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Hitachi Industrial Equipment Systems Co., Ltd.

For further information, please contact your nearest sales representative.

Registration number: JQA-QMA12087
Registration date: April 1, 2005

The Marking Systems and Hotel Systems Division [Taga Division] of Hitachi Industrial Equipment Systems Co., Ltd. obtained international standard ISO 9001 certification for the quality assurance of the Ink Jet Printer contained in this brochure.

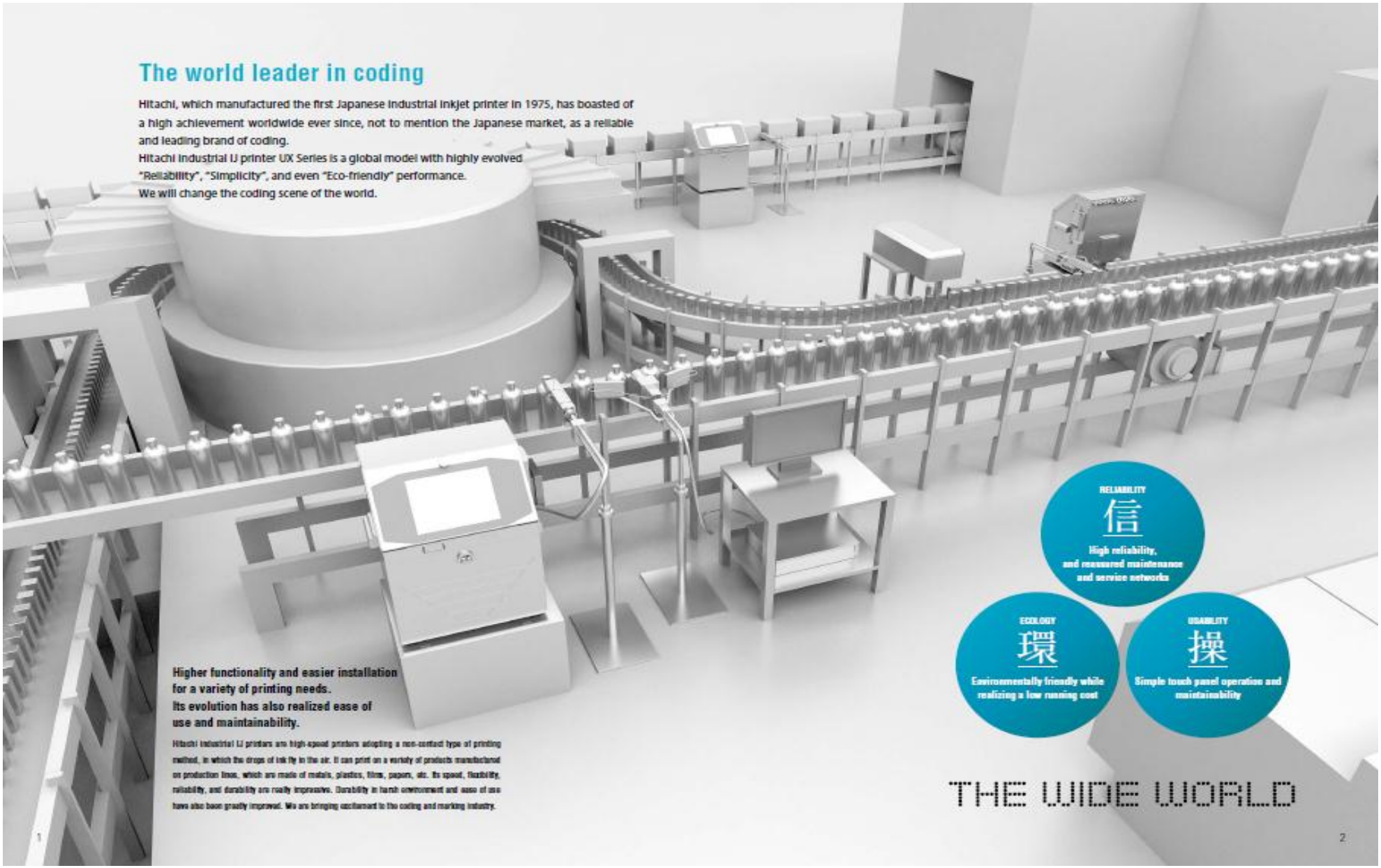
Printed in Japan (D) **SX-E152-01** 1215

HITACHI
Inspire the Next

Ink Jet Printer

UX Series

http://www.hitachi-ies.co.jp/english/products/ijp



The world leader in coding

Hitachi, which manufactured the first Japanese industrial inkjet printer in 1975, has boasted of a high achievement worldwide ever since, not to mention the Japanese market, as a reliable and leading brand of coding.
Hitachi industrial IJ printer UX Series is a global model with highly evolved "Reliability", "Simplicity", and even "Eco-friendly" performance.
We will change the coding scene of the world.

**Higher functionality and easier installation for a variety of printing needs.
Its evolution has also realized ease of use and maintainability.**

Hitachi industrial IJ printers are high-speed printers adopting a non-contact type of printing method, in which the drops of ink fly in the air. It can print on a variety of products manufactured on production lines, which are made of metals, plastics, films, papers, etc. Its speed, flexibility, reliability, and durability are really impressive. Durability in harsh environment and ease of use have also been greatly improved. We are bringing excitement to the coding and marking industry.

RELIABILITY
信
High reliability, and reassured maintenance and service networks

ECOLOGY
環
Environmentally friendly while realizing a low running cost

USABILITY
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Simple touch panel operation and maintainability

THE WIDE WORLD

Feature [1]

ECOLOGY

Environmentally friendly while realizing a low running cost

環

Hitachi original "Makeup fluid consumption reduction system" has Significantly-reduced running cost.

The ink recovery control and device temperature control provided by the new technology of "Makeup fluid consumption reduction system" suppress the amount of makeup vaporad and achieve industry-leading levels of makeup consumption.

Reduction of makeup fluid consumption

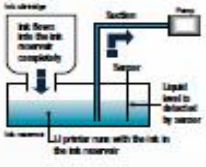
* With 100TK ink at 25°C.

■ UX-E

■ UX-B, UX-D

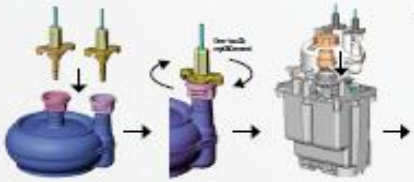
Eco-friendly because the ink and the makeup fluid in the cartridge can be consumed right up to the last drop.

It is not necessary to stop the production line to replace the cartridges. An eco-system of a simple cartridge-type bottle can be replaced after the ink or makeup fluid is completely consumed and is also easily disposed of.



Each part can be replaced separately, and filter replacement is also easy.

The IJ printer is so designed that the minimal part or module can be replaced rather than replacing the whole unit. The ink filter can also be removed and replaced easily without any tools just by rotating the joint. It's a one-touch operation.



Feature [2]

RELIABILITY

High reliability, and reassured maintenance and service networks

信

RFID function to prevent installing the wrong cartridge

IC tags are adopted for the ink and makeup fluid cartridges. Installation of the wrong cartridge can be prevented by simply passing the cartridges over the main unit which is equipped with RFID* (Radio Frequency Identification) function. A message appears on the screen if the wrong cartridge is scanned.

* Some geographic areas are excluded.

Hitachi Industrial Equipment Systems Co.,Ltd. declares that the IC tag reader is in compliance with the essential requirements and other relevant provisions of the FCC Part15 subpart C, EN 301 489-1V-2, EN 300 330-1/-2.

Designed for harsh environments

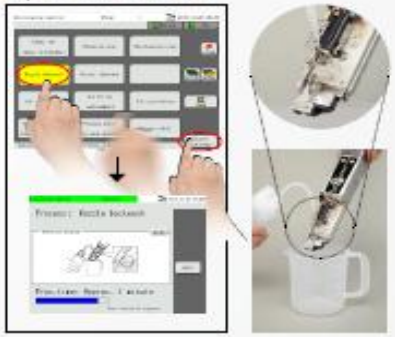
The stainless steel cabinet offers IP65 and allows a wash-down with pressured water and industrial detergent, to meet any environment and hygiene requests. The UX Series with IP65 protection is the ideal choice for applications in the meat and dairy sectors.

Automatic nozzle cleaning / Nozzle backwash

Automatic cleaning starts by one press of a button and there is no need to wait for its completion since the power turns off automatically when it is finished. Even if the nozzle gets clogged, it can be easily recovered by the nozzle backwash function that is opposite of the normal ink ejection, in which the fluid is sucked through the nozzle.

■ Automatic nozzle cleaning

■ Operation screen of nozzle backwash



Made in Japan

Hitachi industrial IJ printers are manufactured with the know-how and technology that have been accumulated since 1975 in Hitachi City where Hitachi was first founded.
After production, all printers have to pass Hitachi's strict quality management before shipment. We provide quality products to our customers worldwide.

Feature [3]

USABILITY

Simple touch panel operation and maintainability

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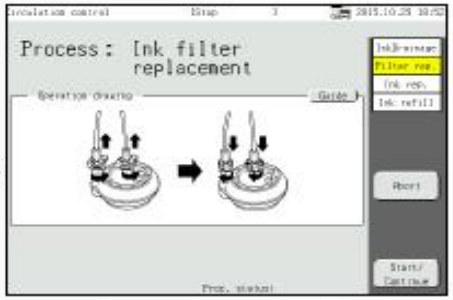
Totally-new user interface!

Intuitive operations with a new readily-understandable screen design is now adopted. Most of the operations can be completed on one screen with a simplified and well-arranged design. Complicated operations are not required to obtain the necessary information thereby improving usability.

Troubleshooting and maintenance guides using plain illustrations

The necessary operations will be displayed on the screen using illustrations when the ink filter needs replacement or when troubleshooting or maintenance is needed. Comprehensive illustrations help to maintain the quality.



IC Card* with RFID function

With IC cards, login information and print data can be managed. * Optional

User login
By scanning IC card, only the registered user can log-in and each user operation can also be limited. It prevents any incorrect operation.

Print data selection
By scanning IC card, the registered print data can be accurately called up. It prevents the incorrect data from being called up which may happen with manual operation.

Enhanced network functionality by improving compatibility with the host system

Configuration of an IoT* system can be smoothly realized using simple wiring because of the standard Ethernet feature and open network compatibility. By collectively managing multiple devices from the host system, the information gathering and operations become more efficient.

* Internet of Things

Note: UX-D is excluded.

Ink conditioning management to maintain print quality

By monitoring both the ink viscosity and the ink consumption, the ink viscosity is always kept in the best condition.

Print sample without ink conditioning | Print sample with ink conditioning

Excellent printhead shape

Tapered shape at the tip of the printhead reduces the distance between the work and the printhead. Printing to the lower position is now made possible. The printhead with anti-corrosion plating keeps working in severe environment.

* Corresponding models: For small characters and high-speed printing

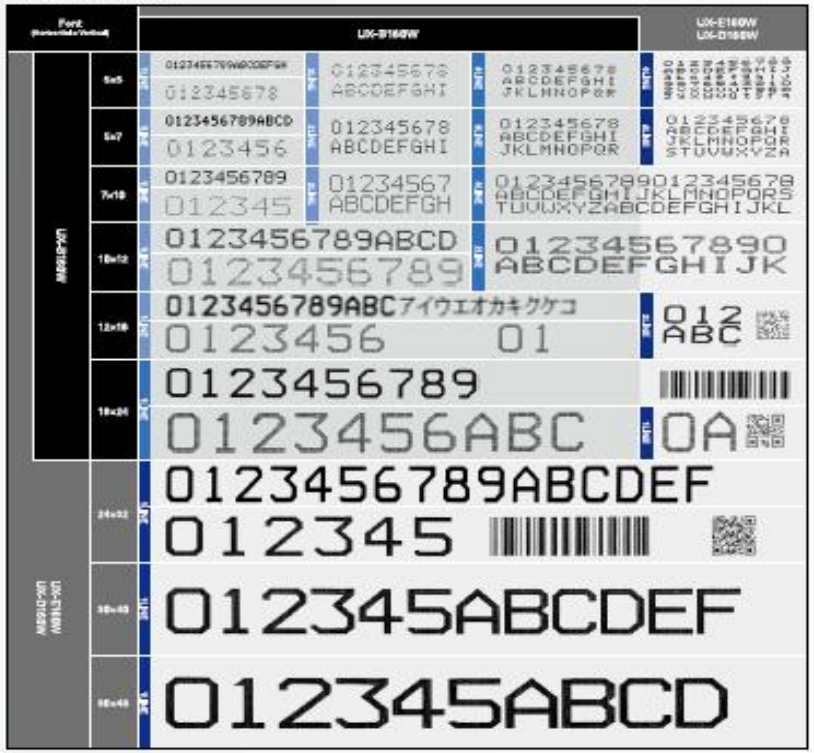
New printing technology, "6-line print" compatible for a wider variety of needs

6-line print from one printhead is made possible.
Even with multiple print lines, Hitachi original interlaced-print-control system makes each printed character appear clearly.
For single-line high-speed printing, its print quality is improved with the new print control system.

* Corresponding models: For small characters

Standard print samples (Approx. full scale)

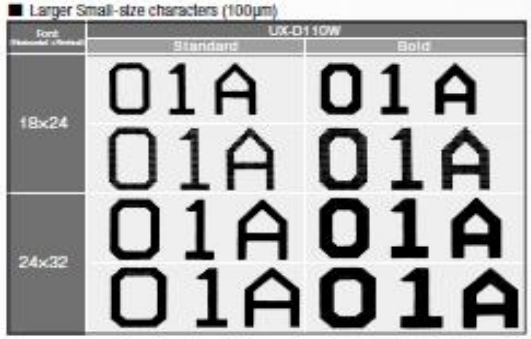
■ Small characters (65µm)



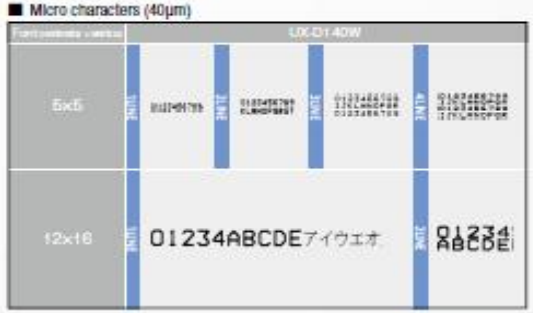
■ Print samples

■ High-speed printing (55µm)

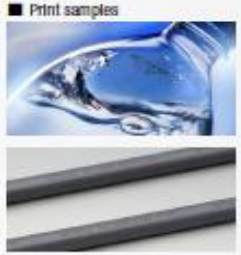
■ Larger Small-size characters (100µm)



■ Micro characters (40µm)



■ Print samples



■ Print samples

■ Print samples

Standard Specification

Item		Small characters		
		UX-B160W	UX-D160W	UX-E160W
Nozzle size			65μm	
Max. print line number		Up to 3 lines	Up to 5 lines	Up to 5 lines
Maximum number of print characters		Up to 240 characters	Up to 240 characters (Option: Up to 1,200 characters)	Up to 1,000 characters
Font (Horizontal × Vertical)	4 × 5	✓	✓	✓
	5 × 5	✓	✓	✓
	5 × 7(N), 9 × 7(N)	✓	✓	✓
	7 × 10	✓	✓	✓
	11 × 11	✓(Chinese only)	✓(Chinese only)	✓(Chinese only)
	10 × 12	✓	✓	✓
	12 × 16	✓	✓	✓
	16 × 24	✓	✓	✓
	24 × 32	—	✓	✓
	30 × 40	—	✓	✓
	36 × 48	—	✓	✓
Character height		2 - 10 mm		
Display & input device		WYSIWYG design Display : TFT LCD (10.4" color), backlight provided Input device: Touch panel, Input sound provided		
Screen language (2 languages selectable)		English, Chinese, Korean, Thai, Vietnamese, German, French, Dutch, Italian, Spanish/Portuguese, Swedish, Danish, Greek, Russian, Czech, Polish,Arabic, Serbian, Turkish, Hungarian, Bulgarian, Catalan, Romanian, Finnish, Norwegian, Slovenian		
Maximum print rate (Characters per second) (Font 5x5, space 1, 1 line)		Up to 1,148 (Option: Up to 1,291 *1)	Up to 1,148 (Option: Up to 2,583 *1)	Up to 2,296 (Option: Up to 2,583 *1)
Standard characters		Alphanumeric (A-Z, a-z, 0-9), symbols (27) and space: Total 90		
User panels		50 panels each for dot matrix	200 panels each for dot matrix (50 panels for 30x 40 and 36x48 fonts)	
Print functions		Calendar, Count, Form mixture, Password		
Barcode printing		—	code39, ITF, NW-7, EAN-13, EAN-8, UPC-A, UPC-E, code128/GS1-128, GS-1 DataBar	
2D code printing		—	Data Matrix (Alphabet: 46 characters/Numerals: 66 characters), DR, Micro QR code	
Message storage capacity		150 messages	300 messages (Option: Up to 2,000 messages (Depends on data content))	2,000 messages (Depends on data content)
Input signal		Print target detection Rotary encoder pulse (NPN/PNP Selectable)	Print target detection, Printing stop, Rotary encoder pulse, Reciprocation printing,Start on command (Run, Stop), High-voltage ON/OFF, Reset), (NPN/PNP Selectable)	
Output signal		Print ready, Fault, Warning (NPN Only)	Print in progress or Print complete, Online (NPN/PNP Selectable), Print ready, Fault, Warning (NPN Only)	
Data interface		Option (RS-232C as baud rate selectable up to 115,200bps)	RS-232C as baud rate selectable up to 115,200bps	
Ethernet (Modbus communication)		—	IEEE802.3 , 100BASE-T	
Internal memory		USB for user data storage		
Printhead cable length/ angle		4m (in-line/90 degree)		
Operating temperature range		0-50°C (10GY Ink)		
Operating humidity range		30-90% RH (no condensation)		
Power supply (Automatic voltage selection)		AC100-120/220-240V ± 10% 50/60Hz 120VA		
Approval		CE, UL, cUL, C-Tick, FCC, ICES		CE, C-Tick
Dimensions (Width x Depth x Height)		400 x 320 x 527 mm		
International protection		IP55	IP55	
Approximate weight		27kg		

*1 Ink types and temperature are limited.

Item		High-speed printing	Larger Small-size Characters	Micro Characters
		UX-D150W	UX-D110W	UX-D140W
Nozzle size		55μm	100μm	40μm
Max. print line number		Up to 4 lines		
Maximum number of print characters		Up to 1,000 characters		
Font (Horizontal × Vertical)	4 × 5	✓		
	5 × 5	✓		
	5 × 7(N), 9 × 7(N)	✓		
	7 × 10	✓		
	11 × 11	—		✓(Chinese only)
	12 × 16	✓		
	16 × 24	✓*2	✓	
	24 × 32	—	✓	
Character height		2-8mm	3-15mm	1-5mm
Display & input device		WYSIWYG design Display: TFT LCD (10.4" color), backlight provided Input device: Touch panel, Input sound provided		
Screen language (2 languages selectable)		English, Chinese, Korean, Thai, Vietnamese, German, French, Dutch, Italian, Spanish, Portuguese, Swedish, Danish, Greek, Russian, Czech, Polish,Arabic, Serbian, Turkish, Hungarian, Bulgarian, Catalan, Romanian, Finnish, Norwegian, Slovenian		
Maximum print rate (Characters per second) (Font 5x5, space 1, 1 line)		Up to 3,173	Up to 458	Up to 3,030
Standard characters		Alphanumeric (A-Z, a-z, 0-9), symbols (27) and space: Total 90		
User panels		200 panels each for dot matrix		
Print functions		Calendar, Count, Form mixture, Password		
Barcode printing		code39, ITF, NW-7, EAN-13, EAN-8, UPC-A, UPC-E, code128/GS1-128, GS-1 DataBar		
2D code printing		Data Matrix (Alphabet: 46 characters/Numerals: 66 characters), QR code*2, Micro QR code		
Message storage capacity		300 messages (Option : Up to 2,000 messages (Depends on data content))		
Input signal		Print target detection, Printing stop, Rotary encoder pulse, Reciprocation printing, Remote control (Run, Stop, High-voltage ON/OFF, Reset), (NPN/PNP Selectable)		
Output signal		Print in progress or Print complete, Online (NPN/PNP Selectable), Print ready, Fault, Warning (NPN Only)		
Data interface		RS-232C as baud rate selectable up to 115,200bps		
Ethernet (Modbus communication)		IEEE802.3 , 100BASE-T		
Internal memory		USB for user data storage		
Printhead cable length / angle		4m (in-line/90 degree)		
Operating temperature range		0-40°C (10GY Ink)	0-35°C (10GY Ink)	
Operating humidity range		30-90% RH (no condensation)		
Power supply (Automatic voltage selection)		AC100-120/220-240V ± 10% 50/60Hz 120VA		
Approval		CE, UL, cUL, C-Tick, FCC, ICES		
Dimensions (Width x Depth x Height)		400 x 320 x 527 mm		
International protection		IP55		
Approximate weight		27kg		

*2 Please consult your nearest sales representative when "16×24 font" or "QR code" is required with UX-D for High-speed printing.

Ink lineup

Specialty printing is possible with wide array of ink types.

Highly adhesive

Metal Paper Plastic

Suitable for containers made from PP (polypropylene) or PE, or two-piece can, three-piece can in the industries of food, medicine, cosmetics, etc.

1072K, 1028K, 1088K, 1114K

Ethanol ink

Metal Paper Plastic

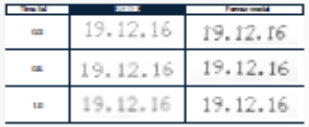
Suitable for applications where MEK-based ink is not acceptable such as food, pharmaceutical and cosmetics.

3112K

Quick-drying

Film

Suitable for food packaging film and applications where quick-drying is required such as pillow packaging machines.



2086K

Solvent resistant

Film Plastic

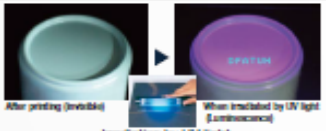
Suitable for food packaging and processing in which containers are cleaned by ethanol. This ink is resistant to wiping with ethanol in the sterilization process.

1087K

Ultraviolet luminescence

Can Plastic

Suitable for manufacturing control, etc.
This ink emits blue light when irradiated by UV light.



Irradiation by UV light

1092F, 1063F

UV curing

Electronic parts

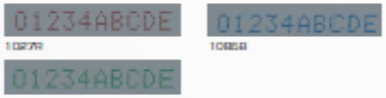
Suitable for PCB and electronic parts.
Curing by UV light makes the printed ink resistant to oils and solvents.

1065K

Color ink

Metal Paper Plastic

Suitable to identify the work printed.



1027R, 1085B, 1095B, 1027C

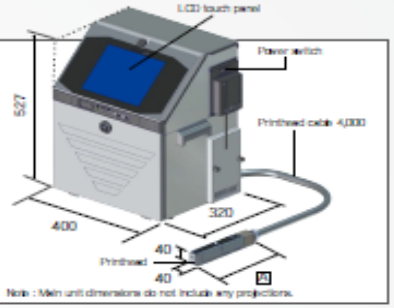
Alkali-soluble	Metal	Paper	Glass	1028K	Transfer-resistant	Plastic	Steel plate	1032K 1110K
Flexibility	Plastic	1061K	Condensation-resistant	Film	Glass	1062K		

*1 Regarding ink for each model, please contact your nearest sales representative.
*2 For SDS, please download it from our website or contact your nearest sales representative.

●Download SDS from here

Dimensions of main unit (Unit: mm)

Main unit



[A] Dimension of each model

Model	Dimension (mm)
For small characters	23t
For high-speed printing	23t
For larger small-size characters	24t
For micro characters	21t

Software options

IJ printer features can be extended with a range of software options.

Linking with Vision system

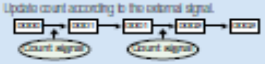
- Inspection item on Vision system changes corresponding to the print item on the IJ printer.
- Vision system corresponds to the change of IJ printer-printed characters.
- Clocks can be synchronized.
- Vision system receives the print content output each time when the IJ printer completes printing, which can be set as Vision system's inspection characters.

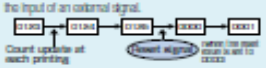
Barcode reader connection function

Setting print content
Barcode content read by the barcode reader is transmitted as "Character strings" and set as print content.

Calling up print data
Barcode content read by the barcode reader is treated as "Call up code" and the print data corresponding to the "Call up code" will be called up.

Special communication functions and External signal functions

Function	Detail
Print content output	Outputs "Print content" to an external device via serial communication when the printer receives an "Inquiry about print content" from an external device or right after completion of printing.
Print completion code output	Outputs "Print completion code" to an external device right after completion of printing.
Status output	Outputs IJ printer status to an external device when operation status changes or an "Inquiry about status" from an external device is received.
External signal count	Update count according to the external signal. 

Function	Detail
Print content switching	Print content, which is sent via communication and stored temporarily, will be printed at the time of external signal input.
Output on calendar update	Outputs signal when the print content is updated by the calendar.
External signal reset	Print content of the count digit is set to a reset value at the input of an external signal. 
Calling up print data	Calls up registered print data by external signal.
Output notifying completion of signal input	When an external signal of the count, reset, print content switching or print data call up is input, signal will be output.

Related products

Vision system

Good partner to improve printing reliability

Instantly checks for print errors of date, serial number, etc. Hitachi original cross-check inspection method (Adjustable matching method) is adopted so that the recognition close to the human eyes is made possible.

HITACHI IJP World Distribution and Overseas Office