

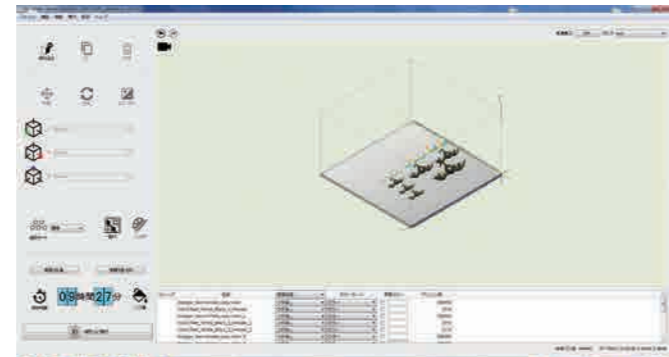


Concentration of the best technologies of Mimaki
Creation by surpassing color expressiveness
with photorealistic color accuracy

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]



It is for laying out a job data of 3D print to transmit to the printer.

Procedure

1. Data loading
Available format: STL, OBJ, VRML, PLY, 3MF
2. Rotation, Zoom-in/out, move, and copy number
indication of data for laying out on the table
3. Select modeling mode and issue a modeling job to
[Mimaki Printer Driver] of print control software
incorporated in the printer

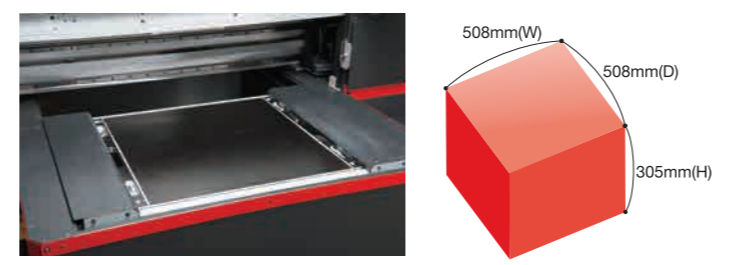
*1 Modeling order by clear ink is available, too.
*2 Estimation unit is for calculation of [modeling time] and [ink consumption].
*3 Max. 20 units of printer are connectable.

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



Useful operability by a large panel of printer
Setting and operation of start modeling, check of print record,
setting of nozzle check and cleaning etc. are possible.

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 head inline	
Ink	Type	Modeling ink MH-100 (C,M,Y,K, White, Clear) Support material ink SW-100
	Tank volume	C.M,Y,K :3L White, Clear, Support material :5L
	Supply style	C.M,Y,K :1L bottle White, Clear, Support material :4.8L bottle
Available modeling area (WxDH)	508×508×305mm (20×20×12in)	
Load capacity (Max. model weight [including support materials] *1)	70 kg (154 lb) or less	
Minimum layer pitch	20 μm	
3D data format	STL, OBJ, VRML, PLY, 3MF	
Software (Standard accessories)	Layout software [Mimaki 3D Link]	
Interface	Ethernet 1000BASE-TX	
Power	Single-phase 100-240 VAC, ±10%, 50/60 Hz×1 Hz ×3 (Main unit 1/ Monitor 1/ External PC 1)	
Power consumption	Printer	1300W or less
	External PC	300W or less
	Touch panel	30W or less
Safety standard	VCCI Class A/FCC Class A/ Compliant with UL60950, ETL / CE Marking (EMC, Low Voltage Directive) / CB Report/ RoHS/REACH	
Installation environment	Usage temperature range	15 °C to 35 °C (59°F to 95°F)
	Relative humidity	35 to 60% RH (No condensation)
	Recommended operational temperature range	20°C to 25°C (68°F to 77°F)
	Dust	Places without mine dust (Dust amount 0.15mg/m ³ or less) *2
Outside dimensions (W×D×H)	2,250×1,500×1,550mm (88.6×59.1×61.0in)	
Weight	Weight 600 kg (1,322.8 lb.)	

*1: The maximum modeling size should be within the available modeling area and below the max. model weight.
*2: 0.15mg/m³ or less...The numerical value of the dust quantity equivalent to the office specified by the Building Standards Act of Japan.

●Some of samples in this catalogue are artificial renderings. ●Specifications, design and dimensions stated in this catalogue may be subject to change without notice for technical improvements etc. ●The corporate names and merchandise names written in this catalogue are the trademark or registered trademark of the respective corporations. ●Inkjet printers print extremely fine dots, so colors may vary slightly after replacement of the printing heads. Also note that if using multiple printer units, colors could vary slightly from one unit to other due to slight individual differences. ●The specifications described in this catalogue are as of May 2019.

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Mimaki
3D Printer

UV Curable Inkjet System 3D Printer

3DUJ-553



Photorealistic Color Accuracy



Mimaki



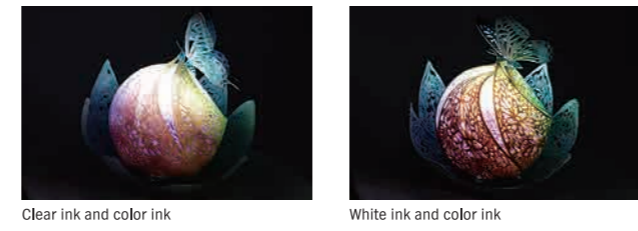
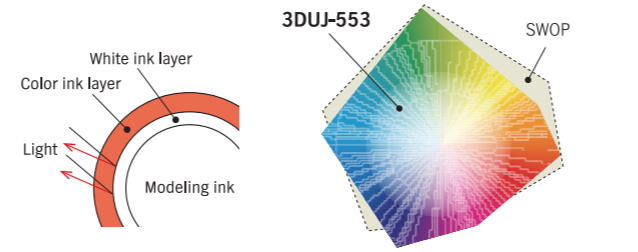
Highly realistic 3D samples



The world's first¹ 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.

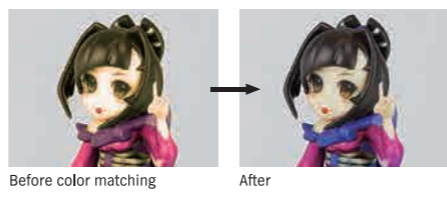


Broadening designs with clear ink

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.

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

Color profile utilization is the world's first method¹ 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. It is to shorten color adjustment time.



¹ Survey as of August 2017 by Mimaki Engineering

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

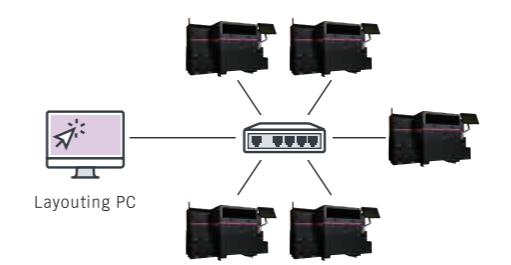
Broadening applications with post-processing

- Modeling materials** Acrylic resin is compounded in the ink corresponding same strength with ABS.
- Drilling** It has the strength to bear 5kg loading weight in spite of drawing with fixing a screw.
- Overcoating** Overcoating is possible. Overcoating can make smoother surface and upgrade weather resistance.
- Water resistance** While a model gets wet with water, no discoloring, neither no damage.

Network connection

Easy to increase to connect new printers

Simple management of systems by Ethernet Available simply to connect layouting PC and main unit with Ethernet. Max. 20 units of 3D printer can be connected to one layout PC. It is possible to upgrade the latest version of software thru internet.

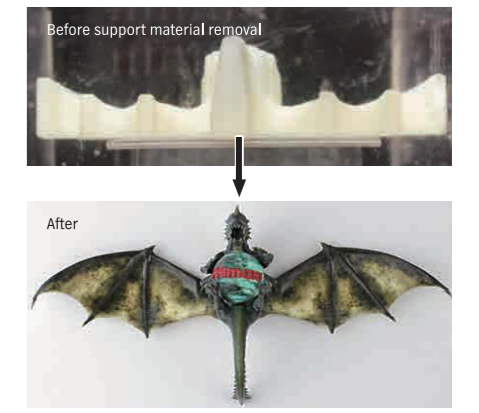


CHARACTERISTICS

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.



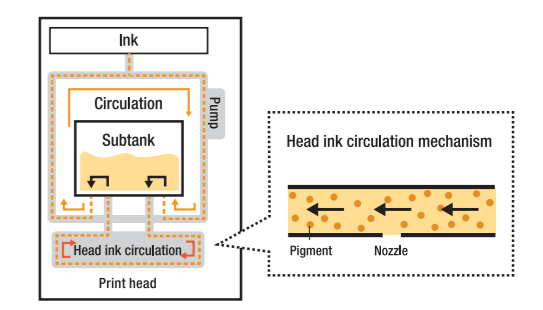
Inner camera to watch modeling process [Inner camera] is mounted for 3D printer operation and modeling process check from remote area. It allows constant check to minimize the loss of print error.



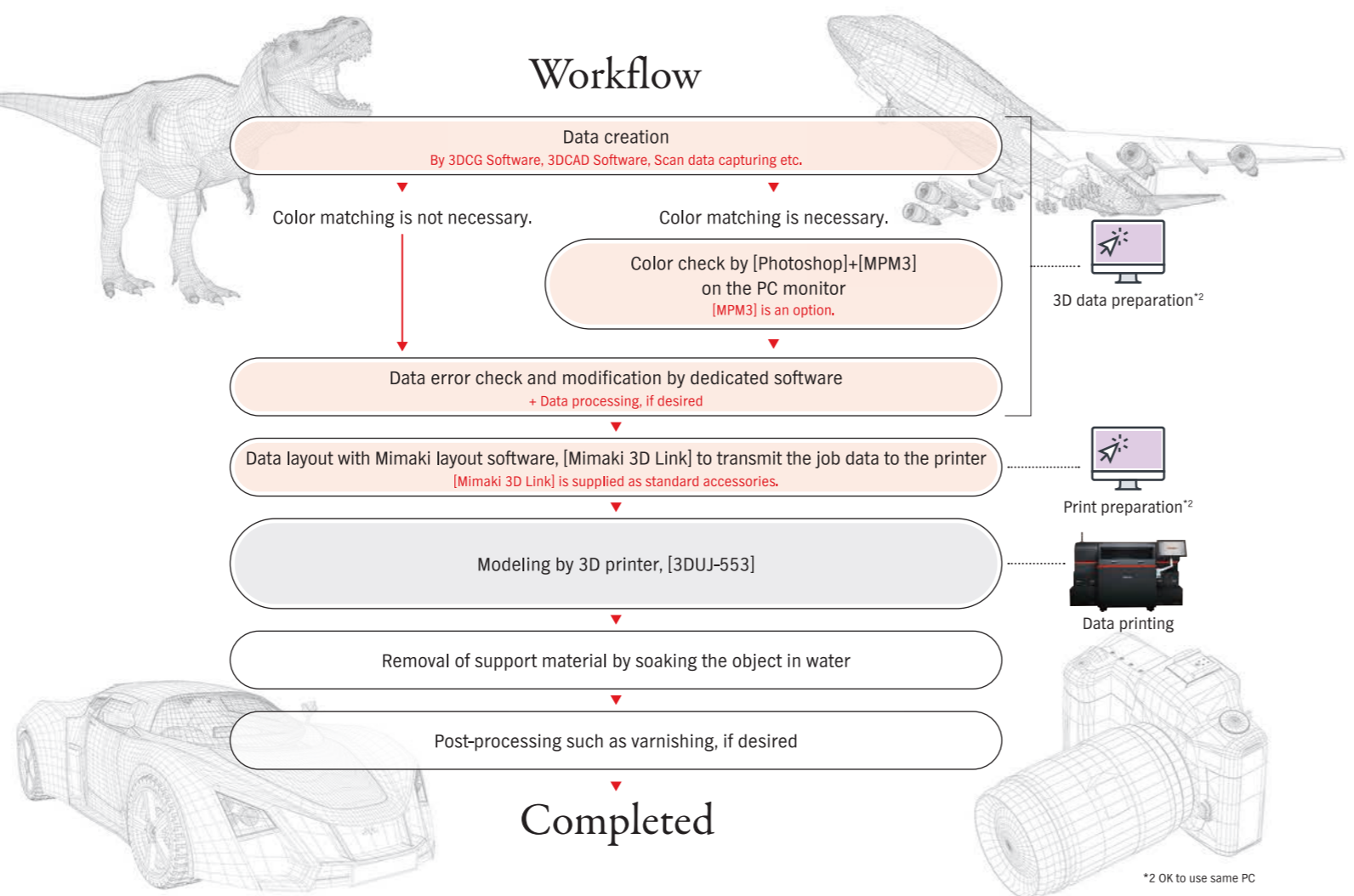
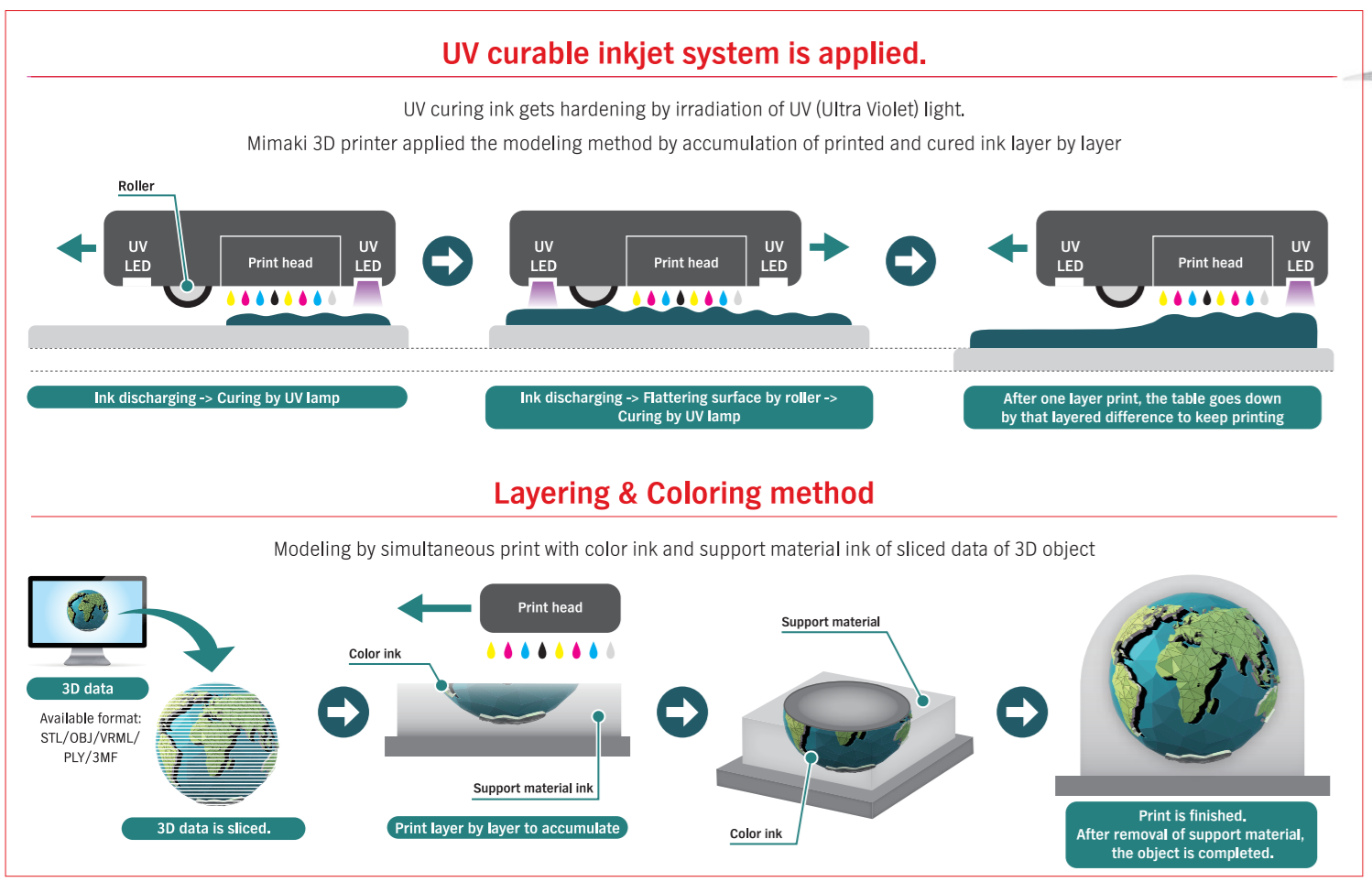
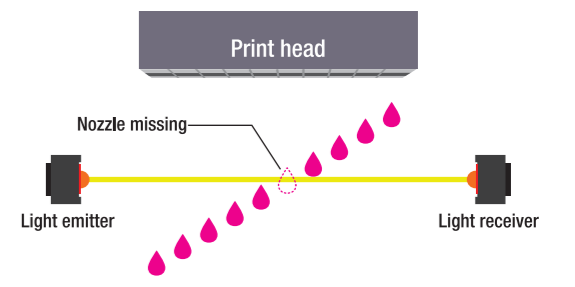
Stable production by two functions.

Production efficiency

Equipment of ink circulation head for reducing nozzle missing It is the world's first equipment³ of the ink circulation print head as 3D inkjet printer. This print head can circulate the ink of head to prevent the sedimentation of pigment to assure the stable ink discharging. It also eliminates air bubbles causing nozzle missing to maintain the optimal status of ink jetting.



[NCU (Nozzle Check Unit)] for self-recovery of automatic detection of nozzle missing The world's first equipment³ of [NCU] as 3D printer function is for auto detection of nozzle status by infrared radiation sensor. When nozzle missing is detected, auto clearing starts to solve it. Detection frequency can be set per data or by time. It prevents modeling loss after detection of nozzle missing.



² OK to use same PC

³ Survey as of August, 2017 by Mimaki Engineering