

Test: The new high-deck touring coach Mercedes-Benz Tourismo

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Mercedes-Benz Tourismo M: The test coach in detail

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Even the paintwork on the test coach reflects the ambitious goals set for the new Tourismo: the metallic paint shimmers with its warm "icon gold" finish. The new Tourismo aims to clinch the gold medal for touring coaches in the business segment from its predecessor: the first-generation Tourismo was by far Europe's best-selling high-deck coach, notching up around 1000 units a year on average throughout its long career. Nine months after the new Tourismo was unveiled, the order book speaks volume: the current Tourismo is not only adding another chapter to the success story of the outgoing generation but is taking the concept to entirely new heights.

Just one look at the urban Mediterranean landscape motif adorning the sides of the Tourismo and the travel bug strikes. The craftsmanship with its structure-like film appears three-dimensional and transparent, almost like peering into a diorama through the panelling on the high-deck coach. The warm colours of the paintwork and motif echo the contemporary trend of increasingly moving away from cool, seemingly technical colours.

Tourismo M: a best-seller in the range

The test coach is a trend-setter in every respect: together with the 12.1 m-long two-axle Tourismo, the 13 m-long Tourismo M with three axles is the best-seller in the range comprising four models. The Tourismo M combines many advantages: thanks to its gross vehicle weight rating of 24 tonnes (dependent on country of

registration, for example Germany), weight is not an issue, even when fully configured or fitted out with a full contingent of seats.

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Thanks to the sophisticated hydraulically steered trailing axle, the Turismo M is also extremely agile: its turning circle is just 21.2 m. The third axle is also steered when reversing, making it far easier to manoeuvre while reducing tyre wear in the process. The axle is also hydraulically centred when driving in a straight line, providing outstanding straight-running. Once the steering angle on the front axle exceeds five degrees, the third axle provides additional steering, making the high-deck coach very agile.

Large luggage compartment, numerous extra stowage compartments

The Turismo M boasts a luggage compartment volume of 9.6 m³ between the axles. The figure comes down to 8.4 m³ if an on-board toilet is fitted. The total volume includes the practical multipurpose space in front of the rear axle with a lockable blind behind the central door entrance. The luggage compartment floor on the test coach is carpeted to protect luggage. The standard-fit hinged flaps provide a very large opening and protect the driver from rain and dirt when loading and unloading the luggage compartment.

The practical front and rear stowage compartments above the axles add around 1.8 m³ to the luggage compartment between the axles. They have proven very popular among drivers and are ideal for drinks or other provisions for the on-board galley, for the driver's own luggage or as a tool compartment. As such, the usable stowage volume on the Turismo M with on-board toilet comes to 10.2 m³.

Passenger compartment: contemporary, homely feel

The equipment fitted to the test coach has deliberately been kept low-key. The vehicle reflects a carefully equipped and very economical touring coach, the kind of all-round vehicle coach operators prefer for daily operations. The configuration with 53 passenger seats, manufactured in-house at EvoBus, corresponds to a GBK three-star rating - GBK is an association that monitors and classifies levels of comfort in

buses and coaches in Germany. The Travel-Star Plus seats come with an adjustable backrest and lateral adjustment of the aisle side seat courtesy of a practical single lever mechanism. Integral grab handles left and right, bag hooks, luggage nets, folding tables with cup holders and footrests are part of the test coach specification.

The colour scheme in the light, friendly passenger compartment reflects the exterior paintwork. The contoured seat cushions with comfortably integrated belt buckles are trimmed with a hard-wearing aurum-coloured velour fabric. The inlaid effect threads provide a warm glow, especially when caught by the sun. Curry-coloured leather headrests, fabric piping (also in a curry finish) and chutney-coloured cushion side panels and backrests provide an equally contemporary and homely feel. The effect is further emphasised by the (chutney-coloured) curtains and the underside of the roof air ducts trimmed in curry-coloured fabric.

Effective air conditioning

The hot-water convector heater and the powerful air conditioning system (32 kW) also ensure passengers are comfortable on board. The driver's area has its own air conditioning. Individually adjustable ventilation nozzles in the service sets above each seat as well as air vents above the side windows and on the luggage racks directed towards the centre aisle ensure efficient air circulation. The system's air flow rate of 4400 m³ per hour is the equivalent of renewing the air a 100 times an hour.

On-board refreshments and entertainment

On board the Turismo M, the chest refrigerator, which is easy to access from above, at the right-hand side of the instrument panel and the compact on-board galley to the left of the central entrance help keep everyone suitably refreshed. Thanks to its basket insert, the drinks in the 65-litre chest refrigerator are always tidy. Equipment in the galley at the central entrance includes a 40-cup coffee machine with drainer, a water heater, a sausage boiler (especially popular in Germany), as well as drawers for provisions. A washroom fitted with a WC toilet is

located opposite at the central entrance. A waste disposal unit is fitted to the toilet cabin on the aisle side. Page 5

Entertainment also comes as standard on the road. All thanks to the Blaupunkt Coach Professional radio unit with attached DVD changer, housed within easy reach in a closed stowage compartment above the driver's area. Films are shown on two 15-inch (screen diagonal) flat screens, mounted at the front in the overhead compartment or over the toilet.

Driver's area: lots of room, ergonomic joystick, superb visibility

The driver's area in the new Tourismo benefits essentially from the longer front end, which has been extended by 140 mm compared to the outgoing model. The instrument panel including the joystick lever located within easy reach has a cockpit-like feel. There is now space for a bag behind the driver's seat. The multi-way adjustable seat comes with an integral microphone and hands-free system for the mobile phone. The screen for the optional navigation unit is positioned right in the driver's field of view on the A-pillar.

Superb visibility for the driver is part of the Tourismo's excellent features: the electrically operated blind on the windscreen is split. The left and right exterior mirrors consist of an electrically adjustable main mirror and separate, adjustable kerb mirrors. The four mirrors provide an exceptionally large field of view. Consequently, the driver has an unrestricted view of the road right in front of the coach, significantly enhancing safety. If any of the mirrors is damaged, an emergency mirror is included that can be used on either side. The Tourismo also comes with a fully-fledged spare wheel as standard.

The Tourismo M driver also benefits from a separately adjustable air conditioning system and a small safe – built into the steps leading up to the centre aisle – that can be used to store valuables.

The tour guide also has a full-size seat in the Tourismo. The seat comes with comfortable upholstery, generous legroom and a reading light.

Economical engine, smooth power transmission

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The vertically mounted six-cylinder in-line unit OM 457 LA with an output of 315 kW (428 hp) is at the heart of the drive train on the Tourismo M. The smooth-running engine delivers outstanding torque of 2100 Nm at 1100 rpm. The engine with Blue-Tec diesel technology in the Euro 4 version is not only environmentally friendly but also extremely economical, thanks to SCR technology. The forward-looking SCR technology reduces diesel consumption compared with Euro 3 by up to six percent, depending on the particular application. As early as autumn this year, the unit will be available optionally in a version that meets the Euro 5 emissions standard.

The Mercedes-Benz GO 210 six-speed manual transmission delivers the engine power to the tried-and-trusted lightweight formed HO6 hypoid axle. The transmission has been tuned perfectly to touring coach operation. Its large ratio spread makes manoeuvring easier without placing undue stress on the clutch at very low speeds, as well as being economical over long distances. The rear axle ratio of $i=3.583$ translates into an engine speed of 1500 rpm at 100 km/h. This combination turns the Tourismo M into a genuine all-rounder.

Unsurpassed safety as standard

Safety comes as standard on any Mercedes-Benz bus or coach. In the case of the Tourismo M, this means an extensive range of equipment including anti-lock braking system (ABS), acceleration skid control (ASR), Electronic Braking System (EBS) including retarder, Electronic Stability Program (ESP), Brake Assist (BAS) and Continuous Braking Limiter (DBL). The new standard-fit immobiliser also takes care of another safety aspect. Thanks to this comprehensive equipment, the Tourismo is setting the standard in its class.

Extremely economical to buy and service

High overall economy is equally part and parcel of any Mercedes-Benz vehicle. In the case of the Tourismo M this is reflected in very low fuel consumption, long maintenance intervals of 90,000 km and, above all, an affordable purchase price.

Mercedes-Benz Tourismo: New star among touring coaches

- **Especially economical model series in the business segment**
- **Range consists of four high-deck touring coaches**
- **Comprehensive safety equipment including ESP**
- **Powerful and economical engines with Blue-Tec diesel technology**
- **Unpretentiously designed body from the Mercedes-Benz family of buses**
- **Friendly and functionally designed passenger compartment**
- **Convenient convector heating, efficient air conditioning**
- **Driver-oriented cockpit with joystick gearshift**
- **Best possible corrosion protection thanks to cathodic dip priming**

The most successful European high-deck touring coach of recent years is making way for its successor: following on from more than 12,000 Mercedes-Benz Tourismo coaches of the previous generation, the comprehensively upgraded Mercedes-Benz Tourismo is set to become a new star among the touring coaches, with nothing but the name in common with its predecessor. As before, the focus of the new Tourismo is on the business segment, with an accomplished and contemporary mixture of economy, convenience and safety. Nonetheless, the new Tourismo possesses a state-of-the-art platform with the latest in safety technology.

One model series covers several segments

The new Mercedes-Benz Tourismo covers a range of segments. It is the successor to the previous Tourismo and at the same time, thanks to its versatility, the replacement for the previous models Integro H and Travego RH. As an economical all-round coach, it is suitable for a broad spectrum of applications in the wide-ranging segment covering touring, transfers and excursions, as well as works service and long-distance operations. At the same time, it is setting a new standard for safety in its class, offers a modern design typical of its brand and, most of all, provides the proven quality of Mercedes-Benz.

And the new Tourismo's appearance is entirely different: formerly a solitary product, with just one, albeit extremely successful model that was characterised by its comprehensive appointments, the Tourismo is now appearing as a complete model series and with individual equipment features from the handy transfer coach to the exquisitely appointed luxury touring coach. The modern and extremely impressively designed new Mercedes-Benz Tourismo celebrated its world premiere at the 2006 IAA Commercial Vehicle Show.

Range of four high-deck touring coaches including a 13-metre, two-axle coach

The Mercedes-Benz Tourismo touring coach model series will consist of four high-deck touring coaches in future: the two-axle Tourismo (length 12.1 metres), the Tourismo M/2 (13 metres), also with two axles, and the three-axle Tourismo M (13 metres) and Tourismo L (14 metres). The height reaches 3620 mm, including the centrally located, roof-mounted air conditioning system. The Tourismo is also available in a right-hand-drive version. As an option, it can also be licensed as a regular-service bus.

With this coach, Mercedes-Benz covers the increasingly attractive and extremely competitive business segment for functional high-deck touring coaches with hardly the slightest gap. As a result, the Tourismo satisfies the coach operators' needs for a made-to-measure high-deck vehicle for a wide spectrum of applications better than ever before. The target markets for the new Tourismo are all of Europe, including Turkey and the Mediterranean region plus the Middle East.

From the economic point of view, both the 12.1-metre Tourismo and, in particular, the variant of the two-axle Tourismo M/2 with a length of 13 metres are of interest. Thanks to the extension of the wheelbase from 6080 mm to 6900 mm, it offers one row of seats or four places more than normal with the same number of axles – e.g. 53 passenger places in the three-star seating with on-board toilet. This variant is primarily interesting in countries such as France, where there is a gross vehicle weight rating of 19 tonnes for two-axle vehicles. Nonetheless, the Tourismo M/2 is a highly economical alternative for other countries, thanks to a kerb weight of just

over 13.6 tonnes when fitted with the usual equipment. And economy is boosted even further since the two-axle high-deck coach attracts notably lower road use charges in many countries than the three-axle version.

The Tourismo M/2 benefits first and foremost from a strictly weight-optimised design without compromising stability. Examples of this approach include the optimised substructure frame and body frame, the reduced thickness of the panes in the side windows, the weight-optimised heating and lighter front box. Aluminium has also increasingly been used on the Tourismo M/2 in particular. For instance, the standard specification includes aluminium wheels. And the purchaser also has the option of dispensing with a spare wheel, as a further measure to reduce weight.

Unpretentiously designed body from the Mercedes-Benz family of buses

With its flowing and unpretentious design, the body of the new Mercedes-Benz Tourismo has a modern and pleasing look. Its membership of the Mercedes-Benz family of buses and coaches is unmistakably apparent from the first glimpse of its front end. A striking, three-dimensional front panel with air intake links both headlamps. The Mercedes star is centrally placed, on a base. In their idle position, the windscreen wipers rest inconspicuously on a dark strip at the bottom of the windscreen. The windscreen curves up dynamically until just under the roof.

Smooth-surfaced, the side walls of the new Tourismo make it straightforward to apply company logos and decoration, and are especially easy to clean. Neither strips nor swage lines disturb the harmonious image. The bonded side windows sit flush with the surface like a continuous band on the window frames. The bus's belt line runs diagonally down and forward at the level of the first side window, merging smoothly into the lower edge of the windscreen.

Character line for a filigree look

The Tourismo's character line also takes up the same gesture at a higher level. It lends the Tourismo's silhouette an almost filigree appearance. Extending out of the character line, above the driver's and the door window, are the arms of the exterior

mirrors. These mirrors, with their exemplary, wide fields of view, are taken directly from the Mercedes-Benz Travego. The mirror housings and arms are coloured a discreet black.

The rear of the new touring coach, too, shows its relationship with the other buses and coaches from Mercedes-Benz. Whether it is the high-reaching V-shaped rear window, the three-dimensionally designed rear lights or the engine flap with its trapezoidal air intake, the form of which is echoed in an embossing further up the back panel, the new Tourismo is instantly recognisable as a Mercedes-Benz coach, even without the brand lettering in the rear window.

Friendly and functionally designed passenger compartment

Passengers entering the new Mercedes-Benz touring coach from the front pass through a wide entrance, which benefits from the 140 mm longer front end. After three low steps, they reach the driver's-seat platform. Two further low steps lead up to the centre aisle. The way through the centre door leads up, via five steps, to the centre aisle, which is 1315 mm above the road surface. The design of the passenger compartment is as friendly as it is functional. With a standing room height of 2010 mm in the centre aisle, it is sufficient for even tall passengers. The external width of 2550 mm means that the interior offers lots of freedom of movement for the passengers. The large windows contribute especially to the airy atmosphere of the passenger compartment, permitting an almost uninterrupted side view along the entire length of the bus.

Those familiar with the previous model of the Tourismo will recognise a familiar stylistic element in the interior lighting. Mounted centrally on the ceiling, the interior lights have retained the typical oval form of the previous model's lights. The lights themselves are, however, new. With two-way switchable interior illumination and a discreet ambient night light setting, they combine multiple functions.

Comfortable "Travel-Star Plus" passenger seats

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Passengers are comfortably seated on "Travel-Star Plus" model twin seats, which are mounted on 150-mm-high platforms arranged to the right and left of the central aisle. The seats, manufactured in-house at EvoBus, are impressive in their relaxing upholstery and comfortable side support. Both the backrests and the inner armrest of the twin seat on the aisle side are adjustable using a convenient single lever mechanism. The belt buckles are recessed. Two grab handles are fitted as standard on the back side of each seat.

In addition, a folding table with a cup holder, luggage nets and folding footrests are also optionally available, along with the ultra-comfortable Softline and Luxline upholstery, also available with leather headrest or trimmed entirely in leather (Luxline) as an option. A wide selection of fabrics from the Mercedes-Benz collection is available.

Above the passengers, the new, harmonious and attractively designed service sets are integrated flush with the surface of the roof air ducts. The service sets, which were individually developed for the new Mercedes-Benz Tourismo, incorporate reading lights, adjustable round ventilation nozzles, loudspeakers, courier call button and stop request button. The spacious, open stowage compartments for the hand luggage are semi-cantilevered and subdivided by slim braces. These prevent the luggage from sliding.

Generously designed luggage space offers up to 11 m³ volume

Passengers' suitcases and bags also have plenty of room, in the Mercedes-Benz Tourismo's generously dimensioned luggage compartment. In line with the other buses and coaches of the new generation from Mercedes-Benz, the high-deck touring coach comes with just two luggage compartment flaps on each side of the coach in the two length variants Tourismo and Tourismo M. This also makes the driver's life easier, when it comes to loading and unloading the luggage compartment. Hinged flaps are fitted as standard, but luggage compartment flaps equipped

with a lifting mechanism for opening can be fitted as an option. The Tourismo M/2 and Tourismo L have three flaps on each side. Page 12

If the bus is fitted with the optional on-board toilet, the volume of the luggage compartment in the Tourismo M and Tourismo M/2 is 8.4 m³ and reaches a value of 11.0 m³ in the case of the Tourismo L. The new Tourismo can also be fitted with an optional multipurpose space between the central door and drive axle, which can in turn be equipped as a quiet space for the driver. Additional stowage compartments are optionally available above the front axle and/or the drive axle, increasing the luggage compartment volume by around 2.0 m³ maximum.

Convenient convector heating, efficient air conditioning

Optimum climatic comfort is also ensured on board the new Mercedes-Benz Tourismo. Cosy temperatures in winter are provided by the hot-water convector heater with its comfortable radiant heat. For keeping a cool head in the hotter seasons, the air conditioning system is fitted as standard. The version fitted to the Tourismo, Tourismo M/2 and Tourismo M as standard achieves a cooling output of 32 kW; the system fitted to the Tourismo L delivers 35 kW. A version delivering 39 kW is also available for particularly demanding cooling requirements. Two manual roof hatches support interior ventilation when required. They are available with electrical opening as an option.

In contrast to its predecessor, the new Tourismo is characterised by individuality. An on-board toilet, available as either a water or a chemical model, can optionally be fitted to the right of the central entrance. The galley, which is also optional, is available in a number of variants. The on-board entertainment system ranging from a radio to CD player can be optionally extended by the addition of a DVD player. In this case, the appointments also include two 15-inch flat screens.

Driver-oriented cockpit with joystick gearshift

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Drivers familiar with the coaches from Mercedes-Benz will feel right at home behind the four-spoke steering wheel that can be pneumatically adjusted for height and reach. Although the driver-oriented, semicircular cockpit has been redesigned and ergonomically optimised, it displays the characteristic elements that make it undeniably a Mercedes-brand touring coach. The front end that is 140 mm longer than the outgoing model increases the freedom of movement. And a bag will also fit behind the set-back driver's seat.

The central instrument panel contains two large dials that clearly show the vehicle's speed and rpm, while two smaller instruments indicate the coolant temperature and the amount of fuel left in the tank. Meanwhile, a central display contains further instruments that indicate, for example, how much Ad-Blue is left in the container.

To the right of the driver is a joystick lever located within easy reach on the instrument panel, a position that also facilitates access to the driver's area. Positioned above it are a number of operating switches, including those of the familiar climate-control system as well as of the standard-fit radio and CD player. Clearly arranged on the left-hand side of the cockpit are the headlamp switch and the buttons for operating additional functions. Directly to the left of his or her seat, the driver will find an open tray and a cup holder located on top of a console, where the parking brake lever is also within easy reach.

Next to the front entrance is a folding seat suited for use by tour guides. A twin seat for two tour guides can be installed as an option. Thanks to the Turismo's extended front end, the tour guide enjoys considerable freedom of movement. The easily accessible large chest refrigerator in the front section has a 65-litre capacity.

Comprehensive safety equipment including ESP

Safety has a high priority in all buses and coaches from Mercedes-Benz, including the new Turismo. Like all of the brand's other new touring coaches, the Turismo

is equipped with an exemplary range of safety features as standard: the Electronic Braking System (EBS), disc brakes all round, the anti-lock braking system (ABS), acceleration skid control (ASR), Brake Assist (BAS), cruise control, hydrodynamic retarder, Continuous Braking Limiter (DBL) and, above all, the Electronic Stability Program ESP.

Another important component of the vehicle's active safety systems is the ergonomically optimised cockpit for easy coach operation and the electrically adjustable and heated exterior mirrors with their very large viewing angles. If an accident becomes unavoidable, the strong assembly of the coach frame with annular frame members ensures that the coach interior remains intact even if the vehicle should roll over.

Powerful yet thrifty engines with Blue-Tec diesel technology

All models of the new Tourismo are equipped with the Euro 4-compliant OM 457 LA six-cylinder in-line turbodiesel engine, which has 12 litres of displacement. In the two-axle versions Tourismo and Tourismo M/2, the horizontally mounted OM 457 hLA is available in two output classes: 260 kW (354 hp) or 300 kW (408 hp). The engines have a maximum torque of 1600 Nm and 1900 Nm respectively. The three-axle Tourismo M and Tourismo L are powered by vertically mounted OM 457 LA engines with an output of 315 kW (428 hp) and an extremely high maximum torque of 2100 Nm. The vehicle's sophisticated noise insulation system deserves particular mention, as the development engineers at EvoBus GmbH used the free space between the horizontally mounted engine and the passenger compartment to create a particularly sound-proof intermediate floor.

The engines are fitted with Blue-Tec diesel technology and a downstream SCR catalytic converter and comply with the EU emissions standard Euro 4. This technology not only ensures a clean exhaust, but also very low fuel consumption, noticeably undercutting the consumption of the previous Euro 3 units. Fuel savings of up to around six percent can be achieved. Ad-Blue consumption, which naturally needs to be factored into the calculation, is somewhere in the region of three percent of diesel consumption on the new Mercedes-Benz Tourismo.

From autumn 2007, the Tourismo will be available as an option with engines that comply with the Euro 5 emissions standard, not due to come into force until 2009. Mercedes-Benz can also supply the new Tourismo as an option with versions that comply with the Euro 3 emissions standard in markets outside Europe subject to different exhaust emissions standards.

The Tourismo has a very long range, thanks to the high capacity of the fuel tank of 490 litres in the two-axle version and 475 litres in the three-axle coach. The same applies to the Ad-Blue tank, which can hold either 61 litres (two-axle) or 47 litres (three-axle), depending on the variant. This amount of Ad-Blue is sufficient for a distance that corresponds to several fillings of the fuel tank. The Ad-Blue filler aperture is located right next to the fuel filler neck.

Highly efficient, due in part to long maintenance intervals

Because of its low fuel consumption, the new Tourismo is also inexpensive to operate. However, the low operating costs are also due to the long maintenance intervals of 90,000 km. To this end, functionality has been the guiding principle in the design of the drive train down to the last detail. As a result, the new Tourismo has the air intakes for the engine located far above the soiling area along the sides of the coach. This arrangement ensures that the corresponding filters will have a long service life.

Power transmission by means of six-speed transmissions

Engine power is transmitted to the tried-and-trusted Mercedes-Benz HO6 hypoid axle by means of six-speed transmissions. Whereas coaches equipped with the low and medium-output engines are fitted with a Mercedes-Benz GO 190 transmission, the GO 210 transmission is used in connection with the highest output rating. Gearshifting is by means of the joystick in the instrument panel. The integral Servoshift also ensures gear changes are smooth and precise.

The individuality of the new Tourismo is also reflected in the drive train. New options will be offered from autumn 2007. The Tourismo with an output of 260 kW (354 hp) will be available with a six-speed automatic transmission as an option. This version will be especially welcomed in certain European markets such as the UK. Purchasers of the three-axle Tourismo looking for outstanding performance can also look forward to an engine with 335 kW (456 hp) from 2008. Drive train versions featuring the AS-Tronic automated transmission from ZF are also in the pipeline.

The Tourismo on the road: comfortable, safe and agile

The chassis of the new Tourismo is identical to that used in the brand's other coach, the Travego. As such, it is proof of the highest levels of safety and comfort. The independent double wishbone suspension at the front, the drive axle featuring wheel location via longitudinal link plus a wishbone, and the stabilisers at the front and rear axles ensure high performance.

Like all of Mercedes-Benz other new-generation buses and coaches, the new Tourismo is extremely manoeuvrable. The turning circle of the 12.1-metre Tourismo, for example, is only 21 metres. The other variants Tourismo M/2 (23.1 m), Tourismo M (21.3 m) and Tourismo L (23.7 m) are likewise extremely agile in relation to their lengths. In the three-axle models Tourismo M and Tourismo L, manoeuvrability is further improved by the electrohydraulic trailing axle RAS (Rear Axle Steering) from ZF. This steered axle is also active when driving in reverse, thus providing considerable assistance during manoeuvring.

Robust electrical and electronic systems

Like the Travego, the new Mercedes-Benz Tourismo is equipped with enhanced electronics. Although the electronic system is still based on the successful flexibly programmed control system (FPS), the number of control units has been cut to five,

thereby reducing the complexity of the system as a whole. At the same time, its functionality has been further increased.

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Many convenience systems on board the new Tourismo deliberately utilise a conventional electronic system with fuses and relays. Among other things, the electronics operate the blinds, power windows, audio and video systems, and the on-board galley. In addition to being easily repairable anywhere in Europe and the adjoining countries, this electronic design was chosen because additional systems can easily be retrofitted. As a result, it is now possible to fit a tow coupling (including power sockets), for example, without requiring any additional software downloads. All in all, the combination of FPS and conventional electronics is very robust and practical.

The Hoşdere plant is one of the most modern bus factories in the world

The new Mercedes-Benz Tourismo high-deck touring coach is manufactured at DaimlerChrysler's Hoşdere plant in Turkey, which is located near Istanbul. In addition to assembling other Mercedes-Benz buses especially for the Turkish and eastern European markets, the Hoşdere plant has been producing the Mercedes-Benz Travego touring coach since 2005. DaimlerChrysler has been manufacturing buses in Turkey since 1968, when it began producing the legendary Mercedes-Benz O 302, which many bus operators and drivers still remember well. The company has built around 48,000 buses and coaches in Turkey since 1968, many of which have been successfully exported to western Europe.

Best possible corrosion protection thanks to new cathodic dip priming facility

The new Mercedes-Benz Tourismo is also benefiting from the extensive modernisation of the Hoşdere plant, which was completed in 2005. The key element of the modernisation measures was the installation of a new cathodic dip priming facility, which ensures the best possible corrosion protection. A new body shop was built as well. The production and quality standards in Hoşdere are at the same high level as in other DaimlerChrysler locations due to the use of identical processes

and, above all, the high standards of training for the employees.

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The coach's broad spectrum of applications is also testimony to the Tourismo's excellent build quality and service life: one such application is on demanding long-distance routes where some coaches clock up well in excess of 200,000 km a year.

Favourable price, delivery at year-end

Despite the greater degree of individualisation possible with the new Tourismo compared to its predecessor and the large number of new appointments and safety features, the new high-deck touring coach costs the same as the outgoing model when fitted with comparable equipment and taking into account the differences in the technical concept (Euro 4-compliant engines, ESP). The four versions of the new Tourismo have already been or will shortly be phased in the European markets and beyond during the course of 2007.

The new Tourismo is embarking on an international career: Mercedes-Benz supplies the Tourismo to more than 50 countries around the world. This in turn helps ensure European coach operators and their vehicles can rely on top-quality service in all the countries usually on their itineraries. The full order book since the presentation of the Tourismo last autumn is testimony to the accomplished concept. The new Tourismo is set to write a new chapter in this success story, following on from its illustrious predecessor.

More information from DaimlerChrysler is available on the Internet at:
www.media.daimlerchrysler.com

**Technical data:
Mercedes-Benz TOURISMO M
FIN: NMB 632.035-13-244056**

Engine

Model:	OM 457 LA (Euro 4), 6 / in-line, direct-injection turbodiesel
Number of cylinders:	6
Method of operation:	4-stroke pump-line-nozzle diesel
Cylinder arrangement:	In-line
Bore/stroke:	128/155 mm
Displacement:	11.97 l
Combustion method:	Direct injection
Compression ratio:	18.5:1
Output:	315 kW / 428 hp
Maximum torque:	2100 Nm at 1100 rpm
Idling speed:	560 rpm
Cylinder liners:	Wet cylinder liners
Cylinder heads:	Single cylinder heads, cast iron
Crankshaft bearings:	6 main bearings + 1 thrust bearing
Big-end bearings:	6 composite friction bearings with steel-backed shell
Number of valves:	2 intake valves and 2 exhaust valves per cylinder

Engine lubrication

Oil cleaning:	Full-flow oil filter
Oil circuit capacity:	27 to 32 l (min. to max.) incl. filter

Cooling

Type:	Radiator with upstream intercooler
Regulation:	Thermostatic, fan activated via electromagnetic clutch (3-speed)

Ignition system (for diesel engine)

Injection pump, model:	Pump-line-nozzle - Bosch
Injection type:	Bosch, 7-hole

Intake air cleaner

Type:	Dry air filter
Manufacturer:	EvoBus / Donaldson

Electrical system

Voltage:	24 volts
Alternator, model:	28 V, 2x 140 A, Bosch T1
Starter, model:	Bosch starter, 24 volts, 7.0 kW
Battery:	2x 220 Ah, wet batteries

Transmission

Manufacturer:	Mercedes-Benz
Model and type:	GO 210, 6-speed, manual transmission with pneumatic shifting aid (PSH)
Ratios:	1st gear: 6.53
	2nd gear: 3.71
	3rd gear: 2.23
	4th gear: 1.44
	5th gear: 1.00
	6th gear: 0.79
	reverse: 6.13

Front axle

Driven:	No
Manufacturer:	ZF
Design/Type:	Double-wishbone
Model name/Designation:	RL-75 / E
Suspension:	Air suspension / 2 bellows / 100 mm spring compression; 110 mm rebound
Stabiliser:	Standard
Shock absorbers:	2x
Toe-in:	0
Wheel camber:	0°
Caster:	2° 30'
King pin inclination/Expansion:	8°
Rim type:	8.25" x 22.5"; steel
Tyre size/type:	295/80 R 22.5
Tyre pressure:	Load-dependent; in accordance with tyre manufacturer's recommendation (8.5 bar)

Drive axle

Driven:	Yes
Manufacturer:	DaimlerChrysler
Design/Type:	Banjo
Model name/Designation:	HO6 / 4 DCL (S) - 13
Differential:	None
Number of teeth:	43:12
Ratio:	3.583
Suspension:	Air suspension / 4 bellows / 95 mm spring compression; 113.5 mm rebound
Stabiliser:	Standard
Shock absorbers:	4x
Rim type:	Tapered rim 22.5 x 8.25"; steel
Tyre size/type:	295/80 R 22.5
Tyre pressure:	Load-dependent; in accordance with tyre manufacturer's recommendation (6.5 bar)

Trailing axle

Driven:	No
Manufacturer:	ZF
Design/Type:	Rigid, offset, with hydraulic steering and RAS
Model name/Designation:	RL-75 / A
Suspension:	Air suspension / 2 bellows / 93 mm spring compression, 109 mm rebound
Stabiliser:	No
Shock absorbers:	2x
Toe-in:	0
Wheel camber:	0°
Caster:	3.5°
King pin inclination:	8°
Rim type:	Tapered rim 8.25" x 22.5"; steel
Tyre size/tyre:	295/80 R 22.5
Tyre pressure:	Load-dependent; in accordance with tyre manufacturer's recommendation (6.5 bar)

Steering

Manufacturer:	ZF
Model/Model:	ZF-Servocon 8098
Design:	Hydraulic recirculating ball power steering
Ratio:	22.2 - 26.2 : 1
Steering angle:	Hydraulic by means of engine-driven pump
Power assistance:	

Brakes

Service brake:	EBS (electronic braking system), discs all-round		
Type:	FA: KNORR SB 7000	DA: KNORR SB 7000	TA: KNORR SB 7000
Compressed air generator:	2-cylinder		
Drive type:	Compressed air		
Compressed air reservoir/capacity:	Auxiliary consumer: 120 l		
Operating pressure:	12 bar		
Design pressure:	9 bar		
Tractor vehicle brake valve:	Brake valve sensor		
Manufacturer:	WABCO		
Parking brake:	Disc brake with spring-operated brake system		
applied at:	Driven axle		
Auxiliary brake (lever-controlled):	Retarder hydrodynamic		
Method of operation:	Electropneumatic, via engine management, EBS		
Manufacturer:	VOITH		

Frame

Design/Type:	Modular design, welded square tubes with continuous reinforcements
Frame length:	12,920 mm
Frame width (exterior):	2530 mm
between the axles:	1130 mm
road, unladen:	Approx. 325 mm

Coach

Intended application:	Touring and excursion services
Calculated top speed:	133.3 km/h
Roll-over protection:	ECE R 66
Body panel attachment:	Accident-critical areas: bolted; otherwise bonded / welded
Interior trim:	Below window: hardboard with trim Above window: film-lined plastic container
Soundproofing and heat insulation (engine comp):	Melamine resin foam on one side with Kermel felt (60% carbon fibre and 40% PET) as surface layer plus additional PU skin (40 µm thick) to meet ECE R 36
Entrance height above road:	Front: 350 mm (unladen) Centre: 325 mm (unladen) Rear: - mm
Number of seats, excl. driver's seat	53 + 1 tour guide's seat
Type of seats:	Travel Star Plus (TSP)
Passenger protection:	As per latest EU Directive
Headroom in centre aisle:	2010 mm
Height to top of side windows in centre aisle:	1880 mm
Height of platform:	150 mm
Ventilation:	Ventilation nozzles and permanent ventilation (passenger compartment ventilation)
Heating:	Convactor heater, warm air via roof-mounted ventilation and heating unit
Manufacturer:	EvoBus
Air conditioning:	Centrally positioned, roof-mounted
Manufacturer:	EvoBus
Luggage capacity:	8.4 m ³ (without toilet: 9.6 m ³) between the axles
Level control system:	Body lowering and raising device

Chassis lubrication

Type:	Individual lubrication (optional: automatically controlled central lubricating system)
Number of lubricating points:	FA: 6 TA: 4

Capacities

Engine incl. oil filter:	32 l	
Drive axles (differential):	Oil / 15 l (type MB HO6)	
Fuel tank:	475 l	
AdBlue:	47.5 l	
Windscreen washer:	22 l	

Dimensions

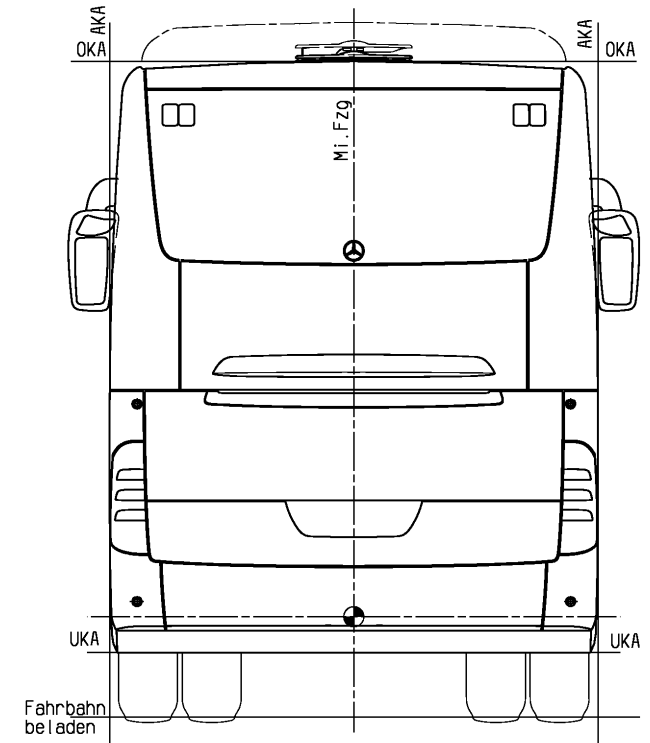
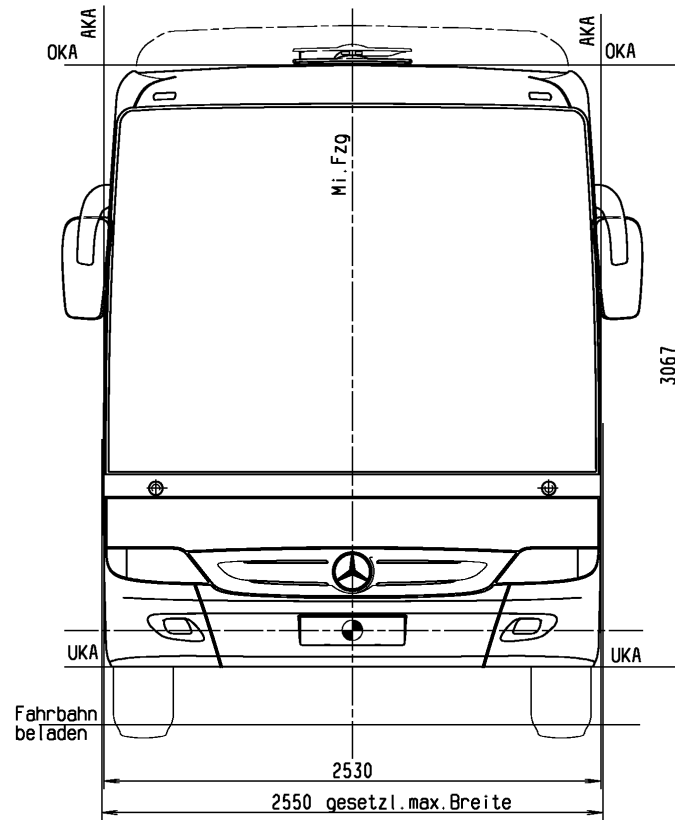
Wheelbase:	6080 mm + 1350 mm
Turning circle:	21,190 mm
Track circle:	17,160 mm
Overhang at front:	2760 mm
Overhang at rear:	2770 mm
Vehicle length:	12,960 mm
Vehicle width:	2550 mm
Vehicle height, unladen:	3620 mm

Weights

Kerb weight as per DIN 70020:	15,300 kg
Front axle load rating:	7100 kg (dependent on country of registration; e.g. Germany)
Driven axle load rating:	11,500 kg (dependent on country of registration; e.g. Germany)
Trailing axle load rating:	5750 kg (dependent on country of registration; e.g. Germany)
Permissible gross vehicle weight:	24,000 kg (dependent on country of registration; e.g. Germany)

Reisebus/Coach Mercedes-Benz Tourismo M

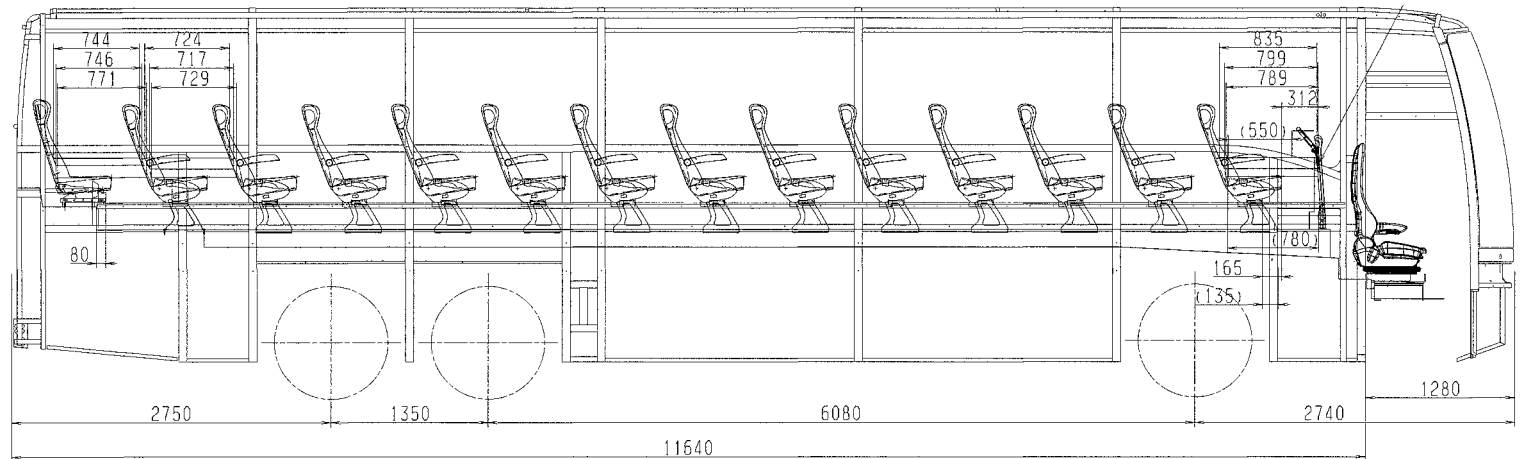
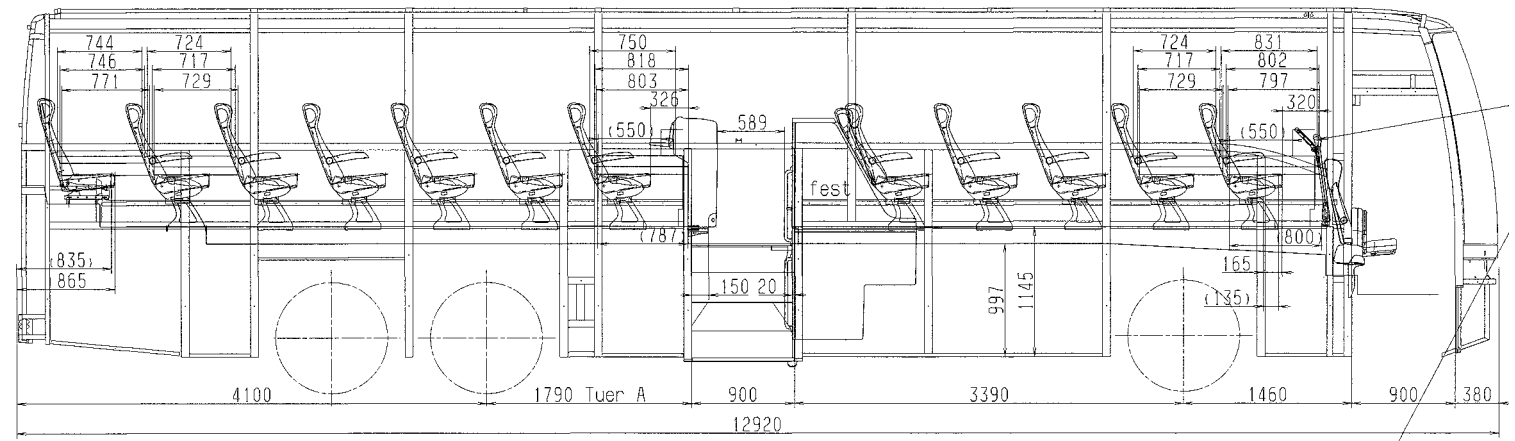
Abmessungen/ Dimensions



Mercedes-Benz

Reisebus/Coach
Mercedes-Benz
Tourismo M

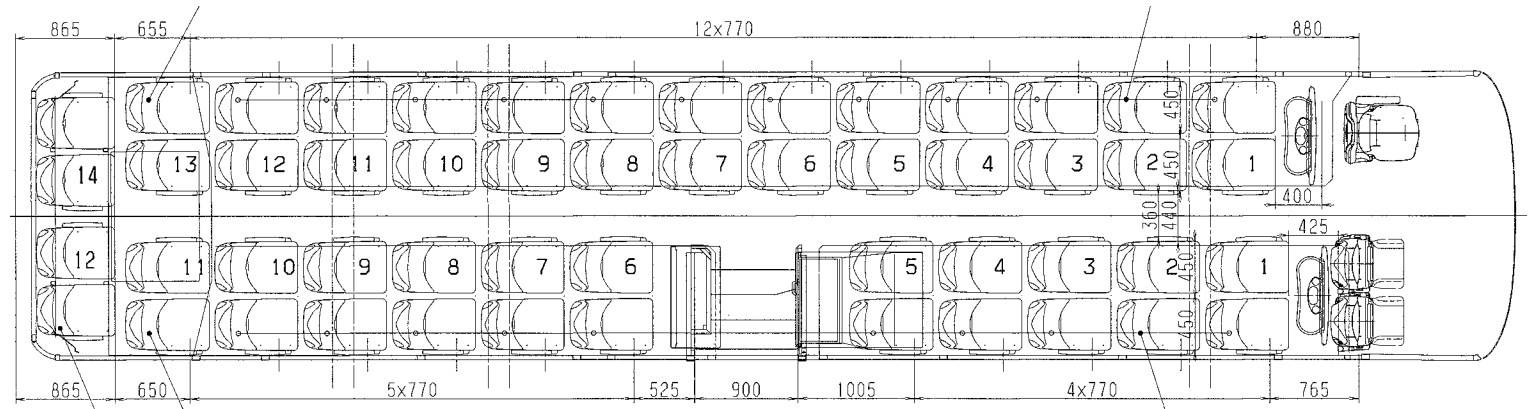
Bestuhlung/
Seating



Mercedes-Benz

**Reisebus/Coach
Mercedes-Benz
Tourismo M**

**Bestuhlung/
Seating**



Mercedes-Benz

**Reisebus/Coach
Mercedes-Benz
Tourismo M**

**Motor OM 457 LA
Euro 4
315 kW (428 PS)
bei 2000/min**

Stationäre Vollastkurven

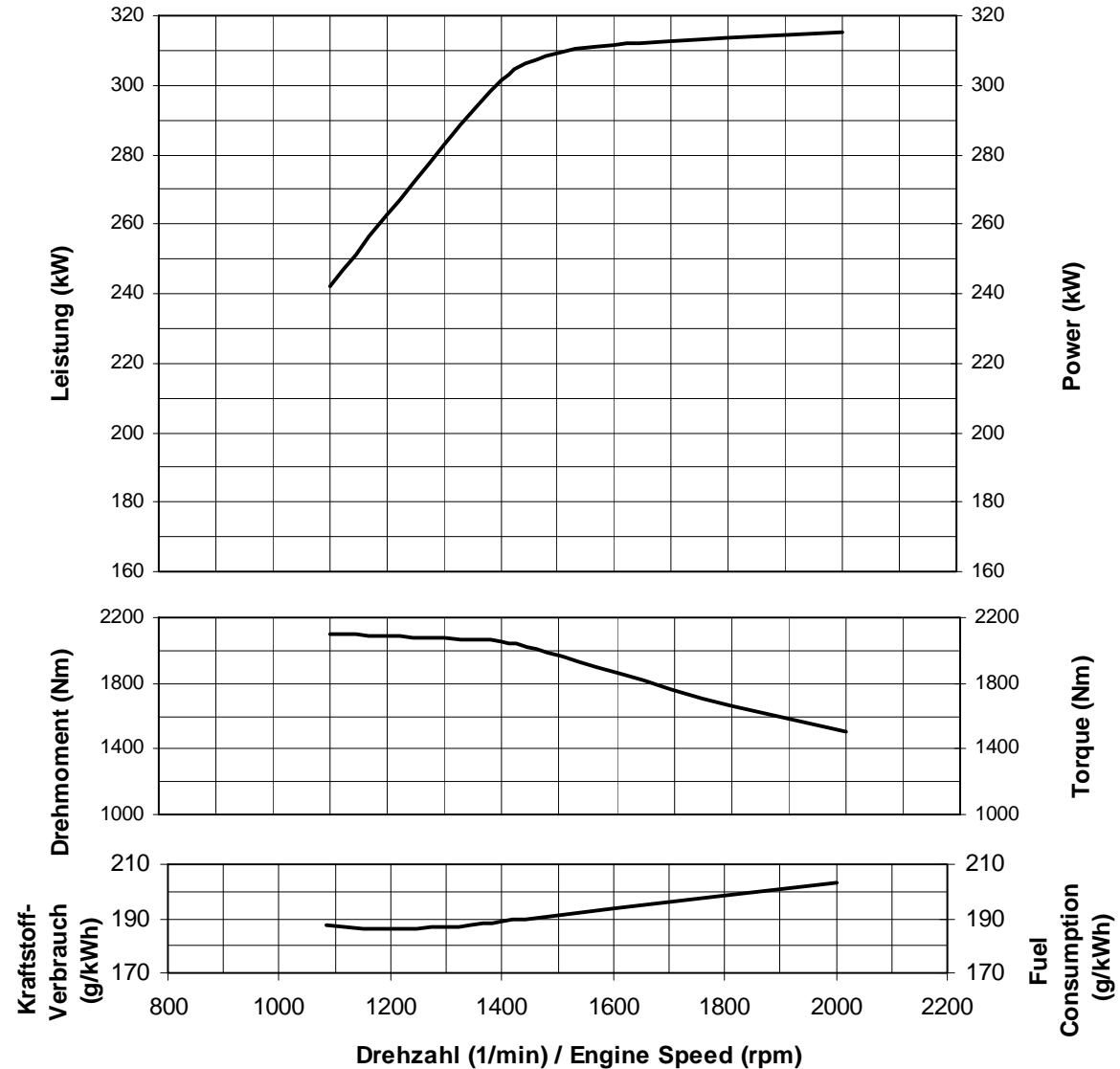
Stationary full load curves



Mercedes-Benz

Pmax 315 kW bei 2000/min, 80/1269/EWG
M_{dmax} 2100 Nm bei 1100/min, M_{dü} = 28%

Pmax 315 kW @2000 rpm, 80/1269/EEC
Lmax 2100 Nm @ 1100 rpm, L_i = 28%



Reisebus/Coach
Mercedes-Benz
Tourismo M

Sägezahn-Diagramm/
Sawtooth diagram

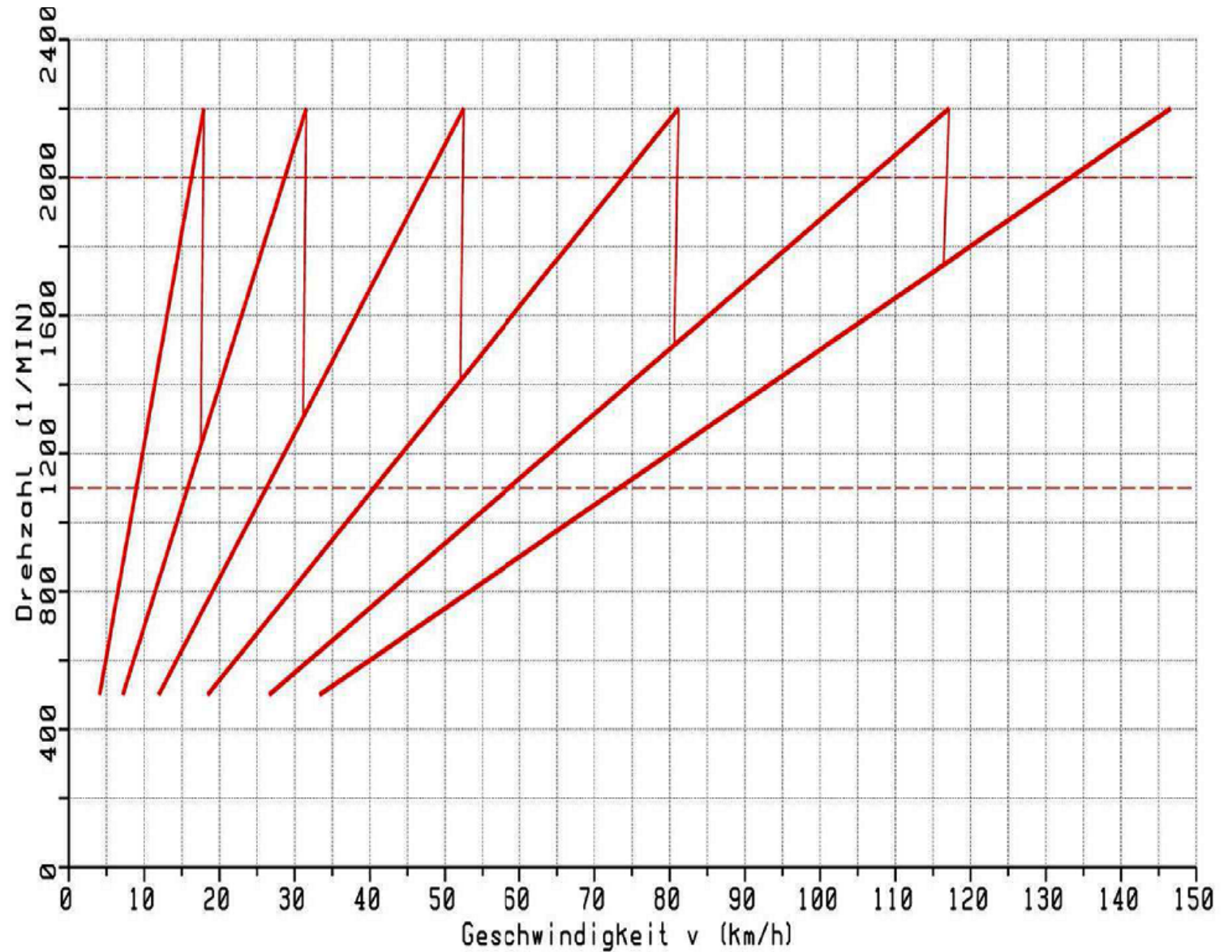
Motor OM 457 LA
315 kW (428 PS)
bei 2000/min



Mercedes-Benz

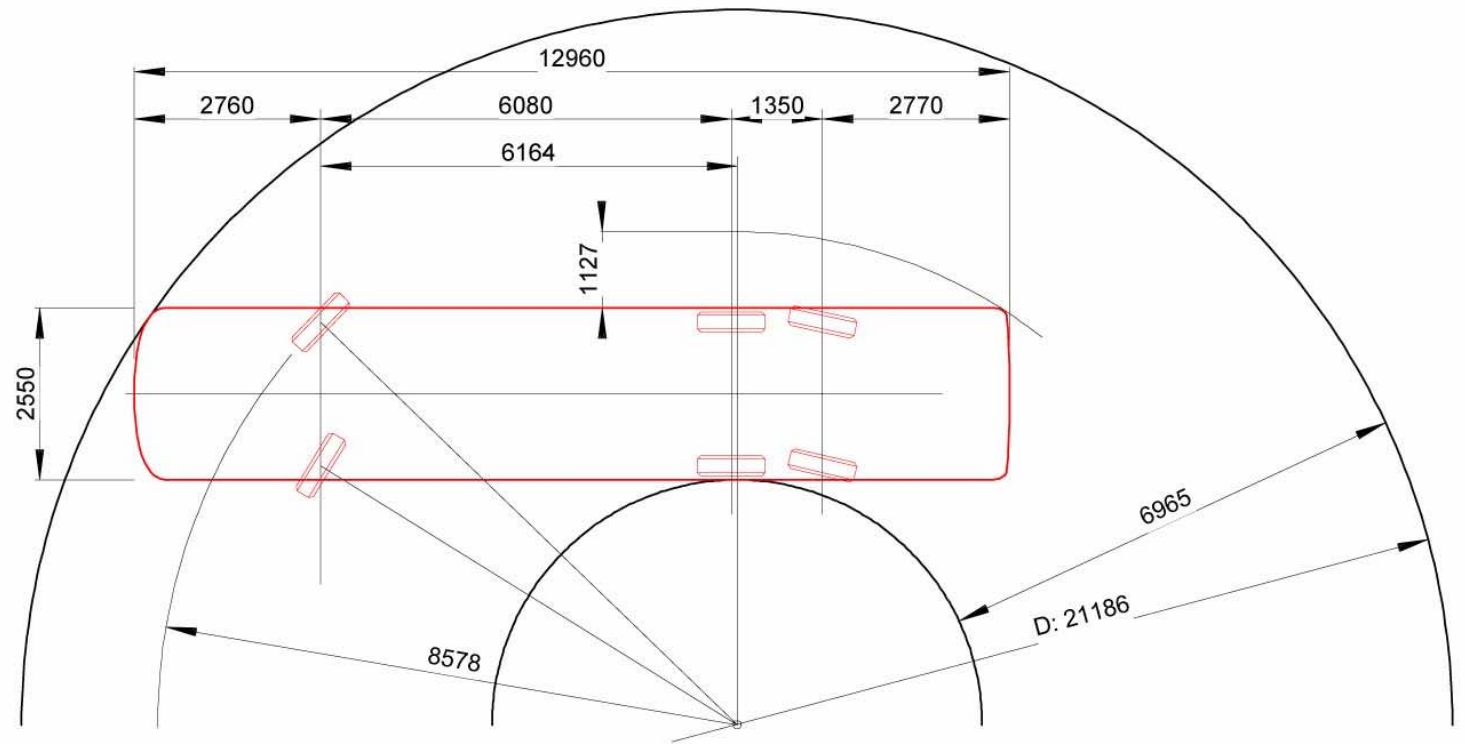
Tourismo M

24t, OM457LA E4 315kW 2100Nm, GO 210-6, iHA=3.583, 295/80 R 22.5



Reisebus/Coach
Mercedes-Benz
Tourismo M

Wendekreis/
Turning Circle

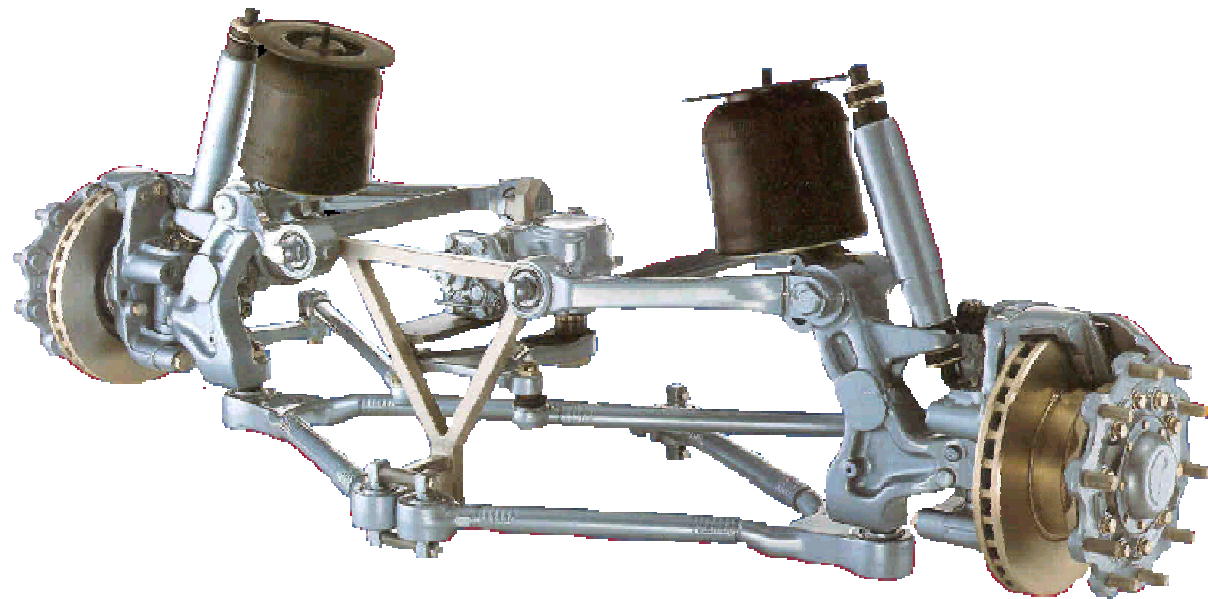


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**Reisebus/Coach
Mercedes-Benz
Tourismo M**

**Vorderachse/
Front Axle**

ZF RL 75 E



Mercedes-Benz