

Mobile Tradition live

Facts and background



Bracing breeze worldwide. BMW 3 Series Convertibles

Page 32



- 14 **The history of BMW aero engines:** It was in the air that BMW celebrated its first records and laid the foundation for its successful history.
- 22 **Isettas for India:** 50 years ago BMW drew up plans to produce the Isetta under licence in India. They never came to fruition.
- 38 **Ludwig “Wigger!” Kraus:** Looking back on the career of racing rider Ludwig Kraus, who would have turned 100 in March.
- 44 **BMW 7 Series – the first generation:** Luxury, elegance and dynamism. The first upper-class model in the series whose success continues to this day.



WELT HÖHEN REKORD

9760 METER



AMTSCHE
KOMMISSION
MÜNCHEN

BAYERISCHE MOTOREN WERKE A-G MÜNCHEN



Dear Friends of BMW Group,

A scenic coastal road – on the one side the endless azure sea, on the other forests and rock faces interspersed with tunnels and bridges. What better way to relish such a ride than in an open-top car. This spring BMW unveiled the new 3 Series Convertible, an aesthetic car oozing heritage and style. To mark its launch BMW Group Mobile Tradition traced the history of BMW 3 Series Convertibles from the first BMW Baur Topcabriolet of 1978 to the convertible model in BMW's latest fifth-generation 3 Series range. Thus in addition to an unrivalled open-top driving experience, you also have a new publication to look forward to: Bracing breeze worldwide. BMW 3 Series Convertibles. Considerably more breeze was generated by the aircraft engines that marked the inception of the company's success story 90 years ago. The very first engine to be manufactured, the BMW IIIa, was significantly superior to rival products and offered better performance even at high altitudes. And there's another story I would like to recommend to you. This year sees the inauguration of BMW's own production plant and sales subsidiary in India, but it was around 50 years ago that BMW first considered broaching the Indian market – with a "Tropical Isetta".

Allow me to end on a personal note. This issue of Mobile Tradition live is the last to be published under my auspices. After six action-packed years I am now moving on to new challenges within the company. Our magazine, which we have developed over the years with keen enthusiasm and pleasure, now passes into the hands of my successor, Karl Baumer.

Read and enjoy!

Holger Lapp

Director BMW Group Mobile Tradition

Below | Before fully-fledged 4-channel ABS systems were installed in production cars, BMW was the first manufacturer to use this technology in touring cars back in 1974.





14

BMW aero engines | For many decades aircraft engines were a core component of BMW history and had a deep, enduring impact on company and brand alike. Not only did these powerplants play a pivotal role in the founding of the company, they also featured at the start of BMW's competitive sporting involvement.

22



Isettas for India | 1956 saw BMW draw up detailed plans for the production of Isettas in India. The "motocoupé" was to be built in collaboration with a local partner with the aim of getting India motorised. In the end, however, the plans were dropped due to lack of funds.





44

BMW 7 Series | The first BMW 7 Series, shown here in front of Munich's opera house, was unveiled to the press in May 1977. These luxury-class automobiles replaced the previous large 2500 to 3.3 Li six-cylinder saloons and set new benchmarks in terms of comfort levels and performance. With sales topping 285,000, the first-generation 7 Series surpassed the sales success of the previous series by some 63,000 units.

38



Ludwig "Wiggerl" Kraus | Ludwig Kraus was one of the most versatile motorcycle racers in BMW history. As a solo and sidecar rider he was highly successful both on and off-road. Ludwig Kraus would have celebrated his 100th birthday in March. A good reason to look back on his extraordinary career.



32

Bracing breeze worldwide. BMW 3 Series Convertibles | Sunshine, airstream, direct contact with the environment: top-down motoring spells Sheer Driving Pleasure. From the very first generation the BMW 3 Series has been available in an open-top version, the first convertible body being built by Baur before BMW took over in 1986. To mark the launch of the new BMW 3 Series Convertible in spring 2007, BMW Mobile Tradition is running the campaign "Bracing breeze worldwide. BMW 3 Series Convertibles", which traces the successful history of these cars from the late 1970s to the present, a period spanning five generations.

50

Leadership handover at BMW Group Mobile Tradition | After six eventful years Holger Lapp is leaving BMW's heritage division to take on new challenges in the company. His successor is Karl Baumer, who leaves his post as head of product, price and brand strategy at BMW and BMW marketing planning. The outgoing and incoming heritage directors talk about the fascination of the brand and the importance to the company of its past.



Other topics

- 26 Das schöne Mädchen | Hannah Höch and BMW
- 54 ABS | From touring car racing to production models
- 58 Museum | From first draft to reality

Columns

- 03 Editorial
- 04 Contents Issue 01 | 2007
- 06 Preview Techno Classica
- 08 Preview Villa d'Este und Mille Miglia
- 09 Review Art Basel Miami Beach
- 10 Review Winter Marathon
- 12 Anniversaries
- 62 Dates | Preview | Publication details



Above | The BMW R 68, the first German bike to break the 100 mph barrier, won many admirers for its clean sporting lines.

Brand anniversary and “Bracing breeze worldwide” at Techno Classica

Essen. As tradition dictates, BMW Group Mobile Tradition will once again welcome friends of the brand and classic car enthusiasts to Hall 12 of the 2007 Techno Classica trade fair in Essen. With this year’s spotlight falling on the successful history of the BMW brand, a display of exhibits will document every decade and area of production – from car and motorcycle design to engine development and motorsport. In addition, a special exhibition will accompany the fascinating history of BMW 3 Series Convertibles from 1978 right up to the most recent model of 2007 (for further reading on this turn to p. 32 of the current issue).

In just over 90 years the company has grown from a Bavarian aero engine plant to one of the world’s leading carmakers and motorcycle manufacturers, known today as the BMW Group. 2007 will see the brand entered onto the commercial register for a 90th successive year, the famous blue-and-white emblem now among the world’s 20 most valuable brands. BMW is both the core brand and origin of the current BMW Group. It dates back to 1917, when the

young company first started to make a name for itself in aero engine design. Motorcycle production was launched in 1923, and the first BMW motor car – the BMW 3/15 PS – was built in 1929.

Ever since those early years BMW has been synonymous with driving pleasure. The uniqueness of BMW vehicles derives from the way they combine dynamic sporting performance with sophisticated design and exclusive quality. The exhibition “90 years of the BMW brand. A story of success” serves to bring these key attributes into sharper focus.

The brand’s sporting character played a crucial role in the success of the products – and the BMW company as a whole – right from the outset. Dynamic performance and sporting agility have been hallmarks of the brand since it set its first world altitude record in 1919. There followed countless victories on two and four wheels at race tracks all over the world, International Six Day Trials, touring car championships and the crowning discipline of Formula One. Today the performance and dynamics of BMW vehicles both



Right | Techno Classica in 2006: the BMW Group Mobile Tradition stand is located in Hall 12.

in production and motorsport continue to play a key role in the power behind the brand.

Another factor that has typified BMW and its products since those aero engines of the early years has been the constant desire to think beyond what is already accepted. This challenging basic attitude continues to be a key factor in the high level of fascination the brand inspires. Customer wishes are met and pioneering trends established through innovative and creative solutions.

Among BMW developers an elevated sense of aesthetics and style has always been the guarantor of successful products. BMW's premium strategy runs like a thread through the history of the company, and even today makes up a substantial slice of the brand's charisma. The elegance and exclusivity of the vehicles is reflected for example in the BMW 507 of 1956, the Z8 of 1999 or the M6 of 2006. All three vehicles will be on display at the Techno Classica.

This year BMW Mobile Tradition is also showing other exhibits that perfectly embody these values. The BMW IV aero engine, for example, is one of the powerplants that launched the brand's success

story. It was thanks to this reliable unit that Zeno Diemer set a new altitude world record of 9,760 metres in 1919 flying a DFW 37/III. Further records and racing successes with BMW motorcycles were to follow, and from the 1930s onwards there were wins with cars as well. The exhibition also highlights the sportiness of the brand with two legendary motorcycles, the BMW WR 750 of 1929 and the BMW R 68 of 1952, the latter being the first German production motorcycle to achieve speeds in excess of 160 km/h.

Fans of motor racing will also be keen to catch a glimpse of Andy Priaulx's world championship car from the 2005 WTCC and Nelson Piquet's Brabham BMW BT 54 Turbo from the 1985 Formula One championship. The BMW Turbo concept presented in 1972 was considered to be highly innovative. This futuristic vehicle combined a whole range of innovations – early forms of impact absorbers, for example – that would later go into series production. And with more and more attention now being paid to alternative drive systems, the BMW stand at Techno Classica will also be showcasing one of the world's first hydrogen-powered vehicles, a BMW 520 from 1975. ■

Other themes in Hall 12



Right | Rolls-Royce at the 2006 Techno Classica. Foreground: Rolls-Royce Phantom I, open tourer built in 1926 by Windovers for the Maharajah of Nanpara. Background: the so-called "small" Rolls-Royce, the 20/25 H.P. Coupe B2 with dicky seat, 1934.

BMW Clubs exhibit "recent classics"

As every year, the BMW Clubs will occupy a permanent position in Hall 12. This year they will be exhibiting a selection of more recent classic cars in acknowledgement of the growing interest in such vehicles.

John Cooper and MINI special edition models

Racing car designer John Cooper developed a special interest in the new front-wheel-drive Morris Mini Minor as soon as it was introduced in August 1959. Initially his idea to create a works-tuned MINI Cooper met with little support. But Cooper persisted, and in 1961 the Morris/Austin Cooper sports models were unveiled to an enthusiastic public. High demand soon made these cars a permanent feature of the

MINI series. At Techno Classica, BMW Group Mobile Tradition will be showing a selection of MINI Cooper models reflecting the history of the MINI. There will also be a display of various MINI special edition models.

100 years of the Rolls-Royce Silver Ghost

Henry Royce designed cars, Charles Rolls sold them. Together they became Rolls-Royce, a brand created over 100 years ago with the aim of building the best cars in the world. The company's Silver Ghost model was launched onto the market exactly 100 years ago. To mark this anniversary, Techno Classica will be displaying two of the rare and impressive Silver Ghost models belonging to the Hans-Günter Zach collection. ■

80 years of Mille Miglia

Brescia. On 26 March 1927, the Minoja/Morandi duo won the first Mille Miglia driving an O.M. 30 years later, in 1957, the long-distance race was abandoned following a tragic accident that cost several lives. 20 years later, in 1977, the event was revived as a historic car race under the name Mille Miglia Storica. As previously, it would take place on public roads, following a sweeping course from Brescia to Rome and back, 1,000 miles – or 1,600 km – in all. In contrast to the original event, however, what counted now was not the highest speed, but the uniformity of performance and reliability of the historic vehicles.

In 2007, 80 years after the first running of the event, the historic Italian O. M. vehicles still have the number one starting position in honour of the first ever winner of the long-distance race. At this year's event, which takes place from 17–20 May, 375 vehicles will line up at the start in Brescia. The race is open to any models that started in at least one original Mille Miglia in the period between 1927 and 1957.

BMW Mobile Tradition will be entering nine teams, including Prince Leopold of Bavaria in a BMW 328 and the multiple winners of the Ladies Trophy in recent years, Franca Boni and Monica Barziza, also driving a BMW 328. Particular attention will be paid to Giuliano Canè. The Italian is aiming for a tenth Mille Miglia success – seven of his titles to date have been achieved in a BMW, one in a Lancia and one in a Ferrari. He will be hoping to achieve this record tenth win in an original Mille Miglia automobile, the BMW 328 Berlin-Rome of 1940. ■



Above | The Mille Miglia Storica passes through the centre of towns. Pictured here is the winning team of Canè/Galliani in a historic BMW 328 MM Roadster.

Below | The official event poster for 2007, designed by Enzo Naso, shows last year's winners: the Ferrari 410 Super America Coupé of 1959 and the 8C Spider concept car by Alfa Romeo.



Concorso d'Eleganza Villa d'Este: classic meets contemporary

Cernobbio. Once again at the 2007 Concorso d'Eleganza Villa d'Este many of the classic stars of automotive history will come face to face with current models. The ninth edition of this now traditional beauty contest will take place at Cernobbio on Lake Como from 20–22 April under the patronage of the BMW Group. Unique classic vehicles will stand shoulder to shoulder with pioneering concept cars and prototypes before the backdrop of the venerable Grand Hotel Villa d'Este. This year around 70 vehicles will compete for awards in various classes, including a BMW 335 Cabriolet Autenrieth. The Public Day, during which the award ceremonies will take place, will be held at Villa Erba on Sunday, 22 April (entrance: 10 euros/single ticket, 20 euros/family ticket). BMW Group exhibits in 2007 two special cars: They are the BMW 328 MM Touring Coupé and the BMW Concept Coupé MM 2006. The Concept Coupé goes on show before the public for the first time. The Coppa d'Oro Villa d'Este was held for the first time on 1 September in 1929, under a joint initiative of the Como Automobile Club, the Grand Hotel Villa d'Este and the Comitato di Cura di Como. Set against the splendid backdrop of Lake Como, the event quickly developed into an international meeting point for automotive enthusiasts and their dream vehicles. But the event was temporarily abandoned in 1937 and took place only sporadically in the decades that followed. The Concorso d'Eleganza Villa d'Este once again became an annual event in 1995. When the BMW Group took over as chief sponsor of the event in 1999, it was a demonstration of the company's intent to see the successful continuation of the tradition. Further information is available at: <http://www.concorsodeleganzavilladeste.com> ■

+++ Review: Art Basel Miami Beach +++ Review: Art Basel Miami Beach +++ Review: Art Basel Miami Beach +++



Left | The BMW Museum stand at Art Basel Miami Beach. In the foreground the model of the museum complex.

The BMW Museum at Art Basel Miami Beach

Miami Beach. About a year before the scheduled completion of building work, the BMW Museum was the subject of a presentation at the Art Basel Miami Beach art fair. A 1:87 scale model and virtual images and films conveyed an idea of what the future museum complex would look like and met with enormous public interest, particularly among architects, gallery owners and all those involved in the international museum scene.

In the VIP area, reserved for selected visitors, gallery owners and artists, the BMW Museum created a platform to advertise its reopening in spring 2008. A giant photo wall drew visitors to the BMW stand and offered glimpses into the architectural and multimedia features which – in addition to the priceless BMW vehicles housed there – are sure to become a key part of the museum's attraction.

At a press conference BMW car designer Adrian van Hooydonk highlighted the basic philosophy and innovative aspects of the new museum. The quality of the innovative design won approval particularly from architects, designers and car enthusiasts. Several visitors expressed the desire to combine their next trip across the Atlantic with a visit to Munich; one owner of several BMW vehicles even asked if it was possible for an exact replica of the future BMW Museum to be built in his native Washington.

With around 50 percent of all visitors to the museum expected to come from outside Germany, and the majority of these from overseas, the art fair on Florida's southern tip provided an excellent worldwide communication platform from which to present the BMW Museum. Art Basel Miami Beach is currently regarded as the most important annual show for modern and contemporary art worldwide. What started out in 2002 as an offshoot of Art Basel in Switzerland, today draws gallery owners, art dealers and collectors from all over the world. Nowadays Miami Beach exudes the flair of a fashionable festival. All along Ocean Drive the once closed or run-down hotels have been restored to their Art Deco glory of the 1930s. Approximately 40,000 visitors passed through the fair's doors from 7–10 December 2006. For some of them the trip to Florida will repay dividends, for the art fair offers top returns on investment. Annual turnover is estimated at approximately three billion US dollars.

Just 200 out of more than 650 galleries that applied for one of the highly prized stands in the display area were selected. They exhibited and offered for sale works from 2,000 artists representing the 20th and 21st centuries – classics including Picasso, Mondrian and Warhol, as well as young US artists and representatives of the highly collectable Leipzig School. The spectrum of work ranged from painting and graphic art to photography, sculpture and large-scale installations.

Media interest was predictably high. Journalists arrived in their hundreds to report on trends, stars and gossip relating to the art world. For the Swiss Samuel Keller, the outgoing director of ABMB, the success of the art fair is due in no small part to the involvement of the city and its cosmopolitan flair. Another crucial aspect is the support shown by committed partners such as the BMW Group. This was the fifth consecutive occasion on which the company contributed to the success of the global event and provided a VIP shuttle service of BMW 7 Series Saloons. ■

Below | View of the ABMB display area: around 200 galleries have 20th and 21st-century art works on show.





Left | Serial winner Giuliano Canè and his wife Lucia Galliani were the first to reach the finish in Madonna di Campiglio in their BMW 503 Convertible.

BMW convertible wins the Winter Marathon

Madonna di Campiglio. This year's participants in the 2007 Winter Marathon in Madonna di Campiglio were greeted by unusually benign driving conditions. Instead of the traditional snow and ice that lend the race an entirely different character, this year's spring-like weather ensured the roads were dry and temperatures soared to double figures. However, the weather conditions also meant that one of the highlights of the event, the drive by the top 30 participants on the normally frozen lake, could not take place.

A BMW team had fewest problems mastering the unfamiliar conditions: the Italian duo of Giuliano Canè and Lucia Galliani won the race comfortably in a BMW 503 Convertible, repeating their success in 2006 in a BMW 328 of 1938. Their winning vehicle for the 2007 event, a BMW 503 Convertible, was designed by Albrecht Graf Goertz and unveiled to the public in 1955. With its powerful V8 engine and a price tag of almost 30,000 marks, the 503 was one of the most exclusive automobiles of its day. In all, 139 units were produced.

The Winter Marathon is open to all rear-wheel-drive vehicles built before 1968. The demanding 500-kilometre rally takes in no fewer than 15 mountain passes, including the Lavazé, Mendola, Costalunga, Marmolada, Fedaiia, Pordoi, Sella, Gardena and Campolongo, meaning that half the course is above 1,500 metres and in places climbs above 2,000 metres. The start and finish line is in Madonna di Campiglio, a small Alpine resort in the Trentino region of Italy. The nocturnal race starts in the afternoon and generally goes on until the early hours of the morning. The Winter Marathon traditionally begins with a ski race, the results of which are added to the classic vehicle competition times.

This year 151 teams entered the event. Runners-up behind the BMW 503 Convertible were the Vesco/Vesco pairing in a Triumph TR3 of 1956, followed by Valseriati/Guerini in a 1962 Porsche 356 B Cabrio. Kristian Ghedina, better known for his performances for BMW in last year's Italian Touring Car Championship, chose the event to make his debut in classic car motorsport. Starting in last position, the former Italian Alpine skiing star finished 128th at the wheel of a 1972 BMW 3.0 CSi. Other BMW rankings: Lena/Andreolli finished seventh in a BMW 3.0 CSi, Senna/Mascherani finished 35th in a BMW 2002 Tl and Frosio/Cittadini 87th in a BMW 700 LL. ■



Above | Hesse's State Minister for European Affairs Volker Hoff (left), Hans-Günter Zach and his wife Erika.

"Rolls-Royce brings good deeds and deserved honours"

Mühlheim/Main. Hans-Günter Zach, owner of one of the world's largest private Rolls-Royce collections, was recently awarded the Merit Medal of the Order of Merit of the Federal Republic of Germany. Zach received the award on 22 December last year from Volker Hoff, Hesse's State Minister for European Affairs. For some years now Zach has been fundraising for underprivileged, sick and disabled people. The money raised comes from guided tours around his private Rolls-Royce museum in Mühlheim/Main, excursions in the cars and charity concerts. To date Zach has collected approximately 150,000 euros, which he has donated to organisations such as the German Society for Osteogenesis Imperfecta (brittle bone disease) and the Mühlheim Group for the Disabled. Anyone wishing to visit the collection of 21 Rolls-Royce models is invited to make an appointment by telephone on +49 (0)6108-73282 or by sending an e-mail to zach@hg-zach.de. ■

New BMW 3 Series
Convertible



www.bmw.com

Sheer
Driving Pleasure



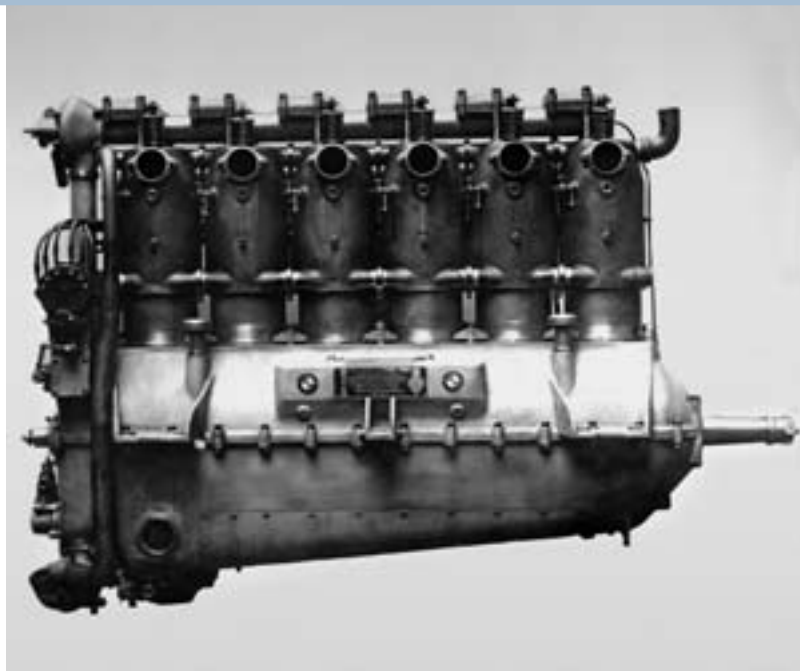
New BMW 3 Series Convertible. There are different ways to enjoy the wind.

Sporty elegant proportions, RHT (Retractable Hard Top), the extraordinary combination of power and efficiency of the new 6-cylinder Twin Turbo engine 335i with High Precision Injection. Because America's Cup is not the only field where BMW innovation meets the wind.

90 years ago | BMW IIIa – the company’s very first product

In the summer of 1917 engineer Max Friz, an employee of Rapp Motorenwerke in Munich, presented his design sketches for an aircraft engine to the German military high command. They instantly recognised the engine’s tremendous potential and ordered 600 units without even waiting for a prototype to be built. A few weeks later Rapp Motorenwerke was renamed Bayerische Motoren Werke.

Inside the BMW IIIa, as Friz’s aero engine was named from autumn 1917, the most important technical developments of the time were ingeniously implemented. An advanced multi-stage carburettor, moreover, helped the BMW IIIa achieve some impressive feats at extremely high altitudes. Delivery of the BMW IIIa began in spring of 1918. The BMW unit proved superior, or at least equal, to any other aircraft engine of the time, whether from Germany or built by the Allies. And so the BMW IIIa catapulted a small Munich company practically from zero to the top echelon of the international aviation industry. ■



Above | The six-cylinder IIIa aero engine was the first product to bear the BMW trademark.

75 years ago | BMW 3/20 PS



Left | The BMW 3/20 PS was the first car to be built from scratch by BMW.

Following various evolutions of the 3/15 PS model, the Austin car built by BMW under licence, the new 3/20 PS was unveiled by BMW in Munich in March 1932. This model sported the supplementary designation AM 1 (probably standing for “Ausführung München”, or “Munich Version”) and had been rebuilt from the ground up. Whereas development work was carried out in Munich for the first time, production – as for all BMW series models before the Second World War – continued in Eisenach.

The engine output of the BMW 3/20 PS boasted an extra five horsepower and a wheelbase that had been stretched by some 25 cen-

timetres. This allowed for considerably larger bodies, which BMW had built by Daimler-Benz at their Sindelfingen plant. Customers could choose from five standard body types: a saloon, delivery vehicle, touring car, roadster or two-window cabriolet.

The final evolution of the 3/20 PS was the AM 4 model of 1933 featuring a four-speed transmission. On account of its larger body, the performance of the BMW 3/20 PS hardly bettered that of the 3/15 PS despite its higher output. But thanks to its quality and comfort, it proved a highly successful model, selling 7,215 units by the time production was phased out in 1934. ■

55 years ago | Back on top of the world thanks to the BMW R 68



At the 1951 IFMA, BMW announced the launch in 1952 of the first high-end sports motorcycle of the post-war era. The 600 cc boxer engine of the BMW R 68 was good for 35 hp, taking the bike to a top speed of just over 160 km/h. At the time, this 100-mile an hour mark was a critical threshold for production motorcycles and was attained by very few models.

The trade journals debated the dangers of such high-powered motorcycles. The editor of the magazine *Das Motorrad* noted that

these machines bore little resemblance to traditional motorcycles and that riding them was more like being “inside a cage with a tiger”. But the BMW R 68 was not targeted at the mass market anyway, it was directed solely at riders with sporty ambitions – something more or less guaranteed by its exclusive price tag of 3,950 marks. By 1954, a total of 1,452 customers had been prepared to invest that princely sum in acquiring this top-class model of international motorcycle production. ■

Above | The BMW R 68 also cut an impressive figure on race tracks, as Gerold Klinger's 1953 photo taken in Salzburg demonstrates.

Below | The 1973 season saw the BMW 3.0 CSL race cars in BMW Motorsport livery challenging the competition for the first time.

35 years ago | BMW Motorsport GmbH is founded



Spring 1972 marked the start of a new era in BMW motorsport. For the first time in the history of the company, its four-wheeled racing activities were hived off into a separate company. The aim was to drive forward BMW's racing involvement on an independent and flexible footing while at the same time demonstrating the performance potential of BMW cars and engines in the competitive arena.

The staff at BMW Motorsport GmbH were to advance BMW's motor racing activities without being tied to the rules and constraints of a major corporation. In addition to developing their own works racing cars, this also embraced the support of private drivers and teams. A key contributing factor in the company's self-financing were the “M models” with their ultra-sporty design. They were production cars that were further developed for racing involvement by the specialists at Motorsport GmbH.

BMW Motorsport GmbH commenced work on 24 May 1972. By 1973 the team surrounding the new managing director Jochen Neerpasch had managed to score a significant triumph: with the BMW 3.0 CSL in special lightweight design, BMW not only won the constructors' title in the European Touring Car Championship, but also saw their driver Toine Hezemans become European champion. ■

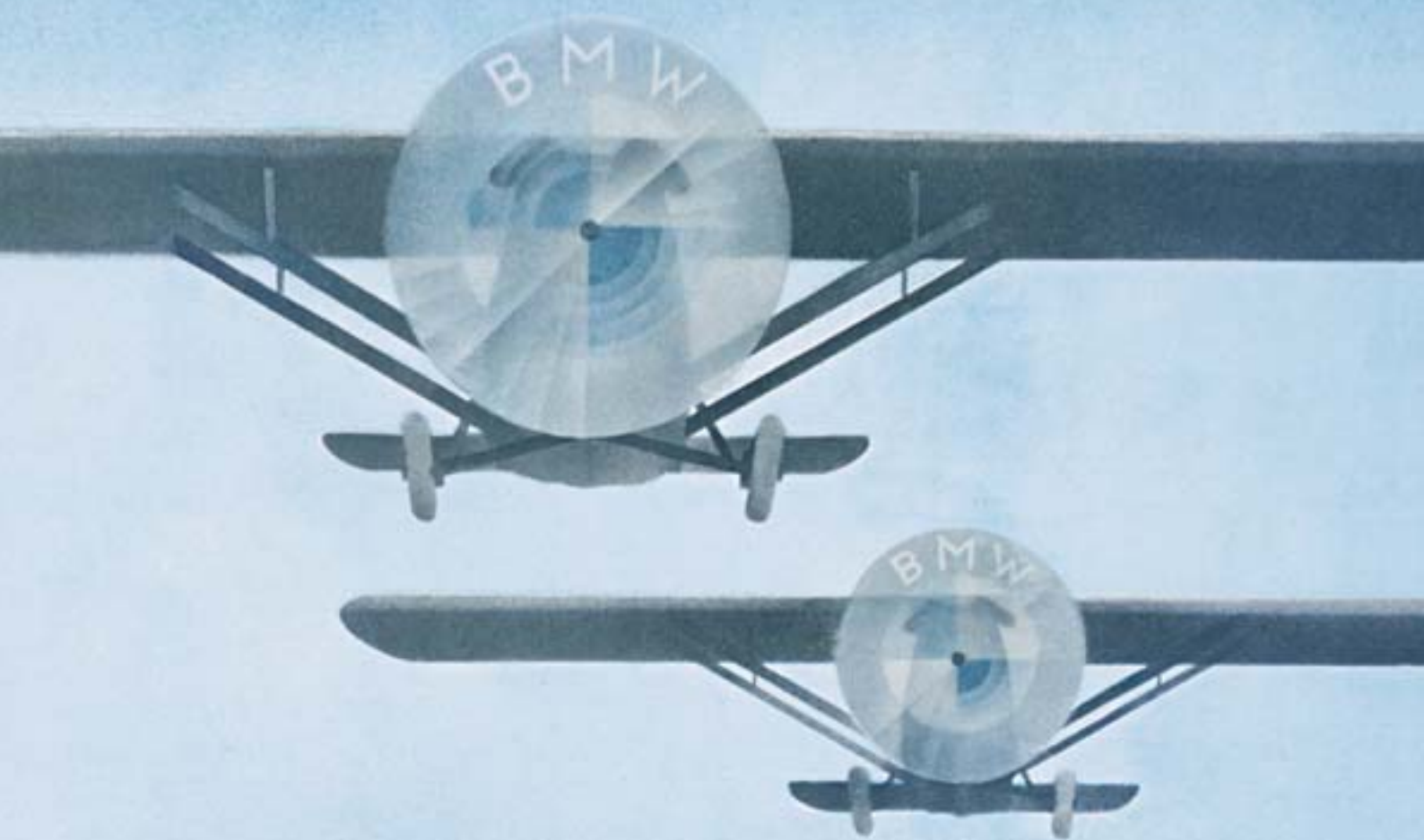


The history of BMW aero engines

For many decades, BMW's main product line was neither cars nor motorcycles but aircraft engines. Particularly during the early years, this product played a big part in shaping the image of the BMW brand and set in motion a series of spectacular record-breaking flights by BMW-engined aircraft that made the BMW name famous throughout the world.

Christian Pierer







Above | The company's first product: the BMW IIIa, 1918.

Below | Franz Zeno Diemer prior to setting his legendary high-altitude record, 1919.

Aero engines and the founding of BMW. In 1913 the Rapp Motorenwerke plant was set up in Munich and began manufacturing aero engines under its chief designer Karl Rapp. None of Rapp's engines stood out as technologically mature designs, however, and none of them were built in any significant quantity. The company was sorely in need of a talented designer. The turning point came in early 1917, when the engineer and ex-employee of the Daimler-Motoren-Gesellschaft Max Friz was persuaded to switch to aero engine development. Hiring Friz turned out to be one of the best moves the company could have made. In next to no time Friz had designed a new aircraft engine, and when the drawings were shown to the German military, they immediately liked what they saw. Now they hoped that the tide would start to turn for the German pilots at the front. Having been roundly upstaged by Friz's new design, Karl Rapp now departed the company. He had only ever held a small number of shares in the company, despite the fact that it bore his name. On 21 July 1917, the name too was changed – from Rapp Motorenwerke GmbH to Bayerische Motoren Werke GmbH. Subsequently, Max Friz's engine acquired the name by which it has been known ever since: the "BMW IIIa". So it was an aero engine that led to the founding of the first company to bear the name BMW and it was in aero engines that the company then went on to make a name for itself.

Anatomy of a high-flier – the technology of the first BMW engine. Like most other German aero engines of the time, the BMW IIIa was an in-line six-cylinder unit. Unlike most competitor products, however, BMW's first engine was designed as an oversized, overcompressed "high-altitude" engine. Even at great heights, this gave Max Friz's BMW IIIa a significant performance edge over all the other German aero engines on offer in 1917/18. True, Maybach had already presented an over-square, overcompressed engine in 1916/17, but it is BMW that must take the credit for bringing such an engine to market.





Above | A BMW stand displays all the company's aero engines at the Berlin International Air Show, 1928.

The BMW IIIa also featured a specially developed multi-stage carburettor specifically designed for operation at very high altitudes. As well as ensuring an optimal mixture ratio at all heights, this carburettor also made the engine extremely economical on fuel. The impressive performance and reliability of the BMW IIIa were among the reasons why this engine remained the template for all other water-cooled BMW aero engines for around 20 years to come.

9,760 metres – a world altitude record. Although by the last year of the First World War BMW had made its way to the forefront of the German aero industry, the end of the war brought a serious crisis for the company. Its sole customer, the German air force, cancelled all its orders and the Allies barred all German firms from manufacturing aircraft and aero engines. But far from losing heart, the management got together with the Deutsche Flugzeugwerke company (DFW) to support pilot Franz Zeno Diemer in his bid to set a new world altitude record. Following extensive preparations, Diemer took to the air on 17 June 1919, in a DFW F37/III powered by a single BMW engine – the BMW IV, successor to the BMW IIIa. The aircraft took 87 minutes to climb to a height of 9,760 metres, thereby setting a new altitude record.

12-cylinder engine boosts business. While Diemer's record-breaking flight proved in no uncertain terms what BMW aero engines were capable of, it did not benefit the company directly. The Allied ban on aero engine manufacture remained in force until 1922 and it was not until 1923/24 that BMW was able to resume production, starting with the proven BMW IIIa and IV straight-six units. It wasn't

long, however, before customers were demanding even more powerful engines. Max Friz now went ahead and developed the BMW VI 12-cylinder engine, which received German airworthiness approval in early 1926. The BMW VI was to remain a very important product for the company right up until 1937, when production finally ceased. This engine had the distinction of making a larger contribution to company profits than any other BMW product of the 1920s and 1930s. The BMW VI was also the first BMW aero engine for which there was strong demand not only in the domestic market but also internationally. The Soviet Union in particular bought engines from Munich for its air force, and in 1930 even started building them under licence. One reason for the runaway sales of the BMW VI was its adaptability to individual customer requirements. For example, it was available with three different compression ratios and horsepower ratings.

Record-breaking flights boost image. Aero engines like the BMW VI were not only very profitable commercially, they were also used in numerous spectacular record-breaking flights which were to leave a lasting mark on the brand image. Record attempts and long-distance flights were all the rage in the first half of the 20th century – so much so that participation in such activities provided a useful public relations tool. BMW was very active in this area, as can be seen from the fact that in 1927, out of a total of 87 international aviation world records, 29 – or around a third – were achieved with BMW engines. In 1932 BMW lent its support to a particularly impressive record attempt by pilot Wolfgang von Gronau. Gronau's aim was to make a round-the-world flight in a Dornier Wal fly- ▶



Above | A BMWVI-engined Dornier Wal takes off, 1930.

Below | Wolfgang von Gronau and his crew pictured after Gronau's successful round-the-world flight, 1932.



ing boat powered by two BMW VIIa engines. Gronau succeeded in his daring feat. After completing a total distance of 44,800 kilometres with no major incidents, he arrived back at his starting point, on the North Sea island of Sylt, approximately four months later.

Radial engines for the German aero industry. In the 1920s, BMW was a medium-sized company with only limited financial resources at its disposal. Certainly it was a commercially successful company, but to develop its own aero engine designs would have been a risky business, since if a design did not catch on, the financial consequences would be devastating. Company management therefore opted for a strategy of manufacturing carefully selected products under licence. The first step in this strategy was to closely monitor the international markets. Then licence agreements were signed which allowed BMW to manufacture, as part of its product range, a variety of pioneering technologies developed by top-name international manufacturers. The most spectacular example of this strategy was the licence agreement concluded with American

aircraft engine manufacturer Pratt & Whitney in January 1928. Under this agreement BMW acquired the rights to manufacture the air-cooled Hornet and Wasp radial engines. However, although the new air-cooled BMW aero engines boasted outstanding performance, sales were slow – at least to start with. Mainly this was due to unfounded scepticism on the part of German manufacturers, who still had to get used to this type of design. Perhaps not surprisingly, this led to the licence agreement being terminated in 1931. Just one year later however, the situation had changed once again. When Junkers unveiled a state-of-the-art civil transport aircraft, the Ju 52, and announced its intention of fitting it with its own Jumo 4 diesel engines, Lufthansa had different ideas. Instead, it asked for the new aircraft to be fitted with radial engines from BMW. The airline eventually got its way and BMW was awarded a contract to supply air-cooled engines for the Ju 52. BMW promptly renewed the licence agreement with Pratt & Whitney and proceeded to market the latest version of the Hornet engine in Germany under the name BMW 132. This meant that, from 1933 on-



wards, BMW emerged as the leading German manufacturer of both air-cooled and water-cooled aero engines.

Aero engines under National Socialism. The year 1933 was an important watershed for the BMW aero engines division. It saw the newly formed Reich Ministry of Aviation launch an all-out effort to build up the German air force, the Luftwaffe. Soon major orders were rolling in for BMW, now one of the largest German aero engine manufacturers alongside Junkers and Daimler-Benz. Constant capacity expansions and rationalisation were required to keep pace with the huge demand, and increasingly the aero engine division came to dwarf the two other BMW product divisions – cars and motorcycles. Acting as aircraft engine supplier to the Reich Ministry of Aviation eventually resulted in a close dependency on the Nazi regime and led to a step-by-step restructuring of the company around a single market sector: aero engines.

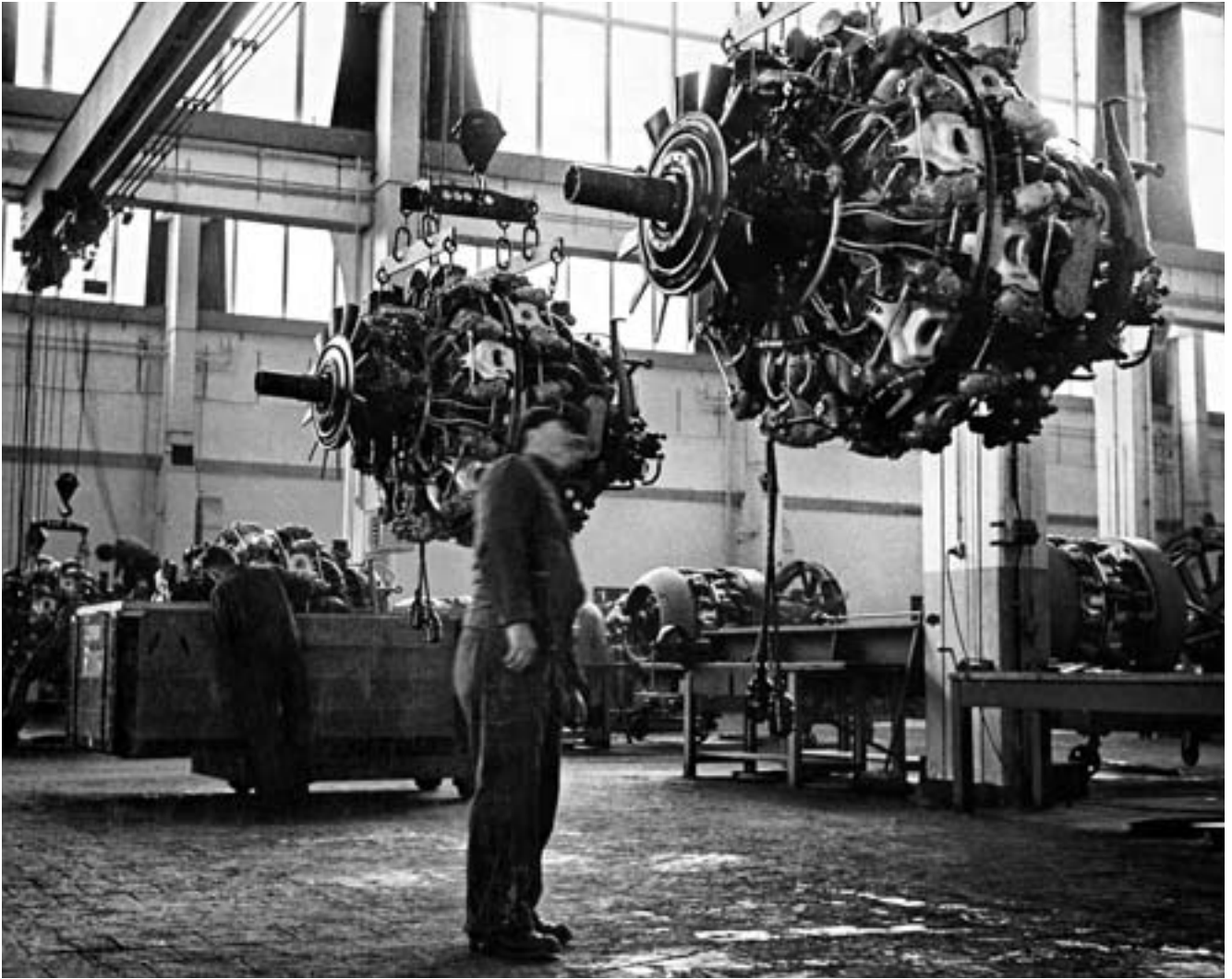
Takeover of Brandenburgische Motorenwerke. At this time BMW was the only German manufacturer developing both air and water-cooled aero engines. Since it would not have been possible for the BMW engineers to cope with this double workload indefinitely, in 1936/37 the company management decided, with the approval of the Reich Ministry of Aviation, to move out of the water-cooled aero engine market and concentrate solely

on manufacturing high-performance radial engines. This move was made easier by the collaboration which began in 1938 between BMW and Germany's second-largest manufacturer of air-cooled aero engines, Brandenburgische Motorenwerke (Bramo). Bramo was a subsidiary of the Siemens group and its experience in radial engine manufacture stretched back many years. In 1939, BMW ended up taking over Bramo and its Berlin-based Spandau and Basdorf-Zühlsdorf plants. This acquisition not only secured BMW's access to the know-how of an important competitor, it also led to BMW acquiring a monopoly on radial engines throughout the German market.

High-performance engines for the Luftwaffe. In 1939 BMW completed its first rig test of the BMW 801 aero engine. This 14-cylinder twin-row radial engine had a rated output of 2,000 hp and was the first air-cooled aero engine to be developed entirely in-house by BMW. Ideally, the complex technology of the BMW 801 would have required long development time scales and stringent testing. However, following the German attack on Poland, the Reich Ministry of Aviation wanted the company to start supplying BMW 801 engines as quickly as possible. The new engine was therefore rushed into production too quickly, which inevitably resulted in technical problems. It wasn't until 1942 that various fundamental development issues were sorted out. The BMW 801 then went on, by ▶

Above left | Two mechanics servicing a BMW 132, 1934.

Above right | The BMW VI-engined Heinkel He70, 1937.



Above | BMW 801 aero engines prior to shipping, 1942.

Below | Heinkel He 162 with BMW 003 jet engine, 1945.

the end of the war, to become one of the biggest-selling German aero engines, spawning countless different versions which powered a wide range of German aircraft. One standout feature of the BMW 801 was the first commercial application of turbocharging in an aero engine. Another was a master control unit which allowed pilots to adjust a variety of flight func-

tions with a single control movement. In addition to the BMW 801, BMW had also developed a number of other large radial engines by 1945, although they did not make it into regular production. The most important of these was undoubtedly the BMW 803, a water-cooled four-row radial engine with 28 cylinders and a maximum power rating of 4,000 hp.



Jet and rocket engines. As well as piston engines, BMW had since 1939 also been working on a new technology of the future: the jet engine. One year earlier, Heinkel Flugzeugwerke had performed the first rig test of such an engine. Other leading aero engine manufacturers then followed suit with products of their own, although only at Junkers and BMW were jet engines actually in regular production by 1945. The BMW 003 jet engine went into production in 1944. It featured a seven-stage compressor and an annular combustion chamber, giving it a static thrust of 800 kp. The engine went into service not in the most famous German jet aircraft of the period, the Messerschmitt Me 262, but in the Arado Ar 234 long-range reconnaissance aircraft and the Heinkel He 162 “Volksjäger” jet fighter. Following the war, the technological principles of the BMW 003 were adopted as the basis for jet engine development in the Soviet Union and in France.

During the war, a small group of BMW engineers also devoted themselves to building rocket engines, with an eye to using them as a propulsion system for aircraft or guided bombs. Although none of the numerous projects were built in anything but small batches, the developers nevertheless scored a number of significant successes. The most important, in retrospect, was the extensive testing and perfecting of nitric acid for use in fuel applications. The implications of this important breakthrough went well beyond the company’s own projects.

Post-war resumption of business – testing times. At the end of the war, BMW faced an uncertain future, to say the least. In the first years the general picture was one of flattened factories, dismantling and expropriation. Initially, all German companies were banned by the Allies from manufacturing aero engines. This ban was only lifted in 1955, whereupon BMW returned to its former core metier. BMW aircraft engine manufacture was now spun off to a subsidiary whose operations were centred at the Allach plant near Munich, which had been built in 1936. Initially, small gas turbines were built at the plant and maintenance work was carried out on non-BMW jet engines. Then in 1959 negotia-

tions started with General Electric with a view to BMW manufacturing the J79-11A engine under licence. The negotiations were successfully concluded, which had far-reaching implications since the J79 was used in the Starfighter and was therefore in great demand in Europe. However, this success was soon overtaken by events. Due to planning blunders on the automotive side, a financial crisis erupted at BMW in the late 1950s. In the resulting restructuring BMW needed to release liquidity and ended up selling its aero engine activities, which had meanwhile returned to profit, to MAN. This took place in two stages, in 1960 and 1965.

Return to aero engine manufacturing. In 1990 BMW decided to return once more to aero engine manufacturing. This led to the founding of the joint venture BMW Rolls-Royce GmbH by BMW and the British aero engine manufacturer Rolls-Royce plc. The new subsidiary, in which BMW AG held a 50.5-percent majority interest, was based in Oberursel, Germany. The BMW Rolls-Royce aero engines were aimed at the 60 to 140-seater regional jet market and the commercial aircraft market. The joint venture first of all developed the BR 700 Series core engine, which it planned to offer in three derivative versions with different output ratings. Although business flourished beyond expectations, in 2000 a major restructuring took place at BMW and the Group once again withdrew from the aero engine business. ■

Below left | BMW trade fair stand in Hanover with GE J79-11A Starfighter engine (background) and BMW 003 (foreground), 1960.

Below right | BMW Rolls-Royce GmbH aero engine, 1996.



Isetta goes to India

2007 sees BMW open its first plant in India, in the city of Chennai. 50 years ago India was at the centre of similar plans, with BMW looking to team up with a local partner to produce small vehicles in India. However, those early manoeuvres were to end in failure.

Dr Florian Triebel

The BMW stand at the International Motor Show in Frankfurt am Main played host to an exotic delegation in 1955. Envoys from a group of Indian industrialists stopped by at the stand to express considerable interest in the Isetta “motocoupé”, which had been in production in Munich since the spring of that year. Back in their homeland, the Indian government had announced a five-year plan with a clear emphasis on industrial development and the expansion of transportation. Indian companies were looking for opportunities to gain a slice of the development programmes set out by the authorities in New Delhi, and producing a small car capable of triggering the motorisation of large sections of society appeared to be an opportunity full of promise. Ideally, this vehicle would be suitable both for keeping people on the move and transporting small loads.

In the months that followed, the BMW management in Munich started to focus ever more keenly on the Asian market. In January 1956, Supervisory Board member Dr Max Günther Grasmann reported back to the Board of Management and the sales executives on the impressions he had gained during a tour through parts of Asia. His comments included an in-depth look at the opportunities and risks of the automotive market, in particular, in the various countries he had visited.

Plans were already in place at the time for Dr Walter Krüger – whose responsibilities within the BMW sales management structure included exports outside Europe – to visit Asia. He was due to stop by in India specifically and build on the contacts forged in Frankfurt. Here, the recommendations made by Grasmann would prove extremely useful.

Between February and April 1956 Krüger’s journey took him through Lebanon, India, Hong Kong, Japan, the Philippines, Indochina, Singapore, Indonesia, Thailand, and Pakistan on the way to Egypt. His detailed report outlined the prevailing political and economical conditions in the countries on his itinerary, the lie of the land in the individual automotive markets and the opportunities that existed for BMW. Krüger believed the outlook was good for a successful introduction of the Isetta in several countries. He explained that in India, more than elsewhere, there was a great deal of ground to be made up in the motorisation of the general population. While there was one vehicle for every 31 people in Germany and one for every three in the USA, the ratio in India was one per 1,270. This showed, as Krüger was keen to emphasise, “the incredible potential for the motorisation of this country and the long-term prospects for an automotive factory in a position to offer the right vehicle”. Krüger also cautioned, however, that the purchasing power of people on the subcontinent was significantly lower.

Krüger’s market analysis in India showed a lack of available motorised vehicles to fill the gap between motorcycles costing the equivalent of 2,700 marks at the top end and the cheapest vehicles, priced from 9,000 marks. This is where the Isetta would

come in. According to the latest government statistics, a section of the population numbering somewhere in excess of 300,000 people could be considered as a target group for a small vehicle in the price range indicated above. However, as there had never before been a comparable product on the market in the country, only restricted prognoses were possible when it came to forecasting the possible response to the Isetta in India. One essential requirement for success, though, was that the vehicle in question was of sufficient quality to withstand the wear and tear of life on Indian roads and that a “faultlessly functioning service and replacement part service” was put in place. This is something that would likely be beyond the capability of the local automotive industry and thus represented a good opportunity for the company to set itself apart from its rivals to positive effect.

However, before the Isetta could be introduced in India, a series of construction-related changes had to be carried out. “With its body structure in its current form, the Isetta would not be suitable for India,” wrote Krüger, pulling no punches in an intermediate report sent from India. The ventilation of the car was just not efficient enough for the tropical local climate. Added to which, the Plexiglas dome at the rear would act “like an oven” when exposed to the sun’s rays and heat the car up even further. Improvements were also needed to the ventilation above the side windows. In short: “In these high temperatures, it would be impossible to drive anywhere in the Isetta in its current form without risking a heart attack.” The car’s seals would also have to be adapted to the extreme humidity of the monsoon season. Plus, some countries were right-hand drive and there were regulations in place stating that the driver had to be able to indicate changes in direction using hand signals. Ultimately, checks had to be conducted to ensure that the existing basic construction could withstand the heavier average demands made on vehicles in Asia thanks to the poorer road conditions and generally higher transport loads. If modified to take these factors into account, the Isetta did stand a good chance of success in Asia.

Working on the basis of these requirements, the Munich-based development engineers designed the first version of a “Tropical Isetta” while Krüger was still away. Modifications made to the standard model included, most importantly, a response to Krüger’s call for improved ventilation inside the car. The Plexiglas dome gave way to a new roof construction, with other draft proposals including a design for a folding convertible roof. This formed the basis for an “Isetta van” derivative. However, examining the results of the engineers’ thinking so far upon his return from India, Krüger was left wanting more. The next step was the definition of criteria for an “overseas Isetta” in July 1956, which included a stipulation that all corrosion-susceptible parts would be “tropics-proof”, the engine cooling would be upgraded and interior ventilation given greater priority. ▶



This illustration clearly shows the very pleasing and streamlined bodywork. Also to be seen are the ventilator grilles designed to admit fresh air without draughts. These ventilators are only fitted to the Tropical model and undoubtedly they also have the effect of enhancing the frontal appearance of this new Isetta.

Special Tropical BMW ISETTA Model 57



Above left and right | A prototype of the "Tropical Isetta" in van form. In the interests of improving ventilation, this model – c. 1956 – came with large ventilator gills in the form of the BMW kidney.

Below | This model of a "large Isetta" was designed at BMW at the instigation of the export department.

During the course of his visit in spring 1956, Krüger had talks with Indian government officials and the minister of industry in the country, which revealed that only two or, at most, three production licences would be granted for foreign products in India. The officials envisaged the construction of tropics-proof, robust, affordable four or five-seater vehicles. As a two-seater, that made the Isetta too small for the job description. However, Krüger did manage to convince his Indian contacts that the Isetta should be given a run-out to test out the suitability of the basic construction. If the trials went well, expanding the assembly programme to include a four-seater small car – a concept which was later to become reality in the shape of the BMW 600 – could come into consideration. With this backing in place, the BMW representative entered into negotiations with three industrial groups regarding a partnership for production of the Isetta on the subcontinent.

Following Krüger's return to Munich, the conditions set out by the three potential partners were examined and assessed. The pro-

posal from Hindustan Vehicles Ltd., which appeared to be the most promising, was based on projected production of some 40,000 vehicles over the first five years. The vehicles would be put together in a new factory to be constructed near Patna in Bihar province, from where they would also be sold across the whole of India. In the medium term, the vehicle could also be delivered to other countries in Asia. In a memorandum, Krüger emphasised the importance of the project, which would – in his opinion – "open up the world market" for BMW and "allow us to finally make some money".

Several rounds of talks took place over the years with Hindustan Vehicles Ltd. in Calcutta, London and New York. Drawing up a first rough estimate of the expenditure, costs and yields involved, Krüger based his calculations on investment from both partners of around 25–27 million marks, development costs for BMW totalling 1.8 million marks and a service rate for the first five years of 2.2 million marks. Against that were parts and goods deliveries worth 31 million marks and the profit for both partners, which he estimated at a combined 15.5 million marks. These initial calculations indicated that the "India Project" could indeed turn out to be a rewarding initiative.

On 16 January 1957 the Board of Management presented the India Project concept to the Supervisory Board. BMW's sole financial involvement would be through the supply of machines and the contribution of licence fees to the new company. The Supervisory



Board gave the enterprise the green light, but commented that long-term financial commitments should be avoided if at all possible due to the uncertain political situation in India at the time. In spring 1957 a team of experts from BMW travelled to India to hammer out the details of the plan with Hindustan Vehicles, set out the investment required and nail down a realistic sale price for the Isetta in India. The team submitted a report to the Board of Management on its return from India recommending that this “interesting project ... should be pushed forward vigorously”. The idea of extending assembly to include a “4-seat Isetta” should also be kept in mind. However, the plan to build a new factory in India was put on ice. The Board of Management considered that these plans were “too large-scale”. Instead, assembly sets could be sent to India, making the most of more favourable customs laws. Plus, a group of several BMW Isetta cars should be sent out onto the streets of Indian cities as quickly as possible in order to gauge reaction to the motocoupé.

The BMW departments involved in the project pursued its development through the course of 1957, but without ever achieving a significant breakthrough. It gradually became clear that the small car project would be passed through the Indian parliament in spring

1958, and only after that process was complete could negotiations be finalised. At the same time, the BMW Board of Management commissioned a country report on India from the company’s newly established market research department. The report contained analysis that brought the company’s plans – some of which were relatively far advanced – crashing back down to earth. The outlook for the long term was not bad, but high levels of start-up investment and market development finance were required in the immediate term in order to gain a sustainable foothold in the Indian market.

It was the late 1950s and BMW simply did not have the money required to make the project a success. Sales of new cars remained sluggish throughout the 1950s, meaning that BMW was not in a position to meet the demands of its Indian partners for a more extensive financial contribution to the planned assembly plant. These financial issues saw negotiations reach a stalemate, and in November 1958 the BMW Board of Management decided to pull the plug on the “Isetta for India” project altogether. Over the years that followed, other attempts to build BMW motorcycles, the BMW 700 and stationary engines in India also came to nothing. ■

The “rickshaw Isetta”

While Dr Walter Krüger was preparing for his tour around Asia, the experts at BMW in Munich were focusing intensively on country-specific spin-offs of the Isetta. The designer of the BMW 507, Graf Albrecht Goertz, came up with sketches of two variants of a “rickshaw Isetta”, which Krüger took with him on his travels. The sketches showed the driver in a raised cab positioned behind the passengers. When these were shown to the partners in India, however, it turned out that there had

been a misunderstanding, as Krüger relayed back to Munich. Country-specific in this case meant that “the driver had to sit on his own at the front, with the passengers behind him”. Further work along the lines of Graf Goertz’s designs was to be stopped immediately. Even so, Krüger was pleased that he had brought the sketches with him. They had been “studied with interest” and seen as proof of the efforts made by BMW to “offer a car suitable for the country”. ■





In 1920 Hannah Höch created BMW's first appearance in the world of art

Das schöne Mädchen

In her 1920 photomontage *Das schöne Mädchen* (The Beautiful Girl), the artist Hannah Höch was the first person to use the trademark of the fledgling BMW company as the basis of a work of art. The following article looks at the Dada movement in modern art, at the way a BMW advertisement was used, and at the meaning and message of the collage and the role of the integrated advertising motif in it.

Dr Florian Triebel

The outbreak of the First World War in 1914 and the failure of politicians to confront violence had shocked many young artists in Berlin who, like Hannah Höch, had adopted a strongly pacifist political philosophy.

A number of artists from various European countries had fled to Switzerland, a country shielded from war by its neutrality. There, on 5 February 1916, they founded the "Cabaret Voltaire" in Zurich. Today, this event is regarded as the birth of Dadaism. In the eyes of the artists involved, there was no more beauty in a world that had been shattered by a senseless war; and it followed that art could no longer be "beautiful" either. With their "artworks" they wanted to raise a noisy and disturbing protest against the bankruptcy of politics. At the same time they strove to wipe the slate clean, erasing the complacent culture of bourgeois society as well as the increasing mechanisation of the world, both of which they denounced as the underlying causes of the destructive turn in world events.

In the mind of the Dadaists, their protest could only succeed through a rejection of the received understanding and language of art. This is why, to many of their contemporaries, the Dadaists' work seemed incomprehensible and devoid of meaning. At the Cabaret Voltaire the Dadaists experimented with sound poems, staged avant-garde and unconventionally costumed plays, and created images and objects from everyday materials never before used in art.

In 1917 one of the founders of the Cabaret Voltaire, Richard Huelsenbeck, returned from Zurich to Berlin, bringing the "Dada message" to Germany. Before long, independent outposts of Dada were established not only in Berlin, but also in Paris, New York, Budapest, Hanover and Cologne. In February 1918 in Berlin, Huelsenbeck gave the "first Dada speech in Germany". Soon afterwards, together with Raoul Hausmann, Johannes Baader, Georg Grosz and John Heartfield, he founded the "Club Dada" in the German capital. A little later Hannah Höch also joined the group. She was and would remain the only female artist who contributed her own works to Dada in Berlin.

After the end of the First World War the Berlin Dadaists organised the "First International Dada Fair" at the gallery of the famous art dealer Dr Otto Burchardt, which opened in July 1920. The exhibition represented the climax of Berlin's Dada movement, but also marked the beginning of its decline. The small exhibition did not attract many visitors, yet it created a considerable stir internationally thanks to coverage in newspapers and magazines at home and abroad. And doubtless the arresting works on show, which jolted the traditional way of looking at things, contributed to the furore. Hannah Höch was represented in the exhibition by some of her Dada dolls and collages and photomontages.

Dada took its place alongside other revolutionary artistic movements in the early 20th century, such as Futurism, Vorticism and Cubism. Of all these forms of avant-garde artistic expression, Dada was without doubt the most aggressive, the noisiest and the most international – and perhaps indeed the most innovative. The influence of Dada can be seen to the present day in many fields of art and design. Despite being active for only a few years (1917–1925), the movement left behind it clear traces in surrealism, pop art, nouveau réalisme and conceptual art, as well as in typography, experimental photography and three-dimensional design, all the way to punk.

Photomontage. In photomontage the Berlin artists created a particular form of expression which is considered to be the most important contribution of Berlin Dada to the history of art. However, the process was not new: the gluing of cut-out images onto pictures or other photographs had already been invented. At the beginning of the 20th century military photographers in particular had made use of this technique. In the Kaiser's Germany, prints and lithographs were circulated widely showing training grounds or barracks with soldiers whose faces were cut out from photographs and pasted on. These "portraits" were sent home as mementos of military service. ▶



Above left | Hannah Höch and Raoul Hausmann at the opening of the First International Dada Fair in July 1920.

Above right | The First International Dada Fair in the Berlin gallery of the art dealer Dr Otto Burchardt. Hannah Höch is seated in the foreground.

When holidaying on the Baltic coast with Hannah Höch, Raoul Hausmann was inspired by army souvenirs such as these. Instead of applying photographs only to a few parts of a picture, he had the idea of creating images almost exclusively from cut-out photographs. While the army portraitists idealised the reality of military life, Hausmann and Höch turned this effect on its head. Through the use of photographs, the resulting works gave the appearance of reality to something that was unreal.

The Dadaists called their “invention” of this specialised form of collage “photomontage”, since they did not want to “play the artist”. They regarded themselves rather as engineers, claiming to design and “assemble” their works.

From 1918 onward, photomontage became Hannah Höch’s preferred medium with which to articulate ironically but clearly her criticism of politicians and of the realities of society under the young Weimar Republic. In doing this she combined elements of traditional craftsmanship with those of modern mass culture. There is no doubt that she was aided and inspired by having a job in the editorial offices of the liberal Ullstein newspaper group. There she had an ample supply of magazines and journals, which became her favoured material as the starting point for her work. The photographs, articles and advertising images they contained provided extracts from contemporary reality. By rearranging them in her photomontages, Hannah Höch gave the images a different, ironic and satirical message.

Two of her most important photomontages were to be seen in the First International Dada Fair in Berlin. In many respects, *Cut with the Kitchen Knife Dada through the Last Weimar Beer Belly Cultural Epoch of Germany* and *Dada Review* occupy key positions. They clearly demonstrate the rejection of war, bourgeois reality and its representatives as well as the perception of a fragmented world, characterised by technology and the mass media. Yet Höch used her photomontages not only to reflect society as a whole, but also as a satirical analysis of the relation between the sexes and the role of women.

The BMW advertising motif. As a background to her photomontage *Das schöne Mädchen* (The Beautiful Girl), Hannah Höch used an advertisement for the company then still known as Bayerische Motoren Werke AG. We know that the ad first appeared in the July/August 1918 issue of the German trade magazine *Der Motor*, but was also frequently placed in other publications in the months that followed.

The design of the advertisement shows a shower of BMW badges of various sizes which appear to be seen through a window falling like snowflakes. As they fall they turn over and form a little blanket of “snow” made up of BMW logos. In a panel beneath the window, as though on the window sill, can be read the key information about the company being advertised. In addition to the company’s name and address there is a list of the products: “Aero engines – automobiles – motor-ploughs – agricultural engines – motorboats.” As in many BMW advertisements of that period, some of these product

About the artist

Hannah Höch (1889–1978) grew up in her birthplace, the town of Gotha in Saxony. In 1913 she moved to Berlin to take up her studies at the academy of the Museum of Arts and Crafts. Among the artists she got to know there was Raoul Hausmann, with whom, from 1915 to 1922, she had an intense and sometimes difficult relationship. From 1916 to 1926 Hannah Höch worked three days a week in the editorial offices of the Ullstein publishing company, where she drew handicraft patterns for magazines and journals. In 1926 she moved the focus of her life to the Netherlands. However, in the mid-1930s she returned to Germany, though the Nazi regime banned her from any artistic activity. Until her death in 1978, Höch continued to live and work in a small house in the Berlin suburb of Heiligensee. ■

Right | Hannah Höch in a Dada costume with one of her Dada dolls.

groups are to be seen more as declarations of intent by the company regarding future areas of activity. The fact is that, at the time this ad was published, the company was only manufacturing aero engines (see article on the founding of BMW, MTL 02/2006).

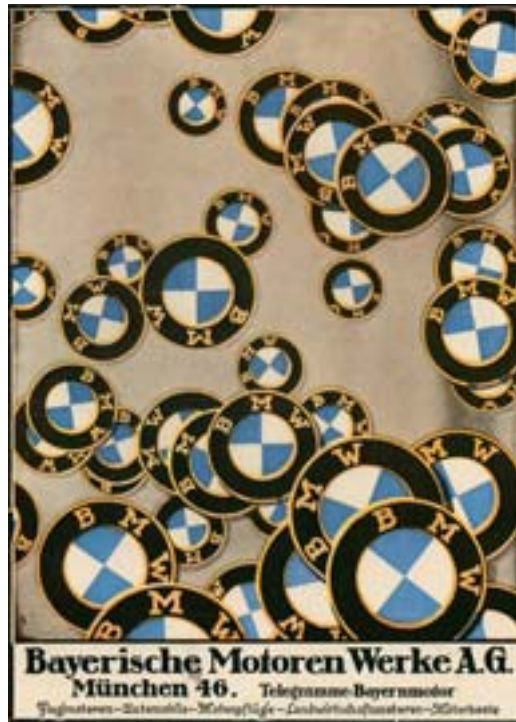
The graphic design of the ad and the use of the logo in it are unusual. At the time of first publication the BMW trademark had only been in use for six months (on the origin of the trademark see MTL 01/2005) and represented aero engines, a product which had little impact on the general public. This meant that it was probably still largely unknown. The design was intended to imprint the logo on the mind of the observer. In addition to the uncluttered design of the trademark itself, the advertisement achieved a similar effect through the spatial depth created by the arrangement of the logos. The round badges, which are drawn larger in the foreground and smaller in the background, pull the viewer into the image and, on longer perusal, create an almost hypnotically suggestive effect.

The same design was used in other advertisements in a different form. Here the snowfall of badges forms the background for a letter dated 11 October 1918, which the company reprinted as evidence for the quality of its products. In the letter, described as a “report from the front-line”, one Oberleutnant Hermann Göring of the No 1 Richt-hofen Squadron writes fulsomely to the inspectorate of the flying corps about his experience with the new BMW IIIa engine. Two aspects of the advertisement are interesting from a design standpoint: in contrast to the first design, the background is extended to the right and – quite visibly – upwards. Secondly, the company uses the origi- ▶



Below | One of Hannah Höch's best-known photomontages:
Der Schnitt mit dem Küchenmesser Dada durch die letzte Weimarer
Bierbauchkulturepoche Deutschlands, 1920.





Right | The original BMW advertisement (left) and used as a collage with Göring's report from the frontline (right) both from 1918.

nal motif in the form of a collage by supplementing the original advertisement with the offprint of the “report from the front”.

Das schöne Mädchen (The Beautiful Girl), 1920. The background to the photomontage is provided by the BMW advertisement with the motif of a “snowfall” of badges. How Hannah Höch got hold of this motif is not clear. It is possible that she came by a copy of it through her brother-in-law who at the time was working for the Knorr-Bremse company, which had bought BMW in 1920.

The badges in the advertising design represent the link between the different influences and impressions which were crowding in on the “new woman”. The “beautiful girl”, as a representative of the “new woman”, sits in the centre of the montage on a steel joist, wearing a black swimming costume. She is posing with an umbrella and has her legs crossed. Where her face should be there is a light bulb, decorated on top with a handmade bow. The light bulb has been cut out from a black-and-white original, which leaves the viewer with an impression of almost incandescent brightness. On the left a boxer steps towards the “beautiful girl” through a car tyre. This faceless “new man” (Jack Johnson in the original) strides with raised fists and an aggressive posture towards the “beautiful girl”, who appears to be fending him off with her umbrella. Above and behind the “beautiful girl” hovers a huge wig from an advertisement, symbolising the influence of the worlds of advertising and the media. On the right Hannah Höch has placed a crankshaft and a hand with a watch, which stand for the mechanisation, automated rhythm and rationalisation of the new world.

At the top, on the left, the viewer sees a female face with a cat's eye. The eye is enlarged and possibly represents a monocle – for Hannah Höch a symbol of the Dadaist. The face is cut out from a monochrome original and appears to lie behind the rest of

the design. The effect is a distancing of the face from the rest of the picture, giving the viewer the impression that it does not form part of the picture at all – and that the viewer, when looking at the picture, is himself or herself being regarded ironically from a distance by a Dadaist, namely Hannah Höch.

With *Das schöne Mädchen* Hannah Höch impressively met the Dadaist challenge of integrating the world of machines with the world of art. At the same time she used this photomontage to comment on the role of the “new woman” in a world transformed by the First World War. During the war, women had in many areas taken over the jobs of the men fighting at the front. In doing so they had also won more social freedom and greater self-confidence. After the return to peacetime life, society and women themselves were forced to come to terms with the redefinition of their social role and of female identity. The “new women” were more independent and had an income of their own, thus they were in a position to lead lives chosen by themselves and independent of men. In her photomontage Hannah Höch illustrates some major influences on the “new woman”: the need to cope with the rationalisation and timetabling of the mechanised world (of work), the enticements of the media and advertising, and the way both “old” and “new” men approached them with a mixture of interest and irritation. In Hannah Höch's picture the “new woman” remains, in spite of all this, the “beautiful girl” who – with a bow in her hair and swinging her legs – is perhaps dreaming of a different world.

For Hannah Höch the BMW trademark probably provided the ideal basis for this visual message. The snowfall of badges in the background of the photomontage symbolises the steady drip-drip of new and ever more intensive advertising, while at the same time the trademark of the young Bayerische Motoren Werke represents the technocult and the male world of the 1920s.

Bracing breeze worldwide. BMW 3 Series Convertibles

Distinctive design, a unique identity and undiluted dynamics are the standout virtues of the open-top BMW 3 Series. And BMW Mobile Tradition is celebrating the 2007 launch of the new 3 Series Convertible with its “Bracing breeze worldwide. BMW 3 Series Convertibles” campaign. Captivating images and an aesthetically accomplished new book provide a vivid showcase for the successful history of these models and Sheer Driving Pleasure with the top down.

Max Bauer

No car exudes a stronger feeling of freedom than a convertible. Enjoying that uninterrupted view of the sky, feeling the sun, following the road – and all with a fresh and pleasant breeze in your face. It is a feeling that unites softtop enthusiasts around the world. Driving a convertible is all about relaxing into the moment, running free and enjoying the wonder of the here and now. BMW Convertibles have developed a reputation for inspirational design. Their flat

silhouette gains them the elegance vote over many other models, sweeping lines oozing a calmness of spirit and independence of mind, and no more so than with the roof down. It is, above all, their distinctive design and unique feeling of identity, combined with powerful engines and high standards of safety, that have set BMW 3 Series Convertibles apart over the years. Making concessions in form to serve the interests of mechanics is anathema to the open-



top 3. And this tradition takes its logical next step in the new BMW 3 Series Convertible launched in early 2007.

It is 30 years now since the first Convertible based on the BMW 3 Series range was presented to the motoring public. Stuttgart-based body manufacturer Baur developed the requisite open-top construction for the 3 Series, introduced in 1975 and still the company's most successful range today. The BMW Baur Topcabriolet, included by BMW in its official sales brochure in 1978, was "a convertible and coupé in one" (in the words of an ad slogan at the time). The fixed window frames, two burly roll-over bars and a hardtop roof allowed the 3 Series Topcabriolet to offer impressive safety. With an additional softtop stowed behind the C-pillar adding a "Landaulet" mode (closed roof, but open at the rear) to the open and closed options, the term "four-season car" soon slipped into motoring parlance. The choice of engines available for the new Convertible was similarly broad. Any of the models in the range could be specified with Baur's cabrio fingerprint or sent to Stuttgart for conversion. Prices for the Topcabriolet started at 23,090 marks. That may have been rather steep for the time, yet Baur had still sold some 4,600 BMW Topcabriolets by the end of 1982.

The arrival of the second-generation 3 Series saw Baur return to the scene of former BMW Convertible glories. The Stuttgart-based body manufacturer began production of its latest BMW Convertible body in 1982, shortly after the 3 Series Saloon went on sale. Like its predecessor, the new conversion came in Topcabriolet guise with fixed roll-over bars and window frames. Baur also succeeded in steering its latest BMW 3 Series Convertible around the pitfall which claimed so many open-top cars, namely "second car" or "summer car" syndrome. Nobody could deny that the latest Topcabriolet was an expensive proposition, but neither could its credentials as a potential first car be overlooked. Like its predecessor, it combined the essential features of a convertible with the attributes of a four-seater, sporty and exclusive saloon, its ability to adapt to changing conditions removing the need for an alternative carriage. The second model was shorter, but also broader and considerably roomier, than Baur's original Topcabriolet. Passengers could enjoy the fruits of a more spacious interior and rely on even more assured roadholding. By 1991 over 14,400 customers had snapped up the second-generation BMW Baur Topcabriolet. The conversion cost almost 8,000 marks, yet the number of drop-top drivers continued to rise – a development which Munich was following with interest. The open-top competition from within was stirring at last. ▶



In 1985 BMW lined up toe-to-toe with Baur as a competitor rather than a partner. The company unveiled its first works 3 Series Convertible at the International Motor Show in Frankfurt. The 325i – a fully-fledged Convertible – was assembled at the Regensburg plant. “The first bar-free open-top 3 Series is here!” rejoiced the motoring press. Only two small triangular windows remained from the design of the bodies made by Baur, and there were no roll-over bars to disturb the view to the sky. All the driver or passenger needed to do was release the two catches on the windscreen and the complete roof construction would disappear down between the rear seats and boot cover. This allowed up to four people to enjoy an uninhibited view to the outside world in all directions, part of an unprecedented open-air motoring experience with the front and rear windows fully lowered. The necessary safety was provided by extensive reinforcement of the body, especially the A-pillar.

Like no other car of its time, the Convertible epitomised lightness, speed, dynamics and elegance. The 2.5-litre engine transferred every dab of the accelerator with silky smoothness yet incredible power into dynamic thrust through the rear axle. The sonorous rumble of the 171 horsepower provided an imposing background to the sound of the wind. The front end of the car was dominated by four headlights, the typical BMW kidney grille and a flat bonnet. The anatomically formed BMW sports seats gave the driver and front passenger impressive lateral support through even sharp corners and represented the perfect complement to a sporty, rigid chassis with enviable torsional stiffness. The engineers spoke glowingly of a “unique synthesis of active safety and ride comfort”, and the sensitive – but very direct – power steering supplied the icing on the cake

In 1987 BMW added a hardtop and environment-friendly catalytic converters to the options list. The 325i was joined in the

range by variants with four and six-cylinder engines. In 1988 BMW brought an M3 Convertible onto the market as a treat for speed merchants with a soft spot for softtops. The muscular new model had a 200 hp four-cylinder powerplant under the bonnet and roots in touring car racing.

The first works 3 Series Convertible exceeded all expectations, despite a price tag in excess of 40,000 marks. Over 140,000 were sold between 1986 and 1993, with BMW offering the following explanation for this success: “Most cars do what you expect of them – they take you from point A to point B. However, for those who want their car to be rather more than a means to an end, a BMW is a welcome alternative. After all, BMW embodies Sheer Driving Pleasure like no other car. And the BMW Convertible offers this pleasure in a very special, open-top form.”

From that point on, BMW included a works Convertible as part of every new 3 Series range. Introduced in 1993, the open-top member of the third 3 Series family was significantly longer, broader and flatter than the model it replaced. As a result, it cut an extremely sporty figure. The low seating position and flat windscreen produced “headroom reaching into the sky”. An arrow-straight line extended from the front edge of the windscreen to the boot. The side view of the second works Convertible was interrupted only by the head restraints, the triangular window of its predecessor now a thing of the past. In addition, further advances had been made with the car’s safety package. ABS, a driver’s airbag, side-impact protection, and belt tensioners and stoppers came together as standard to ensure far-reaching occupant protection. A hardtop was also available as an option for the third-generation Convertible from launch.

The development of the third-generation 3 Series spawned a completely new design. Aerodynamics assumed a decisive role in

Below | Success from the first model. In just 20 years the 1986 BMW 3 Series Convertible has grown into a collector’s item.



BMW chief designer Claus Luthe's creation, inspiring the car's light wedge shape and the twin headlights housed under a glass cover.

In addition to its sporting properties, the distinctive identity and timeless elegance of the Convertible also met the high standards demanded of it. "The aesthetic quality of the BMW 3 Series Convertible is always visible. Inside the car, it is even something you can feel," suggested BMW at the time. Trimmed with wood and leather, the cockpit was built around the driver with an exclusive flair and to impressively ergonomic effect.

Sharing the technical underpinnings of their Coupé cousin, the first models to appear were the six-cylinder 320i and 325i. These were followed by the four-cylinder 318i in 1994 and in 1995 by the new six-cylinder 323i and 328i. The top-of-the-range 2.8-litre engine with 193 hp laid on agility and dynamics in equal measure. Short shift travel, a sporty clutch and stiff suspension provided a guarantee of driving pleasure on both straight and curvy sections of road. And with average fuel consumption of just 8.7 litres per 100 km, the 328i burned around ten percent less petrol than its predecessor.

In 1994 BMW unveiled the second M3 Convertible, which displayed all the hallmark traits of a true M car. This was a luxurious sports convertible costing almost 100,000 marks and powered by a six-cylinder engine. The 3-litre powerplant developed 286 hp and peak torque of 320 Nm to dispatch the dash from 0 to 100 km/h in 6.2 seconds. A model refinement package introduced in 1996 saw the M3 Convertible available with a 3.2-litre unit delivering 321 hp. This model was to lay the technical foundations for the upcoming BMW Z3 Roadster. By the time the second-generation 3 Series Convertible went out of production in 1999, BMW had sold around 170,000 units in five engine variants.

The fourth generation of the BMW 3 Series, which went on sale in 1998, brought together dynamics, innovation and aesthetic beauty once again. Christopher Bangle, Director of Group Design BMW AG, presented a new range with extra curves and more cutting-edge styling, but a revolutionary design experiment this was not. The same was true of the Convertible unveiled in 2000. There was the flat windscreen with slightly rounded A-pillars – shared with all the other models in the range – and then there was just sky: ▶



Above | Longer, flatter, broader: the pure aerodynamics of the second BMW 3 Series Convertible, launched in 1993.





Above | 306 hp for fresh emotions: the new BMW 335i Convertible brings elegance and dynamics together in a single car.

in this BMW Convertible, the universe revolved around the passengers. The windscreen strengthened the sporting credentials of the new model, and could also withstand loads of up to 3.4 tonnes.

Among the optional extras available for the new model were Adaptive Headlights and roll-over bars which extended if the car flipped over. Extensive safety measures – essential for the driver and passengers to sample a genuine feeling of freedom – were provided by an ingenious occupant protection package. Meanwhile, with its use of parallel and straight lines, the design of the interior highlighted the precision of the workmanship involved. New front seats with a standard integral belt system and a sporty yet elegant three-spoke steering wheel were the exclusive preserve of the open-top 3.

The BMW 330Ci was presented at the end of 2000, BMW billing the top-of-the-range softtop 3 Series as the ticket to the “trip of a lifetime” and the press christening it “Münchner Freiheit” [“Munich freedom”, also the name of a well-known square in the city]. With its lively new 3-litre six-cylinder engine (231 hp) and optional six-speed Sequential Manual Gearbox, the 330Ci blended sports car capability with the quintessential open-top driving experience. The driver could change gear without the need for a manual clutch either automatically or using the shift paddles on the steering wheel. Reduced to a matter of milliseconds, shift times were far shorter than with a “normal” gear-change. The engine’s reserves of power appeared inexhaustible even at low revs and helped propel the Convertible to a top speed of 247 km/h – and all with average fuel consumption pinned back to 9.6 litres per 100 km. Another standard feature of the 330Ci was its fully automatic softtop.

The open-top 3 Series was also made available in diesel form from 2004: the 320Cd Convertible sourced its power from a four-cylinder engine developing 150 hp. The pedigree athlete in the fourth-generation range was the M3 Convertible launched in early 2001, a striking beltline giving it an even broader and more powerful visual edge. The high-rev-

ving naturally aspirated engine developed 343 hp and catapulted the Convertible from 0 to 100 km/h in an awesome 5.5 seconds.

The new BMW 3 Series Convertible, launched in the winter of 2007 at the North American International Auto Show (NAIAS), continued the tradition built up by these sporty and elegant cars. The classically distinctive lines have been retained, while the sweeping bonnet, newly designed front apron and long wheelbase with short overhangs strengthen the dynamic impression stoked up by what is now the fourth-generation works Convertible. The flat shoulderline, set-back seating position and short windscreen ensure man and nature are never far apart. The view out of the car has been further optimised from all angles and it now offers an even greater field of visibility. A standard-fitted hardtop roof, meanwhile, is celebrating its 3 Series Convertible premiere, and takes the place of the softtop fitted on previous models. The three-part roof construction is made from lightweight steel and can be opened by remote control. The roof disappears elegantly and fully automatically into the boot of the car in 22 seconds, and requires just a second longer to close again. The new construction lowers noise levels and increases safety. Other key contributors to occupant protection include innovative systems such as the chassis control system DSC and Dynamic Traction Control (DTC).

The wonderfully spacious interior comes with four full-sized seats, its exclusive design set to win over customers with light and dynamic lines, top-quality materials and the type of driver-oriented cockpit for which BMW is rightly famed. The new 3 Series Convertible comes as standard with the BMW iDrive control concept, which serves as a hub for the navigation function, climate control, and entertainment and communications systems. And customers can also choose to add a rather special final touch by specifying the illumination package for the interior door panels and trim.

BMW is offering the Convertible in five variants from launch: the four-cylinder 320i, three six-cylinder models and a 330d diesel. The new four and six-cylinder engines with petrol direct injection have lower fuel consumption, while the new 306 hp straight-six twin-turbo unit – taken from the Coupé – boasts High Precision Injection and plays its part in ensuring an even more intense and sporty open-top driving experience in the range-topping 335i. Peak torque of 400 Nm allows the Convertible to show off its sprinter's edge, powering out of the blocks to 100 km/h in 5.8 seconds. Available as an alternative to the six-speed manual gearbox is a new six-

speed automatic, which can also be operated using steering-wheel shift paddles. With their efficient dynamics, a form that captures the imagination, and unbeatable safety, the various generations of the BMW 3 Series Convertible all contain the ingredients required for a quite unique serving of driving pleasure. BMW Mobile Tradition picks up on this feeling and the irresistible appeal of the cars in its "Bracing breeze worldwide. BMW 3 Series Convertibles" campaign. The pages of a new book, new and fascinating photos, and an image clip all underline what it is that has united 3 Series Convertible drivers over generations: a feeling of freedom and Sheer Driving Pleasure. ■

Bracing breeze worldwide. BMW 3 Series Convertibles

Find out more about the Convertibles in this fascinating new publication. Enjoy exclusive film footage and photographs of the BMW 3 Series Convertibles all the way from the Baur Topcabriolet of 1978 to the new BMW 3 Series Convertible of 2007. These images show the historic Convertibles and the latest model in typical top-down settings: driving along twisty panoramic routes and through endless magical landscapes.

The first Baur Topcabriolet, for example, can be seen curving along scenic coastal roads on the Côte d'Azur, while the BMW 3 Series Convertible from 2000 rides out sandstorms and blistering heat, and the latest 3 Series Convertible savours the magnificent solitude of California's Highway 1.

The book and the film are available from the publishers Heel Verlag, Königswinter, www.heel-verlag.de. ■



The image clip captures the Convertibles in highly emotional, fast-paced driving sequences. You can almost feel the wind blowing through your hair along some of the most wonderful roads on the planet. Clip approx. two minutes, German/English.

The book *Bracing breeze worldwide. BMW 3 Series Convertibles* paints an informative and emotional picture of the six models. Find out more about the various generations of the 3 Series Convertible and the world's most magical roads.

80 pages, hardcover with jacket. Format: 23 x 21 cm. The book and the film are available as a package deal at the price of 24,90 euros plus shipping.

Ludwig “Wiggerl” Kraus

In 1921 Bayerische Motoren Werke offered an apprenticeship to a 14-year-old from the countryside outside Munich. Having completed his training the youngster was then given a chance to hone his motorbike skills as a test rider in the company's motorcycle department – a job that was to lay the foundations of a career in motorcycle racing. The 1930s brought a string of successes in off-road events and ultimately a first German championship title after switching to the race track. When racing began again after the war there was still one man the other riders wanted to beat, whether on two wheels or three. His name? Ludwig Kraus, who would have been 100 years old on 12 March 2007.

Fred Jakobs



Ludwig Kraus was born in the village of Thann in Upper Bavaria on 12 March, 1907. When the family moved to Munich in 1915, the eight-year-old attended the local Volksschule before joining BMW AG as an apprentice mechanic on 2 August 1921. His rural background made young “Wiggerl” a natural target for teasing from his colleagues, but with two Bavarian youth titles for boxing and one for wrestling he was clearly capable of taking care of himself when it mattered. Friends from those early years remembered him as being “small but incredibly tough and wiry”. Having passed his final apprentice’s examination in 1925, Ludwig Kraus was offered a job as a mechanic and lathe operator. Then in 1928 BMW

finally acceded to the wishes of the keen motorcyclist and had him transferred to the test department.

The department was where motorcycles underwent a final quality control before leaving the plant. Road testing occasionally showed up any potential defects that may have remained hidden during the production process. What the job called for therefore was not so much riding ability as technical insight. Nevertheless the work gave Ludwig Kraus an opportunity to perfect his riding skills. The test track at the BMW plant – a 750-metre-long concrete oval with high banked curves completed in 1928 – permitted speeds that were otherwise only possible on race tracks. Kraus’s ▶





duties also included taking prototypes and pre-production models on longer rides that enabled him to explore the countryside around Munich and the Alpine passes.

Early races. Ludwig Kraus began competing in 1928 not as a solo rider but as Alois Sitzberger’s co-rider in a BMW sidecar combination. The pairing enjoyed considerable success in hillclimb events even in their first year together, finishing top of the sidecar standings in the 1,000 cc class riding their 750 cc motorcycle and sidecar combination at Oberjoch, Ruseberg and Schäftlarn. In 1929 there were further victories, including the prestigious Solitude race, and at the Zbraslav-Jiloviště hillclimb near Prague they recorded their first win outside Germany. That same year Ludwig Kraus also broke new ground in the metaphorical sense, twice finishing runner-up in sand races in the saddle of a BMW sidecar combination.

Ludwig Kraus then switched to a new sporting arena. From 1931 he began racing a BMW R 16 sidecar unit in off-road and reliability trials with Josef Mauermayer in the saddle. Before long the pairing were winning one gold medal after another, including the Winter Trial, the 3-day Harz Trial and the ADAC Reichsfahrt. But their greatest success that year came in the Italian Dolomites, where they formed the German national team for the International Six Days event together with world record-holder Ernst Jakob Henne – who also rode a BMW R 16 – and Julius von Krohn on a Zündapp. Like Henne, the Mauermayer/Kraus pairing completed the six-day enduro without penalty to assure themselves of a gold medal. But von Krohn unfortunately collected six penalty points, which meant the team was narrowly beaten into second place by the penalty-free Italians. Nevertheless this was the greatest achievement ever recorded by a German team at the most prestigious off-road competition in the world.

The Mauermayer/Kraus pairing was able to replicate its success at national events in 1932, but their luck ran out at that year’s International Six Days Trial. Whereas Henne and the BMW rider Josef “Peppi” Stelzer – who had joined the team in place of von Krohn – completed the course without penalty, the Mauermayer/Kraus sidecar outfit picked up a 36-point penalty as a result of major damage to the sidecar wheel. The event was won by the British team, who finished just ahead of the host nation Italy.

A historic victory. The win by the British team secured the right to host the event the following year, and so the 1933 Six Days was staged in Wales. Germany arrived for the competition fielding the same BMW team as in the previous season. While they were reasonably confident of a good showing, the British riders were the clear favourites – and not just because of the home advantage. Having won seven of the last 13 events, Great Britain led the world in motorcycle racing. Over the first two days neither the German nor the British riders picked up any penalty points and were level at the

“On the final day there was a terrific downpour which left the course waterlogged. Nobody seriously thought we could possibly get inside the target time, so we just rode hell for leather. Mauermayer took one hairpin so fast I fell out of the back of the sidecar. Unfortunately in the heat of the moment Mauermayer didn’t notice anything was wrong and when my left leg became tangled in the struts of the sidecar I found myself being dragged along behind. My back – not to mention my backside – were pretty much

rubbed raw, and with my badly grazed hands and arms I made one last desperate attempt to grab the spare wheel and haul myself back up using every last ounce of strength. When I was back aboard it was as if the sudden cloudburst had turned the sidecar into a bathtub. It was agony to sit down and Mauermayer still knew nothing of my unfortunate acrobatics. But I urged him on to one final effort – and it was just as well, since we crossed the line ahead of the British team with just 30 seconds to spare.” ■

“Wiggerl” Kraus on the Six Day event of 1933

“On the final day there was a terrific downpour which left the course waterlogged. Nobody seriously thought we could possibly get inside the target time, so we just rode hell for leather. Mauermayer took one hairpin so fast I fell out of the back of the sidecar. Unfortunately in the heat of the moment Mauermayer didn’t notice anything was wrong and when my left leg became tangled in the struts of the sidecar I found myself being dragged along behind. My back – not to mention my backside – were pretty much



Above from left | Ludwig Kraus testing special accessories on a BMW R 66, around 1939; the Sitzberger/Kraus team on the way to a class victory on the Oberjoch in 1928; the team for the 1931 Six Days: (from left) Mauermayer, Kraus, Henne and von Krohn; the 1935 Six Days: Ludwig Kraus – pictured here after refuelling – pilots a sidecar combination for the first time.

Below | Ludwig Kraus ahead of the 1939 Hamburg Stadtpark race.



top of the standings. But on the third day the Germans edged ahead of their rivals by one point and managed to hold onto this lead for the rest of the competition.

It was the first time a German team had won the unofficial European championship for off-road motorcycling. Motor Cycle, Britain's leading magazine for motorcyclists, paid tribute to Germany's success: "Full honour must go to the victors for their magnificent achievement, for the team was well organised, rode sportingly, and their machines – all 750 c.c. flat-twin B.M.W.s, with shaft drive – finished in excellent condition." Back in Munich an enthusiastic reception awaited the BMW quartet, and even BMW's Chairman of the Board Franz-Josef Popp attended the victory parade through the city's streets.

Victory in Wales meant Germany secured the right to stage the 1934 event. And in the mountainous environment of Oberstdorf the same German team – riding the same 750 cc BMW R 16 machines – successfully defended its title. It is perhaps worth mentioning that sidecar riders in those days were accorded relatively little attention. Even the official winners' photographs listing the names of participants make mention of Kraus only as "Mauermayer's co-rider". This explains why Ludwig Kraus remained largely unknown to an international public until 1935, when Kraus switched from sidecar to saddle, his place as co-rider being taken by Josef Müller. This time the team raced on 500 cc supercharged machines. The course was as challenging as had ever been devised, as Kraus and Müller were to find to their cost on the third day. After a serious crash the duo were forced to abandon with fractured bones and heavy bruising – Müller was even unconscious until 3 o'clock that night. But the pair were ready to start again as normal the next morning and completed the remaining three days without putting a foot wrong. The BMW team made a second successful defence of its title.

Ludwig Kraus had now shown that he was more than just a good sidecar rider, and with another two gold medals in 1936 and 1937 Kraus and Müller confirmed their place among Europe's elite motorcycle and sidecar pairings. Kraus remained a member of the German national team until 1938 – a period of eight years in total – despite having found in the meantime a new theatre of activity. ▶



Above | With Bernhard Huser – pictured here in the 1952 Rund um Schotten race – Ludwig Kraus won three German championship titles.

Race track premiere. In 1935, a completely new BMW works racing motorcycle made its debut at the German Grand Prix on the AVUS track in Berlin. The newcomer was the vertical shaft supercharged BMW, which would dominate the race tracks of Europe throughout the 1930s. Although Ludwig Kraus was as yet relatively unknown in road racing circles, he enjoyed the confidence of BMW racing manager Rudolf Schleicher and was given the chance to pilot the new development on its debut. What Kraus achieved was nothing short of sensational. Against strong national and international opposition – and despite problems with the headset bearing – he came away from his first major race track event with an outstanding fifth place.

For the 1936 season, however, BMW signed up Otto Ley as the second works rider alongside Karl Gall. And although Kraus was able to notch up his first ever circuit win riding a 500 cc BMW at the Munich Triangle Race, he once again focused his attention on off-road events. But in 1938, following a serious crash by Gall during training on the Isle of Man, Kraus was brought back into the works team as second rider alongside Georg Meier – also an experienced off-roader. Kraus made the most of the opportunity. At Nuremberg and Monza he finished runner-up behind Georg Meier and in Bucharest he picked up his first Grand Prix win. Georg Meier may have written all the season's headline news as European champion, but Kraus had

demonstrated that he had what it took to race shoulder to shoulder with the international elite. In 1939 he won again in Bucharest and finished third at both the Swedish and Belgian Grand Prix. With further wins at the Eilenriede and Eifelrennen events, by the end of the season Kraus was able to secure the title of German Champion. Then the outbreak of war put an end to racing activities for the immediate future.

In 1939 BMW posted Ludwig Kraus to Wünsdorf near Berlin to the army's training department for motor transport and in October 1940 he was appointed a "touring inspector" for BMW in Romania and Bulgaria. He spent the years from 1944 until 1946 as prisoner-of-war in Romania, only returning to Munich in 1947.

Post-war comeback. In 1948 Kraus bought a pre-war BMW supercharged motorcycle for 4,200 marks and returned to competition as a private rider. That year out of a total of 13 starts, he finished the season with two wins and ten runner-up places. In the German championships he finished second in the overall standings behind Georg Meier. Meier and Kraus completely dominated the national race events and the 1949 season also ended with a one-two victory for BMW, with Kraus again taking the runner-up medal behind Meier.

Kraus rode in the solo category in the 1950 season as well, although he also contested the German road championships piloting a sidecar outfit. His co-

Top right | Last-minute discussions with racing manager Rudolf Schleicher before the supercharged engine's debut on the AVUS in 1935.

Centre right | Ludwig Kraus (No. 3) and Georg Meier dominated German race circuits with their supercharged BMWs in 1948 and 1949.

Below right | Ludwig Kraus won his last gold medal at the International Six Days of 1956. From left: Sebastian Nachtmann, Hans Prütting, Ludwig Kraus, BMW racing manager Max Klankermeier and Hans Meier.

rider was Bernhard Huser, who at 20 was less than half the age of the experienced 43-year-old. As Germany was at the time still debarred from international sporting competition, the motorcycle and sidecar combination was the usual assembly of largely pre-war components. The frame of the BMW R 51 RS supported an engine borrowed from an ex-army BMW R 75 machine with cylinder capacity enlarged to 905 cc. After two retirements in the early part of the season, there then followed a series of eight successive wins and the duo went on to take the German championship in the 600 cc and over class with relative ease.

Victory over the world champions. In 1951 the Kraus/Huser pairing competed in the 500 cc class using a pre-war supercharged engine that had been converted to normal aspiration. 11 wins from 11 starts meant they took the German title virtually unchallenged. The Hockenheim victory was particularly notable, since the German team spent almost the entire race on the wheel of the British world champion Eric Oliver, overtaking the surprised favourite on the final bend to win the race by the narrowest of margins. This was the first German victory against top international motorcycle competition since the war. In 1953 Kraus/Huser were able to win a last championship title before retiring from road racing.

Ludwig Kraus continued to participate in off-road events for a little while longer, however, and garnered a string of medals in the saddle of his BMW sidecar combination. In 1956, at the age of 49, he was still able to show the younger riders a trick or two, winning a last gold medal at the International Six Days in Garmisch on a BMW R 69 with Hans Prütting in the sidecar. The victory was a fitting climax to an impressive career spanning almost 30 years. Kraus had notched up a tally of 47 gold medals in national and international off-road and reliability trials, as well as 40 first, 30 runner-up and 14 third places in hillclimbs and road races. It is doubtful whether any rider ever achieved such success in so many different disciplines as "Wiggerl" Kraus.

A life devoted to motorcycle racing. Even when his active participation on the track came to an end, Kraus maintained a professional involvement in motorsport. In 1952 he gave up his job as Head of Vehicle Approval at BMW to take charge of racing at Metzeler, where for many years he continued to look after the interests of BMW riders. On his retirement in 1973 he was able to look back over a rich and successful career in which motorcycles and racing had always played a central role. Ludwig Kraus died aged 80 on 3 November 1987. ■



In a class of its own

BMW 7 Series – the first generation

Based on the technical platform of the large 6 Series Coupés launched in 1976 and with styling that showed the hand of the new BMW design chief Paul Bracq, a new model series was launched in May 1977. Named the 7 Series, this replacement to the previous large-car series was destined to be the first in a new line of flagship models.

Kai Jacobsen

Built on approximately the same wheelbase as the long versions of its predecessor (the 2.8 L, 3.0 L and 3.3 Li), the first 7 Series from BMW offered far more luxury even than those models, but without sacrificing any of the hallmark BMW dynamism. Despite its fairly imposing dimensions, the new BMW 7 Series paradoxically managed to appear extremely compact, with ingeniously understated bodywork that closely echoed the BMW 6 Series Coupés. The gently sloping bonnet and boot, short overhangs and a low waistline created excellent levels of visibility for the occupants, enlarging the glass area by 11 percent.

The bodywork concealed numerous new features like the double-joint spring struts which located the front wheels, the reduced steering offset and the steering system itself. At the rear the new model adopted the proven BMW semi-trailing arm suspension with spring strut, although here too there was a change, in the form of a closed-shell subframe which offered much greater rigidity. Like the other models in the BMW range, the 7 Series models were equipped with a centre roll-over bar which, together with all-round roof reinforcements and strong, load-bearing pillars, created a very large integrated safety structure. The BMW engineers had adopted nothing from the previous model without first examining it from every angle.

At launch, the range comprised 2.8-litre, 3.0-litre and 3.2-litre versions, developing 170 hp, 184 hp and 197 hp respectively. The “entry-level” BMW 728 boasted engine speed-sensitive power steering as standard, together with a diagonal-split dual-circuit brake system, vented front brake discs, a laminated front windscreen, adjustable steering column and seat height and an electrically adjustable exterior mirror. For the BMW 730 and above, the list also included the Check Control system, a rear centre armrest with first-aid kit compartment, and wood panelling on the doors. The 733i added a Bosch L-Jetronic injection system, contactless transistorised ignition, central locking and tinted glass. Needless to say, all this was complemented by a long list of options, including “sport extras”.

Base prices for the 728 and 730 were 29,300 marks and 33,600 marks, while another 5,000 marks would buy the top-of-the-range 733i model. Although the 7 Series models were between 85 kg and 140 kg heavier than their counterparts in the previous large-car series, they hit roughly the same top speeds – in part thanks to the aerodynamic body shape.

The first sales brochure went straight to the point: “The luxury class is in no need of ‘even better’ cars. What it needs is a genuine- ▶







ly different one!" and "BMW's large models: experience the difference" were among the headlines. Other BMW publications continued the theme with slogans like "In a class of its own", "Reaching new summits", "Prestige without pomposity" and "Tomorrow's ideas in today's cars".

Following the replacement of the large 2500 to 3.3 Li models by the 7 Series, BMW now offered a complete and integrated range of models, from the 3 through the 5 and 6 to the 7 Series. However distinctive the individual models, their design similarities pointed to their membership of a common family. Hans-Erdmann Schönbeck, Member of the Board of Management responsible for Sales, put it like this: "Visual and technical unity is now assured across all model series" and "The BMW models are now unmistakably a 'family' once more, with many shared family likenesses."

The press launch of the new BMW 7 Series starting in mid-May 1977 was held in Munich and Schloss Lehenberg, Kitzbühel. The two-day programme began with a press conference in the Royal Hall of the National Theatre in Munich, before the journalists were handed the keys for their test drives to the Tyrol. Here, in the evening, a medieval banquet awaited them, preceded by cocktails and technical discussions. The next day began with a surprise trip with police escort to a second breakfast at Kitzbühel Golf Club, hosted by the mayor. Then it was time to change cars and head back via Murnau to the BMW headquarters in Munich.

"Aiming at the stars" was the deliberately double-edged headline in the German motoring magazine *auto motor und sport*, which reported that BMW's new model was well equipped for the challenge. *stern* magazine continued the punning theme. Its headline "The star from Dingolfing" was another thinly veiled allusion to BMW's arch rival. The *Frankfurter Allgemeine Zeitung*, meanwhile, warned the competition that "the Seven" had raised the stakes.

The BMW sales promotion department insisted that its dealers should adopt a "careful and structured" selling approach in keeping with the new model's "exceptional importance" both to the dealers and to the company. It went on to identify likely customers in terms of brand (approx. 80 percent BMW drivers, approx. 20 percent drivers of other makes) and occupational status and made recommendations on communication strategies, presentation events and follow-up measures.

How seriously the company took the launch of the BMW 7 Series can be seen from the promotional activity that accompanied it. From mid-May onwards, a whole wave of advertisements was unleashed for the new top model. Interestingly, the first advertisement was printed in the magazine *stern* and only appeared in other magazines and the daily press the following week. It was then another two weeks before advertisements appeared in the motoring magazines *auto motor und sport* and *Auto Zeitung*.



Above left | 1977: a camouflaged prototype of the BMW 7 Series is tested on a gradient.

Below left | "In a class of its own": the first BMW 7 Series was a luxurious all-rounder – powerful and comfortable when cruising long distances, dynamic and elegant in business use.

The campaign had the desired effect, however, and the 7 Series got off to a first-class start. Chairman of the Board of Management Eberhard von Kuenheim reported to the Annual General Meeting on 7 July 1977 that: "The volume of orders is much higher than expected. The Dingolfing factory can hardly build the cars fast enough."

The financial statement information for 1976 presented at the Annual General Meeting was summed up by auto motor und sport as follows: "The professionals from Munich can't put a foot wrong." Turnover was up 32 percent and output of cars and motorcycles were up 24 percent and 10 percent respectively. The upward trend continued in the first half of 1977. Extra shifts had to be laid on to meet the high demand and help shorten the very long waiting times.

Right-hand-drive versions were available almost from the launch date, and in July the first CKD kits were shipped to the BMW plant in South Africa. In December, an American version of the 733i for the highly important US and Canada markets went into production.

In 1977, almost 20,000 BMW 7 Series models were produced, rising in the first full year of production, 1978, to 35,745 units. The next two years production again topped 35,000 units. This meant that in its first three full production years, the BMW 7 Series outstripped production of the previous model series (2500, 2800, 3.0 S and 3.0 Si) over the corresponding period (1969 through 1971) by more than 11,000 units.

To make these high-end models even safer and more enjoyable to drive, further options were now offered, like the Anti-lock Braking System, heated seats and cruise control. For business travellers who spent a lot of time on the road, telephone preparation was also available.

From late August 1979, the company opted to supply the large six-cylinder models only with fuel-efficient injection engines. The 728 was replaced by the 184 hp 728i and the previous 733i was renamed the 732i (with no change in displacement or output rating). This was the first BMW production vehicle to incorporate the newly developed digital engine electronics. A new BMW 735i model, featuring the 3.5-litre 218 hp engine already used in the 635CSi, also

joined the range, along with a new flagship model, the BMW 745i with 252 hp turbocharged six-cylinder engine and standard-fitted three-speed automatic transmission, which went on the market in early summer 1980. The second two digits of the "745" designation were derived by multiplying the engine displacement by the turbo ratio of 1.4. This 3.2-litre turbocharged six-cylinder model boasted unrivalled performance for a saloon model. Admittedly, the price was in a similar league: available in automatic version only, the 745i retailed at 54,200 marks, making it 73 marks more expensive than a Mercedes-Benz 500 SE. Even a Jaguar XJ 12 and a Cadillac Seville were 250 and 1,410 marks cheaper respectively than the top-powered BMW 7 Series model. On the other hand, the BMW's purchase price included extensive standard specification, such as the Anti-lock Braking System, self-levelling suspension, alloy wheels and an onboard computer.

The model enhancements of 1979 were presented at a press launch in July of that year at the Swiss subsidiary BMW (Schweiz) AG in Dielsdorf near Zurich. The revised models were now up to 70 kg lighter than before and boasted changes to engineering and specification. The journalists had ample opportunity to get to grips with the different versions on a test drive from Dielsdorf to Titisee in the Black Forest and back. Less than a year later, on 5 May 1980, another significant milestone was reached when the 100,000th BMW 7 Series came off the line in Dingolfing.

In 1981 BMW brought out a special 725i model which was not part of the official product range and therefore went largely unnoticed by the public at large. This model, fitted with a 150 hp engine taken from the BMW 525i, was specially designed for German public authority employees, whose staff cars were often restricted to an engine size of 2.5 litres. To make sure these potential customers still had the chance to opt for a 7 Series, BMW hit on the simple idea of installing a 5 Series engine. By the time production was discontinued in April 1986, 921 units of this model had been built. 1981 also saw the launch of the first armoured version of the BMW 7 Series.

Below | Telephone preparation for the 7 Series was available from February 1978. The picture shows a 745i model from 1983.





Starting in September 1982, a number of technical changes were phased into the 7 Series, aimed at reducing weight and fuel consumption. Visible changes included the somewhat reduced height of the twin-kidney grille, the smaller air intake, and the modified panel under the bumper. The displacement of the 745i top model was increased to 3.4 litres, though output stayed the same, and the automatic transmission acquired four speeds instead of three. The BMW 735i and 745i were now also offered with Executive leather upholstery, which comprised high-quality, handcrafted water buffalo leather, topped off with select burr walnut wood trim panels. This extra-cost option had a price tag of 3,390 marks.

For the 1984 model year, the optional equipment list for the BMW 7 Series was extended with a four-speed automatic transmission featuring electronic/hydraulic control and three different shift modes. On one model, the BMW 745i, this transmission was standard equipment. Also new were the 735i and 745i "Executive" models. For the price tag of 70,050 and 81,600 marks, the Executive models featured an extensive range of luxury specification, including forged BMW alloy wheels, natural buffalo leather and a Becker radio/cassette player. In the rear, the centre armrest concealed a remote control panel for remote operation of all radio functions, along with controls for the front passenger seat which allowed rear leg-room to be adjusted to suit individual requirements.

In September 1985, two further luxury models joined the BMW 7 Series: the BMW 735i Highline and the 745i Highline. The Highline equipment package featured a predominantly light-coloured natural aniline all-leather interior (in Oyster or Silver), with darker leather on the upper section of the dashboard. The BMW brochure of the time commented: "Luxury has been redefined. Those who only settle for the best can raise their benchmark once again."

Sales of the first BMW 7 Series remained on a roll even as it approached the end of the model cycle. In the first six months of 1986, which were also its last six months in the cycle, some 11,000 units rolled off the assembly line in Dingolfing. By the time production was discontinued in June 1986, total output had reached 285,029 units. The most popular model was the 728i, with 70,360 units, followed by the 735i with 60,818 units. 16,848 CKD kits were delivered to South Africa.

It was in South Africa, incidentally, that the most powerful BMW 7 Series was offered, although this more or less escaped public attention. This model, which came out in early 1984, was a special version of the 745i powered by the four-valve-per-cylinder M88/3 naturally aspirated engine as used in the BMW M1. An L-Jetronic fuel injection system increased output to 290 hp. The power was managed either by a five-speed "sport" manual transmission or an electronic/hydraulic four-speed automatic transmission with three shift modes. The alloy wheels were supplied by BBS while Pirelli provided the proven P7 tyres. The remaining specification was the same as for the 7 Series Executive models sold on the European market. Interestingly, the hubcaps sported the old BMW Motorsport logo, which a circular from BMW Motorsport GmbH had ruled should no longer be used after January 1982. Inside the car only the speedometer, which featured the letter M and the motorsport stripes, gave any indication that the engine under the bonnet was anything out of the ordinary. A top speed of 241 km/h made the South African BMW 745i only slightly slower than the second-generation 5 Series BMW M5, launched in late 1984, despite a weight differential of almost 300 kg. 192 of these South African 745i models had been built by May 1986, making it a very rare breed indeed.

It's a fair bet that even many of BMW's resident experts would only associate an "L7" model badge with a version of the third-gen-



Facing page | A rare South African model: the M1-engined BMW 745i.

Above | The only BMW 7 Series model featuring the "M" Motorsport logo in its speedometer: the South African 745i.

Below | Attractive styling and a spacious interior: a 7 Series estate customised by Bonn-based tuning firm ABC Exclusive.

eration 7 Series, a long-wheelbase model with inserted centre section, built for the Arab and Asian markets. It is a little known fact, however, that an L7 model appeared on the American market well before that – in autumn 1985. In this case, however, the L stood for "Luxury". Although in most respects this version of the first-generation 7 Series corresponded with the European-market BMW 735i Highline, it also offered various additional standard equipment features such as a driver's airbag, electric sliding sunroof and air conditioning.

In a joint project conducted in the early 1980s, BMW and the German Test and Research Institute for Aviation and Space Flight (DFVLR) converted two BMW vehicles, a 735i and a 745i, for operation on either liquid hydrogen or petrol. BMW was an early believer in the environmental benefits of hydrogen, which it recognised as offering virtually unlimited long-term availability as a secondary energy source. Today, almost 25 years on, BMW is bringing out the first hydrogen-powered BMW 7 Series production vehicle, the Hydrogen 7.

Finally, no story of the first BMW 7 Series would be complete without a special mention of the custom-built versions. Although at least two long-wheelbase six-door saloons based on this series were built, for the most part the coachbuilders were far more interested in estate versions. The BMW Euler dealership in Frankfurt commissioned three such conversions in the UK, and the coachbuilding firm of Welsch in Mayen, near Koblenz, converted a BMW 732i into an estate and a 728i into a two-door hearse. A sales brochure published by German conversion firm ABC Exclusive Tuning Company offered a very attractive-looking 7 Series estate with a double "Hofmeister kink" in the C-pillar, although it is not clear whether this vehicle was actually ever built. The French BMW agent Garage du Bac converted a 7 Series into an Alpina estate, while in the UK Rapport Engineering carried out at least one 7 Series estate conversion. The BMW training workshop in Munich likewise built a custom estate body. This one was in Polaris Silver, and featured roof rails and the rectangular tail lights used on the late 02 Series models. It was used for many years for a wide range of transport duties by the BMW factory workshop in Munich.

A fire command car based on a BMW 728i was commissioned by the fire brigade in Sinzheim near Baden-Baden in 1984 and a few models were also equipped for duty as (mostly unmarked) police cars.

BMW never positioned the 7 Series as a sporty car but as a high-end model which combined luxury with dynamism. Nevertheless, BMW Motorsport GmbH did offer a number of sporty accessories for the first 7 Series, namely BBS alloy wheels with BMW racing wheel styling, a Petri leather steering wheel with M1 styling, and Recaro seats.



Change of leadership at BMW Group Mobile Tradition

Challenges are a way of life for BMW and its employees – and meat and drink to Karl Baumer and Holger Lapp. The latter has been director of BMW Mobile Tradition since 2000; he will soon take over at the helm of BMW PR Communications. His current post will be filled by Karl Baumer, who on 1 May moves to BMW Group Mobile Tradition from BMW's product, price and brand strategy and BMW marketing planning. Here, present and future incumbents of the post discuss the history of the brand and its development.



Holger Lapp: It was my good fortune to be in charge of Mobile Tradition for over six years – a period I enjoyed immensely. Now I have been offered, and have accepted, a new challenge within the company. As of 1 May you, Mr Baumer, will take over at the helm of Mobile Tradition. I'm sure you're looking forward to the job.

Karl Baumer: Of course. I'm looking forward to the challenge enormously. I've been with BMW for 25 years and see this as the crowning moment of my career. Until now my professional life has been mainly involved in marketing, the highlight to date being the development of the Rolls-Royce Phantom.

Mr Lapp, you have carried out many functions and have been working for BMW for 24 years. What do you think it is about the BMW brand that inspires such fascination?

Holger Lapp: I think there are many different factors and one has to look back to the origins of the company and its foundation. A brand develops over time and when you add into that mix certain distinguishing characteristics accumulated over nine decades of the BMW brand, then clearly the brand is going to exude a very special charisma. But the products themselves obviously play an enormous role too – products that incorporate innovation, dy- ▶

Below | Conversation in an authentic atmosphere: Karl Baumer (left) and Holger Lapp talk shop.



Right | The BMW 303 of 1933 established two typical BMW features: the first six-cylinder engine and the hallmark BMW kidney-shaped grille.

dynamic performance and efficiency, whether motorcycles, cars or, as in the early days, aero engines. This is what helped build and shape the brand. It is also what enables us to stand out from the competition.

And being different is, of course, essential for marketing. What importance do you attach to the long tradition of the BMW brand in this context?

Karl Baumer: I'm always mindful of the maxim "There's no future without a past" – and when one looks back BMW started out in 1916 building aero engines, then motorcycles, then cars. But if there is perhaps one characteristic that has distinguished the brand over the last nine decades in particular, then it's the constant striving to create innovative and emotional products that are both dynamic and aesthetic.

Mr Lapp, you headed up Mobile Tradition for over six years. In your experience, what part does tradition play in building a brand?

Holger Lapp: It is absolutely essential to keep reminding oneself of the brand values and to adapt them to the changing world. Are we on a steady course? Are the results still accurate? Do they fit with the modern image? All this, I believe, helps to sharpen a brand, helps make it credible and authentic. Viewed over this long period, it is also one of the strengths of the image that BMW presents to the outside world.

Of course, it is also a result of having strong products: the BMW 507 for example, designed in the 1950s by Albrecht Graf Goertz, is one of the most beautiful cars ever built, a true icon. And one can assume that the Z8 of 1999 is also set to become a classic car of the future. So in your view how important is design in brand development?

Karl Baumer: Put simply, design means aesthetics and to a certain extent aesthetics is culture. And what is culture? Culture is generally to do with refining things, making things more beautiful. So in this sense one could justifiably claim that BMW design makes a significant contribution to shaping the refinement of the brand.

But BMW is not just a refined brand – in sport too it has enjoyed countless successes. How does that come across in the brand's history?

Holger Lapp: It is certainly true that sporting performance has played an important role from the early days of the company – just consider, for example, the world records set using BMW aero engines and motorcycles, not to mention the countless sporting victories achieved on two, three and four wheels and in the elite discipline of Formula One. At BMW sporting performance has always been coupled with a certain efficiency – with lightweight construction, aerodynamics and fuel-efficient yet powerful engines. It's what gives BMW its distinctive character and helps explain why sporting excellence still plays a major role at BMW today.

Also crucial, beyond this emotional aspect, is what we call corporate identity – that homogeneous image the brand presents to the outside world. In what ways do you see heritage helping to convey a uniform and stable image?

Karl Baumer: I think it's possible to interpret a long and successful corporate history without major rupture as being rather like the company's "backbone", offering stability and self-assurance. Support of this kind enables a company to act from a position of calm and confidence – and to avoid having to follow ephemeral fashions and trends.

Mr Lapp, what impact do the employees who work for a company have on the brand history?

Holger Lapp: The employees and their expertise are without doubt the single greatest asset that BMW owns. They work for BMW, not at BMW. But I think one can say that the reverse is true also – that the company is important to the workforce. Employees are encouraged by company management to be creative, and that has always been the case. Max Friz, an aero engine designer, was given the chance to build a motorcycle which even today is considered state-of-the-art in technical terms. Or take Alexander von Falkenhausen, who introduced BMW to Formula motor racing, and Paul Rosche, the "engine guru" at BMW, who designed the world championship engine of 1983. These are all examples of successes that have been achieved as a direct result of the company's management style of supporting employees creatively.

Karl Baumer: Mr Lapp, BMW has always shown a strong commitment to cultural matters. The BMW Museum will open again in 2008 – what does that mean for the brand?

Holger Lapp: Spring 2008 will be an important time for BMW. The BMW Museum is part of a long tradition. The original BMW Museum of 1973 was the first non-private museum of a car manufacturer to open its doors to the general public. Now we have been able to expand the museum and the collection significantly. Our lines of development here reflect the continuity of the brand and the company's products. At last the significantly enlarged display area will enable us to showcase all aspects of the BMW brand, Mobile Tradition included.

The new museum will also have space to devote to the theme of innovation. Mr Baumer, in your previous roles in the company, you have always been closely involved with innovation. Which innovations do you think have made BMW so successful?

Karl Baumer: For both motorcycles and cars there have been one or two really groundbreaking innovations. With motorcycles it would have to be the monolever rear suspension, followed by the Telelever front suspension and, of course, in the very early days of the company the R 32's shaft-drive boxer engine. Where cars are concerned, one innovation springs to mind – lightweight construction, which we introduced with the BMW 328 models as far back as 1939. Then of course the six-cylinder engines, the straight-sixes, for which BMW is famous. Plus there are innovations such as the first engine electronics systems introduced in the 1980s.

Holger Lapp: Indeed, Mr Baumer, innovation is all about renewal. And at Mobile Tradition renewal will begin under your leadership on 1 May. Allow me to take this opportunity to wish you every success, and I hope Mobile Tradition will give you as much satisfaction as it has given me. ■



Leading the pack: BMW was the first to use ABS in touring cars.

Race track knowledge fuels development for the road

Nowadays the Anti-lock Braking System (ABS) is a given in all series-produced BMW Group vehicles – and safety has improved demonstrably as a result. In 1974, and with ABS yet to make it onto the production line, BMW became the first manufacturer to use this technology in touring car racing and subjected it to intensive testing out on the track. In 1979 the BMW 745i became the first vehicle to be fitted as standard with a fully functioning electronic 4-channel ABS. The pioneering role of the BMW brand in the introduction of ABS into touring car racing is an impressive example of its burgeoning technological leadership over the years.

Niklas Drechsler



Nürburgring Nordschleife, 13/14 July 1974. The fourth round of the European Touring Car Championship, a six-hour race around the North Loop of the Nürburgring. Fans looked on in amazement as BMW 3.0 CSL drivers Hans-Joachim Stuck and Ronnie Peterson made their braking manoeuvres stick into one corner after another – “... without the obligatory clouds of smoke from the tyres and without the typical twitching and sliding of a racing car under heavy braking ...”, as the official press release described it four days later. Without knowing it, the spectators had just experienced at close quarters the world premiere of the Anti-lock Braking System in touring cars.

The four wheel hubs of the BMW 3.0 CSL were each fitted with a sensor. These sensors recorded the rotational speed of the wheels and were linked up to an electronic control unit which could adjust the responses of the brake hydraulics. Solenoid valves allowed braking force to be increased or reduced in an instant, thus preventing the wheels from locking up. The racing coupé could still be steered under

sharp braking and even retained its directional stability in critical situations. The driver could wait very late – until the car had actually entered the corner – before braking, safe in the knowledge that there was little risk of either flat-spotting a tyre or not making the corner as a result.

Stuck and Peterson were justifiably impressed after the Nürburgring race: “... it is just unbelievable how much driving safety this electronic system allows. Even in the rain we never had the feeling that the car would slide around when we put the brakes on.” The race started in wet conditions, Stuck quickly opening up a lead of 13.4 seconds – a relative eternity – on the first lap of the then 22.835-kilometre circuit. However, an hour later Stuck was the hapless and innocent victim of a collision in the Karussell section of the Nordschleife and was forced to retire. The ABS components had added extra weight to Stuck’s car, but that had not prevented him from setting the fastest lap of the race.

The race-spec ABS technology was developed for the BMW 3.0 CSL in partnership with Teldix. Based in Heidelberg, the company had become a 50-percent subsidiary of Bosch six months previously. The conventional braking system for the CSL racing coupé was supplied by ATE (Alfred Teves GMBH) in 1974, and this was effectively extended to include the additional ABS system from Teldix. Back in 1969, ATE had unveiled this technology to the public, with the caveat that the necessary long-term testing would take “some time” to run. For its part, Teldix had already tested a racing version of the Anti-lock Braking System with Porsche. Reports suggested that these trials were extremely promising, but the system was let down by reliability issues. By the time it was offered to BMW, it had reached a far higher level of development.

The ABS under the skin of the 3.0 CSL certainly provided the drivers with a crucial advantage in the early days, but it was far from free of gremlins. On a number of occasions, the system shut down during a race. While this did not reduce the effectiveness of the “normal” braking system, it left the drivers unable to have total confidence in the technology. Indeed, if they put their faith one hundred percent in the ABS, one malfunction could have race-ending consequences. The most serious glitch in the system centred on the wheel sensors, which were susceptible to damage in ambient temperatures of over 160 degrees Celsius. Added to which, they also tended to suffer mechanical battle scars during a race. Historical documents show that measures were also taken after the first race to solve problems with other ABS components. For example, certain parts were given extra protection against water penetration and mechanical damage.

Since the start of the 1990s BMW has fitted all its models with ABS as standard. Today, few customers would choose to do without the benefits of this technology in a modern car. Braking distances are often part of the discussion when ABS is brought up. On a dry road, positive friction generally allows tyres to transfer greater braking force to the road than if the car is sliding around. The braking effect is greatest at the point at which this positive engagement gives way to slipping and sliding. The art of grading brake force exactly as required is found among only a small elite of drivers. Representative studies in the late 1960s showed that 95 percent of drivers in cars without ABS recorded braking distances around 90 percent longer than the skilled drivers who registered the shortest braking distances without ABS. In other words, lacking the services of anti-lock brakes, the braking performance of the vast majority of drivers was significantly worse than a small band of experts. When ABS was brought into play, however, braking distances became more similar and thus easier to estimate for all drivers. The picture gets clearer ▶



Beim BMW 745i und keinem anderen geht der Fortschritt serienmäßig in beide Richtungen.



0-100 km/h mit Aufladung.



100-0 km/h mit ABS.

Für die Spitze kommt neue Technik. Zur richtigen Zeit.

Der neue BMW 745i besetzt den kleinen Kreis der absoluten Spitzenklasse mit einer progressiven Lösung. Beweglichkeit, Leistungsfähigkeit und Fahren in bestmöglicher Form werden serienmäßig in keinem anderen Automobil mit soviel modernster Technologie und mit soviel intelligenter Effektivität erreicht. BMW Reihen-6-Zylinder, vernünftiger Hubraum von 3,2 l, Aufladung, elektronische Benzinspritzung, Automatic-Getriebe, elektronische Niveauregulierung an der Hinterachse, Bordcomputer.

Der BMW 745i ist damit einer der besten Beweise, daß BMW die neuen Rahmenbedingungen als technische Herausforderung betrachtet

– und daß wir höhere Ansprüche an Technik und Qualität als die beste Chance für Ihre progressive Bewältigung sehen.

Es gibt zwar einige wenige große Automobile, die Sie serienmäßig ähnlich schnell bewegen können, aber kein anderes, das Sie serienmäßig so sicher beim Bremsen macht. BMW 745i mit Anti-Blockier-System als Serienausstattung.

Mit dem Anti-Blockier-System steht jetzt eine Einrichtung zur Verfügung, die für den Fahrer in kritischen Bremsituationen eintritt. Ein System, das die physikalischen Möglichkeiten mit Hilfe eines unbearbeitbaren, elektronisch-hydraulischen Regelsystems voll ausnützt. Es arbeitet präziser, effektiver und fehlerloser, als es

der Mensch könnte, und verhindert absolut sicher das Blockieren jedes einzelnen Rades.

Das wichtigste Ergebnis von ABS: Die Lenkfähigkeit und Stabilität beim Bremsen bleibt voll erhalten, so daß bei Notbremsungen Hindernisse umfahren oder Lücken dazwischen genutzt werden können. Durch die optimale Ausnutzung der bestehenden Kraftschlußbeiwerte für jedes einzelne Rad wird der bestmögliche Bremsweg erreicht.

BMW 745i: Keiner ist weiter auf dem Weg zum zukunftssicheren Besten.

Ihr BMW Händler stellt Ihnen den neuen BMW 745i vor. Er wird Ihnen gerne die ökonomischen und physikalischen Vorteile dieser pro-

gressiven Lösung erläutern. Oder die technischen, insbesondere auch elektronischen Einrichtungen aufzeigen, die Sie bei vergleichbaren anderen Automobilen entweder gar nicht oder nur gegen Aufpreis erhalten. Und nicht zuletzt mit Ihnen über Preis und Gegenwert sprechen.

Die BMW der 7er Reihe: Die zeitgemäße Spitzenklasse. Kauf oder Leasing – für beides ist Ihr BMW Händler der richtige Partner.



Modell BMW 745i, Sonderausstattung. Preis nach Steuer, Zulassung, Transport, Versicherung, optionaler Zubehör. BMW Leasingleistungen.

Above | Advert for a BMW 745i, which was fitted with ABS from launch.

on icy roads or wet concrete, with braking distances on these kinds of surfaces reduced by up to 41 percent in the 1970s through the use of ABS. On loose-packed snow, gravel and sand, though, braking distances tend to be longer, as a “wedge” cannot build up underneath the front wheels to create a braking effect.

The advantage of ABS lies in allowing the car to react dynamically under full braking. Firstly, the driver can engage full braking on surfaces with varying frictional coefficients without risk. Put simply, if the road is dry under the car’s left-hand wheels but icy under the right-hand wheels, the car will skid and swerve under emergency braking if it is not fitted with ABS. With ABS, the car remains stable.

The second major benefit of ABS is that the car can still be steered under full braking. ABS therefore helps the driver to stay within what is known as “Kamm’s Circle”.

Named after Professor Wunibald Kamm (1893–1966), Kamm’s Circle is a model used to illustrate how longitudinal forces – in the form of drive or braking force – and lateral forces can be transferred to the road surface by the tyres in left and right-hand corners. Modern tyre technology and the latest road surfaces allow this circle to be stretched into a positive friction oval, yet this does not alter the basic principle of Kamm’s findings from the 1930s. In brief terms, one of the core messages from Kamm’s studies is that it is no longer possible to brake if the tyres are fully occupied with transferring lateral forces to the road surface. Pushing the tyres to the limits of their grip essentially equates to driving around the edge of Kamm’s Circle. Looking at it from the opposite perspective, the same applies. If the tyre’s full potential is already occupied with maximum braking,

it cannot transfer any steering force. If the front wheels lock up, the driver can no longer alter the vehicle’s direction. If the rear wheels lock, the consequent lack of lateral stability causes the back end of the car to break away and deviate from the desired line. By allowing steering force to be transferred even under full braking, ABS is a key element in helping the driver to maintain the balance between side forces and braking forces, and thus remain within Kamm’s Circle.

It was a long road from the initial idea to series production. Indeed, the first tests aimed at preventing the wheels of rail-based vehicles from locking were carried out back in 1908. In 1936 Bosch registered its system “to prevent a vehicle’s wheels from locking under braking” as a patent, but by the end of the Second World War nobody had yet found a satisfactory way of turning the original theories into practice. The first successful system was a purely mechanical anti-lock mechanism for aircraft wheel brakes developed by Dunlop Maxaret in the 1950s. However, this principle could not be used sufficiently reliably on cars. The subject of ABS for cars was raised repeatedly in motoring circles during the 1960s. Theoretical models were developed, prototypes built, and in the USA very simple systems controlling the rear axle only were made available to customers as an option. In 1966 the Jensen FF was launched. Built in a small series of 320 units, it came with four-wheel drive and was the world’s first passenger car to be fitted as standard with an electromechanical ABS. The Dunlop Maxaret system was linked up to the central differential, but was not what we would consider a fully functioning ABS today.

In Europe, thoughts were turning increasingly to the development of professional systems which could be applied to their full

potential on all four wheels. Only the speed and reliability of the electronic control systems were holding the experts back. The availability of integrated circuits from the mid-60s provided a key breakthrough, though. By this time, Teldix had already embarked on some large-scale pure research projects.

Official documents confirm that the decision was taken at BMW in early 1969 to equip test cars with the latest take on ABS. In 1972 BMW included anti-lock brakes for the first time in its BMW Turbo study. The car never made it into production, but did underline the role ABS was destined to play in future series-produced models. Then, in 1974, BMW became the first manufacturer to use ABS in touring car racing. The official press release focused on the transfer of knowledge from the race track to the road: "Once again we are seeing the fruits of our involvement in motor racing channelled into series production. ... Motorsport, traditionally a key test bed for BMW, has once again delivered fundamental expertise to aid technical progress in production car development." Indeed, nowhere is a braking system placed under such withering loads as on the race track.

Bosch had purchased 50 percent of Teldix in 1973 and taken over sole responsibility for ABS development in 1975, before finally buying the company out in 1981. Its aim was to pool the two firms' ABS technology expertise. Together, they achieved a second major breakthrough: the reduction in the number of components required. In 1971 an ABS control unit consisted of some 1,000 parts, some mechanical; by 1978 this number was down to 140, boosting reliability enormously.

In autumn 1978 the time had come at last – the fully functional electronic Anti-lock Braking System was available for a series-produced vehicle for the first time. Mercedes-Benz introduced the system onto the market as a cost extra a few weeks ahead of BMW. But, from November 1978, ABS could be ordered as an option for all BMW 7 Series models. In 1980 the BMW 745i became the world's first car to be fitted with fully functional electronic ABS as standard. The 4-channel system worked on each wheel individually – in contrast to less sophisticated 3-channel systems, which controlled the two rear wheels together. Then, in 1988, BMW became the first manufacturer to offer ABS for motorcycles as a cost option – exclusively for the K 100 series, at the time. As early as the first year of its availability, 60 percent of buyers ordered their K 100 with ABS. Inherent differences in construction mean that anti-lock brakes have different advantages on motorcycles and cars.

ABS has brought about revolutionary improvements in passenger car development, but not only in terms of braking. In recent years, the system has formed the basis for anti-slip and driving dynamic control technology such as ASC, ASC+T, DSC and DTC – or ASR and ESP, as rival manufacturers have christened them. These



systems use the ABS sensors to recognise key incoming data, and ABS has now become just one function of the overall driving dynamics concept outlined above.

ABS is the subject of ongoing development, the latest evolutionary stages of the system now much more sophisticated than their ancestors. The functioning of ABS when reversing has long formed an area of debate and major strides have been made here as well. This is particularly important if the car cannot be brought back into the line after skidding and rotates through more than 90 degrees from the original direction of travel. The only thing that can help here is to brake the car's speed as quickly as possible – whether the car is travelling forwards or backwards. The weight of the ABS components has also been gradually reduced. Where the systems of the 1970s tipped the scales at up to 25 kg, nowadays they weigh in at a paltry 1.5 kg.

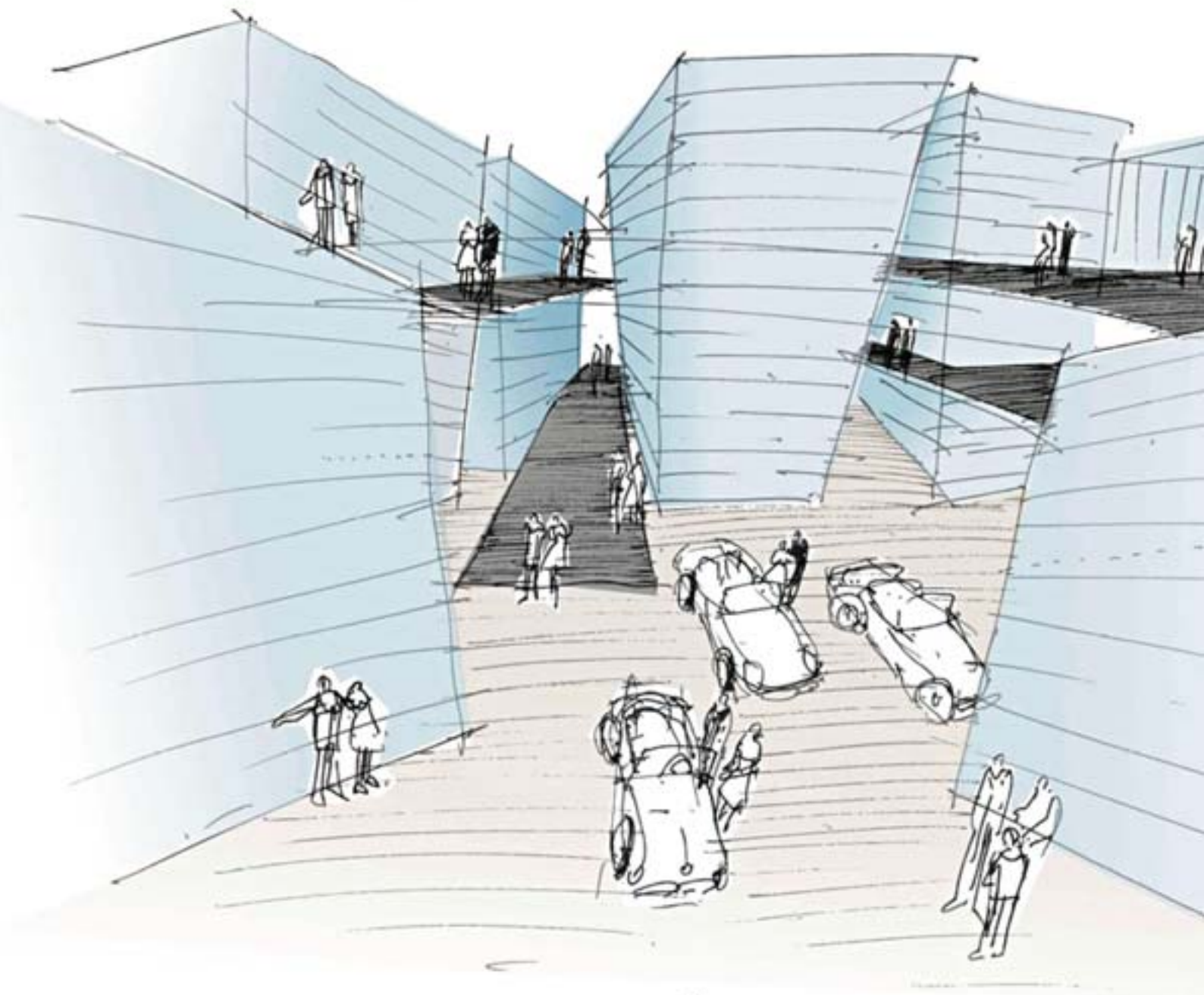
Studies have shown that ABS has made a significant contribution to enhancing road safety.

Above | Testing with various friction coefficients. Here again, the car remains stable under full braking – provided ABS is fitted.

Below | Left: full braking in a corner without ABS; right: with ABS.



BMW Museum
central space
» festführung der strahl
umbau des Raums



» horizontalen erleben,
vertikalen erin

A project team is putting a lot of energy into creating the BMW Museum

Breathing life into a museum

26 subject areas, 120 original BMW exhibits, around 7,000 pictures and numerous original documents and materials will be featured on 5,000 m² of floor space from spring 2008. Since 2002 a BMW project team has been working on originating, designing and realising the museum to provide exhibits in a fascinating setting.

Sibylle Scharrenberg

When the BMW Museum opened in 1973, it created a big stir on the international museum scene. Quite apart from the ground breaking architecture of the building designed by Prof. Karl Schwanzer and the innovative design of the exhibition space, it also set benchmarks with respect to visitor service. The challenge is to expand and steadily evolve this standard. BMW will meet the needs of the entire spectrum of visitors from Germany and around the world with specially developed programmes, including educational agendas, and a broad use of modern media.

Together with BMW Welt and the BMW plant management, the BMW Museum is creating a unique brand experience at the Munich venue. The BMW Museum unifies the past, present and future of BMW in an experience that is vivid and tangible. In practical terms, this means: the exhibition area has been expanded to 5,000 m², and this space has to be planned, remodelled, redesigned and filled with content and exhibits. In a nutshell, life has to be breathed into the space.

The 11-strong museum team is working hard at implementing the following themes: architecture, content, design, visitor service, finance and personnel. Events are also part of the equation. A brief look at the individual working areas highlights the huge challenge presented by the task of planning and redesigning the BMW Museum for everyone involved. Thousands of meetings are being held, kilos of paper are being processed for documentation, hundreds of ideas have been discussed and then rejected at a later point. But just as many have been revived in order to undergo further development.

The BMW Museum in its future form is not a new museum building, but melds two buildings

that were already in existence in 1973 to form a unified whole. The future permanent exhibition will be housed in the low-level western extension of the BMW Tower. Before the remodelling took place, this was used as a meeting area, company restaurant and underground car park. The changing exhibitions will be accommodated in the internationally famous museum "bowl".

The museum team developed a unifying concept for the two different buildings. This design retained the basic idea created by architect Karl Schwanzer, giving an impression of "boulevards and squares set in a developed space", while also taking the requirements of a modern museum into account. Apart from the actual exhibition space, the concept includes a café, a museum shop, a workshop for museum-related educational programmes, meeting rooms, offices, recreation rooms for staff, technical-facility and storage rooms, and areas for preparing exhibitions.

One of the biggest challenges is to transform the two different buildings into a visually unified whole – "one museum". An added ingredient is taking account of the strict guidelines for the building complex since it has listed status and any changes to the outside façade are therefore precluded. A unique spatial situation is created in the interior. The entire low-level building is initially being completely gutted – apart from the bearing elements – in order to create a new, advanced architecture, comprising a ramp system and independent exhibition rooms. In the area designated for changing exhibitions, the existing ramp system in the "bowl" has been extended by two downward "spirals" (floors). This has made it possible to create a passageway between the low-level building and the museum bowl at the lowest level. ▶

Left | Interior view of the BMW Museum. Sketch by Professor Uwe R. Brückner.



Above | Innovation with responsibility: the hydrogen-powered BMW H2R travels at more than 300 km/h and is exhibited in the area "Visions of alternative power units".

Apart from punctual implementation of the plans, the museum team has also been dealing with the selection of materials. A range of issues are then addressed in detail, such as the appropriate floor covering for the various spatial concepts.

During the remodelling, the team was already planning for the time after the museum opened. For example, external service providers are being selected and commissioned to look after facility management. Even before the museum has opened its doors to the public, these service providers have to familiarise themselves with the building and the complex technology – starting with the lighting, covering ventilation systems and finishing with exhibition technology.

BMW history on 5,000 m². The principal function of the museum team remains designing the content of the exhibition. As with any museum, there is an art to selecting a fascinating snapshot from the mass of historic events, products, themes, documents, films and photos, and this selection needs to reflect the identity of the brand. Historic highlights from the long history of BMW – like the BMW 328 or the BMW R 32 – have to be taken into account in the same way as technical innovations such as six-cylinder engines or pioneering developments like hydrogen drives.

Themes and content are developed in close cooperation with the BMW Group Archive, and the various specialist departments, for example from the areas of engine development, lightweight construction, aerodynamics, motorsport and design. The diversity of the brand encouraged the museum team to adopt a thematic concept for the exhibition. In contrast with a chronological presentation, this approach makes it possible to move quickly from one focus to another, in order to make the exhibition interesting in subsequent years and maintain its appeal.

Eight main themes emerged from the design work: company history, design, engineering, motorsport, model series, brand, motorcycles.

A total of 26 thematic areas, 120 original BMW exhibits, more than 7,000 pictures and numerous original documents and materials will form the focus of the BMW Museum. A large proportion of the automobiles, motorcycles and engines will be exhibited for the first time to the general public in a forum of this dimension. Many of the exhibits have been restored especially for the museum, others have simply been prepared for the museum, for example by removing flammable liquids (see "BMW Museum: the Exhibits" in *Mobile Tradition* live, issue 03/06).

Staging the contents and exhibits. Once the themes and content have been defined, it's time to look at how the staging should be implemented. A content-generated design concept is being developed in conjunction with the two agencies that have been commissioned to originate the staging aspect, Atelier Brückner and Art&Com (see "On the art of creating a museum", *MTL*, issue 02/06). This relates to the following issues: how should the individual themes be implemented? How can exhibits be placed in the best light? What are the communication media? What atmospheres should the spaces create? Basic design elements such as form, materials, colour and graphics are also defined. Precise definitions are being laid down to establish what message the space should convey and what content should be implemented. For each individual exhibition, the specific vision has to be implemented in detail, and this involves the exhibits, picture and film material, and the accompanying texts. The individual disciplines have to interact successfully within the design of the thematic structure: architecture and exhibition structures, media design, graphics, sound, lighting design and visions.

"One face to the customer." What would a museum be like without the people who work in it? The visitor service is responsible for managing visitor processes in the museum. It also coordinates internal workflows between the BMW Museum, BMW Welt and the

BMW plant management. The challenge is ensuring that visitors are unaware of these processes and simply enjoy the experience and fascination of the BMW brand. A great deal of groundwork goes into achieving this aim. This includes fixing opening times, devising a code of conduct, planning functional areas, in particular spaces for the museum's educational programmes and the VIP reception, as well as the cloakrooms, museum shop and café, through to selection of external service providers and preparing specifications and contract schedules.

The Visitor Service also defines quality management criteria for operations, and plans and implements training measures tailored specifically to visitors. These include the information service. A Call Centre ensures that visitors are provided with professional and efficient assistance. For example, a knowledge database has been set up with a wide-ranging repertoire of answers to FAQs including opening times and information about the museum's exhibits.

"One face to the customer" is also the philosophy of the Visitor Service Office and the counter for tickets and information. The procedures for the service providers are tailored to provide a perfect fit with the workflows of BMW Welt and plant management. Content and processes such as reservation and booking of experience elements (e.g. museum educational programmes or tours) are defined and implemented. The functional planning of floor spaces, fittings, equipment and IT systems plays a big role geared towards offering the best possible service for visitors to the museum.

Another important focus of the Visitor Service is communicating the exhibition content – the didactic and educational elements of the museum. Museum-specific programmes are developed, such as concepts for museum tours and accompanying media for children, young people and families.

The museum's educational output focuses on programmes for schools – "Learning with the BMW Museum". They include themed tours followed by a practically oriented artistic programme. The museum's educational principles have been designed to ensure that a visit to the museum maintains its educational relevance over the long term. A visit doesn't begin and end in the museum, but generates ideas highlighting the school subjects that might benefit from a visit to the BMW Museum. The media and programmes accompanying the museum's educational packages also allow private groups to enjoy a visit to the BMW Museum, for example in family groups or on children's birthdays. This should be an event that is richly productive in terms of knowledge and experience.

An exclusive venue for sophisticated events: in the past, there has been a steady stream of requests from internal BMW departments and outside organisations to hold events in the BMW Museum. The Museum Team has acknowledged this demand by incorporating the special requirements for an event venue in the design stage of the remodelling for the museum.

The Museum Team is therefore providing appropriate conditions by equipping the exhibition areas with the sort of technology required for events and preparing detailed plans for event management and logistics. Naturally enough, the specialist service provision for events has to be worked out and tenders put out for suppliers of lighting and sound, cloakroom, hospitality, shipping and hostess services – to name just a few of the necessary facilities.

The special feature of the event areas in the BMW Museum is that they aren't located far away from the exhibition. The museum exhibition actually forms the unique and fascinating backdrop. The event takes place at the epicentre of the historic exhibits and

creates a particularly authentic atmosphere. Strategic communication and marketing work is required to ensure that the maximum number of people are able to enjoy such unique events.

This area also forms part of the broad and versatile range of functions carried out by the Museum Team. You can get more information now about event areas by clicking on events.museum@bmw.de. ■



Above | The first BMW motorcycle, the BMW R 32 from 1923, shown here with Franz Biber competing in the Solitude Race, is one of the museum's oldest exhibits.

Below | BMW knows how to make the most of its successful tradition: one of many historical advertising posters that will be on display in the BMW Museum from spring 2008.



Dates and events

April 2007



20 – 23 April 2007
Concorso d'Eleganza Villa d'Este (Italy)

May 2007



16 – 20 May 2007
Mille Miglia / Brescia (Italy)

16 – 20 May 2007
Z8 Club Meeting / Brescia (Italy)

17 – 20 May 2007
Veteranen Club Meeting 2007 / Garmisch-Partenkirchen (Germany)

June 2007



22 – 24 June 2007
MINI United / Zandvoort (Holland)

22 – 24 June 2007
Goodwood Festival of Speed / Goodwood (England)

July 2007



05 – 08 July 2007
10th Silvertta Classic / Montafon (Austria)

06 – 08 July 2007
7th International BMW Biker Meeting / Garmisch-Partenkirchen (Germany)

21 – 29 July 2007
2,000 km through Germany / Mönchengladbach (Germany)

24 – 28 July 2007
Ennstal Classic / Gröbming (Austria)

Preview Issue 02.2007

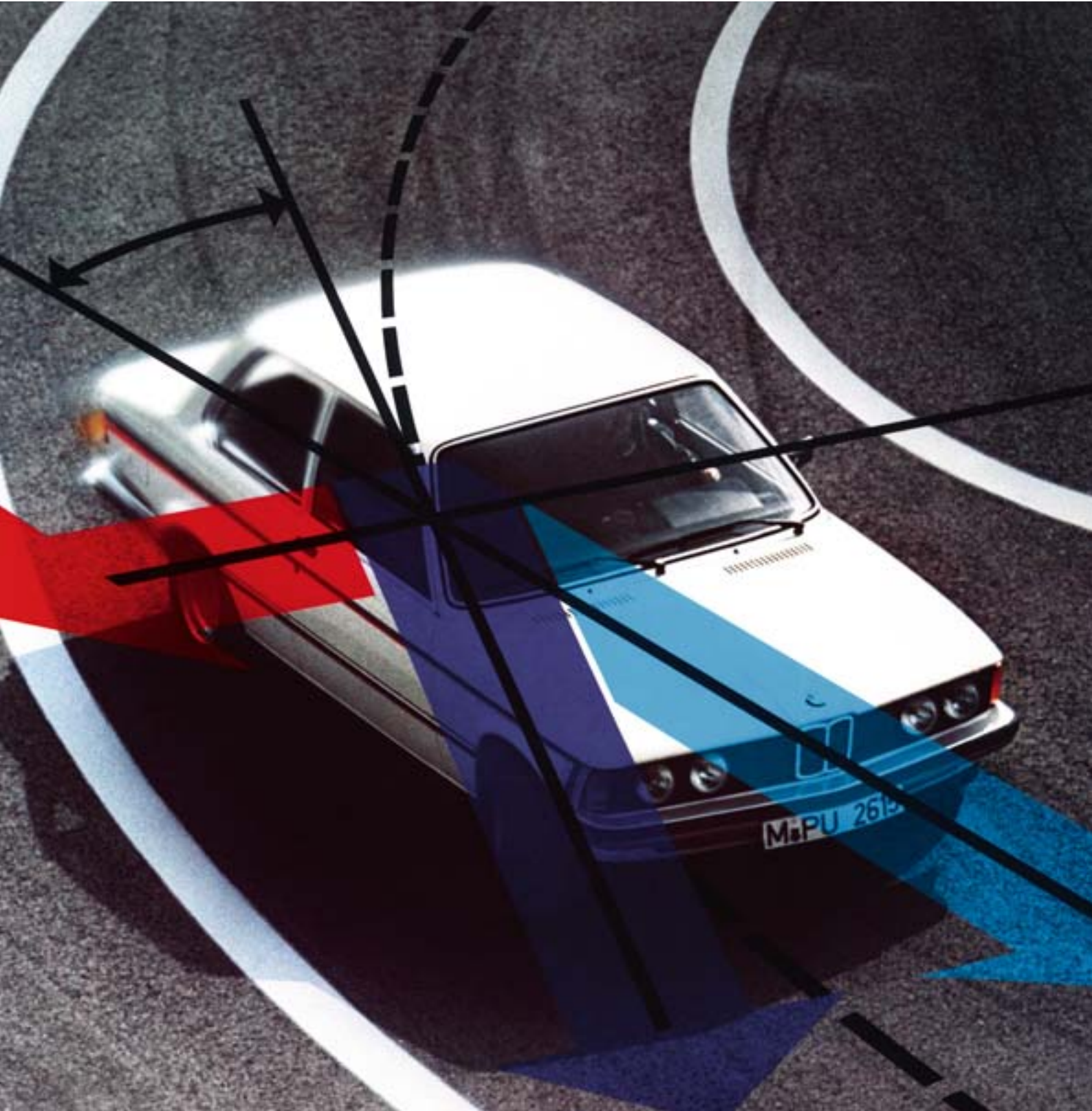


- > 90 years of the BMW brand. A story of success.
 - > The history of BMW motorcycles
 - > 3/15, 2002, 5 Series – BMW model designations
 - > 80 years of the Nürburgring: countless BMW triumphs on two and four wheels
- And much more

Publication details

Responsible: Holger Lapp
Address: BMW Group Mobile Tradition
Schleißheimer Straße 416 / BMW Allee
D-80935 München
Web: www.bmw-mobiletradition.com

Images: BMW Group Archives, Oliver Beckmann (32-37, 50-53), Klaus Kostka (10)
Concept / Realisation: von Quadt & Company
Repographics: Foag & Lemkau GmbH
Printing: Alfred Aumaier Offsetdruck
Production management: BMW AG, Print Management



**Eine BMW Initiative für mehr
Verkehrssicherheit:**

BMW Fahrer-Training.



90 years of the BMW brand. A story of success.



BMW repeatedly sets styling milestones with its outstanding designs; innovations have been the hallmark of all BMW products since the first aircraft engines of 1916; and decades of racing victories and world records bear witness to the sporting character of the brand. BMW is a byword for dynamic vehicles, aesthetics, exclusivity and pioneering innovations. In short, Sheer Driving Pleasure.