LITHRONE G40 advance
LITHRONE G40P advance

LITHRONE G40
KOMORI CORPORATION advance

40-inch Offset Printing Press
40-inch Convertible Perfecting Offset Printing Press

KOMORI

LITHRONE G40 advance

Komori's Lithrone advance series takes offset print production to the next level

The Lithrone G40/G40P advance provides **world-class ROI**[1]

Komori developed the advance series, which offers world-class ROI, in order to improve productivity and profitability for printing companies. In addition to the high return on press investment, advance presses fully support digitalization making the most formidable production press available. Using KP-Connect Pro to link prepress, press and postpress processes optimizes overall production, helping to create smart factories that achieve the highest overall productivity with the least amount of effort. The advance series is all about improving the many micro areas of the process to make a large impact. This is what makes advance series the clear frontrunner in achieving digital transformation for printing companies.

[1] ROI: Return on Investment
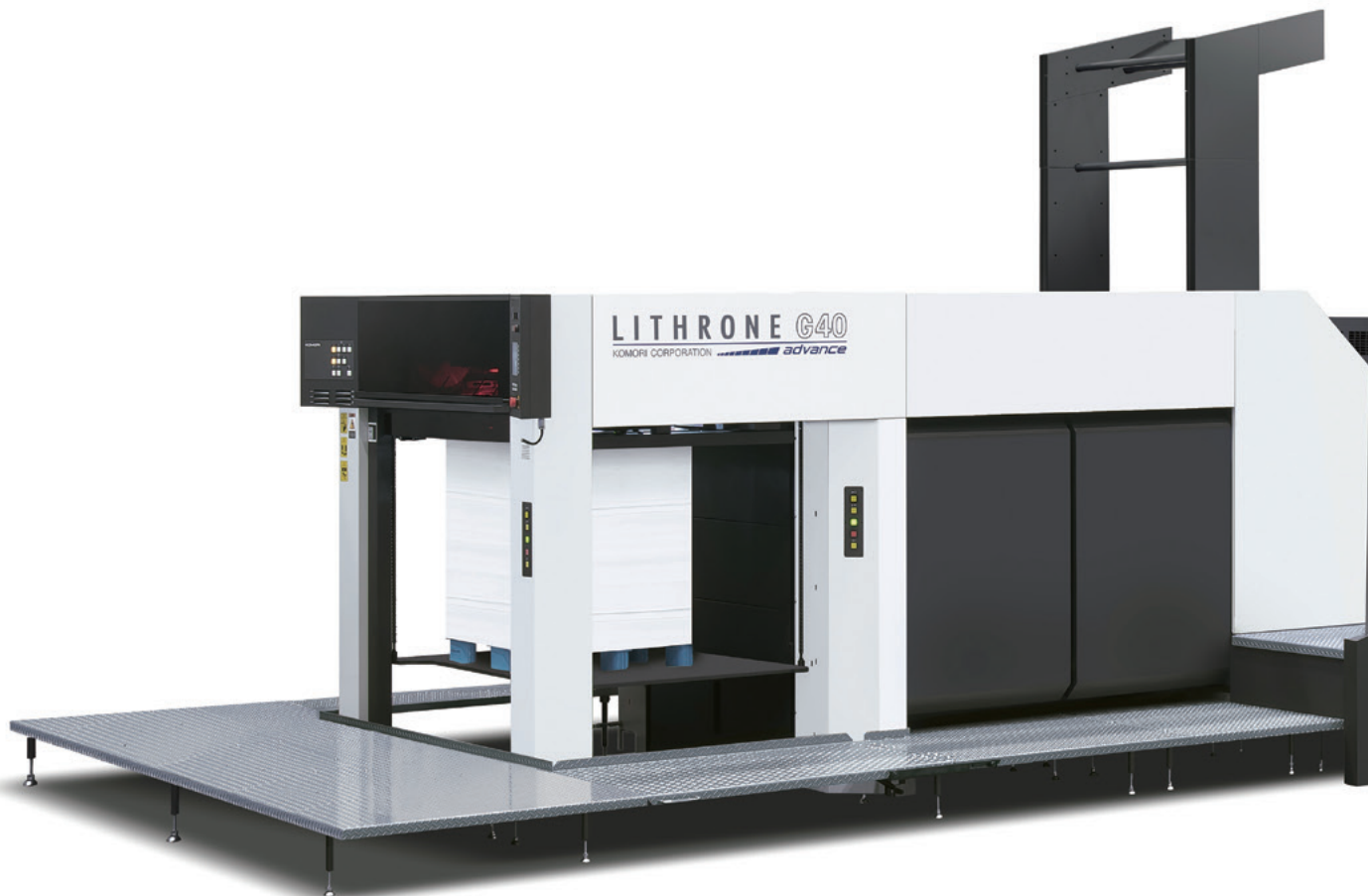
advance × KP-Connect for optimal productivity

According to the data, on average, only 33% of press operating time is spent on production printing*2.

In conjunction with KP-Connect Pro, the new advance press is able to transform makeready and idle time into production printing.

Factors that interfere with productivity

Legacy methods of delegating processes and communicating information create downtime, such as waiting for plates or paper

Manually configuring and adjusting settings for items such as feeder and delivery are time consuming

idle time **34%**

makeready time **33%**

production printing 33%
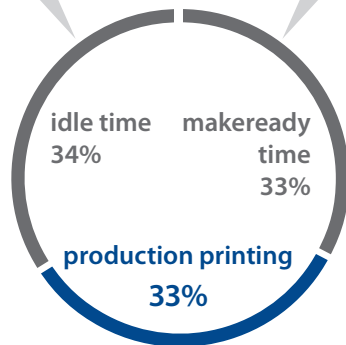
After introducing KP-Connect Pro and advance presses

The KP-Connect advantage

KP-Connect Pro minimizes downtime by **digitalizing the connection between processes**

The advance advantage

Advance automates configuration and adjustments, **shortening makeready time**

Productivity

UP

The advance advantage

High-speed, stable operation through improved paper feeding and delivery also increases productivity while production printing

Photo: GL-540A+C
* Model in photograph includes optional specifications.

*2 In-house survey. Of the 45 companies that have the KHS-AI (51 machines), the results were calculated from 31 companies that mainly use four colors and excludes package users.

Creating smart factories using CONNECTED AUTOMATION

The digital transformation is sweeping the print industry. Through Connected Automation will print providers be able to take advantage and arrive at the new smart factory model. Komori's key to Connected Automation and achieving the smart factory model is through use of Komori's KP-Connect Pro. KP-Connect Pro software enables unified management of a range of devices and information, to better maximize productivity.

Three advantages of advance presses and KP-Connect Pro

Visualization

Link production processes and monitor operations

- Print room operating status can be checked in real-time, even when off-site
- Operators can grasp the progress of connected processes and status of important materials such as plates and paper, for more efficient makeready
- Automatically create a variety of reports, using actual results data, helping to improve productivity

Automation

Automatic job linking between prepress, press and postpress

- Job information from the scheduler is automatically carried over to the press, reducing time spent on configuring complex settings.
- Print operators can specify automatic output of printing plates without stopping production[*1]

[*1] Conditions may apply in regard to compatible manufacturers.

Optimization

Digitalization of process management, for optimization overall production

- Shifting from analogue methods (such as job tickets) to digitalization greatly reduces time spent on process management
- Automatically scheduling optimal job order, with less time spent on makeready and arrangements, for instance by prioritizing fast turnaround jobs, or grouping together jobs that use the same ink or paper size

KP-Connect Komori Solution Cloud

KP-Connect Basic

Monitor operations remotely, anytime, anywhere

KP-Connect visualy analyzes and graphs real print operation data, helping to improve productivity.
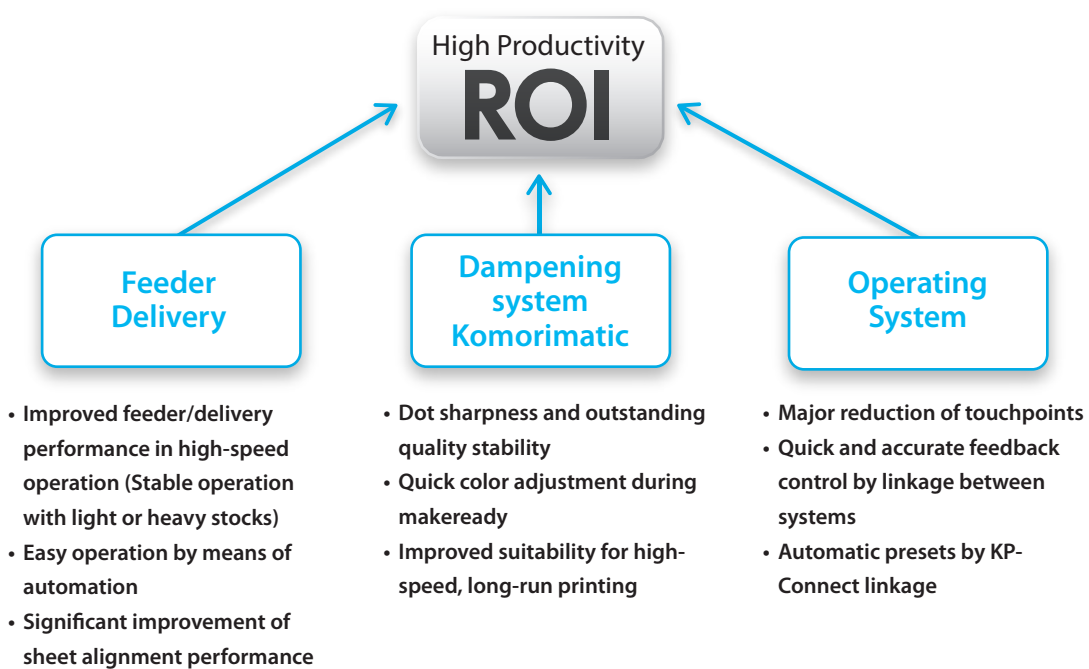
KP-Connect Pro

Links all devices, to visualize and optimize entire site

Monitor progress of all jobs in realtime, at a glance, including prepress, press and postpress. Connected Automation, including MIS and production scheduling, increases overall site efficiency.

advance presses offer high ROI

ROI is the lifeblood of printing companies, and the advance series of presses is dedicated to providing world-class ROI. Komori achieves this high ROI by focusing on three areas.

ROI Return on Investment	=	**Return** Profit (≒Productivity)
		Investment Capital investment (≒Initial investment + maintenance costs)

High Productivity
ROI

Feeder Delivery

- Improved feeder/delivery performance in high-speed operation (Stable operation with light or heavy stocks)
- Easy operation by means of automation
- Significant improvement of sheet alignment performance

Dampening system Komorimatic

- Dot sharpness and outstanding quality stability
- Quick color adjustment during makeready
- Improved suitability for high-speed, long-run printing

Operating System

- Major reduction of touchpoints
- Quick and accurate feedback control by linkage between systems
- Automatic presets by KP-Connect linkage

Reasons for increased production efficiency

Improved paper feed and delivery allow for shorter production printing time when printing speed is increased. Additionally, shorter makeready time allows for more jobs to be handled in the same amount of time. Improved production efficiency allows for downsizing, for instance by handling jobs previously carried out on three presses on two presses instead, thus increasing productivity.
Additionally, shorter makeready time allows for more jobs within a given timeframe.

* Run length is the same

Conventional press — Printing speed / Time / Production printing / Makeready

advance — Printing speed / Time
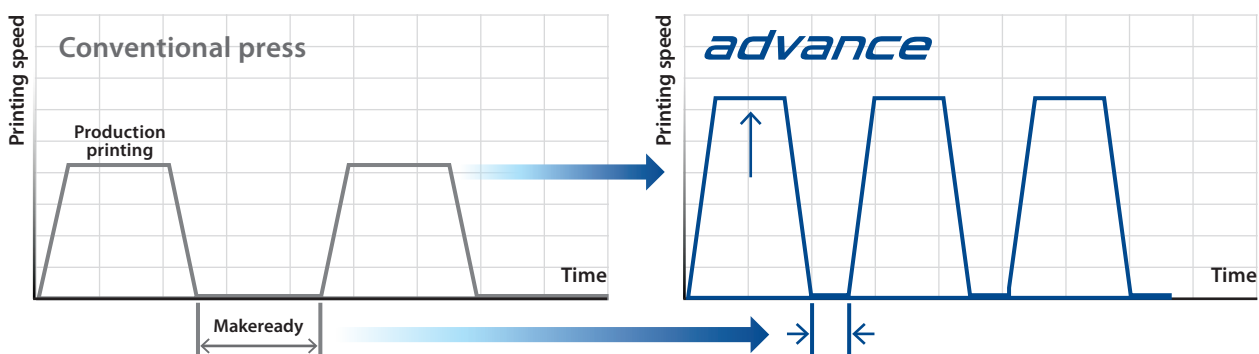
Impressively fast and more stable production

High-performance paper feed and delivery is indispensable for more productive, high-speed operation. The high-speed technology of the Lithrone GX series has been fully applied to the advance series, it enables stable, high-speed printing on both thin and thick paper alike. Komori also paid particular attention to ease of operation, reducing operator workload to even allow for one-man operation.

Smart and easy paper loading

Feeder pile guide pointer `New`

Operators can load paper into approximate position using two pointers on each side of the feeder pile. The press will automatically take over lateral paper feed adjustments, reducing the operator skillset and workload.
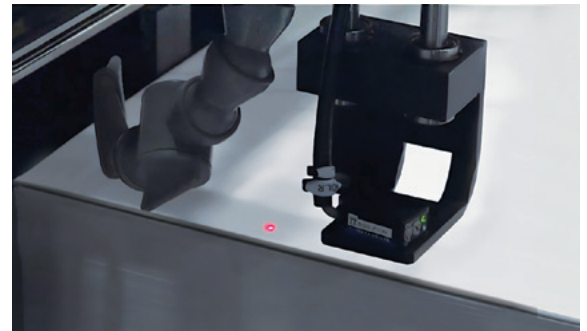
Better air flow, for stable, high-speed feeding of all types of paper

Sucker box `New`

Redesigned air efficiency for paper handling allows for stable, sheet-by-sheet separation, whether dealing with a thin, supple paper or a thick, rigid paper. Optimization of suction head position also helps stop the paper from bending within the sucker box, for stable operation at the highest speeds.
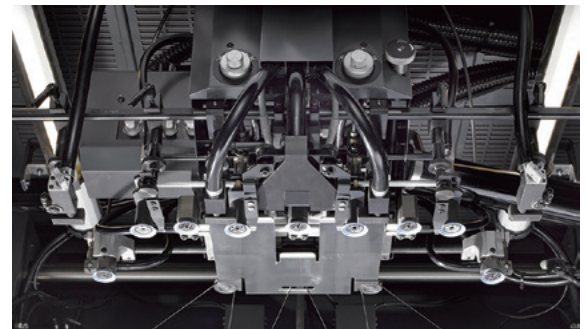
Stable paper feed, even with wrap or wave curled product

Front lay `New`

The register front lay has also been radically redesigned. Structural improvements to the lay hood, at the point of contact with the paper, ensures a stable feed, even for difficult paper that tends to warp or wave.
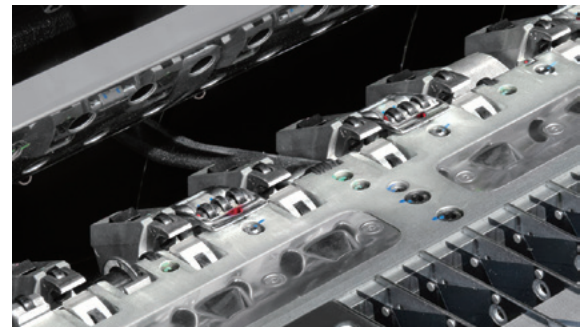
Exceptional sheet alignment even during high-speed printing

Delivery fan zone `New`

Fan control zones have been increased to 11 areas. Optimal air controls allow paper alignment to be fine-tuned for type and size. High-performance paper delivery improves efficiency during high-speed printing.
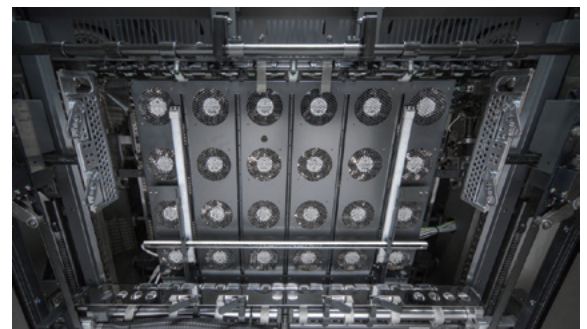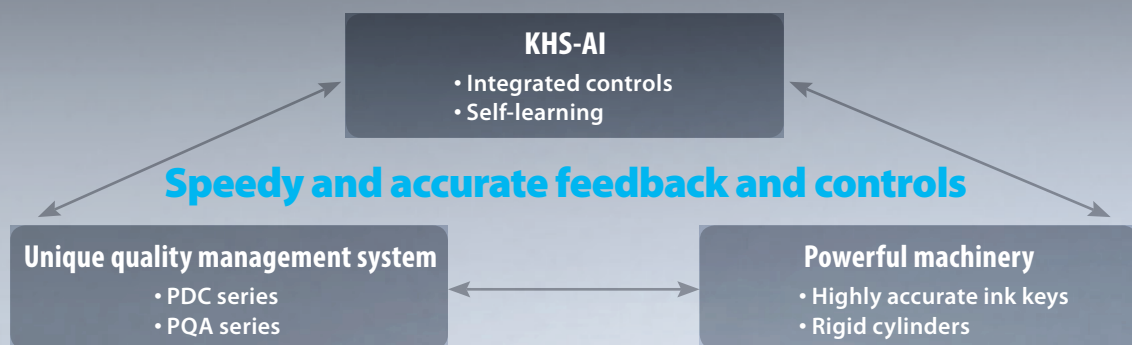

`New` : New feature   `Unique` : A unique Komori feature. Applies to following pages.

* Use the two-dimantional codes on pp. 12-13 to view video of each feature.

Supports digitalization.
Unique Komori systems drastically reduce operator workload

KHS-AI is an integrated, self-learning control system that fully supports operators, from job start-up to production printing, reducing makeready time and paper waste. Further, connecting to KP-Connect also allows production information to be shared digitally, helping to optimize production. All color measurement and control devices are originally developed by Komori. Synergy between reliable production (such as ink keys with high accuracy and followability) and systems ensure faster color and registration adjustment and dramatically shorter makeready times. The systems also provide swift and accurate, automatic feedback, freeing operators from time consuming, in-run, adjustments.
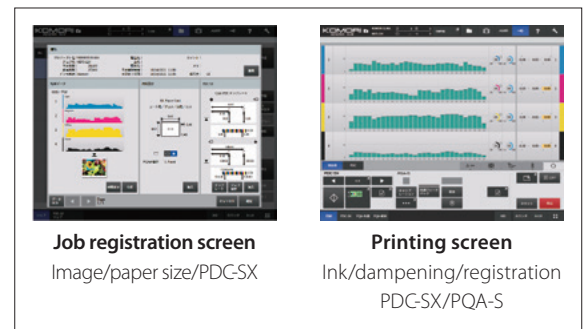
KHS-AI
- Integrated controls
- Self-learning

Speedy and accurate feedback and controls

Unique quality management system
- PDC series
- PQA series

Powerful machinery
- Highly accurate ink keys
- Rigid cylinders

16,500

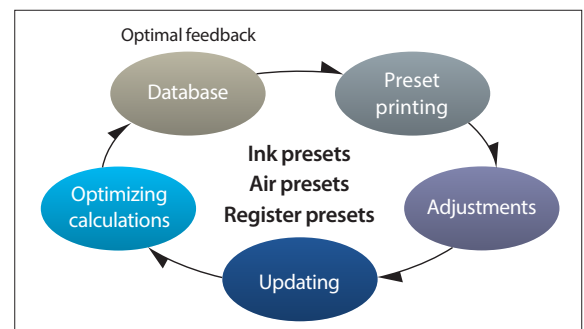## Simple, one-screen operation, for ease of use

KHS-AI, ease of use New

During job registration, makeready and production printing, all necessary information for each phase is gathered onto a single screen. Adjustments can be made during production printing while referencing registration, color and moistures levels. The number of touches required to switch screens has also been reduced, shortening configuration time and helping to prevent human error. Additionally, job settings can be automated via KP-Connect Pro, reducing configuration time by approximately 85% compared to previously.

Job registration screen
Image/paper size/PDC-SX

Printing screen
Ink/dampening/registration
PDC-SX/PQA-S

More efficient makeready through self-learning

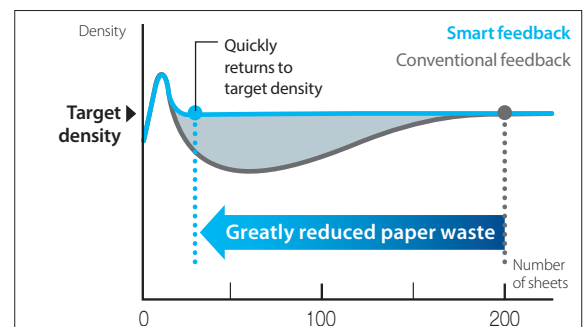### KHS-AI, high precision preset function Unique

Ink key adjustments, air levels and registers can be automatically preset according to paper size/paper information from the job information, greatly reducing makeready time.Self-learning tools are also installed to update data with each use, further fine-tuning presets.

Optimal feedback
Database — Preset printing — Adjustments — Updating — Optimizing calculations
Ink presets / Air presets / Register presets

Machine-regulated density, saves on time and paper

KHS-AI, smart feedback feature Unique

A unique Komori feature that provides quick feedback when density levels differ from target density, and is capable of responding even to initial falloffs in density. Density is measured with PDC-SX, and the amount of ink applied to the roller is then adjusted based on any calculated excess or shortcoming. These unique ink fountain controls can re-adjust to target density within around 30 sheets, dramatically reducing paper waste.

Density / Quickly returns to target density / Smart feedback / Conventional feedback / Target density / Greatly reduced paper waste / Number of sheets / 0 / 100 / 200

Automatic color and register controls, with no need for a loupe

PDC-SX (Spectral Density Control) Unique

PDC-SX not only measures color but also registration, feeding results back to the press. This also applies to register on the back of the sheet. This reduces wasted time, workload and paper when registration does not match.

Auto-registration
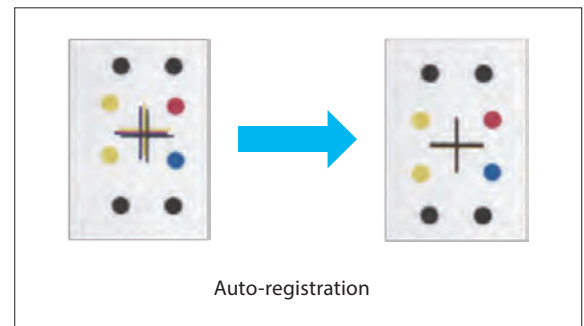
Operator-free quality while printing

PQA-S V5 (In-line Print Quality Assessment System for Sheetfed) Unique

Quality inspection: Checks for printing problems and prevents misprints from passing to postpress

Color control: Measures color bar and automatically adjusts to match and maintain target density

Automatic register control: Measures dedicated registration marks to automatically adjust for and maintain unit-to-unit registration
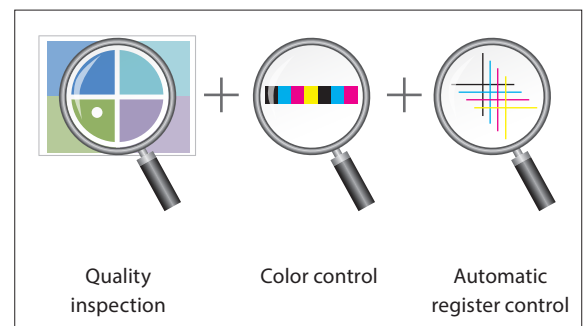
Quality inspection / Color control / Automatic register control

* Includes options.
* Figures show Komori measurements under specific conditions. No warranty is implied.
* Use the two-dimantional codes on pp. 12-13 to view video of each feature.

A new package production machine for the SDGs*¹ era

Komori's advance series enhances package printing. Makeready costs have been minimized by reducing time and work spent on processes such as changing and cleaning special colors, preparing coaters or changing out thick paper, helping to increase profitability even during short-run printing. Additionally, by standardizing ink types, Komori's new Smart Color*² technology can eliminate the need for color changing and allow for color controls similar to those used for process colors, further shortening makeready time.

*¹ SDGs : Sustainable Development Goals
*² A wide gamut, 6- or 7-color solution for special colors, adding either O and G (orange and green) or O, G and V (orange, green and violet) to the traditional CMYK.
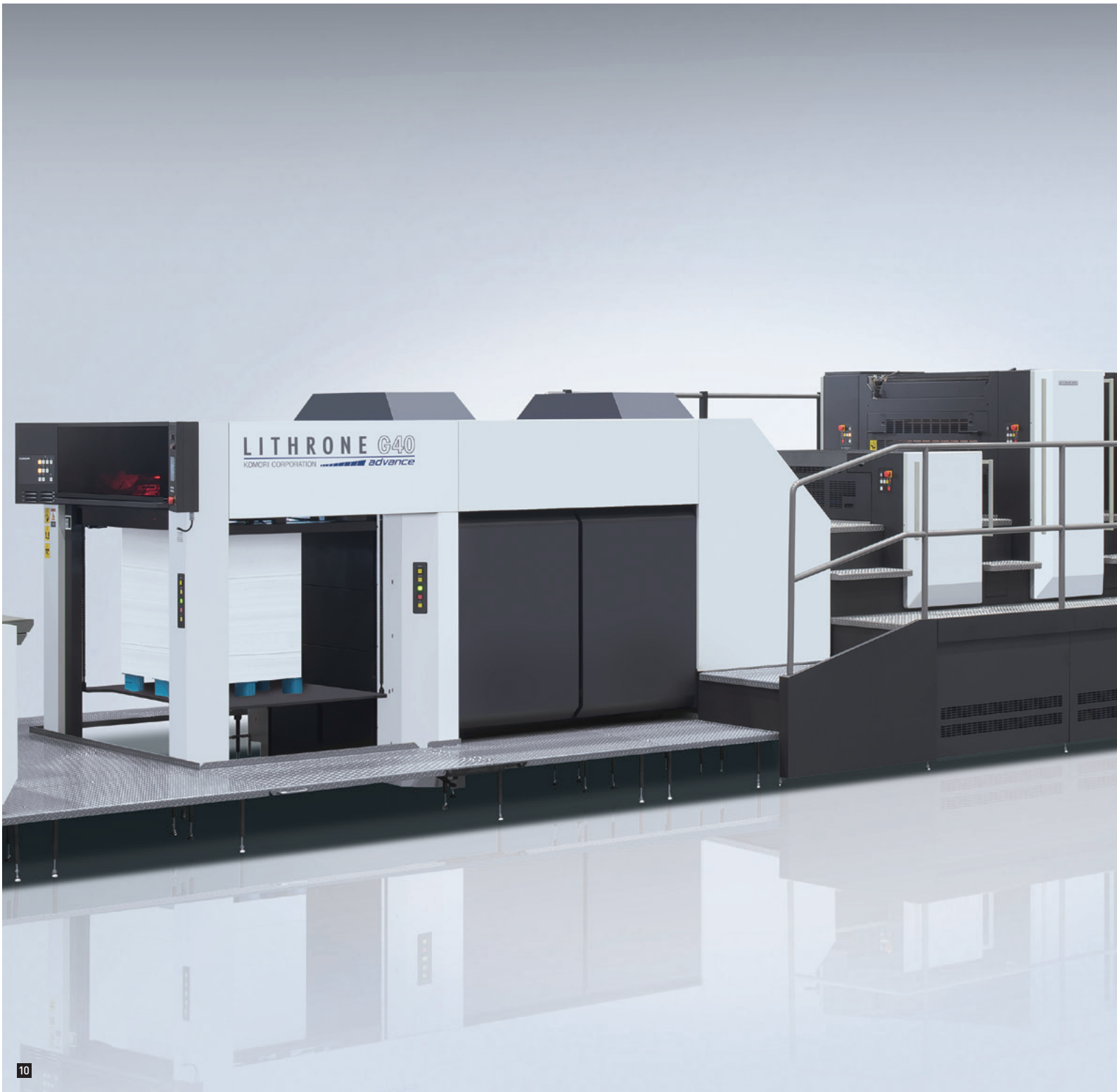
Stable, high quality with Komori's unique dampening system

Komorimatic `Unique`

Komorimatic, Komori's unique dampening system offers the sharp dots and fast color acquisition, with increased effectiveness for high-speed long runs. The four dampening rollers and reverse-slip system creates a thin film of water that is uniform in both the lateral and vertical directions while using the minimum required amount of water. Maintaining a stable water and ink balance minimize surface inconsistencies. Also well-suited for environmentally friendly, alcohol-free printing.
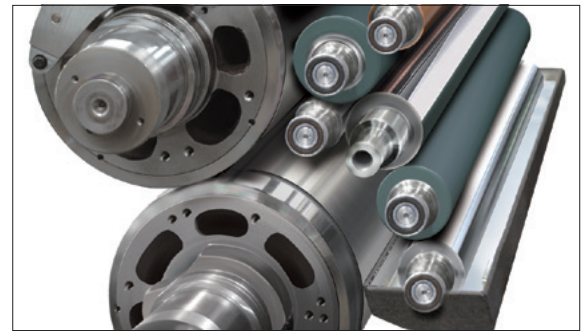
Superior dot shape reproduction reduces waste of a portion of the product due to color variation in step and repeat jobs. `Unique`

When printing multi-up images for packaging, it is important to minimize color difference from lead to tail. The Komorimatic dampener on advance presses minimizes color inconsistencies by providing a highly consistent and stable water layer. When coupled with precise ink key and ink film control from the Komori inker, color consistency is optimized providing expert color reproduction, less waste, and increased profitability.

* Color difference compared to standard density is measured at 6 locations when printing 500/2,000 sheets, using ④ on the 500th sheet as standard.25%, 50% and 75% CMY gray patches are used.
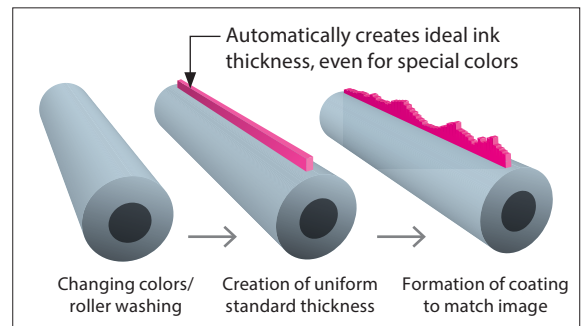

Results and evaluation of surface inconsistencies/color difference*

All reproduced at ΔE<2
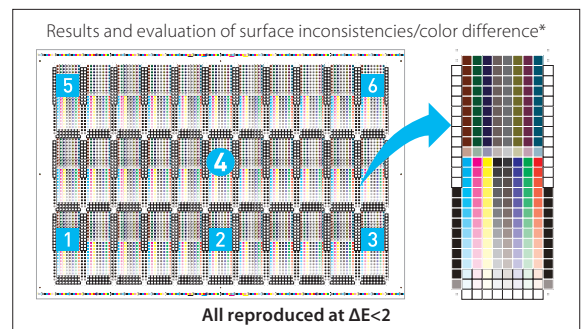
Quick color acquisition for repeat jobs

Special color-compatible pre-inking `New`

Pre-inking has been further strengthened, allowing for a variety of special colors to be reproduced with a high degree of accuracy. Past data can be called up when repeating jobs to automatically create the ideal ink thickness, special color. This greatly reduces paper waste and shortens time required for color matching.

*Requires PDC-SX (optional).

Automatically creates ideal ink thickness, even for special colors

Changing colors/ roller washing → Creation of uniform standard thickness → Formation of coating to match image

Eliminates turbidity after roller washing

Special surfactant for ink rollers `Unique`

Package printing involves a large number of color changes, making roller washing very time-consuming, particularly when changing from a deep color to a lighter Komori's special surfactant lifts surface staining to deep clean the roller, minimizing turbidity.
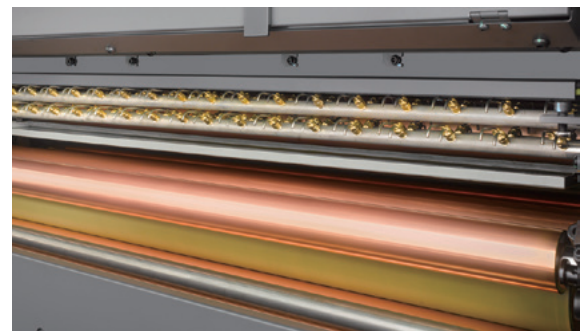
Coater plate changing can be quickly handled by a single operator

Coater clamp system advance `New`

A new tension mechanism was adopted for coater clamping. Plate tension can be adjusted by manipulating a single adjustment on the gripper and tail side, allowing for easy plate changing by a single operator. Coater blanket and photopolymer plate changing time is shortened by approximately 40% compared to previous.


* Includes options.
* Figures show Komori measurements under specific conditions. No warranty is implied.
* Use the two-dimantional codes on pp. 12-13 to view video of each feature.

Functionality to meet a wide range of needs and further increase ROI

The advance presses offer a wide line-up of features to increase ROI, making them suited to all types of printing, including commercial, publishing and package printing.

❼ ❽ ❻ ❼ ❺

LITHRONE G40
KOMORI CORPORATION — advance

---
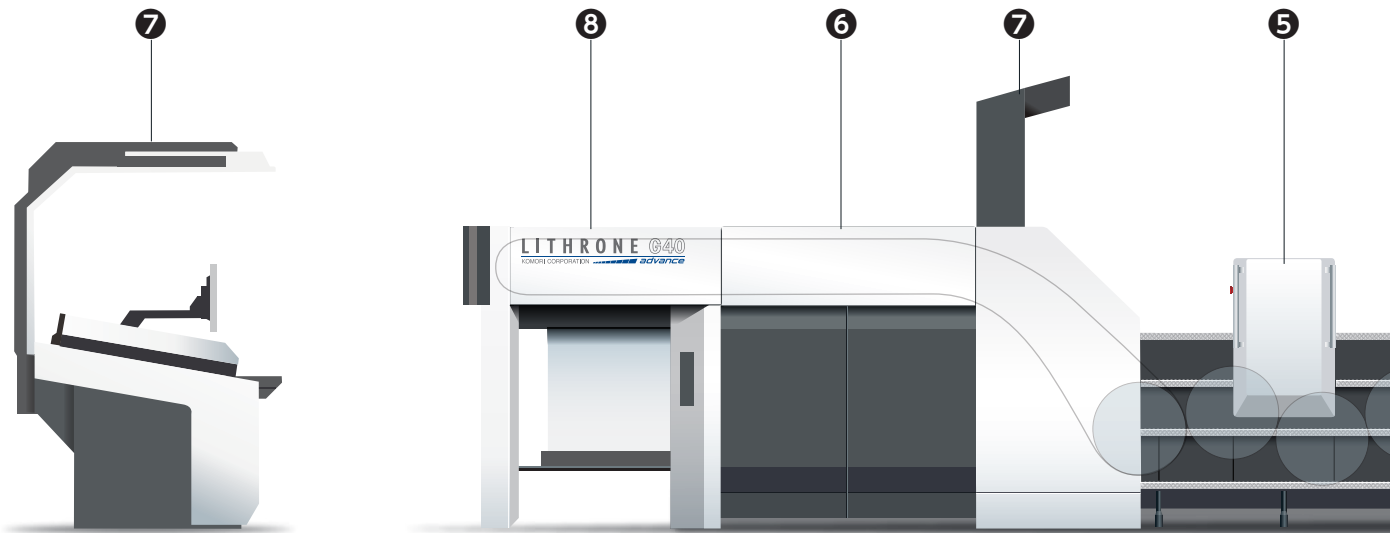
❼ Quality control

A variety of systems to drastically increase productivity.

All uniquely developed by Komori, these systems allow for quick and highly accurate register and color matching and maintain quality during production printing.

• **KHS-AI** KHS-AI	● ● ●
• **PDC-SG** Spectral Print Density Control-SG	● ● ●
• **PDC-SX** Spectral Print Density Control-SX	● ● ●
PDF comparator system	● ●
• **PQA-S V5** Print Quality Assessment System (Sheet) V5	● ●
①**Quality inspection**	
②**Quality inspection + color control**	
③**Quality inspection + color control + automatic register control**	
Automatic mask creation	●
Sheet numbering system	●
• **KID** Komori Info-Service Display	● ●

---

❺ Coater

Coater blankets and photopolymer plates can be easily changed by a single operator, greatly reducing makeready time. Also compatible with aluminum-based blankets and photopolymer plates.

• **Coater clamp system advance**	●
• **Coater Semi-APC**	●

---

❽ Delivery

Allows for high-speed printing on thin or thick paper.

The automatic non-stop delivery system is particularly well-suited for package printing, which requires frequent paper changes.

• **Delivery fan zone**	●
• Manual non-stop delivery system	● ●
• Automatic non-stop delivery system	● ●
• Extended delivery	● ●

---

❻ Dryer

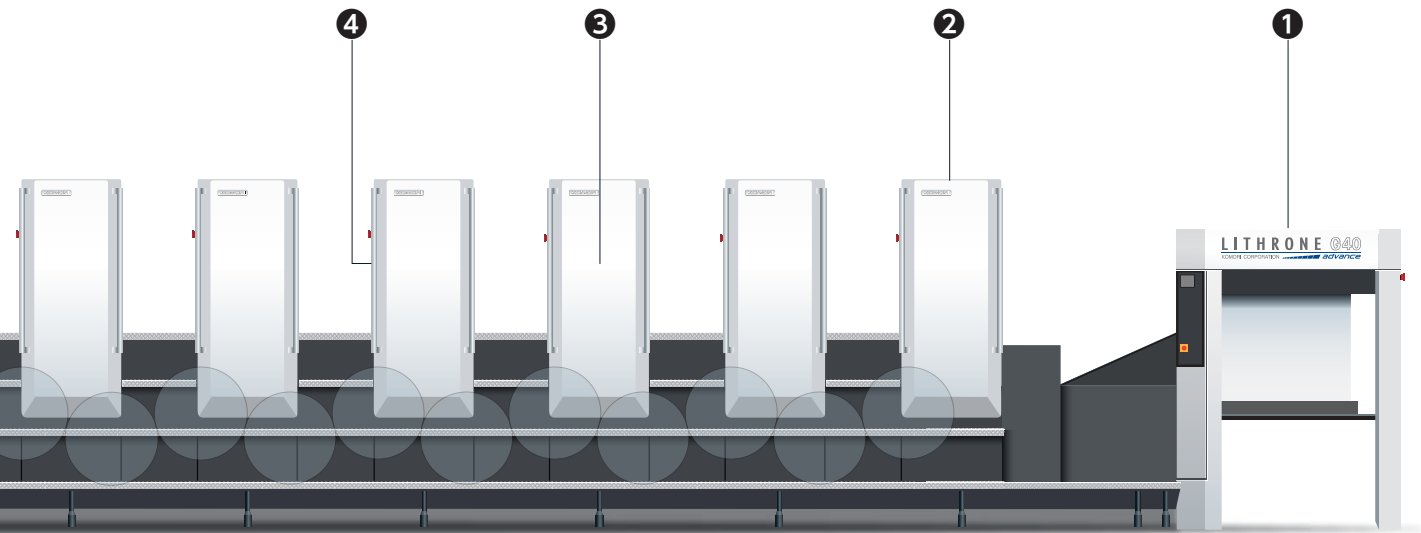Komori's unique drying system, combines ecology, economy, quality and reliability.

• H-UV	● ● ●
• H-UV L (LED)	● ● ●
• UV	● ●
• IR	●

---

* URL for above two-dimantional codes: https://www.komorisolutions.com/video/en/g40ag40ap.html

● … High-speed printing

● … Short makeready

● … Quality

● … Reduced paper waste

● … Environment/safety

④ **③** **②** **①**

LITHRONE G40 KOMORI CORPORATION *advance*

---

❸Automatic Washing/Cleaning System

Efficient automatic washing/cleaning by means of an automatic control program.

Use of pre-soaked cloth for automatic blanket washing and automatic impression cylinder

cleaning shortens cleaning time and reduces cloth consumption, making it friendlier on the environment.

• Automatic blanket washing	● ●
• Automatic impression cylinder cleaning	● ●
• Automatic ink roller cleaning	●
• **Special surfactant for ink rollers**	●

---

❶Feeder

Automates paper settings and adjustments during printing.

Easy to operate, and assists stable, high-speed printing on thick or thin paper.

• **Feeder pile guide pointer**	●
• Automatic height adjustment of feed board entry guides	● ●
• Manual non-stop feeder system	●
• Automatic pile height control	●
• Sucker box	●
• Front lay	●

---

❹Plate changing system

Uses a benderless clamping mechanism, for more efficient plate changing without the

need for plate tail-edge bending. The line-up includes semi-APC (semi-automatic),

full-APC (fully automatic) and A-APC (which allows plates to be changed for all colors at once in

1 minute and 25 seconds).

• Semi-APC	●
• Full-APC	●
• **A-APC**	●

---

❷Unit/other

Includes a system to prevent UV ink mist from scattering, for increased

environmental friendliness. DC blowers also help to reduce power consumption

and heat levels.

• **Komorimatic**	● ● ●
• Ink mist extractor fans	●
• Ink mist removing device	●
• **DC blower**	●

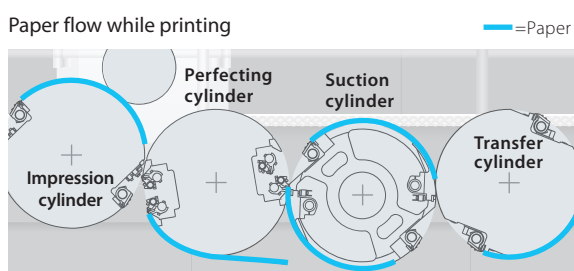* Restrictions apply regarding availability on different models and available combinations of features.

* Figures show Komori measurements under specific conditions. No warranty is implied.

An adaptable perfecting press capable of handling both double-sided printing and one-sided multicolor printing

Photo: GL-840P-A
* Model in photograph includes optional specifications.

With increasing worker shortages, improving production efficiency is more important than ever. The Lithrone G40P advance allows you to handle double-sided printing and one-sided multicolor printing with a single machine. Komori's unique three double-size cylinder are perfect for a wide variety of jobs, from thin paper to thick, with minimal scuffing and marking. The impressive productivity achieved through one-pass printing makes it possible to downsize, covering work previously handled on two or three single-side presses on a single machine. This improves productivity and profitability, while also contributing to the environment by reducing electricity consumption and paper waste. In addition to perfecting presses, Komori offers a lineup of double-sided presses built to increase productivity depending upon the paper used.The Lithrone GX40RP/GX44RP advance is made for commercial printing, publishing and full-scale package printing, while the Lithrone S40SP/S44SP is perfect for one to two color, double-sided publishing printing.

Paper flow while printing

—=Paper

Perfecting cylinder
Suction cylinder
Transfer cylinder
Impression cylinder

Three double-size cylinder `Unique`

Equipped with Komori's unique, high-performance perfecting mechanism. All double-size cylinder create a gentle sheet path with minimal scuffing and tearing, allowing for high-speed double-sided printing on thin and thick paper, alike.

Examples of custom setups/major applications

Legend:
- 🔵 H-UV L (LED)
- 🟪 UV dryer
- 🟥 IR dryer
- 🔵 Overprint varnish
- ⚫ Coater varnish
- ⚪ Primer
- ⚪ Silver varnish

Lithrone G40 advance (40-inch Offset Printing Press)

General commercial printing
5-color standard (example setup: GL−540A)
Special colors/overprint varnish, quality inspection + color control

(Diagram: Overprint varnish, Y, M, C, K) — 11,174 mm
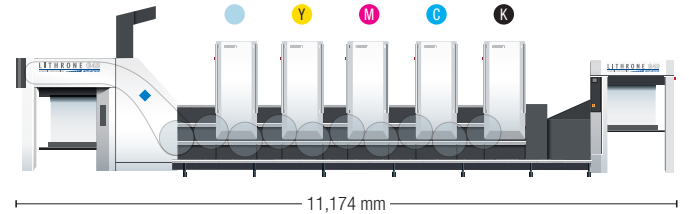
Package printing: Standard setup for package printing covering a wide variety of needs, such as printing using special colors, metalized paper/transparent film and various varnishes
6-color with coater on 300 mm plinth (example setup: GL−640A + C + extended delivery)
White ink, overprint varnish, aqueous/UV varnish,
quality inspection + color control

*(Diagram: Coater varnish, Overprint varnish, Y, M, C, K, W) — 15,258 mm*
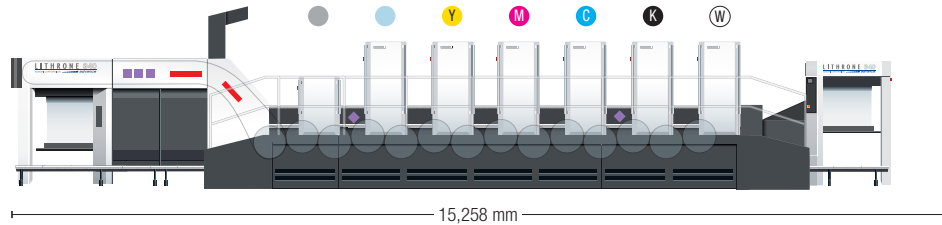
Package printing: Setup for package printing using Smart Color technology, which does not require color changing
8-color with coater on 300 mm plinth (example setup: GL−840A + C + extended/double delivery)
Smart color 7-colors, overprint varnish, UV varnish, quality inspection + color control, sorted delivery

(Diagram: Coater varnish, Overprint varnish, Y, O, G, M, C, V, K) — 19,341 mm
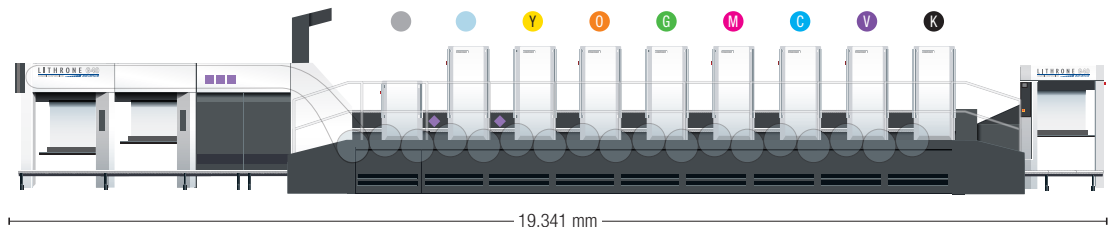
Package printing: Setup for high added−value package printing using elements such as silver underprint or matte+gloss varnish
8-color with coater on 300 mm plinth (example setup: GL−840A: 1C + C + DU + 7C + C + DU + DU + C + extended delivery)
Primer, underprint UV silver varnish, special colors aqueous/UV varnish (matter + gloss), quality inspection + color control
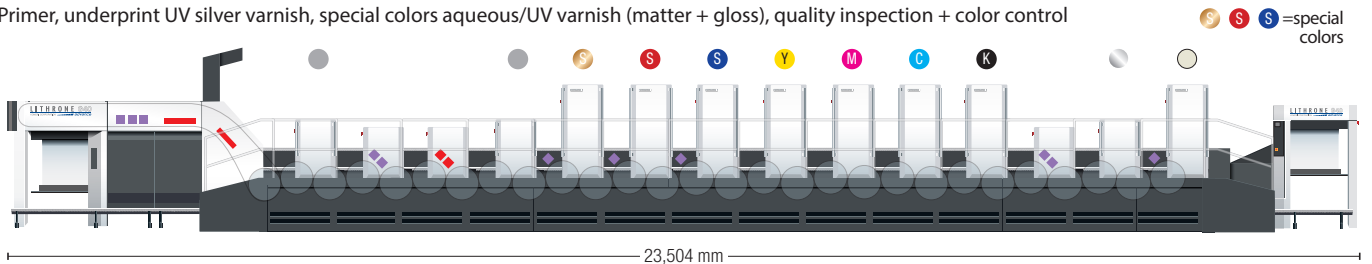
🟠 S 🔵 S =special colors

(Diagram) — 23,504 mm

Lithrone G40P advance (40-inch Convertible Perfecting Offset Printing Press)

General commercial printing/publishing
8-color standard (example setup: GL−840−A)
One-sided multicolor printing, double-sided one-pass
printing, quality inspection + color control

(Diagram: Y, M, C, K, Y, M, C, K) — 15,903 mm
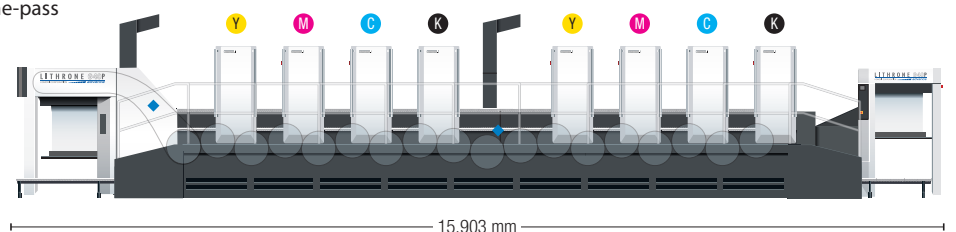
*Additional workspace, not included in machine dimensions, is required for installation, such as for operator stands, surrounding equipment/cabinets and paper transport.

Specifications

LITHRONE G40 advance (40-inch Offset Printing Press) specifications

Model			GL-240A	GL-440A	GL-540A	GL-640A	GL-740A	GL-840A
Number of colors			2	4	5	6	7	8
Max. printing speed		sph	16,500					
Max. sheet size		mm(in)	750 × 1,050 (29.5 × 41.3)					
Min. sheet size		mm(in)	360 × 520 (14.2 × 20.5)					
Max. printing area		mm(in)	710 × 1,020 (28 × 40.2)					
Sheet thickness range		mm(in)	0.04 - 0.8 (0.0016 - 0.0315) (0.06 - 1.0 (0.0024 - 0.0394) option)					
Plate size		mm(in)	800 × 1,030 (31.5 × 40.6)					
Blanket size		mm(in)	920 × 1,040 (36.2 × 40.9) (including aluminum bar)					
Feeder pile height		mm(in)	1,100 (43.3)					
Delivery pile height		mm(in)	1,100 (43.3)					
Dimensions	Length (L)*1	Standard	mm(ft)	7,640 (25'1")	9,996 (33')	11,174 (36'8")	12,352 (40'6")	13,530 (44'5")	14,708 (48'3")
		Standard + coater + extended delivery	mm(ft)	10,546 (34'7")	12,902 (42'4")	14,080 (46'2")	15,258 (50'1")	16,436 (53'11")	17,614 (57'9")
	Width (W)	Standard	mm(ft)	3,945 (12'11") (5,675 (18'7") with blower cabinet)			4,095 (13'5") (5,675 (18'7") with blower cabinet)		
		Plinth 300	mm(ft)	3,800 (12'6") (5,530 (18'2") with blower cabinet)			3,950 (12'12") (5,530 (18'2") with blower cabinet)		
	Height (H)	Standard	mm(ft)	2,153 (7'1") (2,634 (8'8") with cover open)					
		Plinth 300	mm(ft)	2,453 (8'1") (2,934 (9'8") with cover open)					

LITHRONE G40P advance (40-inch Convertible Perfecting Offset Printing Press) specifications

Model			GL-440P-A	GL-840P-A	GL-1040P-A
Number of colors			4	8	10
Max. printing speed		sph	15,000		
Max. sheet size		mm(in)	720 × 1,030 (28.3 × 40.6)		
Min. sheet size		mm(in)	360 × 520 (14.2 × 20.5)		
Max. printing area		mm(in)	710 × 1,020 (28 × 40.2) (single-sided) 700 × 1,020 (27.6 × 40.2) (double-sided)		
Sheet thickness range		mm(in)	0.04 - 0.3/0.06 - 0.6 (0.0016 - 0.0118/0.0024 - 0.0236)		
Plate size		mm(in)	800 × 1,030 (31.5 × 40.6)		
Blanket size		mm(in)	920 × 1,040 (36.2 × 40.9) (including aluminum bar)		
Feeder pile height		mm(in)	1,400 (55.1)		
Delivery pile height		mm(in)	1,400 (55.1)		
Dimensions	Length (L)*1	Oil-based	mm(ft)	10,699 (35'1")	15,411 (50'7")	17,767 (58'3")
		H-UV Specification	mm(ft)	11,191 (36'9")	15,903 (52'2")	18,259 (59'11")
	Width (W) plinth 300		mm(ft)	3,800 (12'6") (5,530 (18'2") with blower cabinet)	3,950 (12'12") (5,530 (18'2") with blower cabinet)	
	Height (H) plinth 300		mm(ft)	2,453 (8'1") (2,934 (9'8") with cover open)		

*1 Total press length will differ depending on inclusion of options, such as double coaters or DU.

* When performing double-sided printing on the Lithrone G40P advance using oil-based ink, a margin is required on the back of the sheet for the suction wheel.

* Maximum printing speed may differ depending on chosen specifications and printing conditions.

* Performance and numbers may differ from specifications herein. Specifications may also be modified for product improvements.

* Please contact a sales representative for information on specs not listed.