The Power of the Middle East

Trucks you can trust
In the long run, only quality counts

Mercedes-Benz trucks have enjoyed a reputation for supreme power, reliability, safety and economy for many years. No wonder that trucks with all these qualities are in great demand specifically in regions where they are faced with extreme conditions.

Pioneering technologies
From the “New Generation” (NG), through the “Heavy-Duty Class” (SK) to the third-generation Actros, Mercedes-Benz has been a pioneer of progress in truck technology for some 35 years. In every conceivable respect. From the cabs and powertrains to the chassis and electronics. Its innovations in the fields of safety, ergonomics, economy and environmental protection are equally impressive.

Trucks of lasting value
Mercedes-Benz trucks prove their value not simply in day-to-day use. They also demonstrate that a service life of over a million kilometres or more is readily possible even in the harshest and most rigorous conditions. They owe their durability on the one hand to their sturdy design, and on the other to the advanced electronics that control the vehicle more proficiently than any driver ever could. The enduring quality of these vehicles is fostered even after many years in operation as reflected in the impressive resale value of Mercedes-Benz trucks.

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At home in the region

The Middle East region is a different world. As a global brand that has been operating there for decades, Mercedes-Benz knows the particular characteristics of the region and of course the special requirements for doing business there.

Long-term partnership

Mercedes-Benz views its partnership with its authorized dealers as a long-term relationship. An important factor for customers, because this attitude guarantees them not just premium-quality products, but also top-notch after-sales services. These range from the financial services to maintenance and repair services using Mercedes-Benz Genuine Parts.

Rational vehicle design

Mercedes-Benz trucks for the Middle East are rationally designed to cope with the conditions they will encounter in the region. Using sturdy, proven components. Built in an appropriate range of versions. And configured for both extreme topographical and climatic conditions, and for varying levels of driving skills.

High parts availability

Trucks only earn money when they are in action. That is why Mercedes-Benz does everything it can to keep down-time to a minimum. Vehicles with the Telligent® maintenance system help by monitoring and indicating the condition of wearing parts. That makes it easier to plan workshop visits. But having spare parts readily available is even more important. That is why Mercedes-Benz Middle East holds 72,000 different parts in stock in Jebel Ali, more than any other competitor in the region.
Cabs: More comfort. Better drivers

The Actros cab is impressive both outside and inside. Its striking design, with bold styling, gives it an unmistakable look. The interior offers an impressive standard of ergonomics, comfort and safety. There are the three cab versions S, M and L to cover a variety of transport tasks.

Driver-focused

Everything, whether ease of entry, the seats or the instrument panel, is geared to easy, safe handing. All switches and controls are positioned within easy reach of the driver. That reduces his workload and helps him to remain fit and alert for longer.

Relaxingly comfortable

All three versions of the Actros cab have ample space to make the driver feel at ease at his place of work. There are trays and storage compartments for everything that is needed when out on the road. The radio, phone and instrument menus can be operated with the multifunction steering wheel, without the driver to take his hands off the steering wheel.

Safety all round

The all-steel cab is very strong and structurally rigid. Only flame-retardant materials are used in its interior. Then there are the efficient safety systems that provide optimal protection for the driver, vehicle and load.

The S cab

With its compact dimensions, this cab is suitable for all cases where the body’s length needs to be maximized. For example for short-distance delivery traffic and for construction traffic.

The M cab

This cab is designed above all for use in heavy delivery traffic and for construction traffic. It comes with the option of a folding bunk, or alternatively with one or two beds to allow the driver to rest.

The L cab

The L cab is particularly suitable for long-distance traffic and for assignments that require ample room to move in the cab. A bed with an interior-spring mattress is supplied as standard, as is a manually adjustable air conditioning system. Useful for keeping a cool head even in extreme temperatures.
Powertrain:

Robust and powerful

Engines are faced with the challenge of yielding top performance in very difficult conditions in the Middle East. Mercedes-Benz’s V6 and V8 engines have routinely been accomplishing that task for many years. Because they are eminently capable of generating the power required, but are distinctly thrifty when it comes to fuel consumption. With power outputs ranging from 310 to 480 hp, they are equipped for every transport task.

Exemplary 6-cylinder engines

The V6 engines with a displacement of 11.9 liters are available in three performance categories: 230 kW/313 hp, 260 kW/354 hp and 290 kW/394 hp. Equipped with an exhaust turbocharger with charge-air intercooling, they already achieve their maximum torque at 1080 rpm. This yields an optimum power characteristic that is very fuel-efficient. The 6-cylinder engines with electronic control have been on the market for a great many years and are used predominantly for short-distance transport tasks (construction sites, deliveries, refuse collection), but the 394 hp version is also used for long-distance traffic.

Outstanding 8-cylinder engine

The V8 engine with a displacement of 15.9 liters develops an output of 350 kW/476 hp. It has two exhaust turbochargers with charge-air intercooling. To that end it is equipped with a fan boost system that improves cooling performance. The maximum torque of 2300 Nm is already achieved at only 1080 rpm. This ensures there is always ample power on tap and fuel consumption remains modest. With its high-torque characteristic, the V8 is just perfect for demanding long-distance transport tasks and for heavy construction assignments, e.g. in conjunction with the 3-axle tipping semitrailer for heavy-duty use.
**Powertrain:**

**Engineered for the Middle East**

The other components of the powertrain as well as the engine are of course designed to withstand the tough requirements of the Middle East region: everything from the double-plate clutch and large-size cooling system to the air cleaner and exhaust systems. This ensures that they continue to operate smoothly however extreme the climatic conditions may be and however difficult the terrain.

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**Strong: double-plate dry clutch**

The uprated double-plate dry clutch with a diameter of 2x400 mm is equipped with diaphragm springs. Its operation is supported by compressed air, which reduces the pedal forces required and reduces the effort required when operating the clutch.

**Well-spaced gearboxes**

The basic version for V6/V8 engines is an all-synchromesh overdrive gearbox with 16 forward and two reverse gears. It comprises of a 4-speed basic gearbox, a front-mounted (split) section and a rear-mounted (range) section. It is possible to change gear by means of a hydraulic gearbox shift system, with the Telligent® shift system or with the Telligent® automatic shift system. Two versions with different gearbox spacing are available: G 210: 14.2-0.83; G 240: 11.7-0.69.

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**Dust in the intake air is a serious problem for the engine. That is why Mercedes-Benz first uses a cyclone pre-filter that already removes as much as 80% of the dust. Secondly, the filter papers used are much larger than those normally used in Europe, to trap the remaining 20% effectively. A neat solution for engines that are already having to work hard.**

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**Two versions of exhaust system**

Depending on the transport task and location, there is an exhaust system with tailpipe that discharges emissions to one side, or the vertical version mounted behind the cab. Both versions help to reduce dust levels, a common problem on construction sites.

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**Keeping going for longer with dual cooling**

To maintain full power however searing the heat, Mercedes-Benz is able to supply an ultra-high-performance cooling system. It covers everything from the cooling duct in the cab to the non-maintenance fan boost system. Thanks to its ample safety reserves, it ensures that the engine and gearbox temperatures always remain down in the green zone.
As strong as necessary, as light as possible
The design and material of the Actros’ frame equip it perfectly for withstanding very high loads. The longitudinal and cross members are 9.5 mm thick. The material used is cold-formed, high-strength steel grade E 500 TM. With bolted and riveted joins, the frame offers superb torsional rigidity. It also exhibits remarkable torsional flexibility that helps it to handle off-road conditions when fully laden. Wheelbase versions ranging from 3300 to 6000 mm are available.

When the going gets tough
Planetary drive axles are designed for heavy-duty construction-site or off-road use, as well as for long-distance traffic with the 350 kW/476 hp engine. With their two-stage ratio, they are capable of translating even monumental torques effortlessly into on-road propulsion. Depending on the operating conditions, they can be ordered with drum or disc brakes. Planetary drive axles are durable, reliable and offer increased ground clearance – ideal for the conditions in the Middle East.

A balancing act
Whenever the Actros is in action on rough terrain, there is always the risk that one axle could become overloaded. Axle-load compensation prevents this from happening by transferring part of the weight of the more highly laden axle to the axle supporting the lower load, whenever the vehicle crosses an obstacle. This protects the axles, steering and tyres.

Dependable workhorse
The Actros is equipped with weight-optimized parabolic springs as standard. There are four-leaf springs on the front axle, and five-leaf springs on the rear axle. These springs are notable for their long spring travel and low internal friction. Zinc dust paint provides reliable protection against corrosion and guarantees longevity for the suspension system. The shock absorbers and stabilisers are precisely matched to the characteristics of the parabolic springs.

Fast, effective, safe
The electronically controlled Telligent® brake system with ABS identifies the speed with which the brake pedal is pressed, and using this basis then calculates the desired brake pressure – all in an instant. The result is a lightning-fast response time and short stopping distances. The system incorporates the engine brake or retarder into the braking process and thus reduces the load on the brake discs.

Chassis:
Quality built to last
All chassis components, whether frame, suspension, axes or brakes, are designed to withstand the extreme conditions that are commonly encountered in the Middle East. The way the components are matched up likewise reflects the harsh operating conditions in situ: a robust basis for vehicles with a lengthy operating life.
A well-considered system
All vehicle functions are interlinked in the Telligent® system. Via the serial CAN data bus, its component systems retrieve, process, regulate and control all important vehicle data. Whether it be the powertrain or the chassis, the systems achieve smooth interaction between all important vehicle functions.

Intelligent engine management
The Telligent® engine system comprises of two components: engine control and drive control. The engine control stage collects key engine data, evaluates it and issues commands to control and regulate systems accordingly. The drive control stage covers all factors that are relevant to normal driving – from the accelerator pedal to engine braking. Both components exchange their data via the serial CAN data bus. Permanent synchronisation of this data and the resulting adjustments produce a high power yield and fuel-efficient operation.

Convenient gearshifts
The Telligent® shift system reduces the customary gearshifting work to a minimum. All the driver needs to do is move the gear lever slightly forward or backward and confirm the intention to change gear by pressing the clutch pedal – Telligent® then does everything else by selecting the desired gear. Both components exchange their data via the serial CAN data bus. Permanent synchronisation of this data and the resulting adjustments produce a high power yield and fuel-efficient operation.

Situations stable
The Telligent® stability control system identifies impending instability in the vehicle, such as skidding, breaking away or tipping over, and counteracts them within the limits of the physically possible. It does this by influencing the engine torque, specifically manipulating the brake system of the tractor and energising the trailer’s brake system. This automatic stabilization significantly enhances transport and driving safety.

Accurate forecast
The Telligent® maintenance system continually registers all key operating statuses and interprets this data to ascertain the condition of operating fluids and wearing parts. On this basis, the system then calculates the anticipated date for changing them and displays this. On the one hand the potential of the operating fluids can be fully utilized, and on the other hand service appointments can be planned precisely and built into the assignment plans for that vehicle. This reduces down-time and noticeably improves the overall costs.

Electronics: Intelligent technology prevents mistakes
Instead of resorting to basic mechanical solutions for the Middle East region, Mercedes-Benz has been using electronics for many years. Successfully so, because the systems used are not only reliable and safe. They also prevent operating errors and therefore protect the vehicle.
The vehicle in the spotlight
The purpose of the FleetBoard® vehicle management system is to reduce consumption and wear across the entire fleet. One key way of achieving this goal is to analyse how all drivers and vehicles are performing. All relevant criteria are taken into consideration, including the route, down-time, excessive revving, speed, braking behaviour, trip recording and average consumption. Using objective data and a driving style analysis, drivers are familiarized with a fuel-efficient, low-wear driving style.

Making the most of maintenance intervals
Service and maintenance information about wearing parts and operating fluids is always just one click away. This helps drivers to keep an eye on the oil level, and the fleet manager can intervene in critical cases if action is needed. Load-based maintenance planning means information on any forthcoming maintenance dates is always to hand. Workshop visits can thus be planned in good time. Electronic tachographs enable the fleet manager to review the positions, down-time and trips performed by his vehicles, always giving him a clear picture of how effectively his fleet is being used.

An eye on the route
FleetBoard® Mapping shows the position of the vehicles on a digital worldwide road map. Thanks to GPS tracking, the positions of vehicles and trip progress can be determined precisely for every vehicle, all the time.

FleetBoard® is a telematics-based internet service that facilitates effective vehicle management. The data collected from Mercedes-Benz vehicles provides a very clear picture, an important condition of optimizing the transport chain. A return on investment for this modern telematics technology can be realized within 12 months in the form of reduced fuel and maintenance costs.

FleetBoard®: Everything under control
Efficient fleet management with FleetBoard®
Route
The trucks will often need to travel over rough ground with a topography ranging from difficult to extreme. Rocky surfaces, scree and sand place tough demands on trucks’ traction and off-road behaviour.

Technical solution
3-axle solo tippers or 3-axle tipping semitrailer vehicles.

Vehicle requirements
This calls for weight-optimized tippers that have a high load capacity and are extremely sturdy and strong, from chassis to superstructure. Good off-road characteristics and several powered axles (6x4) are essential.

Prolonged solutions for the region
The Actros tippers that are in widespread use have powerful engines, are capable of withstanding high loads and everything from their frame structure to their wheel size makes them ideal for working on difficult terrain. The solo tipper, for instance, has an uprated subframe that provides high torsional rigidity in off-road conditions. Suspension springs and simple stabilizers keep the vehicle stably on the ground, even when unladen. The high-strength guard plate protects the radiator and oil sump against damage and so helps to keep repair and maintenance costs down in the long term. Other features such as the underride guard, pivoted ladder and guards for the headlights and mirrors make this vehicle perfect for the construction site.

Material transport:
The earth is moving
Sand, gravel, rock: wherever building work is in progress, the earth will be on the move. Regardless of whether the material is being removed or brought in, the task is to transport it quickly and efficiently from A to B.
The short route from the ready-mixed concrete plant to the construction site is generally partly on surfaced roads and partly over rough surfaces at the construction site. Off-road characteristics such as traction are therefore also required.

Technical solution
Truck mixer with a capacity of 8 to 12 m³ in the form of a 6x4 or 8x4/4 vehicle.

<table>
<thead>
<tr>
<th>Concrete mixer</th>
<th>Wheelbase</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 to 10 m³</td>
<td>4031/4040 or 4140</td>
</tr>
<tr>
<td>12 m³</td>
<td>4440/4840</td>
</tr>
</tbody>
</table>

*Selection from the Mercedes-Benz Trucks vehicle range

Vehicle requirements
Good off-road characteristics and traction are required; in view of the high centre of gravity of the load, also stable handling characteristics.

Proven solutions for the region
The typical Actros truck mixer has an appropriate engine for short-distance traffic. With a subframe made from S-500 steel, suspension springs and stabilizers, it handles off-road conditions with ease. The long wheelbase also gives it stable handling characteristics on the road.

Concrete mixers:

The very many challenging construction projects in the Middle East place huge demands on the construction materials. It therefore comes as no surprise that the region uses the highest quality of concrete in the world. Substances such as microsilica, which increases density, are incorporated into the mixture. Ice flakes need to be added to allow the concrete to be installed at all, considering the extreme prevailing temperatures.
Waste disposal:

The next challenge

Rapidly growing cities, an expanding construction industry, large seaports and airports: all inevitably generate ever-growing quantities of refuse that needs to be disposed of professionally. The process normally involves two stages. The first stage involves refuse collection. In the second stage, refuse is either taken to a sorting plant, where reusable items are separated from the residue, or it is taken directly to a refuse incineration plant.

Route
The route involves surfaced roads or areas with a paved surface. Traction is therefore not particularly critical.

Technical solution
2- or 3-axle collection vehicles with a load capacity of 14 to 30 m³.

Vehicle requirements
Refuse collection is a demanding transport task. The demands on the vehicle are correspondingly high:

- The chassis must be equipped for the special superstructures.
- Powerful power take-offs must be available to drive the typical superstructure assemblies.
- The powertrain must be designed to withstand taxing stop-and-go operations.
- Refuse compaction may result in the vehicle being overloaded.

Proven solutions for the region
The most commonly used Actros refuse collection vehicles have appropriately rated engines and withstand very high loads. Their long wheelbase provides good vehicle stability.

<table>
<thead>
<tr>
<th>Typical vehicle*</th>
<th>Type</th>
<th>Wheelbase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refuse collection vehicles, 14 to 30 m³</td>
<td>2031 to 3331</td>
<td>4500 mm</td>
</tr>
</tbody>
</table>

*Selection from the Mercedes-Benz Trucks vehicle range
Logistics calls for reliability

Logistics is about meeting deadlines. Whether for local or long-distance deliveries, it involves more than simply getting goods from A to B. Deliveries have to arrive punctually, and are increasingly required to arrive “just in time”. That is in itself no easy task, especially in the taxing conditions that are encountered in the Middle East region.

Route
The routes that are relevant for logistics companies tend to involve surfaced roads. They generally cross the lowlands, so traction is not particularly critical.

Technical solution
2- or 3-axle semitrailer units, 4x2 or 6x4.

Vehicle requirements
A weight-optimized, sturdy chassis and a powerful engine are called for.

Proven solutions for the region
The commonly used Actros semitrailer unit has an engine output of 290 kW/394 hp, a wheelbase of 3600 mm and is fitted with small tyres. Alternatively, an outfit with large tyres, a wheelbase of 3300 mm and the V8 engine developing 350 kW/476 hp is a common solution.

<table>
<thead>
<tr>
<th>Typical vehicles*</th>
<th>Type</th>
<th>Wheelbase</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-axle semitrailer tractor with small tyres</td>
<td>22465</td>
<td>3600/3900 mm</td>
</tr>
<tr>
<td>2-axle semitrailer tractor with small or large tyres</td>
<td>22465</td>
<td>3320 mm</td>
</tr>
<tr>
<td>3-axle semitrailer tractor with small tyres</td>
<td>32465</td>
<td>3320 mm</td>
</tr>
<tr>
<td>3-axle semitrailer tractor with large tyres</td>
<td>36465</td>
<td>3320 mm</td>
</tr>
</tbody>
</table>

*Selection from the Mercedes-Benz Trucks vehicle range.
Concrete pump: A specialist for really tough tasks

In view of the particular climatic conditions in the region, concrete has to be installed as swiftly as possible. Its quality will only be assured if this can be done without delays. Concrete pumps are the solution for this difficult task.

Route
Concrete pumps travel along surfaced roads to the construction site, where they then also need to drive over loose surfaces. Good traction then becomes important.

Technical solution
Depending on range, 3, 4, 5 or 6-axle vehicles.

Vehicle requirements
Concrete pumps are special-purpose vehicles that are modified for a specific task. The requirements include a low roof and an engine power take-off.

Proven solutions for the region
Around 80% of the concrete pumps used in the region are based on an Actros. With their powerful engines and rugged construction, they are ideally equipped for the toughest of jobs.

<table>
<thead>
<tr>
<th>Type</th>
<th>Wheelbase</th>
</tr>
</thead>
<tbody>
<tr>
<td>36-metre pump</td>
<td>2631</td>
</tr>
<tr>
<td>4140B</td>
<td>5100 mm</td>
</tr>
</tbody>
</table>
After-Sales Parts and Service:

Supporting Commercial Vehicles across the region

Mercedes-Benz’s high standards do not end with the handover of a vehicle to its new owner. Because trucks have to earn money over their entire vehicle life. Outstanding service quality and a top-notch parts supply are all part of the deal.

Number 1 in After-Sales

With thousands of loyal Actros operators supported by an extensive first class dealer network, Mercedes-Benz delivers the best in terms of After-Sales service. Our state-of-the-art training centre in Dubai ensures the regions technicians are kept fully up to date with the latest advances in repair and maintenance techniques. The large and modern Regional Logistics Centre ensures a constant high first-time supply of spare parts to our workshops to keep all Mercedes-Benz trucks at maximum utilization.

Genuine Parts

Genuine Mercedes-Benz parts will be fitted when your truck is serviced or repaired at an authorized Mercedes-Benz workshop. You can rely on the quality, safety and performance of these parts to keep your vehicle running as efficiently and smoothly as it did when it left the factory.

With After-Sales Parts and Service working in harmony with Sales, the highest standards are maintained for our dealers, with workshops monitored regularly by the Mercedes-Benz specialised technical department team.
## Overview of vehicles

**Actros:**

<table>
<thead>
<tr>
<th>20 t</th>
<th>33 t</th>
<th>38 t</th>
<th>40 t</th>
<th>41 t</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Engine code</strong></td>
<td>MX1</td>
<td>MX3</td>
<td>MX5</td>
<td>MX1</td>
</tr>
<tr>
<td><strong>Displacement in ccm</strong></td>
<td>11946</td>
<td>11946</td>
<td>15928</td>
<td>11946</td>
</tr>
<tr>
<td><strong>No. of cylinders</strong></td>
<td>V6</td>
<td>V6</td>
<td>V8</td>
<td>V6</td>
</tr>
<tr>
<td><strong>Max. torque in Nm (1080/min)</strong></td>
<td>1530</td>
<td>1850</td>
<td>2300</td>
<td>1530</td>
</tr>
<tr>
<td><strong>Euro Standard</strong></td>
<td>2*</td>
<td>2*</td>
<td>2*</td>
<td>2*</td>
</tr>
<tr>
<td><strong>S (F07) short</strong></td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td><strong>M (F05) medium</strong></td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td><strong>L (F04) long</strong></td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td><strong>Wheel configuration</strong></td>
<td>4x2</td>
<td>4x4</td>
<td>6x4</td>
<td>4x2</td>
</tr>
<tr>
<td><strong>Wheelbase (mm)</strong></td>
<td>4500</td>
<td>4500</td>
<td>5400</td>
<td>3900</td>
</tr>
</tbody>
</table>

**Technically permitted axle loads and weights (kg):**
- **1A**: 7500
- **2A**: 13
- **3A**: 13
- **4A**: 13
- **Total**: 20, 20, 20, 33, 33, 33, 38, 38, 40, 40, 40, 40

**Vehicle types:**
- **A**: All-wheel-drive rigid
- **AK**: All-wheel-drive tipper
- **AS**: All-wheel-drive tractor
- **B**: Concrete mixer
- **K**: Tipper
- **S**: Tractor

**Wheel configurations:**
- **4x2**: 2-axle vehicle with driven rear axle
- **4x4**: 2-axle vehicle with all-wheel drive
- **6x4**: 3-axle vehicle with two driven rear axles
- **6x6**: 3-axle vehicle with all-wheel drive
- **8x4/4**: 4-axle vehicle with two driven rear axles and two steered front axles
- **8x6/4**: 4-axle vehicle with three driven axles
- **8x8/4**: 4-axle vehicle with four driven axles

**Other Euro Standards/outputs available:**
- **1A**: 1st axle
- **2A**: 2nd axle
- **3A**: 3rd axle
- **4A**: 4th axle

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**Gearbox designation example:** G 240-16
- **G**: Gearbox
- **240**: Max. input torque
- **16**: No. of speeds