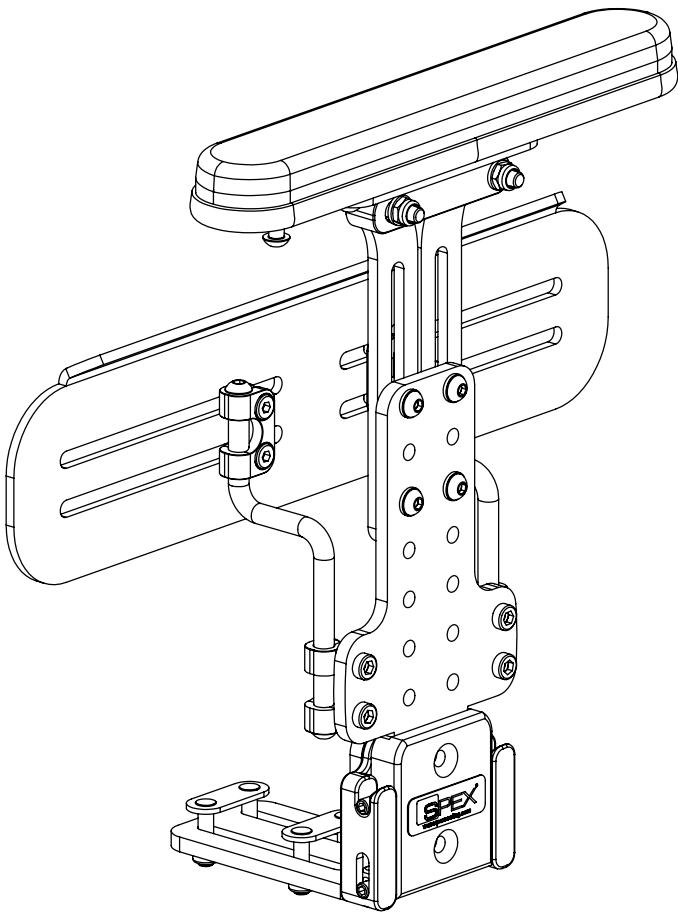


User Manual for all Spex Arm and Thigh Supports (product code begins with '1156-')

Revision: ArmSupport20211229_EN



spex

Arm & Thigh Supports *Installation & User Manual*

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 used in a vehicle.

MD: This product is a Medical Device.

User Name:

Serial Number:

Introduction

Spex recommends that a clinician such as an Occupational or Physio Therapist that is skilled in wheelchair seating and positioning be consulted to determine if the Spex Arm & Thigh Support is appropriate for the user. The intended user of the Arm & Thigh Support is a user with postural support requirements.

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 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 Spex Wheelchair seating products may affect the center 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 Spex Arm/Thigh Support. There are hazards associated with the use of wheelchairs and adaptive equipment. If you misuse your wheelchair or your Arm & Thigh Support you can be seriously injured. If your Arm & Thigh Support ceases to function as intended, please consult your authorised 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 Arm & Thigh support foam meets the flammability requirements of California Technical Bulletin 117. The Arm support fabric meets the flammability requirements of California Technical Bulletin 117. The Thigh support fabric meets the flammability requirements of AS/NZS 3744:1. 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 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.

Compatibility

- Spex Arm & Thigh Supports have been designed to be compatible with most wheelchairs.
- Spex Arm & Thigh supports are designed to be installed to the Spex Seat Base or to the seat rail channels.
- Spex Arm & Thigh supports can be installed to other wheelchair seat pans / seat rails ensuring that a strong and rigid mounting surface is present to enable effective installation and on-going use.
- Spex Arm & Thigh supports are tested and certified for the Spex brand and may not be appropriate for installation to other brands of wheelchairs.
- Spex Arm & Thigh supports are not to be used in a different manner other than what they have been designed for.

Disposal & Recycling

Your Spex Seating System is manufactured using a variety of materials, of which most 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.

Maintenance & Cleaning

Check that the hardware is working correctly, if not you must replace immediately. Spex recommends that all fasteners 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 Seating supplier immediately to replace any broken components. Do not continue to use the system after identifying loose or broken components. The expected lifetime of the Arm & Thigh Support 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.

Cleaning the hardware: Hardware may be wiped clean with mild detergent and water. Dry thoroughly after wiping.

Cleaning the Thigh support cover: Machine wash. Do not bleach. Tumble dry (low heat). Do not iron. Do not dry clean.

Cleaning the Arm support cover: Wipe with mild detergent.



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



WARNING

1. Hardware is shipped out disassembled 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 should be performed only by an authorized dealer or qualified therapist.
3. Spex products must not be modified or changed as this voids warranty
4. Only use genuine Spex accessories, components and hardware.
5. Never lift the wheelchair by the thigh or arm supports
6. Never use the Spex products if any hardware is missing, malfunctioning, or broken. Seek qualified assistance with any repairs, replacements or adjustments.
7. Poorly fitted Spex products can aggravate posture problems and the overall safety of the user
8. The user must not put excessive force against the thigh or arm supports
9. When removing the thigh or arm supports, ensure the user is supported by a carer prior to avoid the user falling from the wheelchair.
10. Be aware of the pinch points. Ensure all body parts are kept clear during these movements and adjustments.
11. The locking mechanism must be correctly locking at all times. If it stops locking do not use the equipment.
12. Spex arm and thigh supports must be used in conjunction with a stabilized pelvis with hip belt fitted
13. If the user has significant or forceful leaning to one side, a complete postural evaluation must be undertaken to ascertain the correct wheelchair seating set up prior to installation.
14. Do not use Spex arm and thigh supports or mechanisms for purposes that are not designed for.
15. 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.
16. Never use the support without its cover. Care should be exercised near open flame or burning cigarettes. Using the thigh support without its cover increases the risk of flammability and skin damage.

Environment

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

Temperature: Your Arm & Thigh Support may not function as intended when used at extreme temperatures. Keep the Arm & Thigh Support 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 Arm & Thigh Support to ensure no build-up occurs around openings and moving parts.

Reissuing to another user

Once the user has finished using the Spex Arm & Thigh support, it must be refurbished if it is issued to another user. Below are the strict guidelines for refurbishing the Spex Arm & Thigh support. Spex takes no responsibility for contamination, cross infection, or damage.

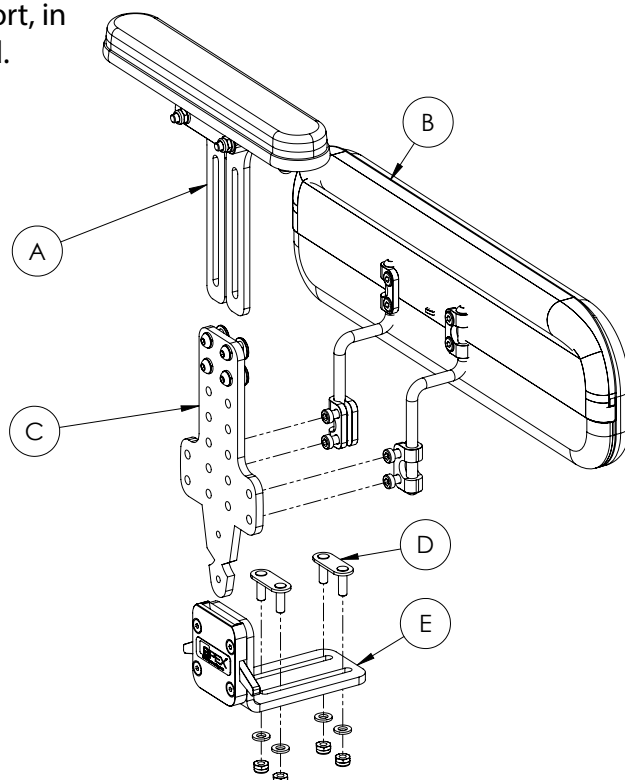
Part	Procedure
Safety check	All components to be checked for signs of stress or cracking.
Upholstery covers	Upholstery outer covers must be replaced regardless of condition.
Hardware and components	Ensure the mechanism components are in place and in safe working order. If any are missing, they must be ordered. Check for signs of stress or cracking. If any stress/cracks are found the Arm & Thigh support is to be condemned and must be disposed of. Clean the hardware and components with a mild detergent and quality disinfectant ensuring all areas are free from grime.
Foam	Foam pad must be replaced regardless of condition.

Arm & Thigh Support Contents

Your Arm & Thigh Support contains the following:

Note: When ordering, it is possible to specify only the Arm Support, in this case the Thigh Support component will not be included. It is also possible to specify only the Thigh Support, in this case the Arm Support component will not be included.

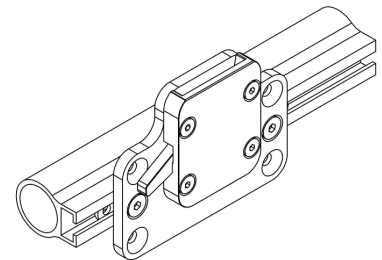
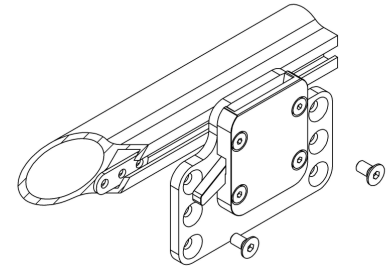
DESCRIPTION	QUANTITY
(A) Arm Support	1
(B) Thigh Support	1
(C) Connection bracket	1
(D) Fixing plate	2
Quick release bracket	1



Mounting to the Wheelchair

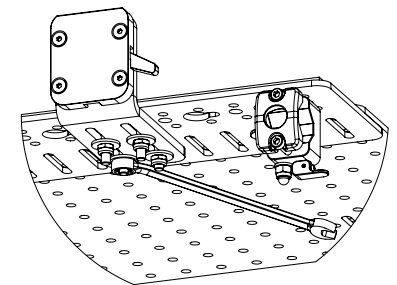
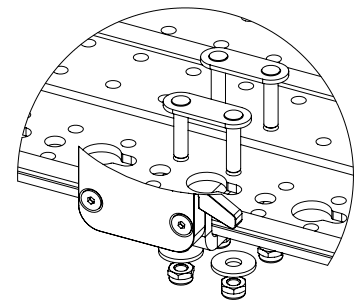
Seat rail mounting guide

1. Loosely fasten both of the stainless backing plates to the Seat Rail mount and slide down the rail tube.
2. Once in position, tighten the fasteners.



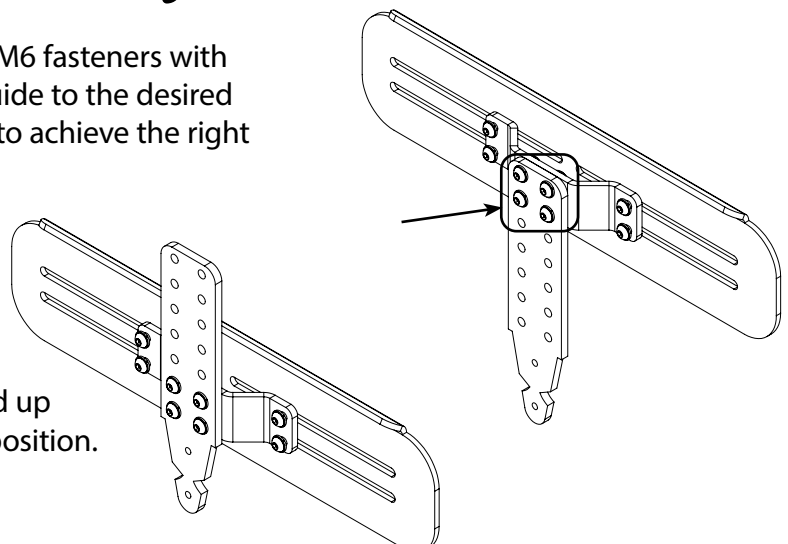
Seat pan mounting guide

1. Slide the seat pan bracket underneath the seat pan, above the rail. Insert one fixing stud through the Seat Pan wing, and one through the Seat Pan as shown. Fasten using the M6 washers and nuts.
2. Slide the bracket to the correct position and tighten using a 10 mm spanner.

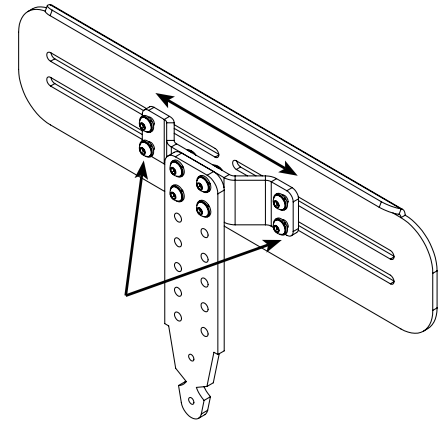


Fixed Thigh support adjustment

1. To adjust the height, loosen the four M6 fasteners with a 4mm Hex Key and adjust the hip guide to the desired height by moving the hole positions to achieve the right height.
2. Ensure all four fasteners are tightened up correctly once the support pad is in position.

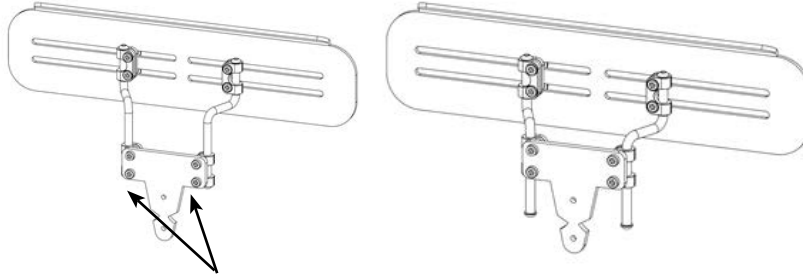
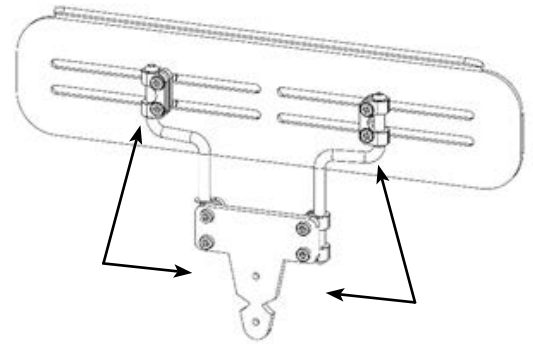


3. To adjust the horizontal position of support pad, loosen the four outer M6 fasteners with a 4mm Hex Key and adjust the hip guide to the desired position.
4. Ensure all four fasteners are tightened up correctly once the support pad is in position.
5. Replace the cover once complete.

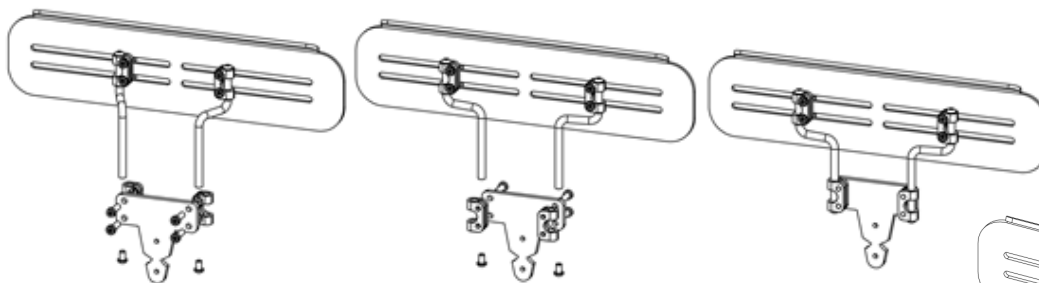


Axial Thigh support adjustment

1. Remove the cover if required.
To adjust the wheelchair width, height and angle, loosen the eight M6 fasteners with a 5mm Hex Key, and adjust the plate as required.
2. To adjust the support pad height only, loosen the four M6 fasteners with a 5mm Hex Key and adjust the hip guide to the desired height.

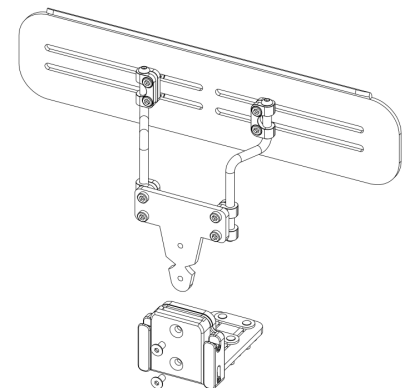


3. To achieve more offset of the thigh support, reverse the 8mm clamps as shown.



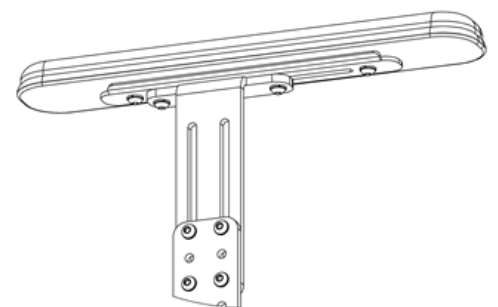
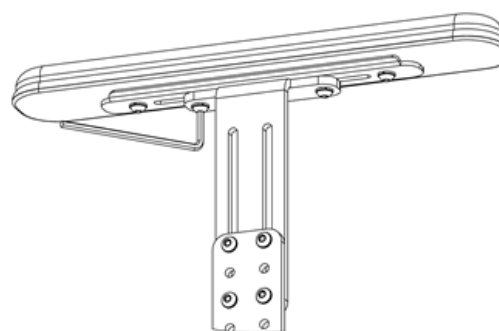
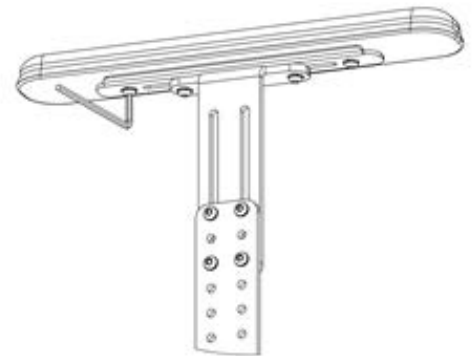
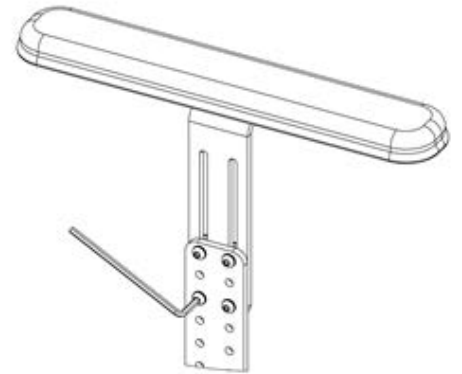
4. If using the Swing Down Seat Pan Mounting Bracket, ensure the hip guide bracket is fastened correctly using the countersunk fasteners.

5. Replace the cover once completed.

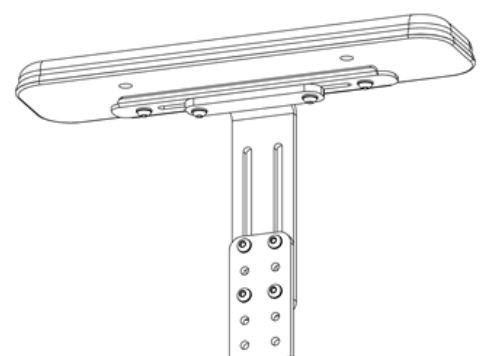


Fixed Arm support adjustment

- 1.** To adjust the arm support height, loosen the four M6 fasteners with a 4mm Hex Key and adjust the arm support pad to the desired height. These may need to move hole positions to achieve the right height.
- 2.** Ensure all four fasteners are tightened up correctly once the arm support pad is in position.
- 3.** Underneath the arm support pad, the outside fasteners allow for a slight angle adjustment of the pad in relation to the arm support post. Further angle adjustment can be achieved by adjusting the Seat pan mounting bracket angle when a Spex Seat Base is installed.
- 4.** The inner fasteners underneath the pad allow for the forward and back adjustment of the pad in relation to the arm support post.

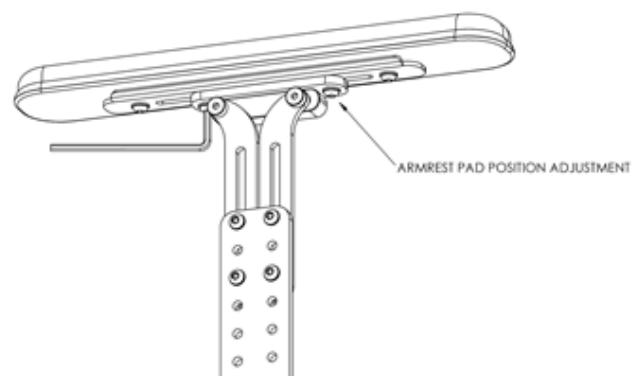
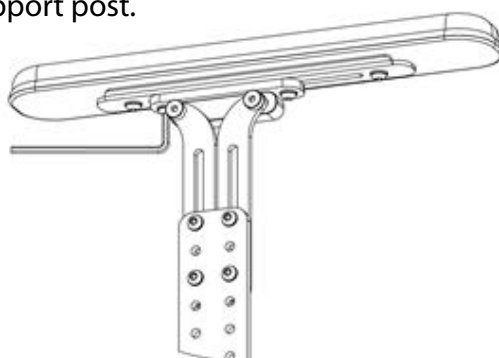
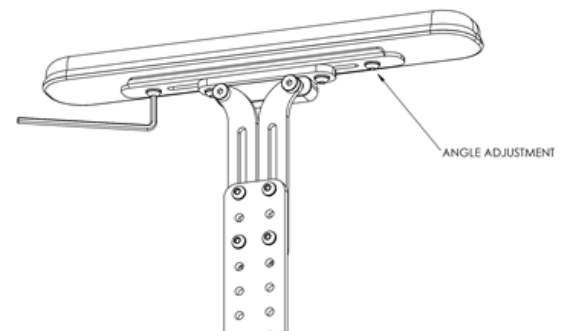
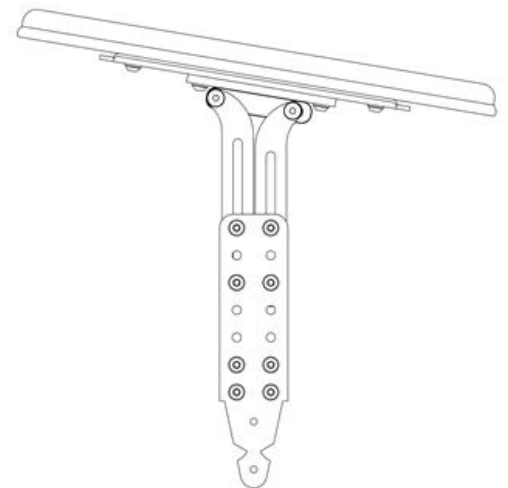
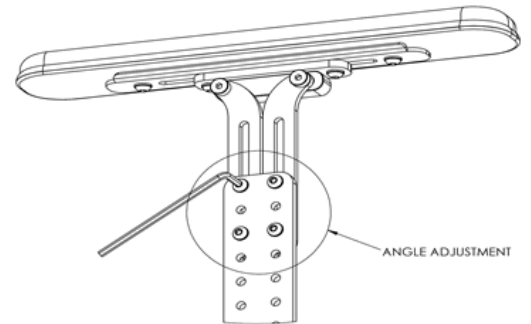


- 5.** Arm support pads can be rotated to either offset the arm support pad or allow for a wider position. Wider arm supports come with an offset fastening hole for alternate positions.



Angle Arm support adjustment

- 1.** To adjust the height and angle of the arm support, loosen the four M6 fasteners with a 4mm Hex Key and adjust the angle until the arm support pad is at the desired height and angle.
- 2.** Ensure all four fasteners are tightened up correctly once the arm support pad is in position.
- 3.** Underneath the arm support pad, the outside fasteners allow for a slight angle adjustment of the pad in relation to the arm support post. Further angle adjustment can be achieved by adjusting the Seat pan mounting bracket angle when a Spex Seat Base is installed.
- 4.** The inner fasteners underneath the pad allow for the forward and back adjustment of the pad in relation to the arm support post.



Transit Safety

The Spex Seating System has been successfully crash tested and complies with RESNA WC-4:2012, 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. Vigour Lo and Vigour Mid back supports.

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 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

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

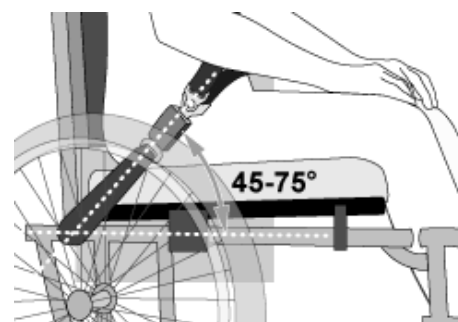


Figure 2



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

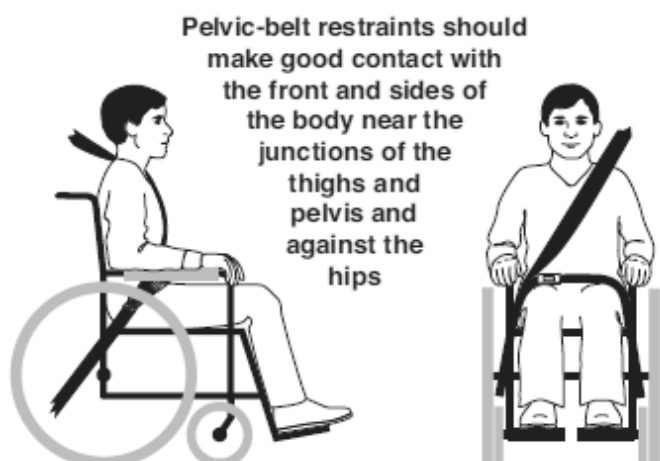


Figure 3b - Proper routing and positioning of belt restraints on the wheelchair occupant.

**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 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-4:2012, 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: 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 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**

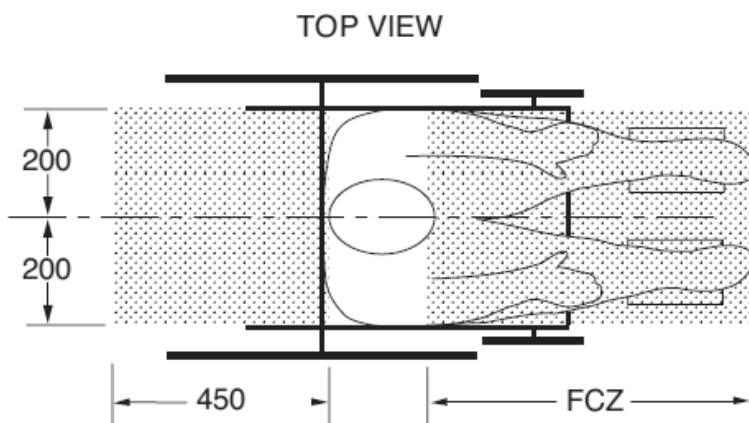
**WARNING**

- 8. cont... 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.**

 **WARNING**

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.

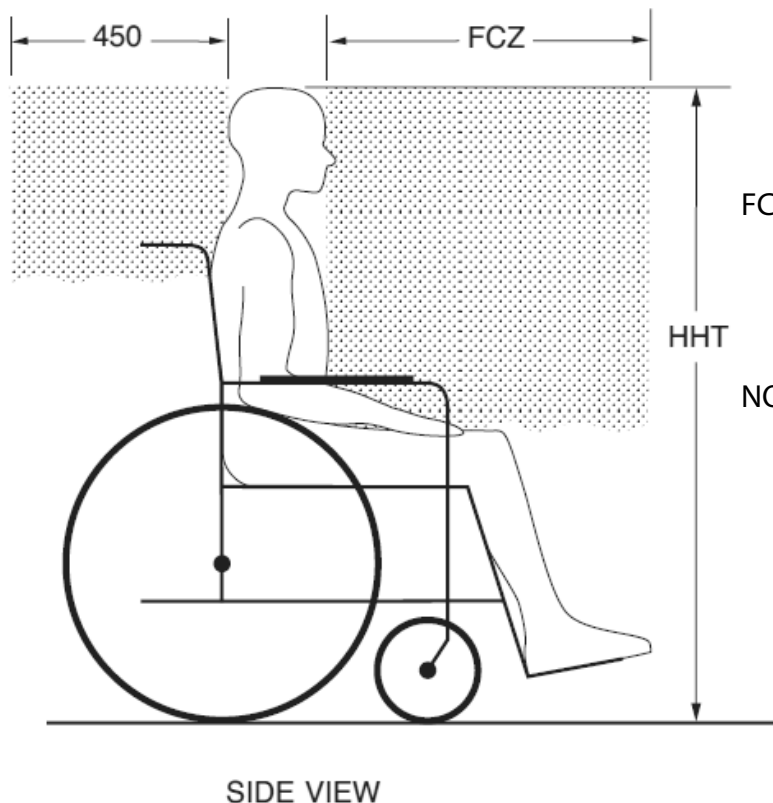
FAILURE TO HEED THESE WARNINGS COULD CAUSE SEVERE INJURY TO THE WHEELCHAIR USER OR OTHERS.



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

 **WARNING**



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 Spex Arm & Thigh Support is carefully inspected to provide peak performance and is guaranteed to be free from defects in materials and workmanship for a period of 12 months from the date of purchase, provided normal use. Should a defect in materials or workmanship occur within 12 months from the original date of purchase, Spex will, at its option, repair or replace it without charge. This warranty does not apply to general wear and use, including punctures, tears or burns, nor to the removable Thigh Support cover.

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 Thigh Support can be located by unzipping the Thigh Support Pad cover. The serial number of your Arm Support is located on the base of the Arm Pad.

Technical Data

Weight Capacity: 136 kg (300 lb)

Arm / Thigh Support Weight: 1.85 kg (4.1 lb)

	Size	Width	Length
Thigh Support Pads	10"	90 mm	265 mm
	12"	95 mm	310 mm
	14"	130 mm	360 mm
	16"	135 mm	410 mm
	18"	145 mm	460 mm
	20"	160 mm	510 mm
Arm Support Pads	Small, Slim	40 mm	250 mm
	Medium, Slim	50 mm	300 mm
	Large, Slim	60 mm	350 mm
	Small, Wide	70 mm	250 mm
	Medium, Wide	80 mm	300 mm
	Large, Wide	90 mm	350 mm

Materials

Hardware

- Aluminium
- Polyurethane foam

Upholstery

- EVA foam
- Neoprene Blend
- Polyester
- Nylon



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