

WELCOME  
TO **PLANET POWER.**  
BMW S 1000 RR.

BMW Motorrad



S 1000 RR

The Ultimate  
Riding Machine





THE ONLY THING KEEPING  
YOUR BLOOD COOL  
**IS THE WIND RUSH.**



## THE S 1000 RR.

Meet the first supersport bike that's also a BMW. Built to deliver performance beyond imagination. Power-to-weight ratio is a class-leading 0.95 horsepower (0.7 kilowatts) per kilogram. Fully adaptable high-precision running gear gives total control.

It is also available with racing features such as DTC (Dynamic Traction Control), Race ABS and HP gearshift assist. The result is supreme rideability and pure riding enjoyment, on road and racetrack alike. The S 1000 RR. Welcome to planet power.



THE POWER TO KEEP MOVING  
**FORWARDS.**



## THE MOST POWERFUL ENGINE IN THE SUPERSPORT CLASS.

Speed redefined. Acceleration that takes the breath away. 193 horsepower (142 kilowatts) with just one aim in mind – power on tap whenever you need it. It's what the all-new in-line four-cylinder engine of the S 1000 RR was made for. Titanium valves and rocker arms

instead of the usual bucket tappets mean the engine can rev up to over 14,200 rpm, and also help reduce its weight to just 59.8 kilograms. Lighter, more powerful and more compact than any comparable engine, it was made to shave those vital fractions of a second off your lap times.

**CAN'T WAIT TO GET  
TO THE NEXT CORNER.**  
CAN'T WAIT TO GET OUT OF IT.





## **DTC AND RACE ABS.**

The Race ABS on the S 1000 RR means you are free to choose the braking point you really want. Because sometimes the key to speed is how fast you can slow down. Weighing just 2.5 kilograms, Race ABS is the lightest system of its kind. It is switchable, and offers a choice of four modes: Rain, Sport, Race and Slick.

The same goes for DTC (Dynamic Traction Control). This adjusts engine torque to the current level of grip, ensuring optimum traction out of every corner. And giving a sense of security that helps you win races.



The BMW S 1000 RR has undergone the world's toughest testing programme – otherwise known as the WSBK World Superbike Championship Series. BMW Motorrad Motorsport has signed two of the sport's top riders, Troy Corser and Rubén Xaus, and is taking on its superbike rivals at the world's most demanding circuits. The RR has also already claimed pole positions and race victories in the German national superbike championship, and in the Barcelona 24-hour race. By extending its racing activities in this way, BMW Motorrad has brought a new level of performance to the road.

**RACING IS LIFE.**  
ANYTHING THAT HAPPENS BEFORE OR AFTER  
IS JUST WAITING.



S 1000 RR  
**TECHNOLOGY**





## ENGINE



# 59.8 KILOGRAMS OF PURE POWER.

**Four cylinders. A capacity of 999 cc. An output of 193 horsepower (142 kilowatts). Maximum torque of 112 newton-metres. The figures say it all – this is power that leaves you speechless. The all-new in-line four-cylinder engine is the most powerful, the most compact, and, at just 59.8 kilograms, the lightest in its class.**

The S 1000 RR engine features an array of innovations never before seen in a supersport bike. Perhaps the most important of these is the use of rocker arms, rather than conventional bucket tappets, to actuate the valves. This solution was borrowed from the world of motorsport, and is not just 55% lighter than a bucket-tappet design, but also gives lower friction and more precise valve timing.

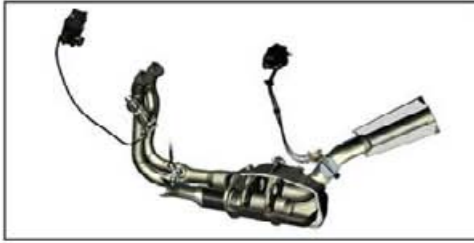
Weight saving is also the reason why the valves are made of titanium, and the spring retainers on the intake side are made of aluminium. The result is higher output, more torque across a wider rev band, lower servicing costs and reduced fuel consumption.

The engine's compact dimensions are made possible by the slimline valve gear, and the use of an intermediate gear with a short inverted-tooth chain to drive the camshaft. As well as reducing both the breadth and height of the engine, this design also allows very high revs – in theory the engine could run much faster than the 14,200 rpm allowed by the rev limiter.

Other superlatives for the S 1000 RR engine include the widest cylinder bore in the supersport class at 80 millimetres, the greatest valve disc diameter for more efficient intake and exhaust strokes, and a bore/stroke ratio of 80:49.7. It all adds up to a maximum output of 193 horsepower (142 kilowatts) at 13,000 rpm, and maximum torque of 112 newton-metres at 9,750 rpm.



The 16 rocker arms are integral to the high revving of the RR engine.



The stainless steel exhaust system is designed to maximize engine performance.

The superior performance of the RR starts with the supply of air to the engine. Here too, the statistics are impressive. A central ram air intake ensures the full force of the wind rush hits the vertical air filter panel directly, which translates into an output boost of as much as 7 horsepower (5.2 kilowatts) at speeds over 200 km/h.

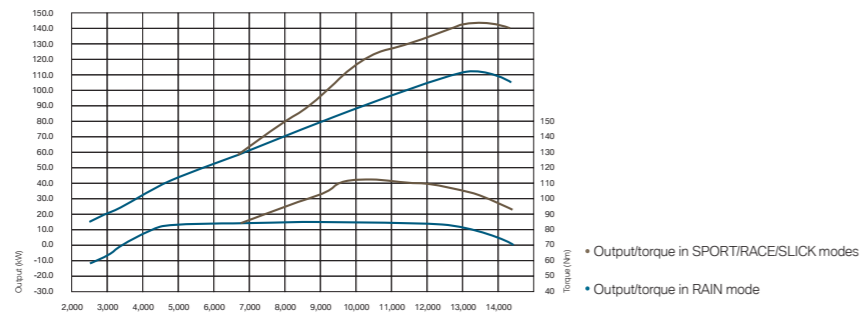
To improve its torque curve, the airbox features sophisticated variable intake technology. A servo motor switches the length of the intake funnel between two settings, depending on the revs, ensuring the engine of the S 1000 RR

always receives the right amount of air. Meanwhile, fully sequential fuel injection based on the throttle mapping ensure the two injectors on each cylinder always deliver precisely the right amount of fuel.

The innovative high-performance exhaust system of the S 1000 RR is made entirely of stainless steel, and follows the 4-2-1 principle. Four headpipes lead into two collectors, one from cylinders 1 and 4, one from cylinders 2 and 3, where a system of balance pipes and flaps ensures optimum torque delivery even at

low revs. The two collector pipes then meet in a large pre-silencer with two three-way catalytic converters. Together with the digital engine electronics, these ensure compliance with strict future emissions regulations (EU4 standard).

Finally, the cleaned exhaust gases pass through a sound flap into the almost indecently good-looking silencer. The noise produced does full justice to every horsepower of the S 1000 RR's output.



Tief Luft holen. Zwischen den asymmetrischen Scheinwerfern fängt der zentrale Ram-Air-Lufteinlass den Fahrtwind ein, um ihn auf direktem Weg in Leistung zu verwandeln.



A long double swing-arm at the rear helps improve traction.



## SUSPENSION

# PRECISION RIGHT UP TO THE LIMIT.



**Every bit of tarmac is different. Sometimes the surface is new and smooth, other times it is old and uneven. Long, sweeping bends alternate with tight corners. To master all these different variables, you need suspension that can always find the right response.**

The chassis of the S 1000 RR rises to this challenge with a wealth of technical innovations.

1. The stanchion diameter of the front forks is 46 millimetres rather than the 43 millimetres typical in this class of bike, and this results in improved stability under braking and more front-end feedback.

2. The 30-shim cartridge damper with its separate internal piston/cylinder system gives the S 1000 RR more sensitive and dynamic responses, and allows set-up to be adjusted with greater precision.

3. The rear wheel is mounted on an elongated double banana-shaped swing-arm, measuring 593 millimetres in length and made of 2.5-millimetre-thick deep-drawn aluminium. The result is outstanding performance and a very stable rear end, especially when accelerating.

4. The key to performance on the track – and for that matter, in everyday riding too – is finding the right set-up. And ideally, you can adjust the settings in moments, with no tools required except for the ignition key. In this regard, the S 1000 RR sets a new benchmark. The damping can easily be adjusted between 10 clearly numbered settings, with different colours for compression and rebound. BMW Motorrad also provides guidelines on which settings are suitable for which types of riding.





Change settings without taking your hands off the handlebars: the menu controls.



Change gear ten times faster, no declutching required: the optional HP gearshift assist.

## ELECTRONICS



# SMART TECHNOLOGIES THAT CUT LAP TIMES.

**How late should you turn into a corner? And how soon are you out of it? The RR doesn't answer these questions with abstract theory, but with hard facts. It is the first supersport bike to offer optional Race ABS, DTC (Dynamic Traction Control) and HP gearshift assist, with a slipper clutch as standard.**

The E-Gas electronic throttle control system allows the throttle responses of the S 1000 RR to be adjusted on the move, without riders even having to take their hands off the handlebars.

E-Gas, DTC and Race ABS can all be switched between four modes: Rain, Sport, Race and Slick. Rain is intended for use on wet or low-grip surfaces, and reduces the maximum output of the S 1000 RR to 150 horsepower (110 kilowatts). Sport is for use on fast roads, Race for track use, and Slick for track use with slick tyres. For safety reasons this last setting requires an electronic key (inserted under the seat) for activation. DTC ensures optimum

performance at all times, and safer acceleration with better traction. Riders can switch the system on and off at will.

Even experienced superbike race riders have been blown away by what DTC can do. It reduces rear wheelspin, increases traction when the frictional coefficient is low, improves stability when the frictional coefficient spikes, and enhances safety on low-grip surfaces.

In short, Dynamic Traction Control does exactly what it was intended to – it takes performance on the racetrack to a whole new level.

And the RR's already-staggering acceleration can be enhanced still further with the optional HP gearshift assist. This allows the six-speed gearbox to change up with virtually no discernible interruption to the flow of power to the wheels. It cuts off the fuel supply and switches off the spark plugs for a few fraction of a second (between 60 and 70 milliseconds, compared to between 600 and 700 milliseconds with the standard transmission), meaning the rider does not need to use the clutch or close the throttle – gaining those all-important fractions of a second, and delivering truly seamless acceleration.

The S 1000 RR is the only supersport bike available with Race ABS and DTC in combination.

Mode	Rain	Sport	Race	Slick	DTC off	DTC matrix
Function						With each mode, from Rain to Slick, the intervention parameters are set progressively higher and a greater degree of wheel slip is permitted.
Wheelie protection	x	x	x	off/5 sec. <23°*	off	

\* No wheelie control.



What goes up must come down – and that applies to speed as well. This is where the optional Race ABS and DTC come into their own (DTC only available in conjunction with Race ABS). This is the first time these two systems have featured together on a supersport bike, and both can be switched on or off at the touch of a button. Together they weight less than 2.5 kilograms, lighter than any competitor system.

BMW Motorrad has more than 20 years' experience of building ABS systems, and Race ABS draws on all of this. It has been designed especially for a supersport bike, and compared to a conventional motorcycle ABS system, it offers optimized braking performance, better feedback due to more precise servo control impulses, and the ability to switch between Rain, Sport, Race and Slick modes. This is an

ultra high-end system, but with surprisingly low-end installation and maintenance costs.

Stopping power is applied to the wheels by Brembo four-piston monobloc calipers with 320-millimetre double brake discs at the front, and a single-piston floating caliper with a 220-millimetre disc at the rear (both discs are five millimetres in thickness). The handbrake lever actuates the front double disc brake, but applies only lighter braking pressure at the rear (on models with ABS), while the foot lever only actuates the rear-wheel brake.

In Race and Slick modes, rear-wheel lift detection does not intervene, so as to minimize braking distances. In Slick mode, Race ABS allows skilful riders to use controlled rear-wheel drift, without foregoing the benefits of front-wheel ABS.

The S 1000 RR also benefits from a multi-disc wet slipper clutch as standard, which prevents the rear wheel from hopping during fast downshifts.

The rider of the S 1000 RR can control DTC, Race ABS and the E-Gas power mode easily, intuitively and safely via the menu navigation. Two buttons conveniently located on the left and right-hand grips call up whatever information the rider needs in the easy-to-read display: rev count, speed, programmable gearshift prompt LEDs (which can also be used to achieve optimum racing starts using launch control), the lap timer, fastest lap, brake usage, throttle percentage, gearshift log for each lap and the current rider aid settings.

However, all the technology crammed into the motorcycle never distracts you from the thing it was intended to enhance – the sheer joy of riding the S 1000 RR.

## POWER IN EVERY LAST DETAIL.

The dynamic lines of the S 1000 RR cut through the air like an arrow. All the way from the aggressively styled front fairing, which reaches down almost to the ground, to the high, angular rear end, the RR is 100% BMW Motorrad – not a line too many, not a line too few.

One glance at the front end is enough to tell you that the S 1000 RR is not bound by convention. Asymmetry is the order of the day. On the left is a large, dynamically shaped main headlight, designed to illuminate as wide a swathe of the road ahead as possible. To the right is a smaller high-beam headlight, giving a more targeted beam that reaches further into the distance. Reflectors are hardly required,

meaning the S 1000 RR saves 300 grams of excess weight. Between the two headlights is the central ram air intake, which divides the front of the S 1000 RR into two halves – the so-called “split face” design. And above this is the windshield, incorporating two holes on either side to reduce air turbulence around the rider's head.

On the right-hand side of the motorcycle, the three shark gills leap to the eye, while the corresponding point on the left-hand side features a large radiator outflow port, where hot air escapes into the atmosphere to ensure the engine does not overheat. The tank of the S 1000 RR is the only single-skin tank in its class, and weighs 1.5 kilograms less than a normal supersport fuel tank.

The strikingly styled rear with its sawtooth lower edge rises up at a steep angle. Above it, the tapered LED twin tipped taillight is the perfect complement to the split-face front end and the twin tipped engine spoiler.

Sit on the S 1000 RR, and straight away, the ergonomics feel just right. Its compact dimensions invite you to lean over hard into corners, and make handling very easy.

The slimline styling is reflected on the scales as well. The RR has a dry weight of just 183 kilograms, and even when fully fuelled, it only weighs 204 kilograms. But this is hardly surprising, when you look at lightweight design features like the die-cast aluminium 10-spoke wheels.

No production motorcycle looks as much like a racing bike as the S 1000 RR. And indeed, it is designed in such a way that it can easily be converted for track use. The number plate holder can be dismantled by taking out a plug and undoing three screws, revealing the sawtooth design of the lower edge of the rear bodywork. And the pillion passenger foot pegs, front indicators and wing mirrors are all likewise easily removed.

And now it's time to hit the track. On a 1,000-cc supersport bike that's even quicker than it looks. The RR. Welcome to planet power.



Stylish and functional. The gills effectively route hot air away from the radiator.



All most road users ever see of the RR: the LED twin tipped taillight.



## EQUIPMENT

### Optional equipment

#### Race ABS

Delivering maximum stopping power, yet weighing just 1.5 kilograms, Race ABS is ideal for racing use.

#### DTC and Race ABS

More effective braking, leading to faster acceleration. Switchable, precisely controllable and weighing just 2.5 kilograms, it has won over even hardened racing riders.

#### HP gearshift assist

For seamless acceleration. Gear changes are ten times faster than with the standard transmission. Riders can upshift through the six-speed gearbox without declutching. The spark plugs and fuel supply are shut off for a few hundredths of a second, saving valuable time.



#### Anti-theft alarm system

If anyone tries to move the RR who shouldn't do, visual and audible warnings will alert passers-by.

### Accessories

#### High Performance foot pegs for rider and pillion passenger

The CNC-milled HP foot pegs are as functional as they are stylish. Fully adjustable, they let the rider achieve an ergonomically perfect position for maximum comfort and performance.



#### Pure racing.

For track use only, your BMW Motorrad dealer can offer a range of non-street-legal racing accessories made by Alpha Racing. These include fibreglass and carbon body panels, suspension components, forged rims, and 2D data recording equipment with a dashboard, as well as merchandise products.

#### Tinted/clear high/tinted high windshields

The three optional windshields offer cool looks and improved protection against the wind, particularly in the case of the high versions. All three have been optimized for aerodynamic performance.



#### Akrapović® sport silencer

Make every ride on the S 1000 RR a journey in sound, with the Akrapović® sport silencer. As well as delivering an almost symphonic engine note, it also looks the part, with its carbon elements and laser-etched Akrapović® logo.



## CUSTOMIZATION WITH CHARACTER.

Thought things couldn't get any better? Think again. A range of sophisticated optional equipment and accessories lets you put the finishing touches to your S 1000 RR, to suit your personal taste and riding style.



### High Performance carbon components

Stylish, dynamic, distinctive and strong, every High Performance Part is a miniature masterpiece of engineering. This is the closest to perfection that you can get on a motorcycle. The components listed below are made of lightweight carbon, and combine striking looks with absolute state-of-the-art technology:

- HP carbon mudguard, front/rear
- HP carbon badge mounting
- HP carbon engine spoiler
- HP carbon seat hump cover
- HP carbon tank trim
- HP carbon chain guard
- HP carbon heel guard, left/right

### Other accessories

- HP clutch and brake lever (folding)
- Tankbag
- Rear bag
- LED indicators
- Sport stands





Safe and stylish with it: the RR leather one-piece suit is the perfect attire for S 1000 RR riders.



RIDER EQUIPMENT

SKILLS TRAINING

# APPAREL FOR UNBEATABLE PERFORMANCE.

To get maximum performance out of your S 1000 RR in maximum safety, then you need equipment that you can rely on through every corner. And here too, BMW Motorrad offers products of uncompromising quality, from the Sport Integral helmet down to the racing boots. This is racing apparel that is equal to even the power of the RR.



Suit also available in Blue/White/Red.

# CONTROL IS EVERYTHING.

The S 1000 RR is a motorcycle bred for the racetrack, and we expect all owners will want to experience the RR in this environment.

To ensure they can do this in a safe way, BMW Motorrad UK is planning a range of track activities for S 1000 RR riders within our World of BMW activity programme. BMW Track Skills will be aimed at track day novices and those with limited experience of track riding, and will take place at race circuits around the UK.

Topics covered by the instructors will include bike preparation, rider equipment, on-track safety procedures, cornering techniques and braking points.

For the latest information, please refer to the World of BMW section on the website at [www.bmw-motorrad.co.uk](http://www.bmw-motorrad.co.uk). Alternatively, call 08000 131 282.

## COLOURS AND TECHNICAL DATA

# LOOKS THAT SIMPLY OOZE POWER.

The colour schemes for the S 1000 RR make use of the striking contrasts provided by the black frame, the thin rims and the silencer. Combined with a double swing-arm in aluminium or Ostra Grey and the use of contrasting colours on the fuel tank and airbox cover, they give the motorcycle an extremely dynamic appearance.

Acid Green Metallic:  
makes a bold statement.

Mineral Silver Metallic:  
tank, swing-arm and rims  
in contrasting Ostra Grey.

Thunder Grey Metallic:  
a walk on the dark side.

Inspired by the racing livery:  
Alpine White, Magma Red and  
Lupin Blue with metallic highlights.

### ENGINE

<b>Type</b>	Water/oil-cooled in-line four-cylinder four-stroke engine, four titanium valves per cylinder, double overhead camshaft
<b>Bore x stroke</b>	80 mm x 49.7 mm
<b>Capacity</b>	999 cc
<b>Max. output</b>	193 hp (142 kW) at 13,000 rpm
<b>Max. torque</b>	112 Nm at 9,750 rpm
<b>Compression ratio</b>	13.0:1
<b>Fuel/engine management</b>	BMS-K-P electronic engine management with knock control
<b>Emission control</b>	2 regulated 3-way catalytic converters, compliant with EU4 emission standard, with regulated balance pipe valves and sound flaps

### PERFORMANCE/FUEL CONSUMPTION

<b>Max. speed</b>	Over 200 km/h
<b>Fuel consumption per 100 km at a constant 90 km/h</b>	5.7 litres
<b>Fuel consumption per 100 km at a constant 120 km/h</b>	5.9 litres
<b>Fuel type</b>	95–98-octane (RON) super plus unleaded

### ELECTRICS

<b>Alternator</b>	350-W three-phase generator
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### TRANSMISSION

<b>Clutch</b>	Mechanically operated multidisc wet slider clutch
<b>Gears</b>	Six-speed sequential gearbox with spur gears, HP gearshift assist optional
<b>Drive</b>	Chain

Dimensions refer to unladen motorcycles as per DIN standard definition.

(1) Filled with all operating fluids, fuelled to 100% of usable tank capacity.

(2) As defined in EU directive 93/93/EEC, filled with all operating fluids, fuelled to at least 90% of usable tank capacity.

(3) Unladen weight without operating fluids.

### CHASSIS/BRAKES

<b>Frame</b>	Aluminium alloy bridge-type frame
<b>Suspension, front</b>	Upside-down telescopic forks, stanchion diameter 46 mm
<b>Suspension, rear</b>	Double swing-arm, central spring strut, high and low-speed rebound and compression damping settings
<b>Travel, front/rear</b>	120 mm/130 mm
<b>Wheelbase</b>	1,432 mm
<b>Castor</b>	95.9 mm
<b>Steering head angle</b>	66.1°
<b>Wheels</b>	Cast aluminium
<b>Rim dimensions, front</b>	3.50 x 17"
<b>Rim dimensions, rear</b>	6.00 x 17"
<b>Tyre, front</b>	120/70 ZR 17
<b>Tyre, rear</b>	190/55 ZR 17
<b>Brake, front</b>	Double disc brake, radial-mounted four-piston fixed caliper, diameter 320 mm, thickness 5 mm
<b>Brake, rear</b>	Hydraulically actuated single-disc brake, single-piston floating caliper, diameter 220 mm, thickness 5 mm
<b>Race ABS</b>	BMW Motorrad Race ABS switchable between 4 modes: Rain, Sport, Race, Slick (optional)
<b>DTC and Race ABS</b>	DTC (Dynamic Traction Control) switchable between 4 modes: Rain, Sport, Race, Slick (optional, only in conjunction with Race ABS)

### DIMENSIONS/WEIGHT

<b>Seat height</b>	820 mm
<b>Rider step length</b>	1,810 mm
<b>Weight, fully fuelled (1)</b>	204 kg (206.5 kg with DTC and Race ABS)
<b>DIN unladen weight, road-ready (2)</b>	203 kg
<b>Dry weight (3)</b>	183 kg
<b>Max. permitted weight</b>	405 kg
<b>Max. load (with standard equipment)</b>	202 kg
<b>Usable tank capacity</b>	17.5 litres
<b>Of which reserve</b>	Approx. 4 litres
<b>Length</b>	2,056 mm
<b>Height (excluding mirrors)</b>	1,138 mm
<b>Width (inc. mirrors)</b>	826 mm

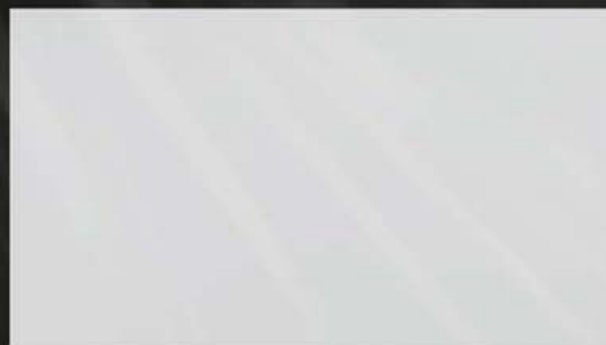
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S 1000 RR

The Ultimate  
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**RR**  
*S1000*



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