A2-Plus Size Multi-color Offset Presses

690 model

RMGT 6

B2-Size Multi-color Offset Presses

790 model

RMGT 7

RMGT

The right choice for diverse short-run printing jobs.

Demand for high-mix, short-run, fast turnaround, high-added value printing is driving the daily workflow toward even higher levels of complexity and specialization. The diverse specifications of different jobs also make printing processes more difficult to manage. Plus there is a need to employ special techniques and effects to differentiate sales materials for added impact.

RMGT 6 and 7 presses offer the exceptional reliability and advanced features needed to respond to this trend*1. With Smart Assist Printing enabling automated printing at high speeds of up to 16,000 sheets per hour*2, these high-performance offset presses boost productivity and optimize production efficiency for diverse short-run printing. RMGT 6 and 7 presses deliver top performance for a wide range of printing work, providing crucial support for success in a competitive market.

*1 The RMGT 7 is available in two models.
The 760's maximum sheet width is 765 mm, and the 790's maximum sheet width is 788 mm.
The descriptions in this brochure refer to the 790.

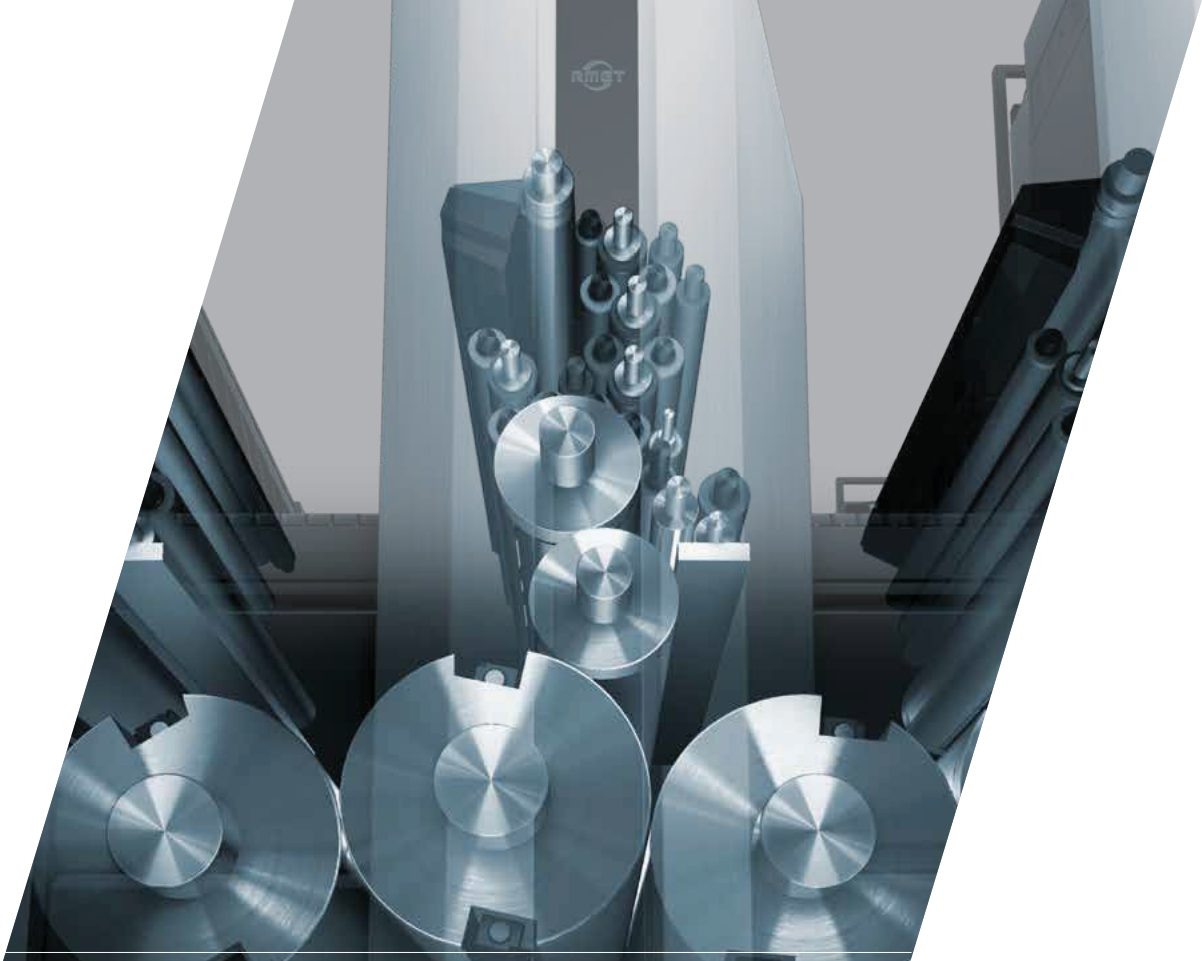
*2 The maximum printing speed of the RMGT 7 (790PF model convertible perfector) and RMGT 6 (690PF model convertible perfector) is 15,000 sheets per hour.

A2-Plus Size Multi-color Offset Presses

RMGT 6

690ST-4 (4-color straight press, standard delivery model)

Note: The press in the photo includes optional equipment.



Fast Job Changeover

High Precision and Durability

Stable Sheet Transfer

Operator Assistance

High Value-Added Printing

B2-Size Multi-color Offset Presses

RMGT 7

790ST-5 + CC + SLD (5-color straight press with coating unit, semi-long delivery model)

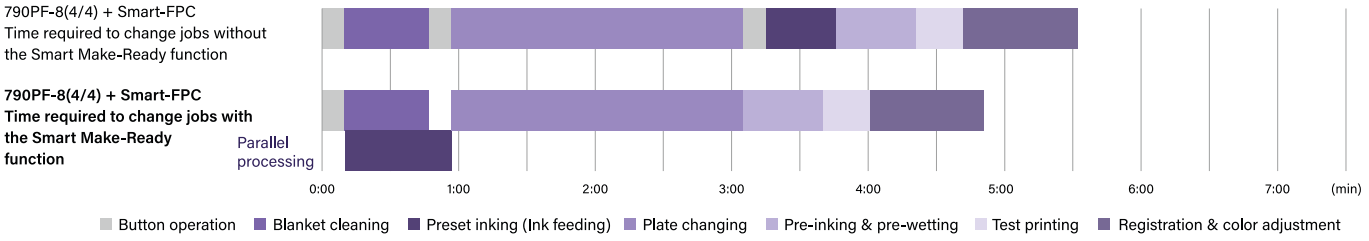
Fast Job Changeover

Shortens make-ready times with greater automation and advanced labor-saving functions

The key to higher productivity for diverse short-run printing is shorter make-ready times.
With an automatic plate changing system, Program Inking and a predictive density control system, the majority of make-ready work is automated.

Smart Make-Ready function

A Smart Make-Ready function that automatically performs blanket cleaning, plate changing, preset inking and test printing greatly enhances efficiency. Job changeover is shortened even further by a newly-added feature that allows blanket cleaning and preset inking (ink feeding) to be performed simultaneously. Fast job changeover further boosts productivity of diverse, small-lot printing.

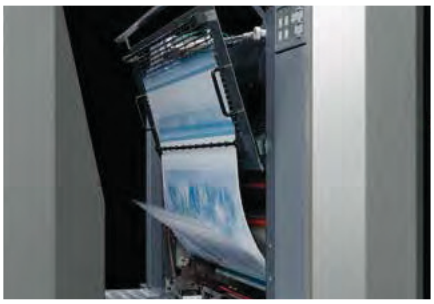


Note: The times shown were measured in-house by RMGT engineers. Actual results will vary according to the printing conditions, printing speed, and operator proficiency.

Automatic plate changing

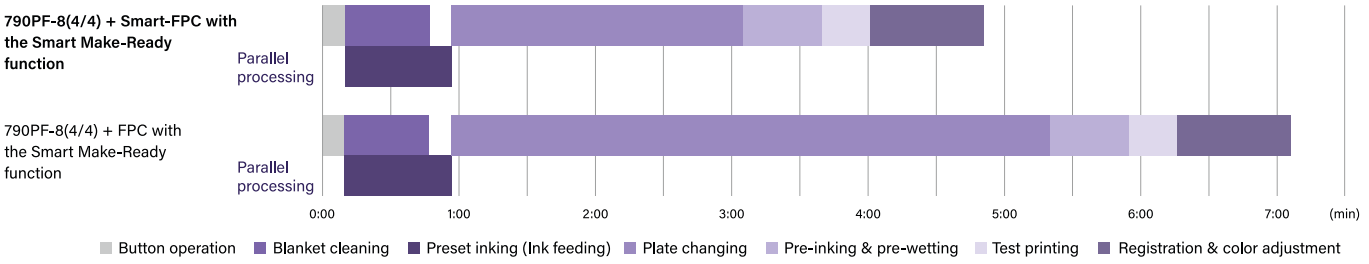
The SPC semiautomatic plate changing system comes as standard and allows plates to be changed quickly and accurately. The operator merely sets the plate on the positioning pins and presses the button for plate changing. Plate changing can be automated with the Smart-FPC* fully automatic simultaneous plate changing system or the FPC* fully automatic plate changing system, which can be combined with Smart Make-Ready functions* so that blanket cleaning, preset inking, and test printing are also performed automatically for even greater work efficiency.

* Option



SPC semiautomatic plate changing system

[Comparison of Smart-FPC and FPC make-ready times]

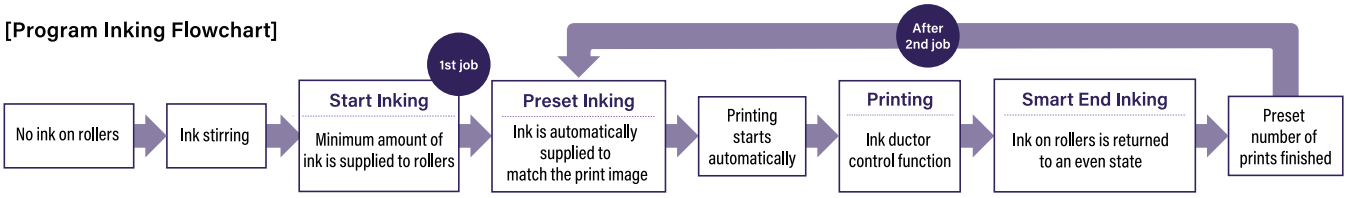


Note: The times shown were measured in-house by RMGT engineers. Actual results will vary according to the printing conditions, printing speed, and operator proficiency.

Program Inking

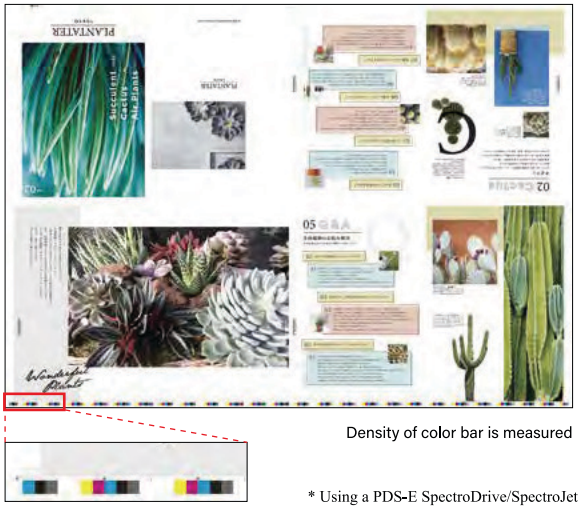
Ink is automatically supplied to match the print image. After a set number of sheets has been printed, the ink on the rollers is automatically returned to an even state to move smoothly on to the next job.

[Program Inking Flowchart]



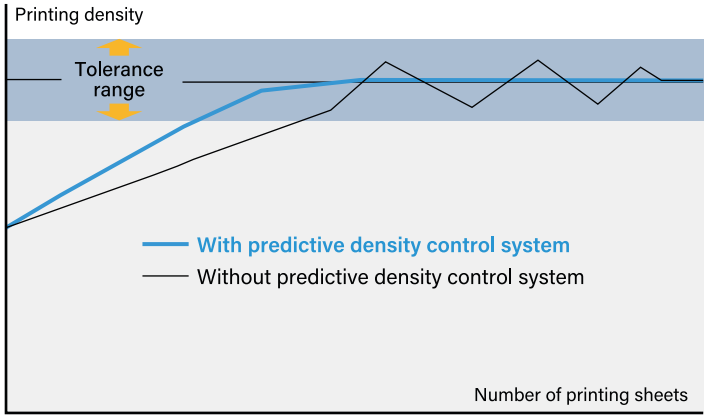
Predictive density control system*

A system for quickly achieving and maintaining the target density with minimum wasted sheets. Ink density is automatically adjusted and controlled by measuring the color bar density on printed sheets and predicting the ink density. This reduces sheet waste during job changeover and maintains stable printing density.



Density of color bar is measured

Density valuation image in predictive density control



* Using a PDS-E SpectroDrive/SpectroJet printing density control system and a PQS-D printing quality control system

Feeder air presetting*

The air volume for the feeder and registration can be preset together from the operation stand according to the substrate type and thickness, shortening make-ready time when changing the substrate. If more precise air adjustment is required, such as for printing on thin sheets, fine adjustments can be made on the feeder touch panel. Updating and saving the preset values further enhances preset precision for repeat jobs.

* Option

Base ink volume control function

Even with job changeover to a completely different print image, the amount of ink on the ink rollers is quickly increased or decreased to begin printing with less waiting time.

Base ink volume-down function : The ink roller cleanup attachment contacts the ink oscillating roller and reduces ink volume.

Base ink volume-up function : The ink ductor roller contacts the ink rollers to quickly increase the volume of ink on the rollers.

Base ink volume-down function screen

Automatic cleaning devices

The automatic cleaning devices (standard for the blanket and optional for the ink rollers) can be centrally controlled from the PCS-G printing control system, including setting the start of cleaning for each printing unit and selecting the cleaning pattern according to the amount of cleaning required.

Automatic blanket cleaning device

High Precision and Durability

The pursuit of uncompromising printing quality

A printing press is comprised of many different mechanisms and components, and printing quality depends on their precision and quality. Press mechanisms with micron-level precision ensure consistent printing quality and excellent color reproduction. Strong, durable, high-precision construction is key to maintaining uncompromising printing quality over long years of use.

Double-diameter printing mechanism

The printing units have a double-diameter impression cylinder and double-diameter transfer cylinder. The large radius of curvature minimizes flapping and ensures stable sheet transport even when printing on heavy stock.

Precision-control inking mechanism

The ink fountain has high graduation performance to enhance ink control precision and match the image with greater accuracy.
The motor-driven ink fountain rollers are programmed to automatically operate in synchronization with the speed of printing, ensuring a stable supply of ink at any operation speed.

R-matic continuous dampening system R-matic-D* and R-matic-D Remote* continuous dampening systems

The R-matic continuous dampening system assures a uniform dampening supply on the plate surface to reproduce sharp dots, glossy solids and finely detailed text. This system also allows non-alcohol printing. Switching between integrated mode and separated mode from the touch-panel display is easy, in order to match the image and ink characteristics. The R-matic-D* continuous dampening system with hickey removing function and R-matic-D Remote* continuous dampening system with remote ON/OFF hickey removing function substantially reduce hickeys on plates by adopting a drive mechanism for the water form roller that creates a rotational speed difference between the water form roller and plate cylinder.

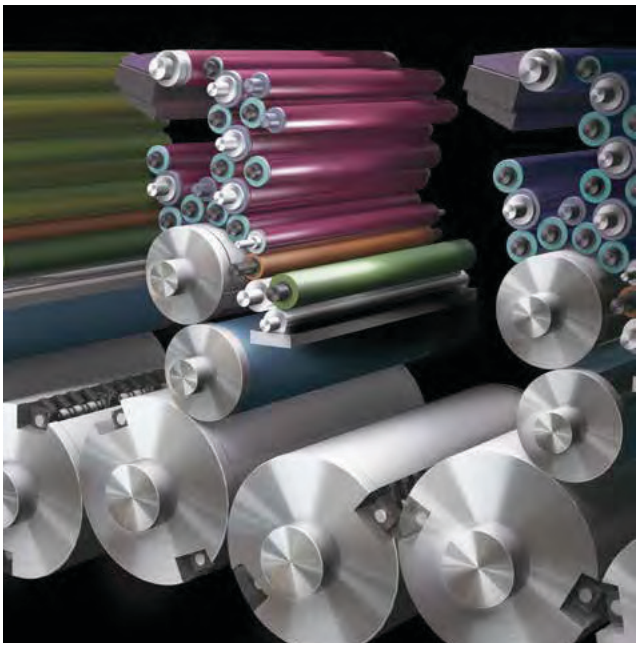
* Option

Double-gripper open/close mechanism

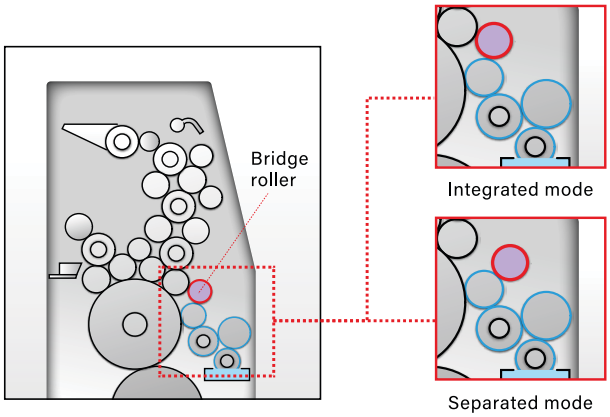
A torsion bar type double sprung gripper mechanism is employed for all of the gripper shafts. Reliable sheet gripping increases registration accuracy for both low-speed and high-speed printing on everything from thin to heavy stock.

Precision components with high rigidity

The use of cylinders supported by ultra-precision bearings, precision induction-hardened helical gears and special cast-iron side frames ensures long-term durability and printing accuracy.



Double-diameter printing mechanism, ink & dampening roller arrangement



Gripper mechanism

High-rigidity precision components

Stable Sheet Transfer

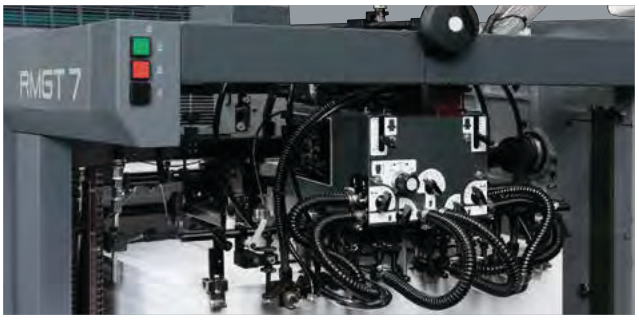
Printing on a wide range of substrates

A printing company must be able to print on many different types of substrates to meet diverse needs and expand the range of work that can be performed. Optional advanced devices ensure stable feed and transport for all types of substrates, from thin to heavy stock and even film and synthetic substrates. Models with a convertible perfecting device boost productivity for double-sided printing.

V-type feeder

Both the RMGT 790 model and RMGT 690 model are equipped with a V-type feeder, the same high-speed, high-performance feeder as RMGT 10 presses. For substrates ranging from thin to heavy stock, sophisticated air management technology ensures each sheet is precisely fed even during high-speed runs.

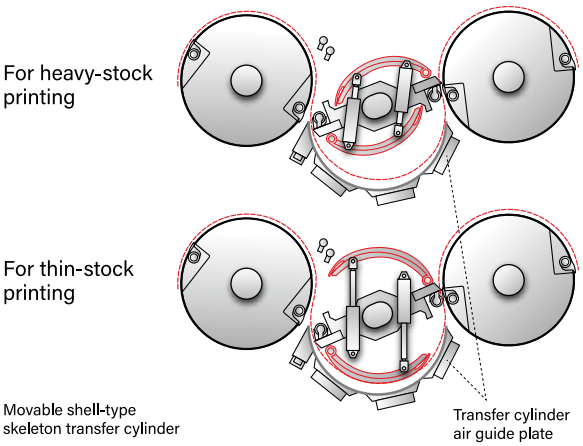
(The V-type feeder's minimum sheet size is 290 × 410 mm. An original-type feeder option is available with a minimum sheet size of 200 × 279 mm.)



V-type feeder

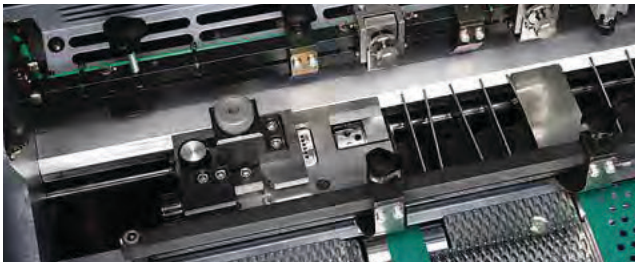
Full lineup of options expands the range of work that can be performed

Installing a movable shell-type skeleton transfer cylinder and air guide plate, an optional pneumatic side lay device, and a special sheet printing set makes it possible to print on a wide range of substrates, including non-absorbent materials such as metalized paper and film. Presses with thick cardboard printing specifications (straight printing models only) can handle stock as thick as 0.8 mm.



Delivery mechanism

Equipped with a de-curler, vacuum wheels driven by an independent motor and an air blower, the delivery section ensures stable sheet piling even when changing settings such as the printing speed or substrate type or thickness.


Pneumatic side lay device

Fully automatic convertible device

Switching between straight printing and perfecting is performed by remote control on the touch panel display of the PCS-G printing control system. The operator inputs the sheet size and printing mode, then simply presses “Start.” The open/close timing of the convertible perfecting device grippers, the various cylinder phases, and the position of the vacuum hold down device are automatically switched in less than 2 minutes with no need for tools, greatly shortening make-ready time.


Double/double/single-diameter cylinder perfecting mechanism*
* Single/double/single-diameter cylinder perfecting mechanism is standard on 2-color to 6-color presses. A double/double/single-diameter cylinder perfecting mechanism is available as an option.

Operator Assistance

Advanced assist functions reduce operator labor

RMGT's advanced technology provides powerful operator assistance — from make-ready tasks to printing, cleaning and maintenance — to meet the growing need for automation and labor-saving.

Press Information Display*

The real-time status of sheet transport is captured by network cameras for viewing on the live-view monitor. The Press Information Display features functions for displaying image data, job progress, printing density measurement results, the operating status of safety devices, and other information. The Press Information Display is also available with Press Information Edge, a platform for connecting to the printing company's ERP system.
(The basic configuration is 3 network cameras, with up to 10 cameras installable.)

* Option

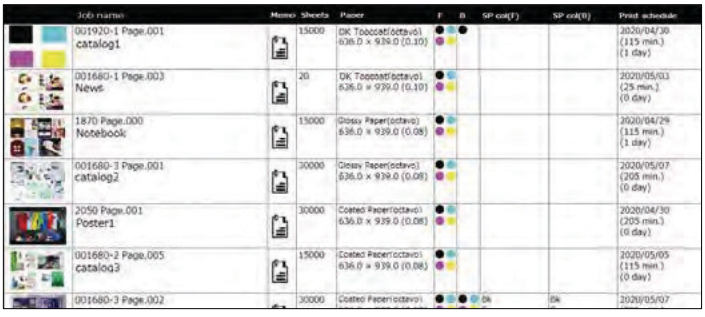
Press Information Edge*

Job data including paper size and ink is received from the printing company's ERP system, then printing job data automatically linking the image area ratio data is generated. The job data is then sorted by sheet size, sheet thickness, and other parameters and integrated with the Smart Assist Printing functions for optimized automatic operation. The resulting press operation data is also automatically uploaded to the Press Information Cloud. Press Information Edge is a platform that connects the printing company's ERP system, presses, peripheral equipment and Press Information Cloud.

* Option

[Optimal job order sorting]

Printing jobs are automatically sorted into the optimum order according to sheet size, thickness, and other printing conditions, reducing the amount of time required for tasks such as changing the paper and colors during job changeover.

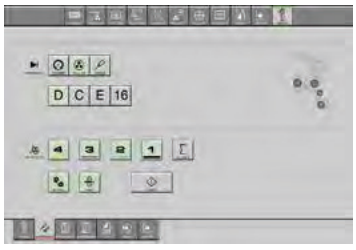


Sorting order changing screen

Maintenance mode

The one-touch nip pressure adjustment position cue function and automatic roller nip pressure checking function reduce the labor required for maintenance work. Nip checking is remarkably easier thanks to the nip-checking mode that prints the actual nip width in a single sheet pass.

Example: Nip-printed sheet

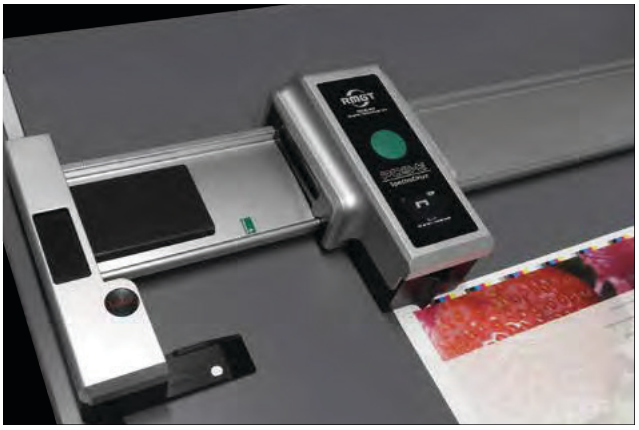


Maintenance mode screen

PDS-E SpectroDrive/SpectroJet*
— Printing Density Control Systems

The color bar on printed sheets is measured and the differences in solid and halftone densities from the standard values are calculated. Using a predictive density control system, the ink correction value is calculated from those differences. The opening of the ink fountain keys is then automatically controlled to quickly match the printing densities to the target values. By numerically managing ink density, a task that previously relied on operator experience and intuition, color adjustment can be quickly and accurately performed, reducing sheet waste and maintaining consistent printing quality.

* Option



PDS-E SpectroDrive

PQS-D (I+C+R) Printing Quality Control System*

A CCD camera installed on the press captures images of the printed sheets to perform inline quality inspection, printing density tracking, and automatic register control without pulling out sheets.

- **Quality inspection function (I)**

  Hickeys and other marks are automatically detected, and the location and type of each defect is displayed. The defective sheets can also be sorted out using a tape inserter.

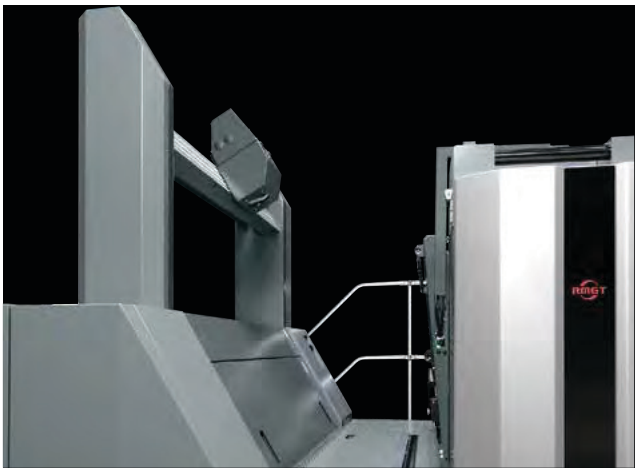
- **Printing density tracking function (C)**

  During printing, the CCD camera records images of the color bars on the printed sheets for comparison with the target density. The ink keys are then automatically controlled to eliminate any difference in density.

- **Automatic register adjustment function (R)**

  The CCD camera captures images of the special registration marks and the registration is automatically adjusted.

* Optional configuration combining the PQS-D (C) and PQS-D (R) with the PQS-D (I).

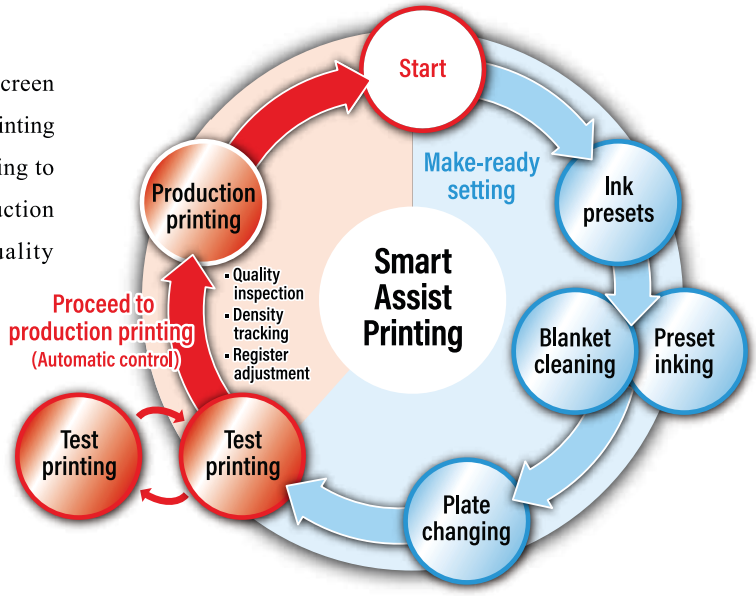


CCD camera

Smart Assist Printing*1*2

Enabling nonstop printing of multiple jobs at the touch of an onscreen button, Smart Assist Printing automatically performs a series of printing processes from ink presetting, blanket cleaning, and plate changing to test printing, register adjustment, density adjustment, and production printing. In conjunction with the PQS-D system, printing quality inspection, density adjustment, and registration adjustment are performed automatically without the need to sample printed sheets. The result is highly efficient job changeover for short-run printing.

For jobs that demand quality inspection by the operator, production printing can begin with visual verification after test printing.



*1 Option

*2 Smart Assist Printing requires the following optional devices.

• Automatic blanket cleaning device • Impression pressure presetting device • PQS-D (I+C+R)
• FPC fully automatic plate changing system or Smart-FPC fully automatic simultaneous plate changing system • PDS-E SpectroDrive/SpectroJet
• Press Information Display or Press Information Edge • PPC server III or Ink Volume Setter • Tape inserter

High Value-Added Printing

A variety of units meet customer needs for a wide range of high value-added printing

UV printing enables high-value-added printing. By combining various surface treatment techniques with UV printing-compatible substrates and ink, new types of printed materials can be created that are extremely attractive and offer high added value. Various printing system configurations are available for creating high-value-added printing work to meet diverse needs.

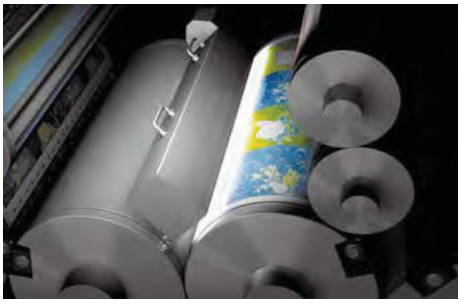
Inline varnish coating

The chamber type coating unit can apply a wide selection of aqueous and UV varnish coatings from packages to book covers, novelty and sales promotion materials, and greeting cards. When not in use, the coating unit retracts upward and a safety guard moves into position, enabling preparations for the next job to be performed while printing is in progress.

Coating unit

Combining a coating unit and LED-UV/UV curing unit for high value-added printing

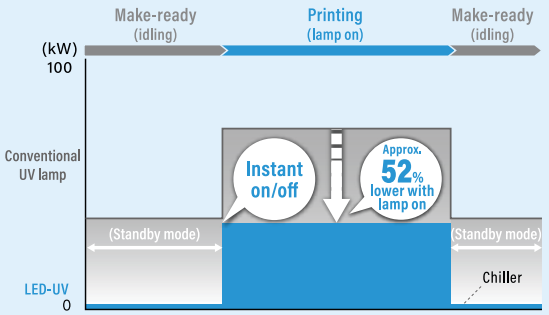
Select from infrared, UV, or LED-UV curing units. Combining a curing unit with the coating unit not only provides instant curing but also enables high-value-added work such as printing on film or metalized paper, as well as chemical embossed printing. The range of special printing capabilities can be expanded even further by installing an inter-deck LED-UV/UV curing unit over the impression cylinder on each unit or over the convertible perfecting device.



Inter-deck LED-UV/UV curing unit over the impression cylinder

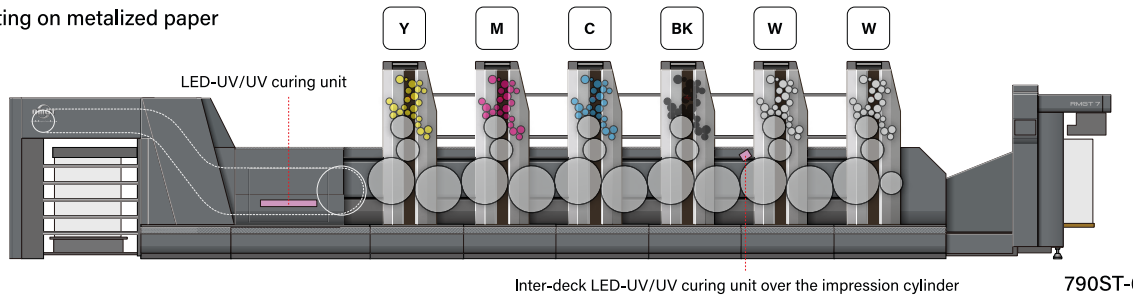
LED-UV curing unit

The power consumption of the LED-UV curing unit is only about 48% that of a conventional UV lamp system. Since the LED-UV light source instantly switches on and off, standby power consumption is also greatly reduced. Another advantage is that the LED-UV system operates at a UV wavelength that generates no ozone, so there is none of the ozone odor peculiar to UV printing. The LED-UV curing unit also generates much less heat, so there is no need to install ducts for ozone and heat exhaust, and there is less chance of heat affecting the printing substrates. Plus, a clean work environment can be maintained since no spray powder is used.



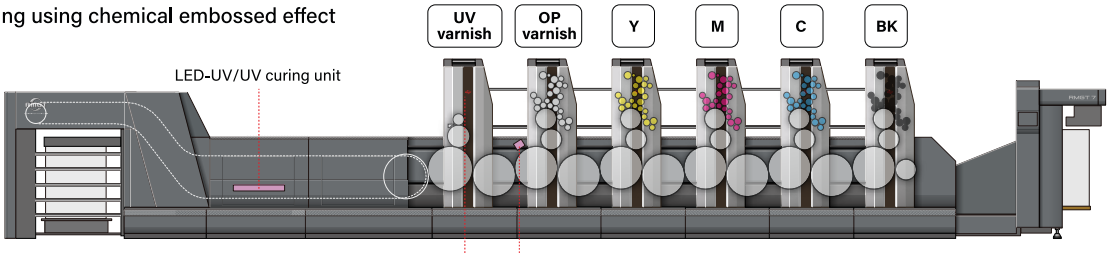
Note: For the 790 model (the percentage will vary depending on various conditions).

Example of printing on metalized paper



790ST-6 + SLD

Example of printing using chemical embossed effect



790ST-5 + CC + LD

Specifications

RMGT 6

			690ST-2/690PF-2	690ST-4/690PF-4	690ST-5/690PF-5	690ST-6/690PF-6	690PF-8	690PF-10
Number of printing units			2(2/0, 1/1)	4(4/0, 2/2)	5(5/0, 4/1) 5(5/0, 3/2)	6(6/0, 5/1) 6(6/0, 4/2)	8(8/0, 4/4)	10(10/0, 5/5) 10(10/0, 6/4)
Max. sheet size			508 x 686 mm (20" x 27.01")					
Min. sheet size		Straight press	290 x 410 mm (11.42" x 16.14")				–	
		Convertible perfector	For straight printing: 290 x 410 mm (11.42" x 16.14") For perfecting: 295 x 410 mm (11.61" x 16.14")					
Max. printing area		Straight press	495 x 660 mm (19.49" x 25.98")				–	
		Convertible perfector	For straight printing: 495 x 660 mm (19.49" x 25.98") For perfecting: 488 x 660 mm (19.21" x 25.98")					
Paper thickness*1		Straight press	0.04 – 0.6 mm (0.0016" - 0.024") Thick cardboard specification (option): 0.04 – 0.8mm (0.0016" - 0.031")				–	
		Convertible perfector	For straight printing: 0.04 – 0.6 mm (0.0016" - 0.024") For perfecting: 0.04 – 0.4 mm (0.0016" - 0.016")					
Printing speed*2		Straight press	3,000 – 16,000 S.P.H.				–	
		Convertible perfector	3,000 – 15,000 S.P.H.					
Plate size			Standard: 550 x 650 mm (21.65" x 25.59") Max: 550 x 670 mm (21.65" x 26.38") [Positioning pin pitch: 425 mm (16.73")] 560 x 670 mm (22.05" x 26.38") [With optional plate clamp mounted of for vertical size of 560 mm (22.05")]					
Plate packing (total)			0.44 mm (0.016")					
Blanket type			Blanket with aluminum bar, Size: 594 x 701 x 1.95 mm (23.39" x 27.60" x 0.077") (Single packing) [Cylinder packing total 2.55 mm (0.1")]					
Max. feeder pile height			930 mm (36.61") [including pallet height]					
Max. delivery pile height			1,030 mm (40.55") [including pallet height]					
Non-printing area			10±1 mm (0.39"±0.039")					
Dimensions*3	Length	Straight press	5,662 mm (18'7")	7,435 mm (24'5")	8,321 mm (27'4")	9,208 mm (30'3")	–	–
		Convertible perfector	6,026 mm (19'9")	7,798 mm (25'7")	8,684 mm (28'6")	9,571 mm (31'5")	11,586 mm (38')	13,359 mm (43'10")
	Width		3,000 mm (9'10")				3,286 mm (10'9")	
	Height		1,870 mm (6'2")					
Weight*3		Straight press	10.3 t (22,707 lbs)	17.9 t (39,462 lbs)	21.7 t (47,840 lbs)	25.5 t (56,218 lbs)	–	–
		Convertible perfector	11.3 t (24,912 lbs)	18.9 t (41,667 lbs)	22.7 t (50,044 lbs)	26.5 t (58,422 lbs)	35.3 t (77,823 lbs)	42.5 t (93,696 lbs)

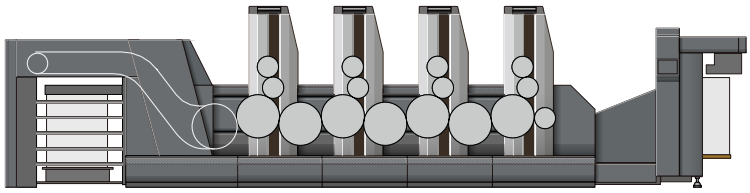
RMGT7

			790ST-2/790PF-2	790ST-4/790PF-4	790ST-5/790PF-5	790ST-6/790PF-6	790PF-8	790PF-10
Number of printing units			2(2/0, 1/1)	4(4/0, 2/2)	5(5/0, 4/1) 5(5/0, 3/2)	6(6/0, 5/1) 6(6/0, 4/2)	8(8/0, 4/4)	10(10/0, 5/5) 10(10/0, 6/4)
Max. sheet size			600 x 788 mm (23.62" x 31.02")					
Min. sheet size		Straight press	290 x 410 mm (11.42" x 16.14")				–	
		Convertible perfector	For straight printing: 290 x 410 mm (11.42" x 16.14") For perfecting: 295 x 410 mm (11.61" x 16.14")					
Max. printing area			790ST-S (PF-S) type: 545 x 765 mm (21.46" x 30.12") 790ST-XL (PF-XL) type: 580 x 765 mm (22.83" x 30.12")					
Paper thickness*1		Straight press	0.04 – 0.6 mm (0.0016" - 0.024") Thick cardboard specification (option): 0.04 – 0.8mm (0.0016" - 0.031")				–	
		Convertible perfector	For straight printing: 0.04 – 0.6 mm (0.0016" - 0.024") For perfecting: 0.04 – 0.4 mm (0.0016" - 0.016")					
Printing speed*2		Straight press	3,000 – 16,000 S.P.H.				–	
		Convertible perfector	3,000 – 15,000 S.P.H.					
Plate size			790ST-S (PF-S) type Standard: 605 x 745 mm (23.82" x 29.33") Max: 605 x 775 mm (23.82" x 30.51") 790ST-XL (PF-XL) type Standard: 635 x 745 mm (25" x 29.33") Max: 635 x 775 mm (25" x 30.51") [Positioning pin pitch: 425 mm (16.73")]					
Plate packing (total)			0.44 mm (0.016")					
Blanket type			Blanket with aluminum bar, Size: 665 x 791 x 1.95 mm (26.18" x 31.14" x 0.077") (Single packing) [Cylinder packing total 2.55 mm (0.1")]					
Max. feeder pile height			930 mm (36.61") [including pallet height]					
Max. delivery pile height			1,030 mm (40.55") [including pallet height]					
Non-printing area			10±1 mm (0.39"±0.039")					
Dimensions*3	Length	Straight press	5,662 mm (18'7")	7,435 mm (24'5")	8,321 mm (27'4")	9,208 mm (30'3")	–	–
		Convertible perfector	6,026 mm (19'9")	7,798 mm (25'7")	8,684 mm (28'6")	9,571 mm (31'5")	11,586 mm (38')	13,359 mm (43'10")
	Width		3,000 mm (9'10")				3,286 mm (10'9")	
	Height		1,870 mm (6'2")					
Weight*3		Straight press	10.3 t (22,707 lbs)	17.9 t (39,462 lbs)	21.7 t (47,840 lbs)	25.5 t (56,218 lbs)	–	–
		Convertible perfector	11.3 t (24,912 lbs)	18.9 t (41,667 lbs)	22.7 t (50,044 lbs)	26.5 t (59,422 lbs)	35.3 t (77,823 lbs)	42.5 t (93,696 lbs)

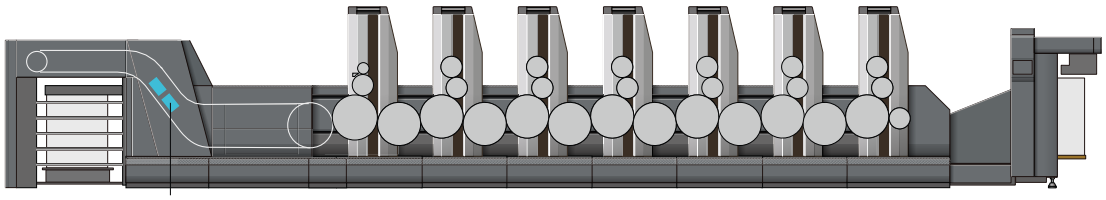
*1: There are some limitations to print thick paper depending on paper types.
*2: Local conditions, ink, stock and printing plate types, and printing quality required will affect the printing speed.
*3: Specifications are for the models without coating unit and with standard delivery. Weight does not include the peripheral devices of the press.

Combination Chart

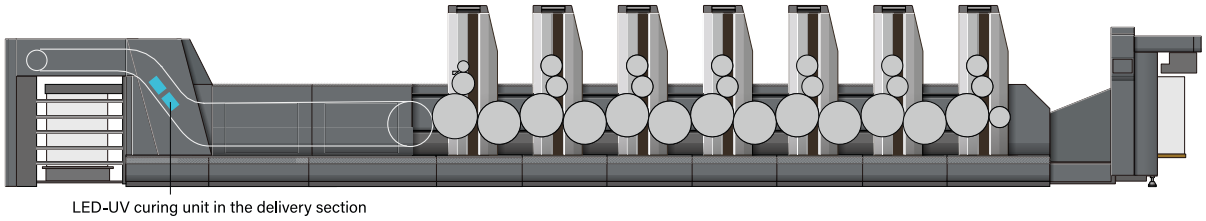
690ST-4 + standard delivery



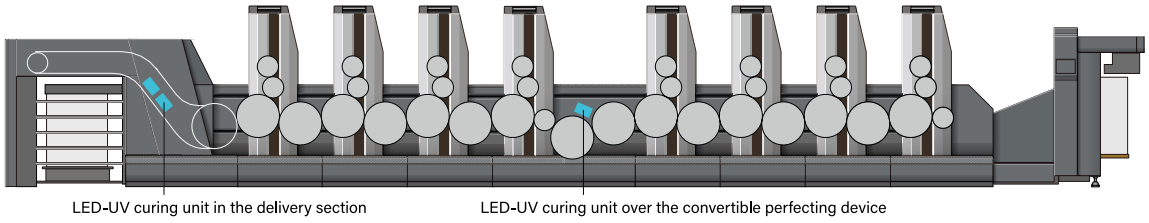
690ST-6 + coating unit + LED-UV + semi-long delivery



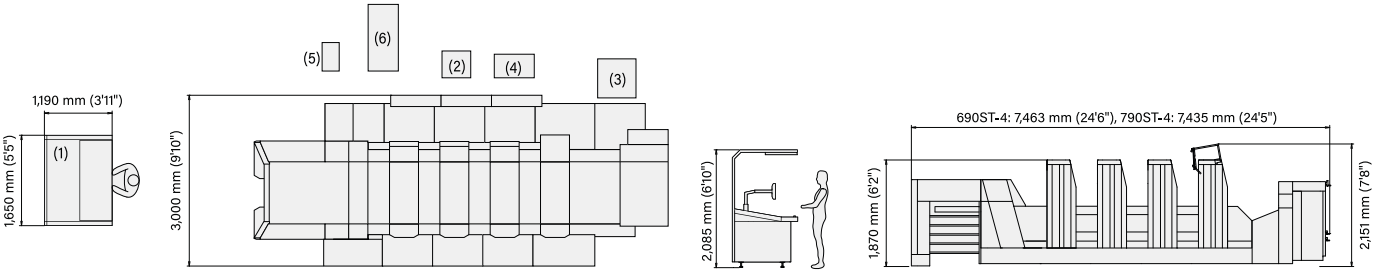
790ST-6 + coating unit + LED-UV + long delivery



790PF-8 + LED-UV + standard delivery



Dimensions



(1) PCS-G Printing Operation Stand
(2) Automatic Ink Roller Cleaning Device Tank
(3) Chiller for Dampening Solution
(4) Cushion Tank for Dampening Solution (option)
(5) LED-UV Control Box*
(6) LED-UV Cooling Device*

* Only for the model with LED-UV curing unit

The illustration shows the 790ST-4 with LED-UV curing unit and standard delivery (chain delivery type). Since installation space and peripheral equipment vary according to the model, please consult a representative for further details.

Design and specifications are subject to change without notice.

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