

Axle Systems

Engineered by Mercedes-Benz



DCA – Durable Compact Axle



DLS – Durable Leaf Suspension



JOST Axle Systems ...

Innovation meets experience

JOST is a corporate group that has been a global leader in the production of systems, modules and components since its foundation in 1952.

The Group is characterised by high-quality, reliable and market-oriented products as well as being its position as a global leader.

JOST expanded its portfolio in 2015 with Axle Systems, formerly Mercedes-Benz TrailerAxleSystems. JOST offers weight-saving trailer axles for a wide range of uses. Innovative products from the DCA Axle Series and the use of disc brakes revolutionised the trailer market in a long-lasting way.

DCA – Durable Compact Axle *a remarkable axle series*

DCA WEIGHTMASTER

The lightest trailer axles in this class set the benchmark with respect to transport economy and efficiency. Their low weight increases the trailer load capacity and offers the carrier significant advantages.

DCA MEGAMASTER

The trailer axle for greater cargo volume – ideal for high-volume haulage applications. The axle combines low ride heights with a long axle travel and is perfect for mega-trailers.

DCA AIRMASTER

The world's first and only trailer axle that stores compressed air for the air suspension and brakes in its housing, thus reducing weight substantially and allowing entirely new vehicle concepts. Tested and approved for all European markets.





... developed by Mercedes-Benz

DCA STEERMASTER

This agile and lightweight steering axle completes the DCA series. A large steering angle reduces your vehicle's fuel consumption and tyre wear whilst also enhancing its manoeuvrability.

DCA PAVEMASTER

Robustness meets weight savings in the DCA PAVEMASTER. The trailer axle has an optimised air bellows support specially made for use on tipper vehicles for road maintenance work.

DCA RAILMASTER

The DCA RAILMASTER is designed for use in combined road/rail/maritime transport. The air bellows of the DCA RAILMASTER consists of two interlocking components which can separate when lifting without air to protect against damage to the air bellows.



DLS – Durable Leaf Suspension *the conventional leaf spring system*



The Durable Leaf Suspension (DLS) trailer axle offers the optimal solution for trailers with 10.5 t axle loading and a variety of ride height operating ranges. The proven steel leaf spring is the basis of the DLS combined with standard, air bellows, shock absorbers, axle beams, standard disc brakes and durable wheel ends.

DCA Series – Durable Compact Axle

practically limitless variety from just a few components

The fully-modular axle construction opens up unlimited possibilities with a minimal number of different parts. For you, the customer, this means fewer replacement parts,

lower stock costs and, last but not least, lower life cycle costs thanks to unmatched quality.

The compact axle housing at the heart of the DCA series



The compact axle beam gives the axle series the name DCA – Durable Compact Axle. Integrating all the axle functions creates a compact axle housing that is extremely durable and lightweight thanks to its innovative design. The axle housing integrates the trailing arm, axle tube, brake flange and axle journal, forming a perfect unit.



Wheel head

A robust construction for 19.5" or 22.5" wheels that has proven itself millions of times. The optimal heat dissipation ensures a very long lifespan for the brake discs, brake pads and storage. The brake discs – made out of a wear-resistant alloy – and the wearing parts are structurally identical to those of Mercedes-Benz lorries.



Hanger bracket

With three hanger brackets each – in some cases also optionally available in stainless steel – the DCA series in combination with the appropriate air bellows supports makes possible all ride heights from 215 mm to 535 mm, from mega trailer to tipper.



Compact bearing

Maintenance-free thanks to the use of state-of-the-art compact-bearing technology that has been proven a million fold.



Air bellow support

The DCA series can be fitted with standard, weight-optimised or application-specific tail ends, covering all areas of trailer usage.

WEIGHT OPTIMISER 27

Weight-saving air bellow support for maximum payload

The WEIGHT OPTIMISER 27 maximises trailer payload thanks to its innovative aluminium design. The topology is optimized for exceptional strength and stability under all conditions of air bellows loading.

WEIGHT OPTIMISER 27 saves a further 9kg per axle (27kg per Tri-axle semi-trailer) making a new contribution to improving the economy of efficient goods transportation. Its reduced weight allows increases in payload offering hauliers significant advantages.

WEIGHT OPTIMISER 27 integrates perfectly with the versatile DCA series, and the Ø300 air bellows.

The WEIGHT OPTIMISER 27 is designed for all common track widths on trailers, from classic curtain-siders to tankers, tippers and other vehicles.



To guarantee the familiar quality of this JOST product, it has passed the tough testing criteria of the DCA series for durability and extreme accidental overload.

Tests used simulate multiple life performance in varied conditions. These include fatigue durability, corrosion, extreme vehicle manoeuvres and field trials.

The WEIGHT OPTIMISER 27 offers minimum weight for maximum payload.

DCA WEIGHTMASTER

The DCA WEIGHTMASTER is the core member of the axle series. Its low weight – from just 381 kg, depending on which version – coupled with its durability, the advantage of fewer components (due to its monocoque design) coupled to the maintenance-free compact bearings, makes it ideal for use in the European transport industry. With its modular design, it is compatible with nearly all trailers, from platform semitrailers, curtain-siders, tippers, tankers and bulk distribution. The DCA WEIGHTMASTER is compatible with 19.5" or 22.5" wheels.



	TE4-8N / TZ4-8N	TE5-8L / TZ5-8L	TE5-8K / TZ5-8K	TE5-8N / TZ5-8N
Permissible axle load	9 t			
Wheel offset	ET 120; ET 0			
Wheel track, spring centre	Suitable for all standard vehicle versions			
Air bellows diameter (Ø)	300 mm; 360 K; 360 L			
Ride heights	225–535 mm			
Lift range	Depending on version			
Min. wheel size	19.5"	22.5"	22.5"	22.5"
Brake	SN 6	DCA L7	SK7	SN 7
Brake disc diameter (Ø)	377 mm	430 mm	430 mm	430 mm
Weight*	≥ 381 kg	≥ 394 kg	≥ 402 kg	≥ 420 kg
Type of bearing	Maintenance-free cartridge bearing			
Paint system	Cathodic dip priming			
Tyres	Single			

* Standard air bellows support instead of a WEIGHT OPTIMISER 27 corresponds to a 9 kg weight increase per axle.

DCA MEGAMASTER

The DCA MEGAMASTER was designed specifically for large-volume semitrailers with an interior height of three metres. This special-purpose axle and suspension is for high-volume road haulage applications, and vehicles that require a long axle travel, this range is based on the innovative and proven components of the DCA series. Despite the low ride height, loading docks can be reached for the purpose of loading and unloading.



	TE4-8N / TZ4-8N	TE5-8L / TZ5-8L	TE5-8K / TZ5-8K	TE5-8N / TZ5-8N
Permissible axle load	9 t			
Wheel offset	ET 120; ET 0			
Wheel track, spring centre	Suitable for all standard vehicle versions			
Air bellows diameter (Ø)	360 M			
Ride heights	215–500 mm			
Lift range	280 mm			
Min. wheel size	19.5"	22.5"	22.5"	22.5"
Brake	SN 6	DCA L7	SK7	SN 7
Brake disc diameter (Ø)	377 mm	430 mm	430 mm	430 mm
Weight	≥ 414 kg	≥ 423 kg	≥ 431 kg	≥ 449 kg
Type of bearing	Maintenance-free cartridge bearing			
Paint system	Cathodic dip priming			
Tyres	Single			

DCA AIRMASTER

As the world's only axle that stores compressed air for the brakes and air suspension in the axle housing, the DCA AIRMASTER is able to dispense with the conventional compressed-air tanks that appear on trailers or semitrailers, thereby freeing up space beneath the trailer as well as reducing weight by up to 50 kg. The DCA AIRMASTER paves the way for the introduction of trailblazing vehicle concepts.



	TE4-8N	TE5-8L	TE5-8K	TE5-8N
Permissible axle load	9 t			
Wheel offset	ET 120			
Wheel track, spring centre	Suitable for all standard vehicle versions			
Air bellows diameter (Ø)	300 mm; 360 K; 360 L			
Ride heights	225–535 mm			
Lift range	Depending on version			
Min. wheel size	19.5"	22.5"	22.5"	22.5"
Brake	SN 6	DCA L7	SK7	SN 7
Brake disc diameter (Ø)	377 mm	430 mm	430 mm	430 mm
Weight*	≥ 381 kg**	≥ 389 kg	≥ 397 kg	≥ 416 kg
Type of bearing	Maintenance-free cartridge bearing			
Paint system	Cathodic dip priming			
Tyres	Single			
Storage volume	Up to 40 l per axle			

* Standard air bellows support instead of a WEIGHT OPTIMISER 27 corresponds to a 9 kg weight increase per axle.

** Additional weight saving of up to 50 kg per vehicle due to absence of compressed-air tanks.

DCA STEERMASTER

An ideal addition to the DCA series. With a steering angle of max. 16 degrees, it negotiates bends with consummate ease, while the lightweight design allows high payloads. In addition, the steering axle reduces the truck's tyre wear and fuel consumption. Like the other axles in the series, the DCA STEERMASTER is based on the tried-and-trusted components of the DCA modular system and, therefore, offers the versatility you expect when it comes to meeting your transport needs.



	TL4-8N	TL5-8L	TL5-8K	TL 5-8N
Permissible axle load	9 t			
Wheel offset	ET 120			
Wheel track, spring centre	All common track widths			
Air bellows diameter (Ø)	300 mm; 360 K; 360 L; 360 M			
Ride heights	225–535 mm			
Lift range	Depends on version			
Min. wheel size	19.5"	22.5"	22.5"	22.5"
Brake	SN 6	DCA L7	SK7	SN 7
Brake disc diameter (Ø)	377 mm	430 mm	430 mm	430 mm
Weight	≥ 588 kg	≥ 596 kg	≥ 604 kg	≥ 622 kg
Type of bearing	Compact bearing			
Max. steering angle	21°			
Paint system	Two-component paint			
Tyres	Single			

DCA RAILMASTER

The new DCA RAILMASTER is designed for use in combined road-rail-sea transport. If a semitrailer is lifted by crane, conventional air bellows can be damaged while the vehicle is being set down. That is why the air bellows of the DCA RAILMASTER consist of two interlocking components which can separate during lifting without air and ensure the optimal position of the air bellows when the semitrailer is set down.



	TE4-8N / TZ4-8N	TE5-8L / TZ5-8L	TE5-8K / TZ5-8K	TE5-8N / TZ5-8N
Permissible axle load	9 t			
Wheel offset	ET 120; ET 0			
Wheel track, spring centre	Suitable for all standard vehicle versions			
Air bellows diameter (Ø)	300 mm			
Ride heights	225–525 mm			
Lift range	Depending on version			
Min. wheel size	19.5"	22.5"	22.5"	22.5"
Brake	SN 6	DCA L7	SK 7	SN 7
Brake disc diameter (Ø)	377 mm	430 mm	430 mm	430 mm
Weight	≥ 397 kg	≥ 410 kg	≥ 418 kg	≥ 436 kg
Type of bearing	Maintenance-free cartridge bearing			
Paint system	Cathodic dip priming			
Tyres	Single			

DCA PAVEMASTER

The DCA PAVEMASTER unites an optimised air bellow support design especially for tippers in road finisher application. The DCA PAVEMASTER has been built to the highest standards to meet the specific demands of road construction.



	TE4-8N / TZ4-8N	TE5-8L / TZ5-8L	TE5-8K / TZ5-8K	TE5-8N / TZ5-8N
Permissible axle load	9 t			
Wheel offset	ET 120; ET 0			
Wheel track, spring centre	Suitable for all standard vehicle versions			
Air bellows diameter (Ø)	360 mm / 360 K			
Ride heights	390–440 mm; 460–510 mm			
Lift range	Depending on version			
Min. wheel size	19.5"	22.5"	22.5"	22.5"
Brake	SN 6	DCA L7	SK 7	SN 7
Brake disc diameter (Ø)	377 mm	430 mm	430 mm	430 mm
Weight*	≥ 388 kg	≥ 391 kg	≥ 399 kg	≥ 407 kg
Type of bearing	Maintenance-free cartridge bearing			
Paint system	Cathodic dip priming			
Tyres	Single			

The special equipment

economical, safe and environment-minded

The special equipment from the DCA series



WEIGHT OPTIMISER 27

The forged aluminium air bellows support with its unusual, filigree appearance saves 9 kg of weight per axle. It is optionally available for many of the DCA series axles with 300 mm air bellows.



Stainless steel retaining bracket

On request stainless steel hanger brackets, in two different sizes, are available for the entire portfolio of the DCA series. These are recommended as the perfect suspension connection for stainless steel trailer chassis. The stainless steel hanger brackets are corrosion and acid resistant.



**Also available in combination
with DCA AIRMASTER!**

Preparation for tyre inflating system

The preparation of the DCA series axles for using tyre inflating system enhances the trailer's operational safety and availability. Threaded bores through the spindles provide the option to fit compressed air connections for a tyre inflating systems. These systems prevent low tyre pressures occurring in normal vehicle operation. Affording longer service lives for the tyres, minimum rolling resistance for the trailer and the optimum fuel consumption for the truck/trailer combination. These system can reduce maintenance work and trailer down time improving the vehicle's economic efficiency.

Z-section

The Z-section is supplied as a welded one-piece construction with integrated hanger brackets. It lends added flexibility to chassis design by relocating structural elements. Its well proven design will enhance your vehicle's stability.



The special equipment from the DCA series and DLS



Cover ring for wheel bolts

The cover ring for wheel bolts is fitted to the hub with the wheel bolts. It covers the wheel bolts and wheel nuts. In addition to enhancing the vehicle's appearance, it also protects the wheel bolts and wheel nuts from damage and helps to prevent injury in the event of an accident.



Brake wear indicator (BWI)

The equipment of the BWI offers the option of showing a signal on the dashboard when the brake linings reach the minimum permitted thickness. The need for monitoring the vehicle is reduced, brake pad replacement becomes predictable, total loss of the disc brakes is avoided and the availability of the vehicle is ensured. Safety is also enhanced since all functions are available.



Twin Lifts

The Twin Lifts are suitable for all applications with medium and high ride heights. They are characterised by their robust construction and low weight. The Twin Lifts reduce effort to a minimum even when retrofitted and are geared towards special usage cases.



Wipper Lift

Wipper Lifts are designed for use in mega-trailers and other vehicles of a low ride height. They offer maximum ground clearance thanks to their shallow and stable construction, even for vehicles of a low ride height. Thanks to their lifting power, the WPs are suitable for use with both the DCA series and the DCA STEERMASTER.



Midlift

The central construction of the Midlift offers maximum ground clearance for vehicles with free configuration options in the chassis. The Midlift is very lightweight and maintenance-free due to its welded connection to the axle tube. Standard air bellows are used.



Hubodometer

Hubodometers are used to calculate distance driven, independent of the truck, for all types of wheeled vehicles. They are characterised by a hermetically-sealed measuring unit. This prevents the formation of condensation and makes them maintenance-free and tamper-proof. The mileage is shown as a six-digit display in km and can be set to miles on request.

DLS – Durable Leaf Suspension

the conventional leaf spring system

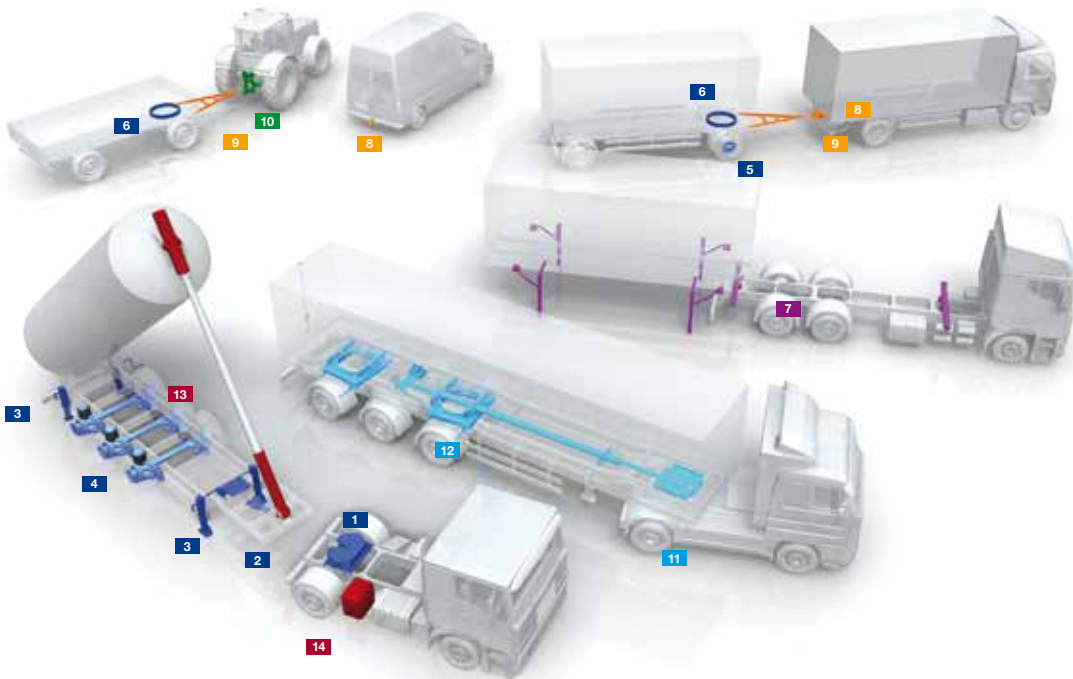
The DLS – the conventional leaf spring system – is the optimal chassis solution for 10.5 t axle loads. It is suitable for on and off highway usage and is compatible with most 22.5", 19.5" applications with 19.5" brakes. Heat management is optimised through the intelligent arrangement of

the wheel hub and brake disc. The brake disc is made out of a wear-resistant iron alloy (a Mercedes-Benz patent) and all wearing parts are structurally identical to Mercedes-Benz truck axles. This makes maintenance easier, increases safety and lowers lifecycle costs.



	TZ3-2	TZ5-2
Permissible axle load	10,5t	10,5t
Wheel offset	ET 0	ET 0
Wheel track, spring centre	Suitable for all standard vehicle versions	
Air bellows diameter (Ø)	360 mm / 360 K / 360 L	
Ride heights	215mm – 490mm	215mm – 490mm
Min. wheel size	19.5"	22.5"
Brake	SN 6	SN 7
Brake disc diameter (Ø)	370 mm	430 mm
Weight*	≥ 470 kg	≥ 515 kg
Type of bearing	conventional bearings	
Paint system	Cathodic dip priming	
Tyres	Supersingle / twin	





JOST



- 1 Fifth wheel couplings and systems**
2" and 3 1/2" fifth wheel couplings in a variety of construction heights, bearing types and versions, mounting plates, sliders and dual-height fifth wheel systems; sensor-controlled systems for the coupling procedure between truck and trailer



- 2 King pins**
2" and 3 1/2" king pins with a conical or plate-shaped flange



- 3 Landing gears**
Landing gears with variable bolting heights, crank handles, connection shaft-lengths and foot types, special landing gears for special applications



- 4 Axle systems**
Wide range of weight-saving trailer axles with additional special equipment



- 5 Hubometers**
Used to calculate distance driven, independent of the truck



- 6 Ball bearing turntables**
Ball bearing turntables and slewing rings in a wide range of sizes and versions



- 7 Container technology**
Components for intermodal transports, supports, twist locks and bolsters, swap body lifting devices, guide roller bearings and bearings

ROCKINGER



- 8 Road traffic**
Open-end, hook and ball towing hitches, suspension elements, VARIOBLOCK alternating system and special models



- 9 Drawbars and towing eyes**
Drawbars and towing eyes as well as custom-made products for on and off-road usage



- 10 Agriculture**
Open-end, hook and ball towing hitches, height adjustable brackets and clutch carriers for agriculture and forestry

TRIDEC



- 11 Steering systems**
Axel-independent or manufacturer-independent mechanically, hydraulic and electronically controlled steering systems for trailers



- 12 Axle suspensions**
Air suspension or hydraulically suspended axle suspensions for on and off-road usage

Edbro



- 13 Vehicle-mounted hydraulic systems**
Front end, underbody and tipping ejector cylinders for trucks and trailers/trailer tippers



- 14 Customer-specific hydraulic component kits**
Hydraulic component kits for various applications, chassis-specific hydraulic container component kits

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