



Active Reach

Clinical Resources

by Permobil Academy



Active Reach

Active Reach combines the use of anterior tilt with power recline, power elevating leg supports and power seat elevation, known as *Active Height*, to position the user in a supported semi-standing position.

This technology increases a wheelchair users vertical and horizontal reach by extending their hips and knees and moving the trunk upwards and forward, whilst ensuring the user remains supported in their seating system.

Active Reach can be combined with *Active Height* to allow a person maximum vertical reach, or can be used independently for optimal horizontal reach or assistance with transfers.

Benefits of *Active Reach*

Active Reach for function

Reduced trunk control is a common issue for wheelchair users. This can make it difficult to flex forward and reach, to vacate and return to a seat and to rotate or work next to a surface. The *Active Reach* technology can assist those with reduced strength or control to maximise hand function and position a user closer to the things they need to reach.

Active Reach combined with *Active Height* provides a person with increased vertical and horizontal reach. This technology may be beneficial in many everyday situations, including:

- **in the bedroom** when a person needs to reach items stored in the cupboards;
- **in the kitchen** when a user requires access to shelves, cabinets, a bench or a stovetop for food preparation;
- **in the bathroom** when a person needs to complete personal grooming tasks at the sink;
- **in a work environment** when the user requires access to a workstation; or
- **in restaurants, cafes or stores** when it's time to pay at the counter.







Active Reach for transfers

Active Reach can be used to optimise standing transfers. This is ideal for users who need assistance to initiate sitting to standing, or have difficulty managing footplates for independent transfers.

The system moves a person into a semi-standing position, reducing the muscle strength required to stand and potentially maintaining an independent or assisted stand transfer.

When *Active Reach* is combined with the Corpus® VS legrest, the footplate can be programmed to lower to the floor.* This provides stability for the user while the chair moves into *Active Reach* and eliminates the need to flip back the foot supports prior to transferring.

**Requires a seat to footplate length of at least 38 cm.*



Active Reach for positioning

The *Active Reach* technology is designed to reduce hip flexion. This allows a person with restricted hip movement to be seated as upright as possible, with potential to reach forward.

Use of smart actuators can assist the user to maintain a seated position, limiting the range of the power seat function so the seat will not move past a person's available range of movement.

Active Reach can provide support to individuals with limited lower limb weight bearing capabilities. This can improve user comfort and tolerance and aid in the process of independent transfers.

Funding

Active Reach is a power seat function that requires clinical rationale to be funded. This rationale can be supported through the use of person centred goals relevant to the funding source.

It is recommended that therapists consider whether power seat elevation, or *Active Height*, will meet a person's needs prior to considering *Active Reach*. If provision of power seat elevation will not meet the person's needs, this information needs to be included in the funding report.

***Active Reach* for function**

- What hand function does a person have? What functional tasks could they potentially complete?
- How far can the person reach forward in a seated position and what implications does this have for the person? (Use Modified Functional Reach Test to complement this information)
- Does the person's environment support them achieving their goals?

***Active Reach* for transfers**

- How does the person transfer now?
- Why is it important to maintain this transfer?
- Do they transfer in a similar way off another seat and does this improve their transfer? (e.g., Riser recliner chair)
- Will the transfer be maintained over time?

***Active Reach* for positioning**

- What alternative options have been considered to achieve the desired positioning?

Permobil Specific

Active Reach is available in:

- 5° - 20° on the M3 and the M5
- 5° - 30° on the F3
- 5° - 45° on the F5

Seat to floor height of 44.5 cm is maintained for all options.*

**44.5 cm seat to floor height is maintained when power seat elevation is included on the chair.*

10° of *Active Reach* is available as a standard feature when a Permobil chair is ordered with power tilt and *Active Height*.

For every 10° of *Active Reach* a person gains approximately 7.6 cm of horizontal reach. *Active Reach* can also provide an additional 7.6 cm of vertical reach over and above what can be achieved with *Active Height* alone.

When 20° or more of *Active Reach* is requested on a chair, the Corpus VS power articulating leg supports are used, these leg supports offer 20 cm of vertical travel, meaning they can be programmed to lower the footplate to the floor for ease of transfers for some users.

Literature supporting function

Rice, L, et al. A pilot investigation of anterior tilt use among power wheelchair users. *Journal of Disability and Rehabilitation: Assistive Technology*. July 2019



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