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# newsline

A newsletter published by FUJIFILM Europe GmbH, Düsseldorf, for the print and media industry



## Wide Format Printing with Fujifilm

SchlieperColor: Making great things visible

Wilhelm Uhl – Buch und Offsetdruck: Green printing in Allgäu

Spielkartenfabrik Altenburg: An emotionally charged product



Dear Readers,

Two key events in 2008 serve to show how rapidly the markets are changing: only four months after drupa 2008, which was held in Düsseldorf and closed in June, photokina was held in September in Cologne. In the past, these two shows were completely separate worlds; now, there are substantial overlaps. Whether it is printing graphic visualisations or printing large-format photos – today, both of these jobs can be done with one single device.

Fujifilm has prepared for these trends already at an early stage. By focusing even more on services for the graphics industry and expanding our range of offerings, both in ink-jet and in digital printing, we are delivering the services which customers really need. In addition to a new line of products for CtP systems, another main development has been the XMF workflow for cross-media production. At the same time, Fujifilm underscored its commitment to sustainable production by launching a range of processless and chemistry-free plates and eco-friendly press-room chemistry. At drupa, our JetPress 720 attracted huge attention: this 72cm x 52cm sheet-fed inkjet printer prototype is the world's very first combination of single-pass printhead, sheet-fed mechanism, extremely high 1200 dpi resolution and 4-level grayscale technology.

The huge interest from industry professionals shows that our customers are readily accepting Fujifilm's full-solution concept, that they believe in it and are willing to invest in these solutions. This issue of newsline looks at Fujifilm's wide range of different solutions for the entire spectrum of the digital print media world, and it takes an indepth look at our digital print offerings.

  
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### Fujifilm astonishes the printing world with an inkjet sheet-fed press

One of the uncontested highlights of drupa 2008 was Fujifilm's new Jet Press 720. Until now and with the exception of Xeikon, there has been no digital press capable of seriously competing with offset for sheet formats larger than DIN A3+. Fujifilm has developed a new inkjet technology which can print sheets up to 720mm x 520mm in size. Capable of handling a wide variety of different coated papers, the "next generation inkjet digital printing technology" achieves results that are comparable with offset printing. The system has very short make-ready times and requires no drying time. This digital printing technology is set to revolutionise the printing industry by significantly enhancing the efficiency of the print production process. The Jet Press 720 (this is the prototype's temporary name) is based on a combination of technologies developed by different companies within the Fujifilm Group. Fuji Xerox designed the digital inkjet system, the printhead with a print width of 720mm comes from Fujifilm Dimatix, the water-based inks were

developed by Fujifilm. The printhead incorporates long-life piezoelectric element arrays and uses single-pass inkjet technology to print up to 180 sheets (A4 size equivalent) per minute (2,700 sheets per hour) at 1,200 dpi. A special inline paper preparation function allows high quality printing on various coated printing papers without curling or wrinkling.

### Fujifilm Emblaze: inkjet spot coating

One application that has been neglected until now is the use of inkjet technology to finish high quality printed products. Fujifilm's Emblaze Finisher uses a new system to coat or spot coat sheets. The offline system was developed by FFEI (a former Fujifilm subsidiary) and uses Xaar inkjet printheads and Fujifilm varnish coatings.



Emblaze is a unique digital system for spot coating print from A5 up to B2 sheets with an equivalent output of up to 9000 A4 sheets an hour. It can handle papers between 90 and 400 microns thick. Spot coating can be produced with gloss, silk, matt and even textured finishes all on the same page in a one pass process and with a single coating. No plates, blankets or wash ups are required; this is a totally digital system using UV single pass inkjet technology. Emblaze utilises a varnish mask layer of the print job, imported as a grey scale TIFF file and assigned to the job. The new Emblaze system will be commercially available from October 2008.

### Fujifilm's wide-format inkjet strategy

At drupa 2008, Fujifilm presented the Group's strategy for the wide-format industrial inkjet printing. Under the banner "One Promotion" Fujifilm showed ideas which help businesses expand their existing activities into wide-format inkjet and print-on-demand. As part of the new inkjet strategy, Fujifilm launched a range of new products and extended the existing portfolio. For instance, Fujifilm now sells Inca Digital products which are distributed worldwide by Fujifilm Sericol. The Inca Onset system was presented in a video, and the Inca Spyder 320 family was printing live on the stand. These presses use the Ultratone ink system with white option and enhanced colour set. Alongside the entry-level models in LFP, Fujifilm also had the Acuity HD 2504 flatbed printer on display, which can print rigid substrates and flexible materials on rolls. For more details, see our article on page 4.

## WIDE FORMAT PRINTING WITH FUJIFILM

**The broad palette of UV flatbed plotters allows users to enter new markets and opens up a wealth of new applications.** Digital inkjet technology is the ideal solution for many of the industry's key trends: smaller print runs, print-on-demand, shorter life cycles for outdoor products, a wider range of substrates and the all-encompassing call for even higher quality.

Fujifilm's stand at drupa 2008 was impressive, although some may have found it slightly confusing or, should we say, new. Never before has Fujifilm focused so stringently on digital output systems than on the booth at the May 2008 show. Of course, CtP systems – digital image-setters – had their place in the spotlight and plates and pressroom chemistry were a major topic. But the true highlights were the JetPress 720, the digital sheet press for the 50cm x 70cm format and the Emblaze inkjet spot coating system. These are systems you might have expected to see on the stands of press manufacturers, but drupa 2008 saw Fujifilm presenting the new world – the future of printing. A world which could very soon become reality.

Inkjet is the core technology which is set to take the industry by storm, that was the one key lesson learned at drupa 2008. But, at the same time, inkjet is also a technology that is very much present in today's prepress and pressrooms, and particularly so in large and wide format printing.

### **Combined and concentrated know-how**

At drupa, Fujifilm presented the Group's strategy for wide format commercial inkjet printing. The results made clear just why Fujifilm has spent the past years focusing and investing specifically in this core technology. Some of the Group's actions and acquisitions over the past few years may have been difficult to understand at the time, but now, in retrospect, everything falls into place. The most obvious examples are the Jet Press, a development on which several Fujifilm companies cooperated, and the Group's wide format segment. The core technologies print-heads, inks and stock are all united under one roof at Fujifilm.

It may look a little complex when viewed from the outside, but then there are very few business contexts and factors that are not complicated; also, keeping ahead of complex developments and developing innovative technologies is a task that can scarcely be shouldered alone, even by major companies. It takes alliances, cooperations and, at the end of the day, mergers and acquisitions to keep ahead. Fujifilm's most recent major coup was the acquisition of the American inkjet print-head producer Dimatix in June 2006. Dimatix, founded in 1984 as Spectra, is active in research, development and the production of printheads; these are used

in industrial inkjet printers, not only in the graphic systems sector. This acquisition saw Fujifilm substantially expanding the Group's inkjet business. Prior to this, in 2005, Fujifilm bought up the British Sericol Group, manufacturers of UV inks; in February 2006, the British ink producer Avecia Inkjet joined the Fujifilm Group. Since then, Fujifilm has invested extensively in inkjet and has brought together expertise and skills from a wide range of different areas.

Each of these companies, all of which are tightly integrated in the Fujifilm Group, has its own vast pool of technological expertise. In addition, each also has its own, long-established sales and distribution channels. Fujifilm Sericol, for example, is the sole distributor of the Inca brand, which is owned by the Japanese manufacturer Dainippon Screen. Through its subsidiary Sericol, Fujifilm can market machines which are made using Fujifilm technologies.

Or take the Acuity HD 2504, for example, which was developed under a strategic cooperation with a manufacturer of wide format printers and which is distributed under the Fujifilm brand name. The Fujifilm division Sericol supplies the UV inks for this product. As you can see, there are numerous points where these



The demand for wide format print applications is rapidly growing worldwide. Wide format printers have become essential for indoor and outdoor applications where excellent quality and durability are key requirements. Fujifilm has a wide palette of solutions for this market.

In 2003, approximately 102 million square meters of inkjet print materials were sold; by the end of 2008, this will have risen to 306 million square meters. The equivalent market value will have increased from around US \$2 billion in 2003 to more than US \$5 billion in 2008.

Experts value the current global market volume of this segment at €2.6 billion and expect it to display annual growth of more than 6%. This market mainly comprises digital printers, screen printers, advertising media producers, photo labs and any other company that makes large-format visual communication media for indoor and outdoor use. One thing's certain: more and more printers will be using digital inkjet technology to expand their range of services.

### **New potential, new markets**

There is much truth in the old saying "A picture says more than a thousand words" and it is no surprise that the advertising industry has latched onto wide format printing and the production of these high-impact eye-catchers with rapidly growing enthusiasm. Posters, outdoor advertising and displays: big is

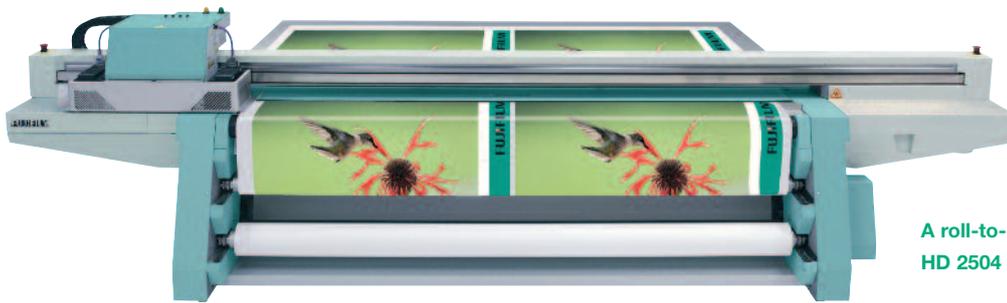
companies intersect and cooperate. This brief overview is intended to bring a little clarity, as Fujifilm has been actively marketing a variety of different systems in Germany since drupa and wishes to provide full transparency.

### **Small print runs for a large market**

The current demand for smaller print runs, print-on-demand, shorter lifecycles for outdoor products, a wider range of print substrates and high quality are all factors that speak strongly in favour of digital ink

jet technology. Already, inkjet printers are used for a broad spectrum of applications, to print customer-specific products on many different types of materials, including wood, glass, materials with a structured surface, plastic and other substrates that can only be used in no-touch printing.

A swift glance at sales and market figures clearly indicates where we can expect to be in a few years' time: currently 50% of the POP/S (point of purchase/sales) market is covered by screen printing; the remainder is split equally between digital and offset. However, experts expect the market for wide format inkjet products in 2008 to be double the volume of 2003.



A roll-to-roll module for Fujifilm's Acuity HD 2504 was launched at drupa 2008.

definitely beautiful when it comes to opulent, revenue-boosting blow-ups. Large format printing (which is also referred to as wide format printing) has penetrated into a market which until recently was completely dominated by screen printing. At the same time, the new process has also opened up untold new potential and new markets. Interior and outdoor advertising, trade show stands and displays, for presentations and real estate – small run, large format prints are being used everywhere, and even rigid materials are being printed on. When it first emerged, inkjet was unsuitable for outdoor applications that were exposed to wind and harsh weather conditions; now, however, new substrates, finishing processes, coatings and special inks have brought large format inkjet prints into the mainstream. As the number of applications for these new print systems has grown, so have the demands made on the actual devices; recent years have seen the launch of numerous large format printers for different requirements in terms of quality, speed, budget and flexibility. Many can process a range of different substrates and print specially developed inks. Today's LFP systems are used for photographic applications or to



Capable of printing UV-curing inks and with a special imaging technology, the Acuity HD 2504 produces stunning photo-quality prints up to 1.25m x 2.50m in size.



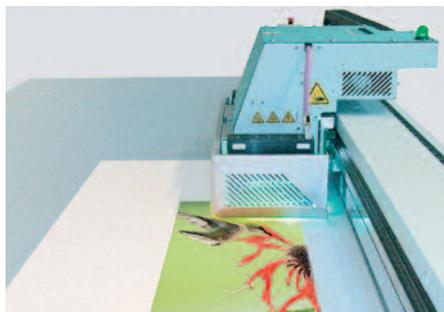
The Fujifilm Acuity HD 2504 prints along the Y-axis (vertical axis) to increase throughput. The printhead has to pass over the substrate fewer times, thus boosting production speed by 25% over systems with pass the media lengthwise through the printer.

make proofs up to A2 format, for large format indoor and outdoor displays and some can process even rigid substrates.

**Flatbed plotter  
Fujifilm Acuity HD 2504**

The Fujifilm Acuity HD 2504 is an excellent example of an advanced LFP system. The printer, which marks a true breakthrough in wide format digital imaging, was developed specifically for applications requiring finely detailed, high-resolution images and it will produce large-format banners and displays on both flexible and rigid materials. The print quality is superb, even at the closest of viewings.

Capable of printing UV-curing inks and with a special imaging technology, the Acuity HD 2504, which has been commercially available since the end of 2007, produces stunning photo-quality prints up to 1.25m x 2.50m in size. As the flatbed printer can handle a wide variety of substrates up to 48mm thick, it is the ideal solution for a broad range of large format colour applications for indoors and outdoors: posters, point-of-sale signage, trade show displays, furniture, signage, banners and back-lit and reflecting applications on rigid substrates.



The Fujifilm Acuity HD 2504 flatbed design employs a zoned vacuum table and a production speed of up to 16m<sup>2</sup> per hour edge-to-edge. As there is no minimum format, substrate wastage is minimised.



With over 25 years of experience in developing pigments and inks, Fujifilm Sericol has now developed the Uvijet KO system, a range of top-quality UV-curing inkjet inks.

The Fujifilm Acuity HD 2504 flatbed design employs a zoned vacuum table and a production speed of up to 16m<sup>2</sup> per hour edge-to-edge which is equivalent to more than 20 individual 70cm x 100cm prints – regardless of substrate. The zoned vacuum table holds the substrate stationary, guaranteeing accurate registration even on multiple passes and double-sided applications. The Acuity prints edge-to-edge, saving time and labour in finishing. As there is no minimum format, substrate wastage is minimised.

The UV inks enable you to print on cost-effective, uncoated, rigid and flexible materials. The Acuity can hold all types of media, including irregularly shaped, heavy substrates and materials, like wood, that have an uneven surface. You can also print on flat and assembled items of furniture, glass, fittings, pre-stretched canvas and other objects. The Fujifilm Acuity HD 2504 prints along the Y-axis (vertical axis) to increase throughput. The print head has to pass over the substrate fewer times, thus boosting production speed by 25% over systems with pass the media lengthwise through the printer. The system also includes an optional roll-to-roll module for true roll-to-roll capability.

The roll-to-roll module, which was launched at drupa 2008, enables users to print on an even greater range of materials, including banners, textiles, films, self-adhesive vinyl and a broad range of paper stock for indoor and outdoor applications.

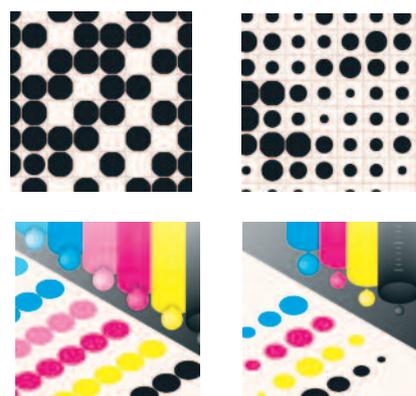
The printer is designed for industrial print applications. The UV curable ink is packaged in bulk, two-litre ink bags to minimise change out. The system includes an intelligent sensor to alert operator to an ink change requirement before running out of ink, as well as ensuring that the correct ink colour is installed. A quick change ink system takes seconds to complete, reducing waste, mess and operator intervention.

**VariaDot imaging technology**

The UV ink printer delivers outstandingly high quality large format prints. The advanced VariaDot imaging technology produces photo-quality image quality with ultra-fine detail in the middle tones and high density shadows and solids. VariaDot is a completely new imaging technology in inkjet printing. Conventional inkjet printers soon reach their limits because they can produce only uniformly sized ink droplets which can lead to grainy images. A few years ago, the manufacturers of LFP systems developed a way of overcoming this problem: two



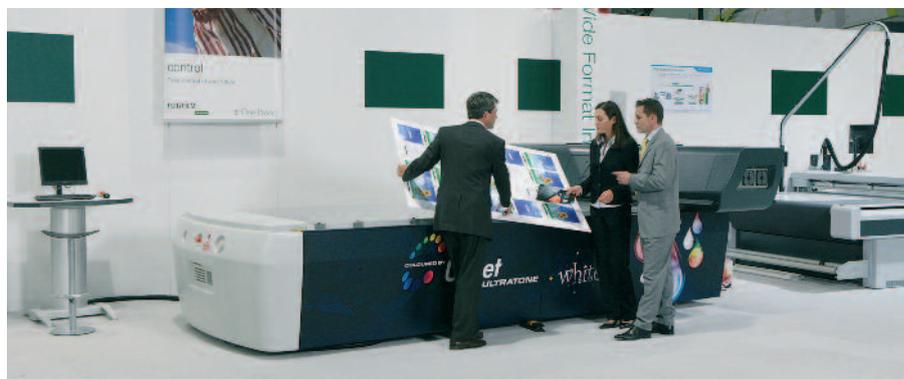
The UV curable ink is packaged in bulk, two-litre ink bags to minimise change out. A quick change ink system takes seconds to complete, reducing waste, mess and operator intervention, and can be done on the fly.



Compared with conventional large format printers (left), printheads with VariaDot technology can generate variably-sized ink droplets. The VariaDot technology enables the print head to jet droplets ranging in size from 6 picoliters to 42 picoliters.

The Inca Spyder 320 prints at speeds up to 50m<sup>2</sup> per hour directly onto the widest range of flexible and rigid substrates up to 30mm thick.

With an image area of up to 3.2m x 1.6m, the Inca Spyder 320 is the fastest UV flatbed printer in its class.



more inks (light cyan and light magenta) were added to the standard four inks to enable the printers to achieve smoother transitions from very light to very dark colours. This complicated processes is called six-colour and it has become the quality standard used by most inkjet printer manufacturers.

Fujifilm realised that even this new technology had its limitations and set about developing new solutions for even better quality. The result is the VariaDot imaging technology that enables each print head to produce variable sized dots as opposed to traditional fixed droplets. This delivers sharper, more precise images and superior ink economy with 30% less ink required to print. Regardless of resolution, images printed with VariaDot are far less grainy than images printed on a conventional six-colour printer with fixed droplet size. The VariaDot technology enables the print head to jet droplets ranging in size from 6 picoliters to 42 picoliters, producing images with smoother transitions in the quartertones and more uniform solid image areas, for image quality comparable to that of a 1440-dpi print. Monochrome type is crisper, more legible, even at 6 pt.

After a stringent process of testing various RIP applications, Fujifilm recommends the special Fujifilm version of the RIP Color GATE production server for use with the Acuity HD 2504.

#### **A world of colours with Uvijet KO**

With over 25 years of experience in developing pigments and inks, Fujifilm Sericol has now developed the Uvijet KO system, a range of top-quality UV-curing inkjet inks for Piezo Drop-on-Demand print heads. The inks were specifically formulated for use in the Fujifilm Acuity HD 2504 and offer vibrant, lightfast inks and a broad range of colours. The Uvijet inks dry instantaneously under UV radiation so they remain stable in the print head, ensuring faithful reproduction with minimum odour. They dry fast enough to keep up with the speed of the modern digital print press; excellent cure and adhesion are achieved immediately on curing, thus providing maximum productivity. However, maximum adhesion, chemical, scuff and scratch resistance may not be obtained until 24 hours after initial curing. The actual level of cure will depend upon the ink thickness and substrate. Superior through cure may be obtained by reducing the print speed to increase the overall UV dose.

Uvijet KO inks are formulated to adhere to most common substrates and most

major brands of plastic, polypropylene and polyethylene. For certain applications where finishing prints may require cutting, drilling or routing, it is recommended that a Uvijet Adhesion promoter is used prior to printing to aid adhesion and mechanical performance. Uvijet KO inks have good chemical and excellent abrasion resistance. Uvijet KO inks for the Fujifilm Acuity HD 2504 will withstand approximately 24 months outdoor exposure in a temperate climate, such as in Northern Europe.

#### **Inca Turbo and Spyder 320: big and fast**

What the Acuity does on a smaller scale, Inca Digital printing systems replicate on a wide format scale: Inca UV flatbed printers can handle formats larger than 1.5m x 3.2m and are specially designed for the industrial print applications on a wide variety of substrates.

As pioneers of UV inkjet technology, Fujifilm Sericol and Inca Digital are constantly working to improve productivity and imaging quality and have developed print solutions that offer outstanding production speed, excellent image quality and a high level of reliability.



The top-of-the-range Inca model is the Onset. The automated Inca Onset can print on substrates with a maximum image area of 3.2m x 1.5m and achieves a production speed of 500 m<sup>2</sup>/h.

Fujifilm Sericol and Inca Digital changed the way digital wide format graphics were produced with the introduction of the Eagle and Columbia Turbo flatbed printers, and with around 150 installations worldwide, these have proven to be the fastest, most reliable, high resolution flatbed digital presses in the market today.

The Turbo Plus and Turbo Plus 220 share the same technical features, differing only in format (3.2m x 1.6m and 3.2m x 2.2m respectively). Both can print rigid materials up to a thickness of 40mm and up to 40kg weight, are designed to provide impressive production speed of up to 160m<sup>2</sup>/h and can be fitted with printheads for up to six inks (with white as an option). The high resolution provides outstanding image quality and crisp, clear lettering even at 10 pt.

The proven technology used in the Turbo models (see the application reports on pages 10 and 11 for more details) has now been engineered into the mid-price range Inca Spyder 320. The Inca Spyder is the fastest UV flatbed printer in its class. With a 3.2m x 1.6m image area, the Spyder can print at speeds up to 50m<sup>2</sup> per hour directly on to the widest range of flexible and rigid substrates up to 30mm thick. The use of Sericol's uniquely formulated Uvijet UV inks means wide

adhesion, vibrant colours and durability in every print. Edge-to-edge printing and minimum make-ready times ensure ultra efficient production processes.

#### **Designed for industrial production: the Inca Onset**

The top-of-the-range Inca model is the Onset. The automated Inca Onset can print on substrates with a maximum image area of 3.2m x 1.5m and achieves a production speed of 500 m<sup>2</sup>/h, meaning that it can print 100 full format sheets an hour. The automated system needs only one person to operate it.

The standard configuration includes a fully automatic material handling system for maximum production efficiency. But recognising the fact that not all material printed will be a standard format size or thickness, the print bed is immediately accessible - thus maximizing versatility for proofing and single-copy runs. In addition, edge-to-edge printing allows Onset to bleed on substrates up to 10mm thick and up to 10kg at full speed. The Inca Onset has 24 print modules each containing 24 Dimatix printheads (CMYK).

A built-in automatic head cleaning station ensures consistent quality and simple ease of use. The print finish can be adjusted for satin or gloss, depending on the print mode and media type. The Inca Onset can be used for a wide variety of

applications, including Point of Purchase displays, exhibition graphics, backlit displays and a variety of outdoor signage. Including the Onset, Inca Digital offers portfolio of eight different UV inkjet printers in a variety of different formats and speeds for the rapidly growing display market. These printers can also be used for large format job printing, a segment which is still dominated by specially designed offset presses, as well as for a wide range of applications, such as printing on ceramic tiles, interior design, architecture, cars, furniture design, sports equipment and many, many more. For some examples of these highly effective applications, visit the website [www.whynotinkjet.com](http://www.whynotinkjet.com).

## MAKING GREAT THINGS VISIBLE

**SchlieperColor in Essen is the very first company in the world to print wide format visualisations with the Inca Columbia 220 Turbo.** Digital printing has had a massive impact on the print industry; technology, quality and achievable speed have improved to the extent that digital printing is competing with traditional methods. Today's wide format printing systems can achieve results that were impossible with screen printing. Now, you can print on virtually anything.

While some screen printers felt threatened by the new digital technologies, others soon realised that wide format inkjet technology could be the perfect addition and complement to their conventional equipment and the ideal solution to make small and medium print runs cost-effective. In fact, conventional presses could be replaced by digital systems.

Industry surveys show that screen printing is most likely to be cost-effective for jobs with more than 400 copies; however, the market and customer demand for print runs of fewer than 200 copies is much larger.

SchlieperColor in Essen was one of the very early adopters of digital technology and has been producing with digital systems and presses since 1992. As production with inkjet presses is based on the direct input of digital data, the cost and the time required for screen production and for tweaking the system are completely eliminated. Basically, the company is ready to produce within minutes of receiving the job data. There is virtually no spoilage and the registration problems that used to make screen printing such a tricky process and which consumed valuable substrate have become a thing of the past.

### **Pioneers in wide format digital printing**

Founded in 1974, SchlieperColor looks back on decades of experience in printing wide format images. In fact, the owner-managed company is one of the pioneers of wide format digital printing. The former screen printing company went completely digital in 1998 and now produces on more than 20 digital presses and finishing systems, specialising in a broad range of indoor and outdoor applications. The company's range of services includes practically any printing and finishing service their customers require.

Today, SchlieperColor calls itself the market leader for all forms of wide format digital printing. The company's more than 90 employees work with a truly impressive range of different systems. Four UV printers to print straight on flexible and rigid substrates with a thickness of up to 40mm and an image area of 2,2m, four wide format presses for printing on textiles and PVC materials up to 5m wide, six inkjet printers with image areas of up to 1.8m, print and transfer systems for sublimation printing up to 3.2m wide and two cutting plotters for producing vehicle, building and exhibition lettering. There is also a fully equipped finishing department (lamination, coating etc) and finishing/ assembling equipment for textiles and PVCs. The company has a high-tech

photo lab and a Lambda imager for digitally laser-imaging photographic material with a production width of 1.25m, a large server for archiving and administrating image databases and it offers a full range of image processing services.

### **Cost-effective full solutions**

This impressive range of equipment combined with the company's extensive know-how allows SchlieperColor to offer customers a full array of wide format print services. "Our services include the very latest, most advanced production and finishing techniques – all from a single company. From layout to scanning and image processing right through to conventional enlargements; from digital imaging to UV printing, from wide format prints to one-of-a-kind displays for exclusive exhibitions and large frame systems for outdoor advertising; from assembling to finishing. Our job only finishes when we've packed away the ladder," says managing director Herbert Schlieper, explaining the company's service philosophy. "Everything we do is governed by our aim of offering our customers cost-effective, economically viable full solutions and developing individual, first rate solutions together with the customer."

Over the past few years, processing and finishing services have grown to account for approx. 15-20% of SchlieperColor's activities. "I would never have believed that one day I would be recruiting cutters or welders," says Herbert Schlieper. But when you're supplying extra wide formats for outdoor applications, you have to make sure that you think of everything so that the product withstands wind and weather conditions.

### The world's first Inca Turbo installation

The technical evolution of wide format prints has been incredibly fast in the past few years, and conventional technologies are increasingly being replaced with digital ones. "Wide format printing lets you do things that were simply impossible with screen printing. From seamless wide format prints up to five metres wide, the ability to print direct on rigid substrates or to print on unusual materials, such as

**The world's first Inca Columbia Turbo 220 is installed at SchlieperColor in Essen. Herbert Schlieper (shown here with Sonja Döhler, Product Manager Wide Format Inkjet at Fujifilm, Düsseldorf) is delighted with his investment, the format and the system's versatility.**

leather, glass or structured materials – now, the sky's the limit," comments Herbert Schlieper.

And what he's referring to here is the company's Inca Columbia 220 Turbo, which can print substrates with a thickness of up to 40mm and weighing 40kg. SchlieperColor was the very first company in the world to install this press. "The Inca Turbo is the world's fastest flatbed plotter," says Herbert Schlieper. "The press produces 2.2m x 3.2m prints at high speeds – and in truly superb quality. With our many, many years of experience with screen printing, both in terms of quality and production volumes, we can truthfully say that digital printing systems surpass screen printing by a long margin." In this connection, Herbert Schlieper adds that due to technological reasons "speed plus quality can only work with UV printing".

He says that the company has never looked back since investing in the Inca wide format printer. "To keep embracing new technologies in order to drive dynamic growth – this is part of our corporate philosophy," explains Schlieper. It goes without saying that the press has to deliver the utmost precision: "It's an absolute must for wide format printing". Edge-to-edge printing on formats of up to 2.2m x 3.2m is a great advantage for the



**One of many application examples: Tyvek material for perimeter advertising in football stadiums is printed on the Inca.**

applications his company is currently producing, adds Herbert Schlieper.

### Our mission: to make great things visible

With its substantial capacity, SchlieperColor is able to produce even relatively large projects at fairly short notice. "And always to excellent quality standards," says Schlieper. Which doesn't mean that the company is content to rest on its laurels: "We want to gradually grow from the traditional graphic systems sector into other markets and applications in order to get ahead of the competition, who aren't simply sitting around waiting."

There is plenty of demand out there, even in market segments where wide format printing has not yet truly arrived. Herbert Schlieper believes that in industrial applications in particular there is a lot of catching up to do, but is confident that demand can be kick-started by providing information, ideas, suggestions and examples from other applications: "Our mission is to make truly great things visible for our customers".

[www.schliepercolor.de](http://www.schliepercolor.de)



## GREEN PRINTING IN ALLGÄU

**High-tech with a small footprint. Removing the risks from production with Fujifilm’s processless plate and CtP system.** At Uhl Printing in Bad Grönenbach eco-friendly production has emerged as a key factor in customer relations management, with a large number of customers saying that they expect reasonable prices and good quality, but that environmental considerations play an increasingly important role.

You can say what you like about small companies, but the cliché “small, old-fashioned, no cash to invest” simply doesn’t hold true for most. One of the best examples is the unwieldily named “Wilhelm Uhl – Buch- und Offsetdruck GmbH” based in Bad Grönenbach in the Allgäu region in southern Germany. While the name may sound heavy-handed, the company itself is anything but. Founded in 1979, Uhl printing is a typical small business: on the one hand, likeable because of its lack of pretension and its attention to personal service, and, on the other, boasting truly amazing equipment, know-how and the courage to go where larger companies have failed miserably or haven’t dared to go in the first place. “We’re a real family company,” says managing director Andreas Uhl with pride and a hint of defiance. “For customers who like personal service and dealing with people they know, this is a key aspect. Personal advice, a high degree of flexibility and a broad range of services are the factors that make our customers feel welcome and well looked after, which is why they regularly recommend us to others.”



“We’re a real family company,” says Andreas Uhl, managing director of Wilhelm Uhl – Buch- und Offsetdruck GmbH, with pride and a hint of defiance. “Our customers like personal service and dealing with people they know.”

Andreas Uhl is wholeheartedly committed to protecting the environment and resources. One reason is because he and his family live above the printing works: “You can see why I want to have as little chemistry around as possible,” he explains. His children Gloria and Adam are too young to understand why sustainable production and processless plates are so important; for them the imagesetter is a glorified playground. When the company switched to the Fujifilm Luxel T-9300 CTP they kept their workflow, as they already used bitmap files to control the imagesetter. Now the Fujifilm Celebrant Gateway takes the high resolution data and sends them to the thermal imagesetter to image the plates. The photo shows Andreas Uhl (on the right) and Jörg Staudt, systems expert at Fujifilm Germany.

### An astonishing range

“We have been producing top quality print for over 20 years. Customers from all different sectors rely on us for their print jobs and they keep returning. This puts us in the enviable position of not having to undercut the competition on price in order to get a job. On the other hand, our customers always know that they can rely on us to deliver outstanding quality,” says Andreas Uhl. To ensure that customers

for personalised jobs and small runs, and Uhl offers a full range of lettershop services: direct mail letters are produced, addressed, packed and taken to the delivery company. “However, we only offer lettershop as an additional service for our customers. We don’t handle lettershop for jobs that we haven’t printed inhouse,” explains Andreas Uhl.

Although the family-run company in the spa resort of Bad Grönenbach (population: 5,000) remains committed to

the Memmingen and Kempten area – extend far beyond just printing. Uhl has a sophisticated prepress department equipped with everything needed for digital image processing and proofing. Customer data can be imported from practically any application and edited.

**Andreas Uhl is proud to have invested in a KBA Rapida 105 and hasn’t looked back since switching to the larger format.**



benefit from competitive prices, the company has all it takes in terms of manpower, equipment and organisational structures to deal with the production of typical commercial jobs, from small to large runs. Uhl’s specialities include wet and self-adhesive stickers in relatively large volumes and packaging work. The company prints in accordance with ISO standard 12647-2 (process standard offset), either in standard or ultra-fine screening; additional services include special coatings, metallic effects, scented prints, die-cutting, lamination and embossing. A digital printing system is used

personal service as one of the key factors in their success, the company has also set up a web shop for standard products, meaning that the company is virtually open 24 hours a day, seven days a week for all types of jobs and volumes. Uhl is committed to providing high quality at competitive prices: “We offer a wide range of online services that is unrivalled elsewhere,” says Andreas Uhl, sketching the company’s approach. The website has enabled the company to extend its geographic market still further.

### Building trust with excellent service

The services the company provides for its customers - the majority of whom are in

“This feature has brought us lots of new customers. Today, 95% of all data are supplied as PDFs.” However, Andreas Uhl still makes a point of doing plots to check the contents prior to printing.

“No proofreading, but we do check form and content simply because 70 - 80% of all data contain errors, most of which can be repaired. Just taking what we are sent and merrily printing it would result in a complete fiasco,” says Andreas Uhl. The company aims to establish and maintain long-term business relationships with its customers. “And so we only offer services that build trust and help us establish

With a maximum plate format of 1,160mm x 940mm the Fujifilm Luxel T-9300 CTP is ideal for 3B presses. Producing with the processless plate meant that the company had space for the imagesetter in their existing premises because no developer is required. Wall to wall high-tech in the pressroom: the KBA Rapida fits perfectly in the production hall.



long-term, mutually satisfactory business relationships. We provide comprehensive advice about prepping print data, colour management, mailings, substrates and much more.”

**Environmental considerations just as important as price and quality**

In the company’s dealings with their customers, one factor that has emerged as being even more important than the smooth exchange of data is the issue of eco-friendliness. “A striking number of customers say that they expect reasonable prices and good quality, but that environmental considerations play an increasingly important role,” says Andreas Uhl, describing his customers’ reactions. “Environmental protection has long been a core issue for us. Quite simply because many of the things we produce have a very short lifespan – packaging labels, direct mail or promotional leaflets, flyers etc – it is essential that we make sure that the product is as green and as eco-friendly as possible. Starting with the materials we source through to the disposal of all waste we produce, our aim is always to protect our natural resources,” says Andreas Uhl.

The company takes great care to reduce its use of chemicals in prepress and in the pressroom, for instance by using processless plates. The use of “green” inks is standard in process colours; these inks contain very little mineral oil and yet give outstanding brilliance. The company uses recycled, chlorine-free bleached and FSC-certified papers.

For their customers in the food industry, manufacturing and tradesmen, all of whom support Uhl’s efforts to reduce their ecological footprint and print greener products, the company offers an EQ flyer (intelligent and eco-friendly) which offers all of the above and where customers benefit from additional savings if they choose the “relax” rate. This special rate offers a 25% discount if the customer gives the printers a little extra time to schedule in production.

**Computer-to-Plate with processless plates**

Andreas Uhl is wholeheartedly committed to protecting the environment and resources. One reason is because he and his family live above the printing works: “You can see why I want to have as little chemistry around as possible,” he explains. His next major plan is the introduction of eco management. He took the first step in this direction in mid-2007, when the printing company

started producing processless with the Fujifilm Brillia HD PRO-T. Back then, the company imaged the new plates on a B2 imagesetter. That changed last November when Andreas Uhl decided to switch to the 3B format and invested in a KBA Rapida 105 Universal, the predecessor of the Rapida 106 which was launched at drupa 2008, but which includes some of the features of the new system. “Make-ready times for B2 and 3B formats are practically the same nowadays and we decided that the larger format gave us some key production advantages.”

The decision to invest also meant that prepress also had to switch to the new format; Uhl replaced his Trendsetter with a larger Fujifilm Luxel T-9300 CTP with single autoloader.

The installation of both new acquisitions – the press and the CtP system – required meticulous planning and manoeuvring, as the company produces in a very confined pressroom in Uhl’s house. The use of processless plates meant that the large imagesetter could be located in the pressroom, as no other developer is required. Andreas Uhl shudders when he looks back at when the company still used conventional plates: “The amount of space we needed, the cost of chemistry, the expense of disposing of the residues,

Although the company firmly believes in personal customer relations, Uhl has set up a web shop for standard products. “We offer a range of online services that is unrivalled elsewhere,” says Andreas Uhl, outlining the company’s approach.



the time needed to clean things, change baths etc: all of these were irritants that swiftly won us over to the great advantages of the new processless technology.” The processless Fujifilm Brillia HD PRO-T does not need wet-developing after being imaged. The plate develops and cleans up directly on press, reducing the process steps to an absolute minimum; it cuts out potential sources of errors, saving both time and money.

**No risks – Fujifilm plates and CtP system**

The fact that the processless Fujifilm Brillia HD PRO-T plate can reproduce standard screen rulings and also effortlessly handles 120 fine rulings was a key consideration in Uhl’s decision given that the company aims for high quality standards in all they do.

Andreas Uhl emphasises that the transition was as easy as anything for the pressroom staff, who could work with the same auxiliaries and settings as before. “You do, however, have to ensure that the fountain solution is really clean,” says Andreas Uhl, sharing some of the experience gained with the new plate, “otherwise the plate won’t clear up well on press.” He adds that this has the added benefit that the pressroom staff work even more meticulously than before.

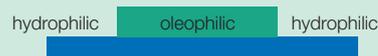
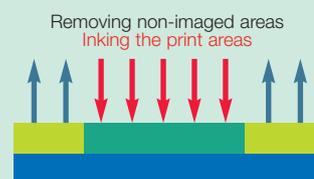
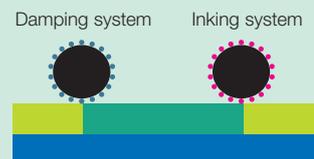
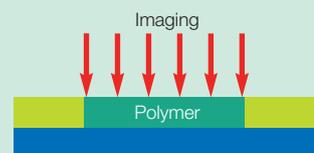
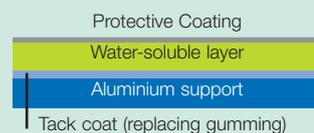
The small-format press also runs with the processless PRO-T. As the Fujifilm image-setter offers the option of manual cassette loading, the staff can stick to one cassette for the autoloader and image the smaller plates manually. The company often finds itself producing around 100 plates a day, particularly when they are producing jobs with runs of between 2,000 and 10,000 copies and with multiple language variants.

“We need seven to eight minutes to produce a full-format plate,” says Andreas Uhl, adding that that includes the entire process from starting the job until holding the finished plate in their hands. “We know that we can rely completely and utterly on the quality of Fujifilm’s processless plates and CtP imagesetter. We have to. We can’t afford to take risks – the company’s too small for that.”

[www.uhl-media.de](http://www.uhl-media.de)

**HOW IT WORKS**

During exposure the polymer layer (the printing element) is hardened. The plate is moistened by the damping rollers, causing the water-soluble monomer to degrade; this is then stripped off by the ink and dampening solution and is deposited onto the paper during the first few impressions. What remains is a standard offset printing plate with ink and water receptive areas.



# AN EMOTIONALLY CHARGED PRODUCT

**Top quality playing cards made by ASS Altenburger are produced on advanced presses with quality materials and coatings by Fujifilm.** There has been a trend in recent years to refer to the “emotional value” of printed products. Few products are so emotionally charged and capable of triggering such a tempestuous flood of feelings as playing cards.

Often, there's cash involved in a game of cards. Plenty of cash, in fact, if you think of tournaments or gambling in casinos. It follows that playing cards are more than just printed and coated pieces of card. These are products that demand the very highest production quality coupled with ultimate security precautions.

“Printing playing cards comes close on the heels of printing cash in terms of difficulty,” explains Peter Warns, managing director of Altenburg GmbH, producers of playing cards. “Quality and security take absolute priority. And the back of a card is just about more important than the face. All it takes is one tiny smear and the card is easy to recognise, which is a disaster for card players.”

## Germany's number one playing card company

“In our retail collections and in the custom cards we produce as advertising giveaways for customers or our special editions, quality is always our top priority. High quality card, equally high quality inks and coatings, the most advanced production equipment, highly motivated and creative staff are the linchpins of our corporate philosophy,” says Warns. Quality also means constantly testing the products to ensure that they comply with the com

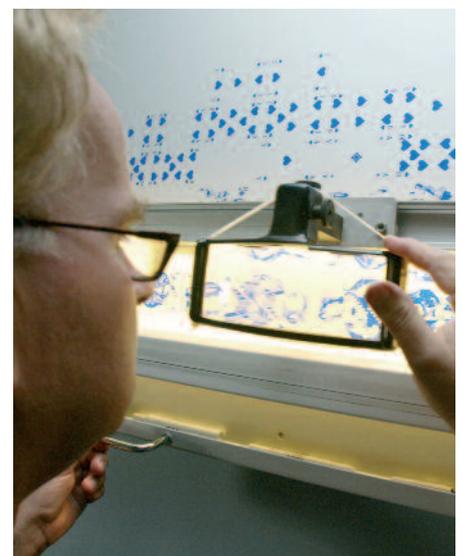
pany's exceptionally high quality standards. ASS Altenburger has an excellent reputation and every intention of protecting and upholding it.

“2007 was a very successful year for ASS Altenburger and the Group. We expanded our existing market on the back of numerous new products and also tapped into new markets,” says Peter Warns, summing up the last business year. “Our turnover increased to €26 million, we produced almost 50 millions sets of cards and we increased the number of employees to 170,” says Warns, sketching the company's key milestones last year. “We – or rather our products – played an important role at hundreds and thousands of playing tables, and we are rapidly gaining new market shares and new customers for our products.”

## Brainstorming and design

Innovative or traditional, exciting, comical, intricate or simply beautiful – no two card designs are the same. A portfolio this broad demands outstanding creativity: whether it's developing a new retail product, designing attractive, catchy promotional ideas for clients or creating cards that comply with specific publishing company design briefs – the design process is always a period of close collaboration and

**Modifying a card set in the graphics art department for a new run. Playing card layouts are processed in the fully digital prepress section with computer-to-plate, but every single plate is checked visually before going to press.**



**Peter J. Warns, Managing Director of Spielkartenfabrik Altenburg GmbH, believes that the niche market for playing cards is “oversupplied”. “The company continues to grow and expand. We are tapping into new markets and sales channels, we’re building stronger cooperations with licensees and implementing strong marketing campaigns to help us achieve our core business objectives.”**



cooperation between the product design and graphic arts teams on one side and the client on the other, culminating in the finished product. ASS Altenburger designs around 50 new sets every year and like so many other products, practically all design work is done on computers.

Prepress and plate production at Altenburg are also fully digital. Once the layout of the card faces and backs is calculated in the graphics computer, the print layout

**The large and spacious pressroom was completed in 2004. At Altenburg, presses from the Roland 700 series provide perfect impressions. Playing cards are always coated, and all presses are equipped with an inline-varnishing module.**

is created, imaged in the computer-to-plate system, checked again for any errors and quality faults and then released for printing.

#### **Playing cards – a top quality product**

Absolutely stable production conditions, modern presses, top quality materials and auxiliaries – this is what it takes to produce sheets of cards. At Altenburg, the rule is always to print complete sets of cards, never individual cards. Some sheets will contain two or three sets of cards per sheet. Continuous quality control of the printed sheets is one of the key tasks of staff in the new Altenburg pressroom, which was built in 2004.

At the Altenburg playing card factory, presses from the Roland 700 series provi-

de perfect impressions, The most recent of the three sheet-fed presses is specially equipped for the production of playing cards with the inline Inspector and the Inline Sorter. The inline inspection system scans each sheet with special cameras and detects even the smallest of irregularities in the print; all defective sheets are removed by the inline sorter. As playing cards are always coated, all presses are equipped with an inline-varnishing module.

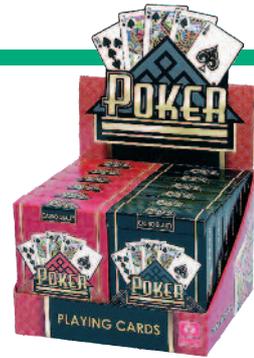
ASS Altenburger uses only premium quality card to make its playing cards: the substrates used range from simple pasteboard to high quality composite card consisting of a double layer of card with a graphite core to prevent transparency. A high quality, double coated special paperboard with a high level of flexibility is the





The special edition to mark the company's 175th anniversary; children's playing cards and top trumps sets are exceptionally popular.

International bridge and poker decks, tournament and casino cards demand the very highest quality and security standards.



standard stock used for ASS Altenburger playing cards.

**Special coatings for exceptional durability**

Alongside the card and the high quality print, the coating is the third main production feature of playing cards. The cards are coated with a special varnish that protects the surface against scuffing and which makes the card shiny and attractive, ensures that the cards are slick and glossy and prevents them from soaking up moisture or dirt. All of these characteristics are important to give the cards a high level of resistance to wear and tear, particularly important because cards are played everywhere: at the pub, in children's rooms or down on the beach. "Take all of these factors into consideration and you soon see just why the playing card coating has to be a top quality product with a complex requirements profile; it's the star discipline of dispersion varnish," explains Matthias Kuhn, Product Line Manager Coatings Europe, Fujifilm Europe. "Our coating has excellent printability and also provides a specific set of characteristics, such as slickness, high resistance to scuffing and abrasion, resistance to sweat, moisture, alcohol and smoke."

The whole coating process is a careful balancing act: it is a permanent compromise between good runnability and the characteristics that the playing cards need to have. "Of course, the cards have to be slick, but you also need to be able to hold them securely without them slipping away while you're playing," says Peter Warns. He knows from experience that even the slightest change to the composition of the card or the formulation of the coating can cause considerable problems. "In our close cooperation with ASS Altenburger, coating process optimisation and constant quality enhancement have always played a key role," says Matthias Kuhn. Fujifilm set up a comprehensive optimisation programme in 2008 in conjunction with ASS Altenburger. "We would

never alter or modify any of the numerous parameters in this process of our own volition," says Kuhn. The optimisations are complex interrelations which can only be considered and implemented in conjunction with the pressroom and finishing staff at ASS Altenburger. All press parameters, such as temperature, chambered doctor blades or rollers etc, demand a high degree of precision from the press operators. Getting the varnish mixture right is also exceptionally tricky. "You can't just keep adding water until the press runs smoothly. That would have a decisive impact on the finishing or the quality of the finished product, says Matthias Kuhn. "The varnish for Altenburg is a product made specifically for this playing card factory and for the precisely defined conditions here only."





The backs of playing cards are often used for advertising. Including the box, a set of cards provides as much advertising space as six A4 pages.

Increasingly used as an add-on: decks of cards are given away with magazines, beverages and many other items,

Which makes it all the more important that the partners work together closely and that the business partnership is defined by mutual trust. Peter Warns sums it up: “We are not the type of customer who uses every excuse to shout and make a fuss, and who takes every little variation as a reason to push the prices down. In return, we enjoy a great partnership with Fujifilm – and we get good products and fast solutions.”

**Card sets take on shape in the finishing department**

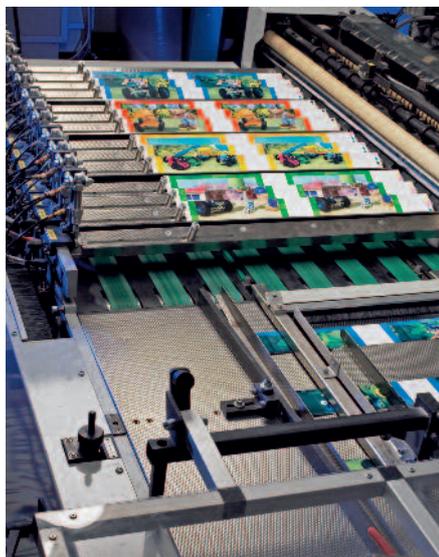
“Printing and coating is complicated enough. The next challenge is finishing, i.e. cutting, which has to be done with an outstanding degree of precision to ensure that every single card is exactly the same

size,” explains Peter Warns. Exceptional care and great skill and craftsmanship are key requirements in the company’s finishing department. Clean cutting and meticulous care to keep the cards in the right order are absolutely essential in the integrated cutting and packing line. Although printing is the first step in the production chain which includes finishing and giving the cards a specific set of characteristics, the real fascination starts when the printed sheet is cut and becomes a finished deck. The sheets are almost fully automatically processed in the cutting machines. Once the machine has been set to the right format and imposition pattern (which is largely determined by the order of the cards when they are assembled to make up a full deck), the sheets are first cut lengthwise

and then crosswise. At peak production times, the company produces up to 300,000 sets of cards a day. The cut cards are machine sorted and bundled in small packs; only then are the rounded corners die cut, the deck packed in cellophane and packed in a box or plastic pouch as required – all automatically.

**The eternal attraction of playing cards**

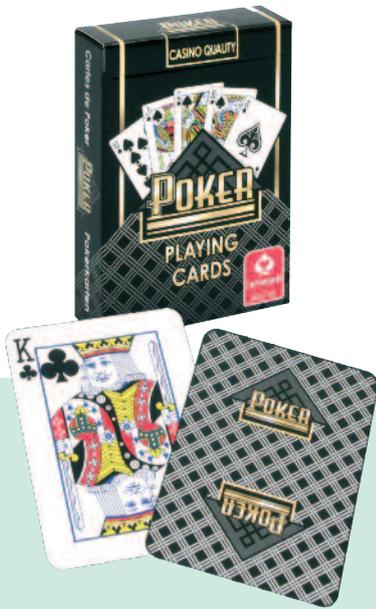
These workflows and processes are constantly being tweaked and optimised. 2004’s investment of €5 million in a new press, more finishing, storage and information technologies and a completely new pressroom was followed in 2006 by further investment of €1 million in new presses, software and an enterprise



Turning a printed sheet into a deck of cards takes a special, fully automated production line. The sheets are fed into cutting machines and come out the other end as playing cards. Special finishing machines sort the cards in the right order.

The sorting machine is part of the finishing line.

The offices and part of the production facility. On the right is the warehouse tower which is decorated with historic playing card figures – the company's trademark.



Carta Mundi, the parent company of ASS Altenburger, is headquartered in Turnhout in Belgium. As the name indicates, the company makes “playing cards for the world”. Turning out the incredible volume of 255 million decks per year at four factories in Belgium, the United Kingdom, Germany and the US, Carta Mundi is one of the world’s leading manufacturers of playing cards. Eleven sales subsidiaries and a network of local agencies and distribution centres in more than 50 countries make sure that the Group’s cards reach playing tables and customers all over the world.

The Group’s production volume is split into five product segments: the retail collection includes standard playing cards, children’s card games and licensed playing cards for Disney, Batman and National Geographic. Cards for toy manufacturers are used in popular games such as Monopoly and the Settlers of Catan. The highest levels of security are applied when making casino cards. Other segments include collectible cards and cards for advertising.

resource planning system. This year and next year, ASS Altenburger will again be investing several million euros in staff and new equipment. “The company continues to grow and expand,” says Peter Warns. “We are tapping into new markets and sales channels, we’re building stronger cooperations with licensees and implementing strong marketing campaigns to help us achieve our core business objectives.”

A survey which was commissioned by ASS Altenburger confirms that card games remain popular. The company knows that there is a stable market for its classic retail range and it is convinced that cards will always fascinate and inspire people, even in today’s bright and busy multimedia world. “Playing cards are affordable products that guarantee hours of fun and entertainment. And for proper tournament players who are deeply passionate about what they do, there is simply no alternative to ASS Altenburger playing cards,” says Peter Warns. He sees the main opportunities for growth in licensed products and in cards made for advertising, and firmly believes that these two segments still are far from fully exploited.

“Playing cards are an efficient and effective means of advertising if they are used creatively and tailored to the customer’s exact needs and image. A full set of cards including the box contains as much advertising space as six whole A4 pages,” says Peter Warns.

#### Not a side line

But even if a deck of cards is not necessarily your typical high-price luxury product, there are still counterfeiters at work in this segment. Committed to safeguarding their reputation for brand-name quality, ASS Altenburger rigorously and forcefully pursues product plagiarism. Nonetheless, again and again the company discovers infringements against their copyrights. Tons of counterfeit cards which pretended to be “Quality made in Altenburg” were seized last year and destroyed before they could hit the shops. Collector’s cards and casino cards are extremely sensitive products. Stringent security precautions and the destruction of faulty sheets under strict surveillance are measures that are essential to prevent fraud. The quality standards are equally high for all other types of playing cards: card decks can only be used if they are complete and faultless. “If one card is spoilt, then the whole deck is spoilt,” says Peter Warns. It takes exceptional know-how to produce playing



cards and it is not something that you can do on the side. “We probably have to take even more care with our products than most other commercial printers,” says Warns.

ASS Altenburger has worked hard to establish its reputation as Germany’s leading manufacturer of playing cards. “In terms of integrated production, like we have, we really do not have many competitors, because many card publishing companies do not actually do the printing themselves,” says Peter Warns. But even against this backdrop, he considers this niche market to be “oversupplied”.

[www.spielkarten.com](http://www.spielkarten.com)

## Playing cards – a long tradition

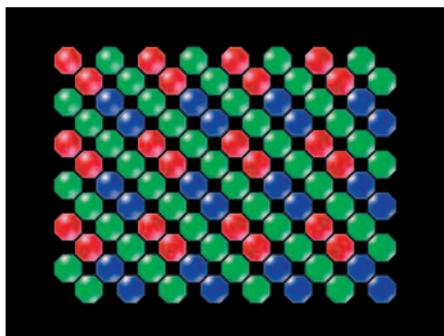
According to a variety of theories, playing cards first originated in eastern Asia, where the custom of playing with thin sheets predates their use in Europe. The earliest playing cards from Korea and China date back to the 12th century. Just how playing cards came to Europe is not known, but it is presumed that they were brought from the Middle East by travellers. Several sources show that cards rapidly became popular; aristocrats are known to have played with hand-painted cards from 1340 on. The oldest set of woodcut printed cards dates back to 1450. In 1509, records show that a card maker settled in Altenburg. Next year, the small town, which is approx. 45km to the south of Leipzig in Thuringia, will be celebrating 500 years of card making. And that’s not all: Altenburg is also viewed as the cradle of the popular German card game of Skat, which was developed here between 1810 and 1817.

In 1832, the Bechstein brothers founded the “Herzogliche Sächsische Altenburger Concessionierte Spielkartenfabrik” - the Royal Saxon-Altenburg Playing Card Factory. Under the brothers’ guidance and with their technical and artistic skills and craftsmanship, the company flourished and in 1897 was acquired by the Stralsunder Spielkartenfabrik, founded in 1765. By 1907, following numerous other acquisitions, the Stralsund-based company was making nearly 3.5 million decks of cards a year and by 1913 had 235 employees. In 1931, the Stralsund factory and the Altenburg factory in Thuringia were merged due to logistical reasons. At the same time, the “Vereinigte Altenburger and Stralsunder Spielkartenfabriken” company was founded, and with it the famous brand name “ASS”. After the second world war, the two companies were divided for more than

40 years. The “Vereinigte Altenburger and Stralsunder Spielkartenfabrik“ moved to temporary premises in Mannheim and in 1956 moved on again to Leinfelden near Stuttgart as “ASS Spielkartenverlag”. Production continued in Altenburg until the factory was demolished in 1946. In 1948, the production of playing cards started again and in 1959 the company became a nationally-owned enterprise. After the fall of the wall, the Altenburger factory was reprivatized in 1991 and was sold to the “Vereinigte Münchener Spielkartenfabriken F. X. Schmid“, which then, in 1996, was taken over by Ravensburger AG. In 1999, Ravensburger bought “Berliner Spielkarten” and shifted production for this new subsidiary to Altenburg. In 2000, the Altenburg site was ambitiously extended to become Europe’s leading production facility for playing cards. In 2002, a new chapter in the company’s history began when it was bought by the international Cartamundi Group, which is based in Belgium. Cartamundi, which also owns ASS Spielkartenverlag, bought the playing card factory in Altenburg from the Ravensburger Group, thus bringing the two companies, which had been separated since 1946, back together. In 2003, the two brands “ASS” and “Altenburger” were united under one roof: the brand ASS Altenburger is symbolic of the new strategy and direction. Extensive investments in production and logistics boosted the company’s further growth. 2004 saw the start of investment to expand and modernise production capacity at Altenburg: the total investment volume was €5 million. The playing card factory in Altenburg celebrated its 175th birthday in 2007, making it the oldest brand of playing cards in Germany – with an unprompted brand recognition of 24%.

## A revolutionary sensor – the new Fujifilm Super CCD EXR

On the anniversary of 10 years of FinePix cameras, Fujifilm presented a revolutionary new sensor at the photokina show in Cologne: the Super CCD EXR. True image quality is determined by a combination of many factors: excellent low light pictures need high sensitivity; high contrast pictures need wide dynamic range, while fine details depend on high resolution. The challenge for Fujifilm engineers was to develop a sensor to fulfil all three demands. The Super CCD EXR features three main changes from previous sensors: a new arrangement of the mosaic



The new sensor Super CCD EXR.

colour filter; a new method of pixel binning, and a complete revision of the electronic charge control for high sensitivity and low noise.

In the new sensor, Fujifilm unites high resolution and sensitivity with a wide dynamic range. Fujifilm looks forward with excitement to introducing the Super CCD EXR sensor into its range of high quality FinePix digital cameras, and expects enthusiasts to see a quantum leap in image quality from anything they have seen before.

[www.finepix.de](http://www.finepix.de)

## Helmut Rupsch retires

Helmut Rupsch, Head of Operations at Fujifilm Germany, has retired in October. His duties have been taken over by Shigehiro Nakajima, who will be performing a dual function alongside his position as managing director of Fujifilm Europe GmbH. Helmut Rupsch joined Fujifilm in 1999 and made a decisive contribution to the company's evolution to a diversified, healthy enterprise which is excellently positioned to face future challenges.

## New Flexo CtP plate technology

Fujifilm has announced the introduction of a unique new CTP plate technology for flexo printing. In this printing method, which is forecast to grow at rates of 5% and more, manual production processes have been replaced by laser-based technologies. There are currently two types of CTP systems for imaging flexo CTP plates. The first uses Laser Ablation Mask (LAM) technology, the second uses Direct Laser Engraving (DLE) technology. The latter technology does not require UV exposure to harden the polymer layer nor developing after laser imaging. Fujifilm favours the DLE technology and uses excellent blending technology of unique polymer materials to provide a flexo printing plate with superb performance. The new Fujifilm flexo CTP plate technology is applicable for a wide range of laser wavelengths; an efficient thermal decomposition reaction at exposed areas achieves high productivity while highly cured plates utilizing a unique polymerisation reaction achieves sharp and fine image reproduction.

## Fujifilm at Ifra Expo in Amsterdam

At Ifra Expo 2008 in Amsterdam (27 - 30 October), Fujifilm celebrated a very special premiere.

The brand new, chemistry-free violet plate Fujifilm Brillia HD PRO-VN, specifically developed for the demands of newspaper production, was demonstrated on two of the most popular imagesetters on the German market. Fujifilm also showcased many other highlights at the stand (Stand 11100 in Hall 11), including the high-performance image optimisation software XMF C-Fit. And, of course, there was also the full range to top quality pressroom chemistry.

## More quality of life for people worldwide

As a global technology enterprise, Fujifilm is active in a wide variety of business sectors. Helping to help ensure the quality of life of people worldwide is one of our key aims. For Fujifilm this means developing better diagnostics to detect illnesses, better image quality in printing and photography, and better images of all kinds of displays. Every single day, Fujifilm invests more than three million euros in research and development to



help us achieve these goals. The brochure "More quality of life for people worldwide" contains a wealth of interesting facts and information about the Group.