



SYNAPSYS VHIT

VIDEO HEAD IMPULSE TEST

DESCRIPTION

Synapsys Video Head Impulse Test (VHIT) allows to test the response of each semi-circular canals separately by performing fast head movements.

Resulting from years of collaboration between Dr Ulmer, Synapsys and research institutes, Synapsys VHIT system is a breakthrough tool for the evaluation of vestibular system.

Differently from all the other video-HIT devices available on the market, Synapsys VHIT does not require the patient to wear any goggles: all the measurements and results are given by the analysis of the head and eyes movements, captured by a remote camera placed at 1 meter from the patient.

Synapsys VHIT is available in 2 scalable software versions:

1. **Screening:** for the analysis of the lateral canals only
2. **Evolution:** for the analysis of all the six canals

TECHNICAL SPECIFICATIONS

- **Camera:**
 - Resolution: 752 px x 480 px (Horizontal x Vertical)
 - Sensor: CCD 1/3"
 - Sensitivity: < 0,005 lux
 - Sampling rate: up to 100 Hz
- **Lighting system:**
 - Infrared lighting
 - Wave length: 830 nm
- **Power supply:**
 - Input: 100-240 VAC, 50-60 Hz, max. 0.9 A
 - Output: 13.2 VDC – 3A
 - Max. Output Power : 40W
 - Insulation class: II
- **Electric device:** Class II
- **Weight:** 6 Kg (without cables)
- **Medical device (Directive 93/42/EEC):** Class I

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- **Standard:** EN 60601-1 / EN 60601-1-2 / IEC 62471-1

SOFTWARE

- **Available exams:**
 - Lateral canals only (for the **Screening** version)
 - Lateral, anterior and posterior canals (for the **Evolution** version)
- **Adjustments:** computer-controlled camera settings on 3 axes (horizontal and vertical alignment of the patient in image and image sharpness), interpupillary distance, acceleration threshold
- **Protocol examination guide:** visual indicators, synthetic voice message
- **Auto detection of head movements** (Manual correction available)
- **Analysis:** VOR (Vestibulo-Ocular Reflex), overt and covert saccades
- **Patient manager:** possibility to store both patient details and test results
- **Available results:**
 - Head and eyes movements: position and velocity
 - VOR gain for each maneuver and mean value for each canal
 - VOR gain as function of the impulse velocity
 - Automatic analysis of overt and covert saccades (apparent gain after cover saccade)
 - Canalogram Ulmer and results table
 - Video recording and playback of each maneuver

MINIMUM SYSTEM REQUIREMENTS

- **Operative system:** Windows 7, Windows 8.1 – 64 bit, Windows 10
- **Processor:** Intel I5-3xxx (3rd generation)
- **Free space on hard disk:** 300 Gb
- **RAM:** 4 Gb
- **Connection:** one free USB 2.0 or 3.0 port

PRODUCT CODES

Code 10738: Synapsys VHIT Screening - SY.VHITIII_SCREENING

Code 10740: Software upgrade from VHIT Screening to VHIT Evolution - SY.VHITII_UP3

Code 10739: Synapsys VHIT Evolution - SY.VHITIII_EVOLUTION

MANUFACTURER

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