

HITACHI
Inspire the Next

Hitachi IJ Printer PXR Series



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

Compliance with the RoHS Directive

- With the PXR series, the amount of raw materials that affect the environment have been reduced, and the guidelines as set forth in the RoHS directive as issued by the European Union have been followed.
- *The RoHS Directive stands for "the restriction of the use of certain hazardous substances in electrical and electronic equipment". This Directive bans the placing on the EU market of new electrical and electronic equipment containing more than agreed levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants.

Eco-friendliness and Sanitary

- Varieties of ink types "Chrome-complex dye free ink and ethanol based ink"
- The printer uses the stainless enclosure body that is sanitary, robust and rust resistant, which conforms to the IP55 international safety standards for dust-proof, drip-proof devices.

The world's fastest, most comprehensive top-level high-speed printer.

- Maximum print speed 345 m/min (Font 5x5, 1 Line, Character pitch 1.5mm)

Large Panel

- 10.4-inch large TFT liquid crystal touch-panel display.
- Bright, easy-to-see and wide viewing angle.
- The menu select system offers users exceptional ease and simplicity of use.



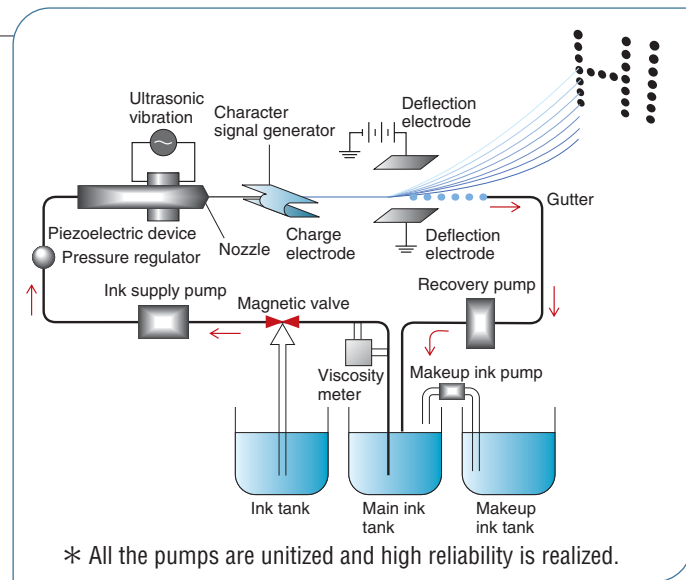
Memory Card

- A commonly available memory card can be used to store the copied "registered character data" and "print data". Uses the PC Card (Flash ATA Type II (8MB or above))



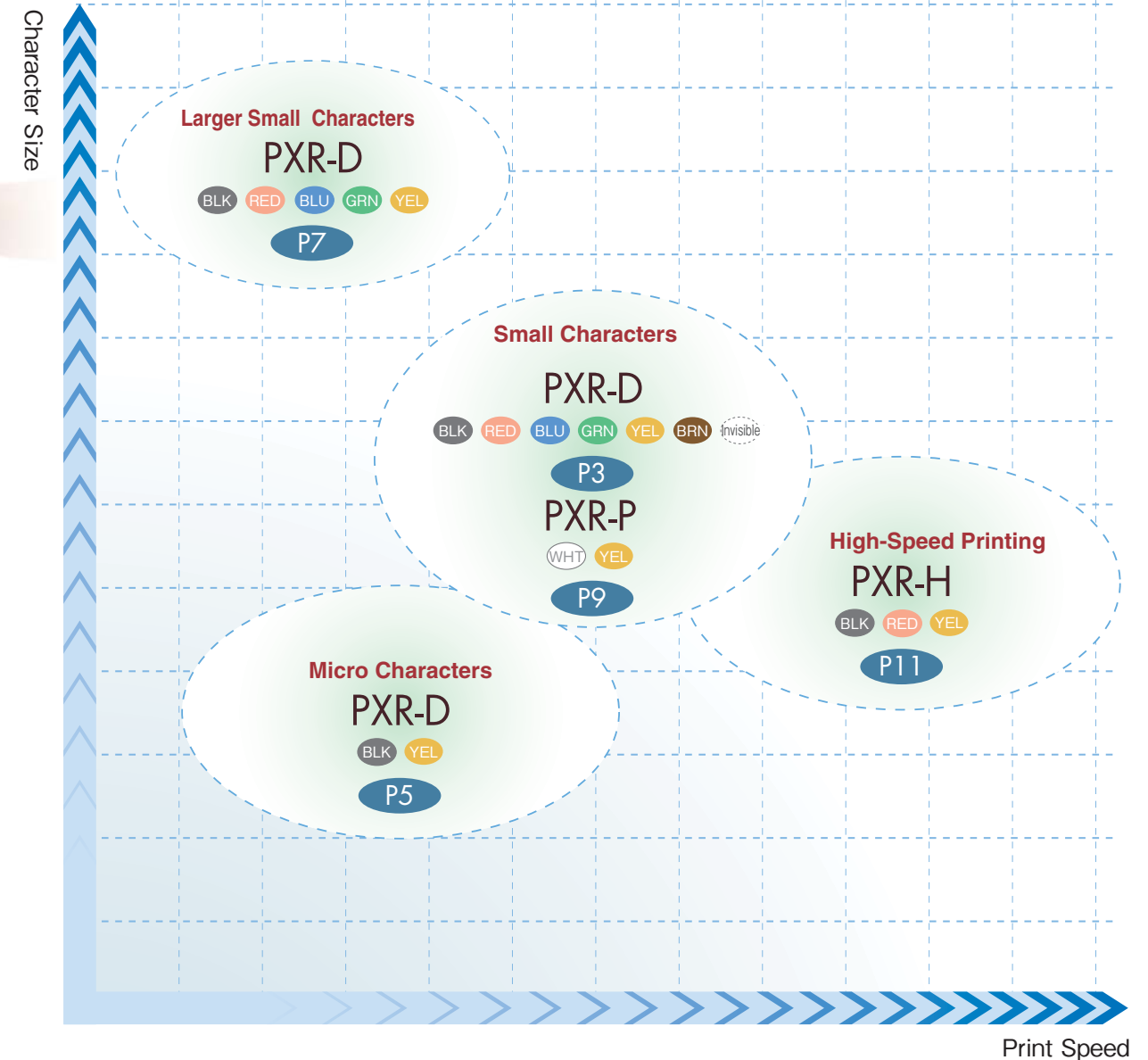
Principles of the Inkjet Printer

- The ink pulled from the ink reservoir by the supply pump is set to specified pressure by a regulator, and supplied to the nozzle.
- The ink is ejected from the nozzle and is subjected to vibrations by the piezoelectric device to create ink droplets.
- The ink droplets are charged at the charge electrode to create pixels.
- When the charged ink droplets pass through the deflection electrode, they will be deflected in the vertical direction in a quantity determined by the traveling speed and amount of charges applied to each droplet. As the object to be printed on moves in horizontal direction by a conveyor, characters will be printed.
- The ink droplets that are not used for printing are caught by the gutter and recovered into the main ink tank by the recovery pump.
- Ink used for printing is supplied from the main ink tank. Makeup ink is also supplied to the main ink tank to keep the fluid density constant. The inkjet printer runs best when maintaining optimum density control.



Viewing angle is drastically increased

IJ Printer Selection Guide



Product Lineups



PXR-D
Micro characters
Small characters
Larger Small characters



PXR-H
High-speed printing



PXR-P
For pigmented ink

PXR-D 65 μm

PXR-D 40 μm

PXR-D 100 μm

PXR-P 65 μm

PXR-H 55 μm

Software Options
Application Examples

Ink Variation

PXR-D for Small Characters

These models are suitable for wide variety of applications: food, beverage, cosmetics and pharmaceutical products.

Main Features

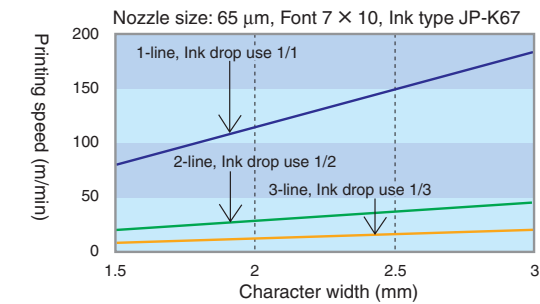
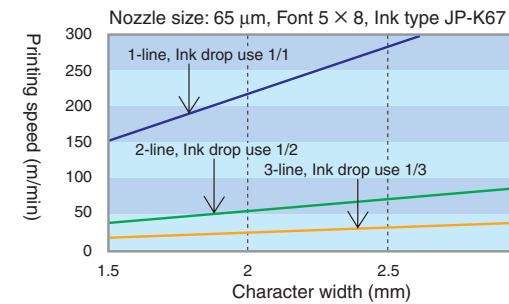
- Various ink types and color inks can be used.
- Wide operating temperature.
0 to 113°F/45 °C (JP-K67 and JP-K69)



Printing Samples (Full Scale)

Font	PXR-D260W				PXR-D460W			
	1 LINE	2 LINE	3 LINE	4 LINE	1 LINE	2 LINE	3 LINE	4 LINE
5X5	0123456789ABCDEF	012345678	012345678 ABCDEFGHI	012345678 ABCDEFGHI JKLMNOPQR	012345678 ABCDEFGHI JKLMNOPQR STUVWXYZA			
	012345678	ABCDEFGHI						
	0123456789	ABCDEFGHI						
5X7	0123456789	ABCDEFGHI						
	0123456	ABCDEFGHI						
7X10	0123456789	ABCDEFGHI						
	012345	ABCDEFGHI						
12X16	0123456789ABC							
	0123456							
18X24	0123456789							
	0123456789ABCDE							
24X32	0123456789ABCDEF							
	012345							

Printing speed



Standard Specifications

Printing specifications	
Model	PXR-D260W PXR-D260WL
Nozzle size	65 μm
Max. print line number	Up to 2 Lines
Maximum number of print characters (each line)	1 Line: Up to 240 characters 2 Line: Up to 120 characters
Dot matrix (horizontal × vertical)	1-2 Line: 5×5, 5×8 (or 5×7), 7×10 (or 9×7, 9×8) 1 Line: 12×16
Character height	0.08-0.39 inches / 2-10 mm
Display & input device	Display: TFT LCD (10.4 inch, color), backlight provided Input Device: Touch panel, input sound provided
Screen language 2 language selectable:	English, Chinese, Korean, Thai, Vietnamese, German, French, Dutch, Italian, Spanish, Portuguese, Swedish, Danish, Greek, Russian, Czech, Polish, Arabic, Serbian, Turkish, Hungarian, Bulgarian and Catalan available
Maximum print rate (characters / s) (Font 5 × 5, space 1, 1 line)	Up to 2,296
Standard characters	Alphanumeric (A-Z, a-z, 0-9), symbols (27), space: Total 90
Number of user pattern registration	Each dot matrix 128 patterns
Print functions	Calendar, Counter, Message storage (150 messages), Font mixture, Passwords security, Bar codes (code39, ITF, NW-7, EAN13/UPC-A, Code128/EAN128), Data Matrix 2-D code (Alphabet : 49 characters, Numerals: 98 characters), Encoder function, Reciprocation printing, etc.
Input signal	Print target detection, Printing stop, Reciprocative printing, Rotary encoder pulse
Output signal	Print ready, Fault, Warnig, Print in progress or print end, Online
Data interface	RS-232C at baud rates selectable up to 38.4 kbps
General specifications	
Operating temperature range	32-113 °F / 0-45 °C (JP-K67, K69 Ink)
Humidity range	30-90 % R.H. (no condensation) Note: When humidity is more than 85 %RH, please purge inside of print head by air.
Power supply (Automatic voltage selection)	AC 100-120 / 220-240V ± 10 % 50/60 Hz 150 VA (AC Inlet)
Approval	CE, UL, cUL, C-Tick, FCC, ICES
Cabinet	Stainless Steel / IP55
Print head cable length	13.1 ft / 4 m
Overall size (width × depth × height)	15.7 × 11.4 × 20.3 inches 400 × 290 × 515 mm
Approximate weight	55 lbs / 25 kg

Dimensions		
Console	Printhead : PXR - D*60W	90 Degree Printhead : PXR - D*60WL

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PXR-D for Micro Characters

These models are suitable for small markings, such as on small components, wire, etc. in the electric and electronic fields.

Main Features

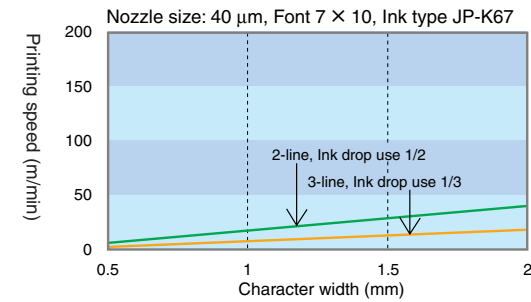
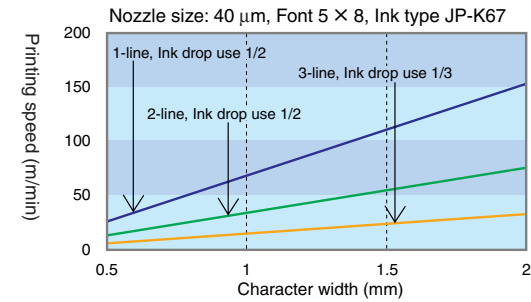
- Printing on products with extremely small marking areas is possible.
- These models are suitable for printing on small components.



Printing Samples (Full Scale)

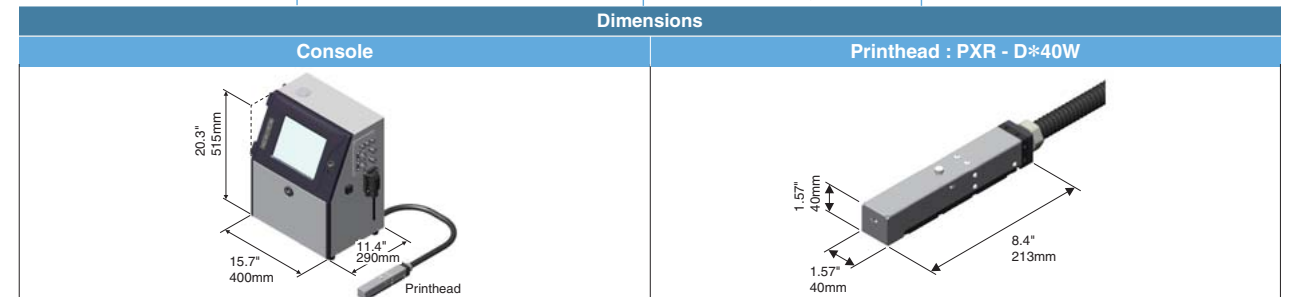
Font	PXR-D240W				PXR-D440W	
PXR-D240W	5X5	1 LINE 0123456789ABCDEFGHIJKL	2 LINE 0123456789ABCDEFGHIJ KLMNOPQRSTUVWXYZABCD	3 LINE 0123456789ABCDEFGHI JKLMNOPQRSTUVWXYZ 0123456789ABCDEFGHI	4 LINE 0123456789ABCDEFGHI JKLMNOPQRSTUVWXYZ 0123456789ABCDEFGHI JKLMNOPQRSTUVWXYZ	
	5X7	1 LINE 0123456789ABCDEFGHI	2 LINE 0123456789ABCDEFGHI JKLMNOPQRSTUVWXYZ	3 LINE 0123456789ABCDEFGHI JKLMNOPQRSTUVWXYZ 0123456789ABCDEFGHI	4 LINE 0123456789ABCDEFGHI JKLMNOPQRSTUVWXYZ 0123456789ABCDEFGHI JKLMNOPQRSTUVWXYZ	
	7X10	1 LINE 0123456789ABCD	2 LINE 0123456789ABCD EFGHIJKLMNOPQR	3 LINE 012345678901234567890123456789 ABCDEFGHIJKLMN 012345678901234567890123456789 ABCDEFGHIJKLMN		
PXR-D440W	12X16	1 LINE 0123456789ABCDEFGHI	2 LINE 0123456789 ABCDEFGHI			
	18X24	1 LINE 0123456789ABCDE				
	24X32	1 LINE 0123456789A				

Printing speed



Standard Specifications

Printing specifications	
Model	PXR-D240W / PXR-D440W
Nozzle size	40 μm
Max. print line number	Up to 2 Lines / Up to 4 Lines
Maximum number of print characters (each line)	1 Line: Up to 240 characters / 2 Line: Up to 120 characters / 1 Line: Up to 240 characters / 2 Line: Up to 120 characters / 3 Line: Up to 80 characters / 4 Line: Up to 60 characters
Dot matrix (horizontal × vertical)	1-2 Line: 5×5, 5×8 (or 5×7), 7×10 (or 9×7, 9×8) / 1 Line: 12×16 / 1-4 Line: 5×5, 5×8 (or 5×7), 9×8 (or 9×7) / 1-3 Line: 7×10 / 1-2 Line: 12×16, 1 Line: 18×24, 24×32
Character height	0.04 - 0.12 inches / 1 - 3 mm
Display & input device	Display: TFT LCD (10.4 inch, color), backlight provided / Input Device: Touch panel, input sound provided
Screen language / 2 language selectable:	English, Chinese, Korean, Thai, Vietnamese, German, French, Dutch, Italian, Spanish, Portuguese, Swedish, Danish, Greek, Russian, Czech, Polish, Arabic, Serbian, Turkish, Hungarian, Bulgarian and Catalan available
Maximum print rate (characters / s) (Font 5 × 5, space 1, 1 line)	Up to 1,514
Standard characters	Alphanumeric (A-Z, a-z, 0-9), symbols (27), space: Total 90
Number of user pattern registration	Each dot matrix 128 patterns
Print functions	Calendar, Counter, Message storage (150 messages), Font mixture, Password security, Bar codes (code39, ITF, NW-7, EAN13/UPC-A, Code128/EAN128), Data Matrix 2-D code (Alphabet: 49 characters, Numerals: 98 characters), Encoder function, Reciprocation printing, etc.
Input signal	Print target detection, Printing stop, Reciprocative printing, Rotary encoder pulse
Output signal	Print ready, Fault, Warnig, Print in progress or print end, Online
Data interface	RS-232C at baud rates selectable up to 38.4 kbps
General specifications	
Operating temperature range	32-95 °F / 0-35 °C (JP-K67, K69 Ink)
Humidity range	30-90 % R.H. (no condensation) Note: When humidity is more than 85 %RH, please purge inside of print head by air.
Power supply (Automatic voltage selection)	AC 100-120 / 220-240V ±10 % / 50/60 Hz 150 VA (AC Inlet)
Approval	CE, UL, cUL, C-Tick, FCC, ICES
Cabinet	Stainless Steel / IP55
Print head cable length	13.1 ft / 4 m
Overall size (width × depth × height)	15.7 × 12.4 × 20.3 inches / 400 × 315 × 515 mm
Approximate weight	55 lbs / 25 kg



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PXR-D for Larger Small-size Characters

The model is suitable for printing large characters on cartons, woods and buildings.

Main Features

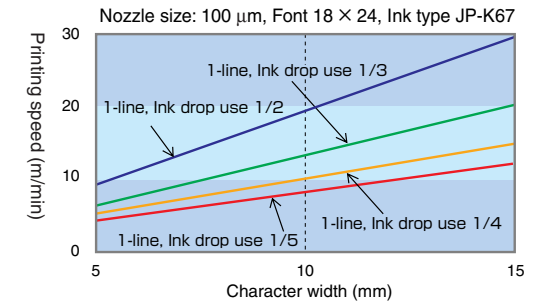
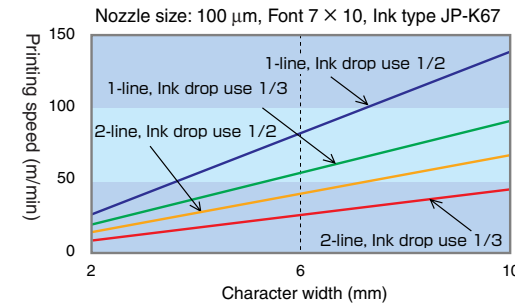
- The largest printing characters and print distance can be made among PXR series.
- Fast dry and high adhesion inks can be used with this model.



Printing Samples (Full Scale)

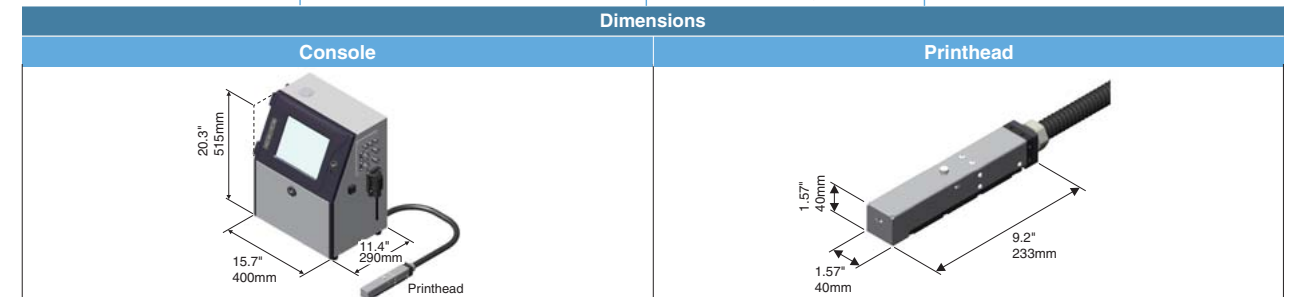
Font	PXR-D410W	
	Standard	Bold
7×10	0123456789ABCDE	0123456789ABCDE
	0123456789ABCDE	0123456789ABCDE
12×16	01234ABCD	01234ABCD
	012ABC	012ABC
18×24	012ABCD	012ABCD
	012ABC	012ABC
24×32	012AB	012AB
	012AB	012AB

Printing speed



Standard Specifications

Printing specifications	
Model	PXR-D410W
Nozzle size	100 µm
Max. print line number	Up to 4 Lines
Maximum number of print characters (each line)	1 Line: Up to 240 characters 2 Line: Up to 120 characters 3 Line: Up to 80 characters 4 Line: Up to 60 characters
Dot matrix (horizontal × vertical)	1-4 Line: 5×5, 5×8 (or 5×7), 9×8 (or 9×7) 1-3 Line: 7×10 1-2 Line: 12×16, 1 Line: 18×24, 24×32
Character height	0.12 – 0.59 inches / 3 – 15 mm
Display & input device	Display: TFT LCD (10.4 inch, color), backlight provided Input Device: Touch panel, input sound provided
Screen language 2 language selectable:	English, Chinese, Korean, Thai, Vietnamese, German, French, Dutch, Italian, Spanish, Portuguese, Swedish, Danish, Greek, Russian, Czech, Polish, Arabic, Serbian, Turkish, Hungarian, Bulgarian and Catalan available
Maximum print rate (characters / s) (Font 5 × 5, space 1, 1 line)	Up to 468
Standard characters	Alphanumeric (A-Z, a-z, 0-9), symbols (27), space: Total 90
Number of user pattern registration	Each dot matrix 128 patterns
Print functions	Calendar, Counter, Message storage (150 messages), Font mixture, Passwords security, Bar codes (code39, ITF, NW-7, EAN13/UPC-A, Code128/EAN128), Data Matrix 2-D code (Alphabet : 49 characters, Numerals: 98 characters), Encoder function, Reciprocation printing, etc.
Input signal	Print target detection, Printing stop, Reciprocative printing, Rotary encoder pulse
Output signal	Print ready, Fault, Warnig, Print in progress or print end, Online
Data interface	RS-232C at baud rates selectable up to 38.4 kbps
General specifications	
Operating temperature range	32-95 °F / 0-35 °C (JP-K67, K69 Ink)
Humidity range	30-90 % R.H. (no condensation) Note: When humidity is more than 85 %RH, please purge inside of print head by air.
Power supply (Automatic voltage selection)	AC 100-120 / 220-240V ±10 % 50/60 Hz 150 VA (AC Inlet)
Approval	CE, UL, cUL, C-Tick, FCC, ICES
Cabinet	Stainless Steel / IP55
Print head cable length	13.1 ft / 4 m
Overall size (width × depth × height)	15.7 × 12.4 × 20.3 inches 400 × 315 × 515 mm
Approximate weight	55 lbs / 25 kg



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PXR-P for Pigmented Ink

The model is suitable for various dark color surfaces.

Main Features

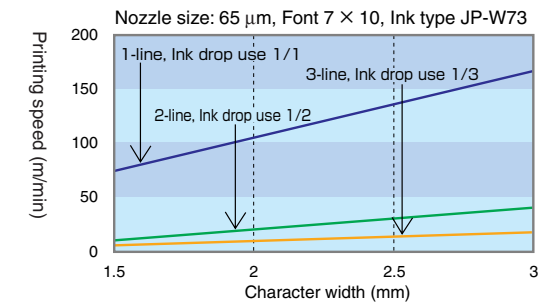
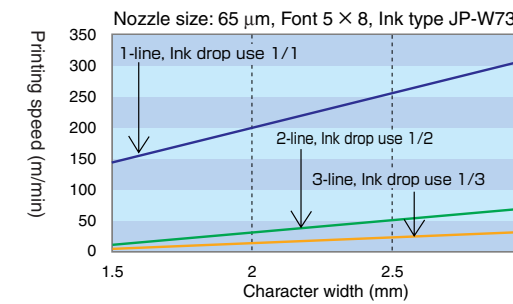
- Whiteness and adhesion strength are improved by newly developed white-pigmented ink.
- New ink circulation system is sure to stir the pigment particles.



Printing Samples (Full Scale)

Font	PXR-P460W			
5X5	1 LINE 0123456789A	2 LINE 01234 KLMNO	3 LINE 012345 ABCDEF NOPQRST	4 LINE 0123456789 ABCDEFGHIJ KLMNOPQR STUVWXYZ
5X7	1 LINE 01234567	2 LINE 01234 KLMNO	3 LINE 0123456 ABCDEF NOPQRST	4 LINE 0123456789 ABCDEFGHIJ KLMNOPQR STUVWXYZ
7X10	1 LINE 012345	2 LINE 0123 KLMN	3 LINE 0123456789 ABCDEFGHIJ KLMNOPQRST	
12X16	1 LINE 0123456789ABCDEFGHIJ		2 LINE 01234 ABCDE	
18X24	1 LINE 0123456789ABCDEFGHIJ 0123456789ABCDEFGHIJ			
24X32	1 LINE 0123456789ABCDE 012345678			

Printing speed



Standard Specifications : Nozzle size 65μm

Printing specifications	
Model	PXR-P460W
Nozzle size	65 μm
Max. number of lines	Up to 4 Lines
Maximum number of Characters per line	1 Line : Up to 240 characters 2 Line : Up to 120 characters 3 Line : Up to 80 characters 4 Line : Up to 60 characters
Dot matrix (Horizontal × vertical)	1-4 Line : 5 × 5, 5 × 8 (or 5 × 7), 9 × 8 (or 9 × 7) 1-3 Line : 7 × 10 1-2 Line : 12 × 16 1 Line : 18 × 24, 24 × 32
Character height	0.08 – 0.39 inches / 2–10 mm
Display & input device	Display : TFT LCD (10.4 inch, color), backlight provided Input Device : Touch panel, confirmation beep
Screen language 2 language selectable	English, Chinese, Korean, Thai, Vietnamese, German, French, Dutch, Italian, Spanish, Portuguese, Swedish, Danish, Greek, Russian, Czech, Polish, Arabic, Serbian, Turkish, Hungarian, Bulgarian and Catalan available
Maximum print rate (characters / s) (Font 5 × 5, space 1, 1 line)	Up to 2,083
Standard characters	Alphanumeric (A–Z, a–z, 0–9), symbols (27) space : Total 90
Number of logos / special character storage	Up to 128
Print functions	Calendar, Counter, Message storage (150 messages), Font mixture, Passwords security, Bar codes (Code 39, ITF, NW-7, EAN13 / UPC-A, Code 128 / EAN128), Data Matrix 2-D code (Alphabet : 49 characters, Numerals: 98 characters), Encoder Function, Reciprocation printing, etc.
Input signals	Print target detection, Printing stop, Reciprocative printing, Rotary encoder pulse
Output signals	Print ready, Fault, Warning, Print in progress or Print completed, Online
Serial interface	RS-232C at baud rates selectable up to 38.4 kbps
General specifications	
Operating temperature range	32–104°F / 0–40 °C (JP-W73 Ink)
Humidity range	30–90 % R.H.(no condensation) Note: When humidity is more than 85 %RH, please purge inside of print head by air.
Power supply (Automatic voltage selection)	AC 100–120 / 200–240 V±10 % 50/60 Hz 150 VA(AC Inlet)
Approval	CE, UK, cUL, C-Tick, FCC, ICES
Air supply	0.2–0.4 MPa
Cabinet	Stainless Steel / IP55
Print head cable length	13.1 ft / 4m
Overall size (width × depth × height)	15.7 × 12.4 × 20.3 inches 400 × 315 × 515 mm
Approximate weight	55 lbs / 25 kg

Dimensions	
Console	Printhead

*1. The print samples have been produced under ideal conditions. Print quality depends printing speed.
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PXR-H for High-speed printing

The model meets high-speed printing needs on lines of electric wires, cans, etc.

Main Features

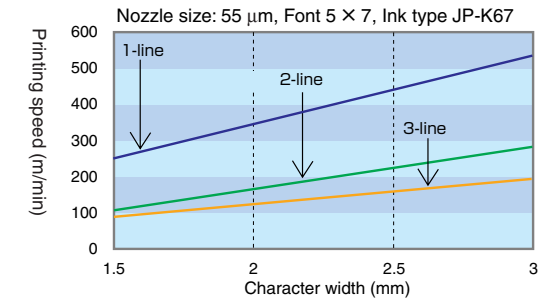
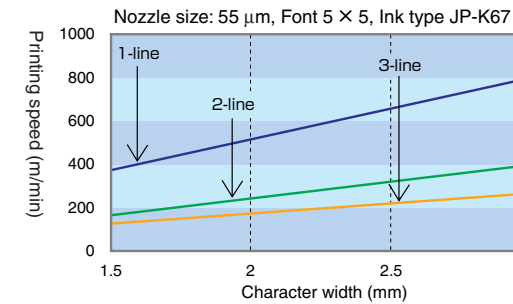
- Print quality has further improved by changes of nozzle control method.
- The world top class high-speed printing is possible



Printing Samples (Full Scale)

Font		PXR-H450W
5X5	1 LINE	0123456789ABCDEFGHIJKLMN
	2 LINE	0123456789ABCDEFGHIJKLMN ABCDEFGHIJKLMNOPQRSTUVWXYZ
	3 LINE	0123456789ABCDEFGHIJKLMN ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789ABCDEFGHIJKLMN
5X7	1 LINE	0123456789ABCDEFGHIJKLMN
	2 LINE	0123456789ABCDEFGHIJKLMN ABCDEFGHIJKLMNOPQRSTUVWXYZ
	3 LINE	0123456789ABCDEFGHIJKLMN ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789ABCDEFGHIJKLMN
	4 LINE	0123456789ABCDEFGHIJKLMN ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789ABCDEFGHIJKLMN ABCDEFGHIJKLMNOPQRSTUVWXYZ
12X16	1 LINE	0123456789

Printing speed



Standard Specifications

Printing specifications	
Model	PXR-H450W
Nozzle size	55 μm
Max. print line number	Up to 4 Lines
Maximum number of print characters (each line)	1 Line: Up to 240 characters 2 Line: Up to 120 characters 3 Line: Up to 80 characters 4 Line: Up to 60 characters
Dot matrix (horizontal × vertical)	1-4 Line: 5X8 (or 5X7), 9X8 (or 9X7) 1-3 Line: 5X5 1-2 Line: 7X10 1 Line: 12X16
Character height	0.08 – 0.26 inches / 2 – 6.5 mm
Display & input device	Display: TFT LCD (10.4 inch, color), backlight provided Input Device: Touch panel, input sound provided
Screen language 2 language selectable:	English, Chinese, Korean, Thai, Vietnamese, German, French, Dutch, Italian, Spanish, Portuguese, Swedish, Danish, Greek, Russian, Czech, Polish, Arabic, Serbian, Turkish, Hungarian, Bulgarian and Catalan available
Maximum print rate (characters / s) (Font 5 × 5, space 1, 1 line)	Up to 3,173
Standard characters	Alphanumeric (A-Z, a-z, 0-9), symbols (27), space: Total 90
Number of user pattern registration	Each dot matrix 128 patterns
Print functions	Calendar, Counter, Message storage (150 messages), Font mixture, Passwords security, Bar codes (code39, ITF, NW-7, EAN13/UPC-A, Code128/EAN128), Encoder function, Reciprocation printing, etc.
Input signal	Print target detection, Printing stop, Reciprocative printing, Rotary encoder pulse
Output signal	Print ready, Fault, Warnig, Print in progress or print end, Online
Data interface	RS-232C at baud rates selectable up to 38.4 kbps
General specifications	
Operating temperature range	32-104 °F / 0-40 °C (JP-K67, K69 Ink)
Humidity range	30-90 % R.H. (no condensation) Note: When humidity is more than 85 %RH, please purge inside of print head by air.
Power supply (Automatic voltage selection)	AC 100-120 / 220-240V ± 10 % 50/60 Hz 150 VA (AC Inlet)
Approval	CE, UL, cUL, C-Tick, FCC, ICES
Cabinet	Stainless Steel / IP55
Print head cable length	13.1 ft / 4 m
Overall size (width × depth × height)	15.7 × 12.4 × 20.3 inches 400 × 315 × 515 mm
Approximate weight	55 lbs / 25 kg
Dimensions	
Console	Printhead

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IJ Printer is Applied for Large Varieties of Printing.

Addition of print columns (Total 1,000 characters) [SOP-02]

The number of printable characters can be increased from standard 240 characters (24 items) to 1,000 characters (100 items)

Standard	240 (characters)	24 (items)
Addition	760 (characters)	76 (items)
Total	1,000 (characters)	100 (items)

Special Communication Function A [SOP-04]

Function	Content
Output of print contents	Print content will be transmitted by serial communication when the printing is completed or on request.
Output of print completion code	Print completion code will be transmitted when the printing is completed.
Status output	The printer status will be output when any change occurs in status, or an inquiry of status is given from an external device.
Transmission of remote operation	Remote operations of start, stop, deflection voltage (ON/OFF) and fault clear are possible.
Transmission of clock initialization	Current time, calendar time control, calendar time and clock system (24/12-hour system) can be set.
Transmission of print data registration	Print data can be registered in the specified message number, and the registered print data can be recalled.

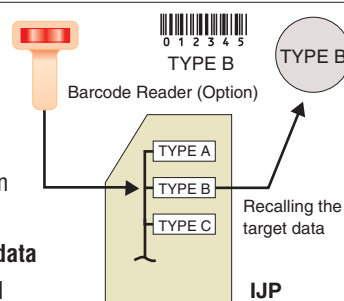
Barcode Reader Connection [SOP-08]

Function for setting print contents

The contents of barcode read by the barcode reader are transmitted to IJ printer as a character string and it is set in the IJP as a print item.

Function for recalling print data

The contents of barcode read by the barcode reader are transmitted to IJP as a recall code and the print data that has been assigned to the code is recalled.

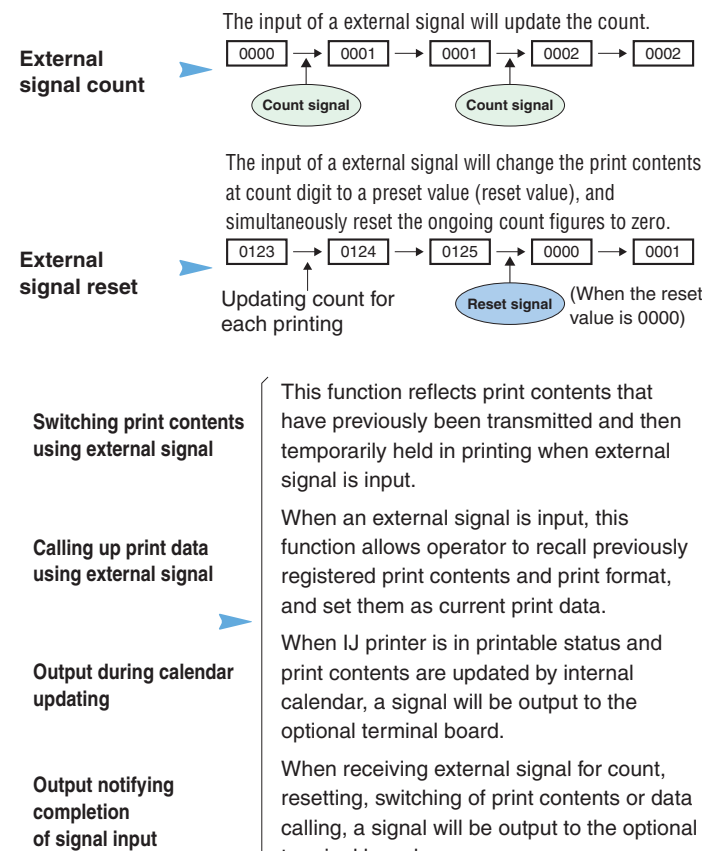


Addition of registered data elements (Total 300 data) [SOP-03]

The number of print data can be increased from standard 150 data to 300 data.

Standard	150 data
Addition	150 data
Total	300 data

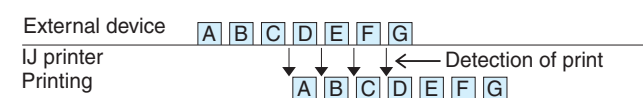
External Signal Function A [SOP-05]



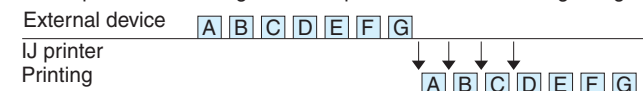
Communication Buffer [SOP-16-03]

The print contents that are temporarily stored in the buffer are retrieved and printed one by one after the print ready status is set. The buffer capacity is 100 print items.

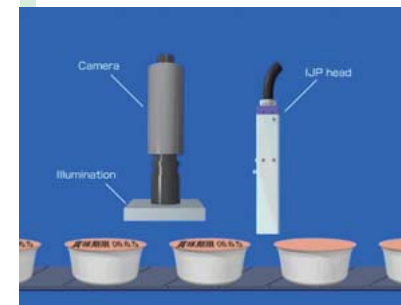
[Example of transmitting print contents constantly during printing]



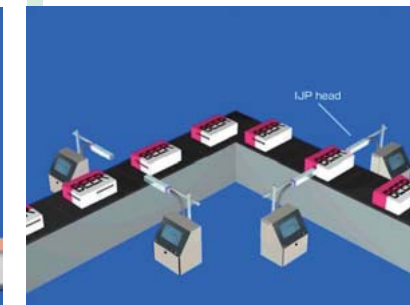
[Example of transmitting collective print contents at the beginning]



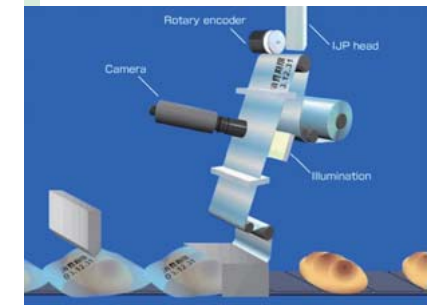
Cap label print inspection



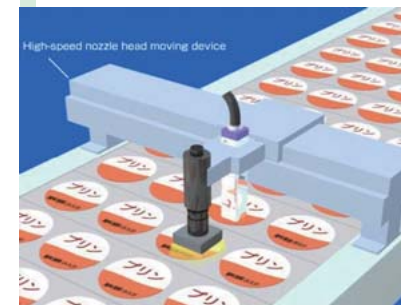
Paper-pack print inspection



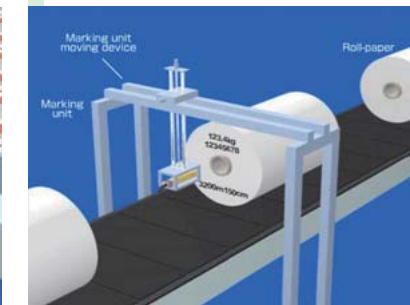
Film package print inspection



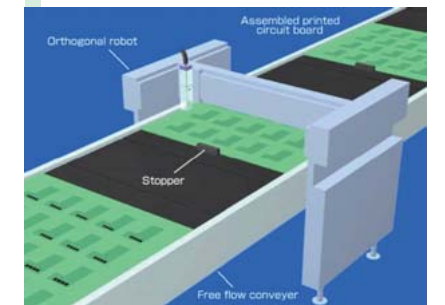
Traversing head automatic cup marking



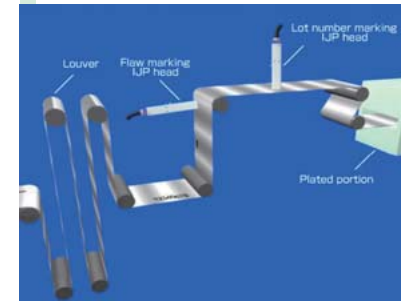
Roll-paper automatic marking



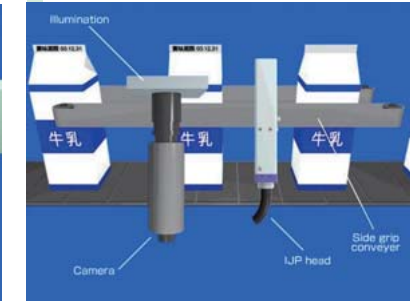
Assembled parts automatic marking



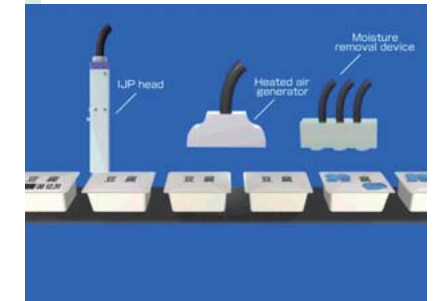
Steel-plate pitch print marking



Carton printing



Moisture/condensation removable printing



Various ink types and Color inks

All inks are based on RoHS.

Name of ink	Color	Makeup ink		Adaptable nozzle & applicable ambient temperature (☑: Adaptable)					Drying time at 68°F/ 20°C(s) ²	Light Stability		Primary applications (Features)
		TYPE	Solvent base	PXR-D for Small Characters	PXR-D for Micro Characters	PXR-D for Larger small-size Characters	PXR-P for Pigmented Ink	PXR-H for High-speed printing		Test conditions	Result	
JP-K26	Black	TH-TYPE B	MEK	32-95 °F/ 0-35 °C ☑		32-95 °F/ 0-35 °C ☑			1 to 5	Same as 1 year in the sunshine	No change	Steel (Alkali soluble ink)
JP-K27	Black	TH-TYPE A	MEK	32-113 °F/ 0-45 °C ☑	32-95 °F/ 0-35 °C ☑				1 to 5	Same as 1 year in the sunshine	No change	
JP-R27	Red	TH-TYPE A	MEK	32-95 °F/ 0-35 °C ☑		32-95 °F/ 0-35 °C ☑		32-95 °F/ 0-35 °C ☑	1 to 5	Same as 8 months in the sunshine	Discolored but legible	Paper, metals, plastic (Bottle, PCB, Film, etc.)
JP-B27	Blue	TH-TYPE C	MEK	32-95 °F/ 0-35 °C ☑		32-95 °F/ 0-35 °C ☑			1 to 5	Same as 1 year in the sunshine	Discolored but legible	Paper, metals, plastic (Bottle, PCB, Film, etc.) Electronic parts, glass container, etc.
JP-G27	Green	TH-TYPE A	MEK	32-95 °F/ 0-35 °C ☑		32-95 °F/ 0-35 °C ☑		32-95 °F/ 0-35 °C ☑	1 to 5	Same as 8 months in the sunshine	No change	
JP-K28	Black	TH-TYPE A	MEK	32-95 °F/ 0-35 °C ☑				32-95 °F/ 0-35 °C ☑	1 to 5	Same as 1 year in the sunshine	No change	Cans, PP-Sheet, PE-sheet, plastics (Retort-resistant, Wax-resistant)
JP-K33	Black	TH-18	MEK	32-95 °F/ 0-35 °C ☑	32-95 °F/ 0-35 °C ☑			32-95 °F/ 0-35 °C ☑	1 to 5	Same as 1 year in the sunshine	No change	Metals, plastics, PET laminated steel sheets (Non-migration)
JP-K60 ⁶	Black	TH-60	Ethanol	32-95 °F/ 0-35 °C ☑					3 to 10	Same as 1 year in the sunshine	Discolored but legible	Carton, painted container, metal, etc. (Suitable for applications dislike for odor)
JP-K61	Black	TH-23	MEK	32-95 °F/ 0-35 °C ☑	32-95 °F/ 0-35 °C ☑			32-95 °F/ 0-35 °C ☑	1 to 5	Same as 1 year in the sunshine	No change	PP, PE
JP-K62	Black	TH-18	MEK	32-95 °F/ 0-35 °C ☑	32-95 °F/ 0-35 °C ☑			32-95 °F/ 0-35 °C ☑	1 to 5	Same as 1 year in the sunshine	No change	Glass bottles, etc. (Resistant to condensation after printing)
JP-F63 ⁶	Invisible	TH-63	MEK	32-95 °F/ 0-35 °C ☑					20 to 40	Same as 1 month in the sunshine	Reduced luminescence but legible ¹⁰	Paper, plastics, metals, etc. Special marking for production control (It is illuminated in ultraviolet rays after printing.)
JP-T64	*9	TH-18	MEK	32-95 °F/ 0-35 °C ☑					1 to 5	—	—	Ceramic, metals, resistors, etc. (Heat resistant up to 1,300°C after printing)
JP-K65	Black	TH-65	MEK	32-95 °F/ 0-35 °C ☑	32-95 °F/ 0-35 °C ☑				10 to 13 for curing ⁷	Same as 1 year in the sunshine	No change	Printed circuit boards, electric parts, etc. (UV curable ink, highly resistant to organic solvents)
JP-R65	Red	TH-65	MEK	32-95 °F/ 0-35 °C ☑					10 to 13 for curing ⁷	Same as 1 year in the sunshine	No change	Printed circuit boards, electric parts, etc. (UV curable ink, highly resistant to organic solvents)
JP-K67	Black	TH-TYPE A	MEK	32-113 °F/ 0-45 °C ☑	32-95 °F/ 0-35 °C ☑	32-95 °F/ 0-35 °C ☑		32-104 °F/ 0-40 °C ☑	1 to 5	Same as 1 year in the sunshine	No change	Paper, metals, plastic (Bottle, PCB, Film, etc.) Electronic parts, glass container, etc.
JP-K68 ⁶	Black	TH-TYPE F	Ethanol	32-95 °F/ 0-35 °C ☑	32-95 °F/ 0-35 °C ☑	32-95 °F/ 0-35 °C ☑		32-95 °F/ 0-35 °C ☑	15 to 30	Same as 1 year in the sunshine	Discolored but legible	Carton, painted container, metal, etc. (Suitable for applications dislike for odor)
JP-K69	Black	TH-69	MEK	32-113 °F/ 0-45 °C ☑	32-95 °F/ 0-35 °C ☑	32-95 °F/ 0-35 °C ☑		32-104 °F/ 0-40 °C ☑	1 to 5	Same as 1 year in the sunshine	No change	Can, paper, plastic container, pipe, steel plate (Chrome-complex dye free ink)
JP-K70	Black	TH-70	MEK	32-95 °F/ 0-35 °C ☑				32-95 °F/ 0-35 °C ☑	1 to 5	Same as 6 months in the sunshine	Discolored but legible	Glass bottles, etc. (Alkali soluble ink, Sweating resistance on glass bottle)
JP-T71	Red-purple to blue ¹¹	TH-71	MEK	32-95 °F/ 0-35 °C ☑					1 to 5	Same as 6 months in the sunshine	Discolored but legible	Can, plastic bag, aluminum bag, plastic cup, etc. (Thermochromic ink in retort process)

Name of ink	Color	Makeup ink		Adaptable nozzle & applicable ambient temperature (☑: Adaptable)					Drying time at 68°F/ 20°C(s) ²	Light Stability		Primary applications (Features)
		TYPE	Solvent base	PXR-D for Small Characters	PXR-D for Micro Characters	PXR-D for Larger small-size Characters	PXR-P for Pigmented Ink	PXR-H for High-speed printing		Test conditions	Result	
JP-K72	Black	TH-18	MEK	32-104 °F/ 0-40 °C ☑	32-95 °F/ 0-35 °C ☑	32-95 °F/ 0-35 °C ☑			1 to 5	Same as 1 year in the sunshine	Discolored but legible	Plastic container, etc. It is highly adhesive to plastics, especially PP.
JP-W73	White	TH-73	MEK	32-104 °F/ 0-40 °C ☑				32-104 °F/ 0-40 °C ☑	5 to 7	Same as 1 year in the sunshine	No change	Rubber hoses, plastic pipes, metal, glass, electric/ electronic parts, etc. (White pigment ink)
JP-T75	Black to Blue	TH-75	2-Pentanone Ethanol	32-95 °F/ 0-35 °C ☑					1 to 5	Same as 2 weeks in the sunshine	Discolored but legible	Plastic, pouches, tin-free steel, tin-plate, aluminum, glass, metal closures of various colors (Thermochromic ink in retort process)
JP-R76	Pink	TH-76	MEK	32-95 °F/ 0-35 °C ☑					1 to 3	Same as 1 year in the sunshine	Discolored but legible	Glass, plastics, metals and coated paper.
JP-B82	Blue	TH-82	MEK	32-95 °F/ 0-35 °C ☑					2 to 3	Same as 1 year in the sunshine	Discolored but legible	Returnable bottles during the Cold Fill process (Washable with caustic wash)
JP-K83	Black	TH-83	MEK	32-95 °F/ 0-35 °C ☑					*8	Same as 1 year in the sunshine	Discolored but legible	Glass, plastics, metals and coated paper (Heat curable ink, resistant to certain chemicals)
JP-K84	Black	TH-84	MEK	32-95 °F/ 0-35 °C ☑	32-95 °F/ 0-35 °C ☑				1 to 5	Same as 1 year in the sunshine	No change	Metal, electric wire and film (Non-migration, retort-resistant and alcohol-resistant after printing)
JP-B85 ⁶	Blue	TH-TYPE C	MEK	32-95 °F/ 0-35 °C ☑					1 to 5	Same as 1 year in the sunshine	Discolored but legible	Glass, plastics, metals and coated paper.
JP-K86	Black	TH-86	Acetone	32-95 °F/ 0-35 °C ☑	32-95 °F/ 0-35 °C ☑				0.3 to 0.6	Same as 1 year in the sunshine	No change	Glass, plastics, metals and coated paper.
JP-K87	Black	TH-18	MEK	32-104 °F/ 0-40 °C ☑					1 to 5	Same as 1 year in the sunshine	No change	Glass, plastics, metals and coated paper (Resistant to Ethanol)
JP-K88	Black	TH-71	MEK	32-95 °F/ 0-35 °C ☑					1 to 5	Same as 1 year in the sunshine	Discolored but legible	Container made of PE such as food, the beverage, cosmetics, and the medicines.
JP-W89	White	TH-73	MEK	32-104 °F/ 0-40 °C ☑				32-104 °F/ 0-40 °C ☑	5 to 7	Same as 1 year in the sunshine	No change	Rubber hoses, plastic pipes, metal, glass, electric/ electronic parts, etc. (White pigment ink)
JP-K90	Black	TH-TYPE E	MEK	32-95 °F/ 0-35 °C ☑	32-95 °F/ 0-35 °C ☑				1 to 5	Same as 1 year in the sunshine	No change	Metal, electric wire and film (Non-migration, retort-resistant and alcohol-resistant after printing)
JP-Y91	Yellow	TH-84	MEK	32-95 °F/ 0-35 °C ☑	32-95 °F/ 0-35 °C ☑	32-95 °F/ 0-35 °C ☑	32-95 °F/ 0-35 °C ☑	32-95 °F/ 0-35 °C ☑	1 to 5	Same as 1 year in the sunshine	No change	Rubber hoses, PVC pipes, metal, glass, electric/ electronic parts, etc.
JP-F92	Invisible	TH-18	MEK	32-95 °F/ 0-35 °C ☑					1 to 3	Same as 1 month in the sunshine	Reduced luminescence but legible ¹⁰	Paper, plastics, metals, etc. Special marking for production control. (It is illuminated in ultraviolet rays after printing.) Compared with the current JP-F63 ink, it dries fast. It has an excellent retort resistance and high visibility under UV light, also.
JP-Y94	Yellow	TH-TYPE E	MEK	32-95 °F/ 0-35 °C ☑	32-95 °F/ 0-35 °C ☑			32-95 °F/ 0-35 °C ☑	1 to 5	Same as 1 year in the sunshine	No change	Rubber hoses, PVC pipes, metal, glass, electric/ electronic parts, etc. The visibility improved compared with the current JP-Y91.
JP-B95	Vivid Blue	TH-18	MEK	32-95 °F/ 0-35 °C ☑					1 to 5	Same as 1 month in the sunshine	Discolored but legible	Glass, plastics, metals and coated paper. Chrome substance and methanol are not contained.
JP-F97	Invisible	TH-71	MEK	32-95 °F/ 0-35 °C ☑					1 to 5	Same as 5 to 10 hours in the sunshine	Reduced luminescence but legible ¹⁰	Paper, cartons, and books (It is illuminated in red in ultraviolet rays after printing.)
JP-K101	Black	TH-101	MEK	32-104 °F/ 0-40 °C ☑					2 to 3	Same as 1 year in the sunshine	Discolored but legible	General purpose. Glass, plastics, metals and coated paper. Superior adhesion to coldfilled (+36°F or +2°C) glass bottles with a very thin layer of condensation.

*1 MEK: Methyl Ethyl Ketone
 *2 Note that the drying speed varies depending on shapes and materials of the printing object, and environment.
 *3 Hue and adhesion of the ink should be confirmed by printing samples in advance.
 *4 Please follow the law of the country when you use and dispose of the inks.
 *5 Please read the Material Safety Data Sheet (MSDS) before you use the inks.
 *6 Please supply clean and dry air from the air purge connection port at the rear of the console because the ink is hygroscopic.
 *7 Typical hardening conditions: Metal halide lamp (2kW), Lamp light emission length 250nm (80W/cm)
 *8 Requires heat curing at 300-350°F / 149-177°C between 30-60 minutes to meet the solvent resistance required by the specified Military Standard.
 *9 *Color of the printing varies depending on the heating temperature. Brown (room temperature), Gray (32°F/50°C), light blue (2,372°F/1,300°C)
 *10 Luminescence will be resumed by painting of the regenerating solution.
 *11 The color changes from red purple to blue by retort processing.

PXR-D 65 μm
 PXR-D 40 μm
 PXR-D 100 μm
 PXR-P 65 μm
 PXR-H 55 μm
 Software Options
 Ink Variation
 Application Examples

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Registration number: JACO-EC99J2009
Registration date: July 22, 1996

The Energy Saving Systems Division (Taga Division) of
Hitachi Industrial Equipment Systems Co., Ltd. obtained
ISO 14001 certification, an international standard for
environmental management systems.

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

The Energy Saving Systems Division (Taga Division) of
Hitachi Industrial Equipment Systems Co., Ltd. obtained
international standard ISO 9001 certification for the quality
assurance of the hoist motor block contained in this
brochure.