BlueEFFICIENCY Power Engines.

Mercedes-Benz Buses and Coaches.

Mercedes-Benz
The standard for buses.
BlueEFFICIENCY Power.
Always one step ahead of the times – Mercedes-Benz engines.

Mercedes-Benz has decisively influenced the development of the diesel engine for commercial vehicles right from the outset. Mercedes-Benz has been fitting its commercial vehicles with diesel engines for more than 80 years. With BlueEFFICIENCY Power engines, Mercedes-Benz successfully continues this tradition and sets new standards in terms of power, consumption and weight.

The history of Mercedes-Benz commercial vehicle diesel engines began in 1922 with the OB2, a diesel engine with pre-chamber injection and an output of 33 kW (45 bhp). It reduced fuel costs by 86 per cent when compared to contemporary petrol engines.

The first truck fitted with a diesel engine as a standard was running on German roads in 1932. It carried the designation LO 2000 and was a Mercedes-Benz.

Following the end of the war, Mercedes-Benz advanced development further with the legendary OM 312, an engine with an output of 66 kW (90 bhp) and displacement of 4.5 litres. 1954 saw the OM 312 A, the world’s first turbocharged diesel engine, leave the factory.

End of the 300 series era. The Euro III emission standard triggered development of a completely new engine generation. Innovative technologies like full electronic control, direct injection with unit pumps, turbocharging, charge air cooling and three-valve technology are revolutionising commercial vehicle engine technology.

BlueTEC technology developed by Mercedes-Benz heralds the latest technological advance in 2004. It leads to a drastic reduction in the emission of pollutants when compared to Euro III, and for the first time without increased fuel consumption. This means that it meets the European emission standards pursuant to Euro V/V.

“BlueEFFICIENCY Power” is the name of the latest engine generation. It is uncompromisingly tailored to the requirements of the Euro VI pollutant emission limits. These engines meet the highest of demands, with efficient combustion and emission levels that have been reduced to the limits of what is feasible. The current motor generation is continuously further developed and optimized.

With the introduction of the new eCitaro, Mercedes-Benz is responding to current and future challenges in the age of electromobility. Ready to electrify the future, the eCitaro, as a sophisticated, fully electric vehicle, is an addition to the world best-seller’s portfolio.
Euro VI - Overview

-66%

The Euro VI emission standard represents a challenge.
We have embraced it.

The Euro VI emission standard that came into force in 2014 aims to reduce pollution caused by heavy commercial vehicles to a minimum. This innovation presented manufacturers with major challenges, as existing emission control systems are only aimed at individual emission values. For example, the particulate content and fuel consumption increased when NOx emissions were reduced. On the other hand, the reduction of particulate emissions and fuel consumption led to an increase in NOx emissions.

BlueEFFICIENCY Power engines from Mercedes-Benz function perfectly in combination with exhaust after-treatment. To realise this, our developers achieved an intelligent combination of cooled exhaust gas recirculation (EGR), diesel particulate filter (DPF) and selective catalytic reduction technology (SCR) with a view to meeting the high requirements of the Euro VI emission standard. This enabled us to make the emission control system extremely efficient and solve the “nitrogen oxides–particulate fuel consumption” trilemma.

BlueEFFICIENCY Power engines from Mercedes-Benz are powerful high-torque solutions that meet the highest standards in terms of environmental friendliness.

-80%
The right engine for every requirement.

The engine requirements of a long-distance coach differ from those of a public transport bus. In city traffic, the all important qualities are different from those on interurban journeys. A different power response is needed in the mountains to that on flat terrain.

In the continual stop and go traffic of the city, a different drive train is required to that on long mountain passes or in a vehicle employed in long-distance travel. Moreover, the driver appreciates above all the vehicle performance, the passenger is primarily interested in travelling comfort and the operating company has to think about costs and efficiency.

Not to mention the legislator, who focuses primarily on the environmental aspects.

BlueEFFICIENCY Power engines are available in a variety of technical designs and tailored perfectly to meet individual operational needs. Whether a long-distance coach, rigid vehicle or articulated bus is involved: Mercedes-Benz provides the appropriate solution for different requirements.
Tailored solutions.
For town and country.

The OM 936 is particularly suitable for urban and interurban service and is designed as the ideal propulsion source for the mid-performance range between 220 kW and 265 kW. The result is not only impressive engine characteristics, but also low weight and compact dimensions. The adjustable camshaft used for the first time in a diesel engine enhances engine efficiency during particulate filter regeneration.

The OM 470 is used primarily in coaches. It delivers power of between 265 kW and 335 kW, thus making the top performance among BlueEFFICIENCY Power engines for the time being. The X-PULSE common rail diesel direct injection system is a completely new technology development. The X-PULSE common rail injection system ensures that only moderate pressure is developed initially in high-pressure lines. Depending on the requirement, the fuel pressure needed for injection is only produced when needed in the injectors. In addition to reducing the quantity of fuel required for combustion to an absolute minimum, this principle also causes much lower material stress and considerably increases the service life of the engine as a result.

With the BlueEFFICIENCY Power generation of engines, Mercedes-Benz proves that environmental protection, profitability and performance need not be in conflict. Quite the opposite: in BlueTEC 6 vehicles, innovative engine technologies work together with efficient exhaust after-treatment. This interaction is a perfect reflection of the times we live in, providing the performance demanded in day-to-day service, the efficiency that entrepreneurs require and ecological friendliness that benefits both people and the environment.

BlueEFFICIENCY Power engines are equipped with the innovative BlueTEC 6 exhaust after-treatment solution. It combines a controlled and cooled exhaust gas recirculation system, an oxidation catalytic converter and a new design of particulate filter with an SCR (Selective Catalytic Reduction) catalytic converter.

Exhaust gas recirculation (EGR) reduces raw nitrogen oxide emissions. Hydrocarbons and carbon monoxide are converted to carbon dioxide and water in the diesel oxidation catalytic converter of the exhaust box. In addition, some of the nitric oxide is oxidised to nitrogen dioxide. A fine-pored ceramic structure in the downstream diesel particulate filter ensures effective retention of particulates. The filter is passively regenerated on a continuous basis by the exhaust gas temperature. An electronic control system ensures that this process functions under all operating conditions.

Proven BlueTEC SCR technology complements all these exhaust after-treatment methods. This is achieved by injecting AdBlue® additive into the exhaust gas flow. It mixes with the pre-treated exhaust gas and is broken down into ammonia. This ammonia reacts with the nitrogen oxides in the honeycomb body of the SCR catalytic converter to form non-toxic nitrogen and water vapour.

BlueTEC 6: An overview of the advantages

- Interplay of innovative engine technology and exhaust gas after-treatment for low pollutant emissions
- Euro VI through intelligent combination of exhaust gas recirculation (EGR), diesel particulate filter (DPF) and selective catalytic reduction (SCR)
- Tried and tested combination in the commercial vehicle sector
- Regulated, on-demand exhaust gas recirculation
- BlueTEC SCR technology converts nitrogem oxides into nitrogen and water
- Innovative regeneration strategy with long maintenance intervals for the diesel particulate filter
- No additional consumption of diesel fuel
- Drastic reduction of emissions and simultaneous increase in performance, dynamic response and smooth running
A big step –
not least for the environment.

Sustainability is paramount at Mercedes-Benz. The company once again sets the standards in terms of economy, environmental compatibility and efficiency with the BlueEFFICIENCY Power engine generation. Innovative BlueEFFICIENCY Power engines from Mercedes-Benz are particularly impressive in terms of their low emission values. They meet the legal pollutant emission limits pursuant to Euro VI with ease.

Gas power.
Natural gas technology provides the basis for sustainable mobility. High-quality compressed natural gas contains almost no polluting components and burns with very low residues.

The gas engine in the Citaro NGT has been specially developed for the demands of public transport and offers an alternative drive concept for future-oriented mobility in urban centres.

The route to the future: tomorrow’s city bus drive concepts.

The question that needs to be posed is what exactly are the drive types of the modern city bus of the future? The answer for Daimler Buses is diesel and electric drives. Although the diesel drive is highly developed, further optimising potential exists, and technical optimising can lead to further reductions in fuel consumption and emissions in the coming years.

The fully electric eCitaro paves the way for e-mobility in the city. It is completely emission-free and practically silent. At the same time, it is not an off-the-peg vehicle, and is adapted to the individual wishes and requirements of the transport companies. With the eCitaro, Mercedes-Benz is pursuing a systematic solution: The eCitaro is far more than just a city bus; it is part of the complete eMobility system from Daimler Buses – and as such is ready today for the city of tomorrow.
Unbeatable performance. The NGT gas engine.

The Euro VI gas engine sets standards in terms of environmental friendliness, as CO₂ emissions are below those of a diesel engine. When biogas is used, the CO₂ balance sheet is even more attractive – making the engine a particularly environmentally compatible model in the Mannheim engine family.

For Mercedes-Benz, sustainability and the conservation of resources are a firm component of corporate philosophy. With the M 936 G gas engine, Mercedes-Benz has pulled out all the stops to build on the success of its proven engine designs and further expand its role as a pioneer in powerful and environmentally friendly engines. The in-line 6-cylinder engine achieves the performance levels of a diesel engine while, simultaneously, setting new standards in noise and exhaust emissions. Whether fossil natural gas or regenerative biogas are used – the M 936G meets much more than the required standards and currently ensures a clean journey in the Citaro NGT and Conecto NGT.

Outstanding performance comparable to a diesel engine.

The natural gas engine is based on the OM 936 turbodiesel engine with a displacement of 7.7 l. It is operated as a purely gas-powered engine with compressed natural gas, has an output of 222 kW (302 bhp) and achieves a maximum torque of 1,200 Nm. With this data and its impressive power development, the single-stage supercharged engine is a worthy equal in every respect to its diesel counterpart.
Recuperation module: Mini-hybrid technology for power supply.

The availability of electric power for the vehicle electrical system and auxiliary units should never be taken for granted - it needs to be produced by the alternator. The simple formula for this is that high power consumption corresponds to higher fuel consumption. This is one of the reasons why many consumers in the vehicle are now designed to optimise consumption, a good example of this being the LED lighting.

Another innovative approach is the use of power generated free of charge in the vehicle. Storing this power and supplying it to the vehicle electrical system during high engine load phases is the idea behind our recuperation module.

The recuperation module on our city buses exploits developments in hybrid technology for this purpose. Current generated by the alternators without fuel consumption is stored during deceleration phases. 16 double layer capacitors - known as ultracaps - with a total capacity of 31 Wh (watt hours) are installed immediately adjacent to the batteries for this purpose.

The energy stored is supplied to the vehicle electrical system during high engine load phases (e.g. when moving off). The recuperation module analyses the drive train status for this purpose. This relieves the demand on the alternators and, consequently, the engine and fuel consumption falls.

Clear fuel savings can be achieved with the recuperation module during regular service operation with its numerous deceleration phases while, additionally, the demand on the batteries and alternators is relieved and their service life extended.
Recuperation for the vehicle electrical system.

Bus slows down (deceleration phase)
- Auxiliary units continuously require power
- Diesel engine drives the alternators without consuming fuel
- Alternators supply the vehicle electrical system and recuperation module
- The recuperation module storage system fills up

Bus speeds up (acceleration phase)
- Auxiliary units continuously require power
- The recuperation module delivers power to the vehicle electrical system
- The alternators do not need to work
- The load on the diesel engine is relieved
One innovation for a range of models. Hybrid technology for the drive.

What is most advantageous for transport operators and the environment: Independent hybrid bus models or efficient hybrid technology as a special feature?

Mercedes-Benz has opted for an innovative hybrid module that, for the first time on a global level, provides hybrid technology as a special feature for a broad range of city buses with OM 936 diesel and M 936 gas engines. Instead of expensive independent hybrid buses, this solution enables numerous models in Mercedes-Benz city bus series to profit from cost-effective and efficient hybrid technology.

The efficient and compact hybrid module was specially developed for the demands of regular service operation in towns, cities and conurbations. It supports the diesel and gas engines optimised for fuel economy used in our city buses, thus contributing to efficiency and sustainability.

Use of our hybrid module poses no problems for drivers and workshops, as selection of the special hybrid module feature only requires minimum modification of the basic vehicle. This also ensures that our hybrid technology is inexpensive in terms of procurement. The module enables the achievement of a fuel saving of up to 8.5%, depending on the route and vehicle version involved. This means that additional costs can be offset within a few years, and the environment profits from the outset from the new technology.

The compact hybrid system transforms your city bus into an extremely efficient and environmentally friendly all-rounder, enabling you to benefit from the perfect combination of efficiency and sustainability.
The hybrid module is a simple, robust design involving integration of a disc-shaped electric motor in the powertrain between the engine and transmission. Two recuperation modules (supercaps) are installed on the roof as an energy storage system. In addition to this, it also includes a voltage converter and intelligent start-off management with adapted engine control. The electric motor and voltage converter are provided with their own cooling circuit.

An important factor in this respect is that, as with Mercedes-Benz cars with hybrid drive, our hybrid module technology has a separate 48 volt network. This means that we dispense with a complicated high-voltage network and the associated safety requirements this entails.

The technology operates as simply as its design. While the bus is moving in overrun mode, the electric motor acts as an alternator and generates current without any fuel consumption. Current generated in this manner is stored as electric power in the supercaps. In the so-called boost phases when demand is high (e.g. when moving off), the electric motor supports the diesel or gas system with additional torque using the energy from the supercaps. This relieves the demand on the combustion engine and consumes less fuel.

Engines with the hybrid module correspond to combustion engines in terms of performance values. The torque generated by the electric motor during the boost phase is exploited entirely to save fuel. If sufficient energy is stored in the supercaps, the electric motor also assists idling mode, thus improving the efficiency of the combustion engine.

More power for less consumption.

- Autonomous energy management: no action from driver necessary
- Reduction in fuel consumption: up to 8.5% (depending on application and vehicle model)
- Largely maintenance-free: (only cooling circuit included in maintenance plan)
- No high-voltage system: maintenance by qualified personnel
- Unchanged driving characteristics and controls for the driver
- No loss of seats: unchanged interior with familiar seating arrangements
- Reduced exhaust emissions: when starting off at bus stops
- Overrun mode
- Boost

Reduction in fuel consumption
- Up to 8.5% (depending on application and vehicle model)
- Unchanged driving characteristics for the driver
- No loss of seats: unchanged interior with familiar seating arrangements
- No high-voltage system: maintenance by qualified personnel
- Largely maintenance-free: (only cooling circuit included in maintenance plan)
- Autonomous energy management: no action from driver necessary

- Reduced exhaust emissions:
  - When starting off at bus stops

26
Availability of engines according to vehicle type

<table>
<thead>
<tr>
<th>Type</th>
<th>Output</th>
<th>Citaro</th>
<th>Citaro LE</th>
<th>Citaro G</th>
<th>Compact</th>
<th>Conecto</th>
<th>Conecto G</th>
<th>Intouro</th>
<th>Tourism</th>
<th>Chassis RF</th>
<th>Chassis LE</th>
</tr>
</thead>
<tbody>
<tr>
<td>OM 936</td>
<td>220 kW</td>
<td>●</td>
<td></td>
<td>-</td>
<td>●</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>260 kW</td>
<td>●</td>
<td></td>
<td>-</td>
<td>●</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OM 936 h</td>
<td>220 kW</td>
<td>●</td>
<td></td>
<td>-</td>
<td>●</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>260 kW</td>
<td>●</td>
<td></td>
<td>-</td>
<td>●</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 936 G</td>
<td>222 kW</td>
<td>●</td>
<td></td>
<td>-</td>
<td>●</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OM 470</td>
<td>265 kW</td>
<td>-</td>
<td></td>
<td>●</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>290 kW</td>
<td>●</td>
<td></td>
<td>-</td>
<td>●</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>315 kW</td>
<td>-</td>
<td></td>
<td>-</td>
<td>●</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>335 kW</td>
<td>-</td>
<td></td>
<td>-</td>
<td>●</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>●</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mercedes-Benz OM 936 h

Mercedes-Benz OM 936

Mercedes-Benz M 936 G

Engine series portfolio

<table>
<thead>
<tr>
<th>Type</th>
<th>Output range [kW]</th>
</tr>
</thead>
<tbody>
<tr>
<td>OM 936</td>
<td>220 - 260</td>
</tr>
<tr>
<td>OM 936 h</td>
<td>220 - 260</td>
</tr>
<tr>
<td>M 936 G</td>
<td>222</td>
</tr>
<tr>
<td>OM 470</td>
<td>265, 290, 315, 335</td>
</tr>
</tbody>
</table>

Torque [Nm] | Output range [kW]

Performance range of engines
Redefining efficiency.

With the BlueEFFICIENCY Power engines in the 936 series, Mercedes-Benz heralds a new era in compact diesel engines for commercial vehicles. The use of state-of-the-art, high-strength materials opens up previously unforeseen dimensions in performance. At the same time, the performance characteristics of the engines enable downsizing of the displacement while maintaining power output, thus making a reduction in energy consumption possible.

The engines therefore achieve an output with a displacement of 7.7 litres which would previously have required a displacement of more than ten litres. As a result, the OM 936/OM 936 h can replace heavier engines with a considerably greater volume. Moreover, this new development offers a dynamic low-end torque at low speeds. Maximum torque is therefore available from 1,200/min and remains constant up to 1,600/min. The engines also generate an output at speeds below 1,000/min which impresses.

A solution for the future.

A longer service life is a further advantage of this series. With a predicted mileage equivalent to 700,000 km in interurban service without a general overhaul, the engines also achieve values here that were previously reserved for larger capacity power units. BlueEFFICIENCY Power engines therefore represent maximum efficiency and longevity, lower AdBlue® and engine oil consumption and longer maintenance intervals.

The M 936 G gas engine: clean, efficient and quiet power.

The M 936 G sets standards in terms of environmental friendliness, thanks to innovative engine technology. It is also extremely quiet and reduces CO₂ emissions, making the engine the most environmentally compatible model of the Mannheim Mercedes-Benz engine family. The in-line 6-cylinder engine achieves the performance levels of a diesel engine while simultaneously setting standards for noise and exhaust emissions. The M 936 G meets much more than the required standards and will ensure a clean journey in future in the Mercedes-Benz Citaro NGT.
Product characteristics OM 936, OM 936 h, M 936 G.

- Diesel powered engines: vertical and horizontal variants available
- Gas powered engines: vertical variant available
- Robust crankcase, stiff crankshaft drive
- Cross-flow cylinder head facilitates optimum cooling
- First series production diesel engines with adjustable camshaft
- Four valves per cylinder
- Injection pressure of up to 2,400 bar
- Engine control with state-of-the-art engine control unit and additional exhaust gas aftertreatment control unit
- Highly flexible injection strategy enables up to five injections per injection cycle
- Air compressor with optimised consumption
- 260 kW variant has two-stage turbocharging with two turbochargers
- Low consumption of fuel and engine oil
- Cooled exhaust gas recirculation integrated
- Change interval of particulate filter up to 120,000 km in city public transport service
- Engine tested in truck with up to 40 t road train weight
OM 936.

Technical data

Type
In-line diesel engine with electronic engine management.

General engine data

Engine model designation OM 936
Number of cylinders 6 (arranged in-line)
Displacement [litres] 7.7
Valves per cylinder 4
Cylinder bore [mm] 110
Piston stroke [mm] 135
Max. injection pressure [bar] 2,400

Firing order
1 – 5 – 3 – 6 – 2 – 4

Injection system
Common rail fuel system
Injection pump
High-pressure pump to produce rail pressure
Turbocharging system
Exhaust gas turbocharging with charge air cooling (air/air)
Exhaust gas turbocharger
Two-stage turbocharging with asymmetric fixed geometry and wastegate
Exhaust gas recirculation
Exhaust gas cooler and exhaust gas recirculation valve
Exhaust gas after-treatment
Combined system consisting of diesel oxidation catalytic converter, diesel particulate filter and SCR system with AdBlue® injection

Combustion principle
Four-stroke diesel direct injection

Performance

Output [kW]

Rated output
220 kW 260 kW
At speed [1/min] 1,800 1,800
Rated torque
1,200 Nm 1,400 Nm
At speed [1/min] 1,200-1,600 1,200-1,600

OM 936 h.

Technical data

Type
In-line diesel engine with electronic engine management.

General engine data

Engine model designation OM 936 h
Number of cylinders 6 (arranged in-line)
Displacement [litres] 7.7
Valves per cylinder 4
Cylinder bore [mm] 110
Piston stroke [mm] 135
Max. injection pressure [bar] 2,400

Firing order
1 – 5 – 3 – 6 – 2 – 4

Injection system
Common rail fuel system
Injection pump
High-pressure pump to produce rail pressure
Turbocharging system
Exhaust gas turbocharging with charge air cooling (air/air)
Exhaust gas turbocharger
Two-stage turbocharging with asymmetric fixed geometry and wastegate
Exhaust gas recirculation
Exhaust gas cooler and exhaust gas recirculation valve
Exhaust gas after-treatment
Combined system consisting of diesel oxidation catalytic converter, diesel particulate filter and SCR system with AdBlue® injection

Combustion principle
Four-stroke diesel direct injection

Performance

Output [kW]

Rated output
220 kW 260 kW
At speed [1/min] 1,800 1,800
Rated torque
1,200 Nm 1,400 Nm
At speed [1/min] 1,200-1,600 1,200-1,600
Technical data

Performance

General engine data

Rated output and rated torque
Powerful but economical in consumption.

With the BlueEFFICIENCY Power engines OM 470/OM 471, Mercedes-Benz completes its offering of commercial vehicle engines for buses and coaches. The powerful six-cylinder engines impress with outputs of between 265 kW and 350 kW.

From the technical standpoint, it is closely related to the OM 471, introduced as the first member of the new engine generation with a displacement of 12.8 litres. Both engines already achieve their maximum torque at 1,100/min.

Fuel consumption minimised.

Both power units were developed according to the same technical concept and have crankcases made of grey cast iron alloy, steel pistons, single-piece cylinder heads with two overhead camshafts, four valves per cylinder and the newly developed X-PULSE high-pressure injection system. This not only minimises fuel consumption, but also maximises the smooth running characteristics of the engines while meeting emission levels.

In spite of the considerable additional effort required for exhaust treatment, we have succeeded in reducing the consumption of these power units. Together with longer maintenance intervals and a long service life, the engines meet all the requirements for future-proof and profitable road use.

Consistent further development of the OM 470 engine enables the achievement of a further fuel saving. This represents a further valuable component when it comes to optimising the total costs of ownership (TCO).
Product characteristics
OM 470.

- Compact dimensions due to six-cylinder in-line vertical engine design
- Very robust cylinder head for high firing pressures and excellent damping properties
- High torque due to long stroke design
- Dynamic response thanks to state-of-the-art turbocharger technology with asymmetric fixed geometry
- Unique common rail system with X-PULSE pressure booster
- Air compressor with optimised consumption
- Innovative engine brake: decompression brake integrated in the engine control
- High performance and dynamic response with low exhaust emissions and low consumption
- Change interval of particulate filter up to 360,000 km (first change) in touring coaches, thereafter every 240,000 km
- Up to 30 % longer maintenance intervals in touring coaches
- Service life extended by approx. 20 %
- High reliability through intensive trials over more than 60 million kilometres
OM 470.

Technical data

Type In-line diesel engine with variable engine management
Engine model designation OM 470
Number of cylinders 6 (arranged in-line)
Displacement [litres] 10.7
Valves per cylinder 4
Cylinder bore [mm] 125
Piston stroke [mm] 145
Max. injection pressure [bar] 2,700
Firing order 1 – 5 – 3 – 6 – 2 – 4

Performance

Output [kW]

<table>
<thead>
<tr>
<th>Speed [1/min]</th>
<th>800</th>
<th>1,000</th>
<th>1,200</th>
<th>1,400</th>
<th>1,600</th>
<th>1,800</th>
<th>2,000</th>
<th>2,200</th>
</tr>
</thead>
<tbody>
<tr>
<td>800</td>
<td>2,800</td>
<td>2,400</td>
<td>2,000</td>
<td>1,600</td>
<td>1,200</td>
<td>800</td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,400</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,600</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We take safety seriously.
More safety for passengers and drivers: UN ECE Regulation 118.

The new version of UN ECE Regulation 118.02 requires newly registered buses from summer 2020 to have additional fire test certificates for materials in the interior, engine compartment, and separate heater compartments. Ensuring the greatest possible safety is a core value for Daimler Buses and compliance with the statutory requirements a self-evident duty. Therefore all materials now used in the interior of our buses are being tested, and where necessary, respecified.
Important for you. Important for us. Technical data stored in the vehicle.

Electronic vehicle components (e.g. Engine Control Unit) contain data storage for vehicle technical data, including but not limited to Diagnostic Trouble Codes in the event of a malfunction, vehicle speed, braking force, or operating conditions of the Restraint System and Driver Assistance Systems in case of an accident (no audio and no video data recording). This data is either stored as volatile e.g. Diagnostic Trouble Codes, over a short period of time (a few seconds only) e.g. in case of an accident or in aggregated form e.g. for component load evaluation. The data can be read using interfaces connected to the vehicle. Trained technicians can process and utilise the data to diagnose and repair possible malfunctions. The manufacturer can use the data to analyse and improve vehicle functions. When requested by the customer, technical data can form the basis of additional optional services. In general, data from the vehicle is transferred to the manufacturer or a third party only where legally allowed, or based on a contractual customer consent in accordance with data protection laws. Further information regarding storage of vehicle technical data is provided in the vehicle owner’s manual. Mercedes-Benz Buses and Coaches naturally handles customer data confidentially.

About the information in this brochure.

Information about the product is subject to change after this brochure went to press (04/19). The manufacturer reserves the right to make changes in the design or form, deviations in colour, and changes to the scope of supply during the delivery period, insofar as the changes or deviations are reasonable for the customer, having regard to the interests of the seller. The illustrations may also show accessories and special equipment optional extras that do not form part of the standard scope of supply. Colours may vary for typographical reasons.

This brochure may also contain models and support services that are not available in some countries. Statements about statutory, legal and tax regulations and their effects are only applicable in the Federal Republic of Germany at the time this brochure went to press. Therefore please contact your Mercedes-Benz sales representative for the latest binding version.

www.mercedes-benz-bus.com

EvoBus GmbH, Mercedesstraße 127/6, 70327 Stuttgart BUS/MPM-B · MB-M-1-EN-08/19