

The new BMW R 1250 RT.

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1. Overall concept. Short version.



"We have given the R 1250 RT a new look, a comprehensive increase in standard equipment and numerous technical upgrades to achieve a whole new riding experience. As a dynamic tourer with the incomparable BMW ShiftCam engine, it also has the perfect power unit with impressive power across the entire speed range"

Harald Spagl, Project Manager

The new BMW R 1250 RT: The benchmark among dynamic tourers is even more sophisticated and innovative for maximum motorcycle enjoyment on extended journeys.

For more than four decades, the BMW Motorrad abbreviation "RT" has been synonymous in the world of dynamic touring motorcycles, combining comfort on long journeys with dynamic riding pleasure on country roads. More than that: a BMW RT has always sets the benchmark in this class. To ensure that this continues to be the case in the future, BMW Motorrad has made extensive changes and innovations to the new R 1250 RT – for even greater riding pleasure and touring enjoyment at the very highest level. As before, the legendary 2-cylinder boxer engine ensures comfortable travel and dynamic propulsion. It still has an engine capacity of 1 254 cc and delivers 100 kW (136 hp) in the current EU5 registration, too. Thanks to BMW ShiftCam technology for varying valve timing and valve lift on the intake side, it offers superior power across the entire speed range, extremely smooth running and refinement as well as outstanding fuel consumption and emission values.

Dynamic Traction Control (DTC) and new "Eco" riding mode as standard. Riding Modes Pro with riding mode preselection and engine drag torque control (MSR) as options.

The standard Dynamic Traction Control DTC ensures a high level of riding safety due to excellent traction, while the new standard "Eco" riding mode helps the rider achieve the best possible fuel efficiency.

The new R 1250 RT Adventure can be fitted with the "Pro Riding Modes" as an ex works option. Another new component of Riding Modes Pro is the engine drag torque control (MSR): this can be used to safely avoid unstable riding conditions that can occur during coasting or downshifting due to excessive brake slip at the rear wheel.

New BMW Full Integral ABS Pro as standard.

In its latest edition, the R 1250 RT is equipped as standard with the new BMW Motorrad Full Integral ABS Pro. This is a braking system in which both the hand and foot brake levers are used to apply the front and rear brakes simultaneously. Combined with the qualities of ABS Pro with banking angle optimisation and dynamic brake force distribution, Full Integral ABS Pro is the perfect braking system for a touring bike such as the R 1250 RT.

New full LED headlamp with turning light and new light functions as ex works options.

The new standard full LED headlamp already illuminates the road with unrivalled brightness and clarity. The new headlamp with swivel function goes one step further: with the "Adaptive Turning Light" option, the dipped beam of the standard full LED headlamp turns into the bend according to the banking position. In this way, the bend is almost fully illuminated because the light moves to where the motorcycle is heading. Thanks to new light functions, the riding experience on the new R 1250 RT is even more intense – and there are practical benefits, too. For example, the "Welcome" function, the "Goodbye" function for taking leave and the "Follow me home" function for guidance purposes will be available as optional extras in future.

Dynamic Cruise Control (DCC) as standard. Active Cruise Control (ACC) – cruise control with integrated distance control for relaxed touring as an ex works option.



In connection with the standard Dynamic Cruise Control (DCC) , “dynamic” means that the preselected speed is kept at a constant level when riding downhill. If the braking effect of the engine is not sufficient for this, the fully integral brake is automatically activated so as to maintain the desired riding speed.

Active Cruise Control (ACC), available as an optional extra, goes one step further. Thanks to radar sensor technology, it enables relaxed gliding with distance control – and there is no need for the rider to adapt road speed to the vehicle in front.

New 10.25” TFT colour screen with integrated map navigation for convenient route planning and extensive connectivity as standard.

The new R 1250 RT is fitted with a 10.25-inch TFT colour screen with integrated map navigation and connectivity. Its excellent readability, clear menu navigation and highly integrated operating concept put the new R 1250 RT at the top of the range of serial production motorcycles. For the first time on a motorcycle, the new 10.25-inch colour screen makes it possible to display a navigation map in the instrument cluster, so no additional display is needed.

Along with the introduction of standard connectivity and the navigation map shown on the screen, the new “Comfort telephony with extended smartphone connection” option is available. A smartphone can be securely accommodated in a storage compartment that is protected from splash water and ventilated by an electric fan, and its battery can be kept ready for use inductively or via USB connection. With the Audio System 2.0, the new R 1250 RT offers an even more intense sound experience than its predecessor.

The new R 1250 RT: enhanced travel capability and dynamic performance thanks to new fairing. Exclusive touring character in an attractive basic paint finish and refined style variants.

Thanks to a newly developed front fairing, the new R 1250 RT now not only looks fresher and more dynamic, it also has enhanced travel and touring qualities thanks to additional aerodynamic advancements. Not only does the new front fairing enclose the new full LED headlamps, for example, but the upper section of the fairing is now reduced in height, too. This results in a wider field of vision for the rider, while at the same time making the new R 1250 RT appear lighter and more dynamic. In addition to the attractive basic version in Alpine White 3, the new R 1250 RT is also available in the refined Style variants "Elegance", "Sport" and "Option 719".

The highlights of the new BMW R 1250 RT:



- Authentic boxer engine with BMW ShiftCam Technology for variation of the valve timings and valve stroke on the intake side.
- Powerful response across the entire engine speed range, exemplary fuel consumption, emission levels, running smoothness and refinement.
- Output and torque: 100 kW (136 hp) at 7 750 rpm and 143 Nm at 6 250 rpm.
- Knock sensor system for optimised travel suitability.
- New BMW Motorrad Full Integral ABS Pro as standard.
- Three riding modes as standard.
- New "Eco" riding mode for particularly economical riding as standard.

- Riding Modes Pro with additional riding mode "Dynamic" and new engine drag torque control (MSR) as an ex works option.
- Dynamic Traction Control DTC as standard
- Dynamic ESA "Next Generation" electronic suspension with fully automatic load compensation as an optional extra.
- Hill Start Control Pro (HSC Pro) with extended function as an ex works option.
- Newly developed front fairing with optimised aerodynamics.
- New LED headlamp as standard and new full LED headlamp with adaptive turning light as an ex works option
- Connectivity: New multifunctional instrument cluster with 10.25-inch full-colour TFT screen and numerous other features as standard.
- New "Comfort telephony with extended smartphone connection" option.
- New Audio System 2.0 option.
- New double tone fanfare as standard.
- Intelligent Emergency Call as an ex works option.
- Attractive basic paint finish along with the three Style variants "Elegance", "Sport" and "Option 719" as ex works options.
- Extended range of optional extras and Original BMW Motorrad Accessories.

2. Drive.

“The boxer engine with BMW ShiftCam technology offers a high level of efficiency, perfectly combining supreme engine running with the necessary performance requirements. The new standard ECO riding mode makes it possible to use the innovative BMW ShiftCam technology primarily in such a way that the maximum range can be achieved with a single tank of fuel.”

Jörg Müller, Drive Development

Authentic, powerful boxer engine offering excellent power, torque and ridability.

As before, the original 2-cylinder boxer engine in the new BMW R 1250 RT ensures supreme, smooth-running propulsion. It has a capacity of 1 254 cc, while the ratio between bore and stroke is 102.5 to 76 mm. Its rated power output is 100 kW (136 hp) at 7 750 rpm and the maximum torque of 143 Nm is reached at 6 250 rpm. This makes it the most powerful BMW boxer engine ever to be produced in series.

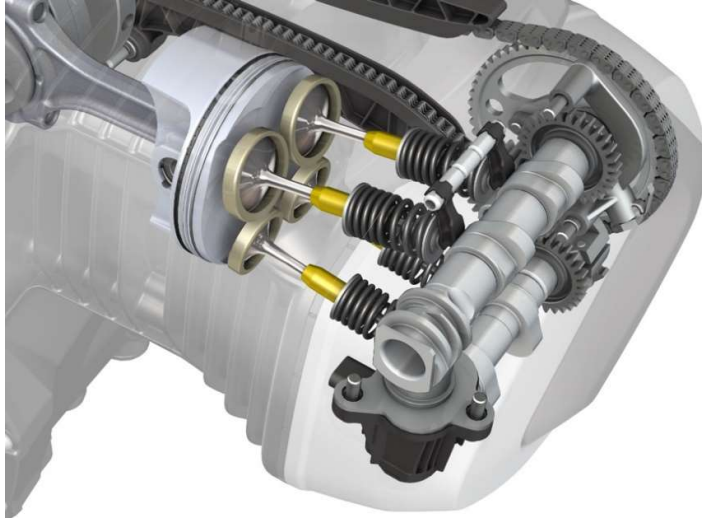
The boxer makes use of the well-established air/liquid cooling system. So-called precision cooling means that the cooling fluid flows through the engine elements that are more heavily exposed to heat – namely the two cylinder heads and parts of the cylinders. Heat is dissipated via two radiators positioned at the left and right of the front vehicle section.

BMW ShiftCam Technology for supreme power delivery across the entire engine speed range, excellent running smoothness and refinement as well as excellent fuel consumption and emission levels.

The strengths of the R 1250 RT's boxer engine lie in its impressive performance and torque levels, smooth running and refinement, and outstanding levels of fuel consumption and emissions.

This is not least due to the use of BMW ShiftCam technology, something that is completely new to BMW motorcycles: its function is to vary the valve timings and valve stroke on the intake side. The core of the technology is a single-unit shift camshaft with two cams

per valve to be activated: one partial-load cam and one full-load cam, each featuring cam geometry in optimised design. While the partial-load cam has been configured to ensure optimised fuel consumption and refinement, the full-load cam is designed for optimised output.



Axial shift of the intake camshaft means the intake valves are activated by either the partial-load or the full-load cam, depending on load and engine speed. The axial shift of the intake camshaft and the use of the partial-load or full-load cam are effected by means of a shifting gate on the camshaft and an electronic actuator which intervenes at this point.

Variation of the intake valve stroke and asynchronous valve opening.

The varied configuration of the cam geometry also enables variation of the intake valve stroke. While the full-load cam provides maximum valve stroke, the partial-load cam delivers reduced valve stroke. There is also a difference between the intake cams for the left and right-hand intake valve in stroke and angular position. This phase shift means that the two intake valves are opened to different degrees and on a time-staggered basis. The effect of this is to create a swirl and therefore greater agitation of the fuel-air mixture flowing into the combustion chamber. This results in particularly effective combustion and better utilisation of the fuel as a result.

The benefits of BMW ShiftCam Technology:

- Powerful torque and full pulling power across the entire range.

- Enhanced refinement and even engine running when travelling at a constant speed due to optimum configuration of the partial-load cam geometry for the lower load range and engine speed range.
- Reduction of load change loss in the partial load range.
- Optimised exhaust emissions and sound.
- Increased fuel efficiency.

Supreme rideability due to full torque, high running smoothness and pleasing refinement.

In practice, BMW ShiftCam Technology makes for a particularly high level of rideability and dynamic performance in the new R 1250 T, too. In addition to the maximum output of 100 kW (136 hp), the high level of torque and the enormous pulling power are the main factors here.

In the range from 2 000 to 8 250 rpm, for example, the level of torque now available is 110 Nm. Within the range that is especially relevant in terms of riding dynamics, namely 3 500 to 7 750 rpm, an impressive level of over 120 Nm is now available. The new R 1250 RT is therefore extremely powerful, combining enormous torque qualities with impressive peak output – whether riding alone or with a passenger, on winding country roads or covering long stages of a journey at a high average speed.

Vertical flow cylinder heads, variable oil intake and effective piston crown cooling.

The engine in the new R 1250 RT also features vertical flow. The advantage here is that the configuration of the intake channel no longer depends on the camshaft control, so it was possible to realise identical intake lengths for both cylinder sides. What is more, the fuel injector is now arranged so that the fuel is injected as directly as possible in front of the intake valves for optimum carburetion.

As before, the two camshafts per cylinder side are powered by a chain running in the shaft behind the cylinders (on the right-hand side of the engine via the counterbalance shaft and to the left via the crankshaft). The timing chain drives an intermediate shaft between the intake and exhaust camshaft and it is from here that power is transmitted to the camshafts via spur gear pairs. For low running noise, the timing chain is configured as a toothed chain.

The valves are positioned at a narrow angle to each other in order to achieve an optimum combustion chamber shape. The valve angle is 8 degrees on the intake side and 10 degrees on the exhaust side, while the disc diameters of the valves are 40 mm on the intake side and 34 mm on the exhaust side. The valve stem diameter is 5.5 mm. The valves are operated via light, speed-resistant rocker arms, the design of which was derived from the high-performance 4-cylinder engine of the BMW S 1000 RR. The valve clearance settings are made by means of replaceable shims.

Full performance and a high level of riding dynamics are also enabled by two back-up measures to ensure maximum operating reliability: the two pistons have base cooling using splash oil, and the lubrication system is fitted with variable oil intake. By means of a shifting piston in the intake area of the oil sump, the latter ensures optimum oil supply in all riding states.

Knock sensor system for optimised travel suitability. BMS-O engine control and twin-jet injection valves for even more effective carburetion.

The new R 1250 RT has a knock sensor system in the form of two knock sensors. These allow the use of fuels with a rating of less than RON 95 – a particular advantage when travelling in the more remote corners of the planet. The new R 1250 RT is also fitted with state-of-the-art digital engine control, the so-called BMS-O. Its main features are fully sequential injection, a compact layout and low weight. Carburetion is carried out by an electronic fuel injection system via throttle bodies with an opening width of 52 mm. Injection is via twin-jet injection valves that support excellent refinement and very good emission levels.

Counterbalance shaft for perfect mechanical running smoothness.

A counterbalance shaft running at crankshaft speed ensures the elimination of unwanted vibrations. It is configured as a hollow intermediate shaft, inside which the clutch shaft runs at the same time. This ensures that the new engine in the R 1250 RT likewise runs comfortably and with low levels of vibration across the entire engine speed range. Nonetheless, the essential authentic boxer characteristics are still preserved.

Gearbox integrated in engine housing, including wet clutch with anti-hopping function.

In the boxer engine of the R 1250 RT, the gearbox and clutch are integrated in the engine housing. This provides benefits in particular in terms of overall weight due to the omission of numerous bolt connections and sealing surfaces, but also in terms of the torsional response of the unit as a whole. In addition to a design that saves both space and weight, this concept means that no additional gearbox volume is required.

Power transmission to the 6-speed gearbox is via a multi-plate wet clutch with eight friction discs. The clutch system is fitted with an anti-hopping mechanism. In this way, BMW is particularly responding to the needs of riders with sporty ambitions who prefer country roads. The brake torque of the engine is now passed to the rear wheel at a reduced level during coasting. This prevents brief blocking or hopping of the rear wheel due to the dynamic wheel load distribution when applying the brakes heavily and changing down at the same time. In this way, the motorcycle remains stable and safely controllable during the braking phase.

Stainless steel exhaust system for optimum performance characteristics.

Made completely out of stainless steel, the exhaust system in the new R 1250 RT is designed entirely for optimum output and torque in conjunction with BMW ShiftCam Technology and works according to the 2-in-1 principle. In this development area, a homogeneous output and torque curve and thus excellent rideability were once again regarded as requirements for supreme performance on country roads and extended tours. Exhaust gas purification is taken care of by a closed-loop catalytic converter controlled by an oxygen sensor. In this way, the new R 1250 RT complies with current exhaust standards and is excellently equipped for future requirements, too.

Three riding modes and Dynamic Traction Control (DTC) as standard. New "Eco" riding mode for a particularly economical riding style.

Even in standard trim, the new R 1250 RT has three riding modes for adaptation to individual rider preferences. Dynamic Traction Control DTC now also ensures a high level of riding safety as standard due to excellent traction. DTC enables even more efficient and safe acceleration, especially in banking position.

With the "Rain" and "Road" riding modes, riding characteristics can be adapted to most road conditions. The new standard "Eco" riding mode also makes it possible to use the innovative BMW ShiftCam technology primarily in such a way that the maximum range can be achieved with a single tank of fuel. In this riding mode, a gentle throttle curve and moderate torque limitation promote a riding style that is as economical as possible. In order to provide visual support for a riding style geared towards optimised fuel consumption, an efficiency indicator in the upper status line of the TFT colour screen provides feedback when "Eco" mode is activated. If maximum performance is required – e.g. on gradients or when overtaking – it is simple to quickly switch to another riding mode using the riding mode button.

Riding Modes Pro with a total of four riding modes and engine drag torque control (MSR) as an ex works option.

As an optional extra, the new R 1250 RT can also be fitted with "Riding Modes Pro" ex works: this comprises the additional riding modes "Dynamic" and "Dynamic Pro".

Another new component of Riding Modes Pro is engine drag torque control (MSR). It can be used to safely avoid unstable riding conditions that can occur during coasting or downshifting due to excessive brake slip at the rear wheel. In these cases, MSR opens the throttle valves at lightning speed to such an extent that drag torque is equalised and the motorcycle stabilises.

The way MSR functions technically is by comparing the peripheral speeds of the front and rear wheels in the same way as DTC Dynamic Traction Control, thereby determining the slip or stability reserves on the rear wheel. Banking position information from the standard sensor cluster is incorporated, too.

The control response depends on the riding mode: in "Eco", "Rain" and "Road" riding modes, MSR ensures maximum riding stability, whereas in "Dynamic" riding mode the control system allows a little more slip.

3. Suspension.



“The new R 1250 RT is fitted as standard with the newly developed BMW Motorrad Full Integral ABS Pro, where the front and rear brakes are activated simultaneously by handbrake or foot brake lever. Combined with ABS Pro featuring banking angle optimisation and also dynamic brake force distribution, this provides the perfect braking system for a touring bike. Braking stability, braking performance and the short braking distance set the benchmark in the big touring bike segment”

Markus Hamm, Development of Chassis Control Systems

New Full Integral ABS Pro for even further enhanced safety and performance during braking manoeuvres as standard.

The new R 1250 RT is fitted as standard with the newly developed BMW Motorrad Full Integral ABS Pro. This brake system involves simultaneous activation of the front and rear brakes via the handbrake or foot brake lever.

Combined with the qualities of ABS Pro with banking angle optimisation and dynamic brake force distribution, Full Integral ABS Pro is the perfect braking system for a touring bike such as the R 1250 RT. Braking stability, braking performance and the resulting short braking distance set the benchmark in the dynamic tourer segment.

Dynamic Brake Control DBC has also been further optimised with regard to braking stability. DBC increases safety when braking, even in difficult situations, by avoiding unintentional accelerator activation. By means of intervention in the engine control, drive torque is reduced during braking, making full use of the integral brake pressure acting on the rear wheel. This keeps the motorcycle stable and shortens the braking distance. Thanks to the standard dynamic brake light, traffic to the rear is alerted to even more effectively to the fact that the motorcycle is being braked.

Hill Start Control Pro (HSC Pro) as an ex works option.

The set-off assistant Hill Start Control is a standard feature in the new R 1250 RT, enabling convenient stopping and starting on

slopes. Hill Start Control is activated or deactivated by firmly pressing the handbrake or foot brake lever. A hold symbol on the TFT screen indicates activation. The brake is released automatically by the integrated start-up detection.

The new option Hill Start Control Pro goes beyond the functions of a comfort system such as Hill Start Control to further facilitate stopping and starting on a slope. The existing HSC Pro was developed further for use in the R 1250 RT. In this further advanced HSC Pro, the holding pressure in the brake system is dependent on the gradient, which is determined by means of a new banking angle sensor. The underlying information regarding the gradient makes it possible to perceptibly increase start-up comfort in all conditions as compared to the previous system. Combined with new control electronics, HSC Pro offers even greater safety and enhanced convenience.

With HSC Pro, the brake is likewise released automatically by setting off or by applying the hand brake lever forcefully. Hill Start Control Pro also includes the new additional function Auto HSC. The settings menu allows this extra function to be individualised in such a way that the parking brake is automatically activated on a gradient (greater than +/- 3 %) when the handbrake or foot brake lever has been activated, shortly after the motorcycle comes to a standstill. If "Manual" is selected, the handbrake or foot brake lever is briefly activated.

Dynamic ESA "Next Generation" electronic suspension with fully automatic load compensation as an ex works option.

An even higher dimension of riding safety, performance and comfort is harnessed with the optional BMW Motorrad Dynamic ESA "Next Generation" (Electronic Suspension Adjustment) in the new R 1250 RT: here, the damping automatically adapts to the situation depending on riding states and manoeuvres, and there is also an automatic self-levelling function to compensate all load states. In terms of the technical background, signals from the new six-axle sensor cluster and the two travel sensors at the front and rear enable comprehensive data collection and therefore finely tuned adaptation of the motorcycle to riding states. Based on additional parameters, riding states are detected such as compression, acceleration and deceleration, and these are incorporated in the adaptation of damping forces, both at the rear spring strut and Telelever front wheel control. This adaptation is

applied by means of electrically actuated regulation valves within the millisecond range. As a result, optimum damping comfort and a very stable ride response are ensured even in banking position.



Dynamic ESA "Next Generation" is pre-set to the "Road" damping characteristics in the standard set-up of the riding modes "Rain", "Road" and "Eco". At the press of a button – conveniently positioned on the handlebars so it can even be operated during travel – the rider can switch to the "Dynamic" damping characteristics in these riding modes, thereby selecting a tighter damping set-up. In "Dynamic" riding mode, the tighter "Dynamic" damping variant is pre-set, and it is

possible to switch to the "Road" damping variant at the touch of a button.

Dynamic Cruise Control (DCC) as standard. Active Cruise Control (ACC) – cruise control with integrated distance control for relaxed touring as an ex works option.

The new Full Integral ABS Pro in the new R 1250 RT provides the basis for more innovation: the electronic cruise control system Dynamic Cruise Control (DCC) and Active Cruise Control (ACC), available as an ex works option.

In connection the standard Dynamic Cruise Control (DCC), "dynamic" means that the pre-selected speed is kept constant when riding downhill. If the braking effect of the motor is not sufficient for this, the full integral brake is automatically activated to maintain the desired riding speed. This means an increase in both comfort and riding safety.

Meanwhile Active Cruise Control (ACC), available as an optional extra, goes one step further – to provide an entirely new riding experience. It allows relaxed gliding with distance control – without the rider having to adjust the speed to the vehicle in front.

With the aid of radar sensors integrated in the front fairing, with a detection range of some 120 metres, the motorcycle is either accelerated automatically to adjust the speed or the new, standard



full integral braking system is applied for deceleration purposes, depending on the situation on the road. For the demanding touring

rider, this means increased comfort and safety while at the same time providing relief for the task of riding.

Speed and distance to the vehicle in front can be set conveniently via a button. The distance can be set in three stages and the desired speed can be set between 30 and 160 km/h. The individual setting is visible at any time on the TFT screen. Two characteristics can be selected in terms of control response: "comfortable" or "dynamic", influencing both acceleration and deceleration as appropriate.

ACC also ensures particularly safe cornering. Where necessary, the cornering control system automatically reduces the speed, giving the rider the right speed for a comfortable and safe banking angle. Braking and acceleration dynamics are limited as the banking angle increases. This results in a stable riding experience and a safe ride feel. The ACC allows full control at all times: the responsibility always remains with the rider, who can intervene at any time. The rider can override ACC at will by accelerating using the throttle twist grip. ACC is also deactivated by applying the brake or turning the throttle twist grip forward beyond the zero position.

The ACC distance control function can be switched off if required, also enabling Dynamic Cruise Control (DCC) to be used separately. It automatically controls the desired speed in a range from 15 to 220 km/h.

The ACC only reacts to vehicles that are moving. Stationary vehicles – for example at the end of a traffic jam – are not detected. In this case, the rider has to apply the brakes.

4. Electrical system and electronics.



“The new 10.25 inch TFT colour screen is impressively large and very easy to read. One innovative highlight is the standard integrated map navigation via smartphone. The new optional storage compartment for the customer's own smartphone offers a USB charging socket and even a wireless charging function by means of induction. The new full LED headlamp with unique light icon can be upgraded – also optionally – with the new adaptive turning light and daytime running light”

Jörg Ploss, Head of Digital Bike

State-of-the-art LED light units all round and new full LED headlamps with adaptive turning light as an ex works option.

For decades now, BMW Motorrad has been regarded as a frontrunner when it comes to safety in connection with motorcycling. Accordingly, the new R 1250 RT comes with state-of-the-art LED light units all around as standard. The new full LED headlamp with LED lens technology and iconic daytime running light (optional extra, market-dependent) illuminates the road with unrivalled brightness and clarity, underlining the prestige of the new R 1250 RT. The light unit consists of one LED module with a total of seven LEDs for the dipped beam and two further LED modules with four LEDs each for the two main beam modules.



As the option “Adaptive Turning Light”, the newly developed headlamp in the R 1250 RT goes one step further with a swivel function. Here, the dipped beam of the standard LED headlamp turns into the curve according to banking angle. In this way, the bend is almost fully illuminated because the light moves to where the motorcycle is heading. Due to the swivel function ($\pm 35^\circ$), the

horizon of the light remains constant, harmoniously and seamlessly adapted to the respective banking angle. By swivelling the light pattern, the dipped beam light ensures particularly wide and homogeneous illumination of the road.

In addition, this technology is also used to ensure the high beam maintains a constant range by adapting the headlamp and maintaining the luminous height ($\pm 2^\circ$) of the two high beam modules according to load and therefore the riding position of the motorcycle. This also happens during dynamic riding in that motorcycle movements are compensated by pivoting the module. The high beam superimposes the low beam with impressive brightness, offering the widest illumination range of all BMW motorcycle LED headlamps.

New light functions as an ex works option.

Thanks to new light functions, the riding experience on the new R 1250 RT is even more intense – and there are practical benefits, too: when the ignition is switched on, the so-called **"Welcome" light is** activated. The main headlamps,



rear light and – if available – the additional headlamps light up, remain on for a short time and then fade into standby mode before the engine is started. Here, the transitional fading involves a dimming process in stages.

After the ignition has been switched off, the front and rear lights are switched on to **"Goodbye"** for a brief moment before finally darkening slowly. This function is to mark the fact that the rider is taking leave of the bike – while at the same time making a clear statement: there's a BMW standing here now.

Another new function is for the purpose of guidance ("Follow me home"). After switching off the ignition, the riding light can be activated by briefly pressing the high beam button. The ignition and other non-guidance functions and light sources remain switched off. This function ensures optimum visibility at night, for example when manoeuvring in parking spaces or opening the garage at home.

New 10.25" TFT colour screen with integrated map navigation for convenient route planning and extensive connectivity as standard.

The new R 1250 RT comes fitted as standard with a 10.25-inch TFT colour screen with integrated map navigation and connectivity. Its excellent readability, clear menu navigation and highly integrated operating concept put the new R 1250 RT at the top of the range of serial production motorcycles. For the first time on a motorcycle, the new 10.25-inch colour screen makes it possible to display a navigation map in the instrument cluster, so no additional display is needed.

For rough touring use, the screen is fitted with a hardened and therefore extremely robust glass cover. It is anti-reflective for optimum display and protected from soiling by means of an anti-fingerprint coating. The full HD resolution with 1920 x 720 pixels offers unique detail and sharpness.

The screen's full capability comes into play in full screen mode. Meanwhile, the alternative split screen view allows several functions to be shown



simultaneously and clearly on the screen, allowing Multicontroller operation. The main display – or "Pure Ride Screen" – shows the speedometer and engine speed display as well as the basic functions and selection menu. Alternatively, the navigation map is also displayed if navigation is active via the BMW Motorrad Connected app. The additional split screen shows either the on-board computer, the on-board trip computer, arrow navigation, a current phone call or radio/media.

The tiles shown can be used to select the "My Motorcycle", "Radio", "Navigation", "Media", "Phone" and "Settings" menus. There is seamless integration of the display and operation of the optional extras Riding Modes Pro, ACC and audio/radio: this makes operation easy, just as for the standard functions.



The screen on the new R 1250 RT has two radio antennas for connections to a helmet or smartphone, for example. One antenna is available for Bluetooth, another enables data exchange via wireless LAN and Bluetooth.

Vehicle functions such as "Settings", "Navigation" and "Communication" are operated using the standard Multicontroller. The "Favourites" button has been redesigned with the aim of providing enhanced and particularly straightforward, intuitive operation. The unit consisting of four buttons is located on the left-hand side of the fairing underneath the handlebars: two-stage tactile control allows access to functions such as "Audio" or "Heated grips", making selection and operation of the functions even easier. Two-stage keying means that when pressed lightly, information is given about which function the key controls and what settings are available. If the key is pressed beyond the pressure point, its function can be applied.

The keys are assigned the following functions:

1. Start/stop media playback (mute).
2. Heating menu (heated grips and optional seat heating).
3. Switch source – audio/media.
4. Navigation (access to active app navigation).



With its new 10.25-inch TFT colour screen, the new R 1250 RT also provides the perfect platform for using a full interactive map view in conjunction with the navigation system of the BMW Motorrad Connected App. The navigation (map) is "mirrored" onto the screen via wireless LAN. As such, the new R 1250 RT offers a whole new dimension of map navigation for motorcycles. The 10.25-inch TFT colour screen now allows many more integrated navigation options to be operated via the Multicontroller. Thanks to the smartphone-based architecture, navigation is always on board: it couldn't be simpler to make route changes during a coffee break or share a route with friends.

The smartphone app provides the rider of the new R 1250 RT with the latest navigation software and maps on an ongoing basis, as well as offering the latest functions. The app also allows maximum

planning flexibility: it can be used for route planning itself, importing planned routes from Basecamp or downloading route suggestions from websites.

The BMW Motorrad Connected App can be downloaded free of charge from the Google and Apple app stores. It also comprises attractive additional functions such as route logging and the display of other travel statistics and information. In this way, logged routes can also be shared directly with other motorcyclists via the Rever community.



Comfort telephony with extended smartphone connection as an ex works option.

Along with the introduction of standard connectivity and the navigation map shown on the screen, the new "Comfort

telephony with extended smartphone connection" option is available. A smartphone can be securely accommodated in a storage compartment on the right-hand side of the motorcycle that is protected from splash water and ventilated by an electric fan, and its battery can be kept ready for use inductively or via USB connection.

The hinged storage compartment lid is automatically locked with the central locking system, which is also available as an optional extra (both features are included in the Comfort Package). Inside the storage compartment there is a holding device in which a smartphone can be securely fastened during travel by means of a flexibly sized holder. A charge indicator provides feedback on the inductive charging process, whereby a charging current of up to 1,000 mA (equivalent to 5 W of charging power) is available. This means that sufficient power is always available during active navigation, for example. Via a USB-A socket, also located in the storage compartment, up to 2,100 mA of charging current is available as an alternative to inductive charging; quick charging is also possible here, depending on the smartphone model. Ventilation by electric fan reduces the heat generated when the smartphone is in use, while a seal on the storage compartment lid protects it from splash water.

Audio System 2.0 – a new digital sound dimension as an ex works option.

With the Audio System 2.0, the new R 1250 RT offers an even more intense sound experience than its predecessor. A striking feature of the new Audio System 2.0 is that the antenna for radio reception is now integrated invisibly into the body. Visually, the system can be recognised by the covers for the new loudspeakers, which consist of high-quality metal grilles with galvanised chrome-plated clasps.

While the previous audio system was docked to the motorcycle as a predominantly independent system, the new audio system has a high level of integration into the on-board electrical system. The menu control, setting options and unique display concept make the audio experience perfect in terms of interaction as well.

The highlights of the new audio system:

- DAB and DAB+ for top-quality, unadulterated listening pleasure and reception stability
- DAB-FM following. The received signal is compared and the best signal is automatically selected.
 - Equalising profiles – listening-optimised profiles for output adaptation for a perfect audio experience
 - via the helmet: one profile (studio).
 - via loudspeakers: four profiles (bass-boost, treble-boost, voice, balanced).
- Highly flexible sound architecture design options (treble/bass) with a very broad output spectrum (output range), even at high speeds.
- HD radio. The digital radio for the US market with FM/AM band and SAT radio as an optional extra for USA.

Intelligent Emergency Call as an ex works option for further increased safety.

Ensuring the fastest possible assistance in the event of an accident or in situations of emergency and danger can save people's lives. For this reason, BMW Motorrad has developed an eCall system – "Intelligent Emergency Call" – which aims to get help to the scene of the incident as quickly as possible. This system is available as an ex works option for the R 1250 RT.

5. Design and colour concept.



"Based on intense further development in the area of aerodynamics, we were able to enhance the travel and touring qualities of the new R 1250 RT. With the new windshield attachment and its patented air guidance system, the air flow is directed in such a way that less turbulence is created and the rider's upper body is noticeably relieved. In addition, the antennas are now invisibly positioned under the fairing."

Reiner Fings, Product Manager



The new R 1250 RT: enhanced travel capability and dynamic performance thanks to new fairing. Exclusive touring character in an attractive basic paint finish and refined Style variants.

Thanks to a newly developed front fairing, the new R 1250 RT now not only looks fresher and more dynamic, it also features enhanced travel and touring qualities thanks to intense aerodynamic advancements.

Not only does the new front fairing enclose the new full LED headlamps, for example, but the upper section of the fairing is now reduced in height, too. This results in a wider field of vision for the rider, while at the same time making the new R 1250 RT appear lighter and more dynamic.

The BMW Motorrad developers placed particular emphasis on further aerodynamic advancement with the aim of achieving even greater travel and touring comfort. For example, a patented air duct

between the die-cast aluminium windshield reinforcement and the underside of the windshield generates an air flow that now follows the windshield position even more precisely. At the same time, suction of the upper body to the front is reduced and air movement around the upper body is calmed. The result is less turbulence, a more relaxed riding position and more enjoyable touring.

The front mudguard has also been redesigned and now consists of two parts instead of three. In addition to a more compact appearance, the new design also reduces inherent soiling, thereby contributing to improved touring capability.

The hallmark rod antenna is a thing of the past in the new R 1250 RT: instead, two newly developed radio antennas are now integrated invisibly under the front fairing on the right and left-hand side. The optional SAT antenna is located under the windscreen on the cover of the instrument cluster. This change also helps give the new R 1250 RT an even lighter, fresher and more dynamic appearance.

The new standard plastic covers with contrasting surface colour already add a stylish, modern touch to the cockpit, with the new innovative 10.25" TFT colour screen at the centre. Newly designed covers for the audio system's optionally available loudspeakers are also fitted with high-quality metal grilles and chrome-plated clasps, giving the R 1250 RT a particularly exclusive, elegant touch.



Basic variant in Alpine White 3.

In this paint finish, the new R 1250 RT has a look that is both timeless and dynamic at the same time. The white elements such as front, side and rear panels, front mudguards, case strips and fuel tank cover provide a fascinating contrast with black components such as

the powertrain, engine spoiler and front spoiler, windscreen trim, handlebar weights and brake calipers. Technical accentuations are the wheels in White Aluminium 3 metallic matt as well as the central fuel tank cover and knee cover in Mineral Grey metallic

matt. Cylinder head covers in Agate Grey metallic matt round off the harmonious appearance of the new R 1250 RT.



R 1250 RT Style Elegance.

In the Style Elegance variant, the new R 1250 RT emphasises its exclusive, refined appearance in the body finish Manhattan metallic for elements such as the front, side and rear panels, front mudguards, case strips and fuel tank cover. The wheels finished in White Aluminium

metallic with a black-coated powertrain add a striking contrast as well as a touch of refinement. Accentuations are the central fuel tank cover and the knee cover in Mineral Grey metallic matt, brake calipers with a gold finish and chrome-plated elements such as handlebar weights and windscreen trim.

R 1250 RT Style Sport.

In Style Sport the new R 1250 RT brings its sporty, dynamic side to the fore. Here, the body finish Racing Blue metallic is applied to the front, side and rear panels, front mudguards, case strips and fuel tank cover.

By contrast, the powertrain, wheels, engine spoiler, front spoiler and windshield trim are all finished in black. Dynamic accentuations are the central fuel tank cover and the knee covers in Mineral Grey metallic matt, the cylinder head covers in Agate Grey metallic matt and brake calipers with a gold finish.



Option 719 Mineral White metallic.



In the Option 719 variant, the new R 1250 RT has a particularly intense metallic paint finish that reflects its aspiration to leadership among the dynamic touring bikes. The body finish Mineral White metallic is applied to the front, side and rear panels, front mudguards, case strips and

fuel tank cover. Lining is also used here – a particularly iconic element that is deeply rooted in BMW Motorrad tradition. While the wheels in White Aluminium 3 metallic matt blend in very homogeneously, black components such as the powertrain, engine and front spoiler offer a striking contrast. Meanwhile, chrome-plated elements such as the handlebar weights and windshield trim underscore the luxurious character of the R 1250 RT, which is fitted with brake calipers in a gold finish.

6. Equipment program.



Optional equipment and Original BMW Motorrad Accessories.

An extensive program of optional equipment and accessories is available for customisation of the new BMW R 1250 RT. Optional equipment items are supplied ex works and are integrated in the production process. Original BMW Accessories are installed by the BMW Motorrad dealer or by customers themselves. These items can also be retrofitted.

Options.

Comfort Package: KeylessRide, chrome-plated manifold, chrome-plated exhaust system, central locking, heated seats, DWA alarm system, comfort telephony with extended smartphone connection, power socket.

Dynamic Package: MSR, Dynamic ESA Next Generation, ACC, Shift Assistant Pro, Riding Modes Pro, Adaptive Turning Light, Daytime Running Light (market-dependent), Headlight Pro.

Original BMW Motorrad accessories.

Storage program.

- Tank bag Black Collection, small
- Rear bag Black Collection
- Liner for touring pannier
- Touring topcase
- Liner for touring topcase

Design.

- Sport Silencer

Ergonomics and Comfort.

- Comfort windscreen
- Comfort rider's seat

Navigation and Communication.

- BMW Motorrad USB cable

Safety.

- LED Auxiliary Headlights
- Cylinder-head cover guard
- Protective film for 10-inch TFT display

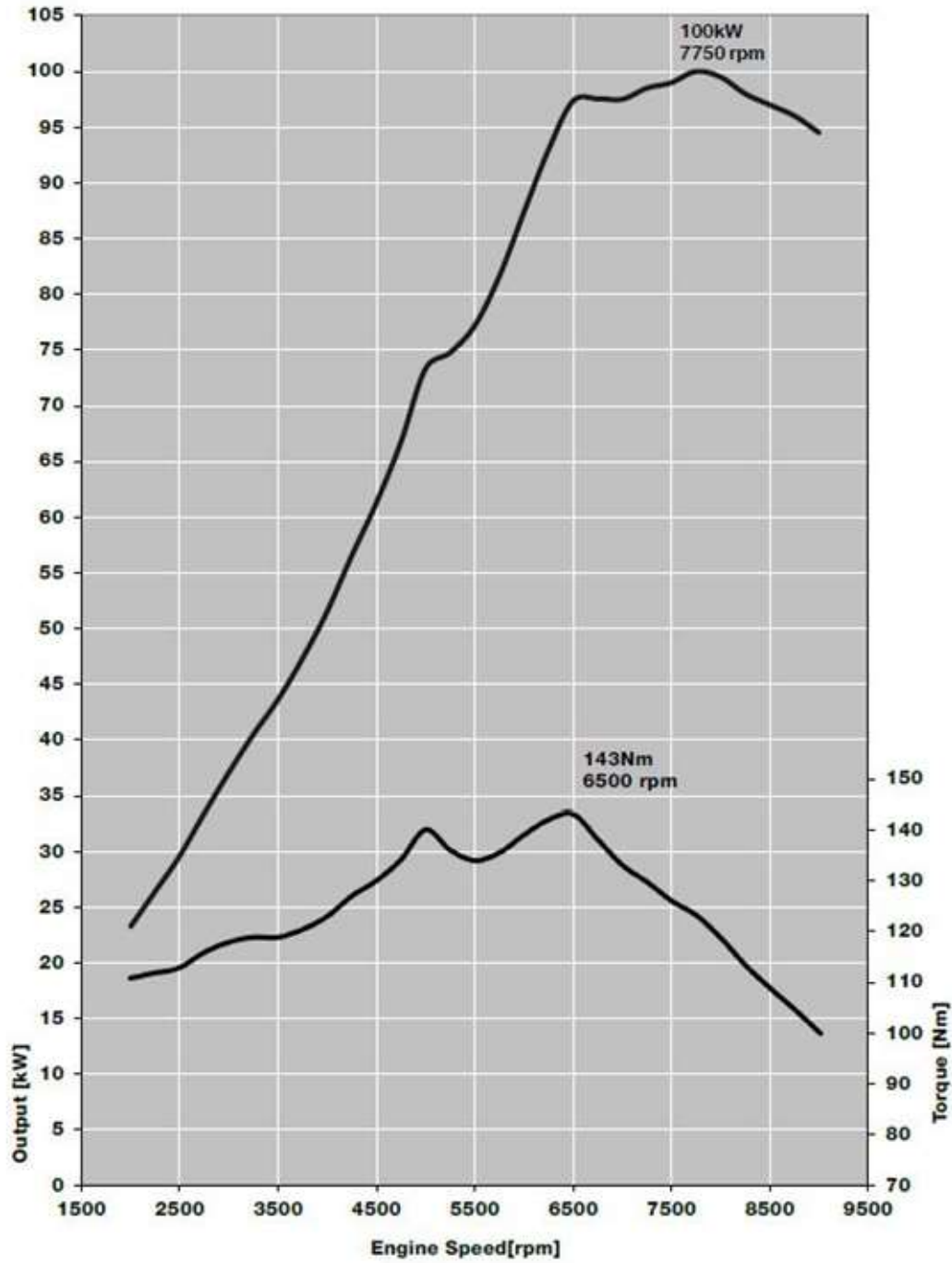
Maintenance and Technology.

- BMW Motorrad battery charger Plus
- Tyre pressure travel pack

7. Engine output and torque.



R 1250 RT



8. Technical specifications.



R 1250 RT		
Engine		
Capacity	cc	1,254
Bore/stroke	mm	102.5 x 76
Output	kW/hp	100/136
At engine speed	rpm	7,750
Torque	Nm	143
At engine speed	rpm	6,250
Type	Air/liquid-cooled 2-cylinder 4-stroke boxer engine with two overhead, spur gear driven camshafts, a counterbalance shaft and variable intake camshaft control system BMW ShiftCam	
Compression		12.5/1
Fuel		Premium unleaded 95 RON
Valves per cylinder		4
Ø intake/outlet	mm	40/34
Ø Throttle valve	mm	52
Engine control		BMS-O
Emission control	Closed-loop three-way catalytic converter, exhaust standard EU-5	
Electrical system		
Generator	W	508
Battery	V/Ah	12/16
Headlamp	Full LED or LED main and high-beam headlamps	
Rear light	LED brake light/rear light	
Starter	W	900
Power transmission		
Clutch	Wet clutch with anti-hopping function, hydraulically activated	
Gearbox	Constant mesh 6-speed gearbox with helical gearing system	
Primary ratio		1.650
Transmission ratios	I	2.438
	II	1.714
	III	1.296
	IV	1.059
	V	0.943
	VI	0.848
Secondary drive	Cardan	
Secondary ratio		2.750

R 1250 RT**Suspension**

Frame construction type	Two-section frame concept consisting of main frame with bolt-on rear frame, load-bearing engine	
Front wheel control	BMW Motorrad Telelever, central spring strut, Ø 37 mm	
Rear wheel control	Cast aluminium single-sided swing arm with BMW Motorrad Paralever, WAD spring strut, continuously adjustable spring preload by means of hand wheel, rebound-stage damping adjustable by hand wheel (Option: Dynamic ESA)	
Spring travel, front/rear	mm	120/136
Wheel castor	mm	116
Wheelbase	mm	1485
Steering head angle	°	64.1
Brakes	front	Twin disc brake, floating brake discs, Ø 320 mm, 4-piston radial brake calipers
	rear	Single disc brake, Ø 276 mm, 2-piston floating caliper
ABS	as standard BMW Motorrad Full Integral ABS	
Wheels	Die-cast aluminium wheels	
	front	3.50 x 17"
	rear	5.50 x 17"
Tyres	front	120/70 ZR 17
	rear	180/55 ZR 17

Dimensions and weights

Total length	mm	2,222
Total width including mirrors	mm	985
Seat height	mm	805/825 (760 to 850 possible)
DIN unladen weight, road ready	kg	279
Permitted total weight	kg	505
Fuel tank capacity	l	25

Performance figures

Fuel consumption (WMTC)	l/100 km	4.75
CO2	g/km	110
Acceleration 0-100 km/h	s	3.7
Top speed	km/h	>200

9. Riding gear.



PaceGuard Tour suit.

The robust **PaceGuard Tour touring suit** is characterised by its waterproof and dirt-repellent 3-layer upper material and generous ventilation options. This makes the **simple, functional all-in-one look** perfect for spring, summer and autumn.

The practical velcro fastening on the collar is symmetrically adjustable. **Velcro** on the sleeves, leg cuffs and waist ensure easy size adjustment. In addition, storm cuffs on the sleeve hems, width adjustment on the waistband and a drawstring waist hem round off the high level of wearing comfort. With the extra-large hanger loop, the suit can be quickly stowed away at home.

Optimum protection is provided by NP-L joint protectors, an NP Pro back protector and the possibility of attaching a chest protector that can be adjusted in three positions. The jacket and trousers can be joined together with either a long or a short (40 cm) zip. The ventilation zips on the chest and thighs provide another feel-good factor. Thanks to the ventilation zips on the back and sleeves as well as the **AirVent system on the front zip**, even long trips are no longer a problem.

The jacket has two waterproof pockets on the front, one breast pocket and one large pocket on the back. It features an embossed monochrome black brand logo on the left upper arm and a word mark on the left forearm. The trousers have two waterproof pockets and two patch pockets on the thigh. The left thigh bears the BMW Motorrad word mark.

The upper material consists of a slightly elastic 3-layer material with a **breathable and waterproof membrane** consisting of 84% polyamide, 13% polyurethane and 3% spandex. The mesh lining is made of 100% polyester. The suit can be washed at 30 degrees in the gentle wash cycle.

The **PaceGuard Tour suit** in black is available in the sizes 34-48 for women and 46-66 for men, both in Regular Fit.

PaceDry Tour suit.

The new **PaceDry Tour entry level touring suit** is suitable for spring, summer and autumn thanks to its good ventilation and water resistance. The anthracite-coloured touring suit is light, comfortable to wear, dirt-repellent and features the full range of protectors.

In addition to the removable NP3 protectors on the shoulders and elbows and the long NP-Pro back protector, the reinforcement of the areas most at risk when falling through **rastered PU coating with ceramic particles** ensures excellent safety.

The Z-Liner construction with **BMW Climate Membrane** makes the **PaceDry Tour suit** unbeatable in terms of wind and water resistance and breathability: The unique zips for ventilation on the chest and back also open the membrane for effective ventilation directly onto the upper body. 3-D spacer fabrics on the back ensure optimum ventilation. **CORDURA 500D/polyamide and elastic inserts** on the sides and inner arm provide both greater strength and comfort. The mesh lining is made of 100% polyester.

The width of the **PaceDry Tour suit** can be adjusted using the velcro straps on the sleeves, waist and waistband. Two patch waterproof flap pockets, one pocket each on the chest and sleeve and two pockets on the back offer plenty of storage space for small items when on the road. Good rider visibility in traffic is ensured by the coloured brand symbol on the left upper arm, the BMW Motorrad word mark on the left breast pocket and the left thigh, together with reflective prints on the sleeves and collar.

The **PaceGuard Tour suit** is available in the sizes 46-60 for women and 34-48 for men, both in Regular Fit. Can be cleaned at 30 °C using the gentle wash cycle.

Dry Jacket.

The elegant **Dry Long Jacket** is a new addition to the BMW Motorrad range for the urban motorcyclist. With its dirt-repellent,

breathable and waterproof 3-layer laminate, the black men's jacket is perfect for daily use in the city.

The fashionable and light **protection class A Dry Long Jacket** has two side pockets and two inside pockets. The long cut with side zips ensures increased seating comfort. In addition to a **removable hood** there is a **storm hood** in the collar which can be worn under the helmet. A reflective print on the back ensures good visibility in traffic. The NP-Flex protectors are fitted on the shoulders and elbows and a back protector can be retrofitted.

The **Dry jacket** for men is available in sizes S-2XL (Regular Fit) and can be washed at 30 °C in the gentle wash cycle.

SummerXcursion jacket.

The new **SummerXcursion blouson jacket** is a must-have for the summer. This jacket is not only airy, light and fashionable, but also provides excellent protection thanks to NPL protectors on the shoulders and elbows (protection class A, retrofittable back protector). The abrasion-resistant polyamide mesh of the outer material is also **water and dirt repellent**.

Special features of the **blouson design** include the word mark on the generous 3M reflective print on the back, a propeller rivet on the left pocket and the **fine knit on the hem, sleeve hem and collar**. A 40 cm long connecting zip allows you to combine the jacket with motorcycle trousers. Two side pockets, two inside pockets, stretch on the back and sides round of the **SummerXcursion** look.

For men the blouson is available in blue and black and in sizes 46-60. For women the colour red is available in sizes 34-48, Regular Fit.

City jacket.

A hoody style motorcycle jacket: The new **City summer jacket**. Perfect for your daily ride in the city. The **City jacket** not only stands out due its sporty look, but is also water and dirt repellent thanks to its 94% polyester and 6% elastane outer material.

With its NP-Flex protectors on the shoulders and elbows (back protector cannot be retrofitted), it complies with protection class A.

No inner lining has been used, making it very light and comfortable to wear. The City jacket features two side pockets and a waterproof outer pocket. The BMW Motorrad word mark adorns the breast pocket.

The grey men's is available in sizes S-2XL (Regular Fit) and can be washed at 30 °C in the gentle wash cycle.

Transformer jacket.

It doesn't get any more practical than this: The new **Transformer jacket** can be **transformed into a backpack** in just two easy steps! This makes the very light summer blouson the perfect daily companion in the city and you can **stow away your helmet** in seconds.

With its NP-Flex protectors on the shoulders and elbows, the **Transformer jacket** complies with protection class A and a back protector can also be retrofitted. Thanks to its abrasion-resistant polyamide fabric, it is also water and dirt repellent, the outer pocket is waterproof. The mesh lining is made of 100% polyester.

The BMW Motorrad word mark is woven into the elastic band at the hem of the **Transformer jacket** and a brand logo can be found in the reflector under the collar. Two side pockets and two inside pockets round off the blouson jacket. A connection zip is not available.

The grey Transformer men's jacket is available in sizes S-2XL (Regular Fit) and can be washed at 30 °C in the gentle wash cycle.

KnitLite sneaker.

Innovation, coolness, protection – that's what the new **BMW Motorrad KnitLite sneaker** is all about. Currently the **only sneaker in 3D Knit technology** with protection level 1 certification (EN 13634:2017) on the motorcycle market, it is both airy and modern as well as stable and unique.

This convincing combination is achieved, among other things, through the use of thermoplastic polyurethane in two different densities in the sole construction: **TPU**.

Gear lever and heel reinforcements ensure protection and stability. The **2K bicolour TPU sole** is resistant to oil and fuel, and its higher density in the footrest and heel area safeguards improved abrasion resistance. The concealed inner zip makes taking the sneaker on and off a comfortable affair.

The men's sneaker is available in brown in the sizes 38-48. For women a red **KnitLite sneaker** is available in the sizes 35-42.

GTX PaceDry glove

GTX PaceDry glove – the perfect choice for all weathers. This model is a **unique, waterproof enduro glove**. Its design is perfectly matched to the **PaceDry Tour suits**. Another new feature is the velcro fastener to prevent the gloves from coming off accidentally.

GORE-TEX technology X-TRAFIT makes the **PaceDry gloves** an utterly reliable companion – not just for off-road purposes but also when touring. X-TRAFIT consists of three layers: the lining is bonded to the membrane and the membrane to the leather. The result is an entirely waterproof yet breathable material.

X-TRAFIT also offers **unrivalled wear comfort**: The **GTX PaceDry gloves fit perfectly and crease-free**, the lining cannot be pulled out by sweaty hands after a strenuous ride, nor does the membrane become twisted or slip out of place. The gloves are extremely easy to put on and take off in wet weather, too. To ensure the latter does not happen by mistake, the **PaceDry GTX gloves** now have an additional velcro fastener plus interior removal strap.

The **PaceDry GTX gloves** are fitted with **safety features** designed specifically for each hand zone: The upper hand and the back of the hand are protected by highly abrasion resistant **CORDURA**, while the tops of the fingers are made of padded elastic spandex for optimum freedom of movement. Meanwhile **SuperFabric underlaid with memory foam** is used at the ball of the thumb. The safety features of these enduro gloves are rounded off with a soft knuckle protector, goatskin leather on the palm and double-layered leather at sensitive points at risk in the event of a fall. The thumb and index finger also feature tactile leather for **touch screen applications**.

The **PaceDry GTX gloves** come with a medium-length cuff made of CORDURA, as well as distinctive styling for men and women. The women's version has longer fingers and a slimmer palm area.

Available sizes: Men's glove 8–8.5 to 12–12.5; women's version 6 to 8. Colours: Black-blue and grey.