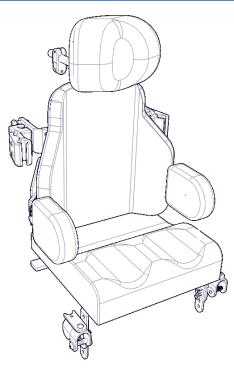
# Stealth Products



Backs and Support



# Diego Seating System

Diego Seating System Owner's Manual

Stealth Products, LLC strives for 100% customer satisfaction. Your complete satisfaction is important. Please contact us with feedback or to suggest changes which may help improve the quality and usability of our products. You may reach us at:



Stealth Products, LLC 104 John Kelly Drive, Burnet, TX 78611

Phone: (512) 715-9995 Toll Free: (800) 965-9229 Fax: (512) 715-9954 Toll Free: (800) 806-1225

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MDSS GmbH Schiffgraben 41 30175 Hannover, Germany



#### **General**

Read and understand all instructions prior to the use of the product. Failure to adhere to instructions and warnings in this document may result in property damage, injury, or death. Product misuse due to failure to adhere to the following instructions will void the warranty.

Immediately discontinue use if any function is compromised, if parts are missing or loose, or if any component shows signs of excessive wear. Consult with your supplier for repair, adjustment, or replacement.

## **Important Information!**

All persons responsible for fitting, adjustment, and daily use of the devices discussed in these instructions must be familiar with and understand all safety aspects of the devices mentioned. In order for our products to be used successfully, you must:

- read and understand all instructions and warnings;
- maintain our products according to our instructions on care and maintenance; and
- ensure devices are installed and adjusted by a trained technician.

# **Supplier Reference**

Supplier:
Telephone:
Address:
Purchase Date:
Model:

Introduction 3.0

These installation instructions will guide you through your product's options and possibilities. They are written with the expressed intent of use with standard configurations. They also contain important safety and maintenance information and describe possible problems that may arise during use. For further assistance or more advanced applications, please contact your supplier or Stealth Products, LLC at (512) 715-9995 or toll free at (800) 965-9229.

Always keep the operating instructions in a safe place so they may be referenced as necessary.

All information, pictures, illustrations, and specifications are based on the product information that was available at the time of printing. Pictures and illustrations shown in these instructions are representative examples and are not intended to be exact depictions of the various parts of the product.

#### **!** CAUTION

These products are designed to be fitted, applied, and installed exclusively by a healthcare professional trained for these purposes. The fitting, application and installation by a non-qualified individual could result in serious injury.

#### **Ordering Documentation**

You can download additional copies of this user manual by accessing the Stealth website (www.stealthproducts.com) and searching "Diego Seating System Owner's Manual" in the search bar at the top of the page.

Warranty 4.0

Our products are designed, manufactured, and produced to the highest of standards. If any defect in material or workmanship is found, Stealth Products, LLC will repair or replace the product at our discretion. Any implied warranty, including the implied warranties of merchantability and fitness for a particular purpose, shall not extend beyond the duration of this warranty. Stealth Products, LLC does not warrant damage due to, but not limited to:

- misuse, abuse, or misapplication of products; and/or
- modification of products without written approval from Stealth Products, LLC.

Any lack or alteration of serial number, where applicable, will automatically void this warranty.

Stealth Products, LLC is liable for replacement parts only. Stealth Products, LLC is not liable for any incurred labor costs.

No person is authorized to alter, extend, or waive the warranties of Stealth Products, LLC.

Stealth Products warrants against failure due to defective materials or workmanship for a period of:

Covers/Soft Goods: 18 months Hardware: 5 years Electronics: 3 years

#### In Case of Product Failure

In the event of product failure covered by our warranty, please follow the procedures outlined below:

- 1. Call Stealth Products at (512) 715-9995 or toll free at (800) 965-9229.
- 2. Request a Return Authorization form (RA) from the Returns Department and follow the instructions on the document.

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Warning Labels 6.0

## Warning Labels

6.1

Warnings are included for the safety of the user, client, operator and property. Please read and understand what the signal words **DANGER**, **WARNING**, **CAUTION**, **NOTICE** and **SAFETY** mean, and how they could affect the user, those around the user, and property.

Identifies an **imminent** situation which, if not avoided, may DANGER result in severe injury, death, and/or property damage. Identifies a **potential** situation which, if not avoided, may **AWARNING** result in severe injury, death, and/or property damage. Identifies a **potential** situation which, if not avoided, may result in minor to moderate injury, and/or property **⚠** CAUTION damage. Identifies important information not related to injury, but NOTICE possible property damage. Indicates steps or instructions for safe practices, reminders of safe procedures, or important safety equipment that may SAFETY be neccesary.

#### **Limited Liability**

6.2

Stealth Products, LLC accepts no liability for personal injury or damage to property that may arise from the failure of the user or other persons to follow the recommendations, warnings, and instructions in this manual. Stealth Products, LLC does not hold responsibility for final integration or final assembly of product to end user. Stealth Products, LLC is not liable for user death or injury.

Testing 6.3

Initial setup and driving should be done in an open area free of obstacles until the user is fully capable of driving safely. Intended Use 7.1

The **Diego System** is designed for the individual who needs a solid back to support minimal deformities or stability needs, and who requires minimal to moderate postural support and improved trunk/pelvic positioning.

The **Diego System** combines all of the features and benefits of individual components into a complete seating system for optimal postural support, skin care and portability. The **Diego System** will accommodate user growth to maintain the best fit and function possible. At the same time, the **Diego System**'s easily accessible adjustments facilitate user care.

Features 7.2

#### Back

- Lightweight planar shell
- Wings offer 2" width adjustability
- Lateral Supports (swing away or fixed)
- Pre-drilled through-holes for seat back mount (headrest) and seat back hinge
- Slots cut for postural supports and hardware mounting
- Dual layer of foam for increased comfort
- Standard CoolCore cover promotes temperature regulation and skin health
- Rear honeycomb cover to hide hardware
- Hardware adjustments for height, angle and depth
- Can be used on multiple diameter tubing
- Quick release features also easy removal of back from canes

#### **Headrest**

- Lightweight multi-axis adjustability
- Offers height, depth, and angle adjustments with the turn of a screw

#### Seat

- Lightweight aluminum seat pan is attached
- Seat pan is pre-drilled for mounting hardware
- CoolCore cover is standard for temperature regulation & skin health
- Seat-to-back hinge allows seat-to-back angle to be locked in

#### **Overall**

- Can be mounted on a variety of bases: rigid, folding, power chairs, or strollers
- Back and cushion can be one unit for easy removal, transfer, and storage

Features 8.0

#### **Parts and Accessories Breakdown**

8.1

#### A full **Diego Seating System** includes:

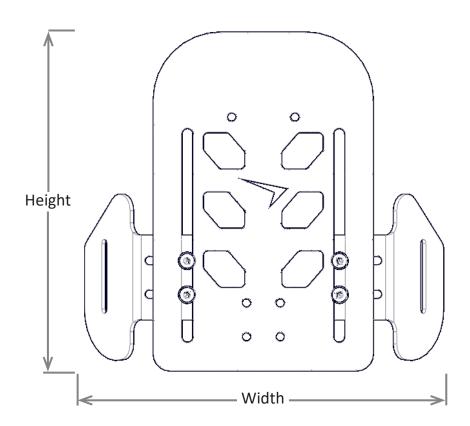
- 1. Back
  - Composed of an aluminum frame with a CoolCore-covered dual-layer foam cushion
- 2. Mounting Hardware
  - · Features FlipLock Back Mounting Hardware for quick-release removal of back from canes
- 3. Lateral Supports
  - Can be fixed or swing-away
- 4. Head Support
  - Multi-axis adjustable
- 5. Seat
  - A seat pan and seat cushion attached to the back by a seat-to-back hinge

#### NOTICE

The FlipLock and head support hardware have separate manuals which should be referred to for the installation of those components.

Features 8.0

# Back Dimensions 8.2

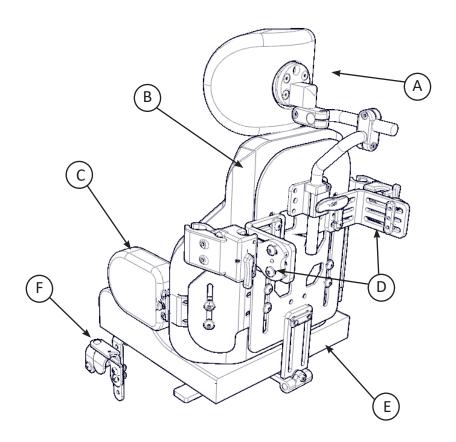


Part Number	Min. Width	Max. Width	Height
DGBAL1010AC	9"	11"	10"
DGBAL1012AC	9"	11"	12″
DGBAL1212AC	11"	13"	12″
DGBAL1214AC	11"	13"	14"
DGBAL1414AC	13"	15"	14"
DGBAL1416AC	13"	15"	16″

# **Installation Instructions**

Parts and Accessories 9.0

# Hardware Parts 9.1



		Description	Qty.
Α	Headrest	Comfort Plus 6" or 8" Headrest	1
В	Back Support	Diego Back Support	1
С	Lateral Supports	Swing-Away or Fixed Lateral Supports	2
D	Mounting Hardware	FlipLock Mounting Hardware	2
Е	Seat	Diego Seat Cushion	1
F	Seat Hardware	J+L Seat Mounting Hardware	2

# Preparations 9.2

Only a qualified service technician may install the **Diego Seating System** and its accessories.

#### **A** WARNING

Incorrect installation of the **Diego Seating System** or its accessories may cause damage to the hardware and/or injury to the user.

Tools 9.3

Use the proper tools to install and adjust the **Diego Seating System** to the desired position for the user. Ensure all torque specifications are followed.

#### **A** CAUTION

The use of improper tools may cause damage to the device. Not tightening to the torque specification can cause components to fail or cause discomfort to the user.

Installation Plan 9.4

Set up an installation plan before beginning the installation. This plan should take into account:

- Where the **Diego Seating System** will be placed as well as applicable laterals and support cushions.
- How the Diego Seating System will be operated, including the quick-release functions for the mount and laterals.

#### **A** CAUTION

Any connection must always be secured with all delivered screws. Only use the screws provided in the package.

#### **!** CAUTION

READ AND UNDERSTAND THE INSTALLATION INSTRUCTIONS FOR YOUR OTHER HARDWARE INCLUDED IN THE SEPARATE HARDWARE MANUALS.

Required Tools 9.5

Below are the tools needed to complete the installation of the laterals:



Hardware	Component Use
3mm Hex Key	Lateral Cushion Mount (G8); Socket Head Screw on Lateral (F5)
4mm Hex Key	Button Head Screws on Lateral Bracket (E1)

#### **A** CAUTION

ADDITIONAL TOOLS REQUIRED FOR OTHER HARDWARE ARE LISTED IN THE INSTALLATION INSTRUCTIONS OF THE SEPARATE HARDWARE MANUALS.

Tools are not provided. Refer to the manuals for additional accessories for the list of tools required for their installation.

Screws	Torque Specifications
M5 x 0.8 x 16mm Button Head Screw (E1)	5.9nM
M6 x 1.0 x 16mm Button Head Screw (E1)	10nM

#### **CAUTION**

TORQUE SPECIFICATIONS FOR YOUR OTHER HARDWARE CAN BE FOUND IN THE SEPARATE HARDWARE MANUALS.

## **Installing the Laterals**

9.6

**Step One:** Place the Q-back lateral track nut into the groove of the 125° lateral bracket.

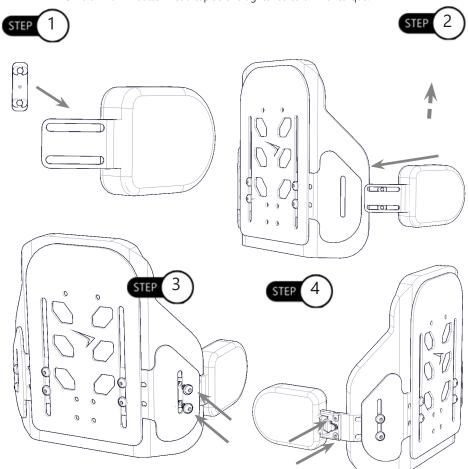
**Step Two:** Slide the 125° lateral bracket between the aluminum and covered foam back.

- The depth that the bracket is placed can be adjusted to change the horizontal placement of the lateral to the appropriate position for the user.

- The vertical alignment of the bracket can be adjusted within the wing's vertical track.

**Step Three:** After having the bracket in the correct position, use the two M6 x 1 x 12mm button head cap screws, each with a 1/4" washer, to secure the bracket in place to 10nM of torque.

**Step Four:** Repeat Steps 1 through 3 to mount each additional lateral. The Swing Away lateral would be mounted in the same manner on the lateral bracket but would also have an additional two M5  $\times$  0.8  $\times$  10mm button head cap screws tightened to 6nM of torque.



## **Installing the Headrest to Back**

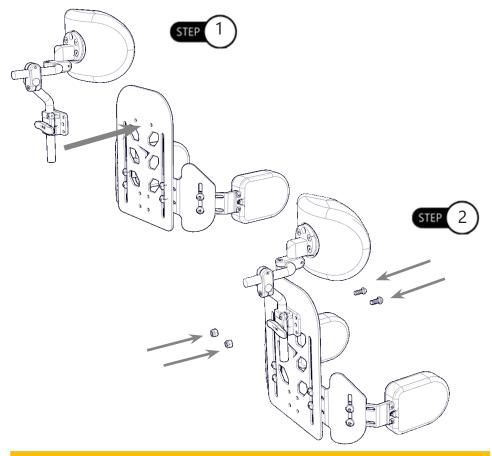
9.7

**Step One:** Align the holes on the seat back mount with the mounting holes of the back.

**Step Two:** Use the M6 x 1 x 16mm button head screws with the M6 x 1 nylon lock nut. Tighten

to 10nM of torque. Ensure the button head screws are installed from the inside of the

back to prevent discomfort to the user.



#### **!** CAUTION

Incorrect installation of the seat back mount can lead to irritation for the user.

#### **!** CAUTION

SPECIFIC INSTRUCTIONS FOR THE INSTALLATION, ADJUSTMENT, AND USE OF THE HEADREST ARE FOUND IN THE SEPARATE HEADREST MANUAL.

#### **Seat-to-Back Mount**

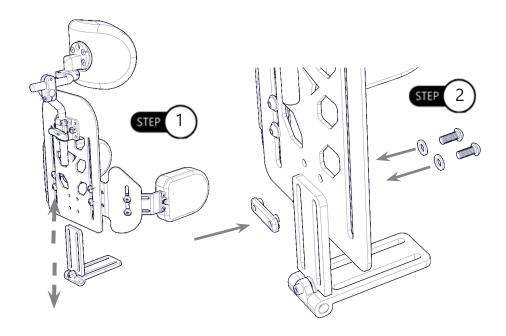
9.8

**Step One:** Align the seat-to-back mount holes with the mounting holes of back.

**Step Two:** Tighten the M6 x 1 x 16mm button head screws, each with a washer, to the lateral

track nut. Tighten to 10nM of torque. Ensure the button head screws are installed from

the inside of the back to prevent discomfort to the user.



# **A** CAUTION

Incorrect installation of the seat-to-back mount can lead to irritation for the user.

# Seat Pan 9.9

**Step One:** Align the seat-to-back mount holes with the mounting holes of the seat pan. Tighten

the M6 x 1 x 16mm button head screws, each with a washer, to the lateral track

nut. Tighten to 10nM of torque.

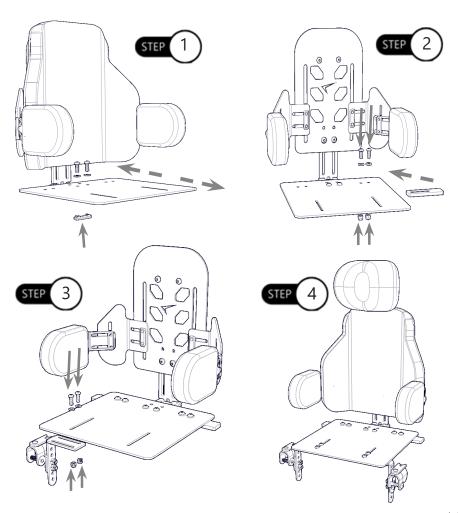
**Step Two:** Tigthen the M6 x 1 x 16mm button head screws, each with a washer, to the spacer by

using M6 lock nuts. Tighten to 10nM of torque. Repeat for the other side.

**Step Three:** Tigthen the M6 x 1 x 16mm button head screws, each with a washer, to the seat mounting

hardware by using M6 lock nuts. Tighten to 10nM of torque.

**Step Four:** Repeat for the other side.

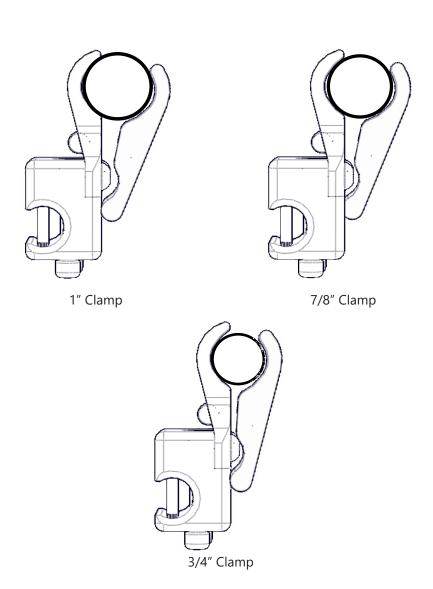


# **Cane Compatibility**

9.10

The **FlipLock** hardware mounts to multiple diameter cane clamps without the use of spacers.

• Hardware is compatible with 1in., 3/4in., and 7/8in. cane diameters.



# **Attaching Clamps to Wheelchair Back Canes**

9.11

**Step One:** Visually determine the desired height of the **Diego** back. Mark on each back cane

the location necessary to attach the clamp assemblies.

**Step Two:** Loosen the M5 x 0.8 x 25mm socket head cap screws (D8) and with two fingers, pinch and

hold the back of the cane clamp to open in order to slide the clamp assembly over the top of the back cane (receiving cane facing inward). Screws do not have to be completely removed

from hardware to slide clamp over the cane.

Step Three: Slightly tighten each M5 screw (D8). Align clamp assembly parallel to the wheelchair seat base.

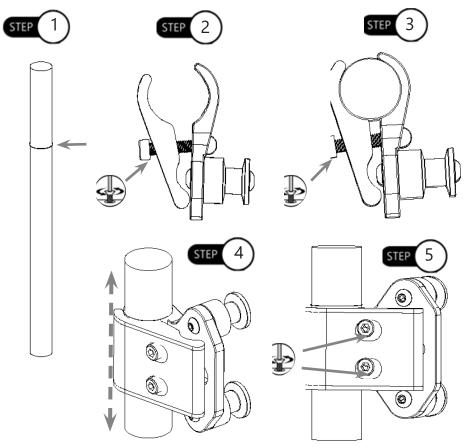
**Step Four:** To achieve proper alignment, slightly move the mounting hardware in or out and/or up

and down. Make adjustments until the backrest smoothly attaches and removes from

the top and bottom receiving canes.

**Step Five:** After final adjustments are complete, tighten all screws (D8) to 12nm of torque. This will

ensure secure placement and safe operation.



#### **WC20 FlipLock Hardware**

10.1

The **Diego System**'s **FlipLock** hardware has met WC20 and ISO16840-4 requirements and provisions.

#### **!** CAUTION

The WC20-approved **FlipLock** hardware and **Diego** back should only be used as detailed in these instructions.

WC20 establishes design/performance requirements and test methods for complete seating systems (i.e., consisting of a seat, back support, and attachment hardware) as they relate to their use as seats in motor vehicles.

Before Transit 10.2

- Clients who use wheelchairs should transfer to the vehicle seat and use the vehicle-installed occupant restraint systems.
- Prior to transporting, always double check the tie-downs and hardware.
- On tie-downs and restraints, look for tears or worn webbing straps. Replace as necessary. *Never* use torn straps.
- · Look for damaged hooks or loose tie-down hardware.
- On the seating system, check for loose screws attaching the hardware to the seat. These should be snug and not over-tightened.
- The FlipLock hardware shold be securely attached to the back, and the transit pins should be peoperly inserted into the hardware.

#### **A** DANGER

The WC20-approved FlipLock hardware and Diego back are designed specifically for occupancy when used on wheelchairs that are facing forward in motor vehicles.

#### A DANGER

The WC20-approved **FlipLock** hardware and **Diego** back have been designed to accommodate the proper use of vehicle-anchored belt restraints and the ratings of the seating systems, with regard to a) ease of properly positioning vehicle-anchored belt restraints on the wheelchair passenger, and b) the degree to which proper positioning of belt restraints can be achieved.

#### **A** DANGER

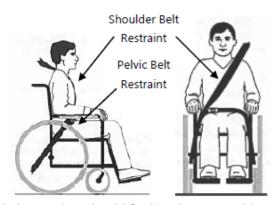
Alterations or substitutions should not be made to the seating system or to its parts and components without consulting the manufacturer.

Belt Placement 10.3

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

- 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.

Proper Positioning of Belts on Occupant



• Upper torso belt restraints should fit directly over, and in contact with, the middle of the shoulder.

#### **!**CAUTION

Belt restraints should be adjusted to fit as snugly as possible, consistent with user comfort.

#### Improper Positioning of Belts on Occupant



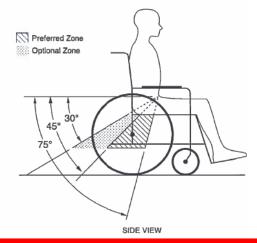
 Belt restraints should not be routed outside of the wheelchair wheels or over the wheelchair arm supports and should not be held away from the body by wheelchair components or parts.

#### **SAFETY**

Belt restraints should not be worn twisted in a manner that reduces the area of contact of the belt webbing with the occupant.

Both pelvic-belt and shoulder-belt restraints that comply with RESNA WC-4:2012, Section 18 and/or 4.6, 5.2, 5.3 or RESNA WC-4:2012, Section 19 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.

The pelvic belt should be angled between 30° and 75° horizontally when viewed from the side, and ideally between 45° and 75° horizontally, as shown in the figure below.



#### **AWARNING**

Back supports with adjustable recline angles should not be tilted back more than 30° to the vertical during travel in vehicles unless necessary for the medical and postural needs of the occupant.

#### **AWARNING**

If the back support must be adjusted to an angle greater than 30° to 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.

#### **Trays**

Wheelchair-mounted rigid trays that are not specifically designed for use during travel in motor vehicles should be:

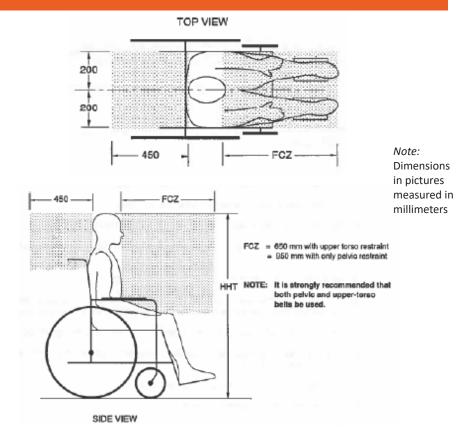
- removed and secured separately in the vehicle; or
- secured to the wheelchair so they will not break free in a crash;
- positioned with a gap of at least 3in. (75mm) between the back edge of the tray and the wheelchair occupant's abdomen and/or chest so as not to interfere with proper belt-restraint use; and
- equipped with energy-absorbing padding between the back edge of the tray and the wheelchair occupant.

User Safety 10.4

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 do not interfere with the proper positioning of crashworthy belt restraints, and they should not be relied upon for occupant protection in crash situations unless the postural belt has been designed to comply with, and perform to, the requirements in 4.6, 5.2, and 5.3 of RESNA WC-4:2012, Section 19.

Sufficient forward and rearward clear space should be provided around the wheelchair occupant.

The forward clear-space zone (FCZ) needs to be larger when a shoulder-belt restraint is not used.



When mounting the WC20-approved **FlipLock** hardware to your **Diego** back, refer to the installation instructions starting on page 4.

Torque specifications for the hardware are listed in the *Installation Instructions* section on page 7.

#### **A**DANGER

The WC20-approved FlipLock hardware and Diego back are designed *only* for use with wheelchair frames that have been successfuly crash-tested to the frontal impact requirements of RESNA WC-4:2012, Section 19

#### **MWARNING**

The WC20-approved **FlipLock** hardware and **Diego** back *must* be used on a wheelchair frame that provides four securement points and pelvic belt anchor points that conform to the requirements of RESNA WC-4:2012, Section 19.

First-Time Use 11.0

Dealer Assistance 11.1

During first-time use by the client, it is advised that the dealer or service technician explain and assist in the configuration of user positioning to the customer (the user and/or the attendant). If needed, the dealer can make final adjustments.

User Testing 11.2

It is important that the customer be fully aware of the installation of the **Diego Seating System**, including how to use it and how it can be adjusted to fit the client comfortably. As a dealer, proceed as follows:

Explain and show the customer how you have executed the installation and explain the function.

Have the user test the position of the seating system.

- Is the hardware in the proper position for the client?
- Can the user safely operate all controls with minimal effort?

If needed, make any adjustments to the positioning. Explain to the customer possible problems and how to address them.

Conditions of Use 11.3

The **Diego Seating System** is intended for use as installed by the dealer, in accordance to the installation instructions in this manual.

- The foreseen conditions of use are communicated by the dealer or service technician to the user and/or attendant during the first-time use.
- If the usage conditions change significantly, please contact your dealer or a qualified service technician to avoid unintended damage.

Maintenance 12.0

Cleaning 12.1

- Use a soft cloth to clean the back shell.
- Ensure all cleaners are approved for finished steel, aluminum, plastic, and upholstered surfaces.
- To wash the cover, remove from the foam and back. Do not get the foam wet.
- Soap and water with a brush can remove dirt and debris in the zipper teeth.

#### To clean the covers of the laterals:

- remove from the foam and back; do not get foam wet; and
- machine wash in cold water on delicate cycle and drip dry.



Do not bleach.

Do not iron.

Do not hand wash in water temperatures above 160°F (70°C). Do not machine dry.

Fabric care instructions can be found on the covers of the cushions and back:

- Remove the pad/cover from the laterals.
- Machine wash in cold water on delicate cycle and drip dry.

#### **A** CAUTION

Take care when removing the back as to not puncture, tear, or otherwise damage the fabric or foam.

#### **↑** CAUTION

Take care when zipping and unzipping the cover as to not catch hair, wires, or anything else which could be caught in the path.

Maintenance 12.0

Disinfecting 12.2

• Wipe gently with a cloth dampened with a household disinfectant.



Do not immerse foam in water.

Maintenance 12.3

The following care and guideline instructions will keep hardware and covers in good condition for a longer period of time and prevent damage:

- Check and re-tighten all fasteners to the proper torque specifications on a regular basis. Reference the installation manual to find proper torque specifications.
- Check pads and covers for any breakdown.
- Repair or replace parts as needed.
- Gently remove dust and dirt from hardware with a soft, damp cloth.

#### **A** CAUTION

Always check all mounting hardware before using the back support, making sure each fastener is properly tightened.

SAFETY

Replace or repair parts as needed.



150lbs (113.40 kg) user weight limit.

#### NOTICE

Improper installation and/or altering a back in any way will void the warranty.

Votes	13.0

Notes	13.0





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