RYOBI®

RYOBI 780E series

784E / 784EP

B2-Size 4-Color Offset Presses

Model in photo is shown with optional accessories.

Discover New Business World

RYOBI 780E series

The Quality to Meet Tomorrow's Needs Advanced Functions and Superior Cost Performance in a Compact Body

RYOBI 780E series offers superior cost performance while meeting the demands of today's printing market for short delivery times, higher quality and lower cost.Backed by years of technical evolution, the 780E series dramatically reduces press downtime and delivers impressive quality printing. While its wide printing area of 765 x 545 mm (30.12" x 21.46") [XL type: 765 x 580 mm (30.12" x 22.83")], the press can handle a greater range of printing applications. The perfecting device on the RYOBI 784EP can be converted between straight printing and perfecting automatically, boosting productivity and corresponding to various printing needs. 780E series is the suitable models for the printing companies by introducing the B2 size format press to further increase the profitability of 4-color short turnaround printing jobs.

Model in photo is shown with optional accessories.

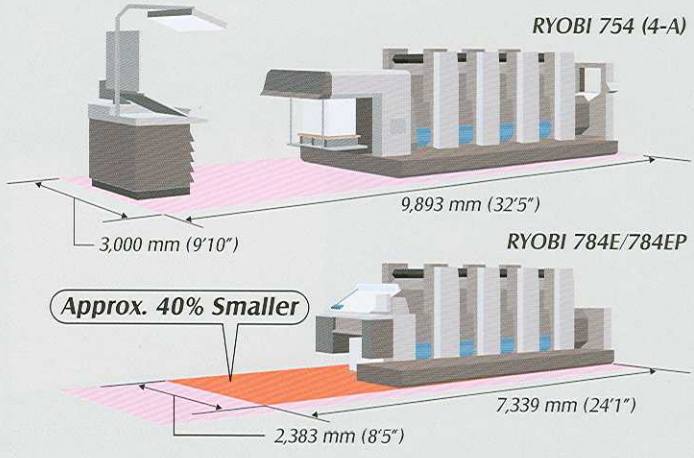
Compact Design Achieves Space-Saving

Built-in RYOBI PCS-K Printing Control System

The RYOBI PCS-K Printing Control System is built into the press as a space-saving feature. This system allows centralized control of the main operations and settings, such as ink and water volume control, printing parameter settings, fine adjustment of registration, impression pressure preset, and maintenance information. It also input the image area ratio data calculated from prepress data by the Ink Volume Setter (Option) and Ink Volume Setter-CIP4 (PPF) (Option).

Comparison of Installation Space with RYOBI 754 (4-A)

Printing Control System RYOBI PCS-G



*Includes 1,500 mm (4'11") of operating space in delivery side.

Advanced Automated Devices Realize Superb Operability

RYOBI Semiautomatic Plate Changer

The RYOBI semiautomatic plate changer comes as standard equipment and allows plates to be changed quickly and accurately. The operator merely sets the plate on the positioning pins and presses the button. A plate bending device is unnecessary as there is no need to bend the leading edge or the tail edge of the plate.

RYOBI Semiautomatic Plate Changer Semi-RPC

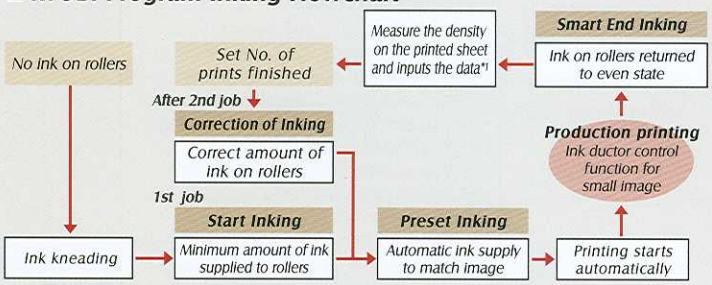
Plate Register Remote Control (vertical, lateral, diagonal)

The plate register remote control device is equipped as standard. It quickly makes precise adjustments of the vertical, lateral and diagonal image position.

RYOBI Program Inking for Quick Printing Setup

RYOBI Program Inking automatically sets the conversion curve for each color according to the image area ratio data calculated at prepress. The ink settings, ink fountain roller speed, and number of contacts by the ink ductor roller are all controlled based on the conversion curves to assure the optimum ink volume.

■ RYOBI Program Inking Flowchart



*1: Only for the press with RYOBI PDS-E

Automatic Cleaning Devices (option)

The automatic blanket cleaning device and ink roller cleaning device reduce the time and effort involved in cleaning and changing colors, reducing operator workload.

Plus, the programm-controlled impression cylinder cleaning function* cleans the blankets and impression cylinder simultaneously.

** Can be used on the press equipped with optional impression preset and automatic blanket cleaning device.*

Ink Volume Setter (for PostScript data) (option) Ink Volume Setter-CIP4 (PPF) (option)

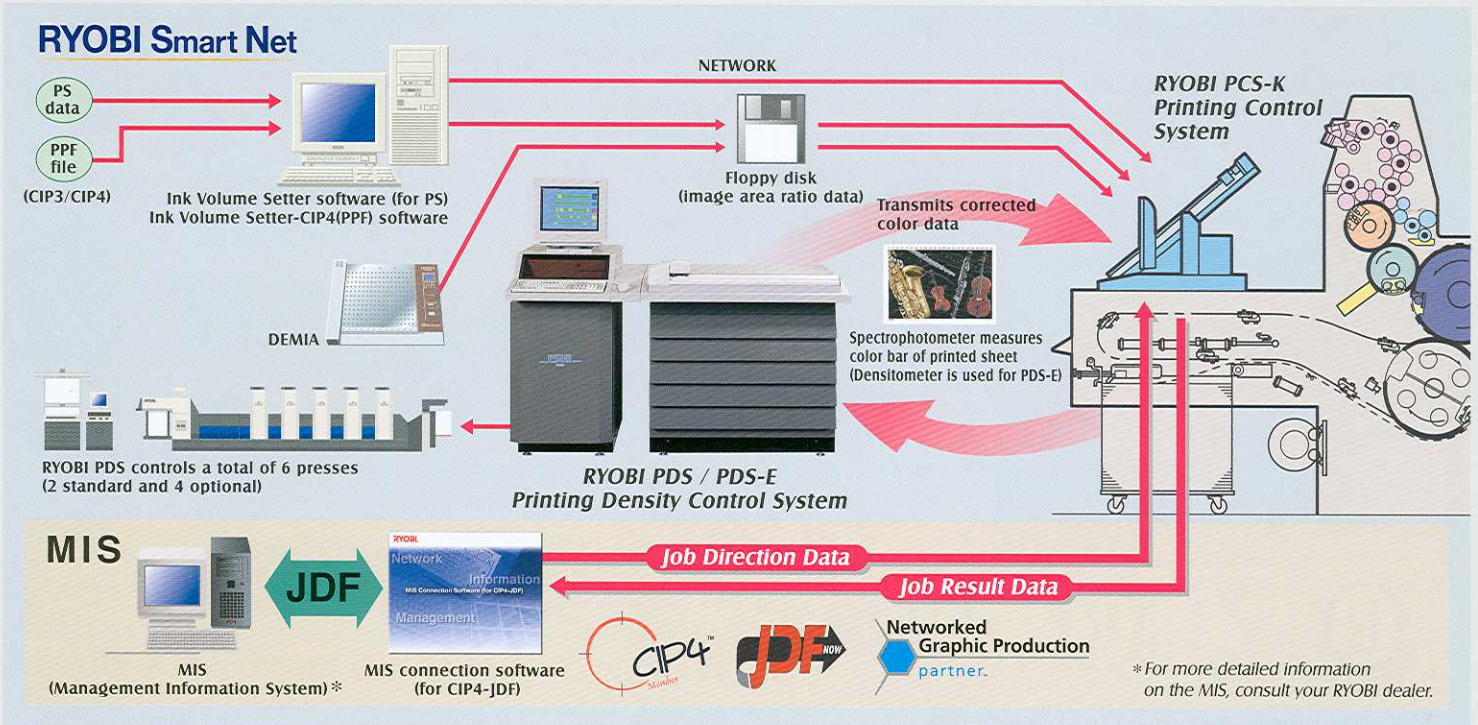
The image area ratio data is calculated by the Ink Volume Setter software (option) using PostScript data created on either a Macintosh*1 or Windows*2 computer, and then converted by the RYOBI PCS-K to preset the ink fountain keys. Ink Volume Setter-CIP4 (PPF) software (option) allows the image area ratio data to be calculated from PPF files. Effective use of prepress data can dramatically reduce the labor involved in adjusting the ink fountain keys prior to production printing.

**1: Macintosh is a registered trademark of Apple Computer, Inc.*

**2: Windows is a registered trademark of Microsoft Corporation in the United States and other countries.*

RYOBI RP780-425M (option) High-Precision Register Punch

The CCD camera scans the register marks exposed on the plate, and the register marks are displayed on the center monitors. By checking the monitors, diagonal, vertical and lateral micro-adjustments can be done easily with dial operations, which assures accurate plate punching by lever operation



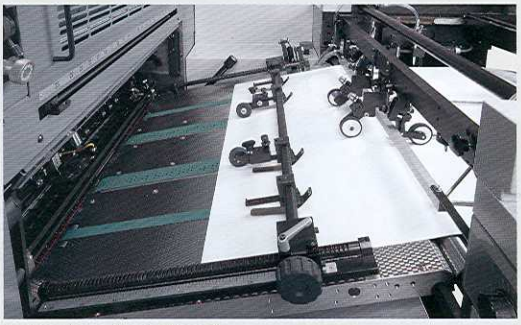
** For more detailed information on the MIS, consult your RYOBI dealer.*

Reliable Technology to Enhance High Printing Quality

RYOBI 780E OFFSET PRESS

Reliable Paper Feeding Mechanism

The suction tape feeder board simplifies the setting of the brush and runner wheels and shortens the time required for changing paper sizes. The suction tape holds the paper securely and feeds it smoothly to the front lay. And an ultrasonic type double sheet detector is equipped as standard. An ultrasonic signal from the transmitter passes through the paper, and the attenuation rate of the ultrasonic wave is measured to detect high precision any double-sheet feeding of thick paper.



Suction Tape Feeder Board

Superior Inking Performance

An optimum ink roller configuration (18 rollers including 4 form rollers) designed by computer analysis assures stable ink supply and superb response to ink volume adjustments. The motor-driven ink fountain rollers are programmed to automatically operate in synchronization with the speed of printing, enabling a stable supply of ink at any operation speed.

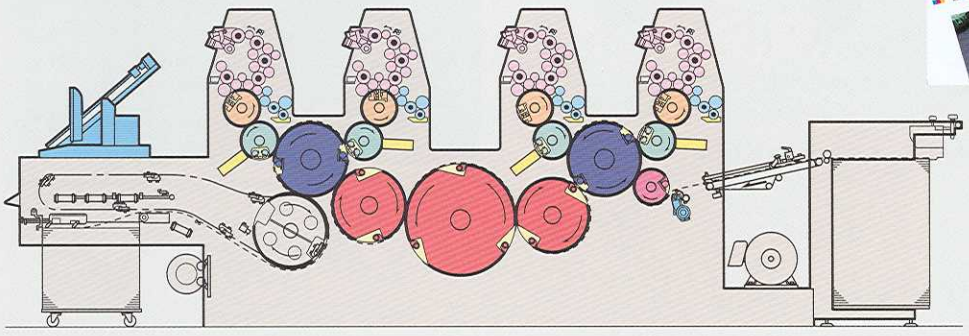
The RYOBI-matic-D Continuous Dampening System with Hickey Removing Function (option)

The RYOBI-matic-D Continuous Dampening System with Hickey Removing Function (option) substantially reduces hickeys on plates by adopting a new drive mechanism for the water form roller that creates a rotational speed difference between the water form roller and plate cylinder. A hickey picker is also available as an option.

Simple Cylinder Arrangement

The RYOBI 780E series features a simple mechanism that links two sets of 2-color printing units (one double-diameter impression cylinder and 2 sets of plate and blanket cylinders) via three transfer drums. Printing is completed with only four gripper changes, increasing image positioning accuracy. Double sprung grippers used on the paper feed drum, impression cylinders and transfer drum firmly grip the paper. Accordingly, even during high-speed operation and heavy solid printing, a precise registration accuracy is maintained.

■ *Mechanical layout*



RYOBI PDS (option), PDS-E (option) Controls Values for the Highest Quality Printing

The RYOBI PDS and PDS-E Printing Density Control System measures the color bar of the printed sheet using special sensors in a spectrophotometer (densitometer is used for PDS-E). Values needed to correct color densities to match those of the OK sheet are calculated and provided as feedback to the RYOBI PCS-K which, in turn, makes appropriate adjustments in the openings of the ink fountain keys. Quality control that previously relied on human experience and intuitions is now done using precise numerical values, contributing to consistent printing quality.

RYOBI PDS-E

Handles a Wide Range of Printing Applications

Wider Paper Size for More Utility

The RYOBI 780E series comes in two types: the S type press which offers a maximum printing area of 765 x 545 mm (30.12" x 21.46"), and the XL type press with a maximum printing area of 765 x 580 mm (30.12" x 22.83") enabling a wider range of printing applications. And the XL type allows 6-up printing of 8.5" x 11" letter-size. This press can flexibly handle a wide range of paper from 0.04 mm (0.0016") onion skin to 0.6 mm (0.024") thick cardboard.

■ Maximum Printing Area of RYOBI 780E series

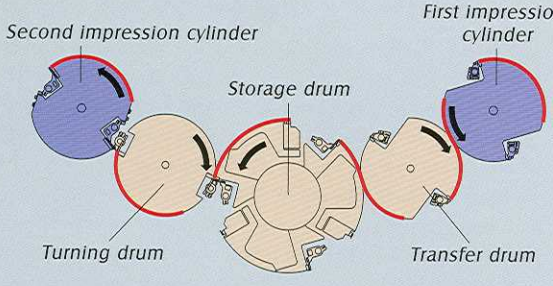
■ When printing 6-up of 8.5" x 11" letter size (XL type)

Automatic Convertible Perfecting Device Boosts Productivity (RYOBI 784EP)

The RYOBI 784EP is equipped with an automatic convertible perfecting device. Switching between straight printing and perfecting can be performed from the RYOBI PCS-K. The operator inputs the paper size and selects a printing mode from the touch panel display. Various perfecting device settings switch automatically to match the paper size. These include the open/close timing of the grippers on the storage drum and turning drum, the position of the paper tail edge suction mechanism, and the phase of the turning drum and storage drum.

(Note) Paper tail edge suction ON/OFF switching is manual depending on the paper width.

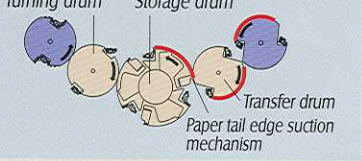
■ Straight Printing



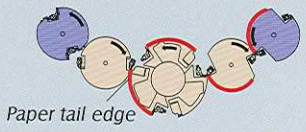
The paper leading edge is gripped during paper transfer.

■ Perfecting

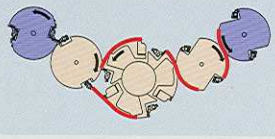
1 **The paper tail edge suction mechanism holds the paper's tail edge on the storage drum.**



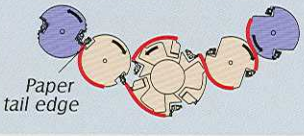
2 **The grippers on the turning drum grip the paper's tail edge.**



3 **The grippers on the turning drum rotate and reverse the gripped sheet.**



4 **The sheet is transferred to the next impression cylinder.**



Paper Tail Edge Suction Mechanism

The storage drum is equipped with a paper tail edge suction mechanism, which uses air suction to pull the paper tail edges.
Rotating suckers tightly hold the paper tail edges and pull them both lengthwise and laterally to accurately transfer paper from the storage drum to the turning drum.

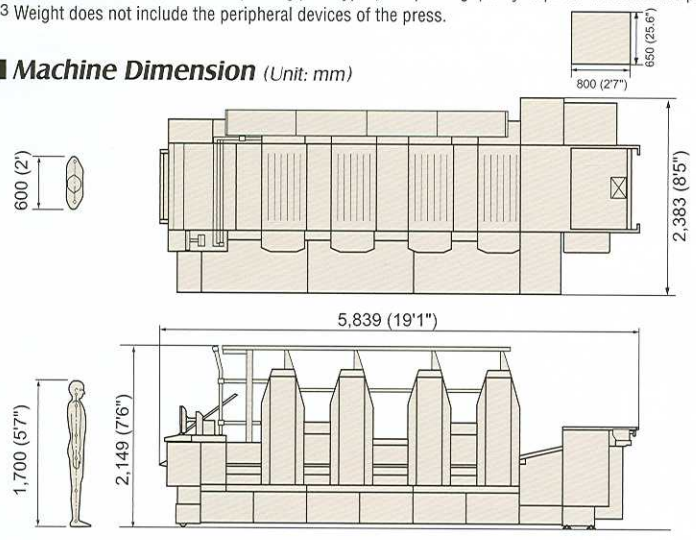
Paper tail edge suction mechanism

Specifications

	784E	784EP
Number of printing units	4	
Max. Paper Size (W x L)	788 x 600mm (31.02" x 23.62")	
Min. Paper Size (W x L)	279 x 200mm (10.98" x 7.87")	Straight printing: 279 x 200mm (10.98" x 7.87") Perfecting: 325 x 295 mm (12.80" x 11.61")
	When the paper vertical size is smaller than 290 mm (11.42"), the delivery auxiliary back guide must be mounted.	
Max. Printing Area (W x L)	S type: 765 x 545 mm (30.12" x 21.46") XL type: 765 x 580 mm (30.12" x 22.83")	
Paper Thickness *1	0.04 - 0.6mm (0.0016 - 0.024")	Straight printing: 0.04 - 0.6mm (0.0016 - 0.024") Perfecting: 0.04 - 0.4 mm (0.0016 - 0.016")
Printing Speed *2	3,000 - 15,000 S.P.H (15,500 S.P.H. is possible on special request).	3,000 - 14,000 S.P.H.
	The maximum printing speed is 8,000 SPH when using the delivery auxiliary back guide.	
Plate Size	S type: Standard; 745 x 605 mm (29.33" x 23.82") Max.: 775 x 605 mm (30.51" x 23.82") XL type: Standard; 745 x 635 mm (29.33" x 25") Max.; 775 x 635 mm (30.51" x 25") [Positioning pin pitch: 425 mm (16.73")]	
Plate Thickness	0.4 mm (0.016") (cylinder packing total)	
Blanket Type	Blanket with aluminum bar	
Blanket Size	791 x 665 x 1.95 mm (31.14" x 26.18" x 0.077") [Cylinder packing total 2.55 mm (0.1")]	
Feeding System	Rotary type stream feeder	
Feeder Pile Capacity	735 mm (28.94")	
Delivery Pile Capacity	500 mm (19.69")	
Infeed System	Underswing gripper and paper feed drum	
Number of Rollers	Ink roller: 18 (form roller: 4)/unit Water roller: 4 (form roller: 1)/unit	
Gripper margin	10 ± 1 mm (0.39" ± 0.039")	
Diagonal Image Micro Adjustment Range	± 0.2 mm (± 0.008") (at max. printing area)	
Vertical Image Micro Adjustment Range	± 1 mm (± 0.039")(front lay), ± 1 mm (± 0.039")(plate cylinder)	
Vertical Image Rough Adjustment Range	+ 40 mm - -20 mm (+ 1.57" - -0.79")	
Lateral Image Micro Adjustment Range	± 2.5 mm (± 0.098")(pull side guide), ± 2 mm (± 0.079")(plate cylinder)	
Oiling System	Automatic centralized oiling system	
Electric Current	3-phase, 200 V, 50/60 Hz, 90 A or other voltages	3-phase, 200 V, 50/60 Hz, 95 A or other voltages
Power Consumption	27 kW	29 kW
Dimensions (L x W x H)	5,839 x 2,383 x 2,149 mm (19'1" x 8'5" x 7'6") For the press with the non operation side inching box, the press width is 2,660 mm (8'9").	
Weight *3	12,700 kg (27,998 lbs)	13,300 kg (29,338 lbs)

*1 There are some limitations to print thick paper depending on paper types.
*2 Local conditions, ink, stock and printing plate types, and printing quality required will affect the printing speed.
*3 Weight does not include the peripheral devices of the press.

Machine Dimension (Unit: mm)



Accessories

Standard Equipment

-RYOBI PCS-K Printing Control System
(includes network kit for Ink Volume Setter)
-RYOBI Semiautomatic Plate Changer (Semi-RPC)
-RYOBI Program Inking (built-in with RYOBI PCS-K)
-RYOBI-matic continuous dampening system
-Dampening solution cooling/circulation device
-Plate register remote control device (vertical, lateral, diagonal)
-Suction tape feeder board
-Ultrasonic type double sheet detector
-Double sheet detector (mechanical)
-Static eliminator (feeder and delivery section)
-Oscillating bridge roller
-Decurling device
-Powder spray device
-Preset repeat counter
-Print counter (total number of printed sheets, non-resettable)
-Machine counter (total number of machine rotations, non-resettable)
-OK monitor

Optional Equipment

-RYOBI PDS Printing Density Control System
-RYOBI PDS-E Printing Density Control System
-Automatic blanket cleaning device *4
-Automatic ink roller cleaning device *4
-Impression pressure preset *4
(includes program-controlled impression cylinder cleaning function *5)
-Ink roller temperature control device *4
-Skid type paper pile board *4
-Side lay sensor
-Delivery racking system *6
-RYOBI-matic-D continuous dampening system with hickey removing function
-Hickey picker *4
-Ink oscillating form roller
-Tape inserter
-Automatic dampening solution supply device
(include automatic alcohol/etching solution supply device)
-Powder spray device (Grafix GmbH)
-Nonoperation side inching box and foot step
-Polyester-based plate kit
-Ink Volume Setter software (for PS)
-Ink Volume Setter-CIP4 (PPF) software
-MIS Connection software
-RP740-425AUTO High-Precision Register Punch
-RP780-425M High-Precision Register Punch

*4 Factory installation only
*5 The program-controlled impression cylinder cleaning function requires optional automatic blanket cleaning device.
*6 This system can be used when the press is stopped.

The air compressor should be prepared at the customer's side.
For more information, please ask your dealer.
Design and specifications are subject to change without notice.
Specifications may differ slightly depending on the country.

RYOBI

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ISO 9001 CERTIFIED ISO 14001 CERTIFIED

Cat. No. 784E/784EP Feb. '06 E03 HB10
Order No. H5784 01 00
Printed in Japan