#### Wide Format Inkjet Printer for Sign & Graphics

# JV300-130/160

### **Product Guide**



### Outstanding Speed, Stunning Beauty





















(C) (M) (Y) (K) (III) (III) (M) (M) MIMAKI ENGINEERING CO., LTD.

Global Marketing Department

2016/5/30

Ver1.9

Note: The information in this document is subject to change without notice.



# **Key Features**

### Outstanding Speed

- ① High productivity with staggered dual-head design and large droplet
  - A) 2 print heads aligned in stagger configuration performs wide band printing
  - B) Max drop size of 35pl enables high speed & high density printing
- 2 Less bleeding results even in high speed printing
  - A) High speed and high density printing without bleeding by fast drying ink, SS21, and 3-way intelligent heater

### 2. Stunning Beauty

- ① Brilliant color reproduction by various colors
  - A) Orange ink delivers wider color gamut printing
  - B) Light black ink produces accurate grayscale printing without color shifts
  - c) White ink ensures high opacity on transparent media
- ② Mimaki's original technologies to perform high quality printing
  - Smooth image quality by waveform control and precise dot placing technology
  - B) 3-way intelligent heater optimizes dot sizes
  - MAPS3\* eliminates banding and produces uneven print density
     (\*Mimaki Advanced Pass System 3)

### **System Configurations**

(PC)



USB2.0 cable of 5m(15ft) is recommended

Recommended specifications

CPU: Core i5 3.2GHz

MEMORY: 8GB HDD: 500GB

USB2.0: 4 ports or more Optical disk drive: DVD-ROM Windows7 Professional 64bit

Monitor1366x768



⟨Design software⟩



- Accpet PS,EPS,TIFF,BMP,JPEG, PDF etc
- Computer, initial ink fees, transportation fees, installation fees, education costs etc are special needs.

#### JV300 System configuration



<RIP software> bundled





#### Option

- · AMF130(160)KIT: Tension Bar
- · MBIS3: Mimaki BulK Ink Supply Unit
- STATIC PREVENTION SHEET FOR 300-130 (160): Static Cling Prevention Sheet Kit
- Drying Fan
- Air exhaust unit



### Ink Type / Ink Set

Ink Type	Colors	Ink Sets		Ink Capacity	*
SS21	9C*	①4C ②8C ③6C+WW ④6C+WW	M C Y K K Y C M  M C Y K Lc Lm Lk Or  M C Y K Lc Lm W W	CMYKLcLmLkOr: ①440ml cartridge ②2L Ink pack (for MBIS3) W: ①220ml cartridge only	*Printing in 9 colors cannot be performed. *④ is available after F/W Ver.1.5.
ES3	6C	①4C ②6C ③6C+WW	M C Y K Lc Lm C M  M C Y K Lc Lm W W	CMYKLcLm: ①440ml cartridge W: ①220ml cartridge only	*3 is available after F/W Ver.1.5. *The PN of white ink is 【SPC- 0433W-2】.
BS3 BS4	4C	①4C	M C Y K K Y C M	CMYK: ①600ml Ink pack (with Eco-cartridge) ②2L Ink pack (for MBIS3)	
Sb53	6C*	①4C ②6C	M B Y Dk Dk Y B M  M B Y Dk Lb Lm B M	BMYDk(K)LbLm: ①440ml cartridge ②2L Ink pack(forMBIS3)	*K or Dk are available.
Sb54	6C	①4C ②6C	M B Y K K Y B M  M B Y K Lb Lm B M	BMYKLbLm: ①440ml cartridge ②2L Ink pack(forMBIS3)	*Sb54 is available after F/W Ver.1.5.

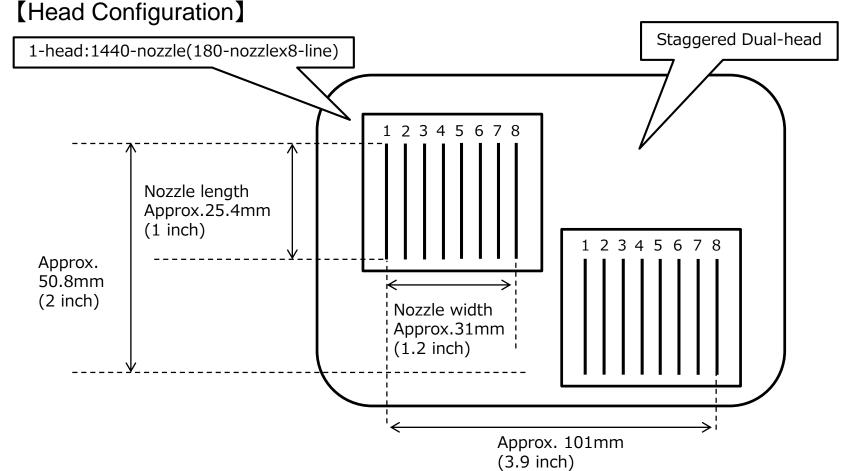
<About a change of ink configuration after the purchase>

- $\cdot$  After the purchase, Mimaki cannot accept customer's change request of ink configurations in cases as below.
  - 1. Change ink type from aqueous ink to eco-solvent ink, or from eco-solvent ink to aqueous ink.
  - 2. Change ink set that includes spot color such as white and silver to other ink sets. (e.g. from CMYKLcLmWW to CMYK)
- All operation is done with Mimaki's customer engineer. Customers cannot change ink sets by themselves.

# **Outstanding Speed Staggered dual-head**

#### High productivity by wide band printing

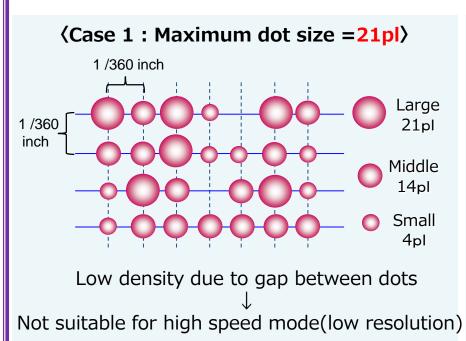
Wide band printing by staggered dual-head arrangement performs high speed printing.

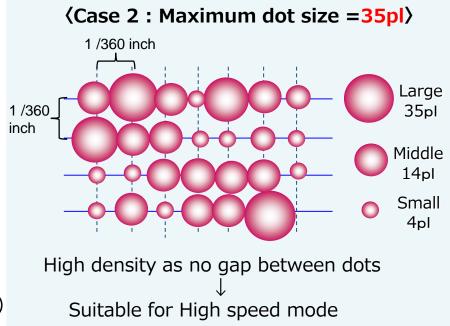


# **Outstanding Speed** 2 Larger Ink drop

#### Large dot size

The maximum drop size of 35pl delivers high density printing even in high speed mode (low resolution mode). The maximum productivity of 105.9 m/h is attained.

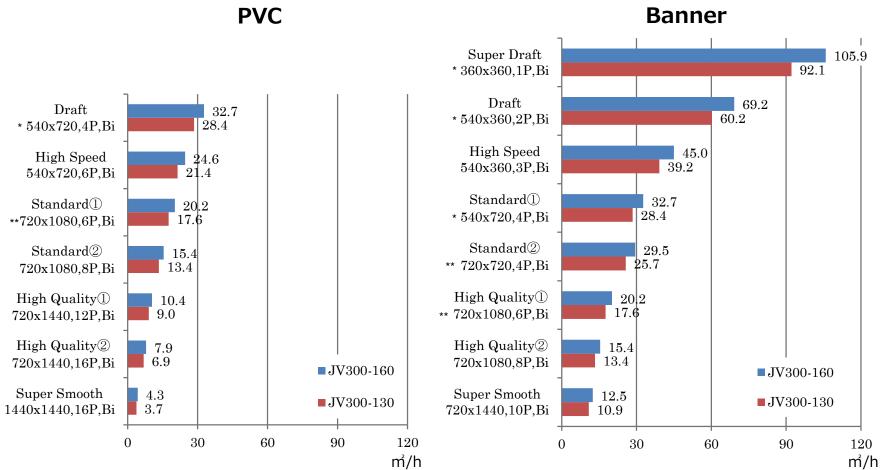




Not only the print mode using 360x360 dpi, but the other low resolution modes of 540x360 and 720x720 which have not been used are available. This delivers wide print speed coverage from high resolution mode to low resolution mode.

### Outstanding Speed 3 4C(CMYK) (SS21/BS3)





The print modes in this document is the performance of the printer itself. The profiles are created selectively depending on the media type. When the profile is not available, you can create profile by using MPM II.

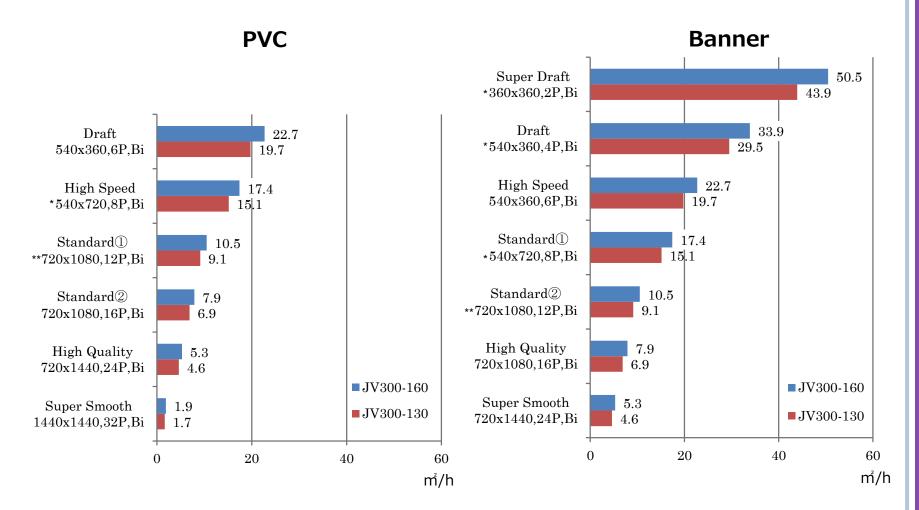


<sup>\*</sup>Setting "quality priority" with RLP, MAPS works.

<sup>\*\*</sup>MAPS doesn't work

### Outstanding Speed 4 8C/6C+WW (SS21)

### 8C(CMYKLcLmLkOr) / 6C(CMYKLcLm+WW) (CMYKLkOr+WW)





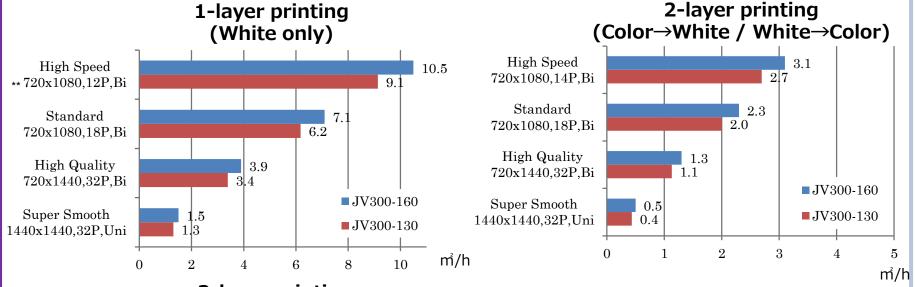
<sup>\*</sup>Setting "quality priority" with RLP, MAPS works.

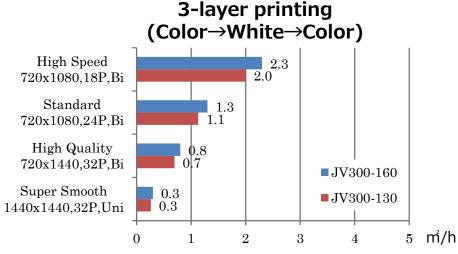
<sup>\*\*</sup>MAPS doesn't work

### **Outstanding Speed White printing(SS21)**

White printing Ink set: CMYKLcLm+WW/CMYKOrLk+WW

Fast drying of SS21 ink performs 3-layer printing using white ink. When printing white ink only, the maximum print speed is 10.5m/h.

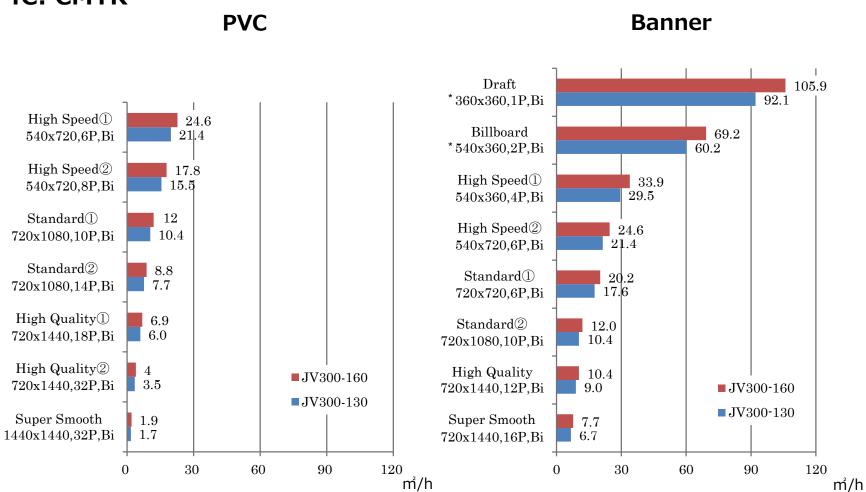






### Outstanding Speed 6 4C(CMYK) (ES3)

4C: CMYK

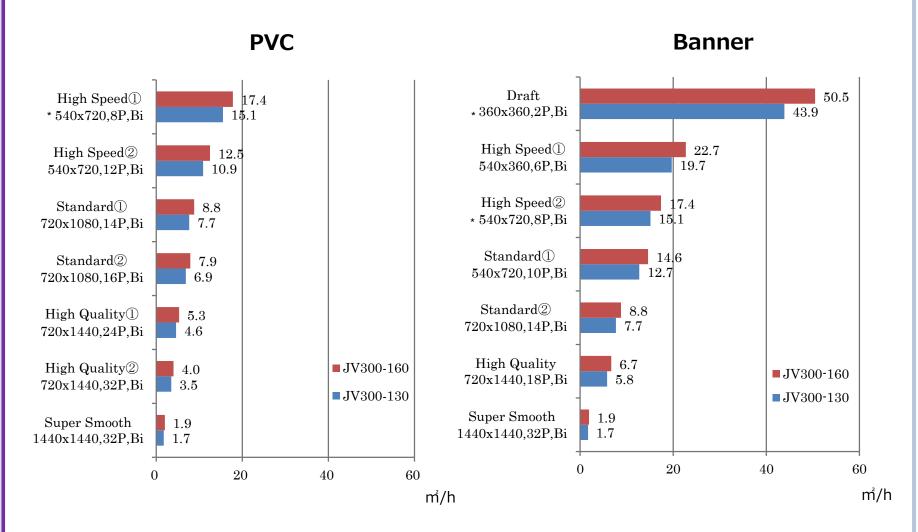


The print modes in this document is the performance of the printer itself. The profiles are created selectively depending on the media type. When the profile is not available, you can create profile by using MPM II.

10

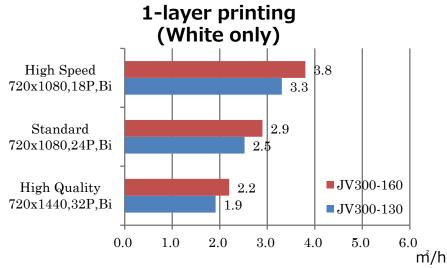
### Outstanding Speed 7 6C (ES3)

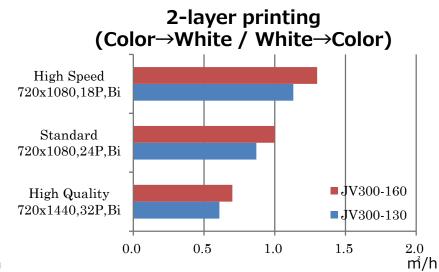
#### 6C: CMYKLcLm



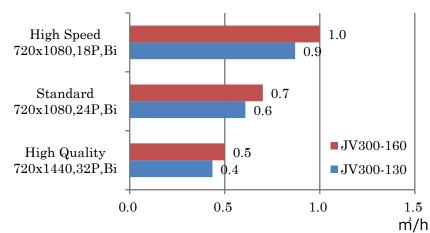
### **Outstanding Speed® White printing(ES3)**

#### White printing Ink set: CMYKLcLm+WW

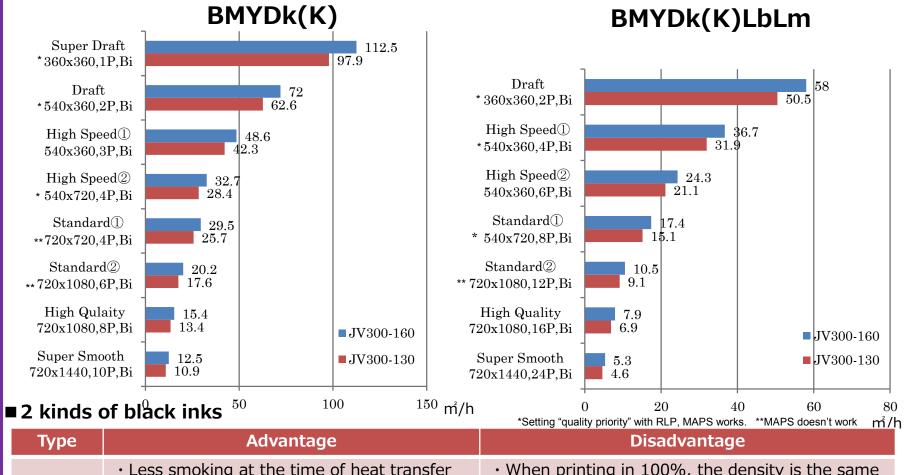




# 3-layer printing (Color→White→Color)



### Outstanding Speed® Sublimation (Sb53/54 4C/6C)



Туре	Advantage	Disadvantage
Sb53K	<ul> <li>Less smoking at the time of heat transfer</li> <li>Less grainy appearance at the low gradation part</li> </ul>	• When printing in 100%, the density is the same as Dk ink, but the density is lower at the part of low gradation part.
Sb53DK	<ul> <li>Reflection density is higher at the low gradation part</li> </ul>	<ul> <li>Grainy appearance at the low gradation part can be seen</li> <li>Smoke a lot while heat transfer compeered to K ink.</li> </ul>

<sup>\*</sup>When using Sb53 inks, the print speed is faster than eco-solvent ink. This is because the viscosity of the Sb53 is lower, which enables ejecting ink faster. \*Sb54 can use K only.(Density is same as Sb53/04)

### Stunning Beauty (Color) 1 Orange ink with SS21

#### Wider gamut with new Orange ink

- ①Orange ink is added as a process color
- ②Approx. 94.8% of PANTONE color chart is covered\*
- ③High reproducibility of corporate color, food, etc.

# **[Gamut comparison]** -120 -100 -80 -60 80 100 120 ° $\mathbf{L}_{\text{CMYKLcLmLkO}}$ **CMYK**

#### (Printed result comparison)

CMYKLcLm



Less freshness without Orange ink with bright, fresh

Approximate colors of PANTONE

CMYKLcLmLk**Or** 



High reproducibility Orange



### Stunning Beauty (Color) Light-Black Ink with SS21

#### High quality Monochrome color reproduction with new Light-Black ink

Good color balance without color shifts reproduce high quality monochrome color, smooth and clear grey output

[Print result comparison 1]

**CMYKLcLm** 



Reddish grey

CMYKLcLm**Lk**Or



 No color shifts and smooth gradation

(Print result comparison②)

**CMYKLcLm** 



- Reddish grey
- Skin w/grainy appearance

CMYKLcLm**Lk**Or



- Clear grey
- Smooth skin

### Stunning Beauty (Color) High opacity print with white ink

#### White Ink

- ①Vivid color expression even on transparent/colored media by printing white ink before printing color
- ②Higher opacity printing is attained by larger ink droplet\*

[Density/Opacity comparison (White - single layer)]

Print White in 100%(Density set on RL6) → Put Mimaki logo underneath and light up from the back-side

JV300-160

JV33-160

Almaki

Transmission density: 0.40

Mimaki

Transmission density: 0.27

Print mode: 720x1440, 32P, Bi, Hi

Productivity:3.9m/h

Maximum drop size: 24pl Media: PET(SPC-0641-62) Density: 48%UP Productivity: 430%Up

Print mode:720x1440,32P,Bi ,Hi

Productivity:0.9m/h

Maximum drop size: 14pl Media: PET(SPC-0641-62)

<sup>\*</sup>The white ink of SS21 is same as the conventional white ink. The higher density print is accomplished by the larger ink droplet.

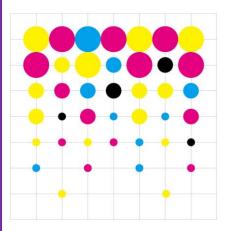
### Stunning Beauty (Quality) Waveform Control Technology

#### Waveform Control Technology for high quality printing

- ①Jetting ink drops in straight with almost a perfect circle dots accomplishes high accuracy dot placement
- 2) Waveform which has less mist is adopted to print crisp letters, lines, edges, etc.
- ③Waveform is optimized in a way not to cause nozzle-out

#### [Image 1]

Ejects ink in straight with a near-perfect circle



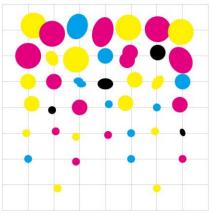


Ink dots do not overlap and accurate dot placement

No grainy appearance

#### [Image 2]

Ejects ink not straightly and not with a perfect circle





Ink dots overlap and not accurate dot placement

Grainy appearance and uneven density

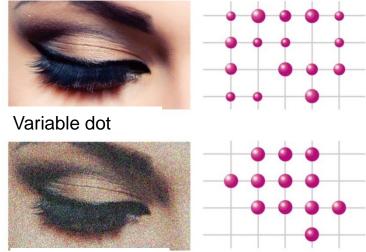


### Stunning Beauty (Quality) Variable Dot Technology

#### Variable Dot

The variable dot technology, printing in 3 different dot sizes of large, medium, and small, delivers the high image printing with very smooth gradations.





Normal dot

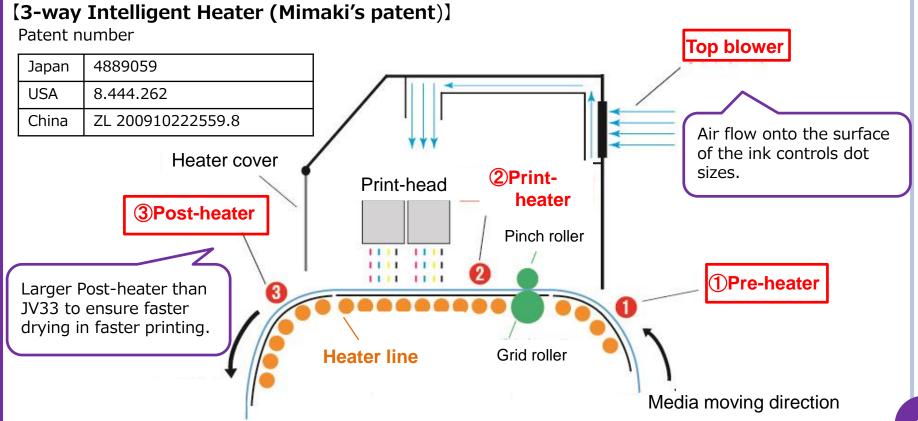
3 different drop sizes are selected from 4pl/7pl/8pl/14pl/16pl/24pl/35pl depending on the ink type and print mode. The combination of the 3 drop sizes are embedded in profile.

Having wide range of dot sizes, not only high resolution printing for high quality but high speed & density printing for high productivity is attained.

### Stunning Beauty (Quality) 3 Optimizing Dot Size

#### 3Way Intelligent Heater plus Top Blower

- ①Ensures higher print quality without smear by quick and accurate ink dots fixed with heating media to proper temperature by Pre and Print heaters
- ②Post-heater provides additional drying after printing
- 3Top blower controls dot sizes by drying ink from its surface



<Printer cross-section view>

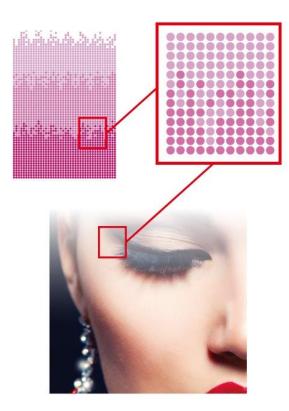
/imaki

### Stunning Beauty (Quality) 4 MAPS3

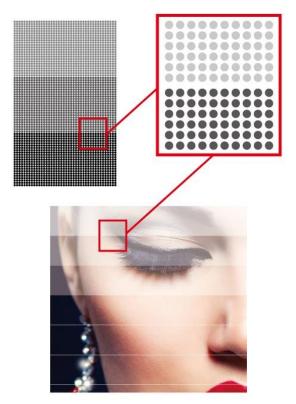
#### MAPS3 (Mimaki Advanced Pass System 3)

MAPS3 prints passes in gradation-like tone by dispersing ink drops between passes, allowing for reducing banding, uneven drying inks, and bidirectional stripes.

#### [MAPS3]



### [Normal Pass]

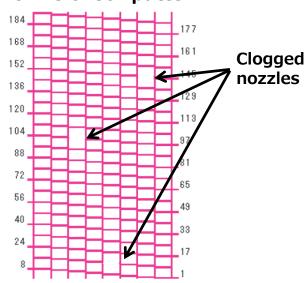


### **Continuous Operation 1 NRS** (Nozzle Recovery System)

#### Less downtime by NRS

Even if the nozzle clogging is not improved by the maintenance function, the continuous printing operation without losing image quality is possible by using the other nozzles registering clogged nozzle in the printer.

#### Nozzle check pattern



Register the number of clogged nozzles (Max register: 10 nozzles out of one row)



# Use the other nozzles instead of clogged nozzles

- ·10 nozzles can be registered per 1 nozzle line
- ·The print speed does not change by using NRS
- Depending on the condition of the nozzle, NRS does not work
- ·When using low passes, NRS does not work
- ·When using MAPS3, NRS may not work in some mode

(Continuous printing by NRS)



Back to work immediately

**Continuous Operation** 

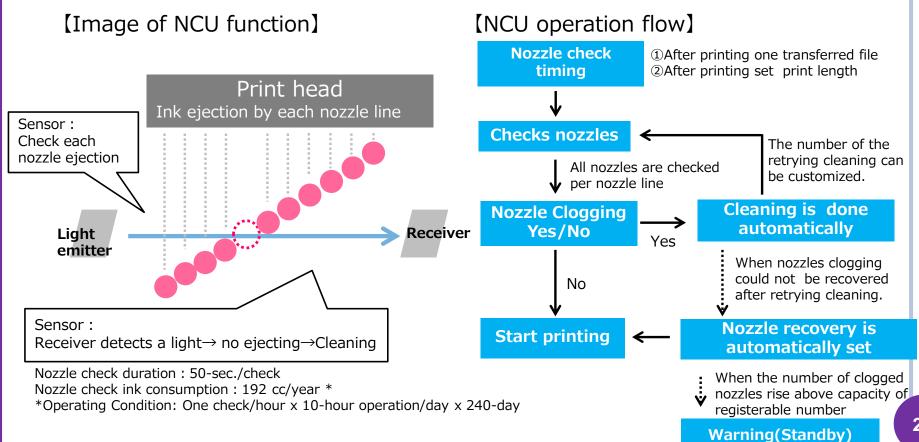


### **Continuous Operation** 2 NCU (Nozzle Check Unit)

#### Unattended printing with stable image quality

NCU checks the nozzle condition automatically per transferred file or set print length.

- ①When nozzles are clogged, cleaning is automatically executed. Printing with the nozzle clogged is avoided.
- ②When nozzle clogging is not recovered by cleaning, Nozzle Recovery System is automatically done, and start printing.



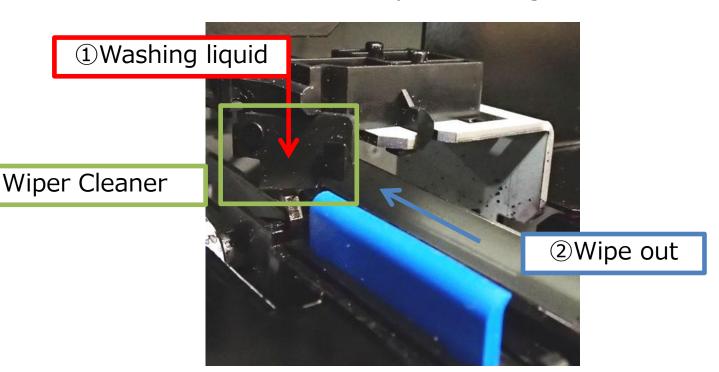
### **Continuous Operation Automatic Wiper Cleaning**

#### Automatic Wiper Cleaning

- ①The ink on the wiper is automatically cleaned up after cleaning.

  The ink on the wiper does not attached to the nozzles. This allows for the stable firing of ink.
- ②The daily maintenance becomes easier because the wiper is cleaned up automatically.

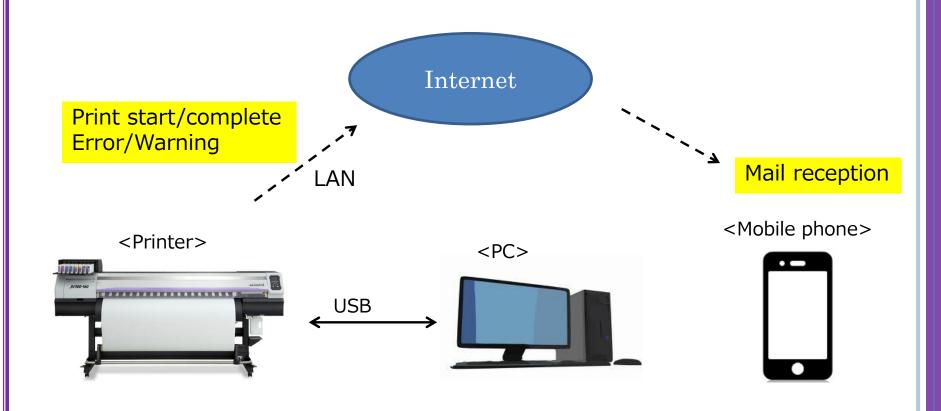
#### [Automatic Wiper Cleaning]



### **Continuous Operation 4 Event Mail Notification**

#### **Event Mail Notification**

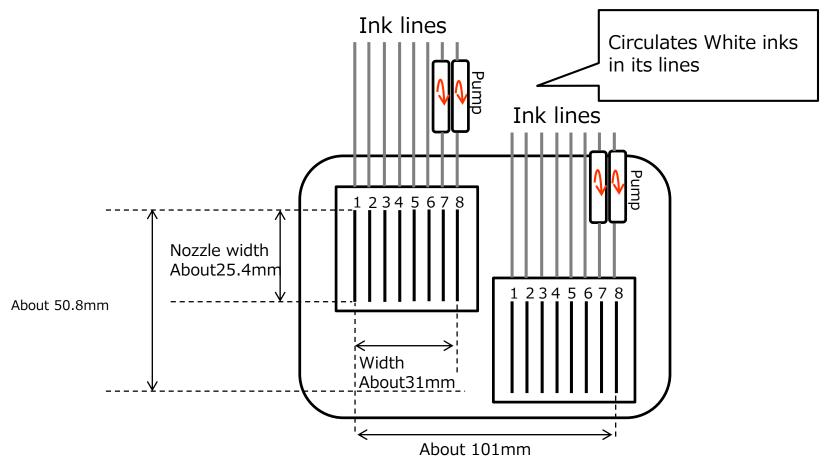
- \*Various information can be sent from printer to mobile phone by email.
- \*Printer status can be monitored remotely allowing for unattended printing.



### Continuous Operation 5 MCT (Mimaki Circulation Technology)

#### Stable print quality by MCT

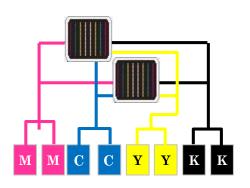
By circulating the white ink in the line, the settlement of pigments is prevented. This allows for the stable printing with out nozzle clogging.



### **Continuous Operation** 6 Ink Supply Systems

#### UISS\*(Uninterrupted Ink Supply System)

In 4C ink-set, when the ink runs out, ink is automatically supplied from the other cartridge for the continuous operation. It avoids stopping due to ink exhaustion.



#### Non-Stop Ink replacement

In 4C ink-set, empty ink cartridge can be replaced with a new one without stopping the on-going print job. No waste of time and media/ink.

\*When using Sb53 6C ink set, UISS works with M and Bl. Not available with 6C+WW and 8C ink sets.

#### MBIS3(Mimaki Bulk Ink System 3) \*Optional

Large volume of 2L ink packs are set directly on to the ink station, ensuring continuous large print jobs. New MBIS on the printer saves working space, and large 2L ink pack saves running cost.



<sup>\*</sup>When using Sb53 6C ink set, UISS works with M and Bl. Not available with 6C+WW and 8C ink sets.

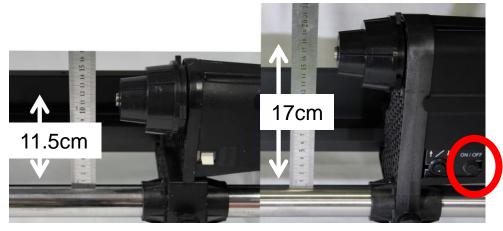
### **Continuous Operation® Media feeding and take-up**

#### 1) Media of up to 40kg can be used

The take-up roll unit of JV300 has a strong torque to feed media of 40kg at the maximum.

#### ②Maximum diameter of up to 250mm can be rolled up

The height of the take-up roll unit is 17cm, which is high enough to roll up the media of the diameter of up to 250mm.



[Take-up roll switch]
By pressing the button,
the media is rolled up.

[JV33]

[JV300]

#### ③Prints one roll of media with high feeding accuracy

The diameter of the taken-up media is measured by a censor. As the diameter of media becomes bigger, the length to roll up the media becomes shorter. This keeps the tension of the media constant.



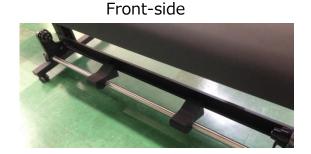
### **Optimize Work Efficiency Media setting assists**

#### 1 Media Stand

Media stands for temporal media placing is available at the back-side or the front-side to support the installation and removal of heavy media.

Media stand





**②Independent Pinch Roller** 

Adjust number of pinch rollers to be used depending on characteristics of



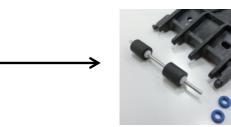
Push the red area



A pinch roller lifts up

The pinch roller can be disassembled easily by removing small blue rubber band. When the pinch roller become old, it can be replaced easily.





### **Optimize Work Efficiency 2 High Visibility Design**

#### **1)Color LCD Control Panel**

3.45inch(52.56mm x 70.08mm) color panel display for easy setting and operation.

(Conventional printer)

<LOCAL>
width:1340mm

SS21 MMCCYYKK
REMAIN 99999999



Various information are displayed in a graphical manner, such as media width, heater temperature, remaining ink volume.

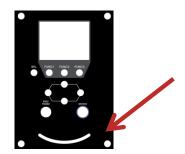
#### ②Multi-language display

11 languages are available for convenience. \* Available sequentially

Selectable languages: Japanese/English/German/French/Italian/Spanish/Portuguese Russian/Chinese/Korean/Thai

#### **3Status LED**

LED status lamp tells you the status of the printer, and grasp the status from a remote position.



(Status LED)

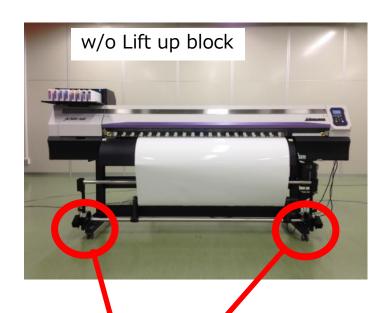
Blinking in Blue: Normal operation Blinking in Red: Error occurred

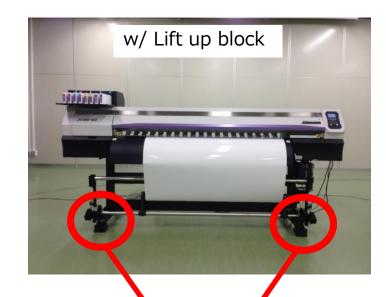


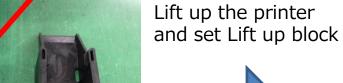
### Reduction of the Wobbling of Printer

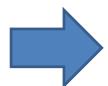
### [Lift up block]

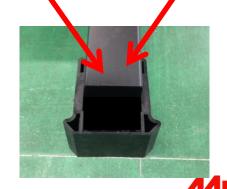
By attaching the Lift Up Block to the casters of machine, the shaking of the machine while printing is prevented.











### RIP Software - RasterLink6 1 Easy Intuitive Operation

### Raster Link 5

#### [Intuitive Operation]





The main information is in one screen. The status of printer, the progress of ripping, the status of job can be checked at a glance. Nesting or composition of job are displayed visually.





The visual icons on the right side of the screen allows for the easy and quick setting of the print condition.





Frequently used setting can be registered as "My Favorite". Up to 100 settings can be registered.

#### [New Advanced Functions]

· Batch printing

"Batch best profile when trying to print on media which has never been used before.

- 3-layer printing
   Simultaneous 3-layer printing is possible
   (Color → White → Color)
- Convenient functions
   Estimated Completion Time display
   Enhanced layout function
   Print Status display

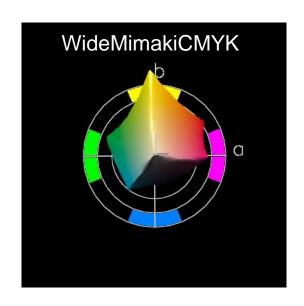
#### [Web Update function]

The web update is available as well as RasterLinkPro5 which has been well received. The program update and the profile download can be done through the web easily.

### **Advanced Features 1 Multi-color Matching Profile**

#### Input profile

The Multi-color matching profile (WideMimaki2013forSign) has a wide color reproduction range of orange area.





\* Gamut viewer : X-Rite ProfileMaker

"WideMimaki2013forSign" is based on the "WideMimakiCMYK" with the enlargement of general color reproduction domain for a wider color reproduction of orange area. It generates brilliant color reproduction with higher intensity.

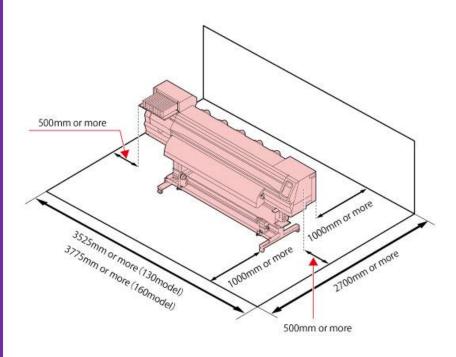
Note) Light colors like skin color or pastel colors will be brighter. It is recommended to confirm the result with test print as color reproduction will differ from "WideMimakiCMYK"

### **Packing / Installation**

#### **(Packing)**

Model	Width	Depth	Height	Weight	Manpower for installation	Per Container
JV300-130	2,662mm	750mm	1,050mm	222.9kg	4 people	20ft:12-unit 40ft:24-unit
JV300-160	2,912mm	75011111		238.5kg		

#### (Installation condition)



#### Remarks

- 1. Do not install on the weak surface floor.
- 2. Make sure to use in a ventilated environment.
  - ·Environmental temperature: 20℃-30℃
  - ·Quality assurance temperature: 20℃-25℃
  - ·Humidity: 35-65%Rh (no condensation)
  - ·Temperature gradient: ±10℃/h or less
  - ·Dust: Equivalent to office environment
- 3.Do not install on carpets, etc because those are easy to be charged, and it can effect the image quality.
- 4. Ink odor generates. Please use the machine in a well-ventilated environment.
- 5. Do not install in the place where using a photograph fixer or the place with acid steam like acetic acid, hydrochloric acid.

<sup>\*</sup>Installation space for PC is required separately

# **Specifications**

	JV300-130	JV300-160		
Print head	On-demand piezo head (staggered dual-head)			
Resolution	360 dpi,540 dpi,720 dpi, 1080 dpi, 1440 dpi			
Drop size	Min. 4pl, Max.35pl			
Head height	2.0mm/2.5mm/3.0mm * manual adjustment (+1.0mm or +2.0mm)			
Ink type	Eco solvent ink:SS21/BS3/ES	3 Sublimation Ink:Sb53/Sb54		
Ink color	SS21: 9C(CMYKLcLmLkOrW), ES3(CMYKLcLmW), BS3(CMYK), Sb53(BlMYKDKLBlLm), Sb54(BlMYKLBlLm)			
Ink capacity	SS21:440ml cartridge/2L ink pack (W:220ml cartridge only) ES3:440ml cartridge(W:220ml cartridge only) BS3:600ml ink pack/ 2L ink pack Sb53/Sb54:440ml cartridge/2L ink pack			
Max. printing width	Max.1,361mm	Max.1,610mm		
Max. media width Max.1,371mm		Max.1,620mm		
Media thickness	1.0mm or less			
Roll weight	40kg or less			
Outside dimension	2,541mm(W)x707mm(D)x1,392mm(H)	2,793mm(W)x707mm(D)x1,392mm(H)		
Packing size	2,662mm(W)x750mm(D)x1,050mm(H)	2,912mm(W)x750mm(D)x1,050mm(H)		
Body weight	170.6kg (376lb)	182.4kg		
Power supply	Single phase (AC100 $\sim$ 120V/220 $\sim$ 240V ±10%)×2 50/60H z ±1H z			
Power consumption	(100V) Max 1440W×2 (200V)Max 1920W×2			
Applicable standards	pplicable standards			



#	Questions	Answers
1	Is the NCU same as that of JV5?	No, it isnt. The NCU of JV5 checks nozzles while scanning while the NCU of JV300 does not.
2	How the coverage ratio of PANTON color chart measured?	Comparison of the gamut size.
3	What is the coverage ratio of PATONE color chart when using 4C(CMYK)	93%
4	Can MBIS2 be used for JV300?	Yes it can, but Mimaki officially recommend MBIS3. As MBIS2 cannot be connected with the printer, there is a risk of fall of MBIS2. Please use MBIS3.
5	Can MAPS3 be used for JV33?	No it can't.
6	The resolution of 540x1080 is not available?	No it is not. Because even if the image quality is same as 720x720, the scan speed is slower.
7	How is the outdoor durability of the Orange ink?	Almost same as the Magenta.
8	Is the ink set of CMYKLcLm available?	No. Because the print speed is same as CMYKLcLmLkOr. It can be used in ES3 ink, which doesn't have Or and Lk.
9	Is the ink set of CMYKOrLkWW available?	Yes.
10	Is JV300 compliant with RL5	No it isn't.
11	Does NCU work when using other company's RIP?	Yes, it does.
12	Can ink be changed from BS3 to SS21?	Yes, it can.
13	Can the ink be changed from Sb53 to SS21?	No it cannot.
14	Is JV300 compliant with Ethernet?	No, it isn't. LAN port is for Event Mail Notification.
15	What's the minimum drop size of sublimation ink,Sb53?	At the time of release, the minimum drop size is 8pl. 4pl is under consideration.
16	Can MAPS3 be turned off?	No, it can't.
17	What is the compliant version of RL6?	Ver.3.0 or later



#	Questions	Answers
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18	What is the compliant version of driver?	Ver.4.0 or later
19	What is the compliant version of F/W?	Ver.1.3 or later
20	What is the compliant version of MPM II?	Ver.4.00β3 or later
21	[About the optional Tension bar] Why does the feeding of the media become stable not having the tension bar also at the back-side of printer?	It is ideal to have tension bar also at the back-side, but; • More effective to have the tension bar at the front • Censor cannot be incorporated for the feeding.
22	Does JV300 has common option s with JV33?	No.
23	How fast does JV300 can print compared to JV33 and TS34.	About 1.7 times faster than JV33. About 1.5 times faster than TS34.
24	Can drop sizes be selected by user?	No. The best combination of the drop sizes are selected by Mimaki HQ for each ink type and each resolution. The combination is fixed, so user cannot customize.
25	How much does the drying of ink improve by using the Top Blower?	Of course the drying of the ink is improved, but the main role of the Top Blower is to control the dot sizes.
26	What is the minimum drop size using BS3? Can 4pl be used for BS3?	The minimum drop size for BS3 is 7pl. For the stable ink ejection, the drop size of 4pl is not used.
27	When one of the print head broken, can print be continued only using the other print head?	Yes. It is available after F/W Ver.1.4.
28	Can ink type be changed?	Yes, it can. The ink set except the type as below can be changed. 1) Ink set including special color 2) Solvent ink $\Leftrightarrow$ dye-sub ink
29	What is the height of the JV300 printer with the MBIS attached?	1,845mm
30	Is there a heater "Off hour" function?	Yes. It is available after F/W ver.1.5. The heater will automatically turn off at a certain time when is not in use.
	Can ES3 White ink which has used in CJV30 or JV33 be used in JV300?	No, it cannot. Please use the 【SPC-0433W-2】.