

# EASISIT



User Manual

EN Instructions for fitting and use

Thank you for choosing

## EasiSit from BraunAbility!

The following manual is an important part of the product, providing you with information on how to achieve maximum performance and safe operation. Keep the manual in a safe place so that you can refer to it when necessary.

If you have any questions about your equipment, please contact us.

Once again, thank you for placing your confidence in our products!



Safe vehicle adaptation solutions  
*For your safety BraunAbility products are designed and tested according to current directives and standards.*

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## Safety information

### Limitation of use

The development of BraunAbility wheelchair restraints is a continuous process. Applications are added on a regular basis. For more details contact BraunAbility or look on the BraunAbility website.



*EasiSit is designed to secure both manual and powered wheelchairs weighing up to 85 kg and incorporates a passenger restraint.*



*In addition to the details given in these instructions, users of BraunAbility restraints must refer to the wheelchair manufacturer's 'Instructions for Use in Transport' for full details of tie-down attachment points on the wheelchair, plus any other specific instructions relating to use in transport.*



*Wheelchair users and their carers must make sure that their wheelchair is recommended for use in transport, including any 'add-on' components such as power tilt or recline options.*

## EasiSit - Combined Seat & Wheelchair Tie-down



EN

Safety information

## General guidance

- Wheelchair Accessories that have not been approved by the Wheelchair Manufacturer must be removed from the wheelchair and secured in the vehicle during transport to reduce the potential for injury. Refer to 'Instructions For Use in Transport' provided with the wheelchair or contact wheelchair manufacturer for further guidance.
- These wheelchair tie-downs comply with all applicable requirements of ISO 10542, including a 48km/h, 20g frontal impact test using a forward facing 85kg surrogate wheelchair and an ATD (test dummy) with a mass of 76.3kg. The test dummy was restrained by both a pelvic and upper-torso restraint. Use of a pelvic only belt may compromise the performance of the WTORS system and should be avoided.
- Regular inspection of all parts is recommended and the equipment should be used only if all components are in good condition.
- **Warning:** protect webbing from contacting sharp edges and corners. Replace equipment if the webbing becomes cut, contaminated or frayed.

- Any restraints which have been subjected to a crash situation from which the vehicle must be towed, should, in the interest of safety, be replaced.
- Do not attempt to modify the equipment. For further advice on the installation and use of these restraints please contact BraunAbility. Please read this manual fully before use.
- Avoid contact with corrosive liquids. Care should be taken to prevent contamination of the webbing with polishes, oils and chemicals.
- The tie-down anchorages should be installed by an experienced technician/vehicle converter. Anchorages should not be installed into unsound materials such as corroded metal, wood, plastic and fibre glass panels, without additional and suitable reinforcement.
- The equipment has been tested in a configuration similar to that recommended by BraunAbility and any deviation from the recommendations here is the responsibility of the installer/user.

## Before installing and using the combined retractable tie-downs with occupant restraints

- Ensure that the wheelchair is correctly maintained and that the settings of any adjustable parts are made according to 'Instructions for Use in Transport'.
- Whenever possible remove any items of luggage etc that may be attached to the wheelchair and secure or store separately during transport in order to reduce the potential for injury to other passengers travelling in the vehicle.
- Extra care must be exercised when using vehicle boarding aids such as passenger lifts or ramps during the loading process. Refer to 'Instructions For Use' for information on safe slopes.
- Position the wheelchair facing forward - centrally in the designated region of the vehicle. **Ensure the wheelchair brakes are applied.**
- To minimise the potential for head injuries in an impact, allow a clear space of at least 400mm behind and 650mm, (FCZ, front clear zone), in front of the head of the wheelchair user, (Fig A). The shoulder belt anchorage must be roof or side-wall anchored at a height level such that the belt webbing passes over the midpoint of the occupant shoulder and at a height that is at or just above the level of the occupants shoulders so as not to impose downward loads on the spine.
- A height provision (HHT) ranging from 1000mm to 1550mm should be made, depending on the size of the passenger. There should also be 200mm of clear space either side of the wheelchair centre line. If these clear space dimensions cannot be provided then any structure protruding into this space should be adequately padded and comply with impact performance requirements of ECE Regulation 21 'FMVSS 201'. All vehicle padding should comply with the flammability requirements of ECE Regulation 118 'FMVSS 302'.

*Note: seated head height (HHT) ranges from as low as 1000mm for a 6-year-old child to 1550mm for a tall adult.*



- Wheelchair users, their carers and family are advised to check vehicle specifications to ensure that sufficient floor space is available to accommodate the wheelchair and tie-down system. These distances are based upon the desire to maintain clear zones for potential head excursions of occupants provided with both upper and lower torso restraints.
- Users of heavy powered wheelchairs are also advised to check vehicle carrying capacity. If in doubt consult the vehicle supplier for further details.
- Any airbag, as fitted to the vehicle, shall be used only as a supplementary occupant restraint if designed to be used in combination with the wheelchair tie-down.
- Installers of these restraints should take note of any vehicle airbag position when planning the installation. Airbags can cause serious injury if a wheelchair-seated occupant is seated too close to an airbag position. If in doubt contact the vehicle manufacturer or your National Automotive Regulatory Body for advice.

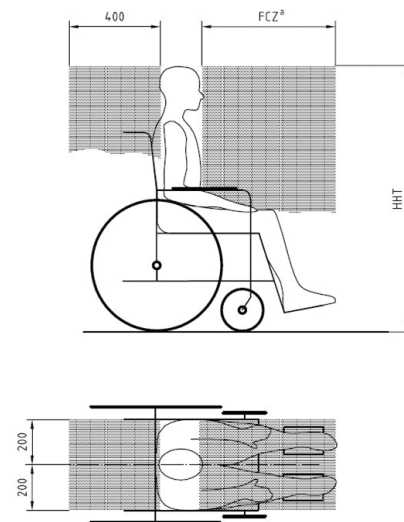


Figure A

## Fit and use

### Positioning a rail mounted EasiSit

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1. Place the EasiSit facing forwards on the rails in the desired position with the handled plunger extended up and the anti-rattle cam in its lowered position (rotated fully anti-clockwise Fig. 1). Use the wheels & curved ends of the rail fitting to aid positioning and insertion into the rail.
2. Once located in the rail, rotate both plungers to coincide with the vertical slots in the anti-rattle cam and slide the EasiSit along the rail until both plungers drop and lock in. Rotate both plunger housing assemblies clockwise until resistance is felt (Fig.2) EasiSit is now securely located and rattle free, ready for use.
3. Release the EasiSit from the rail by reversing the above sequence. Remember to use the curved rail fitting ends to locate the exact exit area of fitting to rail. Once aligned, carefully tilt EasiSit back onto its wheels and wheel away.

To unlock: turn anti-rattle plunger housing fully anti clockwise & plunger raised & disengaged.

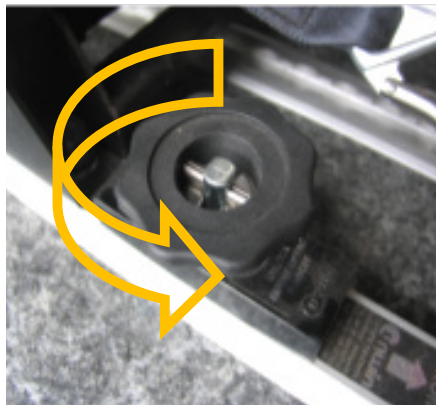


Figure 1

To lock: Drop plunger into position, engaging in rail, turn anti rattle assembly until resistance is felt.

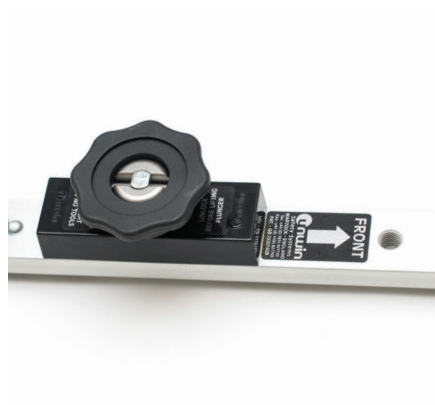


Figure 2

## Fit and use

### Positioning a bolted EasiSit

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1. For a permanent installation, the EasiSit may be bolted directly into a vehicle floor or into BraunAbility rail.
2. Carefully choose a suitable wheelchair space within the vehicle for the EasiSit. **Note:** the six fixing positions through the leg feet. Ensure that there are no obstructions directly beneath the fixing positions such as petrol tanks, brake lines or anything that may be damaged when drilling and bolting through the floor. If necessary, relocate the EasiSit to avoid potential problems.
3. When satisfied that the EasiSit is correctly positioned, mark the fixing positions and drill through the floor using an 11 mm drill bit. A simple card template can be made up if required as an aid to marking and drilling the fixing positions.
4. Underfloor support is required at all bolted positions. It is recommended that a plate 75mmx75mmx4mm (or equivalent) is used for each bolt location.
5. Install the EasiSit and securely tighten all fixings.
6. Apply a proprietary under body sealant/paint to protect any drilled areas beneath the floor to preserve the vehicle's corrosion resistance.
7. **Note:** Fixings are not supplied as different installations will require different lengths of bolt, under floor spreader plates and/or strengthening for optimum fitment. Regardless of length, we recommend that no fewer than six bolts are used at a minimum grade of 10.9 along with nylock or similar shake-proof nuts.

## Fit and use

### Fitting the armrest

1. Find threaded holes in the seat frame, situated one third of the way up from the seat and close to the front edge.
2. Use a bradawl to punch the fabric (Fig 3).
3. Place two 5mm spacers between the armrest and the seat, tighten the screws right up and place the cover on (Fig 4 & 5)



Figure 3



Figure 4



Figure 5

## Fit and use

### Fitting and using EasiSit - wheelchair tie-down

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1. If the EasiSit is set as a seat, lift the armrest(s), if fitted, into an upright position and fold the seat cushion (Fig 6A).
2. Position the wheelchair at a convenient distance in front and away from the EasiSit, pull out each retractable strap and attach karabiner to the wheelchair mainframe. (Some manufacturers may indicate attachment points on the wheelchair frame).
3. Move the wheelchair up to the EasiSit. Stand behind the EasiSit and guide the wheelchair up to and against the telescopic stand-off bar (Fig 6B), adjusting it for width/height if required. Height adjustment is achieved by releasing the two thumb screws and repositioning them along with the stand-off bar to the next row of holes. The standard position will generally be found to be the most suitable for the majority of wheelchairs.
4. Once the wheelchair is hard up against the stand-off bar, depress the foot pedal (Fig 6C) fully until you hear a loud click as it locks in. Apply the wheelchair brakes.
5. Test that the wheelchair is secured by leaning on and then lifting its handles. Neither the front castors nor the rear wheels should be able to lift off the ground. If the wheelchair is felt not to be secured enough, it may be necessary to release the foot pedal and repeat step 4.

#### Releasing the wheelchair

1. Simultaneously lift the red handle (Fig 6D) on the seat back and raise the yellow foot pedal with your toe (Fig 6C).
2. Release the wheelchair brakes and move the wheelchair away from the EasiSit.
3. Reapply the brakes.
4. Unfasten the karabiner(s) from the wheelchair frame, allow the straps to retract to their storage position and clip over the EasiSit front leg cross rail (Fig 6E).
5. Depress the foot pedal to remove any possible trip hazard.

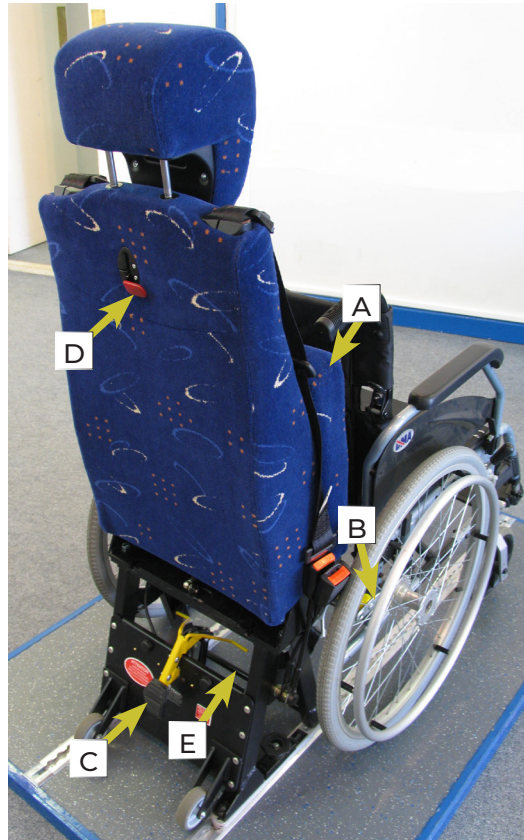


Figure 6

# Fit and use

## Fitting and using EasiSit - occupant restraint

1. The EasiSit may have been fitted with a variety of different passenger restraint options. It will be necessary to identify which options are fitted to the EasiSit being used, so that the attendant can best address the needs of both the wheelchair user and the able bodied passengers.

### The options are as follows:

- Left hand seat belt with height adjuster.
- Right hand seat belt with height adjuster.
- Both left & right hand seat belts with height adjusters forming a 'Cross' Strap.

The seatbelts and stalks are colour coded to ensure that they are correctly fitted.

**Note:** The occupant restraint may be split to allow the lap belt element to pass through the arms of fixed arm wheelchairs, allowing for a more comfortable and better fitting belt.

### Fitting the seatbelt:

1. Pull enough webbing and fittings from the shoulder exit and fit black tongue (Fig 7A) into black stalk (Fig 7B) to form the diagonal belt. Alternatively fit grey tongue (Fig 7A1) into grey stalk (Fig 7B1).
2. Pull the grey tongue (Fig 7C) across the occupant (through a fixed armrest if necessary) and clip into stalk (Fig 7D). Alternatively fit the black tongue (Fig 7C1) into black stalk.
3. Adjust the height adjuster buckle for a comfortable fit across the occupant shoulder. This completes the lap and diagonal restraint (Fig 8) .
4. If fitting a 'cross strap' repeat the procedure with the remaining strap.

### Converting back to a seat

1. Check that the karabiner straps are in their retracted storage position, clipped to the front leg cross rail, and that the foot pedal is depressed and locked down. **Note:** This is important to remove any possible trip hazard to other passengers and to keep the webbing clean and tidy.
2. Push in the ends of the telescopic stand off bar. Stand in front of the EasiSit, hold the sides of the seat cushion and push it down to allow the frame to 'hinge' down to its horizontal position.
3. Fit Tongue C into stalk D and tongue C1 into stalk B, ready to be used as a standard seating passenger seatbelt.





Figure 7



Figure 8

## After care

### Equipment storage and maintenance

- Regularly inspect the wheelchair restraint systems for damage, wear or malfunction. If any problems are identified replace it immediately.
- All webbing and components can be cleaned as necessary, but care should be taken to prevent contamination of the webbings with polishes, oils and chemicals, particularly battery acid.
- To clean the straps use warm soapy water and a clean soft cloth. Rinse with clear water and allow to air dry. To disinfect, use a mild spray disinfectant and do not use products containing bleach.  
**Important: when cleaning or disinfecting, do not immerse or flood buckles, or karabiner fittings in the disinfectant or water.**
- If the vehicle is involved in an accident when any restraints are deployed, remove them from service and replace immediately. If in doubt please contact BraunAbility.
- **IMPORTANT: Seatbelts should be worn on all journeys**
- When in use the lap belt part of the seat belt should be positioned on the bony part of the hip and the buckle should lie on or below the hip. When inserting a tongue into a buckle ensure that a positive audible 'click' is heard.
- The design of the reel makes it lock the webbing by both a sudden withdrawal of the webbing and deceleration, or cornering of the vehicle. To test the former mode of locking, rapidly pull the webbing from the reel. The reel should lock within a few inches. To test the second mode of locking the vehicle may be parked on a sharp incline (approximately 30°), the reel should lock and hold the webbing in place. The lock will disengage itself automatically when the vehicle is level.
- **WARNING:** Always ensure that the belt is not twisted on the body, or through the anchorage points. Always wear the belt as a complete lap and diagonal assembly. Do not use the belt for more than one person, even small children. Do not allow the belt to chafe against sharp edges. Periodically inspect the webbing for abrasion, paying particular attention to anchorage points and adjusting devices. Any safety belt which has been subjected to a shock load should in the interest of safety, be renewed.



# After care

## Warranty

BraunAbility products are extensively tested using BraunAbility anchorage systems, and our full warranty normally only applies to BraunAbility equipment when used with BraunAbility branded anchorages or as instructed. BraunAbility have also participated in test programs with other manufacturers anchorage products and will support warranty on the BraunAbility products when used in conjunction with such jointly tested systems. For further details on specific applications please contact the Sales Office. In other situations, using BraunAbility products, for which BraunAbility has not participated in a joint test program, a limited BraunAbility warranty will apply.



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Quality system certified in accordance with ISO 9001:2008

Illustrations, descriptions and specifications in the user manual are based on current product information. BraunAbility UK Ltd reserves the right to make alterations without previous notice.

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## After care

### Inspection Checklist

Depending on frequency of use it is recommended that the EasiSit be inspected at least once a month.

#### SEAT

- Do the lockable seat fixtures operate as described in page 10 of this manual.
- Appearance/Condition of painted surfaces.
- Appearance/Condition of trim.
- Is there any loose strands/pieces of material/trim.
- Can the seat cushion be lifted with the aid of the gas spring to its upright position.
- Does the gas spring hold the seat cushion in the upright position.
- Does the seat cushion fold flat for use as an able bodied seat.

#### SEAT BELT

- Are all stalks attached tightly to the frame.
- Are all stalks intact and without damage.
- Do the seatbelt tongues lock into their corresponding stalks.
- Do the tongues release when the stalk release buttons are pressed.
- Is the height adjuster present on the shoulder belt.
- Does the height adjuster slide freely along the shoulder belt.
- Does the shoulder belt extend and retract from the exit guide.
- Is any webbing slack formed during occupant fitment taken up by the reel.
- Does retractor lock when the EasiSit is inclined at an angle.

- Does the retractor lock instantly when the webbing is snatch pulled.
- Does the retractor take in when the snatch pull is released.
- Does the webbing show any signs of wear/abrasion/damage.
- Do all webbing stitched areas look to be in good condition.

#### WHEELCHAIR RESTRAINT

- Does the foot pedal raise and lower smoothly.
- Does the release lever lift and allow the foot pedal to be raised.
- With the foot pedal raised can the karabiner straps be manually extended.
- Upon release of the karabiner straps, do they retract back into the reel casings.
- Does the karabiner gate open fully and close automatically upon release of the gate.
- Is the stitch pattern to the karabiner in good condition.
- Does the webbing show any signs of wear/abrasion/damage.
- Is the stand-off bar and retaining knobs (x2) present.
- Can the stand-off bar be telescoped.
- Are the plastic grip covers present and in good condition.
- Can the stand-off bar assembly be moved to another height position.



# Declaration of conformity

## Manufacturer /

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[www.braunability.eu](http://www.braunability.eu)

## Declares that the product/

ESBN, ELSBL, ESBR, ESB2, ESLN,  
ESLL, ESLR, ESL2

## Conforms to following directives standards and regulations /

214/2014/EU Paragraphs 2.3.1 and 2.3.2  
ISO 10542:2012  
RESNA WC-4 2012 Section 18  
2001/85/EC  
R.107.06  
2007/46/EC

BraunAbility, Martock, 17<sup>th</sup> July 2019

A handwritten signature in black ink, appearing to read 'Rob Butcher', is written over a light grey rectangular background.

Rob Butcher  
Director of Engineering



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