

3D-Printing Solutions for perfectly printed Hearing Aid Parts



HEARING

rapidshape

About 10 years ago, we launched our first printer. Since then, we have been contributing to extraordinary moments in the lives of others: The romantic exchange of rings at the altar, the moving sound experience with the right hearing aid, a radiant smile after a visit to the dentist. We are proud of this, and these moments continue to drive us.

The challenges of today are not necessarily those of tomorrow. Intuiting the new ideas originating from our customers, then developing those ideas specifically for them before they even express those ideas to us themselves will always remain our guiding principle.

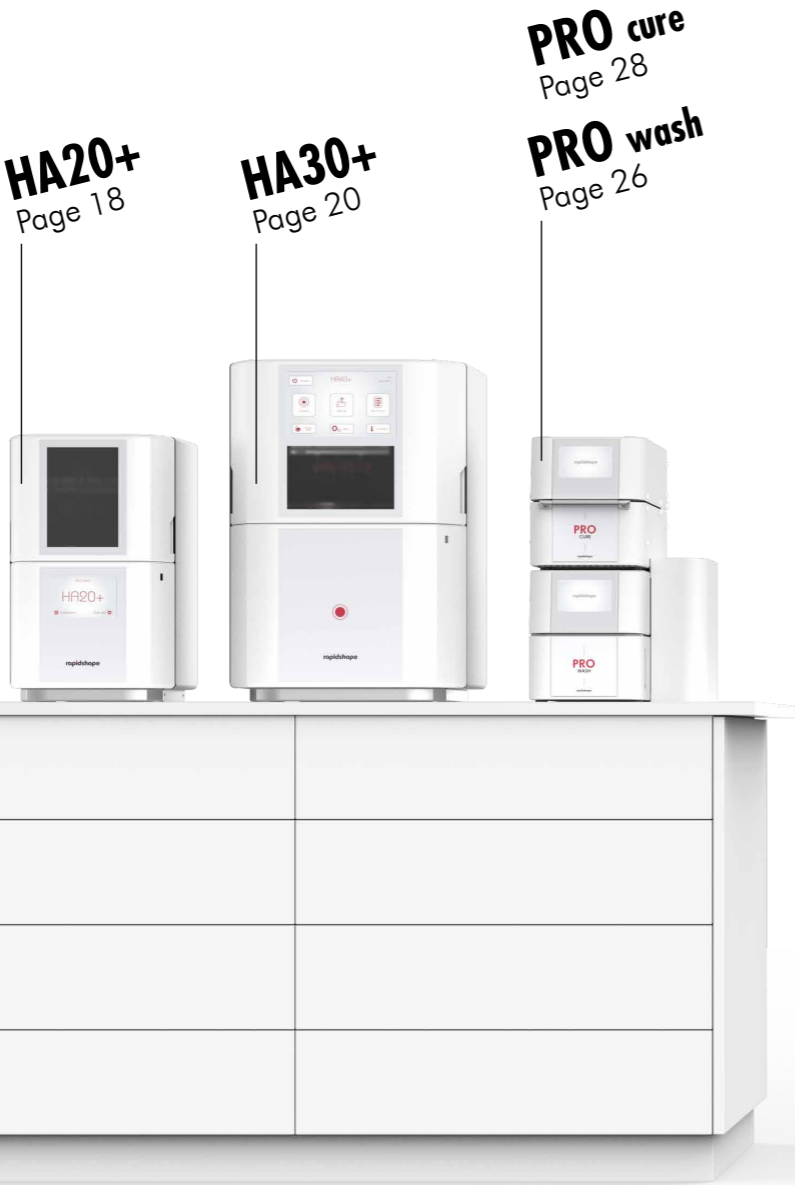
And the next 10 years? The pandemic has taught us a lot. It has also taught us that planning for the future is possible, but not necessarily realistic. But one thing is clear: the world keeps changing and we will all change with it. It is our ideas and decisions that keep us moving forward.



Andreas Schultheiss CEO

Andreas Geitner CTO

Professional Solutions for Audio Retailers, Shops, Labs and Producers



We are Rapid Shape

From a start-up to an international respected company

A company from the south of Germany. In 2011, we decided to manufacture our own 3D printers. In this case, we made a virtue out of necessity. Because the offers on the market were simply not satisfactory for our parent company Schultheiss GmbH, which manufactures jewelry casting technology for processing precious metals. So, if nothing fits, something suitable is made. This is how our first printers came about. Today, we employ around 200 people at six locations in five countries around the world.

Our standard

Not only to meet our customers' expectations, but to exceed them - that has always been our standard. We are constantly developing our products, as well as ourselves, and providing the best solutions for our customers. As a result, our product portfolio has grown enormously since its foundation in 2011.

There's always a solution

3D printing should save you time - not rob you of it. This is exactly where our patented solutions come in. For example, our printers have automatic separation units to relieve you of the task of separating the printed parts from the build platform and start the next print job independently. In addition, the automatic refill unit ensures that there is always a sufficiently high level of print material in the reservoir. Manual refilling is no longer necessary. No idle time no cleaning time.*

The quality

Before each 3D printer leaves our manufacturing facility, it undergoes several rigorous quality checks. One of the most important steps in this is printing. Validated print jobs are printed on each printer and then they are checked for dimensional accuracy. This ensures that the printers meet our high-quality standards and can be sent along to you.

Andreas Laboratory

Simone Customer Service

Chi Distribution

Robin Product Management

Placide Technical Service

* More extras and a complete overview of our solutions can be found starting on page 18.

Globally Activ

- Heimsheim **Germany** _____
- Pécs **Hungary** _____
- Raleigh, NC **USA** _____
- Tokyo **Japan** _____
- Suzhou **China** _____

- Curitiba **Brasilia** _____



Every Machine is an All-Rounder

This is how fast
it can go*

30 x earmold with cone
printed in approx. 35 minutes

30 x cast for silicone
printed in approx. 35 minutes

33 x integrated faceplate
printed in approx. 30 minutes

33 x custom shell ITE`s
printed in approx. 30 minutes

33 x hearing protection
printed in approx. 30 minutes

Rapid Shape 3D printers for hearing aid parts are extremely versatile. With them, you print validated end products at top speed.



* All times refer to benchmark models with an HA20+ equipped with force feedback technology.

Why we are so Fast

Why Vat Polymerization Technology? Why DLP?

There is a huge amount of different 3D-printing technologies available. We made conscious decisions about choosing Digital Light Processing (DLP) for a simple reason: Only by using DLP we can ensure high repeatability over a long period of time when printing high-resolution parts.

DLP is one technical way of vat photopolymerization. Hereby liquid resins are used, the so called photopolymere in this context, which are being cured photochemical by light. As using light as tool, a very precise production is possible. Simultaneously, only lowest energy and resource consumptions are necessary to get from the resin as raw material to the finished printed part. Thereby the highest material turnover rate per time and thus the highest productivity in comparison to other 3D-printing technologies can be achieved. Due to precise manufacturing and smart ideas being developed in-house, a high rate of resource-efficiency is also an effect of this technology.

All named parameters in combination allow us to produce complex geometries in a cost-efficient, sustainable way and is therefore our technology of choice by conviction.

**No
idle time**

**Highest quality
is our standard**

Speed and precision with Force Feedback Technology

We were often asked for the reason being that fast - Alongside many causes, especially our patented Force Feedback Technology is an important reason. When separating the very first layer of the part from the reservoir bottom, normally undefined forces are at work. To prevent the part from being damaged, the separation process has to be proceeded carefully and slowly.

To face this critical point we have a solution called Force Feedback Technology. By measuring the forces involved directly on the part, we ensure that our 3D-printer can increase his processing speed up to the maximum - but always in a safe way! In addition, support structures can be constructed noticeable thinner what simplifies rework after printing. The results of Force Feedback in sum are faster printing times while having a constant high quality level.

- First-class image quality**
- Detailed print results**
- Durable and proven components**
- Wide range of materials**
- Cost-effective materials**
- Easy handling**
- Fast results**
- Low entry costs**

Intelligent Connectivity

Intelligent Connectivity – Less effort and higher process reliability

The Intelligent Connectivity feature enables the communication between your printer and PRO wash and PRO cure post processing devices. Once a connection is established between these devices, the printer can forward completed print jobs to the finishing devices for further processing. There, the cleaning and exposure process is carried out on the basis of the transmitted data.

Post processing devices – You can rely on the automated validation

You can rely on certified processes between material and system manufacturers. Not only 3D printing but also cleaning and post-exposure are done automatically with validated parameters. The risk of incorrect processing is excluded.

Our Solutions for Increased Productivity

Automatic Separation Module (ASM) – Less downtime, more productivity and up to 20% material savings

Increase your productivity with seamless, adjacent print jobs, without interruption. The Automatic Separation Module (ASM) allows you to produce multiple print jobs in a self-determined sequence (job queues) without having to remove the build platform from the printer, detaching the print, unload the print job or clean the platform.* Unused material flows back into the reservoir.

Automatic Resin Refill

Is there still enough resin material inside the reservoir? With the Automatic Resin Refill it's no longer your job to check the filling level. Modern sensor techniques verify the filling level inside the reservoir to the second. Refilling of resin material from the connected resin bottle is automatically started, in the case that the filling level reaches a critical minimum niveau.*



Hearing aid labs

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* Not available for every type of machine.

RFID – Tracking for Your Validated Workflow

Our products support advanced RFID technology to assist you with compliance and workflow tracking. All devices and consumables are equipped with RFID technology. After filling and inserting the material reservoir into the printer, simply scan the bottle and check on the printer display that you have selected the correct material and that the best-before date has not passed.

In addition, when the print process is started, the printer automatically checks whether the material selected in the CAM software matches the material in the reservoir in order to avoid incorrect print jobs.



Material identification



The resin bottle is scanned at the printer. The material designation and the best-before date of the material immediately appear on the printer's display.



HA20+

The economical and professional 3D printing solution for hearing aid labs and mid-sized manufacturers



**PRO wash
PRO cure**

The HA20+ has a print area for approximately 30 pieces and combines the fastest available speed (patented force feedback technology) for immediate patient care with high accuracy and full material choice. With the high-quality, durable DLP printer, you get consistent quality every time - at an attractive price.

Clean and cure your parts directly after printing with the PRO wash and PRO cure post processing units for an optimal and validated end-result.

Performance parameters	HA20+
Build volume	133 x 75 mm
Native pixel	+/- 34 µm
Max. part height	90 mm
Light source	385 nm UV LED
Resolution	Full HD
Dimension (W x H x D)	335 x 541 x 349 mm
Connections	WiFi, LAN, USB
Control	7" Touchscreen



Tailor-made for small labs



Low acquisition cost



Open system

Optional Force Feedback

Material identification (RFID)

Certified auto calibration (ACCS)

Remote Access available



HA30+

Fast, flexible and semi-automatic thanks to the separation module, intelligent connections and validated workflows



**PRO wash
PRO cure**

The powerful HA30+ once again sets standards in terms of quality and productivity. Thanks to the integrated, patented Automatic Separation Module (ASM), your printed parts are automatically separated from the build platform after the printing process is finished and then gathered in a collection basket. The next print job is started immediately, without manual intervention.

Clean and cure your parts directly after printing with the PRO wash and PRO cure post processing units for an optimal and validated end-result.

Performance parameters	HA30+
Build volume	151 x 85 mm
Native pixel	+/- 39 μ m
Max. part height	155 mm (with ASM: 70 mm)
Light source	385 nm UV LED
Resolution	Full HD
Dimension (W x H x D)	480 x 690 x 410 mm
Connections	WiFi, LAN, USB
Control	10" touch-screen



Automatic Separation Module (ASM)



User friendly



Open system

Resin temperature control

Integrated Force Feedback

Material identification (RFID)

Certified auto calibration (ACCS)

Remote Access available

Knowledge Center Access



HA50+

Highly productive, fully automated standalone printer with large print volume, enables series production and fast print times with consistently high accuracy






PRO wash
PRO cure

The HA50+ is our new workhorse for printing any job. With a printing range three times larger than the HA30+ and the optional, patented separation unit, you can catapult the number of pieces per day many times over. Your printed parts are automatically separated from the build platform after printing is finished and gathered in a big collection basket. The next print job is started immediately, without manual intervention. In addition, the automatic refill unit ensures that there is always a sufficiently high level of print material in the reservoir.

Clean and cure your parts directly after printing with the PRO wash and PRO cure post processing units for an optimal and validated end-result.

Performance parameters	HA50+
Build volume	231 × 130 mm
Native pixel	+/- 30 μm
Max. part height	300 mm (with ASM: 100 mm)
Light source	385 nm LED
Resolution	4K
Dimension (W × H × D)	600 × 1660 × 570 mm
Connections	WiFi, LAN, USB
Control	10" touch-screen

-  Automatic Separation Module (ASM) available
-  Automatic Resin Refill unit available
-  Open system

Automatic Separation Module (ASM)

Resin temperature control

Automatic door opener

Material identification (RFID)

Certified auto calibration (ACCS)

Integrated Force Feedback

Remote Access available



HA90+ with ASM

The automated 3D printer for industrial production. With automatic separation module for hearing aid parts





High reliability, high robustness and reproducible quality over time make this device a 24/7 production unit with industrial projection system and internal cooling for system components. Robot-assisted functions are enabled via the Automatic Separation Module (ASM), placing the printed parts either in the cabinet or on a conveyor belt.



PRO wash
PRO cure

Clean and cure your parts directly after printing with the RS wash and RS cure post processing units for an optimal and validated end-result.

Performance parameters	HA90+
Build volume	232 x 137 mm
Native pixel	+/- 30 µm
Max. part height	80 mm
Light source	385 nm, ultra high power UV LED
Resolution	4K
Dimension (W x D x H)	650 x 1080 1860 mm, incl. Cabinet
Connections	LAN, USB
Control	10" touch-screen

-  Automatic Separation Module (ASM)
-  Designed for industrial continuous manufacturing
-  Optional with cabinet or conveyor belt
-  Automatic Resin Refill unit

Automatic Separation Module (ASM)

Storing for large quantity of printed parts

Automatic Resin Refill

AC controlled interior for continuous use

Certified auto calibration (ACCS)

Remote Access available




PRO wash


Give your components the perfect finish- automated and environmentally friendly cleaning


The PRO wash automatic cleaning system will impress you with its simple operation and process-controlled connection to your printer - for professional and validated finishing of your printed parts.

Thanks to the automatic selection of the appropriate cleaning program and cleaning medium, cleaning of the printed parts is not only process-safe and simple, but also environmentally friendly, using a 2-step principle with pre-cleaning and final cleaning. We have applied for a patent for this intelligent system.

Performance parameters	PRO wash
Volume	119 x 160 x 99 mm
Cleaning time	approx 6–8 minutes (depending on material)
Cleaning medium	Isopropanol, ethanol
Connections	WiFi/LAN
Dimension (W x D x H)	452 x 334 x 289mm (w/ Bottle Holder) 452 x 342 x 295mm (w/ Bottle Holder + Cover)

 Wireless connectivity to printer

 Clean process, no handling of sticky resins

 Reduced smell



Effective computer-controlled cleaning agent use

Easily changeable bottles

Stackable with PRO cure







Post Processing

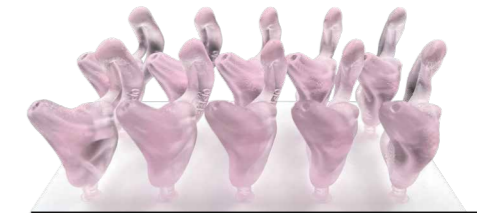
PRO cure

For the perfect finish to your components - 360° curing at the touch of a button

The PRO cure automatic exposure system cures your printed parts homogeneously from all sides thanks to powerful LEDs. The integrated vacuum technology enables excellent curing of the materials. This means that materials from many material manufacturers can be processed in a way that is already validated. The process-controlled connection to your 3D printer ensures that the correct program is always selected automatically and that the mechanical properties and biocompatibility of the end product are achieved. The presets are tested and validated in close cooperation with our material partners to ensure process reliability.

Performance parameters	PRO cure
Volume	179 x 117 x 102 mm
Curing time	approx 6–10 minutes (depending on material)
Connections	WiFi/LAN
Dimension (W × D × H)	243 x 419 x 269 mm
Version	Vacuum, Inert Gas

-  Wireless connectivity to printer
-  Validated process
-  Compatible with various
-  Works with vacuum



360° illumination in one go

Certified Auto Calibration Sensor (ACCS)

Stackable with PRO wash







RS cure XL

A lot of space for many or extra large printed components. The solution for productive manufacturers, that use one or more HA50+ or HA90+ 3D printers

The RS cure XL is based on the proven post-exposure device, the PRO cure, with high-performance LEDs, but with an extra large volume. The device is optimal for post-curing of especially large or numerous printed components. Thanks to the proven 360° luminous exposure and the modern vacuum technology, short post-exposure times are achieved with high quality. The RS cure XL is the perfect supplement to Rapid Shape's full automated 3D-printers. The use of vacuum means, no gas is consumed during use, which significantly reduces the operating costs compared to conventional devices. The investment will amortize – depending on use – in less than one year.

Performance parameters	RS cure XL
Volume (W × H × D)	470 x 375 x 280 mm
Curing time	approx 6–10 minutes (depending on material)
Technology	high-power LED, multiple wavelengths, with vacuum (optional supplemental protective gas)
Control	Touchscreen
Connections	WiFi/LAN
Power Supply	220/230 V, 50/60 Hz, max. 2300 W
Dimension (W × H × D)	650 x 1050 x 800 mm
Weight	~ 150 kg

-  Wireless connectivity to printer
-  Validated process
-  Works with vacuum
-  Extra large volume

Excellent curing

Highest productivity

Constant process repeatability

Significantly reduced operating costs / no gas consumption



CARE PLAN - Our New Service Promise

Free and numerous optional services make Rapid Shape's customer service flexible

Safe results of the highest precision are expected from 3D printing technology in the audiologic field. Perfect printed parts are only achieved through the professional use of the machine and the perfect condition of the 3D printer. A prerequisite for a validated workflow is careful handling of the high-end equipment. In addition, the documentation of all work steps is essential.

Completely customized

Peace of mind 3D printing

Desktop CARE PLAN Modules	Free Services	Care	Care Plus
HA20+, HA30+		1,250€ ^{a)}	2,500€
PRO wash, PRO cure		250€ ^{a)}	500€
Support Agent + Self-Help Tools with latest Software Use the ticketing system; Access articles and videos	✓	✓	✓
Customer Portal Access View the status of your device, consumption and manage your devices	✓	✓	✓
Priority Support Agent Access Call an experienced agent or get reaction with granted max reaction time*		✓	✓
Device Validation Get system check, software updates and recalibration done**		✓	✓
Hot-Swap Service A defective device is swapped, max reaction time grant****			✓
Repair Service Receive discount to repairs-kits and repair following hot-swap****			✓

a) Special offer during the first 6 months (until 02.04.2024) 100% discount in the first year (→ comes free with the machine order) * Maximum reaction time is 4hrs (during regular work hours in CET, EST, CST). Also, phone support access possible.** A device certification document is made available after check. Cost of transport for sensor under calibration is included.*** Cost for transport the device from/to Rapid Shape Service Center included. Repair costs of defective device not included but discounted. Available if machine younger than 36m and machine version still in production.**** Repair discounts currently 30% to all Self-Repairs-Kits and repairs Category A, B, C and D.

Services According to Your Needs

Industrial CARE PLAN Modules	Free Services	Care	Care Plus
HA50+		5,000€	10,000€
RS cure XL		1,250€	2,500€
Support Agent + Self-Help Tools with latest Software Use the ticketing system; Access articles and videos	✓	✓	✓
Customer Portal Access View the status of your device, consumption and manage your devices	✓	✓	✓
Pro-Active Support & Priority Support Agent Access Receive fixes before problems occur; Talk to industry team experts*		✓	✓
Care Visit On-Site including device Validation Get system check, software updates and recalibration done on-site**		✓	✓
Full Consumables Coverage (Exclusive Resin) Select flat fee to limit cost for resin reservoirs, knives, glass plates, etc. ***			✓
Full Repair Coverage Select flat-fee to limit cost for labor, material and other of any repair****			✓

* Maximum reaction time is 4hrs (during regular work hours in Central European Time, Eastern Std Time, China Std Time). Also, phone support access possible. ** With Cure XL, costs for travel and hotel are only included with a concurrent active CARE contract of at least one HA50. *** A free new consumable voucher is granted once machine under subscription has used existing article more than 80% of average life-time. Available only in combination with initial 2x accessory package order. Rapid Shape reserves the right to cancel CARE PLUS when customer operate industrial devices out of their standard specification (e.g. more than 16hrs per day / more than 6 days per week) **** Discount 100% to all Self-Repairs-Kits, repair works, costs for travel and hotel. Vandalism and suspected damage is excluded; Module available only if machine younger than 36m and still in production.

We take care of you and your Rapid Shape equipment

In addition to the numerous free services, Rapid Shape offers new, flexibly bookable service subscriptions. Rapid Shape's new service promise CARE and CARE PLUS goes far beyond the usual service standard and now offers optionally bookable all-round carefree packages.

Customer concerns are prioritized and the service team takes care of maintenance, care or repair of the equipment on site. With the „Hot-Swap Protection“ offer, replacement devices are made available quickly so that no production downtime is to be expected. With the Care Plan, you can go about your work worry-free. Have fun!

New and flexible bookable CARE and CARE PLUS

Contemporary Customer Service - The New Customer Portal

Real time information

Transparency and user-friendliness are the focus of our newly designed Customer Portal. You can look forward to our comprehensive Customer Portal, in which information about your 3D printing process, as well as many other relevant information about your devices, is clearly bundled and available to you. In real time!

With the new Customer Portal, we have succeeded in creating a modern cockpit for you. Take a seat, control and check all processes on your clearly arranged dashboard like a pilot.

Clearly structured overview of all processes

Your goal always in sight, you have full control. The new Customer Portal gives you a comprehensive overview of all processes. Monitor the status of your 3D print and discover numerous other functions.

Real time printer status

Print job documentation

3D printer workload overview

All is Ready

Validation in the digital age

In the medical field, documentation of the used material is extremely important. Every application must be fully traceable. If desired, you can make all procedures transparent to your customer. You get reliable validation, because our laboratory team has already tested and verified over 200 resins for you. New ones are being added all the time.

To ensure a smooth workflow, the fill level of the tank, the temperature and the fill level of the material bottle in the refill unit are displayed to you. Dates for maintenance are also displayed. These should be observed so that your validations are preserved.

* HA 50+ / The available information varies depending on the printer type

We won't let You Down

Our service team

If you have technical problems, we won't let you down! Our technical service team is spread across five service hubs internationally and will get any downtime up and running again. Whether remotely from the service workshop or directly at your site, we will find a way. You can reach our technical service team by phone, email and, WhatsApp. Or you can use our online appointment booking system and book an appointment of your choice from the comfort of your own home.

5 Service hubs worldwide

Over 1 million maintenance and service kilometers

Remote & on-site

Robin Service-Team

Our Experience is Your Value

No one is born a master

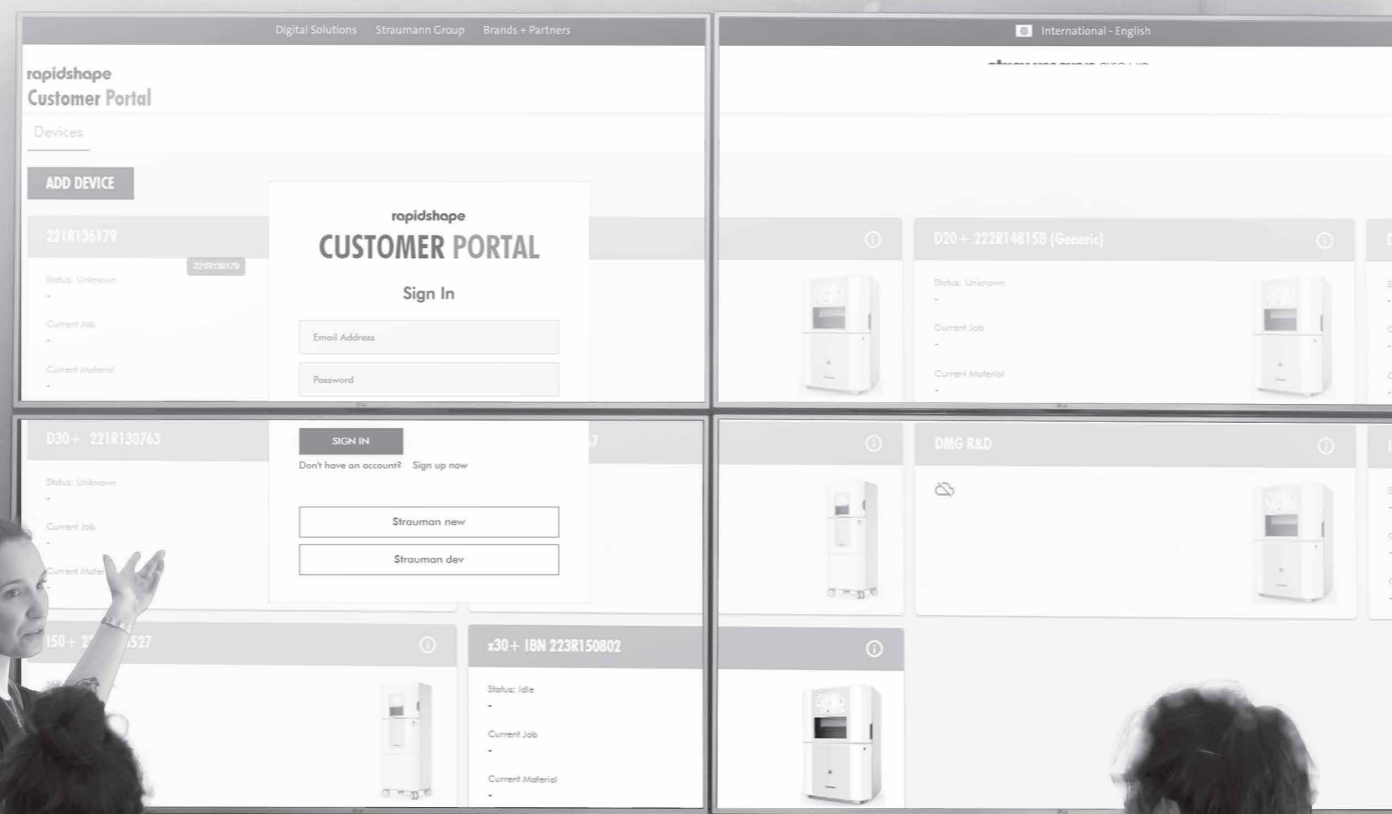
Extensive training in the use of our printers will help you to tailor the print results perfectly to your needs. Afterwards, you will receive a training certificate and will be well-prepared to get started with your 3D printer.

Know-how for Your Job

We like to share

Get access to our knowledge, bundled in our Rapid Shape Knowledge Center! With every product you can dial directly into the Knowledge Center. When you scan the QR code on your device with your smartphone, you will be redirected to the mobile view of the Knowledge Center. * There you can access informative brochures, technical documentation, numerous tutorials and downloads. If you prefer to browse our Knowledge Center from the comfort of your PC, we will send you your individual access data by E-mail.

**Get first-hand tips and tricks
— at our headquarters in
Heimsheim or at your own site**



Showroom at the Headquarter



Heimsheim, Deutschland

For Best Results

Our material partners

DeltaMed

DETAX



Rapid Shape and the leading material manufacturers combine their strengths for maximum flexibility and unlimited availability. This allows us to support a jointly validated workflow throughout. In close cooperation and at the highest level, new material parameters are created every day that are precisely matched to our products and that bring you the best possible end results.

Over 200 validated materials are available in our material library, each with a tested and approved set of printing parameters. You'll receive regular material updates for your material library to stay current and have the widest selection available.

Yet one thing always remains the same: You have the choice of which material you want to work with. With the free parameter sets, you can create and manage your own parameter sets.

An open system with over 200 validated materials included



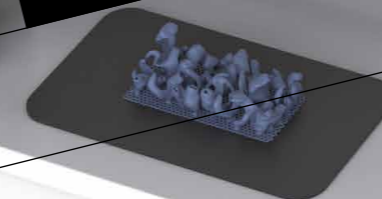
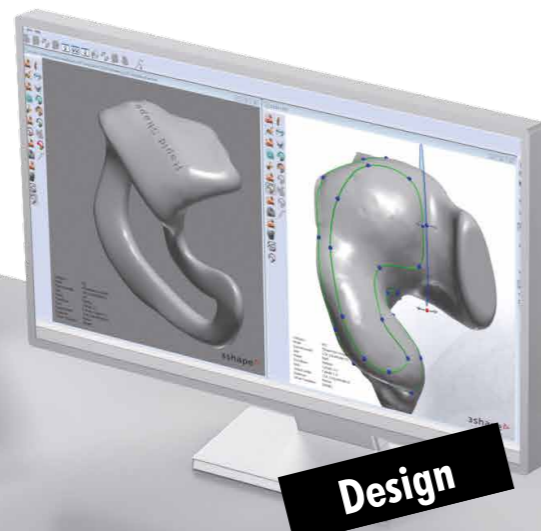
Go Your Way

Our workflow partners



While the production of 3D-printed parts is always subject to the same workflow, with our strong workflow partners, all avenues are open to you. With the latest version of our Netfabb CAM software, we offer a seamless connection to 3Shape. That means: Design parameters, data transfer, and print preparation functions are preconfigured and automated.

Material pre-selection, part orientation and positioning on the build platform, adding necessary support structures, and the final creation of the print data - our software does it all for you. What else is there to do? Press "Start."



We Accompany You on Your Way

Satisfied customers

Comfoor



elacin{
hearing protection

GEERS
GUTES HÖREN

HÖRLUCHS®
MADE IN GERMANY

sonova
HEAR THE WORLD

Over 4,500 satisfied customers worldwide can't be wrong. This is the best proof of quality and service. We maintain a trusting relationship with our customers. Many have been with us since our company was founded in 2011 and know how passionate we are about developing high-quality 3D-printing machines. Our success is based on this passion, the comprehensive expertise of our engineers and that of all our employees.

We will be happy to advise you individually about your needs.

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„Breaking new ground and driving the growth of your business is always exciting. Growth requires making wise decisions, having a lot of courage and relying on the support of reliable partners.“

Andreas Schultheiss
Founder and CEO

rapidshape

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