

DIACOR®

Zephyr® Patient
Positioning and
Transfer Systems for
Radiation Oncology



DIACOR®

PRECISION COMES STANDARD

With over four decades of history, Diacor has established itself as a frontrunner in introducing innovative solutions to enhance patient care within the medical field. The Zephyr Patient Positioning and Transfer system is our latest innovation, utilizing high-volume, low-pressure air to gently transfer patients between various imaging modalities such as CT and MRI, and radiation therapy treatment environments such as brachytherapy.

Implementing Image-Guided Radiotherapy with Zephyr

The Zephyr Transfer System allows clinicians to easily integrate their existing CT, MRI, or other imaging modalities into their patient workflow to improve treatment accuracy and overall clinical outcomes. Diacor's patented patient hover technology enables a center to implement Image-Guided Brachytherapy (IGBT), Image-Guided Radiotherapy (IGRT), and other adaptive radiotherapy techniques.

Advantages of the Zephyr Transfer System include:

- Integration of high-end imaging modalities such as CT or MRI
- Maximize patient throughput and workflow for high-volume treatment centers
- Improve clinical outcomes and patient care

“Zephyr is brilliant. Efficient, accurate and easy. It has drastically improved our patients workflow, while reducing the lift power for our staff.”

Marina Sala, PhD Director of Medical Physics

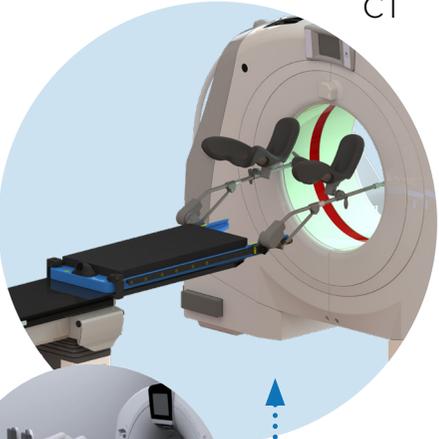
Simplify Patient Transport



Brachytherapy



External Beam (EB) Radiotherapy



CT



MR



Hoverboards

Five different hoverboards were designed to meet the unique clinical requirements of radiation oncology centers:

Image-Guided Brachytherapy Procedures

- Zephyr HDR Lithotomy Hoverboard

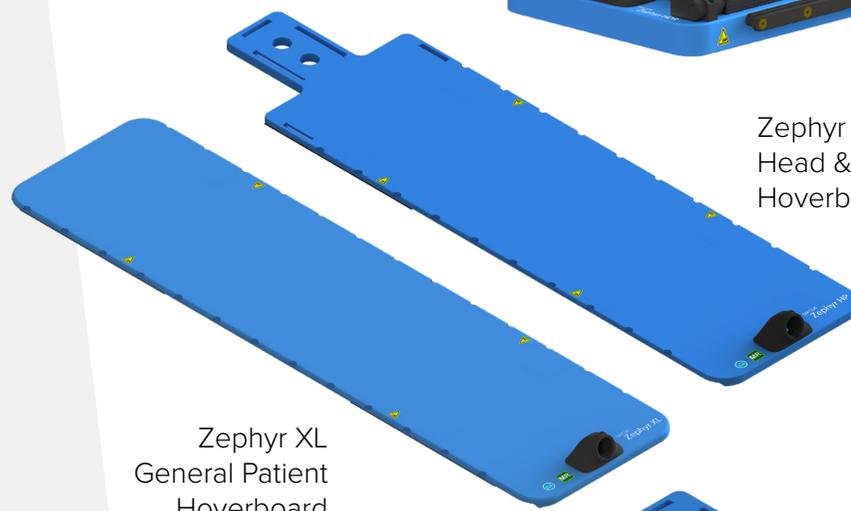
Image-Guided Radiotherapy for External Beam Procedures

- Zephyr XL General Patient Hoverboard
- Zephyr HP Head & Neck Hoverboard
- Zephyr HP Head & Neck Hoverboard designed for Philips MR-RT Systems
- Zephyr HP PRO Proton Head & Neck Hoverboard

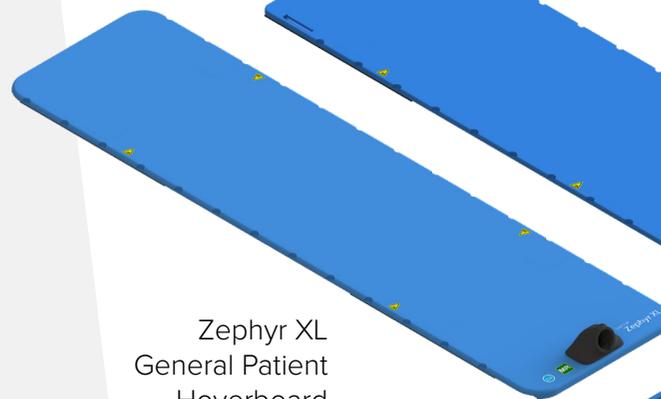
Zephyr HDR
Lithotomy
Hoverboard



Zephyr HP
Head & Neck
Hoverboard

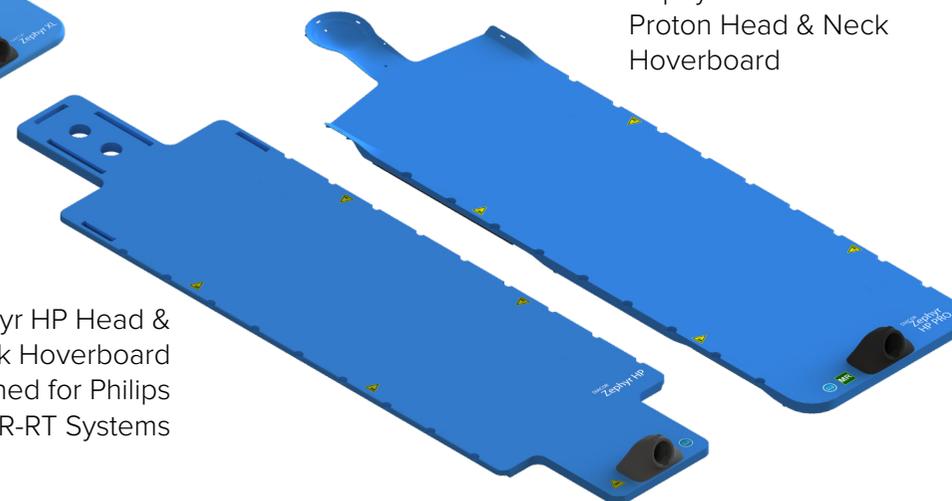


Zephyr XL
General Patient
Hoverboard



Zephyr HP PRO
Proton Head & Neck
Hoverboard

Zephyr HP Head &
Neck Hoverboard
designed for Philips
MR-RT Systems



A wide range of **accessory items** allow customization of the Zephyr systems to meet the unique needs of your department. Our portfolio includes hoverboards, stretchers, blowers, and various accessories. Learn more at diacorinc.com.



Zephyr HDR for IGBT provides hovering capabilities for patients in lithotomy position up to 350 pounds/160 kg



Air blower



Stretcher



Stirrups

Zephyr HDR for Image-Guided Brachytherapy

Ideal for GYN and prostate HDR procedures, the Zephyr HDR system transfers patients while in the lithotomy position from CT, PET/CT, and/or MRI to the HDR treatment room, eliminating the migration of applicators or needles that occur while moving a patient. The Zephyr's patented hover technology assures that what has been imaged and planned is precisely what is treated.

Benefits of the Zephyr HDR Solution

Incorporates IGBT treatment planning for your GYN and prostate procedures

- Delivers a higher dose to the target volume
- Delivers a reduced dose to the surrounding tissue and organs-at-risk
- Reduces the occurrence of side-effects

Improves accuracy of HDR treatment

- Minimizes risk of applicator/needle migration during transfer utilizing hover technology
- Mounting stirrups directly to Zephyr side rails enables the patient to maintain the same position throughout imaging and treatment, reducing the overall procedure time from start to finish
- Provides enhanced access to implant area without repositioning patient

Reduces staff requirements & injuries

- Meets No-Lift Policy standards
- Alleviates physical strain on staff by near effortless lateral and longitudinal movement
- Transfers patient between implant procedure, imaging, and treatment safely with two people
- Enhances patient comfort and safety by hovering instead of lifting

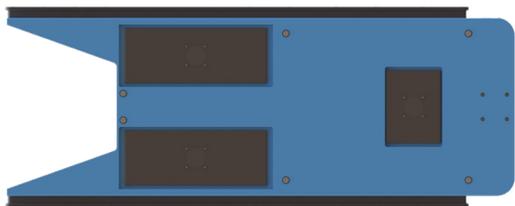
Utilize in CT, PET/CT, and/or MR

- Increases workflow efficiency
- Reduces potential radiation delivery errors by enabling consistent lithotomy position from procedure to imaging
- Allows for comprehensive imaging studies that provide complementary information from different modalities, enhancing diagnostic capabilities

HDR Accessories

A broad selection of accessories allows customization of the Zephyr HDR system to meet the unique needs of your department.

- Universal Clamp Bracket for mounting articulating arm
- Arm board with cushion
- Patient cushions for torso and foot
- Patient safety straps
- Full line of patient stirrups for lithotomy positioning
- Stirrup cart for easy storage of patient stirrups



Three air pads provide hovering capabilities



Arm Board with Cushion



Zephyr HDR Highlights

- The clinician can seamlessly transition from MR or CT imaging to treatment while the patient maintains the lithotomy position
- The world's first full-functioning MR Conditional patient stirrup for lithotomy positioning in MRI
- Unique rail and stirrup placement design provides artifact-free images for superior treatment planning
- Accessory rails along the entire length of the hoverboard allow for attachment of stirrups, arm boards, and patient safety straps
- Universal Clamp Bracket mounts directly to the Zephyr HDR hoverboard and provides ease in adjusting and securing applicators through third-party Universal Clamp providers
- Insertion of needles or applicators can be performed at the inferior end of the Zephyr stretcher, eliminating the need for a separate brachytherapy table



**Learn More about MR
Conditional stirrups
for clinical use in MR-Guided
Brachytherapy**

Zephyr External Beam for Image-Guided Radiotherapy

With the Zephyr EB series, physicians can implement image-guided radiotherapy and adaptive therapy strategies using their existing external beam treatment and imaging equipment. The Zephyr hoverboards enable transfers of immobilized patients from imaging to treatment couch with ease and ensures that sub-millimeter accuracy is maintained. Throughput is increased by immobilizing and aligning the patient in the setup room outside of the treatment suite. Because the patient is imaged and treated in the same position, the risk of translational and/or rotational position changes is minimized.

Benefits of the Zephyr EB Solution

Enables adaptive radiotherapy techniques

- Incorporates MR imaging to enhance visibility of soft tissue differentiation and improves identification of structures
- Lowers rate of acute and late toxicities and organs at risk
- Improves tumor coverage with a more efficient dose delivery

Increases patient throughput without sacrificing treatment accuracy

- Maximizes machine utilization by removing patient setup time from the treatment room
- Maintains patient immobilization and clinical accuracy throughout the patient workflow
- Increases patient comfort and staff safety utilizing patented hover technology

Varian Exact Couch Indexing on the Zephyr EB hoverboards enables the use of your center's current immobilization accessories:

- SBRT related accessories
- Vacuum bags
- Thermoplastic Immobilization devices

Reduces staff requirements & injuries

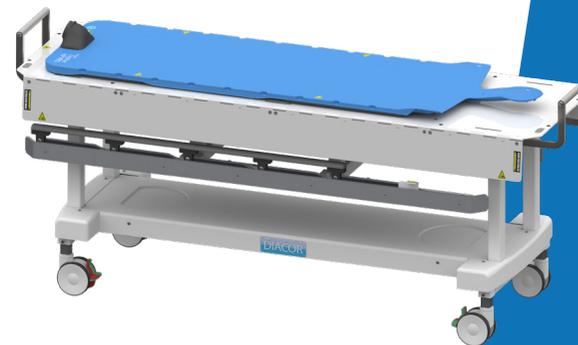
- Meets No-Lift Policy standards
- Transfers patient between implant procedure, imaging, and treatment safely with two people
- Increases patient comfort and safety by hovering rather than lifting

Tailored to meet radiation therapy environment requirements

- Zephyr XL for general patient transfer/treatment
- Zephyr HP for head and neck treatments using industry-standard thermoplastics
- Zephyr HP PRO for use with Orfit's HP PRO® thermoplastic proton solution

Zephyr External Beam Highlights

- Designed specifically for proton/ photon therapy's unique requirements
- Uses industry-standard patient immobilization and positioning devices via Varian's Exact™ Technology
- Minimizes imaging artifacts, as well as treatment attenuation with internal design
- Allows for multi-directional transfers: lateral (side to side) and/or longitudinal (head to foot) with patented hover technology





In addition to our Zephyr® Patient Positioning and Transfer Systems, we offer CT Overlays. All products are manufactured under a registered 13485:2016 quality management system.

Contact Us

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*US Patent No. 8,490,226; 8,640,279; 9,693,921



ISO 13485
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