





High-speed, high-quality printing performance. The RMGT 5 series meets a wide range of needs.

The 520 series of A3-plus size offset presses is popular around the world.

Featuring user-friendly operation, high printing efficiency, and advanced automation and labor-saving functions.

From LED-UV compatible multi-color presses to single-color presses ideal for short-run jobs, the full model lineup meets a wide range of needs.

520GX model

A3-plus size offset press

Ideal for wide range of short-run color printing







PCS-H printing control system



520GE model

A 2-color press that delivers superior cost-performance

A3-plus size 2-color offset press



520HX model

A3-plus size single-color offset press

For high-speed, high-quality single-color printing



NP unit for value-added tasks*

A NP unit capable of inline numbering and perforating



520GX model

A3-plus size offset press LED-UV*
*For the semi-high pile delivery press



State-of-the-art technology for maximum printing quality and all-round performance, meeting a wide range of printing need



The 520GX model features an array of automation and labor-saving systems plus other high-end technologies, delivering high printing speeds up to 15,000 S.P.H. From catalogs and heavy stock packaging to envelopes and postcards, the 520GX model can meet wide range of printing need.

Highly reliable mechanisms for maximum printing quality

Superior inking and dampening mechanisms

The 520GX model features ink fountains with high gradations for precise ink control. In addition, the R-matic continuous dampening system forms a uniform dampening film on the plate surface for excellent reproduction of sharp halftone dots, glossy solids, and finely detailed text. It is easy to switch between integrated mode and separated mode to suit the image printed and ink characteristics.



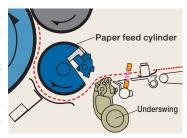
Simple cylinder arrangement

A double-diameter impression cylinder and double- and triplediameter transfer cylinders are arranged in a satellite-type configuration, minimizing the number of gripper changes.

The larger cylinder circumference also reduces sheet curling—an advantage when printing on heavy stock.

High-speed infeed mechanism

Thanks to a simple and reliable underswing, accurate drop-away front lay system, and cam-closed type sheet grippers, registration precision is maintained even when printing at the maximum speed of 15,000 S. P. H.



Rugged construction for exceptional durability



A bearer contact that maintains constant cylinder rotation and pressure, induction-hardened ultrahigh precision gears, and ultra-high precision cylinder bearings combine to ensure many years of consistently high printing quality.

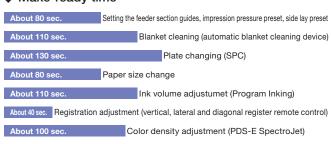


Advanced automation systems

Greatly shortens make-ready time

The entire process from makeready through printing can be centrally controlled from the PCS-H printing control system's touch panel. This greatly shortens makeready for job changeover, such as when changing the sheet size, cleaning, performing registration, color adjustment, adjusting the dampening solution volume, and other tasks. The result is much greater operating efficiency for short-run printing.

Make-ready time



Total make-ready time: About 10 min. 50 sec.

Conditions

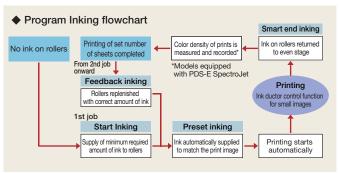
- Using the 520GXP-4
- With a sheet change [from 350 x 500 x 0.5 (t) mm to 375 x 520 x 0.1 (t) mm]
- With image change
- Using sidel lay preset
- Using optional Ink Volume Setter
- Using optional PDS-E SpectroJet
- Using impression pressure preset
- *The times indicated were required by RMGT technical staff to complete the makeready tasks.

 Actual results will vary according to the printing conditions, printing environment, and level of operator experience. (Time required to change the feeder and delivery pile boards not included.)



Program Inking (built into the PCS-H)

The PCS-H printing control system includes a Program Inking function that automatically supplies the rollers with the ideal amount of ink prior to the start of printing. The conversion curve for each color is automatically set according to the image area ratio calculated at prepress. The number of contacts by the ink ductor roller is then regulated based on the conversion curve to supply the ideal amount of ink, so much less time is required for color adjustments.



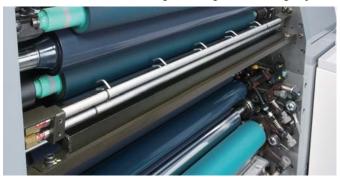
SPC semi-automatic plate changing system

SPC semi-automatic plate changing system comes as standard equipment and allows plates to be changed quickly and accurately. The operator merely sets the plate on the positioning pins and presses the button. A plate bending device is unnecessary, as there is no need to bend the plate's leading or tail edge. This automated system allows easy reuse of stored plates, and can handle polyester-based plates as well as metal plates.



Automatic cleaning devices

The automatic blanket cleaning device and ink roller cleaning device reduce the time and effort involved in cleaning and changing colors, reducing operator workload. The cleaning pattern for ink rollers and blankets can be selected according to the degree of cleaning required.



Automatic ink roller cleaning device

Register punch (option)

The RP780-425M uses a pair of CCD cameras to scan for registration marks. It then adjusts the vertical, lateral and diagonal position of the plate and punches holes to match the image's position.

Accurate, efficient punching further assures the accuracy of the semi-automatic plate changing system. The RP520-425F, a compact and affordable punch, is also available.



RP520-425F

Side lay and impression pressure preset systems

Simply inputting the sheet size and thickness via PCS-H touch panel display automatically sets the impression pressure and side lay to the optimum position.



Side lay and impression pressure preset setting screen

520GX model

A3-plus size offset press LED-UV* For the semi-high pile delivery press



The versatility to handle a wide range of jobs

Vacuum feeder board

Vacuum feeder board makes setting the brush and runner wheels easier and shortens makeready when changing the sheet size. The sheet is held securely by the vacuum belt and smoothly fed to the front lay.



A variety of detectors help to prevent problems

Various detectors continuously monitor the sheet flow from the feeder to the delivery section. If a problem occurs, the cause is displayed on the PCS-H display's OK monitor to enable the operator to take immediate action.

Compatibility with many sheet types

520GX presses have a minimum sheet size of 105 x 100 mm* (4.13" x 3.94"), enabling the printing postcards as well as laterally fed envelopes. In addition, these presses can also handle paper thickness ranging from 0.04 mm (0.0016") onion skin to 0.6 mm (0.024") card stock.

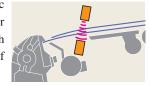
*Min. sheet size of the 520GXP-4/520GXP-5/520GXP-6 when perfecting is 150 x 100 mm (5.91" x 3.94").

Stable sheet piling

The de-curler uses a vacuum to eliminate curls in paper stock immediately prior to delivery. Printed sheets are delivered neat and flat. In addition, an air blower and vacuum slow down wheels boost sheet piling performance when printing at high speed.

Ultrasonic type double sheet detector (option)

The attenuation ratio of an ultrasonic signal that is passed through the paper is measured to detect with high precision any double-sheet feeding of thick paper, transparent film, etc.



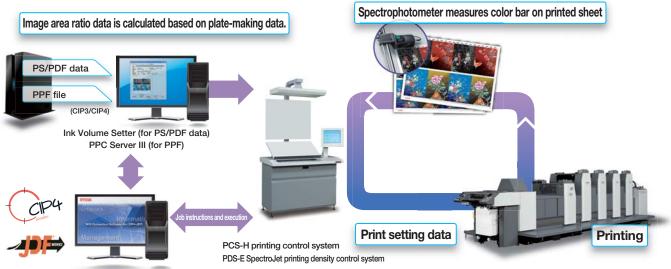
Creating the ideal workflow for production and quality management

PDS-E SpectroJet printing density control system (option)

This system employs a spectrophotometer to measure the color bar on the printed sheet and calculate the amount of color correction required to match the OK sheet. This information is then fed back to the PCS-H printing control system to adjust the opening of the ink fountain keys. Color adjustments are numerically controlled based on the color bar measurement data, requiring fewer test sheets and achieving more consistent printing quality.

MIS connection software (CIP4-JDF compatible) (option)

Optional MIS connection software connects a CIP4-JDF compatible MIS (management information system) and a compatible press for real-time printing process management. This software also enables real-time exchange of CIP4-JDF format data on job instructions (job name, number of sheet printed, sheet size, etc.) between the MIS and PCS-H.



Fully automatic convertible perfecting device

Fully automatic convertible perfecting device

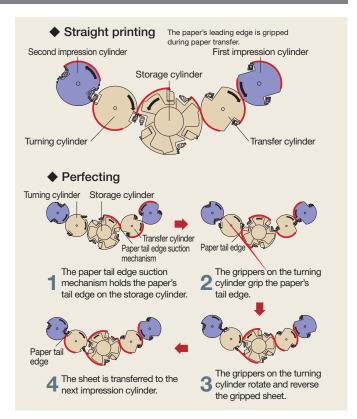
The 520GXP-4/520GXP-5/520GXP-6 presses are equipped with a fully automatic convertible perfecting device. Switching between straight printing and perfecting can be performed remotely from the delivery side via the PCS-H. The operator simply inputs the sheet size and selects a printing mode from the touch panel display. Various perfecting device settings switch automatically to match the sheet size. These include the open/close timing of the grippers on the storage cylinder and turning cylinder, the position of the paper tail edge suction mechanism, and the phase of the turning cylinder and storage cylinder.

Unique features support both high-quality straight printing and perfecting

- The impression cylinders that follow the convertible perfecting cylinder use a jacket with a specially processed surface. This prevents damage to the back side of the paper, guaranteeing superb print quality even when perfecting.
- The rotating suckers of the paper tail edge suction mechanism tightly hold the paper's tail edge, pulling it both the lengthwise and laterally to accurately transfer the paper from the storage cylinder to the turning cylinder.
- Air blown by the air guide plate (perfector only) enable sheets to be delivered without



Paper tail edge suction mechanism touching the delivery section. This system prevents the back side of the sheet



5-color and 6-color printing and varnish coating



from being damaged.

Coating unit

This coating unit can perform in-line coating with either aqueous or UV varnish to protect the printed sheet or produce a glossy finish for high-value-added printing work. The unit also features a universal clamp to which either a blanket with an aluminum bar or a nylon plate attached to a metal plate can be mounted for performing both full-surface and spot coating with varnish.

Retractable coating unit design

When the coating unit is not being used, the entire varnish cylinder and anilox roller mechanism can be easily slid upward at the touch of a button to prevent scratching of the printed sheets.

5-color and 6-color printing for enhancing the visual effect of printed materials

Fifth and sixth color printing units can be used to print custom colors and supplemental colors such as gold, silver, fluorescent ink, and opalescent ink, greatly enhancing the visual effect of printed materials.

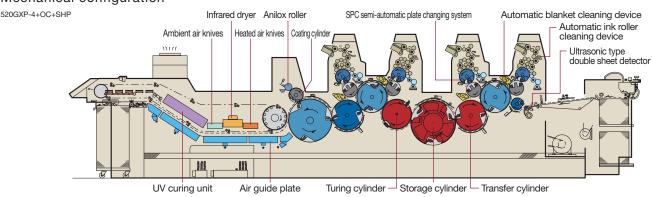
Select from a variety of drying/curing units

520GX/520GXP models can be equipped with various different types of drying or curing units, including infrared/UV and LED-UV curing units. In addition to shorter lead times, instant curing also makes possible high-value-added work such as embossing and printing on



LED-UV curing unit

Mechanical configuration



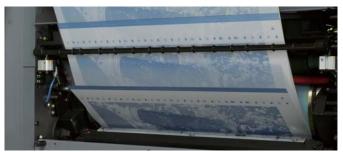
520GE model

A3-plus size 2-color offset press

A compact, superior cost-performance 2-color model boasting easy operation and exceptional printing quality



SPC semi-automatic plate changing system



The 520GE model has a semi-automatic plate changer for fast, accurate plate changing. The plate can be mounted by simply placing it on the positioning pins and pressing a button. There is no need to bend the plate's leading edge or tail edge, so no bending tool is required.

Lever-controlled ink fountains

Lever-controlled ink fountains are included as standard equipment. Ink level markings enable the level in each fountain to be confirmed at a glance. The color can be fine-adjusted quickly and easily by simply moving the lever up or down.

PCS-JX printing control system (option)

PCS-JX printing control system let operators remotely control subtle ink balance adjustments.

The operation panel is equipped with a touch-screen LCD, from which the operator can easily control Program Inking, save and call up printing data and check the opening volume of the ink keys.



Vacuum feeder board

Vacuum feeder board makes setting the brush and runner wheels easier and shortens makeready when changing the sheet size. The sheet is held securely by the vacuum belt and smoothly fed to the front lay.



The 520GE's many automation and labor-saving devices ensure easy operation and exceptional printing quality. Various optional devices are also available, including automatic cleaning devices and the PCS-JX printing control system which enables remote color adjustment. The 520GE model delivers outstanding performance for low-cost short-run color printing.

Automatic cleaning devices (option)

Automatic ink roller and blanket cleaning devices are available as options to reduce operator workload and shorten the time needed for cleaning and changing colors during job changeover.

R-matic continuous dampening system

The 520GE model is equipped with the R-matic continuous dampening system, which forms a uniform dampening film on the plate surface for excellent reproduction of sharp halftone dots, glossy solids, and finely detailed text.



Bearer contact cylinder system

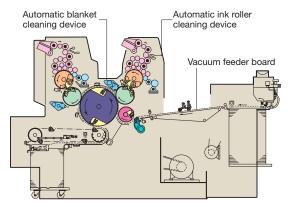
A bearer contact cylinder system for the plate cylinder and blanket cylinder maintains constant cylinder rotation and plate pressure for consistently high printing quality.

Rotary-type stream feeder

A rotary type stream feeder ensures smooth, stable paper feeding for paper thickness ranging from onion skin to heavy stock. Adjustments to accommodate variations in sheet type and size are simple and easy.



Mechanical configuration



520HX model

A3-plus size single-color offset press

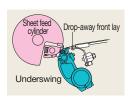
Exceptional versatility to handle a wide range of printing work with outstanding productivity and efficiency



Featuring the R-matic continuous dampening system, highly reliable mechanisms and simple operation, the 520HX model delivers both high productivity and high printing quality. It is the ideal A3-plus size single-color offset press for diverse short-run printing.

High-speed infeed mechanism (underswing and drop-away front lay)

Thanks to a simple yet precise underswing infeed system, an accurate drop-away front lay system and cam-closed type sheet grippers, stable registration accuracy is maintained even during printing at 13,000 S.P.H.



Front/side lay register controller

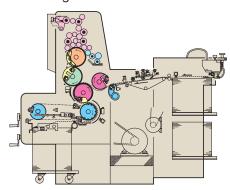
A front/side lay register controller comes as standard equipment to allow operators to simply push buttons to make adjustments in the image position. From the delivery side, the operator can quickly adjust the registration by moving the front and side lays in increments of 0.01 mm (0.0004") vertically, laterally or diagonally. [Adjustment range: vertically, diagonally: ±1 mm (0.039"): laterally: ±2.5 mm (0.098")]



Quick plate mounting

A plate cylinder fixed-position stop function automatically stops the plate cylinder at the ideal position for easy plate mounting. A straight-edge plate clamp with positioning pins and a quick tension mechanism allows accurate and easy plate mounting.

Mechanical configuration



NP52, numbering and perforating unit

NP unit

Can be easily retrofitted in the field. For high-value-added jobs



Independent impression cylinder

The NP52 unit features an independent impression cylinder which is completely separated from the offset printing section. This system does not affect the offset printing quality, and allows the combining of finishing operations including numbering, vertical and cross perforating and imprinting.

Swing-away design

A swing-away design has been adopted for the NP unit. When only offset printing is required without any finishing operations, the NP unit can be swung away from the parent press in just a few minutes.

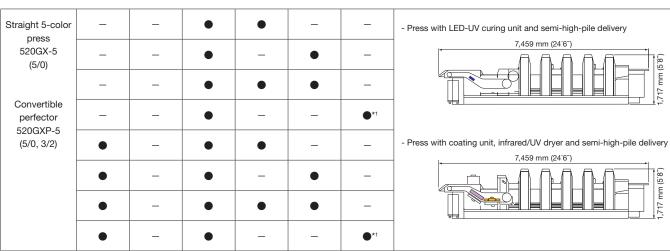
Specifications

		NP52
N	Max. sheet size (when using NP unit)	365 x 520 mm (14.37" x 20.47")
N	fin. sheet size (when using NP unit)	182 x 257 mm (7.17" x 10.12")
F	aper thickness (when numbering)	0.04 – 0.25 mm (0.0016"- 0.0098")
F	aper thickness (when perforating)	0.04 – 0.15 mm (0.0016" - 0.0059")
N	Max. numbering area	345 x 505 mm (13.58" x 19.88")
N	Max. nylon plate size	120 x 90 mm (4.72" x 3.54") for one spot color printing
N	Max. imprinting area	345 x 505 mm (13.58" x 19.88") (Spot color printing of numerous small images can be printed in this area)
N	Non-printing area	9±1 mm (0.354"± 0.039")
P	rinting speed (when using NP unit)	3,000 – 8,000 S.P.H.
١	lumber of ink rollers	8 (form rollers: 2)
	Delivery system	Chain delivery
	Delivery pile capacity	350 mm (13.78')
	lumbering boxes straight & convex)	Mount rings (max): 5, Numbering boxes on a ring (max.): 4, Total numbering boxes (max.): 20
F	Repeat numbering	Prints the same number on up to 9 consecutive sheets
V	/ertical perforator	5 pcs. (max.)
	Cross perforator	3 pcs. (max.)
l	Jnit dimensions (L x W x H)	920 x 1,020 x 1,020 mm (3' x 3'4" x 3'4")
l	Jnit net weight	460 kg (1,015 lbs)

Note: NP 52 can be only be installed on a low-pile delivery press. Installation requires that a special chain delivery system be installed on the press

520GX model combination chart

	Coating unit	Delivery		Dryer				
Model		Low-pile	Semi-high pile	Infrared dryer	UV curing unit	LED-UV curing unit	Mechanical side view	
Straight press 520GX-4	_	•	_	_	_	_	- Press with low-pile delivery	
(4/0)	_	_	•	•	_	_	4,196 mm (13°9")	
	_	_	•	_	•	_	-11 mm (5.8.5)	
Convertible perfector 520GXP-4	_	_	•	•	•	_	 	
(4/0, 2/2)	_	_	•	_	_	•	- Press with coating unit, infrared/UV dryer and semi-high-pile delivery press	
	•	_	•	•	_	_	6,899 mm (22'8")	
	•	_	•	_	•	_	717 mm (5/8)	
	•	_	•	•	•	_		
	•	_	•	_	_	•		



^{*1:} A type that mounts over the fifth color unit's impression cylinder is also available.

Straight 6-color press	_	_	•	•	_	_	- Press with infrared/UV dryer and semi-high pile delivery
520GX-6 (6/0)	-	_	•	_	•	_	7,459 mm (24'6")
	_	_	•	•	•	_	(8.9) mu L/L-1
Convertible perfector	-	_	•	_	_	•	
520GXP-6 (6/0, 4/2)	•	_	•	•	_	_	- Press with coating unit, infrared/UV dryer and semi-high pile delivery press
	•	_	•	_	•	_	8,394 mm (27'6')
	•	_	•	•	•	_	177. mm (F7.
	•	_	•	_	_	•	

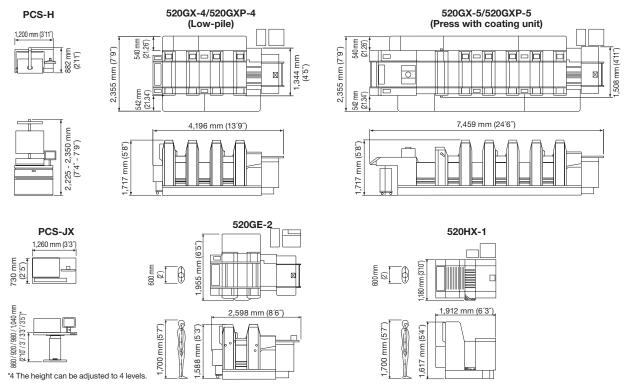
Notes

^{1.} There are some coating and drying limitations when perfecting. For more information, please ask your dealer.

Specifications

		520GX-4/ 520GXP-4	520GX-5/ 520GXP-5	520GX-6/ 520GXP-6	520GE-2	520HX-1			
Number of printing	g units	4	5	6	2	1			
Max. sheet size			(Ĩ					
Min. sheet size			.13" x 3.94") Perfecting : 15 Postcard feeding set is necessary.	105 x 100 mm (4.13" x 3.94") Postcard feeding set is necessary.					
Max. printing area				7					
Paper thickness*1			t: 0.04 – 0.6 mm (0.0016"– : 0.04 mm – 0.4 mm (0.0010	0.04 – 0.4 (0.5) mm [0.0016" – 0.016" (0.02")] 0.5 mm (0.02") stock can be printed when feeding sheets perpendicular to the fiber direction.					
Max. printing spee	ed*2		15,000 S.P.H.	11,000 S.P.H.	13,000 S.P.H.				
Plate size			400 x 510 mm [positioning		Standard: 400 x 510 mm (15.75" x 20.08') Max.: 410 x 510 mm (16.14" x 20.08')				
Plate thickness			0.3 ı	mm (0.012") (cylinder packing	total)				
Blanket type				Blanket with aluminum bar					
Blanket size			437 x 5	i41 x 1.95 mm (17.2" x 21.3" x	0.077")				
Under-blanket size	е		389 x 5	05 x 0.6 mm (15.31" x 19.88" :	x 0.024")				
Feeder pile capac	ity		800 mm (31.5")	600 mm (23.62°)	550 mm (21.65°)				
Delivery pile capa	city	Low pile : 430 mm (16.93') Semi-high pile : 700 mm (27.56')	700 mm	400 mm (15.75″)	400 mm (15.75″)				
Infeed system			Unders	cylinder					
Number of	Ink rollers		17 (form rollers : 4)/unit	16 (form rollers : 4)/unit	17 (form roller: 4)/unit				
rollers	Water roller								
Non-printing area									
Vertical image micr	ro adjustment		± 1 mm (± 0.039°		± 1 mm (± 0.039") by front lay				
Vertical image roug	gh adjustment		± 20 mm		± 20 mm (± 0.79")				
Lateral image micr	o adjustment		± 2 mm (± 0.079")		± 2.5 mm (± 0.098') (side lay)				
Diagonal image mic	cro adjustment	±	_						
Oiling system		Automatic centralized oiling system							
Power source			3 pha	ltages					
Electric current*3		520GX-4 : 63A*3 520GXP-4 : 70A*3	520GX-5 : 73A*3 520GXP-5 : 80A*3	520GX-6 : 78A* ³ 520GXP-6 : 85A* ³	27A	17A			
Power consumption	on*³	520GX-4 : 16 kW* ³ 520GXP-4 : 18.5 kW* ³	520GX-5 : 21 kW* ³ 520GXP-5 : 24 kW* ³	520GX-6 : 23 kW* ³ 520GXP-6 : 25 kW* ³	7.5 kW	5 kW			
	Length	4,196 mm (13´9´)*4	7,459 mr	m*4 (24´6´)	2,598 mm (8'6")	1,912 mm (6´3´´)			
Dimensions	Width		2,355 mm (7'9")	1,955 mm (6´5")	1,180 mm (3´10´´)				
	Height		1,717 mm (5´8´)	1,588 mm (5´3´´)	1,617 mm (5´4´´)				
Weight		, , ,	520GX-5 : 11,900 kg (26,230 lbs) *5 520GXP-5 :12,200 kg (26,900 lbs) *5	3,350 kg (7,385 lbs)	2,000 kg (4,409 lbs)				

Mechanical Configuration



^{*1:} There are some limitations to print thick paper depending on paper types.
*2: The local conditions, ink, stock and printing plate types, and printing quality required will affect the maximum printing speed. When printing postcard, the maximum printing speed is 8,000 S.P.H.
*3: The electrical specifications indicated are only for the press itself. For the specifications when a coating or drying unit is installed, contact your dealer.

^{*4:} The indicated dimensions and weight are for a low-pile delivery press without a coating unit.

^{*5:} The indicated dimensions and weight are for a semi-high pile delivery press without a coating unit.

Equipment & Accessories

● : Standard ○ : Option - : Not available

520GX 520GE 520HX model model model Vacuum feeder board An integrated feeder board roller movement system Side lay presetting Side lay detector*1 Front lay micro adjustment device (manual) • Front/side lay register controller Impression pressure preset system SPC semi-automatic plate changing system • • Plate register remote control device Lever control ink fountain Dial control registration adjustment PCS-H printing control system O*1 PCS-JX printing control system Program Inking O*2 (with built-in printing control system) Dial control ink fountain R-matic continuous dampening system Chiller for dampening solution Cushion tank for dampening solution R-matic-D continuous dampening system 0 \bigcirc with hickey removing function \bigcirc Hickey picker*1 PPC Server III ○*3 Ink Volume Setter (for PS) \bigcirc ○*3 PDS-E SpectroJet \bigcirc O*3 printing density control system MIS connection software (for CIP4-JDF) 0 Print Job Manager 0 Ink roller temperature control system

● : Standard ○ : Option - : Not available

	520GX model	520GE model	520HX model
Double sheet detectors (mechanical/electronic)	•	•	•
Ultrasonic type double sheet detector*1	0	_	_
Slewed paper detector	•	•	•
Front lay paper stopper	•	_	_
Static eliminator	•	•	•
De-curler	•	0	0
Powder spray	•	•	•
Powder spray (Grafix Gmbh)	0	_	_
Preset repeat counter (5-digit)	•	•	•
Machine counter (8-digit)	•	•	•
Print counter (8-digit)	•	0	0
OK monitor	•	•	•
Tape inserter	0	0	0
Nonstop delivery device	0	0	0
LED-UV curing unit*4	0	_	_
Coating barrel	0	_	_
Coating barrel with heater	0	_	_
Straight edge blanket clamp set	0	0	0
RP780-425M register punch	0	0	0
RP520-425F register punch	0	0	0
Beil 425 register punch	0	0	0
NP unit: NP52*5	0	0	0
Postcard feeding set	•	•	•
Ink oscillating form roller (for 1st form roller)	0	0	0
Oscillating bridge roller	0	0	0
UV roller*6	0	0	0
Air compressor	*7	*7	*7
Various safety devices (Certified under global safety standard)	•	•	•

^{*1:} Factory installation recommended. *2: The PCS-JX is required. (Smart End inking is not available on the 520GE-2.) *3: The PCS-JX is required.

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For more information, please ask your dealer.

Non-operation side crawl operation box

Automatic ink roller cleaning device

Automatic blanket cleaning device

Design and specification are subject to change without notice.

Specifications including accessories may slightly differ depending on the country.

RYOBI MHI Graphic Technology Ltd.

International Sales and Marketing Department

^{*4:} For more detail information of LED-UV curing system, please ask your dealer.

^{*5:} Only for the press with low-pile delivery *6: The UV roller is standard on models equipped with a UV curing unit.

^{*7:} An air compressor is not equipped and thus should be prepared at the customer's side.