zortrax

Inkspire 2
Refined resin 3D printing experience

Precise engineering

Medium- to large-
-scale production

Detailed models

Excellent surface
quality

Highly automated

Zortrax Inkspire 3D printer

Build volume

192 x 120 x 280 mm
7.56 x 4.72 x 11.02 in

Pixel size

50 microns

EU
Made in EU

❯ High speed resin 3D printing

UV LCD technology used in the Inkspire 2 is one of the fastest in the resin 3D printing market. The entire layer is solidified at once, so there is no time lost for a laser dot to draw it on a resin vat. The same high speed of printing is maintained regardless of how much of the build platform is filled.

❯ Advanced post-processing ecosystem

Most resins require additional post-processing to achieve desired properties after the printing is done. This is why we have introduced Zortrax Cleaning Station and Zortrax Curing Station, two automatic post-processing devices that complement the Inkspire 2 resin 3D printer in an advanced ecosystem. The purpose of the Zortrax Cleaning Station is to remove uncured resin from the surfaces of models while the Zortrax Curing Station provides UV curing to materials that need it.

❯ Uniform UV exposure

Models 3D printed on the Inkspire 2 have the same high surface quality and excellent mechanical properties regardless of whether they are positioned in the center or towards the edges of the build platform. This has been achieved through maintaining uniform UV light distribution across the entire build platform.

❯ Compatible with high-performance resins

The Inkspire 2 is compatible with many advanced engineering resins, including the ones previously available only for DLP 3D printers. We are working with brands like Henkel/ Loctite or BASF Forward AM to ensure properties of parts printed with their best performing materials match or exceed the specced values.

❯ More advanced, even easier to operate

The Inkspire 2 is our most advanced resin 3D printer and yet it is easy to set up and run. It comes with a pre-calibrated build platform, so it is ready to work out of the box. Appropriate sensors keep tabs on resin levels both in the vat and in the bottle. Other sensors detect power outages to save the printing progress. The Inkspire 2 is a highly automated machine that gets the job done with very little supervision and maintenance.

❯ Air filtering systems

The Inkspire 2 has closed air circulation within its build space to keep unpleasant smell and potentially harmful fumes released by resins from getting out. Instead, the fumes are routed through air filtering system designed to keep the Inkspire 2 surroundings safe and comfortable to work in.

Industrial-grade proprietary light engine

7x
more powerful UV light engine*

40%
more uniform UV light distribution*

4x
more build volume*

Ingenious design

The light engine in the Inkspire 2 has been developed in-house from the ground up. Our engineers designed an array of UV diodes backlighting a monochromatic screen to achieve consistent UV exposure of every single pixel on a large build platform while retaining utmost precision.

UV LCD

Uniform and powerful

The amount of UV light delivered to the resin vat in the Inkspire 2 is 7 times higher than in the Inkspire 1. This powerful exposure is also uniform across the build platform due to placement of each UV diode working in the array.

Open to engineering resins

Because its light engine is so powerful, the Inkspire 2 can work with dense, advanced resins made by world-leading manufacturers like BASF Forward AM or Henkel/Loctite. Such materials have thermal and mechanical properties comparable to most durable polymers used on industrial manufacturing lines but need significantly more UV light.
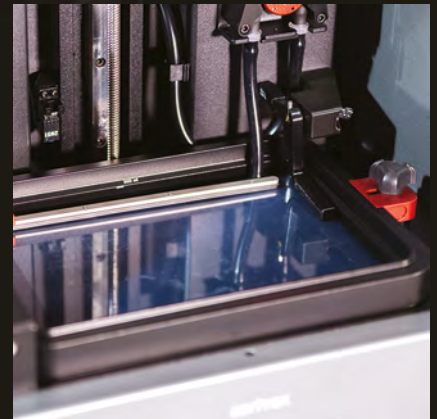
Consistent precision

Each pixel in the Inkspire 2 measures just 50x50 microns which, when combined with 25 microns of minimal layer height enables printing astonishingly precise parts. Moreover, individual pixels can be accurately projected onto the polymer vat which means the Inkspire 2 is just as good at printing both extremely small and very large models.

APPROVED
BASF
We create chemistry
FORWARD AM
BY LEADING MANUFACTURERS OF RESINS

APPROVED
Henkel
BY LEADING MANUFACTURERS OF RESINS

*compared to last-gen Inkspire 3D printer

Less messy, more automated resin 3D printing

The Inkspire 2 is designed to keep the resin 3D printing process clean and simple. We have achieved this simplicity through advanced, cleverly implemented automation.

〉 Pre-calibrated for performance

The build platform in the Inkspire 2 is factory-calibrated so there is no need to do the calibration manually. And even if manual calibration proves necessary at some point, the procedure is fast and simple.

〉 Resin wiper

Automatic resin wiper stirs the resin in the vat at pre-defined intervals to prevent resin sedimentation and this way makes it possible to reliably print more advanced materials.

〉 Intelligent build platform mount

The build platform in the Inkspire 2 can be easily attached and detached. It can also be positioned at an angle, allowing for the resin to drip down to the vat, which helps keeping the build platform clean.

〉 Blackout Response System

Blackout Response System detects power outages and keep the Inkspire 2 going until the printing progress is saved. When the power is back on, printing can be safely resumed.

Resin management system

The Inkspire 2 recognizes how much resin it has available and how much is needed to complete the printing process. Here are the key components of the resin management system:

〉 One sensor constantly measuring how much resin is left in the bottle placed in the holder at the back of the printer.

〉 Another sensor measuring how much resin is in the vat beneath the build platform.

〉 A pump that can transfer the resin from the bottle to the vat and back when necessary.

All three parts constantly work together to make sure the Inkspire 2 has enough material to get the printing done with no interruptions.
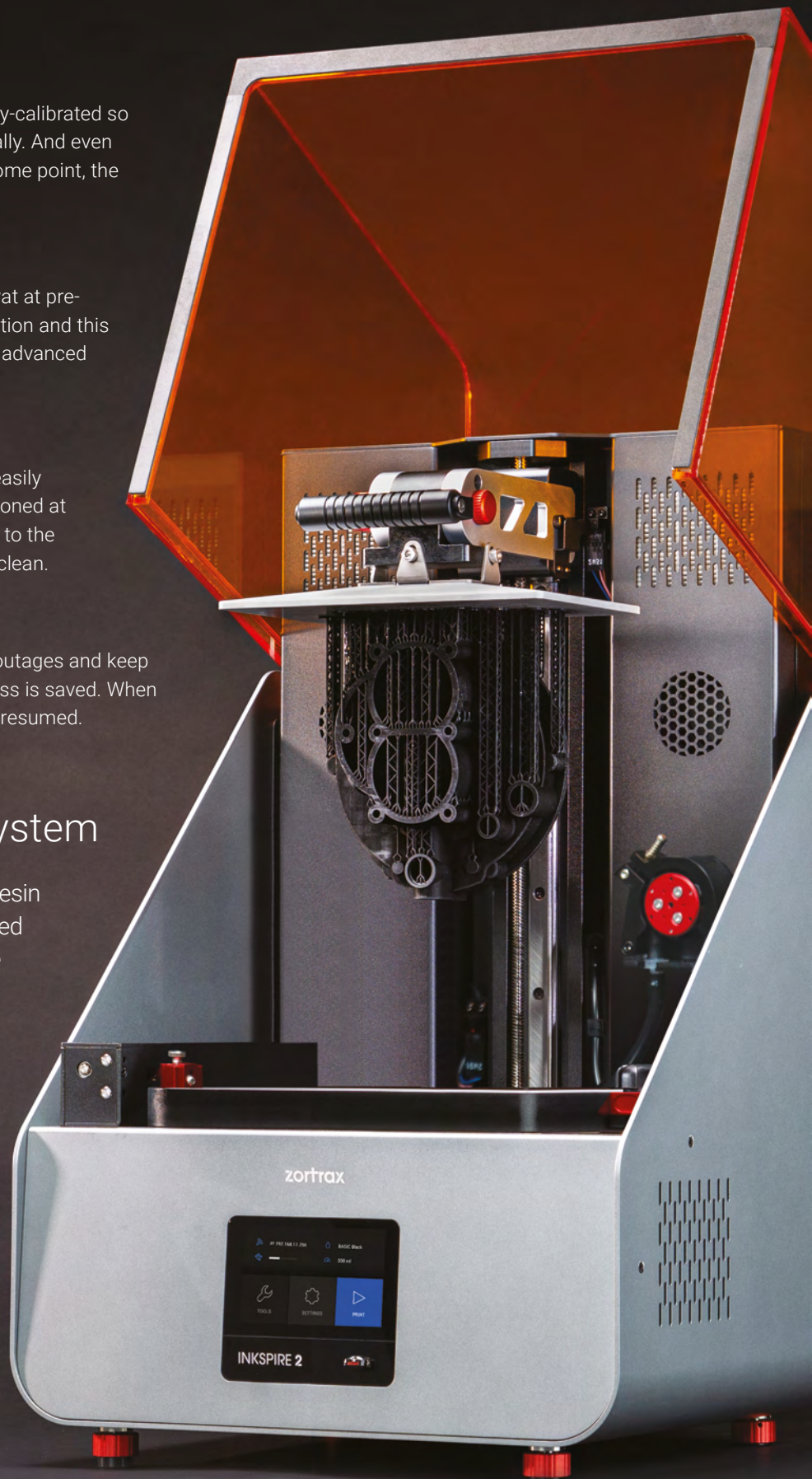
Shoe midsole

Arm wrist band

Transparent artery

Fixtures and Jigs

Bike saddle

Functional vent

UV
LCD

DEVICE

Build volume	192 x 120 x 280 mm (7.56 x 4.72 x 11.02 in)
Platform	pre-calibrated during quality control; immediately ready for 3D printing
Connectivity	Wi-Fi, LAN, USB
Operating system	Android
Touchscreen	4" IPS 800 x 480'
External materials	applicable
Supported formats	.zcodex2

SOFTWARE

Software bundle	Z-SUITE
Supported file types	.stl, .obj, .3mf, .dxf (only 2D models), .ply
Supported operating systems	Mac OS Catalina and newer versions / Windows 7 and newer versions

IN THE BOX

Zortrax Inkspire 2, UV Resin, Bottle Holder, FEP Film (set), Wiper Set, Resin Sensor Set, Starter Kit

PRINTING

Technology	UV LCD
Pixel size	50 µm
Layer thickness	25, 50, 100 µm
LCD screen	8.9" monochrome
Light source	integrated LED panel (wavelength 405 nm), ensuring even light distribution across the entire platform
Supports	mechanically removed - printed with the same material as the model

TEMPERATURE

Ambient operation temperature	20-40 °C (68-104 °F)
Storage temperature	0-35 °C (32-95 °F)

ELECTRICAL

AC Input	100-240 V AC 6.2 A 50/60 Hz
Maximum power consumption	340 W

*Predefined printing profiles for third-party resins are periodically added to Z-SUITE by Zortrax in cooperation with industry-leading resin manufacturers.