Mercedes-Benz Powertrain

PORTFOLIO Truck EURO VI

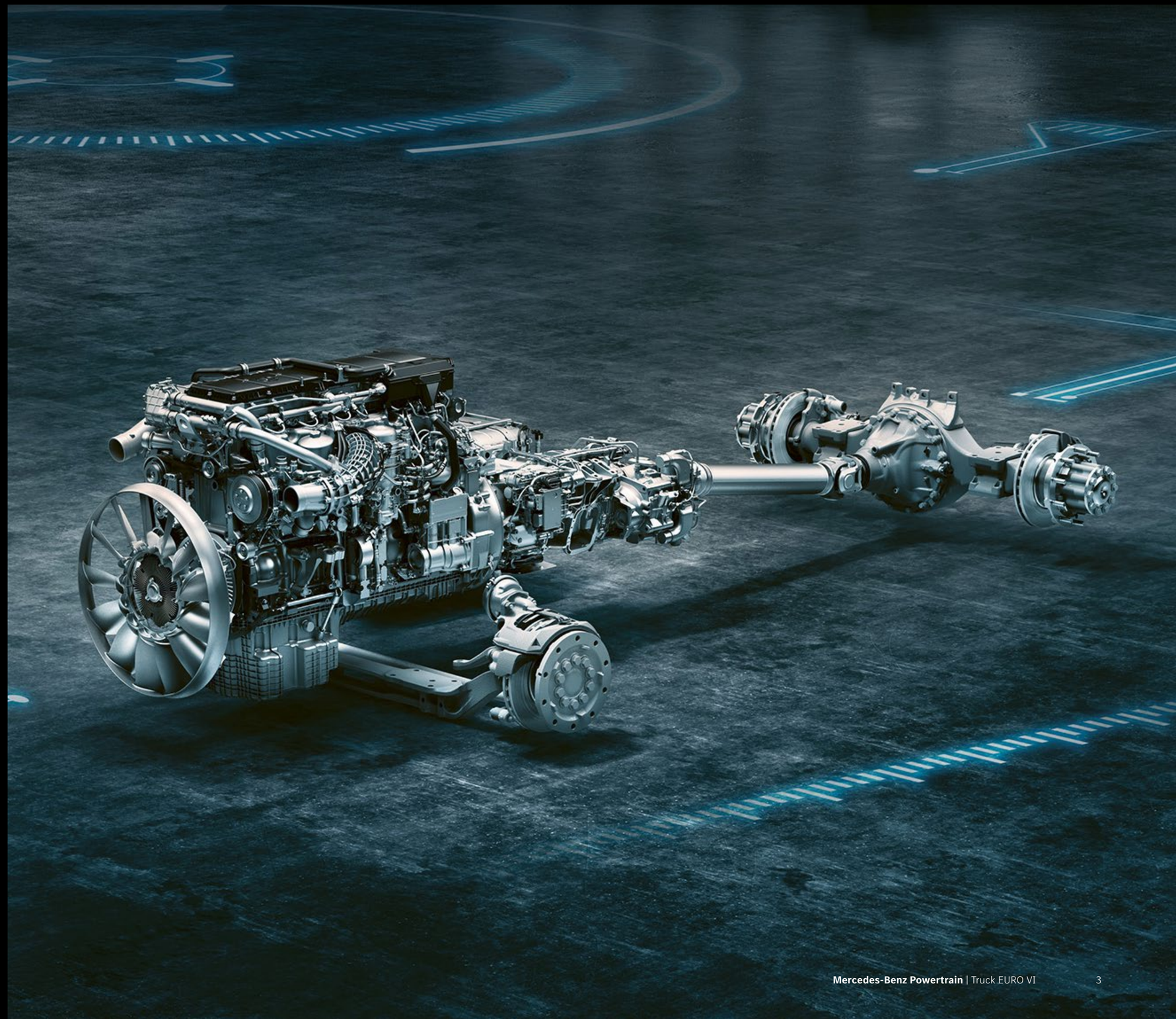
Mercedes-Benz

OVERVIEW

MERCEDES-BENZ POWERTRAIN

Global leader. In technology and efficiency.

- Outperforming components
- Benefits
- TCO reduction



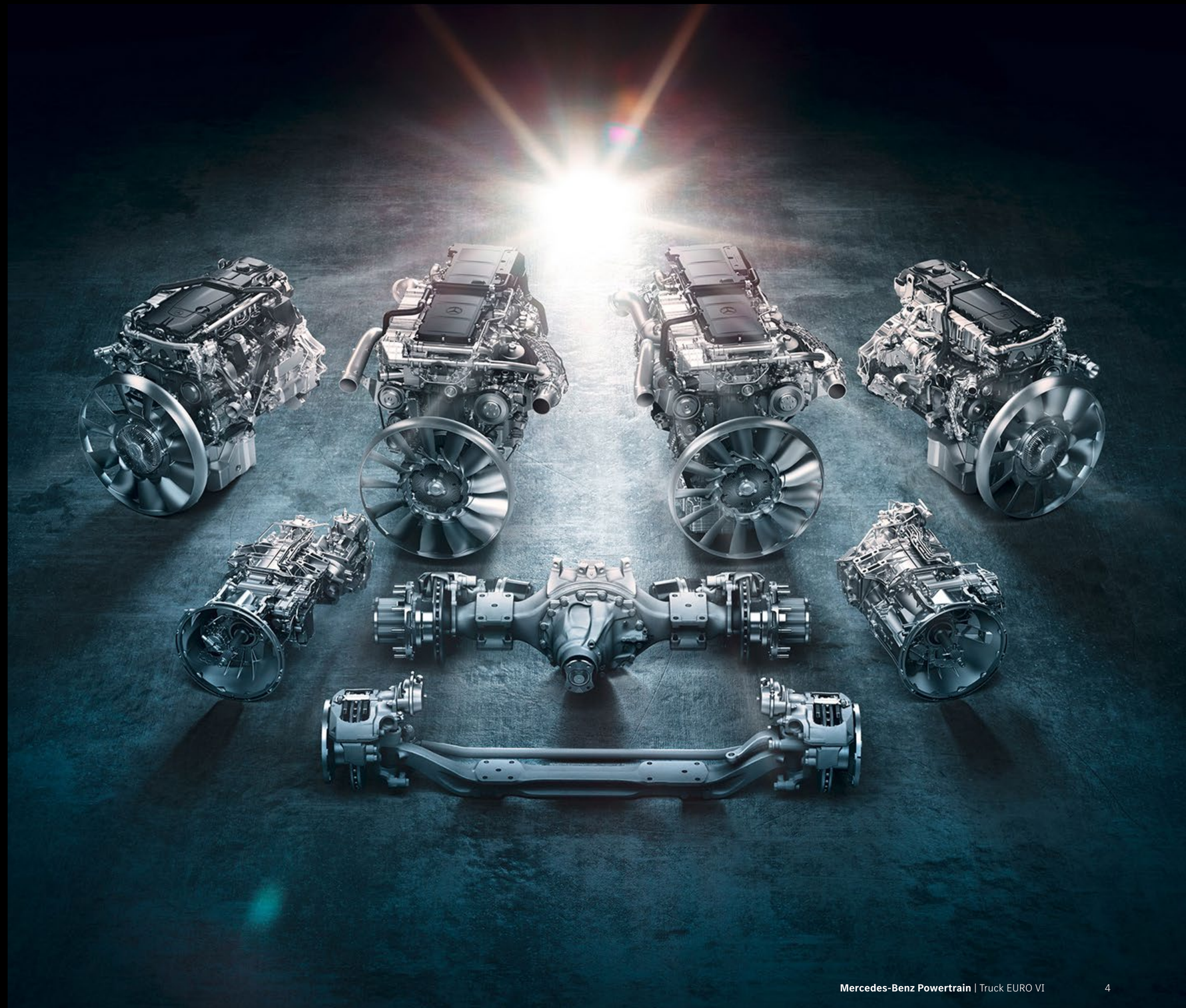
Mercedes-Benz Powertrain

GOING THE EXTRA MILE. MERCEDES-BENZ POWERTRAIN.

Mercedes-Benz Powertrain offers out-performing and individually 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 the best individual solution for your success together.



Mercedes-Benz Powertrain

BENEFITS FOR YOU. AND FOR YOUR CUSTOMERS.

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 set-up 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 investment in Mercedes-Benz R&D ensures state-of-the-art quality

Benefits for your customers

- ✓ Provides optimized fuel efficiency through 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
- ✓ Greater driver comfort due to the high level of integration of all assistant systems and features

Mercedes-Benz Powertrain

OUR ENGINE SYSTEMS PRODUCT PORTFOLIO: TCO REDUCTION AT ITS BEST.

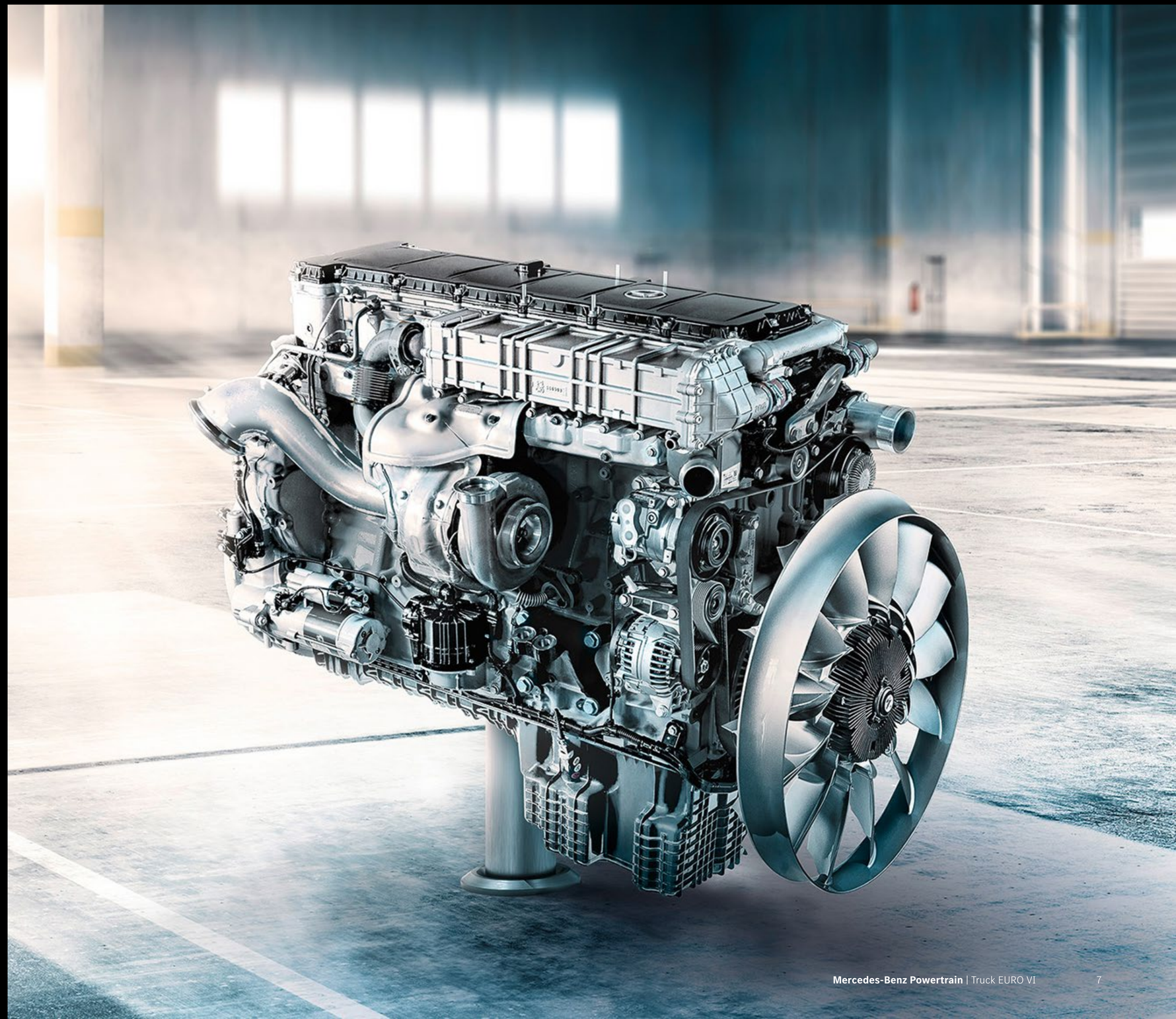
The perfect combination of engine systems, transmissions and axles yields the greatest possible efficiency and the **best quality** made by Mercedes-Benz Powertrain.

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.

ENGINE SYSTEMS

Our engines set benchmarks.



Engine systems

ENGINE SYSTEMS FOR EURO VI.

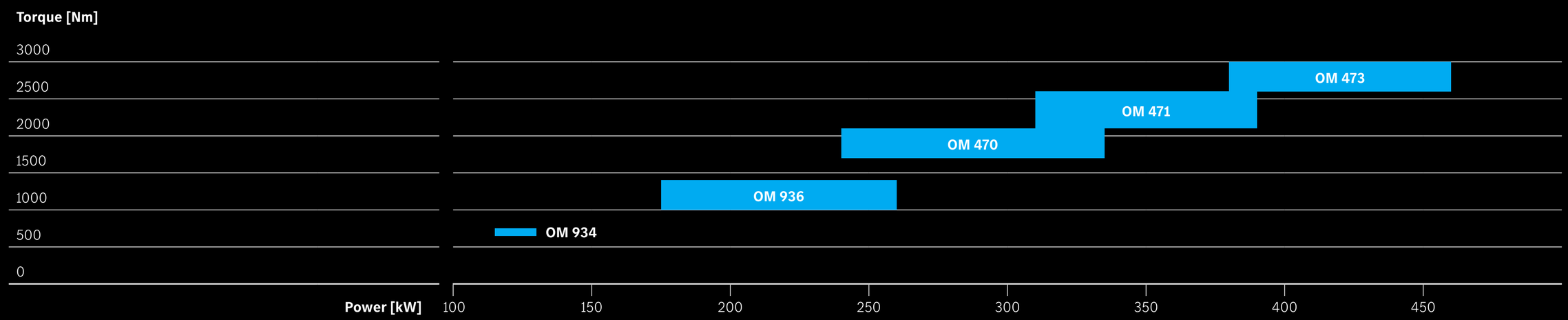
Portfolio of EURO VI engine systems for trucks

Model series	Type	Cylinder	Displacement [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

EURO VI

100 150 200 250 300 350 400 450

Power range of EURO VI engine systems for trucks



Engine systems

MEDIUM-DUTY ENGINE SYSTEMS.

› Benefits › OM 934 › OM 936

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 litres**
- **Output** of **115** up to **260 kW**
- **Advanced combustion system** to minimize fuel consumption
- **Common rail injection system** of up to 2400 bar 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

Medium-duty engine systems

OM 934

Arrangement: In-line 4
Displacement: 5.1 l

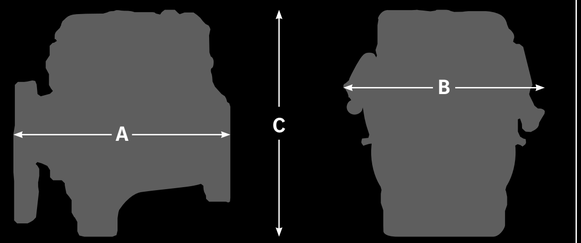
Weight and dimensions*

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

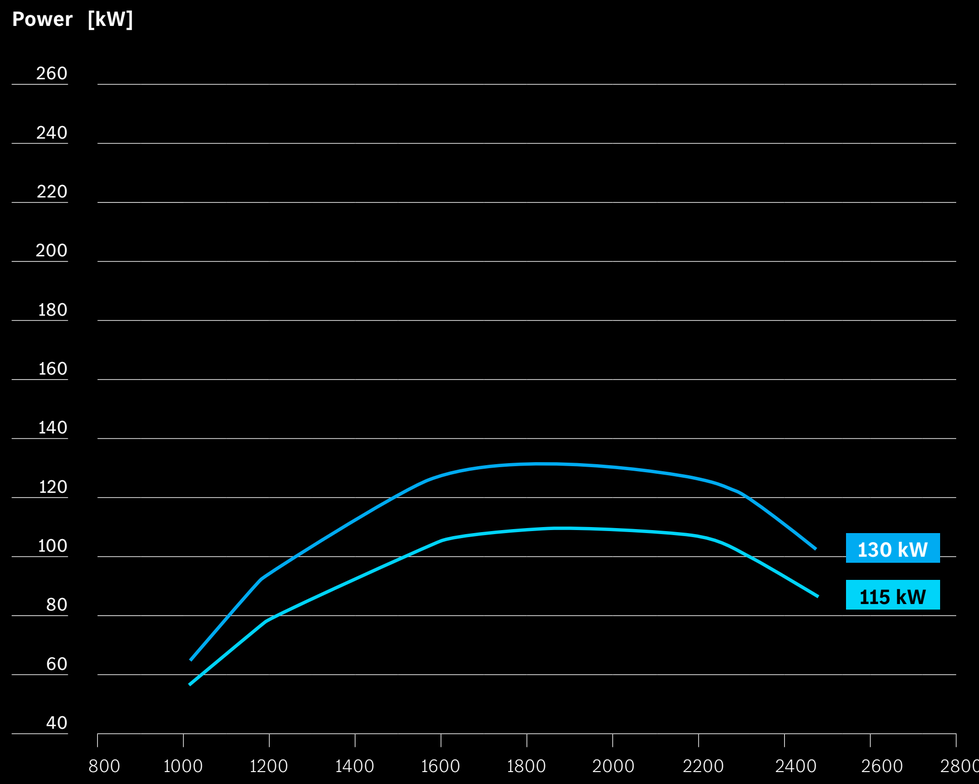


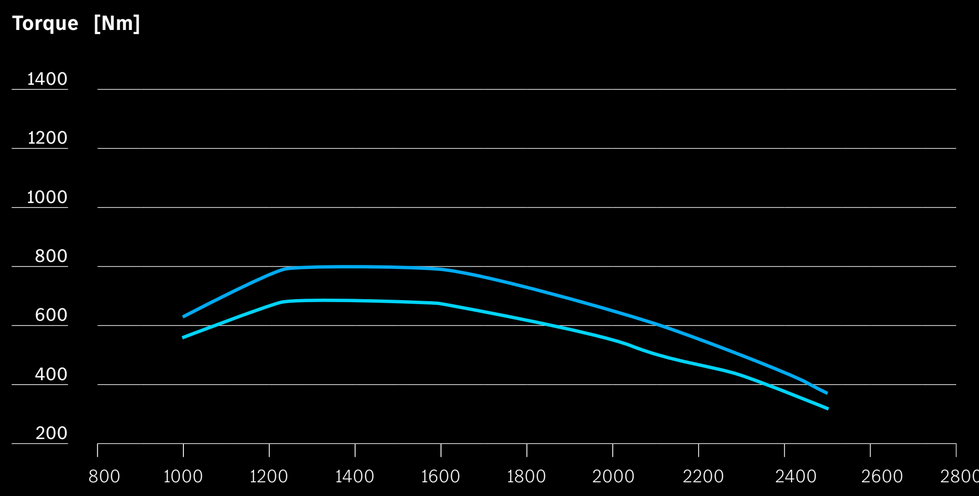
*depending on equipment installed

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





Medium-duty engine systems

OM 936

Arrangement: In-line 6
Displacement: 7.7 l

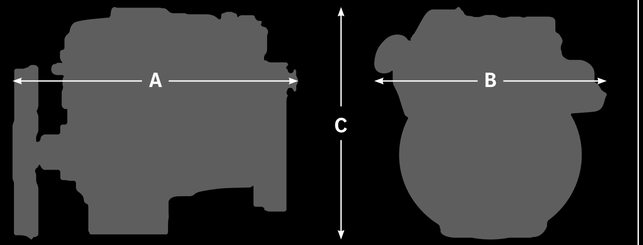
Weight and dimensions*

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

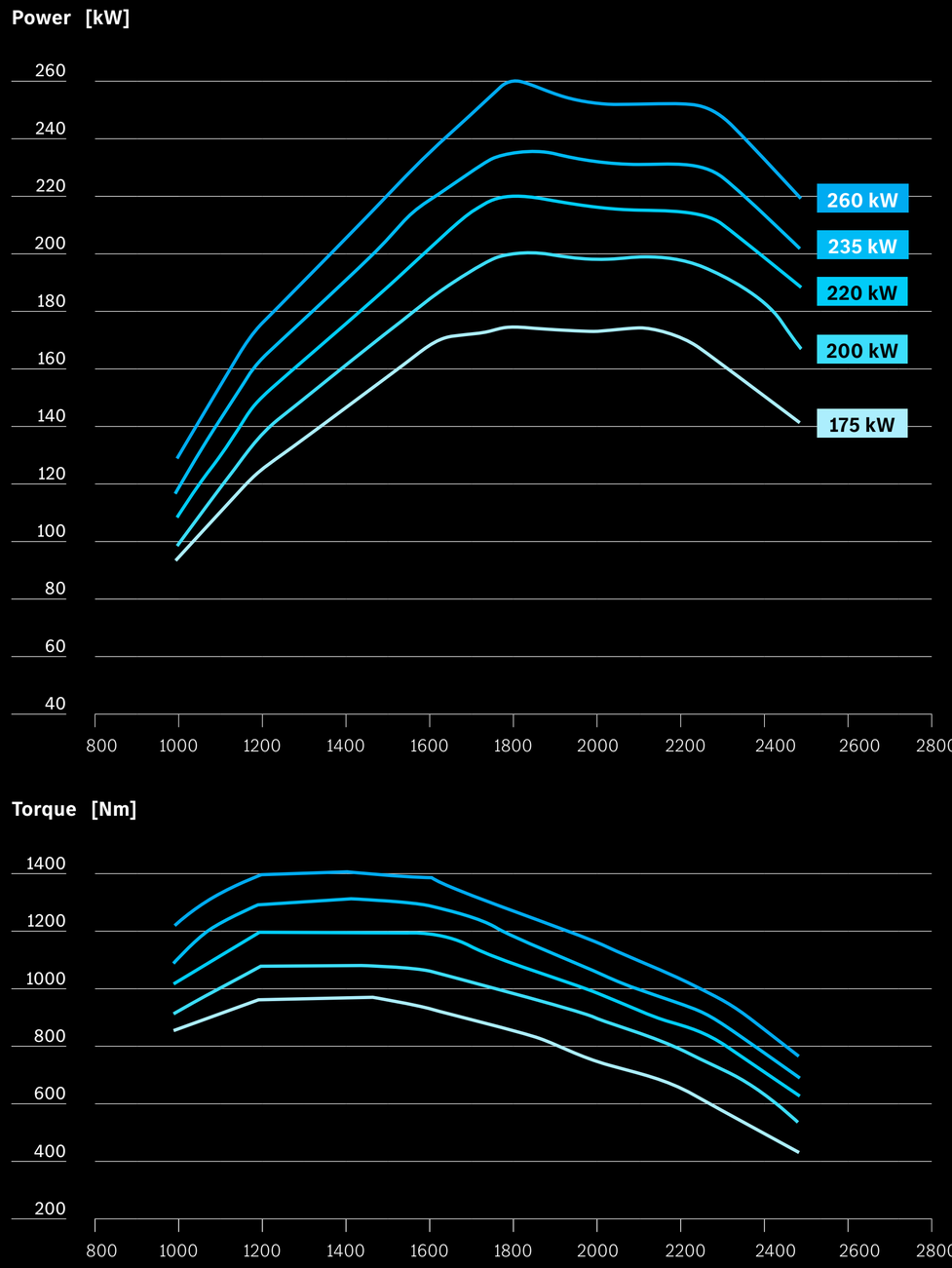


*depending on equipment installed

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



Engine systems

HEAVY-DUTY ENGINE SYSTEMS.

› Benefits › OM 470 › OM 471 › OM 473

Heavy-duty engine systems

ALWAYS GIVING 100%. EFFICIENTLY.

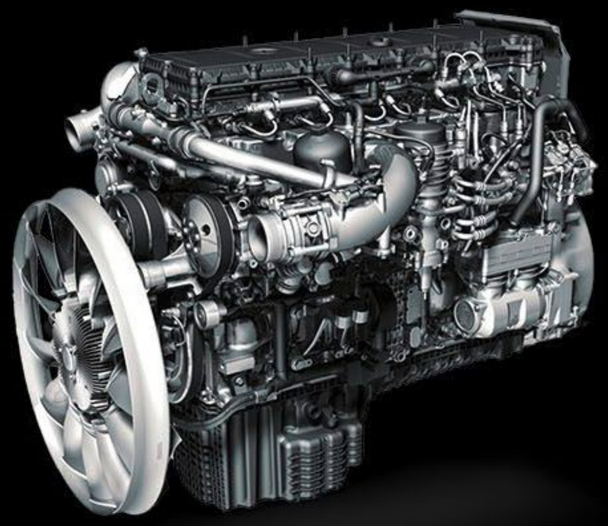
Your product benefits for heavy-duty engine systems:

- **6-cylinder** diesel engines in **in-line arrangement** with **cooled exhaust gas recirculation**
- **Displacement** between **10.7** and **15.6 litres**
- **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** of up to 2700 bar
- **Captive 1-stage asymmetric turbocharger** with outstanding efficiency
- **15.6-litre 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

Heavy-duty engine systems

OM 470

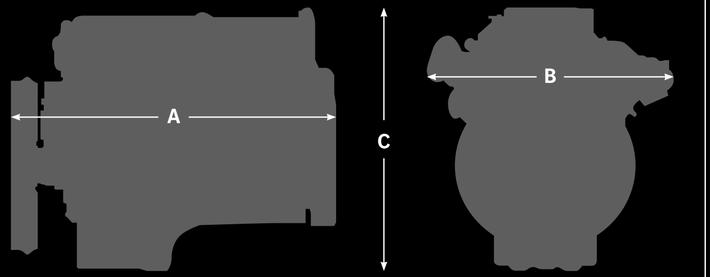
Arrangement: In-line 6
Displacement: 10.7 l



Weight and dimensions*

Weight
DIN 70020 - GZ 956 kg

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

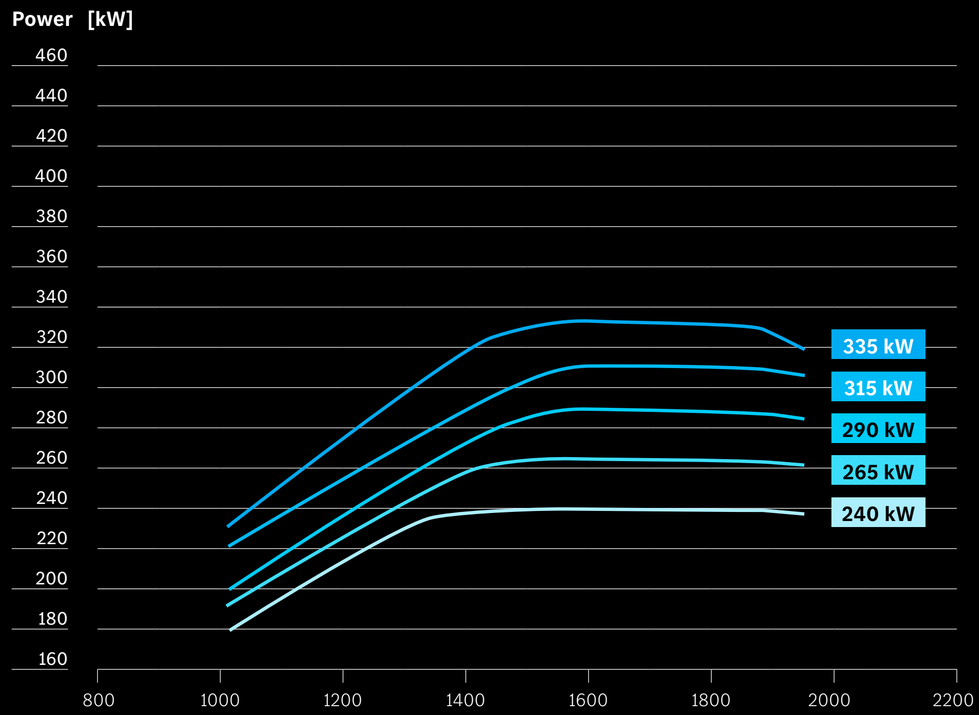


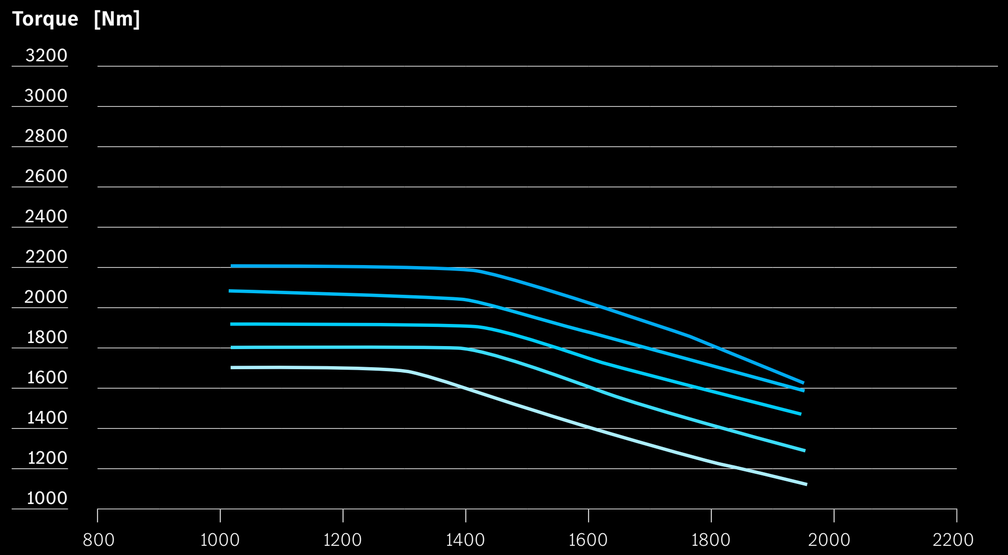
* depending on equipment installed

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	2200
at engine speed	[rpm]	1100	1100	1100	1100	1100

Performance

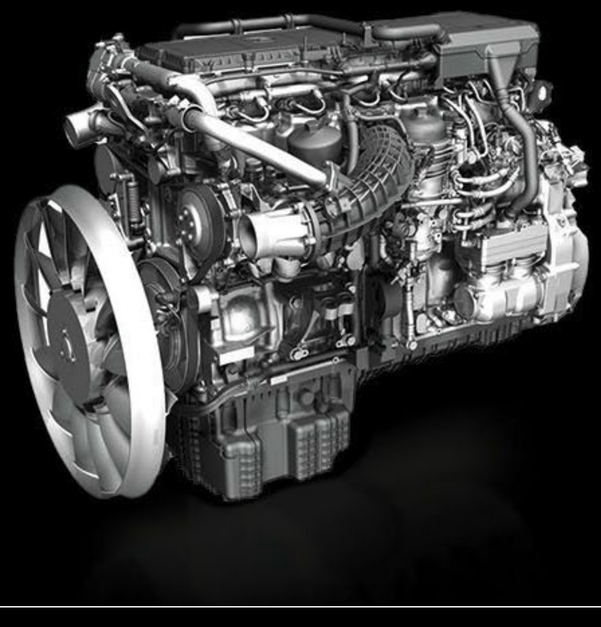




Heavy-duty engine systems

OM 471

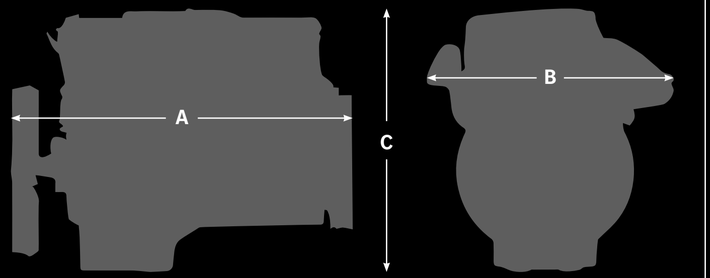
Arrangement: In-line 6
Displacement: 12.8 l



Weight and dimensions*

Weight
DIN 70020 - GZ 1091 kg

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

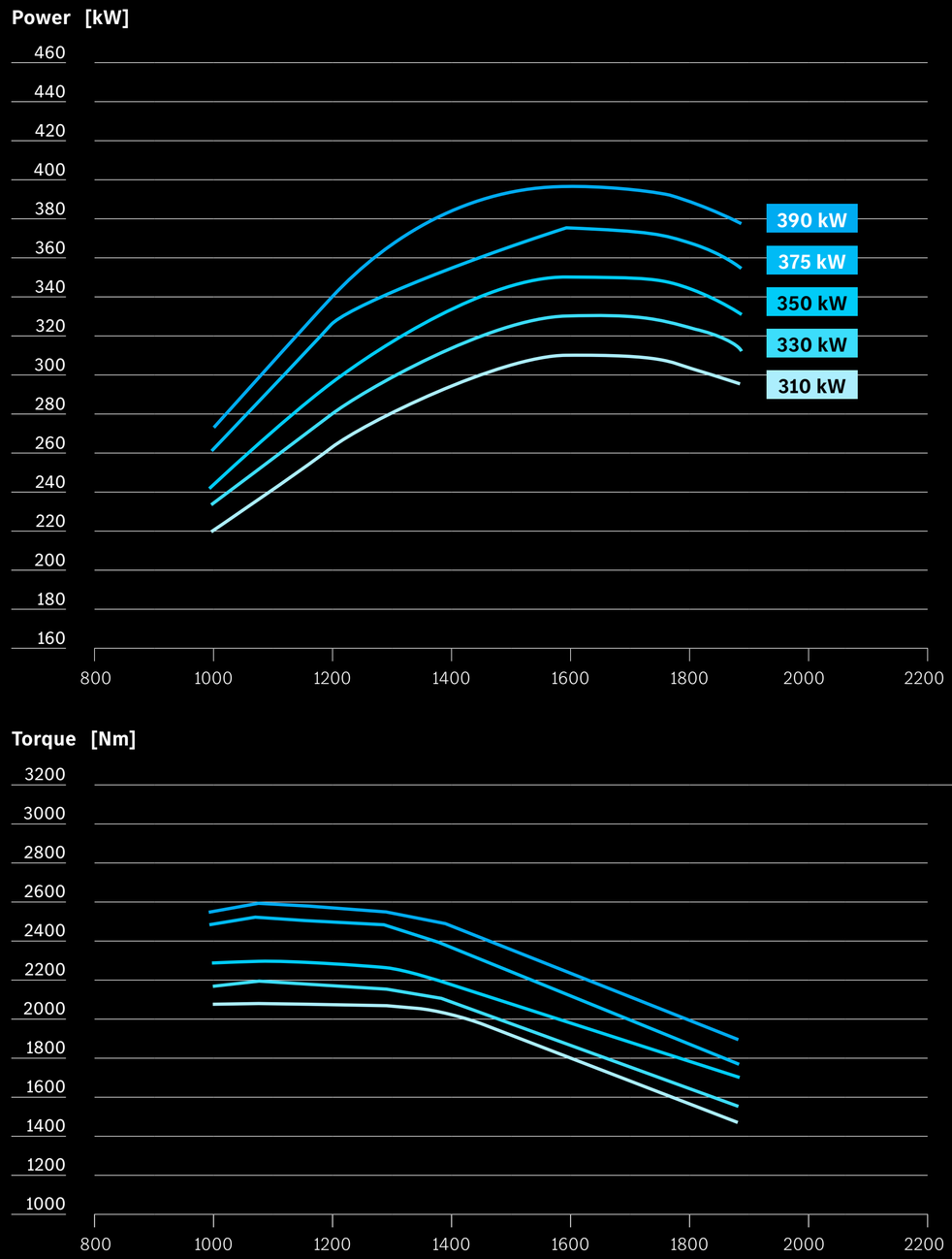


* depending on equipment installed

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

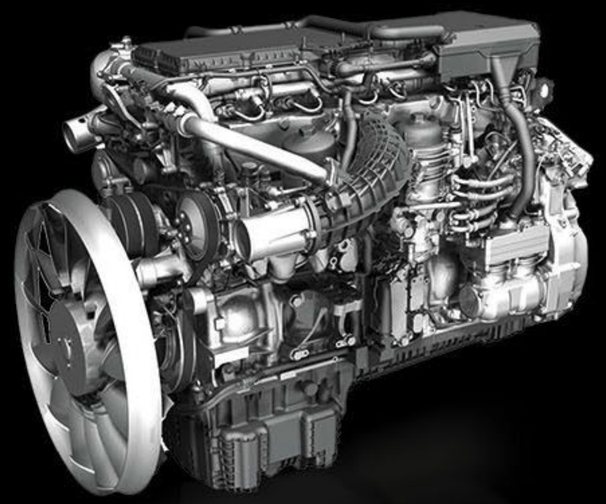
Performance



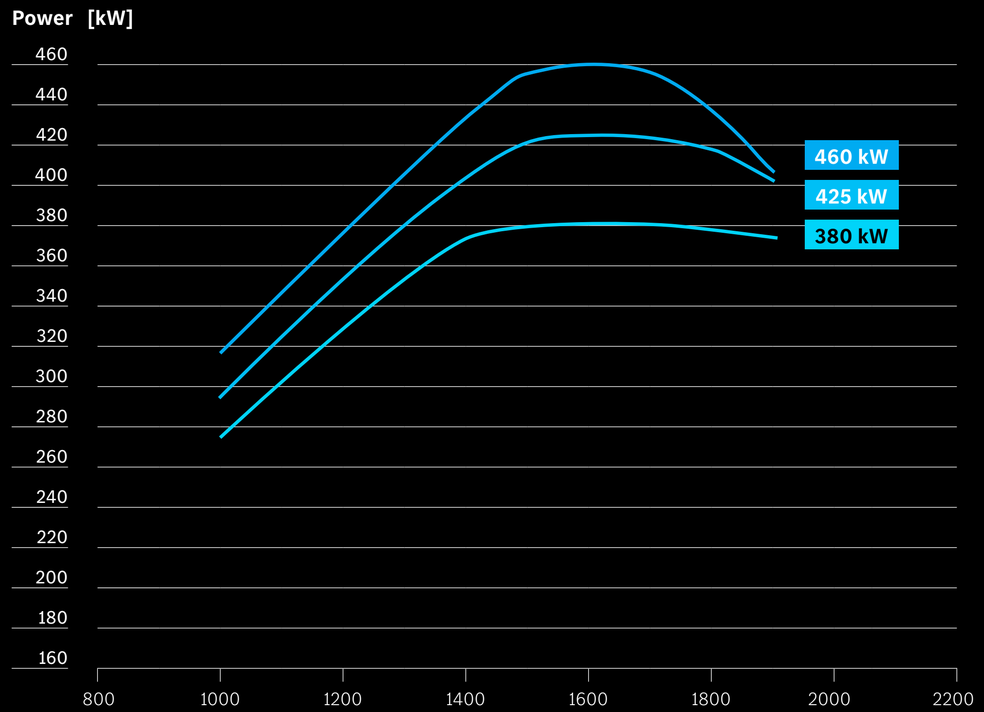
Heavy-duty engine systems

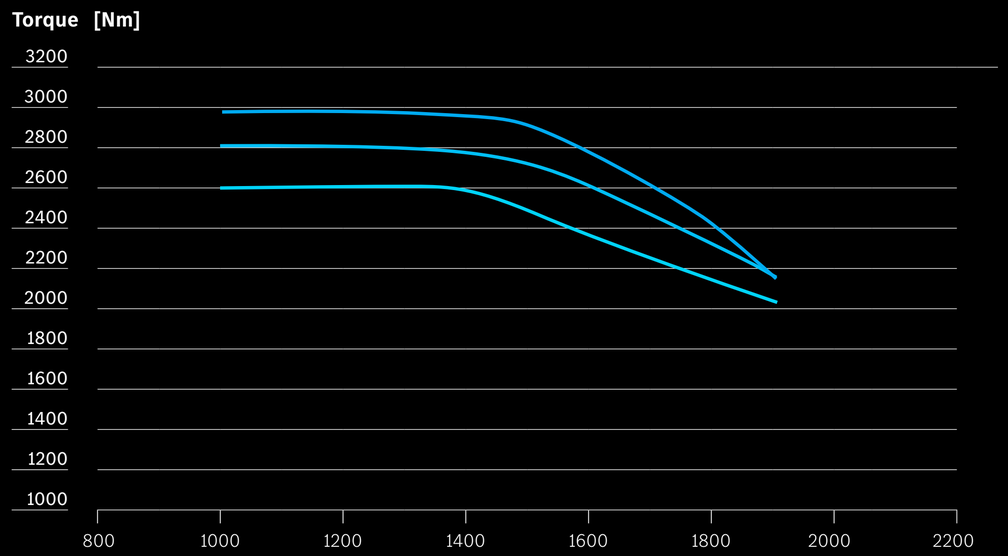
OM 473

Arrangement: In-line 6
Displacement: 15.6 l



Performance

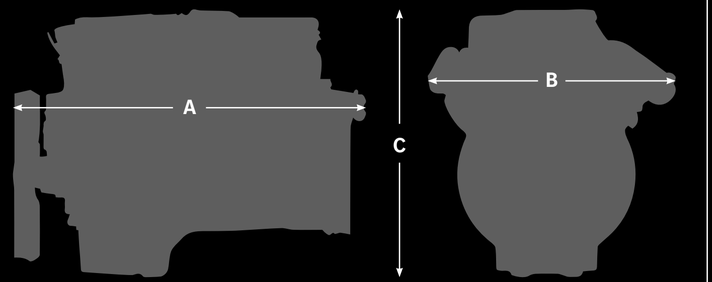




Weight and dimensions*

Weight
DIN 70020 - GZ 1240 kg

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



* depending on equipment installed

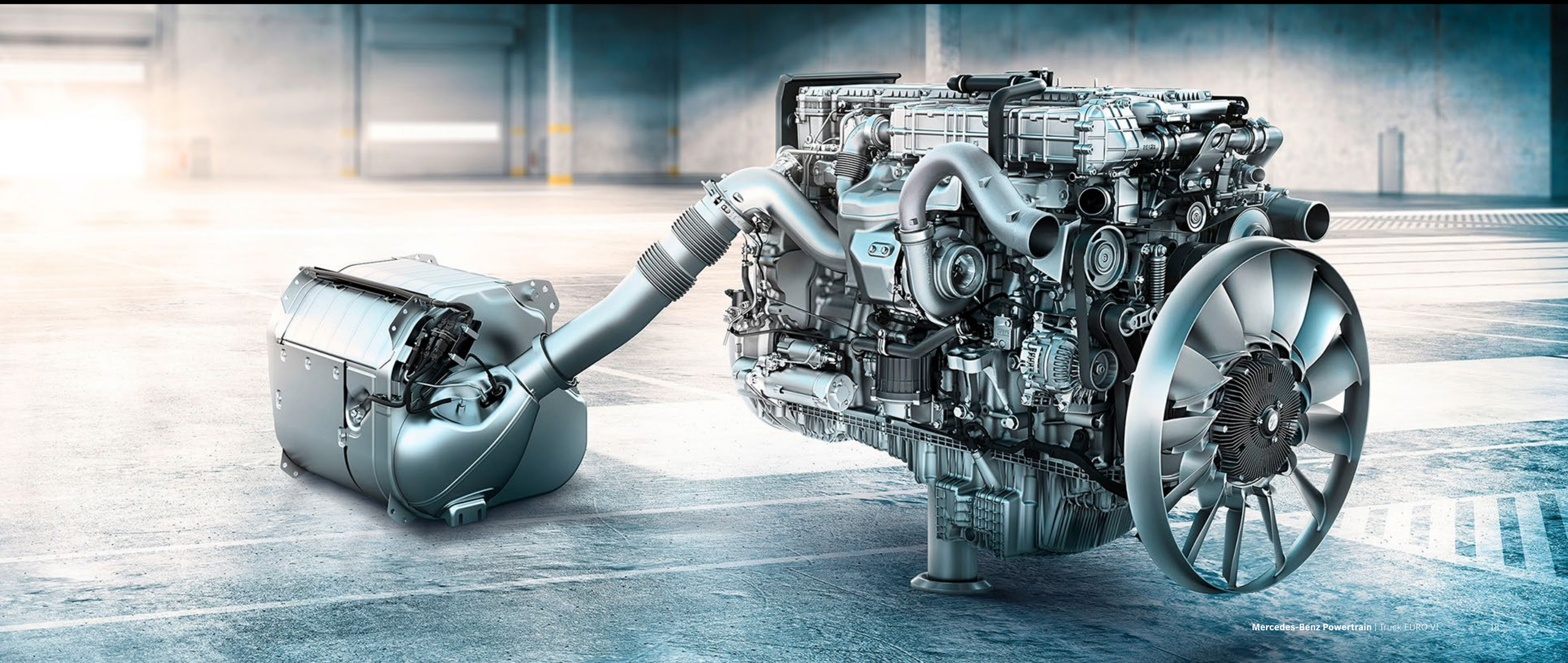
Rated power and maximal torque

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

Engine systems

EXHAUST AFTER-TREATMENT SYSTEM.

› Benefits



Exhaust after-treatment system

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 CO_2, particulate matter and low nitrogen oxide emissions.

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

Engine systems

DERIVATION “NOMENCLATURE” – ENGINE SYSTEMS.

OM = Oil (diesel) engine

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

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

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

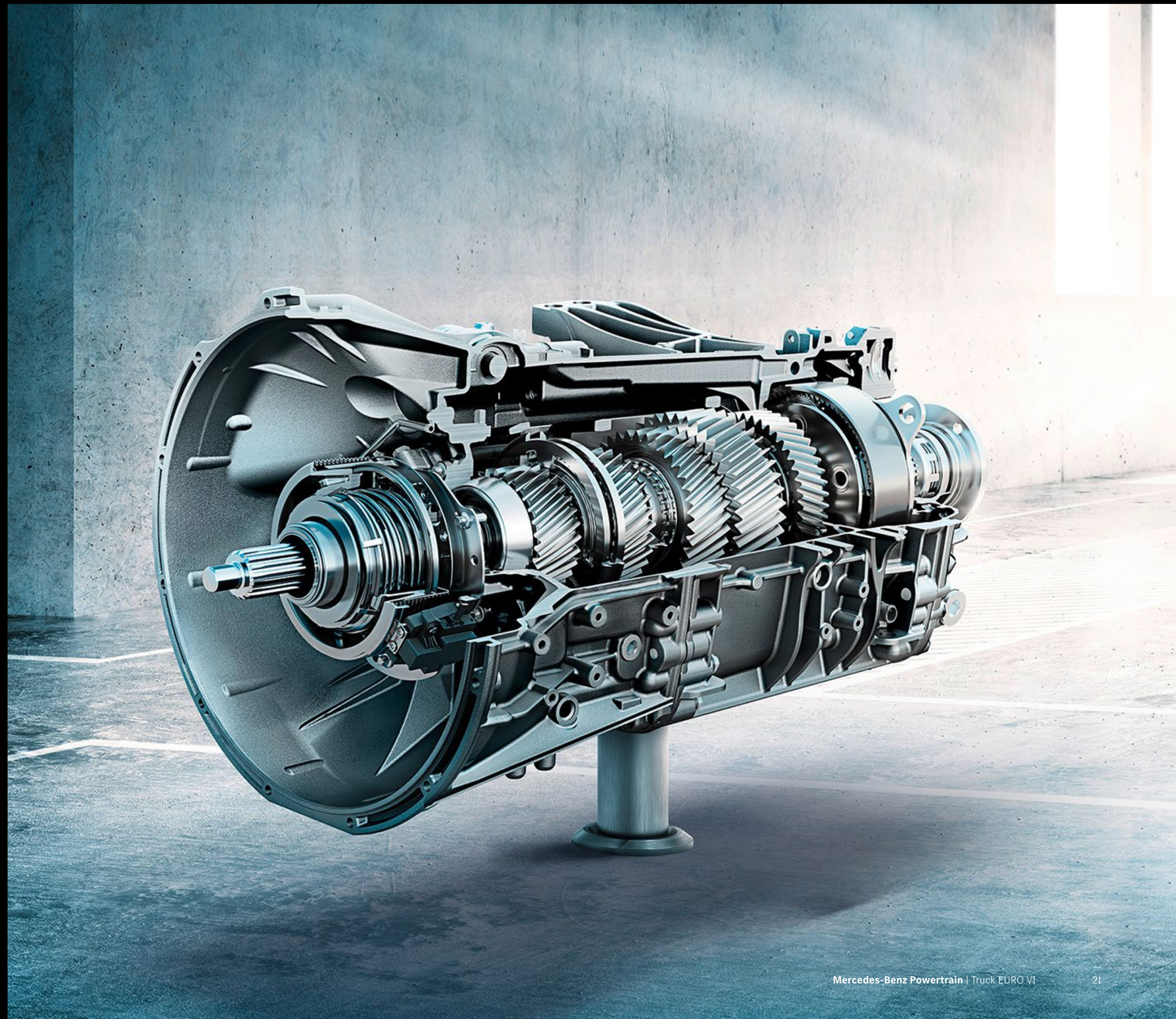
9 = 93X model series (MD)
4 = 47X model series (HD)

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)

* BR = Baureihe = model series

TRANSMISSIONS

Reliable transmissions for a wide range of applications.



Transmissions

SMOOTH AND EFFICIENT OPERATION IN EVERY SITUATION.

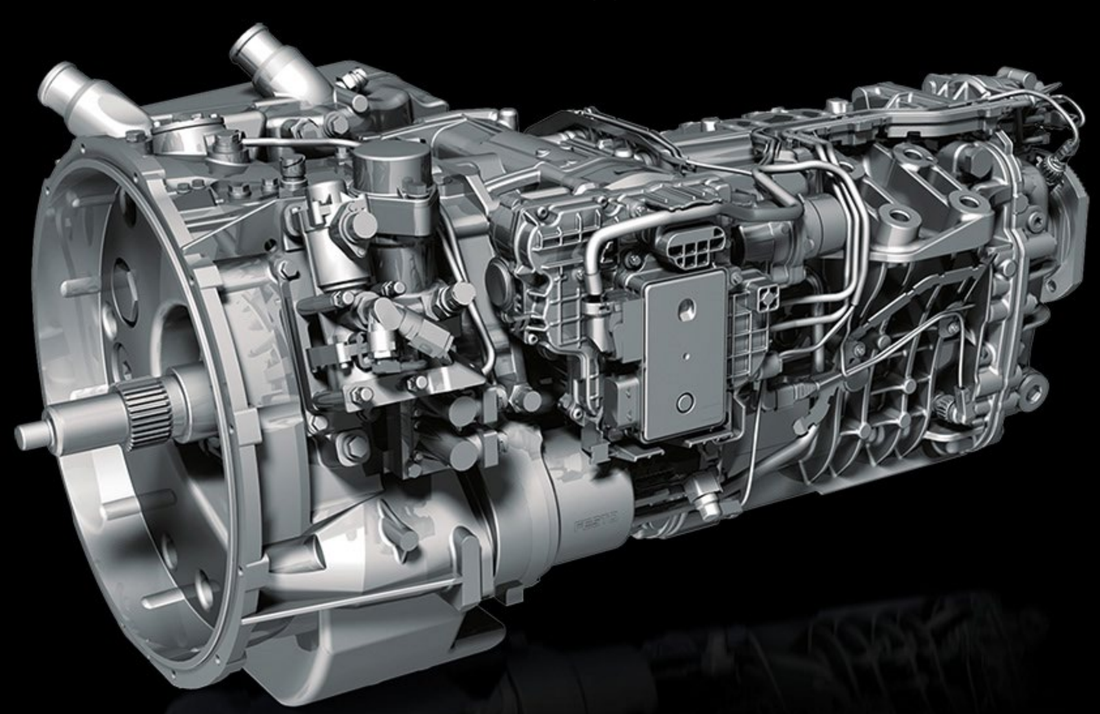
Our range of service extends from 12-speed to 16-speed transmissions for heavy-duty commercial vehicles, special vehicles and mobile cranes. An extensive selection of power take-off units, transfer cases and various circuit variants ensure that a custom-made transmission can be developed from standardized 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 through three features in particular:

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

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

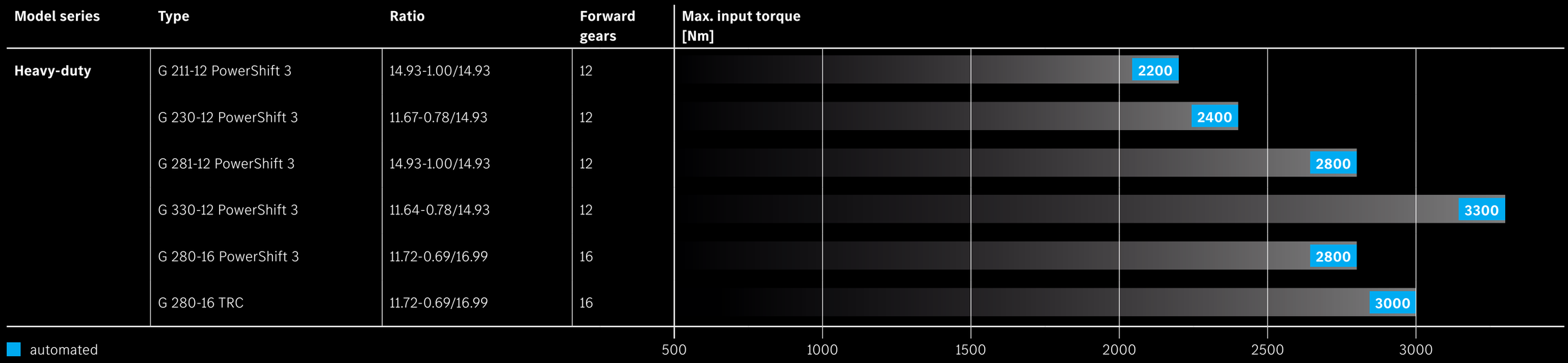


Transmissions

TRANSMISSIONS FOR EURO VI ENGINE SYSTEMS.

Portfolio of transmissions for trucks

Model series	Type	Ratio	Forward gears	Max. input torque [Nm]
Heavy-duty	G 211-12 PowerShift 3	14.93-1.00/14.93	12	2200
	G 230-12 PowerShift 3	11.67-0.78/14.93	12	2400
	G 281-12 PowerShift 3	14.93-1.00/14.93	12	2800
	G 330-12 PowerShift 3	11.64-0.78/14.93	12	3300
	G 280-16 PowerShift 3	11.72-0.69/16.99	16	2800
	G 280-16 TRC	11.72-0.69/16.99	16	3000



Meaning of symbols:

AMT Fully automated manual transmission

Transmissions for medium-duty trucks

Transmission for heavy-duty trucks and special vehicles

Transmission for cranes

Transmissions

HEAVY-DUTY TRANSMISSIONS.

Heavy-duty transmissions

HARD-WORKING AND RESILIENT.

Your product benefits for heavy-duty transmissions:

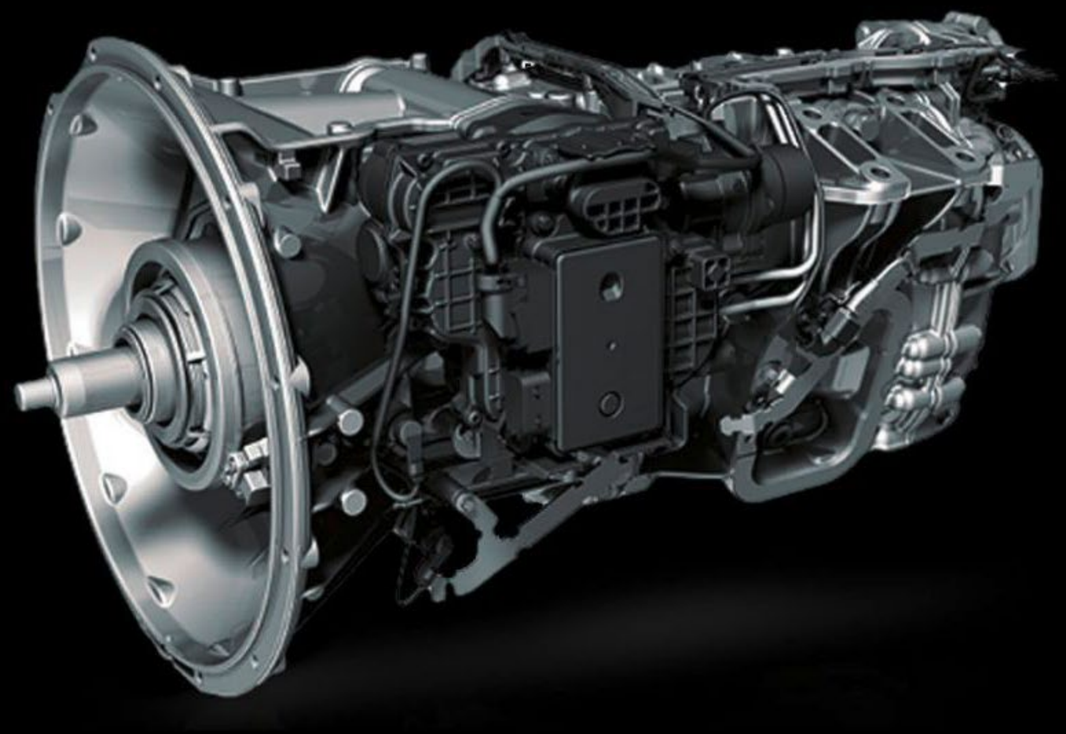
- **12- to 16-speed** manual and automated shifted manual transmissions
- **Max. input torque** from **2200** to **3300 Nm**
- **Gear ratio** spread from **11.64** to **17.17**
- Max. permissible **gross combination weight (GCW)** from **44** to **60 t (250 t)**
- **Oil retarder** can be adapted
- Highly variable **modular systems** for customer-specific system solutions
- **Quiet running characteristics** and **long service life** through optimized gear set geometry and high-precision 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 customer-specific operating conditions
- More **comfortable vibration characteristics** due to integrated engine suspension on the transmission housing

Heavy-duty transmissions

G 211-12 POWERSHIFT 3

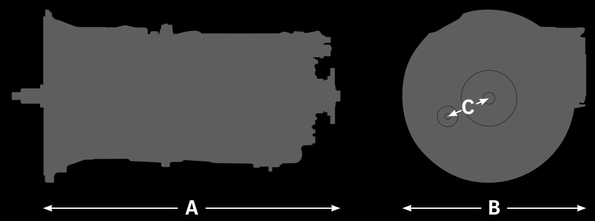
AMT

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



Specifications and dimensions

Max. input torque	2200 Nm
Permissible gross combination weight (GCW)	44 t
Transmission weight excl. oil	235 kg/ 299 kg*
Oil filling capacity	10 l
A = length	964 mm
B = width	596 mm
C = centre to center	142 mm



* with retarder

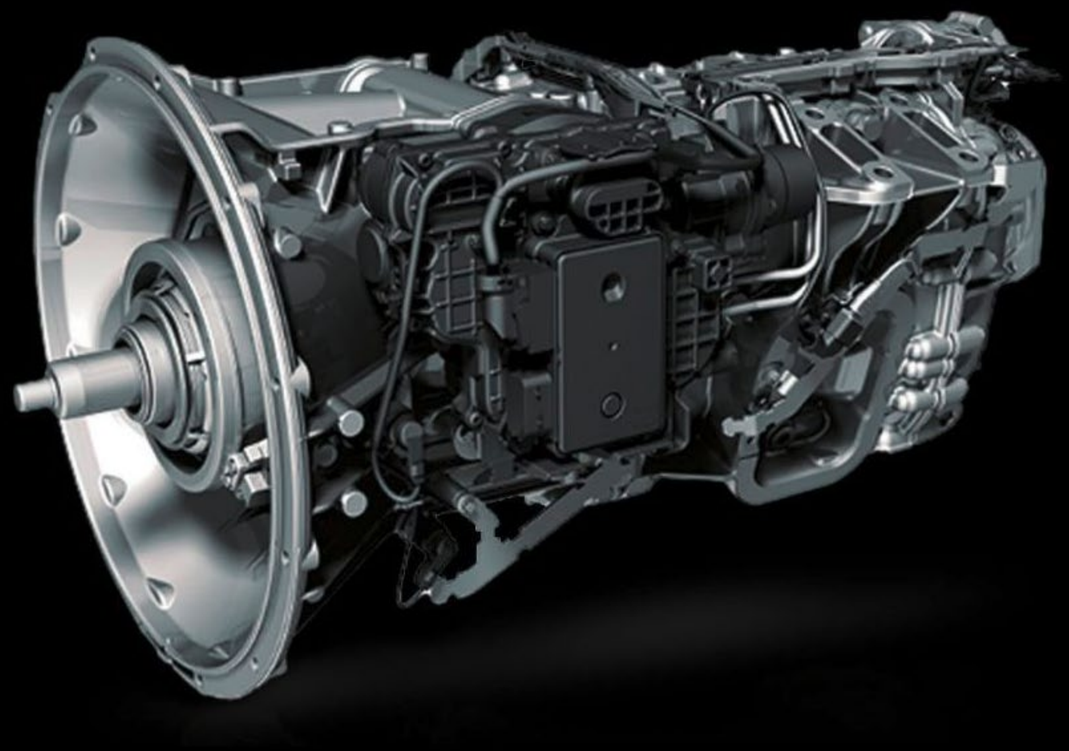
Gear	1	2	3	4	5	6	R	Gear ratio spread
iS	14.930	9.024	5.628	3.393	2.051	1.279	14.930	14.93
iL	11.673	7.056	4.400	2.653	1.604	1.000	11.673	14.93

Heavy-duty transmissions

G 230-12 POWERSHIFT 3

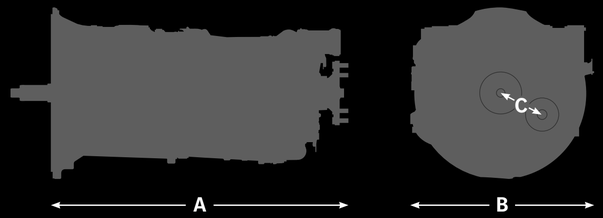
AMT

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



Specifications and dimensions

Max. input torque	2400 Nm
Permissible gross combination weight (GCW)	45 t
Transmission weight excl. oil	235 kg/ 299 kg*
Oil filling capacity	10 l
A = length	964 mm
B = width	596 mm
C = centre to center	142 mm



* with retarder

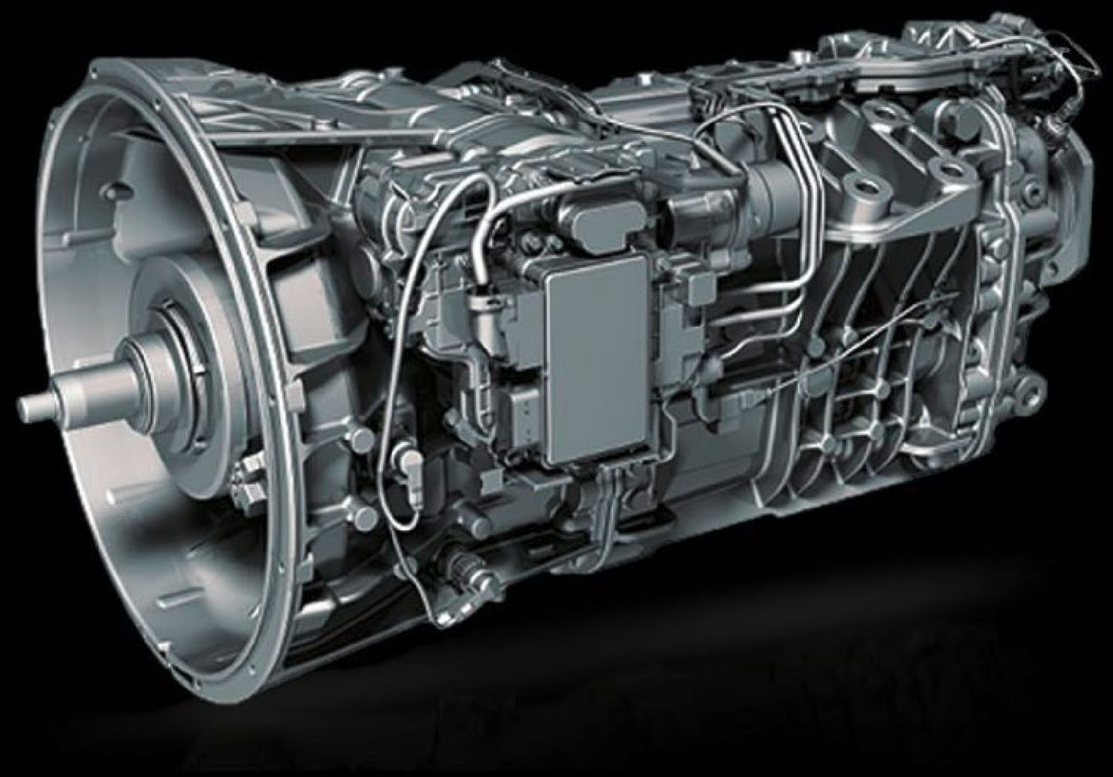
Gear	1	2	3	4	5	6	R1	R2	Gear ratio spread
iS	11.673	7.056	4.400	2.653	1.604	1.000	11.673	2.653	14.97
iL	9.101	5.501	3.431	2.068	1.205	0.780	9.101	2.068	14.97

Heavy-duty transmissions

G 281-12 POWERSHIFT 3

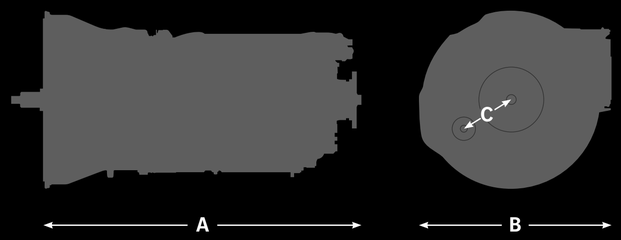
AMT

- 12-speed none synchronised transmission with a wide gear ratio spread
- Direct-drive configuration
- Oil 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/ 351 kg*
Oil filling capacity	14 l
A = length	1033.5 mm
B = width	624 mm
C = centre to center	152 mm



* with retarder

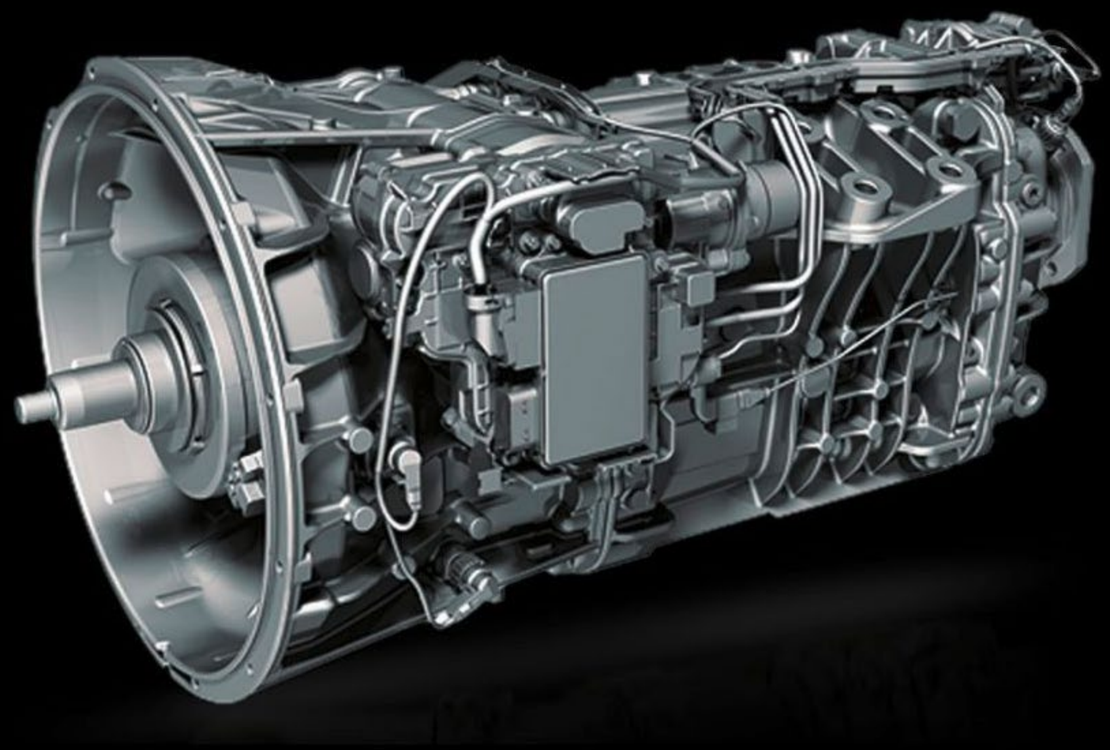
Gear	1	2	3	4	5	6	R1	R2	Gear ratio spread
iS	14.931	11.132	6.581	3.698	2.187	1.293	20.873	4.100	14.93
iL	14.563	8.611	5.091	2.861	1.691	1.000	16.145	3.171	14.93

Heavy-duty transmissions

G 330-12 POWERSHIFT 3

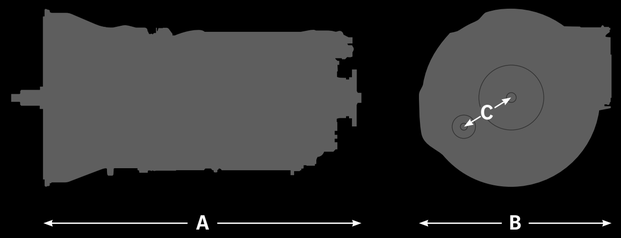
AMT

- 12-speed none synchronized transmission with a wide gear ratio spread
- Overdrive configuration
- Oil 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/ 351 kg*
Oil filling capacity	14 l
A = length	1033.5 mm
B = width	624 mm
C = centre to center	152 mm



* with retarder

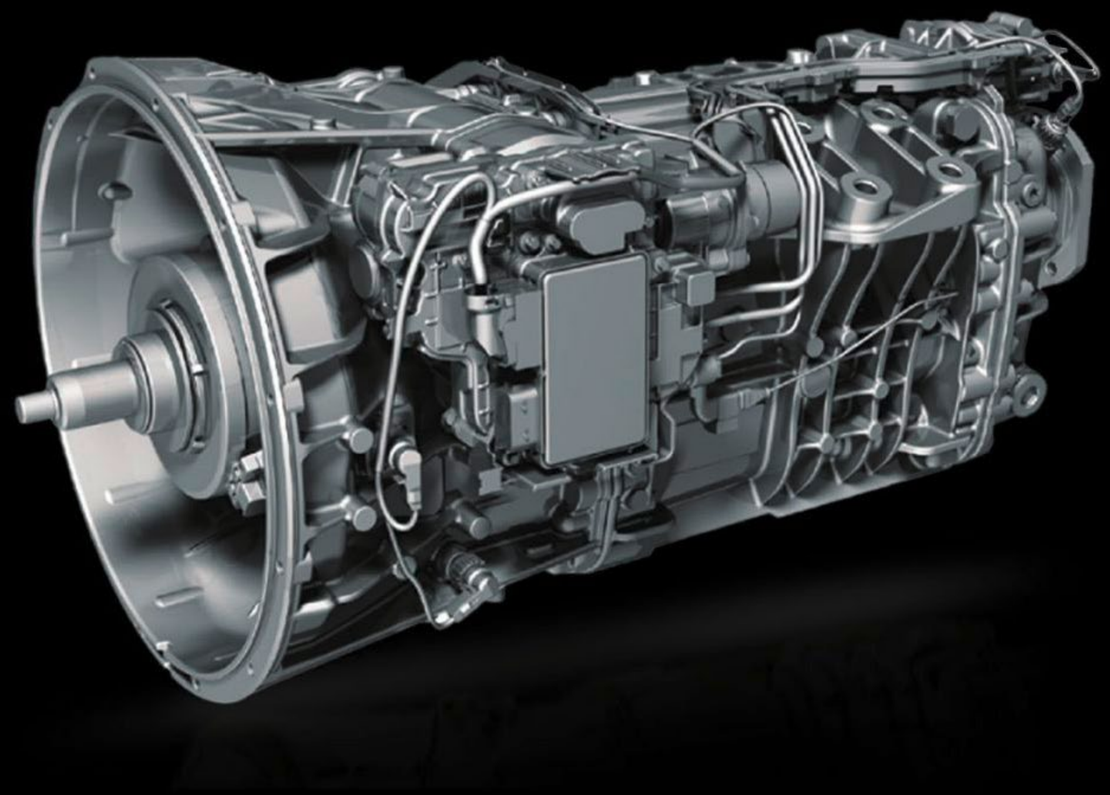
Gear	1	2	3	4	5	6	R 1	R 2	Gear ratio spread
iS	11.639	7.035	4.400	2.645	1.599	1.000	12.774	2.093	15.02
iL	9.020	5.452	3.410	2.050	1.239	0.775	9.900	2.250	15.02

Heavy-duty transmissions

G 280-16 POWERSHIFT 3

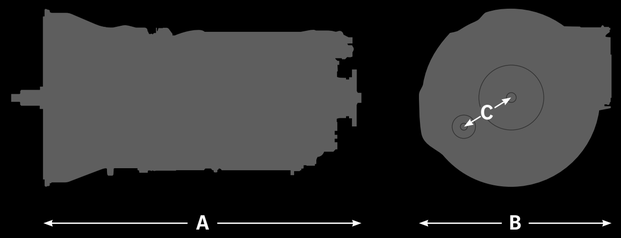
AMT

- 16-speed none synchronized transmission with a wide gear ratio spread
- Overdrive configuration
- Oil 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/ 358 kg*
Oil filling capacity	14 l
A = length	1033.5 mm
B = width	624 mm
C = centre to center	152 mm



* with retarder

Gear	1	2	3	4	5	6	7	8	R 1	R 2	Gear ratio spread
iS	11.722	7.916	5.291	3.636	2.664	1.799	1.203	0.826	10.656	2.422	17.06
iL	9.747	6.583	4.400	3.023	2.215	1.496	1.000	0.687	8.861	2.014	17.06

Transmissions

TRC TRANSMISSION.

› TRC transmission for extreme applications

› G 280-16 TRC

TRC transmission

TRC TRANSMISSION FOR EXTREME APPLICATIONS.

Automated non-synchronous 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 manoeuvring 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 manoeuvre heavy loads with millimetre precision, even when tractional resistance is high.

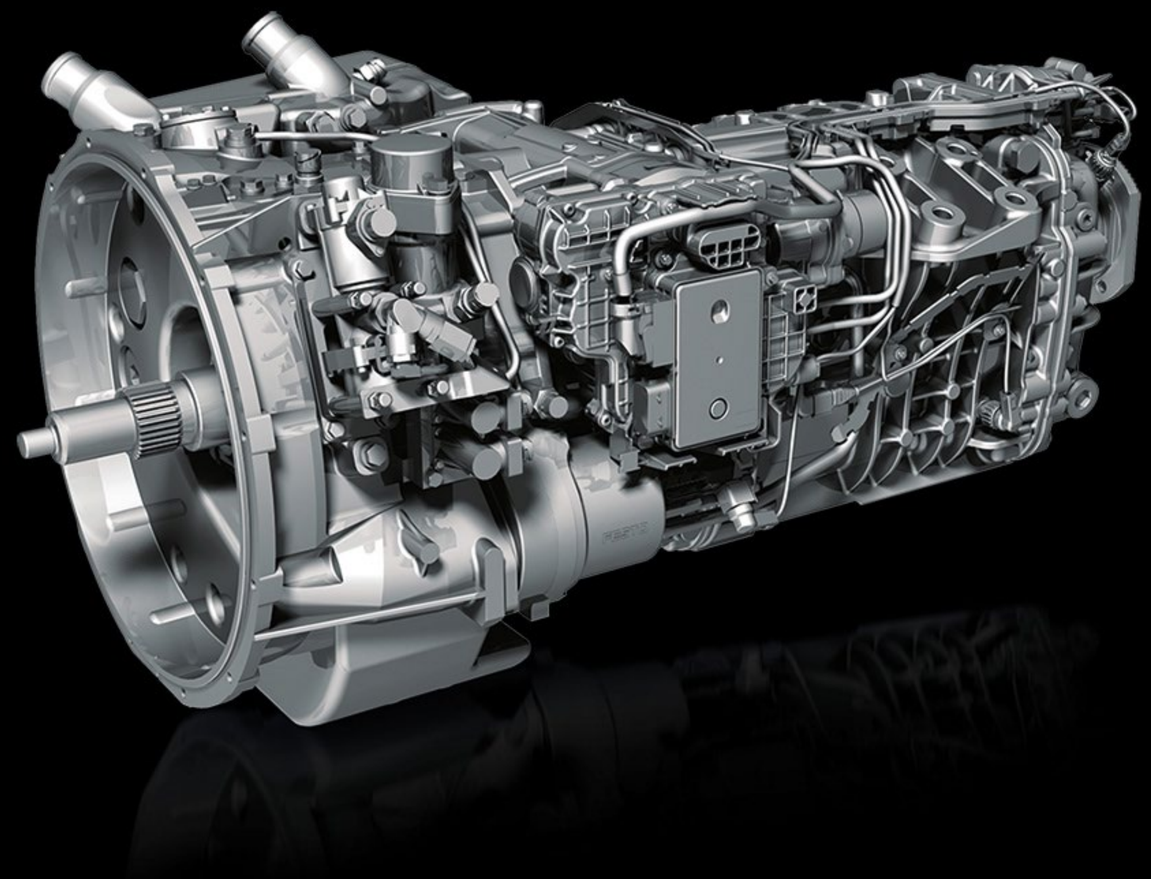
- Braking with no wear due to integrated primary retarder function and patented coupling configuration.

TRC transmission

G 280-16 TRC

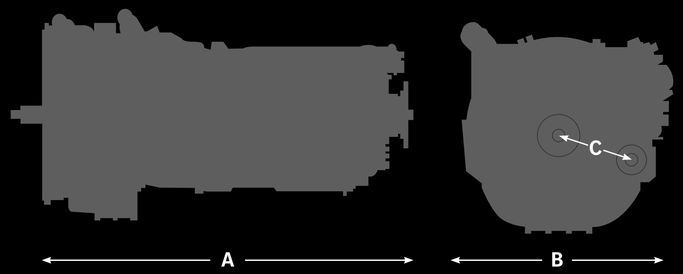
AMT

- 16-speed non-synchronous 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 = centre 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	17.06
Ratio	9.747	6.583	4.400	3.023	2.215	1.496	1.000	0.687	8.861	2.014	17.06

Transmissions

RETARDER.

› **Integrated secondary water retarder**

› **Benefits**

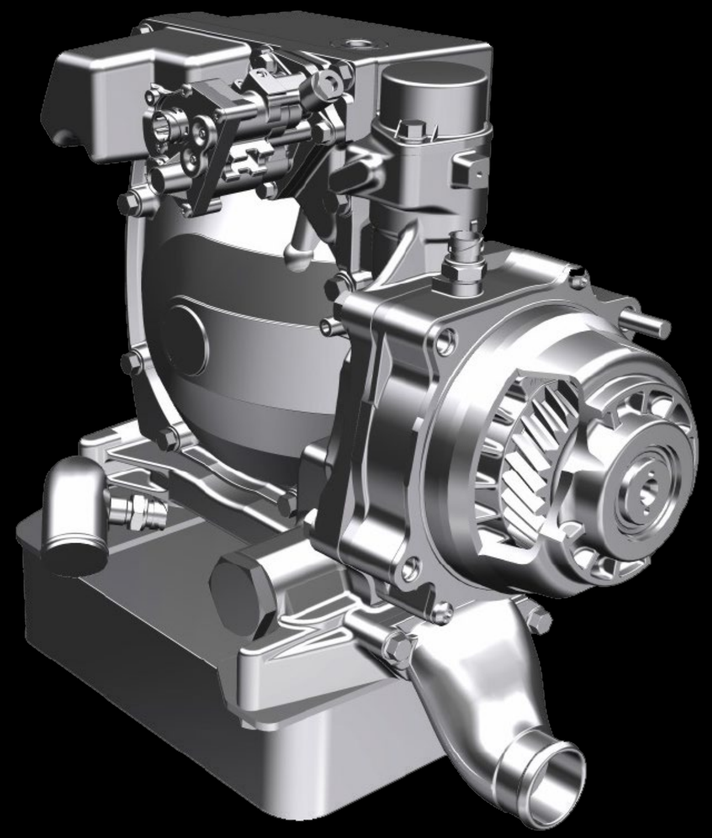
Retarder

INTEGRATED OIL RETARDER.

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 of up to 3500 Nm.**

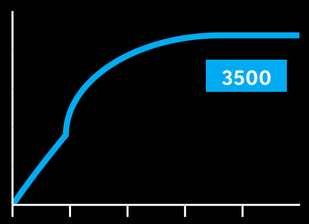


Retarder

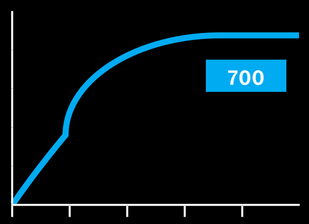
INTEGRATED OIL RETARDER.*

Your product benefits:

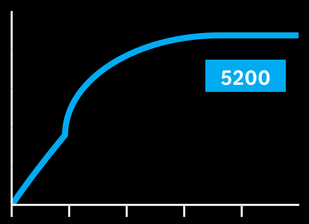
- Integrated **step-up gear retarder**
- **High braking** moments
- **Autarchic** oil supply system
- **Stainless steel** heat exchanger
- **Oil-air** separation
- **Optimized** hydrodynamics
- Retarder **integrated** into the **vehicle management system**
- Standard universal joint shaft length is **not affected by the retarder**



Max. braking torque [Nm]



Max. braking power [kW]



Max. rotation [min -1]

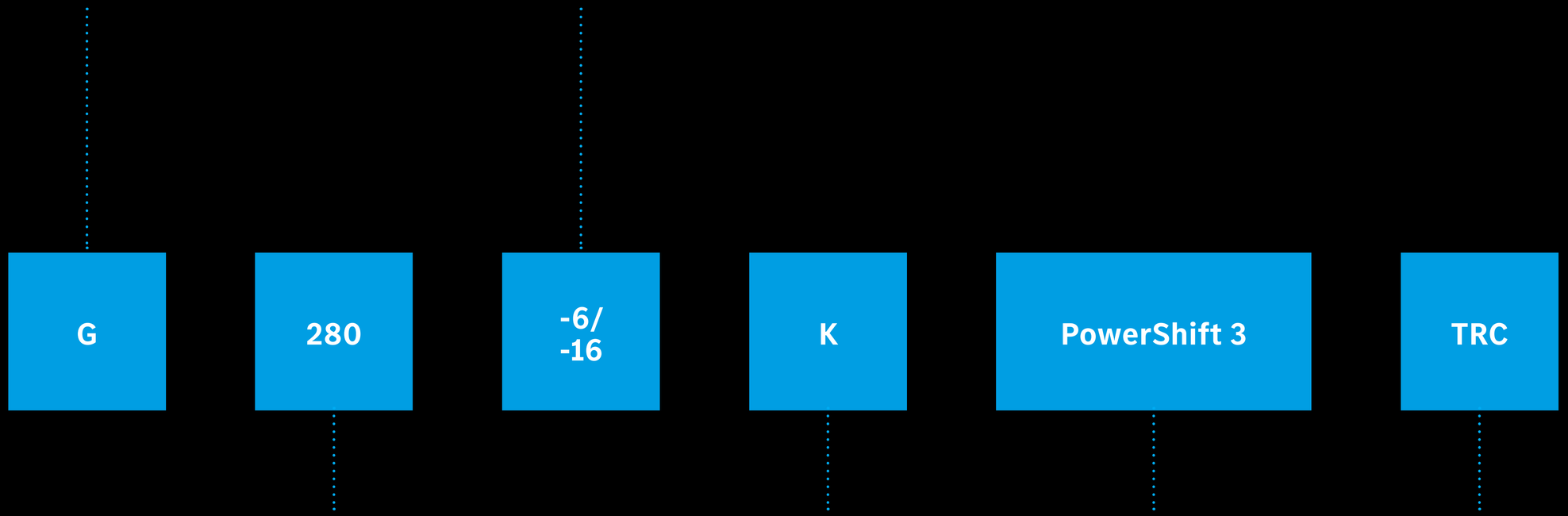
* Not available with TRC

Transmisions

DERIVATION “NOMENCLATURE” – TRANSMISSIONS.

G = transmissions

Number = gears



90 = Maximum torque/ 10 [900 Nm]
330 = Maximum torque/ 10 [3300 Nm]

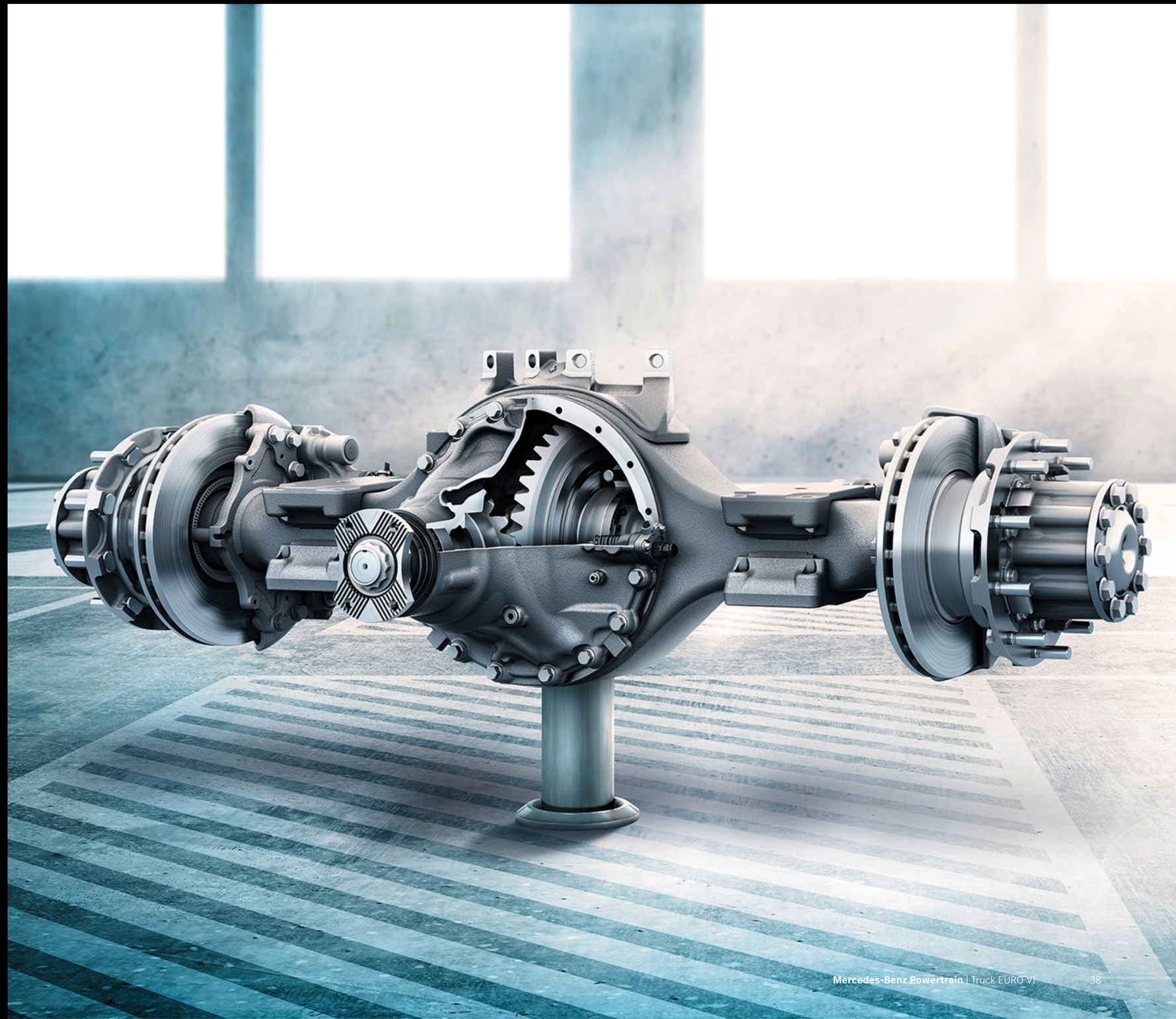
K = Non synchronized transmission
S = Synchronized transmission

PowerShift 3 = Automated gearshift

TRC = Turbo retarder clutch
VR 115 HV = Oil retarder

AXLES

Reliable axles
for every application.



Axles

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-duty trucks.

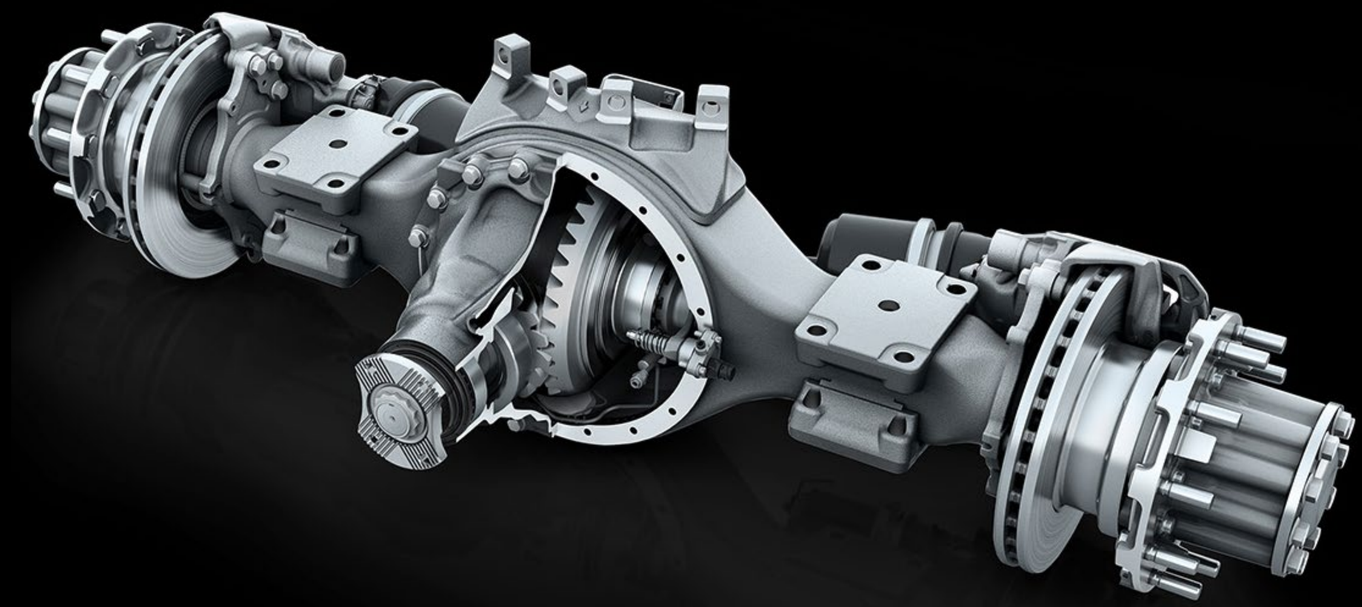
We use our customers' experience, requirements and demands as an essential precondition for the development of new axle technologies.

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

- **Durability**
- **Fuel efficiency**
- **Quiet operation**

Top vehicle manufacturers around the world trust 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.

See for yourself and discover the advantages of Mercedes-Benz axles.

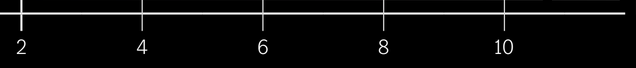


Axles

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]
	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	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
					R 485	22.5	13
					R 233 P-R 300 P	20/22.5/24	13.4-16
		F 9-F 10	20/22.5	9-10	RT 390 + RT 390 T**	22.5	20
		FD 233 P	20/22.5	7.5-9	RT 440 + R 440**	22.5	26
		FD 233 P + FT 233 P**	20/22.5	18	RT 233 P + R 233 P- 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:

FA Front axles

RA Rear axles

Axles for light-duty trucks

Axles for medium-duty trucks

Axles for heavy-duty trucks

Axles

FRONT AXLES.

Front axles

FLEXIBILITY AT A 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 **10 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

Front axles

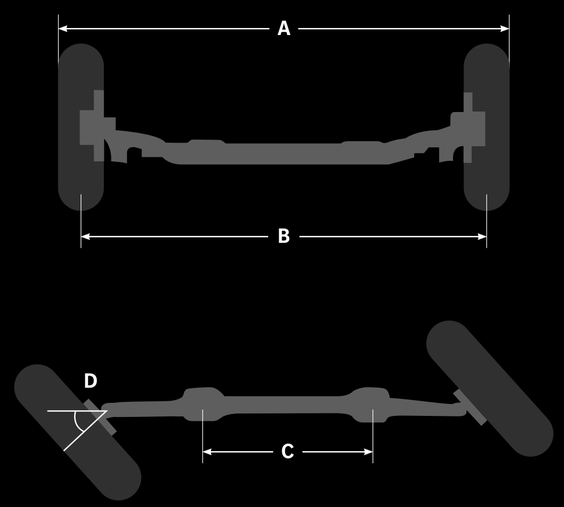
F 4.1-F 4.4

FA

- 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

Front axles

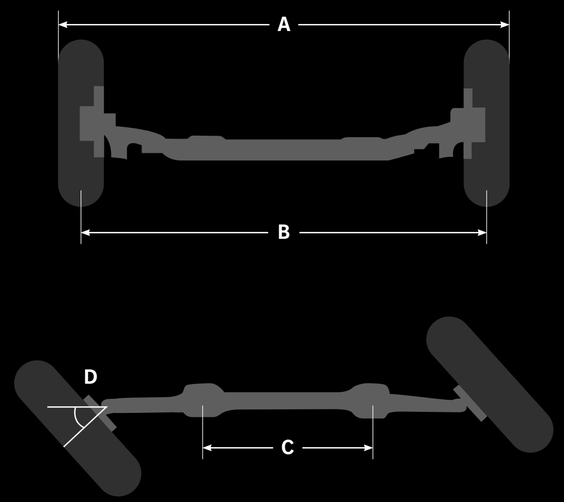
F 5.3-F 6.1

FA

- 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

Front axles

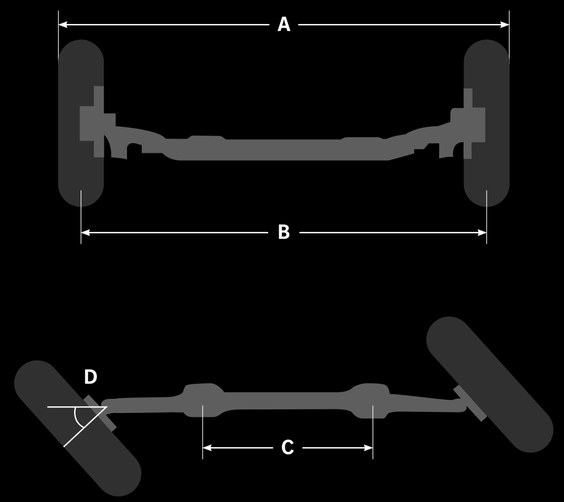
FD 346-FD 360

FA

- 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

Front axles

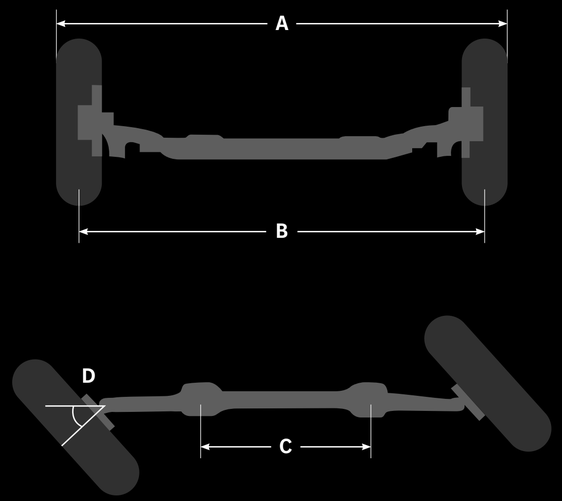
F 7.5-F 8

FA

- 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	2046-2140 mm
C = spring track	840 mm
D = max. steering angle	52°



* varies depending on configuration

Front axles

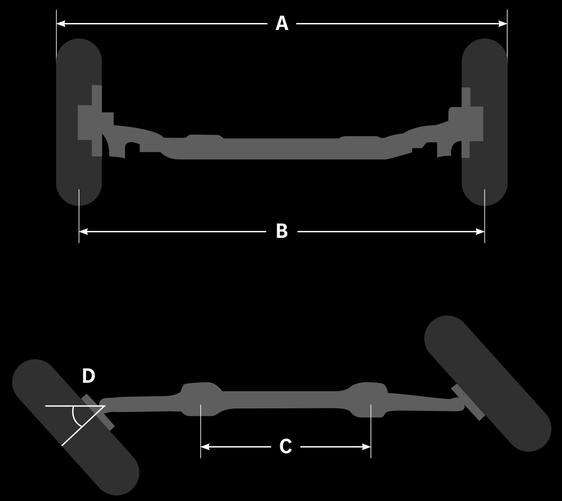
F 9-F 10

FA

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

Data and dimensions

Axle load	9-10 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	2046-2153 mm
C = spring track	840 mm
D = max. steering angle	48°



* varies depending on configuration

Front axles

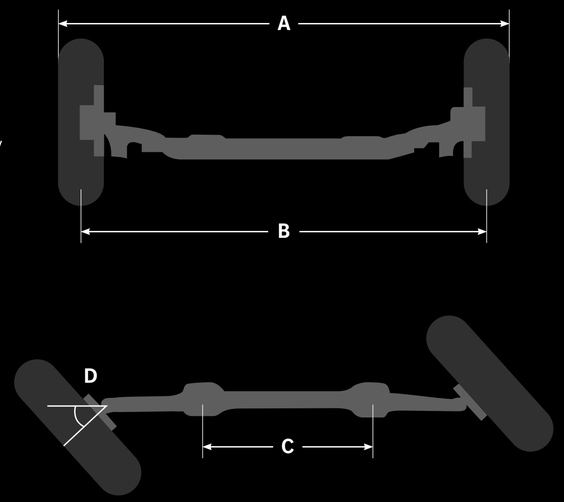
FD 233 P

FA

- 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°



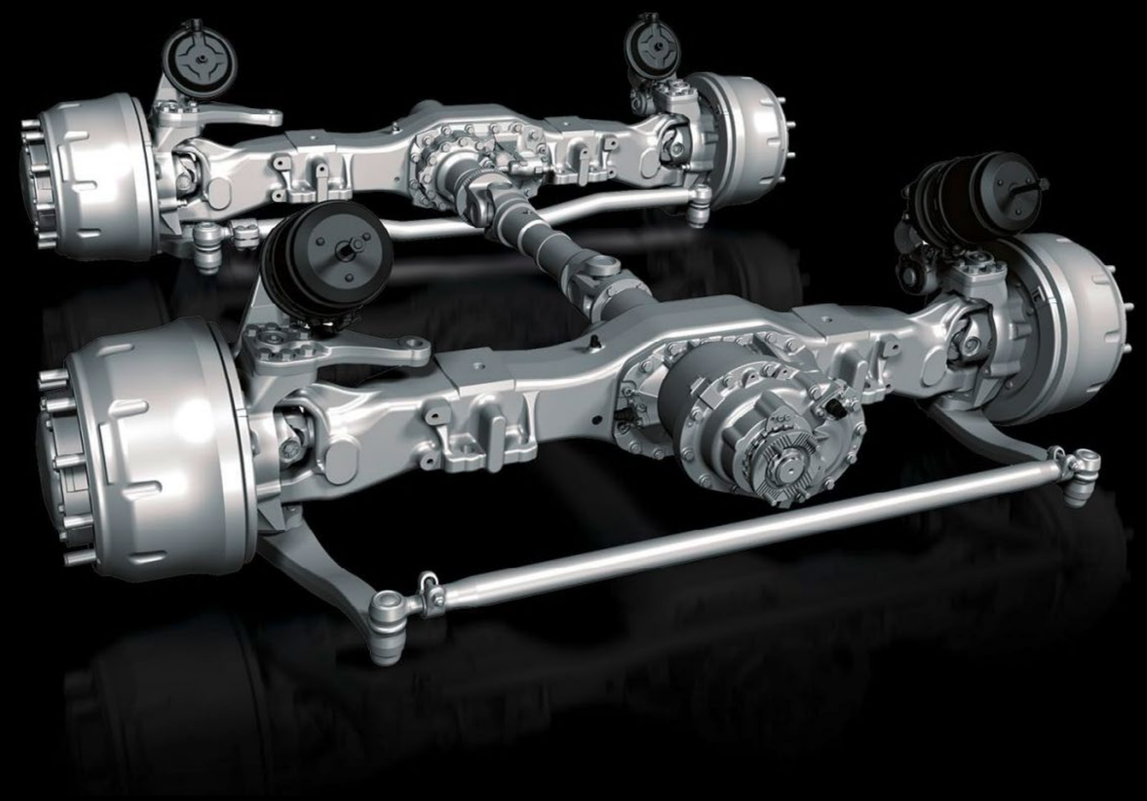
* varies depending on configuration

Front axles

FD 233 P + FT 233 P

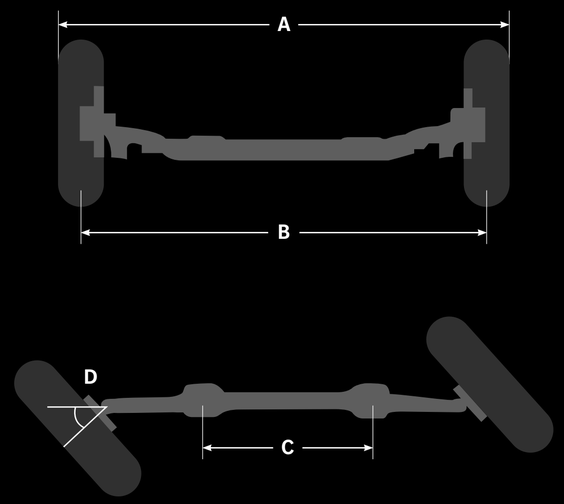
FA

- 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

Axles

REAR AXLES.

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 **quiet operation** due to optimized gear set design
- **Additional payload** due to weight-optimized design
- **Maintenance-free** wheel hub
- New final drive axle with **optimized oil management** reduces fuel consumption

Rear axles

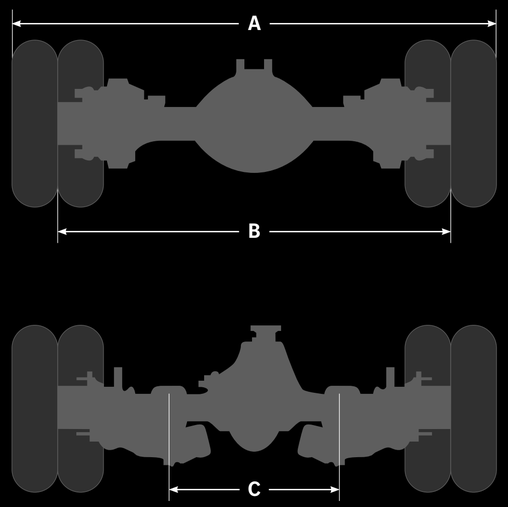
R 325

RA

- 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	760-1775 mm
C = spring track	1022 mm
Ring gear diameter	325 mm



* varies depending on configuration

Rear axles

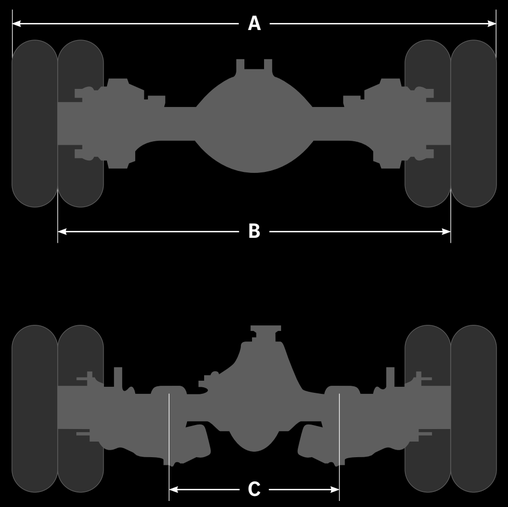
R 390

RA

- 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	2284-2489 mm
B = track width	1753-1840 mm
C = spring track	1022 mm
Ring gear diameter	390 mm



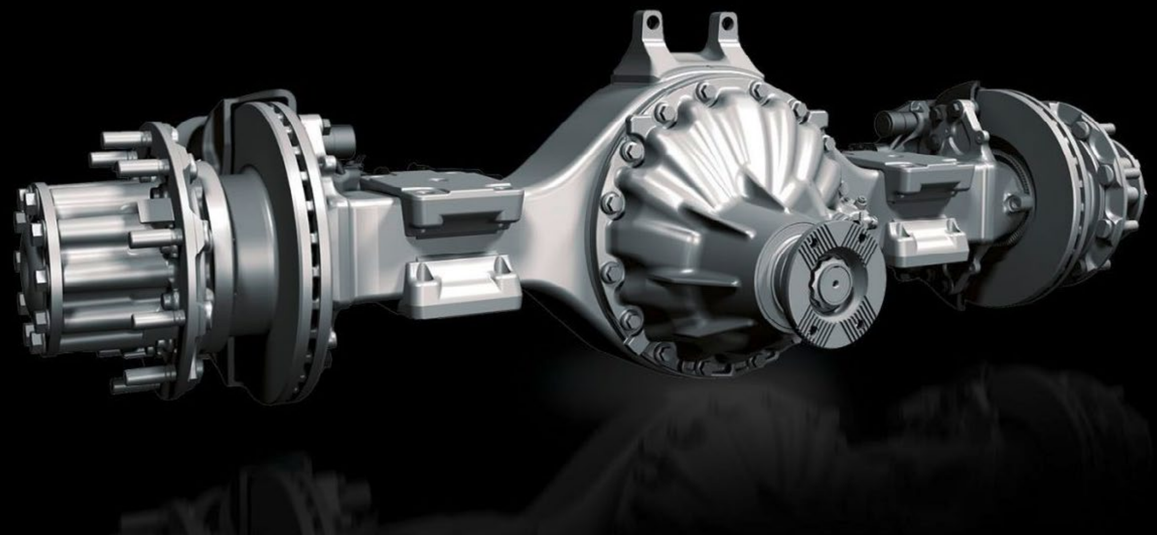
* varies depending on configuration

Rear axles

R 440

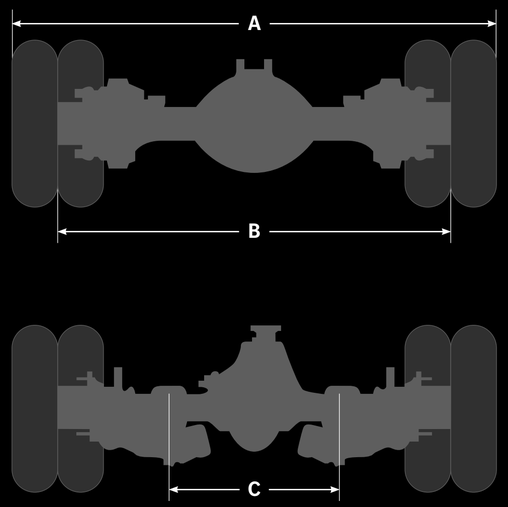
RA

- 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



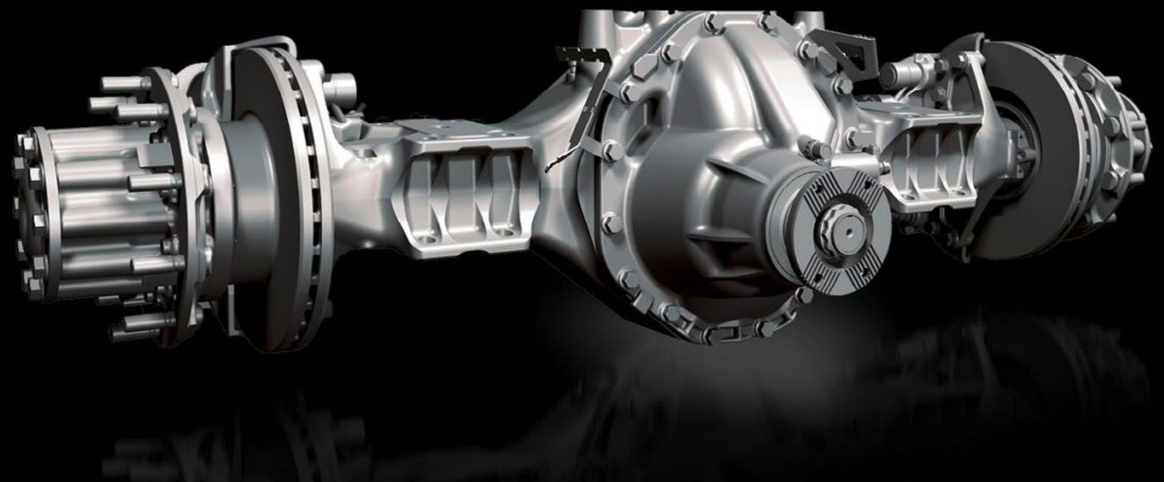
* varies depending on configuration

Rear axles

R 485

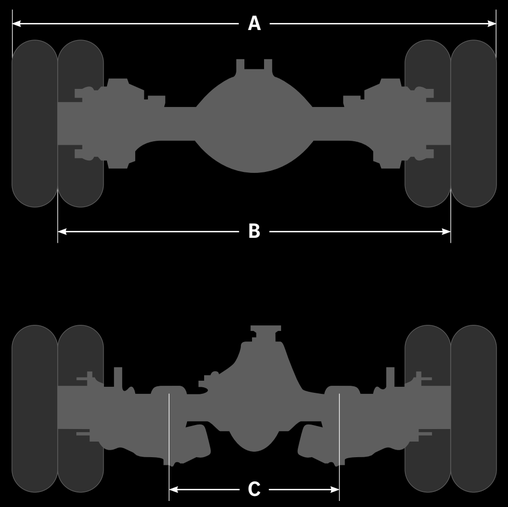
RA

- 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



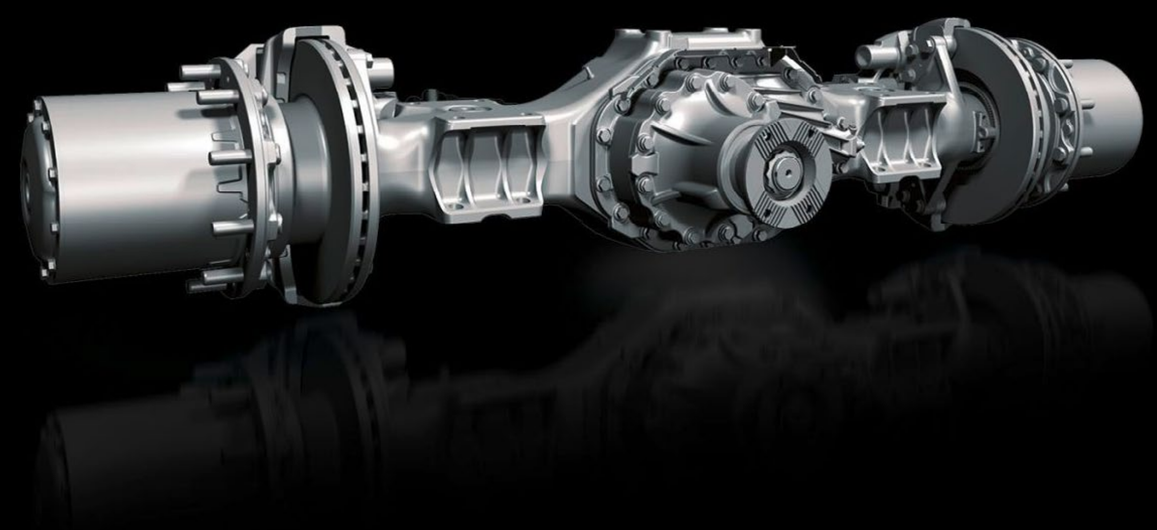
* varies depending on configuration

Rear axles

R 233 P-R 300 P

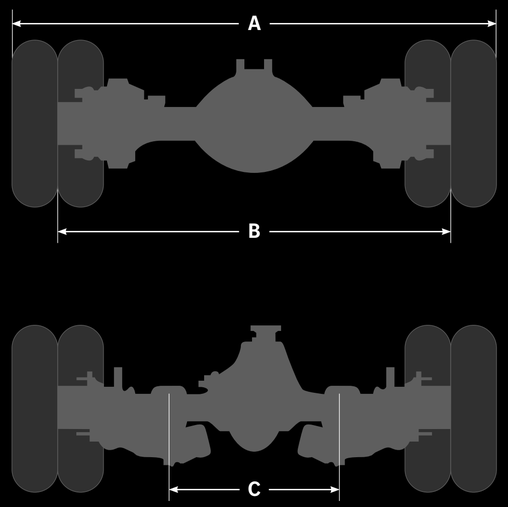
RA

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



Data and dimensions

Axle load	13.4-16 t
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

Rear axles

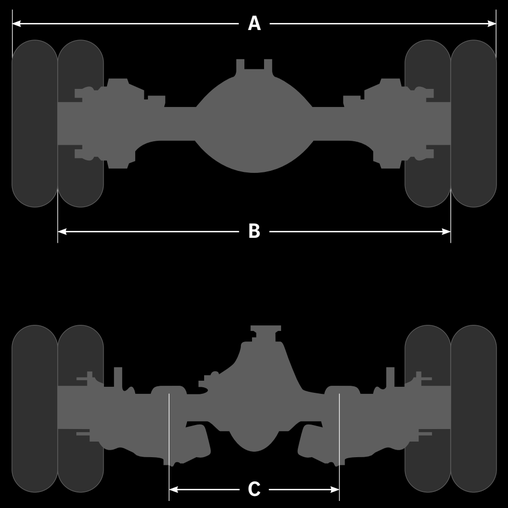
RT 233 P + R 233 P
RT 300 P + R 300 P

RA

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

Data and dimensions

Axle load	26.8-32 t (tandem)
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



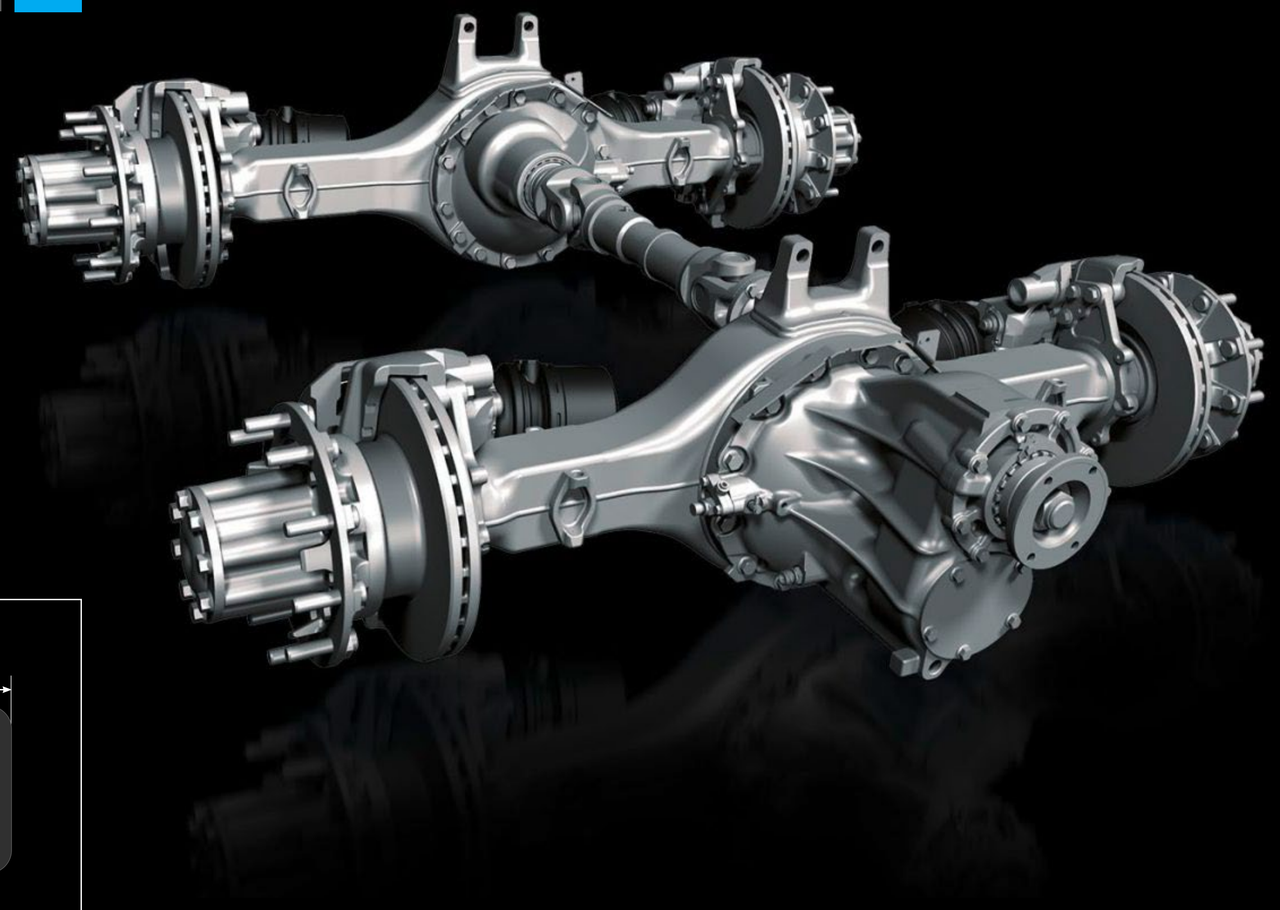
* varies depending on configuration

Rear axles

RT 390 + RT 390 T

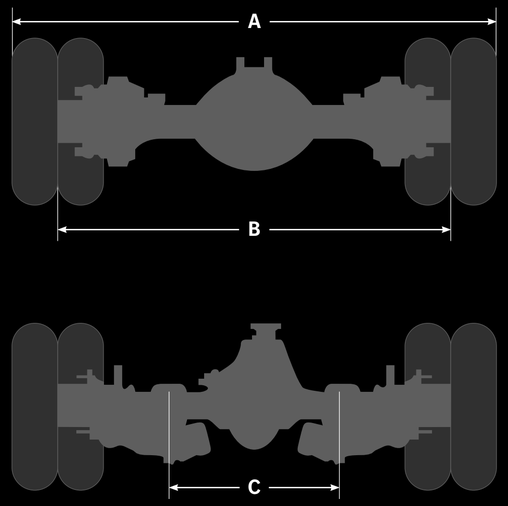
RA

- 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

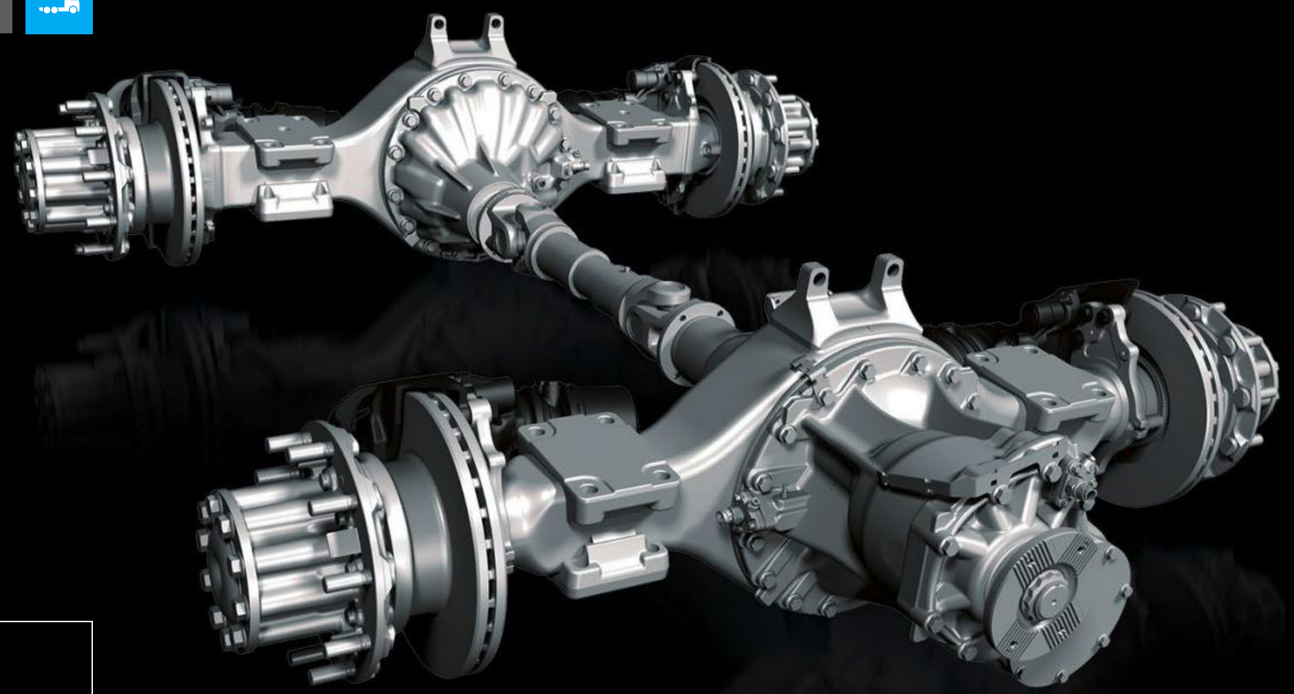


* varies depending on configuration

Rear axles

RT 440 + R 440

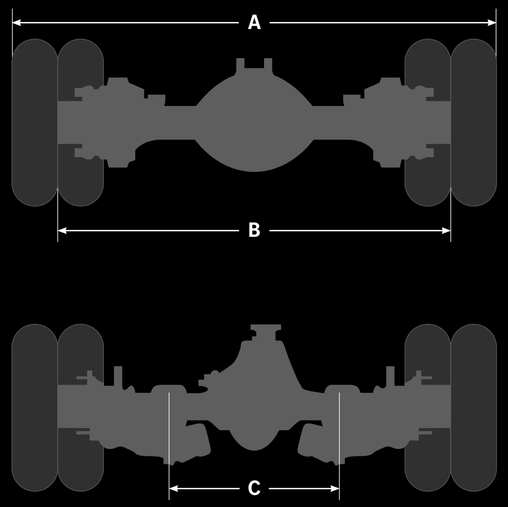
RA



- 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

Axles

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]

SERVICE

More than products.

- **Global service network**
- **Spare parts supply**
- **Extended warranty**
- **Sales service**

Service

OUR GLOBAL MERCEDES-BENZ SERVICE NETWORK.

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

Your nearest Service Center:
Dealer Locator Online

Service

SPARE PARTS SUPPLY.

We will ensure spare parts availability for many years after your initial investment. Your vehicle can only 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 – to save costs but maintain the same quality level.

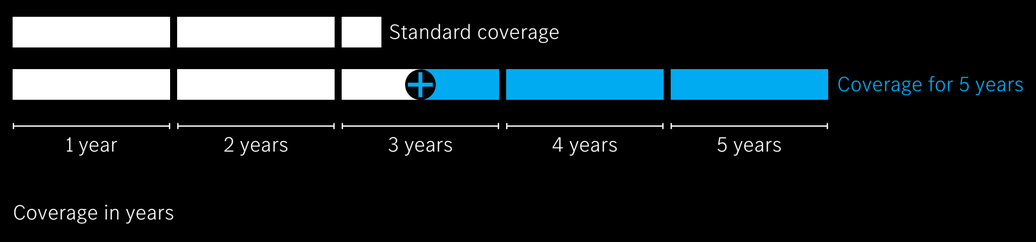
Service

EXTENDED WARRANTY. WE BELIEVE IN OUR QUALITY.

Our extended coverage programme takes you to a higher level. Mercedes-Benz Powertrain engine system owners enjoy overall coverage, which can be extended to five 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 programme with 500,000 km and 300,000 Stop-Starts: five 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 + accessories covered
- ✓ Crankshaft radial sealing rings covered
- ✓ Electronic control units covered
- ✓ Valid in matured markets

Service

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 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.

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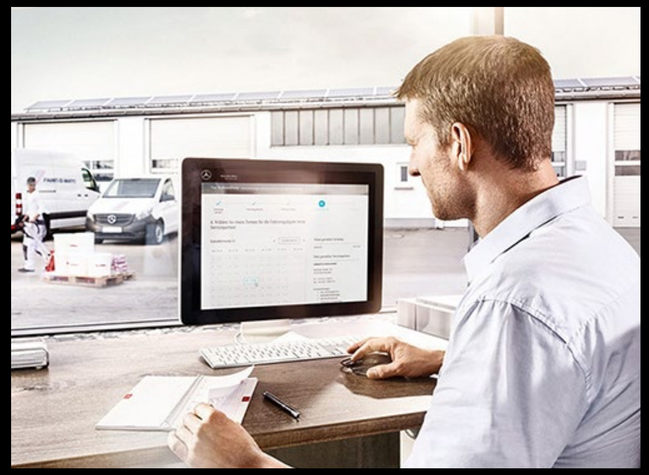

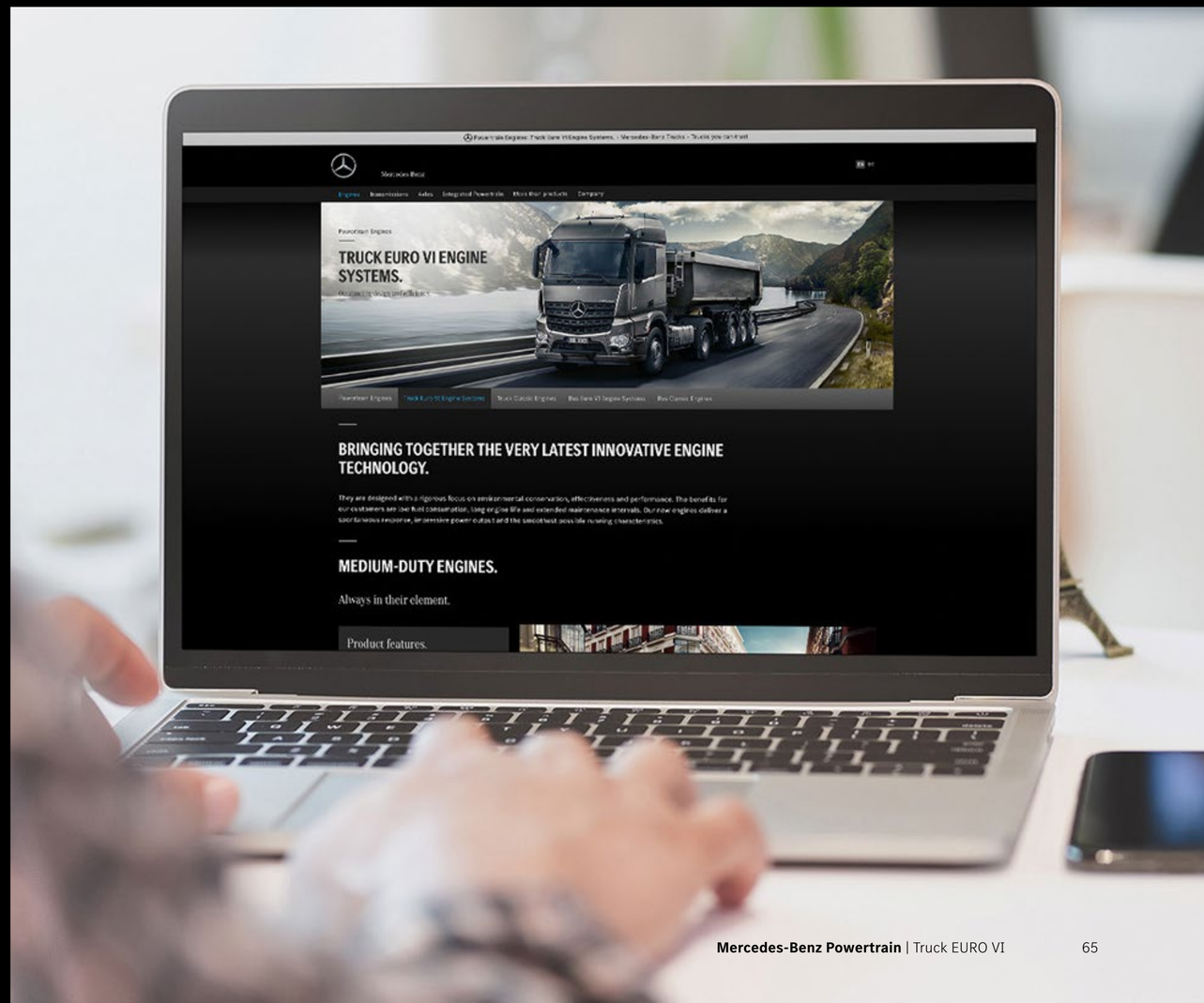

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Components at a glance.

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ENGINES.

Type	Cylinder	Displacement [litres]	Power [kW]	Torque [Nm]	TRUCKS	BUSES
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	

[1] Output level only available for trucks.

[2] Output level only available for buses.

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TRANSMISSIONS.

Type	Ratio	Forward gears	Max. input torque [Nm]	TRUCKS	BUSES
GO 250-8 PowerShift 3	6.57-0.63/10.38	8	2500		x
G 211-12 PowerShift 3	14.93-1.00/14.93	12	2200	x	
G 230-12 PowerShift 3	11.67-0.78/14.93	12	2400	x	
G 281-12 PowerShift 3	14.93-1.00/14.93	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	

RETARDER.

	TRUCKS	BUSES
Oil Retarder VR 115 HV	x	

Index

AXLES.

Type [front axles]	Wheel-end size [inches]	Axle load [t]	TRUCKS	BUSES
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 10	22.5	9-10	x	x
FD 233 P	22.5	7.5-9	x	
FD 233 P + FT 233 P	22.5	18	x	

Type [rear axles]	Wheel-end size [inches]	Axle load [t]	TRUCKS	BUSES
R 325	17.5	6.2-8.3	x	x
R 390	19.5	11	x	x
R 440	22.5	11.5-13	x	x
RO 440	22.5	11.5-13		x
R 485	22.5	13	x	
R 233 P-R 300 P	22.5	13.4-16	x	
RT 233 P + R 233 P-RT 300 P + R 300 P	22.5	26.8-32	x	
RT 390 + RT 390 T	22.5	20	x	
RT 440 + R 440	22.5	26	x	

09/ 2022

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