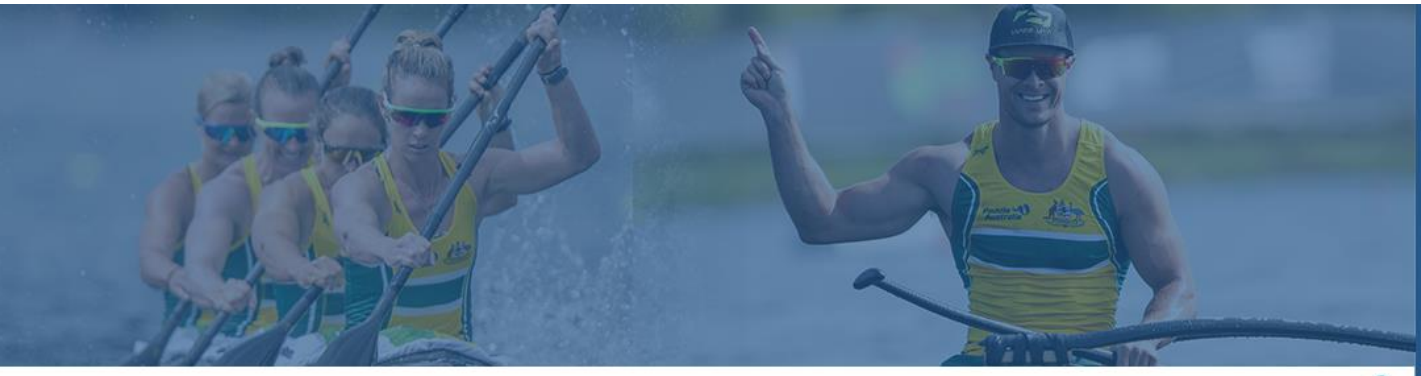


PERFORMANCE & RECOVERY INFORMATION

AIS Paddle Australia

Understanding Race Analysis and Training Data

Race analysis and training reports are key pieces of information for athletes, coaches and sports scientists. They break down the athlete's race or training into important variables such as velocity, stroke rate, distance per stroke, split times and efficiency. Race reports can compare heats, semi-finals and finals for individuals.

Where does the data come from?

Race and training data is collected from small devices (Minimax) which are placed on the back of boats. Inside these devices are GPS transmitters, tri-axial accelerometers, tri-axial gyroscopes, magnetometers, a battery and storage.

Minimax/OptimEye Models

Key Metrics

Velocity – How fast the boat moves (m/s or km/h)

Stroke Rate (SR) – How many strokes per minute (rpm)

Distance Per Stroke (DPS) – How far does the boat travel per stroke (m)

Effective Work (eWPS) – Effectiveness of each stroke. For example, consistent velocity with an increase in SR would see a decrease in eWPS (spinning)

Pacing – An estimate of how long it will take to cover a certain distance at a known velocity (mm:ss.00). Small changes in velocity may result in large changes in pacing

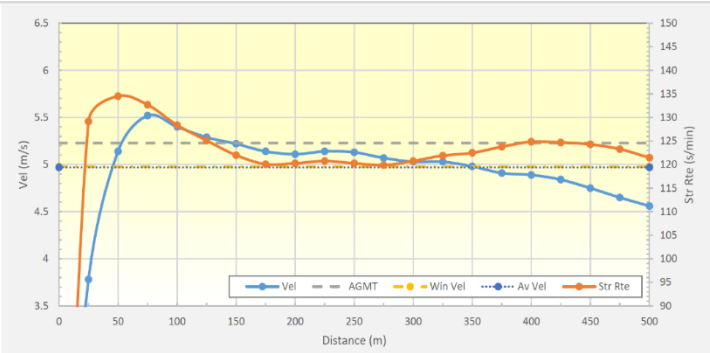
How to read graphs

Graphs are a great way to view large amounts of data quickly. In race reports they are used to compare heats, semis and finals results. It is common to see velocity by distance graphs for efforts.

Key graphical information:

- **Identify what the graph is about** – Look at the axis titles and legends
- **Check the scale of the axis** – Two graphs with the same information but at different scales can mislead the reader to a false observation
- Finally, look at the actual data and make your observation

Below is an example of a more complex graph as it has two vertical axes. Graphs like this are often used to save space by combining information sharing the same horizontal axis. However, as they use different vertical axes, it is important to view the information independently. Take time to be aware of all the information presented.



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