

BMW at the GPEC 2016

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1. BMW at the GPEC 2016.

Reliable partner with competence in emergency services.

Munich. At the international trade fair GPEC being held in Leipzig from 7 to 9 June 2016, the BMW Group will be presenting a current overview of its comprehensive range of emergency and special security vehicles for police forces and other security authorities.

The GPEC (General Police Equipment Exhibition & Conference) is held every second year and is Europe's largest closed specialized trade fair for police equipment and security technology. As an important trade and services exhibition, the show is providing for the ninth time now an international communication platform for experts from authorities and other public security sectors. At the last GPEC in 2014, the organizer recorded more than 6,500 trade visitors from 62 countries as well as more than 500 national and international exhibitors from 28 countries.

This year too, BMW Group is represented in Leipzig with a comprehensive range of functional and emergency and security vehicles tailored not only to meet the highest demands with regard to performance, functionality and security, but also to convince in terms of efficiency and economy. At the GPEC 2016, BMW is exhibiting seven different emergency and security vehicles, including the BMW i3 in an exclusive foiling design as well as the BMW 318d Touring and the BMW 220d xDrive Gran Tourer as a police emergency vehicle. Moreover, the spotlight will be on the BMW X5 xDrive50i Security Plus featuring maximum passenger protection coupled with characteristic BMW driving dynamics. In addition, the public authority versions of the motorcycle models BMW R 1200 RT, BMW F 700 GS and BMW F 800 GS will be on show.

Customised development with tradition.

As a leading manufacturer of premium automobiles and motorcycles, BMW looks back on decades of experience in the development and production of special security vehicles. These meet the same high standards in terms of quality, functionality and safety as the respective base vehicles themselves. Therefore, BMW EfficientDynamics technology and the networking of driver assistance systems and mobility services by BMW ConnectedDrive are always standard on these vehicles.

The possible use of special equipment features is already taken into account during development of the base model and later incorporated into series

production. In the process, BMW engineers work closely with the customer's specialists, falling back on cutting-edge components from well-known and experienced suppliers. Ultimately, every BMW emergency vehicle, including all installations and attachments, must withstand stringent tests that often exceed by far the requirements of existing testing standards. Only in this way will customers receive a customised emergency vehicle that is fitted with perfectly matching components and fulfills the BMW Group's high functional and quality standards.

2. At the focus of the BMW stand.

2.1 The BMW i3: On patrol with electric drive



Agile, with powerful acceleration and above all, locally emission-free: these characteristics make the **BMW i3** perfectly suitable as a police emergency vehicle. BMW was the first manufacturer to provide from the very beginning a fully fledged premium vehicle developed purely for electric mobility with special additional equipment designed for use by police forces.

At the GPEC 2016, BMW is exhibiting a BMW i3 designed for police operations. The special "BMW i3" foiling bearing the word "POLICE" is just as much a part of the equipment range as are the front and rear flashers in blue, digital radio preparation Sepura and the special signal roof bar system Hella RTK-7 with the LED flasher module KL-LM2 and a worklight. The special signal system features LED strobe headlights, front and rear stop signal matrices and alley lights, these being four white power LEDs for direct close-range illumination. The rear-mounted LED signal bar (LSB) Arrow Stick is also operated via the special signalling system. In addition, the BMW i3 features fast charging systems for direct and alternating current.

The BMW i3 is driven by a synchronous electric motor, delivering 125 kW/170 hp. Combined electricity consumption (NEDC) is 12.9 kWh/100 km. (Combined fuel consumption with range extender: 0.6 l/100 km, combined CO₂ emissions 13 g/km)*. Under purely electric power, the BMW i3 has a range of up to 160 kilometres under everyday conditions (with optional range extender up to 120 km). The optional range extender fitted to the trade show vehicle is a small internal combustion engine that extends the range by an additional 150 kilometres. The BMW i3 accelerates in 7.2 seconds from a standing start to 100 km/h (with range extender in 7.9 seconds).

A vision becomes reality.

The fully electric BMW i3 as a part of the everyday life of operational and emergency services is no longer a vision. Emergency services in Bavaria, Milan, Los Angeles and London have in the meantime added the BMW i3 to their vehicle fleets.

* Consumption figures were determined on the basis of the ECE test cycle, dependent on tyre format.

2.2 The BMW 318 d Touring: Proven all-rounder



Thanks to a high level of functionality, variability and practice-oriented standard equipment features, the **BMW 318d Touring** is the ideal emergency vehicle for police forces. It has technical features such as a roof-mounted special signal system and LED beacons integrated into the rear lid and its powerful 110 kW/150 hp engine (combined fuel consumption: 4.6 – 4.3 l/100 km, combined CO₂ emissions: 122 – 112 g/km*) delivers highly dynamic and efficient performance. The vehicles have foiling in a blue police design with fluorescent yellow stripes for better recognisability. The redesigned luggage compartment featuring aluminium lightweight elements offers a lot of stowage and an optimised passenger protection – particularly in the event of a rear collision thanks to the improved deformation characteristics of the special installations.

The innovative rear warning system featuring a VESBA design developed exclusively by BMW is making its first appearance at the GPEC. It increases the recognisability of disguised vehicles parked at the deployment location, thus contributing significantly towards the safety of police officers and other road users.

* Consumption figures were determined on the basis of the ECE test cycle, dependent on tyre format.

2.3 The BMW 220d xDrive Gran Tourer: Functional and dynamic during emergency operations



With the **BMW 2 Series Gran Tourer**, BMW developed an independent series that combines outstanding space utilisation with the dynamic driving experience that is so typical of BMW. The BMW 2 Series Gran Tourer being presented is designed as a police emergency vehicle. Appropriate foiling gives indication of the vehicle's specific purpose. Two blue LED front flashers behind the radiator grille and two blue LED flashers located in the rear lid can be activated on emergency vehicles that have priority. The combined roof antenna (4 m), which can be used both with the Global Positioning System (GPS) as well as the digital trunking radio TETRA, is already connected to the radio preparation installations for the AEG TX9 system and the Sepura digital radio device. An additional battery with a capacity of 70 ampere hours (Ah) ensures the operability of all electric and electronic equipment features even when the engine is switched off at the deployment location. Chargers for both vehicle batteries conveniently recharge the batteries during standby time. Besides an accident data recorder (ADR) and an additional LED light inside the luggage compartment, the equipment range for this BMW police emergency vehicle also includes a steel separating grid located behind the rear seats.

Powerful diesel engine combined with intelligent four-wheel drive.

The BMW 220d xDrive Gran Tourer is powered by a four-cylinder turbo diesel delivering 140 kW/190 hp and a maximum torque of 400 Nm. The version featuring an 8-speed Steptronic transmission has a combined fuel consumption of 5.1–4.9 litres* of diesel per 100 kilometres. This corresponds to a CO₂ emission of just 134–128 g/km* and offers – measured in terms of engine performance – remarkably good fuel economy.

The BMW 220d xDrive Gran Tourer sprints from a standstill to 100 km/h in 7.6 seconds and reaches a top speed of 218 km/h. The intelligent four-wheel drive system BMW xDrive distributes power variably to each of the four wheels, whilst allowing for the respective grip.

A total of seven engines, in some markets six, are available for the BMW 2 Series Gran Tourer – three petrol and four or three diesel engines respectively. They cover a performance range of 70 kW/95 hp to 141 kW/192 hp (combined fuel consumption: 6.2–3.9 l/100 km; combined CO₂ emissions: 144–104 g/km)*.

* Consumption figures were determined on the basis of the ECE test cycle, dependent on tyre format.

2.4 The BMW X5 xDrive50i Security Plus: Passenger protection and superior driving dynamics



Celebrities, important decision-makers and private individuals at risk need protection against violent attacks, abduction or organized crime. For this target group, BMW has developed the meanwhile third generation of a security vehicle based on the new Sports Activity Vehicle (SAV) BMW X5. The BMW X5 Security Plus being presented in Leipzig has an armoured passenger compartment that reliably protects up to four occupants even against the effect of the AK-47, the world's most widespread firearm. Protection by means of tightly sealed joints prevents the penetration of bullets or splinters in critical areas such as door gaps or the transitions between the body and the pillars. Security glazing developed especially for resistance class 6 also withstands attacks by impact weapons and a polycarbonate coating protects the interior from splinters.

The BMW X5 Security Plus combines effective passenger protection with the generous spaciousness, brand-typical dynamics, agility and versatility of an X series vehicle. Finally, in addition to a great amount of space the BMW X5 offers passengers a luggage compartment capacity of approximately 640 litres – sufficient storage space for special equipment or any additional items. The superior handling characteristics are owed not least to the powerful V8 petrol engine with BMW TwinPower Turbo technology delivering 330 kW (450 hp) (combined fuel consumption: 11.5 l/100 km, combined CO₂ emissions: 270 g/km*). Together with intelligent BMW xDrive four-wheel drive technology the new security vehicle is safely controllable even in critical situations off-road. BMW has of course optimally adapted the suspension, the electronic control unit and the brake system to the higher vehicle weight due to the armouring, meaning that the BMW X5 Security Plus achieves virtually the same performance as the production model and ensures an experience of unlimited supremacy in everyday traffic. Here the vehicle offers very discreet protection, as even to the trained eye it is barely distinguishable from the production model.

Tyres with emergency running characteristics also remain functional after being under fire or running over sharp objects, even following a complete loss of pressure. The intercom system allows communication with persons outside the vehicle when the doors and windows are closed. The attack alert function ensures that windows and doors are locked automatically and that audible and visual alarm signals are given. The controls are located under a cover on the centre console.

* Consumption figures were determined on the basis of the ECE test cycle, dependent on tyre format.

2.5 The BMW R 1200 RT: Sophisticated ergonomics and high-level functionality

Best qualifications as an emergency services motorcycle.

Even the standard BMW R 1200 RT production model possesses the best qualifications for use as a Military Police emergency motorcycle. Thanks to its ultra-modern frame with two selectable riding modes and Automatic Stability Control (ASC) fitted as standard equipment, the BMW R 1200 RT can be adapted to road conditions, thus additionally improving riding safety. The BMW R 1200 RT excels through refined ergonomics for improved ground accessibility, which benefits riders of all statures when manoeuvring and when getting on and off the machine. The best possible protection from wind and weather is provided by the optimized windshield, thus ensuring maximum riding comfort.

Practical equipment features.

The BMW R 1200 RT being shown at the GPEC in Leipzig is also fitted with several pieces of customized special equipment that have been specifically designed for a Military Police emergency motorcycle. The appearance of the motorcycle is marked by the Military Police emergency motorcycle foiling in black, contrasting with the base paint in glacier silver. Blue LED flashing beacons at the front and a blue LED rotating signal beacon on a telescopic pole, in conjunction with the electronic audible signalling system indicate to other road users at an early stage the particular urgency of the journey when riding to an incident covered by the special rights for emergency services. A public address system allows the Military Police to give clearly audible instructions to bystanders or other emergency personnel. The technical preparations for the installation of a digital radio are at the rear of the motorcycle. The BMW R 1200 RT is equipped with two side-mounted panniers labelled "Military Police" with a total volume of 56 litres. Protection rails around the panniers and below the front of the fairing protect the motorcycle from damage. An auxiliary battery guarantees long periods of operation even if all of the electrical and electronic equipment for securing the scene of an incident is activated while stationary, or an external load is connected to the electrical outlet of the motorcycle.

Convincing performance and efficiency.

In order to quickly reach the scene of an incident, the 274 kilogram (DIN curb weight) BMW R 1200 RT is fitted with a powerful air/water-cooled two-cylinder boxer engine with 1,170 cc capacity delivering 92 kW/125 hp at 7,750 rpm and a maximum torque of 125 Nm at 6,500 rpm. Simultaneously, the drive unit

impresses with extremely economical average fuel consumption (according to ISO 7118) of 3.9 litres per 100 km at 90 km/h, 5.3 l/100 km at 120 km/h. On the road, the BMW R 1200 RT delivers extremely dynamic riding performance, accelerating from 0 to 100 km/h in 3.8 seconds and achieving a top speed of over 200 km/h.

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)

2.6 The BMW F 700 GS: High-level everyday suitability and ergonomic comfort

The BMW F 700 GS police motorcycle.

For many years now, the popular BMW F 700 GS has proven its diverse competences – outstanding handling, powerful acceleration, high level of everyday suitability and ergonomic comfort. Thanks to an intelligent all-round concept with ABS as standard and a comprehensive range of special equipment and accessories, the F 700 GS is particularly capable when the focus is on manoeuvrability and resilience. This is of fundamental significance for day-to-day police operations. The BMW F 700 GS offers the ideal prerequisites for use as a police emergency motorcycle, as it allows the rider to concentrate fully on what is most important – safety during all operations.

Customised special equipment.

The F 700 GS being shown at the GPEC is fitted with tailor-made equipment features for daily police operations. The motorbike's appearance is characterised by a Glacier Silver metallic paint finish. See and be seen: When activated through functional switches, blue LED flashing beacons and rotating flashing beacons in conjunction with the electronic audible signalling system alert other road users of an urgent police operation so that a deployment location in congested areas can be reached as quickly as possible. If necessary, the front beacons can be conveniently operated using the integrated steering wheel buttons. Like the R 1200 RT, the motorcycle is fitted with a radio box including the technical preparations for the installation of digital radio, which was developed and installed by Speedsignal, a novelty for radio preparation in the lightweight motorcycle sector that is also available for the F 800 GS. The F 700 GS is fitted with waterproof cases offering sufficient storage space for secure accommodation of police equipment that needs to be taken along on an operation. The readily accessible fire extinguisher is likewise attached to the side. Protection bars below the front cladding protect the motorcycle from damage. An auxiliary battery ensures a secure and dependable supply of electricity. This is especially important when all available equipment features are taken into operation to

secure the scene of an accident or a hazardous area, or when an external load is connected to the motorcycle's standard electric outlet.

Efficient performance.

The BMW F 700 GS delivers outstanding performance that is also coupled with low fuel consumption. The bike's cutting-edge parallel twin accelerates from 0 to 100 km/h in less than 5 seconds, combining the highest level of dynamism with supreme power delivery. Therefore, in order to reach a deployment location as quickly as possible, the F 700 GS, which weighs just 209 kilograms (DIN curb weight), is driven by a powerful water-cooled, two-cylinder four-stroke in-line engine with a displacement of 798 cc and an engine output of 55 kW/75 hp at 7,300 rpm and a maximum torque of 77 Nm at 5,300 rpm. The engine convinces with an economical average fuel consumption of 3.9 litres (unleaded premium grade petrol) per 100 km at 90 km/h and 5.1l/100 km at 120 km/h. The BMW F 700 GS impresses with dynamic performance and a top speed of 192 km/h.

2.7 The BMW F 800 GS: Safety and versatility

BMW F 800 GS – the all-round machine.

The F 800 GS from the GS model family also excels through versatility both on and off the road, powerful performance and supreme controllability in emergency operations and when used for military purposes. ABS as standard, outstanding ergonomics as well as a comprehensive range of accessories and optional equipment features all render this powerful motorcycle the ideal vehicle for use by authorities.

Equipment details

The F 800 GS presents itself in the colour Alpine White. In order to gain attention in road traffic and to provide visual and audible stimuli to other road users, the blue LED flashing beacons, rotating flashing beacons and the electronic audible signalling system can be easily activated by means of functional switches. These have been systematically arranged for simple operability and to meet the specific requirements of authorities. Clearly visible LED lights reliably inform the rider at any time which one of the various signal functions is currently being used. Like the F 700 GS, the single seat is also fitted with a practical radio box. This novelty for radio preparation in the lightweight motorcycle sector is also available for the F 800 GS. Waterproof cases offer sufficient storage space for required equipment. The readily accessible fire extinguisher is likewise attached to the side. The high windshield offers best possible protection against wind and weather. Furthermore, the seat of the F 800 GS is available in different heights in order to serve maximum rider ergonomics. The main stand allows the motorcycle to be parked safely and securely – even off-road. An auxiliary battery guarantees long periods of operation.

Performance and efficiency.

The BMW F 800 GS is a professional you can rely on even in extreme situations. Low weight and superb performance are the defining characteristics of this all-round motorcycle. For carefree riding both on and off-road, the lightweight F 800

GS (214 kilograms DIN curb weight) features a dynamic two-cylinder, four-stroke in-line engine with 798 cc capacity and an output of 63 kW/85 hp at 7,500 rpm and a maximum torque of 83 Nm at 5,750 rpm. The engine also excels through an extremely economical average fuel consumption of 3.8 litres of petrol per 100 km at 90 km/h and 5.2l/100km at 120 km/h. Top speed is over 200 km/h.

3. Comprehensive systems with a long-standing tradition. **Outstanding quality and practical skills for police operations**



For almost 60 years, BMW has been developing state of the art emergency vehicles of outstanding quality in collaboration with both national and international authorities. Adapted to the respective local regulations and directives, BMW special vehicles meet the same high standards as the base vehicle itself in terms of quality, functionality and safety and unite maximum safety with cost-effectiveness and innovative technology.

The history of BMW as a manufacturer of emergency vehicles dates back to the 1950s. At that time, the Munich police authorities put new BMW 501 and BMW 502 patrol cars into service. These models, fitted with powerful six-cylinder and eight-cylinder engines became known throughout the country thanks to the German TV series "Funkstreife Isar 12" and even then the "Baroque Angels" as the saloons were affectionately nicknamed set standards in terms of reliability and serviceability.

The integration of future users into the development process.

Since that time, BMW elevated the development and manufacture of emergency vehicles to a new level of professionalism. This also includes involving the future users of the emergency vehicles in the development phase. Representatives of the fire services, rescue services and other institutions contribute their practical experience and collaborate closely with BMW engineers to define the requirements of a new emergency vehicle fit for practical deployment. These are then compared with the specifications of the base model and implemented by renowned specialist companies, integrating the latest technological developments. This process results in comprehensive vehicle concepts that unite the specific needs of the customers with the high quality standards of BMW.

The emergency vehicles planned using this procedure are built in an integrated production process, which in terms of quality, functionality and safety achieves a level which cannot be reached by the more usual retrofitting of individual components. Thus the installation of measuring, radio and signal control technology in all model series is integrated into the series production process. Emergency vehicles based on models in the BMW 3 Series and BMW 5 Series are fully assembled on the same production lines as the series production models themselves.

Full manufacturer's warranty on the entire emergency vehicle.

In order to maintain the high level of BMW standards, the emergency vehicles including all fittings, installations and additions, are required to pass a series of rigorous tests, the requirements of which exceed the demands of current test standards. This is how BMW guarantees that the customer will receive a customized emergency vehicle of the outstanding quality for which BMW is known. All components are perfectly matched and work safely and reliably as integral parts of an overall concept. Accordingly, BMW grants all components of any special equipment installed at the factory the full BMW manufacturer's warranty.

This is based on nearly 60 years of experience in the construction of special vehicles for the police, fire and rescue services. The expertise, innovation and the quality of the ongoing development of BMW Group emergency vehicles are built on this solid foundation.

For further questions please contact:

Bernhard Ederer
BMW Group Corporate and Intergovernmental Affairs
Spokesperson BMW Welt
Telephone: +49-89-382-28556

www.press.bmwgroup.com
Email: presse@bmw.de

The BMW Group

With its three brands BMW, MINI and Rolls-Royce, the BMW Group is the world's leading premium manufacturer of automobiles and motorcycles and also provides premium financial and mobility services. As a global company, the BMW Group operates 31 production and assembly facilities in 14 countries and has a global sales network in more than 140 countries.

In 2015, the BMW Group sold approximately 2.247 million cars and nearly 137,000 motorcycles worldwide. The profit before tax for the financial year 2015 was approximately € 9.22 billion on revenues amounting to € 92.18 billion. As of 31 December 2015, the BMW Group had a workforce of 122,244 employees.

The success of the BMW Group has always been based on long-term thinking and responsible action. The company has therefore established ecological and social sustainability throughout the value chain, comprehensive product responsibility and a clear commitment to conserving resources as an integral part of its strategy.

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