

Electric front reel tie-downs

User manual

Thank you for choosing a

Electric front reel tie-downs 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 tie-down is a continuous process. Applications are added on a regular basis. For more details contact BraunAbility or look on the BraunAbility website.



*These BraunAbility tie-downs are designed to secure the front of a wheelchair when facing **forward** in a vehicle and must be used as instructed. The electric front tie-downs are designed to secure wheelchair weights up to 100kg. The use of an appropriate rear wheelchair tie-down and an occupant restraint will be required for all.*



In addition to the details given in these instructions, users of BraunAbility electric front tie-downs 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.

Electric front reel tie-downs

EF3CK



EF3CJ



EF3H



EF4CT



EF4CJ



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.
- If the installation is to be used with an occupant head rest anchored to the vehicle, then a vehicle-anchored back rest must be provided to minimise rearward deflection of the wheelchair seatback, preventing neck injury.
- 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 this tie-down 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 electric front reel tie-downs

- 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 in 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 this tie-down 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.

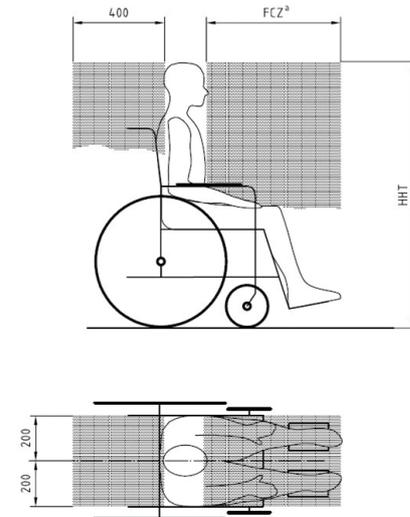
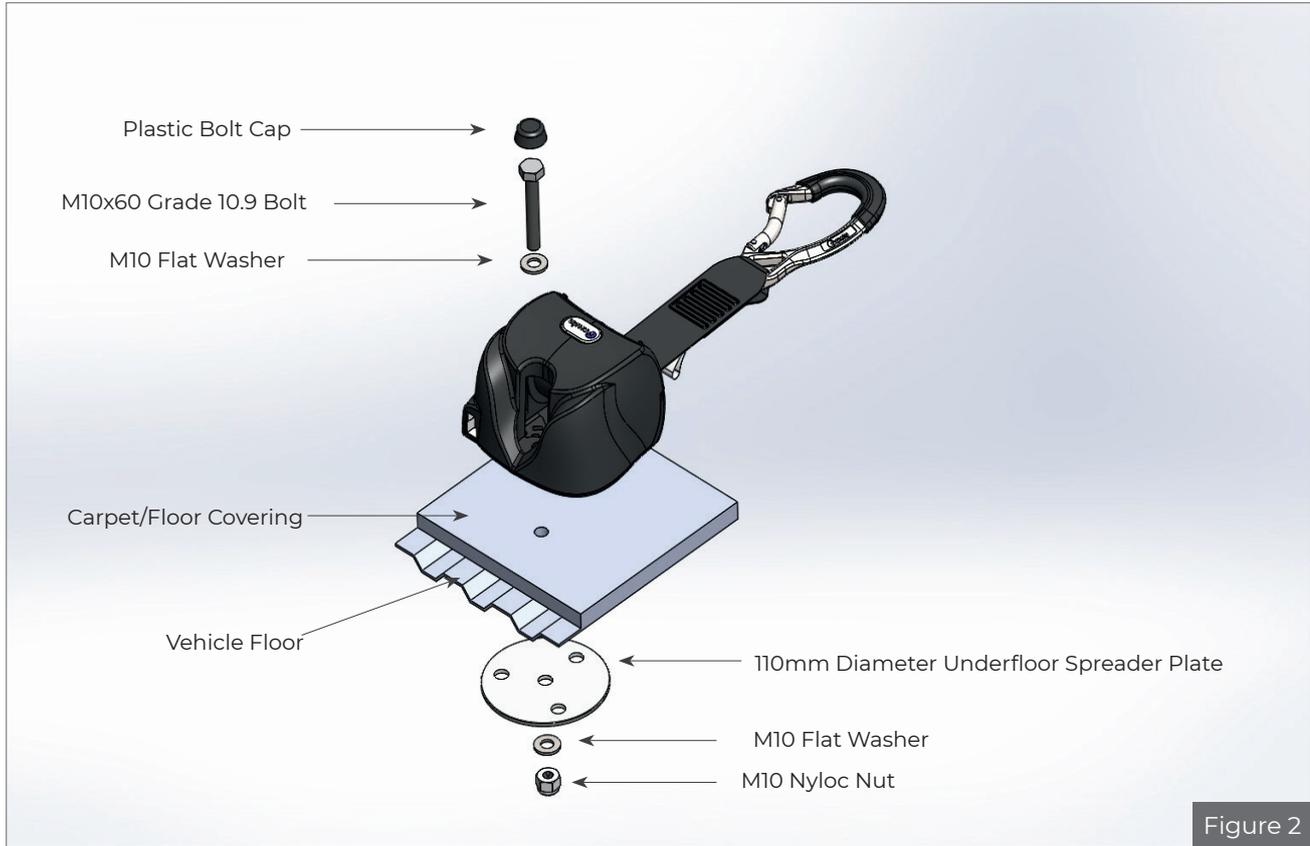


Figure A



WARNING:

The terminals of Electric Reels fitted with LED lighting are polarity specific. Correct function of the reel and lights will only be achieved if wired correctly to that shown below.



Figure 3

Using the electric front reel tie-downs

1. Position the wheelchair as required.
2. Extend the webbing by applying the 12volt dc current to each reel to release the reel 'lock' and attach the karabiner, hook or tongue & buckle arrangement of each reel to the front vertical frame of the wheelchair, (some wheelchairs will indicate this tie-down position Fig 4). To do this press the red buckle release button, detach the tongue from the buckle and pass it around the wheelchair frame tie-down point, reconnect the tongue firmly back into the buckle **OR** snap the hook/ karabiner onto the tie-down position. If using karabiners ensure that the gates are fully closed.
By removing the 12v current (switching off the power), the reels will 'spool' in taking up webbing slack but will be 'locked off' from spooling out.
3. The webbing should form angles within the regions shown in Fig 5.
4. To release, slacken the front tie-down firstly, then once again apply current to each reel allowing the webbing to extend and the karabiner, hook or tongue & buckle to be released from the wheelchair frame.
Note: If using Tongue & Buckle, in an emergency release can be achieved immediately and quickly by pressing the red release buttons on each buckle, without the need to unlock the reels electrically.
5. Allow the webbing to retract back into the reels in a controlled manner.
Warning: Do not let the webbing 'fly' back into the reels uncontrollably as this may result in damage to the equipment and injury to persons within the vehicle.



Figure 4

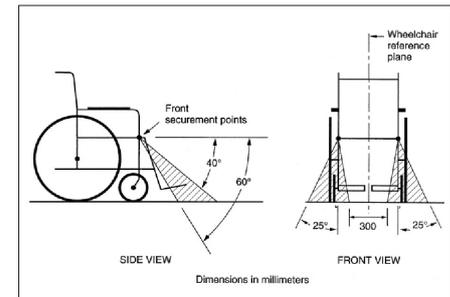


Figure 5

After care

Equipment storage and maintenance

- Regularly inspect the electric front tie-downs 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, karabiner fittings or floor anchors 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.

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.

Declaration of conformity

Manufacturer /

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Declares that the products /

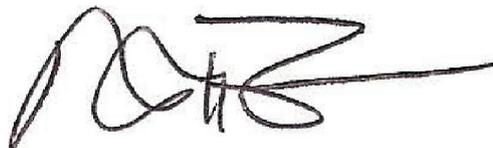
3m Electric front reel tie-downs:
EF3CT, EF3CH, EF3CK, EF3T, EF3H,
EF3K, EF3J, EF3CJ, SLR104, SLR105,
SLR116, SLR116H, SLR119, SLR119H,
SLR104LED, SLR116LED

4m Electric front reel tie-downs:
EF4CT, EF4CH, EF4CK, EF4T, EF4H,
EF4K, EF4J, EF4CJ, SLR102, SLR103,
SLR115, SLR120, SLR120H,
SLR102LED, SLR115LED

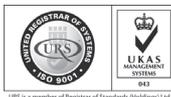
Conforms to applicable paragraphs in the following Directives, Standards and Regulations /

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

BraunAbility, Martock, 1st April 2020

A handwritten signature in black ink, appearing to read 'Rob Butcher', with a long horizontal line extending to the right.

Rob Butcher
Director of Engineering



URS is a member of Registrar of Standards (Holdings) Ltd.

Quality system certified in accordance with ISO 9001:2015

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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