

The new BMW R 12 G/S.
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1. Overall concept. Short version.



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The background of the motif was edited using AI.

"With the new BMW R 12 G/S, BMW Motorrad is offering a classic enduro for puristic off-road fun. The abbreviation borrowed from the legendary R 80 G/S stands for 'Gelände / Straße' (Off-road / Street) and signals that the new member of the BMW R 12 family masters both equally. We know that numerous fans have been eagerly waiting for this motorcycle."

Markus Lederer, Head of Boxer Series.

The new BMW R 12 G/S: Classic enduro design inspired by the legendary BMW R 80 G/S. Ideal ergonomics for ambitious off-road riding.

BMW Motorrad and off-road sport. This motorsport success story runs like a red thread through the company's history. The high-torque boxer engine in combination with the cardan drive has proven its winning ability and durability in countless competitions.

However, it was not until 1980 that BMW Motorrad took the concept of an enduro with a boxer engine into series production. The BMW R 80 G/S was born. A series-production off-road bike that had never been seen before. Blessed with off-road expertise, touring ability and dynamic on-road qualities in equal measure. In short: The abbreviation G/S ("Gelände / Straße" meaning off-road / street) summed up the all-round qualities of the new motorcycle perfectly.

The new BMW R 12 G/S skilfully captures the spirit of the off-road enduro with a boxer engine in the style of the R 80 G/S in terms of design and perfectly transfers it into the present day with modern technology. With long suspension travel, cross-spoke wheels, and a small, compact cockpit fairing.

Three different seat options, sure-footed enduro footrests and handlebar risers for dedicated off-road adventurers.

The new BMW R 12 G/S comes with a flat solo seat as standard (standard seat height with 17" rear wheel: 860 mm / seat height in the Enduro Package Pro with 18" rear wheel: 875 mm). Flat and straight, it is ideal for enduro riding - even in a standing position. The optional Pillion Package includes a seat for two (standard seat height with 17" rear wheel: 860 mm / seat height in the Enduro Package Pro with 18" rear wheel: 875 mm). The rider's seat height is increased by 20 mm with the Rallye Seat option (standard seat height with 17" rear wheel): 880 mm / seat height in the Enduro Package Pro with 18" rear wheel: 895 mm). The new R 12 G/S comes as standard with two practical steel eyelets on the rear frame, which can be used as lashing points.

The basic version of the new BMW R 12 G/S is equipped with a footrest system designed primarily for on-road use, but also suitable for off-road use thanks to its serrated profile. As part of the "Enduro Package Pro", the R 12 G/S is equipped with an enduro footrest system which, thanks to the enlarged contact area of the footrest body in combination with three rows of spikes, provides optimum grip for enduro riding.

The butted aluminum tubular handlebars allow further ergonomic adjustment. The optional Enduro Package includes a 20 mm riser.

A powerful boxer engine with a superior power and torque output and a single-flow exhaust system.

Ever since the first BMW motorcycle - the R 32 - was launched in 1923, BMW Motorrad boxer engines have been synonymous with unmistakable, original and authentic design, a full torque curve and a unique sound character. The same is true of the new BMW R 12 G/S. The air/oil-cooled 101 mm bore, 73 mm stroke, 1,170 cc capacity boxer engine from numerous BMW motorcycle models delivers 80 kW (109 hp) at 7,000 rpm and a maximum torque of 115 Nm at 6,500 rpm. The left-hand exhaust system

with high-mounted rear silencer meets the requirements of a classic enduro.

Standard riding modes "Rain", "Road" and "Enduro" as well as additional riding mode "Enduro Pro" as part of the Enduro Package Pro. Dynamic Traction Control (DTC) and engine drag torque (MSR) control as standard.

The new BMW R 12 G/S already features the "Rain", "Road" and "Enduro" riding modes as standard. The new R 12 G/S also comes with Dynamic Traction Control (DTC) as standard, which ensures a high level of riding safety when accelerating. For off-road use, DTC can be switched off completely on the new BMW R 12 G/S. In addition, the 12 G/S is equipped with engine drag torque control (MSR) as standard.

Optional factory-installed Shift Assistant Pro for upshifting and downshifting without clutch operation for more dynamics, comfort and acceleration with almost no interruption of pulling power.

The Shift Assistant Pro, available as optional equipment ex works for the new BMW R 12 G/S, allows for clutchless shifting in almost all load and speed ranges. It offers increased dynamic performance and comfort compared to manual shifting, with extremely short shift times that enable acceleration with minimal interruption of pulling power.

One-piece tubular bridge steel spaceframe with bolted-on rear frame provides the ideal basis for an enduro. Optimised steering head section for perfect off-road ergonomics and a wide steering angle.

The one-piece tubular bridge steel spaceframe of the R 12 family is at the heart of the new BMW R 12 G/S. The rear frame, also made of tubular steel, is bolted to the main frame. The steering head is slightly higher and further forward on the new BMW R 12 G/S.

Large 21-inch front wheel as standard for optimum off-road performance. Optional Enduro Package Pro with 18-inch instead of 17-inch rear wheel for maximum off-road performance.

The new BMW R 12 G/S with its cross-spoke wheels is a fully fledged enduro. Accordingly, it is equipped with a 21-inch wheel at the front. A 17-inch wheel is fitted as standard at the rear. An 18-

inch rear wheel is available as part of the Enduro Package Pro for even greater off-road capability.

Fully adjustable upside-down telescopic fork at the front and Paralever swingarm with angled, also fully adjustable rear shock absorber paired with long spring travel for superior off-road capability.

In addition to a stiff and stable main frame as the basis, long suspension travel is essential for ambitious off-road riding. On the new R 12 G/S, the front wheel is guided by fully adjustable upside-down telescopic fork with a 45 mm diameter and a generous 210 mm of travel.

As with the other models in the BMW R 12 family, the rear wheel is guided by a Paralever swinging arm. Suspension and damping are provided by a 200 mm travel, angled spring strut with travel-dependent damping and full adjustability.

Powerful braking system in conjunction with BMW Motorrad ABS Pro for safe braking even when cornering.

The front wheel of the new R 12 G/S is fitted with a twin disc brake with two axially bolted, 2-piston floating calipers and a disc diameter of 310 mm. A single disc brake with 2-piston floating caliper and 265 mm diameter is used on the rear wheel.

The new R 12 G/S is already equipped with BMW Motorrad ABS Pro (part-integral) as standard. ABS Pro also offers more safety when braking in bends by enabling ABS-assisted braking when leaning into corners.

Classically designed, centrally positioned round instrument and 12 V socket.

The new BMW R 12 G/S is equipped as standard with a centrally positioned round instrument and a 12 V socket for the on-board power supply on the right-hand side of the cockpit.

Powerful LED light units as standard and Headlight Pro as optional equipment ex works.

The new BMW R 12 G/S features a compact LED round headlight with a diameter of 5 ¾" and an iconic light signature in the shape of an "X" as standard. Furthermore, the turn indicator and control lights of the new R 12 G/S also use LED technology.

The adaptive headlight, part of Headlight Pro optional equipment, offers even more safety when riding at night.

Three attractive colors for the new BMW R 12 G/S.

The BMW R 12 G/S basic version.

Night black matt paint for front wheel cover / cockpit fairing / fuel tank / airbox cover / rear end.

Seat: Black.

Decals: Airbox cover.

BMW R 12 G/S optional color.

Light white paint for front wheel cover / cockpit fairing / fuel tank / airbox cover / rear end.

Seat: Red.

Decals: Fork protectors / fuel tank / cockpit fairing / airbox cover.

BMW R 12 G/S Option 719 Aragonit.

Sandrover matt paint / Racing red matt paint / Mineral grey metallic matt for fuel tank / front wheel cover / cockpit fairing / airbox cover / rear end.

Seat: Black / Sandrover / Red.

Decals: Fork protectors / fuel tank / cockpit fairing.

Highlights of the new BMW R 12 G/S:

- Classic, purist enduro design.
- Original air/oil-cooled two-cylinder boxer engine with 80 kW (109 hp) at 7,000 rpm and 115 Nm at 6,500 rpm.
- Left-hand single-flow exhaust system with high-mounted rear silencer and conical tailpipe.
- One-piece tubular spaceframe with raised and forward-positioned steering head section. Bolted-on rear frame.
- Fully adjustable upside-down telescopic fork at the front and Paralever swing arm with angled, also fully adjustable rear shock absorber with revised travel-dependent damping.

- 21-inch front wheel and 17-inch rear wheel as standard. 18-inch rear wheel as part of the "Enduro Package Pro" optional equipment.
- Axially mounted 2-piston floating calipers, steel flex brake lines and 310 mm brake discs.
- BMW Motorrad ABS Pro for safe braking even when leaning into corners.
- "Rain", "Road" and "Enduro" riding modes as standard. Additional "Enduro Pro" riding mode available as optional equipment.
- DTC (Dynamic Traction Control) and engine drag torque control (MSR) as standard.
- Classic round instrument panel and 12 V socket. Digital display available as optional equipment ex works.
- Powerful LED light units as standard and adaptive "Headlight Pro" as optional equipment ex works.
- Keyless Ride for conveniently activating the locking functions via radio as standard.
- Three attractive colors for a stylish look.
- Tailored range of ex works customization optional equipment available through the premium quality Original BMW Motorrad accessories range.

2. Design and ergonomics.



"The design of the new BMW R 12 G/S builds a bridge to the R 80 G/S from 1980 and brings its unmistakable spirit into the modern age with balanced ergonomics for the best possible off-road control. Its ergonomic triangle provides the ideal riding position, whether you are sitting or standing, and combines classic enduro design with modern technical features for serious off-road use. The R 12 G/S is therefore not only a tribute, but also a powerful motorcycle for dynamic off-road experiences."

Alexander Buckan, Head of Design BMW Motorrad.

The new BMW R 12 G/S: Classic enduro design with a design language based on the legendary BMW R 80 G/S.

BMW Motorrad and off-road sport. This motorsport success story runs like a red thread through the company's history. The high-torque boxer engine in combination with the cardan drive has proven its winning power and durability in countless competitions.

However, it was not until 1980 that BMW Motorrad took the concept of an enduro with a boxer engine into series production. The BMW R 80 G/S was born. A series-production off-road bike that had never been seen before. Blessed with a high level of off-road expertise, superior touring capability and dynamic qualities in sporty road riding in equal measure. In short: The abbreviation G/S ("Gelände / Straße" meaning off-road and street) summed up the all-round qualities of the new motorcycle perfectly.

The resounding market success of the R 80 G/S ultimately established the completely new motorcycle segment of high-capacity touring enduros, which BMW Motorrad not only dominates to this day with the GS models, but also continues to develop further. At the same time, the Enduro provided a formidable basis for motorsport success, as BMW Motorrad's commanding victories in the Paris-Dakar Rallye in the first half of the 1980s impressively demonstrated.

The new BMW R 12 G/S captures the spirit of the off-road boxer enduro in the style of the R 80 G/S and brings it into the present

with modern technology. With a high front wheel cover, cross-spoke wheels and small, compact cockpit fairing. In addition, the R 12 G/S in the special color Light white features a white fuel tank with contrasting light blue and dark blue knee pads, complemented by the red full-length seat and the model name in fine red letters on the side panels of the airbox. In this variant, the new R 12 G/S looks as if it has been transported back in time to 1980.

Perfect ergonomics and equipment for ambitious off-road riding and dynamic off-road experiences.

Of course, the new BMW R 12 G/S is much more than just a formal tribute to its predecessor from 45 years ago. It has everything you need for serious off-road riding nowadays, both in terms of drive and chassis.

After all, the drivetrain and chassis are perfectly complemented by the equally important ergonomics that play a decisive role in off-road use. The ergonomic handlebar-footrest-seat triangle is designed so that the footrests are positioned precisely under the seated point. A butted aluminum tube handlebar, positioned high and close to the rider, also ensures an ideal riding position, whether sitting or standing. The shape of the 15.5-liter steel fuel tank is designed accordingly. The sides of the fuel tank match the width of the seat and widen slightly towards the front. This side contour provides optimum support and good knee grip on the fuel tank.

For dedicated off-road adventurers, there are three different seat options, sure-footed enduro footrests and adjustable handlebars. Practical lashing points for luggage.

The new BMW R 12 G/S comes with a flat solo seat as standard (standard seat height with 17" rear wheel: 860 mm / seat height in the Enduro Package Pro with 18" rear wheel: 875 mm). Flat and straight, it is ideal for enduro riding - even in a standing position. The optional Pillion Package includes a seat for two (standard seat height with 17" rear wheel: 860 mm / seat height in the Enduro Package Pro with 18" rear wheel: 875 mm). While the rider's seat height remains the same, the pillion seat is designed with significantly more foam and a pillion strap is fitted. This optional equipment also includes pillion footrests. The "Rallye Seat" option (standard seat height with 17" rear wheel: 880 mm / seat height in the Enduro Package Pro with 18" rear wheel: 895 mm), raises the seat height for the rider by 20 mm. As with the Pillion Package, the "Rallye Seat" option also includes pillion footrests and straps.

The basic version of the new BMW R 12 G/S is equipped with a footrest system designed primarily for on-road use, but also suitable for off-road use thanks to its serrated profile. The rounded tips provide an optimum compromise between grip and comfort. The gearshift lever is adjustable via an eccentric and the foot brake lever has a large contact area and a conical grip pattern for optimum usability.

As part of the "Enduro Package Pro", the R 12 G/S is equipped with an enduro footrest system which, thanks to the enlarged contact area of the footrest body in combination with three rows of spikes, provides optimum grip for enduro riding. The foot brake lever also has a better grip thanks to its stable shape and serrated contour and is ideal for enduro use. It can also be locked in two different positions. The rear brake is easier to reach from a standing position due to its upturned position. The gearshift lever is the same as on the basic model.

The butted aluminum tubular handlebars allow further ergonomic adjustment. In addition to the correct adjustment of the gearshift and foot brake levers, we recommend that the handlebars be turned forward by 10 degrees for off-road riding while standing. There are corresponding markings on the handlebars for this purpose. This will raise the handlebars and make the controls even more accessible from a standing position.

The new R 12 G/S comes as standard with two practical steel eyelets on the rear frame, which can be used as lashing points for attaching a rear bag for example. There are also two fabric straps under the solo seat, which can also be used as lashing points. The footrest slots and the outriggers of the pillion footrests can be used as additional lashing points with the optional equipment "Pillion Package" and "Rallye Seat".

Three attractive color variants for the new BMW R 12 G/S.

The BMW R 12 G/S basic version.

Night black matt paint for front wheel cover / cockpit fairing / fuel tank / airbox cover / rear end.

Frame: Black.

Forks: Gold.

Seat: Black.

Decals: Airbox cover.

BMW R 12 G/S optional color.

Light white paint for front wheel cover / cockpit fairing / fuel tank / airbox cover / rear end.

Frame: Black.

Forks: Gold.

Seat: Red.

Decals: Fork protectors / fuel tank / cockpit fairing / airbox cover.

BMW R 12 G/S Option 719 Aragonit.

Sandrover matt paint / Racing red matt paint / Mineral grey metallic matt for fuel tank / front wheel cover / cockpit fairing / airbox cover / rear end.

Frame: Red.

Forks: Black.

Seat: Black / Sandrover / Red.

Decals: Fork protectors / fuel tank / cockpit fairing.

Contents Option 719 ("Street" without Enduro Package Pro).

- Silver fork bridge.
- Black ignition coil covers and black oil filler plug.
- Cylinder head covers in Avus black.
- Black hand protectors.
- Shadow II milled parts package with black hand lever, black expansion tank cover and Shadow II footrest system.
- Pillion Package with black pillion footrests.
- Chrome-plated manifold.

Contents Option 719 II ("Offroad" with Enduro Package Pro).

- Silver fork bridge.
- Black ignition coil covers.
- Black oil filler plug.
- Cylinder head covers in Avus black.
- Black hand levers.
- Black expansion tank cap.
- Enduro Package Pro.
- Riding modes Pro.
- Pillion Package with black pillion footrests.
- Chrome-plated manifold.

3. Drive.



"With the air/oil-cooled boxer engine from the R 12 family, the new BMW R 12 G/S has an ideal enduro drive for ambitious off-road fun. Its ample torque and the 'Enduro' and 'Enduro Pro' riding modes, which are fully tailored to off-road use, make it a perfect partner for dedicated off-road riding."

Norbert Rebholz, Boxer Series Project Manager.

Rugged boxer engine offers confident power and torque for dynamic enduro enjoyment on and off the road.

Ever since the first BMW motorcycle - the R 32 - was launched in 1923, BMW Motorrad boxer engines have been synonymous with unmistakable, original and authentic design, a full torque curve and a throaty, unique sound. The same is true of the new BMW R 12 G/S. Already familiar from numerous BMW Motorrad models, the air/oil-cooled boxer engine with 101 mm bore, 73 mm stroke and 1,170 cc capacity delivers 80 kW (109 hp) in the R 12 G/S at 7,000 rpm and the maximum torque of 115 Nm is generated at 6,500 rpm.

The valves, which are only radially arranged in the combustion chamber for this BMW boxer engine, are controlled by two overhead, chain-driven camshafts (DOHC) per cylinder. Lightweight cam followers are responsible for valve operation, and the valve clearance is adjusted using hemispherical shims. The cylinder head covers have been redesigned, drawing inspiration from the design language of BMW's legendary two-valve boxer engines. The proven six-speed gearbox and the cardan drive take care of the power transmission to the rear wheel.

New single-flow exhaust system in a classic design provides the unmistakable boxer sound.

The left-hand exhaust system with high-mounted rear silencer meets the requirements of a classic enduro.

The cover and end cap of the rear silencer are painted matt black, while the silencer body is made of blasted stainless steel, emphasizing the vehicle's sleek, dynamic lines. On the new

BMW R 12 G/S, the exhaust manifold with front silencer is electropolished as standard and is also available in a chrome-plated version as an optional extra. The Original BMW Motorrad accessories for the R 12 G/S offer customization options in the area of the exhaust system with the titanium rear silencer to match the character of the new R 12 G/S to personal preferences.

Standard riding modes "Rain", "Road" and "Enduro" as well as additional riding mode "Enduro Pro" as part of the Enduro Package Pro. Dynamic Traction Control (DTC) and engine drag torque control (MSR) as standard.

The new BMW R 12 G/S already features the "Rain", "Road" and "Enduro" riding modes as standard. It also comes with Dynamic Traction Control (DTC) as standard, which ensures a high level of riding safety when accelerating. For off-road use, DTC can be switched off completely on the new BMW R 12 G/S. In addition, the 12 G/S is equipped with engine drag torque control (MSR) as standard.

While DTC offers increased riding safety when accelerating and especially on slippery road surfaces, the engine drag control prevents the rear wheel from slipping as a result of abruptly releasing the throttle or downshifting - even when braking. However, if the tire's available grip capacity is below this opening threshold, for example in wet conditions, the rear wheel could still exceed the static friction limit due to the engine drag torque and simultaneous activation of the rear wheel brake and then slip. Thanks to engine drag torque control, the R 12 G/S can detect this danger at an early stage. Depending on the coefficient of friction between the tire and the road surface, the throttle valves are opened in milliseconds in such a way that the drag torque is compensated, and the rear wheel remains in the static friction range. This results in further enhanced safety, especially on slippery roads.

The "Rain" mode is designed for use on wet roads. Throttle response is softer, and all control systems are designed to maximise stability and control.

In "Road" mode, which is designed for dry roads, the throttle response is more direct. Traction control is mid-range, and the control systems are used for maximum stability.

The "Enduro" mode is designed for off-road use with road-legal enduro tires. The throttle response is smooth, and the front wheel lift detection, engine drag torque control, and dynamic traction control are only minimally active. The part-integral ABS control at the rear wheel operates in the mid-range and is adapted to off-road use.

The "Enduro Pro" mode as part of the Enduro Pro package has the same direct throttle response as the "Road" mode. Traction control and front wheel ABS only provide minimal stabilisation. Otherwise, all control systems (e.g. rear wheel ABS) are inactive in order to provide an optimum off-road experience.

Optional factory-installed Shift Assistant Pro enables clutchless shifting up and down, provided more dynamic response, comfort, and acceleration with minimal interruption of pulling power.

The Shift Assistant Pro, available as optional equipment ex works for the new BMW R 12 G/S, allows for clutchless shifting in almost all load and speed ranges. Compared to manual shifting, it maximises comfort and dynamics.

In addition, the typical lateral forces exerted on the rear wheel by the boxer engine when shifting gears and using the clutch are significantly reduced. Gear changes are smooth and fast, while the vehicle remains stable and precisely maintains its line.

The shift linkage is not visible from the outside for a clean and uncluttered design. Instead, it is located behind the swinging arm.

4. Chassis/suspension.



"By adjusting the steering head position of the frame, incorporating a large 21-inch front wheel, and long suspension travel, we succeeded in bringing the new BMW R 12 G/S, a fully off-road capable boxer enduro, to life. An 18-inch rear wheel is part of the Enduro Package Pro and ensures maximum off-road fun."

Ulf Musekamp, Vehicle Concept Manager.

One-piece tubular bridge steel spaceframe with bolted-on rear frame provides the ideal basis for roadsters, cruisers and now an enduro. Optimized steering head section for ideal off-road ergonomics and a wide steering angle.

The one-piece tubular bridge steel spaceframe of the R 12 family is at the heart of the new BMW R 12 G/S. As a result, the new frame does away with many of the bolted joints found on the first generation R nineT, which gives it an even tidier and more classic appearance. The rear frame, also made of tubular steel, is bolted to the main frame. The steering head is slightly higher and further forward on the new BMW R 12 G/S. In addition to improved ergonomics for off-road use, this change also allows a large steering angle of 42 degrees to both left and right, which is essential for off-road operation.

Large 21-inch front wheel as standard for optimum off-road performance. Optional Enduro Package Pro with 18-inch instead of 17-inch rear wheel for maximum off-road performance.

While the other models in the BMW R 12 series are designed for pure road use, the new BMW R 12 G/S with its cross-spoke wheels is a fully fledged enduro. Accordingly, it is equipped with a 21-inch wheel at the front with 90/90 R 21 tire. A 17-inch wheel with a 150/70 R 17 tire is fitted as standard at the rear. For even more off-road capability, an 18-inch rear wheel with 150/70 R 18 tires is available as part of the Enduro Package Pro. This offers even more traction, riding precision and ground clearance in tough off-road conditions.

The chassis geometry has been consistently designed for ambitious enduro use in combination with plenty of ground clearance.

The entire chassis geometry has also been redesigned with the aim of making the new BMW R 12 G/S a fully capable enduro for dedicated off-road use.

The wheelbase is 1,580 mm (Enduro Package Pro: 1,585 mm), the caster 120.8 mm (Enduro Package Pro: 121.3 mm) and the steering head angle 63.1 degrees (Enduro Package Pro: 63.2 degrees).

With 240 mm ground clearance (Enduro Package Pro: 255 mm), the new BMW R 12 G/S offers plenty of clearance between the engine/transmission and the road surface, enabling it to master even difficult off-road conditions without the risk of bottoming out.

Fully adjustable upside-down front forks and Paralever swinging arm with angled, fully adjustable rear sprint strut combine with long travel to deliver outstanding off-road performance.

In addition to a stiff and stable main frame as the basis, long travel is essential for ambitious off-road riding. On the new R 12 G/S, the front wheel is guided by fully adjustable upside-down telescopic forks with a 45 mm slider tube diameter and a generous 210 mm of travel.

As with the other models in the BMW R 12 family, the rear wheel is guided by a Paralever swinging arm. Suspension and damping are provided by an angled spring strut with travel-dependent damping and full adjustability. The fully adjustable suspension strut's travel-dependent damping has a hydraulic end stop. This prevents hard shocks when riding. A generous 200 mm of suspension travel is also available at the rear.

Powerful braking system in conjunction with BMW Motorrad ABS Pro for safe braking even when cornering.

The front wheel of the new R 12 G/S is fitted with a twin disc brake with two axially bolted, 2-piston floating calipers and a disc diameter of 310 mm to ensure excellent, stable stopping power. A single disc brake with 2-piston floating caliper and 265 mm diameter is used on the rear wheel.

The new R 12 G/S is already equipped with BMW Motorrad ABS Pro (part-integral) as standard. ABS Pro also offers more safety when braking in bends by enabling ABS-assisted braking when leaning into corners. ABS Pro prevents the wheels from locking even when the brakes are applied quickly and reduces abrupt changes in steering force and thus the bike from returning to the upright position, even during sudden braking. The benefits are increased braking and riding stability combined with the best possible deceleration even when cornering. Depending on the selected riding mode, ABS Pro and the engine drag torque control offer adapted control characteristics for optimum braking maneuvers.

Hill Start Control Pro (HSC Pro), available as optional equipment ex works, provides assistance for holding and starting on hills.

The Hill Start Control Pro, available as optional equipment ex works, makes it easier to hold and start on hills. The holding pressure in the brake system depends on the gradient, which is determined by a lean angle sensor. This information allows for improved comfort during starting in all conditions. Combined with control electronics, HSC Pro offers even greater safety and enhanced convenience.

Hill Start Control Pro also includes the function Auto HSC. The settings menu allows this additional function to be individualised in such a way that the holding brake is automatically activated on a gradient (greater than +/- 3 %) when the hand or foot brake lever has been activated, shortly after the motorcycle comes to a standstill. With the "Manual" setting, this takes place after briefly applying the hand or foot brake lever. With HSC Pro, the brake is automatically released when starting or forcefully operating the hand brake lever.

5. Electrical system and electronics.

"The round instrument, positioned centrally in the cockpit, perfectly reflects the purist enduro character of the new BMW R 12 G/S, offering a vast array of information despite its minimalist design. We've also included an optional micro TFT display to accommodate the customization concept."

Carina Höfler, Product Management BMW R 12 Series.

Classically designed, centrally positioned round instrument and 12 V socket. Digital display available as optional equipment ex works.

The new BMW R 12 G/S is equipped as standard with a centrally positioned round instrument and a 12 V socket for the on-board power supply on the right-hand side of the cockpit. The round instruments continue to support customization by communicating via a LIN-Bus and separating the control and display units.

The control lights and a digital display are integrated into the dial of the speedometer. This includes menu scrolling, gear selection and riding mode display.

With the Digital Display option, the round instruments on the new BMW R 12 are replaced by a micro TFT display with a 3.5-inch screen diagonal. The high resolution of the micro-TFT display ensures excellent readability even in difficult lighting conditions and brings the instrument display of the new R 12 G/S into the digital age. As a highlight, the menu includes the Pure Ride mode, which displays only the most necessary information (speed, riding mode, selected gear) to emphasize the purist riding experience.

Powerful LED light units as standard and adaptive "Headlight Pro" as optional equipment ex works.

The new BMW R 12 G/S comes as standard with the smallest LED round headlamp in the current BMW motorcycle range, measuring 5 ¾" in diameter and featuring the iconic X-shaped light signature. Furthermore, the turn indicator and control lights of the new R 12 G/S also use LED technology.

The adaptive "Headlight Pro" light system offers even more safety at night as optional equipment ex works. The headlamp segments are each supplemented by adaptive cornering light elements. And this, in turn, allows for better illumination of the road in bends, ensuring a safer night-time ride.

Keyless Ride for conveniently activating the locking functions by radio as standard.

The standard Keyless Ride system replaces the conventional ignition lock on the new BMW R 12 G/S. The use of a traditional key is now only necessary for the steering lock and fuel tank cap. The ignition and anti-theft alarm system are controlled by means of a transponder integrated in the vehicle key, which transmits a radio signal with a vehicle-specific frequency. The key can therefore remain in the rider's jacket, for example. Readiness to ride is established by pressing the ON button on the right handlebar switch.

Connected Ride Control as optional equipment ex works.

With the Connected Ride Control option, the new BMW R 12 G/S, like the other R 12 models, is equipped with a Bluetooth interface for pairing with a smartphone and connecting to the BMW Motorrad Connected app. The app displays vehicle data, riding dynamics, local weather information and map navigation in the app. The familiar BMW Motorrad Multi-Controller on the left handlebar can be used to conveniently control the app without removing hands from the handlebars. The MotoMount by SP Connect and the Universal Phone Clamp ensure quick, secure, and vibration-isolated mounting of the smartphone on the handlebars.

Tire pressure monitoring with deactivatable warning function for low air pressures in Enduro mode as an optional extra ex works.

Available as an option, the tire pressure control system (RDC) measures the air pressure in the front and rear wheels via a sensor on the inside of the rim and displays it on the screen. An angled valve makes it easier to top up the air. In addition, the warning messages can be deactivated in all riding modes, allowing riders to ride with low pressure without a constant warning message, especially in Enduro mode.

Intelligent Emergency Call as an ex works option for further increased safety.

Ensuring the fastest possible assistance in the event of an accident or in situations of emergency and danger can save people's lives. For this reason, BMW Motorrad has developed an eCall system – "Intelligent Emergency Call" - which aims to get help to the scene of the incident as quickly as possible. This system is available as an ex works option for BMW the R 12 G/S.

6. Equipment program.



Special equipment and Original BMW Motorrad accessories for the new BMW R 12 G/S.

The new BMW R 12 G/S can be customized further thanks to a wide range of optional equipment and accessories. Optional equipment items are supplied ex works and are integrated in the production process. Optional BMW accessories are installed by the BMW Motorrad dealer or by customers themselves. These items can also be retrofitted.

Optional equipment packages.

- **Comfort package:** Hill Start Control, Shift Assistant Pro, heated grips, cruise control.
- **Enduro Package Pro:** 18" rear wheel, off-road tires, Enduro footrest system, large engine guard, hand protectors, handlebar riser +20 mm, long side stand.

BMW R 12 optional equipment.

- Headlight Pro with adaptive light.
- Chrome-plated manifold.
- Engine guard.
- Tire pressure monitoring.
- Anti-theft alarm.
- Intelligent Emergency Call.
- Connected Ride Control.
- Digital display.
- M lightweight battery (lithium-ion battery, approx. 2 kg lighter than the standard battery).
- Pillion Package: Pillion footrests, pillion seat, pillion strap.
- Rallye seat (+20 mm seat height, incl. pillion footrests and pillion straps).

- Cross-spoke wheels II (with gold finish in 21" / 17").
- Cold country version (14 Ah battery for better starting behavior in cold climates).

Original BMW Motorrad Accessories.

Design.

- Cockpit fairing Rallye black matt (without tape).
- Cockpit fairing Rallye Light white uni (with tape).
- Rallye Sandover cockpit fairing (with tape).
- Titanium rear silencer.
- Option 719 hand lever Shadow II black.
- Option 719 footrest system Shadow.
- Option 719 pillion pillion footrest Shadow.
- Option 719 cylinder head cover Classic silver.
- Option 719 cylinder head cover Shadow black.
- Aluminum cross-spoke rim Gold 2.15x21" & 4.00x17".

Ergonomics and comfort.

- Rallye seat.
- Handlebar riser 20 mm natural aluminum.
- Handlebar riser 20 mm aluminum black.
- Enduro foot brake lever.
- Enduro footrests.
- Heated grips
- Shift assistant.
- Cruise control.

Navigation and communication.

- Navigation preparation.
- ConnectedRide Smartphone Cradle.
- ConnectedRide Navigator.
- ConnectedRide Navigator protective glass.

Safety.

- Silver engine guard.
- LED additional headlight incl. holder.
- Cylinder head cover protection.
- Hand protectors black.
- Hand protectors white.
- Large engine guard.
- Small engine guard.
- Anti-theft alarm.
- Tire pressure monitoring.

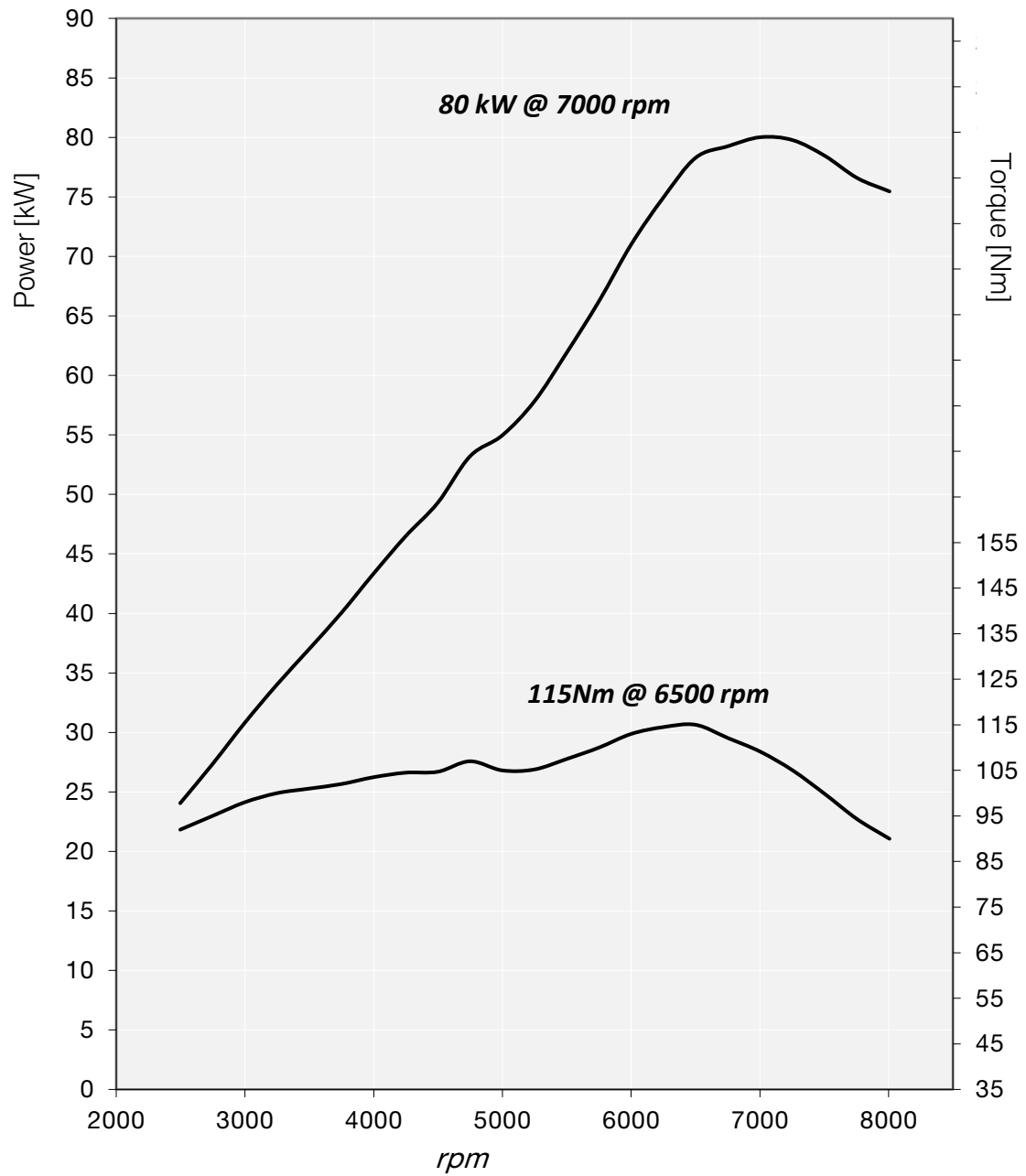
Storage.

- Holder left side bag.
- Holder right side bag.
- Tank bag connection.
- Side bag Soulfuel Collection Black waterproof 10 l + 16 l.
- Tank bag Soulfuel Collection 5 l black small.
- Backpack SoulFuel black 20 l.
- Side bag Black Collection black 10 l+ 16 l.
- Tankbag Black Collection 5 l black small.
- Side bag Urban Collection white waterproof 10 l+ 16 l.
- Tank bag Urban Collection 5 l white small.
- Side bag Urban Collection white 20 l.
- Adventure Collection side bag olive watertight 10 l+ 16 l.
- Tank bag Adventure Collection 5 l olive small.
- Backpack Adventure Collection olive 20 l.

Maintenance and technology.

- Micro TFT instrument cluster.
- M Lightweight battery (lithium-ion battery, approx. 2 kg lighter than the standard battery).
- Retrofit set - Ride Modes Pro.

7. Engine output and torque.



8. Technical specifications.

R 12 G/S		
Engine		
Capacity	cc	1,170
Bore/stroke	mm	101 x 73
Output	kW/hp	80/109
at engine speed	rpm	7,000
Torque	Nm	115
at engine speed	rpm	6,500
Type	Water-cooled, 2-cylinder, four-stroke boxer engine with four valves per cylinder operated by cam followers and two overhead camshafts per cylinder	
Compression		12
Fuel		Premium unleaded 95 RON
Valves per cylinder		4
Ø intake/outlet	mm	39/33
Ø throttle valve	mm	50
Engine control		BMS-O
Emission control	Closed-loop three-way catalytic converter, exhaust standard EU-5+	
Electrical system		
Generator	W	660
Battery	V/Ah	12/12 maintenance-free
Headlight		LED
Rear light		LED
Turn indicators		LED
Starter	W	1200
Power transmission		
Clutch		Dry clutch, hydraulically operated
Transmission		Claw-shift 6-speed gearbox
Primary ratio		1.737
Transmission ratios		2.375
	I	
	II	1.696
	III	1.296
	IV	1.065
	V	0.939
	VI	0.848
Secondary drive		Universal shaft
Secondary ratio		2.91

Chassis

Frame construction type		Tubular space frame in steel, engine self-supporting
Front wheel suspension		JSD telescopic forks, spring base, rebound and compression damping adjustable Ø 45 mm
Rear wheel suspension		Aluminum Paralever swinging arm, directly linked WAD spring strut, spring base, rebound and compression damping adjustable
Spring travel, front/rear	mm	210/200
Wheel castor	mm	120.8 / 121.3 (Enduro Package Pro)
Wheelbase	mm	1,580 / 1,585 (Enduro Package Pro)
Steering head angle	°	63.1 / 63.2 (Enduro Package Pro)
Brakes	front	Twin disc brake with two axially bolted 2-piston floating calipers, Ø 310 mm.
	rear	Single disc brake, Ø 265 mm, 2-piston floating caliper
ABS		Standard equipment BMW Motorrad ABS Pro (lean angle optimised)
Wheels		Aluminum cross-spoke wheels
	front	2.15 x 21"
	rear	4.00 x 17" / 4.00 x 18" (Enduro Package Pro)
Tires	front	90/90-21
	rear	150/70 R 17 / 150/70 R 18 (Enduro Package Pro)

Dimensions and weights

Total length	mm	2,200
Overall width incl. hand levers	mm	830
Seat height	mm	860 / 875 (Enduro Package Pro)
DIN unladen weight, road ready	kg	229
Permitted total weight	kg	430
Fuel tank capacity	l	15.5

Performance figures

Fuel consumption (WMTC)	l/100 km	5.1
CO2	g/km	119
Acceleration	0-100 km/h	s
Top speed	km/h	>200