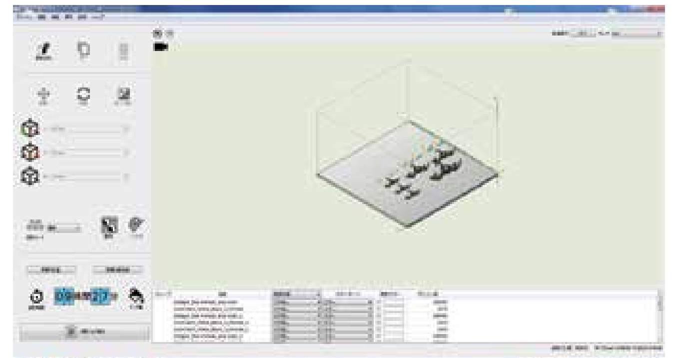
Concentration of the best technologies of Mimaki
Creation by surpassing color expressiveness
with photorealistic color accuracy

Concentration of the best technologies of Mimaki, the leading company of the inkjet printer segment in each market of Sign Graphics, Industrial products, and Textiles & Apparel. Mimaki 3D printer, [3DUJ-553] provides the innovating competitive power in your business development.

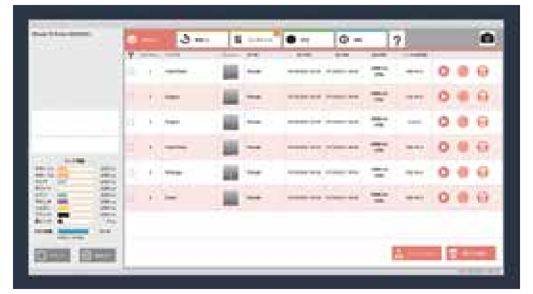
Software (Bundled)

■Layout software [Mimaki 3D Link]



Creating a nesting layout of the job and transmit the job data to the printer.

■[Mimaki Printer Driver], Print control software integrated in the printer



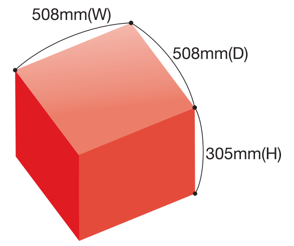
Easy operation by large touchscreen
3D-Link print control software allows you to apply settings, to check your print records, perform nozzle check, cleaning, etc.

Procedure

1. Data loading
   Available formats: STL, OBJ, VRML, PLY, 3MF
2. Rotate, Zoom-in/out, move, assign colors and multiply objects. Check you working table layout
3. Select modeling mode and assign a modeling job to [Mimaki Printer Driver] of the print control software integrated in the printer

*1 Modeling order with clear ink is available
*2 Accurate estimation function for modeling time and consumption
*3 Max. 20 printer units can be connected

Available modeling area



Specifications

Item		3DUJ-553
Modeling method		UV curable inkjet
Available color number		Full color / More than 10 million different colors
Print head		On-demand piezoelectric print head 8 heads inline
Ink	Type	Modeling ink MH-100 (CMYK, White, Clear) Support material ink SW-100
	Tank volume	CMYK: 3L White, Clear, Support material: 5L
	Supply style	CMYK: 1L bottle White, Clear, Support material: 4.8L bottle
Available modeling area (W×D×H)		508×508×305mm (20x20x12inch)
Minimum layer pitch		22 µm
Modeling time (Modeling 100×100×100mm W×D×H object.)		High speed mode: 14.4 hours 600x300x600dpi (42µm) Standard mode: 17.0 hours 600x300x800dpi (32µm) High definition mode: 25.7 hours 600x300x1270dpi (22µm)
3D data format		STL, OBJ, VRML, PLY, 3MF
Software (Standard accessories)		Layout software [Mimaki 3D Link]
Interface		Ethernet 1000BASE-TX
Power		Single phase AC 100-120V/220-240V±10% 50/60Hz±1Hz
Safety standard		VCCI Class A/FCC Class A/ Compliant with UL60950, ETL / CE Marking (EMC, Low Voltage Directive) / CB Report/ RoHS/REACH
Outside dimensions (W×D×H)		2,250×1,500×1,550mm (88.6x59.1x61.0 inch)
Weight		600 kg (1,322.8 lb) (mounted ink weight incl.)

* Specifications, designs and dimensions stated in this list may be subject to change without notice due to technical improvement etc.

Supplies

Product name		Item code	Remarks
MH-100	Cyan	MH100-C-BA	1L bottle
	Magenta	MH100-M-BA	
	Yellow	MH100-Y-BA	
	Black	MH100-K-BA	
	White	MH100-W-BD	4,8L bottle
	Clear	MH100-CL-BD	
SW-100	Support material	SW100-Z-BD	

* There may be changes made to these contents.

Options

Item	Item Code	Remarks
MPM+i1 Pro Set	MPM3+i1	Color management software and colorimeter

* There may be changes made to these contents.

Mimaki 3D Printer

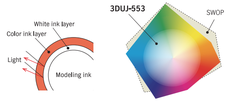
UV Curable Inkjet System 3D Printer

3DUJ-553

The world's first[*1] 3D modeling by over 10,000,000 different full colors

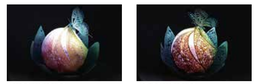
Covering the color gamut of 84% of FOGRA39L and 90% of SWOP

Modeling by color ink (CMYK,White,Clear) can achieve 84% of FOGRA39L and 90% of SWOP gamut. Modeling by color ink with high transparency and light reflecting on the surface of white ink layer, a fine color of object with essential beauty of real ink color is presented.



Broadening designs with clear ink

In addition to the transparency by clear ink, the combination of clear ink and color ink can express the colored transparency. Clear ink can give a different look when lighted from the inside of object.The combination of clear and color ink will broaden designs.


Clear ink and color ink

White ink and color ink

The world's first ! Enhancing color reproduction with color profile

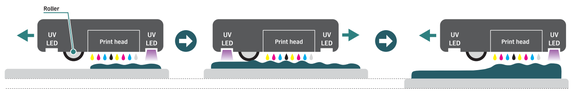
Color profile utilization is the world's first method [*1] among the inkjet system 3D printers. Implementing the color simulate profile created by MPM3(Option: Color management software) to Adobe Photoshop, the color to be printed is checked on the PC monitor. It is possible to get closer between the color of image on the PC and the object to shorten color adjustment time.


Before color matching　　After

*1. Survey as of August 2017 by Mimaki Engineering

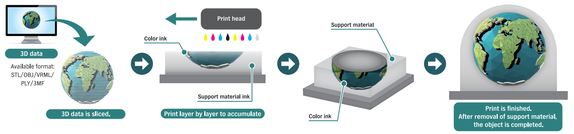
UV curable inkjet system

UV ink gets hardened by irradiation of UV (Ultra Violet) light.
The Mimaki 3DUJ-553 printer is modeling by curing the ink with LED UV after each printed layer.

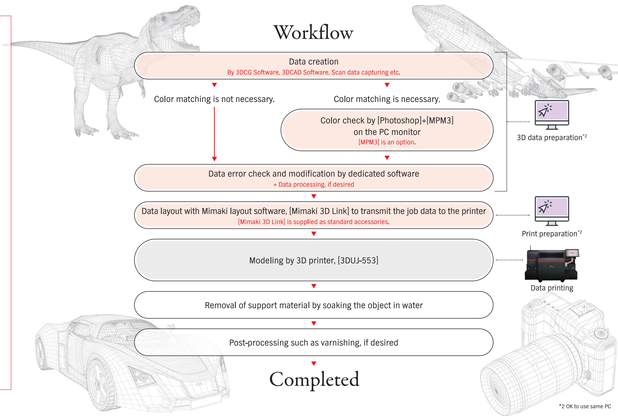


Layering & Coloring method

Modeling by simultaneous print with color ink and support material ink of sliced data of 3D object



Workflow



*2 OK to use same PC

CHARACTERISTICS

Modeling quality with high definition

Beautiful modeling object by Mimaki technology only

High definition print technology Mimaki 3D printer's precise ink droplet placement as aimed is by our original wave form control and high precision ink discharging technology, amassed in the development of inkjet printer for professionals with their strict requirements of high quality image. This excellent droplet precision can deliver modeling with elaborate design.

Variable dot function Variable dot function contains to discharge 3 types dot size and selects always the optimal size. This specified function enables to print a beautiful gradation of less granularity in extremely high accurate full color.

Four advantages of modeling

Broadening applications with post-processing

Modeling materials
Acrylic resin is compounded in the ink resulting in a simular strength as ABS.

Drilling
Printed objects can handle 5kg weight mounted with a screw.

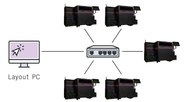
Overcoating
Overcoating is possible. It creates a surface that is smoother while upgrading the weather resistance.

Water resistance
While a model gets wet with water, no discoloring, neither damage will occur.

Network connection

Easy to increase and connect new printers

Simple management of systems by Ethernet Simply connect the layout PC and main unit with Ethernet switch. Max. 20 units of 3D printers can be connected to 1 layout PC. Upgrading the latest software version thru internet is supported.

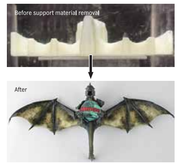


CHARACTERISTICS

Usability

Less labor, higher quality

Water soluble support material
Beautiful finish with very simple operation
Water soluble support material is applied. Support material can be washed away by placing in water instead of scratching off. Even an intricate design, support material can be taken-off easily without damage.



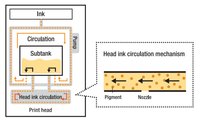
UV LED is applied as curing light source.
[3DUJ-553] applies UV ink curing by irradiation of UV (Ultra Violet). The UV LED of curing source exerts less heat effects to object and no loss time of starting light. It saves running cost with long life and power saving.

Monitoring camera to watch modeling process [Internal monitoring camera] is mounted for 3D printer operation and modeling process check from remote area. It allows constant check to minimize the loss of print error.

Stable production by two functions.

Production efficiency

Equipment of ink circulation head for reducing nozzle missing The world's first 3D inkjet printer[*1] equipt with print head ink circulation. The printheads allow the ink to circulate preventing sedimentation of the pigments to assure stabile ink jetting. It also eliminates air bubbles causing misfiring while maintaining optimal shaped ink drops.



[NCU (Nozzle Check Unit)] for self-recovery of automatic detection of nozzle missing The world's first 3D inkjet printer [*1]equipt with an NCU (Nozzle Check Unit) for auto detection of the nozzle status by infrared radiation sensor. When a missing nozzle is detected, auto cleaning starts to solve it. Detection frequency can be set per data or by time. The NCU prevents loss of waste and print time after detection of a missing nozzle.