



HR2 SERIES

High Precision & High Resolution Printing

Applications

HR2 Series - Features



High Precision Printing

Specifically designed for applications that need to print on small labels measuring only 3mm(P) x 7mm(W) within a high precision printing of $\pm 0.3\text{mm}$.*

High Resolution Printing

Capable of printing high resolution barcodes and images on small labels at 305dpi or 609dpi resolution.



Industrial Space-Saving Design

The printer heavy-duty metallic construction is designed for the most demanding industrial environments that have limitations on space.



Integrated Dispenser with Internal Liner Rewinder

The printer integrated dispenser provides the ability to automatically dispense small labels without the liner for easy application after printing while internally rewinding the backing material from the dispensed labels.



Easy Media Loading

Easy loading of labels and ribbons as the top cover is uniquely designed to open upwards for providing easy access to the media compartment.



Multiple Communication Interfaces

Multiple standard communication interfaces - LAN, USB, RS-232C and EXT Port, ensuring easy-integration to a wide variety of applications.



Mobile Phone and Laptop Batteries Labelling



Electronic Components and Circuit Boards (PCB) Labelling



Cosmetics and Small Bottles Labelling



Serial Numbered Nameplates



* Using the Gap sensor.

PRINTER SPECIFICATIONS

Model: HR212 / HR224

PHYSICAL CHARACTERISTICS

Physical Dimension	Width 197mm (7.75")	Height 285mm (11.22")	Depth 365mm (14.37")	Weight 16.4kg (36.16 lbs.)
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PROCESSING

32 Bit RISC-CPU	Flash ROM: 32 Megabytes	SDRAM: 16 Megabytes	External memory: SD card (Up to 2GB)
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POWER SUPPLY

HR212	At peak: 95W / 95VA (Print ratio 30%), In standby: 26W / 27VA
HR224	At peak: 115W / 115VA (Print ratio 30%), In standby: 26W / 27VA

ENVIRONMENTAL (EXCLUDING MEDIA)

Operating Temperature/Humidity	0° to 40°C (32 to 104 F), 10 to 80% RH, Non-condensing
Storage Temperature/Humidity	-5° to 60°C (23 to 140 F), 10 to 90% RH, Non-condensing

PRINT

Method	Thermal Transfer		
Print Speed (selectable)	25 to 100 mm/sec (1 to 4 ips) <i>Note: Setting value: 12.5 mm/sec (0.5 ips) increments. Print speed varies depending on the media used.</i>		
Resolution	HR212: 12 dots/mm (305 dpi)	HR224: 24 dots/mm (609 dpi)	
Max. Print Area	W 56 mm (2.2") x P 200 mm (7.9")		
Precision of print start position			
Dispenser mode	[GAP sensor] Within ±0.3 mm (0.012")	[I-Mark sensor] Within ±1.5 mm (0.059")	Width direction: Within ±0.3 mm (0.012")
Continuous mode	[GAP sensor] Within ±0.3 mm (0.012")	[I-Mark sensor] Within ±1.0 mm (0.039")	Width direction: Within ±0.3 mm (0.012")
Tear-off mode	[GAP sensor] Within ±0.5 mm (0.019")	[I-Mark sensor] Within ±1.5 mm (0.059")	Width direction: Within ±0.3 mm (0.012")

Operating environment: Temperature 0 to 40°C (32 to 104 F)/Humidity 10 to 80%RH (Non-condensing). *Using the Gap sensor will provide better print start position accuracy as compared to using the I-Mark sensor. *The print accuracy above is tested based on specific conditions and it does not include label assembly accuracy. Depending on label, ribbon and label size conditions, it may not be possible to obtain the value above. Using SATO precise measurement labels with ±0.2 mm (0.008") tolerance is recommended.

MEDIA (Label)

Size	Pitch: 3 to 197 mm (0.1" to 7.7") Width: 7 to 58 mm (0.3" to 2.3")	Pitch including liner: 6 to 200 mm (0.2" to 7.8") Width including liner: 10 to 61 mm (0.4" to 2.4")
<i>The above sizes are structurally possible and some restrictions may apply depending on paper types and environment usage. Make sure to check the paper size and corresponding print mode before operation.</i>		
Type	Thermal Transfer	Roll Diameter (Max. outer diameter) 185 mm (7.3")
Core Diameter	Inner core diameter 76.4 mm (3.0")	Label Thickness 0.13 to 0.220 mm (0.005" to 0.008")
Wind Direction	Face-Out	

RIBBON

Dimension	Width Max. 65 mm (2.55")	Length Max. 150 m (492.1ft.)	Wind Direction: Face-In
Winding Method	Wind on roll (Roll inner diameter: 1")		
Roll outer diameter	Max. 51 mm (2.0")		

CHARACTER FONT CAPABILITIES

Bitmap Fonts	X20, X21, X22, X23, X24, U font, S font, M font, WB font, WL font, OCR-A, OCR-B
Rasterized Fonts	CG Times, CG Triumvirate
Outline Fonts	Alphanumeric, Symbols

BARCODE CAPABILITIES

1D Barcodes	UPC-A, UPC-E, JAN 13, JAN 8, EAN-13, EAN-8, CODE39, CODE93, CODE128 (128A, 128B, 128C), GS1-128 (UCC/EAN128) (Character set: Set-A, Set-B, Set-C), CODABAR (NW-7), ITF, Industrial 2 of 5, Matrix 2 of 5, Customer barcode, UPC add-on barcode, GS1 Databar (RSS), Composite Symbols.
2D Barcodes	QR code, MicroQR, PDF417, MicroPDF, MAXI code, GSI DataMatrix (ECC200), Security QR code

INTERFACES

Interface	USB 2.0, LAN (10BASE-T/100BASE-TX Auto detection), RS-232C (DSUB9 pin-female), EXT Port (Amphenol 14 pin-female), SD card slot (1 slot)
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LANGUAGE

Standard	SATO Barcode Printer Language (SBPL)
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SENSING

Sensors	Gap (Transmissive), I-Mark (Reflective), Cover Open, Dispense, Ribbon End, Rewinder Full, Head Lift.
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REGULATORY COMPLIANCE

CE, CCC	SD card
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OUR PRESENCE IN ASIA PACIFIC

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