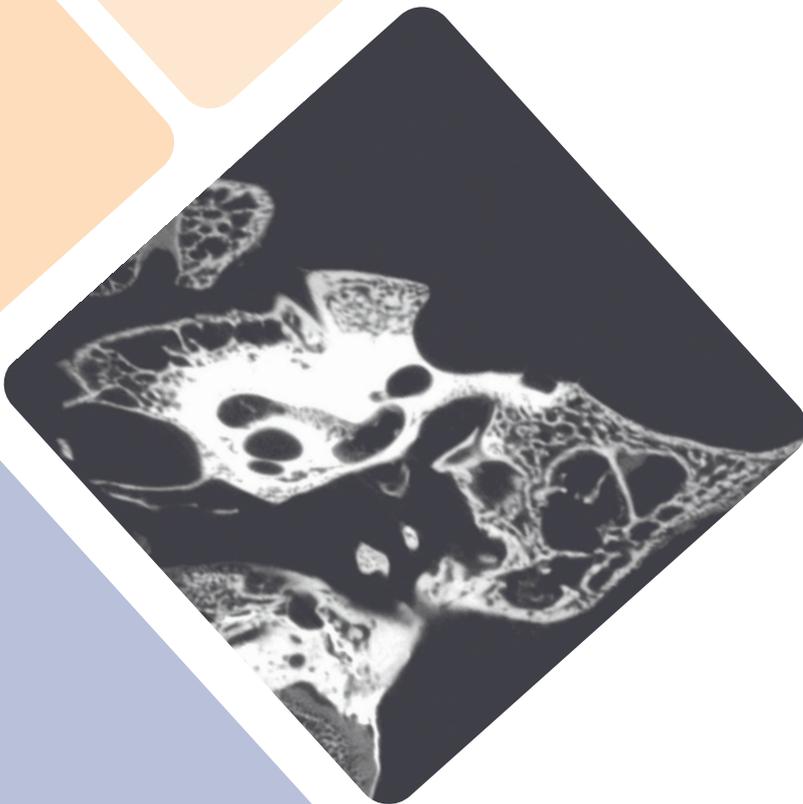


PHACON
PRODUCT CATALOGUE ENT



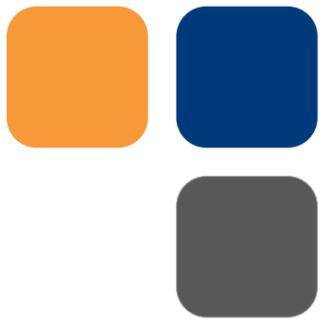
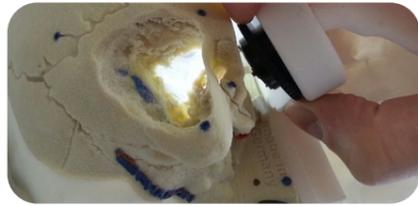


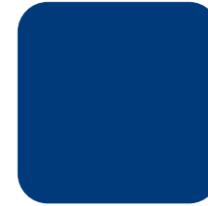
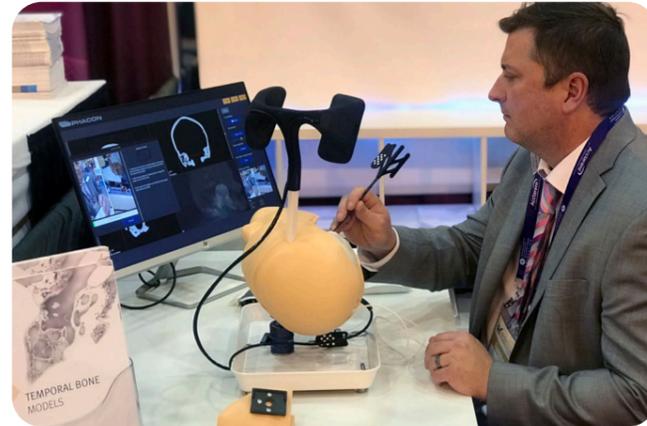
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ADVANCED/ REALISTIC CONDITIONS/ **HYGIENIC**
COST EFFECTIVE/ **SERVICE**/ HIGH QUALITY
REALISTIC MODELS/ FLEXIBLE/ **UNIQUE**
INNOVATIVE/ **CUSTOMER-ORIENTED**/ **EASY**
HIGH TECH/ **EFFICIENT TRAINING**/ MOBILE
SURGICAL DEMONSTRATION/ **CT-BASED**
FAST DEVELOPMENT/ **MADE IN GERMANY**
EASY HANDLING/ **REALISTIC CONTEXT**/ NAVIGATED



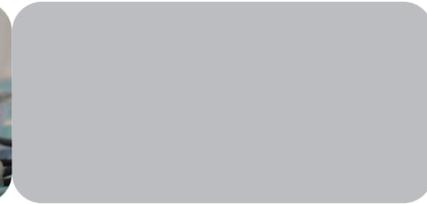
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IMPLANTOLOGY



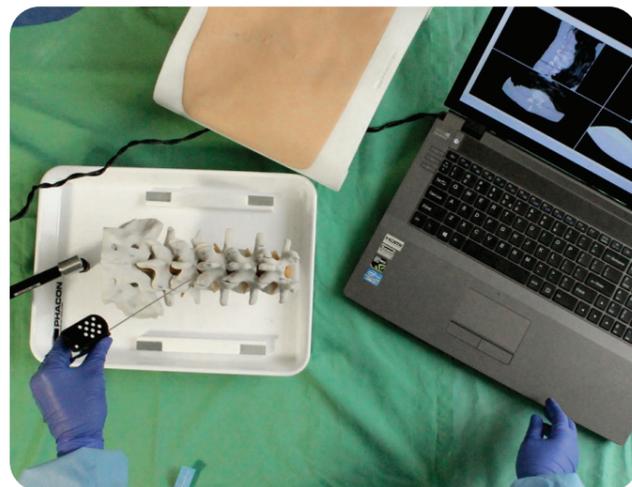
THE PATIENTS FOR YOUR SURGICAL DEMONSTRATION AND EDUCATION



PRE-OP



PHACON THE CONCEPT



THE PATIENTS FOR YOUR SURGICAL DEMONSTRATION AND EDUCATION

The PHACON offers a variety of products for your surgical training as well as your marketing presentation. The PHACON products are used worldwide as a supplement and alternative to human preparations.

We distinguish between 3 PHACON solutions for ENT, Neuro, Spine and Vascular.

The PHACON Patients are anatomically detailed patients models, that reflect the most diverse human tissue properties. The surgeon thus receives a haptic feedback that is comparable to the human patient - for a realistic surgical experience. We offer numerous patient models with different anatomies, pathologies, levels of detail and different age groups.

The PHACON Assistant provide you a simple click-in system for our PHACON Patients. The inserted PHACON Patient can be replaced by another model with e.g. other anatomy at any time.

The PHACON Trainer combines the advantages of a surgical training on an anatomical model with the possibilities of virtual assistance. The surgery on the artificial specimen is supported by a related navigation system and integrated sensor technology.

PHACON furthermore developed a special method which significantly improves your surgical preparation. Based on your medical image data (CT, MR, DVT, 3D-ultrasound) we produce patient individual 3D models. Surgeons as well as patients receive additional information by this preoperative planning of complex interventions.

Besides the continuous improvement of our existing products PHACON constantly develops new models and trainers for additional medical disciplines.



Scan this QR-Code and visit our shop to get even more information.



Visit our Youtube channel to see instruction and possible use of our products.

PHACON BUSINESS & EDUCATION



BUSINESS

Anatomies based on CT-data, realistic hard- and soft tissue imitation as well as all important landmarks – the PHACON Models are an advanced and professional marketing tool to demonstrate the function and details of your devices and instruments.

You can use the PHACON Models to present your medical instrument at congresses but also to train your consuments or your staff. Indicate the function and the features of your instruments in a realistic context. Explain the important details of your devices function by using them on the anatomical model.

Various anatomies and pathologies offered by PHACON are suitable for a wide range of devices. Use the PHACON Models without the necessity of special precautions or safety clothing.

Together we find the right solution for your perfect presentation at congresses and exhibitions.

EDUCATION

You can use PHACON Models for your surgical courses. Thanks to realistic imitation our model based on CT-data our PHACON Models are perfect for your surgical training.

The PHACON Models guarantee high quality and are available and deliverable anytime. Bone-like, mineral material with realistic soft tissue offer a true to life haptic during work with your instruments. With the PHACON Navigator integrated in the PHACON Trainer, you navigate your instruments inside the CT-data and inside a virtual 3D model of your patient. This helps especially by training and preparing for complicated cases and anatomies.

PHACON Trainers are equipped with a special sensor technology. In case of risk of injuring structures, you are warned with an optical and acoustical signal. Our various anatomies and pathologies provide you the possibility of thematic courses. We are pleased to help you to choose the most suitable PHACON Model and Trainer for your perfect course setup.

3D PRINTING AND HANDMADE ///
/// INDIVIDUAL /// HIGH-TECH ///



The PHACON Models are manufactured in Germany with the use of advanced detailed 3D printing as well as with high-level craftsmanship.

The basis of our models are CT- or MRT-data. To create realistic models, comparable to the human patient, at first we segment the image data and convert the necessary parts into 3D objects. They are further processed until they are detailed and clean printable parts.

It can be a long process, as often for one model they are needed many single parts, that need to be prepared. E.g. one PHACON Temporal Bone Model consists of seven to eight different printed components. In addition to that, almost all of the models include a lot of different materials to represent all anatomical structures.

After printing the components, all of the parts need to be cleaned very carefully per hand, because of their fragility. The next step is the coating process to harden the printed mineral materials. The PHACON developed a special solution to ensure that our models have the same density and structure as the real bones.

At PHACON we combine many different materials and procedures to produce the right haptic of different anatomical structures as skin, fat tissue, different bony structures, muscle, cartilage, nerves, vessels etc.

The PHACON Temporal Bone Models are assembled by hand and when they are ready, parts like the labyrinth block, vessels and nerves are carefully added by hand. The PHACON Temporal Bone Models are assembled by hand, one compartment after another. At the end, the model is covered with Dura, also by hand.

To ensure the accuracy and quality of our products, all parts as well as the final PHACON Models are carefully inspected. All of the details of the anatomical structures and their position are very important, so we manufacture the part with an accuracy up to 16 microns.



Every material, used for the production of PHACON products, is non-hazardous and can be disposed in the regular household waste.

All of the parts of every PHACON Model are designed and manufactured in-house in Germany. Some of our models used in the PHACON Trainers include sensor technology and electronic interfaces that are all designed and manufactured in-house.

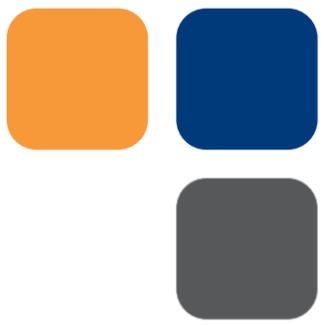
The PHACON Navigation-Software is also developed in-house by our software engineers. It is constantly optimized and advanced. Updates, extensions and technical upgrades are always available online. If you purchased the software once for one PHACON Trainer, you can also use it for all other PHACON Trainers.



If you need any additional information or would like to request a quote, please contact us:



Phone: +49 341 24 19 210
Mail: sale@phacon.de



PHACON TEMPORAL BONE

PRODUCT OVERVIEW

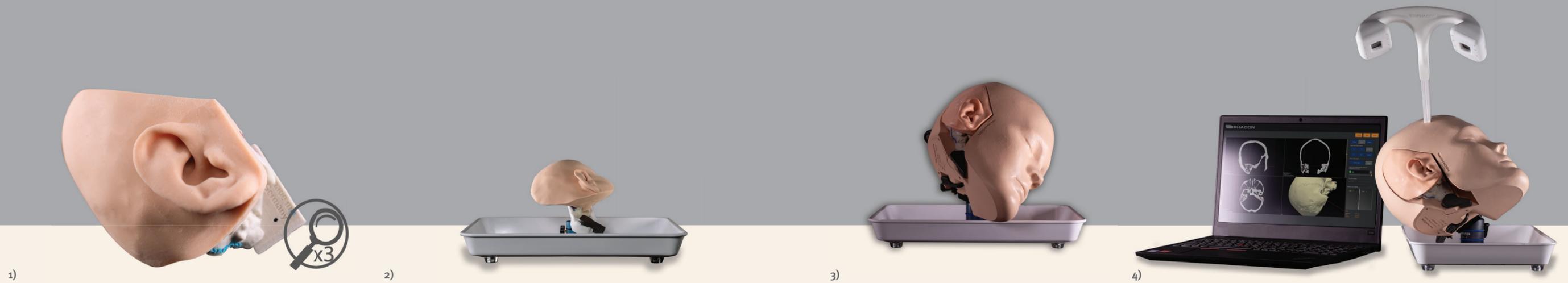
PHACON provides a variety of different products and options to perfectly fit your individual needs. Depending on your course set up or congress booth presentation together we choose the right product package for you.

1) PHACON Temporal Bone Patients are intended for use together with the PHACON Temporal Bone Trainer or Assistant as well as with the PHACON Temporal Bone Holder Tray. PHACON offers variety of patients, with different anatomies and for various surgical procedures

2) PHACON Temporal Bone Holder Tray provides you a stable fixation of your PHACON Temporal Bone Patient. The patient is placed safely and can be adjusted in any direction for a comfortable working position. It is also easy to take it apart and clean after usage.

3) PHACON Temporal Bone Assistant consists of a PHACON Temporal Bone Holder Tray and a skull, where the PHACON Temporal Bone Patient should be placed. This set up provides you more realistic feeling of work on a skull. The skull can be installed bilateral, this way you can use the PHACON Temporal Bone Patient on both sides. It is also very easy to adjust the position of the skull for the perfect work conditions. (This version can not be connected to the laptop with PHACON Software).

4) PHACON Temporal Bone Trainer, the most advanced Trainer includes the anatomical and technical part. It combines hands on training on the PHACON Temporal Bone Patient with the guidance of an optical navigation. This advanced set up is a perfect tool for your surgical training courses. Train your surgical intervention and besides learn how to navigate your tools inside the CT-images and inside the matching 3D rendered anatomical model.



1) PHACON Temporal Bone Patient ///

The PHACON Temporal Bone Patient "Schmidt", "Kohl", "Schneider", "Winkler", "Klein" and "Wagner" provide you the opportunity of the training of different surgeries on various anatomies - from 1 year old to 55 years old patient.

You find more information about all PHACON Temporal Bone Patients on page 26.

2) PHACON Temporal Bone Holder Tray ///

Art-No.: S-00030

The PHACON Temporal Bone Holder Tray can be used with all PHACON Temporal Bone Patients. Rotate and adjust your PHACON Temporal Bone Patient with the twistable joint head.

Included: 1 PHACON Holder Tray, 1 transport case

3) PHACON Temporal Bone Assistant -bilateral ///

Art-No.: S-00022

The PHACON Temporal Bone Assistant consists of skull for placing the PHACON Temporal Bone Patient and PHACON Temporal Bone Holder Tray. That makes it perfect set up for a convenient training session. On the page 16 you find further details about the PHACON Temporal Bone Assistant.

4) PHACON Temporal Bone Trainer-bilateral ///

Art-No.: S-00024

The PHACON Temporal Bone Trainer includes the anatomical and technical part of the trainer. It is the most advanced solution providing you best possible set up for your surgical training. Anatomically detailed PHACON Temporal Bone Patient placed in the realistic looking skull together with high-tech navigation software gives you the haptic feeling

of the real surgery. More information about PHACON Temporal Bone Trainer, you find on the 14.

Included: 1 anatomical part, 1 technical part, 1 holder tray, 1 PHACON Temporal Bone Patient (TF-bah), 1 instrument tracker set, 1 tracking camera, 1 transport case

If you have doubts, which product is best for you or would like to request a quote do not hesitate and contact us - together we find a perfect solution!

Phone: +49 341 24 19 210 / Mail: sale@phacon.de



PHACON TEMPORAL BONE TRAINER - BILATERAL

/// Art-No.: S-00024/S-00025

The **PHACON Temporal Bone Trainer** offers the possibility of a complex training of the middle ear and inner ear surgeries. Anatomically detailed model together with the PHACON Software ensure the unique experience - as close to the real surgery as possible.

With PHACON Temporal Bone Trainer you can use your own instruments to learn the surgical techniques. At the same time, thanks to our advanced software, you practice orientation within the related patient CT-data. During the session, injuries of structures are automatically detected and communicated by the software. 3D model, endoscopic or CT- view, possibility of adjusting the layers and opacity of the anatomical structures - these are only a few options provided by the PHACON Software that ensure the perfect conditions for your surgical training. PHACON Software, as well as all of our products, are constantly optimized, developed and extended with new function. New updates and always actual information to our software you can find on our website.

The root of our PHACON Temporal Bone Trainer is the PHACON Temporal Bone Patient. PHACON Patients are 3D printed models, finished by hand with reflection of even smallest details. Available with different characteristics, the PHACON Temporal Bone Patient can be replaced after your training. This way, our PHACON Temporal Bone Trainer is a cost-effective and long-term solution for your practice.

One of the advantages of the PHACON Temporal Bone Trainer is the possibility of the bilateral use so you can train on the both sides of the skull. The position of the skull is also easy adjustable to ensure the optimal work conditions.

This Trainer is also available as **PHACON Temporal Bone Trainer with Transparent Cochlea**. It is intended to train the insertion of an electrode into the scala tympani. Thanks to the camera in the middle ear you have possibility to watch the electrode curve inside the cochlea in real time, while inserting.

Not only the whole Trainer but also the single parts of the PHACON Temporal Bone Trainer - holder tray with the skull as well as laptop with navigation software and trackers - can be reordered at PHACON any time.

The PHACON Temporal Bone Trainer can facilitate the organisation of your training course with the following advantages:

- The PHACON Temporal Bone Trainer allows training independent from location or available equipment, because there are no complex handling, storing or special rooms necessary to work with the artificial specimen
- The PHACON Software offers unique support during your training making it realistic and effective
- The PHACON Temporal Bone Trainer helps instructors reduce the time needed for the training as they get virtual assistance in the software
- The included CT-data set enables the live navigation within the related model
- Automatic analysis and learning curves help to evaluate the training objectively
- Exchangeable PHACON Temporal Bone Patients are always available and can be reordered at PHACON any time.
- Used PHACON Temporal Bone Patients can help to analyse the passed training sessions
- Nonhazardous residues are safe to use and easy to clean

On the page 12, you find a list of the all components of the PHACON Temporal Bone Trainer.



ORDER YOUR
PHACON TEMPORAL BONE TRAINER:



ORDER YOUR
PHACON TEMPORAL BONE TRAINER
WITH TRANSPARENT COCHLEA:





PHACON TEMPORAL BONE ASSISTANT - BILATERAL

/// Art-No.: S-00022/ S-00022-EM

The **PHACON Temporal Bone Assistant - bilateral** provides you a basic set up for your surgical training or your marketing presentation. It consist of the PHACON Temporal Bone Holder Tray and the skull, where the PHACON Temporal Bone Patients is to be placed.

This combination offers you optimal conditions for your training. With a 360 degree rotating joint, skull can be easy adjusted and placed exactly where you need. Every skull has a simple click-in system, where you assemble the PHACON Temporal Bone Patient. The PHACON Temporal Bone Assistant is compatible with every PHACON Temporal Bone Patient, that can be effortlessly exchanged after the training with a new one. This way you can practice various surgeries on patients with different anatomies and you only need one assistant. This solution is cost-effective and convenient. As well as the PHACON Temporal Bone Trainer, PHACON Temporal Bone Assistant can also be used bilateral - just choose a side you need.

This Assistant is also available as **PHACON Temporal Bone Assistant for electromagnetic navigation**. This version is characterized by lack of mental parts so it is possible to use it with electromagnetic navigation.

The PHACON Temporal Bone Assistant is perfect choice when:

- You need simple set up for marketing presentations of your tools or instruments
- You wish reusable artificial specimen for your surgical training
- You want to work on a realistic specimen, to make your training better
- You do not need advanced virtual assistance of the software



your holder tray with skull

your patient

On the page 12, you find a list of the all components of the PHACON Temporal Bone Assistant.

ORDER YOUR
PHACON TEMPORAL BONE ASSISTANT:



ORDER YOUR
PHACON TEMPORAL BONE ASSISTANT
FOR ELECTROMAGNETIC NAVIGATION:



PHACON TEMPORAL BONE PATIENTS

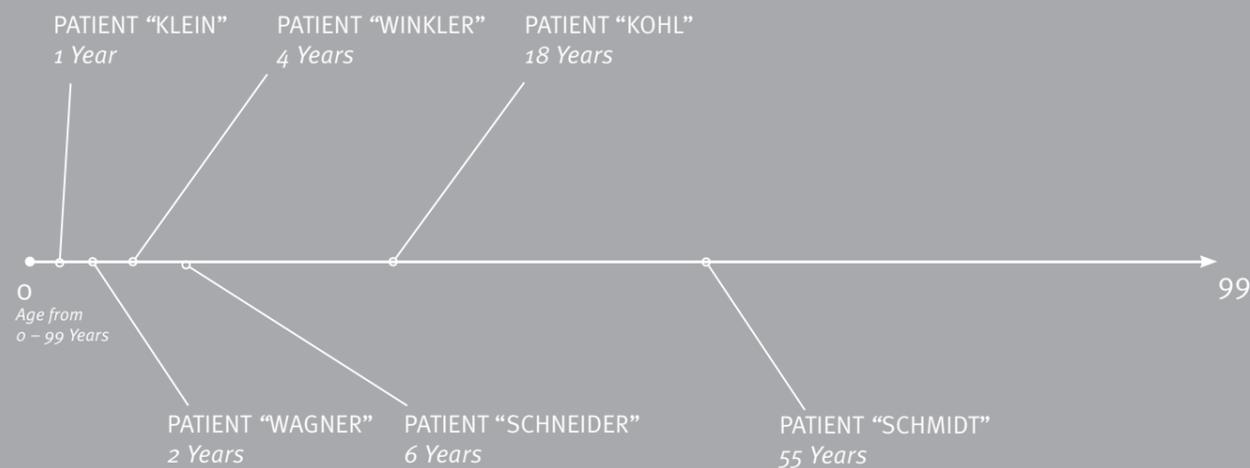
The PHACON Temporal Bone Patients are artificial specimens to practice different surgeries on the temporal bone, for instance a cochleostomy. They are removed after the training session and can be replaced by a new model. This concept makes your course or presentation cost-effective, as you only need to exchange the PHACON Temporal Bone Patient without necessity of replacing the PHACON Temporal Bone Trainer or Assistant with a new model. To make your practice even more efficient, some of the models include electronic parts, that together with PHACON Software provide you the possibility of the navigation of your instruments in real time. Injuries of the structure will be automatically detected and communicated. Overview of all the PHACON Temporal Bone Patients you can find on page 26 together with all details about the possible applications or included structures and landmarks. The PHACON Temporal Bone Patients can be reordered at PHACON any time.

THE ARTIFICIAL PATIENT

PHACON offers artificial patients for all training levels and surgeries, all suitable for the PHACON Temporal Bone Trainer. PHACON artificial specimens are based on real patient CT-data. All of the models reflect the most diverse human tissue properties (such as bones, cartilage, muscles, skin and nerves), which we handcraft to the smallest detail using a variety of materials.

- Various anatomies of adults and children.
- Both right and left temporal bone
- Various pathologies as atresia and hypoplasia of the cochlea.
- Realistic anatomical structures like the flexible tympanic membrane, moveable ossicles, the round window membrane, chorda tympani and an insertable scala tympani are integrated.

THE DIFFERENT AGES OF THE PHACON TEMPORAL BONE PATIENTS



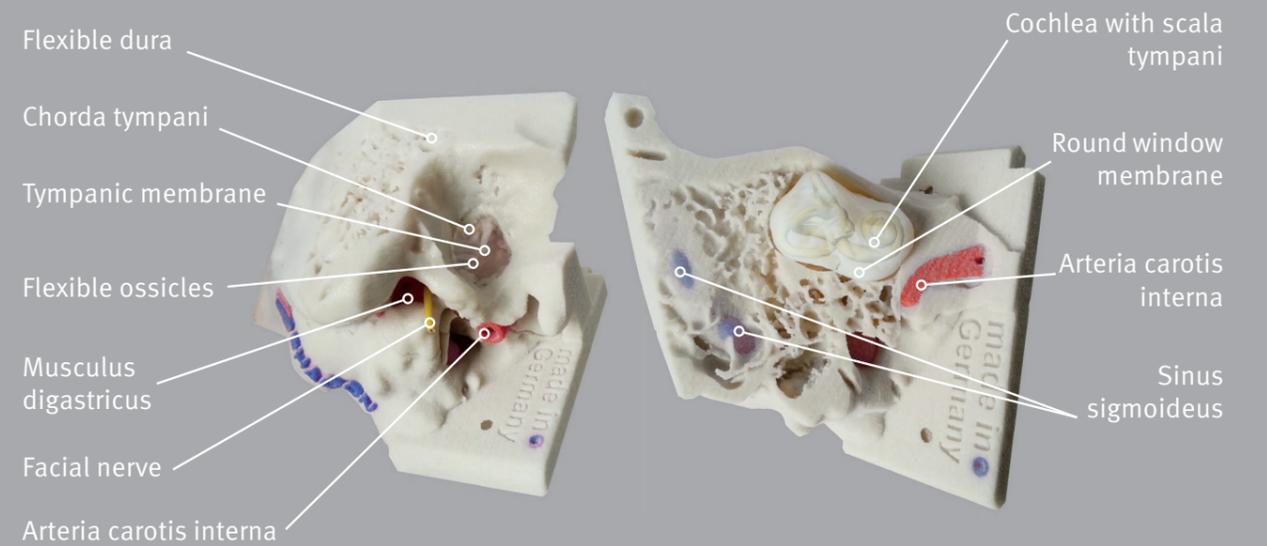
PHACON TEMPORAL BONE PATIENTS ARE USED FOR

Demonstration of your tools, instruments and strategies and for the following surgeries:

- Mastoidectomy
- Cochleostomy
- Insertion of an electrode into the scala tympani
- Preparing implant beds for bone conduction implants
- Placing middle ear implant systems to the ossicles
- Tympanotomy
- and much more...



IMPORTANT STRUCTURES AND LANDMARKS OF VARIABLE SOFT AND HARD MATERIALS



ORDER YOUR PHACON TEMPORAL BONE PATIENT:





PATIENT "SCHMIDT"

PATIENT

PHACON Temporal Bone Patient "Schmidt"

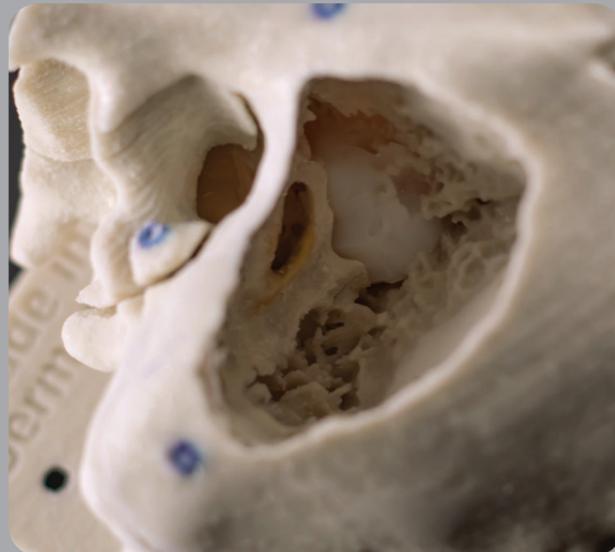
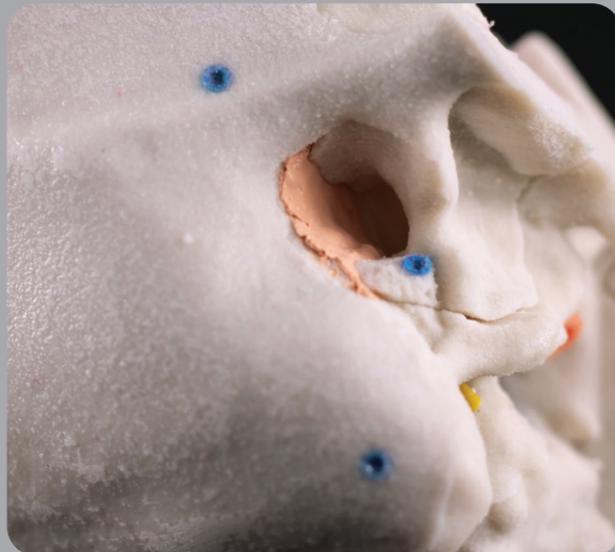
Type Temporal Bone

PATIENT CHARACTERISTICS

Age	55 Years
Side	left or right side
Anatomy	normal

The PHACON Temporal Bone Patient "Schmidt" is an anatomically highly detailed artificial specimen. He represents a 55-year-old patient with anatomy without any pathologies. There is also a special variant of the Patient "Schmidt" for practicing cochleostomy, with an implemented complex cochlea for inserting electrodes into the scala tympani.

Like every patient, also PHACON Temporal Bone Patient "Schmidt" is compatible with PHACON Temporal Bone Trainer, Assistant as well as Holder Tray. PHACON Temporal Bone Patient can be reorded at any time. Detailed overview of characteristics of PHACON Temporal Bone Patient's every model you find on the page 26.



ORDER YOUR
PHACON TEMPORAL BONE PATIENT SCHMIDT:



PATIENT "KOHL" – PATHOLOGY HYPOPLASIA OF THE COCHLEA

PATIENT

PHACON Temporal Bone Patient "Kohl"

Type Temporal Bone

PATIENT CHARACTERISTICS

Age	18 Years
Side	left or right side
Anatomy	normal

The PHACON Temporal Bone Patient "Kohl" is based on a CT-dataset of an 18-year-old patient. This patient includes a cochlea malformation with a hypoplasia of the cochlear and the vestibular system. This CT-dataset can be installed into the PHACON Temporal Bone Trainer which enables the navigation within the CT-images of patient "Kohl" during the training in real-time. Every patient is made from irrigable, bone-similar material to provide you realistic drilling properties.

The PHACON Temporal Bone Patient "Kohl" is compatible with all PHACON Temporal Bone solutions and is available at PHACON at any time. Detailed overview of characteristics of PHACON Temporal Bone Patient's every model you find on the page 26.



ORDER YOUR
PHACON TEMPORAL BONE PATIENT KOHL:





PATIENT "SCHNEIDER"

PATIENT

PHACON
Temporal Bone Patient "Schneider"

Type Temporal Bone

PATIENT CHARACTERISTICS

Age	6 Years
Side	left or right side
Anatomy	normal

The PHACON Temporal Bone Patient "Schneider" is based on a high resolution CT-scan of a 6 year old child. Surgeries like mastoidectomy, cochlea implant insertion or the preparation for an implant bed can be trained. Some of the included features and structures are round window membrane, artificial periosteum and scalp or ossicles.

As all PHACON Temporal Bone Patients, the pediatric PHACON Temporal Bone Patient "Schneider" is compatible with PHACON Temporal Bone Trainer, Assistant as well as Holder Tray. PHACON Temporal Bone Patient can be reorded at any time. Detailed overview of characteristics of PHACON Temporal Bone Patient's every model you find on the page 26.



ORDER YOUR
PHACON TEMPORAL BONE PATIENT SCHNEIDER:



PATIENT "WINKLER" - PATHOLOGY EXTERNAL AUDITORY CANAL ARTRESIA

PATIENT

PHACON
Temporal Bone Patient "Winkler"

Type Temporal Bone

PATIENT CHARACTERISTICS

Age	4 Years
Side	left or right side
Anatomy	normal

The PHACON Temporal Bone Patient "Winkler" is based on a CT-dataset of a 4 year old child with pathology external auditory canal atresia. In this special case, the temporal bone shows an occlusion of the external auditory canal and merged ossicles. This patient is especially intended to trainig of surgical reconstruction of an EAC and forming new tympanic membrane (usually with temporalis fascia). The PHACON Temporal Bone Patient "Winkler" is also available in the version with integrated electronics for our PHACON Temporal Bone Trainer, but can be also used with PHACON Temporal Bone Assistant as well as Holder Tray. Detailed overview of characteristics of PHACON Temporal Bone Patient's every model you find on the page 26.



ORDER YOUR
PHACON TEMPORAL BONE PATIENT WINKLER:





PATIENT "WAGNER"

PATIENT

PHACON Temporal Bone Patient "Wagner"

Type Temporal Bone

PATIENT CHARACTERISTICS

Age	2 Years
Side	left or right side
Anatomy	normal

The PHACON Temporal Bone Patient "Wagner" has a normal anatomy of 2 years old child. It provides the possibility of training of surgeries like milling of mastoidectomy, facial recessus and cochleostomy. Structures like the tympanic membrane, the ossicles, the facial nerve and chorda tympani are integrated in the model as important landmarks. Also the PHACON Temporal Bone Patient "Wagner" is compatible with every PHACON solution for the temporal bone and can be reordered at any time. Detailed overview of characteristics of PHACON Temporal Bone Patient's every model you find on the page 26.



ORDER YOUR
PHACON TEMPORAL BONE PATIENT WAGNER:



PATIENT "KLEIN"

PATIENT

PHACON Temporal Bone Patient "Klein"

Type Temporal Bone

PATIENT CHARACTERISTICS

Age	1 Years
Side	left or right side
Anatomy	normal

The PHACON Temporal Bone Patient "Klein" offers you the worldwide unique possibility of the training on a artificial Temporal Bone Patient with detailed one year old anatomy. Surgeries like mastoidectomy or the preparation for an implant bed can be trained. A complex cochlea for inserting electrodes into the scala tympani is implemented. You can use this patient with all of our PHACON Temporal Bone Solutions and reorder it after your training at phacon.de at any time. Detailed overview of characteristics of PHACON Temporal Bone Patient's every model you find on the page 26.



ORDER YOUR
PHACON TEMPORAL BONE PATIENT KLEIN:



PHACON TEMPORAL BONE PATIENTS - OVERVIEW

Patient	Ref. No.	L	R					
				Auditory canal plastic surgery	Cochlea implantation	Bone conduction implants	Mastoidectomy	Tympanoscopy
SCHMIDT	TF-bc		✓			✓	✓	
	TF-bo	✓				✓	✓	
	TF-bx		✓			✓	✓	
	TF-bz	✓					✓	✓
	TF-bq		✓			✓	✓	✓
	TF-bs	✓				✓	✓	✓
	TF-by		✓			✓	✓	✓
	TF-baa	✓				✓	✓	✓
	TF-br		✓			✓	✓	✓
	TF-bt	✓				✓	✓	✓
	TF-bah		✓			✓	✓	✓
	TF-bar	✓				✓	✓	✓
	TF-bae		✓			✓	✓	✓
	TF-bad	✓				✓	✓	✓
	TF-bab		✓			✓	✓	✓
	TF-bac	✓				✓	✓	✓
	TF-bap		✓		✓	✓	✓	✓
	TF-bax	✓			✓	✓	✓	✓
	TF-bav		✓		✓	✓	✓	✓
	TF-bay	✓			✓	✓	✓	✓
	TF-bca		✓		✓	✓	✓	✓
	TF-bcb	✓			✓	✓	✓	✓
	TF-bam		✓			✓		
	TF-ban	✓				✓		
	TF-bas		✓			✓		
	TF-bat		✓			✓		
	TF-baw	✓				✓		
	TF-bau		✓			✓	✓	✓
	TF-bbb		✓				✓	✓
	TF-bbf	✓					✓	✓
	TF-bbc		✓			✓	✓	✓
	TF-bbe	✓				✓	✓	✓
TF-baq		✓						
WAGNER	TF-dg		✓		✓	✓	✓	
	TF-dc	✓			✓	✓	✓	
	TF-do		✓		✓	✓	✓	
	TF-dp	✓			✓	✓	✓	
	TF-dh		✓			✓	✓	✓
	TF-dd	✓				✓	✓	✓
	TF-dk		✓			✓	✓	✓

								
Middle ear surgery	Detailed middle ear	Sensors for trainers	Periosteum and skin	Round window membrane	Skin in auditory canal	Predrilled	Transparent cochlea	3 skin layers
			✓					
			✓					
	✓							
	✓							
	✓		✓					
	✓		✓					
	✓	✓						
	✓	✓	✓					
	✓			✓				
	✓			✓	✓			
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✓	✓				✓			
✓	✓		✓		✓			
✓	✓		✓	✓	✓			
						✓		
						✓		
		✓				✓	✓	
			✓			✓	✓	
			✓	✓				✓
		✓		✓				✓
			✓					✓
	✓							✓
							✓	
	✓							

PHACON TEMPORAL BONE PATIENTS - OVERVIEW

Patient	Ref. No.	L	R	 Auditory canal plastic surgery	 Cochlea implantation	 Bone conduction implants	 Mastoidectomy	 Tympanoscopy
WAGNER	TF-di	✓			✓	✓	✓	
	TF-dl		✓		✓	✓	✓	
	TF-dj	✓			✓	✓	✓	
	TF-dn		✓		✓	✓	✓	
	TF-dm	✓			✓	✓	✓	
WINKLER	TF-gc		✓		✓	✓	✓	
	TF-gd	✓			✓	✓	✓	
	TF-ge		✓		✓	✓	✓	
	TF-gf	✓			✓	✓	✓	
KOHL	TF-ic		✓		✓	✓	✓	
	TF-id	✓			✓	✓	✓	
	TF-ie		✓		✓	✓	✓	
	TF-if	✓			✓	✓	✓	
SCHNEIDER	TF-eb		✓		✓	✓	✓	
	TF-ec	✓			✓	✓	✓	
	TF-ef		✓		✓	✓	✓	
	TF-eg	✓			✓	✓	✓	
	TF-ed		✓		✓	✓	✓	
	TF-ee	✓			✓	✓	✓	
KLEIN	TF-kc		✓		✓	✓	✓	
	TF-ka	✓			✓	✓	✓	
	TF-kf		✓		✓	✓	✓	
	TF-ke	✓			✓	✓	✓	
	TF-kd		✓		✓	✓	✓	
	TF-kb	✓			✓	✓	✓	
	TF-kg		✓		✓	✓	✓	
	TF-kh		✓		✓	✓	✓	

ICON LEGEND

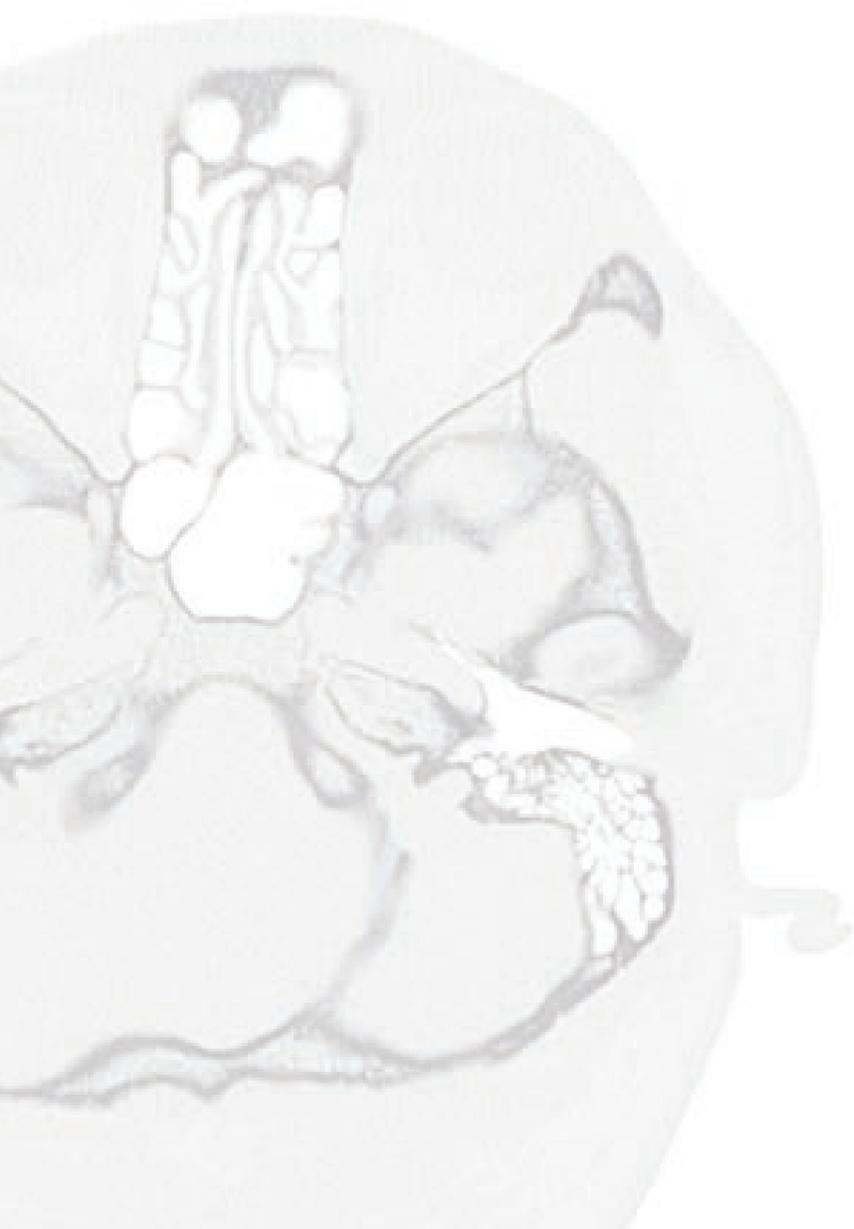
APPLICATIONS

-  **Tympanoscopy:** These PHACON Temporal Bone Patient are covered with a skin in the auditory canal, which is directly connected to the flexible eardrum. Thus the eardrum can be released and the middle ear can be opened. After the procedure the eardrum can be folded back into its original position.
-  **Cochlear Implantation:** These PHACON Temporal Bone Patients have a detailed inner ear. Therefore these petrous bones are perfectly suited for training and demonstration of cochlear implantation. The electrode can be fully inserted into the Scala Tympani.
-  **Auditory canal plastic surgery:** The realistic reproduction of the external auditory canal and the middle ear make these PHACON Temporal Bone Patients suitable for an auditory canal plastic surgery.
-  **Mastoidectomy:** In these PHACON Temporal Bone Patients you can perform a mastoidectomy, where the mastoid process (mastoid) is removed and a common cavity is created from the dome of the middle ear (epitympanum), the mastoid and the auditory canal with removal of the posterior wall of the auditory canal.
-  **Implantation of bone conduction implants:** These PHACON Temporal Bone Patient are perfect for training and demonstration of a bone conduction implantation. For example, a screw can be screwed into the cranial bone with the appropriate force, or an implant bed can be milled out.
-  **Middle ear surgery:** These PHACON Temporal Bone Patients are equipped with an extra realistic middle ear by separate ossicles, connected by flexible tendons, and are therefore perfectly suited for middle ear surgery, e.g. stapesplasty.

 Middle ear surgery	 Detailed middle ear	 Sensors for trainers	 Periosteum and skin	 Round window membrane	 Skin in auditory canal	 Predrilled	 Transparent cochlea	 3 skin layers
✓	✓							
✓	✓	✓						
✓	✓	✓						
✓	✓			✓				
✓	✓			✓				
	✓							
	✓							
	✓	✓						
	✓	✓						
	✓							
	✓							
	✓		✓					
	✓		✓					
	✓							
	✓	✓						
	✓	✓						
	✓							
	✓							
	✓							
	✓							
	✓						✓	✓
	✓							✓

FEATURES

-  **Detailed middle ear:** The middle ear contains the tiny ossicles that connect the outer ear with the inner ear. In these models, the ossicles have a high resolution and are therefore particularly close to reality.
-  **Sensor for Trainers:** These models have detectable structures and can be used with PHACON trainers.
-  **Periosteum and skin:** These PHACON Temporal Bone Patients have a bone structure and a skin reconstruction.
-  **Transparent cochlea:** These PHACON Temporal Bone Patients have a transparent inner ear structures: cochlea and ductus semicircularis
-  **3 skin layers:** These PHACON Temporal Bone Patients are significant bigger and therefore not suitable with PHACON Temporal Bone Trainers/Assistents. Besides a special hardened bone they have a filigrane sewable skin over realistic layers of periosteum and fat.
-  **Skin in the auditory ear canal:** This PHACON Temporal Bone Patient is provided with skin in the ear canal (tympanomeatal flap).
-  **Predrilled:** These PHACON Temporal Bone Patients have predrilled mastoidectomy with grooves for electrode placement.
-  **Round window membrane:** In these PHACON Temporal Bone Patients the round window membrane is reproduced true to detail.



PHACON SINUS

PRODUCT OVERVIEW

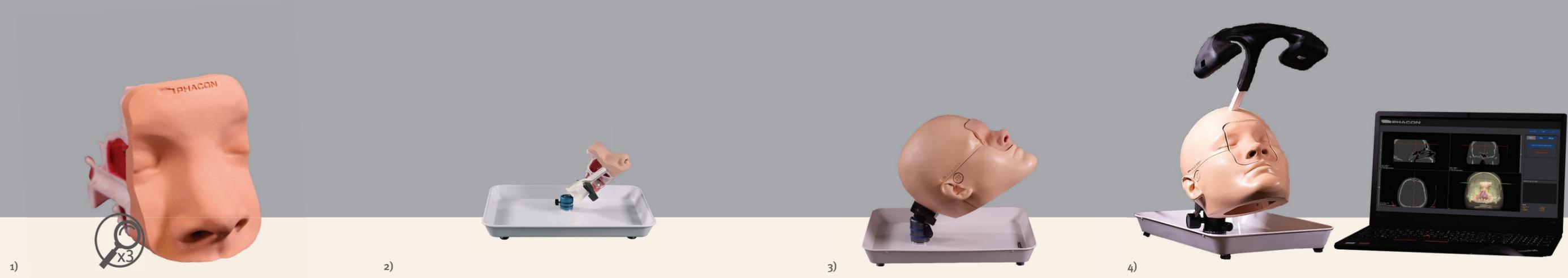
PHACON provides a variety of different products and options to perfectly fit your individual needs. Depending on your course set up or congress booth presentation together we choose the right product package for you.

1) PHACON Sinus Patients are intended for use together with the PHACON Sinus Trainer or Assistant as well as with the PHACON Sinus Holder Tray. PHACON offers variety of patients, with different anatomies and for different surgeries.

2) PHACON Sinus Holder Tray provides you a stable fixation of your PHACON Sinus Patient. The patient is placed safely and can be adjusted in any direction for a comfortable working position. The PHACON Sinus Holder Tray gathers also all surgical fluids and tissue (including bones). It is easy to take it apart and clean after usage.

3) PHACON Sinus Assistant consists of a PHACON Sinus Holder Tray and a skull, where the PHACON Sinus Patient should be placed. This set up provides you more realistic feeling of work on a skull. It is very easy to adjust the position of the skull for the perfect work conditions. (This version can not be connected to the laptop with PHACON Software).

4) PHACON Sinus Trainer, the most advanced Trainer includes the anatomical and technical part. It combines hands on training on the PHACON Sinus Patient with the guidance of an optical navigation. This advanced set up is a perfect tool for your surgical training courses. Train your surgical intervention and besides learn how to navigate your tools inside the CT-images and inside the matching 3D rendered anatomical model.



1) PHACON Sinus Patient ///

The PHACON Sinus Patient "Meyer", "Schulze", provide you the opportunity of the training of different surgeries on various anatomies of 40 or 54 years old patient. You find more information about all PHACON Sinus Patients on page 42.

2) PHACON Sinus Holder Tray ///

Art-No.: S-00031

The PHACON Sinus Holder Tray can be used with all PHACON Sinus Patients. Rotate and adjust your PHACON Sinus Patient with the twistable joint head.

Included: 1 PHACON Holder Tray, 1 transport case

3) PHACON Sinus Assistant ///

Art-No.: S-00007

The PHACON Sinus Assistant consists of skull for placing the PHACON Sinus Patient and PHACON Sinus Holder Tray. That makes it perfect set up for a convenient training session. Further information are on the page 36.

Included: 1 skull, 1 PHACON Holder Tray, 1 Sinus Patient "Meyer" (SN-abs), 1 transport case

4) PHACON Sinus Trainer ///

Art-No.: S-00005

The PHACON Sinus Trainer includes the anatomical and technical part of the trainer. It is the most advanced solution providing you best possible set up for your surgical training. Our very anatomically detailed PHACON Sinus Patient placed in the realistic looking skull together with high-tech navigation software gives you the haptic feeling of

the real sinus surgery. More details about this PHACON Sinus Trainer, you find on the 34.

Included: 1 anatomical part, 1 technical part, 1 holder tray, 1 Sinus Patient "Meyer" (SN-aas), 1 instrument tracker set, 1 tracking camera, 1 transport case

If you have doubts, which product is best for you or would like to request a quote do not hesitate and contact us - together we find a perfect solution!

Phone: +49 341 24 19 210 / Mail: sale@phacon.de



PHACON SINUS TRAINER

/// Art-No.: S-0005



The **PHACON Sinus Trainer** offers the possibility of a complex training of the sinus and skull base surgeries. Anatomically detailed model together with the PHACON Software ensure the unique experience - as close to the real surgery as possible.

With PHACON Sinus Trainer you can use your own instruments to learn the surgical techniques. At the same time, thanks to our advanced software, you practice orientation within the related patient CT-data. During the session, injuries of structures are automatically detected and communicated by the software. 3D model, endoscopic or CT- view, possibility of adjusting the layers and opacity of the anatomical structures - these are only a few options provided by the PHACON Software that ensure the perfect conditions for your surgical training. PHACON Software, as well as all of our products, are constantly optimized, developed and extended with new function. New updates and always actual information to our software you can find on our website.

The root of our PHACON Sinus Trainer is the PHACON Sinus Patient. PHACON Patients are 3D printed models, finished by hand with reflection of even smallest details. Available with different characteristics, the PHACON Sinus Patient can be easily replaced after your training. This way, our PHACON Sinus Trainer is a cost-effective and long-term solution for your practice.

Not only the whole Trainer but also the single parts of the PHACON Sinus Trainer - holder tray with the skull as well as laptop with navigation software and trackers - can be reordered at PHACON any time.

The PHACON Sinus Trainer can facilitate the organisation of your training course with the following advantages:

- The PHACON Sinus Trainer allows training independent from location or available equipment, because there are no complex handling, storing or special rooms necessary to work with the artificial specimen
- The PHACON Software offers unique support during your training making it realistic and effective
- The PHACON Sinus Trainer helps instructors reduce the time needed for the training as they get virtual assistance in the software
- The included CT-data set enables the live navigation within the related model
- Automatic analysis and learning curves help to evaluate the training objectively
- Exchangeable PHACON Sinus Patients are always available and can be reordered at PHACON any time.
- Used PHACON Sinus Patients can help to analyse the passed training sessions
- Nonhazardous residues are safe to use and easy to clean

On the page 32, you find a list of the all components of the PHACON Sinus Trainer.

ORDER YOUR
PHACON SINUS TRAINER:





PHACON SINUS ASSISTANT

/// Art-No.: S-00007/ S-00007-EM

The **PHACON Sinus Assistant** provides you a basic set up for your surgical training or your marketing presentation. It consist of the PHACON Sinus Holder Tray and the skull, where the PHACON Sinus Patients is to be placed.

This combination offers you optimal conditions for your training. With a 360 degree rotating joint, skull can be easy adjusted and placed exactly where you need. Every skull has a simple click-in system, where you assemble the PHACON Sinus Patient. The PHACON Sinus Assistant is compatible with every PHACON Sinus Patient, that can be effortlessly exchanged after the training with a new one. This way you can practice various surgeries on patients with different anatomies and you only need one assistant. This solution is cost-effective and convenient.

This Assistant is also available as **PHACON Sinus Assistant for electromagnetic navigation**. This version is characterized by lack of metal parts so it is possible to use it with electromagnetic navigation.

The PHACON Sinus Assistant is perfect choice when:

- You need simple set up for marketing presentations of your tools or instruments
- You wish reusable artificial specimen for your surgical training
- You want to work on a realistic specimen, to make your training better
- You do not need advanced virtual assistance of the software

On the page 32, you find a list of the all components of the PHACON Sinus Assistant.



your holder tray with skull

your patient

ORDER YOUR
PHACON SINUS ASSISTANT:



ORDER YOUR
PHACON SINUS ASSISTANT
FOR ELECTROMAGNETIC NAVIGATION:



PHACON SINUS PATIENTS

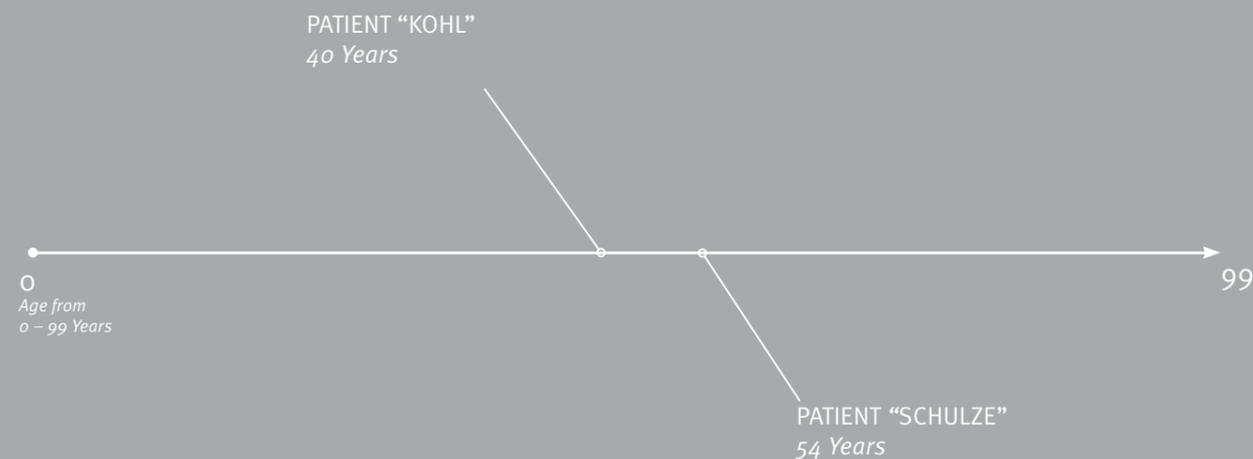
The PHACON Sinus Patients are artificial specimens to practice different surgeries on the sinus and skull base, for instance an orbital decompression. They are removed after the training session and can be replaced by a new model. This concept makes your course or presentation cost-effective, as you only need to exchange the PHACON Sinus Patient without necessity of replacing the PHACON Sinus Trainer or Assistant with a new model. To make your practice even more efficient, some of the models include electronic parts, that together with PHACON Software provide you the possibility of the navigation of your instruments in real time. Injuries of the structure will be automatically detected and communicated. Overview of all the PHACON Sinus Patients you can find on the page 42 together with all details about the possible applications or included structures and landmarks. The PHACON Sinus Patients can be reordered at PHACON any time.

THE ARTIFICIAL PATIENT

PHACON offers artificial patients for all training levels and surgeries, all suitable for the PHACON Sinus Trainer. PHACON artificial specimens are based on real patient CT-data. All of the models reflect the most diverse human tissue properties (such as bones, cartilage, muscles, skin and nerves), which we handcraft to the smallest detail using a variety of materials.

- Various anatomies of adults.
- Models with low-lying skull base.
- Realistic anatomical structures like optic nerve, process uncinatus, bulla ethmoidalis and flexible nasal conchae.

THE DIFFERENT AGES OF THE PHACON SINUS PATIENTS



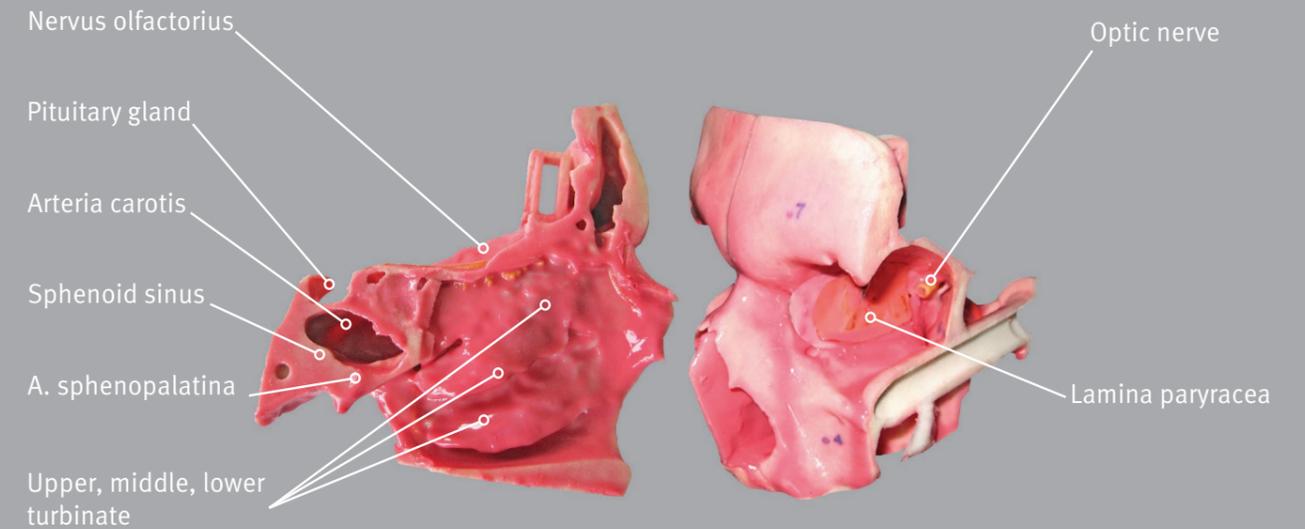
PHACON SINUS PATIENTS ARE USED FOR

Demonstration of your tools, instruments and strategies and for the following surgeries:

- Functional endoscopic sinus surgery (FESS)
- Transnasal and transtympanic access to the pituitary gland
- Orbital decompression
- Decompression of the optic nerve
- Septoplasty and rhinoplasty training
- and much more...



IMPORTANT STRUCTURES AND LANDMARKS OF VARIABLE SOFT AND HARD MATERIALS



ORDER YOUR PHACON SINUS PATIENT:





PATIENT "SCHULZE"

54

PATIENT

PHACON
Sinus Patient "Schulze"

Type SINUS

PATIENT CHARACTERISTICS

Age 54 Years

Anatomy low-lying skull base

The PHACON Sinus Patient "Schulze" is an anatomically highly detailed artificial specimen. He represents a 54-year-old patient with anatomy without any pathologies. This model is available in two versions: with and without skin. As a special anatomical property, this patient has a low-lying skull base. This patient is intended for instance for practicing Functional Endoscopic Sinus Surgery (FESS). Following structures are included in this model, for instance: processus uncinatus, bulla ethmoidalis and flexible turbinates or nervus opticus.

The PHACON Sinus Patient "Schulze" is compatible with PHACON Sinus Trainer, Assistant as well as Holder Tray. PHACON Sinus Patient can be reorded at any time.



ORDER YOUR
PHACON SINUS PATIENT SCHULZE:



PATIENT "MEYER"

40

PATIENT

PHACON
Sinus Patient "Meyer"

Type Sinus

PATIENT CHARACTERISTICS

Age 40 Years

Anatomy normal

The PHACON Sinus Patient "Meyer" is based on a CT-dataset of a 40-year-old patient with normal anatomy. There is also a special version of this patient with nasal polyps that allows you to practice removal of polyps. You can also train the trans nasal and transethmoidal access to the pituitary gland. As well as PHACON Sinus Patient "Schulze", also the PHACON Sinus Patient "Meyer" you can get both with and without skin.

The PHACON Sinus Patient "Meyer" is also available in the version with integrated electronics for our PHACON Sinus Trainer, but can be also used with PHACON Sinus Assistant as well as Holder Tray.



ORDER YOUR
PHACON SINUS PATIENT MEYER:



PHACON SINUS PATIENTS - OVERVIEW

Patient	Ref. No.	 FESS	 Polypectomy	 Skull base surgery	 Septoplasty and rhinoplasty	 EM Navigation	 Dilatation of the eustachian tube
MEYER	SN-aa	✓					
	SN-aas	✓					
	SN-ab	✓					
	SN-abs	✓					
	SN-ae	✓	✓				
	SN-aes	✓	✓				
	SN-af	✓	✓				
	SN-afs	✓	✓				
	SN-ah	✓					
	SN-ahs						
	SN-ak	✓			✓		
	SN-am	✓		✓			
	SN-ams	✓		✓			
	SN-an	✓				✓	
	SN-ans	✓				✓	
	SN-ap	✓	✓		✓		
	SN-aq	✓					✓
	SN-aw	✓					✓
	SN-aaa	✓			✓		
	SN-ays	✓					
SN-a-mark-f			✓				
SN-as							
SCHULZE	SN-ba	✓					
	SN-bas	✓					
	SN-bb	✓					
	SN-bbs	✓					

ICON LEGEND

APPLICATIONS

-  **Functional Endoscopic Sinus Surgery:** These PHACON Sinus Patients are suitable for FESS examinations.
-  **Polypectomy:** These PHACON Sinus Patients have polypender in the maxillary sinus behind the processus uncinatus and between the upper and middle nasal concha.
-  **Skull base surgery:** These PHACON Sinus Patients include flexible replicas of the optic nerves, the olfactory nerves and the brain rim. Therefore they are perfectly suited for skull base surgery.
-  **Showcase model:** These PHACON patients are marketing models. They have a special partial view for demonstration of medical instruments.
-  **Septoplasty and rhinoplasty:** In these PHACON Bone Patients you can perform septoplasty also rhinoplasty or nose correction.
-  **EM Navigation:** These PHACON Sinus Patients do not contain any metallic or magnetic substances and are therefore suitable for operations where the instruments are navigated electromagnetically.
-  **Dilatation of the eustachian tube:** These PHACON Sinus Patients are perfect for training and demonstration of a dilatation of the eustachian tube.
-  **Dacryocystorhinostomy:** This model of PHACON Sinus Patient enables you to train creating a new tear drain between eyes and nose.

 Showcase model	 Dacryocystorhinostomy	 Nasal cartilage	 Pituitary tumor	 Nasopharynx extension	 Sphenopalatine artery	 Deviated septum	 Sensors for trainers	COMMENTS
							✓	Without skin, only for old Trainers/Assistants
							✓	
								Without skin, only for old Trainers/Assistants
								Without skin, only for old Trainers/Assistants
							✓	Without skin, only for old Trainers/Assistants
							✓	
			✓					Without skin, only for old Trainers/Assistants
			✓					
		✓						
								Without skin, only for old Trainers/Assistants
								Without skin, only for old Trainers/Assistants
								Model for nasal swab
	✓	✓			✓			
							✓	
✓								Assembly model
✓								Only right half of the nose
							✓	Without skin, only for old Trainers/Assistants
							✓	
								Without skin, only for old Trainers/Assistants

FEATURES

-  **Nasal cartilage:** These PHACON Sinus patients have flexible nasal cartilage.
-  **Sphenopalatine artery:** This model has a sphenopalatine artery filled with blood and bleeds when it is cutted.
-  **Pituitary tumor:** This model of PHACON Sinus Patient has a tumor located in the pituitary gland and is perfect for training of surgeries on this type of tumor such as craniotomy.
-  **Deviated septum:** These PHACON Sinus Patients have displaced nasal passages and are intended to training of septoplasty.
-  **Nasopharynx extension:** These PHACON Sinus Patients have detailed nasopharynx, which is connected with the middle ear through the eustachian tube.
-  **Sensors for trainers:** These models have detectable structures and can be used with PHACON trainers.



PHACON **THROAT**

PRODUCT OVERVIEW

PHACON offers you PHACON Throat Assistant in many configuration to provides a variety of different products and options to perfectly fit your individual needs. Depending on your course set up or congress booth presentation together we choose the right product package for your.

1) PHACON Sinus Patients "Meyer" are intended for use not only together with the PHACON Sinus Trainer and Assistant but also PHACON Throat Assistant. Variety of patients, with different anatomies ensure multiple possibilities of application.

2) PHACON Throat Patients represent an anatomical detailed replication of the human throat, esophagus and stomach. These patients are compatible with PHACON Throat Assistant and can be used for training of endoscopic surgeries such as e.g. laryngoscopy. PHACON Throat Patient "Peters" has an exchangeable uvula and is also available in version with tumor.

3) PHACON Throat Assistant consists of a PHACON Sinus Patient, PHACON Throat Patient, skull and PHACON Holder Tray or tripod. This set up provides you more realistic feeling of work on a skull. It is very easy to adjust the position of the skull for the perfect work conditions. (None of the PHACON Throat Assistants can be connected to the laptop with the

PHACON Software). With a simple click in system, both the PHACON Sinus Patient and PHACON Throat Patient can be independently and easily exchanged, what makes the PHACON Throat Assistant a cost and performance efficient model. The PHACON Throat Assistant is available in different versions for diverse use.



1) PHACON Sinus Patient ///

The PHACON Sinus Patient "Meyer" with an anatomy of 40 years old patient together with PHACON Throat Assistant provide you the opportunity of the various trainings.

You find more information about all PHACON Sinus Patients on page 52.

2) PHACON Throat Patient ///

The PHACON Throat Patient "Peters" with various anatomies of 48 years old patient gives you the possibility of training of various surgeries in the field of endoscopy.

You find more information about PHACON Throat Patients on page 51.

3) PHACON Throat Assistant ///

The PHACON Throat Assistant can be used with PHACON Sinus Patient "Meyer" and all PHACON Throat Patients. Different configurations of the PHACON Throat Assistant ensure the broad applications possibilities. All details about our PHACON Throat Assistant are on the page 48.

Included: 1 skull, 1 PHACON Holder Tray/tripod, 1 PHACON Throat Patient "Peters", 1 PHACON Sinus Patient "Meyer", 1 uvula, 1 transport case

If you have doubts, which product is best for you or would like to request a quote do not hesitate and contact us - together we find a perfect solution!

Phone: +49 341 24 19 210 / Mail: sale@phacon.de

PHACON THROAT ASSISTANTS

PHACON Throat Assistant provide you the variety of solutions to ensure you the perfect conditions for your surgical training or marketing presentations. PHACON Assistant offers you a basic set up, easy adjustable to your needs. Every PHACON Throat Assistant consist of PHACON Sinus Patient, PHACON Throat Patient, skull and PHACON Holder Tray or tripod. With a 360 degree rotating joint, you can conveniently change the position of the skull and place it exactly where you need. This way you have perfect access to the Patients and optimal work conditions. Both PHACON Sinus Patient and PHACON Throat Patient are assembled in the skull with a simple click-in system, so you can easily replace your Patients with a new one after the training. Thus you can use one Assistant multiple times with carious patient with different anatomies and pathology. That makes our PHACON Throat Assistant a convenient and cost-effective solution. Thanks to transport case in the size of the hand lugage, the PHACON Throat Assistant is also easy to transport.

With the PHACON Throat Assistant you can train the endoscopic examinations such as inspection of the interior of the stomach or larynx. The PHACON Throat Assistant is available in 5 different versions. All of the details about differences between our Assistant you find below. On the page 50 you find detailed description of our Patients dedicated for the PHACON Throat Assistant together with all features and possible application. The list of all available PHACON Sinus and Throat Patients is to be found on the page 54.



1) PHACON Throat Assistant ///
Art-No.: S-00012

The PHACON Throat Assistant offers possibility of the training of endoscopic surgeries. It includes PHACON Throat Patient "Peters" with stomach with Z-line and exchangeable uvula, among other things.

Included: 1 skull, 1 PHACON tripod, 1 PHACON Throat Patient "Peters" (PM-aam), 1 uvula for PHACON Throat Patient "Peters" (PM-ae), 1 PHACON Sinus Patient "Meyer" (SN-aq), 1 transport case

2) PHACON Throat Assistant - Tuba Auditiva ///
Art-No.:S-00013

The PHACON Throat Assistant Tuba Auditiva has a detailed tuba auditiva. This model is applicable for the training of endoscopic surgery. It is assembled on the PHACON Holder Tray and can be used on the table, for optimal work conditions.

Included: 1 skull, 1 PHACON Holder Tray, 1 PHACON Throat Patient "Peters" (PM-acm), 1 uvula for PHACON Throat Patient "Peters" (PM-ae), 1 PHACON Sinus Patient "Meyer" (SN-aq), 1 transport case

3) PHACON Throat Assistant – Tumor – flexible endoscopes ///
Art-No.: S-00014

The PHACON Throat Assistant with laryngeal tumor offers the unique possibility of the training of removing the tumor. This model is also suitable for the training of gastroscopy.

Included: 1 skull, 1 PHACON tripod, 1 PHACON Throat Patient "Peters" (PM-abm), 1 uvula for PHACON Throat Patient "Peters" (PM-ae), 1 PHACON Sinus Patient "Meyer" (SN-aq), 1 transport case

4) PHACON Throat Assistant – stretched//
Art-No.: S-00016

The PHACON Throat Assistant with stretched neck is intended to train laryngoscopy. Suitable positioned neck provides perfect access to throat, larynx and vocal folds.

Included: 1 skull, 1 PHACON Holder Tray, 1 PHACON Throat Patient "Peters" (PM-afm), 1 uvula for PHACON Throat Patient "Peters" (PM-ae), 1 PHACON Sinus Patient "Meyer" (SN-aq), 1 transport case

5) PHACON COVID-Test Assistant ///
Art-No.: S-00017

PHACON Covid-Test Assistant is intended to training nasopharyngeal swabs. Thank to color pads you get a feedback, if the smear was dne properly. The pads must be colored with the supplied paint before use and after they can be exchanged, so the PHACON Covid-Test Assistant can be used again.

Included: 1 skull, 1 PHACON Holder Tray/tripod, 1 PHACON Throat Patient "Peters", 1 PHACON Sinus Patient "Meyer", 1 uvula, 1 transport case

ORDER YOUR
PHACON THROAT ASSISTANT:



PHACON THROAT PATIENTS

The PHACON Throat Patients are artificial specimens to practice different surgeries on the throat. They are intended for the training of laryngoscopy and endoscopic surgery. Also body functions such as the swallowing movement can be simulated and the transnasal endoscopy of the stomach can be trained. After the training, they can be removed from the PHACON Throat Assistant and replaced with a new model. This concept makes your course or presentation cost-effective, as you do not need a new Assistant for the next practice. Overview of all the PHACON Throat Patients you can find on page 54 together with all details about the possible applications or included structures and landmarks. The PHACON Throat Patients can be reordered at PHACON any time.

THE ARTIFICIAL PATIENT

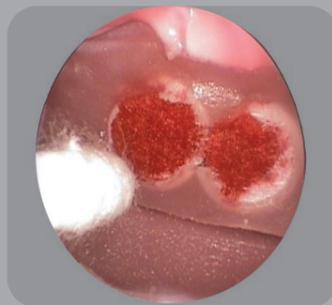
PHACON offers artificial patients for all training levels and surgeries, all suitable for the PHACON Throat Assistant. PHACON artificial specimens are based on real patient CT-data. All of the models reflect the most diverse human tissue properties (such as bones, cartilage, muscles, skin and nerves), which we handcraft to the smallest detail using a variety of materials.

- Various anatomies of adults.
- Opened mouth with teeth and tongue.
- Exchangeable uvula.
- Various pathologies such as laryngeal tumor.
- Realistic anatomical structures like the larynx and vocal folds, epiglottis and vocal folds, oesophagus, stomach with Z-line

ENDOSCOPIC PICTURES



Turbintues



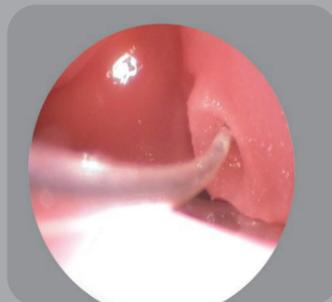
Color pads - COVID Assistant



Mouth



Vocal folds



Tuba auditiva



Tumor

ORDER YOUR PHACON THROAT PATIENT:



PATIENT "PETERS"

PATIENT

PHACON
Throat Patient "Peters"

Type THROAT

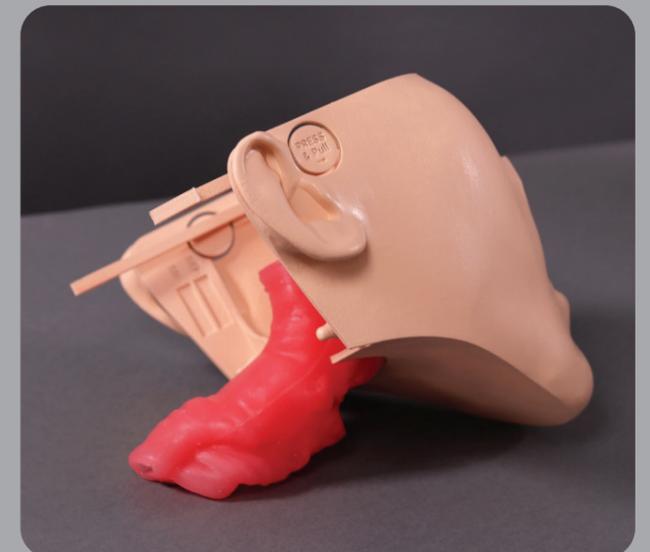
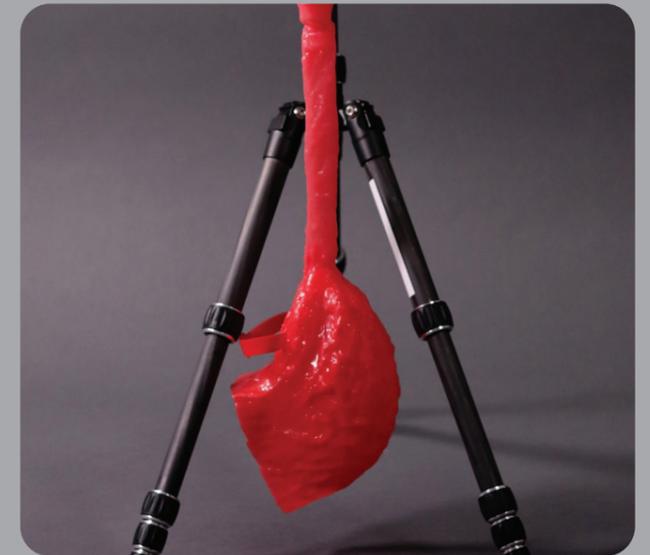
PATIENT CHARACTERISTICS

Age 48 Years

Anatomy normal

The PHACON Throat Patient "Peters" is an anatomically highly detailed artificial specimen. He represents a 48-year-old patient with different anatomies. This model consists of an open mouth with tongue and teeth. It is available with or without stomach. The uvula can be exchanged and reordered. This patient is intended for instance to practice i.e. endoscopic surgery. Following structures are included in this model, for instance: oesophagus or larynx. There is also a PHACON Throat Patient in special version with laryngeal tumor.

The PHACON Throat Patients "Peters" are compatible with different PHACON Throat Assistants and can be reordered at PHACON at any time.



ORDER YOUR PHACON SINUS PATIENT PETERS:



PHACON SINUS PATIENTS

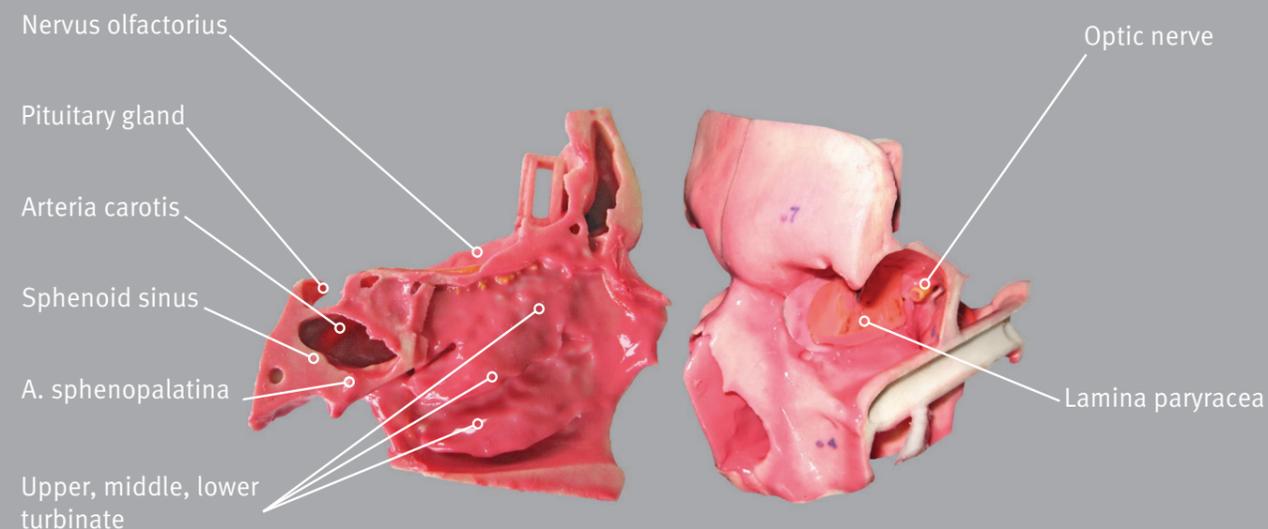
The PHACON Sinus Patients are artificial specimens to practice different surgeries on the sinus and throat, for instance an endoscopic surgery. PHACON artificial specimens are based on real patient CT-data. All of the models reflect the most diverse human tissue properties (such as bones, cartilage, muscles, skin and nerves), which we handcraft to the smallest detail using a variety of materials. As all PHACON Patients, they can be removed after the training session and replaced by a new model. This concept make your course or presentation cost-effective, as you only need to exchange the PHACON Sinus Patient without necessity of replacing the PHACON Throat Assistant with a new model. The PHACON Sinus Patients can be reordered at PHACON any time.

PHACON SINUS PATIENTS ARE USED FOR

Demonstration of your tools, instruments and strategies and for the following surgeries:

- Training of nasal and nasopharyngeal smears
- Functional endoscopic sinus surgery (FESS)
- Transnasal and transetmoidal access to the pituitary gland
- Orbit decompression
- Dilation of the auditory tuba
- and much more...

IMPORTANT STRUCTURES AND LANDMARKS OF VARIABLE SOFT AND HARD MATERIALS



Although, all of the PHACON Sinus Patients are compatible mit all of the PHACON Throat Assistants, two modells are especially recomended for the use with PHACON Throat Assistant because of their special features. All details about PHACON Sinus Patients are on the page 42.

PHACON SINUS PATIENT “Meyer” – nasal smear

(Art-No.: SN-aw)

This Patient is intended for use with PHACON COVID-Test Assistant (S-00017). It provides you the possibility of the training of nasal and nasopharyngeal smears with color indicator. The color pads at the important areas integrated in these modell indicate the success of the smear. They are covered in the red paint that is transfered to the swab, if the smear was successful. The pads can be replaced fot the next training and only after getting soaked wit the supplied paint, they are ready to use. Some of the included structures and landmarks are: nasopharynx with bilateral tuba auditiva, ethmoid bulla and flexible turbinates, torus tubarius, ethmoid cells, frontal sinus, sphenoid sinus, optic nerve, sphenopalatine artery and skin.



PHACON SINUS PATIENT “Meyer” – Tuba auditiva

(Art-No.: SN-aq)

This model is compatibel with every PHACON Throat Assistant. It is characterised by very detailed tuba auditiva integrated in the patient so you can perform and train surgeries such us dilation of the eustachian tube. Above that, this PHACON Sinus Patient Meyer can be also used with every PHACON Sinus Trainer, Assistant or Holder Tray. Like every PHACON Patient, this model can be reordered at PHACON at any time.



THE DETAILED DESCRIPTION OF ALL PHACON SINUS PATIENTS IS GIVEN ON THE PAGE 42.

ORDER YOUR PHACON SINUS PATIENT:



PHACON THROAT PATIENTS - OVERVIEW

Ref. No.	Endoscopic surgery	Gastroscopy	Laryngoscopy	Larynx and vocal folds	Esophagus	Stomach with Z-line	Streched neck	Table version
PM-aa	✓	✓		✓	✓	✓		
PM-aam	✓	✓		✓	✓	✓		
PM-ab	✓	✓		✓	✓	✓		
PM-abm	✓	✓		✓	✓	✓		
PM-ac	✓			✓				✓
PM-acm	✓			✓				✓
PM-ad	✓	✓		✓	✓	✓		
PM-afm	✓		✓	✓			✓	✓
PM-agm	✓	✓	✓	✓	✓	✓	✓	

LEGEND

APPLICATIONS

- **Endoscopic surgery:** these PHACON Throat Patients are suitable for endoscopic surgery and examination.
- **Gastroscopy:** these PHACON Throat Patients have stomach with Z-line and esophagus. Therefore they are perfectly suited for gastroscopy.
- **Laryngoscopy:** thanks to streched neck these PHACON Throat Patients are applicable for laryngoscopy.

FEATURES

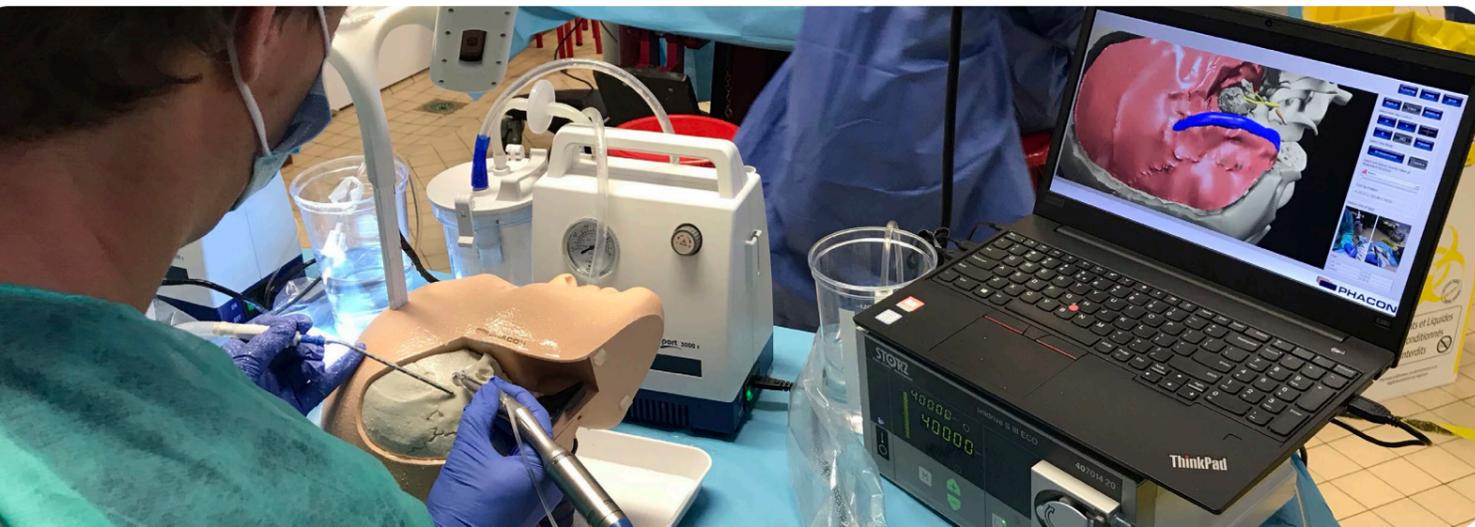
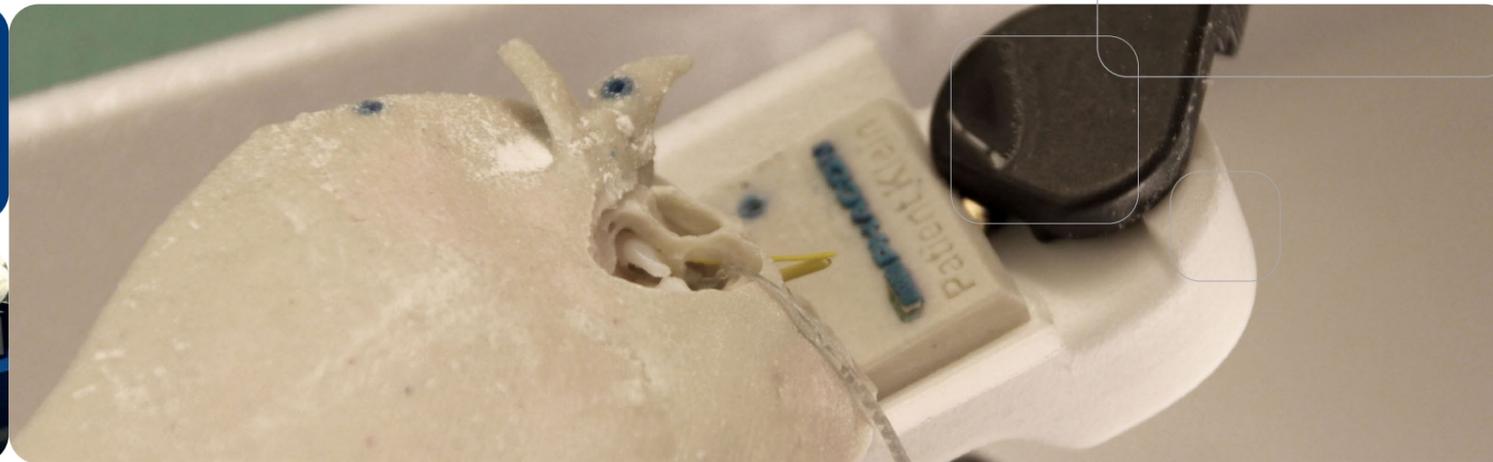
- **Larynx and vocal fods:** these models have larynx and vocal folds what makes the imitation of swallowing possible.
- **Esophagus:** these PHACON Throat Patients have detailed esophagus connecting the throat and the stomach.
- **Stomach with Z-line:** these PHACON Throat Patients have reproduced stomach with regular Z-line.
- **Streched neck:** these PHACON Throat Patients have head streched backwards.
- **Table version:** these PHACON Throat Patients are assembled on the PHACON Holder Tray instead of tripod and should be putted on the table for optimal work conditions.



Middle Ear Surgery, Hearing Implants & Lateral Skull Base (IRDC Academy/Surgical Training School/Germany)



PITO Training Course (Surabaya/ Indonesia)



Advanced Bionics Training course (Paris/ France)

COURSES

The PHACON Trainers are an excellent tool to support and assist your training course. Different course set-ups are possible - use the Trainer with Navigation software by each participant or use the Trainer as a master station. The participants can also follow the instructions and train on the PHACON Temporal Bone Assistant both options are an advantage to your training course. For the most basic set up you only need a Patients and Holder Tray.

Well known companies and doctors are taking the advantage of this practical alternative in their hands-on courses, using PHACON models. It is an easy, clean and cost-efficient way to teach your assistant doctors and staff.



Temporal Bone Course (Asklepios Clinic Hamburg/ Germany)



Temporale Bone Course (Medtronic Europe Tolechanaz/ Switzerland)

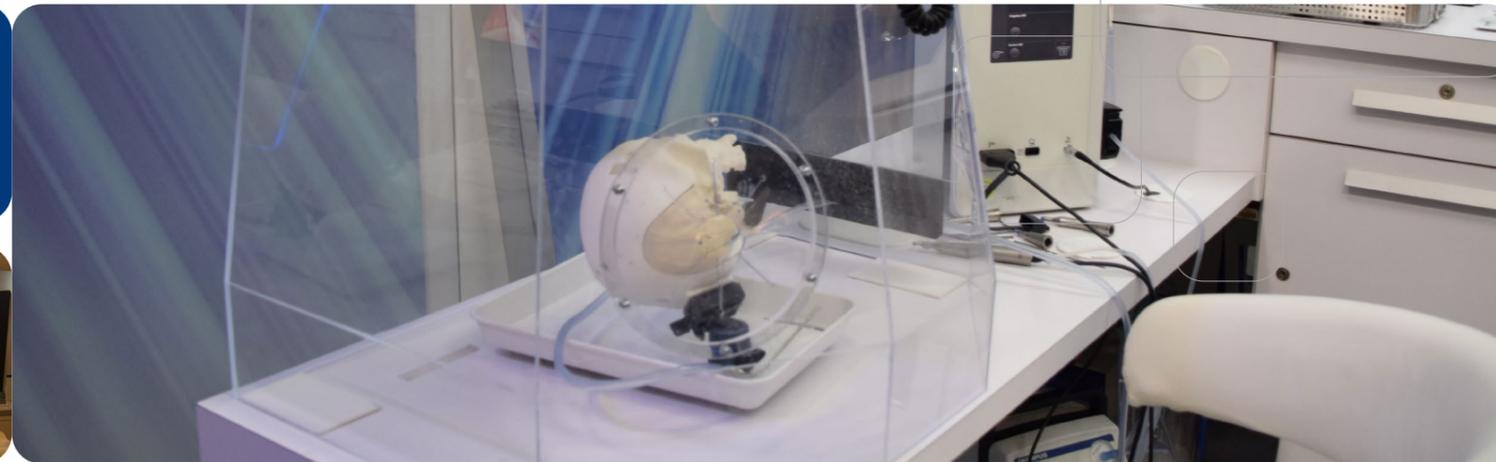


Temporal Bone surgery course during the PITO congress (Surabaya/ Indonesia)



PHACON models used at the STRYKER booth during the AAO congress. (Vancouver/ Canada)

Live mastoidectomy-drilling, ARRI microscopes booth at the annual ENT congress.(Berlin/ Germany)



Stryker booth at the AAO (Vancouver, Canada)



MARKETING

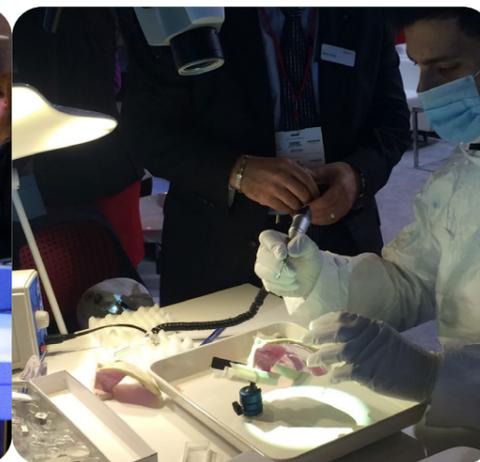
Present your medical instruments and devices at congresses and exhibitions. Use the PHACON ENT Models and Trainers to show the function and features of your instruments in a realistic context. Explain and teach the important details of your instruments function and advantages to your customers and internal staff to use it direct on the anatomical model.

PHACON Models and Trainers, your perfect partners for your successful, public marketing performance.

Med-El booth during the AAO congress. (Vancouver/ Canada)



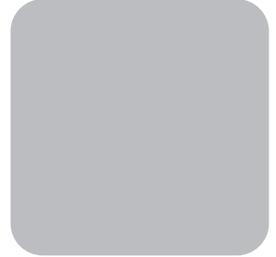
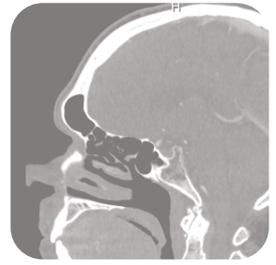
Cochlear booth, AAO congress (Vancouver, Canada)



Live drilling at the Med-El booth (Meoto, Dubai)

Congress booth of our distributor SuoShare Education and Training Congress (Hefei/China)





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