

The new BMW R nineT Racer and R nineT Pure.

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1. Overall concept. (Short version)



The new BMW R nineT Racer and R nineT Pure: purist roadster feeling and athletic dynamic performance based on classic concepts.

For a lot of motorcycle fans, less is very often more – which is why they opt for “pure motorcycling” and the kind of motorbike that credibly and authentically embodies this approach.

BMW Motorrad responded to this trend with the R nineT in 2013 – a model that has enjoyed ongoing success and popularity ever since. This was a good reason for the BMW Motorrad team to follow up with the R nineT Scrambler in 2015, another fascinating specimen of classic motorcycle design which once again received enthusiastic feedback.

Motivated by this positive response, BMW Motorrad now presents the R nine T Racer and R nineT Pure – two motorcycles that add two exciting new facets to the BMW Motorrad Heritage world of experience: the roadster reduced to the essentials and the classic, old-school half-faired sports motorcycle. These are both concepts that were popular in the 1960s and 1970s and continue to inspire nostalgia among many motorcycle enthusiasts to this day.

Both the new BMW Heritage models feature the potent, air/oil-cooled boxer engine with a capacity of 1 170 cc and an output of 81 kW (110 hp) combined with a 6-speed transmission. They are both designed to meet the requirements of the EU4 pollutant class. The design of the exhaust system in stainless steel with the rear silencer positioned on the left reflects classic styling.

Modular frame with individual scope for customising.

On the suspension side, the R nineT Racer and R nineT Pure make use of the modular steel tubular space frame familiar from the R nineT Scrambler consisting of the three components front main frame, rear main frame and removable passenger frame. The latter provides flexibility to change the appearance and character of the two BMW boxer models according to preference, for example by adding different seats from the range of Original BMW Motorrad Accessories. Front wheel control is taken care of by a conventional telescopic fork while at the rear the BMW Paralever comes into use in conjunction with a central spring strut. The five-spoke light alloy cast wheels in the sizes 3.5 x 17" at the front and 5.5 x 17" at the rear have tyres in

the dimensions 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. In order to prevent the rear wheel from spinning on slippery roads, there is an ASC (Automatic Stability Control) option which is available ex works. Wire-spoked wheels are an option that further emphasise the classic appearance.

R nineT Pure: purist roadster for dynamic, classic riding pleasure on country roads.

The R nineT Pure embodies the essence of the purist, classic roadster – authentically designed, without frills and reduced to the absolute essentials. The design draws on a blend of both classic and modern stylistic elements of motorcycle construction combined with high-end details such as footrests and fork bridges in forged aluminium with a clear anodised finish.

The fuel tank and front mudguard of the BMW R nineT Pure are finished in the colour Catalano Grey non-metallic. In combination with black for the suspension and drivetrain, this colour emphasises the purist character of the R nineT Pure as a roadster for dynamic, classic riding pleasure on country roads.

R nineT Racer: classic 1970s sports motorcycle feeling.

The R nineT Racer deliberately arouses memories of the sports motorcycles popular in the early 1970s. Crouched, compact and elongated, it conveys a sense of old-school sporty aspiration with its strikingly short half-fairing, hump seat, stub handlebars and set-back footrests, combining this overall impression with modern technology.

In Lightwhite non-metallic combined with decor that is reminiscent of past BMW Motorsport colours, the R nineT Racer is particularly light and athletic in appearance. The frame finished in Aluminium Silver prominently presents an architectural contrast with the black drivetrain, underscoring the standing of the R nineT Racer as an old-school sports motorcycle designed for dynamic riding fun on winding roads.

The highlights of the BMW R nineT Racer and R nineT Pure:

- Potent boxer engine with a capacity of 1 170 cc and an output of 81 kW (110 hp) that meets EU4 requirements.
- Modular frame with scope for customising, allowing individualisation according to personal taste.
- Five-spoke light alloy cast wheels, 3.5 x 17" at front and 5.5 x 17" at rear (optional wire-spoked wheels).
- 320-millimetre twin disc brake at the front.

- ABS as standard.
- ASC (Automatic Stability Control) as an ex works option.
- 2-in-1 exhaust system made of stainless steel (polished in the Racer, brushed in the Pure).
- High-end details such as fork bridges and footrests in forged, clear anodised aluminium.
- R nineT Pure in Catalano Grey non-metallic as a classic, purist roadster.
- R nineT Racer with half-fairing, hump seat and set-back footrests in the style of a 1970s sports motorcycle.
- R nineT Racer in Lightwhite non-metallic combined with multi-coloured decor reminiscent of past BMW Motorsport colours, with the frame in Aluminium Silver.

2. Technology.



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

The longitudinally mounted 2-cylinder boxer engine with power transmission via universal-shaft drive has been synonymous with BMW motorcycles for more than 90 years. Like no other motorcycle engine, the air-cooled BMW Motorrad boxer power unit enthral riders with its unmistakable, authentic design, powerful torque and unique, throaty sound.

The BMW R nineT Racer and the R nineT Pure both feature the familiar air/oil-cooled boxer engine with 101-millimetre bore and 73-millimetre stroke, creating 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.

Both new models of the BMW Motorrad Heritage world of experience are designed to meet the requirements of the EU4 pollutant class. This involved fitting the motorcycles with such features as a new engine mapping, a fuel system with carbon canister for fuel tank ventilation and an exhaust system with an altered catalytic converter that has a larger cross-section.

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

Exhaust system in sporty style for a classic boxer sound.

The stainless steel exhaust system with rear silencer positioned on the left-hand side also reflects the style of a classic motorcycle – it is the type of feature that was not uncommon in café racers and roadsters of the 1960s and 1970s. Fitting snugly up against the wiry stature of the R nineT Racer and R nineT Pure, it underscores their slim appearance and perfectly captures the authentic styling of a bygone era. While the end piece of the rear silencer is finished in black silk matt in the R nineT Pure, in the R nineT Racer the finish is matted clear stainless steel.

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 emission regulation 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 relating to the exhaust concept so as to be able to adapt the character of the two R nineT variants of the Heritage world of experience entirely according to personal taste.

Distinctive frame concept with newly defined suspension geometry and variation options.

Like the R nineT and the R nineT Scrambler, the R nineT Racer and R nineT Pure also respond to the desire on the part of many motorcycle fans to be able to make technical and visual modifications – or customising for short – by providing a special frame concept. For this reason, the new models feature a modular steel tubular space frame like the R nineT Scrambler. 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 two new R nineT models also offer plenty of scope to change the look and therefore also the character of the BMW boxers entirely according to personal taste.

The sporty aspirations of the R nineT Racer and the active riding character of the R nineT Pure are reflected in the suspension geometry, which in both cases is geared towards light-footed handling, a neutral cornering response, a high level of directional stability and above all riding fun on winding country roads. The wheelbase of the R nineT Pure is 1 493 millimetres, the castor 105.0 millimetres and the steering head angle 63.4 degrees. In the R nineT Racer the wheelbase is 1 491 millimetres, the castor 103.9 millimetres and the steering head angle 63.6 degrees.

Purist motorcycle feeling that gets under the skin – solo or with a passenger.

As supplied, the new BMW R nineT Pure also enables tours with a pillion passenger. The seat height for the rider is approx. 805 mm, which in conjunction with a narrow inside leg width provides pleasant seat comfort for both rider and passenger. If solo trips are planned, the Pure can be converted to the aluminium rider's hump seat with the passenger frame dismounted, which makes the rear particularly light in appearance. This highlights the character of the R nineT Pure as an uncompromising riding machine reduced to the essentials in the style of the 1960s and 1970s. The range of Original

BMW Motorrad Accessories allows the R nineT Pure to be modified according to personal taste by means of various seat solutions.

Very much in the style of an early 1970s sports machine, the R nineT Racer is supplied with space for a rider only, who takes up a dynamic position on the one-man hump seat. The seat height is approximately 805 millimetres. However, BMW Motorrad has provided for all eventualities and allows a pillion passenger to be carried by means of an additional bolt-on passenger frame complete with passenger seat and footrests, all of which is available as part of the range of BMW Motorrad accessories.

Classic telescopic fork at front, Paralever at rear and five-spoke light alloy cast wheels.

Front wheel control in both models 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 of the BMW Motorrad Heritage world of experience. A central spring strut with the spring in a white 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.

Both models come with light alloy cast wheels in the sizes 3.5 x 17 inches at the front and 5.5 x 17 inches at the rear, with tyres of the dimensions 120/70 ZR 17 and 180/55 ZR 17 respectively. In order to enhance its classic appearance, the R nineT Pure can alternatively be fitted with wire-spoked wheels, which are optionally available as part of the range of Original BMW Motorrad Accessories. 4-piston brake calipers at the front along with floating brake discs with a diameter of 320 millimetres and ABS ensure secure deceleration in both models. In order to prevent the rear wheel from spinning on slippery roads, there is an ASC (Automatic Stability Control) option which is available ex works.

3. Design and colour concept.



Die R nineT Pure: purist roadster reduced to the essentials.

No frills, authentically designed and with all the attributes that make a classic motorcycle – this is how the R nineT Pure comes across not just in terms of technology but also from the point of view of its paint finishes and styling.

As was the case with the R nineT, one design objective was to give the purist character a powerful presence and express it stylishly using just a small number of skilfully designed elements. The Pure likewise blends both classical and modern elements of motorcycle styling, combining these with high-end surfaces.

These include the painted 17-litre sheet-steel fuel tank with an aluminium trim panel featuring an embossed R nineT inscription which runs across the air intake duct on the right-hand side. It has a clear anodised finish and creates a striking technical contrast due to its finely brushed surface.

High-end classic details for a visual treat in technical style.

The R nineT Pure conveys a sense of sophisticated workmanship in numerous details. For example the fork bridges and the footrests are high-quality aluminium forged parts with a surface which has been glass-bead blasted and then given a clear anodised finish. The likewise aluminium clamp of the double-butt aluminium handlebars for perfect roadster ergonomics bears the BMW Motorrad inscription, while boreholes are provided on the steering head that allow attachment of a type plate reminiscent of historical BMW motorcycles (Original BMW Motorrad Accessory).

The circular headlamp with sheet steel casing and the BMW emblem positioned centrally on the bulb cover also echo BMW Motorrad history that now stretches back more than 90 years. In corresponding style, the R nineT Pure is fitted with white turn indicators and an LED rear light. The range of ex works optional equipment and BMW Motorrad accessories allow it to be fitted with LED turn indicators, too.

The instrument cluster perfectly matches the classically reduced appearance of the R nineT Pure with a circular speedometer featuring an analog display and integrated indicator lamps. Housed in a high-quality metal casing, its straightforward functionality is very much in keeping with the reduced style of

the classic BMW roadster. 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 Pure is fitted with an LCD display that shows important information such as the time and trip distance.

Classic, purist appearance in Catalano Grey non-metallic.

The fuel tank and front mudguard of the BMW R nineT Pure are finished in the colour Catalano Grey non-metallic. Otherwise, black determines the classic, purist character of the Pure on the suspension, engine and seat. Meanwhile, numerous aluminium surfaces of varying structure create fascinating contrasts and a marked classic appearance.

The R nineT Racer: classic sports bike in a café racer look.

When BMW showcased the BMW Concept Ninety on 24 May 2013 at the Concorso d'Eleganza Villa d'Este, it also evoked memories of the legendary BMW R 90 S – a motorcycle that was synonymous with the desires of sports-oriented motorcyclists of its day: with short-cut handlebar fairing and a hump seat, it had sufficient power to reach a top speed of 200 kilometres per hour.

Today, the R nineT Racer brings to a serial production model what the BMW Concept Ninety captured as a design study: purist athletic flair, emotional design and uncompromising styling as a classic sports machine that not only inspires boundless motorcycling pleasure but also instils a desire to customise.

Frame-mounted half-fairing, hump seat and set-back footrests in the style of the sports bikes of the early 1970s.

Crouched, compact and elongated, the R nineT Racer conveys a sense of old-school sporty aspiration with its strikingly short, frame-mounted half-fairing on the steering head, and combines this impression skilfully with modern technology. In combination with the set-back footrests made of forged aluminium, the stub handlebars positioned deeply and mounted directly on the aluminium-forged, clear anodised upper fork bridge force the rider into a dynamic seating position. This is just what many motorcyclists in the early 1970s were looking for, resorting to the appropriate conversion parts at the time.

An absolute must in this type of conversion was the hump seat - just like the one featured on the R nineT Racer. Modelled on the racing machines of that era, the hump seat not only made for a very sporty style but was also designed to give the rider optimum support when accelerating dynamically.

This function is performed in the very same way today by the one-man hump seat of the R nineT Racer with its aluminium hump, and just as in bygone times it is combined with the low, narrowly shaped half-fairing and the elongated 17-litre fuel tank to create a particularly sporty line. What is more, the front view of the R nineT Racer is especially slim and squat in style, determined by the classic circular headlamp with the BMW emblem positioned centrally on the bulb cover.

The typical café racers of the 1970s always featured analog circular instruments, and this detail is faithfully reproduced in the R nineT Racer. In their simplicity, both circular instruments follow the classic principles while still making use of modern technology. For example the R nineT Racer has an on-board computer as standard which provides a large and clear display on a segmented screen of the most important information such as time, active gear, remaining range, trip distance, service interval and average speed and fuel consumption.

Sporty lightness and dynamic performance in Lightwhite non-metallic combined with multi-coloured decor.

The BMW R nineT Racer is finished in the colour Lightwhite non-metallic, which appears on the half-fairing, the fuel tank, the front mudguard and the seat hump. Enhanced by decor reminiscent of past BMW Motorsport colours, it conveys a sense of light, dynamic and sporty flair. The frame in Aluminium Silver is reserved exclusively for the R nineT Racer, prominently presenting an architectural contrast with the black drivetrain. The passenger frame for optional additional attachment is finished in black. Meanwhile, numerous aluminium forged parts create skilfully accentuated technical contrasts.

4. 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 Racer and R nineT Pure.

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.

BMW Motorrad optional equipment.

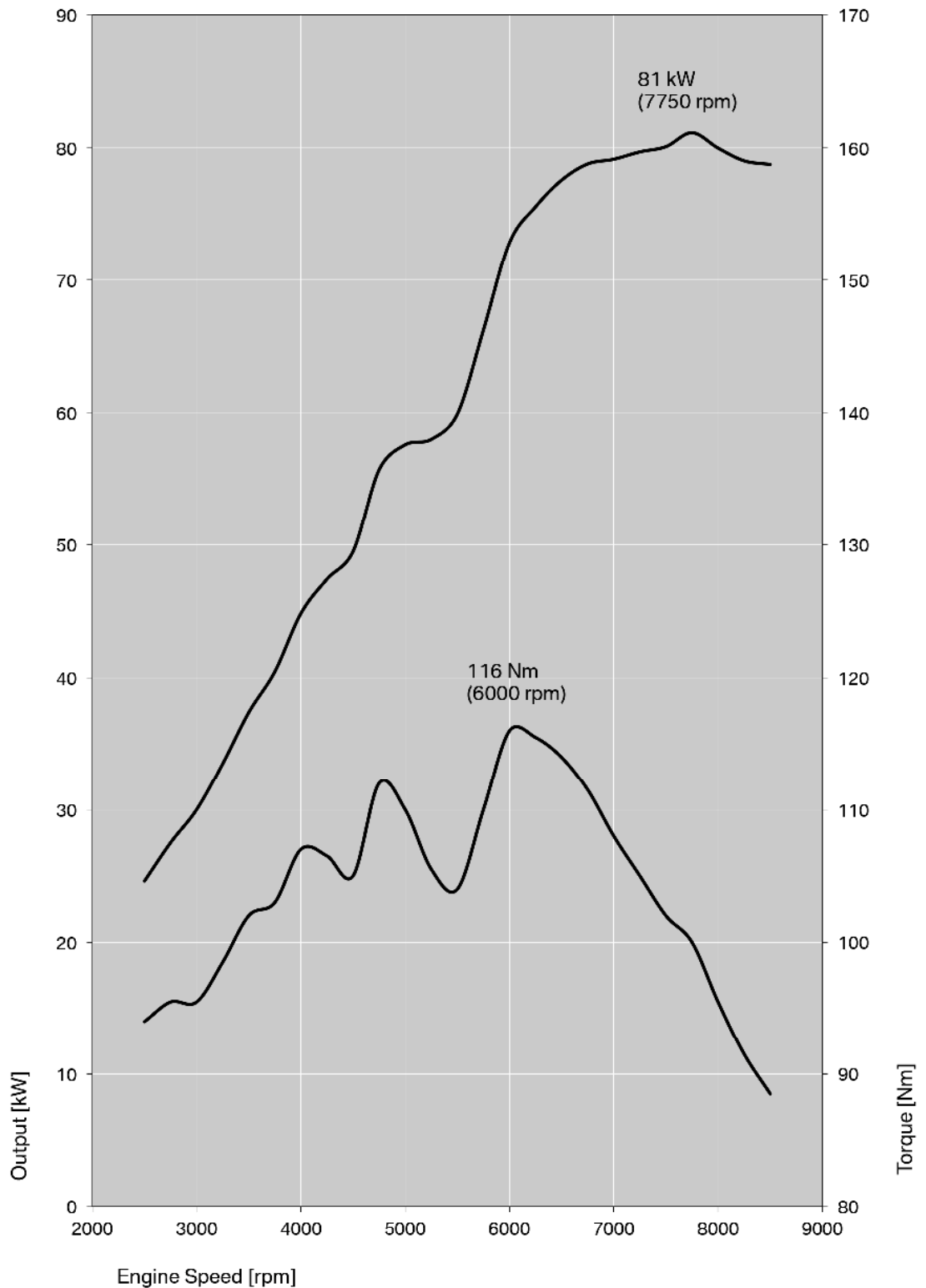
- Spoke wheels.
- Automatic Stability Control ASC.
- Heated grips.
- LED turn indicators.
- Hand-brushed aluminium fuel tank with ground/visible weld seam.
- Chrome-plated manifold.
- Alarm system.

Original BMW Motorrad Accessories.

- Air filter housing cover right/left in hand-brushed aluminium.
- Radiator trim right/left in hand-brushed aluminium.
- Aluminium fuel tank, hand-brushed with ground or visible weld seam.
- Knee pads for fuel tank side surfaces.
- Hump cover, aluminium or hand-brushed aluminium.
- Back pad cover fabric as for R nineT seat or in Alcantara.
- Scrambler Urban single seat (R nineT Pure only).
- R nineT rider seat for R nineT Racer.
- Comfort passenger seat with grab straps (for the R nineT Racer only in conjunction with passenger frame).
- Passenger seat in conjunction with passenger frame.
- Custom rider seat.
- Aluminium handlebar end piece.
- Main frame cover (without passenger frame).
- Engine speed display (R nineT Pure only).
- Barrel-type instrument cluster, chrome matt.

- Protective grille for headlamp (R nineT Pure only, not for use on public roads).
- Windshield in hand-brushed aluminium (R nineT Pure only).
- Ignition lock cover in Granite Grey.
- HP Carbon parts: ignition lock cover, intake snorkel cover, throttle body cover, front wheel cover, hump cover, belt cover, cylinder head covers.
- HP sports silencer.
- R nineT rear silencer.
- Chrome-plated manifold.
- Cylinder head covers in 2V style.
- Cylinder head covers, chrome-plated, black or silver.
- Cylinder head covers, aluminium or plastic.
- High-end steering damper (adjustable).
- Fork bridge with integrated stub handlebars (R nineT Pure).
- Mechanically processed parts: footrest system (adjustable), passenger footrests, hand lever, belt cover, cylinder head covers, oil filler cap, swinging-arm pivot mount cover, headlamp cover, handlebar end cover, rear axle bearing cover.
- Tank rucksack and rear bag.
- Saddle bags on passenger seat.
- Alarm system.
- Classic emblem.

5. Engine output and torque. The new BMW R nineT Racer and R nineT Pure.



6. Technical specifications.

The new BMW R nineT Racer.



BMW R nineT Racer		
Engine		
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	
Electrical system		
Alternator	W	720
Battery	V/Ah	12/14 maintenance-free
Headlight	W	60/55 H4
Starter	kW	1.2
Power transmission - gearbox		
Clutch	Hydraulically activated dry clutch	
Gearbox	Constant-mesh 6-speed gearbox	
Primary ratio	1.737	
Transmission ratios	I	2.375
	II	1.696
	III	1.296
	IV	1.065
	V	0.939
	VI	0.848
Rear wheel drive	Universal shaft	
Transmission ratio	2.91	
Suspension		
Frame construction type	Tubular space frame in steel, engine self-supporting	
Front wheel suspension	Telescopic fork, Ø 43 mm	
Rear wheel suspension	BMW Paralever	
Total spring travel, front/rear	mm	125/120
Wheel castor	mm	103.9
Wheelbase	mm	1 491
Steering head angle	°	63.6
Brakes	front	Hydraulically activated twin disc brake, Ø 320 mm
	rear	Single-disc brake Ø 265 mm
ABS	BMW Motorrad ABS	

BMW R nineT Racer		
Wheels		Aluminium cast wheel
	front	3.5 x 17"
	rear	5.5 x 17"
Tyres	front	120/70 ZR 17
	rear	180/55 ZR 17
Dimensions and weights		
Total length	mm	2 105
Total width with mirrors	mm	920
Seat height	mm	805
DIN unladen weight, road ready	kg	220
Permitted total weight	kg	430
Fuel tank capacity	l	17
Performance figures		
Fuel consumption (WMTC)	l/100 km	5.3
0–100 km/h	s	3.5
Top speed	km/h	200

The new BMW R nineT Pure.

BMW R nineT Pure		
Engine		
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	
Electrical system		
Alternator	W	720
Battery	V/Ah	12/14 maintenance-free
Headlight	W	60/55 H4
Starter	kW	1.2
Power transmission - gearbox		
Clutch	Hydraulically activated dry clutch	
Gearbox	Constant-mesh 6-speed gearbox	
Primary ratio	1.737	
Transmission ratios	I	2.375
	II	1.696
	III	1.296
	IV	1.065
	V	0.939
	VI	0.848
Rear wheel drive	Universal shaft	
Transmission ratio	2.91	
Suspension		
Frame construction type	Tubular space frame in steel, engine self-supporting	
Front wheel suspension	Telescopic fork, Ø 43 mm	
Rear wheel suspension	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	

BMW R nineT Pure		
Wheels	Aluminium cast wheel	
	front	3.5 x 17"
	rear	5.5 x 17"
Tyres	front	120/70 ZR 17
	rear	180/55 ZR 17
Dimensions and weights		
Total length	mm	2 105
Total width with mirrors	mm	900
Seat height	mm	805
DIN unladen weight, road ready	kg	219
Permitted total weight	kg	430
Fuel tank capacity	l	17
Performance figures		
Fuel consumption (WMTC)	l/100 km	5.3
0–100 km/h	s	3.7
Top speed	km/h	200