Index of Functions

* Option

TP

PF

RMGT 10
1,020/1,050 mm Format Offset Presses

RMGT 11
1,130 mm Format Offset Presses

1050LX-6 + CC + LD
(6-color press with a coating unit and long delivery)

Design and specifications are subject to change without notice.

RYOBI MHI Graphic Technology Ltd.

Superior Performance, Cutting-Edge Technology

RMGT 10 / RMGT 11 – Shaping an Evolution

Highly durable basic design improved and validated over time.

High-precision mechanisms developed and produced by specifically targeting our

uncompromising pursuit of printing quality.

A digital control system and automated devices developed with

the press operator in mind.

Two new high-performance flagship press models

boasting superior printing performance,

unique new styling and state-of-the-art technologies have arrived:

the RMGT 10, 1020/1050 mm format offset presses,

and the RMGT 11, 1130 mm format presses.

1,020/1,050 mm Format Offset Presses

RMGT 10

1,130 mm Format Offset Presses

RMGT 11

New Concept

New Design

New Technology

1050ST-5 (1,050 mm Format Straight 5-Color Offset Press)

1130ST-5 (1,130 mm Format Straight 5-Color Offset Press)

High-definition and high-value-added printing that surpasses other presses

The RMGT 10 and RMGT 11 press models not only meet the needs for small lot, diverisifed production, but also deliver a higher level of overall performance in line with today's demands.

The feeder and registration sections realize labor savings, while at the same time improving registration accuracy. The high-output LED-UV curing system* achieves substantial energy savings and productivity improvements. And with the wide-screen press information display* and further enhanced IPC-III operation interface geared toward the next generation, these presses boast some of today's most sophisticated functions. In addition, continuous operation efficiency for package printing on heavier stock with these presses is significantly enhanced by a newly developed automatic nonstop feeder* and delivery shutter*.

Greater press utilization and stability of the RMGT 10 and RMGT 11 bring you greater profitability.

* Option

Advanced downtime-reducing mechanisms
- Single belt-type brush-less feeder board
- SimulChanger*
- Convenient delivery touch panel
- Register air adjustment preset
- Easier nip checking function

Uncompromising pursuit of printing quality
- Seven o'clock cylinder arrangement
- Multi-mode dampening system
- Stable sheet transfer by original air control
- Torsion bar-type gripper shafts / Lubrication-free gripper bearings
- Ink roller temperature control system*

High-level printing quality controls
- Expert software
- Color Control System MCCS-e *
- Color Navigator*

Operator-friendly performance
- IPC-III (Intelligent Press Control III)
- Press Information Display*
- Digital workflow

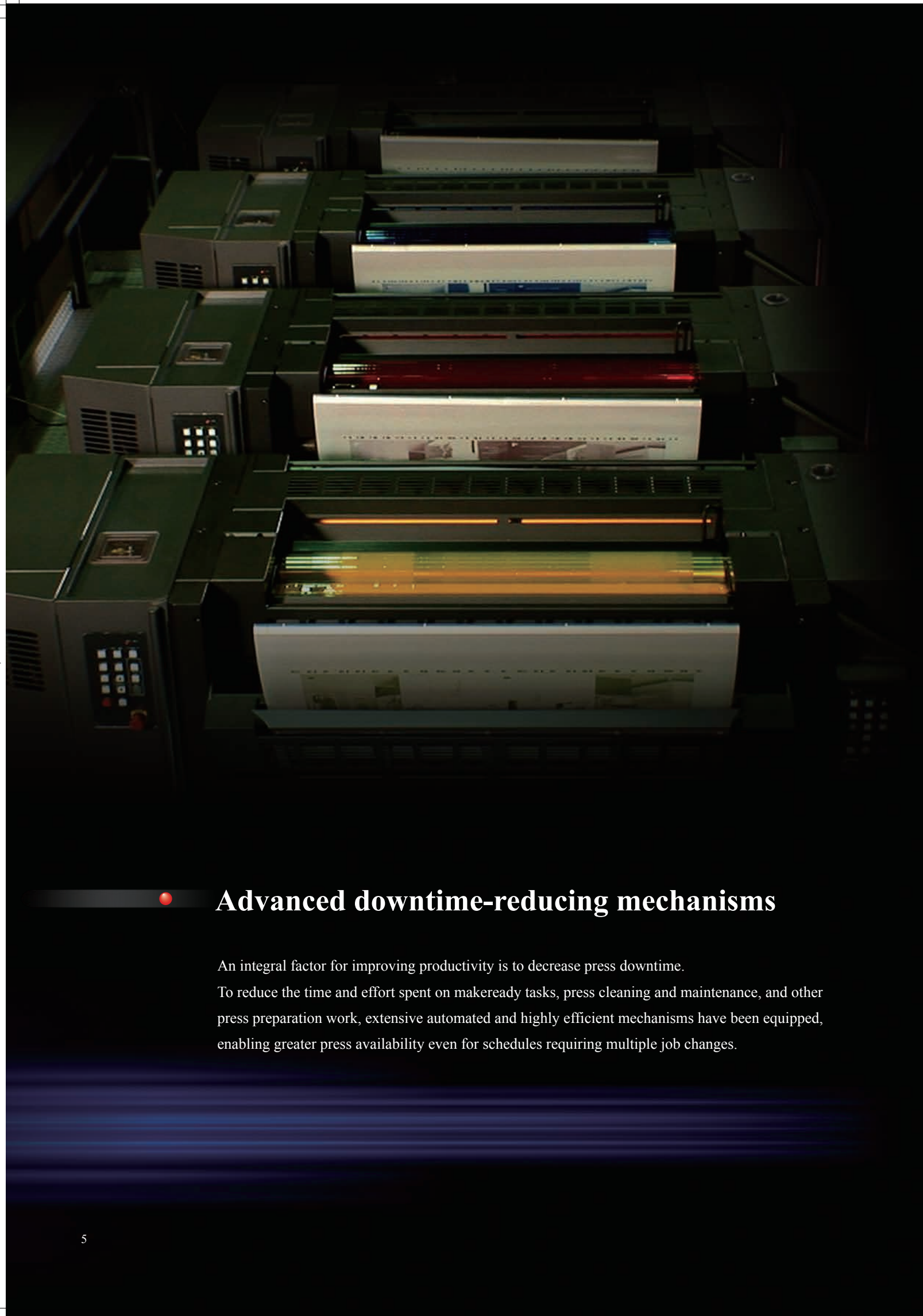### Earth and human conscious
- LED-UV curing system*
- ecoUV curing system*
- Energy savings and reduced sheet waste contributions
  Eco Drive Motor / Reduced sheet waste at printing startup
- Safety-conscious considerations
  Safety sensors / World's first multifunctional LED beams

* Option

1050LX-6 + CC + LD (1,050 mm Format Wide Stock Range 6-color Offset Press)

Single belt-type brush-less feeder board

The feeder board features a single vacuum hold-down belt that provides smooth sheet feeding without the use of brush and rubber rollers, eliminating the makeready task of feeder board roller adjustments. Sheet registration accuracy has been improved by reducing sheet feeding speed at the separator and sheet arrival speed at the front-lay, effectively reducing vacuum pressure on the sheet.

SimulChanger*¹

With this automation wonder, the operator needs only to set new plates in position while the previous job is underway and then execute the plate change task from the press control console. All processes from cylinder phase adjustment to removal of old plates and mounting of new plates are accomplished simultaneously at each color in the lightning-fast time of just 75 seconds*². The bender-less plate clamping system eliminates the need to bend the plate edge before mounting. The SimulChanger helps achieve a high production rate with multiple, short-run jobs requiring frequent plate changes.

With bend　　Without bend

*¹ Option

*² for RMGT 10 series
RMGT 11 series requires 90 seconds to remove the old plates and mount the new plates.
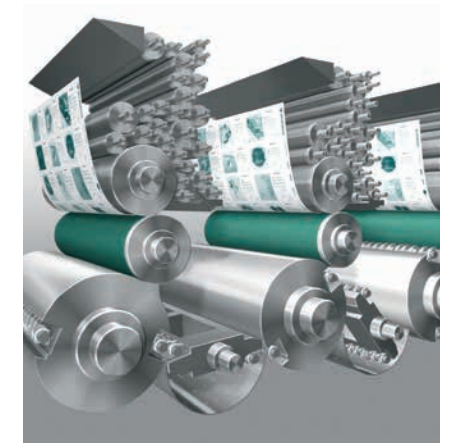
Convenient delivery touch panel

The delivery section of RMGT 10 / RMGT 11 features a touch panel display for easy digital setting and adjusting of delivery fans, vacuum slowdown wheel rotation speed and cam position for sheet release. By storing air adjustment values for special sheets and each job to the IPC-III, batch presetting is possible for repeat jobs.

Register air adjustment preset

Touch panels have been implemented for control and adjustment of vacuum air at the side-lay and air volume at the front-lay Bernoulli device. An automatic preset function, based on different sheet types and thicknesses, is incorporated. Storing air adjustment settings of special sheets or individual jobs to the IPC-III enables batch presetting for repeat jobs.

Easier nip pressure checking function

The one-touch nip pressure adjustment position cue function and automatic roller nip pressure checking function vastly reduce the amount of labor required during maintenance work. Nip checking is remarkably easier on the RMGT 10 and 11 with the nip checking mode that print actual nip width on a single sheet pass.

Advanced downtime-reducing mechanisms

An integral factor for improving productivity is to decrease press downtime.
To reduce the time and effort spent on makeready tasks, press cleaning and maintenance, and other press preparation work, extensive automated and highly efficient mechanisms have been equipped, enabling greater press availability even for schedules requiring multiple job changes.

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.

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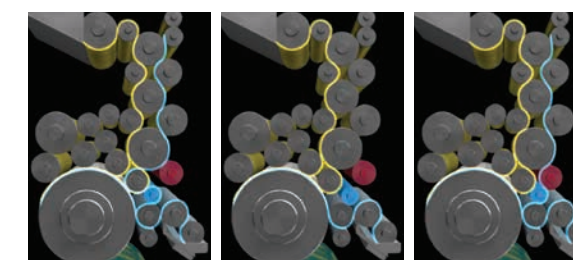
Semi-AD Mode
Intermediate mode applied to a wide variety of print image conditions

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

ITD Mode
Provides heavy ink coverage through high rate of ink emulsification

Torsion bar-type gripper shafts / Lubrication-free gripper shaft bearings

Each gripper shaft features a torsion bar-type gripper open/close mechanism. Reliable gripper-to-gripper sheet transfer at any operation speed ensures stable registration accuracy. In addition, oil-less gripper shaft bearings eliminate the need for lubrication, contributing to shorter maintenance time and protecting the sheet surface from grease or oil spills.

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 separator
- Front-lay Bernoulli device*
- Delivery section air management system
- Integrated vacuum slowdown wheel

* Option

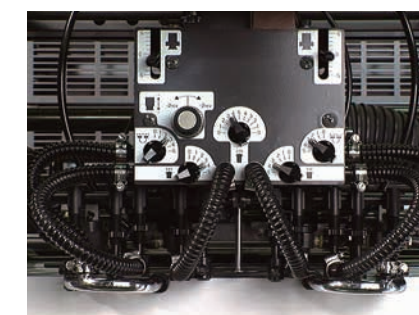Delivery section air management system
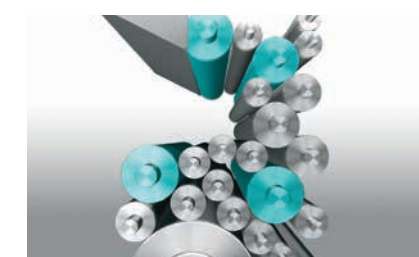
Integrated vacuum slowdown wheel

High-speed feeder head

Ink roller temperature control system*

Ink roller temperature control system maintains consistent temperature of the ink rollers and three oscillation rollers from start to finish of printing. This system eliminates variations in print quality due to fluctuations in ink train temperature.

* Option

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. In addition, the printing quality control system for reducing sheet waste, the PQS-Eye, and other unrivaled and cutting-edge technologies are available.

Expert software

Built-in expert software controls ink adjustments at job changes. It stabilizes printing quality from start to end of printing, shortens makeready time, and reduces sheet waste.

Expert software is an inking control program, including quick start inking and smart print end inking.

Smart print end inking
Automatically reduces the volume of ink supplied at the end of printing to eliminate residual ink on rollers

Expert software
■ Decreases time required to reach density
■ Reduces sheet waste at job changes

Color Control System
MCCS-e
Printing Density Control System
PDS-E SpectroDrive
■ Controls ink density during printing
■ Maintains and controls stable quality

Quick start inking
Provides optimal ink film thickness on inking rollers prior to the print run based on image to be printed

Color Control System MCCS-e *

MCCS-e uses X-Rite's sensor to measure printed color patches. Our original predictive control algorithm calculates the amount of ink deviation from the difference between target and measured values. MCCS-e automatically controls ink key opening volume to immediately converge on target values by performing color adjustment with high accuracy. In addition, an economy-type printing density control system, PDS-E SpectroDrive*, is also available.
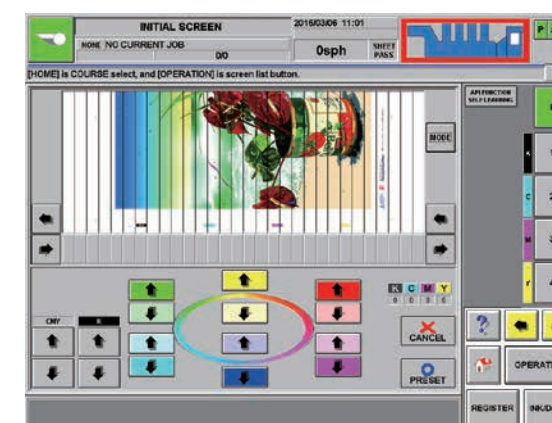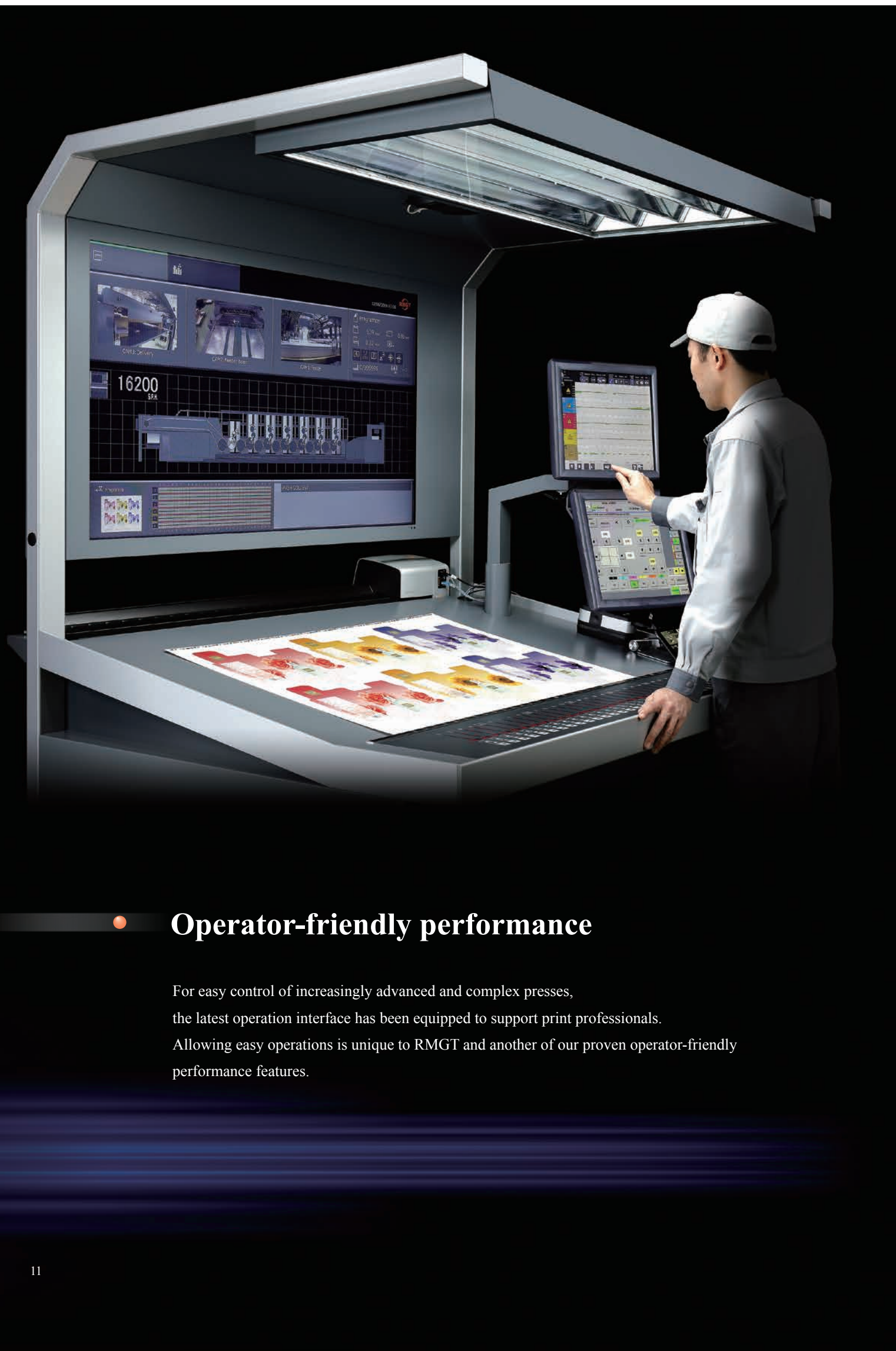
* Option
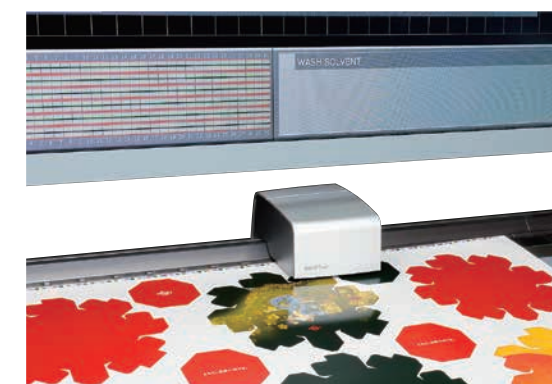
MCCS-e

PDS-E SpectroDrive

Color Navigator

Color Navigator provides highly skilled operator-like fine-tuning of colors through a revolutionary touch screen color wheel installed in the IPC-III. Highly precise color adjustment and registration functions, encompassing RGB colors as well, are included.

IPC-III (Intelligent Press Control III)

The IPC-III is a centralized press control operation interface containing expert software that promotes consistent high-quality printing, reduced makeready time, and the reduction of sheet waste. While outfitted with an array of monitoring programs, such as the power consumption monitoring function and ink mileage counter, and an installed learning function that correctly interprets various information necessary for operation, including real-time operation efficiency, the IPC-III is readily capable of remotely controlling the press.
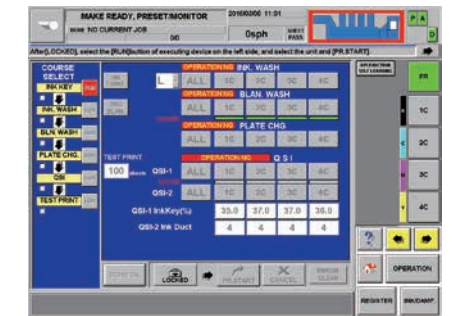
Press information display＊

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.
(Normally, three cameras are installed, but up to a maximum of ten can be accommodated.)

＊ Option
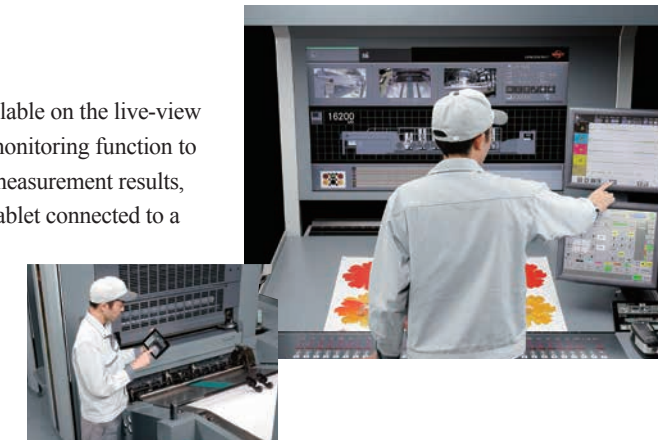
Digital Workflow

A digital workflow can be established to integrate the entire press room, prepress, and other internal sections. With the IPC and PPC servers as an interface, you can not only implement MIS, CIP4, and JDF, but also easily connect to other management systems and prepress processes you have established separately.

IPC Server (IPC Server II)

This server centrally manages printing job data, job schedules, and maintenance information for up to ten presses. It functions as an interface with MIS to enable real-time printing information management.

PPC Server (PPC Server III)

This server converts image area ratio data generated by CIP3/CIP4-PPF and CIP4-JDF-enabled prepress systems and provides data on ink key opening volume.

＊ The IPC Server II is required to connect RMGT 10 or RMGT 11 to an MIS system.
  To connect RMGT 5, RMGT 6, RMGT 7 or RMGT 9 to an MIS system,
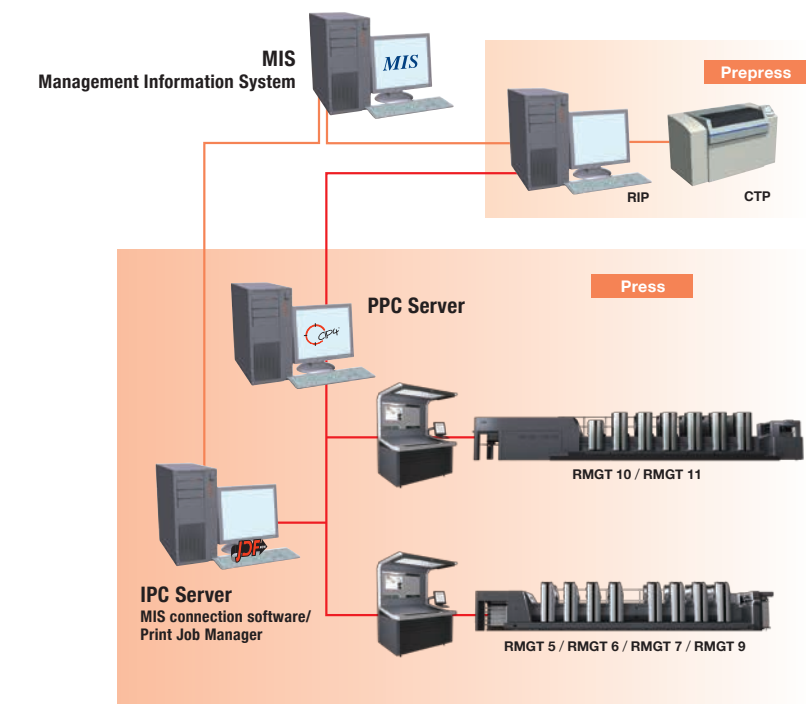 MIS connection software or Print Job Manager is required.

● Operator-friendly performance

For easy control of increasingly advanced and complex presses,

the latest operation interface has been equipped to support print professionals.

Allowing easy operations is unique to RMGT and another of our proven operator-friendly

performance features.

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.

LED-UV Curing system*

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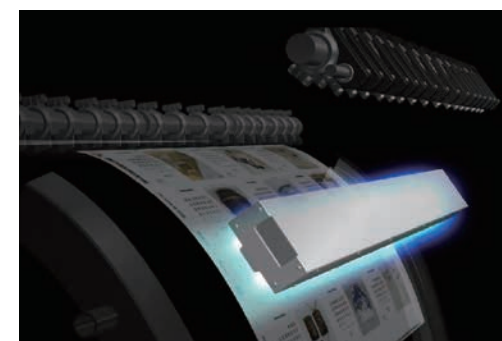
* Option

LED-UV installation example

RMGT 1050ST-5 + LED-UV

LED-UV curing unit

UV irradiation   Front side printing
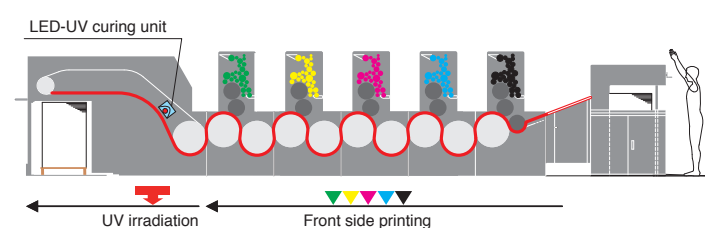
Installation example on 5-color, 1,050 mm format, straight printing press

■ UV power consumption comparison

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

Approximately **1/6** that of conventional UV lamp

Note: Values may differ depending on conditions.

ecoUV curing system*

The power savings of the ecoUV curing system closely follow that of the LED-UV curing system and quick curing is possible. As with the LED-UV curing unit, the ecoUV curing unit can be installed in the standard delivery unit and can also be easily retrofitted on existing presses in operation.
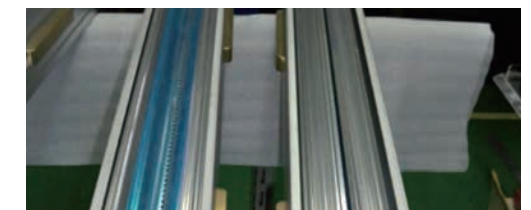
* Option

ecoUV installation example

RMGT 1050TP-10 + ecoUV

ecoUV curing system

ecoUV curing system

UV irradiation   Front side printing   UV irradiation   Front side printing
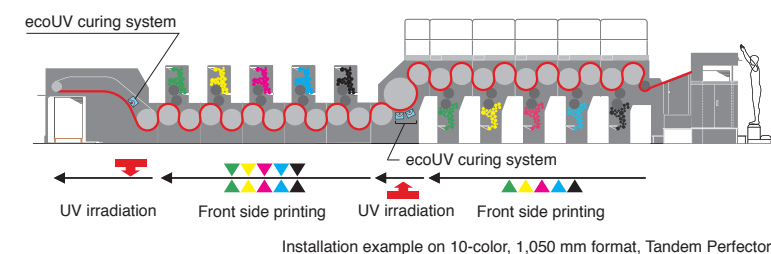
Installation example on 10-color, 1,050 mm format, Tandem Perfector

■ UV power consumption comparison

UV type	UV lamp location and output	Total output
Conventional UV	Translink unit 160 W/cm x 3 lamps	105.6 kW
	Extended delivery 160 W/cm x 3 lamps	
ecoUV	**Translink unit delivery: 2 lamp**	**52.8 kW**
	Swan-neck delivery: 1 lamp	

Approximately **1/2** that of conventional UV lamp

Note: Values may differ depending on conditions.

Energy savings and reduced sheet waste contributions

Eco Drive Motor

A highly efficient eco drive motor serves as the main press motor.
Compared to conventional drive motors, its power consumption is reduced by 7 to 8%*.

* Reduction value depends on operating conditions of the press.

Reducing sheet waste when printing starts

Expert software that automatically adjusts ink volume during job changes and print startups, high-speed impression-on, and other sophisticated mechanisms are employed to reduce sheet waste when printing starts, the time most susceptible for generating sheet waste.

Eco Drive Motor

Careful attention to safety

Safety sensors

Area sensors have been incorporated into the delivery unit to meet the latest safety standards. These are designed to protect the operator from careless accidents.

Safety sensors

World's first multifunctional LED beams

The multifunctional LED beam is a revolutionary new system that for the first time in the world 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.
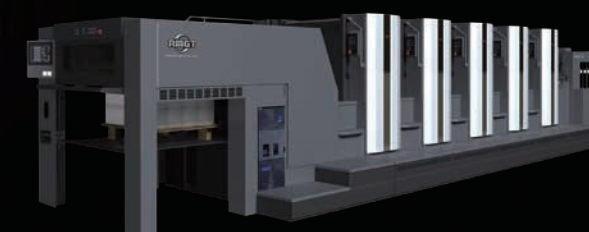

Multifunctional LED Beams

Various Model Lineups for Customer Applications

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 the cylinders, these presses can handle a wide range of paper stock from 0.04 mm thin paper to 1.0 mm heavy board.

Air chamber below transfer cylinder

An air chamber below the transfer cylinder stabilizes sheet movement with an advanced air management system. It ensures the suitable sheet transfer for a wide range of sheet thicknesses.

Skeleton transfer cylinder

These cylinders have no cylinder surface, transferring sheets by use of grippers alone. With no cylinder surface to come in contact with, outstanding printing quality is achieved even with full-page images. An opening on the cylinders allows easy access to the air chambers to facilitate cleaning.

Automatic Nonstop Feeder / Delivery shutter*

The automatic nonstop feeder and delivery shutter make it possible 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

Automatic Nonstop Feeder   Delivery shutter

Chamber coater*

The chamber coater maintains a consistent coating thickness at all times regardless of printing speed. It is ideal for jobs requiring thick applications in spot and pattern coatings as well as with high-quality gold, silver, and other metallic inks. Coating thickness adjustments are accomplished by changing out the anilox roller. Register adjustment is a standard feature that facilities precise coating control.

* Option

Anilox roller
Plate
Plate cylinder
Chamber
Impression cylinder
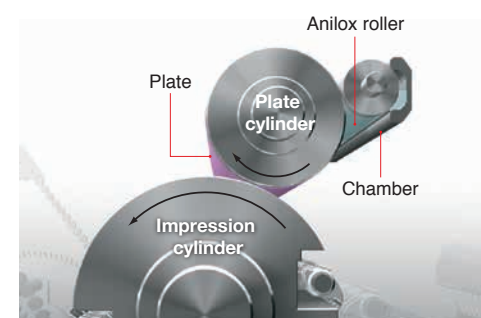
TP Tandem Perfector

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.

Translink unit streamlines sheet transfer

The unique translink unit smoothly and stably conveys sheets from reverse-side printing units to front-side printing units without the need to reverse the sheets, providing a key role in printing speed and quality. The press produces little fan-out since it does not alternately print the front side and back side, achieving highly accurate front to back side registration similar to that of straight presses. In addition, the press transfers sheets without changing the vertical direction, eliminating the need to make plates differently for front side and back side printing units.
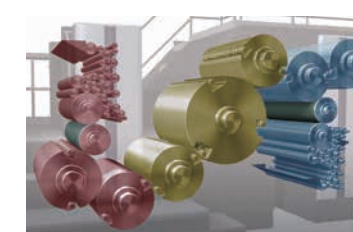
Front Side Printing Units

These units inherit a proven design, including the world's first application of the seven o'clock cylinder arrangement and a highly responsive inking system with high-precision ink keys.

Vacuum Hold-Down Cylinder

This cylinder stabilizes sheet transfer to front side printing units with each sheet held in place by an air vacuum immediately after its back side is printed, preventing the occurrence of scratches and ink smearing due to sheet flutter.

Back Side Printing Units

These units provides the same high quality features as front side printing units with operational access on the same floor level, reducing the need for constantly going up to the upper structure.

PF Convertible Perfector*

This press employs our unique three double-diameter cylinder convertible perfecting device for fast, high-quality perfecting.
* RMGT 10 only

Original three double-diameter cylinder mechanism

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 ranges. Doubling the size of the reversing cylinder at the center of the convertible perfecting device allows smooth sheet transfer during reversal with applications for up to 0.6 mm sheet thicknesses.

Impression cylinder
Double-diameter reversing cylinder
Vacuum hold-down device
Tail edge
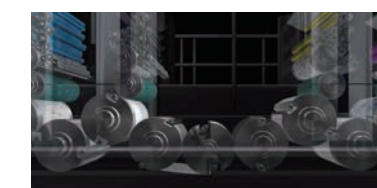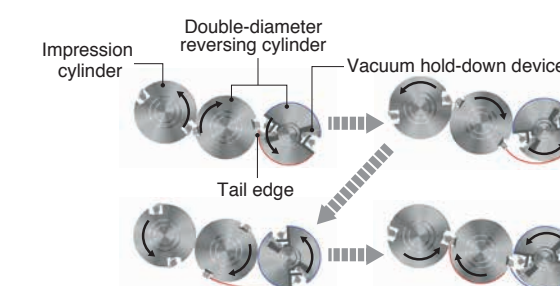
Changeover between straight printing and perfecting is automatically accomplished with a single touch operation in just three minutes. The straight printing mode responds to high value-added printing needs, including special color inks and OP vanish coating.
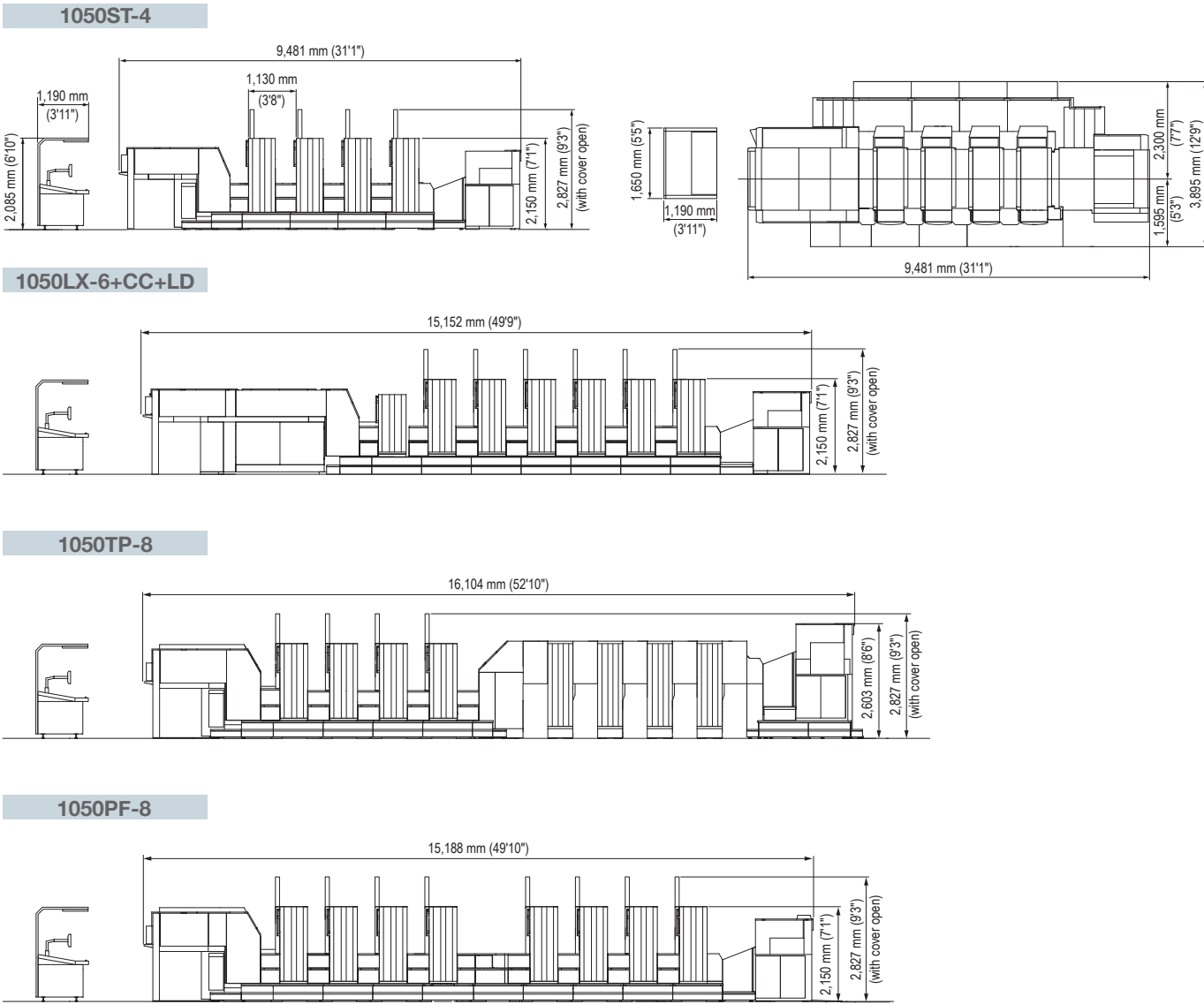
Specifications

■ RMGT 10 1,020 / 1,050 mm Format Offset Presses

	ST (straight press)		LX (wide stock range press)		TP (tandem perfector)		PF (convertible perfector)	
	1020 model	1050 model	1020 model	1050 model	1020 model	1050 model	1020 model	1050 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 × 1,020 mm (29.13" × 40.16")	750 × 1,050 mm (29.53" × 41.34")	740 × 1,020 mm (29.13" × 40.16")	750 × 1,050 mm (29.53" × 41.34")	740 × 1,020 mm (29.13" × 40.16")	750 × 1,050 mm (29.53" × 41.34")	740 × 1,020 mm (29.13" × 40.16")	750 × 1,050 mm (29.53" × 41.34")
Min. sheet size	360 × 540 mm (14.17" × 21.26")		360 × 540 mm (14.17" × 21.26")		360 × 540 mm (14.17" × 21.26")		360 × 540 mm (14.17" × 21.26") [for straight printing] 440 × 540 mm (17.32" × 21.26") [for perfecting]	
Max. printing area	730 × 1,020 mm (28.74" × 40.16")	740 × 1,050 mm (29.13" × 41.34")	730 × 1,020 mm (28.74" × 40.16")	740 × 1,050 mm (29.13" × 41.34")	730 × 1,020 mm (28.74" × 40.16")	740 × 1,050 mm (29.13" × 41.34")	730 × 1,020 mm (28.74" × 40.16") [for straight printing] 720 × 1,020 mm (28.35" × 40.16") [for perfecting]	740 × 1,050 mm (29.13" × 41.34") [for straight printing] 730 × 1,050 mm (28.74" × 41.34") [for perfecting]
Sheet thickness	0.04 – 0.8 mm (0.002" – 0.031")		0.04 – 1.0 mm (0.002" – 0.039")		0.04 – 0.6 mm (0.002" – 0.024")		0.04 – 0.6 mm (0.002" – 0.024")	

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

Dimensions

1050ST-4

1050LX-6+CC+LD

1050TP-8

1050PF-8

Specifications

■ RMGT 11*2 1,130 mm Format Offset Presses

	ST (straight press)	LX (wide stock range press)	TP (tandem perfector)
Max. printing speed *1	15,000 S.P.H.	15,000 S.P.H.	13,000 S.P.H.
Max. sheet size	820 × 1,130 mm (32.28" x 44.49")	820 × 1,130 mm (32.28" x 44.49")	820 × 1,130 mm (32.28" x 44.49")
Min. sheet size	460 x 620 mm (18.11" x 24.41")	460 x 620 mm (18.11" x 24.41")	460 x 620 mm (18.11" x 24.41")
Max. printing area	810 x 1,120 mm (31.89" x 44.09")	810 x 1,120 mm (31.89" x 44.09")	810 x 1,120 mm (31.89" x 44.09")
Sheet thickness	0.04 – 0.6 mm (0.002" – 0.024")	0.04 – 1.0 mm (0.002" – 0.039")	0.04 – 0.6 mm (0.002" – 0.024")

*1 Local conditions, ink and printing plate types, and printing quality requirements will affect the maximum printing speed.
*2 RMGT 11 series is not available as PF (convertible perfector) type.

Dimensions

1130ST-4

1130LX-6+CC+LD

1130TP-8