Which rowing machine?
Simulator or Ergometer
– What's the Difference

Extracts taken from www.Rowperfect.com

Look at the diagrams
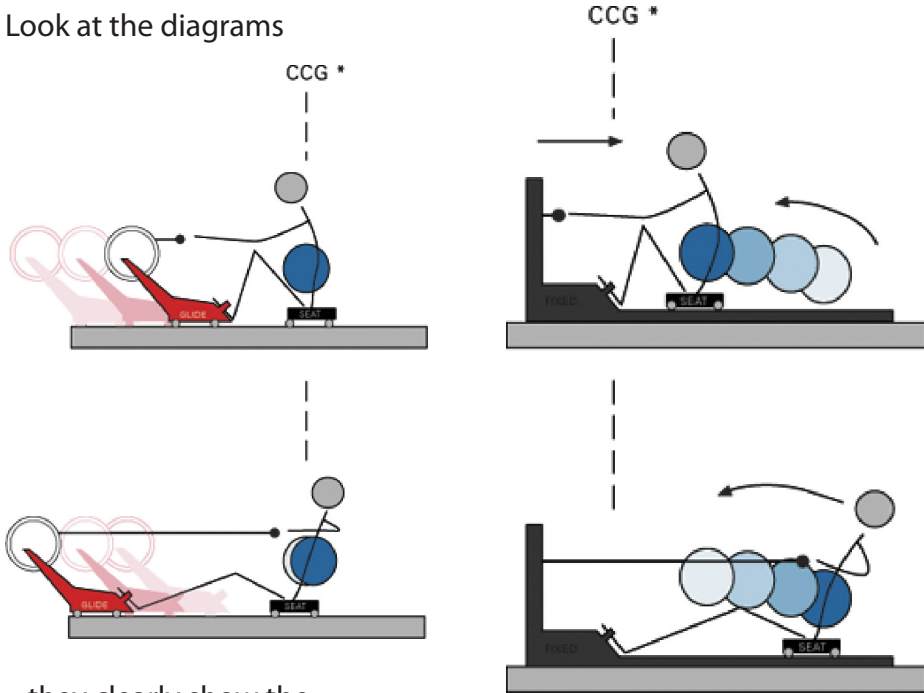
– they clearly show the difference between a fixed rowing machine and a rowing simulator (or rowing boat).

On a fixed ergometer, the rower moves his entire body mass up and down the slide, and must absorb large amounts of momentum at the beginning and end of each stroke, when he stops before the next stroke/recovery. This energy is about 6 times higher with the flywheel fixed compared to floating. The Rowperfect's floating flywheel dramatically decreases the risk factor for injury to body structures absorbing kinetic energy.

In a racing boat, the rower is attached to only 17 - 23kg, which will move far more than he does every stroke. The rower's muscles, ligaments and tendons must absorb considerably less energy, and are therefore less likely to be injured. The Rowperfect's moving mass is 19kg and thus the "feel" (scientifically known as Proprioception) is virtually identical between a Rowperfect and a well-rowed racing boat – the rower trains the correct reflexes, so that when he returns to the boat, his Co-ordination Pattern (TECHNIQUE) is exactly as it should be.

Comparison of fixed and dynamic Rowing Machines

On analysis, the two most critical points in the rowing stroke where technique can make a difference to just raw power are: (1) How the control into the catch is carried out, and (2) Same for the finish.

1. This should be done so as to place no backward pressure ideally onto the stretcher that is not transferred via the blade in the water and then leveraged forward against the pin and then into the boat. Backward stretcher pressure without the counter balance of force in the opposite direction against the pin results in the boat being driven backwards. Simply this would mean one has crashed their body into the front stops and stretcher before taking the stroke or starting the stroke (leg drive) without being in the water. Try doing this on the Rowperfect and see how the machine responds. It will fairly quickly force you to concentrate on the 'proper' approach and application for the catch. This may for some, may be a challenge and require significant concentration in order to maintain the carriage and seat working in a stable central position. This will be because you've got it wrong if you can't maintain the stable point.

2. The logic also applies at the back of the stroke. On the fixed platform machine you can bash into the front as much as you like or for as long as your back and body can take it. I'd suggest that for those who haven't tried. *Learn how to get it right on the Rowperfect then get off and onto the Concepts. If you are not left with the immediate impression that one of them was like rowing and the other something quite different I'd be very surprised.*

-Jim Battersby
Australian Champion Sculler, Olympic and World Medallist rower

Which rowing machine? Simulator or Ergometer – What's the Difference

Extracts taken from www.Rowperfect.com

Feature	Benefit	Rowperfect	All other 'rowing machines' available today
Double action - accurate reproduction of the physics of rowing a floating boat	The closer your off-water training simulates a real boat—the more effective the training. Allows more rapid acquisition and honing of co-ordination. Reduces the forces acting on knees and lower back	Yes	No
Mass balanced - 17.5kg Moving flywheel mechanism	Allows you to learn and practice good technique. It is very sensitive to proper co-ordination of movements.	Yes	No
Seat requires balance	Forces you to sit and pull symmetrically (so you avoid developing incorrect body alignment while training off-water).	Yes	No
Handle force equivalent to boat	Allows you to train specifically for rowing.	Yes	No
Direct, immediate bio-feedback of Force Curve *	Proven as optimum learning method - never before available outside sports institutes	Yes	No
Body mass corrected readout *	Rowperfect presents the fairest comparison of performances of oarsmen of different weight. A world's first!	Yes	No
Boat class variable *	Train specifically for various events	Yes	No
Power-per-pulse available *	Revolutionary training tool - monitor cardiac output as never before	Yes	No
Full steel construction - no easily breakable plastic extrusion parts	Designed to last thousands of hours, with regular maintenance	Yes	No
Inherent flexibility equivalent to rigger + shoulder + footstretcher in a boat.	Flexibility = Strength Stresses are minimised on both machine and rower! Reduces damage to machine and injury to rower.	Yes	No
With Rowperfect interface attached			