

Science **made** smarter

VisualEyes™ 525 Orion Rotary Chairs

Rotary chair testing
made versatile

- Orion Auto-Traverse
- Orion Comprehensive
- Orion Reclining

Rotary chair
solutions for
every clinic's
needs

Micromedical
by Interacoustics




Interacoustics

Audiometry

Tympanometry

ABR

OAE

Hearing Aid Fitting

Balance





Rotary chair
testing made
pediatric
friendly

The benefits of rotary chair testing

Many people experience some form of dizziness or imbalance during their lifetime. As there are a wide variety and duration of symptoms, it is extremely important for the balance clinic to have the right assessment tools to meet the needs of the adult and pediatric patients with dizziness.

Comprehensive insight into the vestibular system

Rotary chair testing has the advantage of allowing us to evaluate the vestibular system over a wide range of frequencies. This provides clinicians with a more comprehensive insight into the vestibular system by encompassing physiological stimuli in which normal head movements occur.

The gold standard for bilateral vestibular loss

Rotary chair testing is the gold standard for confirmation of suspected bilateral vestibular hypofunction but can also aid in the diagnosis of unilateral peripheral vestibular loss due to its high sensitivity at 0.01 Hz. With three different chair options, Interacoustics has the right fit for your patient population and needs.

Ideal for vestibular testing in pediatrics

Pediatric assessment of the vestibular system can be challenging, but rotary chair testing is a well established and well tolerated procedure for this population. Interacoustics has taken great care to incorporate pediatric modifications to our rotary chairs to help clinicians effectively evaluate infants and pediatrics with confidence.



Orion Auto-Traverse

Rotary chair with off-axis centripetal acceleration

The Auto-Traverse chair is a state-of-the-art enclosed rotary chair, engineered to deliver precisely controlled stimuli and superior data analysis of the VOR. The innovative Auto-Traverse chair offers maximum acceleration up to 200 deg/sec² and can accommodate for patient weight up to 400 lbs.

A comprehensive test battery

The Auto-Traverse test battery provides the clinician with advanced protocols, which can be customized to meet the needs of a diverse patient population from infants to adults:

- Sinusoidal Harmonic Acceleration (SHA) from 0.01 - 1.28 Hz
- Step Velocity Testing up to 350 deg/sec
- VOR Suppression Test from 0.01 - 1.28 Hz with built-in laser fixation target
- Visual VOR Test, utilizing built-in optokinetic drum to enhance the VOR
- Static and dynamic subjective visual vertical (SVV) tests

Dynamic assessment of eccentric otolith function

The off-axis centripetal acceleration offered with the Auto-Traverse chair provides for advanced dynamic

assessment of eccentric otolith function with the dynamic subjective visual vertical (SVV) test of perceived tilt:

- 300 deg/sec velocity, on or off-axis
- Computer-controlled step motor provides up to ±7 cm lateral movement from center axis
- XY-axis laser-projected line
- Handheld remote control allows the patient to adjust the laser line in 0.1° increments to their perceived vertical
- Customizable protocol - set desired line offset and number of trials
- Completely darkened environment for the most accurate SVV otolith assessment

Full-field optokinetics when combined with VisualEyes™ 525 VNG

When combined with VisualEyes™ 525 VNG, the Auto-Traverse chair offers a true full-field oculomotor experience. Perform full-field optokinetics with the built-in optokinetic drum, along with optokinetic after nystagmus (OKAN), to measure your patient's optokinetic velocity storage. You can perform horizontal and vertical saccades, and smooth pursuit and gaze testing, with the in-booth XY laser projector.

Pediatric add-on package

The pediatric add-on package allows for even more versatility with the Auto-Traverse chair. The package includes a car seat adapter for testing of infants, along with an in-booth observation camera to provide the clinician with the ability to see the infant's eye movements for situations when the goggle cannot be placed on the child's eyes. Additionally, the pediatric package includes a small face goggle with a monocular USB camera that is ideal for tracking eye movements in young children that cannot fit in the traditional binocular goggle.



For those rare occasions when testing cannot be performed with infrared camera recordings with the binocular or monocular goggles, consider the EOG add-on option to add even more flexibility to the Auto-Traverse chair.





Orion Comprehensive

Providing insight into the complexity of the balance system

The Comprehensive chair offers the same state-of-the-art features as the Auto-Traverse chair, but without the off-axis centripetal option.

Accommodating for a wide variety of vestibular assessment needs

The Comprehensive chair has maximum velocity up to 350 deg/sec, maximum acceleration up to 200 deg/sec², and provides the clinician with advanced protocol options and customization. This enables you to utilize this

chair for a wide variety of vestibular assessments:

- Sinusoidal harmonic acceleration (SHA) from 0.01 - 1.28 Hz
- Step velocity testing up to 350 deg/sec
- VOR suppression test from 0.01 - 1.28 Hz with built-in laser fixation target
- Visual VOR Test, utilizing built-in optokinetic drum to enhance the VOR
- Static subjective visual vertical (SVV) tests - for dynamic SVV, see the Auto-Traverse chair

The Comprehensive chair is also ideal for clinics doing extensive pediatric assessments.

Orion Reclining

Combining rotary chair testing with VNG

The Reclining chair is a unique and space-saving solution that is designed with the practitioner in mind. With no booth enclosure, the chair can be reclined to varying positions, allowing the clinician to perform the entire VNG test battery from the rotary chair, with no need to move the patient to another exam table or separate room.

The enclosure is in the goggles

With multiple goggle options available for this chair, you can efficiently obtain a light-tight seal and comfortable fit for your patients. All goggle options utilize USB high-speed infrared cameras with multiple pupil tracking options for the most accurate data analysis.

Limitless possibilities for customization

The Reclining chair utilizes the same VisualEyes™ 525 software application as the other rotary chairs, with limitless possibilities for customization. It can achieve maximum velocity of 200 deg/sec and acceleration up to 200 deg/sec², and accommodates for patients up to 350 lbs.

Test battery

- Sinusoidal harmonic acceleration (SHA) from 0.01 Hz to 0.64 Hz
- Step velocity test up to 200 deg/sec
- VOR suppression test from 0.01 Hz to 0.64 Hz
- Visual VOR using the included large-screen monitor

- All oculomotor tests: gaze, smooth pursuit, saccades, saccadometry and optokinetics
- Positional and Dix-Hallpike tests
- Caloric evaluation

Accurate caloric assessment and supine testing

You can recline the chair to precisely 30 degrees using the built-in angle gauge for accurate caloric assessment and recline the chair to a supine position for positional tests, Dix-Hallpike tests and canalith repositioning maneuvers. The easy-to-remove headrest makes it an ideal solution for Dix-Hallpike evaluation.



Science made smarter

Interacoustics is more than state-of-the-art solutions

Our mission is clear. We want to lead the way in audiology and balance by translating complexity into clarity:

- Challenges made into clear solutions
- Knowledge made practical
- Invisible medical conditions made tangible and treatable

Our advanced technology and sophisticated solutions ease the lives of healthcare professionals.

We will continue to set the standard for an entire industry. Not for the sake of science. But for the sake of enabling professionals to provide excellent treatment for their millions of patients across the globe.

Interacoustics-us.com

Interacoustics USA
10393 West 70th Street
Eden Prairie, MN 55344

T +1 800 947 6334
F +1 952 903 4200

info@interacoustics-us.com
interacoustics-us.com

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Portable Essential &
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Product specifications

All technical and hardware specifications concerning all products can be downloaded from our website.

