# Model: ARIA 1.0 - Aria 2.0 - ULTRA Tutorial: User Measurement

**TOOLS NEEDED** 





## **SW\_SEAT WIDTH**

The seat width determine the user's comfort and performance. It must be wide enough to ensure good weight distribution but narrow enough to arrow easy manipulation of the wheelchair.

#### **APPLY THE FOLLOWING METHOD:**

- 1. Let the person sit on a flat surface
- 2. Position vertical blocks left and right of the hips and measure he distance between the blocks
- 3. Add approximately 1cm to cater for winter clothing for the wheelchair measurement. The result is the choice on the order form.

## **SD\_SEAT DEPTH**

A correct seat depth measurement enables an even distribution of the user's weight across the whole seating base, thereby avoiding pressure points and skin irritation in the area behind the knee.

#### **APPLY THE FOLLOWING METHOD:**

- 1. Let the person sit on a flat surface
- 2. Measure the distance from the rear most point of the buttocks/lower back to the hollow at the back of the knee
- 3. Subtract at least 8 cm (depend on the user's physique and the legrest angle) to give the wheelchair measurement.

The result is the choice on the order form.

## STF\_SEAT TO FOOTREST

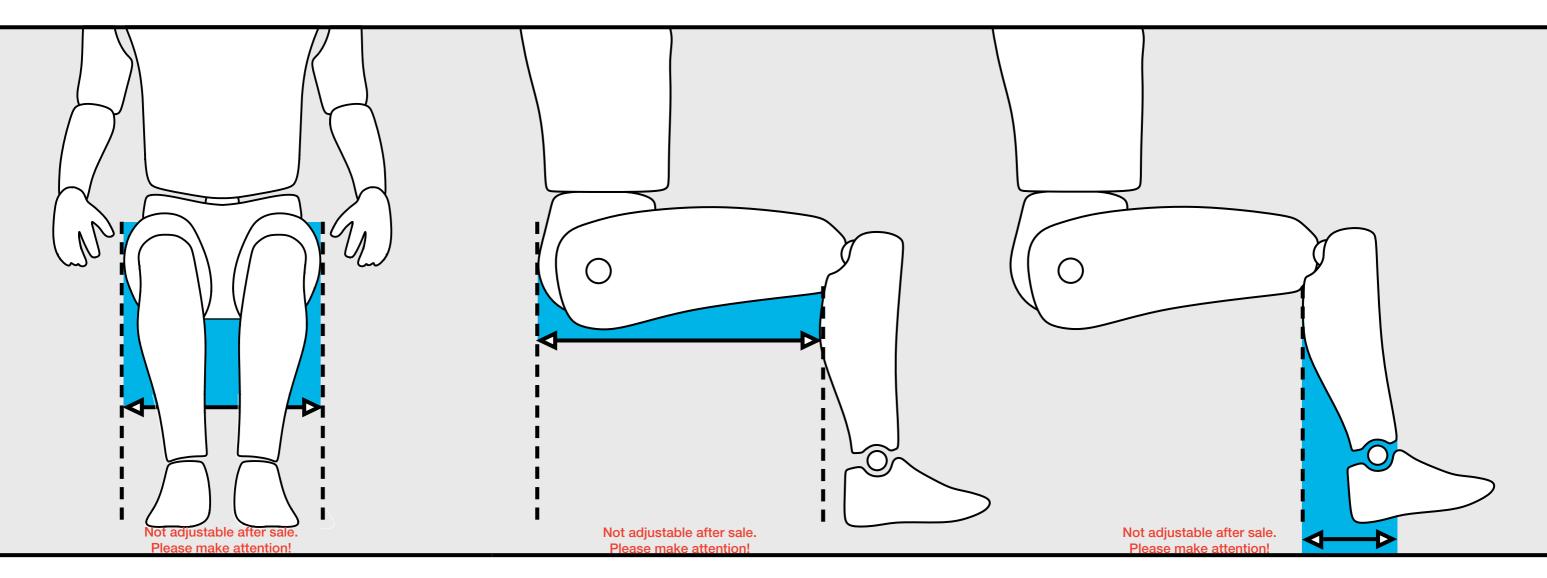
The seat to footrest measurement determine the variation of the user's knee angle.

#### APPLY THE FOLLOWING METHOD:

- 1. Let the person sit on a flat surface
- 2. Open the knee angle as desired by the user
- 3. Measure the distance from the hollow at the back of the knee to the center of shoe
- 4. Add 12 cm to garantee a correct foot support on footrest.

The result is the choice on the order form.

#### **NOT AVAILABLE FOR ARIA 2.0**



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## SHF\_SEAT HEIGHT FRONT

A correct seat height measurement will ensure the optimum driving efficency and can give more clearance to fit underneath tables.

#### **APPLY THE FOLLOWING METHOD:**

- 1. Let the person sit on a flat surface
- 2. Measure the vertical distance from the ground to the hollow at the back of the knee
- 3. This measurement should not be less than the knee to heel dimension (KHL) + 4 cm to hallow sufficient footplate clearance above the ground
- 4. Subtract any cushion tickness to give the seat height front (SHF) wheelchair measurement

# SHR\_SEAT HEIGHT REAR

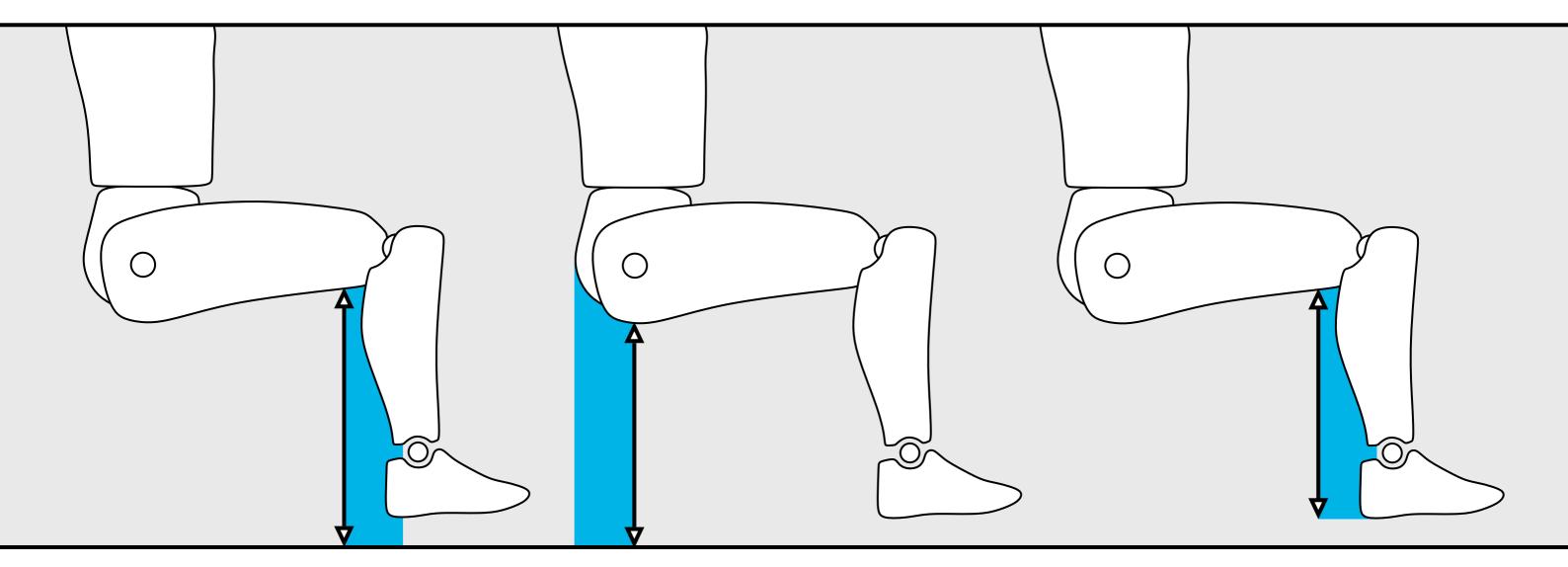
The seat height rear is determine by the seat height front, the seat angle and the seat depth.

## KHL\_KNEE TO HEEL LENGHT

The knee to heel lenght measurement determine the correct height for the footrest, which will enable part of the body weight to be taken by the feet. Footrest must have at least 2 cm clearance above the ground.

#### **APPLY THE FOLLOWING METHOD:**

- 1. Let the person sit on a flat surface
- 2. Measure the distance from the heel to the shoe to the hollow at the back of the knee
- 3. Subtract any cushion tickness to give the wheelchair measurement



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## BRH\_BACKREST HEIGHT

The backrest height is dependent on the user's degree of disability. A correct backrest height should maintaine a good posture whilst allowing the permitted freedom of movement.

#### **APPLY THE FOLLOWING METHOD:**

- 1. Let the person sit on a flat surface
- 2. Measure the vertical distance from the seat plate to the scapulas
- 3. If more trunk support is required, measure from the seat plate up to the required level of support
- 4. If less trunk support is required reduce the backrest height in order to improve activity

### **CAMBER**

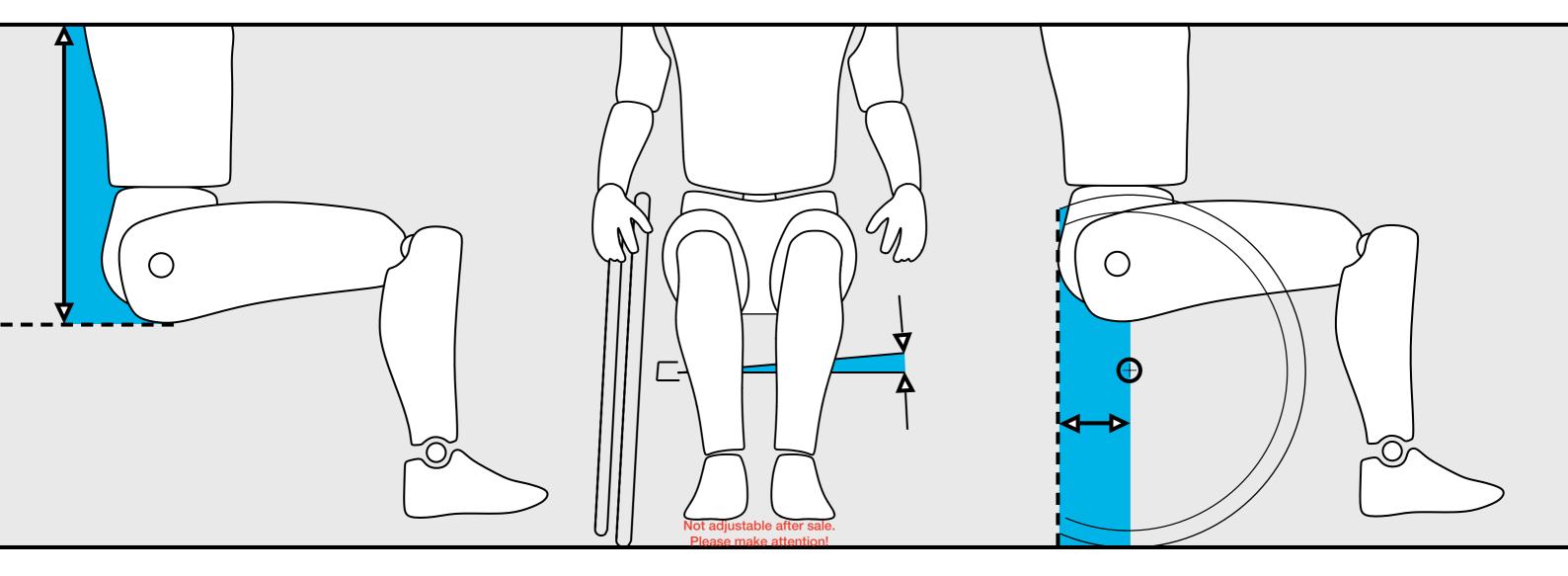
The camber determine the maneuverability, stability and reactivity of the wheelchair in the changing direction.

It determine also the total width of the wheelchair.

## **CG\_CENTRE OF GRAVITY**

The centre of gravity determine the distribution of the user's weight respect the rear wheels axis by changing the wheelchair's set-up.

The centre of gravity determine the comfort and the performance of the wheelchair. It must be enough stable to ensure good weight distribution but active enough to arrow easy manipulation of the wheelchair.



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