

Watt Per Kilo Explanation

W/Kg opposed to absolute power

As power meters are becoming more and more common among a wide range of cyclists, power output is becoming a conversation topic within every group ride. You probably have heard questions like "what was your average power today?" or "how much watts did you produce on that climb?" Absolute power outputs are not always the right way to compare between two or more riders. Just like maximal aerobic ability (VO2max) is usually measured relatively to weight, so is power output. It makes sense that a rider weighing 60 kilo won't produce the same power as a rider weighing 80 kilos, considering they train similarly. Identical power outputs between them will be translated into different speeds according to the grade of the road they're riding. On a flat road, the heavier rider with the higher absolute power will go faster, but as the road goes up, the forces facing the riders will favor the lighter rider. Therefore, to give a better perception of performance, the best way to evaluate a riders' performance and ability is by taking into consideration the riders' power to weight ratio, or how much watts are being produced per kilo of body weight.

Power Profiling

To evaluate a riders' physiological abilities, w/kg power profiling can be the ultimate tool.

It is common to profile neuromuscular power

(by measuring the maximal w/kg produced for 5 sec),

anaerobic power (1 min power) maximal aerobic power (5 min maximal power) and

FTP (5% less than the 20 min maximal power or 1 hour maximal power).

Other duration measurements can be used to evaluate more specific abilities.

Improving w/kg ratio.

There are two options for improving w/kg ratio:

1. Increasing your maximal power output for a defined duration.
2. Reducing your body weight.

Of course, ideally, you can improve both parameters simultaneously, but this is very hard to accomplish.

Different types of riders will improve differently by changing their w/kg ratio differently. For instance,

a sprinter will prefer improving 5 sec and 1 min maximal power rather than reducing body weight, since sprints are normally done on flat roads,

and losing weight can negatively effect your maximal power. On the other hand, climbers will prefer reducing body weight while maintaining their power output to increase their climbing speeds over all effort (steady and explosive climbing).

The Beatscore

At Watteam, We believe in underlining w/kg as a main training parameter.

We have introduced an effective and simple tool in our

When training, w/kg will be visualized for you, allowing you to manage your effort.

Secondly, we've developed the Beatscore, an objective tool made for assessing

your training impact. This score will be presented in the POWERBEAT Live app, summarized together with other important data, at the end of every ride.

The beatscore is calculated from the average w/kg of the workout,

and multiplied by your pedaling time in minutes. For example, a 180 minutes workout

with 120 minutes of pedaling at an average w/kg of 2.5,

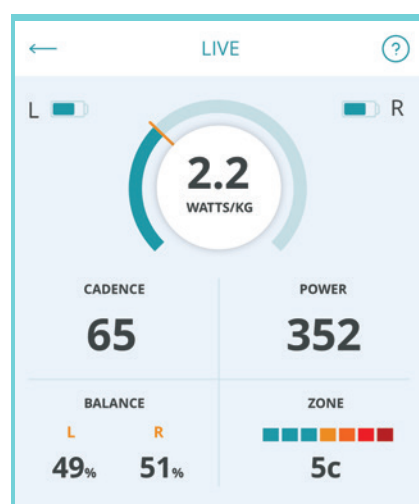
will earn you a Beatscore of 300 .

This score will allow you compare your effort with friends every training ride only using

POWERBEAT Live app earn amazing offers and deals!

Go out, ride and try it out!

POWERBEAT Live app- the w/kg live scale



Use the POWERBEAT™ app to help maximize your performance!