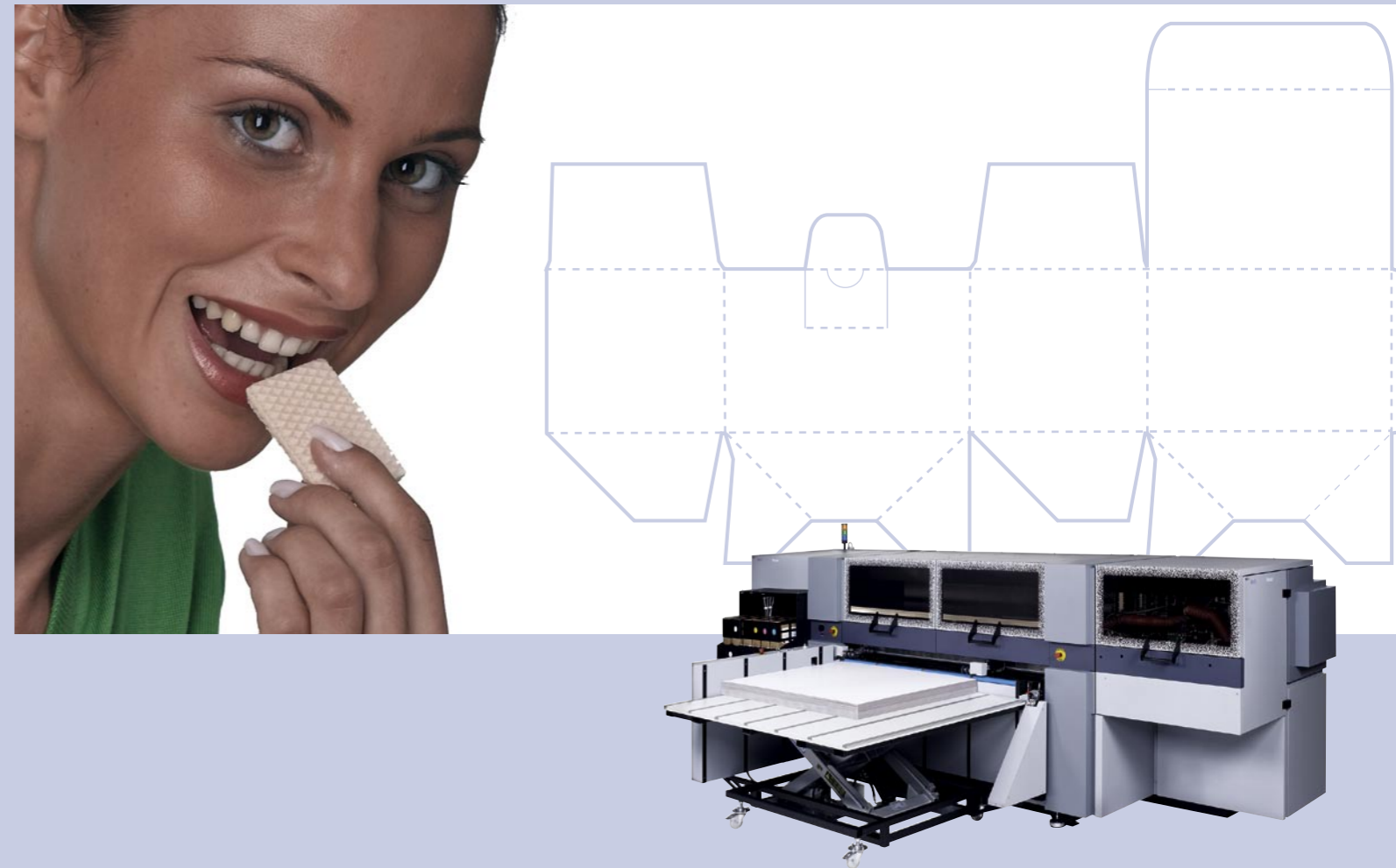


Rhopac

Versatility & Creative Packaging Printing



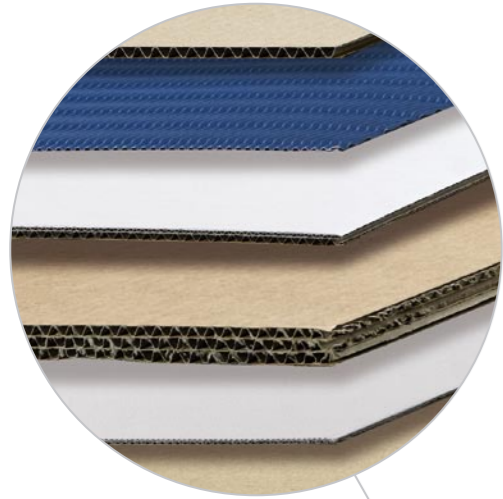


„Digital printing on corrugated boards provides an interesting business opportunity which can be fully exploited with the Rhopac. High quality packaging and graphic displays can be produced economically, even in very low volume. This is how the Rhopac helps to differentiate us from the competition whilst allowing us to provide an even better service to our customers.“

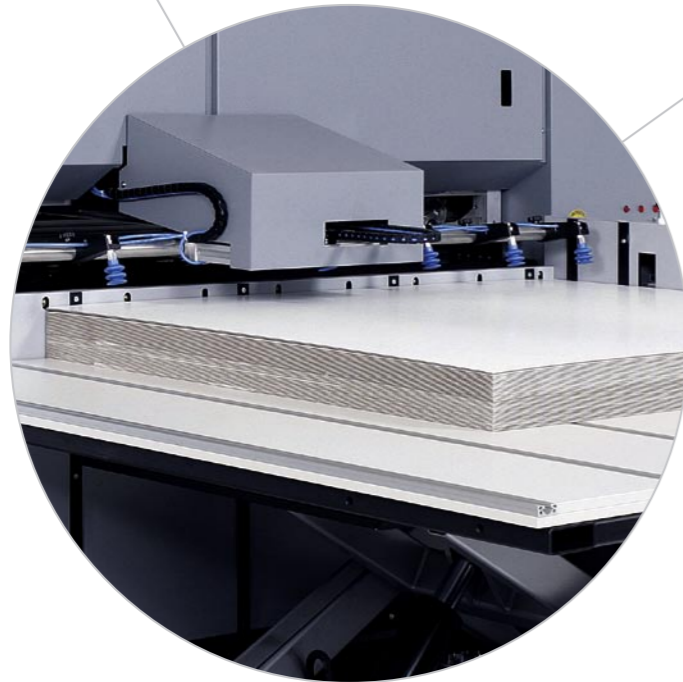
John-Åke Svensson, General Manager
SCA Packaging Display Division, Schweden



**Packaging Printing from A to Z:
Simple, Affordable, Premium Quality**



An impressive variety of materials.
The Rhopac demonstrates its distinct leadership in creative packaging printing with its ability to print onto the widest range of materials, from corrugated cardboard to a comprehensive list of display materials.



Automatic Loading and Unloading.
The Rhopac maximises work flow with loading on the one side and unloading on the other. This process can be fully automated with the optional Durst feeder stacker.

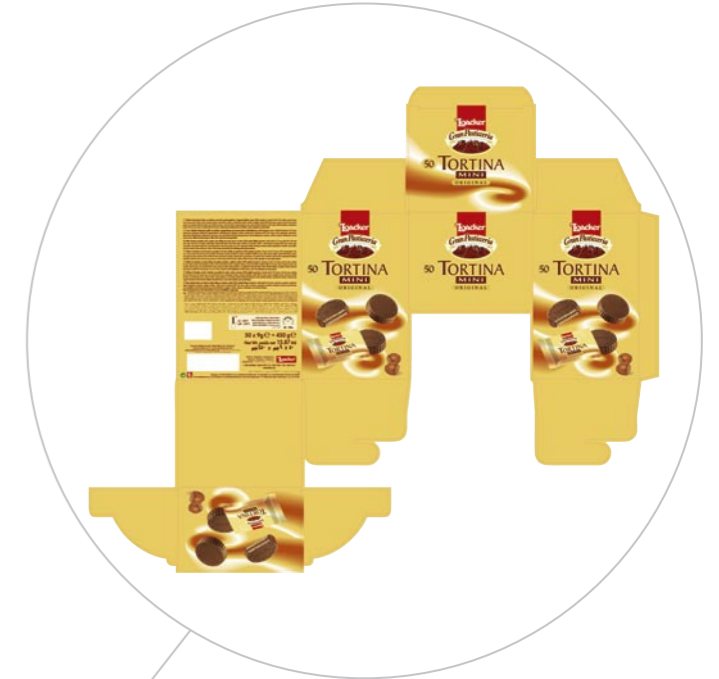
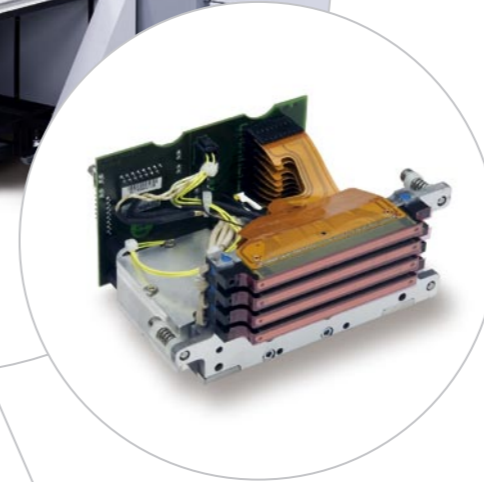
A New Dimension in Packaging Printing.
The application of creativity in packaging printing now knows no bounds. Rhopac is the name given to the innovative flatbed inkjet printer, which has been especially developed for low volume printing on corrugated cardboard cartons and displays. It is unrivalled in both economic efficiency and printing quality, whilst leading the world with its special effect varnish and white ink printing capabilities.

Freedom of Digital Packaging Printing.
Enjoy the new freedom. Whilst print runs are decreasing in size, the need for higher efficiency and pressure from the competition are increasing. The Rhopac produces premium quality print, without the laborious process of producing printing plates, by the application of innovative digital techniques incorporating Durst's own Quadro® Array Technology.

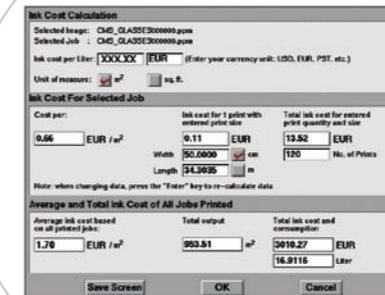
The Rhopac surpasses the of conventional offset printers and is faster and more flexible for short print runs.



Innovative Inkjet Printing.
The Quadro® Array nozzle heads developed by Durst guarantee premium printing quality by the fast and precise application of colour drops. The UV hardening printing ink ensures impressively vibrant colours on all materials.



Finished Packaging.
The production of the packing is carried out by automated cutting and punching devices. The Rhopac automatically prints cutting references for the i-cut plotter systems.



User-Friendly Software.
The complete production process, from data processing to digital cutting, is controlled by the reliable Durst User Software. Nesting, the integrated Colour Management System and the automatic ink cost input are just some of the performance features.

Five Good Reasons for the Durst Rhopac. Versatility & Creative Packaging Printing.

1

Modularity: Can be upgraded with output speed and colour ink options.

3

Speed: The fastest UV flatbed printer in the market.

4

Cost efficiency: Prints one-offs and low volume print runs, economically.



2

Quality: Quadro® Array Technologie and UV-Ink technology provide brilliant colours and pin sharp text.

5

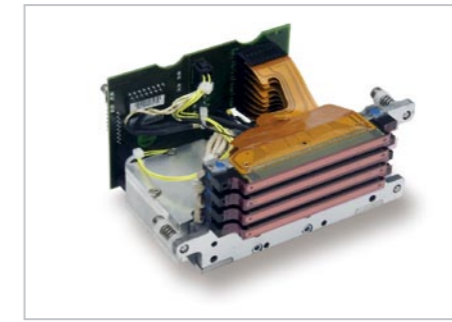
Materials: Wide variety of corrugated boards and display material at varying thicknesses.

The ideal partner for your company.
The Rhopac is the ideal printer for both the packaging industry and print shops, which produce prototype and small volume and short lead time packaging. The Rhopac is also the ideal solution for companies, who wish to produce their own packaging and displays, in house, as well as for design and packaging companies, who offer their customers complete solutions, from design through to the finished item.

Rhopac: The Best for Small Volume.
With the current demand for "today this, tomorrow that ..." For the Rhopac variety is the spice of life. Elaborate packaging, personalized displays, event promotions, POPs or tailor-made product packaging for short-term sales' promotions, all can be printed in the minimum of time and, when compared with the competition,

at a competitive price. Personalised printing becomes a reality for the Rhopac, and so does the packaging requirements for "just in time" production.

Modularity



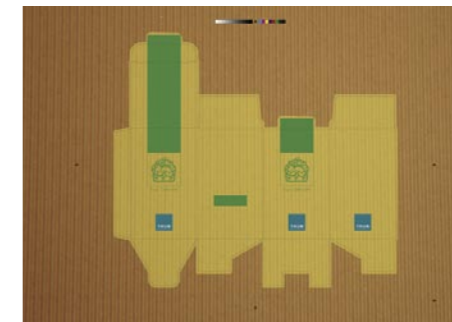
Quadro® Array nozzle heads: additional module for increased production and additional colours.

+



Feeder stackers for fully automated media handling.

+



Software module for automated finishing by digital cutting devices.

+



Special module for white ink printing, spot colours and the special effect varnish.



Rhopac grows with you
 "Grow with the business" is the Rhopac's philosophy. Thanks to its modular construction, the Rhopac, depending on the model, can be adjusted to suit different business requirements and can be upgraded at any time. This includes such features as: productivity, white ink printing, spot colours and selective varnish.

Optimization of work flow, cost efficiency and unattended, automated production can be achieved with additional devices such as the Durst feeder stacker, etc..

Compact and robust
 The Rhopac is considerably smaller than most of its counterparts, but its "industrial" construction is designed for 24-hour operation in a dusty environment. All mechanical parts are capable of withstanding high levels of stress and all sensors and electronic components comply with the European Standard for industrial manufacturing.

Printing with Durst UV Ink.



Conventional Printing.



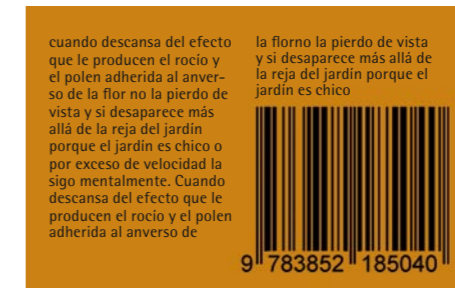
Stronger and Brighter: Durst UV Ink. The environmentally-friendly and near odourless Durst paperboard ink is hardened by UV lamps. It guarantees perfect adhesion and brilliance on all materials, naturally this includes corrugated cardboard which does not require pre-treatment. The high elasticity of the ink film prevents printing flaws in

the corners, edges and seams of packaging and displays. The handy ink containers can even be refilled during printing.

Printing Quality without Compromise. Capable of printing flawless natural skin tones, smooth colour graduations and solid colour surfaces, the unique printing quality of the Rhopac relies on a system developed by Durst that controls the nozzle heads, which is also known as "dot size control". This guarantees the precise control of the



Printing on corrugated surfaces



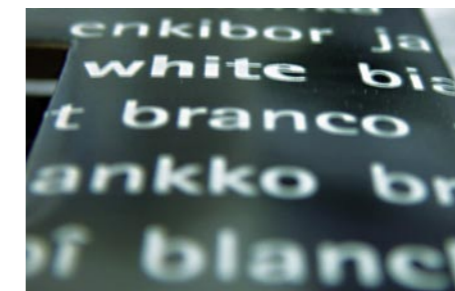
Pin sharp printing of text sizes as small as 6 points and bar codes



Printing of solid colours without banding



Finishing with selective varnish



A world first: white ink printing

combination with the integrated Colour Management System, the Rhopac guarantees an exact reproduction of even the most subtle colours.

Pin Sharp Letters and Bar Codes. Study the fine print carefully. With the Rhopac, even text with sizes as little to 6 pts, on packaging, displays, etc. are not a problem. Nor is the printing of bar codes (A-Rating). The Quadro® Array Technology with controlled drop geometry makes this possible.

Flexo Printing



Handling and production times measured in weeks.

Digital Printing



Same day turn around of individual

Faster than anything in the inkjet market Speed is a time and cost consideration. With a production capability of up to 150 m²/hour, the Rhopac is the fastest inkjet printer for corrugated cardboard packaging in the market. Designed for maximum efficiency and premium printing quality, it will effectively allow you to put your competitors under pressure.

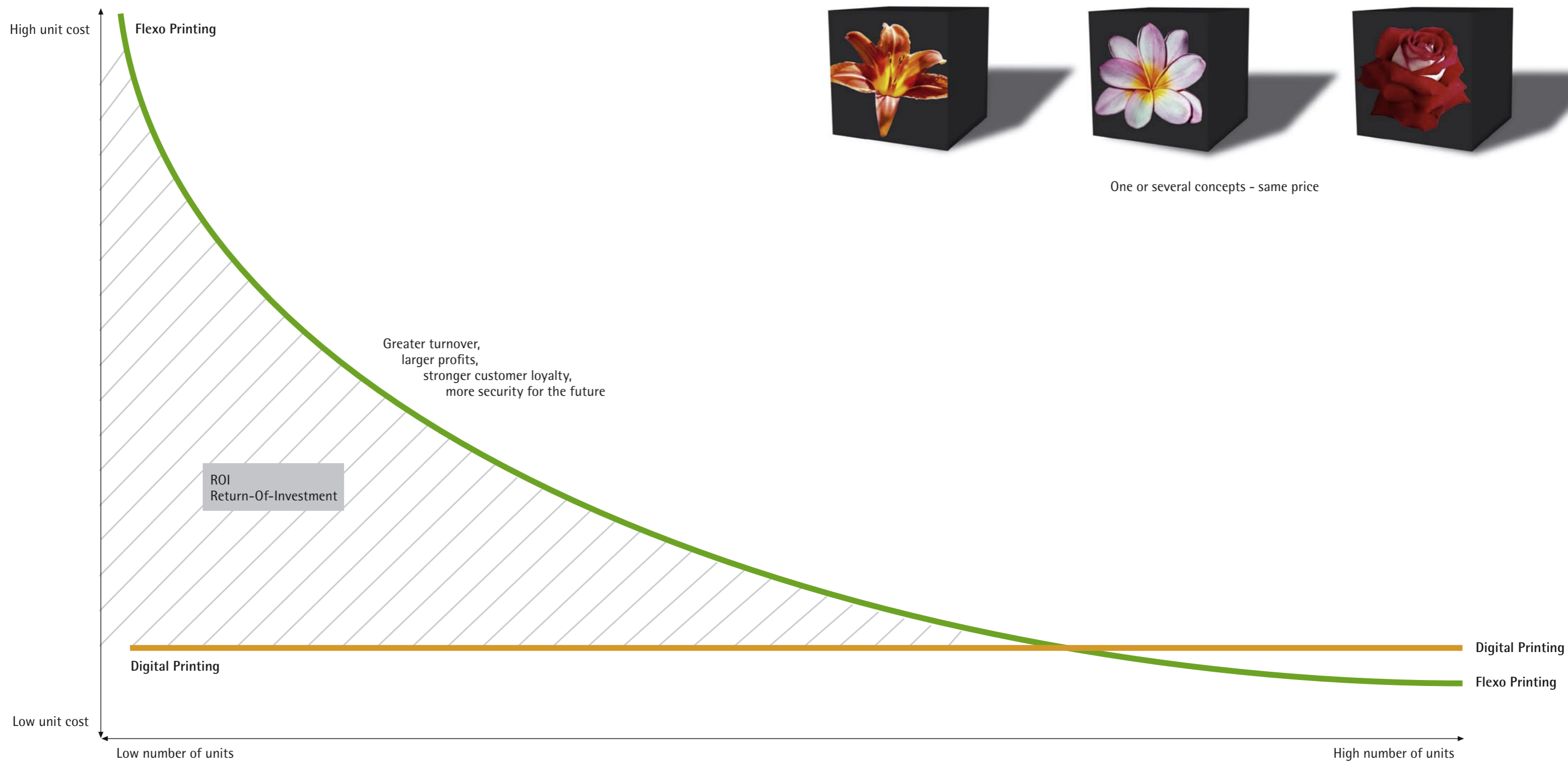
The Rhopac completes your tasks without the compilation of manuscripts such as clichés and stanza forms. The integrated Colour Management System ensures highest printing quality from the first unit onwards. The first print is sure to be a success!



Quality or Quantity?

The innovative Quadro® Array Technology allows you to have both. Thanks to its modular construction, multiple nozzle heads can be easily installed to suit a wide range of different configurations.

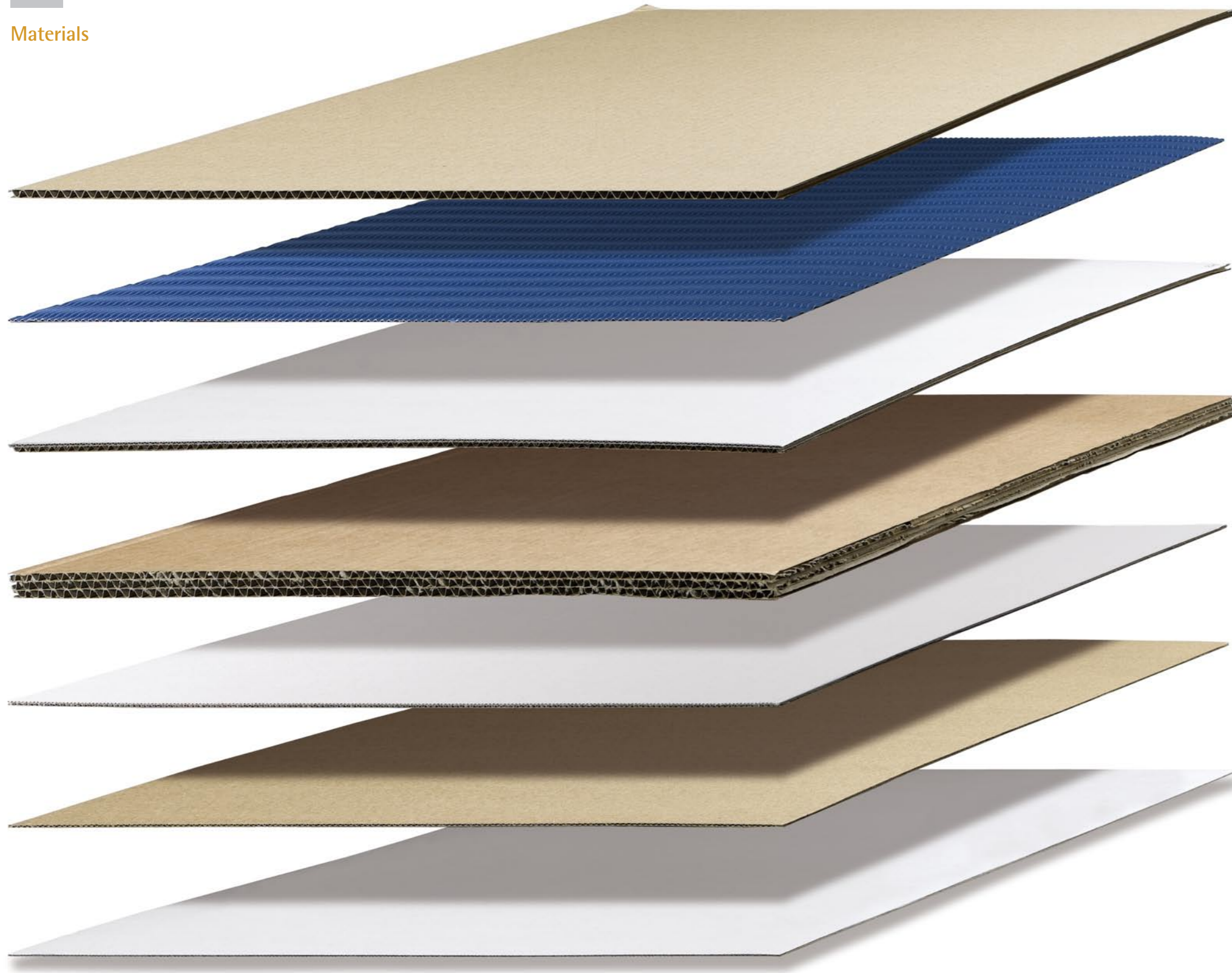
Costs calculation



Maximum Profitability for Small Orders. With the Rhopac, you can economically and efficiently produce low volume and sample packaging, as well as single prints. You can produce displays and construction overnight, if necessary. In addition to these feature, you can rest assured that the Rhopac will never diminish its quality of output and technical reliability.

Reduced Storage Space. The Rhopac can save you the need costly, environmentally controlled storage space. With "just in time" printing all that is needed is the storage space for the week or monthly requirement. The storage of a wide range of different coloured inks is also eliminated because the Rhopac uses the four-colour process and can reproduce any colour tone this way.

Rhopac: Investing in the Future. Thanks to specific Durst software, the Rhopac allows you to simply and easily estimate printing costs/m² and for the preparation of quotations. The durable hardware provides consistent printing quality over its long life. Thus providing guaranteed profitability.



a variety of corrugated cardboard
(A, B, E, Flute), POP materials

open corrugation

flat and structured surfaces

up to 40 mm thick

over 2 m printing width

unlimited printing length

plate size of DIN A3 and upwards



Rhopac: the Specialist for Corrugated Cardboard Packaging

Whether it is the printing of corrugated cardboard packaging or the printing of graphic displays, the Rhopac has no problem with various board thicknesses, smooth and structured, coated and uncoated surfaces, as well as different formats.

Top of POP Materials.

Also, the Rhopac has no problem with different materials such as hard or soft foam board. The impressive printing quality on diverse surfaces provides you with endless possibilities for creative display design.

Consistent work, always.

The Rhopac has been equipped with a special transport guide in order to provide good, dependable and consistent results even on warping corrugated cardboard. First, the warped cardboard is pulled through a cleansing brush and then held down flat in two guide rails until it leaves the machine in a perfectly printed state.

"Impressed?"
Then get more Information now!

Durst digital

Since 1936, Durst has been creating landmarks in the manufacture of high-quality systems for the reproduction of images on paper and other media. Digital and conventional. Innovative and reliable. Efficient and versatile. A world leader. We simply have the expertise that makes our products attractive to our customers.

Service and Support

Durst products and systems enable our customers to work more rationally and economically. In order for you to gain the full effectiveness of our printers, we provide the following service benefits:

- Professional employee and technician training at one of our training centres
- Consultation on location
- Sample prints
- After sales service: Worldwide

Welcome to the Future!

The Rhopac will open the door into the world of digital packaging for you. Dare to take this step into the future? Then we will be more than pleased to accompany you there. When will we meet?

Durst training centres in Brixen and Lienz.



Quadro® Array Technology from Durst is based on four compact and precisely placed spectra slots in a sturdy plate with 512 outlets per Quadro® head. This allows for the largest drop to be positioned in the smallest area, precise drop setting on exact pre-defined points and drop geometry: the decisive requirements for the unrivalled print quality at high output speed and low costs.

The Quadro Array® Technology has been incorporated in many other printing machines from Durst.

Significant Features of the Software

White Print

The unique CMYKW – printing technology developed by Durst enables digital printing of coloured and transparent materials. White can be used as a colour in three printing types:

1. White as background colour. For use on transparent and coloured media in order to produce the perfect 4 colour print with powerful colours.
2. White as a spot colour. It enables the printing of white patterns on transparent and non-white materials.
3. White as a background colour. Used for spot colours, in order to highlight coloured logos on transparent media.

Clear Coating for Special Effects

Used to highlight picture elements and create a 3 dimensional effect of selective areas also intensifies colours. In addition the coated areas are better protected against external elements.

Spot Colours

As an option 2 specific spot colours can be used at the same time.

Picture Processing in Real Time (On-the-fly)

Durst's proprietary user software and patented picture processing system "on-the-fly" offers fast and reliable production with minimal hard disk usage (on-the-fly pixel interpolation/Scaling, Colour, density, contrast, saturation, and sharpness correction, black and white printing, multiple job printing, cuttings, etc). The "on-the-fly" picture processing system eliminates the need for additional print files, which significantly reduces overall printing times and minimises hard disk usage. In addition to this various print sizes can be printed at maximum resolution – without needing to re-rip after changes have been made.

Autonesting

For optimal use of materials and fast printing. This function enables automatic positioning of different files and formats alongside each other for printing.

Stack Processing

For fast processing of jobs with multiple, similar or differing documents or pages.

Multiple Printing

Minimal hard disk usage and optimal use of a wider range of media. This function enables series of pictures with the same image to be automatically cloned and printed alongside each other during printing (on-the-fly).

Colour Management System

Integrated Colour Management System with Kodak CMS Colour Calculator for Durst Printer Software. The CMS contains an independent colour conversion system for PostScript, EPS, PDF, TIFF, TIFF/LZW, BMP and JPEG files (using "Load from Disk") and recognised embedded ICC-Profiles. The Durst Colour Management System also contains an automatic independent colour conversion system for pantone colours in PostScript files via Vector pallets during a ripping.

MGE i-cut Software (Accessory)

MGE i-cut software module for automatic workflow when used with the Esko iXL-Cutter. Individual pictures, series of pictures with the same image or pictures created using autonesting printed using the Durst Rho can be automatically cut out. The Durst printer software creates a reference point which is printed onto the printing material during printing along with the print file. In doing so, production times and costs are reduced to a minimum. No further steps are necessary in preparing the pictures for cutting.

General Specifications

Dimensions:

Width: 545 cm (215 in.)
Length without roller tables:
195 cm (77 in.)
Length with roller tables:
425 cm (167 in.)
Height: 188 cm (74 in.)
Height with open doors: 255 cm (101 in.)

Weight:

approx. 3.800 kg (8.100 lb)

Safety standards:

complies with currently valid guidelines

Printing specifications

Printingsystem:

Patented Durst flatbed system with Quadro® array technology for the finest quality and the highest speed

Resolution:

400/600 dpi selectable

Colours:

Standard: CMYK
Optional: White, Clear Varnish for special effects, Spot Colours (on request)

Inks:

UV-resistant pigment inks for interior and exterior applications.
Rho Ink Paper Board Set: Flexible, low odour inks specifically developed for corrugated packaging applications

Ink supply:

Integrated ink tanks with 10 litre capacity per ink, refillable during the printing process.
The refill inks are in 5-litre, non-returnable containers, easily disposal in collapsed condition, thus avoiding pollution to the machine and the environment.

Software/RIP:

Durst Rho Linux software with on-the-fly image processing (scaling, pixel interpolation, sharpness correction, cropping, panning and further corrections) and on-the-fly dithering for very fast processing with minimum storage capacity occupation on the hard disk.
Integrated Cheetah PostScript Level 3 RIP (400 MB in approx. 1 min.).

File formats:

- Grey levels CMYK, RGB and Lab TIFF
- Grey levels CMYK and RGB JPEG
- Windows Bitmap (BMP)
- PostScript Level 2/3, EPS (only Type 1 fonts)
- PDF
- RGB PPM raw format

Productivity

Rhopac Presto:
up to 80 sqm/h (65 cm/min – 25,5 in./min)
Rhopac Rapid:
up to 150 sqm/h (122 cm/min – 51 in./min)

Printing speed is measured on full width at continuous production at 400 dpi

Media specifications

Media types:

Wide range of uncoated and coated materials printable – also textured surfaces such as hard foam sheets, soft foam sheets, aluminium, acrylic glass, cardboard sheets, corrugated sheets, etc.

Maximum printing width:
205 cm (80 in.)

Maximum printing length:
Only restricted by medium length

Maximum thickness:
Standard: 40 mm (1.58 in.)

Maximum board weight:
Standard: 50 kg

Smallest sheet size:
DIN-A3 – 29.7 x 42 cm (12 x 17 in.)

Registration of materials:
Materials are registered mechanically at the left side and by means of fibre optic sensors at the leading edge. An encoder measures the transport sequences, ensuring utmost precision in image alignment.

Location requirements

Space requirements:
min. 8 x 8 m (27 x 27 ft.)

Maximum height:
2.400 m (8.000 ft) above sea level

Temperature range:
+15 °C to +30 °C (+59°F to 86°F) non condensing

Relative air humidity:
25 – 80 %, non-condensing