





svs

# zortrax

Reliable, renowned and revolutionary
3D printing solutions









# End to end agile prototyping and manufacturing

Next-gen technologies enhancing every stage of product development

Zortrax is a widely-acclaimed manufacturer of professional 3D printers, printing materials, and post-processing devices used by world-leading organizations like Bosch or NASA. The company has developed a portfolio of unique flexible manufacturing technologies to deliver the best value to its customers.

### ( ) LPD | Layer Plastic Deposition

The LPD is an additive manufacturing technology that builds physical models by depositing a fused polymer filament onto a build platform moving in a Z axis. The LPD technology is tightly integrated with its dedicated software and a wide range of filaments with various chemical and physical properties.

#### 

The image of the model's layer is displayed on a high-res LCD screen with a UV light source placed beneath. Its main strength is very high precision as it is capable of printing extremely small objects barely visible to the naked human eye.

### LPD Plus | Layer Plastic Deposition Plus

The LPD Plus has the same working principle as the LPD but it supports simultaneous 3D printing with two filaments: one for the model, and one for the water-soluble support structures. This way there is no need for mechanical support removal.

#### SVS | Smart Vapor Smoothing

The SVS is a unique technology developed by Zortrax to automate vapor-smoothing, one of the most popular techniques to remove visible layering from models 3D printed in the LPD, LPD Plus, FDM, FFF or similar technologies. Vapors of methyl ethyl ketone (MEK) or acetone react with models' surfaces to achieve glossy or matte finish, depending on the filament used.



# **\Q**

Cost-efficient prototyping



Prosthetics & orthotics



Pre-surgical planning models



### zortrax

# M200 Plus Basically reliable 3D printer



Build

Extrusion

VOIUME 200 x 200 x 180 mm 7.9 x 7.9 x 7.1 in



Zortrax M200 Plus 3D printer

#### Designed for hard work

The M200 Plus LPD 3D printer has been made with high-quality components to offer class-leading reliability and low maintenance costs. This machine is a versatile, affordable 3D printing solution that can work for many hours without a single failure.

#### Fail-safe design

The industrial-grade extruder in the M200 Plus is compatible with a wide range of filaments. Functionalities like efficient cooling system or a heated build-platform guarantee dimensional accuracy while the filament endstop mechanism pauses the print and notifies the user when the filament runs out.

#### > Made for 3D printing farms

Large clusters of remotely controlled 3D printers can offer significant prototyping and small to medium scale production capabilities. The M200 Plus has Wi-Fi and Ethernet connectivity which make it great as a basic manufacturing unit in a 3D printing farm.

#### **>** Easy to control

The M200 Plus can be operated remotely or through an intuitive touch screen fitted in the front panel. The printing process can be monitored at all times with a camera installed in the printing chamber. The machine can be set up and operated with no prior 3D printing experience.







Medical winch for fiber laser closing varicose veins

End-use drill-driver casing

Artificial human heart model

Functional headphones prototype

#### **DEVICE**

Build volume	200 x 200 x 180 mm (7.9 x 7.9 x 7.1 in)			
Material container	Spool			
Material diameter	1.75 mm (0.069 in)			
Nozzle diameter	0.4 mm (0.016 in) – standard / 0.3 mm (0.012 in) / 0.6 mm (0.024 in)			
Support	Mechanically removed - printed with the same material as the model			
Extruder	Single (compatible with demanding materials like TPU or nylon)			
Extruder cooling system	Radial fan cooling the extruder block; two fans cooling the print			
Hotend	Single, V3			
Platform	Heated; perforated and glass are applicable			
Material endstop	Mechanical			
Connectivity	Wi-Fi, Ethernet, USB			
Operating system	Android			
Processor	Quad Core			
Touchscreen	4" IPS 800 x 480			
Camera	Yes			
External materials	Applicable			

#### **SOFTWARE**

Software bundle	Z-SUITE
Supported input file types	.stl, obj, .dxf, .3mf
Supported operating system	Mac OS up to Mojave version / Windows 7 and newer versions

#### **PRINTING**

Technology	LPD (Layer Plastic Deposition) – depositing melted material layer by layer onto the build platform
Layer resolution	90-390 microns
Minimal wall thickness	400 microns (for 0.4 mm nozzle)
Platform levelling	Automatic measurement of platform points' height

#### **TEMPERATURE**

Maximum printing temperature (extruder)	290° C (554° F)
Maximum platform temperature	105° C (221° F)
Ambient operation temperature	20-30° C (68-86° F)
Storage temperature	0-35° C (32-95° F)

#### **ELECTRICAL**

AC Input	110 V ~5.9 A 50/60 Hz; 240 V ~2.5 A 50/60 Hz
Maximum power consumption	320 W

#### IN THE BOX

3D Printer, Hotend V3, Side Covers, Z-SUITE, Starter Kit, Z-ULTRAT, Spool holder, USB memory stick

5



# Automotive

parts

# M300 Plus Print big models in one go



prototyping









#### Large workspace

The M300 Plus workspace is one of the largest among desktop class 3D printers. It allows printing big models in one go without breaking them down into separate parts that need to be assembled. That's particularly important when durability is of the essence as joints are usually the weakest spots in the structure.

#### > Remote management

Manufacturing output increases with the number of 3D printers working on the project and the M300 Plus is designed to work in 3D printing farms. Multiple machines can be controlled remotely from one workstation over Ethernet or Wi-Fi.

#### Rock-solid performance

Working cycles on large volume 3D printers tend to be longer than on smaller machines which makes reliability even more important. The M300 Plus is based on a proven M300 design capable of running for many hours without failure at world-leading organizations like NASA.

#### > Wide range of filaments

The M300 Plus works with all 1.75 mm filaments available on spools. It can print with challenging materials like flexible TPU or with highly durable nylon. Professional users are thus free to choose the right filament for their projects and rely on the 3D printer to handle it with no issues.







Car grille prototype



Apartment cross-section model

#### **DEVICE**

Build volume	300 x 300 x 300 mm (11.8 x 11.8 x 11.8 in)		
Material container	Spool		
Material diameter	1.75 mm (0.069 in)		
Nozzle diameter	0.4 mm (0.016 in) – standard / 0.3 mm (0.012 in) / 0.6 mm (0.024 in)		
Support	Mechanically removed - printed with the same material as the model		
Extruder	Single (compatible with demanding materials like TPU or nylon)		
Extruder cooling system	Radial fan cooling the extruder block; two fans cooling the print		
Hotend	Single, V3		
Platform	Heated; perforated and glass are applicable		
Material endstop	Mechanical		
Connectivity	Wi-Fi, Ethernet, USB		
Operating system	Android		
Processor	Quad Core		
Touchscreen	4" IPS 800 x 480		
Camera	Yes		
External materials	Applicable		

#### SOFTWARE

Software bundle	Z-SUITE
Supported input file types	.stl, obj, .dxf, .3mf
Supported operating system	Mac OS up to Mojave version / Windows 7 and newer versions

#### **PRINTING**

Technology	LPD (Layer Plastic Deposition) – depositing melted material layer by layer onto the build platform	
Layer resolution	90-290 microns	
Minimal wall thickness	400 microns (for 0.4 mm nozzle)	
Platform levelling	Automatic measurement of platform points' height	

#### **TEMPERATURE**

Maximum printing temperature (extruder)	290° C (554° F)
Maximum platform temperature	105° C (221° F)
Ambient operation temperature	20-30°C (68-86°F)
Storage temperature	0-35°C (32-95°F)

#### **ELECTRICAL**

AC Input	110 V ~5.9 A 50/60 Hz; 240 V ~2.5 A 50/60 Hz			
Maximum power consumption	360 W			

#### IN THE BOX

3D Printer, Hotend V3, Side Covers, Z-SUITE, Starter Kit, Z-PETG, Z-HIPS, Spool holder, USB memory stick

# Parts & Accessories for © LPD

PARTS & ACCESSORIES	DESCRIPTION	M200 PLUS	M300 PLUS	PRODUCT
Extruder cable*	Cable connecting an extruder with a motherboard	<b>√</b>	√	Sortrox
Fan cooler	Spare extruder's fan cooler	<b>√</b>	<b>√</b>	
Glass plate*	Glass build plates make it possible to achieve extremely smooth first layers when printing raft-free	<b>√</b>	<b>√</b>	
Hotend V3	Heating block for filament extrusion system	<b>√</b>	✓	zortrax betand v2
Nozzle 0.4 mm	Spare 0.4 mm nozzle	<b>√</b>	✓	
Nozzle set 0.3 & 0.6 mm	Set of 2 nozzles with 0.3 diameter for precise prints and 0.6 mm diameter for fast prints	<b>√</b>	<b>√</b>	

<sup>\*</sup>Different for each 3D printer.

# Parts & Accessories for © LPD

PARTS & ACCESSORIES	DESCRIPTION	M200 PLUS	M300 PLUS	PRODUCT
Nozzle caps	Set of 4 teflon nozzle cap	<b>√</b>	<b>√</b>	
Perforated plate*	Perforated plate to install on heatbed	✓	✓	
Radial fan cooler	Spare radial fan cooler dissipating heat generated in the XY block where the upper part of hotend is attached	√	√	A CONTRACTOR OF THE PARTY OF TH
Side covers*	Detachable plastic panels covering build space	✓	✓	
Spool holder*	Holder for spools of filament	✓	✓	
Thermocouple +heater*	Set of one thermocouple (element for hotend temperature gauge) and one heater (heating element for hotend)	√	<b>√</b>	
USB memory stick	USB flash storage device	✓	<b>√</b>	

<sup>\*</sup>Different for each 3D printer.



# 3D Printing Thermoplastic Filaments for @ LPD

FILAMENTS	DESCRIPTION	COLORS	M200 PLUS	M300 PLUS
Z-ABS	ABS-based, multi-purpose, budget filament. Easy to post-process for both beginners and professionals.	<ul><li>O Pure White</li><li>Pure Black</li><li>Cool Grey</li></ul>	Spool net weight: 800 g ± 5%	Spool net weight: 800 g ± 5%
Z-ABS 2	Z-ABS 2 is an ABS blend that has higher elongation at break and tensile strength than standard Z-ABS.	O Pure White Red Warm Grey Sky Blue Cool Grey Green Yellow Blue Orange Pure Black	Spool net weight: 800 g ± 5%	Spool net weight: 800 g ± 5%
Z-ASA Pro	ASA-based resilient filament for functional prototypes that can withstand the UV light, rain, and wind.	<ul><li> Graphite</li><li> Pure Black</li><li> Pure White</li></ul>	Spool net weight: 800 g ± 5%	Spool net weight: 2 000 g ± 5%
Z-ESD	PETG-based filament perfect for the electronic industry. Guarantees electrostatic discharge protection along with resistance to most acids, alcohols, and alkalis.	● Black	Spool net weight: 800 g ± 5%	Spool net weight: 800 g ± 5%
Z-FLEX	Strong TPU-based flexible filament with great interlayer-adhesion. It can bend without breaking. The material is non-toxic and resistant to various chemicals like gasoline and ethyl alcohol.	● Black	Spool net weight: 800 g ± 5%	Spool net weight: 800 g ± 5%
Z-GLASS	Composite material based on PETG with fiberglass addition. It has light-transmitting properties for translucent models and is resistant to scratches, UV light, and chemicals.	O Natural Transparent	Spool net weight: 800 g ± 5%	Spool net weight: 2 000 g ± 5%
Z-HIPS	A filament based on HIPS (high impact polystyrene) with semi-mat texture that masks the layering. Offers high impact resistance and effortless post-processing.	<ul><li>Black</li><li>Grey</li><li>Natural White</li></ul>	Spool net weight: 800 g ± 5%	Spool net weight: 2 000 g ± 5%

# 3D Printing Thermoplastic Filaments for <a>O</a> LPD

FILAMENTS	DESCRIPTION	COLORS	M200 PLUS	M300 PLUS
Z-NYLON	Very strong, versatile filament resistant to high temperatures and chemicals. It can be post-processed with tools meant for machining metals. The material is easy to paint and hard to break.	O Natural ■ Black	Spool net weight: 800 g ± 5%	Spool net weight: 2 000 g ± 5%
Z-PCABS	A blend of ABS and polycarbon. Can easily withstand impacts, UV light, high temperature, and time. It's also resistant to salts, acids, and other chemicals.	O Ivory	Spool net weight: 800 g ± 5%	Spool net weight: 800 g ± 5%
Z-PETG	Filament based on PET with glycol addition. Able to withstand UV light and passage of time. The material is also exceptionally resistant to oils and other greases.	Black Grey	Spool net weight: 800 g ± 5%	Spool net weight: 2 000 g ± 5%
Z-PLA	PLA-based filament with low shrinkage, guaranteeing high-quality details and smooth surfaces. Offers exceptional precision for complex models.	<ul><li>Black</li><li>White</li><li>Graphite</li><li>Grey</li></ul>	Spool net weight: 800 g ± 5%	Spool net weight: 2 000 g ± 5%
Z-PLA Pro	PLA-based, biodegradable filament. An addition of chalk gives its surface a unique mat finish and more visible details with gypsum-like texture.  Very low shrinkage, almost no warping.	<ul><li> Gypsum White</li><li> Concrete Grey</li><li> Cool Grey</li><li> Pure Black</li></ul>	Spool net weight: 800 g ± 5%	Spool net weight: 2 000 g ± 5%
Z-ULTRAT	Durable and lasting ABS-based filament. Its surface can be easily post-processed with acetone and mechanical treatment. Available in a wide range of colors.	O Gypsum White Concrete Grey Coo ● Blue Yellow Green Cool Grey Ivory Pure Black Red I Grey Pure Black	Spool net weight: 800 g ± 5%	Spool net weight: 2 000 g ± 5%



# 編

Architecture



Medium-sca production



Geometrically complex models



Large mechanical models



Production lines support

### zortrax

# M300 Dual Industrial-class 3D printing on your desk



Zortrax M300 Dual 3D printer

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Build volume 265 x 265 x 300 mm 10.4 x 10.4 x 11.8 in

# Resolution



#### Large volume dual extrusion

The M300 Dual can simultaneously print with both base and water-soluble support filaments in a large build volume measuring  $265 \times 265 \times 300$  mm. This makes it capable of printing big models needed in industries like aerospace, automotive, or architecture.

#### Advanced filament control

The printer can detect when the filament ran out or jammed. In both scenarios the print is paused and a notification is sent to the user. The work can be resumed from the same spot when the problem is solved.

#### Various build-platforms

With a capacitive displacement sensor the M300 Dual can automatically calibrate to work with glass, perforated, or other types of build platforms. This way it's possible to customize the printer for the project at hand.

#### Fail-safe 3D printing

To deal with power outages, the Blackout Response System stores enough energy to save the printing progress. Printing can be resumed from the same spot when the power is back on.

#### Third-party filaments support

Professional users often need special-purpose filaments for their projects. That's why the M300 Dual can work with all third-party 1.75 mm filaments available on spools with no adverse effect on utility.

#### Extensive connectivity

Multiple M300 Dual 3D printers can be connected via Wi-Fi or Ethernet network to work in large, remotely controlled clusters. Such 3D printing farms can be used for bridge manufacturing or small to medium scale production.









Car gearbox



#### **DEVICE**

Build volume	265 x 265 x 300 mm (10.4 x 10.4 x 11.8 in)
Nozzle diameter	0.4 mm (0.016 in)
Extruder	Dual, printing with model and support material
Extruder cooling system	Two fans cooling the extruder, radial fan cooling the print
Hotend	Dual
Platform	Heated; various platforms are applicable (e.g. perforated or glass)
Material Endstop	2 x Mechanical
Connectivity	Wi-Fi, Ethernet, USB
Operating system	Android
Processor	Quad Core
Touchscreen	4" IPS 800 x 480
Camera	Yes

#### SOFTWARE

Software bundle	Z-SUITE
Supported input file types	.stl, obj, .dxf, .3mf
Supported operating system	Mac OS up to Mojave version / Windows 7 and newer versions

#### PRINTING

Technology	LPD Plus (Layer Plastic Deposition Plus) – advanced technology depositing melted thermoplastics with dissolvable support structures
Layer resolution	150-200 microns
Minimal wall thickness	400 microns
Platform levelling	Automatic measurement of platform points' height / manual measurement of platform points' height

#### **TEMPERATURE**

Maximum printing temperature (extruder)	310° C (590° F)
Maximum platform temperature	105°C (221°F)
Ambient operation temperature	20-30°C (68-86°F)
Storage temperature	0-35° C (32-95° F)

#### ELECTRICAL

AC Input	110 V ~5.9 A 50/60 Hz; 240 V ~2.5 A 50/60 Hz
Maximum power consumption	400 W

#### **FILAMENTS**

Dedicated for single extrusion	Z-FLEX, Z-GLASS, Z-HIPS, Z-NYLON, Z-PETG, Z-PLA, Z-PLA Pro, Z-ULTRAT, Z-ULTRAT Plus
Dedicated for dual extrusion	Z-ESD, Z-GLASS, Z-PETG, Z-PLA, Z-PLA Pro, Z-ULTRAT Plus, Z-SUPPORT Premium
External filaments	Applicable
Support	Mechanically removed – printed with the same material as the model
	Water-soluble – printed with a different material than the model
Filament container	Spool
Filament diameter	1.75 mm (0.069 in)

#### IN THE BOX

3D Printer, Side Covers, Z-SUITE, Starter Kit, Z-PETG, Z-SUPPORT Premium, 1x Perforated Platform, 1x Glass Platform, 2x Spool holders, Material Box, USB



# Surgical planning models

# Inventure Compact tool for your inventions



Mechanical engineering



mechanisms





Zortrax Inventure 3D printer

### 

Build volume 135 x 135 x 130 mm 5.3 x 5.3 x 5.1 in





#### > Enclosed printing chamber

The Inventure has an enclosed heated printing chamber which allows to tightly control the temperature around the model. That's how warping and shrinkage that occur during the polymers' cooldown are minimized to achieve better dimensional accuracy.

#### Advanced dual-extrusion

Models in the Inventure can be printed in dual or single extrusion modes. In dual-extrusion, the printer works with two filaments: one for the model and one for water-soluble support structures. In the single-extrusion mode, the Inventure prints both the model and support structures with the base filament alone.

#### Third-party filaments support

The Inventure works with both dedicated and third-party filaments available on spools. Dedicated smart cartridges are also available and automatically identify the type, color, and amount of the filament inside. Compatibility with spools enable the Inventure to support all 1.75 mm filaments available on the market.

#### Built-in HEPA filter

The HEPA filter is an integral part of the Inventure that prevents fumes and ultra-fine particles (UFPs) from getting out of the printing chamber. This filter is experimentally proven to intercept over 99% of the UFPs released in the 3D printing process.

#### Automated support removal

Soluble support removal can be done automatically in the DSS Station designed to complement the Inventure. The DSS Station keeps the water at optimal temperature and circulates it around the model until all the support structures are gone\*.

<sup>\*</sup>The DSS Station is a stand-alone device that does not come in the box with the Inventure 3D printer.











Prototype of a knee joint

Bicycle cassette model before support material dissolution

Human heart pre-surgical planning model

Torsen differential mechanism

#### DEVICE

Build volume	135 x 135 x 130 mm (5.3 x 5.3 x 5.1 in)
Nozzle diameter	0.4 mm (0.016 in)
Extruder	Dual, printing with model and support material
Hotend	Dual
Material detection sensor	Yes (for filaments in cartridge only)
Chip with information about material (type, color, consumption)	Yes (for filaments in cartridge only)
HEPA Filter	Yes
Connectivity	SD card (included)

#### SOFTWARE

Software bundle	Z-SUITE
Supported input file types	.stl, .obj, .dxf, .3mf
Supported operating systems	Mac OS up to Mojave version / Windows 7 and newer versions

#### PRINTING

Technology	LPD Plus (Layer Plastic Deposition Plus)  - advanced technology depositing melted thermoplastics with dissolvable support structures
Layer resolution	150-200 microns
Minimal wall thickness	400 microns
Platform levelling	Automatic measurement of platform points' height

#### **TEMPERATURE**

Heated chamber	Yes
Ambient operation temperature	15-30° C (59-86° F)
Storage temperature	0-35° C (32-95° F)

#### ELECTRICAL

AC Input	110 V ~ 4 A 50/60 Hz; 240 V ~ 1.7 A 50/60 Hz
Maximum power consumption	300 W

#### **FILAMENTS**

Dedicated for single extrusion	Z-FLEX, Z-GLASS, Z-HIPS, Z-NYLON, Z-PETG, Z-PLA, Z-PLA Pro, Z-ULTRAT, Z-ULTRAT Plus
Dedicated for dual extrusion	Z-ESD, Z-GLASS, Z-PETG, Z-PLA, Z-PLA Pro, Z-ULTRAT Plus, Z-SUPPORT Premium
External filaments	Applicable
Support	Mechanically removed – printed with the same material as the model
	Water-soluble – printed with a different material than the model
Filament container	Cartridge or spool
Filament diameter	1.75 mm (0.069 in)

#### IN THE BOX

3D Printer, Z-PETG, Z-SUPPORT Premium, 5 build trays, Starter Kit, 2x Spool



Jigs and fixtures for manufacturing lines

Large end-use parts



Chemical-resistant models



Functional aerospace & automotive prototypes



Support tools for machines



### zortrax

### **Endureal**

# The real future of production lines



Extrusion 🛱 Dual

Single

Resolution 200 microns (nozzle 0.4)



Build volume

400 x 300 x 300 mm 15.7 x 11.8 x 11.8 in

#### Easy to implement

Being a full-fledged industrial machine, Endureal is as fast to set up and easy to operate as Zortrax desktop-class 3D printers. Intuitive user interface and software with carefully tuned settings predefined for each dedicated filament make Endureal ready to work at full capacity from day one.

#### > PEEK CF compatibility

Polyether ether ketone reinforced with carbon fiber (Z-PEEK CF) is one of the most future-oriented 3D printing materials. High resistance to heat, chemicals, and abrasion make Z-PEEK CF the right filament for fully functional parts in satellites, automobiles, or airplanes.

#### Performance under control

Endureal's operation is monitored in real time by a wide array of sensors. Everything from air humidity in the filament's compartment, to temperatures in its critical modules is tightly controlled. The printer can detect multiple issues like overheating or filament shortages and notify the user. In emergencies, its operation can be immediately stopped by hitting a clearly visible safe button.

#### Industrial printing chamber

Endureal has an enclosed printing chamber designed for the most challenging materials like Z-PEEK CF, or flame-retardant Z-PEI 9085. It can be heated up to over 200 °C. Such high temperatures are necessary to minimize shrinkage in large-format prints.

#### High temperature build platform

A build platform in the Endureal is made of aluminum covered with PEI film to ensure proper adhesion for all supported filaments. The platform is designed to withstand temperatures reaching 200 °C which are necessary to efficiently print high-performance polymers.

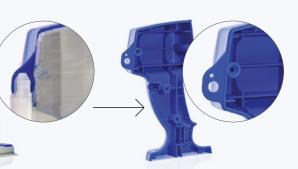
#### Dual-extrusion capability

The printer can simultaneously work with two filaments, one for the model, and the other one for soluble or breakaway support structures. This makes it capable of fabricating models with complex internal geometries, movable mechanisms, and other shapes that would have been impossible to print in a single-extrusion mode.

An MTB shock absorber support 3D printed with Z-PEI 9085



Functional 4-cylinder engine block 3D printed with Z-PEEK CF



An end-use power tool handle before and after water-soluble support removal

### A durable supporting bracket printed with Z-PEEK CF





LPD Plus

A temperature-resistant U-shaped hydraulic connector 3D printed with Z-PEI 9085

#### **DEVICE**

Build volume*	400 x 300 x 300 mm (15.7 x 11.8 x 11.8 in)	
Nozzle diameter	0.4 mm (0.016 in)	
Extruder	Dual material	
Extruder cooling system	Two fans cooling the extruder, radial fan cooling the print	
Hotend	High-temperature dual hotend	
Platform	Heated, aluminum coated with PEI	
Material Sensors	2 x Mechanical endstop, 2 x Material weight sensor	
Connectivity	Wi-Fi, Ethernet, USB	
Operating system	Android	
Processor	Quad Core	
Touchscreen	7" IPS 1024 x 600	
Camera	Yes	

#### **SOFTWARE**

Software bundle	Z-SUITE
Supported input file types	.stl, obj, .dxf, .3mf
Supported operating system	Windows 7 and newer versions

#### PRINTING

Technology	LPD Plus (Layer Plastic Deposition Plus) – advanced technology depositing melted thermoplastics with break-away and dissolvable support structures	
Layer resolution	200 microns (nozzle 0.4)	
Minimal wall thickness	400 microns (nozzle 0.4)	
Platform levelling	Automatic measurement of platform points' height	

#### **TEMPERATURE**

Maximum printing temperature (extruder)	450° C (842° F)
Maximum platform temperature	200° C (392° F)
Maximum build chamber temperature	200° C (392° F)
Ambient operation temperature	17-30° C (63-86° F)
Storage temperature	0-35° C (32-95° F)

#### **ELECTRICAL**

AC Input	120 V ~ 13 A 50/60 Hz 200 - 240 V ~ 9,5 A 50/60 Hz
Maximum power consumption	120 V - 1600 W 200 - 240 V - 2300 W

#### **FILAMENTS**

Dedicated for single extrusion	Z-ULTRAT Plus, Z-ESD
Dedicated for dual extrusion	Z-ULTRAT Plus, Z-ESD, Z-PEEK CF, Z-PEI 9085, Z-SUPPORT Premium (water-soluble), Z-SUPPORT High-Temp (break-away), Z-SUPPORT ATP (solu- ble with Z-SUPPORT ATP Activator)
Support	Mechanically removed – printed with the same material as the model
	Break-away – printed with a different material than the model
	Soluble – printed with a different material than the model
Filament container	Spool
Filament diameter	1.75 mm (0.069 in)

#### IN THE BOX

3D Printer, Z-SUITE, Starter Kit, Maintenance Kit, spool of model material, spool of support material, spool of high-temperature model material, spool of high-temperature support material, USB memory stick

<sup>\*</sup>In dual-extrusion mode project's dimensions cannot exceed 390 mm [15.35 in] in the X axis and/or 290 mm [11.40 in] in the Y axis.

# Parts & Accessories for @ LPD & @ LPD Plus

### **HEPA** Cover

Dedicated for: M200, M200 Plus, M300, M300 Plus, M300 Dual and other 3D printers with similar dimensions





HEPA Cover is a filtering device designed to intercept harmful UFPs and unpleasant odors released in the 3D printing process. It also keeps the temperature in the printing chamber stable to reduce warping and shrinkage.

#### **WEIGHT AND PHYSICAL DIMENSIONS**

HEPA Cover 200	
Without filtering module (W x D x H)	368 x 357 x 230 mm (14.5 x 14.1 x 9.1 in)
With filtering module (W x D x H)	426 x 357 x 230 mm (16.8 x 14.1 x 9.1 in)
Device weight	1.95 kg (4.3 lb)
HEPA Cover 300	
Without filtering module (W x D x H)	496 x 483 x 280 mm (19.5 x 19.1 x 11 in)
With filtering module (W x D x H)	545 x 483 x 280 mm (21.5 x 19.1 x 11 in)
Device weight	2.55 kg (5.6 lb)

#### **FILTRATION**

Odor reduction filter	Carbon
Particle reduction filter	HEPA
Filtration efficiency	99.5%

#### **ELECTRICAL**

AC input	100 - 240 V ~ 0.7 A 50/60 Hz
Power supply parameters	12 V DC, 0.5 A (min)
Maximum power consumption	6 W

#### **IN THE BOX**

Device, power supply unit, filtering module with HEPA and carbon filters

### HFPA Cover Filter set

Dedicated for: Zortrax HEPA Cover

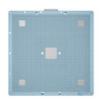
HEPA and carbon filters in HEPA Covers should be changed every 3-4 months. This filter set contains 3 HEPA and 3 carbon filters - enough to keep the HEPA Cover's performance at optimal level for up to a year.



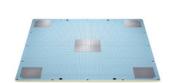
# Parts & Accessories for @ LPD & @ LPD Plus

# Perforated plate & glass plate

Dedicated for: M200 Plus, M300 Plus, M300 Dual







Perforated plate for M300 Plus

Perforated build plates are made to ensure great build-platform adhesion and are recommended for printing with rafts.

Glass build plates available for the M300 Dual make it possible to achieve extremely smooth first layers when printing raft-free.



Perforated plate for M300 Dual



Glass build plate\* for M200 Plus, M300 Plus, M300 Dual

\*Different for each 3D printer.

## **Zortrax DSS Station**

Dedicated for: Inventure



Zortrax DSS Station is an automated soluble support removal device compatible with the Inventure 3D printer. It keeps the water at optimal temperature and circulates it around the model to increase the supports dissolution rate.

#### **WEIGHT AND PHYSICAL DIMENSIONS**

External dimensions (W x D x H)	235 x 238 x 295 mm (9.2 x 9.4 x 11.6 in)
Internal dimensions	188 x 188 x 199 mm (7.4 x 7.4 x 7.8 in)
Working volume	6 I (202.9 fl oz)
Device weight	8.4 kg (18.5 lb)

#### MECHANICAL

Maximum working temperature	75° C (167° F)
Maximum rotational speed	220 rpm

#### **ELECTRICAL**

AC input	110 V ~ 9 A 50/60 Hz; 240 V ~ 4.2 A 50/60 Hz
Maximum power consumption	1000 W

# Parts & Accessories for O LPD Plus

PARTS & ACCESSORIES	DESCRIPTION	M300 DUAL	INVENTURE	PRODUCT
Build tray	4 spare standard build trays	χ	<b>√</b>	
Build tray plus	4 spare build trays plus. Designed for 3D printing with Z-ULTRAT Plus	X	<b>√</b>	
Extruder FPC cable	M300 Dual extruder's cable	<b>√</b>	X	in and the second
Extruder PCB	M300 Dual extruder's PCB	<b>√</b>	X	Bortrax G
Extruder v1	Extruder for M300 Dual	<b>√</b>	X	
Fan cooler	Spare extruder's fan cooler	<b>√</b>	X	E
Glass build plate	Glass build plates available for the M300 Dual make it possible to print raft-free	<b>√</b>	X	
HEPA filter	Spare air filter	X	<b>√</b>	
Hotend module*	2 separate hotends in set, one extruding the model material and the other extruding the support material	<b>√</b>	<b>√</b>	
Material box	Container protecting support filament from moisture	<b>√</b>	χ	

<sup>\*</sup>Different for each 3D printer.

# Parts & Accessories for O LPD Plus

PARTS & ACCESSORIES	DESCRIPTION	M300 DUAL	INVENTURE	PRODUCT
Nozzle caps	Set of 4 teflon nozzle cap	<b>√</b>	<b>√</b>	
Nozzle set	2 nozzles, 2 teflon nozzle caps, 2 hotend covers	<b>√</b>	<b>√</b>	
Perforated plate	Perforated plate to install on heatbed	<b>√</b>	Х	
Radial fan cooler	Spare radial fan cooler dissipating heat generated in the XY block where the upper part of hotend is attached	<b>√</b>	Х	
Set of fan coolers*	A set of 3 spare fan coolers	<b>√</b>	<b>√</b>	
Side covers	Detachable plastic panels covering build space	<b>√</b>	X	
Silica gel	Desiccant for M300 Dual material box	<b>√</b>	X	
Spool holder	Holder for spools of filament	<b>√</b>	X	
USB memory stick	USB flash storage device	<b>√</b>	Х	

<sup>\*</sup>Different for each 3D printer.



# 3D Printing Thermoplastic Filaments for <a>O</a> LPD Plus

FILAMENTS	DESCRIPTION	COLORS	M300 DUAL	INVENTURE
Z-ESD	PETG-based filament perfect for the electronic industry. Guarantees electrostatic discharge protection along with resistance to most acids, alcohols, and alkalis.	● Black	Spool net weight: 800 g ± 5%	Spool net weight: 800 g ± 5%
Z-FLEX	Strong TPU-based flexible filament with great interlayer-adhesion. It can bend without breaking. The material is non-toxic and resistant to various chemicals like gasoline and ethyl alcohol.	Black	Spool net weight: 800 g ± 5%	Spool net weight: 800 g ± 5%
Z-GLASS	Composite material based on PETG with fiberglass addition. It has light-transmitting properties for translucent models and is resistant to scratches, UV light, and chemicals.	O Natural Transparent	Spool net weight: 2 000 g ± 5%	Spool net weight: 800 g ± 5%
Z-HIPS	A filament based on HIPS (high impact polystyrene) with semi-mat texture that masks the layering. Offers high impact resistance and effortless post-processing.	<ul><li>Black</li><li>Grey</li><li>Natural White</li></ul>	Spool net weight: 2 000 g ± 5%	Spool net weight: 800 g ± 5%
Z-NYLON	Very strong, versatile filament resistant to high temperatures and chemicals. It can be post-processed with tools meant for machining metals. The material is easy to paint and hard to break.	○ Natural ● Black	Spool net weight: 2 000 g ± 5%	Spool net weight: 800 g ± 5%

# 3D Printing Thermoplastic Filaments for © LPD Plus

FILAMENTS	DESCRIPTION	COLORS	M300 DUAL	INVENTURE
Z-PETG	Filament based on PET with glycol addition. Can withstand UV light and passage of time. The material is also exceptionally resistant to oils and other greases.	Black     Grey	Spool net weight: 2 000 g ± 5%	Cartridge net weight: 350 g ±5% Spool net weight: 800 g ± 5%
Z-PLA	PLA-based filament with low shrinkage, guaranteeing high- quality details and smooth surfaces. Offers exceptional precision for complex models.	<ul><li>Black</li><li>White</li><li>Graphite</li><li>Blue</li><li>Green</li><li>Yellow</li><li>Grey</li></ul>	Spool net weight: 2 000 g ± 5%	Cartridge net weight: 350 g ±5% Spool net weight: 800 g ± 5%
Z-PLA Pro	PLA-based, biodegradable filament. An addition of chalk gives its surface a unique mat finish and more visible details with gypsum-like texture.  Very low shrinkage, almost no warping.	O Gypsum White Concrete Grey Cool Grey Pure Black	Spool net weight: 2 000 g ± 5%	Spool net weight: 800 g ± 5%
Z-ULTRAT	Durable and lasting ABS-based filament. Its surface can be easily post-processed with acetone and mechanical treatment. Available in a wide range of colors.	<ul><li>Blue</li><li>Yellow</li><li>Green</li><li>Cool Grey</li><li>Ivory</li><li>Pure Black</li><li>Red</li></ul>	Spool net weight: 2 000 g ± 5%	Spool net weight: 800 g ± 5%
Z-ULTRAT Plus	Durable ABS-based filament. When printed with a soluble support material, it offers high layer adhesion.	O Ivory Blue Graphite Pure Black Red	Spool net weight: 2 000 g ± 5%	Cartridge net weight: 350 g ±5%
Z-SUPPORT Premium	BVOH-based soluble support filament. The material has a fast dissolution rate.		Spool net weight: 800 g ± 5%	Cartridge net weight: 350 g ±5% Spool net weight: 800 g ± 5%



### Water-proof models

# Apoller Revolutionary automated post-processing







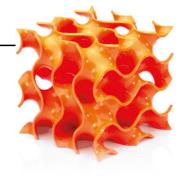
movable parts

300 x 250 x 250 mm 11.8 x 9.8 x 9.8 in









3D printing farms

Zortrax Apoller automated post-processing device

#### Smart Vapor Smoothing

MEK or acetone vapors react with surfaces of 3D printed models which leads to disappearance of visible layering. The SVS is a patent-pending technology that efficiently performs this process in a controlled and user-friendly manner.

#### Perfect details

Manual vapor-smoothing can leave tiny details deformed. The Apoller solves this with tight control over the temperature and pressure in the smoothing chamber. The smaller the detail the less solvent is applied to its surface which keeps its shape intact.

#### Safety first

The Apoller has an EU ATEX certificate\* of safety necessary for the equipment woking with solvents' vapors. Carefully designed vapors' flow and condensation systems make the device safe to use even by untrained staff.

#### Wide compatibility

The Apoller is compatible with prints made on all FDM, FFF, LPD, and LPD Plus 3D printers. It can smooth models printed with ABS, ASA, or HIPS filaments. Surfaces can be smoothed to glossy or matte finish, depending on the used filament.

#### High efficiency

Once the smoothing is done, excessive vapors are retrieved in the condensation system and placed back in the tank to be reused in the future. This way multiple smoothing sessions can be performed with just one 500 ml bottle of MEK or acetone.

#### Serial post-processing

Each smoothing session takes about 3h, regardless of how many models are placed in the smoothing chamber. The Apoller can work in large 3D printing farms taking their production quality to the level comparable with injection molding technology.

<sup>\*</sup> Every unit requires an annual inspection conducted at Zortrax HQ to keep the ATEX certification valid and ensure safe operation of the device.









Turbine prototype

End-use bike handle

#### DEVICE

Build volume	300 x 250 x 250 mm (11.8 x 9.8 x 9.8 in)
Connectivity	Wi-Fi, Ethernet, USB
Operating system	Android
Processor	Quad Core
Touchscreen	4" IPS 800 x 480
Solvent compatibility*	Aceton, MEK
Zortrax compatible materials	Z-ABS, Z-ULTRAT, Z-ULTRAT Plus, Z-ASA Pro, Z-HIPS
External compatible materials	ABS, ASA, HIPS

#### IN THE BOX

Device, Starter Kit

#### **PROCESS**

Maximum working temperature	90° C (194° F)
Minimum working temperature	- 20° C (-4° F)
Minimum gauge working pressure	- 0.6 bar
Ambient operation temperature	15-30° C (59-86° F)
Storage temperature	0-35° C (32-95° F)

#### ELECTRICAL

AC Input	110 V ~13.6 A 50/60 Hz; 240 V ~6.3 A 50/60 Hz
Power supply parameters	24 V DC @ 21 A, 500 W
Maximum power consumption	1500 W







After vapor smoothing

<sup>\*</sup>Only pure MEK or acetone are supported and safe to use. Using other solvents may be dangerous and should not be attempted.



# Dental modeling

# Inkspire Made for speed and surgical precision



Dental aids manufacturing



Precision engineering

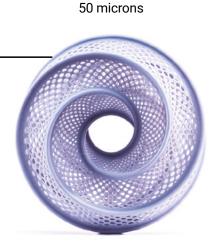


Medium to large--scale production





Build volume 132 x 74 x 175 mm 5.2 x 2.9 x 6.9 in



Pixel size

Zortrax Inkspire 3D printer

#### Fast resin 3D printing

Zortrax Inkspire works at constant high speed regardless of how much of the workspace is used. An entire build-platform filling batch of models prints in the same time as a single part. That's why the Inkspire scales up so well when higher manufacturing output is needed.

#### > Top of the line precision

Each model's layer is displayed on a high-res LCD and solidified by a UV light source placed beneath. This way, the Inkspire can accurately print extremely small details barely visible to the naked human eye.

#### Great connectivity

The Inkspire is ready to use in large 3D printing farms due to its remote management capabilities. It can be remotely operated via a Wi-Fi or Ethernet network. Models can be also loaded directly from USB storage devices.

#### Easier support removal

Support structures printed on the Inkspire are easier to remove. Additional UV light exposure time can be set specifically for supports to make them harder than the rest of the model. This way, their footprint on the model's surface is significantly reduced.

#### Open to all resins

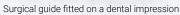
All resins that can be cured by light with 405 nm wavelength are fully supported with no loss of utility. The Inkspire works at full capacity with both dedicated and third-party photopolymers. Users are free to choose the resin which they deem best for their projects.





Jewelry investment casting pattern







Dental bridge and crown models



Fully functional contractor

#### **DEVICE**

Build volume	132 x 74 x 175 mm (5.2 x 2.9 x 6.9 in)
Platform calibration	Automatic
Support	Mechanically removed - printed with the same material as the model
Light source	UV integrated light (wavelength 405 nm)
Connectivity	Wi-Fi, Ethernet, USB
Operating system	Android
Processor	Quad Core
Touchscreen	4" IPS 800 x 480
External materials*	Applicable
Supported formats	.cws, .zcodex, .sl1, .zip

#### SOFTWARE

Software bundle	Z-SUITE
Supported input file types	.stl, .obj, .dxf, .3mf, .zcodex
Supported operating system	Mac OS up to Mojave version / Windows 7 and newer versions

#### **PRINTING**

Technology**	UV LCD
Pixel size	50 microns (0.05 mm)
Layer thickness	25, 50, 100 microns

#### **TEMPERATURE**

Ambient operation temperature	20-30°C (68-86°F)
Storage temperature	0-35°C (32-95°F)

#### **ELECTRICAL**

AC Input	110 V ~1.4 A 50/60 Hz; 240 V ~0.85 A 50/60 Hz	
Maximum power consumption	75 W	

#### **IN THE BOX**

3D Printer, Z-SUITE, Starter Kit, Zortrax Resin Basic (500 ml)

<sup>\*</sup>Predefined printing profiles for third-party resins are periodically added to Z-SUITE by Zortrax in cooperation with industry-leading resin manufacturers. \*\*The LCD screen has suggested replacement time of about 200 working hours. This period highly depends on the type of resin you use most often.

# Parts & Accessories for \( \rightarrow UV LCD \)

# Ultrasonic Cleaner

#### Dedicated for: Inkspire and other resin 3D printers

Zortrax Ultrasonic Cleaner uses high frequency sounds propagated in liquid detergent like isopropyl alcohol to remove excessive liquid resin from models 3D printed on the Inkspire. Typical cleaning sessions takes up to 10 min.



#### **DEVICE**

Model	Zortrax Ultrasonic Cleaner	
Tank dimensions	240 x 135 x 100 mm (9.4 x 5.3 x 4.0 in)	
Maximum tank capacity	3.2	
Material	Stainless steel	
Time control	0-30 min	

#### **ELECTRICAL**

Maximum power consumption	120 W
Cleaning frequency	40 KHz

#### **TEMPERATURE**

Ambient operation temperature	20-30° C (68-86° F)
Storage temperature	0-35° C (32-95° F)

#### **WEIGHT AND PHYSICAL DIMENSIONS**

Device (W x D x H)	250 x 150 x 230 mm (9.8 x 5.9 x 9.0 in)
Net weight	3.3 kg (7.2 lb)

PARTS & ACCESSORIES	DESCRIPTION	PRODUCT
Carbon filter	Spare carbon filter	
FEP film set	A set of 4 spare FEP films to put in a resin tank	and the second s
LCD screen	A set of high-res LCD Screens providing high UV light transmission	
Platform Inkspire	Spare build platform	
Resin tank	Removable resin tank	

# Trusted Partners' Professional Resins for $\bigcirc$ UV LCD

PHOTOPOLYMER RESINS	DESCRIPTION	COLORS	CONTAINER
BlueCast Original LCD/DLP	Very precise castable resin for light-weight filigree jewelry. Can be hand-shaped after printing and leaves only 0.003% of ash residue.	<ul> <li>Dark Blue</li> </ul>	500 g bottle
BlueCast X5 LCD/DLP	Castable resin for standard jewelry items like engagement rings. Can be used in the same process as wax, leaves no ash residue, and does not need post-curing.	• Blue	500 g bottle
BlueCast X10 LCD/DLP	Castable resin for large jewelry investment patterns. Guarantees smooth surfaces, high dimensional accuracy, and leaves no ash residue.	<ul> <li>Transparent Blue</li> </ul>	500 g bottle
Raydent Crown & Bridge Resin	Class IIa biocompatible resin for printing temporary crowns and bridges. Very precise and highly resistant to abrasion.	• A2	1000 ml bottle
Raydent Surgical Guide Resin	Clear, class I biocompatible resin designed for printing dental surgical guides. Offers high dimensional accuracy.	O Crystal Clear	1000 ml bottle

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# Zortrax Photopolymer Resins for \( \rightarrow UV LCD \)

PHOTOPOLYMER RESINS	DESCRIPTION	COLORS	CONTAINER
Zortrax Resin BASIC	An epoxy-based resin offering sharp edges and accurate details. It's durable and easy to print.	<ul><li>Grey</li><li>White/Ivory</li><li>Pigment-free</li></ul>	500 ml bottle
Zortrax Resin DENTAL MODEL	Precise dental resin with a gypsum-like texture.  Offers very low shrinkage and high level of detail sufficient for accurate modeling of teeth.  Not meant for intraoral use.	<ul><li>Beige</li></ul>	500 ml bottle
Zortrax Resin FLEXIBLE	Flexible, epoxy based resin which is highly impact resistant. Offers smooth surfaces, high level of detail, and sharp edges.	O Transparent Yellow	500 ml bottle

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