Seating and Wheeled Mobility Measurement Guide

Part 2

Ginger Walls, PT, MS, NCS, ATP/SMS

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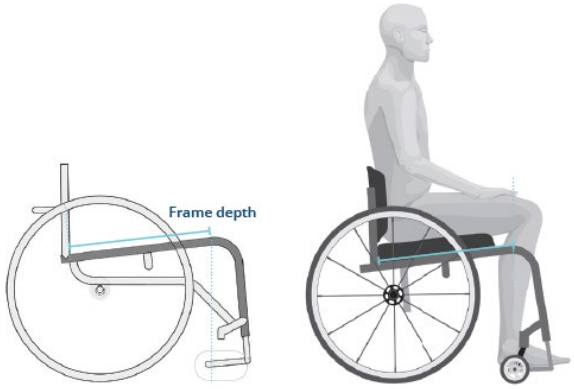
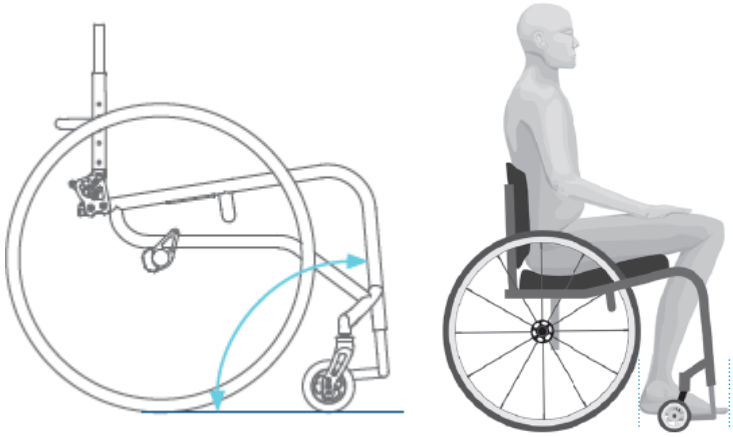
Fact Sheet

Frame Depth: On a rigid manual wheelchair (WC), frame depth is measured from the front of the back cane to the front frame bend. Frame depth should be set so that the bend in the frame lines up with the bend in the user's leg. The result is a wheelbase that matches the user's body because the center of the caster lines up with the bend in the frame.



Front Frame Angle: This WC dimension is independent of the frame length and should be set by asking the user whether they want their feet tucked in or further out, as well as with respect to any ROM limitations. The ball of the user's foot should rest on the footrest tube.



Ergo Seat:

WC measurement is from the back post of the WC to the point on the seat tube where you want it to start to bend upwardly. Anatomical measurement is from behind the hip to the greater trochanter plus 1-2". Consider this option when >2.5" of seat slope needed

Produced by

ASSISTIVE TECHNOLOGY / SEATING & WHEELED MOBILITY SPECIAL INTEREST GROUP
Academy of Neurologic Physical Therapy

A Special Interest Group of

ACADEMY OF NEUROLOGIC PHYSICAL THERAPY

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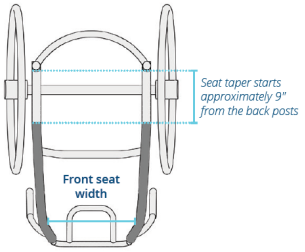
Footrest width:

Anatomical measurement is across both the client's feet when they are in their desired position. Wheelchair measurement is inside-to-inside of the front frame tube. Select a width that allows adequate space for the client's legs and feet, especially if they leave their feet on the footplates for transfers, as well as provides lower extremity positioning within the frame.

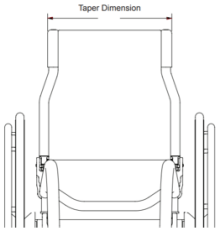
Tapered Seat – Front Seat Width

Anatomical measurement is the width across the client's legs across the distal femurs. WC measurement is inside-to-inside of the front seat frame tubes. Select a width that allows space and provides positioning for the client's femurs. This application is not always used for rigid chairs but may be helpful for clients who have very atrophied legs. The cushion should be considered.

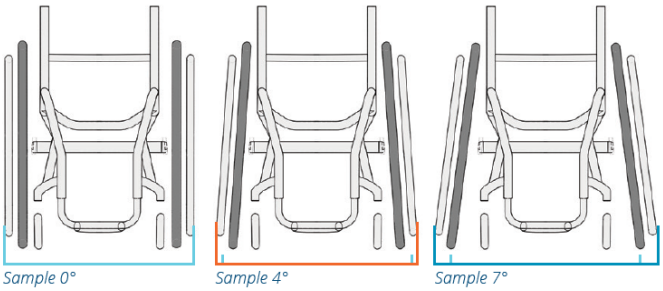


Backrest width

Backrest post width will match the seat width measurement unless a tapered backrest option is needed for a client with wider hips and a very narrow trunk. In this case, tapered backrest posts would allow for better wheel access, back support, and allow full UE excursion during propulsion. Anatomical measurement: width of client's trunk at the top of the desired backrest height. WC measurement is outside-to-outside of the backrest posts.



Camber is the inward tilt of the rear wheel. More camber increases lateral stability and wheel access, but also increases the overall width of the chair. Most adult WCs for daily use have 0-3 degrees of camber. Pediatric and sports chairs often have more camber because of shorter arms and greater need for stability, respectively.



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