

VertiChair®

Universal Rotary Chair System



VertiChair® is a universal rotary chair system for the diagnosis and treatment of balance disorders.

Life needs balance!

KM-ENKE
GmbH



ZEHNIT®

VertiChair®

VertiChair® is a universal rotary chair system for the diagnosis and treatment of balance disorders. Its powerful stepper motors permit the rotation of the patient around all spatial axes.

In addition, the seat can be moved out of the vertical axis to perform unilateral centrifugation.

The system can be position and speed controlled. It allows the user to perform all known vestibular procedures and tests, including all standard as well as custom procedures for the diagnosis and treatment of BPPV.

The chair is controlled via VertiPACS®, the integrated software for all ZEHNIT vestibular products.



Diagnosis and treatment of BPPV



Currently, BPPV is diagnosed and treated by means of manual positioning maneuvers. This is physically demanding for the examiner and requires a high level of compliance from the patient. Also, the success of these maneuvers depends heavily on the skill of the person performing them and the physical condition of the subject.

VertiChair® eliminates these drawbacks by enabling the automated diagnosis and treatment of all types of BPPV. With its unique range of motion, the VertiChair® can be moved to any desired position in three-dimensional space.



BPPV Maneuver

BPPV VertiChair® Tests

Predefined and user-created procedures can be performed for effective treatment of BPPV. Program-controlled by the VertiPACS® software and motor-driven, the VertiChair® can be positioned precisely, quickly and without strain on the user.

- » With its unique, high acceleration, the VertiChair® has an excellent success rate, even in otherwise treatment-resistant BPPV.

3D nystagmus analysis

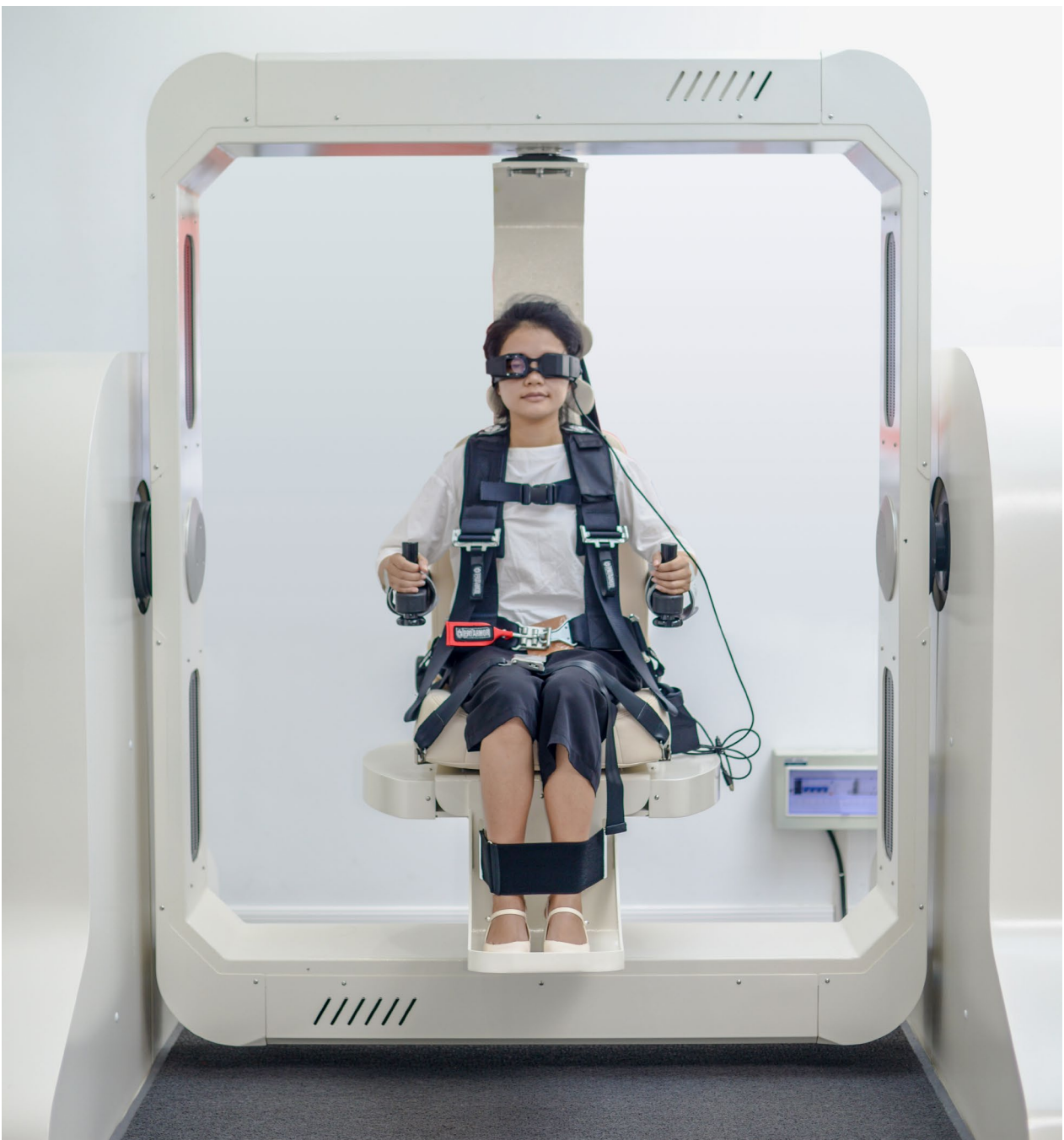
Analysis of torsional eye movements provides additional information for determining BPPV and the effectiveness of the treatment method.



Classical rotary chair tests

Test procedure

- » Impulse Acceleration Test
- » Constant Acceleration Test
- » Sinusoidal Acceleration Test
- » Sinusoidal Harmonic Acceleration Test
- » Visually Enhanced Vestibulo-Ocular Reflex Test (VVOR)
- » Vestibulo-Ocular Reflex Suppression Test (VORS)



Eccentric rotation test

Unilateral centrifugation is the gold standard for utricle diagnostics, as it permits each utricle to be assessed separately.

Test procedure

- » Unilateral Centrifugation (Subjective Visual Vertical)
- » Unilateral Centrifugation (Torsional Eye Movements)



VertiPACS® The integrated software for all ZEHNIT vestibular products

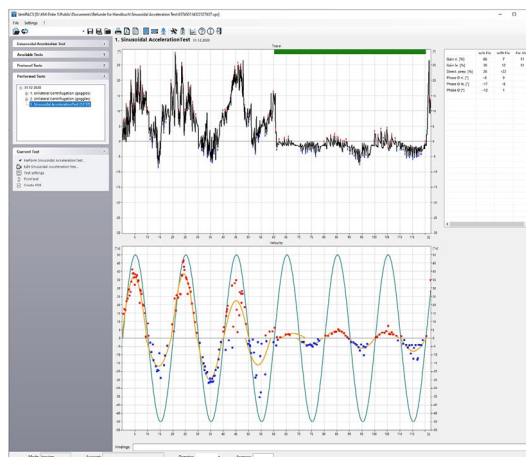
VertiPACS® controls the chair, enables the creation of test procedures, runs the tests, analyses the resulting eye movements and charts the results.

The modular nature of VertiPACS® allows the user to add test procedures and measurement methods.

Optional software modules include:

Calorics, Head Impulse Test,

Oculomotor, Subjective Visual Vertical, Posturography.



VertiGoggles®

VertiGoggles® is a state-of-the-art infrared goggles system for the simultaneous recording of eye and head movements, even in complete darkness.





VertiChair® Vertigo Diagnosis and Treatment System

Standard Configuration:

Diagnosis and Treatment System Rotary Chair **VertiChair®**
 Powerful step engines allow simultaneous movements in the pitch and yaw plane.
 The motor-driven sled can even be moved out of the yaw axis to enable eccentric rotations.
 The system can be position-driven and velocity-driven.

Diagnosis System **VertiGoggles®**
 Weight of under 100 grams, usable for either the left or right eye, camera resolution up to 220 FPS, magnetically held cover, build-in LED, automatic pupil detection.

Software Module I Calorics, Position Test, Positioning Test, Custom Test, Calibration.
 (test procedures that can also be used without the use of the **VertiChair®**)

Optional VertiPACS® Software Modules:

Software module II BPPV Automatic Diagnosis and Treatment Module.

Software module III Impulse Acceleration Test, Constant Acceleration Test, Sinusoidal Acceleration Test, Sinusoidal Harmonic Acceleration Test, Visually Enhanced Vestibulo-Ocular Reflex Test (VVOR), Vestibulo-Ocular Reflex Suppression Test (VORS), Unilateral Centrifugation Test (Torsional Eye Movements).

Software module IV Unilateral Centrifugation (Subjective Visual Vertical)*
 *Additional hardware (**VertiSW®**) required.

Further system requirements:

Minimum computer requirements:
 Computer with CPU 3.5 GHz processor, 8 GB RAM, 1 TB free disk space, Windows 10 Home 64-bit, USB port 2.0/3.0, Bluetooth interface.

A 380 Volt power supply is required to operate the VertiChair® Vertigo Diagnosis and Treatment System.

Specifications are subject to change without notice.

Model: ZT-Chair-I

Note: The total weight of the **VertiChair®** is about 1.100 kg.



ZEHNIT Vertigo Institute

ZEHNIT Vertigo Institute (ZVI) is the first commercially funded venue for vertigo examination skills training in China.

Committed to providing clinicians with more value-added services, it brings more innovative vertigo products and technologies to more medical institutions, promotes the continuous spread and improvement of vertigo expertise, and meets the growing needs of customers in high-quality vertigo diagnosis and treatment.



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VertiPACS®

VertiPACS® is the integrated software platform for all ZEHNIT vestibular products.

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