The new BMW R 1300 RS.

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1. Overall concept. Short version.

P90596235 The background of the motif was edited using AI.

"With the new BMW R 1300 RS, we've taken our sports touring bike with boxer engine to a whole new level. The motorcycle has been consistently designed with dynamic riding in mind. Thanks to an all-new engine, chassis and aerodynamic concept, it offers an even sportier riding experience than its predecessor. At the same time, it remains the perfect companion for comfortable touring and long-distance travel."
Hauke Glässing, Project Manager BMW R 1300 RS

The new BMW R 1300 RS: The new sports tourer with boxer engine, featuring refined technology and styling, along with a dynamic design that signals sporty flair. Four attractive model variants.
The goal behind developing the new BMW R 1300 RS was to achieve both a visual and technical enhancement of the sports touring bike with boxer engine. Alongside its much sportier design, equipment features such as the Performance variant – including a sport suspension, short hand levers, milled and adjustable footrests, DTC-Shift, two additional sport screens, sport seat, engine spoiler and sport tyres – allow customers to dial up the bike's dynamic potential even further. At the same time, the BMW R 1300 RS remains a capable companion for everyday use and touring, and with options such as seat heating, Riding Assistant, a higher windscreen, and a variety of luggage choices, the bike can be perfectly tailored to individual needs of this type.

In addition to the basic version in Racing Blue metallic, the BMW R 1300 RS is also available as the Triple Black model variant in Blackstorm metallic, the sport-focused Performance variant in Lightwhite uni, and the premium Option 719 Cuyamaca variant in Brooklyn Grey metallic.

Sporty ergonomics and equipment for both dynamic riding fun on country roads as well as comfortable touring and travel.
The BMW Motorrad developers set out to make the new BMW R 1300 RS significantly more dynamic and sporty than its predecessor – a goal the new sports touring bike with boxer engine fulfils not only in terms of design, engine and chassis: equal importance was also placed on ergonomics, with a focus on creating a sportier, more active riding position.
Accordingly, the ergonomic triangle formed by handlebars, footrests and seat on the new R 1300 RS has been designed to position the rider noticeably further forward over the front wheel thanks to slightly rear-set footrests and flatter handlebars. This results in particular in improved feedback from the front end, especially during sporty riding, and therefore even greater controllability. At the same time, the sporty seating position still allows for relaxed touring and travel, even with a passenger. For a more touring-oriented riding position, the optional comfort handlebars are also available.

Various seat options and comfort handlebars allow for an optimised seating position. Featuring electrified cases and topcase, along with a clever tank bag, a new luggage system ensures a comfortable experience on extended tours and holiday trips.
Since the launch of the BMW R 100 RS in 1976, BMW RS models with boxer engines have earned a legendary reputation for perfectly combining sporty motorcycling, the thrill of cornering and comfortable touring. For this reason, the new BMW R 1300 RS not only features a new luggage system, but also offers a wide range of seat variants and optional comfort handlebars to meet the individual ergonomic needs of all riders. In addition to the standard rider's seat, five others are available as individual items of optional equipment ex works.

For touring and holiday trips, the new BMW R 1300 RS can be equipped ex works with case holders and a topcase carrier, while a newly developed case system and topcase are available as part of

the Original BMW Motorrad Accessories range. The cases offer a capacity of 26 and 29 litres respectively, while the topcase holds 39 litres. The two cases and the topcase are electrified and can be unlocked using the central locking system. Both the cases and the topcase also feature interior lighting, while the left-hand case and the topcase additionally include a USB-C charging port. The tank bag is also new. For the first time, it is completely strapless and attaches to the bike via a tank ring.

Rugged boxer engine with top figures for power and torque along with optimised running smoothness and efficiency.
The boxer engine in the new BMW R 1300 RS has a capacity of exactly 1 300 cc while the ratio between bore and stroke is 106.5 to 73 mm (predecessor: 102.5 to 76 mm). This increase in capacity derives from an enlarged cylinder bore and a new crankshaft with reduced stroke. It has an output of 107 kW (145 hp) (predecessor: 100 kW (136 hp), still at 7 750 rpm, and develops a maximum torque of 149 Nm at 6 500 rpm (predecessor: 143 Nm at 6 250 rpm), making it by far the most powerful serial production BMW boxer engine to date. Its maximum engine speed is 9 000 rpm.

Three riding modes are included as standard, allowing the bike to adapt ideally to any road conditions. Riding Modes Pro with the additional modes "Dynamic" and "Dynamic Pro", along with riding mode pre-selection as optional equipment ex works. Engine drag torque control (MSR) as standard.
In standard trim, the new R 1300 RS has three riding modes for adaptation to individual rider preferences. The "Rain" and "Road" riding modes allow riding characteristics to be adapted to most road conditions. The "Eco" riding mode also makes it possible to use the innovative BMW ShiftCam technology primarily in such a way that the maximum range can be achieved with a single tank of fuel. On request the new R 1300 RS can also be fitted with the optional equipment item "Riding Modes Pro" ex works. Among other things, this comprises the additional riding modes "Dynamic" and "Dynamic Pro". With the riding mode pre-selection the rider can use the riding mode button to make an individual selection. In this way, a preferred and easily manageable number of riding modes can be configured and selected while riding.

Engine drag torque control (MSR) is on board even in standard trim. This can be used to safely avoid unstable riding conditions that can occur during coasting or downshifting due to excessive brake slip at the rear wheel. In these cases, MSR instantly opens the throttle valves to such an extent that drag torque is equalised and the motorcycle stabilises.

Automated shift assistant (ASA) with fully automated clutch operation and manual or automated shifting for an enhanced motorcycling experience as optional equipment.
With the automated shift assistant (ASA), BMW Motorrad offers an innovative technical solution to make motorcycling easier and more comfortable. True to the motto "Simplify your Ride", automated clutch operation and gear changes puts the riding experience even more front and centre – without sacrificing the dynamic of the shifting process.

Completely newly developed chassis with sheet metal main frame made of steel and aluminium rear frame.
The chassis of the new BMW R 1300 RS has been completely redesigned. The centrepiece is the new sheet metal main frame made of steel, which in addition to a significant optimisation of the installation space for even more compact packaging also offers higher levels of stiffness than the predecessor model. In the course of the redesign, the rear frame was also completely reconceived. In place of the previous tubular steel construction, the new R 1300 RS now has a rear frame made of die-cast aluminium.

In combination with a drive unit that is now much more compact, the new design of the chassis achieved a significant concentration of mass towards the overall centre of gravity, which is reflected in noticeable handling benefits. At the same time, the new R 1300 RS is even more precise and stable when braking, requires noticeably less effort to ride, and offers an even more satisfyingly precise response of the suspension elements.

New upside-down telescopic fork and new EVO Paralever rear suspension for even greater precision. New wheels more than 1.4 kg lighter.
In the new BMW R 1300 RS, front wheel guide is handled by a new upside-down telescopic fork with an inner tube diameter of 47 mm. The rear wheel guide of the new R 1300 RS has also been

redesigned. The hallmark of the Evo Paralever is a significantly stiffer connection via the suspension in the frame and a continuous swinging arm quick-release axle.

The new R 1300 RS also features new 17-inch aluminium cast wheels with hollow-spoke design. All in all they weigh in at more than 1.4 kg less than the existing wheels. The reduced rotational masses result in both improved acceleration and brake response as well as optimised handling qualities.

New electronic Dynamic Suspension Adjustment (DSA), with dynamic adjustment of the damping, spring rate and load compensation as optional equipment. The world's first series production motorcycle telescopic fork with adjustable spring rate.

With its dynamic adjustment of the damping and adjustable spring rest at the rear, the standard electronic Dynamic ESA itself offers a high level of ride safety and riding fun on a wide variety of terrains.

The electronic Dynamic Suspension Adjustment (DSA) now goes one step further, combining the dynamic adjustment of the front and rear damping with a corresponding adjustment of the spring rate ("spring stiffness") – depending on the selected riding mode, riding condition and manoeuvres. After the new R 1300 R presented a few weeks ago, this makes the new BMW R 1300 RS the second series production motorcycle with an upside-down telescopic fork that allows adjustment of the spring rate. Automatic load compensation is provided by the adjustable spring rest. With DSA, the rider benefits from even more refined handling and increased banking freedom in "Dynamic" mode.

A high-performance braking system in conjunction with Integral ABS Pro comes as standard. Sport brake as optional equipment ex works.

The new R 1300 RS comes as standard with a twin disc brake featuring two radially mounted four-piston fixed callipers at the front and a single disc brake with two-piston floating calliper at the rear in conjunction with BMW Motorrad Integral ABS Pro. The new BMW R 1300 RS can be fitted with the sport brake system as optional equipment ex works. In addition to a sportier look with titanium-coloured brake callipers, it offers a slight increase in braking performance.

Standard full LED headlight with separate high beam and state-of-the-art LED light units all round. For the first time on a BMW RS, Headlight Pro with adaptive turning light is available as optional equipment ex works.
BMW Motorrad is regarded as the pioneer par excellence when it comes to motorcycling safety and related innovations. Accordingly, the new R 1300 RS comes as standard with a newly designed twin-chamber LED headlight in a very slim, sporty design featuring a distinctive light icon. The lighting unit comprises two LED elements for the low beam and two additional, separately positioned LED elements for the high beam. Two more LED units are provided for the daytime running light and side light. State-of-the-art LED light units with newly designed LED rear light round off the lighting concept of the new R 1300 RS.

With the optional Adaptive Turning Light, the dipped beam of the standard full LED headlight is optimised for cornering, depending on the banking position, by activating additional LED elements. In this way, the bend is almost fully illuminated because the light moves to where the motorcycle is heading. By optimising the light pattern, the dipped beam light ensures an even wider and more homogeneous illumination of the road.

Riding Assistant with Active Cruise Control (ACC), Front Collision Warning (FCW), Lane Change Warning (SWW) and Rear End Collision Warning (RECW) for more convenient and safer motorcycling as optional equipment ex works.
The new R 1300 RS comes as standard with Dynamic Cruise Control (DCC) with braking function, while the Riding Assistant as optional equipment ex works offers a significantly wider range of functions, including Active Cruise Control (ACC), Front Collision Warning (FCW), Lane Change Warning (SWW), and the new Rear End Collision Warning (RECW).

For the first time, navigation preparation now features electric locking for maximum operating comfort as optional equipment ex works.
This item of ex works optional equipment allows quick and secure attachment and operation of a navigation device or smartphone using a mount cradle. For the first time, this mount no longer requires a key – it unlocks electrically for maximum convenience.

Optional equipment and Original BMW Motorrad Accessories for the new BMW R 1300 RS.
An extensive program of optional equipment and optional accessories is available for further customisation of the new BMW R 1300 RS.

The highlights of the new BMW R 1300 RS:

- Dynamic, sporty design.
- Sporty ergonomics and equipment for both dynamic cornering fun and comfortable touring and travel.
- Four model variants: Basic version, Triple Black, Performance and Option 719 Cuyamaca.
- 2-cylinder boxer engine with 107 kW (145 hp) at 7 750 rpm and 149 Nm at 6 500 pm.
- A range of seat variants ensures an optimum seat height, while a newly developed luggage system with electrified cases, topcase and a clever tank bag makes the bike ideal for comfortable touring and holiday trips.
- Three riding modes are included as standard, allowing the bike to adapt ideally to any road conditions.
- Riding Modes Pro with the additional modes “Dynamic” and “Dynamic Pro”, along with riding mode pre-selection as optional equipment ex works.
- Engine drag torque control (MSR) as standard.
- Automated shift assistant (ASA) with fully automated clutch operation and manual or automated shifting for an enhanced motorcycling experience as optional equipment.
- Completely newly developed chassis with sheet metal main frame made of steel and aluminium rear frame.
- New upside-down telescopic fork and revised EVO Paralever rear suspension for even greater handling precision.
- New electronic Dynamic Suspension Adjustment (DSA) as optional equipment ex works, with dynamic adjustment of the damping and spring rate, and also load compensation. The world’s first series production motorcycle telescopic fork with adjustable spring rate.

- New wheels more than 1.4 kg lighter.
- High-performance brake system in conjunction with BMW Motorrad ABS Pro for safe braking, even in banking position.
- Standard full LED headlight in sporty, slim design and state-of-the-art LED lighting throughout. Headlight Pro with adaptive turning light as optional equipment ex works.
- Riding Assistant with Active Cruise Control (ACC), Front Collision Warning (FCW), Rear End Collision Warning (RECW) and Lane Change Warning (SWW) for convenient and safe motorcycling as optional equipment.
- For the first time, navigation preparation now features electric locking for maximum operating comfort as optional equipment ex works.
- Extensive range of optional equipment and Original BMW Motorrad Accessories.

2. Design and ergonomics.

"The new BMW R 1300 RS has been given a far sportier character than its predecessor. This is evident not only in its increased engine performance and chassis capability, it is also instantly visible in the bike's sporty design with fairing that extends a long way downwards. Accordingly, the ergonomics are now also noticeably sportier and more front-wheel-oriented – without compromising the typical BMW RS qualities of comfort for touring and long-distance travel."
Christian Hahn-Wörnle, Designer R 1300 RS

The new BMW R 1300 RS: Technically and visually much sportier, with dynamic styling and a wide range that spans from a no-frills sports machine to a comfortable touring and travel motorcycle.
The goal in developing the new BMW R 1300 RS was to give the sports touring concept a significantly sportier and more dynamic feel – both technically and visually – in combination with the boxer engine.

The tank's dynamic flyline flows seamlessly into the sharply contoured front fairing with its distinctive headlights. The full fairing is visually broken up by functional technical cut-outs and recesses which strikingly showcase the aerodynamics of the new R 1300 RS. The model's even sportier character is further emphasised by the split-face design of the front section.

Despite the headlight's added functionality with turning light, it appears noticeably smaller than its predecessor – giving it a more compact, sporty look. Visually, the daytime running lights form the bike's striking face. The low beam and turning lights are integrated in the daytime running lights, while the high beam – barely visible – is positioned beneath the front fairing.

The aluminium die-cast rear frame complements the sporty character of the new R 1300 RS while retaining traditional RS touring capabilities, including comfortable luggage options. Thanks to its modular construction, the rear frame allows the bike to span the full range from stripped-back sports machine to comfortable

touring motorcycle – with separate case holders and a variety of rear-end configurations, depending on individual preference and intended use, without compromising function or weight.

The aerodynamics also meet the demands of a true sports touring bike: during development, special emphasis was placed on the interplay between increased sportiness and the high level of wind and weather protection that is typical of RS models – all tested and refined in the wind tunnel. The optimised aerodynamics also enhance performance, resulting in a significantly increased top speed of 246 km/h. This makes the R 1300 RS the fastest and all in all the sportiest model in the current boxer engine line-up.

Finally, the sporty, dynamic appearance of the new R 1300 RS is rounded off by numerous carefully crafted details, such as the two-part front mudguard and the concealed centre cover.

Alongside its more aggressive, sportier design, equipment features such as the Performance variant – including a sport suspension, short hand levers, milled and adjustable footrests, DTC-Shift, two additional sport screens, sport seat, engine spoiler and sport tyres – allow customers to dial up the bike's dynamic potential even further. At the same time, the BMW R 1300 RS remains a capable companion for everyday use and touring, and with options such as seat heating, Riding Assistant, a higher windscreen, and a variety of luggage choices, the bike can be perfectly tailored to individual needs of this type.

The model variants of the new BMW R 1300 RS.

Basic version.
• Racing Blue colour.
• Seat insert, unpainted.
• Passenger seat with embossed graphic.
• Upside-down fork, black.
• Stainless steel exhaust system.

Triple Black variant.
• Blackstorm metallic colour.
• Seat insert, painted.
• Passenger seat with embossed graphic.
• Engine spoiler.
• Design option rear silencer, dark chrome-plated.

• Manifold, dark chrome-plated.

Performance variant.
• Lightwhite uni colour.
• Upside-down telescopic fork, gold.
• Red spring in the suspension strut.
• Dynamic Package.
• Seat insert, painted.
• DTC-Shift + Sport-Screen 2 & 3.
• Milled and short sport handlebars.
• Milled and adjustable footrests.
• Central fuel tank cover with colour applications.
• Windshield, tinted.
• Sport passenger seat with colour accent and embroidery.
• Sport seat, high.
• Sport seat (as optional equipment).
• Rider's seat, low (as optional equipment).
• Sport suspension.
• Engine spoiler.
• Sport tyres.
• Design option wheels.
• Design option rear silencer (dark chrome-plated).
• Sport silencer (as optional equipment).
• Manifold, dark chrome-plated.
• Manifold, chrome-plated (as optional equipment).

Option 719 Cuyamaca variant.
• Brooklyn Grey metallic colour.
• Upside-down telescopic fork, black.
• Seat insert, painted.
• Passenger seat with embossed graphic.
• Option 719 badge.
• Option 719 Milled Parts Package Shadow.
• Option 719 Wheel Sport.
• Design option rear silencer (dark chrome-plated).
• Sport silencer (as optional equipment).
• Manifold, dark chrome-plated.
• Manifold, chrome-plated (as optional equipment).

Perfect sporty ergonomics and equipment for dynamic sports touring – from riding fun on twisting country roads to comfortable touring enjoyment for two with luggage.
The BMW Motorrad developers set out to make the new BMW R 1300 RS significantly more dynamic and sporty than its predecessor – a goal the new sports touring bike with boxer engine fulfils not only in terms of design, engine and chassis: equal importance was also placed on ergonomics in particular, with a focus on creating a sportier, more active riding position.

Accordingly, the ergonomic triangle formed by handlebars, footrests and seat on the new R 1300 RS has been designed to position the rider noticeably further forward over the front wheel thanks to slightly rear-set footrests and flatter handlebars. This results in particular in improved feedback from the front end, especially during sporty riding, and therefore even greater controllability. At the same time, the sporty seating position still allows for relaxed touring and travel, even with a passenger.

The stub handlebars are also around 35 mm wider than on the previous model. The optional comfort handlebars are positioned closer to the rider and set higher, resulting in a more relaxed riding position.

Further individual ergonomic adjustments are possible thanks to the footrest system with four-way adjustment, available on the Performance variant and as part of the range of Original BMW Motorrad Accessories.

A range of seat variants ensures an optimum seat height, while a newly developed luggage system with electrified cases, topcase and a clever tank bag makes the bike ideal for comfortable touring and holiday trips.
As always, the BMW Motorrad developers placed particular emphasis on optimum accessibility and a low seat height. For this reason, the development of the new R 1300 RS likewise placed particular focus on achieving a seat height of 790 mm. In addition to the standard seat, the following are available as single optional extras ex works.

- Sport seat (with seat heating, single optional equipment item with Performance only).
- Sport seat, high (with seat heating, Performance standard trim only).
- Sport passenger seat (no seat heating, Performance standard trim only).
- Rider's seat, high (with seat heating).
- Rider's seat, low (with seat heating).
- Rider's seat, Comfort (with seat heating).
- Comfort passenger's seat (with seat heating).

For touring and holiday rides, the new BMW R 1300 RS can be fitted with a newly developed case system from the BMW Motorrad Original Accessories range, or with preparation for the luggage system fitted as optional equipment ex works. The cases have a capacity of 26 and 29 litres respectively. Both are electrified and can be unlocked using the central locking system. They also both feature interior lighting, and the left-hand case includes a USB-C charging port. Additional storage is provided by the new optional topcase: this is also electrified, offers a capacity of 39 litres and includes a USB-C port.

Another accessory highlight in the new R 1300 RS is the new tank bag. For the first time, it is designed entirely without straps and is mounted on the motorcycle using a tank ring. A magnetic guide built into the tank ring makes fitting the tank bag especially easy.

The storage capacity can be expanded from 5 to 8 litres by means of a zip. In addition, the tank bag features a rigid top and base and is UV-resistant. The rain cover that is included protects both the bag and its contents from moisture.

3. Drive.

"With significantly increased power and torque compared to its predecessor, the boxer engine in the new BMW R 1300 RS is the ideal drive for an even more dynamic sports touring experience – whether on country roads or on extended trips, even with a passenger and plenty of luggage."
Achim Baier, Vehicle Concept Manager BMW R 1300 RS

Rugged boxer engine with top figures for power and torque along with optimised running smoothness and efficiency.
The boxer engine in the new BMW R 1300 RS has a capacity of exactly 1 300 cc while the ratio between bore and stroke is 106.5 to 73 mm (predecessor: 102.5 to 76 mm). This increase in capacity derives from an enlarged cylinder bore and a new crankshaft with reduced stroke. It has an output of 107 kW (145 hp) (predecessor: 100 kW (136 hp), still at 7 750 rpm, and develops a maximum torque of 149 Nm at 6 500 rpm (predecessor: 143 Nm at 6 250 rpm), making it by far the most powerful serial production BMW boxer engine to date.
Its maximum engine speed is 9 000 rpm.

In addition to the significantly increased maximum output compared to the predecessor model, the new BMW R 1300 RS benefits in particular from an even more commanding torque, which makes the new R 1300 RS more potent and dynamic than ever before, combining enormous pulling power with impressive peak output. And this applies to riding fun both solo and with a passenger, whether on sporty rides on long winding country roads or for extended tours and trips.

It was also possible to optimise efficiency. Despite offering significantly more power and torque, the new BMW R 1300 RS consumes no more fuel than its predecessor. The boxer engine sets standards in terms of running smoothness, too, offering an even more direct response to throttle commands thanks to reduced load reversal cycles in the powertrain. Ideal alignment of the engine-frame combination also ensures an exemplary vibration response.

The boxer engine in the new R 1300 RS still uses the well-established air/liquid cooling system where coolant flows through the engine elements that are subject to particular thermal stress, such as the cylinder heads and parts of the cylinders. Other features that are retained include the vertical-flow cylinder heads, variable oil intake, effective piston base cooling and the DOHC valve gear with light cam followers. In the new boxer engine, the two camshafts are powered on each side of the cylinder by a timing chain running over both camshafts, each from a reduction sprocket. On the right-hand side the drive is located in front of the cylinder, while on the left-hand side the timing chain duct is arranged behind the cylinder. Furthermore, the engine of the new BMW R 1300 RS features the tried-and tested knock sensor system to ensure maximum touring suitability and the BMS-O engine management system for highly effective carburation.

With a significantly increased output and torque, the boxer engine compresses the fuel-air mixture in a ratio of 13.3:1 (predecessor: 12.5:1). The gain in power and torque with high efficiency is due to recalculated timing and larger valve diameters: these now measure 44 mm instead of 40 mm on the inlet side and 35.6 mm instead of 34 mm on the outlet side.

Gearbox located below the engine for even more compact packaging with reduced weight. New propeller shaft drive and rear axle transmission.

The 6-speed gearbox and clutch are integrated in the engine housing in the new BMW R 1300 RS, too. However, the gearbox is no longer located behind the engine, but underneath it. The particular advantages of this new arrangement lie in a reduced overall length and in improved packaging and weight balance, since it was possible to make the transmission shafts significantly shorter. Compared to the power unit of the predecessor models, it was possible to achieve a weight saving of no less than 3.9 kg on the basic engine and 6.5 kg on the powertrain as a whole. At the same time, an even greater concentration of mass towards the overall centre of gravity ensures even better handling qualities. As before, power is transmitted to the 6-speed gearbox via a wet clutch with ten lining discs and a self-reinforcing anti-hopping mechanism.

Output is via two spur gears, one of which has an integrated judder damper.

In the interests of increased shifting precision, the gearbox now has a sensor signal transmitter based on a new concept involving a torsion magnet. In combination with Shift Assistant Pro, this results in a much more direct feel when changing gear.

The propeller shaft now has larger universal joints, while a reduced deflection angle also reduces the non-uniformity of the rotational transmission that is inherent in propeller shaft joints. The rear axle transmission has a longer wheel axle stub for even easier mounting and dismounting of the rear wheel.

BMW ShiftCam technology for superior performance and running smoothness as well as excellent fuel consumption and emission levels.
The boxer engine of the new BMW R 1300 RS is also equipped with the unique BMW ShiftCam technology for varying the valve timing and valve stroke on the intake side. At the heart of this technology is a single-section intake shift camshaft which has a partial-load and a full-load cam for each valve to be actuated, each with a different cam geometry. While the partial-load cam has been configured to ensure optimised fuel consumption and refinement, the full-load cam is designed for optimised output.

The intake cams for the left and right-hand intake valves differ in stroke and angular position. This phase shift means that the two intake valves are opened to different degrees and on a time-staggered basis. The effect of this is to create a swirl and therefore greater agitation of the fuel-air mixture flowing into the combustion chamber. As a result, the new BMW R 1300 RS benefits from even more effective combustion and fuel utilisation.

Lightweight stainless steel exhaust system for optimum performance characteristics and low weight.
The exhaust system of the new R 1300 RS, made entirely of stainless steel, works according to the 2-in-1 principle: it is designed for optimum output and torque in conjunction with BMW ShiftCam technology and for very low weight. It enables a very

homogeneous output and torque curve, thereby ensuring the best possible ridability and performance – whether on country roads or on extended tours. Exhaust gas purification is taken care of by a closed-loop catalytic converter controlled by an oxygen sensor. In this way, the new R 1300 RS complies not just with current exhaust standards, it is excellently equipped to meet future requirements, too.

Three riding modes are included as standard, allowing the bike to adapt ideally to any road conditions.
In standard trim, the new R 1300 RS has three riding modes for adaptation to individual rider preferences. The "Rain" and "Road" riding modes allow riding characteristics to be adapted to most road conditions. The "Eco" riding mode also makes it possible to use the innovative BMW ShiftCam technology primarily in such a way that the maximum range can be achieved with a single tank of fuel. In this riding mode, a gentle throttle curve and moderate torque limitation promote a riding style that is as economical as possible. In order to provide visual support for a riding style geared towards optimised fuel consumption, an efficiency indicator in the upper status line of the TFT colour screen provides feedback when "Eco" mode is activated. If maximum performance is required – e.g. on gradients or when overtaking – it is simple to quickly switch to another riding mode using the riding mode button.

Riding Modes Pro with the additional modes "Dynamic" and "Dynamic Pro", along with riding mode pre-selection as optional equipment ex works. Engine drag torque control (MSR) as standard.
On request the new R 1300 RS can also be fitted with the optional equipment item "Riding Modes Pro" ex works: among other things, this comprises the additional riding modes "Dynamic" and "Dynamic Pro". In addition, the riding mode Dynamic Pro allows adaptation to individual needs.

With the riding mode pre-selection the rider can use the riding mode button to make an individual selection. For this purpose, at least two and a maximum of four riding modes can be chosen from a list in the settings menu, and these can be selected successively using the riding mode button. This offers a wide range of options

for configuring the new R 1300 RS to suit the rider's personal needs. In this way, a preferred and easily manageable number of riding modes can be configured and selected while riding.

Engine drag torque control (MSR) is on board even in standard trim. This can be used to safely avoid unstable riding conditions that can occur during coasting or downshifting due to excessive brake slip at the rear wheel. In these cases, MSR instantly opens the throttle valves to such an extent that drag torque is equalised and the motorcycle stabilises.

The control response depends on the riding mode. In "Eco", "Rain" and "Road" riding modes, MSR ensures maximum ride stability, whereas in "Dynamic" and "Dynamic Pro" riding mode the control system allows a more slip.

Dynamic Traction Control DTC as standard. DTC-Shift function in the R 1300 RS Performance.
As standard, Dynamic Traction Control DTC uses fixed base settings to control rear wheel slip in the "Rain", "Road" and "Eco" riding modes. In "Dynamic Pro" mode – included in the new R 1300 RS Performance – fine adjustment via DTC-Shift (+/– shift) is also available. To put it simply, this function allows the length of the black line to be adjusted when accelerating out of a bend.

Automated shift assistant (ASA) with fully automated clutch operation and manual or automated shifting for an enhanced motorcycling experience as optional equipment ex works.
With the automated shift assistant (ASA), BMW Motorrad offers an innovative technical solution to make motorcycling easier and more comfortable. True to the motto "Simplify your Ride", automated clutch operation and gear changes puts the riding experience even more front and centre – without sacrificing the emotionally important dynamic of the shifting process.

ASA features a clever functional design in which two electromechanical actuators automate clutching and shifting in the conventional 6-speed gearbox – the key difference from a conventional shift assistant. As a result, there is no need for a clutch lever for manual operation. Starting, stopping and manoeuvring are effortless.

What is more, ASA enhances the actual riding experience with quick gear-shifting processes which are appropriate to the load and engine speed, and the resulting precise gear changes. The rider workload is thus reduced, resulting in even greater riding enjoyment. ASA also creates a more direct connection to the powerful boxer engine, as the precise clutch actuation makes it easier to control the ride via throttle grip and gear lever.

In shift mode “M”, gears can still be changed manually using the foot lever, allowing the rider to choose the exact shift point. ASA really comes into its own in shift mode “D”: here, perfectly timed gear changes with smooth torque interruption deliver efficient acceleration and greater ride stability. When shifting up, for instance, the usual jolt of a manual gearbox is largely eliminated, reducing the risk of helmet contact between rider and passenger.

Downshifts are also carried out with maximum smoothness, minimising any disruption to the chassis. In order to ensure optimal gear shifting for each driving situation, the different riding modes are assigned specific characteristics of the automated shifting function. And when used in conjunction with cruise control or Front Collision Warning, the networking of functions brings the future of motorcycling within reach.

A summary of the benefits offered by automated shift assistant (ASA):

- No need for the rider to operate the clutch.
- Dynamic and convenient gear shifts for a more engaging ride.
- Choice between manual and automated shifting.
- Automatic adaptation of shifting behaviour to rider’s style in automated mode D.
- Prevents the engine from stalling due to poor shift timing.

4. Chassis/suspension.

“The new BMW R 1300 RS is the most powerful sports touring bike with boxer engine that has ever been built. Its performance comes not only from the punchy engine but also from an extremely compact design and a clear focus on riding dynamics. The sports suspension in the R 1300 RS Performance also provides increased banking freedom and a firmer damping set-up for particularly sporty rides.
Markus Klein, Project Manager Riding Dynamics BMW R 1300 RS

Completely newly developed chassis with sheet metal main frame made of steel and aluminium rear frame.
The chassis of the new BMW R 1300 RS has been completely redesigned. The centrepiece is the new sheet metal main frame made of steel, which in addition to a significant optimisation of the installation space for even more compact packaging also offers higher levels of stiffness than the predecessor model. In the course of the redesign, the rear frame was also completely reconceived. In place of the previous tubular steel construction, the new R 1300 RS now has a rear frame made of die-cast aluminium. In addition to excellent stiffness levels and low weight, this new solution also has advantages in terms of optimised installation space as well as offering a high degree of freedom for innovative design. For example, a short, slim and dynamic rear end in the new R 1300 RS forms a significantly stiffer bond with the main frame compared to its predecessor. This results in a noticeable increase in riding precision and stability.

In combination with a drive unit that is now much more compact, the new design of the chassis achieved a significant concentration of mass towards the overall centre of gravity, which is reflected in noticeable handling benefits. At the same time, the new R 1300 RS is even more precise and stable when braking, requires noticeably less effort to ride, and offers an even more satisfyingly precise response of the suspension elements.

New upside-down telescopic fork and revised EVO Paralever rear suspension for even greater handling precision. New wheels more than 1.4 kg lighter.
In the new BMW R 1300 RS, front wheel guide is handled by a new upside-down telescopic fork with an inner tube diameter of 47 mm. The spring travel is 140 mm.

The rear wheel guide of the new R 1300 RS has also been redesigned. The hallmark of the Evo Paralever is a significantly stiffer connection via the suspension in the frame and a continuous swinging arm quick-release axle. In addition, the swinging arm bearing is now arranged off-axis to the axis of rotation of the propeller shaft joint. The spring travel is 130 mm.

The new R 1300 RS also features new 17-inch aluminium cast wheels with hollow-spoke design. All in all they weigh in at more than 1.4 kg less than the existing wheels. The reduced rotational masses result in both improved acceleration and brake response as well as optimised handling qualities. The wheel size at the front is 3.5 x 17" and 6.0 x 17" at the rear, with tyres fitted in sizes 120/70 ZR 17 at the front and 190/55 ZR 17 at the rear.

New electronic Dynamic Suspension Adjustment (DSA) as optional equipment ex works, with dynamic adjustment of the damping and spring rate, and also load compensation. The world's first series production motorcycle telescopic fork with adjustable spring rate.
The standard Dynamic ESA electronic suspension itself offers a high level of ride safety and riding fun on a wide variety of terrains with its dynamic adjustment of the damping and adjustable spring rest at the rear.

The electronic Dynamic Suspension Adjustment (DSA) now goes one step further, combining the dynamic adjustment of the front and rear damping with a corresponding adjustment of the spring rate ("spring stiffness") – depending on the selected riding mode, riding condition and manoeuvres. This makes the new BMW R 1300 RS – in addition to the recently presented R 1300 R – the first series production motorcycle with an upside-down telescopic fork that allows adjustment of the spring rate. Automatic load compensation is provided by the adjustable spring rest.

This makes for an even more thrilling riding experience on all surfaces. Whether solo, in pairs or with luggage – DSA ensures an even higher level of ride safety, performance and comfort. With DSA, the rider also benefits from even more refined handling and increased banking freedom, too. DSA also significantly simplifies usability due to even more consistent integration in different riding modes and therefore worlds of experience. Within these worlds of experience, the riding modes can be individualised by means of click-setting in the vehicle settings menu, offering a wealth of options for customising the new R 1300 RS to suit personal preferences. DSA also includes a "prop-up aid" function, making it easier to raise the bike onto the centre stand, which is available as an optional accessory and as optional equipment.

Sports suspension exclusive to the R 1300 RS Performance.
The sports suspension fitted exclusively in the new R 1300 RS Performance gives the new sports touring bike an even more pronounced sporting edge. To this end, the DSA suspension was further developed with a longer upside-down fork at the front and a longer spring strut. This allows for even greater ground and banking freedom. In addition, firmer damping in both damping modes provides even greater stability in the chassis and gives the rider more precise feedback. The sport suspension increases ground clearance, thereby raising seat height by around 10 mm.

High-performance braking system with Integral ABS Pro as standard. Sport brake as optional equipment ex works.
The new R 1300 RS comes as standard with a twin disc brake featuring two radially mounted four-piston fixed callipers at the front and a single disc brake with two-piston floating calliper at the rear in conjunction with BMW Motorrad Integral ABS Pro. Here, the handbrake lever activates the front and rear brakes simultaneously. Integral ABS Pro is optimised for the respective purpose by means of an additional set-up that depends on the riding mode. In the Integral ABS Pro settings it is possible to lock the rear wheel via the foot brake lever.

As a back-up system to Integral ABS Pro, Dynamic Brake Control (DBC) offers increased safety when braking – also in difficult situations – by preventing unintentional throttle application. By means of intervention in the engine control, the drive torque is reduced during braking, making full use of the braking power at the rear wheel. This keeps the motorcycle stable and shortens the

braking distance. Thanks to the standard dynamic brake light, traffic to the rear is alerted to even more effectively to the fact that the motorcycle is being braked.

The new BMW R 1300 RS can be fitted with the sport brake system as optional equipment ex works. In addition to a sportier look with titanium-coloured brake callipers, it offers a slight increase in braking performance.

5. Electrical system and electronics.

"The new full LED headlight in a very slim, sporty design gives the new BMW R 1300 RS a distinctive front profile and highlights its more distinct sporty character. With the Riding Assistant featuring Active Cruise Control (ACC), Front Collision Warning (FCW), Lane Change Warning (SWW) and Rear End Collision Warning (RECW), major new features are also available as optional equipment ex works for added safety and comfort."
Matthias Hillebrand, Product Manager BMW R 1300 RS

Standard full LED headlight with separate high beam and state-of-the-art LED light units all round. For the first time on a BMW RS, Headlight Pro with adaptive turning light is available as optional equipment ex works.
BMW Motorrad is regarded as the pioneer par excellence when it comes to motorcycling safety and related innovations. Accordingly, the new R 1300 RS comes as standard with a newly designed twin-chamber LED headlight in a very slim, sporty design featuring a distinctive light icon. This illuminates the road with a hitherto unrivalled clarity, thereby ensuring even better perception in traffic. The lighting unit comprises two LED elements for the low beam and two additional, separately positioned LED elements for the high beam. Two more LED units are provided for the daytime running light and side light. State-of-the-art LED light units with newly designed LED turn indicators round off the lighting concept of the new R 1300 RS.

With the optional Adaptive Turning Light, the dipped beam of the standard full LED headlight is optimised for cornering, depending on the banking position, by activating additional LED elements. In this way, the bend is almost fully illuminated because the light moves to where the motorcycle is heading. By optimising the light pattern, the dipped beam light ensures an even wider and more homogeneous illumination of the road.

The function is activated when the engine is running, the high or low beam is activated and darkness is detected, from road speeds of approx. 10 km/h and a banking angle of the motorcycle of

approx. 7°. The additional lighting is highly effective up to a banking angle of approx. 25°. What is more, the adaptive turning light segment is activated in a dimmed state. The greater the banking angle, the brighter the segment becomes. This function significantly improves illumination when cornering.

Riding Assistant with Active Cruise Control (ACC), Front Collision Warning (FCW), Lane Change Warning (SWW) and Rear End Collision Warning (RECW) for further increased comfort and safety when motorcycling as optional equipment ex works.
The new R 1300 RS comes as standard with Dynamic Cruise Control (DCC) with braking function, while the Riding Assistant as optional equipment ex works offers a significantly wider range of functions, including Active Cruise Control (ACC), Front Collision Warning (FCW), Lane Change Warning (SWW), and the new Rear End Collision Warning (RECW).

Active Cruise Control (ACC) enables maximum comfort and the best possible safety when motorcycling: the electronic cruise control with integrated distance control can be used to set the desired riding speed as well as the distance to the vehicle in front. A radar sensor at the front of the motorbike determines the distance to the vehicle ahead. If this distance decreases, the system reduces speed and automatically restores the desired distance. This frees the mind for carefree riding fun – also ensuring a relaxed ride, especially on lengthy tours.

The Front Collision Warning (FCW) with brake intervention is designed to prevent collisions and help reduce the severity of accidents. The Front Collision Warning uses the ACC radar system to provide protection from rear-end collisions. The rider assistance system can warn of potential collisions with other vehicles and preconditions the brakes.

Lane Change Warning (SWW) monitors the lanes to the left and right and can help ensure a safe lane change while supporting use of the rear mirror. A radar sensor monitors the area behind the motorcycle, as well as covering the infamous blind spot. If another vehicle is approaching or dangerously close and could potentially be overlooked by the rider, the lane change warning function detects this and warns against changing lanes. This is indicated by a symbol in the respective rear mirror.

The Rear End Collision Warning (RECW) alerts following traffic to an impending rear-end collision by means of high-frequency flashing. This visual warning is triggered by a vehicle travelling in the same lane, detected by the radar sensor at the rear of the new R 1300 RS; it is indicated by the simultaneous flashing of the rear turn indicators.

For the first time, navigation preparation now features electric locking for maximum operating comfort as optional equipment ex works.
This item of ex works optional equipment allows quick and secure attachment and operation of a navigation device or smartphone using a mount cradle. For the first time, this mount no longer requires a key – it unlocks electrically for maximum convenience. The new navigation preparation allows use of the BMW Motorrad Navigator 4 to 6, the ConnectedRide Navigator and the ConnectedRide Cradle.

Seat heating for rider and passenger, available as optional equipment ex works.
In addition to the heated grips, which are also available as optional equipment ex works, the new seat heating for rider and passenger provides comforting warmth on cold days – for a more enjoyable riding experience. Seat heating for the rider is available with all seat height options, while passenger seat heating – also optional equipment ex works – is only available in combination with the Comfort passenger seat. No other passenger seats can be heated.

Onboard power and USB socket as standard.
The new BMW R 1300 RS already offers two different sockets as standard. A 12-volt onboard power socket is installed on the right-hand side near the passenger footrest pin. In addition, a USB-C socket with 5-volt supply is located on the right-hand side of the cockpit. It delivers up to 2,400 mA of charging current (normal level: 1 200 mA), enabling fast charging depending on smartphone type. This most widely used USB-C socket type with newly developed charging electronics allows a smartphone to be charged while riding by connecting an adapter cable. The Original BMW Motorrad Accessories include a USB adapter cable for this purpose that has been tested over time and is equipped with a sturdy kink protection.

In tried-and-tested BMW Motorrad manner, the external and therefore easily accessible socket is designed to be short-circuit-proof and is protected from overvoltage. Thanks to the integrated sealing cap, it is also effectively protected against environmental influences such as water penetration.

Connectivity: multifunctional instrument cluster with 6.5-inch full-colour TFT screen and numerous features.
The new R 1300 RS has the equipment feature Connectivity as standard, including a 6.5-inch full-colour TFT screen. In conjunction with the standard BMW Motorrad Multi-Controller with integrated operation, it gives the rider fast access to vehicle and connectivity functions.

This means it is possible to conveniently make a phone call or listen to music during travel. If a smartphone and a helmet with the BMW Motorrad Communication System are connected via Bluetooth to the TFT screen, for example, the rider can conveniently access media playback and telephone functions. These functions can also be used without the need to install an app. With an active Bluetooth connection to any standard smartphone, the rider can enjoy the pleasures of listening to music during travel. In addition, the freely available BMW Motorrad Connected App offers handy arrow-based navigation suitable for day-to-day use directly via the TFT screen. The BMW Motorrad Connected App can be downloaded free of charge from the Google and Apple app stores. It also comprises attractive additional functions such as route logging and the display of other travel statistics and information. The basic navigation system will be of particular interest to motorcyclists since it enables convenient organisation of day-to-day travel and short trips without the need for additional equipment.

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.

6. Equipment program.

Optional equipment and Original BMW Motorrad Accessories for the new BMW R 1300 RS.
An extensive program of optional equipment and optional accessories is available for further customisation of the new BMW R 1300 RS. Optional equipment items are supplied ex works and are integrated in the production process. Optional accessories are installed by the BMW Motorrad dealer or by customers themselves. These are also features which can be retrofitted.

In addition to the existing range of Original BMW Motorrad Accessories, the following new items are available for the new R 1300 RS.

Special equipment packages.

- **Comfort Package:** Seat heating, heated grips, RDC.
- **Dynamic Package:** DSA, Shift Assistant Pro or automated shift assistant ASA, Riding Modes Pro, sport brake.
- **Innovation Package:** Headlight Pro, Riding Assistant, Rear End Collision Warning.
- **Touring Package:** Preparation for navigation unit, central locking system, centre stand with prop-up aid, luggage bridge or topcase holder, case holders.

Individual items of optional equipment.

- Design option rear silencer, dark chrome-plated.
- Touring windshield, high.
- Sport rear silencer.
- Navigation preparation.
- Chrome-plated manifold.
- Manifold, dark chrome-plated.
- M lightweight battery (lithium-ion battery, approx. 2 kg lighter than the standard battery.
- Alarm system.
- Comfort handlebars.

- Design wheel with red strip of paint across the rim base and the inscription 1300.
- Intelligent Emergency Call.
- Teleservices.
- Rider's seat, high (with seat heating).
- Rider's seat, low (with seat heating).
- Comfort passenger's seat(with seat heating).

R 1300 RS Performance only:

- Sport seat, high (with seat heating).

Original BMW Motorrad Accessories.

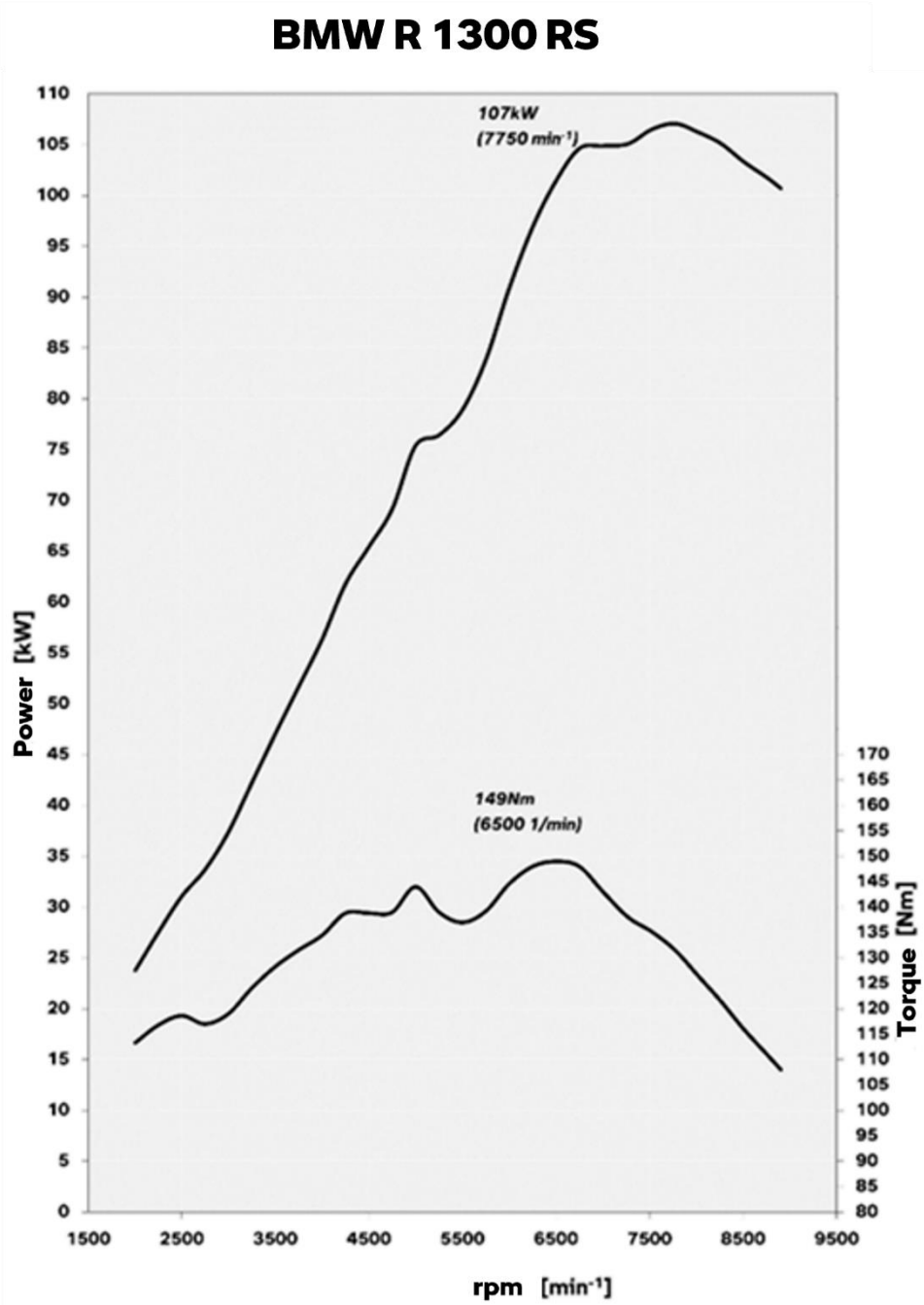
Design.

- Passenger seat cover.
- Rear axle cover (axle tube cover).
- Clutch lever, milled, adjustable.
- Ignition coil cover, milled.

Storage.

- Case 26 l and 29 l, electrified.
- Case liners.
- Topcase 39 l, electrified.
- Tank bag.

7. Engine output and torque.



8. Technical specifications.

		R 1300 RS
Engine		
Capacity	cc	1,300
Bore/stroke	mm	106.5 x 73
Output	kW/hp	107/145
at engine speed	rpm	7,750
Torque	Nm	149
at engine speed	rpm	6,500
Type		Air/liquid-cooled 2-cylinder 4-stroke boxer engine with two overhead, chain-driven camshafts, a counterbalance shaft and variable intake camshaft control system BMW ShiftCam
Compression		13.3:1
Fuel		Premium unleaded 95 RON
Valves per cylinder		4
Ø intake/outlet	mm	44/35.6
Ø throttle valve	mm	52
Engine control		BMS-O
Emission control		Closed-loop three-way catalytic converter, exhaust standard EU-5+
Electrical system		
Generator	W	650
Battery	V/Ah	12/10
Headlamp		LED
Rear light		LED brake light/rear light
Starter	W	900
Power transmission		
Clutch		Wet clutch with anti-hopping function, hydraulically activated
Gearbox		Constant mesh 6-speed gearbox
Primary ratio		1.479
Gear transmission ratios	I	2.438
	II	1.714
	III	1.296
	IV	1.059
	V	0.906
	VI	0.794
Secondary drive		Cardan
Secondary ratio		2.818

		R 1300 RS
Chassis		
Frame construction type		Two-section frame concept consisting of main frame with bolt-on rear frame, load-bearing engine
Front wheel control		Upside-down telescopic fork. Ø 47 mm
Rear wheel control		Cast aluminium single-sided swinging arm with BMW Motorrad EVO Paralever, WAD (optional equipment: DSA or sport suspension)
Spring travel, front/rear	mm	140/130
Wheel castor	mm	122.5
Wheelbase	mm	1,523
Steering head angle	°	62
Brakes	front	Twin disc brake, floating brake discs, Ø 310 mm, 4-piston radial brake callipers
	rear	Single disc brake, Ø 285 mm, 2-piston floating calliper
ABS		Standard equipment BMW Motorrad Integral ABS Pro (full integral, lean angle optimised)
Wheels		Light alloy cast wheels
	front	" 3.50 x 17"
	rear	6.00 x 17"
Tyres	front	120/70 ZR 17
	rear	190/55 ZR 17
Dimensions and weights		
Total length	mm	2,138
Total width incl. weight of handlebars + mirrors	mm	846
Seat height	mm	790/815
DIN unladen weight, road ready	kg	245
Permitted total weight	kg	460
Fuel tank capacity	l	17
Performance figures		
Fuel consumption (WMTC)	l/100 km	4.8
CO2	g/km	110
Acceleration 0-100 km/h	s	3.2
Top speed	km/h	>200