

Fitting and Operating Instructions



Dynamic Footrest



GETTING STARTED

When assessing for a Dynamic Footrest, please carefully read the following two stages:

Stage	Task	Page
1	Read 'Section 1 - Important' thoroughly	5
2	Read 'Section 2 – Assessment Notes' thoroughly	5

When fitting a Dynamic Footrest, please read this complete booklet.

USAGE

The Dynamic Footplates can with used with a CAPS II Seating System or wheelchair base with a suitable footrest adapter fitted. They are not suitable for use with the MiniCAPS Seating System.

TYPES OF DYNAMIC FOOTREST

We manufacture two types of Dynamic Footrest Assembly. The Part Numbers and Descriptions are shown below.

XC28/46 Active Dynamic Footrest Assembly (new type)



XC28/45 Dynamic Footrest Assembly (Double Plate Type)



SECTION 1 - IMPORTANT

- Caution, Dynamic Seating components must be used with care, and consideration given to all factors, in particular ensuring that inappropriate movement patterns are not promoted.
- Dynamic Footplates should not normally be used with a kneeblock. A 'P-shaped' adjustable or fixed pommel should be used. Where the travel of the footrest assembly is less than 25mm (such as on the Double Plate Type), a kneeblock may be used subject to it being checked. In this case, you must ensure that on full extension, the front surface of the knee is still in contact with the full surface of the kneecup, and not the bottom edge.
- By fitting and using this Dynamic Footrest Assembly, you confirm that you have fully read these instructions, in particular Section 2 – Assessment Notes and has been taken into account during your clinical decision-making. You also agree that you will provide feedback on the use of the footplates to further improve their clinical application.
- This Dynamic Footrest must only be fitted by a competent person.

SECTION 2 – ASSESSMENT NOTES

Dynamic footplates could be considered after assessment and configuration of standard seating, and found that a person demonstrated a need to move within the seated position using an extension pattern which uses the footplates and backrest or headrest for leverage.

Research suggests (Nwoabi et al, 1983, 1987) that orientation of the trunk behind the base of support will often produce increased extensor tone in people with spastic CP, which reduces their pelvic stability, and therefore their ability to function effectively.

Rather than accommodate active extension as a total pattern, a better solution may be to accommodate the need to extend by provision of a footrest assembly which moves with their legs into extension, rather than utilising total body extension.

It should be possible to maintain pelvic stability with the usual configuration of sacral support, pelvic lateral pads, a seat cushion with a flat ischial area and reduced ramped cushion.

The need to manage any asymmetry at their pelvis should be achieved via a one-piece pommel or medial pads only, and not through the application of standard kneeblocks, as the movement of the knees downwards may cause them to get caught under the lower edge of the kneeblock cup as they relax.

The medial support would need to be modified to provide consistent support to the medial aspect of the knees and upper legs during any extension movement of the legs.

Great care should be taken to set the seat depth up to the best position to achieve pelvic stability, with the pelvis in a neutral tilt position.

The footrests should be positioned so that their hips knees and feet are in midline orientation, with hips, knees and feet flexed to 90°, to increase stability and encourage relaxed control.

The use of dynamic footrests should be monitored for approximately 8 weeks of regular use to establish their effectiveness, when it should be possible to observe improved pelvic stability and less use of total body extension.

At this time there is little published evidence to establish the effectiveness of dynamic backrests or footplates for people with spastic CP, so it is important to audit their use to establish the effect on postural control and function.

References:

Nwaobi OM, Brubaker C, Cusick B, Sussman MD (1983) Electromyographical Investigation of Extensor Activity in Cerebral Palsied Children in Different Seating Positions. Developmental Medicine and Child Neurology 25: 175-183.

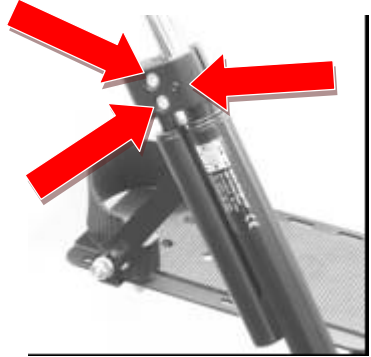
Nwaobi OM (1987) Seating Orientations and Upper Extremity Function in Children with Cerebral Palsy. Physical Therapy 67 (8): 1209-1212.

SECTION 3 – FITTING AND ADJUSTING THE DYNAMIC FOOTRESTS

This section applies to Active Dynamic Footrest Assembly (new type) only. The Dynamic Footrest Assembly (Double Plate Type) is adjusted in the same way as a standard CAPS II Footplate.

Adjusting the Height of the Dynamic Footrest Assembly

1. To adjust the height of the footrest, loosen the grub screw. Loosen the two retaining bolts until you can slide the footrest assembly up and down the footrest drop tube. When you have reached the required position, tighten the retaining bolts.



2. You may want to use a spirit level to ensure the footplate is level. To adjust the level, loosen the two retaining bolts above and rotate the footrest assembly around the drop tube. Alternatively, adjust the footplate as shown in X below.



Adjusting the Stiffness of the Dynamic Footrest

The stiffness of the footrest is adjusted by changing the internal spring. Additional springs are available from Active Design. Four different spring ratings are available.

1. Ensure the Dynamic Footrest has fully returned to its 'rest' position. Carefully remove the tube bung using a flat screwdriver.



2. Using a 4mm allen key, remove the spring retaining bolt and washer from inside the sliding tube.



3. The spring can then be removed. To reassembly the footrest, insert the spring you require and replace the spring retaining bolt and washer while holding the tube assembly upside down. Fully tighten the bolt and then replace the tube bung. Check the operation of the assembly.



Adjusting the Footplate Position

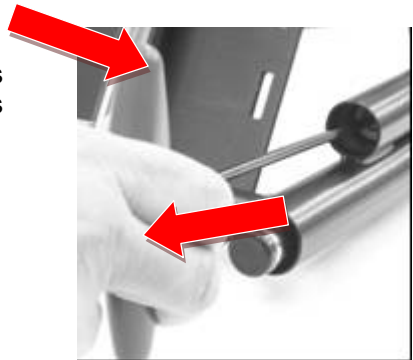
1. Loosen the bolt attaching the bottom end of the Footplate Rear Strut.



2. Loosen the bolt attaching the top end of the Footplate Rear Strut.



3. Adjust the width and depth position of the footplate by loosening the two nuts shown. Once the required position has been reached, tighten the nuts. You may also wish to check that the footplates are level.



SECTION 4 – FINAL FITTING

Ensure all mounting bolts are tightened, in particular the grub screw in the Height Adjustment Block.

Check the operation of the Dynamic Footrest Assembly, it should move freely on the footrest drop tubes and return to its rest position when no force is being applied to it. Please contact us if required.

SECTION 5 – REVIEW AND MAINTENANCE

We recommend that the red seat restraining strap is fastened around the back of the remaining seat frame as a secondary safety device, and that the armrests are also used.

The dynamic footrest should be checked every 8 weeks initially, and then no less frequently than every 6 months.

If you are unsure about any part of these instructions, please contact us.



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