3D PRINTER CATALOGUE

JEWELRY DESIGN SPECIALTIES

INDONESIA TECHNOLOGIES

Vida Office Building
Jln. Raya Perjuangan No. 8, Kebon Jeruk
Jakarta 11530, Indonesia
Phone +62 21 29661379

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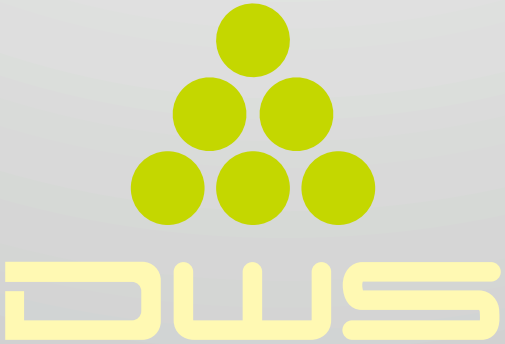
DIGITALWAX J



DWS Additive Manufacturing

DWS, Digital Wax Systems, was founded in Vicenza in 2007, drawing on lengthy consolidated experience in prototyping.
DWS develops hi-tech solutions for prototyping and high-speed production, with the aim of reducing development times for new products and, as a consequence, time to market. These systems have become must-haves and strategic resources for corporate competitiveness. The goal of DWS is to innovate processes to make production faster and more flexible.

DWS is the only Italian company today capable of developing systems for prototyping and rapid production through implementation of stereolithography technology, with in-house manufacture of all the necessary resins and materials. It exports 95% of its production to over 60 countries around the world and is divided into four business units: jewellery, dental, general applications and, from today, also consumer goods.

The advantages that qualify DWS as an excellence can be summarised as follows:
- the use of new-gen photosensitive resins and materials developed in-house
- the innovative BluEdge® laser system
- dedicated 3D editing and manufacturing software
- the absence of the immersion in resin phase
- speed, accuracy and high surface quality.

The production process is one of its kind and protected by international patents.
DWS is leader in the jewellery sector and also an important player with very interesting solutions for the dental sector and industrial applications in general.


Jewelry & Fashion

Dental & Biomedical


Industrial

DigitalWax® J systems

DigitalWax® J line-up

Legend

HR = Laser High Resolution - Optional

Productivity

+ = Performance

> = building speed

o = resolution

008J	009J	028J	028J+	029J	029J+	030J
-	-	HR	HR	HR	HR	HR
10 Patterns*	**50 Patterns***	**80 Patterns***	**150 Patterns***	**270 Patterns***	**800 Patterns***	**3.200 Patterns***
+	+ + +	+ + + + +	+ + + + +	+ + + + +	+ + + + +	+ + + + +
>	> > > >	> > > > >	> > > > >	> > > > >	> > > > >	> > > > >
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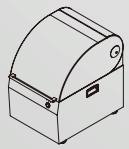
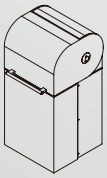
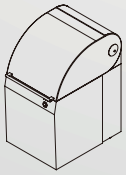
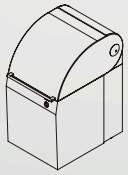
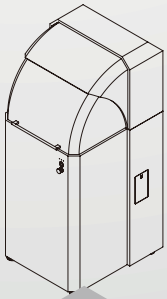
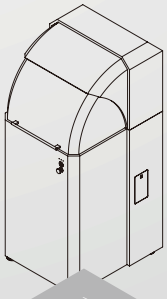
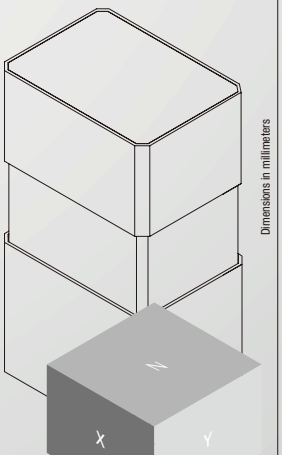
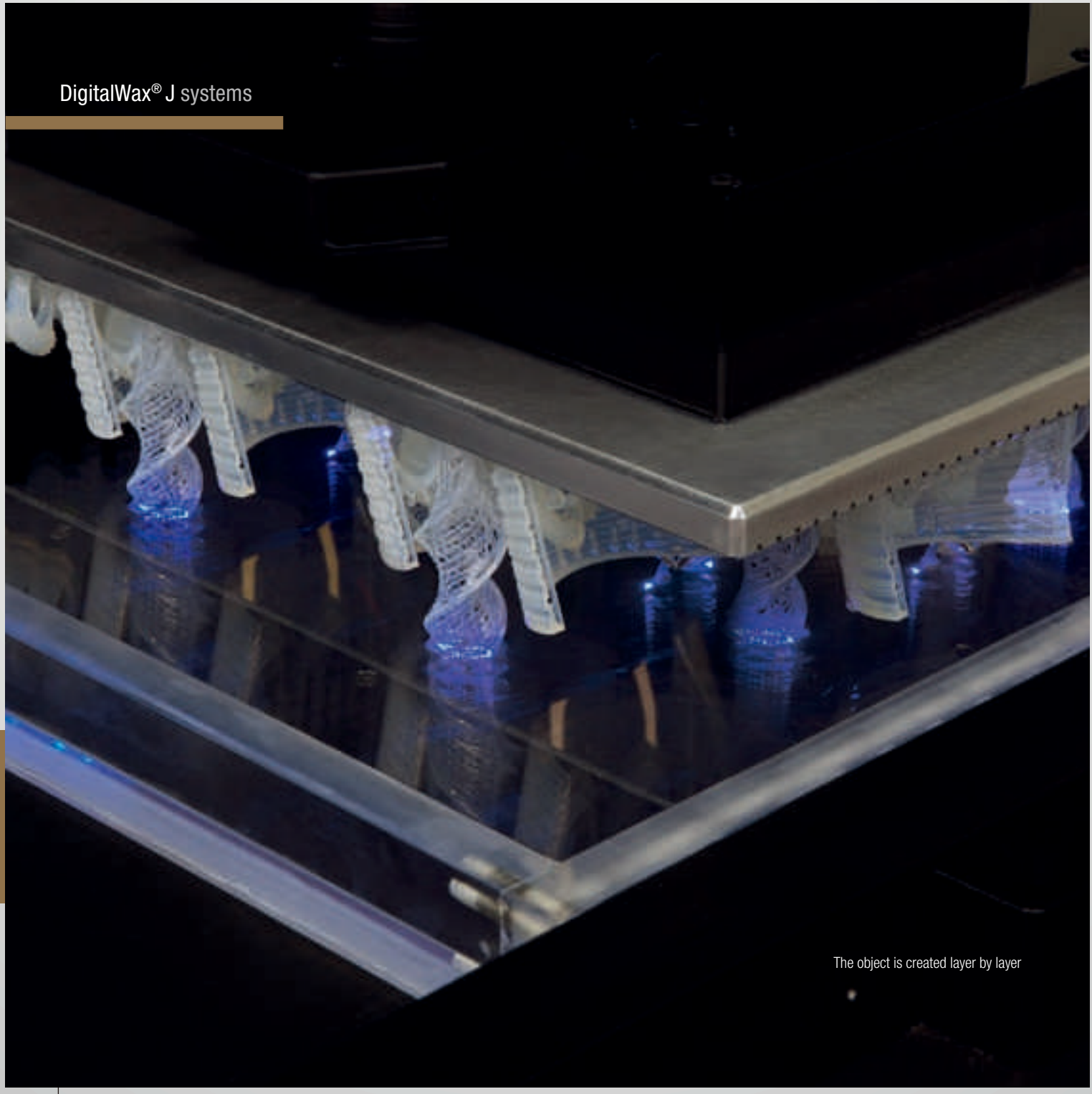
	NEW 					 Dimensions in millimeters
WORKING AREA 65X65X90	WORKING AREA 50X37X100	WORKING AREA 65X65X90	WORKING AREA 90X90X90	WORKING AREA 110X110X100	WORKING AREA 150X150X100	WORKING AREA 300X300X300
p 8	p 10	p 12	p 14	p16	p 18	p 20

* Built in 24 hours - Patterns = wedding ring

DigitalWax® J systems



The object is created layer by layer

DigitalWax® 008J

Entry-level laser machine

DigitalWax® 008J is an entry-level rapid prototyping system for jewelry applications.
With its unbeatable price-performance ratio and the lowest running cost in the market, DigitalWax® 008J is the perfect choice for small companies with low volume production needs.
DigitalWax® 008J can build 2 to 10 models per day (24 hours), it depends on their size and complexity.
The three-dimensional models are built by a special laser which hardens a proprietary photo-curable resin. The laser is specifically developed to guarantee high performance and long life.
Thanks to the layer-by-layer forming technology, there are no limits to the geometric complexity of the models: undercuts, cavities, thin surfaces and complex shapes can be created without any difficulty. The BluEdge® laser head allows the use of a new generation, high performance UV photo-curable resins for direct casting and rubber mould applications.

Standard accessories supplied with DigitalWax® 008J:

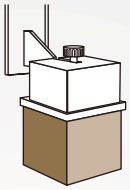
- N. 1 Building platform mm 75x75 (working area mm 65x65)
- N. 1 Resin tank mod. RT800
- N. 1 Set of handling tools
- N. 1 DigitalWax® 008J Software Suite License
- N. 1 User manual

*it depends on the kind of photo-curable resin used.
Technical specifications subject to changes without notice.

Technical data:

Laser source:	Solid State BluEdge® BE-1000
Working area (x, y, z):	65 x 65 x 90 mm
Slice thickness*:	0,01 – 0,10 mm
Laser scanning speed:	0-40 mm/sec
Scanning method:	Plotter X-Y
Software:	DigitalWax® 008J Controller
OS compatibility:	32 bit Windows XP Pro - Vista - 7
Input file format:	.stl - .slc
Machine size:	380x515x560 mm
Weight:	43 Kg
Operating Temperature and Humidity:	22°- 25°C / 60%
Electrical consumption:	200 W
Power supply:	AC 230/115 V / 50-60 Hz

PLOTTER X-Y **No Option** 65x65x90



HIGHLIGHTS
BluEdge® laser source
High accuracy
Complete choice of materials
Lowest running cost
Long life UV laser
No lamp replacement
No calibration

Up to 10 *Patterns per day (24 hours)

DigitalWax® 009J NEW

Entry-level DLP® machine

Thanks to a productivity of up to 50 patterns per day, DigitalWax® 009J is the perfect entry-level solution with no compromises in terms of performance.
DigitalWax® 009J is the cheapest machine among the DigitalWax® products and it allows the highest accuracy and resolution thanks to the DLP®, the latest technology developed by Texas Instruments®.
With a working area of 50x37 mm, DigitalWax® 009J is the ideal rapid prototyping choice with minimum investment and running costs. It's perfectly compatible with the extensive DigitalWax® J material portfolio, including the revolutionary Irix® Digital Stone.

Standard accessories supplied with DigitalWax® 009J:

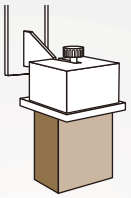
- N. 1 Building platform mm 60x47 (working area mm 50x37)
- N. 1 Resin tank mod. RT900
- N. 1 Set of handling tools
- N. 1 DigitalWax® 009J Software Suite License
- N. 1 User manual

*it depends on the kind of photo-curable resin used.
Technical specifications subject to changes without notice.

Technical data:

Working area (x, y, z):	50 x 37 x 100 mm
Slice thickness*:	0,01 – 0,10 mm
Light source:	LED UV
Scanning method:	DLP® Texas Instruments Inc.
Software:	DigitalWax® 009J Controller
OS compatibility:	32 bit Windows XP Pro - Vista - 7
Input file format:	.stl - .slc
Machine size:	315x335x630 mm
Weight:	15 Kg
Operating Temperature and Humidity:	22°- 25°C / 60%
Electrical consumption:	150 W
Power supply:	AC 230/115 V / 50-60 Hz

DLP PROJECTION **No Option** 50x37x100



HIGHLIGHTS

- DLP® Display Technology by Texas Instruments
- High speed and accuracy
- Complete choice of materials
- Lowest running cost
- No lamp replacement
- No calibration

Up to 50 *Patterns per day (24 hours)

DigitalWax® 028J

Desktop size system

DigitalWax® 028J is a high accuracy rapid manufacturing system for jewelry applications.
With its unbeatable price-performance ratio and the lowest running cost in the market, DigitalWax® 028J is the perfect choice for fast production of high quality models. DigitalWax® 028J can build up to 80 models per day (24 hours), it depends on their size and complexity. The three-dimensional models are built by a special laser which hardens a proprietary photo-curable resin.
The laser is specifically developed to guarantee high performance and long life.
Thanks to the layer-by-layer forming technology, there are no limits to the geometric complexity of the models: undercuts, cavities, thin surfaces and complex shapes can be created without any difficulty.
The BluEdge® laser head allows the use of a new generation, high performance UV photo-curable resins for direct casting and rubber mould applications.

Standard accessories supplied with DigitalWax® 028J:

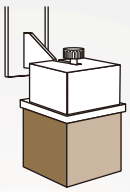
- N. 1 Building platform mm 75x75 (working area: mm 65x65)
- N. 1 Resin tank mod. RT800
- N. 1 Set of handling tools
- N. 1 Personal Computer with LCD monitor
- N. 1 UPS 650VA 230V 50/60 Hz
- N. 1 DigitalWax® 028J Software Suite License
- N. 1 User manual

*it depends on the kind of photo-curable resin used.
Technical specifications subject to changes without notice.

Technical data:

Laser source: Solid State BluEdge®	BE-1500A/BE-1500AHR
Working area (x, y, z):	65 x 65 x 90 mm
Slice thickness*:	0,01 – 0,10 mm
Laser scanning speed:	0-2200 mm/sec
Scanning method:	Galvanometer
Software:	DigitalWax® 028J Controller
OS:	Windows 7
Input file format:	.stl - .slc
Machine size:	380x515x733 mm
Weight:	56 Kg
Operating Temperature and Humidity:	22°- 25°C / 60%
Electrical consumption:	400 W
Power supply:	AC 230/115 V / 50-60 Hz

GaLVaNOmETER **HR Option** 65x65x90



HIGHLIGHTS

- BluEdge® laser source
- High speed and accuracy
- High surface quality
- Complete choice of materials
- No lamp replacement
- No calibration
- Long life UV laser
- Lowest running cost

Up to 80 *Patterns per day (24 hours)

DigitalWax® 028J Plus

Desktop size system

DigitalWax® 028J Plus is a high accuracy rapid manufacturing system for jewelry applications.
With its unbeatable price-performance ratio and the lowest running cost in the market, DigitalWax® 028J Plus is the perfect choice for fast production of high quality models.
DigitalWax® 028J Plus can build up to 150 models per day (24 hours), it depends on their size and complexity.
The three-dimensional models are built by a special laser which hardens a proprietary photo-curable resin. The laser is specifically developed to guarantee high performance and long life.
Thanks to the layer-by-layer forming technology, there are no limits to the geometric complexity of the models: undercuts, cavities, thin surfaces and complex shapes can be created without any difficulty.
The BluEdge® laser head allows the use of a new generation, high performance UV photo-curable resins for direct casting and rubber mould applications.

Standard accessories supplied with DigitalWax® 028J Plus:

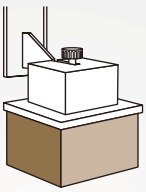
- N. 1 Building platform mm 100x100 (working area: mm 90x90)
- N. 1 Resin tank mod. RT800
- N. 1 Set of handling tools
- N. 1 Personal Computer with LCD monitor
- N. 1 UPS 650VA 230V 50/60 Hz
- N. 1 DigitalWax® 028J Software Suite License
- N. 1 User manual

*it depends on the kind of photo-curable resin used.
Technical specifications subject to changes without notice.

Technical data:

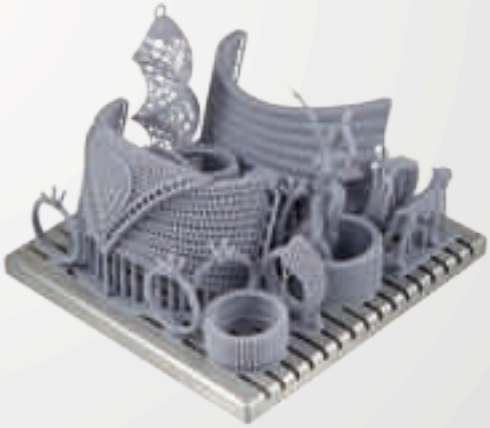
Laser source: Solid State BluEdge®	BE-1500A/BE-1500AHR
Working area (x, y, z):	90 x 90 x 90 mm
Slice thickness*:	0,01 – 0,10 mm
Laser scanning speed:	0-2200 mm/sec
Scanning method:	Galvanometer
Software:	DigitalWax® 028J Controller
OS:	Windows 7
Input file format:	.stl - .slc
Machine size:	380x515x733 mm
Weight:	56 Kg
Operating Temperature and Humidity:	22°- 25°C / 60%
Electrical consumption:	400 W
Power supply:	AC 230/115 V / 50-60 Hz

GaLVaNOmETER **HR Option** 90x90x90



HIGHLIGHTS

- BluEdge® laser source
- High speed and accuracy
- High surface quality
- Complete choice of materials
- No lamp replacement
- No calibration
- Long life UV laser
- Lowest running cost



Up to 150 *Patterns per day (24 hours)

DigitalWax® 029J

High performance production system

DigitalWax® 029J is a rapid manufacturing system conceived to achieve the highest productivity and quality. The unbeatable price-performance ratio and the lowest running cost in the market make DigitalWax® 029J the perfect choice for medium and big companies, for service bureau oriented business and for all those who need to get models for direct casting and silicon rubber moulding, in large quantities and in a short working time.

DigitalWax® 029J can build up to 270 models per day (24 hours), it depends on their size and complexity.

The three-dimensional models are built by a special laser which hardens a proprietary photo-curable resin. The laser head is specifically developed to guarantee high performance and long life.

Thanks to the layer-by-layer forming technology, there are no limits to the geometric complexity of the models: undercuts, cavities, thin surfaces and complex shapes can be created without any difficulty. We offer high performance UV photo-curable resins for direct lost-wax casting and for rubber moulding.

Standard accessories supplied with DigitalWax® 029J:

- N. 1 **TTT system**
- N. 1 Building platform mm 130x130 (working area: mm 110x110)
- N. 1 Resin tank mod. RT500
- N. 1 Set of handling tools
- N. 1 Personal Computer with LCD monitor
- N. 1 UPS 650VA 230V 50/60 Hz
- N. 1 DigitalWax® 029J Software Suite License
- N. 1 User manual

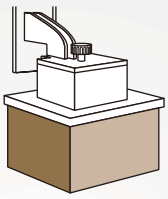
*it depends on the kind of photo-curable resin used.
Technical specifications subject to changes without notice.

Technical data:

Laser source: Solid State BluEdge®	BE-1700/BE-1700HR
Working area (x, y, z):	110 x 110 x 100 mm
Slice thickness*:	0,01 – 0,10 mm
Laser scanning speed:	2600 mm/sec
Scanning method:	Galvanometer
Software:	DigitalWax® 029J Controller
OS:	Windows 7
Input file format:	.stl - .slc
Machine size:	610x660x1400 mm
Weight:	150 Kg
Operating Temperature and Humidity:	22°- 25°C / 60%
Electrical consumption:	500 W
Power supply:	AC 230/115 V / 50-60 Hz

SYSTEm – GaLVaNOmETER

HR Option 110x110x100



HIGHLIGHTS

- BluEdge® laser source
- TTT - Tank Translation Technology
- High speed and accuracy
- High surface quality
- Complete choice of materials
- Extra-long life UV laser
- No lamp replacement
- No calibration
- Lowest running cost

Up to 270 *Patterns per day (24 hours)

DigitalWax® 029J Plus

High productivity additive manufacturing system

DigitalWax® 029J Plus is a production-grade rapid manufacturing system conceived to achieve the highest productivity and quality. The large working area of 150x150 mm and the lowest running cost in the market make DigitalWax® 029J Plus the perfect choice for medium and big companies, for service bureau oriented business and for all those who need to get models for direct casting and silicon rubber moulding, in large quantities and in a short working time.
DigitalWax® 029J Plus can build up to 800 models per day (24 hours), it depends on their size and complexity.
The three-dimensional models are built by a special laser which hardens a proprietary photo-curable resin. The laser head is specifically developed to guarantee high performance and long life. Thanks to the layer-by-layer forming technology, there are no limits to the geometric complexity of the models: undercuts, cavities, thin surfaces and complex shapes can be created without any difficulty. We offer high performance UV photo-curable resins for direct lost-wax casting and for rubber moulding.

Standard accessories supplied with DigitalWax® 029J Plus:

- N. 1 **TTT system**
- N. 1 Building platform mm 160x160 (working area: mm 150x150)
- N. 1 Resin tank mod. RT500
- N. 1 Set of handling tools
- N. 1 Personal Computer with LCD monitor
- N. 1 UPS 650VA 230V 50/60 Hz
- N. 1 DigitalWax® 029J Software Suite License
- N. 1 User manual

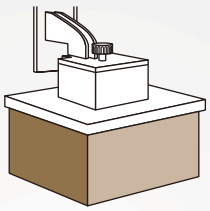
*it depends on the kind of photo-curable resin used.
Technical specifications subject to changes without notice.

Technical data:

Laser source: Solid State BluEdge®	BE-1800A/BE-1800AHR
Working area (x, y, z):	150 x 150 x 100 mm
Slice thickness*:	0,01 – 0,10 mm
Laser scanning speed:	5000 mm/sec
Scanning method:	Galvanometer
Software:	DigitalWax® 029J Controller
OS:	Windows 7
Input file format:	.stl - .slc
Machine size:	610x660x1400 mm
Weight:	150 Kg
Operating Temperature and Humidity:	22°- 25°C / 60%
Electrical consumption:	500 W
Power supply:	AC 230/115 V / 50-60 Hz

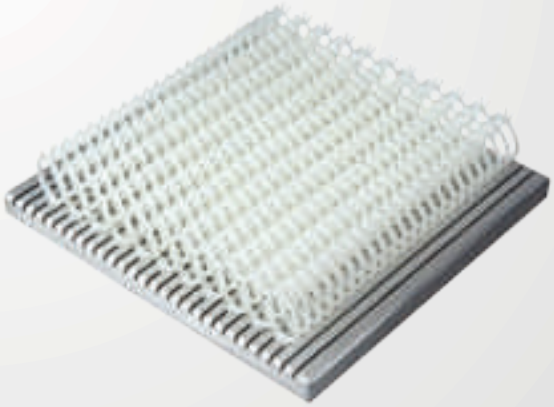
SYSTEm – GaLVaNOmETER

HR Option 150x150x100

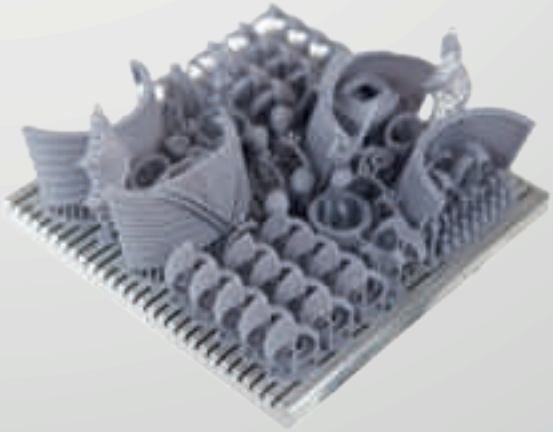


HIGHLIGHTS

- BluEdge® laser source
- TTT - Tank Translation Technology
- High speed and accuracy
- High surface quality
- Complete choice of materials
- Extra-long life UV laser
- No lamp replacement
- No calibration
- Lowest running cost



Up to 800 *Patterns per day (24 hours)



DigitalWax® 030J

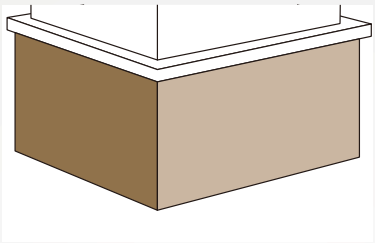
High productivity additive manufacturing system

DigitalWax® 030J rapid manufacturing system has been specifically developed for high productivity applications in the jewelry field.
High accuracy, large size capacity and the lowest running cost in the market are the main features of this innovative system. In combination with a new generation of fully castable materials, DigitalWax® 030J is the perfect solution for the mass production of wax-like patterns, delivering the highest accuracy and surface quality for a perfect replacement of the conventional mould injection method.
The great flexibility of the DigitalWax® 030J allows a quick material change and a choice of different materials, either for direct casting and rubber moulding applications. Thanks to its long-term experience, DWS has developed the DC series of wax-based resins for direct casting and the DM/DL Series of hybrid materials for the production of master models for rubber moulding applications.

Technical data:

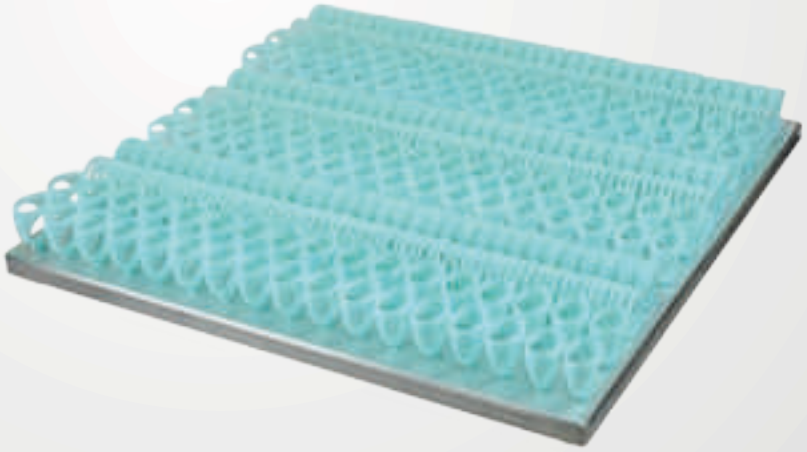
Laser source:	Solid State BluEdge®
Working area (x, y, z):	300x300x300 mm
Machine size:	1100x700x2000 mm

SYSTEm – GaLVaNOmETER **HR Option** 300x300x300

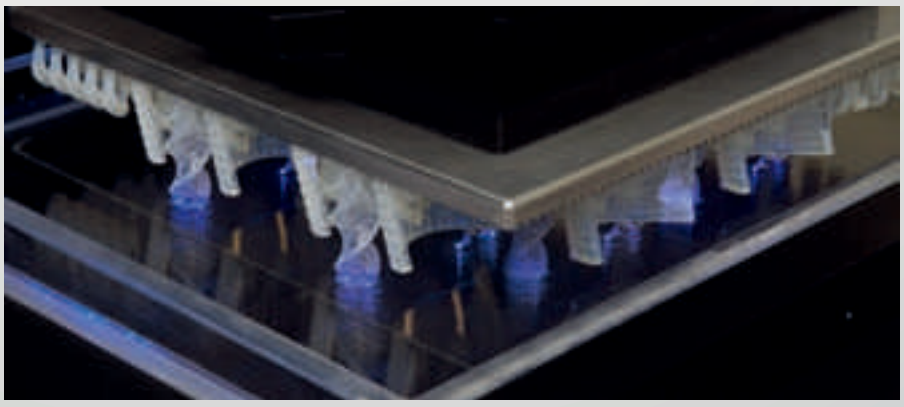


HIGHLIGHTS

- BluEdge® laser source
- TTT - Tank Translation Technology
- Highest productivity
- High speed and accuracy
- Superior surface quality
- Complete choice of materials
- Lowest running cost



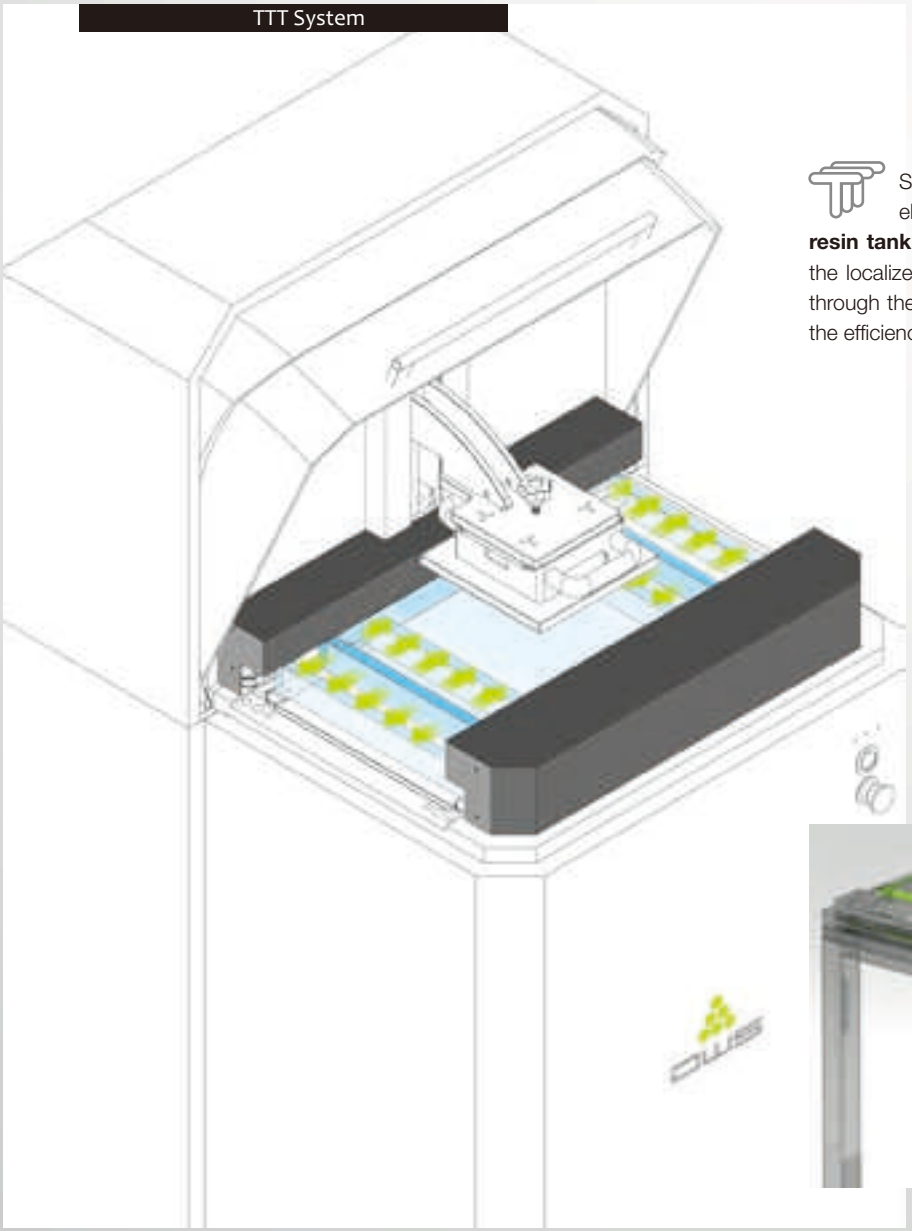
Up to 3.200 *Patterns per day (24 hours)



DigitalWax® advantages

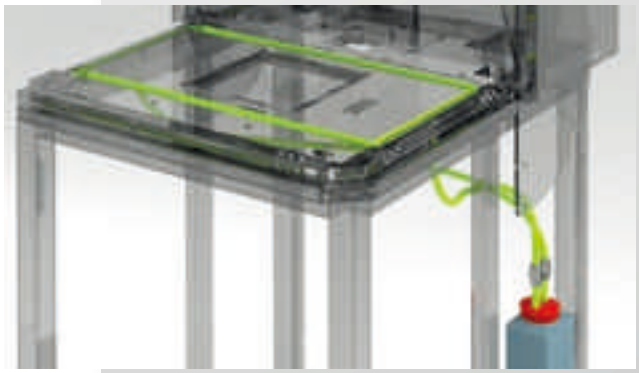
Resin tank loading system, left or right - Quick material change

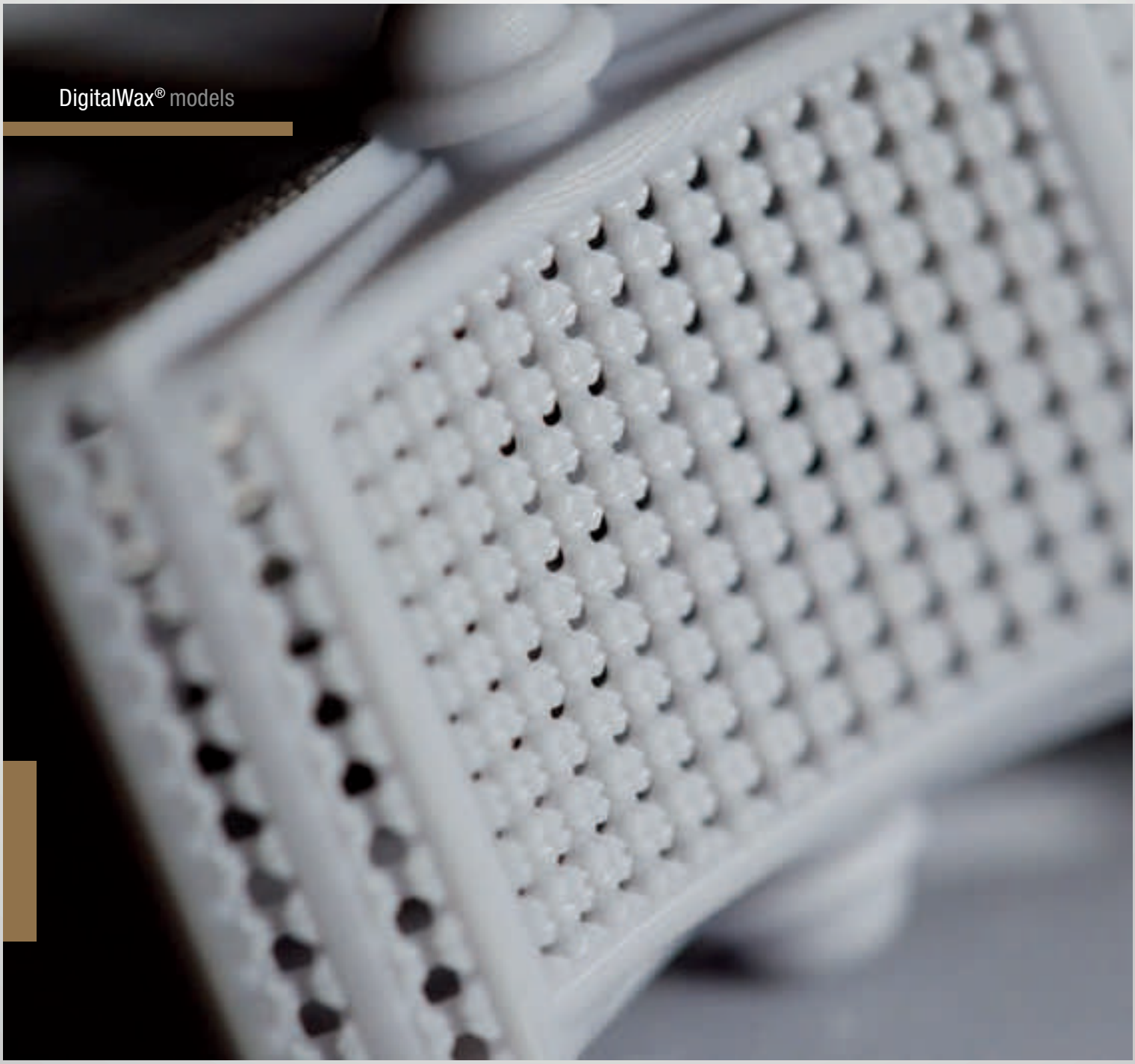
TTT System



TTT SySTEM (Tank Translation Technology) consists of an electromechanical device that **automatically shifts the resin tank during the growing of the model**: it allows to reduce the localized wear of the tank caused by the laser beam irradiation through the same area, improving both the life of the resin tank and the efficiency of the building process.

The **Leakage Protection System** prevents damages due to improper infiltration of liquids inside the sophisticate scanning and laser devices.

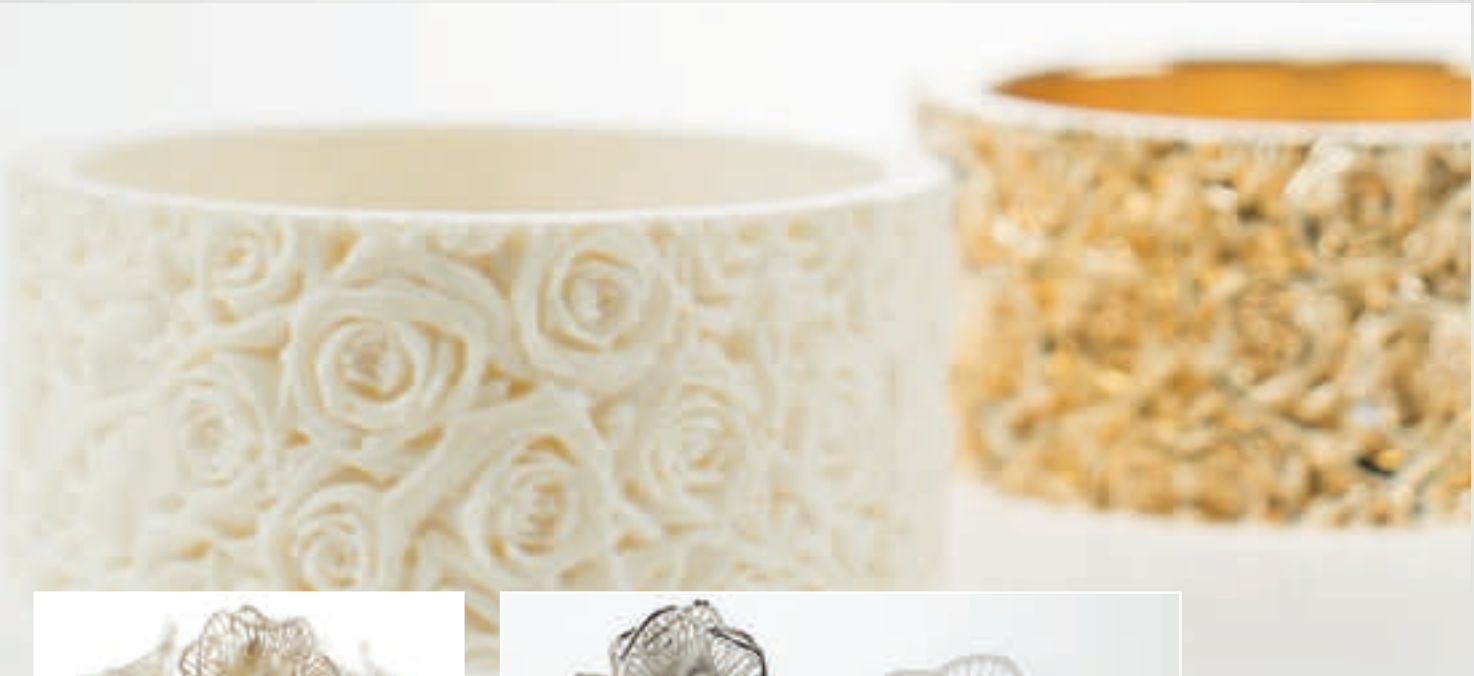



DigitalWax® models

DWS -

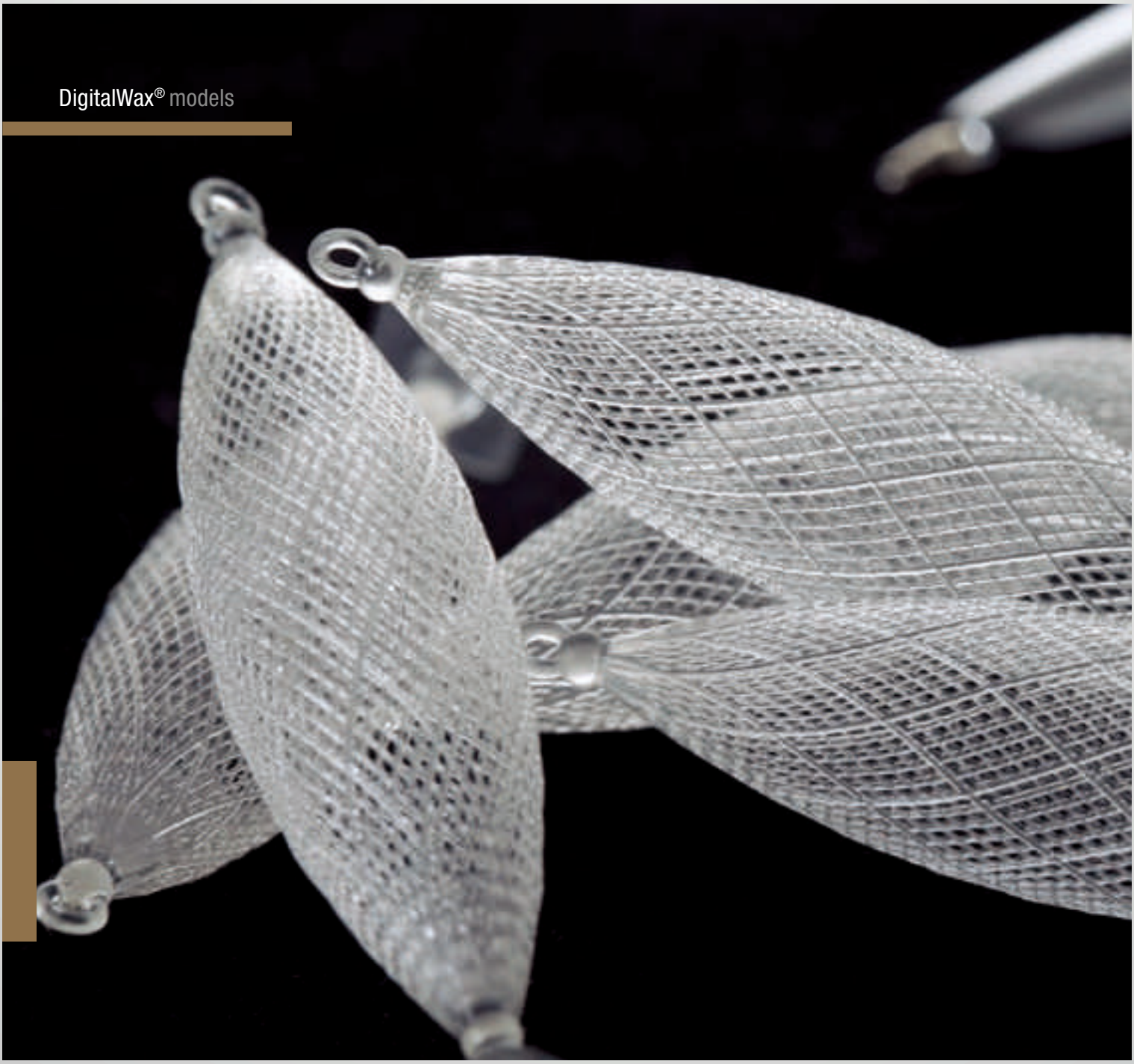
DigitalWax® models

Courtesy of Francesca Gabrielli - Designer



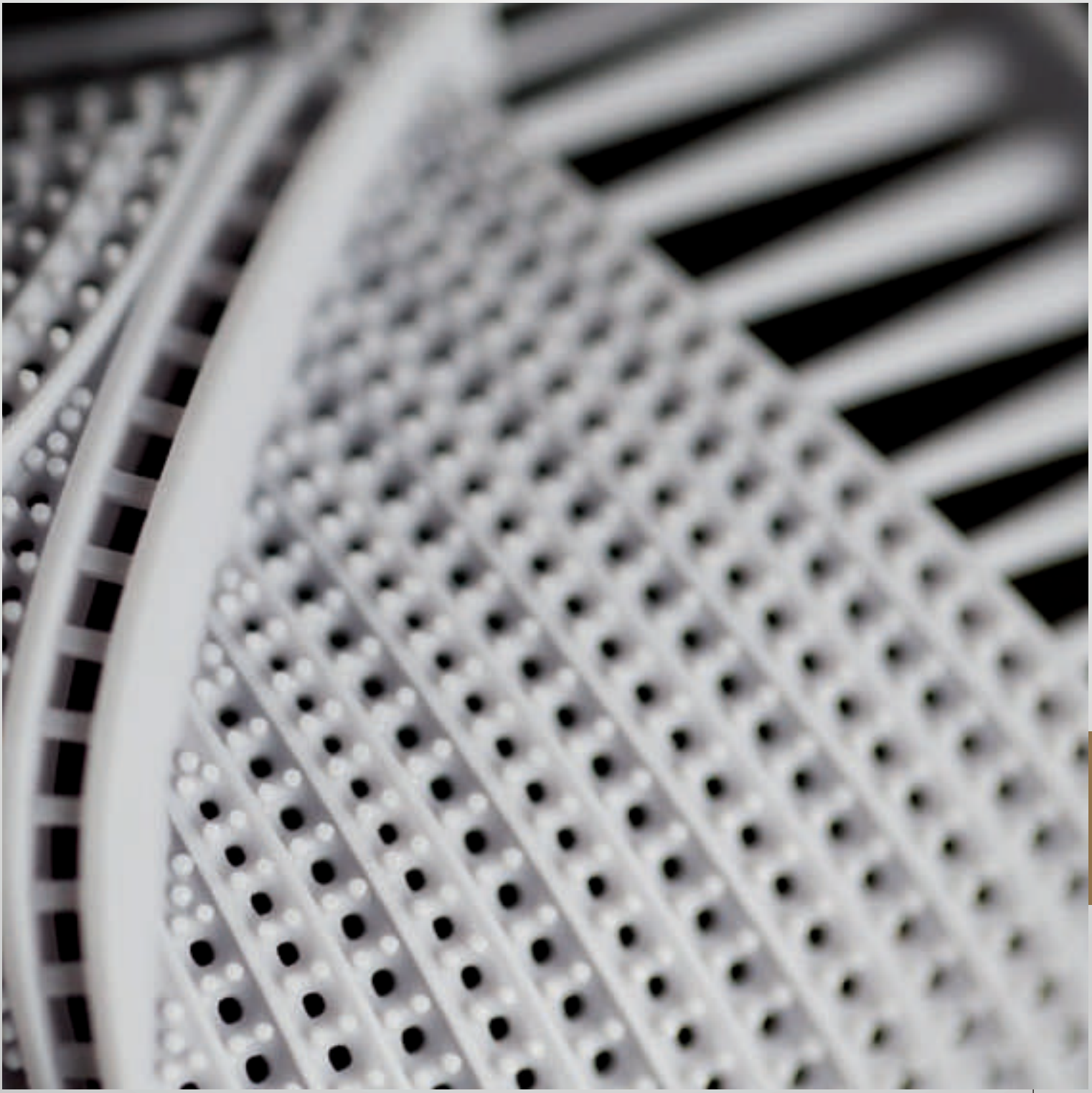
DWS -

DigitalWax® models



DWS -

DigitalWax® models



DWS -

DIGITALWAX® DC Series: resins for direct casting

DC casting resins are specifically designed for **direct lost wax casting** of jewelry models. Designed to allow the production of high-definition, detailed parts and smooth surfaces that do not require manual finishing. These products are ideal for special applications such as **stone-in-place casting** of resin models and filigrees.

Type	application	Features
DC100	Direct casting	High accuracy, low shrinkage
DC300	Direct casting	Wax-like, high growth factor
DC400	Direct casting	Wax-like, high growth factor
DC500	Direct casting	Wax-like, easy burnout
DC550	Direct casting	Wax-like, smooth surface
DC600	Direct casting	Wax-like, easy burnout

DIGITALWAX® DM/DL Series: resins for rubber moulds

DM/DL moulding resins have been designed for the **creation of master models** to be used in the production of rubber moulds, including VLT, liquid silicone and vulcanised rubber. These resins are suitable **for thin models as well as thick ones**, replacing traditional silver master models.

Type	application	Features
DM210	Direct moulding - max 90° C	Nano-filled ceramic, smooth surface
DM220	HTV moulding - max 170° C	Nano-filled ceramic, smooth surface
DL260	Direct moulding - max 90° C	Plastic-like, ultra-smooth surface

IRIX® Digital Stone®, available in all colours

Thanks to the nanotechnologies and the DWS patented additive manufacturing process, it is now possible to manufacture jewelry products using the innovative **Irlx ® Digital Stone®** material. A just-in-time production of the orders is made possible by **Irlx ® Digital Stone®**, allowing the expansion of the product range without investments in further production equipments.

Our customer will be able to order any customized colour according to the leading fashion trends. The creation of the stone is performed using nanotechnologies applied to the additive process, obtaining a biocompatible material having the main features of a natural stone.

Absolute advantages: biocompatibility, no geometrical limit, wide colour range, maximum versatility for the manufacture of the finished product and the matching with precious metals.

Type	application	Features
Irix® White	Digital Stone®	Nano-filled ceramic, White colour
Irix® Black	Digital Stone®	Nano-filled ceramic, Black colour
Irix® Ivory	Digital Stone®	Nano-filled ceramic, Ivory colour
Irix® Coral	Digital Stone®	Nano-filled ceramic, Coral colour
Irix® Turquoise	Digital Stone®	Nano-filled ceramic, Turquoise colour
	Custom colours available as special order	

Courtesy of Viola Vecchi - Designer

IRIX® DIGITAL STONE®

UV Curing Units

HIGHLIGHTS

- Best casting results
- Low power consumption
- Simple use and maintenance
- Timer setting

UV Curing Unit ‘S’ and ‘M’

The UV Curing Unit device concurs the secondary solidification of the models built by the DigitalWax® systems. These models are perfectly formed, but they need an additional exposure to a specific UV light source. This allows the consolidation and the stabilization of their structure and ensures the best casting results.
UV Curing Unit model “S2” is usually suggested for DigitalWax® 008J, DigitalWax® 009J and DigitalWax® 028J, while the model “M” is more suitable for DigitalWax® 029J because it can cure a complete platform all at once.

Technical data:

	UV Curing Unit ‘S2’	UV Curing Unit ‘M’
Ventilation	Forced ventilation inside	Forced ventilation inside
User controls	On/Off button Timer Safety device on door opening	On/Off button Timer Safety device on door opening
Timer setting	0 ÷ 30 minutes	0 ÷ 30 minutes
Curing area dimensions	160 x 160 x 160 mm	225 x 250 x 225 mm
Machine size	265 x 300 x 330 mm	370 x 330 x 480 mm
Weight	11,8 kg	20,5 kg
Power consumption	35 W	120 W
Power supply	90-264 V / 50-60 Hz	220 V / 50-60 Hz

Technical specifications subject to changes without notice.

3Z STUDIO

Jewelry Perfection Simplified

From Inspiration to Finished Design

The 3ZSTUDIO brings the jeweler's bench to the retail shop where users of any technical level can produce their own intricate wax patterns, ready for casting. The fully automated 3ZSTUDIO marries the passion of fine jewelry design with the power of high precision 3D printing.

Easy One-Touch Operation

Intuitive one-touch operation via a universal LCD icon display eliminates language and technical barriers.

Efficient Workflow

The 3ZSTUDIO empowers the jewelry creation process from design through finished wax patterns in an effortless workflow that delivers high casting yields, consistent turnarounds and low cost-per-part.

Superior Casting Results

New 3Z™Model and 3Z™Support materials produce extremely smooth jewelry wax patterns that accurately reproduce the most intricate of geometries—without the need for manual refining. Both materials offer superior casting properties, fast meltout, no ash or residue, and no thermal expansion.

Solidscape®
High Precision 3D Printers

System Specifications

3Z STUDIO

EASE OF USE

Fully Automated	Plug and print Automatic calibration and testing
Accessible	Icon-based user interface Files, job start-up and job status can be managed and viewed remotely from PC

HIGH PRECISION RESULTS

Resolution	5000 X 5000 dpi (197 X 197 dots/mm) in X, Y 8000 dpi (158 dots/mm) in Z
Accuracy	± 0.0010 inch/inch (±.0254mm) along each axis X, Y and Z
Layer Thickness	User selectable through variable slider
Surface Finish	32-63 micro-inches (RMS)

OFFICE ENVIRONMENT

Desk-top Size	21.4"W X 18"D X 16"H (558 X 495 X 419 mm)
Weight	75 lbs. weight (34 kg)
Build Envelope	6" X 6" X 2" (152.4 X 152.4 X 50.8 mm) X, Y, Z Consistent Results over entire 6 inch x 6 inch (152.4mmx152.4mm) area
Power Requirements	90-250-v, 10A @ 230v max consumption
Ambient Operating Temp	Recommend 60° to 80° F (16° to 27° C) at a 40% to 60% range of humidity
Equipment Interface	PC to printer connectivity Hi-Speed USB 2.0

MATERIALS

3Z®Model	Model material formulated for clean burnout to produce 100% casting results.
3Z®Support	Sacrificial support material is generated automatically for each job, and later dissolved away for a labor-saving, hands-free operation.
Dewax	Liquid solution used to dissolve sacrificial support material

EFFICIENT WORKFLOW

CAD file input	.stl and .slc files
3Z®Works	Software formats CAD files for 3D printing Allows operator to visually place job suites within build envelope Automatically generates support structure, saving on design time
3Z®Touch	System Software is Windows® based
Automatic	Status monitoring and fault detection Re-start of build from point of interruption Works unattended up to 72 hours
SCP®	Smooth Curvature Printing for superior surface finish

AGENCY COMPLIANCE
CE certified; FCC Class A approved TUV approved (EN 60950 Compliant)

Solidscape, Inc. is the leading manufacturer of high precision 3D printers, materials and software for the jewelry industry, able to print intricate wax patterns designed in CAD.

Solidscape systems incorporate innovative printing technology and material properties that advance the state-of-the-art in computer-controlled fabrication of jewelry master patterns, by providing the highest standards in surface finish, accuracy and material castability.

Solidscape wax patterns are ideal for investment casting and mold making applications such as fine jewelry, dental restorations, turbine blades, biomedical products, orthopedics, consumer goods, electronics, toys and many other high precision products.

These systems are true office peripherals--easy to use and residing on a desk or countertop.

Solidscape, Inc.
316 Daniel Webster Hwy.
Merrimack, NH USA 03054-4115
Tel. +1 603 429 9700
Fax. +1 603 424 1850

www.solid-scape.com

3Z PRO

Precision, Process Made Easy

From Design to Finished Piece

The fully automated 3Z®PRO printer brings the power of high precision 3D printing to the office desktop and retail environment. Users of any technical level can produce their own high precision wax parts, ready for casting.

Easy One-Touch Operation

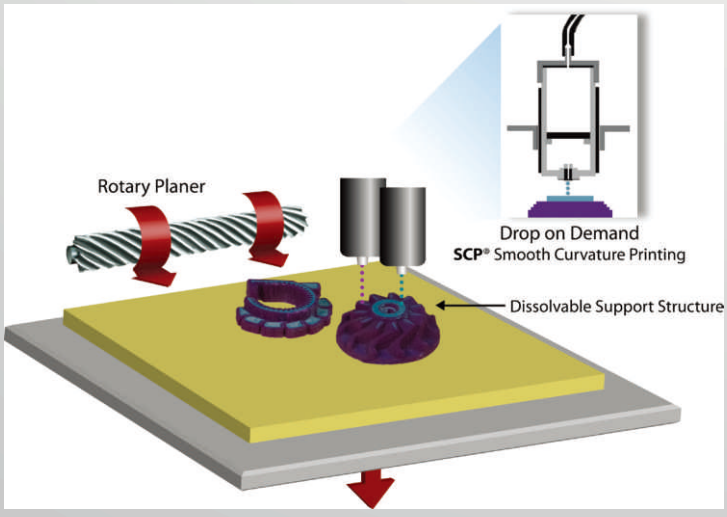
Using icons as a common lanuage, a familiar print dialog box makes an array of functions readily understood and quickly accessible.

Efficient Workflow

3ZPRO capabilities drive an extremely efficient manufacturing workflow process delivering high casting yields, consistent turnarounds and low cost-per-part.

Superior Casting Results

The exclusive 3Z®Model and 3Z®Support materials produce extremely smooth wax parts accurately reproducing the most intricate of geometries without the need for manual refining and with superior casting properties; fast meltout, no ash or residue, and no thermal expansion.



DoD/SCP® technology

- Resolution
- Castability
- Surface Finish

Solidscape®

High Precision 3D Printers

System Specifications

EASE OF USE

Fully Automated	Plug and print Automatic calibration and testing
Accessible	Icon-based user interface Files, job start-up and job status can be managed and viewed remotely from PC

HIGH PRECISION RESULTS

Resolution	5000 X 5000 dpi (197 X 197 dots/mm) in X, Y 8000 dpi (158 dots/mm) in Z
Accuracy	± 0.0010 inch/inch (±.0254mm) along each axis X, Y and Z
Layer Thickness	User selectable through variable slider
Surface Finish	32-63 micro-inches (RMS)

OFFICE ENVIRONMENT

Desk-top Size	21.4"W X 18"D X 16"H (558 X 495 X 419 mm)
Weight	75 lbs. weight (34 kg)
Build Envelope	6" X 6" X 4" (152.4 X 152.4 X 101.6 mm) X, Y, Z Consistent Results over entire 6 inch x 6 inch (152.4mmx152.4mm) area
Power Requirements	90-250-v, 10A @ 230v max consumption
Ambient Operating Temp	Recommend 60° to 80° F (16° to 27° C) at a 40% to 60% range of humidity
Equipment Interface	PC to printer connectivity Wireless Wi-Fi 802.11 b/g, Ethernet Hi-Speed USB 2.0

MATERIALS

3Z®Model	Model material formulated for clean burnout to produce 100% casting results.
3Z®Support	Sacrificial support material is generated automatically for each job, and later dissolved away for a labor-saving, hands-free operation.
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3Z PRO

Solidscape, Inc. is the leading manufacturer of high precision 3D printers, materials and software for direct manufacturing, able to print solid parts designed in CAD.

Solidscape systems incorporate innovative printing technologies and material properties that advance the state-of-the-art in computer-controlled fabrication of master patterns, by providing the highest standards in surface finish, accuracy and material castability.

Solidscape wax patterns are ideal for investment casting and mold making applications such as fine jewelry, dental restorations, turbine blades, biomedical products, orthopedics, consumer goods, electronics, toys and many other high precision products.

These systems are true office peripherals--easy to use and residing on a desk or countertop.

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Merrimack, NH USA 03054-4115
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Fax. +1 603 424 1850

www.solid-scape.com

MAX²

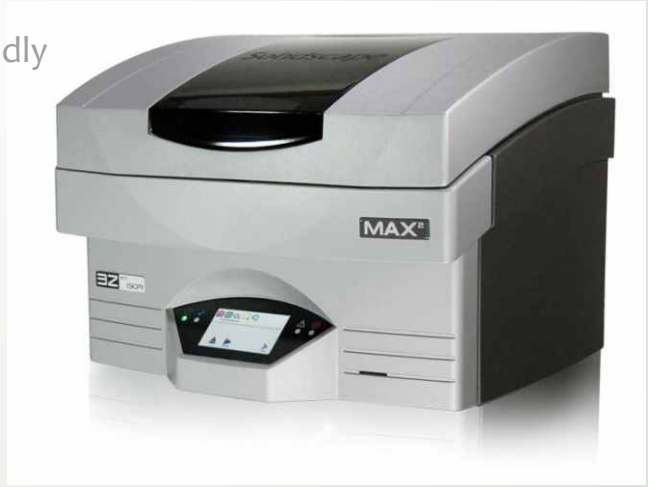
Precision *and* Performance

High Precision 3D printer for Manufacturing

The **Solidscape® MAX²** is the high precision 3D printer for the manufacturing of wax patterns. **MAX²** supports higher throughput and delivers very significant production gains for precision designs in jewelry, medical and industrial manufacturing applications.

Easy One-Touch Operation

The fully automated **MAX²** printer features a user -friendly touch screen and innovative software that allows operators of any skill level to produce their own high-precision wax patterns ready for casting.



Efficient Workflow

New **MAX²** high performance capabilities greatly reduce the manufacturing workflow process time while delivering high casting yields and low cost -per-parts.

Superior Casting Results

Exclusive Solidscape 3Z ®Model and 3Z ®Support materials produce extremely smooth wax parts that accurately reproduce the most intricate of geometries while eliminating the need for manual post -production refining processes. Superior casting properties include fast meltout, no ash or residue, and no thermal expansion.

Optimized Applications —Precision *and* Performance

Fine Jewelry Industrial Advanced Medical Research

Solidscape®

System Specifications

EASE OF USE

Fully Automated	Plug and print Automatic calibration and testing
Accessible	Icon-based user interface Files, job start -up and job status can be managed and viewed remotely from PC

HIGH PRECISION RESULTS

Resolution	5000 X 5000 dots/inch (197 X 197 dots/mm) in X, Y 8000 dots/inch (315 dots/mm) in Z
Accuracy	± 0.0010 inch/inch (±25.4µ/25.4mm) along each axis X, Y and Z
Layer Thickness	User selectable through variable slider 0.001in ↔ 0.002in (25.4µm ↔ 50.8µm) in ¼ mil (6.3µm) steps
Surface Finish	Layer thickness dependant, up to 32 micro-inches (RMS)

OFFICE ENVIRONMENT

Desk -top Size	21.4" W X 18"D X 16" H (558 X 495 X 419 mm)
Weight	75 lbs. weight (34 kg)
Build Envelope	6" X 6" X 4" (152.4 X 152.4 X 101.6 mm) X, Y, Z Consistent Results over entire 6 inch x 6 inch (152.4mmx152.4mm) area
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These systems are true office peripherals -- easy to use and residing on a desk.

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USA

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ProJet® 1200

Micro-SLA® Jewelry 3D Printer

Quickly print intricate casting patterns, stunning samples, and finished pieces in one affordable 3D printer

The ProJet® 1200 3D printer from 3D Systems puts the high precision and exceptionally fine feature detail of a professional 3D printer right on a jeweler's bench for an MSRP of $4,900 With a variety of VisiJet® FTX materials, the ProJet 1200 produces exceptionally detailed direct sacrificial patterns for easy casting, and it delivers a smooth surface finish, minimizing polishing of precious metal pieces. Insert a different material cartridge, and the same printer will produce samples and finished pieces in shimmery gold or silver hues, or clear glass-like materials.

The ProJet 1200 is so affordable to own and use that every jeweler can have one on his bench. Most jewelry pieces can be printed in under two hours and for less than $1 in materials, and the printer is no harder to use than a coffee maker. The ProJet 1200 delivers crisp details on small features and micro pave settings that meet or exceed printers costing over six times as much.

www.3dsystems.com

MANUFACTURING*THE*FUTURE

ProJet® 1200

Micro-SLA® Jewelry 3D Printer

ProJet 1200

Net Build Volume (xyz)	1.69 x 1.06 x 5.90 in (43 x 27 x 150 mm)
Native Resolution (xy)	56 micron (effective 585 dpi*)
Layer Thickness	0.0012 in (0.03 mm)
Vertical Build Speed	Up to 0.55 in/hour (14 mm/hour)
Material	VisiJet® FTX Green, FTX Cast, FTX Gray, FTX Clear, FTX Silver, FTX Gold
Material Packaging	All-in-one cartridge with built-in print window
Post-processing	Built-in UV Curing Station
Software	– Easy installer – Network connection – Windows®-based OS – Automatic and optimized supports
File Input	STL
Electrical	
Input	100-240 VAC, 50/60 Hz, 2.0 A
Output	24 V DC, 3.75 A, 90 W max
Dimensions (WxDxH)	
3D Printer Crated	15 x 15 x 22 in (381 x 381 x 560 mm)
3D Printer Uncrated	9 x 9 x 14 in (230 x 230 x 362 mm)
Weight	
3D Printer Crated	25 lbs (12 kg)
3D Printer Uncrated	20 lbs (9 kg)

* Enhanced LED DLP technology provides an effective resolution of 585 DPI.

Micro-SLA

Micro-SLA is an additive manufacturing technology in which a thin layer of resin is contained in a build tray. The build platform lowers, transferring the resin to the build platform, and then the layer is cured by a UV projector. This process is repeated, building the part layer by layer until the model is finished.

A low cost, professional-grade jewelry 3D printer

- Maximize your dollar – Achieve unmatched part accuracy and smoothness for the most intricate casting patterns and high-quality, unique customer samples and end-use pieces.
- Make precise parts – 585 dpi print resolution means you see every detail and can produce your micro pave settings.
- Accelerate your workflow – Fast print times allow you to keep up with your constant need for precision parts and casting patterns. Print most jewelry pieces in less than two hours.
- Get started with 3D printing at a low price – The ProJet 1200's affordability and inexpensive prints make it the perfect tool for every jewelry designer. Print a ring for less than $1 in materials.
- Get started q uickly – The ProJet 1200 features a convenient size and push-button operation.

Features:

- Enhanced LED DLP technology for 585 dpi resolution and 0.03 mm layers
- VisiJet FTX Cast material cleanly burns out for ash-free castings
- VisiJet FTX Gray shows off every detail and is ready for painting
- VisiJet FTX Clear creates models with a crystal-like appearance
- VisiJet FTX Gold and FTX Silver provide metallic appearance
- Prints fast – rings in two hours
- Integrated material cartridges ensure consistent high-quality parts every time
- Factory calibrated for reliably accurate operation
- Network-ready and USB printing

Materials		VisiJet FTX Green UV Curable Plastic	VisiJet FTX Cast UV Curable Plastic with Wax	VisiJet FTX Gray UV Curable Plastic	VisiJet FTX Clear UV Curable Plastic	VisiJet FTX Silver UV Curable Plastic with metallic flakes	VisiJet FTX Gold UV Curable Plastic with metallic flakes
Description		Tough castable plastic	Wax and plastic hybrid for delicate castings	Primer gray general purpose	Transparent Tough	Metallic Silver	Metallic Gold
Color		Dark Green	Light green	Gray	Clear	Metallic Silver	Metallic Gold
Cartridge Quantity		30 g	30 g	30 g	30 g	30 g	30 g
Density @ 25°C (liquid)		1.04 g/cm3	1.01 g/cm3	1.12 g/cm3	1.1 g/cm3	1.16 g/cm3	1.16 g/cm3
Tensile Strength	ASTM D638	30 MPa	2.2 MPa	28 MPa	24 MPa	16 MPa	16 MPa
Tensile Modulus	ASTM D638	1700 MPa	154 MPa	1288 MPa	1075 MPa	701 MPa	866 MPa
Elongation at Break	ASTM D638	10 %	2.20 %	6.20 %	13.50 %	11.70 %	5.70 %
Flexural Strength	ASTM D638	40 MPa	3 MPa	38 MPa	31 MPa	22 MPa	18 MPa
Ash Content		0.01 %	0.008 %	N/A	N/A	N/A	N/A

USA
Tel: +1 803.326.3900
moreinfo@3dsystems.com

UK
Tel: +44 1442 282 600
info@3dsystems-europe.com

Germany, Scandinavia, Eastern Europe, Middle East
Tel: +49 6151 357 0
info@3dsystems-europe.com

Asia-Pacific
Melbourne Tel: +61 3 9819 4422
Sydney Tel: +61 2 9516 5571
3dprinters.asiapac@3dsystems.com

01-15

ProJet®3500 CP & CPX

Professional 3D Printers

Superior wax casting patterns, unmatched throughput

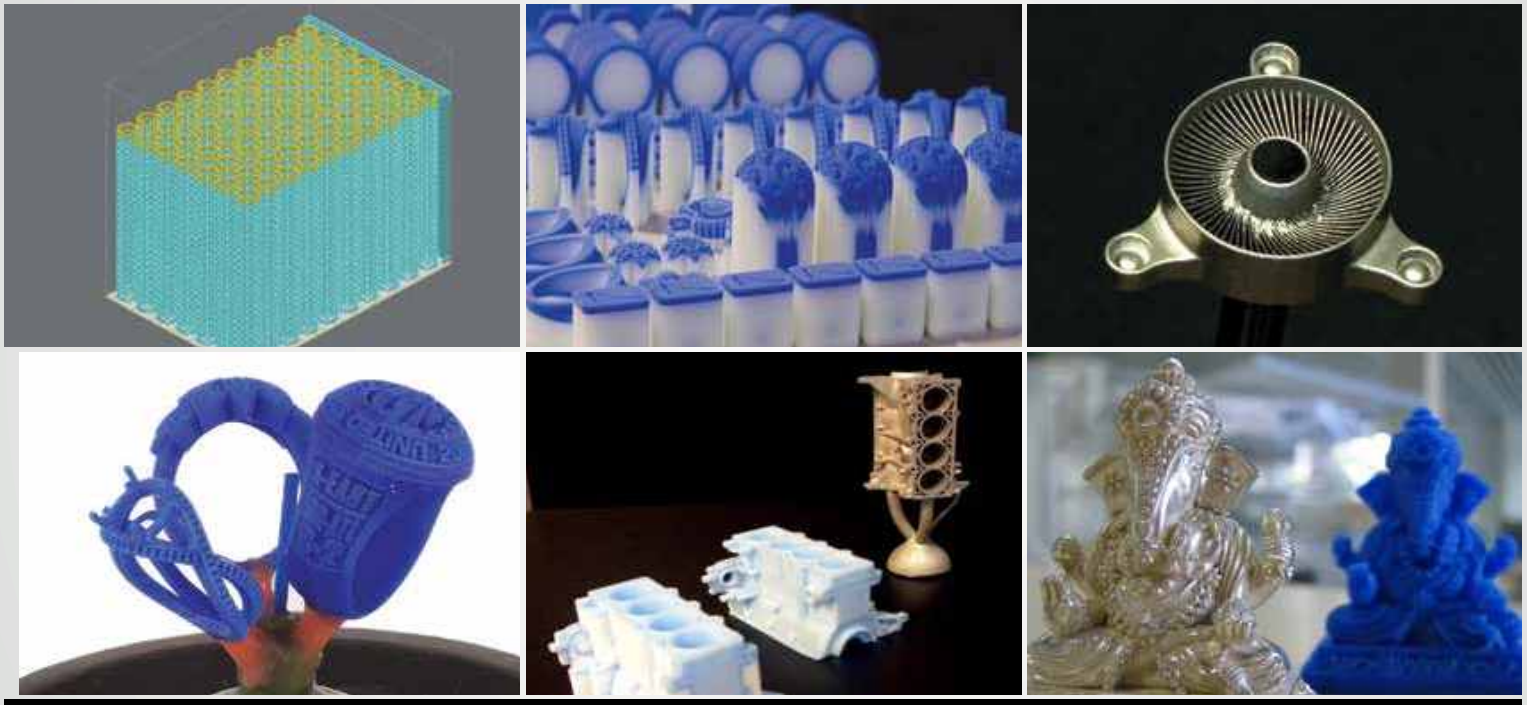
Imagine going from a 3D design idea to a cast part in the metal of your choice. Imagine printing wax patterns of unlimited complexity with the ProJet® 3500 series of high-productivity, precise wax 3D printers. This versatile range of workhorse printers is easy to use, with fast print times and easy post-processing. Wax patterns made on ProJet 3500s are beautifully precise, with sharp edges and true-to-CAD fidelity. Efficient material use, low-maintenance operation and a five-year print head warranty means you can print with confidence and keep costs down.

Using 3D Systems' MultiJet Printing (MJP) technology and VisiJet® M3 performance engineered materials, ProJet 3500 casting pattern printers make ultra-precise 100% RealWax™ patterns to suit your requirements, whether it's for general foundry applications, high-quality jewelry, or detailed components so complex they cannot be manufactured any other way.

www.3dsystems.com

MANUFACTURING*THE*FUTURE

Productive, high-capacity ProJet ®3500 professional printers



Sharp edges, crisp details and smooth surfaces from 100% RealWax™ patterns

Easy connectivity and high productivity with high resolution and accuracy

ProJet3510 CP

The ProJet 3510 CP is transforming 3D printing of complex direct investment casting patterns. This 3D printer produces superior 100% RealWax patterns that are ideal for general foundry casting applications such as medium- to large-sized mechanical parts, pneumatics, aerospace, energy, custom manufacturing equipment, restorations and other heavy equipment.

HIGH QUALITY • PRODUCTIVITY • RAPID FOUNDRY

ProJet3510 CPX

Mass produce micro-detailed 100% wax patterns with smooth surface finish, extremely fine detail and exceptional precision. The ProJet 3510 CPX enables a faster workflow, mass customization, improved casting room e[redacted]ciencies, and higher productivity for a variety of applications.

PRECISION • HIGH DEFINITION • INVESTMENT CASTING

ProJet3510 CPXPlus

The ProJet 3510 CPXPlus offers the flexibility to choose between four resolution modes to mass produce 100% RealWax casting patterns, supporting unlimited applications capabilities. Casting yields from ProJet 3500 patterns mirror those from standard casting waxes. Just connect to the printer and you can produce extremely fine-featured patterns with a greater level of output.

PATTERNPlus • RESOLUTION Plus • FLEXIBILITY Plus

ProJet3500 CPXMax

The high-capacity ProJet 3500 CPXMax offers larger high-definition prints and greater productivity. The RealWax pattern performance rivals injected wax patterns in existing lost-wax casting processes and equipment. Users everywhere can benefit from a level of increased throughput and part size, feature detail, and surface quality only possible with ProJet printers.

Max THROUGHPUTMax DEFINITION • Max VOLUME

VisiJet®M3 Materials for ProJet CP & CPX Printers

The VisiJet M3 line of RealWax materials offers numerous capabilities to meet a variety of casting applications. 3D Systems' ProJet 3500 3D printers use VisiJet M3 materials to build accurate, high-definition wax patterns for direct investment casting in transportation, energy, consumer products, recreation, healthcare, education and other vertical markets.

Properties	Condition	VisiJet M3 Prowax	VisiJet M3 Hi-Cast	VisiJet S400
Composition		100% Wax	100% Wax	Wax Support Material
Color		Light Blue	Navy Blue	White
Bottle Quantity (kg)		1.75	1.75	1.75
Density @ 80 °C (liquid), g/cm	ASTM D4164	0.81	0.81	0.87
Melting Point, °C		70	70	55-65
Softening Point, °C		52-62	52-62	N/A
Volumetric Shrinkage, from 40 °C to RT, %		2.24	2.24	N/A
Linear Shrinkage, from 40 °C to RT, %		0.75	0.75	N/A
ProJet Compatibility		CP	CPX	CP, CPX
Description		General Foundry Casting	High Resolution Micro-Casting	Non-toxic wax support material with dissolvable hands-free removal

VisiJet M3 Prowax

VisiJet M3 Hi-Cast

VisiJet M3 RealWax Materials Benefits

- Address a wide range of casting applications
- Produce high-definition parts with crisp details and smooth surface finish
- Castable in a wide range of casting processes
- Support material offers easy post-processing and preserves delicate features

ProJet® 3500 CP & CPX

Professional 3D Printers

Extend Innovation. Extend Production. Extend Choices.




	ProJet 3510 CP	ProJet 3510 CPX	ProJet 3510 CPXPlus	ProJet 3500 CPXMax
Printing Modes	HD - High Definition HDHiQ - High Definition/High Quality - -	HD - High Definition HDHiQ - High Definition/High Quality - XHD - Xtreme High Definition	HD - High Definition HDHiQ - High Definition/High Quality UHD - Ultra High Definition XHD - Xtreme High Definition	HD - High Definition HDHiQ - High Definition/High Quality UHD - Ultra High Definition XHD - Xtreme High Definition
Net Build Volume (xyz)				
HD Mode	11.75 x 7.3 x 8" (298 x 185 x 203 mm)	11.75 x 7.3 x 8" (298 x 185 x 203 mm)	11.75 x 7.3 x 8" (298 x 185 x 203 mm)	11.75 x 7.3 x 8" (298 x 185 x 203 mm)
HDHiQ Mode	11.75 x 7.3 x 8" (298 x 185 x 203 mm)	11.75 x 7.3 x 8" (298 x 185 x 203 mm)	11.75 x 7.3 x 8" (298 x 185 x 203 mm)	11.75 x 7.3 x 8" (298 x 185 x 203 mm)
UHD Mode	-	-	8 x 7 x 6" (203 x 178 x 152 mm)	11.75 x 7.3 x 8" (298 x 185 x 203 mm)
XHD Mode	-	5 x 7 x 6" (127 x 178 x 152 mm)	8 x 7 x 6" (203 x 178 x 152 mm)	11.75 x 7.3 x 8" (298 x 185 x 203 mm)
Resolution				
HD Mode	375 x 375 x 775 DPI (xyz); 33µ layers	375 x 375 x 775 DPI (xyz); 33µ layers	375 x 375 x 775 DPI (xyz); 33µ layers	375 x 375 x 775 DPI (xyz); 33µ layers
HDHiQ Mode	375 x 375 x 775 DPI (xyz); 33µ layers	375 x 375 x 775 DPI (xyz); 33µ layers	375 x 375 x 775 DPI (xyz); 33µ layers	375 x 375 x 775 DPI (xyz); 33µ layers
UHD Mode	-	-	694 x 750 x 1300 DPI (xyz); 20µ layers	694 x 750 x 1300 DPI (xyz); 20µ layers
XHD Mode	-	694 x 750 x 1600 DPI (xyz); 16µ layers	694 x 750 x 1600 DPI (xyz); 16µ layers	694 x 750 x 1600 DPI (xyz); 16µ layers
Accuracy (typical)	0.001-0.002 inch per inch (0.025-0.05 mm per 25.4 mm) of part dimension. Accuracy may vary depending on build parameters, part geometry and size, part orientation, and post-processing.			
E-mail Notice Capability	Yes	Yes	Yes	Yes
Tablet/Smartphone connectivity	Yes	Yes	Yes	Yes
5 Year Printhead Warranty	Standard	Standard	Standard	Standard
Build Materials	VisiJet M3 Prowax	VisiJet M3 Hi-Cast	VisiJet M3 Hi-Cast	VisiJet M3 Hi-Cast
Support Material	VisiJet S400	VisiJet S400	VisiJet S400	VisiJet S400
Material Packaging				
Build materials	In clean 3.86 lbs (1.75 kg) bottles (machine holds up to 2 with auto-switching)			
Support materials	In clean 3.86 lbs (1.75 kg) bottles (machine holds up to 2 with auto-switching)			
Electrical	100-127 VAC, 50/60 Hz, single-phase, 15A; 200-240* VAC, 50 Hz, single-phase, 10A			
Dimensions (WxDxH)				
3D Printer Crated	32.5 x 56.25 x 68.5" (826 x 1429 x 1740 mm)	32.5 x 56.25 x 68.5" (826 x 1429 x 1740 mm)	32.5 x 56.25 x 68.5" (826 x 1429 x 1740 mm)	32.5 x 56.25 x 68.5" (826 x 1429 x 1740 mm)
3D Printer Uncrated	29.5 x 47 x 59.5" (749 x 1194 x 1511 mm)	29.5 x 47 x 59.5" (749 x 1194 x 1511 mm)	29.5 x 47 x 59.5" (749 x 1194 x 1511 mm)	29.5 x 47 x 59.5" (749 x 1194 x 1511 mm)
Weight				
3D Printer Crated	955 lbs, 434 kg	955 lbs, 434 kg	955 lbs, 434 kg	955 lbs, 434 kg
3D Printer Uncrated	711 lbs, 323 kg	711 lbs, 323 kg	711 lbs, 323 kg	711 lbs, 323 kg
ProJet® Accelerator Software	Easy build job set-up, submission and job queue management ; Automatic part placement and build optimization tools ; Part stacking and nesting capability ; Extensive part editing tools ; Automatic support generation ; Job statistics reporting tools			
Print3D App	Remote monitoring and control from tablet, computers and smartphones			
Network Compatibility	Network ready with 10/100 Ethernet interface			
Client Hardware Recommendation	1.8 GHz with 1GB RAM (OpenGL support 64 mb video RAM) or higher			
Client Operating System	Windows XP Professional, Windows Vista, Windows 7			
Input Data File Formats Supported	STL	STL and SLC	STL and SLC	STL and SLC
Operating Temperature Range	64-82 °F (18-28 °C)	64-82 °F (18-28 °C)	64-82 °F (18-28 °C)	64-82 °F (18-28 °C)
Noise	< 65 dBa estimated (at medium fan setting)			
Certifications	CE	CE	CE	CE

***** Requires small external transformer supplied by 3D Systems in the provided country kit.

USA
Tel: +1 803.326.3900
moreinfo@3dsystems.com

UK
Tel: +44 1442 282 600
info@3dsystems-europe.com

Germany, Scandinavia, Eastern Europe, Middle East
Tel: +49 6151 357 0
info@3dsystems-europe.com

Asia-Pacific
Melbourne Tel: +61 3 9819 4422
Sydney Tel: +61 2 9516 5571
3dprinters.asiapac@3dsystems.com

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