



# spex constructa

*Installation & User Manual*

User Name

Serial Number

**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 Constructa range of modular cushions was designed for a wide range of symmetric and asymmetric postures. With options for all ages and catering to everything from simple seating requirements to the most challenging demands, it's our most anatomically adaptable cushion ever – and the foundation for a safer, more comfortable experience for every individual user.

Check none of the parts are damaged from shipping. Contact Spex or your supplier for further instructions if needed. Spex recommends that a clinician who is skilled in wheelchair seating should decide if the Constructa Cushion is appropriate for the user. They could be an Occupational Therapist, Physiotherapist, or other health professional with training in wheelchair seating and positioning.

# Intended Use

Spex Seating is intended for 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 adjustments to provide improved personal body-posture conditions and/or to help prevent/reduce physical problems associated with sedentary work or activities.

# Safety Instructions

To avoid injury, read, understand and follow all instructions and warnings in this manual before installing and using the Spex Constructa Cushion. There are hazards associated with the use of wheelchairs and adaptive equipment. If you misuse your wheelchair or your cushion you can be seriously injured. If your cushion 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.

The Spex Constructa Cushion cover and foam meet the flammability requirements of California Technical Bulletin 117 and ISO 16840-10:2021. In rare cases the fabrics used in this product may cause 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 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

- 14"-16" width cushion maximum user weight: 200 lbs. (90 kg)
- 18"-20" width cushion maximum user weight: 300 lbs. (136 kg)

# Environment

**⚠ Caution:** Avoid sharp objects or exposure to extreme heat or open flame. These could damage your cushion.

**Moisture:** Always keep your cushion dry. If your cushion gets damp or wet, thoroughly wipe with a dry cloth as soon as possible. Never use your cushion in a showering or pool facility. Moisture is a contributing factor in causing pressure ulcers. It can damage your cushion and could potentially cause failure.

**Temperature:** The cushion should be at room temperature before sitting on it. Your cushion may not function as intended when used at extreme temperatures. Do not leave the Cushion outside overnight or at temperatures below 5°C/41°F.

**Dirt:** Small bits of dust, dirt and sand can damage your cushion. Regularly wash your cushion cover to ensure no build-up occurs.

# Compatibility

- The Spex Constructa Cushion has been designed to be compatible with most wheelchairs.
- The Spex Constructa Cushion must have a solid base to install to, such as a solid seat base or cushion rigidizer, which provides more stability to the user.

# WARNING

## **RISK OF ACCIDENT, INJURY, PAIN OR DEATH IF WARNINGS ARE NOT FOLLOWED**

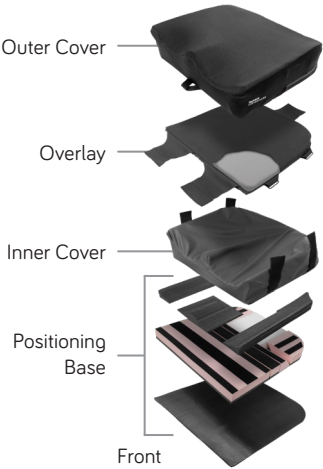
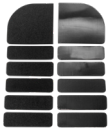
Ask for help if you are unsure about any of the following points.

1. Check your skin for red marks or pressure spots regularly. If your skin is red or itchy, stop using the cushion and consult with your healthcare professional.
2. Never use the cushion without the Overlay foam. Failure to do so may result in pressure injuries.
3. Never use the cushion without a cover. Stay away from open flames or burning cigarettes. Using the cushion without a cover increases the risk of flammability and skin damage.
4. Never exceed the weight limit of your cushion or your wheelchair. The weight limit of the wheelchair is specified by the wheelchair manufacturer. Never perform exercise weight training that could exceed the weight limit of the wheelchair.
5. Check if anti-tippers or other adaptations need to be added to the wheelchair to help increase stability. Installing seating systems may affect the centre of gravity and could cause the wheelchair to tip.
6. The Spex Constructa Cushion has been designed as a cushion for wheelchair users. Never use your cushion in ways it is not designed to be used.
7. Adjusting the cushion can change the pressure distribution. Only clinicians who are skilled in wheelchair seating should adjust the cushion. They could be an Occupational Therapist, Physiotherapist, or other health professional with training in wheelchair seating and positioning. Adjustment should follow a proper assessment of the user's needs.

# Cushion Contents

Your cushion contains the following:

Adjustment  
Kit (optional)



# Re-issuing to Another User

Once the user has finished using the Constructa Cushion, it must be refurbished and thoroughly cleaned if it is issued to another user. Below are the strict guidelines for refurbishing the Constructa Cushion. 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   | Check all parts for signs of collapse, water damage, UV damage, or rips.                                                                                                                                                                                                                                                                                                                     |
| Outer Cover    | Replace the outer cover regardless of its condition.                                                                                                                                                                                                                                                                                                                                         |
| Overlay        | Replace the foam and cover regardless of their condition.                                                                                                                                                                                                                                                                                                                                    |
| Inner Cover    | Check for water damage, UV damage, or rips.<br>Wipe the inner cover and follow the Maintenance and Cleaning instructions for washing.                                                                                                                                                                                                                                                        |
| Base foam      | Make sure the base has: <ul style="list-style-type: none"><li>• Base</li><li>• Positioning Blocks</li><li>• Contours</li></ul> See the Cushion Contents and the Spare Part Ordering Guide (separate document) for accurate details on what this contains.<br>Check that Velcro is securely attached to each part.<br>Check the foam for signs of collapse, water damage, UV damage, or rips. |
| Ischial Insert | Replace the ischial insert regardless of its condition.                                                                                                                                                                                                                                                                                                                                      |

# Disposal and Recycling

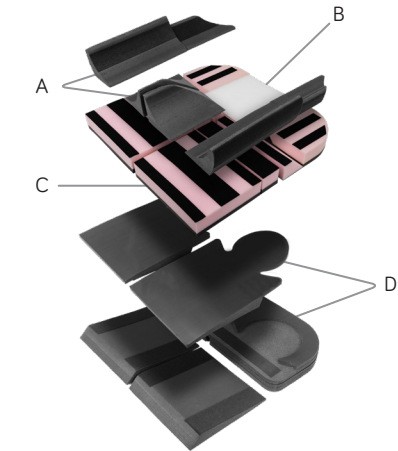
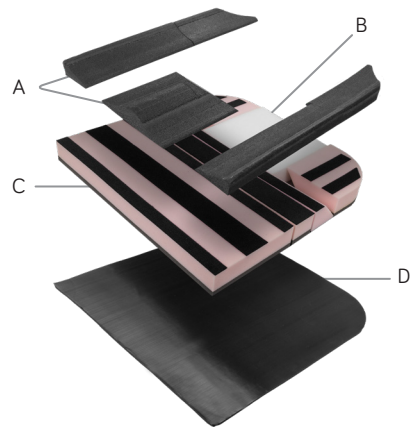
Many of the materials in your Spex Seating System can be recycled by taking it to a recycling centre. Thank you for looking after the environment! Follow all local laws and regulations when disposing of your Spex Seating System.

## Get to Know your Base Foam

Detach the Overlay and remove the Inner Cover to reveal the base foam.

Depending on the cushion (Shape or Flex), your Base foam contains the following:

|    | Description            | Quantity |
|----|------------------------|----------|
| A  | Contours               |          |
| A1 | Lateral Pelvic Contour | 2        |
| A2 | Lateral Thigh Contour  | 2        |
| A3 | Medial Thigh Contour   | 1        |
| B  | Ischial Insert         | 1        |
| C  | Positioning Blocks     |          |
| C1 | Trochanter Block       | 2        |
| C2 | Pre-Ischial Shelf      | 1        |
| C3 | 5cm Thigh Block        | 1        |
| C4 | Thigh Block            | 1        |
| D  | Base                   | 1        |



|    | Description            | Quantity |
|----|------------------------|----------|
| A  | Contours               |          |
| A1 | Lateral Pelvic Contour | 2        |
| A2 | Lateral Thigh Contour  | 2        |
| A3 | Medial Thigh Contour   | 2        |
| B  | Ischial Insert         | 1        |
| C  | Positioning Blocks     |          |
| C1 | Trochanter Block       | 2        |
| C2 | Pre-Ischial Shelf      | 2        |
| C3 | 5cm Thigh Block        | 2        |
| C4 | Thigh Block            | 2        |
| D  | Base                   |          |
| D1 | Leg                    | 2        |
| D2 | Rear Underpanel Pivot  | 2        |
| D3 | Leg Wedge              | 2        |
| D4 | Ischial Pad            | 12       |

# Adjust the Cushion

The Spex Constructa Cushion works for different body positions in people with disabilities or sitting challenges. By changing the base foam, the cushion surface adjusts to help with overall posture, pelvic alignment, sitting ability, comfort and pressure distribution.



Always put the Overlay on top of the base foam before using the cushion, even when setting it up. The Overlay helps reduce pressure and blend gaps in the base foam.

When setting up the cushion, it might be easier to make changes without the Inner Cover. During the assessment process you can test the cushion adjustments by attaching the overlay to the top of the positioning base. Use the front flaps to keep it in place.

Once the base foam is adjusted, fit the Inner Cover, attach the Overlay and fit the Outer Cover and check the cushion function.



## Caution:

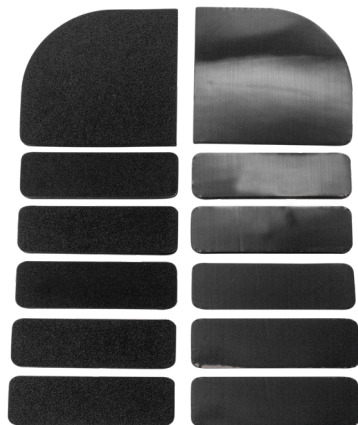
- Ensure the Ischial Tuberosities are positioned on the ischial insert foam. If positioned incorrectly (on; Trochanter Blocks, Contours, Pre-Ischial Shelf, Thigh Blocks), this may result in pressure injuries.
- This Cushion must be trailed first to determine its effectiveness in meeting the needs of the user. The clinician must inspect the user's skin to ensure that red pressure spots are not developing.

# Base Adjustment

The Strategic Positioning Kit allows you to add or remove Pelvic and Thigh Positioning Pads to adjust the cushion for different needs, such as:

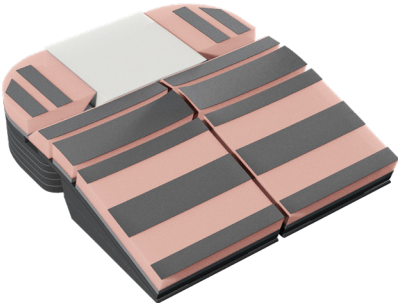
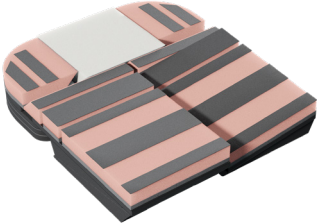
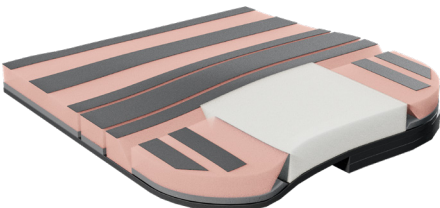
- Correct or accommodate pelvic obliquity
- Support minor flexion limitations
- Ramp the cushion to provide anti-thrust
- Dump the cushion provide added stability
- Angle the cushion to aid punting

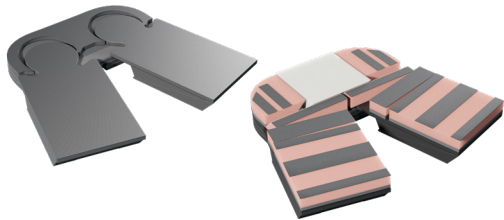
The Constructa Flex base has more adjustments for users with complex needs. If you have a Constructa Shape, you can go to 'Positioning Block and Contour Adjustment'.



# Constructa Flex Base Adjustment

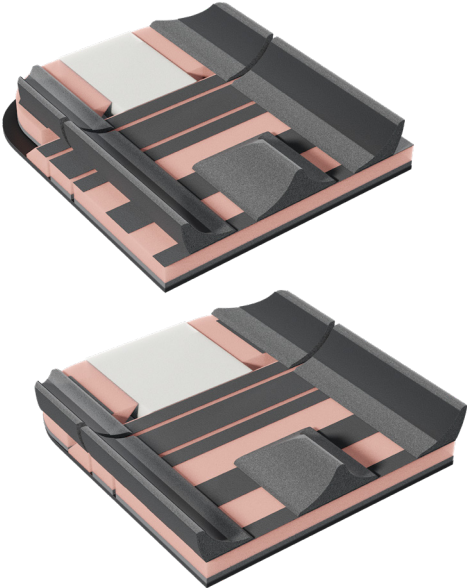
Make adjustments to the base to change the shape of the cushion surface. Removing some of the positioning blocks may make it easier to adjust. The base should be adjusted before the contours.

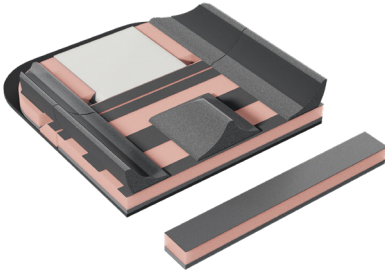
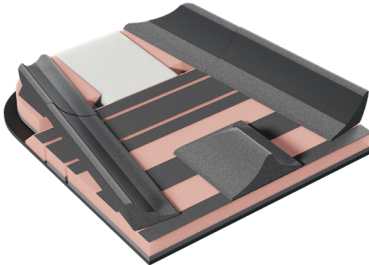
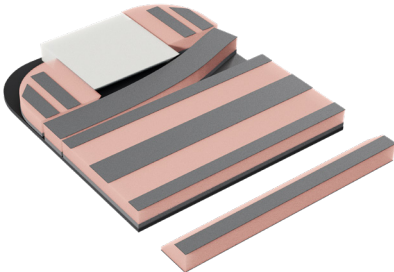
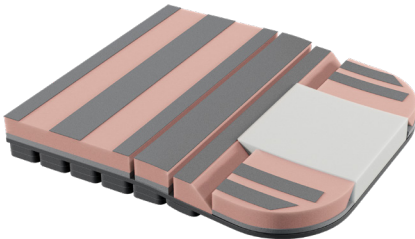
| Images (for illustrative purposes only)                                            | Description of Adjustment                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p><b>Hip/Thigh Angle</b><br/>Remove the Leg Wedge to lower the leg (open hip angle).</p> <p>To increase the angle, reattach the wedge in reverse (thinner edge to the front). This will be 15 degrees.</p> <p>Wedges can be added to raise the thighs (reducing the hip angle).</p>                                                                                                                                    |
|  | <p><b>Pelvic Height</b><br/>Adjust the pelvic height by adding or removing Ischial Pads.</p> <p>When the thigh angle is lowered to 15 degrees or more, extra ischial pads must be added.</p>                                                                                                                                                                                                                            |
|  | <p><b>Internal and External Rotation</b><br/>Rotate the Leg Wedge by 90 degrees.</p> <p>The wedge may need to be trimmed to fit.</p>                                                                                                                                                                                                                                                                                    |
|  | <p><b>Pelvic Obliquity</b><br/>Add or remove Ischial Pads.</p> <p>To accommodate a pelvic obliquity, add pads to match the posture.</p> <p>To correct a pelvic obliquity, do the opposite. Flip the pads when moving them between the left and right sides.</p>                                                                                                                                                         |
|  | <p><b>Leg Length Discrepancy or Seat Depth</b><br/>Leg length can be shortened by 1" using the puzzle joint. Peel up the leg and reattach further back in the puzzle joint.</p> <p>To increase the discrepancy; extend the other leg as much as possible.</p> <p>For seat depth adjustment; do the same on the other leg.</p> <p>To reset; position the legs with a 1" (25mm) gap in the back of the puzzle joints.</p> |

| Images (for illustrative purposes only)                                          | Description of Adjustment                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>Abduction and Windsweeping</b></p> <p>Adduct or abduct either one or both legs using the puzzle joint adjustment. Peel up the leg and reattach at the desired angle.</p> <p>Pay attention to the leg length to ensure it is not too long or short as this is also adjusted at the same time.</p> |

# Positioning Block and Contour Adjustment

These adjustments apply to both Shape and Flex cushions, the only difference is the split between the legs. The Constructa Flex cushion has pairs of: thigh block, pre-ischial shelf and medial contour pad. We recommend making the Flex Base adjustments (see previous) before refining the Positioning Blocks and Contour Pads.

| Images (for illustrative purposes only)                                           | Description of Adjustment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>Pelvic Width</b></p> <p>Move the Trochanter Blocks in or out to match the pelvis. Done correctly this will load the greater trochanters and offload the ischial tuberosities (ITs).</p> <p>Move the Lateral Pelvic Contours in or out to support the pelvis and load the greater trochanters and hips effectively.</p> <p>Make sure the inner edge of the Lateral Pelvic Contour does not sit over the Trochanter Block undercut as this will increase pressure in the ischial well.</p> <p><b>Seat Width</b></p> <p>The Lateral Pelvic and Lateral Thigh Contours can be adjusted in or out to support a narrower or wider user.</p> <p>Make sure the pelvic width is adjusted correctly using both the Trochanter Blocks and Lateral Pelvic Contours (detailed above)</p> <p>SuperHigh and Standard contours are designed for width reduction only.</p> <p>High contours can also be moved 1" wider if needed.</p> |

| Images (for illustrative purposes only)                                            | Description of Adjustment                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p><b>Seat Depth and Pelvic Positioning</b></p> <p>Move or remove the 5cm Thigh Block to reduce the seat depth (bringing the Pre-Ischial Shelf forwards). This is also useful for supporting in posterior pelvic tilt.</p> <p>Curve and form the Pre-Ischial Shelf to support the pelvis effectively.</p>                                                    |
|   | <p><b>Abduction and Windsweeping</b></p> <p>Lateral Thigh and Medial Thigh Contours can be moved to accommodate for abduction, wind sweeping, internal and external rotation.</p>                                                                                                                                                                            |
|  | <p><b>Pelvic rotation</b></p> <p>For pelvic rotation; the 5cm Thigh Block can be removed or cut in half to allow the Pre-Ischial Shelf to be moved further forward on one side.</p> <p>To correct a flexible rotation, build up the shelf as detailed below, 'Anti-Thrust Support'</p> <p>Thigh contours can also be positioned to accommodate rotation.</p> |
|  | <p><b>Anti-Thrust Support</b></p> <p>Add Thigh Positioning Pads under the base to build up the front of the cushion.</p> <p>For an abrupt shelf, add them between the Thigh Blocks and the Base.</p> <p>To further block the ITs and restrict forward migration, remove the Pre-Ischial Shelf and position the 50mm Thigh Block in its place.</p>            |

# Other Foam Adjustment Tips

Adjustments must be based on biomechanical evaluation and assessment.

- Trochanter Block position is important to support the pelvis and maximise pelvic offloading.
- Thigh Blocks and Trochanter Blocks can be inverted to increase support and reduce immersion in some areas.
- Gaps between the base foam components are acceptable, but ensure the Overlay is positioned correctly before fitting the Outer Cover. The Overlay is needed for pressure management and blending the contours of the cushion.
- To correct an anterior pelvic tilt: Leave the base foam flat or slightly raise the front of the base foam for neutral alignment of the pelvis or promoting weight bearing on ischial tuberosities.
- Positioning Blocks, Contours, and Bases can be cut to expand the adjustment range – replacement parts are available from our Constructa Cushion Spare Parts Script.

## **Caution:**

Only use genuine Spex covers, accessories, and components with your cushion.

# Installing the Covers and Overlay

Once the base foam is adjusted, fit the Inner Cover. This is a loose fit to allow for adjustment to the base foam.

## **Caution:**

- Never use the cushion without the Inner Cover. Failure to do so will reduce the life of the cushion.
- Overlay foam must be used with the Overlay cover, with the flaps and the straps attached. Failure to do so will allow the overlay to move and may cause pressure injuries over time.

1. Place the Overlay on top of the cushion and line up the front edge with the front edge of the Inner Cover.



2. Press the Overlay into the leg troughs to match the cushion profile. Pull the Front Flaps tight and attach under the base.

Make sure the Overlay is centred on the cushion.

**Flex only:** Attach the inner leg straps firmly under the cushion. Make sure the Medial Contours are covered by the Overlay and the Overlay is aligned with the inner edge of the cushion.



3. Loop the 4 side straps from the Inner Cover up and out through the Overlay loops. Fold the strap back down and attach to itself. Set the tension so the overlay is held in place but not too tight.



**Caution:**

Overlay side straps must not be too tight. This could cause the Overlay to hammock and reduce the pressure management of the cushion.



4. Attach the rear flap under the cushion to stop the Overlay from sliding forward. This flap does not need to be tight.



# Fitting the Cushion

1. Position the cushion about 1cm forward of the front edge of the seat base to protect the user's legs.

Constructa labels on the sides of the Outer Cover show the front of the cushion. The front of the cushion must always face forwards.

- Handle is at the front of the Constructa Shape
- Handle is at the back of the Constructa Flex



2. Check the size of the cushion. The cushion must fully support the base of the user. If the cushion is too long it may force the user to sit with a posterior pelvic tilt.
3. Proper foot position may enhance sitting comfort. Adjust the foot supports so the user's legs are supported by the cushion and the foot supports.

# Maintenance and Cleaning

Monthly cleaning and regular maintenance will help extend the life of the cushion. The expected lifetime of the cushion is 5 years; however, the cushion needs to be checked regularly for performance.

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.

## Caution:

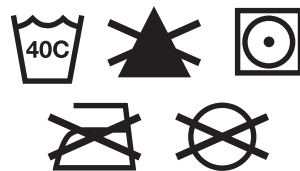
- Replace the cover correctly after washing. Check the back of the cover matches up to the back of the foam base.
- Use only Spex Constructa Covers on Spex Constructa Cushions. Changing the Outer Cover, or using different materials, will alter the cushion performance.

## Foam

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

## Outer Cover

- Remove the cover from the foam base and turn inside out.
- Machine wash in warm water (40°C / 104°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 it if ripped, torn or otherwise not fully functional.
- If used in an institutional setting, write the resident's name with a permanent marker on the content label of the covers. This will help to ensure the return of the covers after washing.



If you have any additional questions regarding cleaning procedures, please contact your authorised Spex Seating dealer.

# Assembly, Use, Maintenance and 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 top and bottom mounts of the backrest and 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 the quick release latches are engaged.
- Do not use the Spex Seating System as a vehicle seat if seating components which have not been successfully crash tested are used anywhere on the seating system. Spex seating 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 Spex seating.
- At regular intervals check that all the fastenings on the Spex Seating System 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.

# Transit Safety

The Spex Seating System has been successfully crash tested and complies with RESNA WC-4:2017, Section 20 (WC20). The Spex 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.

Spex 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. The following items of the Spex Seating System have been tested and are suitable for use in a motor vehicle:

- Full Height Back Support Models
- Seat Base
- Cushion Models
- Arm and Thigh Supports
- Trunk Lateral Supports
- Head Supports

**Note:** Back supports that are lower than the user's shoulder height are not certified and not recommended for transport in a vehicle. Eg. Zygo Lo back supports.

## Correct Positioning of Belt Restraints

When using the Spex 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

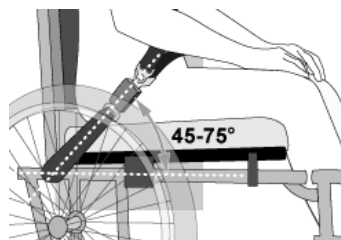


Figure 2

Belt restraints must not be held away from the body by wheelchair components such as armrests or wheels.



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

Pelvic belt restraints should make good contact with the front and sides of the body near the junctions of the thighs and pelvis and against the hips.

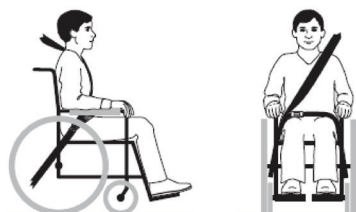


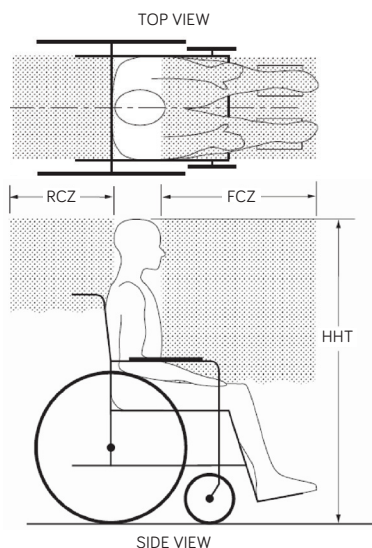
Figure 3b - Proper routing and positioning of belt restraints on the wheelchair occupant.

# 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 Spex 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-4:2017, Section 19.
3. The Spex 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: 2017, 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 Spex 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 Spex 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
    - 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 crashworthy 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.



**NOTES:** The rear clear zone is measured from the rearmost point on an occupant's head. The front clear zone is measured from the front most point on an occupant's head.

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

FCZ = 650mm (25.6") with upper-torso restraint  
= 950mm (37.4") with only pelvic restraint

**NOTES:** It is strongly recommended that both pelvic and upper-torso belts be used.

# Warranty

Every Constructa Cushion is carefully inspected to provide peak performance. We guarantee that your Constructa Cushion will be free from defects in materials and workmanship for a period of 24 months from the date of purchase, assuming normal use.

Should a defect in materials or workmanship occur within 24 months from the original date of purchase, Spex will, at its discretion, provide a free repair or replacement. This warranty applies to all cushion components including the Outer Cover, Overlay, Inner, and Positioning Kit.

Please note that this warranty does not cover general wear and tear, such as punctures, tears, burns, or customer misuse of any cushion components.

Because of the modular design of the Constructa Cushion, minor deviations or imperfections in its internal components may occur over time without compromising product performance. These imperfections, which may arise from adjustments or use, fall outside the scope of warranties when they do not impact the cushion's functionality.

Claims and repairs should be processed through the nearest authorized Spex supplier. 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 Cushion can be located inside the Cushion cover.



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