



**Zephyr<sup>TM</sup>**

Patient Positioning  
and Transfer System

**MR Conditional  
Patient Transfer Stretcher ZTG-2 Manual**

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**This manual contains the latest information at the time of publication. Diacor, Inc. reserves the right to revise this manual without notice.**

#### **INTENDED USE**

*The Zephyr MR Patient Transfer Stretcher is intended to be used in tandem with the Zephyr Patient Transfer Hoverboard to easily and safely move patients between the stretcher and imaging tabletop or treatment couch and to transfer patients from room to room.*

*The Zephyr MR Patient Transfer Stretcher is intended for use only by physicians qualified in diagnostic imaging or radiation oncology and experienced in gynecologic or prostate cancer planning or treatment, or by therapists at the specific direction of such qualified physicians.*

**Diacor, Inc. has appointed M. Devices Group/E.C. REP Ltd as our EU Authorized Representative.**



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**Date of Publication: June 23, 2017 ECO 51026**

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***Figure 1.1 Diacor Zephyr MR Patient Transfer Stretcher***



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# SECTION

## INTRODUCTION

# 1

The Diacor Zephyr MR Patient Transfer Stretcher with accessories provides the capability to easily move a patient on the Zephyr Patient Transfer Hoverboard to or from a flat surface or flat table top (FTT). The stretcher also provides the means to move a patient from one location to another.

The Patient Transfer Stretcher consists of a flat aluminum top that is mounted to a conventional patient stretcher. This flat aluminum surface has a bridge extension along each side that folds up to create a bridge between the stretcher and a flat surface such as an MR FTT. The MR Patient Transfer Stretcher is part of a patient transfer system that includes a Patient Transfer Hoverboard.

The Diacor Zephyr MR Patient Transfer Stretcher was tested for compatibility with a 3 Tesla Siemens Magnetom TRIO.

Items were checked to see if they could be used near the bore of the MR Magnet. If there was no magnetic pull, they would then be determined to be acceptable for use with a 3T System.

The Diacor Zephyr MR Patient Transfer Stretcher is MR Conditional for 3T.

Please note that throughout the manual, references are made about how the Diacor Zephyr MR Patient Transfer Stretcher is used with an MR FTT (Flat Table Top). The Zephyr MR Patient Transfer Stretcher can be used with any imaging or treatment FTT.





# SECTION 2

## GENERAL DESCRIPTION

### 2.1 GENERAL

This section contains a brief description of the features and physical characteristics of the Diacor Zephyr MR Patient Transfer Stretcher.

### 2.2 FEATURES

Figure 2.1 shows the Zephyr Transfer Stretcher with pointers to the various features of the device.

#### 2.2.1 Stretcher Top and Bridge Extensions

Along the two long sides of the flat aluminum top are bridge extensions that serve as bridges between the stretcher top and the FTT (flat table top) to or from which a patient on the Hoverboard is transferred. When not in use, the bridge extensions should be locked in a vertical position.

#### 2.2.2 Stretcher Top Bridge Extension

To raise the bridge extensions lift the extension to a horizontal position, spring-loaded supports will come into position to support the extension. Pull the knob, under the extension, at either end of the Zephyr to release the support and lower the extension.

#### 2.2.3 Stretcher Top End Stops

The pull up handles at each end of the stretcher serve as stops to prevent the Zephyr Transfer Hoverboard from being pushed off either end of the stretcher top. To raise simply lift the handle to the up position and it locks in place. Slide the lock, that is located at the hinge area, to the left to lower the end stop.

#### 2.2.4 Air Blower

The blower can be carried on the bottom of the stretcher when it is moved from room to room.



## WARNING

***The cage and blower are not MR safe and must never be brought into the MR suite!***

### 2.2.5 Stretcher Handrails

Handrails are provided on both sides of the stretcher. These rails can be released and moved under the stretcher table top during transfer of a patient to or from the stretcher. Whenever the patient is left on the stretcher or moved, the Handrails should be lifted and locked in place. Lift the yellow lever at the bottom of the assembly to lower the hand rail.

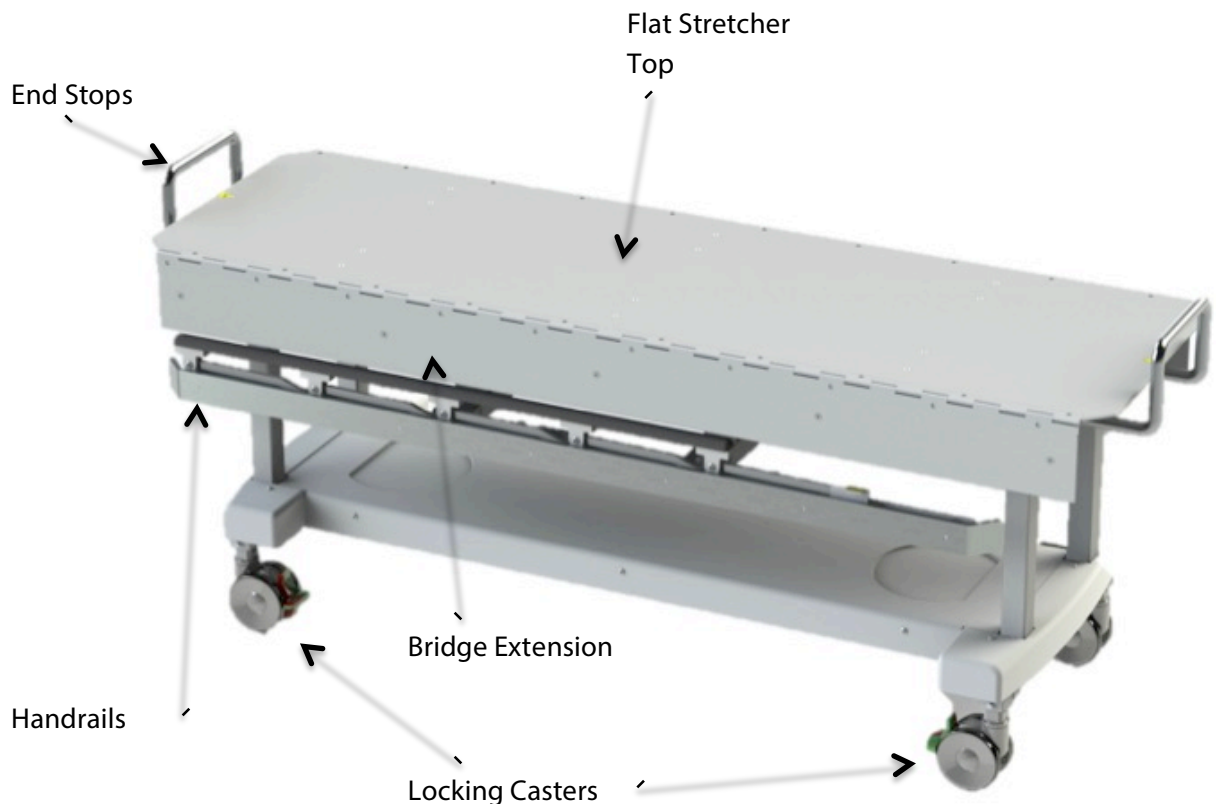
### 2.2.6 Locking Casters

The stretcher provides four independent locking casters. Pushing down on the red tabs locks the caster preventing the stretcher from moving. Pushing down on the green tab will lock the caster so that the wheel will still turn but only parallel with the stretcher. This allows one person to easily move the stretcher around corners. It is critical that the casters are locked whenever the stretcher is stopped and a patient is being moved to or from the stretcher.



## WARNING

***To prevent possible injury to the patient, the stretcher wheel locks must be set before turning the air blower on and whenever a patient is being moved to or from the stretcher.***



**Figure 2.1 Zephyr MR Stretcher Features**

## UNPACKING, INSTALLATION, USE

### 3.1 GENERAL

The Diacor Zephyr MR Transfer Stretcher is designed to be ready for use following removal from its packing container and removal of packing protection restraints.

### 3.2 UNPACKING AND INSPECTION

When the Zephyr MR Transfer Stretcher arrives, inspect all shipping containers for evidence of physical damage. If there are any dents, scratches or other evidence of physical damage to the boxes, contact Diacor, note the damage on the shipper's copy of the bill of lading and file a claim against the shipper.

In the case of shortages or malfunctions, notify Diacor immediately to arrange for replacement or repair, if purchased through a distributor please contact them for assistance. Refer to sections 5.3 for the discussion of replacement or repair of products under warranty. Save all packing containers and materials for the Zephyr MR Transfer Stretcher in the event it needs to be returned to Diacor for replacement or repair.

### 3.3 INSTALLATION

The Zephyr MR Transfer Stretcher requires minimal inspection before it is ready to use. The two bridge extensions should rotate freely on their hinges between the down and horizontal positions. The two stretcher Handrails should lift and lock in place. The stretcher brakes should release and lock the wheels. Check that the end stops lift and lock and lower.

### 3.4 USE

The stretcher is ready to be used upon removal from the shipping container. However, there are two functions that must be accomplished.

First, adjustments to establish the fixed or resting height of the stretcher must be made to match a determined height of the MR FTT. These adjustments must be made before the stretcher is used to transfer a patient on a Hoverboard to another flat surface such as the MR FTT.

Second, prior to use the stretcher should be cleaned, see 4.2.1

### 3.4.1 Set the Stretcher Height

The stretcher is designed for a fixed height. However, a small adjustment in the wheel height may be needed to ensure that when the extension is in the horizontal position it will be flush with the FTT from end to end. Both the head and foot end of the stretcher may be separately adjusted to match the MR FTT height, but usually only one end of the stretcher needs adjustment. To set the stretcher height, move the stretcher next to the MR FTT with the stretcher extension in the horizontal position. Adjust the height of the MR FTT to the height of the extension. At this time one end of the extension may be higher than the other. If this is the case, the lowest end requires a wheel height adjustment. (Figure 3.1 shows the height adjustments on the wheels.) To do this, first remove the two Phillips screws holding the end cover, and remove the cover.

Next, loosen the set screws on each of the two wheels on the lowest end of the stretcher. With a 15/16 wrench, turn the bolt clockwise to raise the height of the stretcher. When both ends of the stretcher extension are flush with the surface of the FTT then tighten the set screws. At another time, if the stretcher is used against the opposite side of the MR FTT or the opposite extension is used, it may be necessary to readjust the height.

### 3.4.2 Use with Hoverboard and Patient

The following steps are suggested to utilize the Zephyr MR Transfer Stretcher with the Zephyr Patient Transfer Hoverboard. These steps assume that the stretcher wheel heights have been set to match the MR FTT. Refer to the User Manual for the Zephyr Patient Transfer Hoverboard for details on its use and operation.

Adjust the Stretcher to Allow a Patient to Sit On or Exit the Hoverboard

1. Position the Hoverboard to the edge of the stretcher.
2. Lock the wheels.
3. With a foot stool, assist the patient onto the Hoverboard.
4. Assist the patient as they sit on the Hoverboard. Adjust patient's position on the Hoverboard and in the stirrups to physician's standards.

Adjust the Stretcher to Move the Stretcher and Patient to the MR Room

1. Raise and lock the stretcher Handrails in the up position.
2. Unlock the stretcher wheels.
3. Move the stretcher with Hoverboard and patient to the MR room entrance.
4. Remove the cage and blower from the stretcher before entering the MR Suite. The cage and blower are not MR safe and must never be brought into the MR suite!



## WARNING

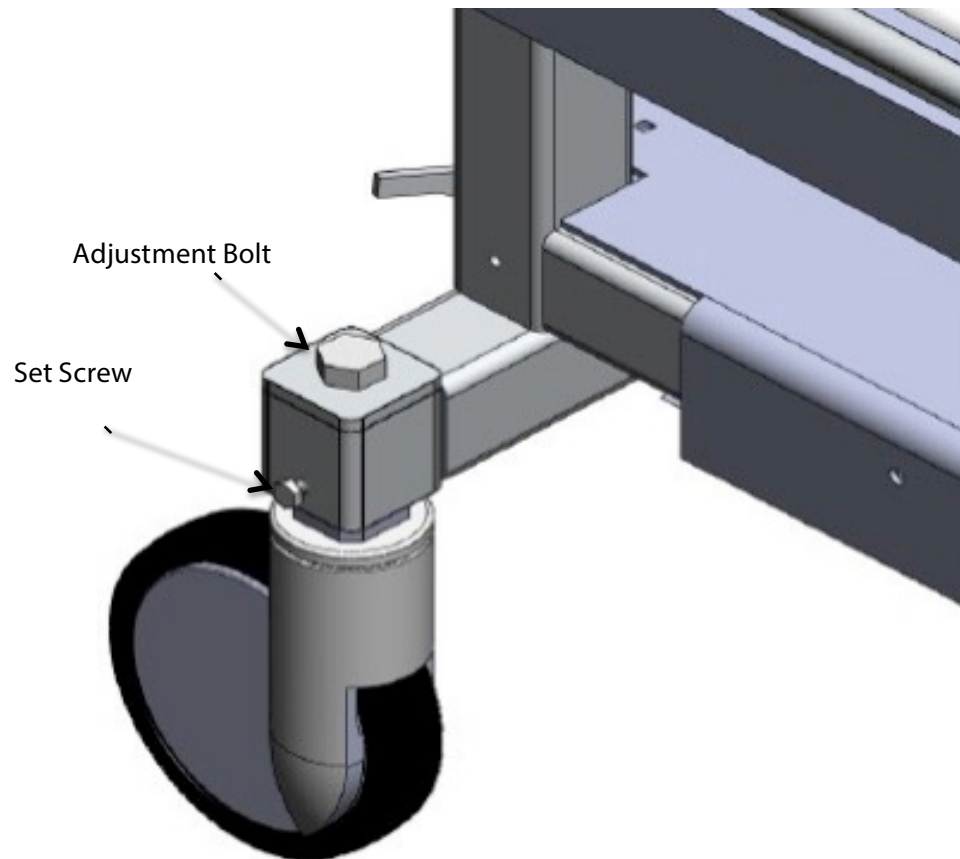
***The cage and blower are not MR safe and must never be brought into the MR Suite.***

Adjust the Stretcher to Allow Hoverboard and Patient Transfer to MR FTT

1. Drop the hand rail and raise the stretcher extension next to the MR table.
2. Adjust the elevation of the MR FTT to be flush with the stretcher bridge extensions.
3. Move the stretcher close to the MR FTT so that there is no gap between the FTT and the stretcher extension.
4. Lock the wheels of the stretcher.

Adjust the Stretcher to Allow Hoverboard and Patient Transfer to MR FTT

1. Drop the hand rail and raise the stretcher extension next to the MR table.
2. Adjust the elevation of the MR FTT to be flush with the stretcher bridge extensions.
3. Move the stretcher close to the MR FTT so that there is no gap between the FTT and the stretcher extension.
4. Lock the wheels of the stretcher.



**Figure 3.1 View of MR Zephyr Height Adjustments**



## WARNING

***To prevent inadvertent movement of the Hoverboard and to ensure patient's safety, two people must always assist in moving the patient whenever the Hoverboard is supported by the air pads.***

Transfer the Hoverboard and Patient to the MR FTT

1. Connect the Air Blower to the Hoverboard and to electrical power.
2. Turn the blower on and with two therapists, slide the Hoverboard on the stretcher to the MR FTT until the Hoverboard is fully supported by the FTT. When transferring the patient it is best to transfer either head first or feet first at a 45 degree angle for best results. Then turn the air blower off.



## WARNING

***The patient and users must keep their fingers above the Hoverboard to prevent pinching when the Air Blower is turned off and the Hoverboard settles to its supporting surface.***

Moving the Hoverboard and Patient on the MR FTT

1. Place the Hoverboard guides in the down position (HDR Hoverboard only)
2. Turn on the Air Blower to move the Hoverboard and patient to other positions on the FTT. Use two people to move the Hoverboard. Turn off the Air Blower when the desired position is reached.

Reverse these steps as the Hoverboard and patient are moved from the MR FTT to the stretcher and the patient is assisted from the Hoverboard.



## WARNING

### **For HDR Hoverboard only**

***Before sliding the Hoverboard from the MR FTT to the stretcher, the four alignment guides must be in the up position. Failure to do so may cause damage to the FTT and may make movement of the Hoverboard difficult.***

# SECTION 4

## SERVICING

### 4.1 GENERAL

The Diacor Zephyr MR Patient Transfer Stretcher requires careful handling and cleaning following each use but generally requires minimal service.

### 4.2 CLEANING

The Zephyr MR Patient Transfer Stretcher and accessories experience noncritical patient contact. It is important to thoroughly clean these parts following each use.

#### 4.2.1 CLEANING METHOD

After each use, wipe the surfaces of the stretcher and the support accessories with wipes containing a mild cleaning and disinfecting solution of 14% alcohol and active quaternary ammonium chlorides or a similar disinfecting solution. (One such solution is offered by Professional Disposables International with a trade name of SANI-CLOTH PLUS). After the cleaning process is complete, let the cleaned surfaces air dry. Do not use water as either a cleaning or rinsing agent. Never use aerosol cleaning sprays, cleaning agents, solvents or abrasive detergents.

### 4.3 PERIODIC MAINTENANCE

Periodic checks of the Zephyr Patient Transfer Stretcher should be done to ensure the wheels have not loosened in the legs. Check to ensure the wheels lock. Repair and replace as necessary.

### 4.4 HANDLING AND STORAGE

Handle the stretcher carefully to prevent damage. Store in a safe place when not used.





# SECTION 5

## WARRANTY

### 5.1 GENERAL

The Zephyr MR Patient Transfer Stretcher and all the associated parts for this system are warranted by Diacor for a period of one (1) year from the date of shipment.

The Diacor warranty coverage is limited to defective materials or workmanship. The warranty is void if the Zephyr MR Patient Transfer Stretcher has been damaged by accident, unreasonable or improper use, neglect, or other causes not arising out of defects in material or workmanship.

### 5.2 WARRANTY DISCLAIMERS

The express warranty provided herein is in lieu of any and all implied warranties arising out of the sale of the Zephyr MR Patient Transfer Stretcher, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. Diacor shall not be liable for loss of use of the Zephyr MR Patient Transfer Stretcher or other incidental or consequential costs, expenses, or damages incurred by the customer or other user.

### 5.3 WARRANTY PERFORMANCE

During the stated warranty period, the Zephyr MR Patient Transfer Stretcher will be repaired or replaced, at the option of Diacor, Inc., with a new or reconditioned Zephyr MR Patient Transfer Stretcher when the unit is returned shipping prepaid to Diacor, Inc., 2550 Decker Lake Blvd., Suite 26, Salt Lake City, Utah 84119. Please contact Diacor, 800-342-2679 or 801-467-0050, for a Return Material Authorization (RMA) prior to sending the defective unit to us. The replacement of a Zephyr MR Patient Transfer Stretcher will not extend the expressed warranty stated herein beyond the original warranty period.





## TECHNICAL INFORMATION

## 6.1 SPECIFICATIONS

<b>Weight</b>	<b>250 lb. 113.6 kg.</b>
<b>Length (with handles up)</b>	<b>83.44 in. 212 cm.</b>
<b>Length (with handles down)</b>	<b>80 in. 203.2 cm.</b>
<b>Width (with Handrails down and extensions down)</b>	<b>24.9 in. 63.2 cm.</b>
<b>Width (with Handrails up)</b>	<b>35 in. 88.9 cm.</b>
<b>Height</b>	<b>32.4 in. 81.3cm</b>
<b>Hand Rail Length</b>	<b>48 in. 121.9 cm.</b>
<b>Wheel Base</b>	<b>24 in. x 66 in. 61 cm. x 167.6 cm.</b>
<b>Caster Size</b>	<b>5 in.diameter 12.7 cm. diameter</b>
<b>Maximum Working Load</b>	<b>600 lb. 272 kg.</b>

The Diacor Zephyr MR Patient Transfer Stretcher is MR Conditional for 3T