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hen it appeared in 1980 it seemed like little more than an interesting oddity. An improbable blend of roadster and enduro

bike, from a company whose products, and especially their flat-twin engine layout, were struggling to compete with more powerful Japanese fours.

Thirty years and more than half a million sales later, BMW's GS is a global phenomenon: Europe's most popular motorcycle, the world's best-selling bike over 500cc, and the star of countless books and TV shows. As well as reviving BMW and the boxer engine format, the GS has been the inspiration for numerous rivals, as the adventure class it created has become motorcycling's most dynamic.

All of which would have seemed almost impossible back in 1979, when BMW's motorcycle division gained a new

management team that included Sales Director Karl Gerlinger. The German marque's bike sales were falling; dramatically so in the vital US market. So serious was the situation that Eberhard von Kuenheim, legendary boss of the BMW Group (and father of current Motorrad chief Hendrik) was considering closing the two-wheeled operation.

'When he asked us to take over this business he said, "Decide whether you make it or you close it — whether you sell off the stuff and it's the end of the story," recalls Gerlinger, more than three decades later. 'But when you're a young guy, how can you think of selling off BMW Motorrad? I couldn't do it, and nor could my colleagues.'

Gerlinger's biggest problem was that not even he could see a long-term future for the boxer engine on which BMW's range had long been based. Development work had started on the 987cc, liquid-cooled four-cylinder engine that would power the K100 in 1984. 'We

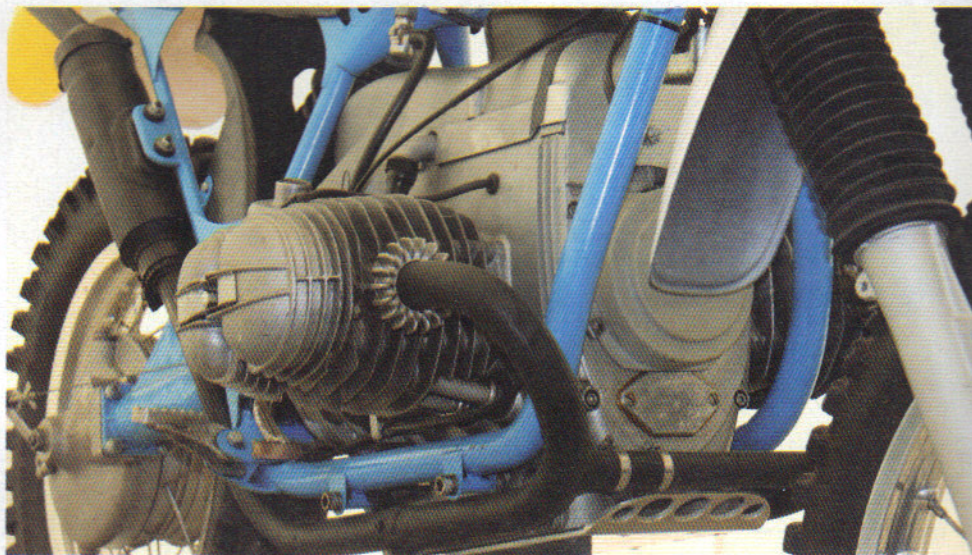
thought we needed a new, modern generation machine, moving away from the flat twin,' he recalls. 'But that takes four years at least, and in the meantime you go bankrupt if you have nothing to sell. So we needed something that we could develop quickly.'

Inspiration came from Laszlo Peres, an engineer in BMW's test department. A skilled enduro rider, Peres had ridden a self-built, 800cc boxer to second place in the German championship. Encouraged by this, BMW established a factory team that won the national title in 1979 and '80, adding the European championship in the second season.

Peres saw the opportunity to follow this success with a production model, and teamed up with some fellow engineers to build the forerunner of what would become the R80G/S. 'It was just a prototype, something we made to test,' he recalls. 'I had many years' experience of enduro riding so thought we should develop something new.' ➤



It came as a small surprise to remember that the GS story started with this, the GS80. Something of a boxer rebellion, in its way...



Although the extra-long, extra-bouncy front forks were an unusual sight on a BMW twin of its day, the engine appeared remarkably familiar

Gerlinger was initially sceptical. 'Laszlo first came into my office and tried to convince me we needed to do motorsport,' he says. 'I said no, first we need a bike to sell. But he insisted, and later the engineers said: "We have something in the basement — come down and look at what we have to show you." When I tested it I said: "Jesus Christ, this thing is going to make us or break us!"'

Peres and Gerlinger knew that a production model could not be a close replica of the GS80

enduro competition bike; that it had to have wider appeal. The Japanese manufacturers were having success with dual-purpose bikes, but these were generally singles of up to 500cc, such as Yamaha's XT500. BMW's research showed that these bikes typically covered 98 per cent of their distance on the road. Perhaps there was a gap in the market for a larger capacity alternative — powerful, robust and comfortable enough for long journeys?

The project was given the go-ahead, under

the control of Rüdiger Gutsch, BMW's head of chassis development and a keen off-road rider. Gutsch's influence was most clearly seen in the innovative, single-arm rear suspension layout, which linked the wheel directly to the drive train, and made changing the rear tyre as easy as on a car.

Equally important was the reduction in weight from the R80 roadster from which the new bike's air-cooled 798cc, pushrod-operated boxer motor was derived. Much of this was

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Here comes a BMW equally suited to going mild in the country as going wild in the burbs

achieved by adapting the chassis of the lighter R65, resulting in a dry weight figure of 167kg — still heavy by enduro standards, but light for a large-capacity roadster. Considerable weight was also trimmed from the R80 engine's heavy flywheel.

BMW put plenty of effort into development, including a demanding endurance test in January 1980, in which two riders (one from the factory, the other a journalist) rode pre-production models for 1300 miles through Ecuador. Both riders and bikes came through the trip, which ranged from the heat of the Amazon rainforest to 5000m high glaciers in the Andes.

The production bike was named the R80G/S, its initials standing for the German words Gelländer (off-road) and Strasse (road). With its mainly white paintwork, enduro style front mudguard and orange dualseat it was a striking machine. It was a tall one too, with 200mm of fork travel and 170mm at the single-sided rear end. Front brake was a single Brembo disc, a first for a dual-purpose bike. Other features included halogen headlight, electric starter, electronic ignition, and bash-plate.

The Press riding launch was held in Avignon, France, in September 1980 — less than two years after the project had begun. Initially there was consternation from a motorcycling world unused to seeing such innovation from BMW. 'A BMW dirtbike? A shaft drive off-roader?' wondered *Bike* magazine's tester. 'This can't be real — BMs are pure roadsters, man, the definitive long-distance touring mount.'

But the G/S won over almost everyone who rode it. The boxer motor's output of 37bhp was modest even 30 years ago, but the bike's lively ►

The early production machines were less striking (and less effective off-road) than the GS80, but they still took the market by storm



throttle response and relaxed cruising ability were unprecedented for a dual-purpose bike. And although it was clearly no enduro bike its off-road performance, helped by specially-made Metzeler tyres capable of coping with the ton-plus top speed (previous off-road rubber had been good for only about 80mph), came as a pleasant surprise to many riders.

The *Bike* tester concluded: 'It is real... and a real nice bike. The new R80 G/S is possibly the most delightful Bee Em ever. Right now you're offered a sporty and responsive road cruiser which is light and high enough to cope with off road excursions, yet is still a fully equipped transport module. BMW have produced a great all-rounder.'

The G/S also made a stunningly successful entry to the competition world, in the Paris-Dakar Rally. The gruelling endurance trek from the French capital to Senegal in western Africa

had been started by Frenchman Thierry Sabine in 1979. Yamaha's XT500 single had won the first two Dakars, although French enduro ace Hubert Auriol, riding an RS80 boxer with support from the French BMW importer, had led the 1980 Rally after 11 days before being disqualified for receiving outside assistance.

Auriol had much better luck on the 1981 Rally, which he won on a boxer prepared by French dealers with support from the factory. 'The French BMW manager said did I want to be on a team, which was fantastic,' he recalls. 'The bike that year was very close to standard, and the dealers who were preparing it didn't have much experience. It was heavy and the rear suspension didn't have much travel due to the shaft. But in the early days the race was all about going fast between the holes, and this bike was good because it was faster than the singles.'





Not exactly a spy shot, but the Press loved them ... once they'd figured out what they were for

The boxer also had an advantage in being both reliable and easy to work on, although Auriol's race was far from incident free. 'The first stage was in Algeria and a really fast one of about 250km. I finished first with another BMW third, I think. After checking the bikes, and sorting out some problems because I had a few oil leaks, the team manager Dietmar Beinhauer said, "We have to make a big decision: if you go on like this you'll break the bike and won't finish the race, so you have to slow down." I replied, "It's not possible to slow down — it's a race!"

'The second day was also really fast, visibility was really bad and on some small bumps I over-revved the engine and broke a valve. I had to wait for the service car, and that day we discovered that this bike really was fantastic because you can change the cylinder head, and after a quarter of an hour away you go. After a couple of days I was leading the race again.'

Auriol won that 1981 Dakar by over three hours, and repeated the victory two years later, after the team had been withdrawn in 1982 with gearbox problems. The wins were hugely important in establishing the G/S, not least because Gerlinger was quick to promote the achievement. 'In the beginning the Paris-Dakar was not known in Germany or other countries (except France), but after our first success we started to blow the marketing and PR horn like devils,' he recalls. 'Throughout our worldwide organisation we showed all these movies, and used our money to help Thierry Sabine get the race known to the public.'

That aggressive approach paid huge dividends. Gerlinger had hoped to sell about 3000 units of the G/S in 1981, but by the end of that year the firm's Berlin production line had produced more than 6500. The model's instant success led the motorcycle division's recovery, restored confidence in the boxer layout, and gave vital breathing space for development of the K-series four. ➤



Most of the upright boxers saw an easy life (as did their riders)...



Inevitably, things became bigger, better and a little more punchy



The boxer's association with the Paris - Dakar event did neither party any harm

And the GS success story was only just beginning. Before long, specialist firms began producing a wide variety of extras, from larger fuel tanks and engine protection to luggage. In 1984, BMW introduced a special Paris-Dakar version of the boxer, featuring a larger, 32-litre tank, single seat and unfolding luggage rack. By the middle of the decade the Japanese firms had responded with increasingly capable rivals, and the large-capacity dual-purpose market was firmly established.

BMW had sold more than 20,000 units of the G/S by 1987, and had also followed-up Auriol's Dakar success with consecutive wins for Belgian ace Gaston Rahier in 1984 and '85. But the firm knew they couldn't afford to stand still, and for the 1988 model year unveiled the R100GS. As

well as its GS rather than G/S initials, this had a bigger, 980cc engine producing a claimed 60bhp. (There was also an R80GS.)

Equally important was the GS's uprated chassis, which introduced the parallelogram style Paralever rear end, designed to counter the forces introduced by the drive shaft. The system was based on that pioneered on Walter Zeller's factory racebikes in the 1950s. It was even more useful on the dual-purpose machine, because the shaft's torque reaction tended to stiffen the long-travel suspension under acceleration, with resultant loss of traction.

The GS also featured extra suspension travel at both ends, Marzocchi forks up front, wire-spoked wheels with tubeless tyres, bigger tank and seat, and a small screen that was standard

fitment on the larger model. The GS proved hugely popular, and so did its new-found weather protection. For 1991, the model's tenth anniversary, this was enhanced by a redesign that added a frame-mounted fairing and adjustable screen.

The GS's gradual progression towards its current character was well under way, and arguably the most significant change came in 1994. That year saw the arrival of the R1100GS. The new bike's 1085cc boxer engine made 80bhp and was a detuned version of the high-cam, four-valve unit introduced a year earlier in the R1100RS. Its revamped chassis featured Telelever front suspension, plus triple discs with optional ABS. More to the point, the new GS was a generally bigger, more touring oriented

Suitably modded, the boxer was handy in the desert...



**And the fame continues, unabated**

machine that was heavier and taller than its predecessor. Some people wondered whether BMW had gone too far, and whether a bike of this size was too big to be a serious touring off-roader. The sales figures gave the answer. By 2000, when it was replaced by the 5bhp more powerful R1150GS, more than 40,000 had been produced. The GS had won numerous magazine awards, and covered millions of miles both on- and off-road all round the world.

Two years later came the even more gigantic R1150GS Adventure, with its bigger screen, extra crash protection, optional 30-litre tank, and aluminium panniers. Ewan McGregor and Charley Boorman rode R1150GS Adventures on their hugely publicised *Long Way Round* trip around the world, adding to the impact of a model that was the choice of numerous other long-distance riders, some of whom also generated coverage in books or on television.

By this time, GS didn't just mean boxer twins. Also in 2000, BMW unveiled the F650GS, based on the single-cylinder F650 roadster. It was available both as a standard dual-purpose GS model and a more dirt-oriented Dakar variant, with screen, hand-protectors and extra suspension travel. Helped once again by publicity from the Dakar Rally, which Frenchman Richard Sainct had won on an F650RR single in 1999 and 2000, the singles provided a cheaper GS option and sold more than 18,000 in their first year.

But it was still the big boxers that led the GS line, and that became even more true when perhaps the most successful revamp of all resulted in the R1200GS in 2004. The new bike's style was even more striking and distinctive, and its 1170cc, balancer-shaft equipped engine gave 100bhp along with smoother cruising performance. But it was the chassis that made the most impact, especially the dry weight figure ➤



Rear floating was much improved by this clever arrangement; retaining the easy-removal wheel attachment and single-sided swinging arm; the Paralever



The standard BMW tourist panniers may have looked a little out of place, but ... luggage is luggage!

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of 199kg, which matched that of KTM's rival Adventure and even Ducati's racy 999.

The inspiration behind the GS's development was an unlikely object: a big blue plastic water container that weighed 30kg and had the word Ziel — 'target', in German — on its side. 'Our development team's aim was to reduce weight by 30kg, so this water tank was placed where it was in view every day,' said BMW's bike boss Herbert Diess at the bike's launch.

The target was reached, handling was significantly improved, and the R1200GS became the most successful GS of all. By July 2007 BMW had sold over 100,000 units of the R1200GS, including 15,000 Adventures, and the model was firmly established as one of the world's most popular bikes. And the records keep on tumbling, as BMW continues to set

the pace in an adventure bike class that has become one of motorcycling's most important. Last May, the 500,000th GS model left the firm's Berlin factory.

This year the GS is upgraded yet again, with a dohc engine that brings max power output to a highest-yet 110bhp. It's another success: Britain's best-selling big bike in the latest June figures, and still setting the pace in other countries too. Crucially, the GS's popularity has allowed BMW to expand into new areas, too. Those difficult days in the late 1970s, when Laszlo Peres built his enduro boxer prototype with the marque's two-wheeled future under threat, seem a very long time ago. **Rc**

*This is not an
airhead, you'll
observe...*

