Mobile Tradition live

Facts and background

Anniversaries in 2005

85 years ago	M 2 B 15 – BMW's first motorcycle engine	Page 10
75 years ago	In the shadow of the castle – BMW 3/15 DA 3 Wartburg	Page 10
15 years ago	FIZ is opened	Page 11

BMW radial engines – aircraft construction in the 1930s Page 18

Willi Faust and Karl Remmert

"These, gentlemen, are the future World Champions of the sidecar class!" proclaimed four-times title-winner Eric Oliver after the first World Championship race in Barcelona's Parque Montjuïc in 1955. If Faust and Remmert carried on performing as they had done that day, he continued, they would dominate the event as nobody could hold a candle to them any more. And he proved right. At the close of the season the two privateers Willi Faust and Karl Remmert were World Champions and played their part in BMW's legendary run of sidecar victories.

International Tourist Trophy 1955: Noll/Cron ahead of Faust/Remmert in the Manx Arms Corner. Above right: Faust (left) and Remmert win the 1955 German Grand Prix.

Dear Friends of the BMW Group,

Today BMW enjoys a reputation primarily as a producer of premium automobiles and high-quality, sophisticated motorcycles. But the company's exciting past abounds with plenty of other tales. There's the story of BMW's utility vehicles in the 1930s and '50s, for example (page 12), while a major feature on BMW aero-engines shows how BMW persuaded Germany of the merits of the radial engine (page 18). This achievement is typical of many BMW ventures, as exemplified in such concepts as the BMW GS Series (page 41) or the sensational architectural coup that is the BMW Museum (page 46). And it is backed by many more stories that make up the BMW heritage. As you can see, we have again put together a smorgasbord of topics for you in this latest issue. Plenty to read – and plenty to look forward to.

Enjoy!

Holger Lapp
Director BMW Group Mobile Tradition

The Farmobil during offroad testing.

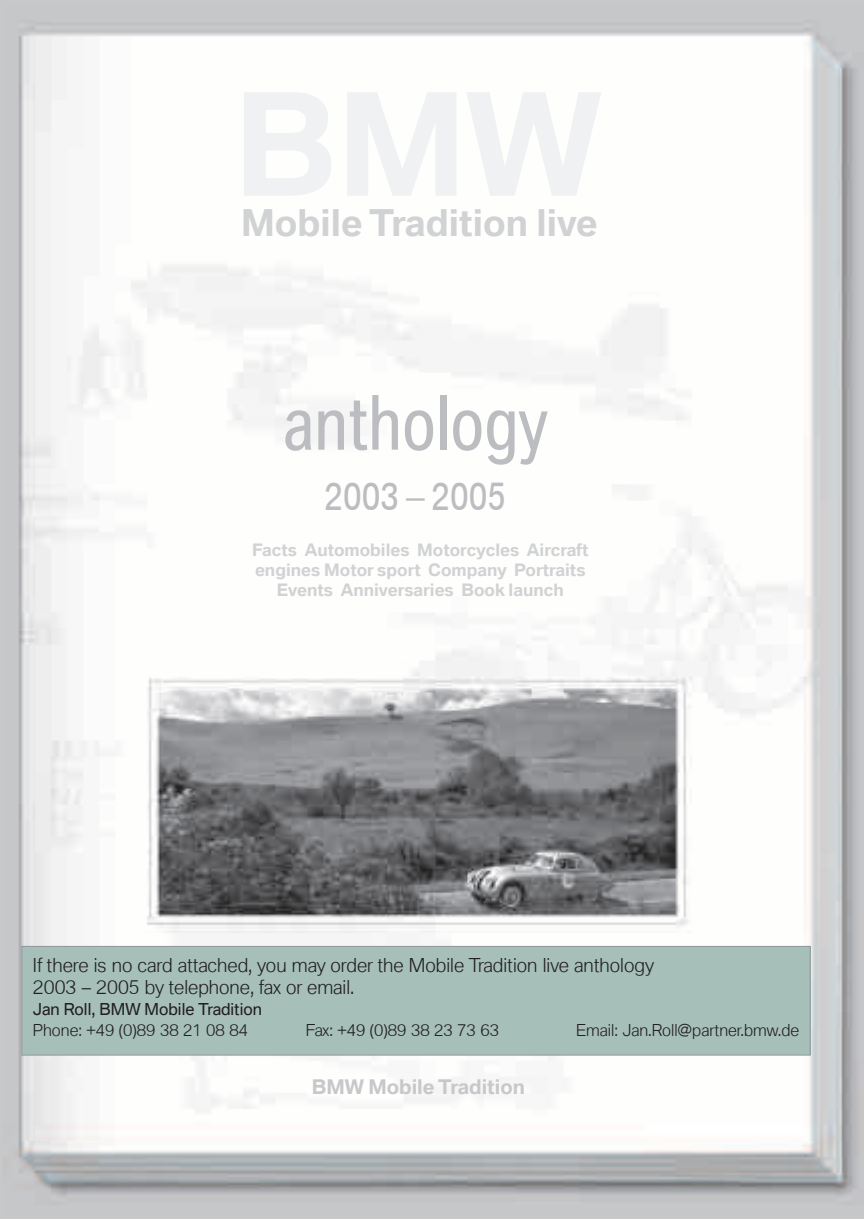
Contents Issue 03.2005

Publication Details

Responsible: Holger Lapp
BMW Group Mobile Tradition
Schleissheimer Strasse 416 / BMW Allee
D-80935 München
www.bmw-mobiletradition.com
Pictures: Mobile Tradition image archive
Concept / Realization: von Quadt & Company

++ Order now! +++ Order now! +++ Order now! +++ Order now! +++ Order now! ++

To bring the past alive – that is the mission of BMW Mobile Tradition. Nowhere else can you experience the fascinating and multifaceted history of the company more intensely than in this comprehensive anthology of Mobile Tradition live. You, as friends of the brand, are the first to be informed of this exclusive offer.
500 pages arranged according to subject areas present articles spanning three years of Mobile Tradition live and covering every aspect of the BMW past. This richly illustrated publication features captivating background stories on the products and evolution of the BMW enterprise.
As this is a strictly limited-edition publication, we recommend that you use the attached reply card to make sure you don't miss out on your Mobile Tradition live anthology.



EUR 39.90
Limited edition!

Mobile Tradition live –
anthology 2003 – 2005
Paperback, 497 pages, 1,130 illustrations, many in colour.
BMW Mobile Tradition
Schleissheimer Strasse 416
D-80935 München

If there is no card attached, you may order the Mobile Tradition live anthology 2003 – 2005 by telephone, fax or email.
Jan Roll, BMW Mobile Tradition
Phone: +49 (0)89 38 21 08 84 Fax: +49 (0)89 38 23 73 63 Email: Jan.Roll@partner.bmw.de

500 pages – more than 1,000 pictures
The best of three years of Mobile Tradition live

Place your order now.
We have 20 BMW 507 keyrings to give away to 20 lucky winners among the first 100 orders received.

The keyring retails at EUR 19.90 and is modelled on the famous wheel knock-offs of the legendary BMW 507 from the year 1955.
This high-quality and totally scratchproof keyring is available from BMW Mobile Tradition in a limited edition of 1,955.

++ Order now! +++ Order now! +++ Order now! +++ Order now! +++ Order now! ++

Presentation of a BMW X5 by manager Sven Quandt of the X-Raid Team from Trebur in Hesse – another gem for BMW Mobile Tradition's motor sport collection

Holger Lapp, Director of BMW Mobile Tradition, and Johann Raiger, who heads BMW's company archive, proudly took delivery of the muscle car generating 170 bhp at 4,200 rpm. A push of the starter button next to the steering wheel stirs the six-cylinder biturbo diesel engine to life. This power unit in the Desert X5 comes straight from the BMW pre-development division for diesel units in Steyr, Austria. With a view to conserving the driveline, it was decided to stick with a torque of 570 newton-metres rather than a possible 700 Nm.

The Dakar Rally has been held annually since 1979, largely on the African continent. The toughest and longest offroad sporting event is also the world's best-known desert rally, more familiar as the Paris-Dakar. It is divided into three main categories: motorcycles, cars and trucks.

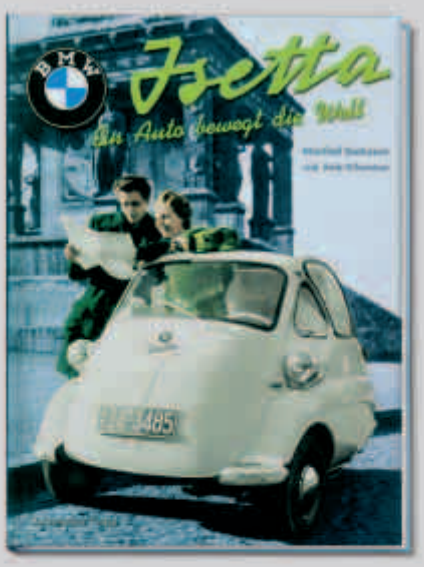
BMW has been involved right from the start and has claimed a raft of successes with its BMW GS motorcycles. In 1981 and 1983 Hubert Auriol won the Dakar, while in 1984 and 1985 victory went to Gaston Rahier. Following a lengthy absence, the company returned to the event in 1998 with its single-cylinder bikes based on the BMW F 650. In 1999 and 2000 the winner was Richard Sainct, who demonstrated the reliability of the single-cylinder Enduro bikes.

BMW X5	
Engine	six-cylinder inline diesel
Displacement	2,999 cc
Output	270 bhp at 4,200 rpm
Transmission	six-speed manual
Brakes	inner-vented disc brakes with four-piston brake callipers
Weight	1,900 kg
Top speed	185 km/h

The X-Raid Team, managed by Sven Quandt since 2002, made a sensational first appearance in the Dakar. In 2003 they celebrated a stage win together with overall victory in the 4x4 diesel category. Khalifa Al Mutaiwei in the BMW X5 X-Raid succeeded in winning the Raid Rally World Cup in 2004, while 2005 saw ex-world skiing champ Luc Alphand gain fourth place in the BMW X5 diesel.

For the 2006 Dakar Rally, the X-Raid Team from Trebur in the German state of Hesse have announced that Nasser Al-Attiyah of Qatar and South African Alfie Cox will be in the driver line-up. These two seasoned desert drivers will be gunning for overall victory in a new BMW X3CC diesel.

Above: A glance inside the cockpit of the Desert X5: Sven Quandt points out details of the BMW X5 X-Raid.
Below, from right: Sven Quandt, Team Manager of the X-Raid rally team, presents the powerpack to Holger Lapp, Director of BMW Mobile Tradition, and Johann Raiger, head of BMW's company archive.



BMW Isetta – Ein Auto bewegt die Welt
192 pages, Euroformat, over 200 illustrations, many in colour.
Bodensteiner Verlag
Andy Schwietzer
Neuwallmodener Str. 14
D-38729 Wallmoden
ISBN 3-9806631-2-4

BMW Isetta – half a century old

The desire of many families, workers and employees to get to destinations near and far independently of public transport and sheltered from the elements led to a flood of designs in early 1950s Europe that sought to marry the ride comfort of a small car with the maintenance costs of a two-wheeler.
In 1953, Commendatore Rivolta in Bresso, Italy launched the patented Isetta front-opening door design in an attempt to keep customers in tow who were keen to move on from their ISO two-wheelers. At BMW in Germany, where the mood had tired of two-wheelers, the Isetta licence presented a chance to jump onto the fast-departing bandwagon.
It was to become a success story that would save the undercapitalized plant in Munich, with its upmarket car and motorcycle image, right into the 1960s.
The book BMW Isetta – Ein Auto bewegt die Welt (BMW Isetta – A Car Moves the World) not only shows the 50-year-old Isetta and the original ISO design, which battled unsuccessfully against FIAT in Italy, but also gives a detailed account of failed competitors such as Hoffmann of Düsseldorf and fellow licensee builders in France, Britain and Brazil. BMW offshoots like the little-known scooter prototypes and the more upmarket BMW 600 and 700 models are also given due exposure. No technical details or political and economic circumstances that impacted on the Isetta's global career are overlooked.
As well as excerpts from BMW documents never previously published, there are special chapters devoted to the individual variants, colour options and equipment levels, rendering the book of interest not just from a historical point of view but also of use to restorers.
BMW Isetta – Ein Auto bewegt die Welt by Manfred Seehusen and Andy Schwietzer is published by Bodensteiner Verlag at a cost of 29.90 euros.

Bertone calls in at BMW Mobile Tradition

A few weeks ago, Dr Michele Blandino and his wife Barbara dropped by at BMW Mobile Tradition while on a business visit to BMW.
Dr Blandino is currently Managing Director of Carrozzeria Bertone Spa and was delighted to come face to face with the BMW 3200 Coupé and the only BMW 3200 CS Cabriolet built by his predecessors – and to be allowed to get behind the wheel of these models. It was at the 1961 Frankfurt Motor Show that BMW had presented the last of the big eight-cylinders to derive from the BMW 501. Nuccio Bertone was the man behind the design of the elegant BMW 3200 CS Coupé. By request of Dr Herbert Quandt, Bertone adapted a BMW 3200 CS Coupé into a Cabriolet in 1962, but for reasons of cost it remained a one-off model.
A brief retrospective of more than 90 years of Bertone shows how a four-man operation evolved into an automotive factory with a production capacity of some 70,000 units:
In 1912, 28-year-old carriage-builder Giovanni Bertone set up his own small workshop as a family business for building and repairing carriages. Coachwork by Bertone was already very popular at that time, distinguished as it was by exceptional elegance. Then in 1914, Giuseppe ("Nuccio") Bertone was born and in due course followed in his father's footsteps.
After the 1940s and the years of war and reconstruction, Bertone developed into a successful car factory in the 1950s, while in the 1960s the company focused on implementing various GT concepts before undergoing radical changes in the '70s and collaborating with world-famous exclusive marques. Through the '80s and '90s, too, it proved a successful, "upwardly mobile" enterprise.
Nuccio Bertone died on 26th February 1997, just days before the Geneva Motor Show. It was a particular blow to the staff of Turin-based Carrozzeria Bertone.
Bertone has had a reputation for unusual design thanks to the countless car bodies on which the company has left its stamp. To this day the name is a byword for the best in Italian car design – a tradition that goes back more than 90 years.

Dr Michele Blandino, Managing Director of Bertone, in the unique BMW 3200 CS Cabriolet. Below: His wife Barbara Blandino on a BMW C1, a blend of motorcycle and car designed by Bertone in 1999.

BMW Z8 Club meeting: future classics outside the BMW Research & Innovation Centre in Munich.

World's first BMW Z8 Club founded in Munich

Z8 aficionados from around the world are already celebrating tomorrow's classic

On Saturday, 11th June 2005, 130 Z8 devotees from Germany, Austria, Belgium, Switzerland, Holland and the USA gathered in Munich to found the world's first BMW Z8 Club. 68 of these fascinating 400 bhp sports roadsters converged on Munich for the occasion. With the backing of BMW Group Mobile Tradition, the founding meeting was held on its premises. Olaf Hetze, the man who initiated the club, was voted in as its first president.

At the top of the agenda was a tour of BMW M GmbH. Professor Ulrich Bruhnke, chief executive of BMW M, along with various experts from the development and production phase of the Z8 were on hand to answer questions from the auto fans. Following a photo call outside the BMW Research and Innovation Centre, it was off to BMW Mobile Tradition in Schleissheimer Strasse, where a range of individual models and prototypes from the BMW Z8's development period could be viewed. This was followed by the official part of the occasion and the founding of the BMW-accredited type club.

On Sunday the cars belonging to the BMW Z8 Club members could be admired en masse during their first joint outing through the Bavarian Alps on their way to Bad Wiessee. The worldwide fascination with the Z8 is closely allied to the legendary BMW 507 from the year 1955. The BMW Z8 represents a revival of the concept behind that fifties classic and ranks as its modern-day rendition: breathtakingly beautiful with classic proportions and featuring innovative technology – in a word, the revival of a legend.

Holger Lapp, Director of BMW Group Mobile Tradition: "The BMW Z8 symbolizes the bridge from the past to the present and on into the future. In many respects it is the modern-day interpretation of the BMW 507 theme. As a 'future classic' it will give its owners pleasure for many years to come and has already become a sought-after collector's item with lasting value."

Back in 2003, readers of the car journal Motor Klassik had similarly recognized the powerful cult potential of the Z8 and placed it first by a long way in their vote for the "Classic of the Future" in the convertible category. The chief criteria in this choice were timeless values and aesthetics.

The conditions of its production also favoured a swift rise to classic status. The model was only produced from 2000 to 2003, with a total of 5,703 units being built during this period. Even before the launch of series production the BMW Z8 achieved international fame as James Bond's "official car", as also reflected in the 3,000 or so models exported to the United States.

The Z8 entered the marketplace with a price tag of 127,000 euros. Currently, well-preserved models are available for around 100,000 euros, underlining the high value retention of the Z8 on the road from new car to classic. This is also corroborated by current demand for the roadster. Olaf Hetze: "I have already had a number of enquiries from potential buyers interested in acquiring as-new models, but on the sales side there hasn't been a single appropriate offer so far. And I don't really think any of our club members would be willing to part with their Z8."

Further information on the Z8 Club e.V. is available at www.press.bmwgroupcom or http://www.z8-club.de

Glass workshop: BMW rebuilds the cult car of the 1970s

Visitors can watch the live progress of the bodyshell to a complete BMW 2002 tii through the “glass workshop”.

The “cult car” label is popular and frequently bestowed. But there is one car this indisputably applies to: the BMW 2002. Like few other cars besides, this model embodies the spirit of the early 1970s. And it is this zeitgeist phenomenon that BMW Mobile Tradition is currently reproducing with the help of spare parts. The best thing about it is that visitors to the BMW Museum next to the Olympic Tower can follow its progress on a daily basis at the Museum’s “glass workshop”.

In the beginning was the number

What triggered the project was the fact that Mobile Tradition, the heritage division of the BMW Group, can today provide an estimated 90 percent of all spare parts for the BMW 2002. That makes parts supply for this recent classic – which can be researched on the internet at www.bmwmobiletradition.com – outstandingly good.

It didn’t take long for the idea of rebuilding a BMW 2002 to be hatched. The work is based on an original bodyshell from the 1970s. The few spare parts not available in Mobile Tradition’s stock are being sourced from a donor car or remanufactured by hand. With the erection of the glass workshop on the grounds of the BMW Museum Exhibition next to the Olympic Tower, moreover, the perfect location has been found to give the 250,000 or so annual visitors a unique chance to watch its construction “live”. Should the BMW 2002 tii ever have to be taken out of the glass workshop for specialist work, there’s an immediate replacement waiting to occupy the hydraulic ramp in the shape of a BMW 3.0 CSL. The project, scheduled to continue until the end of the year, is in the capable hands of master car mechanic Arthur Heimann and the head of the BMW Group Mobile Tradition workshop, Klaus Kutscher. Using several thousand Original BMW parts, Arthur Heimann is putting together a more than 30-year-old new car.

Cult car – cult colour

This new car, model year 1973, will have a powerful heart: a 2.0-litre four-cylinder providing 130 bhp will pump life into the BMW 2002 tii. In the days of the Beetle, 190 km/h with moderate consumption of 9 litres/100 km was not to be sniffed at. A 0 to 100 km/h spurt in 9.4 seconds drove family men into raptures and then straight to their nearest BMW showroom. At the time the dream car was to be had for 14,400 marks. The historical hue of the day – literally – was reflected in the paintwork options of the time: Verona, Golf and Colorado were among the vivid finishes available. But the hallmark body colour of the day was Inka, a strong shade of orange. And that’s the bodywork colour of the BMW 2002 tii currently being built – a true gem of the 1970s.

The restoration project can be watched daily from 10 a.m. to 10 p.m. at the BMW Museum Exhibition on the Spiridon-Louis-Ring.

Highlight: BMW 2002 tii with Inka paintwork.

Special exhibition in the Motorcycle Hall of Fame Museum in Ohio

BMW: The Mastery of Speed

Since opening on 20th July 2005, a new exhibition at the Motorcycle Hall of Fame Museum in Pickerington/Ohio has been showcasing a panoply of rare BMW motorcycles, exceptional background histories and artworks from BMW's own archives never before seen in public. Some of the exhibits have been personally provided by the curator and well-known collector Peter Nettesheim.

Photo: courtesy of Jeffery Yost

Photo: courtesy of Jeffery Yost

Photo: courtesy of Jeffery Yost

Above left: Mark Mederski (left), Director of the Motorcycle Hall of Fame Museum, and Laurence Kuykendall of BMW of North America at the opening of the exhibition. Centre: Sporty classic from the 1970s: a BMW R 90 S. Right: A glimpse of the exhibition.

Pickerington, Ohio. The name says it all: calling itself "Motorcycle Hall of Fame" without any false modesty, this museum in Columbus, Ohio is backed by the American Motorcyclist Association (AMA), the umbrella organization for American bikers.

Photo: courtesy of Jeffery Yost

The exhibition curator: Peter Nettesheim, a BMW enthusiast from Huntington, New York.

The museum houses around 140 milestones of motorcycling history, starting with a replica of the Daimler Riding Car and continuing all the way to the latest motocross championship bikes. A well-stocked library and numerous trophies, posters, dioramas and scale models, as well as a wide-ranging collection of bikers' gear, complement this presentation of the history of motorcycle riding.

The Hall of Fame

At the core of the museum is the Hall of Fame, where to date more than 200 people who have rendered services to the world of motorcycles are honoured.

Among them are BMW Superbike riders Reg Pridmore and Steve McLaughlin, as well as John Penton, who rode a BMW R 69 to set up a new record for the New York to Los Angeles distance ("from coast to coast") with a time of 52 hours and 11 minutes.

Peter Fonda has also been honoured for his role in the cult movie Easy Rider, as has designer Craig Vetter for his pioneering work in the field of motorcycle fairings.

Focus on sporty production bikes

This illustrious circle presents a worthy context for a special exhibition jointly organized by BMW of North America and collector Peter Nettesheim: "BMW: The Mastery of Speed" turns its attention to the sporting past of the BMW brand.

But it is not so much a case of racing successes and competition bikes. Rather, it is the sporty production models that take centre stage, allowing the exhibition to span an arc across eight decades – from the BMW R 47 of 1927 to the freshly launched BMW K 1200 R.

The BMW classics on display (including the BMW R 5, BMW R 90 S and BMW K 1 models) hail from the comprehensive collection of BMW enthusiast Peter Nettesheim of Huntington, New York. "All my motorcycles are road-

Pictures at an exhibition: text and picture panels complement the exhibition (right). Adding the final touches before the opening (bottom).

Photo: courtesy of Jeffery Yost

Photo: courtesy of Jeffery Yost

ready. When they were delivered here, Mark Mederski, the Director of the Museum, wanted to put down tin baths to catch the oil. I had to explain to him that my motorcycles come from Germany and therefore do not shed any oil!"

Mederski, who was more than happy to dispense with his tubs after being thus enlightened, is especially impressed by the sporting component of the brand: "Long before most other manufacturers, BMW understood the art of developing high-performance motorcycles. This exhibition not only traces BMW's sporting genes back to their roots but also gives visitors the opportunity to follow their evolution with the help of several of the brand's most significant models."

80 years of heritage

Laurence Kuykendall, spokesman for BMW Motorcycles of North America, adds: "BMW is a comparatively small motorcycle brand in the United States. Only few people know that our two-wheeled heritage goes back 80 years. If you look at our latest models, you should spare a thought for what the older models achieved in the sporting arena."

The exhibition on the internet

Numerous members of BMW Motorcycle Owners of America were also present at the opening of the exhibition as it coincided with the 33rd Annual Meeting of the clubs, which was taking place at the same weekend just a few miles away in Lima, Ohio.
The exhibition runs until June 2006. Those interested can find further detailed information on the Motorcycle Hall of Fame at the following internet address:

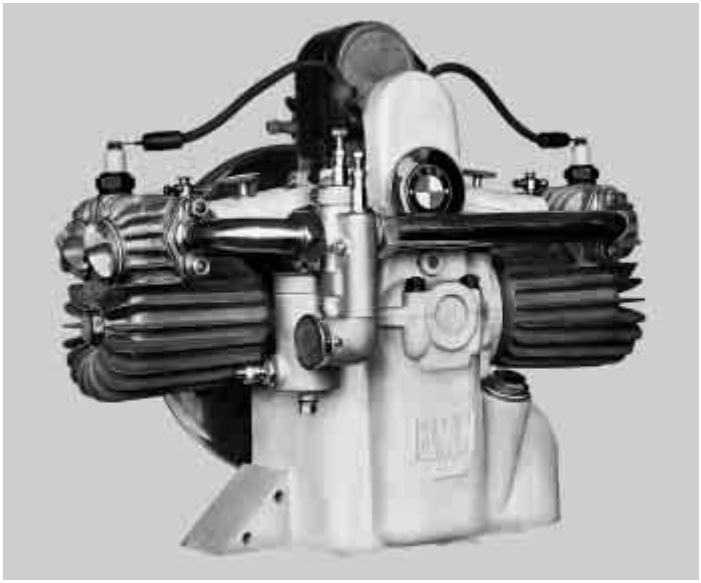
http://www.motorcyclemuseum.org

Anniversaries in 2005

85 years ago

M 2 B 15 – the first BMW motorcycle engine

BMW came into being towards the close of the First World War as an aircraft engine factory and rapidly earned a reputation thanks to its BMW IIIa high-altitude unit. After the war, however, when the Treaty of Versailles banned the manufacture of aero-engines in Germany, BMW lost virtually its entire business portfolio. The production of truck and marine engines was not an economic success. That enabled factory manager Martin Stolle, himself a keen motorcycle rider, to push through his proposal for building a motorcycle engine. Stolle took his lead from his own Douglas bike and designed a 500 cc side-valve flat-twin Boxer. This unit, the first examples of which were completed in December 1920, was supplied by BMW to numerous motorcycle manufacturers throughout Germany, including Victoria, Helios, Bison, SMW, Corona and Hoco. With the M 2 B 15, BMW laid the foundation stone for a second product line: in September 1923 the company launched its first motorcycle.



A design principle which BMW has perpetuated to this day: the Boxer engine. The M 2 B 15 marked the start of BMW motorcycle production.

75 years ago

In the shadow of the castle: the BMW 3/15 PS DA 3 Wartburg

After the first BMW automobile, a 3/15 PS DA 2, had emerged from the factory in March 1929, keen sports motorists clamoured for a sporty version of this small car. BMW complied with the wishes of its customers and in April 1930 unveiled the Type 3/15 PS DA 3 Wartburg, a rather special automotive treat modelled on the English Austin 7 "Ulster". Its light-alloy bodywork reflected the prevailing sports car fashion in miniature with its long bonnet, fold-down windscreen and sharply tapering boat tail.

The construction team had retuned the 750 cc four-cylinder engine powering the diminutive roadster from 15 to 18 horsepower thanks to an increased compression ratio, a copper intake manifold and a dual exhaust system. That enabled the 2-seater – which weighed in at just over 400 kilograms – to achieve speeds of more than 90 km/h, and it soon turned into a popular and successful competition car. BMW paid special tribute to its place of birth: for the first time since 1903, a car was endowed with the Eisenach trademark. Just 150 examples of this alluring roadster, which kick-started BMW's motor sport history, were produced up until 1931.

Fast and easy handling: cutting a dash with the BMW 3/15 PS DA 3 Wartburg.

The FIZ building, which opened in 1990 next-door to BMW Mobile Tradition, soon became known thanks to its striking architecture. An advertisement shows the divisions of the newly inaugurated Research & Engineering Centre.

15 years ago

Research and Engineering Centre (FIZ) opens its doors

In the 1970s, both the Munich production plant and the BMW office tower were getting more and more crowded. Many departments had had to move to external premises, which seriously hampered communication and the exchange of information. Against this background, the idea of building a new Research and Engineering Centre, known in German by the abbreviation FIZ (Forschungs- und Ingenieurszentrum), began to assume concrete shape in the early 1980s.

The concept for the new research, development and production facility envisaged open and transparent structures. This new complex sited in the north of Munich was designed to enable all product and plant planning and development departments, along with the logistics and personnel divisions, to directly coordinate their goals and strategies by the shortest possible routes. The new “FIZ” thus enabled a novel approach to work organization.

With the completion of “Stage 3”, the BMW Research and Engineering Centre was officially inaugurated in spring of 1990 after almost six years of construction work. Fed by an investment approaching 1.4 billion deutschmarks, a facility of over a million cubic metres grew up on a footprint of more than 100,000 square metres.
In autumn of 2001, this “think tank” was renamed the “Research and Innovation Centre”.

Small utility vehicles by BMW

Even connoisseurs of BMW history are frequently unaware that, in its more remote past, the company was also involved with utility vehicles. Two such models were the F 76 and the F 79 three-wheeler delivery vehicles of the 1930s, as well as the Farmobil, which was built after the Second World War.

By Kai Jacobsen

The Farmobil 700 at the Acropolis in Athens.

It was before the Second World War that the Bayerische Motoren Werke began to turn their attention to utility vehicles. In the early 1930s BMW developed a three-wheeled delivery van of the kind already on offer from other companies. But by the time this reached the marketplace, it had been overtaken by ongoing developments in that vehicle segment. As a result, production ran to just a few hundred examples. At the end of the 1950s the Fahr mechanical engineering company in Gottmadingen secured BMW AG as partners and engine suppliers for a lightweight transport vehicle. But the road to volume production proved a long one. In the end, the so-called “Farmobil” was not manufactured in Gottmadingen but produced under licence in Thessaloniki, Greece, from 1962 onwards. Starting in the summer of 1965, BMW became the sole distributor for Germany.

BMW F 76 and F 79 delivery three-wheeler

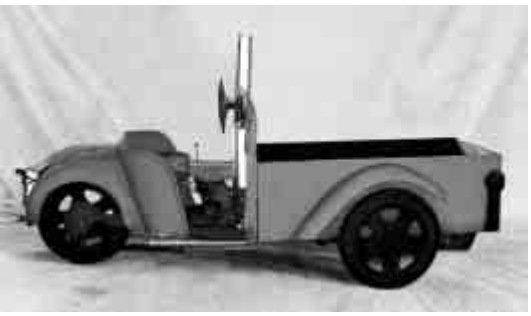
The BMW three-wheeled delivery vans designated the F 76 and F 79 occupy a special niche in BMW’s model history – not only because of their unusual appearance but also on account of their genesis. Whereas previously all cars had been developed and manufactured in Eisenach, the development and construction of the prototypes of these car-like vehicles took place in Munich, with volume production handled by Eisenach. The increase in production capacity at this plant also secured workplaces: in the winter of 1931/32, due to the general economic crisis, the workforce had had to be slashed to around 600, whereas by summer of 1932 it had grown back to 1,200.

Following the takeover of the Dixi plant in Eisenach, BMW had quickly managed find a footing in the automobile market. During the Great Depression in the late 1920s, the BMW 3/15 PS car had proved a safe seller, and by the early 1930s there were already plans for far more luxurious cars. Sales of BMW motorcycles, moreover, already a byword for quality, were flourishing.

In the expanding sector of small delivery vehicles BMW had so far only launched a cube-van variant of the 3/15 PS, sales of which did not take off, however, on account of its fairly low cost-benefit ratio. Numerous companies, including Borgward and Tempo, had since the 1920s been offering so-called "front-loaders" – affordable three-wheeled vehicles featuring a motorcycle saddle over the single rear wheel and a large payload area on the front axle. By using the tried and tested BMW single-cylinder motorcycle engines of the R 2 and R 4, BMW was now also in a position to build such a vehicle from 1931 on.

In December 1932, the Type F 76 was launched: a BMW three-wheeled delivery van with a Cardan drive and a 200 cc fan-cooled engine giving 6 horsepower. It came with a price tag of 1,350 reichsmarks and boasted a two-seater driving bench – optionally fully covered – and a high load capacity of 650 kg. Steering was by means of a car steering wheel, and the rear wheel had a sprung suspension arm. The loading area measured 1,600 x 900 mm but could be increased to 1,600 x 1,400 mm. In 1933, an optically identical F 79 model was added, featuring a 14 horsepower 400 cc single-cylinder engine, for which BMW was asking 1,500 reichsmarks.

Another interesting and crucial aspect of the delivery three-wheeler was the fact that anyone over the age of 16 could drive it. It required neither a driving licence nor any kind of vehicle tax.



Top: BMW Mobile Tradition's F 76 three-wheeler delivery van in the condition in which it was acquired by the Mack family.
Bottom: BMW F 76/F 79 with enclosed cab and tarpaulin over the load space.

In Hamburg, Shell bought two of BMW's practical three-wheeler vans.

The loading area of the BMW three-wheeled van was optionally available as an open platform, a closed bonnet compartment or a wide payload area with tarpaulin and bows. In the standard version, the driver and passenger seat were open on all sides. Options included a front windscreen, roof, rear wall and canvas side doors.

Despite their high quality, neither variant succeeded in securing the hoped-for sales success. In the early 1930s, developments were already moving away from the motorcycle-like front-loader towards a more car-like enclosed three-wheeled delivery van with a fixed driver's cab and single front wheel. As a result, by the time production was phased out in mid-1934, sales had totalled just 600 BMW delivery three-wheelers.

An F 79 was added to the BMW Mobile Tradition collection back in 1997. In summer 2004 it was joined by an F 76. This came from the Mack family of Wernburg in Thuringia. Frau Mack's father had acquired the F 76 in Leipzig in the early 1950s from the Hermann Greiner car repair workshop. The Greiner business had been using the three-wheeled delivery vehicle for a whole range of transport and supply requirements since 27th February 1939. Prior to that, on 11th November 1936 it had begun rendering good services to the magazine distribution business of Carl Fritzsche. Unfortunately there are no records to show by whom and for what purpose it was used between its production (1933) and November 1936.

The BMW Farmobil

In 1955, in the then tractor division of the Fahr AG mechanical engineering factory in Gottmadingen near Lake Constance, a small development team was tasked with designing a light transport vehicle for agricultural use.

It was given the designation "Farmobil", a modification of "Farmmobil". The brief for this utility vehicle specified a maximum permissible weight of 1,000 kg, a wheelbase of 1,800 mm and a track of 1,300 mm. For the engine, an output of 20 horsepower and a five-speed gearbox were planned.

In spring of 1956 the first prototype was ready. Powering the vehicle was a rear-mounted 20 horsepower Horex twin-cylinder engine taken from the Imperator motorcycle. Horex had adapted the engine for use in small vehicles and had also offered it to Fahr. The transversely mounted power unit was coupled with a four-speed transmission. The

A woodsman driving across his territory in 1965.

rear-wheel-drive unit was fitted with a rubber spring in front of the rear rocker arm on each side. A linkage connected the front and rear swing-arms.

Test drives showed that the chassis was not suited for its intended use, and the engine revealed major vibration problems. These negative test results led to the development of a vehicle with independent wheel suspension featuring spring struts with rocker arms pushed at the front and pulled at the rear. Power was again provided by a Horex engine – though this was an improved version. Gear-changing was handled by a Selectromat transmission, a five-speed preselector gearbox jointly developed by Getrag and Fahr.

The utilitarian, though elegantly designed vehicle was based on a tubular frame with welded panels and had – like the BMW Isetta – just one front-opening door. Between the axles there was a loading pan.

During the subsequent trials, largely on unmetalled country lanes, it emerged that neither the engine nor the gearbox were up to the rough demands of everyday use. At an in-house presentation the body with its front-opening door also came in for criticism. Only the vehicle's outstanding offroad capability earned any praise.

But since there was a demand for such a vehicle in the market, it was decided in 1958 to develop a new model – in collaboration with BMW. The basic dimensions were largely maintained while the new self-supporting body was given side access and featured removable doors and top. The engine and transmission (again rear-mounted) now derived from the BMW 600, as did the engine and transmission mountings and the gearshift. As before, it was a real-wheel-drive configuration, but the lack of all-wheel drive would prove a disadvantage in due course.

The individual wheel suspension remained unchanged, but the strut/rocker design was replaced by separate coil spring/damper units with lower wishbones. At the same time spring travel was increased to 250 mm, which significantly improved ride characteristics in all load conditions. Instead of rack-and-pinion steering, the designers now chose a ZF Gemmer steering system.

At the 45th DLG (German Agricultural Society) travelling fair in Frankfurt in early May 1959, the Farmobil 600 was introduced to the public at large for the first time. Test drives with the 20 bhp twin-cylinder Boxer engine by BMW revealed hardly any problems, but there were difficulties with the self-supporting body in relation to the chassis.

At the Hanover Industrial Fair, too, which had assumed even more importance in the light of the forthcoming European Economic Community, the Farmobil 600 was unveiled in spring of 1960. That same year, work began on a new prototype. The air-cooled Boxer engine along with the transmission now derived from the BMW 700 launched in 1959. The gearshift, brakes and wheel suspensions also came from the 30 bhp BMW. In Munich it was hoped that the vehicle would enter military use, which was why they backed its further development.

Two vehicle versions with a rounded design emerged: one was the flatbed truck with removable half-doors and plug-in windows, and the other the version with a fixed driver's cabin. The body was much improved thanks to a stronger understructure. In order to improve the stiffness of the front wall, the tunnel cross-section was increased. The steering and suspension (spring travel front/rear 240/225 mm) were slightly modified. The loading area (1,652 x 1,470 mm) featured a recess to accommodate seats. Standard equipment now also included heating with defroster jets.

It is assumed that in early 1961 the plan was to dispense with the rounded body design in order to save on tooling costs for later volume production. Within a short space of time, a sharp-angled body, similar to the Steyr-Puch Haflinger, was developed and built. For this revised model the engineers included, as planned, front and rear power take-off, which could be engaged and disengaged from the driver's seat. A steady engine speed was ensured by a regulator attached to the power unit. With this, the Farmobil could now also be used as an implement carrier for trade and agriculture.

15 examples of the Farmobil 700 were built in the tractor testing division for endurance tests and extended trials. The original plan was to have the Farmobil manufactured by Fahr in Gottmadingen, but this did not materialize as Fahr signed a contract with Klöckner-Humboldt-Deutz (KHD) for the

A Farmobil 700 on offroad tests in autumn 1960.

An early version of a Farmobil 700 being put through its uphill paces.

manufacture of Deutz tractors. This went hand-in-hand with a 25 percent acquisition of Fahr by KHD. That left no more free capacity for the Farmobil, and so the Fahr mechanical engineering company granted a licence for building the vehicle to the Greek brothers Gerasimos and Peter Kondogouris. The latter had previously worked for the Fahr company. In the 1950s the brothers' business had played a major role in selling second-hand BMW motorcycles for constructing the "motorized donkey carts" so popular in Greece. In Thessaloniki they founded the company FARCO A.E. and set up a manufacturing plant. Production was very simple as only a few special tools were required. And so by 1962, the first Farmobil 700 models built there were ready for delivery. FARCO had not only taken over their production but also handled distribution for the Balkans and the Near East. In autumn of 1961 the company had already exhibited the Farmobil at trade fairs in Thessaloniki, Izmir (Turkey), Zagreb (Yugoslavia) and Damascus (Syria) – to great acclaim from the public and with healthy sales.

In 1963 the Chrysler corporation bought out the FARCO company and with it the Farmobil production lines. FARCO A.E. was renamed Chrysler Hellas S.A.I. The Americans hoped for successful sales in the USA after a test model had been successfully trialled in the state of Michigan. But ultimately the vehicle did not go on sale in the States.

Simca with its head office in Paris took over sales in France, while in Switzerland the Farmobil was sold among others by BMW importer MOTAG, and in other countries via the Chrysler International S.A. sales organization. In 1965, BMW AG as general importer took on sole distribution of the Farmobil for Germany.

The Farmobil was roundly praised to the BMW dealers, who were also briefed on the exhibition of the BMW Farmobil programme at the 1965 Frankfurt Motor Show. The sales blurb for the Farmobil issued at the time was not short on promises: "A vehicle with many faces… and even more possibilities… This automobile is built for hard work and easy driving… A test drive with the BMW Farmobil will prompt surprised enthusiasm – on your part and on the part of potential customers. Its wide track allows it to 'stick' to the steepest slopes and to be securely manoeuvred. Its commendably strong and flexible individual wheel suspension ensures that obstacles 230 mm in height can be easily climbed, while 200 mm deep holes are simply swallowed, and 500 mm deep water is washed aside with bravura."

In September 1965, BMW went on to publish a brochure and price list in which the range of potential uses of the BMW Farmobil, now with 32 bhp, were listed along with the fact that the vehicle now had a payload capacity (616 kg) which was greater than its own weight (610 kg). Standard equipment included a front hood, removable doors with plug-in windows, 5x offroad tyres, heating and tools, all for the price of 6,400 deutschmarks. Special options included fold-down sidewalls, a wooden gate, rear tarpaulin and bows, rear hood with windows, rear bench, rear guard rail, power take-off and a creep-speed gear. In total, around 1,000 units of the Farmobil were built before production ceased in 1966/67.

The Farmobil also attempted to launch its career in Britain. The Chrysler-owned Rootes Group imported two Farmobil 700 models for test purposes and gave it the water-cooled engine of the Hillman Imp with front-mounted radiator. These two vehicles were apparently tested by the British Army.

In January 2005, BMW Mobile Tradition was offered a Farmobil. The American seller living in a Geneva suburb, Gregory Bradbury (owner of a BMW M1 and a very rare BMW 530 of the first South African-produced 5 Series), had bought the vehicle in Annecy, France. The model he was offering BMW was his second Farmobil. The French second owner of the vehicle now owned by BMW Mobile Tradition had purchased it from the first owner more than 20 years ago, but had no longer used it in the last years. It was for that reason, and for reasons of age, that he offered it for sale. Bradbury had intended to restore the Farmobil, but professional commitments left him no time for the task.

One can be sure that, in the not too distant future, the Farmobil will emerge resplendent in its old glory again and ready to be taken out on its first spin, perhaps even on "typical" Farmobil terrain – dirt tracks.

02
2006

01 02 03 04 **05** 06 07 08 09 10 11 **12** 13 14 15 16 17 18 **19**

The main picture for each month with scenes depicting the open-air lifestyle is accompanied by four images that tell a little story.

20 21 22 23 24 25 **26** 27 28

Der große Tag. Sonne, Glocken, hoher Himmel.
The big day. Sunshine, church bells and blue skies.

BMW Classic Calendar 2006

Following the major success of the Classic Calendar on the theme of the 1950s, BMW Mobile Tradition has chosen another subject for 2006 which will have BMW fans' pulses racing again: BMW – Wind in your face since 1929.

The BMW Classic Calendar 2006 is devoted to a theme that strikingly epitomizes the "Sheer Driving Pleasure" slogan: Wind in your face. After all, the experience of top-down motoring has traditionally embodied driving pleasure in a very special way with its closeness to nature, all-round view and refreshing airstream. The Classic Calendar 2006 has succeeded in blowing this enthralling breath of freedom right into the living room. Among the 12 emotive images, each staged in the context of its time, are such unique models as the BMW 315, the "sunshine limousine", the BMW 3200 CS Bertone Cabrio – the only one of its kind worldwide – and the BMW M3 Cabrio, dream model of all sporting open-topped fans.
Several BMW motorcycles, including a BMW R 12, a BMW 51/3 of 1951 and a BMW R 80 GS, show that BMW has similarly managed to persuade discerning bikers of the particular pleasures of open-air progress.
The Classic Calendar 2006 is geared to match the high standards set by the 2005 calendar on the theme "BMW and the 1950s" – already a collector's item among devotees of the brand.

Ordering the calendar

The BMW Classic Calendar is available on the internet from the end of November:
www.bmw-shop.de

Single radial engines at BMW

Aero-engine construction in the 1930s

When we look back today to the year 1928, the acquisition of vehicle manufacturer Fahrzeugfabrik Eisenach emerges as an important stage in the history of BMW. That was when BMW started up production of its own automobiles. However, there's another reason why 1928 proved extremely important, even if this second event now barely figures in the memories of those years. On 3rd January 1928, BMW concluded a licence agreement for the two air-cooled engines Wasp and Hornet with American aero-engine manufacturer Pratt & Whitney. This contract enabled BMW to take up its position as a leading German aero-engine manufacturer in the years to come.

By Christian Pierer

The Letov S 31 takes off in 1931 powered by the Hornet engine. At the time, radial engines were still regarded as second rate in Germany.

Water and air-cooled aero-engines

The First World War brought enormous technical advances to aviation in all the countries involved in the war. The demands of the front led to a continuous increase in performance for aircraft and aero-engines. However, there was no single formula for the development of aviation during wartime. Engineers designed a large variety of different aircraft types. In the case of aero-engines, two fundamentally different principles of construction were pursued simultaneously.

One design involved a water-cooled inline engine, which had been developed on the basis of automobile and marine engines from the prewar period. Alongside this, engine designers had also developed an air-cooled engine. The feature of this engine was that the components were not cooled by water but by air.

The big advantage of the air-cooled engine was its low weight, because it required neither a coolant nor a radiator. In order to ensure that all cylinders could be uniformly cooled by the airflow, it was necessary to configure them in a circular pattern. Because of this characteristic design, air-cooled engines were also called radial engines. The disadvantage of this design is that the air resistance of an engine is increased significantly if the cylinders are arranged in a circular pattern instead of in a straight line.

The German military had weighed up the advantages and disadvantages of air-cooled and water-cooled aero-engines, and rejected the radial engine because of its greater air resistance and lower power. The Reichswehr (German Army) gave preference to the water-cooled six-cylinder inline engine. This proved to be a far-reaching decision for ongoing development in Germany, because after the war came to an end, the German aviation industry and German airlines primarily focused on air-cooled aero-engines.

Aero-engine technology outside Germany

While the German military adopted six-cylinder inline engines during the war, the Allies used both air-cooled and water-cooled aero-engines. In contrast to the situation in Germany, this resulted in both designs of aircraft engine being developed further after the war. In the USA, for example, the military actively promoted the use of radial engines. The US Navy supported aero-engine manufacturer Pratt & Whitney in developing the Wasp engine and also installed numerous examples of this type in its aircraft.

Left: Cutaway of the BMW 132 A aero-engine in 1933, the most successful radial engine of the 1930s. Right: The Hornet engine passes its sampling test in Berlin, 1930.

BMW acquires a licence

The circumstances outlined above held back the German aviation industry on the international stage during the 1920s. BMW as the best-known German aero-engine manufacturer succeeded in maintaining its position in international competition for water-cooled units with its BMW VI (see Mobile Tradition live 3/2004, 1/2005), but as far as air-cooled engines were concerned, there were really no home-grown developments by a German manufacturer that could compete.

Around the close of the 1920s, it emerged that radial engines might be superior to water-cooled engines. Two developments had led to this result. Firstly, the bhp outputs only varied marginally in the two designs following a number of technical innovations. Moreover, when drag was significantly reduced by new engine cowlings, the last main argument against the use of radial engines was eliminated. BMW General Manager Franz Josef Popp had followed this development and decided to acquire the licence for the two air-cooled aero-engines Wasp and Hornet, manufactured by Pratt & Whitney. This licence agreement gave BMW two technically refined, modern products and saved the company from having to go through the long and tedious process of developing engines themselves.

The radial engine – a bad investment?

BMW was able to finance the purchase of the licence and the costs of setting up the new production facilities for the Hornet engine from the profits that had been generated from aero-engine business in the preceding years. This laid the foundation for the success of the BMW Hornet. However, rejecting air-cooled engines was to prove a fatal mis-

The Ju 52 was also used after the war. Shown here, a model at the Swiss Aviation Museum in Dübendorf, 1983.

judgement by the Imperial Transport Ministry and the Imperial War Ministry. The officials in charge of policy were continuing to pursue the line adopted during the First World War in 1928, favouring water-cooled versions. Rejection by the state had a particularly detrimental effect on BMW. Deutsche Lufthansa was the most important domestic customer for aero-engines, and they bought virtually no air-cooled units. Chairman of the Board of Management of Lufthansa, Erhard Milch, had to toe the official line because the state was the main shareholder in the company and kept the only German airline going with high subsidies. Milch himself had recognized the potential of air-cooled aero-engines, which were ideal for use especially in civil aviation. But like General Manager Franz Josef Popp, he failed to convince the powers-that-be of the benefits of air-cooled engines.

The breakthrough came with the Ju 52.

The result was that BMW only succeeded in selling a small number of Hornet engines during the period up to 1933. Export business with air-cooled engines was even worse. The biggest foreign customer, the Soviet Union, was likewise not interested in the new radial engines being manufactured by BMW. Although Popp had been correct in his assessment of the technical development, purchasing the licence initially proved to be a mistake that only incurred costs and didn't generate any income. As a result, the licence agreement was brought to an end by mutual agreement in September 1931. The involvement of BMW in the production of radial engines came to an end for the time being.

1933: The situation changes

The assumption of power by the National Socialists in 1933 marked a significant caesura in the history of Germany. Right from the start, Hitler's policies were directed towards war. Consequently, rearmament was pushed forward more intensively after 1933 and the armed forces were given a key role in all aspects of military planning by the National Socialists.

The fundamental clauses in the Versailles peace treaty concluded in 1919 were still valid in 1933. Under this treaty, the German Reich was prohibited from maintaining military forces. While the democratic governments had for the most part kept to this condition, Hitler disregarded it. BMW benefited by receiving several orders for its water-cooled BMW VI aero-engine from the armament programme of the new masters in power. The Reichswehr continued to refuse to entertain the notion that air-cooled radial engines might be used to power modern fighter aircraft.

The radial engine wins through – power unit for the Ju 52

The success story of the BMW radial engines is closely connected with the most famous aircraft of the time – the Ju 52. The Junkers plant in Dessau initially designed the Ju 52 as a single-engine freighter aircraft and it was launched at the start of the 1930s. It quickly became obvious that the aircraft was ideal for transporting passengers. However, all aircraft operated by airline companies were fitted with several engines on safety grounds. The Ju 52 with only one engine therefore became a Ju 52/3m – an aircraft with three engines.

Junkers was not only the biggest German aircraft manufacturer during the 1920s and 1930s, it was also the number two in aero-engine construction after BMW. The company's management therefore favoured their own engines for their aircraft. The intention was to fit the Ju 52 with the Jumo 4, a diesel engine. However, Lufthansa rejected these engines and demanded the installation of BMW radial engines.

The Ju 52 from the front. Clearly visible, its blue engine covers which reduced drag and improved cooling.

Small air-cooled BMW aero-engines for sports aircraft

A new generation of BMW aero-engines – models X, Xa and XI

When you're looking at BMW aero-engines, you inevitably think of the powerful BMW IIIa, BMW 132 or BMW 801. These engines were deployed by civil aviation companies and by the air forces of numerous states. However, at the beginning of the 1930s, BMW endeavoured to open up a new market. The Munich engineers developed the BMW X engine for sports aircraft. The BMW X only had an output of 50 bhp, offering no more than 10 percent of the power of the BMW Hornet, which served as a template for the small radial engines. BMW also exploited the expertise it had acquired since 1917 in aero-engine construction to develop this new generation of engines.

Sports aircraft Klemm L 25 with BMW X aero-engine.

Experience from the construction of motorcycle engines was also channelled into the design of the BMW X. Key components such as pistons and valves were taken over from the tried and tested 750 cc motorcycle engines. The development of the BMW X indicated very clearly that the individual product classes at BMW didn't simply exist alongside each other. It demonstrated that technical achievements were transferred from one product to the other.

BMW planned to supply three engine models with different power classes for sports aircraft. The BMW Xa radial engine generating 68 bhp was launched as early as 1931 and boasted a higher specification than the BMW X. The BMW XI nine-cylinder radial engine was intended to complete the new segment of sports aero-engines. Although this was developed and subjected to in-depth testing on the test rig, unlike the models X and Xa it did not enter volume production.

The Challenge 1930 with BMW X aero-engines

When the BMW X had been developed to volume production in 1930, BMW required a high-profile launch for the new product. A decision was taken to participate in the spectacular Challenge International de Tourisme 1930. The BMW X was installed in the two small aircraft Klemm L25 and BFW M23 and took off on its first big test. Within the space of ten days, the two planes had covered 7,560 km.

Despite extremely adverse weather conditions, the two pilots von Grafenreuth and Böhning succeeded in keeping up with some 60 other competitors. This is all the more astounding given that the other competitors had for the most part fitted far more powerful engines in their aircraft.

Above: Advertisement for the 1930 Challenge.
Below: Route of the 1930 Challenge.

Final assembly of the BMW 132 air-cooled aero-engines at the Munich plant, 1940.

While political pressure had up to then tended to work against the installation of air-cooled BMW engines, the authorities were on the side of the Munich company when it came to fitting a power unit in the Ju 52 in 1932.

However, BMW now had a problem. The company had served notice on the licence agreement with Pratt & Whitney in 1931 due to lack of orders and had to renew the licence in order to be able to continue building air-cooled aero-engines. They succeeded in extending the agreement, and the Americans handed over to BMW the design plans for the latest version of this proven aero-engine, the Hornet S4D2, in 1933. This engine was sold by BMW under the designation BMW 132 and built in numerous versions up until the mid-1940s.

Two sets of operating instructions for the same product. The PWA Hornet S4D2 was temporarily marketed under that name before being renamed the BMW 132.

Mass production

Although the government authorities had been committed to using radial engines for the Ju 52, this by no means represented a sea change in the general scepticism towards this type of engine. The general view remained that air-cooled engines could only be used in civil passenger aircraft and military transport aircraft. The Ju 52 met this specification absolutely. The aim was to build 5,000 aircraft of this type, fitted almost exclusively with three BMW radial engines. Around 500 aircraft went to Lufthansa, while the others went into service with the Luftwaffe (German Air Force), which was being built up from 1933 onwards.

With the benefit of hindsight, it is obvious that the Ju 52 was ready for mass production at precisely the right time for BMW. This was the aircraft that helped the future-oriented technology of the air-cooled radial engine to make the breakthrough in Germany. The officials in the ministries now recognized the potential in the radial engines. The reappraisal even allowed BMW General Manager Franz Josef Popp to give up the production of water-cooled engines entirely, in agreement with the Imperial Air Ministry.

BMW's aim with this measure was to concentrate all its efforts on further developing the radial engines. To this end, BMW joined forces with Berlin-based Brandenburgische Motorenwerke in 1939, when it acquired the second German facility manufacturing air-cooled aero-engines. This merger allowed Popp to turn BMW into the undisputed market leader for radial engines.

This monopoly position had a dual effect for BMW: the company benefited from numerous armaments orders, but it had to put up with a great deal of interference from the National Socialist regime in the internal affairs of the company.

BMW aero-engine construction

Aero-engine construction was always a highly political issue because the government was the main customer. This meant that the regime interfered more in the internal affairs of the companies involved than in other sectors of industry. There is ample evidence of this interference at BMW in the period after the First World War. During the 1920s, development programmes financed by the state even enabled new BMW aero-engines to be developed. These state subsidies were largely earmarked for water-cooled engines. The radial engine played a lesser role in the plans of the authorities and financial support for this area of technology was correspondingly lower.

BMW therefore had to finance technical improvement to the Hornet engine acquired under licence in 1928 and 1933. Against this background, the work done by the BMW engineers on these engines

was all the more astonishing. The stages of progress achieved in BMW aero-engine construction during those years provide an interesting comparison. All the single BMW radial engines had the same capacity – 27.7 litres.

But there are substantial differences in power. The Hornet A acquired from Pratt & Whitney in 1928 only generated 525 bhp. Since 1934, BMW had been manufacturing the BMW 132 on the basis of the design plans of the Hornet S4D2, which generated 660 bhp.

The BMW 132 series H generated 1,000 bhp and formed the culmination of this continuous process of improvement. It was built on an industrial scale from 1938.

The history of aero-engine construction has many instances of engineers attempting to generate more power with greater engine capacity. However, in practice bigger cylinders entail more weight, and this is something that engineers wanted to avoid at all costs.

It is therefore understandable that BMW left the capacity unchanged in the Hornet and 132 models for a period of 15 years. But how did the design engineers manage to increase power substantially, from 525 to 1,000 bhp – in other words by almost 100 percent?

It isn't easy to answer this question, and that makes it all the more intriguing. Essentially, every new engine series contains a wide variety of small new measures to optimize efficiency. The sum of the large number of small changes produced an outstanding result overall.

For example, in the case of the 132 radial engine, BMW decided to increase the revs and raise the boost pressure. New materials were also used and this strengthened highly stressed components like the crankshaft.

However, the key aspect in every radial engine is whether engineers succeed in cooling the engine adequately. The cooling of the engine was continually improved from 1928 by increasing the number of cooling fins on the cylinder head. This created the basic conditions for increasing engine power. The main challenge presented by additional cooling fins was in manufacture. BMW benefited from the fact that the company had its own aluminium foundry from 1918 onwards, one which had been producing outstanding quality for many years.

In summary, the radial engines manufactured during the 1930s were one of the most important products to come out of the Bayerische Motoren Werke. At the time, the construction of aero-engines was rightly regarded as the pinnacle of engine manufacture.

After taking over the licence from Pratt & Whitney, BMW carried out permanent technical innovations to further develop the acquired models. This enabled BMW to play a leading role in German aero-engine production, despite increased competition.

A cylinder head from the Hornet A (right) and the BMW 132 L (left). The much thinner cooling fins of the BMW 132 are clearly visible.

BMW staff manufacturing the BMW Hornet engine, 1943.

View of the Pamir mountain range from the Ju 52.

BMW radial engines in full flight – the legendary Pamir flight of a Ju 52

The path to China

From the 1920s onwards, Germany had had the densest air-traffic network in Europe. However, Lufthansa had not simply focused on making its success in the domestic market since it was founded in 1926. The company had also expanded abroad and offered a series of long-haul flights. Intercontinental flights with freight or passengers were not only prestigious, they were also much more profitable than short-haul flights.

Since the mid-1930s, Lufthansa executives had been pursuing an ambitious project. They wanted to set up permanent air links between Germany and China. Three different flight routes were available to cover this huge distance. The shortest alternative was the flight via Moscow and over Soviet territory. The conditions were outstanding. Lufthansa had operated the Deruluft joint airline for a number of years, plying the route between Königsberg and Moscow. In principle it was "only" necessary to extend the range of flights offered by this company to China. However, relations between China and the Soviet Union were in such a bad way that a flight from Moscow to Shanghai was simply rejected out of hand on political grounds.

Lufthansa had to find an alternative route to China. The British and French airlines flew over India and Indochina. Although this route was considerably longer than the route via Moscow, it was more reliable because there was already an infrastructure for aviation in the European colonies. However, the route didn't really represent a viable alternative. Lufthansa assumed that the British and French would want to support their own airlines and would therefore not grant competing companies a licence to overfly their territories.

There was a third route from Berlin to Shanghai, but this was extremely dangerous. Nevertheless, the airline decided to opt for it as there was no viable alternative, and pilots had to fly over Iraq, Iran and Afghanistan to China. The big risk on this route lay in crossing the Pamir mountain range with its numerous mountain peaks up to 8,000 metres in height. The fact that the average flying altitude for civil aviation at the time was 2,500 metres shows just what a challenge these altitudes represented for aviation.

Lufthansa carried out a number of test flights aimed at overcoming the risks of crossing the high mountains.

Across the "Roof of the World"

On 14th August 1937, a Ju 52 with three BMW 132L aero-engines took off from Berlin in order to fly to China across the "Roof of the World". The three crew members were Flight Captain Carl August Freiherr von Gablenz, Flight Captain Robert Untucht and Senior Radio Engineer Karl Kirchhoff. They had many years of flying experience and had prepared themselves well for the challenge. Even so, the three men had a healthy respect for the journey they were about to under-

take. During their flight, the engines and aircraft were subject to a twin load that was only seldom encountered by civil aviation at the time. The route to be covered was extremely long and it also had to be flown at very high altitudes.

Contrary to expectations, the great weight of the aircraft didn't present any major problems because the Ju 52 and its BMW engines were famous for their dependability and the flight characteristics weren't significantly impaired. Alongside spare parts and provisions, the crew took on board up to 5,000 litres of fuel in order to be able to cover the long distances involved. The normal consumption of the BMW 132 aero-engines was between 430 and 450 litres an hour, but this was significantly reduced under good external conditions. It was therefore possible to undertake the first stage from Berlin to Cyprus in a single day without a fuel stop.

The following days of the expedition also went without a hitch, until the crew reached Kabul airport at an altitude of 1,800 metres. The Ju now had to undertake the toughest leg of the journey – crossing the Pamir mountain range. The aircraft had to fly over the bare mountain landscape with its numerous peaks up to 8,000 metres in height in one day. There was absolutely no question of an emergency landing. A sudden change in the weather conditions might have meant the end for the German aviation pioneers. Despite the hazards, Captain Gablenz lined up for the takeoff. Slowly the aircraft battled for several hours to gain height. The load on the BMW aero-engines increased relentlessly. There was still a question mark over whether the engines would have enough power to carry the aircraft over the Wakhan pass. If the plane – which weighed many tons – proved unable to achieve the necessary altitude in time, the only option open to the pilots would be to jettison fuel in the vague hope that they might gain some further height.

But these extreme measures weren't necessary. The weather conditions remained stable and the BMW aero-engines carried out their mission reliably. The Ju 52 reached Jarkand safely. This was the first time anyone had flown over the Pamir mountain range. It had almost been child's play for the aircraft and engines to master the huge challenge. The remaining sections of the journey to the destination of Sian, west of Shanghai, wasn't a problem for the tough Ju 52. The expedition was a complete success.

Berlin welcomes back the crew: (from left) Untucht, von Gablenz and Kirchhoff.

Capture and happy return

The crew only got into difficulties on their return to Germany. Suddenly, an engine started smoking east of the Pamir mountain range near Chotan. But the situation wasn't critical because the other two engines powering the aircraft were quite adequate to keep the aircraft airborne. Nevertheless, Captain Gablenz decided to land in order to overhaul the engine. It seemed only possible to cross the mountain range with three fully operational aero-engines. The technical problems proved to be slight and within a few hours, the BMW engine was up and running again. However, just before the aircraft started up, it was surrounded by advancing soldiers who took the German pilots prisoner. The plane had landed in Chotan, an area where the Chinese civil war was raging, and the Lufthansa pilots had unfortunately come down there. They were only freed after several weeks once they had been able to convince the soldiers they weren't on a military mission.

It took some further days before the Lufthansa crew were in a position to fly back to Germany. Initially the aircraft had to be overhauled. When this work had been carried out, there was nothing to prevent the return to Germany. On 3rd October 1937, the Ju 52 reached Berlin and was welcomed back by an enthusiastic crowd.

The Ju 52 with crew and locals after landing in Sian.

The Mini estates: ...“revolutionary in concept, smart in appearance”

In August 1959 the British Motor Corporation (BMC) unveiled a small four-seater car which was destined to write a long and celebrated chapter in automotive history. Engineer Alec Issigonis was the brains behind the Mini’s completely newly developed compact construction with front-mounted transverse engine and front-wheel drive. This brilliant concept was so popular that the original saloon was soon joined by other variants in the Mini range.

By Inge Melber

The Mini had been on the market for barely a year in September 1960 when the British Motor Corporation drew back the curtain on the first estate version of the car. Like the saloons, the estate models were also sold under the Austin and Morris brands. The Austin Seven Countryman and Morris Mini-Traveller were virtually identical both inside and out, with only the differences in logo and radiator grille to tell them apart. The new estates celebrated their debuts at the motor shows in Paris and London in October 1960. Various road tests during the previous month had already provided evidence of their impressive attributes.

The estate’s design was based on the Mini Van, which had been launched the previous spring, but the new model came with windows all around. The 848 cc entry model developed 34 bhp and retained the double “barn door”-style rear doors. Despite having a 110 mm longer wheelbase than the saloon, a slightly higher roofline and a total length of 3.30 metres, the estate was still compact and agile. Parking, for example, was pleasingly effortless.

BMC’s marketing department had a well-documented preference for rustic-style estate cars with a rural feel and wood panelling – so-called “woodies”. And the latest estate models were also given the wood treatment in a nod to the early BMC estate cars. By contrast to the legendary Minor “woodies”, such as the Morris Minor Traveller from 1953, the wood had no load-bearing function in the new models, but was purely decorative – the wood strips were simply glued on. Of course, this bumped up the vehicle weight compared to the Mini saloon – by as much as 50 kg, depending on the specification levels. And that, in turn, had a predictably adverse effect on fuel consumption and acceleration. However, its top speed of 112 km/h wasn’t much lower than the saloon’s. The launch price for the car in the British market was the same for both brands: 623 pounds.

The Austin Seven Countryman. This rustic-style family car proved ideal for conveying passengers and for leisure use.

The Mini Clubman estate replaced the Countryman and Traveller estate models in October 1969. The completely reworked front end was designed to give the new estate a more grown-up and secure look.

From 1961 the estate models were also available outside Britain without wood trimmings. And from October 1962 also British customers could choose between the “woody” and the cheaper wood-free model.

Practical, but stylish too

The greatest quality of the small but agile Mini estate was its versatility and practicality. This could be a spacious work car for business travellers, officials or tradesmen, a touring and family car with four comfortable seats – “for the pleasure and convenience of the modern family” – or a two-seater commercial vehicle for transporting loads. The car could be transformed from one type into the other quickly and easily, and the wide-opening split rear doors ensured easy access to the load and luggage area. Folding down the seats extended the length of the loading surface to 120 cm, freeing up capacity of some 1,000 litres. Even when the car was carrying four passengers,

A sales brochure from 1964: Morris Mini Traveller – “Pile in! There’s room for everything...”

there was still an astonishing amount of room for items of luggage. In Great Britain this type of body variant had always enjoyed widespread popularity among motorists. And here was a time-honoured expression of the British way of life, valued not only as a practical mode of transport, but also as a decidedly stylish way to travel.

User-friendly sliding windows at the front and rear and the two exterior mirrors required by law for estate cars – which were mounted on the front wings of the Mini – were fitted as standard. Unlike the rear-view mirror, that is, which was still marooned in the options list. Indeed, it wasn’t until September 1964 that this item finally made it into the range of standard equipment. Otherwise, the estate had all the trimmings of the deluxe version of the Mini saloon.

The second generation

The first-series Mini estate – the Austin Seven Countryman, which was renamed the Austin Mini Countryman in 1962, and the Morris Mini-Traveller – were replaced by the second-generation models in 1967, by which time a total of 161,000 units had rolled off the assembly line.

In 1967 the British Motor Corporation unveiled the new Mk II Mini at the London Motor Show under the slogan: “Still the incredible revolution”. As before, it was available in two almost identical versions – and these were now known simply as the Austin Mini and Morris Mini. Like the Mini saloons, the Austin Mini Countryman Mk II and Morris Mini-Traveller Mk II estate variants had also been fitted with one or two new features. These included the striking new radiator grille (still bearing the hallmark distinctions of the Austin and Morris brands), changes to various details in the interior and several technical improvements.

The key modification to the outgoing models came in the form of a more powerful engine. Now boasting displacement of 998 cc and developing 39 bhp at 5,250 rpm, the new power unit gave the little all-rounder an extra boost of energy. A synchromesh transmission was introduced in 1968, while all Mini estates could be ordered as an option with automatic transmission from the start of series production. The rear of the car, on the other hand, remained unchanged, retaining the double “barn door”-style rear doors. Even if this element of the car’s design was no longer exactly cutting-edge, it clung on until the Mini estate models finally disappeared from the production schedules in 1982. Incidentally, the second-generation estates could still be ordered with or without wood décor, as the customer desired.

Demise of the “woodies”

In early 1968, BMC and Leyland merged to form British Leyland. Then, in the autumn of 1969 and with 46,000 Mk II estates produced, Mini witnessed the end of the era of the Austin and Morris brands. The Countryman and Traveller designations were also dropped. This development marked the end of the wood-panelled Mini estate – the “woody”. From now on, all models were sold under the brand name Mini.

An Austin Mini Countryman. The estate was a hit even without the wood trim. A lower-priced export model without wood décor went into production in April 1961, but was not available in the British market until October 1962.

British Leyland used the launch in October 1969 of the new generation of Mini cars – produced under the works designation ADO 20 – to unveil the Mini Clubman alongside the regular Mini. The Clubman, which could be ordered as either a saloon or an estate, was intended to mark a new beginning. The new model was all about preparing for the 1970s with a state-of-the-art, comfortable and safe small car. However, the new design enjoyed only limited popularity and was even considered a step backwards in some quarters. The Mini Clubman estate, meanwhile, filled the shoes of the Countryman and Traveller.

Sharp-angled exterior, attractive interior

The Mini Clubman was given an all-new front end, featuring a wider and more sharply angled form, and an improved headlamp arrangement. The new “nose” created more room under the bonnet, which blended in harmoniously with the front wings to set the seal on the new design. A distinctive Clubman logo took pride of place on the chrome-trimmed radiator grille. Inside the car, the instruments were now grouped behind the steering wheel, putting them directly in the driver’s field of vision.

All Clubman models, including the estate, were powered by the tried-and-tested 998 cc powerplant developing 39 bhp at 5,250 rpm. The total length of the Mini Clubman estate was 340 cm. It was fitted with wind-down windows at the front, while the sliding side windows in the rear compartment were left untouched. The styling of the rear, with its double outward-swinging doors, also remained largely the same.

The only decoration at the rear was a chrome-ringed “wood-look” plastic trim strip, matching those along the sides of the car, and a Clubman estate badge on the right-hand door wing. While the wood trim used for the Countryman and Traveller was always the real thing, if largely superfluous, the Mini Clubman estate had to make do with a cheap imitation. This “fake” wood was replaced by painted side stripes all round in 1977.

End of the road for the estate in 1982

The financial situation at British Leyland was precarious and the pressure to cut costs immense. And that meant it was October 1975 before any further modifications of note were introduced. All Clubman models, with the exception of the automatic versions, were now powered by a 1,098 cc engine. In the Mini Clubman estate, this powerplant developed 45 bhp at 5,250 rpm and was good for a maximum speed of 130 km/h. Other facelift measures followed on the inside and outside of the car, the most prominent of which was the redesigned radiator grille with new logo introduced in 1976. Steadily declining sales eventually saw the Clubman pulled from production in August 1980.

It was left to the estate model, which had been rechristened as the Mini 1000 HL estate in October 1980 and fitted once again with the smaller 998 cc engine, to fly the flag for another two years before the company finally pulled the plug on production in February 1982. A total of 197,606 Mini Clubman estates were produced between 1969 and 1982.

In all, an impressive total of 400,000 units of the various Mini estate models were built between 1960 and 1982.

From the 1960/61 sales brochure: the Austin Seven Countryman.

BMW Summer & Film Party

The first Summer & Film Party held by BMW Mobile Tradition at the BMW Museum next to the Olympic Tower revolved around the many fascinating BMW-related films that have emerged over recent years: from the world-renowned shorts of bmwfilms.com and exciting motor racing footage, all the way to the anniversary documentaries by BMW Mobile Tradition on "30 Years of the BMW 3 Series" and "25 Years of the BMW GS". Heavy showers did nothing to dampen the exuberant atmosphere.

By Sinja Lohse

The weather didn't exactly play along: it was bucketing down when the first BMW Summer & Film Party opened at 7 p.m. on 30th July 2005. But that did nothing to put off the crowds. Even before the event started, people were thronging the entrance to the BMW Museum next to the Olympic Tower. Evidently word had got around among BMW fans that the previous event at the BMW Museum in October 2004 had been a thrilling, action-packed and entertaining affair. Numerous guests cited the BMW Night Race as the reason for coming to this year's Summer & Film Party.

There were two major anniversaries to celebrate: "30 Years of the BMW 3 Series" and "25 Years of the BMW GS". The celebrations were backed up by a host of entertaining and illuminating activities. In the course of the year, up-to-date footage on both themes had been shot and was presented at the event. The theme "25 Years of the BMW GS" was at the heart of the new mobile tradition live TV format that was introduced to the many fans attending the evening. Its aim is to provide a service that communicates ongoing news and offers relating to BMW's heritage.

Live racers

In addition to the current museum exhibition, which was also open for view on the evening, visitors were able to admire the "birthday models" as well as the very latest versions. All the

Variety was the spice of the evening: the crowds who came to the BMW Summer & Film Party enjoyed a wide range of racing films, BMW Mobile Tradition documentaries and even an internet image film.

The rain did not deter the crowds: many visitors had flocked to the museum even before the official opening of the event.

generations of the BMW GS motorcycle, including the new BMW HP2, together with the BMW 3 Series all the way up to the latest model were on show. The motor sport theme was also honoured by an M3 display. The incredible advantages the BMW M3 brought to the race track after its launch in 1987 were explained a little later on by Marc Hessel, who was a racing driver at the time and won the inaugural event with this car on the Nürburgring. Even 18 years on, Hessel still waxes enthusiastic about the unique relationship between engine performance and vehicle weight that made the BMW M3 one of the best racing cars of all time.

Living heritage

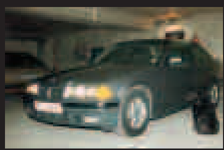
Visitors were as delighted with such accounts that brought the past to life as they were with the chance to contribute their own little piece of history. In order to bring the BMW past even more vividly alive on the night, visitors had been invited to bring along their own personal BMW history – in the form of a photograph of their BMW 3 Series or BMW GS, which would then become part of a large “Anniversary Multipicture”. And so in the course of this fun-filled evening the company history merged with the personal lives of the visitors. Everybody who submitted a photograph, moreover, was entered into a major prize draw. The winner could look forward to a weekend in a spa hotel with the new BMW 3 Series. In the course of the evening, the many photo contributions made for a colourful panorama of the various generations of the BMW 3 Series and BMW GS models.

Festive atmosphere: a marquee specially erected in front of the museum was the venue for the prize presentation, a journey through “30 Years of the 3 Series” and a film show featuring the shorts of the bmwfilms.com series.

BMW Summer & Filmparty Annive



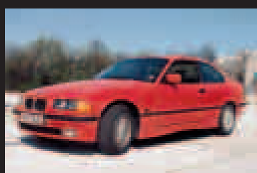


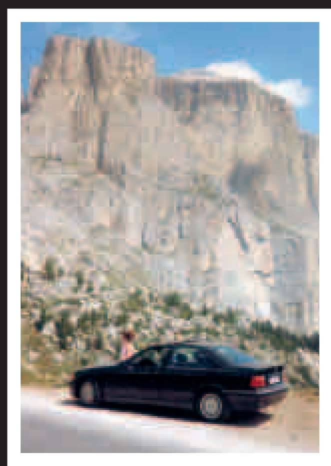









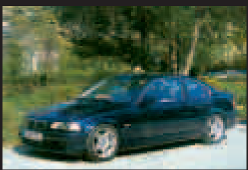




ersary Multipicture

30 Years of the B

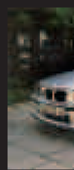




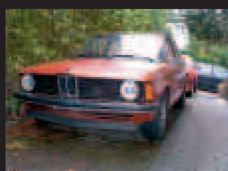










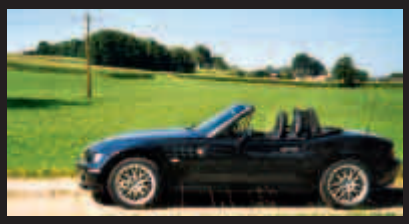


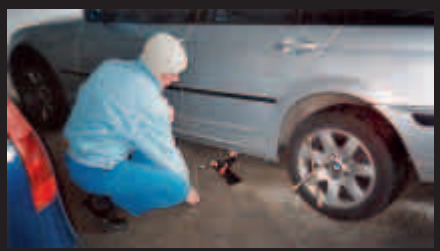







MW 3 Series. Unequalled right from the start. 25 Years of

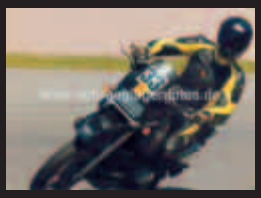


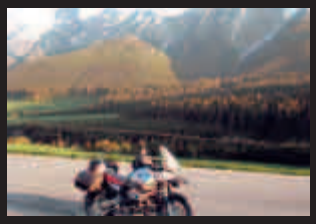


the BMW GS. Where the road stops the fun starts.
















The attractive location of the BMW Museum, with its numerous exhibits from the company's past, offered the 3,000 or so guests attending the event the perfect setting in which to enjoy the BMW films on the programme. They ranged from motor racing and model launch films all the way to high-speed motorcycle movies. Various associated themes were illustrated in an endless loop at a number of film stands. Special highlights were the two films 30 Years of the BMW 3 Series. Unequalled from the start, which had already been shown to great acclaim at the launch of the fifth-generation BMW 3 Series at the Geneva Motor Show, and the documentary The White Phantom, profiling the legendary world record-breaking motorcyclist and driver Ernst Jakob Henne, who died in May of this year.

High-speed action, high-profile stars

At 10 p.m. the lights were dimmed in the marquee for a showing of all the films in the bmwfilms.com series. In The Hire, Hollywood star Clive Owen was seen driving a range of BMW cars through high-speed action films directed by John Frankenheimer, Wong Kar-Wai, John Woo, Alejandro González Iñárritu and other world-renowned film directors. Playing in "minor roles" were stars such as Mickey Rourke, James Brown and Gary Oldman – in films that spared neither cars nor nerves. Probably the best-known film of the series is Star by director Guy Ritchie, with Madonna in the lead role. She is totally thrown by the insane driving style of Clive Owen and ends up falling out of the car door and onto the red carpet at the feet of the waiting media.

And there was more

A journey through time with a live presenter took the audience through the various generations of the 3 Series. Holger Lapp, Director of BMW Mobile Tradition, brought to life some key moments from the 1970s and '80s to exemplify the phenomenon that is the BMW 3 Series. Enlightenment on the "silver anniversary" of the BMW GS came from Dr Herbert Diess, head of BMW Motorrad. Using the latest two-wheeled model, the HP2, he pointed out the components that had turned this family of motorcycles into BMW's bestselling range. In addition to the films, there were also a wide range of attractions to suit everybody's taste. While the youngsters had great fun with the big Balloon Race (the further the balloon flew, the higher the chances of winning), 3 Series drivers were challenged in the Anniversary Quiz: a narrow strip of photos showed the typical BMW "kidney grilles" of the five generations of the BMW 3 Series. Not everyone had an easy time matching the right kidney with the right model.

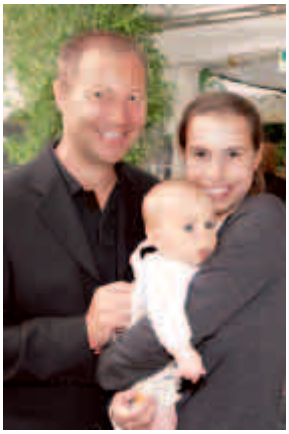
Glass workshop draws crowds

As there's a mechanic inside every man, the "glass workshop" also proved a major draw. The fact that there was a BMW 2002 parked on its hydraulic ramp was an added attraction, as many of those attending still remembered the car from first-hand experience or at any rate from the streets of Munich in the 1970s. The fascinating sight of the workshop team beavering away at this dated car prompted a steady stream of questions throughout the evening. Where else could you peek under the engine compartment and witness the mechanical marvels of car construction at close quarters? And with no risk of getting grease on your jacket.

Lucky winner: host Jochen Sattler and Sinja Lohse of BMW Mobile Tradition's Marketing and Communications present the main prize.

At the end of the film night, visitors went away delighted and impressed by every aspect of the evening's programme – except perhaps the weather, as the rain did not let up all evening. It played its role in making it a most memorable "Summer Party".

A good time was had by all: (from left) Hans Friedrich Andexer (Team Andexer GmbH) in the glass workshop, Dr Herbert Diess next to a BMW HP2, the young family of DTM racing driver Marc Hessel, and Melina Aulinger of the BMW Mobile Tradition team talking shop with guests.



Willy Huber – lake-dwelling metal artist

Tomes are written about racing drivers and car designers, and they are ever assured the keen interest of the media. But little is said about the back-room boys who do all the hard graft – the mechanics. Yet among their ilk they count some genuine artists. This is the story of one such gifted artist who, when it came to building racing engines as well as car bodies, ranked among the best of his kind.

By Hagen Nyncke

Wilhelm Huber was born on the Fraueninsel, an island in Lake Chiemsee, on 8th October 1910. After elementary school, he completed an apprenticeship as a mechanic. During the tough years of the Great Depression he was relieved to quickly find a job with the Bavarian Castle and Lake Administration on neighbouring Herrenchiemsee island. He had his work cut out here, as the fairytale palace of the Bavarian monarch resembled a permanent building site. But it was not very exciting work, and it was badly paid. Young Willy felt drawn into the big wide world. Thanks to the good offices of a Professor of Mechanical Engineering who had a holiday home at Lake Chiemsee, he joined BMW. On 17th October 1933 he took up his post as an engine mechanic in the motorcycle test department headed by Rudolf Schleicher.

His wage negotiating skills were evidently not well honed as his starting pay was a modest 65 pfennigs an hour. But at least he had found work with BMW.

At the time, Schleicher's testing department was still housed in an old wooden hut, but it was here that Willy Huber learnt everything about engines and was able to apply his own skills in metalworking. Within the department a great deal of testing was carried out,

Facing page: The artist and his work. Willy Huber in the HH 48 Formula 2 race car.
Right: Willy Huber's works pass.

prototypes were built and new concepts were trialled in everyday situations as well as on the race track. Huber was allowed to work on Ernst Henne's record-breaking models and was also frequently sent to work as a mechanic at factory-supported racing events. That is how he came to be Ernst von Delius' mechanic at a variety of circuits. When the BMW factory called its own racing division into being in autumn 1936, Huber was one of the first on board when it came to testing the new 328 model out on the race track. But he never got behind the wheel of these fast sports cars as he didn't have a driving licence. However, his knowledge of engines earned him a place as an indispensable member of the team charged with further development of the sports car that was to make an enduring mark on the racing arena in the late 1930s, both in Germany and beyond.

Willy Huber's diligence and prodigious craftsmanship skills did not go unnoticed by Schleicher, as a result of which his wages were notably increased every six months despite an official pay freeze. But Schleicher was determined to do all he could to foster his young protégé. The new car marked its debut abroad on 28th June 1936 in the French Grand Prix at Montlhéry. The three teams of drivers comprised Ernst Henne/Bobby Kohlrausch, Fritz Roth/Christian Kautz and Aldington/Fane. It wasn't long before the sports cars came down with all manner of teething troubles. Kautz was the first to head back for the pits with the sparks showering out from beneath his BMW. His engine support bracket had broken and the prop shaft was scraping against the space frame. As there was no welding equipment nor spare parts available, Willy Huber had to stabilize the engine by means of a lever held in place with wire between the frame tubes.

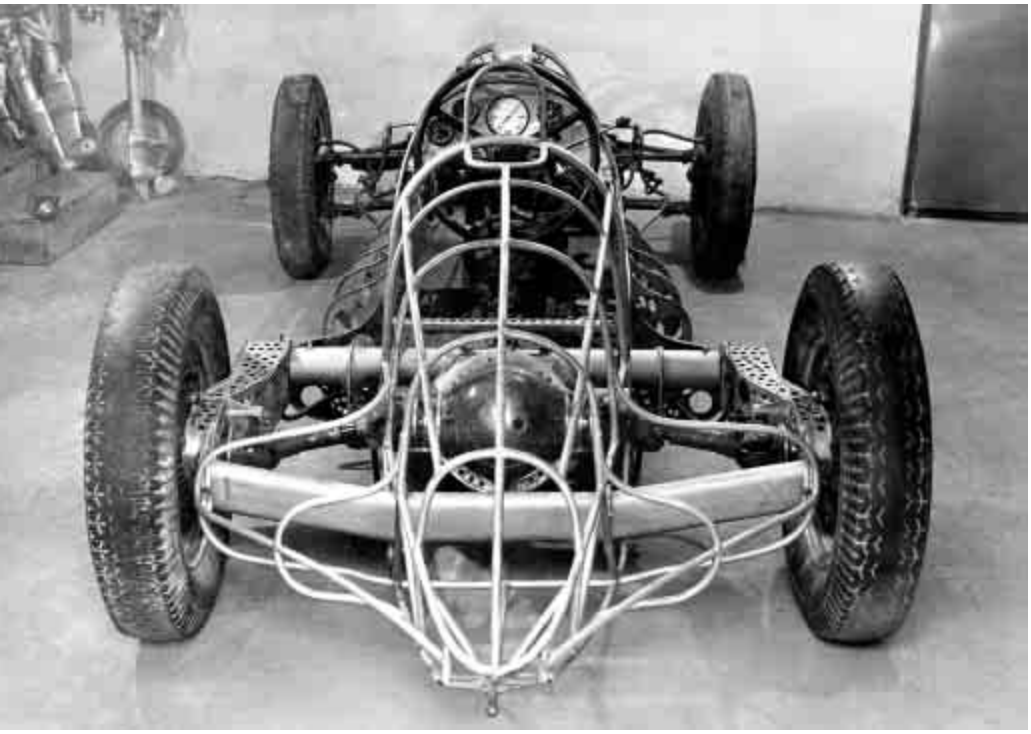
It was obvious that this stopgap solution could not last, but the aim was to glean as much experience as possible from this event. It wasn't long before Henne's BMW retired from the race with the same fault. Only Aldington and Fane managed to last out a little longer, but Huber had to change their rocker arms, which weren't up to the task.

After the initial weaknesses were swiftly eliminated, no rival could hold a candle to the BMW 328 any longer. On race tracks throughout Europe it raked in one victory after another. The factory kept sending seasoned drivers onto the track to hone the cars further. Strikingly, it was mostly the same cars that were fielded time and again over the years.

At countless of these events, Willy Huber was on the spot as a dedicated mechanic. But his workplace wasn't only in the pit garage. He drove the entire course of the 1938 Mille Miglia during training as a co-driver to Ernst Henne and

Below left: A rare shot of a mechanic at work: Willy Huber welding a car jack at the 1938 Mille Miglia.
Below right: The first postwar pontoon-style body – Heinz Sauermann in his BMW Special.

Uli Richter. He evidently had talents in the navigator's seat too. Munich driver Fritz Roth took him with him as his co-driver on the 1938 and 1939 International Alpine Trials. A class win and overall victory show that Huber clearly knew what to do with the stopwatch and route map.



HH 48 Formula 2 race car skeleton.

But there were a few events abroad involving the BMW sports car which reflected a spirit of adventure rather than perfect organization. Huber had been sent to England for the company's involvement in the 1938 Tourist Trophy in Donington. Due to the chronic lack of foreign exchange in the German Reich, he had been given four pounds sterling in travellers' cheques along with 250 silver reichsmarks, which he was to exchange at an English bank. He was quickly rid of the first two pounds in the port of Bremen when the captain of the freighter insisted on being paid in hard currency.

Desperately seeking sterling

When he eventually arrived in London, Huber dropped in at Barclays Bank, as arranged. But no-one there was willing to give this "Hitler man" any pounds in exchange for his silver German marks. And so he continued on to the nearby town of Isleworth where Frazer Nash, BMW's British importer, was based. As H.J. Aldington, the boss, was absent and his deputy was not exactly well disposed towards the German, he found no help there either. So he made his way back to the docks where he could at least unload his three sports cars. The plan was for him to drive the first to Donington himself the next day, coming back by train to pick up the second and then the third. But it was raining heavily and the dockers were in no mood for work. It was obvious that he wouldn't get very far with his remaining two pounds, so he decided to spend the night in Hyde Park – but was soon moved along by the Bobbies. He began walking the streets of London to pass the time. In a pub he encountered a familiar face. It was the mechanic of British racing driver Earl Howe. He was supposed to be sorting out the brakes on the Earl's Delage, but after imbibing in too much alcohol was no longer in a fit state to do so. Willy Huber took over the task and the Earl gave him a wad of pound notes for his services.

There followed a great many more racing involvements at home and abroad. As the political situation in Europe continued to decline, Schleicher made sure he would not lose his favourite mechanic to other requirements. He had the relevant Wehrmacht authorities declare him indispensable in the event of any mobilization to save him from being called up for military service.

Huber was also given above-average payment to sweeten the countless hours of overtime and weekend work he put in at the race tracks. A minimum 48 working hours, after all, boiled down to a six-day week, and there were just seven days' holiday a year. But with an hourly rate of 1.20 reichsmarks he was now earning more than many of his colleagues.

Willy Huber displayed outstanding skills when it came to panel-beating. Apart from making motorcycle fairings, he was also allowed to work on the aluminium bodies of the BMW racing cars. The leaders in body manufacturing at the time were indisputably the Italians. Coachbuilders Touring of Milan had developed the "superleggera" principle of lightweight construction using a filigree tubular space frame covered in a thin aluminium skin. Commissioned by the Supreme National Sports Body for German Motor Vehicles (ONS), work was under way here in spring of 1939 to create a coupé body for a BMW 328 chassis, the model that would go on to win the 1940 Mille Miglia. Willy Huber had been sent to the company for a few weeks with the aim of working alongside the Italians and deepening his knowledge of handling aluminium. There was still a lot to be learnt when it came to aluminium welding in particular. It is likely that he was also involved in building the bodies for the Mille Miglia roadsters.

But Huber's specialization were engines. The cylinder heads of all five Mille Miglia cars were his own work. He had pulled out all the stops to get the

Wilhelm Bräuning and Willy Huber with the completed HH 47 sports model.

Ready for delivery: the HH 48 is driven out of the garage by Huber's assistant.

engines raceworthy when they were sent out onto the autobahn for a final test run shortly before the race. He gave the drivers very detailed instructions on how to handle the engines, but they simply put their foot to the floor. That evening saw three damaged engines on the workbench. Willy Huber worked through the night and managed to repair two of them. When he was about to hand the third engine over to another mechanic, Ernst Loof, who headed the racing division, threatened not to take him to the event. And so a desperately sleep-deprived Huber got the last engine up and running as well. The triumph of the German team must have brought him a great deal of personal satisfaction as well – and helped him get over the wearying difficulties with his boss.

His last assignment for the racing division was at the end of August 1940 at the race in Brasov, Romania. As a co-driver, he had made his way in the race car along the wretched roads of the Balkans to the circuit only to find that the event could not be held due to the war situation. The return journey is said to have taken him a week.

The closure of the racing division in April 1941 meant the start of Willy Huber's involvement in the war. He had already been trained with the 801 aero-engine and knew the powerplant inside out. Although he enjoyed his work, he missed the opportunity of putting the results to the test himself. Even during the war, contacts between the BMW staff did not break off. Huber was posted to Paris, where repair workshops for the front line were set up in the former factories of Gnome & Rhône and Hispano Suiza. Heading this department was Hermann Holbein, a former engineer in BMW's chassis test department and thus an old acquaintance. By virtue of his organizational talent, Willy Huber was always dispatched to the "hot spots". And so he went on to postings in Argenteuil, St. Albert and Clermont-Ferrand, where he himself would be in charge of large groups of assembly workers, a job that strictly speaking should have been carried out by a head foreman.

Above left: Unusual freight – a racing car on Lake Chiemsee. Above right: Metalwork session – Willy Huber (centre) with two assistants and the bodyshell of the HH 49.

A Type 50 AFM for Nuremberg racing driver Fritz Riess. At the 1950 Schauinsland Hillclimb he took victory in the Formula 2 racing car class.

On the basis of his performance, he was ultimately promoted to head assembler in 1943. After the Allied invasion and the dismantling of the war repair workshops, he returned to Munich and moved into the technical service department, where he was responsible for testing and approving engine test rigs. When the war ended he had to bid farewell to BMW: on 20th April 1945 he was dismissed due to "the suspension of production".

Race cars ride across the lake

Huber returned to the Fraueninsel where he set up a small workshop. Initially he carried out repair work on boats and boat engines for the American occupying forces. Somehow one had to keep one's head above water in this devastated country. But by the end of 1946 there was light at the end of the tunnel. Ernst Loof, who had ended up in Leinau, a small Bavarian village near Kaufbeuren, wrote to him regarding an interesting project: he was planning to start making sports racers again. They were to be based on the chassis and engine of the BMW 328, but with a completely different body. Already during the war, the National Socialist Motoring Corps had commissioned Touring of Milan with building three roadsters featuring pontoon-type streamlined bodies with a view to participation in the Berlin-Rome marathon. But as the race never materialized, they remained untouched. Loof used a scale model as a bait, and Huber duly made his way to Leinau to return to working as in the old days.

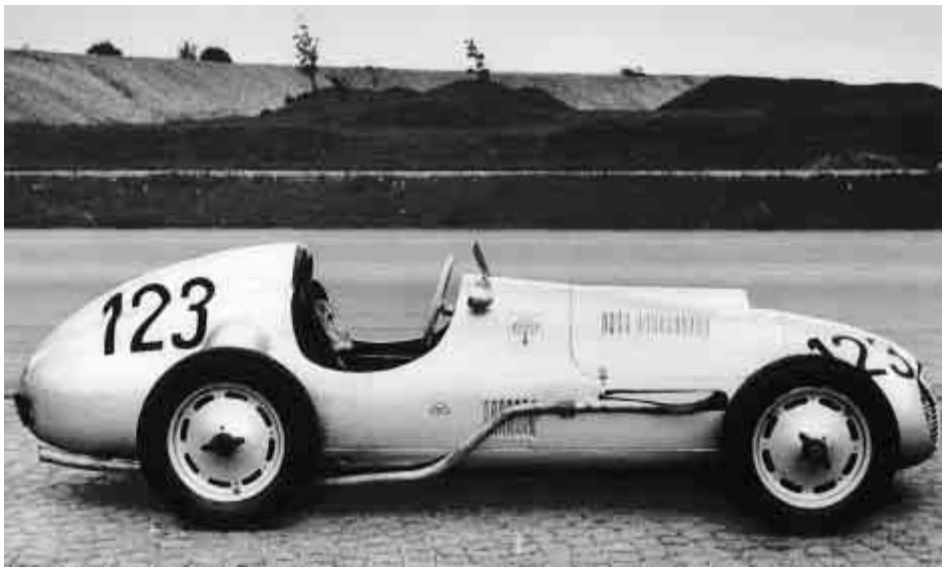
What he found there bore little resemblance to what Loof had promised him. Both his accommodation and the working conditions in what was barely more than a glorified scrapyard could only be described as wretched. But Huber stuck it out and within three months the body for the BMW 328 Special destined for Munich businessman Heinz Sauermann was completed. Loof had another two buyers lined up for his new sports racer, namely Hermann Holbein and Karl Kling. But when the unacceptable conditions were compounded by difficulties regarding payment, Loof and Huber parted company.

Holbein now took the construction of his sports racing model into his own hands and invited Huber to join him in Herrlingen near Ulm. He was greeted here not only with decent accommodation, but working in Holbein's own garage next to his villa was also far more pleasant than at his last workplace. When neighbours began to complain about the loud noise in this quiet residential district, Huber turned to a local workshop, where he completed the car together with metalworker Wilhelm Bräuning.

Externally, the car was barely distinguishable from the Sauermann BMW. The Holbein BMW, initially with blue then silver paintwork, became known as the HH 47. The abbreviation HH stood for Hermann Holbein, the 47 for the model year. For the forthcoming season Holbein already had fresh plans. He was designing a single-seater racing car for the newly launched Formula 2 and tasked Willy Huber with building the entire car, including tuning the engine.

But Huber had had enough of the gypsy life and now wanted to work at home and nowhere else. From now on, a

Only the last of the cars received this badge as a mark of their origin.



Huber built the last Type 50 AFM for Willi Heeks in 1952.

former boathouse on the Fraueninsel would serve as his race car workshop. Naturally the finished car could not be tested on the island, and so a provisional platform had to be mounted onto a low freight ferry in order to convey the racer safely to the other shore. It was a bizarre sight but one which local residents got used to as the number of cars being shuttled back and forth across the lake steadily increased. Holbein had another Formula 2 race car built by Huber, namely the HH 49.

Vehicles of every description

Another old acquaintance also put work his way. Alex von Falkenhausen, who had been with BMW in the 1930s as a designer in the motorcycle department, had made a name for himself not only as an excellent racing driver but, after the war, also as an inspired designer of his own sports and racing cars badged as AFM (Alexander von Falkenhausen München). His two cars for the 1949 season, driven by himself, Hans Stuck and Teddy Vorster, had been given bodies by an unknown sheet-metalworker. Presumably he had not been persuaded by the quality of craftsmanship on these projects, as he had the bodies for the three subsequent Type 50 single-seaters built by Huber on his island. For at least one of these racing cars, records indicate that Huber was also responsible for its entire technology. With these Formula 2 cars, drivers Willi Heeks, Fritz Riess and Hans Stuck continued their successful racing careers for some years to come.

In addition, there were commissions to build special bodies for private customers. For the Augsburg factory owner Wilhelm Martini he built a Volkswagen with an attractive convertible body, as well as a stunning Fiat Topolino which reflected the design of the Veritas racing cars in miniature. Unfortunately Willy Huber himself left hardly any records regarding his projects. It is quite conceivable that he built even more interesting models of which we know nothing. His apparently final order to build car bodies once more came from BMW. In the racing division, now led by Alex von Falkenhausen, plans to build a genuine race car based on the BMW 700 had ripened in 1961. Heinz Eppelein was the designer of the small Spyder and the space frame had also been constructed at the plant under his auspices. But there was nobody on site who could build a suitable aluminium body for it. Willy Huber inevitably sprang to mind, and he was naturally happy to take on the commission for the two bodies.

Boats for the border police

Huber's field of activity was not exhausted by cars. Word had quickly got around that this man could do anything remotely connected with metal. He repaired outboard motors for fishermen, made metal fittings for speedboats and built conservatories. But his main occupation in the 1960s and '70s was boatbuilding. Around 20 stainless steel vessels rolled out of his workshop, destined as fishing boats on Lake Chiemsee or as motorboats for the border police on Lake Königssee. Some of his products are still in use today. With advancing age, however, he increasingly turned to more manageable assignments, earning a reputation above all for his artistically worked carriage lamps, which he built in quantity.

An artist like Willy Huber would undoubtedly have acquired a certain prosperity in our day and age. But he himself remained a modest man – for him the quality of his work was more important than mere financial reward. Willy Huber died on 9th September 2002 at the age of 91.

Above left: Willy Huber built a beautiful mini-Veritas based on a Fiat Topolino for the manufacturer Martini. Above right: Final commission from BMW – aluminium bodies for the two BMW 700 RS models.

Biker Meeting 2005

The 5th BMW Motorrad Biker Meeting coincided with the 25th anniversary of the BMW GS. BMW Mobile Tradition laid on a wide range of activities in celebration of this successful motorcycle concept. The highlight was the presentation of the new BMW HP2, which was put through its paces by leading international racing bikers.

By Sinja Lohse

The clouds hung heavy over the Zugspitze and Hausberg mountains and the rain beat down on the town of Garmisch-Partenkirchen. It is hard to believe that it was the first day of the summer month of July. Yet this year once again the BMW Motorrad Biker Meeting attracted crowds of participants. Perhaps it was because, as the host pointed out, "by tradition it rains on at least one of the three days". Perhaps it was also because many of the more than 30,000 BMW motorcyclists were well kitted out with BMW bikers' gear and as a result were barely affected by the rain. But there was one indisputable reason why not even the most adverse weather conditions could stem the tide of visitors to this

Left: Great leaps with the BMW HP2.
Right: The classic parade was well attended again while the BMW GS theme was the talk of the town.

event: the powerful charisma of the BMW motorcycle brand.

The response was truly impressive. In 2005, the year of the fifth BMW Motorrad Biker Meeting, there were records to be noted once again. More than 30,000 bikers met up in the idyllic Upper Bavarian town, whose mayor, Thomas Schmid, was delighted, as he has been for some years now. This was, after all, the fourth time that his town was hosting the bikers. Indeed, everyone involved was delighted. Local restaurants welcomed the many visitors, hotels and pensions were fully booked, and the motorcyclists enjoyed hospitality that just gets better and better and was already signalled by the numerous welcome flags flapping along the approaches to Garmisch-Partenkirchen. Even the police were delighted with the swarms of bikers on roads that normally present a problem when it comes to two-wheeled progress. The difference compared to many another biking aficionado was particularly evident during a ride across the famous mountain stretch of the Kesselbergstrasse. Among those attending the BMW Biker Meeting, riding pleasure significantly overrides any desire to take risks on the road. This relaxed enthusiasm for "their" BMW brand distinguished the entire meeting and even spread to the representatives of the law.

This year, moreover, there was a special anniversary to be celebrated. In 1980, BMW Motorrad launched a new model range – the BMW R 80 G/S. Back then, quarter of a century ago, the market launch of the new concept had a dramatic impact. The market segment of the touring endurance bike was born. Technological innovations such as the introduction of the Telelever fork as standard for the first time had the press fizzing with excitement, and there were rave reports on the handling of the G/S. A powerful engine quickly won over fans among devotees of long-distance, exotic travel destinations that occasionally took riders off the beaten track. The comfort offered by the new bike, moreover, not only allowed for longer non-stop stretches but had owners of other endurance bikes switching to BMW in their droves. The GS concept was a resounding success, and today the various GS models account for almost 30 percent of BMW motorcycle sales.

And so the anniversary in Garmisch-Partenkirchen was celebrated by a broad gathering of GS fans from far and wide: bikers had come all the way from Spain, Turkey and even Russia to take part in the festivities marking 25 years of their favourite two-wheeler. Among them was Igor Brezovar of Slovenia, who has already travelled to 75 countries with his R 1100 GS and has received a special award for his motorcycling passion. The prize for the furthest journey to the event surprisingly went to two Garmisch-Partenkirchen locals. To get to the BMW Motorrad Biker Meeting they had chosen to take an 18,950-kilometre detour around the Mediterranean.

BMW Mobile Tradition had also compiled a comprehensive press package on the theme of the GS anniversary. Issue 02/05 of Mobile Tradition live marked the 25-year GS anniversary with a cover feature that included a comprehensive retrospective of the success story of a motorcycle concept that has lost none of its fascination even quarter of a century on. Many of those attending the BMW Biker

Once more the traditional biker party proved a main highlight.

More than 30,000 bikers from over 40 countries attended the 5th BMW Motorrad Biker Meeting in Garmisch-Partenkirchen, tested the latest BMW models and took part in the parade of 1,200 motorcycles through the Werdenfelser Land. Below: BMW Mobile Tradition questionnaire.

Meeting read the magazine and gleaned many details and background stories on the GS tradition.

More than 700 visitors took part in an extensive questionnaire by BMW Mobile Tradition on topics revolving around the BMW GS range, BMW Motorrad in general and the importance of heritage (see also box below). The highlight of the questionnaire was the BMW GS quiz, in which each contestant was played four different motorcycle sounds and had to identify which one belonged to the GS. Those taking part in the quiz automatically qualified for a raffle that was hosted on the first day of the meeting by the popular bike-loving TV presenter Harry Weber.

There were more than 100 prizes to be won, from a complete GS Rallye 2 suit and the latest GS AirFlow helmet all the way to publications from the BMW Profiles series and DVDs on record-breaking racing legend Ernst Jakob Henne. It was no surprise that the crowds were thronging the BMW Mobile Tradition stand. But apart from the quiz, the marquee and the exhibition on the theme of "25 Years of the BMW GS – Meeting of Generations" proved popular throughout the event. Attracting keen interest were not just the historic models of the original GS, the winning motorcycle of the Paris-Dakar Rally and representatives of other GS generations: it was above all the HP2 – unveiled before the wider public for the first time – that was an object of fascination for the assembled bikers. With its uncompromising concept created by enthusiasts for enthusiasts (see also the interview with Dr Diess, head of BMW Motorrad), the story comes full circle to the first BMW R 80 G/S of the year 1980.

In Sunday's glorious sunshine, visi-

tors were able to partake of the traditional weisswurst breakfast and a bikers' church service, as well as admiring the colourful convoy of classic two-wheelers. Some 100 participants rode their bikes past approximatley 3,000 spectators lining the roads from Garmisch-Partenkirchen to Grainau.

Questionnaire on 25 Years of the BMW GS

Which do you regard as the typical BMW GS?	R 80 G/S (51.7%) R 1150 GS (22.8%) R 1200 GS (20.8%)
What is associated with BMW motorcycles?	Reliability (60.8%) Good workmanship (49.2%) Easy handling (41.3%)
What do you believe the BMW GS family stands for?	Rough terrain and roads (81.0%) Adventures in faraway lands (34.45%) Escape from daily life (21.0%)

Multiple answers were possible.

Above left: Raffle prizes are drawn in the exhibition marquee after the big BMW GS quiz by BMW Mobile Tradition. Left: The BMW Mobile Tradition team on location.

Interview with Dr Herbert Diess, head of BMW Motorrad

Mobile Tradition live: Dr Diess, BMW Motorrad has introduced the BMW HP2 here for the first time. What is the concept behind it?
Dr Diess: The HP2 is a motorcycle by specialists for specialists. It was created by a group of passionate endurance bikers who built their own vision of a motorcycle. They wanted to recreate what happened 25 years ago by designing a BMW that is genuinely suited for cross-country riding.

Mobile Tradition live: Does that complete the circle to the original GS launched in 1980?
Dr Diess: Yes, I can definitely see similarities. When the original GS was introduced there were no big Enduros. These bikes came with 250 or 300 cc, and the biggest had 500 cc. Nobody imagined you could ride an 800 cc machine, least of all with a Boxer engine, in offroad terrain. The G/S issue was a very controversial one at BMW. But the concept's backers prevailed and built one of the most successful BMW two-wheelers of all time. A new market segment was created, and we are doing something similar again with the new HP2. The first 80 G/S came with 50 bhp, while 25 years on the HP2, based on a similar concept, draws on 100 bhp. And it is clearly designed for offroad travel, just like the old G/S.

Mobile Tradition live: How much of the old concept is retained in the HP2?
Dr Diess: The GS concept comprises a series of typical features: the Paralever swing-arm, the low centre of gravity with the flat-twin Boxer engine, long spring travel, light weight – all of which contribute to the bike's good handling on rough terrain as well as surfaced roads. The HP2 has all these ingredients and it is by far our lightest endurance bike. It boasts long spring travel, the famous single swinging arm, the shaft drive: it's an evolutionary concept.

Mobile Tradition live: The original GS rose to fame in the Paris-Dakar Rally. Can we expect something similar of the HP2?

Dr Herbert Diess, head of BMW Motorrad, with the BMW HP2.

Dr Diess: Although the HP2 isn't a rally bike, the GS didn't start off by competing in the Dakar either. But the HP2 is already being fielded by three riders in the German Cross Country and other endurance events. We had a strong showing at the Erzberg Race against genuine offroad competition and acquitted ourselves outstandingly well. I think that a lot of private riders will be using the bike as well.

Mobile Tradition live: 25 years of the GS – how important is the concept for BMW?
Dr Diess: Incredibly important. Today around a third of our turnover and sales are down to the GS range, primarily the 1200 GS and the F650 GS, which takes up some of the attributes of the big Boxer GS. It is also very important for the brand – the GS is one of BMW's iconic products.

Mobile Tradition live: Do GS riders need an anniversary of this kind?
Dr Diess: I think it's a very important occasion for the bikers. They have usually had a very longstanding association with the bike. Once you've been a GS rider it's very difficult to give it up again. There are a lot of people who have been riding GS models since the 1980s. Looking back on the history of the GS is an enjoyable experience for many motorcyclists.

Mobile Tradition live: Is heritage an important part of BMW Motorrad?
Dr Diess: Extremely important. You can see it in the HP2. It still retains the classic BMW attributes: the Boxer engine, shaft drive and telescopic fork were also invented over more than 80 years of BMW motorcycle history. As you can see, we are actively living and cultivating our heritage, and the fundamental approach is evolutionary. There are a lot of BMW motorcycles today in which you can read the entire history of BMW.

Mobile Tradition live: We are now celebrating 25 years of the BMW GS. Will there be a golden anniversary in another 25 years?
Dr Diess: I'm certain of that.

Mobile Tradition live: Finally, an off-the-cuff question: K 1200 R or HP2?
Dr Diess: Both. An off-the-cuff answer: you need both. The HP2 for tackling challenging terrain, and the K 1200 R is of course a fantastic bike for twisty country roads. I'm fortunate enough to be able to ride both of them from time to time.

BMW and Daimler-Benz join forces in car production (1926 to 1934)

Since the 1980s BMW and Mercedes have been locked in a battle for supremacy in the premium car market. Which makes it all the more amazing that the two companies enjoyed such a close alliance during a period in their collective past. During the years of economic hardship in the Great Depression between 1929 and 1932, the powers-that-be in Stuttgart and Munich added further layers to the cooperation agreement concluded in 1926. The primary aim of the original tie-up was to work together in the production of bodywork for BMW cars at the Daimler plant in Sindelfingen.

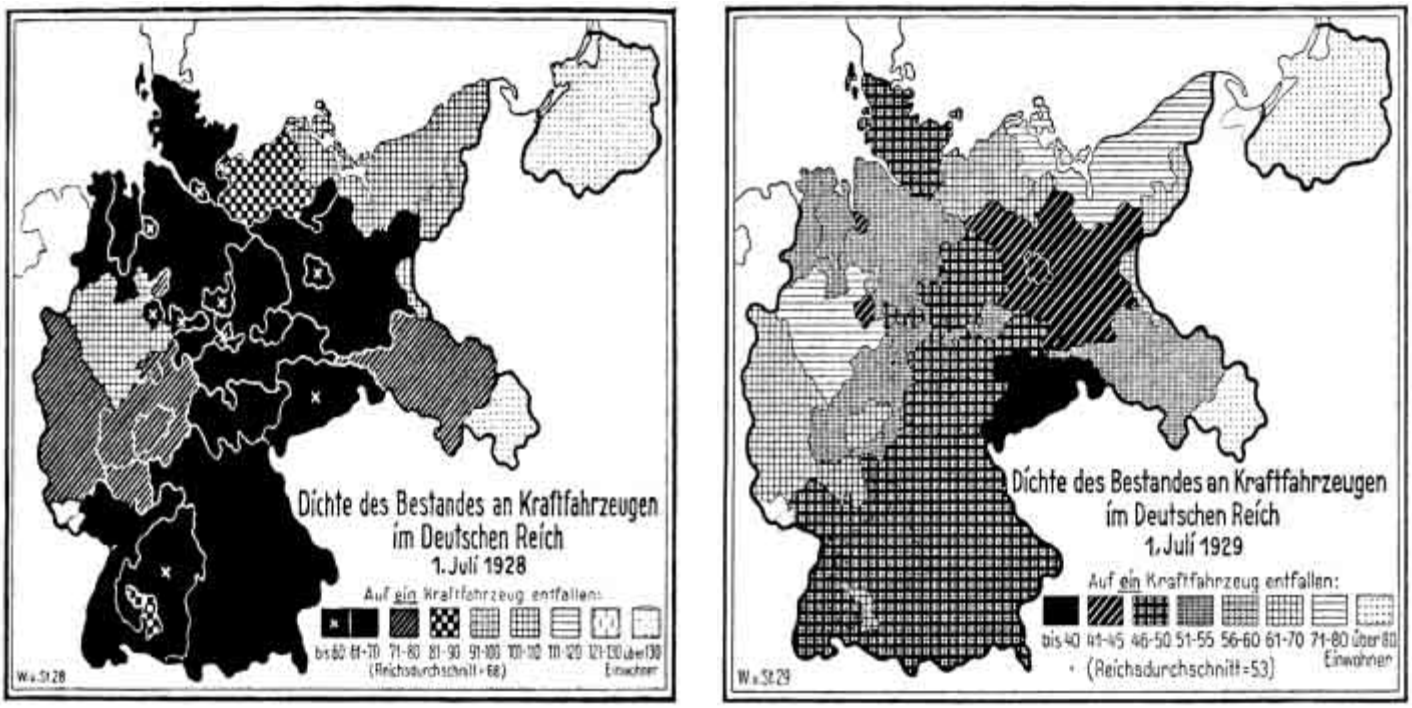
By Caroline Schulenburg

The administration building at the Eisenach car factory, still with “Dixi-Werke” signage.

In 1926 BMW concluded a cooperation agreement with Daimler-Benz AG. The Stuttgart-based company was the product of a merger completed earlier that year between Daimler Motoren-Gesellschaft and the Mannheim-based firm Benz & Cie. Initially, the agreement appeared to lack any real punch, save for a mutual exchange of Supervisory Board members (it was decided that Franz Josef Popp would attend the Supervisory Board meetings of Daimler-Benz AG in his capacity as General Manager of BMW AG and, in return, Carl Schippert would be present at meetings of the BMW Supervisory Board as a representative of Daimler). And that, for the time being, was about as far as the cooperation went. Indeed, there was little reason to expect anything different, given the lack of common ground between the two firms’ product ranges – while BMW was turning out motorcycles and aero-engines, Daimler-Benz’ focus was on vehicle production. And Popp’s insistence that Daimler keep its finger out of the aero-engine pie poured more cold water on any potential for a closer partnership.

BMW enters the automotive world

In 1928 BMW bought up the vehicle factory in Eisenach, a branch operation of Gothaer Waggonfabrik A.G. and the plant responsible for production of Dixi cars. This was BMW AG’s ticket into automotive production, sparing the company the trouble and expense of having to build a new manufacturing facility of its own. Initially, production continued of the 3/15 small car built under licence from Austin. The purchase of the Eisenach vehicle factory came at a time when the German economy was showing signs of a tentative recovery after the hard years and the inflation which followed the end of the First World War. This welcome revival was also making its presence felt within the auto-



Germany's vehicle population in 1928 and 1929. The rapid rise in numbers is clearly visible.

motive sector. Germany's vehicle population doubled in size between 1925 and 1928, although it still lagged some way behind that of its European neighbours. The figure in Great Britain, for example, was nudging the million-unit mark by 1929. A large number of the vehicles registered in Germany were small cars, which gave BMW good reason to expect further gains in this market segment. The reality, however, turned out to be rather different. The Great Depression of 1929 hit the car market hard. Between 1928 and 1931 vehicle production in Germany nose-dived from 150,000 to 80,100 units. Over the same period, the number of automotive manufacturers shrank from 62 firms to 36.

Troubled times in a global downturn

The BMW Board of Management consequently decided to sell the Eisenach plant and channel all its energies into the production of motorcycles and aero-engines. However, Popp and his colleagues soon had to accept that there were no takers for the plant. The Board was faced with two choices. It could abandon car production, which would mean taking an immediate hit of some 2.5 million reichsmarks, plus a further loss for the year of around 0.5 million reichsmarks. Or it could grant the factory a stay of execution, a plan dependent on developing a new small car that would generate sufficient demand in a deflated market.

In order to keep the option of selling the plant open, it seemed like a good idea to get the new model onto the road as soon as possible. This would, in turn, act as a spur for potential customers. Since the price and quality of the new car were crucial if it was to make a profit, the BMW Board of Management was considering severing its ties with its Berlin-based body supplier Ambi-Budd and approaching Daimler-Benz AG with a proposal of partnership.

At last it was time to dust off the cooperation agreement of 1926, which had barely seen the light of day in any meaningful form since it was originally concluded. The new 7 horsepower swing-axle cars from Daimler and the similarly new 3 bhp model from BMW added depth to both companies' product ranges.

On the road to partnership

Visions of how the two manufacturers could work together on a technical and commercial level took on a more concrete form in the summer of 1931. The partnership would form the basis for the new BMW car, several examples of which had already been produced for testing purposes. First, however, there was the question of whether a suitable body for the new BMW model could be built at Daimler's Sindelfingen production facility. It was a marriage of convenience which stood to benefit both companies. BMW lacked the resources to build its own bodywork factory from scratch, while the Daimler plant was operating at only half capacity thanks to the knock-on effects of the Depression. Popp had high

Vehicle population 1928 – 1934 in units

	1928	1929	1930	1931	1932	1933	1934
Germany	351,000	433,000	501,000	523,000	497,000	522,000	674,000
France	643,000	757,000	930,000	1,109,000	1,251,000	1,388,000	1,432,000
Great Britain	899,000	998,000	1,100,000	1,157,000	1,171,000	1,434,000	1,324,000

hopes for the future success of the prospective tie-up, “as the exterior of the BMW car, when shaped to fit the Mercedes body moulds, would surely give sales a significant boost”.

Possible forms of cooperation

In addition to relocating body production to the Daimler-Benz factory, there were also plans in the pipeline to sell BMW cars though the Stuttgart-based company’s sales outlets. This was another move which made a lot of sense for both parties, as sales recorded by the Daimler sales organization would increase its revenues and allow it to spread costs more widely.

Munich was also hoping to strike some kind of agreement with Daimler aimed at securing technical support from its southern German neighbour. The resultant arrangement saw the BMW prototype handed over to the engineers in Stuttgart for a thorough health check. As it turned out, Daimler had themselves made this a condition of the agreement to sell BMW cars. If the Bavarian company’s cars were going to pass through Daimler sales outlets, it wanted to be sure that they would meet its own technical standards.

However, the tie-up was put on ice in the summer of 1931, with customers still needed for the 2,000 units of the old BMW car which had already rolled off the production line. On the basis that they were not likely to be found before early the following summer, the decision was taken to put the two existing test models through an extended 100,000-kilometre trial and to build 15 cars as part of a pre-production run, of which five would be fitted with bodies made in Sindelfingen.

The value of the cooperation to Daimler-Benz was not to be underestimated, as the company’s Board were well aware. The Stuttgart-based firm was prepared to waive its fee for the body design provided that BMW gave the order for production to Daimler as well. However, if BMW decided to have the Daimler-designed bodies manufactured at the Eisenach factory, a one-off payment would be due. An offer of 575 reichsmarks per unit was on the table for production of the BMW bodies. Although the Daimler-Benz Board of Management offered to supply the bodies at cost price, the company had almost certainly factored in a respectable profit margin.

BMW openly advertises its car with “Original bodywork by Daimler-Benz” (point 5).

Every now and again, someone would raise the idea of taking the cooperation to the next level and building the planned Mercedes 5/20 PS – a smaller model – not at Daimler-Benz’ plants in Untertürkheim or Mannheim, but initially in a joint initiative with the BMW model in Eisenach. As construction of small cars required different working methods from those used in the production of high-quality mid-range and luxury-class cars, the Stuttgart management feared that producing the new model at Untertürkheim would simply prove too expensive and would not therefore be competitive. The plans also envisaged relocating all small car production from Eisenach to the Daimler plant in Mannheim in the event of an upturn in the economy, since capacity in Eisenach would most probably no longer be sufficient to cope with an accompanying surge in demand.

While Popp toyed with the idea of bringing the two companies’ small car production (up to 1,200 cc) together under an agreement of mutual interest in autumn 1931, the Stuttgart top brass saw such a move as premature. BMW, they reasoned, had not yet developed a fully formulated model range.

A cooperation agreement underpins the partnership

This led to the completion of a new cooperation agreement between the two companies in the winter of 1931. At the heart of this contract was an arrangement to bring together the two firms’ models with displacement under 1.2 litres. Added to which, there was also a commitment to providing mutual sales support by absorbing each other into their respective

BMW bodies from Sindelfingen

Period	Units	Type of car
Nov/Dec 1931	5	
1932	2,469	2,315 saloons 152 convertibles 1 touring car 1 van
1933	4,701	
1934	6,170	4,409 saloons 1,761 convertibles
1935	5,756	4,436 saloons 1,320 convertibles
1936	2,991	2,717 saloons 274 convertible saloons
Jan/Feb 1937	105	
Total	21,197	

sales structures. Finally, it was established that BMW would commission the bodies for the new model, which was scheduled for delivery from the spring of 1932, from Daimler-Benz rather than from Ambi Budd as had previously been the case. The agreement was valid initially until December 1934.

As part of the next stage in the development of the partnership, it was agreed at the beginning of 1932 that Popp should be voted in as a member of the Daimler-Benz Supervisory Board and Daimler-Benz Chairman Wilhelm Kissel elected to the equivalent body at BMW AG. Over the following years, the idea of bringing together the two firms on a more fundamental level was never far from the surface. From a technical point of view, a merger would certainly have been beneficial to BMW AG. However, the global economic downturn at the time had plunged Daimler-Benz AG heavily into the red, whereas BMW AG was based on a sound and virtually debt-fee financial footing, and Popp stopped short of pushing forward his merger plans.

A new model brings the curtain down on the partnership

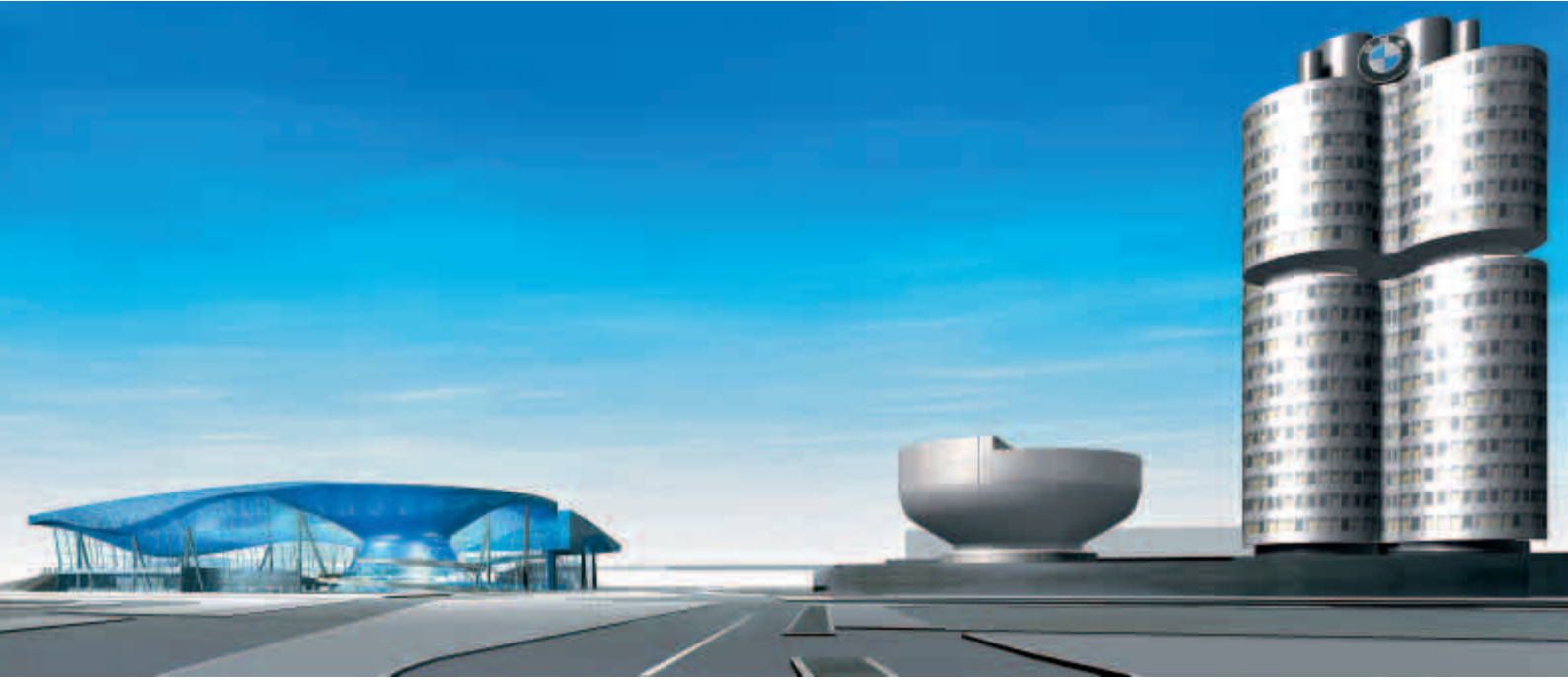
The idea of amalgamating the two companies was finally scrapped at the beginning of 1934, when the Daimler-Benz Board of Management announced in the run-up to the International Motor Show (IAA) that BMW had developed a 1.5-litre car and was going to put it on show in Berlin. The Daimler Board interpreted this as a breach of the cooperation agreement, which still had until December that year to run. During the negotiations, the issue had arisen of whether BMW should agree not to build cars with displacement of more than 1.2 litres, with Daimler-Benz making a similar pledge to omit cars under 1.2 litres from its vehicle range. This clause had been removed, though, from the most recent draft of the agreement. BMW was indeed planning to show a pair of 1.5-litre sports cars in Berlin, but Popp responded to Stuttgart's concerns by stating that, to his knowledge, the agreement did not set any kind of 1.2-litre demarcation. He also described the new model as a reaction to the 1.3-litre car developed by Daimler-Benz, which undercut BMW's 1.2-litre car in terms of price. This pushed BMW into a corner where it was forced to come up with a car fitted with a more powerful engine, allowing the BMW car to make up the lost ground in terms of price and regain its competitive edge over Daimler's 1.3-litre model. At the same time, he pressed his Swabian counterparts for a reduction in the price of bodies made in Sindelfingen.

In a letter dated February 1934, Popp stressed how fruitful the cooperation agreement had proved for Daimler Benz AG, while BMW had seen precious little in the way of benefits: "We have given Daimler-Benz orders for bodies worth millions – and at extremely attractive prices. I have seen to it that Daimler has also received orders for aero-engine parts worth millions from us and have given them further assistance through the rights of co-sale for our cars at several Daimler branches. The cooperation agreement which we concluded has therefore worked out totally to the benefit of Daimler-Benz. Meanwhile, DB has to this day not made the slightest effort to offer us anything by way of reciprocation. Indeed, I would go as far as to say that their strategy is serving to undermine our interests."

The cooperation agreement was concluded at a time of severe crisis for the two companies, and the upturn in the German economy and the automotive industry as a whole in the second half of 1932 had taken away its primary raison d'être. The BMW Board was therefore in no mood to continue selling its cars through Daimler-Benz AG. Stuttgart, on the other hand, had rather more to lose should the link-up hit the buffers, and set about drafting a new agreement – with the offending clause specifying a fixed displacement limit conspicuous by its absence. Instead, the new proposal would see the two companies exchanging information and perhaps reaching agreement on their product ranges. Daimler was keen to enshrine the cooperation within the terms of a new contract, but Munich felt it was more desirable to pursue the partnership without any contractual constraints.

This, however, was not the outcome Daimler-Benz was hoping for. In mid-June 1935 the company informed the BMW Board that capacity at its Sindelfingen plant had already been exhausted by demand for its own vehicles and that it could therefore no longer produce bodies for the Bavarian company. BMW responded by insisting that Daimler continue deliveries through 1936 until they had found another body manufacturer to take up the slack. In the years that followed, the lion's share of bodies for production cars were built at Ambi-Budd, just as they had been before 1931. The companies maintained a cordial relationship after the agreement had expired and their representation on each other's Supervisory Boards was left untouched. The intention was for the relationship to continue along friendly lines, especially as far as a demarcation of interests in aero-engine production was concerned.

Bones of contention: BMW 315 at the 1934 Berlin Motor Show (left) and the first BMW cars with Daimler-Benz bodies (centre and right).



Architecture, philosophy and zeitgeist of the BMW Museum

In less than two years – in the summer of 2007 – the new BMW Museum will open to the public. Design, planning and realization are going full steam ahead. The history of the BMW brand will soon have its 90th birthday, and it is currently being profiled for the exhibition. The products are being prepared for a venue that will showcase the enormous range in the environment of an "urban traffic complex". Visitors will be able to enjoy unique exhibits, new perspectives, exciting architecture, an innovative exhibition design and sophisticated tours. Contributions to the new BMW Museum will bridge the period until the museum is opened. Part 1 is dedicated to a historical review of the museum, which was opened in 1973 in the satellite building known as the museum "bowl".

By Dr Andreas Braun

Cathedrals of the present

"Museums are the cathedrals of the present!" These are the words used by Japanese architect Tadao Ando to describe new museum buildings of our day, and he numbers them among the most significant and often most spectacular building projects. The cultural image and commercial success of a city – if not an entire nation – are intimately associated with these buildings, supported by the general boom in museums. They are also termed "site factors" or "seismographs of contemporary architecture". Many of them were conceived with no regard for functionality. They are designed to embody values and fulfil aesthetic visions. They are architectural shells that are not intended to serve the exhibit but whose main aim is to celebrate their own existence and that of their creators.

Museums that are getting on in years have also become more architecturally ambitious. Some famous international names like the Louvre or the British Museum are reconfiguring their structure to meet the requirements of visitors. Above all, they are installing new technologies for communication and using new concepts of display.

The BMW Museum is also currently being modernized and significantly expanded, after having been opened more than 30 years ago. Lots of work has to be done in order to meet international museum standards. The museum also needs to do justice to the BMW brand, its history and the unfolding story of success. Moreover, BMW is planning to set up a great world of experience at its Group Head Office – the BMW World. Alongside the museum, this will include a dispatch centre, a brand presentation and a plant tour. The official opening is scheduled for spring/summer of 2007.

A "traffic complex"

The project team "New BMW Museum" is enthusiastic about creating a complex that will epitomize the rebirth of the BMW Museum. The museum will not only provide a spectacular shell – it is dedicated to a philosophy. The defining factor is the world of exhibits that are presented in the BMW Museum. The architecture and the purpose of the building will mutually enhance each other. Even the location is a critical aspect of design: the BMW Tower looks down on the streams of pedestrians walking to and from the Olympic Park, automobiles come out of the Petuel Tunnel and drive along roads and across squares. The traffic arteries are the functional spaces of the automobiles: roads, bridges, tunnels and parking spaces. They don't simply determine the environment of the BMW Museum, they also dominate its architecture. The guiding motif is the traffic complex enclosed within a shell, the continuation of the road within the enclosed space.

The BMW Museum is not intended as a okace to park valuable two- and four-wheelers, but as a presentation site for BMW vehicles "in a suitable action space".

Desired cityscape effect

At the close of the 1960s, when the BMW Board of Management decided to build a new administrative centre located before the gates of Plant 1, a museum didn't figure. The tender initially only required an administrative building, a pavilion for an electronic computer centre and a car park. The aim was to create a landmark that represented the company and expressed its growing importance.

The architectural competition

spawned a number of different architectural concepts in the summer of 1968. However, because none of the plans could be recommended for implementation without corrections, the jury didn't award a first prize. The decision was therefore back with the BMW Board. Paul G. Hahnemann, deputy Chairman of the Board from 1961 to 1971 and initiator of the new architectural project, was very enthusiastic about the design by Austrian professor of architecture Karl Schwanzer. The jury had also highlighted the "desired cityscape effect with an impressive and convincing impact", conferring second prize on this design. With appropriate backing, all remaining doubts in the executive management were dispelled and Schwanzer was finally awarded the commission.

The next stage was devoted to the concept and planning phase. Time was at a premium and this stage was completed in just under two years. In July 1970, the detailed planning had been completed. Since the museum was not an element included in the tender and it didn't appear necessary for the routine operational workflow, there was a continuing question mark over whether it would come to fruition. However, Schwanzer designed an independent external building for the automobile exhibition, devoting special care to this project in order to secure a following wind for the museum with the Board of Management. His strategy was successful: after a construction period of around two years, the ensemble of buildings was officially opened on 18th May 1973.

Dynamic architecture

The museum owes its imposing profile to a shell design constructed in lightweight concrete. It constitutes a foil for the vertical tower and the horizontal design of the operations building. The strongly curved contours of the silver shimmering wall complete the outside of the building. The only views of the interior are afforded by the strip of windows positioned in the plinth. Solid circular bases and a continuous ring anchor form the load-bearing structure. Five platforms of different size rise up to different levels without touching the shell wall, connected to each other only by a suspended ramp that permits vehicles to be driven up and down. A sweeping escalator is a key element of the designated visitor route, linking the entrance foyer with the spacious bowl and the two top platforms.

In his publications, Schwanzer referred a number of times to the dynamic effects that emerge by virtue of the overlapping spatial forms in the interior of the bowl. These are particularly suited to the purpose of the building as a showcase for transport. He believed that the curvature of the contoured interior wall made it particularly appropriate for conveying cornering and the dynamic illusion of the driving characteristics of the vehicles exhibited.

Unprecedented stroke of genius

Schwanzer's oeuvre, created between 1947 and 1975, has no uniform signature. He was no proponent of a rigid canon of design, attempting rather to create an individual solution for each project. In general terms, Schwanzer moved consistently and early on from the linear spatial structure characteristic of the 1950s to the plastic architecture of the 1960s and early 1970s.

He created the BMW ensemble from complementary large-scale forms. The design of the museum is on a scale that enables it to mediate between the tower and the low-level structure. Alongside these buildings, it provides a relatively small but optically extremely effective feature. With the tower, Schwanzer had to observe architectural constraints and meet functional requirements. By contrast, he was able to approach the design of the museum with maximum freedom.

The design of the museum was not based on any precursors and remained unique. The Solomon R. Guggenheim Museum in New York, designed by Frank Lloyd Wright between 1956 and 1959, probably provided some ideas with its circular external structure, the isolation of the interior, and the spiralling route taken by the visitors. The government complex in the Brazilian capital Brasilia, designed by Oscar Niemeyer, might be seen as a forerunner of the architectural ensemble as a whole.

Engineering feat as work of art

As well as being in a position to effect a bold design in engineering terms for the architecture of the tower and the museum, Karl Schwanzer was also capable of verbally communicating the aesthetic ideas behind his work. By a stroke of luck, he met the photographer Sigrid Neubert in 1970, whom he had met previously in Vienna in 1962. He found in her a chronicler of the visual image who captured his architecture from a photographer's point of view. The intellectual concept underlying his work was expressed in her images, and she captured significant details. The BMW buildings came to be documented from the commencement of construction to the end of building work. This exceptionally impressive record goes far beyond merely documenting the progress of construction. The black-and-white photographs emphasize the plastic quality of architectural form

Masterworks of architectural photography: Sigrid Neubert records the opening of the BMW Museum in 1973.

Curving space: ramps and platforms transform the BMW Museum into a unique “traffic complex”.

that is typical of Schwanzer’s work. Using intense contrasts, expressive shadows and sharply delineated contours, they display the tower ensemble as a complete work of art. Neubert’s compositions generate a language of images that creates an analogy with Schwanzer’s architecture and communicates a timeless modernity.

Sigrid Neubert is rightly regarded as one of the foremost photographers of architecture. The list of architects whose works she has portrayed through her camera reads like a Who’s Who of German postwar architecture. Her photographs have allowed today’s museum planners to uncover and reconstruct the physiognomy of the museum building in its original elegance and aesthetic effect.

Signs of the times

Directly after the museum opened in May 1973, the architecture at BMW attracted a great deal of attention. In the same year, Schwanzer received the BDA Award Bavaria from the Association of German Architects. Munich, the venue for the XXth Olympic Games, now boasted another architectural highlight alongside the bold tent roofs over the Olympic complex. The fascination of the two big architectural ensembles on either side of Munich’s middle ring road derives from the structural and aesthetic constructions that foreground technology. The architecture harmonizes with the ethos of the early 1970s – a belief in the aesthetic effect of spectacular architectural feats of engineering. World expos presented breathtaking pavilion designs, and after the moon landing, the worlds of film and fashion were inspired by the technoid magic of the American Apollo missions. The competition for the Pompidou Centre in Paris tendered in 1971 demonstrated the extent to which technology dominated the options for design at the time. Along with the BMW Museum, the Sydney Opera House and the Twin Towers of the World Trade Center in New York were inaugurated in 1973.

Cornucopia of success

The bowl of the BMW Museum and the “Four-Cylinder” tower also symbolize entrepreneurial success. When these buildings were officially opened in 1973, the Bayerische Motoren Werke were more successful than ever before. The statistics presented in their Annual Report show significant growth rates for production, sales and vehicle registrations, with buoyant demand abroad powering the German economy. After the boom years of the 1960s, the early 1970s continued to show successful growth. They also marked a phase of reorientation and new directions for BMW. On 1st January 1970, Eberhard von Kuenheim was appointed Chairman of the Board of Management at the age of only 41. When the BMW 520 was launched in 1972, BMW introduced a forward-looking model strategy. The model policy based on the 1 Series, 3 Series, 5 Series and 7 Series was launched in that year, a strategy that proved to be a guarantee of success.

In May 1973, the company had a new and prestigious head office with impressive architecture as well as a brand museum located in a prominent position. After a construction period of three years, November 1973 saw production start up at the Dingolfing plant – the Bavarian site is the biggest BMW manufacturing facility in the world.

Another key development at this time was the move towards globalization. After establishing sales companies in France, Belgium and Italy, the Board of Management opted for a greater commitment in South Africa. The contours of a group that thinks and acts globally were gradually starting to take shape. But the

A car in a new “stage set”: a concrete structure is lent dynamic movement.

Annual Report for 1973 is not oblivious to the dark clouds gathering over the global economy. It records the drop in business during November and December and refers to the global oil crisis. The Arab oil boycott and the subsequent drastic rises in prices caused the economies of the western industrialized nations to falter. Major automobile manufacturers reacted with short-time working, and a strict ban on car traffic was enforced on Germany’s motorways for several Sundays. People had concrete evidence of the limits to growth. A belief in the inevitability of progress that had endured for generations was severely dented.

The New BMW Museum

Since 1973, the BMW Museum has received millions of visitors. In a series of exhibitions, innovatory exhibition concepts were introduced and the theme of the BMW brand was presented from many different perspectives. After more than 30 years in operation, the time was ripe for a new concept.

BMW is well aware of the great success of the museum and its worldwide popularity. The New BMW Museum that is currently being constructed will respect the “bowl”, as it is affectionately known in Munich, retaining its symbolic force and projecting it as an architectural landmark. Additional structures added over the last 30 years will be removed so that the museum building can re-emerge in its original, compact beauty. This minimalist aesthetic will foreground its timeless modernity.

The building for the BMW World will be located to the west of the Lerchenauer Strasse and will provide a major new architectural impetus from 2007. In contrast, the newly designed BMW Museum will be created within the contours of the structure built in 1973. The major expansion of floor space will generate a fivefold increase in exhibition space but will not be visible on the exterior.

The museum remains firmly linked with the group head office and melded within an ensemble that has the status of a listed building. The new museum architecture is a statement that demonstrates how the company respects its tradition. Nevertheless, the museum is dedicated to the BMW brand – there’s plenty of scope for innovation and reinterpretation.

The adjacent low-level building is being refurbished for its new public use designed to enhance the brand. The architectural shell – comprising three exterior façades – will remain intact. However, a new, large space will be created in the interior and this will give rise to a remarkable spatial concept. An innovative architecture will be integrated within this corpus, comprising a ramp system and standalone exhibition elements.

A media dream

The original museum bowl and the additional area of the low-level building have a connecting element in the ramps that upholds the architectural philosophy of Karl Schwanzer while breathing new life into it. The platforms are also located within the bowl, like squares along a “road”, forming an open, interacting system. The basic idea of the ramp is reinterpreted as it is transferred to the low-level building: the road in the enclosed space embodies the principle of a dynamic architecture. Exhibition areas are located along a “road” in this part of the building. But the fact that they are encapsulated affords the possibility of discrete presentations of exhibition objects.

One of Karl Schwanzer’s original design ideas is given new life using the genre of film. After the architect has been introduced, the visitor is to experience an “illusionistic panorama projection on the shell wall” on the uppermost level of the bowl. This projection, permitting a 360° panorama, will be made possible by this extraordinary, free-floating space with a wall area 120 metres in length and up to 6 metres in height, offering visitors a unique attraction. Where else will it be possible to experience the proverbial “sheer driving pleasure” in such an all-embracing format?

The architect in conversation: Karl Schwanzer (right) and Herbert Quandt.

A very special debut

The BMW Isetta occupies a unique place in the history of BMW. But its drivers occasionally had to resort to unusual means in order to call the diminutive car their own – as shown in this story of a determined young woman who was to become the first female owner of the "bubble car".

By Manfred Grunert

In the official chronicles of the BMW Isetta, Rottach-Egern occupies a rather special niche. It was on 3rd March 1955 that the "motocoupé" celebrated its world debut in the idyllic town on Lake Tegernsee in Bavaria. That part of the story is widely known: the upmarket Hotel Bachmair, the throng of curious media representatives, the damp, cold weather, the memorable introductory words of Fritz Fiedler and C.T. Hoepner. But shortly after this successful press launch, Rottach-Egern was to be the scene of another, hitherto little-known chapter in the history of the Isetta. The protagonist is a young woman who, thanks to her initiative and persuasive powers, became the first female Isetta customer.

In 1955 Hanni Bakker lived at Hauptstrasse 18 in Rottach-Egern. To get about, she and her husband had opted for a Lambretta 125 LC. On this Italian scooter she would ride through the scenic environs of Lake Tegernsee. But the pleasures of this small two-wheeler were increasingly dampened by the cold and rain. Her ardent wish was to have a roof over her head on these excursions. Now aged 81, she clearly remembers how the choice fell on the Isetta. The fact that the press launch of the motocoupé had taken place in her immediate neighbourhood, and that BMW had swamped the daily newspapers and weekly magazines with a deluge of ads, ensured that Frau Bakker took due note of the latest product to come from the Bayerische Motoren Werke.

Her pride and joy: Hanni Bakker with her BMW Isetta 250 Standard.

No sooner had she identified the Isetta than her decision was made. It was just what the young woman had been looking for: not only protection against wind and weather, but also a fashionable, smart mode of four-wheeled transport. But how was she to get hold of her dream car? In May 1955 there was no dealer far and wide who had an Isetta in the showroom. Frau Bakker therefore decided it would be a good idea to get in touch directly with the company's head office. Her brother-in-law, who was working for the car dealers Münchner-Automobil-Handel Haberl & Co. KG – or MAHAG – gave her a lift to Munich and dropped her off outside the factory in Milbertshofen. Somehow she managed to nobble the sales manager in charge of domestic business, Dr Walter Krüger. She told him of her enthusiasm for the "rolling egg" and how desperately she needed just such a vehicle. Krüger was initially very unreceptive to her requirement, as BMW had its hands full trying to supply all dealers with a demonstration model. But Frau Bakker would not be deterred and in the end, by remaining obdurate yet all the while charming, she managed to persuade the sales manager to deliver a model to her before long.

Fast learner

Time was pressing. Her husband had accepted his first position as an advertising assistant with the Graetz company. This traditional enterprise, founded in 1866, had since the war been producing radio sets in the town of Altena. A move to Westphalia was thus impending and the Bakkers were determined to take the Isetta with them to their new home. Monday, 24th May 1955, was the big day. A new Isetta 250 Standard with ivory paintwork was parked in the backyard of the Otto Hoffmeyer dealership in Bad Wiessee. It was not to be put in the showroom so as not to attract any new customers. This model was destined for Frau Bakker and Bad Wiessee had to wait until the middle of June for its long-awaited demo model.

An employee from the dealership immediately set off for Rottach-Egern. When he arrived, the first female Isetta driver revealed that, although she had been riding around on two wheels for some time, she needed a little practice with four wheels. As the journey to Altena was planned for that same week, the two of them lost no time and headed for the newly completed Wallbergstrasse in the Isetta. Here the car salesman explained to the young lady how to handle the motocoupé as they drove around. Frau Bakker was quick on the uptake, and three days later was ready to embark on the long journey.

Targeting female customers: "Women are better drivers..."

Packed to the gunnels with everything the large removal van had not taken, Hanni Bakker hit the road.

The first stopover was in the Grünwald suburb of Munich, where she spent the night in the house of Werner Eplinius – a well-known scriptwriter – and his wife, who were longstanding friends of the Bakkers. Though this first stage seemed very short, the second day would prove a marathon stretch. The newly fledged Isetta driver wanted to make it all the way to Altena: 700 kilometres in a vehicle which, according to the works specifications, had a top speed of 85 km/h. It was an ambitious target. The route first took the young woman to Frankfurt. On the way to Wuppertal she developed a real thirst. The petrol station she spotted was like a godsend. The only problem was it was on the wrong side of the carriageway. But that wasn't going to stop Frau Bakker. She simply cut across the grass central reservation to take her rest stop. Unfortunately the little incident did not go unnoticed. Two policemen had observed this breach of traffic regulations and questioned the driver. Hanni Bakker made her apologies and quickly told the two guardians of the law her unusual story. Taken in equal measure by the charming young lady and her unusual four-wheeler, they not only turned a blind eye to the offence but escorted her back onto the northbound carriageway to ensure a safe continuation of her journey.

By the time she reached Altena it was already dark. Her concerned spouse was relieved finally to embrace his wife. The Isetta, Hanni Bakker, the clay pot, the box of bedlinen and all the other bits and pieces stashed away in the little two-seater had arrived safe and sound in Westphalia. She was rather tired, she confesses today, but on her long-distance trip she had at least been spared the engine problems that had afflicted the early Isetta models.

The Isetta quickly became the Bakkers' trademark. They were known all over town, she recalls. Before that, Altena had only known the Isetta from newspaper reports or advertisements. The population's first "live" sighting of the motocoupé was thanks to the young couple from Bavaria. Frau Bakker had long since lost her heart to the diminutive car and she felt proud of this rare means of transport that so aptly expressed her lifestyle. "What price the world?" she says of her feelings at the time. But she was not alone. Her husband had also taken a shine to the Isetta. More and more frequently he would drive to work in it while Frau Bakker was left watching her "bubble car" disappear around the corner. Meanwhile, she was busy paying it off. She had managed to part-exchange her Lambretta for 800 deutschmarks. The remaining 1,750 marks came out of her salary as secretary to the Technical Director at Graetz. It was a tight financial plan, but Frau Bakker stuck to it rigidly. By the end of 1956 she was able to call the Isetta her very own.

Almost three years to the day after the inaugural drive, it was time to say farewell to her trusty companion. Frau Bakker had recently give birth to a son. The journey back from the hospital was taken in the Isetta, but it had now grown too small for the family's needs. The treasured car was advertised for 1,600 marks. A master tailor was interested in buying it but attached one condition to the purchase: Herr Bakker was to have a suit tailor-made by him and the cost of the garment would be subtracted from the sale price of the motocoupé. Having seen the suits on display in the tailor's shop, Herr Bakker declined to put in an order. He preferred to sell the Isetta at a slightly reduced price to ensure that he would continue to arrive at the Graetz premises dressed in an appropriate fashion.

First out of the blocks

It was the end of an era in the life of the Bakkers that had been closely entwined with the Isetta. But the little two-seater remains firmly anchored in Hanni Bakker's memory as a symbol of regeneration and a carefree life. In that respect the sprightly 81-year-old is no exception, as others share the same or similar recollections of their time with the Isetta. But there could hardly have been anyone who put so much heart and charm into securing their "bubble car". And there was surely nobody quicker off the mark than Hanni Bakker, who has since returned – Isetta-less – to Bavaria to live in similarly idyllic surroundings as those of 50 years ago.

Rottach-Egern 1953: Hanni Bakker and her husband on a Lambretta 125 LC.

Ernst Kämpfer in 1962.

Ernst Kämpfer – man of transition

At the General Meeting held on 9th December 1959 the small shareholders and dealers blocked the sale of BMW to Daimler-Benz that was proposed by the Board of Management and the Supervisory Board. In the following weeks the company's top management took on a new shape. The man who had chaired the Board of Management up till then, Heinrich Richter-Brohm, retired. Initially no successor was appointed. In this situation the Finance Director, Ernst Kämpfer, took over the role of chief executive and as "unofficial chairman" steered BMW through the first years of reconstruction.

By Dr Florian Triebel

In August 1957 plans for rescuing the stricken Bayerische Motoren Werke were taking concrete shape. The implementation of Heinrich Richter-Brohm's "Programme for the Future" (MTL 02/2005) involved the cancellation of all investment in the BMW 501 and the closing down of motorcycle production in favour of the development of a "mid-range" car. The plans only provided for small improvements to the Isetta and the V8 engines for the big saloons, while the BMW 600 was to be developed into a "small, gutsy 2-seater sports car".

However, it soon became clear that work on the "mid-range" car was not proceeding according to plan. One of the principal factors in this was the production department's unauthorized diversion of investment funds towards large saloons. That is why the planned production launch of the "mid-range" car in spring 1959 could no longer be achieved on schedule. It was this that thwarted

efforts to carry through the company restructuring under the "Programme for the Future".

At a meeting of the Supervisory Board in February 1958, the Head of Production, Willy Black, had to admit responsibility. The Supervisory Board accepted his resignation at a meeting later that month. Along with him, the Finance Director, Dr Heinz Seyfried, also left the company.

A major shareholder, Hermann Krages, took this opportunity to exert his influence. In the spring of 1956, this industrial entrepreneur from a family of timber merchants in Bremen had begun to buy up fairly large blocks of BMW shares on the stockmarket, which led to violent fluctuations in BMW's share price. In April 1956, investigations revealed that Krages already held between 20 and 25 percent of BMW stock. By early 1958 he had built up his holding still further; it was finally estimated at between 30 and 35 percent. This meant that Krages had risen to become the second-largest shareholder after Deutsche Bank. Not only did he use his influence to appoint two members of the Supervisory Board, he even wanted to put someone he could trust on BMW's Board of Management.

Turbulent times for BMW

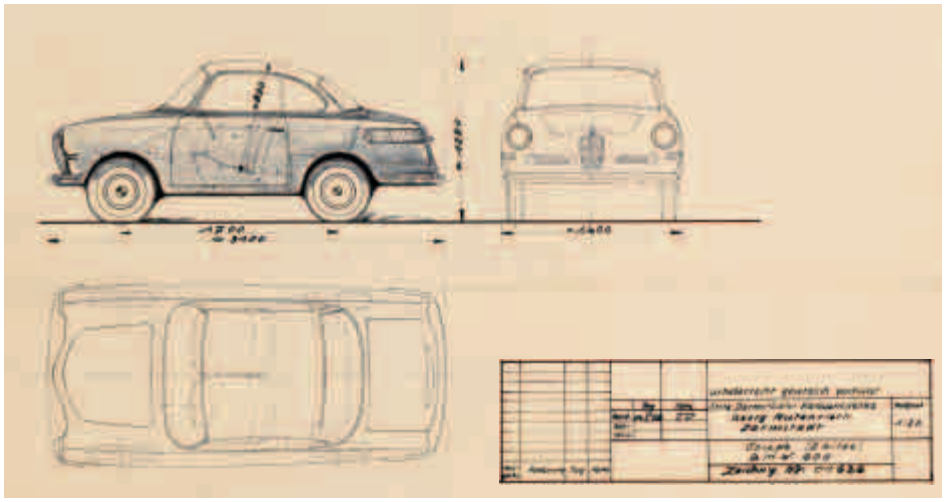
With the departure of Seyfried the way was clear to appoint someone new to the key finance department. Krages proposed Ernst Kämpfer. Born on 8th June 1911, Kämpfer had been employed at the Vereinigte Österreichische Stahlwerke (VOEST, the United Austrian Steelworks) in Linz until 1951 and had already worked alongside Heinrich Richter-Brohm there. After that, he was a company assessor with the Deutsche Treuhand-Gesellschaft (German Trustee Company), and then moved to a senior job in the Stülken shipyard in Bremen. BMW's Supervisory Board followed Krages' suggestion and on 13th February 1958 appointed Kämpfer as deputy executive board member for finance. As early as 1st May of that year Kämpfer additionally took over the purchasing department from his colleague Ernst Hof.

Ernst Kämpfer presenting the BMW LS in 1962 to two senior representatives of the Bavarian revenue authorities.

Kämpfer's role in the crisis

In this position he gave his support to the Chairman of the Board of Management, Heinrich Richter-Brohm, in implementing the delayed "Programme for the Future". The measures only took effect slowly. In autumn 1959 a worrying liquidity crisis loomed over the company. There seemed no prospect of BMW continuing as an independent business. In consultation with his top management colleagues and the Supervisory Board, Kämpfer, as a member of a BMW delegation, negotiated with Daimler-Benz AG about possible cooperation and a takeover by the Stuttgart-based company. The discussions were intended to open up a future for BMW. This only seemed possible through close dependence on a strong industrial partner. The negotiations led to an offer by Daimler-Benz AG to acquire a strategic majority holding in BMW's equity capital. The offer from Stuttgart was timed to run out on the date of the Extraordinary General Meeting on 9th December 1959. Despite eloquent advocacy by the Chairman of the Supervisory Board, Herr Frowein, and of two of the directors, Heinrich-Richter-Brohm and Ernst Kämpfer, the small shareholders and the dealers' representatives succeeded in forcing an adjournment of the meeting – which meant that Daimler-Benz's refinancing offer expired and was not renewed.

On 10th December, the Board of Management was thus faced with an insoluble problem. The possibility of a reconstruction led by Daimler-Benz AG had collapsed – an alternative means of keeping BMW in business had to be found. To make matters worse, the Board was split on a number of important issues. Kämpfer opposed the sales programme put forward by the Marketing Director, Hof, which had the backing of Richter-Brohm. Hof's plan was based almost exclusively on the BMW 700, which had just been launched. From his detailed knowledge of the profit-and-loss figures, Kämpfer criticized the programme for its lack of vision. In his view, the new small saloon could not, on its



Design drawing of a sporty coupé based on the BMW 600, 14th May 1958.

own, get the company out of trouble. Despite the grim financial situation, he felt they had to push on with the "mid-range" car project.

Richter-Brohm recognized that his original idea for a reconstruction had failed and he no longer had the full support of the company's top management. In February 1960 he therefore announced his resignation. In this critical situation, the Supervisory Board did not appoint a successor. At that point no way of refinancing the company had yet been found, and negotiations were being conducted simultaneously with various interested parties. Not until a commitment had been made to one solution would the company's Board of Management be given a new chairman. Meanwhile, the Supervisory Board required the remaining members of the Board of Management – Ernst Kämpfer, Heinrich Krafft von Dellmensingen (MTL 01/2005) and Ernst Hof – to run BMW on collegiate lines. Together with Krafft, Kämpfer led negotiations with the Bavarian state government on financial assistance to keep BMW solvent in the short term. In doing so, he succeeded in regaining the government officials' confidence in BMW, which had been damaged by Richter-Brohm's negotiating policy.

In June 1960 Kämpfer additionally assumed responsibility for sales from his colleague Hof, and then on 1st August, following the departure of Krafft von Dellmensingen, he also took over the "Administrative and Legal" department. In exchange he handed the Purchasing Department back to Hof. With this new breadth of responsibilities, Kämpfer's position on the Board became that of primus inter pares and thus unofficial chairman. In this capacity Kämpfer, in conjunction with representatives of the Supervisory Board, conducted the negotiations on ways of refinancing BMW AG. From tentative discussions it soon became clear that it was unlikely any industrial partner would come on board on acceptable terms. This meant that the reconstruction had to be achieved from internal resources. To do this, the first thing needed was a medium-term business model. Kämpfer based his concept on what he knew of Richter-Brohm's "Programme for the Future". But whereas originally the Isetta and the BMW 600 were meant to carry the company until the "mid-range" car was ready to go into production, the role of stop-gap solution in Kämpfer's plans was now taken by the successfully launched BMW 700. Meanwhile the plans for a medium-sized saloon were well advanced. The designers had come up with a model whose engine capacity ranged from 1.3 to 1.8 litres. Calculations and forecasts showed that the BMW 700 and the "mid-range" car would bring the main BMW plant, in Munich's Milbertshofen district, up to breakeven point. If sales went well, profits were possible in the medium term.

Ernst Kämpfer (standing, right) and Supervisory Board representative Gerhard Wilcke (seated in front of Kämpfer) in talks with Roy Chapin, Vice-President of American Motors Corp. (standing centre), about possibilities for restructuring BMW in 1960.

The successful "chairman"

These plans were the basis of the business policy for the next few years and also lay behind the reconstruction talks. Kämpfer presented them at the Annual General Meeting and not least of the results was to persuade Dr Herbert Quandt to make a major investment in BMW.

Ernst Kämpfer and Supervisory Board member Gerhard Wilcke after flying back from talks in Detroit, 1960.

In the spring of 1961 Kämpfer urged that the vacant board position of Marketing Director be filled. He was no longer able to handle this growing workload in addition to his job as acting chief executive. What is more, he himself possessed no relevant marketing experience. If the "mid-range" car was to be a success, a marketing expert had to be brought into BMW's top management team. The Supervisory Board accepted Kämpfer's arguments and in September 1961 appointed the former head of marketing at Auto-Union, Paul G. Hahnemann, as Marketing Director.

With the arrival of a full-time marketing man on the Board, Kämpfer did give up some of his responsibilities, but in doing so released more time for his other assignments. He was sure that, because of the successful reconstruction under his leadership, the Supervisory Board would in the foreseeable future ratify his position as Chairman of the Board of Management. His hopes were not without foundation, since he had steered BMW successfully through the difficult first phase of reconstruction and he enjoyed the confidence of and good relations with both the Supervisory Board and Herbert Quandt.

Hopes are dashed

Nevertheless, Kämpfer was mistaken in his calculations. In the middle of February the Supervisory Board brought in a new Chief Executive for BMW AG. His name was not Kämpfer but Dr Karl-Heinz Sonne. He was to take over the areas of General Administration and Purchasing. Kämpfer was only left with responsibility for finance. This meant a marked weakening in his position from the "quasi-chairman" he had been up to now.

The reasons why Kämpfer, despite his services to the company, was not considered for the post of Chairman of the Board of Management remain unclear to this day. One clue might be that, before his appointment to BMW, Sonne had worked for a company in the Quandt Group.

It is possible that the new major shareholder wanted to put someone in charge of BMW who had already shown his qualities in a Quandt-owned firm. This would suggest that Kämpfer suffered from being the nominee of the former big shareholder, Hermann Krages, who had sold his holding to Deutsche Bank back in 1959.

Initially Kämpfer wanted to give up his post. But despite his disappointment, the Supervisory Board managed to persuade him to extend his contract to the year 1965. This can probably be seen as a demonstration of their faith in Kämpfer's qualities and as recognition of his contribution to BMW up to that point. Nevertheless, it was not sufficient to create a relationship of trust between the former "quasi-chairman" and the new Chairman of the Board of Management.

With the successful launch of the BMW 1500, the "mid-range" car project was effectively completed and with it the first phase of Kämpfer's plan for restoring the fortunes of BMW.

In spring 1963 Kämpfer took this opportunity to ask the Supervisory Board for an early release from his contract. In the past months it had become clear he could no longer work successfully with Sonne. Kämpfer felt he had been demoted and robbed of the success of his concept, which Sonne, as Chief Executive, was now reaping. On 30th April 1963 Kämpfer took his leave of BMW.

No-one more than Kämpfer represents the transition from a crisis-torn business to a modern, ambitious motor manufacturer. First, he supported Richter-Brohm on his path to reconstruction and was also involved in the discussions about selling the company prior to 9th December 1959. After the General Meeting in 1959, the adaptation of the "Programme for the Future", his negotiations with the state authorities and potential investors, and not least the dynamic implementation of the plans in the course of business assured the successful refinancing of the company. Looked at from his point of view, his disappointment at not being appointed Chairman of the Board of Management is quite understandable.

Board members (left to right) Paul G. Hahnemann, Wilhelm Gieschen, Ernst Kämpfer and Karl-Heinz Sonne congratulate Sales Manager Ludwig Hense in 1962.

Departure from BMW

After leaving BMW, Kämpfer went on to become executive chairman of the Maximilianhütte steelworks. In January 1971 he moved to become chief executive of the Flick conglomerate, where he stayed until 1976. He also held various other posts, including that of Chairman of the Supervisory Board of Krauss-Maffei AG. Ernst Kämpfer died on 11th January 1999 at the age of 87.

Belgian Grand Prix in Spa-Francorchamps 1955: Noll/Cron (2) ahead of Smith/Dibben (40) and Faust/Remmert (12).

Surprise World Champions: Willi Faust and Karl Remmert

In 1954, Wilhelm Noll and Fritz Cron shattered Britain's longstanding dominance in sidecar racing to claim the first World Championship for BMW. The supremacy of this duo right up to the end of the season also made them favourites for the 1955 World Championship. But two German privateer entrants on a BMW RS proved a sensation and ultimately relegated the title defenders into second place.

By Fred Jakobs

The 1955 motor sport season had just one favourite in the sidecar category: Wilhelm Noll who, with his sidecar driver Fritz Cron, had won not only the previous year's German Championship but also the World Championship title. The sidecar duo with their works BMW had proved too superlative towards the close of the season. In particular it was the final World Championship race in Monza, for which the pair lined up for the first time with a fully-faired sidecar combination, that turned into a veritable display of strength. They shaved around four seconds a lap off the runners-up – a minor miracle in sidecar racing which saw them outclass their rivals.

Although the reigning World Champions did not compete in the first World Championship race in Barcelona's Parque Montjuïc, BMW had three other strings to their bow in the pairings of Faust/Remmert, Hillebrand/Grunwald and Schneider/Strauss, who had taken 2nd, 3rd and 4th places in the 1954 German Championship. However, this trio came to grief during practice when Hillebrand broke his thigh in a crash. When Schneider/Strauss had to retire from the race, Munich pinned all its hopes on Willi Faust and Karl Remmert. This twosome would not disappoint the BMW team: they went on to win the first World Championship race of the season with around a minute's lead over second-placed Brits Cyril Smith and Stanley Dibben on Norton. It was more than a minute later that four-times World Champion Eric Oliver crossed the finishing line on the second works Norton to take third place.

Oliver was deeply impressed by the performance of the two Germans: "Here, gentlemen, you have the future World Champions of the sidecar class!" he announced to reporters after the event. There was currently no team in the world that could match them, he went on. If Faust and Remmert were to continue performing as they had in Barcelona that day, they would dominate this class in future. "Nobody can hold a candle to them," he concluded. Eric Oliver would be proved right, at least with respect to the 1955 season.

But who were these two men – runners-up in the 1954 German Championship but little known internationally? Willi Faust, born in Oberbimbach in the Fulda district in 1924, was an

Facing page: Willi Faust and Karl Remmert, 1955 World Champions and German Champions.

apprentice vehicle mechanic before serving in the navy during the war. It wasn't until 1951, aged 27, that he embarked on motor racing. He contested his first races on a 250 cc twin-cylinder rotary-valve Triumph and managed to rake in five wins in his first five races. In 1951 he made his sidecar race debut on a second-hand flat-twin BMW Boxer. On this BMW he also contested several solo races in the 500 cc class, which meant that in 1951 he was already a regular competitor in three different categories.

Success with better hardware

In 1953 he presented himself before the experts as a newly fledged licensed rider. He had taken over Wilhelm Noll's BMW sidecar combination and was now regularly among the front-runners in national races. "Willi Faust was the up-and-coming man," says Noll looking back. Noll himself was supplied with better material by the BMW factory and knew that his ageing, yet still speedy, BMW was in the best of hands with this newcomer.

Sitting in the sidecar from the start was Karl ("Charly") Remmert, born in Silges – also near Fulda – in 1925. Remmert, who was more or less successfully trying his hand as a cross-country rider, was already a firm friend of Faust's before their shared motor sport career. "Karl was a fun guy. He was a typical sidecar rider – they were a breed apart anyway," says Noll today of the sidecar man whose "great tenacity and incredible energy" were highlighted by a profile in the journal Motorrad in 1956.

The breakthrough for the duo came in 1954 when Willi Faust managed to get hold of one of 24 Type RS 54 BMW racing machines that were for sale. In his employer's workshop, the talented technician set about fine-tuning the bike. Logistical and financial support came from the local Fulda tyre factory. It was incredible that the twosome achieved their successes using road tyres on general sale from this manufacturer when the trend in motorcycle racing was already towards specialization. They ended the 1954 season as runners-up in the German Championship, while in the World Championship they came third in the Swiss and Italian Grands Prix to secure a respectable sixth place. The outstanding achievement of that year was their victory in Schotten, where before an elated crowd of 175,000 they put Schneider/Strauss and Noll/Cron firmly in their places in a memorable rain-sodden event, providing clear evidence of their winning potential for the first time at an international competition.

Despite these succès d'estime, the victory the duo clinched at the first World Championship race in Spain came as a surprise to all as they were riding an unfaired sidecar combination. And even if they had streaked ahead of the British competition, the question was whether this was any more than a fluke and how Faust/Remmert would acquit themselves against the national BMW competition, in particular title defenders Noll/Cron.

Faust/Remmert in the International Tourist Trophy on the Isle of Man in 1955.

The answer would come in the Isle of Man Tourist Trophy where Noll/Cron were lining up for their first race in this, the season's second World Championship event, and Schneider/Strauss were also on their mettle for the TT. Fritz Hillenbrand, on the other hand, would miss out on the entire season due to his injury. But then there was the powerful British competition on Norton and Matchless, keen to capitalize on their home advantage. The importance of a detailed course knowledge on this circuit of over 60 kilometres had been eloquently demonstrated by Eric Oliver the previous year when he crossed the finishing line with a gap of more than five minutes to the ensuing World Champion, Wilhelm Noll.

Privateers without team orders

It was Oliver, too, who initially put his stamp on the race. He took the lead, but was unable to shake off the three BMW sidecar combinations in his slipstream. With the insider's favourite, Cyril Smith, having already crashed out of the first lap with his Norton, it became clear fairly early on that only Oliver, Schneider, Noll or Faust were in the running for victory.

On lap four Schneider managed to get past the four-times World Champion, who was forced to retire on the same lap: a stone had shattered the spectacles of his sidecar man Bliss, who abandoned the race with splinters in his eye.

Now BMW could easily have gone on to take a one-two-three win, but there was no works team out on the track that might have been kept on course by team orders. Only Noll/Cron had a works contract, while the other two pairings were competing as privateers, paying their own way, at their own risk, and equally keen to take the prestigious TT. BMW press spokesman Hoepner had a feeling things might not go too well as he and the mechanics watched the tough three-way battle from the pits.

Dutch TT in Assen, 1955. Noll/Cron (1) still ahead of Faust/Remmert (12).

Wilhelm Noll moved into the lead, posting the fastest race lap at an average 115 km/h, and had soon carved out a lead of 50 metres before taking a corner too fast, overturning and retiring from the race. Faust/Remmert were also forced to retire after coming into contact with Schneider/Strauss. Fortunately the latter survived the collision without major damage and managed to secure victory with a gap of more than three minutes. That put Schneider on level-pegging with Faust in the World Championship rankings, while title defender Noll came away still empty-handed after the second race of the season.

The BMW sidecar teams went on to secure the forfeited threefold victory in the third World Championship race: the German Grand Prix on the Nürburgring. Faust/Remmert made their debut in a faired machine and the aerodynamic improvements paid dividends: they beat Noll/Cron with a lead of a minute. In third place was Schneider, who had a substitute in the sidecar after Strauss had been incapacitated by an accident during practice. With this impressive win – they had a lead of 53 seconds by the end of lap three, after which they turned down the heat – the two men from Fulda had taken over the sole lead in the World Championship.

A minor scandal then accompanied the Belgian Grand Prix in Spa-Francorchamps. The first four laps of the race were dominated by the three BMW sidecar teams. Then, on lap five, Cyril Smith made a charge from fourth place to move to the front of the field. But it seems the Englishman had overtaxed his machine, since he had to retire two laps later with a technical fault. With Schneider having dropped back slightly, everything pointed to a battle between the leader Noll and second-placed Faust. As they turned into the start/finish straight on lap seven, Noll/Cron were met by the chequered flag: the Belgian race director had miscounted and ended the race a lap too early.

The question was, how should this race be scored if the distance prescribed in the regulations had not been covered? Faust/Remmert, moreover, were extremely put out as they had planned to thrash the reigning World Champions on the final lap. In the end the FIM declared the race in order, giving Noll/Cron their first win of the season. In the overall rankings, however, they had to content themselves with third place. Faust/Remmert, whose protest at the race results was rejected, managed to expand their lead over Schneider/Strauss.

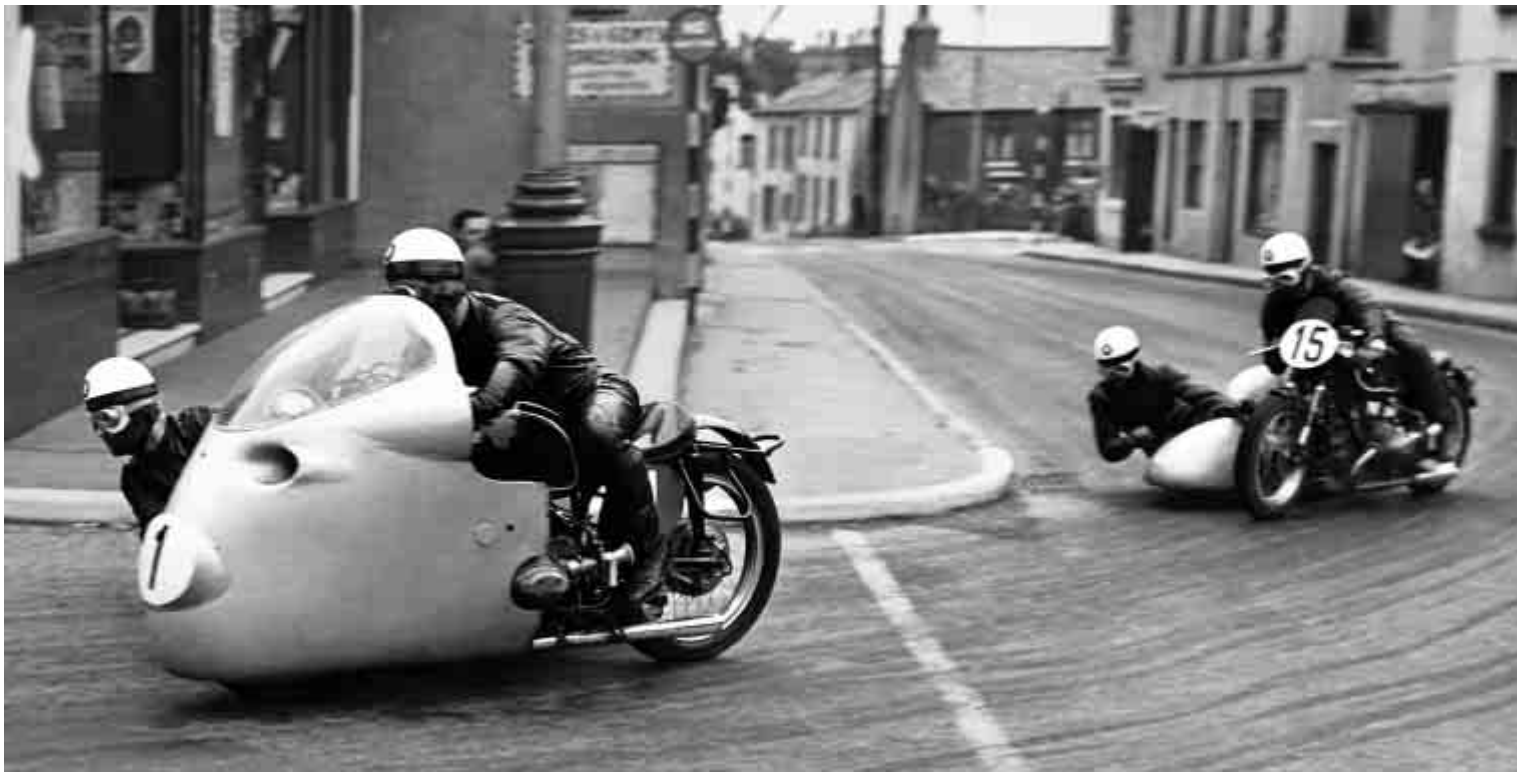
Tragic end of a career

In the next race, the Dutch TT in Assen, both were able to avenge themselves for the curtailed race in Belgium.

After numerous retirements among the competition, they were once again gunning for victory against Noll and Cron. The leaders repeatedly switched places until Faust/Remmert swept past the title defenders shortly before the close of the race to win by a margin of 14 seconds. As Schneider, previously second in the rankings, had abandoned the race on the eighth lap, this win allowed the two Fulda contestants to clinch their World Championship title ahead of the final race in Monza. That made it easier to come to terms with their retirement from that event. Noll/Cron won the season's concluding race to become World Championship runners-up.

But the undisputed stars of the year 1955 were Faust/Remmert, who also claimed honours in the German Championship by virtue of their wins on

Faust/Remmert crossing the finishing line in the Rund um Schotten race in 1955.

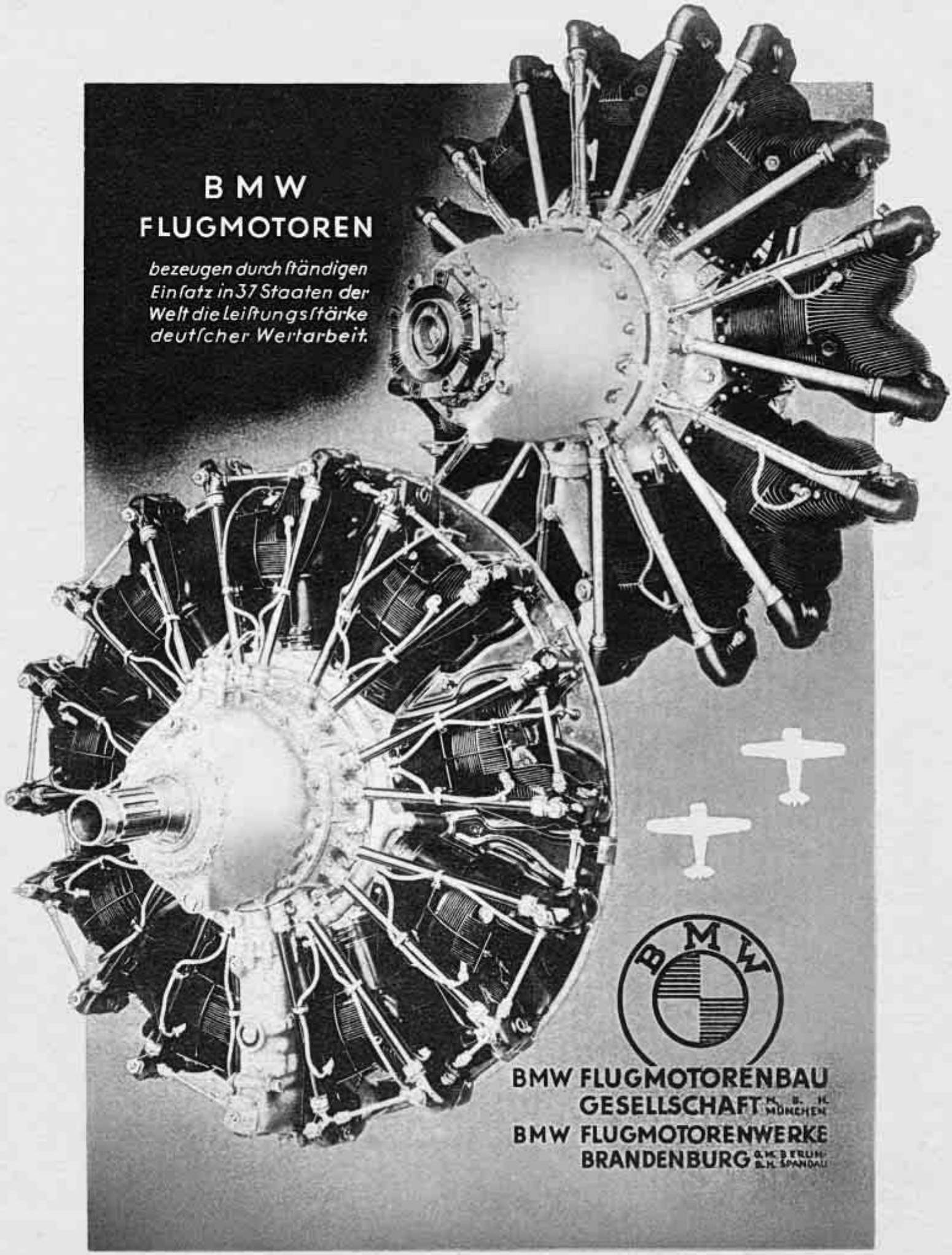


1955 International Tourist Trophy: Noll/Cron ahead of Faust/Remmert in the Manx Arms Corner.

the Solitude, in the Rund um Schotten race, in Nuremberg, on the Sachsenring and at Eilenriede.

Even 50 years on, Wilhelm Noll still talks about the racing duo from the Fulda area with undisguised respect: “Faust and Remmert deservedly took the World Championship title back then.” But it wasn’t just their racing skills that made such an impression on him: “Willi was a technical wizard as well. He had adapted his sidecar combination to run on 16-inch rather than 18-inch wheels and was the first to realize that this enabled a favourably low centre of gravity.” There was also the almost blind communication between the two riders during a race, and the good fortune to have been largely spared any technical breakdowns. By the time they had won the World Championship, all the experts concurred with Eric Oliver’s forecast at the outset of the competition season that Faust/Remmert would dominate the racing scene for years to come. But it was not to be. In April 1956 the duo were testing their machine for the forthcoming World Championship season. Their motorcycle had new all-round fairing and the two of them were running a few trial laps to familiarize themselves with its very different handling. Just before the Hockenheim Stadkurve (Town Corner) they had a serious crash, in which Karl Remmert died on the spot. Willi Faust survived with serious injuries, but he never got over the loss of his friend and completely withdrew from racing. He died in 1992.

Above left: International Solitude Race 1955: in the front row, Faust/Remmert (53), Schneider/Strauss (34) and Noll/Cron (43). Above right: The winners Willi Faust and Karl Remmert.


B M W
FLUGMOTOREN
bezeugen durch ständigen
Einsatz in 37 Staaten der
Welt die Leistungsstärke
deutscher Wertarbeit.
BMW
BMW FLUGMOTORENBAU
GESELLSCHAFT M. B. H. MÜNCHEN
BMW FLUGMOTORENWERKE
BRANDENBURG A.-G. BERLIN-
B.-H. SPANDAU