

BMW at RETTmobil 2014. Contents.



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1. BMW at RETTmobil 2014: Mobile specialists for every requirement.



From May 14 to 16, 2014, the BMW Group will be displaying an extensive range of custom-designed special-purpose and emergency vehicles at the 14th RETTmobil trade fair in Fulda.

RETTmobil ranks as the leading European trade fair for emergency services and mobility, acting as an important information platform for paramedics, rescue services and firefighters, as well as public services, local authorities and trade associations. More than 450 exhibitors will come to Fulda to present their latest technologies and developments in the fields of emergency rescue, technical intervention, firefighting and disaster recovery.

As a leading manufacturer of premium cars and motorcycles, BMW also has decades of experience in developing and building special-purpose vehicles. In Fulda, BMW will present an extensive range of practical and purpose-designed emergency vehicles which meet highest standards not only in performance, practicality and safety but also in cost efficiency and fuel economy.

BMW emergency vehicles: customised functionality and performance.

BMW is presenting a total of six different models at this year's RETTmobil, beginning with an attractive and eye-catching exhibit at the main entrance to the show: a BMW M235i paramedic vehicle. Highlights at the trade fair stand itself include paramedic vehicles based on the new BMW X5 xDrive30d and on the BMW X3 xDrive20d, and a BMW X1 xDrive20d fire command vehicle. Finally, the BMW Group is also exhibiting a BMW 325d Gran Turismo covert emergency vehicle and the new BMW R 1200 RT motorcycle.

Further information on BMW emergency vehicles can be found on the internet at www.bmw-authority-vehicles.com.

BMW X5 as a fast, high-performance emergency vehicle.

When every second counts, a powerful engine and optimal handling are crucial qualities in an emergency vehicle. The new BMW X5 xDrive30d (combined fuel consumption: 6.2* l/100 km [45.6 mpg imp]; combined CO₂ emissions: 164–162 g/km) is a natural choice for the job. Equipped with an intelligent all-wheel-drive system and 8-speed Steptronic transmission, this Sports Activity Vehicle is powered by a 3.0-litre six-cylinder in-line diesel engine which combines impressive performance with high efficiency. Peak output of 190 kW (258 hp) and powerful peak torque of 560 Nm (413 lb-ft) ensure that this paramedic vehicle wastes no time getting to the scene of an emergency. The special advantages of this model include its high seating position and precise, light-action steering. Further plus points are the outstanding spaciousness, extensive interior adaptability and an automatic tailgate which allows emergency equipment to be quickly accessed. Amongst other things, the new-generation BMW X5 boasts an extended engine line-up that includes a new entry-level version, the BMW X5 sDrive25d (combined fuel consumption: 5.7–5.6* l/100 km [49.6–50.4 mpg imp]; combined CO₂ emissions: 151–149 g/km).

Brand-new BMW R 1200 RT: emergency services version already available.

Since they can often get to the scene of an incident more quickly than other types of vehicle, whether in or out of town, motorcycles make an excellent mobility solution for emergency response teams. BMW has a long tradition and extensive know-how in this field. Currently, four different motorcycle models are available for police, rescue and escort duty. The brand-new BMW R 1200 RT (fuel consumption at a constant 90/120 km/h: 3.9/5.3* l/100 km [72.4/53.3* mpg imp]) can be tailored for special requirements of all kinds. It offers excellent handling in all conditions and an outstanding range of safety features. “Rain” and “Road” riding modes allow the riding characteristics to be optimally matched to road conditions. ABS and Automatic Stability Control (ASC) are also standard, while the optional Hill Start Control and Gearshift Assistant Pro help to reduce stress when the pressure is on. A restyled instrument cluster with large TFT colour display provides an optimal overview of important information. Riders also benefit from excellent wind and weather protection, optimised ergonomics and an individually selectable range of options, all of which makes the BMW R 1200 RT an ideal motorcycle for emergency service work. The high-torque, liquid-cooled twin-cylinder boxer engine develops 92 kW (125 hp) and maximum torque of 125 Nm (92 lb-ft).

BMW X3 paramedic vehicle.

For more than ten years, the BMW X3 has been a byword for robust agility, dynamic performance and extensive interior adaptability. That makes it the ideal partner in challenging emergency response situations, in any kind of terrain. With the recently presented third model generation, two more powerful – yet at the same time more fuel-efficient – new-generation two-litre turbodiesel engines are making their debut. Developing 140 kW (190 hp), and with average fuel consumption of just 5.4–5.0* l/100 km (52.3–56.5 mpg imp) (automatic version) and CO₂ emissions of 141–131 g/km, the BMW X3 xDrive20d on show in Fulda sets the benchmark in its class.

BMW 3 Series Gran Turismo as a covert emergency vehicle.

At the BMW stand in Fulda, the BMW 3 Series Gran Turismo is being shown in a covert emergency vehicle version for the first time. Outwardly, there is nothing to tell this BMW apart from a regular model. Inside too, the special-purpose equipment is intelligently integrated and there are few indications of this vehicle's special role. Underneath the skin, meanwhile, high-performance powertrain and chassis technology gives this BMW the necessary agility and dynamic handling to tackle even the most challenging tasks. A choice of eight fuel-efficient, high-torque four- or six-cylinder petrol and diesel engines can be supplied. The intelligent BMW xDrive all-wheel-drive system delivers superior handling in all conditions, varying power between the axles and wheels with split-second speed, in line with road surface conditions. This minimises oversteer and understeer and maximises traction and directional stability. The BMW 325d Gran Turismo on show at RETTmobil develops maximum power of 160 kW (218 hp) and maximum torque of 450 Nm (332 lb-ft). With 6-speed manual transmission, its fuel consumption is 5.2–5.1* l/100 km (137–134 g/km CO₂). 0–100 km/h (62 mph) acceleration time is 7.1 s, and top speed is 240 km/h (149 mph).

BMW M235i: paramedic vehicle in a class of its own.

The latest addition to the BMW M family, the BMW M235i Coupe, embodies unadulterated sporty performance. Its six-cylinder in-line petrol engine develops maximum power of 240 kW (326 hp) and accelerates this compact two-door model from 0 to 100 km/h (62 mph) in just 5.0 seconds (combined fuel consumption: 8.1* l/100 km [34.9 mpg imp]; combined CO₂ emissions: 189 g/km). Naturally, the chassis and brake system provide sharp handling and stopping power to match the performance of this sporty model, even in extreme situations. Somewhat out of the usual run of emergency vehicles, this model makes an exciting addition to the range with its fascinating styling and cutting-edge technology.

BMW X1 fire command vehicle.

Emergency services are known for their efficient and effective use of resources when the pressure is on. This is certainly true of the fire command vehicle based on the BMW X1 xDrive20d. Developing 135 kW (184 hp), it is not only fast and agile, but also offers impressive efficiency and low fuel consumption and emissions (combined fuel consumption: 5.5* l/100 km [51.4 mpg imp]; combined CO₂ emissions: 145 g/km). With its higher seating position and precise steering, this vehicle makes light work of agile, precise manoeuvring in complex driving situations. When responding to an emergency, the low centre of gravity provides superb stability even at high speeds. A 40:20:40 split-folding rear seat bench allows the interior to be configured for a wide range of requirements. The optional equipment features are attractive and affordable even on a limited budget.

Tried and tested in everyday operation: rear-extending load floor system.

Specified on many BMW emergency vehicles, the optional retractable load floor in the luggage compartment brings with it valuable benefits. This built-in system provides secure and tidy storage for important rescue gear and equipment, and offers fast and easy access. Adjustable dividers keep the equipment secure and tidily organised during transport. To protect back-seat passengers if the vehicle is hit from the rear, a penetration protection system in the backrests prevents the load floor rails from intruding into the passenger compartment. This solution is available for the BMW 5 Series Touring and the BMW X3.

* Figures according to EU test cycle, may vary depending on the tyre format specified.

Further information on official fuel consumption figures, specific CO₂ emission values and the electric power consumption of new passenger cars is included in the following guideline: "Leitfaden über Kraftstoffverbrauch, die CO₂-Emissionen und den Stromverbrauch neuer Personenkraftwagen" (Guideline for fuel consumption, CO₂ emissions and electric power consumption of new passenger cars), which can be obtained from all dealerships, from the Deutsche Automobil Treuhand GmbH (DAT), Hellmuth-Hirth-Str. 1, 73760 Ostfildern-Scharnhausen and at <http://www.dat.de/en/offers/publications/guideline-for-fuel-consumption.html>. LeitfadenCO₂ (GuidelineCO₂) (PDF – 2.7 MB)

2. High-tech features as standard: BMW EfficientDynamics and BMW ConnectedDrive.



The latest technologies available to the regular BMW models are also used on BMW emergency vehicles. That means our emergency vehicles not only meet the highest standards in terms of performance, practicality and safety, but also offer impressive cost efficiency and fuel economy.

BMW EfficientDynamics: more power with reduced fuel consumption.

Powerful engines and optimal handling are essential qualities for vehicles used in emergency response, where every minute counts. At the same time, in order to meet public sector budget constraints – not to mention environmental requirements – customers also expect low fuel consumption and emissions. BMW EfficientDynamics technology meets these seemingly conflicting requirements both in regular BMW vehicles and in special-purpose models. These features are incorporated into virtually all areas of the vehicle.

Highly advanced petrol and diesel engines, high-efficiency transmissions, intelligent lightweight engineering, optimised aerodynamics and a range of other measures all help BMW emergency vehicles to combine impressive performance and handling with cost-efficient operation based on low fuel consumption and emissions. Examples of innovative BMW EfficientDynamics technologies include the TwinPower Turbo engines with optimised performance and fuel consumption, intelligent energy management for auxiliary units and electrical consumers, the Auto Start Stop function, Brake Energy Regeneration and the Optimum Shift Indicator.

Further information about BMW EfficientDynamics is available on the internet at www.bmw.com/EfficientDynamics.

BMW ConnectedDrive: intelligent connectivity for enhanced safety, comfort and information.

For years, BMW ConnectedDrive has been supporting intelligent connectivity with the outside world for both vehicle and occupants. With its unique combination of driver assistance systems and mobility services, BMW ConnectedDrive also offers highest levels of comfort and safety for the crews of BMW emergency vehicles.

Offering internet access and high-performance interface technology for the integration of mobile devices such as smartphones or the BMW Car PC, BMW ConnectedDrive has revolutionised the principle of integrated online and other services. Intelligent interaction between online content and standard or optional onboard assistance systems provides the best possible support for the driver, whether in a regular model or an emergency vehicle. For example, addresses can be forwarded straight from the internet to the navigation system for use as a destination. This can save the driver of an emergency vehicle valuable minutes which may make all the difference between the success and failure of an emergency callout. Special apps like BMW Connected can receive RSS messages, so that important information, for example from the dispatch centre, can be passed on to paramedics and drivers.

Real Time Traffic Information (RTTI): up-to-the-minute information.

When responding to an emergency, traffic conditions may require a detour from the planned route. For such situations, BMW ConnectedDrive offers a premium-quality alternative to the TMC (Traffic Message Channel) radio-based traffic news. The BMW RTTI traffic information system is mobile phone-based, which means it is very fast and offers extensive coverage. The vehicle's built-in SIM card receives the relevant traffic data in real time and immediately calculates an alternative route. Drivers are not only informed about hold-ups on their current route as they develop, they also receive precise information about conditions on potential alternative routes. The system monitors not only motorways and dual carriageways but also other extra-urban roads, as well as main and secondary roads in urban areas. Traffic conditions are continuously analysed, so that drivers always have the latest information at their fingertips. Information sources include GPS data from vehicle fleets and mobile phones as well as data from roadside sensors and local authority traffic management systems. Current congestion levels are depicted on an optimised, colour-coded "live congestion map", which shows roads in green, yellow, orange and red so that emergency response personnel can immediately see where traffic is heaviest at any given time. If they wish, drivers can leave it to the navigation system to calculate the fastest route to the destination. The resulting time savings can help to save lives.

Intelligent Emergency Call: rapid assistance for the emergency services themselves.

Critical traffic situations, risky conditions at the scene of the incident, inattention on the part of other road users and force majeure-type situations all come with their fair share of risk for the emergency services – and increase the chance that an emergency vehicle may also be involved in an accident. In such an eventuality, the Intelligent Emergency Call system provides invaluable assistance by automatically supplying vehicle location and accident severity data. In the event of an accident the system can either be triggered manually or can make an automatic emergency call to the BMW Call Centre via the built-in SIM card. This call includes a wide range of sensor-based information, for example about the type and severity of the collision, potential injury risk, seat occupancy, accident location and vehicle model, to help ensure that fast and appropriate assistance is provided at the scene of the accident. The Call Centre makes telephone contact with the occupants of the vehicle and informs the nearest control centre so that the necessary action can be launched immediately. With Intelligent Emergency Call, BMW already offers a system with features that go well beyond the statutory requirements for 2015.

Driver assistance systems: enhanced safety and comfort.

The full-colour Head-Up Display makes life significantly easier for drivers of emergency vehicles, projecting all the necessary information with razor-sharp precision onto the front windscreen in the driver's direct line of view. Information such as speed, navigation data or warning messages can be read directly off the windscreen without drivers having to take their eyes off the road.

A wide range of other assistance systems helps drivers of BMW emergency vehicles to maintain control of their vehicle and cope with traffic conditions even when under great stress and in extreme conditions such as darkness or icy roads. Examples include the BMW anti-dazzle High Beam Assistant, Lane Change and Lane Departure Warning with Collision Warning, Pedestrian Warning and BMW Night Vision (which detects and spotlights pedestrians or animals in the dark).

BMW iDrive: easy and intuitive operation.

For many years the BMW iDrive system with Controller and Control Display has been hailed as an outstanding automotive control interface. In BMW emergency vehicles, the twist-push control in the centre console not only conveniently controls the audio system, navigation system and the various ConnectedDrive functions, it can also be used to control the various emergency lights and sirens. Frequently used functions can also be operated via the one-touch direct selection buttons situated next to the Controller. Visual confirmation that the relevant functions have been activated is provided in the Control Display. This means that in a BMW emergency vehicle there is no need for the additional buttons or monitors that are a typical feature of retrofitted systems.

Further information on BMW ConnectedDrive is available on the internet at www.bmw.com/ConnectedDrive.

3. Know-how based on tradition: Tailored development, decades of experience.



The special-purpose equipment of BMW emergency vehicles meets the same high standards in terms of quality, functionality and safety as the base vehicle itself. This is achieved through integrated development and parallel production. Special-purpose components are integrated into the development process from the start, and the emergency vehicles and regular models are built in parallel.

Integrated production.

The design of the base model includes provision for the installation of special-purpose equipment. This means that installation of equipment such as data-measuring, radio communication and signal control systems can be easily slotted into the regular production process. The BMW 3 Series and 5 Series emergency vehicles are built on the same production lines as the corresponding regular models supplied to private customers. In this way, BMW is able to maximise the functional performance, quality and life expectancy not only of the individual special equipment features but also of the overall system.

When developing emergency vehicles, the BMW engineers work closely with the prospective users. Representatives of fire and rescue services and other bodies contribute their practical experience when the requirements for new vehicles are defined. BMW then compares these requirements with the technical specifications of the base model, at the same time taking into account the latest technical developments from leading and experienced special equipment suppliers. The end result is a concept which meets the needs of the customer while also complying with the high quality standards of BMW.

In the subsequent, integrated production process, BMW ensures standards of functional performance and safety that are not achievable with the commonly practised retrofit approach. To verify these high standards, BMW emergency vehicles with their full complement of special equipment are then subjected to strict testing programmes which go far beyond the requirements of current test standards. This means that the customer gets a tailor-made emergency vehicle whose components all work together perfectly and function safely and reliably as an integral, organic whole. Not surprisingly, therefore, BMW offers

an original manufacturer quality warranty on all factory-fitted special-purpose components.

BMW emergency vehicles: know-how based on tradition.

The story of BMW emergency vehicles has its beginnings in the 1950s, when new patrol cars based on the BMW 501 and BMW 502 went into service with the Munich police force. With their powerful six- and eight-cylinder engines these models soon shot to fame nationwide when they played a starring role in “Funkstreife Isar 12”, a popular police drama on German TV. Popularly known as “baroque angels” on account of their curvaceous design, these vehicles already set high standards of reliability and fitness for purpose.

Since then, BMW has systematically advanced the design of its emergency vehicles and steadily expanded its engineering lead. Today the range of BMW emergency vehicles extends from BMW 3 Series and BMW 5 Series versions to vehicles based on the BMW X1, X3 and X5 Series and BMW motorcycles. Future models will also be offered in emergency vehicle versions, providing that their basic format is appropriate. In the course of their career, typical brand hallmarks such as exceptional dynamism, outstanding reliability, functional performance and safety have helped BMW emergency vehicles build up an excellent track record in this line of work, even in extreme situations. At the same time, advanced BMW EfficientDynamics technology helps to ensure high standards of cost efficiency and environmentally friendly performance, and therefore responsible and prudent use of public funds.

Almost 60 years’ experience building special-purpose vehicles for the police, fire and rescue services has given BMW a robust head start in terms of know-how, innovative expertise and quality. All this flows directly into the ongoing development of BMW emergency vehicles. Our development work always takes place in close collaboration with specialists and users in the relevant organisations, both in Germany and abroad, since different emergency services often face widely differing tasks and requirements at national and international level. These requirements are steadily growing in both scale and complexity. Close collaboration with public services around the world enables professional solutions to be devised for emergency vehicles of today even in the case of highly specific customer requests. BMW emergency vehicles can be individually equipped to meet specific local requirements in any part of the world. That means emergency services get a vehicle that optimally supports them in their important and demanding work, both in routine day-to-day operation and in extreme situations.