



Mercedes-Benz

Mercedes-Benz at the 2012 International Commercial Vehicle Show

Press Information

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Mercedes-Benz Antos: the world premiere of the first truck specialised for the short-radius distribution

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- **Antos: in a class of its own**
- **Design: unmistakable origin, unique character**
- **Three cab variants, all with premium cockpit**
- **Euro VI engines from 175 kW (238 hp) to 375 kW (510 hp)**
- **Fully automated transmission for all variants**
- **All safety systems in short-radius distribution for the first time**
- **Wide range of variants, chassis with good body-mounting ability**
- **Antos Loader: a payload record for tractor units**
- **Antos Volumer: for uses with a low load compartment sill**

The premiere of the new Mercedes-Benz Antos, the first specialised truck series for heavy-duty short-radius distribution. Whether it's food, domestic heating fuel or municipal transportation, with a permitted gross vehicle weight of 18 t to 26 t, the Antos is at home when it comes to regional transport. The model range, including the highly-specialised Loader and Volumer models, is just as varied as the field of application. The Antos's trump cards also include a wide range of engines compliant with the Euro VI emissions standard, fully automated transmission and the user-friendly cab. The new Antos will celebrate its public premiere at the International Motor Show for Commercial Vehicles (IAA) in September.

Antos: the first heavy-duty distribution truck in a class of its own

The new Antos is in a class of its own: in the Antos, Mercedes-Benz is the first manufacturer to provide a truck specifically for the usage profile in heavy-duty short-radius distribution: well-organised, easy-to-operate, economical and low-emissions vehicles for daily use are needed here. A topography that varies widely from one region to the

next and varying loads require a broad range of engine powers; frequent stops en route require easy entry and exit. Heavy-duty distribution trucks are equally at home in towns and cities as they are in inter-city transport and on motorways. With its unusually broad range, the new Mercedes-Benz Antos is custom-designed for these diverse requirements of companies and drivers.

Design: unmistakable origin, unique character

The design of the new Mercedes-Benz Antos is unmistakably reminiscent of the new Actros for long-distance transport. But the Antos has its own identity. The family likeness is unmistakable: the origin is the same, but the character is different. The Antos, too, has a distinctive, clear design idiom and the contrasting flow of concave and convex lines. They add excitement to the powerful design.

The Antos has a friendly feel, in line with its frequently urban field of application. The relatively flat design for short-radius distribution allows it to look very robust and sturdy at the same time, however. The width of the cab, which is 2.30 metres, also contributes to this. Together with the wide chassis, the Antos is dynamic and broad-shouldered in appearance. The transition between the cab and the wheel housings is harmonically designed. Drivers benefit from the convenient staircase-shaped entry with three steps.

The central point of the front part is the radiator grille with the confidently large Mercedes star. Thanks to the flatter cab, the Antos generally manages with three radiator fins. They are perforated in a similar sporty style to the Actros. The three-part bumper with robust steel corners won't take exception to even comparatively rough use, which is par for the course in short-radius distribution.

Three cab variants, all with premium cockpit

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The cab of the new Mercedes-Benz Antos is available as ClassicSpace in short (S) and medium (M) design. The medium-length variant is also available as a super-flat CompactSpace cab, for example for trucks with a refrigeration unit attached. Depending on the model, the engine tunnel is just 320 mm or 170 mm high. The medium-length cab optionally has a folding bunk 2000 x 600 mm in size and an all-around curtain, ideal for longer breaks or an occasional overnight stop.

The driver of the new Antos sits in a premium cockpit. This is clear just from the multifunction steering wheel and from the generous seat adjustment. The cockpit of the new Antos has a dome-shaped and driver-orientated basic shape. The ergonomic operation and very well-organised instrument cluster are also exemplary. According to the field of application of the Antos, however, more functional materials are used. The driver's side of the cockpit is in black, the passenger side is in a flannel grey and the ceiling of the Antos is in a friendly, down-to-earth "greige", a shade between grey and beige, which makes the cab appear bigger.

In the optional cab variant with an additional middle seat, the central section of the instrument panel has been moved towards the front of the vehicle to provide extra kneeroom. The parking brake lever and the air vents have been repositioned accordingly.

Euro VI engines from 175 kW (238 hp) to 375 kW (510 hp)

The new Mercedes-Benz Antos is available with an extraordinarily wide range of BlueEfficiency Power diesel engines. The range includes three up-to-the-minute and responsive inline six-cylinder engines compliant with the Euro VI emissions standard with a 7.7-litre, 10.7-litre and 12.8-litre displacement. The power ranges from 175 kW (238 hp) for lighter applications as a solo vehicle up to

375 kW (510 hp) for heavy-duty truck/trailer combinations and tractor/semitrailer combinations under very challenging topographical conditions.

The new Mercedes-Benz OM 936 inline six-cylinder engine is particularly light and compact. The new design has a number of technical refinements, such as a maximum injection pressure of 2,400 bar or the world's first adjustable exhaust camshaft in a diesel engine.

The Mercedes-Benz OM 936 is available in five power and torque levels:

Power	Torque
175 kW (238 hp) at 2,200 rpm	1,000 at 1,200-1,600 rpm
200 kW (272 hp) at 2,200 rpm	1,100 at 1,200-1,600 rpm
220 kW (299 hp) at 2,200 rpm	1,200 at 1,200-1,600 rpm
235 kW (320 hp) at 2,200 rpm	1,300 at 1,200-1,600 rpm
260 kW (354 hp) at 2,200 rpm	1,400 at 1,200-1,600 rpm

The OM 470 inline six-cylinder engine with a 10.7-litre displacement, which is also new, already belongs in the heavy-duty class. It is based on the OM 471 series and also has its technical features, such as the unique X-Pulse fuel-injection system. The compact engine is very powerful and at the same time weight-optimised. The OM 470 is available in four versions:

Power	Torque
240 kW (326 hp) at 1,800 rpm	1,700 Nm at 1,100 rpm
265 kW (360 hp) at 1,800 rpm	1,800 Nm at 1,100 rpm
290 kW (394 hp) at 1,800 rpm	1,900 Nm at 1,100 rpm
315 kW (428 hp) at 1,800 rpm	2,100 Nm at 1,100 rpm

The top engine in the new Antos is the Mercedes-Benz OM 471 inline six-cylinder engine introduced in 2011. It has already proved to be a success in the new Actros. In the Antos, the engine is available at the following power and torque levels:

Power	Torque
310 kW (421 hp) at 1.800 rpm	2.100 Nm at 1.100 rpm
330 kW (449 hp) at 1.800 rpm	2.200 Nm at 1.100 rpm
350 kW (476 hp) at 1.800 rpm	2.300 Nm at 1.100 rpm
375 kW (510 hp) at 1.800 rpm	2.500 Nm at 1.100 rpm

All engines are already compliant with the Euro VI emissions standard. They have common-rail injection and exhaust gas recirculation. Treatment of the exhaust gases is by means of SCR technology with AdBlue injection and a downstream oxidation catalytic converter and a particulate filter.

Maximum efficiency is taken for granted in the new BlueEfficiency Power generation of engines: all engines combine a spirited response and a very smooth ride with low consumption of fuel, AdBlue and engine oil, and with exemplary environmental protection and long maintenance intervals of up to 120,000 km for engine oil services.

Fully automated transmission for all variants

Power transmission is consistently by means of a fully automated and fast-acting Mercedes Powershift 3 transmission with eight and twelve gears. One special feature of the new Antos is the possibility of combining very compact engines such as the OM 936 with multi-stage transmissions. This results in a favourable performance, even in truck/trailer combinations and tractor/semitrailer combinations which are only occasionally loaded to full capacity, with correspondingly payload-optimised engines.

The creep mode of the transmission is particularly important in short-radius distribution, with its high proportion of urban routes and manoeuvring operations at tight unloading areas: with a pulling-away gear or reverse gear selected, the driver can control the speed of the new Antos using the brake pedal alone.

The automated transmission is actuated – if manual commands are required – by means of an intuitively-operated steering-column lever.

Broad frame, safe handling

The Antos has an 834-mm wide frame as the basis for stable handling. The new steering operates both precisely and directly. The rear axle guide and the symmetrical four-bellows air suspension of the rear axle as usual ensure handling that is both comfortable and safe in equal measure.

All safety systems in short-radius distribution for the first time

The full availability of all safety assistance systems familiar from the Actros in short-radius distribution too is typical of the new Antos and of Mercedes-Benz standards. The electronic brake system EBS with disc brakes all round, highly-effective engine brake, anti-lock braking system ABS and acceleration skid control ASR all come as standard, as well as the stability control assist.

The new, equally light and powerful water retarder, the high-performance brakes and the proximity control assist with stop-start traffic function can also be supplied as optional extras. Also available are, among other things, lane keeping assist and the unique next-generation active brake assist 3, which can also initiate full brake application when approaching stationary obstacles.

Attention assist continuously checks the attention of the driver – even with lane keeping assist deactivated – by means of various parameters. If concentration decreases, the driver is visually and acoustically prompted to take a break. Lane keeping assist is also reactivated.

With all these assist systems, Mercedes-Benz has put together a safety package for the new Antos which is uncompromising and is unparalleled in short-radius distribution.

Wide range of variants, chassis with good body-mounting ability

The new Antos range is as diverse as its fields of application. There are two and three-axle tractor units with wheelbases ranging from 2,650 mm to 4,000 mm. Chassis are available in eleven wheelbases from 3,700 mm to 6,700 mm in a 300-mm pattern. In addition to the two-axle chassis, the Antos is also available in a three-axle variant with a trailing axle as well as a trailing axle with twin tyres.

Since a large proportion of the trucks in short-radius distribution have a special-purpose body, the new Antos is exceptionally well prepared for this. For example, with a consistent hole pattern in the frame at distances of 50 mm in length and height. With its variable frame extensions and individual positions of the end crossmember, the Antos likewise optimally adapts itself just as well to attachment bodies as it does to consoles at defined positions and uniform electronics interfaces across all variants.

Loader/Volumer: the first usage-specific models

Together with the new Antos, Mercedes-Benz introduces usage-specific models for specialist transport in heavy-duty short-radius distribution. Mercedes-Benz uses the term Loader to describe payload-optimised variants. They achieve record values for unladen weight and payload.

Antos Loader: a payload record for tractor units

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The Antos Loader is the first tractor unit for 40-tonne vehicle combinations to be below the 6-tonne limit for unladen weight – and this is even with an engine that is compliant with the Euro VI emissions standard. As the Antos 1835 LS with the ClassicSpace cab, aluminium wheels and super single tyres on the rear axle, it weighs approx. 6,000 kg.

Even with the larger OM 470 inline six-cylinder engine compliant with the Euro VI emissions standard and up to 315 kW (428 hp) of power, the tractor unit weighs approx. 6,400 kg. At this weight, the Antos is able to position itself very well in the competitive environment, and even in comparison to trucks in Euro V the new Antos Loader is right at the forefront, too.

The prerequisite for this is consistent design aimed at a low weight. With the Antos Loader, this includes an aluminium entrance carrier, a weight-optimised windscreen and floor coverings, batteries with a reduced capacity, a combined tank for fuel and AdBlue and various other measures.

Antos Volumer: for uses with a low load compartment sill

The advantages of the Antos Volumer include an 80-mm lower load compartment sill than was previously available. Customers can choose from a wide selection of cab models. In addition, buyers have the choice between different sizes of fuel tank – depending on whether the focus is to be on the payload or range.

As the first and only specialist for heavy-duty short-radius distribution, the new Mercedes-Benz Antos is a landmark vehicle in a class of its own: the short-radius distribution pro covers the whole diverse spectrum of fields of application in its segment. Companies benefit from its economy and efficiency, bodybuilders from its good body-mounting ability and individuality and drivers from its user-friendliness, safety and handling.

The Antos at the International Motor Show for commercial vehicles (IAA) 2012

Six Mercedes-Benz Antos vehicles covering the entire range of heavy-duty short-radius distribution vehicles will be on show in Hanover. For typical short-radius distribution of temperature-regulated goods, the Antos 1832 L is available as a chassis variant with a 5500 mm wheelbase, ClassicSpace cab and a refrigerated body. The compact engine from the new OM 936 series delivers 235 kW (320 hp), whilst the equally new G 140-8 automated eight-speed manual transmission handles the transfer of power. The Antos 1840 LS presents itself as a multi-faceted tractor unit and equally sports the ClassicSpace cab. The new OM 470 series engine offers an output of 290 kW (394 hp).

Two Antos Loader versions represent payload-optimised transport. The Antos 1835 LS tractor unit with ClassicSpace cab develops 260 kW (354 hp) which makes it the top performer in the new OM 936 series. Twelve gears appropriately proportion the power. An Antos 2535 L 6x2 with tank body provides a typical usage example for the transport of mineral oil. The cabin and drive train are the same as the aforementioned model.

Two Antos Volumer vehicles show off the impressive performance of the new Antos for volume-optimised transport. The Antos 1835 L solo vehicle has a low frame and sports the 2.3-metre-wide StreamSpace cab as well as a curtainsider platform body. An eight-speed transmission suffices here for power delivery. That's certainly not the case for the Antos 2543 L 6x2: here, the new OM 470 engine delivers a peak performance of 315 kW (428 hp) and thus requires the G211-12 automated twelve-speed transmission. On show are a ClassicSpace cab as well as a beverage body.

Mercedes-Benz Actros: new engine and model options making it more versatile and efficient than ever before

- **Engines: two new inline 6-cylinders**
- **Loader/Volumer: models for specific use**
- **Actros Loader: a payload giant compliant with the Euro VI emissions standard**
- **Actros Volumer: extremely reduced coupling dimensions**
- **Predictive Powertrain Control: the clever cruise control**
- **Active Brake Assist 3: emergency braking before stationary obstacles**

The new Mercedes-Benz Actros has a number of new features and product enhancements lined up for the IAA Commercial Vehicles 2012. The flagship vehicle for long-haul transport now optionally includes new engines from the OM 470 and OM 936 series, both of which comply with the Euro VI emissions standard. The Actros Loader and Volumer, two models that have been designed for specific use, are setting the standard when it comes to payload, frame height and coupling point height. The Predictive Powertrain Control (PPC) assistance system saves fuel by linking GPS data, cruise control and automatic PowerShift transmission, while the latest generation of the unique Active Brake Assist helps to avoid accidents: it is capable of independently braking before colliding with stationary obstacles.

Actros: Economic superstar among the long-haul trucks

In terms of fuel efficiency, the new Mercedes-Benz Actros is a real superstar among European long-haul trucks, proven by its spectacular “Record Run” fuel consumption test on public roads, as well as its performance on everyday haulage routes. With the new engine and model options, the influence of the Actros spreads even

further: companies are now set to benefit from Mercedes-Benz trucks with optimised volume and payload. Page 14

Engines: two new inline 6-cylinders

The new Mercedes-Benz Actros has now set the bar even higher: the specialist for national and international long-distance transport has further expanded its engine range. Two new inline 6-cylinder models have been added to the leading OM 471 series with 12.8 l displacement and a performance range of 310 kW (421 hp) to 375 kW (510 hp), as well as 2100 to 2500 Nm torque.

The new OM 470 with 10.7 litre displacement is based on the larger and more established OM 471 engine series, boasting the same technical features from the unique patented X-Pulse injection system to the particulate filter. Efficient and low in weight, this compact engine is the lightest engine of its class that complies with the Euro VI emissions standard. In combination with FleetBoard, oil change intervals can last up to 150,000 km. There are four versions of the OM 470 available for the Actros:

Power	Torque
240 kW (326 hp) at 1800 rpm	1700 Nm at 1100 rpm
265 kW (360 hp) at 1800 rpm	1800 Nm at 1100 rpm
290 kW (394 hp) at 1800 rpm	1900 Nm at 1100 rpm
315 kW (428 hp) at 1800 rpm	2100 Nm at 1100 rpm

The new Mercedes-Benz Actros is also available with the new and particularly compact inline 6-cylinder Mercedes-Benz OM 936. With 7.7 litre displacement, this engine is noticeably compact and light. This new design also boasts a number of sophisticated technical features, such as a maximum injection pressure of 2400 bar or the world's first adjustable exhaust camshaft in a standard diesel engine.

The Mercedes-Benz OM 936 is already available in five power and torque stages:

Power	Torque
175 kW (238 hp) at 2200 rpm	1000 at 1200-1600 rpm
200 kW (272 hp) at 2200 rpm	1100 at 1200-1600 rpm
220 kW (299 hp) at 2200 rpm	1200 at 1200-1600 rpm
235 kW (320 hp) at 2200 rpm	1300 at 1200-1600 rpm
260 kW (354 hp) at 2200 rpm	1400 at 1200-1600 rpm

With performance ranging from 175 kW (238 hp) to 375 kW (510 hp) and a maximum torque of 1000 to 2500 Nm, the new Actros boasts an unrivalled scope for a long-distance truck. Another unique selling point of the Actros: all models will only be offered with fully automated manual transmission.

Loader/Volumer: models for specific use for the first time ever

While introducing the new engines, Mercedes-Benz is also launching models made specifically for certain traffic situations. Mercedes-Benz classifies payload optimised vehicle variants under the name “Loader”. These are capable of achieving record values when it comes to kerb weight and payload. Top results have also been achieved with the Actros Volumer: this leading large-volume truck sports the lowest coupling point height of all tractor units in its class in Europe.

Actros Loader: a payload giant compliant with the Euro VI emissions standard

The Actros Loader has turned out to be a payload giant, weighing approx. 6500 kg in a standard package that includes the new OM 470, a maximum power of 315 kW (428 hp), the ClassicSpace long-haul cab, aluminium wheels with 315/70 R 22.5 tyre format and

a fuel tank with 300 litre capacity. It is thus one of the lightest long-haul tractor units to meet the Euro VI emissions standard. Even when compared to vehicles compliant with Euro V, the Actros Loader comes out on top.

This is possible thanks to a consistent focus on features which keep weight low. These include the aluminium entrance carriers, weight-optimised windscreen and flooring, a lower berth in the cab, a closed cab wall on the right-hand side, batteries with reduced capacity, a combined tank for fuel and AdBlue, as well as plenty of other design features.

Actros Volumer: extremely reduced coupling dimensions

Further improvements have been made to the Actros Volumer tractor unit. With a 315/45 R 22.5 tyre size format and reduced shock course for the spring, this lowliner achieves a coupling dimension of 880 mm – setting yet another record.

Customers who purchase an Actros Volumer also benefit from the unusually broad range of five different final-drive ratios found in this vehicle category. Even with tyres other than those specified, the optimum and thus particularly efficient total ratio with direct-drive transmission is guaranteed at all times.

Further highlights include a large selection of cab designs, as well as the choice between fuel tanks of varying sizes – depending on whether priority lies with payload or range. With up to 990 litres of diesel, the Actros Volumer also boasts a Euro VI emissions value that compares very well with others in its class.

Predictive Powertrain Control: the clever cruise control

The new Mercedes-Benz Actros is another proven winner when it comes to fuel consumption. Together with the OM 471 and the new

“Predictive Powertrain Control” (PPC), as much as three per cent is saved on fuel. PPC represents an anticipatory cruise control function coupled with the drive system. The assistance system registers the topography ahead using GPS data, thus facilitating a reaction that provides for optimum fuel consumption. PPC covers more than 95% of the motorways and federal highways in 28 European countries.

As the world’s first GPS cruise control, the Predictive Powertrain Control is additionally used to adjust speed and braking in the transmission control module. This combination leads to an optimum shifting sequence on uphill stretches, avoids upshifting when approaching summits and proactively shifts down before downward slopes. The EcoRoll mode is also activated with just as much precision.

Active Brake Assist 3: emergency braking before obstacles

The new Actros is not only more efficient but also safer. Regarded as the safest truck in the world, the latest version goes one step further with the next generation of the unique Active Brake Assist 3. The emergency braking system is now capable of independently initiating hard braking before stationary obstacles. This not only enables the Actros to reduce the consequences of a rear end accident as before but, depending on the speed travelled, to even avoid such accidents occurring in the first place; thus achieving yet another milestone in truck safety standards.

The new Actros is the flagship of Mercedes-Benz Trucks. The strengths of the new Actros, voted "Truck of the Year 2012" by an international jury of trade journalists, lie in its high standard of comfort, driving dynamics and efficiency.

The new Actros at the International Motor Show for commercial vehicles (IAA) 2012

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Seven new Mercedes-Benz Actros vehicles will cover the broad spectrum of the fleet flagship for long-distance transport. Three tractor units - including one 6x4 variant - and a three-axle chassis show the diversity of this archetypical long-distance transport vehicle. Their befittingly comfortable cabs go by the names of StreamSpace, BigSpace and GigaSpace. The engines offer performance figures of 310 kW (422 hp) and 375 kW (510 hp). A tractor unit of type 1848 LS with low frame bears the standard for the Volumer range. The Actros with GigaSpace cab is just one example of the broad line-up of available cabs. The need for weight-optimised vehicles is covered by the Loader variants Actros 1840 LS and 1843 LS. Hiding beneath their 2.3-metre-wide ClassicSpace and StreamSpace cabs are engines from the new OM 470 series with outputs of 290 kW (394 hp) and 315 kW (428 hp).

Mercedes-Benz Actros cut-away model: individual solutions with Mercedes-Benz Genuine Accessories

- **Exterior: focus on individual solutions**
- **Interior: comfort and greater convenience**
- **Electricity for the coffee machine, adapter set for the DVD player**

The diversity of Mercedes-Benz Trucks leaves virtually nothing to be desired. However, some users wish to give their own truck an even more individual character. Mercedes-Benz knows how to fulfil these wishes and offers an extensive range of tried and tested Genuine Accessories. These are a perfect optical, qualitative and technical match for the Trucks of Mercedes-Benz. Visitors to the International Motor Show for commercial vehicles (IAA) in 2012 can climb aboard an Actros cut-away model to gather ideas on how we can make both the exterior and the interior even more attractive, functional and individual.

Exterior: focus on individual solutions

As impressive and dynamic as the new Mercedes-Benz Actros might be, some operators and drivers wish to stand out from their colleagues or competitors in more ways than just paintwork in company colours or light alloy wheels. Chrome-plated fins and fine stainless steel accent trim parts for the front apron or for framing the brand badge under the windscreen – these are just some of the ways to add an individual touch to your vehicle.

If you wish to make an impression with the new Actros, you should select the brush guard. This has been tested in thorough endurance tests and in punishing conditions, both in summer and winter, for quality and a safe connection to the cab. The stainless steel front bar

emphasises the striking appearance of the new Actros and can accommodate two additional headlamps. The design is protected by a design patent.

Slightly less conspicuous, but no less effective, are the stainless steel protective caps for the wheel nuts. Wheel nut covers and rear axle caps with an embossed Mercedes star emphasise the connection with the brand and provide a further optical upgrade.

Interior: comfort and greater convenience

Anyone who spends long hours in the cab will appreciate a cab that is both functional and comfortable. The driver's hands are mostly on the steering wheel: so an aluminium and leather steering wheel means more than just good looks. The grip areas are padded and covered in the finest perforated leather – true luxury for the hands. On the top and bottom of the steering wheel rim there are inserts with a dynamic aluminium look.

A velour floor mat not only looks good; it also enhances comfort by creating a pleasant atmosphere. This is especially important during the driver's breaks, when the cab is used as living space. The same applies to the trim on the seat base frame. Protective seat covers are available which either give the seats an individual touch or which match the series design. They protect the standard seat covers from soiling or wear and tear. It goes without saying that all of these parts from Mercedes-Benz are a perfect fit and have been manufactured to the highest level of quality.

There are practical conveniences such as mobile phone cradles, for example an iPhone. These ensure that the battery is always charged and that the device is connected to the exterior aerial of the vehicle, linked to the radio via Bluetooth and operated using the buttons on the multifunction steering wheel. The display is shown in the

instrument cluster. An individually positioned LED reading lamp facilitates reading of maps or papers on board.

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The reversing camera is an essential safety extra for manoeuvring. It is heated so it can be used all year round. It is automatically activated when reverse gear is engaged. Its distortion-free and low-dazzle image is displayed on the cockpit monitor.

Electricity for the coffee machine, adapter set for the DVD player

The coffee machine and kettle in the new Actros are equipped with a power plug. This ensures a safe supply of electricity and prevents short-circuiting.

With the audio adapter set, the video adapter set and the USB extension cable, various different devices such as MP3 players, games consoles or DVD players can be operated.

Mercedes-Benz Atego BlueTec Hybrid: best-selling short-radius distribution Hybrid truck in Europe

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- **110 vehicles currently in customer hands**
- **Fuel consumption and CO₂ emissions reduced by up to 15 percent**

The Mercedes-Benz Atego BlueTec Hybrid is the first Hybrid truck across the whole of Europe to be manufactured in series production. By mid-2012, the first 110 units of the "Truck of the Year 2011" were already with European customers. The Atego BlueTec Hybrid is thus the best-selling Hybrid truck on the European market. Thanks to target-oriented integration of the Hybrid components and the usage-specific vehicle operating strategy, which takes into account topography and operating conditions, fuel consumption and CO₂ emissions were able to be reduced by between 10 and 15 percent. Noise pollution has also been reduced. During braking and when in overrun mode, the electric motor functions as a generator and stores energy in the vehicle's lithium ion batteries; this energy is then made available in certain load situations.

For the Atego BlueTec Hybrid, Daimler Trucks opted for a parallel Hybrid architecture. This system is the best suited to the technical design of the Atego's drive system. In parallel Hybrids the electric motor is fitted behind the combustion engine and clutch but in front of the transmission. This arrangement means that the engine and the electric motor can either be used independently of one another or simultaneously to propel the truck.

Not only does this architecture allow the vehicle to move off in electric mode, but it also enables recuperation of energy as well as providing assistance to the drive system by switching in the electric motor. This type of construction is also the best solution in terms of installation costs, dimensions, power and weight. In comparison to a

conventional drive, the Hybrid drive features the following additional components: battery, electric motor, converter or voltage converter, as well as Hybrid control unit and cooling. The Hybrid drive technology developed by Daimler Trucks for use in trucks has since established itself internationally. Page 23

With emissions, fuel consumption and vehicle weight in mind, the Mercedes-Benz Atego BlueTec Hybrid uses a modern Euro V EEV four-cylinder engine. The Atego 1222 L EEV serves as the platform for short-radius distribution Hybrid trucks. The base vehicle itself already fulfils the EEV standard and with its maximum permissible gross vehicle weight of 11.99 t already belongs to the particularly well-liked category of short-radius distribution trucks in Europe. On German roads it even benefits from toll exemptions. Its compact and light four-cylinder OM 924 LA diesel engine boasts a 4.8-l displacement and an output of 160 kW (218 hp) at 2200 rpm. Maximum torque of 810 Nm unfolds at 1200-1600 rpm.

The water-cooled electric motor has a top output of 44 kW and 420 Nm maximum torque. The electric motor is a three-phase permanent magnet motor. It is fitted between the clutch and the automated transmission. The transmission in question is the Mercedes-Benz G 85-6 six-speed transmission with the Telligent automatic gearshift system.

Energy is supplied to the electric motor by powerful lithium ion batteries with an impressive energy density. The batteries are charged using recuperated braking energy. In overrun mode, the electric motor works as a generator, turning braking energy into electricity which is then fed into the batteries until they are fully charged. A converter turns the AC voltage of the electric motor into a DC voltage for the battery and when the energy is needed again, the process occurs in reverse order.

The Hybrid drive provides noticeable support to the conventional diesel engine. This is particularly the case when pulling off and during acceleration phases. By using the electric motor, pulling away, for example, becomes much smoother. The engine only runs at idle speed. The impressive acceleration results from the electric motor being able to immediately supply its maximum torque from a standstill and engine speed not needing to be built up in the same way as with a combustion engine. If additional power is required during driving, for example when driving up an incline or when rapid acceleration is required, the electric motor can be switched in briefly to support the diesel engine. This is only possible if the battery has a sufficient charge level.

As the Atego BlueTec Hybrid is a self-sufficient system and accordingly does not require any specific infrastructure (e.g. charging station, cable), its scope of usage is just as flexible as purely diesel-powered vehicles.

The drivetrain of the Atego BlueTec Hybrid is set up to match its typical application profile as an all-rounder: the short-radius distribution truck is just as suited to urban areas as it is to short motorway stretches. The Atego BlueTec Hybrid has a European type approval, and meets the current Euro V EEV emissions standard, which means that the vehicle can be registered in all EU countries without restriction.

Mercedes-Benz Atego: number one in the medium-duty short-radius distribution truck sector

- **Atego: high-quality, economical, comfortable and successful**
- **Comfortable, job-matched driver's cab**
- **High levels of profitability**

Economical, reliable, comfortable and versatile: it is no accident that the Mercedes-Benz Atego, already enhanced in many respects on the occasion of the IAA International Commercial Vehicle Show 2010, is the market leader in the light and medium-duty short-radius distribution sector. With gross vehicle weights of 6.5 to 16 t, low-level entry on the Atego up to 11.99 t, cabs ranging from the compact S-cab to the L-cab with bunks and high roof, high levels of reliability and a highly efficient drivetrain – the Atego boasts a whole host of benefits.

Comfortable, job-matched driver's cab

Drivers of the Atego appreciate its optimum ride comfort as well as its convenient cab entry. The Atego is also extremely flexible in adapting to the relevant application for which it is used: the comfortable, job-matched cab is available with three different cockpits, and comes fitted with a multifunction steering wheel as standard.

In addition, it is also available as the compact S-cab, S-cab with extended rear (and with folding bunk too) as well as the spacious L-cab, including high roof. The largest cab even boasts room for up to two comfortably equipped bunks.

Coolboxes and stowage boxes – even with fold-out table – are optionally available to supplement the highly practical standard equipment which includes numerous stowage compartments and, in the S-cab, even a clothes rail with adjustable hooks.

High levels of profitability

Companies appreciate the high levels of profitability of the Atego. The gross vehicle weight spans a range of between 6.5 and 16 t, which has been finely tuned. One of the highlights is the 11.99-t rating, which translates into the model being exempt from motorway and road tolls in Germany. The Atego can be ordered as a chassis with cab and as a semitrailer tractor, with air or steel suspension and low frame height, as well as a combination of the two. The Atego stands for reliability and ruggedness in the lightweight short-radius distribution sector.

The profitability of the Atego is closely linked to its tried-and-tested drivetrain. The densely graduated engine outputs cover a broad range from 95 kW (129 hp) to 210 kW (286 hp), comprising four and six-cylinder inline engines with displacements of 4.25 to 7.2 litres. Thanks to BlueTec technology, featuring SCR technology and AdBlue injection, they boast low fuel consumption and meet the Euro V emissions level and EEV without particulate filter. Long maintenance intervals of up to 60,000 km for the short-radius distribution applications, and up to 100,000 km for long-distance haulage applications, also help to reduce costs.

Power transmission comes courtesy of six and nine-speed manual transmissions. In some case they are also available with Telligent automatic gearshift system (up to 175 kW/240 hp). Other exceptional features of the Atego include the optional engine start/stop system (fitted as standard in Germany). It automatically switches the engine off at traffic lights or during other stops of more than three seconds, and also starts it again fully automatically as

soon as the clutch pedal is pressed or the vehicle starts to roll - a feature which helps to save fuel and reduce emissions even further.

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The Atego at the IAA International Commercial Vehicle Show 2012

Three Atego models are on display at the IAA International Commercial Vehicle Show to demonstrate the capabilities of the market leading vehicle in the light and heavy-duty short-radius distribution sector. Aimed at the classic 7.5-tonne truck segment is the Atego 818 L with pickup body and curtain-sider body. Other features include the compact S-cab, lightweight and economical four-cylinder OM 904 LA engine producing 130 kW (177 hp), and also a six-speed manual transmission.

The Atego 1224 L with low frame and furniture box body is an example of the short-radius distribution truck which is exempt from tolls yet boasts a high payload. Fitted beneath the spacious L-cab with high roof are the OM 926 six-cylinder engine with a displacement of 6.4 litres and a six-speed Telligent automatic gearshift system. Representing the building industry is an Atego 1224 K in the guise of a three-way tipper with loading crane and extended S-cab. Power transmission is taken care of in this model by a six-speed manual transmission.

Mercedes-Benz Actros and Axor: tried and tested, versatile, economical heavy trucks for difficult tasks

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- **Two successful model series for heavy-duty applications**
- **Actros: outstanding among heavy trucks in Europe**
- **Axor: the specialist for short-radius distribution, construction and long-distance transport**

Those who talk about heavy trucks talk about the Actros and the Axor: with these two tried-and-tested series, Mercedes-Benz covers the whole spectrum from heavy-duty short-radius distribution to construction vehicles, and right up as far as to medium and long-distance transport operations. Mercedes-Benz continues to offer its customers both of these model series.

Actros: outstanding among heavy trucks in Europe

Tried and tested and with many awards: the Mercedes-Benz Actros continues to play an outstanding role among heavy trucks in Europe. It is at home both in international long-distance transport operations and in the construction industry. In both cases the Actros is impressive with its high performance, economy, reliability and comfort.

Engine oil change intervals of up to 150,000 km, controlled power take-offs, optional Economy Packs and the standard-fit Mercedes PowerShift 2 automatic transmission for road vehicles – with its drive system, its safety systems and driver assistance systems, the Actros continues to set standards.

This also applies to the tipper for use in construction operations: a stainless-steel protective plate for radiator and engine, an optionally protected fuel tank, swing step, robust outer mirror housings – the

Actros is a practical worker for heavy and arduous applications. That is why it is also available with all-wheel drive. Page 29

The Actros V6 and V8 engines are legendary with their pioneering BlueTec engine technology featuring SCR and AdBlue fuel injection in accordance with the Euro V or EEV emission standards. The output ranges from 235 kW (320 hp) to 440 kW (598 hp) in nine steps. Semi and fully automatic transmissions with 16 or 12 gears, including the Mercedes PowerShift 2 transmission, are responsible for power transmission.

Axor: the specialist for short-radius distribution, construction and long-distance transport

The Mercedes-Benz Axor is at home anywhere where an economic heavy-duty truck with high payload and driver-oriented comfort levels are required. In heavy-duty short-radius distribution, the Axor is available either as a tractor unit, or as a platform vehicle with two and three axles. With a variety of cabs and three cockpit variants it is exactly suited for any use.

As a construction vehicle, the Axor combines robustness with a high payload. The platform truck with two, three and four axles and the tractor unit cover a broad spectrum.

The Axor is also placed in the medium-distance transport operations sector. A high payload, Economy Packs if desired – the Axor is a real economic wonder. With its L cab and high roof it provides plenty of space for breaks and overnight stays.

The Axor has durable, straight six-cylinder engines with 6.4 to 12.0 l displacement. They conform to the Euro V emission standards (or EEV if desired for most engines), have BlueTec engine technology with SCR (Selective Catalytic Reduction) technology and AdBlue injection, and they cover an output range of 175 kW (238 hp) to

315 kW (428 hp). The selection of available transmissions is both varied and purpose-oriented: six, nine, twelve or sixteen speeds, manual or semi-automatic shifting and the fully automatic Mercedes PowerShift gearbox – the range is endless.

The Actros and the Axor at the International Motor Show for commercial vehicles (IAA) 2012

Three construction vehicles will be representing the Actros and Axor series at the IAA. The Actros 2046 LAS 4x4 tractor unit has all-wheel drive and an output of 335 kW (456 hp) from a V6-cylinder engine for heavy-duty applications. It has an M cab, as does the Actros 4144 AK 8x8/4: this heavy, four-axle rear-end tipper with 320 kW (435 hp) output also works its way through the tough terrain of a building site thanks to its all-wheel drive. A finely gauged 16-speed transmission supports the traction of the two all-wheel-drive models.

The Axor 3240 B 8x4/4, which will also be displayed, is a payload-optimised cement mixer with four axles, two of which are driven. Its distinctive features are its extended S cab, a straight six-cylinder engine with 295 kW (401 hp) output, fully automatic Mercedes PowerShift twelve-speed transmission and single tyres on the first rear axle.

Unique vehicle concept: innovative Euro VI technology carrier allows a first look at the new generation of the 2014 Unimog

- **New engine generation: environmentally-friendly, powerful and economical**
- **Exhaust gas aftertreatment combined with SCR technology and particulate filter**
- **Positive payload figures by increasing load values**
- **More compact due to skilful arrangement of components**

Mercedes-Benz Special Trucks is giving a first glimpse into the future of the Unimog as a technology carrier by presenting the future drivetrain which combines compliance with the Euro VI emissions standard with a compact chassis. It is based on the medium-sized U 400 model. In addition to the drivetrain, Mercedes-Benz will also be giving first indications of the advanced technological developments and compact dimensions of tomorrow's Unimog. These developments will start flowing into series production during the course of next year.

New engine generation: environmentally-friendly, powerful and economical

In taking the step towards Euro VI, the Unimog will make use of the new generation of Mercedes-Benz OM 934/936 engines with either 5.1 or 7.7 l displacement and four or six cylinders. They are grouped under the term BlueEfficiency Power. The engines excel with their environmental friendliness, low exhaust emissions as well as great economy. This economy results from a long life expectancy and low consumption figures for fuel, AdBlue and engine oil, as well as long maintenance intervals.

The new engines impress with their multitude of technical refinements. A crossflow cylinder head with four valves per cylinder ensures a rapid gas cycle. The cylinder head and the crankcase are connected to one another by six screws per cylinder. This provides very rigid and thus stable interlocking. Two overhead camshafts per cylinder take care of valve actuation; the camshafts are based on a single-tube design to which the cams are shrunk on. This method of construction is light but at the same time strong.

Among the refinements of the new OM 936 is the variable camshaft phaser (VCP). This term describes an adjustable exhaust camshaft, the first such camshaft ever to be fitted on a diesel engine. The adjustment serves to assist regeneration of the particulate filter. If regeneration is necessary, the actuation times for raising the temperature level in the exhaust train are adjusted.

Exhaust gas aftertreatment combined with SCR technology and particulate filter

Exhaust gas aftertreatment in both engines employs Mercedes-Benz BlueTec-6 technology: a closed particulate filter is perfectly complemented by the SCR system which Mercedes-Benz has been using successfully for several years now. The BlueTec-6 technology causes particulate emissions to be reduced to such a level that they are hardly recognisable and the use of AdBlue injection in the downstream SCR catalytic converts nitrous oxide emissions to harmless substances found in the air.

The new engines offer rapid acceleration and impressive power, as well as extremely smooth running. High torque at low engine speeds provides superior, economic performance at a point just above idling speed. This is an important factor in the typical kind of work done by

the implement carrier where great traction and high stamina play an important role. Page 33

Performance once again improved

Tomorrow's Unimog will benefit from downsizing of the highly efficient engines: the four-cylinder OM 934 achieves the same performance as the six-cylinder engines used up to now. The OM 934 is also fitted in the technology carrier.

The performance of the Unimog will also be improved with the new engines. For the first time, the six-cylinder engines of the Unimog will achieve the 300 hp mark (220 kW, 299 hp). The drivetrain for the all-wheel drive implement carrier is provided by the well-known Unimog transmission. Just like the portal axles, it too has been reinforced for the increased engine torque of up to 1200 Nm.

Higher kerb weights result from new vehicle components such as the diesel particulate filter and the stronger engines with larger cooling systems. To counteract this, the Unimog designers have consistently used a weight-optimised construction without this influencing the vehicle's legendary stability and toughness. Such measures include apertures on the frame or the use of aluminium wheels. The light alloy wheels have already proved their worth for trucks working on construction sites and in municipal operations. To ensure positive payload values, the maximum permissible gross vehicle weight has also been moderately increased.

More compact due to skilful arrangement of components

The designers have also implemented a new components package which compensates for the larger volume of the Euro VI equipment, which results from the large cooling system and additional particulate filter. This package involves the cooling system being divided into several components installed on two different parts of

the chassis. Engines designed for the Euro VI emissions standard require a larger supply of cooled air and this is provided in part by improved airflow around the engine. The new cooling concept will also make a name for itself thanks to its very easy maintenance.

In comparison with the current model, the Unimog wheelbase has actually been shortened by 8 centimetres.

A vision of the future

Despite the additional volume needed for the legally-prescribed Euro VI equipment, the Unimog has managed to retain one of its most important unique selling points: its compact design.

The new generation of Unimog is more environmentally-friendly and economical. In time for its launch, product features such as its performance, simple operation, drive unit, ergonomics and safety will be thoroughly re-engineered.

Mercedes-Benz Unimog: fascinating all-rounder with outstanding off-road capabilities for use in special operations

- **Unimog U 20: the compact and manoeuvrable implement carrier**
- **Unimog U 300/U 400/U 500: the professional implement carrier**
- **Unimog U 4000/U 5000: the outstandingly agile off-road all-rounder**

When looking for outstanding performance as an implement carrier or in off-road operations, the Unimog manufactured by Mercedes-Benz Special Trucks is the first choice worldwide. No matter whether it is the compact U 20 implement carrier, the professional implement carriers U 300/U 400/U 500 or the outstandingly agile U 4000 / U 5000 off-roader, if an environmentally-friendly and economic vehicle with great traction, high performance and reliability is required, you cannot afford to ignore the Unimog. Its usage spectrum includes municipal works, the energy sector, fire fighting and recovery operations, airports, agricultural logistics and many other fields worldwide.

The Unimog at the International Motor Show for commercial vehicles (IAA) 2012

Alongside the Euro VI technology carrier showing the technology which will already be available from mid 2013, Unimog will be attracting more attention with two other striking exhibits. The U 300/U 400/U 500 implement carriers are represented by a deep orange U 400 equipped as a Trio mower – a real premiere. The show vehicle with its 210 kW (286 hp) output is equipped with, among other things, the VarioPilot transferable steering system, mowing door and mower seat. In addition it has a hydrostatic drive unit, VarioPower power hydraulics, a dual circuit hydraulic system and an

engine-driven PTO. The Trio mower is fitted with a rear boom mower, a verge mower and a reflector post mower. Page 36

The third Unimog being shown in Hanover is the spectacular design study. This concept is based closely on the Unimog and provides an idea of the future design idiom of Mercedes-Benz commercial vehicle design. It is based on a Unimog from the outstandingly agile off-road product range U 4000/U 5000 and features an extremely dynamic body design. The green paintwork used for the design study is not just by chance, after all, green was the colour of the first ever Unimog over 60 years ago. Just like in the early days, the design study too has been fitted with an open cab.

Unimog U 20: the compact and manoeuvrable implement carrier

Since its premiere at the IAA 2006, the Unimog U 20 has established itself on the market as a universal implement carrier. With its width of only 2.15 m and a turning circle of just 12.6 m, it is amazingly easy to manoeuvre. Its maximum permissible gross vehicle weight of 7.5 t to 9.3 t gives the U 20 great payload potential, making it extremely suitable for a variety of purposes in its main areas of work. Its permanent all-wheel drive, portal axles and differential locks (optional at the front), coil springs, single tyres and four same-size wheels make it predestined for work off the beaten track. Two implement-attaching areas, a dual circuit hydraulic system with proportional control, a single circuit hydraulic system as well as an optional transmission-driven PTO and an engine-driven PTO show clearly just how well-designed it is for running attached implements.

The Unimog is powered by a 4-cylinder turbodiesel engine with 110 kW (150 hp) output and meets the Euro V emissions standard. Power transfer is handled by eight forward and six reverse gears. As an option, an additional eight working gears (forward/reverse) are available.

Since its premiere in 2000, the medium Unimog range has become a synonym for a highly professional implement carrier. With its three implement-attaching points and one body-mounting area, a single circuit and a dual circuit hydraulic system as well as a power hydraulics system with two circuits and an engine-driven PTO as well as a transmission-driven PTO, the Unimog U 300-U 500 product range can hardly be surpassed as an implement carrier.

Its cab made of fibre composite material is an ideal place to work, fitted as an option with the VarioPilot transferable steering system or a mowing door with swivel seat on the embankment side. With its permanent all-wheel drive, coil-sprung portal axles and up to three differential locks as well as four same-size wheels with single tyres, the medium Unimog product range also demonstrates its outstanding handling characteristics when driving off-road.

What is new for the Unimog when mowing is a cushioning package for the co-driver's side – it offers the driver or operator additional protection should there be a rear-end collision while mowing.

The Euro V four and six-cylinder engines have an output of up to 210 kW (286 hp) and the power is transmitted by eight forward and six reverse gears, as an option supplemented by eight working and crawling gears (forward/reverse). Also optionally available is a hydrostatic drive unit. The maximum permissible gross vehicle weight varies between 7.5 t and 16 t.

Unimog U 4000/U 5000: the outstandingly agile off-road all-rounder

If what is needed is a vehicle with outstanding off-road capabilities which at the same time is also exceedingly robust, then the decision inevitably points towards a Unimog from the U 4000/U 5000 range.

A Unimog gets through places where the others daren't even approach.

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This is thanks to a superior concept comprising engageable all-wheel drive with differential locks, portal axles and coil springs with long shock courses, single tyres with same-size wheels all-round and a central tyre inflation system (available as an option) which allows the tyre pressure to be adjusted while driving. The frame has great torsional rigidity and the diagonal degree of axle articulation can be as much as 30 degrees.

The power which enables the Unimog to overcome all obstacles is transmitted by up to 24 forward and 22 reverse gears, and its maximum permissible gross vehicle weight can be up to 14.1 t. The four and six-cylinder Euro V engines give a performance of 160 kW (218 hp).

Equipped with two connections at the front and rear for the hydraulic system and the transmission-driven PTO, the big Unimog is also suitable for use with a great number of attached implements.

**Mercedes-Benz Econic CNG/LNG:
uncompromisingly environmentally-friendly –
quietly and with low emissions through the city**

- **Low-floor cab: see well and be well seen**
- **Econic NGT with gas-powered drive: quiet and with low emissions**
- **Econic NGT with liquefied natural gas (LNG): high range**
- **Details of the truck's continuous development**

Municipal applications, waste collection and short-radius distribution – as an environmentally-friendly, low-floor transport vehicle for use in the city, the Econic from Mercedes-Benz Special Trucks is a true all-rounder. In production since 1998 and continually developed, the Econic is unmatched in its fields of operation, thanks to its low-level entry concept. The Econic is also being used more and more in heavy-duty short-radius distribution in and around cities. The success story of the Econic is reflected in its sales turnover: with a total of more than 10,000 Econic vehicle sales, the truck has become a true sensation in European metropolitan areas.

Low-floor cab: see well and be well seen

The most noticeable feature of the Econic is its generously glazed low-floor cab with an extremely low entrance and a flat floor. It enables fast and safe entry and exit of the vehicle, not to mention great visibility, which in turn also means added safety for drivers and their surroundings. The fact that the driver is at eye level with pedestrians also makes the vehicle more acceptable in inner-city traffic.

The Econic's environmentally-friendly drive system represents a further plus point. Output ranges from 175 kW (238 hp) to 240 kW (326 hp) thanks to compact turbodiesel engines featuring BlueTec

technology which also fulfil the EEV emissions standard. Power transmission is by means of an automatic transmission with torque converter.

Econic NGT with gas-powered drive: quiet and with low emissions

The usage scope of the Econic predestines the truck for the implementation of particularly environmentally-friendly alternative drive systems. The Econic CNG with natural gas drive has established itself comprehensively. The supercharged in-line six-cylinder M 906 LAG engine has a displacement of 6.9 l and impresses with its 205 kW (279 hp) output. If biogas is used, the Econic can even be operated CO₂-neutrally. The gas-powered Econic has no particulate emissions. Equally advantageous is the low level of noise generated by the gas drive system. Accordingly, deliveries in heavily populated areas are no problem, even at night or on weekends.

Econic NGT with liquefied natural gas (LNG): high range

A third type of gas is gaining in importance: LNG (Liquefied Natural Gas). Natural gas reserves are available in many regions of the world and global resources will last for a good many years yet. However, as a result of lacking connections to the international pipeline network in some countries, liquefied gas can only be transported at sea. The liquefied stage of natural gas can be reached by cooling the gas to temperatures below -160 °C at atmospheric pressure in the port of loading – CNG becomes LNG. Liquefied natural gas is transported in specialist tankers. For further transport at the port of destination, for example in pipelines to the consumer, the transition from -160 °C to ambient temperature causes the substance to return to its gaseous state – LNG becomes CNG again. However, further transport of the gas in its liquefied state from the port of destination to the consumer or filling station occurs either by rail or truck. In the last five years,

the capacity for LNG has increased drastically in the producer countries, as too have the transport capacity and the number of LNG terminals.

Advantages of LNG: its volume is much less than that of gaseous natural gas (CNG). Thus in comparison with CNG, trucks like the Econic LNG can travel great distances on what is essentially a manageable tank size. The range is comparable to diesel vehicles. The Econic LNG uses multi-walled stainless steel isolation tanks. A cooling system is not necessary as the liquefied gas is stored in a state of thermodynamic equilibrium.

Wide range: chassis variants and tractor units

The Econic is available both as a chassis variant with two, three or four axles, and as a two-axle tractor unit. The three-axle chassis variants are available in numerous axle configurations – steering leading or steering trailing axles; 6x4 with two driven rear axles – the Econic caters for all requirements. As part of the Econic's standard equipment, full air suspension with electronic level control system is also available.

Particularly pleasing is the increase in the number of Econic vehicles being used in short-radius distribution applications. The truck combines great manoeuvrability with the transport capabilities of a heavy truck, as well as the ergonomics of a low-floor vehicle with the road-friendliness of full air suspension. Add to that the advantages of a drive system with low emissions. The Econic with its quiet and clean CNG/LNG drive is optimal for city logistics as well as in zones where access restrictions apply around the clock as well as on weekends.

The current Econic generation benefits from some improvements: LED daytime running lights make the vehicle more identifiable. A form-locking, integrated glass-in-glass side window on the co-driver's side helps keep the vehicle ventilated. A new rear panel in the cab has now also found its way into series production, as too have an air intake with resonator and an optimised engine flap for improved insulation of engine noise.

The Econic at the International Motor Show for commercial vehicles (IAA) 2012

A two-axle tractor unit Econic 1828 LS NGT with both a CNG and an LNG tank demonstrates the possible variants for compressed gas (CNG) and for liquefied natural gas (LNG) whilst at the same time putting on show the extensive programme of environmentally-friendly Mercedes-Benz Econic vehicles. The supercharged M 906 LAG puts out 205 kW (279 hp) and has a maximum torque of 1000 Nm – ideal for heavy-duty short-radius distribution. Four CNG tanks with a volume of 80 l or two LNG tanks of 445 l ensure great ranges from 300 to 800 km.

Mercedes-Benz Zetros: All-wheel-drive cab-behind-engine truck for the toughest operations

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- **Cab-behind-engine concept: advantages in tough off-road operations**
- **Well thought out off-road concept with permanent all-wheel drive**
- **Range consisting of solo vehicles with two or three axles**
- **Details of the truck's continuous development**

When other vehicles are forced to give up, the Zetros from Mercedes-Benz Special Trucks is just getting going: it combines the off-road capabilities of a Unimog with the load-bearing capacity of a heavy-duty truck. One of its most notable features is its cab-behind-engine design. Since its premiere in 2008, the Zetros has gained an impressive reputation for having a robust construction suitable for use in the toughest of environments. Its field of operations is very varied: the Zetros is not only used in the construction and construction supplies industries, but also in agricultural logistics and fire fighting operations.

Its robust construction, coupled with its virtually indestructible Euro 3/5 OM 926 engine, predestine the Zetros for particularly hard applications outside of western Europe.

The Zetros at the International Motor Show for commercial vehicles (IAA) 2012

With a spectacular show vehicle, the Zetros will certainly draw attention to itself in Hanover: the Zetros 2733A 6x6 with fully automatic transmission is equipped for fire fighting applications in crisis areas and is part of an order made by the UN. This all-wheel-drive Zetros benefits from a low construction as a cab-behind-engine vehicle, which even allows for loading into C-130 "Hercules"

transport planes. The Rosenbauer Buffalo body can hold 6100 l water and 750 l foam, as well as 250 kg extinguishing powder. Fires are fought by means of two remote-controlled jets: a bumper turret and a roof turret. What's more, the fire fighting vehicle's equipment includes a hose reel and a winch with a maximum pulling capacity of 4000 kg. Page 44

Cab-behind-engine truck: advantages in tough off-road operations

An awe-inspiring characteristic of the Zetros is its cab-behind-engine design. As a result of these low contours, it is easy to get into and out of the vehicle, it has a cab without an engine tunnel and is also easier to service thanks to the forward-opening bonnet. Particularly in off-road conditions, the cab-behind-engine construction is beneficial in that the driver is seated between the axles: a highly comfortable solution with optimal weight distribution both when laden and unladen. This design also makes the vehicle easier to control. Accordingly, the vehicle is extremely agile and has a high level of safety thanks to the driver being positioned behind the front axle.

Well thought out off-road concept with permanent all-wheel drive

The Mercedes-Benz Zetros has a well thought out off-road concept with permanent all-wheel drive. Planetary axles ensure high ground clearance, three differential locks offer impressive traction and the two-stage transfer case delivers great tractive force. Single tyres in the format 14.00 R 20 are fitted to the front and rear axles in a uniform track; the reinforced frame displays good torsional rigidity and the maximum degree of articulation on the axles is 2 x 500 mm diagonally.

The low-maintenance drum brakes correspond in size to the requirements of an off-roader. The same can also be said of both the standard fording depth of 800 mm (optionally up to 1190 mm) and the vehicle's slope climbing ability of 70 percent.

The vehicle is driven by an in-line six-cylinder engine with 7.2-litre displacement and an output of 240 kW (326 hp) with BlueTec technology in accordance with the Euro 5 emissions standard. Power is transferred either by a hydraulically shifted eight-speed transmission with additional crawler mode, or by a six-speed automatic transmission with torque converter.

Range consisting of solo vehicles with two or three axles

The Zetros range consists of solo vehicles with two or three axles and gross vehicle weights of 16 t or 25 t. Through the addition of twin tyres, the gross vehicle weight of each of the two variants can be increased by 2.0 t.

Details of the truck's continuous development

With its ever-increasing field of applications, the Zetros is subject to continuous development. New for three-axle vehicles is a permissible axle load-bearing capacity of 10.5 t on rear axles fitted with single tyres. This results in a maximum permissible vehicle weight on the solo vehicle of 30 t – particularly important for large quantities of water in fire fighting vehicles, for example. Also new is the approval of the two-axle Zetros 4x4 for a maximum permissible gross combination weight of 40 t. Thus, it is now perfectly suited to operations with a heavy trailer.

A further novelty available as an optional extra ex-works is the central tyre inflating system which allows the tyre pressure to be adapted in the individual tyres. There is a display in the instrument cluster to this effect. This system is particularly important for increasing traction when driving off-road.

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Mercedes-Benz TrailerAxleSystems: reduced weight, improved environmental protection, increased safety and efficiency

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- **Efficient: all three-axle assemblies are 15 kg lighter**
- **For the sake of safety: the new tyre pressure monitoring system for trailers**
- **Environmentally friendly: all screw connections are chrome-free**
- **MercedesServiceCard for trailers with Mercedes-Benz axles**
- **More than 500 000 trailer axles from Kassel, Germany**

Increased efficiency through lower weight, better protection of the environment thanks to chrome-free coating of all screw connections – Mercedes-Benz TrailerAxleSystems has optimised its successful trailer axles in time for the 2012 International Motor Show for Commercial Vehicles (IAA).

Known for technical revolutions

Although it was only started in 1996, TrailerAxleSystems is one of the biggest and most prestigious manufacturers of trailer axles in Europe. Its success is based both on highest quality and a wealth of innovations: the first trailer axle with disc brakes ushered in a revolution in 1996. The revolution was continued with the lightweight DCA Compact-Axle Housing and led to the creation of the DCA Airmaster – the only trailer axle in the world with an integrated compressed air reservoir in the axle tube for the brakes and air suspension.

The programme from Mercedes-Benz TrailerAxleSystems comprises the DCA Weightmaster assembly, the DCA Megamaster for large-volume trucks, the DCA Airmaster with compressed air reservoir and the steered DCA Steermaster axle.

Efficient: all three-axle assemblies are 15 kg lighter

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Mercedes-Benz TrailerAxleSystems has weight-optimised the whole DCA axle family with the aim of attaining highest possible transport efficiency. All axles in the product family of three-axle assemblies now weigh 15 kg less than before.

This is thanks to a changed hub design with a new brake disc connection. The weight reduction has been achieved without any compromises in safety or economy. The weight reduction affects all four members of the DCA axle family: DCA Weightmaster, DCA Megamaster, DCA Airmaster and DCA Steermaster.

For safety's sake: the new tyre pressure monitoring system for trailers

The preparations for Mercedes-Benz trailer axles with tyre inflation systems are already in place and thus the next step is currently being taken: Mercedes-Benz trailer axles can now be equipped with a tyre pressure monitoring system. Tyre pressure discrepancies can now be detected immediately and shown to the driver on the dashboard. In this way unnecessary fuel consumption can be avoided and CO₂ emissions reduced. What's more, safety risks and the number of vehicle malfunctions can be reduced.

Environmentally friendly: all screw connections are chrome-free

It is not just the European emissions standards that are of importance for the environment, but also the materials used in the actual construction of the vehicle. Mercedes-Benz TrailerAxleSystems has moved to a coating of all screw connection surfaces which does not contain chrome VI. Wheel bolts, wheel nuts and all other screw connections are chrome-free. Mercedes-Benz TrailerAxleSystems has taken this voluntary step to ensure compliance with tomorrow's standards today.

Advantage for fleets with Mercedes-Benz TrailerAxleSystems assemblies: MercedesServiceCard will be offered for services provided to towed units with Mercedes-Benz axles. This service is provided regardless of the make of the tractor unit towing the trailer and thus opens up the dense Europe-wide Mercedes-Benz Service network to customers.

More than 500 000 trailer axles from Kassel, Germany

With their axles, Mercedes-Benz TrailerAxleSystems belong to the top providers in Europe. The axles come from the Kassel plant in Germany which is Europe's largest manufacturer of axles for commercial vehicles. More than half a million trailer axles have been produced there to date.

Mercedes-Benz TrailerAxleSystems at the International Motor Show for commercial vehicles (IAA) 2012

The exhibition of Mercedes-Benz TrailerAxleSystems in Hall 26, the components hall, is somewhat of a tradition. Here, freight companies, drivers and trailer manufacturers can admire the exhibits and find information about the whole programme of DCA Weightmaster, DCA Megamaster, DCA Airmaster and DCA Steermaster axles, as well as the new tyre pressure monitoring system for trailers.

Mercedes-Benz Custom Tailored Trucks: trucks with a star dressed to the nines

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- **Customers' special wishes become reality**
- **Increasing demand for individual transport solutions**
- **Many modifications have been developed and are readily available**
- **Individual trucks from a single source with a factory warranty**

As extensive as the range of Actros, Antos, Axor, Atego, Econic and Zetros vehicles is, sometimes a special solution needs to be found for individual transport requirements. Mercedes-Benz Custom Tailored Trucks (CTT) fills this gap. The range of possible modifications includes: changes to the position of components, modifications to the chassis or cab, five or six-axle trucks, or even the Actros SLT heavy-duty tractor unit.

Customers' special wishes become reality

If you need an Actros 4165 SLT as a heavy-duty tractor unit, a six-axle Actros for a concrete pump, an Actros with an auxiliary frame and a longer wheelbase for use on an oil field, an Axor with a crew cab for fire-fighting applications, an Econic with steered leading and trailing axles, or even a Zetros as a tractor unit, then it is time to call on the specialists from Custom Tailored Trucks. Custom Tailored Trucks fulfil customers' wishes which cannot be served by a standard series vehicle.

Mercedes-Benz Trucks customers with special wishes turn to CTT. CTT receives and records customer wishes, develops individual solutions at CTT's own development centre and manufactures them in association with internal and external conversion partners.

Increasing demand for individual transport solutions

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The demand for highly specific solutions is growing: in recent years, roughly 20% of the standard trucks manufactured at the Wörth trucks plant were converted to order by CTT. The major conversion partners are the Mercedes-Benz works in Molsheim (France), which is also where the CTT business organisation is located, and the Mercedes-Benz Commercial Vehicles plant in Wörth am Rhein (Germany), where individual customer wishes are fulfilled directly on the assembly line.

Many modifications have been developed and are readily available

Not all wishes necessarily mean extensive modifications. Sometimes special tasks or bodies mean altering the wheelbase or reinforcing the frame. Sometimes the exhaust system, tanks or brake unit carriers need to be repositioned. Many of these solutions do not need to be redesigned from scratch, as around 3500 conversions have already been developed and documented which can be called up on demand.

CTT specialists are on hand to advise the sales organisations of Mercedes-Benz Trucks all over the world. They check the feasibility, plausibility, time frame and prices, as well as organise the administration and manufacturing in collaboration with a series of internal and external partners. They work hand-in-hand with Daimler Trucks Development in Stuttgart and with the manufacturing plants.

Individual trucks from a single source with a factory warranty

The end result is that the customer receives a personalised truck from a single source which meets Mercedes-Benz quality and safety standards – and all that with only one invoice. All vehicles come with a full factory warranty and a guaranteed supply of spare parts. All

conversions are carefully documented and only approved genuine parts are used.

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CTT at the International Motor Show for commercial vehicles (IAA) 2012

CTT is presenting its extensive range of tailor-made transport solutions at the IAA, from the new Actros to the Zetros. On show at the Daimler stand is an exemplary vehicle for use in the construction industry in the form of a tried-and-tested Actros 2046 tractor unit with all-wheel drive. This truck tows a dump semitrailer for construction use and is equipped with, among other things, modified rear-axle suspension which was fitted directly on the assembly line in Wörth. Some more of the modifications exhibited include: a combination tank for 480 l of diesel fuel and 180 l of hydraulic fluid; an AdBlue tank which has been repositioned on the left-hand side; a hydraulic unit with variable operating pressure and all the necessary lines and connections; axle load measuring equipment; and a lowered frame.

CTT has already taken the first orders for customer wishes relating to the new Actros and Antos vehicles and has even delivered the first tailor-made solutions.

The New Mercedes-Benz Citan: the economic pro among urban delivery vans

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- **Powerful, yet economic: the new Citan**
- **Range featuring three lengths and three model variants**
- **Uncompromisingly safe: ADAPTIVE ESP®, up to six airbags**
- **Instantly recognisable brand image with prominent radiator grille**
- **An ergonomic, comfortable and high-quality driver's workplace**
- **Four engines cater to all needs**
- **BlueEFFICIENCY package for additional fuel economy**
- **Safe and comfortable handling as befits the brand**
- **Optional extras allow the Citan to be tailored perfectly to customer desires**

Stuttgart. Up to 3.8 m³ of load space, a maximum payload of 800 kg and, despite its impressive transport capacity, its fuel consumption values remain low – the new Mercedes-Benz Citan is an economic miracle. The city delivery van offers massive performance at compact dimensions suited to inner cities. Impressive quality and driving dynamics, outstanding safety and economy, exemplary versatility and resilience – the Citan is the star among professional urban delivery vans. A real money-saver: with two different power ratings offering fuel consumption of just 4.3 litres/100 km according to the NEDC, the new Citan with its diesel engine and BlueEFFICIENCY technology is the most economical vehicle in its class. Equally low and ahead of the game are the Citan's low CO₂ emissions which weigh in at 112 g/km.

Range featuring three lengths and three model variants

The versatility and adaptability of the new Mercedes-Benz Citan make it the ideal solution for urban deliveries. It is based on the panel van and available in three lengths from 3.94 m (Citan

Compact) to 4.32 m (Long) to 4.71 m (Extra Long). The vehicle's width is also ideally adapted to city traffic: including both exterior mirrors, the Citan measures 2.14 m. The bodywork excluding mirrors measures just 1.85 m.

Also available is the Citan Mixto variable five-seater with folding rear bench seat, an optimal separator grille closing off the load compartment and two sliding doors; the Mixto is based on the extra-long variant. The third basic variant is the Citan crewbus, a five-seater with folding rear bench seat and sliding doors which can be optionally fitted on both sides. This variant is based on the long version.

Despite its compact dimensions, the new Citan offers massive space. The panel van's load space is 1.36 m or 1.75 m or 2.13 m in length (Citan Compact, Long, Extra Long respectively). Depending on the version, the corresponding volume is 2.4 m³ or 3.1 m³ or 3.8 m³ respectively. Depending on the length and weight variant, the payload totals either 500 kg, 635 kg or 800 kg.

Rear doors or tailgate, partition wall or safety grille

The body offers just as much flexibility: the load space can be accessed by up to two sliding side doors. As an alternative to the standard rear doors, Mercedes-Benz also offers the Citan with a large-aperture tailgate (standard for the Citan crewbus). The load space can also be expanded by means of the optional roof rails and the panel van can be equipped with the optional ladder flap at the rear of the roof.

The panel van comes as standard with a full partition wall closing off the load compartment. A folding safety grille is optionally available. In conjunction with the folding co-driver's seat, the grille can be used to expand the cargo space right up to the dashboard on the right-

hand side while simultaneously protecting the driver from the objects stowed there.

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The Citan Mixto comes with the options of a safety grille permanently installed on the C-pillar and a variable grille on the three-seater rear bench seat. The load space cover of the Citan crewbus also offers high flexibility: it can be fixed in one of two horizontal positions as well as fastened to the bench seat's backrest for storage. The area below is panelled.

The Citan panel van's load space features partial panelling as standard and can optionally also be fully panelled. Another optional extra is a wooden floor.

Uncompromisingly safe: ADAPTIVE ESP®, up to six airbags

Just like any other Mercedes-Benz, the new Citan features extensive safety equipment. A key feature – standard for all models – is the electronic stability program ADAPTIVE ESP® that takes the vehicle's load into account.

In the Citan, this innovative driving dynamics control system combines the functions of the ABS anti-lock braking system, the VDC (Vehicle Dynamic Control) system that regulates over and understeer as well as the TCS traction control system. It also covers the ASR acceleration skid control as well as drive and braking torque control and the associated sub-functions.

Standard equipment additionally includes start-off assistance and daytime running lamps, height-adjustable seat belts, belt tensioners and belt force limiters for driver and co-driver, a belt warning system as well as a driver airbag. In the case of the Citan crewbus (M1 category approval), standard equipment further includes a co-driver airbag and thorax-sidebags and windowbags for both the driver and the co-driver.

Instantly recognisable brand image with prominent radiator grille

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A true Mercedes-Benz at first glance: the new Mercedes-Benz Citan's look is unmistakably typical of the brand. The characteristic appearance revolves around the confidently displayed, chrome-plated star in the prominent and sturdy radiator grille with its three sporty, perforated fins. The Citan's striking headlamps and the arrow-shaped bonnet with its clearly defined edges add to the striking look.

The trapezoidal cooling air intake in the bumper emphasises the width and powerful appearance of the Citan. This feature is also a styling element typical for Mercedes-Benz and can also be found throughout, from the current compact-class passenger-car range right up to the new Actros.

Instantly recognisable rear with great attention to detail

The rear window also emphasises width. Its angled lower edge takes up the line of the vertically arranged rear lights perfectly – the new Citan provides a highly detailed example of the Mercedes-Benz designers' skill. On the versions with rear doors, the panel for the licence plate is located on the left-hand door which is the wider of the two asymmetrical doors. If the customer purchases the Mercedes-Benz with a tailgate, the licence plate is centrally positioned.

With its unique appearance, the new Citan stands out among urban delivery vans while easily finding its place alongside the Sprinter and the Vito in the family of Mercedes-Benz vans.

An ergonomic, comfortable and high-quality driver's workplace

Also unmistakable are the high-quality features of the Mercedes-Benz Citan's interior. Both the driver and the co-driver have seats with taut yet comfortable upholstery. The shape of the backrests in

particular follows the line of the body, providing lateral support and thus comfort and safety. The fabric cover of the seats is both skin-friendly and breathable as well as being easy-to-clean and resilient, a feature that is once again typical of the brand.

The driver-friendly dashboard of the new Citan takes up the powerful, striking design of the exterior. Its surface features leatherlike graining that is pleasing to both the eye and to the touch. Colour and structure are typical of the brand.

Mercedes-Benz drivers will immediately feel at home in the new Citan's cockpit. And not merely because of the familiar star in the steering wheel boss: combination switch, gear-lever knob, light switch or dashboard buttons – the arrangement, appearance and function of the driver's workplace all correspond to the familiar Mercedes-Benz standard. The interior is further embellished by a trim element above the glove compartment.

Focus on functionality

The Citan places key emphasis on functionality for everyday use: a large glove compartment, a stowage compartment between the front seats as well as a practical overhead stowage compartment across the entire width of the windscreen offer abundant space for the large and small objects of a driver's day-to-day life. The new Citan's standard equipment is oriented towards practical use and includes a height-adjustable steering wheel, remote central locking and exterior mirrors that can be adjusted from within the interior.

Four engines cater to all needs

There is a broad selection of engines available. The powerful, smooth-running and highly efficient turbo diesel direct-injection Mercedes-Benz OM 607 with a capacity of 1.5 l is supplied at three different output levels:

- Citan 108 CDI, output 55 kW (75 hp), torque 180 Nm
- Citan 109 CDI, output 66 kW (90 hp), torque 200 Nm
- Citan 111 CDI, output 81 kW (110 hp), torque 240 Nm

The range is complemented by the lively, turbocharged M 200.71 petrol engine with a capacity of 1.2 l:

- Citan 112 CDI, output 84 kW (114 hp), torque 190 Nm.

All engines feature direct injection and an exhaust gas turbocharger (diesel with 81 kW/110 hp and variable turbine geometry). They comply with the Euro V emissions standard. The diesels are characterised by common-rail injection, piezo-controlled injectors and a controlled oil pump. The petrol engine impresses through details such as the aluminium crankcase, double overhead camshafts and a controlled oil pump. The petrol variant features ECO start/stop as standard, while the function is optionally available for the diesel engines.

Emission control is achieved by means of exhaust gas recirculation, particle filter and, in the case of the diesels, an oxidation catalytic converter. In the petrol engine, a three-way catalytic converter is used. For the two lower-output diesel engine variants, power transmission is handled by a five-speed gearbox, the petrol engine and the high-power diesel both use a six-speed gearbox. In all cases, the driver shifts gears using an easy-to-reach joystick-type gear lever in the centre console. The vehicles feature front-wheel drive.

Low fuel consumption, long maintenance intervals

One of the new Citan's trademarks is outstanding fuel economy. It not only displays impressive maintenance intervals of up to 40,000 km or two years, but also low fuel consumption. This is achieved, besides the efficient drivetrain, by the electric power steering featured as standard.

The gearshift indicator, also a standard feature, assists the driver in maintaining an economic driving style. Fleet operators can also further increase the new Citan's efficiency by means of a limit speed set at the factory. The combination of low CO₂ emissions and an NEDC average consumption of just 4.3 litres/100 km makes the new Citan the most economic urban delivery van around. These top values are attainable in Citan panel van and crewbus versions with 55 kW (75 hp) and 66 kW (90 hp) output and BlueEFFICIENCY technology.

BlueEFFICIENCY package for additional fuel economy

The BlueEFFICIENCY package comes as standard for the petrol engine and is also optionally available for the diesel engines. Among others, this includes: the ECO start/stop function, battery and generator management, and variant-dependent tyres with optimised rolling resistance which help further reduce fuel consumption to record lows.

Safe and comfortable handling as befits the brand

The developers of the Mercedes-Benz Citan set great store on achieving brand-typical handling through a combination of driving dynamics, driving safety and driving comfort. The electric power steering operates with high precision and minute sensitivity. The suspension, dampers and stabilisers have all been newly developed and carefully attuned to one another. The suspension on the Citan long panel van as well as the crewbus is lowered by about 15 mm at the front and rear axle when driving under normal load. Typical for the Citan are the short springs and high spring rate, rigid damping and modified stabilisers that result in greater resistance to rolling.

Both empty as well as laden, the new Citan is a typical Mercedes-Benz in displaying the precise, stable and simultaneously comfortable handling already familiar to drivers from the Sprinter

and the Vito. The new Citan is largely impervious to heavy loads and experiences only slight sprung mass vibrations. Page 60

Optional extras allow the Citan to be tailored perfectly to customer desires

With a whole range of customisation options, the new Mercedes-Benz Citan can be tailored perfectly to the tasks required of it by the customer. Besides additional safety and comfort extras, the range primarily features additional function options.

Various partitioning elements, a folding co-driver's seat facilitating extension of the load space, a selection of door and window configurations and load-space panelling are just some of the optional extras available. The accessories available ex-works also include cargo baskets, carrier systems and stowage trays for the load space. As an alternative to purchasing individual options, Citan buyers can also make use of logically compiled package offers.

The new Mercedes-Benz Citan shows itself to be a real transport pro down to the smallest detail. Special bodies made by bodybuilders can be adapted to the vehicle's technology by means of a special interface and a special module.

Tailor-made services

Alongside the usual, broad range of financing and service offers, the Citan will also have a particularly attractive range of complete tailor-made offers. Here in particular, the new Citan scores top marks through the exceptional transport-business competence of Mercedes-Benz.

Mercedes-Benz Vito E-CELL Crewbus: first ex-works seven-seater with a locally emission-free drive system

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- **Wide variety of emission-free passenger transport applications**
- **Powerful motor, durable batteries**
- **Safety without compromise**
- **On sale in more than 15 countries with full integration into the service network**
- **Transparent model shows the drive technology**
- **650,000 km of positive experience, numerous awards**

The Vito E-CELL Crewbus is the world's first seven-seater vehicle to make locally emission-free mobility possible ex-works. With an operating range of around 130 km, it is particularly suitable for operations in environmentally sensitive areas such as pedestrian areas, inner cities or spas. Its range is optimally designed for short distances with numerous stops. The Crewbus is based on the Vito E-CELL panel van, which has been available to customers ex-works since 2010. Building on the success of the Vito E-CELL panel van, the Crewbus will open up new segments.

Wide variety of emission-free passenger transport applications

There are many potential areas of application for the Mercedes-Benz Vito E-CELL Crewbus: in particular, it enables companies for the first time to organise their short-range shuttle or on-site transport for personnel on a locally emission-free and at the same time highly comfortable basis.

In addition to restaurants and hotels in inner-city areas with access restrictions, the Vito E-CELL Crewbus is extremely interesting for use in conservation areas. It is also highly suitable for on-site transport in large companies, or at airports and harbours.

The Vito E-CELL Crewbus is based on the long-wheelbase Vito. In addition to the driver's and co-driver's seats, its seating consists of a two-seater bench in the middle and a three-seater bench at the rear. To conserve battery power, the optional auxiliary heater is powered by liquefied gas. The E-CELL Crewbus is available in both left and right-hand-drive variants.

Powerful motor, durable batteries

The permanent magnet electric motor (output 60 kW, torque 280 Nm), power electronics, transformer and charger with an output of 6.6 kW are housed under the bonnet. Power is transferred to the front wheels.

The powerful and durable lithium-ion traction batteries are beneath the passenger compartment floor. The nominal voltage is 360 V, the capacity 36 kWh. To provide an operating range of 130 km (New European Driving Cycle NEDC), the top speed is limited to 89 km/h. This enables the Vito E-CELL Crewbus to flow confidently with the traffic on city roads and occasionally along inter-urban routes. It has a lively acceleration of 6.5 from 0 - 50 km/h or 11 seconds from 0 - 80 km/h.

The batteries of the Vito E-CELL are charged at 380/400 V outlets, and this takes a maximum of five hours. If required it is later also possible to charge from a 230 V outlet. Regenerative braking also charges the battery while on the move.

Safety without compromise

The Vito E-CELL makes no compromises where safety features are concerned: ESP and airbags for the driver and co-driver are standard equipment, and a seat belt is integrated into each seat in the passenger compartment.

The batteries are protected by a crash guard. If an airbag is triggered, the high-voltage system is automatically deactivated. The Vito E-CELL has impressively demonstrated its high level of safety in crash tests. Page 63

The technology of the Vito E-CELL Crewbus is based on that of the Vito E-CELL panel van. This has been in production since 2010, as the first series-production van with electric drive to be offered by any vehicle manufacturer.

On sale in more than 15 countries, fully integrated into the service network

The Vito E-CELL is meanwhile available in more than 15 European countries, from Finland to Spain and from Great Britain to the Czech Republic. Like the panel van, the E-CELL Crewbus is available under a long-term rental scheme with a duration of four years or 80,000 km. The rental model comprises a service package with services such as maintenance, repair and wear-and-tear parts.

In Germany alone, more than 40 company-owned branches and partners of Daimler AG are responsible for sales and servicing of the Vito E-CELL. Like any other Vito, the Vito E-CELL is integrated into standard processes such as the familiar Star diagnosis. As with any other Mercedes-Benz, replacement parts specific to the Vito E-CELL are obtainable from the company's central parts warehouse in Germersheim/Palatinate.

Transparent model shows the drive technology

The transparent model of the Mercedes-Benz Vito E-CELL makes it possible to understand the workings of the electric drive system. It gives an insight into the operating principle of the Vito E-CELL, from the charger units, voltage transformer, high-voltage control units and batteries to the electric motor. The power flow from the battery via

the control electronics to the drive shafts is demonstrated using high-performance LEDs in the model.

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650,000 km of positive experience, numerous awards

The conclusion after the first year of the series-production Vito E-CELL being in customer hands is that this van with electric drive is ideally suited to inner-city operations. Thanks to the subsidies available in Germany, there are now more than 230 Vito E-CELL vans on the road. Altogether they have covered well over 650,000 km and performed well.

The Mercedes-Benz Vito E-CELL has received numerous awards from independent juries, one of them the "Green Commercial of the Year". In 2011 the Vito E-CELL won the "Baden-Württemberg Environmental Technology Award" and the Design Award presented by the Michelin "Challenge Bibendum", one of the world's largest forums for sustainable mobility. Just recently the Vito E-CELL again received the innovation prize for "Alternative drive systems" in the "KEP Van of the Year 2012" awards.

Mercedes-Benz Vito: reliable and efficient practical vehicle for everyday use

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- **Vito: wide-ranging programme for all requirements**
- **BlueEFFICIENCY technology: role model for a whole class**
- **Driving safety and highest possible level of quality**

Given a thorough makeover two years ago, the Mercedes-Benz Vito has proven its worth since then as a reliable, efficient practical assistant for everyday use. The programme is as varied as the range of transmission and engine variants.

Vito: wide-ranging programme for all requirements

Three lengths, two heights, a number of different weights variants as well as five model variants, a large number of highly efficient engines ranging from 70 kW (95 hp) to 190 kW (258 hp), six-speed manual or automatic transmission, rear-wheel and all-wheel drive – the broad choice of Vito variants is unmatched in the class of compact vans. A common feature among all models is their robust design and their economical and practical operations, as well as their unsurpassed safety standard. With the panel van and the Vito Worker, the versatile Mixto, crew bus and shuttle, the Vito covers the whole range of goods and passenger transport applications in its market segment.

BlueEFFICIENCY technology: role model for a whole class

One of the highlights of the current generation is BlueEFFICIENCY technology, provided as standard for the crew bus and as an option for the panel van. With this innovative package, the Vito is a pioneer in its class. It includes on-demand ancillary equipment, generator management, ECO start/stop and tyres with optimised rolling resistance properties.

Its resilient chassis is comfortable and impresses with a high safety standard. The cockpit is typical of the Vito with its high material quality and pleasant look and feel, simple operation and low noise level. Buyers can have their Vito fitted out in a highly personalised style. Logically grouped optional extras are also available as packages at attractive prices.

The Vito at the International Motor Show for commercial vehicles (IAA) 2012

Seven exhibition vehicles demonstrate the wide versatility of the Mercedes-Benz Vito. The range spans from the panel van with workshop fittings to the Vito Shuttle as a taxi and a Mixto with all-wheel drive. A special role is played by the Vito E-CELL crewbus and a cutaway model of the E-CELL panel van: already in series production, the panel van and E-CELL crewbus offer locally emission-free and almost silent operation.

World premiere of the Sprinter E-CELL prototype: emission-free and silent with high payload

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- **Consistent development of emission-free vans**
- **Wide range of possibilities thanks to various bodies**
- **High performance drive system and charging technology**
- **Performance and operating range suit customer wishes**
- **Prototype is a chassis cab with 3.5 t gross weight**

Mercedes-Benz is further increasing its lead in the electrically powered van sector: at the 2012 International Motor Show for commercial vehicles, the prototype of the Sprinter E-CELL will have its world premiere. In doing so, Mercedes-Benz has transposed the environmentally friendly concept of the Vito E-CELL from the small vans segment to the large vans segment. This will make locally emission-free transport of larger weights and volumes possible in environmentally sensitive areas. The premiere at the IAA will also serve as a test of customer reactions before a decision is made about possible series production.

Consistent development of emission-free vans

First the Vito E-CELL panel van, then the Vito E-CELL crewbus and now the Sprinter E-CELL – consistently and step by step, Mercedes-Benz is continuing to develop vans with battery-electric drives. The platform was provided by the Vito E-CELL: two years ago, the first deliveries to customers were made, and now approximately 500 Vito E-CELL vehicles are now already in proper use. They have proved their worth in extensive customer tests. This allowed for the technology to be successfully further optimised and for the sales and distribution network to be extended.

The Vito E-CELL is the first electrically powered van to be produced in series by a car manufacturer and is now available in more than fifteen European countries. The recent introduction of the Vito E-CELL crewbus, which has space to seat seven, has once again greatly increased the vehicle's potential fields of operation. The vast amount of expertise gained from the Vito E-CELL was used for the development of the Sprinter E-CELL.

Wide range of possibilities thanks to various bodies

The prototype of the Sprinter E-CELL is an answer to the positive reactions to the Vito E-CELL.

The Sprinter E-CELL multiplies the possibilities for locally emission-free transport, because it is just as suited to use as a chassis cab as it is for use in conjunction with attachment bodies. This is of particular importance to spacious delivery vans for supplying inner cities, pedestrian precincts, or towns with restricted vehicle access, for example. The Sprinter E-CELL is equally suited to use as a drop-side body with double cab for use in landscape gardening within green zones. The Sprinter E-CELL is of interest to a large number of businesses and trades.

High performance drive system and charging technology

The technology of the Sprinter E-CELL is similar to that of the Vito E-CELL. However, it had to be carefully adapted to the specific characteristics of this highly demanding weight class as well as to a completely different chassis with rear-wheel drive.

The permanent magnet synchronous motor of the Sprinter E-CELL can reach a constant output of 70 kW (short-term peak output of 100 kW). Due to the design of the motor, the 220 Nm torque (short-term 270 Nm) is available in its entirety from a standstill, thus ensuring dynamic starting performance. The Sprinter E-CELL draws its energy from two lithium ion batteries, each with 93 cells and a combined capacity of 35.2 kWh.

The particularly powerful charger of the Sprinter E-CELL supplies 22 kW at a current of 32 amps. When connected to a 400-volt power source, the batteries can be charged in less than two hours. This considerably extends the possible areas of use of the Sprinter E-CELL, as it does not require time-consuming overnight charging. The battery charging socket is located on the driver's side, at the bottom of the B pillar instead of the usual tank filler neck.

The developers of the Sprinter E-CELL have made use of synergies within the company: for example, in the Sprinter E-CELL the tried and tested batteries of the smart electric drive are used.

Performance and operating range suit customer wishes

The top speed of the Sprinter E-CELL is limited to 80 km/h in favour of an extended range. This means it is not only suitable for inner city areas but can also be used for inter-city journeys or short motorway stretches. Its preferred area of use, however, is inner cities and towns. The range was designed with this in mind. With an NEDC energy consumption of 27 kW/h, the range is approximately 135 km. This is sufficient for most uses, as customer tests with the Vito E-CELL have shown. Daily journeys of up to around 100 km, as are most common in short-radius distribution, the trades and the service sector, can be completed risk-free by the Sprinter E-CELL.

As the batteries are located in robust containers between the axles and below the frame, neither the luggage compartment of the closed Sprinter nor its good body-mounting ability are impaired. With a maximum permissible gross vehicle weight of 3.5 tonnes, the payload of the Sprinter E-CELL can be up to 1200 kg, depending on the body. Ground clearance and angle of approach are not restricted.

The Sprinter E-CELL, like every other Sprinter, will be fitted with the newest generation of the ESP Electronic Stability Program with all its functions. In addition there is a high level of protection of the high-voltage power system.

Prototype is a chassis cab with 3.5 t gross weight

The prototype of the Sprinter E-CELL at the IAA is a chassis version with driver's cab and the middle wheelbase of 3665 mm. This enables not only a presentation of the electric drive components, but also, thanks to its good body-mounting ability, simultaneously shows the possibilities for a wide range of uses.

The design of the Sprinter E-CELL is suitable for many other variants: with the long wheelbase, as a double cab and with a number of bodies. There are also the closed versions, equally with a wide variety of bodies. Other weight variants might also be considered.

During and after the IAA, Mercedes-Benz will examine customer reactions to the new Sprinter E-CELL closely. Just like every other Mercedes-Benz, the Sprinter E-CELL will be carefully prepared for practical use before it is launched. The usual rigorous summer and winter tests are already planned, as are crash tests which the Vito E-CELL also needs to pass successfully.

Mercedes-Benz Sprinter: seven gears, seven litres, enhanced ESP® functions

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- **First van with seven-speed torque-converter automatic transmission**
- **BlueEFFICIENCY package reduces fuel consumption and emissions**
- **Fuel consumption only 7 litres with new, long axle ratio**
- **ADAPTIVE ESP®: functions further enhanced**
- **Sprinter – synonym for its vehicle class**

The Mercedes Benz Sprinter is characterised by striking product enhancements in the model year 2012, thus underlining the Sprinter's ambition to lead its segment. The focus is on safety, economy and comfort. It is the first van in the world to be available with a seven-speed torque-converter automatic transmission. The BlueEFFICIENCY package and the longer axle ratio contribute towards further reducing fuel consumption. Furthermore, the standard-fit adaptive ESP® now has additional, enhanced functions.

First van with seven-speed torque-converter automatic transmission

As of July, the new transmission, termed 7G-TRONIC, will be available as an option in a van for the first time worldwide. The seven-speed automatic transmission is equipped with a fully electronic control system and was adapted to fulfil the specific requirements of a van.

The advantage of this new transmission with its seven gears is the wide spread between the lowest and the highest gears combined with closely spaced ratios. In practice, this means that the Sprinter's low first-gear ratio ensures that it can pull away dynamically. However, at high speeds, the van is economic, produces low emissions and runs quietly with a low engine speed. At the same

time, there is a gear for every driving situation and the shifts in engine speed between the different ratios are small.

Low fuel consumption in conjunction with the BlueEFFICIENCY package is remarkable: depending on the model variant and the axle ratio, the combined consumption for Sprinters with a permissible gross vehicle weight of 3.5 tonnes and a four-cylinder diesel engine easily falls below the 7.6 litre per 100 km mark.

BlueEFFICIENCY package reduces fuel consumption and emissions

It goes without saying that every Mercedes-Benz Sprinter consumes fuel sparingly. All diesel engines are equipped with a battery management system. The engine and transmission are designed for low fuel consumption and low emissions.

The already favourable fuel consumption of Sprinters with manual transmission can be reduced by a further 0.5 litre per 100 km with the help of the optional BlueEFFICIENCY package. This also results in a reduction in CO₂ emissions.

The BlueEFFICIENCY package comprises the ECO start/stop function, tyres with optimised rolling resistance, the ECO power steering pump, alternator management and an electrically controlled fuel pump. Thus, the combined fuel consumption for a Sprinter panel van with a four-cylinder CDI diesel engine, manual transmission, a closed body and a permissible gross vehicle weight of 3.5 t is reduced to as little as 7.4 litres per 100 km.

Fuel consumption only 7 litres with new, long axle ratio

A new, longer rear-axle ratio for the Mercedes-Benz Sprinter is another measure to reduce fuel consumption and emissions and is available as an option for various vehicle variants. The ratio of

i=3.692 reduces engine speed by approximately six percent. The result is an excellently low fuel consumption of as little as 7.0 litres per 100 km and accordingly lower CO₂ emissions.

ADAPTIVE ESP: functions further enhanced

Mercedes-Benz has further improved the exemplary level of safety in the Sprinter. The most recent generation of the successful standard-fit ADAPTIVE ESP® now has additional functions.

The new Brake Disk Wipe system builds up a low level of brake pressure on a cyclical basis in rainy and wet conditions. As a result the film of water on the brake disc is wiped away, thus ensuring full braking performance immediately.

This is complemented by Electronic Brake Prefill: if the driver removes his foot from the accelerator abruptly, the vehicle interprets this as the first move before braking. The system reacts to this by gently applying the brake pads to the brake discs. As a result the distance between the two resistance partners has already been reduced to nothing, so to speak, when the driver depresses the brake pedal. This, in turn, reduces the reaction time for braking.

Sprinter – synonym for its vehicle class

The Sprinter lends its name to an entire vehicle class: the Mercedes-Benz Sprinter has long been synonymous for vans with a gross permissible vehicle weight of around 3.5 tonnes. Available in four different lengths, three heights and with gross vehicle weight ratings between 3.0 and 5.0 t, the Sprinter is a real all-rounder, be it as a panel van, crewbus, platform, tipper or chassis variant.

Equally diverse is the range of drives available with their economic and powerful CDI diesel engines, which range from 70 kW (95 hp) to 140 kW (190 hp), as well a V6 petrol engine with 190 kW (258 hp)

for particularly special requirements. The optional BlueEFFICIENCY technology reduces fuel consumption and emissions yet further. The Sprinter NGT with natural gas drive and the Sprinter LGT with liquefied petroleum gas drive cover the segment of low-emission and economic alternative drive technologies. The basis for these vehicles is the Sprinter with 115 kW (156 hp) four-cylinder petrol engine.

Typically Sprinter are: the safe and comfortable chassis, the spacious and well-equipped high-quality cab, as well as the utmost levels of functionality and safety.

The Sprinter at the 2012 commercial vehicles motor show (IAA)

Eight Sprinter models will be on show in Hanover. Three Sprinter BlueEFFICIENCY panel vans, including one model with a long rear axle ratio, are examples for particularly efficient and fuel-saving models. A Sprinter 4x4 tipper with the extended off-road function Downhill Speed Regulation (DSR), as well as a double cab with low platform from the Mercedes-Benz VanSolution programme display the Sprinter's suitability for applications in the construction and building materials industries, as well as for communal applications. A Sprinter with box body and 7G-TRONIC automatic transmission demonstrates the multi-faceted possibilities of the Sprinter in short-radius distribution operations, whilst a 319 CDI crewbus with the one-of-a-kind V6-cylinder engine displays its suitability for use as an exclusive shuttle vehicle. The low-emissions Sprinter 316 NGT panel van runs on environmentally friendly natural gas. The Sprinter E-CELL even offers locally emissions-free driving with its battery electric drive.

Mercedes-Benz Viano: Edition models combine versatility and efficiency with a high level of comfort

- **Viano Ambiente Edition: noble character**
- **Viano Marco Polo Edition: exclusive travel comfort**
- **Mercedes-Benz Viano: benchmark for large-capacity vehicles**

Green light for the attractive Mercedes-Benz Viano special models. The Viano Trend Edition and Ambiente Edition models combine dynamism, efficiency and comfort in a large-capacity vehicle for the discerning. The Viano Marco Polo Edition combines travel comfort with exclusive fittings. Country-specific edition models are offered.

Viano Ambiente Edition: noble character

VIP shuttle, ambitious company vehicle, a practical large-capacity vehicle: the Edition models of the Viano Trend and Ambiente have everything one could possibly wish for. As standard, both are powered by the 2.2 CDI turbodiesel engine (output 120 kW/163 hp). As an alternative, the 3.0 CDI (165 kW/224 hp) provides exclusive six-cylinder driving comfort. The transmission is automatic in all cases.

The noble character of the Viano Ambiente Edition is underlined by metallic paintwork, tinted glass with black glass in the rear compartment, PARKTRONIC parking assistance, cruise control, the TEMPMATIC additional rear-compartment climate control for large-capacity vehicles and a Media Interface in the glove compartment.

It also offers an additional sliding door on the left, electric tilting/sliding glass sunroofs in the front and rear, THERMOTRONIC automatic climate control, COMAND APS navigation system and a sound system with nine loudspeakers and an additional amplifier.

Viano Marco Polo Edition: exclusive travel comfort

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The Viano Marco Polo Edition provides plentiful space and many intelligent solutions, for example swivelling front seats. The engine, transmission and paintwork are based on the Viano Ambiente Edition. The extensive fittings include bi-xenon headlamps, 17-inch light alloy wheels, TEMPOMATIC climate control, an auxiliary warm air heater, PARKTRONIC system, Audio 50 APS radio navigation system, cruise control and metallic paint.

Mercedes-Benz Viano: benchmark for large-capacity vehicles

Given an all-round facelift two years ago, the Mercedes-Benz Viano is the benchmark for comfort, material look and feel, and efficiency in the large-capacity vehicle sector. The 100 kW (136 hp) to 165 kW (224 hp) diesel engines offer BlueEFFICIENCY technology as standard. This includes on-demand ancillary equipment, generator management, ECO start/stop and tyres with optimised rolling resistance properties.

Versatile programme fulfils individual wishes

The large-capacity vehicle programme consists of the three equipment lines Viano Trend, Ambiente and Avantgarde, and also the recreational vehicles Viano Fun and Marco Polo. In three lengths and two weight variants, as well as numerous seating and equipment configurations, the Viano is as individual as its owners.

The Viano's safety standard is unsurpassed thanks to the outstanding dynamism of its rear-wheel drive, the standard-fit ADAPTIVE ESP electronic safety program with its many sub-functions, and other passive safety systems.

The Viano at the International Motor Show for commercial vehicles (IAA) 2012

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The Viano is represented with two Edition models at the 2012 IAA. The Viano Ambiente Edition is powered by a six-cylinder CDI 3.0. In addition to its extensive standard equipment, it has an electric sliding door, a rearview camera and the sports package with 18-inch light alloy wheels, sports suspension and sports pedals in brushed stainless steel.

The Viano Marco Polo Edition is powered by the particularly economical CDI 2.2. With its yacht-look floor, an electric tilting/sliding glass sunroof and TEMPMATIC climate control in the rear, it fulfils the desires of the most discerning clients.

MobiloVan: the new mobility guarantee as standard for Citan, Sprinter and Vito

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- **Mobility guarantee as standard which runs for up to thirty years**
- **Services: from breakdown assistance to a replacement vehicle**
- **A maintenance service is enough to re-instate the guarantee**

Owners and drivers of a Mercedes-Benz know you can rely on the high-quality technology of your vehicle. In the rare event of a breakdown or problems with starting your vehicle, Mercedes-Benz MobiloVan will be there to help you. That is the name of the new mobility guarantee which comes as standard for the new Citan, Sprinter and Vito. MobiloVan quickly and simply ensures that you are kept on-the-move in the case of a breakdown.

Mobility guarantee as standard which runs for up to thirty years

The MobiloVan mobility guarantee comes as standard and with no extra charge for every new Citan, Sprinter or Vito registered on or after 1 October of this year. The guarantee runs for up to thirty years – so that the usual expected working life of a van is fully covered.

Services: from breakdown assistance to a replacement vehicle

MobiloVan services are extensive: in the case of technical breakdown or problems starting your vehicle, they cover breakdown and starting assistance, including the technician's journey to and from the scene of the breakdown, as well as on-the-spot repairs up to 150 euros. If the problem cannot be solved on-the-spot, the vehicle will be towed away free of charge and if necessary you will be provided with a replacement vehicle for up to three days. In addition, up to three nights in a hotel are included or – as an alternative to the replacement vehicle – a journey home by rail or air.

For up to two years after the vehicle is first registered, your mobility is guaranteed in the case of repairs carried out under warranty or company goodwill which take longer than two hours. Page 79

A pick-up and return service within a radius of 50 km from the Mercedes-Benz service outlet is part of the service package, as is a taxi or driver service, or journeys by public transport.

A maintenance service is enough to re-instate the guarantee

The only condition for MobiloVan is regular maintenance service carried out as specified by an authorised Mercedes-Benz Service partner. If a Service has been missed – for example by the previous owner in the case of a used van – it is possible to re-instate the MobiloVan mobility guarantee after a maintenance service.

MobiloVan is valid almost everywhere in Europe, from Andorra to Cyprus. The basis of our MobiloVan services is the dense 24-hour Service network with around 3000 authorised Mercedes-Benz Service outlets across Europe.

Mercedes-Benz Citaro: world's first production urban bus with Euro VI emissions rating

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- **Drive system: two completely newly developed engine families**
- **Fuel consumption up to 5 percent lower with Euro VI**
- **Excellent economy thanks to technical finery**
- **Design: the restyled Citaro rear end**
- **The exhibition vehicle in detail**

The Mercedes-Benz Citaro is extending its lead over the competition with a brand new generation of engines. It is the first regular-service bus to be supplied with power units that already meet the Euro VI emissions standard. It furthermore includes a raft of innovative measures for cutting fuel consumption and CO₂ emissions. At the same time, this compensates for the Euro VI technology's extra weight.

Drive system: two completely newly developed engine families

The engine series for the Citaro have been developed completely from scratch, and comprise the OM 936 and OM 470 in-line 6-cylinder units with displacements of 7.7 litres and 10.7 litres respectively. Both have a Euro VI emissions rating. Another common characteristic is excellent economy resulting from their durability, efficient consumption of fuel, AdBlue and engine oil, as well as the long service intervals for the particulate filter in the Citaro of 120,000 km or two years.

In practice, the engines stand out for their spontaneous response from standstill and impressive power output combined with smooth running. The high torque that comes online from very low rev speeds ensures effortless and economical power delivery from just above idling speed.

Thanks to the beefy performance on tap, it was possible to lengthen the final drive ratios compared to the previous engines in almost all cases. The result is a considerable reduction in both engine speed and noise levels. The optimum shift points furthermore occur at low engine speeds, enabling a smooth, fuel-efficient driving style with a smaller number of gear changes for even greater comfort.

Technical features of the new engines

A highly efficient combustion process using common-rail injection forms the foundation for clean emissions and low fuel consumption. The high ignition and injection pressures both set new benchmarks, while the system of cooled exhaust gas recirculation brings further benefits, too. Both engines employ the BlueTec 6 exhaust gas aftertreatment technology from Mercedes-Benz: here, a closed particulate filter is combined with the successful SCR system from Mercedes-Benz to optimum effect.

The new OM 936 in detail: compact and powerful

The refined features of the OM 936 include VCP (Variable Camshaft Phaser), as the first adjustable exhaust camshaft to be fitted in a diesel engine is known. This aids particulate filter regeneration by modifying the valve timing on the exhaust side. The six-cylinder unit comes in two power ratings.

Output	Torque
220 kW (299 hp) at 2200 rpm	1200 Nm at 1200 rpm
260 kW (354 hp) at 2200 rpm	1400 Nm at 1200 rpm

The in-line six-cylinder engine is available for the Citaro in a horizontal variant (OM 936h), which comes in both power ratings and is tailored to regular-service bus operation. Although the basic engine remains the same, there is still a great deal of engineering

work involved as the entire engine periphery has been purpose developed for such applications.

The 220 kW engine can also be ordered in a vertical variant. The second power rating delivering 260 kW is initially only available for the vertical engine on the Citaro LowEntry model, and cannot be specified for the regular rigid version as yet.

The OM 470 in detail: light but powerful

The new OM 470 is based on the heavy-duty engine series. Weighing just 990 kg (DIN 70020-A), it is perfectly suited to use in articulated vehicles. The standout feature of the vertically installed OM 470 engine is the unique and highly flexible X-PULSE common-rail system from Mercedes-Benz with fully electronic control and hydraulic pressure boosting.

The new OM 470 is designed to power articulated buses that operate in challenging topographical conditions. It comes in a choice of two output and torque ratings:

Output	Torque
265 kW (360 hp) at 1800 rpm	1700 Nm at 1100 rpm
290 kW (394 hp) at 1800 rpm	1900 Nm at 1100 rpm

Power is transferred to the wheels via an automatic transmission with torque converter. There is a choice of units manufactured by Voith and ZF, which come in the very latest version for the Euro VI emissions rating. With their torque converter design, they are ideally geared towards the low rev speeds of the new engines.

Fuel consumption up to 5 percent lower with Euro VI

Despite the Euro VI rating and the extensive exhaust gas aftertreatment technology that accompanies it, the new Citaro

actually succeeds in once again undercutting the fuel consumption figures of its economical Euro V predecessor. Measurements taken in practice indicate an average fuel saving of up to 5 percent.

Excellent economy thanks to technical finery

The development team for the new Citaro really pulled out all the stops to assure it of outstanding economy. Take, for instance, the regular-service bus's fuel-saving recuperation module: the electrical power generated without using fuel during overrun phases is stored and then used to supply power to auxiliary consumers such as fans, lighting, etc. when the bus is accelerating forward again. The air compressor with two-stage control also features a recuperative operating mode when the engine is overrunning, as it fills the compressed air tanks above the normal level of 10 bar to 12 bar. This excess compressed air can then be utilised by the auxiliary consumers when the vehicle is next accelerating, thereby reducing air compressor operating time and, in turn, fuel consumption.

The battery and alternator management systems are networked by CAN bus, allowing them to communicate with one another and distribute the load more evenly. This serves to extend the operating life of these two units. A tyre pressure monitoring system is optionally available for the first time, which indicates the current pressure in the individual tyres as well as providing a warning when fluctuations are detected.

Lowering the entrances at doors 2 and 3 (or 4 on the articulated bus) by 20 millimetres to 320 millimetres increases passenger comfort, shortens the kneeling time and also reduces air consumption – meaning a substantial reduction in fuel consumption, too.

Despite the inclusion of the new generation of Euro VI engines with their exhaust gas aftertreatment technology, the weight of the new Citaro is largely unchanged, meaning no loss of passenger capacity.

As a result, the rigid bus offers space for up to 100 passengers, depending on the chosen configuration.

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Design: the restyled Citaro rear end

On the outside, it is the slightly raised rear end and tower-style engine arrangement that distinguish the new Citaro with Euro VI emissions rating. Masked by a styling element on the sides, the rear turret is particularly eye-catching, as it gives the Citaro a slightly rounded and dynamic silhouette. The dark-tinted glass service flap on the left of the rear window is yet another distinctive feature.

The lighter engine compartment flap has been redesigned too, with a sandwich construction formed by joining two pressed parts together. The tail light clusters have an unmistakable design and are made up almost exclusively of energy-saving, long-life LED bulbs.

Engine and radiator in tower arrangement

The engine tower at the rear varies in size depending on whether a horizontal (OM 936h) or vertical (OM 936/OM 470) engine is fitted. The radiator above the power unit is positioned far out of the range of any dirt or spray water that is thrown up, as is the engine's air intake.

The engine tower features a new insulation concept, comprising two layers of sheet metal with the insulation sandwiched in-between. This insulation jacket has a decorative plastic coating on the side facing the passenger compartment.

The new Mercedes-Benz Citaro: characteristic features

The front end of the Citaro has a particularly striking "expression", greeting its passengers with a friendly smile. The large almond-shaped headlamps and the front end's rounded forms help to rid the

Citaro of the austere appearance that is so typical of regular-service buses. The deep-set side window line gives the bus a transparent appearance. The three-dimensional styling of the glass-fibre-reinforced-plastic wheel arches lends the body added dynamism.

One of the outstanding safety features at the front is the collision protection for the driver in the front end. This, together with the strengthened A-zero pillars and the frame design, means that future European pendulum impact regulations have already been factored into the Citaro. This collision protection has been tested in accordance with the ECE R 29 standard, while the Citaro bodyshell also already meets the ECE R 66.01 standard governing rollover strength, which only comes into effect in 2017.

Lower, well-illuminated entrances

The passenger compartment of the new Citaro has a particularly inviting feel to it. The pleasant experience for passengers begins at the bus stop thanks to the bright illumination of the entrance and exit areas. The passenger compartment itself stands out for its bright and cheerful design.

Light fittings can be supplied for the ceiling's border section in the new model generation. These LED lamps can be used to create quiet zones and reading corners within the seating area. The good lighting levels reduce the risk of vandalism and increase passenger safety.

Driver's workstation with perfected ergonomics

The driver's workstation on the new Citaro takes ease of operation, ergonomics, instrumentation and comfort to new heights. The door to the driver's cab is hinged at the rear and opens from the front. At the same time, the developers have improved the door's stowage facilities. The partition screen for the driver's cab is larger than before and curves further forward, too. Drivers also benefit from a

higher seating position that puts them at eye level with passengers who are boarding.

The instrument panel mirrors all the recommendations for the new European driver's workstation. The new, elegant shape creates extra kneeroom, while its soft-touch surface further adds to the Citaro's high-class feel. The cockpit comprises large, clearly arranged dials for road speed and engine speed. Between the two dials there is a colour display showing a multitude of supplementary information, which can be operated using the buttons on the steering wheel. The cockpit's buttons and switches have been positioned based on the latest ergonomic findings.

The comfort and safety-enhancing Citaro chassis

The chassis excels with exceptional comfort and handling safety thanks to the independent front suspension. The Electronic Stability Program (ESP) is being made available in a low-floor urban regular-service bus for the very first time in the new Citaro, thereby taking safety technology for this type of vehicle into a brand new era.

The exhibition vehicle in detail

The three-door rigid bus with vertically mounted engine encompasses a wealth of outstanding features, ranging from the Euro VI emissions rating to the Electronic Stability Program (ESP). Power is provided from the rear by the new OM 936 in-line 6-cylinder engine with a 7.7-litre displacement, an output of 220 kW (299 hp) and maximum torque of 1200 Nm. Power is transferred by the ZF Ecolife six-speed automatic transmission.

Its safety specification, including the Electronic Stability Program (ESP), is exemplary. The chassis is equipped with anti-roll bars, electronically operated level control and roll-and-pitch control. The lighting system is in a class of its own, comprising bi-xenon

headlamps, fog lamps with integrated cornering light function and LED daytime running lamps. Cameras monitor the area around the cash register and the door 1 entrance as well as the passenger compartment. There is a 6.5-inch (16.5 cm) screen integrated into the driver's workstation to monitor what's happening. LED entrance lights (known as ambient lighting) are placed under the hem section at all three doors to help passengers boarding the vehicle in the dark.

Functionality: the Citaro is driver and maintenance-friendly

The segmented side panelling with easily replaceable components simplifies repairs. The electrically powered pivot-and-slide doors operate rapidly, and remain securely shut when closed. The electrically operated cassette ramp under the vehicle floor at door 2 makes life easier for the driver. The electric pivot-and-slide door at the front is unique, as it allows fast door opening and a generously sized entrance area for passengers.

Mercedes-Benz Travego: even safer thanks to Active Brake Assist 2 and Edition 1 is even cleaner thanks to compliance with the Euro VI emissions standard

- **Active Brake Assist 2 brakes when it recognises stationary obstacles**
- **Attention Assist supports the driver's concentration**
- **An engine from the new BlueEFFICIENCY Power generation**
- **Automated GO 250-8 PowerShift transmission**
- **Cockpit revised to the very last detail**
- **Travego M Edition 1: touring coach for the successful**

The Mercedes Benz Travego is strengthening its leading position in the premium high-deck touring coach sector. It now has unique safety features such as Active Brake Assist 2 or Attention Assist. At the same time, the Travego Edition 1 is the first standard touring coach which complies with the Euro VI emissions standard.

Active Brake Assist 2 brakes when it recognises stationary obstacles

The second generation of Active Brake Assist is new and unique to the Travego. Until now the risk of a rear-end collision with a slower vehicle travelling ahead caused the safety system to initiate a full brake application. Now though, Active Brake Assist 2 also brakes the vehicle if stationary obstacles, such as an unexpected traffic jam on the motorway, are detected.

The radar-based system scans the lane ahead, covering an area of between 0.25 and 200 m in front of the bus whilst continuously measuring the distance and the relative speed of vehicles ahead or the distance to an obstacle. The radar technology functions reliably in almost all weather and light conditions. Active Brake Assist is active at all speeds up to 100 km/h.

Active Brake Assist is available for all variants of the Travego Edition 1. It is supplied at no further cost, if ordered in conjunction with the optionally available adaptive cruise control. Page 89

Attention Assist warns the driver of fatigue

The new Attention Assist, available in the Travego Edition 1 as an option, is just as unique. It registers parameters such as steering angle, speed, longitudinal and lateral acceleration, journey time, control signals and the change of drivers. Attention Assist correlates this data in order to ascertain the condition of the driver. If the data indicates a lack of concentration or the onset of fatigue, a coffee cup symbol appears in the display indicating that a break is necessary.

LED daytime running lights and a tyre pressure monitoring system

Further equipment also increases the safety standard of the Travego Edition 1. The new daytime running lights with LED lamps integrated into the housing of the headlamps are also optional. Special equipment also includes a tyre pressure monitoring system which indicates the pressure of the individual tyres and issues a warning should the pressure deviate from the optimum value. This reduces wear on the tyres, has a positive influence on fuel consumption and prevents dangerous tyre damage.

An engine from the new BlueEFFICIENCY Power generation

The drivetrain on the Travego Edition 1 heralds a new era for touring coaches. This figurehead of Mercedes Benz Buses is the first touring coach to comply with the upcoming Euro VI emissions standard.

The engine in the Travego Edition 1 is a vertically mounted straight six-cylinder from the new OM 471 model series. With 12.8 l displacement, it delivers 350 kW (476 hp) at 1800 rpm. The high maximum torque is 2300 Nm at 1100 rpm.

The engine is equipped with the unique common-rail injection system with pressure booster (X-PULSE). This enables extremely precise fuel injection with cylinder-selective control, high injection pressures of up to 2100 bar and a freely adjustable injection process. This new engine is the prerequisite for low fuel consumption, reduced exhaust emissions and smooth running.

The efficient three-phase engine brake and the asymmetric exhaust gas turbocharger bring about further advantages. The latter provides for the engine's fast response. The torque characteristic of the new engine enables unusually low and fuel-saving engine speeds. The engine achieves a torque of 2000 Nm at around 900 rpm.

The new in-line engines boast low fuel consumption and particularly low emissions. The exhaust system of the EURO VI engines is also equipped with an extremely efficient diesel particle filter which, in the Travego, only needs servicing for the first time at 360,000 km and thereafter only every 240,000 km.

Great cooling performance, no disadvantage to weight

The developers of the Travego Edition 1 have pulled out all the stops. A significantly higher cooling performance is required for the Euro VI. This was achieved by moving the radiator from the left to the right-hand side, shielding the radiator from the engine compartment, additional exhaust air openings on the rear end as well as the use of optimised fans and fan couplings with an improved control range.

To optimise weight distribution, the developers swapped the positions of the fuel tank and batteries, placing the fuel tank in front of the front axle. At the same time the weight of the vehicle was reduced by optimising components. In doing so, an important requirement was able to be fulfilled: Euro VI buses should not exhibit any restrictions with regard to passenger and luggage capacity when compared with previous models.

Automated GO 250-8 PowerShift transmission

In the Travego Edition 1, Mercedes Benz is introducing the new GO 250-8 PowerShift eight-speed bus transmission together with the Euro VI-compliant engines. The fully automated assembly is based on the well-respected GO 240-8 PowerShift transmission still in use in other models.

As usual, drivers profit from the progressive graduation of the transmission as well as even faster and more comfortable gearshifts. A heat exchanger ensures that the oil temperature in the transmission remains constant at an operating level of about 80 degrees. This has a positive effect on oil change intervals. The crawling mode of the transmission is also new. It enables precise manoeuvring simply by using the brake pedal.

The new integrated retarder achieves braking torques of up to 3500 Nm. It uses the engine coolant as a braking and cooling medium. As a result the heat exchanger that was previously necessary and the associated oil change are now redundant.

The practically wear-free and almost maintenance-free clutch is also new. Thanks to a centrally located, pneumatically operated clutch cylinder, mechanical parts such as the clutch release fork, release bearing and clutch force booster are no longer required.

Gears now shifted with a steering-column lever

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The gearshift of the GO 250-8 PowerShift transmission is completely new: the joystick in the instrument panel has now been replaced by a steering-column lever. It is used for all functions, but these are all very clear thanks to the unmistakable operation of the lever.

The driver can manually intervene by pulling the lever towards him or pressing it briefly. The retarder can be controlled in the usual manner by moving the lever downwards.

Cockpit revised to the very last detail

In addition to the steering-column lever for operating the transmission, the developers have implemented numerous ideas for optimising the ergonomics of the cockpit for the driver: navigation through the various functions and displays via the new multifunction steering wheel has also been simplified considerably.

The new electronic key is inserted on the left-hand side of the instrument panel. The ignition and the start/stop function of the engine are controlled via a two-stage button. The switches in the cockpit have been rearranged according to their function.

Large, legible instruments

The use of non-reflecting glass for the display instruments is also a new feature. Two large gauges display the speed and engine revs. Two smaller instruments indicate the level of fuel and AdBlue. The driver can also access many other types of information in the centrally located colour display using the steering wheel keypad.

The Travego at the International Motor Show for commercial vehicles (IAA) 2012

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The 13 m long, three-axle Travego M Edition 1 on exhibit does not only have all of the technical features of the Travego Edition 1; this is a very special touring coach: it is the team bus for the German men's national football team. Its exterior basic colour of Arachne Metallic matt white, painted door mirror caps and the striking lettering emphasise its special use.

The seating, with 36 Travel Star Xtra seats in Luxline upholstery and with leather covers, provides extraordinary travel comfort. The silver-coloured leather head sections as well as the side folds and curtains in curry contrast with the black seats and backrests. Anyone who wants to put up their tired feet can take up place in the first row of seats which features an electrically adjustable table/leg rest.

Entertainment during the journey is no problem: card players can meet up at the rear of the coach where there are two club tables with face-to-face seats. Those who just want to watch the game have a good view from every seat: there are a total of three monitors located in the front end and in the centre aisle whilst a fourth flat screen (all 19-inch/48 cm) is mounted in the rear. Four subwoofers, located under the passenger seats, guarantee a rich sound from the on-board audio system.

Mercedes-Benz Intouro: utmost economy across the board

- **Extremely efficient high-floor rural-service bus**
- **Proven components from the modular system**
- **Easy-to-repair long-term construction**
- **Comfort level of a touring coach**
- **Powerful, economical and long-lasting engines**

Mercedes-Benz completes its range of rural-service buses: the successful Integro will be complemented by the particularly efficient and functional Intouro. Thus, with its broad palette consisting of the Citaro Ü, Citaro LE Ü, Integro, Integro RH and Intouro (which is now available across Western Europe), Mercedes-Benz covers every possible bus requirement from local transportation to inter-city buses, right up to rural regular-service buses.

Extremely efficient high-floor rural-service bus

Intouro stands for an economic high-floor vehicle concept, which is particularly suited to inter-city applications, school bus operations and own account transport requirements. Previously only on offer in Central Europe and in selected Western European countries, the Mercedes-Benz Intouro will now be launched across the whole of Europe.

As a purely high-floor vehicle with a floor height of 860 mm, the Mercedes-Benz Intouro comes directly from the tried-and-tested Mercedes-Benz rural-service bus modular system. With its focus firmly on economy, both in terms of acquisition and running costs, the Intouro impresses with its excellent price-performance ratio. Long-lasting components, robust technology and an equipment level intended primarily for inter-city operation distinguish the Intouro.

The Intouro scores points with its attractive life cycle costs, from acquisition right through to re-sale. Besides its functional and largely standardised equipment, this is to a large extent thanks to the numerous practically tested components and assemblies adopted from other rural-service buses sporting a star.

Made for everyday operation even under the most demanding of conditions, the Intouro fulfils the special requirements of a long-lasting vehicle made for high mileage. The two-axle rural-service bus is available in two lengths (Intouro 12.14 14.4 m length, 6080 mm wheelbase; Intouro M 12.98 m length, 6920 mm wheelbase) and has space for 55 and 59 passengers respectively. Both variants measure 3.36 m in height. Upon request, the centre door can be ordered as a double-wing door.

Both optically and technically, this is a true Mercedes-Benz

Both optically and technically, the Mercedes-Benz Intouro fits perfectly into the Mercedes-Benz bus family. The front end of this attractive rural-service bus, with its individual round headlamps fitted in a dynamic piece of trim, sets itself apart thanks to its taut lines. This impression is further reinforced by the air intake integrated into the front trim panel as well as by the rounded bumper.

The shape of the Intouro is, rather befittingly of its duties, in the first instance, characterised by high functionality. The high, steep integral front windscreen offers an optimal view whilst also leaving enough space for the integration of a large destination display. At the same time, the front windscreen forms the basis for optimum usage of the available space and a sense that the interior is both generous and airy.

Easy-to-repair long-term construction

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The flat and easy-to-clean side wall with large seamless bonded side windows in front of thin window pillars is perfectly suited for personalised letterings or advertisements. The rear end mirrors the fact that this bus belongs to the Mercedes-Benz family. The rounded rear window is particularly prominent. The autonomous tail lights frame the engine hatch, which itself takes up the same design idiom as the rear window. The three-part bumper ensures that minor manoeuvring damage can be repaired cost-effectively.

Thin seals on the doors and flaps are proof of a high-quality bodyshell, a feat also mirrored by the cathode-dip-primed body with the best possible level of protection against corrosion.

Economic in acquisition, operation and maintenance

The Intouro impresses with high cost-effectiveness in all areas. Its low weight is absolutely crucial if a large number of passenger seats is to be accommodated. It is equally important for a reduction in fuel consumption in comparison with an identical load. Oil change intervals every 60,000tkm correspond, in usual operation, to a single service interval every year.

For standardised fleet management, a Fleet Management System (FMS) interface is also optionally available. With the FMS, a service provider obtains a comprehensive overview of the technical condition of their Intouro and any current vehicle operating data.

To keep maintenance and repairs simple, the entire front-end flap can be folded down. Just as with the three-part rear bumper, the elements of the front bumper which house the headlamps and indicators can also be replaced individually should they become damaged. Small repairs can therefore be carried out quickly and cost-effectively.

In its segment, the Mercedes-Benz Intouro is also the benchmark in all things comfort. The safe and balanced driving characteristics of the Intouro are based on a chassis which makes use of fully-fledged touring coach technology. This has been adapted to suit the specific requirements of rural transport. The front axle is not only safe and comfortable, it also allows for extraordinary manoeuvrability thanks to its large wheel turning angle (wheel on the inside of the bend: maximum 58 degrees). Accordingly, the turning circle of the Intouro is a mere 20.98 m. Even the longer Intouro M version achieves a comparably good value of 23.12 m.

Spacious and customisable interior

Passengers climb aboard both at the front and middle of the vehicle through 900-mm-wide outward-swinging single-wing doors. The centre door is optionally available as an outward-swinging double-wing door with a width of 1380 mm. A lift for disabled passengers is also available.

The passenger area of the Mercedes-Benz Intouro has impressive headroom measuring 2.17 m which affords a pleasant feeling of openness and spaciousness. The "Inter-Star Eco" seats which were specially designed for rural-service buses sit firmly on top of a 170-mm-high platform. Thanks to a modular system, these high-strength seats can be delivered in different backrest height variants. It isn't just the comfortable upholstery with its pleasant lateral support that is impressive, rather also their optically appealing shape with thin head restraints.

The double seats are fixed at the side in C rails on the wall. This means that the distance between the seats can be changed without great effort. As an option, the Mercedes-Benz Intouro can also be

ordered with the particularly comfortable "Travel-Star Eco" seating which offers improved comfort.

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Above the passenger seats, optionally available luggage racks can accommodate hand luggage. The grid floor of the luggage racks ensures that no possessions get left behind. Large pieces of luggage fit nicely in the spacious luggage compartment between the axles. Depending on the centre door fitted, the volume of the luggage compartment ranges from 4.5 to 5.0 m³ (Intouro) and 5.5 to 6.0 m³ (Intouro M).

A powerful electronically-controlled heating and ventilation system ensures a homely ambience on board this rural-service bus. The heat distribution within the bus is handled by heating fans. As an optional extra, the Intouro can be equipped with a powerful roof-mounted air-conditioning system with either 26 kW or 32 kW output, depending on the vehicle's engine variant.

Ergonomically designed driver's area, practical stowage compartments

The driver's area of the Intouro rural-service bus is, just like the centre isle, 860 mm above road level. The cockpit is optically styled on Mercedes-Benz touring coaches and is definitely driver-oriented whilst also being ergonomically well thought out. All operating elements are handily placed in front of the driver. Any driver looking at the instrument cluster is greeted by large, easy-to-read instruments. The centrally positioned display offers the driver additional important information. The height and angle of the steering wheel can be pneumatically adjusted.

On the left of the driver's workplace are a series of stowage compartments. On a pedestal, there is a further open compartment as well as the parking brake which is in perfect reach of the driver. If desired, a 50-litre coolbox can be fitted to the right of the dashboard.

The Intouro is driven by a vertically-installed straight six-cylinder Mercedes-Benz OM 926 LA engine with 7.2 l displacement. It has an output of 210 kW (286 hp) and its maximum torque comes in at 1120 Nm. The low-emissions engine, with its BlueTec diesel technology, meets the EU emissions standards Euro V and EEV. The engine is centrally positioned which ensures easy access to the assembly during maintenance work. Power transmission is effected by the Mercedes-Benz GO 110 mechanical six-speed manual transmission.

As an alternative, the Intouro is also available with the OM 457 hLA engine with 12 l displacement and 220 kW (299 hp) output, in conjunction with a six-speed automatic transmission from ZF.

Active and passive safety

The Intouro is fitted with disc brakes all-round as standard. The rural-service bus is also equipped as standard with the anti-lock braking system (ABS) and optionally with acceleration skid control (ASR). Also available if desired is a retarder.

Annular frame members used in the construction of the Intouro play an important role in its passive safety. This gives the vehicle a high level of torsional rigidity.

The Omniplus service network operates Europe-wide and ensures that your Mercedes-Benz Intouro is always safely on the road.

The Intouro at the International Motor Show for commercial vehicles (IAA) 2012

The lime-green metallic Intouro on show is equipped with the OM 926 LA straight six-cylinder engine with an output of 210 kW

(286 hp), a six-speed manual transmission and a retarder. The OM 926 LA complies with the EEV emissions standard. The body is clearly identifiable by its double glazing, LED matrix destination display and a lift at the central entrance. A roof-mounted air-conditioning system keeps the passenger compartment cool. The interior is fitted with 55 Inter Star Eco passenger seats and an interchangeable platform with pram area at the central entrance. Luggage racks are suspended above the seats.

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Mercedes-Benz Turismo: the economic wonder is the number one

- **Particularly economic model series in the business segment**
- **Four high-deck touring coaches and two high-floor buses**
- **Extensive safety equipment including ESP**
- **Best possible level of protection against corrosion thanks to cathode-dip paint**

Presented in 2006 at the IAA, the Mercedes-Benz Turismo is a true success: more than 5000 units of the touring coach from the business segment have been sold to date. One of the reasons for this success is the clear orientation of the bus as an economic and safe touring coach available in numerous versions.

Four high-deck touring coaches and two high-floor buses

The Mercedes-Benz Turismo range is made up of four high-deck touring coaches: the two-axle Turismo (12.1 m long), the two-axle Turismo M/2 (13 m) and the three-axle versions Turismo M (13 m) and Turismo L (14 m). In addition, there is also the high-floor Turismo RH touring coach with two axles, available in two lengths: 12.1 m and 13 m. This is particularly suited for short tours, day trips and upmarket rural transport (including own account transport).

No-frills body design

The Mercedes-Benz Turismo comes across as modern and pleasant thanks to its flowing, no-frills body design. Noticeably smooth surfaces on the side walls of the Turismo ensure that branding and decor can be easily stuck to the vehicle whilst also making the vehicle particularly easy to clean. The beltline drops off towards the front at the height of the first side window. It then opens out energetically to join up with the lower edge of the front windscreen.

Passengers board the Tourismo at the front through a wide entrance. The mid-length version sits 1330 mm (Tourismo) or 1060 mm (Tourismo RH) above the road surface. The passenger compartment has been designed to be both friendly and functional. Once aboard the Tourismo, passengers take a seat in the newest generation of the comfortable and light-weight Travel Star Xtra double seats. Inter Star Eco is the standard seating used on the Tourismo RH. Optionally available are the Travel Star Plus seats, which are suited to touring coaches.

The Mercedes-Benz Tourismo is also suitably equipped to provide perfect climatic comfort aboard. The ideal interior temperature in winter is achieved by the use of warm water convector heating. To keep a cool head in the warmer seasons, the Tourismo is also equipped as standard with an air conditioning system (this is optionally available for the Tourismo RH).

The fittings on board the Tourismo provide individual flare. For example, on the right-hand side of the centre door, a lavatory is optionally available. Numerous types of galley are also available as an optional extra.

Extensive safety equipment including ESP

As with all touring coaches from Mercedes-Benz, the Tourismo has exemplary safety systems fitted as standard, including: the electronically controlled brake system (EBS), disc brakes all-round, anti-lock braking system (ABS), acceleration skid control (ASR), Brake Assist (BA), cruise control, hydrodynamic retarder, Continuous Braking Limiter (DBL) and, above all, the Electronic Stability Program (ESP).

The drivetrain of the Tourismo ensures optimal economy. At the heart of the drivetrain are in-line six-cylinder engines from the OM 457 series. With their 12-litre displacement and outputs ranging from 260 kW (354 hp) to 315 kW (428 hp), they offer a maximum torque of 2100 Nm. BlueTec diesel technology with SCR technology and AdBlue injection keeps fuel consumption low and respect for the environment high. As standard, the Tourismo meets the low-emissions requirements of the Euro V emissions standard and can optionally be ordered in a version without particulate filter which meets the EEV standards.

Power transmission: six-speed transmission or PowerShift

Power transmission to the rear axle is by means of a six-speed manual transmission with dash-mounted joystick-style gear lever. Thanks to the integrated Servoshift system, gear changes are smooth and precise. The Tourismo can optionally be fitted with an eight-speed Mercedes GO 240-8 PowerShift transmission. This is the first bus-specific transmission in its class and also works towards reducing fuel consumption. Eight gears with progressive gear ratio spreads cover the broad range of requirements, from precision manoeuvring to fuel-saving motorway speeds at low engine speeds.

The chassis of the Tourismo is similar to that of its brother, the Travego – it, too, gets a seal of approval for driving safety and comfort. Like all other buses from Mercedes-Benz, the Tourismo impresses with great manoeuvrability. The 12.1-m-long Tourismo has a turning circle of just 21 m. Taking into account the dimensions of the other variants, they too display impressive handling characteristics. A hydraulically actuated trailing axle with independent suspension helps the three-axle version remain agile.

Best possible level of protection against corrosion thanks to cathode-dip paint

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A central element of the vehicle's extensive measures to protect against corrosion is the cathode-dip paint on the Tourismo. The Tourismo's field of operation is a demonstration of just how solid and durable the vehicle really is: among other things, the Tourismo is used on demanding, long-distance lines where a bus can clock up more than 200 000 km in a year.

The Tourismo at the International Motor Show for commercial vehicles (IAA) 2012

Portraying economical touring coach travel is a three-star version of the 12.1-m-long, two-axle high-deck Mercedes-Benz Tourismo. The right amount of drive power is guaranteed by an in-line six-cylinder OM 457 hLA engine with an output of 300 kW (408 hp) which complies with the EEV emissions standard. In conjunction with this engine, the show vehicle is equipped with the Mercedes PowerShift GO 240-8 automated transmission. Xenon headlamps underline safety, light-alloy wheels demonstrate elegance, and the FleetBoard on-board computer stands for economy. Equally beneficial to the driver are the reversing camera and the monitoring camera mounted on the centre door.

Mercedes-Benz Minibuses: four model series, one route to success

- **Sprinter Transfer: rural regular-service bus and excursions**
- **Sprinter Travel: specialist for tourism and travel**
- **Sprinter City: low-floor programme for public transport**
- **Sprinter Mobility: for passengers with restricted mobility**

Early 2006 was the beginning of the success story of the latest Mercedes-Benz minibus generation. This generation comprises four model series: the Sprinter Transfer, Sprinter Travel, Sprinter City and Sprinter Mobility with a total of fourteen basic models based on the Mercedes-Benz Sprinter. Mercedes-Benz Minibus GmbH is one of the largest suppliers in its segment in Europe.

Logically structured range

The line-up consists of minibuses in six lengths from 5.9 metres to 8.7 metres and 3.5 tonnes to 6.8 tonnes gross vehicle weight. The Sprinter Transfer is a versatile minibus for regular rural services and excursions. The Sprinter Travel is tailored to excursions and tourism. Sprinter City is the name of the model series with a low-floor design for public transport in urban areas. And finally, the Sprinter Mobility is designed to carry passengers with restricted mobility.

Sprinter Transfer: rural regular-service bus and excursions

The Sprinter Transfer is available in four length variants from 5.9 to 7.6 m and four weight variants between 3.55 and 5.3 t gross vehicle weight. These make up a programme with five basic models. The range reaches from the shortest Sprinter Transfer 23 with twelve passenger seats to the Sprinter Transfer 55 which can seat up to 22 passengers.

The Sprinter Transfer minibus is smartly turned out: it features large parallelogram-shaped flush-mounted side windows and a stylish character line along the flanks to emphasize its dynamic character. The largest model in the rural service series, the Sprinter Transfer 55, has a distinctive bus-type rear as standard with an integrated luggage compartment flap.

Passengers have the choice of embarking via a wide sliding door or through one of the two optionally available outward-swinging doors. An electrically operated step comes as standard. The interior of the Sprinter Transfer is harmoniously attuned to the exterior design.

Passengers in the Sprinter Transfer sit on comfortable seats bearing the name "Inter Star Sprinter". Optionally, the vehicles can be equipped with "Travel Star Sprinter" touring coach seats.

Sprinter Travel: specialist for tourism and travel

The Mercedes-Benz Sprinter Travel minibus range is made up of the models Sprinter Travel 45, 55 and 65, all of which provide outstanding comfort for day trips and long-distance travel.

The touring coach bodies of the Sprinter Travel 45 and 55 are based on the Sprinter panel van. The Sprinter Travel 55 differs from its smaller brother in that it is 320 mm longer, comes as standard with a touring-coach-style rear end with generous luggage compartment flap and offers up to 1.5 m³ of stowage space. Since the middle of 2011, a luggage compartment well combined with a rear platform has been part of the equipment package for the Sprinter Travel 45. Access to the roughly 1.25 m³ large luggage compartment is via the Sprinter's rear doors.

The Sprinter Travel 65 is distinctive thanks to the frame-like structure of its independent body. A typical feature is its particularly elegant appearance with large, generous windows including a

panoramic windscreen which extends up above the front of the vehicle. The flagship of the series also stands out thanks to the special touring-coach-style rear end with luggage compartment door and 2.0 m³ of luggage space, a large rear window and an interior width which is around 10 cm larger.

The Sprinter Travel is instantly recognisable by its chrome radiator grill. All the models offer an exclusively styled passenger compartment, from seats with reclining backrests to the air-conditioning system. The Sprinter Travel 65 pampers its passengers as standard with Travel Star Xtra luxury touring coach seats, double glazing, an air sprung rear axle and much more.

Sprinter City: low-floor programme for public transport

The Sprinter City series with its low-floor construction is the specialist for regular service buses in urban areas. Whereas the Sprinter City 35 (6.9 m long, up to 22 passenger seats) is based on a modified panel van, the larger Sprinter City 65 (7.7 m long, maximum 30 passenger seats) is instantly recognisable by its independent body and ample glazing. The elegant panoramic windscreen cuts right back into the vehicle roof, thus also providing enough space for an integrated destination display.

The Sprinter City range is rounded off by the new Sprinter City 77. Its low-floor frame with a tandem rear axle is an exclusive development, as is the body. The Sprinter City 77 provides 40 passenger seats, an all-through low floor in the passenger compartment and space for a second wheelchair. The chassis of the three-axle vehicle boasts independent suspension all round and single tyres.

The Sprinter Mobility is carefully designed to meet the needs of passengers with restricted mobility. There are two models: the Mobility 23 (5.9 m long) and the larger Mobility 33 (6.9 m long). Both are based on the Mercedes-Benz Sprinter as a panel van with high roof and double rear doors. They both have a gross vehicle weight of 3.5 t.

Seven or eight passenger seats are standard. Numerous other seating variants are available on request. The passenger compartment floor is fitted with an integrated rail-type mounting system to enable flexible seating configurations as well as the transport of wheelchairs.

If desired, the Mercedes-Benz Sprinter Mobility can be modified to suit a variety of needs. Versions are available with electrically retractable steps for both the front-passenger door and the sliding door. A linear platform lift or a swivel lift is also available for the rear of the vehicle. A third underfloor variant of the lift is particularly space-saving in the vehicle interior.

The ideal basis: the Mercedes-Benz Sprinter

The minibuses are all based on the Mercedes-Benz Sprinter range of vans. They are driven by powerful, efficient diesel engines with outputs ranging from 70 kW (95 hp) to 140 kW (190 hp). All the engines comply with the Euro V or optionally even the EEV (Enhanced Environmentally friendly Vehicle) emissions standards. The engines are equipped with a diesel particulate filter as standard.

The ECO Gear six-speed manual transmission handles the transfer of power. An automatic transmission is standard on the Sprinter City 35, Sprinter City 65 and Sprinter City 77. The automatic transmission is an optional extra for the other minibus models.

The new 7G-TRONIC automatic transmission is gradually being integrated into the programme. The advantage of the new seven-speed transmission is the combination of a wide overall spread and short gear ratio steps from one gear to the next. In practice this means: a short transmission ratio for first gear ensures a dynamic start. At higher speeds, the Sprinter runs economically with low emissions and low noise levels, all at low engine speeds.

The minibuses based on the Mercedes-Benz Sprinter are among the safest in their class. The highlight is ADAPTIVE ESP, fitted as standard. Handling and driving comfort are similar to those of a passenger car. Air suspension on the rear axle is available as an extra for the Sprinter Transfer/Travel 45 and 55 minibus models and is even standard for the Sprinter City 65, Sprinter City 77 and Sprinter Travel 65.

Mercedes-Benz Minibus GmbH at the International Motor Show for commercial vehicles (IAA) 2012

The pinnacle of minibuses is portrayed by a Sprinter Travel 65 with anthracite metallic matt paint. It has a six-cylinder CDI engine with 140 kW (190 hp) output and automatic transmission. Safety is enhanced by xenon headlamps and a retarder. This exclusive minibus is kept at a pleasant temperature by air conditioning for the driver's and passenger areas, convector heating, a hot-water auxiliary heater and an electric hot-air heater. For the passengers, there are fifteen Travel Star Xtra seats with Luxline upholstery and leather headrests.