

English
2025/2026



AUDIOLOGY
CATALOGUE

#pureScanning

GERMAN ENGINEERING | ATTENTION TO DETAIL | QUALITY | PRECISION | DURABILITY





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WELCOME

GERMAN ENGINEERING

"We rely on quality 'Made in Germany' for our scanners. All of our audiology products are maintenance-free, dependable and affordable for businesses of all sizes. We do our best every day to find the ideal solution for our partners and customers. Our work focuses on our own quality requirements and ultimately on the 'satisfied owners of hearing aids'. This is proven by the low repair rate of our 3D scanners. For this reason I am particularly proud of my team, which makes smart optics what it is: competent and purposeful."

Dipl. Ing. Jörg Friemel, CEO
smart optics Sensortechnik GmbH

SMART OPTICS

HOME OF 3D SCANNERS

MANUFACTURER OF DEPENDABLE
3D AUDIOLOGY SCANNERS



OEM

Want a unique design
for one of our 3d scanners?
We'll create it to match your ideas and needs.



MADE IN GERMANY

Our goal is to consistently
deliver the highest quality and facilitate
streamlined workflows for your company.



36 MONTHS WARRANTY

Your satisfaction is our priority! That's
why we offer great confidence in our 3D
scanners with a 36-month warranty.



ISO CERTIFIED

Top-notch quality assured with our ISO
certification at smart optics, ensuring
transparency and excellence.

Our products have firmly established themselves in the audiology industry due to their performance and quality. Our many years of experience and constant exchange with our customers help us to further develop our products in a customer-, quality- and future-oriented manner. Fulfilling customer requirements and finding new, innovative solutions are our daily challenges and therefore part of our core competence. For us, the EN ISO 13485 standard is not only mandatory for the design and manufacture of medical products but also part of our quality commitment and promise. The voluntary implementation of DIN EN ISO 9001 represents the cornerstone of our business activities. We are convinced of our quality, so that all our products have a 36-month warranty.



QUALITY

Quality Control

At smart optics, quality and service
always comply with the ISO 9001 and 13485 standards.



Quality Management System



Quality Management System for Medical Devices

3D SCAN

ATTENTION
TO DETAIL



■ free Stage one



■ free Stage twin

Our audiology products free Stage one, free Stage twin, mono Scan and duo Scan are 3D scanners for the digitization of ear impressions, precisely tailored to your specific needs. As a HIMSA member company, smart optics equips all scanners with a Noah interface as a matter of course, allowing the scanners' software to be integrated into your Noah system.



■ mono Scan



■ duo Scan

■ free Stage one



The free Stage one was created for acousticians who are looking for a modern, open store solution. The open view into the measuring area allows the user to demonstrate to his customers the complete scanning process in an impressive way. The impressions can be inserted one after the other, remarkable is the nearly noiseless operation at a scanning speed of only 13 seconds.

The open standard output formats allow the files to be processed by industrial manufacturing centers or in all industry-standard CAD software solutions. Compatibility with Noah and winIPRO is also ensured.

The slimly designed 3D scanner can be used in even the smallest branches.



FEATURES

- ✓ Quick start function
- ✓ Annotate and comment
- ✓ Various naming methods
- ✓ Barcode naming *Required: Barcode scanner
- ✓ 3D calibration *Required: 3D calibration object
- ✓ Color texture scan optional (> 20 devices)
- ✓ Project export incl. FTP upload, network drive and e-mail

DUST COVER



The handmade dust cover is non-transparent and water-, dirt- and oil-repellent. Slots especially designed to connect devices exist and ensure a perfect fit.

SCOPE OF DELIVERY

- 1 free Stage one
- 1 Object holder (silver)
- 1 Power cable
- 1 USB cable
- 1 Scanning software with calibration data

MEASUREMENT

Accuracy	< 9 µm
Scan time	13 seconds* (one impression)
Sensor technology	Structured light triangulation with long-life high performance LED
Scan quality resolution	variable
Output format	STL, HPS, PLY, ASCII, MSH

DEVICE INFORMATION

Size (W × L × H)	186 × 292 × 348 mm
Weight	6 kg
Supply voltage	100-240 VAC, 50/60 Hz
Connections	1 USB 1 Power
Touch sensor	—
Open scanning	✓
Warranty	36 months
Warranty extension	 12 months

SOFTWARE

Scanning software	aural Scan
Compatible with Noah	✓
Compatible with winIPRO	✓

*Plus matching time 3-10 seconds, depending on PC configuration.

■ free Stage twin



The free Stage twin turns any workplace into an eye-catcher. The modern, slim design of the 3D scanner combines its elegant look with a robust construction. The open scanner simplifies workflows and gives users the opportunity to let their customers experience the complete scanning process in an impressive way. The free Stage twin can scan two impressions simultaneously. With the help of the coloured needle adapters, the assignment of the impressions is visually simplified. The user can decide whether the 3D data is to be captured monochrome or whether marked textures are to be made visible with the help of a color scan.

The touch sensor of the free Stage twin allows starting the nearly noiseless scanning process directly at the scanner. The open standard output formats enable the files to be processed by industrial manufacturing centers or in all industry-standard CAD software solutions. Compatibility with Noah and winIPRO is also ensured.

The free Stage twin impresses with its high quality, making it the perfect partner for hearing care professionals.



FEATURES

- ✓ Quick start function
- ✓ Annotate and comment
- ✓ Various naming methods
- ✓ Barcode naming *Required: Barcode scanner
- ✓ 3D calibration *Required: 3D calibration object
- ✓ Color texture scan
- ✓ Project export incl. FTP upload, network drive and e-mail



DUST COVER



The handmade dust cover is non-transparent and water-, dirt- and oil-repellent. Slots especially designed to connect devices exist and ensure a perfect fit.



SCOPE OF DELIVERY

- 1 free Stage twin
- 2 Object holders (blue and red)
- 1 Power cable
- 1 USB cable
- 1 Scanning software with calibration data

MEASUREMENT

Accuracy	< 9 µm
Scan time	13 seconds* (two impressions simultaneously)
Sensor technology	Structured light triangulation with long-life high performance LED
Scan quality resolution	variable
Output format	STL, HPS, PLY, ASCII, MSH

DEVICE INFORMATION

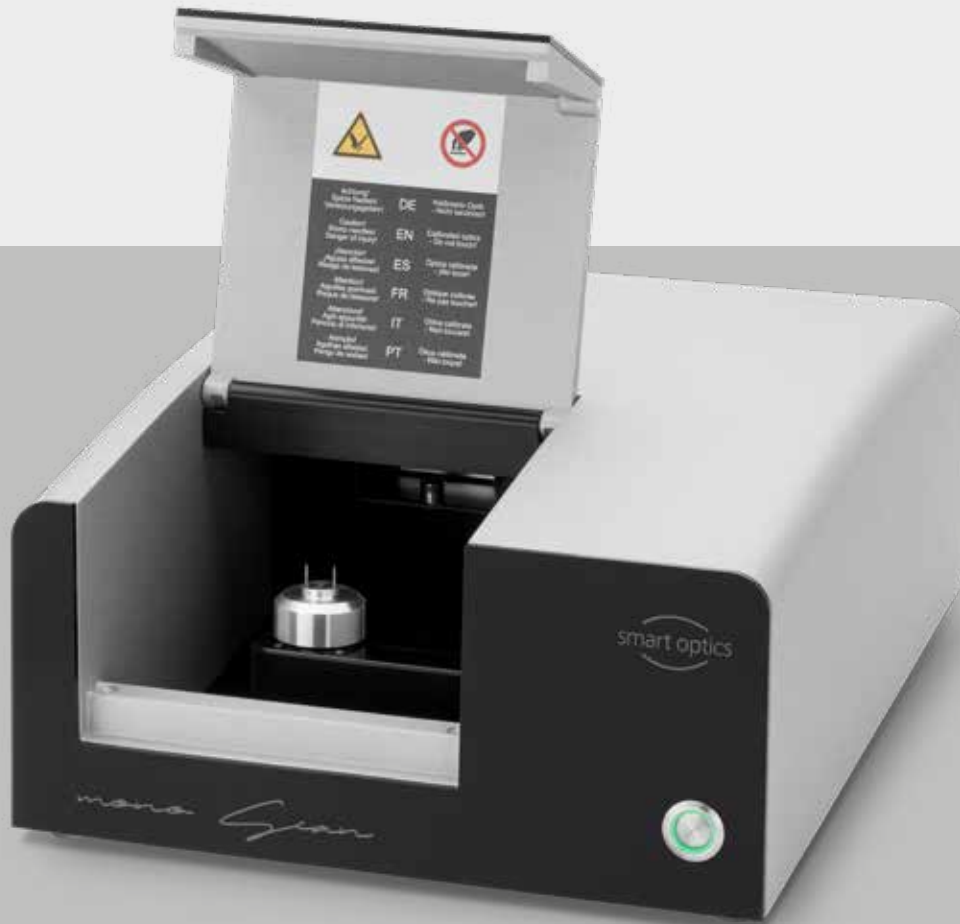
Size (W × L × H)	186 × 292 × 348 mm
Weight	6.5 kg
Supply voltage	100-240 VAC, 50/60 Hz
Connections	1 USB 1 Power
Touch sensor	✓
Open scanning	✓
Warranty	36 months
Warranty extension	 12 months

SOFTWARE

Scanning software	aural Scan
Compatible with Noah	✓
Compatible with winIPRO	✓

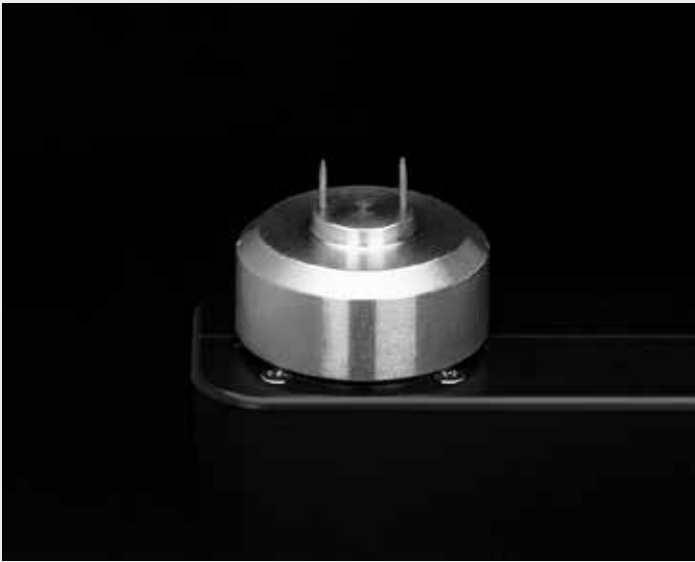
*Plus matching time 3-10 seconds, depending on PC configuration.

■ mono Scan



The mono Scan from smart optics allows generating 3D data from ear impressions. The handy desktop scanner is the digitization entry-level solution for ENT doctors' offices and smaller shops. The mono Scan offers a particularly cost-effective basis for creating digital ear impressions and stands out due to its elegant appearance.

A single impression can be recorded within a very short time. Standard open output formats facilitate the connection to industrial manufacturing centres or to your own CAD software.



FEATURES

- ✓ Quick start function
- ✓ Annotate and comment
- ✓ Various naming methods
- ✓ Barcode naming *Required: Barcode scanner
- ✓ 3D calibration * Required: 3D calibration object
- ✓ Color texture scan optional (> 20 devices)
- ✓ Project export incl. FTP upload, network drive and e-mail



SCOPE OF DELIVERY

- 1 mono Scan
- 1 Object holder (silver)
- 1 Power cable
- 1 USB cable
- 1 Scanning software with calibration data

MEASUREMENT

Accuracy	< 9 µm
Scan time	13 seconds* (one impression)
Sensor technology	Structured light triangulation with long-life high performance LED
Scan quality resolution	variable
Output format	STL, HPS, PLY, ASCII, MSH

DEVICE INFORMATION

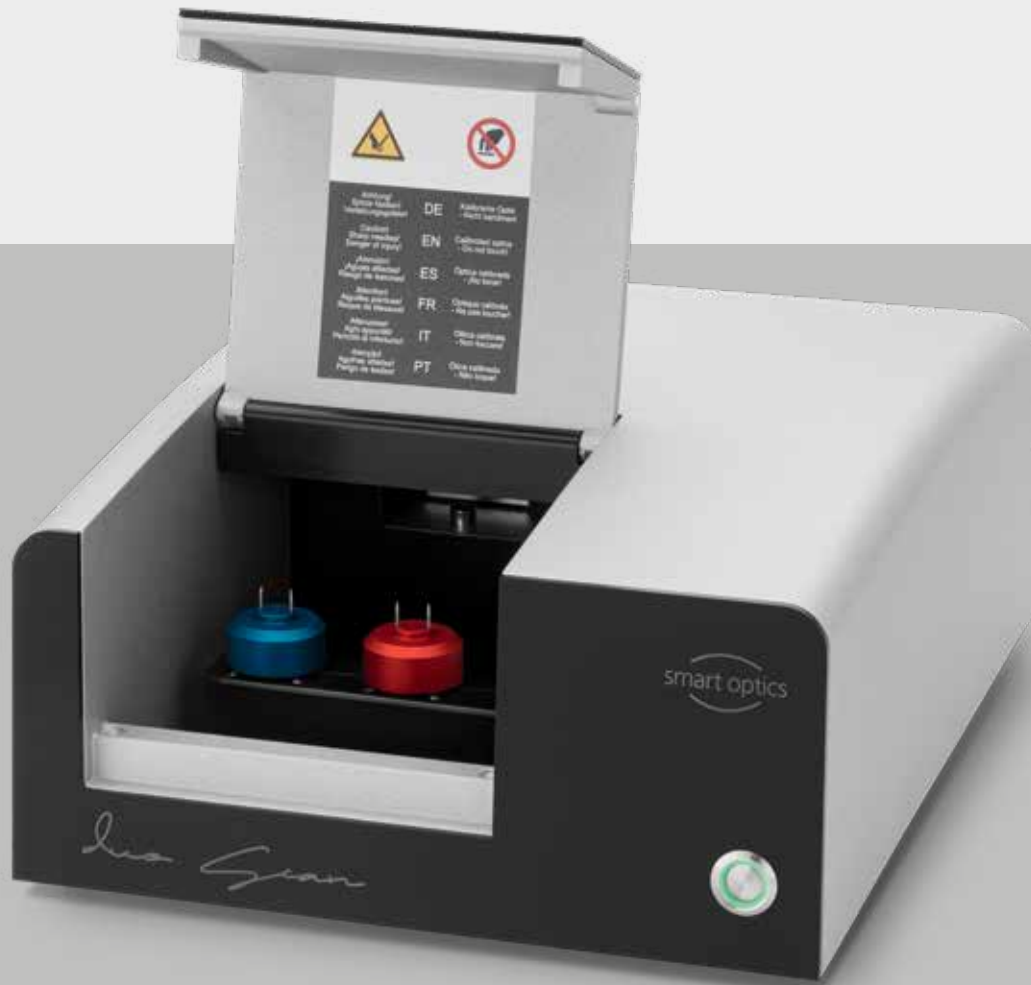
Size (W × L × H)	280 × 332 × 135 mm
Weight	5.5 kg
Supply voltage	100-240 VAC, 50/60 Hz
Connections	1 USB 1 Power
Warranty	36 months
Warranty extension	 12 months

SOFTWARE

Scanning software	aural Scan
Compatible with Noah	✓
Compatible with winIPRO	✓

*Plus matching time 3-10 seconds, depending on PC configuration.

■ duo Scan



The duo Scan is a reliable 3D scanner for digitizing ear impressions and was designed for daily use in ENT doctors' offices, shops and production. The compact, powerful scanner can be added seamlessly to any workstation.

Its unobtrusive design and the pleasant operating sound level are an advantage when the device is up inside the shop. The short scanning time ensures a high daily throughput.



FEATURES

- ✓ Quick start function
- ✓ Annotate and comment
- ✓ Various naming methods
- ✓ Barcode naming *Required: Barcode scanner
- ✓ 3D calibration *Required: 3D calibration object
- ✓ Color texture scan
- ✓ Project export incl. FTP upload,
network drive and e-mail

SCOPE OF DELIVERY

- 1 duo Scan
- 2 Object holders (blue and red)
- 1 Power cable
- 1 USB cable
- 1 Scanning software with calibration data

MEASUREMENT

Accuracy	< 9 µm
Scan time	13 seconds* (two impressions simultaneously)
Sensor technology	Structured light triangulation with long-life high performance LED
Scan quality resolution	variable
Output format	STL, HPS, PLY, ASCII, MSH

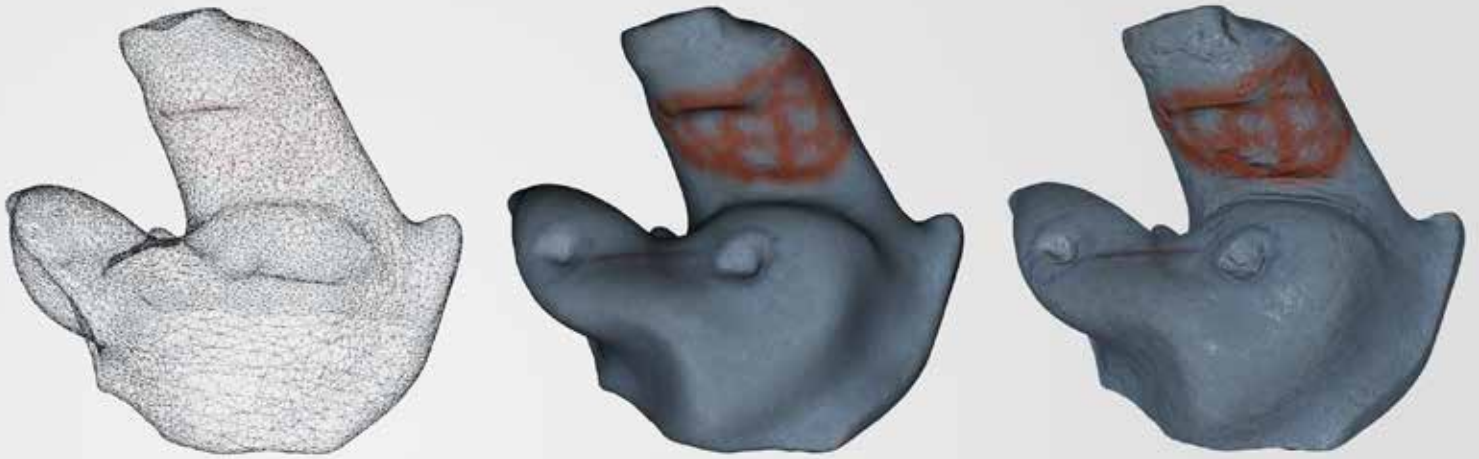
DEVICE INFORMATION

Size (W × L × H)	280 × 332 × 135 mm
Weight	6 kg
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Warranty	36 months
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SOFTWARE

Scanning software	aural Scan
Compatible with Noah	✓
Compatible with winIPRO	✓

*Plus matching time 3-10 seconds, depending on PC configuration.



SCANNING SOFTWARE

AURAL SCAN

Precise. Efficient. QM-compliant.

smart optics' 3D audiology scanners are equipped with the aural Scan scanning software. aural Scan was developed in close contact with audiologists to optimize the digitization of ear impressions (individually or in pairs) and to design an efficient workflow.

aural Scan is a reliable and stable software for strenuous everyday life with a modern, structured appearance. The focus is on communication and accuracy. Ear impressions can be digitized quickly with aural Scan. User instructions offer a safe guideline through all work steps.

aural Scan is completed by useful features that facilitate the workflow and save valuable time.

At the beginning of the digital workflow comes the scan.

The process starts directly to support fast working. Names can be assigned at any time, automatically, manually or optionally by means of barcodes. The system is flexible and can be adapted to individual specifications.

All software tools are clearly arranged and identified by means of appealing icons. The 3D viewer has variable views of scans and features correction functions. Editing notes can be recorded both as pinpointed annotations and project comments. For jobs where every detail of the surface texture is important, the colored texture scan can be activated.

The export function facilitates order communication: The completed scan project can be saved as a ZIP archive, sent by email or uploaded to an FTP server. A configurable PDF document clearly summarizes the orders data.



When HIMSA's Noah is in use, the integrated interface allows scanner workstations to be integrated into the Noah system. The Noah patient browser is the starting point for the scanning process: Simply select the patient and start aural Scan. Noah workstations without a scanner can be enabled to use aural Scan to view scans.

aural Scan can be adapted to different needs. Among others, the following can be configured: Language (Chinese, Czech, English, French, German, Greek, Italian, Japanese, Korean, Portuguese, Romanian, Russian, Spanish and Turkish), file formats (STL, HPS, PLY, MSH and ASCII), file storage, scan

strategy, quality, automatic cutting or also the impression color. aural Scan can work with individual user profiles.

All aural Scan functions mentioned above are included in the standard scope of delivery (the *rescanning* functions are not available for mono Scan and free Stage one).

smart optics' 3D scanners and software meet the highest quality standards. Thanks to regular axis calibration, scans always achieve a high level of accuracy.



AURAL SCAN SYSTEM REQUIREMENTS

Empfohlen:

- Windows 11 - 64 bit
- Quad Core CPU, i5
- 8 GB RAM
- USB 3.0 Port
- HDD with approx. 80 GB of free disk space
- Graphics card with min. 2 GB RAM

■ smart Cart



Maximum flexibility for modern workflows:

The smart Cart combines proven 3D scan quality with maximum ease of use – wherever you need it. Equipped with the powerful free Stage scanner (either one or twin), an integrated PC including Wi-Fi connection and a touch monitor, the mobile scanning system is immediately ready for use.

Thanks to the uninterruptible power supply with a battery life of around 45 minutes, the smart Cart can be moved effortlessly through your workrooms. In seconds, the scans can be carried out binaurally directly with the customer, without a socket. Ideal for those who want to flexibly use their scanner at different workplaces without sacrificing quality or stability.

smart Cart - your mobile scanning solution when efficiency and freedom of movement are required.



FEATURES

- ✓ Integrated free Stage scanner (one or twin)
- ✓ PC with Wi-Fi connection
- ✓ Fixed-mounted touch monitor
- ✓ Uninterruptible power supply with approx. 45 minutes runtime
- ✓ Can be used anywhere
- ✓ Compact, robust design
- ✓ Pre-configured and ready to use



SCOPE OF DELIVERY

smart Cart

Trolley
Uninterruptible power supply
PC
Display

Scanner

free Stage (one or twin)
Object holder
Power cable
USB cable
Scanning software with calibration data

P C	
Model	Lenovo ThinkCentre M720q
Processor	Intel Core i5 - 6 cores
Graphics card	Intel UHD Graphics 630
Arbeitsspeicher	16 GB
Memory	256 GB
Operating system	Windows 11 Pro
Network	Wired and Wi-Fi
Display	Touchscreen

UNINTERRUPTIBLE POWER SUPPLY	
Model	Eaton Ellipse PRO
Weight	7.3 kg
Power	850 VA / 510 W
Input voltage	230 V
Battery life	approx. 45 minutes under typical load
Battery type	Sealed, lead-acid battery
Battery replacement	Replaceable
Temperature range	0° to 35°C (32° to 95°F)
Noise level	< 25 dB at 1 meter

■ 3D CALIBRATION



Meet the growing requirements of quality management with the 3D calibration function included in the aural Scan scanning software.

For the highest requirements, e.g. in quality management, smart optics recommends the optional 3D calibration, for which a special 3D calibration object is required (available as an accessory). The extensive process calibrates the sensor, the axes and the mesh calculation. After validation, aural Scan creates a test report that documents the current accuracy.

A video in the smart optics University explains how to use the 3D calibration and where you can access the protocols.

Would you be interested in expanding your knowledge on 3D calibration? Our sales team is eager to assist you.



PRECISION

ACCURACY IS OUR STRENGTH

Attention to detail, German engineering, quality and accuracy are not just empty words for smart optics, but are part of the company's cornerstone and are responsible for the fact that the 3D scanner manufacturer is a company with heart and mind.

The medium-sized company was founded in Bochum in 1997 and keeps its roots in the field of measurement technology to this day. The first scanners went into series production in the 2000s, and since then, the Bochum-based company has been developing, producing and expanding its product portfolio.

At smart optics, all company areas are united under one roof. This ensures the smooth running of all processes. The 3D scanners made in Germany set international standards and enjoy the highest level of customer satisfaction.

■ 2Create Plus / 2Create



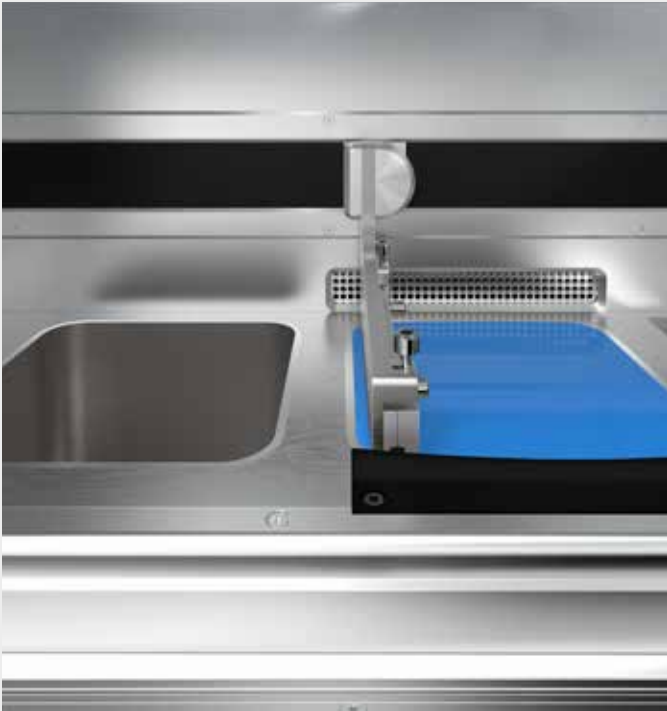
The future of otoplastics: titanium fittings on the rise – with 2onelab and smart optics!

Titanium sets new standards in otoplastics. More and more hearing care professionals and manufacturing companies are relying on otoplastic titanium fittings – and for good reason: titanium is biocompatible, extremely durable, corrosion-resistant and at the same time particularly light. It offers maximum wearing comfort and is ideal for permanent use in the ear.

In order to make the most of this progress, smart optics, in collaboration with 2onelab, offers an innovative complete solution for manufacturers: a specially developed 3D printer that enables the precise production of titanium otoplastics – economically, reliably and at the cutting edge of technology.

You benefit from high-precision manufacturing, maximum material quality thanks to titanium, and efficient workflows from digital molding to the finished product. Step into the future of otoplastics now and take your production to the next level – with the combined expertise of smart optics and 2onelab.

TECHNICAL DATA		
Device	2CREATE Plus	2CREATE
Process	Powder Bed Fusion	Powder Bed Fusion
Laser	400W	250W
Build volume	150 x 150 mm, height 100 mm	100 x 100 mm
Buildenvelope size	150 x 150 mm, height 100 mm	100 x 200 mm
Coater	Linear coater	Rotation precision coater
Material (Titanium)	Ti6Al4V	Ti6Al4V
Inert gas	Argon	Argon
Layer thickness	30 - 80 µm	30 - 80 µm
Weight	450 kg	450 kg
Dimensions (W x D x H)	720 x 860 x 1790 mm	720 x 860 x 1790 mm

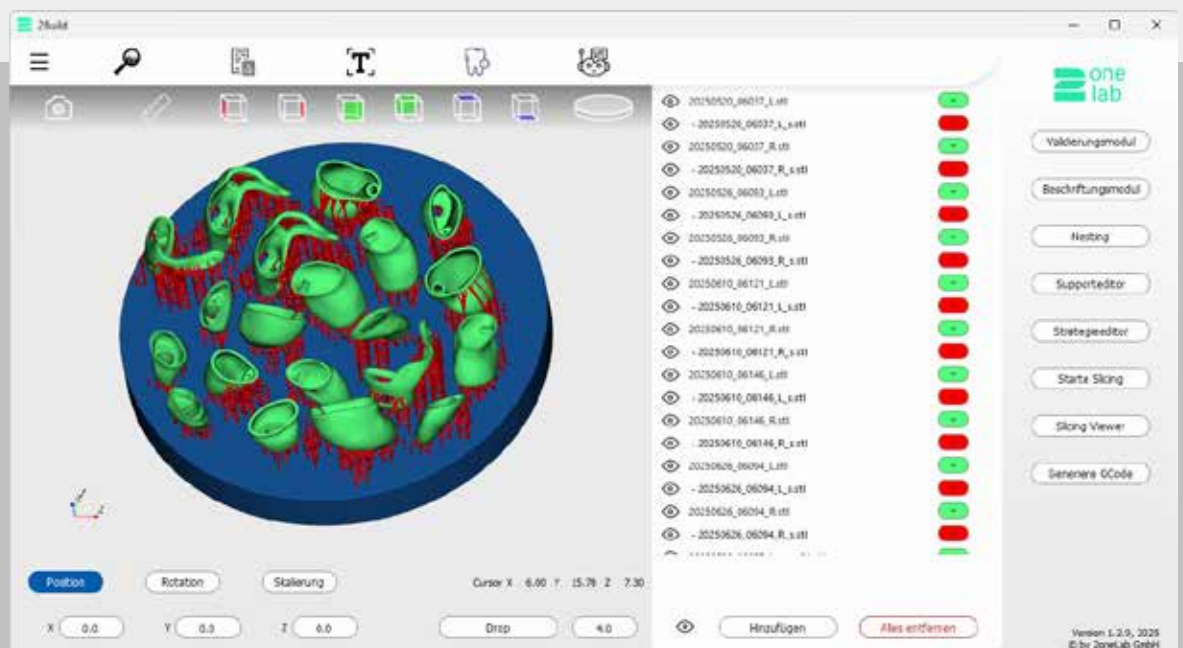


Linear coater of the 2Create Plus



Rotation precision coater of the 2Create

■ 2Build



2Build - The powerful & advanced CAM solution for 3D printing

The integrated 3D software solution for additive metal production developed by Zonelab optimizes the workflow from the 3D part to successful printing. Print exactly what you want - exactly how you want it.

✓ Nesting

Automated nesting of components – saves time, even during post-processing.

✓ Support / Generation of support structures

Sophisticated, fully automated support creation

✓ Strategy editor

Parameter selection for different powder types

✓ Slicing

Quick slicing calculation of the job file, ready for printing.

■ Accessories



2Sieve - Ultrasonic sieving system

The 2Sieve sieving system ensures a consistently high powder quality and thus optimal printing results in production. Efficient sieving recovers unused powder, minimizing material loss and maximizing efficiency.



2Clean - Powder recovery

Effortless cleaning with the 2Clean cleaning system. The 2Clean consists of an explosion-proof, compressed air-powered vacuum cleaner that meets the strict standards of the ATEX directive (zones 1, 2, 21, 22).



BRAINPOWER

& FUTURE THINKING

Our products have firmly established themselves in the dental and audiology industry, as well as in electronics, due to their performance and quality. Our long-standing experience and the constant exchange with our customers help us to further develop and improve our products in a customer-, quality- and future-oriented manner.

Fulfilling customer requirements and finding new, innovative solutions are our daily challenges and therefore part of our core competence. We concentrate on implementing projects quickly and in a targeted manner, in close cooperation with our customers and development partners.

WE ARE HERE FOR YOU

We focus on people – our customers as well as our employees. Without the commitment of our employees, we would not be able to grow and be successful on the market.

Short facts

☆ Founded in 1997

🏠 Bochum | Germany

👤 > 50 employees

💻 > 2,000* dental scanners
> 1,000* audiology scanners (*per year)

👥 > 200 international partners

WE GIVE YOU PRECISE ADVICE

Upon request, you will receive detailed advice on our products: on site, by phone or via the Internet. The consultation is primarily about establishing precisely the right focus for your needs. Increase the performance of your company with our solutions.

WE PAY ATTENTION TO EVERY DETAIL

Our services

- OEM and standard solutions
- Product training for our resellers in the fields of sales and support
- Long-term project planning
- Fulfilment of high quality standards in manufacturing and development
- Support with market approvals for our customers' target markets
- Development of complex logistical processes



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