

K450 Base

The K450 MX is a power wheelchair which is capable of negotiating small obstacles and soft terrain, such as grass or gravel, so CLIENT can participate in ADLs with peers in the home, school, yard or on the playground. Additionally, it offers all-wheel suspension which further promotes safety by reducing the amount of forces absorbed through CLIENT's body while navigating various terrains and reducing the risk of fractures.

The K450 MX base also has the option to add 45° power tilt which will provide postural stability (facilitating trunk and head control) and appropriate pressure relief (reducing the risk of skin breakdown) – ultimately increasing overall sitting tolerance.

Suspension

This wheelchair comes standard with an improved shock absorbing system to decrease jolts and bumps when driven over uneven terrain such as grass or gravel. This will help to maintain sitting balance and maintain contact with the controller to safely drive the wheelchair. Suspension allows all four wheels to remain on the ground and also absorbs jolts from the terrain that can cause pain and increased pressure or shearing to the wheelchair user due to increased movement. The smoother driving is less likely to cause pain and reduces fracture risk, making sitting tolerance, posture, and driving better. This system will also decrease wear and tear on the wheelchair frame.

MX Power Seat to Floor

The MX Power Seating System offers the unique function of moving CLIENT to the floor. The K450 MX provides a large range of vertical mobility, in addition to the traditional 2 dimensional movement provided by other power wheelchairs. The seat moves forward and down by the press of a switch or via any wheelchair control, enabling CLIENT to get to the floor while remaining seated. The seat to floor function not only helps incorporate children into peer activities, but also enables CLIENT to transfer independently and safely to the floor, or to any other surface. Providing a means for independent transfers in and out of the wheelchair is a medical necessity for individuals of all ages. In addition to improving independence, the seat to floor feature also promotes safety by reducing handling by unqualified people and lowering the level of transfer. The elevating seat allows CLIENT to access various heights – supplementing upper extremity weakness and range limitations, thereby increasing access for performing MRADL tasks and further improving independence.

The MX seat will grow with the child for years, from 10"x10" to 16"x18". It offers manual adjustable legrests, height adjustable armrests, and seat depth adjustability at no charge. All standard seating accessories are available, such as headrest, thoracic lateral supports and hip guides for improved positioning. As an alternative, a tubular seat frame may be used to accept after-market seating systems. Permobil also offers one time free growth kit on this pediatric system to accommodate children as they grow, making the system more economical in the future.

Power Adjustable Seat Height

The power adjustable seat height allows vertical adjustment of the seat height by the wheelchair user. Elevation increases reach and allows more independence. It facilitates lateral transfers by allowing a level transfer or transfer from a higher to lower surface, which is gravity-assisted. It also facilitates forward transfer by allowing legs, hips to be more extended, thereby lessening the strain for the user to perform a stand-pivot

transfer. Moving/driving while elevated allows better eye contact and allows better positioning for reaching, which can lead to independence in many activities, such as eating, cooking, and hand washing. Vertical rise has psychosocial benefit of eye-to eye contact, and further benefits the user by reducing neck strain. Medications can be kept out of reach of children but remain accessible.

Power Tilt

Power tilt allows independent orientation in space and has multiple medical and functional benefits:

- Provides powered orientation in space, 45 degrees
- Compensates for limited trunk stability
- Allows independent orientation change
- Reduces shear along back and seat, especially when used in conjunction with recline
- Maintains proper position in relation to AAC devices, computer
- Allows for safer negotiation of inclines
- Improves respiration and digestion
- Slows inevitable progression of neurologically based spinal deformity
- Provides some control of edema (best when used with elevating legrests)
- Inhibits triggering of abnormal tone or reflexes

Compact Advanced Joystick for R-net

The Compact Advanced Joystick for R-net is a proportional upgraded joystick that is separate from the controller box. The programmable electronics have separate drives and switch options available to safely meet different access, environmental, and terrain needs. The joystick is more compact and can be placed closer to the frame and may also be placed in multiple locations for better hand access. The joystick may also be turned for optimal access to the buttons. This feature has the potential to make the overall profile of the wheelchair smaller for maneuvering. When using multiple power options or alternative drive controls, this type of upgraded joystick is needed along with the expandable controller.

Expandable Controller and Harness

The expandable controller is the power module located in the base of the chair that allows the input device to communicate with the drive motors and gear box. The expandable controller is needed for multiple power options on a base as a non-expandable controller (in the form of an integrated joystick and controller) will not accommodate these features. An expandable controller is used in conjunction with an upgraded joystick (Pilot + or R-net). An expandable controller is also required when any alternate drive controls are being used on a power wheelchair. With R-net, the expandable controller can accommodate up to six different types of drive inputs.

Multiple Seat Function Control Kit

The Multiple Seat Function Control Kit describes the electronic components that allow the user to control two or more of the following actuators from a single interface (e.g., proportional joystick, touchpad, or non-proportional interface): power wheelchair drive, power tilt, power recline, power shear reduction, power leg elevation, power seat elevation, power standing. It includes a function selection switch which allows the user to select the motor that is being controlled and an indicator feature to visually show which

function has been selected. This feature is contained both in a separate membrane switch box and integrated into the wheelchair drive interface.

Headrest, Adjustable/Removable

A contoured adjustable angle headrest is medically necessary to provide posterior and lateral support to the cervical spine and head. This headrest is used for positioning and head control and comes with the necessary hardware to mount the headrest pad to the wheelchair backrest.

Headrest, Removable Hardware

Adjustable hardware is required so that the headrest is properly placed to provide optimal support to CLIENT's head and cervical spine. This headrest is also removable for ease of transfers in and out of the wheelchair and to reduce the wheelchair's overall height when traveling.

Uni-Track Support and Hardware

The Uni-track system accommodates an infinite amount of adjustments and placement points using few modular pieces that are customizable to the individual. The support surfaces are used for trunk support, thigh support, calf support, or amputee support, and can be interchangeable. The accompanying hardware mounts to the seating system using a track and consists of multidirectional joints, thereby making attachment and subsequent adjustment limitless.

Upper Extremity Support

A wheelchair tray table is necessary to assist in upper trunk positioning and upper extremity support. It also provides a horizontal surface for working or eating, or to facilitate carrying of essential items. The necessary hardware to mount the tray to the wheelchair frame is angle adjustable for better visual access to the items on the tray, and is removable for transfer.