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1. Overall concept. Short version.



The new BMW G 310 R – the BMW roadster under 500 cc.

One cylinder, low weight, powerful dynamic performance – the new BMW G 310 R embodies the pure essence of a BMW roadster: it has neither too little nor too much of anything. Pragmatic in the best sense of the word, it offers precisely what is needed – for dynamic performance and comfort, both in town and out in the country. The BMW G 310 R takes these essential qualities into a capacity segment that is new to BMW Motorrad. As a genuine BMW roadster it masters a range of disciplines: it is just as happy winding its way nimbly and flexibly through the narrow streets of a city as it is travelling supremely and powerfully along country roads. And thanks to its exceptionally low level of fuel consumption and a relaxed, comfortable seating position, it offers the welcome capability of being able to cover a long distance at a time.

At home on the roads of the world.

Newly conceived from scratch, the G 310 R represents everything BMW Motorrad stands for: innovation, quality and of course many years of carefree partnership with its owner. Designed specifically for the world market, the BMW G 310 R can run on the most diverse fuel qualities, meets all emission standards and local requirements – and takes the typical BMW premium aspiration to the segment under 500 cc.

Dynamic roadster design with echoes of the S 1000 R.

The powerfully expressive design of the BMW G 310 R instantly reveals its agile, dynamic character, making a clear statement within its own segment. It has an unmistakable visual kinship with athletic family members such as the BMW S 1000 R. The small headlamp mask with striking headlamp, dynamically modelled fuel tank trim elements and characteristic roadster proportions with a striking front section and dynamic rear give the BMW G 310 R a mature presence on the road. Precisely modelled surfaces define the dynamic side view. The compact, dynamic proportions and the short wheelbase promise fast changes of direction, while the high rear conveys a lightness that is suggestive of the bike's sporty genes. In spite of the clearly visible naked bike character of the BMW G 310 R, the side surfaces in body colour create a closed silhouette in athletic style. High-end details such as a standard upside-down fork, quality materials, supplementary fittings and excellent workmanship all reflect the finest within the segment, clearly underscoring the premium aspiration of the BMW G 310 R.

Innovative single-cylinder engine for dynamic riding fun and suitability for a broad range of uses worldwide.

The centrepiece of the new BMW G 310 R is a completely newly developed 313 cc liquid-cooled single-cylinder engine with four valves and two overhead camshafts together with electronic fuel injection. The capacity of 313 cc results from a bore of 80 millimetres and a stroke of 62.1 millimetres.

The striking feature of the engine is its backward-tilted cylinder in open-deck design with the cylinder head turned by 180 degrees, making it possible to position the intake tract at the front, viewed in the direction of travel. With an output of 25 kW at 9 500 rpm and a maximum torque of 28 Nm at 7 500 rpm, the engine of the new G 310 R is a very dynamic partner in conjunction with the low unladen weight of 158.5 kilograms according to DIN.

Sophisticated ergonomics and an easy ride response.

The new G 310 R offers a markedly relaxed seating position for relaxed, stress-free and easy-going motorcycling. As is characteristic of BMW Motorrad, all switches and controls are simple and secure to handle. Great importance was attached to easy and safe operation, taking into account the most diverse rider anatomies.

It banks with ultimate agility yet always remains neutral and predictable. It masters lengthy bends and fast passages with directional stability, displaying athletic talent without any loss of comfort. Extremely compact and with a broad spectrum ranging from comfortable to sporty and dynamic, the new G 310 R simply opens up a whole new world of experience in its segment when it comes to ride response.

Rigid tubular steel frame, upside-down fork and long swinging arm for a high degree of ride stability, precise steering response and sound handling. In terms of suspension, the new G 310 R has a torsionally stiff, highly robust tubular steel frame in grid structure with bolt-on rear frame. The front wheel suspension is taken care of by a solid upside-down fork while at the rear there is an aluminium swinging arm in conjunction with a spring strut that is mounted on it directly.

High-performance brake system, ABS as standard and multifunction instrument cluster.

Like all BMW motorcycles, the new G 310 R is fitted with ABS as standard. It combines a powerful brake system with 2-channel ABS. At the front wheel, a single-disc brake with radially bolted 4-piston fixed caliper and a brake disc diameter of 300 millimetres ensures powerful and stable deceleration. At the rear, this function is performed by a 2-piston floating caliper in conjunction

with a 240-millimetre brake disc. The G 310 R instrument cluster has a large liquid crystal display that offers excellent clarity and a wide range of information.

The highlights of the new BMW G 310 R:

- Innovative liquid-cooled single-cylinder engine with two overhead camshafts, backward-tilted cylinder and intake tract positioned at the front.
- Output 25 kW at 9 500 rpm and a maximum torque of 28 Nm at 7 500 rpm.
- Rigid tubular steel frame, upside-down fork and long swinging arm for a high degree of ride stability, precise steering response and sound handling.
- Tyres 110/70 R 17 at front and 150/60 R 17 at rear.
- High-performance brake system and ABS as standard.
- Sophisticated ergonomics and multifunctional instrument cluster.
- Low seat height of just 785 millimetres.
- Dynamic roadster design with echoes of the S 1000 R.
- Developed in Munich by BMW Motorrad – produced in India by cooperation partner TVS Motor Company.

2. Technology.



The new BMW G 310 R – the BMW roadster under 500 cc.

One cylinder, low weight, powerful dynamic performance – the BMW G 310 R embodies the pure essence of a BMW roadster: it has neither too little nor too much of anything. Pragmatic in the best sense of the word, it offers precisely what is needed – for dynamic performance and comfort, both in town and out in the country. The BMW G 310 R takes these essential qualities into a capacity segment that is new to BMW Motorrad. As a genuine BMW roadster it masters a range of disciplines. Whether for the daily ride to work or when breaking away from routine: it is just as happy winding its way nimbly and flexibly through the narrow streets of a city as it is travelling supremely and powerfully along country roads. And thanks to its low level of fuel consumption and a relaxed, comfortable seating position, it offers the welcome capability of being able to cover a long distance at a time. Newly conceived from scratch, the G 310 R represents everything BMW Motorrad stands for: innovation, quality and of course many years of carefree partnership with its owner.

Single-cylinder tradition – reinterpreted by BMW Motorrad.

Whether the BMW R 39 – the first ever BMW motorcycle with a single-cylinder engine 90 years ago – the R 25 models or the F 650 series established in the 1990s: easy control, thrilling riding dynamics and high efficiency have always been core qualities of the BMW Motorrad single-cylinder models.

BMW Motorrad now perpetuates this tradition in fresh, cutting-edge style with the G 310 R. Designed as a light, dynamic roadster, it combines athletic talents with solid comfort to make a perfect partner for all situations – due to its low weight, easy controllability and not least an engine that produces lively and vigorous engine power from a single cylinder.

Innovative single-cylinder engine for dynamic riding fun and suitability for a broad range of uses worldwide.

The centrepiece of the new BMW G 310 R is a completely newly developed 313 cc liquid-cooled single-cylinder engine with four valves and two overhead camshafts together with electronic fuel injection. The capacity of 313 cc results from a bore of 80 millimetres and a stroke of 62.1 millimetres.

Designed for the world market and therefore offering compatibility with various fuel qualities, the compression ratio is a comparatively moderate 10.6:1. With an output of 25 kW at 9 500 rpm and a maximum torque of 28 Nm at 7 500 rpm, the engine of the new G 310 R is a very dynamic partner in conjunction with the low unladen weight of 158.5 kilograms according to DIN.

Backward-tilted cylinder and cylinder head turned by 180 degrees for perfect packaging and a high degree of efficiency.

Unlike conventional single-cylinder concepts, the engine of the new G 310 R offers a series of unusual technical solutions. First and foremost, the engine is striking with its backward-tilted cylinder and cylinder head turned by 180 degrees. The intake tract is positioned at the front when viewed in the direction of travel, while the exhaust tract is at the rear. The ignition spark is supplied by a spark plug placed centrally in the combustion chamber.

This configuration not only follows the logic of a straight, power-enhancing supply of fresh fuel-air mixture, it also has positive consequences in terms of the architecture of the bike as a whole. In conjunction with the consecutively positioned transmission shafts, this creates a low centre of gravity that is shifted towards the front wheel as compared to a conventional arrangement. At the same time, this set-up and the preservation of an advantageously short wheelbase allows for a longer swinging arm, thereby ensuring a stable ride response. The result is agile handling, clear feedback from the front wheel and outstanding control.

The engine concept with the intake side at the front makes for a generously sized intake silencer positioned directly behind the steering head and a very short fuel tank. This prevents any excessive sloshing of the fuel back and forth, so undesirable reactions to uncontrolled shifts in weight are avoided.

High-performance valve gear as in the S 1000 RR, DLC-coated engine components and Nikasil cylinder liner.

Fitted with an electric starter motor, the single-cylinder engine of the new G 310 R offers modern, horizontal separation of the engine housing, innovative technical solutions and a selection of high-quality materials. The valve gear with two overhead camshafts is based on that of the S 1000 RR, for example, while very light, highly resistant rocker arms with a very hard DLC coating (Diamond Like Carbon) that minimises friction and wear are responsible for activating the four valves, likewise as in the BMW superbike. The valve angle is 11.2 on the intake side and 13.3 degrees on the exhaust side. The diameter of the intake valves is 33.5 millimetres, that of the exhaust

valves is 27.2 millimetres and that of the intake pipe fuel injection throttle valve is 42 millimetres.

The resilient and low-friction DLC coating is also used for the gudgeon pin. It enables the pin to run directly in the ground connecting rod eye, obviating the need for an additional plain bearing. In conjunction with the low weight of the cast lightweight piston, this results in reduced oscillating masses. The slide bearing for the lower connecting rod eye and the main camshaft bearing is also by no means typical of a single-cylinder engine, offering benefits in terms of space, weight and durability. A low-friction Nikasil coating of the sleeve for the cylinder integrated in the upper half of the engine housing highlights the fact that the BMW Motorrad engineers have endeavoured to combine lightweight construction, fuel efficiency with modern, groundbreaking engine technology.

Effective lubrication and cooling system for maximum reliability, even in adverse conditions.

The vital supply of oil inside the engine is taken care of by a well-established wet sump lubrication system. Here there is a labyrinth of pans inside the oil sump that reliably counters any lack of lubrication during extreme riding manoeuvres.

The liquid cooling system ensures excellent thermal stability, even in very high outdoor temperatures. The coolant circulates through a generously sized radiator positioned underneath the steering head section.

6-speed gearbox, high maximum engine speed and counterbalance shaft for lively dynamic performance and excellent running smoothness.

Power transmission is via a multi-plate wet clutch onto a well-graduated, constant-mesh 6-speed gearbox. The final drive to the rear wheel takes the form of an O-ring chain. With a spontaneous throttle response, lively pulling power, full-blooded engine characteristics and a high maximum engine speed of 10 500 rpm, the new G 310 R delivers very dynamic riding performance figures for excellent riding fun within its class.

What is more, a rotating counterbalance shaft in front of the crankshaft effectively suppresses unpleasant vibrations, thereby ensuring a high level of running smoothness for the single-cylinder segment. Fitted with a closed-loop catalytic converter positioned on the intake side of the rear silencer, the BMW engine control BMS-E2 and a secondary air system make the engine of the new G 310 R extremely environment-friendly, allowing adherence to the EU4 emission standard.

Rigid tubular steel frame and long swinging arm for a high degree of ride stability, precise steering response and light handling.

Extremely compact and with a broad spectrum ranging from comfortable to sporty and dynamic, the new G 310 R opens up a whole new world of experience in its segment when it comes to ride response. It banks with ultimate agility yet always remains neutral and predictable. It masters lengthy bends and fast passages with directional stability, displaying athletic talent without any loss of comfort.

In terms of its suspension, the new G 310 R has a torsionally stiff, highly robust tubular steel frame in grid structure with bolt-on rear frame. Given its good stiffness balance, this provides the basis for excellent ride stability and a precise steering response. The suspension geometry of the G 310 R is designed for easy handling, stability and a neutral cornering response, which makes for maximum riding fun and easy controllability as well as reflecting the bike's active riding character. The wheelbase is 1374 millimetres, the castor is 102.3 millimetres and the steering head angle is 64.9 degrees.

Due to the engine conception and arrangement, the single-section rear-wheel swinging arm made of die-cast aluminium is longer than in conventional designs, though without extending the wheelbase unnecessarily. With its generous length of 650 millimetres, it supports the bike's high level of neutrality, enables exemplary pitch compensation and makes load shift reactions much gentler. In this way, the new G 310 R combines light-footed handling, maximum precision and a high level of ride stability with benefits in terms of suspension and load shift response, too.

Upside-down fork at front and directly mounted spring strut at rear for a broad range of use on all roads.

The ride properties of the G 310 R, characterised by easy handling and a high level of stability, are supported by the balanced suspension/damper set-up of the directly mounted rear spring strut which is adjustable in the spring rest. The progressively wound spring distributes the spring rates in such a way that precisely the desired suspension resistance applies, depending on the position within spring travel: comfortable for everyday riding, with sufficient reserves when travelling in sporty style and tight enough when hard bumps or road hole edges challenge the reserves. The spring travel is 131 millimetres.

The appropriate counterpart to the control, suspension and damping of the rear wheel is to be found in the upside-down fork at the front. With a slider tube diameter of 41 millimetres and generously designed light alloy fork bridges, this provides a highly rigid composite structure for exact control of the front wheel, thus giving the G 310 R a directionally precise and secure

steering response. In conjunction with the perfect set-up of the rear end, it ensures a high level of ride comfort as well as suitability for the most varied road surfaces and therefore a wide range of uses. The spring travel is 140 millimetres.

The new G 310 R is fitted with 5-spoke light alloy die-cast wheels in the sizes 3.0 x 17 inches at front and 4.0 x 17 inches at the rear. The tyre sizes are ample so as to ensure a safe, dynamic ride response in all conditions: 110/70 R 17 at the front and 150/60 R 17 at the rear.

High-performance brake system and ABS as standard for safe braking manoeuvres on poor roads.

Like all BMW motorcycles, the new G 310 R is fitted with ABS as standard. It combines a high-performance brake system with 2-channel ABS for efficient deceleration and short braking distances as well as efficient anti-locking – entirely geared towards optimum riding safety on poor or soiled roads.

At the front wheel, a single-disc brake with radially bolted 4-piston fixed caliper and a brake disc diameter of 300 millimetres ensures powerful and stable deceleration. At the rear, this function is performed by a 2-piston floating caliper in conjunction with a 240-millimetre brake disc. Steel-wrapped brake lines ensures stable pressure levels.

Sophisticated ergonomics for relaxed motorcycling pleasure.

The new G 310 R offers a markedly relaxed seating position for comfortable, stress-free motorcycling that allows for ease and concentration. As is characteristic of BMW Motorrad, all switches and controls are simple and secure to handle. Great importance was attached to simple and safe operation, taking into account the most diverse rider anatomies.

The design of the ergonomic triangle consisting of handlebars, footrests and seat ensures excellent control while also providing very good and comfortable feedback from the contact surfaces on the fuel tank and seat. At higher speeds, the standard windshield also relieves the rider's upper body from the force of the airstream as well as ensuring an even wind flow at the helmet

The low seat height of just 785 millimetres and the short inside leg length ensure that almost every motorcyclist will instantly feel at ease on the G 310 R. Meanwhile shorter or taller riders can draw on the range of BMW Motorrad optional accessories to select a lower variant with a seat height of 760 millimetres or else a higher, particularly comfortable seat at 815 millimetres.

Multifunction instrument panel with a range of features.

The G 310 R instrument cluster has a large liquid crystal display that offers excellent clarity and a wide range of information. The displays include the following: engine speed, road speed, gear, total kilometres, engine temperature, fuel tank level, remaining range, average fuel consumption, average speed, time.

3. Design and colour concept.



Compact, dynamic proportions.

The powerfully expressive design of the BMW G 310 R instantly reveals its agile, dynamic character, making a self-assured statement within its own segment. Reduced to the essentials, the proportions promise straightforward riding fun above all else: the BMW G 310 R is simply a perfect invitation to get on and ride away. This is because the newly developed engine of the BMW G 310 R is characterised by an innovative mounting geometry that signals compactness and agility. What is more, the short wheelbase, low front and high, light rear promise a dynamic, agile riding experience – ideal for manoeuvring in cramped urban traffic.

Despite its compactness, the BMW G 310 R comes over as large and mature within its segment. The small headlamp mask with striking headlamp, the powerful front section and the dynamic rear give the BMW G 310 R a self-assured presence on the road. Seen from the top, too, the BMW G 310 R looks more like a model from a larger capacity segment. The powerful surfaces of the fuel tank give it a clearly defined, muscular look from this angle, too.

Expressive surfaces.

Even when stationary, the precise lines and expressive interplay of light and shade on the side surfaces create an impression of motion and speed. All lines are directed towards the front wheel, thereby underscoring the easy handling of the BMW G 310 R. An especially striking feature here is the side wing contour which protrudes from the fuel tank. Below this, the precisely shaped surfaces echo characteristic elements of higher-capacity roadsters from the BMW Motorrad portfolio, though these are given a clearly distinctive interpretation – such as the side trim that is reminiscent of the S 1000 R.

In spite of the motorcycle's obvious naked bike character, the generous surfaces nonetheless produce a closed, sporty silhouette. Here the large proportion of body colour and the joining of the body parts without visible bolts conveys the high-end quality feel of the BMW G 310 R.

Exclusive highlights.

The uncompromising striving for quality and high-quality solutions implemented down to the last detail reflect the high aspirations

BMW Motorrad is pursuing with the BMW G 310 R. Exclusive highlights from the side view include the standard upside-down fork with golden slider tubes, the likewise gold-coloured brake calipers, and the rear wheel swinging arm. The aluminium swinging arm with detailed modelling and lattice-like design conveys lightness and stability. In keeping with this, the 17" rims with 5-spoke turbine design show just what rims can look like in this segment.

Within the rider's direct field of vision, too, the BMW G 310 R features numerous visual and haptic highlights such as polished embossings and high-end materials. The aluminium fork bridge is elaborately modelled as well as echoing the chiselled look of the footrests and rear wheel swinging arm in its own distinct form. On the fuel tank, a high-gloss "R" engraved in the plastic surface acts as an exclusive emblem signalling the fact that the bike belongs to the roadster segment. A further exclusive touch is added by the likewise high-gloss embossed inscriptions on the headlamp mask and number plate carrier.

Individualisation through a variety of colours and materials.

The BMW G 310 R is available in the three strikingly expressive colour variants Cosmic Black/PolarWhite non-metallic, Strato Blue metallic and the elaborately designed Pearl White metallic. These variants offer a spectrum ranging from sporty and modern right through to elegantly exclusive.

The basic colour variant Cosmic Black/Polar White metallic makes the most of the powerful contrast between black and white. With black as the base colour, white accentuation surfaces emphasise the modern lines of the body parts. In the engine area, additional contrast surfaces in silver add a touch of variety to the overall impression, lending a sense of lightness and modern flair to the side in the lower area.

In Strato Blue metallic, the second basic variant, the BMW G 310 R is presented in radiant blue. Depending on the occasion and the rider's clothing this can give it an elegant, exclusive look or else a touch of sporty flair. The contrast surfaces in Titanium Grey and the silver sections in the area of the engine add variety to the overall impression while also lending a touch of modern appeal. In combination with the gold accentuations of the fork and brake calipers, the general appearance here is one of high quality.

The absolute highlight of the colour range is the top variant Pearl White metallic, subject to an additional charge. (OE). Pearl White is the base colour here – a white with a discreet sparkle effect – against which the BMW motor racing colours of blue and red are applied to create a striking accentuation graphic. The graphic runs from the fork base across the fuel tank and under

the seat. What is more, a painted surface in high-gloss black provides the background for the striking interplay between the graphic and the paint finish on the side trim. Underneath, silver accentuation surfaces lighten up the dark engine area, adding a modern touch to it. The fork tubes and brake calipers provide golden accentuations as a perfect supplement to this colour variant.

4. Production and quality.



Developed in Munich by BMW Motorrad – produced in Bangalore, India by the cooperation partner TVS Motor Company.

The new BMW G 310 R is produced in Bangalore, India by the cooperation partner TVS Motor Company,

India's third largest motorcycle manufacturer with a production volume of some 2.5 million vehicles per year. The company has been committed to sustainability for many years and attaches great importance to adhering to defined social and environmental standards which go far beyond what is common practice in India.

TVS Motor Company is the flagship of the TVS Group, which is made up of more than 90 companies in total. These include numerous firms that enjoy an excellent reputation in the automotive sector as suppliers for well-known car makers. Many of these suppliers from within the TVS Group provide the components for the G 310 R.

Quality management and state-of-the-art production following the standards of the BMW Motorrad plant in Berlin-Spandau.

TVS Motor Company's quality management system has been based on Japanese role models for many years. For the G 310 R, this system was extended to include the requirements and standards specific to BMW Motorrad, and within the area of quality management there are interdisciplinary teams from both companies working in close collaboration.

A dedicated production area has been set aside in the factory for production of the G 310 R. Mechanical production of the engine components is carried out on new, high-quality machine tools made by leading German manufacturers. BMW Motorrad was closely involved in an advisory capacity here and production is set up based on the model of the BMW Motorrad plant in Berlin-Spandau. The engine assembly line is completely new and fitted with cutting-edge automation and testing technology for every stage of the process. All the relevant work stages are monitored and automatically recorded with regard to size accuracy, tolerances and bolt-fitting values. Assembly is carried out in a completely sealed, glazed area which can only be accessed via air locks so as to prevent any dirt from entering. At the end of the

engine assembly line, each engine is put through a test bench run where all relevant parameters are measured including output.

Vehicle assembly is also carried out in a dedicated section of the factory reserved exclusively for BMW Motorrad. Here again, state-of-the-art assembly technology is deployed. The final inspection is performed according to BMW Motorrad standards and includes electronic functional testing as well as a final run on the roller test bench for every motorcycle. The roller test bench is also completely new and set up according to Berlin standards.

Furthermore, staff were specially selected and trained by TVS for production and assembly. Additional training programs were held for assembly workers together with colleagues from the BMW Motorrad plant in Berlin-Spandau over a period of more than a year prior to the start of serial production. From the very first motorcycle to come off the production line in India, they have also contributed to the high assembly standards and heightened quality awareness. All in all, production of the new BMW G 310 R is subject to the same quality criteria that apply to production at the BMW Motorrad plant in Berlin-Spandau.

PRICE: R62, 990

6. Technical Specifications.

BMW G 310 R		
Engine		
Capacity	cc	313
Bore/stroke	mm	80/62
Output	kW	25
at engine speed	rpm	9500
Torque	Nm	28
at engine speed	rpm	7500
Type		liquid-cooled single-cylinder engine
No. of cylinders		1
Compression/fuel		10.6:1 / premium unleaded (95 RON)
Valve/accelerator actuation		DOHC
Valves per cylinder		4
Ø intake/outlet	mm	33.5/27.2
Ø Throttle valves	mm	42
Engine control		BMS-E2
Emission control		closed-loop 3-way catalytic converter
Electrical system		
Alternator	W	330
Battery	V/Ah	12/8
Headlamp	W	H4 12 V 60/55 W
Starter	kW	0.5
Power transmission – gearbox		
Clutch		Multi-plate wet clutch
Gearbox		constant-mesh 6-speed gearbox
Primary ratio		3.083
Transmission ratios	I	3.000
	II	2.063
	III	1.588
	IV	1.286
	V	1.095
	VI	0.955
Rear wheel drive		O-ring chain
Suspension		
Frame construction type		Tubular steel frame in grid structure with bolt-on rear frame
Front wheel suspension		Telescopic fork, Ø 41 mm
Rear wheel suspension		Aluminium swinging arm in conjunction with a directly mounted spring strut
Total spring travel, front/rear	mm	140/131
Wheel castor	mm	102.3
Wheelbase	mm	1374
Steering head angle	°	64.9
Brakes	front	Single-disc brake Ø 300 mm
	rear	Single-disc brake Ø 240 mm
ABS		BMW Motorrad ABS



BMW G 310 R		
Wheels		5-spoke light alloy die-cast
	front	3.0 x 17"
	rear	4.0 x 17"
Tyres	front	110/70 R 17
	rear	150/60 R 17
Dimensions and weights		
Total length	mm	1988
Total width with mirrors	mm	896
Seat height	mm	785
DIN unladen weight, road ready	kg	158.5
Permitted total weight	kg	345
Fuel tank capacity	l	11
Performance figures		
Fuel consumption (WMTC)	l/100 km	3.33
Top speed	km/h	145

