

Children to Adult Chair Sizes

SmartSeatPro II

A smart evolution in complex seating

Assessment & Prescription Guide

CareFlex

Standard Features At A Glance

The SmartSeatPro II is a highly adjustable modular seating system that takes specialist seating to the next level for those with complex postural management and pressure care needs. The SmartSeatPro II's unique design allows for a range of configurations to ensure postural asymmetries can be fully stabilised, accommodated, and, where possible, corrected from the feet to the pelvis and through the spine to the head. Available in Small and Medium chair sizes to support children through to the older adult of varying shape and size.

The SmartSeatPro II benefits from Tilt-in-Space, Back Angle Recline, and a multi-adjustable back and head system with sections of modifiable filling. The chair's design gives Health & Social Care Professionals maximum adaptability to optimise posture, function and comfort for individuals in all environments, including domestic settings, schools, care homes and hospitals. Operation of chair functions can be by either manual gas action control or battery-controlled motors and a pro-control option. The chair provides high levels of comfort and the robust construction quality associated with CareFlex chairs. For peace of mind the SmartSeatPro II comes with a 5-year warranty on the frame and 1-year on all other parts and labour.

CLIENT GROUPS

- Cerebral Palsy
- Traumatic Brain Injury
- Spinal Cord Injury
- Stroke
- Muscular Dystrophy
- Motor Neurone Disease

ENVIRONMENTS

- Domestic and Home Care
- Rehabilitation Settings
- Hospital Wards
- Schools and Colleges
- Nursing and Residential Homes

ADJUSTMENT CONTROL OPTIONS

- Manual
- Pro-Control (Leg Rest and Tilt-in-Space Functions Only)
- Fully Motorised

FEATURES

- Multi-Adjustable and Modifiable Back and Head System
- Tilt-in-Space with Inclinometer (Visual Tilt Angle Indicator)
- Back Angle Recline with Visual Indicator
- WaterCell Technology
- Negative Angle, Channelled and Elevating Leg Rest
- Angle Adjustable Flip-Up Footplate
- Integral Seat Depth Adjustment
- Integral Seat Width Adjustment
- Integral Arm Height Adjustment
- Adjustable and Removable Armrests
- Hoist and Transfer Friendly Frame with Increased Ground Clearance
- Four Fully Braked Castors
- Removable Battery Tray on Motorised Versions



Multi-Adjustable Head and Back System



Tilt-in-Space Inclinometer



Easy and Clear Seat Width Adjustments

Optional Accessories

OPTIONS

- Back & Head Adjustment Kits (Lever Adjustment or Quick-Release)
- Back Depth Adjustment Upgrades
- Armrest with Quick Ratchet Adjustments (Medium Chair Only)
- Ergonomically Shaped Lateral Supports
- Range of Head Supports
- Range of Positioning Aids
- Range of Footplate Supports
- Adjustable and Swivel-Head Pommel
- Tray
- Tailored Seating Solutions

EXTRAS (contact us for details)

- Aftercare Service Packages



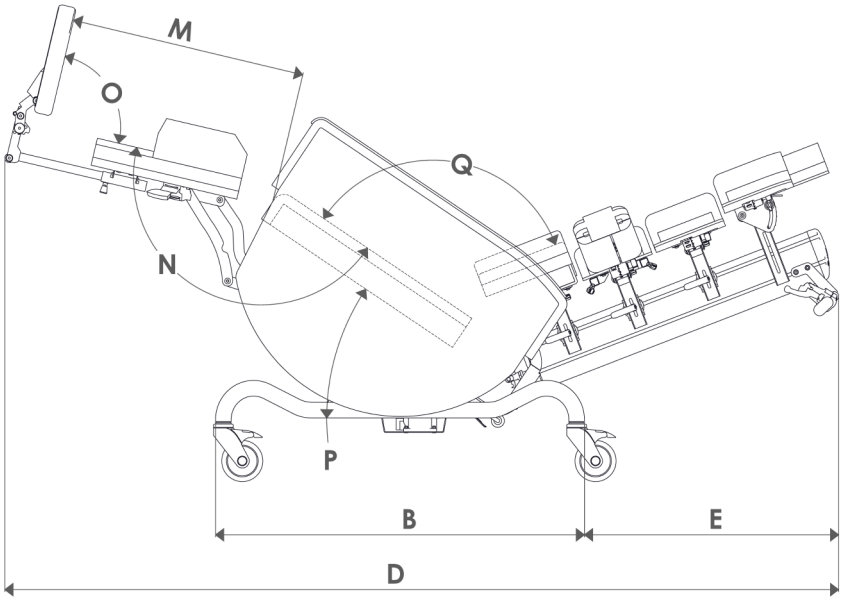
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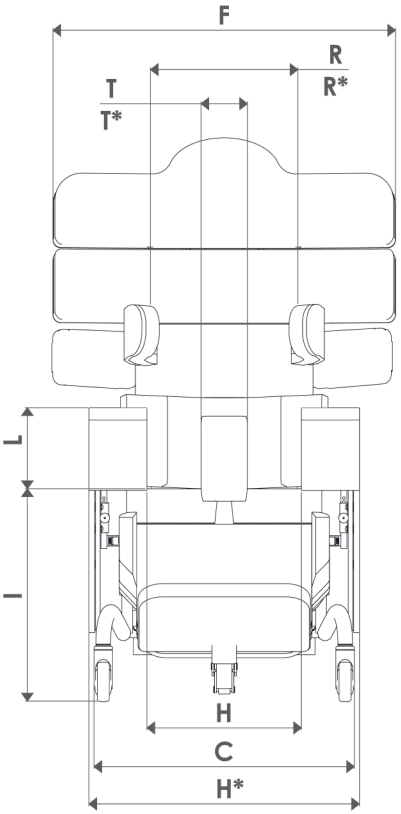
BASIC DIMENSIONS		MEASUREMENTS	RANGE
A	Overall Height	1240/1270/1300/1330mm	90mm
B	Base Frame Length	850mm	
C	Base Frame Width	620mm	
D	Maximum Length	1900mm	
E	Tilt-in-Space Clearance	640mm	
F	Back Element Max Width	820mm	
G	Ground Clearance (Manual)	110mm	
G*	Ground Clearance (Motorised / Pro-Control)	70mm	
BASIC DIMENSIONS		**MEASUREMENTS**	**RANGE**
H	Seat Width	280mm - 440mm	160mm
H*	Minimum / Maximum Outside Arm Width	550mm - 710mm	160mm
I	Seat Height	450/480/510/540mm	90mm
J	Seat Depth	280mm - 490mm	210mm
K	Back Height	700mm - 800mm	100mm
L	Armrest Height	150mm - 200mm	50mm
M	Seat to Footplate Height	290mm - 490mm	200mm
N	Leg Rest Angle	75° - 165°	90°
O	Footplate Angle	-75° / 90° / 105° / 120°	60°
O*	Footplate Depth	(S) 200mm | (L) 270mm	70mm
P	Tilt-in-Space (TiS)	0°- -30°	30°
Q	Back Angle Recline (BAR)	90° - 125°	35°
R	Lateral Width (Narrow)	140 - 340mm	200mm
R*	Lateral Width (Wide)	240 - 440mm	200mm
R**	Lateral Height from Seat	230mm - 470mm	130mm
R***	Lateral Pad Depth (Small or Medium Pad)	(S) 160mm | (L) 190mm	30mm
S	Push Bar Height Adjustment	0 - 150mm	150mm
T	Pommel Lateral Movement	-20mm - +20mm	40mm
T*	Pommel Head Rotation	360°	360°
U	Back Element - Top Depth Range	100mm	100mm
U*	Back Element - Lower Depth Range	40mm	40mm
U**	Back Element (Upgrade Options)	150, 200, 250, 300mm	300mm
V	Back Element Angle	7.5° increments	7.5°
W	Back Element Head Section Articulation	90° - 45°	45°
X	Back Element Rotation	-14° - +14°	28°

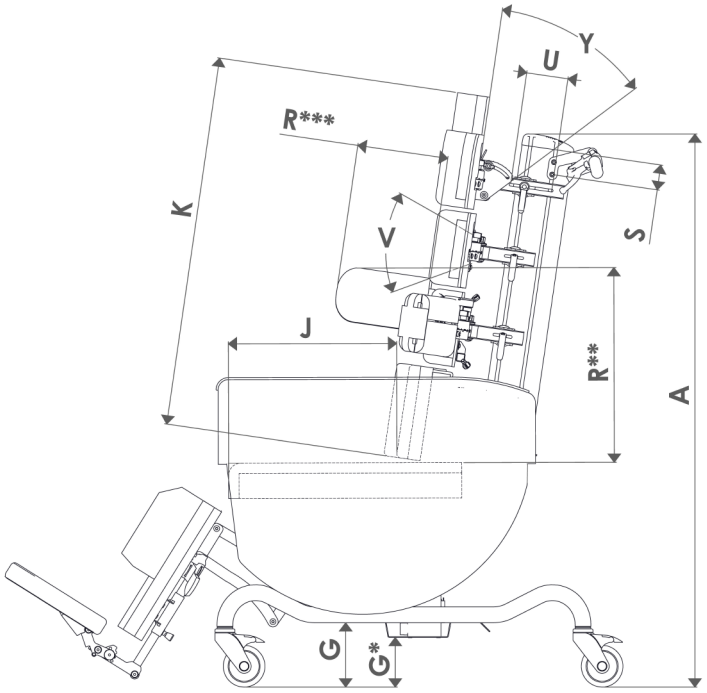
Refer to Technical Diagram for Letters and Asterisks

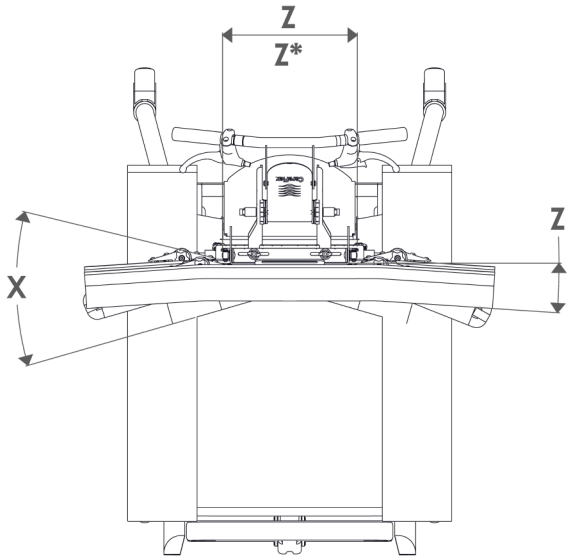
(All measurements ±10mm / 5°)

Technical Data - Small









WEIGHTS	KILOGRAMS
Chair Weight - Manual (Standard Specification)	66kg
Chair Weight - Motorised (Standard Specification)	72kg
Maximum User Weight	100kg

Technical Data - Medium

BASIC DIMENSIONS		MEASUREMENTS	RANGE
A	Overall Height	1330/1360/1390/1420mm	90mm
B	Base Frame Length	900mm	
C	Base Frame Width	675mm	
D	Maximum Length	2030mm	
E	Tilt-in-Space Clearance	620mm	
F	Back Element Max Width	890mm	
G	Ground Clearance (Manual)	150mm	
G*	Ground Clearance (Motorised / Pro-Control)	120mm	

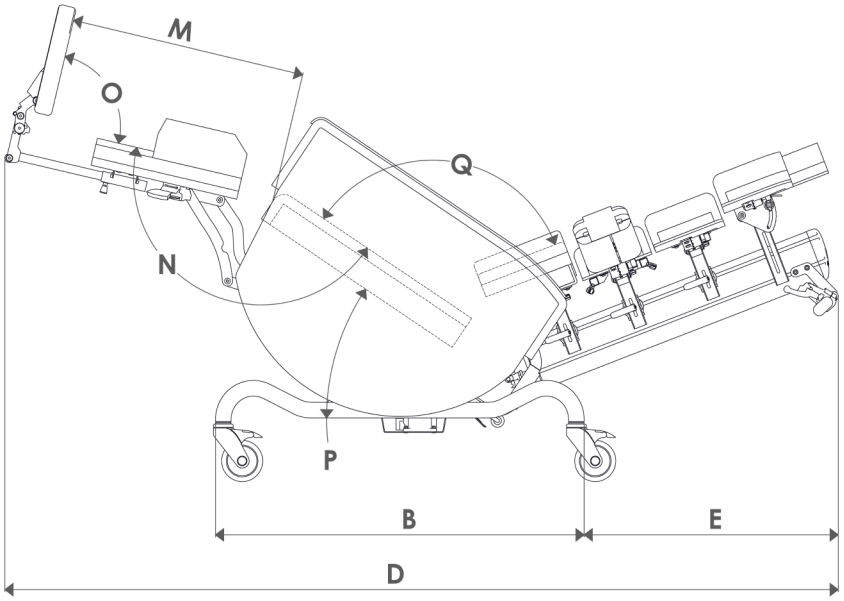
BASIC DIMENSIONS		MEASUREMENTS	RANGE
H	Seat Width	350 - 550mm	200mm
H*	Minimum / Maximum Outside Arm Width	650 - 850mm	200mm
I	Seat Height	530/560/590/620mm	90mm
J	Seat Depth	360 - 570mm	210mm
K	Back Height	830 - 930mm	100mm
L	Armrest Height	200 - 250mm	50mm
L*	Armrest Height (Ratchet Adjustment Armrest Option)	200 - 270mm	70mm
M	Seat to Footplate Height	400 - 575mm	175mm
N	Leg Rest Angle	70° - 160°	90°
O	Footplate Angle	-75° / 90° / 105° / 120°	60°
P	Tilt-in-Space (TiS)	0°- -35°	35°
Q	Back Angle Recline (BAR)	90° - 125°	35°
R	Lateral Width (Narrow)	200 - 400mm	200mm
R*	Lateral Width (Wide)	300 - 500mm	200mm
R**	Lateral Height from Seat	250 - 500mm	250mm
R***	Lateral Pad Depth (Small or Medium Pad)	160 or 190mm	30mm
S	Push Bar Height Adjustment	0 - 150mm	150mm
T	Pommel Lateral Movement	-60mm - +60mm	120mm
T*	Pommel Head Rotation	360°	360°
U	Back Element - Top Depth Range	100mm	100mm
U*	Back Element - Lower Depth Range	40mm	40mm
U**	Back Element (Upgrade Options)	150, 200, 250, 300mm	300mm
V	Back Element Angle	7.5° increments	7.5°
W	Back Element Head Section Articulation	90° - 45°	45°
X	Back Element Rotation	-14° - +14°	28°
Y	Back Element Wing Rotation	0° - 100°	100°
Z	Back Element Lateral Adjustment (Top)	60mm range	60mm
Z*	Back Element Lateral Adjustment (Lower)	140mm range	140mm

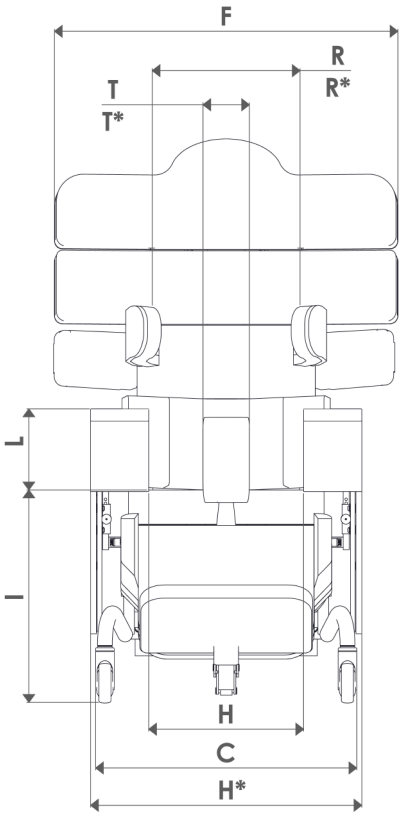
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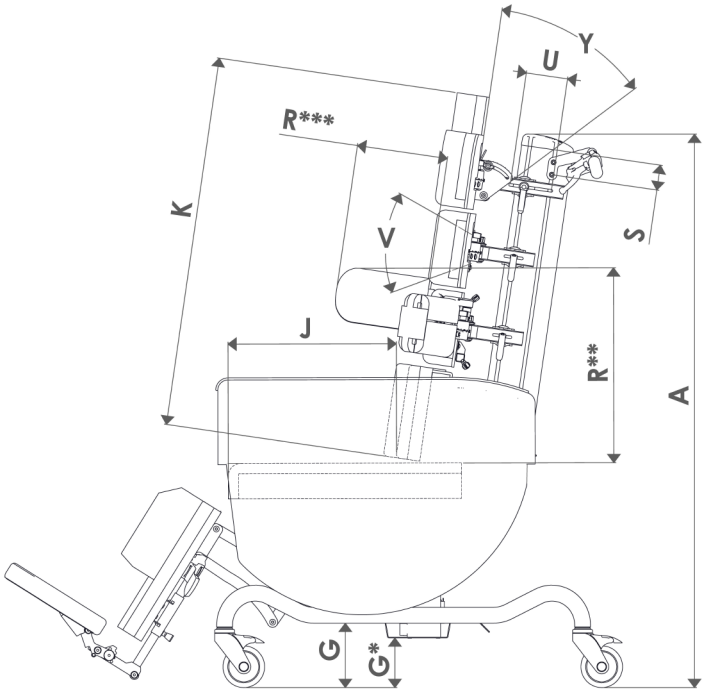
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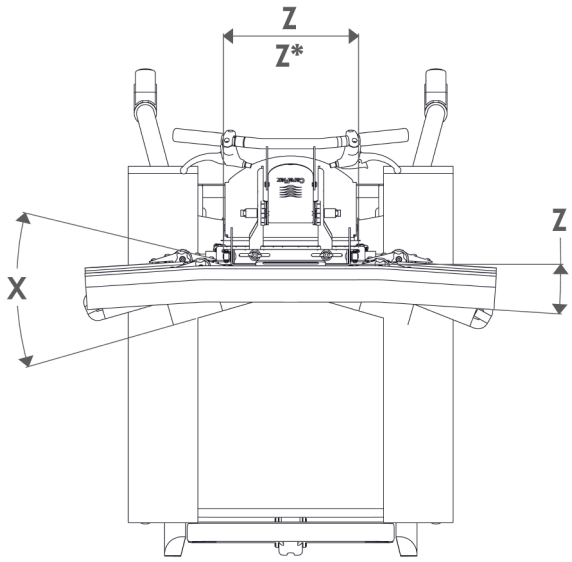
Technical Data

M
Chair







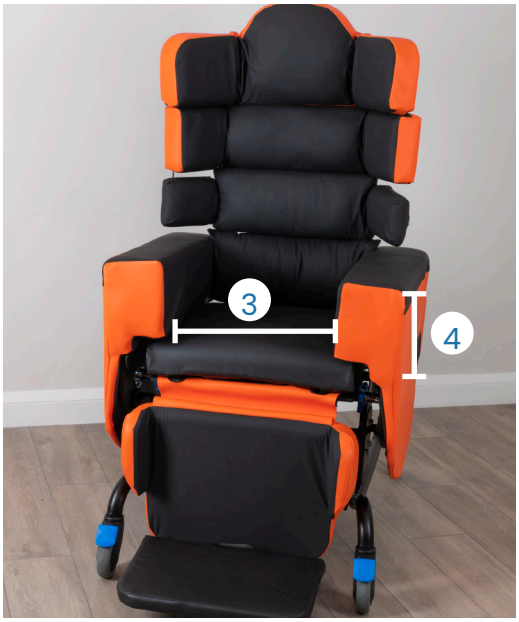


WEIGHTS	KILOGRAMS
Chair Weight - Manual (Standard Specification)	77kg
Chair Weight - Manual (Ratchet Arm Option)	85kg
Chair Weight - Motorised (Standard Specification)	83kg
Chair Weight - Motorised (Ratchet Arm Option)	91kg
Maximum User Weight	160kg

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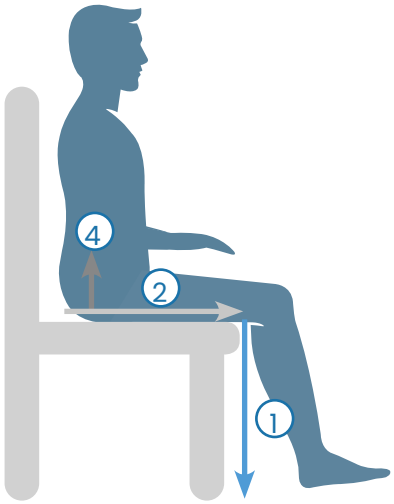
Chair Set-Up



Every chair must be set up to fit its user, supporting posture appropriately and ensuring maximum contact with the support surface to distribute weight evenly whilst maintaining comfort and independence. Chair set-up influences positioning, which can consequently impact the risk of secondary complications, including postural deterioration, pressure injury and reduced quality of life.

Please refer to the Clinical Justification & Case Studies document for detailed information on assessment, prescription and clinical reasoning.

It is critical that the seating prescription and subsequent set-up are based on the individual's body shape and size determined during the seating assessment; if it is not, then it can cause more harm than good.



Taking Measurements

Ensure optimum sitting position before measuring. These are guidelines only as they will be affected by the user's size and shape and the functions and accessories prescribed.

1) Seat height – popliteal fossa to footrest/floor
2) Seat depth – back of the pelvis to the back of the knee minus approx. one inch (both left and right measured)
3) Seat width – hip-width/two widest points
4) Armrest height – seat to elbow (both left and right measured)

CHAIR DIMENSION	ADJUSTMENT RANGE	MEASUREMENT/SELECTION
Seat Depth	Small | 280mm - 490mm Medium | 360mm - 570mm	
Seat Height	Small | 450/480/510/540mm Medium | 530/560/590/620mm	
Seat Width	Small | 280mm - 440mm Medium | 350mm - 550mm	
Seat to Footplate Height	Small | 290mm - 490mm Medium | 400mm - 575mm	
Armrest Height (Standard Arm)	Small | 150mm - 200mm Medium | 200mm - 250mm	
Armrest Height (Optional Ratchet Adjustment Arm)	Medium | 200mm - 270mm	

Pressure Care

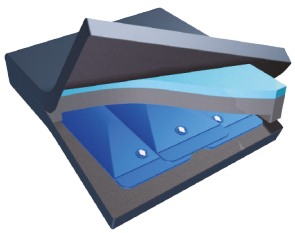
Posture and pressure are inextricably linked; body posture and positioning have a direct influence on the pressure going through specific body sites.[1] The body can only withstand high interface pressures for a short period of time, and when the loading of tissues is unequal and/or pressure isn't regularly relieved; pressure ulcers can occur.[2] There are also a number of contributing or confounding factors, including pressure, shear forces, friction and moisture, associated with pressure ulcers.

Everyone is potentially at risk of developing a pressure injury.[3] The impact of a pressure injury is profound, with individuals being affected physically, psychologically, socially, emotionally, spiritually, and financially.[4] Appropriate management or, better still, prevention can not only improve an individual's outcomes and quality of life, but it can also reduce the costs of health and social care services benefiting the wider community. A key intervention is pressure redistribution; regular repositioning is critical for those deemed at risk of developing a pressure injury as it is believed to be one of the most effective methods for preventing skin damage.[1]

Specialist seating systems aim to reduce the risk of pressure injuries by distributing the user's body weight evenly throughout the chair over the maximum surface area with posture supported as aligned and symmetrical as possible. The opportunity to sit out can offer a much-needed change of position to encourage blood flow and redistribute pressure.

Professional guidance from a Tissue Viability Nurse or District Nurse may be indicated.

The SmartSeatPro II offers WaterCell Technology as standard, which provides a reliable and dynamic pressure care solution for people at medium to high risk of pressure injury. It enables the individual to achieve a stable and functional posture without compromising on pressure care and comfort. The water cells work by allowing the seat cushion to contour naturally and effectively around the body. The SmartSeatPro II also features vapour permeable fabric as standard to all contact areas – seat, back, leg rest and armrest. The Tilt-in-Space function can be utilised to redistribute pressure by changing the tilt angle of the chair on a regular basis and can be used in combination with Back Angle Recline.

CUSHION TYPE	DESCRIPTION	IMAGE	SIZE SELECTION
CareFlex Watercell	Our WaterCell Technology provides a reliable and dynamic pressure care solution for people at medium to high risk of pressure injury. The water cells work by allowing the seat cushion to contour naturally and effectively around the user's body. The layer of Visco-Elastic Memory Foam moulds to the shape of the buttocks and thighs, distributing weight over a larger surface area and minimising pressure build-up under bony areas. It enables the individual to achieve a stable and functional posture without compromising on pressure care and comfort.		☐ Standard Width Small Chair Seat Width ≤340 Medium Chair Seat Width ≤450 ☐ Large Width Small Chair Seat Width ≥340 Medium Chair Seat Width ≥ 450mm

Postural Support

When an individual's ability to achieve good posture is affected, either through illness, injury, disease, or disability, it can significantly impact their health and well-being. Specialist seating aims to allow individuals who might otherwise have difficulty achieving their optimum sitting posture to sit out comfortably, interact with their environment, participate in activities of daily living and enhance physiological function.

Postural care is the use of any technique to minimise postural abnormality[5] and is evidently linked to an individual's ability to achieve their seating objectives. Lack of postural care and prolonged abnormal sitting postures can cause tension in the body and increase the risk of significant secondary complications, such as exacerbated pain and postural deterioration.[6] Proper positioning has demonstrated that it can decrease fatigue whilst helping to alleviate chronic discomfort and maximise function.[7] As the body structure is supported and the segments work together efficiently, the user will experience improved comfort, stability, functional movement, and energy conservation.

The SmartSeatPro II offers a range of functions and accessories to promote good postural support at all body segments, especially pelvic stability, trunk alignment, head support and foot support:

Multi-Adjustable Back and Head System

- Four-part system can be easily configured to suit individual needs.
- Soft and removable padding at all sections allow for configuration for enhanced comfort and provides support exactly where indicated.
- The individual components can be quickly and easily adjusted tool-free.
- The three upper sections can be altered in height, depth, angle, offset and rotation.
- The top head section also allows for specific profiling of the back of the chair to accommodate the more complex head and neck positions.
- The lower lumbar and sacral sections can be further configured to fully meet the individual's pelvic stability needs.



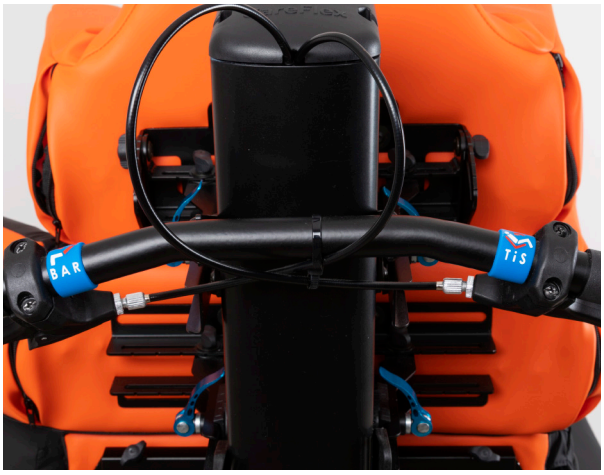




Postural Support

Tilt-in-Space (TiS)*

- Seat to back angle remains the same – the whole system tilts posteriorly.
- Promotes pelvic stability.
- Encourages pressure redistribution.
- Manages energy levels.
- Assists with hoisting and positioning.
- Tilt angle will be dependent on safety, tolerance, and appropriateness.
- The informative inclinometer will aid seating prescription and safe use.



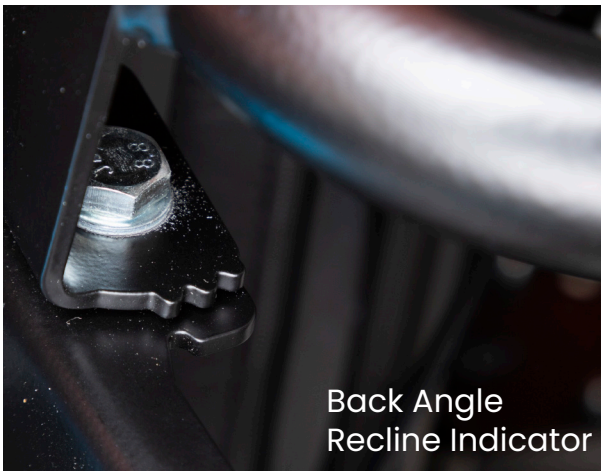
Back Angle Recline (BAR)*

- Seat to back angle adjusts to open up the hip angle.
- Assists with comfort and reduces abdominal pressure.
- Accommodates reduced hip flexion range of movement, and helps alleviate any associated pain.
- Back angle will be dependent on hip range of movement and pelvic stability.
- The visual back angle indicator for degree of recline will aid seating prescription and safe use.



Tilt-in-Space Inclinometer

* Tilt-in-Space and Back Angle Recline should always be prescribed responsibly, ensuring that they are safe and appropriate for the user following a comprehensive assessment of posture and risk, with advice sought from the multi-disciplinary team where indicated. In some cases, these functions will be contra-indicated, and they could also increase shear and friction forces.


Back Angle Recline Indicator

Adjustable Armrests

- Height adjustable armrests allow the front and back to be set at different heights to angle support.
- Armrests can also be utilised to set the chair at different widths from front to back and left to right, which may be indicated for users with some degree of fixed lower limb postures such as windsweeping (additional seat inserts can be added to increase this range).
- The optional extra unique ratchet system may be indicated for environments where arm height needs to be adjusted regularly.



Postural Support

- Armrests are removable to facilitate transfers and sling application/removal.



Adjustable Lateral Supports

- Adaptable thoracic control with independent height and width adjustment is achievable with the ergonomically shaped external lateral support.
- It may be indicated for individuals who require firmer postural support to achieve an optimum midline position.



Channelled Leg Rest

- The SmartSeatPro II's channelled elevating leg rest provides comfort whilst maintaining an aligned and safe position at the lower limbs.
- Leg rest elevation angle will depend on range of movement/hamstring muscles length.
- The negative angle can accommodate limited knee range of movement allowing a more comfortable seating position for those with contractures or tight hamstrings muscles.
- It can also facilitate safe standing by allowing optimum foot placement.



Angle Adjustable Footplate

- On average, 19% of the body's weight is distributed through the feet when seated;[8] foot support is essential for proprioceptive feedback and to reduce the risk of pressure injury.
- It also encourages postural stability to allow freedom of movement in the upper limbs from their load-bearing role.
- The angle adjustability can accommodate fixed angles of plantarflexion at the ankle or correct foot posture to a more neutral position for comfort and pressure distribution.



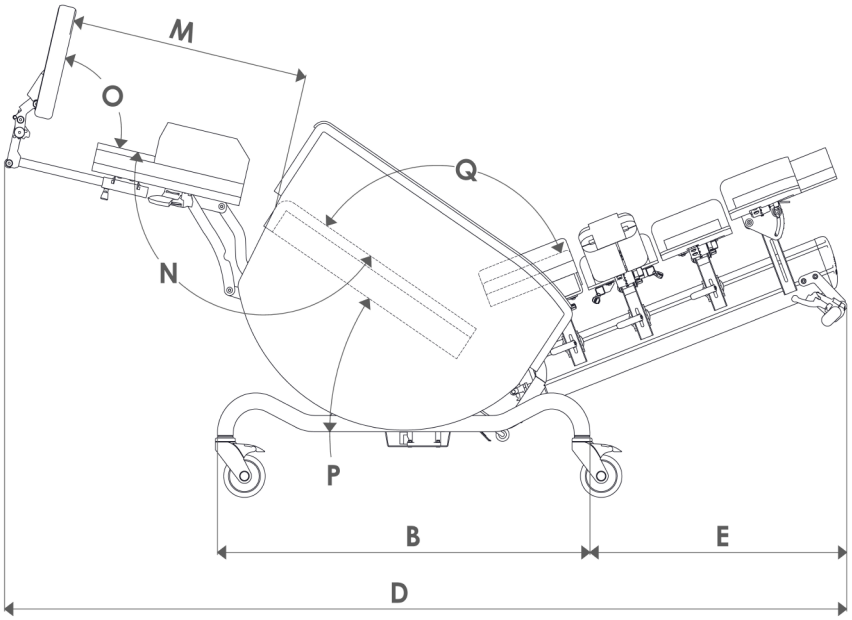
Increased Ground Clearance

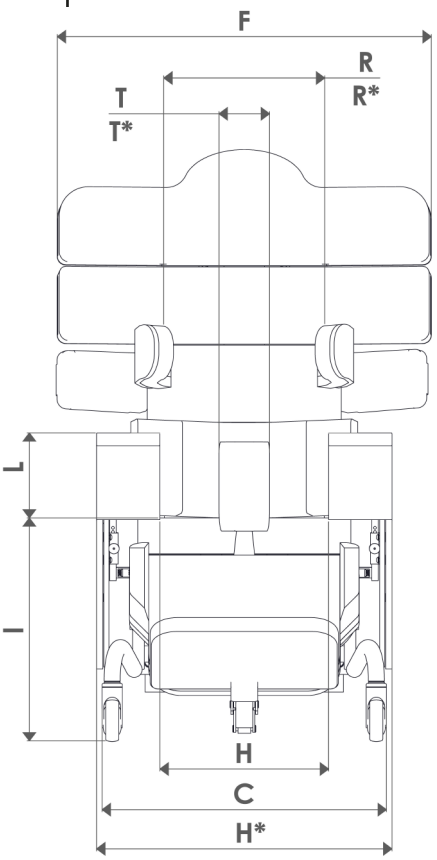
- The chair frame has been developed for use with a variety of hoisting and transfer equipment with increased ground clearance.
- In combination with four braked swivel castors, it promotes security and smooth portering.



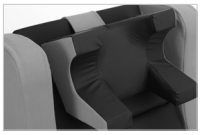
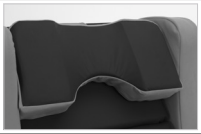
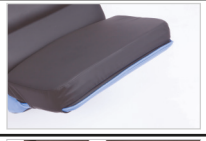
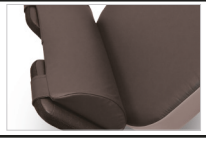
Seating Checklist

FUNCTION	ADJUSTMENT RANGE	MEASUREMENT / ANGLE / SELECTION
R/R*: Lateral Support Width (Optional)	Narrow: (S) 140mm - 340mm | (M) 200mm - 400mm (200mm range) Wide: (S) 240mm - 440mm | (M) 300mm - 500mm (200mm range)	
R**: Lateral Support Height from Seat (If applicable)	Small Chair (S): 230mm - 470mm (240mm range) Medium Chair (M): 250mm - 500mm (250mm range)	
R***: Lateral Pad Depth (See technical data for drawing)	Small Pad: 160mm Medium Pad: 190mm	
Q: Back Angle Recline (BAR)	90° - 125°	
P: Tilt-in-Space (TiS)	Small Chair: 0° - -30° Medium Chair: 0° - -35°	
N: Leg Rest Angle	Small Chair: 75° - 165° Medium Chair: 70° - 160°	
O: Footplate Angle	-75° / 90° / 105° / 120°	
Adjustment Control Option	Manual / Pro-Control (Leg Rest & Tilt-in-Space Only) / Fully Motorised	

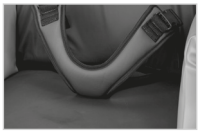




Optional Accessories

NAME	DESCRIPTION	IMAGE	SELECTION
Back Quick Release Adjustment Kit	• Quick release to back elements for ease of adjustments without tools. • Suitable for multi-user environments.		☐
Back Lever Adjustment Kit	• Adjustment levers to back elements for ease of adjustments without tools. • Suitable for multi-user environments or changing user needs.		☐
Pommel	• A fully padded pommel. • Provides both lateral and swivel tool-free adjustments to support deformities such as windsweeping.		☐
Lateral Supports	• External and removable trunk control with independent height and width adjustment. • May be indicated for individuals who require firmer postural support to achieve an optimum midline position.		☐ Narrow ☐ Wide ☐ S = Small Pad M = Medium Pad
Kidney Shaped Lateral Supports	• Adaptable trunk control with independent height and width adjustment. • Shaped for comfort and effective support to midline.		☐
Soft Headrest	• A comfortable rectangular pillow that can support the head if an individual presents with weakness or fatigue. • Available in shallow and deep.		☐ Shallow ☐ Deep
Soft Profiled Headrest	• A contoured pillow to support shoulders, neck and head. • Encourages head alignment for interaction and optimum physiological function. • Available in shallow and deep.		☐
In-line Headrest	• Memory Foam lining providing full cranial support with cut-away sides for unobstructed sight and hearing.		☐
Foam Headrest	• Available in shallow, medium and deep, providing basic lateral head control.		☐ ☐ ☐ Shallow Med. Deep
Neck Headrest	• Has a deep profile to give greater lateral control.		☐
Tray	• A plastic tray with low profiled edges. • Supports the upper limbs and offers a platform for engagement in activities or occupation.		☐
Detachable Footplate Pad	• To provide greater comfort or for shorter leg length. • Medium chair only.		☐
Footplate Lozenge	• To provide greater comfort or for shorter leg length. • Medium chair only.		☐

Optional Accessories

NAME	DESCRIPTION	IMAGE	SELECTION
Soft Pillow Footplate Pad	• A soft pillow that can be easily fixed to the footplate to provide greater comfort and support for individuals with fixed foot deformities. • Medium chair only.		☐ Shallow ☐ Deep
Channel Footplate Pad	• Easily fixed to the footplate to provide greater comfort whilst encouraging a midline position at the feet. • Medium chair only.		☐
Basic Pelvic Belt	• A simple webbing belt ideal for use during portering.		☐
Padded Pelvic Belt*	• Intervention for anterior pelvic stabilisation. • Safety belt when portering.		☐
4-Point Padded Pelvic Belt*	• Centre pull adjustment and comfort pads to reduce pressure on the front of the pelvis. • Secondary straps that pull down over the thighs at right angles to the seat base to maximise pelvic stability and reduce the risk of sacral sitting.		☐
Groin Harness*	• Positioning aid that provides maximum pelvic control. • Prevents the user from sliding forward in the seat.		☐
Dynamic Chest Harness*	• Provides anterior support and comfort whilst not restricting active positioning and function. • Lower straps have multi-direction buckles that swivel to avoid twisting and provide comfort.		☐
Sternum Harness*	• Provides greater upper trunk stability but allows for user movement.		☐

*All belts and harnesses (positioning aids) must be prescribed, implemented, and monitored responsibly following a comprehensive risk assessment. Please see the following for further information:

- Medicines and Healthcare Regulatory Agency (MHRA) (2015) MDA/2015/018 All posture or safety belts fitted to supportive seating, wheelchairs, hoists and bathroom equipment London: MHRA
- British Standard (BS) (2019) 8625:2019 Selection, placement and fixation of flexible postural support devices in seating London: BSI

Optional Accessories

Back Depth Adjustment Brackets - Options

NAME	DESCRIPTION	IMAGE	SELECTION
Back Depth Adjustment Bracket Upgrade	• Upper back – 100mm Std Adjustment (Upgrade to 150mm / 200mm / 250mm 300mm) • Upper-middle back - 40mm Std Adjustment (Upgrade to 150mm / 200mm / 250mm 300mm) • Lower-middle back – 40mm Std Adjustment (Upgrade to 150mm / 200mm / 250mm 300mm) • Lower back - 40mm Std Adjustment (Upgrade to 150mm / 200mm / 250mm 300mm)		☐ Upper Back ☐ Upper Middle Back ☐ Lower Middle Back ☐ Lower Back



Clinical Notes

Clinical Notes

References

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5. Farley R, Clark J, Davidson C, Evans G, MacLennan K, Michael S, Morrow M, Thorpe S (2003) What is the evidence for the effectiveness of postural management? International Journal of Therapy and Rehabilitation 10(10):449-455
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