flanks of Alpe d'Huez in the Tour de France we can see on TV that Froome carefully monitors his power meter and pushes exactly the amount of power that he knows he can maintain. He allows competitors like Contador and Nibali to breakaway and follows at his own pace. The result is usually that Contador and Niabli blow themselves up and are overtaken by Froome after some time.

As runners, we are used to pace ourselves based on feel, HR or speed. We try to maintain a constant pace throughout the race, but this is not easy when the conditions change (hills, wind). Now that we can measure our running power, we finally have access to the most accurate representation of our effort, so we can pace ourselves perfectly.

An example of these aspects can be seen in the pictures below. Author Ron ran the Rotterdam Marathon on April 10, 2016. Based on previous experiences, Ron had planned to run the race at a constant pace of 4:50/km. He managed to hold on to this strategy for the main part of the race, but fatigue forced him to reduce his pace in the final 12K. All in all, he was quite content with the final result of 3:28:53 (equivalent to an average pace of 4:54/km). However, the Stryd data clearly show that he used too much power at the start (when he got a bit carried away by the pack) and uphill the Erasmus bridge (2 times, after 2K and 27K). The Stryd illustrates this very nicely with the red zones, where Ron spent too much power. We believe that if Ron he had run with constant power (instead of constant pace), the decline in the final 12K would have been less and his race time would have been better.



Figure: The Rotterdam Marathon by co-author Ron presented in TrainingPeaks

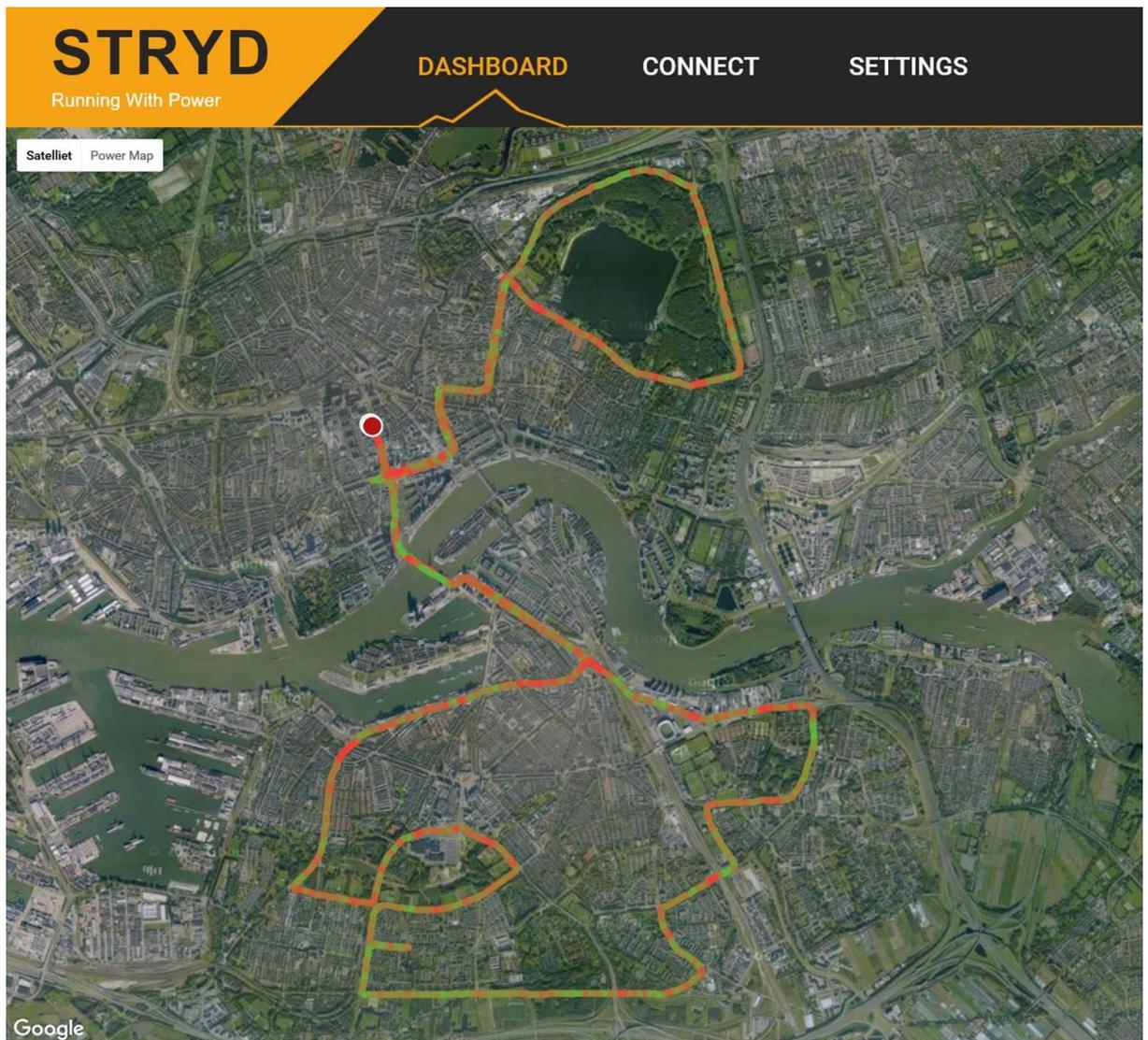


Figure: Power Map in Stryd Power Center with the Rotterdam Marathon of author Ron. The colors indicate differences in power zones.

Another example is given below. Runner JanWillem Nieboer of Amersfoort, the Netherlands, ran the Berg (mountain) Race by Night and spent too much power (532 Watts) uphill Wageningen mountain, so he blew himself up and lost a lot of time.



Figure: JanWillem Nieboer's Berg Race by Night presented in PowerCenter.

2. Analyze your performance perfectly

This is similar to what we discussed in the previous chapter on training. Your running power is the best and most accurate measure of your effort. Consequently, it is better to analyze your performance based on power data as compared to feel, HR or pace. An example of such an analysis for the Rotterdam Marathon of author Ron is shown below. The Power:HR ratio of Ron's marathon was a nice -3.91%, but Pace:HR was +5.77% (see next paper), which confirms that he had used too much power at the start and at the Erasmus bridge. He should have run with constant power to obtain an perfect pacing.

In our book *The Secret of Running* (www.thesecretorunning.com) we explained that if heart rate during an all-aerobic workout rises while the intensity (power or pace) stays the same your human engine is not operating efficiently. The aerobic endurance is questionable when the value is worse than 5%. The same is true if heart rate stays the same and power decreases or the pace slows.



Figure: Workout summary of Ron's Rotterdam Marathon presented in TrainingPeaks.

3. Share your data with your coach and an online platform

This is also similar to what we already covered in the last paper on training. By sharing all data with your coach, you give him the best understanding of your races and your strong and weak points. The same applies to apps and online platforms such as Stryd PowerCenter, TrainingPeaks, Strava, Garmin Connect and Polar applications. In this way you build a wonderful database of all your workouts with all the details. You will get feedback with trend analysis and correlation of data that you can use to analyze your performance in more detail. We are curious to the reactions and experiences of the readers, we welcome you to share these at www.thesecretorunning.com.

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