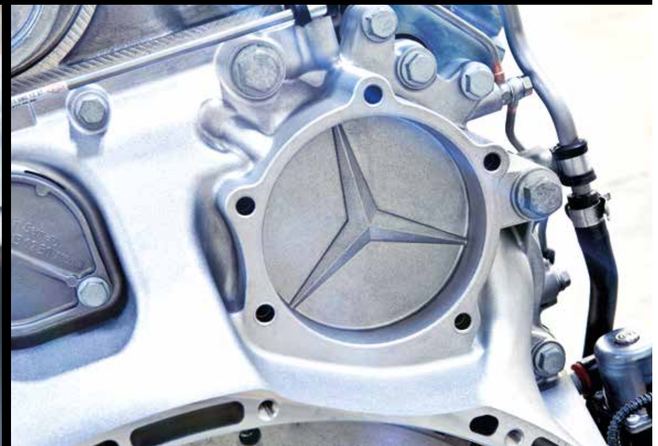
Mercedes-Benz Powertrain

Portfolio Truck EURO VI.

Mercedes-Benz

Welcome to the Mercedes-Benz Powertrain. Leading in technology and efficiency.



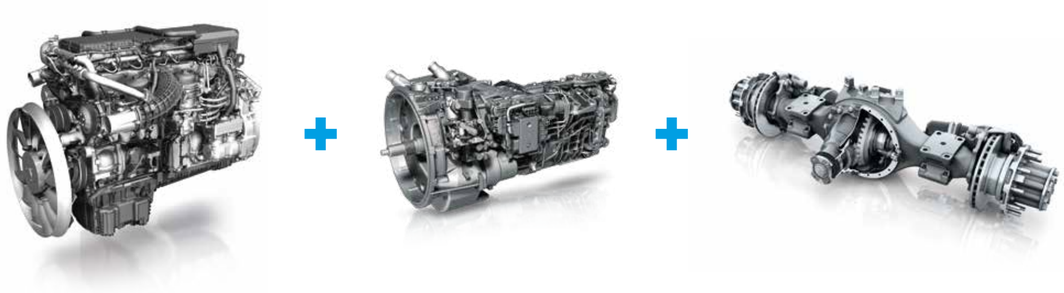
Content

Going the extra mile. Mercedes-Benz Powertrain.

Mercedes-Benz Powertrain offers outperforming and individual engineered aggregates: engine systems, Transmissions and axles – each will provide our customers with the **highest durability and quality at the same time.**

Together, they compose an even more sophisticated, technologically advanced and with regards to efficiency, unbeatable powertrain.

Let's develop together the best individual solution for your success.



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Benefits **for you.**

Integrated Powertrain:

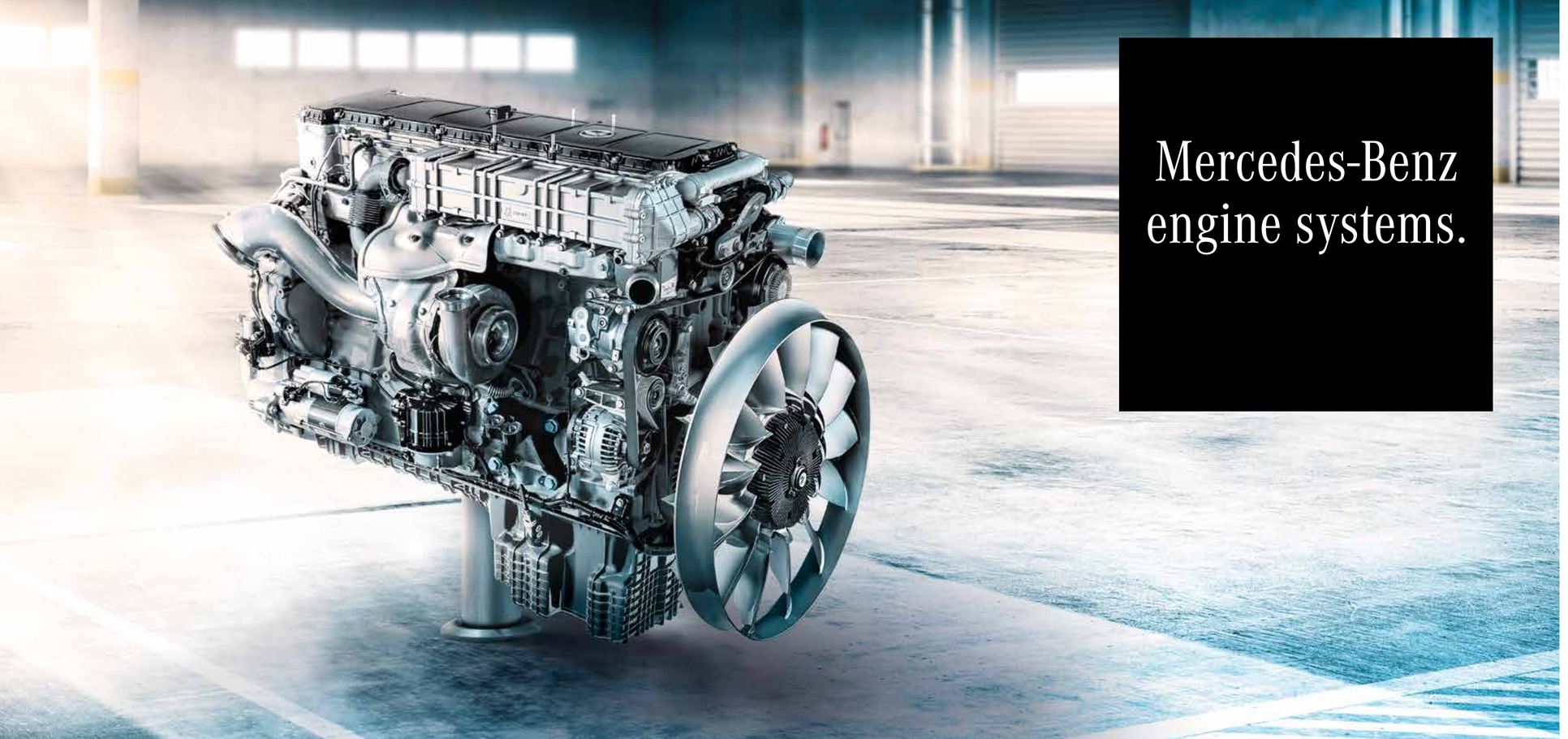
- ✓ Reduces integration efforts
- ✓ One Key Account Manager as main contact partner
- ✓ One system supplier for your individual powertrain solution
- ✓ One contractual partner

All aggregates:

- ✓ Premium Mercedes-Benz quality standards due to the production on our high volume production lines
- ✓ Overall robust and reliable powertrain solutions provide a long lifetime for your aggregates
- ✓ Leads to an optimized system setup due to common electric and electronic architecture (EE architecture) for efficient interaction of all aggregates
- ✓ One electronic tool for end of line commissioning and diagnosis requires less training for your engineering group and After-Sales team
- ✓ High invest in Mercedes-Benz R&D assures state-of-the-art quality

Benefits **for your customers.**

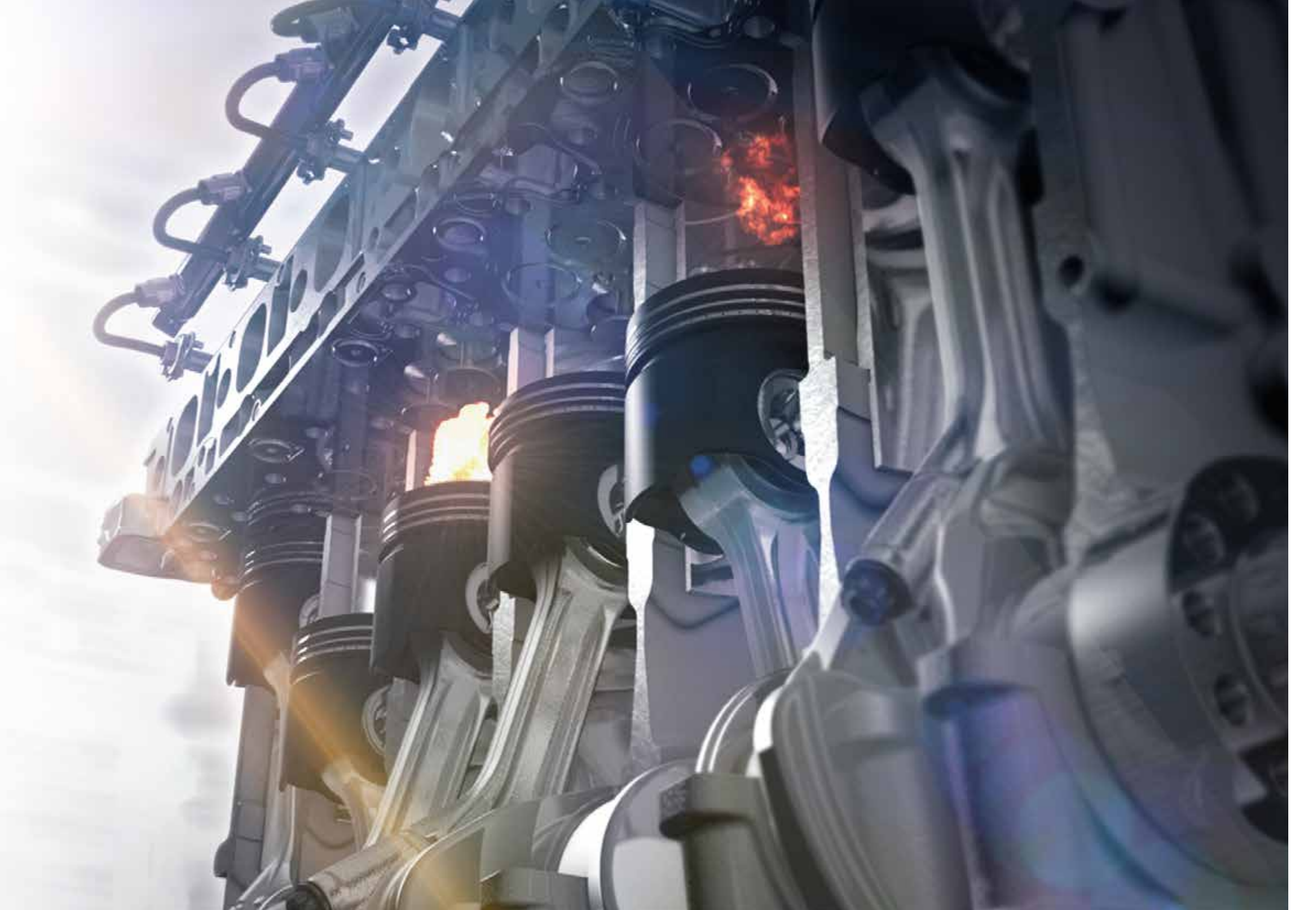
- ✓ Provides optimized fuel efficiency by specially composed powertrain solutions
- ✓ Ensures robust and reliable performance in every scenario of operation
- ✓ Increases the resale value of the vehicles due to the highest quality standards offered by Mercedes-Benz
- ✓ Minimizes downtimes as our worldwide after-sales network covers warranty and policy from one source
- ✓ Synchronized maintenance intervals and repair worldwide via our one-stop shop logic for the complete powertrain



Mercedes-Benz engine systems.

OM 93X and OM 47X model series.

Outstanding design and efficiency. Specifically developed to comply with the EURO VI emission standard.



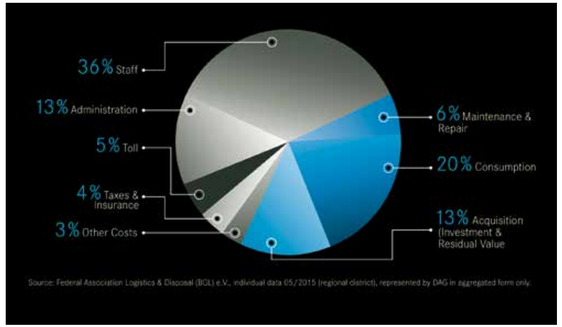
Our engine product portfolio: TCO reduction at its best.

Bringing together the very latest innovative engine technology, they are designed with a rigorous **focus on environment conservation, effectiveness and performance.**

The benefits for our customers are **low fuel consumption, long engine life and extended maintenance intervals.** Our engines deliver a spontaneous response, impressive power output and the smoothest running characteristics.

Based on these characteristics our engines in all series are ideal for short radius distribution, construction site transport and long distance haulage.

Due to numerous technical innovations, the current 4- and 6-cylinder in-line engines from Mercedes-Benz provide fuel savings of up to 3 percent compared to the previous generation. The 6-cylinder in-line engines are distinguished, depending on the model series, by a robust design with sturdy steel pistons, two overhead camshafts with high-efficiency gear train, an asymmetric turbocharger or turbo-compound technology as well as powerful engine brakes and the one-of-a-kind X-Pulse common-rail injection system with pressure booster. The asymmetric injection and combustion as well as the exhaust gas recirculation were also optimized to design the engines systematically for low fuel consumption and improved exhaust gas quality.



Derivation "Nomenclature" – engines.

OM = Oil (diesel) engine

Medium-duty = OM 934, OM 936
Heavy-duty = OM 470, OM 471, OM 473

3 = Medium-duty engine
5-7 = Heavy-duty engine

OM | **9** | **3** | **6**

9 = 93X model series (MD)
4 = 47X model series (HD)

4 = L4 cylinder engine (5.1 l)
6 = L6 cylinder engine (7.7 l)
0 = L6 cylinder engine (10.7 l)
1 = L6 cylinder engine (12.8 l)
3 = L6 cylinder engine (15.6 l)

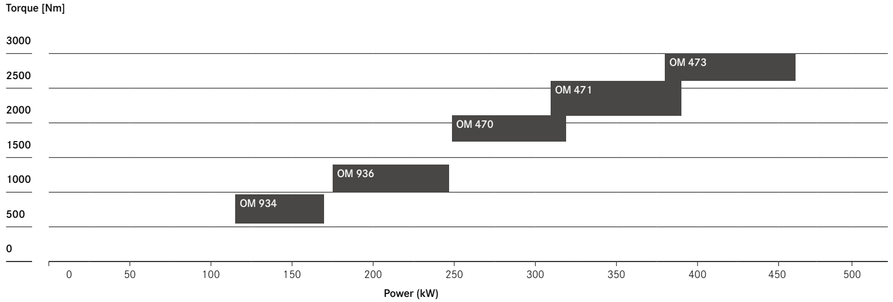
Engine systems for EURO VI.

Portfolio of EURO VI engines for trucks

Model series	Type	Cylinder	Displ. [liters]	Power range [kW]
OM 93X Medium-duty	934	L4	5.1	115 130 155 170
	936	L6	7.7	175 200 220 235 260
OM 47X Heavy-duty	470	L6	10.7	240 265 290 315 335
	471	L6	12.8	310 330 350 375 390
	473	L6	15.6	380 425 460

100 200 300 400

Power range of the EURO VI engines for trucks



Medium-duty engine systems.

Always in their element. Whatever the terrain.

Your product benefits for medium-duty engine systems:

- 4- and 6-cylinder diesel engines in an **in-line arrangement** with **cooled exhaust gas recirculation**
- **Displacement** of 5.1 and 7.7 liters
- **Output** of 115 up to 260 kW
- **Special combustion system** to minimize fuel consumption
- **Common rail injection system** up to 2400 bars and multiple injection
- **Tailor-made charging system** with 1- and 2-stage turbochargers
- Future-proof **valve timing gear** with 2 overhead camshafts and 4-valve technology
- Powerful and dynamic **engine brakes** with up to 300 kW brake power
- Multiple **power take-off** options
- **“One box”** exhaust after-treatment with SCR and DPF

OM 934

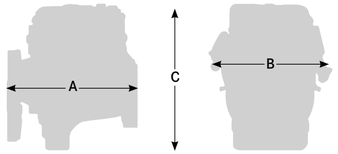
Arrangement: In-line 4
Displacement: 5.1 l

Weight and dimensions*

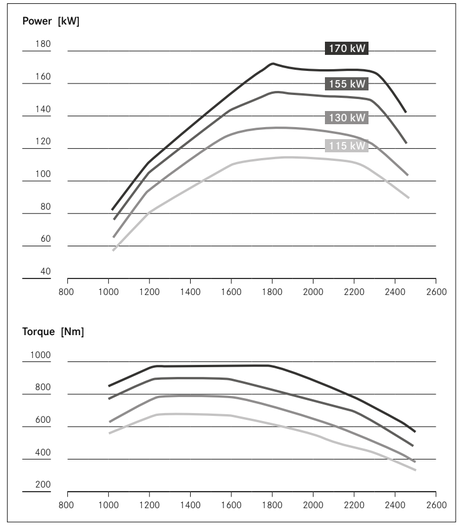
Weight
DIN 70020 - GZ 495 kg (single stage charger)
DIN 70020 - GZ 510 kg (dual stage chargers)

Dimensions
A = length 980 mm
B = width 910 mm
C = height 1025 mm

* depending on equipment installed



Performance



Rated power and maximal torque

		115/156	130/177	155/211	170/231
Rated power	[kW/hp]	**115/156**	**130/177**	**155/211**	**170/231**
at engine speed	[rpm]	1800	1800	1800	1800
Maximal torque	[Nm]	650	750	850	900
at engine speed	[rpm]	1200–1600	1200–1600	1200–1600	1200–1800

OM 936

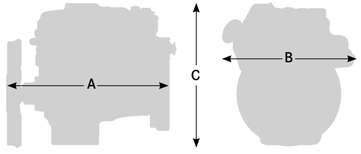
Arrangement: In-line 6
Displacement: 7.7 l

Weight and dimensions*

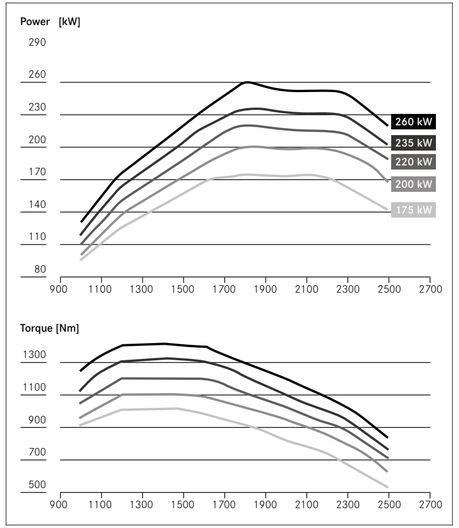
Weight
DIN 70020 - GZ 652 kg (single stage charger)
DIN 70020 - GZ 666 kg (dual stage chargers)

Dimensions
A = length 1290 mm
B = width 1050 mm
C = height 1050 mm

* depending on equipment installed



Performance



Rated power and maximal torque

		175/238	200/272	220/299	235/320	260/354
Rated power	[kW/hp]	**175/238**	**200/272**	**220/299**	**235/320**	**260/354**
at engine speed	[rpm]	1800	1800	1800	1800	1800
Maximal torque	[Nm]	1000	1100	1200	1300	1400
at engine speed	[rpm]	1200–1600	1200–1600	1200–1600	1200–1600	1200–1600

Heavy-duty engines.

Always giving 100 %.

Your product benefits for heavy-duty engines:

- 6-cylinder diesel engines in an **in-line arrangement** with **cooled exhaust gas recirculation**
- **Displacement** of 10.7 to 15.6 liters
- **Output** of 240 up to 460 kW
- **Special combustion system** to minimize fuel consumption
- This engine generation combines **high performance** with **low fuel consumption**
- **Common rail injection system** up to 2700 bars
- 1-stage **turbocharger** with asymmetrical turbine geometry
- **15.6 liter variant** with a standardly turbo compound
- Future-proof **valve timing gear** with 2 overhead camshafts and 4-valve technology
- Powerful and dynamic **engine brakes** with up to 480 kW brake power
- Additional **power take-off** options
- **“One box” exhaust after-treatment** with SCR and DPF

OM 470

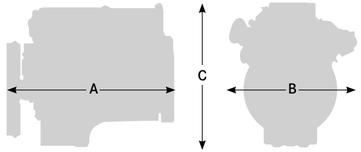
Arrangement: In-line 6
Displacement: 10.7 l

Weight and dimensions*

Weight
DIN 70020 - GZ 956 kg

Dimensions

A = length	1469 mm
B = width	1115 mm
C = height	1190 mm

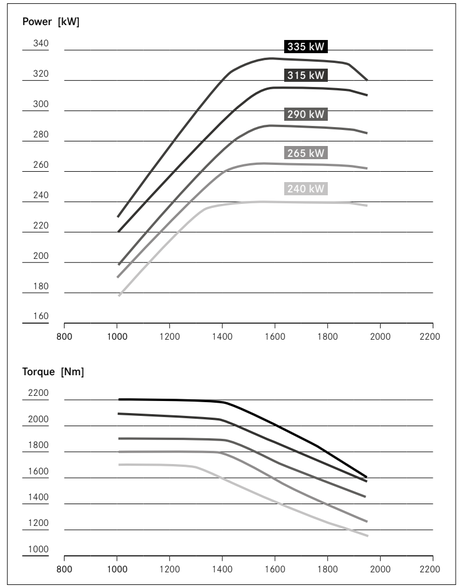


* depending on equipment installed

Rated power and maximal torque

Rated power	[kW/hp]	**240/326**	**265/360**	**290/394**	**315/428**	**335/456**
at engine speed	[rpm]	1600	1600	1600	1600	1600
Maximal torque	[Nm]	1700	1800	1900	2100	2100
at engine speed	[rpm]	1100	1100	1100	1100	1100

Performance



OM 471

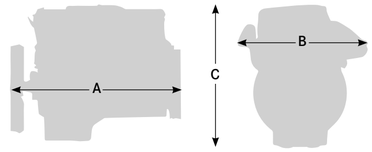
Arrangement: In-line 6
Displacement: 12.8 l

Weight and dimensions*

Weight
DIN 70020 - GZ 1091 kg

Dimensions

A = length	1544 mm
B = width	1115 mm
C = height	1190 mm

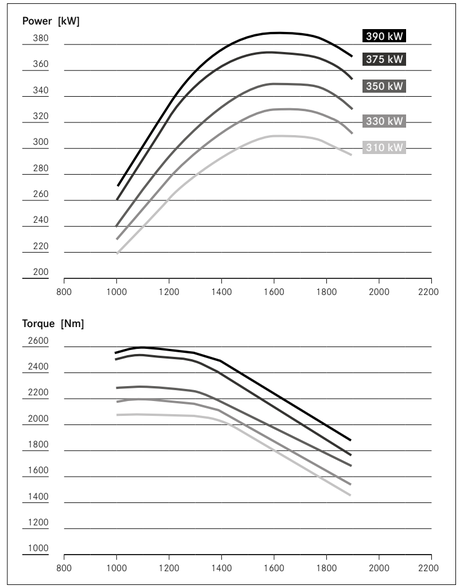


* depending on equipment installed

Rated power and maximal torque

Rated power	[kW/hp]	**310/422**	**330/449**	**350/476**	**375/510**	**390/530**
at engine speed	[rpm]	1600	1600	1600	1600	1600
Maximal torque	[Nm]	2100	2200	2300	2500	2600
at engine speed	[rpm]	1100	1100	1100	1100	1100

Performance



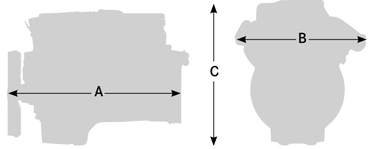
OM 473

Arrangement: In-line 6
Displacement: 15.6 l

Weight and dimensions*

Weight
DIN 70020 - GZ 1240 kg

Dimensions
A = length 1595 mm
B = width 1120 mm
C = height 1210 mm

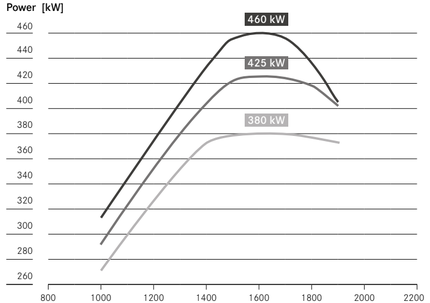


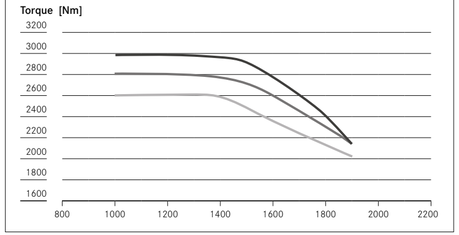
* depending on equipment installed

Rated power and nominal torque

		380/517	425/578	460/626
Rated power	[kW/hp]	**380/517**	**425/578**	**460/626**
at engine speed	[rpm]	1600	1600	1600
Maximal torque	[Nm]	2600	2800	3000
at engine speed	[rpm]	1100	1100	1100

Performance





Clean from start to finish.

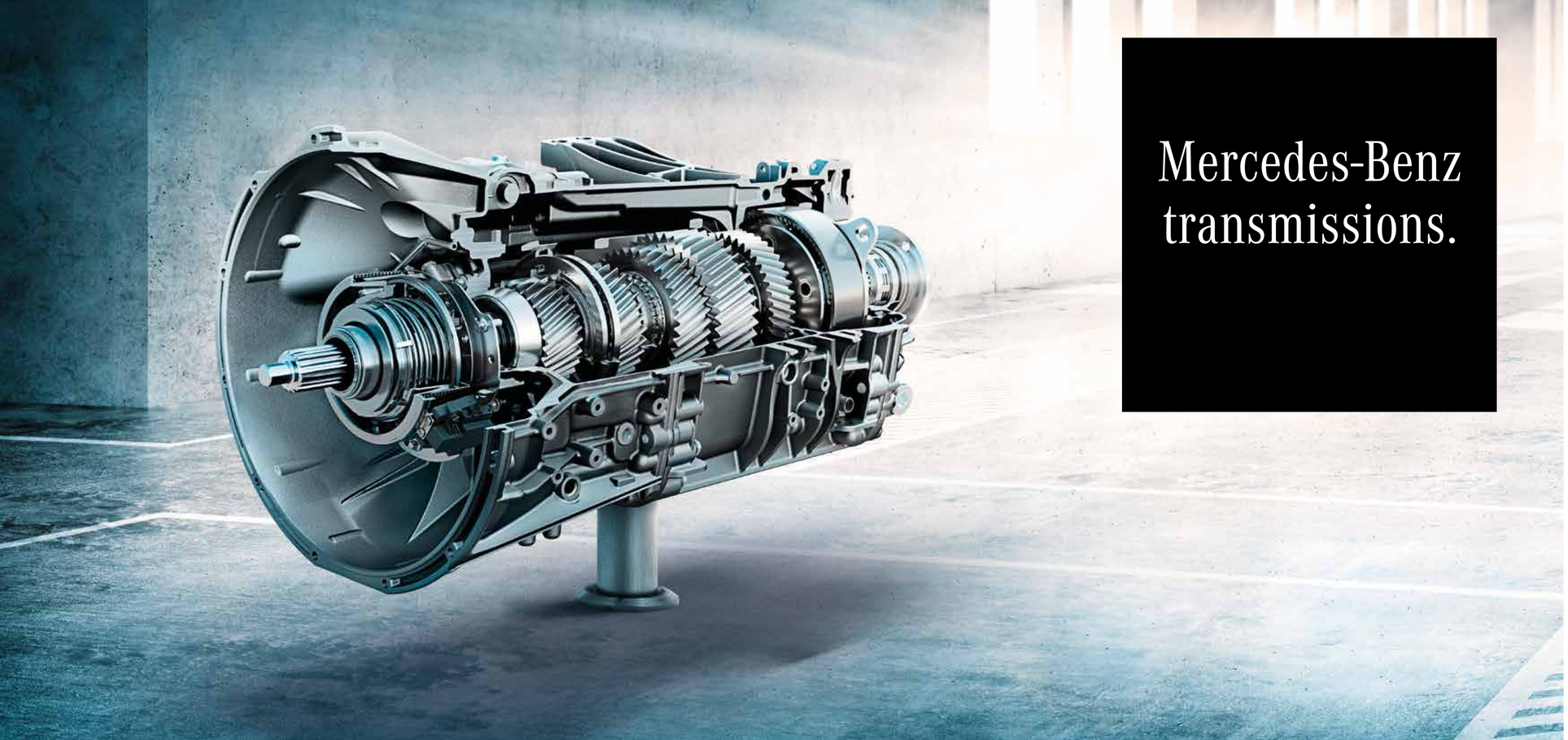
Your product benefits for the after-treatment system:

- Low exhaust **back pressure**
- Significant **NOx reduction** at a broad range of exhaust gas volume flows and exhaust gas temperatures
- Maximum possible **soot burn-off** in the diesel particulate filter (DPF) by means of automatic regeneration
- In addition, adaptive **regeneration of the DPF** in all relevant driving cycles
- Large capacity for **ash storage** in the DPF to make maintenance intervals as long as possible
- Small **installation space** and low weight
- Long **service lifetime**, adapted to the engine's service lifetime
- Consistent **common parts strategy**
- Many different **variants** for exhaust gas inlet and outlet
- Metering of **AdBlue©** without compressed air; very low AdBlue© consumption

In view of the high requirements stipulated by the EURO VI emission standard, Mercedes-Benz has developed **cooled exhaust gas recirculation (EGR), particulate filters and SCR technology** for its new generation of engines.

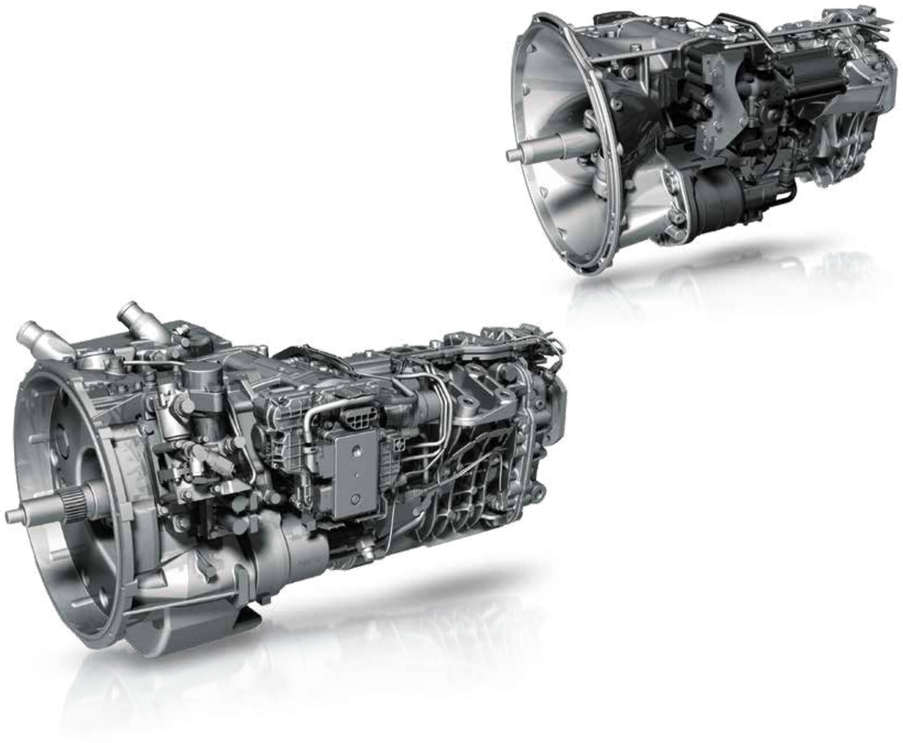
This has already proven to be a winning combination in its use in commercial vehicles from Daimler Trucks. Together, the systems results in an extremely efficient exhaust after-treatment.

EURO VI exhaust after-treatment system.



Mercedes-Benz transmissions.

Reliable transmissions for a wide range of applications.



Our transmission product portfolio: Smooth operation in every situation.

Our range of service extends from 9-speed to 16-speed transmissions for heavy-duty commercial vehicles and cranes as well as for special vehicles. An extensive selection of power take-off units, transfer cases and several circuit variants ensure that a custom-made transmission can be developed from standardized components. All transmissions are manufactured on a large scale by Mercedes-Benz Commercial Vehicles and are engineered to meet the highest standards of technology and quality.

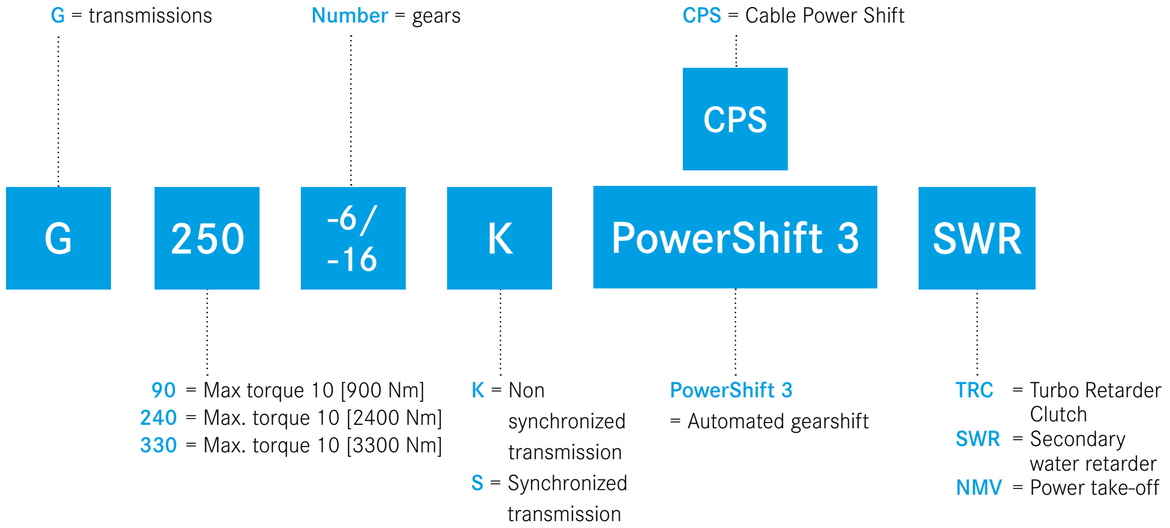
Meeting the demands of our customers is the focus of our work. We feel committed to advancing the design of our systems in a consistent and innovative way in-line with market and customer requirements.

Our know-how is based on decades of experience in the manufacturing and development of commercial vehicle transmissions. This manufacturing expertise distinguishes our transmissions today particularly by three features:

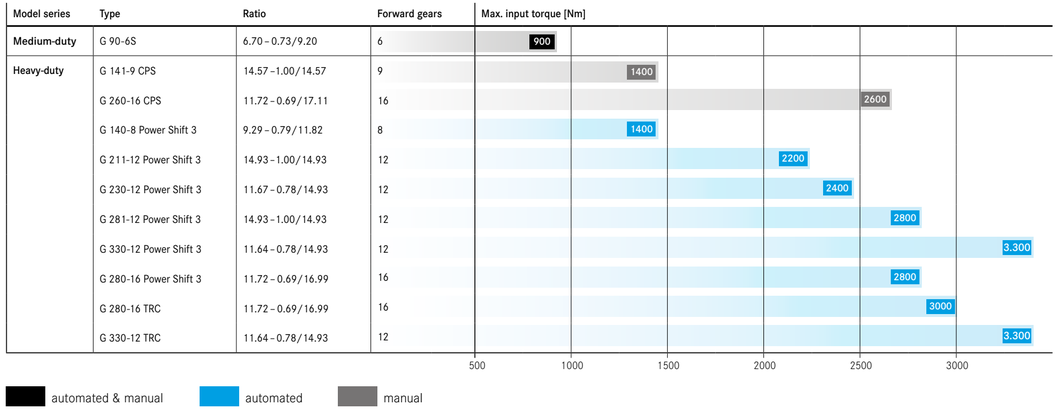
- **Very smooth running characteristics**
- **Low weight**
- **Extreme durability**

In future, we will continue to stand for innovative products focused on customer-oriented applications.

Derivation "Nomenclature" – transmissions.



Transmissions for EURO VI engines.



Meaning of symbols:

MT Manual shifted transmission

AMT Fully automated manual transmission

Transmission for medium-duty trucks

Transmission for heavy-duty trucks & special vehicles

Transmission for cranes

Medium-duty transmissions.

Redefining efficiency.

Your product benefits for medium-duty transmissions:

- **6-speed** transmissions
- Resilient to 900 Nm **max. input torque**
- Manual and fully automated **shifting systems**
- **Gear ratio** spread from 8.00 to 9.20
- Permissible max. **gross combination weight** (GCW) up to 28 t
- Highly variable **modular systems** for customer-specific system solutions
- Quiet **running characteristics** and **long service life** through optimized gear set geometry and high-precision **processing technologies**
- Long **service intervals** and low **operating costs** due to a **fuel-efficient design** optimized for specific operating condition
- More comfortable **vibration characteristics** due to an integrated engine suspension on the transmission housing

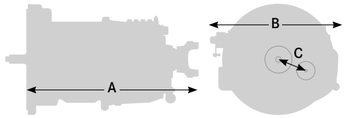
G 90-6S

MT AMT

- 6-speed synchronized transmission with a wide gear ratio spread
- SAE 2 or SAE 3 clutch housing available
- Overdrive configuration
- Hydrodynamic retarder can be adapted

Specifications and dimensions

Max. input torque	1000 Nm
Permissible gross combination weight (GCW)	28 t
Transmission weight excl. oil	138.5 kg/ 191.5 kg*
Oil filling capacity	9 l
A = length	709 mm
B = width	562 mm
C = center to center	130 mm



* with retarder

Gear	1	2	3	4	5	6	7	8	R	Gear ratio spread
Ratio	6.696	3.806	2.289	1.480	1.000	0.728	6.294	9.20	13.862	14.573

Heavy-duty transmissions.

Hard-working and resilient.

Your product benefits for heavy-duty transmissions:

- **9- to 16-speed** manual and automated shifted manual transmissions
- **Max. input torque** from **1400 Nm to 3300 Nm**
- **Gear ratio** spread from 11.82 to 17.17
- Max. permissible **gross combination weight** (GCW) from 32 to 60 t (250 t)
- **Secondary water** retarder can be adapted
- Highly variable **modular systems** for customer-specific system solutions
- Quiet running and **long service life** through optimized gear set geometry and high-precision processing technologies
- **Compact design** and **weight-optimized** metal housing for ideal installation dimensions and an ideal power/weight ratio
- **Long service intervals** and low operating costs due to a fuel-efficient design optimized for specific operating condition
- **More comfortable vibration characteristics** due to an integrated engine suspension on the transmission housing

G 141-9 CPS

MT

- Direct-drive transmission with 9 gears and a wide gear ratio spread
- Economical gear ratio stepping (including small step increment between 7th and 8th gear)

Specifications and dimensions

Max. input torque	1400 Nm
Permissible gross combination weight (GCW)	44 t
Transmission weight excl. oil	210 kg
Oil filling capacity	11 l
A = length	914 mm
B = width	557 mm
C = center to center	142 mm

Gear	1	2	3	4	5	6	7	8	R	Gear ratio spread
Ratio	9.748	6.635	4.821	3.667	2.585	1.810	1.315	1.000	13.862	14.573

G 260-16 CPS

MT

- 16-speed synchronized transmission with a wide gear ratio spread
- Overdrive configuration
- Secondary water retarder can be adapted

Specifications and dimensions

Max. input torque	2600 Nm
Permissible gross combination weight (GCW)	55 t
Transmission weight excl. oil	290 kg/ 333 kg*
Oil filling capacity	14 l
A = length	1033.5 mm
B = width	557 mm
C = center to center	152 mm

* with retarder

Gear	1	2	3	4	5	6	7	8	R	Gear ratio spread
i_S	11.722	7.916	5.291	3.636	2.664	1.799	1.203	0.826	10.656	17.11
i_L	9.747	6.583	4.400	3.023	2.215	1.496	1.000	0.687	8.861	17.11

G 140-8 PowerShift 3

AMT

- 8-speed none synchronized transmission with a wide gear ratio spread
- Overdrive configuration
- SAE 1 or SAE 2 clutch housing available

Specifications and dimensions

Max. input torque	1400 Nm
Permissible gross combination weight (GCW)	32 t
Transmission weight excl. oil	189 kg
Oil filling capacity	10.5 l
A = length	765 mm
B = width	555 mm
C = center to center	152 mm

Gear	1	2	3	4	5	6	7	8	R 1	R 2	Gear ratio spread
Ratio	9.296	5.837	3.673	2.306	1.593	1.252	1.000	0.786	8.538	5.361	11.82

G 211-12 PowerShift 3

AMT

- 12-speed none synchronized transmission with a wide gear ratio spread
- Direct-drive configuration
- Secondary water retarder can be adapted

Specifications and dimensions

Max. input torque	2100 Nm
Permissible gross combination weight (GCW)	44 t
Transmission weight excl. oil	235 kg/ 278 kg*
Oil filling capacity	10 l
A = length	964 mm
B = width	596 mm
C = centre to center	142 mm

* with retarder

Gear	1	2	3	4	5	6	R	Gear ratio spread
i_S	14.930	9.024	5.628	3.393	2.051	1.279	14.930	14.93
i_L	11.673	7.056	4.400	2.653	1.604	1.000	11.673	14.93

G 230-12 PowerShift 3

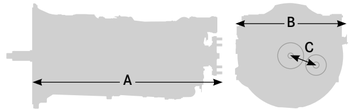
AMT

- 12-speed none synchronized transmission with a wide gear ratio spread
- Overdrive configuration
- Secondary water retarder can be adapted

Specifications and dimensions

Max. input torque	2300 Nm
Permissible gross combination weight (GCW)	45 t
Transmission weight excl. oil	235 kg/ 278 kg*
Oil filling capacity	10 l
A = length	964 mm
B = width	596 mm
C = center to center	142 mm

* with retarder



Gear	1	2	3	4	5	6	7	8	R 1	R 2	Gear ratio spread
i_S	11.673	2.653	4.400	2.653	1.604	1.000	11.673	2.653	14.96	2.422	14.93
i_L	9.101	2.068	3.431	2.068	1.205	0.780	9.101	2.068	14.96	2.014	14.93

G 281-12 PowerShift 3

AMT

- 12-speed none synchronised transmission with a wide gear ratio spread
- Direct-drive configuration
- Secondary water retarder can be adapted

Specifications and dimensions

Max. input torque	2800 Nm
Permissible gross combination weight (GCW)	60 t
Transmission weight excl. oil	287 kg/ 330 kg*
Oil filling capacity	14 l
A = length	1033.5 mm
B = width	624 mm
C = center to center	152 mm

* with retarder

Gear	1	2	3	4	5	6	R1	R2	Gear ratio spread
i_S	14.930	9.024	5.628	3.393	2.051	1.279	14.93	2.422	14.93
i_L	11.673	7.056	4.400	2.653	1.604	1.000	14.93	2.014	14.93

G 330-12 PowerShift 3

- 12-speed none synchronized transmission with a wide gear ratio spread
- Overdrive configuration
- Secondary water retarder can be adapted

Specifications and dimensions

Max. input torque	3300 Nm
Permissible gross combination weight (GCW)	60 t
Transmission weight excl. oil	287 kg/ 330 kg*
Oil filling capacity	14 l
A = length	1033.5 mm
B = width	624 mm
C = center to center	152 mm

* with retarder

Gear	1	2	3	4	5	6	R 1	R 2	Gear ratio spread
i_S	12.774	2.093	4.400	2.645	1.599	1.000	14.90	2.422	14.93
i_L	9.900	2.250	3.410	2.050	1.239	0.775	14.90	2.014	14.93

G 280-16 PowerShift 3

- 16-speed none synchronized transmission with a wide gear ratio spread
- Overdrive configuration
- Secondary water retarder can be adapted

Specifications and dimensions

Max. input torque	2800 Nm
Permissible gross combination weight (GCW)	60 t
Transmission weight excl. oil	294 kg/ 337 kg*
Oil filling capacity	14 l
A = length	1033.5 mm
B = width	624 mm
C = center to center	152 mm

* with retarder

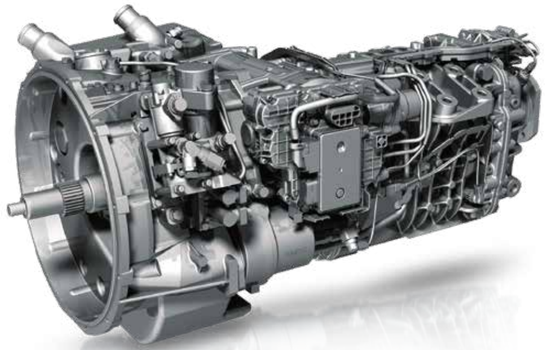
Gear	1	2	3	4	5	6	7	8	R 1	R 2	Gear ratio spread
i_S	11.722	7.916	5.291	3.636	2.664	1.799	1.203	0.826	10.656	2.422	16.99
i_L	9.747	6.583	4.400	3.023	2.215	1.496	1.000	0.687	8.861	2.014	16.99

TRC transmission for extreme applications.

AMT TRC = turbo retarder clutch

Automated none synchronized transmission including TRC
The innovative TRC starting and braking element unites hydrodynamic start-up and hydrodynamic braking functions into one system. Unlike conventional torque converter solutions, engine output is transferred by a fill level regulated, fluid turbo coupling.

- Wear-free start-up and maneuvering due to the hydrodynamic transfer of power with no time limit due to variable turbo coupling input.
- In conjunction with the large gear ratio spread, it is possible to maneuver heavy loads with millimeter precision, even when tractional resistance is high.
- Braking with no wear due to integrated primary retarder function and patented coupling configuration.



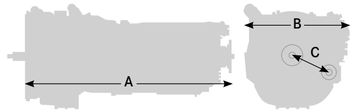
G 280-16 TRC

AMT

- 16-speed none synchronized transmission with a wide gear ratio spread
- Overdrive configuration

Specifications and dimensions

Max. input torque	3000 Nm
Permissible gross combination weight (GCW)	250 t
Transmission weight excl. oil	455 kg
Oil filling capacity	13,5 l
A = length	1200 mm
B = width	690 mm
C = center to center	152 mm



Gear	1	2	3	4	5	6	7	8	R 1	R 2	Gear ratio spread
Ratio	11.722	7.916	5.291	3.636	2.664	1.799	1.203	0.826	10.656	2.422	16.99
Ratio	9.747	6.583	4.400	3.023	2.215	1.496	1.000	0.687	8.861	2.014	16.99

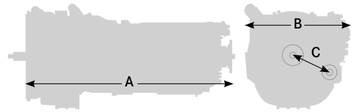
G 330-12 TRC

AMT

- 12-speed none synchronized transmission with a wide gear ratio spread
- Overdrive configuration

Specifications and dimensions

Max. input torque	3300 Nm
Permissible gross combination weight (GCW)	250 t
Transmission weight excl. oil	455 kg
Oil filling capacity	14 l
A = length	1200 mm
B = width	690 mm
C = center to center	152 mm



Gear	1	2	3	4	5	6	R 1	R 2	Gear ratio spread
i_S	12.774	2.093	4.400	2.645	1.599	1.000	14.90	2.422	14.93
i_L	9.900	2.250	3.410	2.050	1.239	0.775	14.90	2.014	14.93

The **integrated secondary water retarder** offers a **high braking torque in combination with a compact, weight-saving design**. The weight advantage of the new retarder is about 43 kg (SWR) compared to previous oil retarders. The braking power of the retarder is also independent of selected gear or current engine speed.

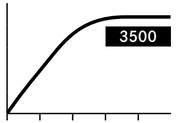
A gear change does **not** result in **any interruption** in the retarder braking action and the retarder braking power depends only on the current driving speed. The braking power can be controlled precisely in **five stages** using the right hand control stalk on the steering column. In addition to the engine brake, the retarder provides a **maximum braking torque up to 3500 Nm.**

Secondary water retarder.*

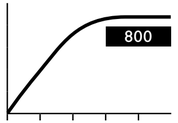
Your product benefits:

- **Reduction of friction** by **axial rotor displacement**
- **No heat exchanger** required since the cooling water is used as the operating medium directly
- Compact unit requires only **minimal installation space**
- **Freedom from maintenance** for reduced vehicle service costs
- **Significantly lighter** than comparable hydrodynamic retarder
- **Increased comfort** through low noise emission
- **Integration** into the vehicle management
- Between 20 – 30 % higher constant brake power than current oil retarders

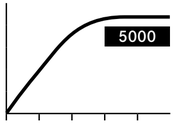
*Not available with TRC



max. braking torque [Nm]



max. braking power [kW]



max. rotation [min -1]

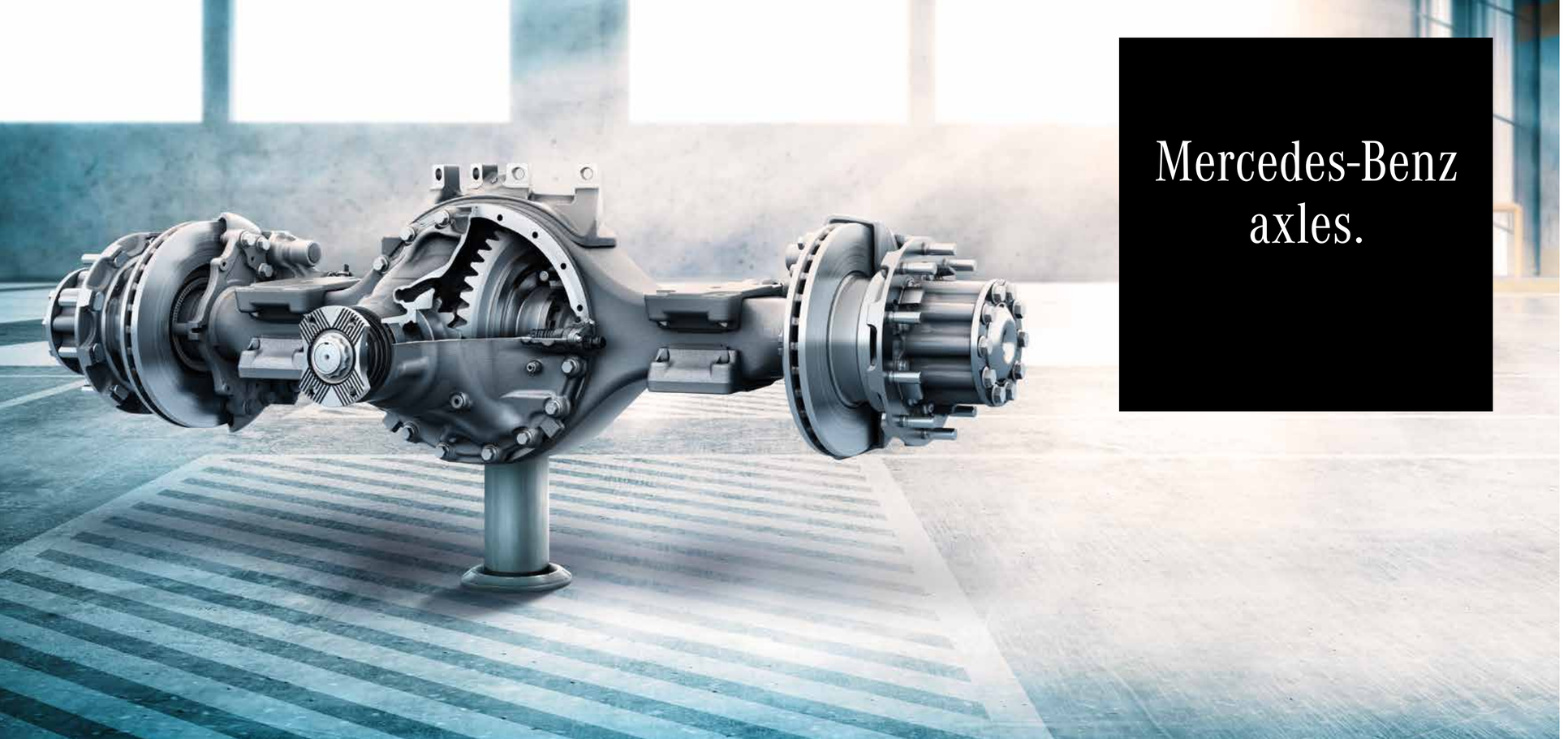
PTO rear side of transmission (working only when truck is not driving or in one of the start up gears)

PTO model		Max. torque	Vehicle type
NA 121		1000 Nm	Small dumper trucks
NA 131		400 Nm	Heavy dumper trucks
NA 123		650 Nm	Silo vehicle
NA 124		650 Nm	Fire truck Silo vehicle Concrete pump
NA 125		600 Nm	Fire truck Garbage truck Concrete pump
NA 135		600 Nm	Fire truck Garbage truck Concrete pump

PTO between engine and transmission (working while the truck is stopping or driving)

NMV		Output torque depends on PTO Max. engine torque depends on maximal available engine torque (max. 3300 Nm)	Concrete pump Crane Airport firefighters Suctions pump vehicles

Power take-off (PTO).



Mercedes-Benz axles.

Reliable axles for every applications.

Derivation "Nomenclature" – axles.

Non-driven axles

F = Front axle

F 9

Number = Axle load [t]

Driven axles

R = Rear axle
RT = Rear axle tandem
FD = Front axle driven
FT = Front axle tandem driven

R 440

Number = Ring gear diameter [mm]

The right axle for every application.

Axle portfolio: front axles* and rear axles.

	Vehicle category	Front axles*	Tire size [inches]	Axle load [t]	Rear axles	Tire size [inches]	Axle load [t]
	Light-duty	F 4.1 – F 4.4	17.5	to 4.4	R 325	17.5	6 – 8.3
	Medium-duty	F 5.3 – F 6.1	19.5/20/22.5	5.3 – 6.1	R 390	19.5/20/22.5	9.2 – 11
		FD 346 – FD 360	20/22.5	4.7 – 6			
	Heavy-duty	F 7.5 – F 8	20/22.5	7.5 – 8	R 440	22.5	13
					R 485	22.5	13
					R 233 P – R 300 P	20/22.5/24	13.4 – 16
		F 9 – F 9.5	20/22.5	9	RT 390 + RT 390 T **	22.5	20
		FD 233 P	20/22.5/24	7.5 – 9	RT 440 + R 440 **	22.5	26
		FD 233 P** FT 233 P +	20/22.5/24	18	RT 300 P + R 300 P **	20/22.5/24	26.8–32

4 6 8 10 15 20 25 30

* front axles are applicable as steered tag and pusher axles ** tandem

Meaning of symbols:

FA Front axles

RA Rear axles

Axles for light-duty trucks

Axles for medium-duty trucks

Axles for heavy-duty trucks

Our axle product portfolio: Efficiency on demand.

Our product range consists of axles for a broad range of commercial vehicles. This portfolio is highly suitable for nearly all commercial categories, in urban areas or overland, from delivery to heavy trucks.

We use our customers' experience, their requirements and demands as an essential precondition in the development of new axle technologies.

Our innovative state-of-the-art engineering and our quality-driven plants in Germany give our axles outstanding performance in:

- **Durability**
- **Fuel efficiency**
- **Noise behaviour**

Top vehicle manufacturers around the world trust on the outstanding quality and performance of our axles and the reliability of our services. We are one of the world's biggest producers of commercial axles and we want so share our experience and technology with you.

Convince yourself and discover the advantages of Mercedes-Benz axles.

Front axles.

Flexibility at high level.

Your product benefits for front-axles:

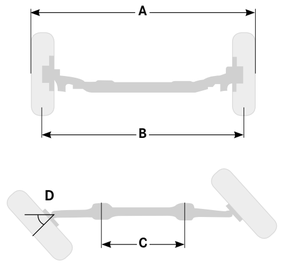
- Tire sizes from **17.5 to 24 inches**
- Driven front axles **for light-, medium- and heavy-duty applications**
- Axle loads from **3.5 to 9 t** (per axle)
- Gross vehicle weight rating **(GVWR) from 6.5 to 250 t**
- **High fuel efficiency design** to suit the operating conditions
- Easy maintenance and **long oil change intervals**
- **Longer lifetime** and **quieter operation** due to our optimized gear set design
- **Additional payload** due to compact design and weight-optimized technical design
- Maintanance **free wheel-hubs**
- **Left or right handed** applications possible

F 4.1–F 4.4

- Steered rigid axle with forged front axle beam
- Recommended for light-duty application

Data and dimensions

Axle load	to 4.4 t
Tire size	17.5 inches
Brake	disk brake
Axle weight*	245 kg
A = overall width	2293–2303 mm
B = track width	1949–1975 mm
C = spring track	830 mm
D = max. turning angle	52°



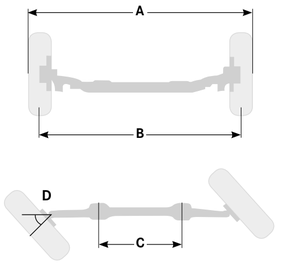
* varies depending on configuration

F 5.3–F 6.1

- Steered rigid axle with forged front axle beam
- Recommended for medium-duty application

Data and dimensions

Axle load	5.3–6.1 t
Tire size	19.5/20/22.5 inches
Brake	disk brake
Axle weight*	357 kg
A = overall width	2346–2389 mm
B = track width	1955–1991 mm
C = spring track	830 mm
D = max. turning angle	52°



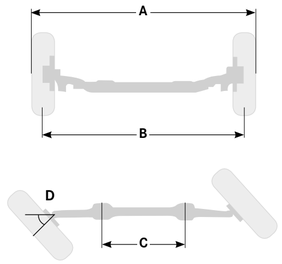
* varies depending on configuration

FD 346–FD 360

- Steered, driven salisbury-design axle
- Recommended for medium-duty application

Data and dimensions

Axle load	4.7–6 t
Tire size	20/22.5 inches
Brake	drum brake
Drive type	single-stage
Axle weight*	492 kg
A = overall width	2190–2496 mm
B = track width	1886–2098 mm
C = spring track	830/1000 mm
D = max. turning angle	39°



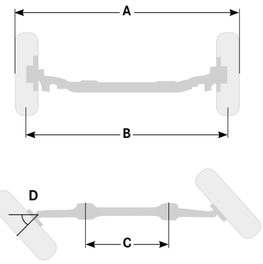
* varies depending on configuration

F 7.5–F 8

- Steered rigid axle with forged front axle beam
- Recommended for heavy-duty application

Data and dimensions

Axle load	7.5–8 t
Tire size	20/22.5 inches
Brake	disk brake/ drum brake
Axle weight*	461 kg
A = overall width	2486–2583 mm
B = track width	2046–2140 mm
C = spring track	840 mm
D = max. turning angle	52°



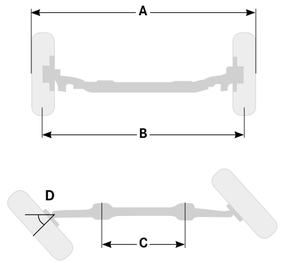
* varies depending on configuration

F 9–F 9.5

- Steered rigid axle with forged front axle beam
- Recommended for heavy-duty application

Data and dimensions

Axle load	9 t
Tire size	20/22.5 inches
Brake	disk brake/ drum brake
Axle weight*	463 kg
A = overall width	2486–2583 mm
B = track width	2046–2153 mm
C = spring track	840 mm
D = max. turning angle	48°



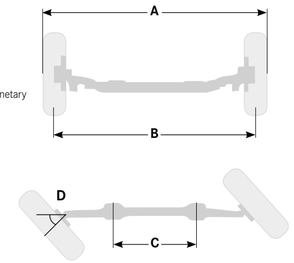
* varies depending on configuration

FD 233 P

- Steered, driven planetary axle with cast axle housing
- Recommended for heavy-duty application

Data and dimensions

Axle load	7.5–9 t
Tire size	20/22.5/24 inches
Brake	drum brake
Drive type	double reduction/planetary
Axle weight*	738 kg
A = overall width	2480–2506 mm
B = track width	1997–2092 mm
C = spring track	840/875 mm
D = max. turning angle	42°



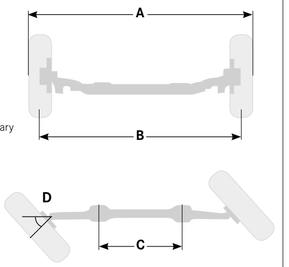
* varies depending on configuration

FD 233 P + FT 233 P

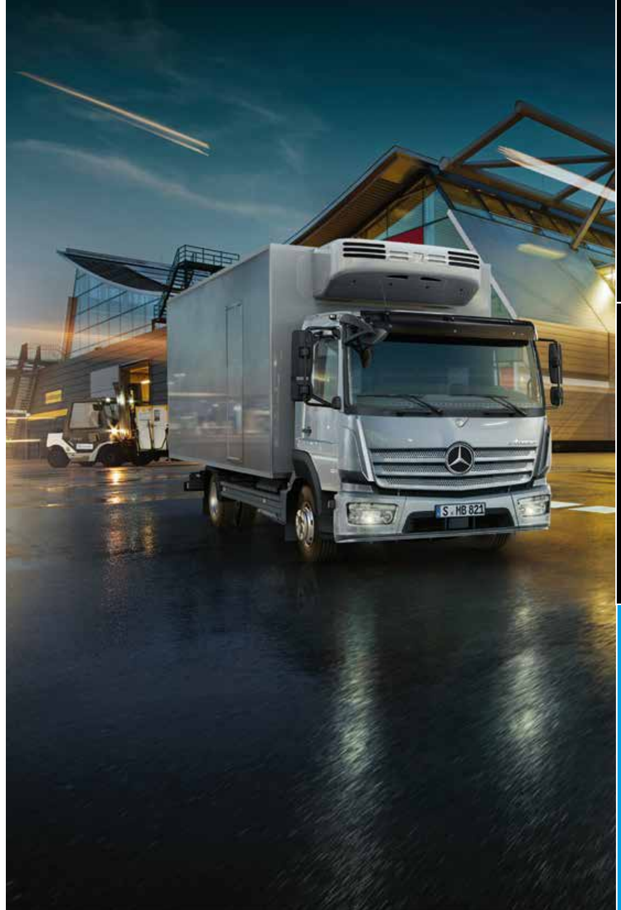
- Steered, driven planetary axle with cast axle housing, tandem
- Recommended for heavy-duty application

Data and dimensions

Axle load	18 t (tandem)
Tire size	20/22.5/24 inches
Brake	drum brake
Through-drive axle	yes
Drive type	double reduction/planetary
Axle weight*	1621 kg
A = overall width	2480–2506 mm
B = track width	1997–2092 mm
C = spring track	840 mm
D = max. turning angle	38°



* varies depending on configuration



Rear axles.

Master every challenge.

Your product benefits for rear axles:

- Tire sizes from **17.5 to 24 inches**
- **Hypoid and planetary** driven
- Ring gear diameter from **233 to 485 mm**
- Axle loads from **6 to 16 t** (per axle)
- Gross vehicle weight rating (GVWR) **from 6.5 to 250 t**
- **High fuel efficiency**
- **Easy maintenance** and long oil change intervals
- **Long lifetime** and **quiete operations** due to our optimized gear set design
- **Additional payload** due to weight optimized design
- **Maintanance free** wheel-hubs
- New Final Drive axle with active oil management reduces fuel consumption

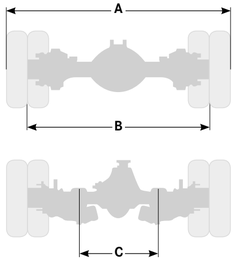
R 325

RA

- Fabricated axle housing
- Recommended for light-duty application

Data and dimensions

Axle load	6–8.3 t
Tire size	17.5 inches
Brake	disk brake
Suspension	air springs/steel springs
Drive type	single reduction/hypoid
Axle weight*	350 kg
A = overall width	2232–2330 mm
B = track width	1760–1775 mm
C = spring track	1022 mm
Ring Gear Diameter	325 mm



* varies depending on configuration

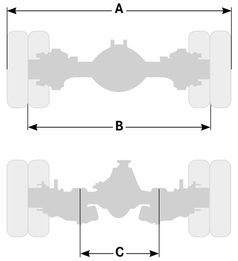
R 390

RA

- Fabricated axle housing
- Recommended for medium-duty application

Data and dimensions

Axle load	9.2–11 t
Tire size	19.5/20/22.5 inches
Brake	disk brake/drum brake
Suspension	air springs/steel springs
Drive type	single reduction/hypoid
Axle weight*	541 kg
A = overall width	2284–2489 mm
B = track width	1753–1840 mm
C = spring track	1022 mm
Ring Gear Diameter	390 mm



* varies depending on configuration

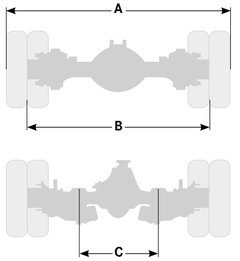
R 440

RA

- Fabricated axle housing
- Recommended for heavy-duty application

Data and dimensions

Axle load	13 t
Tire size	22.5 inches
Brake	disk brake
Suspension	air springs/steel springs
Drive type	single reduction/hypoid
Axle weight*	680 kg
A = overall width	2410–2482 mm
B = track width	1802–1910 mm
C = spring track	930 mm
Ring Gear Diameter	440 mm



* varies depending on configuration

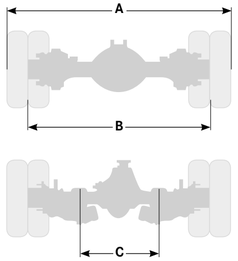
R 485

RA

- Cast axle housing for high engine torque
- Recommended for heavy-duty application

Data and dimensions

Axle load	13 t
Tire size	22.5 inches
Brake	disk brake
Suspension	air springs/steel springs
Drive type	single reduction/hypoid
Axle weight*	765 kg
A = overall width	2422–2482 mm
B = track width	1802–1804 mm
C = spring track	930 mm
Ring Gear Diameter	485 mm



* varies depending on configuration

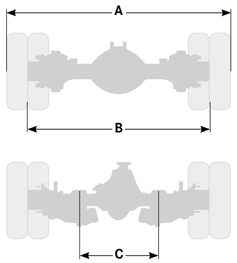
R 233 P - R 300 P

RA

- Planetary axle with cast axle housing
- Recommended for heavy-duty application

Data and dimensions

Axle load	13.4–16 t
Tire size	20/22.5/24 inches
Brake	disk brake/drum brake
Suspension	air springs/steel springs
Drive type	double reduction/planetary
Axle weight*	792 kg
A = overall width	2407–2775 mm
B = track width	1800–2039 mm
C = spring track	930 mm
Ring Gear Diameter	233/300 mm



* varies depending on configuration

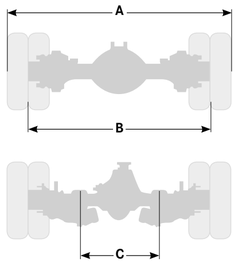
RT 233 P + R 233 P– RT 300 P + R 300 P

RA

- Planetary axle with cast axle housing, tandem
- Recommended for heavy-duty application

Data and dimensions

Axle load	26.8–32 t (tandem)
Tire size	20/22.5/24 inches
Brake	disk brake/drum brake
Through-drive axle	yes
Suspension	air springs/steel springs
Drive type	two-stage/planetary
Axle weight*	1643 kg (tandem)
A = overall width	2407–2775 mm
B = track width	1800–2039 mm
C = spring track	930 mm
Ring Gear Diameter	233/300 mm



* varies depending on configuration

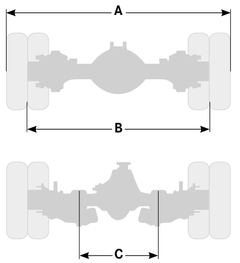
RT 390 + RT 390 T

RA

- Fabricated axle housing, tandem
- Recommended for heavy-duty application

Data and dimensions

Axle load	20 t (tandem)
Tire size	22.5 inches
Brake	disk brake
Through-drive axle	yes
Suspension	air springs/steel springs
Drive type	single-stage/hypoid
Axle weight*	1255 kg (tandem)
A = overall width	2441–2501 mm
B = track width	1821–1823 mm
C = spring track	990 mm
Ring Gear Diameter	390 mm



* varies depending on configuration

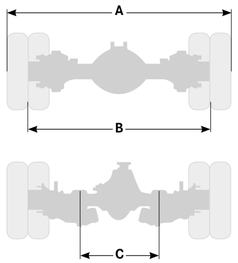
RT 440 + R 440

RA

- Fabricated axle housing, tandem
- Recommended for heavy-duty application

Data and dimensions

Axle load	26 t (tandem)
Tire size	22.5 inches
Brake	disk brake
Through-drive axle	yes
Suspension	air springs/steel springs
Drive type	single-stage/hypoid
Axle weight*	1482 kg (tandem)
A = overall width	2410–2482 mm
B = track width	1802–1910 mm
C = spring track	930 mm
Ring Gear Diameter	440 mm



* varies depending on configuration

Service benefits at a glance.

Application engineering consultancy service

Our experts will help you to select the right aggregates, components to create a customized solution that suits your application specific requirements. Our experts provide you installation manuals for mechanical and electronical integration of our components. As part of the release process we optionally run an installation inspection.

Customer training

Uniquely tailored training courses can be held in Germany and other countries to ensure that you receive the necessary expert knowledge in regards for installing, operating, and maintaining your aggregate in accordance with our high standards.

The following topic areas are handled on a need-to-know basis as part of our customer training courses

- Control units in the architecture
- Electrical interfaces
- Electronic interfaces
- Basics of assemblies
- Control unit functions
- Diagnostics interface
- Basics of the diagnostics tool
- Practical applications of the diagnostics tool

Service network

Optimizing customer support while minimizing down-times of your truck and bus is highly relevant for us. Enjoy the advantages of our network with more than 2,400 authorized Mercedes-Benz Truck Service Centers worldwide.

Your next Service Center:
Dealer Locator Online

Spare parts supply

We will ensure spare parts availability for many years after your initial investment. Your vehicle only can deliver top performance if it's kept in shape at all times. It is only the use of high-quality GenuineParts that ensures that the explicit and implied warranty is maintained.

For our price sensitive customers we also offer a large portfolio of Genuine Remanufactured Parts - for saving costs but on the same quality level.

For more information:
https://remanparts.mercedes-benz.com/download-center/

More than products.

Our perfectly matched powertrain delivers you the best possible performance and fuel savings, while maintaining low overall operating costs. The perfect combination of engine systems, transmissions and axles yields in the greatest possible efficiency and the best quality made by Mercedes-Benz Powertrain. We tailor Mercedes-Benz Powertrain component configurations to the needs of our customers for sales in the on-highway segment.

If you have technical questions, would like additional information or wish to request installation drawings, please do not hesitate to contact our sales team:

Sales External Customers
Daimler AG
001-E206
70546 Stuttgart/Germany

+49 (0)711 17-5 41 86
aggregate-info@daimler.com
www.mercedes-benz.com/powertrain

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Daimler AG, Mercedesstr. 137, 70327 Stuttgart, Germany, TG/LPS

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