



Quality  
needs a strong partner.

**BPW Agricultural Programme**

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## Agriculture makes extremely high demands. Reason enough to pick BPW.

Agricultural vehicles and machinery has to be equipped to meet ever increasing demands. Different ground conditions, increasing speeds and high payloads are the great demands on the vehicle technique – and all that without any loss of ride comfort.

Vehicle technology from BPW means uncompromising reliability, durability, safety and robustness. Factors that have defined more than 110 years of the certified quality level of BPW products. With BPW you have a strong partner – at any time.







## **A good harvest.** With the BPW Quality Factor.

It is basically very simple, to ensure maximum reliability and solidity - at least if the focus is one hundred percent on its customer. An attitude that is usually recognized by BPW and the entire process chain. This is shown in the unique BPW quality.



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# Quality signed and sealed.

## BPW complies with the strictest standards.

As a successful global company, BPW operates a quality and environmental management system in line with the internationally recognised standards DIN ISO 9001:2000 and ISO 14001:2004.

### BPW-Hungária Kft. – a one-hundred percent company of the BPW group



Long before certification was achieved in 1995, BPW had already set great store by environmental protection: Protecting the environment was made a company objective on the same footing as achieving high technical standards, high quality, innovation and value-for-money products. For example, BPW was the first company in its sector to introduce a certified environmental management system.

Certification according to ISO 9001:2000 covers the development, design and manufacturing of agricultural axles, axle accessories, brake components, axle units, drawbars and overrun hitches.



#### ISO certifications – Features and benefits

- ▶ Basis for confidence in keeping our performance promises
- ▶ Internationally recognised standard not confined to one industry
- ▶ Regular checking by independent experts
- ▶ Traceability of the production chain
- ▶ Continuous quality improvement
- ▶ Demonstration of BPW's high quality standards
- ▶ Even greater process and customer orientation
- ▶ Continuous improvement of all processes
- ▶ Key figures as measurable targets
- ▶ Continuous personnel development
- ▶ Consistent consideration of all environmental aspects during the planning, control and monitoring of business processes
- ▶ Systematic and complete documentation of all environmentally relevant effects

# The art of thinking in a solution-oriented manner. BPW Engineering.

BPW engineering is the creative force behind all our running gear solutions. It is backed up by the technical expertise of the specialists in our Research and Development Department. It is here that not only prototypes are brought to series-production readiness, but BPW also produces individual, made-to-measure components for running gear modules and complete running gear systems for customers' orders.

Our engineering work includes detailed driving and test facility trials, during which units such as axle beams, bearing units, brakes and air suspension are tested for function, load capacity, wear, durability and ease of maintenance. This yields valuable knowledge from which you can benefit too. Our experts will be happy to advise you – in a spirit of partnership and always with an eye on the application.





# At home 3,100 times worldwide. Genuine parts from BPW.

To enable you to rely on our quality all the time, we have more than 3,100 BPW service stations worldwide to ensure optimum availability of BPW genuine parts. BPW components are identified using an efficient system that reduces waiting and downtime to a minimum. When it really matters, we can deliver genuine parts within 24 hours.

Genuine BPW parts undergo continuous development and offer you the security of knowing that they are designed exactly for your chassis and suspension system, as well as for maximum mileage. Ordering couldn't be easier, thanks to the systematic approach used for identifying genuine parts. Every axle and every suspension unit is documented. As a result, we can trace every component to a particular axle, chassis and suspension system. And this means you'll receive the correct spare part as quickly as possible. The parts list search facility in the BPW customer net at [www.bpw.de/kunden-net](http://www.bpw.de/kunden-net) offers you a continuously updated and comprehensive database for searching for specific parts at any time.





### Genuine BPW spare parts – features and benefits

- ▶ BPW in-house production with tested OEM quality
- ▶ Long service life and reliability thanks to perfectly matched individual components (compatible and a perfect fit)
- ▶ Long component life
- ▶ Shorter repair times
- ▶ Excellent spares availability throughout Europe
- ▶ No stock deterioration thanks to the high quality surface treatment (e.g. cataphoretic dip-coating with zinc-phosphating, KTL<sub>Zn</sub>) and correct packaging
- ▶ More economical in the long term
- ▶ BPW accepts product liability and handles warranty claims smoothly

# We offer you more than just in time. Individual BPW logistical concepts.

Greater availability, less fuss, more efficiency. The carefully thought-out BPW logistical concept provides all that and more. With a personal contact and solutions that are tailor-made to your individual requirements. Your components will be delivered not only at the right time but also ready to fit. As a result you can reduce your storage capacity.





## BPW logistics centre, Wiehl

### Global spares provision

BPW stocks about 7500 different spare parts at its central logistics centre. Our customers can order parts on a 24/7 basis. Within Germany, orders for goods weighing up to a maximum of 120 kg received from Monday to Thursday up to 6:00 p.m. and Friday up to 5:00 p.m. will be delivered to the customer by 8:00 a.m. the next morning. In emergencies, orders can be made ready for collection at night and at the weekend. As a result, even customers who carry minimum stock are able to respond rapidly.

### Delivery performance

Intelligent logistics combined with ground-breaking warehouse technology, powerful IT systems and a lean production process make BPW a highly reliable logistics partner with short response times. Which means fast, accurate deliveries – every time.

### „All-inclusive“ logistics support

From order acceptance through to delivery, you will be dealt with by one contact. He or she will take down your logistics requirements and process them in a friendly and cooperative manner. For you, this means quick decision-making and clearly defined responsibilities.

### Intelligent packaging solutions

The transport racks developed by BPW enable goods to be transported without damage to our customers' production plants, and reduce handling times. Our specially developed packaging for overseas deliveries complies with the strictest import regulations (e.g. Australia and China). Empty containers can be stacked compactly and so returned inexpensively for reuse, or else they can be disposed of in an environmentally friendly manner.

### Customer-specific logistical support

In co-operation with the customer, we develop logistical concepts with the objective of reducing stock, cutting response times and therefore saving costs. The principal objective is to achieve the best solution for both parties. As well as an outstanding technical product, BPW thus also offers you solutions which demonstrate our high-performance, innovative logistics.

# No chance for rust and stone impact damage. Optimum corrosion protection for all BPW components.

Running gear from BPW offers robust technology for a long vehicle life. An important quality feature of our products is cathaphoretic dip-coating with zinc-phosphating (KTL<sub>Zn</sub>). This is a special surface finish that provides 5 times more effective corrosion protection than conventional painting processes. Thin layer corrosion protection processes such as Dacromet® and Geomet®, as well as chromated surface protection systems, can withstand even the hardest stone impacts.





The computer-controlled BPW cathodic dip-coating and zinc-phosphating plant matches the high-tech standards achieved in the application of corrosion protection in car production, and sets the global standard for coating quality in trailer chassis and suspension systems.



The BPW colour creation system enables additional special paint finishes for series production in company colours.



### BPW surface treatment – Features and benefits

- ▶ Comprehensive corrosion protection, even in inaccessible places such as cavities (5 times better than conventional primers with topcoat finish)
- ▶ Minimum rust creepage, e.g. after surface damage by stone or chipping strikes
- ▶ High chemical resistance, e.g. when high-pressure cleaners are used with detergent additives
- ▶ Longer service life for the entire BPW chassis
- ▶ Outstanding looks: surfaces without drips or runs and with an even coat thickness
- ▶ No further topcoat required. Where there are individual requirements for a particular lustre and colour, these finishes can be applied using inexpensive topcoat systems without pre-treatment
- ▶ High surface hardness: less transport and assembly damage
- ▶ Easier maintenance and repairs
- ▶ Less time off the road
- ▶ Excellent heat resistance
- ▶ ECO-friendly coating processes: no release of environmental pollutants



## **We take you further in all respects.** With the great BPW service programme.

With BPW, you take full advantage of the Quality Factor. And this covers much more than just our running gear. Indeed, we offer you an extensive range of services, as you would expect from a market leader. Starting with numerous development partnerships, individual special solutions and expert advice, plus engineering services, product training and commissioning functions, as well as a global sales and service network, which is always there for you when you need it.



- 20 BPW contacts and service partners
- 21 BPW customer trainings
- 22 BPW dealerships

# No matter where you happen to be driving. BPW is there for you.

## Technical Distribution, Agriculture

The staff of Technical Distribution (Agriculture) are at your disposal as useful contacts when developing new vehicles and upgrades to existing ones, when employing alternative suspension systems in existing vehicle designs, as well as for any questions associated with the BPW range of axle and running gear systems.



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Fax: +49 2262 78-1516  
Internet: <http://www.bpw.de>  
E-Mail: [info@bpw.de](mailto:info@bpw.de)

Our Technical Distribution department will also provide information about our latest products and developments, and will support you with the prototyping of BPW running gear systems in your vehicles.

## BPW Agricultural Dealers

You have at your disposal an extensive network of workshops throughout Germany, which are ideally prepared for any emergency thanks to comprehensive BPW training courses and intensive contact with BPW. BPW agricultural dealers normally stock all the commonly required parts for replacement and repair, in order to be able to provide rapid local assistance, with trained staff always available.



More information

▶ [www.bpw.de/en/vertrieb-agrar](http://www.bpw.de/en/vertrieb-agrar)

▶ [www.bpw.de/en/servicenet](http://www.bpw.de/en/servicenet)

# We always keep you up to date.

## BPW seminars – by professionals, for professionals.

We can offer you a wide range of seminar opportunities, all pursuing the same aim: to improve our customers' quality and reliability when dealing with BPW products in everyday business.

The individual seminars are directed towards our target groups of vehicle manufacturers, workshops, contractors and parts dealers. BPW Customer Training develops the seminar content with high-quality information aimed at specific target groups. The seminars are held in our modern training centre at the central production facility in Wiehl, Germany.



### BPW Seminars

#### Agricultural technology seminar

How can you offer your customers good service with regard to the maintenance and repair of axles and running gear systems for agricultural vehicles and machinery? Our agricultural technology seminar will explain what really matters and inform you about the wide variety of applications, as well as the range of BPW axles and suspension systems to cope with them.

#### Agricultural parts trade seminar

Do you want to be able to offer your farmers and contractors the perfect spare parts service? Our agricultural parts trade seminar will provide you with the necessary technical knowledge and an overview of the range of BPW axles and suspension units.

In addition to the seminars available in the agricultural sector, BPW Customer Training also offers seminars about commercial vehicle trailers, as well as car and light truck trailers.



#### Features of BPW seminars

- ▶ Qualified training with certificates
- ▶ Lectures and discussions in small groups
- ▶ Intensive collaboration and the exchange of ideas
- ▶ Practical work on functioning exhibits

# A worldwide presence.

## The BPW dealerships.

Whether in Europe or overseas – whenever you are on the move with a running gear system from BPW, you always have a reliable partner close at hand. That's because our dealerships and agencies worldwide make sure that everything runs smoothly for you. You can rely on it.

### BPW subsidiaries in Europe and Overseas

#### Germany

BPW Bergische Achsen  
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51674 Wiehl  
Phone +49 2262 78-0

#### Australia

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#### Denmark

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Phone +45 75 525200

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Phone +66 38 692243

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**Austria**

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Phone +43 2236 414800

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**Lithuania**

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51129 Kaunas  
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## From the module to the complete solution. BPW takes a systematic approach.

Good running gear is more than just the sum of its parts. All components have to work together optimally in order to achieve the required performance and efficiency. It's good to know that you can always get the right solution from BPW – specifically for the type of vehicle and the application in question.

As a systems supplier, we deliver intelligent running gear systems for trailers and semi-trailers of all kinds. Our modular construction principle makes it possible to achieve an incredibly varied range of possible combinations of running gear components. It goes without saying that everything we offer features BPW's usual high standard of quality with an excellent price/performance ratio.



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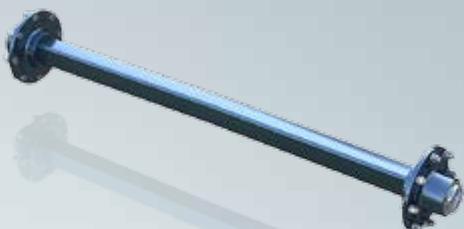
# Axles and running gear systems.

## The correct running gear for each application.

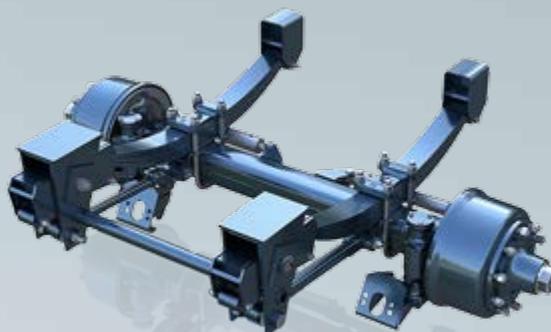
The range of products in the BPW agricultural programme covers everything from the single trailer axle through to the complex hydro-pneumatic suspension unit.



**BPW trailer axles with solid and hollow axle beams**  
(p. 51)



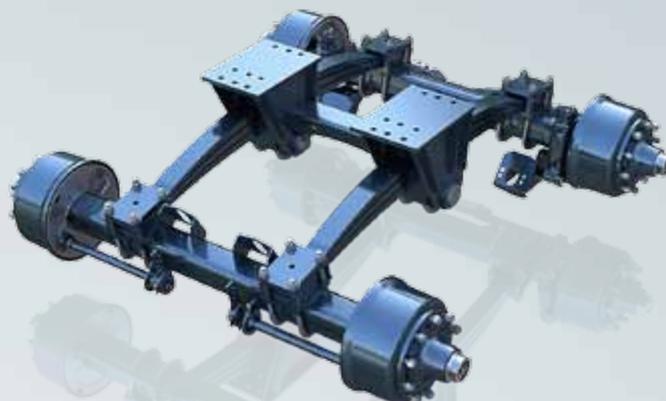
**BPW spring suspension units**  
(p. 62-63)



**BPW unit steering axles**  
(p. 46)



**BPW tandem axle units**  
(p. 64-65)



**BPW air suspension units**  
(p. 66-67)



**BPW hydro-pneumatic suspension systems**  
(p. 60-61)

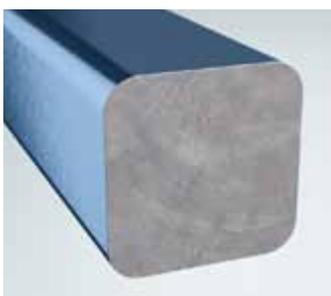
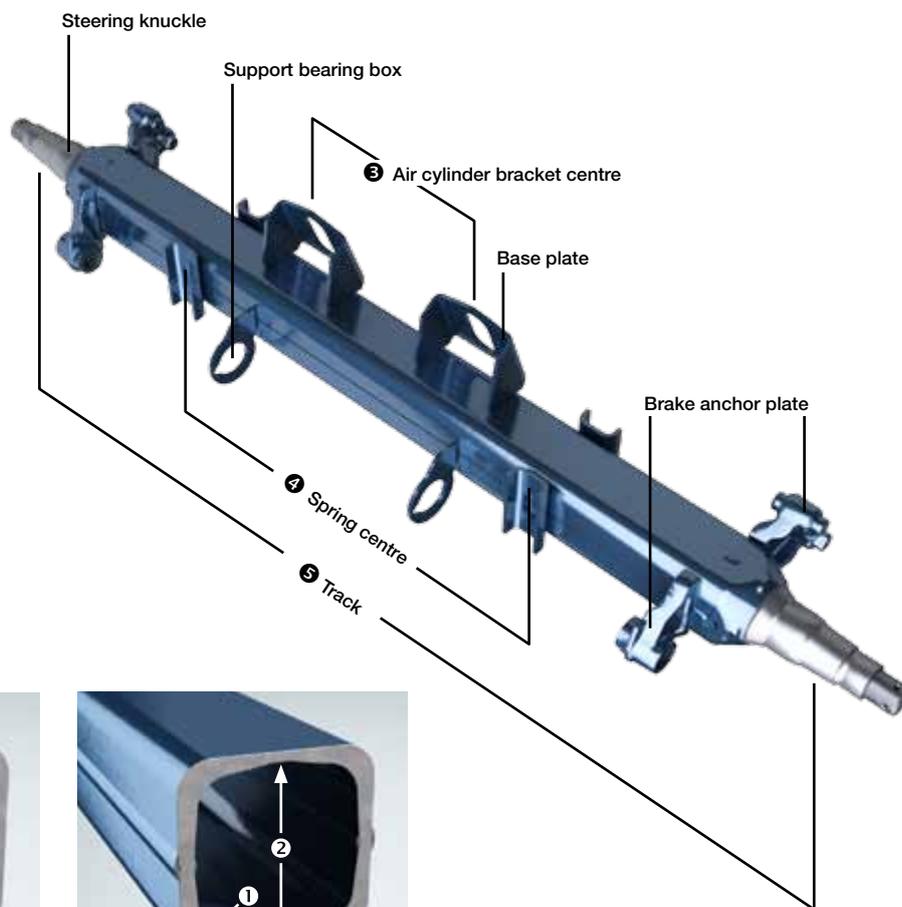


# We build on the sturdy square profile

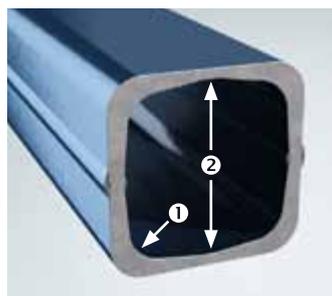
so that everything runs smoothly when you are on the move.

BPW axle beams have been square for years. And for good reason. They offer extreme stability and excellent reliability. It is a BPW design principle that has proven itself millions of times over. Together with our brakes and suspension systems, the square axle beam offers a sturdy basis for a long vehicle service life. In addition to the tried and tested solid axle beam, BPW has also been producing hollow axle beams for many years.

## BPW axle beams for drum brakes



Solid axle beam



Hollow axle beam

BPW's square hollow axle beam (used in axles GS11 and GS12) is comprised of two specially rolled, high-quality half axle tubes (U-profiles), which are welded together both internally and externally. The special feature of the BPW standard axle tube is its profile shape. Having more material at the corner radii ❶ and less material in the upper and lower areas ❷ means this shape guarantees the longest possible service life.

As a result, the axle cross sections are reinforced at the points where the load is applied and are optimally shaped to cope with the load. BPW axle tubes are available with various axle cross sections and wall thickness values, depending on the axle load and the application conditions. BPW axle stubs are forged, quenched and tempered. They have two stepped bearing seats.



Axle stubs are welded onto the axle beam



Axle beam after flash butt-welding

Axle beam after removal of the welding flash

The axle stubs and axle tube are flash butt-welded together to produce one piece – the BPW axle beam. In this welding process, the axle tube and the ends of the axle stubs are heated up to welding temperature by an electric current applied at their joining faces, whilst at the same time being forced together. This produces an absolutely homogeneous connection without any flaws. In contrast to conventional welding processes, no filler metals are needed. At the same time, the axle beam is given its camber and toe-in. Then the appropriate brake components are welded onto the BPW axle beams.

The most important technical data for the axle are the axle load, the brake version, the track **5** (SP), the spring centre **4** (FM) and the air cylinder centre **3** (GM). The spring centre, for example, is the centre distance between the two spring pads and usually corresponds to the width of the trailer frame.



### BPW axle beams - Features and benefits

- ▶ The square axle beam is optimally adapted to the total forces arising, such as flexural and torsional loads
- ▶ Hollow axle beams with low inherent weight and excellent rigidity for high payloads
- ▶ Joining the quenched and tempered axle stubs to the square axle beam using the flash butt-welding process ensures a uniquely strong connection as well as the longest possible service life
- ▶ BPW hollow axle beams are equipped as standard for the retrofitting of ABS
- ▶ Even tyre wear because the axle beam has a positive camber and a narrow toe-in tolerance
- ▶ Easy installation/removal of the wheel hub thanks to stepped bearing seats on the axle stub
- ▶ Long-lasting corrosion protection by means of cathaphoretic dip-coating with zinc-phosphating, KTL<sub>Zn</sub>

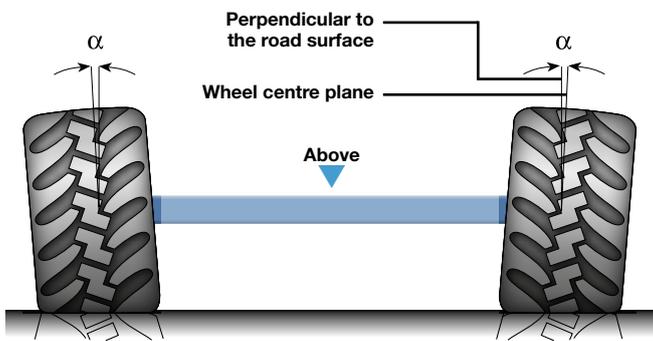


### More information

- ▶ Tracking and camber (p. 30)
- ▶ Cathaphoretic dip-coating with zinc-phosphating, KTL<sub>Zn</sub> (p. 16-17)

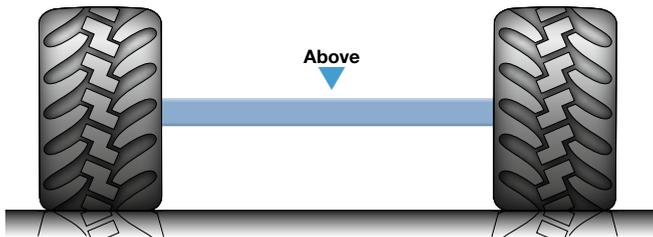
# Reduced wear and tear on both tyres and driver. For BPW, it's purely a question of adjustment.

Both the camber and toe-in of each BPW axle beam are set at the factory. These are minor values, but they have a big effect when driving. This is because having the right camber and toe-in adds up to greater road safety and efficiency.



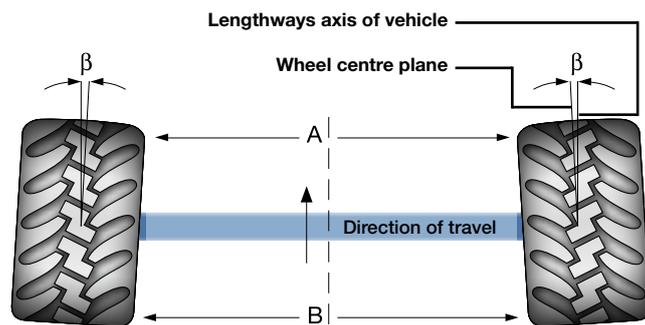
### Positive camber – Unladen vehicle

Camber is defined as the angle ( $\alpha$ ) between the wheel centre plane and a line drawn perpendicular to the plane of the carriageway. The camber is positive if the top of the wheel is angled outwards when the axle is unladen.



### Positive camber – Laden vehicle

The flexural load on the axle beam when the vehicle is laden causes the wheel to straighten. This means the tyre rolls with optimum road contact when the vehicle is laden, the most critical condition in terms of tyre wear. This avoids uneven, premature tyre wear.



### Toe-in

Toe is the angle ( $\beta$ ), between the lengthways axis of the vehicle and the wheel centre plane. Toe-in means the front part of the wheel is turned inwards towards the longitudinal axis of the vehicle – i.e. the distance between the front of the tyres (A) is less than the distance at the rear (B). When driving, the rolling resistance of the tyres causes the angle ( $\beta$ ) to be reduced to zero, thereby guaranteeing good straight-line stability. Without toe-in, the wheels would attempt to run outwards.



## Camber and toe-in – Features and benefits

- ▶ Setting a positive camber ensures maximum contact between the road and the tyres when the vehicle is laden, optimum tyre tracking and avoidance of uneven, premature tyre wear
- ▶ Precisely adjusted toe-in ensures good straight-ahead stability
- ▶ Lower operating costs and greater driving safety

# Optimum braking results.

## It comes down to the correct brake compatibility.

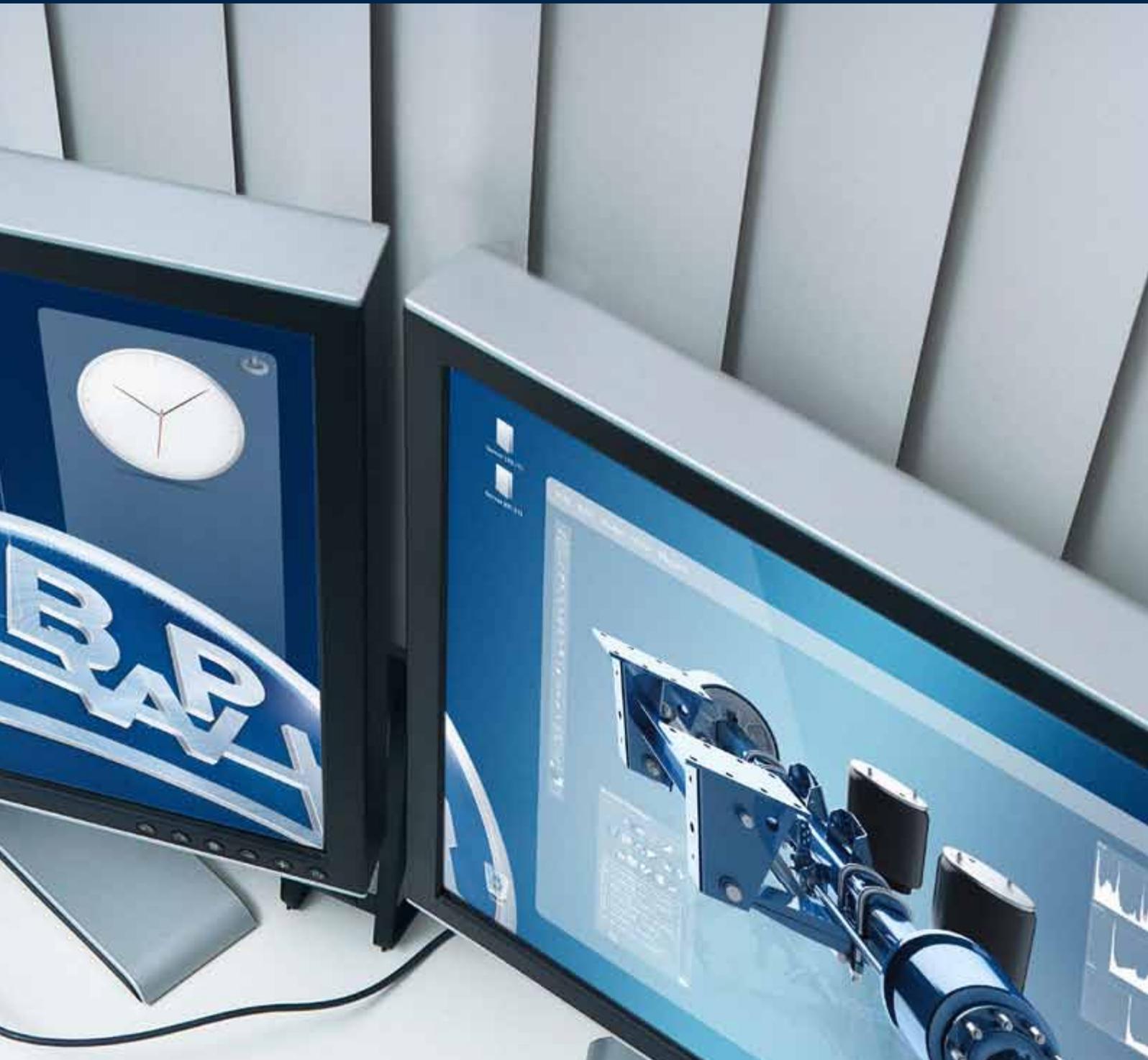
As a result of ever rising speeds, increasing vehicle weights and ever more powerful tractors, BPW recommends brake matching to be carried out in an authorised specialist workshop, as over-braking may occur under certain circumstance as a result of high pilot pressures. This is usually expressed in the form of increased brake wear. In the event of over-braking of the vehicle the specialist workshop can take appropriate measures, such as the installation of an adjustment valve.





## **BPW technology in facts and figures.** Innovative solutions for everything associated with running gear.

BPW running gear systems have proven themselves millions of times over, all over the world. With perfect driving comfort and low-maintenance technology.

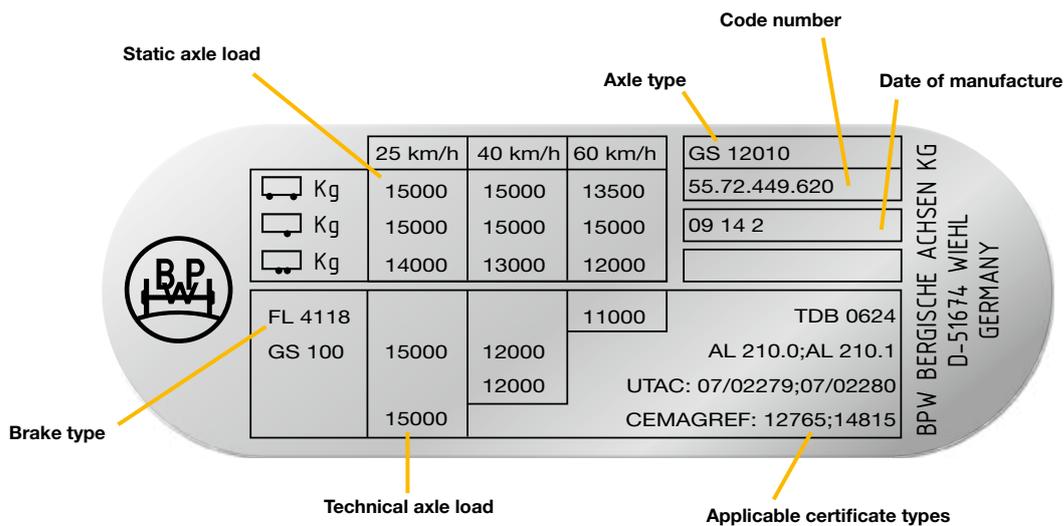


<b>34</b> Type plate	<b>48</b> Steering axle operating process	<b>60</b> Hydro-pneumatic suspension units
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# The type plate.

## Your axle's identity document.

Every BPW axle has a type plate. It is affixed to the centre of the axle beam, facing to the rear of the vehicle. The information on the type plate enables you to order replacements for wearing parts at any time or – after an accident, for instance – the entire axle.



The BPW type designation (see axle type) is composed of a letter group and a number group. The letter group identifies the type of axle and suspension version as well as defining the hub version. The number group specifies the axle load on the ground in kilograms and the number of wheel studs per wheel hub.

The extended text report line not only contains the standard test report but also any special test reports for other test loads. The brake test reports specified on the type plate can be downloaded from the BPW website at [www.bpw.de](http://www.bpw.de) (Download Centre – Test Reports). All BPW components and assemblies have a 10-digit „speaking“ code number.

## Code number key, axles

## For example

55.	88.	460.	600	
36.				Agricultural trailer axle, steered
55.				Agricultural trailer axle, braked and unbraked
58.				Agricultural trailer axle, braked and unbraked
56.				Bearing: 32207-30210, GS 4006
63.				Bearing: 32207 - 32013x, GS 5506, GS 5508
67.				Bearing: 32211-30214, GS 7006, GS 7008-1
70.				Bearing: 32213 - 32215, GS 8008-3, GS 8010-3
72.				Bearing: 33213 - 33118, GS 12010
88.				Bearing: 32310A - 33116, GS 11008-1, GS 11010-1
	001.			without brake
	356.			Wedge-type brake S 3008 RA (3081)
	381.			Wedge-type brake S 3006-7 RAZG
	443.			Cam brake N 3006-3
	454.			Cam brake N 3108-3
	449.			Wing cam brake FL 4118
	460.			Wing cam brake FL 4112
	461.			Cam brake N 4008-4
		001		Serial number
		...		Serial number
		600		Serial number

## Code number key, suspension units

## For example

56.	88.	01.	0064	
56.				Agricultural suspension units
	63.			Bearing: 32207 - 32013x, GS 5508
	67.			Bearing: 32211-30214, GS 7006, GS 7008-1
	70.			Bearing: 32213 - 32215, GS 8008-3, GS 8010-3
	72.			Bearing: 33213 - 33118, GS 12010
	88.			Bearing: 32310A - 33116, GS 11008-1, GS 11010-1
		01.		Air-sprung axle (single axle)
		02.		Air suspension (tandem and tri-axle suspension with frame)
		03.		Spring suspension (single axle)
		04.		Spring suspension (tandem and tri-axle suspension with frame)
		05.		Tandem axle suspension (bogie suspension)
		06.		Tandem axle suspension (pendle suspension)
		07.		Special suspension
		08.		Hydro-pneumatic suspension (single module, tandem and tri-axle suspension with frame)
		0001		Serial number
		...		Serial number
		0064		Serial number

# Type designations at a glance.

## Type designation, axles

### For example

<b>G</b>	<b>S</b>		<b>LL</b>	<b>8008</b>	<b>-1</b>	
<b>G</b>	BPW trailer axle for agricultural vehicles					
	<b>S</b>	Single wheels, wheels without offset				
		<b>ST</b>	Axle stubs			
			<b>LA</b>	Unit steering axle, type LA		
			<b>LL</b>	Unit steering axle, type LL		
			<b>L</b>	Steering axle, type L (positive steering)		
				<b>8008</b>	Axle load and number of wheel studs per wheel (last two digits)	
					<b>-1</b>	Bearing type number

## Type designation, suspension units

### For example

<b>GS</b>	<b>BW</b>		<b>:2/</b>	<b>12010</b>	<b>-1</b>	
<b>GS</b>	GS axle (without offset)					
<b>GSST</b>	GS axle stub (agric.), max. 40 km/h (without offset)					
	<b>SLO</b>	Air suspension, straight trailing arms fitted on top of the axle (max. 12 t)				
	<b>SLU</b>	Air suspension, straight trailing arms fitted below the axle (max. 12 t)				
	<b>VB</b>	Spring suspension				
	<b>VBA</b>	Spring suspension with brake load equalisation				
	<b>BW</b>	Tandem axle suspension				
	<b>P</b>	Pendle axle or pendle axle stub				
	<b>OH</b>	with hydro-pneumatic suspension				
		<b>R</b>	with frame			
		<b>LA</b>	Unit steering axle, type LA			
		<b>LL</b>	Unit steering axle, type LL			
		<b>L</b>	with steering axle, type L			
		<b>LS</b>	Trailer axle stub			
			<b>:2/</b>	Tandem axle suspension		
			<b>:3/</b>	Tri-axle suspension		
				<b>5506-12010</b>	Axle load (in kg) and number of wheel studs per wheel (last two digits)	
					<b>-1</b>	Bearing type
					<b>V</b>	Spring suspension with torque arm

# Axle load table.

## Trailer axles and braking axles

Axle type	Track SP (mm)	Spring centre FM (mm)	Axle square section A (mm)	permissible axle load (kg)								
				1-axle trailer			2-axle trailer			Tandem		
				25 km/h	40 km/h	60 km/h	25 km/h	40 km/h	60 km/h	25 km/h	40 km/h	60 km/h

### Trailer axles with solid axle beam

GS 4006	1,500	1,000	60	4,500	4,100*	3,800*	3,800	3,500*	3,200*	-	-	-
GS 5506	1,800	1,300	70	7,000	6,500*	6,000*	6,000	5,500*	5,000*	5,500	5,000*	4,500*
GS 7008	1,800	1,200	80	9,000	8,000*	7,500*	7,500	7,000*	6,500*	7,000	6,500*	6,000*
GS 8008-3	1,800	1,200	90	11,000	10,000*	9,000*	9,500	8,500*	8,000*	8,500	8,000*	7,500*

### Trailer axles with hollow axle beam

GS 12010	1,900	1,100	150x10	15,000	15,000	15,000	15,000	15,000	13,500	14,000	13,000	12,000
----------	-------	-------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------

### Braked axles with drum hub and solid axle beam

GS 4006	1,500	1,000	60	4,500	4,100	3,700	3,800	3,500	3,200	-	-	-
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### Braked axles with drum hub and solid axle beam

GS 5506 GS 5508	1,500	1,000	70	7,000	6,500	6,000	6,000	5,500	5,000	5,500	5,000	4,500
GS 7008(-1)	1,800	1,200	80	9,000	8,000	7,500	7,500	7,000	6,500	7,000	6,500	6,000
GS 8008-3 GS 8010-3	1,800	1,200	90	11,000	10,000	9,000	9,500	8,500	8,000	8,500	8,000	7,500

### Braked axles with flange-mounted brake drums and solid axle beam

GS 11008-1 GS 11010-1	2,050	1,100	120 x 10	11,000	9,500	9,000	11,000	9,500	9,000	11,000	9,500	9,000
GS 11008-1 GS 11010-1	2,050	950	120 x 15	12,000	11,000	10,000	12,000	11,000	10,000	11,000	10,000	9,000
GS 12010	2,050	1,100	150 x 10	15,000	15,000	14,500	15,000	15,000	13,500	14,000	13,000	12,000
	2,050	850	150 x 16	15,000	15,000	15,000	15,000	15,000	13,500	14,000	13,000	12,000

Axle loads are dependent on the track/spring centre/axle arrangement used.  
\*only valid outside the EC.

# BPW wheel brakes

## for externally power-assisted braking.

### EC test reports for $v \geq 25$ km/h

Type of wheel brake	Brake size (mm)	Test load (kg)	Max. permissible axle load (kg)	Tyres tested		Dynamic tyre radius (mm)		Test report - number
						tested	permissible $\geq$	
N 3006-3	300 x 60	3,800	3,800	205 R 14 C	Twin	332	265.6	TDB 0403
				8.5 R 17.5	Single	388	310.4	TDB 0410
N 3108-3	310 x 80	6,000	6,000	7.5 R 15	Single	371	296.8	TDB 0364
				8.25 R 20	Single	471	376.8	
N 4008-3	400 x 80	7,000	7,000	600/55 - 26.5	Single	631	504.8	TDB 0370
				21.0/80 - 20	Single	661	528.8	
N 4008-4	400 x 80	7,000	7,000	14/80 R 20	Single	543	434.4	TDB 0833
FL 4112	410 x 120	10,000	10,000	14.5 R 20	Single	527	421.6	TDB 0680
FL 4118	410 x 180	11,000	11,000	385/65 R 22.5	Single	519	415.2	TDB 0624
				700/50 - 22.5	Single	594	475.2	
				500/75 R 24	Single	653	522.4	

### Certified according to German road traffic regulations (StVZO)

Type of wheel brake	Brake size (mm)	Test load (kg)	Max. permissible axle load (kg)	Max. permissible speed (km/h)		Tyre radius (mm)		Test report - number
				$V \leq 25$	$V \leq 40$	min.	max. *	
N 3006-3	300 x 60	6,000	6,000	•		330	450	AL 180.0
N 3108-3	310 x 80	8,000	8,000	•		330	630	AL 192.0
N 4008-3	400 x 80	8,000	8,000	•		380	631	AL 181.0
N 4008-4	400 x 80	8,000	8,000	•		380	631	AL 318.1
FL 4112	410 x 120	8,000	8,000	•		650	950	AL 224.0
		13,000	13,000	•		420	650	AL 224.1
FL 4118	410 x 180	10,500	10,500		•	420	650	AL 224.2
		15,000	15,000	•		420	800	AL 210.0
		12,000	12,000		•	590	800	AL 210.1
		13,500	13,500		•	420	650	AL 210.2

\*Other tyre radii are possible after mathematical checks.

The largest possible tyre sizes can be established by means of a brake calculation.

Test reports according to UTAC (France) for  $v \leq 40$  km/h

Type of wheel brake	Brake size (mm)	Test load (kg)	Max, permissible axle load (kg)	Tyres tested	External diameter (mm)		Operation	Test report - number
					tested	permissible $\geq$		
N 3006-3	300 x 60	3,800	3,800	12.5/80 - 15.3	897	717.6	Compressed air	07/02276
							Hydraulic	07/10272
N 3108-3	310 x 80	6,000	6,000	12.5/80 - 15.3	897	717.6	Compressed air	07/02277
							Hydraulic	07/10273
N 4008-3	400 x 80	7,000	7,000	600/50 - 22.5	1,172	937.6	Compressed air	07/02278
							Hydraulic	07/10274
N 4008-4	400 x 80	7,000	7,000	600/50 - 22.5	1,172	937.6	Compressed air	08/06745
							Hydraulic	08/06746
FL 4112	410 x 120	10,500	10,500	600/50 - 22.5	1,172	937.6	Compressed air	07/02281
							Hydraulic	07/02282
FL 4118	410 x 180	12,000	12,000	600/50 - 22.5	1,172	937.6	Compressed air	07/02279
							Hydraulic	07/02280

 Test reports according to CEMAGREF (France) for  $v \leq 25$  km/h

Type of wheel brake	Brake size (mm)	Test load (kg)	Max. permissible axle load (kg)	Tyre radius (mm)		Test report - number
				min.	max.	
N 3006-3	300 x 60	6,000	6,000	330	450	13124
		8,000				14762
N 3108-3	310 x 80	8,000	8,000	330	630	12436
		8,000				12395
N 4008-3	400 x 80	8,000	8,000	380	630	13644
						8,000
		16,000			650	15735
N 4008-4	400 x 80	12,000	12,000	380	890	12713
		12,000				650
FL 4112	410 x 120	13,000	13,000	420	970	12765
				420		800
FL 4118	410 x 180	15,000	15,000	420	970	
				420		



More information

[www.bpw.de/en/download/test-reports/index.html](http://www.bpw.de/en/download/test-reports/index.html)

# BPW braked axles with solid axle beams.

## Brakes N 3006-3; N 3108-3; N 4008-4.

With a large number of permissible axle loads and various brakes, BPW axles with solid axle beams cover all possible applications.



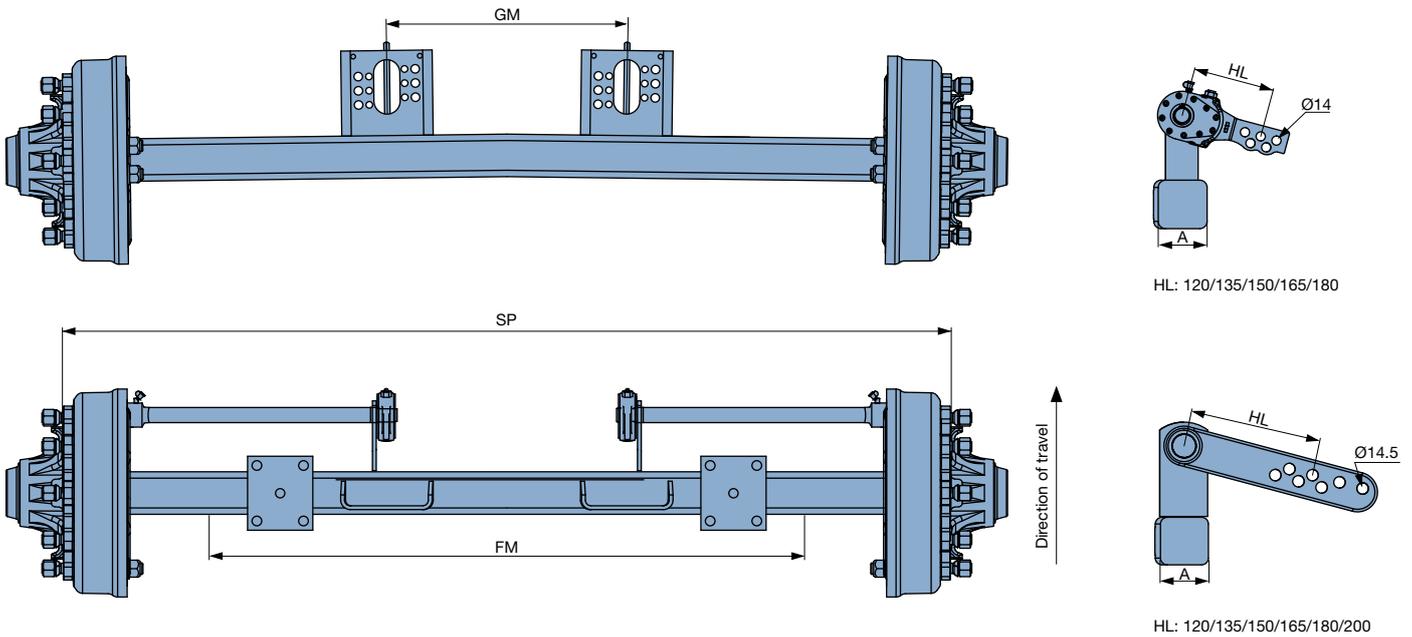
Axle type	Track SP (mm)	Air cylinder centre GM (mm)	Spring centre FM (mm)	Axle square section (mm)	Wheel brake	Wheel connection	Code number
GS 4006	1,500	375	1,000	60	N 3006-3	160/205/6 ET 0	55.56.443.6xx
GS 4006	1,700	575	1,200	60	N 3006-3	160/205/6 ET 0	55.56.443.6xx
GS 4006	1,800	675	1,300	60	N 3006-3	160/205/6 ET 0	55.56.443.6xx
GS 5506	1,500	370	1,000	70	N 3006-3	160/205/6 ET 0	55.63.443.6xx
GS 5506	1,700	570	1,200	70	N 3006-3	160/205/6 ET 0	55.63.443.6xx
GS 5506	1,500	300	1,000	70	N 3108-3	160/205/6 ET 0	55.63.454.6xx
GS 5506	1,700	500	1,200	70	N 3108-3	160/205/6 ET 0	55.63.454.6xx
GS 5506	1,850	650	1,350	70	N 3108-3	160/205/6 ET 0	55.63.454.6xx
GS 5508	1,500	300	1,000	70	N 3108-3	220/275/8 ET 0	55.63.454.6xx
GS 5508	1,700	500	1,200	70	N 3108-3	220/275/8 ET 0	55.63.454.6xx
GS 5508	1,850	650	1,350	70	N 3108-3	220/275/8 ET 0	55.63.454.6xx
GS 7008	1,850	650	1,250	80	N 3108-3	220/275/8 ET 0	55.67.454.6xx
GS 7008	1,950	750	1,350	80	N 3108-3	220/275/8 ET 0	55.67.454.6xx

Welded air cylinder brackets included as standard.

Brake equalisation device either at the front in the centre, at the front 250 mm to the left or at the front 250 mm to the right, as required.

Standard offset: ET 0 mm

Additional types available on request.



HL: 120/135/150/165/180

HL: 120/135/150/165/180/200

Axle type	Track SP (mm)	Air cylinder centre GM (mm)	Spring centre FM (mm)	Axle square section (mm)	Wheel brake	Wheel connection	Code number
GS 8008-1	1,800	600	1,200	90	N 3108-3	220/275/8 ET 0	55.70.454.6xx
GS 8008-1	1,950	750	1,350	90	N 3108-3	220/275/8 ET 0	55.70.454.6xx
GS 8008-1	2,050	850	1,450	90	N 3108-3	220/275/8 ET 0	55.70.454.6xx
GS 7008	1,800	450	1,200	80	N 4008-4	220/275/8 ET 0	55.67.461.6xx
GS 7008	1,850	500	1,250	80	N 4008-4	220/275/8 ET 0	55.67.461.6xx
GS 7008	2,000	650	1,400	80	N 4008-4	220/275/8 ET 0	55.67.461.6xx
GS 8008-3	1,850	500	1,250	90	N 4008-4	220/275/8 ET 0	55.70.461.6xx
GS 8008-3	1,950	600	1,350	90	N 4008-4	220/275/8 ET 0	55.70.461.6xx
GS 8008-3	2,000	650	1,400	90	N 4008-4	220/275/8 ET 0	55.70.461.6xx
GS 8008-3	2,050	700	1,450	90	N 4008-4	220/275/8 ET 0	55.70.461.6xx
GS 8010-3	1,850	500	1,250	90	N 4008-4	280/335/10 ET 0	55.70.461.6xx
GS 8010-3	1,950	600	1,350	90	N 4008-4	280/335/10 ET 0	55.70.461.6xx
GS 8010-3	2,000	650	1,400	90	N 4008-4	280/335/10 ET 0	55.70.461.6xx
GS 8010-3	2,050	700	1,450	90	N 4008-4	280/335/10 ET 0	55.70.461.6xx

Welded air cylinder brackets included as standard.

Brake equalisation device either at the front in the centre, at the front 250 mm to the left or at the front 250 mm to the right, as required.

Standard offset: ET 0 mm

Additional types available on request.



More information

▶ BPW test reports (p. 38-39)

▶ BPW brake cylinders (p. 44-45)

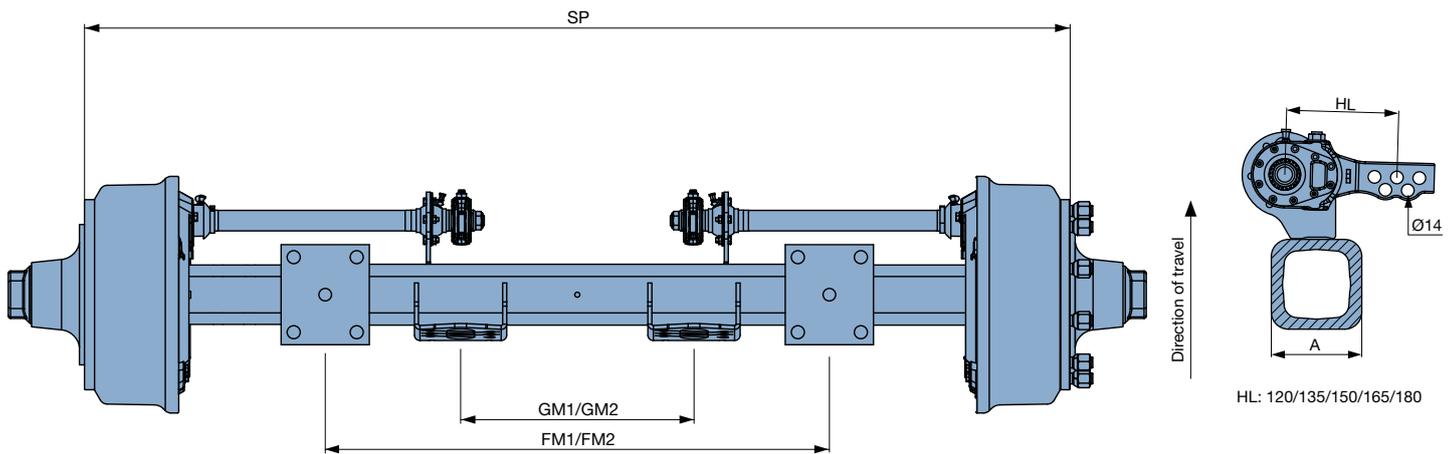
# BPW braked axles with hollow axle beams.

## Brakes FL 4112, FL 4118.

With wing cam brakes, these axles provide optimum braking performance. Depending on the individual vehicle type, usage and speed, they are designed for up to 65 km/h. Engineered for static axle loads up to 15,000 kg and with special brake camshaft bearings, BPW braking axles offer are a cut above the rest. The location of the brake camshaft and all the mounting plates for the brake cylinders are adapted to suit each vehicle.

At speeds over 62 km/h, an automatic slack adjuster and ABS must be used.





HL: 120/135/150/165/180

Axle type	Track SP (mm)	Air cylinder centre GM 1 (mm)	Air cylinder centre GM 2 (mm)	Spring centre FM 1 (mm)	Spring centre FM 2 (mm)	Axle square section 1 (mm)	Axle square section 2 (mm)	Wheel brake	Wheel connection	Code number
GS 11008-1	1,800	-	1,083	-	700	120 x 10	120 x 15	FL 4112	220/275/8 ET 0	55.88.460.6xx
GS 11008-1	1,850	363	1,133	930	750	120 x 10	120 x 15	FL 4112	220/275/8 ET 0	55.88.460.6xx
GS 11008-1	1,950	463	1,233	1,000	850	120 x 10	120 x 15	FL 4112	220/275/8 ET 0	55.88.460.6xx
GS 11008-1	2,000	513	1,283	1,050	900	120 x 10	120 x 15	FL 4112	220/275/8 ET 0	55.88.460.6xx
GS 11008-1	2,050	563	1,333	1,100	950	120 x 10	120 x 15	FL 4112	220/275/8 ET 0	55.88.460.6xx
GS 11008-1	2,150	663	1,433	1,200	1,050	120 x 10	120 x 15	FL 4112	220/275/8 ET 0	55.88.460.6xx
GS 11010-1	1,800	-	1,083	-	700	120 x 10	120 x 15	FL 4112	280/335/10 ET 0	55.88.460.6xx
GS 11010-1	1,850	363	1,133	930	750	120 x 10	120 x 15	FL 4112	280/335/10 ET 0	55.88.460.6xx
GS 11010-1	1,950	463	1,233	1,000	850	120 x 10	120 x 15	FL 4112	280/335/10 ET 0	55.88.460.6xx
GS 11010-1	2,000	513	1,283	1,050	900	120 x 10	120 x 15	FL 4112	280/335/10 ET 0	55.88.460.6xx
GS 11010-1	2,050	563	1,333	1,100	950	120 x 10	120 x 15	FL 4112	280/335/10 ET 0	55.88.460.6xx
GS 11010-1	2,150	663	1,433	1,200	1,050	120 x 10	120 x 15	FL 4112	280/335/10 ET 0	55.88.460.6xx
GS 11010-1	1,800	-	1,083	-	700	120 x 10	120 x 15	FL 4112	280/335/10 ET 0	55.88.460.6xx
GS 11010-1	1,850	363	1,133	930	750	120 x 10	120 x 15	FL 4112	280/335/10 ET 0	55.88.460.6xx
GS 11010-1	1,950	463	1,233	1,000	850	120 x 10	120 x 15	FL 4112	280/335/10 ET 0	55.88.460.6xx
GS 11010-1	2,000	513	1,283	1,050	900	120 x 10	120 x 15	FL 4112	280/335/10 ET 0	55.88.460.6xx
GS 11010-1	2,050	563	1,333	1,100	950	120 x 10	120 x 15	FL 4112	280/335/10 ET 0	55.88.460.6xx
GS 11010-1	2,150	663	1,433	1,200	1,050	120 x 10	120 x 15	FL 4112	280/335/10 ET 0	55.88.460.6xx
GS 12010	1,950	405	1,175	900	750	150 x 10	150 x 16	FL 4118	280/335/10 ET 0	55.72.449.6xx
GS 12010	2,000	455	1,225	1,050	800	150 x 10	150 x 16	FL 4118	280/335/10 ET 0	55.72.449.6xx
GS 12010	2,050	505	1,275	1,100	850	150 x 10	150 x 16	FL 4118	280/335/10 ET 0	55.72.449.6xx
GS 12010	2,150	605	1,375	1,150	950	150 x 10	150 x 16	FL 4118	280/335/10 ET 0	55.72.449.6xx
GS 12010	2,225	680	1,450	1,150	1,025	150 x 10	150 x 16	FL 4118	280/335/10 ET 0	55.72.449.6xx

The versions listed here include welded air-cylinder mounting plates and spring pads.

Standard offset: ET 0 mm

Additional types available on request.



More information

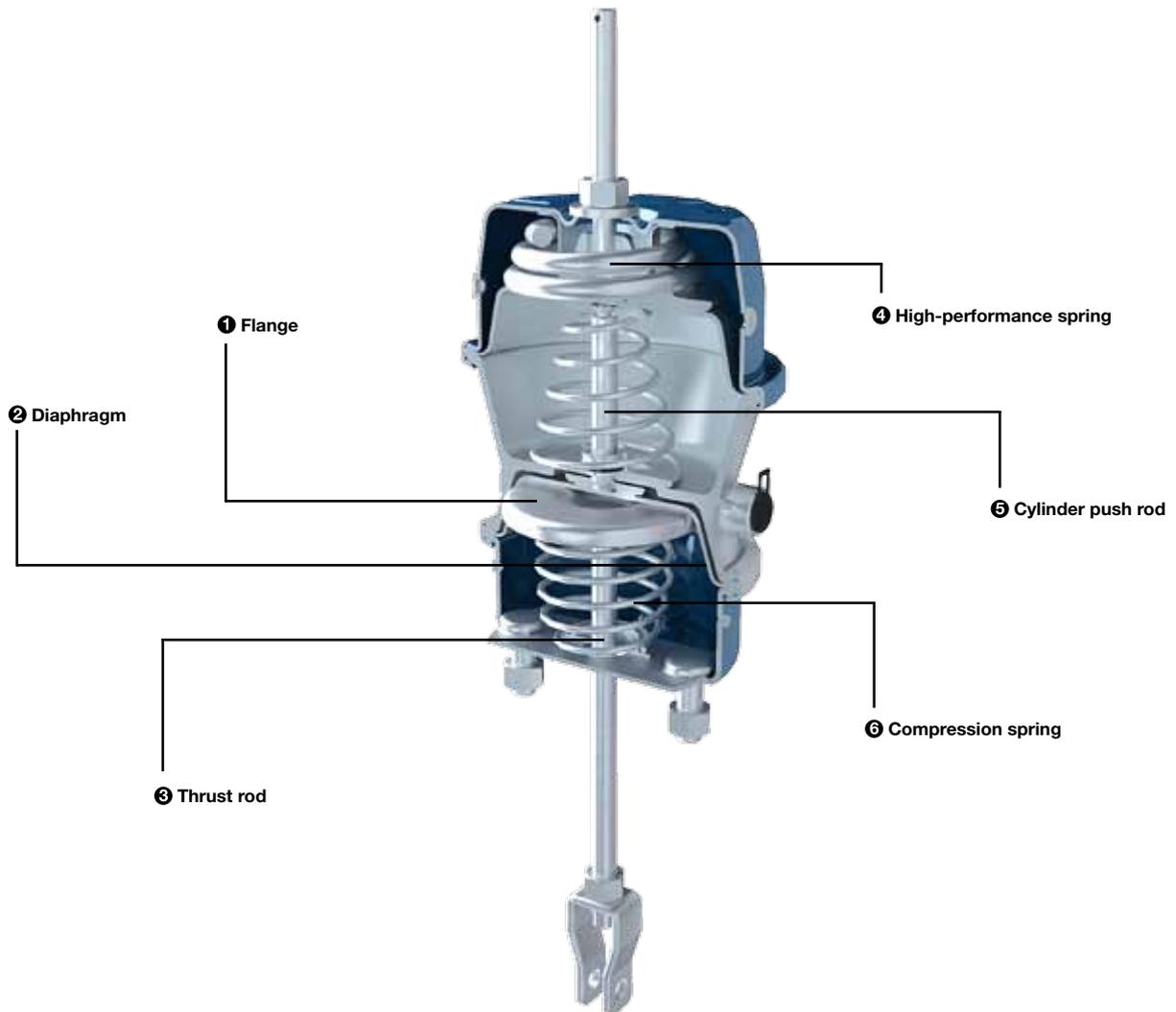
▶ BPW test reports (p. 38-39)

▶ BPW brake cylinders (p. 44-45)

# The force behind your brake system.

## Brake cylinders from BPW.

In a brake system, it is of the utmost importance to achieve an optimum interplay between the individual components. The brake cylinders have a decisive role to play in this, because they have to provide a perfectly modulated force transfer within the brake system. BPW develops and produces its own brake cylinders for drum brakes – further proof of our extensive expertise when it comes to brakes. As a systems provider our product range includes both single and double diaphragm cylinders.



**Operation of the service brake:** As soon as the compressed air acts on the diaphragm ②, the force generated (area x pressure) acts on the flange ① and the push rod ③. The force is transferred to the wheel brake in accordance with the brake pressure applied. When the brake cylinder is vented, the compression spring ⑥ moves the flange ① with the push rod ③ and the diaphragm ② back to their original positions.

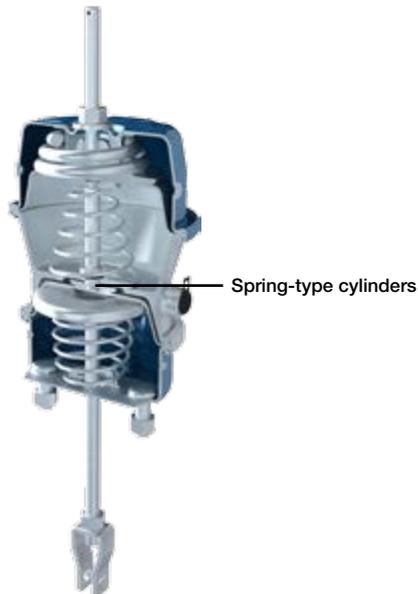
**Operation of the parking brake:** When the pressure level in the brake system (reservoir tank) drops close to zero, the parking brake is activated in vehicles with spring-type brake systems. The spring-type actuator applies the wheel brake by means of the cylinder push rod ⑤ and the integrated high-performance spring ④, thereby preventing the vehicle from moving. When the release pressure is reached, the high-performance spring ④ in the spring-type actuator is compressed by the diaphragm ② and the flange. The pressure acting on the cylinder push rod ⑤ drops until the brake is released. The parking brake is now inactive and there is nothing more to prevent the vehicle from being moved.

## Delivery variants of BPW brake cylinders



### Single diaphragm cylinders

They act as a service brake and are characterised by their compact external dimensions and low weight.



### Double diaphragm cylinders

They act both as a service brake as well as an auxiliary and parking brake. They are lighter than the diaphragm-piston cylinder.

For axles with drum brakes	
Single diaphragm cylinders	Double diaphragm cylinders
12"	
16"	16/24"
20"	20/30"
24"	24/30"
30"	30/30"
36"	

Refer to the BPW brake cylinder booklet (BPW-BZ-...) for more technical data. They can be supplied fully fitted to BPW axles as original equipment. If the lever length is > 150 mm, make sure that only long-stroke diaphragm cylinders are used. Long-stroke cylinders must always be used with automatic slack adjusters.



### BPW brake cylinders – Features and benefits

- ▶ High spring-type actuator force with low release pressure
- ▶ Tested service life of the service brake: over 1 million braking cycles
- ▶ Optimum anti-corrosion protection by means of powder and zinc cobalt coating
- ▶ Chromated aluminium housing
- ▶ Imperial and metric connections available
- ▶ Sustained high quality assured by testing and continuous quality checks (FMEA, dimension test, release pressure test, functional test on the vehicle, vibration test, dirt test, dynamic strength test, hot and cold test (80 °C, -40 °C), force output check)
- ▶ In the case of drum brakes, no external pull-off spring is required between the slack adjuster and the air cylinder bracket
- ▶ New ECE certificates and test reports are available from the BPW website

# BPW steering axles

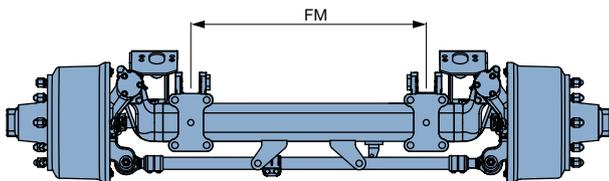
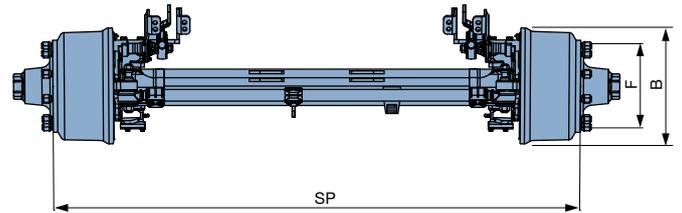
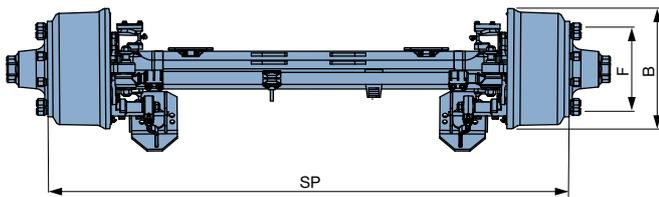
## suitable for self-steering and positive steering.

BPW steering axles contribute to the protection of the road or field surface, to increased manoeuvrability and hence to reduced fuel consumption. BPW offers a new generation of steering axles, which are suitable for both positive steering and for self-steering as a result of the basic axle beam.

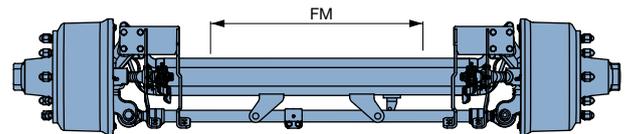


GSLA

GSLL



Direction of travel ↑



Axle type	Track SP (mm)	Axle square section (mm)	Wheel brake	Number of wheel studs	Wheel connection		Threaded wheel studs	Code number
					∅ F (mm)	∅ B (mm)		
GSLA 7008 (-1)	1,950	120 x 15	N 3108-3	8	220	275	M20 x 1.5	36.67.454.xxxx
GSLA 8008-3	1,950	120 x 15	N 3108-3	8	220	275	M20 x 1.5	36.70.454.xxxx
GSLA 8008-3	1,950	120 x 15	N 4008-4	8	220	275	M20 x 1.5	36.70.461.xxxx
GSLA 11010-1	1,950	120 x 15	FL 4112	10	280	335	M22 x 1.5	36.88.460.xxxx
GSLL 12010	2,050	150 x 16	FL 4118	10	280	335	M22 x 1.5	36.72.449.xxxx

The following standard spring centres (FM in mm) can be achieved, depending on the tyres and the track dimension: 700, 750, 800, 830, 930, 1,030

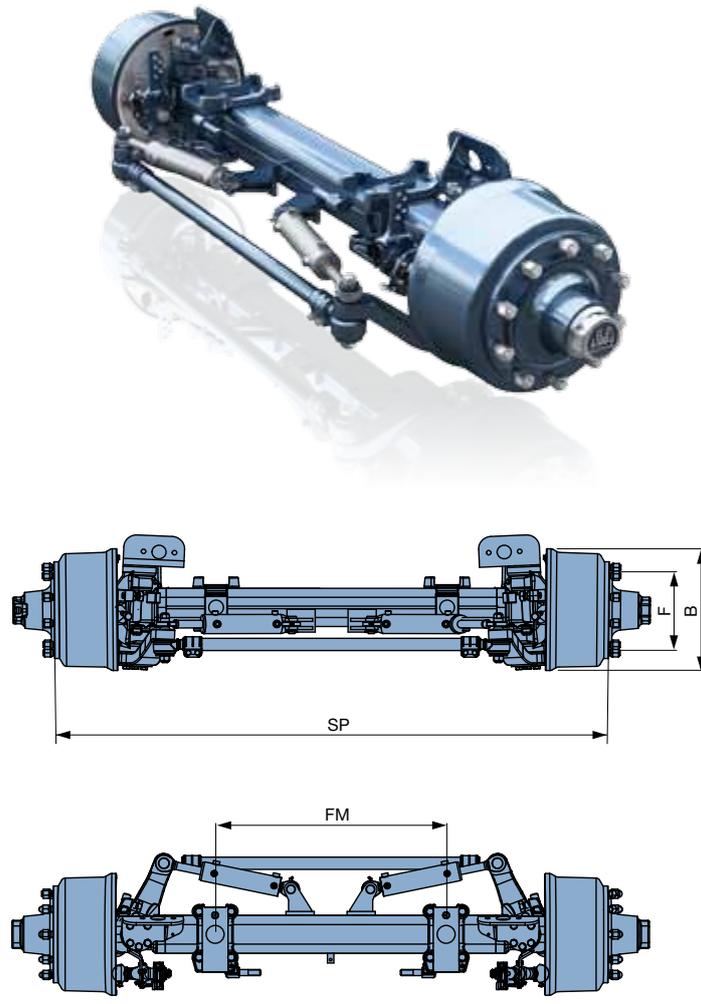
The new generation of BPW steering axles is available in the following versions:

Unit axle without cylinder, unit axle with positive steering, unit axle with self-steering, positive steering installation parts kit, self-steering installation parts kit.

# BPW positive steering axles.

## Type GSL.

The BPW type GSL positive steering axle is notable for its very small turning radius. In addition to which, as a result of the arrangement of the steering pivots and particularly in the case of large and wide wheels, the forces on the steering housing are considerably reduced.



Axle type	Track SP (mm)	Axle square section (mm)	Wheel brake	Number of wheel studs	Wheel connection		Threaded wheel studs	Code number
					∅ F (mm)	∅ B (mm)		
GSL 11010-1	2,050	120 x 15	FL 4112	10	280	335	M22 x 1.5	36.88.460.xxx
GSL 12010	2,050	150 x 16	FL 4118	10	280	335	M22 x 1.5	36.72.449.xxx

The following standard spring centres (FM in mm) can be achieved, depending on the tyres and the track dimension:  
700, 830, 930, 1,030



### More information

- ▶ Steering axle operating process (p. 48-49)
- ▶ BPW test reports (p. 38-39)

- ▶ BPW brake cylinders (p. 44-45)

# BPW steering axle.

Larger and/or longer vehicles require that steering axle be used for reasons of safety. BPW offers both self-steering axles and positive steering axles from 7,000 kg to 13,000 kg permissible axle load.

Types GSLA and GSSL are available as a so-called unit steering axle. This axle can be equipped with both a locking cylinder for simple self-steering as well as with steering cylinders as a positive steering axle. Steering axle GSL is a purely positive steering axle without self-steering offset.

All BPW steering axles are equipped with the patented cam plate for excellent straight-line stability and cornering behaviour. BPW supplies steering axles with bolted mounting plates for the brake cylinders as standard. These mounting plates are adjusted with regard to the tyres and rims used, as well as the necessary steering angle, so the vehicle manufacturer does not need to carry out any additional adjustment work.

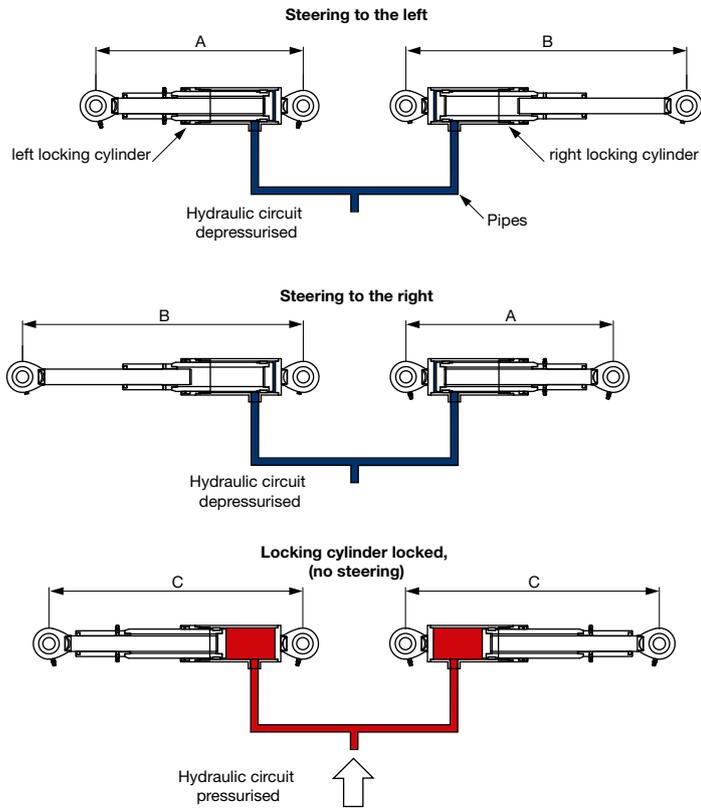


Steering housing when driving straight ahead (zero position).

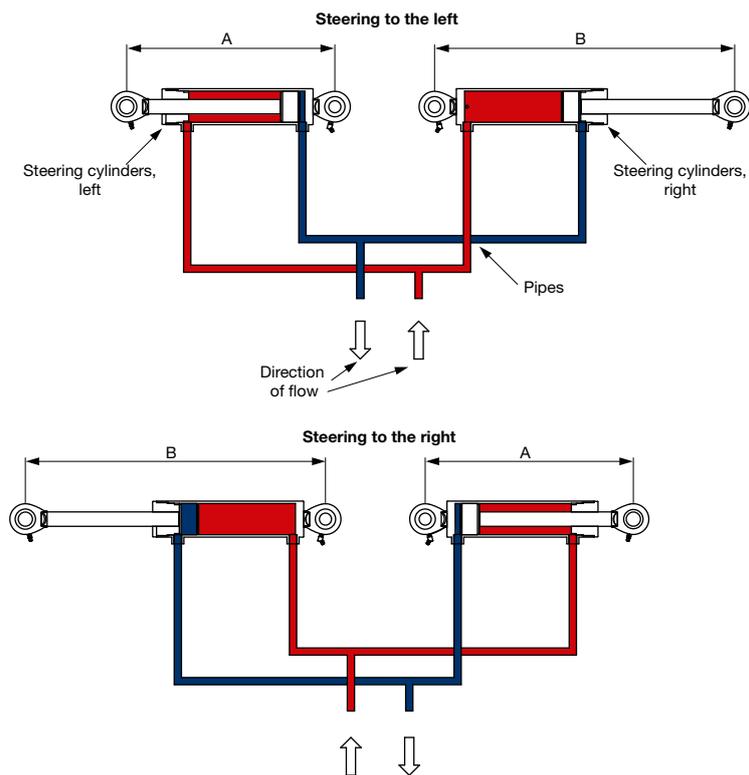


Steering housing when cornering (up to 27 degrees, depending on vehicle model).

Locking cylinder for unit steering axle, single acting

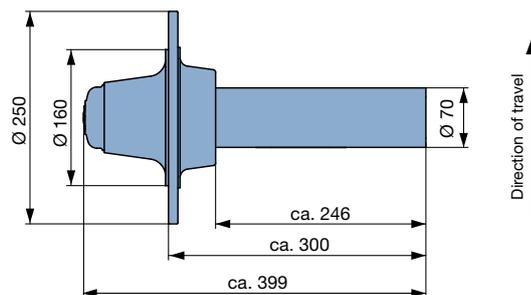
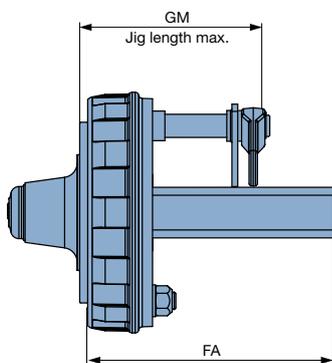


Positive steering operating process, dual action



# BPW braked and unbraked axle stubs.

BPW axle stubs are available for those special applications in which complete axles cannot be used, such as for chassis with excessively wide track or agricultural machinery.



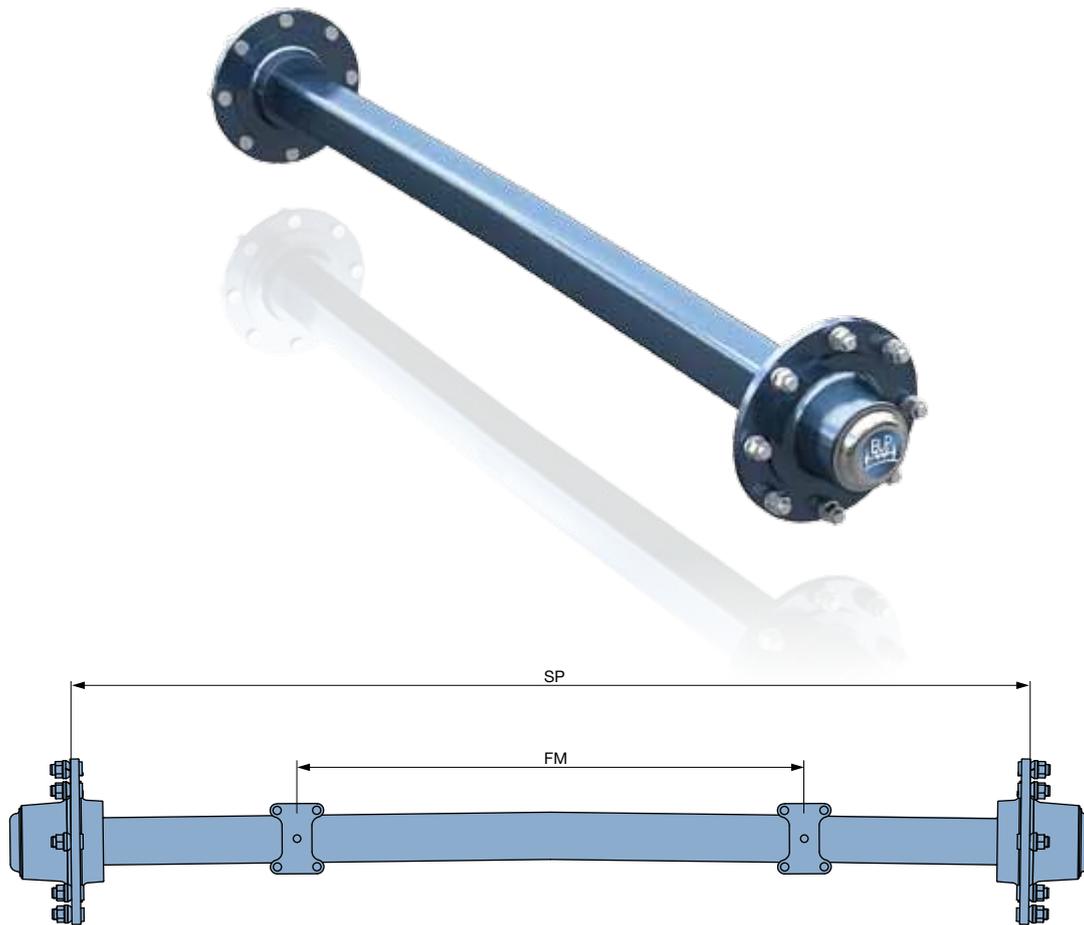
Axle type	Wheel brake	Axle square section (mm)	Flange length FA (mm)	Wheel connection	Code number
GS-ST 4006	-	60, solid	300	106/205/6 ET 0	58.56.001.6xx
GS-ST 4006	N 3006-3	60, solid	350	205/160/6 ET 0	58.56.443.6xx
GS-ST 5506	-	70, solid	300	160/250/6 ET 0	58.63.001.6xx
GS-ST 5508	-	70, solid	300	220/275/8 ET 0	58.63.001.6xx
GS-ST 5506	N 3006-3	70, solid	350	205/160/6 ET 0	58.63.443.6xx
GS-ST 5506	N 3108-3	70, solid	350	160/205/6 ET 0	58.63.454.6xx
GS-ST 7008	-	80, solid	350	220/275/8 ET 0	58.67.001.6xx
GS-ST 7006	N 3108-3	80, solid	350	160/205/6 ET 0	58.67.454.6xx
GS-ST 7008	N3108-3	80, solid	350	220/275/8 ET 0	58.67.454.6xx
GS-ST 7008	N 4008-4	80, solid	350	220/275/8 ET 0	58.67.461.6 xx
GS-ST 8008-3	-	90, solid	350	220/275/8 ET 0	58.70.001.6xx
GS-ST 8008-3	-	90, solid	350	280/335/10 ET 0	58.70.001.6xx
GS-ST 8008-3	N 3108-3	90, solid	350	220/275/8 ET 0	58.70.454.6xx
GS-ST 8008-3	N 4008-4	90, solid	350	220/275/8 ET 0	58.70.461.6xx
GS-ST 11010-1	FL 4112	120 x 10	600	280/335/10 ET 0	58.88.460.6xx
GS-ST 11010-1	FL 4112	120 x 10	735	280/335/10 ET 0	58.88.460.6xx
GS-ST 11010-1	FL 4112	120 x 10	809	280/335/10 ET 0	58.88.460.6xx
GS-ST 12010	FL 4112	120 x 15	695	280/335/10 ET 0	58.72.460.6xx
GS-ST 11010-1	FL 4118	120 x 10	590	280/335/10 ET 0	58.88.449.6xx
GS-ST 11010-1	FL 4118	120 x 15	590	280/335/10 ET 0	58.88.449.6xx
GS-ST 11010-1	FL 4118	120 x 10	650	280/335/10 ET 0	58.88.449.6xx
GS-ST 11010-1	FL 4118	120 x 15	650	280/335/10 ET 0	58.88.449.6xx
GS-ST 12010	FL 4118	150 x 10	490	280/335/10 ET 0	58.72.449.6xx
GS-ST 12010	FL 4118	150 x 10	650	280/335/10 ET 0	58.72.449.6xx
GS-ST 12010	FL 4118	150 x 10	785	280/335/10 ET 0	58.72.449.6xx

Standard offset: ET 0 mm

BPW braking axle stubs with a wing cam brake (FL) have a hollow axle beam.

Additional types available on request.

# BPW unbraked axles with solid and hollow axle beams.

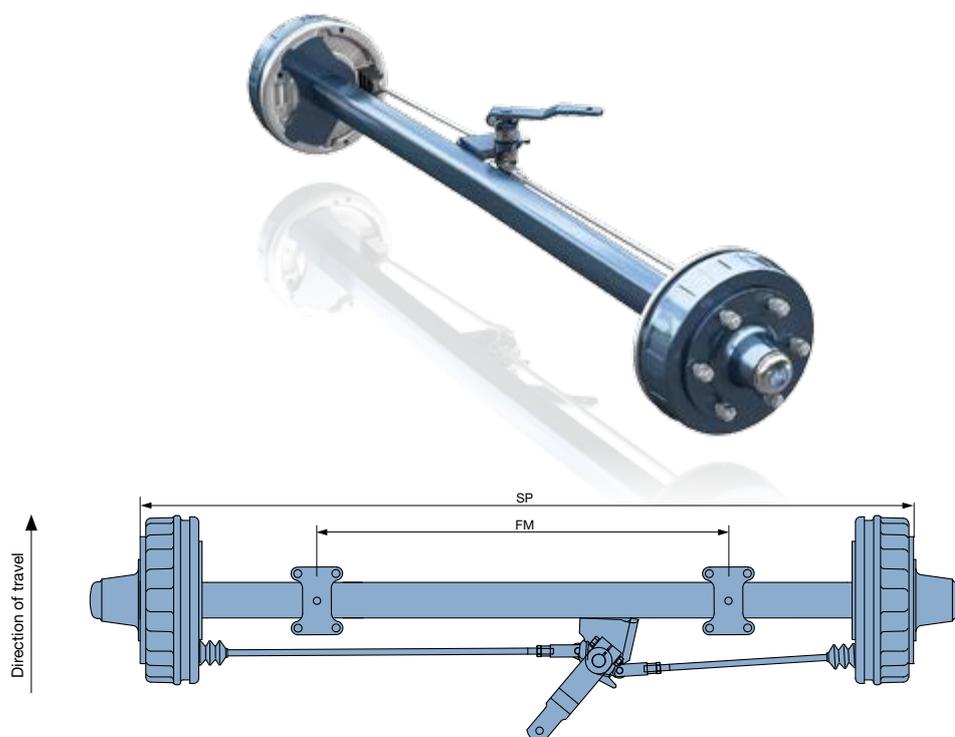


Axle type	Track SP (mm)	Spring centre FM (mm)	Axle square section (mm)	Wheel connection	Code number
GS 4006	1,500	1,000	60, solid	160/205/6 ET 0	55.56.001.6xx
GS 4006	1,600	1,100	60, solid	160/205/6 ET 0	55.56.001.6xx
GS 4006	1,700	1,200	60, solid	160/205/6 ET 0	55.56.001.6xx
GS 4006	1,800	1,300	60, solid	160/205/6 ET 0	55.56.001.6xx
GS 4006	1,900	1,400	60, solid	160/205/6 ET 0	55.56.001.6xx
GS 4006	2,000	1,500	60, solid	160/205/6 ET 0	55.56.001.6xx
GS 5506	1,650	1,150	70, solid	160/205/6 ET 0	55.63.001.6xx
GS 5506	1,800	1,300	70, solid	160/205/6 ET 0	55.63.001.6xx
GS 7008(-1)	1,800	1,200	80, solid	220/275/8 ET 0	55.67.001.6xx
GS 8008-3	1,800	1,200	90, solid	220/275/8 ET 0	55.70.001.6xx
GS 8008-3	1,900	1,300	90, solid	220/275/8 ET 0	55.70.001.6xx
GS 12010	1,900	1,100	150 x 10	280/335/10 ET 0	55.72.001.6xx
GS 12010	2,050	1,250	150 x 10	280/335/10 ET 0	55.72.001.6xx

Standard offset: ET 0 mm  
 Additional types available on request.

# BPW axles with reversing mechanism. Wedge-type brakes, types S 3006-7 and S 3008 RA (3081).

BPW axles with reversing mechanisms are notable for their good braking performance and together with the matching BPW over-run hitches they form a perfect combination for your vehicles.



Axle type	Track SP (mm)	Spring centre FM (mm)	Axle square section (mm)	Wheel brake	Code number
GS 4006	1,360	860	60	S 3006-7 RAZG	55.56.381.6xx
GS 4006	1,500	1,000	60	S 3006-7 RAZG	55.56.381.6xx
GS 4006	1,600	1,100	60	S 3006-7 RAZG	55.56.381.6xx
GS 4006	1,500	1,000	60	S 3008 RA	55.56.356.6xx
GS 5506	1,500	1,000	70	S 3006-7 RAZG	55.63.381.6xx
GS 5506	1,700	1,200	70	S 3006-7 RAZG	55.63.381.6xx
GS 5506	1,800	1,300	70	S 3006-7 RAZG	55.63.381.6xx
GS 5506	2,000	1,500	70	S 3006-7 RAZG	55.63.381.6xx
GS 5506	1,500	1,000	70	S 3008 RA	55.63.356.6xx
GS 5506	1,700	1,200	70	S 3008 RA	55.63.356.6xx
GS 5506	1,800	1,300	70	S 3008 RA	55.63.356.6xx
GS 5506	2,000	1,500	70	S 3008 RA	55.63.356.6xx
GS 7006	1,700	1,200	80	S 3008 RA	55.67.356.6xx
GS 7006	2,050	1,500	80	S 3008 RA	55.67.356.6xx
GS 7008	1,800	1,300	80	S 3008 RA	55.67.356.6xx
GS 7008	2,050	1,500	80	S 3008 RA	55.67.356.6xx
GS 8008	1,800	1,300	90	S 3008 RA	55.70.356.6xx
GS 8008	2,050	1,500	90	S 3008 RA	55.70.356.6xx

Standard offset: ET 0 mm

Mounting plates and spring pads possible on request.

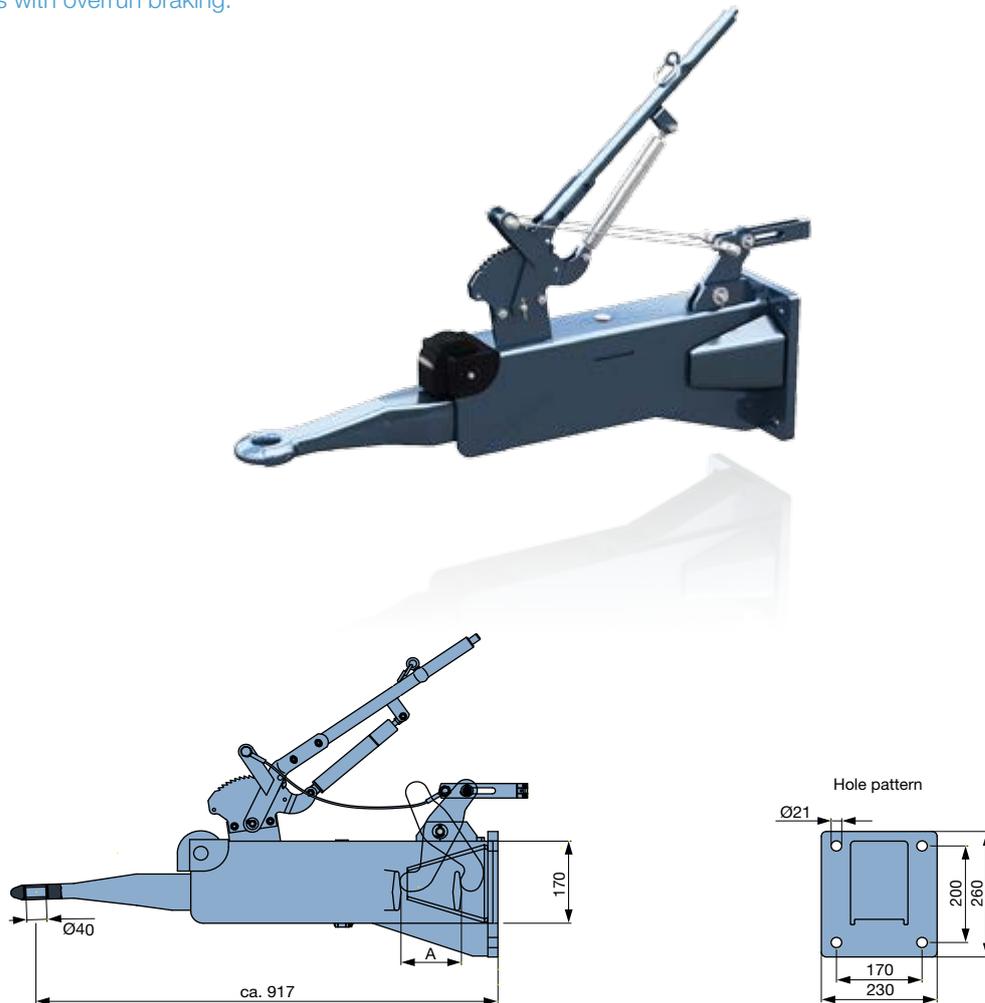
Brake equalisation device either at the front in the centre, at the front 250 mm to the left or at the front 250 mm to the right, as required.

Under certain technical conditions it is possible to equip the axle with Bowden brake cables (RAZG) instead of the brake linkage.

# BPW overrun hitches

## with reversing mechanism AVE 2000.

With its AVE 2000, AVEG 2000 and AVEK 2000 overrun hitches, BPW covers the entire spectrum for single-axle towed vehicles with overrun braking.



Type	Speed		permissible total weight min.-max. (kg)	max. permissible nose weight (kg)	Wheel brake	Overrun travel A (mm)	Bell crank ratio (mm)	Code number
	up to 25 km/h	over 25 km/h						
AO + BHO	•	•	4,920 - 8,000	1,000	S 3006-7 RA	120	120/100	48.69.533.062
AP	•	•	5,557 - 8,000	1,600	S 3008 RA	100	120/93	48.69.533.006
AP + BHP	•	•	4,920 - 8,000	1,000	S 3006-7 RA	120	120/100	48.69.533.040
AP + BHP	•	•	4,920 - 8,000	1,000	S 3008 RA	100	120/93	48.69.533.009
AV + BHV	•	•	4,920 - 8,000	1,000	S 3008 RA	100	120/93	48.69.533.013
AV + BHV	•	•	4,920 - 8,000	1,000	S 3006-7 RA	120	120/100	48.69.533.041
BNO	•	•	3,242 - 5,600	840	S 3006-7 RA	120	120/100	48.63.533.028
BNP	•	•	3,242 - 5,600	840	S 3008 RA	100	120/93	48.63.533.014
BNP	•	•	3,242 - 5,600	840	S 3006-7 RA	120	120/100	48.63.533.020
BNV	•	•	3,242 - 5,600	840	S 3006-7 RA	120	120/100	48,63,533,021

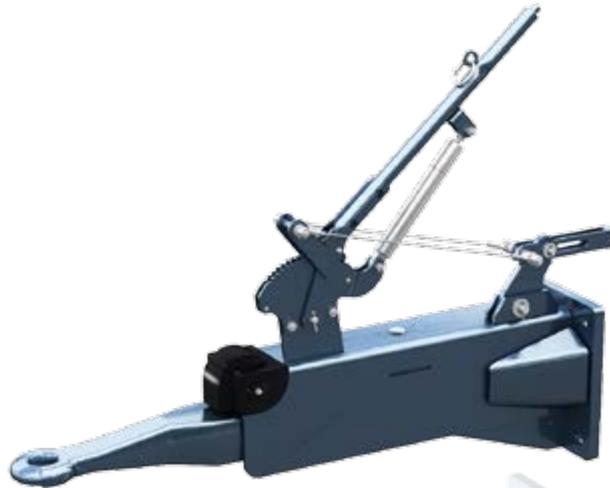
Additional types available on request.

Other versions can also be supplied without a reversing mechanism for replacement purposes.

# BPW overrun hitches

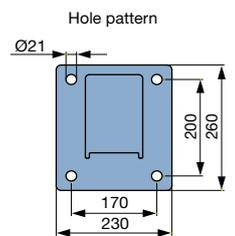
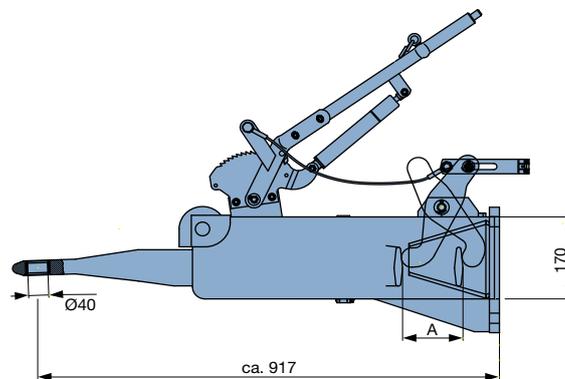
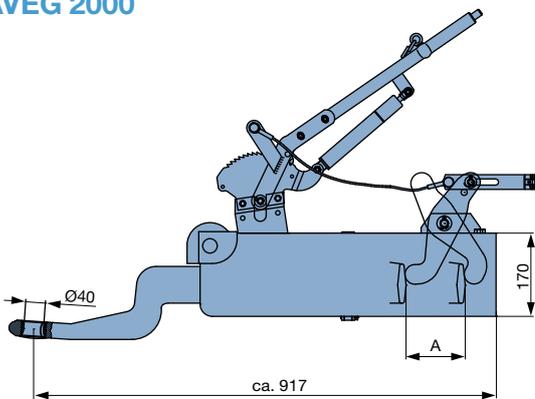
## with reversing mechanism AVEG 2000 / AVEK 2000.

The AVEG 2000 is a control device with cranked BPW towing eye. The control device AVEK 2000 is designed for vehicles with a reduced gross vehicle weight.



**AVEG 2000**

**AVEK 2000**



**AVEG 2000**

Type	Speed		min. - max. permissible gross weight (kg)	max. permissible nose weight (kg)	Wheel brake	Overrun travel A (mm)	Bell crank ratio (mm)	Code number
	up to 25 km/h	over 25 km/h						
A2	•	•	1,840 - 3,620	500	S 3006-7 RA	120	120/100	48.68.533.001
B	•	•	2,310 - 4,630	500	S 3006-7 RA	120	120/100	48.69.533.300

**AVEK 2000**

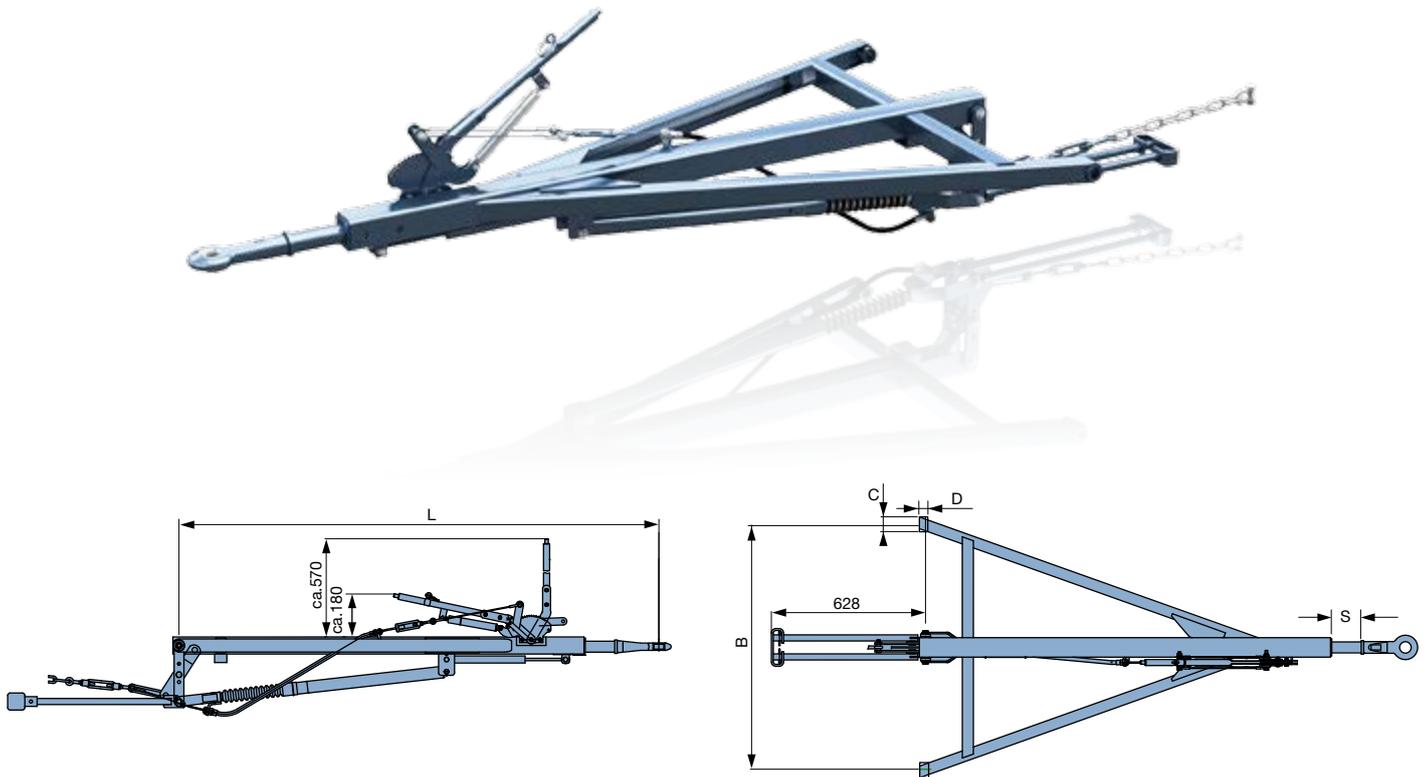
NO + HO	•	•	6,348 - 8,000	1,200	S 3006-7 RA	120	120/75+100	48.69.533.136
NP	•	•	5,046 - 8,000	1,000	S 3006-7 RA	120	120/100	48.69.533.134

Additional types available on request.

# BPW overrun hitches

## with reversing mechanism AM 2000.

The BPW AM 2000 overrun hitch is particularly suitable for twin-axle vehicles. All AM 2000 units are equipped with a height-adjustment device (Klemmfix). This makes coupling and uncoupling the vehicles significantly easier.



Type	permissible axle load (kg) min. - max.		Wheel brake	Overrun travel					Bell crank ratio (mm)	Code number		
	up to 25 km/h	over 25 km/h		S (mm)	L (mm)	B (mm)	C (mm)	D (mm)				
AK 12/BK 12	3,264 - 8,000	5,175 - 8,000	S 3006-7 RA	120	1,960	750	60	24	120/100	48.69.833.040		
			S 3008 RA			860	60	24	120/75	48.69.833.010		
			S 3006-7 RA					1,000	60	24	120/100	48.69.833.041
			S 3008 RA					1,000	60	24	120/75	48.69.833.011
			S 3008 RA					1,000	70	26	120/75	48.69.833.012
			S 3006-7 RA					1,100	70	26	120/100	48.69.833.042
			S 3008 RA					1,100	70	26	120/75	48.69.833.013
			S 3006-7 RA					1,100	70	26	120/100	48.69.833.043
			S 3006-7 RA					1,100	80	28	120/100	48.69.833.078
			S 3008 RA					1,200	70	26	120/75	48.69.833.014
			S 3006-7 RA					1,200	70	26	120/100	48.69.833.089



More Information

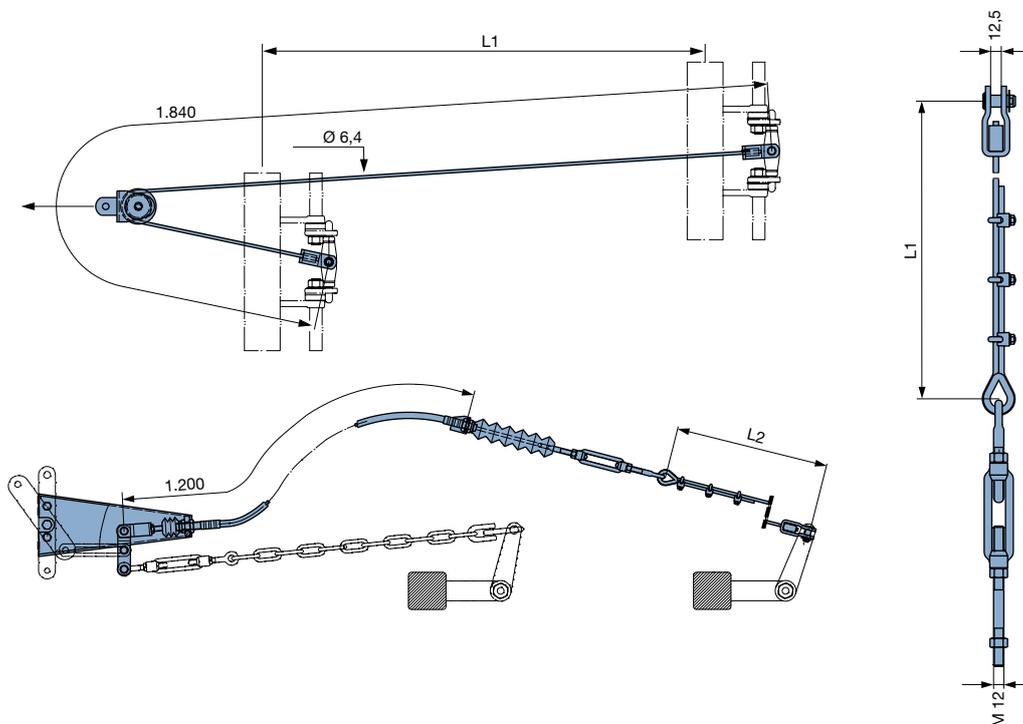
▶ [www.bpw.de/en/drawbar\\_assy](http://www.bpw.de/en/drawbar_assy)

# BPW wheel brakes for trailers with overrun braking.

Axle type	Wheel brake size (mm)	Test report No.	Type	PE test load per wheel brake			Tyre radius (mm)	
				up to 25 km/h	up to 40 km/h	up to 60 km/h	min.	max.
S3006-7	300 x 60	F 1330	RASK	3,000	2,000	-	330	480
S3006-7	300 x 60	F 1330	RASK	-	-	1,500	310	440
S3006-7	300 x 60	F 1331	RASK	3,000	-	-	330	480
S3006-7	300 x 60	F 1331	RASK	-	-	1,500	310	440
S3008-RA	300 x 80	M 1556	B Drum hub	4,000	-	2,000	360	480
S3008-RA	300 x 80	M 1556	B Drum hub	-	-	-	360	420
S3008-RA	300 x 80	M 1556	CI Flange mounted	4,000	-	-	480	580
S3008-RA	300 x 80	M 1556	CI Flange mounted	-	-	-	480	620
S3008-RA	300 x 80	M 1556	D Flange mounted	4,000	-	2,000	360	480
S3008-RA	300 x 80	M 1556	D Flange mounted	-	-	-	360	420

## BPW transmission devices.

Transmission devices especially matched to the vehicle in question, in conjunction with BPW overrun hitches and BPW axles with reversing mechanism, guarantee optimum braking results.



Axle type	Brake operation	L1 (mm)	L2 (mm)	Code number
AVE 2000	Tandem	990		05.085.50.02.0 + 05.089.61.17.0
AM 2000	4 wheel	1,200	3,000	05.085.50.01.0 / 05.085.51.25.0
AVE 2000	2 wheel	1,850		05.089.61.17.0

Additional types available on request.







# BPW hydro-pneumatic suspension systems GSOH.

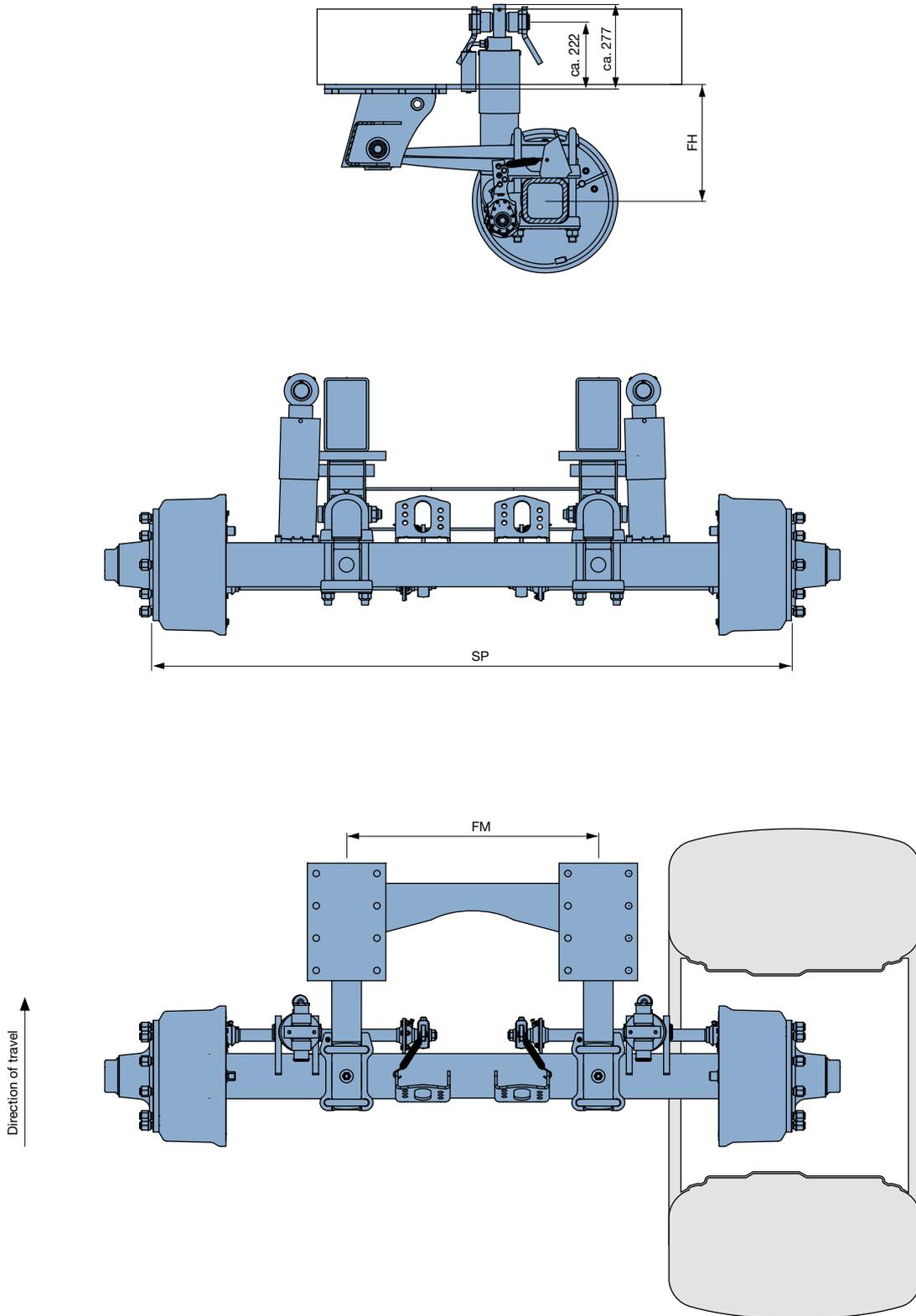
A running gear system is only ever as good as its suspension. In order to guarantee the highest possible level of driving safety, BPW running gear systems are individually designed for the vehicle in question, taking into account its maximum permissible gross weight, its tyres and its area of application.

For vehicles with special requirements in terms of roll stability, driving safety and comfort, BPW's product range includes running gear systems with hydro-pneumatic suspension. BPW suspension units with hydro-pneumatic suspension are notable for their impressive equalisation (approx. 270 mm) between the axles with the same axle load distribution. This ensures extremely safe and comfortable driving, particularly in the case of trailers that may display critical handling behaviour as a result of their high centre of gravity.



Suspension unit type	Suspension unit load (kg)	Speed (km/h)	Track SP (mm)	Ride height FH	Wheel brake	Code number
GSOH 11010-1	9,000	40	1,950	371	FL 4112	56.88.08.xxxx
		60	2,050			
			2,150			
			2,225			
GSOHLA 11010-1	9,000	40	1,950	371	FL 4112	56.88.08.xxxx
		60	2,050			
			2,150			
			2,225			
GSOH 12010	11,000	40	2,050	371	FL 4118	56.72.08.xxxx
		60	2,150			
			2,225			
GSHOHL 12010	11,000	40	2,050	365	FL 4118	56.72.08.xxxx
		60	2,150			
			2,225			

The following standard spring centres (FM in mm) can be achieved, depending on the tyres: 750, 850, 950  
Additional types available on request.



# BPW spring suspension units GSVB/GSVBLL-V.

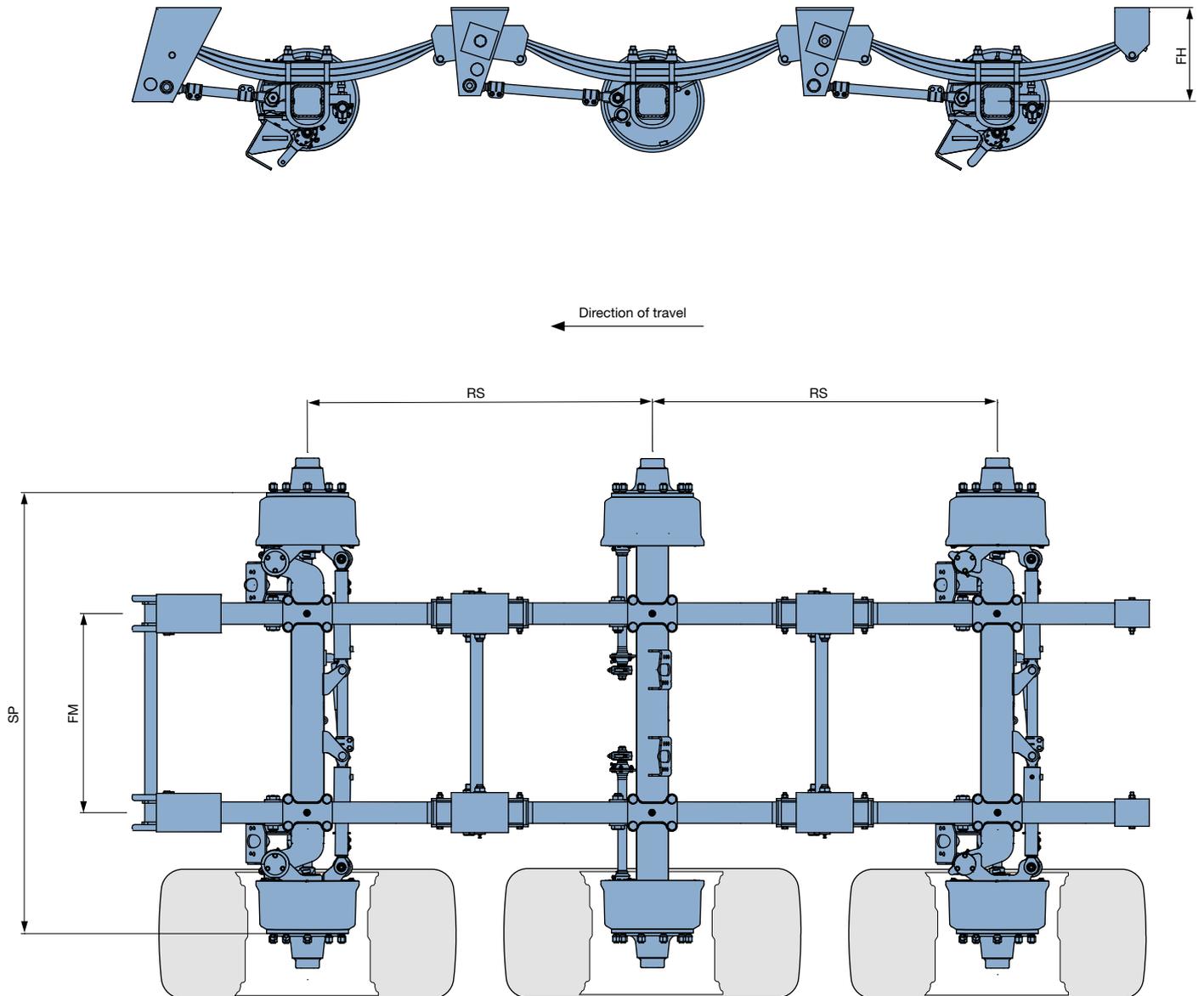
BPW spring suspension units are notable for their excellent suspension characteristics in on-road and gentle off-road usage. Equalisation between the axles amount to approx. 60 mm and the adjustable torque arm (in the case of type V) guarantees easy track adjustment of the axles on the vehicle.



Suspension unit type	Suspension unit load (kg)		Speed (km/h)	Track SP (mm)	Wheelbase RS (mm)	Ride height FH (mm)	Wheel brake	Code number
	Tandem	Tridem						
GSVB 2/7008 (-1)	12,000		40	1,700 1,850	1,200	377	N 3108-3	56.67.04.xxxx
GSVB 2/8008-3 GSVBLA 2/8008-3	14,000		40 60	1,850 1,950	1,380 1,600	298 329	N 4008-4	56.70.04.xxxx
GSVB 2/11010-1 V	18,000		40 60	2,050 2,150 2,225	1,380 1,600	338 386	FL 4112	56.88.04.xxxx
GSVBLA 2/11010-1 V 3/11010-1 V	18,000	27,000	40 60	2,050 2,150 2,225	1,380 1,600	356 386	FL 4112	56.88.04.xxxx
GSVB 2/12010 V	22,000 24,000		40 60	2,050 2,150 2,225	1,600 1,850	440	FL 4118	56.72.04.xxxx
GSVBLL 2/12010 V 3/12010 V	24,000 22,000	36,000 33,000	40 60	2,050 2,150 2,225	1,600 1,850	434 444	FL 4118	56.72.04.xxxx

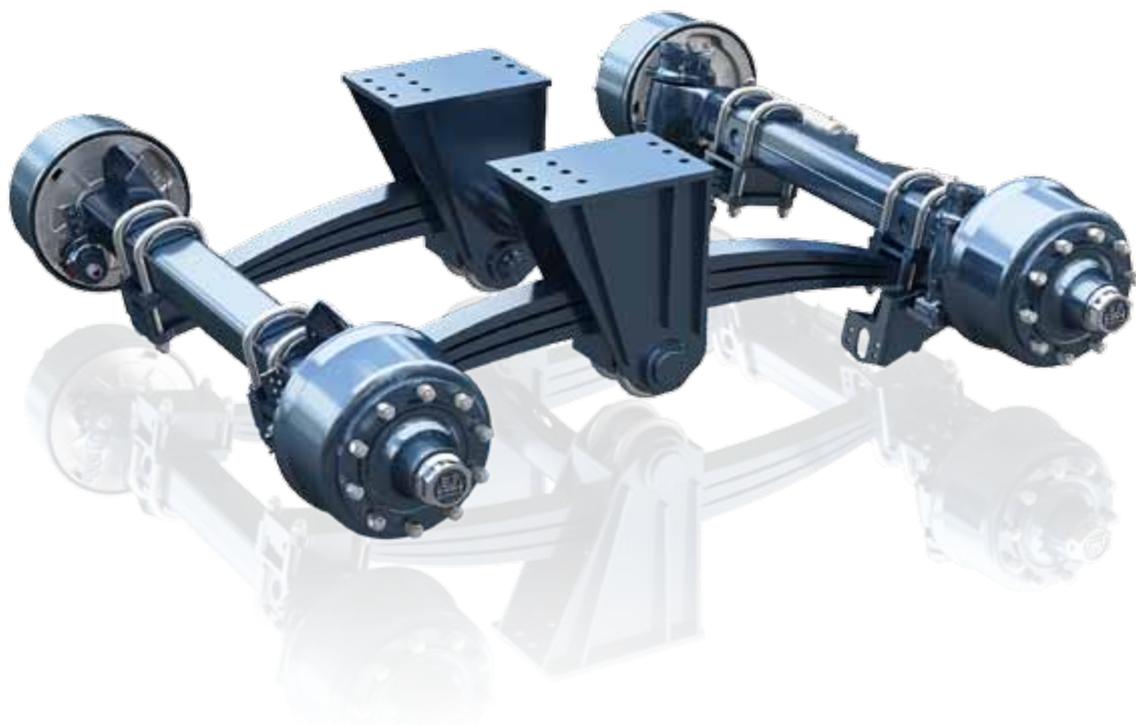
The following standard spring centres (FM in mm) can be achieved, depending on the tyres: 830, 900, 930, 950, 1,030, 1,100  
Additional types available on request.

Spring suspension unit GSVBLL-V



# BPW tandem axle units GSBW.

The BPW bogie suspension unit can be used for a wide range of vehicle types, such as tankers, loaders, tippers, transport trailers etc. Thanks to the large equalisation between the axles amounting to 300 mm, the bogie suspension unit is very suitable for off-road use. But this unit is also impressive on the road for its very good suspension properties. When the axles are equipped with ABS and automatic slack adjustment, speeds of up to 65 km/h are possible.

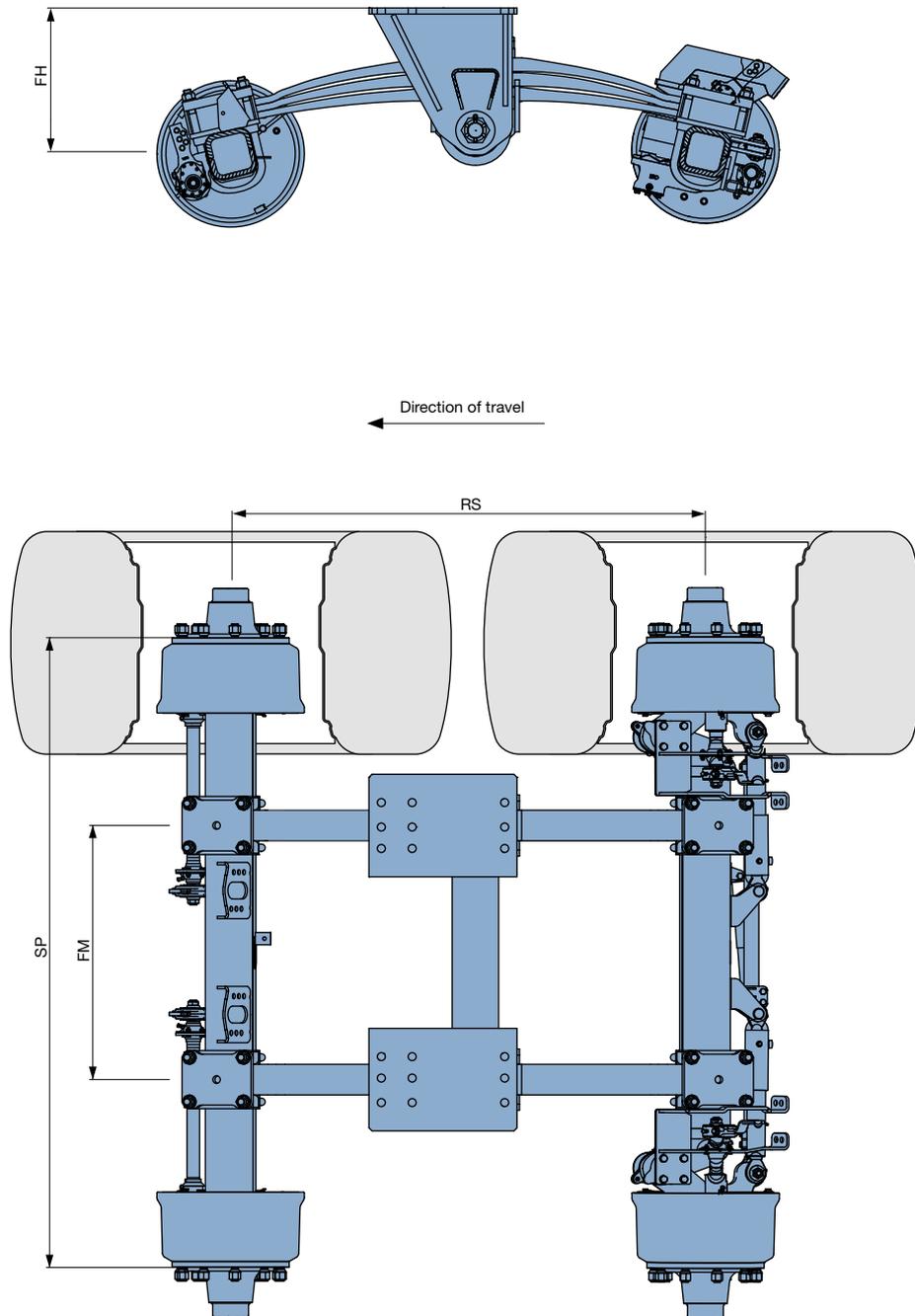


Suspension unit type	Suspension unit load (kg)	Speed (km/h)	Track SP (mm)	Wheelbase RS (mm)	Ride height FH (mm)	Wheel brake	Code number																																																																					
GSBW 2/8008-3	14,000	40	1,850	1,600	445	N4008-4	56.70.05.xxxx																																																																					
GSBW 2/8010-3		60	2,050					GSBWLA 2/8008-3	14,000	40	1,850	1,600	445	N4008-4	56.70.05.xxxx	GSBWLA 2/8010-3	60	2,050	GSBW 2/11010-1	18,000	60	1,950	1,450	437	FL 4112	56.88.05.xxxx		20,000	40	2,000	1,600	446	GSBW 2/12010	24,000	40	1,950	1,600	478	FL 4118	56.72.05.xxxx	22,000	60	2,050	1,450	468	GSBWLA 2/11010-1	18,000	60	1,950	1,450	447	FL 4112	56.88.05.xxxx	2,000	1,600	456	2,050	1,900*	467	2,225		GSBWLL 2/12010	26,000	40	2,050	1,450	478	FL 4118	56.72.05.xxxx	GSBWLL 2/12010	24,000	40	2,150	1,600	487	GSBWLL 2/12010
GSBWLA 2/8008-3	14,000	40	1,850	1,600	445	N4008-4	56.70.05.xxxx																																																																					
GSBWLA 2/8010-3		60	2,050					GSBW 2/11010-1	18,000	60	1,950	1,450	437	FL 4112	56.88.05.xxxx		20,000	40	2,000	1,600	446	GSBW 2/12010	24,000	40	1,950	1,600	478	FL 4118	56.72.05.xxxx	22,000	60	2,050	1,450	468	GSBWLA 2/11010-1	18,000	60	1,950	1,450	447	FL 4112	56.88.05.xxxx	2,000	1,600	456		2,050	1,900*	467	2,225				GSBWLL 2/12010	26,000	40	2,050	1,450	478	FL 4118	56.72.05.xxxx	GSBWLL 2/12010	24,000	40	2,150	1,600	487			GSBWLL 2/12010	22,000	60	2,225	1,900*	515	
GSBW 2/11010-1	18,000	60	1,950	1,450	437	FL 4112	56.88.05.xxxx																																																																					
	20,000	40	2,000	1,600	446			GSBW 2/12010	24,000	40	1,950	1,600	478	FL 4118	56.72.05.xxxx	22,000	60	2,050	1,450	468	GSBWLA 2/11010-1	18,000	60	1,950	1,450	447	FL 4112	56.88.05.xxxx	2,000	1,600	456	2,050	1,900*	467		2,225		GSBWLL 2/12010	26,000	40			2,050	1,450	478	FL 4118	56.72.05.xxxx	GSBWLL 2/12010	24,000	40	2,150	1,600	487	GSBWLL 2/12010	22,000	60	2,225	1,900*	515																	
GSBW 2/12010	24,000	40	1,950	1,600	478	FL 4118	56.72.05.xxxx																																																																					
	22,000	60	2,050	1,450	468			GSBWLA 2/11010-1	18,000	60	1,950	1,450	447	FL 4112	56.88.05.xxxx	2,000	1,600	456	2,050	1,900*		467	2,225		GSBWLL 2/12010	26,000			40	2,050	1,450	478	FL 4118	56.72.05.xxxx	GSBWLL 2/12010	24,000	40	2,150	1,600	487	GSBWLL 2/12010	22,000	60	2,225	1,900*			515																												
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GSBWLL 2/12010	22,000	60	2,225	1,900*	515																																																																							

The following standard spring centres (FM in mm) can be achieved, depending on the tyres and the track dimension: 830, 930, 1,030  
Suspension units with axles above and below the spring are available. Additional types available on request.

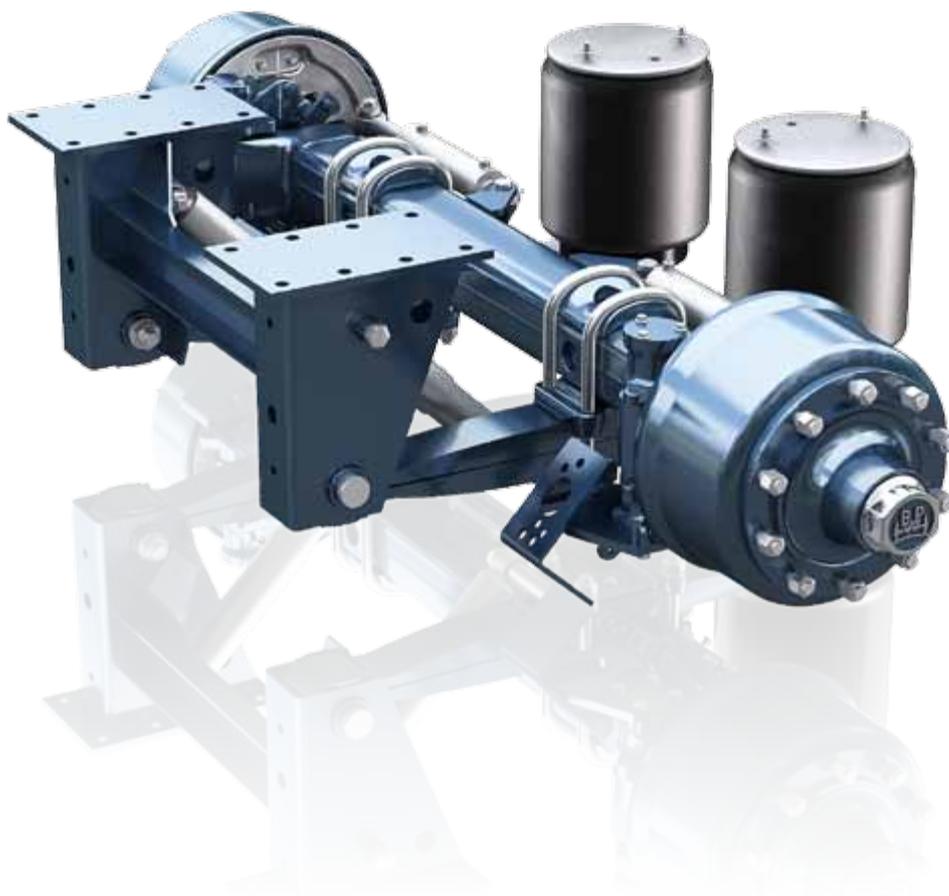
\*Wheel base 1900 mm only on request.

Tandem axle unit GSBWLL 2/12010



# BPW air suspension units GSSLU/GSSLO.

BPW air suspension units guarantee extremely good ride quality both on and off-road, thanks to the large suspension travel and the high degree of equalisation between the axles. BPW air suspension contributes to the protection of the chassis, the body and the load.

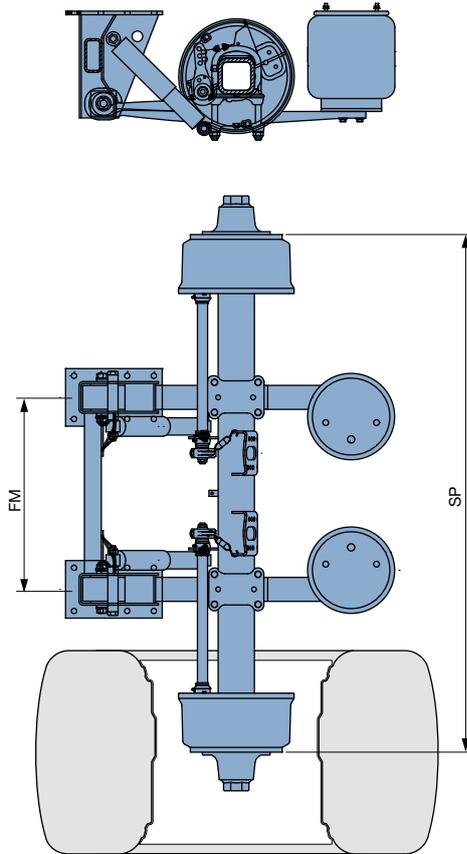


## BPW air suspension units GSSLU

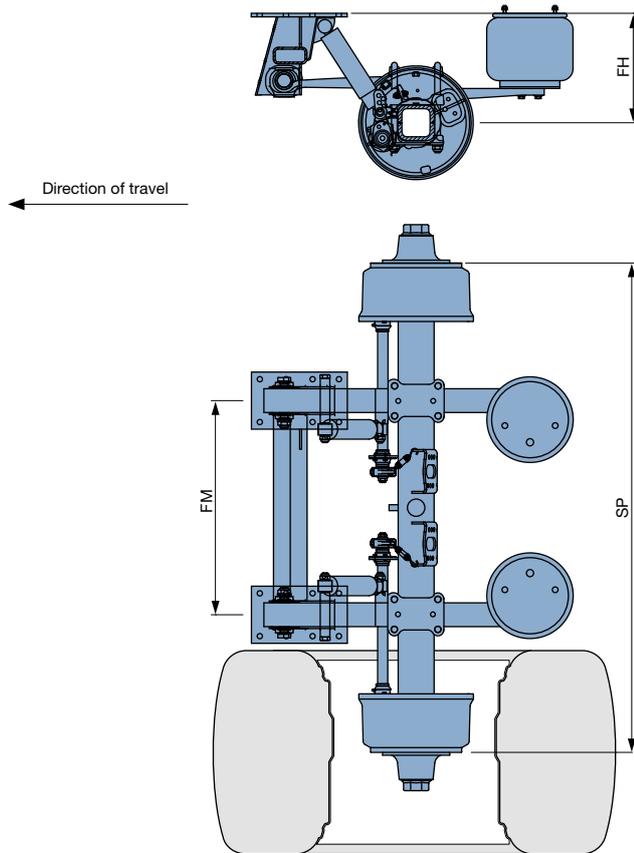
Suspension unit type	Suspension unit load (kg)	Speed (km/h)	Track SP (mm)	Ride height FH (mm)	Wheel brake	Code number
GSSLU 11010-1	9,000	40	1,950	270 - 330	FL 4112	56.88.01.xxxx
		60	2,050			
			2,150			
GSSLULA 11010-1	9,000	40	1,950	270 - 330	FL 4112	56.88.01.xxxx
		60	2,050			
			2,150			
GSSLU 12010	11,000	40	2,050	275 - 370	FL 4118	56.72.01.xxxx
		60	2,150			
			2,225			
GSHSLULL 12010	11,000	40	2,050	275 - 370	FL 4118	56.72.01.xxxx
		60	2,150			
			2,225			

The following standard spring centres (FM in mm) can be achieved, depending on the tyres: 800, 900, 1,100  
Additional types available on request.

BPW air suspension unit GSSLU



BPW air suspension unit GSSLO



BPW air suspension units GSSLO

Suspension unit type	Suspension unit load (kg)	Speed (km/h)	Track SP (mm)	Ride height FH (mm)	Wheel brake	Code number
GSSLO 11010-1	9,000	40	1,950	470 - 520	FL 4112	56.88.01.xxxx
		60	2,050			
GSSLOLA 11010-1	9,000	40	1,950	470 - 520	FL 4112	56.88.01.xxxx
		60	2,050			
GSSLO 12010	11,000	40	2,050	490 - 540	FL 4118	56.72.01.xxxx
		60	2,150			
			2,225			
GSHSLOLL 12010	11,000	40	2,050	490 - 540	FL 4118	56.72.01.xxxx
		60	2,150			
			2,225			

The following standard spring centres (FM in mm) can be achieved, depending on the tyres: 800, 900, 1,000, 1,100  
Additional types available on request.



More Information

▶ BPW airbags (p. 72-73)

▶ Airbag pressure chart (p. 74-75)

# BPW pendle axle units GSSTP/GSSTPLS.

The pendle axle units are characterised by very generous, laterally independent equalisation. They also guarantee even ride height, even under differing load conditions. Pendle axle units are suitable for both on and off-road use.

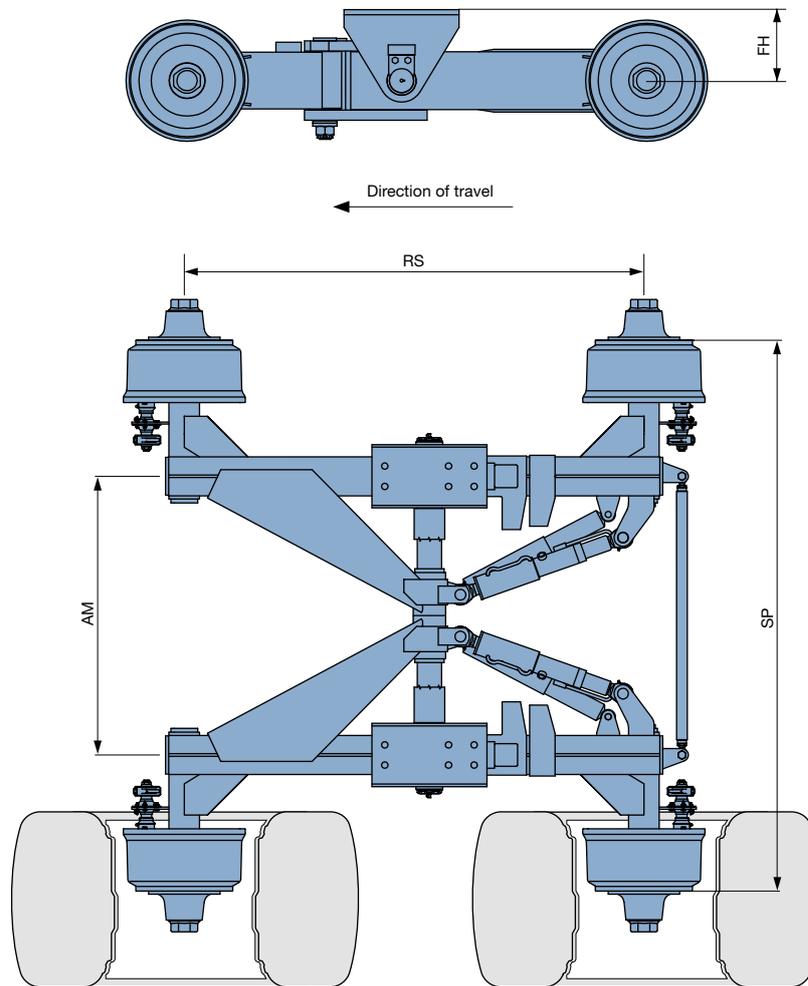


## BPW pendle axle units GSSTP

Suspension unit type	Suspension unit load (kg)	Speed (km/h)	Track SP (mm)	Ride height FH (mm)	Support centre AM (mm)	Wheelbase RS (mm)	Wheel brake	Code number
GSSTP 2/8008-3 GSSTP 2/8010-3	14,000	40	1,950 2,050	280	1,100	1,350 1,500	N 4008-4	56.70.06.xxxx
GSSTP 2/11010-1	18,000	40	2,000 2,050 2,225	280	1,050 1,200	1,300 1,500	FL 4112	56.88.06.xxxx
GSSTP 2/12010	20,000	40	2,050 2,225	280	932 950	1,500	FL 4118	56.72.06.xxxx

Additional types available on request.

## BPW pendle axle units GSSTPLS



## BPW pendle axle units GSSTPLS

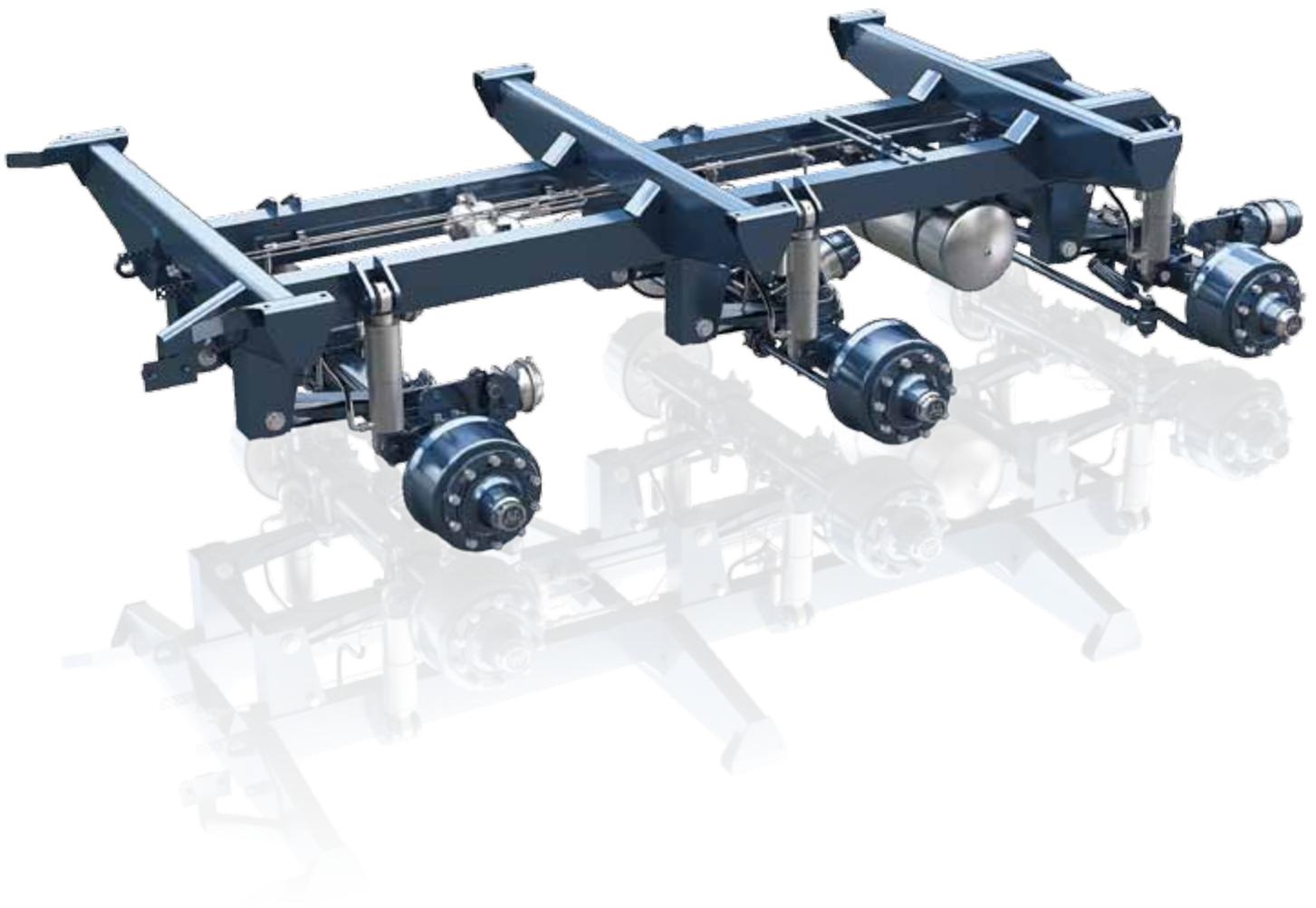
Suspension unit type	Suspension unit load (kg)	Speed (km/h)	Track SP (mm)	Ride height FH (mm)	Support centre AM (mm)	Wheelbase RS (mm)	Wheel brake	Code number
GSSTPLS 2/8008-3	14,000	40	1,950 2,000	280	1,100	1,350	N 4008-4	56.70.06.xxxx
GSSTPLS 2/11010-1	18,000	40	2,150	280	1,100	1,550	FL 4112	56.88.06.xxxx
GSSTPLS 2/12010	22,000	40	2,150 2,250	280	1,100	1,800	FL 4118	56.72.06.xxxx

Additional types available on request.

# BPW complete running gear systems.

## Suspension unit with brake system, suspension and frame.

In addition to axles and suspension units, BPW also offers fully equipped running gear systems. This comprises the entire brake system including brake cylinders, trailer brake valves, load-sensing valves and all the pipes and hoses for the components, as well as the fitted control components of air and hydro-pneumatic suspension units. BPW is also in a position to provide its suspension units with complete subframes, so all the vehicle manufacturer has to do is to fit the vehicle frame on top of them. This considerably reduces the actual production time for the vehicles.



### More Information

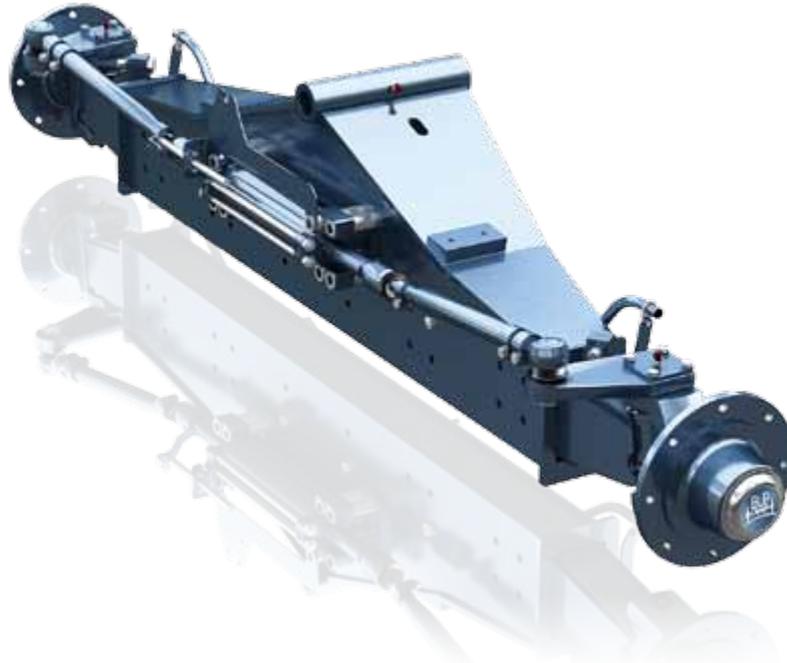
- ▶ BPW brake cylinders (p. 44-45)
- ▶ BPW airbags (p. 72-73)

- ▶ BPW axle lift (p. 76)

# Customer-specific solutions. BPW steering axle for forage harvesters.

Over 100 years of experience in the production of axles guarantee a high level of competence in the development of individual solutions for your vehicle. In addition to the series production of trailer axles, BPW also produces steering rear axles for forage harvesters, axles and suspension units in oversize widths for the Australian market, special axles for agricultural machinery, etc.

## Special steering axle



## BPW axle with adjustable track.

As a result of the different row spacing for different types of cultivation, multiple track widths are needed particularly in the case of agricultural sprayers. In this case the BPW axle with adjustable track is the ideal solution to meet these requirements.

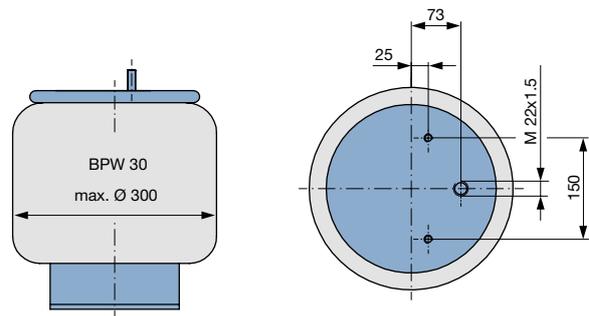
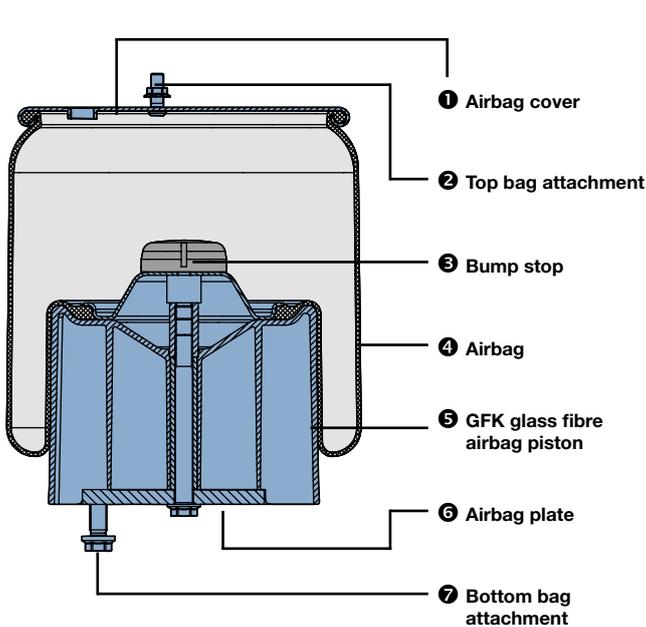
## Axle with adjustable track



# Withstand any pressure.

## With airbags from BPW.

BPW airbags are firmly rolled into the airbag top plate ❶ and are clinched onto the clamping plate at the bottom by vulcanisation. The top airbag cover ❶ is either bolted directly onto the frame, or else a plate or bracket is welded onto the vehicle frame to attach the airbag, depending on the airbag type. The airbag cover is attached using two M12 self-locking nuts. The lower airbag piston ❷ is bolted to the trailing arm by means of two M 16 self-locking nuts.



### Versions a:

**BPW 30** For stroke 200 mm at axle centre  
**BPW 30 K** For stroke 180 mm at axle centre

**Diameter** Max. 300 mm at approx. 5 bar  
**Specific bag pressure** 0.00023 bar/N (at ride height)  
**Bellows offset V** = 0 mm, 20 mm, 60 mm (series)

### Stop

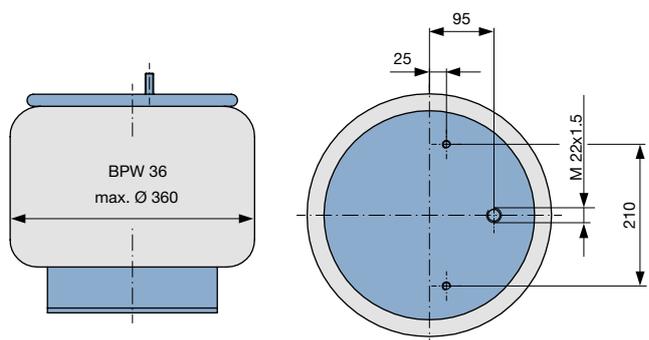
The upward suspension travel is restricted by a bump stop ❸ inside the airbag ❹. The downward travel must be restricted under certain conditions.

### Air bag type 36 or 36-1

Stroke limiting is required in vehicles with a lifting and lowering device and type 36 or 36-1 airbags.

### Air bag type 30 K, 30 or 36 K

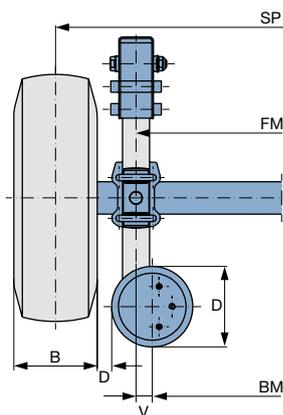
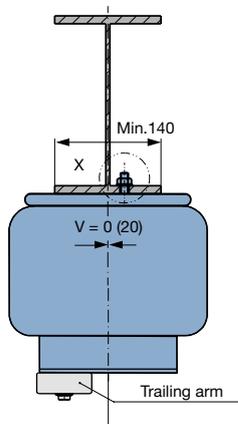
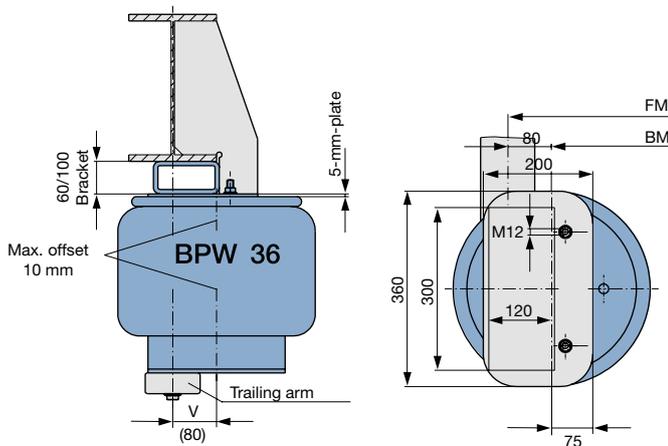
As a rule, no stroke limiting is required when type 30 K, 30 or 36 K airbags are used.



### Versions b:

**BPW 36** For stroke 200 mm at axle centre  
**BPW 36-1** For stroke up to 340 mm at axle centre  
**BPW 36 K** For stroke 180 mm at axle centre

**Diameter** Max. 360 mm at approx. 5 bar  
**Specific bag pressure** 0.000156 bar/N (at ride height)  
**Bellows offset V** = 45 mm, 80 mm (series)



### With bracket

The maximum lateral offset between the top and bottom attachment must not exceed 10 mm. The top and bottom airbag attachments must not be installed with any rotational misalignment.

### General

Flexural forces are created in airbags with an offset. These forces must be absorbed by gusset plates welded onto the frame. Checks must be carried out to ensure the necessary clearance for the airbag when defining the design and the airbag offset.

SP = Track on the ground

FM = Spring centre

BM = Airbag centre

D = Airbag diameter

(diameter 300 in the case of BPW 30, 30 K)

(diameter 360 in the case of BPW 36, 36-1, 36 K)

V = Airbag offset (60 mm or 80 mm depending on version)

B = Tyre width (take account of rim width)

MA = Centre distance of the rim

### Note

The clearance between the airbag and tyres or the brake cylinder with the maximum airbag diameter should be at least 30 mm.



### More Information

▶ BPW installation instructions for air suspension systems (BPW-EA-Luft...)

# Airbag pressure charts for BPW airbags.

## Examples: Types 30/30 K and 36.

Luftfederbälge-Typ:  
air suspension bellows type:  
cousin d'air type:

BPW 30  
Ø 300

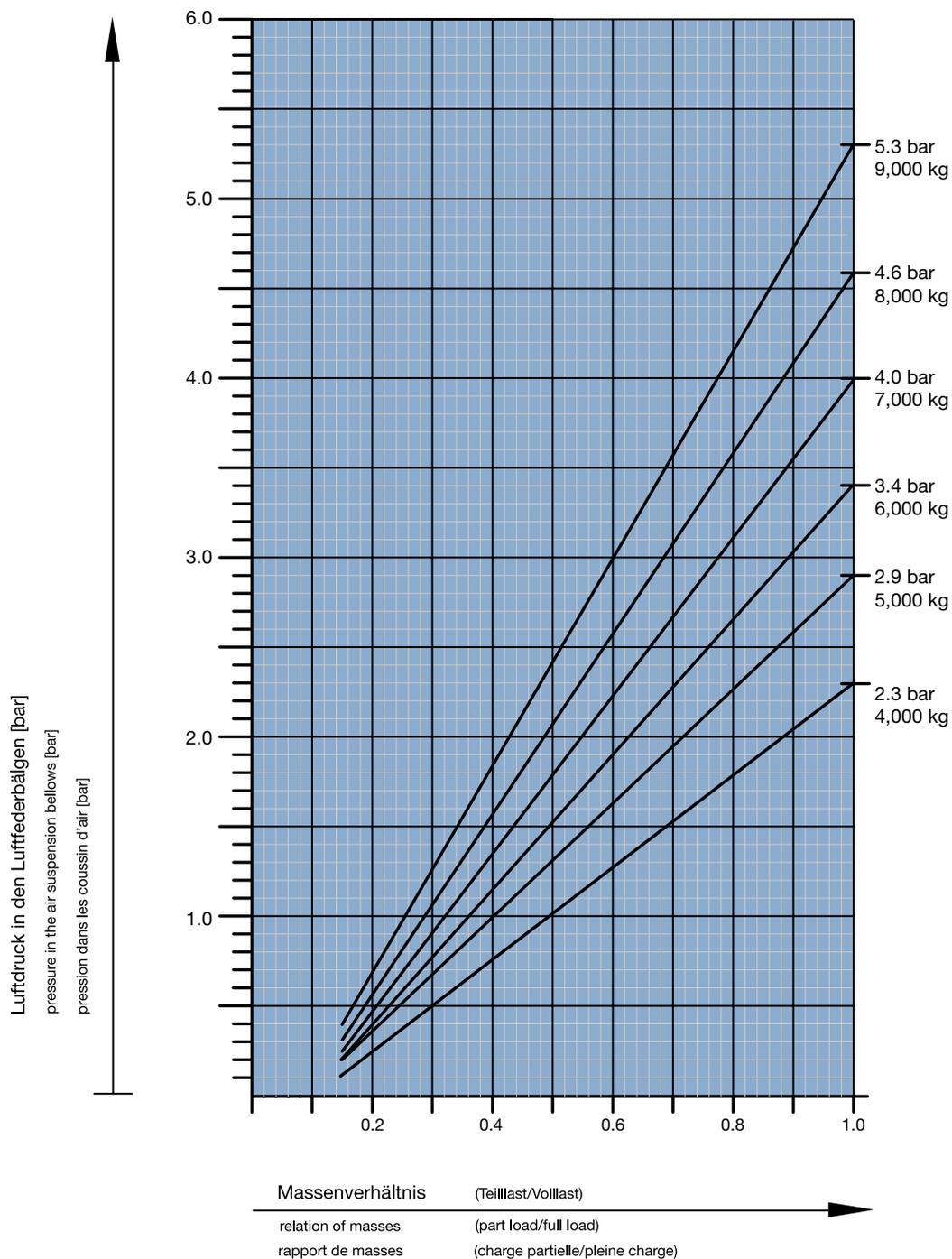
L1 = 500  
L2 = 405

→  $i = 0.552$

Die angegebenen Werte sind Richtwerte und müssen ggf. korrigiert werden!

The calculated values are approximate values only and if necessary must be corrected!

Les valeurs calculées sont données à titre indicatif et peuvent faire l'objet d'une correction!





Luftfederbälge-Typ:  
air suspension bellows type:  
cousin d'air type:

BPW 36  
Ø 360

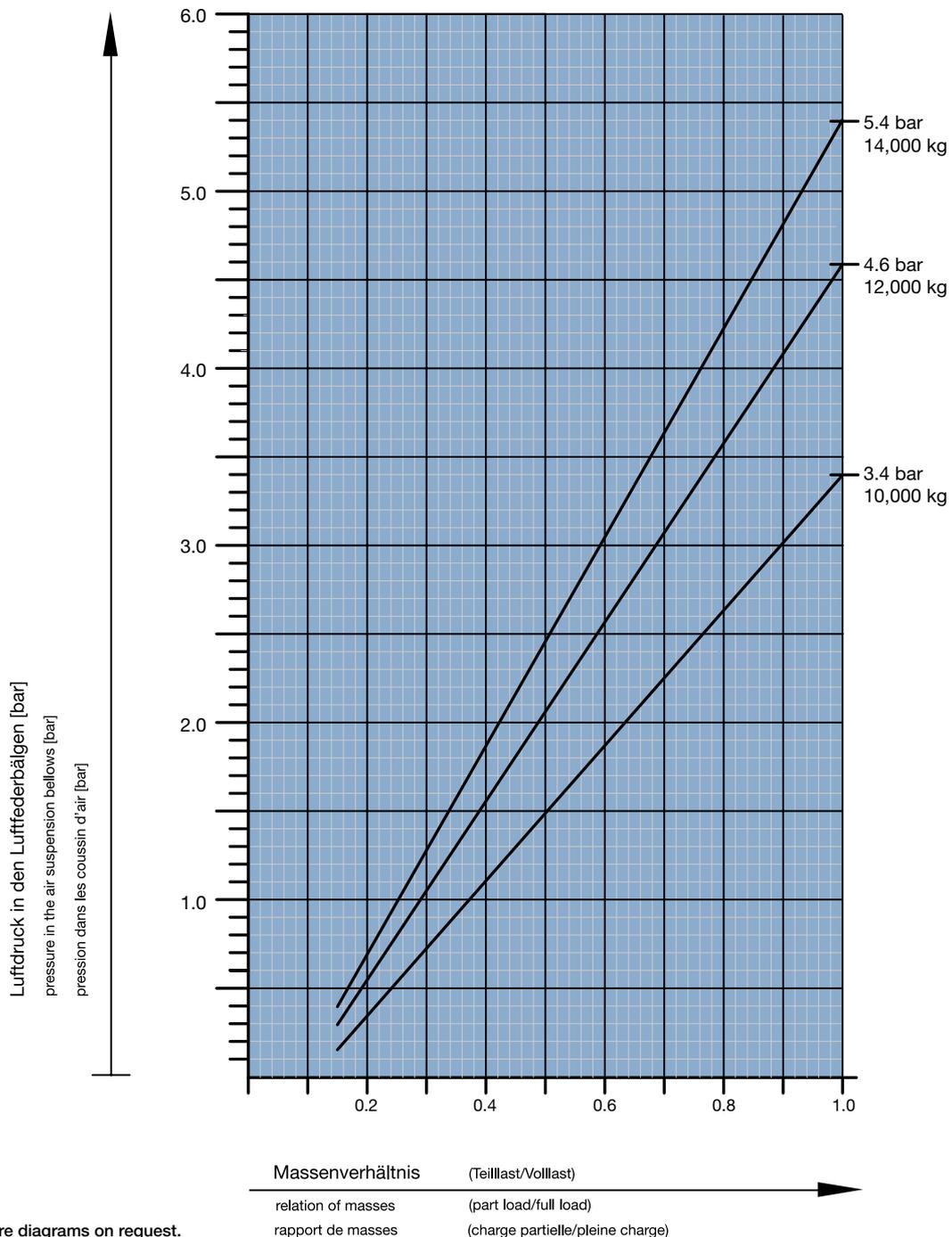
L1 = 550  
L2 = 475

→ i = 0.537

Die angegebenen Werte sind Richtwerte und müssen ggf. korrigiert werden!

The calculated values are approximate values only and if necessary must be corrected!

Les valeurs calculées sont données à titre indicatif et peuvent faire l'objet d'une correction !

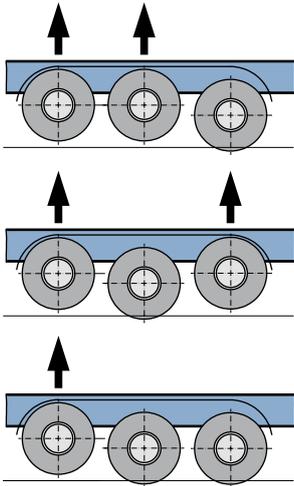


More airbag pressure diagrams on request.

# Lifting axles and lowering costs.

## With BPW axle lift devices.

Axle lift devices reduce tyre wear when unladen or carrying only a light load, and also save fuel and hence cash over many kilometres thanks to reduced rolling resistance. Air suspension axles from BPW can be equipped with an axle lift device. One axle can be lifted in the case of tandem axle units, and a maximum of two axles can be lifted on tri-axle units.

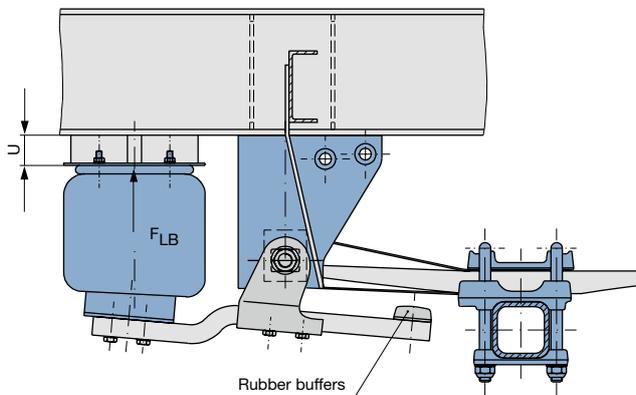


### With steering axle

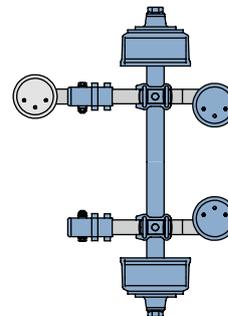
A „rigid axle/steering axle“ ratio of 1:1 is permitted in the case of vehicles with BPW series LA, LL or L self-steering axles. As a result, one rigid axle can also be lifted in tri-axle suspension systems. It is advantageous to lift the first suspension axle since this gives greater ground clearance (body lean) and a longer wheelbase – thereby achieving a more stable driving behaviour. Note: Statutory turning circle requirements must be adhered to!

### Control

Lifting axles are controlled either electro-pneumatically (electric switch), with manual pneumatic control (hand-operated valve) or automatically (compact valve). The overload protection required by law is provided for in the BPW installation kit.



Lateral arrangement



Two lateral arranged lifts are required for use with agricultural axles.

The lateral arrangement is suitable for lifting the first suspension axle when the axle weights are relatively high or in the case of long-travel suspension units. The lift arm is mounted on the front air suspension hanger bracket below the trailing arm. The lift bag is located centrally on the lift arm ( $V = 0 \text{ mm}$ ) and is attached below the longitudinal member of the vehicle. No additional crossmembers are required. The top lift bag cover can also be offset  $\pm 20 \text{ mm}$  to either side.

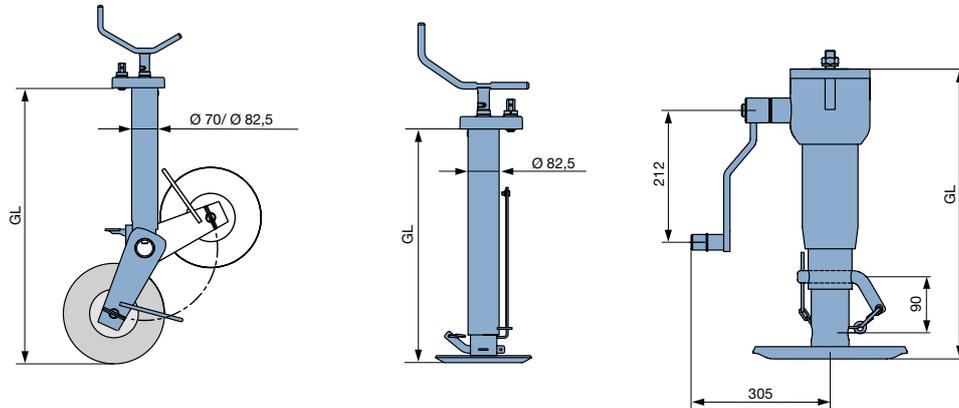


### More Information

▶ [BPW installation instructions for air suspension systems \(BPW-EA-Luft...\)](#)

# BPW jockey wheels and outriggers.

BPW jockey wheels and outriggers are available in either square or round tubular designs. There is a choice of spur or bevel gears for the crank handle mechanism, with the required gearing. Appropriate wheel sizes are available, depending on the load to be supported. Mounting brackets for attachment to the vehicle are also available as optional extras.



Basic length GL + spindle stroke + Quick adjustment (mm)	Wheel size (mm)	Maximum load (kg)	Drive	Code number
<b>Steel jockey wheels</b>				
500 + 290	260 x 85	150	Standard	10.10.210121
890 + 300	280 x 70	700	Standard	10.10.210008
1,080 + 300	400 x 80	700	Bracket	10.10.210103
910 + 300	280 x 70	1,500	Standard	10.10.210003
910 + 300	320 x 80	1,500	Standard	05.375.80.01.0
1,110 + 300	320 x 80	1,500	Standard	10.10.210030
1,090 + 300	320 x 80	1,500	Front	05.375.80.10.0
1,080 + 300	320 x 80	1,500	Front	10.10.210192
1,005 + 300	320 x 80	1,500	Bracket	10.10.210002
1,090 + 280	320 x 100	2,000	Standard	10.10.210017
910 + 300	320 x 100	2,000	Standard	05.375.80.04.0
1,160 + 300	400 x 100	2,000	Standard	10.10.210109
1,081 + 300	320 x 100	2,000	Front	10.10.210014
1,090 + 300	320 x 100	2,000	Front	05.375.80.23.0
1,210 + 300	320 x 100	2,000	Angle	10.10.210016
<b>Outrigger, lightweight version</b>				
716 + 490	-	1,000	Standard	05.375.81.35.0
660 + 350 + 310	-	1,200	Standard	05.375.81.31.0
660 + 350 + 310	-	1,200	Standard	05.375.81.40.0
700 + 450	-	1,200	Standard	10.10.210029
1,000 + 500	-	1,500	Standard	05.375.81.59.0
650 + 350	-	2,000	Bracket	05.375.81.57.0
720 + 400 + 350	-	2,000	Standard	05.375.81.58.0
570 + 300 + 200	-	2,000	Standard	10.10.210195
<b>Outrigger, heavyweight version</b>				
370 + 180 + 90	-	3,000	Bracket	05.375.81.08.0
370 + 180 + 90	-	3,000	Bracket	10.10.210155
370 + 180 + 90	-	5,000	Bracket	05.375.81.10.0



More Information

▶ [www.bpw.de/en/drawbar\\_assy](http://www.bpw.de/en/drawbar_assy)

# BPW trailer coupling type K 80.

The trailer coupling type K 80 is only permitted for use in conjunction with 40 mm drawbar eyes complying with DIN 74054, and for trailers complying with section 43 subsection 4 of the German Road Traffic Act (StVZO).



Max. permissible trailer load 8,000 kg,  
max. permissible speed 40 km/h,  
Type / approval mark K 80 / F 4157,  
BPW code number 05.206.10.01.0

## Designed to meet your individual requirements. The connecting assemblies from BPW.

High-quality connecting assemblies round off the extensive BPW product range. BPW offers the right solution for every requirement between the tractor vehicle and its trailer – from the hitch block and underride guard through to drawbars, A-frames and turntables. With maximum safety and reliability. Typically BPW.



More Information

▶ BPW connecting assembly catalogue (BPW-ZGD 1452901e)

# From A for Axle to Z for Zinc-phosphating – With BPW you can be sure to find what you are looking for.

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BPW-Agrar 1007901e

