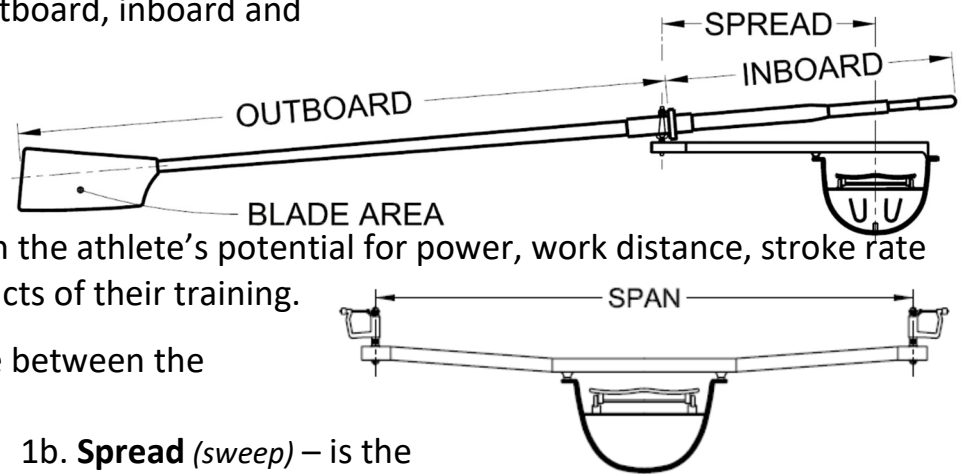


Rigging Load

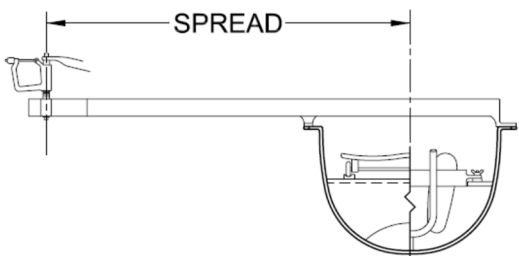
By: Mike Purcer

Load is a measure of the difficulty or how hard it is to pull the oar handle through the drive phase of the stroke. A heavier rigging load would be similar to trying to lift a heavier weight. The load is a product of the leverage of the oar and the length of stroke and reflects the power required to row at a given rate. The rigging dimensions of span or spread, outboard, inboard and blade area controls the power required by the athlete.

One of the goals in rigging is to match the load and length (previously discussed) with the athlete's potential for power, work distance, stroke rate and stroke ratio, which are products of their training.



1a. **Span** (*sculling*) – is the distance between the centres of the oarlock pins.

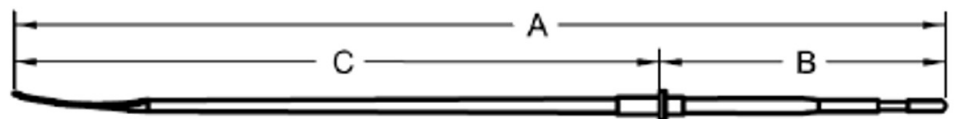


1b. **Spread** (*sweep*) – is the distance from the centerline of the boat to the centre of the oarlock pin measured perpendicular to the boat.

The measurement of span/spread reflects the distance between where the load is applied at the oarlock pin and the centre of the boat where the athlete applies force on the footstops. This distance is a critical dimension of load and one-half centimeter change would be noticeable to the athlete.

2. **Inboard** – (B) is the distance between the end of the oarhandle and the collar.

The inboard along with the span/spread provide the leverage between the oarhandle where the power is applied on the oar and the oarlock pin (load).

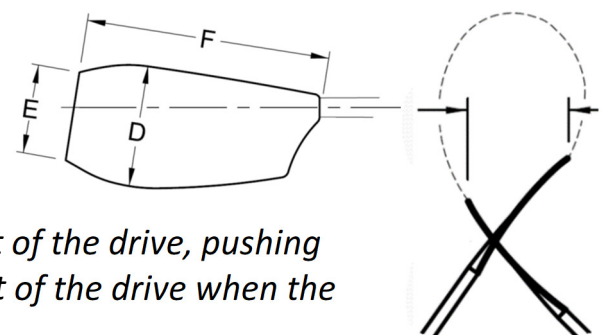


3. **Outboard** – (C) is the distance from the collar to the tip of the oar measured along the centerline of the shaft.

This distance is related to the leverage between the oarlock pin (load) and the fulcrum (blade). The outboard also controls the stroke length (previously discussed) and increases both the length and the load when extended. A one-centimeter change would be noticeable.

4. **Blade Area** – is the surface area of the blade measured in square centimeters.

The area of the blade provides a surface that acts as a fulcrum when the pressure is applied. The larger the area the greater the load. The blade also acts as a propeller moving away from the boat during the first part of the drive, pushing water off the back edge and moving closer in the last part of the drive when the tip is the maximum pressure point.



MATCHING THE LOAD WITH THE ATHLETE'S CAPACITY IS A GOAL OF RIGGING.