

Mercedes-Benz Powertrain

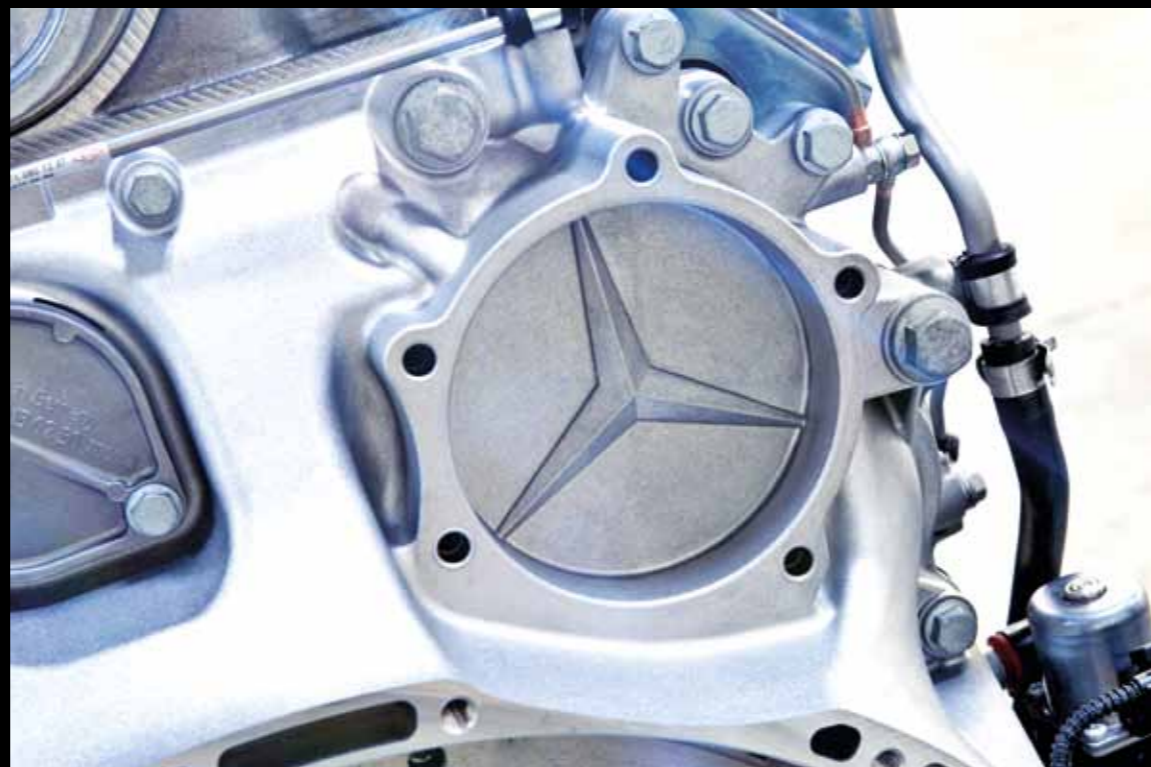


Portfolio **Truck EURO VI.**

Mercedes-Benz



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



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Going the **extra mile**. Mercedes-Benz Powertrain.

Mercedes-Benz Powertrain offers outperforming and individual engineered powertrain components: 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.



$$1 + 1 + 1 > 3$$

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 powertrain components:

- ✓ 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 powertrain components
- ✓ Leads to an optimized system setup due to common electric and electronic architecture (EE architecture) for efficient interaction of all powertrain components
- ✓ 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
- ✓ 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
- ✓ Increases the resale value of the vehicles due to the highest quality standards offered by Mercedes-Benz
- ✓ Higher Driver comfort due to the high integration of all assistent systems and features

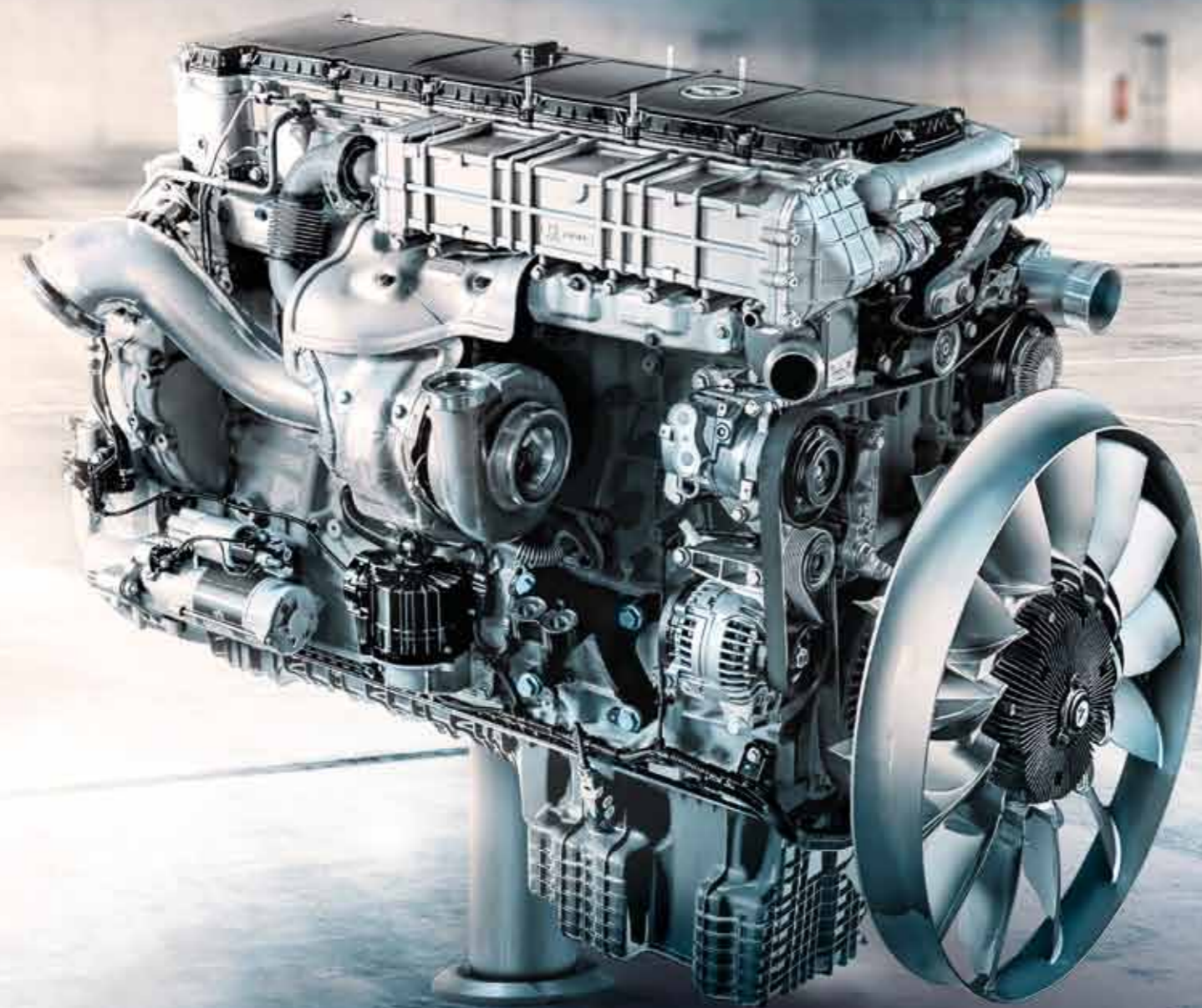
Our Powertrain-Solutions: TCO reduction at its best.

The **perfect combination** of engine systems, transmissions and axles yields in the greatest possible efficiency and the **best quality** made by Mercedes-Benz Powertrain.

Our perfectly matched powertrain delivers you the best possible performance and fuel savings, while maintaining low overall operating costs. Through close collaboration with you as our customer, we can perfectly customize the powertrain components to your individual requirements.

In this way, **optimum fuel efficiency and low TCO** (Total Cost of Ownership) can be achieved. This is an important contribution and our responsibility to your business and also to the environment.



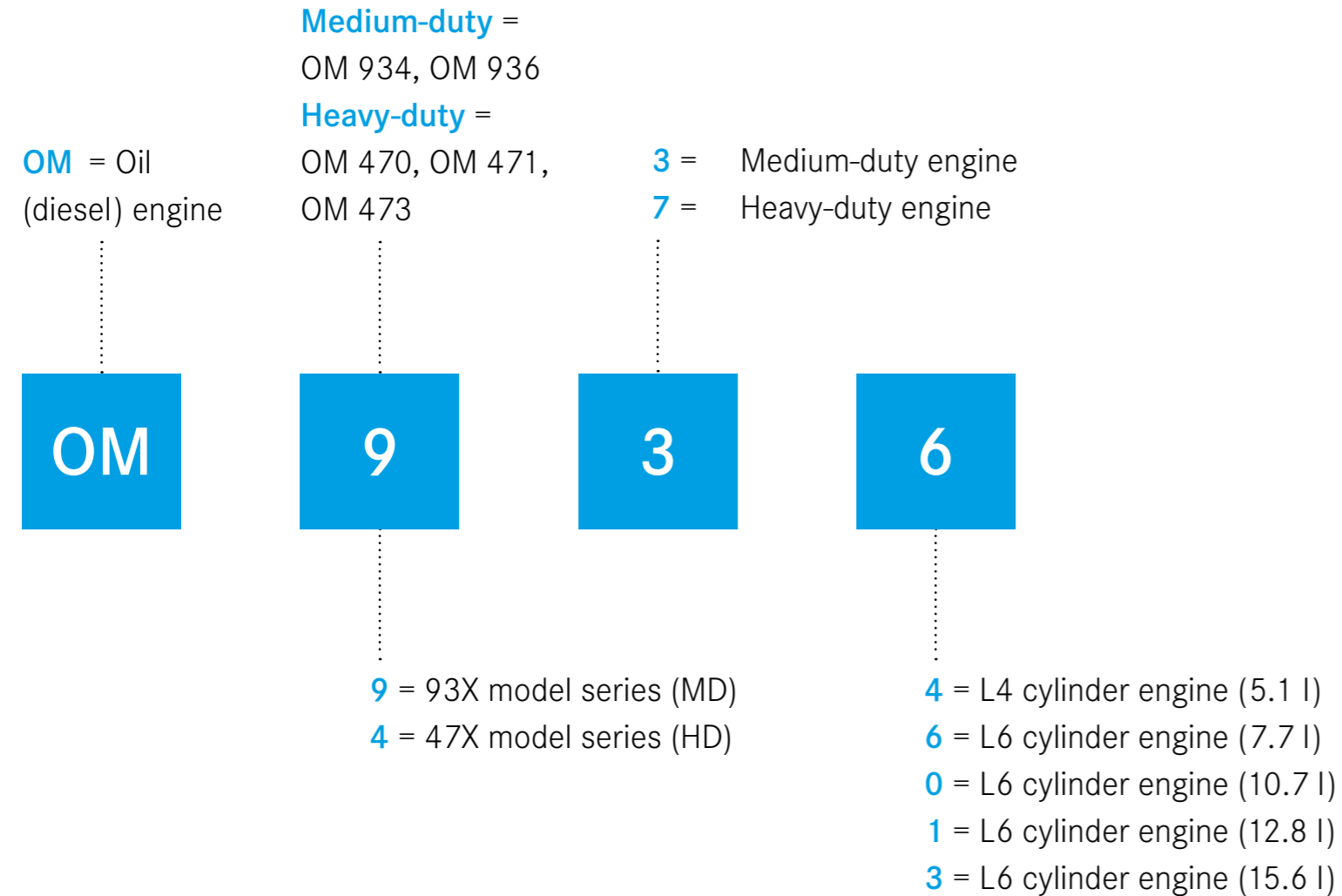


Mercedes-Benz engine systems.

OM 93X and OM 47X model series.

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

Derivation "Nomenclature" - engine systems.

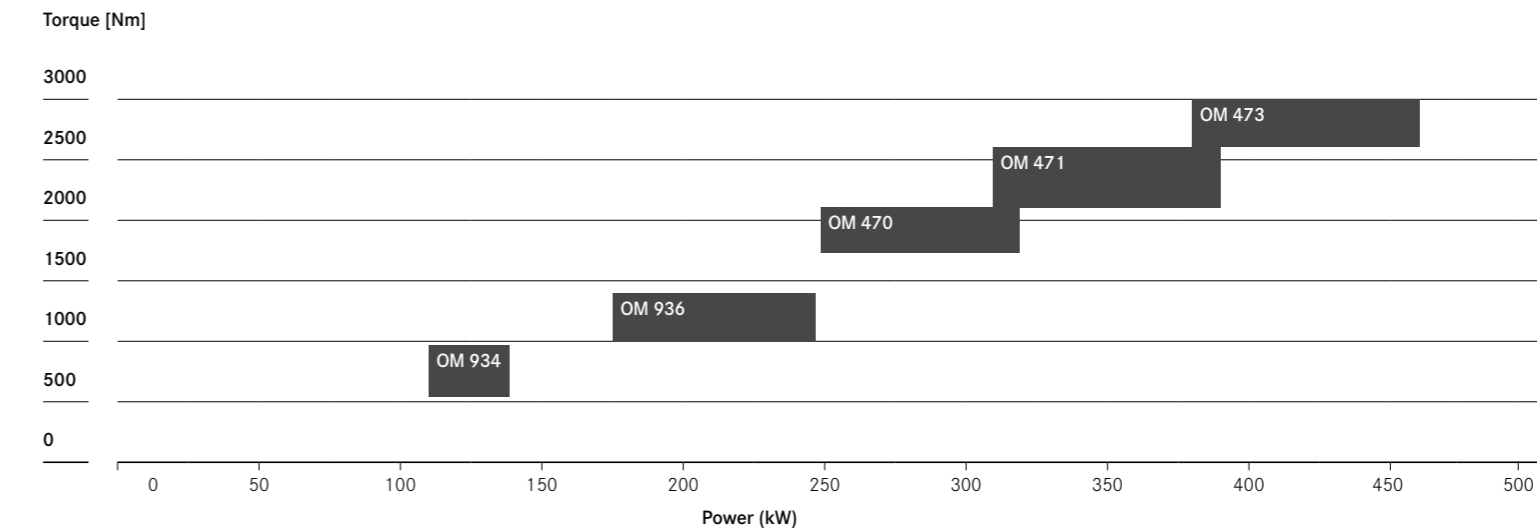


Engine systems for EURO VI.

Portfolio of EURO VI engine systems for trucks

Model series	Type	Cylinder	Displ. [liters]	Power range [kW]
OM 93X Medium-duty	934	L4	5.1	115 130
	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

Power range of the EURO VI engine systems for trucks





Medium-duty engine systems.



The Perfect combination of Power and Efficiency.

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
- **Advanced combustion system** to minimize fuel consumption
- **Common rail injection system** up to 2400 bars and multiple injection
- **Tailor-made turbo 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

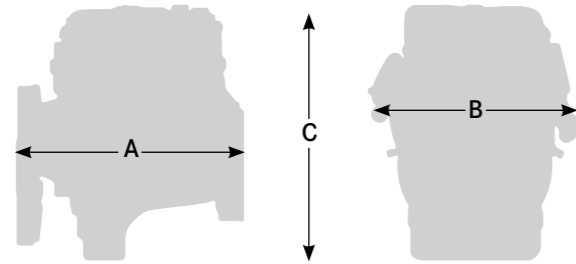


Weight and dimensions*

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

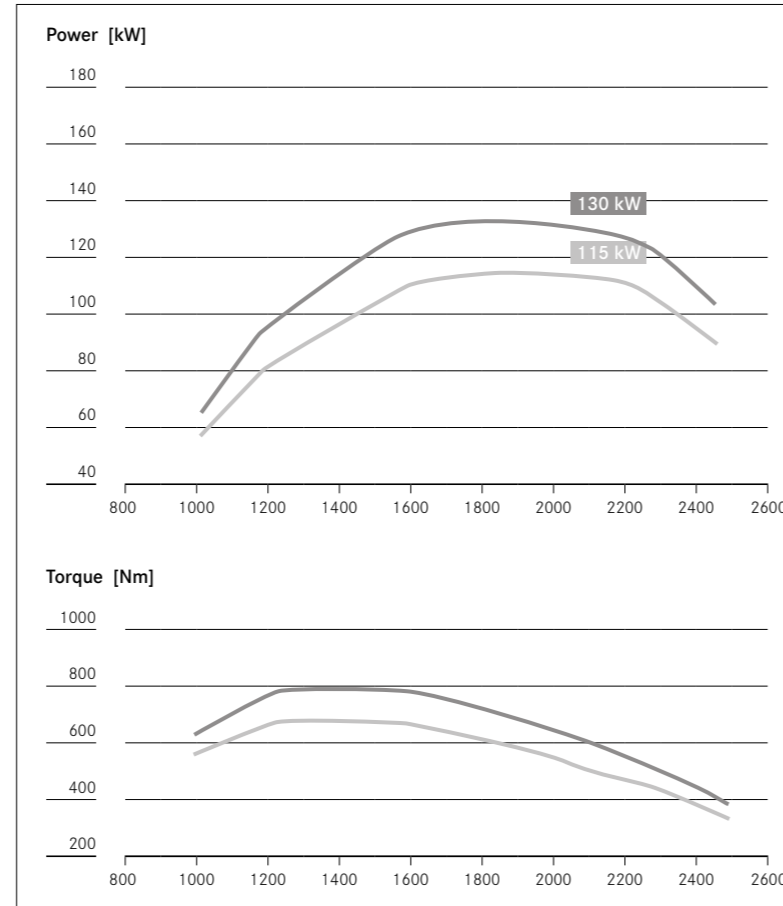
* depending on equipment installed



Rated power and maximal torque

Rated power	[kW/hp]	115/156	130/177
at engine speed	[rpm]	1800	1800
Maximal torque	[Nm]	650	750
at engine speed	[rpm]	1200-1600	1200-1600

Performance



OM 936

Arrangement: In-line 6
Displacement: 7.7 l

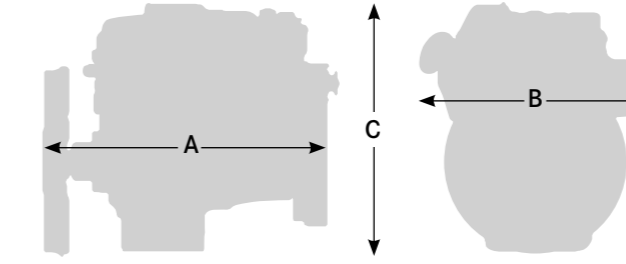


Weight and dimensions*

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

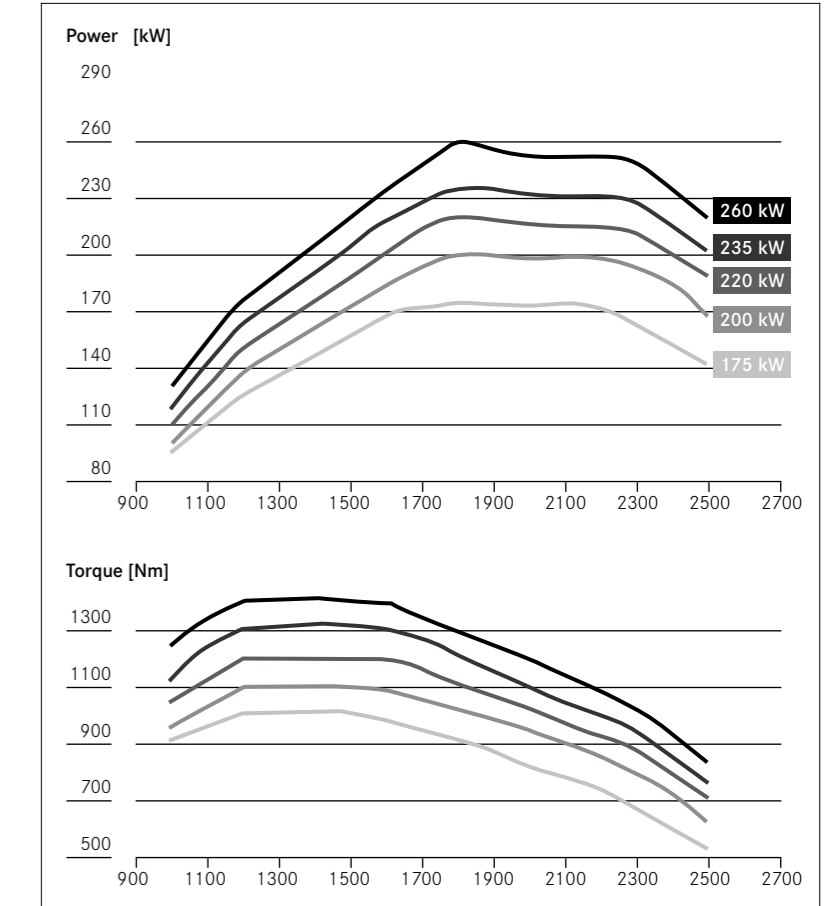
* depending on equipment installed



Rated power and maximal torque

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

Performance





Heavy-duty engine systems.

Always giving 100%. Efficiently.

Your product benefits for heavy-duty engine systems:

- 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
- **Captive 1-stage asymmetric turbocharger** with outstanding efficiency
- **15.6 liter variant** with turbo compound for maximum reliability and durability
- 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

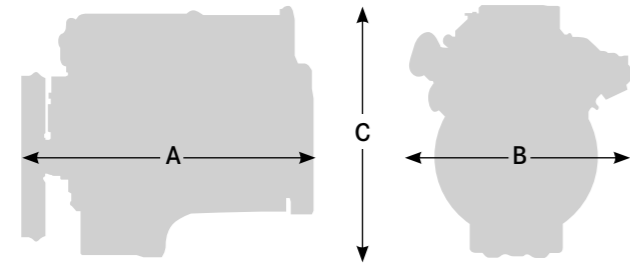
Arrangement: In-line 6
Displacement: 10.7 l



Weight and dimensions*

Weight
DIN 70020 - GZ 956 kg

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

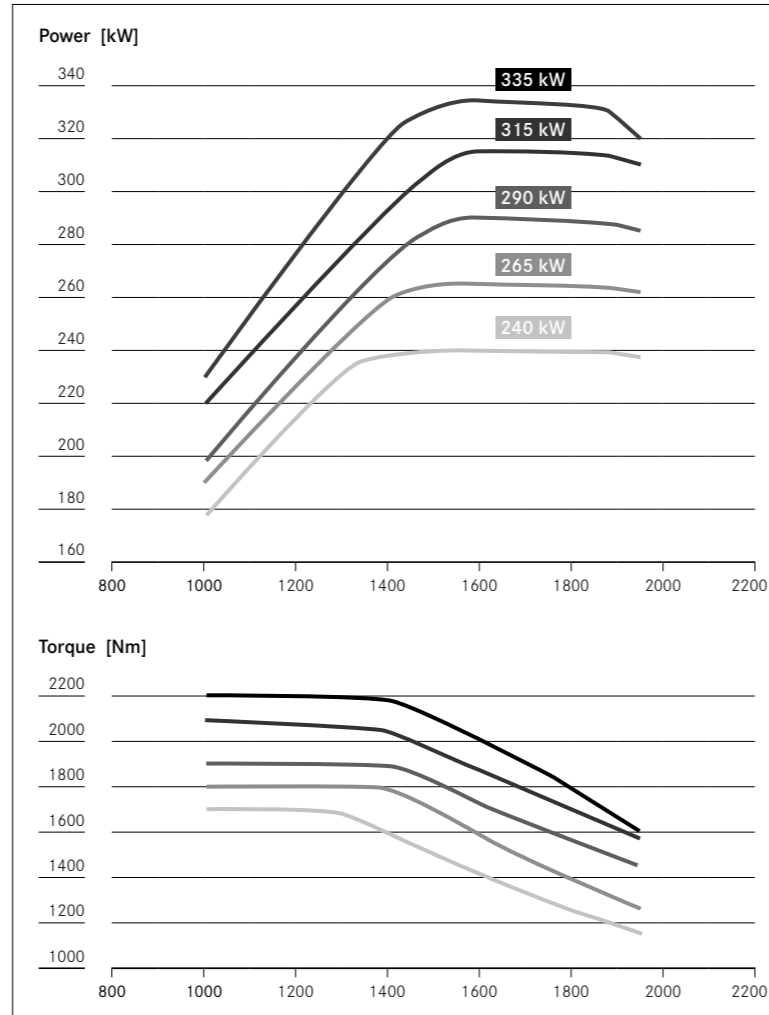


* depending on equipment installed

Rated power and maximal torque

		240/326	265/360	290/394	315/428	335/456
Rated power	[kW/hp]					
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

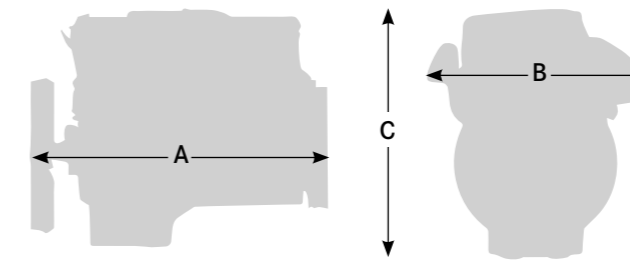
Arrangement: In-line 6
Displacement: 12.8 l



Weight and dimensions*

Weight
DIN 70020 - GZ 1091 kg

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

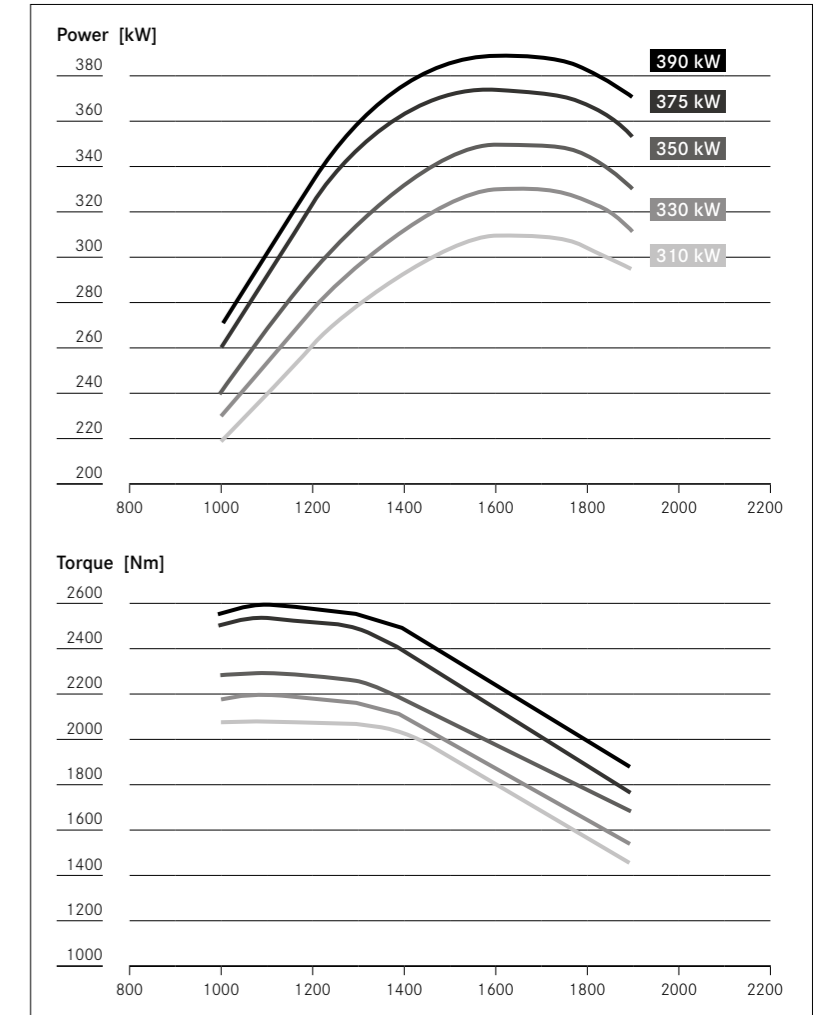


* depending on equipment installed

Rated power and maximal torque

		310/422	330/449	350/476	375/510	390/530
Rated power	[kW/hp]					
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

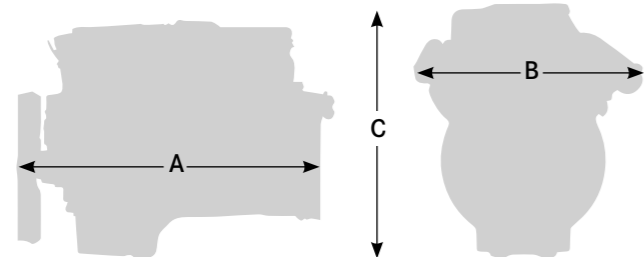
Arrangement: In-line 6
Displacement: 15.6 l



Weight and dimensions*

Weight
DIN 70020 - GZ 1240 kg

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

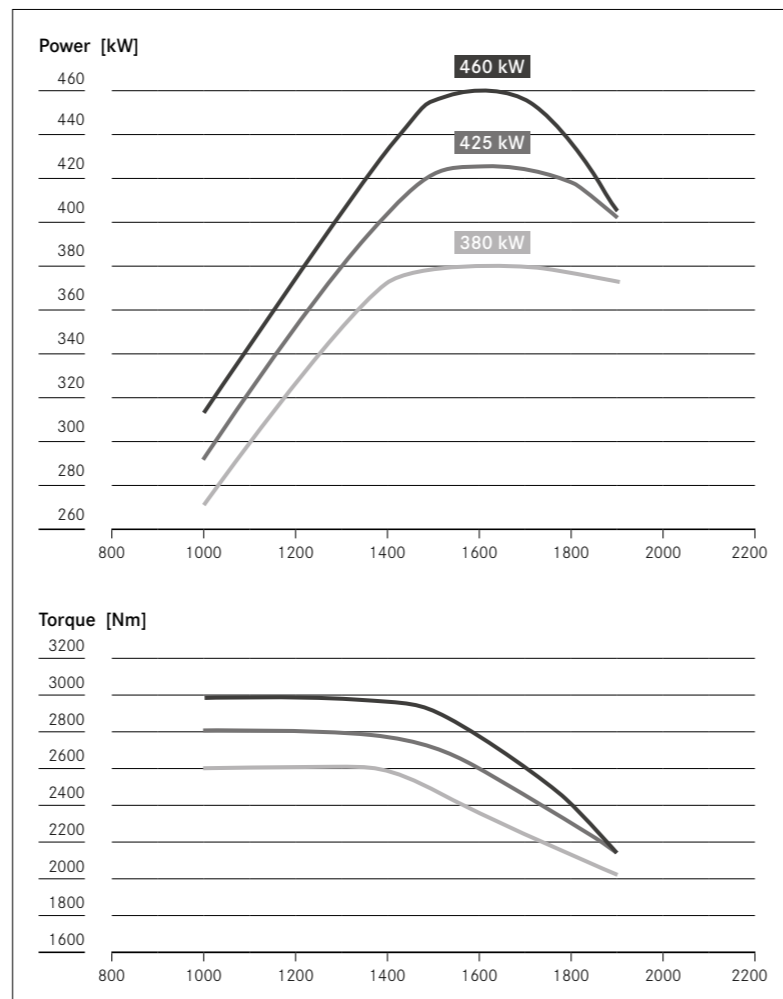


* depending on equipment installed

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



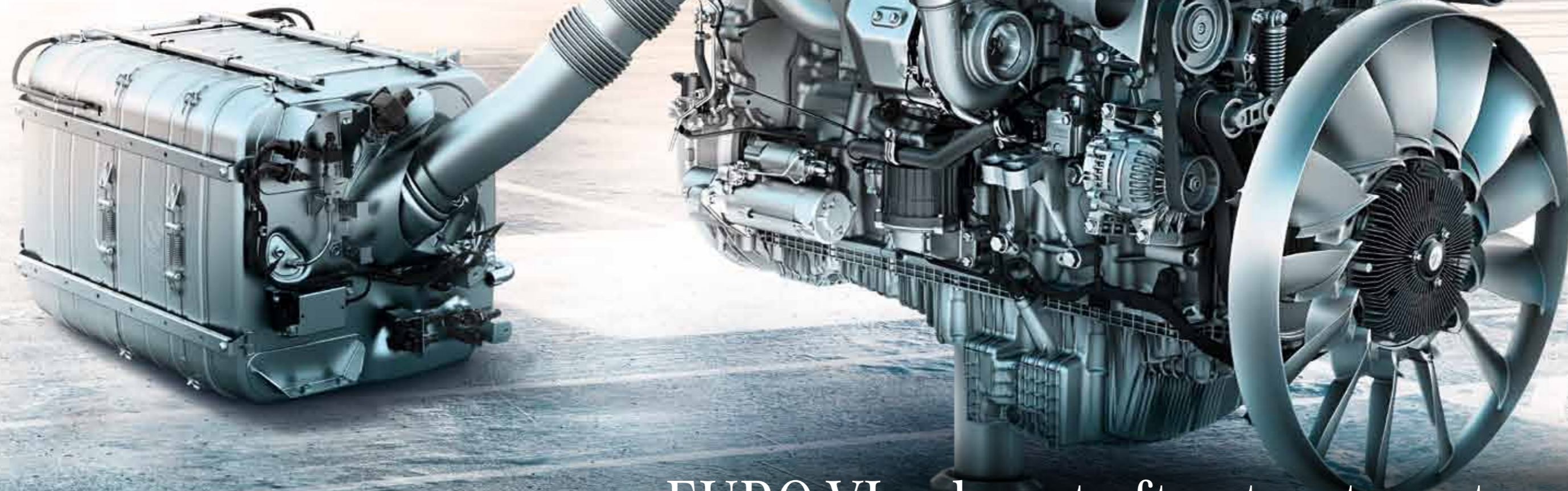
Clean from start to finish.

Your product benefits for the after-treatment system:

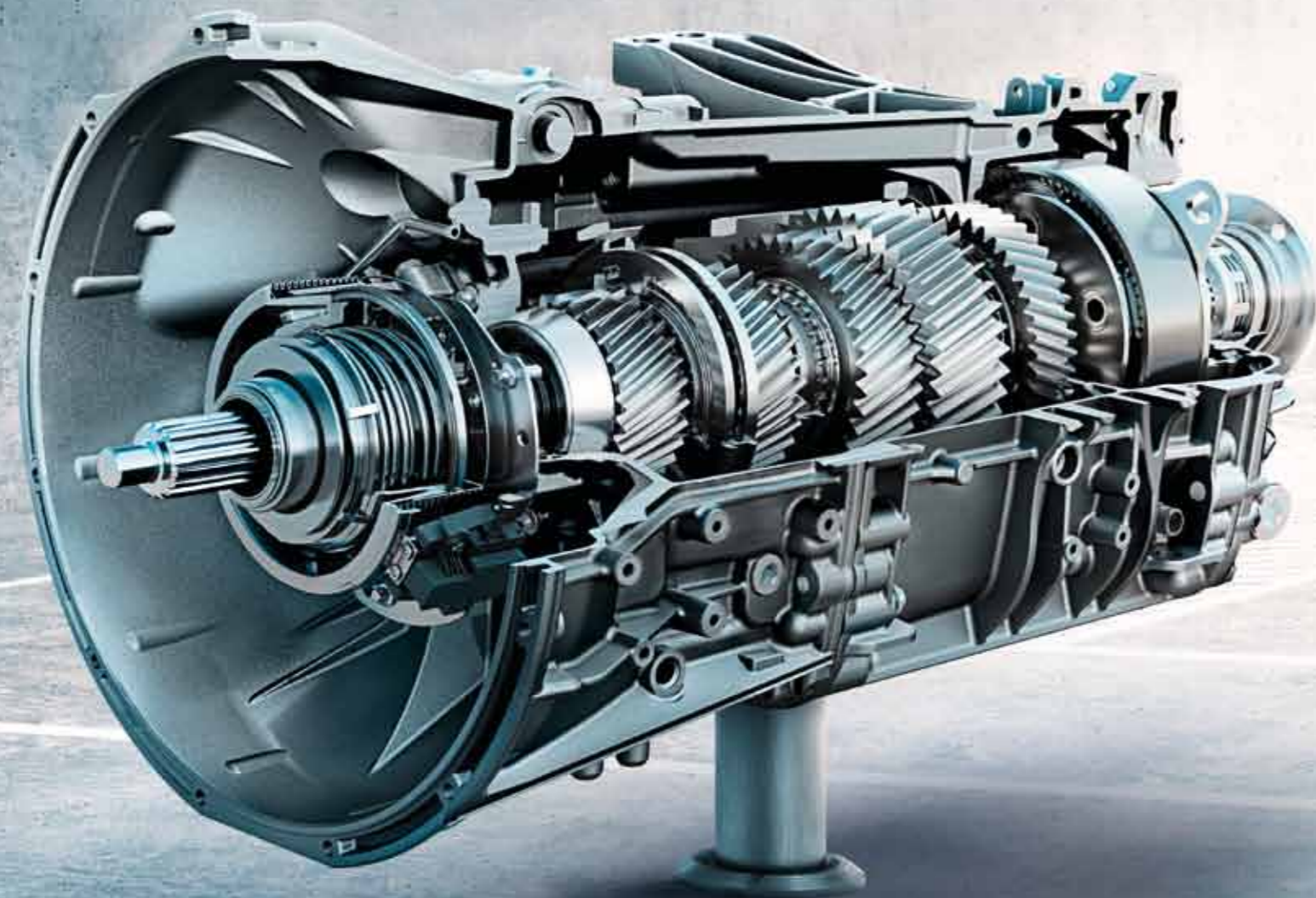
- Low exhaust **back pressure**
- Significant **NOx reduction** at a broad range of exhaust gas volume flows and exhaust gas temperatures
- Maximum possible **soot burn-off** in the diesel particulate filter (DPF) by means of automatic regeneration
- In addition, adaptive **regeneration of the DPF** 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

The 4- and 6-cylinder Euro VI engines from Mercedes-Benz impress with consistently low fuel consumption, reduced CO₂, particulate matter and low nitrogen oxide emissions.

The overall system is trimmed for superior efficiency already during the design and engineering phase. As an example, the **intelligent combination of selective catalytic reduction (SCR), cooled and controlled exhaust-gas recirculation (EGR) as well as a diesel particulate filter (DPF) reduces emissions** to a fraction of previous emission standards.

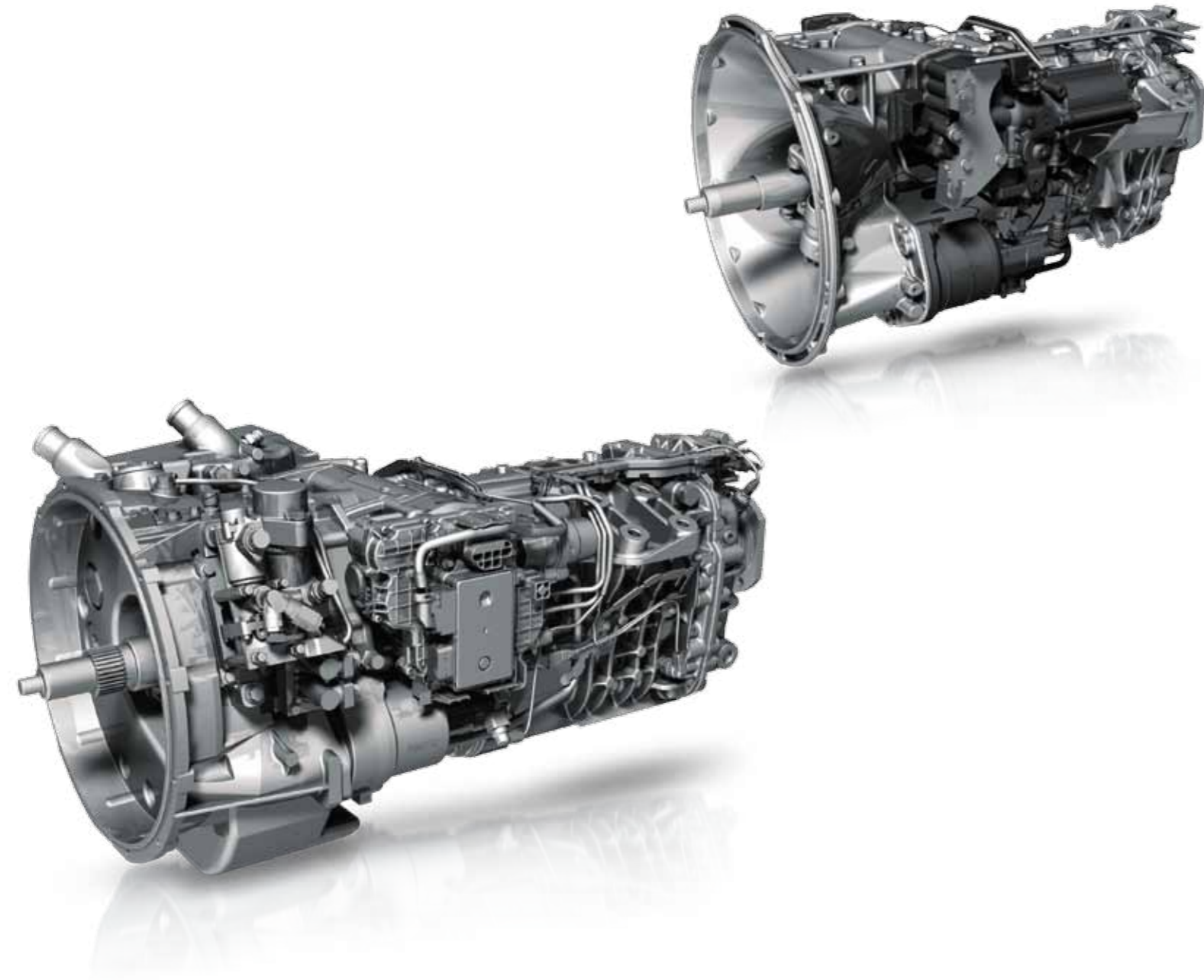


EURO VI exhaust after-treatment system.



Mercedes-Benz
transmissions.

Reliable transmissions
for a wide range of
applications.



Smooth and efficient operation in every situation.

Our product range of service extends from 8-speed to 16-speed transmissions for heavy-duty commercial vehicles, special vehicles and mobile cranes. An extensive selection of power take-off units, transfer cases and various 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.

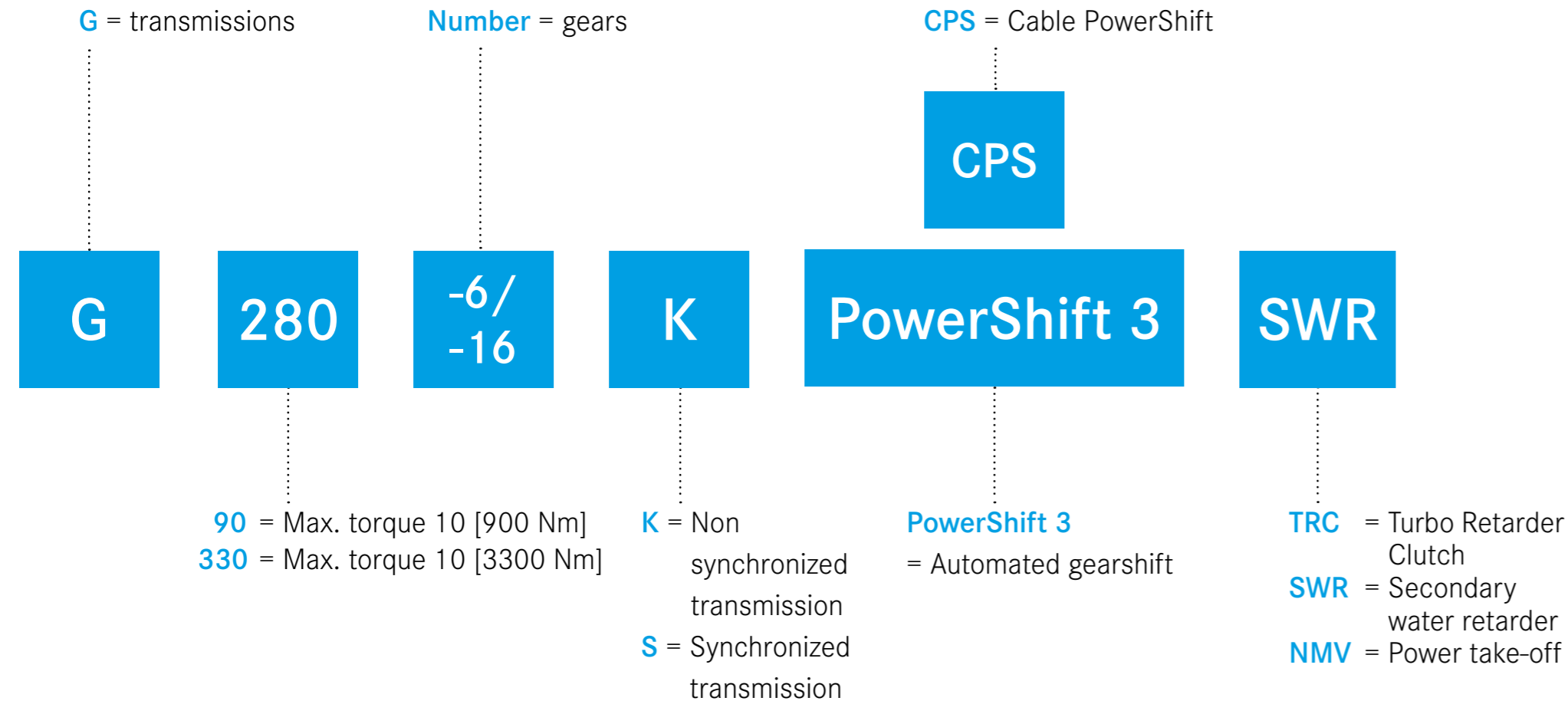
Meeting the demands of our customers is the focus of our work. We feel committed to advancing the design of our systems in a consistent and innovative way in-line with market and customer requirements.

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:

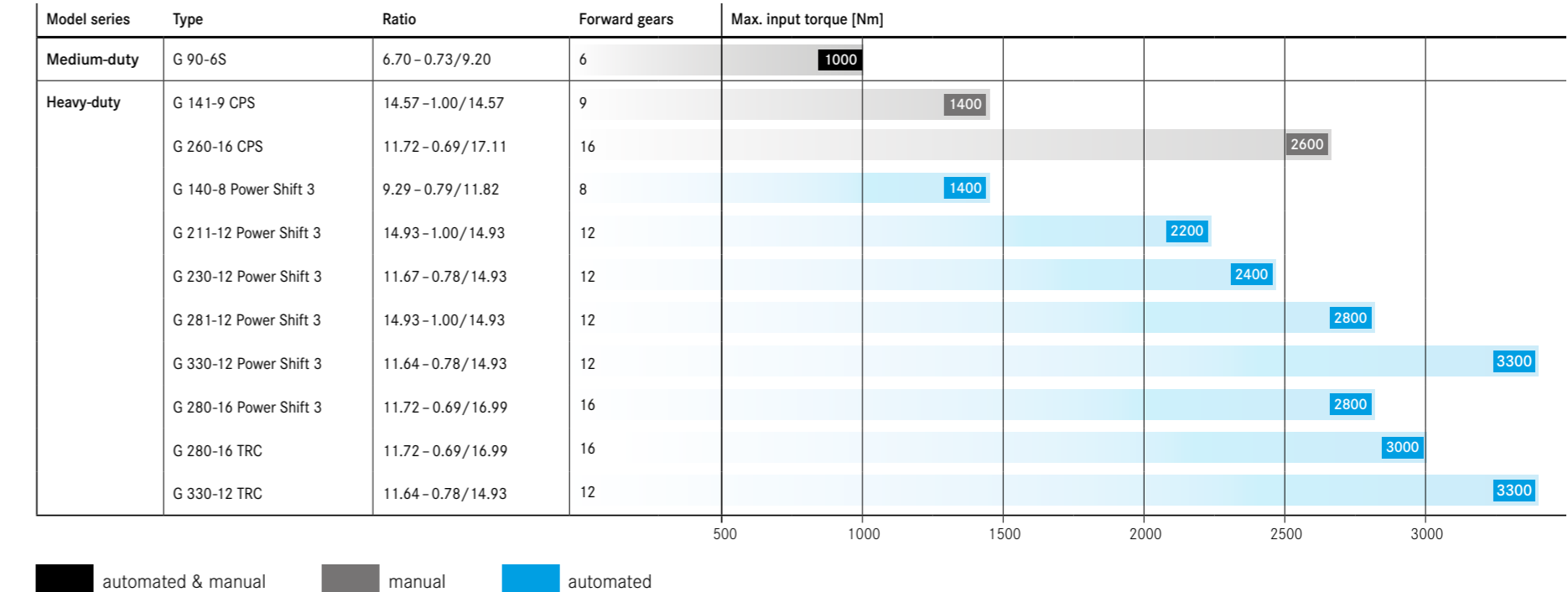
- **Very smooth running characteristics**
- **Low weight**
- **Extreme durability**

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

Derivation "Nomenclature" - transmissions.



Transmissions for EURO VI engine systems.



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 **manufacturing 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



- 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

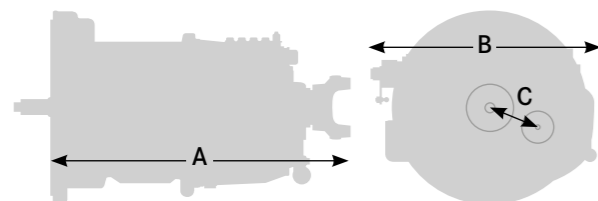


Specifications and dimensions

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:

- **8- 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 characteristics and **long service life** through optimized gear set geometry and high-precision manufacturing 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



- 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



- 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



- 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



- 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



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



G 281-12 PowerShift 3



- 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	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

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	11.673	7.056	4.400	2.653	1.604	1.000	11.673	2.653	14.93
i_L	9.101	5.501	3.431	2.068	1.205	0.780	9.101	2.068	14.93

Gear	1	2	3	4	5	6	R1	R2	Gear ratio spread
i_s	18.826	11.132	6.581	3.698	2.187	1.293	20.873	4.100	14.93
i_L	14.563	8.611	5.091	2.861	1.691	1.000	16.145	3.171	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	11.639	7.035	4.400	2.645	1.599	1.000	12.774	2.093	14.93
i _L	9.020	5.452	3.410	2.050	1.239	0.775	9.900	2.250	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

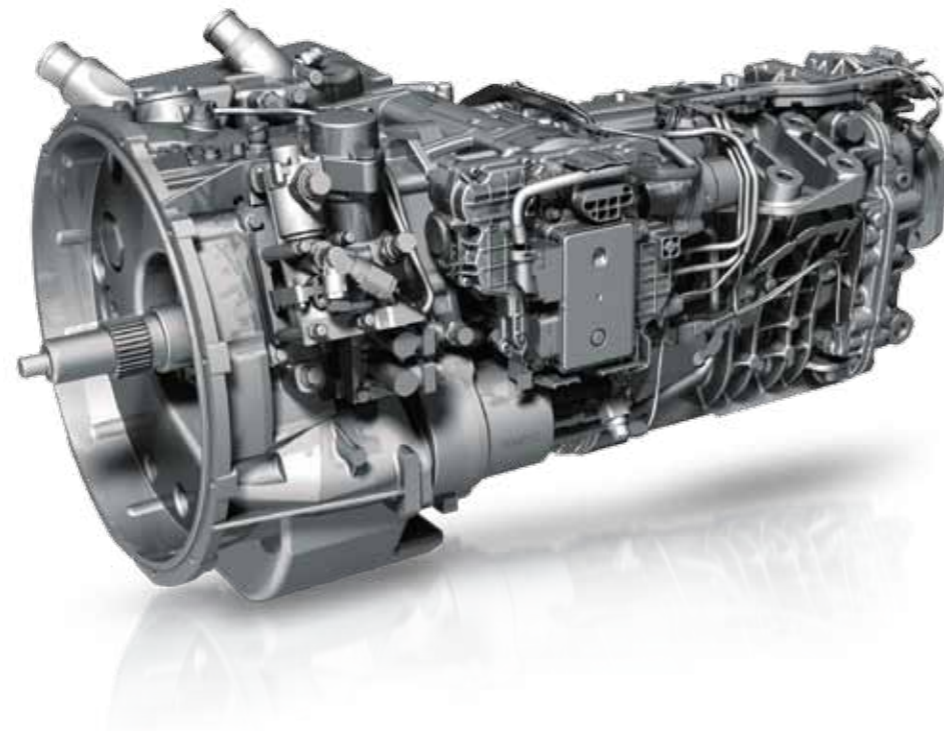
TRC transmission for extreme applications.

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	11.639	7.035	4.400	2.645	1.599	1.000	12.774	2.033	14.93
i_L	9.020	5.452	3.410	2.050	1.239	0.775	9.900	2.500	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**.

Retarder.



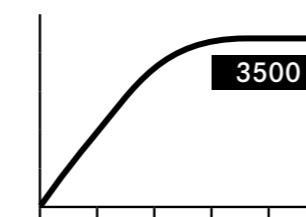
Secondary water retarder.*

Your product benefits:

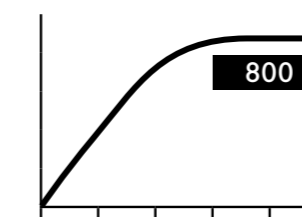
- **Reduction of friction** by axial rotor displacement
- **No heat exchanger** required since the cooling water is used as the operating medium directly
- Compact unit requires only **minimal installation space**
- **Freedom from maintenance** for reduced vehicle service costs
- **Significantly lighter** 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



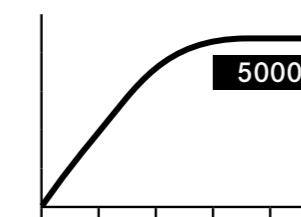
*Not available with TRC



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)

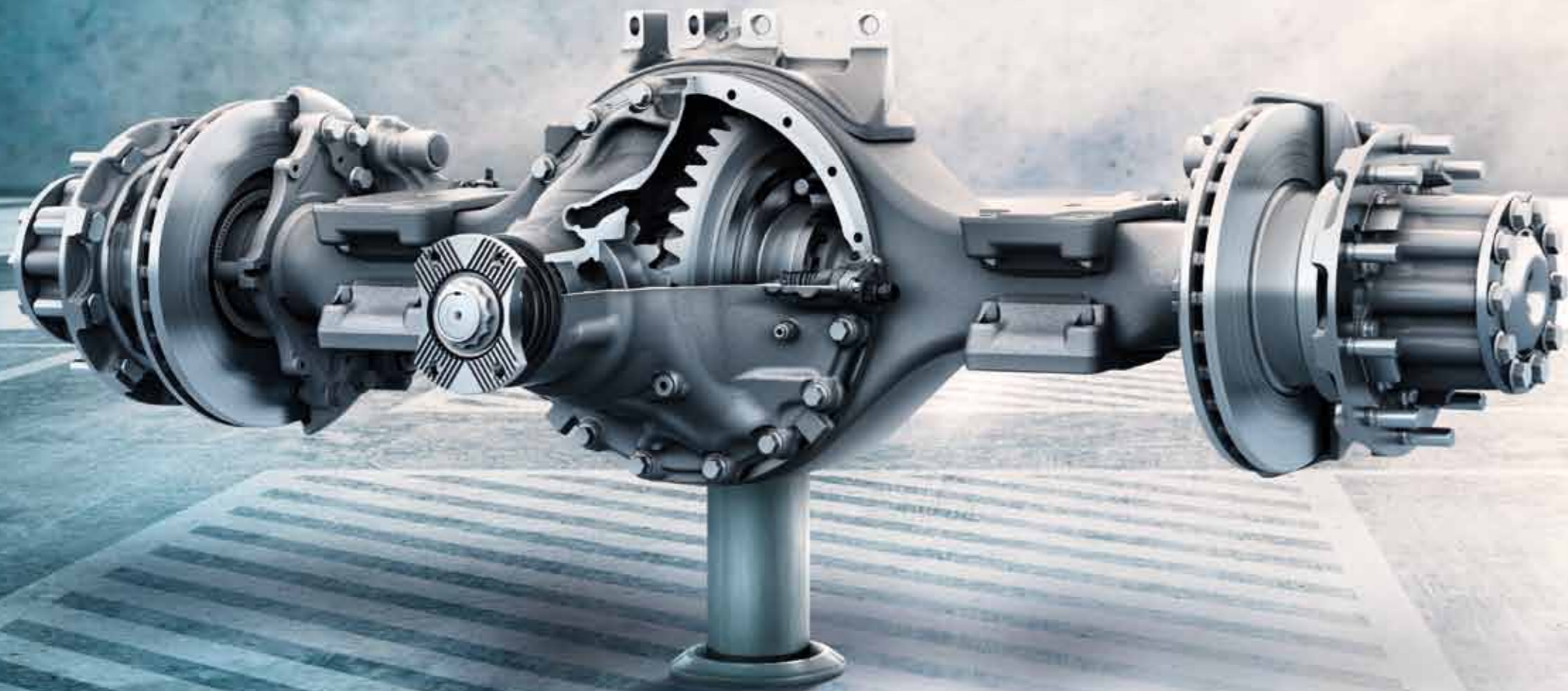
PTO model	Max. torque	Vehicle type
NA 121 	1000 Nm	Small dumper trucks
NA 131 	400 Nm	Heavy dumper trucks
NA 123 	650 Nm	Silo vehicle
NA 124 	650 Nm	Fire truck Silo vehicle Concrete pump
NA 125 	600 Nm	Fire truck Garbage truck Concrete pump
NA 135 	600 Nm	Fire truck Garbage truck Concrete pump

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.

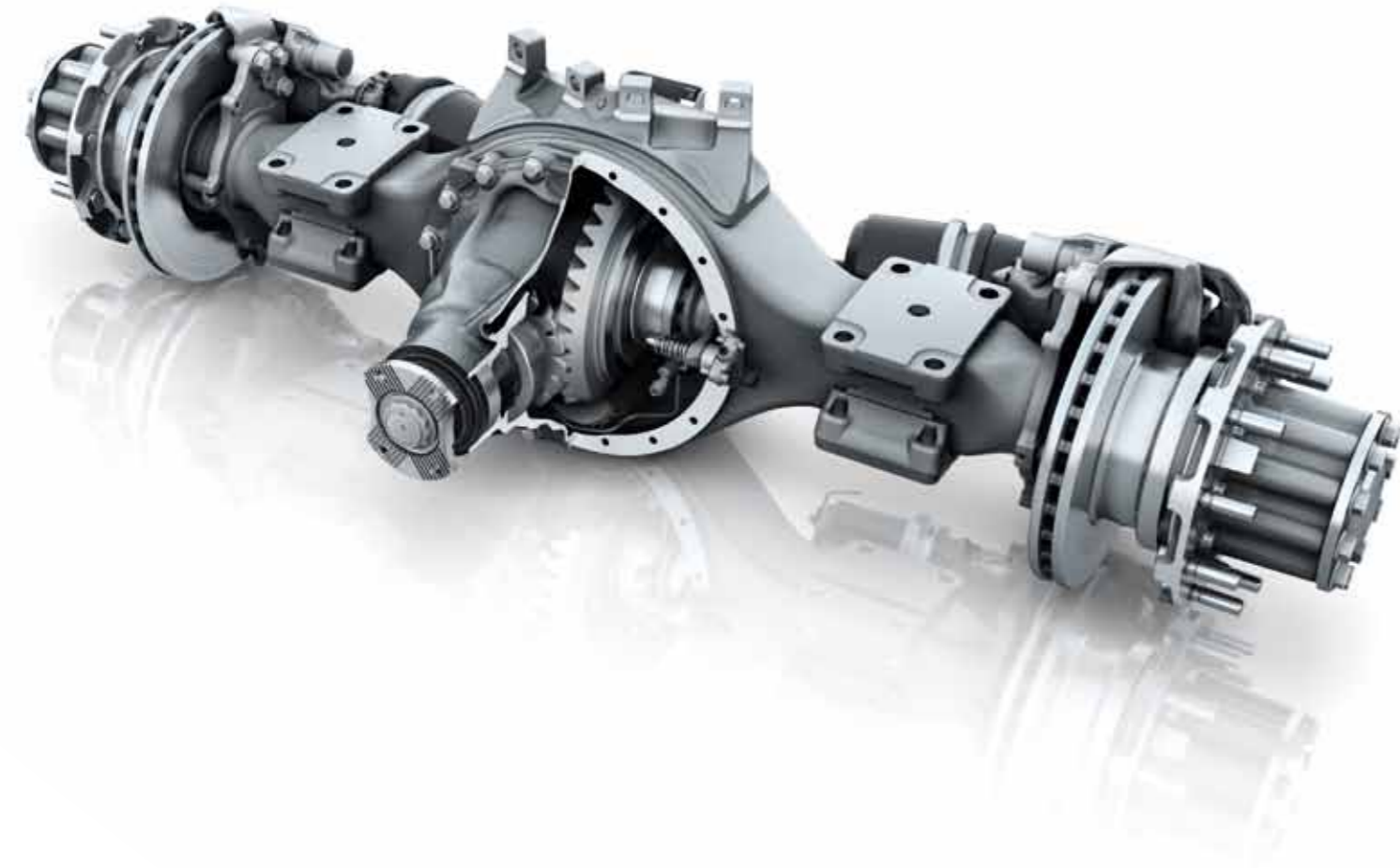
Vehicle category	Front axles*	Size [inches]	Axle load [t]		Rear axles	Size [inches]	Axle load [t]	
			Min	Max			Min	Max
Light-duty	F 4.1 - F 4.4	17.5	4.1	4.4	R 325	17.5	6.2	8.3
Medium-duty	F 5.3 - F 6.1	19.5	5.3	6.1	R 390	19.5/20/22.5	11	
	FD 346 - FD 360	19.5	4.7	6				
Heavy-duty	F 7.5 - F 8	22.5	7.5	8	R 440	22.5	13	
	F 9 - F 9.5	20/22.5	9	9.5	R 485	22.5	13	
	FD 233 P	20/22.5	7.5	9	R 233 P - R 300 P	20/22.5/24	13.4	16
	FD 233 P** FT 233 P+	20/22.5			RT 390 + RT 390 T **	22.5	20	
					RT 440 + R 440 **	22.5	26	
					RT 300 P + R 300 P **	20/22.5/24	26.8	32

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

Meaning of symbols:

- Front axles
- Rear axles

- Axles for light-duty trucks
- Axles for medium-duty trucks
- Axles for heavy-duty trucks



The most efficient way of putting power on the road.

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 to 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:

- Wheel-end sizes from **17.5 to 22.5 inches**
- Driven front axles for **light-, medium- and heavy-duty applications**
- Axle loads from **4.1 to 9.5 t** (per axle)
- Gross vehicle weight rating (GVWR) from **6.5 to 250 t**
- **Additional payload** due to compact design and weight-optimized technical design
- **Left or right hand drive** applications possible
- **High fuel efficiency design** to suit the operating conditions
- **Maintenance-free** wheel-hubs
- Easy maintenance and **long oil change intervals**
- **Longer lifetime** and **quieter operation** due to our optimized gear set design

F 4.1-F 4.4



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

Data and dimensions

Axle load	4.1-4.4 t
Wheel-end 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. steering 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
Wheel-end size	19.5 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. steering 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
Wheel-end size	19.5 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. steering 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
Wheel-end size	22.5 inches
Brake	disk brake/ drum brake
Axle weight*	461 kg
A = overall width	2486-2583 mm
B = track width	2046-2157 mm
C = spring track	840 mm
D = max. steering angle	48°

* varies depending on configuration

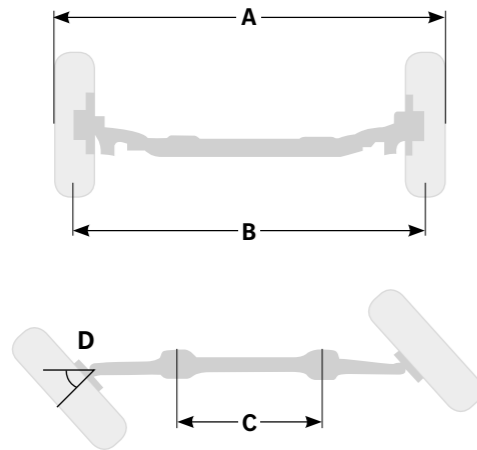
F 9-F 9.5



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

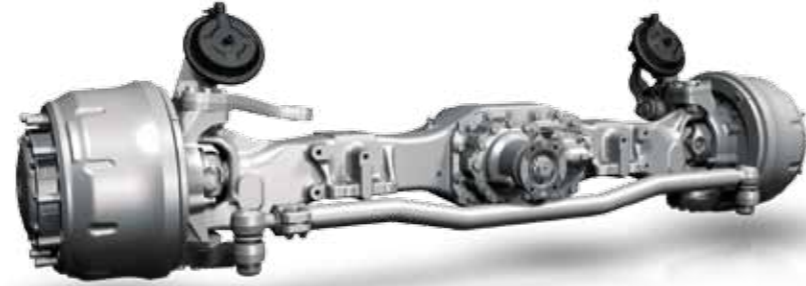
Data and dimensions

Axle load	9-9.5 t
Wheel-end size	22.5 inches
Brake	disk brake/ drum brake
Axle weight*	463 kg
A = overall width	2486-2583 mm
B = track width	2046-2157 mm
C = spring track	840 mm
D = max. steering angle	48°



* varies depending on configuration

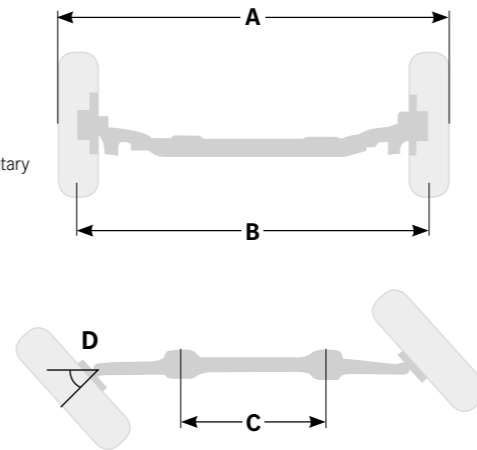
FD 233 P



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

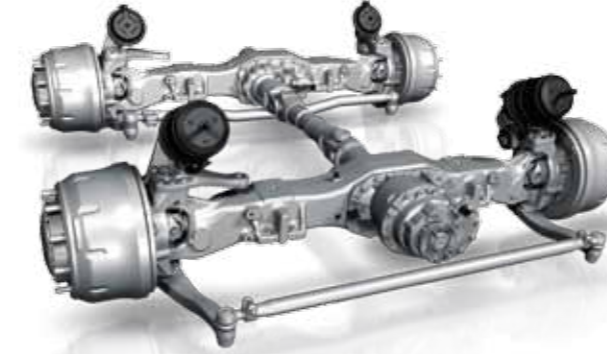
Data and dimensions

Axle load	7.5-9 t
Wheel-end size	22.5 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. steering angle	42°



* varies depending on configuration

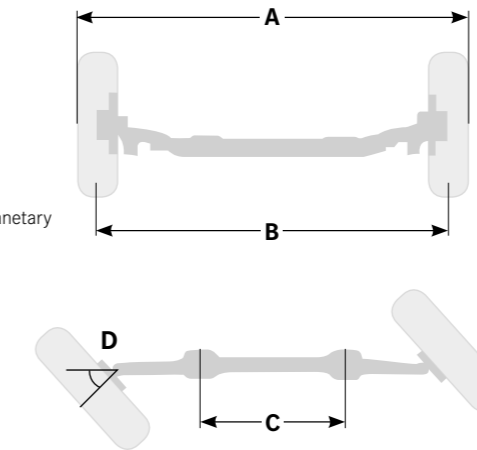
FD 233 P + FT 233 P



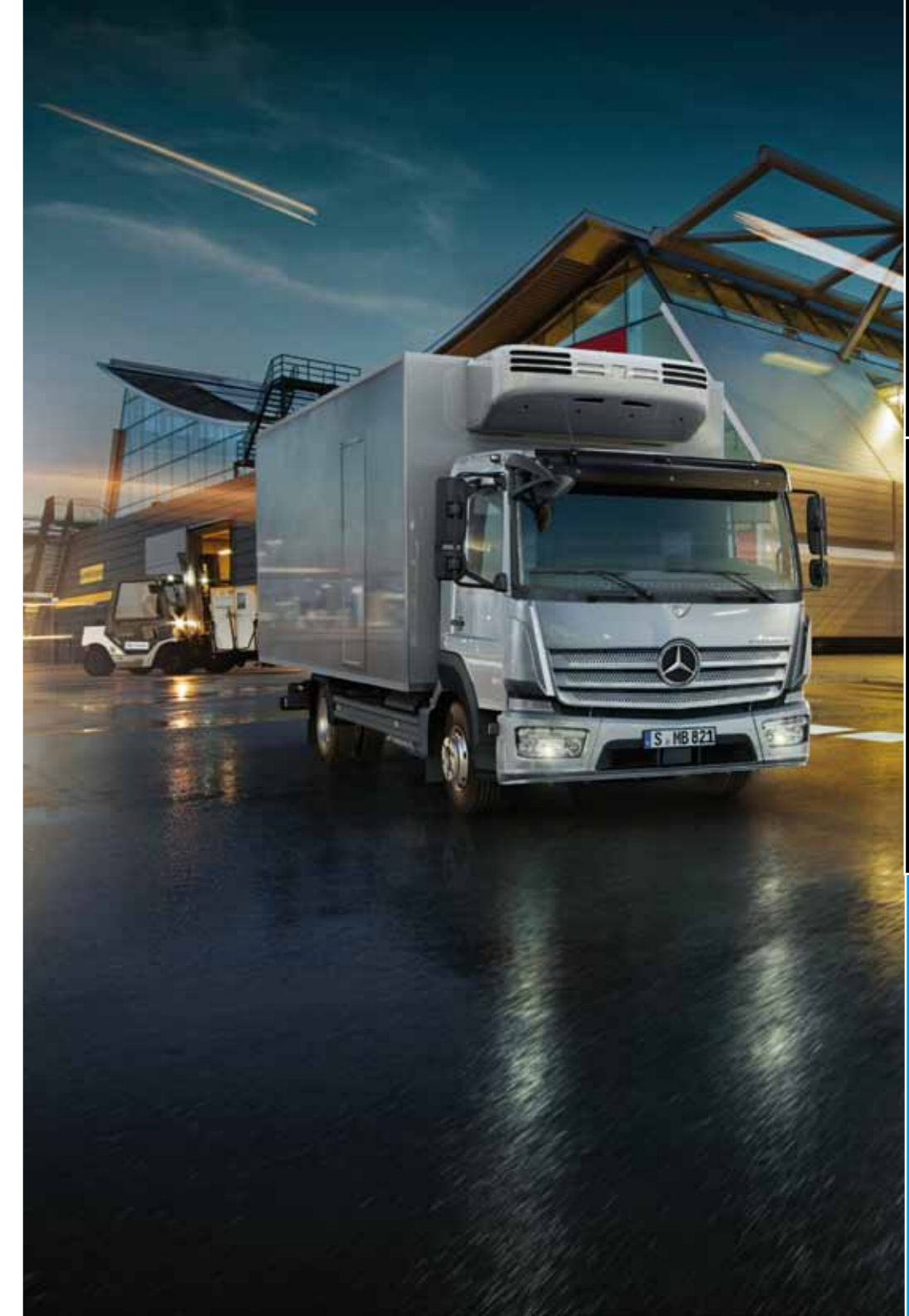
- Steered, driven planetary axle with cast axle housing, tandem
- Recommended for heavy-duty application

Data and dimensions

Axle load	18 t (tandem)
Wheel-end size	22.5 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. steering angle	38°



* varies depending on configuration





Rear axles.

Master every challenge.

Your product benefits for rear axles:

- **Wheel-end sizes** from 17.5 to 22.5 inches
- **Hypoid and planetary** driven
- **Ring gear diameter** from 233 to 485 mm
- **Axle loads** from 6.2 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 **optimized oil management** reduces fuel consumption

R 325



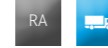
- Fabricated axle housing
- Recommended for light-duty application

Data and dimensions

Axle load	6.2-8.3 t	
Wheel-end 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



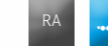
- Fabricated axle housing
- Recommended for medium-duty application

Data and dimensions

Axle load	11 t	
Wheel-end size	19.5 inches	
Brake	disk brake/drum brake	
Suspension	air springs/steel springs	
Drive type	single reduction/hypoid	
Axle weight*	541 kg	
A = overall width	2350-2489 mm	
B = track width	1796-1840 mm	
C = spring track	1022 mm	
Ring gear diameter	390 mm	

* varies depending on configuration

R 440



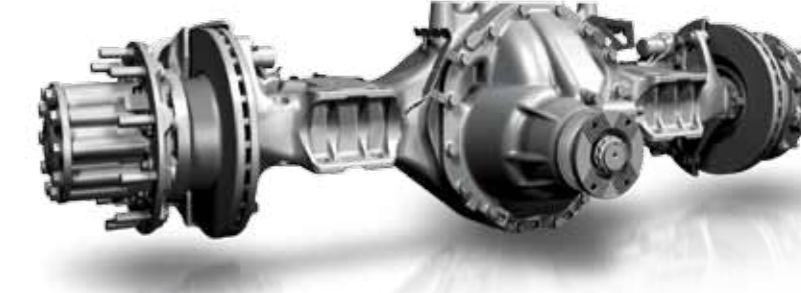
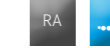
- Fabricated axle housing
- Recommended for heavy-duty application

Data and dimensions

Axle load	13 t	
Wheel-end 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



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

Data and dimensions

Axle load	13 t	
Wheel-end 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



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

Data and dimensions

Axle load	13.4–16 t	
Wheel-end size	22.5 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



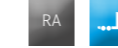
- Planetary axle with cast axle housing, tandem
- Recommended for heavy-duty application

Data and dimensions

Axle load	26.8–32 t (tandem)	
Wheel-end size	22.5 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



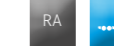
- Fabricated axle housing, tandem
- Recommended for heavy-duty application

Data and dimensions

Axle load	20 t (tandem)	
Wheel-end 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



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

Data and dimensions

Axle load	26 t (tandem)	
Wheel-end 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



Our Global Mercedes-Benz Service Network.

Optimizing customer support while minimizing downtimes of your truck and bus is highly relevant for us. Enjoy the advantages of our network with more than 2400 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.

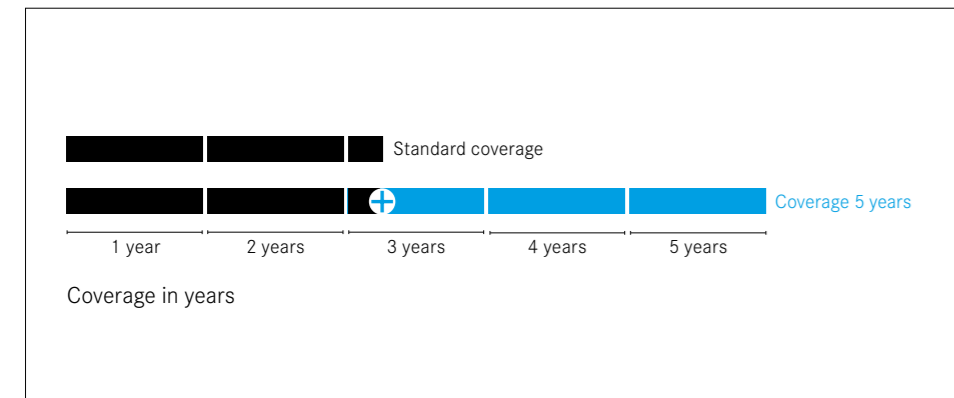
For our price sensitive customers we also offer a large portfolio of Genuine Remanufactured Parts - for saving costs but on the same quality level.

Extended Warranty. We believe in our quality.

Our extended coverage program takes you to a higher level. Mercedes-Benz Powertrain engine system owners enjoy an overall coverage, which can be extended to 5 years and therefore adds even more value to your engine system.

Benefit from five years of manufacturer's coverage for your powertrain components – our new coverage program with 500,000 km and 300,000 Stop-Starts: 5 years of manufacturer's coverage for your powertrain components.

Coverage types



Extended Warranty your advantages* at a glance:

Integrated Powertrain:

- ✓ 5 years coverage
- ✓ Up to 500,000 km
- ✓ 300,000 Stop-Starts
- ✓ After-treatment system covered
- ✓ Alternator, starter and accessories covered
- ✓ Crankshaft radial sealing rings covered
- ✓ Electronic control units covered
- ✓ Valid in matured markets

*With Mercedes-Benz workshops only; with original parts only; not with B20.

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 Truck AG
00 1-E206
70546 Stuttgart/Germany

aggregate-info@daimler.com
www.mercedes-benz.com/powertrain



Index.

ENGINES					TRUCK	BUSES
Type	Cylinder	Displacement [litres]	Power [kW]	Torque [Nm]		
OM 934	L4	5.1	115, 130	650, 750	x	
OM 934 LA	L4	5.1	115, 130, 155, 170	650, 750, 850, 900		x
OM 936	L6	7.7	175, 200, 220, 235, 260	1000, 1100, 1200, 1300, 1400	x	
OM 936 LA	L6	7.7	175, 200, 220, 235, 260	1000, 1100, 1200, 1300, 1400		x
OM 470	L6	10.7	240 ¹ , 265, 290, 315, 335	1700, 1800 ¹ , 1900, 2100, 2200 ²	x	x
OM 471	L6	12.8	310 ¹ , 330 ¹ , 350, 375, 390 ¹	2100 ¹ , 2200 ¹ , 2300, 2500, 2600 ¹	x	x
OM 473	L6	15.6	380, 425, 460	2600, 2800, 3000	x	

TRANSMISSIONS					TRUCK	BUSES
Type	Ratio	Forward gears	Max. input torque [Nm]			
G 90 - 6S	6.70 - 0.73/9.20	6-8	1000	x		x
G 141 - 9 CPS	9.75 - 1.00/14.57	8	1400	x		
G 260 - 16 CPS	11.72 - 0.69/17.11	16	2600	x		
G 140 - 8 PowerShift 3	9.29 - 0.79/11.82	8	1400	x		
G 211 - 12 PowerShift 3	14.93 - 1.00/14.93	12	2100	x		
G 230 - 12 PowerShift 3	11.67 - 0.78/14.93	12	2300	x		
G 281 - 12 PowerShift 3	18.83 - 1.00/14.93	12	2800	x		
G 330 - 12 PowerShift 3	11.64 - 0.78/14.93	12	3300	x		
G 280 - 16 PowerShift 3	11.72 - 0.69/16.99	16	2800	x		
G 280 - 16 TRC	11.72 - 0.69/16.99	16	3000	x		
G 330 - 12 TRC	11.64 - 0.78/14.93	12	3300	x		
GO 230 - 6E CPS	6.53 - 0.73/9.03	6	2300			x
GO 250 - 8 PowerShift 3	6.57 - 0.63/10.38	8	2500			x

RETARDER			TRUCK	BUSES
Secondary water retarder			x	x

AXLES			TRUCK	BUSES
Type [front axles]	Wheel-end size [inches]	Axle load [t]		
F 4.1 - F 4.4	17.5	4.1 - 4.4	x	x
F 5.3 - F 6.1	19.5	5.3 - 6.1	x	x
FD 346 - FD 360	19.5	4.7 - 6	x	
FO 7.5	22.5	7.5		x
F 7.5 - F 8	22.5	7.5 - 8	x	x
F 9 - F 9.5	22.5	9 - 9.5	x	x
FD 233 P	22.5	7.5 - 9	x	
FD 233 P + FT 233 P	22.5	18	x	

			TRUCK	BUSES
Type [rear axles]	Wheel-end size [inches]	Axle load [t]		
R 325	17.5	6.2 - 8.3	x	x
R 390	19.5	11	x	x
R 440	22.5	13	x	x
RO 440	22.5	11.5 - 13		x
R 233 P - R 300 P	22.5	26.8 - 32	x	
RT 233 P + R 233 P - RT 300 P + R 300 P	22.5	26 - 32	x	
RT 390 + RT 390 T	22.5	20.5	x	
RT 440 + R 440	22.5	26	x	

¹ Output level only available for trucks. ² Output level only available for buses.

Oktober 2020

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Daimler Truck AG, Mercedesstr. 120, 70327 Stuttgart, Germany, TG/LPS

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