LITHRONE A37 A37P

# LITHRONE A37



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# LITHRONE A37

### 37"OFFSET PRINTING PRESS

### **First Lithrone Series 37-inch Press**

### The power to meet many different needs with stable high quality

The Lithrone A37 is a high performance press that inherits the basic performance of the Lithrone Series machines. A compact press that can produce A1-size products, the Lithrone A37 offers a 640 x 940 mm maximum sheet size that can accommodate a wide range of printing needs. Capable of printing sheets up to 37 inches in width, this press has the power to address the full span of requirements in the publishing and commercial printing segments. Since color management can be implemented by including a CMS color bar on sheets even with 8-up A4 and American letter size impositions, this machine is ideal for producing high pagecount products with high print quality. Perfect for printing items in the international standard A1 poster size, plus total flexibility in layout criteria such as bindery register marks. The 13,000 sheets per hour maximum printing speed is just right for regular operation. Moreover, this press offers a sheet thickness range of 0.04-0.6 mm and all the performance demanded for success with short- and medium-run work. In addition, being more compact and lighter than a 40-inch press means lower initial cost and lower life-cycle cost due to reduced power and materials costs. The Lithrone A37: the 37-inch press that delivers the versatile ease of use and superlative cost performance that only Komori can create.

Introduction

# **Environmentally Friendly**

The Lithrone A37 was developed as a green printing press that is environmentally friendly. Ninety-five percent of the environmental impact of a press takes place during the usage stage. During this critical stage, Komori presses achieve a minimal impact by saving energy and resources through shorter makeready time and minimal paper waste, by reducing harmful chemical substances such as volatile organic compounds (VOCs) released during printing and by reducing noise. Komori products also comply with the Restriction of Hazardous Substances Directive (RoHS) of the European Union. The Lithrone A37 is an environmentally responsible press that is friendly to both the production environment and the global environment.



mum printing area ting needs	8	Quality Reproducibility and color development that elevate the value of print quality
hat solve diverse	10	<b>Perfector</b> High productivity and profitability of a perfector;
		H-UV instant drying even with double-sided printing
quick turnaround,	13	OffsetOnDemand OffsetOnDemand machine for short run and fast turnaround needs
erformance even	14	Custom Configurations
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### Maximum Sheet Size and Maximum Printing Area that Meet a Wide Range of Printing Needs

### Maximum sheet size accommodates everything up to A1 and 37-inch sheet width. Maximum sheet size of 640 x 940 mm. Capable of printing sheets up to 37 inches in width, the LA-37 has the power to address

the full range of requirements in the publishing and commercial printing segments.

### Maximum printing area allows use of a CMS<sup>+</sup> color bar even on 8-up A4 impositions.

Maximum printing area of 620 x 930 mm accommodates the simultaneous printing of a CMS color bar with 8-up A4 or American letter size impositions. The optional specification of the PDC-LITE II Scanning Density Control System\* enables the printing of high page-count products with high print quality ensured by digital control.



# PDC-LITE II (Scanning Density Control System)\*

PDC-LITE II is a color control system that measures the CMS color bar in the margin of the sheet and converts the densities and color tones to digital data for assessment and analysis. Integrated into the operation stand, PDC-LITE II is an effective tool for print standardization and short makeready due to digital control (of densities, dot gain, trapping etc.). In addition, the system enables smart feedback and is compliant with the ISO 12647-2 print standard.

Can also be equipped with the PDC-SX\* or PDC-SII\* Spectral Print Density Control.



#### \* Option

## H-UV\* and Eco-friendly Design that Solve Diverse Printing Issues

# Can be specified with the H-UV\* Innovative Curing System

The Lithrone A37 can be equipped with Komori's H-UV Innovative Curing System for the immediate inline drying of printed work. H-UV is a new UV curing system that uses Komori-developed H-UV lamps and high-sensitivity UV inks. With one lamp mounted in the upsweep of the delivery, the system provides economy and green credentials as well as high print quality and reliability. By improving quality thanks to the powderless technology, meeting the need for quick turnarounds by cutting total lead times, adding value because of the ability to print on heavy stocks and special substrates, lightening the operator workload and trimming the environmental impact, and improving productivity by enhancing working efficiency, H-UV printing solves many different printing issues. In addition, the H-UV lamps are housed in drawer-type enclosures, making it very easy to change lamps.

# Eco-friendly Lithrone A37 raises operating efficiency

#### **Reduced footprint**

The footprint of the Lithrone A37 is significantly smaller than that of a 40-inch press, helping to cut space costs.

· Including the air cabinet, the footprint is reduced by approximately 40 percent.



### Reduced life-cycle costs

Life-cycle costs are cut substantially due to reduced power consumption and lower materials usage, which is positive for both the environment and the bottom line. The compact, lightweight design also reduces the initial cost.

Four-color Lithrone S40

### Integrated operation stand raises efficiency

Equipped with an integrated operation stand that permits nearly all operations and information acquisition to be performed from the newly designed dual touchpanels. Reduces the operator load and contributes to an efficient working environment.

 $\cdot$  Job data is stored on CompactFlash (CF) memory cards or USB flash drives.

\* Option

![](_page_2_Picture_30.jpeg)

## Short Makeready to Comply with Quick Turnaround, Short Run Needs

The Lithrone A37 achieves the short makeready that is demanded by the quick turnaround, short run market of today. This new machine delivers high print quality with a wide range of paper sizes and thicknesses. With its tool-free plate clamping system, Komori's benderless Semi-APC (Semi-Automatic Plate Changer) or Full-APC (Fully Automatic Plate Changer)\* improves plate register accuracy and significantly reduces makeready time. The automatic blanket washing and automatic impression cylinder cleaning systems\* employ a pre-soaked cloth. Cleaning is accomplished quickly by simply pressing a button.

The sheet thickness preset function enables sheet thickness adjustment to be performed by just inputting a digital value, and job changeover time is dramatically shortened because transfer cylinder gripper pad adjustment is not necessary. In addition, the high-speed print start-up function shortens test printing time, reduces paper waste, and raises productivity and efficiency.

Full-APC\*

![](_page_3_Picture_6.jpeg)

Semi-APC

![](_page_3_Picture_8.jpeg)

#### Automatic plate changer

Highly efficient automatic plate changer that performs plate changing guickly. The automatic plate changer substantially reduces makeready times and improves productivity by raising the actual working efficiency of the press.

![](_page_3_Picture_11.jpeg)

#### Benderless clamp

The benderless clamp used with the Semi-APC system eliminates the need to bend the plates, making plate discharge and feeding more efficient. The flat plate clamping also improves plate registration accuracy and reduces preparation time. Preservability is also improved, making reprint orders easy to handle

Automatic ink roller cleaning\*

![](_page_3_Picture_15.jpeg)

### Automatic blanket washing\*

![](_page_3_Picture_17.jpeg)

Automatic impression cylinder cleaning\*

![](_page_3_Picture_19.jpeg)

#### Automatic Cleaning Systems\*

Efficient and automatic cleaning is ensured thanks to an automatic control program. The quickest automatic blanket washing system in the industry is further enhanced by the use of pre-soaked cloth for blanket washing and impression cylinder cleaning. This shortens the cleaning time and also protects the environment by reducing cloth consumption. Komori automation links all of these processes to dramatically shorten overall makeready times.

![](_page_3_Picture_22.jpeg)

#### Sheet thickness preset

The sheet thickness preset function flexibly provides unfailing support for operation with a wide range of sheet thicknesses — from ultrathin to thick sheets. Stress-free sheet thickness adjustment between the blanket and impression cylinder is performed by simply inputting a digital value from the touchpanel. In addition, the paper size preset is available as an option.

### \* Option

### Exceptional Job Changeover Performance even with Heavy Stock

Developed on the concepts of a waste-free size, easy-to-handle speed, easy-to-use mechanisms, and reasonable price, the Lithrone A37 is a high performance press that provides extraordinary versatility and cost performance. A compact machine incorporating the minimum necessary level of automation, this multi-performer can print sheets up to 37 inches in width and affords outstanding competence with thick paper and short runs. Handles paper thicknesses from 0.04 mm to 0.6 mm. Equipped with the benderless Full-APC\*, the press changes four plates in three minutes and completes job changeover in an astounding eight minutes. With its highly usable maximum printing speed of 13,000 sph, the Lithrone A37 makes available the functionality and operability needed to smoothly meet the needs of short turnaround and short- and medium-run work, which is continuously growing as a share of the market. When specified with the optional KHS-AI\* integrated control system and either the PDC-LITE II Scanning Density Control System\* or the PDC-SX Spectral Print Density Control\*, this press enables print standardization by means of digital control and very quick print start-up.

#### Flow of job changeover from thin to thick paper (four colors, no change in sheet size)

![](_page_3_Figure_29.jpeg)

![](_page_3_Figure_30.jpeg)

### KHS-AI (Komori KHS Advanced Interface)\*

KHS is an innovative productivity enhancement system developed to reduce job changeover time and paper waste to an absolute minimum. KHS-AI with self-learning is a further evolution of this system. Linked to the optional PDC-LITE II or PDC-SX, color matching is optimized by constant analysis and automatic compensation of the image area ratio and ink key openings matched to the machine condition, the printing environment and changes in the printing materials. In addition, KHS-AI manages the operating record, status history and maintenance data of the press. The system includes a self-diagnostic function for troubleshooting. Customer support also benefits from the ability to accommodate remote diagnostics in an emergency. When combined with the H-UV system\* and the Komori Color Management System,\* the Lithrone A37 becomes capable of ultimate short run, short turnaround printing (OffsetOnDemand) by shortening makeready, slashing paper waste, and condensing the entire printing process to the utmost limit.

•The optional ink roller cooling system is necessary to maximize KHS-AI performance.

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

- Test printing by the standard specification, 12,000 sph high-speed print start-up Changeover without gripper pad adjustment for sheet thicknesses of 0.04 mm to 0.6 mm

### Reproducibility and Color Development that Elevate the Value of Print Quality

Komori is defined by its remarkably exacting approach to quality. High reproducibility is distinguished by the excellence of inking and distribution, attractive color development, and highly precise expression. The printing units employ the ideal array of ink and dampening rollers determined by computer analysis to maintain the optimum balance of ink and water and perform high quality printing. A new Komorimatic continuous dampening system with a new low rider provided as standard equipment is used as the dampener. Moreover, Komori's unbounded insistence on quality, through improvement of dot reproduction capability, for example, enables unsurpassed high print quality. The sheet transport system ensures high quality printing through precise, smooth and stable sheet feeding and delivery by means of ultrasonic double-sheet detection, sucker box, air side lay,\* and high-pile delivery.

The new strategic partner for the future, ready to meet all needs with consistent print quality.

![](_page_4_Picture_4.jpeg)

Register adjustment advance cylinder Enables adjustment of leading edge register by controlling the effect of mis-register during printing caused by characteristics of the paper and facilitates high register accuracy.

![](_page_4_Picture_6.jpeg)

Suction tape feeder Sheet transport by the suction tape feeder realizes stable sheet feeding regardless of the paper grade or sheet size. The time required to prepare for changing the sheet size is also shorter.

![](_page_4_Picture_8.jpeg)

Ultrasonic double-sheet detection The inflow of defective sheets is prevented through high detection accuracy and a wide detection range by a double-sheet detector that incorporates the latest mechatronics technologies.

![](_page_4_Picture_10.jpeg)

#### Ink and dampening roller array

The ink fountain keys, dampening roller array, and roller pressure follow mechanism are all derived from Lithrone Series technologies. The inker also incorporates an independent drive function and cleaning function for the ink duct roller and upper and lower oscillating dampening riders. These technologies ensure high quality printing by maintaining the optimum balance of ink and water and providing a stable ink film that is consistent across the plate.

![](_page_4_Picture_13.jpeg)

![](_page_4_Picture_14.jpeg)

![](_page_4_Picture_17.jpeg)

\* Option

\* Option

### LITHRONE A37

![](_page_4_Picture_22.jpeg)

#### Komorimatic

The Komorimatic dampening system provides a consistent supply of dampening solution directly to the plate and ensures high print quality using the minimum necessary amount of water. The incorporation of oscillating dampening riders stops ink piling. Komorimatic facilitates non-alcohol printing, contributing to a better global environment.

![](_page_4_Picture_25.jpeg)

#### Air side lay\*

Air vacuum-type side lay maintains stable register accuracy. Since rollers are not used, marking and smearing by the side lay are prevented.

#### Sucker box

Incorporation of a sucker box that provides extremely stable high speed feeding ensures consistent feeding performance across the full range of sheet thicknesses - from ultrathin to thick sheets.

![](_page_5_Picture_1.jpeg)

### 37" CONVERTIBLE PERFECTING OFFSET PRINTING PRESS

### High Productivity and Profitability of a Perfector

A compact perfector that meets the needs of both single-sided and double-sided printing, the Lithrone A37P offers the same maximum sheet size and maximum printing area as the Lithrone A37. With a maximum printing speed of 13,000 sheets per hour, the press meets the needs of high quality printing on both light and heavy stocks with a sheet thickness range of 0.04-0.45 mm in single-sided printing and 0.04–0.3 mm in double-sided printing.

The sheet reversing mechanism uses a newly developed double-double-single cylinder configuration consisting of a double-sized transfer cylinder, a double-sized suction drum and a single-sized perfecting cylinder for high-stability perfecting. This cylinder array and the impression cylinder immediately following sheet reversal enable printing with smooth, stress-free sheet transport. The sheet reversing mechanism employs a smooth, flat perfecting cylinder surface that eliminates scratches and marking. The mechanism is also equipped with an automatic changeover function that allows quick mode changeover, thereby reducing human error. In addition, the changeover fault recovery guidance system enables the avoidance of errors, the prevention of mechanical damage, and the reduction of any downtime if a problem does occur. In the delivery, the adoption of the upsweep air guide and belt-type vacuum wheels ensures stable sheet transport and prevents scratches and marking in the delivery.

![](_page_5_Picture_6.jpeg)

### Double-double-single cylinder array

Compared to a single-double-single setup, this ensures stable sheet transport and reduces the likelihood of scratches and marking in double-sided printing, thus realizing high performance perfecting.

![](_page_5_Picture_9.jpeg)

![](_page_5_Picture_11.jpeg)

![](_page_5_Picture_12.jpeg)

### Automatic changeover function

Incorporates an automatic changeover function that is operated by just selecting single-sided or double-sided and inputting the sheet size (top to bottom) on the touchpanel. Changeover is completed in approximately 2 minutes 20 seconds.

### LITHRONE A37P

### H-UV Instant Drying even with Double-sided Printing

The Lithrone A37P has one H-UV lamp above the suction drum in the sheet reversal mechanism and one in the delivery. Further, the design makes impression cylinder jackets on the downstream printing units unnecessary and realizes print quality with virtually no front/back difference.

![](_page_6_Figure_5.jpeg)

[Double-double-single cylinder array]

### Prints 8-up A4 size impositions with CMS color bar even in double-sided mode

Maximum printing area is 620 x 930 mm, the same as the Lithrone A37. The press accommodates 8-up impositions with a CMS color bar even in the double-sided printing mode. In H-UV printing, the same imposition can be used on the front and back sides, facilitating a wide range of printing applications.

For printing with oil-based ink, a margin 10 mm in width in the center of the back side (for vacuum wheels) is necessary.

#### Back side in H-UV printing (printed first)

![](_page_6_Figure_11.jpeg)

Center margin not necessary in H-UV printing

#### Back side in oil-based printing (printed first)

![](_page_6_Picture_14.jpeg)

Center margin necessary in oil-based printing

# OffsetOnDemand Machine for Short Run and Fast Turnaround Needs

OffsetOnDemand is Komori's system to facilitate short runs and quick turnarounds by shortening makeready time, cutting paper waste and reducing the printing process to the absolute minimum while maintaining the high print quality and productivity of offset printing. Komori OffsetOnDemand is a new solution that employs an innovative offset-based printing system that has as its core the KHS-AI and H-UV systems and the various software components of Komori CMS Solutions. In addition, by equipping the press with the optional PDC-SX or PDC-SII and PQA-S systems, which offer powerful support for digitizing and controlling print quality, further optimization of printing processes and breakthrough improvements in productivity can be achieved.

![](_page_6_Figure_18.jpeg)

contributing to quick, accurate decisions by the operator. Information from KHS-AI, PDC-SX, PDC-SII and PQA-S can, of course, be displayed on KID.

# Custom configurations and lineup

### Lithrone A37 standard specification

![](_page_7_Figure_3.jpeg)

### Lithrone A37P standard specification

![](_page_7_Figure_5.jpeg)

37-inch four-color convertible perfecting offset printing press (LA-437P+H-UV)

![](_page_7_Figure_7.jpeg)

### Specifications

### Lithrone A37 (37-inch offset printing press) specifications

Litilione A37 (37-inch offset printing press) specifications							
Model			LA-237	LA-437	LA-537		
Number of colors		2	4	5			
Max. prin	nting speed	sph	13,000				
Max. she	et size	mm (in.)	640 x 940 (25 <sup>3</sup> /16 x 37)				
Min. shee	et size	mm (in.)	297 x 420 (11 <sup>11</sup> /16 x 16 <sup>17</sup> /32)				
Max. prin	nting area	mm (in.)	620 x 930 (24 <sup>13</sup> / <sub>32</sub> x 36 <sup>5</sup> / <sub>8</sub> )				
Sheet thi	ckness range	mm (in.)	0.04 ~ 0.6 (0.0016 ~ 0.0236)				
Plate size	5	mm (in.)	700 x 945 (27 <sup>9</sup> / <sub>16</sub> x 37 <sup>7</sup> / <sub>32</sub> )				
Blanket s	size	mm (in.)	780 x 955 (30 <sup>23</sup> / <sub>32</sub> x 37 <sup>19</sup> / <sub>32</sub> ) including aluminum bar				
Feeder pi	ile height	mm (in.)	900 (357/16)				
Delivery	pile height	mm (in.)	900 (357/16)				
	Length	mm (ft.)	6,206 (20'4")	8,169 (26'10")	9,151 (30')		
Dim.	Width	mm (ft.)		3,370 (11'1")			
	Height	mm (ft.)	1,990 (6'6") [ 2,236 (7'4") : cover open ]				
Weight		kg (lb.)	12,500 (27,558)	21,100 (46,518)	25,400 (55,997)		

Lithrone A37P (37-inch convertible perfecting offset printing press) specifications								
Model			LA-237P		LA-437P			
Number o	of colors		2	4				
Max. prin	ting speed	sph	13,000					
Max. shee	et size	mm (in.)	640 x 940 (25 <sup>3</sup> / <sub>16</sub> x 37)					
Min. sheet size mm (in.)		297 x 420 (11 <sup>11</sup> / <sub>16</sub> x 16 <sup>17</sup> / <sub>32</sub> ) [single sided] 350 x 420 (13 <sup>25</sup> / <sub>32</sub> x 16 <sup>17</sup> / <sub>32</sub> ) [double sided]						
Max. prin	Max. printing area mm (in.) 620 x 930 (24 <sup>13</sup> / <sub>32</sub> x 36			36 <sup>5</sup> /8) [single sided] 620 x 91	6 (24 <sup>13</sup> / <sub>32</sub> x 36 <sup>1</sup> / <sub>16</sub> ) [double sided]			
Sheet thickness range mm (in.)		0.04 ~ 0.45 (0.0016 ~ 0.0177) [single sided] 0.04 ~ 0.3 (0.0016 ~ 0.0118) [double sided]						
Plate size	!	mm (in.)		700 x 945 (27 <sup>9</sup> / <sub>16</sub> x 37 <sup>7</sup> / <sub>32</sub> )				
Blanket s	ize	mm (in.)	780 x 955 (30 <sup>23</sup> / <sub>32</sub> x 37 <sup>19</sup> / <sub>32</sub> ) including aluminum bar					
Feeder pi	le height	<b>mm (in.)</b> 900 (357/16)						
Delivery p	oile height	mm (in.)	(in.) 900 (357/16)					
	Length	mm (ft.)	6,936 (22'9")		8,899 (29'2")			
Dim.	Width	mm (ft.)	3,370 (11'1")					
	Height	mm (ft.)	1,990 (6'6") [ 2,236 (7'4") : cover open ]					
Weight		kg (lb.)	14,500 (31,967)		23,100 (50,927)			

• Maximum printing speed may differ from specifications herein.

• In double-sided printing with oil-based ink, a margin on the back side of the sheet for the vacuum wheels is necessary.

• Performance and values may differ depending on specifications. Komori reserves the right to change specifications for the purpose of product improvement.

### Note:

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