



VOXEL-MAN ENT & VOXEL-MAN DENTAL

VIRTUAL REALITY SIMULATORS

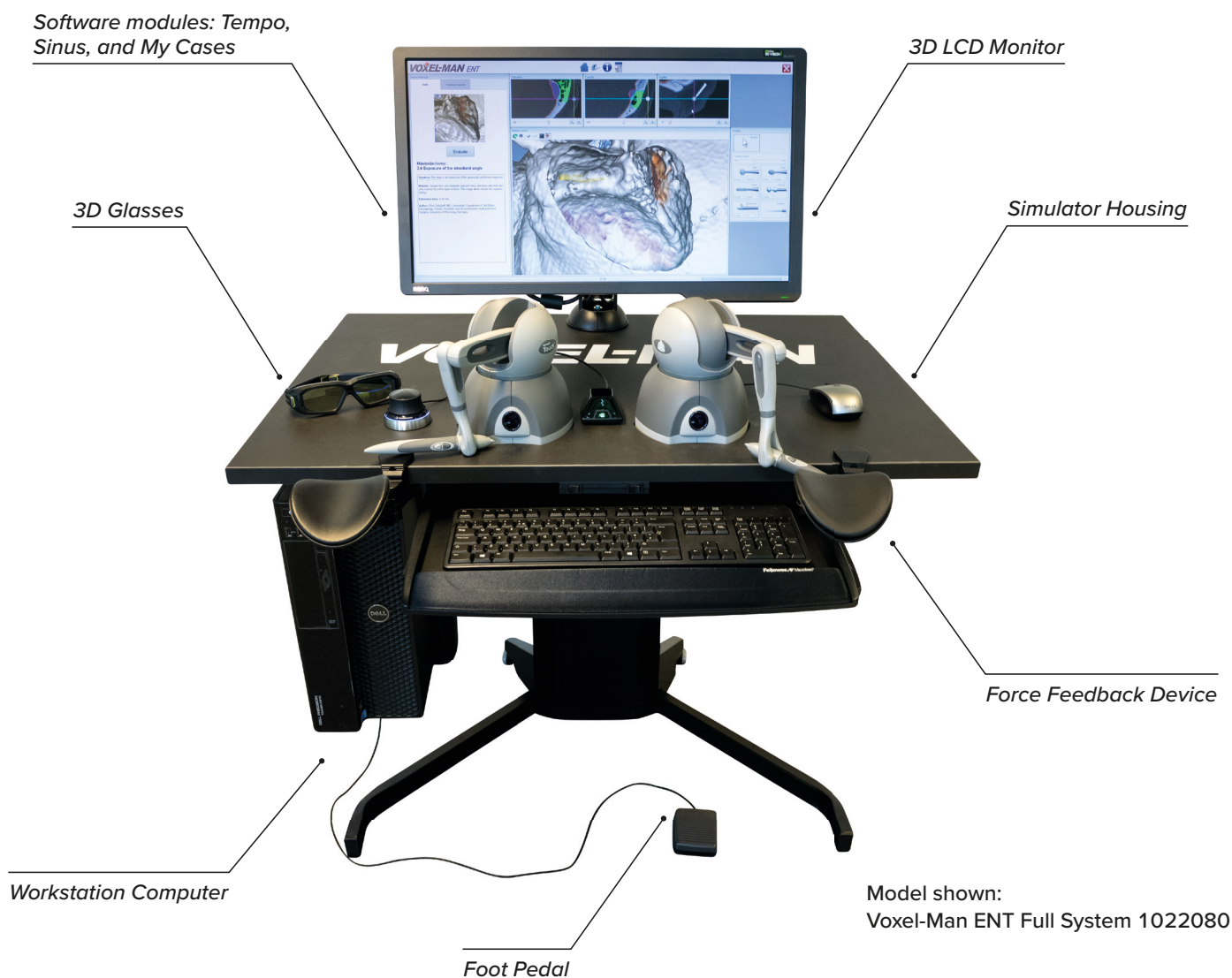
Voxel-Man ENT is a complete VR Surgical Simulation System for temporal bone dissection available either as a **Basic** or as a **Full System**. The Full System allows the simulation of Endoscopic sinus surgery.

Voxel-Man Dental provides a versatile emulation of a surgical experience with its look, feel and tactile feedback extremely close to the real intervention.



ADVANTAGES OF THE VOXEL-MAN VR TRAINING SYSTEMS:

- + Reduced costs for surgical training lab
- + Safe training environment with objective skills assessment
- + Predefined training cases and natural variabilities and pathologies
- + Training of surgical approaches and manual dexterity
- + Authorization of training cases and tasks
- + Independent validation studies



TECHNICAL FEATURES

- Simultaneous handling of drill and suction or endoscope and instrument
- Drilling with realistic force feedback including sound
- 3D display with superior image quality and 3D glasses
- Metal and diamond burs with matching haptics and sound
- Foot pedal
- Surgical navigation
- Visualization of learning curves and video capture
- Online software updates and remote service

AVAILABLE SOFTWARE MODULES:

TEMPO – TEMPORAL BONE DRILLING SIMULATION:

- Training cases of middle ear with different anatomy and pathology
- Structures at risk are highlighted (facial nerve, tympanic chord, vestibular labyrinth, cochlea, auditory ossicles and dura)
- Optional support function provides automatic alerts
- Permanent tracking of instrument movements
- Automatic skills assessment provides immediate and objective feedback of performance
- Automatic video capture of session for 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
- Structures at risk such as periorbita, optic nerve, optic chiasm, ethmoidal cells, olfactory bulb and internal carotid artery are highlighted
- Virtual surgical navigation system provides additional cross-sectional CT images
- Sinus Surgery only available with the Voxel-Man ENT Full system

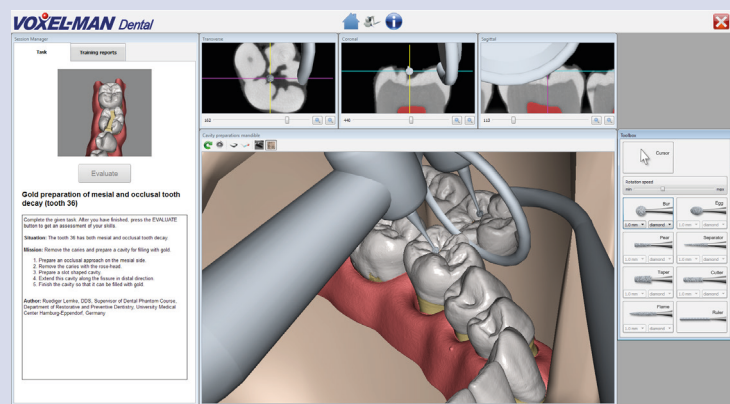
VOXEL-MAN DENTAL

VIRTUAL REALITY TRAINING IN DENTISTRY

The dental VR simulation features teeth and instruments visualized on a 3D screen, both one and two-handed operation of instruments, a database of different pathologies, automatic skills assessment and monitoring of progress.

- High resolution tooth models derived from real teeth by microtomography
- Dental hand piece is represented by force feedback device which can be moved in three dimensions
- Dental models include carious lesions at various locations, such as mesial, occlusal, and distal tooth decay
- Instruments include a selection of high and low speed burs of different shapes which are controlled by a foot pedal, as well as a dental mirror

Voxel-Man Dental Full System 1022081



VIRTUAL REALITY SIMULATION

CHOOSE THE VIRTUAL REALITY TRAINER THAT BEST FITS YOUR REQUIREMENTS

	ENT Basic System	ENT Full System	Dental Full System
Item No.	1022079	1022080	1022081
Hardware			
Workstation computer	✓	✓	✓
3D LCD Monitor	✓	✓	✓
Two pairs of 3D glasses	✓	✓	✓
Force feedback device (handle)	1	2	2
Space navigator	✓	✓	✓
Foot pedal	✓	✓	✓
Simulator housing with two arm rests and electrically adjustable height	–	✓	✓
Software modules			
"Tempo" for temporal bone drilling exercises	✓	✓	–
"My Cases" for adding new simulations based on own CT or CBCT data	✓	✓	–
"Sinus" for endoscopic sinus surgery exercises	–	✓	–
Two-handed operation with bleeding and suction	–	✓	–

Hands-on Anatomy!

All 3B Scientific anatomical models are now 3B SMART ANATOMY models. Customers receive an exclusive high-tech label that enables access to a free warranty upgrade from 3 to 5 years as well access to 3B SMART ANATOMY via the award-winning Complete Anatomy platform.

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3bscientific.com



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