HeadStar

The Video Head Impulse Test

Difra instrumentation

- INNOVATIVE TECHNOLOGY FOR **PRECISE FUNCTIONAL ANALYSIS** OF THE SEMICIRCULAR CANALS
- **FLEXIBLY ADAPTABLE AND MODULARLY EXPANDABLE** – PERFECTLY COMPATIBLE WITH DIFRA'S VIDEONYSTAGMOGRAPHY SYSTEMS (VNG CALORIC TESTING, VHIT, OPTOKINETIC STIMULATION, AS WELL AS ROTATIONAL AND PENDULUM TESTS)

HeadStar

The Video Head Impulse Test

The head impulse test according to Halmagyi and Curthoys is now an essential tool in the diagnosis of dizziness and balance disorders, and a standard component of every neuro-oto-logical examination. While the traditional bedside method involves a degree of uncertainty in assessing eye movements, our device enables precise, instrument-based recording of head and eye movements – ensuring reliable, reproducible, and objective analysis.

HEADSTAR – COMFORT MEETS PRECISION

he HeadStar system impresses with an exceptionally lightweight, rotatable mask offering high wearing comfort – ideal for a relaxed examination experience. The weight-optimised, front-mounted USB high-speed camera precisely captures the patient's eye movements and analyses them in real time.

Integrated sensors simultaneously measure head acceleration directly at the camera unit. In addition to the gain value, both overt and covert corrective saccades are reliably detected, recorded, and documented – for comprehensive and precise diagnostics.

FLEXIBLE AND FUTURE-PROOF – THE MODULAR HEADSTAR SYSTEM

The integrated camera can be configured to capture either the left or right eye – offering maximum flexibility in use.

Following software modules selected, HeadStar can be expanded into a full video nystagmography (VNG) system. This enables additional examinations of spontaneous nystagmus, positional and positioning tests, and caloric testing – all with a single device.

All examination results are conveniently captured using user-friendly software and stored centrally in a database – clearly organised, secure, and accessible at any time.

VNG OPTION FOR HEADSTAR – CUTTING-EDGE MOBILE VESTIBULAR DIAGNOSTICS

The VNG extension for the HeadStar system represents the latest generation of mobile vestibular analysis systems from Difra.

It enables precise recording and direct evaluation of eye movements following targeted stimulation of the vestibular organ – in real time and with maximum accuracy.

Thanks to a wide range of optional stimulation modules, the system is ideal for use in private practices as well as for the demands of everyday clinical settings.

CUTTING-EDGE INFRARED TECHNOLOGY FOR CRYSTAL-CLEAR RESULTS

The new USB infrared camera delivers an impressive resolution of ensuring excellent video quality during recording.

In combination with the innovative Disoft II software, the system enables precise tracking and analysis of both horizontal, vertical, torsional eye movements and pupil diameter.

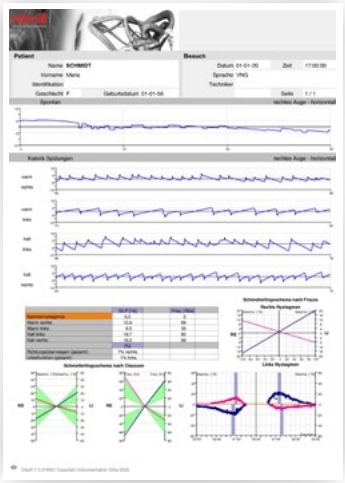
An integrated control window allows live monitoring of the patient's eye – without the need for an additional monitor.

When used with a laptop PC, the system can also be deployed flexibly and portably – ideal for both practice and clinical environments.

INDIVIDUALLY CUSTOMISABLE ANALYSIS – FLEXIBLE AND USER-FRIENDLY

Both the evaluation criteria and preferred display formats can be customised to suit the examiner's specific requirements.

The software reliably performs automatic nystagmus analysis, which can be reviewed and adjusted manually at any time if needed.



FOCUS ON INNOVATION AND TECHNOLOGY

High-end solutions for modern vestibular diagnostics.

In addition to proven systems for caloric stimulation, the manufacturer also offers innovative rotary and swing chairs as well as highly precise visual stimulators. These high-tech components optimally complement the diagnostic portfolio and enable precise, standardised examinations at the cutting edge of technology.

A key advantage: **all auxiliary devices can be conveniently and centrally controlled via a single, user-friendly software platform** – ensuring maximum efficiency and intuitive operation throughout the diagnostic workflow.

Also optionally available: the ***IDEAS III*** ENG system for recording and analysing eye movements using electronystagmography further expands diagnostic capabilities and is ideally suited for specific clinical questions in neurology.

TECHNICAL SPECIFICATIONS

(As of: 12/06/2025)

PC Requirements: (min. specifications)	1 x USB 3.1 Gen 1 or higher Windows PC or notebook meeting the system specifications
Operating System:	Windows 10 Pro Windows 11 Pro
Equipment:	Light-blocking mask with high-resolution USB 3.0 infrared video camera 4.5 m USB cable Autofocus camera pupil centring Database with GDT master data import
Camera weight:	145 g (without cable)
Video resolution:	**Image Sensor** 1600 x 1300 pixels **Preview** 1600 x 1300 pixels at 60 Hz **VNG-Mode** 640 x 480 pixels at 180 Hz **VHIT-Mode** 320 x 240 pixels at 250 Hz
Software Options:	**VNG Basis** Spontaneous nystagmus, Positional and positioning nystagmus, Caloric testing **VHIT Lateral** Lateral semicircular canals with SHIMP function **VHIT All Canals** Lateral canals with SHIMP, All canals (LARP / RALP) **VNG Oculography** Smooth pursuit, Random saccades, Optokinetics **Rotation Testing** Rotational, pendulum & trapezoid tests
Recording Capabilities:	Horizontal, vertical, and torsional (3D) eye movement and pupil diameter

Instrumentation Difra SA
Industriestrasse 33
B-4700 Eupen / BELGIUM

+32 87 89 80 80
www.difra.be
info@difra.be

Presented by:

www.difra.be
LEADING BALANCE DIAGNOSTIC SYSTEMS