Presstek 52DI®-AC

Four-Colour Digital Offset Press Featuring Integrated Aqueous Coating

- **Highly automated four-colour digital offset press**
- **Supports flood and spot coating**
- **Anilox metering**
- **On-press chemistry-free plate imaging**
- **High resolution printing**
- **Streamlined workflow**
- **Affordable short-runs**
- **Fast turnaround**
- **Compact footprint**
- **Environmental benefits**

PRESSTEK

A SMARTER WAY TO PRINT

Highest Quality Offset Printing— Fast, Efficient, and Profitable

The Presstek 52DI-AC combines the power of DI® printing with the capabilities of in-line aqueous coating. Commercial, in-plant and packaging printers can expand the range of applications they produce, thus opening new business opportunities. The Presstek 52DI-AC is a smarter way to print.

The entire printing operation is automated from plate advancing and imaging to printing and coating in one compact, easy-to-use press. High quality results are easy to achieve, and you can print higher volume and more jobs every shift.

...::PRESSTEK 52DI-AC

Presstek 52DI-AC Press Design

■ The Presstek 52DI-AC features an integrated coater, a central impression cylinder, and Presstek's Zero Transfer Printing (ZTP) process. All four colours are laid down in precise register without sheet transfer between grippers.

■ The 52cm landscape format features 16 ink keys for each colour. Since each ink fountain covers a shorter distance, the inking characteristics of the 52DI-AC are stronger than portrait-format presses.

■ Waterless printing eliminates the need to control ink/water balance. It reproduces a wider colour gamut and sharper images with more definition than other processes. There is minimal dot gain during printing.

Integrated Aqueous Coater

■ Aqueous coating improves the look of a printed piece and raises its value. With the 52DI-AC, coating is applied to sheets in one pass through the press without drying problems.

■ A variety of finishes can be produced including matte, dull, satin and gloss. Aqueous coating provides excellent rub resistance to improve bindery throughput and protect finished printed pieces.

■ The Presstek 52DI-AC supports flood and spot coatings. Spot coating is facilitated by using a flexo plate.

■ Anilox metering precisely measures and controls the amount of coating being applied, reducing waste and further enhancing the quality of the printed sheet.

On-press Imaging

■ All four plates are simultaneously imaged on press in precise register.

■ Chemistry-free thermal imaging eliminates the variables of processing and exposure.

■ 16-micron lasers produce sharp, well defined dots and easily support up to 300 lpi and FM screening.

Auto Print Mode

■ The Auto Print feature advances and images plates and begins printing at the push of a button. It automatically cleans blankets at the end of the print run and prepares the press for the next job.

■ Smart Inking automatically pre-sets ink keys, supplying the right amount of ink to the rollers to match the image. At the end of print run, the ink rollers automatically restore to an even state.

Key Features and Benefits of the Presstek 52DI-AC

■ **All-digital workflow efficiency**

■ **Built-in aqueous coater with Anilox metering**

■ **Supports flood and spot coating**

■ **Highest quality offset printing**

■ **300 lpi and stochastic (FM) screening**

■ **Print on a wide range of stocks**

■ **Automated set-up and printing with 10-minute makeready, including plate imaging**

■ **Waterless printing for superior colour range and image definition**

■ **Low cost per page for runs of 500 to 20,000**

■ **Eliminates the equipment, labour and costs of off-press platemaking**

■ **Environmentally friendly**

Advanced Colour Control

The Printing Density Control System (PDS-E) enables operators to easily match printed output and keep colour consistent. The optional PDS-ProE spectrophotometer extends the benefits with a colour profile setter, quickly and accurately producing ICC profiles by taking colorimetric measurements from printed sheets and proofs.

The Right Solution

■ The Presstek 52DI-AC enables printers to differentiate their services with high-value printing, fast turnaround and low cost per page.
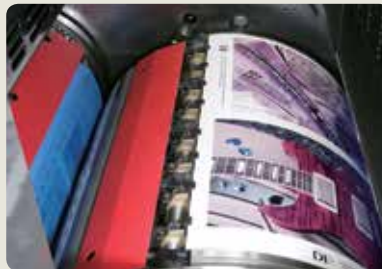
■ The speed, accuracy, quality and ease-of-use of Presstek DI are combined with the production advantages of an in-line aqueous coater.

■ With a Presstek 52DI-AC, printers can profitably bridge the production gap between digital toner and conventional offset printing.

■ Digital printers will gain the capability to print on a wider range of stocks. With a low cost per page, they will be more competitive on longer runs.

■ Printers with large offset presses will be able to schedule and print fast turnaround, short-run jobs more easily and profitably than with their conventional presses.

■ Presstek DI is the right choice for a more environmentally friendly and cleaner printing method.

High Resolution Printing

10 multibeam laser diodes on each of two ProFire modules produce consistent, high resolution imaging on Presstek ProFire Digital Media. Waterless offset printing yields a broader colour gamut than conventional printing, with higher density, less dot gain, and sharper details.
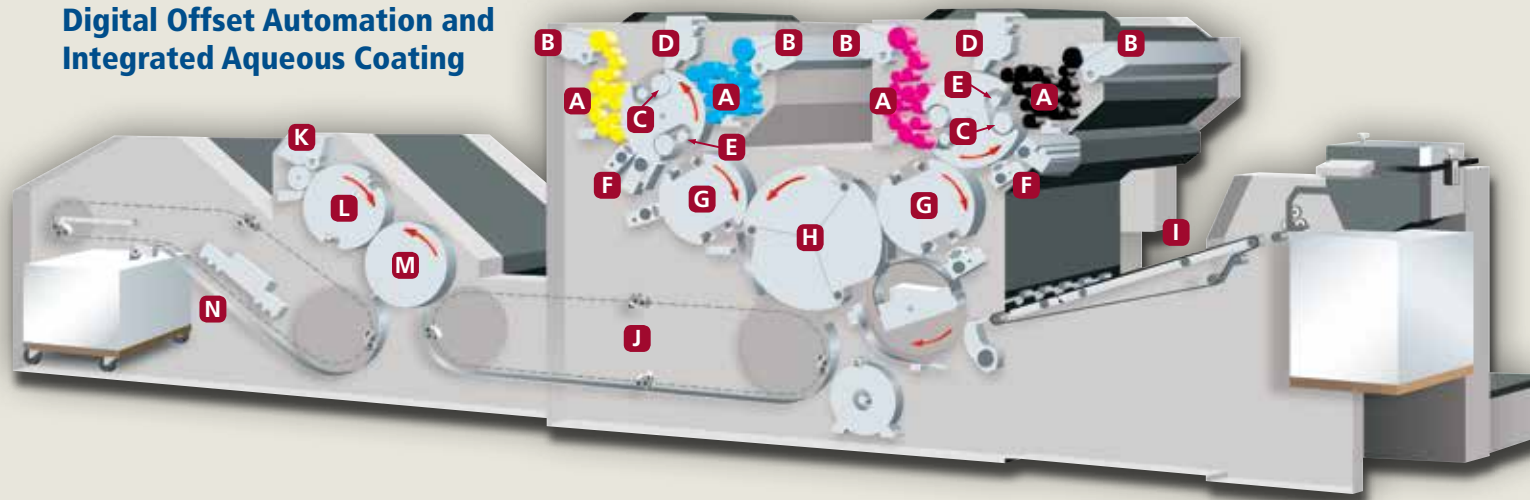
Easy-to-achieve, High Quality Output

Sheets move through the printing process on the central impression cylinder without gripper changes, resulting in precise registration from first sheet to last. Anilox metering produces high quality aqueous coating with minimal operator involvement.

Fast Turnaround

The fast turnaround time of Presstek DI printing is enhanced by the 52DI-AC's integrated coating process. Fast drying time and protective coatings increase throughput and speed delivery to the client.

Digital Offset Automation and Integrated Aqueous Coating

A) Waterless offset printing—Ink train has four form rollers. Three chilled rollers significantly reduce toning.

B) Sixteen ink keys per unit are preset based on colour profiles and specific job colour requirements. Auto start-up pre-inks plates.

C) Spooled ProFire Digital Media is automatically dispensed; press declutches to spin plate cylinders at 300 rpm during imaging.

D) Presstek ProFire Excel imaging unit simultaneously images all four plates at 2540 dpi in 4.5 minutes.

E) ProFire Digital Media spools contain enough material for 44 full size jobs; used plates are automatically transferred to take-up spools.

F) After imaging, plates are automatically cleaned, a vacuum removes any remaining debris, and plates are ready for inking.

G) DI press design features double-plate and double-blanket cylinders.

H) Central impression cylinder holds three sheets. A sheet picks up four colours in two revolutions without gripper changes, eliminating the potential for misregistration.

I) Register board with vacuum pull guide and suction tape handles a wide range of stock and weights, including envelopes.

J) Sheets are printed and transported for in-line coating in one pass.

K) Anilox metering roller applies coating in the required amount.

L) Coating is applied to the blanket or pre-imaged photopolymer flexo plate.

M) Impression cylinder picks up sheet for coating and completes the automated, integrated printing and coating sequence.

N) Infrared dryer expedites printing second sides and readies sheets for the bindery. Auto Print cycle prepares the press for the next form/job.

Presstek 52DI-AC Specifications

Printing Speed

Maximum Printing Speed*	10,000 full size sheets per hour; 333 A4 size pages per minute

Printing Stock

Thickness	0.06–0.5 mm
Sheet Size	520 mm × 375 mm 110 mm × 100 mm

Printing

Maximum Print/Coating Area	510 mm × 360 mm 9 mm gripper margin
Minimum Coating Area	90 mm × 95 mm

Imaging System

ProFire Excel	2 modules
Maximum Image	510 mm
Image Resolution	2540 dots/in. (100 dots/mm)
Imaging Time	4 minutes 30 seconds (4 plates simultaneously)
Spot Size	16 microns
Automated Makeready	10 minutes (includes plate imaging and cleaning, ink presetting, and printing to sellable colour)
Register Unit-to-Unit	Immediate, precise via Zero Transfer Printing process
Density Achievement	Achievable within 20 sheets

Inking Unit

Inking Process	Waterless
Zones/Rollers	16 zones per unit; 15 rollers per unit
Form Rollers	4 per unit
Standard Features	Automatic pre-setting, wash-up device and temperature control

Blanket Cylinder

Blanket Specs	530 mm; Thickness 1.95 mm
Automatic Wash-up Device	Standard

Feeder

Rotary Stream Feed	Standard
Feeder Board	Suction
Pile Height Adjustment	Motorised
Double Sheet Detector	Mechanical & electrical
Register	Air pull side guide
Infeed	Underswing gripper & feed drum
Pile Capacity	500 mm
Pre-pile Device	Standard

Delivery

Pile Height Adjustment	Motorised
Pile Capacity	490 mm
Standard Features	Sheet decurler, IR dryer, powder device

Plate Media

Plate Material	ProFire Digital Media
Plate Dimensions	Width 525 mm; Thickness 0.18 mm
Spool Length	63 ft. (19.2 m)
Plate Saver Version 2	Standard
Plate Advance	Automatic
Plates Per Roll	44 full format
Screen Ruling	Up to 300 lpi AM and FM (stochastic)
Run Length	20,000 impressions*

Electro-Mechanical

Input Power	200 to 208 VAC, 50/60 Hz
Lubrication	Automatic centralised oiling system
Recommended Operating Environment	Temp. 68–77° F (20–25° C), relative humidity 50–60 %
Physical Dimensions (L×W×H)	6370 mm × 4785 mm × 1667 mm including catwalk and console

Quality Control

Density Control	PDS-E
Colorimetric Control	PDS-ProE spectrophotometer (optional)

*Actual numbers will be affected by ink and paper conditions.

Product specifications are subject to change.

Service and Support

Presstek provides an integrated support network of field engineers, customer care representatives, technical support engineers, and on-board monitoring of digital systems—all supported by advanced information technology systems. Expert installation, training and maintenance supports your investment so it will pay dividends quickly and reliably for years to come.

Environmental Advantages

Presstek DI is an environmentally superior process over other printing methods. Environmentally friendly features include chemistry-free imaging, reduced paper waste, and waterless printing—which eliminates waste water and significantly reduces VOC emissions.

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