Elite Equipment Fit & Performance

Who We Are

- Jeremy “Opie” Lade
  - Director of Sales & Marketing – Top End Sports
  - Head Coach – USA Women’s Wheelchair Basketball Team
  - Paralympian

- Paul Schulte
  - Paralympian | Gold Medalist
  - Wheelchair Basketball & Performance Specialist
  - Motivational Speaker

Racing Chairs – Precision Matters

Eliminator OSR Racing Wheelchair U Cage

Eliminator OSR Racing Wheelchairs- Open V

Eliminator OSR Racing Wheelchairs- I Cage

Eliminator NRG Racing Wheelchair

Basketball Chairs – Built for Performance

TOP END ®
Top End GOAT Basketball Court Chair

TOP END ®
Top End Paul Schulte 7000 Series

TOP END ®
Top End Pro Basketball

TOP END ®
Top End Sport BB Wheelchair

Tennis Chairs – Speed + Mobility

Top End Pro Tennis Court Chair

Top End SportTN Tennis Chairs

Top End T-5 7000 Series Tennis Wheelchairs

Handcycles – Endurance + Power

NEW! Carbonbike VENTO PRO TETRA H1/H2

E-Force 3 Handcycles

Top End Force 3 Handcycle

Lil' Excelerator Handcycle

Top End Excelerator Handcycle

Off-Road Chairs – Access + Independence

Crossfire All Terrain Wheelchair

Fit Drives Performance

- Control, mobility, and stability all start with fit
- Basketball = agility + contact + balance
- Racing = efficiency + speed
- Tennis = quick turns + reach + balance
- Handcycles = endurance + power transfer

Better Fit = Better Performance

Better Equipment = Breaking Barriers

One Message Across All Equipment

- Fit drives performance, access, and independence
- Sport = performance
- Daily use = freedom
- Right equipment changes outcomes

Racing Chair Fitting

How We Measure Athletes Racing Wheelchairs

TOP END® KEEP PUSHING

Measurement Guide for Racing Chairs

Side Measurements

Torso Height: _____

Shoulder joint to Elbow joint length: _____

Elbow joint to Ring Finger knuckle: _____

Seat Depth: _____

Knee Depth: _____

Front Measurements:

Shoulder Width: _____

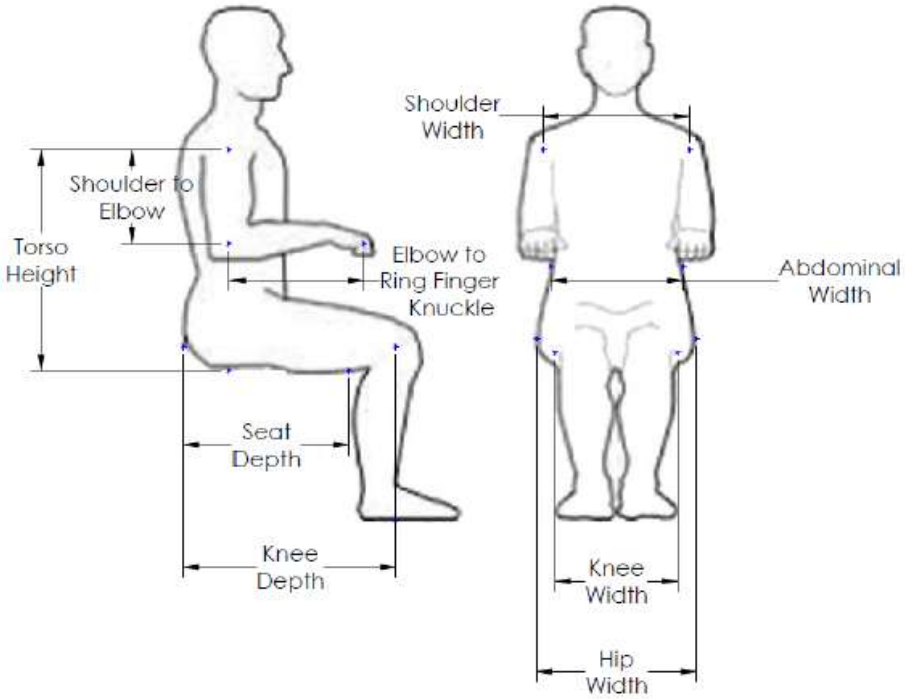
Abdominal Width: between navel and chest: _____

Hip Width: measured at the hip joint: _____

Knee width: _____

Level of Injury if SCI: _____

Other notes regarding ability or needs: _____



Applying the Fit Process

- Ask the right questions before building equipment
- Measure accurately – no guessing
- Fit based on function, not just size
- Small adjustments = big performance gains

What Fit Looks Like in court chairs

- Stability for contact and collisions
- Agility for quick direction changes
- Proper seat position for balance
- Confidence to play aggressive

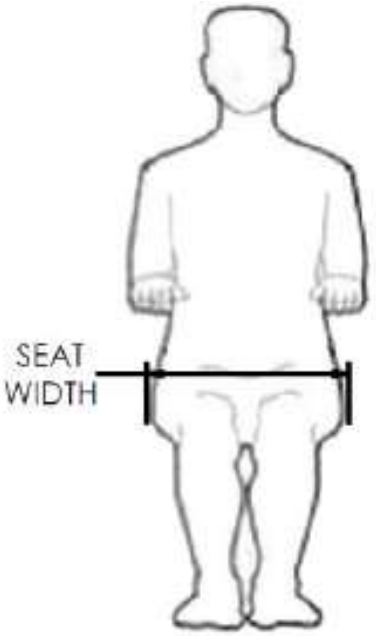
Seat Width – Key Fit Principles

Seat Width

Seat width is a measurement of the outside to outside of the hip by using two flat surfaces on either side.

Fitting Points:

1. For adult athletes, aim for a snug fit. If they measure over the increment, choose a larger size. If they're right under or at the measurement, select that size.
    a. If a click strap is selected, choose a seat width 1" wider than measured.
2. For young athletes that are still growing, consider going up a size to provide room for growth.



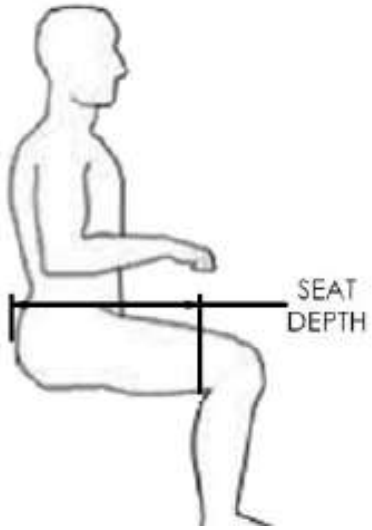
Seat Depth – Key Fit Principles

Seat Depth

Seat depth is a measurement from the athletes backside to under their caf while seated.

Fitting Points:

1. For adult athletes, it's best to use the measurement taken and subtract 2". This provides room for the leg to prevent it from rubbing on the seat upholstery.
2. For young athletes that are still growing, consider using the measured length. This way, they can grow into the chair.

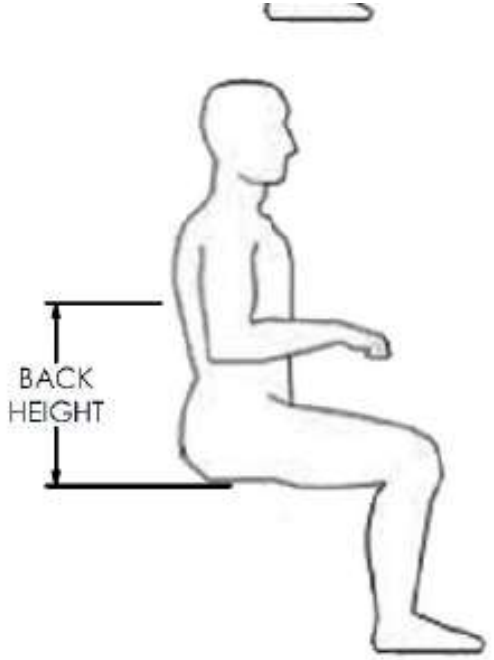


Back Height – Core Function Driven

Back Height

Back height is more a consideration of the Athlete's core function. If the Athlete uses a day-chair, a general rule of thumb is to use a similar backrest height. In general, you can correlate backrest heights to the following:

1. High to full core strength: Adjustable 8" to 11"
    a. This means the Athlete is able to lean over and sit up with minimal or no assistance from their arms.
2. High to Medium core strength: Adjustable 10" to 14"
    a. This means the Athlete needs more assistance from their arms when leaning over and sitting back up.
3. Medium to low core strength: Adjustable 14" to 18"
    a. This means the athlete cannot sit up after leaning over without using their arms to assist.



Fitting Points:

1. In general, Athlete's require more core support while playing games versus when using a day chair or doing other activities of daily living. It will help with performance to error on the side of a taller backrest than shorter. I.E., If there's not enough support when raising hands above the head when shooting a basketball or reaching for a catch, it decreases the overall functional performance of the athlete.

Seat Height & Anti-Tip Setup

Top End Pro Basketball Wheelchairs(ProBB)

Spinal Cord Injury Considerations

- T6+: limited core function
- T6–T12: moderate core
- T12–S4: near full core
- Always ask athlete about function
- Fit based on ability, not just injury level

What Proper Fit Looks Like in Motion

- Efficient push mechanics
- Stable trunk positioning
- Optimal power transfer
- Reduced fatigue over distance

What Fit Looks Like in Handcycling

- Efficient crank mechanics
- Optimized hip and trunk positioning
- Consistent power transfer through full cycle
- Reduced fatigue over long distances

Basketball Chair – Key Features

- Built for agility and quick turns
- Low seat position for stability
- Wheel camber for balance and control
- Designed for contact and competition

Tennis Chair – Key Features

- Increased camber for lateral movement
- Anti-tip design for quick stops and turns
- Optimized for reach and recovery
- Built for speed and court coverage

Why This Information Matters

- Every measurement directly impacts fit and performance
- Ensures proper positioning and comfort
- Guides custom setup and adjustments
- Creates a repeatable, professional fitting process

Connecting Measurements to Fit

- Torso + arm length = push mechanics
- Seat depth = leg positioning + comfort
- Widths = stability + control
- Everything works together to maximize efficiency