Seat Width – The recommended wheelchair (WC) seat width should match the width of the person.

Anatomical Measurement: Trochanter to trochanter/or widest part of the body

Wheelchair Measurement: Outside to outside of seat tubes at the back post

Seat Depth

Anatomical Measurement
- Upper Leg Length: Back of sacrum to popliteal fossa

Consider postural limitations, such as a fixed posterior tilt or leg length discrepancy, that will require accommodation of the WC seat depth.

Wheelchair Measurements
- Seat Depth: Front of back post to front edge of seat sling
- Strategy: Clear the calf while maximizing seat depth

Front Seat Height

Anatomical Measurement
- Back of knee to heel

For a foot propeller the FSTFH will be the client’s lower leg length minus the cushion thickness to allow foot contact for propulsion.

Wheelchair Measurements
- FSTFH: Floor to top of seat tube at front edge of seat sling
- Ground clearance: Equivalent to no more than cushion thickness for optimal center of mass

Foot support-to-seat length (leg rest length): lower leg length minus cushion height to provide optimal femoral contact at seat surface.
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Rear Axle Position determined by Rear Seat to Floor Height and Center of Gravity

User Position determines axle position
Seated in w/ c with arms straight down at their sides, the user's fingertips should touch the rear axle.

Horizontal Axle position
Center of Gravity specification – Front of back post to center of rear wheel.
Goal is 75% - 80% of user weight over rear axle.

Vertical Axle position
Rear Seat-to-Floor Height specification – Rear seat tube to floor

Use RSTFH and COG of demo chair as reference point to determine where definitive specs should be set.

A properly balanced chair should lift easily from the front end with the user sitting in the chair. If it does not, then it is front loaded; the rear axle should be moved forward. Proper weight distribution can be assessed using a scale: Castor Load with hands on rims/ Entire chair with consumer

Seat Slope is the difference between the Front and Rear STFH and is important for postural stability and propulsion. Most adults need at least 2” seat slope if they propel with their UEs. Foot propellers need ½” to 1” seat slope.

Back Height is determined by the lowest point of the trunk needing support for stability/function. Seat-to-Back Angle is usually open a few degrees past 90 degrees for most adults to provide necessary positioning and postural support.

Armrest Height is measured from the seat tube to the top of the armrest. The armrest height should be set so that the client's arms can be supported in neutral with a 90-degree bend at the elbows.

References: