150 Years of Heidelberger Druckmaschinen Aktiengesellschaft

From Maker of Letterset Presses
to the World's Leading Provider of Solutions for the
Entire Printing and Publishing Industry

HEIDELBERG

Heidelberg – the world's leading provider of solutions for the entire graphic arts community – has remained young and dynamic, continually developing new products and production methods. Wiesloch, Germany, is home to the world's largest and most modern printing press factory.

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Dr. Dietmar Kuhnt, Chairman of the Supervisory Board, Heidelberger Druckmaschinen AG

The birth year of typographic printing is generally thought to have been 1440, when it was invented by Johannes Gensfleisch zur Laden zu Gutenberg. We know him as Johannes Gutenberg. The invention of printing with moveable type was, in the words of the French writer Victor Hugo, "The biggest event in world history". It allowed knowledge to be reproduced in a way previously unknown, and hence to reach a much wider audience. The seeds of our information society were thus planted over five centuries ago.

Even as new electronic media join the information fray, the printed word shows no signs of fading from our everyday lives. Instead of supplanting existing media, new media supplement existing forms of communication. Heidelberg employees should take pride in their contribution over the last 150 years, while facing the future with justified optimism. Through targeted acquisitions, a restructuring of business segments, and product innovations, Heidelberg's 24,000 workers have ideally positioned the enterprise to meet tomorrow's demands. In over 170 countries, more than 250 companies market and advise customers on Heidelberg products and services.

A major factor is our ability to consistently innovate, which we have been doing for over 150 years. Now, more than 1,700 Heidelbergers devote themselves to research and development, thus keeping Heidelberg at the forefront of the industry. With 6,500 patents, Heidelberg remains a leader among mechanical engineering companies around the world.

And Heidelberg is capable of much more. We have transformed ourselves into a provider of integrated printing and communication solutions. Heidelberg offers its customers complete production processes from one source, covering everything from prepress through actual printing to postpress finishing, along with first-rate service. New, important goals include strengthening our newspaper web press business and expanding "Heidelberg Digital", for instance, by promoting efforts to develop a digital color printing press for the short-run market. But even amid such ambitious plans, Heidelberg pledges to continually advance our core business – offset printing – to give our various customers the edge they need in their respective markets.

Today's printers realize that they have a dependable, industry-leading partner in Heidelberg. We do more than deliver excellent solutions for the entire graphic arts industry. The Heidelberg "package" includes all the benefits of brandname products, service, financing, and management consulting. Each piece of equipment that comes out of our factories embodies know-how and expertise accumulated over a century and a half.

We will continue to be a major player in a multimedia world, just as Gutenberg's moveable type will always have its place in history. And as we travel the road ahead of us, I sincerely wish all Heidelberg employees continued success.

Dr. Dietmar Kuhnt

Bernhard Schreier, Management Board Chairman, Heidelberger Druckmaschinen AG

Heidelberger Druckmaschinen AG is celebrating its birthday. We are looking back on 150 years of history. From humble beginnings as founder Andreas Hamm's bell foundry in Frankenthal, Germany, our company has developed into a world leader and solutions provider serving the entire graphic arts industry. Our climb began with a letterpress platen machine at the dawn of the last century. And ever since, Heidelberg's success story has continued unabated, most recently with a new digital printing press. This story has centered around our answers to three key questions: How do our customers change? What do our customers need to succeed in the future? And how can we best support them?

Until the 1990s, prepress, press and finishing were largely separate processes. But the advent of electronic media has fundamentally changed this. Today, print buyers require more flexibility and much faster responses from everyone involved in the graphic arts industry. This has created a need to efficiently tie the separate printing stages together. As a powerful, innovative and globally active partner to the graphic arts industry, Heidelberg customizes solutions that combine prepress, press and postpress from scanners for capturing and creating images and texts to plate and film imaging and the printing press itself, and extending all the way to cutting, folding and binding machines.

In the years ahead, Heidelberg is going to expand its presence in the digital and newspaper printing markets. Digital printing enables faster, high-quality printing on short runs. Our Heidelberg Digital division is already successfully addressing this market segment.

Although more and more information is disseminated electronically, print media still has an outstanding future. Even the Internet is creating a flood of new print products. Real paper retains its value; newspapers, for instance, show no signs of fading away. Still considered one of the most credible sources of information, they also remain exceptionally user-friendly. This is true the world over. We are convinced that new and old media will complement each other, instead of merely battling for existing market shares.

To remain successful, our customers need reliable products and, to keep things running smoothly, exceptional service. For years, Heidelberg, with its global service network, has been a highly regarded partner. Bolstering our proven training offerings, our customers and employees can now also take advantage of the Print Media Academy in Heidelberg – a global training center for communication and knowledge in the graphic arts industry.

Our employees are proud of Heidelberg's performance over the last 150 years. Motivated employees, loyal customers, dependable vendors and well-informed shareholders have been and continue to be the foundation of our success. Heidelberg employees feel a responsibility to continue this tradition. And thanks to our unflagging, trail-blazing spirit, we'll be setting standards well into the new millennium.

Bernhard Schreier

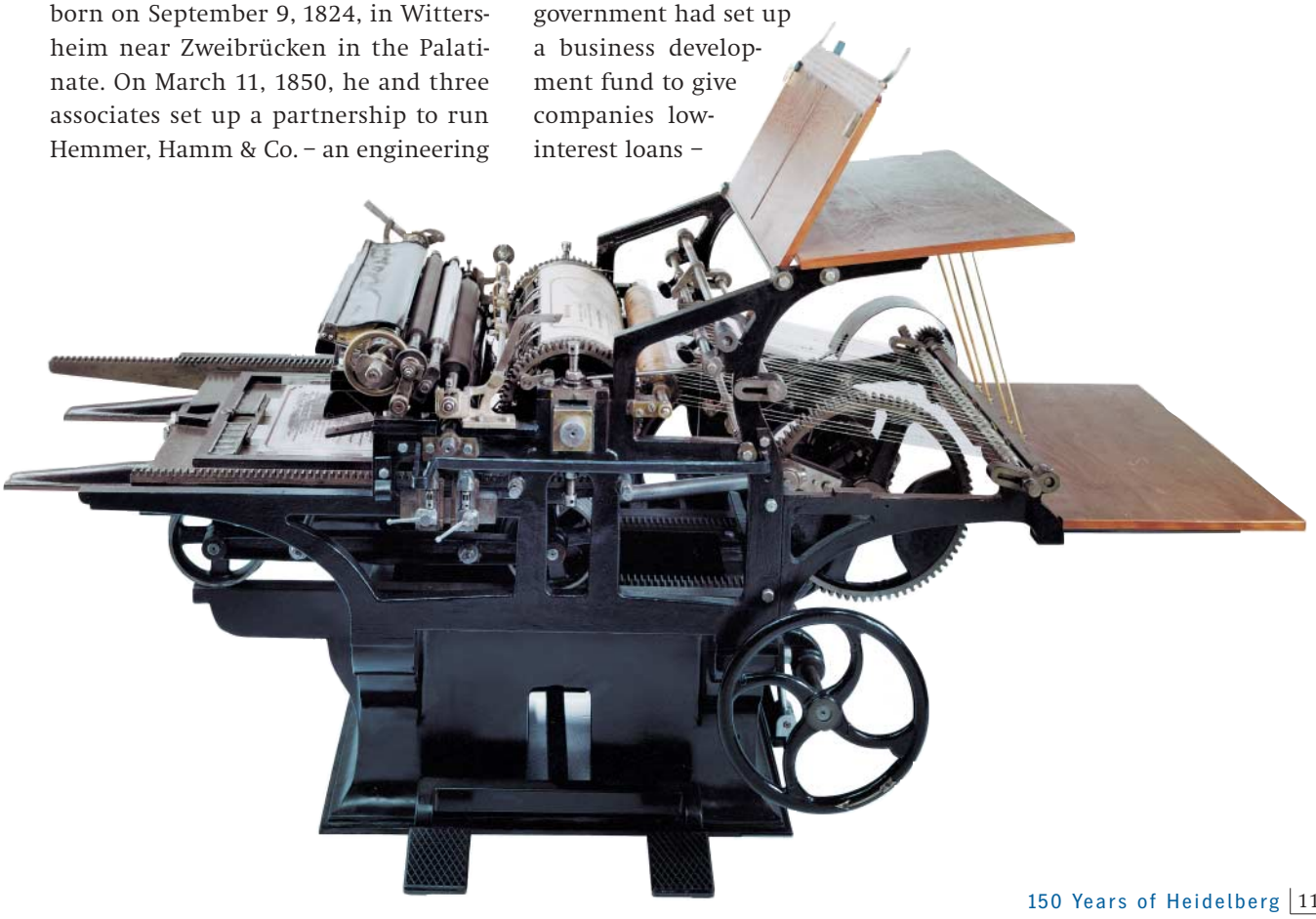
Andreas Hamm joined the engineering firm of "Hamm und Compagnie" in 1849. It was renamed "Hemmer, Hamm und Compagnie" when another partner came on board on March 11, 1850 – the official birthday of todays Heidelberger Druckmaschinen AG.

From Bells to Printing Presses

One hundred and fifty years ago in Germany, the quiet, cozy Biedermeier era had just come to an end, giving way to the seismic upheaval of the Industrial Revolution. This was the heyday of the great entrepreneurs – including the men who laid the foundations for what would one day become Heidelberger Druckmaschinen AG.

Andreas Hamm, a miller's son, was born on September 9, 1824, in Wittersheim near Zweibrücken in the Palatinate. On March 11, 1850, he and three associates set up a partnership to run Hemmer, Hamm & Co. – an engineering factory and bell foundry in the town of Frankenthal. The company had been founded by his brother, Georg, in 1844, but encountered financial problems during the turmoil of Germany's 1848-49 revolution.

By then the political revolution was over and industrialization was again on the march in southern Germany. In those days, the Palatinate belonged to the Kingdom of Bavaria. The Bavarian government had set up a business development fund to give companies low-interest loans –



Andreas Hamm ran a bell foundry in Frankenthal, with a sideline in printing press production. In 1885, he launched the "Pro Patria" – an ultracompact letterset press costing just 1,350 marks. By 1892, Hamm had sold over 500 "Pro Patria" presses, which were available in five formats.

and provided entrepreneurs like Andreas Hamm with an opportunity to establish their own manufacturing operations.

Hamm had trained as a bell-founder, but he was also a brilliant, multi-talented engineer, who went about developing his own company with outstanding verve and flair. Andreas Hamm was the beginning of an unbroken line of business entrepeneurs who leads straight from Hemmer, Hamm & Co. to the Heidelberger Druckmaschinen AG of today.

Andreas Hamm Strikes Out on His Own

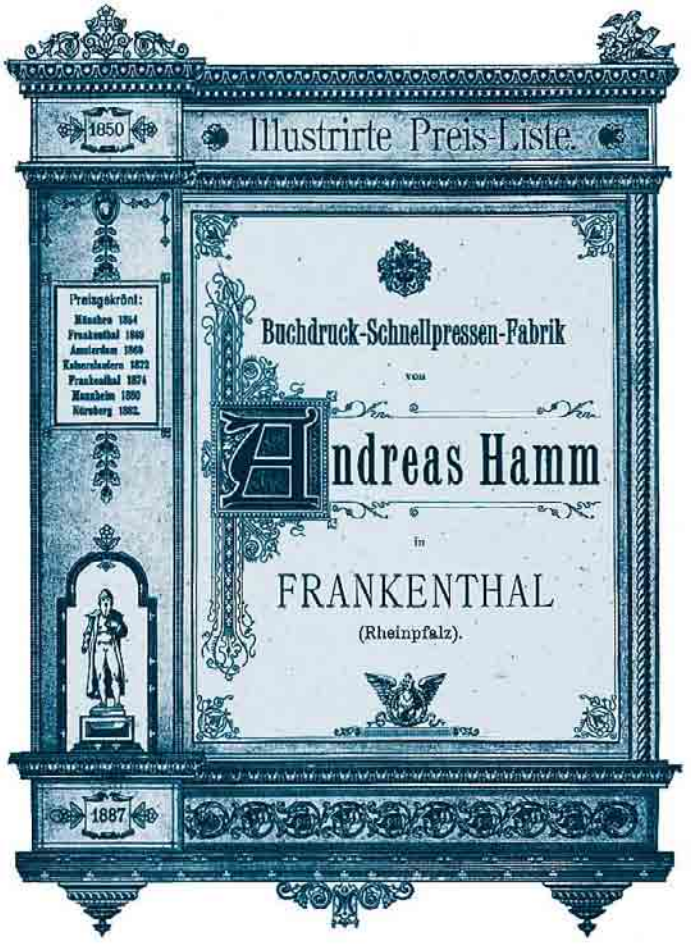
In the course of time, differences arose between Hamm and his partners. In 1851, he left the company and struck out on his own, setting up the Andreas Hamm Bell Foundry, along with an attached engineering workshop. He managed to secure government funding, and was soon able to expand the works, diversifying into castings and forgings, mill machinery, and steam engines.

Between 1861 and 1873, the Hamm-Albert partnership manufactured mechanical platen presses, as well as this toggle press, at their factory in Frankenthal.

A few years later, Hamm teamed up with printing press engineer Andreas Albert. After two years of informal collaboration, Hamm and Albert signed an official cooperation agreement on August 18, 1861. On April 1, 1863, they consolidated their relationship with a ten-year contract. The new factory was called "Maschinenfabrik Albert & Hamm" (Albert & Hamm Engineering Company). Its mission was to "manufacture letterset presses and other equipment employed in letterpress printing shops".

Albert had learned how to build letterpress machines during his apprenticeship at the "Koenig & Bauer" printing press factory in Oberzell am Main. There he was eventually promoted to the post of master mechanic, before leaving in 1845 to join the Augsburg engineering company. He rose to become operations manager there, but after 14 years moved on to set up his own letterset press business.

After a few minor start-up troubles, "Maschinenfabrik Albert & Hamm" soon



Andreas Hamm's price list from 1887, when he was in hot competition with his former partner, Andreas Albert. Hamm's top seller was his cylinder treadle press.

flourished. Trade press articles of the time report that the company sold 44 letterset presses in just two and a half years. On June 7, 1864, the local newspaper, the Frankenthaler Zeitung, remarked: "This company has succeeded in gaining a wide reputation far beyond Germany, in a remarkably short time. It will shortly dispatch presses to the Black Sea port of Odessa, and to Cherson on the Pontic Steppes." The company soon landed another hit with its small manual commercial presses, which were "particularly well-suited for circulars, memoranda, bills of exchange, invoices, and all manner of cards, wine lists and menus."

In 1868, the company celebrated the manufacture of its 100th letterset press, destined for the Leipzig publishing house of Philipp Reclam, which had already bought five presses from Frankenthal. To mark the occasion, the press was adorned with a specially penned poem. The fifth verse of the poem gives a – somewhat idealized – picture of the business relationship between Albert and Hamm:

Mr Albert's keen and expert eye
Watches o'er the business of the day
Mr Hamm, with open, friendly ear,
Gives consent to many a good idea.
May they both enjoy prosperity
In shared and happy perpetuity!

However, this apparent harmony was deceptive. Just a few years after this ditty was composed, their business relationship was over. Albert and Hamm had become archrivals.

Casting the "Kaiser's Bell"

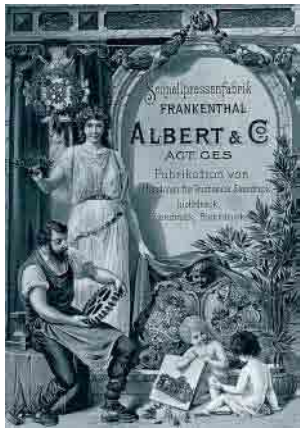
The ten-year contract between Albert and Hamm expired in 1873, and Albert left to set up "Schnellpressenfabrik Frankenthal Albert & Cie." (Albert & Co. Printing Press Factory, Frankenthal), together with his new partner, Wilhelm Molitor. It is likely the split was triggered partly by Hamm's plans for casting the massive 27-metric-ton "Kaiser's Bell" for Cologne Cathedral – for his bell casting business had continued, despite the company's success in the printing press market.

For Hamm, this prestigious contract from German Emperor Wilhelm I was a wonderful chance to really make his mark as a bell-founder. At the same time, however, it was a hugely risky venture that could jeopardize the company's financial future. Hamm made two attempts at casting Europe's heaviest bell before finally succeeding in producing a perfect bronze specimen in October 1874.

While Hamm was devoting his energies to the cathedral bell, his company continued producing printing presses. This sparked a bitter feud with his former partner, Albert. For several years, the two rivals bombarded each other with allegations – some of them libelous – in the trade press. Albert was keen to keep his old customers on board, and attract new ones – so he published several notices in the trade periodical Journal für Buchdruckerkunst accusing Andreas Hamm of incompetence. This example dates from 1873:

"A Circular placed by Mr A. Hamm in Issue 23 of this Journal … might lead printers to believe that Mr Hamm has been a manufacturer of letterset presses for some considerable time, and that I, the Undersigned, have acted merely as his associate … This false representation has stirred me to state the truth: prior to his association with the Undersigned, Mr Hamm had never even seen a letterset press, much less built one."

Despite the attack, Hamm successfully developed a competitive range of letterset presses, and gained a foothold in the market. In particular, his treadle-driven cylinder presses, launched in 1875, proved highly popular with customers and the trade press. These models were designed to suit smaller print shops without powered drive systems. They were followed in 1885 by the compact



In 1873, Andreas Albert ended his ten-year partnership with Andreas Hamm and set up his own printing press company. The two former associates became bitter rivals.

Carl Hamm sold his father's printing press operation to Wilhelm Müller and Wilhelm Molitor, and production moved to Heidelberg. At this time, the product range included the "Chromotype", a multicolor letterset press "for fine illustrations, autotype, and three- and four-color printing".

"Pro Patria" press, with a format of 320 x 410 mm, which quickly became a top seller. Soon the "Pro Patria" became available in five formats, as well as a power-driven version. By 1892, more than 500 had been sold.

In those days, the company's steadily expanding product range comprised six kinds of printing presses. These included letterset presses with rotary plate cylinders, an impression cylinder and double cylinder-type inking systems, able to output up to 1,600 copies per hour. Also on sale were double letterpress units capable of printing 2,400 to 3,500 copies per hour – as well as heavy two-color letterset presses with combined rotary and sliding, track-mounted wheel action. Hamm also manufactured ancillary printing equipment and tools. By around 1890, his company had sold presses to 400 customers in Germany and the rest of Europe – and even as far as, for example, India and Egypt. In the year 1892, the factory had a workforce of around 160, nearly 100 machine tools, and two steam engines.

The Move to Heidelberg

Andreas Hamm died at the age of 70, on June 22, 1894. His son, Carl, was not keen on continuing the business on such a large scale. So on August 19, 1895, he sold his printing press operation and the company A. Hamm OHG to the Heidelberg manufacturer, Wilhelm Müller – for the sum of 220,000 marks. The bell

foundry remained with the family, and stayed in business until 1960.

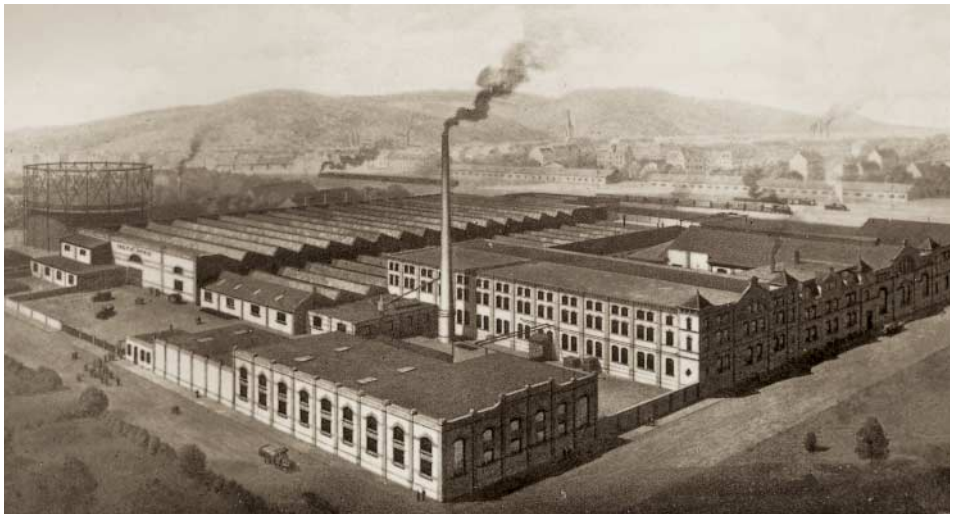
Wilhelm Müller was an associate of Wilhelm Molitor, the former partner of Andreas Albert, and founder of Maschinenfabrik Heidelberg Molitor & Cie. In 1891, Molitor had purchased four plots of land in Heidelberg's Eppelheimer Straße, with a view to setting up a factory.

Tough Transition to the Twentieth Century

Once Wilhelm Müller had purchased A. Hamm's company, he and Molitor liquidated Molitor & Cie., on May 22, 1896. That same day, a new firm appeared in the pages of the Heidelberg business register: A. Hamm OHG, Printing Press Factory and Iron Foundry. The owning partners were Wilhelm Müller and Karl Geiger, who had been the attorney of Molitor & Cie. They took over Molitor's properties in Eppelheimer Straße – including a two-storey machine room, a residential building, a foundry, additional production facilities, and several outbuildings. The headquarters of A. Hamm's factory – known as *Schnellpresse*, for short – also moved to Heidelberg. Production continued in Frankenthal for several more years. In 1896, a total of about 300 employees worked at the two sites.

In 1899 A. Hamm OHG became a joint-stock company.

Two years later, the Heidelberg operation expanded into a neighboring plot of land, and the days of the Frankenthal site were numbered. By the end of 1900, all the facilities had been moved to Heidelberg. In 1899 the company urgently needed capital, and Müller and Geiger converted it into a joint-stock company dubbed Schnellpressenfabrik A. Hamm Act.-Ges. Heidelberg (A. Hamm Letterset Press Factory Inc.). This raised a total of one million marks in share capital. The new company's first board members were the main shareholders, Müller and Geiger. Despite this capital injection, *Schnellpresse* began the new century with many serious financial problems. Pro-



In 1896, A. Hamm OHG moved to its new home on the site of the engineering company Maschinenfabrik Heidelberg Molitor &Cie., between Eppelheimer Straße and the former railway corridor leading to the old train station (behind the buildings on the right), which is now the boulevard called Kurfürsten-Anlage.

Downtown Heidelberg just after the turn of the 20th century. In 1906 and 1910, *Schnellpresse* workers held protests to call for better pay. The company had serious financial troubles, and the banks had to bail it out on several occasions.

duction costs were high, the competition was offering attractive prices and payment terms, and there was high management turnover.

The board of directors introduced new machine tools to streamline the production process – but things continued to deteriorate. Whereas in 1900 production capacities were booked out four to five months in advance, by a year later demand had plummeted. The managers were forced to cut the workforce from 400 to 220 and dock wages by ten percent. The crisis led the general assembly held on July 27, 1901, to reduce the company's equity from 1,000,000 marks to 400,000 marks. Wilhelm Müller and Karl Geiger resigned from the Management Board on December 5, 1901. In 1903, capital was cut by a factor of twenty to just 20,000 marks – before being increased again to 600,000 marks with the issue of 580 new shares. This enabled the Rheinische Creditbank in Mannheim and the "Bank für Handel und Industrie" in Darmstadt to acquire a majority stake in the business. Together with another bank – Wingenroth, Scherr & Co. – they now held 99 per cent of *Schnellpresse* shares. On August 26, 1903, the new owners removed the company chairman, Max Thedy – who had held the post since early 1902 – and replaced him with a sole director, Julius Lutz. In 1905, the general assembly decided to shorten the name by dropping the historical connection with "A. Hamm" – and the company became known as Schnellpressenfabrik Aktiengesellschaft Heidelberg (Heidelberg Letterset Press Factory Inc.).

The financial situation was still precarious, however. Sales rose by ten percent in 1905, due to growth in exports – but profits slumped again a year later because of higher wages and material costs, and generous payment deadlines for customers. This downward trend persisted during the next few years, amid falling prices and oversupply. In 1911, the banks waived debts amounting to 900,000 marks to keep the company afloat. In 1913, they cancelled more debts totalling 280,000 marks.

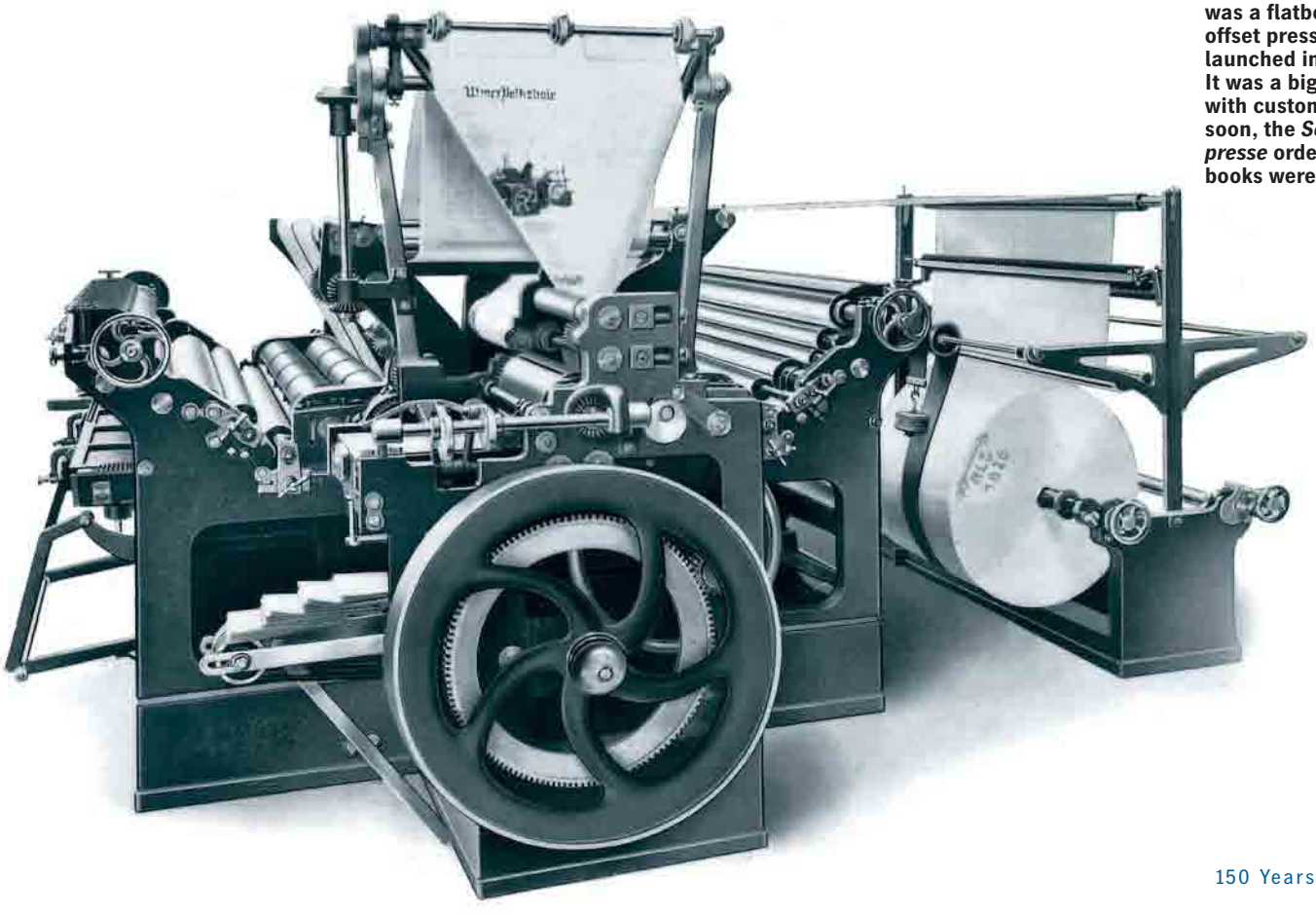
The financial crisis also created big divisions between the board of directors, managers, and the supervisory board. Deputy chairman Mathias Brandt, who was appointed in August 1910, resigned just nine months later. That same year, company director Julius Lutz refused to sign the annual balance sheet – and in 1913, the general assembly gave him a vote of no confidence. Lutz was succeeded by Eugen Scheding, who had served as deputy chairman since April 1912.

The crisis that hit *Schnellpresse* in the first few years of the 20th century was largely caused by inefficient production and outdated products. The company was manufacturing around

90 product types and models – ranging from a simple treadle-driven letterpress retailing at 2,400 marks, to a multicolor letterset press unit "for fine illustrations, autotype, and three- and four-color printing", with the princely price tag of 17,200 marks. At that time, the biggest sellers were the "Pro Patria" platen press for commercial printing, as well as the slightly larger "Excelsior" model. This enormous range of products stretched the largely manual production lines to their limits. The factory foreman, Martin Nieder, who worked for the company between 1895 and 1945, recalls: "Despite all the costly experiments, our letterpresses were still built the old-fashioned way, and we didn't take our competitors' improvements on board".

"Heureka" Flatbed Web Offset Press

Things began to take a slow turn for the better with the launch of the new "Heureka" flatbed web offset press. This special newspaper press was based on the concept of printing on a continuous paper web from a reel using letterpress flatbeds, and had been in development at *Schnellpresse* since 1900. The firm bought the patent for 50,000 marks from its inventor, Heinrich Stamm, a former head engineer at the Voigtländische Maschinenfabrik (Voigtland Engineering Company) in Plauen, and developed the design to production maturity. The "Heureka" had separate printing units for each side of the paper. In offset letterpress printing using lead typeforms, a rubber-coated cylinder transfers the inked image from the flatbed to the impression cylinder, which then prints the image onto the paper. The rubber cylinder only touches the flatbed on every third pass. This press was targeted at small newspaper publishers unable to afford large web offset presses and the expense of casting cylindrical printing plates. Depending on the model, the



The "Heureka" was a flatbed web offset press launched in 1908. It was a big hit with customers, and soon, the *Schnellpresse* order books were full.

"Heureka" could print and fold 6,000 – 8,000 newspapers with up to eight pages each in just an hour. *Schnellpresse* pinned great hopes on this press, which had cost 300,000 marks to develop. Only five units were sold in 1909, but this had risen to 13 a year later. By 1915, sales of the "Heureka" press had risen to 107, plus 15 additional orders that had to be shelved when the First World War broke out.

After the war, the "Heureka" went back into production. However, in 1924 it had to give way to the "Heidelberg Platen" – a press that was sold to print shops all over the world, and helped *Schnellpresse* to dominate the market for decades. The "Heidelberg Platen" secured the company's reputation, sales, and profits for years to come.

The seeds of this global success story were sown in the two years leading up to the First World War. At that time, most Heidelberg models – apart from the "Heureka" – were old-fashioned and uncompetitive; and the improved quick-printer model, the "Exquisit", was still in development.

The first "Heidelberg Platen" was presented at the 1914 Bugra trade show in Leizpig for the letterpress and graphics industry. But the design was not yet ready for full production – and development was halted by the outbreak of the First World War.

The "Heidelberg Platen"

As luck would have it, in 1912 *Schnellpresse* bought the rights to a new invention that would prove crucial to the company's success. This was the "propeller-gripper" – a two-armed device for feeding and placing sheets on the platen. It was devised by Karl Gilke, a print shop owner and engineer.

Up until then, with platen presses, sheets had to be fed and removed by hand – limiting throughput to 400–600 sheets per hour at most. As a result, platen printing – typically used for small-format short-run jobs – was extremely expensive. The new "propeller-gripper" system had a revolutionary impact – and not just on costs, but also on worker safety.

Nonetheless, several years would pass before its benefits were incorporated into the "Heidelberg Platen". First it was necessary to make major improvements to the "propeller-gripper", as well as to modify the platen technology. After many trials, in 1914 a prototype of the "Heidelberg Platen" featuring the new "propeller-gripper" was presented at Bugra, a trade show held in Leipzig for the letterpress and graphics industry. The new press, known as the "Express", was capable of printing 1,000 sheets per hour and caused quite a stir. However, before production of "Express" could begin, war broke out in Europe – and for the time being, the progress of the "Express" came to an abrupt halt.

The First World War and a New Beginning

When the First World War broke out in August 1914, the market for printing presses collapsed. *Schnellpresse* had to bring production to an almost complete standstill and lay off most of the workers

The outbreak of the First World War in 1914 led to the near collapse of the printing press market. During the war, *Schnellpresse* production lines were given over to arms manufacture.

who had not already joined the army. In 1915, the company began undertaking arms contracts, and employees – mainly women, young apprentices, and older men – worked the lathes in shifts to produce grenade blanks. These arms contracts did nothing to improve the company's financial predicament, however. In the fiscal years 1914–1916, losses swelled from 150,000 to 513,000 marks. This situation led the company's majority owners, Rheinische Creditbank and Bank für Handel und Industrie – who were caught in a tricky dual role as both shareholders and creditors – to call for tough action.

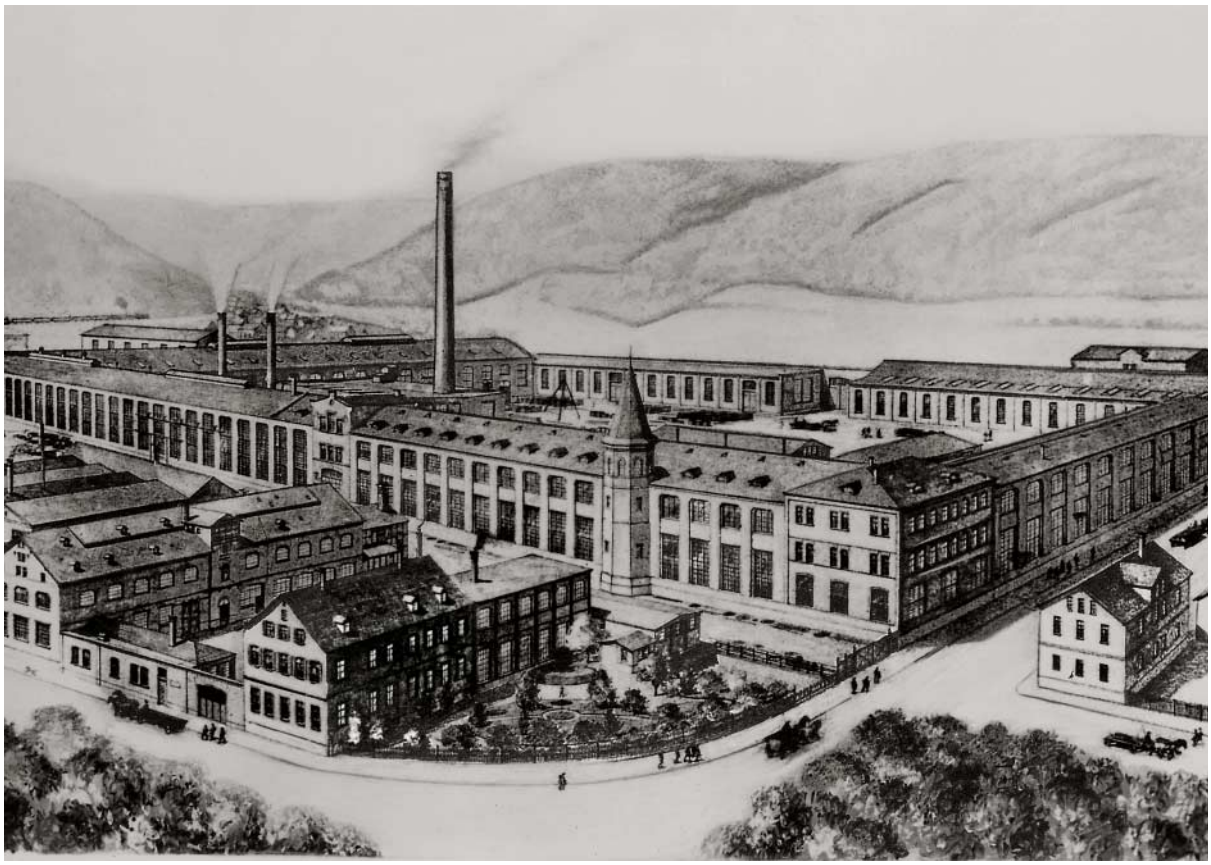
The Richard Kahn Era

On November 9, 1916, the banks concluded an agreement with two manufacturers, Richard Kahn of Mannheim and Alfred Eversbusch of Speyer. The two businessmen would buy up half the company's debts to the banks – totaling 760,000 marks – for the sum of 276,500 marks. In return, Kahn and Eversbusch received 295 shares, each with a nominal value of 1,000 marks. Both – the banks and Kahn/Eversbusch – also made additional shareholder contributions of 95 percent of their equity holding, thus boosting the company's share capital by 100,000 marks each. Finally, the two shareholder parties bought up any remaining shares still held in other investment portfolios – giving each side a 50 percent stake. Kahn and Eversbusch were also appointed to the Supervisory Board. At the same time, Oskar Faber joined the management team as deputy director under Eugen Scheding, in order to represent the interests of the new shareholders. Faber introduced new measures to streamline production, with the result that in the 1917-18 fiscal year the company finally climbed out of the red and turned a profit of 50,000 marks.

Richard Kahn, a colorful character, ushered in a new chapter in the history of *Schnellpresse*. This intrepid entrepreneur was born on November 9, 1890, as the son of a cattle trader in Bochum. When he was 17, he began a traineeship in machine tool construction. Then, at the tender age of 20, he bought shares in several engineering companies –

The First World War

The local Heidelberg paper, Heidelberger Neueste Nachrichten, trumpeted the outbreak of the First World War with big headlines and nationalist fervor – like newspapers throughout the German Empire. Coverage of the end of the war – and the German defeat – was much more subdued. The Heidelberger Tageblatt devoted just one column to the abdication of the Kaiser. During the war, *Schnellpresse* had to stop building printing presses – and was unable to develop the platen press to production maturity. Although it was launched in 1914, production did not begin in earnest until 1921.



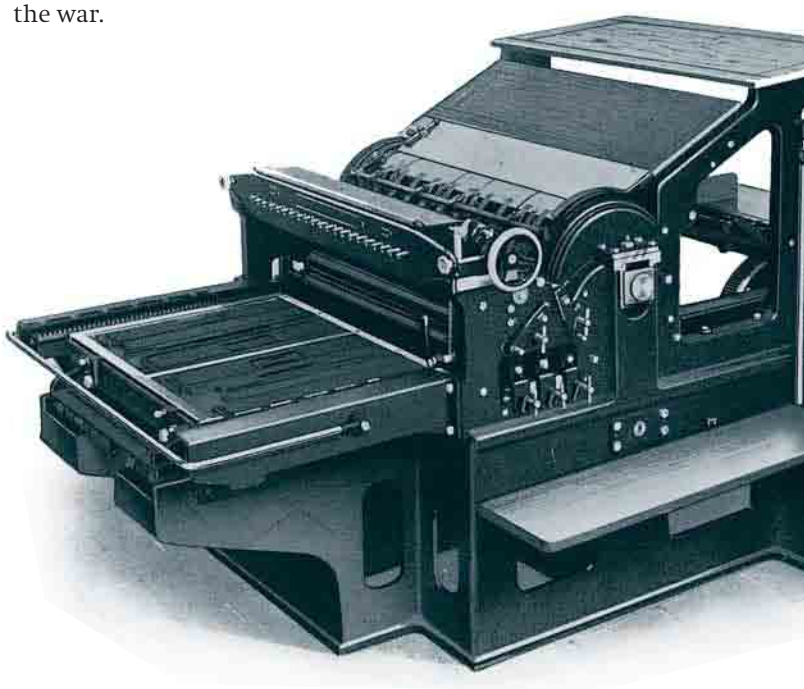
Richard Kahn's investment interests included Maschinenfabrik Geislingen "MAG", which supplied *Schnellpresse* with cast parts in the early 1920s. In 1929 the two companies merged, along with Heidelberger Maquet AG.

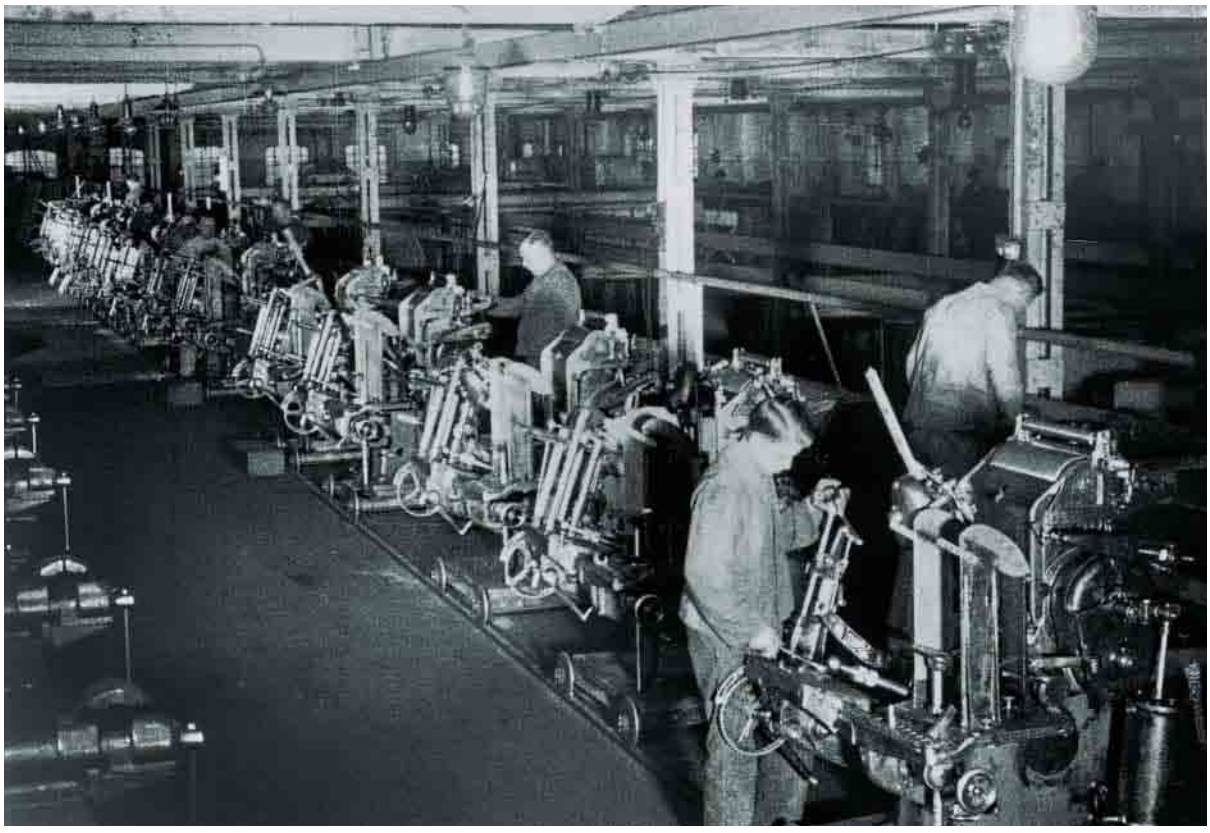
chiefly with the help of bank loans. His investments included Alfred Eversbusch's company, Mannheimer Schraubenfabrik (Mannheim Screw Factory), Maschinenfabrik Geislingen "MAG" (Geislingen Engineering Company), and Rhenania Motorenfabrik AG (Rhenania Engine Factory – Rhemag) in Mannheim.

During the First World War, he supplied the German army with aircraft components and other arms supplies, as a joint owner of the aircraft company Pfalz-Flugzeugwerke Speyer. It appears that he charged highly inflated prices – in July 1918, the Mannheim regional court fined him for profiteering. But once the war was over, he was granted a reprieve within the scope of a general amnesty. During 1918-19 his partner, Eversbusch, left *Schnellpresse*, and Kahn became the sole owner. In early 1920, Kahn was also appointed general manager.

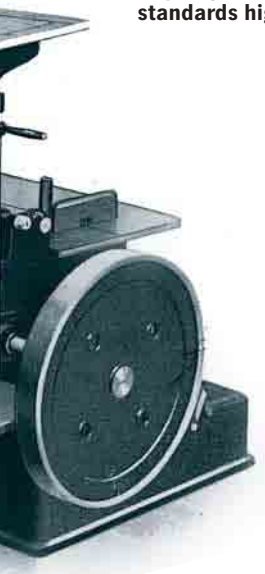
In the first few years after the war, the company's management took advantage of the transition to peacetime production to modernize the entire operation. The product range was cut back considerably to focus instead on the "Heureka" flatbed web offset press and the "Schnellläufer Exquisit" model developed before the war.

The "Schnellläufer Exquisit" press hit the market in 1921.





The "Heidelberger Platen" production line: In 1926, *Schnellpresse* became the first German mechanical engineering company to introduce assembly lines. As a result, it was able to increase its output, yet keep standards high.



Meanwhile, Heidelberg's engineers were working feverishly to develop the "Heidelberg Platen", which finally went into series production in 1921. Gradually, company finances improved. Whereas in 1919-20 there had been a loss of 305,000 marks, just a year later a profit of 103,000 marks was made.

During this time, the firm's key shareholder, Richard Kahn, moved to Berlin. He quickly set about acquiring several companies, which were mostly in the machine tool sector. In 1921 he founded "Richard Kahn GmbH" – a limited-liability holding company bringing together the key businesses in his group to form a syndicate. Under the group contract, all the businesses had to share their combined profits and losses. In other words, they all had to transfer their net profits over to Richard Kahn GmbH. After covering its costs, the holding company then compensated any losses made by individual enterprises, and the remainder was distributed among the businesses in the group. These new measures meant the end of *Schnellpresse's* financial independency.

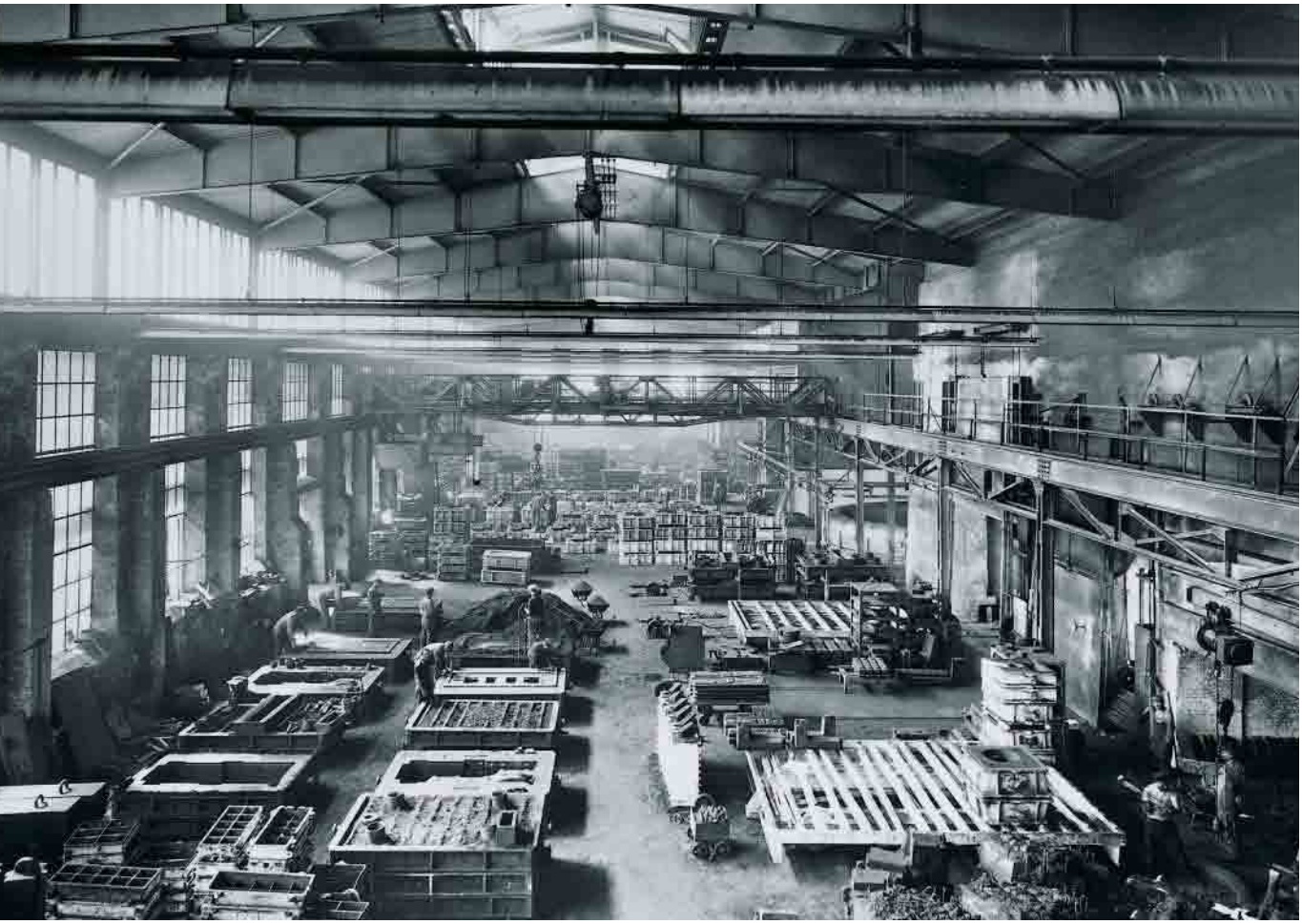
During the period of hyperinflation in Germany in 1922-23, the general assembly increased the company's share capital in several stages from 800,000 marks to 120 million paper marks. This enabled the Berlin banking house of Alexander Löwenherz Nachfolger and the Commerz- und Privatbank to acquire a stake in the company. In the wake of the 1923 devaluation and the introduction of the reichsmark, share capital dropped to 1,175 million reichsmarks in early 1925. That same year, the syndication agreement forced *Schnellpresse* to follow the other Kahn companies deep into the red. Like all the businesses in the Kahn group, it had to go into receivership to avert the threat of bankruptcy. In June 1926, a settlement was finally reached with the creditor

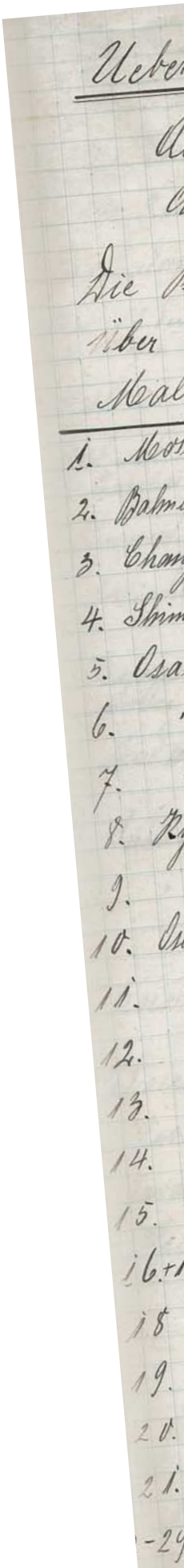
Richard Kahn and his then partner, Alfred Eversbusch, acquired *Schnellpresse* in 1916. When Germany was hit by hyperinflation, the company's profits were poured into supporting other ailing businesses in the Kahn empire. As a result, *Schnellpresse* also ended up in a precarious financial position. In 1932, after the collapse of the Kahn group, *Schnellpresse* was acquired by two banks: Deutsche Bank and Commerz- und Privatbank.

banks, who agreed to waive 70 percent of outstanding debts. *Schnellpresse* had to shoulder 800,000 reichsmarks of the remainder – which totalled more than eight million reichsmarks. All the shares and business assets of the companies owned by Kahn and his group, Richard Kahn GmbH were mortgaged to the Deutsche Bank.

This settlement also spelled the end for the syndicate – and *Schnellpresse* regained its financial independence. Now the company could finally profit from all the effort it had invested during the years of turmoil. The production facilities had been modernized, and some of them were already set up for assembly line production. And the "Heidelberg Platen", which had been in series production since 1921, had been improved considerably at the hands of Viktor Jereczek, whom Kahn had assigned to Heidelberg in 1922. Jereczek had introduced a toggle system to reduce noise, increase the contact pressure, and boost print quality. The new model also had a cylinder inking unit with two inking rollers – as well as the famous "propeller-gripper". The "Platen" was capable of printing 2,500 – 3,000 sheets per hour. With the help of innovative sales techniques, the "Heidelberger Druckautomat" – to give it its official name – soon triumphed and opened up a glowing future for the company. Once hyperinflation ended, the "Exquisit" letterpress model was also a market success. Soon after the agreed on settlement with the banks had been finalized, *Schnellpresse* again started to turn a profit.

MAG foundry in Geislingen: the iron was melted in the cupola furnace and cast into machine components in the molds down below.



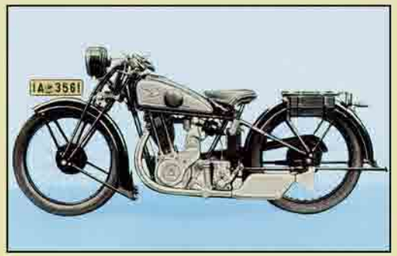


The Far East – New Horizons

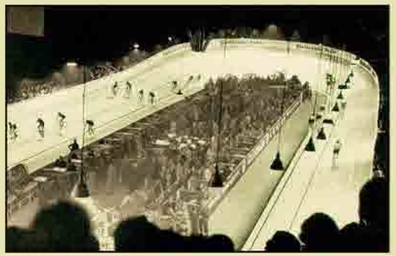
Schnellpresse began forging business links with Japan and the Asia/Pacific region starting around 1925. The company was represented in Japan by the family-run business of Kawashima. For two years, engineer Karl Ehrmann travelled around East Asia, keeping detailed records of his visits. His job was to help install presses and train agency workers. In the photograph below, he is standing on the left of the Japanese representative, Mr Kawashima, and his son.

The “Roaring 20s” – the good and bad times

In the aftermath of the traumatic First World War, people craved diversion: the “Roaring 20s” were born. Culture and business experienced a boom. Filmmakers, musicians, fashion designers, painters, scientists and engineers experimented with new shapes, styles and approaches. The icons of this decade were figures such as Charlie Chaplin and Buster Keaton, Mickey Mouse and Marlene Dietrich, Albert Einstein and Fritz Lang. Exotic-looking new crafts for road, rail and air travel ushered in new records and spectacular crashes – in addition to further technological advances. But this period of scientific and cultural exuberance ended abruptly when the stock market on New York’s Wall Street collapsed on October 25, 1929. The entire world economy veered off course and plunged into a deep recession marked by mass unemployment.

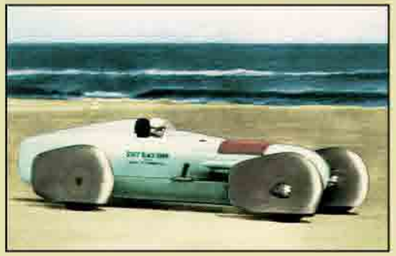


D-Rad



Sechstagerennen

Avusrennen



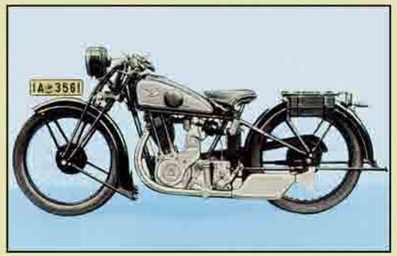
Black Hawk

Rollendes Kommißbrot

Bremen und Europa

Do X

Schienen-Zeppelin



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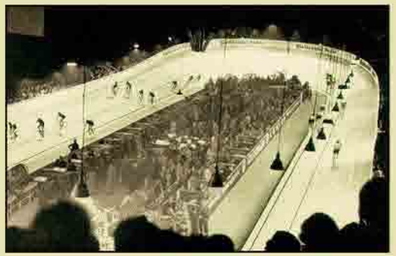

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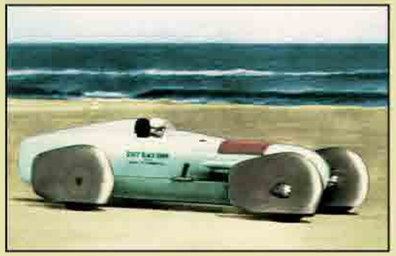


Black Hawk

Rollendes Kommißbrot

Bremen und Europa

Do X

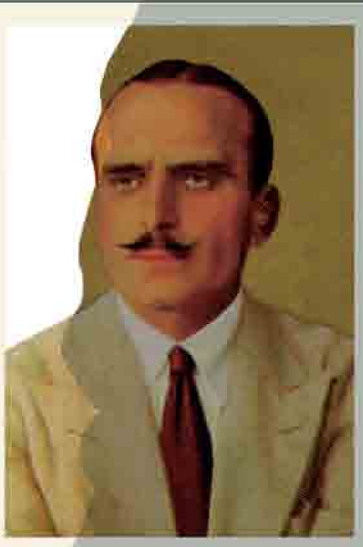
Schienen-Zeppelin

Ceci n'est nas une nipe.

Harold Lloyd

Marlene Dietrich

Buster Keaton



Douglas Fairbanks

Greta Garbo

Rudolph Valentino


VOX
Foxrot
Orchester
Sing a Song
Bestell-Nr. 08043
VOX
Matriz-Nr. 25


LUCKY STRIKE
"IT'S TOASTED"
CIGARETTES

THE TWENTIES

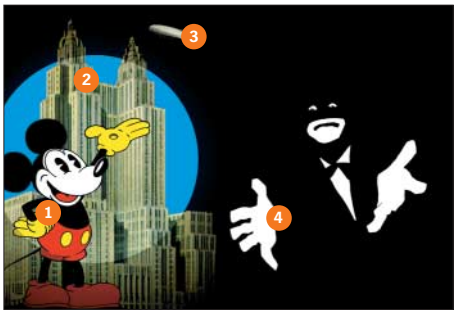
1 Mickey Mouse grabs the spotlight in 1928 – and makes his creator, Walt Disney, world-famous.

2 The Eldorado, built at 300 Central Park West in 1929 by Margon & Holder. Counting 30 floors, it is one of New York's most imposing buildings of the era.

5 Albert Einstein is awarded a Nobel Prize for his "Theory of Relativity" in 1921. He emigrates to the U.S. in 1933 to teach at Princeton University.

6 The straw hat, seen here as a lapel pin, is an important feature of the gentleman's casual wardrobe. Flannel pants and striped jacket make the perfect match.

7 Gertrude Stein, an American author (1874–1946) who prefers Paris, loves to put purely associative word sequences and seemingly nonsensical repetitions of the same word into her prose. She uses them to express the passage of time.



3 Airships, nicknamed zeppelins after their originator, serve a transatlantic route until the Hindenburg catastrophe in 1937.

4 Al Jolson is "The Jazz Singer" in one of the first American talkies, released in 1927.

8 "Metropolis", Fritz Lang's legendary film, is made in 1926. Shown here is a shot of the set.

9 Inflation. Inflation in Germany at the beginning of the '20s leads to a total currency devaluation, which is halted in 1924 by the introduction of the reichsmark.

10 The D-Rad made at Deutsche Werke's Spandau plant clocks 95 kilometers per hour (57 mph) with its four-stroke engine in 1929.

11 At the first Avus race in 1921, Fritz von Opel set the record speed of 128.4 kilometers per hour (77 mph) in his Opel.

12 The Hanomag microcar of 1924, with its 500 cubic centimeters and one-cylinder engine, goes up to 70 kilometers per hour (42 mph). Popularly known as "the canned bread on wheels".

13 The DO X flying boat is the world's largest hydroglider in 1929. Built by Claudius Dornier, it has a wingspan of 48 meters (157 1/2 feet) and is powered by 12 engines. The DO X crosses the southern Atlantic from Lisbon to Rio de Janeiro.

14 The Six-Day Race in the Berlin Sports Arena celebrates its victories. In 1924 drivers Krupkat and Huschke, both Berliners, set a new record with 4544.2 kilometers in 145 hours.

15 The "Black Hawk" of Indy winner Frank Lockhart takes a shot at beating the world speed record at Daytona Beach in 1928.

16 The "Bremen" and the "Europa" set out on their maiden voyages in 1929 and 1930, respectively. The sister ships both receive the "Blue Riband" maritime distinction.

17 "Zeppelin on Rails" is the name the German National Railways give to the propeller-driven car that debuts in late 1929. Manufacturer Kruckenberg's technical innovation is not a successful breakthrough, however.

18 René Magritte's surrealist declaration: "This is not a pipe."

Film stars of the "Roaring '20s"

19 Harold Lloyd

20 Buster Keaton

21 Greta Garbo

22 Marlene Dietrich

23 Douglas Fairbanks

24 Rudolph Valentino

25 Charlie Chaplin

26 Charleston, the dance of the 1920s.

27 Lucky Strike's old look. Until 1924, the logo has a green background. Then Raymond Loewy turns it white.

28 Record made of shellac; shown here is a recording of the then famous dance orchestra led by Bernard Etté.

Interior of a demo bus carrying fully operational presses: *Schnellpresse's* sales agents succeeded in winning over the customer at his own doorstep. Even in the U.S. the demo buses were largely responsible for the growing preference for "Original Heidelberg".

Thanks to the demo buses, Schnellpressenfabrik's "Heidelberg Platen" became internationally known and highly popular.

The Heidelberg Platen's Success Story

Hubert H. A. Sternberg made a decisive contribution to the success of Schnellpressenfabrik Heidelberg AG *Schnellpresse*. A native of Potsdam, he served in the First World War after leaving high school, and then trained in business management at the publishing company of Rudolf Mosse in Berlin. In 1923, at the age of 26, he took up a post in the Kahn group, where he rapidly rose to become a director.

In early 1926 Richard Kahn asked him to take a look at the group's firm in Heidelberg, to determine whether and how "Schnellpresse could be sorted out". Sternberg took a trip to Heidelberg, inspected the factory, and accepted the assignment – provided that he was given an entirely free hand, particularly with regard to the manufacturing program, and five percent of the shares. Kahn agreed to both conditions. (This was related subsequently by Lothar Hug, who served the company for 50 years as platen sales manager, not retiring until 1974.)

And so the 29-year-old Sternberg arrived at *Schnellpresse* in Heidelberg – and went on to play the leading role in what was to be a remarkable period of continuity in the history of the firm.

He steered the company successfully through the Great Depression, the National Socialist dictatorship, the Second World War and its aftermath, and Germany's economic revival.

Novel Ideas in Marketing and Production

On June 22, 1926, immediately after joining the firm, Sternberg was appointed to the management board. The other members of the board were Ernst Schwarzländer, who had been serving as a deputy board member since 1920 (he retired in 1960), Oskar Leroi, and Wilhelm Meurer, who only remained until March 1927.

The driving force among them was undoubtedly Sternberg. By wielding a combination of modern advertising methods, pioneering production techniques, and continuous product development, he drove the firm to the summit of the printing press industry. The first priority, in the wake of the global economic crisis, was to boost business. Sternberg achieved this with novel marketing and distribution methods. For instance, he had buses converted into demonstration vehicles carrying fully operational Heidelberg platens, so that print shop

owners and employees could view demonstrations at their own doorsteps.

The demo buses were manned by mechanics, who put the platens through their paces and carried out any necessary repairs or maintenance on other Heidelberg presses in the print shops.

Sternberg's ingenious system of payment by installments, intended to provide easy financing for potential buyers with the promise that the Heidelberg would "pay for itself", was an equally revolutionary – and irresistible – idea. His argument that the Heidelberg would increase production to the point where the monthly installment would be more than covered – and a tidy profit made into the bargain – found many a willing ear.

Within a very short time, sales had boomed and production volumes had to be stepped up.

The catchword was customer focus. But the idea took some getting used to on the part of the independent sales and service firms responsible for selling Heidelberg's presses. At first they were less than enthusiastic about this elaborate sales and service policy. But the rising sales figures soon also enabled them to profit from this intensive customer service.

The former skeptics rapidly turned into franchised distributors. The demo buses now travelled not only through Germany and Europe, but also to the industrial centers of the U.S., South America, and India. Sternberg made it mandatory for all of the larger agencies of *Schnellpresse* to acquire demo buses, "to use this wonderful advertising medium in as many places as possible to promote sales".

After many years of experience with these mobile demonstrations, *Schnellpresse* designed a standard version of the demo bus, which was offered to agencies at half the normal price.

A Heidelberg two-color Cylinder on a demo bus in the mid-1960s. The mobile demos even toured the U.S.

In the mid-1930s, the company sold four of these "corporate image" demo buses to France, two to the U.K., and one each to Argentina, Brazil, India, South Africa, Australia, Portugal, the Netherlands, and Switzerland. A total of 25 buses were making the rounds worldwide by 1937.

With his advertising acumen, Sternberg also saw an opportunity to bolster his brand by appropriately naming the platens. He knew exactly how to exploit to the full the reputation of his production site: the whole world knew the romantic town of Heidelberg, celebrated in verse and song by Goethe, Hölderlin, Keller, and Victor von Scheffel. For this

Heidelberger Druckmaschinen have been reaching customers directly since the late 1920s. Even today demo buses travel through Russia's vast expanses.

Hubert H. A. Sternberg – Entrepreneur and Visionary.

The applause for Hubert Heinrich Adalbert Sternberg at his 90th birthday celebration on January 13, 1987, in Heidelberg's Europäischer Hof hotel was warm and sincere. After his praises had been sung, the tall and sprightly guest of honor announced his intention to sing a very special song, exhorting guests to join in wholeheartedly in the second verse. Accompanied by a local brass band, the Kurpfälzer Jagdhornbläser, the native of Potsdam then launched into a lusty rendition of "Ich hab' mein Herz in Heidelberg verloren ..." (I lost my heart in Heidelberg...)

Nor was there a shadow of a doubt that Sternberg – attached as he was to his house on the "Philosphers' Walk" up on the slopes across from the Old Town and to the inhabitants of Heidelberg – was in fact referring to his much-loved company. Sternberg died just a few months later, on June 22, 1987. But he will always be remembered as the Grand Old Man of the printing industry. Recipient of a number of honors and awards for his contributions over many years to the German economy, he had already become a legend in his lifetime. For 46 years he had guided Heidelberg's destiny. When, in late 1972, the 76-year-old resigned as chairman of the Management Board and was appointed an honorary member of the Supervisory Board, he could look back on a lifetime of impressive achievement.

An entrepreneur in the truest sense of the word, he built up Heidelberger Druckmaschinen from its small and insignificant beginnings to become the world's leading printing press manufacturer. A vital role in this success was played by the three pillars of Sternbergian corporate philosophy: a product, a market, and the conscientious calculation of the businessman.

His other great assets were his intuitive understanding of technical matters, and the ability to imbue others with his own enthusiasm. The "Heidelberg spirit" that he engendered united all employees, from the top director to the newest trainee, and helped the company tide over the most difficult times.

When the 29-year-old Sternberg moved from Berlin to Heidelberg in 1926 to take over the management of the "factory on the railway tracks", things there were not looking good. Schnellpresse was on the verge of bankruptcy. But he succeeded in averting it by deciding to concentrate all efforts on a single product, the Heidelberg Platen.

With this first fully automatic sheetfed press, called "Tiegel" for short in German, Sternberg laid the foundations for Heidelberg's worldwide reputation. The combination of cost-effective assembly-line production and innovative marketing ideas enabled him to increase exports and turned the name "Heidelberg" into a watchword for precision, power and reliability for printers all over the world.

In the immediate aftermath of the Second World War, Sternberg contributed not only to the reconstruction of his own company, but also to the reestablishment and consolidation of the Heidelberg Chamber of Commerce and Industry. As its president between 1945 and 1949, he established links with the U.S. occupation authorities, and in 1949 organized the first German postwar exhibition in New York. In the lean years before currency reform, Sternberg provided for his employees through his "Machines for Food" export initiative.

His degree of personal involvement was high, and he saw to many things himself. When new presses were under development, he would spend days standing alongside the designers at the drawing board. He often personally received agency representatives and customers visiting Heidelberg, and took the opportunity to inquire about the status of Heidelberg in their areas.

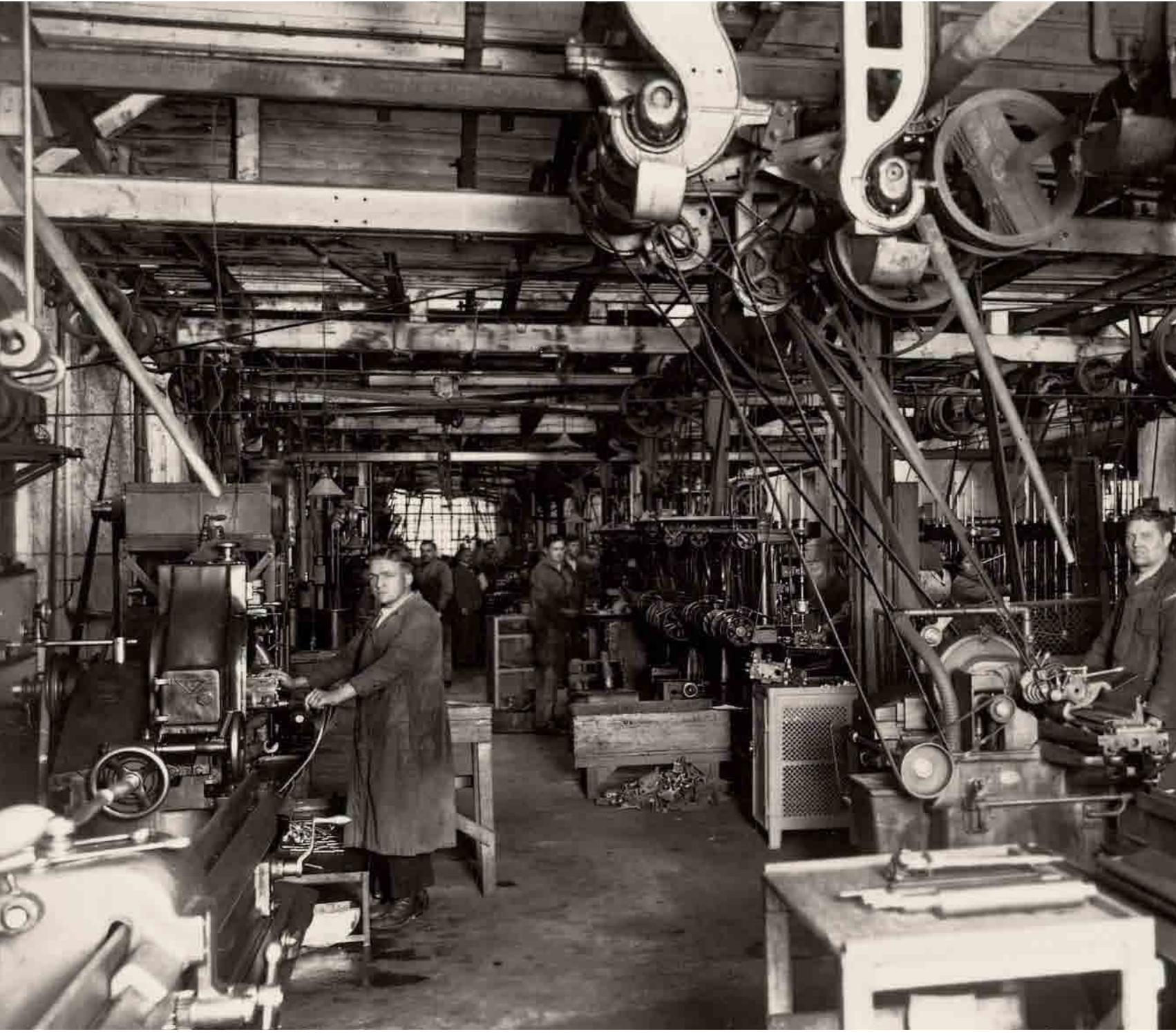
Among Sternberg's most significant decisions in the 1950s was the construction of the new production site in Wiesloch, after expansion plans in Heidelberg itself had been rejected. With his customary far-sightedness, he made sure there was plenty of space in reserve, in the absence of which Schnellpressenfabrik would not have been able to carry through its ambitious investment plans of the following decade. The far-reaching effects of this decision are remembered to this day, not least by the vocational training school in Wiesloch that carries his name.

When Hubert H. A. Sternberg celebrated his 65th birthday in 1962, he was a long way from contemplating retirement, and was in fact to remain at the helm of the company for another ten years. It was during this period that the company changed its name from Schnellpressenfabrik to Heidelberger Druckmaschinen AG, in order to underscore its technical achievements. Sternberg was an outstanding individual who was not afraid to go back on his own decisions. And so in 1961 he agreed, despite some earlier skepticism, to manufacture offset presses in addition to letterpress machines.

Sternberg also played a particularly important role in the establishment and expansion of Drupa in Düsseldorf. He had assumed responsibility for the world's largest trade show for the printing and publishing industries ever since its inception in 1951. It was he who gave the crucial impetus to advertising targeted at exhibitors and visitors. And it was thanks to him that Düsseldorf obtained a modern trade show site in the early 1970s. Until Drupa 72, he chaired the trade show committee, and thereafter was its honorary president. Among the many honors and awards he received for his services to industry were the National Cross of Merit with Star (with which he was personally invested in 1962 by Ludwig Erhard, then Federal Economic Minister) and an honorary doctorate from the Aachen Polytechnic (in 1967).

But the title that undoubtedly gave him the most pleasure was that of "Father of the Printers", bestowed upon him by satisfied customers.

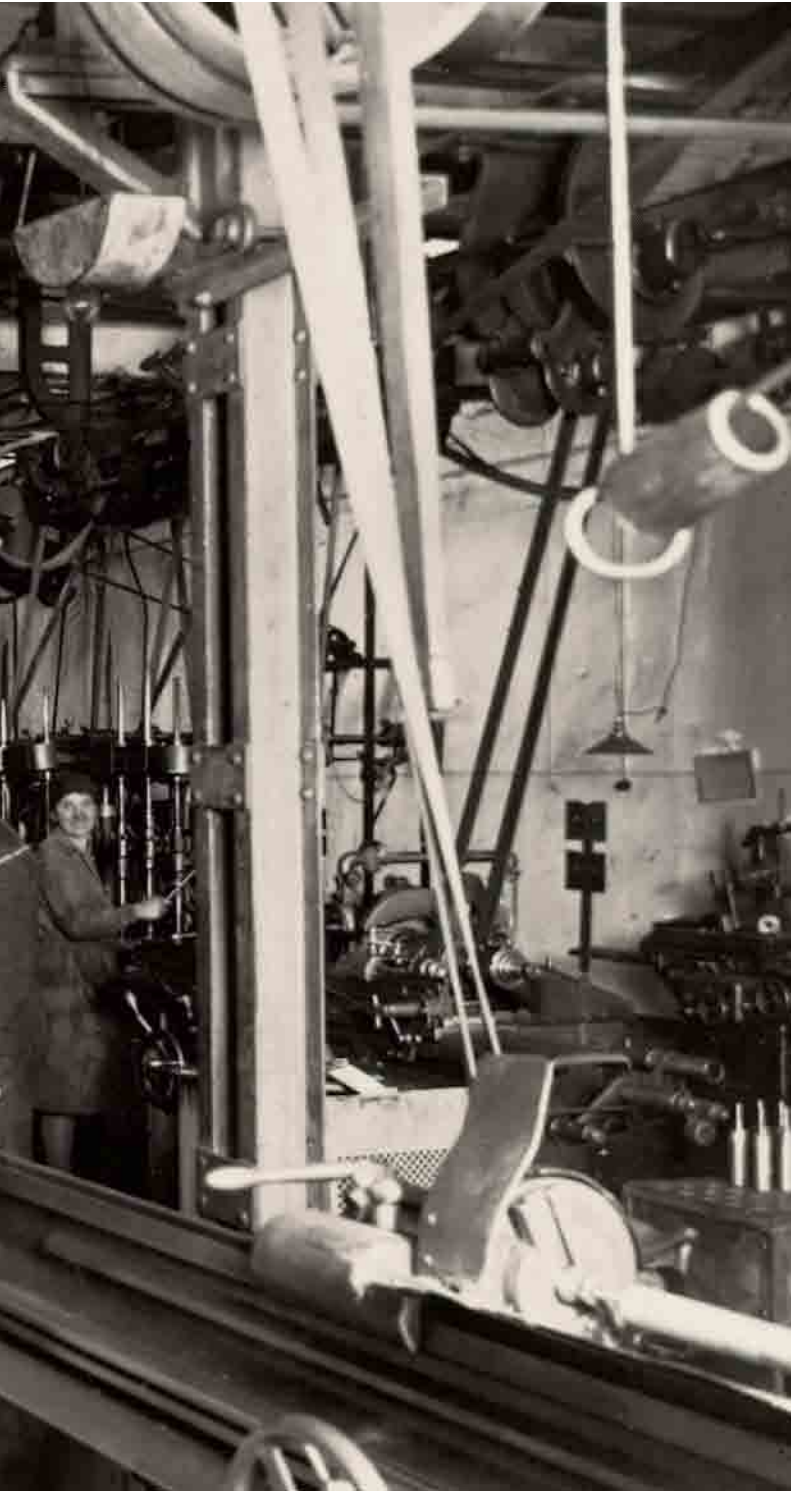
Hubert H. A. Sternberg at his 90th birthday celebration on January 13, 1987.



The Heidelberg factory in the 1930s. Following the Great Depression, *Schnellpresse* enjoyed a period of unprecedented growth under Sternberg's management, which was brought to an abrupt end by the outbreak of the Second World War.

reason Sternberg named the press the "Heidelberger Tiegel" (Heidelberg Platen), thus infusing a breath of life and romance into each of these seemingly soulless cast-iron machines.

But romance alone was not enough. What customers demanded first and foremost was quality at a reasonable price. Shortly after assuming office, Sternberg had undertaken to produce 200 platens of consistently high quality every month. This could be achieved only through the use of modern machine tools and assembly-line production. And so in 1927 the company installed, along with other equipment, a large surface grinding machine, enabling the base surface of the platen's frame and the printing surface to be ground to an accuracy of one-hundredth of a millimeter – 14 times faster than the job could be done manually. Other acquisitions included special machine tools such as multi-unit drills, gear-cutting machines, turret



lathes, and profilers, some of which were designed and constructed in Heidelberg's own workshops.

There were also changes in the workflow. Individual machine elements were collected into groups, and assembly was carried out by employees at platform conveyors and on assembly lines. In this, *Schnellpresse* was a pioneer in both a technical and an organizational sense: apart from the automotive and electrical engineering industries, no other industry had adopted the assembly-line production introduced by Henry Ford.

Sternberg's entrepreneurial far-sightedness gave *Schnellpresse* a competitive edge that was to stand it in good stead in the economic slump ahead. Another of his innovations, which helped push up sales, was the customer magazine, "Heidelberger Nachrichten: Anregungen und Ratschläge für fortschrittliche Drucker" (Heidelberg News: Ideas and Advice for Progressive Printers), published by the company.

The "Heidelberg News"

Started in 1930 as part of a customer-oriented marketing strategy, the magazine was soon being distributed in 23 countries. Initially a monthly, it was published six times a year from 1931 onward.

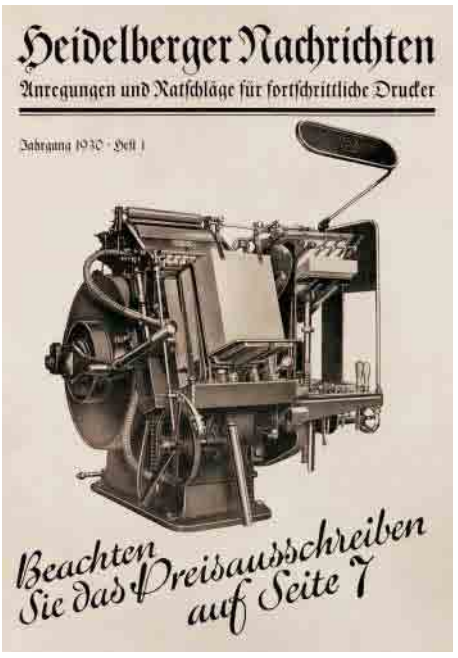
The articles were mainly about the presses manufactured by the company and the specific characteristics of each. Schematic drawings and exact specifications were used to elucidate how individual machine elements worked.

The Heidelberg News also carried illustrated reports on the production of the presses, and gave its readers advice on business management. And it advertised job vacancies, as a service to customers. Already in the 1930s, the Heidelberg News was delivering what every publisher today demands of his editors: utility value.

The customer magazine was of course printed on Heidelberg presses, providing a wonderful opportunity to demonstrate the power and versatility of the Heidelberg Platen and its successors, the Cylinders. From the second year of publication, the magazine was printed in color and contained inserts such as postcards, labels, stationery, carbon paper, or paper napkins. Even the covers were varied for demonstration purposes: they were of paper, cardboard or high-gloss foil, and embossed or diecut with four-color fine-art printing.

The engineering works of Maschinenfabrik A.G. Geislingen (MAG), also founded in 1850, manufactured a wide range of products for many years, including universal milling machines. Shortly after the merger with *Schnellpresse*, MAG concentrated on producing castings for Heidelberger Druckmaschinen.

The customer magazine "Heidelberg News" rapidly developed into an important marketing tool. Sternberg, an astute marketeer, utilized this medium for more than dissemination of product information. The magazine also provided advice on business management. Seventy years after its first appearance, the "Heidelberg News" has a total circulation of 350,000 and is published in 25 languages.



Sternberg's marketing mix included regular competitions in the Heidelberg News, such as the prize of 100 reichsmarks for the best printing job of the month on a Heidelberg press. Half of the prize money went to the owner of the press, and the other half to the operator who had worked on the winning entry. For wider publicity, the entry was also published in the Heidelberg News.

Merger for a Broader Base

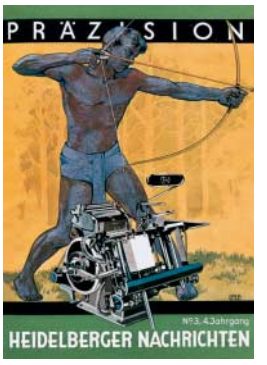
Members of Heidelberg's Management Board were also responsible for two other companies in the Kahn group: Hubert H. A. Sternberg and Oskar Leroi, who were not only appointed to the board of *Schnellpresse* in the year of 1926, but were also simultaneously entrusted with the management of Maquet AG, of which Ernst Schwarzländer was already a member of the board .

Schwarzländer also headed MAG, the traditional engineering works in Geislingen an der Steige. He served Schnellpressenfabrik, which he joined in 1913, for forty-seven years. The buildings of the firm of Maquet, which manufactured operating tables, hospital furniture and other medical equipment, were located directly next to *Schnellpresse*.

MAG, which was located in Geislingen 160 km (100 miles) from Heidelberg, had a very similar history to that of Schnellpresse. It had also been established by the son of a miller, Daniel Straub, in 1850. By 1875 Straub employed 350 workers in his foundry, manufacturing water wheels and turbines. In the 1920s *Schnellpresse* and MAG entered into a close collaboration under the aegis of Kahn Holdings. MAG undertook casting work for Schnellpressenfabrik and was soon associated with the Heidelberg company also through the person of Ernst Schwarzländer.

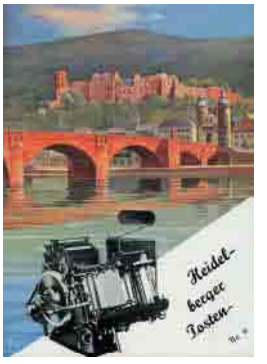
In view of the many common factors the three companies shared, it made sense to amalgamate them, and in November 1929 they were all merged under the management of *Schnellpresse*. Maquet AG and MAG transferred all their assets to *Schnellpresse* retroactively with effect from January 1, 1929. The equity capital of Schnellpressenfabrik was thus simultaneously increased from 351,000 to 2 million reichsmarks. Both of the absorbed firms continued operating as departments of *Schnellpresse*, and initially retained their own names and existing manufacturing programs. The collaboration with MAG soon resulted in all casting work being transferred from Heidelberg to Geislingen.

In 1929 the newly merged company reported a profit of 237,348.96 reichsmarks – a result deemed satisfactory by both the Management Board and shareholders at a time when the depression following the Wall Street crash was beginning to cast its shadow. That same year, *Schnellpresse* founded the sales subsidiary of Heidelberg Printing Machinery Corp., with headquarters in New York. Its performance was adjudged in the 1929 annual report to be "reasonably satisfactory, in view of the prevailing economic climate in America".

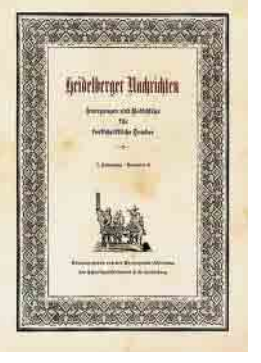


The customer magazine…

… Heidelberg …



… News …

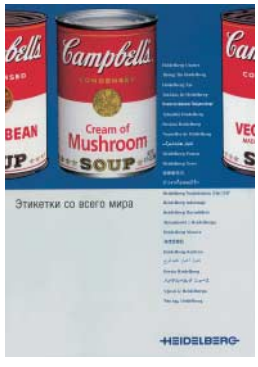


… over the years

Then as now …

… readers expected …

… practice-oriented …



… information.

The crash of the New York Stock Exchange did more than just wipe out the fortunes of individual investors. Widespread unemployment followed, thus creating fertile ground for the rise of the Nazi party in Germany.

The Great Depression and World War II

In 1930, the German economy was pulled headlong into the Great Depression. Schnellpressenfabrik Heidelberg AG *Schnellpresse* was also hit by the crisis. Although the company earned a profit of 164,000 reichsmarks that year, enough to pay shareholder dividends, the situation soured just a year later, when profits dropped to 33,500 reichsmarks. The Management Board commented as follows:

"The crisis is real ... it has become so deep and so widespread that it has engulfed our company as well. Exports make up 80% of our sales, which buffered us against domestic economic problems in the past. But now that the crisis has left no corner of the world untouched, we no longer have a safe haven anywhere. In the few countries that still have purchasing power, we have worked with strong local agencies to maximize our opportunity. As a result of this global situation, Schnellpresse turnover is 10% down compared to the previous year."

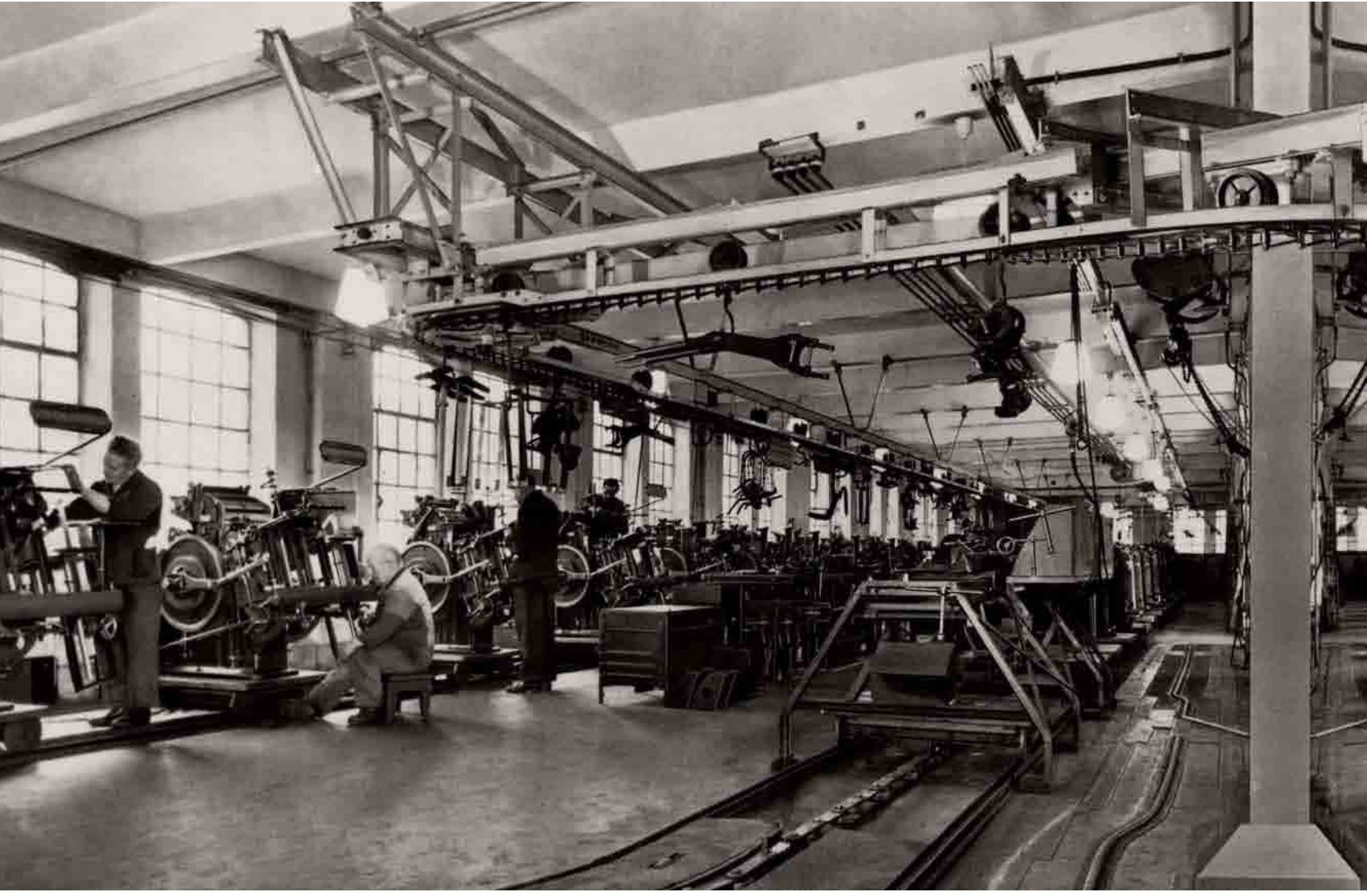
The company reached the peak of the crisis in 1932. That year marked a crucial turning point in the history of *Schnellpresse*. On August 25th, Richard Kahn retired from his Supervisory Board seat after almost 16 years. His empire had finally crumbled. The Deutsche Bank und Diskonto-Gesellschaft and the Commerz- und Privatbank acquired the majority of *Schnellpresse* shares, thus ensuring the long-term survival of the company.

Kahn himself was forced to swear an insolvent debtor's oath on November 2, 1932. Little is known about the final days of this colorful personality. On April 4, 1933, Kahn was taken into protective custody in Berlin, and on April 12th he was placed under arrest for several crimes of bankruptcy. Among other things, he was accused of using sales of shares in *Schnellpresse* to satisfy the interests of large banks while leaving all other creditors high and dry. The judicial authorities also investigated the Commerzbank and the Deutsche Bank in this matter.

Because Kahn was Jewish, the judicial authorities threw the book at him for he outwardly embodied the distorted picture of the "Jewish speculator" dramatized by Nazi propaganda. To make matters worse, the period of his imprisonment coincided with the first wave of antisemitic boycotts and riots in Germany.

Kahn's two sons, Charles-Henry and Rudolf, emigrated to France and England

The stock market crash on Wall Street on October 25, 1929, precipitated a global economic crisis. This led to the fall of the Kahn empire in 1932, restoring economic independence to *Schnellpresse*.



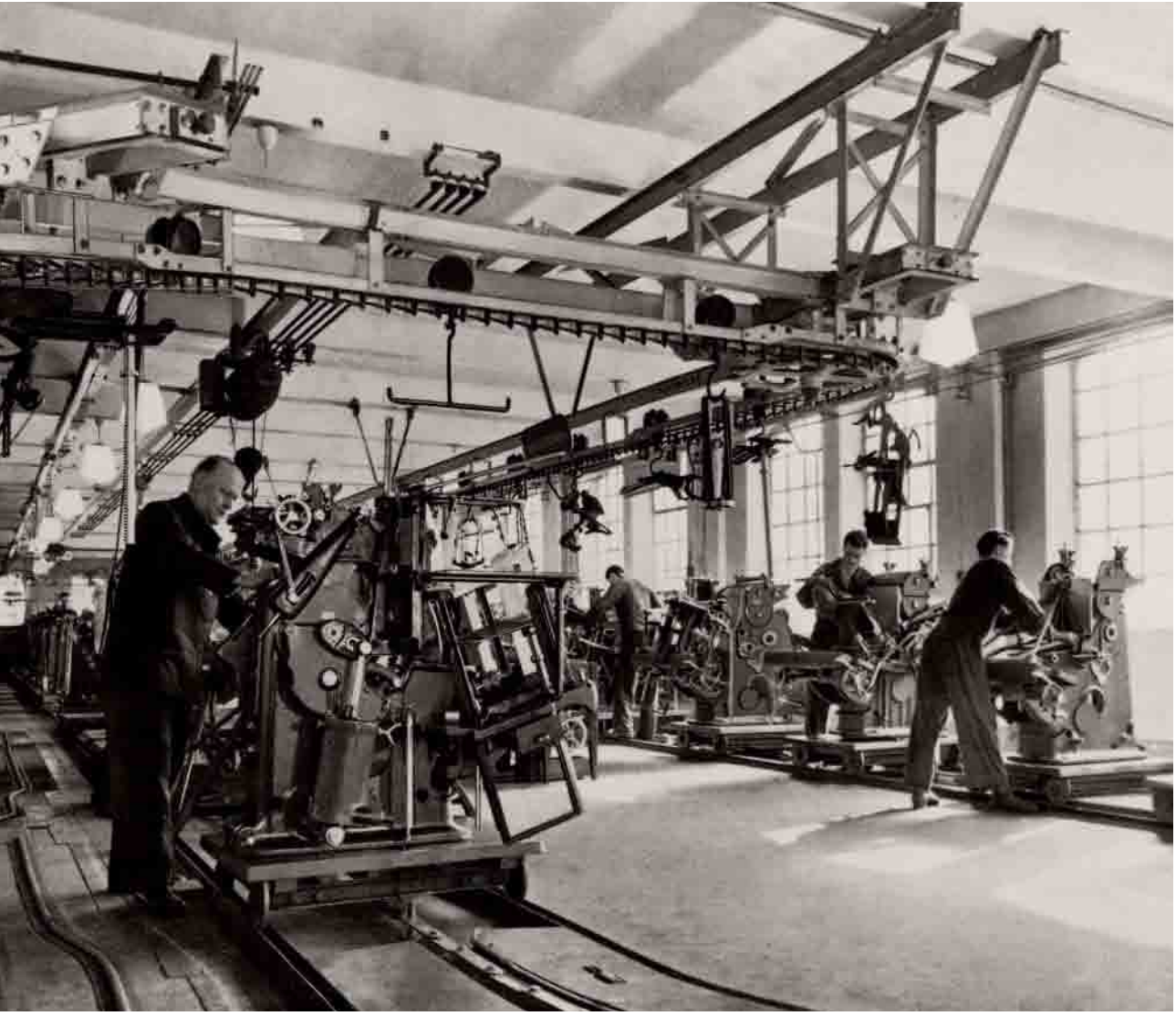
Platen assembly in Heidelberg: the presses snaked through the hall on two U-shaped assembly lines as parts were added one by one. Small parts were installed from above.

in the 1930s. During the Second World War they served in the Allied military forces and eventually earned French and British citizenship, respectively. After the war they filed a claim for the "aryanized" property of their parents in Germany to be returned, and persuaded the occupation forces to review the ownership arrangement of *Schnellpresse*. The U.S. authorities interviewed Management Board members Sternberg and Schwarzländer, but these managed to provide proof that *Schnellpresse* had been spun off from the Kahn Group in 1931 without any antisemitic motivation.

Before the Kahn empire fell apart, the conglomerate comprised 27 companies, including mechanical engineering firms, retailing operations, real estate companies, and self-serve restaurants. *Schnellpresse* brought in greater revenues than any of the others. It had an ace in the hole: its letterpress machines were extraordinarily successful and highly profitable.

Creative Export Campaign

The managers of *Schnellpresse* did not take the Great Depression lying down, but developed a two-pronged strategy to overcome it. First, they focussed almost exclusively on their company's core competency: building printing presses. Production of the relatively unsuccessful Stock Kardan motorcycle (see advertisement on p. 45) was halted altogether in 1933. Heidelberg's Management Board also sold the Maquet division, because it felt that the manufacture of surgical tables and hospital furniture was out of place in a mechanical engineering firm. A few unrelated fields of business were continued for a while (the Maschinenfabrik Geislingen built mills, turbines, and wire-braiding machines), but they gradually declined in importance.

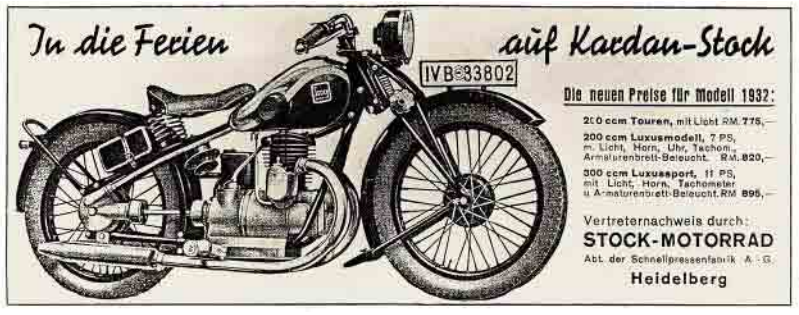


As the second prong of its survival strategy, *Schnellpresse* expanded its product line to include a larger version of the automatic platen press. The new press was dubbed "The Giant Heidelberg", while the standard platen press remained "The Super Heidelberg".

In the mid-1930s, Sternberg took full advantage of the economic upturn, primarily in the export business, on which his company's business was even more dependent than before. His optimism and catchy advertising campaigns captured customers' imaginations. Short on cash, Heidelberg allowed its customers to make installment payments on new presses. In Britain, a down payment of just five pounds sterling was all it took to purchase a fully installed Heidelberg Platen letterpress. Every fifth customer received an invitation to visit Heidelberg, and every tenth buyer won a 14-day summer holiday on the Neckar River.

Back home in Germany, however, management's positive outlook was darkened in 1935 by the policies of the Nazi regime. It implemented the "Order for Protection of Independent Newspaper Publishers", which forced the systematic liquidation of private and non-conformist publishing houses. This move was followed in 1935 by a "market regulation in the graphic arts industry".

While domestic sales of automatic platen presses dropped by more than one quarter, foreign sales increased by about



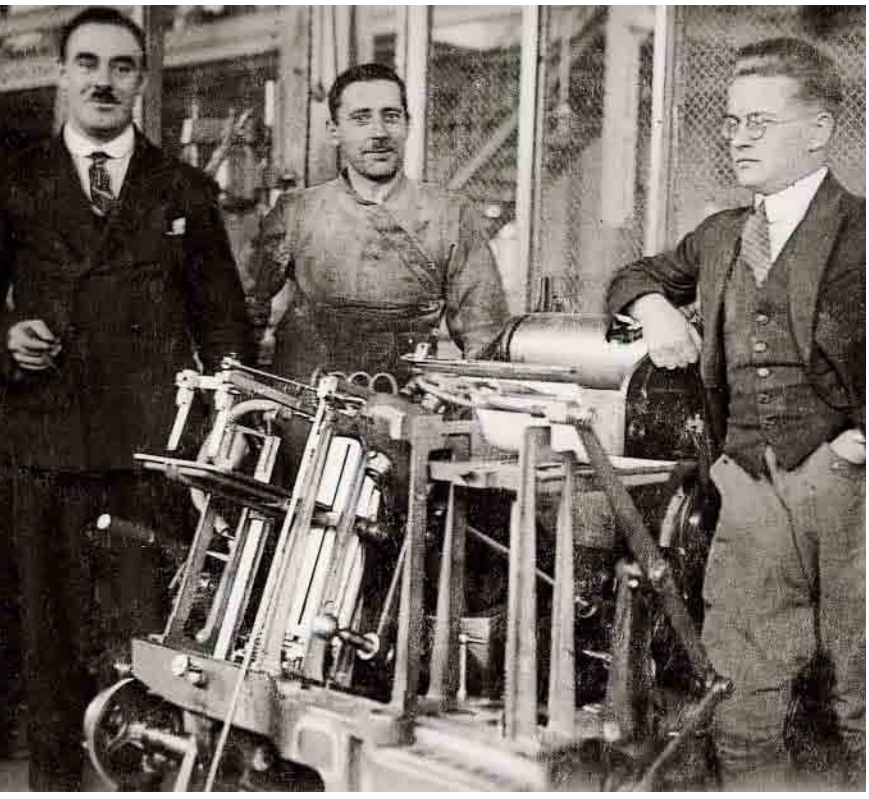
The Stock Motorcycle

Schnellpresse manufactured a stock motorcycle in an attempt to expand its product line in the early 1930s. The bike was based on the American Evans line of motorcycles. It was a light machine with a two-stroke engine with 119 cc of displacement and a chain drive.

In 1924, Richard Kahn acquired the production facilities and incorporated them into his company, Stock Motorpflug AG, in Berlin. Production was moved to Heidleberg seven years later, in 1931.

With Heus at the helm as the chief development engineer, the company produced a solid, lightweight motorcyle with a universal shaft drive (using a shaft instead of a chain) that was quickly embraced by racing enthusiasts.

Schnellpresse offered the "Stock Extra", which was derived from the Evans design, for 325 reichsmarks. The more powerful versions with a universal shaft drive sold for between 775 and 895 reichsmarks. But such refined vehicles were tough to sell in those difficult times. Despite the strong reputation of the Kardan-Stock motorcycle, sales fell far below expectations. Management therefore decided to halt production in late 1933.



The Swiss agency was an important source of support for *Schnellpresse* both before and after the war. On the right of the picture is Artur Büttner, who later became the Management Board member for development.

a third. The situation in Germany did not improve until the "market regulation order for the graphic arts industry" was relaxed in 1936.

But the export business still provided *Schnellpresse* with its bread-and-butter income. Sixty percent of the company's sales came from abroad, thanks in part to the use of demo buses. This suited the Nazi economic policy-makers, because it meant that the company was bringing urgently needed foreign exchange into the country. Due largely to its export business, *Schnellpresse* became Germany's second-largest manufacturer of printing presses based on total production value in the mid-1930s.

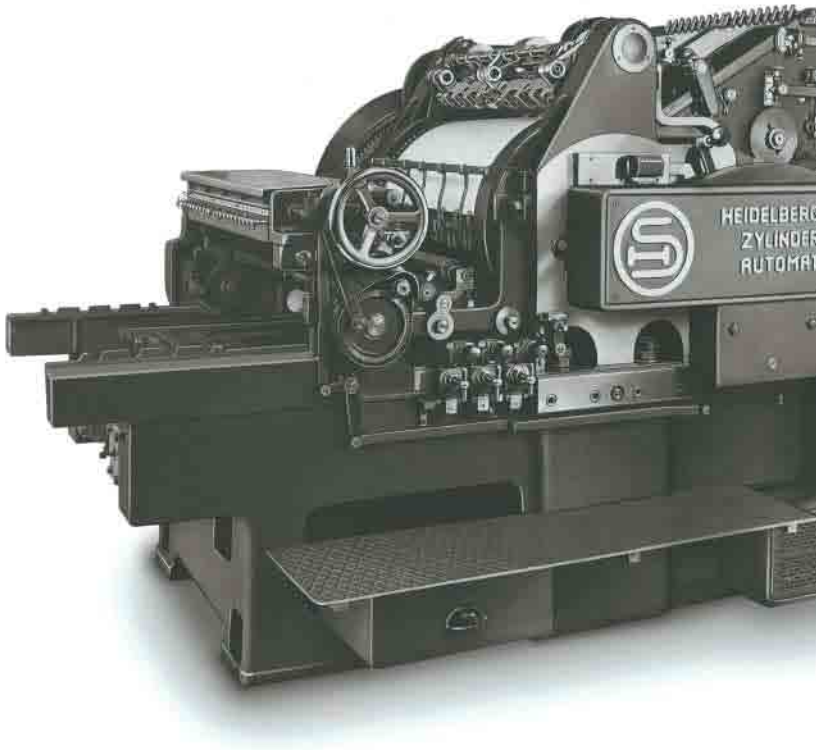
The "Heidelberg Automatic Cylinder Press"

During that time, the technical development at *Schnellpresse* was focused entirely on its new fully automatic cylinder press, the Heidelberg Automatic Cylinder Press.

Schnellpresse had achieved a prominent worldwide position in this market segment with its automatic platen presses. It was logical to build a modern flatbed press that could handle larger formats and higher volumes in order to capture other market segments. Sternberg and chief designer Artur Büttner decided to base the drive of the new press on the "corrected single-revolution system" that had been developed to the prototype stage in England in 1932 in cooperation with the London agency.

This drive did not move the carriage with the plate at a uniform speed. Instead, it moved much more slowly during actual printing and much faster on the return. This design significantly increased the overall printing speed. A highlight of the Heidelberg Automatic Cylinder Press was its particularly large, robust impression cylinder. It had a diameter of 540 mm (21 1/4") and weighed a full metric ton. The other component groups in the press were unusually large and designed to be very stable. Under continuous operation, this design led to a top speed of 4,000 sheets per hour, even when printing difficult motifs on board.

The Heidelberg Automatic Cylinder Press for the 46 x 63 cm (A2) format was unveiled to reporters in March 1935. Its preloader reduced make-ready times, its suction bar grippers improved sheet travel, and three form rollers increased the ink storage volume. The result: higher print quality at faster speeds.



While skyscrapers reached new heights in New York, the U.S. grew to become one of the most important markets for *Schnellpresse*. It opened its first U.S. office in New York in 1929, followed by a Los Angeles office in 1937.

After a very intensive development period, the first Heidelberg Automatic Cylinder Press made its debut in March 1935 at the Wohlfeld print shop in Magdeburg. It printed a maximum sheet size of 46 x 63 cm (which was soon increased to 51 x 66 cm). Experts were thrilled: Heidelberg had created a brand new type of press with clear technical and economic advantages for the A2 letterpress format class.

At the International Print Expo held in the London Olympic Stadium in 1937, the Automatic Cylinder Press won international acclaim and soon became a solid seller in the market.

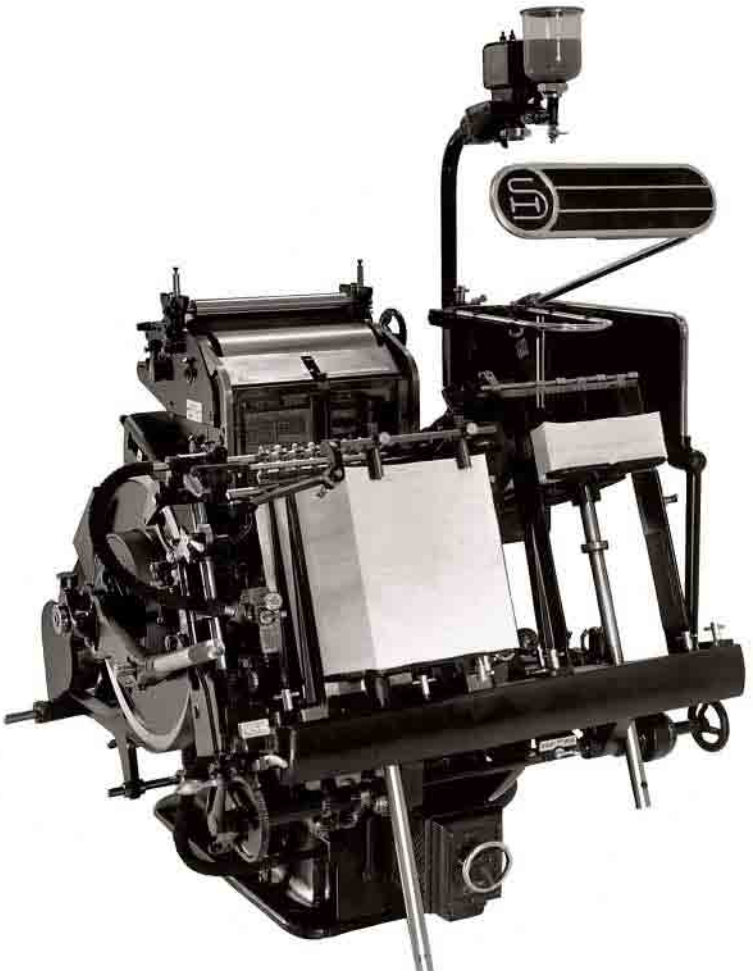
The company's most important product, however, was still the automatic platen press in its two versions, "The Super Heidelberg" and "The Giant Heidelberg".

The U.S. became an even more important piece of the company's export equation in the 1930s. *Schnellpresse* had had an agency in New York since 1929. It opened a second U.S. office, in Los Angeles, in 1937, to participate in the growth of the developing economic centers on the West Coast of the United States.

World War II

But in 1938, the company's sales were affected once again by local politics. Americans began to boycott German products in response to the aggressive domestic and foreign policies of the Nazi dictatorship. In April 1938, the U.S. increased import duties on German products by 25 percent, which sent the New York subsidiary into the red. The total number of presses sold abroad dropped by one quarter in 1938. For the first time since 1934, the total value of exported presses fell below the value of machines sold in Germany.

Alarmed by his company's severe shortage of foreign exchange, Sternberg travelled to the U.S. and other countries in early 1939 to personally review the



Production of the platen press essentially ground to a halt during World War II. Once the war ended, however, production slowly started up again.

situation. But ultimately he was unable to rise above the effects of Nazi policy on foreign sentiments. The outbreak of World War II was just months away.

Sternberg, who was elected Chairman of the Board in 1937, feared for his company's survival when the war broke out. Although *Schnellpresse* took in orders for about 900 platen presses and 300 automatic cylinder presses in the summer of 1939, it was unable to fill many of them.

First of all exports dried up. Britain and France, which were two very important foreign markets, were now at war with Germany. Stricter allocations were introduced for iron, steel, and other metals and this broke the back of the domestic market. Since letterpress machines were not important to the war economy, raw materials were not approved for use in their production. *Schnellpresse's* sales sank dramatically.

Now owned largely by Mannheim-based Rheinelektra, the company was faced with the challenge of finding other suitable work to which it could devote its production capacity. Sternberg did not want his highly skilled workers to be taken away to armaments factories. He set his sights on acquiring orders for lathes. Lathes were important to the war effort and could be manufactured by the company's specialists in Heidelberg and Geislingen. Sternberg acquired the license for the most important product during the war years, the D 30 lathe, from the Junkers aircraft manufacturing company. By virtue of its expertise in assembly line production of printing presses, *Schnellpresse* became the first company in Germany to take this step in manufacturing lathes.

In December 1939, Sternberg managed to acquire the company's first large order for 500 precision turning lathes from Magdeburger Werkzeugmaschinenfabrik, which belonged to Junkers. In the month of January 1941 this was followed by another order for 500 turret lathes from the Gebr. Heinemann company in St. Georgen.

The D 30 lathes were used primarily in aircraft construction. The Schnellpresse also manufactured hydraulic systems for aircraft.

Use of Forced Labor

Concurrently with the war production activities, Sternberg drove the production of printing presses to maintain the company's technical edge over the competition. Despite the chaos of war, the company built 1,500 platen presses and 100 cylinders in 1940 and 1941 and shipped them to neutral foreign countries. Production of printing presses was however halted altogether in 1942.

Although *Schnellpresse* was able to hold onto its workforce of well-trained

and experienced technical workers in the early years of the war, more and more of them were called off to military service from 1942 on. Women stepped in to fill their places in the factory.

A contingent of French and Soviet prisoners of war were sent to work at *Schnellpresse*, along with so-called "Eastern workers", impounded by the Soviets. The company also employed a handful of "civilian workers" who presumably came from neighboring Western European countries or Denmark. In 1943 and 1944, an average of 23 percent of all employees at *Schnellpresse* were foreign workers or prisoners of war. The use of foreign workers reached its apex in the spring of 1943. On April 30th of that year, records show that *Schnellpresse* had 30 male and 39 female Eastern workers, one civilian worker, and 38 French and 40 Soviet POWs. Little is known about the living and working conditions of the foreign workers and prisoners of war. They worked in the factory for 12 to 13 hours a day.

Records indicate, as far as we can determine, that the forced laborers were housed in public meeting rooms in Heidelberg hotels. In May 1942, *Schnellpresse* housed the first Russian POWs in the hotel "Zum Schwarzen Schiff" in Schlierbach just upriver, which the local Forestry Office had converted into a POW camp. The company paid a per-night stipend for each bed, and also made monthly payments to house the guards. On top of this, it paid fees for the use of city-owned furnishings such as beds, straw sacks, wool blankets, wash tubs, and other items. *Schnellpresse* also rented rooms in the "Jägerhaus" hotel.

The plant in Geislingen employed prisoners of war as well. They were housed in a storage facility on the grounds of the "Karl Mine" of the Gutehoffnungshütte ironworks, where MAG had leased a barracks building.

Oskar Leroi: Victim of the Nazi Regime, Unforesaken by Heidelberg

In 1937, the Nazi dictatorship stepped up its actions against the German Jews. One of the express goals was to "eliminate the Jewish influence on business". It targeted not only Jewish industrialists and business owners, whose plants and assets were "aryanized", but Jewish managers and workers as well. They were systematically forced out of their jobs. Nazi officers finally forced the management of *Schnellpresse* to fire its Jewish managers and workers.

One of these individuals was Oskar Leroi, a Jew who was also a member of *Schnellpresse's* Management Board. He was born in Bad Ems on July 6, 1876. After earning a degree in business management, he joined the Kahn Group in the 1920s. In July 1926, Leroi and Sternberg were promoted to positions on the Management Board of Schnellpresse, where Leroi's main responsibilities included purchasing, statistical cost accounting, and personnel management.

In 1937, the pressure on company management became so great that Max H. Schmid, Chairman of the Supervisory Board, called Leroi into his office on March 31 and offered him a lucrative early retirement package. Leroi accepted the offer and retired from the company on December 31, 1937. He received his usual salary of 2000 reichsmarks per month that year, including a bonus of 64,000 reichsmarks. Beginning in January 1938, the company began paying him a pension of 900 reichsmarks per month.

The managers of *Schnellpresse* certainly understood that the agreement they had reached with Leroi was contrary to the intent of Nazi racial policy, because, as a letter written much later revealed, the original agreement with Oskar Leroi was "destroyed in light of the situation at that time".

Oskar Leroi emigrated to France in August 1939 and settled in Saint-Yrieix, south of Limoges. Even after he left Germany, Schnellpresse continued to pay Leroi's pension directly into his account at the Deutsche Bank in Heidelberg until the authorities prohibited this in April 1940. Leroi's bank accounts were then seized and his funds were transferred to the Heidelberg City Treasury.

About one year after the end of World War II, in March 1946, Leroi and Sternberg were in touch with each other. Leroi wanted to return to Heidelberg. Sternberg promised him his support, as well as the continued payment of his pension, retroactively back to April 1940.

In December 1949, Leroi returned to the city of Heidelberg and moved back into his old house in the Bergstrasse in the borough of Neuenheim. Until 1950, *Schnellpresse* paid Leroi's monthly pension, which was raised each year proportionately to increases in union wages. He was thus able to live out the rest of his life in financial security until he passed away in March 1962.


ORIGINAL HEIDELBERG

Heidelberg was spared being bombed because the Americans wanted to install their military administration here. U.S. troops moved into the city on March 30, 1945.

The Road to Global Market Leadership

On March 30, 1945, American troops marched into Heidelberg and took over the city without firing a shot. Fortunate to have been spared any bombing attacks, the city of Heidelberg came through largely unscathed. The platen press factory in Heidelberg also made it through World War II intact. For the printing press company, the breakup of the National Socialist regime and the transfer of power to the U.S. military meant the end of production for the war effort. Manufacture of the D 30 precision lathe initially continued in order to meet the needs of civilian industry. But the demand in war-torn Germany was so small that the factory had to let workers go. The low point came in 1945, when a mere 208 people manned the Heidelberg plant.

The new start hinged on relations with U.S. officials. And Sternberg was remarkably quick in developing a relationship of trust with the U.S. representatives in Heidelberg. The situation was also quite favorable because the Americans themselves had an interest in keeping *Schnellpresse* up and running. On April 5, 1945, the military government therefore issued an order that the factory not be occupied or its materials and equipment destroyed nor confiscated.

Shortly thereafter, on April 20, Sternberg and his Heidelberg Board colleague, Dr. Ludwig Henrici, signed a declaration of loyalty to the occupation authorities. One of its stipulations was that no organization comprising former National Socialists would be tolerated within the company. Because management had had no political affiliation with the Nazis, *Schnellpresse*, in contrast to other major companies in Heidelberg, was spared being placed under "property control". On May 2, 1945, the factory was granted permission to resume operation.

Production was at first severely limited, initially focussing on the manufacture of replacement parts and repairing Heidelberg platen and automatic cylinder presses damaged during the war. The plant also manufactured lathes. By 1947, platen press production had resumed, but company executives had to cope with serious shortages of raw materials and transportation bottlenecks. Cylinder production did not start up again until 1949.

Sternberg was highly respected by the higher-ranking U.S. officers. His house on

For the printing industry and press manufacturers, one of the first highlights following World War II was the International Fair for Print and Paper (Drupa) held in Düsseldorf. Sternberg was instrumental in promoting Drupa, which replaced the Leipzig Fair for the letterpress and graphics industry (Bugra), held each year until 1938.

In 1948, after the currency reform and the end of the state-controlled economy, *Schnellpresse* was able to take advantage of its business contacts at home and abroad to bring about a revival. The government issued each German citizen 40 deutschmarks, which had to be picked up in person.

the hillside opposite the Old Town was always open to them. When a British specialist showed up at *Schnellpresse* to seize important documents on all Heidelberg printing press models, these good relationships paid off. Sternberg had been forewarned by his American friends, who also informed him that no such inspector enjoyed the protection of the U.S. military command. In no uncertain terms, Sternberg rejected the British major's demands, who was forced to leave without completing his patent inspection.

Reviving Foreign Contacts

Thanks to his good relations with the Swiss, Sternberg could exploit their neutrality to jumpstart his company's foreign activities. In 1947, he travelled there with a special permit to meet with representatives from France, the Netherlands, Belgium, Scandinavia, and the United Kingdom. They assured Sternberg that they would order equipment from *Schnellpresse* to meet the demand that had accumulated in their countries over the intervening years. The representatives immediately agreed to Sternberg's proposed barter – presses in return for food and other necessities – which called for them to deliver clothing and produce including butter, margarine, cocoa, coffee, chocolate, fish, and lard to Heidelberg. *Schnellpresse* employees were suffering from the same shortages as the rest of the German population, especially in the famine year of 1947.

Both company executives and the employee council made every effort to get their workers through these tough times. They leased gardens and farmland to plant potatoes, fruit and vegetables for the factory's canteen. Because there was no gasoline, Sternberg also had a demo truck converted to run on wood gas to deliver groceries to his personnel. Between the barter deals and home-grown fruits and vegetables, the company was able to provide a nourishing lunch to its workers. During a period of extreme shortages, "Sternberg's Victuals" became well-known throughout the city. As a result, jobs at the factory were some of the most sought-after (besides civilian positions with the U.S. military).

In his role as a consultant to the American import and export business – and thanks to the orders coming in from

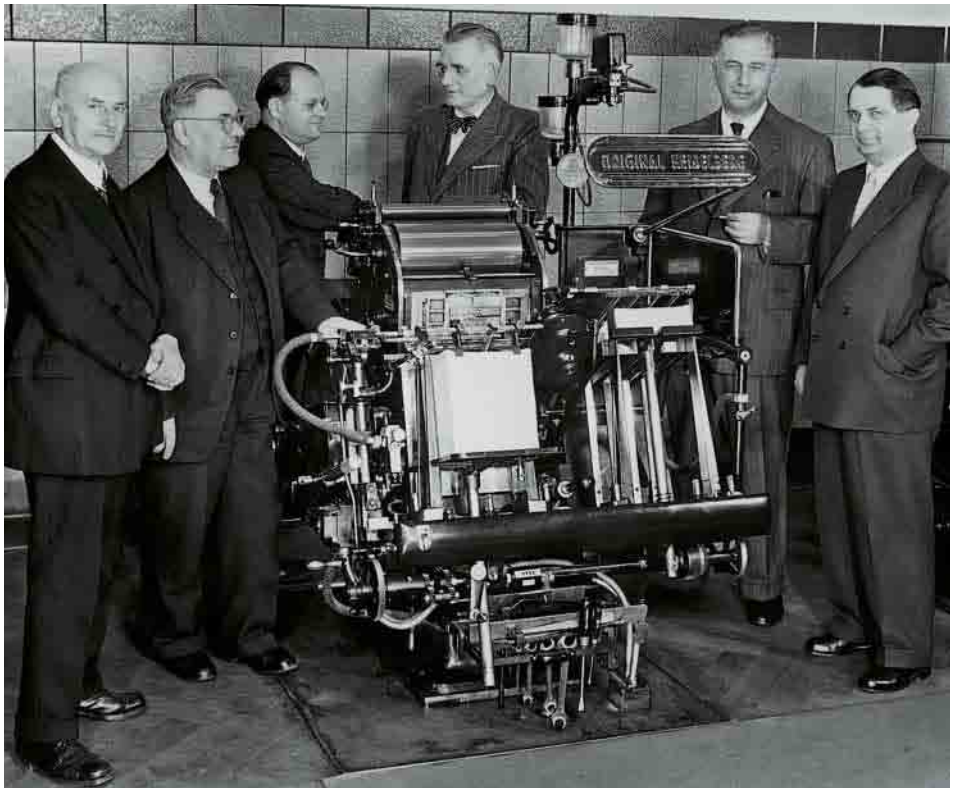
his foreign representatives – Sternberg was able to get German exporters certain privileges tied to their sales volumes. Companies were eligible for two types of bonuses. Bonus A permitted them to import raw materials, finished products and equipment. Bonus B ensured employees groceries, textiles, wool, stockings and other necessities. Demand for otherwise extremely scarce foodstuffs was so great that a special position at the factory was created to distribute bonus points among the employees. Retired Heidelberg employees from that era still remember "Bonus Schmidt", who held this post. Employees worked overtime to earn bonus points, which could be exchanged for goods on one Saturday each month.

The depressed economy of the first few postwar years began to revive after the currency reform of June 21, 1948. The annual report for 1948 reads: "The end of the state-controlled economy, with its numerous bureaucratic obstacles, has been perceived everywhere as a deliverance. Work now once again makes sense and has value. This has improved worker performance. The positive impact of the currency reform was immediately felt in our industry as well. Demand for our presses at home and in nearly every foreign market was strong."

The currency reform also spelled a new beginning for Sternberg's employees. The company gave them interest-free loans to finance long-overdue purchases. And they were able to pay back the money at a rate of just 50 deutschmarks a month.

The Company's 100th Anniversary

In fiscal 1949, the "economic miracle" reached *Schnellpresse* – a phase of uninterrupted gains in sales and profits that continued until the late 60s. This reversal of fortune raised the spirits of the entire workforce at the company's 100th anniversary party in 1950. At the same time, the Geislingen factory – formerly



The hard times were over. In the early 1950s the German economic miracle reached *Schnellpresse*. The firm's top executives (from left): Board Member Ernst Schwarzländer, Technical Director Friedrich Frank, Design Head Artur Büttner, Sales and Advertising Director Matschat, Management Board Chairman Sternberg, and Head of Commercial Operations Ludwig Henrici.

Dr. Ludwig Henrici, Soul of the Company

Dr. Ludwig Henrici succeeded Oskar Lerois as *Schnellpresse's* Head of Commercial Operations. Born in Neckarbishofsheim on February 1, 1896, he graduated from the Karl Friedrich Gymnasium (a college/prep high school) before voluntarily joining the armed forces to fight in World War I. From 1919 to 1921, Henrici then studied law and economics at the Universities of Heidelberg and Munich.

On December 1, 1923, after earning a doctorate in law, Henrici joined *Schnellpresse* as a company lawyer. In 1925, Henrici added the business management of MAG to his duties. Two years later he ascended to the position of overall business manager. Because he saw no more opportunity for advancement, he left the firm in August 1931 to work first in the cement industry and, from 1934 on, as a lawyer in Stuttgart before returning to *Schnellpresse* to take over for Lerois as Head of Commercial Operations on December 1, 1937.

In their 27 years of working closely together on the Board, Sternberg was considered the spirit of the company, and Henrici the soul. Henrici retired in 1964.

In October 1950, *Schnellpresse* celebrated its first 100 years. The ceremony attracted over 200 guests, and was held in the cylinder production hall. The night before the party, Heidelberg employees toiled feverishly to clear the area. The photo shows General Director Sternberg welcoming Minister of Commerce Ludwig Erhard, the speaker of the day.

MAG – commemorated its 100th jubilee. From October 9 to 14, 1950, company employees, customers and guests attended a series of events in Heidelberg and Geislingen to celebrate the occasion. The official guest speaker was Economics Minister Ludwig Erhard, a close friend of Sternberg. More than 200 guests from all over the world joined in the festivities. The week concluded with a tour of the Heidelberg plant for foreign visitors, who then rode in a specially chartered train to Geislingen.

On the Thursday evening before the party, Heidelberg employees had one more weighty challenge ahead of them. After work they spent the night clearing out the Heidelberg cylinder production hall, where the ceremony would be held the next day. On Friday morning, gardeners festively adorned the hall shortly before the arrival of Economics Minister Erhard, Sternberg, and fellow Board members Dr. Ludwig Henrici and Ernst Schwarzländer.

During the celebration, the employees were told that a pension plan would be implemented at the company. In addition, each worker would receive an extra month's wages as a bonus.

On the last day of the celebration, the 750 workers and their families were invited to a huge party at Heidelberg Castle. Renowned artists provided colorful entertainment. And to top off the night, an awe-inspiring fireworks display illuminated the sky.

The First Drupa Show in Düsseldorf

Around the time of the company's 100th anniversary, an improved version of the Heidelberg Platen went into production that was capable of printing 5,000 impressions an hour. To distinguish this press from unlicensed imitations built in Czechoslovakia, the company inscribed each one with the words "Original Heidelberg". Half a year later, the public got its first glimpse of this enhanced model at the International Print and Paper Fair in Düsseldorf, or "Drupa" for short. This was the first large show for the graphic arts industry held in Germany since 1938, replacing the Leipzig Letterpress and Graphics Show (Bugra) held annually in Germany before the war.

Sternberg was a major driving force behind Drupa. He served as Drupa Committee president from 1951 to 1972, and also developed an extensive advertising campaign that, in the show's first year, attracted 300,000 visitors from around the world. Sternberg also made sure that every *Schnellpresse* agency, both domestic and foreign, had to bring a certain number of customers to the show. No agency dared to fall short of its target.

Sternberg had used gentle persuasion to ensure that the city of Düsseldorf and

the Düsseldorf Fair Company erected appropriate halls for the event. He casually let it be known that Frankfurt was also interested in hosting the print show, no doubt accelerating the response from the Düsseldorf decision-makers.

Thereafter Drupa was alternately held every fourth or fifth year. Under Sternberg's guidance, Drupa developed into by far the world's biggest trade show for the entire print production process.

Construction of the Wiesloch Plant

As the economic miracle began to take hold in the early 1950s, with the number of orders received by *Schnellpresse* growing at a fast clip, it became more and more apparent that the company's existing buildings in Heidelberg would not suffice for much longer. Despite expansions between 1951 and 1954, additional capacity was urgently needed.

At the same time, many fundamental changes to the overall infrastructure at Schnellpresse were taking place. One significant development was the relocation of the city's main train station, a plan drawn up in the 1920s but not actually realized until the early 1950s. When the tracks leading through the city were removed, *Schnellpresse* lost its direct rail link and with it an important logistical advantage. From that time on, the company's freight cars had to be moved from

Continued on page 66

***Schnellpresse* preferred to hire its employees' progeny. Here we see three generations of the Felgenbutz family.**

Drupa – Marketplace of the Printing Industry

Since 1951, the International Print and Paper Show (Drupa) – initiated by Heidelberg boss Sternberg – has been held in Düsseldorf, Germany. For Heidelberg, each Drupa has marked a milestone in the development of its offers. Heidelberg innovations and product enhancements reach the market constantly, and the world's largest printing press manufacturer shines at other trade shows with previously unseen innovations. But Drupa is undisputed as the most important date in the industry.

At the first Düsseldorf shows in 1951, 1954 and 1958, before any advancements were brought to market, Heidelberg presented its Original Heidelberg Cylinder, as well as the – at that time – legendary high-performance Automatic Platen letterpress. The fourth Drupa, held in 1962, marked Heidelberg's entry into the offset realm, with the unveiling of its KOR model in the 40 x 57 cm (15 3/4 x 22 1/2") format.

Performance enhancements and additional formats for all models, along with brand new models like the GTO, were the highlights of the 1967, 1972 and 1977 Drupa exhibits. Besides the Speedmaster, which had been introduced at Print 1974 in Chicago, Heidelberg's Computer Print Control (CPC), a new electronic inking control system for sheetfed and web offset presses, caused the biggest stir at Drupa 1977.

Economics Minister Erhard examines the Platen letterpress at Drupa 1951.

Just five years later at Drupa 1982, Heidelberg again broke new ground by presenting its first 8-page web offset press. Another first-time Heidelberg showing at Drupa included the Web 16, a 16-page web offset system, in 1986. At Drupa 1990, with its innovative thrust now shifting more toward electronics, Heidelberg unveiled its first fully digital press. The industry was mightily impressed by its new register control and spectral colorimetric system CPTronic, complete with monitoring and diagnostic electronics.

The billboard for the first Drupa, held in 1951 in Düsseldorf, Germany.

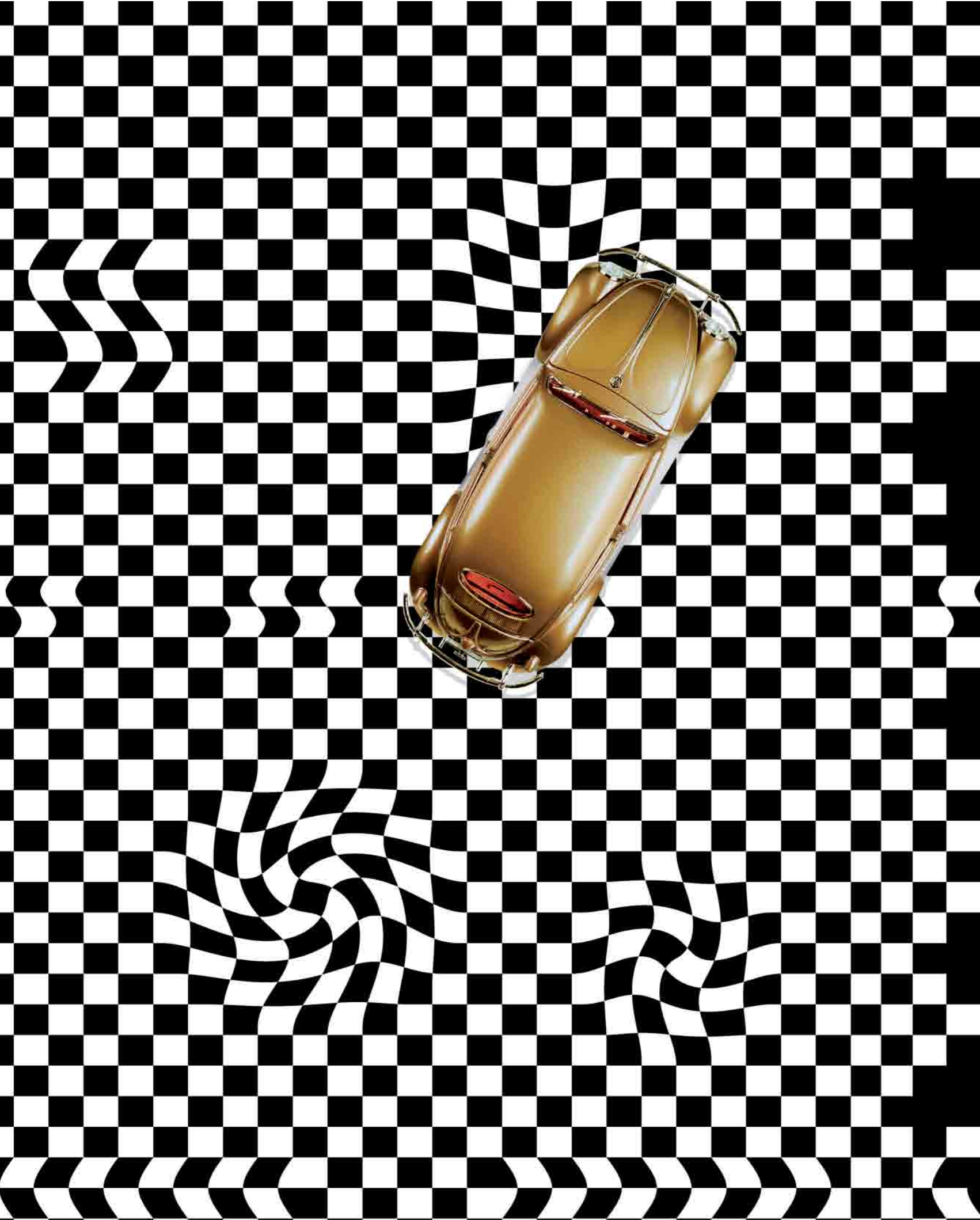
At Drupa 1995, Heidelberg exhibited almost exclusively new product innovations in sheetfed and web offset printing.

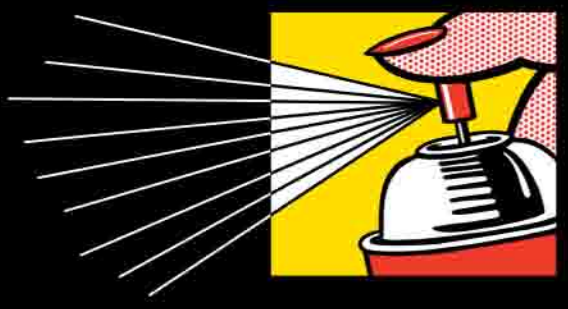
At Düsseldorf 2000, the twelfth such event, Heidelberg is presenting itself for the first time as a solutions provider, showcasing a new dimension of digital printing, along with a revolutionary newspaper web press.

THE SIXTIES

Cold War, Men on the Moon, Beatles and Op Art: The Wild 60s

During the decade of the 1960s, society underwent profound changes. A new generation sought to overcome established institutions and searched for new life styles and role models. While the Beatles sang “All You Need Is Love”, the Flower Power movement flourished on the West Coast of the U.S. and elsewhere. Young people demonstrated in urban centers across the Western world, while human rights activists spearheaded by Martin Luther King marched against discrimination in the United States. The Cuban missile crisis kept the world spellbound. The first manned spacecraft landed on the Moon. East Germany built the Berlin Wall and completed Germany’s division. The assassination of John F. Kennedy plunged the world into mourning. Creative individuals such as Andy Warhol and Roy Lichtenstein created a new synthesis of art, pop and everyday elements.



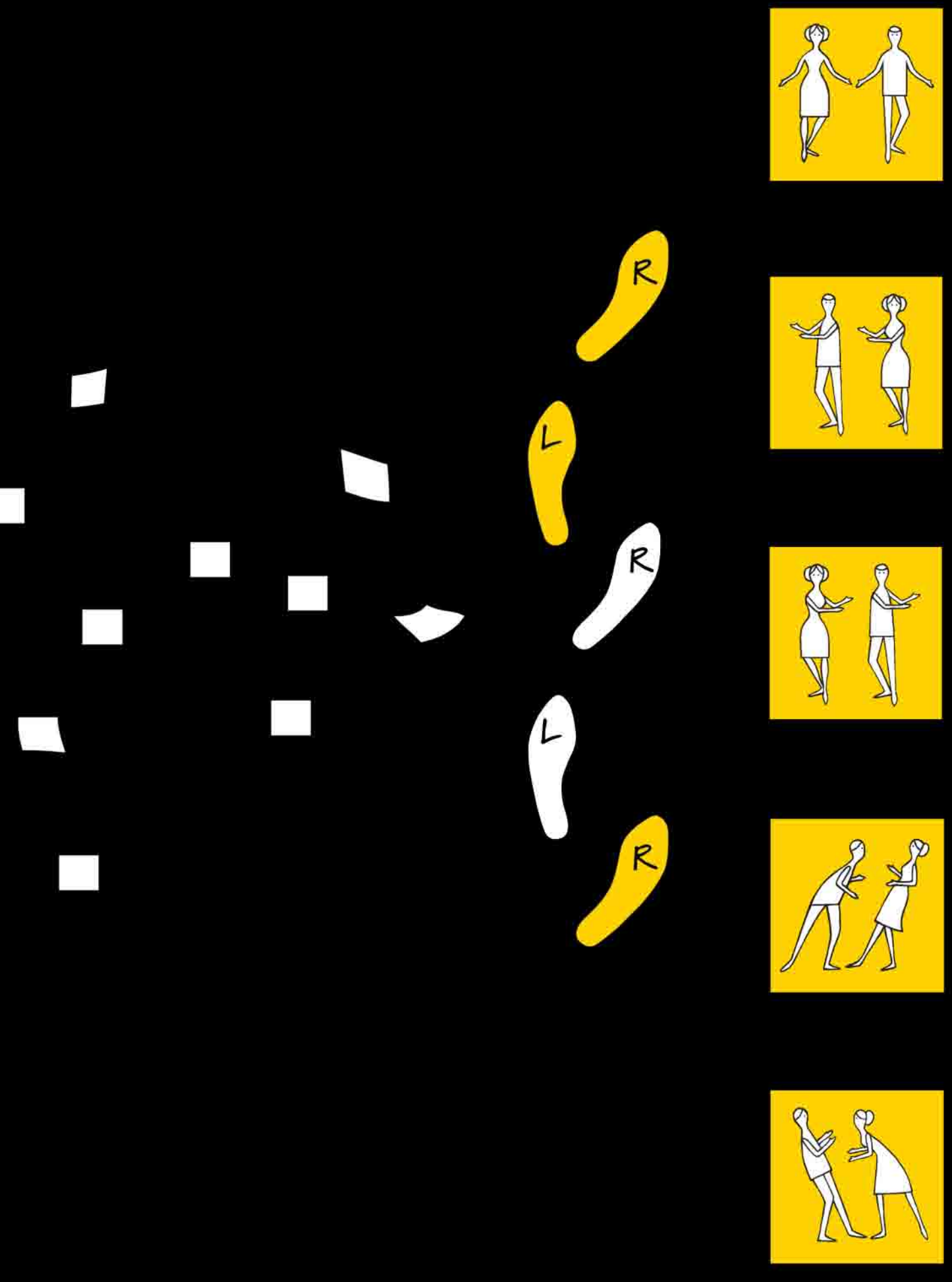



She loves you, yeah, yeah, yeah. She loves you, yeah, yeah, yeah.


She loves you, yeah, yeah, yeah. She loves you, yeah, yeah, yeah.


ah. She loves you, yeah, yeah, yeah, yeah.
Campbell
CONDENSED
Eldorado


ah. She loves you, yeah, yeah, yeah, yeah.
Campbell
CONDENSED
Eldorado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Norman Mailer
Muhammad Ali

THE SIXTIES

1 Op Art à la Vasarely. An art trend that flourished in the late 60s.

2 The VW Beetle becomes the most successful German car ever.

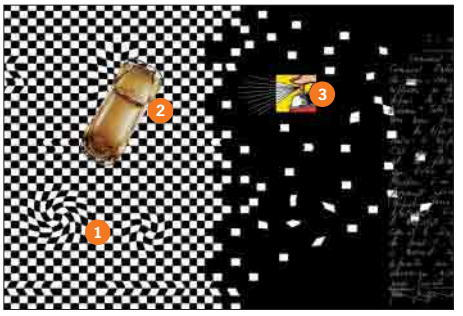
3 Roy Lichtenstein, "Spray", 1962. The aesthetics of everyday items.

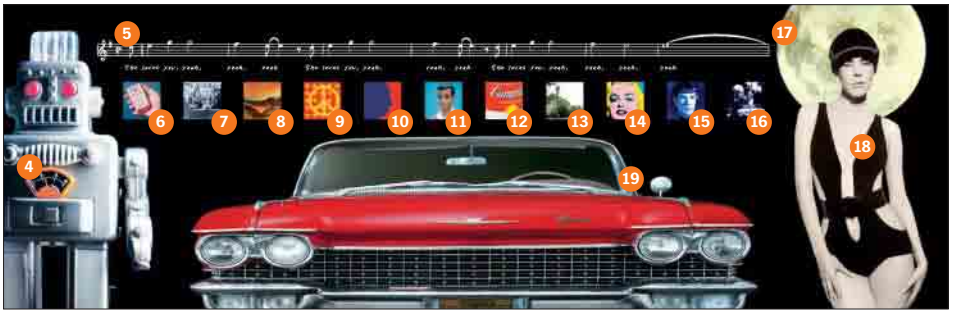
6 The pocket radio takes the world by storm in 1960.

7 Berlin Wall. In 1961 the government of former East Germany erects a concrete and barbed-wire wall to shut off the eastern part of Berlin from the three western sections.

8 Big Mac: Fast food lovers' heaven from 1968 on.

16 Nikita Khrushchev. The famous shoe used by the Soviet leader to pound on the table during the 1961 UN General Assembly.





4 First tin robots. Science fiction takes shape in 1961.

5 The Beatles. In 1964 the four from Liverpool land their first international hit: "She Loves You".

9 Peace. Flower Power wins the hearts and minds of many Western teenagers.

10 Alfred Hitchcock. The master of "whodunnit" makes thrillers such as "The Birds" and "Psycho".

11 Barbie's boyfriend Ken is "born" in 1961.

12 Andy Warhol. His "Tomato Soup" also brings world fame to the Campbell brand.

13 The BMW Isetta: Causing a stir on German roads in the early 60s.

14 Marilyn Monroe. The much-adored film icon dies tragically in 1962.

15 "Star Trek": A TV series from outer space captivates audiences.

17 Moon landing. In 1969 Neil Armstrong becomes the first man on the moon.

18 Rudi Gernreich's bathing attire creates a stir.

19 Cadillac Eldorado. Epitome of the classic American car.

20 Jean-Paul Sartre refuses the 1964 Nobel Prize.

21 Twist: A dance style that takes the early 60s by storm.

Signatures

22 Norman Mailer, novelist and journalist.

23 Muhammed Ali, alias Cassius Clay, American boxing legend.

24 Ho Chi Minh, Vietnamese communist and freedom fighter.

25 Nikita Khrushchev, Soviet head of state and party chief.

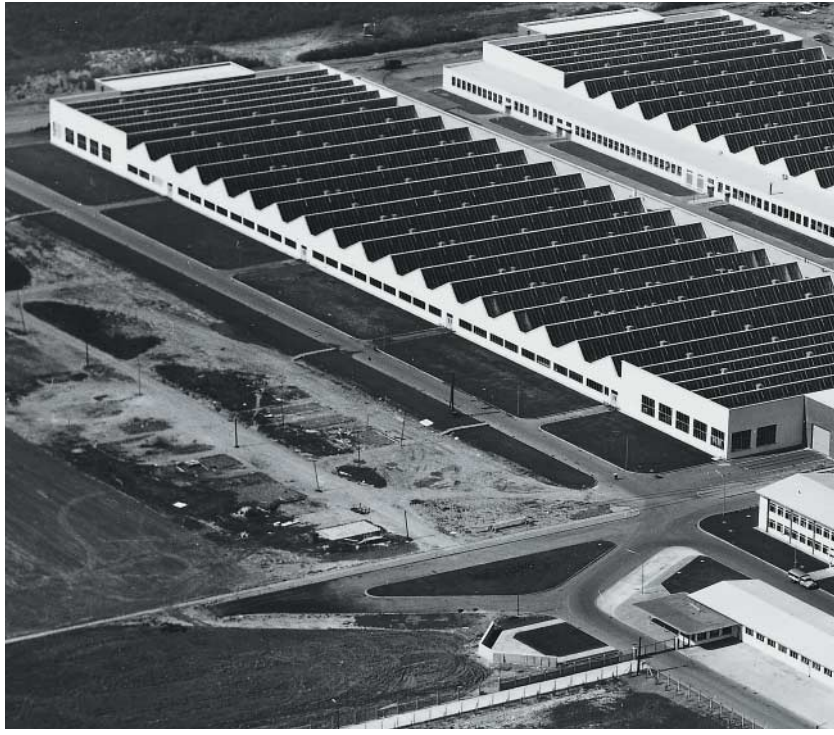
26 John F. Kennedy, U.S. President.

27 Martin Luther King, fighting for civil rights in the U.S

28 Fidel Castro, Cuban revolutionary and head of state.

29 Neil Armstrong, American astronaut.

30 Mont Blanc fountain pen, a popular writing instrument in the 60s.



Continued from page 55

Heidelberg's freight station to the factory and back on special trailers.

In addition, the municipal authorities were planning to build a new, distinctive boulevard between the train station and the city center, with a clear view of Heidelberg Castle and the surrounding hillsides. These plans clashed with *Schnellpresse's* intention of erecting a five-story building on company premises. Negotiations between factory management and local policy makers began in 1950 and dragged on for years. Again and again, new compromises were worked out and modified construction plans were presented. Even the company's employee council applied to the city council in order to try to obtain a building permit – in vain. In 1956, Sternberg finally abandoned his plans for a new building in the city.

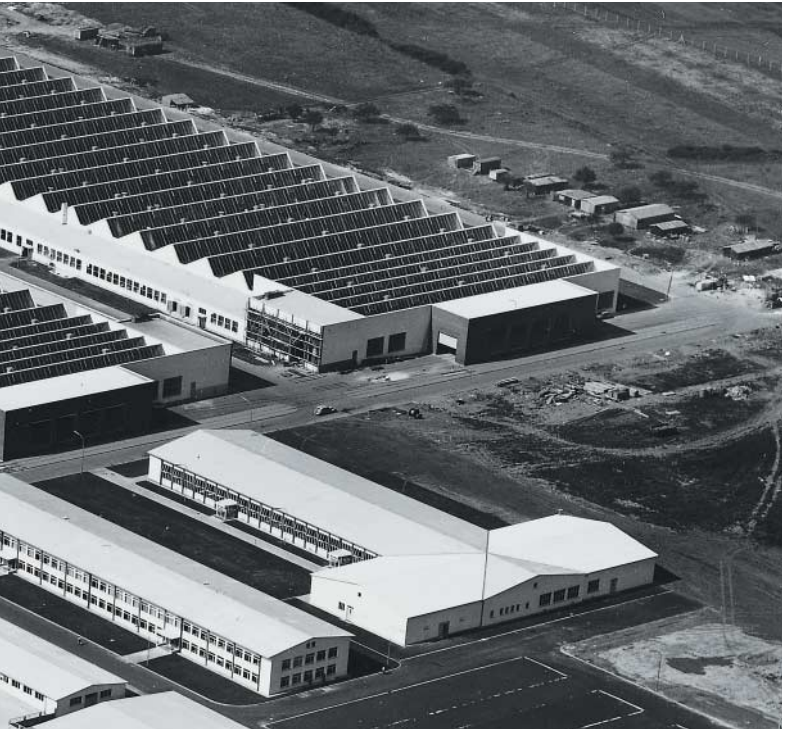
In searching for an alternative site for the new production facility, *Schnellpresse* executives found exactly what they were looking for in the neighboring town of Wiesloch. In their Easter issues, local Heidelberg newspapers reported on the 15-hectare site located right on the railway line between Heidelberg and Bruchsal to the south, where the new buildings would go up. Despite having to perform laborious drainage and foundation work on the swampy terrain, out of which crude oil was still being pumped, the company succeeded in finishing the first two production halls, a building with facilities for employees, and a suite of offices within a year. Included were a railway siding for freight trains and an extra passenger platform inside the Wiesloch-Walldorf station right next to the factory.

In July 1957, the Wiesloch plant opened with an impressive presentation of the new KS Automatic Cylinder Press. The relocation of the company's production equipment to the plant was a logistically brilliant feat. "On a Friday evening, workers shut down half of the old Heidelberg plant's production and assembly equipment. And by Monday morning the same equipment was up and running in Wiesloch," recalls longtime employee council chairman Martin Hambrecht.

In Heidelberg itself remained only administration, research and development departments and – temporarily – production of OHZ and Tiegel.

The Wiesloch plant was soon expanded. Hall 1 was finished in 1959, Hall 4 in 1964, and Hall 5 in 1968. By 1972, the plant spanned over 10 million square feet, and 4,000 people worked there (by 1998 this figure had risen to 5,700). Undergoing continual expansion and modernization, it was called the "Mecca

In July 1957, *Schnellpresse* opened its new plant in Wiesloch. During the first phase of construction, Halls 2 and 3, a building with employee facilities, and a suite of offices were built. A huge party commemorated the event for the employees and residents of Wiesloch and Walldorf. In stifling heat, pop star Gerhard Wendeland (upper left) and MC Hans-Joachim Kulenkampff entertained the guests. A boat ride on the Neckar River was also part of the program.



of Mechanical Engineering" by industry insiders. Under the administration of production boss Hans Kuhnert, parts production was switched over to N/C machines, which were developed largely in-house in cooperation with Aachen Technical College.

These changes also altered the production workflow of the world's largest and most technologically advanced printing press factory. Single-pass assembly line production was replaced by parts family production in order to utilize the N/C machines for as large a volume as possible. This switch was facilitated by the development department's preliminary work. Heidelberg's engineers designed standardized parts that could be used in as many different models as possible. This system laid the groundwork for cost-effective production based on new methods.

Dedicated Employees

The rapidly growing volume of orders in the 50s required tremendous commitment from the workforce. Overtime was the rule rather than the exception. Through it all, management and the employee council cooperated in an atmosphere of trust for the good of the company, its customers, and employees. Even in those early years, the normal workday at the factory equalled the standard number of hours plus another half an hour to flexibly accommodate workload fluctuations.

During the 50s, printers around the world were clamoring for ways to turn out printed items more cost-effectively. At the same time, the trend toward color printed products grew stronger. Globally, the dominant process remained letterpress, which possessed clear economic and technological advantages.

Expanded Press Range

Schnellpresse then developed the "Heidelberg plate positioning device", which reduced costs by minimizing the time presses stayed idle between jobs.

The growing demand for two-color letterpress machines was met by the inexpensive Original Heidelberg Cylinder (OHC) in the 38 x 52 cm (15 x 20.5") and 54 x 72 cm (21 1/4 x 28 3/8") formats, which were unveiled at Drupa 1958. They were based on the design of the Heidelberg single-color automatic cylinder press. The OHC was equipped with a second rotary printing unit with a high-performance inking system. All other assemblies and controls were borrowed from the single-color press.

Before this new press went into series production, Sternberg set up a special department for printing plate research that busied itself with the further devel-

opment of repro equipment and the production of high-quality letterpress rotary plates. By the beginning of the 60s, the printing plate research department was experimenting with various kinds of offset plates – an important component in the first Heidelberg offset presses, introduced in 1962.

During the 50s and 60s, the factory expanded its press program to meet practically all requirements.

Heidelberg was able to cost-effectively manufacture its growing variety of press models by incorporating the same key dimensions within its systems, as well as the same controls and component assemblies. The sheet format and printing process could differ. And each system offered a multitude of options to greatly expand its range of applications.

By the late 50s, *Schnellpresse* was also looking into ways to build rotary sheetfed machines. Such presses had existed for decades, but couldn't meet the standards of quality that commercial printers required. So *Schnellpresse* developed a pair of two-color sheetfed rotary letterset presses for high-quality printing: the KRZ in 40 x 57 cm (15 3/4 x 22 1/2") format and the RZ in 66 x 97 cm (26 x 38 1/4") format.

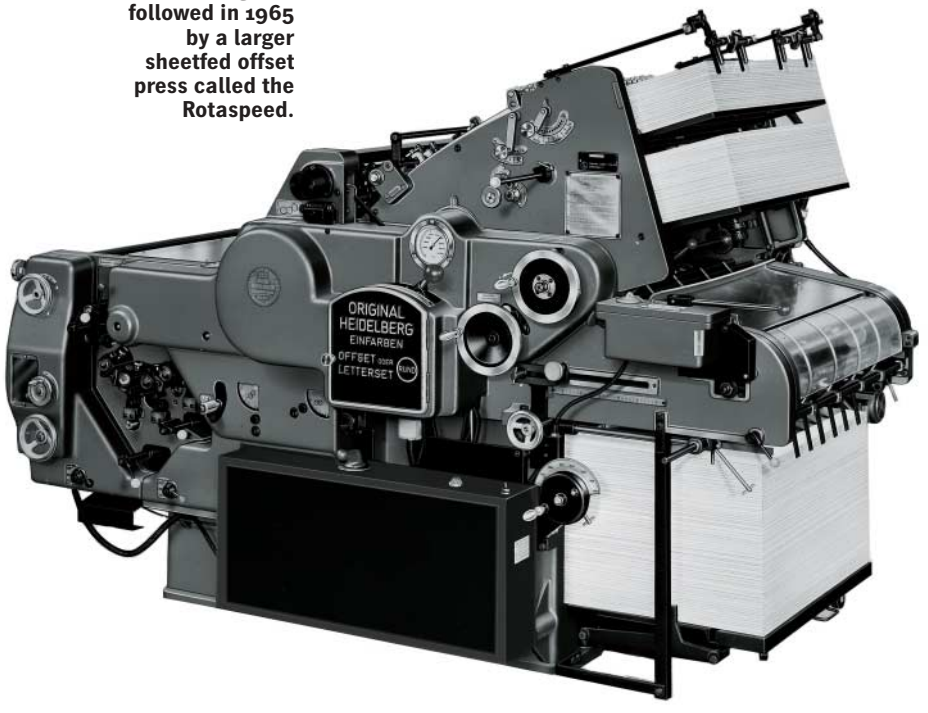
With the successors to the KRZ and RZ and other models derived from the OHC 64 x 90 cm (25 1/4 x 35 1/2"), the number of Heidelberg letterpress sheetfed rotary models went up to 12. Production ran from 1962 to 1975. Still, on average the company produced just four presses per month.

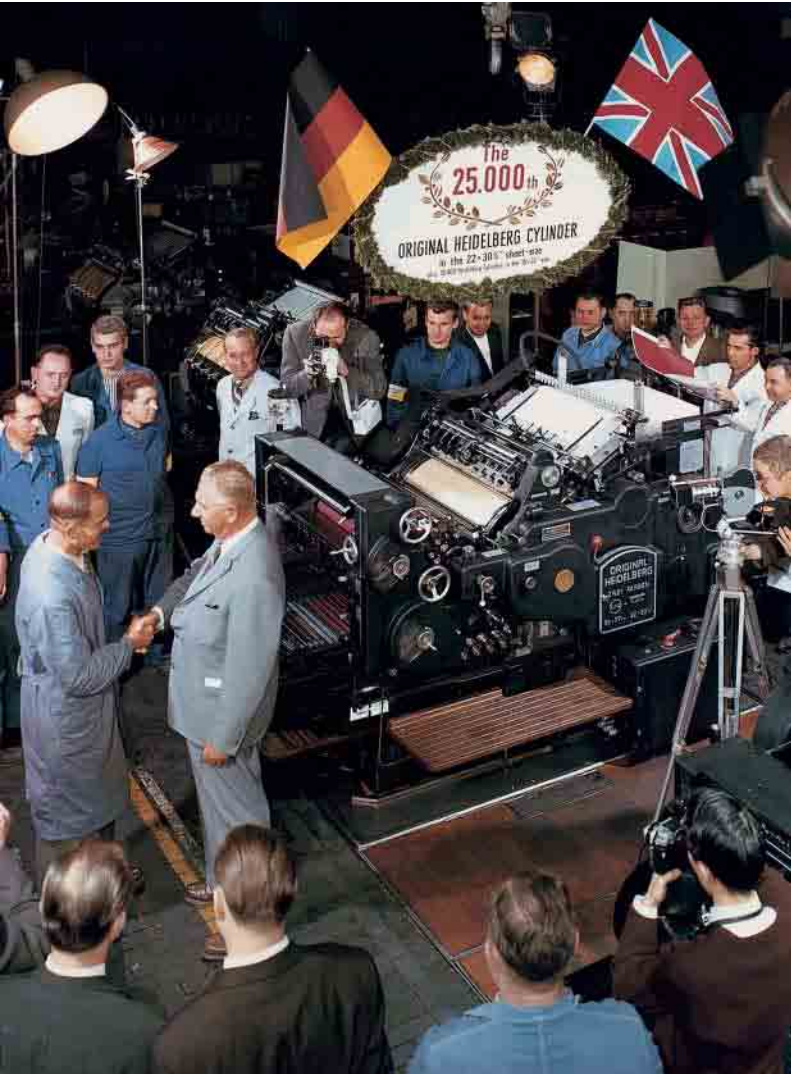
Entry into Offset

The star of Drupa 1962 was the first Heidelberg KOR single-color offset press for the 40 x 57 cm (15 3/4 x 22 1/2") format class. The KOR immediately drew rave reviews. During the two weeks of Drupa, over 1,000 were sold. Over the next 24 years, 38,000 KOR presses would leave the Wiesloch factory. Ironically, competitors initially responded to the Heidelberg product with snickers.

Up to this point in time, Sternberg had shown very little enthusiasm for offset presses. But as he began to realize that the time and technology were ripe, he rapidly turned his attention to this printing process. Just a half year before Drupa 1962, the design department re-

For *Schnellpresse*, the offset age began in 1962 with the introduction of the KOR 40 x 57 cm (15 3/4 x 22 1/2"), bottom left. This first offset web press from Heidelberg was followed in 1965 by a larger sheetfed offset press called the Rotaspeed.





Assembly supervisor Erni was honored for the 25,000th automatic cylinder press produced. Sternberg never forgot to give employees the credit they were due.

ceived the order to take the KRZ and develop it into the KOR for the Düsseldorf show. The staff were up to the challenge. The first Heidelberg offset press was so successful because it looked like a letterpress automatic cylinder press. The feeder, delivery, control system, and controls were largely identical.

The KOR made it exceptionally easy for letterpress printers to migrate to offset. The KOR was also available at a very reasonable price, since over two-thirds of its components came from the series-produced letterpress machine.

At a fair in Paris 1965, the company followed the KOR with the larger Rotaspeed sheetfed offset press in the 71 x 102 cm (28 x 40") format, which was derived from the two-color letterpress sheetfed web RZ. The Rotaspeed line comprised single-, two-, four-, and five-color offset presses; these were produced until 1976.

During the same period, *Schnellpresse* was filling the gap between its KOR and Rotaspeed machines with its SOR ("S format offset rotation"). By 1970, the S-offset range of single- and two-color presses was complete. In 1971, over 2,000 offset printing units were shipped – about ten per workday.

"Heidelberger Druckmaschinen AG"

In 1967, *Schnellpresse* underscored the speedy progress of its offset program by changing its name to Heidelberger Druckmaschinen Aktiengesellschaft (Aktiengesellschaft means joint-stock company).

At Drupa 1972, Heidelberg entered yet another market segment – small offset printing in A4 and A3 formats. Up to that time, printed items in small offset formats had average or even below-average print quality. The Heidelberg GTO managed to change all this by making possible genuine high-quality printing in small formats. The GTO, which gave its name to an entire format range, could print 8,000 impressions an hour and was built to Heidelberg standards: extremely robust, with high-performance inking and dampening systems, excellent user-friendliness, and numerous options for numbering and perforating – all available at the same price as a conventional small offset press.

At its very first showing, the GTO was overwhelmingly successful. At the Drupa show alone, 1,500 were sold. By the end of the 1970s, the GTO line included one-, two- and four-color models, which could be converted for perfecting. This series is still produced today. By the end of 1999, 95,000 GTO printing units had been sold, making it the most successful high-quality offset press line of all time.

This triumphant entry into offset printing technology laid the groundwork for the company's future. At the close of 1972, Sternberg, then almost 76, left the Heidelberg Management Board to become an honorary member of the Supervisory Board.

Artur Büttner, Chief Designer of the Old School

On January 1, 1972, Artur Büttner quietly celebrated half a century with Heidelberg. This was typical for Büttner, who kept the focus more on Heidelberg presses than on his personal life. In 1925, Büttner was already head designer at *Schnellpresse*. In 1963 he was appointed to the Management Board. Each decisive improvement to the construction and operation of Heidelberg presses, each additional platen model for diecutting or embossing, all new Heidelberg automatic cylinder presses before and after the war with all their variations, special models and formats, with rotary printing units for letterpress and offset printing, special foil embossing presses, letterpress sheetfed web – Heidelberg presses from a half a century – were all brought to life on Büttner's enormous drawing board at a life-size, with his "assistant" Sternberg at his side.

The move into offset also occurred during his era, but he shifted the load onto much younger shoulders. Having reached retirement age years earlier, he stayed on until 1972, when he and Sternberg exited the Heidelberg stage together.

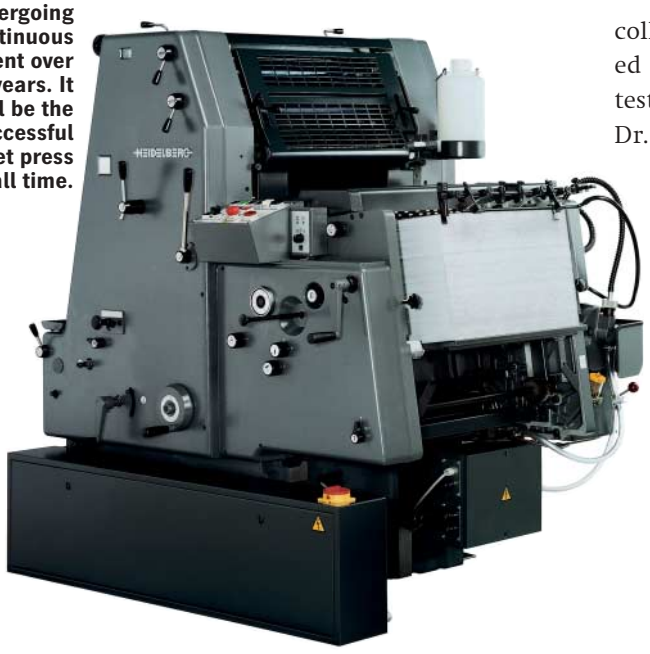
Presses are complex systems, and manufacturing them requires a high degree of technical expertise. To guarantee quality, Heidelberg practices a high degree of vertical integration.

From Tradition to Progress

For Heidelberger Druckmaschinen AG, the end of the Sternberg era was more than a change at the top. This critical time in the company's history coincided with major challenges to the world economy and international business. The dollar was uncoupled from the gold standard, and its value depreciated dramatically as a result. OPEC, the Organization of Petroleum-Exporting Countries, triggered a global economic slump with its oil boycott and exorbitant price hikes. And as if that weren't enough, the value of the deutschmark rose by 26% within just a few years, pushing up the prices of German products for overseas purchasers. With around 80 percent of its production volume destined for export, Heidelberger Druckmaschinen AG was naturally hard hit by the international economic upheaval of the late 1960s and early 1970s. The sales for 1972, the last year under Sternberg's direction, nevertheless amounted to an impressive 391 million marks, even exceeding the record set in 1969.

But then came the events of fall 1973. The Yom Kippur War broke out in the Middle East on October 6, and OPEC imposed a boycott on oil supplies to countries friendly with Israel, forcing Germany and other European countries to ban the use of vehicles on Sundays.

The world economic crisis faced the collegial Management Board, constituted in early 1973, with its first severe test. The Board at this time comprised Dr. Wolfgang Zimmermann, Joachim Pöppel, Dr. Hilmar Dosch, and Willi Jeschke. Dr. Zimmermann, a long-serving member of the Board, had been head of Finance, Human Resources, and Procurement in Sternberg's time; in early 1973 he took over as Board Member for Sales and Distribution. Willi Jeschke succeeded Artur Büttner as head of Development. The "new recruit" Joachim



Precision and reliability are the distinguishing characteristics of Heidelberger printing presses. The GTO series, which gave its name to an entire format class, has been manufactured since 1972, undergoing continuous development over the years. It may well be the most successful offset press series of all time.

The Wiesloch site: the largest press factory in the world. The World Logistics Center, which distributes service parts to customers, is on the lower left.

Pöppel replaced Hans Kuhnert as head of Production and Dr. Hilmar Dosch, who joined Heidelberger Druckmaschinen AG in May 1973, assumed responsibility for Finance, Human Resources, and Procurement.

This new Management Board was confronted with the harsh consequences of the oil-price shock in fiscal 1974-75. Sales plummeted by 45%, necessitating the introduction of curtailed working hours and staff adjustments. Despite this severe setback, however, the Board succeeded in avoiding a loss in this critical year by taking prompt action to reduce costs. The surplus was even sufficient to allow the distribution of a dividend to Heidelberg's shareholders. Dr. Zimmermann's courageous decision to increase prices played no small part in staving off the worst.

New Products Revive the Market

But the crisis was so quickly surmounted largely because of the commitment and resourcefulness of the entire workforce. In a fine display of the old "Heidelberg spirit", workers and their superiors pulled together like a family in hard times. The crisis brought out hidden strengths in people. While sales directors and independent agencies did their level best to generate orders, the research and development department worked overtime to get the prototype of the Speedmaster right for the market. Heidelberg unveiled its entirely new generation of presses for multicolor printing and perfecting at the Print 1974 trade show in Chicago. Even without the benefit of field trials, the new press was capable of delivering an unprecedented 11,000 sheets per hour. To this day, the Speedmaster family, which has undergone continuous development over the years, remains fundamental to Heidelberger Druckmaschinen's success.

The year 1976 witnessed a rapid recovery, thanks to the newly developed offset machines and the general improvement in the economic climate: sales surged by 45% to reach 473.9 million marks, approaching the 1974 figure. Domestic sales rose by 28% to 96.9 million marks. Exports increased initially by 50% before steadying at around 80% of total sales.

Retaining Customer Loyalty Through Innovation

Simultaneously with the development of the Speedmaster, Jeschke, the Board Member for Development, and his electronics specialists – of whom there were only a few at the time – pressed ahead with work on an electronic color management system, then unknown in the printing press industry. Computer Print Control (CPC), unveiled at Drupa 1977, astonished the

The Speedmaster was first shown as a prototype at Print 74 in Chicago. Along with its successors, it remains the backbone of Heidelberger Druckmaschinen's product palette.

Ultramodern, computer-controlled final assembly in the large, well-lit Hall 6 at the Wiesloch works.

entire printing industry, and Heidelberg became the undisputed technological leader in offset printing as well. No other exhibitor at the trade show was able to offer a comparable system.

Amazingly, this pioneering technological feat was pulled off entirely by Heidelberg's own electronics engineers and development staff without any external assistance. Inquiries at external software firms had quickly revealed that it would take far too long to teach their programmers the basic requirements and finer points of printing technology.

Using new mechanical, electronic and hydraulic components, Heidelberg not only offered its customers considerable economic advantages, but also saved press operators a great deal of strenuous physical work.

At Drupa 1977, Heidelberg also presented the multicolor version of the GTO offset press, based on the same principles as the Speedmaster.

An extraordinary capacity for innovation, plus superb quality and reliable service, enabled the company to attain its highest-ever sales volume of 623 million marks in 1977. This represented an increase of 32% over the previous year.

The hectic pace of development and of introduction of new products on the market since the middle of the 1970s can be summed up in one single statistic: in the year 1982, products launched on the market within the previous five years accounted for more than half of Heidelberg's revenues.

New Market Requirements

One of the main driving forces behind the rapid pace of development was the burgeoning demand from print buyers for color products in small editions. Print shops could respond to these needs only by using state-of-the-art, versatile multicolor presses that were highly economical to operate, even on short runs. Heidelberg's Speedmaster range met these exacting requirements.

During this dynamic period, Heidelberg also entered the web offset market with the Heidelberg Web 8 in 1982. And once again the competition marvelled at

Willi Jeschke – Innovations for Series Production

Willi Jeschke authoritatively steered Heidelberg's technological progress from the 1960s onwards. Jeschke studied mechanical engineering at the Schule Ferdinand Porsches in Sudetenland and subsequently in Munich. He came to the printing industry by way of the press works of MAN in Augsburg and joined Heidelberg as a design engineer in 1956.

Jeschke's first important success came at Drupa 62. A few months before the trade show he was assigned the task of developing a small offset web press based on the components of the K letterpress printing program. The resulting KOR proved to be a great success: 38,800 K-offset presses had been sold by the mid-1980s.

The following years brought further commercial successes, such as the single-color and two-color presses of the S-offset series. Appointed a member of the Management Board in 1973, Jeschke, heading a small team, next concentrated on developing a multicolor offset press that could also be used for perfecting double-sided printing. The Speedmaster prototype was soon ready for presentation at Print 74 in Chicago.

The Speedmaster series, whose triumphant progress has continued uninterrupted to this day, was born.

the originality of Heidelberg's engineering. The Web 16, a more advanced version, followed just two years later.

After the purchase of the U.S. web offset manufacturer Harris Graphics, the web offset division was transferred to this subsidiary.

Another important technical innovation was introduced at Drupa 90: CPTronic, the world's first fully digital press control system, incorporating diagnostics and control electronics for managing and monitoring all press functions from a central control console. CPTronic was networked with the CPC control system that had debuted in 1977, for color and register control in particular.

The success of systematic quality and innovation policies throughout the company during the reign of the collegial Management Board was also manifested in the breaking of the magic 1 billion marks barrier as early as 1981. Sales that year amounted to 1.030 billion marks. That same year, the company rolled out the 300,000th Heidelberg press.

Versatile Employees

Far-reaching changes in production processes, adoption of new technologies in manufacturing and products, and the satisfaction of increasingly diverse customer requirements would never have been possible if employees and their representatives had not adapted flexibly to the new circumstances, putting the company's interests first. Fluctuations in demand frequently made it necessary to work overtime, to which the employee council agreed, provided that workers were suitably compensated.

As a result of the success of the modernized, forward-looking press line, production capacities in Wiesloch and Geis-

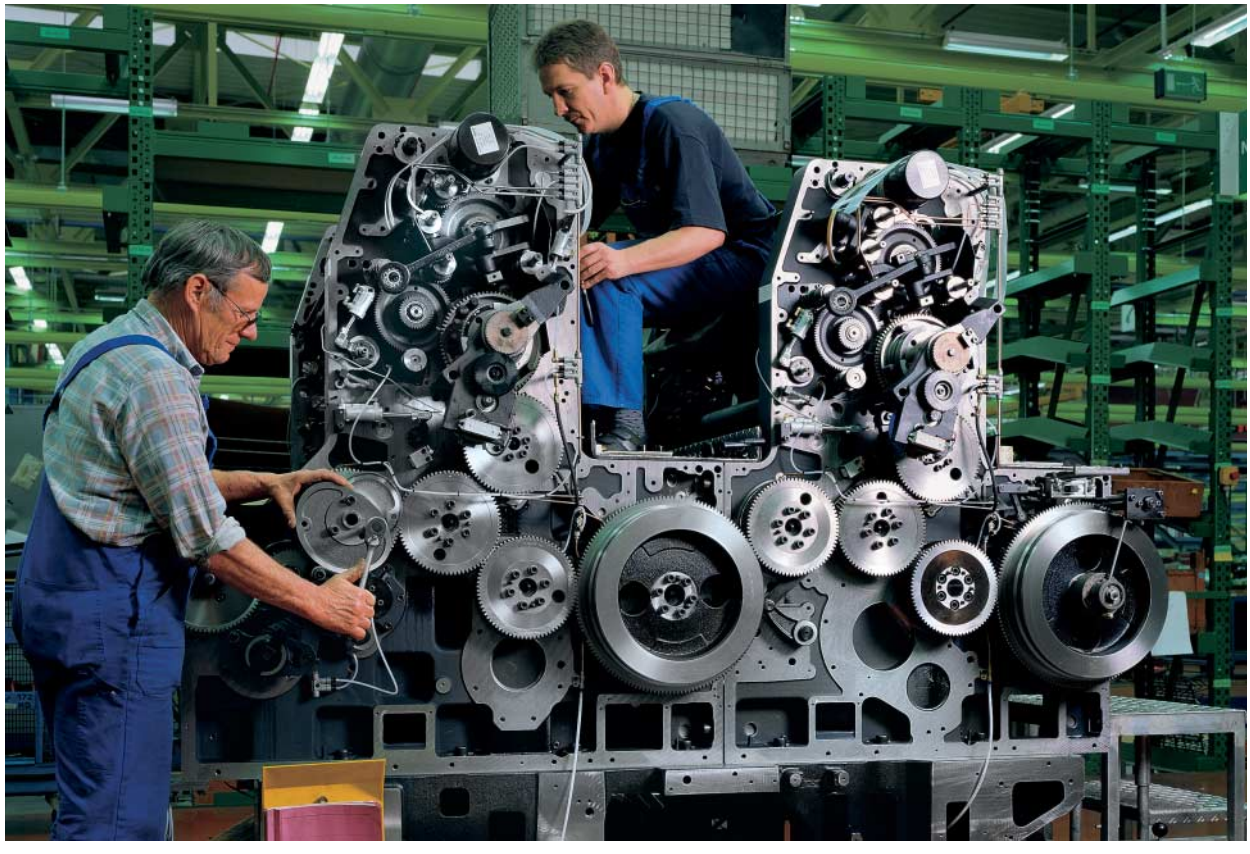
The Speedmaster, which made its debut in 1974, underwent continuous development over the years. The photograph shows the Speedmaster 74.

Assembly in the Wiesloch works: printing units of the Speedmaster series are assembled as they pass through the hall. For more than 20 years the Speedmaster has been one of the company's most successful product lines.

lingen soon became inadequate. The Wiesloch production and assembly facility – which opened with two halls in 1957 and is now the world's largest manufacturing plant for printing presses – underwent continuous modernization and development to incorporate the latest production techniques and processes. The construction of Hall 5 in Wiesloch enabled the Head of Production Joachim Pöppel to implement the method of parts families production, which brought about an appreciable increase in productivity. This enabled the company to cope with the increasing number of orders while simultaneously expanding the product range, and to meet specific customer requirements faster and more economically.

Expansion of Existing Production Facilities and Construction of New Sites

However, the Amstetten factory, the largest of the investment projects of the 1970s, did not begin operation until 1985. As early as 1976, the Amstetten local authorities had expressed interest in the establishment of a new foundry and an adjacent processing center for large cast parts, as the old, traditional Geislingen foundry, MAG – as it was known throughout its existence – was



A highly complex system of gears, shafts and rollers calls for the highest degree of coordination and precision to comply with Heidelberg's legendary quality standards.

Dr. Wolfgang Zimmermann – Primus inter Pares

Having studied law and business management, Wolfgang Zimmermann, then a young trainee barrister, was awarded a scholarship to Yale University, where he obtained a masters degree in jurisprudence.

This period in America developed Dr. Zimmermann into a true cosmopolitan. After gaining his doctorate in 1956 he worked initially as a lawyer and legal adviser. At the age of 30 he joined what was then Schnellpressenfabrik AG Heidelberg, on January 1, 1960. Just four years later he was appointed Member of the Management Board for Finance, Human Resources, and Procurement.

Zimmermann himself made no secret of the fact that his American experience predisposed him to a career in sales and marketing.

In late 1972 he took over from Sternberg as director of the international sales and service organization. Under his leadership the company succeeded in avoiding losses, even during cyclical downturns, by hard selling and a courageous pricing policy. The communicative and customer-oriented Zimmermann remained on the Management Board until September 30, 1991.

Ultramodern, electronically controlled and monitored production technology makes the Amstetten works one of the most advanced foundries in the world.

neither large enough nor adequately equipped technically.

After a long battle with regulations and licensing procedures, the start of construction was finally signalled by a groundbreaking ceremony in late September 1982. Little wonder that Pöppel, Management Board Member for Production, made no attempt to conceal his ire at the enforced 71-month delay in obtaining the necessary authorization. In his speech at the ceremony, he complained to the assembled dignitaries and employees: "Resignation instead of confidence; a reluctance to compete, instead of a desire to boost productivity; self-interest instead of team spirit; bureaucratic restrictions instead of freedom to develop; an emphasis on our differences rather than the common factors that bind us: these are the qualities that now characterize our relationship. Poor Germany." His frustration over bureaucratic

Mold production in Amstetten: the foundry produces blanks for all of the iron casting parts of Heidelberg offset presses.

The Amstetten foundry conforms to the highest environmental standards. Here iron is being electronically smelted.

processes and injunctions was clearly enormous.

But the 500 million marks investment in planning and capital goods paid off. The new facilities have provided, since beginning operation on August 16, 1985, an efficient foundry and production company conforming to the most stringent environmental and health standards.

New standards are being set in Wiesloch and Amstetten with ultramodern and highly economical production flows using CNC processing centers, computer-controlled conveyors and IT-assisted production planning. Heidelberger Druckmaschinen AG has used its investments to consolidate its position not only as the world market leader, but also as the leader in production technology, electronics and logistics. At one time, one-third of all NC machines installed in Europe were in Wiesloch. High technological standards and unique production

Dr. Joachim Pöppel – Parts Families

Immediately after joining Heidelberg in 1973, Management Board Member for Production Joachim Pöppel set to work on implementing the "parts families" manufacturing principle. Despite the recession following the oil crisis, Pöppel ordered construction of Hall 5 in Wiesloch, so as to make a start on economical parts families production as early as possible.

This involves the manufacture, on electronically controlled machines, of similar and identical parts for various series of presses, to produce a high number of parts in the most efficient and economical way possible. The idea had been extensively discussed in the 1960s, and Pöppel's predecessor Hans Kuhnert had conducted preliminary trials, but it was Pöppel who fully implemented this manufacturing principle. Under his direction the Wiesloch works became a Mecca of production technology for mechanical engineers.

Pöppel simultaneously speeded up the development of CNC machines, so that the efficiency-boosting potential of producing parts families could be fully exploited. Integrated planning and the systematic use of computers permitted economical production.

Heidelberg has had this functional and imposing head office since October 1982. As the employee newspaper, Die Schnellpresse, put it, "After years of a 'backyard' atmosphere Heidelberg at last has an administrative building commensurate with the company's importance."

expertise have consistently guaranteed the quality of Heidelberg products and permitted the company to operate economically despite a degree of vertical integration that is most unusual in the mechanical engineering fields.

Over the years, both the Wiesloch and Amstetten works were continuously expanded, restructured, and adapted for new product lines and manufacturing techniques. This enabled management to continue using Germany as a manufacturing location while remaining fully competitive, and to create additional jobs with a secure future.

Functionality and Representation

As frenzied as the construction and expansion activities might have seemed to the casual observer, they were always based on carefully conceived, long-term plans. The purchase and development of building land were always planned with usage for the next 30 years in mind. Investment in buildings was based on requirements for the following 10 to 15 years, and investment in machinery for the next five-year period.

When the collegial Management Board took over, Heidelberg's administrative offices, including the offices of the Board members themselves, were of a Spartan simplicity, since all investment was restricted to the areas of product development and production. Dr. Dosch remembers his first day in office: "I was assigned a bare room with a desk, a chair for myself and one for a visitor; there wasn't even a closet in which to hang my coat." After giving the matter some thought, in 1979 the Management Board decided to build a visually imposing headquarters in Heidelberg that was appropriate to the company's growing international stature.

And so the new administrative building was erected in 1982, followed by the Research and Development Center in 1990. As in earlier times, existing and prospective clients can see the latest Heidelberg machines and technologies in action at the company's headquarters. With this investment in buildings, Heidelberg – by a wide margin the world's largest manufacturer of presses – laid the groundwork for the infrastructure necessary to accommodate future technological upgrades and staff expansion.

One of the most significant departures of the collegial Management Board

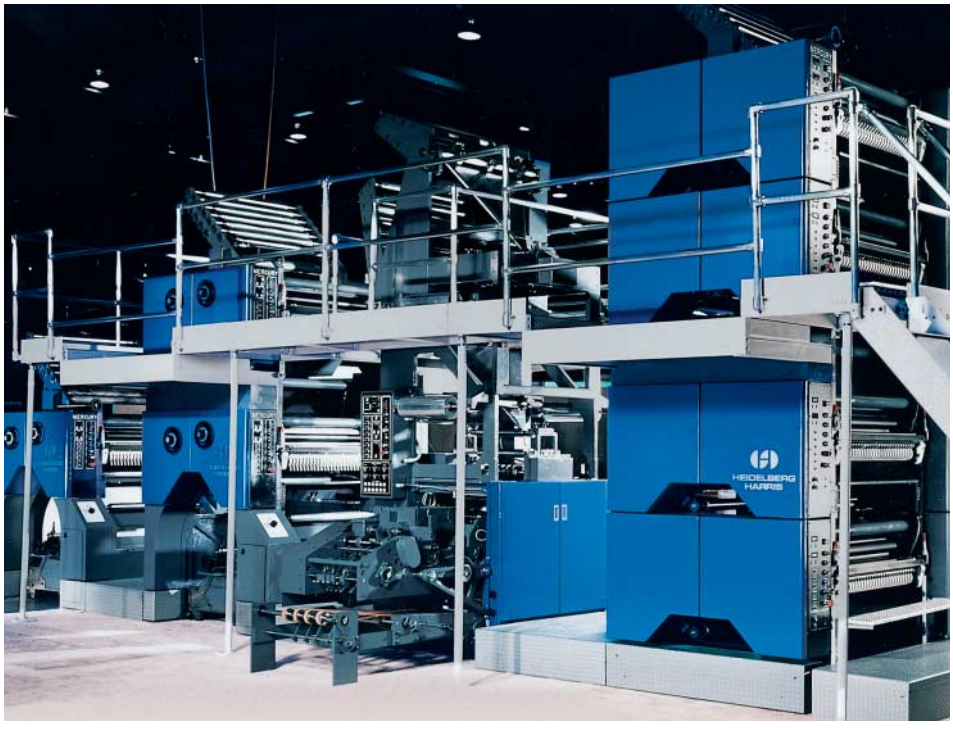
The Research and Development Center in Heidelberg, completed in 1990, offers employees ideal working conditions, and more. The glass-roofed inner courtyard is ideal for social and cultural events.

from the old order was the gradual restructuring of the international sales and service organization. In Sternberg's time the rule was strictly adhered to that Heidelberg was first and foremost a factory, and it insisted on immediate payment for products supplied to agencies. While this had the advantage that, in Sternberg's scheme of things, there were no outstanding accounts receivable in the books, it also restricted Heidelberg's opportunities to shape the market. Only in Hannover did Heidelberg open its own, wholly owned sales and service subsidiary – in 1966 – because the independent agency had failed to meet the stipulated standards.

The first opportunity for changing this sales policy abroad was taken by the Management Board in 1975. That year, the U.K. agency, whose performance had been unsatisfactory, was taken over. After a short period under German management, business picked up to such an extent that other agencies were opened in Germany and elsewhere by Heidelberg itself. Since then, Heidelberg has taken most international sales activities under its own wing.

Takeover of Harris Graphics

The most significant break with tradition, however, was the purchase of Harris Graphics, the U.S. manufacturer of web offset machines, in 1988 (see also



The year 1988 marked a milestone in Heidelberg's corporate policy. For the first time in the history of the company, Heidelberg acquired another firm. The U.S.-French web offset manufacturer Harris Graphics was purchased for $300 million.

Dr. Hilmar Dosch Financial Saavy and Vision

The holder of a doctorate in economics, Hilmar Dosch took over in May 1973 as the Management Board member responsible for Finance and Human Resources. The youngest member of the quartet of Management Board colleagues, Dosch clearly felt the after-effects of Sternberg's authority. In the 1980s, however, employees joining the company were beginning to demand more empowerment, and Dr. Dosch succeeded in resolving the conflict to the satisfaction of all concerned. He concerned himself with the subject of quality management; he also initiated discussions on the basics of management, and implemented measures based on the results of these discussions.

Some of the important milestones in his more than 20 years of service to Heidelberg were the construction of the headquarters and the Research and Development Center, the establishment of the foundry and production site in Amstetten, and, most importantly, the takeover of the U.S. firm of Harris Graphics.

1992 Dr. Dosch was appointed Chairman of the Management Board, a post he held until his retirement in late 1995.

page 113). This company, with subsidiaries in Mexico (Harris Graphics de Mexico in Saltillo) and France (Harris Marinoni S.A. in Montataire), and in which a large Japanese competitor held a minority stake, was up for sale because the core competencies of the parent company had shifted. The battle with Japan to acquire Harris Graphics cost Heidelberg around $300 million. But this price tag must be viewed in light of the fact that the tax authorities of the German state of Baden-Wuerttemberg, where Heidelberg is located, agreed that it could be fully written off within the year, without the need to show a loss.

The real difficulties became apparent only after the purchase. The new subsidiary proved to be in bad shape and had to be restored to profitability. The Management Board dispatched Dr. Klaus Lederer and Horst Schlayer to the U.S. as troubleshooters to bring the company up to Heidelberg standards in every respect.

In a transatlantic transfer of know-how, German engineers and technicians reorganized production flows in the American factory and trained the employees to the level of German skilled workers. In charge of the Harris Graphics factory in Montataire, France, was Bernhard Schreier, now Chairman of the Management Board.

Even today, Dr. Dosch gives credit to his Management Board colleagues, who organized the turnaround at the site, and also to the many employees who worked tirelessly to raise quality in the U.S. factory to German standards.

After three years Harris Graphics was finally brought into line and integrated: Heidelberg Harris, into which Wiesloch's web offset press production was also merged, provided Heidelberger Druckmaschinen AG with a second, internationally active organization with production sites in the U.S. and Europe and nearly 2,800 employees.

This first important acquisition was followed by others (see also page 99). Heidelberg thus developed strategically into a provider of complete solutions to the printing and publishing industries.

The End of the Collegial Board

In the early 1990s the collegial Board – which by then included some new members – was once again faced with an economic slump. In fiscal 1991-92 the sales of Heidelberger Druckmschinen AG slumped, after 15 years of uninterrupted growth, by 4.5% to 2.62 billion marks, and that of the Group (on account of a fall in overseas business) by 7.5% to 3.48 billion marks. The following fiscal year showed no improvement: in fact, the Board even

Artist Otmar Alt, who lives in Hamm, decorated this 10-color Speedmaster with bright pictures. He painted twelve motifs in all – two extra ones in case more printing units were added later.

hinted at the possibility of staff cuts. It was not until the 1993/94 fiscal year, in late March 1994, that the company entered a completely new, lasting phase of growth. In that year Heidelberg Harris moved into the black for the first time since the takeover. "We were finally looking at the first dollar we earned ourselves," reported Dr. Dosch at the time, with palpable relief.

In the early nineties the Management Board, despite the burden imposed by the rehabilitation of Harris Graphics, grasped the opportunities arising in Eastern Germany as a result of political developments. Even before German reunification, Dr. Zimmermann, the Management Board member for Sales and Marketing, had opened a Heidelberg branch in Leipzig. The decision to build a factory in Brandenburg came shortly after this, and the foundation stone was laid on May 7, 1992.

By this time the composition of the collegial Management Board had changed following the retirement of some of its members. The first to leave, in 1987, was Willi Jeschke, Head of Development, who made way for his colleague, Wolfgang Pfizenmaier.

September 1991 saw the retirement of the Head of Sales, Dr. Wolfgang Zimmermann, after nearly 32 years of service for Heidelberger Druckmaschinen AG. His duties were taken over by Ulrich Mauser. Dr. Klaus Lederer, Head of Production Technology, who had taken over from Dr. Pöppel on the Management Board after his return from the U.S. in 1991, also left the company at the end of May 1992.

In 1988 Horst Schlayer was promoted to deputy member of the Management Board and after his return in 1990 from the U.S. he took over the responsibility for product marketing.

The board was reorganized on March 26, 1992. The Supervisory Board appointed Dr. Hilmar Dosch Chairman of the Management Board; in June of the same year, Pfizenmaier, Head of Research and Development, also took over from Dr. Lederer the responsibility for production technology.

And so after nearly 20 years the era of the collegial Management Board drew to a close. Until his retirement in 1995, Dr. Dosch continued to lay the foundations for solid growth with a fresh effort to modernize the Speedmaster 74 series.

Together with his Board colleagues and employees, he also created a new, modern image of the company: since autumn 1994 the "Heidelberg" logo has been the hallmark of the enterprise and its products.

Horst Schlayer – Marketing Expert and Rehabilitator of Harris

Horst Schlayer's arrival at Heidelberg in 1961 marked the start of a long and successful career that propelled him right to the top of the organization.

As Heidelberg's "marketing man", he provided many important stimuli for the change in the product palette, in the early 1960s, from letterpress to offset printing, and for the development of multicolor presses. By 1973 he had already reached the position of sales director, performing his duties so successfully that he became a deputy board member in November 1988. That same month, he travelled to the U.S. as president of the newly acquired company of Harris Graphics, where he shared responsibility with Dr. Klaus Lederer for the necessary restructuring. Having successfully completed his mission, he returned to Heidelberg in 1990.

He was appointed in 1993 to the Board as a full member with responsibility for Product Marketing. In this capacity, Schlayer was largely responsible for mapping the future strategy of the Heidelberg Group, and for defining the technical specifications for presses to be exhibited at Drupa 95.

Schlayer retired at the end of 1995.

Meeting Tomorrow's Challenges

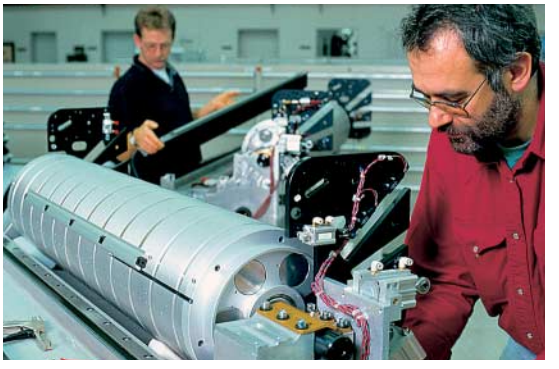
In the mid-1990s the pace of change accelerated rapidly at Heidelberg. The entire printing industry, in fact, entered a phase of upheaval, mainly due to the ever-increasing importance of electronic media and new digital technologies. It began to dawn on printers that they were going to have to offer more than just printing services. Customers were increasingly demanding that finished printed products be supplied by a single "full-service provider". And they expected this one-stop shop to deliver better quality, greater flexibility, and faster turnaround than ever before. The upshot of this development was that the processes of prepress, press, and postpress began to merge.

It was against this background that the newly reconstituted Management Board, chaired by Hartmut Mehdorn, decided in late 1995 to prepare the company to meet the challenges of a digital future. After Mehdorn had assumed office and held intensive discussions with the Board, he issued this statement: "As a major force driving change in the printing and publishing industries, Heidelberg will evolve into a complete solutions provider covering prepress, press and postpress." Management explained this new direction to its employees in a brochure entitled "Printing Redefined", stressing that Heidelberg would not merely react to change but, as the market leader in its field, proactively move to shape it. An important justification for the new strategy was provided by a study carried out by Horst Schlayer, who sat on the Management Board until the end of 1995. His analysis predicted that electronic media would account for about fifty percent of the market by the year 2010. The new "competitors" of offset printing would be color copiers and toner-based color printers, which would make increasingly deep inroads into the traditional domain of printers, particularly for short runs. "Global exchange of digital data over increasingly powerful communication networks will influence the entire market and demand ever faster and more intelligent solutions from the printing industry," the study predicted.

In response to this study and current developments, in 1996 Heidelberg began

With the Quickmaster DI (Direct Imaging), which debuted at Drupa 1995, Heidelberg took an important step on the path to digitalization. The Quickmaster DI directly imports data from the computer, thus eliminating the need for film or exposure of photographic plates.

Through a systematic strategy of expanding into prepress and postpress (the operations preceding and following actual printing), newspaper web printing, and digital printing, Heidelberg has recently developed into an internationally active solutions provider serving the printing, publishing and media industries. (Shown here: Heidelberg's plant in Montataire, France)



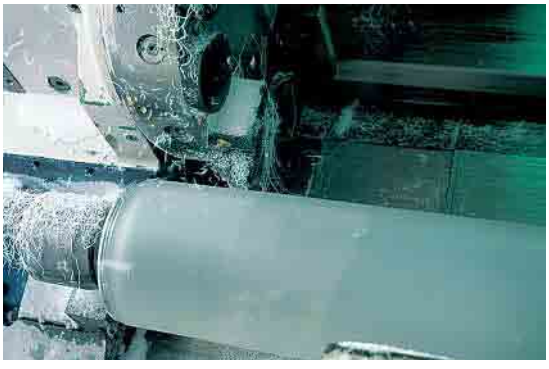
By acquiring Linotype-Hell in 1996, Heidelberg laid the groundwork for the Prepress Business Unit. Scanners and other prepress system components are produced in the ultramodern manufacturing facilities of what is now Heidelberg Digital in Kiel.

systematically extending its capabilities beyond conventional printing in the narrow sense. But before moving to acquire the necessary expertise, the company geared up for the task ahead by streamlining its corporate structure. The April 1997 reorganization into Business Units, each assuming responsibility for a product family, equipped Heidelberg with a more transparent internal structure. Corporate and Service Units and, in the markets, Sales & Service Units were established to support the Business Units. In Mehdorn's evocative metaphor, "Heidelberg's battleship was transformed into a powerful fleet of speedboats."

Becoming a Solutions Provider

To broaden the company's traditional specialization in offset printing, the Management Board decided to acquire the necessary prepress and postpress know-how by making judiciously selected acquisitions.

Even before the corporate reorganization was complete, Heidelberg took over



Stork Contiweb, a Dutch manufacturer of splicers and dryers. In late July 1996 Heidelberg decided to purchase Linotype-Hell AG, based in Eschborn, Germany. Eighteen months later Linotype-Hell, one of the world's leading prepress specialists, joined the Heidelberg Group — a decisive step forward into the areas of prepress and digital color management. Under the capable direction of Bernhard Schreier, the present Management Board chairman, this company was restructured and integrated into Heidelberg's corporate organization. Some of Linotype-Hell's activities were spun off, and its remaining core business competencies were concentrated at its Kiel, Germany, location.

To gain a foothold in postpress, in 1996 Heidelberg also took over Sheridan Systems, a U.S.-British manufacturer of bindery and mailroom systems. Barely two years later, this was followed by the acquisition of the Stahl Group, with headquarters in Ludwigsburg just north of Stuttgart.

Together with its subsidiaries of Brehmer in Leipzig and Baumfolder in the U.S., Stahl was one of the world's leading vendors of folding machines, stitcher-gatherers, and book-sewing and thread-sealing machines.

Moving into Digital Printing

A number of printers were by now feeling the heat of increasing competition from copy shops. "Print on demand" was the new wave. Heidelberg therefore started looking around for a competent partner with the know-how to develop competitive products, and in mid-1997 launched a joint venture, NexPress, with Kodak. The objective was to produce a color press to keep pace with competitors such as Xerox and Océ in the field of digital printing. Kodak contributed its expertise in scanning and color technology, while Heidelberg provided its competence in the printing industry and its international distribution network.

In March 1999, Heidelberg also took over Kodak's Office Imaging division to advance to the forefront of digital black and white printing. Kodak employees in Rochester, New York, in the U.S., Kirkby in the U.K., Tijuana in Mexico, and Mühlhausen in Germany became members of the Heidelberg family. The same year saw the establishment of Heidelberg Digital based in Rochester, a subsidiary that brought together all of Heidelberg's digital printing activities under one roof. Its first product, the digital black-and-white Digimaster press, was a resounding success from the word go. Its counterpart in the color printing field, named NexPress after the joint venture with Kodak, will be one of the highlights at drupa 2000.

Heidelberg's first newspaper web press, the Mainstream 80, will also be a focus of attention at the printing and publishing industries' largest international trade show in Düsseldorf. As in its more traditional markets, Heidelberg is

With the acquisition of the Stahl Group, the tradition-seeped Swiss firm of Brehmer GmbH in Leipzig also joined the Heidelberg Group. Its expertise in building postpress machines forms the backbone of the Finishing Business Unit. The Stitchmaster 300 is one of the machines manufactured in the ultramodern production facility in Leipzig (above).

pursuing ambitious goals here. Its newspaper web presses are expected to be market leaders within the next ten years.

Heidelberg is not only committed to meeting its customers' radically changed requirements with products. For the first time, the company will present itself at Drupa 2000 as a complete solutions provider covering all parts of the printflow. At nine Solution Centers, the company will showcase consulting services and product lines tailored to the special needs of particular customer groups ranging from label printers to newspaper publishers.

Excellent Stock Market Performance

Heidelberg's development has also impressed the investment community. In only six months after the company's stock was first floated in December 1997, it was added to the list of enterprises used to compute the MDAX, the Dow Jones STOXX, and the Dow Jones Euro STOXX indices. This stock market success was accompanied by an upturn in the international company's performance: the Group's sales volume doubled within five years, climbing from 4 billion marks in fiscal 1995-1996 to more than 8 billion marks in 1999-2000. This success is also reflected in other performance indicators: during the same period (1995–2000) the company's workflow grew by 100%, which means that at the eve of the new millennium there are around 24,000 "Heidelbergers" working in over 170 countries around the globe.

Yet as in the past, all of the company's activities are geared to customers and their needs. And because an increasing number of Heidelberg-equipped printers in the booming packaging market are clamoring for web offset flexographic presses, in September 1999 Heidelberg acquired 30% of the Gallus Group. This Swiss company, which has been a quality and market leader in its field for generations, develops and produces web offset presses, mainly for flexography, letterpress printing as well as screen printing. It primarily targets label printers.

In the face of stiff competition, maximum press uptimes are increasingly vital for printers' success – and also for Heidelberg's. The Heidelberg Group's dense, worldwide service network has long played a key role in ensuring this. Since September 1999, the organization has been supported by the fully automated facilities of the new World Logistics Center in Wiesloch, which supplies spare parts around the clock. Within Europe, spare parts reach their destinations within 24 hours. To speed the supply of spare parts of all kinds to customers worldwide, a central computer system coordinates the dispatch of consignments via local warehouses.

The revolution in the trade poses new challenges to the graphic arts industry, and not only where technology is concerned. Continuing education and focused training programs for customers and employees are mission critical for effective handling of data and products. Heidelberg is addressing these customer needs in the year 2000 by opening the Print Media Academy, a unique training center for the graphic arts industry. The Academy is a center for communication, expertise, and knowledge – a forum at which experience and ideas come together from the international printing, publishing and media industries. Course participants receive important ideas and stimuli for the future. The curriculum is closely geared to practical requirements; everything taught at the Academy today needs to be fully implementable on the shop floor tomorrow, and it should yield palpable and immediate benefits. Here again, Heidelberg proves itself a reliable partner who builds bridges between theory and practice, and between the past and the future.

Hartmut Mehdorn – From Pioneer to Solutions Vendor

Hartmut Mehdorn chaired the Management Board for four years, from 1995 to 1999. During this period the company took a new strategic tact: through internal development efforts and systematic acquisitions, Heidelberg changed from a traditional manufacturer of printing presses into a complete solutions provider serving the printing and publishing industries. The acquisitions made included Linotype-Hell AG for prepress, Kodak's Office Imaging division for digital printing, and the Stahl Group for postpress. The company also started manufacturing newspaper web presses in November 1998.

Heidelberg's service and distribution networks were also extended worldwide to further improve customer service.

Mehdorn, born in 1942, studied mechanical engineering in Berlin and began his professional career at Vereinigte Flugzeugwerke in Bremen before switching to MBB in Hamburg and later to Airbus Industrie in Toulouse. He then returned to Germany to join the board of the Dasa aeronautics division. In December 1999 he left Heidelberg to become management board chairman of Deutsche Bahn AG (German Rail).

New Stimuli for the Graphic Arts Industry

Even for those in the trade, it is not always easy to keep abreast of rapid technological developments in the graphic arts industry and the increasing integration of prepress, press, and postpress. Heidelberg has therefore created an internationally unique center for communication, expertise, and knowledge: the Print Media Academy, whose inauguration on April 14, 2000, marks an important milestone in the history of Heidelberger Druckmaschinen AG.

"The Academy is not only a training ground for future Heidelberg employees," emphasized Dr. Bernd Kaiser, director of the Print Media Academy, at the opening ceremony. "Rather, our intention is to provide a forum for everyone in the graphic arts, printing and publishing industries, from which they can draw ideas and inspiration for shaping their own future." The Academy offers guidance and advice on how to optimally deploy state-of-the-art technologies, as well as conferences, panel discussions, and workshops. The Print Media Academy gives attendees the tools they need to implement their ideas. This is important, because modern media service providers need a full set of tools including effective management instruments. "It's no longer enough to have a perfect mastery of the art of printing. To successfully penetrate the market, you have to professionally organize your business processes as well," explains Kaiser. The Print Media Academy therefore also offers management training. And its integrated approach extends to an advanced course of study culminating in a Print Manager degree. Graduates take home all the industry and technical knowledge and skills they require.

Not olny will this knowledge be available in Heidelberg, the company is now in the process of setting up a global network of Academies, six of which are already operating in major cities around the world. Further Academies will follow in Cairo and São Paulo in the second half of 2000. Thanks to the Internet and tele-teaching, many seminar rooms are no more than a mouse-click away – no matter where you are in the world.

Managers and employees of Heidelberg customers, as well as Heidelberg's own employees, learn about state-of-the-art technologies at the Print Media Academy. They are also brought up to date on the latest techniques for management and print-media marketing.

The Print Media Academy is the hub of a global network of local academies. Experience and expertise from the international printing, publishing, and media industries come together here.

Training for Individual Responsibility

Heidelberg spends around 29 million marks every year to train more than 700 apprentices in the whole of Germany. “Heidelberg has always taken training very seriously,” says Management Board Chairman Bernhard Schreier, “and has offered young people valuable training opportunities even in economically difficult times.”

The company’s Brandenburg site deserves special mention: no less than 20 percent of those working there are trainees, considerably more than the German national average of 5% for mechanical engineering firms. An outstanding feature is the “learning center” approach, which in 1997 was awarded the Training Oscar, the country’s highest award in this field. Under this “company within a company” scheme, third-year trainees in Brandenburg assemble numbering inking systems and fill actual orders from all over the world. The youngsters assume complete responsibility for planning, checking, assembly, and quality control, even electing assembly managers from among their own ranks. The supervisors responsible for the trainees merely monitor their activities. Heidelberg boasts eight such learning centers.

The high demands that Heidelberg places on its employees are clear from the importance it attaches to instilling, even in the rawest of recruits, a willingness to shoulder responsibility, an awareness of customers’ needs, and entrepreneurial thinking. During their training, the young apprentices are intensively coached. A personal development folder with sheets documenting progress in individual areas accompanies each apprentice. At the end of training, the learning objectives set together with the trainers give way to goal agreements that they jointly defined with their supervisors.

During the course of their training, Heidelberg apprentices are taught the importance of responsible, customer-oriented, entrepreneurial thinking and action. In 1997 the company’s “learning center” approach received the Training Oscar, Germany’s highest award in this field.

Management by objectives, goal-oriented training in specialist expertise, and development of personal capabilities are all in the day’s work for all Heidelberg employees, right from day one. The young people are helped to realize that it is up to each and every one of them to maintain Heidelberg’s position as a world leader in printing technology.

Trainers at all sites face a common task. As Management Board Chairman Bernhard Schreier puts it: “In order for us to keep ahead of our rivals in international competition, it just is not enough for us to react passively and make changes only when forced to. We need to be proactive and think today about the challenges of tomorrow.” Learning is part of the job.

Bernhard Schreier, Chairman of the Management Board of Heidelberger Druckmaschinen AG, talks about corporate strategy and the challenges facing the globally active company.

Strategically Aligned in All Areas

Interview with Bernhard Schreier, Chairman of the Management Board of Heidelberger Druckmaschinen AG

Mr. Schreier, you have worked successfully for Heidelberg for 25 years. Which events of this period have made the most profound impression on you?

Schreier: One of the important milestones was my work for Heidelberg in France, after we acquired the U.S. firm Harris Graphics. We had traditionally been vendors of sheetfed presses, and now we faced the challenge of making a mark in web offset. This involved relocating production of web offset presses, which had already started in Germany, to France. The task was far from easy – but everything went according to plan. And of course the acquisitions of Linotype-Hell AG and Kodak's Office Imaging division were also very important for me. Many other highlights stand out in my memory as well, and there will undoubtedly be more to come.

Heidelberg has evolved from a classic German manufacturer of machines into an international solutions provider, with subsidiaries and production sites in other countries. In what ways has this transformation affected the culture of the organization?

Schreier: When I started working here, we were a traditional medium-sized German firm. English was hardly spoken at all, and every business trip involving a flight had to be approved by the Management Board. The company had just three core sites: at Heidelberg, Wiesloch and Geislingen. Now there are twenty major sites, spread all over the world. English is the company's official language, and most presentations, even here in Heidelberg, are held in English. In fact, during the course of my working day I speak German only half the time. We are now a multinational, multicultural company.

A lot has been said about the Heidelberg spirit. What exactly does this mean?

Schreier: In earlier days, when the company was still known as Schnellpresse, our spirit was a specific, localized phenomenon. The Heidelberg spirit of today is more in the nature of a corporate culture transcending geographical boundaries. And it is management's task to communicate certain values in such a way that they are seen to be common, fundamental principles.

Heidelberg's new architectonic symbol directly opposite the main railway station is the Print Media Academy.

Heidelberg's Management Board (left to right): Dr. Herbert Meyer (Finance), Holger Reichardt (Marketing), Bernhard Schreier (Chairman), Dr. Klaus Spiegel (Technology), Wolfgang Pfizenmaier (Digital).

Heidelberg has accumulated a wealth of new experience while integrating the firms it has taken over. Have the new subsidiaries also influenced the parent company?

Schreier: We have of course profited from the expertise of these firms, and from their new – and to us, unconventional – ways of looking at things. And also from the new, international nature of the organization. Plus, we have adopted many excellent ideas for successful processes that Heidelberg can also benefit from.

How did the new employees – in France, for example – respond to being acquired by a German company? Was there any antipathy?

Schreier: The reaction was entirely favorable. Most of the companies involved viewed the acquisition less as a takeover than as a partnership, passing into safe hands. And nationality is irrelevant here. The important thing is that the partner should be sufficiently strong to offer a secure future.

Has the takeover of agencies and overseas firms resulted in a stronger internationalization of production?

Schreier: We already produce internationally. Here in Germany, the term "overseas production" brings to mind low-wage countries like China and the Czech Republic. We have experimented with overseas production in the past, but have come to the conclusion that a Heidelberg sheetfed press, to cite just one example, really can't be assembled outside Germany. Overseas production is simply not a viable option. Our sheetfed presses can't be produced anywhere except Germany. By the same token, our web offset presses can only be manufactured in the U.S. and France.

In the case of those machines where the know-how required for assembly is less critical, it may be feasible to relocate production. But when you consider that the cost of materials accounts for 80 to 90 percent of overall production costs, and the difficulty in finding vendors in

these low-wage countries that are able to supply these materials, overseas production just doesn't make economic sense. The lower costs of assembly – which comprise just 10 to 15 percent of total costs – are of minor importance. At this time it simply isn't worthwhile for us to transfer production just to take advantage of lower wage costs.

Does this apply also to software development and similar services?

Schreier: Software is available everywhere now. It makes no difference to us whether a particular idea comes out of Japan or Silicon Valley or Germany. We sign on software people where they are available, and we see little point in relocating them. Software can be easily transmitted over the Internet to any part of the world, so software development can be a 24-hour-a-day activity. In contrast to relocation of production, personnel considerations are hardly relevant here.

Thanks to information technology, with which the printing industry is now closely linked, the world is shrinking. What, in your opinion, will be the effects of the Internet and its awesome information and communication possibilities? Do these developments concern you?

Schreier: No, I believe that the market for printed products will continue to grow – and not despite, but together with electronic media. To ensure our success, it will be crucial to open up new markets and focus even more intensively on customer needs. Research indicates that in many world markets, the demand for print media is nowhere near saturation point. Electronic and print media will coexist. We ourselves are making increasing use of the Internet to assist our customers. A print shop may, for example, download files from an advertising agency, process the data, and then upload it so that the agency itself can make a test print. The document then returns to the print shop along with an order for a print run of 500. Finally, confirmation of the order is sent over the Internet to the agency. This is the kind of application we have an important stake in. Gigabytes of data can zoom over the lines in seconds to transmit an image comprising several megabytes without any errors. There is still work to be done here, however, since the Internet isn't yet fully developed for graphic design.

Will manufacturers of conventional presses face entirely new competitors from other fields as a result of advances in electronics?

Schreier: Yes, but our Heidelberg Digital division is well prepared for this. And, of course, we are carefully monitoring all developments in the marketplace. For example Hewlett Packard, a strategic Heidelberg partner, has a vision for decentralized printing. In their future scenario, there won't be presses anymore, or at least none of the kind that Heidelberg makes, because everyone will have a personal printer of their own at home. Printed information will be obtained by printing directly in the living room or wherever. The manufacturer will be informed automatically if a device is defective even before the user realizes that there's a problem. A replacement printer will then be delivered by the next day, naturally free of charge to the customer, with the costs being covered by advertising. Users will have no defense against the advertising, which appears on the printouts.

Companies like Canon and Xerox are also in touch with the situation today. They no longer believe that the future belongs to "master-bound" print production with plates; in their view, only electronic digital printing will survive. In this method, information is fed from a digital database into a press, which then prints the required number of impressions of satisfactory quality.

The customer's requirements are of crucial importance here. For short to

mid-sized print runs, sheetfed offset printing will still be the best option, while web offset printing will leverage its strengths on longer runs. Digital printing is clearly the best solution for personalized printing and short runs. The available options will therefore be digital presses, flexible sheetfed presses, and very fast web offset presses, the choice being dictated by the customer's requirements with regard to flexibility, quality, and speed. We have recently taken a decisive step forward in both digital black and white and color printing. Competitors like Xerox are now taking us seriously.

When will the new digital color press be launched on the market?

Schreier: We unveiled it at drupa 2000 in Düsseldorf.

Will digital presses capture a significant share of the market at the expense of offset printing?

Schreier: Offset printing and digital printing address entirely different requirements, in terms of both quality and run lengths. Digital presses will bring our customers additional business and offer them new advantages for holding their own against the electronic media.

Heidelberg is positioning itself as a solutions provider serving the printing and publishing industries. Do the new presses for digital and newspaper printing complete its product palette, or are there any other important areas into which Heidelberg could usefully diversify?

Schreier: Our new newspaper press is just the first of an entire family. When we speak of newspaper solutions, we think of the entire production chain stretching from prepress across newspaper production to mailroom systems. And even in digital printing, what we have so far acquired and developed is really no more than a beginning. Our product palette must become appreciably broader.

Having said that, I believe that we're equipped to meet our targets in all areas. Only a few gaps still need to be filled in.

And can you accomplish this within your existing organization, or may we expect further acquisitions?

Schreier: Acquisitions aren't ruled out. We have certain concrete objectives and a few suitable candidates in mind.

Will there be regional focuses that promise particularly rapid growth?

Schreier: The major growth region of the future is, of course, Asia, including the highly promising Chinese market. We are establishing a presence there. Japan has also always been a good market for us, and will continue to be so.

There will be modest growth in Central Europe and North America. We are anticipating respectable growth rates in Latin America in the years ahead. Eastern Europe can also be expected to contribute; that market still has considerable potential. In many future markets, the development of the printing industry will primarily depend on political conditions. Wherever there are curbs on free dissemination of information, this will affect the printing industry, and therefore also the printing press industry. But the newly industrializing countries are increasingly opening up, and our products will be in greater demand there.

Is there any particular formula for Heidelberg's success that can be applied to its newly acquired subsidiaries?

Schreier: Our basic management tenets work very well at Heidelberg. But it's impossible to turn these into a set of theoretical principles that can be applied universally to everything and everybody, just because it works at

Heidelberg. Our advantage is that we work from a solid technical base, drawing upon a great deal of expertise in the field of offset printing. The entry threshold for any other company is extremely high. And, thanks to our financial strength, we are in a position to push certain things very forcefully.

Traditionally, Heidelberg has practiced a high degree of vertical integration in its production activities. Is there any intention of changing this?

Schreier: Over the last two years, we have been carrying out make-or-buy analyses at all our subsidiaries. In many cases, we have come to the conclusion that it is preferable to outsource. On the other hand, we have resumed manufacture of many parts, having found that in-house production offers the best quantity/quality ratio on the market. So far we have been fairly flexible about this. But we have a special team that continually checks whether we are indeed on the right track.

Are there benchmarks for this that Heidelberg can learn from?

Schreier: These are available everywhere. But they are highly selective, not universal. We don't stipulate that such-and-such a firm must be a benchmark for us, although its paint shop or its marketing may well be, and we should study these carefully. In other words, we seek out individual areas where others have performed outstandingly.

Heidelberg's rapid growth calls for highly qualified employees and trainees. Where do you recruit new employees?

Schreier: We have always had an excellent reputation as a manufacturer, and naturally receive many applications directly from university graduates, experienced people, and so on. And of course we also market ourselves at relevant universities and technical colleges. We have a special department within Human Resources that is responsible for this. We also run trainee programs for college students and generally enjoy an excellent image.

What is the future role of the Print Media Academy in your education and training plans?

Schreier: It is already extremely important; after all, it is the only one of its kind in the world. Internally, the Print Media Academy provides training: in marketing and service, for example, or for employees of our agencies in operating, installing and maintaining our machines. We offer our customers many varied training programs, ranging from courses for operators and service engineers to the advanced "Print Manager" course of studies.

To sum up, Heidelberg wants to show customers how to remain successful now and in the future. That is the most important thing for us.

On the eve of the new millennium, what do you see as the greatest opportunities and challenges for Heidelberg?

Schreier: Our greatest challenge this year will be our following-up to drupa 2000. At Drupa 95 we exhibited as manufacturers of sheetfed and webfed presses. This year, we presented ourselves as solutions providers for our customers, offering complete process pathways, from data in-put all the way to the finished product, with all the intermediate facets that this entails. We showcased a full range of services and consumables: inks, plates, film, printing chemicals, and so on. As a solutions provider our greatest challenge ist continuing to meet customers needs. We must balance technology and innovation with the needs of our customers.

Cyberspace and Outer Space – What Does the Future Hold?

Visions inspire us to act. Many advances that will shape the future have already debuted in the here and now. We are growing at an accelerating pace into a new, digital world. Digital technology enables the dissemination of information over the Internet, and even our daily newspapers are printed on digitally controlled presses. A burgeoning volume of business transactions are conducted over the World Wide Web – cyberspace has long since ceased to be merely a playground for youthful surfers. Meanwhile, space travel is penetrating new dimensions: after the Moon, now the next target is Mars. An international team effort will launch a space station orbiting 210 miles above the earth's surface to study our world and the cosmos in greater detail. In just a few years, if all goes according to plan, manned spacecraft will depart from this station to visit the Red Planet and ascertain whether it, too, harbors life.


NASA
USA


SHUTTLE RADAR TOPOGRAPHY MISSION
SRTM


SHUTTLE RADAR TOPOGRAPHY MISSION
SRTM


beta lounge
EXPO2000
ATHENS 2004

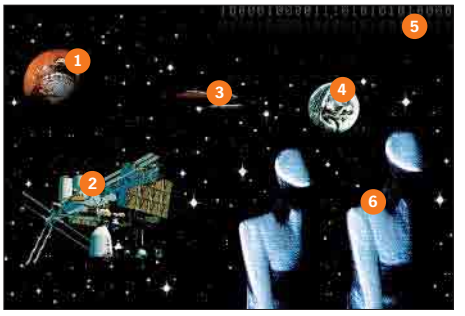

beta lounge
EXPO2000
ATHENS 2004

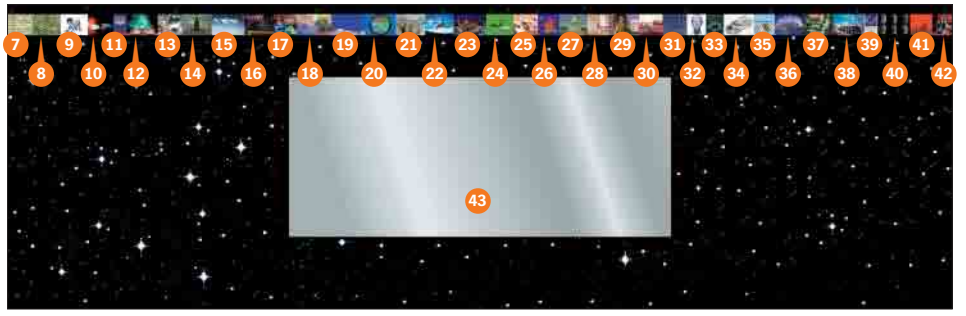
ZUKUNFT

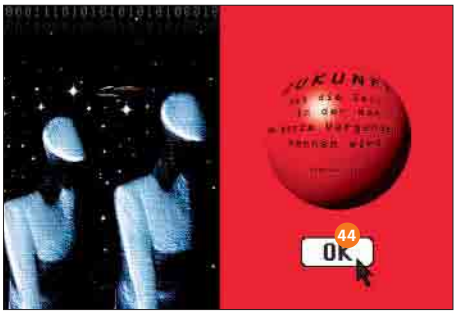
ist die Zeit,
in der man
die ganze Vergangenheit
kennen wird.

Gabriel Laub

THE NINETIES







1 Mars becomes the target of future space missions. The ice cap on its South Pole fires scientists' imaginations.

2 An International Space Station will accommodate four people and serve as a base camp for future space missions.

3 Solid fuel is to be used to transport astronauts to Mars.

4 The Earth as seen from space.

5 0101 series, the mathematical language of the digital world.

6 Fantasy figures are timeless.

7 Stock market prices.

8 Satellite image of earth – incredibly sharp.

9 Aibo – Sony's robotic dog.

10 Space vehicle with extended solar panels.

11 Superbowl in the USA.

12 The Reichstag in Berlin.

13 Weightlessness in the space station.

14 The Pharos lighthouse at Alexandria – one of the Seven Ancient Wonders of the World.

15 The Beluga transport plane, made by Airbus.

16 Under construction. Many Internet sites have been registered but not yet finished.

17 Latest technology – this example is by Frog Design Deutschland.

18 Satellite image for surveying the earth.

19 American website for Chinese speakers.

20 NASA's website. Shuttle flight to survey the earth by radar.

21 Mariko Mori, Japanese photographer and video artist.

22 Satellite powered by solar collectors.

23 Asian webcam.

24 "Beta Lounge" MP3 music webcast.

25 Astronauts at work.

26 Expo 2000.

27 The Mausoleum at Halikarnassos – one of the Seven Ancient Wonders of the World.

28 Mars shuttle landing. Reconstruction.

29 Lara Croft. The first megastar in cyberspace.

30 Mars. Reconstruction of planetary exploration.

31 Satellite image of Mars.

32 Hologram of a human head.

33 Japanese website of U.S. artist Cindy Sherman.

34 Hybrid car powered by a combined electricity/gasoline engine.

35 Playstation.

36 American weather satellite with TV channel.

37 Animation for a computer game.

38 Berlin. The German capital's Internet site.

39 Athens 2004. Promotion for the Olympic Games.

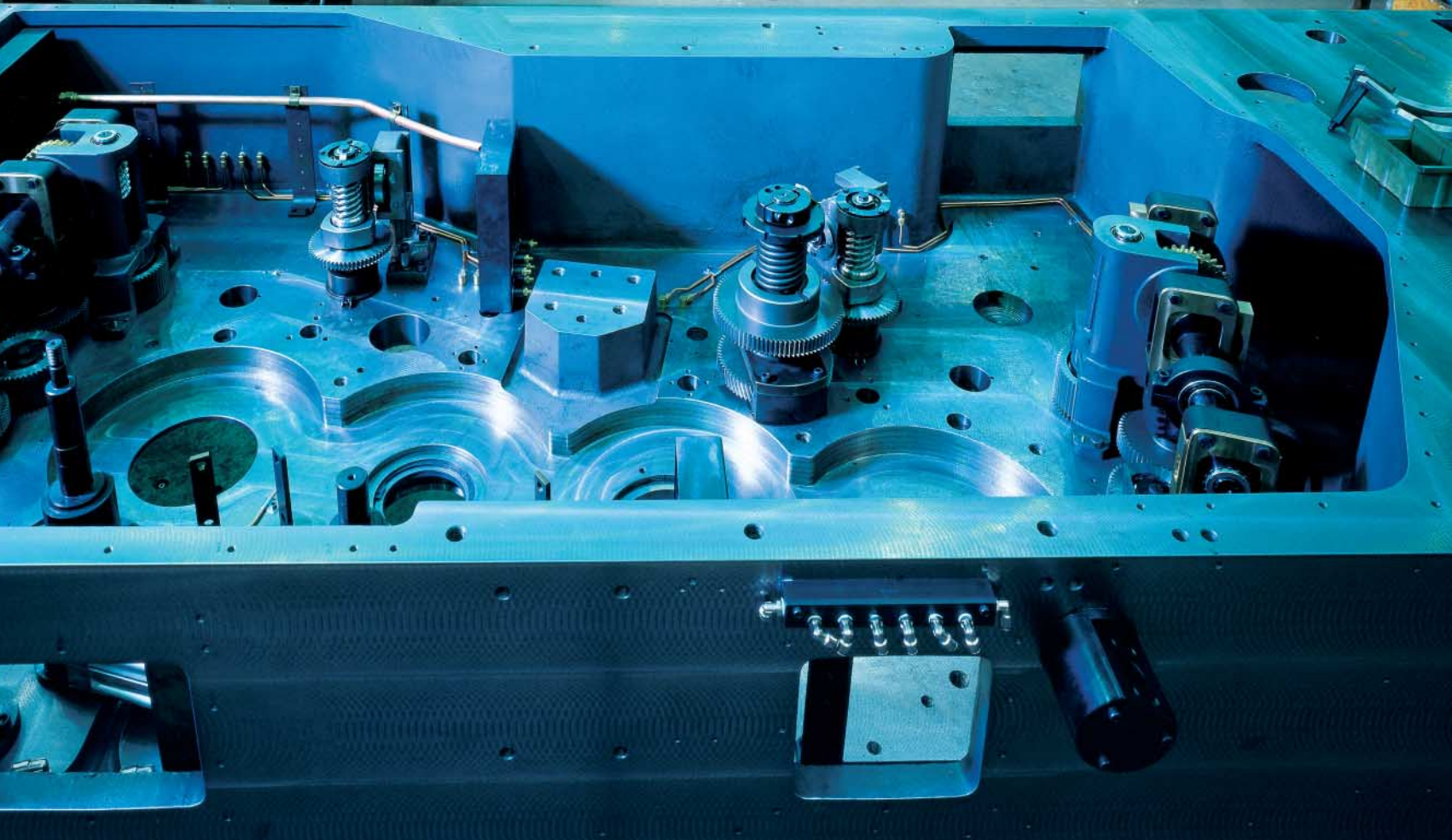
40 3-dimensional body image.

41 Egyptian website on the Pyramids.

42 Astronauts on a spacewalk.

43 Mirror. Despite high-tech and space travel, humankind is still part of nature.

44 The future is … a time when the entire past will be known. (Gabriel Laub, b. 1928, Polish-Czech aphorist.)



Specialists in Web Offset Printing

Heidelberg Harris is a name that customers and employees still drop all the time – after all, around the world it has become synonymous with state-of-the-art web offset presses. Take the M-600, for instance, which is the crown jewel of print shops everywhere. But the company's development hasn't stopped there. Now a whole new business unit – Web Systems, in Heidelberg's Press Division – has been set up to mark the successful integration of the Franco-American company of Harris, originally acquired in 1988.

It all began back in 1890 with two brothers who lived in a sleepy little Ohio town called Niles. Charles and Alfred Harris, the owners of a jewelry store, visited the local printer, a Mr. Smith who also handled the printing of the local Niles Independent, to complain that he still hadn't completed a batch of invoices they had ordered. The printer apologized, saying he couldn't keep up with his workload because he had to insert each sheet of paper into the press by hand. At best, he said, he could only manage 25 sheets a minute.

As soon as they arrived back home, younger brother Charles got to work. And before the year was out, he had created an automatic paper feeder made entirely of wood. Money was short while the device was being developed, so the Harris brothers went into partnership with H.K. Tayler, a lawyer in nearby Warren. It was Tayler's job to get the paper feeder patented, raise funds, and register a company to manufacture the feeder and a printing press.

After making countless improvements, the Harris brothers finally put together their first automatic paper feeder at the Winfield Manufacturing Co. in Warren, connected to a press they also built. Unfortunately, when they tried it out not a single sheet made it correctly into the machine.

By the beginning of 1896, however, the design problems had been ironed out. In a trial run, the press printed 250 sheets a minute and 15,000 in an hour, automatically – this was ten times the output with manual feeding. But that was apparently much too fast for the times. Most print shop owners burst out laughing in disbelief when Charles Harris told them his machine could produce 15,000 envelopes or post cards in an hour. His brother Alfred angrily stated, "We're going to starve to death in a gold mine." The solution? From then on, the Harris brothers boasted that their machine could (only) manage 5,000 impressions in an hour. That did the trick.

Heidelberg Web Systems, the new home of Heidelberg Harris, unveils a new newspaper web press at drupa 2000.

Heidelberg produces web offset printing presses like the successful M-600 in the Web Systems production workshop at Montataire (formerly Marinoni) in France.

Groundbreaking innovation, total reliability, and maximum print quality make Heidelberg Web Systems' web offset presses hot items. Among the machines that Web Systems builds at its Montataire facility is the M-600, for which more than 1,000 printing units have been supplied since 1993.

The Brooks Printing Company in Cleveland was the very first customer to order a Harris press, after seeing a successful demonstration during which the machine made 14,000 impressions an hour instead of the promised 5,000. In November 1897, the E-1 was delivered to Brooks Printing.

By 1898, the Harris brothers were toying with the idea of a web offset press. They built two models and got their press design patented. But the stone cylinder it used was very hard to handle and produced greatly fluctuating quality. Charles Harris spent eight more years planning and designing. His breakthrough finally came in 1906, when the Harris brothers built the world's first commercially successful "offset lithographic press". In July 1906 it was sold to the Republic Banknote Company of Pittsburgh. By the end of 1907, the company had manufactured 53 more presses. A new market was born.

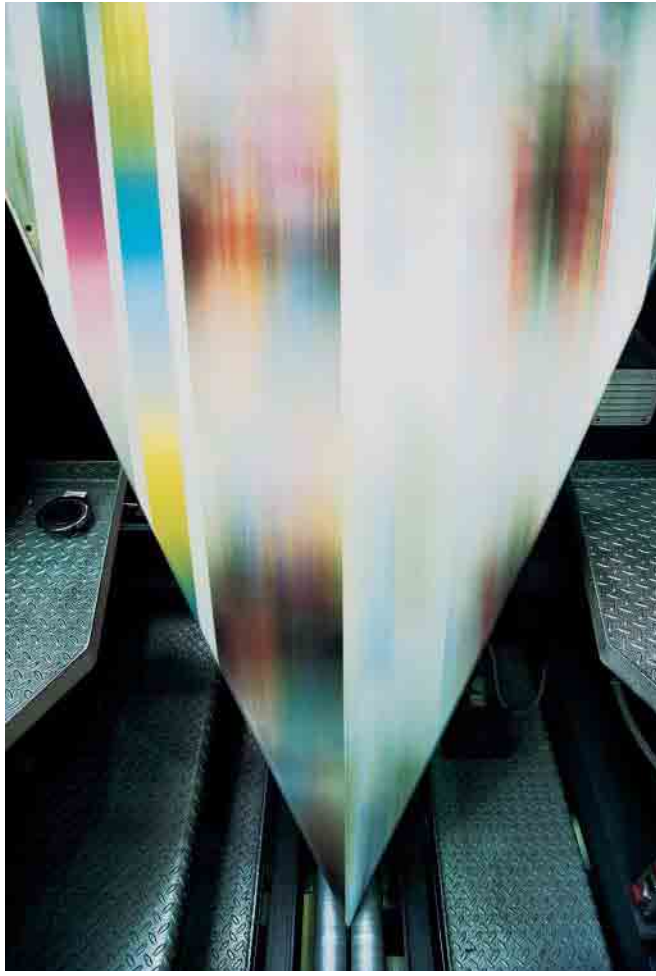
After the untimely death of Charles Harris in 1910, Alfred hired several talented young engineers who became the source of dozens of patents and groundbreaking innovations.

Two inventions stand out in particular: the first two-color offset press in 1921, and the first four-color press in 1931.

1926 was a landmark year. Harris bought competitors Premier Potter Press Co. and Seybold Machine Co. in rapid succession. The expanded company adopted the new name of Harris-Seybold in the following years.

Alfred Harris, cofounder of the company, died in 1943. His son, Alfred Stull Harris, took over the reins as president in 1944. He was the driving force behind the development of a new generation of models, and also established a chemical laboratory to study new chemicals for the printing process and quality control. By the time Harris passed away unexpectedly in 1947, the company's inventors had patented almost 250 innovations.

The elder Harris's legacy to the company was an unusual strategic tool – the "five-year plan". What started out sounding like socialist economics turned out to be a highly successful approach that



accelerated the company's growth and later also led to diversification into many new fields.

The first five-year plan, described on three typed pages, covered the period from 1944 to 1949 and stated company goals such as annual sales targets, the extension of the product range, and the phase-out of older models. This first plan was a resounding success, as became clear after the five-year term had ended. Harris-Seybold had delivered $20 million worth of presses – four times as many as before World War II.

The goal for the second five-year plan (1949 to 1954) was to offer a range of 50 products to the printing industry. Harris-Seybold also experienced a growth spurt when it acquired C.B. Cottrell & Sons in Westerly, Ohio, a company steeped in tradition, whose speciality was a high-speed, 250-ton web offset press able to produce up to 80,000 magazines an hour. This purchase catapulted Harris-Seybold into the ranks of the leading press manufacturers in the United States.

During the next five-year period (1954-1959), Chairman R. Verne Mitchell led his management out of the original field of press manufacturing and into telecommunications. Even then, Harris-Seybold's management could see what was coming: the merging of print and electronic communications. In the U.S., electronic media began competing with print to an increasing extent during the mid-1950s – in advertising, news, entertainment, and education. This prompted Harris-Seybold to buy Gates Radio of Quincy, Illinois, a producer of broadcasting equipment. At that time, Gates supplied about one-quarter of U.S. radio stations with broadcasting equipment.

Marinoni S.A. brought its strong tradition in press manufacturing to Heidelberg when Harris Graphics was purchased in 1988.

Precision down to the smallest detail. High quality and user-friendliness – printers get it all from Sunday Technology.

In 1955 Harris-Seybold floated its stock on the New York Stock Exchange to raise capital for further expansion.

Harris reached another development milestone on its third five-year stretch. The company then merged with Intertype Corp. of Brooklyn, a leading manufacturer of typesetting equipment with experience in photocomposition. In 1949 Intertype developed a successful system called "Fotosetter", which was then developed with Harris to create the Fototronic Phototypesetter. The new company was dubbed the Harris-Intertype Corp. Between 1959 and 1964, the company split up into divisions – Harris-Seybold, Cottrell, Intertype, Harris Intertype Ltd., and Gates Radio – laying the groundwork for further expansion. In 1959 Harris acquired PRD Electronics (Polytechnic Research & Development). The new affiliate produced shortwave measuring and testing equipment incorporating electronic components, and also developed computerized control devices.

In the realm of printing, Harris-Intertype acquired the French press maker Marinoni S.A., thereby gaining a foothold in Europe. Marinoni, founded in 1847, sold its first web offset press to the Petit Journal in 1867. This machine churned out 20,000 issues per hour.

After more acquisitions and start-ups in Europe, Harris-Intertype merged with Radiation Incorporated of Melbourne, Florida, a leader in digital communications equipment, satellite communications terminals, and other electronic systems, during the 1964-1969 planning period. Radiation supplied equipment for the Apollo Space Program, and at the time was the seventh-largest employer in Florida.

The merger tipped the scales again in favor of electronics and away from the press business. At that point, Harris' management divided its activities into three divisions: printing, electronics, and international business.

After internal planning targets were met in 1968, management launched the sixth five-year plan, a year earlier than expected. The goal was modest – to maintain their growth rate. But this didn't stop the Harris Group from venturing further into electronics applications.

To that end, management purchased three more companies: R F Communications, a Rochester, New York, manufacturer of radio devices in 1969; General Electric's TV broadcast equipment division in 1970; and Sanders Associates Data Systems Group, producer of interactive terminals, in 1973. After further acquisitions in the electronics field had been made, it was clear to everyone that the Harris image had undergone a complete transformation. A company with a long tradition of manufacturing web offset presses had now, irrevocably, evolved into an electronic communications and information processing specialist.

The consequences seemed inevitable. The original business no longer had a place in the new, high-tech company, which now made three-quarters of its profits from electronics. On April 29, 1983, the printing division was therefore sold to Clayton & Dubilliers in a deal that included a management buyout.

The new press company's name was Harris Graphics Corp. The company changed hands again in June of 1986. But AM International Harris Graphics, as its new owner was called, did not keep its new subsidiary for long. In 1988 Heidelberger Druckmaschinen AG bought Harris Graphics. This opened the doors to a bright new future for the U.S.-French company.

The joint effort soon bore fruit, for instance in the redesigned M-600, which produces up to 100,000 impressions an hour, and the M-3000 with Sunday Technology.

Since then, Heidelberg Harris has merged with Heidelberg's Web Systems Business Unit.

A Leader in Prepress Technology

The purchase of Linotype-Hell AG by Heidelberger Druckmaschinen AG in the fall of 1996 heralded the fusion of three companies rich in printing tradition to create a single, achievement-oriented entity. Linotype, Hell and Heidelberg represent three roots that have grown toward one another in the course of their evolution. The three companies developed in tandem for many decades, before first Linotype and Hell and then Heidelberg joined forces in difficult times to expand their activities in the prepress field.

As with the Hamm platen machine factory, Linotype and Hell were each founded by an engineer with business acumen: Ottmar Mergenthaler and Rudolf Hell. Ottmar Mergenthaler, born in the Württemberg village of Hachtel on May 11, 1854, began as an apprentice watchmaker in Stuttgart in 1868. The 18 year-old successfully completed his training in the summer of 1872. When August Hahl, his master's son, offered him a job in his electrical instrument factory, Mergenthaler left Germany in 1872 aboard the "Berlin" and headed for the U.S. The Hahl company moved to Baltimore soon afterward in hopes of drumming up more business there.

"At the beginning of August 1876, we found Hahl in his office at 13 Mercer Street, deep in conversation with Charles T. Moore," Mergenthaler wrote later. "Moore was the inventor of a device that he called a 'writing machine'." Ottmar Mergenthaler examined the machine, suggested improvements and drew sketches. His model worked flawlessly. When Mergenthaler finished work on his typesetting-writing machine in the summer of 1877, the device worked perfectly. But in practice, the process proved to be unusable.

After taking over Linotype-Hell, Heidelberg brought together all of its prepress activities at the former Hell factory, now part of Heidelberg Digital.

In 1883 Ottmar Mergenthaler went into business for himself. In July 1884, he successfully introduced his groundbreaking typesetting machine.

In the year of 1883, Mergenthaler left Hahl and opened his own workshop in Baltimore's Bank Lane. He kept looking for a way to cast entire rows of letters automatically.

On his way to meet some investors in Washington, a brilliant idea occurred to the young inventor: "Why not press letters directly into bars of type and then pour molten metal into them with the same machine?" In July of 1884, he presented his new typesetting machine to the investors and other interested parties.

The inventor later described the historic moment in which he demonstrated his first casting machine: "The matrices glided evenly and quietly into the places made for them, were set and adjusted; the pump then emptied, and a finished slug, shining like silver, fell out of the machine. The matrices returned to their usual places. All of this was the work of only 15 seconds."

However, Mergenthaler was still not content, and worked feverishly to improve his invention. After many intervening stages, the final construction emerged, and later, under the name of Linotype, began its triumphal procession around the world.

The financial backers of the invention had in the meantime managed to organize themselves into the National Typographic Company of West Virginia, the shareholders of which were a group of newspaper publishers interested in securing the benefits of this invention for themselves.

In October 1885 the Mergenthaler Printing Company was founded with a share capital of $1 million. The National Typographic Company held the majority stake in the company; the original share-

For decades, the "Linotype" dominated mechanical composition around the world. But after 1935, machines could be fed with punched tape. Linotype delivered its last lead composition typesetting machine in mid-1976.

holders and the publishing syndicate were given preference for acquiring the new shares. In July of 1886, the first typesetting machine went into service at the New York Tribune.

In April 1890, Mergenthaler received an order to build 100 machines. After an increase in share capital, the company began trading as "Linotype Company of New Jersey" (with share capital of $5 million). In the years that followed, Mergenthaler's invention of the century made its economic breakthrough.

Mergenthaler contracted tuberculosis and died at the early age of 45 on October 28, 1899. His life's work, once dubbed "the eighth wonder of the world" by Thomas Edison, was already on a victory march around the globe. In late 1894 a demonstration of the first Linotype could be seen in a storefront in Berlin's Französische Strasse. This was also where August Scherl, publisher of the Berlin Lokal-Anzeiger, saw it. He gained the patent to build one in Germany. Mergenthaler Setzmaschinen-Fabrik, founded October 28, 1896, delivered the first German-built Linotype on May 25, 1899, to the Zerbster Extrapost, where it was in service for a good 40 years.

Another tributary of development that fed into Linotype later on was the typeface business. As early as 1900, D. Stempel was producing type matrices for Linotype machines. The first faces were called Kolonel Fraktur No. 5 and Petit Fraktur No. 5. The firm of D. Stempel invested in other type libraries. When Linotype eventually took over the typeface division of D. Stempel AG in 1985 (and at the same time entered into cooperative agreements with Apple Computers, Adobe software and ITC), such renowned names as Haas Type Foundry or Deberny & Peignot were added to the Linotype type library. Since then it has grown to include 4,400 typefaces.

But Linotype Hardware changed dramatically and welcomed the technological inventions of the age. In 1935 the first typesetting machine to use inserted punched tape was introduced. In 1958, the company started producing the first integrated phototypesetting system with punched tape, called the "Linofilm System". The "Lino Quick Setter" typesetting machine of 1966 set 30,000 characters per hour. Another innovation came in 1969: Linotype introduced the "Linotron 505", a typesetting machine based on cathode ray technology.

In 1973 Mergenthaler Typesetting Machines merged with Linotype GmbH. The new company, called Mergenthaler-Linotype GmbH, had its headquarters in Frankfurt.

The pace of technological change picked up in 1975-76. The company introduced the first Linotronic phototypesetting system with a monitor display and diskette storage. By now, the age of typesetting machines built on Mergenthaler's molten-metal principle had ended after 90 years. The last new Linotype typesetting machine was delivered in 1976.

In 1987, Commerzbank bought Linotype, reorganized the company under the name of Linotype AG, and successfully launched it on the stock market. Three years later Linotype AG and Dr.-Ing. Rudolf Hell GmbH merged to become Linotype-Hell AG. Soon the restructured company came to feel the competition from desktop publishing and plunged into a deep crisis.

Rudolf Hell, an inspired inventor, is regarded as one of the fathers of television and fax machines. In the printing industry, a key role is played by his scanners for electronic image processing.

The Hell Co. Story

Rudolf Hell, born in Eggmühl in Bavaria on December 19, 1901, caught the notice of his professor, Max Dieckmann, early on during the course of his engineering studies. In 1927, the professor and his student presented the first television broadcasting and receiving station at a trade show in Munich. That same year, Rudolf Hell completed his studies and graduated. At the age of 28, Hell founded his own company in Berlin. The basis of his busi-

ness career was a pioneering invention that subsequently became famous as the "Hell Writer". Hell could thus be considered the father of the fax machine. The devices soon turned up in pressrooms, post offices, police stations, and weather services.

The company continued to grow, but its rise was cut short by World War II – its production facilities were completely destroyed. However, as early as 1947, the inventor ventured a new beginning – this time in Kiel-Dietrichsdorf.

In 1951 Rudolf Hell experimented with a plate engraving machine. Three years later the "Klischograph" was ready to be introduced to the market and quickly conquered German and European publishing houses.

Hell's inventive streak continued in the years to come. In 1963 he presented his "Chromagraph" scanner, his "Digiset" system for digital type and image reproduction and the "pressfax", which could transmit complete newspaper pages abroad. In 1971, Rudolf Hell launched production of telecopy devices for offices – the world's first fax machines meant for a broader group of consumers. A multitude of further innovations followed over the years, such as the "Chromacom" electronic image processing system in 1980.

Dynamic growth made adaptation in organization and capital necessary. On April 1, 1971, Hell converted the partnership into a limited-liability company called Dr.-Ing. Rudolf Hell GmbH and sold a majority share in it to Siemens AG. Ten years later, he handed his lifetime's work entirely over to Siemens.

When Hell and Linotype merged in 1990 to become Linotype-Hell AG, Rudolf Hell, then 88, left both the company and his post as honorary chairman of the supervisory board.

With technological change in the prepress area proceeding at breakneck speed and desktop publishing assuming a dominant role, Linotype-Hell was increasingly plagued by financial difficulties. The principal shareholders sought a strong partner – and found it in 1996 in Heidelberger Druckmaschinen AG, whose management and supervisory boards had just decided to expand the company to become a complete provider of printing solutions.

Under the leadership of Bernhard Schreier, the current director of Heidelberg's Management Board, the company was reorganized, the former Linotype headquarters in Eschborn was closed, and the Linotype-Hell company was integrated into Heidelberger Druckmaschinen AG as its Prepress Business Unit. It is now part of Heidelberg Digital.

The type library is a prized part of the Linotype heritage, now owned by Heidelberg. It holds both historical characters and ultramodern typographical design variants. Today graphic artists and printers can choose from more than 10,000 fonts on two CD-ROMs.

Perfection in Binding and Gluing

In August 1996 Sheridan Systems joined the Heidelberg Group. This year Sheridan will be 165 years old, that is 15 years older, in fact, than the parent company. Bernard Sheridan founded the company in New York in 1835, at a time when the demand for printed information, education and entertainment was growing rapidly. Right from the start, Sheridan's company produced bookbinding machines for graphic arts businesses and newspaper printers and quickly made a name for itself in the field of magazine and catalog binding.

Thirty years after its founding, Sheridan made headlines in the printing industry by introducing its perfect binding machine.

This invention marked a milestone in the evolution of book and newspaper production. For the first time, it made available a commercial, automated adhesive-binding solution for books. The term Perfect Binding soon entered the parlance in the industry, but it took a num-

Sheridan looks back on a tradition older than Heidelberg's. Founded in 1835, it ultimately joined the Heidelberg Group in 1996. Along with equipment for binding and stitching printing products, mailroom systems are also produced at its plant in Dayton, Ohio. Sheridan is now part of Heidelberg Web Systems

ber of decades to work all of the bugs out of the system. The big breakthrough came at the end of the 1940s, when Sheridan and the DuPont Corporation jointly developed a hot glue that was considerably stronger than the bonding agents used until then.

This innovation signified a quantum leap in productivity. Leading printers such as R.R. Donnelly, Curtis Publishing, the U.S. Government Printing Office, and W.F. Hall lost no time in adopting the new technology. And before long, perfect binding had established itself as the most popular and effective bookbinding method.

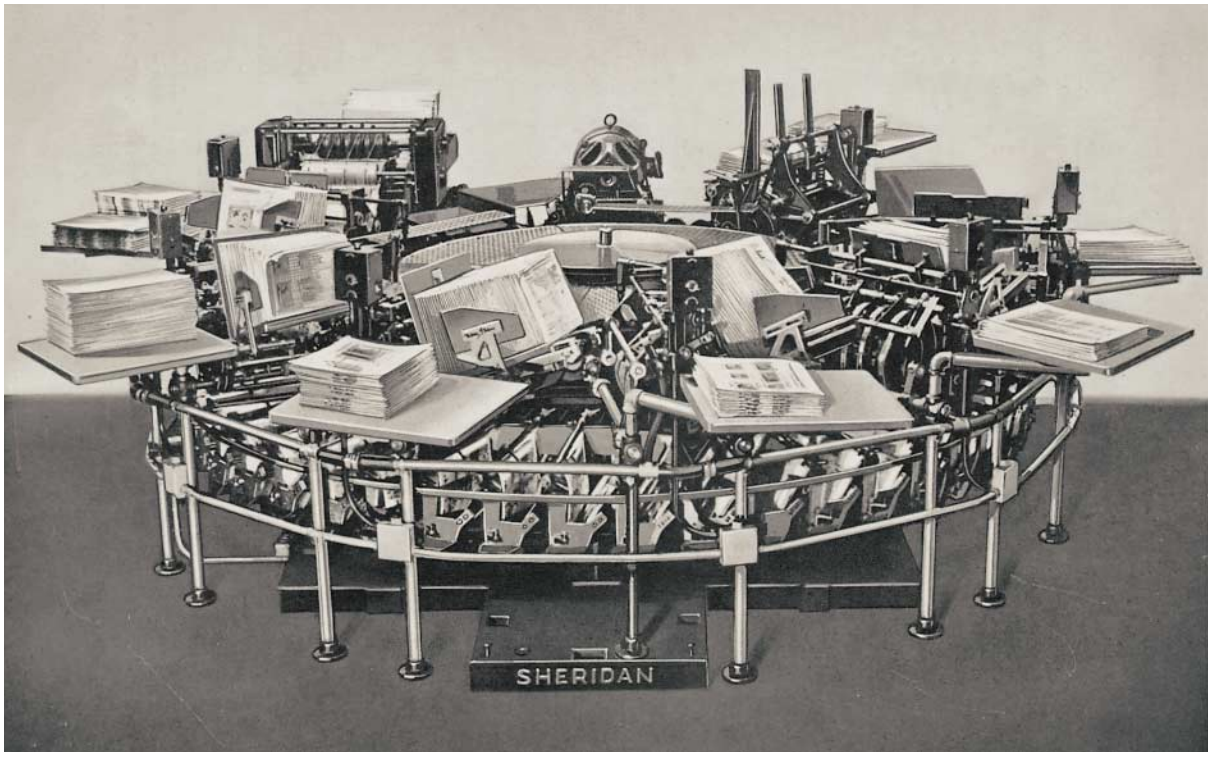
In the 1930s Sheridan collaborated with R. R. Donnelly, the biggest printer in the U.S. at that time, to develop the first automated packing machine for books and magazines. And in 1934 Sheridan supplied the Donnelly firm with the first high-capacity three-blade pile cutter. Two other Sheridan innovations also had a revolutionary impact on printing-industry finishing processes: the saddle-stitcher and the newspaper inserting machine. In 1936 Sheridan launched the first high-speed saddle-stitcher, which was able to compile and bind 5,000 books an hour. And eight years later, the *Philadelphia Inquirer* installed the first rotary high-speed inserting machine, which Sheridan had specially developed for the newspaper industry.

In 1968 Sheridan released the first perfect binding machine that enabled selective assembly of books according to geographical or demographical criteria. Also in 1968, the company began offering the world's first commercial interface for linking web offset presses and adhesive bookbinding machines, thus enabling the production of complete books in a single continuous process.

In 1996, another major innovation appeared on the scene with the arrival of the first saddle-stitcher capable of producing more than 20,000 books an hour.

In 1996 Sheridan Systems was acquired by Heidelberg and is now part of Heidelberg Web Systems.

A revolution in the newspaper industry: in 1944, the *Philadelphia Inquirer* installed the first rotary high-speed inserting machine, which had been specially developed for the newspaper industry.



Precision in Folding, Stitching and Binding

A long tradition of modernity: after Germany's reunification, the Stahl Group, originally established in 1949 by Kurt Stahl and Adolf Döpfert, acquired the Gebrüder Brehmer machine factory, founded by Hugo and August Brehmer in 1879 (shown here: the Leipzig plant). Both firms have been part of the Heidelberg Group since 1998.

In late 1998 the Stahl Group joined the Heidelberg family. Stahl, international market leader in folding machines, has manufacturing locations in Ludwigsburg and Leipzig in Germany (Brehmer Buchbindereimaschinen GmbH), and Sidney, Ohio in the U.S. (Baumfolder Corporation). By acquiring this enterprise, Heidelberger Druckmaschinen AG expanded its service within the Finishing Business Unit, plus a completely individual customer orientation.

Kurt Stahl and Adolf Döpfert established the firm in 1949, starting out with just five employees. Stahl, an engineer, designed and built the first folding machine himself, while Döpfert took care of sales and marketing.

Right from the beginning, the new company's products stood out due to their striking innovations and advanced industrial design. And success was not long in coming: by the firm's 20th anniversary, more than 10,000 Stahl folding machines were in use. Today, ten times as many systems of this kind are operational in print shops and binderies all over the world.

Among the technical highlights of recent years is the Computer Folding Center (CFC) of 1986, the world's first fully electronic folding machine. The TC buckle folder, which hit the market two years later, was the first to attain folding speeds of well above 200 meters per minute. And in the mid-nineties, the use of computer technology and intelligent electronic systems contributed to further improvements, leading to reduced makeready times and even higher productivity.

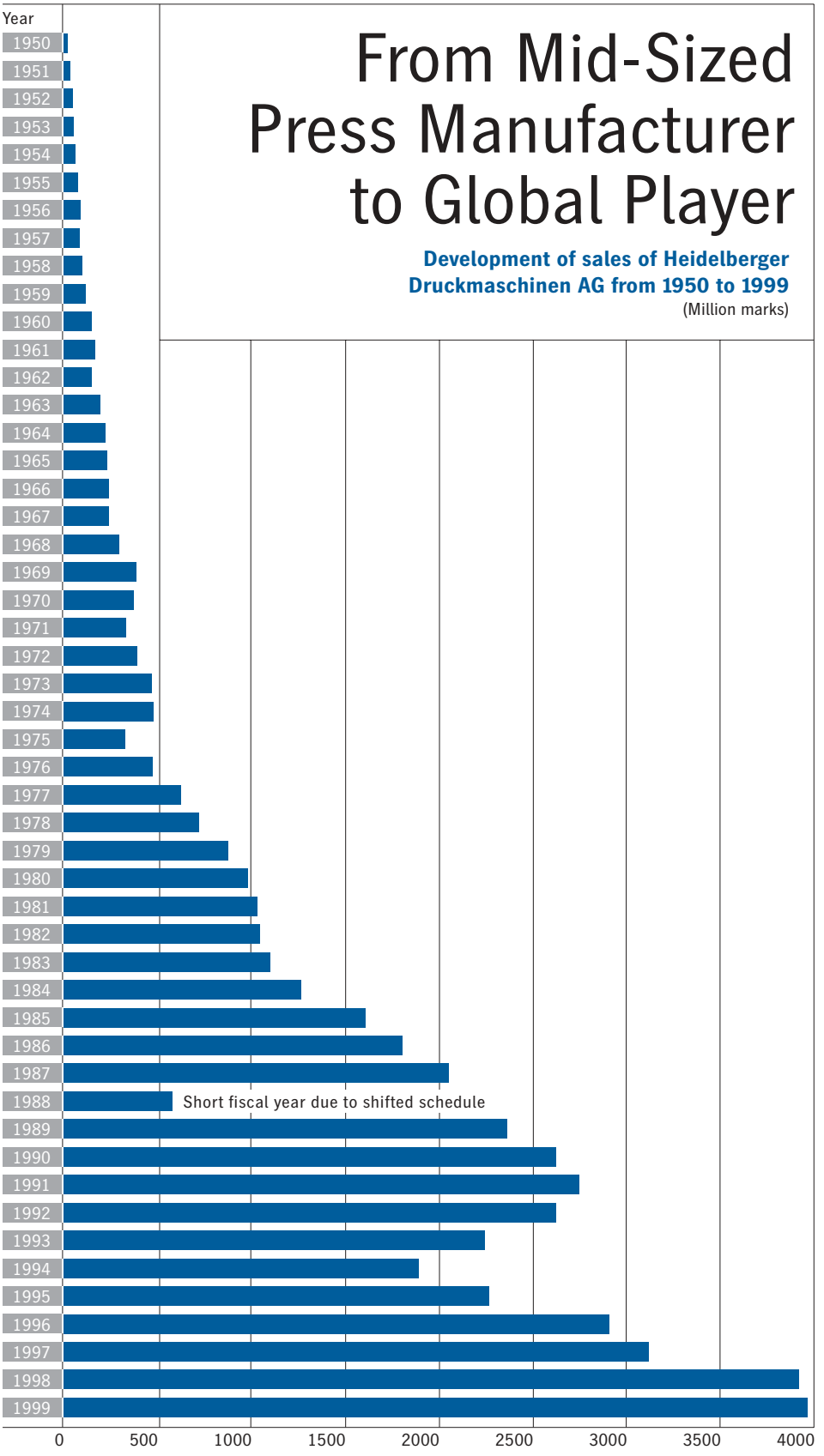
Stahl had already extended its product palette in 1994 by taking over Brehmer, a Leipzig-based manufacturer of bookbinding machinery. As a result, the Heidelberg Group acquired two tradition-steeped companies at the same time.

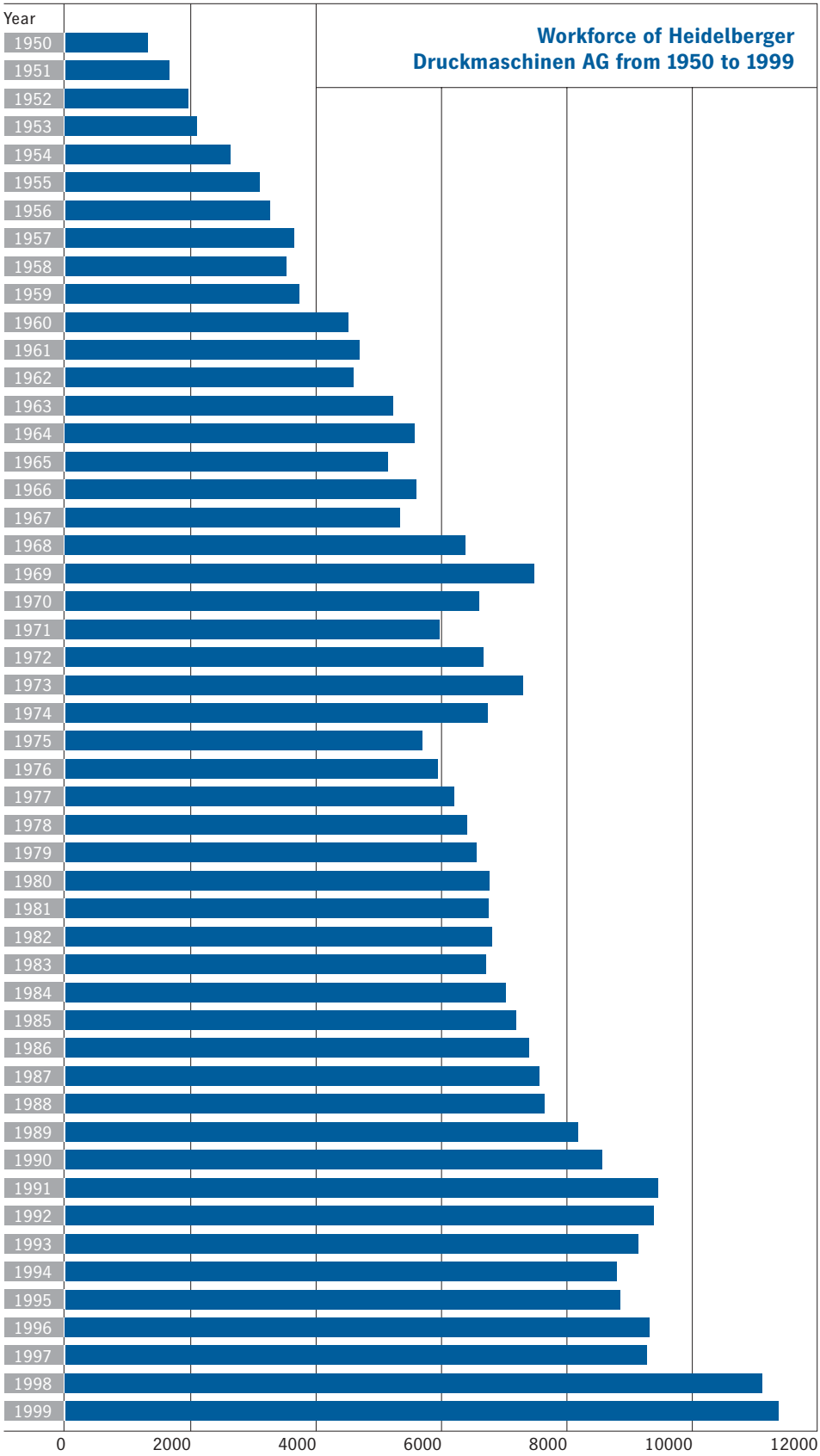
The Leipzig firm owes its existence to Hugo Brehmer, who invented the wire-stitching machine in 1873 after emigrating to America. Upon returning to Germany in 1879, he founded the machine factory Gebrüder Brehmer together with his brother, August. The company has always lived up to its good reputation of offering world-class stitcher-gatherers, thread-sealing machines as well as book-sewing machines.

By the time *Schnellpresse* celebrated its 100th anniversary in 1950, it had overcome the problems of the postwar years. That year sales reached 21 million marks. And the company's dynamic development has continued ever since, interrupted only briefly by cyclic dips in the world economy. Heidelberger Druckmaschinen AG alone attained a sales volume of nearly 4 billion marks in fiscal 1998-99, while the Heidelberg Group took in total revenues of roughly 7.7 billion marks.

From Mid-Sized Press Manufacturer to Global Player

Development of sales of Heidelberger Druckmaschinen AG from 1950 to 1999
(Million marks)





Since the postwar years, Heidelberg has steadily created new jobs parallel to the growth in its sales volume. Now some 11,000 people work for Heidelberger Druckmaschinen AG, and the Heidelberg Group as a whole employs more than 23,500 around the world.

Management Board Members Since the Establishment of the Joint-Stock Company in 1899

Wilhelm Müller †
30.5.1899 – 5.12.1901

Karl Geiger †
30.5.1899 – 5.12.1901

Max Thedy †
5.12.1901–26.8.1903

Julius Lutz †
26.8.1903 – 31.10.1913

Mathias Brandt †
1.8.1910 – 8.11.1911

Eugen Scheding †
6.4.1912 – 4.12.1918

Dr. Oskar Faber †
13.12.1916 – 22.5.1922

Gustav Hagen †
6.11.1919 – 5.4.1923

Wilhelm Zilling †
12.11.1920 – 31.7.1926

Albert Stuckmann † *(asst.)*
12.11.1920 – 29.12.1923

Viktor Jereczek †
8.12.1922 – 31.7.1926

Ernst Schwarzländer † *(asst.)*
12.11.1920 – 31.12.1960

Oskar Leroi †
31.7.1926 – 31.12.1937

Wilhelm Meurer †
31.7.1926 – 14.3.1927

Paul Wurster †
27.4.1927 – 28.12.1928

Hubert H. A. Sternberg †
31.7.1926 – 31.12.1972

Dr. Ludwig Henrici †
15.12.1937 – 31.12.1964

1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990

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10.7.1963 – 15.2.1973

Artur Büttner †
(asst., from 1968 full)
10.7.1963 – 31.12.1972

Dr. Wolfgang Zimmermann † *(asst., from 1968 full)*
10.7.1964 – 30.9.1991

Dr. Johannes Erasmus †
1.10.1967 – 31.8.1968

Joachim Pöppel †
1.2.1973 – 31.12.1990

Willi Jeschke *(asst., from 1976 full)*
1.6.1973 – 30.6.1987

Dr. Hilmar Dosch
(asst., from 1976 full, from 1992 Chairm.)
15.5.1973 – 18.10.1995

Horst Schlayer
(asst., from 1993 full)
1.11.1988 – 18.10.1995

Ulrich Mauser
(asst., from 1992 full)
1.3.1991 – 15.5.1997

Wolfgang Pfizenmaier
(asst., from 1989 full)
3.7.1986

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With few exceptions, the Board members served for many years. This ensured continuity, long-term corporate policies, and an atmosphere of trust between management and the workforce.

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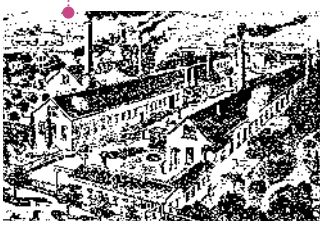
The History of Heidelberger Druckmaschinen AG at a Glance



1850
Andreas Hamm, born in 1824, sets up a bell foundry and machine shop in Frankenthal, Germany. The fledgling company will eventually evolve into Heidelberger Druckmaschinen Aktiengesellschaft.

1875
The company develops a cylinder letterset press capable of up to 1,200 impressions an hour.

1885
The "Pro Patria" high-speed cylinder letterset press hits the market.

1894
Adreas Hamm dies on June 22, 1894.

1896
The machine shop moves from Frankenthal to Heidelberg. "A. Hamm OHG Heidelberg" is entered in the local Commercial Register.

1899
The company is converted from a general commercial partnership into a joint-stock corporation.

1905
The company is renamed "Schnellpressenfabrik Aktiengesellschaft Heidelberg".

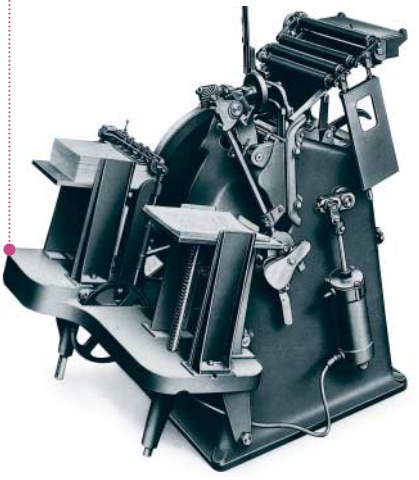
1912
The company begins experimenting with automatic sheet feed and delivery on its platen press. This innovation, invented by a bookbinder named H. Gilke, deploys rotating grippers to eliminate time-consuming manual sheet feed and delivery. The seeds of printing press automation are planted.

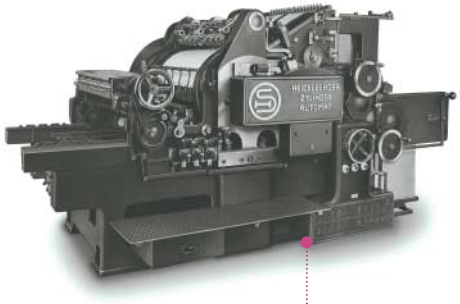
1914
The company presents its first automatic platen press at the Bugra show in Leipzig, Germany. The first model produces 1,000 impressions an hour. Five years later, it prints twice as fast.

1926
Assembly line production is introduced, with 100 platens manufactured each month.

Heidelberg establishes an agency in Japan.

The first Heidelberg demo trucks hit the streets.





1927
The company adds an agency in the United States.

1929
Heidelberg purchases the Maschinenfabrik Aktiengesellschaft Geislingen (MAG), a large German foundry.

1930
The first company newsletter, the Heidelberg News, is published with a circulation of 8,500.

1932
14,000 platen presses shipped so far. The larger GT model, in 34 x 46 cm format, is presented.

1935
Introduction of the Heidelberg Automatic Cylinder press. (It will be renamed the Original Heidelberg Cylinder in 1950.) This is a trail-blazing letterpress machine in midsize format with a corrected single-revolution system. Format: 48 x 65 cm. Speed: 3,600 iph.

18,000 Heidelberg platen presses sold.

Annual sales: 4.4 million reichsmarks.

1939
Heidelberg's platen press is enhanced for more speed. It now is capable of 5,000 iph. Heidelberg sells its 26,000th press (counting both platen and cylinder presses).

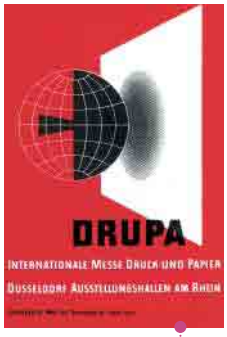
Circulation of the Heidelberg newsletter reaches 64,000.

1940
The RWE AG acquires share majority in Schnellpressenfabrik Heidelberg through Rheinische Elektrizitäts-AG (Rheinelektra).

1948
Printing press production is revived. Annual sales reach DM 6.6 million.

1950
Heidelberg celebrates its first 100 years.

35,000 Heidelberg printing presses have been shipped to all corners of the globe.



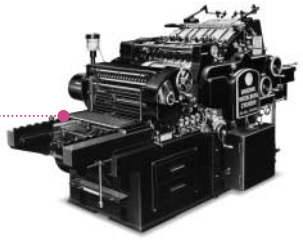
1951
The first Drupa show is held in Düsseldorf.

1953
Annual sales reach 52.3 million marks.

The Heidelberg News reappears after the war, this time with a circulation of 65,000.

1954
The second Drupa.

1957
The Wiesloch plant opens.



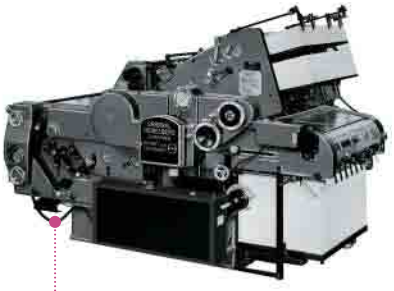
The company presents the small Original Heidelberg Cylinder in 38 x 52 cm format. It prints up to 5,000 iph.

1958
The third Drupa.

Sales: 100 million marks.

1959
100,000 printers now work with Heidelberg presses.

A department for printing plate research is established.



1962
The fourth Drupa.

Heidelberg launches the KOR, its first offset press, in 40 x 57 cm format.

1963
Circulation of the Heidelberg News climbs to 200,000. It is printed in 13 languages.

1964
Since its founding, the company has sold 150,000 presses.

1965
Rotaspeed Offset models in 71 x 102 cm format, available in two- and four-color versions, are unveiled.

1966
The Development and Design Department moves into its own building.

1967
The fifth Drupa.

The company renames itself "Heidelberger Druckmaschinen Aktiengesellschaft".

1968
The 200,000th Heidelberg press is sold. Sales grow to 293 million marks, with exports accounting for 80 percent of revenues.

1969
The legendary Heidelberg suction head is presented at a trade show in Milan, Italy.

1970
Worldwide there are 51 Heidelberg printing schools. Over 60,000 printers have been trained on Heidelberg presses.

1972
The sixth Drupa.

Introduction of the Heidelberg GTO, which has given A3 format a new name around the world.

1973
A quarter million Heidelberg printing presses sold so far.

1974
The company presents the four-color Speedmaster 72 in 52 x 72 cm format – the first model of Heidelberg's latest offset generation – at Print 74 in Chicago.

1975
World premier of the two-color Speedmaster 102 in 72 x 102 cm format, a convertible perfector.

1977
The seventh Drupa.

Introduction of Computer Print Control (CPC), the new electronic monitoring and control technology for the Heidelberg Speedmaster.

The company attains worldwide market leadership in offset – in both number of presses shipped and sales.

1980
Heidelberg unveils its new midsize-format press, the M-Offset, in single-, two- and four-color models.

1981
The 300,000th Heidelberg printing press is sold. Sales climb to over 1 billion marks, with exports contributing 84 percent.

1982
The eighth Drupa.

The company presents its first web press developed in-house, the Heidelberg WEB 8 – an 8-page press for high-quality web offset printing. It includes CPC remote control of inking and register.

The new headquarters in Heidelberg is completed.

1984
Introduction of the T-Offset line for small printed items, in formats up to 28 x 39 cm. The program-controlled T-Offset can use any type of printing plate, including ones made of metal, paper and plastic. It prints 10,000 iph.

1985
The last platen press leaves the Wiesloch plant. Over 165,000 of these were shipped to customers around the world.

The Geislingen foundry is replaced by Amstetten, one of the most modern facilities of its kind in the world.

1986
The ninth Drupa.

1988
The Harris Graphics Corporation, later renamed Heidelberg Harris, with factories in the United States, Mexico and France, is acquired.

A hall for electronics production opens in Wiesloch with 11,000 square meters of floorspace.

1990
The tenth Drupa

The new Research and Development Center opens. About 900 employees will work there.

Introduction of the world's first fully digital printing press, with central operator console, electronic control and diagnostics, and new systems for monitoring print quality.

Consolidated annual sales of the Heidelberg Group exceed 4 billion marks. Heidelberg becomes the first printing press manufacturer to establish a branch in former East Germany (Leipzig) after German reunification.

1991
Heidelberg unveils its Direct Imaging technology at Print 91 in Chicago.

The latest generation of web offset presses – the M-300 (also called the Sunday Press), M-6000 and Mercury – is introduced.

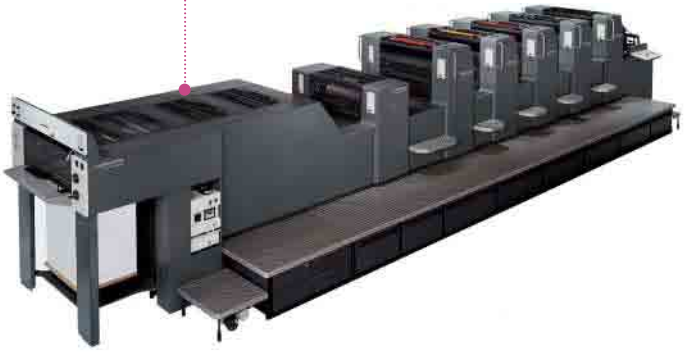
Sixty new Heidelberg employees begin production in a rented hall in Brandenburg.

1992
Production begins at Heidelberg's own facility in Brandenburg. Investment: 200 million marks.

1993
The company publishes its first environmental report.

1994
Introduction of a completely new line of midsize-format presses: the Heidelberg Speedmaster 74 in 52 x 74 cm format.

Heidelberg presents its new A3 press, the Quickmaster, in single- and two-color models. The new Corporate Design is introduced, including a redesigned company logo.



1995
The eleventh Drupa.

World premiere of a completely new line of presses: the Quickmaster DI and the small-format Speedmaster 52.

1996
Heidelberg acquires Stork Contiweb B.V. in the Netherlands (splicers and dryers), Sheridan Systems in the U.K. and U.S. (finishing), and a majority stake in Linotype-Hell in Eschborn, Germany (prepress).

Heidelberg restructures its German sales network. All agencies are merged into Heidelberger Druckmaschinen Sales Germany GmbH.

Heidelberg Eastern Europe is established in Vienna. It is responsible for all Eastern European markets.

1997
Linotype-Hell AG is merged into Heidelberger Druckmaschinen AG.

The company goes public on the Frankfurt Stock Exchange.

1998
Construction of the Print Media Academy begins in Heidelberg. The facility is envisioned as a knowledge and communications center for the entire graphic arts industry.

Heidelberg acquires its previously independent French and Mexican sales and service agencies.

Establishment of a new Heidelberg sales and service organization in Brazil.

Heidelberg purchases from the East Asiatic Company (EAC), Copenhagen, all of its sales and service companies and activities for graphic arts products in Asia, Scandinavia and Africa.

Heidelberg joins the companies used to calculate the MDAX, Dow Jones STOXX, and Dow Jones EURO STOXX indices.

Heidelberg acquires the Stahl Group to expand its finishing activities.

1999
Heidelberg bolsters its digital printing activities and acquires the Office Imaging division of Eastman Kodak Company in Rochester, NY.

The company establishes the subsidiary of Heidelberg Digital, with headquarters in Rochester, New York.

Establishment of a new Consumables Business Unit headquartered in Tremblay near Paris, France.

Heidelberg augments its involvement in flexographic printing by acquiring 30 percent of Gallus Holding AG in St. Gallen, Switzerland.

The world's largest logistics center for the graphic arts industry opens in Wiesloch.

2000
The twelfth drupa.

150 years of Heidelberg.

The Print Media Academy opens.

Heidelberg presents itself at the world's largest trade show as the world's leading provider of solutions for the printing and publishing industries.

The Mainstream, a new generation of newspaper presses, is unveiled.

1994: A New Heidelberg Logo

In 1994, Heidelberger Druckmaschinen AG gave itself a new logo – the latest step along a lengthy path. The logo has undergone several major changes during the course of the press manufacturer's history. In 1905, the abbreviated company name, "SH", for Schnellpressenfabrik Heidelberg, appears. In 1930, an oval cigar shape is featured on the gripper guard of the Platen. In 1939, the "SH" wanders from the middle of this oval to the left. In 1952, "Original Heidelberg" enters the oval. At the seventh Drupa show in 1977, the gripper guard oval and the brand name "Heidelberg" (officially registered in 1974) are combined for the first time to create a new company logo. At Drupa 1995, the company presents a new logo, which it created a year earlier. And in 2000, the logo's colors are changed.

1905

1930

1939

ORIGINAL HEIDELBERG
1951

HEIDELBERG
HEIDELBERG
1977

HEIDELBERG
1994

HEIDELBERG
2000

We are endebted to all those who helped us create this anniversary volume by contributing information, documents, photographs, and other materials, especially:
Dr. Markus Ackermann, Daniela Blum, Dr. Rolf Danzer, Rolf Demmerle, Hans-Joachim Dietz, Dr. Hilmar Dosch, Karl Ehrmann, Willi Elfner, Anneliese Ernst, Andreas Gembe, Jonathan Graham, Dirk Grosse-Leege, Martin Hambrecht, Klaus Hugel, Willi Jeschke, Dr. Günther Kahlmann, Prof. Dr. Helmut Kipphan, Paul Kletti, Edgar Kloe, Ralf Kolb, Bernd Lang, Marlies Pabst, Josef Pitz, Nina Purtscher, Martin Ritter, Elke Schillinger, Horst Schlayer, Dr. Hubert Straub, Dr. Volker Stückradt, Erich Walter, Romuald Wenglorz, Heinz Wroz, Günther Ziegele

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