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Voxel-Man ENT Full System Virtual Reality Simulator

Item No.	1022080
Weight	60 kg
Dimensions	100 x 70 x 130 cm
MPN:	ENT-full

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SKU:

Categories: Ear, [Nose and Throat Examination](#)
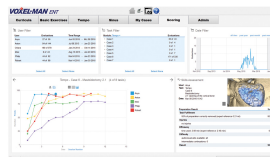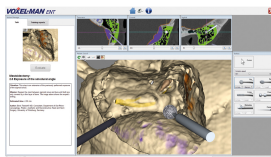
Product Description

Voxel-Man is a complete VR Surgical Simulation System for temporal bone dissection, endoscopic sinus surgery and adding own cases in CT or CBCT format. The system provides a versatile emulation

of a surgical experience: the look, feel and tactile feedback are extremely close to the real intervention.

The VR simulation features both one and two-handed operation of instruments such as metal and diamond burs of different sizes or suction. The system offers predefined tasks, automatic skills assessment, visualization of learning curves, video capture as well as online updates. The trainee will quickly acquire a thorough understanding of the surgical anatomy and approaches, all within a safe learning environment.

Tempo – the temporal bone drilling simulation:

- Pre-defined training cases of middle ear with different anatomy and pathology
- Structures at risk such as facial nerve, tympanic chord, vestibular labyrinth, cochlea, auditory ossicles, carotid artery, sigmoid sinus and dura are highlighted
- Optional support function provides automatic alerts
- Predefined tasks such as exposure of sigmoid sinus, short process of the incus or facial nerve
- Permanent tracking of instrument movements
- Automatic skills assessment provides immediate and objective feedback of performance
- Automatic video capture of session provides additional insights
- Learning curves of individuals and groups help monitor and compare progress over time

My Cases – new simulations based on own data

- Upload own clinical or research data from CT or CBCT to create new specialized training cases
- System provides a bone model ready for drilling within minutes
- 3D anatomy may be further enhanced with structures at risk, identified using an advanced interactive segmentation approach
- Your cases can reach the same functionality as predefined training cases

Sinus – the endoscopic sinus surgery simulation

- Allows for simultaneous handling of endoscope and a surgical instrument
- Provides straight and angular endoscopes and various instruments such as Blakesley forceps or debrider
- Structures at risk such as periorbita, optic nerve, optic chiasm, ethmoidal cells, olfactory bulb and internal carotid artery are highlighted
- Names of important landmarks such as the uncinate process are displayed when the endoscope is aimed at them
- Virtual surgical navigation system provides additional cross-sectional CT images

	ENT Basic System	ENT Full System	Dental Full System

	1022079	1022080	1022081
Hardware	**YES**	**YES**	**YES**
Workstation computer	**YES**	**YES**	**YES**
3D LCD Monitor	**YES**	**YES**	**YES**
Two pairs of 3D glasses	**YES**	**YES**	**YES**
Force feedback device (handle)	1	2	2
Space navigator	**YES**	**YES**	**YES**
Foot pedal	**YES**	**YES**	**YES**
Simulator housing with two arm rests and electrically adjustable height	–	**YES**	**YES**
Software modules			
"Tempo" for temporal bone drilling exercises	**YES**	**YES**	–
"My Cases" for adding new simulations based on own CT or CBCT data	**YES**	**YES**	–
"Sinus" for endoscopic sinus surgery exercises	–	**YES**	–
Two-handed operation with bleeding and suction	–	**YES**	–