

envision**TEC**



enviontec.com

M-CAD

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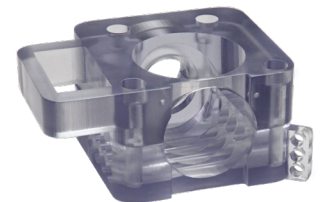
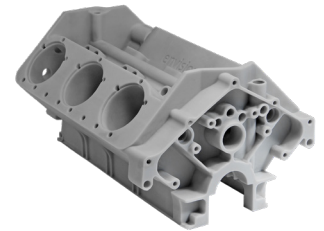
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EnvisionTEC Core 3D Technologies

Digital Light Processing

In DLP, a vat of liquid photopolymer is cured by a digital light source to build parts. EnvisionTEC pioneered DLP technology for 3D printing using a high-definition projector.

Over the years, we've also developed many proprietary methods of delivering DLP prints that are more accurate and deliver better surface finish than the competition. From our patented grayscaleing software to our ERM (enhanced resolution module), EnvisionTEC prints are about twice as good as the competition – even when using the same resolution projector.



Scan, Spin & Selectively Photocure (3SP)

A unique spin on stereolithography, EnvisionTEC's patented 3SP method reflects a laser beam on a spinning drum mirror to selectively scan out parts in photopolymer rather than drawing them.

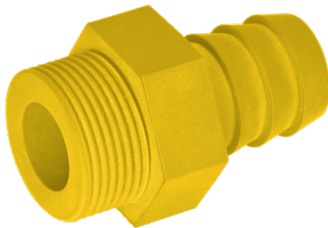
It's an innovative and simplified approach that is faster and delivers better resolution and surface finish than traditional SLA. Because the machine design is also less complex than SLA, the acquisition and operating costs are also lower.



Continuous Digital Light Manufacturing (cDLM)

An improvement to the DLP process that relies on continuous printing in the Z direction, unlike the stop-and-start method used in DLP printing.

Aside from high speed and isotropic properties, continuous 3D printing also delivers other benefits. That includes fewer supports and the ability to process materials with a short pot life that deliver properties that compete with traditional injection molded plastics.



EnvisionTEC Core 3D Technologies

Bioprinting

Processing of biomaterial using air or mechanical pressure to a syringe, which can fabricate scaffolds using a wide variety of materials.

EnvisionTEC offers three versions of its 3D-Bioplotter, a Starter, Developer and Manufacturer model, to satisfy a wide range of needs. The 3D-Bioplotter is a recognized world leader. Peer-reviewed journals have published more than 200 research papers featuring the EnvisionTEC 3D-Bioplotter.



Selective Lamination Composite Object Manufacturing (SLCOM)

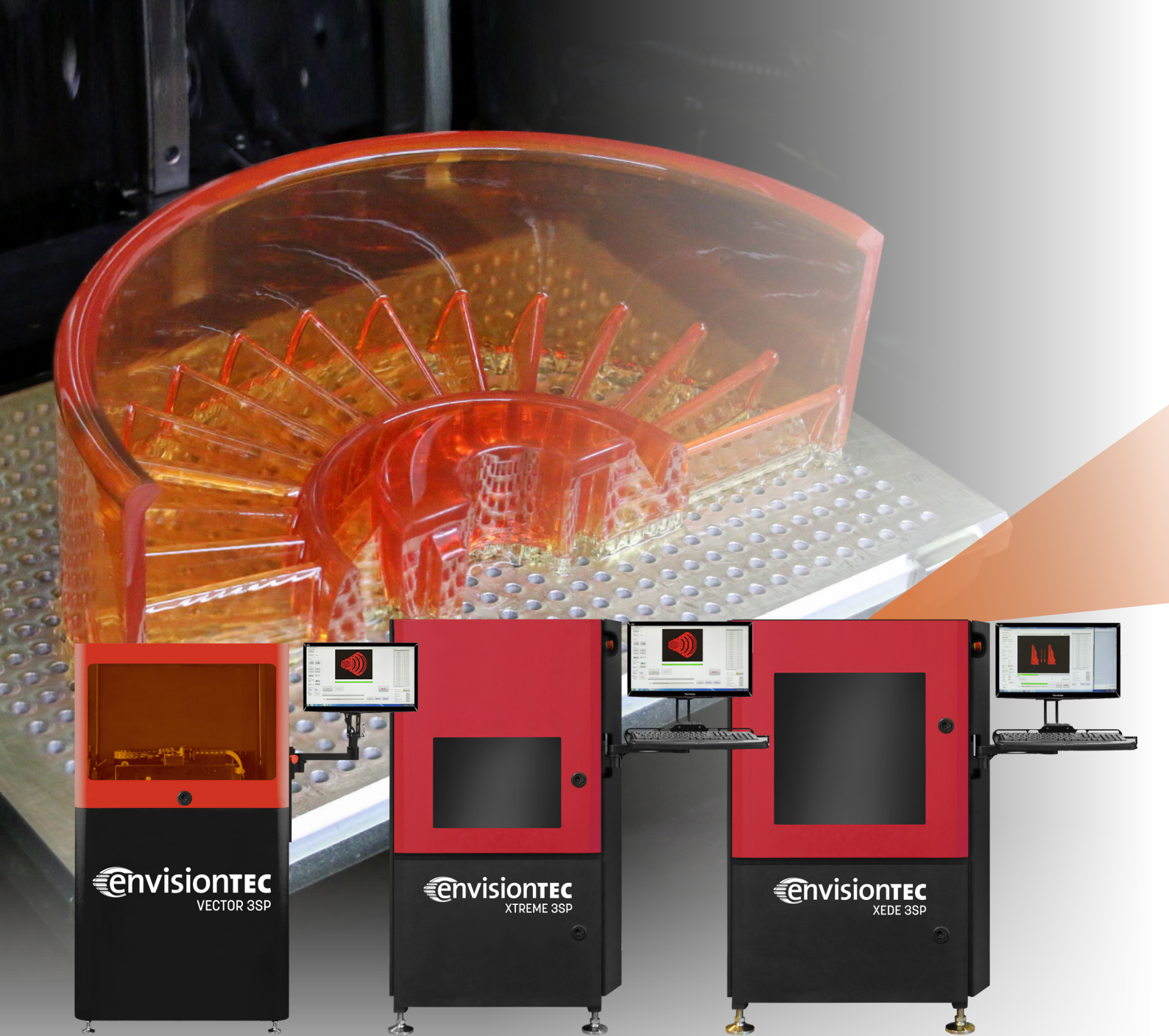
A bold concept from EnvisionTEC, the SLCOM 1 aims to disrupt hand layup of composites, a laborious and time-consuming process, with automated production of complex composite parts. The SLCOM1 selectively laminates a wide range of woven fibers preimpregnated with thermoplastics using a proprietary method of printing an anti-lamination fluid and etching out parts with an ultrasonic cutting blade.



Robotic Additive Manufacturing (RAM)

Through an exclusive strategic partnership with Viridis3D, EnvisionTEC is leading the way with robotic 3D printing. By attaching a proprietary print head to a robotic arm, our RAM technology delivers a unique and scalable method of binder jetting to deliver large sand molds and cores to the foundry industry.





3SP Family: Vector, Xtreme and Xede



- 3SP uses a UV laser to Scan, Spin and Selectively Photocure objects in a large vat of photopolymer.
- A highly efficient method of vat photopolymerization, 3SP is also highly accurate and delivers an extremely smooth surface finish.
- Quickly print large parts or a build area full of small- to medium-sized parts for prototypes or end use.
- Ideal for service bureaus and users in the automotive, aerospace and consumer goods markets.
- Learn more at EnvisionTEC.com/print3SP

Machine Specification	Vector 3SP	Xtreme 3SP	Xede 3SP
Maximum Build Envelope ¹	300 x 200 x 275 mm	254 x 362 x 330 mm	457 x 457 x 457 mm
XY Resolution	100 μm^3	100 μm^3	100 μm
Z Resolution ²	50 - 100 μm	50 - 100 μm	50 - 100 μm
Footprint	76 x 76 x 117 cm	165 x 165 x 165 cm	178 x 190 x 165 cm
Electrical Requirement	110-120 / 220 VAC, single phase, 15 Amp		

System specifications are subject to change without notice.

¹Deviation of +/- 2mm possible.

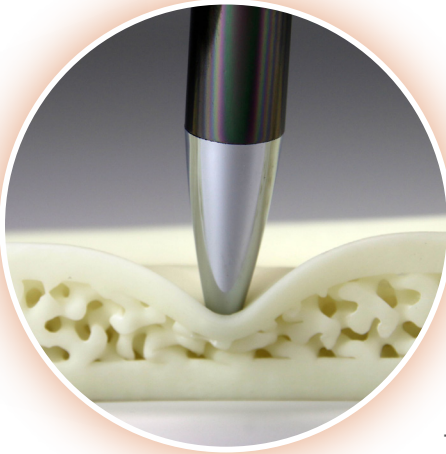
²Z Resolution is a pre-set value specific to print material selected.

³ Higher resolution available with the Vector HD 3SP and Xtreme HD 3SP.



Perfactory P4K Series

- New LED-powered variations also available for greater cost and energy savings
- Low cost, user-friendly 3D printer offering ease of maintenance and outstanding reliability
- The ultimate in printing flexibility: more than 45 materials available. Swapping materials is easy with no pumps or tubes.
- Produces the finest detail in the shortest period of time
- The P4K 90 is the largest DLP printer available on the market today.

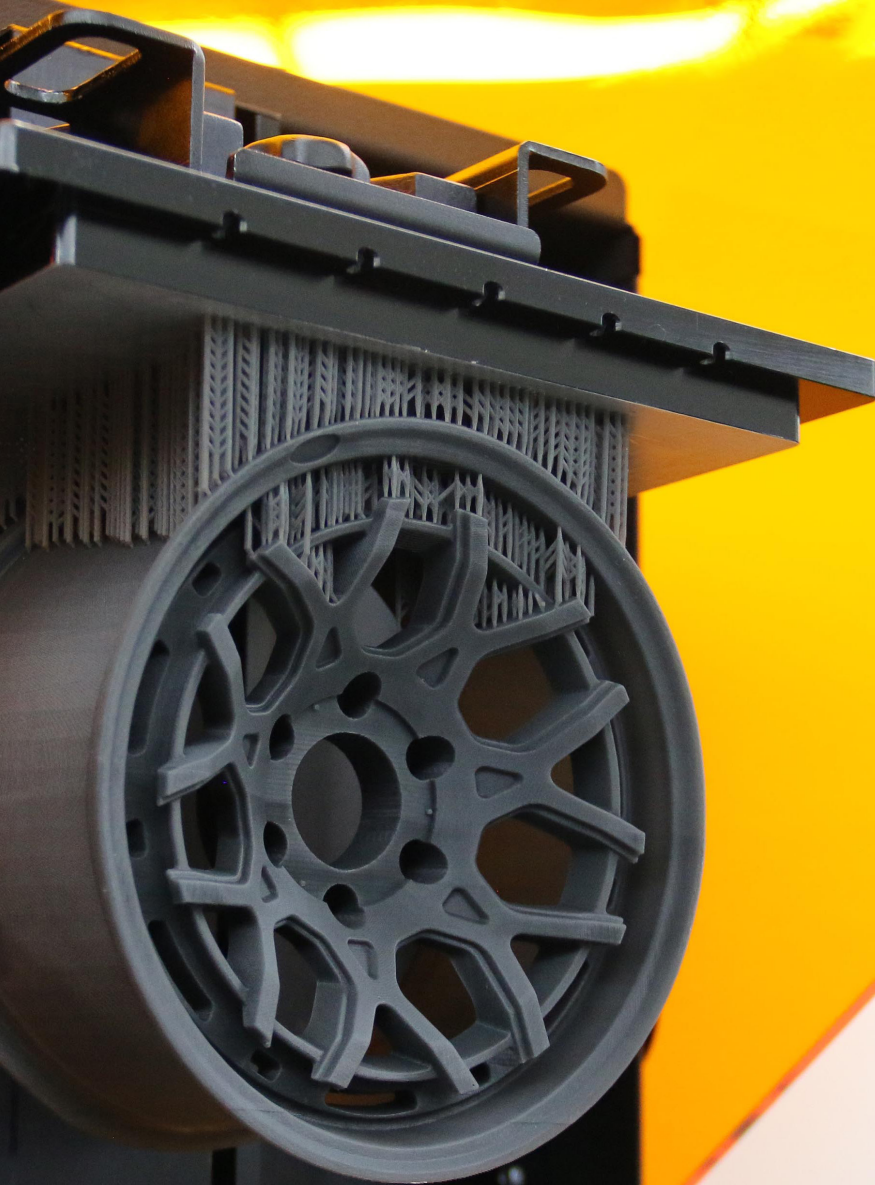


Machine Specification	P4K 62	P4K 75	P4K 90
Build Envelope ¹	160 x 100 x 200 mm	192 x 120 x 200 mm	230 x 144 x 200 mm
XY Resolution (ERM)	60 µm	83 µm	90 µm
Z Resolution ²	25 - 150 µm	25 x 150 µm	26 x 150 µm
Projector Resolution	2560 x 1600	2560 x 1600	2560 x 1600
Footprint	73 x 48 x 135 cm	73 x 48 x 135 cm	73 x 48 x 135 cm
Weight Approx	85 kg	85 kg	93 kg
Electrical Requirement	100-120 VAC, 5.4 Amp or 220-240 VAC, 6.3Amp		

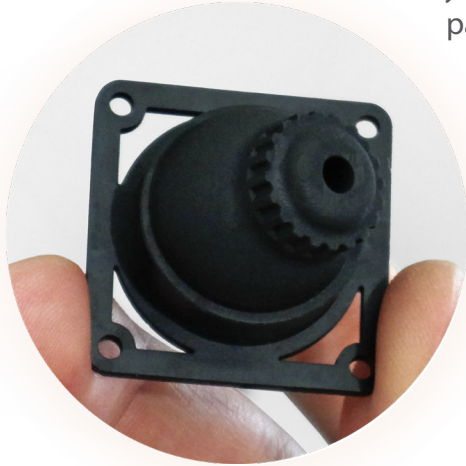
System specifications are subject to change without notice.

¹Deviation of +/- 2mm possible.

²Z Resolution is a pre-set value specific to print material selected.



Envision One cDLM



- Layerless technology delivers super smooth models and high precision parts

• 75% less supports compared to regular DLP printers

- Domeless technology delivers the highest accuracy in Z
- High-resolution industrial projector with glass UV optics
- Our easiest-to-use yet software interface

Impressive build speeds of up to 80 mm/hour in Z.

Machine Specification

Envision One cDLM Mechanical

Build Envelope ¹	180 x 101 x 175 mm
XY Resolution	93 μ m
Dynamic Z Resolution ²	25 - 150 μ m
Footprint	39 x 43 x 64 cm
Electrical Requirement	110/220 VAC 50/60 HZ 5A

System specifications are subject to change without notice.

¹Deviation of +/- 2mm possible.

²Z Resolution is a pre-set value specific to print material selected.



cDLM Series



- Continuous Digital Light Manufacturing allows for continuous printing in the Z axis, for truly high-speed printing and isotropic part properties.
- Fewer supports required as parts are essentially built in free space—resulting in less post-processing.
- cDLM can process materials with a short pot life that can compete with injection molded parts.
- EnvisionTEC patented continuous printing in 2011 and our method allows users to print accurately across the entire build area without distortion.

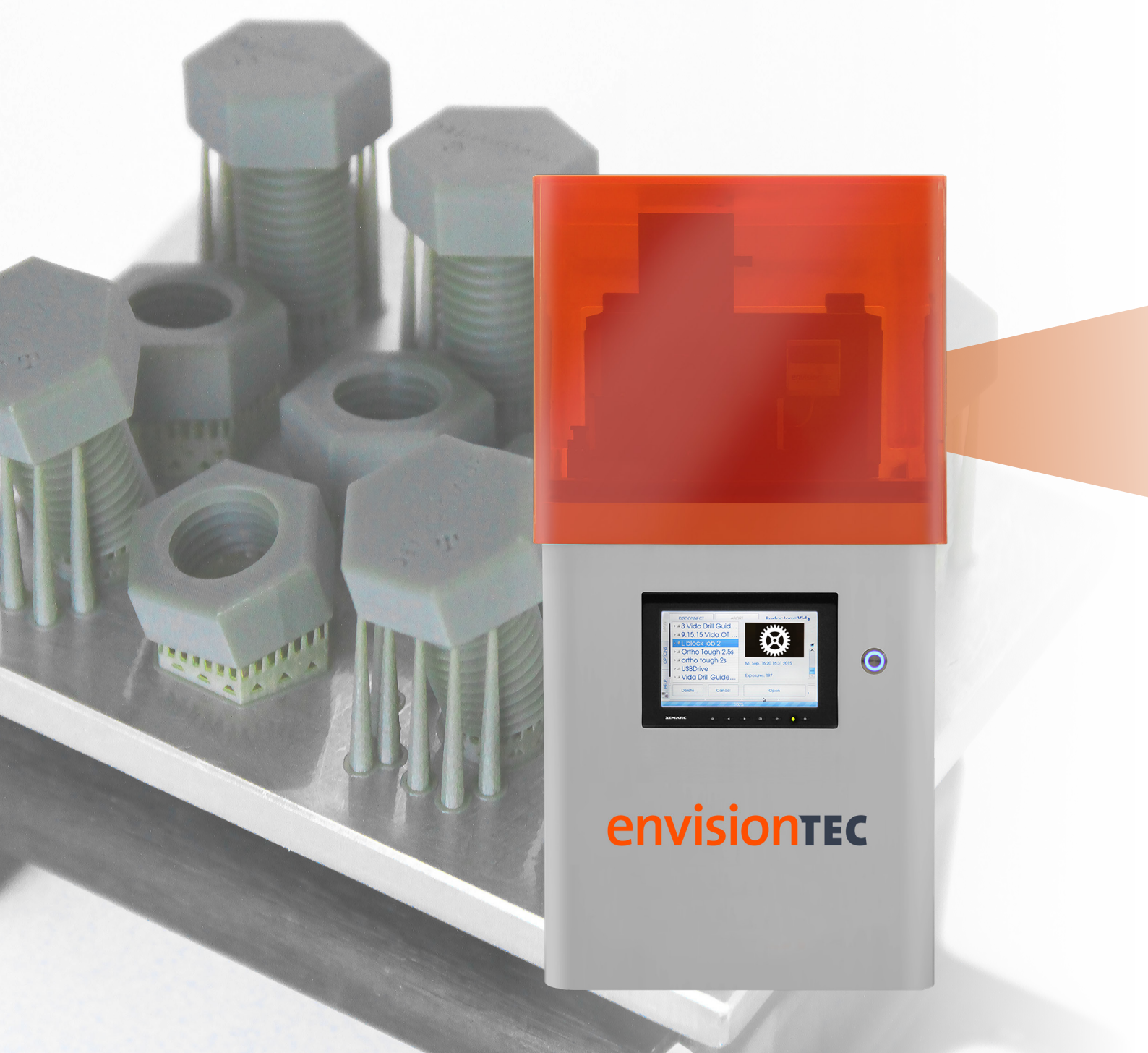
Machine Specification	Vida cDLM	Vida HD cDLM	Micro cDLM
Build Envelope ¹	145 x 81.5 x 100 mm	90 x 50 x 100 mm	45 x 28 x 75mm
XY Resolution	73 μm	50 μm ³	40 μm X / 31 μm Y
Z Resolution ²	25 μm to 150 μm	25 μm to 150 μm	25 μm to 150 μm
Footprint	39.5 x 35.0 x 78.7 cm	39.5 x 35 x 78.7 cm	23 x 24 x 54 cm
Weight Approx	34 kg	34 kg	16 kg
Electrical Requirements	110 VAC @ 3A	110 VAC @ 3A	110 VAC @ 3A

System specifications are subject to change without notice.

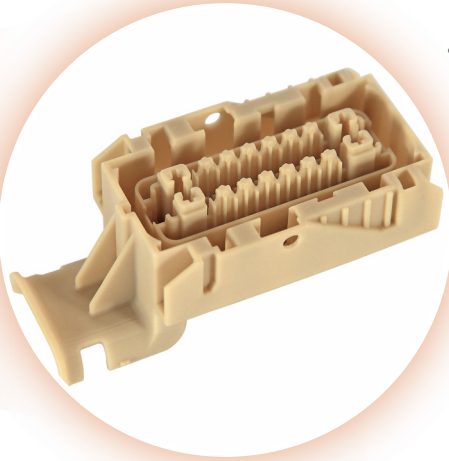
¹Deviation of +/- 2mm possible.

²Z Resolution is a pre-set value specific to print material selected.

³Higher resolution available with Vida UHD cDLM.



Vida Series



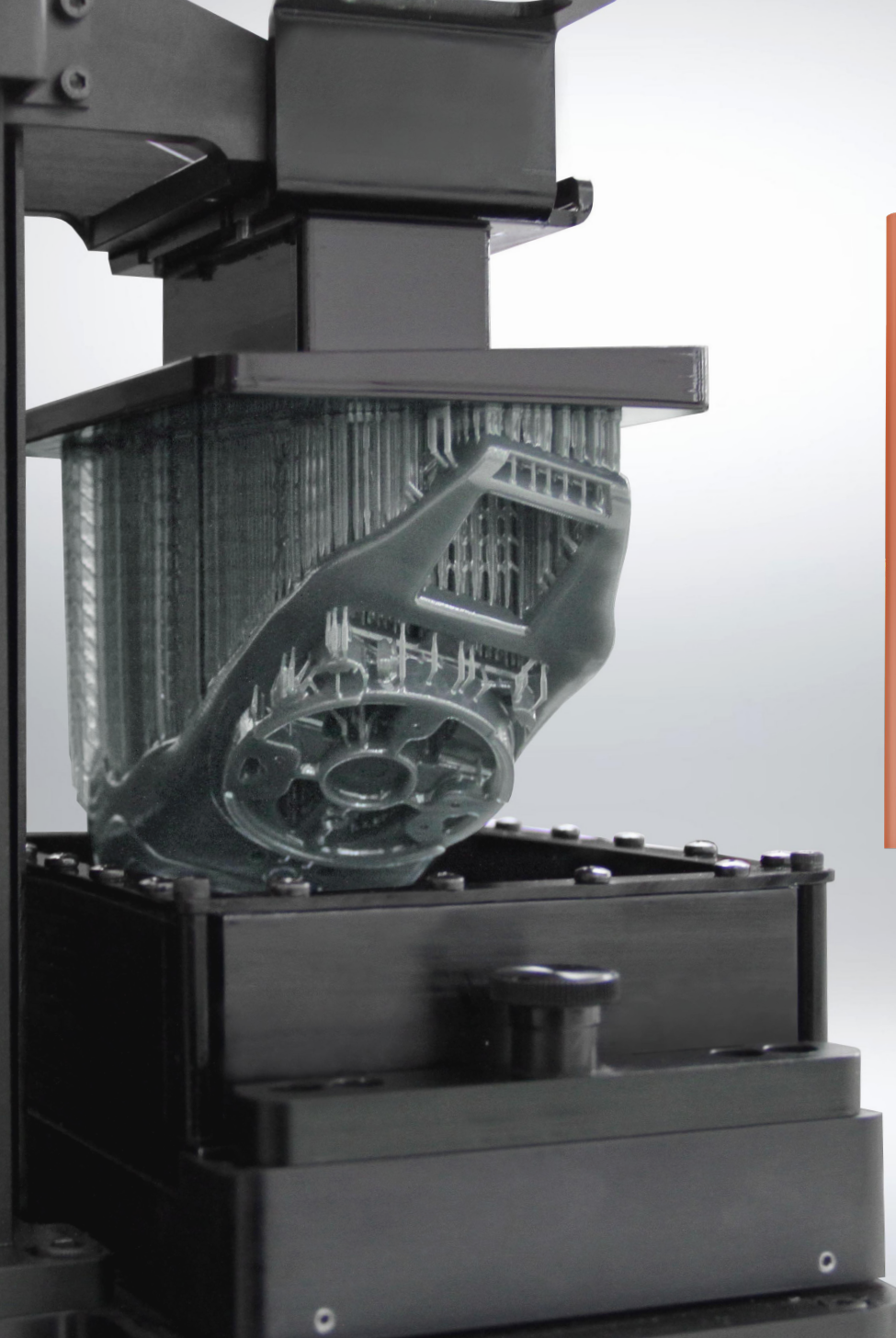
- Our bestselling desktop DLP printer.
- An easy-to-use machine that delivers extreme accuracy, surface finish quality and speed.
- The ultimate in printing flexibility: more than 24 materials available. Swapping materials is easy with no pumps or tubes.
- Ideal for design professionals, educators and consumers.

Machine Specification	Vida	Vida HD
Build Envelope ¹	140 x 79 x 100 mm	98 x 55 x 100 mm
XY Resolution	73 µm	50 µm
Z Resolution ²	25 µm to 150 µm	25 µm to 150 µm
Footprint	39.5 x 35.0 x 82.6 cm	39.5 x 35 x 82.6 cm
Weight Approx	34 kg	34 kg
Electrical Requirement	110 VAC @ 3A	110 VAC @ 3A

System specifications are subject to change without notice.

¹Deviation of +/- 2mm possible.

²Z Resolution is a pre-set value specific to print material selected



Micro Plus Series



- An affordable easy-to-use machine that delivers extreme accuracy, surface finish, quality and speed.
- A high-quality desktop machine with components built for stable performance and long-term reliability.
- The ultimate in printing flexibility: more than 24 materials available. Swapping materials is easy with no pumps or tubes.
- Ideal for design professionals, educators and consumers.

Machine Specification	Micro HD	Micro Advantage	Micro XL
Build Envelope ¹	45 x 28 x 100 mm	65 x 40 x 100 mm	120 x 74 x 85 mm
XY Resolution	30 µm	60 µm	85 µm
Z Resolution ²	25 - 75 µm	25 - 75 µm	25 - 75 µm
Footprint	23 x 24 x 64 cm	23 x 24 x 65 cm	23 x 24 x 66 cm
Weight Approx	16 kg	16 kg	16 kg
Electrical Requirement	100 - 120V, 3A / 220 - 240V, 1,5A		

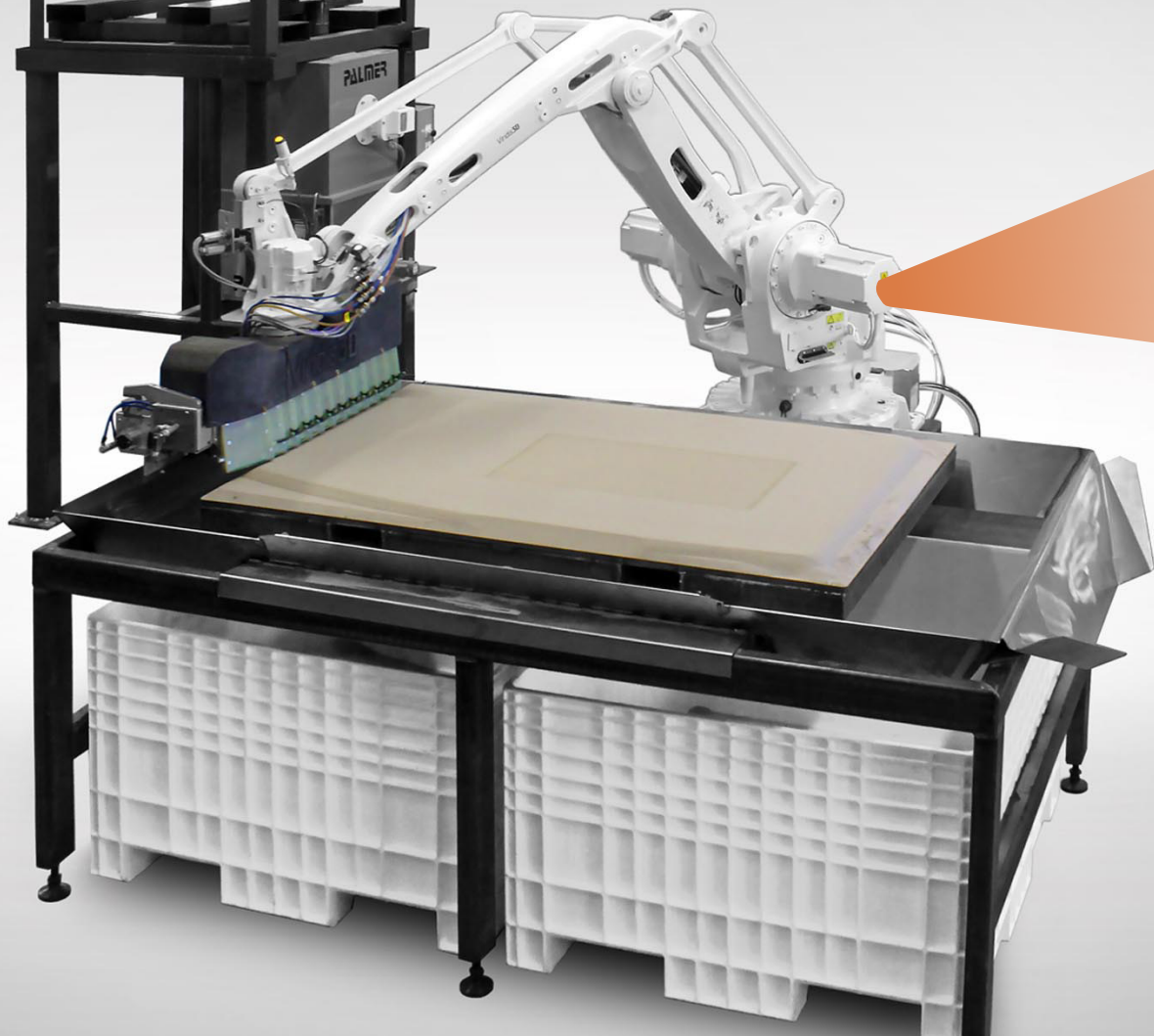
System specifications are subject to change without notice.

¹Deviation of +/- 2mm possible.

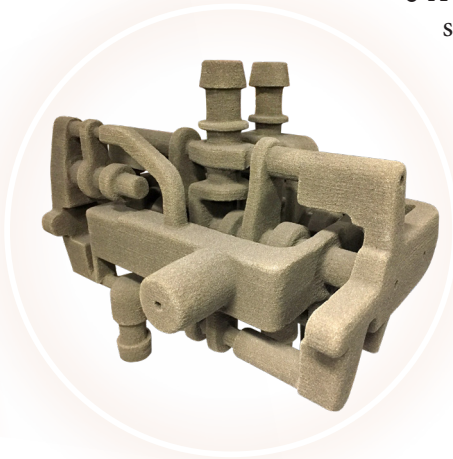
²Z Resolution is a pre-set value specific to print material selected



Viridis3D™



RAM Series from Viridis3D™



- A proprietary print head attached to an ABB robot arm uses exclusive binder jetting technology to print sand molds, mold cores and investment casting patterns for foundry applications.
- The RAM system is a turnkey solution that is available at about one-third the cost of competing technologies that build sand molds and cores in a box.
- Easy-to-use Viriprint software uses a CAD file to quickly print molds cores and investment casting patterns.
- This solution comes in a variety of sizes and the system is scalable to even larger sizes.
- Capable of printing a mold and core in just a few hours.

What's new:

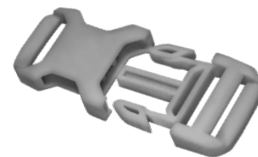
- Improved accuracy - laser calibration for trigger timing
- New printhead Backplane design - eight channel increments, scalable, improved reliability, shorter assembly time
- New viriprint features -
 - Speed: 2 1/2 - 3 vertical inches/hour
 - System repeatability: 100 µm
 - Layers: 200 - 500 µm
 - Part roughness: 200 - 300 RMS
 - Accuracy: +/- 0.010"
 - Base sand: Silica sands, GFN Oklahoma & Wedron
 - Sand GFN: 115 to GFN65, round or subangular
 - Catalyst: dry acid
 - Resin: modified furan
 - Compatibility: Ferrous and nonferrous sand casting
 - Strength: 175 psi
 - Strength (baked): >370 psi

Engineering-Grade Resins

ABS FlexWhite



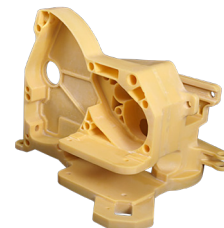
ABS Hi-Impact



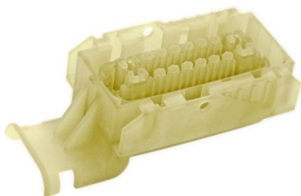
E-Rigid PU



E-Denstone



E-Model



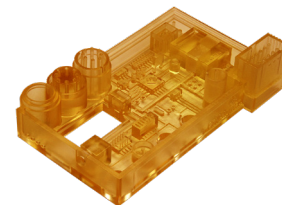
E-Glass 2.0



E-RigidForm



E-Poxy



E-Clear



E-CE



See more options at EnvisionTEC.com/materials

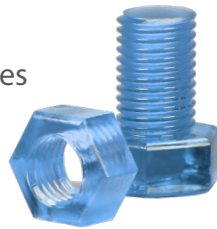
ABS Tough



E-Tool 2.0



E-Shell 200/300 Series



HTM140



E-Shore A



QView



LS600



Pro Gray



R5/R11 Series



RC70/90 Series



Open Materials Program

EnvisionTEC offers a range of high performance materials to cope with most applications required by industry, including wax-filled resins used for direct casting applications, high temperature resistant ceramic-filled resins, and highly accurate general purpose resins for functional end results.

EnvisionTEC has always been a leader in 3D printing materials, with one of the most versatile materials portfolios available. To further drive the adoption of 3D Printing technologies beyond prototyping to final parts production, EnvisionTEC is now partnering with the best in 3D printing materials manufacturers in our Open Materials Program.

Through this Open Materials Program, EnvisionTEC is working with select materials experts to certify the best of the best for use on our 3D printers in order to expand our selection of high-quality materials. Ask your sales representative for more details on selecting the right material for your project.

Some of our Current Material Partners:





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