

# The new BMW R nineT /5. Table of contents.



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# 1. Overall concept. (Short version)



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## **R nineT /5: Exclusive model to mark the 50th anniversary of the /5 series and 50 years of BMW Motorrad production in Berlin Spandau.**

Classic, authentic, original – and air-cooled. This is what the BMW R nineT models stand for. The new R nineT /5 provides another addition to the successful BMW Motorrad Heritage world of experience, this time with special historical roots: the model marks the 50th anniversary of the legendary /5 series and at the same time the start of BMW Motorrad production at the BMW plant in Berlin Spandau 50 years ago.

## **A look back to the past with the future in mind: the /5 series as a historical archetype.**

BMW automobile production increased enormously in the 1960s, so the decision was taken to build BMW motorcycles in Berlin. Operations got underway in 1969 with some 400 staff and a new series: the /5 models R 50/5, R 60/5 and R 75/5. With a completely newly developed chassis and engine along with a fresh, modern design, BMW made a lasting impact on the expanding motorcycle market of the time. The /5 models saw instant success, thrilling customers with a combination of riding dynamics on country roads and travel comfort.

The new BMW motorcycles perfectly matched an age defined by upheaval, rock music and a powerful sense of freedom. As a reflection of this, a wide range of bold, bright body colours was available for the new /5 models.

The BMW Motorrad anniversary model R nineT /5 not only marks the 50th anniversary of the /5 series and 50 years of BMW Motorrad production in Berlin Spandau, however. Produced in limited numbers and fitted as standard with heated grips, the R nineT /5 also rekindles memories of that bygone era, bringing the /5 models back to life with nostalgic charm but in a contemporary form.

**Painstaking details in the style of the /5 models for a harmonious overall package.**

The anniversary model features contemporary knee pads, for example, as well as an elaborate body finish in Lupine Blue metallic with smoke effect and double line marking on the fuel tank, which bears the anniversary emblem. Chrome for the rear mirrors and exhaust manifold are likewise hark back to the historical archetype, as does the double seat contoured in the style of the /5 with cross-embossing on the cover, grab straps and white piping as well as gaiters on the telescopic fork.

The coating of the engine, gearbox, fork slider tubes, wheel hubs and spokes in Aluminium Silver also stylishly evokes the legendary /5 models, as do the components finished in black such as the frame and the propeller shaft casing.

**Highlights of the BMW R nineT /5:**

- Potent boxer engine with a capacity of 1 170 cc and an output of 81 kW (110 hp) that meets EU4 requirements.
- Spoke wheels, 3.5 x 17 inches at front and 5.5 x 17 inches at rear.
- 320-millimetre twin disc brake at the front.
- ABS as standard.
- ASC (Automatic Stability Control) as standard.
- Heated grips as standard.
- 2-in-1 exhaust system made of stainless steel with chrome manifolds and polished rear silencer.
- Chrome mirrors.
- Fuel tank with knee pads and elaborate paint finish in Lupine Blue metallic with smoke effect and double line marking.

- Front mudguard in Lupine Blue metallic with double line marking.
- Double seat with chrome decorative elements and white piping, evoking the historic predecessor.
- Fork slider tubes, wheel hubs and spokes in Aluminium Silver.
- Telescopic fork with gaiters.
- High-end details such as fork bridges and footrests in forged, clear anodised aluminium.
- Limited edition.



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## 2. Technology.



### **The BMW R nineT /5: reminiscence and a modern interpretation of the legendary /5 classic of 1969.**

In the R nineT /5, BMW Motorrad rekindles the tradition and flair of the BMW /5 models. In doing so, the roadster combines the classic retro charm of its historic archetype with innovative modern technology – now as then with the longitudinally installed air-cooled 2-cylinder boxer engine – now established for more than nine decades – and with power transmission via universal-shaft drive. Like no other motorcycle engine, it enthralled riders with its unmistakably authentic design, its powerful torque and its unique, throaty sound.

### **Distinctive, air-cooled boxer engine for classic motorcycle enjoyment and dynamic riding fun.**

The BMW R nineT /5 features the air/oil-cooled boxer engine familiar from other R nineT models with 101-millimetre bore, 73-millimetre stroke and therefore a capacity of 1 170 cc. Its peak output is 81 kW (110 hp) at 7 750 rpm and the maximum torque of 116 Nm goes on stream at 6 000 rpm, with a maximum engine speed of 8 500 rpm.

Control of the four valves is via double overhead chain-driven camshafts (DOHC) per cylinder and valve activation is taken care of by very light and therefore speed-resistant rocker arms. Valve clearance compensation is by means of light hemispherical shims. Power transmission is via the well-established 6-speed gearbox and universal-shaft drive.

### **Exhaust system with polished rear silencer for authentic 1970s flair and a classic boxer sound.**

With a view to echoing its classic counterpart, the R nineT /5 is fitted with an exhaust system featuring the polished rear silencer of the R nineT Racer as well as chrome manifolds.

It closely hugs the wiry stature of the R nineT /5, stylishly underscoring the slim look that was typical of the /5 models 50 years ago. A particularly high-end technical accentuation is provided by the exhaust end section



in natural, matted stainless steel whose shape recalls the conical end sections of the /5 silencers.

The exhaust system has an electric servomotor and an acoustic valve controlled by opening and closing cables so as to meet the desire for a sonorous boxer sound while still complying with the noise emissions directive ECE R41-04. What is more, a large-size catalytic converter ensures even more effective exhaust gas cleaning.

The range of Original BMW Motorrad Accessories also gives customers a range of individualisation options as part of the exhaust concept so as to be able to adapt the authentic character of the R nineT /5 according to personal taste.

### **Distinctive frame concept with geometry designed for agility and riding dynamics.**

Like the other R nineT models, the R nineT /5 also has a particular frame concept in the form of a steel tubular space frame in modular structure. This comprises three components: a main front section, a rear section with integrated end piece and a passenger frame. These three frame components are bolted together. Due to the removable passenger frame, the R nineT /5 also offers plenty of scope to change the look and therefore also the character of the BMW boxer entirely according to personal taste.

The chassis geometry of the R nineT /5 does justice to the bike's dynamic, active riding ambitions, too. It is designed for a light-footed handling, neutral cornering response and a high level of directional stability, thus promising riding fun on winding country roads in particular. The wheelbase of the R nineT /5 is 1 493 millimetres, the castor 105.0 millimetres and the steering head angle 63.4 degrees.

### **Purist motorcycle feeling that gets under your skin – solo or with a passenger.**

Like the /5 models 50 years ago, the R nineT /5 is a thrill to ride not just solo but also with a pillion passenger thanks to the seat which authentically recreates its historical archetype. The seat height for the rider is approx. 825 mm, which in conjunction with a narrow inside leg width provides pleasant seat comfort for both rider and passenger.

### **Classic telescopic fork at front, Paralever at rear and spoke wheels.**

Front wheel control in the R nineT /5 is decidedly classic in style with a conventionally designed telescopic fork featuring a fork tube diameter of 43 millimetres and 125 millimetres of spring travel. Rear wheel control is

taken care of in well-proven fashion by means of a Paralever single-sided swinging arm, as used in other boxer models belonging to the BMW Motorrad Heritage world of experience. A central spring strut with the spring in a black finish is responsible for suspension and damping, offering a spring travel of 120 millimetres. The spring rest is adjustable and rebound-stage damping can also be set to continuously variable levels.

For a particularly authentic, classic appearance entirely in the style of the R 75/5, the R nineT /5 has wire spoke wheels in the dimensions 3.5 x 17 inches at the front and 5.5 x 17 inches at the rear, with tyres in the sizes 120/70 ZR 17 and 180/55 ZR 17 respectively. 4-piston brake calipers at the front along with floating brake discs with a diameter of 320 millimetres and ABS ensure secure deceleration. ASC (Automatic Stability Control) is available in order to prevent the rear wheel from spinning on slippery roads.

### 3. Design and colour concept.



#### **The BMW R nineT /5: stylistically authentic homage to the /5 series.**

Anyone who was around when the motorcycle was rediscovered as a vehicle of fun and leisure in the 1970s – resulting in a boom in the motorcycle market – will have vivid memories of the innovative BMW /5 series. Numerous motorcycle fans from those days owned /5 models – especially the top model R 75/5 – for years if not decades, often travelling several hundreds of thousands of kilometres on them. For others, the R 75/5 simply remained the dream bike of their youth.

With the new R nineT /5, BMW Motorrad brings this era back to life, masterfully drawing on stylistic elements modelled on the historic predecessor model that combine a highly distinctive character with nostalgic flair. No frills, authentically designed and with all the attributes that define the /5 series – this is how the R nineT /5 comes across not just in terms of technology but also from the point of view of its paint finishes and styling.

As in all models of the BMW Motorrad Heritage world of experience, one key design objective was to stylishly translate the legendary /5 look to the present day by means of cleverly designed elements. As a result, the new R nineT /5 is characterised by a well-balanced blend of classic and modern motorcycle design elements, combined with high-end surfaces and meticulous craftsmanship.

#### **Fuel tank with knee pads and elaborate paint finish in Lupine Blue metallic with smoke effect and double line marking.**

This applies to the elaborately finished 17-litre sheet steel fuel tank, for example. Its basic finish in Lupine Blue metallic and the laterally mounted knee pads already spontaneously rekindle memories of the historic role model – the BMW /5 series motorcycles. The particularly high-end finish in hand-crafted quality is reflected not just in the multiple masking and finish on the fuel tank.



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The smoke effect in Deep Sea Blue metallic is also applied purely by hand, serving as a finely detailed underlay for the double line markings applied in Lightwhite. The same double line markings also adorned the R 75/5 in its day and they are also featured on the front mudguard of the R nineT /5, likewise finished in Lupine Blue metallic. Finally, the anniversary character of the R nineT /5 is emphasised with a “50 Jahre /5” emblem on the top of the fuel tank.

### **Double seat with chrome decorative elements and white piping as in the historic predecessor model.**

50 years ago, the /5 models were not just characterised by their dynamic, active driving flair. With their ample spring travel and comfortable double seat, they also offered outstanding ride comfort, providing an enjoyable riding experience whether alone or with a passenger.

BMW Motorrad has masterfully translated the typical seat design of the BMW /5 motorcycles to the contemporary era – complete with the slightly recessed seat surfaces for rider and passenger and the cross-embossing of the black seat cover. The BMW logo at the rear and the centrally positioned grab straps also offer a clear echo of the original /5 – as do the distinct white piping in the passenger area and the high-end decorative chrome strips attached on the side.

### **High-end details and harmonious colour matching.**

In addition, there are a range of other details that give the R nineT /5 an aura of impressive quality and nostalgic charm. Chrome mirrors offer a skilfully showcased reminder of the legendary archetypes, for example, while brushed aluminium on the covers of the battery and air filter box create a fascinating surface contrast.

The gaiters on the telescopic fork are a feature that has been clearly borrowed from the historic original. 50 years ago their function was to provide protection for the hard chrome-plated surface of the slider tubes – from stone chip, for example, as well as from fine-grain soiling that continues to cause long-term shaft seal blockage to this day.

The finish selected for the fork slider tubes is also reminiscent of the /5 models. They are coated in Aluminium Silver, as are the wheel hubs and spokes, engine and gearbox. The black coated frame and black propeller shaft casing are also perfectly showcased with a view to bringing the historical originals back to life.

An appropriate nod to the past is also provided by the sheet steel casing of the circular headlamp, which is finished in black just like its historic reference model. In corresponding style, the R nineT /5 is fitted with white turn indicators and an LED rear light.

### **Modern functionality and a harmonious choice of materials.**

The new R nineT /5's masterfully showcased blend of nostalgic flair and modern technology is to be seen in numerous details. And the anniversary model always opts for a different solution than did the R 75/5 once did where it makes sense from a technological point of view and taking into account modern production methods. This can be seen in various chassis components which in the R 75/5 were made of heavy steel and today consist of aluminium.

The fork bridges and footrests are now high-end lightweight aluminium forged parts, for example, with a surface that has been glass-bead blasted and then given a clear anodised finish. Other aluminium features include the double-buttet tubing handlebars and clamp.

### **Console back then – instrument cluster today.**

Even 50 years ago, BMW showed itself to be a pioneer of modern instrumentation in the R 75/5. The lamp bowl of the headlamp housed a circular instrument that combined speedometer and engine speed display in a single unit, for example. This individual BMW solution was characterised by space-saving installation and low weight while still ensuring yet excellent readability.

What was then a state-of-the-art information centre is replaced today by contemporary technology in the R nineT /5. The instrument cluster – likewise designed as a circular unit – features an analog speedometer display and integrated indicator lamps, harmoniously matching the classic, reduced appearance of the R nineT /5. Housed in a high-quality metal casing, its simple functionality is entirely dedicated to the principle of reduction to the essentials – the very approach that was so typical of the /5 models 50 years ago. If desired, the range of BMW Motorrad special accessories allows the addition of a classic engine speed counter with analog display. In addition, the R nineT /5 is fitted with an LCD display that shows important information such as the time and trip distance.

## 4. History.



### **50 years of the BMW /5 series and BMW Motorrad production in Berlin Spandau: two technological and entrepreneurial milestones.**

When BMW automobile production in Munich began to increase rapidly in the mid-1960s, the company decided to shift its BMW motorcycle operations to Berlin. Production started at the BMW plant in Berlin Spandau in 1969, with 400 staff and a daily output of 30 motorcycles.

The launch of the new /5 series in 1969 coincided with the commissioning of the new production facility for BMW motorcycles. In terms of technology, no stone was left unturned: not only did the engine belong to a new era, so did the chassis and design.

In terms of the chassis, there was a new dual-cradle tubular frame made of steel, a swinging arm with two oil pressure struts at the rear and a hydraulically damped telescopic fork at the front. The /5 models' long spring travel, much increased ground clearance as compared to previous BMW Motorrad models and excellent agility found unanimous praise in the motorcycle press as well as among customers. There were also high-end light alloy wheel rims in order to achieve reduced unsprung masses. Meanwhile, amply sized duplex full hub brakes guaranteed reliable and stable deceleration.

The 2-cylinder boxer engine was also completely newly developed, providing an output of 32 hp in the R 50/5, 40 hp in the R 60/5 and 50 hp in the top model, the R 75/5. The engine crankshaft was forged from a single piece: it had slide bearings for the crankshaft and connecting rod bearings – roller bearings had been used in the preceding models. What is more, the camshaft was no longer positioned above the crankshaft but below it, so the pipes for the valve activation tappets were now underneath the light alloy cylinders. Carburetion was taken care of in the R 75/5 by new constant-pressure carburetors with vacuum membrane instead of the previous slide carburetors. This gave the R 75/5 an outstandingly direct throttle response, excellent acceleration and a low level of fuel consumption. As a special comfort feature, the R 75/5 also had an electric starter.

With the /5 models, BMW Motorrad was well equipped to serve the rapidly growing motorcycle in the 1970s. The chassis and engine offered great

potential for further development, thereby offering the prospect of even more powerful and dynamic models to come based on the /5 series.

BMW also made a key contribution to the increasing dynamic of the motorcycle market during this period with the /5 series. People's outlook on life was changing, and the language of advertising was adapted accordingly. In its 1972 advertising campaign, BMW committed clearly and proactively to the motorcycle as a newly discovered source of fun and leisure: "A motorcycle allows us to tap into new dimensions, making the world broader and more colourful. A motorcycle has to be experienced at first hand. Motorcycles will exist as long as there are men who thrive on close contact with sophisticated technology – motorcycles built by BMW."

The boldness of the /5 concept turned out to be effective – and this was quickly rewarded, with production figures at the BMW plant in Berlin growing rapidly: in 1970, as many as 12,287 motorcycles left the factory halls. Producing the /5 series in the still divided city of Berlin, BMW Motorrad was thus able to send out its very own message of individualism and freedom. When the /5 series was discontinued in July 1973, BMW had built a total of 68,956 motorcycles in Berlin, and in that same year the company celebrated "50 years of BMW Motorrad" with the manufacture of the 500,000th BMW motorcycle.



## 5. Equipment program.



BMW Motorrad optional equipment and Original BMW Motorrad Accessories for wide-ranging customisation. An extensive BMW Motorrad program is available to individualise the R nineT /5.

BMW Motorrad optional equipment is supplied directly ex works and integrated in the production process. Original BMW Accessories are installed by the BMW Motorrad dealer or by customers themselves. These are features which can be retrofitted, too.

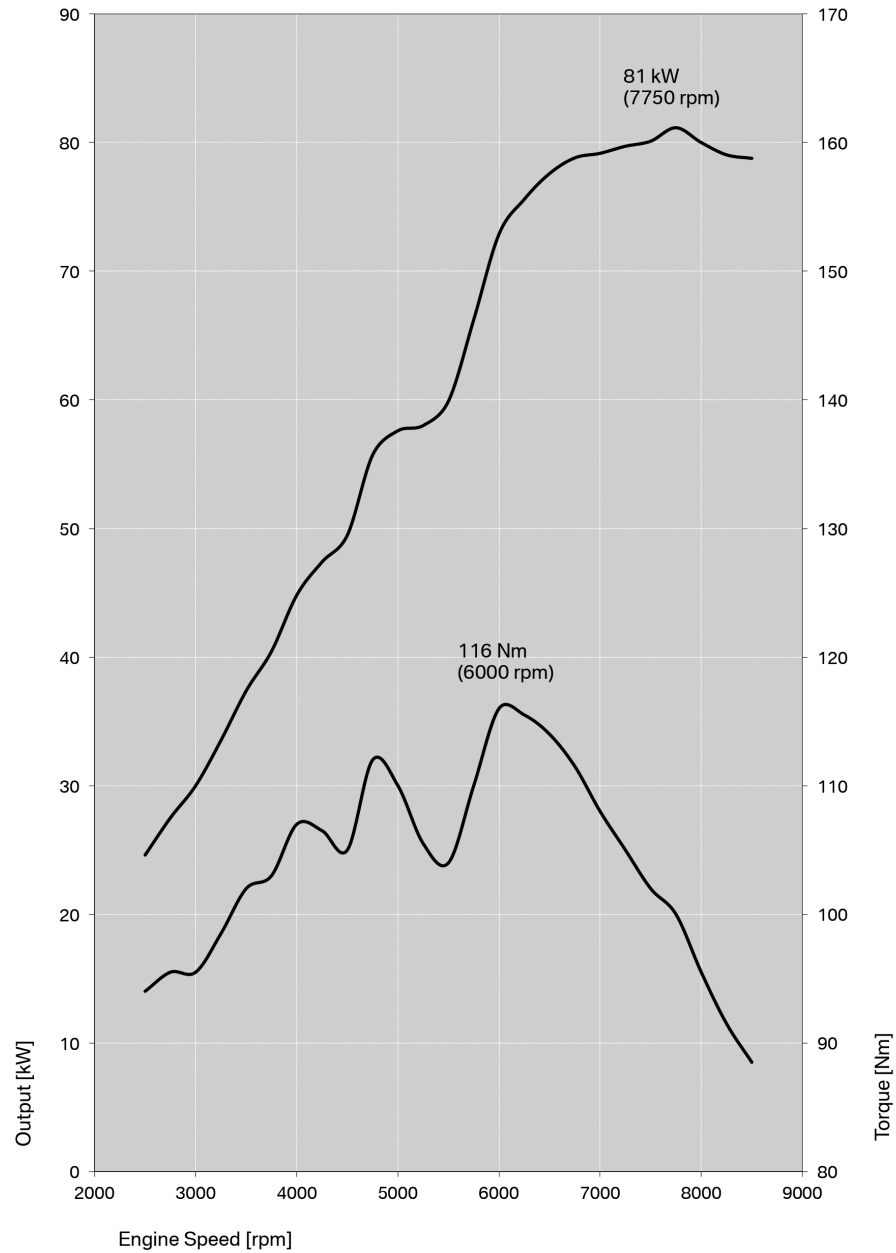
### **Original BMW Motorrad optional equipment.**

- Alarm system.

### **Original BMW Motorrad Accessories.**

- Radiator trim right/left in hand-brushed aluminium.
- Single seat Scrambler Urban.
- Comfort passenger seat with grab straps.
- Aluminium handlebar end piece.
- Engine speed display.
- Barrel-type instrument cluster, chrome matt.
- Protective grille for headlamp (not for use on public roads).
- Windshield, hand-brushed aluminium.
- Ignition lock cover in Granite Grey.
- HP Carbon parts: ignition lock cover, intake snorkel cover, throttle body cover, front wheel cover, hump cover, strap cover, cylinder head cover.
- HP sports silencer.
- R nineT rear silencer.
- Cylinder head covers in 2V style.
- Cylinder head covers, chrome, black or silver.
- Cylinder head cover protection, aluminium or plastic.
- High End steering damper (adjustable).
- Fork bridge with integrated stub handlebars.
- Tank rucksack and rear bag.
- Saddle bags on passenger seat.

## 6. Engine output and torque. The new BMW R nineT /5.



## 7. Technical specifications. The new R nineT /5.



<b>BMW R nineT /5</b>		
<b>Engine</b>		
Capacity	cc	1 170
Bore/stroke	mm	101/73
Output	kW/hp	81/110
at engine speed	rpm	7 750
Torque	Nm	116
at engine speed	rpm	6 000
Type	Air/oil-cooled 2-cylinder boxer engine	
No. of cylinders	2	
Compression/fuel	12.0:1 / premium unleaded (95-98 RON)	
Valve/accelerator actuation	DOHC	
Valves per cylinder	4	
Ø intake/outlet	mm	39/33
Ø throttle valves	mm	50
Engine control	BMS-MP	
Emission control	Closed-loop 3-way catalytic converter	
<b>Electrical system</b>		
Alternator	W	720
Battery	V/Ah	12/14 maintenance-free
Headlamp	W	60/55 H4
Starter	kW	1.2
<b>Power transmission – gearbox</b>		
Clutch	Hydraulically activated dry clutch	
Gearbox	Constant-mesh 6-speed gearbox	
Primary ratio	1.737	
Transmission ratios	2.375	
	I	
	II	1.696
	III.	1.296
		1.065
IV.		
	V	0.939
		0.848
VI.		
Rear wheel drive	Universal shaft	
Transmission ratio	2.91	
<b>Suspension</b>		
Frame construction type	Tubular space frame in steel, engine self-supporting	
Front wheel control	Telescopic fork, Ø 43 mm	
Rear wheel control	BMW Paralever	
Total spring travel, front/rear	mm	125/120
Wheel castor	mm	105.0
Wheelbase	mm	1 493
Steering head angle	°	63.4
Brakes	front	Hydraulically activated twin disc brake, Ø 320 mm
	rear	Single-disc brake Ø 265 mm
ABS	BMW Motorrad ABS	

<b>BMW R nineT /5</b>		
Wheels	Spoke wheels, spokes and hubs in Aluminium Silver	
	front	3.5 x 17"
	rear	5.5 x 17"
Tyres	front	120/70 ZR 17
	rear	180/55 ZR 17
<b>Dimensions and weights</b>		
Total length	mm	2 105
Total width with mirrors	mm	900
Seat height	mm	825
DIN unladen weight, road ready	kg	219
Permitted total weight	kg	430
Fuel tank capacity	l	17
<b>Performance figures</b>		
Fuel consumption (WMTC)	l/100 km	5.3
0–100 km/h	s	3.7
Top speed	km/h	>200