

# Content guide for M1



**M1** – referring to the mens single scull discipline – depicts a competitive single scull rower in action. The rower and his shell are floating on a sea of scientific graphs, expressions, imagery, diagrams, and data, all pertaining specifically to the physiological, biomechanical, and physical aspects of the single scull discipline, as well as the competitive history of olympic single scull finals for men and women. The artwork is mixed-media on canvas and measures 183cm x 91.5cm (72" x 36").

The water in the background is "painted" with racing data + repeating curves representing measurements of velocity, acc., angles, etc. of the rowers body and oars.

Rower's centre of gravity — diagram of rower body during recovery phase + table with the relative mass and distance of body parts over water line

Picture of female single scull rower in action showing the pairs of action/reaction forces internal to the rower boat-oar system

Buoys show the designs of the olympic gold medals from Tokyo 2020 back to Munich in 1972 (excl. the 1980 olympics in Moscow due to boycott)

Graph showing the rate of oxygen uptake (ml/min) and heart rate values for two single scull rowers over a 2000m race

Diagram mapping the relations between body mass, muscle mass, skeletal proportions, oxygen uptake, and rowing performance for the single scull rower

The molecular formula and simulated structure of the hemoglobin protein in the rower's red blood cells responsible for transporting oxygen organs and muscles and CO2 back to the lungs. Accordingly, the blood of professional rowers is high in hemoglobin.

Graph showing measurements of the rate of oxygen uptake as a function of shell velocity for single scull oarsmen

Cross-sectional view of a skeletal muscle showing three types of muscle fiber (Type I: slow twitch fibers; Type IIa: fast twitch trained fibers; and Type IIx, fast twitch untrained fibers). The muscles of successful rowers must be primarily (70-85%) Type I for endurance, but Type II fibers are needed for the start and finish.

Quadrant and graphs showing the evolution of different rowing styles and their respective power curves

The rower's organs system and its trainability to optimize oxygen consumption and rowing performance

The racing times for the single scull women and men olympic gold medal winner can be found in the water surrounding every buoy representing those olympic games

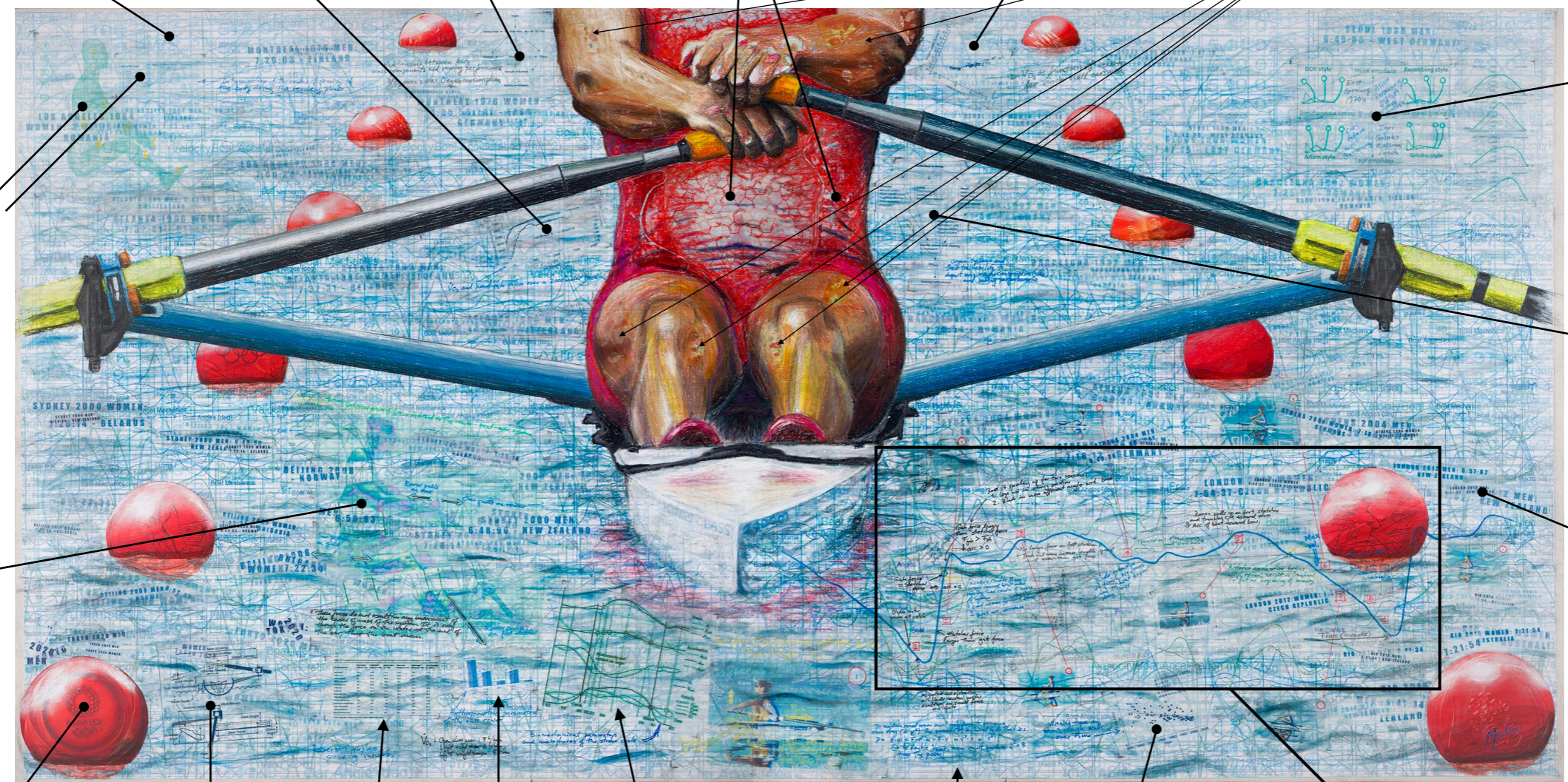


Diagram showing the layout of the rower's cockpit with labels and sizes/distances of all structures and components

Measurements and proportions of the elite rower's body

Biomechanics parameter of rowers body components in different micro-phases of the stroke cycle

Explanation of the relationship between rower power, boat drag, and boat speed

Graph showing winning times in mens single scull racing from 1880 till 2006

Detailed explanation of the rowing shell acceleration curve over the stroke cycle based on the forces in the rower shell oar system. Each of the phases of the stroke-cycle is captured in pictures of women single scull rower.

Table with mean body dimensions for international female and male rowers