PrintPromotion

NEWSLETTER

›› Training Information & News in Printing and Paper Converting Technology | No. 102 | July 2016

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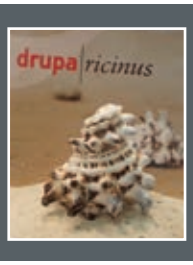

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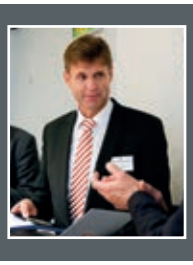

Friedrich-Koenig Medal awarded to German printing machine engineer

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Company News

Printers` Guide

From 31 May to 10 June, 1,837 exhibitors from 54 countries gave impressive proof of the versatility and innovative power of their sector at drupa 2016. The focus was especially on next-generation and highlight themes such as packaging production, multichannel, 3D printing, functional printing and industrial applications. Some 260,000 visitors from 188 countries and some 1,900 journalists from 74 countries travelled to Düsseldorf.

Top marks for drupa 2016 – Decisive impulses for the global print industry

The atmosphere at drupa 2016 can hardly be topped: the investment climate was extremely good and far exceeded all expectations. The exhibitors unanimously reported excellent business deals, extremely promising contacts and a positive spirit for the global print industry. The re-positioning of drupa and its focus on future themes with strong growth potential – such as 3D printing, functional printing or packaging printing – proves to be a real asset. Be it publication, commercial, packaging or industrial printing – printing technology offers matching solutions for all of these applications while opening up new lines of business and business models at the same time. Various indicators also underscore very clearly that drupa is a flawless B2B trade fair and platform for business decisions in the highly innovative print media industry.

Totalling 76%, the percentage of international visitors is up 16% from four years ago. 17% of international visitors came from the Asian continent alone (2012: 13.6%). And here, India accounted for the largest share with 5%, followed by China with 3%. The leading European countries were Italy, France, the Netherlands and the UK.

Meeting with high demand was the programme of accompanying expert events with its three pillars drupa cube, drupa innovation park, 3D fab + print, but also touchpoint packaging as well as Printed Electronics and Solutions.

drupa sticks to 4-year cycle!

drupa – the No. 1 trade fair for print and cross-media solutions – will be held again in Düsseldorf from 23 June to 3 July 2020.

VDMA sees printing as an industry with a future

At the end of drupa 2016, Dr. Markus Heering, Managing Director of the VDMA Printing and Paper Technology Association as well as of PrintPromotion, informed that the drupa exceeded the high expectations. The VDMA stand was the center of enormous attention. Furthermore, the feedback from the VDMA member companies indicates that the quality of the talks with old and new contacts as well as the volume of new orders received were more than pleasing. The manufacturers used the last few rather difficult years to develop tailored solutions for the changing demands in the printing industry.

The VDMA Printing and Paper Technology Association supported the reorientation, inter alia, with the "Print 2030" workshop series in order to create positive guiding principles and identify new chances.

Print 4.0 goes transatlantic

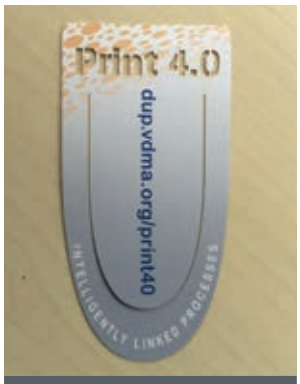
Agreed to strengthen their transatlantic collaboration: Dr. Markus Heering of the VDMA and Thayer Long from the NPES

On the occasion of drupa 2016, Dr. Markus Heering, Managing Director of the VDMA Printing and Paper Technology Association, and Thayer Long, the successor of Ralph J. Nappi in the office of President of the US-American NPES (Association for Suppliers of Printing, Publishing and Converting Technologies), agreed to continue the close collaboration between the two associations.

During his visit to the VDMA stand, Thayer Long showed a keen interest in the initiatives of the VDMA and the progress made by the German printing technology industry towards Print 4.0, stressing that the ultimate objective should be a joint industry standard for digital networking in order to ensure an optimal combination of the various technologies of the manufacturers on both sides of the Atlantic. Furthermore, the associations wish to support the establishment of better political, legal and economic framework conditions, continue their dialogue about norms and standards as well as topics relating to basic and further training, and, last, but not least, explore possibilities for collaborative research.

According to Heering, one advantage as regards the latter is that some companies are members of both associations and that the printing technology industry can only benefit from the involvement of the VDMA and NPES in national standardization bodies.

Focus on Print 4.0



The Print 4.0 bookmark, one of the three products of the exemplary 4.0 process chain at the VDMA stand.

Print 4.0 was also the dominating theme at the VDMA stand. In the printing company of the future, digitally linked "process chains" will play a decisive part in production and ensure high speed, quality and flexibility in the handling of even the most diverse printing jobs. An open communication standard enables the printing companies to combine machines and equipment from different suppliers by plug& play and guarantees that the print product is accompanied by all data that are relevant to its handling all through the process chain. The VDMA demonstrated how such a process chain of an interlinked production process functions. Cartoons on the floor, on roll-ups and projection screens explained the individual process steps. Furthermore, the visitors could select one out of three products (a dice, a bookmark and a book) with an exemplary encoding (barcode) in which all necessary information for the further production steps were embedded. On the screen, the visitors then saw the demonstration of an intelligent processing station initiated by the information given in the product barcode. Finally, the printed product was finished in accordance with the preselected specifications on the Digicut laser cutting machine of Polar Mohr.

At the VDMA stand: Young visitors with a dream

Last year, Stiftung Lesen(German Reading Foundation) and Stiftung Druck- und Papiertechnik (Printing and Paper Technology Foundation) invited German pupils of grades 7 to 9 to send in short contributions for an anthology about "life and dreams". The winners (seen here with VDMA Printing and Paper Technology Chairman Kai Büntemeyer) were invited to drupa 2016. The first prize additionally included 500 euros for the piggy bank of the winning class.

In the pipeline: Further PrintPromotion Management Conferences

During recent months, all eyes and ears were on drupa, but plans are already made for PrintPromotion Conferences near the end of the year. PrintPromotion is in talks with interested circles in India (outside the big cities), Bangladesh and Sri Lanka. In addition, a poll among the PrintPromotion partners is being conducted about a PrintPromotion Conference in Nepal. Next spring, PrintPromotion Conferences will again be held in South America - in countries that have not yet been destinations of the conference tours. Four venues will be chosen. The decision-finding process among the PrintPromotion Partners will be started soon.

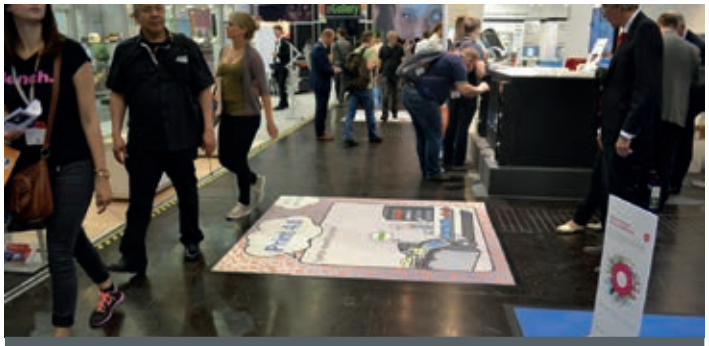
Showcases Industrial Printing and 3D Printing

In addition to Print 4.0, focal themes of the drupa and, naturally, also highlights at the VDMA stand were Industrial Printing and 3D Printing, products of which were presented in special showcases.

The stand proved to be a lively and popular meeting point. VDMA members had contributed exemplary exhibits, and the showcases attracted a great deal of attention from industry experts. Many of them started discussing ideas for new applications and business areas. Flyers directed the VDMA stand visitors to the stands of the contributing companies where they could get even more inspiration – or even order the equipment needed for the realization of their visions.

An eye-catcher at the VDMA stand: the 3D printed drupa ricinus shell

Print 4.0 to walk on: The laminate flooring at the VDMA stand, an exemplary product of industrial printing.



There was a steady flow of visitors to the VDMA stand with its inspirational showcases.

First PrintPromotion Specialist Teacher Course in Germany after drupa

drupa 2016 is over, and the specialist teachers participating in this year`s course held in Chemnitz in Germany from 31 August to 29 September will profit from it – learning about brand-new trends and the new impulses emanating from this great trade fair. PrintPromotion invited members of the teaching staff of specialist institutions for printing from Brazil, Colombia, Egypt, Ghana, India, Latvia, Nigeria, Russia, Serbia, Sri Lanka, Thailand, Uganda, Ukraine, Uzbekistan and Vietnam. All have accepted the invitation and are busy preparing their stay in Germany, inter alia, by getting the required visa.

Friedrich-Koenig Medal awarded to German printing machine engineer

The Friedrich-Koenig Medal was handed over to Dietmar Pötter during drupa 2016. From left: Dr. Markus Heering, Managing Director of the VDMA Printing and Paper Technology Association, Dietmar Pötter and drupa President Claus Bolza-Schünemann.

Dietmar Pötter, head of printing and finishing at gravure and flexographic printing press manufacturer Windmöller & Hölscher, has been awarded the Friedrich-Koenig Medal for his outstanding contributions to German printing machine engineering. Pötter is just the 12th recipient of the Friedrich-Koenig Medal awarded by the VDMA in more than 60 years. He is the holder of numerous patents, inter alia, one for the automated positioning of the format and anilox rolls in relation to the impression roller. Besides working for Windmöller & Hölscher, Pötter also worked as a printing house manager and, therefore, knows the user side as well. Accepting the award, Pötter pointed out that the concepts of the printing machines have been improved a lot, not only with regard to the design and construction of the mechanical modules and processes, but also as far as the drive and control technology is concerned. Operation, handling and service concepts play an increasingly important role. Assistance systems that support the machine operator in the makeready process or for inline quality monitoring during production are a reality now. For the future, he sees Print 4.0 with digitally networked "intelligent machines" as the key to further productivity increases.

Company news

Cutting system Gamma 4.0 wows the crowd

"We solve it" was the slogan of BaumannWohlenberg for this year`s drupa, and the fair was a great success. The visitors were enthusiastic about the new Cutting System Gamma 4.0 which regularly attracted crowds of visitors while it was operating at full capacity.

With the new solution "cutting 4.0", BaumannWohlenberg primarily addresses customers who handle a large cutting volume with a cutting time of more than 5 minutes per ream – with a large number of jobs with medium and short print-runs. The sheets are jogged with the automatic jogging system BASA and transferred as a perfectly aligned ream to the storage rack BMR. Up to 20 reams can be stored within the BMR simultaneously until they are requested from the operators of the high-speed cutters. The second system on the BaumannWohlenberg stand also met with great interest. Taking "high flexibility for medium cutting volumes" as its theme, the company showcased 4-Cut-System Delta, a cutting system with automatic feeding via the front table. The system is completed by a pile hoist, an automatic jogger as well as an unloader. The 4-Cut-System Delta offers high productivity in combination with perfect ergonomics. All main components can either be used automatically or manually. In addition to the above-described two systems, BaumannWohlenberg also showcased a new "small" high-speed cutter. Wohlenberg 80 Basic Line has a maximum cutting depth of 800 mm. A Baumann Pile Turner was also part of the programme. Furthermore, a BSW 3-1200 LV with aeration and vibration device could be seen (and some of the visitors even had the opportunity to try the smooth manual turning themselves).

The star of the stand: The new Cutting System Gamma 4.0 with the BMR storage rack for up to 20 perfectly aligned reams.

Baumann Maschinenbau Solms GmbH & Co. KG

Smart Gluing – Great success for Planatol System at drupa 2016

Smart Gluing 4.0 – That was the impressive contribution of Planatol System to Print 4.0 at drupa 2016.

drupa 2016 was a great success seen from the perspective of Planatol System. The upward trend in the printing industry was clearly noticeable. Planatol System tries to react to future challenges of print finishing with new technologies and advancements and informed the mainly international visitors about numerous applications.

The visitors were very interested in the finishing process of printing and especially in the fold line from manroland web systems - with a Coldjet fold-gluing system which had been integrated by Planatol System. The highlight of this year's drupa was an articulated-arm robot from Mitsubishi Electric Europe B.V. With this robot a wide range of adhesive applications were demonstrated live to the visitors. Furthermore Planatol System presented Coldjet- and Hotjet gluing systems in combination with the control unit Duojet, as well as the possibility for wireless control via WLAN or with the help of an app for tablet computers and smart phones.

Looking back to drupa 2016: Interesting conversations, a variety of new contacts and strengthened customer relations give the whole team of Planatol System a motivated outlook to 2020.

Planatol Holding GmbH

Push to Stop – Heidelberg makes autonomous printing a reality

The digitization of all of a printing company's processes enables much higher net productivity. In order to exploit these technical possibilities to the fullest, a completely novel approach is required for press operation. Heidelberg presented the new generation Speedmaster at drupa 2016, thus ushering in a paradigm shift in industrial print production with its new "Push to Stop" operating philosophy. Whereas until now processes were actively started by the operator, in future the press will do this itself. The operator only interrupts the autonomously running process chain if necessary. This raises the effectiveness of print production to previously unattainable levels, enables better planning of processes, and continuous process monitoring lowers the error rate. The "Push to Stop" operating concept is achieved on Speedmaster presses by means of the new Prinect Press Center XL 2 machine control station with smart Intellistart 2 user software and its assistance systems such as "Intelliguide". The operator can clearly see and follow all steps displayed on the large Wallscreen XL. With this new human-machine interface, the operator can navigate processes and retains an overview, even when there are numerous job changes. This can then be expanded all the way to autonomous printing. This way an intelligent solution is established, in which the press automatically works through the queued jobs.
The "Push to Stop" concept is available for the new generation Speedmaster, covering the series XL 75, CX/SX 102, XL 106 and XL 145/162, which are equipped with the Prinect Press Center XL 2, the Wallscreen XL, and AutoPlate Pro or AutoPlate XL 2 and Inpress Control 2 automation components.
The Prinect Press Center XL 2 includes the patented Intellistart 2 user software with Intelliguide assistance system. Like a car navigation system, Intellistart 2 calculates the shortest sequence of makeready processes, and the new Intelliguide timeline display indicates makeready progress in real time. This provides the operator with complete transparency over which automated processes are ongoing, but also when manual processes are required, ensuring optimum transition from one job to the next. For more complex makeready processes with frequent ink and coating changes – in particular such as are common in packaging printing, for example – Intelliguide offers unique support, prevents errors and increases net productivity.

In the new Prinect Press Center XL 2 control station, intelligent assistance systems support navigated printing. This is of interest in packaging printing, with its complex make-ready processes and many special colours, and commercial printers working through standardized jobs with numerous changes can now make autonomous printing a reality.

For commercial printers carrying out standardized jobs with numerous changes, Intellistart 2 can even make fully autonomous printing a reality. For the first time, multiple follow-up orders can be prepared and released in a job queue while production is still underway. The operator can change the order of the jobs using drag and drop, while Intellistart 2 automatically calculates the new job-change sequence. In addition, processes are automatically started on a job change, and then run on their own. Here, working together with Prinect Inpress Control 2, the new "Quality Assist" software module recognizes when the printing parameters are within the predefined tolerance, and automatically starts production.

Heidelberger Druckmaschinen AG

drupa 2016 – World premiere of Primefire 106

World premiere and milestone at drupa 2016: the new Heidelberg Primefire 106 for the industrial production of digital printed products in 70 x 100 format. Heidelberg has outfitted the Primefire 106 with a completely new operating concept, the Prinect Digital Center Inline with Perfect Stack technology.

Heidelberg presented a world premiere for industrial production of digital printing applications in 70 x 100 format with the Primefire 106. The newly designed system is based on the leading inkjet technology from Heidelberg`s development partner Fujifilm and the proven Heidelberg Peak Performance platform from the company`s offset technology.

The Primefire 106 enables packaging printers in particular to take the first step in developing new areas of business, for example with the production of variable or personalized packaging. The digital printing system offers quality of 1,200 x 1,200 dpi at a printing speed of up to 2,500 sheets per hour, even achieving production volumes of up to 1.5 million sheets per month in future productivity modes. The 7-color inkjet system with Heidelberg Multicolor technology also covers up to 95 per cent of the Pantone color space. At the same time, water-based inkjet printing permits food-safe production.

Heidelberg has outfitted the Primefire 106 with a revolutionary operating concept in the form of the new Prinect Digital Center Inline with Perfect Stack technology. In combination with the Prinect Digital Frontend (DFE) from Heidelberg, the new high-performance control station ensures seamless integration into a print shop's existing overall workflow.

In combination with the Perfect Stack technology and controlled by the Prinect Digital Center Inline, the Speedmaster XL-based feeder only allows good sheets into the delivery pile. The operator can also output test sheets directly to the control panel at the push of a button in order to visually check their quality.

Heidelberg´s shows on the Primefire 106, taking place four times per day, demonstrated the variety and variability of industrial digital printing in terms of possible print jobs and applications.

Heidelberger Druckmaschinen AG

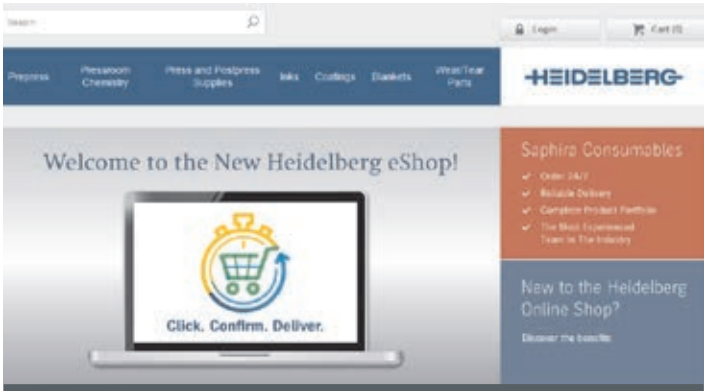
Smart collaboration

Extensive digitization in the print media industry is providing print shops with totally new opportunities in relation to efficient job processing and communication with their customers and suppliers. Cooperation between Heidelberg and its customers will also change significantly in the digital age. With this in mind, the company presented the three innovations Heidelberg Cloud, Heidelberg Assistant, and Heidelberg eShop at drupa 2016, based on the theme "Smart Collaboration".

The Heidelberg Cloud is an information and service platform specially adapted for the print media industry. It integrates the Heidelberg Remote Service network, which links more than 10,000 machines and an additional 15,000 software products with Heidelberg Service, with all the information that a customer needs: it is comprehensively supported by Heidelberg Service, for example with augmented reality videos showing how to carry out maintenance tasks or real-time fault reporting with eCall. The Heidelberg Cloud is also the backbone for services based on the analysis and prediction of big data to increase the availability of machines and to improve the productivity of print shops.

With the Heidelberg Assistant, customers get personal access to all information and services related to their company. As the customized "window" to the Heidelberg world, they enjoy access to communication with Heidelberg and numerous Heidelberg solutions as well as to availability and productivity data for their print shops. The Heidelberg Assistant also permits direct access to the new Heidelberg eShop, which is the basis for attractive e-commerce solutions. Heidelberg has now launched this new online shop in 27 countries.

At drupa 2016, customers could take a look at the future of e-commerce. As an illustration, Heidelberg demonstrated how order data can be exchanged via an electronic interface (EDI) and how digital and offset printing systems can independently trigger an order transaction for Saphira consumables in the eShop via the management information system; or how, in a later enhancement stage, a marketplace is created that customers can use to also purchase products from partner companies. Heidelberg thus makes work easier for its customers: the new eShop means less administration work and fewer errors occur in the ordering process.



The new Heidelberg eShop provides the basis for attractive e-commerce solutions. On this platform, customers can already order consumables — and, in the future, also selected service parts — around the clock, and the goods will be delivered on the next working day in most cases.

Heidelberger Druckmaschinen AG

New generation of the ICS webfed inline converting system

For the drupa 2016 concept of Converting 4.0, Heidelberg Web Carton Converting presented the Heidelberg ICS 850, the new generation of the Heidelberg ICS inline converting system. The ICS has been developed and perfected for years. Like the proven ICS 670, the Heidelberg ICS 850 can be adapted flexibly to the customers` needs offering the benefit of easy-to-change printing, value-adding and postpress modules as well as excellent print quality. The press' rugged construction ensures stable processes throughout the job. The ICS delivers an outstanding combination of flexo print quality, production efficiency, minimum waste and ergonomics. Allegedly, 65 % of the customers` buying decisions are made at the Point of Sale and 89 % of all information taken into consideration is received visually. This is what Heidelberg Web Carton Converting set out to test at the drupa future lab, where the company presented both innovative packaging and efficient packaging production. It took the opportunity to have a closer look at the subconscious buying behavior of drupa visitors. Using sophisticated eye tracking glasses, visitors could experience for themselves how highly finished packaging impacts the retail environment. Heidelberg reconstructed a supermarket shelf, arranging several product packages, both with and without value-added elements. To avoid false positives from the positioning of the products at the point of sale, the boxes were moved around twice a day. The test period was just a few seconds, and afterwards the volunteers could see their individual heat maps. Even the testers who insisted that value-added packaging has no influence on their buying behavior were completely surprised when seeing the analysis.

Heidelberg Web Carton Converting GmbH

Finishing makes the difference: With the ICS 850, value-added packaging and folding cartons from roll to die-cut blanks can be produced in a single pass. In addition to die-cutting, e.g., gravure printing, hot foil and cold foil applications, laminating and screen printing can be combined in-line. The heatmap compiled by Heidelberg Web Carton Converting demonstrates that value-added packaging has an influence on the buying behavior of customers.

A powerful ray of sunshine

Crowds were gathering at the POLAR stand to see, among other things, the POLAR Cutting System 200 PACE and the Digicut.

For POLAR, drupa 2016 indicated a high readiness to make investments and demonstrated that the offset printing sector is very lively and digital printing continues to grow. The number of contracts concluded reflects this positive spirit. Therefore, POLAR is very satisfied with the course of the trade show.
For most visitors it was worthwhile coming to Hall 1 where Heidelberg, POLAR and other partners were exhibiting. The distinct conceptional design of the hall was very attractive, and a lot of future-oriented innovations were offered. In addition, the machines installed in Hall 1, including all of the POLAR machinery, were carbon neutral.
The main attractions on the POLAR stand were the two laser cutting machines, as well as LabelSystem DC-11plus and CuttingSystem 200 PACE. Especially the Digicut ECO and Digicut PRO models met with great interest.
Digital laser cutting opens up new opportunities to increase the added value. In Digicut ECO, POLAR is offering a device which is designed for small quantities and special materials. The Digicut PRO model was presented for the first time. It is designed for producing creative finishings on an industrial scale
POLAR sold numerous stand-alone machines and quite a number of cutting and die-cutting systems right from the booth. The POLAR team also managed to initiate many interesting projects. Once again, POLAR has proven to be an innovative and reliable partner for its customers.

POLAR MOHR Maschinenvertriebsgesellschaft GmbH & Co. KG

Leading position strengthened with drupa appearance

An oversized "UV" attracted drupa guests to the 400 m² stand of IST METZ with its sheet-fed offset printing press.

With its appearance at drupa, IST METZ has once again demonstrated its prowess as a leading market player with a very large product portfolio of UV systems worldwide.

The new Hot Swap technology from IST METZ provides customers with maximum flexibility in all things drying. IST METZ used show units and live printing demonstrations to showcase the UV technology it offers and the advantages these products boast. Four demonstrations took place daily on the Heidelberg XL 75-6 + coater Anicolor 2, equipped with proven IST LAMPcure technology and the more recently developed IST LEDcure technology. IST METZ offers both UV lamps and LED systems. The broad reach across many application areas has been consciously expanded in recent years. The company provides solutions for all kinds of printing and coating applications, including comprehensive advice as to the best possible light source, i.e. LED or lamp.

Visitors to the trade fair were provided with information regarding the current climate for UV technology. The Heidelberg Speedmaster was used to demonstrate the careful integration of IST METZ UV systems into production machinery. Numerous print samples created in-house, such as the customer magazine, virtual reality glasses or a print sample fan, impressively demonstrated the potential of IST METZ products.

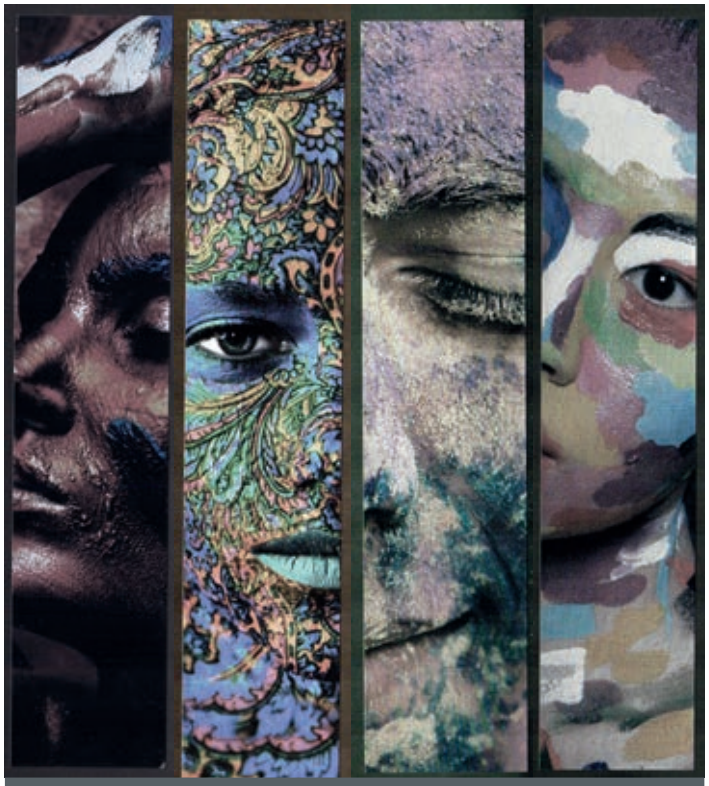
The UV systems were not only on display at the trade fair, however. At the UV Transfer Center, located at the company's headquarters in Nürtingen near Stuttgart, IST METZ provides customers and interested parties with a testing facility, complete with two presses and a laboratory. The demand is high. Here, the visitors have the opportunity to see in 'hands-on' demonstrations just how efficient the systems are. The area of LED UV curing has been a particular focus of IST METZ in recent years: With a distance of 60 mm or less, the LEDcure system achieves an output of 8 W/cm² or more. Due to the design of the system, there is not only a distinct peak but also a high dosage. Using just one LEDcure system, a production speed of 500 m/min is achieved in rotary offset printing.

IST METZ registered an extremely high demand for the LED retrofitting of machinery in commercial printing at drupa. Making its debut at drupa: the new Hot Swap technology, which facilitates subsequent retrofitting to LED UV. The machine's existing peripheral equipment is used for this purpose. The LAMPcure unit is swapped for a LEDcure unit. The respective unit is automatically recognised by the control system and production can immediately resume without any further effort required. With Hot Swap technology, the customer receives a system he can later convert to LED without a problem – a product thus securing future prospects and representing a safe investment. Both the lamp and LED systems from IST METZ were in equal demand at drupa.

IST METZ GmbH

Reliable print quality in packaging

Direct printing methods are an excellent means in order to put colour on paper in outstandingly natural and realistic looking quality. Moog as a manufacturer of sheetfed gravure printing machines with many years of experience in special machinery manufacturing and narrow web gravure printing is one of the pioneers of this printing method which offers innovations that go nearly unnoticed, has quite a number of exclusive characteristics and can hold its ground against the competing printing methods. Especially for the production of packaging for tobacco, spirits, cosmetics, perfumes and many other branded articles, sheetfed gravure printing is used offline with other printing and finishing methods. In most cases, only the complex combination of different printing and finishing methods will render the result requested by the branded companies. At the same time, the production with different machines generates brand protection. What is typical for gravure printing is the colour stability over the total print run in the course of which all pigment sizes up to 200 µm in alcohol-based, water-based or UV inks can be applied. In contrast to the indirect printing methods, e.g., colour tones can be printed with the required layer thicknesses in just one printing unit due to the possible cell configurations. This is advantageous in terms of register, colour stability and the printing cost. Colour tones that can be processed very easily, like bronze, gold, silver and also pearlescent inks are optimally accepted by the printing substrate and rendered in high quality. Sheetfed gravure printing ensures high production reliability and economic efficiency for the production process. In rotary gravure printing, cylinder diameters of different sizes are used depending on the packaging size, whereas in sheetfed gravure printing, it is possible to use cylinders with the same diameter that simple need to be re-imaged – this means substantial cost and time advantages. In the C-t-C (Computer-to-Cylinder) method, the cell depth is modified in the same step in order to optimally adjust it to the substrate and thus the necessary ink transfer. As an alternative to the traditional gravure printing cylinder, printing plates with a resolution of up to 10.160 DPI are used. The easy production of printing plates, in combination with the higher resolution, predestines it for brand protection and/or security printing. Every printing unit can also be used as an embossing unit, e.g. for decorative embossing, the embossing of structures or 3D embossing. New machine designs allow the use of embossing technology with surface pressures of up to 900 tons.
H. C. Moog has also developed own innovations for gravure printing. Excellent results have been achieved with ink applications with up to 200 mµ pigments as well as relief heights of 36 mµ for special haptic and visual effects. The imitation of bronzing and screen printing is produced with very high layer thicknesses in direct gravure printing, and, what is more, at substantially higher printing speeds.
During recent months, RGB (Red Green Blue) sheetfed gravure printing caused a stir. Tests have shown that the visual effects produced with RGB cannot be achieved with other printing methods. The RGB printing method is based on additive colours and, therefore, offers a wider colour gamut for increased flexibility in the design.



RGB sheetfed gravure printing helps achieve amazing results.

H. C. MOOG GmbH

Multi-functional 1-TBR Compact installed in India

Narendra Paruchuri and Hemanth Paruchuri of PRAGATI Pack Ltd. are now happy to have the 1-TBR Compact for the production of sophisticated packages for a wide range of branded goods.

The installation site had been perfectly prepared at the large printing house of PRAGATI PACK in India, so everything went like clockwork. The staff members have been trained by a team of specialists from MOOG. Excellent conditions for the 1-TBR Compact and the delivery of products with a precision in the micrometre range. PRAGATI Pack Ltd. supplies high-quality packaging products to global players of numerous industries. As part of the company`s impressive machine pool, the MOOG 1-TBR Compact will in future hold a special position since it combines maximum print quality with flexible finishing techniques. It is possible to use metal pigment and pearlescent inks as well as gloss and matt coatings, functional coatings and coatings with haptic effects. In combination with the integrated embossing technology, the modular machine produces packages with a sophisticated, elegant look, which conquer customers at the point-of-sale – and thrill with a fine play of light on the printed and embossed surfaces.
A special MOOG service: The German specialists remain on site for the execution of the first orders. "We always do that," says Achim Kurreck, CEO of H.C.MOOG, underlining that a good start is important for long-standing relationships. "After all, a true MOOG runs for decades," he assures.

H. C. MOOG GmbH

Best drupa since 2000

Claus Bolza-Schünemann, CEO and president of Koenig & Bauer (KBA) and drupa president 2016, gave a decidedly positive closing verdict on this year's industry's leading trade show saying that print in all its diversity made a strong comeback at drupa 2016 following structural shifts over the past eight years, that most companies had adapted to new market realities and that many visitors came very well prepared with clear requirements which made consulting easier.
The press manufacturer reported orders totalling a figure in the triple-digit million euro range in its largest segment, sheetfed offset, received many orders in all format classes from over 40 countries on all six continents. The focus on growing markets, such as digital, LED-UV and packaging printing, proved highly successful. The expansion of KBA`s offerings to post-press with an own rotary die-cutter and the planned takeover of Spanish die-cutter manufacturer Iberica AG S.A. (see page 11) were extremely well-received. The same is true of the conceptual presentation of the KBA VariJET 106 Powered by XEROX digital sheetfed press, whose development will be completed in a few months' time, and the new KBA services towards Industry 4.0.
The innovative solutions in digital, flexo and offset printing and thus also the process alternatives for various market segments presented on the KBA stand had a positive effect on the numbers of visitors. Practical demonstrations of the NEO XD hybrid press from KBA-Flexotecnica, a flexo press to print film for food packaging with water-based inks in an outstanding quality, was the subject of great interest.

Web press orders placed at a trade show is somewhat unusual. Nevertheless, KBA-Digital & Web Solutions, announced the sale of a Commander CL to Germany and a waterless Cortina to the island of La Réunion in the Indian Ocean. KBA-Metronic was also pleased with the substantial interest shown in the company's coding and marking solutions. Given the raft of new projects, KBA expects brisk post-drupa business.

The live presentations of the RotaJET L digital press whose high print quality and enormous performance on various substrates, even coated offset stock, attracted big crowds. At this year's drupa, KBA-Digital & Web Solutions presented the RotaJET L-series live in action several times a day. With new inkjet head technology and an excellent print quality (up to 1,200 dpi native) the RotaJET 77 really turned heads. A special eye catcher was also the laminate flooring shown on the KBA stand. It had been printed on the RotaJET VL. The RotaJET L with a web width of 77 to 138cm can be configured as a 4/4 press for commercial and publications printing or as a 4/0 press for industrial functional printing.

Koenig & Bauer AG (KBA)

Claus Bolza-Schünemann welcomes the participants of a morning KBA VIP show.

Augmented reality: Whoever scanned the writing on the laminate flooring printed on a KBA RotaJET VL using the Layar app was able to see the digital press in action at decor printer Interprint in Arnsberg.

KBA Australasia now also distributes CI flexo presses

Alongside numerous sheetfed offset, commercial and newspaper press installations, KBA now wishes to expand its footing with CI flexo web presses for flexible packaging in Australia and New Zealand. At drupa 2016, subsidiary KBA Australasia signed a corresponding sales and service agreement with KBA-Flexotecnica in Italy. KBA-Flexotecnica demonstrated outstanding print quality and sustainability with water-based inks with the new CI flexo web press, the NEO XD LR. The hybrid press is engineered for handling water-based and solvent-based inks as well as radiation-curing UV-LED and EB ink systems. The NEO XD is suited to printing various run lengths and printing on film, paper and board with up to 12 print decks, print lengths up to 1,200mm (47in), print widths up to 1,650mm (65in), speeds up to 55m/min (1,640ft/min) and a new dryer generation.

Koenig & Bauer AG (KBA)

Joining forces to strengthen the position of KBA (L-r): Andreas Friedrich, KBA China, Claudio Bisogni, CEO KBA-Flexotecnica, Dave Lewis, KBA Australasia, Peter Stewart, KBA Flexotecnica sales manager/ KBA Australasia, Stefan Segger, KBA AsiaPacific

KBA takes over Spanish die-cutter producer Iberica

At the beginning of July, the take-over of Barcelona-based Iberica AG S.A. in Spain by KBA was completed with the signing of the purchase agreement by Officine Meccaniche G. Cerutti S.p.A. (OMGC) from Italy. The KBA Group thus expands its extensive portfolio for packaging customers in print finishing. Iberica with some 60 staff produces medium and large-format flatbed die-cutters for board and corrugated packaging. KBA has been active in this market successfully for some time with its presses.

KBA president and CEO Claus Bolza-Schünemann (2nd left) with Iberica engineers on a tour of the assembly hall

Koenig & Bauer AG (KBA)

High-end Rapida for Bangladesh

Bangladesh's first Rapida 106 will be delivered at the end of August to NRG Printing & Packaging. The company operates 18 sheetfed offset presses. The seven-colour Rapida 106 with coater and UV kit will soon ensure that the company can target new markets.
NRG is one of Bangladesh's largest textile manufacturers and has had its own printing company with 175 staff and a head office in Dhaka since 2007. The Rapida 106 will be installed in the printing plant in Jamirdia. The new press will be equipped with a cardboard and plastics package and will be raised by 450mm. Print quality will be controlled via Ergo Tronic Color Drive and Logo Tronic Professional links pre-press and MIS. NRG Printing & Packaging produces food packaging and folding carton for the cosmetic industry and pharmaceutical products.
Customers include international brand names. The new press is expected to produce print products, which previously were imported from India, directly in Bangladesh.

Koenig & Bauer AG (KBA)

Networked machines for sustainable end-of-line packaging

The Internet of Things is expanding at Mosca. Mosca`s trade show appearance at this year's drupa focused on Industry 4.0. Visitors could see a variety of fully automated strapping machines as well as selected products from its sustainable strap range, including the latest ECO-Strap made from industrially compostable PLA.

The display at drupa included the fully automated SoniXs TR-6 Pro strapping machine for high-end operations. The machine features different communication channels that can be easily integrated into a variety of conventional control platforms. Visualization takes place via HMI touch panel. This information can be transmitted via Virtual Network Computing (VNC) to any PC component in the network. As an alternative machine model, the SoniXs TR-6 Base offers a highly efficient entry-level solution. Package handling options, including the package hold down device or back stops, are available on both machines in electromechanical or pneumatic versions to ensure optimal, trouble-free strapping.

Furthermore, the company showed the fully automated UATRI-2 XT inline strapping machine, which meets the specific needs of the corrugated cardboard industry. Thanks to an optionally integrated quality assurance system, the UATRI-2 XT automatically recognizes packages that do not meet predefined criteria. In this case, the package is sorted out downstream by a ball chain conveyor. To protect the product and to prevent damage to the corrugated board structure, the strap is applied "inline" or lengthwise to the corrugated structure. Thanks to its special configuration, the machine straps up to 30 packages per minute.

Mosca GmbH

Open Day to celebrate "50 years of MOSCA"

On 27 July, Mosca will celebrate the 50TH anniversary of its establishment with an Open Day event at Waldbrunn, the headquarters of the company. It will be an event not only for business customers, but also a family day for guests, young and old, from the region. Technically interested visitors will be offered information about the company itself and its suppliers, from machinery engineering companies to the IT sector. Demonstrations of the strapping machines and the equipment for the production of strapping material will give an insight into what is state-of-the art now.

Mosca GmbH

Kolbus sets new standards and records

According to the motto >Printopolis<, KOLBUS presented different business models. The center of traditional production was formed around the latest generation, the new KM 610 perfect binder. The demonstration included a repeated changeover of two different productions – formats and types of glue (hotmelt and PUR) – with a change-over time of less than 1.5 minutes. The digital printing post press was represented by the slogan >from the digital printed role to the finished hardcover book< and contained the entire KOLBUS production of digital hardcover manufacturing. Thereby, the complete production process was demonstrated impressively with different contents, format dimensions and format thicknesses in less than 30 minutes. The special feature: the KOLBUS inline solution works fully automatic. The so-called 3D adjustment ensures that the perfect binder KM 200, the three knife trimmer HD-HD 143 as well as the book production line BF 513 will adjust individually and product-specific. The result: Complete inline manufacturing of different books in first-class quality. Besides the post press area, KOLBUS demonstrated luxury packaging production. This year's drupa was the first one for the new KOLBUS business segment. The modularly engineered system convinces by extremely high productivity. In addition, existing KOLBUS machines can also be used. The system bribes with shortest set-up times because a product change is based on minimal adjustment processes and not on complicated and extensive modifications. The flexible KOLBUS solution produces more than 2,000 packages and thus offers completely new market opportunities.

Kolbus GmbH & Co. KG

11 days in Düsseldorf – a lot of work, a lot of fun and an overwhelming result. The numerous international visitors were inspired of the variety and variability of the KOLBUS production solutions.

Numerous sales contracts

With the new KM 610 including Assist app OEE for production analysis and live survey, one of the most modern perfect binding lines for Bangladesh was ordered by Lecture Publication based in Dhaka during drupa. Since 2006, Engineer MD Mehedi Hasan has continuously invested in the professional printing business - initially in equipment for sheetfed and from 2008 in equipment for the first web offset production in Bangladesh. With the introduction of industrial production and the efficient presses, book production increased significantly in Bangladesh and LPL convinced the government to implement the national education programme, for example, to provide free books for the approx. 20 million students. LPL consistently invested in the expansion of the Bangladeshian media landscape through own developments and the expansion of Internet platforms and applications (APPs) for consumers and users. For example, book contents are viewed for free via the Internet. The aim is to contribute to the expansion and development of the country and to increase education and prosperity.

Also at drupa 2016, Welsh book publisher and printer Gomer Press bought a Kolbus DA 260 fully-automatic casemaker, which runs at up to 40 cycles per minute as well as a compact Meccanotecnica Aster Pro sewing machine that runs at up to 200 cycles per minute. William Metsu and Peter Leroy used their visit at drupa Printopolis to sign the contract for the first KOLBUS perfect binding line of the Roularta Media Group in Belgium. With the new perfect binding line type KM 412 for 15,000 cycles per hour inline production with the print-roll system, one of the most effective and state of the art post print production in Belgium will be at Roularta.

A group of Chinese packaging printers was keen to see a demonstration of the Kolbus BOXline, a modular system for the versatile and flexible production of luxury packaging.

Kolbus GmbH & Co. KG

Engineer MD Mehedi Hasan, Vice Chairman of the Omicon Group (3rd from left beside Kolbus Managing Partner Kai Büntemeyer), who transformed the originally small family business into the largest publications company in Bangladesh with about 65 % market share, ordered the new KM 610 including Assist app OEE for Lecture Publication in Dhaka during drupa.

Kai Büntemeyer also welcomed visitors from the Chinese packaging printing industry for a special demonstration of the new Kolbus BOXline at drupa. The group was accompanied by the chairman of Shanghai Packaging Industry Association, Mr. Fei Junde, and the general manager of Shanghai Jielong (leader in paper-packaging printing).

Positive conclusion from drupa 2016

With "PACKAGING 4.0", Windmöller & Hölscher was firmly on the pulse. W&H and subsidiary GARANT counted several thousand attendees at drupa 2016, and approximately 800 visitors travelled to the in-house EXPO at the company´s headquarters in Lengerich. The order intake reached into the high eight figure range. Both the new MIRAFLEX II C flexographic press and the DYNASTAR gravure printing machine were sold before drupa opened. Customers were impressed by the wealth of innovations integrated into the new MIRAFLEX II C. From better ergonomics with a new design to the new TURBOCLEAN ADVANCED E inking unit and wash-up system to the fully integrated VISION assistance system, there was plenty for customers to get excited about. The DYNASTAR makes the traditional gravure printing process more cost-effective, especially for smaller jobs.
drupa 2016 also proved to be a good show for GARANT, the paper bag machine specialist. There was a lot of interest in the format changing system in the TRIUMPH 2-T8, the new, ultra-modern block bottom bag machine. Format changes can be completed within 30 minutes. The demo TRIUMPH 2-T8 in the booth was sold at the show.
At the in-house ExPO in Lengerich, visitors could see press demonstrations close-up, learn more about the company`s products and see the facilities.

WINDMÖLLER & HÖLSCHER KG

Several thousand visitors flocked to the stand of Windmöller & Hölscher and its subsidiary GARANT at drupa 2016 in Düsseldorf.


Around 800 visitors travelled from drupa to the in-house EXPO at W&H`s headquarters in Lengerich.

High efficiency for digital short run finishing

A lot of drupa visitors came to the KAMA booth to see the world's first folder-gluer for short runs (back left).

KAMA demonstrated a complete "speed-to-market" workflow at drupa 2016.

drupa 2016 was a complete success for KAMA with its presentation under the slogan "speed-to-market". The company finished the industry trade fair with full order books, closing ten deals totalling 3.5 million euros. Kama's innovative post-press solutions will be delivered to companies in Germany and around Europe, the Middle East and the USA. The first series of the KAMA FF 52i, the world's first folder-gluer for short runs, is already sold out, the three-year development phase for the FF 52i is now paying off. Demonstrations of the FF 52i showed the visitors that, with its almost fully automatic changeover, the machine can be set up for the next run of straight-line folding boxes in an impressive 5 minutes. On request, the machine comes with inspection systems for various levels all the way up to a real 100 % inspection for the pharmaceuticals market.

Together with the die cutting and stamping machine DC 76 ASB, which thanks to its AutoRegister function and tool-free stripping and blanking unit SBU is able to finish digitally printed sheets with tenth-of-a-millimetre precision, KAMA covers the entire post-printing folding carton production workflow. Fast changeover – which thanks to the FF 52i is now also available for folding and gluing – is the key to profitable short runs. This is a unique solution for finishing digitally printed folding cartons in the required quality, individualised and with various designs.
The complete "speed-to-market" workflow for folding carton production was demonstrated at the drupa trade fair in the packaging area of the HP hall. Printing was carried out on the HP Indigo 30000 with the inline Tresu varnishing module i Coat 30000. Die cutting, creasing, stripping and blanking was done on the KAMA DC 76 ASB and folding and gluing on the KAMA FF 52i.
Furthermore, KAMA showed the 'Generation S' of the tried and tested ProCut 76 Foil die-cutting and finishing machine. This machine features ultra-modern servo technology and new hot foil stamping systems with friction rewinder and 50 % more output. At 5,000 sheets per hour, the ProCut 76 Foil finishes a capacity folder with hot foil stamping motifs, including a very finely structured motif with nano-embossing.

Kama GmbH

Wide paper converting range

There was a lot to discover at the booth of BW Papersystems at drupa 2016. From 31 May to 10 June, live machine demonstrations took place every day. Visitors to BW Papersystems's booth not only saw live demonstrations of an eCon folio sheeter and a Wrapmatic GREC folio size ream wrapper, but were also able to find out about the group's extensive machinery range for stationery products like exercise books, note pads and spiral or wire bound products. Dedicated kiosks on the booth informed about the variety of available solutions.

Part of the portfolio, for example, are now high-productive, fully automatic exercise book machines for medium to high output of max. 36,000 exercise books/hour. The lines are Z-shaped for a compact layout that allows for easy access to deep pile and stitching unit and can be operated with one or two webs. Entry-level machines for small to medium output of max. 18,000 exercise books/hour complete the portfolio. Semi and fully automatic machines for the production of steel and PVC spiral as well as double wire note pads offer extraordinary product quality, flexibility and additionally convince with high production output for medium and large runs. The modular concept and the economic design fulfils basically every production requirement. Stand-alone or inline double wire forming machines are available as well. A newly developed, double wire binding machine from the brand Kugler-Womako, the ProFlex, is ideal for costefficient, entry-level binding of notepads.

Another kiosk was dedicated to digital print converting – including an innovative book converting method for digitally printed softcover books, flexible sheeters for digital paper sizes and book-on-demand binding solutions for hardcover books for small order volumes starting already from a single book.
Additionally, visitors could find information about RFID transponder laminating and finishing solutions, including reel-to-reel converting machines for dry and wet inlays and chip modules. A modular machine concept suits entry level to high end production needs.

WillPemcoBielomatik GmbH

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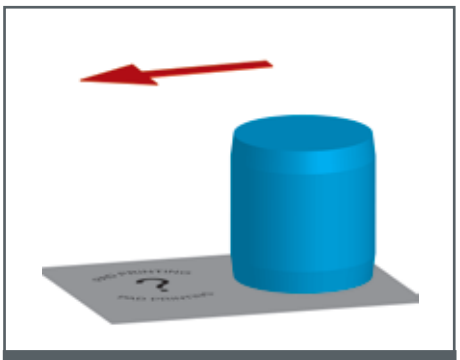
Gravure printing

Pad printing has supplemented the family of gravure printing methods since the 1960s. The technical basis of pad printing originates in the Decalcier process that was, e.g., used to decorate clock faces. From what was a niche at the beginning, pad printing developed into a standard for printing small-size motifs on irregular surfaces, above all of moulded parts made of plastic. The field of application of pad printing covers the world of merchandising products or model making, but also the automobile or electronics industry. Pad printing is an indirect gravure printing process. The printing principle differs from doctor-blade based gravure printing and recess printing. The motif is transferred into a small-size printing plates made of steel or plastic. The cups etched into the printing plate are flooded with ink and then doctored. Ink metering is by squeegeeing the surface of the printing plate. Afterwards the pad takes up the ink from cups as an intermediate carrier and transfers them to the surface of the substrate. The pad is a soft-elastic intermediate carrier made of silicone rubber. The shape of the pad depends on the motif to be printed as well as the printing surface. The variants are manifold and the right selection requires careful planning of the printing job and quite some experience.

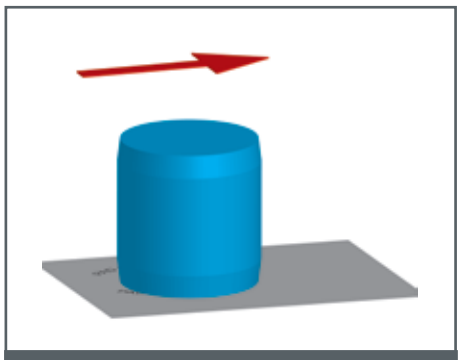
A decisive factor for the print result is the shape of the surface and the elasticity and/or hardness of the pad. The pad is partly considerably deformed during the printing process. If the wrong one is chosen, there is a risk that the printed image is distorted and the print result becomes blurred. Multi-colour printing wet-on-wet is possible, however, requires ink drying to be adjusted in order to prevent smearing in the following printing unit.

For printing plate inking, there are two different systems. The original variant is the open ink well system. The ink is transferred from a storage pan to the printing plate by means of a flood bar (scraper). Then a steel blade (knife) is used to remove the excess printing ink and to transport it back into the storage pan. The ink that remains in the cups is taken up by the pad and printed. After that, the cycle starts again.

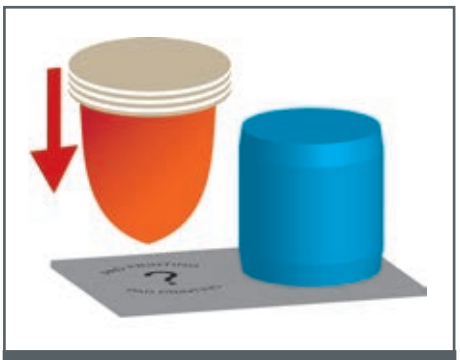
As an answer to the demand for higher cycle rates in printing, the closed ink cup system was developed. For that, the storage pan and the scraping device were united in a so-called doctoring cup. This cylindrical container holds the printing ink; it is closed at its head and open at its foot. The foot is equipped with a doctor ring all around. The doctoring cup is slightly pressed against the printing plate and thus prevents the ink



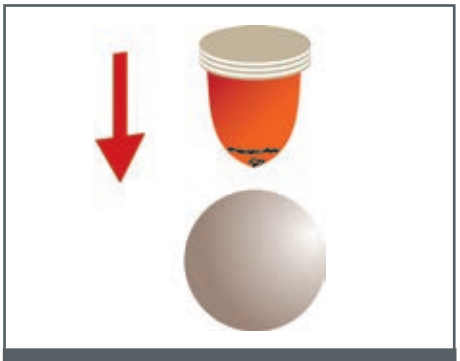
The cup is filled with ink.



Excess ink is removed.



The ink adheres to the pad.



The ink is transferred onto the object.

The 2D image is on the 3D object.

from escaping. For the closed system, an additional "parking zone" must be planned for the doctoring cup in addition to the proper motif surface on the printing plate. Inking of the printing plate is carried out by travelling over the motif area with the doctoring cup. The closed system protects the ink from evaporation of the solvents and contaminations. The doctoring cup remains in the parking zone while the pad takes the ink from the cups and prints. Then this cycle begins again.

Printing plate production for pad printing

In pad printing, several printing plate materials are used. For short runs and normal requirements as regards the quality of the printed image, photopolymer plates are preferred. A photopolymer layer on a metal sheet carrier is exposed by means of a film and UV light and hardens at the non-printing areas. For the production of a wall/cup structure, double exposure is needed. At first the printing motif is exposed, a second exposure is made with a fine approx. 80 L/cm film. The second exposure produces small wall structures in the printing image which prevent the blade from dipping into the motif during printing. After the exposure, the parts that have not been exposed are washed out with a solvent and the printing plate is dried. Finally, post-exposure ensures that the plate surface is sufficiently hard.

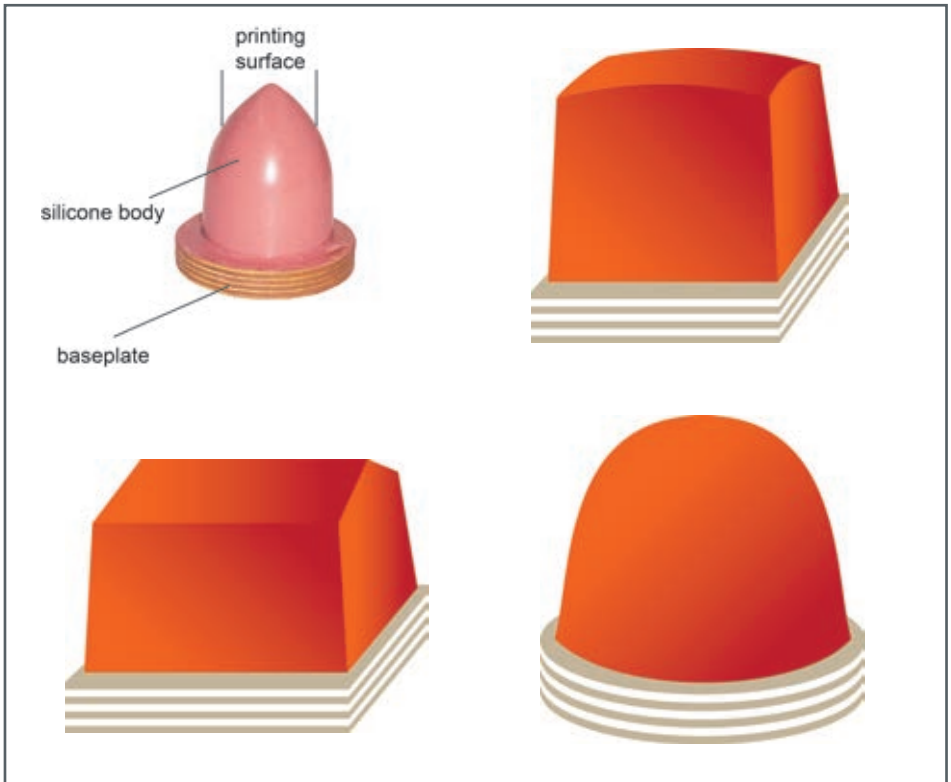
Depending on the plate type, organic-based or water-based solvents are used for washing out. When handled carefully, photopolymer plates can perform runs of several thousands. For longer print runs and special requirements as regards the precision of the printed image, etched and lapped steel plates are preferred. Steel plates feature a long service life. The printed image is etched into the surface. Before the etching process, the steel plate is coated with a light-sensitive emulsion and dried. This process is followed by the imaging process with the printing motif and screening. Finally, the photo emulsion is washed out and dried. The etching process is carried out with nitric acid or iron (III) chloride. The hardened photo emulsion is resistant to the etching acid. Only the areas that have been exposed are etched. Then the photo emulsion is removed from the printing plate, and the plate is cleaned. The etching process produces cup depths of up to approx. 20 µm. The resulting printing image allows the production of finest typefaces and details which are, e.g., required in model making.

In addition to the traditional exposure process and chemical development, laser direct engraving is increasingly used. The printing image is engraved with a high-resolution laser into the printing plate. In this process, preferably steel, aloxide and/or ceramic plates are imaged. All printing plates have in common that they feature a long service life and excellent detail reproduction.

The pad

The pad is the key element in pad printing. The rapid development was initiated with the use of silicone as the basic material for the pad in the 1960s. Actually, the pad material is a mixture of silicone and silicone oil. Its hardness is adjusted by means of the mixture ratio of these two components. For a better distinction between the hardness classes, the pads are colour coded. The material features excellent elasticity and there are no slipping movements at the contact area between the substrate and the pad. The shape of the pad rather causes a rolling movement on the substrate that enables the printing ink to be deposited cleanly and prevents the trapping of air bubbles. At the same time, the material ensures high ink transfer from the printing plate to the substrate. Normally, only an extremely thin ink film is present after the ink transfer. During the printing process, influences of the printing ink and solvents may cause swelling of the pad so that the printing image becomes blurred. The life expectancy of a pad depends on its hardness, resistance to inks and solvents as well as the application conditions. Depending on the specifications of the manufacturers, it is between 20,000 and 500,000 prints. Aggressive inks and solvents reduce the service life accordingly. The service life of a pad is limited anyway. The silicone oil used gradually evaporates out of the pad. This affects the surface tension on the printing area and the hardness of the pad. As a result, the ink transfer and resistance to chemicals decrease, and increased wear of the surface caused by abrasion can be seen. Therefore, it is recommendable to nourish the pads with silicone oil and to ensure pressure-free, clean, dark and not too warm storage.

During the printing process, care must be taken that the dried ink residues are only removed from the pad with an adhesive tape. Strong solvents and rubbing movements on the pad damage the surface and cause increased abrasion. Prior to their first use, new pads must be slightly cleaned with spirit, since otherwise they would not transfer ink. The selection of the pad shape and hardness is determined by the printed motif. A steep pad shape ensures better rolling on the substrate and is, therefore, especially suited for fine lines and signs. For printing on areas, the use of flat pads is recommendable. Care must be taken that the pad is sufficiently large for the printed image to be produced.



The figures shows the different pad shapes

Pad printing inks

As is similarly the case in screen printing, pad printing can also be used to print on nearly every kind of substrate if the right ink system is used. The printing inks are optimized for printing on plastic, metal, wood, textiles and coated substrates. For ink layers with high mechanical and chemical resistance and high printing speeds, UV curing inks are preferred. Furthermore, solvent-based ink systems play the most important part in pad printing. Through the use of additional curing agents, the solvent-based inks also feature excellent resistance to mechanical and chemical stress. Further requirements as regards colour fastness, resistance to perspiration, saliva and cremes are due to pad printing being used for the decoration of control elements, toys and bottle caps. The examples listed above show that the field of application of pad printing is nearly indefinitely expandable.