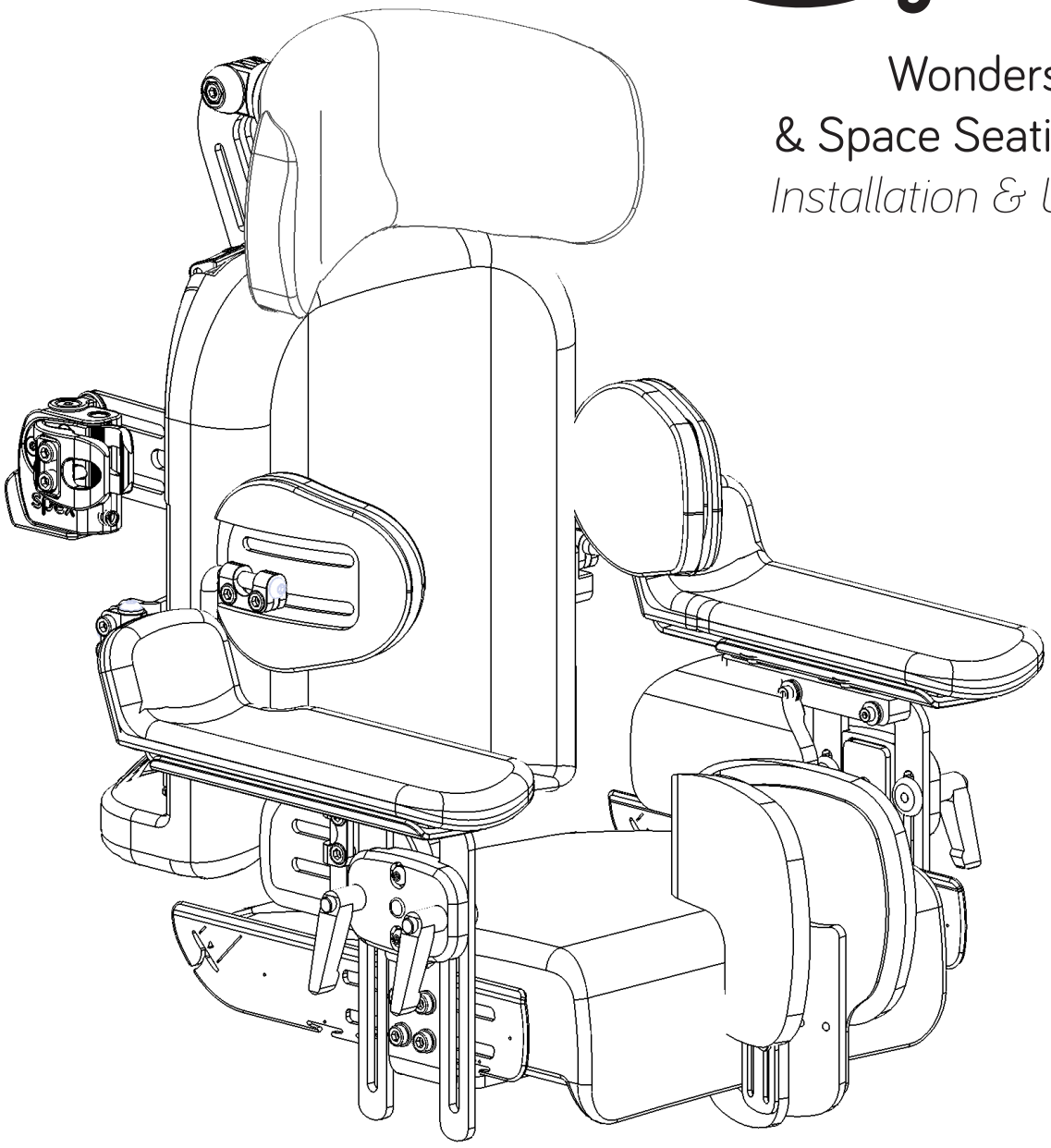
User Manual for Wonderseat by Spex
Revision: IFU-022-EN_v2 [1003-0022-0EN]

Wonderseat by spex

Wonderseat Bounce & Space Seating Systems

Installation & User Manual



User Name / Nom de l'utilisateur:

Serial Number / Numéro de série:

IMPORTANT CONSUMER INFORMATION NOTICE:
This manual contains important instructions that must be passed on to the user of this product. Please do not remove this user manual before delivery to the end user.

SUPPLIER: This manual must be given to the user of this product.

USER/CAREGIVER: Before using this product, read entire manual and save for future reference. Transit Safety section MUST be read before product is used in a vehicle.

MD This product is a Medical Device.

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Introduction

The Wonderseat Bounce and Wonderseat Space are modular and adjustable Seating Systems for wheelchairs.

Check all parts are free from shipping damage. Contact Spex Ltd. or your supplier for further instructions if needed.

Spex Ltd. recommends that a clinician such as an Occupational Therapist or Physiotherapist who is skilled in wheelchair seating and positioning be consulted to determine if the Wonderseat system is appropriate for the user.

Intended Use

Wonderseat Seating Systems are intended for paediatric users (disabled and/or discomforted) that require specific postural and positioning support to provide comfort for body function in a sitting posture on wheelchairs for daily activities and for transportation in vehicles. It is designed with ergonomic adjustments to provide improved personal body-posture conditions and/or to help prevent/reduce physical problems associated with sedentary work or activities.

Contraindications

1. Use of Wonderseat Seating Systems may affect the centre of gravity causing the wheelchair to tip, potentially causing injury. Always judge the need for anti-tippers or amputee axle adapter brackets to be added to the wheelchair to increase stability.
2. Check regularly for skin redness and that pressure spots are not developing. If your skin develops redness, stop using the product and consult your doctor or therapist.

Safety Instructions

To avoid injury, read, understand and follow all instructions and warnings in this manual before installing and using the Seating System. There are hazards associated with the use of wheelchairs and adaptive equipment. If you misuse your wheelchair or your Seating System you can be seriously injured. If your Seating System ceases to function as intended, please consult your authorized Spex Seating supplier immediately before continuing to use. Any serious incident that has occurred in relation to this product should be reported to Spex Ltd.

Wonderseat Seating Systems meet the requirements of ISO 16840-10:2015; Wheelchairs - Resistance to ignition of non-integrated seat and back support cushions. The materials used meet the flammability requirements of California Technical Bulletin 117. In rare cases the fabrics used in this product may cause a skin irritation for people with sensitive skin. If you experience any reddening or itching of the skin consult with your health care professional.

Disclaimer: Spex Ltd. takes no responsibility as to the therapeutic effectiveness of our products. Our claims relate to the ability of the products to provide safe and reliable positioning and seating on the equipment onto which they are installed.

Weight Capacity

Seating System maximum user weight: 47 kg (104 lb)

⚠ Warning

Never exceed the weight capacity of your Seating System or the wheelchair as specified by the wheelchair manufacturer.

Never perform exercise weight training that causes the user to exceed the weight capacity of the wheelchair.

Environment

Moisture: Keep your Seating System dry at all times, as contact with water or excess moisture could cause corrosion, degradation to the functionality of your Seating System, or potential failure. If your Seating System becomes damp or wet, thoroughly wipe with a dry cloth as soon as possible. Do not use your Seating System in a showering or pool facility.

Temperature: Your Seating System may not function as intended when used at extreme temperatures. Keep the Seating System away from sources of extreme heat or extreme cold to avoid burns from the metal components.

Dirt: Small particles such as dust, dirt and sand may restrict optimum functionality. Regularly check your Seating System to ensure no build-up occurs around openings and moving parts.

Compatibility

- Spex Ltd. recommends that the Seating System can be used with most wheelchairs that have vertical and horizontal canes that have circular-shaped tubes between 0.75" (19 mm) and 1" (26 mm) in diameter.
- Wheelchairs that the Seating System cannot be installed on include chairs that do not have canes, and some powered wheelchair designs.
- Components of the Wonderseat Seating Systems are tested and certified as part of the Seating System and may not be appropriate for use with other brands of wheelchair seating.
- If parts of the Wonderseat Seating System are used with other seating products not manufactured by Spex, this configuration is deemed not tested and certified, whereby the prescriber/purchaser takes full responsibility for outcomes.

⚠ Warning

RISK OF ACCIDENT, INJURY, PAIN OR DEATH IF WARNINGS ARE NOT HEEDED

Seek assistance if you are uncertain about any of the following points:

1. The Seating System is shipped partially assembled and with brackets attached loosely. It is the installer's responsibility to ensure all hardware is installed correctly and tightened before using the wheelchair.
2. Installation and adjustment of your Seating System should be performed only by
   a. An authorized Spex dealer or technician,
   b. A qualified healthcare professional who has undergone appropriate biomechanical training.
3. The Seating System must not be modified or changed as this voids warranty.

4. Only use genuine Spex accessories, components, and attachments to this Seating System.
5. Never lift or push the wheelchair by the Seating System.
6. Never use the Seating System if any parts are missing, malfunctioning, or broken. Seek qualified assistance with any repairs, replacements, or adjustments.
7. A poorly fitted Seating System can aggravate posture problems and the overall safety of the user.
8. The user must not put excessive force against the Seating System.
9. Ensure all fasteners are securely tightened before seating the user in the wheelchair.
10. Care must be taken when undertaking a user transfer from the seating system. The user may fall from the wheelchair or injure themselves when supports are removed.
11. Be aware of the traps and pinch points. Ensure all body parts are kept clear during movements or adjustments.
12. Always ensure that the quick release latches are always engaged correctly. If the quick release latches are not engaged, the Seating System may detach and cause injury.
13. Failure to use the appropriate equipment for restraint in a vehicle can result in serious injury or death.
14. Never use the Seating System without its covers. Care should be exercised near open flame or burning cigarettes. Using the Seating System without its covers increases the risk of flammability and skin damage.

Maintenance & Cleaning

Spex recommends that all parts be checked for wear, such as loose bolts or broken components every 6 months. Loose fasteners should be retightened according to the installation instructions. Contact your authorized Spex dealer immediately to replace any broken components. Do not continue to use the system after identifying loose or broken components. For any questions regarding cleaning procedures, contact your authorized Spex dealer. The expected lifetime of the Seating System is 5 years.

Spex recommends using AHP (Accelerated Hydrogen Peroxide) disinfectant wipes. The disinfection product must be used as per the manufacturer instructions. Spex takes no responsibility for the effectiveness of the disinfecting process.

Foam

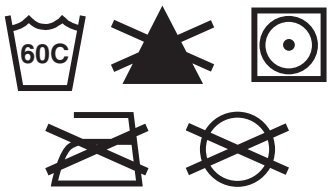
- Keep dry.
- Check the foam regularly to ensure good foam consistency.
- If it accidentally becomes wet, dry thoroughly before replacing the covers.

Incontinence Covers

- Hand wash only.
- Do not use bleach or other strong cleaners.

- Do not tumble dry.
- Failure to use this cover may reduce the life of the seating system.

Outer Covers



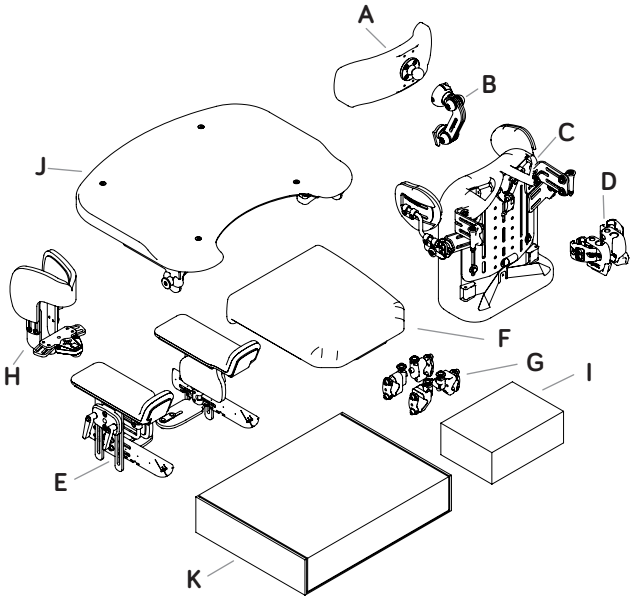
- Remove the cover from the foam base and turn inside out.
- Machine wash in warm water (60°C / 140°F)
- Drip or tumble dry on low heat.
- Do not iron. Do not dry clean. Do not bleach.
- If chemical cleaners are used, covers must be rinsed thoroughly with water to remove all chemical residue and left to dry completely before reuse.
- Check the cover for tears and excessive wear and replace if ripped, torn or otherwise not fully functional.

Hardware

- Wipe clean with mild detergent and water.
- Disinfect using AHP (Accelerated Hydrogen Peroxide) wipes.
- Wipe away any chemical residue with clean water and dry thoroughly after wiping.

Wonderseat Contents

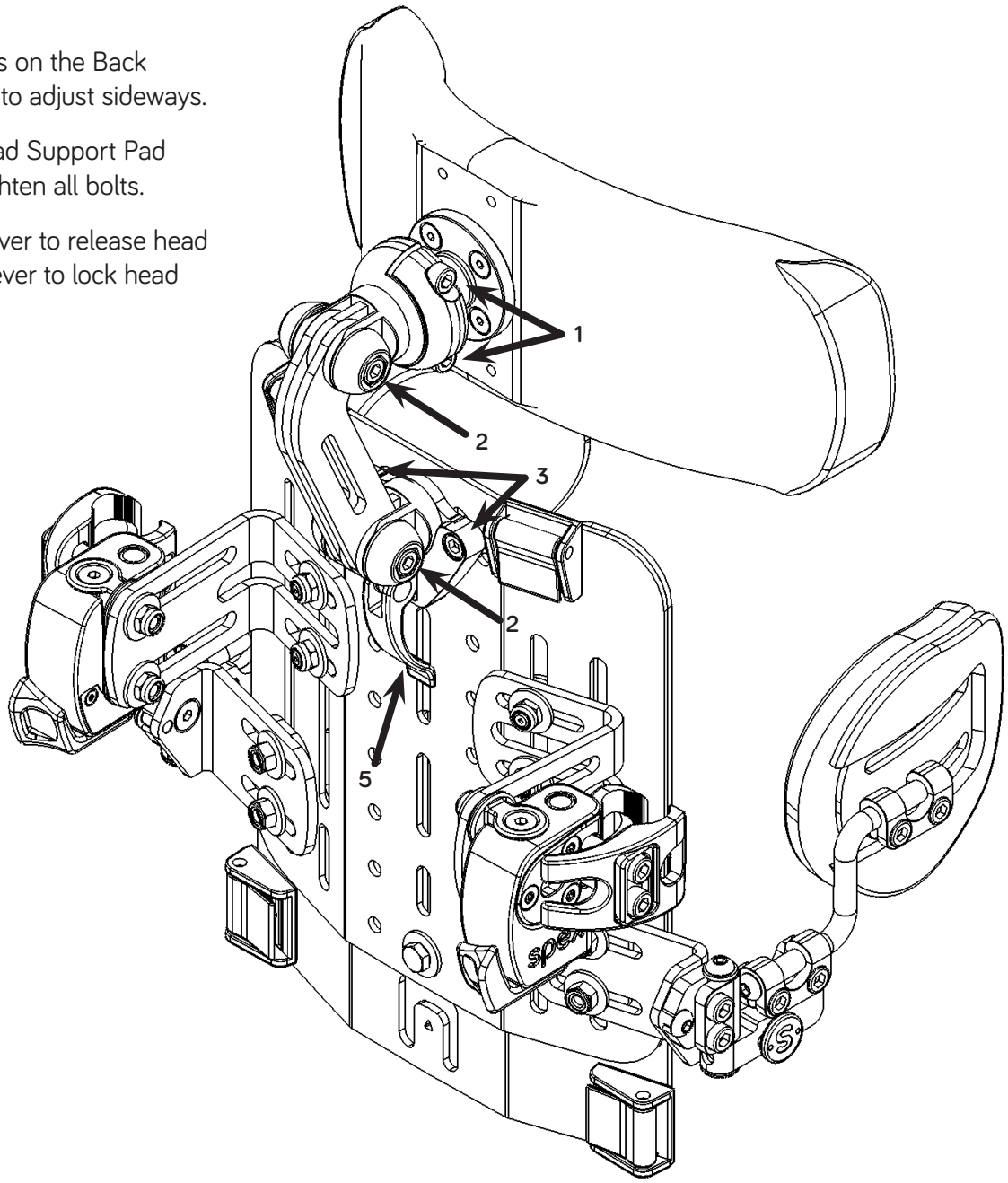
	Description	Quantity	
		Space	Bounce
A	Head Support Pad	1	1
B	Head Support Hardware	1	1
C	Back Support Assembly	1	1
D	Back Mount Receiver	2	2
E	Arm and Thigh Support	2	2
F	Seat Cushion Assembly	1	1
G	Seat Base Mount	4	4
H	Medial Thigh Support	1	0
I	Hip Belt and Trunk Harness	1	1
J	Tray Table	1	0
K	Bit-Box	1	1



Adjusting Head Support Pad Position

- 5mm Hex Key

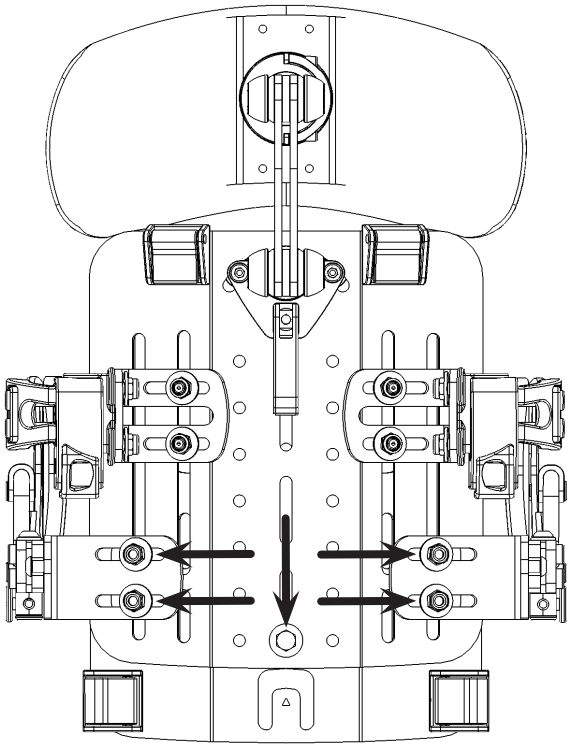
1. Loosen the bolts on the top ball joint to adjust the angle.
2. Loosen the bolts in the positioning arm and top ball joint to adjust the height.
3. Loosen the bolts on the Back Support mount to adjust sideways.
4. Position the Head Support Pad and securely tighten all bolts.
5. **(If fitted)** Pull lever to release head support. Push lever to lock head support.



Adjusting Back Support Height

- 10mm Spanner

1. Loosen the centre bolt and four outer nuts to adjust the height.
2. Add foam cubes or strips inside the cover to match the back support height.



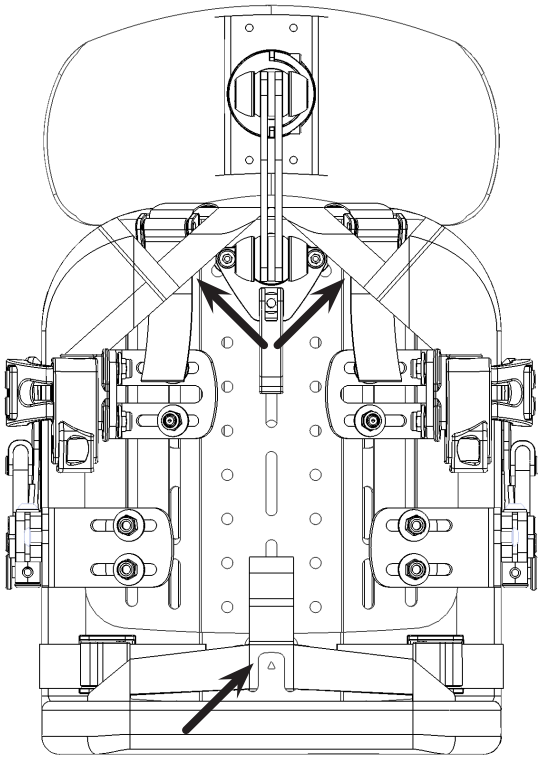
Installing Back Support Upholstery & Trunk Harness

- No tools required

1. Install the cover so that the back support shell is inside the flaps.
2. Pull the flaps over the top buckles
3. Push the harness straps through all four buckles.
4. Change the strap length then close the buckle levers to lock the harness in position.
5. Tuck the cover strap into the tab at the bottom of the shell.

Tip: *Harness width can be adjusted by moving the buckles to different mounting points using a 3mm Allen key, and an 8mm spanner*

WARNING: Check that the top straps and buckles are under the flaps as shown.



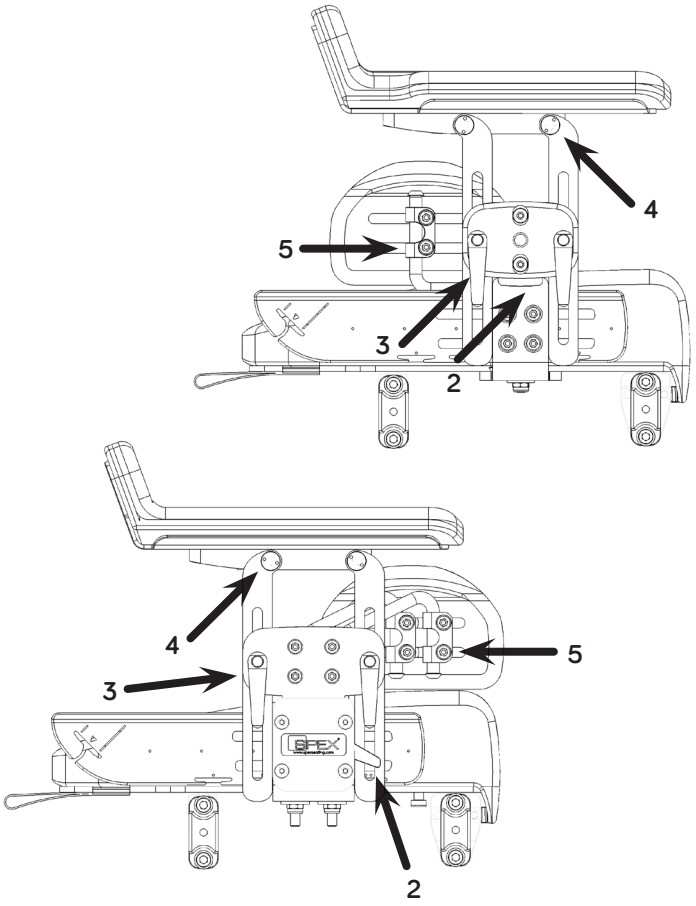
Adjusting Arm & Thigh Support Hardware

- 5mm Allen Key, 10mm Spanner

1. Attach brackets under the seat base with the fasteners provided.
2. Push the red button to release the arm support sideways. Press onto silver stub to attach.

   OR

2. Lift the red lever to release the arm and thigh support upwards. Drop into the receiver to attach.
3. Loosen the plastic levers to adjust arm support height and angle.
4. Loosen the screws under the arm support pad to adjust depth, width, and angle.
5. Loosen the clamp screws to position the thigh supports.

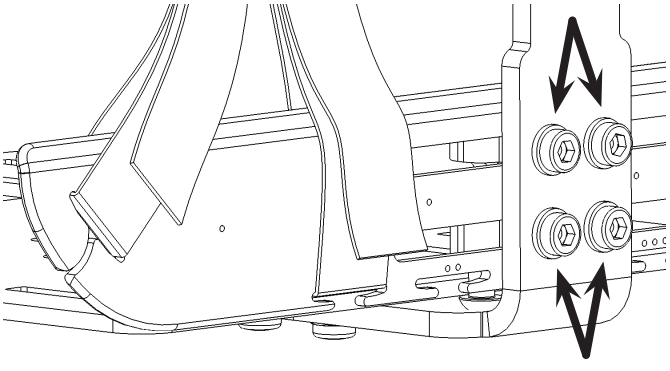


Adjusting & Removing Hip Belt

- 5mm Allen Key ***OR*** 10mm Spanner

1. Loosen all mounting plate screws to slide the mounting plate forwards and backward.
2. Change the strap length then set the adjuster 10mm above the top edge of the mounting plate.
3. Pass the strap back through the adjuster to lock the strap length.
4. Unhook the straps from the mounting plate to remove the hip belt.

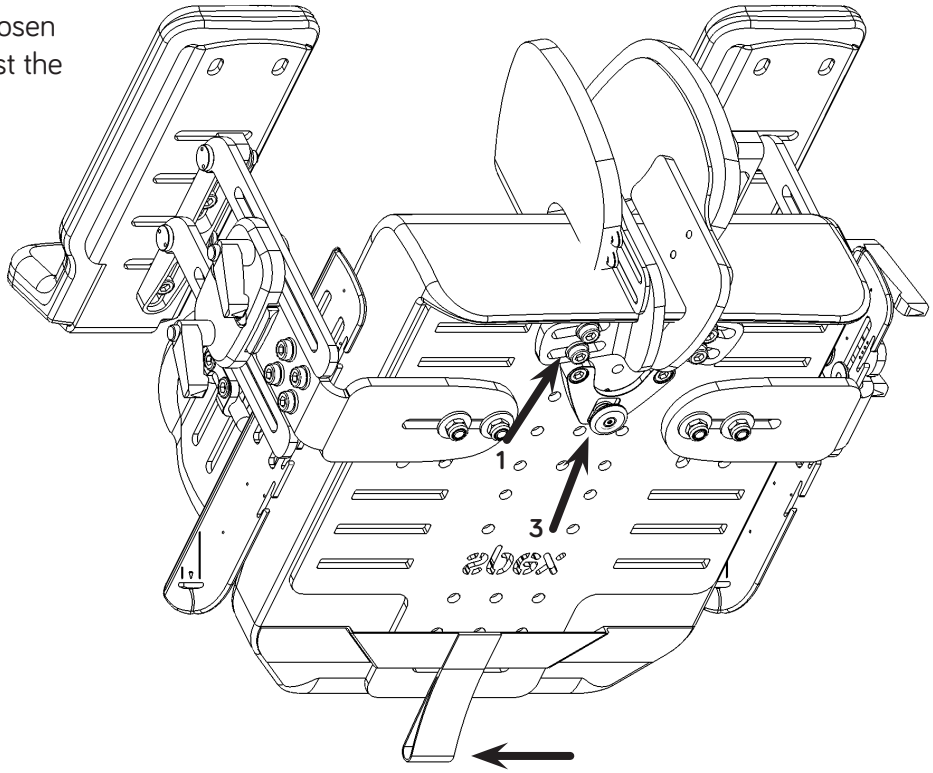
WARNING Check the straps form loops around the mounting plate as shown.



Adjusting Medial Thigh Support

- 3mm Allen Key, 5mm Allen Key

1. Loosen the screws underneath the support brackets to adjust the pad width and angle.
2. Remove the velcro wrap and loosen the screws on the sides to adjust the pad height and depth.
3. Press button upwards and pull the pad forwards to release the support. Click the support back into receiver to reattach.
4. Pull the cover over the pad from the back. Check the back of the cover is tight and align the seams with the edges of the foam. Attach the Velcro flaps.



Adjusting Cushion

- No Tools Required

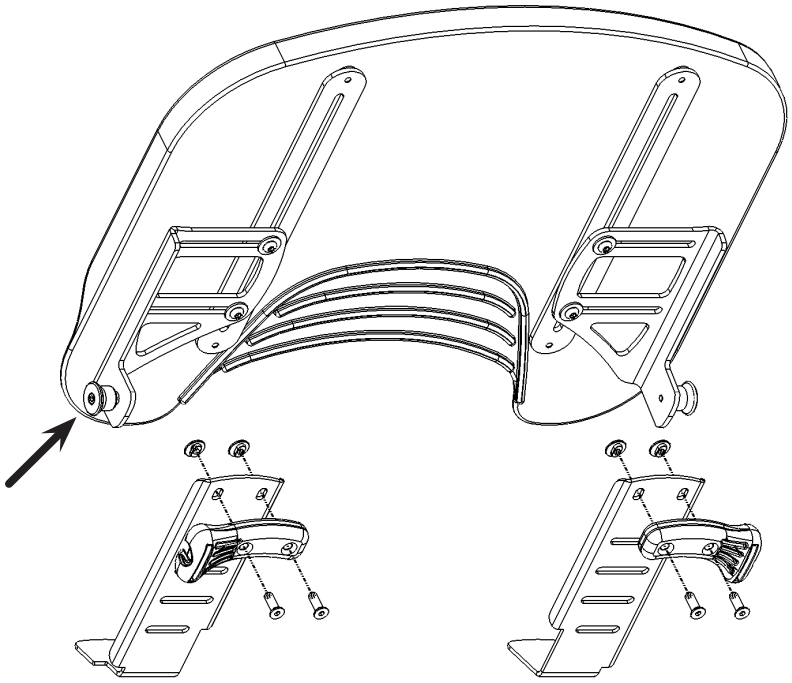
1. Pull the rear strap over the tab at the back of the seat base. Detach the Velcro at the front of the cushion then slide the cushion forwards.
2. Remove both covers to adjust the cushion foam. Use positioning blocks from 'Cushion Bits' box for extra adjustment.
3. Install both covers before using the cushion. Check that all foam pieces are correctly placed.
4. Slide the cushion backwards on to the seat base. Attach the front of the cushion using the Velcro. Pull the rear strap around the metal tab on the seat base (as shown). Check the cushion is secure.

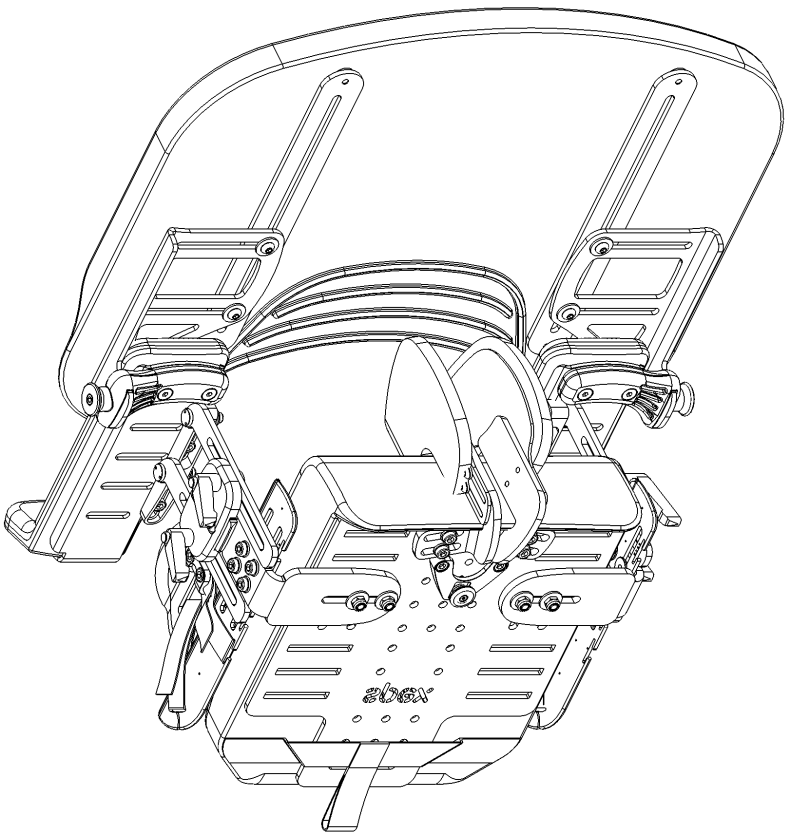
Installing Tray

- 4mm Allen Key

1. Loosen the screws underneath the tray to line up the brackets with the receivers.
2. Press the brackets into the receivers. **Pull up on the receivers and push down on the tray until the knobs click in**.
3. Adjust the tray depth and position then tighten all the screws underneath.
4. Pull both knobs out then lift up to release the tray.

Caution: *Do not adjust the screws attaching the knobs to the tray brackets*





Contouring the Back Support Surface

(Wonderseat Space Only)

The Classic Back Support has been designed to accommodate postural asymmetries and adapt to different shapes. This guide shows how the inner section of the Classic Back Support can be changed.

Each cube compartment contains 2 cubes. These may be removed or added to as required. Each compartment can have up to 3 layers of cubes. Keep any unused cubes as these can be used at a later date if the client's needs change. The cubes must always face the rear of the Back Support.

Back/spinal protrusions

Open the zipper on the Back Support to release the inner contouring section. Remove this from the cover. You can now remove layers of contouring cubes from where back protrusions need to recess into the Back Support. There is sufficient padding behind the user if all of the compartment's cubes are removed to accommodate a prominence.

Back/spinal indentations

Open the zipper on the Back Support to release the inner contouring inner section. Remove this from the cover. You can now add layers of contouring cubes where back indentations need more contouring support.

How to make changes with the user sitting in the wheelchair

Two people are required for this adjustment. Before doing this adjustment, retrieve a soft head pillow or similar padded objects.

⚠ Warning **Ensure the user has the hip belt fastened.**

Lean the user forward to remove the inner contouring section of the Back Support (the cover will remain secured to the Back Support shell) and replace with pillow.

Lean the user back.

⚠ Warning **The second person must remain with the wheelchair user to support them and keep them safe from falling.**

Now the contouring section can be changed to suit the user's posture. Once finished, remove the pillow and re-insert the inner contouring section.

Re-issuing to another user

Once the user has finished using the Wonderseat Seating System, it must be refurbished and thoroughly cleaned if it is issued to another user. Below are the strict guidelines for refurbishing the Seating System. Spex takes no responsibility for contamination, cross infection, or damage. Spex recommends using AHP (Accelerated Hydrogen Peroxide) disinfectant wipes. The disinfection product must be used as per the manufacturer instructions. Spex takes no responsibility for the effectiveness of the disinfecting process.

Part	Procedure
Safety check	All components to be checked for signs of stress or cracking.
Upholstery covers	Covers must be replaced regardless of condition.
Hardware and components	Ensure the mechanism components are in safe working order. If any are missing, they must be ordered. Check for signs of stress or cracking. If any stress/cracks are found these parts must be retired from use and replaced immediately. Clean the components with a mild detergent and quality disinfectant such as the AHP (Accelerated Hydrogen Peroxide) disinfectant wipes, ensuring all areas are free from grime.
Foam	Foam parts must be replaced regardless of condition.

Disposal & Recycling

Your Wonderseat Seating System is manufactured using a variety of materials, some of which can be recycled. Once it reaches the end of its life, if you are the legal owner, do not dispose of as ordinary household waste but take your Spex System to an approved recycling or collection point, to dispose of according to local laws and regulations.

Separate collection and recycling of the Spex System when disposing ensures protection of the environment and assists with natural resource conservation.

Transit Safety

The Wonderseat Seating System has been successfully crash tested and complies with RESNA WC-4:2012, Section 20 (WC20). The Wonderseat Seating System meets the requirements of ISO 16840-4:2009 and is suitable for use as a motor vehicle seat when used with an appropriate wheelchair base. Please follow all installation, use and maintenance instructions within this manual as well as the following transit instructions. If feasible, the wheelchair user should transfer to the vehicle seat and use the vehicle-installed occupant restraint systems.

Wonderseat Seating System has been designed to accommodate the proper use of vehicle-anchored belt restraints. Spex achieved a rating of Excellent (16 out of 16), for ease of properly positioning a belt restraint, and the degree to which proper belt restraint can be achieved, based on the methods of Annex D.

Assembly, Use, Maintenance & Limitations

- Adjustments to the set-up of the wheelchair must only be carried out by a qualified therapist, professional, or seating technician. Custom contoured/bespoke systems may require a qualified professional to configure and install the seating system.
- After carrying out any adjustments ensure all bolts, screws and nuts are securely fastened again to ensure safety when travelling in a vehicle.
- Ensure the front and rear mounts of the seat pan are installed as far apart from each other as possible to give a stronger 4-point attachment to the wheelchair frame.
- Ensure all quick release latches on the back support, seat base, medial thigh support, arm support, head support are engaged.
- Do not use the Wonderseat Seating Systems as a vehicle seat if seating components which have not been successfully crash tested are used anywhere on the seating system. The Seating System is designed and certified using only Spex components. Spex is not liable in the event where other manufactured seating systems are used in conjunction with Wonderseat Seating Systems.
- At regular intervals check that all the fastenings on the Wonderseat Seating Systems have not become loose during day to day use and re-tighten if necessary.
- Ensure the swing-away laterals are in their locked position before using the seat as a vehicle seat in a motor vehicle.
- Do not use the Tray Table when using the seat as a vehicle seat in a motor vehicle.

Correct Positioning of Vehicle Belt Restraints

When using the Wonderseat Seating System as a vehicle seat, both a pelvic-belt restraint and shoulder-belt restraint must always be used. To correctly position the belt restraints on the wheelchair occupant, the following must be ensured:

- The pelvic-belt restraint should be worn low across the front of the pelvis near the junctions of the pelvis and thighs.

- The angle of the pelvic-belt restraint should be between 30° to 75° relative to the horizontal and, ideally, between 45° to 75° to the horizontal (as shown in Figure 2).
- The belt-restraint buckle of three-point belt restraints should be placed in contact with the occupant's body and away from wheelchair components.
- The junction of the shoulder-belt and pelvic-belt of three-point-belt restraints should be located near the hip opposite the shoulder over which the diagonal belt crosses and not near the midline of the occupant.
- Belt restraints should not be routed outside of the wheelchair wheels or over the wheelchair armrests, and should not be held away from the body by wheelchair components or parts.
- Upper torso belt restraints should fit directly over, and in contact with, the middle of the shoulder.
- Belt restraints should be adjusted to fit as snugly as possible, consistent with user comfort.
- Belt restraints should not be worn twisted in a manner that reduces the area of contact of the belt webbing with the occupant.



Figure 1

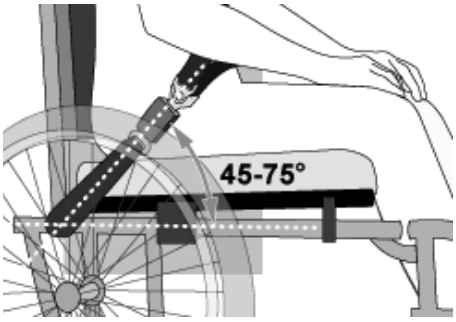


Figure 2



Figure 3a - Improper positioning of pelvic-belt restraints over wheelchair supports.

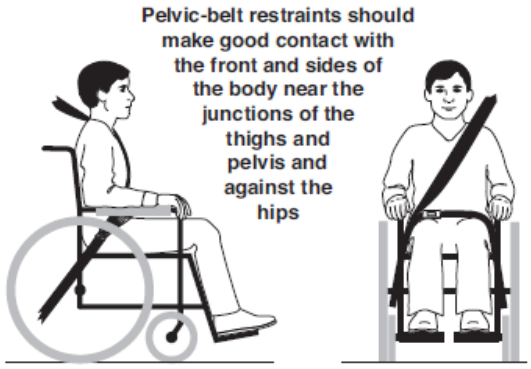


Figure 3b - Proper routing and positioning of belt restraints on the wheelchair occupant.

⚠ Warning

1. **The distance between the top of the user's shoulder and the top of the back should not exceed 6.5" (16.5 cm).**
2. **The Wonderseat Seating System must only be used with wheelchair bases that are tested as part of a wheelchair system that conforms to performance requirements of ISO 7176-19 and RESNA WC-4:2012, Section 19.**

⚠ Warning

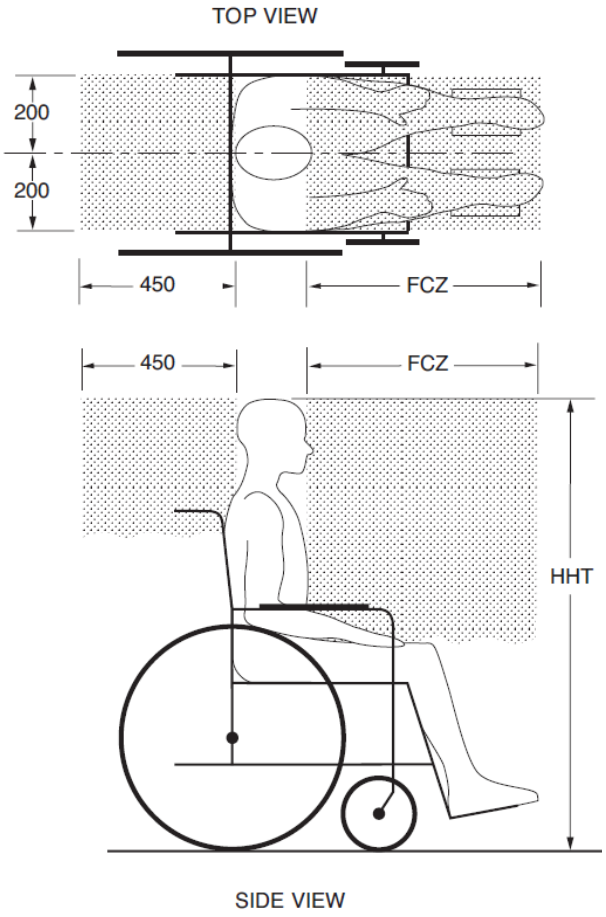
3. The Wonderseat Seating System should only be used on wheelchair frames that provide four securement points and pelvic-belt anchor points that conform to the requirements of RESNA WC-4: 2012, Section 19.
4. The wheelchair must be labelled as appropriate for use as a seat in a motor vehicle, dynamically tested to the performance requirements of ISO 7176-19 and installed, used and maintained according to the manufacturer's instructions.
5. The Wonderseat Seating System must only be used as indicated in this user manual.
6. Both pelvic and shoulder-belt restraints as a part of a complete Wheelchair Tie down and Occupant Restraint System (WTORS) which meets ISO 10542-1 shall be used to achieve effective occupant restraint and optimum protection in a vehicle impact; the belt restraints should be compatible with the specific wheelchair and fitted to the user in accordance with WTORS manufacturer's instructions.
7. Back supports with adjustable recline angles should not be tilted back more than 30° beyond the vertical during travel in vehicles unless necessary for the medical and postural needs of the occupant.
8. If the back support must be adjusted to an angle that is greater than 30° beyond the vertical during travel, the upper shoulder-belt anchor point should be adjusted rearward to maintain belt contact with the wheelchair occupant's shoulder and chest.
9. The Wonderseat Seating System must only be used for forward-facing seating in motor vehicles.
10. In order to reduce the potential of injury to vehicle occupants, wheelchair-mounted rigid trays not specifically intended for use during travel in motor vehicles must be:
    a. Removed and secured separately in the vehicle or
    b. Secured to the wheelchair so they will not break free in a crash and;
        - Be positioned with a gap of at least 3" (75 mm) between the back edge of the tray and the wheelchair occupant's abdomen and/or chest so as not to interfere with the proper belt-restraint use, and

⚠ Warning

- Have energy absorbing padding placed between the back edge of the tray and the wheelchair occupant.

11. Alterations or substitutions must not be made to the seating system structure, parts or components, without first consulting Spex.
12. The use of a postural pelvic belt attached to the wheelchair base or seat frame is encouraged during travel, but these belts should be positioned so that they don't interfere with the proper positioning of crash worthy belt restraints, and they should not be relied on for occupant protection in crash situations unless the postural belt has been designed to comply with, and perform to the requirements of WC19.
13. Postural support devices that are not labelled as conforming to ISO 16840-4 may be used when in a vehicle, but should not be relied on for occupant restraint.
14. Both pelvic-belt and shoulder-belt restraints that comply with WC18 and/or WC19 should be used to limit occupant movement in a crash and reduce the likelihood of occupant ejection from the vehicle and/or injurious contact of the occupant with the vehicle interior.
15. Belt restraints should be positioned on the wheelchair occupant in accordance with WTORS manufacturer's instructions.
16. Backrest mounting hardware must be installed correctly. Refer to the appropriate section for correct backrest hardware mounting instructions.
17. If the wheelchair is being transported while occupied, the wheelchair must still be secured to the WTORS.
18. Children whose mass is less than 48.5 lbs. (22 kg) should be transferred from their seating system into appropriate child restraint systems intended for use in motor vehicles.
19. Sufficient forward and rearward clear space should be provided around the wheelchair occupant. Forward clear-space zone (FCZ) needs to be larger when a shoulder-belt restraint is not used.

FAILURE TO HEED THESE WARNINGS COULD CAUSE SEVERE INJURY TO THE WHEELCHAIR USER OR OTHERS.



NOTE: The rear clear zone is measured from the rearmost point on an occupant's head. The front clear zone is measured from the frontmost point on an occupant's head.

Seated head height (HHT) ranges from about 47" (1200 mm) for a small adult female to about 61" (1550 mm) for a tall adult male.

FCZ = 25.5" (650 mm) with upper torso restraint

= 37" (950 mm) with only pelvic restraint

NOTE: It is strongly recommended that both pelvic and upper torso belts be used.

Recommended forward and rearward clear zones for wheelchair seated occupants. (Note: the FCZ may not be achievable for wheelchair seated drivers).

Warranty

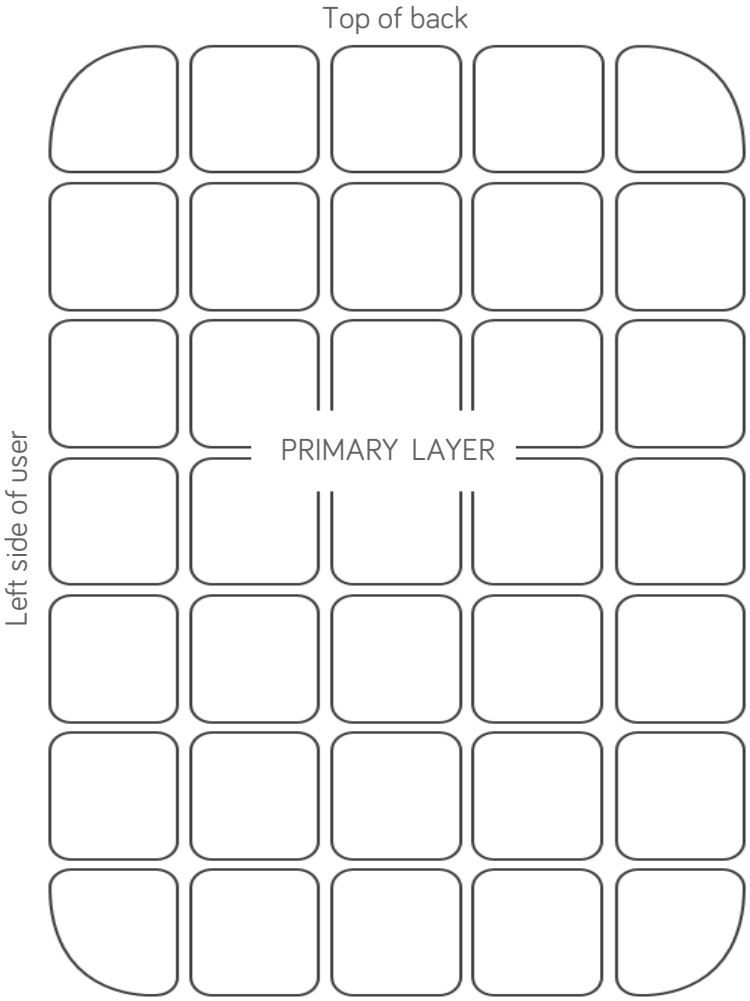
Each Wonderseat Seating System is carefully inspected to provide peak performance and is guaranteed to be free from defects in materials and workmanship for a period of 24 months from the date of purchase, provided normal use. Should a defect in materials or workmanship occur within 24 months from the original date of purchase, Spex will, at its option, repair or replace it without charge. This warranty applies to the Seating System components including the foam, covers, and hardware. This warranty does not apply to general wear and use, including punctures, tears or burns or customer abuse of any of the Seating System components.

Claims and repairs should be processed through the nearest authorized Spex dealer. Except for express warranties made herein, all other warranties, including implied warranties of merchantability and warranties of fitness for a particular purpose are excluded. There are no warranties which extend beyond the description on the face hereof. Remedies for breach of express warranties herein are limited to repair or replacement of the goods. In no event shall damages for breach of any warranty include any consequential damages or exceed the cost of non-conforming goods sold.

The serial number of your Seating System can be located at the base of the Cushion cover.

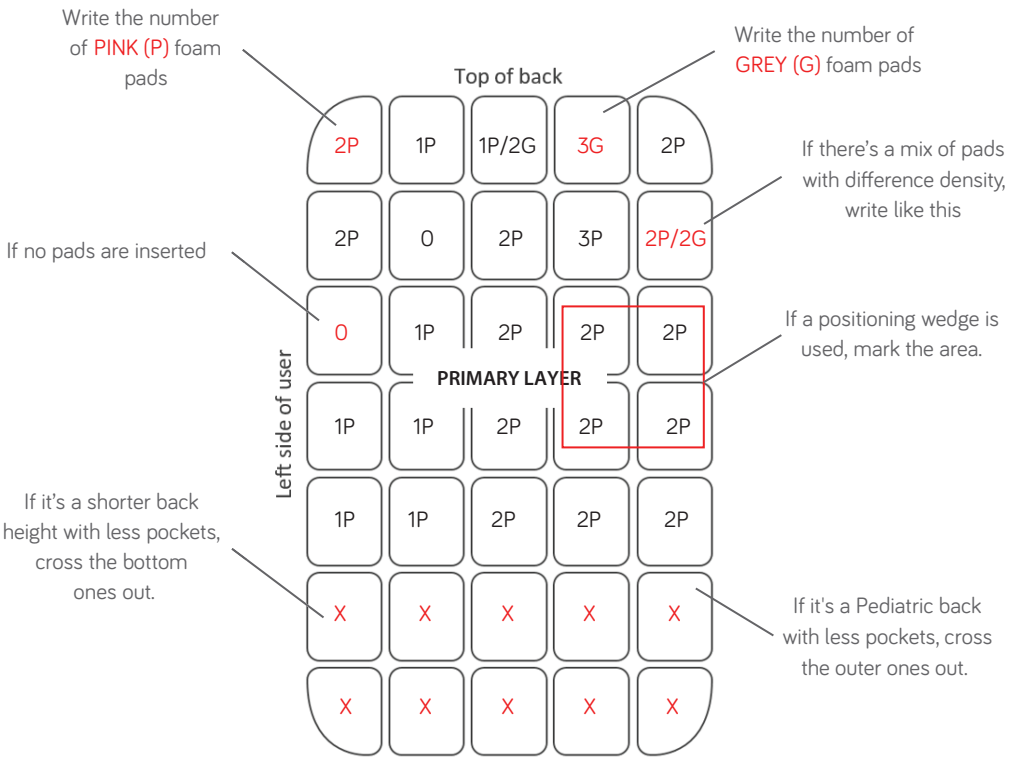
Back Support Contouring Charts

Record the amount of contouring cubes used. Fill out this form and enter the number of cubes used in each pocket and save for future reference.



EXAMPLE

Example of how to use the back support contouring positioning chart:



1 Pereita Drive
Rolleston 7614
New Zealand

Spex Ltd
Phone 0800 543 343
solutions@spexseating.com
spexseating.com

US REP
Medicept 200 Homer Ave, Ashland, MA 01721 United States Tel: +1-508-231-8842

EU REP
BEO MedConsulting Berlin GmbH Helmholtzstr. 2 D-10587 Berlin, Germany Tel: +49-30-318045-30

UK REP
Advena Ltd 3 Plato Cl, Warwick, CV34 6WE United Kingdom Tel: +44 1926 800 153