

3D Printers for Industrial Applications



INDUSTRY

rapidshape

12 years ago we launched our very first printer. Ever since we have been contributing to extraordinary moments in other people's lives: When exchanging wedding rings in front of the altar, when the perfect fitted hearing aid let people discover an emotional sound experience, when smiling bright to both sides after leaving the dentist and with every step you take. These are the moments we are proud of and which push us forward.

Today, additive manufacturing (AM) is more dynamic than ever before. AM allows us to realize completely new shapes, to think further and to discover unknown paths. AM makes the impossible become reality so that we are able to think outside the boxes of conventional production processes. The part production of the future will become faster, more flexible and less expensive - but quality will remain the same. Our ideas and solutions are made to provide this future of production to you already today!

But what about the upcoming 10 years? Pandemic has taught us many things. One of the lessons learned is that planning the future is necessary, but every scenario should be designed adaptable. But it is also clear that the world will keep on turning and we all keep turning with it. It is our ideas and decisions that will keep us pushing forward.



Andreas Schultheiss CEO

Andreas Geitner CTO

Optimize Your Production!

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We are Rapid Shape

From a start-up to an international respected company

A company from the south of Germany. 12 years ago, we decided to make our own 3D printers. Thus, a virtue was made of necessity. Because the offers on the market were simply not satisfactory for our parent company Schultheiss GmbH, whose field of activity is heating and casting technology for processing precious metals. So, if nothing fits, then something suitable is made. That's how our first printers came about. Today, we employ over 200 people at six locations in over six countries around the world.

Our claim

Not only to meet our customers' expectations, but to exceed them, that has always been our aspiration. We are constantly developing our products, as well as ourselves, to provide the best solutions for our customers. Thus, our product portfolio has grown enormously since the foundation in 2011.

Always a solution

3D-printing is supposed to save you time - not take it away. This is exactly where our patented solutions come in. For example, our printers have Automatic Separation units to save you 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 leaving our production site, every single 3D-printer must pass several strict quality control processes. One of the most important checks - the printing itself. Every printer has to execute validation print jobs which will be measured afterwards. That's how we ensure that every printer meets our high quality standards and will be sent to you fully functional.

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 14.

All Over the World

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

- Curitiba **Brasilia** _____



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.

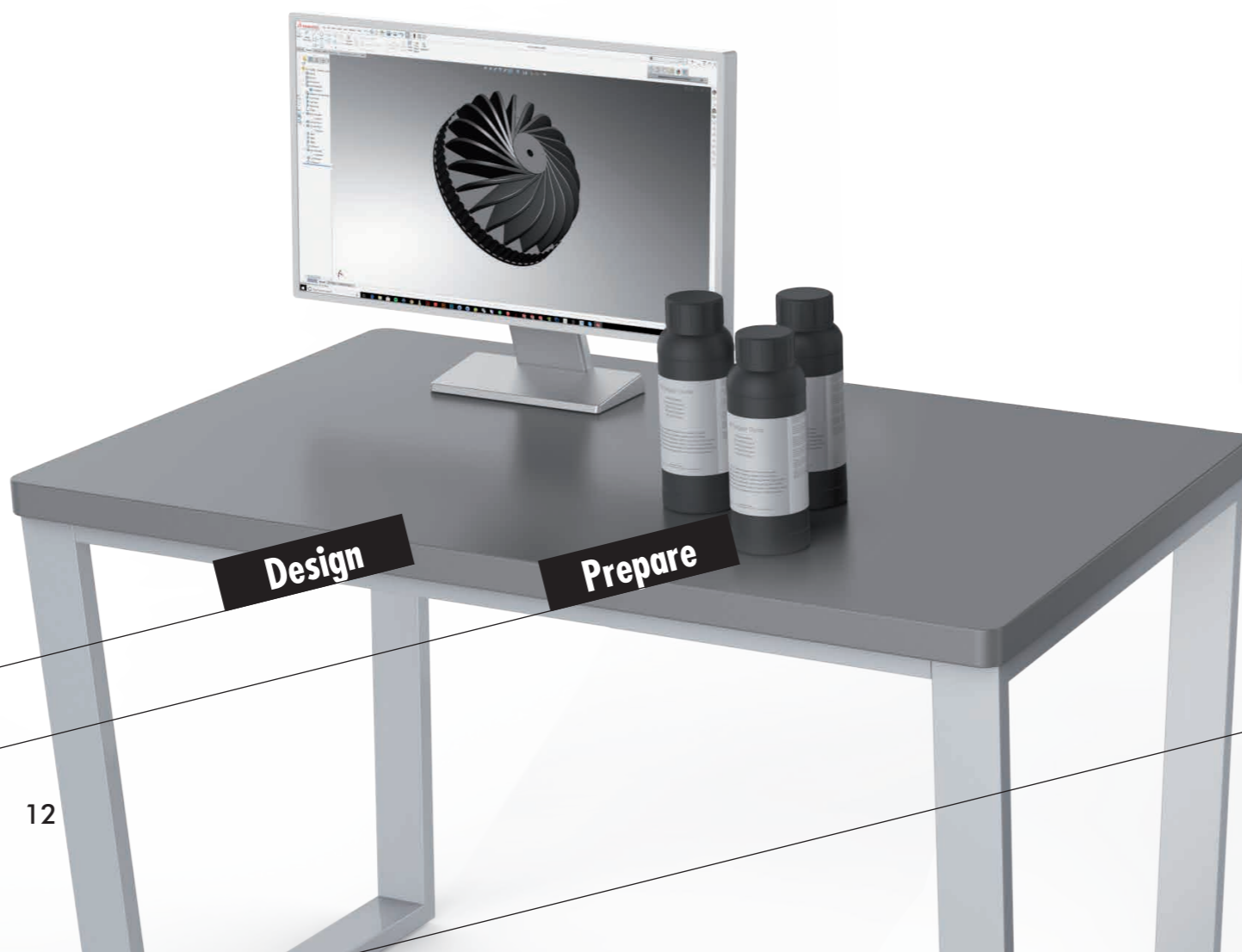
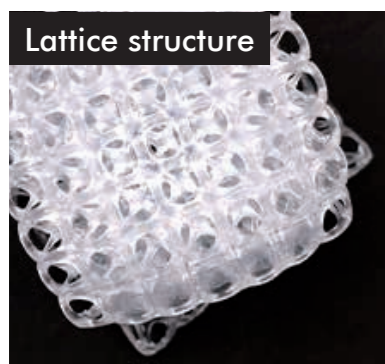
To face this critical point we have a solution called Force Feedback Technology. By measuring the forces involved directly on the part, we ensure that our 3D-printer can increase his processing speed up to the maximum - but always in a safe way! In addition, support structures can be constructed noticeable 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**

Our Solutions For a Higher Level of Productivity

Automatic Separation Module (ASM)

Increase your productivity through seamlessly proceeded printing jobs - without any interruption. The Automatic Separation Module (ASM) enables you to produce multiple printing jobs in an order you chose (job-queue) without being obliged to remove the build platform out of the printer and separate the parts on your own.



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 technique 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.*

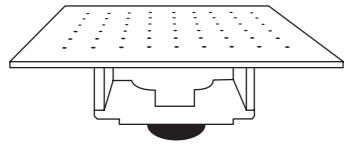


* Not available for every type of machine.

I50+

The workhorse for entry into professional 3D printing production




The I50+ is our new workhorse for printing every kind of use-case. With the optional patented Automatic Separation Module, you will give your daily production output a real boost up to the maximum. Your printed parts will be removed from the build platform right after being finished and all collected in a collection basket. The upcoming printing job will be started immediately, without any manual intervention. An Automatic Resin Refill unit takes care of a constantly sufficient filling level of resin material inside the reservoir.



Printing area
231 x 130 mm

Maximum height of parts
300 mm (with ASM: 100 mm)

Performance parameters	I50+
Printing area	231 x 130 mm
Native pixel	+/- 30 µm
Maximum height of parts	300 mm (with ASM: 100 mm)
Lightsource	385 nm UV LED
Temperature	Regulated up to 35° C (equal to 95° F)
Resolution	4K
Dimensions (W x D x H)	600 x 570 x 1660 mm
Ports	WiFi, LAN, USB
Control unit	10" LCD-Display, Touchscreen

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

Automatic Separation Module (ASM)

Certified Auto Calibration Sensor (ACCS)

Integrated Force Feedback Technology

Regulated up to 35° C (equal to 95° F)

Automatic Resin Refill unit

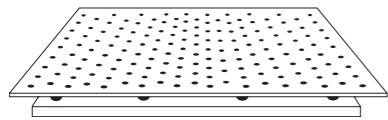
4K Resolution



I100+

Efficient, automated, trustworthy - Perfect workflow, maximum speed and constant quality

The I100+ has an even bigger printing area than the other printer while ensuring highest precision when producing parts. Combined with longlasting, reproducible quality the machine is the perfect 24/7 production unit. It comes with an industrial projection system and internal cooling for all system components. The I100+ is the solution for 3D-laboratories or production sites with high capacities including multiple-shift operation or simply when having high build space requirements.



Printing area
338 x 190 mm

Maximum height of parts
400 mm

Performance parameters	I100+
Printing area	338 x 190 mm
Native pixel	+/- 44 μ m
Maximum height of parts	400 mm
Lightsource	385 nm, ultra high power UV LED
Resolution	4K
Dimensions (W x D x H)	575 x 498 x 2160 mm
Ports	LAN, USB
Control unit	10" Touchscreen



Open System



For permanent usage



Automatic Resin Refill unit

Integrated Force Feedback Technology

Automatic Resin Refill unit

Certified Auto Calibration Sensor (ACCS)

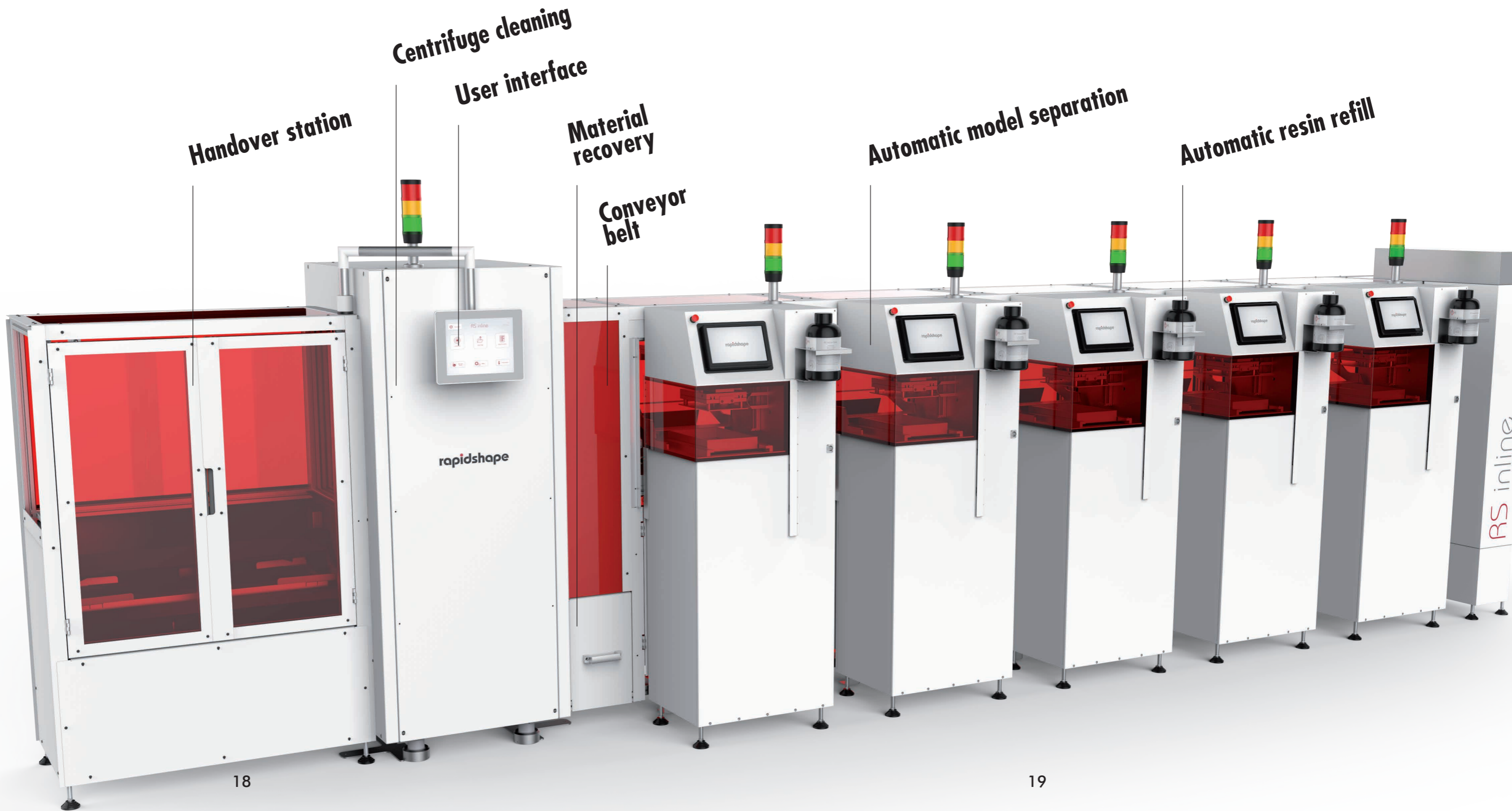
Remote access



RS inline

Scalable from 2 to 5 -
applicable to 1-, 2- or
3-shift operation

The fully-automated system for producing thousands of parts per day. Recycling of material during the whole handling and cleaning process.







RS cure XL

A lot of space for many or extra large printed components. The solution for productive manufacturers, that use one or more 150+ 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

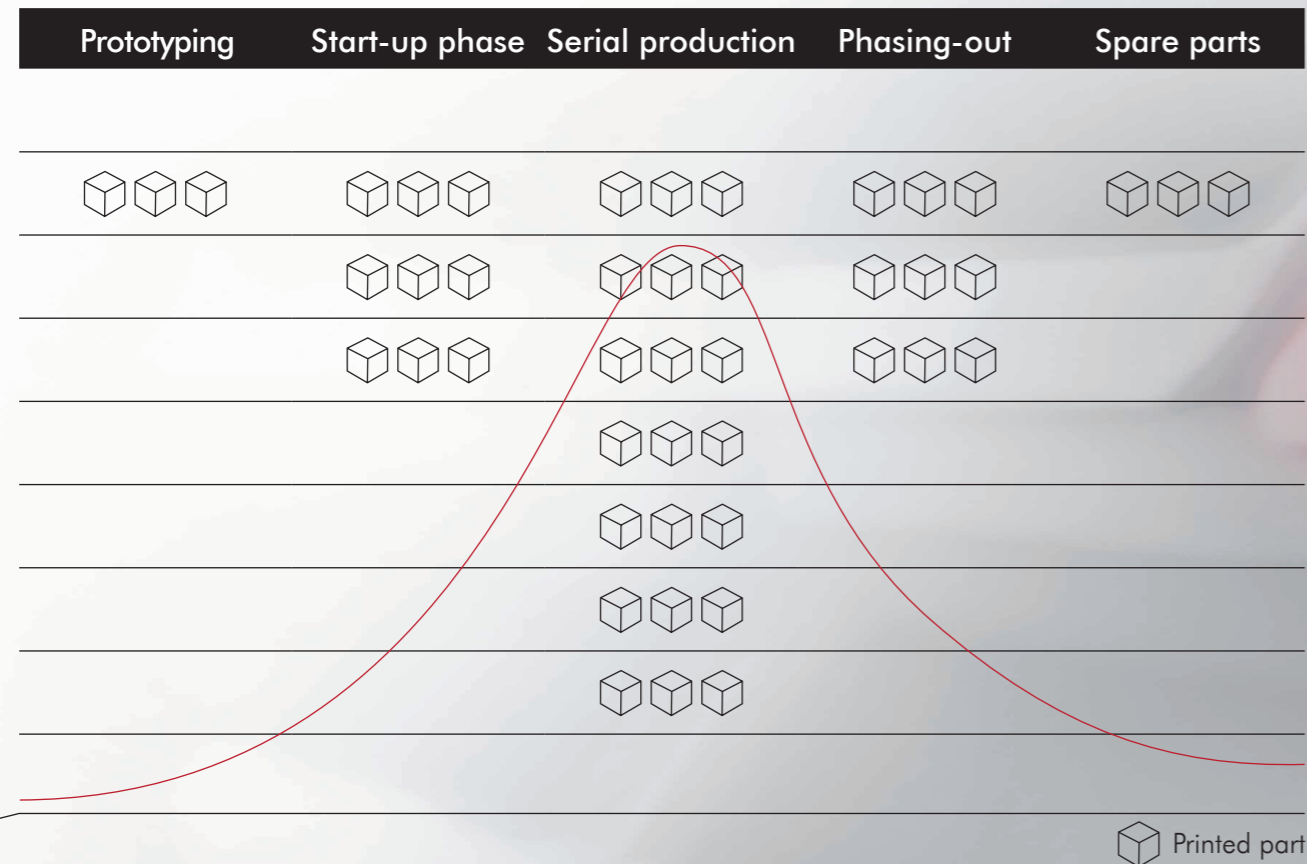
Significantly reduced operating costs / no gas consumption



Revolutionize Your Production Process

From injection moulding to additive manufacturing

No large initial investments necessary! Always scalable in any steps. Keeping spare parts in stock is expensive and takes up a lot of space. Revolutionize your production process by producing your own parts when you need them. This way you avoid long delivery times and current delays in the global supply chain, save space in your warehouse and in the end valuable money by reducing the amount of expensive spare parts in your warehouse.



When You Need to Go Fast

Automated 3D printing ensures low production costs per part

Produce prototypes quickly and easily in small quantities to test them for your application and implement changes flexibly. In this way, you avoid high costs for individual orders and long delivery times. You can carry out revisions independently and on your own until your prototype is ready for series production.

Single parts

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 industrial sector. 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.

NEW Industrial CARE PLAN

Industrial CARE PLAN Modules	Free Services	Care	Care Plus
I50+		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 I50+. *** 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.

Services According to Your Needs

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

Completely customized

Peace of mind 3D printing

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

Process and material batch in use documentation is extremely important for quality purpose. 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.

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

We won't let You Down

Our service team

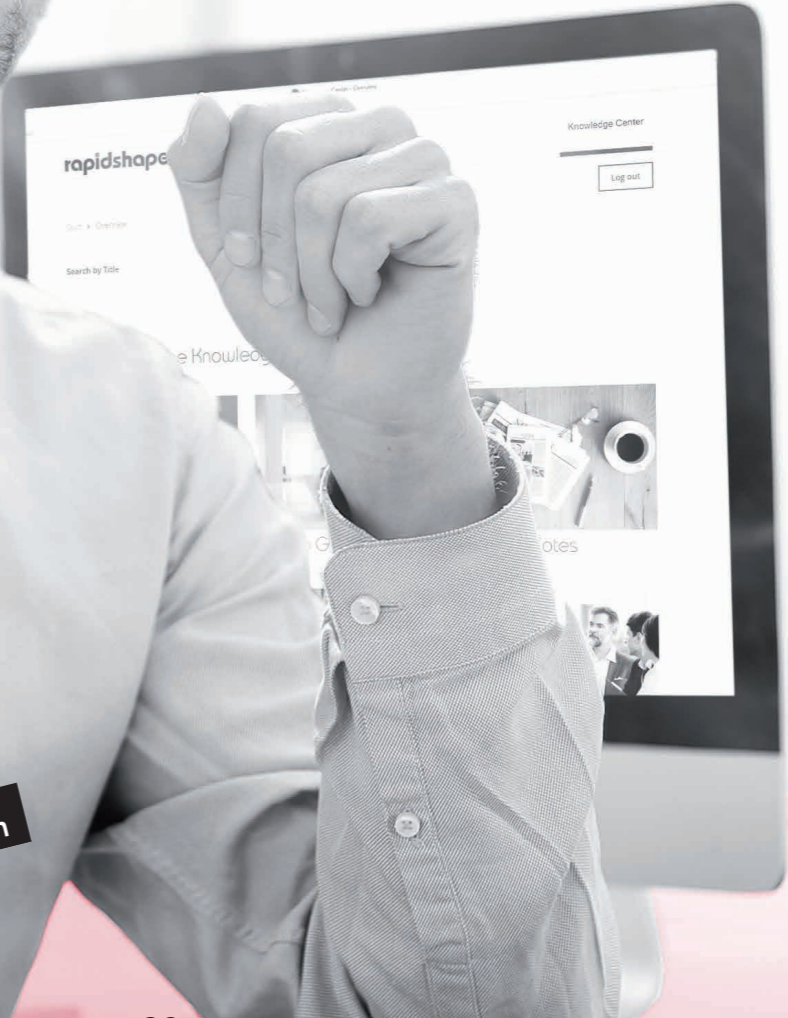
If you have problems with the technology, we won't let you down! Our technical service team is spread out internationally across 5 service hubs and will get any downtime up and running again. Whether remotely from the service workshop or directly at your site, we will find a way. You can reach our technical service team by phone, email, and WhatsApp, or you can use our online booking system and book an appointment of your choice from the comfort of your 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

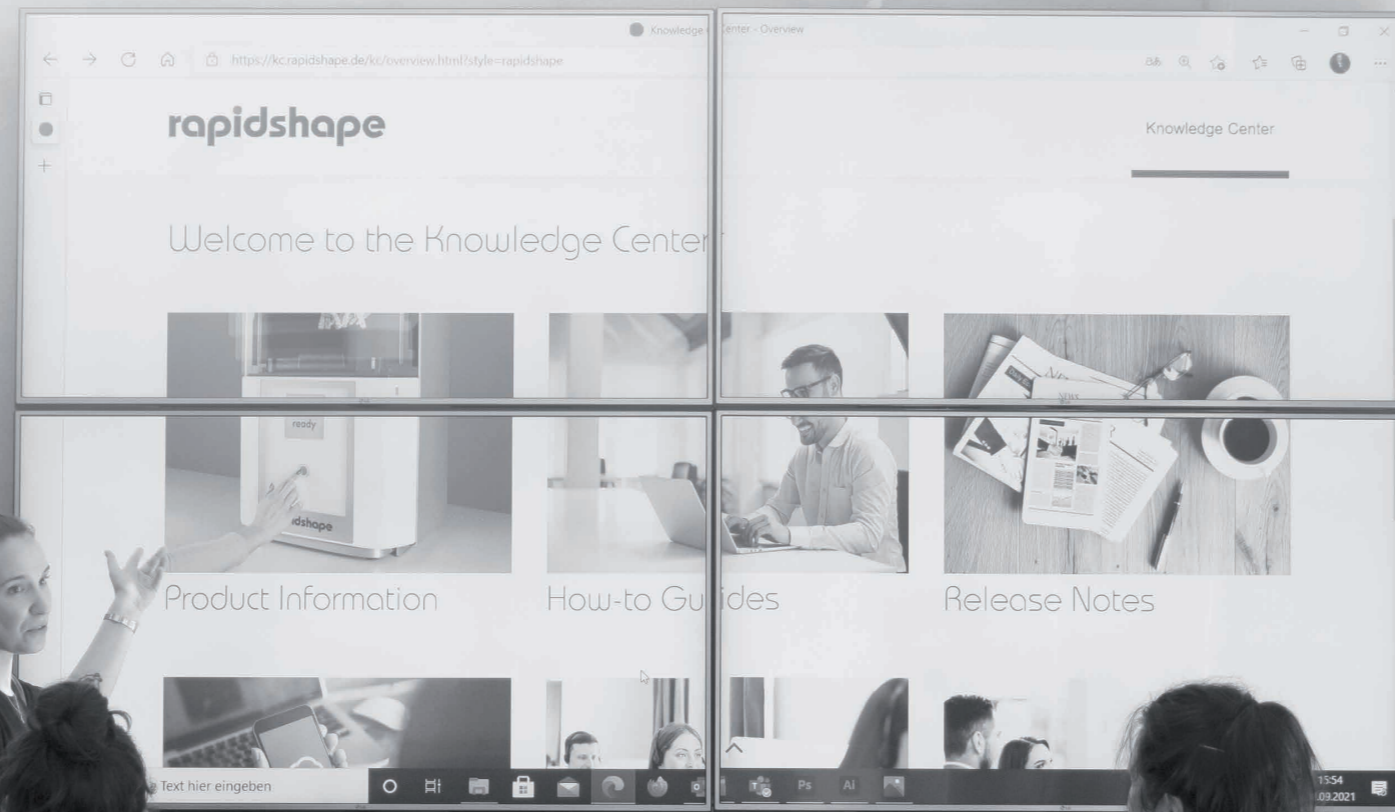
Extensive training in the use of our printers will help you to perfectly match the print results to your needs. Afterwards, you'll receive a training certificate and be ready to get started with your printer.

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

Knowledge is Power

We like to share

Get access to our knowledge, bundled in our Rapid Shape Knowledge Center! You can dial directly into the Knowledge Center with each product. 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 as well as numerous tutorials and downloads. If you prefer to browse our Knowledge Center from the comfort of your PC, we can send you your individual access data by email.



Showroom at the Headquarter



Heimsheim, Germany

For Best Results

Our material partners

Rapid Shape and the leading material manufacturers combine their strengths for maximum flexibility and unlimited availability. This allows us to support a jointly validated end-to-end workflow. 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.

Our material library provides you with validated materials, each of which is accompanied by a tested and approved set of printing parameters. You will receive regular material updates for your material library to ensure that you are always up to date with the largest selection available.*



Our Recommendation

3D-printing materials by

LOCTITE.

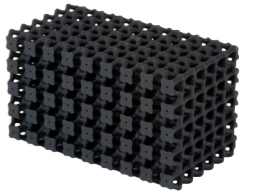
High Toughness
LOCTITE 3D 3843



High Impact
LOCTITE 3D 3172



High Accuracy
LOCTITE 3D 3818



High Rebound
LOCTITE 3D 8195



* Validations of materials from other partners are currently pending and will soon be available in our library.

All Doors Open for You

Our workflow partners



We take almost all the steps out of your hands. With the latest version of our Netfabb CAM software, part orientation and positioning on the build platform, the addition of necessary support structures as well as the final creation of the print data are automatically taken over for you.

What's left to do? Press „Start“.

tewipack Application:
Pressure gauge for physical
water treatment systems



We'll Accompany You on Your Path

Satisfied customers



We are proud and grateful for the trust of over 6.000 satisfied customers worldwide. This is the best proof of quality and service. Many have accompanied 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 and on the comprehensive know-how of our engineers and all our employees.

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

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„Breaking new ground and growing your business is always exciting. Growth requires making wise decisions, having a lot of courage and using reliable partners, to support you.“

Andreas Schultheiss
Founder and CEO

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