

**The new BMW M 1000 RR, BMW S 1000 RR,  
BMW M 1000 R and BMW S 1000 R.**



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## 1. Overall concept. Summary.



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### **The new BMW M 1000 RR, BMW S 1000 RR, BMW M 1000 R, and BMW S 1000 R: The superbikes and roadsters are set to enter the upcoming season with even more dynamism.**

Both the superbikes M 1000 RR and S 1000 RR, as well as the emotional roadsters M 1000 R and S 1000 R, have been technically and visually updated and come with expanded standard features for the upcoming motorcycle season. Common changes include the Euro 5+ homologation of the engines and the inclusion of the M short-stroke throttle with a reduced rotation angle.

### **BMW M 1000 RR: Drastically Increased Performance through More Power, Enhanced Downforce, and Steering Angle Sensor Technology.**

The new M 1000 RR – abbreviated as M RR – benefits from a significant power increase of the inline-four engine by 4 kW (6 hp) to 160 kW (218 hp) thanks to an extensive package of measures.

Additionally, it features optimized aerodynamics through a newly designed front fairing. The newly constructed M Winglets 3.0, with drastically increased downforce, support even faster lap times on

the racetrack. Furthermore, the Flex Frame has been further developed and now includes a new engine mount on the left side.

BMW Motorrad has also made improvements to the control systems. The Dynamic Traction Control (DTC) now features the new Slide Control function thanks to steering angle sensor technology. This has resulted in a new subdivision of the DTC into Slip Control and Slide Control. The introduction of steering angle sensor technology has also led to the new Brake Slide Assist function of the BMW Race ABS Pro. Combined with the M short-stroke throttle, this results in significantly increased performance and control.

As before, the new M RR is offered in two versions: the M 1000 RR base variant in the primary color Lightwhite uni and the M 1000 RR M Competition in the primary color Blackstorm metallic, each combined with graphics in M colors.

### **BMW S 1000 RR: Even higher track performance and significantly enhanced standard features.**

The S 1000 RR – abbreviated as Double-R – has been significantly refined, especially for track use. The M short-stroke throttle allows the S 1000 RR to respond even more directly to every command at the throttle, new winglets provide increased downforce, a new front wheel cover with integrated brake ducts improves brake cooling, and new fairing side panels offer a more striking design.

Additionally, the standard features of the Double-R have been significantly enhanced. The Pro riding modes are now standard, including additional "Race Pro" modes, two more combinations of throttle response and engine torque, as well as the Engine Brake and Hill Start Control Pro functions, five-level adjustable ABS in the "Race Pro" modes, and the ABS setting "Slick." The Dynamic Brake Control (DBC) is also a new standard feature.

The new S 1000 RR is offered in three attractive color schemes: the base variant in Blackstorm metallic, the Sport model variant in Bluestone metallic with matte graphic applications, and the M Motorsport variant in Lightwhite uni/M Motorsport in combination with the M package.

### **BMW M 1000 R: Refinement for the M Roadster.**

For the upcoming season, the M 1000 R – abbreviated as M R – has received a more dynamic design with the new dual-flow LED headlight derived from the RR models and the M logo in the air intake between the headlights.

The new M 1000 R is available as a base variant in the color scheme Lightwhite uni/M Motorsport and in the new color White Aluminium metallic matt. In the M Competition equipment variant, this paint is also available alongside the color scheme Blackstorm metallic/M Motorsport.

In all color schemes, the rear frame and swingarm of the new model year are in Platinum Grey metallic. The winglets are finished in black textured paint, and the covers for the clutch and generator are also coated in black.

The traction control DTC has also been revised. The control strategy has been derived from the RR models and, in combination with the M short-stroke throttle, brings a noticeable improvement, especially in Race mode for track days.

An expanded range of Original BMW Motorrad accessories and special equipment completes the scope of changes.

### **BMW S 1000 R: Dynamic Roadster with increased power and enhanced standard features.**

The dynamic roadster S 1000 R – abbreviated as Single-R – now starts with an even more powerful inline-four engine, offering 125 kW (170 hp). A shorter final drive ratio enhances sprint performance. The optimized standard Shift Assistant Pro supports even smoother gear changes. Combined with the new M short-stroke throttle, this results in a significantly more dynamic setup and noticeably better acceleration in all situations. Additionally, the traction control DTC of the S 1000 R benefits from the revisions made to the DTC from the M 1000 R, further enhancing its performance.

The new Single-R also receives the new dual-flow LED headlight derived from the RR models, providing a more striking appearance. The expanded standard features of the S 1000 R include the engine drag torque control (MSR) with configurable "Engine

Brake," a short license plate holder, a USB-C charging socket under the seat, and the intelligent emergency call E-Call.

The new Single-R is offered in three attractive color schemes: the base variant in Blackstorm metallic, the Sport model variant in Bluefire/Mugiallo Yellow, and in combination with the M package in Lightwhite uni/M Motorsport.

### **Overview of all new standard features:**

#### **BMW M 1000 RR**

- 218 hp (+6 hp)
- Compliance with Euro 5+ emission standards
- Engine overhaul: Cylinder head with new port design, new combustion chamber shape, full-shaft titanium valves with new tulip and seat geometry on intake and exhaust sides, and new engine mount
- Titanium exhaust system with modified cylinder head flanges, oval header inlets, and modified pre-silencer
- M short-stroke throttle (58-degree rotation angle)
- Frame with new engine mount on the left and modified flex in the steering head area
- Dynamic Traction Control (DTC) with new Slide Control function via steering angle sensor for acceleration drifts
- ABS Pro with new Brake Slide Assist function via steering angle sensor for braking drifts and ABS Pro setting "Slick"
- New M Winglets 3.0 made of CFK
- New fairing design
- Fairing, front wheel cover, and engine spoiler now made of plastic
- Removal of M Aero Wheel Covers

## **BMW S 1000 RR**

- New winglets
- Compliance with Euro 5+ emission standards
- Pro riding modes as standard
- M short-stroke throttle (58-degree rotation angle)
- Side fairings in new design
- New front wheel cover with brake ducts

## **BMW M 1000 R**

- Dual-flow LED headlight
- Compliance with Euro 5+ emission standards
- M short-stroke throttle (58-degree rotation angle)
- Winglets in black textured paint
- Clutch/generator covers in black
- Rear frame and swingarm in Platinum Grey

## **BMW S 1000 R**

- Dual-flow LED headlight
- Compliance with Euro 5+ emission standards
- 170 hp (+5 hp)
- M short-stroke throttle (58-degree rotation angle)
- Engine drag torque control (MSR)
- Optimized Shift Assistant
- Shorter final drive ratio
- USB-C charging socket under the seat
- Short license plate holder
- Intelligent emergency call E-Call

## 2. The new BMW M 1000 RR.



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**„ With the new M RR, the BMW Motorrad engineers have once again made a significant leap in terms of performance. More power, more downforce, an optimized Flex Frame, and the M short-stroke throttle with a reduced rotation angle are essential points for even faster lap times. Additionally, track day riders benefit from the new features Slide Control and Brake Slide Assist on the racetrack, thanks to the steering angle sensor..“**

Toprak Razgatlıoğlu, BMW Motorrad factory rider with ROKiT BMW Motorrad WorldSBK Team & WSBK Champion 2021 & 2024.

**Significant performance increase of the M RR inline-four cylinder by 4 kW (6 hp) to 160 kW (218 hp) thanks to a comprehensive package of measures.**

With the massive further development of the M 1000 RR, BMW Motorrad once again raises the bar in the field of superbikes homologated for racing. The new M RR features the well-known but significantly revised inline-four engine. It now complies with the

Euro 5+ emissions standard. Its peak power is now 160 kW (218 hp) at 14,500 rpm, compared to the previous 156 kW (212 hp) at 14,500 rpm. The maximum engine speed remains at 15,100 rpm.

The technical basis for the 4 kW (6 hp) power increase includes newly designed full-shaft titanium valves, an increase in the compression ratio to 14.5:1 (previously 13.5:1), new oval-shaped intake and exhaust ports, an adapted airbox geometry, as well as a modified combustion chamber shape and larger throttle valves. The throttle valve diameter is now 52 mm instead of the previous 48 mm, corresponding to an increase in the cross-sectional area of about 17 percent. The new piston design accommodates the increased thermal and mechanical demands.

For optimal flow conditions, the valve guides are shortened flush with the port surface, and the exhaust valves have smoother transitions and a reduced seat angle from 45 to 40 degrees. To prevent backflow, the intake ports have a pronounced edge at the valve disc.

The exhaust system, made of titanium, has been adapted to the new oval and significantly larger cross-section of the exhaust ports. It features correspondingly designed connection flanges and oval-shaped header inputs. The internal pipe routing of the pre-silencer has also been adjusted.

**Optimized aerodynamic qualities due to newly designed front fairing. Drastically increased downforce with newly constructed M Winglets 3.0.**

The increased potential of the new M 1000 RR for even faster lap times also results from the further development of aerodynamics. The newly designed front fairing made of plastic and the revised windscreen provide even better aerodynamic qualities and a more distinctive appearance.





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As part of this aerodynamic advancement, the M Winglets have also been newly constructed. Made from carbon fiber (CFK), they now produce even stronger aerodynamic downforce — both in an upright riding position and when leaning. The rider benefits from increased confidence in the front wheel when leaning and higher cornering speeds at the same lean angle. At the same time, the tendency to wheelie has been further reduced. Despite the aerodynamic downforce load at 300 km/h increasing from the previous 22.6 kg to now 30 kg, there are no compromises in top speed, which remains at 314 km/h.

**Further developed flex frame with new engine mount.**

The proven Flex Frame has also undergone adjustments. The stiffness in the steering head area has been optimized, and an upper mounting point on the left side of the engine has been relocated from the cylinder head to the engine housing.

**M short-stroke throttle with reduced rotation angle for perfect throttle control, especially in track use.**

The new M short-stroke throttle, with its reduced rotation angle, ensures relaxed throttle control without the need to reposition the hand or twist the wrist. The rotation angle is now 58 degrees instead of the previous 72 degrees. This provides a significant advantage, especially in track use, while maintaining excellent

throttle modulation thanks to the corresponding application of the engine management system to the changed rotation angle.

The linear progression of the throttle signal from 0 to 100% for the throttle position sensor has been retained, though with a slightly increased ramp-up. The torque requested by the rider is then overridden based on various input parameters. The engine control application to the new reduced rotation angle has been carried out in all riding modes to ensure the full potential is utilized.

**Dynamic Traction Control (DTC) with new Slide Control function via steering angle sensor. New division of DTC into Slip Control and Slide Control.**

The new M 1000 RR comes standard with Dynamic Traction Control (DTC) featuring a 6-axis sensor cluster, lean angle sensor, and fine-tuning for enhanced safety and performance during acceleration.

A new feature of the DTC is Slide Control, an extension of the DTC slip regulation. The central component of Slide Control is the steering angle sensor. Using its signal, along with wheel speeds and sensor box signals, the slip angle at the rear wheel ("drift angle") is determined.

Depending on the characteristics of the rear tire, the road surface, and the slip tolerated by the slip regulation, a slip angle is established. In a stable driving state, this angle is so small that it is not perceived by the rider. Slide Control now matches the current slip angle with a target value dependent on the DTC setting. If this target value is at risk of being exceeded, Slide Control reduces the drive slip.

For track use with slick tires, the rider is supported in controlling power slides that occur with the appropriate riding style and DTC setting. The new M RR features two different settings with different preset drift angles: DTC Setting 3 and 2. These allow highly skilled riders to maximize the potential of the rear tire and influence the driving line at the corner exit via the throttle and thus the "drift angle." Analogous to this new Slide Control function, the use of the steering angle sensor also enables the new Brake Slide Control function.

The DTC still features four fixed basic settings for the respective riding modes "Rain," "Road," "Dynamic," and "Race." In the "Race Pro" riding modes, fine-tuning (+/- shift) is also available. In the special equipment "Riding Modes Pro," the DTC Wheelie function is also adjustable. It allows the suppression or limitation of wheelies via front wheel lift detection, aiming for maximum acceleration.

### **BMW Race ABS Pro with new Brake Slide Assist Function and ABS Pro Setting "Slick".**

ABS Pro comes standard on the new M 1000 RR. Unlike conventional ABS systems, ABS Pro offers increased safety even during braking in corners. It can prevent wheel lock-up during rapid braking while leaning and reduce the risk of falling during panic braking in a lean. In the "Race Pro" riding modes, the ABS function is adjustable in five levels, and the ABS Pro function is correspondingly linked to it. A new feature of the current M RR is the ABS Pro Setting "Slick," which is part of the Pro riding modes. This setting accommodates the use of treadless slick tires.

Another important innovation for track riders is the new Brake Slide Assist function. Similar to the new DTC Slide Control function, this system is based on steering angle sensor technology and allows the rider to set a specific drift angle for so-called braking drifts with a constant slide into corners.

Technically, a drift angle calculated from the steering angle sensor is set by limiting the brake pressure on the rear wheel through the Race ABS Pro system and by regulating the rear wheel slip through the engine drag torque control (MSR). Due to its position on the vehicle and the force input via the handlebars, the rider has a significant influence on the drift behavior during braking. Brake Slide Assist supports the rider in this semi-stable drifting state.

As before, the new M RR is offered in two versions: the M 1000 RR base variant in the primary color Lightwhite uni and the M 1000 RR M Competition in the primary color Blackstorm metallic. Additionally, all carbon parts of the new M 1000 RR are finished in a matte look.

### 3. The new BMW S 1000 RR.



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**„Through optimized aerodynamics featuring new winglets and newly designed fairing side panels, the new M short-stroke throttle, and a substantially increased standard equipment package, we have been able to significantly enhance the performance of the RR once again.“**

Sepp Mächler, Product manager S 1000 RR

**Significantly increased downforce with new winglets. New front wheel cover with integrated brake ducts and newly designed side panels.**

The potent inline-four engine, with an output of 154 kW (210 hp) at 13,750 rpm, continues to ensure powerful propulsion. It now complies with the Euro 5+ emissions standard.

The increased performance of the new S 1000 RR – simply referred to as RR – primarily results from the further development of aerodynamics. As part of this aerodynamic advancement, the winglets have been completely redesigned.

The winglets on the front fairing of the new RR now produce significantly more aerodynamic downforce – both in an upright riding position and when leaning. At 300 km/h, the downforce has been increased from the previous 17.1 kg to now 23.1 kg. The positive effects include greater rider confidence in the front wheel for even larger lean angles or higher cornering speeds at the same lean angle, as well as reduced wheelie tendency.



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Another key point in optimizing aerodynamics is the area around the front wheel. The new RR features brake cooling ducts – known as Brake Ducts – in this area. These are integrated into the new front wheel fender, which has been optimized for improved airflow around the fork legs and brake calipers. They reduce the brake temperature during track use, thereby enhancing performance and providing more consistent brake pressure.

Inspired by the first generation RR from 2009, the new RR features asymmetrical design side panels made of plastic, similar to the engine spoiler. While the left side is characterized by a large exit opening for heat dissipation, the right side features a dynamic and distinctive gill design.

### **M short-stroke throttle with reduced rotation angle for perfect throttle control, especially in track use**

The new M short-stroke throttle, which is also used in the new M 1000 RR (see page 9), ensures relaxed throttle control and perfect handling without the need to reposition the hand or twist the wrist. The rotation angle is now 58 degrees instead of the previous 72 degrees. This provides a significant advantage, especially in track use, while maintaining excellent throttle modulation thanks to the corresponding application of the engine management system to the changed rotation angle.

### **Pro riding Modes standard with additional "Race Pro" modes, two more throttle response and drive torque combinations, engine brake and Hill Start Control Pro functions, five-level adjustable ABS in the "Race Pro" modes, ABS "Slick" setting and dynamic brake control (DBC)**

As before, the new RR distinguishes between two riding mode worlds: for the road and for the track. Previously, the RR came standard with the four riding modes "Rain," "Road," "Dynamic," and "Race." The standard equipment of the new RR includes the previously available optional equipment "Pro Riding Modes" with the additional riding modes "Race Pro 1," "Race Pro 2," and "Race Pro 3."

The DTC still features four fixed basic settings for the respective riding modes "Rain," "Road," "Dynamic," and "Race." In the "Race Pro" riding modes, fine-tuning (+/- shift) is also available. With "Pro Riding Modes," the DTC Wheelie function is also adjustable. It allows the suppression or limitation of wheelies via front wheel lift detection, aiming for maximum acceleration.

Previously, the new RR had three throttle response curves, which were fixed to the respective riding modes "Rain," "Road," "Dynamic," and "Race." In the newly added standard "Race Pro 1" to "Race Pro 3" modes, two additional combinations of throttle response and drive torque can be selected.

- Soft throttle response and full drive torque.
- Direct throttle response and full drive torque.

As another component, "Pro Riding Modes" offers the "Engine Brake" function in the "Race Pro" modes with three levels of adjustability for engine drag torque during deceleration.

Another component of "Pro Riding Modes" is the Hill Start Control Pro function. It goes beyond the features of the comfort system Hill Start Control and offers the additional Auto HSC function. Through the settings menu, this additional function can be customized so that the holding brake on a slope (greater than +/- 5%) is automatically activated shortly after the motorcycle comes to a stop following the activation of the hand or foot brake lever.

In the "Race Pro" riding modes, the ABS function is adjustable in five levels, and the ABS Pro function is correspondingly linked to it. Additionally, the ABS Pro Setting "Slick" accommodates the use of treadless slick tires.

As another component of "Pro Riding Modes," the Dynamic Brake Control (DBC) supports the rider during braking maneuvers. DBC offers more safety when braking, even in difficult situations, by preventing unintentional throttle activation. As soon as the sensor box detects a certain deceleration value during braking, any simultaneous acceleration request by the rider is recognized as implausible, and the throttle valves are prevented from opening. This keeps the motorcycle stable and shortens the braking distance. From a certain deceleration level, the hazard warning lights are automatically activated.

The new RR is offered in three attractive color schemes: as a base variant in Blackstorm metallic, as a Sport model variant in Bluestone metallic, and in conjunction with the M Package in Lightwhite uni / M Motorsport.



## 4. The new BMW M 1000 R.



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**„ With targeted fine-tuning, we have made the M R even more consistently aligned with the requirements of a roadster with superbike performance. The driving dynamics speak for themselves, both on the road and on the track.“**

Dominik Blass, Product manager M 1000 R

### **Fine-Tuning for the M Roadster for the highest demands from the road to the track.**

With an engine output still at 154 kW (210 hp) – now considering the Euro 5+ emissions standard – and a DIN curb weight of only 199 kg, the new M 1000 R – simply called M R – brings driving dynamics to the roadster segment that are otherwise reserved for pure superbikes.

The traction control DTC has also been revised. The control strategy has been derived from the RR models and, in combination with the M short-stroke throttle, brings a noticeable improvement, especially in Race mode for track days.

For the new model year, the M R received targeted fine-tuning in various areas and is available as a base variant in the color schemes



Lightwhite uni/M Motorsport and White Aluminium metallic matt. In the M Competition equipment variant, this paint finish is also available alongside the Blackstorm metallic/M Motorsport color scheme.

In all color schemes for the new model year, the rear frame and swingarm are integrated in Platinum Grey. Complementing this, the winglets are finished in black structural paint. The covers for the clutch and generator are also coated in black.



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The new, dual-flow LED headlight derived from the RR models ensures a more dynamic design and superior road illumination at night. The new M short-stroke throttle with a reduced rotation angle ensures relaxed throttle control without the need to reposition the hand or twist the wrist (see page 9).

### **New optional equipment and original BMW Motorrad accessories for the M Roadster.**

The already extensive range of optional equipment and Original BMW Motorrad accessories has been further expanded for the new model year. Now available are a luggage plate for the passenger seat, carbon winglets, and a low tinted windshield.

- Luggage plate for passenger seat.
- Carbon winglets.
- Low tinted windshield

## 5. The new BMW S 1000 R.



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**„Even more than before, the revised S 1000 R lives up to its reputation as a Dynamic Roadster. 5 HP more power with the current Euro 5+ homologation, even better sprint performance, a more aggressive design thanks to the dual-flow LED headlight, and an expanded standard equipment significantly enhance the Single-R once again.“**

Maximilian Freund, Project lead S 1000 R

**The Dynamic Roadster with an even more powerful inline-four engine according to Euro 5+ homologation and now 125 kW (170 HP) power. Shorter secondary gear ratio for increased sprint performance and optimized shift assistant as standard.**

Emotional Roadster looks combined with super sporty driving dynamics – this is what the new BMW S 1000 R, also known as Single R, stands for. Its inline-four engine is still based on the power unit of the S 1000 RR and impresses with a particularly linear and full torque curve as well as a harmonious power characteristic for the best rideability. Compared to the previous model, the engine power has been increased by 4 kW (5 HP) to now 125 kW (170 HP) at an unchanged nominal speed of 11,000 rpm.

The main reasons for the power increase are a changed geometry of the intake ports and an adjusted mapping. The maximum torque remains at 114 Nm at 9,250 rpm. In addition, the engine now meets the requirements of Euro 5+. The shorter secondary gear ratio of 17 to 46 teeth ensures even better acceleration.

The shift assistant allows upshifting without clutch operation, providing perfect acceleration with almost no interruption in traction. It also allows downshifting without clutch or throttle operation in the relevant load and speed ranges. This enables very fast gear changes and reduces clutch operation to a minimum. For use in the new S 1000 R, it has been optimized so that smooth upshifting is now possible with a closed throttle and smooth downshifting with an open throttle.

**M short-stroke throttle grip with reduced rotation angle for perfect dosing, especially in track operation. New, dual-flow LED headlight.**



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For relaxed throttle control and perfect handling without having to reposition or twist the wrist, the new M short-stroke throttle grip, as also used in the new M RR (see page 9), ensures this. The rotation angle is now 58 degrees instead of the previous 72 degrees. This offers a significant advantage, especially in track operation, while the excellent controllability thanks to the corresponding application of the engine management to the

changed rotation angle has been fully retained. Additionally, the traction control DTC of the S 1000 R benefits from the revisions made to the DTC from the M 1000 R, further enhancing its performance.

The new dual-flow LED headlight, derived from the RR models, ensures a characteristic design and confident road illumination at night.

### **Drag torque control (MSR) and "Engine Brake" function as standard.**

The new Single R now comes standard with drag torque control (MSR). Electronically controlled, MSR prevents the rear wheel from slipping due to abrupt throttle closure or downshifting. An anti-hopping clutch opens the clutch from a mechanically predetermined threshold to prevent the rear wheel from stamping – for example, when downshifting. However, if the available grip of the tire is below this opening threshold, for example in wet conditions, the rear wheel could still exceed the limit of static friction due to the engine's drag torque and slip.

Thanks to MSR, the new S 1000 R detects this danger early. Depending on the riding mode, the throttle valves are opened within milliseconds to reduce the drag torque appropriately, keeping the rear wheel within the grip range. This provides the rider with even more safety, especially on slippery road surfaces.

The "Engine Brake" function for adjusting the engine braking torque in conjunction with drag torque control (MSR) has four settings:

- Rain: Maximum engine brake and MSR.
- Road: Maximum engine brake and MSR.
- Dynamic: Medium engine brake and MSR.
- Dynamic Pro: Medium engine brake and MSR. Additionally, this mode offers the possibility to set the engine brake and MSR to minimum.

### **Short license plate holder, USB-C charging socket, and intelligent emergency call E-CALL as standard.**

For an even more dynamic appearance, the crisp rear end with a new, short license plate holder in the style of the M 1000 R ensures this. A convenient charging option is also provided by the

now standard USB-C charging socket under the seat. Quick assistance in emergency situations is supported by the now also standard Intelligent Emergency Call E-CALL. In the event of an emergency, it automatically contacts the BMW call center to activate the rescue chain as quickly as possible and, if possible, establish an initial conversation with the affected person. Additionally, the system can also be triggered manually. The use of such an E-CALL system has been proven to allow emergency services to reach the accident site faster.

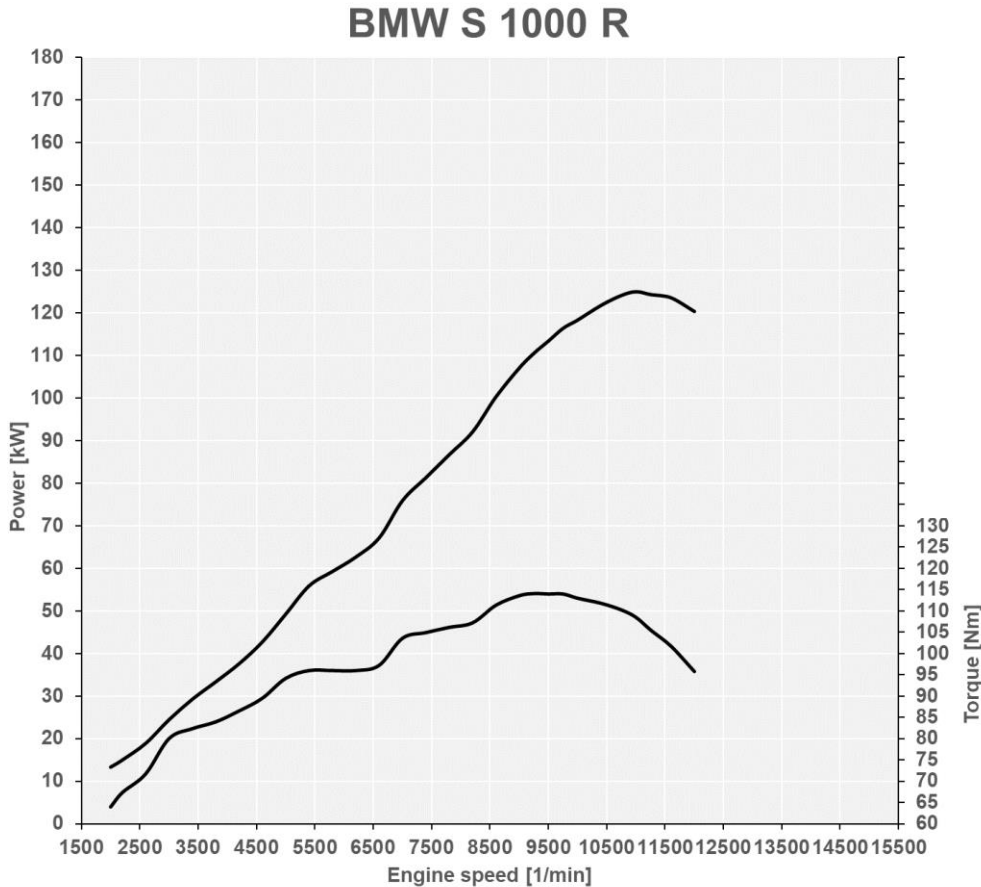
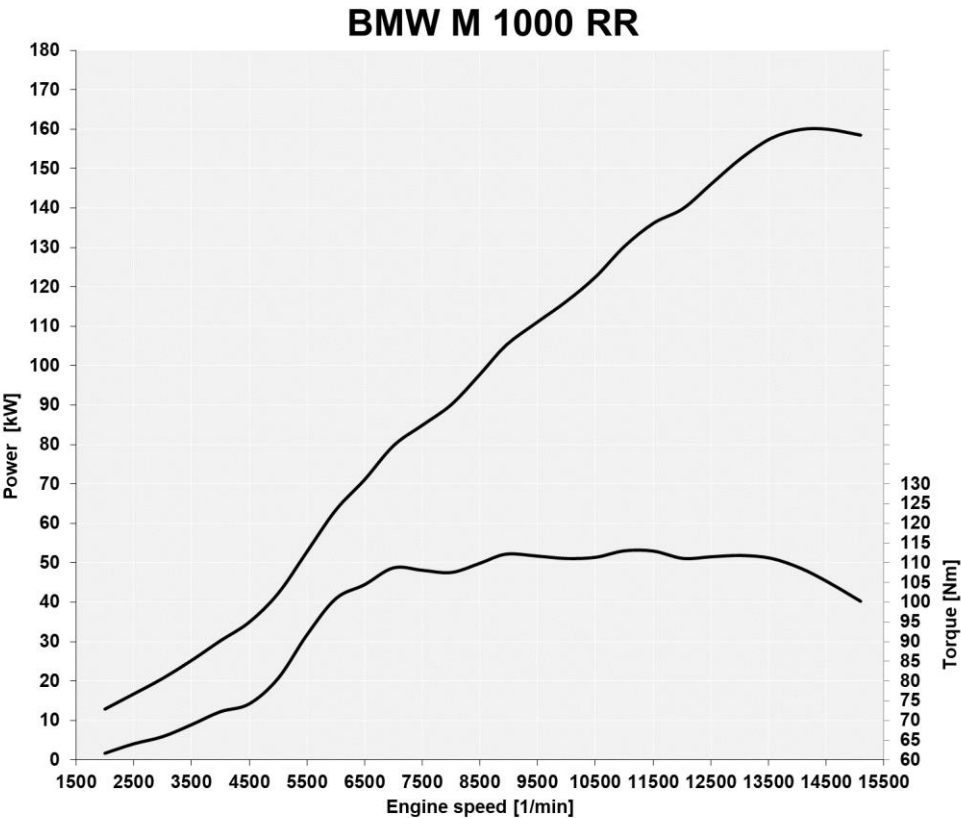
**New special equipment, Original BMW Motorrad accessories, and color schemes for the Dynamic Roadster.**

The already very extensive range of special equipment and Original BMW Motorrad accessories has been further expanded for the new model year. Thus, a preparation for the holder of the navigation device (Ride Cradle) as well as handlebar end mirrors, the luggage plate for the pillion seat, and a low tinted windshield are now available.

- Luggage plate for pillion seat.
- Preparation for navigation device holder (Ride Cradle).
- Handlebar end mirrors.
- Low tinted windshield.

The new R will be offered in three attractive color schemes. As base variant in Blackstorm metallic, as model variant Sport in Bluefire/Mugiallo Yellow, and in conjunction with the M package in Lightwhite uni / M Motorsport

6. Power and torque.





## 7. Technical specifications.



BMW M 1000 RR		
Engine		
Capacity	cc	999
Bore/stroke	mm	80/49.7
Power	kW/hp	160/218
at engine speed	rpm	14 500
Torque	Nm	113
at engine speed	rpm	11 000
Type	Water/oil-cooled inline-4-cylinder, 4-stroke engine	
Compression/fuel	14.5/1 / Premium unleaded (max. 5 % ethanol, E5), 95-98 ROZ/RON (max. rated output with ROZ 98)	
Valve control	DOHC-(double overhead camshaft), valve actuation via single rocker arm and variable intake camshaft control system BMW ShiftCam	
Titan-valves per cylinder	4	
Ø intake/outlet	mm	33.5/27.2
Ø Throttle valve	mm	52
Engine control	BMS-O	
Emissions control	Closed-loop three-way catalytic converter	
Elektrical system		
Generator	W	450
Battery	V/Ah	M Lightweight Battery 12 / 5, maintenance free
Headlight	W	Low beam LED dual headlights in freeform technology High beam LED freeform surface/modular design
Starter	kW	0,8
Power transmission		
Clutch	Multiplate clutch in oil bath, slipper clutch, mechanically activated	
Gearbox	Claw-shifted 6-speed gearbox	
Primary ratio	1.652	
Transmission ratios	I	2.647
	II	2.091
	III	1.727
	IV	1.500
	V	1.360
	VI	1.261
Secondary drive	Chain 17/46	
Secondary ratio	2.706	

## Chassis

Frame	Bridge-type frame, cast aluminum, load-bearing engine	
Front wheel guide	Upside-down telescopic fork, diameter 45 mm, spring preload, rebound and compression stages adjustable	
Rear wheel suspension	Aluminum swing arm, full floater pro, compression and rebound damping adjustable, adjustable spring preload	
Spring travel front/rear	mm	120/118
Wheel castor	mm	102.5
Wheelbase	mm	1 458
Steering head angle	°	66

Brakes	front	M Twin disc brake, Ø 320 mm, 4-piston fixed caliper
	rear	M Single disc brake, Ø 220 mm, 2-piston fixed caliper

ABS	BMW Motorrad ABS Pro BMW Motorrad Race ABS (partial integral), Brake-Slide-Assist	
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Traction control	BMW Motorrad DTC, slide control	
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Wheels	standard: M Carbon Wheels	
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	front	3.50 x 17"
	rear	6.00 x 17"
Tyres	front	120/70 ZR17
	rear	200/55 ZR17

## Dimensions and weights

Total length	mm	2 085
Total width incl. mirrors	mm	899
Seat height	mm	865
DIN unladen weight, road ready	kg	194
Permitted total weight	kg	407
Fuel tank capacity	l	16.5

## Performance figures

Fuel consumption (WMTC)	l/100 km	6.5
CO2	g/km	151
Acceleration 0–100 km/h	s	3.1
Top speed	km/h	314



BMW S 1000 RR		
Engine		
Capacity	cc	999
Bore/stroke	mm	80/49.7
Power	kW/hp	154/210
at engine speed	min <sup>-1</sup>	13 750
Torque	Nm	113
at engine speed	min <sup>-1</sup>	11 000
Type	Water/oil-cooled inline-4-cylinder, 4-stroke engine	
Compression/fuel	13.3:1 / Premium unleaded (max. 5 % ethanol, E5), 95-98 ROZ/RON (max. rated output with ROZ 98)	
Valve control	DOHC (double overhead camshaft), valve actuation via single rocker arm and variable intake camshaft control system BMW ShiftCam	
Valves per cylinder	4	
Ø intake/outlet	mm	33.5/27.2
Ø Throttle valve	mm	48
Engine control	BMS-O	
Emissions control	Closed-loop three-way catalytic converter	
Elektrical system		
Generator	W	450
Battery	V/Ah	M Lightweight Battery 12 V 5 Ah
Headlight	W	Low beam LED dual headlights in freeform technology High beam LED freeform surface/modular design
Starter	kW	0.8
Power transmission		
Clutch	Multiplate clutch in oil bath, anti-hopping clutch, with self-reinforcement, mechanically activated	
Gearbox	Claw-shifted 6-speed gearbox	
Primary ratio	1.652	
Transmission ratios	I	2.647
	II	2.091
	III	1.727
	IV	1.500
	V	1.360
	VI	1.261
Secondary drive	Chain 17/46	
Secondary ratio	2.706	
Chassis		
Frame	Bridge-type frame, cast aluminum, load-bearing engine	
Front wheel guide	Upside-Down-telescopic fork, diameter 45 mm, spring preload, rebound and compression stages adjustable, SA DDC: damping electronically adjustable	
Rear wheel suspension	Aluminum swing arm, full-floater pro, central spring strut, spring, preload, rebound and compression stages adjustable, SA DDC: damping electronically adjustable	
Suspension travel front/rear	mm	120/117

Wheel castor	mm	101.4
Wheel base	mm	1 456
Steering head angle	°	66.2
Brakes	Vorne	Twin disc brake, Ø 320 mm, 4-piston fixed calipers
	Hinten	Single disc brake, Ø 220 mm, 1-piston floating caliper
ABS		BMW Motorrad ABS Pro BMW Motorrad Race ABS (partial integral), Brake-Slide-Assist
Traction control		BMW Motorrad DTC, slide control
Wheels		Standard: Aluminum cast wheels M Aluminum forged wheels with factory option Race Package M Carbon wheels with factory option M Package
	Vorne	3.50 x 17"
	Hinten	6.00 x 17"
Tyres	Vorne	120/70 ZR17
	Hinten	190/55 ZR17

#### Dimensions and measures

Total length	mm	2 073
Total width incl. mirrors	mm	848
Seat height	mm	832
DIN unladen weight, road ready	kg	standard: 198 Incl. factory option Race Package 195.4 incl. Factory option M Package 193.5
Permitted total weight	kg	407
Tank fuel capacity	l	16.5

#### Performance figures

Fuel consumption (WMTC)	l/100 km	6.4
CO2	g/km	149
Acceleration 0-100 km/h	s	3.3
Top speed	km/h	>300

BMW M 1000 R		
Engine		
Capacity	ccc	999
Bore/Stroke	mm	80/49.7
Power	kW/hp	154/210
at engine speed	min <sup>-1</sup>	13,750
Torque	Nm	113
at engine speed	min <sup>-1</sup>	11.000
Type	Water/oil-cooled inline-4-cylinder, four-stroke engine	
Compression/fuel	13.3:1 / Premium unleaded (max. 5 % ethanol, E5), 93-98 ROZ/RON, (max. rated output with ROZ 98)	
Valve control	DOHC (double overhead camshaft), Valve actuation via single rocker arm	
Valves per cylinder	4	
Ø intake/outlet	mm	33.5/27.2
Ø Throttle valve	mm	48
Engine control	BMS-O	
Emissions control	Closed-loop three-way catalytic converter	
Elektrical system		
Generator	W	493
Battery	V/Ah	M Lightweight Battery 12 / 5, maintenance free
Headlight	Low beam LED dual headlights in freeform technology	
	High beam LED freeform surface/modular design	
Starter	kW	0.8
Power transmission		
Clutch	Multiplate clutch in oil bath, anti-hopping clutch, with self-reinforcement, mechanically activated	
Gearbox	Claw-shifted 6-speed gearbox	
Primary ration	1.652	
Transmission ratios	I	2.647
	II	2.091
	III	1.727
	IV	1.500
	V	1.360
	VI	1.261
Secondary drive	Kette	
Secondary ratio	2.765	
Chassis		
Frame	Bridge-type frame, cast aluminum, load-bearing engine	
Front wheel guide	Upside-down telescopic fork, diameter 45 mm, electronic self- adjusting DDC Dynamic Damping Control, spring preload, rebound and compression stages adjustable	
Rear wheel guide	Aluminum twin-sided swingarm, DDC Dynamic Damping Control (central shock absorber), adjustable spring preload, rebound and compression stages electronically adjustable	
Suspension travel front/rear	mm	120/117
Wheel castor	mm	97.6
Wheel base	mm	1 455

Steering head angle	°	65.8
Brakes	Vorne	Twin disc brake, Ø 320 mm, 4-piston fixed caliper
	Hinten	Single disc brake, Ø 220 mm, 1-piston floating caliper
ABS		BMW Motorrad ABS Pro (partial integral)
Traction control		BMW Motorrad DTC
Wheels		Standard: Aluminum forged wheels
		M Carbon wheel with M Competition Package
	Vorne	3.50 x 17"
	Hinten	6.00 x 17"
Tyres	Vorne	120/70 ZR17
	Hinten	200/55 ZR17

**Dimensions and measures**

Total length	mm	2 085
Total width incl. mirrors	mm	996
Seat height	mm	830
DIN unladen weight, road ready	kg	199
Permitted total weight	kg	407
Tank fuel capacity	l	16.5

**Performance figures**

Fuel consumption (WMTC)	l/100 km	6.4
CO2	g/km	149
Acceleration 0–100 km/h	s	3.2
Top speed	km/h	280

BMW S 1000 R		
Engine		
Capacity	cc	999
Bore/Stroke	mm	80/49.7
Power	kW/hp	125/170
at engine speed	min <sup>-1</sup>	11000
Torque	Nm	114
at engine speed	min <sup>-1</sup>	9250
Type	Water/oil-cooled inline-4-cylinder, four-stroke engine	
Compression/fuel	12.5:1 / Premium unleaded (max. 5 % ethanol, E5), 93-98 ROZ/RON, (max. rated output with ROZ 98)	
Valve control	DOHC (double overhead camshaft), Valve actuation via single rocker arm	
Valves per cylinder	4	
Ø intake/outlet	mm	33.5/27.2
Ø Throttle valve	48	
Engine control	BMS-O	
Emissions control	Regulated three-way catalytic converter	
Elektrical system		
Generator	W	330
Battery	V/Ah	12 / 9 maintenance free
	V/Ah	12 / 5 maintenance free
Headlight	Low beam LED dual headlights in freeform technology High beam LED freeform surface/modular design	
Starter	kW	0.8
Power transmission		
Clutch	Multiplate clutch in oil bath, anti-hopping clutch, with self-reinforcement, mechanically activated	
Gearbox	Claw-shifted 6-speed gearbox	
Primary ration	1.652	
Transmission ratios	I	2.647
	II	2.091
	III	1.727
	IV	1.476
	V	1.304
	VI	1.167
Secondary drive	Kette 525	
Secondary ratio	2.706	
Chassis		
Frame	Bridge-type frame, cast aluminum, load-bearing engine	
Front wheel guide	Upside-Down-telescopic fork, diameter 45 mm, spring preload, rebound and compression stages adjustable, SA DDC: damping electronically adjustable	
Rear wheel guide	Aluminum swing arm, full-floater pro, central spring strut, spring, preload, rebound and compression stages adjustable, SA DDC: damping electronically adjustable	
Suspension travel front/rear	mm	120/117

Wheel castor	mm	97.6
Wheel base	mm	1447
Steering head angle	°	65.8
Brakes	front	Twin disc brake, Ø 320 mm, 4-piston fixed caliper
	rear	Single disc brake, Ø 220 mm, 1-piston floating caliper
ABS		BMW Motorrad ABS Pro (partial integral)
Traction control		BMW Motorrad DTC
Wheels		standard: Aluminum cast wheels, Aluminum M forged wheels or M Carbon wheels as factory option
	front	3.50 x 17"
	rear	6.00 x 17"
Tyres	front	120/70 ZR17
	rear	190/55 ZR17
		Mit M Rädern 200/55 ZR17
<b>Dimensions and measures</b>		
Total length	mm	2085
Total width incl. mirrors	mm	812
Seat height	mm	810
DIN unladen weight, road ready	kg	199
Permitted total weight	kg	407
Tank fuel capacity	l	16.5
<b>Performance figures</b>		
Fuel consumption (WMTC)	l/100 km	6.2
CO2	g/km	144
Acceleration 0-100 km/h	s	3.2
Top speed	km/h	>250