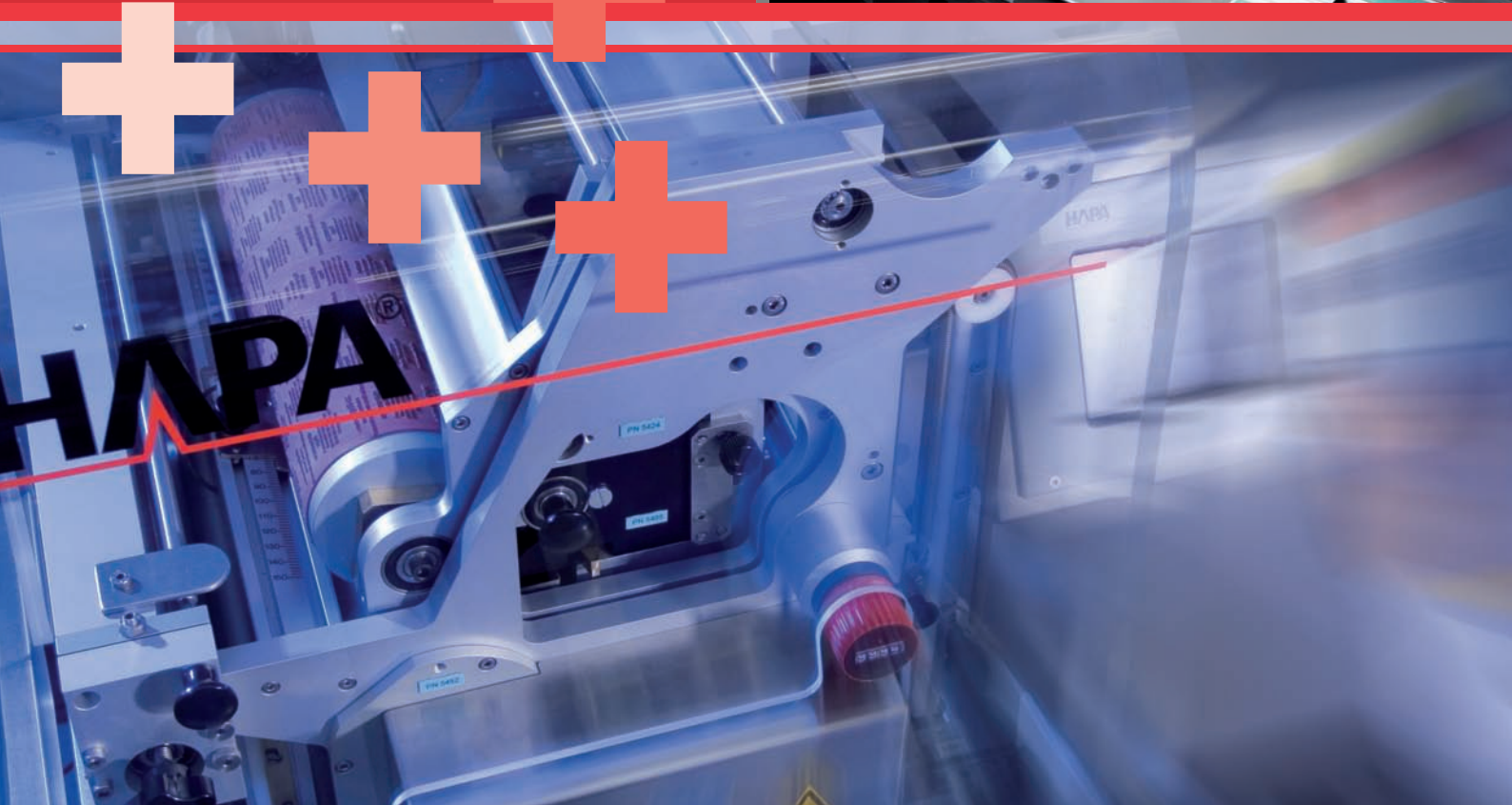


Hybrid Printing Systems

The Freedom Concept available only at Hapa



Could you face tomorrow's needs today?

Secure your competitive edge with the flexibility to meet evolving needs. Hybrid printing systems combine proven cost-effective, ultra-responsive and secure Just-In-Time technologies into one system. Developed by the only company offering you UV Flexo, UV Digiprint and UV DOD InkJet pack print solutions.

- Serialisation, Track & Trace
- Late Stage Customisation
- Micro Batches
- Full Digital Printing

- Unit Dose Coding
- Multiple Changes of Artwork
- Clinical Trial Batches

- Medium to Large Batches
- Frequent Batch Changes
- Rapid Response

- Large Batches
- Multi Colour
- Standard Artwork
- Highest Print Quality



UV DOD InkJet



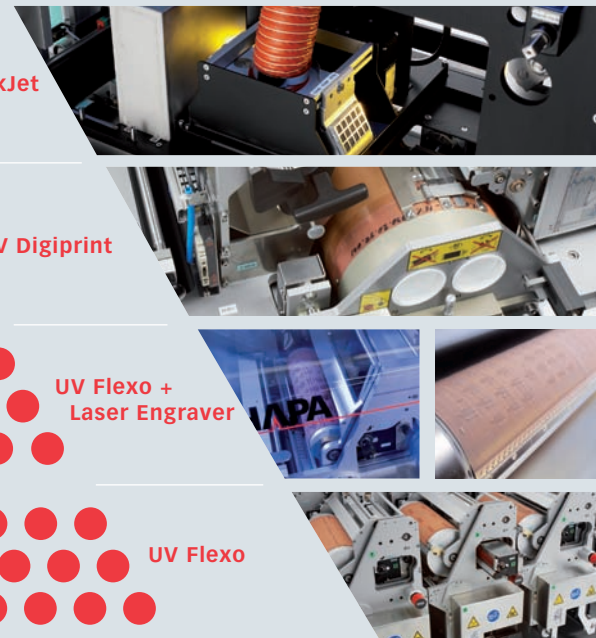
UV Digiprint



UV Flexo +
Laser Engraver



UV Flexo



PRINTING SOLUTIONS FOR EVERY PACKAGING NEED

No one gives you more choices

Only Hapa offers you all of the printing technologies available to meet any pharmaceutical print production need. UV Flexo technology is ideal for all bulk printing – runs in the tens or hundreds of thousands – and for product information and artwork requiring the highest print quality.

When batch sizes shrink, and runs shorten, in response to market or regulatory demands, digital technology becomes more cost-effective. Hapa offers both UV Digiprint, the efficient computer-to-print technology for medium-sized batches where more frequent changeovers are

required, and UV DOD InkJet, the non-contact, fully-digital print technology, ideally suited for the smallest batches, serialisation and track and tracing.

With the addition of the Hybrid concept, Hapa adds a new dimension of tailor-made solutions that can meet and anticipate any individual requirement.

The freedom of flexibility . . .

Choose the most economical way to produce every run. Operate the technologies your Hybrid combines either together or independently:

- When you need to change batch-specific information during large runs, use the technologies in combination.
- Use the UV Flexo function autonomously when producing large batches that have no variable data.
- Add variable data to blank or pre-printed materials using the digital technology only.

. . . and ease of operation

Data management couldn't be more user-friendly. All Hybrid system processes are harmonised via one standard interface – ours, or yours.

And the simplicity of line integration and operation belies a sophisticated functionality that ensures compliance with the stringent validation requirements of the pharmaceutical sector.

. . .with unlimited possibilities

Any of the technologies we offer can be combined. But Hybrid solutions are not limited to Hapa technology alone; we can even integrate the technologies of any other supplier.

Hapa is ready to tailor an individual Hybrid solution to your precise specifications. Let your imagination run. . .

Allow us to introduce you to just two installed Hybrid solutions:



UV Digiprint / UV Flexo Hybrid

Uses UV Flexo for

- Different colour coding
- Quick colour change
- Product-branding print quality
- Homogeneous print areas

Individualises with Digiprint for

- Product/market-specific information
- Variable data print
- Quick artwork changes
- Composing artwork out of data base



UV Flexo / UV DOD InkJet Hybrid

Print standard batch artwork with UV Flexo

- Highly cost-effective
- Minimum usage of ink
- UV ink in all PMS colour shades
- Highest print quality (up to 2400 dpi)

Customise with UV DOD InkJet

- Market-specific information
- Language variations
- Bar, matrix and alphanumeric codes
- Serialised/randomised data



Technical Data	UV Flexo	UV Digiprint	UV DOD InkJet
Short description	Designed for printing larger volumes of flat pharmaceutical packaging substrates. This contact printing technology uses rubber or photopolymer mats for the highest quality reproduction of graphics, verifiable bar/matrix codes, and text – even at the smallest point sizes – in up to five colours. The reusable print mats can be stored for unlimited usage ensuring consistent results for each throughput.	This contact print technology is particularly suitable for the efficient production of medium-sized batches where more frequent changeovers or unit dose coding is required. From electronic artwork, an individual print master is generated and then used to print in a repeatable manner using a method similar to screen printing. The computer-to-print process is entirely automatic, and takes only a matter of moments.	This non-contact, fully-digital print technology is ideal for the smallest batches of blisters, cartons and labels, finished and semi-finished products, as well as any type of web material. Hapa's UV DOD Inkjet technology has the unique ability to print both artwork and variable data in a single pass, allowing the highest flexibility to production planning and the fastest response to market-specific changes and serialisation.
Resolution, max.	2400 dpi	600 dpi	720 dpi
Speed, max. (m/min)	34	20	30
Print width, max. (mm)	600	290	430
Web width, max. (mm)	610	300	440
Print length, max. (mm)	350	285	unlimited
Colours	Up to 5 in all PMS shades	Single colour in all PMS shades	Up to 4 spot colours or CMYK
Working mode	Continuous and intermittent	Continuous and intermittent	Continuous and intermittent
Computer-to-print capability	Yes via Hapa Print Mat Laser Engraver, powered by Hapa's Place-it software	Yes via integrated print master production, powered by Hapa's Place-it software	Yes via Hapa's Place-it software, or customer-specific data interface
Printing Characteristics			
Type of fonts	All	All	All
Font size, min. (points)	2-3 (depending on font)	4 (depending on font)	5 (depending on font)
Codes	All established bar codes and 2D codes	All established bar codes and 2D codes	All established bar codes and 2D codes
Variable data print	Yes via variable data strip	Yes via new print master	Yes fully-digital
Serialisation / Track & Trace	No	No	Yes
Press proof	Yes via print mat	Yes via print master	Yes via vision control system

Hapa – Your total solution provider



FOUNDED IN 1933, HAPA IS THE **WORLD LEADER IN LATE STAGE CUSTOMISATION AND ON DEMAND PRINTING** TECHNOLOGIES FOR THE PHARMACEUTICAL SECTOR, **DELIVERING FAST, ACCURATE AND VALUE-CREATING PACKAGING SOLUTIONS**. SINCE THE INTRODUCTION OF ITS FIRST OVERPRINTING MACHINE MORE THAN FIVE DECADES AGO, HAPA HAS DELIVERED A **CONSTANT STREAM OF INNOVATIONS** TO HELP ITS CUSTOMERS REMAIN RESPONSIVE AND COMPETITIVE IN A FAST-CHANGING MARKET. HAPA'S RANGE OF TECHNOLOGY – **UV FLEXO, UV DIGITAL, UV DOD INKJET, LASER ENGRAVER & HYBRID TECHNOLOGIES** – MAKES US UNIQUELY QUALIFIED **TO CONSULT WITH YOU TO FIND THE RIGHT PACKAGING PRINT SOLUTION** FOR YOUR NEEDS. HAPA IS HEADQUARTERED NEAR ZÜRICH, **SWITZERLAND**, WHERE A TEAM OF OVER 100 SPECIALISTS ARE ENGAGED IN R&D, DESIGN AND PRODUCTION, SALES AND PROJECT MANAGEMENT AND AFTERMARKET. IN ADDITION, A **WORLDWIDE NETWORK OF SALES AND SERVICE CENTERS** PROVIDES PROFESSIONAL, LOCAL SUPPORT TO HAPA'S INSTALLED BASE OF **OVER 8,000 MACHINES IN 50 COUNTRIES**. HAPA IS A PROUD MEMBER OF **COESIA GROUP**, AN INTERNATIONAL, PRIVATELY OWNED ENTERPRISE. COESIA IS A FEDERATION OF AUTOMATED MACHINERY COMPANIES DEVOTED TO GROWTH AND MARKET LEADERSHIP.

Hapa AG
Chriesbaumstrasse 4
8604 Volketswil
Switzerland
Phone +41 43 399 32 00
Fax +41 43 399 32 01
info@hapa.ch
www.hapa.ch