JFX600-2513

JFX600-2531





Two table sizes, one high-performance, large format flatbed, inkjet production platform.

Product Guide

※This information is subject to change without notice due to technical improvements.

Innovative Systems, Proven Results

Mimaki®

Features overview

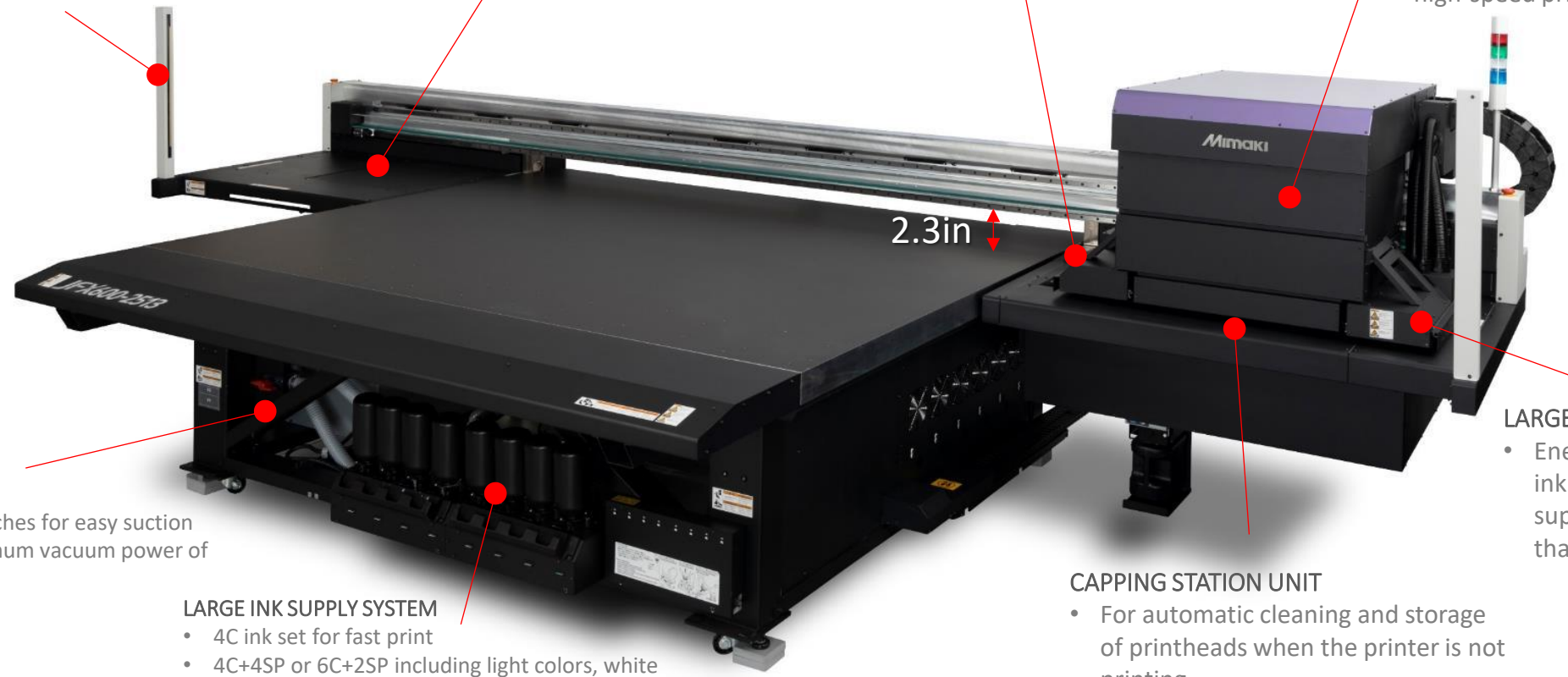
JFX600-2513 JFX600-2531

SAFETY OPERATION CURTAIN SENSORS
- The printer stops operating when safety sensor is activated by obstacle

MAINTENANCE AREA
- Easy access to cleaning area

MEDIA JAM SENSORS
- Obstacle sensor technology prevents head damage

HEADS CARRIAGE
- 16 printheads in staggered mode for high-speed print



VACUUM CONTROL
- The vacuum switches for easy suction control and optimum vacuum power of table areas

LARGE INK SUPPLY SYSTEM
- 4C ink set for fast print
- 4C+4SP or 6C+2SP including light colors, white and clear for special applications
- Available in 1Ltr bottle

CAPPING STATION UNIT
- For automatic cleaning and storage of printheads when the printer is not printing

LARGE LED-UV UNITS
- Energy-saving, high intensity ink curing units with a superior lifespan of more than 10.000 working hours

JFX600 shared Sales Features

The JFX600 Series is fastest large-format flatbed UV inkjet printer at Mimaki.

Further pursuit of production efficiency and stability.

◆ **High Productivity (p10)**
- The JFX600-2531 has a 16-head configuration, which provides approximately twice the printing speed (4c4sp) of the JFX500-2131 and about 2.6 times of the JFX200-2513 EX.

◆ **High Quality Printing (p20-24)**
- Although JFX500-2131 is 4-color compatible, JFX600-2531 is 6-color compatible, with a wide range of ink variations for greater expressiveness and reproducibility than ever before.

◆ **Stable Production (p27-29)**
- NCU & NRS, which inherits the conventional technology, automatically detects missing nozzles and retrieves them to reduce downtime

◆ **Safety prevention function (p30)**
- Light curtains on the left and right sides of the main unit for added safety against fast-moving heads. Accurate media jam sensors on both sides of the carriage to prevent accidents.

◆ **Automation support (p32)**
- Supports external control MDL and supports automation of work transfer.

JFX600 Size related Sales Features

The JFX600 Series is fastest large-format flatbed UV inkjet printer at Mimaki.

Further pursuit of production efficiency and stability.

JFX600-2513

◆ **Table size is 98 in x 51.2 in x 2.3 in (p5)**

・The ability to print on 4x8 sheets will enable direct printing on a wide range of standard media, including sign boards, packaging, and decorative materials, and is expected to expand into new markets.

◆ **2 Divided Vacuum Areas (p8)**

• The vacuum area can be divided into nine areas of different sizes according to the media used. Improved media adsorption for high-precision printing.

JFX600-2531

◆ **Table size is 98 in x 122 in x2.3 in (p5)**

・The ability to print on 5x10 plates will enable direct printing on a wide range of media, including sign boards, packaging, and decorative materials, and is expected to expand into new markets.

◆ **Toggle Print (p7)**

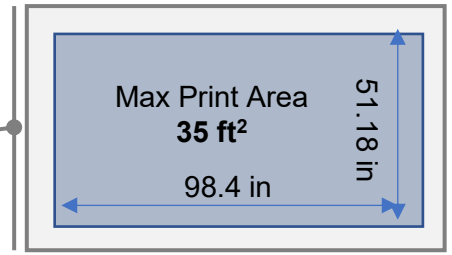
・Two origins can be set on the print table, printing can be performed on the front side of the table while media is changed on the back side of the table, allowing the two printing areas to be used alternately in an efficient manner. The maximum media size and height for toggle printing can be set for each side.

◆ **9 Divided Vacuum Areas (p8)**

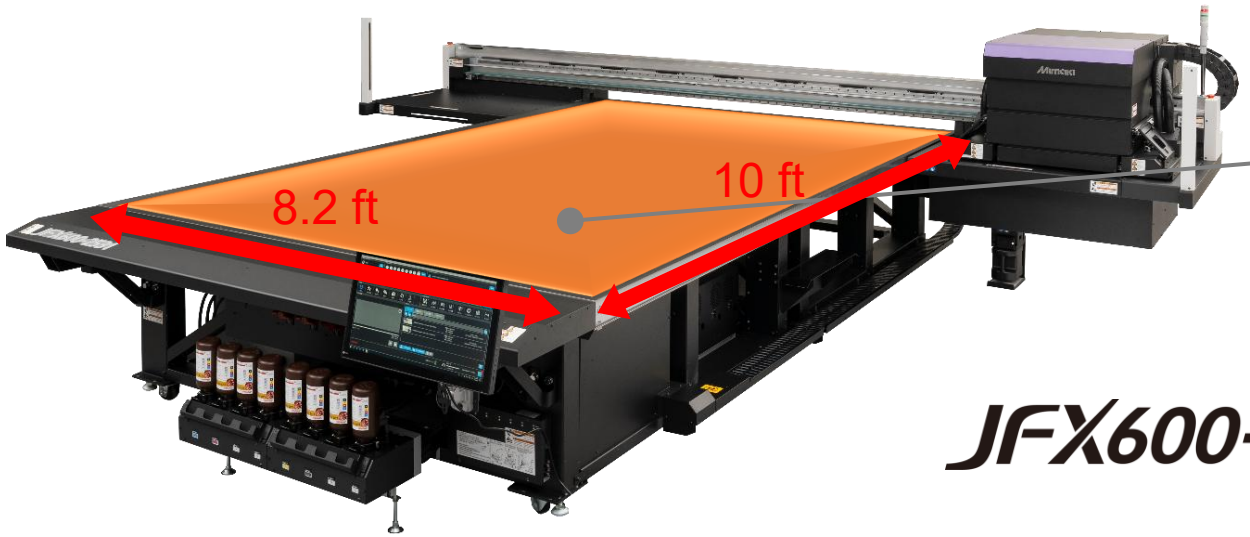
・The vacuum area can be divided into nine areas of different sizes according to the media used. Improved media adsorption for high-precision printing.

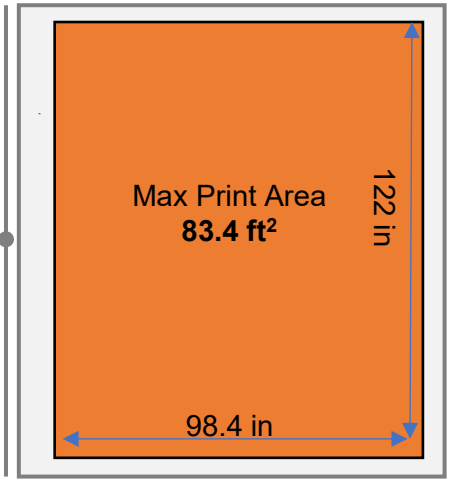
Print Area





JFX600-2531

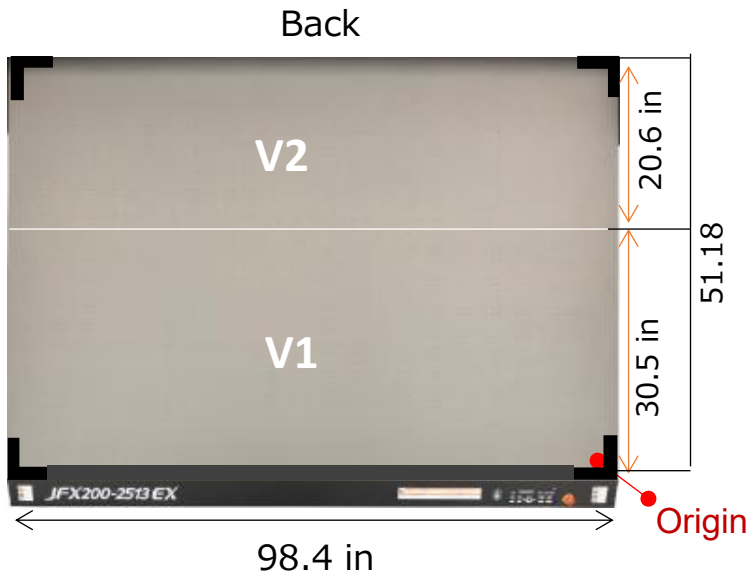




JFX600-2513

Vacuum Area

The suction area is divided into **two sections in the X direction in the JFX600-2513**, and **9 sections in the JFX600-2531,** so the effective vacuum area can be designated by opening and closing valves according to the size of the media. Vacuum efficiency on the substrate surface can be improved by closing the valve in the unused area or covering the suction holes with film or other material. Optional blower are available for media that cannot be vacuumed by the standard blower.



Front of table



JFX600-2513

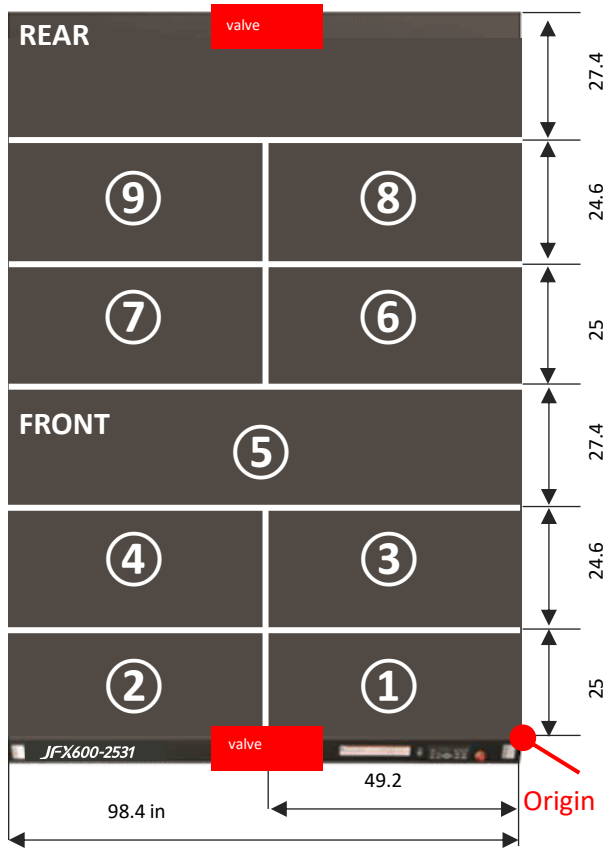
Valve Levers

Front of table (2-5) Back of table (6-9)



JFX600-2531

※There is a same valve on the back side
※Vacuum ON/OFF for FRONT/REAR is set on MPC
※Area ① is always ON.
※JFX600-2531 is available with two units of each blower unit.
※Two standard vacuums are included as standard accessories.
※ The same vacuum unit as JFX600-2513 is used.



JFX600-2513

JFX600-2531

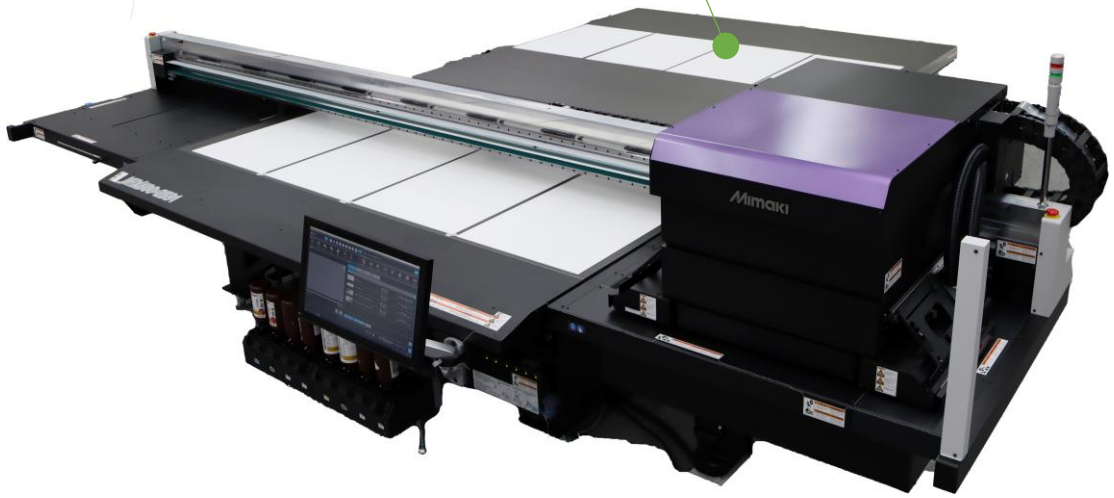
JFX600-2531 Specific - Toggle Print

NON-STOP continuous operation Improves Productivity

In toggle print mode

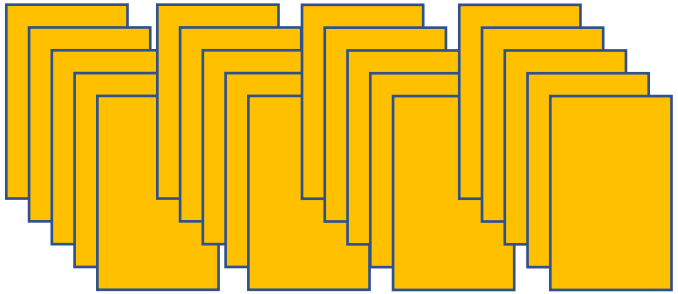
A1 size Can produce approx. **69** sheets /hour.

The backside media can be exchanged while the front side is being printed, there is no need to stop the press for material exchange, thereby improving production efficiency.



JFX600 LUS-120 4P Production Mode

485 ft²/h



Production:**69 sheets/hour**

Compared to JFX600-2513

Approx.27%UP

(Productivity of JFX600-2513 is 54 sheets/hour)

※Specifications and numbers are subject to change. 2024/07
※Calculation JFX600-2531 JFX600-2513 together with LUS-120 ink 4c4sp ink set
A1 size: 600 x 840mm Calculated with 4 sheets side by side in toggle print mode (media placement time approx. 40 seconds)
※Results may be different depending on printing method, ink set, and printing environment. Please test in advance.

JFX600-2531 Specific - Toggle Print

Toggle Print

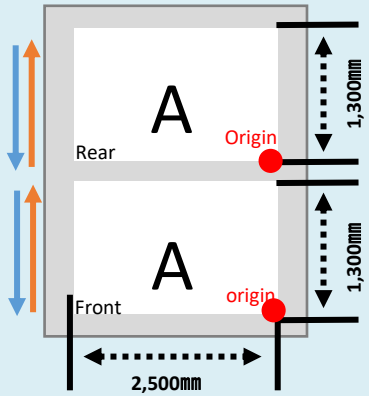
Two origins can be set on the print table, printing can be performed on the front side of the table while media is changed on the back side of the table, allowing the two printing areas to be used alternately in an efficient manner. The maximum media size and height for toggle printing can be set for each. side.

Two toggle printing systems, FF and FR, are used.

Full board / FF method / FR method" can be set in MPC.

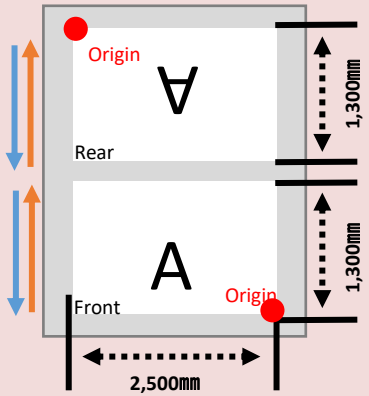
※ The maximum print size for toggle printing front/rear is 2513 (2500x1300mm).

FF mode



The printed result is checked from the front side The origin for both FRONT and REAR is the right front side when viewed from the front. FRONT and REAR have the same printing direction, they basically print identical print conditions.

FR mode



The system checks media replacement and print results in the REAR side area from the back of the table. FRONT: The origin is on the right side when viewed from the front of the table. REAR: The origin is located at the left rear side as seen from the front of the table, making it easy to place media.

【 Print Direction 】

Color
Special
Color⇒Special

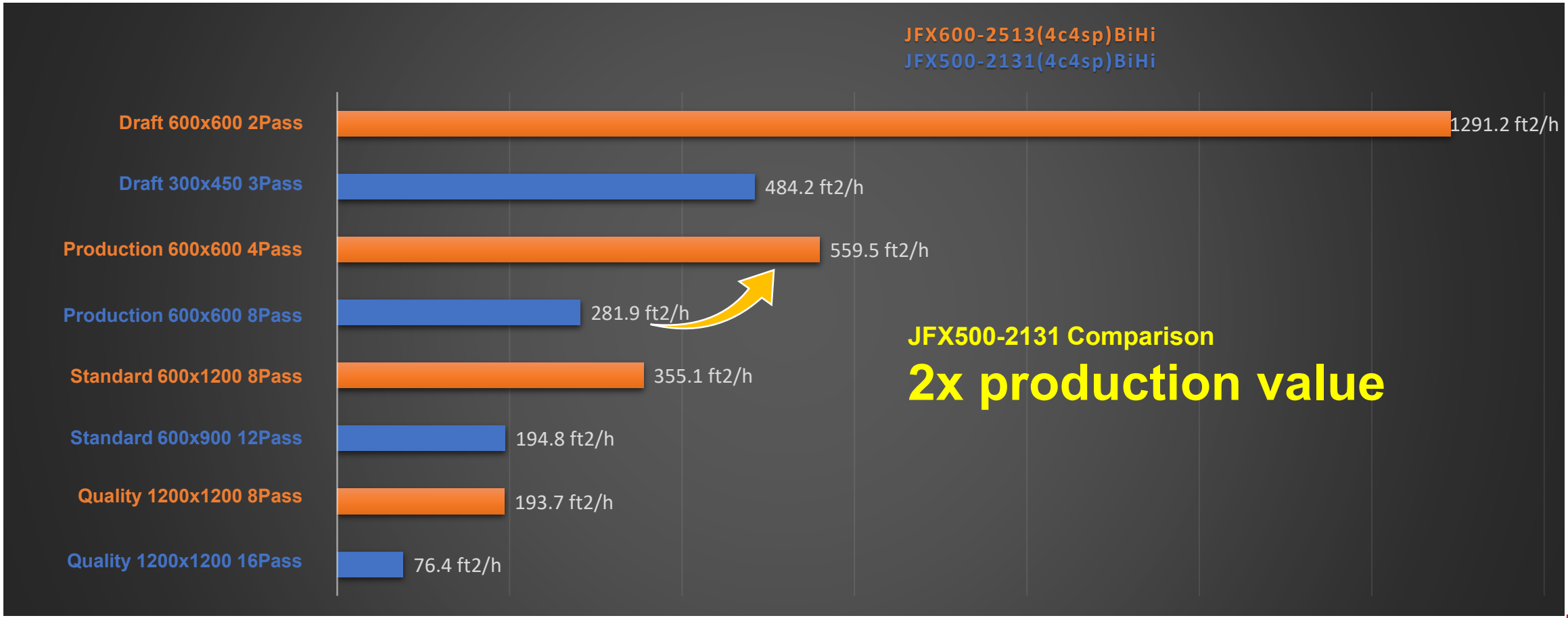
Special⇒Color

※Specifications and values are subject to change as of 2024/07.
※Image quality by printing method is evaluated based on our standards and is not guaranteed.
The same results may not be obtained depending on the substrate type and data. We recommend that you always test the results in advance.

JFX600 / JFX500 Speed Comparison

Print Speed

The JFX600 Series has a 16-head configuration and can print **approximately twice as fast as the JFX500-2131** in the same printing mode, making it possible to meet short delivery times.



※Specifications and values are subject to change as of 2024/07.
※JFX600-2513 LH-100/LUS-150 Printing speed when ink is used Bi-directional/High-speed mode
※Comparison of productivity per 4x8 size sheet in equivalent printing modes
※The above estimates are based on our standards and are not guaranteed.
Even with the same type of model, the same results may be different if the ink type or environment is different.
We recommend that you always test the ink before printing.
※ Printing speed may be different depending on ink type/curing conditions, etc.

Production Speeds

LH-100 / LUS-150

	Mode	Resolution	Pass	Speed	Direction	MAPS	Print Speed (ft2/hr)
4C	Draft	600x600	2	Hi	Bi	100%	2152
	Production	600x600	4	Hi	Bi	80%	969
	Standard	600x1200	8	Hi	Bi	92%	603
	Quality	1200x1200	8	Hi	Bi	100%	377
4C+SP	Draft	600x600	2	Hi	Bi	100%	1292
	Production	600x600	4	Hi	Bi	80%	560
	Standard	600x1200	8	Hi	Bi	100%	355
	Quality	1200x1200	8	Hi	Bi	100%	194
6C+SP	Draft	600x600	4	Hi	Bi	100%	1184
	Production	600x600	8	Hi	Bi	80%	484
	Standard	600x1200	16	Hi	Bi	100%	323
	Quality	1200x1200	16	Hi	Bi	100%	183

LUS-120

	Mode	Resolution	Pass	Speed	Direction	MAPS	Print Speed (ft2/hr)
4C	Draft	600x600	2	Hi	Bi	100%	1830
	Production	600x600	4	Hi	Bi	80%	861
	Standard	600x1200	8	Hi	Bi	92%	560
	Quality	1200x1200	8	Hi	Bi	100%	323
4C+SP	Draft	600x600	2	Hi	Bi	100%	1130
	Production	600x600	4	Hi	Bi	80%	484
	Standard	600x1200	8	Hi	Bi	100%	323
	Quality	1200x1200	8	Hi	Bi	100%	161
6C+SP	Draft	600x600	4	Hi	Bi	100%	1055
	Production	600x600	8	Hi	Bi	80%	441
	Standard	600x1200	16	Hi	Bi	100%	269
	Quality	1200x1200	16	Hi	Bi	100%	161

※Media sets and RIP times are not included.
※Measurement method...Measure the time from the start of scanning after the cap is turned off to the end of the final scan of the print (excluding additional scans).
※ This information is subject to change due to technical improvements, specification changes,

Production Speeds

LH-100 / LUS-150

	Mode	Resolution	Pass	Speed	Direction	MAPS	Print Speed (ft2/hr)
4C+SP	Draft	600x600	2	Hi	Bi	100%	1184
	Production	600x600	4	Hi	Bi	80%	517
	Standard	600x1200	8	Hi	Bi	100%	323
	Quality	1200x1200	8	Hi	Bi	100%	183
6C+SP	Draft	600x600	4	Hi	Bi	100%	592
	Production	600x600	8	Hi	Bi	80%	258
	Standard	600x1200	16	Hi	Bi	100%	161
	Quality	1200x1200	16	Hi	Bi	100%	86

LUS-120

	Mode	**Resolution**	**Pass**	**Speed**	**Direction**	**MAPS**	**Print Speed (ft2/hr)**
4C+SP	Draft	600x600	2	Hi	Bi	100%	1076
	Production	600x600	4	Hi	Bi	80%	441
	Standard	600x1200	8	Hi	Bi	100%	280
	Quality	1200x1200	8	Hi	Bi	100%	161
6C+SP	Draft	600x600	4	Hi	Bi	100%	549
	Production	600x600	8	Hi	Bi	80%	226
	Standard	600x1200	16	Hi	Bi	100%	140
	Quality	1200x1200	16	Hi	Bi	100%	75

Print Mode Support Table

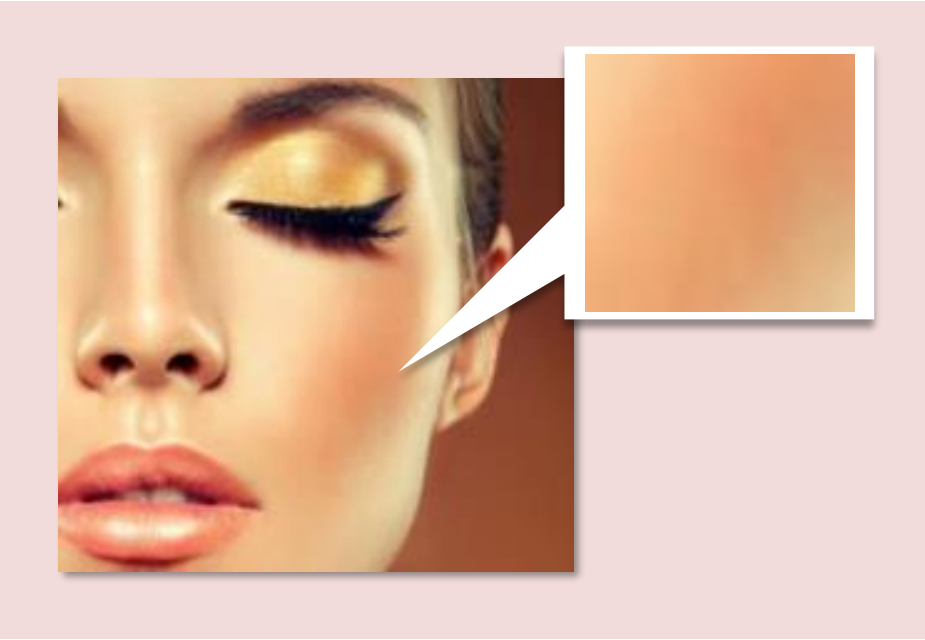
Ink	Ink set	Printing conditions	Draft	Production	Standard	Quality
LH-100 LUS120 LUS150 LUS211※1	4c	Color Single Layer	○	○	○	○
	4c+4SP	Color Single Layer	○	○	○	○
		Color → White	○	○	○	○
		White → Color	○	○	○	○
		Clear (matt)	×	×	○	○
		Clear (Gloss)	×	×	○	○
		Color → Clear (matt)	×	×	○	○
		Color → Clear (Gloss)	×	×	○	○
		Primer → Color	○	○	○	○
	6c+2SP	Color Single Layer	○	○	○	○
		Color → White	○	○	○	○
		White → Color	○	○	○	○

Smooth Gradients

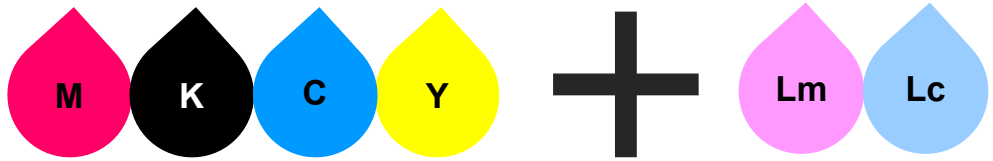
High-quality printing with 6-color ink set

6 colors available

JFX600 Series supports LcLm configurations. The wide variety of ink variations allows for higher definition and expressiveness compared to four-color, enabling higher quality reproduction than ever before.

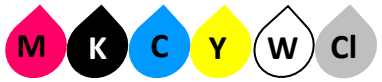


6Color Configurations



Supports 6 colors: CMYK + Lc (light cyan) + Lm (light magenta).
It effectively suppresses the light color graininess and tonal skips that are common in CMYK four-color printing, enabling high quality prints that approach photographic quality.

LED-UV Ink Types

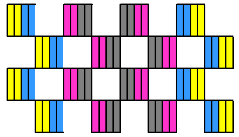
	Color Set	Performance	Applications
LH-100		• Hard surface and scratch-resistant • High solvent resistance • Builds resistant textures	・Indoor Display Panels ・Small Decorations ・Name Plates
LUS-120		・Flexible surface, bendable ・Hard to curl after printing ・Many applicable media (Can be printed on a lot of media)	・Signage Applications ・Print on soft materials ・Printing on materials to be post-processed (cutting, heat treatment)
LUS-150		・Flexible surface, bendable ・Hard to curl after printing ・Many applicable media (Can be printed on a lot of media)	・Signage Applications ・Print on soft materials ・Printing on materials to be post-processed (cutting, heat treatment)
LUS-211		・Flexible surface, bendable ・Hard to curl after printing ・Many applicable media (Can be printed on a lot of media)	・Signage Applications ・Print on soft materials ・Printing on materials to be post-processed (cutting, heat treatment)

※This information is subject to change without notice due to technical improvements, etc.
※LUS-211 ink is available in some regions.
※PR-200 cannot be used with LUS-211 ink.

LED-UV INK

Select an ink set from 4 types of inks to suit your purpose

In addition to the basic 4 colors (C, M, Y, K) and 6 colors (Lc, Lm), there are white for printing on transparent materials and wood boards with vivid colors, clear for special printing such as glossy finish, and primer to enhance adhesion between ink and material.

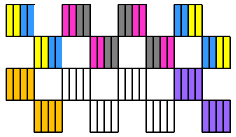


【4cx4c】

M K C Y M K C Y

Ink set for high-volume production
Color-only configuration offers unparalleled print speed.

Ink type ： LH-100 LUS-120 LUS-150 LUS-211

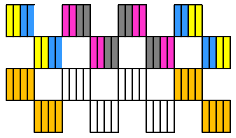


【4C+Cl+Pr+W】

M K C Y Cl Pr W W

Adding primer ink improves adhesion between ink and material.

Ink type ： LH-100 LUS-120 LUS-150

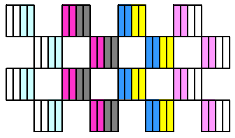


【4C+Cl+W】

M K C Y Cl Cl W W

Adding clear ink, it is possible to achieve a glossy finish on the printed surface and a three-dimensional finish with multiple overprints.

Ink type ： LUS-120 LUS-150 LUS-211

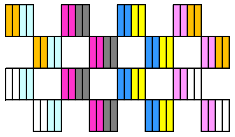


【6C+W】

M K C Y Lm Lc W W

The combination of light colors allows for image quality printing without graininess.

Ink type ： LH-100 LUS-120 LUS-150



【6C+W+Cl】

M K C Y Lm Lc W Cl

The combination of light colors and clear ink can add gloss to the image quality without graininess.

Ink type ： LUS-120 LUS-150

※LUS-211 ink is available in some regions.

GREENGUARD

GREENGUARD / GREENGUARD GOLD Certified inks

Four types of inks (LH-100 / LUS-120 / LUS-150 / LUS-211) are certified for use with JFX600 Series.
They can be used safely for indoor decorative use.

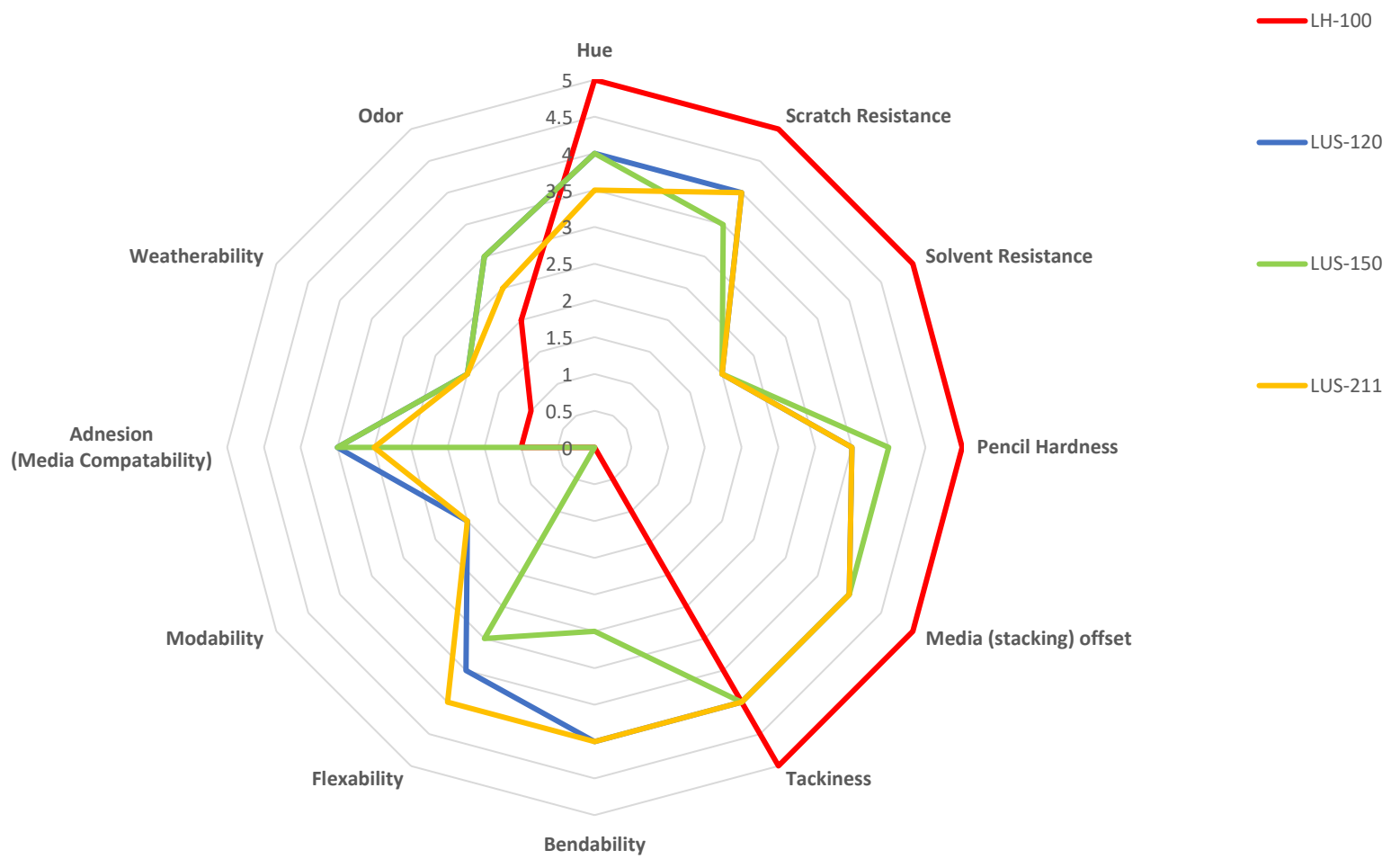
- **What is GREENGUARD?** It is a third-party certification for indoor air quality (IAQ) initiated by the GREENGUARD Environmental Institute (GEI) in 2001. GREENGUARD is certified according to the world's most stringent standards for emission measurement testing of volatile organic compounds (VOCs).

- GREENGUARD certified products are distinguished from others as more environmentally friendly products with lower chemical emissions in the indoor space. In addition to GREENGUARD certification, Mimaki Engineering's UV inks are GREENGUARD GOLD certified, a more stringent standard.





Ink Performance - Characteristics



Ink Performance - Flexibility/Solvent resistance

		LH-100		LUS-120		LUS-150		LUS-211※5
		Color	+PR-200	Color	+PR-200	Color	+PR-200	Color
Abrasion Resistance※1	Pencil hardness※2	5H	2H	2H～H	HB～B	3H～H	HB～B	2H~H
Flexibility	Stretch rate	100% (not stretching)		170% (1.7 times stretch)		150% (1.5 times stretch)		200% (2 times stretch)
Solvent abrasion resistance※3 (Rubbing Test)	Water	○		○		○		○
	Ethanol	○		△		△		△
	IPA(100%)	○		×		○		×
	Xylene(100%)	○		×		○		×
	[Valuation basis] ○: Doesn't come off. / △: Peels off at low solution concentrations / ×: Peels right off.							
Solvent immersion resistance※4 (Immersion performance)	Water	×	△	○		○		○
	Hot water (60℃)	×	×	△		△		△
	Ethanol (100%)	○	×	××		××		××
	[Valuation basis] ○: Doesn't come off / △: Peel off a little / ×: Peels off, but takes time. ×× : Peels off immediately after immersion（3 minutes after immersion in ethanol or xylene）							

※1 Abrasion resistance performance tends to depend on the hardness of the media surface.
※2 The pencil hardness value can be used as an indicator of whether the film will peel off when the edge of the printed material is scraped with a fingernail. Since the hardness of a fingernail is about H, it is effective to select inks with a hardness of H or higher. However, this does not apply to materials with weak adhesion.
※3 Evaluation method: Overall score based on primary, secondary, and tertiary color test results
※4 When printing on substrates with low adhesion to UV inks, water and solvents penetrate the printed edges, causing them to peel easily.
※5 PR-200 cannot be used with LUS-211 ink.

Ink Performance - Adhesion

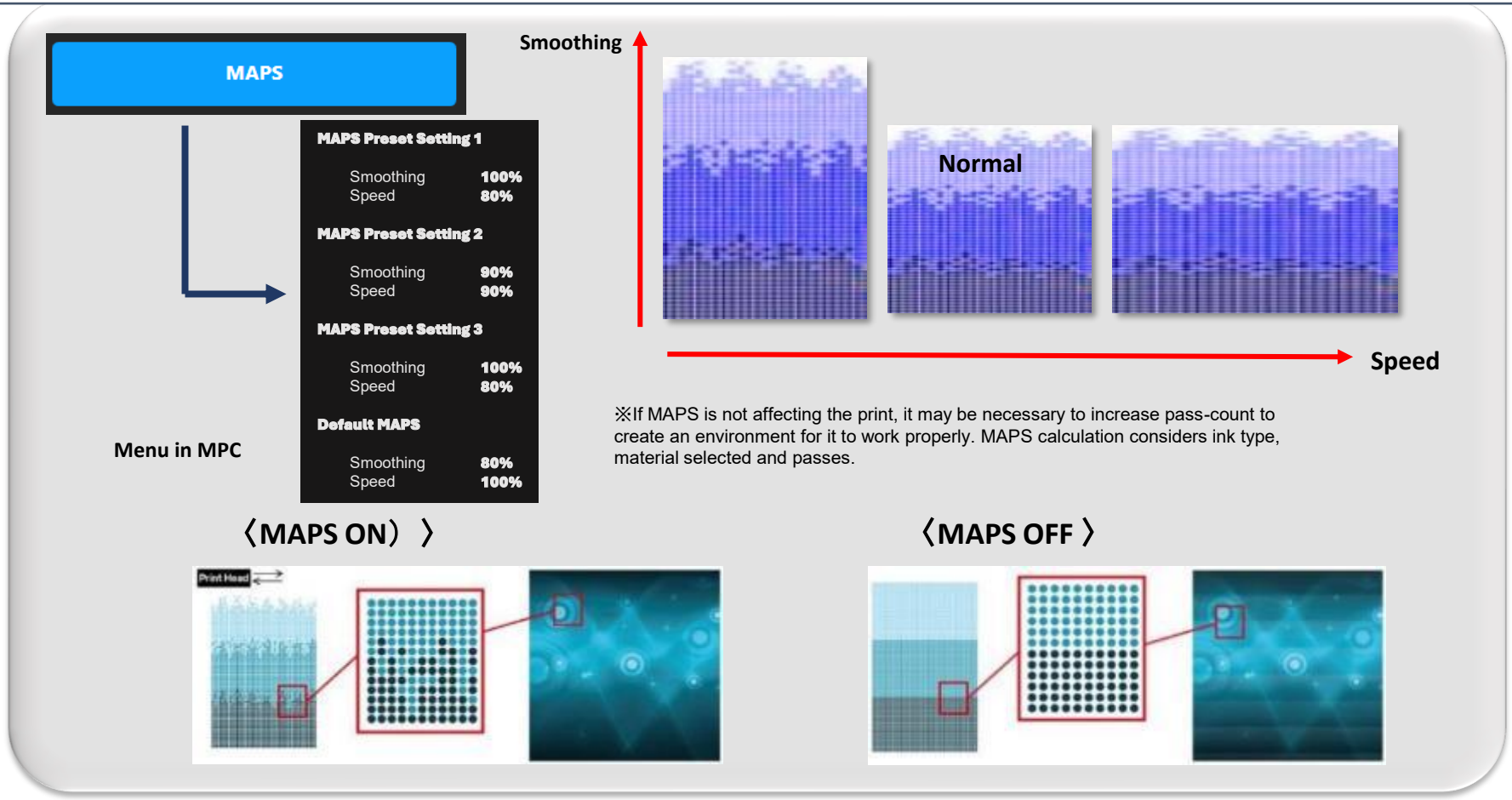
Materials	Name	LH-100		LUS-120		LUS-150		LUS-211
		Color	PR-200	Color	PR-200	Color	PR-200	Color
Resins	Polycarbonate	○	Adhere by color only.※1	○	Adhere by color only.※1	△～○	○	○
	Polystyrene	○		○		○	Adhere by color only.※1	○
	ABS	○		○		○		○
	Adhesively treated PET HK31WF	○		○		○		○
	Adhesively treated PET U292W	×	○	○		○		○
	Acrylic	×	○	×	○	△	○	△
	Glass epoxy	×	○	×	○	△	○	×
	6-nylon	×	○	×	○	×	○	×
	PP/PE	×	×	×	×	×	×	×
	FOREX	○	○	○	○	○	○	○
Inorganic	Glass	×	○	×	○	×	○	×
Metal	SUS	×	○	×	○	×	○	×
	Aluminum	×	○	×	○	×	○	×
	Copper	×	○	×	○	×	○	×
	Brass	×	○	×	○	×	○	×
Surface Finishing	Nickel	×	○	×	○	×	○	×
Aluminum Composite	DIBOND	○	○	○	○	○	○	○
Coated paper	KAPA	○	○	○	○	○	○	○

※1 Primer is not required. When bonding with color only, the adhesive strength may be reduced if a primer is used together.
※ The above adhesion test is an evaluation based on our standards and is not guaranteed. Different manufacturers and types of substrates do not necessarily produce the same results with the same type of substrate. It is always recommended to test the product beforehand.
※ PR-200 cannot be used with LUS-211 ink.

Image Control Technology

Optional MAPS adjustment

Optional MAPS adjustment function to reduce unevenness and banding is available on the MPC.
Three different settings can be saved and used depending on the media
※This function may reduce printing speed. Depending on the media and image data, some characteristics may not be utilized. If it does not work perfectly, take measures such as increasing the number of passes.



※ MAPS automatically selects the optimal gradation pattern for printing based on printing conditions such as media type, ink type, and resolution.

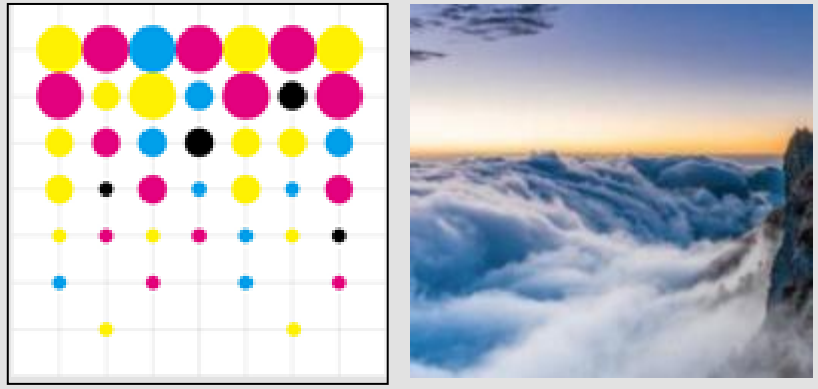
Image Control Technology

Waveform Control

Ink droplets are ejected spherically and in a straight line, which improves the landing performance and reduces overlap between dots. As a result, sharp print quality with less graininess can be obtained.

〈 When printed on a true sphere 〉

〈Discharged in a nearly true spherical state〉



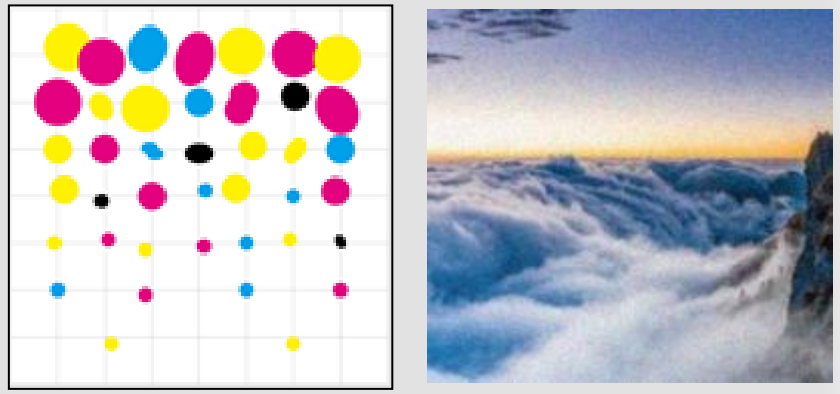
High-precision printing is possible

↓

Sharp finish with less graininess

〈 When printed on non-true sphere 〉

〈Non-spherical discharge〉



Gaps and overlaps occur between dots.

↓

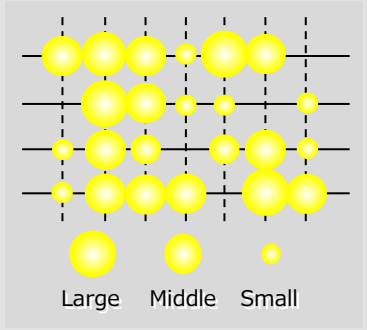
Rough image quality and blurred edges

Image Control Technology

Variable Dot

By dividing the ink dots into three sizes (small, medium, and large), high quality prints with reduced graininess are achieved.

〈 Variable Dot Image 〉



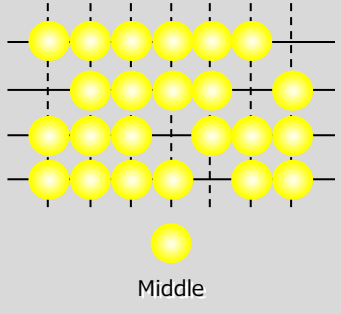


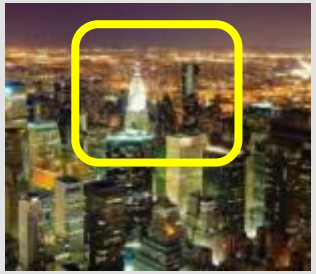
〈 Variable dot 〉



The combination, including a minimum of 7pl dots, produces smooth color printing with little graininess.

〈 Fixed Dot Image 〉





〈 Fixed Dot Image 〉



Image Control Technology

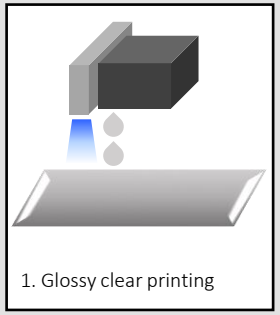
MCC(Mimaki Clear Control)

Advanced UV-LED lamps control the curing of clear ink. Minimizes dust adhesion and air bubbles to achieve beautiful glossy clear printing. Glossy clear printing is possible in a single process, allowing for sharp edges.

〈With MCC〉



〈 Printing process for glossy clear 〉

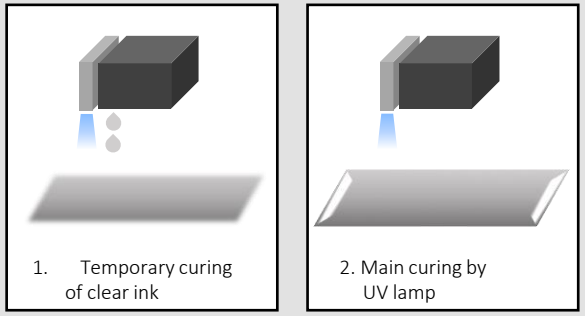


Glossy clear printing is possible in a single process,

〈Without MCC〉



〈 Printing process for glossy clear 〉



Glossy clear printing required two processes.

※The photo shows LH-100 clear.
※Simultaneous printing of three layers is not possible.
※ Low concentration of clear ink may cause poor curing.

Image Control Technology

Recommended Clear Density

Depending on image quality and print speed, better results may be obtained with clear ink using the recommended settings below.

LUS-120	Recommended Printing Condition				Clear ink density	
	Resolution	Pass	Direction	High-speed	Gloss	Matt
4C+CLPRWW	600x1200 VD	8	Bi	High-speed	100%	100%
	1200x1200 VD	8	Bi	High-speed	75%	100%
4C+CLCLWW	600x1200 VD	8	Bi	High-speed	70%	70%
	1200x1200 VD	8	Bi	High-speed	70%	50%
6C+WCL	600x1200 VD	8	Bi	High-speed	70%	70%
	1200x1200 VD	8	Bi	High-speed	70%	70%
LUS-150	**Recommended Printing Condition**				**Clear ink density**	
	Resolution	Pass	Direction	High-speed	Gloss	Matt
4C+CLPRWW	600x1200 VD	8	Bi	High-speed	100%	100%
	1200x1200 VD	8	Bi	High-speed	85%	100%
4C+CLCLWW	600x1200 VD	8	Bi	High-speed	70%	70%
	1200x1200 VD	8	Bi	High-speed	70%	50%
6C+WCL	600x1200 VD	8	Bi	High-speed	70%	70%
	1200x1200 VD	8	Bi	High-speed	70%	50%
LH-100	**Recommended Printing Condition**				**Clear ink density**	
	Resolution	Pass	Direction	High-speed	Gloss	Matt
4C+CLPRWW	600x1200 VD	8	Bi	High-speed	100%	100%
	1200x1200 VD	8	Bi	High-speed	85%	100%

※ When the recommended density checkbox in RL7 is checked, the density is automatically set to the recommended density.
※ Even if the clear density is the recommended value, high density may cause warping of printed materials depending on the media material.
※Please test and confirm before use.
※ Low concentration of clear ink may cause poor curing.

Inkjet Primer　PR200

★ nkjet primer is Mimaki's patented technology.
Patent No. Japan：5817059　USA：US9,132,685 B2

Inkjet primer for improved adhesion 「PR-200」

JFX600 Series have the option of jettable primer. When adhesion to materials is poor with color ink alone, the use of inkjet primer can improve adhesion.
PR-200 can improve adhesion not only to resin-based materials such as acrylics, but also to glass, metal, and materials with surface treatment.



Jetted primer reduces waste because the primer is applied directly where it is needed, not a full coverage like a wipe-on.

＜Difference in adhesion with and without PR-200 ※1＞

〈Acrylic〉



Without PR-200
（white + color）



With PR-200
（PR-200 + white + color）

〈Aluminum〉



Without PR-200
（white + color）



With PR-200
（PR-200 + white + color）

※1 Comparison of adhesion by the cross-cut test method.
In the cross-cut test method, a cutter is used to make a grid of cuts on the printed surface and see if it peels off.
※See "Adhesion Comparison" for a list of adhesion characteristics by material with and without PR-200.
※When printing PR-200, there are recommended densities for each resolution.

2.5D Texture Maker

High Speed 2.5D Texture Maker

JFX600-2513 supports 2.5D printing, which is significantly faster than JFX200EX.
2.5D print data can be easily created without special software, just using ordinary illustrator or Photoshop and RasterLink7 (standard accessory).

RasterLink7 automatically generates data to stack based on the data read.
What used to require the purchase of expensive software sold separately or the manual creation of data over and over again can now be done easily.
This is a useful feature made possible by Mimaki, a developer and seller of 3D printers.
※ There are two modes: standard mode for layering clear ink and high-speed mode for layering CMYK black.

	Time for 2.5D printing of 0.5mm thickness on 2500mmx1300mm size media	
	JFX200EX	**JFX600**
Standard mode	Apporox.16h 30min	**Apporox.2h 30min** **Apporox.6.6 times faster！**
High speed mode	Apporox.2h 30min	**Apporox.1h** **Apporox.2.5 times faster！**



Innovative Systems, Proven Results

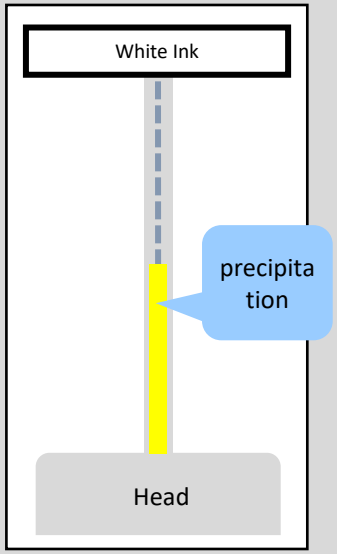
※ This information is subject to change without notice due to technical improvements, etc.
※ Printing speed may be different depending on ink type/curing conditions, etc.

Stability Safety Features

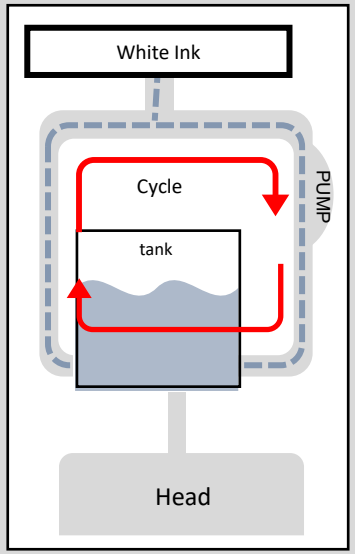
MCT(Mimaki Circulation Technology)

JFX600-2513 is equipped with an ink tank and a circulation mechanism in the ink path.
Regular circulation of white ink prevents nozzle problems caused by ink pigment precipitation and ensures stable printing.

〈Without MCT〉



〈With MCT〉



＜MCT＞
Efficiently suppresses pigment deposition and ensures stable output from machine startup.
MCT also help reduce ink waste and promote environmentally and economically superior operations.

※MCT＝Mimaki Circulation Technology、 MCT works only with white ink.

Stability Safety Features

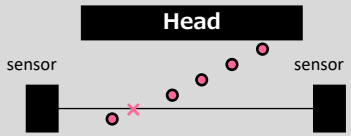
Automatic maintenance– NCU &NRS

NCU (Nozzle Check Unit) automatically detects nozzle condition.
When a missing nozzle is detected, the nozzle is automatically cleaned. If cleaning does not solve the problem, the defective nozzle is automatically replaced with another nozzle, allowing work to continue without waiting for service repair.

NCU

The sensor automatically detects nozzle status.
When a missing nozzle is detected,
automatic cleaning is performed to
eliminate the missing nozzle.

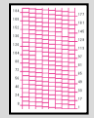
If light penetrates, it is determined that no ink has been ejected.



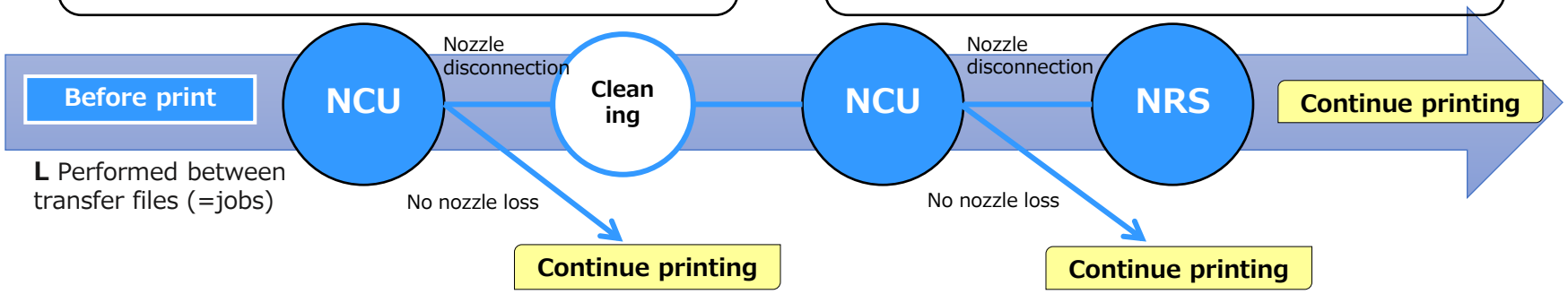
NRS

Nozzle defects that cannot be resolved by cleaning are automatically replaced with another nozzle, allowing work to continue without waiting for CE repair.

Nozzles that do not eject ink are replaced with another nozzle that is automatically set based on information from the NCU.



← Replace with another nozzle.



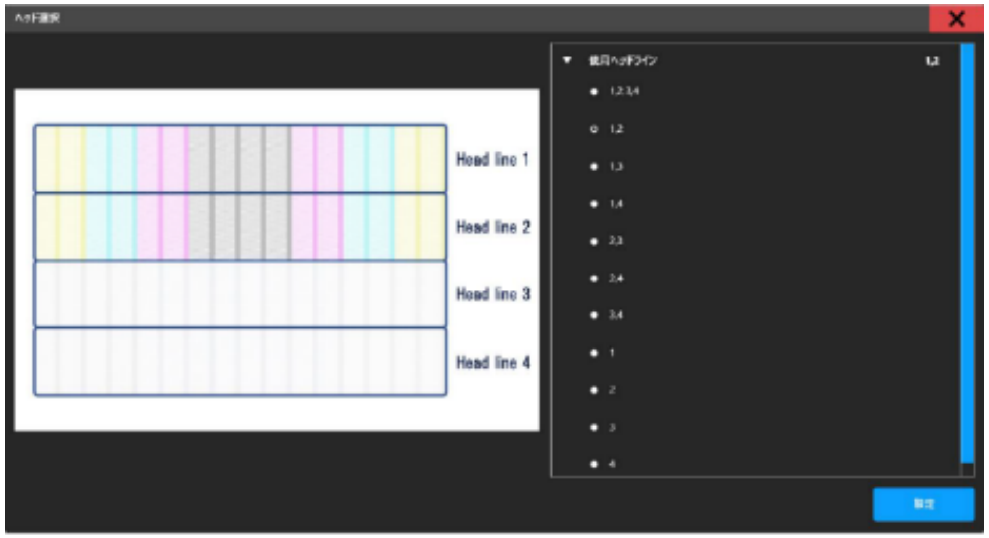
※To use the nozzle check, automatic cleaning, and automatic nozzle recovery functions, settings must be made on the printer itself.
※Nozzle check timing can be set in terms of output frequency and time units.
※Nozzle recovery may not work in some modes.

Stability Safety Features

Head Selection

If a nozzle cannot be recovered by nozzle recovery or if a nozzle is missing, printing is performed without using that headline. The limited number of head rows used will reduce printing speed, but production can continue until repairs are completed.

Head selection on MPC
Intuitive head selection and easy operation



- For 4C and 6C+WW, no matter which pattern of heads is selected, they can print without problems.
- 4Only in the case of 4C+WWPrCl(CLCL), some prints may not be printed depending on the head selection pattern, please check the table on the right.

4C+WW/PrCl or CLCL　　Print ○ ×

No	head rows used				Printable Jobs (Both single and multi)				
	1	2	3	4	4C	W	CL Mat	CL Gloss	Pr
1	★	★	★	★	○	○	○	○	○
2	★		★		○	○	○	×	○
3	★			★	○	○	○	×	○
4		★	★		○	○	○	×	○
5		★		★	○	○	○	×	○
6	★	★			○	×	×	×	×
7			★	★	×	○	○	×	○
8	★				○	×	×	×	×
9		★			○	×	×	×	×
10			★		×	○	○	×	○
11				★	×	○	○	×	○

※Preliminary evaluation is recommended because initial ink film characteristics may not be exhibited depending on inkset, printing conditions
※Cannot select three headlines.
※The head to be used can be selected for each row. Individual head selection is not possible.
※This information is subject to change without notice due to technical improvements, etc.

Stability Safety Features

Automatic thickness measurement function

The gap pin at the end of the carriage can be used to automatically measure the thickness of the media.(For substrates with a fixed thickness, media thickness can be entered in 0.1 mm increments.)

Automatic Media Thickness Measurement Gap pins



Manual media thickness input

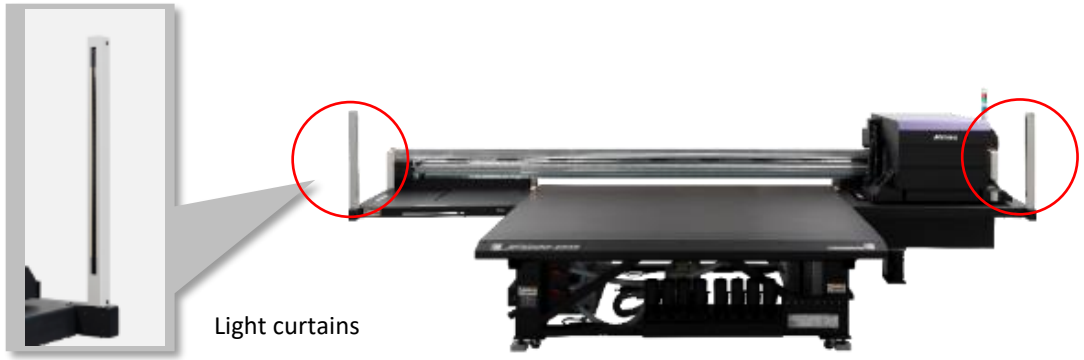


Head Guards and Safety

To prevent accidents, accurate media jam sensors are provided on both sides of the carriage. For example, if the media thickness is entered incorrectly or the media is distorted, the carriage stops to protect the head surface. Light curtains are provided on both sides of the main unit to increase safety against heads moving at high speed.

Jam sensor





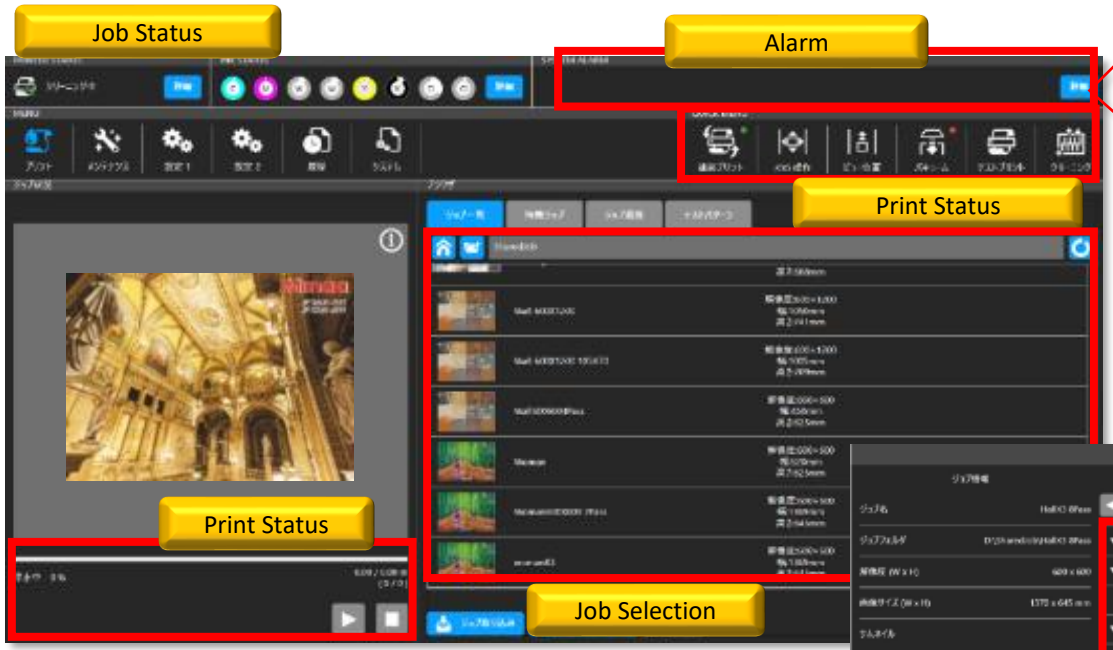
Light curtains

※ This information is subject to change without notice due to technical improvements, etc.

MPC

MPC

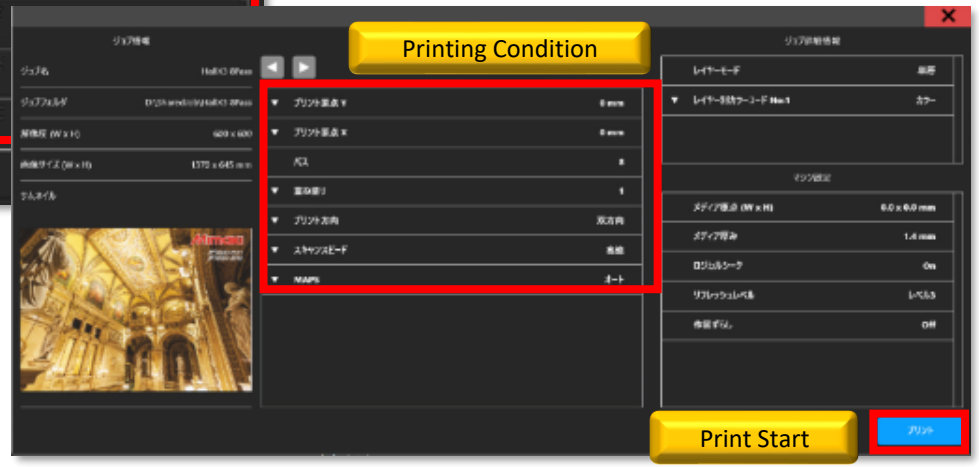
Easy to use, intuitive MPC performs origin setting, height adjustment, and maintenance. It's designed simply for efficient operation with a short learning curve.



Job Management Page



Displays alarms and their resolution



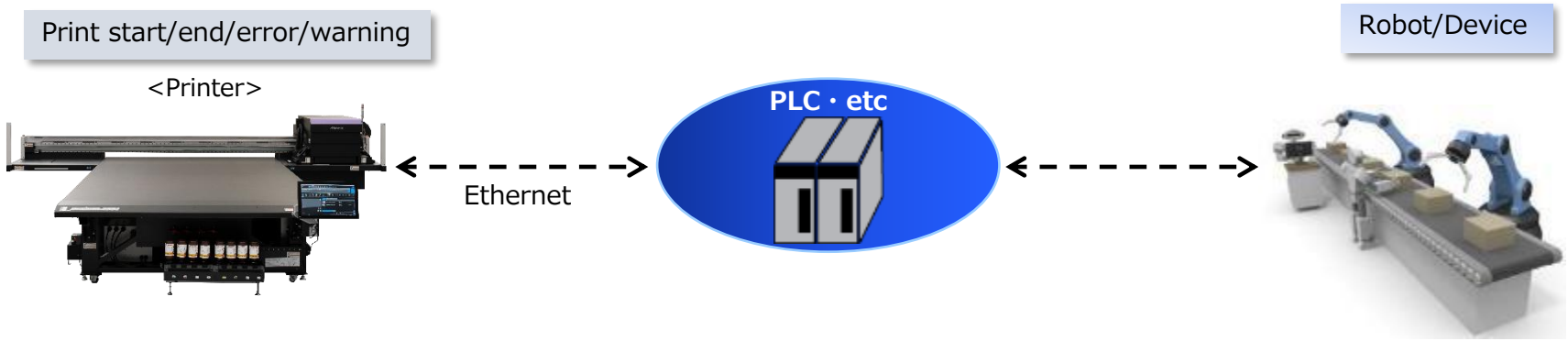
Print Condition Management Page

※ Displayed screens current as of 2024/07

Automation Capable Usability

MDL command

MDL commands can be used externally to control the printer and manage jobs.







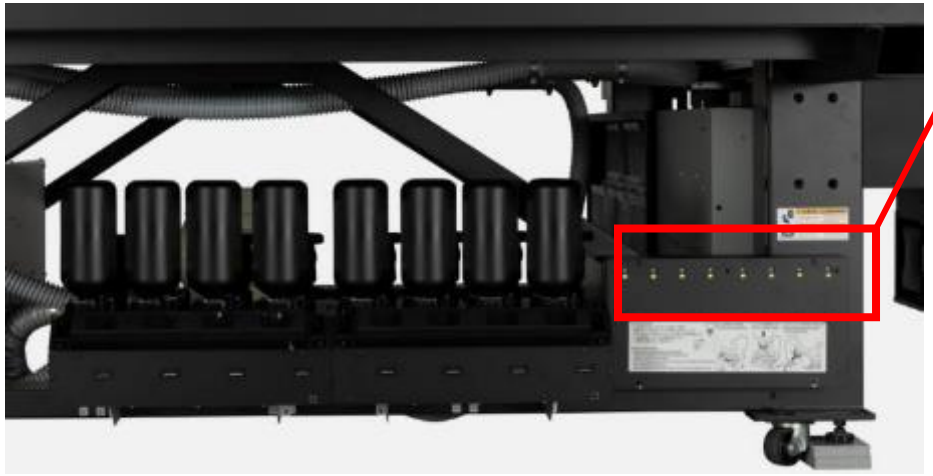


※When using MDL commands, please refer to the manual for MDL commands included in the SDK.
※May not be able to guarantee machine failure due to the use of MDL commands.

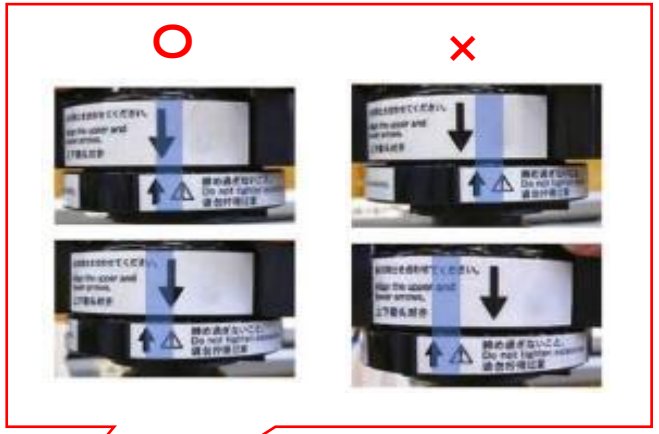
Bulk Ink System

MBIS

1L System Standard



【 Notification of ink supply status and out of ink 】





【 Ink Bottles 】

【 Cap 】





【 Put on the cap 】



【 Cap tightening jig 】



【 Tighten until the arrows are aligned. 】



【 Match the pins and fit into the cartridge. 】

※ Bottles may deform during use, but there are no functional or ink problems.

3L Bulk Ink Option

3L Ink Supply Option

The Mimaki 3L Bulk Ink System (MBIS) allows for longer runs between ink fill ups. It also features Uninterrupted Ink Supply System (UISS) that allows the operator to replenish the ink without interrupting the current print. Ink is managed by a conventional IC chip system, and the remaining amount is accurately detected by a load cell system (weight sensor). In addition, the automatic agitation function eliminates the need for manual agitation of white ink as in the past. The system fits neatly under the table.

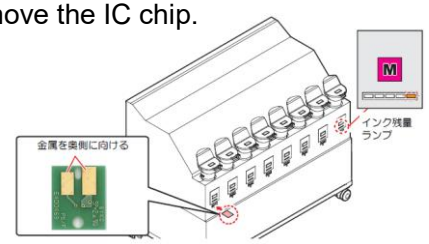
3L Ink Supply Option



How to use the 3L ink supply option

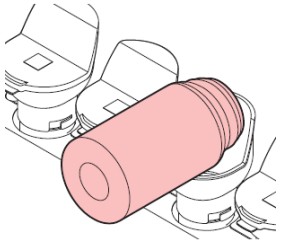
① IC chip reading

Insert the IC chip provided in the ink bottle and read the information. After reading, remove the IC chip.

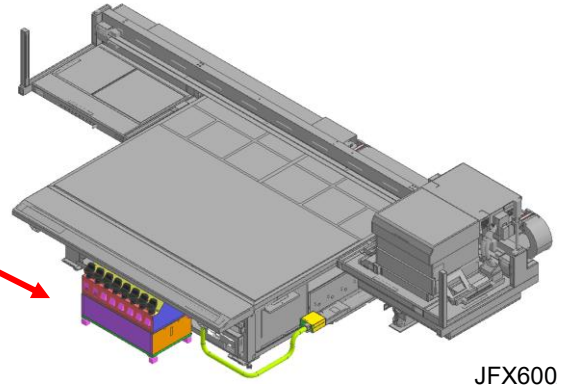


② Replenish

Fill a 1L ink bottle from the inlet on the front of the 3L tank and fill it with a spigot.



The 3L System takes the place and space of the 1L system. It does not take up additional floor space.



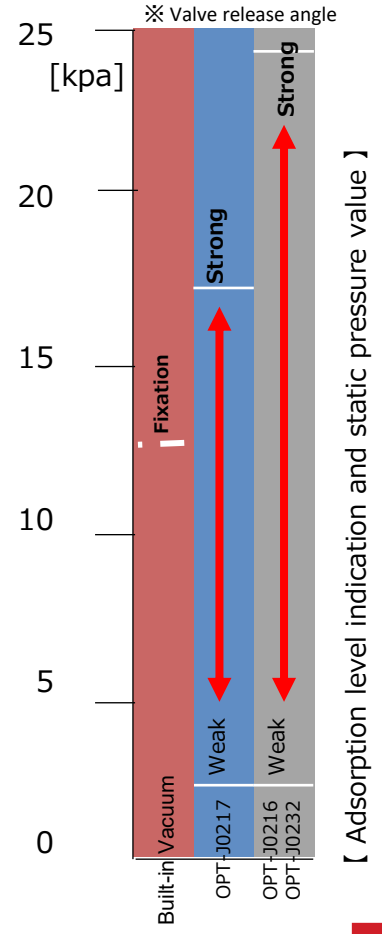
JFX600 Series

※ The existing ink supply unit (MBIS) is replaced by the 3L System.

Vacuum Options

The suction area is divided into **two sections in the X direction in the JFX600-2513**, and **9 sections in the JFX600-2531,** so the effective vacuum area can be designated by opening and closing valves according to the size of the media. Vacuum efficiency on the substrate surface can be improved by closing the valve in the unused area or covering the suction holes with film or other material. Optional blower are available for media that cannot be vacuumed by the standard blower.

stock number	Name	Purpose and Utility	Specifications	Maximum Power
	Standard Vacuum			Apporox.13kpa
OPT-J0217	Vacuum Unit (1ϕ-200)	Can be used in the same power supply environment as the printer without the need for a three-phase power supply.	Single-phase・200-240V 30A1.9kw	Apporox.17kpa
OPT-J0216	Vacuum Unit (3ϕ-200)	This is the largest suction power among the optional blowers. Power supply specifications vary, so please choose according to the power supply conditions in your area.	Three-phases・200-240V 30A,3.4kw	Apporox.24kpa
OPT-J0232	Vacuum Unit (3ϕ-400)		Three-phases・380-480V 20A,3.4kw	Apporox.24kpa



System Configurations

RasterLink7 and MPC

RIP



Raster Link 7

RIP processing

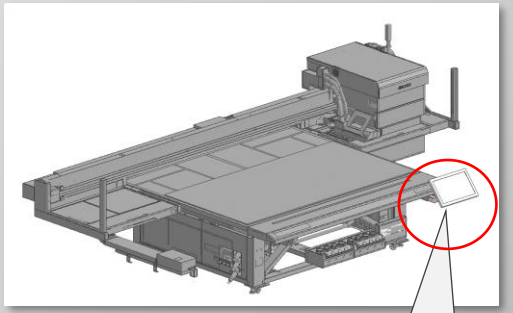
Resolution and number of passes
Color Matching
Board setting
Nesting,
ink amount, printer Status

〈RIP PC Spec〉
CPU：Intel® Core™ i5-4670K 3.4GHz
Memories：over 8GB
HDD：1TB以上（NTFS)
Network：Ethernet (10GBASE-T)
Windows 10® Pro (64bit)
Monitor：1920x1200以上

Ethernet

MPC（Built-in）





Printer Management
Job Management
Head Height Setting
Printing
leaning and maintenCance
Service mode





※ Built-in MPC touch panel controller

- JFX600-2513 uses MPC (operation software) built into the printer itself.
- Perform media thickness setup, maintenance, initial setup, and cleaning at MPC.
- From RasterLink7, JOB data is transferred in 4-color separation

RasterLink7

RasterLink7

Enhanced favorite settings and log popups. PDF data processing time is reduced by an average of 25% and the reproducibility of special effects (transparency effects) is improved. Also added an insert printing function.

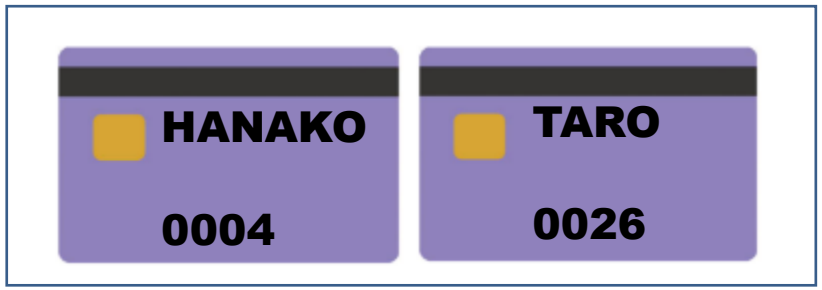
Updated Variable Print (v4+)

Raster Link 7

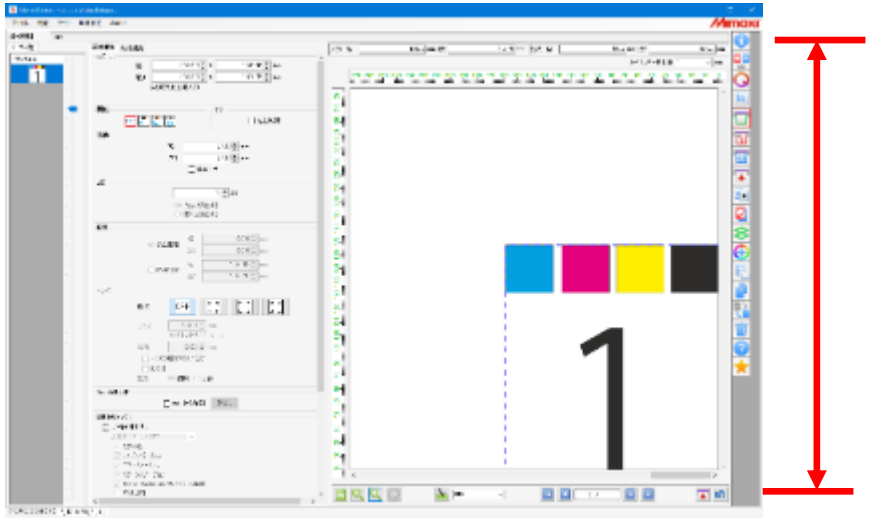
◆ The insert printing function automates the printing of numbered and variable data.

Template Data	name	number
	HANAKO	0004
	TARO	0026

Insert



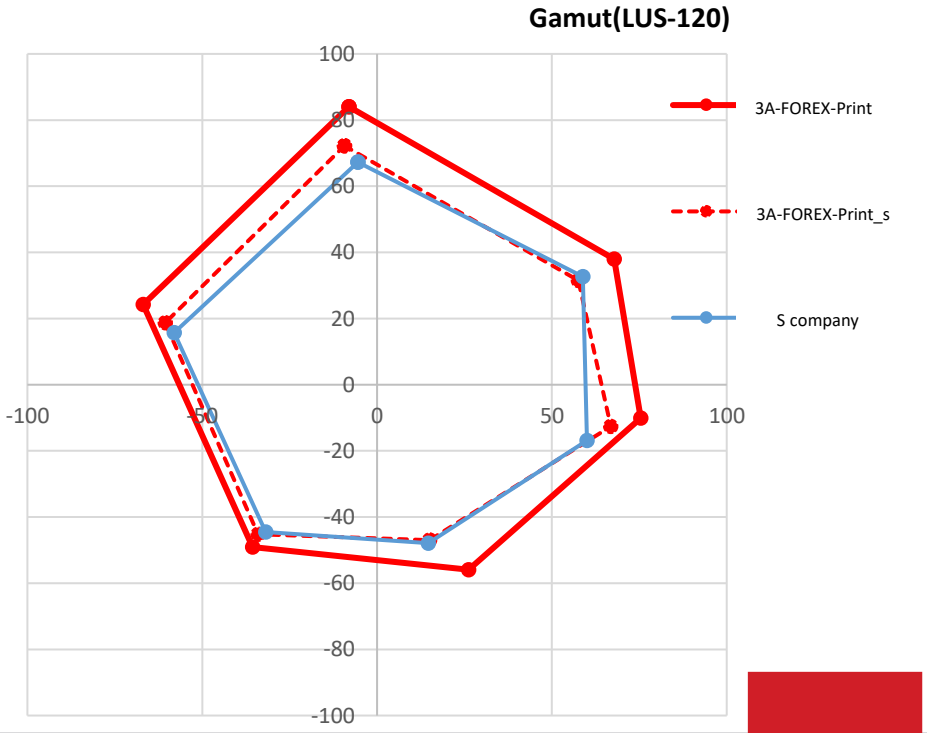
Easier navigation with at-a-glance layout (v4+)



The confirmation screen is wider and easier to use.

Ink Saving Profiles

No	Name Description.	LH-100/LUS-120/LUS-150/LUS-211		
		4 C	4C+SP	6C+SP
1	**3A-FOREX-Print** ◆ Standard profile for rigid PVC	○	○	○
2	**3A-FOREX-Print_s** ◆ Ink consumption reduction profile for rigid PVC ◆ Colors will be slightly lighter, Ink consumption will be reduced.	○	○	—
3	**Evonik PLEXIGLAS XT(ConW)** ◆ White → Color Standard profile for acrylic	—	○	○
4	**Evonik PLEXIGLAS XT(WonC)** ◆ Color → White Standard profile for acrylic	—	○	○



3A-FOREX-Print_s

【Summary】
With a 15% reduction in ink usage, there is minimal gamut loss, which is very comparable with high end competition.

Effectiveness
1) Cost reduction per sheet
2) Reduced banding
3) Improved printing accuracy of fine lines

※Please check the image quality by outputting before use.
※Profiles are available for each resolution: 600x600VD, 600x1200VD, 1200x1200VD.
※Specifications and values are subject to change. 2024/07

Ink saving profile selections

Ink saving

The Ink Save function is a RasterLink7 feature that reduces ink consumption while maintaining color balance. Ink consumption can be reduced with a simple operation while maintaining color balance.



Print mode : Normal
Ink consumption：2.199cc



Print mode：Level 1
Appox.-20%
Ink consumption：1.769cc



Print mode：Level 3
Appox.-35%
Ink consumption：1.439cc



Print mode：Level 2
Appox.-25%
Ink consumption：1.661cc



Print mode：Level 4
Appox.-40%
Ink consumption：1.316cc



Print mode：Level 5
Appox.-50%
Ink consumption：1.120cc

Easy to use ink density selections when color matching isn't required. **Saves you money!**

※ JFX600 LUS-120 4c4sp 600x600 4Pass bi-directional Output in high-speed mode
※ Specifications and values are subject to change. 2024/07
※ These results are based on in-house evaluations and are not guaranteed. Please test the output and confirm the image quality before use.

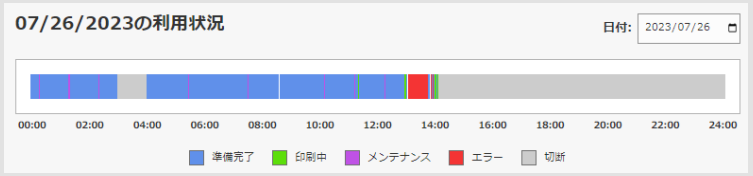
PICT Cloud-based printer status monitoring tool

Mimaki Cloud Technology PICT

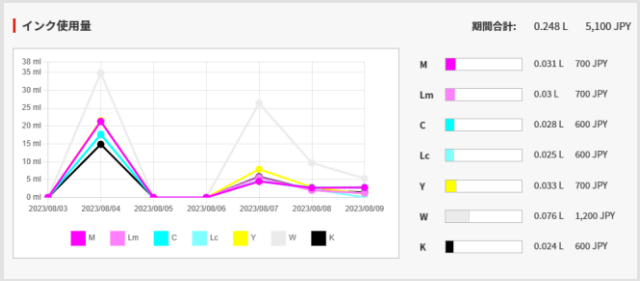
Remotely monitory printer operating status, ink usage and more!

Create historical statistic reports that help give the printer history and even help predict ink needs.

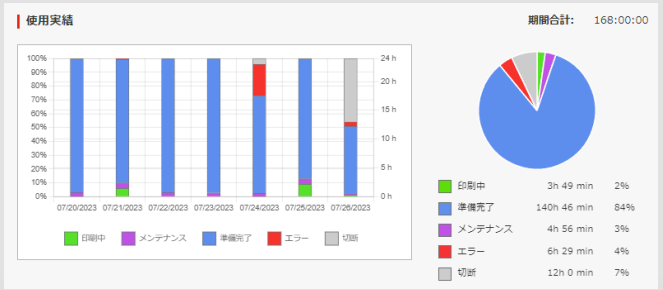
Timeline of performance within days



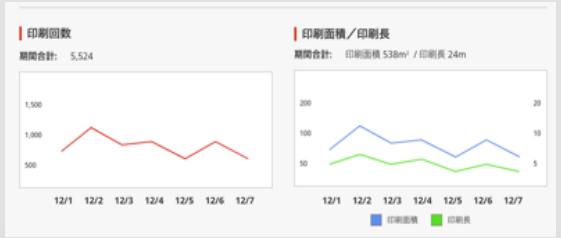
Ink usage per day, per period



Operation Status Graph
Displays the accumulated time and percentage of printer status.



Number of sheets printed per day and per period/printed area/length





JFX600 × Mimaki Cloud Technology PICT

Progress can be monitored during mass production

Can support planned operations

※Each specification is subject to change. 2024/07

Ink drop accuracy in Y direction

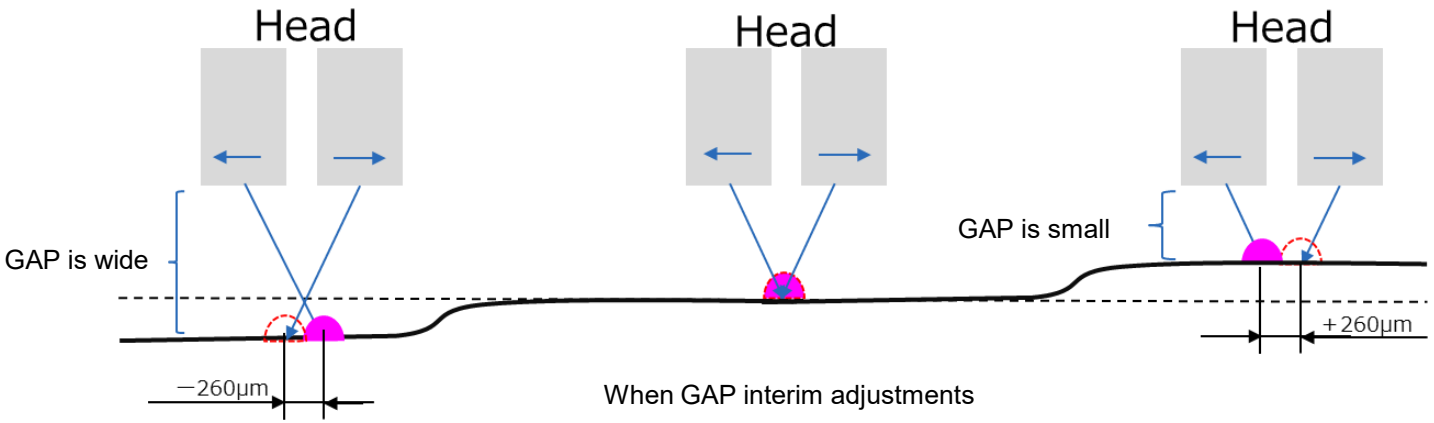
Ink drop accuracy in Y direction

Due to print conditions (speeds) and the image, JFX600 may have areas where thin lines or text appear doubled, but adjustments can be made to minimize blurring.

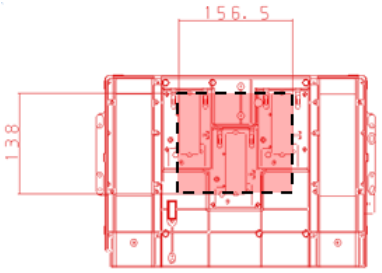
Main factors determining Y-impact accuracy
- Carriage orientation (flatness, Y-bar twist or deflection)
- Flatness of the printing table

To achieve higher speeds, the carriage size and Y-unit weight of the JFX600 are significantly larger than those of previous models.
Therefore, it is very difficult to maintain a constant distance (GAP) from the head nozzle surface to the printing surface.
The flatness of the table is adjusted to stay within ±0.42 mm, but there are areas where the gap fluctuates or deviates in some parts.
As a countermeasure, **the GAP intermediate adjustment** averages out the blurring of the printed surface.

The actual measured ink ejection volume in the Y direction may be blurred by ±260 µm.

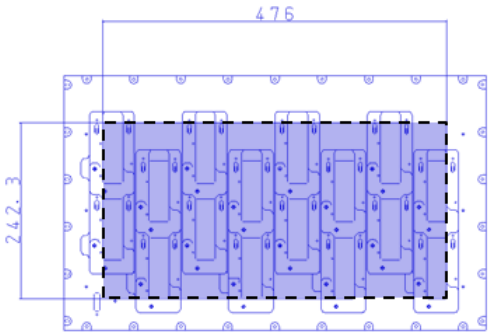


When GAP interim adjustments



JFX200EX

Carrige base



JFX600

Carrige base

LUS-150 and LUS-120

Difference in printing surface

LUS-150 is glossier than LUS-120, and the printed surface tends to be glossy, with banding slightly more noticeable. LUS-120 is less glossy than LUS-120 and the printed surface is matte. Please use LUS150 and LUS120 for different purposes.

LUS-150

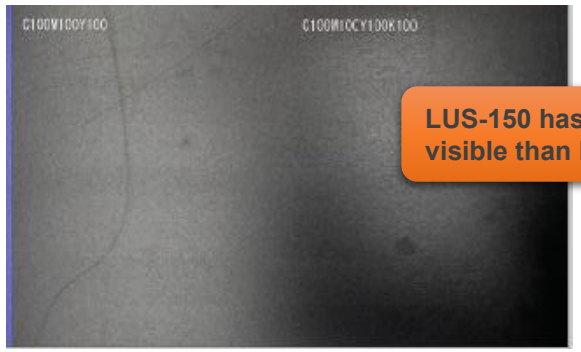
Solution：600x600 8P
Media：PVC (FOREX)

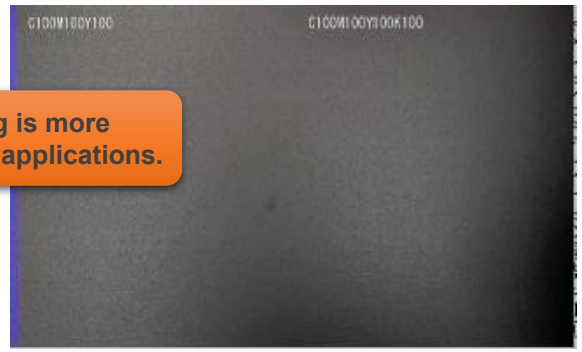


LUS-120

Solution：600x600 8P
Media：PVC (FOREX)







LUS-150 has a glossy sheen and banding is more visible than LUS-120. Test materials and applications.

※ Photo shows comparison with 6-color ink set

Applications

More possibilities made possible by speed and quality

From signage, packaging, fixtures, furniture, and building materials to industrial products, it withstands further mass production from the traditional market. It combines productivity and quality that is a class above.



Architectural signage and building materials/exterior walls and floor mats



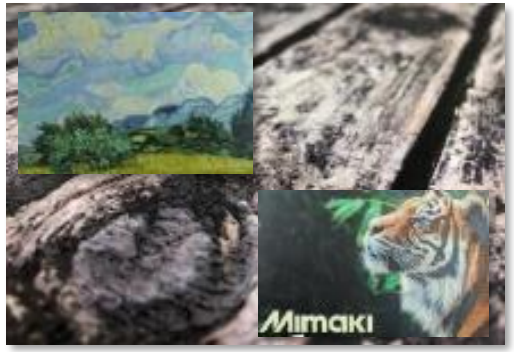
Fixtures, packaging



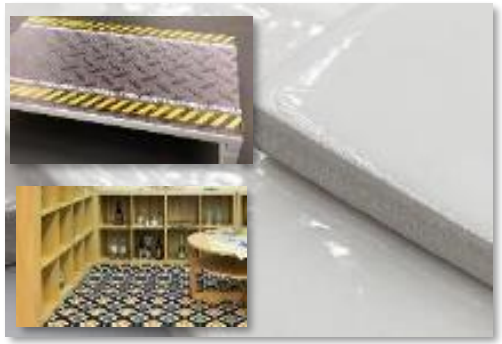
Wayfinding Signage



Value Added/Specialties/Textures



Reproduction/Digital Archive



Tile Interior materials



Store Displays



Industrial / Car parts

JFX500 / JFX600 Specs Comparison

	JFX500-2131	*JFX600-2513*	*JFX600-2531*
Size (body size)	W:161.4 in D:175.7 in H:58.7 in weight:1353kg	W:208.7 in D:112.2 in H:67 in weight：1200kg	W:212.5 in D:220.4 in H:66.9 in weight：1500kg
Dimensions	Machine W:90.6 in D:188.2 in H:47.2 in weight:3792 lb Y bar：W:45.3 in D: 196.9 in H:49.6 in weight:1296 lb	W:229.5 in D:90.6 in H:73.2 in weight: 4541 lb	Machine W:229.9 in D:90.6 in H:83.5 in weight:4674 lb Table：W:182.3 in D:90.9 in H:52.8 in weight:4374 lb
Resolution	300dpi,600dpi, 900dpi,1200 dpi	Y:/600/1,200dpi X:600/1,200dpi	
Ink set	≪LH-100/LUS-120/LUS-150/LUS-200≫ CMYK+WCLPR※1 /CMYK+W※2 ※1･･･LH-100/LUS-150/LUS-120 ※2･･･LUS-200	≪LH-100/LUS-120/LUS-150/LUS-211≫ CMYK / CKYKLcLm+WW or WCL/ CMYK+WW+CL※1)+PR※2) ※1･･･Only LUS150 used LH100_CL ※2･･･PR200	
Maximum print Size	82.7 x 122.0 in	98.4 x 51.2 in	98.4 x 122 in
Maximum media Weight	Less than (10.24 lb/ft²) 50kg/㎡		
Maximum media Thickness	1.97 in (50mm)	2.36 in (60mm)	
Vacuum division	4	2	9
Head Gap	1.5mm		
Print accuracy	Absolute accuracy：±0.3mm or Specified distance ±0.3% Reproducibility：±0.2mm or Specified distance ±0.1%		
Interface	USB 2.0	Ethernet 1000base-T	Ethernet 10GB-T
Compliant	VCCI class A、CE mark、CB report、 U.S. Safety Standards UL、RoHS directive	UL 775 ETL CE Marking(EMC Voltage Directive, Machinery Directive) RoHS / REACH / EAC	UL62368 CE marking（EMC directive、machine directive） RoHS、REACH、RCMマーク、KC Certification、UKCA mark
Power supply	single phase AC200～240V 50/60Hz 20A	single phase AC200-240±10% 50/60Hz±1Hz、24A x 3	
Nozzle Recovery	Yes		
NCU	Yes		
MAPS	MAPS2	MAPS 4	
DAS	No		
RIP	RasterLink6Plus	RasterLink7	

※ Specifications and names are subject to change without notice. ・2024/07

Innovative Systems, Proven Results

Mimaki®

JFX Series Features Comparison

	Feature	JFX500-2131	JFX200 EX Series	JFX600 Series
2.5 Dimensional	2.5D Texture Maker	-	✓	✓
Maximum production	4C(1lay)	6456 ft²/h (60㎡/h)	377 ft²/h (35㎡/h)	2153 ft²/h (200㎡/h)
Workability	Media thickness automatic measurement	✓	✓	✓
	Layout pin	✓	✓	✓
	USB 2.0	✓	✓	-
	Ethernet	-	✓	✓
	MDL	-	✓	✓
	Foot pedal (for blower)	-	✓	✓
	External I / F (for safety measures)	-	✓	✓
Stability	Media jam sensor	✓	✓	✓
	Light Curtain	-	-	✓
	NRS	✓	✓	✓
	NCU	-	✓	✓
Quality	PR-200	✓	✓	✓
	V3.2 Profile	✓	-	-
	V3.5 Profile	-	✓	✓
	MAPS	-	✓	✓
	MCT	✓	✓	✓
	MCC	-	✓	✓

※Speed is for LUS-150/LH-100 ink
※Contents are subject to change without notice. 2024/07

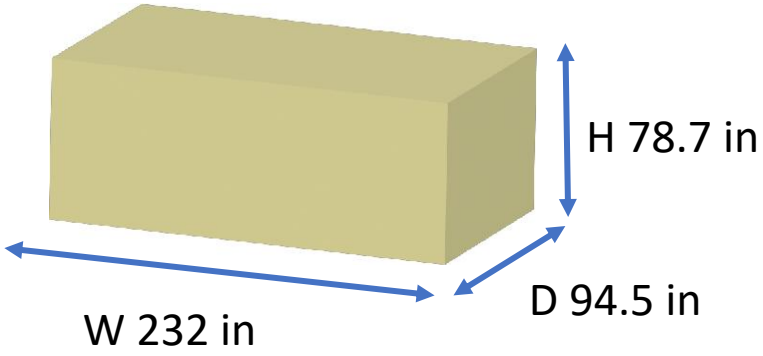
Packing Size JFX600-2513

	Machine	Width	Depth	High	Weight
Packing	JFX600-2513	232inch (5,900mm)	94.5inch (2,400mm)	78.7inch (2,000mm)	4850lbs (2,200kg)

JFX600 is delivered in one box

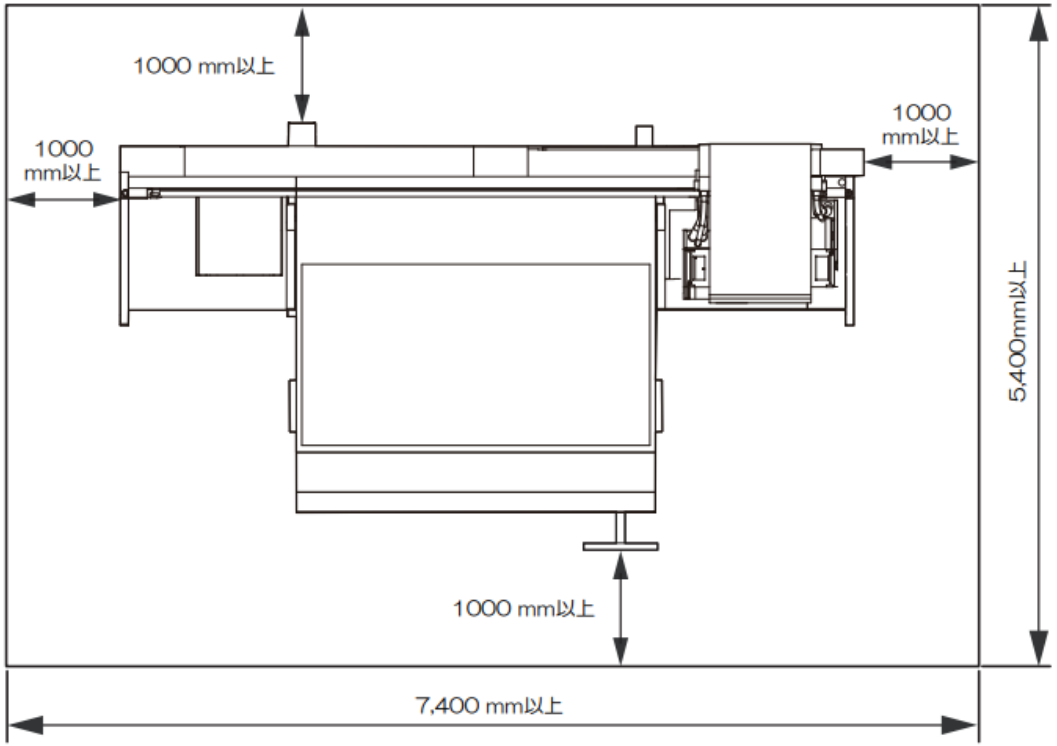
JFX600-2513





Recommended Installation Environments

Machine	Width	Depth	High	Weight
JFX600-2513	291.3 in (7,400㎜)	212.6 in(5,400㎜)	66.9 in (1,700mm)	2646 lb (1,200kg)



Installation environment
Usable temperature：20～30℃
Relative humidity：35～65%Rh
Guaranteed temperature：20～25℃
Temperature gradient :less than ±10℃/H
Dust ： Office Equivalent

■ Precautions for installation environment

1. Please refrain from using weak OA floors, etc.
2. Use in an air-conditioned environment. Ambient operating temperature: 20° C to 30° C
3. Do not use carpets, etc., as they are susceptible to static electricity and may affect image quality.
4. Ink odor is generated, please use in a well-ventilated place.
5. To reduce deformation of the floor surface, a foot base should be laid down.
6. Do not install the printer in direct sunlight, as this may cause the UV ink to harden and interfere with printing.

※ Separate space for RIP PC is required.

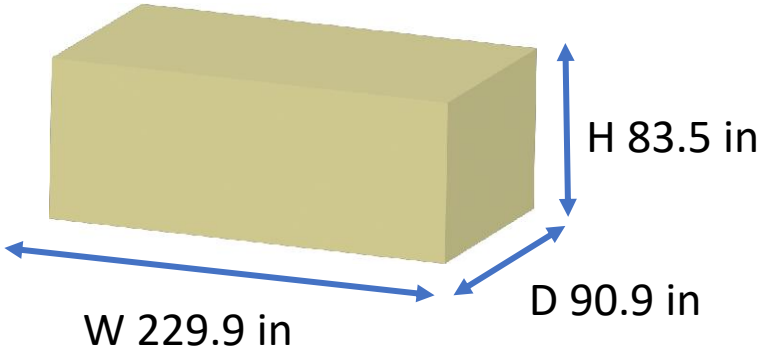
Packing Size JFX600-2531

	Machine	Width	Depth	High	Weight
Packing	JFX600-2531	229.9 in (5,840㎜)	90.9 in (2,310㎜)	83.5 in (2,120㎜)	4674 lb (2,120kg)
	JFX600-2531 Table	182.3 in (4,630㎜)	90.9 in (2,310㎜)	52.8 in (1,340㎜)	4374 lb (1,984kg)

Shipping arrangement for JFX600-2531 is divided into the main unit on the front and the table on the back, for a total of one freight container size.

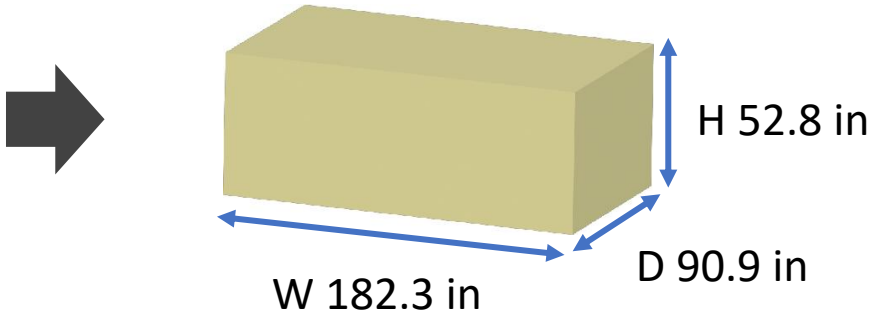
JFX600-2531





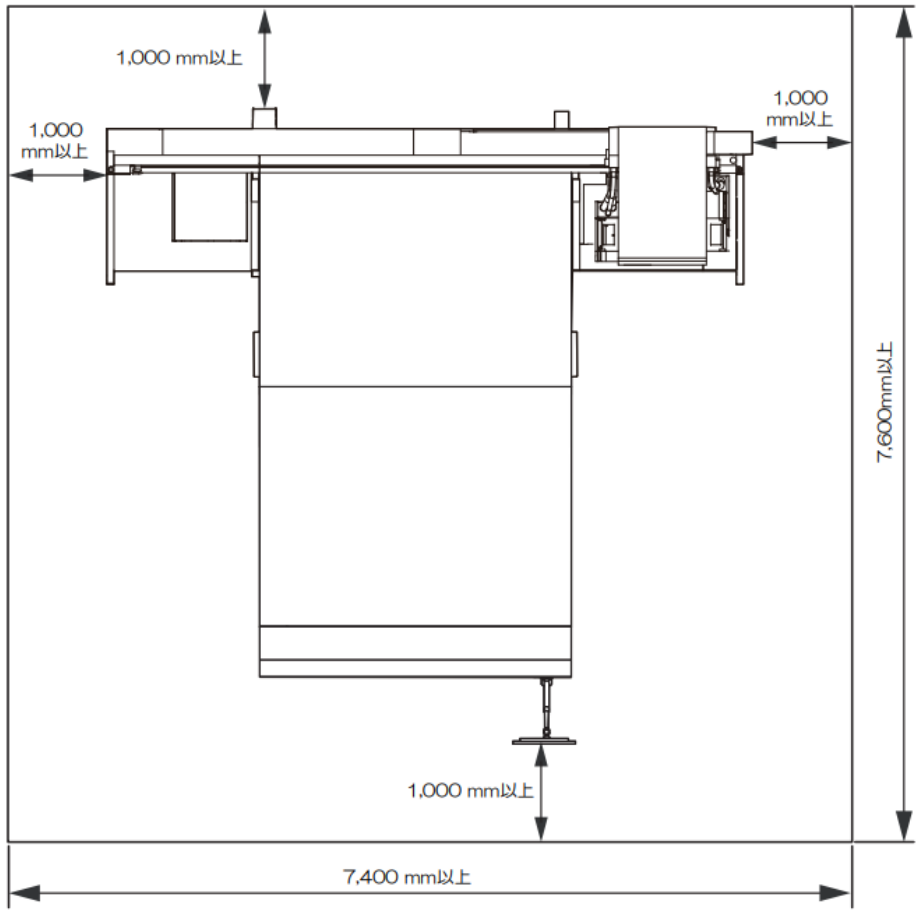
JFX600-2531 Table





Recommended Installation Environments

	Machine	Width	Depth	High	Weight
Installation	JFX600-2531	291.3 in (7,400㎜)	299.2 in (7,600㎜)	66.9 in (1,700㎜)	3307 lb (1,500kg)



Installation environment
Usable temperature：20～30℃
Relative humidity：35～65%Rh
Guaranteed temperature：20～25℃
Temperature gradient :less than ±10℃/H
Dust ： Office Equivalent

■ Precautions for installation environment

1. Please refrain from using weak OA floors, etc.
2. Use in an air-conditioned environment. Ambient operating temperature: 20° C to 30° C
3. Do not use carpets, etc., as they are susceptible to static electricity and may affect image quality.
4. Ink odor is generated, please use in a well-ventilated place.
5. To reduce deformation of the floor surface, a foot base should be laid down.
6. Do not install the printer in direct sunlight, as this may cause the UV ink to harden and interfere with printing.

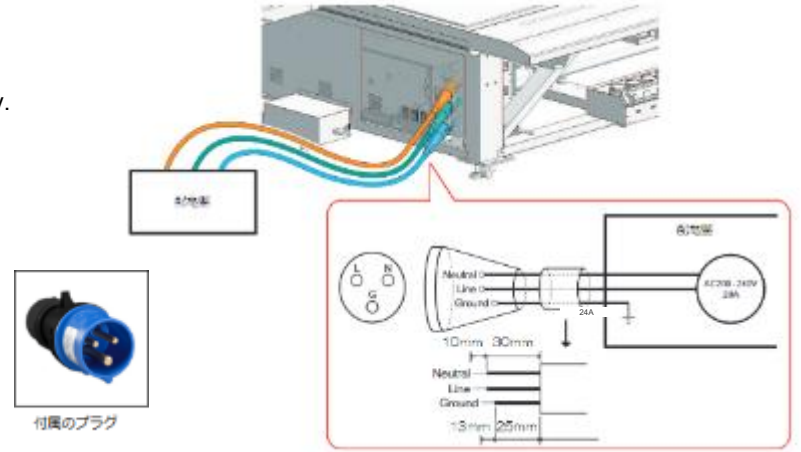
※Separate space for RIP PC is required.

Recommended installation environment (power supply facilities)

Power supply

1． S/N＃1～20 machine

•A power socket is attached to the side of the main unit. A power plug that fits the above power socket is included as an accessory.
JFX600-2513：3 Power cable is not included. Please provide your own power cable.
Electrical work between the distribution board and the socket must be performed by a qualified electrician.
•The following wires, breakers, and plugs should be used
(1) Wire : VCT-5.5 mm2 x 3 cores (600V) or UL-AWG10 x 3C (600V) equivalent,
sheath outer diameter φ16-20 mm
(2) Breaker : Single layer 200 ~ 240 V 24 A
(3) Attached plug : IEC60309 standard plug (plug-in type B)

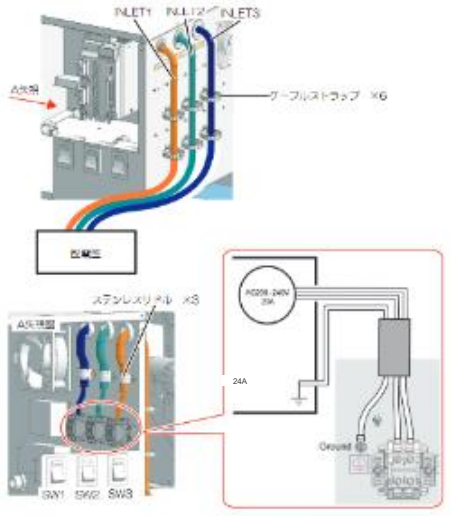


2. S/N＃21 after

•JFX600-2513: Three power cables are not included. The power cable must be provided by the customer.
Electrical work between the switchboard and terminal block must be performed by a licensed electrician.

•The following wires, breakers, and plugs should be used
(1) Wire : VCT-5.5 mm2 x 3 cores (600V) or UL-AWG10 x 3C (600V) equivalent,
sheath outer diameter φ16-20 mm
(2) Breaker : Single layer 200 ~ 240 V 24 A
(3) Attached plug : IEC60309 standard plug (plug-in type B)







■ Disclaimer

- The Company is not liable for any direct or indirect damages caused by using this unit regardless of whether the JFX600-2513 (hereinafter referred to as this machine) is out of order.
- We are not responsible for any direct or indirect damages caused to the products created by this machine.
- If you use a device other than the one recommended by us, there is a risk of fire or damage to the machine. In this case, the warranty does not cover the damage. In addition, we are not responsible for any direct or indirect damages caused by it.
- Please use our genuine ink and maintenance cleaning liquid. If you use any other type, the print quality may deteriorate, and the machine may be damaged. In this case, the warranty does not cover. In addition, we are not responsible for any direct or indirect damages caused by it.
- Do not refill the ink in the ink bottle. In this case, the warranty does not cover the damage it could occur to the machine. In addition, we are not responsible for any direct or indirect damages caused by it.

■ Precautions for maintenance

- Clean this unit regularly. Dust and debris can accumulate on the electrical components after many years of use of this unit. This may cause malfunction of the unit, electric shock, or fire due to electrical leakage.
- Do not use organic solvents such as acetone or IPA to clean the table. The table may be damaged. If the table is damaged, it cannot be repaired on site.
- Do not install the printer in direct sunlight, as this may cause the UV ink to harden and interfere with printing.
- Periodic replacement parts should be replaced at the recommended replacement time. Deterioration can lead to machine damage.
- Do not clean the unit by exposing it to the airflow from a blower or other source. Dust and dirt may get into electrical parts, resulting in malfunction, electric shock, or fire. Use a soft cloth with neutral detergent diluted in water and wring it out tightly before wiping it off. Or, vacuum up dust with a vacuum cleaner.
- Do not allow liquids to get inside the main unit. Doing so may cause malfunction of the unit, electric shock, or fire.
- Specifications in this manual are subject to change without notice.