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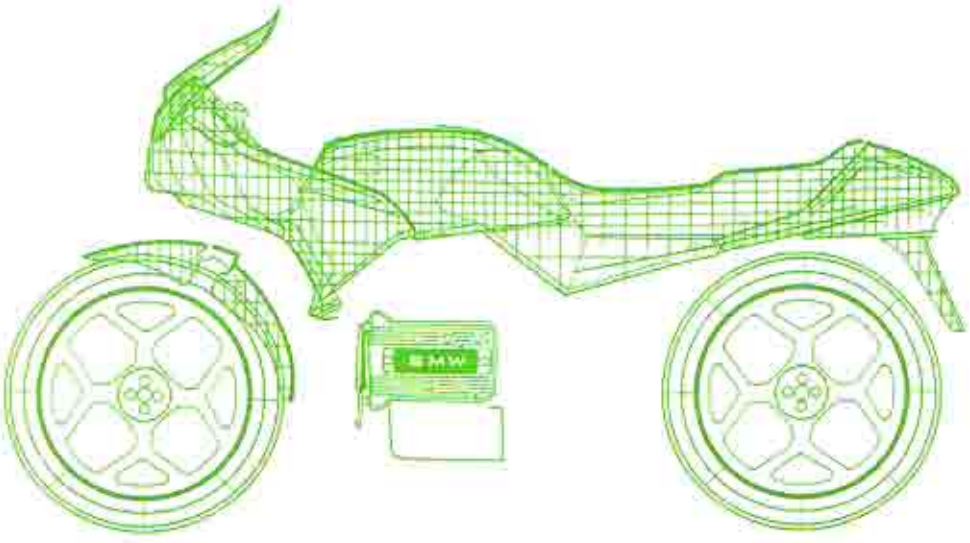

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In short

Just like the large K 100: the BMW K 75 3-cylinder

Exactly two years after the fantastic start of the BMW K 100 Series, a completely new generation of 1000-cc 4-cylinder motorcycles through which Europe's largest motorcycle manufacturer has taken up the challenge of the dominating Japanese manufacturers, the second stage of the very successful K-project is to be launched as planned in autumn 1985: BMW is proud to present the K 75, a 750-cc model series with the first 3-cylinder engine in more than 60 years of BMW motorcycle history.

The K 75 is available in two versions: The K 75 C basic model with a small cockpit fairing fastened rigidly to the handlebar will be launched in September. The K 75 S with a sports fairing fastened to the frame and optimized for streamlining in the BMW wind tunnel will be available in spring 1986.

Developing 75 bhp (55 kW), both K 75 models represent an attractive addition to the BMW 1986 motorcycle range now consisting of no less than 10 different models. More slender, lighter and easier to handle than the K 100, the K 75 is intended not only in terms of price and performance to close the gap in the BMW model range between the R Series of flat-twins limited to 800-cc and 50 bhp (37 kW) and the 90 bhp (66 kW) top models in the K 100 Series, in this way developing a new purchaser potential for BMW.

Conceived in Munich at the same time as the K 100 and developed two years later, the K 75 is built in Berlin like all other BMW machines at one of the world's most modern motorcycle factories. The new K 75 now

following in the footsteps of the 4-cylinder offers all-round harmony and applies the ideas already implemented by BMW in the K 100: advanced and sensible high-performance motorcycle technology combined with functional and indeed unique design.

As an example, the K 75 naturally offers the advantages of the BMW Compact Drive System - an outstanding drive concept patented worldwide. The liquid-cooled inline engine in longitudinal, flat arrangement (which in this case is even more compact with its three cylinders and about 10 kg less weight) with logical direct drive via a 5-speed gearbox to the drive shaft running in the monolever excels not only through its low centre of gravity with good and smooth handling but also through its optimum access and ease of maintenance. The fully electronic ignition and fuel injection with coasting cut-off optimize the engine's output and fuel economy and reduce exhaust and noise emissions.

Although the new 3-cylinder engine has a somewhat higher output per litre than the 4-cylinder power unit its design objectives were not one-sided peak performance, but rather practical torque, power and a long running life. Like the K 100 it therefore provides 83 % of its maximum torque of 68 Nm (50 ft/lb) at just 2500 rpm (the maximum torque being developed at 6750 rpm). This provides a relaxed but nevertheless fast style of riding without hectic gear-shifts.

The free first-order mass momentum inevitably generated by a 3-cylinder engine has been compensated by BMW's engineers with the help of two balance-weights on the drive shaft. The drive shaft, in turn, rotates opposite to the crankshaft at exactly the same speed, in this way performing the function of an equalizing shaft. The engine of the K 75 thus excels through a high standard of running refinement.

The building-brick system applied by BMW not only for the flat-twin models but also with the K Series offers a great advantage in terms of parts supply. In addition, more than half of all the parts and components used on the K 75 have already proven their merits in practice on the K 100. Not only many auxiliary units but also the generous features and running gear have therefore been taken over from the K 100 with hardly any modifications. Only the K 75 C is different in this respect with its 18" wheel with integral drum brake at the rear. With a full 21-ltr aluminium fuel tank, the K 75 C weighs only 228 kg (503 lb), the K 75 S a mere 235 kg (518 lb).

Both models are genuine all-round motorcycles. With particularly good handling in bends and a top speed of up to 200 km/h (124 mph) (K 75 C) and 210 km/h (130 mph) (K 75 S), they are both stable and safe on the road providing ideal conditions not only for a sporty style of riding but also for pleasant touring or long-distance travelling with a lot of luggage. And thanks to their comfortable design and running characteristics they also guarantee sheer riding pleasure for the rider with a passenger.

BMW also presents new developments in the 1986 model year within the popular flat-twin motorcycle range. Indeed, these motorcycles just recently proved their qualities once again by winning the Paris-Dakar Rally for the fourth time in 1985.
Resembling the R 80 launched last year in terms of its styling and technical features, the new R 65 now represents BMW's attractive high-torque model for beginners in the BMW range (output: 48 bhp/35 kW). It goes without saying that also the R 65 can be run on unleaded fuel.

In full

Based on the successful concept of the K 100: the new BMW K 75 3-cylinder

The readers of MOTORRAD, Europe's largest motorcycle journal, voted it the Motorcycle of the Year twice in a row - in 1983 and 1984 - and more than half a dozen other public surveys in both Germany and abroad provided the same result: Two years after its world premiere, the BMW K 100 representing a completely new 1000-cc 4-cylinder model generation has received not only an unparalleled response from the media but also unprecedented success in the market. With new motorcycle registrations dwindling in the world market by 14 % in 1984, BMW was able to increase its sales figures over 1983 by 17 % to a total of 32,000 units. Apart from the proven flat-twins, every second of these BMWs was a K model. And while the K 100 RS became the absolute best-seller of the year in the Federal Republic of Germany with a total of more than 3,200 units sold in 1984, BMW considerably expanded its leading position in the top market segment of large motorcycles above 750-cc not only in Germany itself but also in Great Britain and the Netherlands.

After the fantastic start of the K 100 Series with which Europe's largest motorcycle manufacturer had taken up the challenge of the dominating Japanese manufacturers, the second stage of the K-project is to be launched as planned in autumn 1985: BMW will be presenting the K 75, a 750-cc model series with the first-ever 3-cylinder engine in the history of BMW motorcycles.

The K 75 is available in two versions: The basic model with cockpit fairing is to be launched in September, the K 75 S with its optimized streamlining will be introduced in spring 1986.

Developing 75 bhp (55 kW), both K 75 models represent an attractive addition to BMW's 1986 motorcycle range now consisting of no less than 10 different models. More slender, lighter and easier to handle than the K 100, the K 75 is intended not only in terms of price and performance to close the gap in the BMW model range between the R Series of flat-twins limited to 800-cc and 50 bhp (37 kW) and the 90 bhp (66 kW) top models in the K 100 Series, in this way developing a new purchaser potential for BMW.

Conceived in Munich at the same time as the K 100 and developed two years later, the K 75 - like all other BMW motorcycles - is built in Berlin at one of the world's most modern motorcycle factories.

The consistent line applied by BMW in more than 60 years of flat-twin models is now being continued in the K Series. The new K 75 developed on the basis of the 4-cylinder models provides a high standard of all-round harmony based on the ideas already implemented by BMW in the K 100: Advanced and sensible high-performance motorcycle technology and functional, truly unique design.

As an example the K 75 naturally also features the advantages of the BMW Compact Drive System - a drive concept patented worldwide. The liquid-cooled inline engine in flat, longitudinal arrangement (which is even more compact in this case and, at 66 kg, weighs about 10 kg less than the 4-cylinder), the 5-speed gearbox and the monolever housing the drive shaft form one functional unit as the power train and help to carry the running gear. The advantages of this design go far beyond the substantial reduction in weight and the unmistakable appearance of the K 75: The low centre of gravity ensures optimum handling and the crankshaft arranged in the direction of travel provides direct drive to the drive shaft without joints and pivots that would only cause a loss of power. The horizontal position of the engine also facilitates maintenance, since all important parts and components are within easy reach.

The K 75 offers another advantage over these existing benefits of the Compact Drive System. This is the building-brick concept already applied by BMW with the flat-twin models and now continued with the K Series: With both machines sharing a large number of standard parts, the production of a second model series becomes more economical and the supply of parts remains as simple and inexpensive as possible despite the wider model range. Another advantage is that all the components taken over from the K 100 have already proven their merits in practice.

But while about half of the parts and components of the K 75 come from the K 100, the new "BMW 3 Series" is much more unique in technical terms than would appear at first sight. The heart of the new machine is of course the engine reduced in size by one cylinder. However, while the two engines are still identical in terms of their bore and stroke, valve timing and dimensions, the K 75 features among other things a modified combustion chamber, new pistons and a compression ratio increased to 11.0:1 in order to develop its increased output equalling 100 bhp/litre.

The engine of the K 75 nevertheless has the typical features of all BMW motorcycle engines. The main objective was not to develop an extreme peak in power and performance. Rather, the 3-cylinder - like BMW's other engines - excels above all by its particular performance characteristics. The first and foremost design objective, therefore, was to generate superior torque also at low engine speeds. Accordingly, the engine of the K 75 (like its bigger brother in the K 100) develops 83 % of its maximum torque of 68 Nm (50 ft/lb) at just 2500 rpm (the maximum torque being provided at 6750 rpm). In practice this means that this power is available, for example, in 5th gear at about 60 km/h. This in turn provides a relaxed but quick style of riding without hectic gear-shifts. Avoiding one-sided performance peaks also provides a longer running life.

BMW's engineers also found a simple and convincing solution to one of the inherent features of all 3-cylinder engines: While three cylinders provide a good balance of free mass forces as opposed to a 4-cylinder, the 3-cylinder engine develops a first-order free mass momentum. The adverse effect of this momentum is compensated by two balance-weights on the drive shaft which rotates at the same speed as the crankshaft, in this way also serving as an equalizing shaft. As a result, the engine of the K 75 provides a high standard of running smoothness.

The 3 and 4-cylinder engines of the K Series are also closely related in terms of their auxiliary units. Fully electronic ignition and fuel injection with coasting cut-off optimize engine power and fuel consumption and reduce exhaust and noise emissions. Other electrical components such as the large alternator with an output of 460 Watt are also very similar to the electrical system of the K 100. The power of the engine is conveyed by the slightly modified clutch of the R 80. With a shorter transmission ratio on the rear wheel, the 5-speed gearbox is the same as on the existing model and did not require any modifications.

The 3-in-1 exhaust system made of rustproof stainless steel discreetly indicates the number of cylinders. Because while the silencer of the K 100 is square, the silencer of the K 75 is triangular. The deep and powerful sound emitted by the tail-pipe shows people right away that here three cylinders are developing ample power.

Following comprehensive tests the running gear remained more or less the same as on the K 100. With the exception of the front frame supports bent back a bit further to the rear on account of the shorter engine housing, the steel tubular space frame open at the bottom remained the same as on the 4-cylinder model. While it is just as long as the K 100, the K 75 provides even better handling due to a reduction in weight by more than 10 kg and the smaller amount of weight resting on the front wheel, which still has a

rim diameter of 18". The stable telescopic fork of the K 100 providing 185 mm (7.3") wheel travel has been supplemented by an integral fork stabilizer, the large dual disc brake with a diameter of 285 mm (11.2") has been taken over from the K 100 without any modifications. The light-alloy BMW monolever and the monoshock with 110 mm (4.3") spring travel, which make changing a wheel dead easy, both come from the K Series building-brick system. The two K 75 versions nevertheless differ at the rear wheel: While the somewhat faster K 75 S features the wider 17" wheel of the K 100 with one disc brake, the K 75 C has an 18" rim with an integral drum brake measuring 200 mm (7.9") in diameter.

The two K 75 models differ most visibly through their fairing with integral direction indicators, which was developed in comprehensive tests in the BMW wind tunnel. As a largely open motorcycle, the K 75 C features a small cockpit fairing mounted directly on the handlebar and serving to reduce wind pressure by a substantial margin. A high transparent windshield is also available as an alternative to the cockpit fairing.
The handlebar of the K 75 S measures 10 cm (3.9") less in width and the streamlined sports fairing fastened rigidly to the frame provides even better protection from wind and weather. It also improves the motorcycle's dynamic performance and riding safety by a further reduction of lift forces and air resistance. As a result, the K 75 S is about 10 km/h (6 mph) faster than the K 75 C which has a top speed of approximately 200 km/h or 124 mph.

The K 75 features the same wide range of fittings and appointments as the K 100. As an example, it has the same intelligently designed instrument cluster on the handlebar including automatic direction indicator cancellation, the gear display and the electronic rear-light monitor. As on all K models, the reserve fuel light has been modified: Now only one - instead of two - warning lights tells the rider that only 5 litres of fuel is left in the tank.

Consistent lightweight construction and the use of high-quality light-alloy on the engine, gearbox, wheels and fuel tank have helped to reduce the weight of the K 75. In road trim with full tank, the K 75 C therefore weighs a mere 228 kg (503 lb), the K 75 S just 235 kg (518 lb).

Both models are genuine all-round motorcycles. While they offer particularly good handling especially in bends, they are also safe and stable up to a top speed of 200 km/h (124 mph) (K 75 C) and 210 km/h (130 mph) (K 75 S), respectively.

Both machines are therefore well-suited for a sporty style of riding, for casual touring and - thanks to their high load capacity - for long-distance travelling. Designed for genuine comfort on two wheels, they also guarantee sheer riding pleasure when the rider takes along a passenger. And since BMW offers the largest range of special equipment and accessories in the motorcycle market, the K 75 will also be available with a wide range of options.

While the K 75 is now making its debut, the K 100 is entering its third year of production with a few innovations. As an example, it is receiving the new seat of the K 75 with integral grab handles for the pillion, battery panels to match and the footrest plate.

Another completely different innovation is available in the popular flat-twin range for 1986 - a model range whose merits were recently confirmed by BMW's fourth victory in the Paris-Dakar Rally in 1985.
With similar looks and technical features as the R 80 introduced last year, the new R 65 taking the place of the previous R 45 and R 65 models is now equipped with a monolever like all BMWs and offers an attractive, high-torque alternative for achievers moving up to the BMW range. Developing 48 bhp (35 kW), the R 65 can also be run on unleaded fuel.

The K 75: BMW's first 3-cylinder motorcycle

BMW is introducing an engine with three cylinders - a first-time achievement in the history of a company that so far has only produced motorcycle engines with one, two or four cylinders. The decision to build this power unit may appear to be very unusual at first sight. Because whenever three cylinders appeared in the history of engine design there was always something exotic about it. It would appear, therefore, that BMW has actually followed another philosophy throughout 60 years of constant progress in engine design.

In reality, however, the choice of a 3-cylinder is typical of BMW's development strategy which started in 1923 with the R 32 designed by Max Friz. Ever since that time (and up to the new K 75) the golden rule of all BMW designers has been to achieve an optimum result with clear-cut technologies and without unnecessary mechanical gimmicks.

The flat-twin has proved the viability of this logical approach for more than 60 years. And this approach becomes even clearer and more consistent in the K Series. Because here it was decided even before the very first draft to build engines with three and four cylinders, in this way obtaining power units tailor-made for various classes of power and performance. Power units designed from the very beginning to fulfill a definite purpose.

The consistent K Series building-brick principle

Within a range of engines designed for different power and performance, a 750-cc 3-cylinder provides fundamental advantages as the junior partner of the 1000-cc 4-cylinder. This even starts in the design phase: With the same bore and stroke and largely identical cylinder head design, the basic study of thermo-dynamics and mechanical properties is greatly facilitated. A "building-brick engine" made up of cylinder units with the same displacement is, as we know today, the optimum solution for a related range of engines.

The use of standard cylinders of the same size also provides advantages in design. Because leaving aside the difference in maximum output, this principle of equality helps to retain the basic characteristics of the engine. The mean operating pressure will be similar, the output and torque curves more or less the same. While one cylinder more or less obviously causes a difference, both engines still develop their power in basically the same way.

Economy in use is another argument in favour of cylinders of the same size. Because three instead of four cylinders inevitably means less frictional losses. And since a smaller engine also has the duty to consume less fuel, a reduction in internal friction is always highly desirable.

A saving in weight and money

The advantages of a 3-cylinder become very obvious when we consider its weight. While one cylinder less does not mean 25 % less weight, the 3-cylinder weighs only 66 kg (146 lb) which makes it about 10 kg lighter than the 4-cylinder. A 4-cylinder with 750 cc, on the other hand, would only have been a 1/2 kg lighter than the one-litre machine, at the very best.

Less weight and less different parts and components obviously also means a lower cost of production. And without such savings it would not have been possible to give the K 75 an appropriate price in the market distinguishing it from the K 100.

Greater running smoothness thanks to the equalizing shaft

The building-brick principle with three and four standard cylinders inline also enabled BMW's engineers to reach an objective they had set themselves in the light of their own riding experience: To achieve an optimum standard of refinement and running smoothness without the "lifelessness" of an

electric motor. The 4-cylinder reaches this objective through its good balance of mass forces (there are only second-order free mass forces on a straight four). While a 3-cylinder achieves a complete balance of mass forces, it presents first-order free momentum also found to a slight extent on a flat-twin. The effect of such momentum can nevertheless be compensated very easily by two weights on the output drive shaft incorporated anyway in the K-engines and serving in the case of the K 75 as an equalizing shaft, since it rotates at the same speed as the crankshaft, but in the opposite direction. The result is a high standard of running smoothness.

Even better handling than the K 100

The 3-cylinder concept also gives the engine a definite identity without making it a downmarket version of the K 100. Indeed, it stands out from its big brother not only on account of the 3-cylinder design. Rather, the specific character of the K 75 results from the reduction in weight by about 11 kg (24 lb) serving above all to reduce the load on the front wheel. This makes the K 75 a genuine alternative to BMW's sporty 4-cylinder travel machines with even better handling. The result is a symbiosis of flat-twin agility and modern engine technology, providing a motorcycle that proves its qualities in each and every bend.

ENGINE

Technical features of the K 75

With BMW, the looks of a motorcycle is also a question of style. As the flat-twin has proven for more than 60 years. Because this engine has made all models - from the R 32 to the R 80 - clearly identifiable members of one and the same product family.

This consistent design and styling philosophy is now also continued with the K-models. Following in the footsteps of the K 100 after a period of two years, the new K 75 takes up ideas first introduced in the 1000-cc model. To a large extent it uses the same or at least similar components. It is therefore the more discreet features that give the small K its unique position, the identity of this machine not resulting from eye-catching visual effects.

The Compact Drive System with the usual advantages

The new 750-cc model naturally also features the BMW Compact Drive System conceived by BMW engineer Josef Fritzenwenger and patented all over the world. The liquid-cooled inline engine in flat arrangement (this time with three cylinders, each of which displaces 250 cc), the gearbox and the monolever accommodating the drive shaft represent one functional unit as the power train and part of the running gear. The advantages of this design are far greater than " just" a substantial reduction in weight:

- The low centre of gravity provides excellent handling and agility on the road.
- The crankshaft arranged longitudinally in the direction of travel provides a direct transmission of power to the drive shaft without the loss that would inevitably be caused by pivots, joints, etc.

- The horizontal arrangement of the compact engine facilitates maintenance by providing easy and direct access to all important parts and components. Without having to remove the tank or engine components, the mechanic will quickly gain access on the left side to the valves, spark plugs and injection jets. He can even replace all crankshaft bearings, pistons and connecting rods on the right-hand side without removing the engine from its supports.

The K 75 offers a further advantage over these traditional benefits of the Compact Drive System already featured in the K 100: With many of the parts being the same, production of a second model series is more economical and the supply of spares easier despite the larger model range.

Superior torque at low engine speeds

The engine of the K 75 is not only based on the same design principle but also offers typical BMW running features. Because in this case extreme performance is not the name of the game. Developing 75 bhp (55 kW), the 3-cylinder remains clearly behind the 90-bhp (66-kW) 4-cylinder. For this 750-cc machine does not seek to prove that it is just as fast as a 1000-cc motorcycle.

The strongest point of the new 3-cylinder, therefore, is the way it develops its power. BMW's first and foremost design objective (based on personal experience) was to build a machine with strong pulling force thanks to ample torque even at very low engine speeds. The result is a motorcycle ideal for fast riding in relaxed style and without hectic gear-shifts. This concept has inevitably led to another result also of importance in BMW's opinion: Giving up a bit of peak power provides much greater reliability and a longer running life. The objective, therefore, is to have a motorcycle for 100,000 km without the need of an overhaul.

No simple task

Practical development of the 3-cylinder engine started more than three years ago. And during this time much more had to be done than just reducing the length of the light-alloy engine block by one cylinder unit.

Four minus one is three - this can be a lot more than simple arithmetic for beginners. Particularly when three troublesome factors have a direct influence on the result. Because three things were clear from the very beginning: First, the K 75 was to be a unique motorcycle; second, the objective was to use as many standard parts as possible; third, some room was to be left over for technical progress. Adding to this the need to build a motorcycle with a lower price, one obtains a task that can give the development engineer nightmares.

Half of it a new motorcycle

How much work goes into reaching such objectives is shown by the simple fact that one half of the K 75 is a completely new motorcycle while the other half has been inherited, as it were, from the K 100. And indeed, the 3-cylinder has far more technical distinctions than one might think at first sight.

These distinctions start right beneath the skin of the engine. The fact that the engine is one cylinder shorter is most striking on the valve side where the three intake manifolds make it easier to identify the engine. At 67 mm (2.64") and 70 mm (2.76"), respectively, the bore and stroke are exactly the same, as is the basic design of the cylinder head with two overhead camshafts and the valves inclined at an angle of 19^{0} relative to the cylinder axis. Valve timing and the valves themselves are also identical, the diameter on the inlet side being 34 mm (1.34"), on the outlet side 28 mm

(1.10"). But that is just about the end of the road: The 3-cylinder, two years younger than the 1000-cc machine, already differs in its combustion chamber profile. A more hemispherical shape allows a higher compression ratio of 11.0:1 instead of 10.2:1. And the new combustion chamber also has new pistons, while the connecting rods have remained the same.

Output per litre up by 10 %

The cylinder head required some refinement to reach the objective of providing a higher output per litre. As the name happens to indicate, the K 75 develops 75 bhp (55 kW). This means about 100 bhp/litre, whilst the K 100 develops "only" 90 bhp (66 kW) and, accordingly, has an output per litre of 90 bhp. This increase in muscle also meant an increase in engine speed: The maximum output of the K 75 comes at 8500 rpm, that of the K 100 at 8000 rpm. And we have a similar shift when it comes to engine torque: The K 75 develops 68 Nm (50 ft/lb) at 6750 rpm, the K 100 86 Nm (63 ft/lb) at 6000 rpm. However, the torque curve so essential in practice explains the characteristics of the K 75 power unit better than maximum torque: 83 % of the maximum torque is available at just 2500 rpm. Which means that this power is available in 5th gear at a speed of only about 60 km/h.

An equalizing shaft for extra smoothness

From technical data let's return to technical details. The shorter crankcase of the K 75 houses a shorter crankshaft with four main bearings and three connecting rod bearings. Like on the K 100, the last crankweb is designed as a gear, while the other five carry balance weights of various size on account of the special mass compensation required on a straight-three power unit.

Beneath the crankshaft the 3 and 4-cylinder are basically the same. Power is transmitted to the drive shaft at a ratio of 1:1 by a split gear-wheel, the two halves of which are counter-tensioned in order to compensate gear flank tolerance and minimize running noise. The front end of the drive shaft drives the gear-type oil pump and the water pump. With two forged-on balance weights and rotating in the opposite direction to the crankshaft, the drive shaft compensates the first-order free mass momentum and thus acts as an equalizing shaft for maximum running smoothness.

The crankshaft drives the camshaft via a single-piece bush roller chain and also drives the ignition pulse generator.

Computerized control to maintain the same high standard

The engines in the K Series are also closely related in terms of their auxiliary units. In both cases the ignition is contact-free and controlled by computer. The only special feature of the K 75 in this context is the asymmetric arrangement of the two induction points on the rotor (at 120^{o} and 240^{o} crankshaft angle). The ignition of the 3-cylinder therefore only requires two control pulses: for cylinders one and three, since the control pulse of the second cylinder is determined directly in the computer on the basis of this data. The fully electronic ignition of the K 75 also acts a speed governor by retarding the advance ignition from 8777 rpm. This effect is enhanced from 8905 rpm by switching off the fuel injection.

The high-voltage required for the ignition is provided by the coils. Pre-spark leads are incorporated in the ignition lines to improve operating reliability.

The Bosch LE-Jetronic electronic fuel injection with air volume metering by means of a butterfly is basically the same as on the BMW K 100. The three injection jets inject fuel simultaneously once per crankshaft rotation. The injection volume is determined by the digital control unit in

accordance with the engine output curve, depending on engine speed, the position of the air volume meter and the injection period. The coasting cut-off operates at engine speeds down to 2000 rpm, a starter repeat lock being activated from a speed of 711 rpm.

The rest of the electrical system is the same as on the BMW K 100. The high-speed alternator with a transmission ratio of 1:1.5 generates no less than 460 Watt and is therefore very powerful for a motorcycle. The torque generated by the starter (with an output of 0.7 kW) is increased 27 times by a four-stage backgear before it reaches the crankshaft. This allows the use of a very compact starter and a relatively small and light starter battery (12 volts, 20 Ah).

The streamlined drive system

At first sight the power transmission of the K 75 looks exactly the same as on the K 100. And this will be confirmed if you count the number of teeth in the gearbox. All five gears have the same transmission ratio -indeed a significant compliment to the 3-cylinder which, despite its smaller displacement, has power and performance characteristics similar to the 4-cylinder. BMW's engineers were therefore only required to modify the final drive by choosing a shorter transmission ratio.

However, since the 3-cylinder presents a completely different situation as regards the balance of masses, it was not sufficient just to compensate the free mass momentum by counterweights on the drive shaft. In addition, the power transmission of the K 75 must tally with the larger firing gaps and the lesser uniformity of the 3-cylinder. There is therefore a rigid connection between the drive shaft and clutch without dampers in between. This made it possible to use a somewhat lighter clutch taken over in modified form from the R 80.

It goes without saying that the three cylinders also required a redesigned exhaust. The somewhat lighter 3-in-1 exhaust system is made of rustproof stainless steel, as on the K 100. Incidentally, the shape of the muffler provides a discreet indication of the number of cylinders: While the K 100 has a square muffler, the muffler of the K 75 has three corners -what else? The throaty and powerful sound of the exhaust also bears witness to the 3-cylinder engine.

RUNNING GEAR

Less weight, better handling

In developing the frame of the K 75 BMW's engineers initially sought to shorten the wheelbase, in this way giving the K 75 the particularly good handling it was designed for from the beginning. Practical tests showed, however, that this was not even necessary. Even with the same wheelbase as the K 100, the K 75 achieves even better handling through the reduction in weight by 11 kg (24 lb) and the smaller share of weight on the front wheel. The tubular space frame open at the bottom and weighing 11.3 kg (25 lb) has remained unchanged apart from one very minor modification: The two front frame supports are angled a bit further to the rear on account of the shorter engine housing which, as usual, serves as a load-bearing component.

The cast light-alloy monolever housing the drive shaft with torsion vibration dampers is one of the building-brick components. Some minor modifications are then to be found once again near the drive unit. The K 75 C, for example, has a drum brake with 200 mm (7.87") diameter integrated in the light-alloy wheel. The somewhat faster K 75 S features a slightly heavier and more expensive disc brake at the rear.

A fork bridge acting as a stabilizer

A new feature currently exclusive to BMW's 3-cylinder models is the telescopic fork which differs from the otherwise identical fork of the K 100 in one important respect: As on the R 80, the two tubes are connected by a very strong fork bridge. Like the K 100, the K 75 has a large dual disc brake at the front with a diameter of 285 mm (11.02").

With a tube diameter of 41.4 mm (1.63"), the telescopic fork is one of the strongest of its kind. And the ample spring travel of 185 mm (7.28") for a road machine provides typical BMW riding comfort further enhanced by 110 mm (4.33") spring travel at the rear.

While seeking to optimize handling, BMW has not indulged in any experiments with small wheels on the K 75. 18" rim diameter therefore remains the standard at the front to ensure stable riding characteristics. However, both the front and the rear wheel provide practice-oriented progress with modern tubeless low-profile tyres. And the rear wheel has special dimensions to provide optimum running characteristics: The K 75 C has an 18" rim at the rear with a slightly narrower tyre, the K 75 S has the wider 17" rear wheel of the K 100.

MODEL FEATURES

The small K should not lack any important features

The wide range of features provided by the K 100 has not remained a privilege of the top model. On the contrary - the K 75 leaves nothing to be desired in this respect, either: It has the same intelligently designed handlebar controls including the direction indicator cancellation operating as a function of time (10 seconds) and travel (210 metres/689 feet). The large and clearly designed instrument cluster is also the same, including the electronic speedometer and engine speed dials as well as the gear display. Only the liquid-crystal-display digital clock is an extra-cost option on the K 75 C. Incidentally, the tank reserve display has been modified on all K models: Now there is only one - instead of two - warning lamps for the remaining amount of 5 litres (this has proved more suitable).

It goes without saying that the small K also has all the typical BMW features such as the universal key for the ignition, handlebar, tank cap and seat. Beneath the seat there is adequate space for the exemplary on-board toolkit and repair set, while the rear section provides another 9 litres of stowage space - lockable and safe and sound. The comfortable seat has a new upholstery profile providing a seat height of 810 mm (31.9"). Both models naturally feature H4 halogen headlights. The headlight of the K 75 C is of classical round design, the headlight of the K 75 S is rectangular in shape and fits harmoniously into the fairing.

The fairing tells its own story

The most significant visual distinction between the two versions of the K 75 is the different fairing with integrated direction indicators. Both fairings made of glass-fibre-reinforced plastic were developed in comprehensive tests in the BMW wind tunnel.

The K 75 C as a relatively open motorcycle has a small cockpit fairing attached directly to the handlebar and providing a considerable reduction in wind pressure. As an alternative, this model also comes with a high transparent windshield.

The K 75 S has a slender handlebar measuring 10 cm (3.9") less in width and an even more streamlined sports fairing attached rigidly to the frame and offering even more protection. This also improves the motorcycle's dynamism and riding safety by further reducing lift and air resistance. The K 75 S is therefore 10 km/h (6 mph) faster than the K 75 C, which has a top speed of about 200 km/h (124 mph).

Like the K 100, the K 75 combines a wide range of features with low weight. Consistent lightweight construction with no compromises in stability or reliability and the use of high-quality light-alloy on the engine and gearbox housing, the monolever, wheels and tank therefore also makes the K 75 a relatively light motorcycle. With full tank and in road trim, the K 75 C weighs a mere 228 kg (503 lb) (K 100: 239 kg/527 lb), while the K 75 S weighs just 235 kg (518 lb) (K 100 RS: 253 kg/558 lb).

Both K 75 models offer genuine all-round abilities. They provide good handling and agility in bends, they are stable on the road and safe even at high speeds. And they are suited both for a sporty style of riding and for relaxed tours or comfortable long-distance travel.

Sheer riding pleasure - also with a passenger

Not least, however, the K 75 - like every BMW - is a motorcycle for sheer riding pleasure (also with a passenger). Because here the passenger has a rear seat offering full riding comfort - with integral grab handles and a newly designed footrest plate for relaxed riding free of fatigue.

With a maximum permissible weight of 450 kg (992 lb), the K 75 C and K 75 S can carry a substantial load of 222 kg (490 lb) and 215 kg (474 lb), respectively. Which means a lot of luggage for long tours. This luggage can be carried in integral cases also designed in the wind tunnel and perfectly suited for all K-models, in the tank bag, on the luggage rack or the new topcase. Needless to say, the K 75 also comes with the wide range of BMW accessories and special equipment.

Entering its third year of production with hardly any changes: The K 100 Series in 1986

While the K 75 is celebrating its premiere, the K 100 is entering its third year of production with hardly any changes. Drawing from the K building-brick system, it is however receiving the new seat of the K 75 with integral grab handles for the pillion, battery panels to match and the footrest plate of the K 75. The tank display has been simplified to provide only one warning light for a residual amount of five litres, and the fork tube is now painted black like on all BMW motorcycles in the 1986 model year. The flow of air from the radiator has been improved on the K 100 RS and RT streamlined models. An analogue display for the fuel level and oil temperature to be fitted in the fairing is also available as an optional extra. All three K-models are now also available with a topcase to be fitted on the luggage rack, while the K 100 RT even comes with a kit for fitting a radio (which includes the aerial and water-tight loudspeakers).

Three themes of the same subject: The three K 100 models

The three 1000-cc 4-cylinder models have exactly the same running gear, engine and output.

The K 100: The classical machine

The K 100 is the basic model, the classic motorcycle without fairing for enthusiasts who really want to feel the wind blowing through their hair.

The K 100 RS: The sports model

The cockpit of the K 100 RS with its more slender handlebar for sporty riding at high speeds and over long distances is designed for a slightly forward-leaning posture on the part of the rider. The multi-piece sports fairing optimized in the wind tunnel is fastened by a multi-arm support to

the middle of the handlebar and rests on vibration dampers. It also incorporates rear-view mirror housings serving to protect the rider's hands, integral direction indicators and a knee-guard made of integral foam plastic on the rear edges of the fairing. An adjustable spoiler in front of the upper edge of the fairing provides a defined flow of air over the rider's helmet.

The exemplary fairing of the K 100 RS offers not only good protection from wind and weather but also increases the top speed by about 10 km/h (6 mph) over the K 100 thanks to its excellent streamlining. Even more importantly, it helps to minimize lift on the front axle, thus providing optimum stability at high speeds and, ultimately, even greater riding safety.

The K 100 RT: The long-distance tourer

The multi-piece touring fairing of the K 100 RT is fastened by a multi-arm support to the handlebar centrepiece and rests on vibration dampers. With the detachable windshield plus spoiler extended far to the rear, the fairing gives the rider and passenger optimum protection in wind and weather. It also includes a rear-view mirror housing to protect the rider's hands, while the direction indicators are integrated directly in the fairing itself. As on the K 100 RS, the fork opening is fully sealed and the rear edges of the fairing serve to protect the rider's legs. Integral cases also designed in the wind tunnel as well as lockable side boxes in the fairing are featured as standard on this model, emphasizing its particular qualities as a refined but nevertheless very agile long-distance touring machine.

Special Equipment

	K 75 C	K 75 S	K 100	K 100 RS	K 100 RT
Temperature and fuel indicator	-	-	-	x	x
Hazard warning lights	x	x	x	x	x
2 additional headlights	x	-	x	-	-
Digital clock	x	o	x	o	o
Dual-tone fanfare	x	x	x	o	o
30 Ah battery	x	x	x	x	x
Socket	x	x	x	x	x
Heatable grips	x	x	x	x	x
Burglar alarm	-	-	x	x	x
High handlebars	x	-	x	-	o
Nivomat	x	x	x	x	x
Super tool kit	x	x	x	x	x
Splashguard at rear	x	x	x	x	x
Windshield instead of cockpit fairing	-	-	-	-	-
Windshield	-	-	x	-	-
Rack for integral paniers	x	x	x	x	o
Luggage rack	x	x	x	x	x

	K 75 C	K 75 S	K 100	K 100 RS	K 100 RT
Set integral paniers with rack	x	x	x	x	o
Set city-paniers (smaller size)	x	x	x	x	-
High seat bench	.	.	.	.	.
crash bar	x	x	x	x	x
Lateral support (automatic)	x	x	x	x	x
First aid kit	x	x	x	x	x
Special painting	x	x	x	x	x

Optional Extras

	K 75 C	K 75 S	K 100	K 100 RS	K 100 RT
Windprotection	-	-	x	-	-
Multivario K tank bag	x	x	x	x	x
Tank bag K	x	x	x	x	x
Plate K	x	x	x	x	x
Topcase	x	x	x	x	x
Luggage roll	x	x	x	x	x
Supplementary tool kit	x	x	x	x	x

x = equipment possible

- = not possible

o = standard equipment

. = alternatively

TECHNICAL DATA
BMW K-MODELS

Engine

Model	Capacity cc	Bore/Stroke mm	Output kW/HP at rpm	Torque Nm at rpm	Type No. of cylinders	Compression ratio Type of fuel (also unleaded)	Valve/ Exhaust and Refill Control	Valves per cylinder inlet/outlet dia.	Carburettor type	Ignition	Gen...
K 100	987	67/70	66/90 8.000	86 6.000	4 cyl.	10.2 N	2	2 34/28	Bosch LE-Jetronic	Digital Ignition System Bosch VZ-51L	460
K 100 RS	"	"	"	"	"	"	"	"	"	"	"
K 100 RT	"	"	"	"	"	"	"	"	"	"	"
K 75 C	740	"	55/75 8.500	68 6.750	3 cyl.	11.0 S	"	"	"	"	"
K 75 S	"	"	"	"	"	"	"	"	"	"	"

Weights, Dimensions

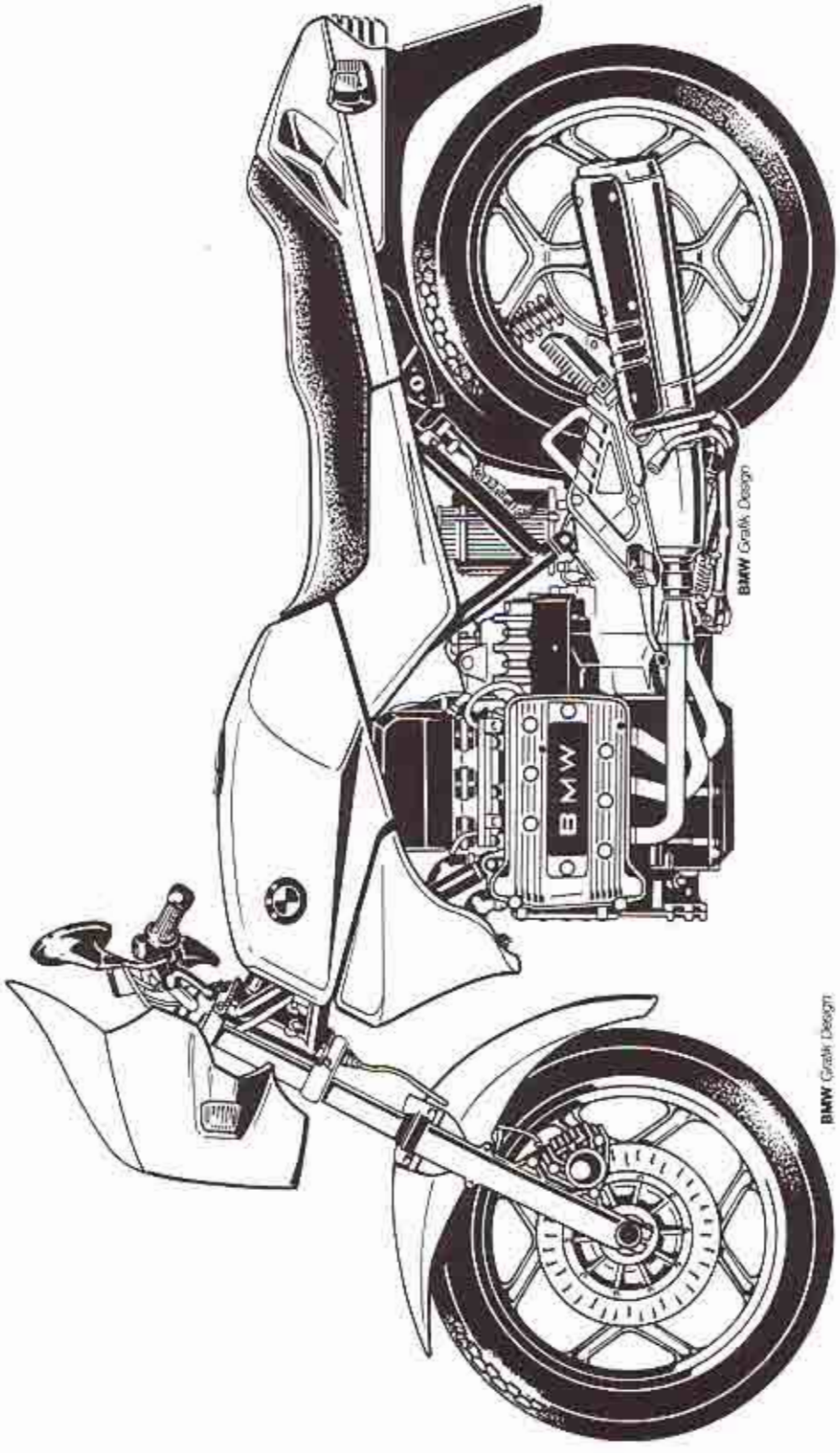
Model	Wheelbase mm	Brakes front/rear	Wheels front/rear	Tyres front/rear	Overall length/width mm	Handlebar width mm	Seat height mm	Empty weight with full tank kg	permissible tot... kg	
K 100	1,516	Front: Dual fixed caliper disk brake, 285 mm dia.; rear: integrated fixed caliper disk brake, 285 mm dia.; K 75 C: drum brake 200 mm dia.	LM 2,50-18MTH2/ 2,75-17MTH2	100/90V18 130/90V17 tubeless	2220/ 960	730	810	239	480	22
K 100 RS	"		"	"	2220/ 800	690	"	253	"	"
K 100 RT	"		"	"	2220/ 916	770	"	263	"	"
K 75 C	"		LM 2,50-18MTH2/ 2,75-18MTH2	100/90/H18 120/90/H18 tubeless	2220/ 900	710	"	228	450	21
K 75 S	"		LM 2,50-18MTH2/ 2,75-17MTH2	100/90/V18 130/90/V17 tubeless	2220/ 810	620	"	235	"	"

Electrical System				Power Transmission					Running Gear		
Generator W	Battery V/Ah	Headlight	Starter kW	Gearbox	Gearbox secondary transmission ratio	Rear wheel drive	Clutch	Type of frame	Spring travel front/rear mm	Caster mm	
30	12/20	H4 55/60 W	0.7	5-speed gearbox with dog-type hook shift	I = 4.50 II = 2.96 III = 2.30 IV = 1.88 V = 1.67 / 2.91	new enclosed drive shaft with universal joint and integrated torsional damper	single-plate dry clutch counter-rotational	Tubular space frame engine as additional support	185/110	101	
	"	"	"	"	„/2.81				"	"	
	"	"	"	"	„/2.91				"	"	
	"	"	"	"	„/3.20				"	"	
	"	"	"	"	„/3.20				"	"	

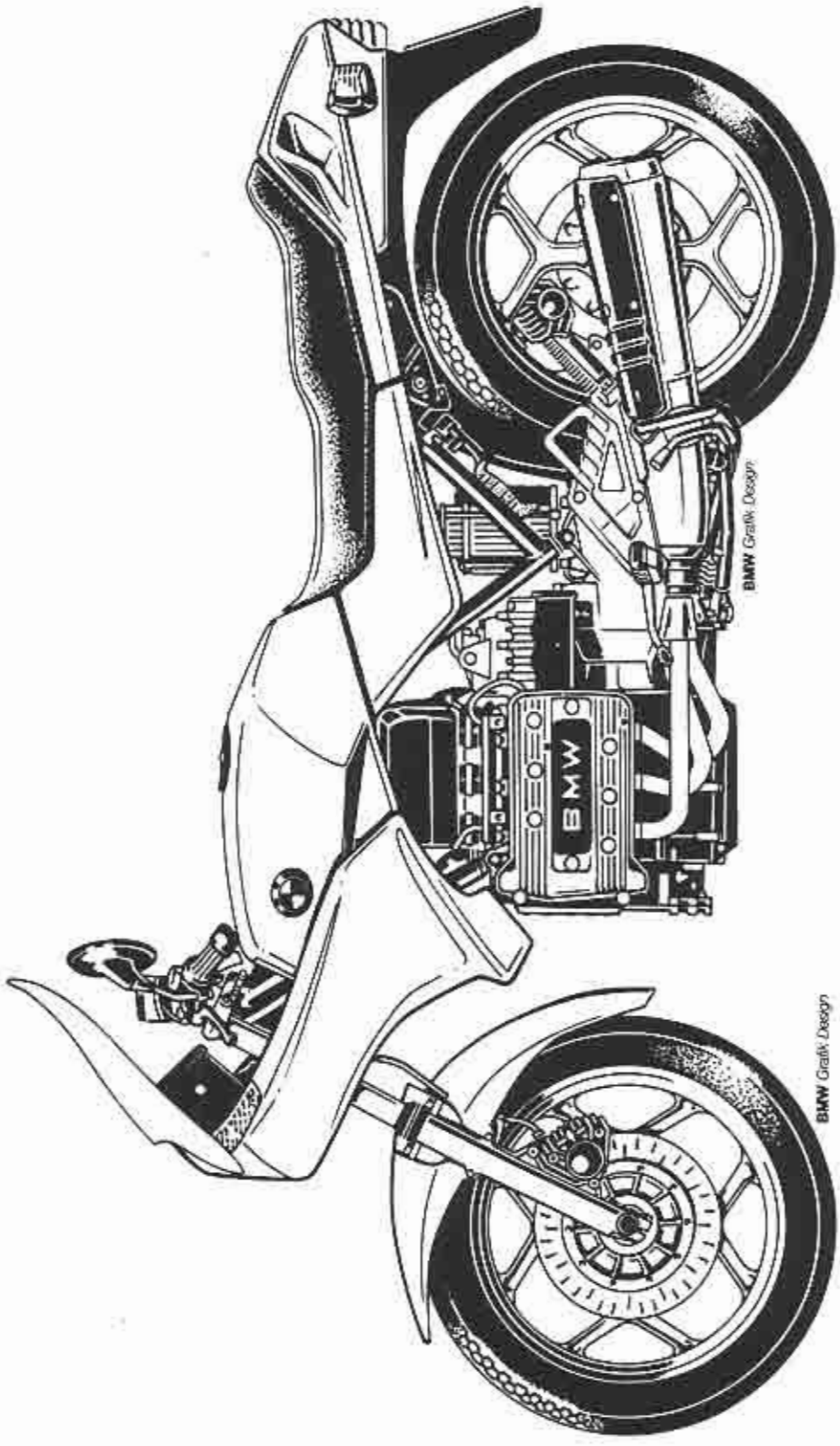
Performance					Equipment		
Total weight kg	Fuel tank/ltr	Fuel consumption (90/110 km/h)	Acceleration 0–100 km/h 0–1000 m (s)	Top speed*	Fairing	Standard equipment	Special equipment
222	5.0/5.7	3.9 23.6	215			Breakdown kit, tool kit	
"	4.3/5.1	4.0 23.5	220	multi-piece, aerodynamically optimised sports fairing made of glass fibre reinforced plastic		" digital clock	
"	4.4/5.4	4.1 24.1	215	multi-peace, aerodynamically optimised touring fairing made of glass fibre reinforced plastic		" high-rise handlebar, integrac cases with support	
221	4.5/5.2	4.6 25.6	200	aerodynamically optimised handlebar cockpit fairing made of glass fibre reinforced plastic		Breakdown kit, tool kit	
"	4.3/5.0	4.6 25.2	210	multi-piece, aerodynamically optimised sports fairing made of glass fibre reinforced plastic		" digital clock	

See extra pages

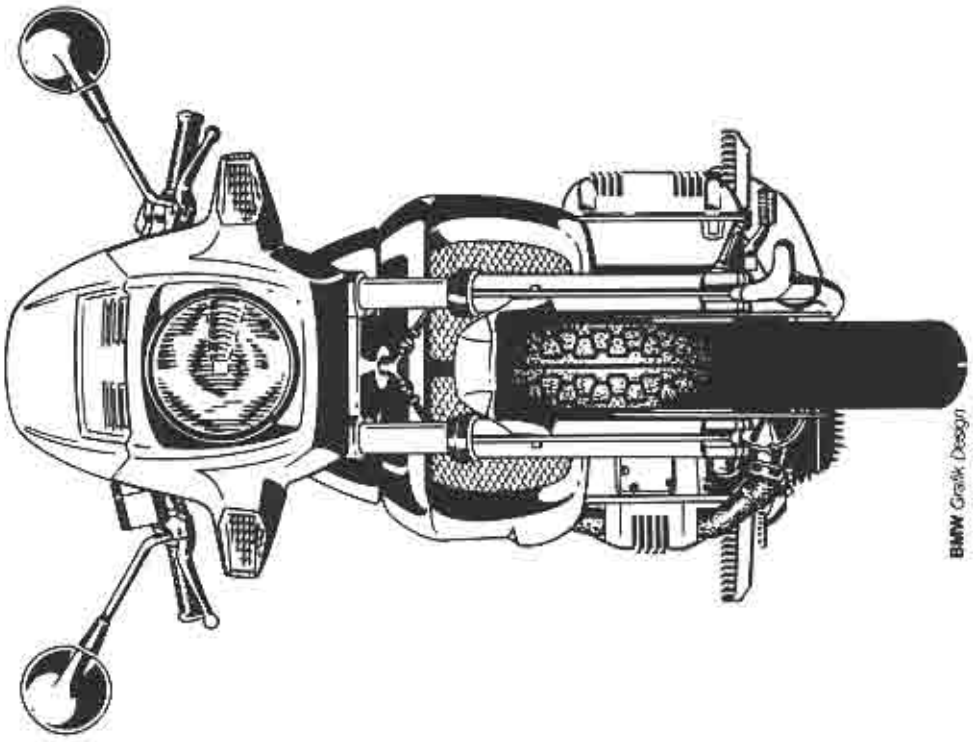
BMW K 75 C	R 85/1



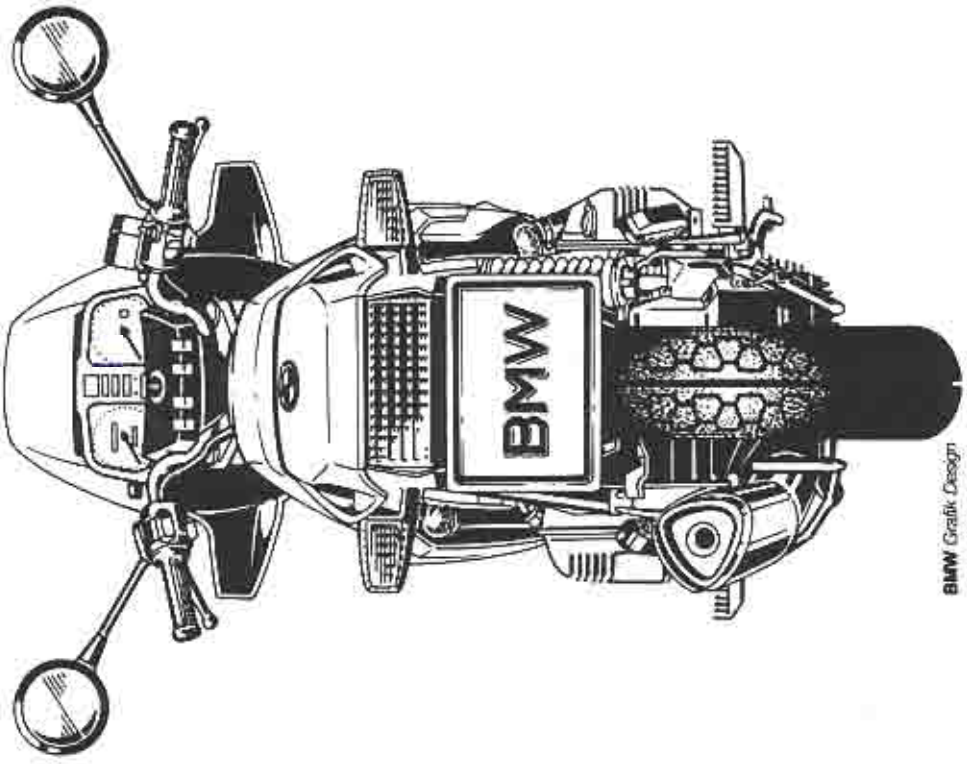
BMW K 75 S	R 85/2



BMW K 75 C	R 85/3

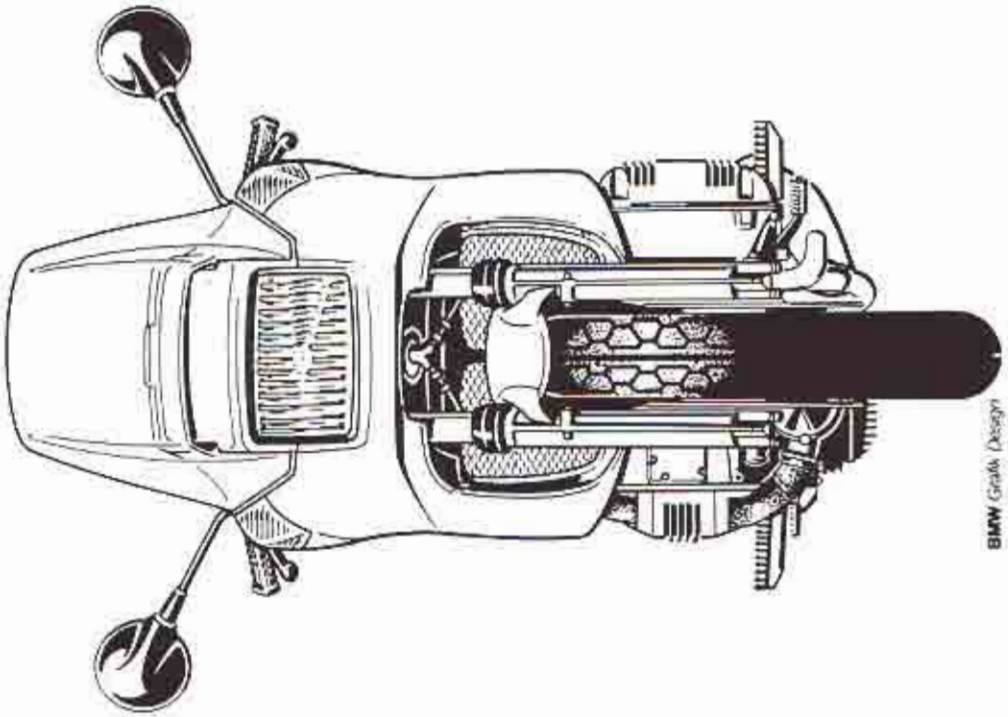


BMW Grafik Design



BMW Grafik Design

BMW K 75 S	R 85/4



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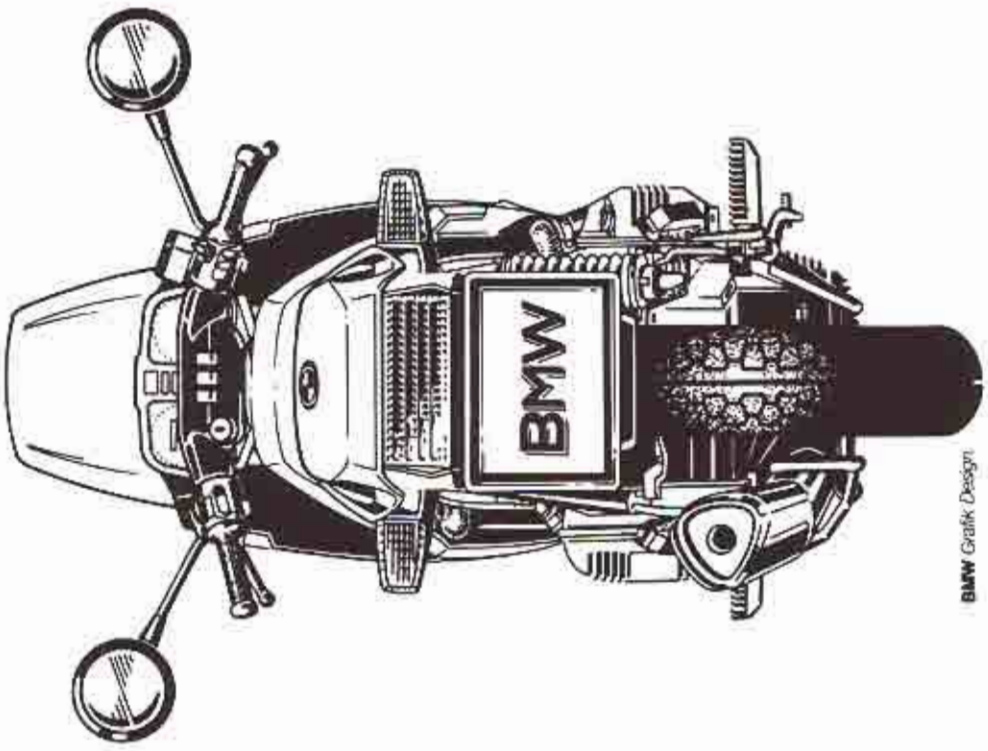
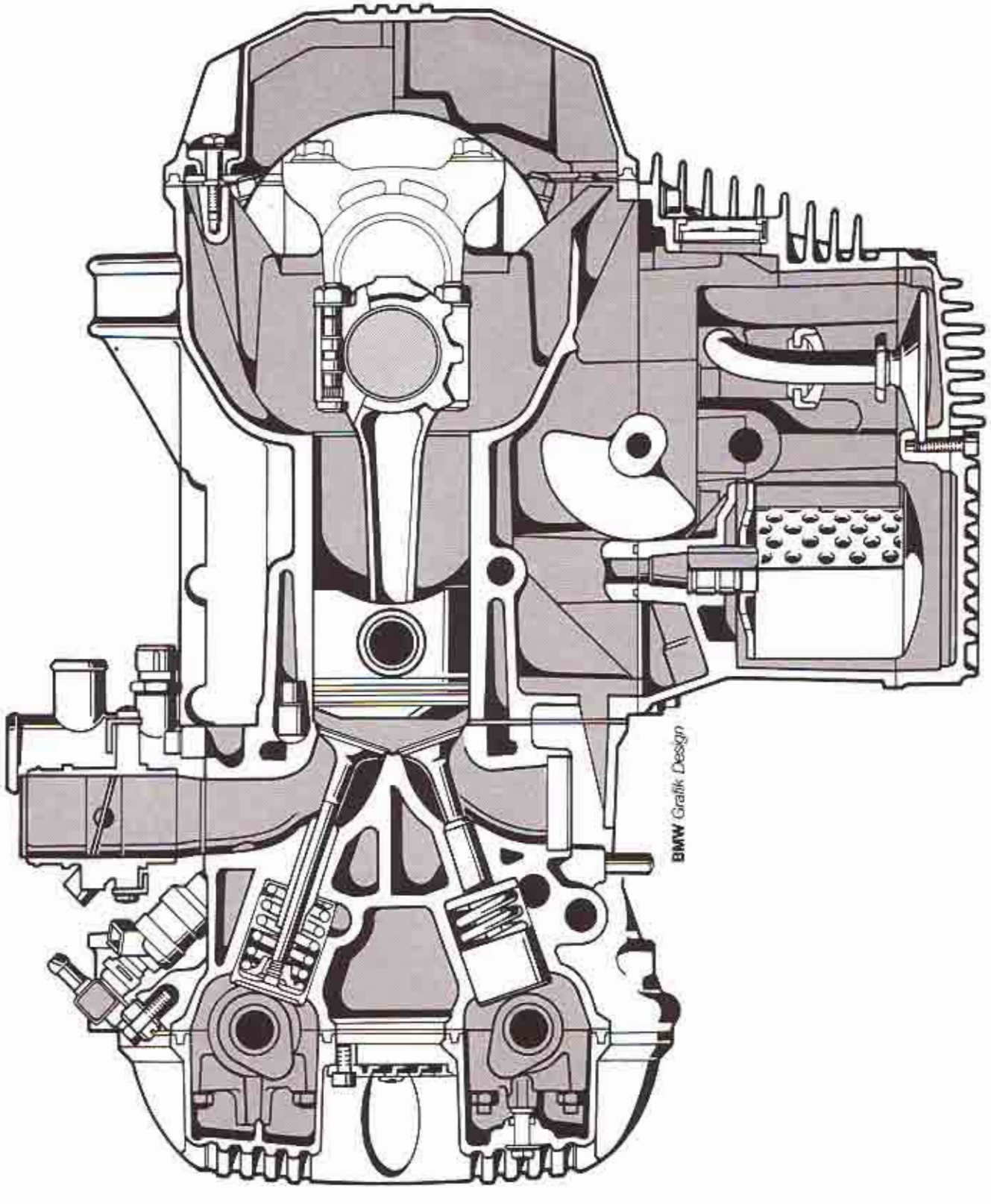


BMW Grafik Design

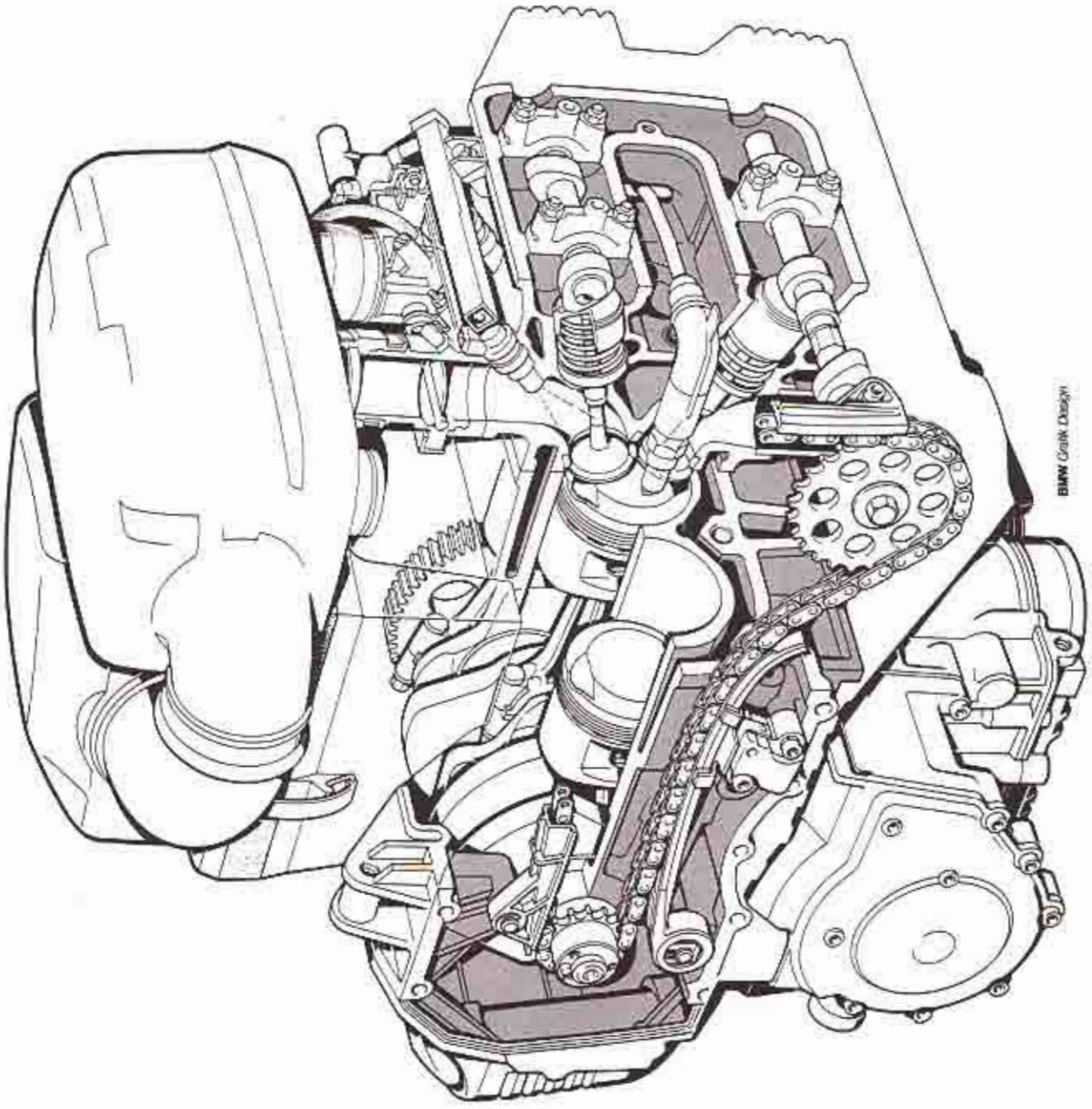
BMW K 75
Motorquerschnitt (von vorn)

R 85/5



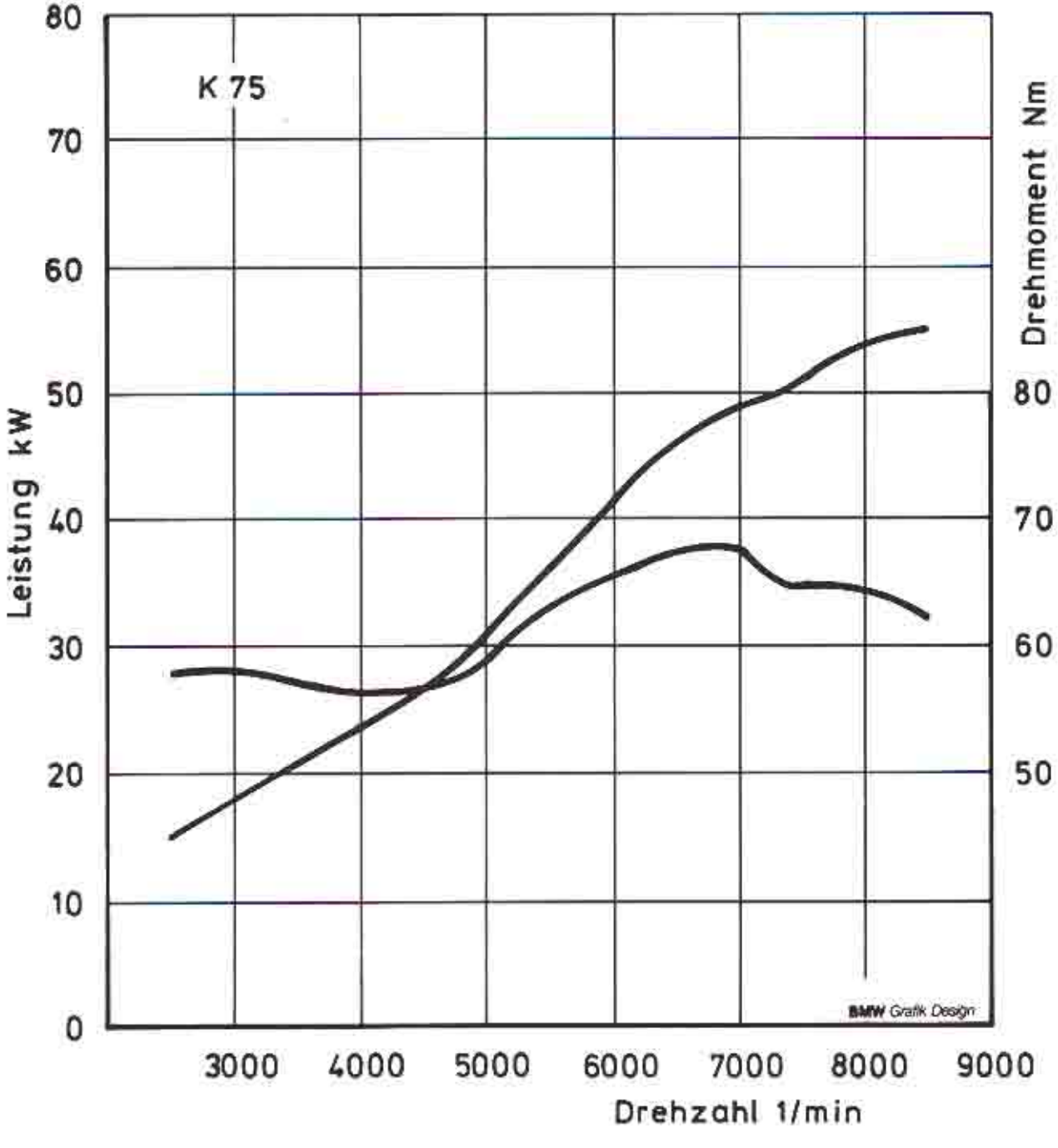
BMW K 75
Motorquerschnitt (von hinten)

R 85/6



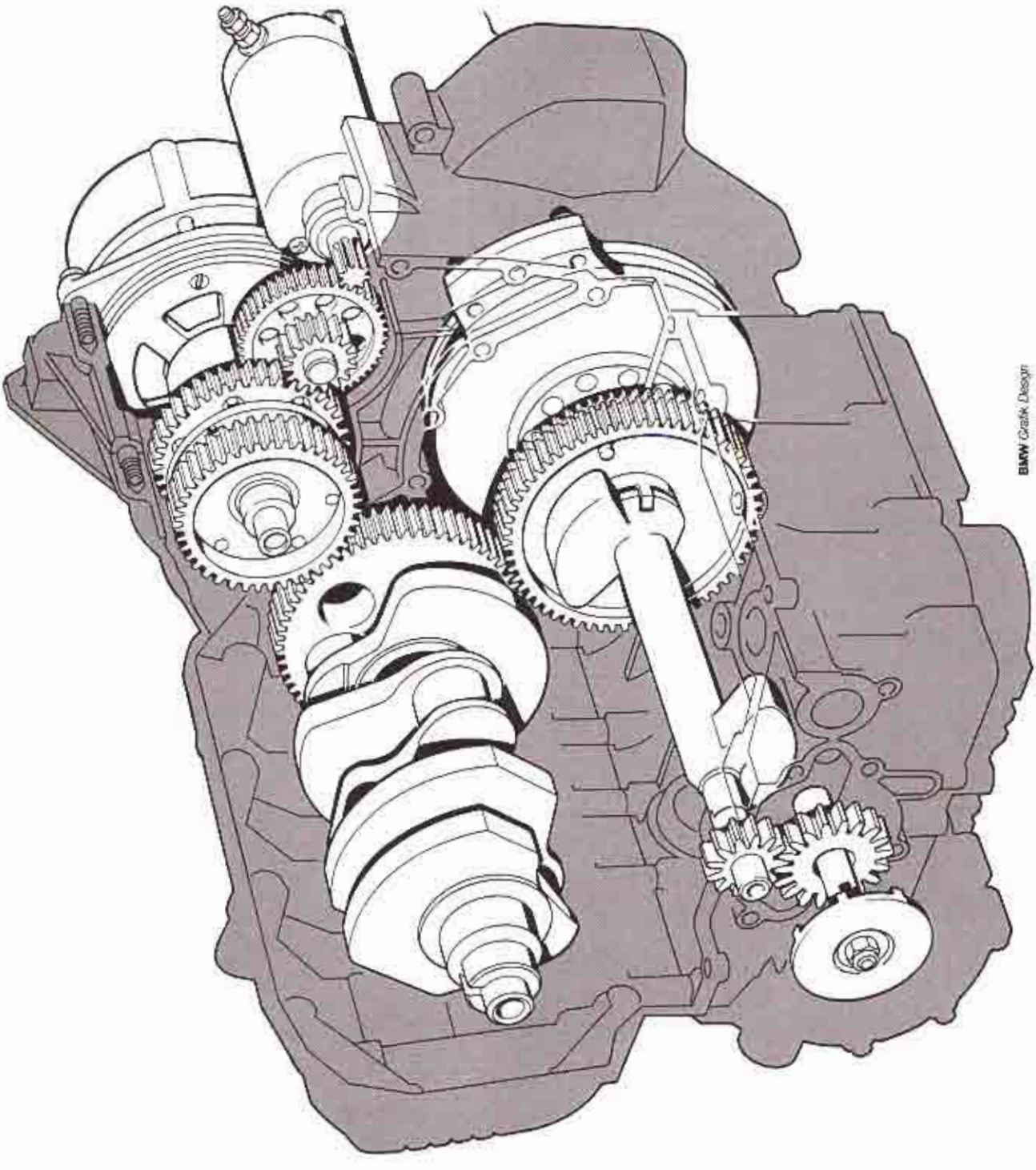
BMW K 75
Leistungs- und Drehmomentdiagramm

R 85/7



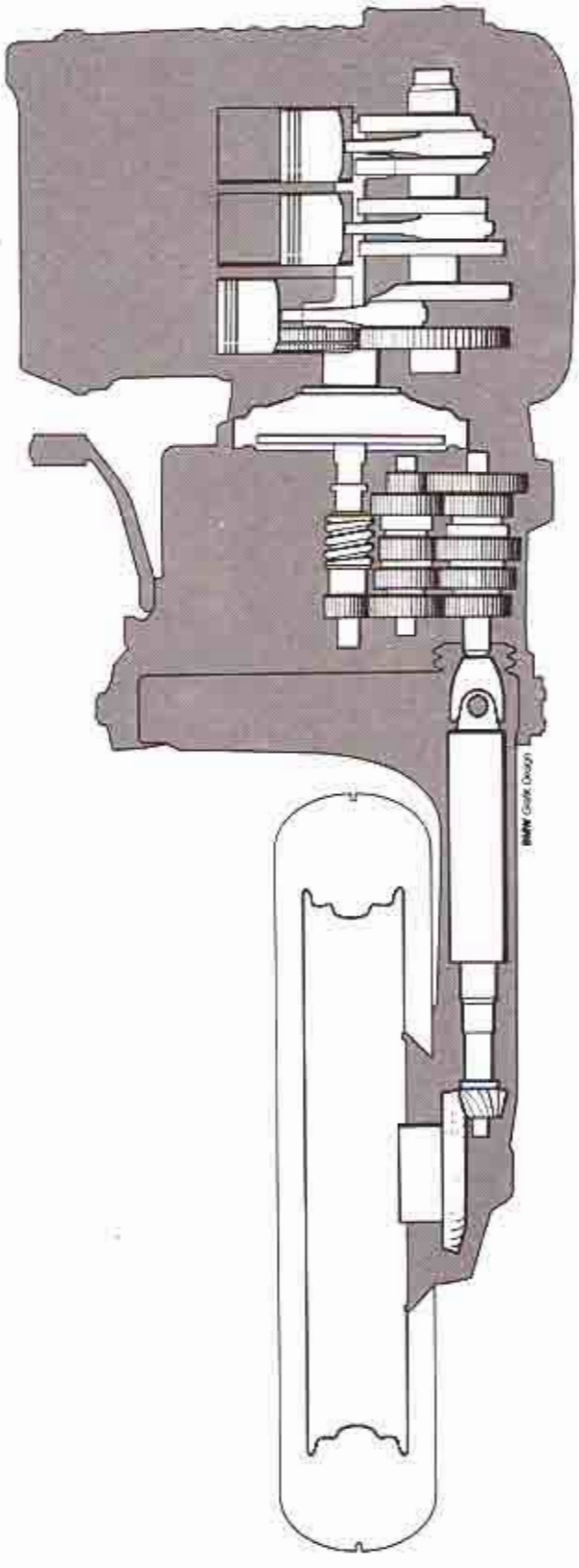
BMW K 75
Motor (Kurbelwelle, Abtriebswelle, Anlasser und Lichtmaschine)

R 85/8



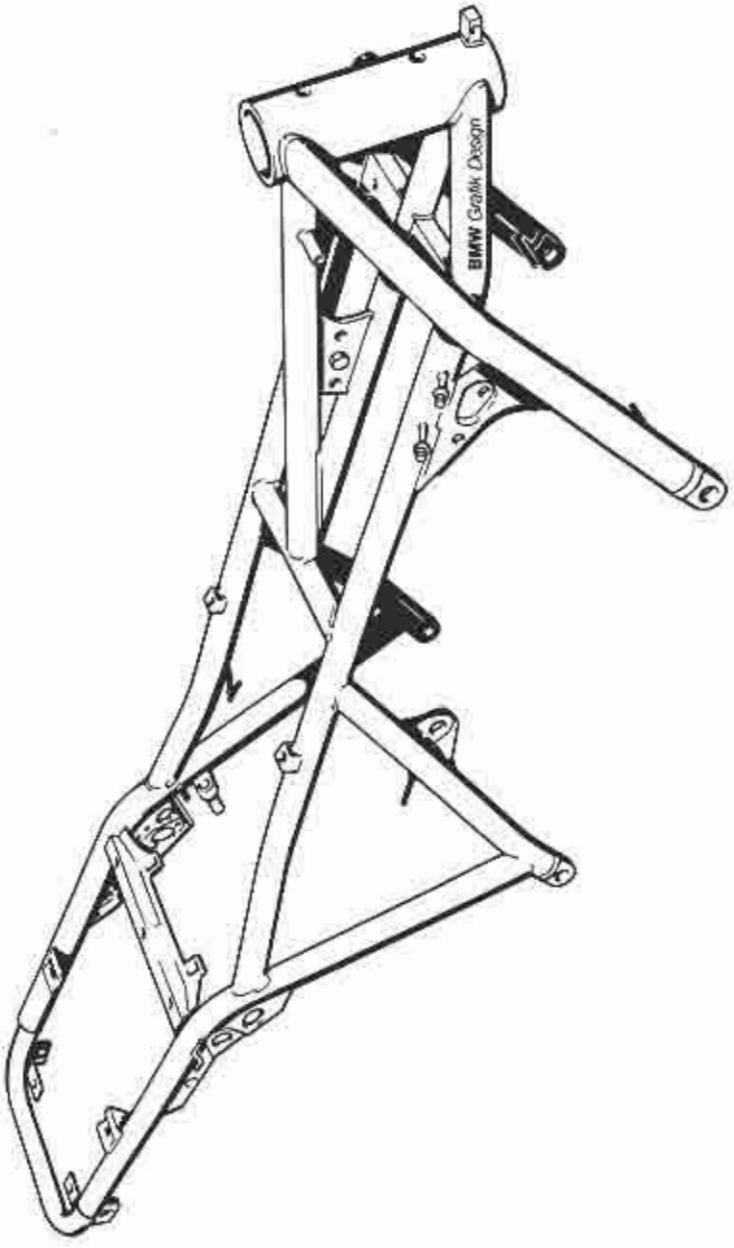
BMW K 75
BMW Compact-Drive System

R 85/9



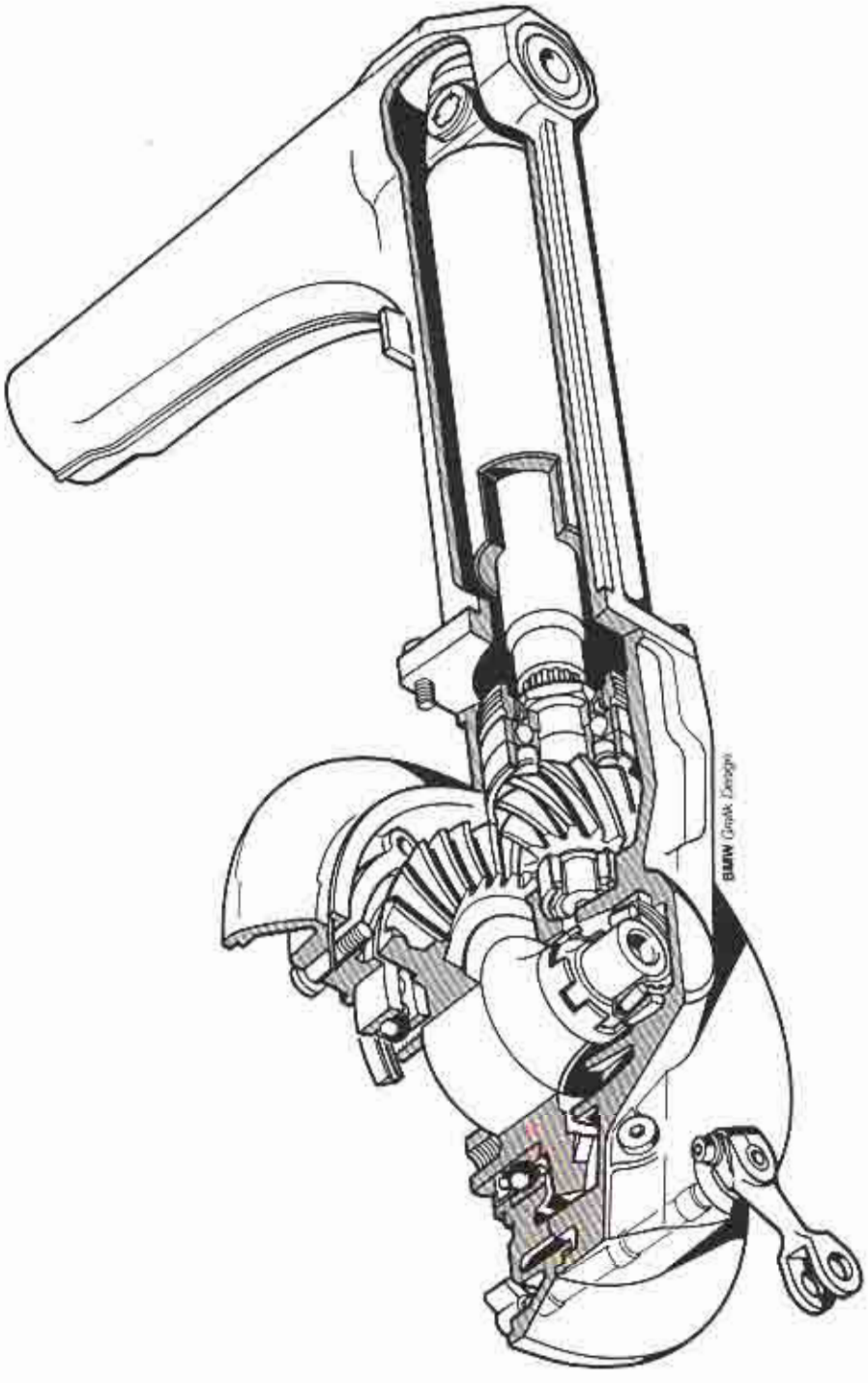
BMW K 75
Brückenrahmen in Fachwerkkonstruktion

R 85/10



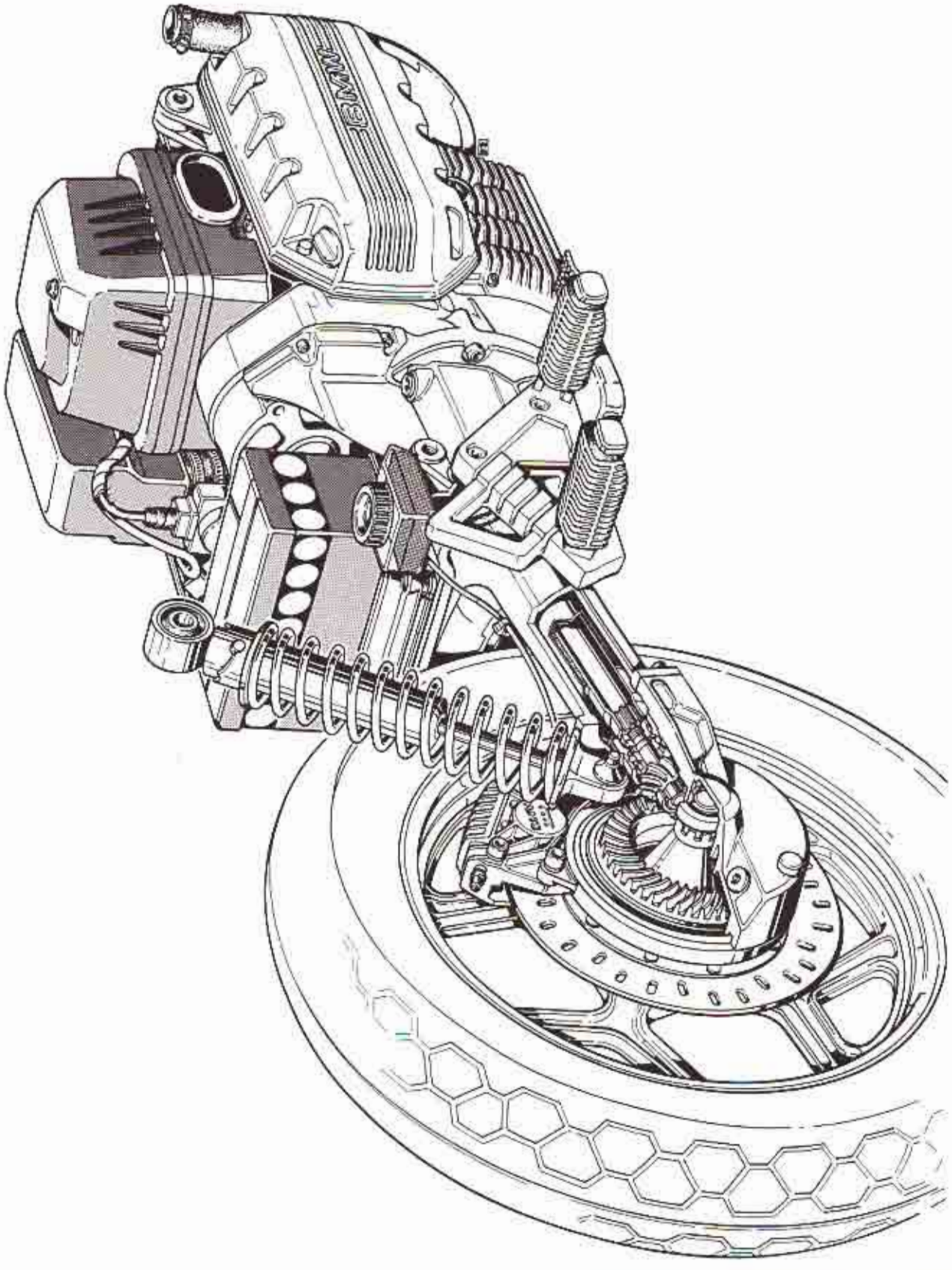
BMW K 75
Einarmschwinge (BMW Monolever) mit Hinterradantrieb

R 85/11

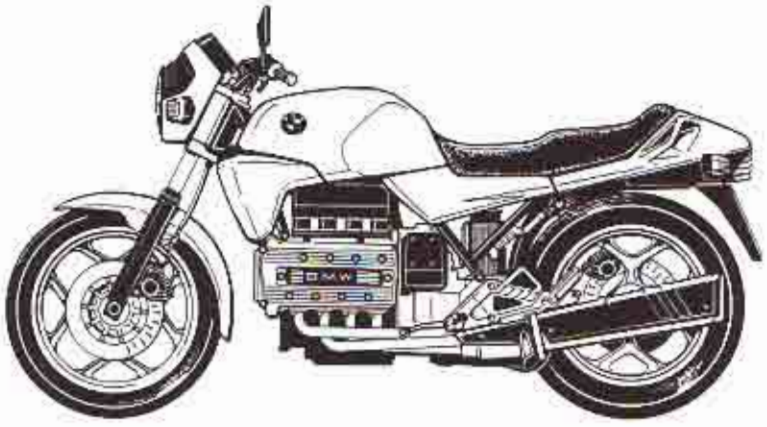


BMW K 75
Compact Drive System (Schnitt)

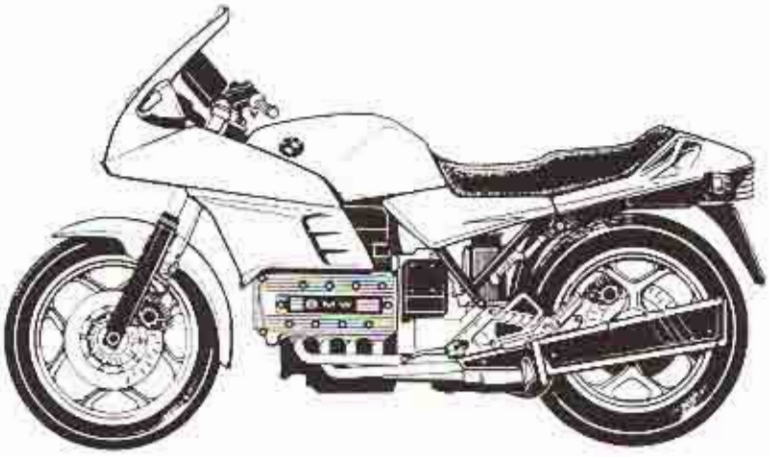
R 85/12



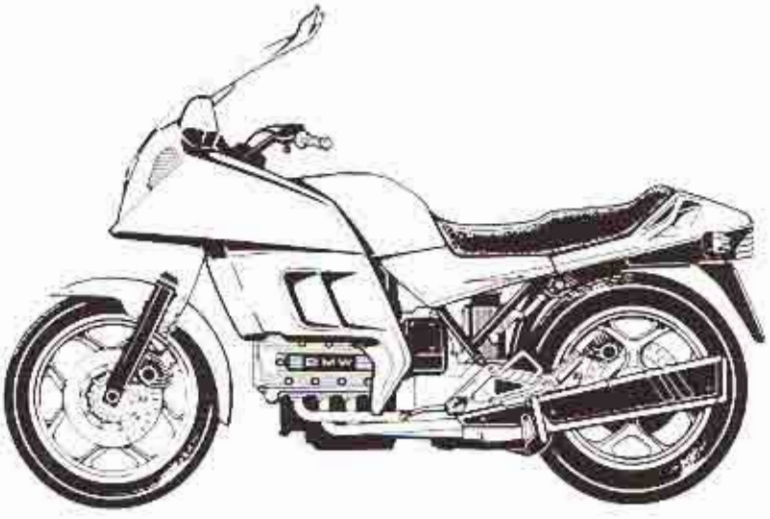
BMW Motorräder K 100 / KS 100 RS / K 100 RT	R 85/13



K 100



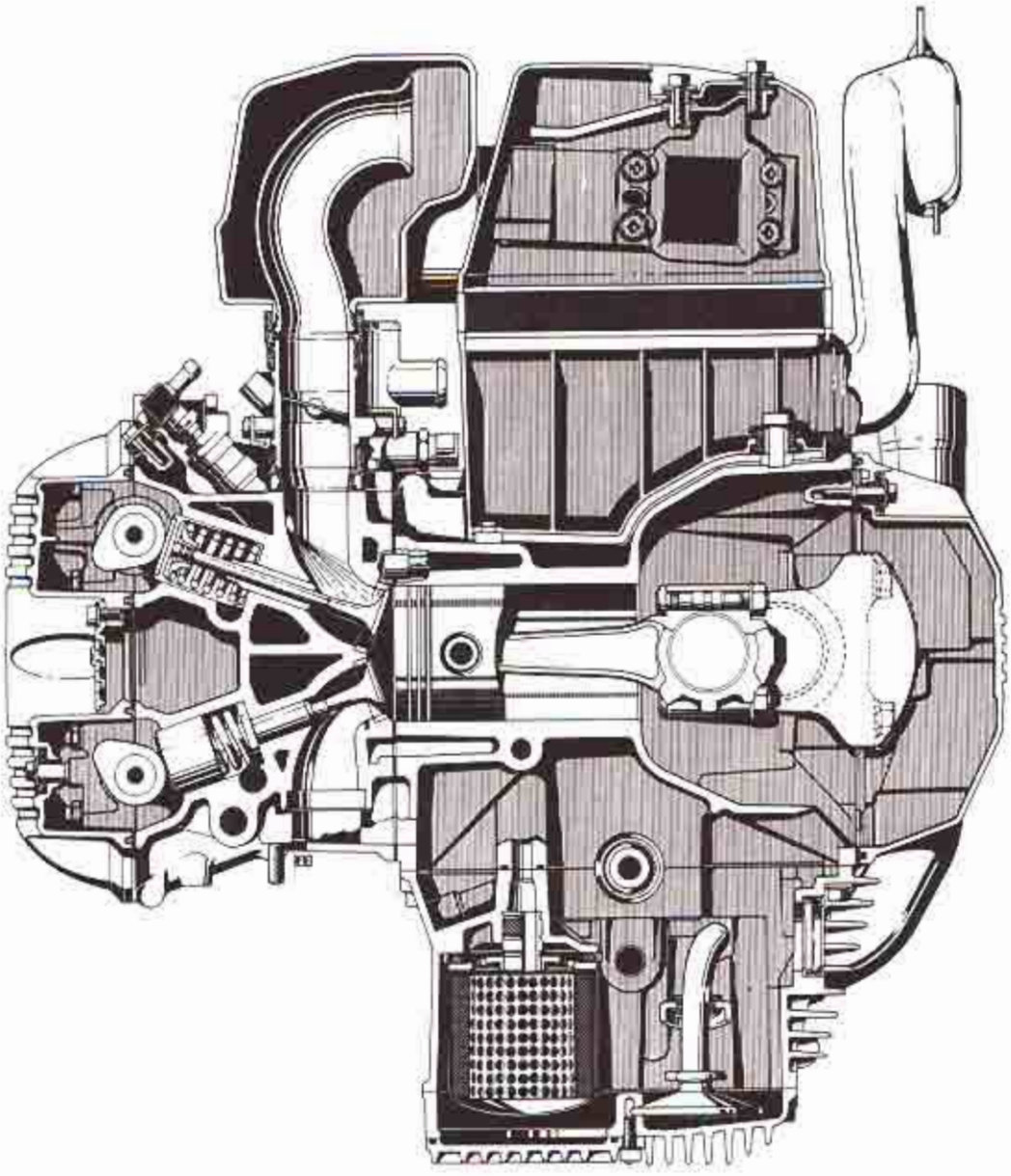
K 100 RS



K 100 RT

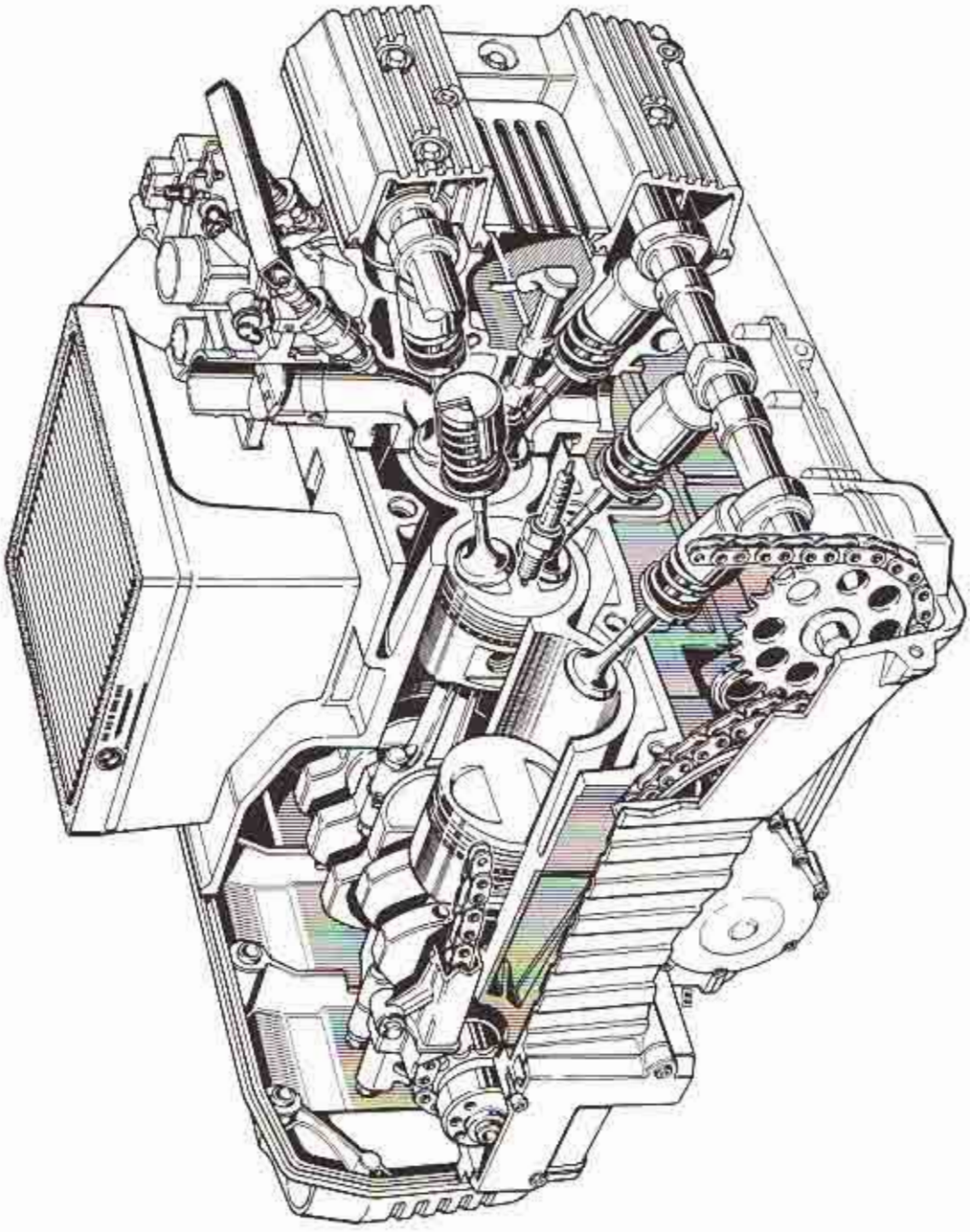
BMW K 100
Motorquerschnitt (Ansicht von hinten)

R 83/10



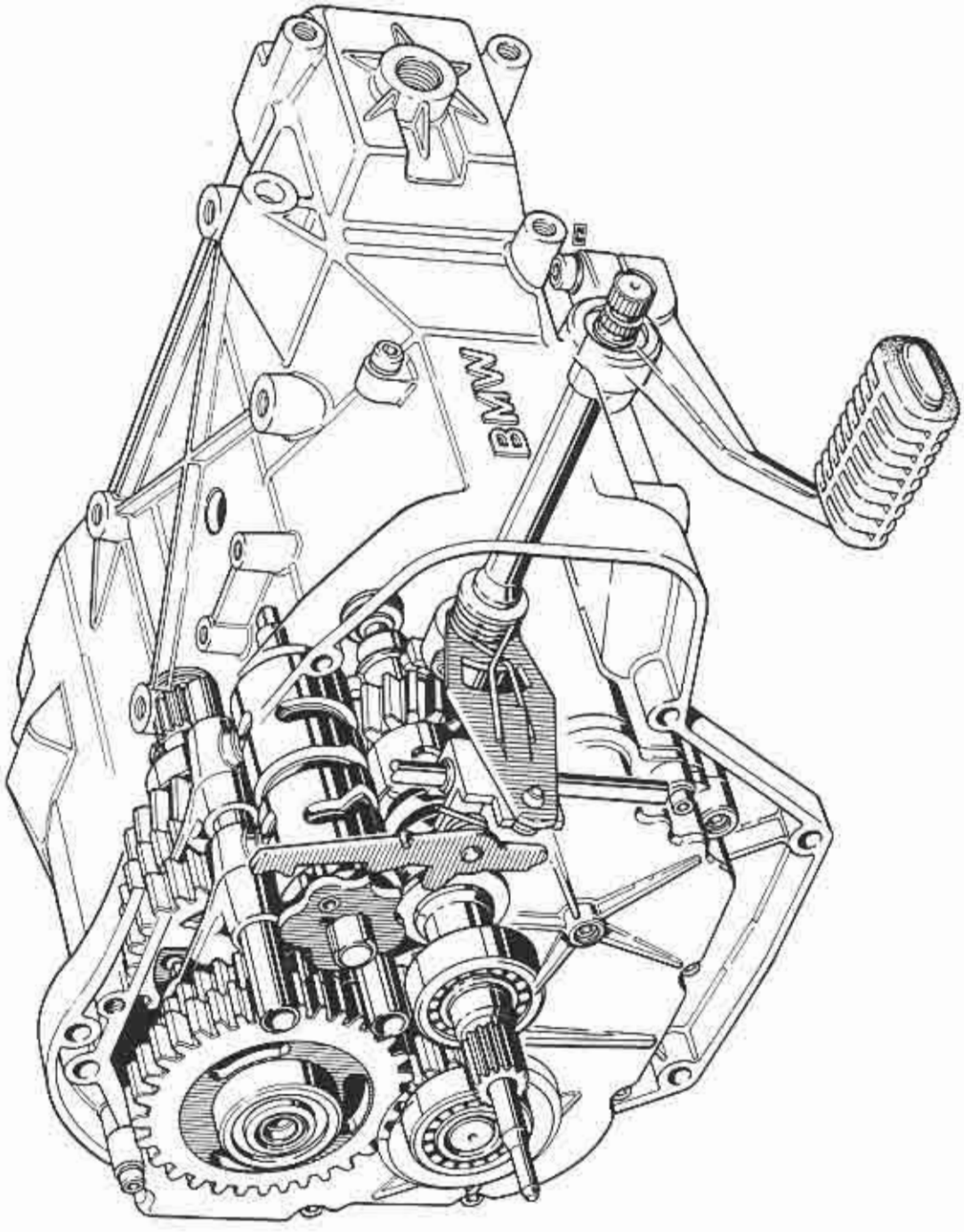
BMW K 100
Motorschnittbild

R 83/11



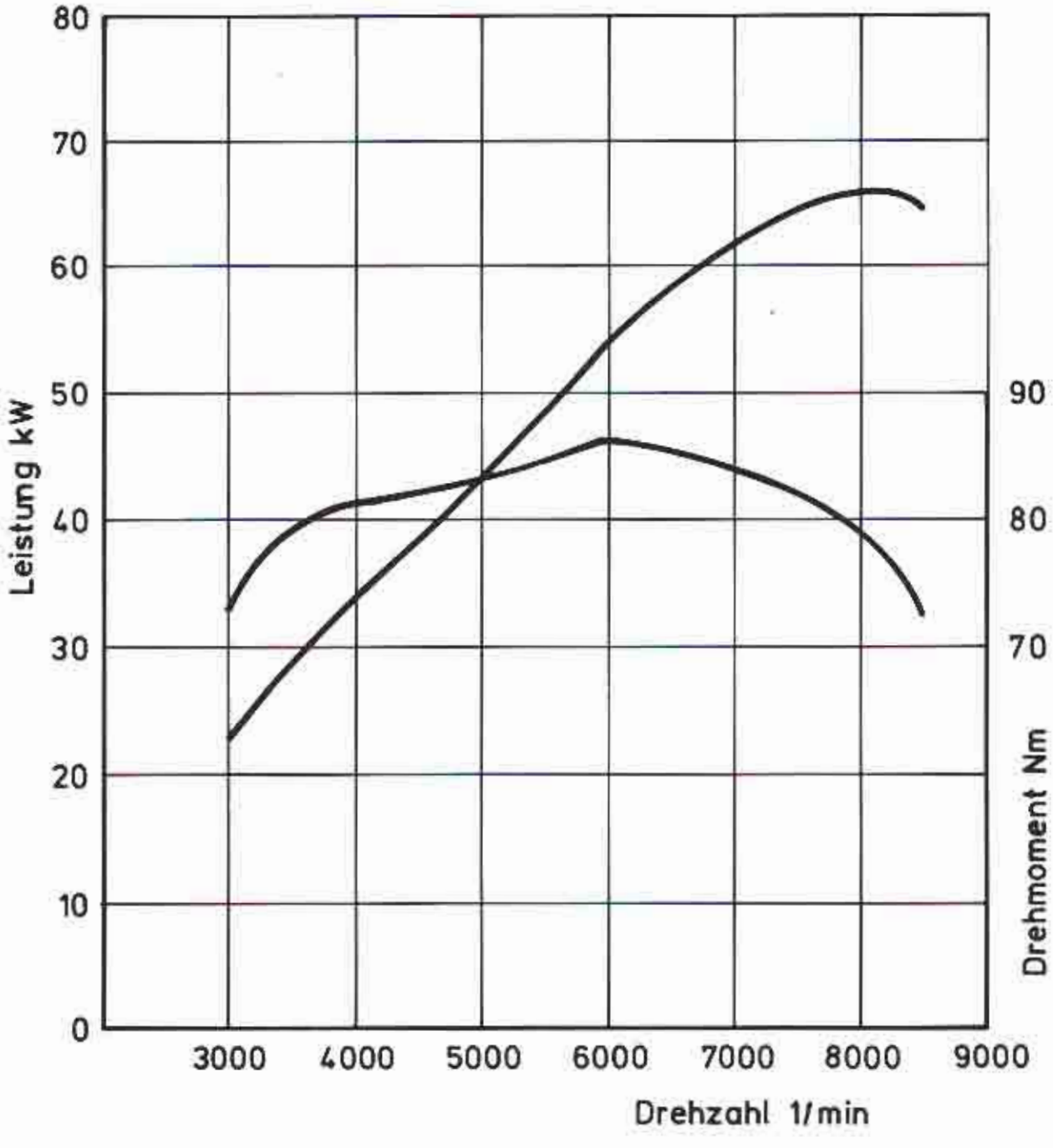
BMW K 100 und K 75
5-Gang-Schaltgetriebe

R 83/12



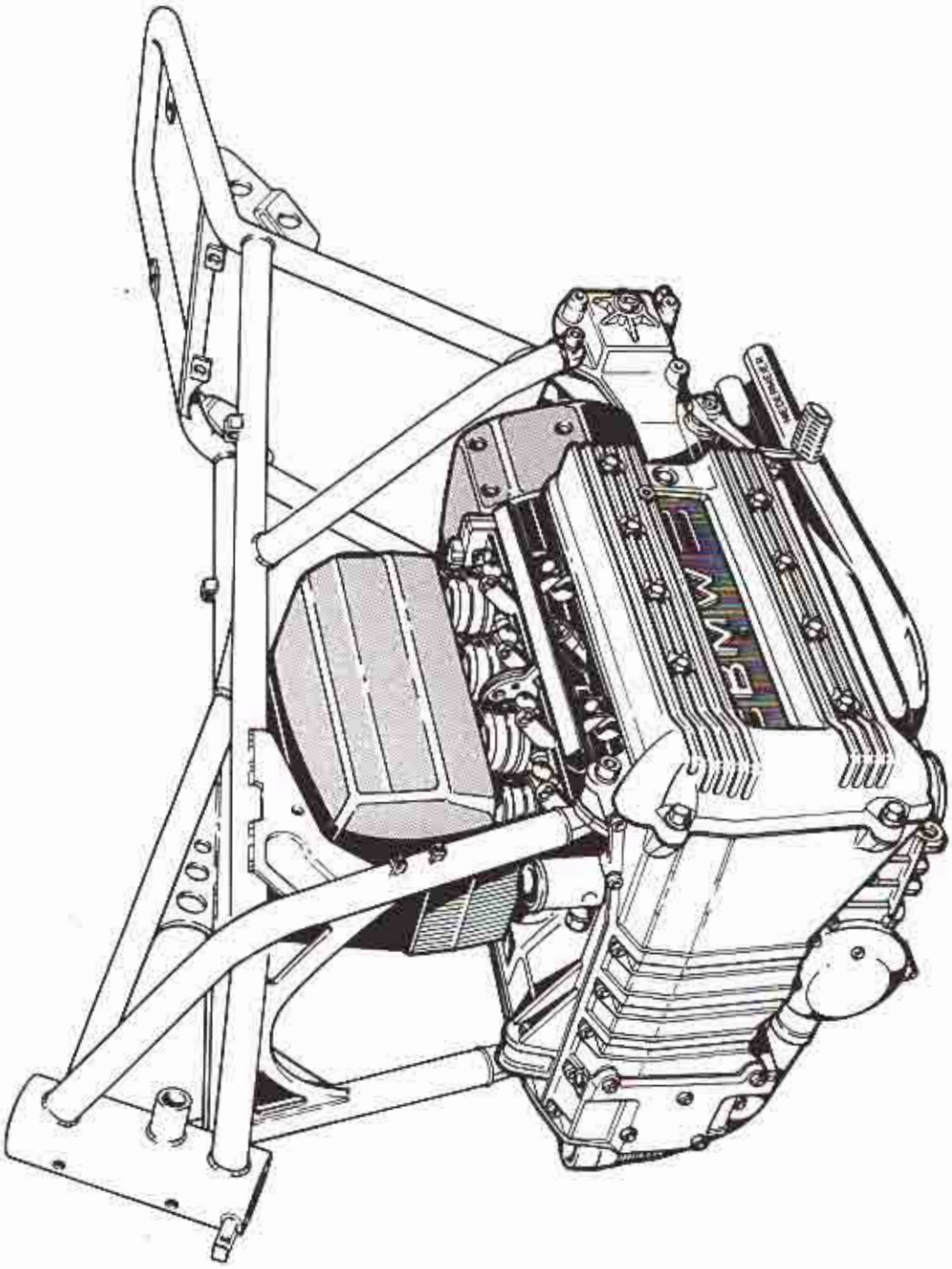
BMW K 100
Leistungs- und Drehmomentdiagramm

R 83/13



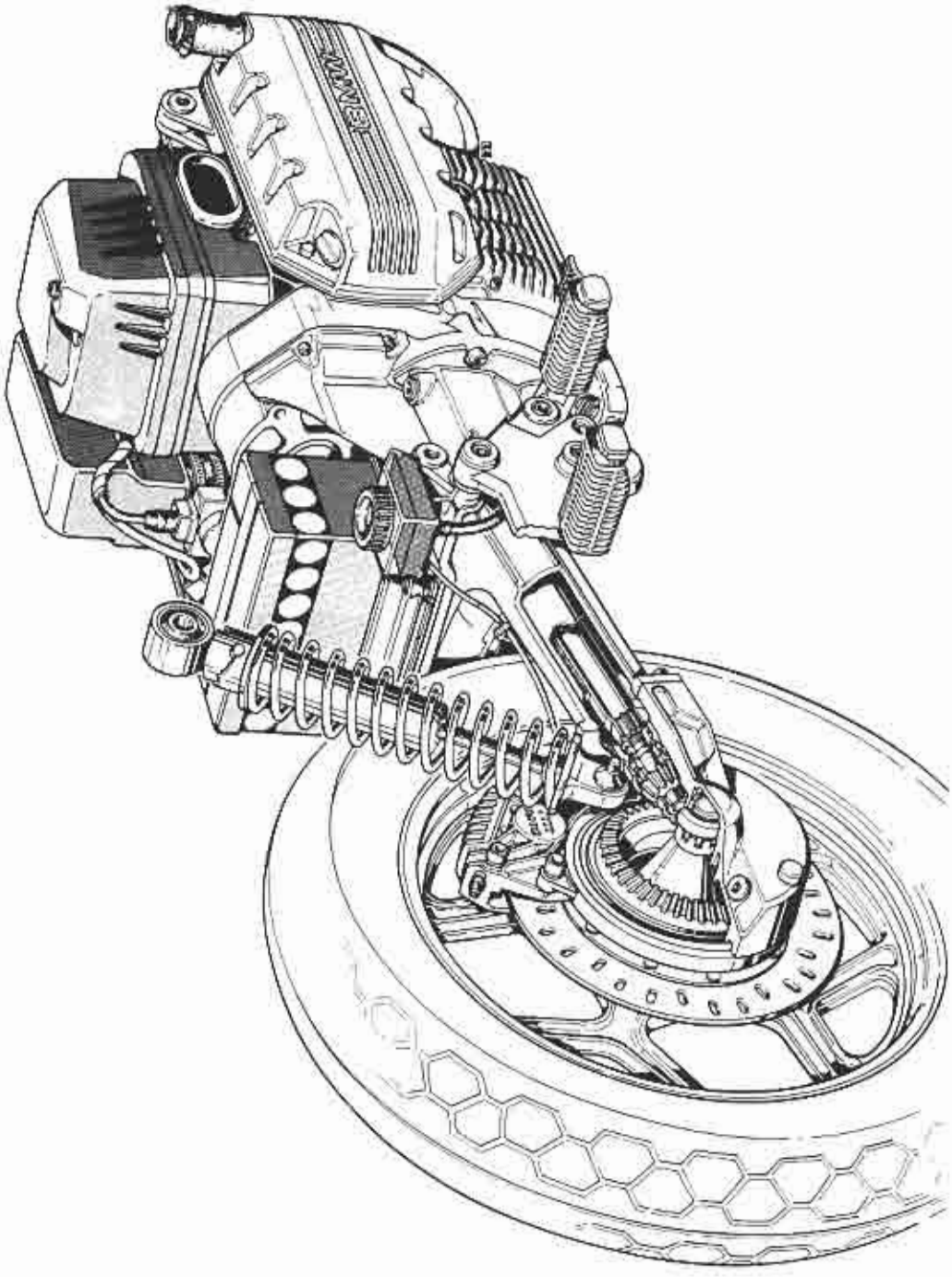
BMW K 100
Brückenrahmen in Fachwerkkonstruktion mit Motor und Antriebsblock als mittragendes Element

R 83/14



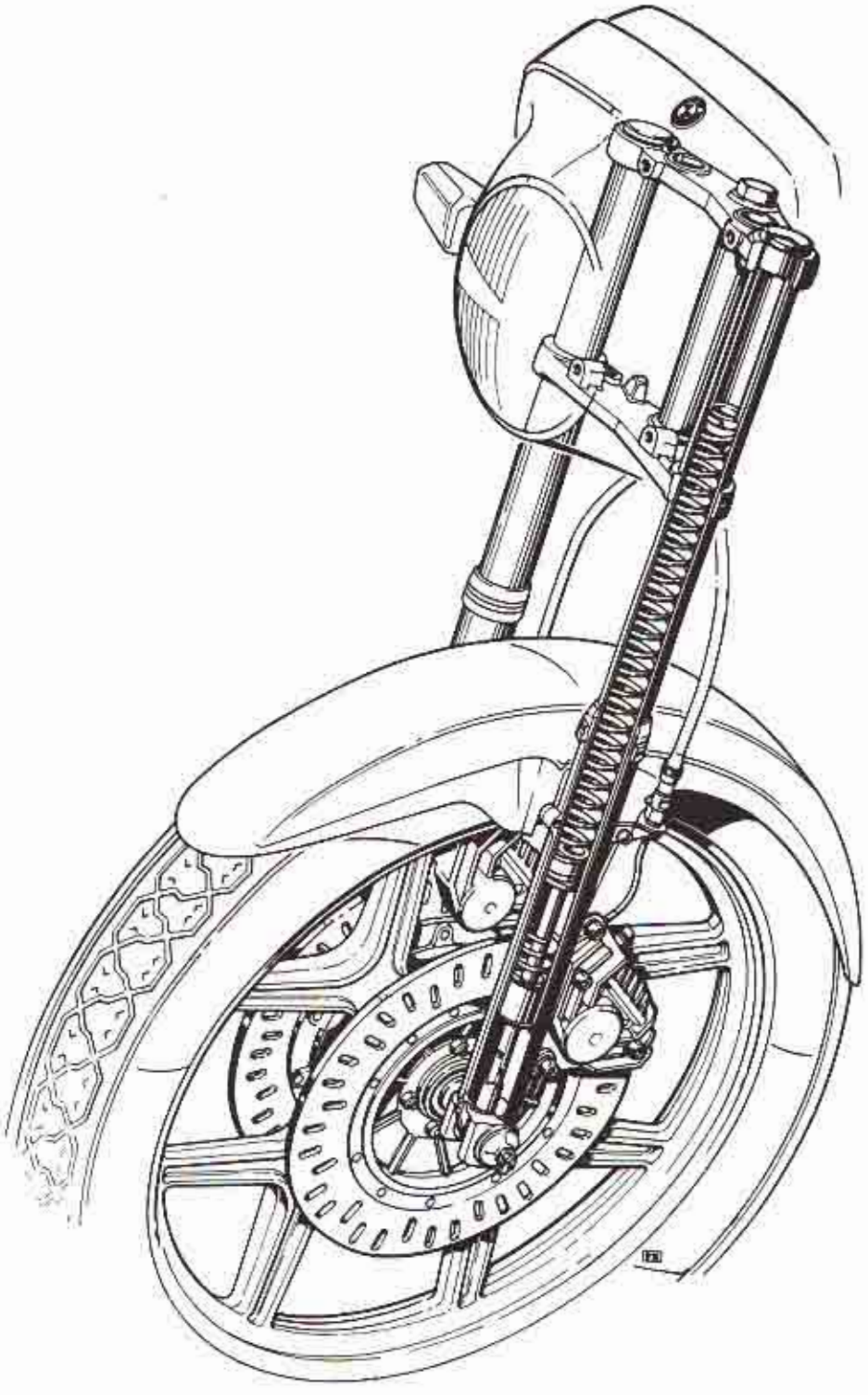
BMW K 100
Compact Drive System

R 83/15



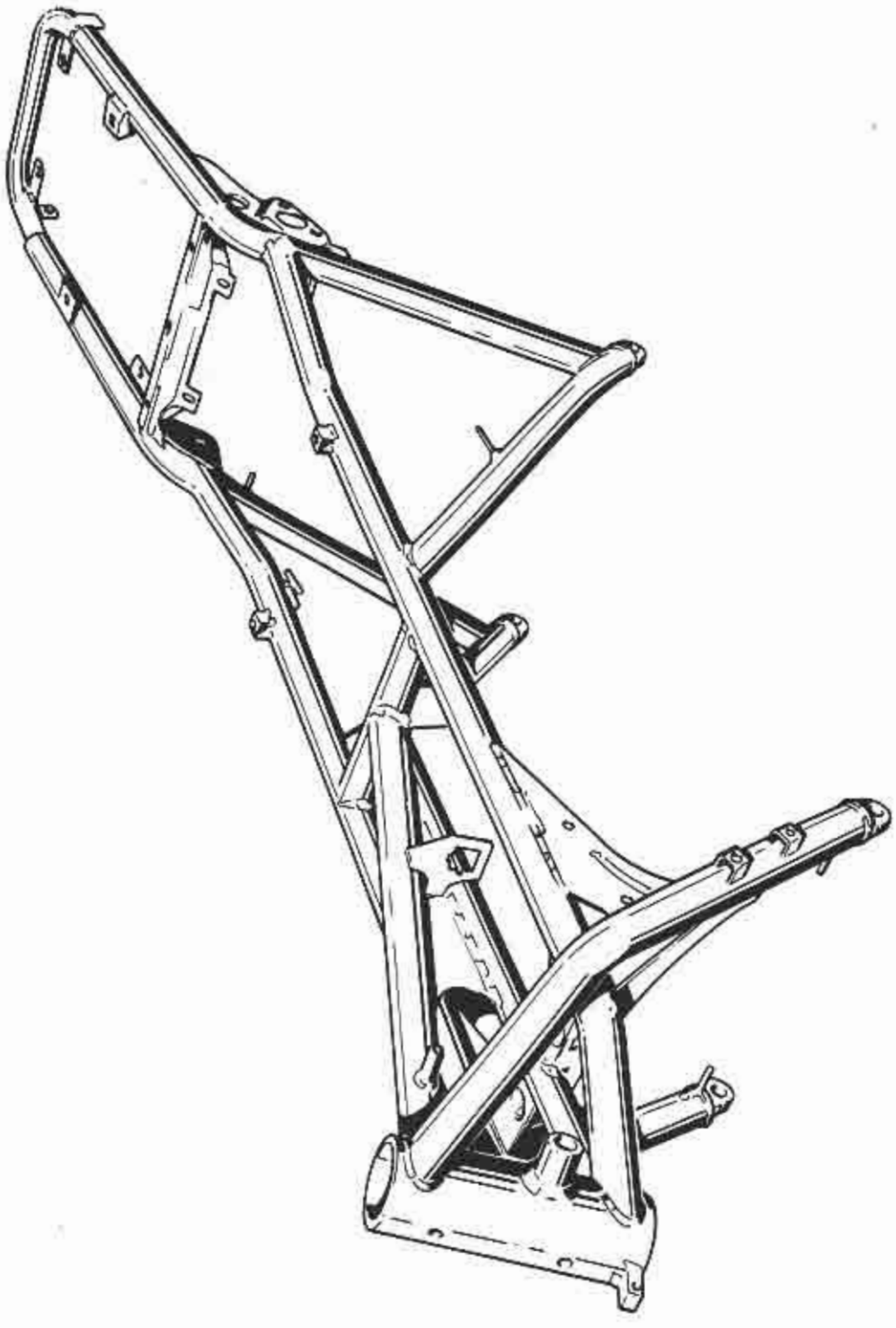
BMW K 100
Vorderrad mit Teleskopgabel

R 83/16



BMW K 100
Brückenrahmen in Fachwerkkonstruktion

R 83/17



A new addition to the flat-twin family:
The R 65 as an attractive model for achievers

While the new K 100 Series has already scored spectacular success in the market, the proven but young-at-heart BMW flat-twin has continued its long story of popularity among motorcycle enthusiasts. Particularly the two new 800-cc models launched in autumn 1984 - the R 80 and R 80 RT - remain very popular in addition to the R 80 G/S as a permanent best-seller.

In 1986 BMW has news in the flat-twin range one class further down where a new R 65 is now taking the place of the former R 45, R 65 and R 65 LS models.

This new and highly attractive BMW for up-and-comers features a 650-cc power unit and is virtually identical to the R 80 in its appearance and technical features. To enable this machine - like all other BMW motorcycles - to run on unleaded fuel, the output has been reduced from 50 bhp (37 kW) to 48 bhp (35 kW). The new R 65 is nevertheless far superior to its predecessor in terms of performance, since the torque curve so vital to a relaxed and dynamic style of riding has been substantially improved. The maximum torque of 47.8 Nm (35.2 ft/lb) is now developed at only 3500 rpm as opposed to 6500 rpm so far.

The engine of the R 65 is arranged in the usual way. Via a lightweight clutch and a directly connected 5-speed gearbox power is transmitted directly through the low-maintenance drive shaft to the rear-wheel drive now also running in bevel gears (like on the K 100). Compared with the needle bearing used previously, the bevel-gear drive is more reliable and can take a higher load. Like all BMW motorcycles, the R 65 now also features the BMW monolever system. The decisive advantages of this suspension are good wheel guidance, low weight and simple removal of the rear wheel.

Featuring 18" cast light-alloy wheels with Y-shaped spokes, tubeless low-profile tyres, a large telescopic fork with a tube diameter of 38.5 mm (1.52") and an integrated fork stabilizer, the highly efficient anti-fading single-disc brake with a disc diameter of 285 mm (11.2") and a reinforced double-loop frame, all flat-twin models now offer the same high technical standard as the K Series.

Two conventional circular dials for road and engine speed as well as a large 22-ltr (4.8 gal) tank give the R 65 timeless elegance and classic styling. Other features that add to this classic look are the comfortable seat with grab handles for the passenger and the rear section with stowage box.

Weighing a mere 205 kg (452 lb) with full tank, the R 65 is a lightweight in its class. With a maximum permissible weight of 440 kg (970 lb) and a maximum load of 235 kg (518 lb), this BMW flat-twin is really ideal for touring.

The 800-cc flat-twins: Always the right choice

The three 800-cc models with their 50 bhp (35 kW) engines follow BMW's motto of offering "ample power from large displacement" and provide even higher torque.

R 80: The classic sports machine

The R 80 without fairing is a classic sports machine for supporters of an active but nevertheless relaxed style of riding. Enthusiasts who really like to enjoy their tours.

R 80 RT: The comfortable tourer

Otherwise identical with the R 80, the R 80 RT features the large touring windshield for optimum protection in wind and weather. This windshield is ideal for comfortable long-distance touring in conjunction with the high-rise touring handlebar.

The multi-piece tour fairing has a large adjustable windshield extending to the rear, direction indicators integrated in the fairing and two lockable stowage boxes. Air inlet nozzles on both sides with adjustable nozzle openings provide a good supply of fresh air in hot weather. Additional folding headlights and further instruments may also be fitted on request. The R 80 RT weighs only 227 kg (500 lb) with full tank - very little for a touring machine.

R 80 G/S: The adventure bike

The R 80 G/S is the ideal motorcycle for adventure tours. Whether on asphalt roads or off the beaten track, the R 80 G/S always feels at home. Its special on and off-road tyres allow a top speed of 170 km/h (105 mph). This is therefore the ideal machine for individualists in search of their own route.

Launched in 1980, the R 80 G/S was the first BMW motorcycles with monolever. In competition trim the R 80 G/S won the Paris-Dakar Rally, the world's toughest long-distance race, for the fourth time in 1985.

The legend that already surrounds the "evergreen" R 80 G/S is underlined by the fact that the readers of MOTORRAD, Europe's largest motorcycle journal, voted this machine the "Enduro of the Year" for the fifth time running in 1984.

Special Paris-Dakar version of the R 80 G/S:
Based on the winning machine

Based on the winning BMW ridden by Gaston Rahier, the Belgian ex-world champion in moto cross, in the 1984 and 1985 Paris-Dakar Rally, BMW has created a special limited-edition version of the R 80 G/S, now followed by a further edition to satisfy the great demand.

This special model differs from the standard R 80 G/S by its 32-ltr (7 gal) fuel tank, Alpine-white paintwork signed by Gaston Rahier, knee-guard padding, Paris-Dakar emblem and two fuel petcocks, a particularly comfortable single seat (in red), a large luggage rack and a chrome-plated exhaust pipe with matt-black cover. It is equipped with Michelin T 61 tyres, cylinder protection bars and side-stand.
Special parts (fuel tank, single seat, luggage rack) are available either individually or as a kit for retrofitting the R 80 G/S.

Special Equipment

	R 65	R 80 G/S	R 80	R 80 RT
Voltmeter with quartz clock	-	-	-	x
Voltmeter with quartz clock and holder	x	-	x	-
Hazard warning system	x	-	x	x
2 additional headlamps	x	-	x	-
2 additional headlamps, tiltable	-	-	-	x
Quartz clock	-	x	-	-
Rev counter	o	x	o	o
Dual-tone fanfare	x	-	x	x
30 Ah battery	x	-	x	x
Socket	x	x	x	x
Heatable grips	x	-	x	x
High handlebar	x	o	x	o
Nivomat	x	-	x	x
Double disk brake	x	-	x	x
Kick starter	-	x	-	-
Super tool kit	x	x	x	x
Splashguard at rear	x	x	x	x
Windshield	x	-	x	-
Holder for touring case	x	-	x	x
Holder for touring case with luggage rack	-	x	-	-

	R 65	R 80 G/S	R 80	R 80 RT
Luggage rack	x	-	x	x
Set touring case with holder	x	-	x	x
Set touring case with holder and luggage rack	-	x	-	-
Low seat bench	o	x	o	o
High seat bench	-	o	-	-
Cylinder protection bar	x	-	x	x
Cylinder protection bar with integr. lateral support	-	x	-	-
First aid kit	x	x	x	x

x = available

- = not available

o = standard equipment

Optional Extras

	R 65	R 80 G/S	R 80	R 80 RT
Reinforcement for telescopic fork	-	x	o	o
Tank-lid, lockable	o	x	o	o
Sport spring suspension	-	x	-	-
Paniers classic	x	-	x	x
Tankbag Multivario	x	x	x	x
Tankbag Vario	x	x	x	x
Tankbag Multivario K	-	x	-	-
Tankbag K	-	x	-	-
Tankbag plate G/S	-	x	-	-
Luggage roll	x	x	x	x
Leatherbags (small)	x	x	-	-
Paris-Dakar Kit	-	x	-	-
Paris-Dakar tank	-	x	-	-
Tyre-Service-Set (with tubes)	x	x	-	-
Tyre-Service-Set (tubeless)	-	-	x	x
Supplementary tool kit	x	x	x	x

x = available

- = not available

o = standard equipment

TECHNICAL DATA
BMW R-MODELS

Engine

Model	Capacity cc	Bore/Stroke mm	Output kW/HP at rpm	Torque Nm at rpm	Type No. of cylinders	Compression ratio Type of fuel (also unleaded)	Valve/ Exhaust and Refill Control	Valves per cylinder inlet/outlet dia	Carburettor type	Ignition	Elec Generator W
R 65	650	82/61.5	35/48 7.250	47.8/ 3.500	Boxer 2	8.7 N	OHV	2 40/36	Bing 2/32	Contactless electronic transistorized battery ignition	280
R 80	797.5	84/70.6	37/50 6.500	58/ 4.000	"	8.2 N	"	2 42,38	"		"
R 80 RT	"	"	"	"	"	"	"	"	"		"
R 80 G/S	"	"	"	"	"	"	"	"	"		"
Special model R 80 G/S Paris-Dakar	"	"	"	"	"	"	"	"	"		"

Electrical System

Power Transmission

Running Gear

erator W	Battery V/Ah	Headlight	Starter kW	Gearbox	Gearbox secondary transmission ratio	Rear wheel drive	Clutch	Type of frame	Spring travel front/rear mm	Caster mm
0	12/20	H4 55/60 W ø 180 mm	0.7	5-speed gear box with dogtype hook shift	I = 4.40 II = 2.86 III = 2.07 IV = 1.67 V = 1.50 / 3.36	Bevel gears with palloid serration	Single-plate	Doubletube steel frame	175/121	120
	-	"	"		../3.20				-	"
	"	"	"		../3.36				-	-
	"	" ø 140 mm	"		"				200/170	115
	"	"	"		"				"	"

Dimensions, Weight

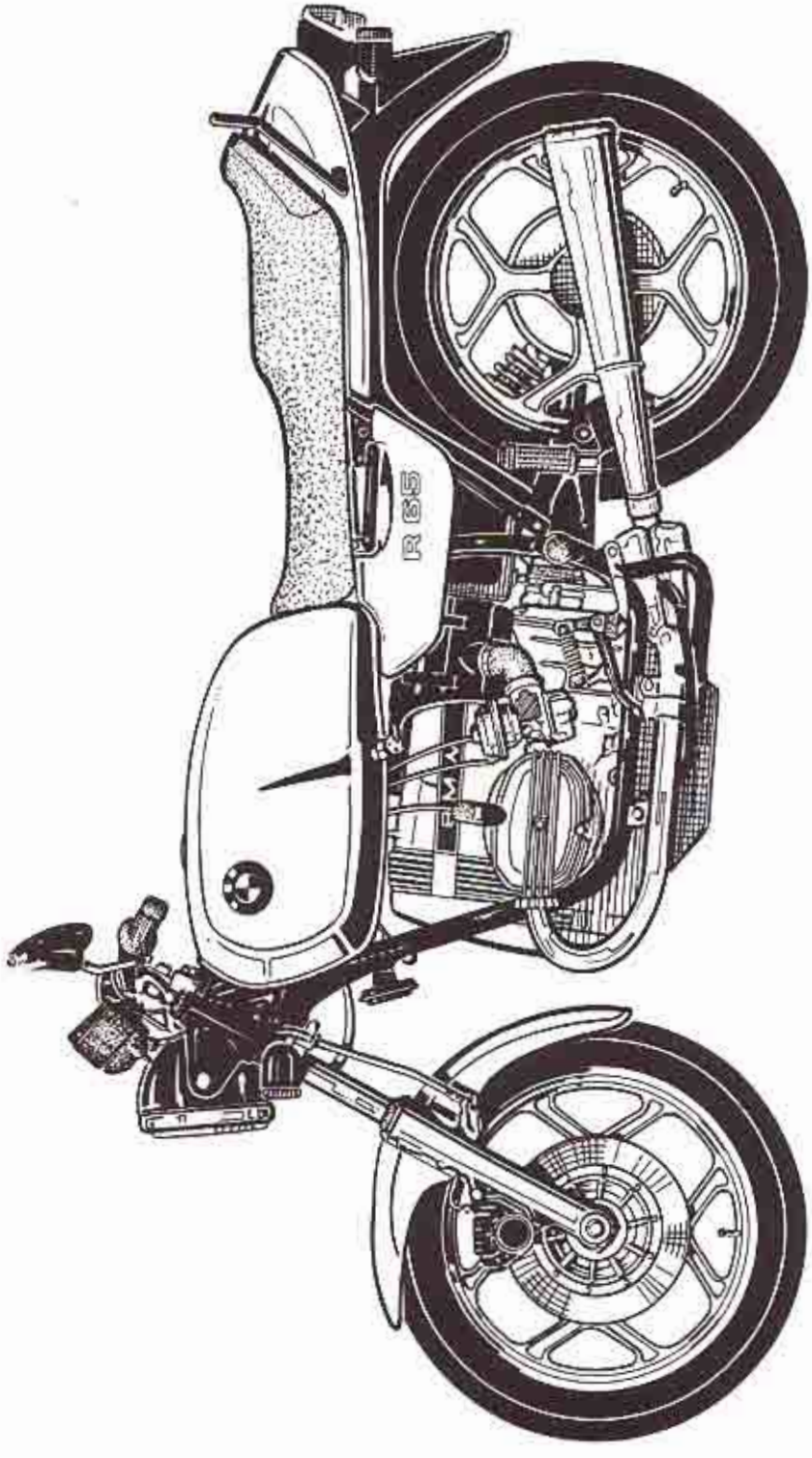
Model	Wheelbase mm	Brakes front/rear	Wheels front/rear	Tyres front/rear	Total length/ width mm	Handlebar width mm	Seat height mm	empty weight with full tank kg	max. permissible weight kg	Tank
R 65	1.447	R 80/R 80 RT/R 65, front single-disk fixed caliper brake, ø 285 mm, R 80 G/S, ø 260 mm rear: Simplex full-hub brake, ø 200 mm	LM-dic-cast MTH 2,50x18E	90/90-18H 120/90-18H	2.175	635	807	205	440	22/2
R 80	"		LM-dic-cast MTH 2.50x18E MTH 2.50x18E	"	2.175 800	"	"	210	"	"
R 80 RT	"		"	"	2.175 960	714	"	227	"	"
R 80 G/S	1.465		Spoke 1.85Bx21 2.50Bx18	3.00-21R 4.00-18R	2.230 746	820	860	191	"	19.5/
R 80 G/S Paris-Dakar	1.465		"	"	"	"	875	205	"	32/4

Data				Equipment		
Tank/spare tank kg	Fuel consumption 90/110 km/h	Acceleration 0–100 km/h 0–1000 m (sec)	Top speed km/h *	Fairing	Standard equipment	Special equipment
2/2	4.6/5.7	6.8 29.5	173		Tool kit, breakdown kit	
	4.6/5.5	5.9 27.6	178		"	
	4.8/5.9	6.4 29.0	170	Frame-mounted full fairing with adjustable windscreen and integrated stowage boxes made of glass fibre reinforced plastic	"	
9.5/2	4.7/5.5	5.6 26.5	168		Tool kit, air pump	
2/4	"	"	"		Tool kit, air pump, solo seat, red luggage rack behind the solo seat, cylinder protection bar with lateral support	

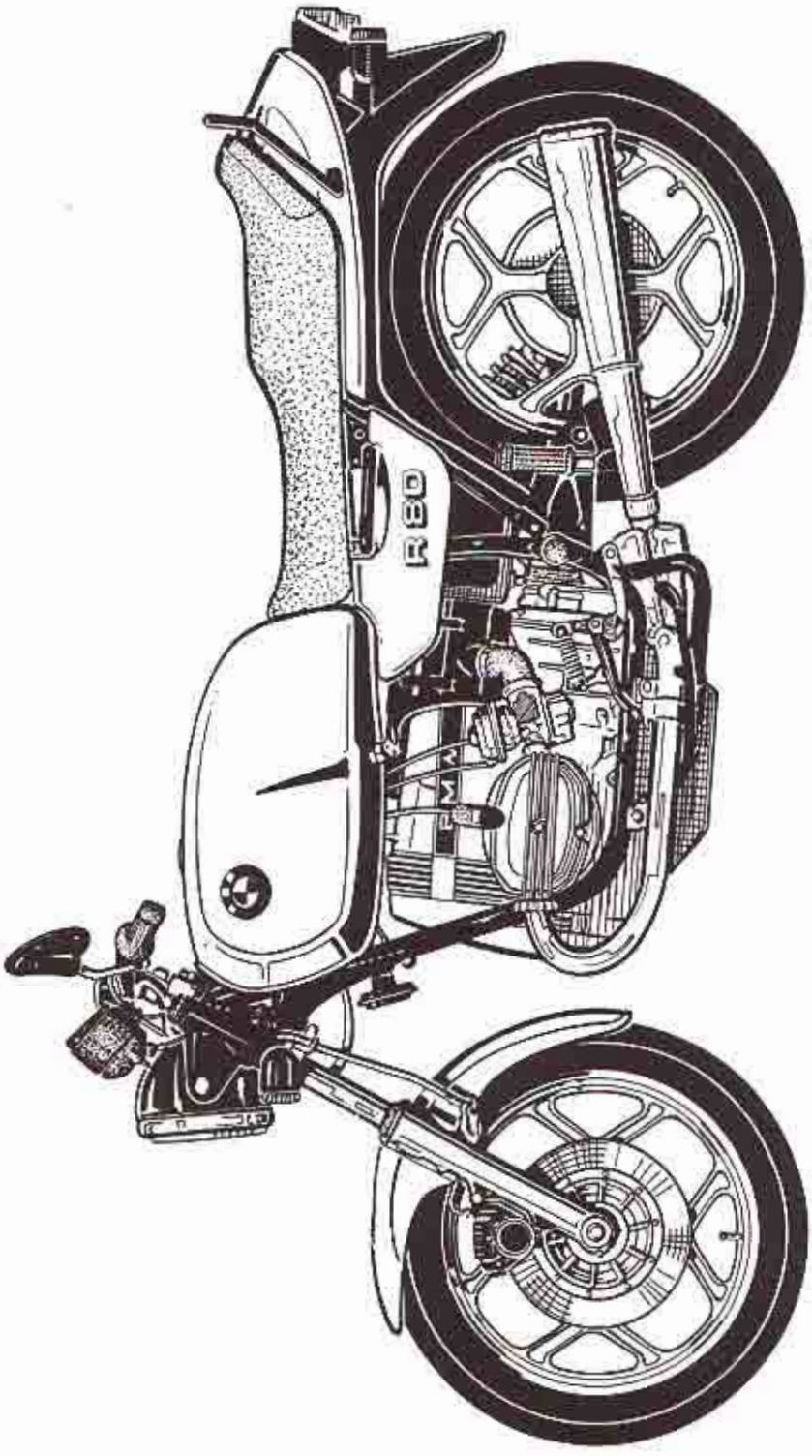
* Top speed is dependent on rider's size, position and clothing, road and weather conditions

See extra pages

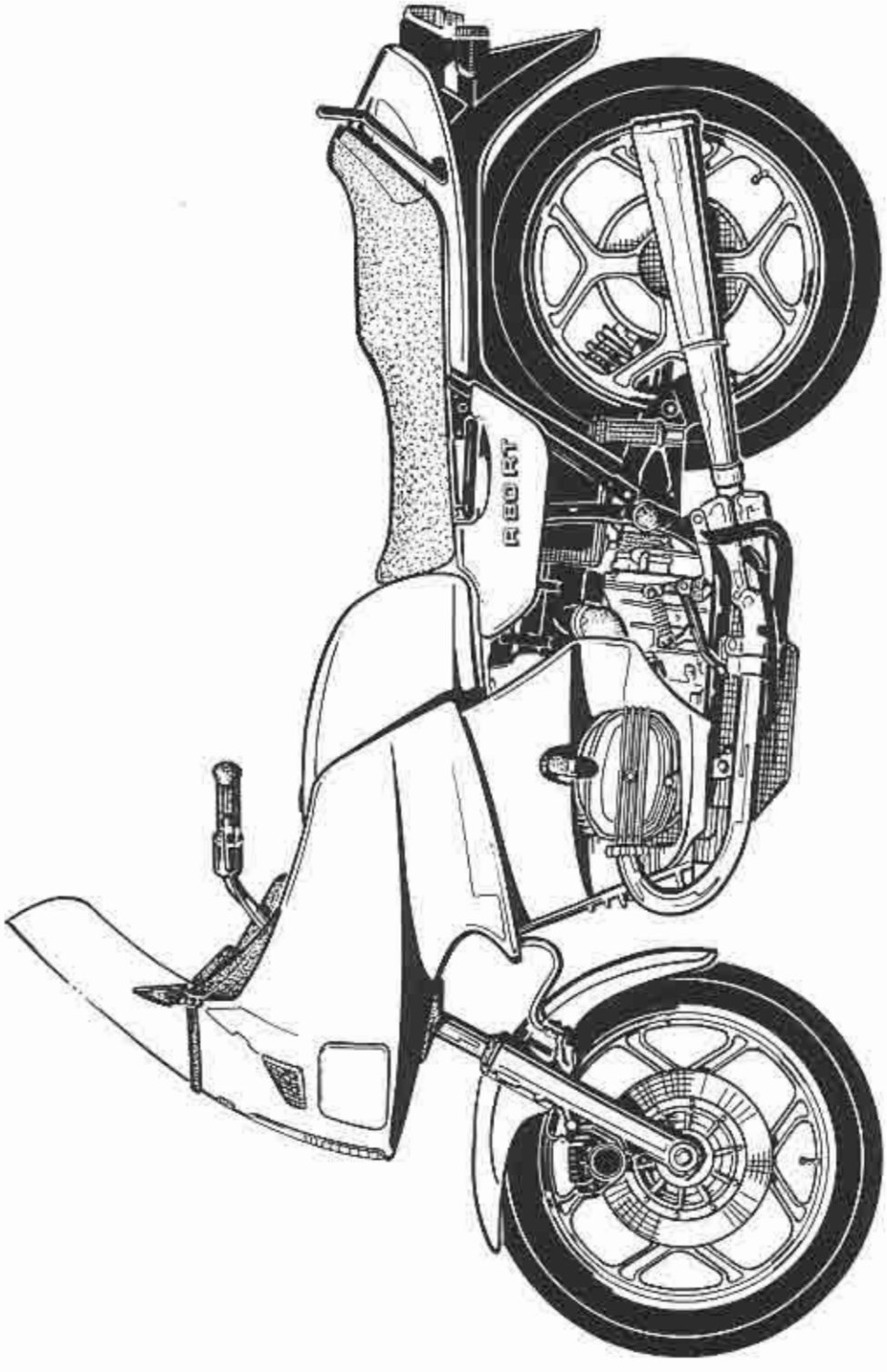
BMW R 65	R 85/15



BMW R 80	R 85/16

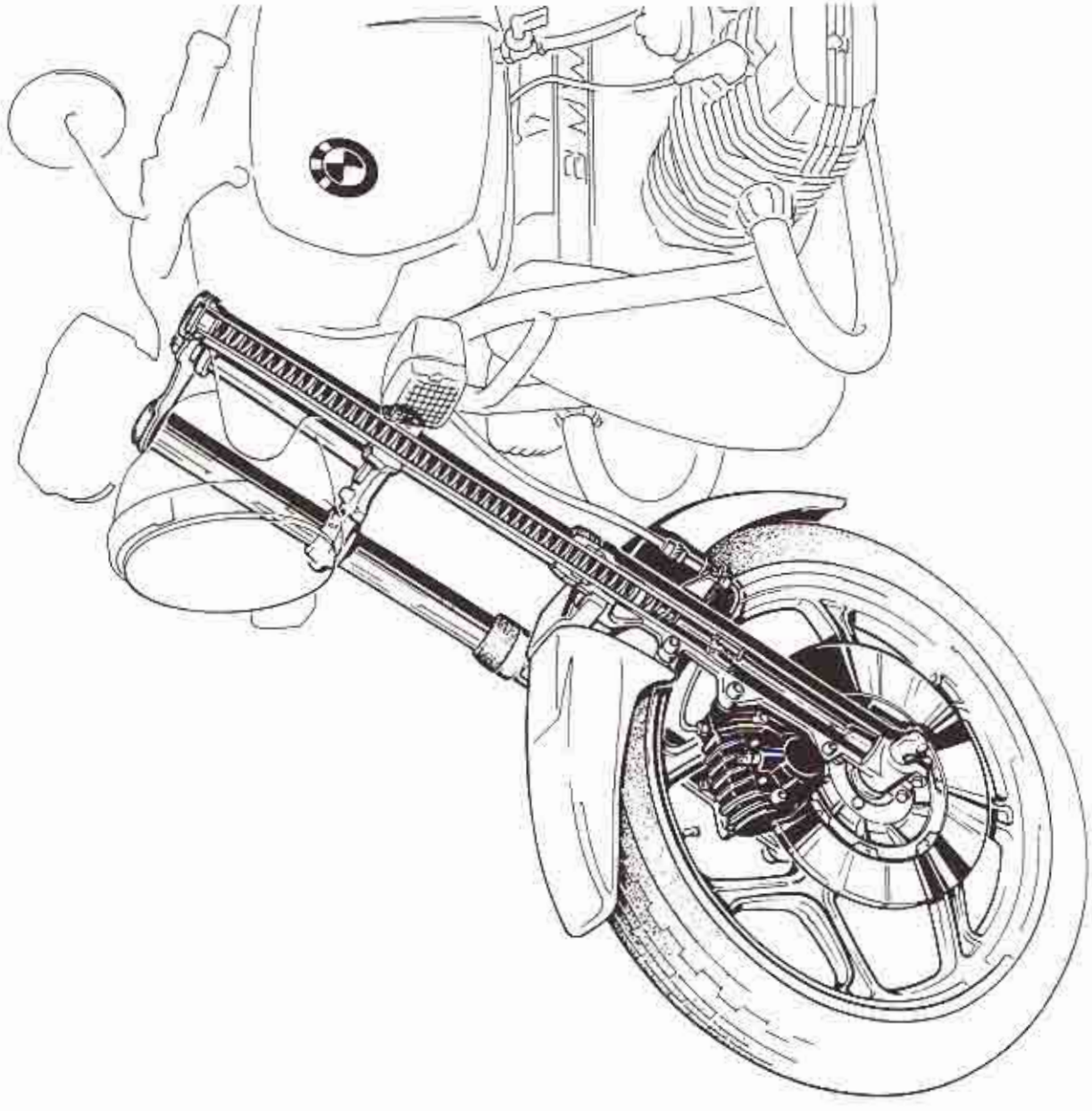


BMW R 80 RT	R 85/17



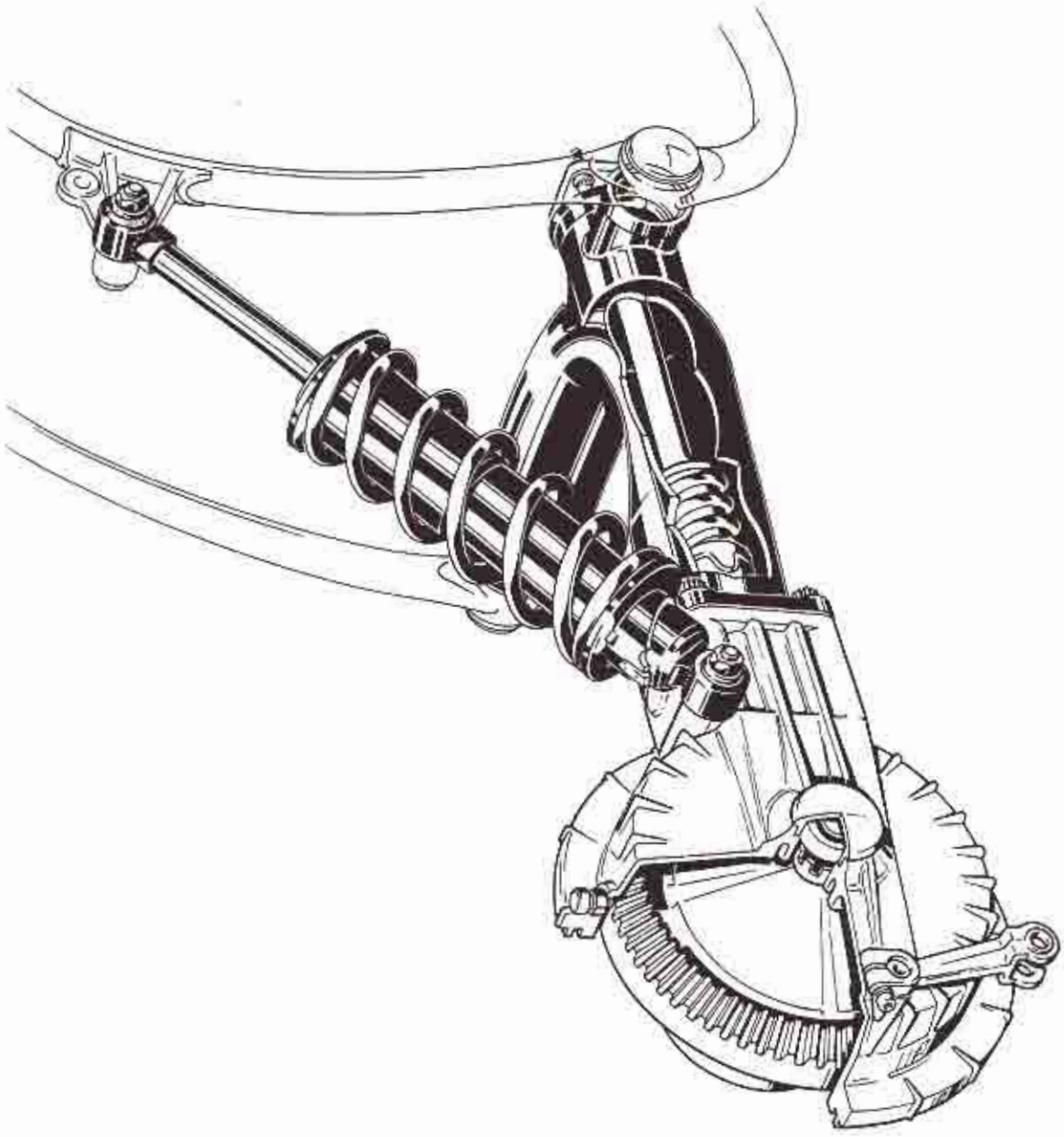
BMW R 80, R 80 RT und R 65
Teleskopgabel mit Gabelstabilisator

R 84/20



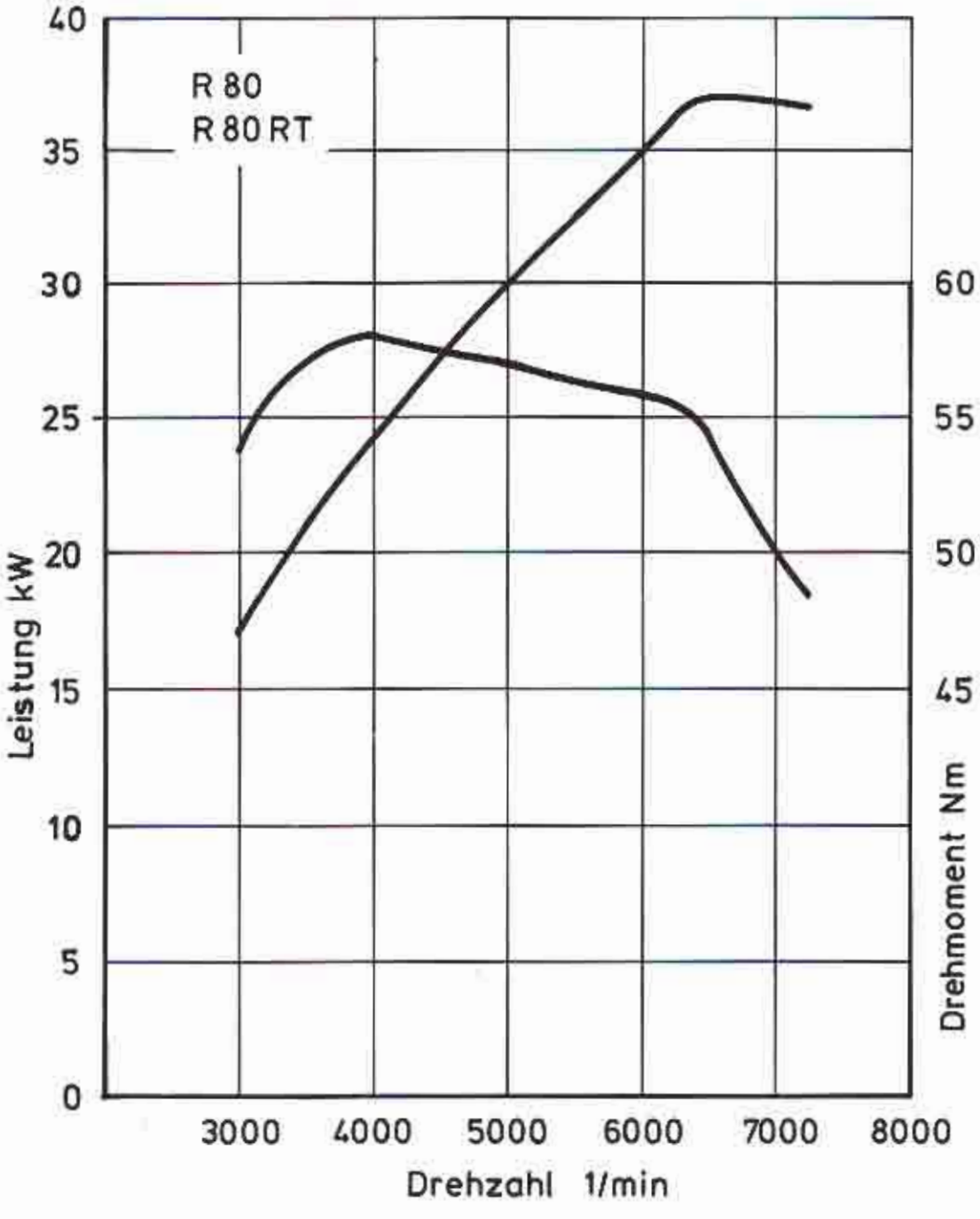
BMW R 80, R 80 RT und R 65
Einarmschwinge (BMW Monolever-System)

R 84/21



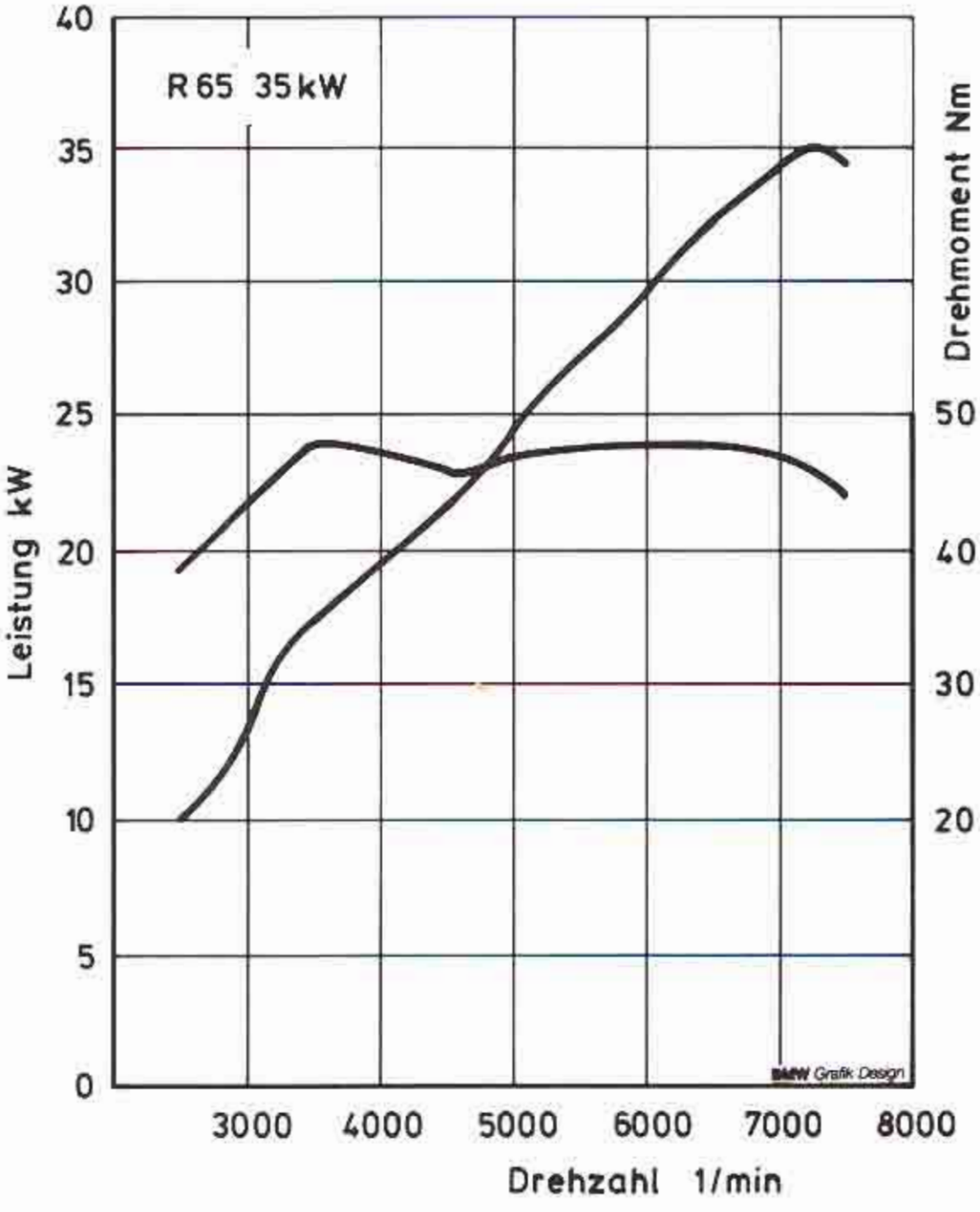
BMW R 80 und R 80 RT
Leistungs- und Drehmomentdiagramm

R 84/22

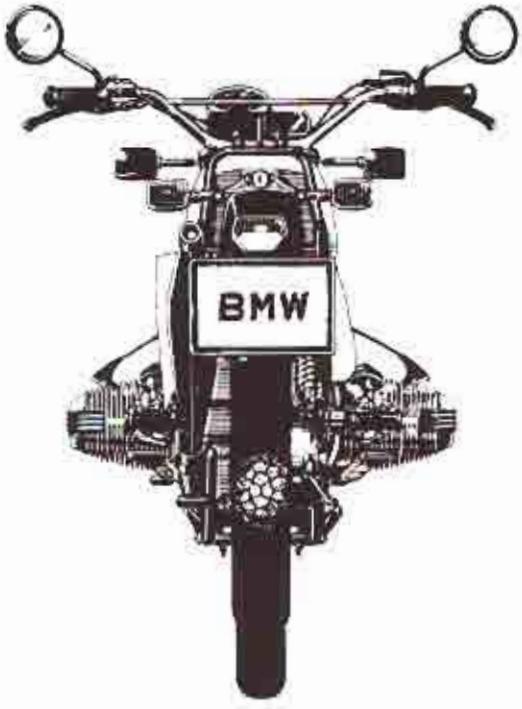


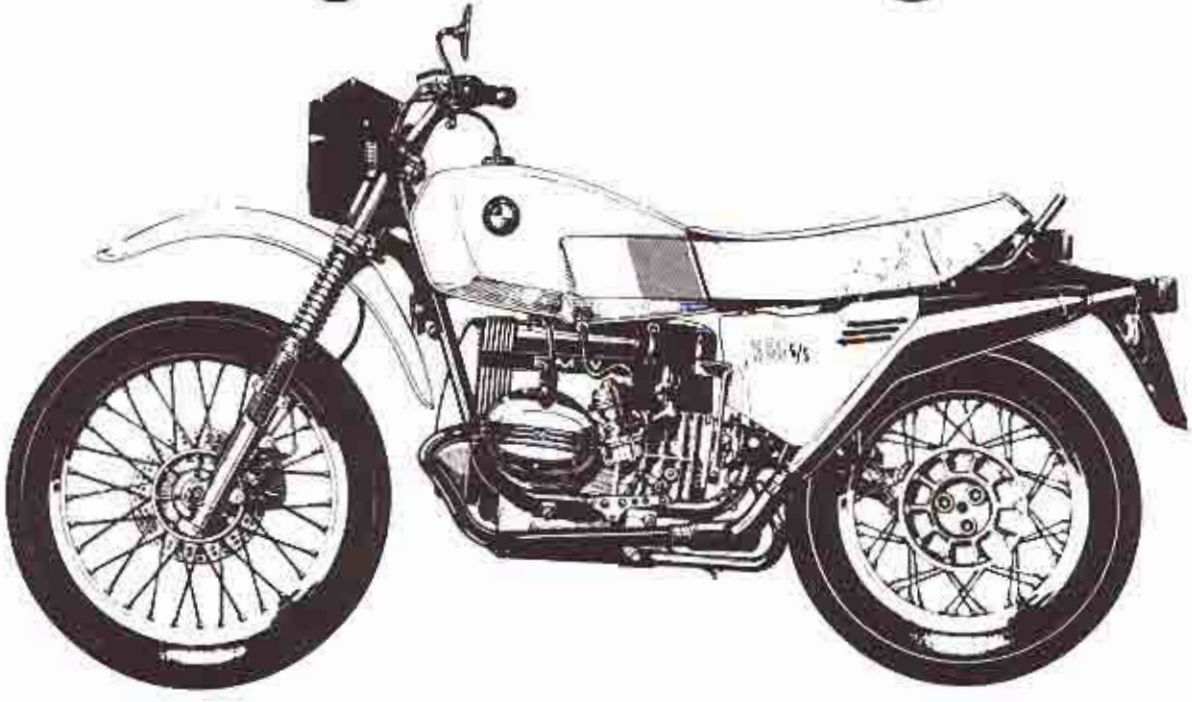
BMW R 65
Leistungs- und Drehmomentdiagramm

R 85/18



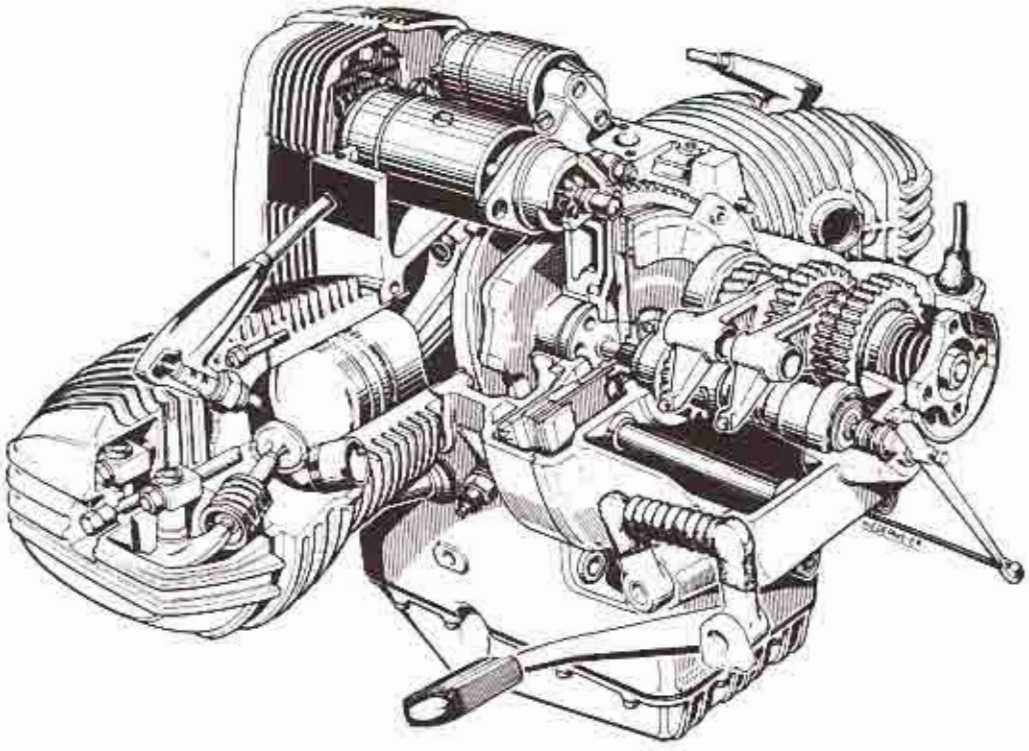
BMW R 80 G/S	R 83/1

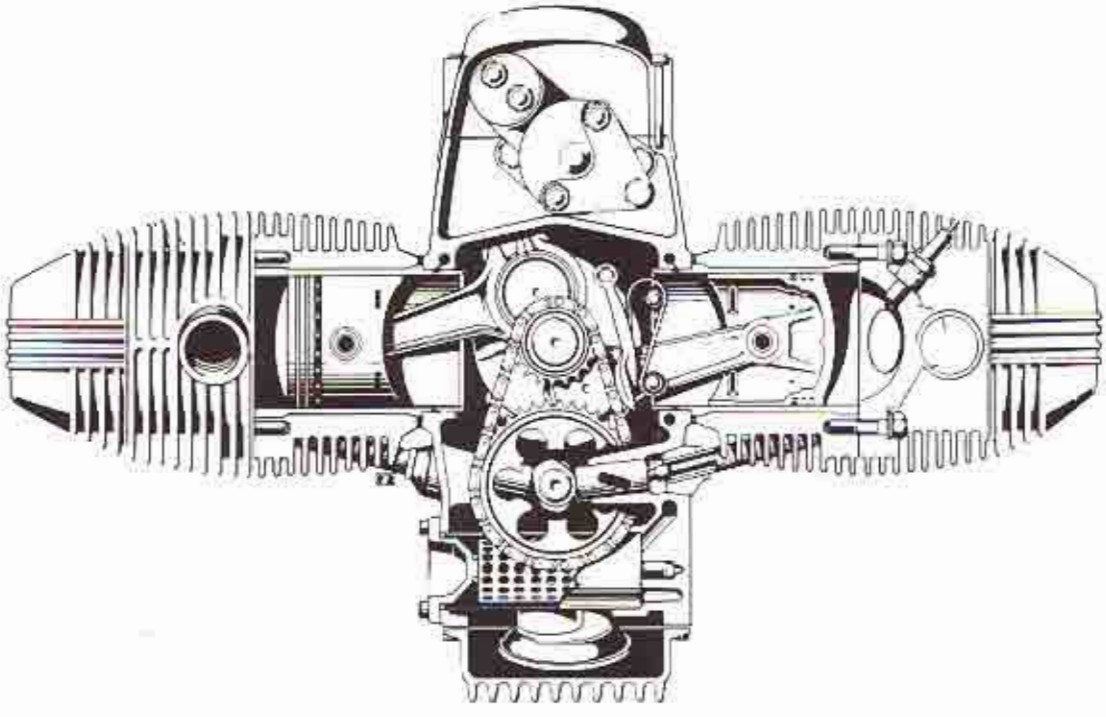




BMW Motorräder
Motorschnittbild (800 cm³)

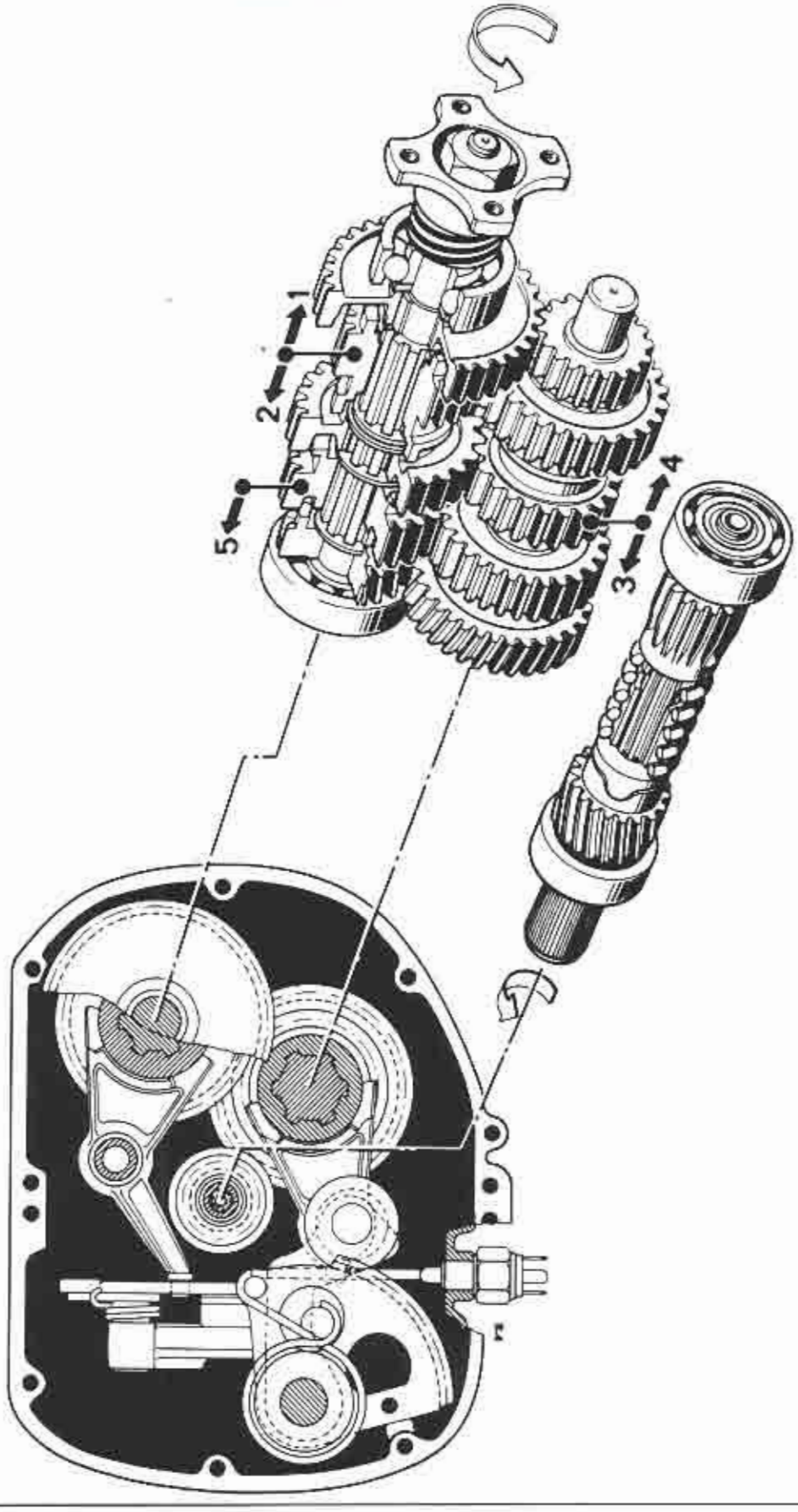
R 83/3





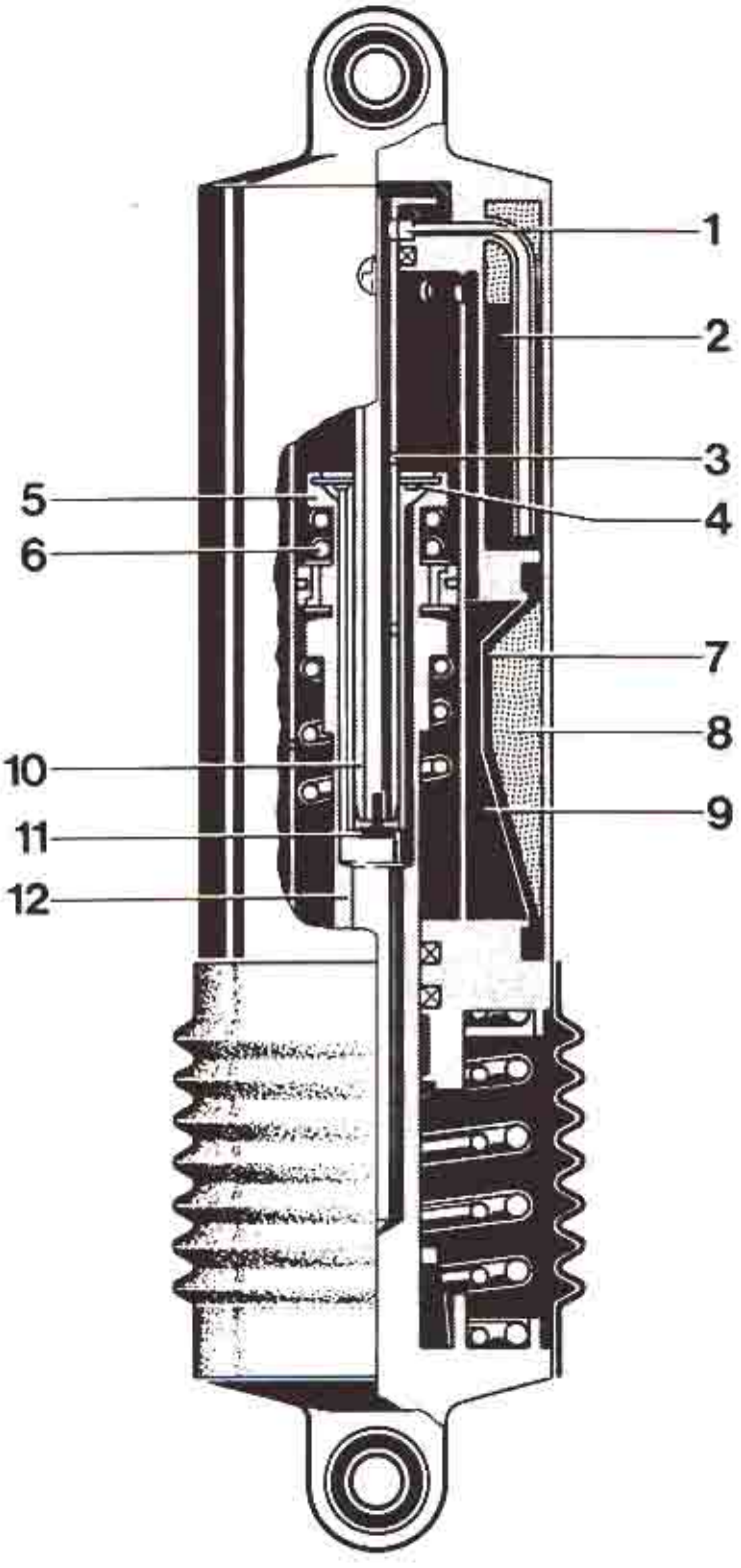
BMW 5-Gang-Schaltgetriebe
Gesamtprogramm

R 83/7



BMW NIVOMAT – Motorräder
Schnittzeichnung

R 83/8



BMW R 80 G/S
Leistungs- und Drehmomentdiagramm

R 85/20