1,020mm Format/1,060 mm Format Offset Press
1020 model/**1060** model

RMGT 10

NEW

RMGT

10

RMGT RYOBI MHI Graphic Technology Ltd.

RMGT

Introducing the latest RMGT 10 series presses

A huge step forward in productivity

from commercial printing to package printing

Our automation and laborsaving technologies are all designed to Assist Your Potential.

This goal inspired the design of the latest RMGT 10 presses.

RMGT's unique technologies including parallel processing of make-ready tasks,

a shorter blanket cleaning time, and enhanced preset functions for job changeover,

greatly boost productivity by reducing make-ready time for multi-variety, small-lot commercial printing.

Operation rates for package printing achieve new highs through the RMGT 10 series' high-speed printing

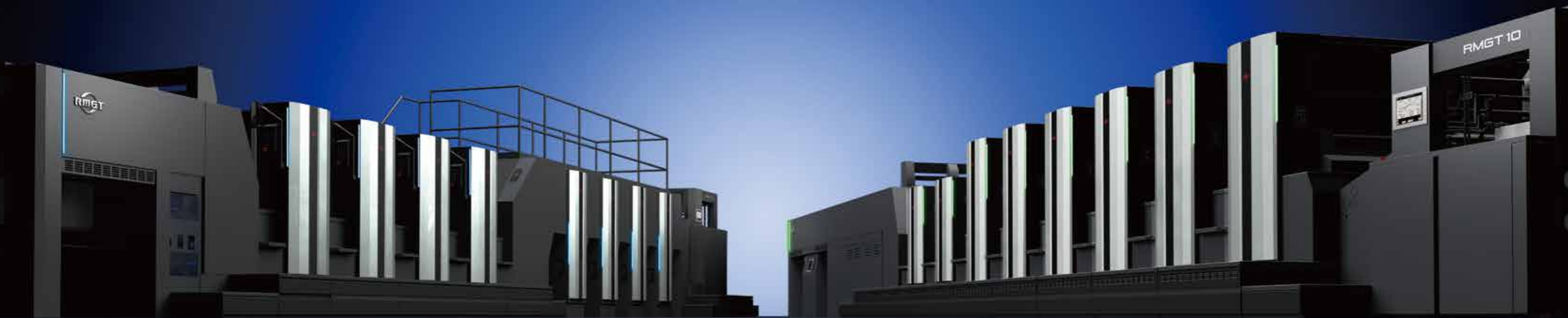on heavy stock and shortened varnish setup time.

All RMGT 10 models are equipped with new automatic operation functions* that offer powerful support for operator tasks.

Plus, the 1060 model can handle paper up to 1,060 mm wide (max printing width: 1,050 mm),

enabling a greater range of printing work.

Looking toward the future, the newest additions to the RMGT 10 series meet the demands of today's printing market

from commercial printing to package printing with an unparalleled standard of performance.

*Option

1060TP-8 (1060 mm Format 8-color Tandem Perfecter Offset Press)

1060LX-6 (1060 mm Format 6-color Wide Stock Range Offset Press)

Exceptional productivity opens the door to new possibilities for commercial printing

The key factor for achieving the high productivity required for a variety of small-lot commercial printing jobs such as catalogs, leaflets, fliers and posters, is shorter make-ready time.
The RMGT 10 series shortens blanket cleaning time, simultaneously performs blanket cleaning in parallel with plate changing, and meets the need for automated operation, significantly boosting operation rates for short-run commercial printing.

Simul Changer*[1] and Simul Changer Parallel*[1, 2]

Available as options are the Simul Changer and Simul Changer Parallel, two automatic plate-changing systems that can change plates simultaneously on all printing units. The Simul Changer Parallel features a mechanism for independently driving the plate cylinder, enabling blanket cleaning to be carried out in parallel with plate changing, saving approximately 80 seconds in comparison with the Simul Changer.

*1 Option
*2 Parallel processing functionality is limited in the U.K., France, Germany, Austria, Switzerland and Liechtenstein.
   Please contact your RMGT distributor for details.
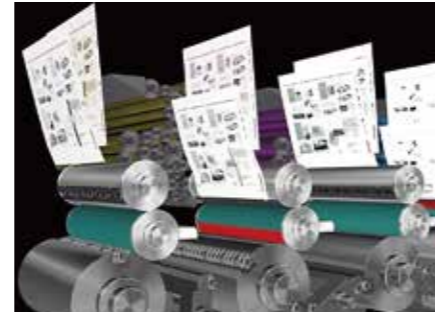
Simul Changer Parallel

Shorter blanket cleaning time* NEW

By optimizing the cleaning cycle, the time required for blanket cleaning is reduced by approximately 20 seconds compared with previous models. Achieving high cleaning performance with shorter cleaning time saves make ready time for diversified small lot printing jobs requiring frequent blanket cleaning.

* When using RMGT blanket cleaning device

New preset functions for the feeder, registration and delivery sections allow faster job changeover NEW *

A preset function enables faster air adjustment for the paper type and thickness. There is also a remote air switching function on the side lay operating side and drive side. This greatly simplifies changing the settings for job changeover. For printing on special substrates, storing the air adjustment values for each job in the PCS-N printing control system enables simultaneous presetting of all the air values for the feeder, registration and delivery sections when doing repeat work.
Touch panel operability at the feeder and delivery sections has been further improved by a redesigned GUI and adoption of a larger screen size at the feeder section.

* New features include a redesigned GUI and remote switching on the side lay operating side and drive side.
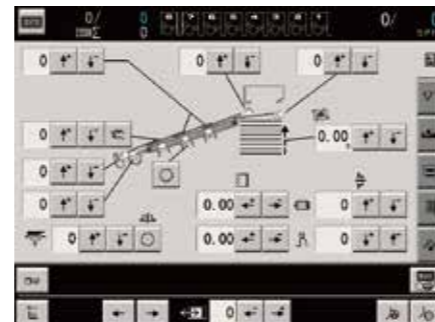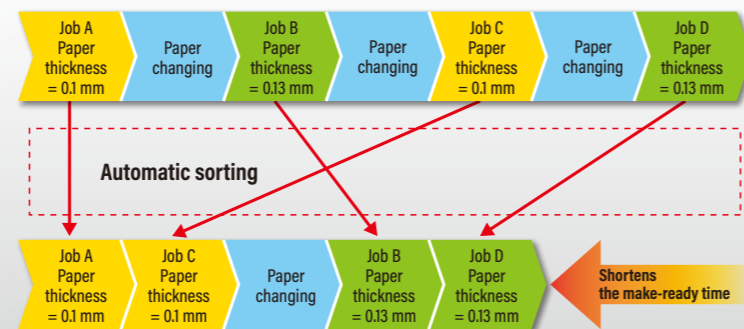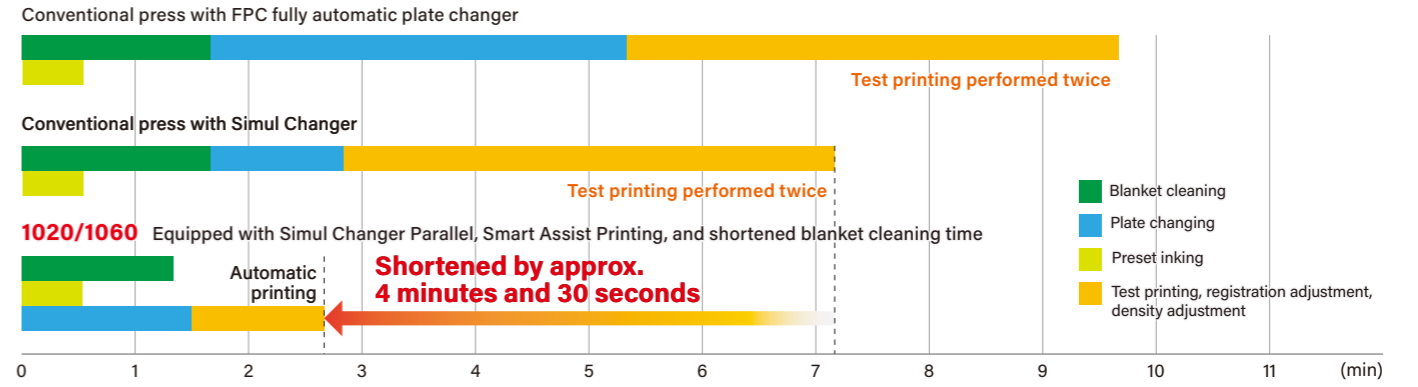
Feeder section air adjustment screen

Automatic job data sorting* NEW

This feature automatically sorts jobs and puts them in the optimal order according to the paper, color, due date and other parameters, based on data sent from the printing company's main system. This reduces the time required to change the paper stock and perform other tasks between jobs, greatly improving operating efficiency.

* Requires the optional Press Information Edge

Job A Paper thickness = 0.1 mm → Paper changing → Job B Paper thickness = 0.13 mm → Paper changing → Job C Paper thickness = 0.1 mm → Paper changing → Job D Paper thickness = 0.13 mm

Automatic sorting

Job A Paper thickness = 0.1 mm → Job C Paper thickness = 0.1 mm → Paper changing → Job B Paper thickness = 0.13 mm → Job D Paper thickness = 0.13 mm

Shortens the make-ready time

Make-ready time comparison (straight 4-color 1060ST-4)

Conventional press with FPC fully automatic plate changer

Test printing performed twice

Conventional press with Simul Changer

Test printing performed twice

1020/1060 Equipped with Simul Changer Parallel, Smart Assist Printing, and shortened blanket cleaning time

Automatic printing

Shortened by approx. 4 minutes and 30 seconds

- Blanket cleaning
- Plate changing
- Preset inking
- Test printing, registration adjustment, density adjustment
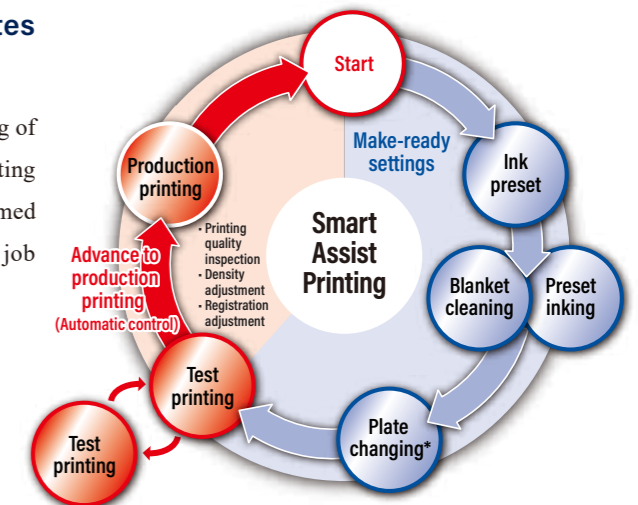
0 1 2 3 4 5 6 7 8 9 10 11 (min)

Note: In-house test results. Results will vary according to various conditions.

Smart Assist Printing*[1, 2] increases press production rates for continuous small-lot printing NEW

The newly developed Smart Assist Printing system enables consecutive printing of multiple jobs fully automatically. In conjunction with the PQS-D system, printing quality inspection, density adjustment, and registration adjustment are performed automatically without sampling printed sheets. The result is highly efficient job changeover for short-run printing.

*1 Option
*2 The following options are necessary for Smart Assist Printing.
   • MCCS-e or PDS-E SpectroDrive
   • Simul Changer or Simul Changer Parallel (Automatic Simultaneous Plate Changing System)
   • Press Information Display or Press Information Edge
   • PPC Server III (or Ink Volume Setter)
   • Tape inserter.

Start
Make-ready settings
Ink preset
Production printing
- Printing quality inspection
- Density adjustment
- Registration adjustment
Smart Assist Printing
Advance to production printing (Automatic control)
Test printing
Test printing
Preset inking
Blanket cleaning
Plate changing*

* On presses with a Simul Changer Parallel system, plate changing is simultaneously performed in parallel with blanket cleaning and preset inking. (Parallel processing functionally is limited in the U.K., France, Germany, Austria, Switzerland and Liechtenstein. Please contact your RMGT dealers.)

1060TP-8 (1,060 mm Format 8-color Tandem Perfector Offset Press)

Dramatically improved productivity for high value-added package printing

Improved feeder and delivery functions greatly increase package printing productivity. The shortened blanket cleaning time and a new coating unit for faster varnish setup markedly reduce make-ready time, greatly increasing productivity for high value-added package printing.

Make-ready time comparison

(On a 1060LX-5, changing jobs from a paper thickness of 0.1 to 0.5 mm, changing overprint varnish to special color ink on 5th printing unit, changing photopolymer plate)

Previous model equipped with an FPC fully automatic plate changer

Previous model equipped with a Simul Changer fully automatic simultaneous plate changer

1020/1060 Equipped with a Simul Changer fully automatic simultaneous plate changer and a retractable coating unit (with SPC)

Approx. 3 min. 40 sec. shortened

Varnish cylinder elevating and plate changing

Varnish cylinder lowering and + set to ON

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 (min)

- Ink fountain cleaning, change of color
- Blanket cleaning
- Plate changing
- Plate changing of coating unit
- Delivery pile removal + Feeder pile setting
- Start inking, preset inking
- Test printing, registration and ink density adjustment
- Register section setting
- Number of workers

Note: In-house test results. Results will vary according to various conditions.

High-speed package printing* NEW

The delivery section features a newly developed polygon type vacuum wheel for heavy stock. The register section is equipped with a side lay push-pull mechanism that simultaneously operates the operation and drive side side lays to increase the side lay pulling force, with a front lay swing paper guide that ensures reliable heavy stock feeding. The result is faster package printing.

* Option for the LX type

## Shorter make-ready time for changing paper* NEW

The preset function at the infeed section is further enhanced to adjust to the paper thickness. The leaf spring position preset function at the register section automatically switches from thin to heavy stock feeding speedily. The heavy stock guide rollers also automatically adjust the height to accommodate heavy stock feeding, shortening make-ready time when changing paper.

* Option

Retractable coating unit* enables preparation of coating varnish during printing NEW

The coating unit is retractable, so the varnish cylinder can be swung upward when not in use, preventing damage to the printed sheets. An independent drive* for the coating cylinder enables preparations for the next job, such as cleaning the varnish cylinder and changing the plates, to be performed while printing, and installing an SPC semiautomatic plate changer* enables faster plate mounting on the varnish cylinder.
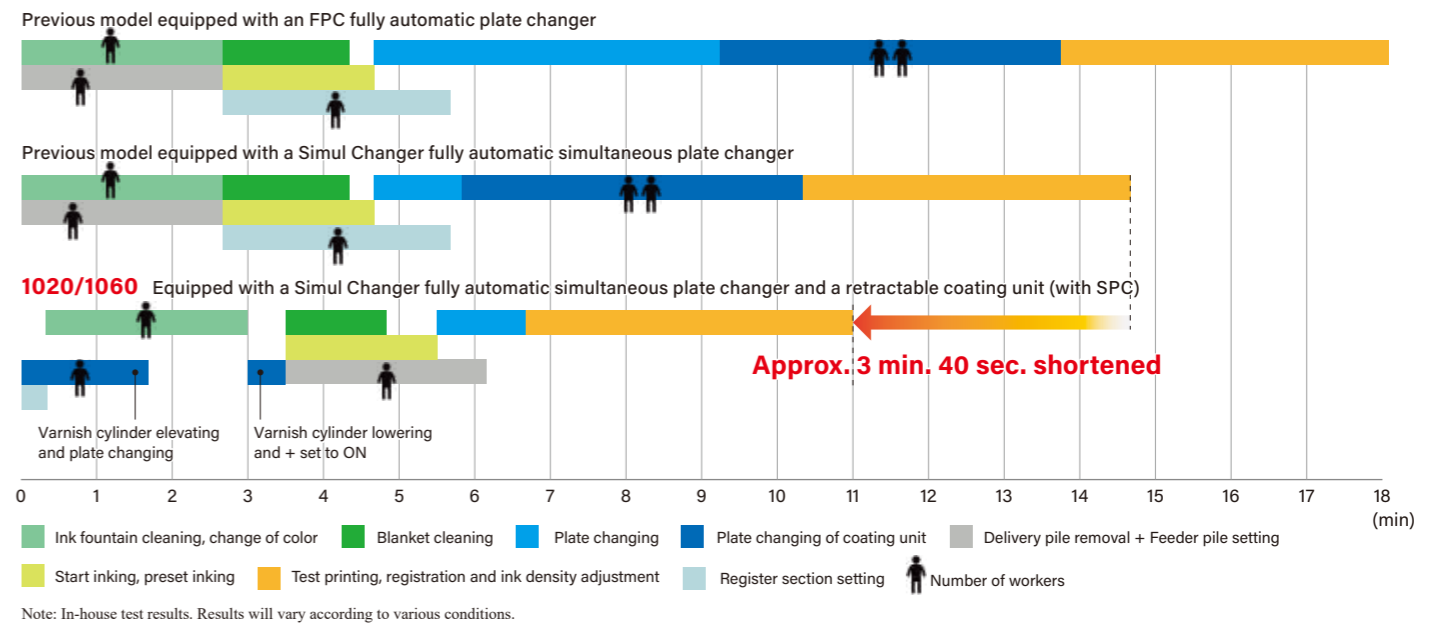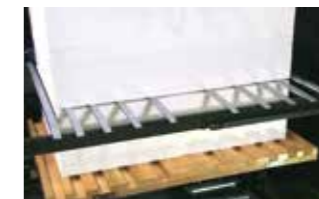
* Option
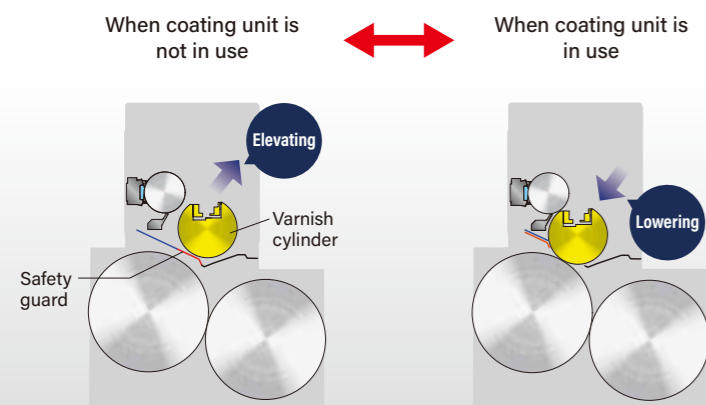
Automatic nonstop feeder*/ Delivery shutter*

The automatic nonstop feeder and delivery shutter enable to print long runs of heavy stock without the need for stopping the press. These devices eliminate downtime and reduce sheet waste during pile loading and removal and improve press productivity.

* Option for the LX type (paper thickness over 0.2 mm)
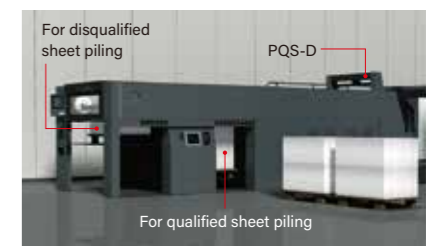
Automatic nonstop feeder

Delivery shutter

Double delivery*

The inline printing quality control system PQS-D inspects sheets during printing and automatically discharges the delivery for disqualified printed sheet piling, eliminating any need to sort out defective sheets after printing is finished.

* Option for the LX type (paper thickness over 0.2 mm)

For disqualified sheet piling

PQS-D

For qualified sheet piling

When coating unit is not in use

When coating unit is in use

Elevating

Lowering

Varnish cylinder

Safety guard

Retractable coating unit

1060LX-6 + DU + CC + 2LD (1,060 mm format 6-color wide stock range offset press)

Uncompromising pursuit of printing quality

Various systems serve essential roles geared to quality control. Included here are a proven air management system that contributes to highly stable sheet transfer and a multitude of highly reliable mechanisms developed by combining technologies accumulated over many years. Our uncompromising pursuit of printing quality is intended to meet diversified printing demands.

High-level printing quality controls

The best software is required for intelligently improving press stability. Included here is our expert software – a program for automating color adjustment at job changes and for maintaining stable and high printing quality – and our digitally controlled color control system.
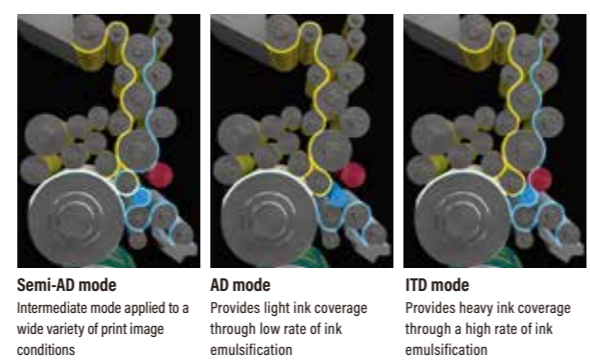
Seven o'clock cylinder arrangement preventing the occurrence of printing problems

Printing units are configured with double-diameter impression and transfer cylinders positioned in a seven o'clock arrangement with plate and blanker cylinders.
These highly reliable mechanisms, designed in pursuit of uncompromising precision and durability provide smooth and stable sheet transfer that readily supports outstanding printing quality.
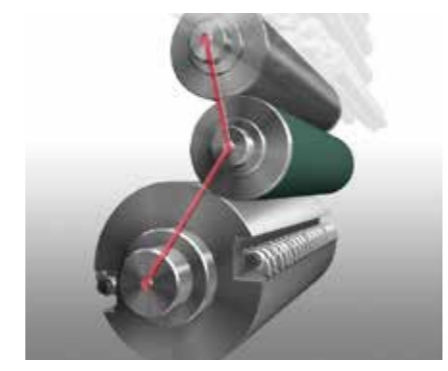
Multi-mode dampening system

This system optimizes the supply of dampening solution depending on the type of image being printed, from light ink coverage to large solid ink areas. Three modes are available: the semi-AD mode for most routine color job requirements; the AD mode, suitable for print images requiring less ink; and the ITD mode, designed for solid high gloss print images requiring heavy ink coverage. Different modes can be set at different printing units, and on-the-run mode changes are also possible.

Semi-AD mode
Intermediate mode applied to a wide variety of print image conditions

AD mode
Provides light ink coverage through low rate of ink emulsification

ITD mode
Provides heavy ink coverage through a high rate of ink emulsification

Lubrication-free gripper shaft bearings

The use of oil-less bearings for the impression cylinder, transfer cylinder and swing grippers eliminates the need for lubrication, reducing maintenance work and preventing stains on the printed sheets from oil spatter.

Stable sheet transfer by original air control

RMGT's own advanced air management technologies. Together, each ensures stable sheet transfer at all times.

- High-speed feeder head
- Front-lay Bernoulli device*
- Delivery section air management system
- Integrated vacuum slowdown wheel

Delivery section air management system

Integrated vacuum slowdown wheel

High-speed feeder head

* Option
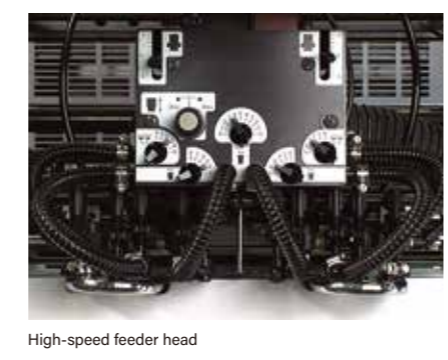
MCCS-e (color tone control)*1
PDS-E SpectroDrive (color density control)*1

The MCCS-e employs an X-Rite sensor to measure printed color patches, and RMGT's proprietary predictive control algorithm calculates the amounts by which the ink needs to be adjusted to meet the target value. The ink key openings are then automatically controlled for high precision color matching to quickly achieve the target values.
An another powerful option is the PDS-E SpectroDrive printing density control system. Both the MCCS-e and PDS-E SpectroDrive are equipped with an M1 spectrophotometer*2 for high-precision measurement under a wide range of sheet conditions.
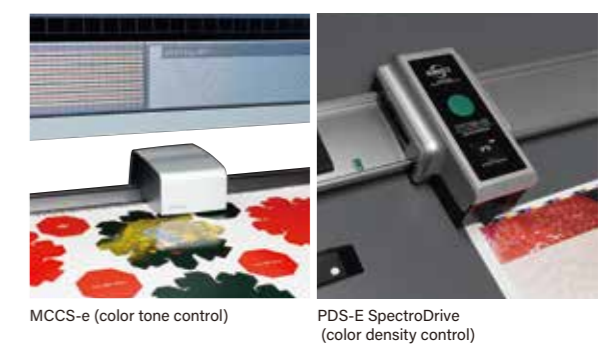
*1 Option
*2 Colorimeter capable of precise color measurement under a D50 light source when using paper treated with a fluorescing whitening agent.

MCCS-e (color tone control)

PDS-E SpectroDrive (color density control)

MCCS-e measurement screen

PQS-D (I+C+R) Printing Quality Control System*1

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.
And the addition of a fully automatic plate changer makes it possible to use the automatic operation functions of Smart Assist Printing.

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*2.

Printing density tracking function (C):
During printing, the CCD camera captures 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.

*1 Optional configuration combining the PQS-D (C) and PQS-D (R) with the PQS-D (I).
*2 When using the LX model's optional double delivery, defective sheets are sorted out automatically.

Operator-friendly performance

For easy control of increasingly advanced and complex presses,
the latest operation interface has been equipped to support print professionals.
The GUI has also been revamped for greater usability.
Such operator-friendly performance ensures easier press operation.
The feeder and delivery sections have also been redesigned for easier operation.

Earth and human conscious

The proven LED-UV curing system provides significant energy-savings and extended service life
while maximizing high productivity.
Various devices are equipped to reduce sheet waste and pursue greater efficiency.
And press safety systems have been designed specifically with protection of operators and machines in mind.
RMGT's technologies further embody an earth and human conscious environment.

Press Information Display*/ Press Information Edge*

Real-time viewing of sheet transfer by press-mounted video cameras is available on the live-view monitor at the press operation console. The information display features a monitoring function to show ink key supply volumes, image area data, job progress, print density measurement results, and operating conditions of safety devices.

The screen can be viewed on a tablet connected to a Wi-Fi network, allowing remote operation at locations away from the delivery section. The press information display contributes to a comfortable operational environment. Use of the Press Information Display has been expanded to allow selection of Press Information Edge*, a platform for connecting to a printing company's ERP system. (Three cameras are standardly installed, but up to a maximum of ten can be accommodated.)

* Option. Press Information Edge is required to connect to the Press Information Cloud.
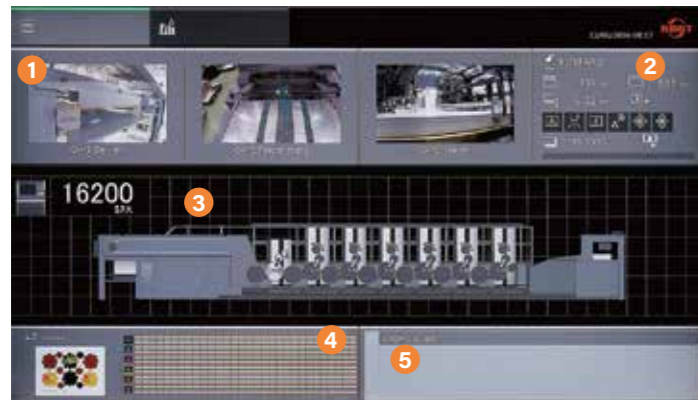
1. Live view monitors
2. Job indication
3. Press operating status
   (impression pressure, impression cylinder ON, safety device and etc.)
4. Density measurement result display
5. Error indication (message)

Large 21.5-inch wide display for easier operation `NEW`

The operation stand is equipped with a large new 21.5-inch wide display. A sub operation screen located to the right of the main operation screen enhances operability for tasks such as registration adjustment, water volume adjustment, and ink settings while linking with the main operation screen.

21.5-inch wide display equipped with sub operation screen

Improved operability and accessibility for feeder and delivery sections `NEW`

The feeder and delivery section operation panels are equipped with touchscreen monitors that feature easy-to-understand intuitive GUIs (graphic user interfaces). In addition, the panels and buttons have all been redesigned based on ergonomics, greatly improving the operability and accessibility of the feeder and delivery sections.

Feeder section 10-inch touchscreen monitor

LED-UV curing system*

The LED-UV cuing system substantially reduces power consumption compared to conventional UV lamp unit. Minimal heat generation at the unit's light source lessens the influence of heat on film and other printing substrates. In addition, the system switches on and off instantaneously, offering more effective press utilization.
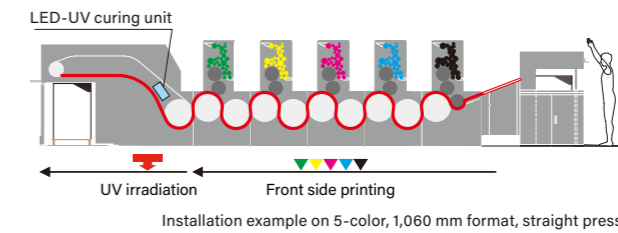
* Option

UV irradiating device power consumption example

UV type	UV lamp location and output	Electrical consumption
Conventional UV	Extended delivery 160 W/cm x 3 lamps	52.8 kW
LED-UV	Swan-neck delivery: 1 lamp	9.0 kW

Note: Values will differ depending on conditions.
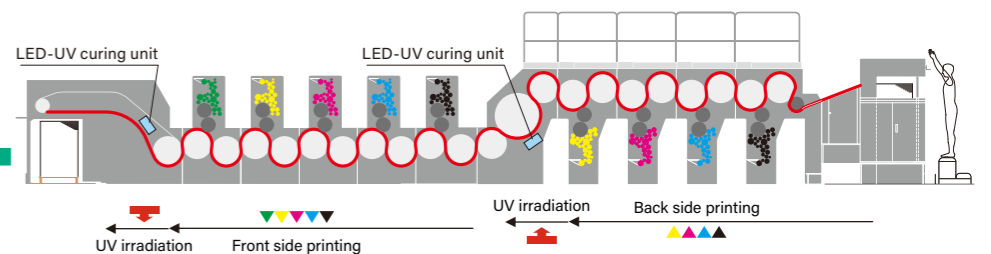
LED-UV installation example

RMGT 1060ST-5 + LED-UV

LED-UV curing unit

UV irradiation   Front side printing

Installation example on 5-color, 1,060 mm format, straight press

Electrical consumption: approximately **75%** lower

RMGT 1060TP-9 + LED-UV

LED-UV curing unit   LED-UV curing unit

Single-pass instant-drying perfecting allows the printed sheets to go immediately to cutting

UV irradiation   Front side printing   UV irradiation   Back side printing

* Example of a 9-color tandem perfector

Careful attention to safety

Multifunctional LED beams

The multifunctional LED beam enables the operator to monitor the press status in real time by means of different colored lights. LED strips equipped at each press section, from feeder to printing unit to delivery, flash red when the press is running on auto, green during sheet size presetting or ink key adjustment, and blue when safety devices are activated. The operator can instantly recognize the status of the press even from a distance.
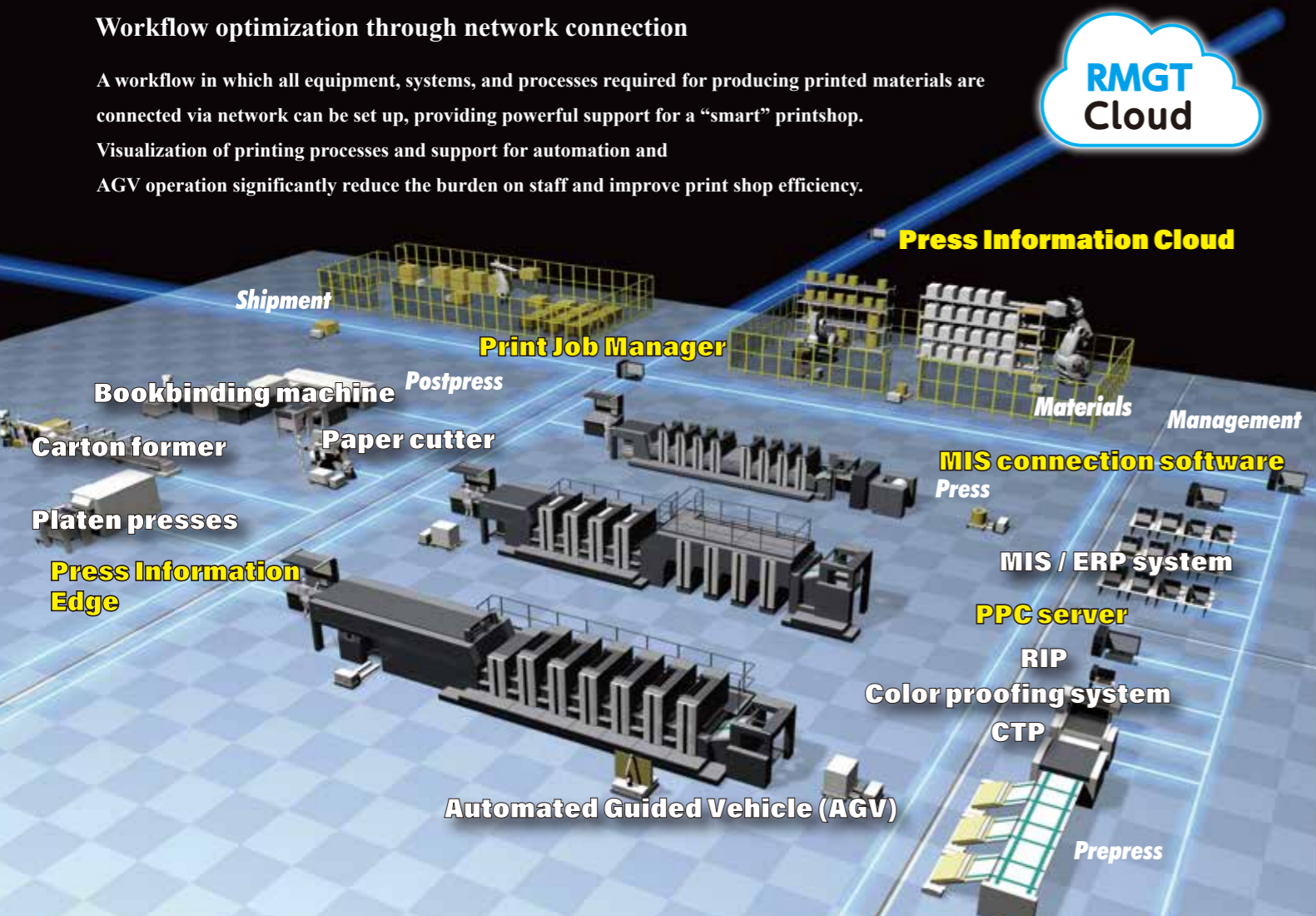
Multifunctional LED beams

Safety area detectors

Safety area detectors incorporated in the delivery unit meet the latest safety standards. These are designed to protect the operator from careless accidents.

RMGT Smart Net

Workflow optimization through network connection

A workflow in which all equipment, systems, and processes required for producing printed materials are connected via network can be set up, providing powerful support for a "smart" printshop.
Visualization of printing processes and support for automation and
AGV operation significantly reduce the burden on staff and improve print shop efficiency.

RMGT Cloud

Press Information Cloud

Shipment

Print Job Manager

Postpress

Bookbinding machine

Materials

Carton former

Management

Paper cutter

MIS connection software

Press

Platen presses

MIS / ERP system

Press Information Edge

PPC server

RIP

Color proofing system

CTP

Automated Guided Vehicle (AGV)

Prepress

RMGT Smart Factory Solution Concept

Supporting automation
Enhancing productivity by data integration among devices

- PPC server III*1
- Exporting image area ratio data
- Printing company's ERP system
- Importing job data and sorting job order*2

Press Information Edge*1 acts as a platform for network connection of a press

Supporting visualization
Enhancing productivity by visualization and analysis of press production status

- Collection and analysis of productivity rate data*3
- **RMGT Cloud**
- Press Information Cloud*1
- Print Job Manager*1

Support for automation and labor reduction (use of AGV)
Automated sheet transport

- Order for sheet transport*4
- Sheet (printed/non-printed) transport
- AGV automated guided vehicle

*1 Option   *2 Press Information Edge is needed for importing job data and job order sorting.
*3 Press Information Edge is needed to connect with Press Information Cloud.   *4 Wireless connection. Requires Press Information Edge.

Supporting automation

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.

[Optimal job order sorting] NEW

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

Supporting visualization

Press Information Cloud

By centrally collecting, managing, and analyzing the operation data for each press, it is possible to visualize the operating conditions, production rates, and improvement targets for each printing process.
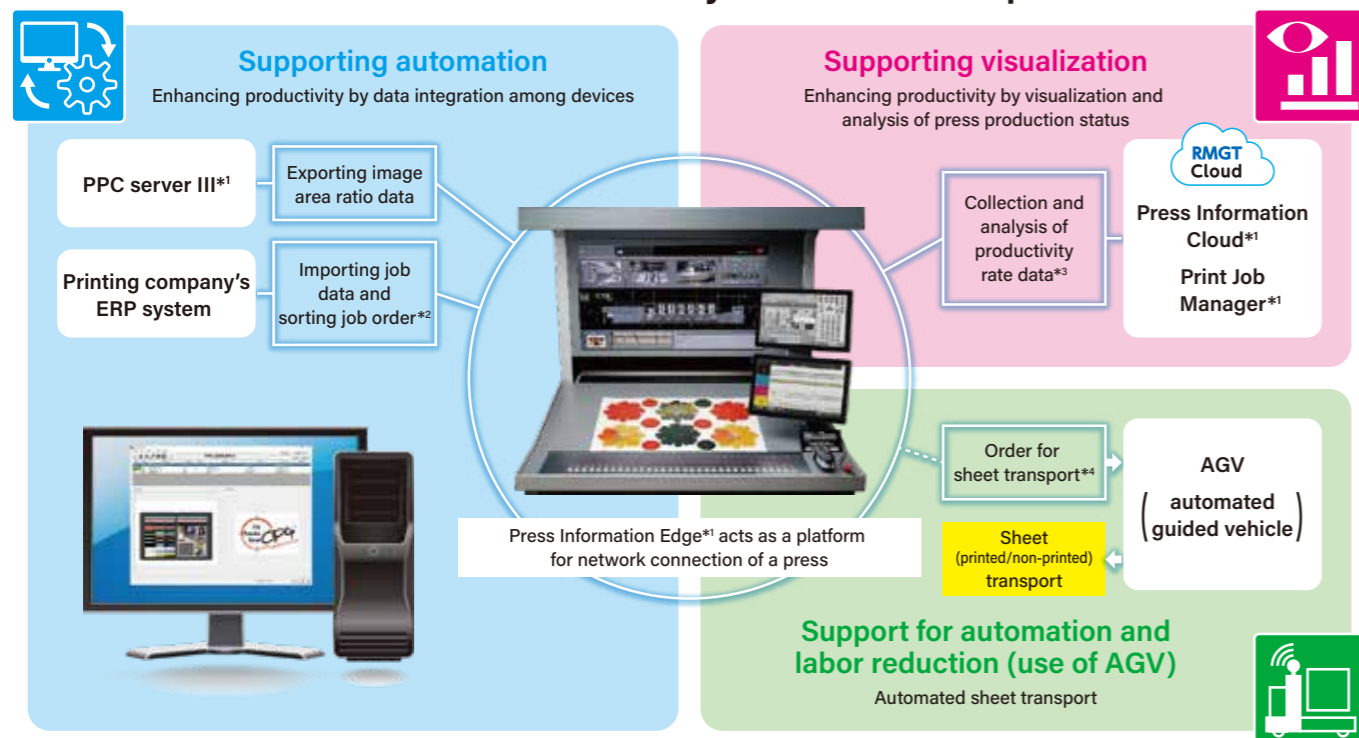
Production report
Displays production data such as sheet waste, operation rate, efficiency, and daily statements.

Press status
Displays the production status of a press.

Support for automation and labor reduction (use of AGV)

AGV (automated guided vehicle)

Based on the press operation status, Press Information Edge sends commands to the feeder section to supply sheets and to the delivery section to remove the printed sheets. In accordance with those commands, sheets are automatically supplied and printed sheets are automatically removed and transported to the next process.

Note: In case of an inquiry of AGV with required interface arrangement for the overseas territories, please kindly contact the RMGT Distributors or the International Sales and Marketing dept.

Various model lineups for customer applications

Lineup

ST

Straight Press

These presses combine cutting-edge technologies with mechanisms offering proven rigidity, including the seven o'clock cylinder arrangement with double-diameter impression and transfer cylinders.

LX

Wide Stock Range Press

Featuring air management technology for smooth sheet transfer and skeleton cylinders that prevent scratching and smearing by keeping the printed sheets away from contact with cylinders, these presses can handle a wide range of paper stock from 0.04 mm thin paper to 1.0 mm heavy board.

Skeleton transfer cylinder

TP

Tandem Perfector

The reverse-side printing units are connected to conventional straight printing units by a translink unit to provide single-pass perfecting without the need to reverse the printed sheets.
Three double-diameter cylinders ensure stable sheet transport and easy installation of drying units.

Translink unit streamlines sheet transfer

PF

Convertible Perfector

Our original three double-diameter cylinder sheet-reversing mechanism provides smooth and accurate sheet reversal and highly accurate front side to back side registration at all printing speed.

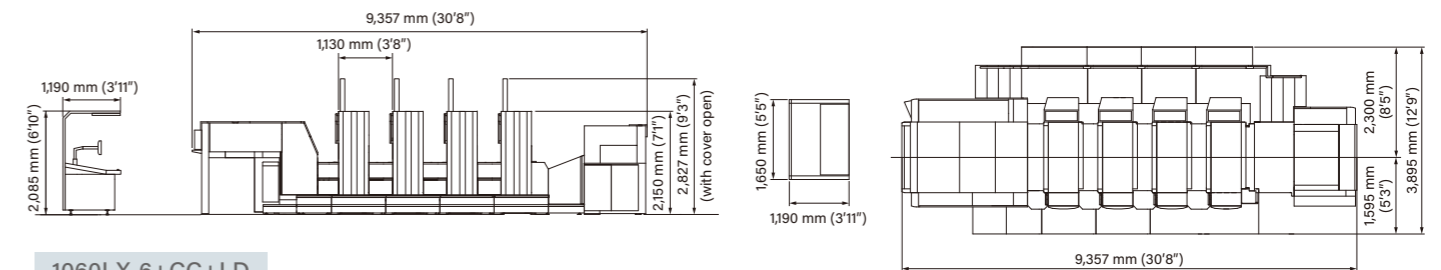Three double-diameter cylinder sheet-reversing mechanism

Specifications

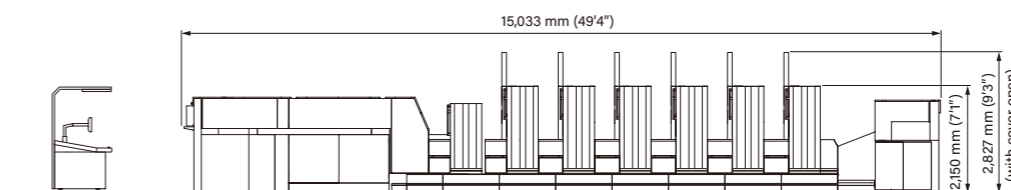|	ST (straight press)		LX (wide stock range press)		TP (tandem perfector)		PF (convertible perfector)	
	1020 model	1060 model	1020 model	1060 model	1020 model	1060 model	1020 model	1060 model
Max. printing speed*	16,200 S.P.H.		16,200 S.P.H.		16,200 S.P.H.		16,200 S.P.H.	
Max. sheet size	740 x 1,020 mm (29.13" x 40.16")	750 x 1,060 mm (29.53" x 41.73")	740 x 1,020 mm (29.13" x 40.16")	750 x 1,060 mm (29.53" x 41.73")	740 x 1,020 mm (29.13" x 40.16")	750 x 1,060 mm (29.53" x 41.73")	740 x 1,020 mm (29.13" x 40.16")	750 x 1,060 mm (29.53" x 41.73")
Min. sheet size	360 x 540 mm (14.17" x 21.26")		360 x 540 mm (14.17" x 21.26")		360 x 540 mm (14.17" x 21.26")		360 x 540 mm (14.17" x 21.26") [for straight printing] 440 x 540 mm (17.32" x 21.26") [for perfecting]	
Max. printing area	730 x 1,020 mm (28.74" x 40.16")	740 x 1,050 mm (29.13" x 41.34")	730 x 1,020 mm (28.74" x 40.16")	740 x 1,050 mm (29.13" x 41.34")	730 x 1,020 mm (28.74" x 40.16")	740 x 1,050 mm (29.13" x 41.34")	730 x 1,020 mm (28.74" x 40.16") [for straight printing] 720 x 1,020 mm (28.35" x 40.16") [for perfecting]	740 x 1,050 mm (29.13" x 41.34") [for straight printing] 730 x 1,050 mm (28.74" x 41.34") [for perfecting]
Sheet thickness	0.04~0.8 mm		0.04~1.0 mm		0.04~0.6 mm		0.04~0.6 mm	

* Local conditions, ink and printing plate types, and printing quality requirements will affect the maximum printing speed.
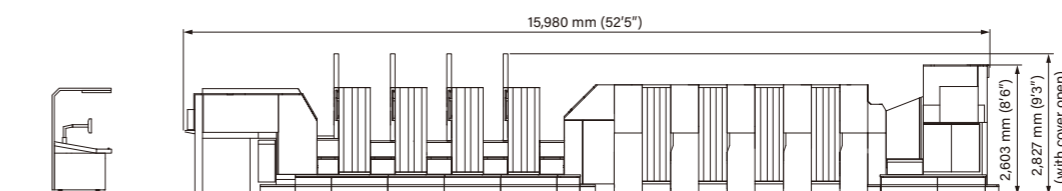
Dimensions

1060ST-4

9,357 mm (30'8")
1,130 mm (3'8")
1,190 mm (6'10")
2,085 mm (6'10")
2,150 mm (7'1")
2,827 mm (9'3") (with cover open)
1,650 mm (5'5")
1,190 mm (3'11")
2,300 mm (8'5")
1,595 mm (5'3")
3,895 mm (12'9")
9,357 mm (30'8")

1060LX-6+CC+LD

15,033 mm (49'4")
2,150 mm (7'1")
2,827 mm (9'3") (with cover open)

1060TP-8

15,980 mm (52'5")
2,603 mm (8'6")
2,827 mm (9'3") (with cover open)

1060PF-8

15,172 (49'9")
2,150 mm (7'1")
2,827 mm (9'3") (with cover open)