

L I T H R O N E S 4 0 S P



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Tsukuba Plant

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Breathtakingly New Departures

Superfecto^r

Genesis of a Great Press: Enhanced Productivity Converges with High Print Quality

The new Komori Lithrone S40SP SuperPerfector combines the exceptional print quality of sheetfed presses with the productivity of web presses. The press was developed by rethinking the remarkable Lithrone 40SP and introducing many of the proven features of the Lithrone S40 series. This endeavor was an extension of Komori's ideal of conceiving all product development from the user's perspective. In addition to featuring a space-saving footprint, the new Lithrone S40SP improves production efficiency and delivers major cost reductions. The press integrates a range of technologies to resolve the issues of front/back print quality differences as well as scuffing and marking.



LITHRONE S40SP

Major Features

Sheetfed Print Quality with Near-Web-Press Productivity

The Lithrone S40SP was developed to combine the outstanding performance qualities of sheetfed and web offset presses. The S40SP offers the print quality made possible by one-pass two-sided printing along with outstanding production efficiency and cost reduction. Heir to the Lithrone S40 Series design philosophy, the press provides outstanding ease of operation as well as enhanced print quality and productivity. Its one-pass printing approach virtually eliminates front/back print quality variation. Cost reductions are significant because a gripper margin is necessary for only one end of the sheet. Sheet marking and scuffing are no longer an issue thanks to Komori's basic cylinder configuration, which requires no transfer cylinder between printing units, and Komori's innovative belt-guide sheet transfer mechanism in the delivery.

Environmentally friendly

As a leading printing

press manufacturer, Komori has long been devoted to the development of presses that lessen the environmental impact of printing. Printing systems that consume the absolute minimum of resources, energy and labor are the best means of reducing environmental impact.

- 1 Reduced paper waste**
KHS-AI System
- 2 Lower energy consumption**
High-efficiency inverter motors
Advanced automation and digital-ready design and features
- 3 Low solvent usage**
Alcohol-free printing enabled by Komorimatic dampening system
- 4 Reduced solid waste**
Available with automatic ink cartridge feeder
Designed with oil-free bearings
New oil pump incorporates oil cleaner
- 5 Reduced noise**
Low-noise cabinet (optional)



LITHRONE S40SP

Technology

6-7 Rising demand for high print quality
High print quality is achieved through advanced technologies incorporated from the feeder to delivery.

Short Makeready

8-9 Very formidable technologies
Komori is renowned for setting the industry standard for automation and digitalization. The Lithrone S40SP is driven by the most advanced technologies found anywhere.

Productivity

10-11 Economic gains of one-pass printing
Compared to two-sided printing on a straight sheetfed press, the Lithrone S40SP's advantages are overwhelming: two to three times the productivity, one-half the labor costs, and one-third the printing time.

Quality

12-13 Komori development eliminates scuffing and marking issues
The Lithrone S40SP completely resolves the issues of scuffing and marking, an issue with other two-sided presses.

Digital Ready

14 Perfect match for today's labor-saving and power-saving management environment

Komori Cutting-Edge Technologies Address the Need for Higher Print Quality

Komori developed the Lithrone S40SP by looking at productivity from every angle. A new unit air blower design increases the volume of air on the blanket cylinder and the blowing range for enhanced register accuracy. Improved ease of operation and a greater adjustment range by means of a new clamping device has been achieved through revamping the gripper arrangement, gripper-changing cam, and gripper pressure settings to reduce the stress of gripper-changing on the sheets. Transfer cylinder fanout adjustment can be made by remote control, and the operation console allows easy one-touch operation. And an effective integrated plate register adjustment function is provided for front/back image alignment. The Lithrone S40SP: Komori's stroke of genius.

Air Side Lay Eliminates Roller Marks and Assures Improved Ease of Operation ①

The air vacuum design maintains stable side lay accuracy and eliminates roller marks. In addition, adjustments for paper weight are easy and can be changed during a run. ④

Register Designed for Sheet Stability ②

Adoption of an air blower at the feedboard to prevent lifting on the gripped side of the sheet totally stabilizes sheets at registration. In addition, a function for adjusting the height of the hold-down lay hood has been incorporated to address varied paper weight and curvature. A Komori-developed register sensor placed at the position held down by the lay hood enables stable detection.

New Clamping Mechanism Minimizes Adjustment for Register Error due to Sheet Deformation ③

A new clamping mechanism permits quick and easy register adjustment for sheet circumferential fanout, sheet tail lateral fanout, or sheet stretching. This new configuration not only adjusts the shape of the plates effectively and reliably but also switches the circumferential plate tension according to the grain of the paper (short or long). The range of adjustment is larger than conventional clamping mechanisms. All operations are performed with just one tool, which significantly shortens work time.

New Suction Tape Feeder Upgrades Operability (optional)

This suction tape cuts the number of rollers and brushwheels. This device eliminates time-consuming adjustments, and the air vacuum design allows stable transfer of a wide range of papers.

Vacuum Slow Down Wheels

The new belt-type wheels with increased sheet deceleration effect allow the Lithrone S40SP to handle increased operating speeds and a greater range of paper thicknesses. Up to five easily removable wheels may be used, allowing the press to handle any imposition.



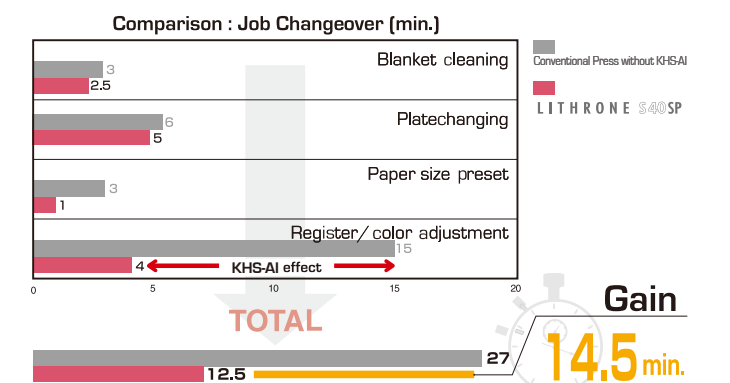
New Technology

KOMORI'S INNOVATIVE SOLUTIONS



Reducing Time Costs: The Komori Development Strategy for Enhancing Profitability

Komori has led the way in integrating automation and digitalization in offset printing presses, and the Lithrone S40SP benefits from the full range of the industry's most advanced technologies. Komori's well-known Fully Automatic Platechanging (Full-APC/option) changes all eight plates in only five minutes. Automatic blanket and impression cylinder washing is software-controlled. The KHS-AI (Komori KHS Advanced Interface) performs one-step color register adjustment and color matching, reducing paper wastage and slashing makeready times. A full arsenal of advanced systems aimed directly at greater productivity and profitability.



● New Full-APC Saves Labor and Shortens Makereadies

The operator simply sets the new plates and the Full-APC system automatically performs the time-consuming task of platechanging on both upper and lower units. Heir to the high operating speed and safety standards of the revolutionary high-technology Lithrone S40, the S40SP meets all relevant European safety standards.

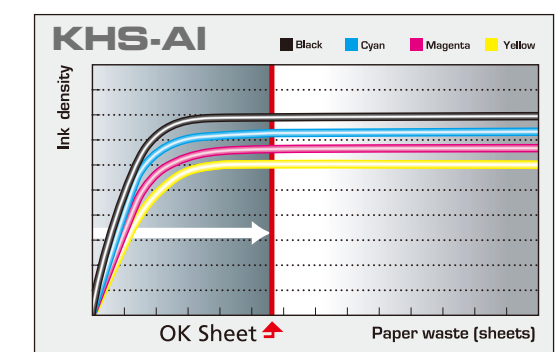
● Automatic Blanket and Impression Cylinder Washing

Cylinders are washed efficiently and automatically under program control. For impression cylinder washing, a function that advances the cylinder by a fixed amount reduces the consumption of cleaning cloth.



KHS-AI for Very Short Makereadies with Minimum Paper Waste

The KHS-AI (Komori KHS Advanced Interface) was designed to raise productivity by reducing job changeover times and paper waste to absolute minimum levels. CTP-produced plates and preset data calculated from CIP4 data enable one-step register adjustment and color matching. The program-controlled pre-inking and removing function creates the proper ink film thickness on the ink rollers, thus enabling very fast startups. This ensures amazingly short makereadies, reduces paper waste, and extracts the full potential of the press, thus significantly raising total productivity.



Short Makeready

A LEVEL OF AUTOMATION FOUND IN NO OTHER MACHINE

LITHRONE S40SP

Productivity

INCALCULABLE POTENTIAL AND EXPANDED BUSINESS OPPORTUNITIES



The Economic Magic of One-Pass Front/Back Printing: Not Just Short Turnarounds

The Lithrone S40SP meets client needs for short turnaround and raises the bar for productivity and profitability. The press also offers a maximum printing speed of 15,000sph. In fact, the S40SP achieves up to three times the productivity of a straight press. And conventional perfectors require gripper margins on both ends of the sheet, while the Lithrone S40SP needs a margin only on one end because the sheet is not reversed. This extra 5mm of space is advantageous in imposition, and the accumulated savings adds up to impressive cost reductions. Also, unlike a conventional perfecter, front and back plates are imaged in the same direction, so the same plates imaged for straight presses can be utilized by the Lithrone S40SP.

Economies of One-Pass Front/Back Printing

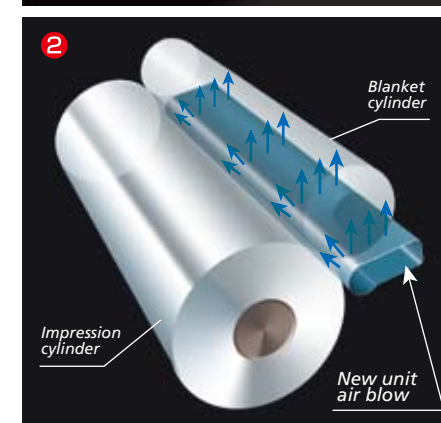
Compared to two-sided printing on a conventional straight press, the Lithrone S40SP delivers far higher productivity with significantly reduced labor costs and printing time.

New Step Design for Operating Ease ①

The steps on the operating side of the press are ergonomically designed to facilitate easy operator movement and to increase efficiency. Access to the upper units is improved, and the overhanging configuration ensures a better working environment around the lower units.

New High-Power Air Blow System ②

A powerful and very efficient air blow system is incorporated in the Lithrone S40SP. This innovation significantly improves register accuracy by quickly removing any water on the blanket cylinder during printing. This also prevents any deviation of the sheet as it enters between the impression and blanket cylinders and reduces the possibility of irregularities such as sheet doubling. This system also provides a function for quicker drying of cleaning fluid after blanket washing.



Komori's Mission Is Higher Print Quality

The Lithrone S40SP offers innovative and effective solutions for sheet scuffing and marking as well as front/back print quality variation, which are issues with conventional perfectors. Specifically, Komori has developed a unique belt system for sheet transfer that excludes the possibility of smearing and marking occurring in the delivery. In addition, the vacuum wheels, one of the common causes of marking, can be easily attached/detached, thanks to a movable shaftless design. The Lithrone S40SP, in fact, is equipped with many features and functions to ensure predictable reproduction with consistent print quality, including special ceramic jackets.

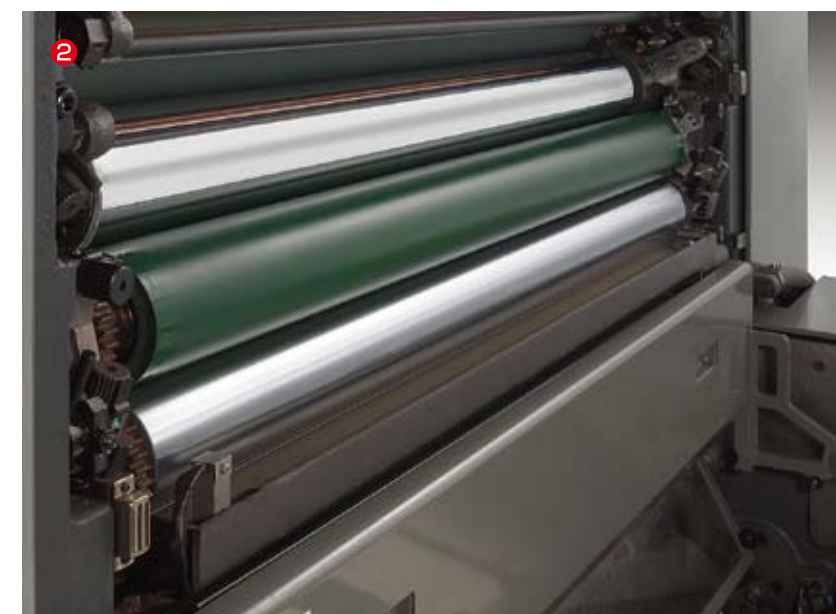
Belt Transfer System Eliminates Marking / Scuffing ①

The power of Komori technologies is shown in the belt-type sheet transport system. The belt moves at the same speed as the sheets, completely eliminating the problem of rubbing and marking. This belt system also reduces complex, time-consuming air adjustments and opens the door to handling a wider variety of jobs.



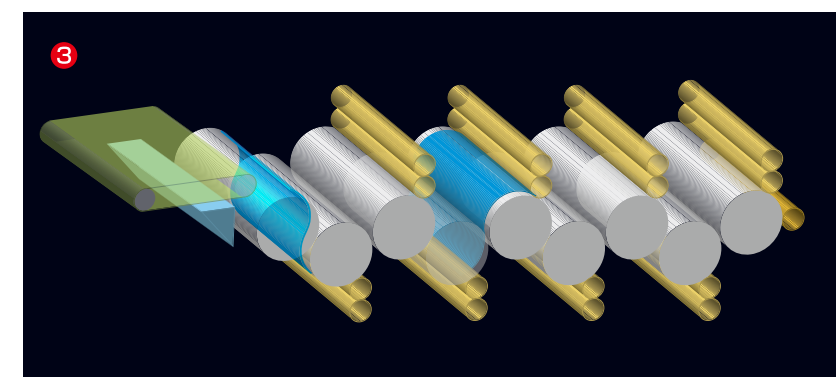
Eco-friendly Komorimatic Dampening System for High Print Quality ②

Configured of four rollers and featuring a reverse-slip system, the Komorimatic system is the industry's first dampening system that forms a thin film of water and enables high-quality alcohol-free printing. This eco-friendly system complements the Lithrone S Series' higher rigidity and durability for greater printing consistency.



Unique Configuration Minimizes Number of Gripper Changes ③

The Lithrone S40SP performs four-color two-sided printing with just ten gripper changes. This is typically half the number required by a conventional perfecter. By minimizing the number of gripper changes — the key cause of inconsistency for any sheetfed press — the S40SP assures predictable high print quality and superior productivity. The smooth sheet travel path made possible by double-size cylinders also lowers stress on the sheets.



Quality

FIELD-PROVEN SUPERIOR PRINT QUALITY



Automation and Digitalization

INTEGRATED COMMAND CENTER FOR INCREASED EFFICIENCY

Advanced Operation Console for Fully Digital Control

Equipped with dual large-screen touch panels, the new operation console allows nearly all press adjustments to be made easily by remote control. The operation console can be configured with the CIP4/JDF-compatible K-Station (optional) and KHS-AI Komori KHS Advanced Interface (optional) for centralized control that offers a realtime view of press operating conditions with external data. This setup greatly facilitates management streamlining, and the improved operating environment reduces the operator's taskload. Combining these capabilities with the optional PDC-SII Print Density Control-Spectrodensitometer and K-ColorProfiler II enables numeric control for color matching printed items and implementation of advanced color management, a major step toward printing standardization. The Komori command center ready to evolve with future digital technologies.



Integrated Operation Console
Nearly all operations and data collection are performed from the dual touch panels — an efficient working environment that also cuts the operator's taskload.



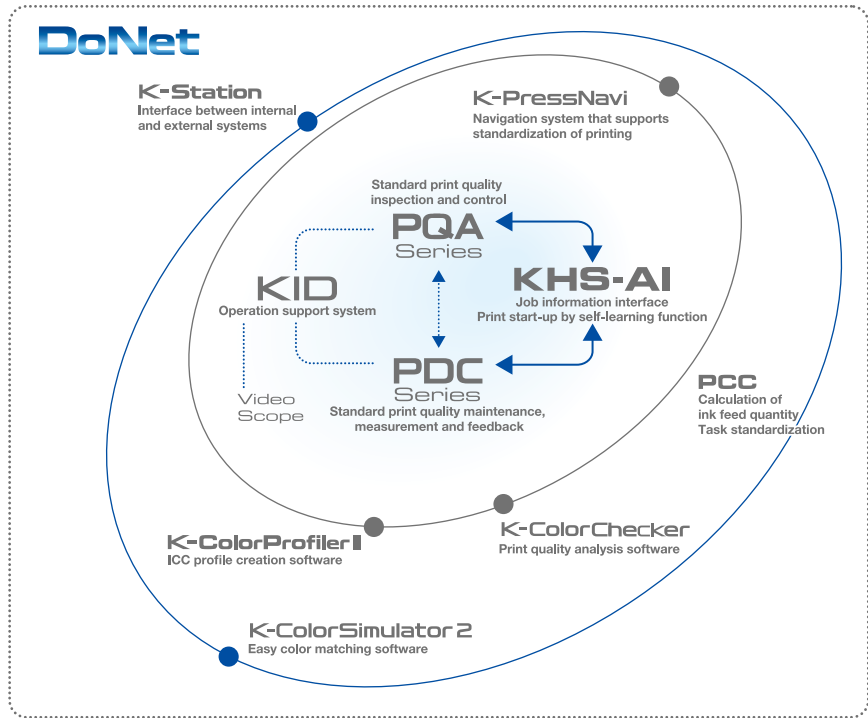
● PQC Print Quality Control

● KHS-AI Komori KHS Advanced Interface

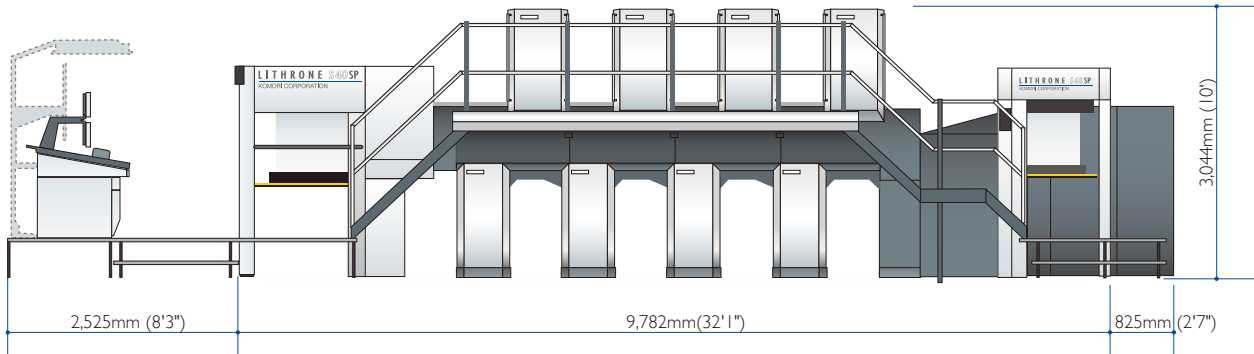
● K-Station CIP Data Converter

Optimization of printing processes by DoNet

DoNet is a digital workflow concept aimed at supporting the standardization of printing from the viewpoint of a specialty printing manufacturer. DoNet enables the stabilization of quality (Quality), reduction of waste (Cost), short makeready (Delivery) and reduction of the environmental footprint (Environment) and improves both productivity and client satisfaction.



Specifications



LITHRONE S40SP Specifications							
Model			LS-140SP	LS-240SP	LS-440SP	LS-540SP	LS-640SP
Number of colors			1 × 1	2 × 2	4 × 4	5 × 5	6 × 6
Max. printing speed		sph	15,000			13,000	12,000
Max. sheet size		mm (in.)	720 × 1,030 (28 ¹¹ / ₃₂ × 40 ⁹ / ₁₆)				
Min. sheet size		mm (in.)	360 × 520 (14 ³ / ₁₆ × 20 ¹⁵ / ₃₂)				
Max. printing area		mm (in.)	710 × 1,020 (27 ¹⁵ / ₁₆ × 40 ⁵ / ₃₂)				
Sheet thickness range		mm (in.)	0.04~0.2 (0.002~0.008) [option: 0.04~0.3 (0.002~0.012)]				
Plate size		mm (in.)	800 × 1,030 (31 ¹ / ₂ × 40 ⁹ / ₁₆)				
Blanket size (L)×(W)×(T)		mm (in.)	920 × 1,040 × 1.95 (36 ⁷ / ₃₂ × 40 ¹⁵ / ₁₆ × 0.08) -including aluminium bar				
Feeder pile height		mm (in.)	1,450 (57 ³ / ₃₂)				
Delivery pile height		mm (in.)	1,450 (57 ³ / ₃₂)				
Dim.	Length (L)	mm (ft.)	6,254 (20'5")	7,424 (24'4")	9,782 (32'1")	10,961 (36')	12,140 (39'8")
	Width (W)	mm (ft.)	4,036 (13'2")				
	Height (H)	mm (ft.)	3,044 (10') [3,500 (11'5") with cover open]				
Weight		kg (lb.)	20,700 (45,636)	31,700 (69,887)	53,700 (118,388)	64,700 (142,639)	75,700 (166,890)

*Maximum printing speed may differ from specifications herein.
*Margin for vacuum wheels on back side of sheet required for double-sided printing.
*Performance and numbers may differ from specifications herein, and specifications may also be modified for product improvements.

Note:
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