

Shop System™

No lasers. No supports. No machinist.

Easy-to-use metal 3D printing
with the world's best-selling metal
binder jet system





PRECISION METAL PART PRODUCTION FLEXIBILITY

The Shop System from Desktop Metal was designed with the modern machine shop in mind to 3D print small, end-use metal parts with unparalleled speed and productivity. Using binder jetting technology to build complex shapes much like printing ink on a sheet of paper, metal powder is deposited before binder is precisely jetted layer-by-layer until the entire build volume is packed with bound parts and surrounding loose powder. Because parts are fully supported in the powder bed, support structures typical of laser-based systems are not required.

After crosslinking to provide the green parts with additional strength, all loose powder is removed from the build envelope and recovered for re-use. Parts are placed into the Desktop Metal Furnace for batch sintering to produce fully-dense, end-use parts with superior surface finish and resolution.

Plug-and-play

We've packaged binder jetting, the most promising 3D printing technology for speed and mass production, in an easy-to-use solution to fit seamlessly into your workflow. The Shop System is an ideal tool for anybody who wants to produce metal products quickly with an outstanding surface finish and resolution at scale.

Unparalleled productivity and quality

With production rates up to hundreds of green parts per day, the Shop System produces parts up to 10x faster than laser powder bed fusion. Employing a ~1 pL droplet size, it achieves superior surface finish, bleed control, and rich feature detail at high speed. The Shop System is your doorway into the future of metal production.

Options to fit your needs

The Shop System is a turnkey, end-to-end solution using engineered powders and processing parameters optimized to deliver exceptional part quality and ensure part-to-part repeatability. We also offer the Shop System™ Pro, enabling additional functionality for advanced users looking for expanded material flexibility.

A complete, turnkey solution

The Shop System contains all the equipment you need to begin binder jetting metal parts, including the furnace. Powder is recovered via a built-in powder recycling system and the Desktop Metal Furnace delivers quality and reliable sintering with the ability to process high-strength binders in a user-friendly format.

Simple sintering software

Our Live Sinter™ software produces sinter-ready printable geometries. Even beginners now have the power to simulate part behavior and automatically compensate for distortion in the furnace to 3D print and sinter metal parts successfully and further refine results with scan-based adjustments.

Trusted binder jet leaders

Scale up production with the world's most trusted team of metal binder jetting experts. Desktop Metal's experienced and scalable ecosystem of binder jetting technologies process a range of metals and technical ceramics for manufacturers of every size and at every stage of the additive manufacturing adoption curve.

Configurations

The Shop System™ printer comes in four models to enable you to tailor the solution for your needs.

16 L

[Build Envelope Size]
350 x 222 x 200 mm
(13.8 x 8.7 x 7.9 in)

12 L

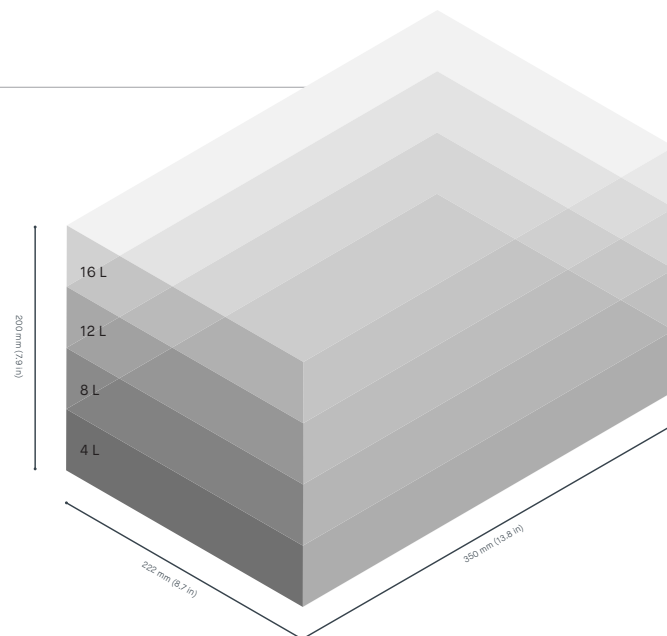
[Build Envelope Size]
350 x 222 x 150 mm
(13.8 x 8.7 x 5.9 in)

8 L

[Build Envelope Size]
350 x 222 x 100 mm
(13.8 x 8.7 x 3.9 in)

4 L

[Build Envelope Size]
350 x 222 x 50 mm
(13.8 x 8.7 x 2.0 in)

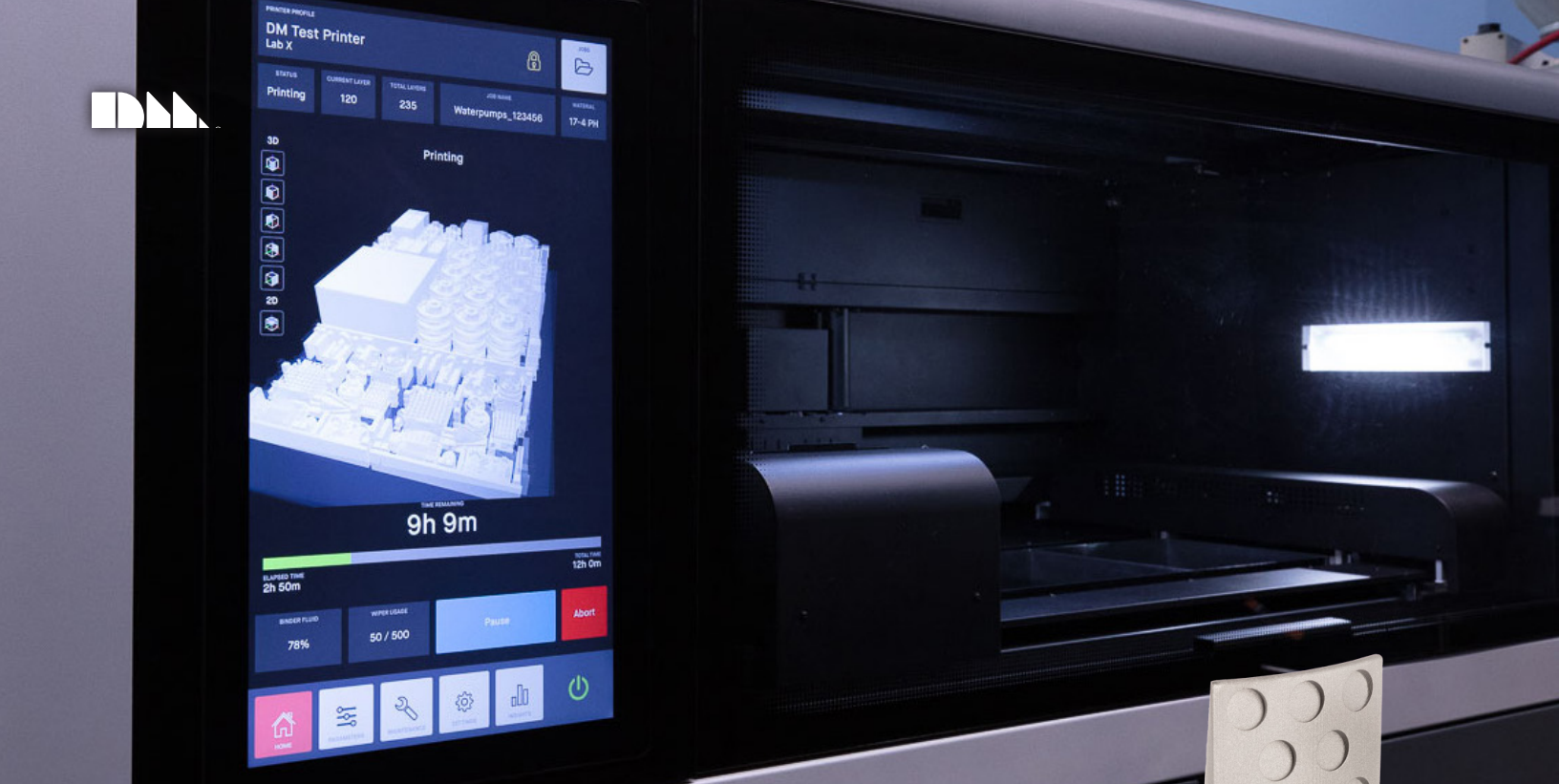


Touch screen panel with intuitive interface and video operation tutorials

Industrial-strength sintering in a fully software-controlled and office-friendly package



High-resolution printing technology provides incredibly fine feature detail with dense, solid parts



SHOP SYSTEM™ PRO

For new users to get started quickly, the Shop System is offered as a turnkey, end-to-end solution with engineered powders and processing parameters optimized to deliver exceptional part quality and ensure part-to-part repeatability.

The Shop System is compatible with powders from traditional powder metallurgy processes and for high-production users with powder metallurgy expertise we offer the Shop System Pro. This upgrade offers additional process flexibility through advanced features, such as custom printing and spreading parameters and bi-directional printing for the Shop System Printer, and custom sintering profiles for the Desktop Metal Furnace. The Shop System Pro is ideal for users who seek not only to optimize their running costs but also to enable specific applications or cost structures by leveraging proprietary or third-party powders.

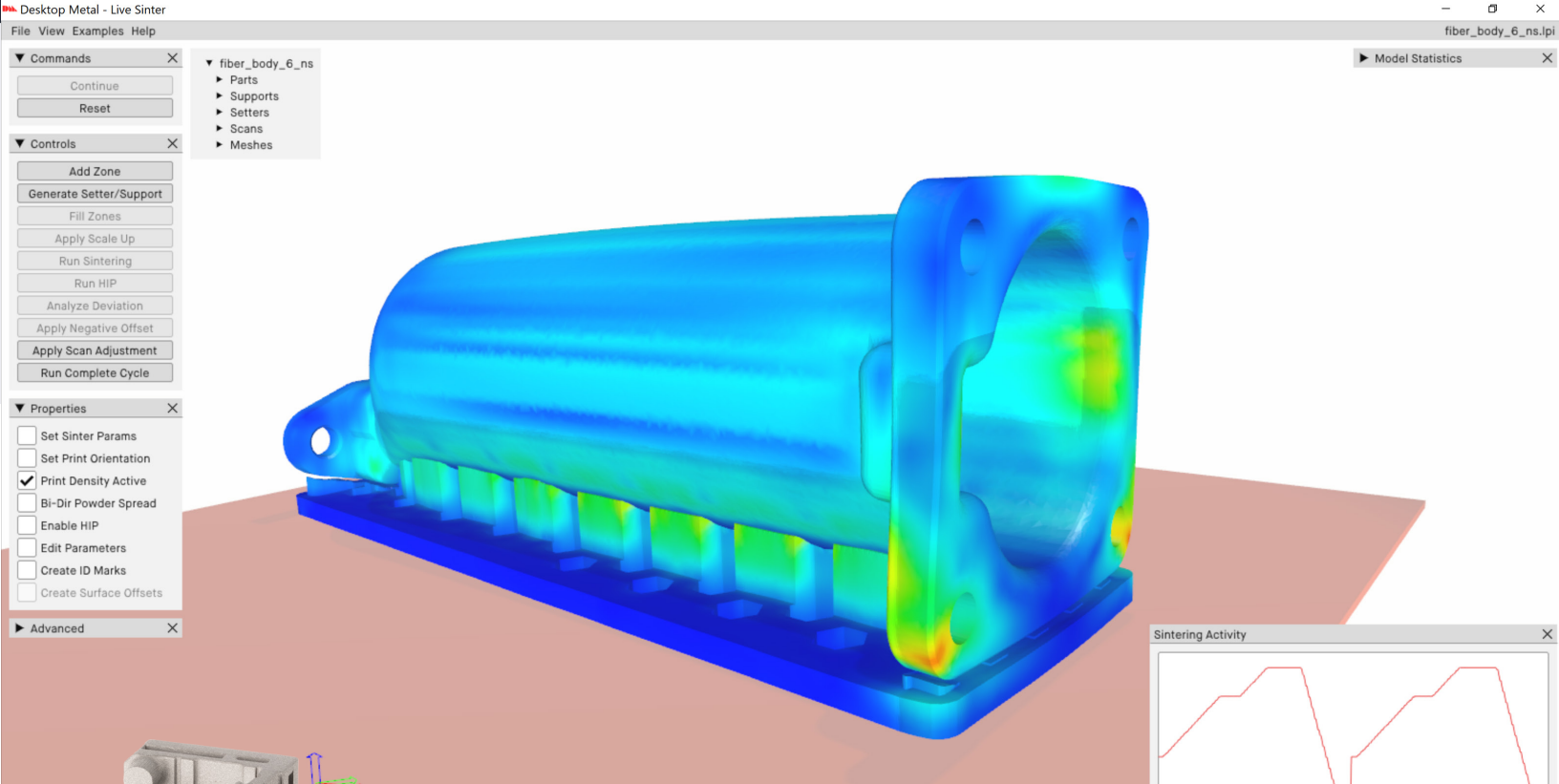


Qualified DM-Engineered Powders

- 17-4 PH Stainless Steel
- 304L Stainless Steel
- 316L Stainless Steel
- Cobalt Chrome*
- Nickel Alloy Inconel 625
- Nickel Alloy Inconel 718

* Not currently qualified for medical applications
**Some restrictions apply

Packages	Shop System™	Shop System™ Pro
TURNKEY HARDWARE, SOFTWARE AND MATERIALS	X	X
DM BINDER	Required	Required
USE OF DM-ENGINEERED POWDERS	Required	Recommended**
DISCOUNTED DM BINDER AND POWDERS		X
CUSTOM PRINTING AND SPREADING PARAMETERS		X
DM FURNACE CUSTOM SINTERING PROFILES		X**



LIVE SUITE™ SOFTWARE

Desktop Metal's Live Suite connects you with the lifblood of your digital manufacturing systems - your data - in new ways that simplify and deliver value. Brought together, our collection of Additive Manufacturing 2.0 software solutions, from prep and build to sinter, scan, and scale, makes our customers' digital design data come alive easily and accurately in 3D printed metal parts.

Live Build™ MFG

A desktop-based build preparation software to generate and optimize binder jetting applications for printing and sintering success, Live Build MFG was designed to help users print parts easily, quickly, and efficiently, particularly those with limited experience.

Live Monitor™

Collect sensor and machine data for temporary storage in a cloud database and access the time-series database with analytic and visualization tools to gain near-real-time and short-term trends with Live Monitor. Configurable filters control the data items and sample rate, providing valuable insight into system statistics. Armed with quantifiable machine data, operators, managers, and owners can make informed decisions to effectively drive business goals.

Live Sinter™

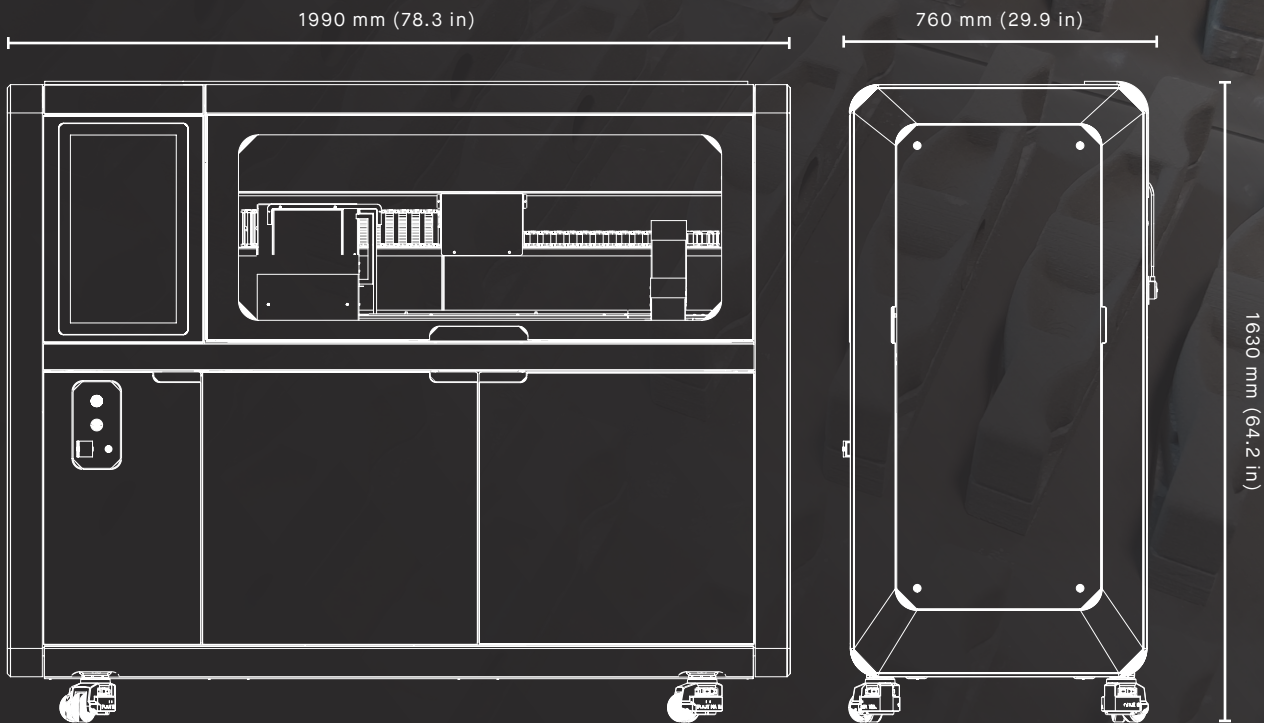
Live Sinter software is a powerful, multi-physics sintering simulation application that delivers final parts with tight tolerances.

Rather than printing a part straight to have it warp out of spec, Live Sinter prints a negative offset that will sinter to meet dimensional tolerances. It enables unique distortion compensation to help manufacturers not only reduce costs, but enable sintering to be successfully applied to a wider range of applications.

After scan-based adjustments, Live Sinter enables correcting for complex distortion effects, yielding parts that consistently fall within 1% of target dimension with as low as $\pm 0.3\%$ deviation, avoiding distortion, warping, and other common sintering challenges.



TECHNICAL SPECIFICATIONS



Print technology	Binder jetting
Print direction	Uni-directional
Build envelopes (L x W x H)	4L 350 x 222 x 50 mm (13.8 x 8.7 x 2.0 in) 8L 350 x 222 x 100 mm (13.8 x 8.7 x 3.9 in) 12L 350 x 222 x 150 mm (13.8 x 8.7 x 5.9 in) 16L 350 x 222 x 200 mm (13.8 x 8.7 x 7.9 in)
Maximum throughput	800 cc/hr
Layer thickness	50 µm - 100 µm
Native print resolution	1,600 dpi (1 pL native drop size)
Dimensional tolerance of parts	± 2.0%*
Binder jetting module	70,000 nozzles (5x redundancy)
External dimensions (L x W x H)	1,990 x 760 x 1,630 mm (78.3 x 29.9 x 64.2 in)
Weight	907.18 kg (2,000 lbs)
Electrical requirements	100-120V, 12.5A. 220-240V, 5.6A. 50/60 Hz, 1.03 kW

With binder jetting we're able to improve weight and cost while reliably producing quality parts enabling a more efficient workflow. It's a game changer for us.

Pedro Domingues
Additive Manufacturing Application Engineer
Jade Groupe

CUSTOMER SUCCESS STORIES

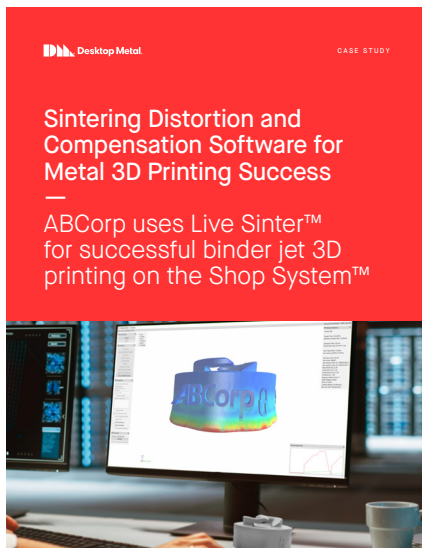


JADE GROUPE

Fast Manufacturing Solutions with Binder Jet 3D Printing

Investing to position itself on the leading edge of digital manufacturing solutions, Jade Groupe streamlines production of its luxury fashion accessory products through the use of quick-turn 3D printed tools. The Shop System reduced production operations and lead to a cost savings of 20% compared to a traditionally CNCed component.

TeamDM.com/JadeGroupe



ABCorp

Easy Adoption Success with the Shop System and Live Sinter

In addition to the easy-to-use Shop System, a key component to the out of-the-box success of ABCorp's binder jetting operations is Live Sinter's advanced simulation to predict and correct for errors when sintering 3D printed parts.

TeamDM.com/ABCorp

Additive Manufacturing 2.0

Metal | Polymer | Ceramic | Composite | Wood

Authorized Partner



DESKTOPMETAL.COM

Desktop Metal (NYSE:DM) is driving Additive Manufacturing 2.0, a new era of on-demand, digital mass production of industrial, medical, and consumer products. Our innovative 3D printers, materials, and software deliver the speed, cost, and part quality required for this transformation. We're the original inventors and world leaders of the 3D printing methods we believe will empower this shift, binder jetting and digital light processing. Today, our systems print metal, polymer, sand and other ceramics, as well as foam and recycled wood. Manufacturers use our technology worldwide to save time and money, reduce waste, increase flexibility, and produce designs that solve the world's toughest problems and enable once-impossible innovations. Learn more about Desktop Metal and our #TeamDM brands at DesktopMetal.com

Printer platforms



Desktop Health™



Materials



Applications and more



Desktop Labs