



CONCR3DE
YOUR 3D POWDERHOUSE

ENABLING THE UNIMAGINABLE

At CONCR3DE, we believe our additive manufacturing technology should facilitate and accelerate your progress. Thanks to our fully accessible binder jetting platform, material scientists and researchers can now explore the full potential of 3D printing novel materials. Our versatile and customizable research & development product range supports your goals.

[CONCR3DE.COM](https://concr3de.com)

RESEARCH & DEVELOPMENT SOLUTIONS



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EXPLORE NEW COMPOUNDS

Our printers allow you to use powder and binder combinations previously unimaginable for 3D printing applications. Whether your focus is on biocompatibility, novel mixes to achieve specific material properties or upcycling – we enable the fastest printing available, with high precision.

TAKE FULL CONTROL

The CONCR3DE platform allows you to customize any and every setting in the printing process, which means inaccessible technology is no longer a limiting factor in your quest. Our NOAH software lets you control the printer and any installed add-ons specific for the material types involved.

OUR EXPERTISE IS YOURS

We love to share our many years of experience with you to overcome any hurdles you might encounter along the way. With curiosity being one of our CONCR3DE's core values, we are here to advise, customize, test, or embark on a joint development journey together.



PRODUCTS

Our product range for research & development applications is highly customizable to meet your specific needs. Based on your dimensional and material requirements, our team can advise on the integral solution for your project or department.

ARMADILLO WHITE • This versatile 3D printer allows you to select the scale and features to fit your research. Consistently test with tiny material volumes, include built-in support for compounds that cure with heat or UV light, or use multiple printheads to combine different binders in a single print – it's all possible.

NOAH SOFTWARE • NOAH gives you full access to all parameters of the 3D printing process and lets you control all Armadillo add-ons. Our software even allows altering the waveform inside the printheads, which gives you unprecedented control of droplet size and shape - and subsequently the final results.

POWDERS & BINDERS • Armadillo White was specifically designed to enable printing the widest possible range of powders and binders, whether readily available from our certified material range or currently undiscovered. If the material is or can be made available in powder form, you can print it!

HANDLING & POST PROCESSING • After the print is completed, CONCR3DE offers several options for convenient depowdering and post processing. Our standalone Depowdering Station helps you remove and recycle any unused powders in a clean and dust-free process, with the option for a printer-integrated Vacuum Arm. Depending on the material involved, we can also include solutions for coating/dipping or sintering your prints.

R&D SERVICE • At CONCR3DE, we are curious - and we love collaboration. Our current range of binders could already work for your purpose; our team is happy to assist you in selecting the optimal product for your goal. If we don't have your binder available yet, we do have the know-how for an in-depth discussion on what could work - and the tools to develop and test alongside you, if desired.

Specifications and details are available in our Product Leaflets or check out www.concr3de.com for more information. Ready to discuss how we can support your project? Send us an email at info@concr3de.com or call +31 (0)85 0606 171.

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ARMADILLO WHITE

When developing new 3D printing materials and applications, you don't want hardware to be the limiting factor. When our founders experienced the restrictions of the tools available on the market, they founded CONCR3DE - and we developed our own. Armadillo White is a fully open binder jetting 3D printer that has both customizable hardware, an open material platform and accessible software.

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FOR RESEARCHERS, BY RESEARCHERS



CONCR3DE

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Armadillo White was designed to help material researchers and scientists explore the full potential of additive manufacturing. This modular, accessible platform can use any available CONCR3DE powder or binder - but invites you to create new standards and novel applications. Every single setting, from speed to saturation and from the binder droplet size and shape to UV- or infrared curing options – Armadillo White gives you full control over the 3D printing process and results.

FROM PROTOTYPING TO PRODUCTION

REDUCTION INSERT • The Reduction Insert is an add-on that shrinks the minimum print size. This means you can start printing with less than 1 liter of powder, reducing your waste, preparation time and costs. Once you progress, simply take it out to print full scale, all in one versatile printer.

LABJET LFR BINDER SUPPLY • When testing new binder and powder formulations, you want to start with small batches, with optimal stability and repeatability. The Labjet LFR Binder Supply allows you to insert small, measured volumes of binder with a syringe. This add-on is excellent for volatile or expensive binders.

EXPANSION BED • This add-on doubles the Armadillo printing dimensions to 440 x 440 x 250 mm, with a daily production capacity of up to 100 liters. It adds the options to both do perform research, prototype, and run production on a single printer, without additional investments or R&D transfer issues.

UNPRECEDENTED VERSATILITY

INTEGRATED NOAH CONTROL • Armadillo White includes an integrated control station with our custom and fully open NOAH software pre-installed on optimized hardware. NOAH offers full access to all parameters of the printing process and controls the add-ons.

UV CURING • For printing polymer or composite materials, the UV Curing add-on is indispensable. It adds the possibility to cure the material with a 395 nm (+/- 5) light engine with a typical radiation of 5,5 W/cm² and optical output power of 31 W, and UV power of 4,2 W/cm.

INFRARED HEATER • Certain powders require high temperature curing or bind faster at higher temperatures. The Infrared Heater is based on a powerful infrared curing lamp and allows you to control the print bed temperature. The Infrared Heater makes it possible to increase the temperature up to 80°C.

MULTIPLE PRINTHEADS • If you are looking to explore biocompatible, food-safe or pharmaceutical opportunities with our binder jetting platform, this Armadillo White add-on allows you to work with up to 3 different binders in a single print. This enables a controlled workflow with specific materials.

OTHER OPTIONS • Looking for other integrated functionalities? Have a look at our In-Printer Add-On range or contact us if you have other wishes!

TECHNICAL SPECIFICATIONS

ARMADILLO WHITE

Print box dimensions	370 x 290 x 250 mm or 440 x 440 x 250 mm
Capacity	49 or 96 liters/day
Printhead precision	400 DPI
Layer height	40 – 500 µm
Maximum drop size	200 pL
Powder compatibility	Any
Binder compatibility	CONCR3DE aqueous, solvent, UV, particle-filled
Connectivity	Ethernet (cable included)
Power requirements	230 V
Dimensions	1.700 x 1.200 x 1.600 mm
Space requirements	2.400 x 2.000 x 2.200 mm
Weight	650 kg
Software	NOAH (included)

Interested to learn more? Check out www.concr3de.com for more information. Are you ready to discuss your project? Send us an email at info@concr3de.com or call +31 (0)85 0606 171.

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YOUR 3D POWDERHOUSE

We build powder-based 3D printers that enable the unimaginable, produce the remarkable and shape the impossible. Our accessible ecosystem allows you to create accurate, complex parts with novel material properties, unprecedented scalability, and waste upcycling options – all in a single platform.

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3D PRINTING FOR RESEARCH, INDUSTRY & CONSTRUCTION



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HARNESSING THE POWER OF ADDITIVE MANUFACTURING

Traditional production methods like casting or injection molding have several limitations, whether in terms of manufacturing cost-effectiveness, limited part complexity and material properties, or generated waste. At CONCR3DE, we harness the power of additive manufacturing to overcome these shortcomings and create the previously unimaginable. Based on our proprietary binder jetting 3D print technology, we offer the most versatile platform and expertise to print functional products – in any size and any powder-based material.

MATERIALS THAT MEET YOUR REQUIREMENTS

The material options are extensive. We can create anything from stone to ceramics and from (bio)polymers to stainless steel. This allows us to meet material requirements such as aesthetic properties, outdoor use, biocompatibility and shock, heat, or electrical resistance. CONCR3DE enables accurately printing complex shapes with zero waste. Even better: our print technology allows true upcycling of for example stone and concrete by using worthless (or even expensive to dispose of) waste streams to create new products.

SCALABILITY IN HIGH-QUALITY HARDWARE

Our 3D printer range allows cost-effective production by selecting the print volume that fits your application – from the size of a Rubik's Cube to the size of a building facade. This makes it possible to test small and produce big without the need to switch platforms or figure out new parameters. Depending on your material and application requirements, CONCR3DE customizes the setup with in-printer add-ons or external stations to fit your needs, resulting in an integral solution. All high-quality hardware is designed for industrial use and robust performance.

COOPERATION TO ACCELERATE TOWARDS YOUR GOALS

As our curiosity does not end there, we invite researchers to adjust our open software and hardware settings and create new powder and binder compositions. With CONCR3DE, you can benefit from our years of experience through our services focused on joint development, process optimization or co-production. Whether you are looking for a unique research or prototyping platform, industrial or high-tech complex functional parts production or printing large-scale architectural designs: CONCR3DE is your 3D Powderhouse.



Our Application Leaflets detail our dedicated solutions for different sectors. Check out www.concr3de.com for more information. Are you ready to discuss your application? Send us an email at info@concr3de.com or call +31 (0)85 0606 171.

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