

BPW air suspension

we think transport




**OUTSTANDING ON ANY  
TERRAIN.**





# RUNNING GEAR FROM BPW. ANY PLACE, ANY TIME.



Whether for curtainsiders, reefers or silo trailers making long or short-distance journeys or tippers for off-road use, air suspension from BPW is the perfect solution for every application and offers unlimited peace of mind throughout the vehicle's service life with the 5+3 years ECO Plus warranty and the Partner Service Package.



MORE INFORMATION ABOUT  
WARRANTY CONDITIONS



# READY FOR ANYTHING.

BPW offers an extensive range of various air suspension solutions that are tailored to your individual transport tasks and various operating conditions – and have been tried and tested in millions of vehicles. Their modular design makes them particularly easy to service and their straightforward maintenance ensures that they are always economical.



Curtainsiders  
Dry containers and reefers  
Tippers  
Moving floors

Page 6



Tank and silo vehicles  
Mega trailers  
Swap body trailers  
Low loader trailers  
Vehicle transporters  
Wood transporters

Page 18



Heavy-duty tippers  
Heavy-duty wood transporters

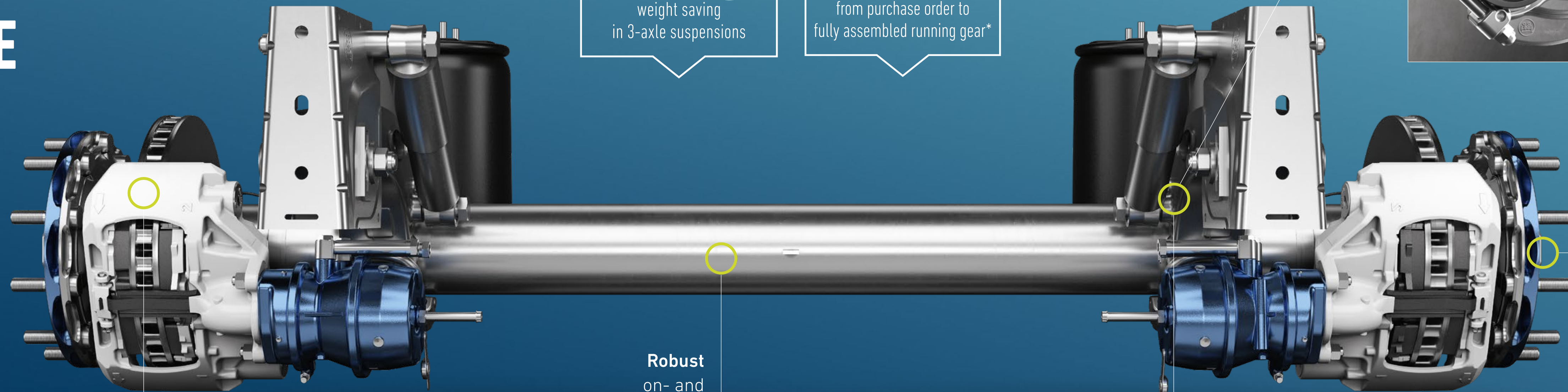
Page 28

# ECO Air

Curtainsiders  
Dry containers and reefers  
Tippers  
Moving floors



# ECO Air THE RUNNING GEAR OF THE FUTURE.



THE BPW EFFECT  
**27 kg**  
weight saving  
in 3-axle suspensions

THE BPW EFFECT  
**2h**  
from purchase order to  
fully assembled running gear\*



**Innovative laser process**  
for robust, clamped and  
100 % maintenance-free  
axle mounting

**Faster**  
disc change without  
calliper removal

**Robust**  
on- and  
off-road use

**100 % maintenance-free**  
mounting

**ECO PLUS  
WARRANTY**  
5+3 years

\* Rather than ten days, based on the example of a medium-sized vehicle manufacturer.



## THE FIRST OF ITS KIND.

BPW ECO Air is the new generation of running gear for on- and off-road use and provides the benefit of a 27 kg weight saving in a 3-axle-suspension unit. It has been designed from the ground up as a complete digitised system and makes the configuration, construction and production of trailers simpler and more flexible than ever before. The replaceable individual components also mean that maintenance can be performed as needed – so you not only save weight but also reduce additional costs.



# ECO Air

## 9 TONS

Curtainsiders  
Dry containers and reefers  
Tippers  
Moving floors

## For the road and beyond.

ECO Air is the completely redesigned robust running gear for 9 t on- and off-road applications. The modular architecture with standardised, intelligent components makes it possible to purchase running gear as a kit and install the required variants of the components yourself – for extremely fast processing times and maximum flexibility.

From the moment it is ordered, ECO Air carries a unique digital DNA that stays with it throughout its life, from production to maintenance. This DNA makes highly efficient processes and intelligent services possible across its entire life cycle.

A patent pending laser process is used during production, which, for the first time, makes it possible to combine the typical BPW clamped and modular air suspension with a round axle beam. This provides maximum durability and cuts the weight of a three-axle suspension unit by 27 kg.

### FEATURES AND BENEFITS FOR MANUFACTURERS

- For an axle load of 9 t.
- Patent pending laser process provides high flexibility in running gear assembly.
- Digitised processes right from configuration and purchasing
- Thanks to the digital DNA, each component is tagged with information on technical specifications and combination options.
- Shorter processing time thanks to modular architecture and standardised components.
- Effective minimisation of stock.

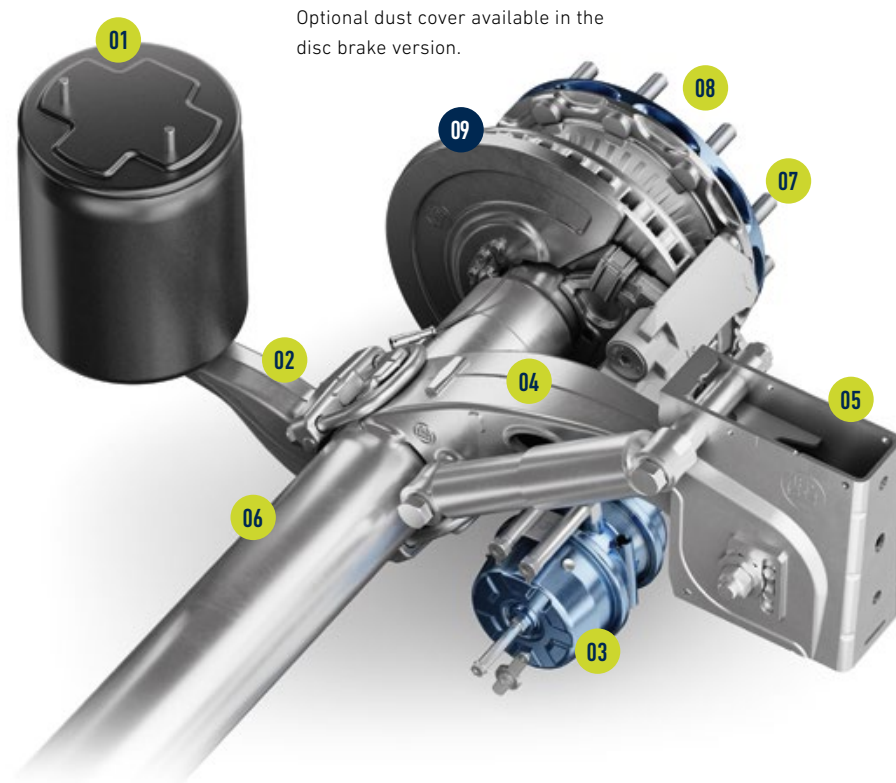
### FEATURES AND BENEFITS FOR VEHICLE OPERATORS

- Weight reduction of 27 kg for three-axle suspension unit
- For on- and off-road use.
- 5+3 years warranty with unlimited mileage on hub, hub bearings, axle beam, air spring connection and hanger brackets.
- Maintenance according to needs, thanks to replaceable individual components.

# The modular ECO Air system enables individual combination options.

## Disc brake TS2 4309 / TS2 3709

ECO Plus bearing technology / ET 120

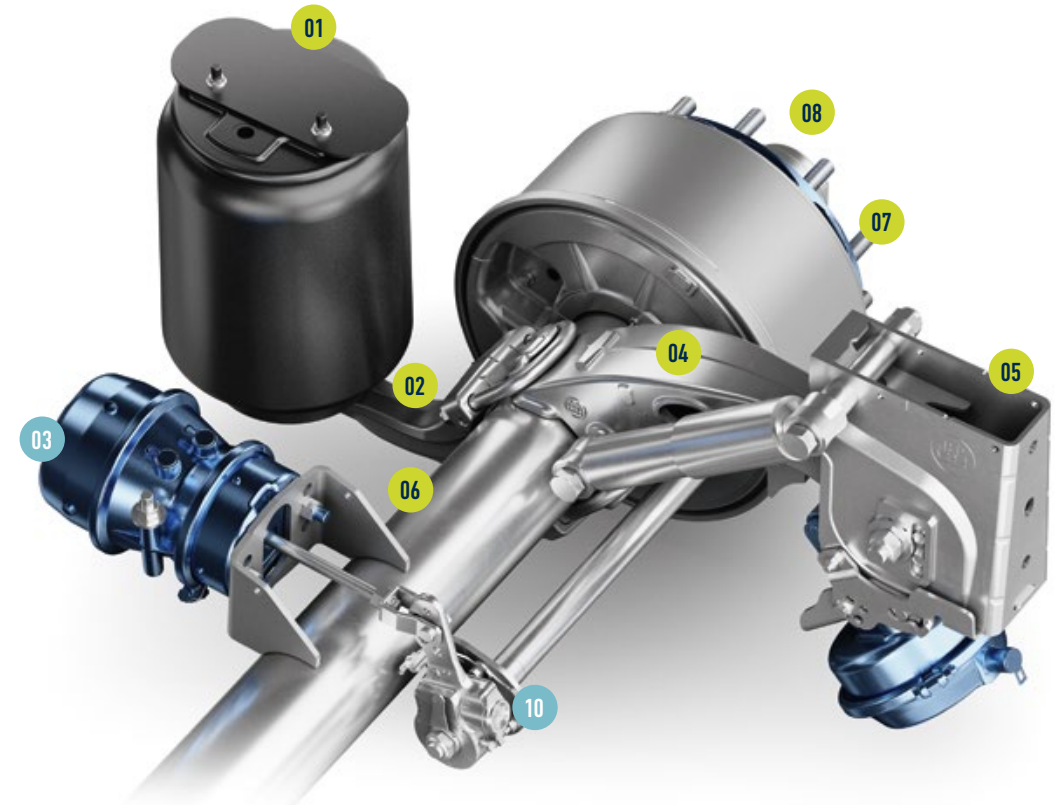


Optional dust cover available in the disc brake version.

**BORN DIGITAL:**  
the new BPW running gear configurator.  
Simple online configuration and ordering.

## Drum brake SN 4218

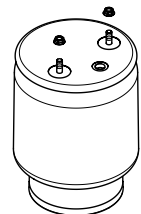
ECO Plus bearing technology / ET 0



**01**

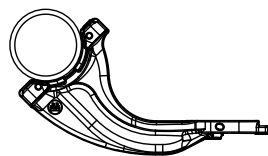
Air bag	
Type	Offset (V)
30 / 30K	V = 20 mm
30 / 30K	V = 0 / 20 / 60 mm
30 / 36K	V = 45 / 80 mm
36-1	V = 45 / 80 mm

Loose or assemble



**02**

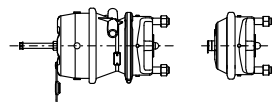
Air bag beam	
Type	Crank (K)
U	K = 155 mm
M	K = 85 mm
O	K = -10 mm
0-335	K = -10 mm



**03**

Brake cylinder TS2 4309/3709	
M / M	M
16 / 24"	16"
20 / 24"	18"
	20"
	22**
	24**

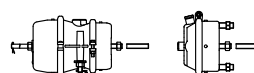
\* Only for TS2 4309



**03**

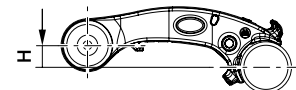
Brake cylinder SN 4218	
M / M	M
16 / 24"	20"
20 / 30"	24"
24 / 30"	30"
30 / 30"	

Assembled: only versions stated above. Loose: all technically permissible versions.



**04**

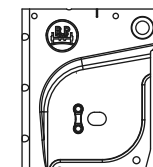
Trailing arm	
Hooked (H)	
A	H = 60 mm
B	H = 130 mm



**05**

Air suspension hanger brackets	
ST	
	205 mm
	290 mm

Loose or assembled



**06**

Axle beam	
Round Ø 146 × 10 mm	

**07**

Wheel studs	
93 mm	



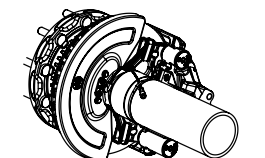
**08**

Wheel nuts	
Loose	



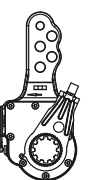
**09**

Dust cover	
(optional, only with disc brake)	
Loose or assembled	



**10**

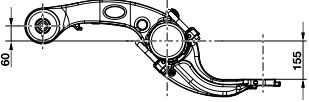
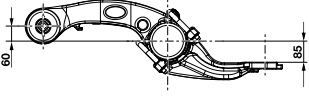
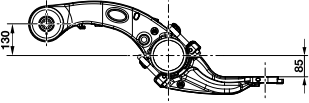
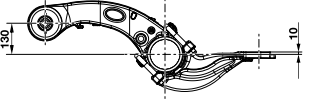
Automatic slack adjuster	
Loose	



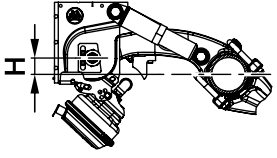
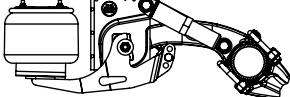


# Technical data

## DISC BRAKE AND DRUM BRAKE – TRAILING ARM AND AIR BAG BEAM

Version	Ride height Empty without air	Hanger bracket height
 <p><b>EAAU</b> Hooked (H) = 60 mm Cranked (K) = 155 mm</p>	145–190 mm  210 mm	205 mm  290 mm
 <p><b>EAAM</b> Hooked (H) = 60 mm Cranked (K) = 85 mm</p>	185–230 mm  270 mm	205 mm  290 mm
 <p><b>EABM</b> Hooked (H) = 130 mm Cranked (K) = 85 mm</p>	240–260 mm	205 mm
 <p><b>EABO</b> Hooked (H) = 130 mm Cranked (K) = -10 mm</p>	270–315 mm  305–390 mm	205 mm  290 mm

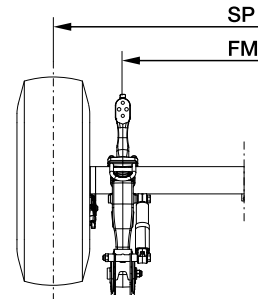
## AXLE LIFT DEVICES

Two-side axle lift	Loose
Hooked (H)	
H = 60 mm H = 130 mm	
	
Sidewise mounted axle lift	Loose
	

## ECO AIR WITH DISC BRAKE

TS2 4309/3709	
Track (SP)	Spring centre (FM)
1,965	1,200 / 1,250 / 1,270
1,980	1,200 / 1,250 / 1,270
2,000	1,200 / 1,250 / 1,270 / 1,300
2,010	1,200 / 1,250 / 1,270 / 1,300
2,040	1,200 / 1,250 / 1,270 / 1,300
2,095	1,270 / 1,300 / 1,350 / 1,400
2,140	1,300 / 1,350 / 1,400

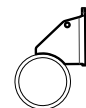
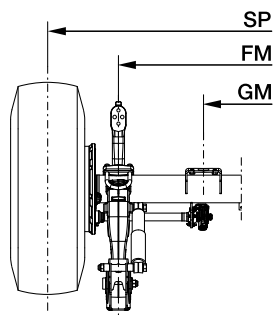
Specifications in mm



## ECO AIR WITH DRUM BRAKE

SN 4218		
Track (SP)	Spring centre (FM)	Booster bracketcentre (GM)
2,015	1,200 / 1,250 / 1,270 / 1,300	376
2,040	1,200 / 1,250 / 1,270 / 1,300	401
2,100	1,270 / 1,300 / 1,350	461
2,140	1,300 / 1,350 / 1,400	501

Specifications in mm



Booster bracket R

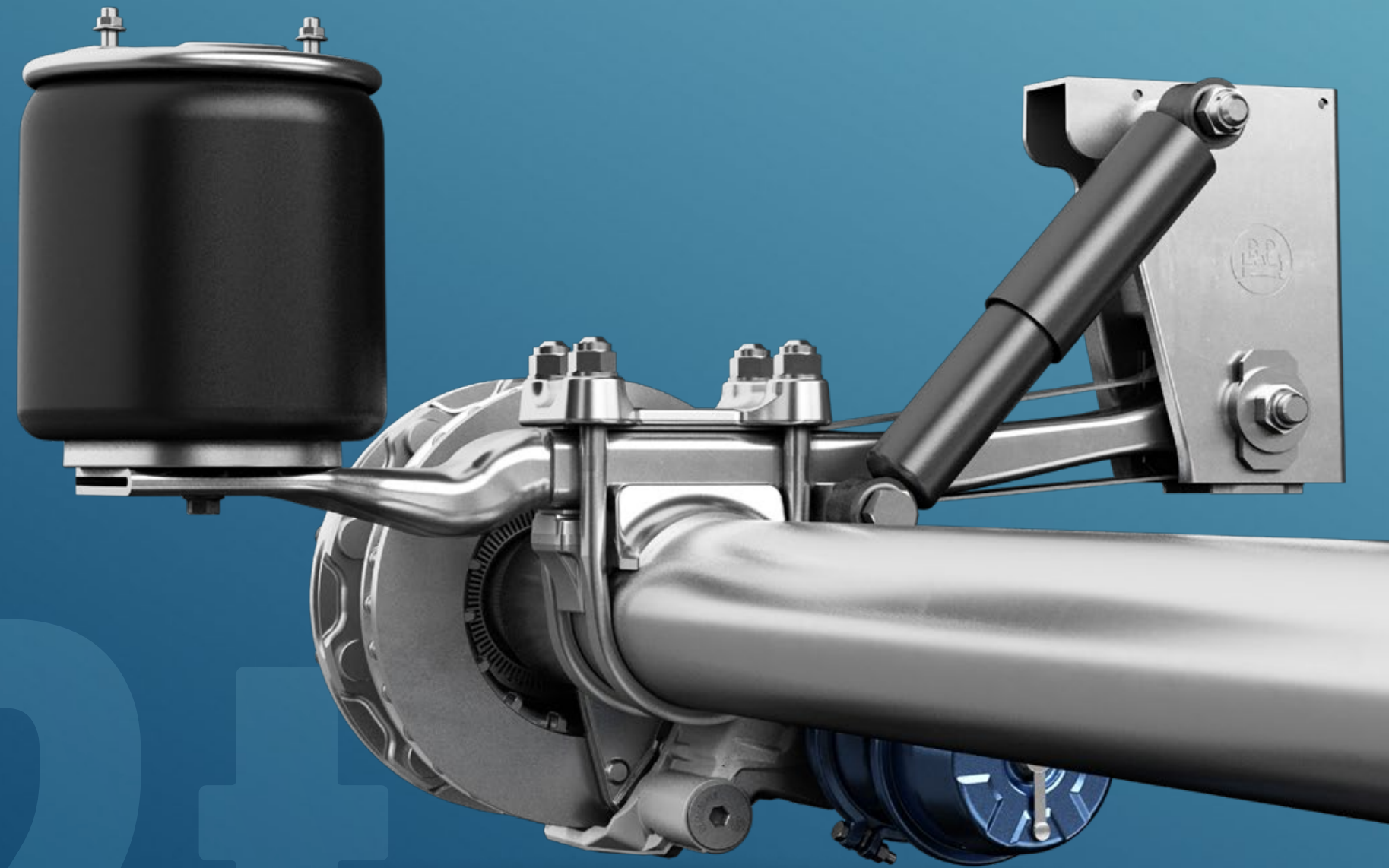


Special equipment that is not stated here cannot be added to the EAC delivery scope (e.g. preparation for tyre pressure control system).

# Airlight II

## THE ALL- ROUNDER.

Tank and silo vehicles  
Mega trailers  
Swap body trailers  
Low loader trailers  
Vehicle transporters  
Wood transporters



# 9-12t



# Airlight II

## 9-12 TONS

Tank and silo vehicles  
Mega trailers  
Swap body trailers  
Low loader trailers  
Vehicle transporters  
Wood transporters

## The intelligent solution for your needs.

The light and robust running gear is a true all-rounder: whether as the light-weight version for tank and silo vehicles or the long-travel version for swap body trailers and mega trailers. Cost-effectiveness is at the forefront – thanks to the maintenance-free spring seat arrangement and the high load capacity, which can be increased even further with lightweight components. The comprehensive modular system can be used to configure the ideal solution for any requirements.

The individual design for each application using a variety of possible module variants and the large range of components makes this air suspension a real all-rounder in the 9–12 t range and enables the lightest possible construction with the maximum degree of variation.

### FEATURES AND BENEFITS FOR MANUFACTURERS

- For axle loads of 9–12 t.
- Air suspension kit with a maximum number of options to create the optimal variants for any applications.
- Large variety of types of disc and drum brakes can be used for any needs.
- Choice of clamped and welded spring seat arrangement depending on application.
- Available as steering axle.
- NEW: With round axle beam and patent-pending Axle mounting technology available for 9t on- and off-road use.

### FEATURES AND BENEFITS FOR VEHICLE OPERATORS

- Requires no maintenance with clamped spring seat arrangement.
- 5+3 years ECO Plus warranty with unlimited mileage on hub, hub bearings, axle beam, air spring connection and hanger brackets.
- Lightest running gear of its type.
- Offsets of 0 and 120 available.
- Single and twin wheels.



## Discover the solution options for Airlight II.



Option 1

### Lightweight options for tank and silo vehicles

- Lightest running gear on the market.
- 90 kg weight saving in 3-axle units.
- Available with alloy hub.
- Available with LightTube trailing arm.



Option 2

### Long-travel version for mega trailers and swap body trailers

- Large power capacity with long travel.
- Weight-optimised.
- For low ride heights.



**MORE INFORMATION ABOUT  
LIGHTWEIGHT OPTIONS**



Option 3

### Double-leaf arm version for particularly tough applications

- Weight saving for applications up to 12 t axle load.
- Robust welded mounting.
- Optimum adjustment to the centre of gravity height.



Option 4

### Steering axle and self-steering axle with channel cross member for better manoeuvrability

- Lower tyre wear.
- Lower fuel consumption.
- Channel cross member available, no additional braces required.
- Active Reverse Control (ARC) available as an option.



Option 5

### Tipper operation

- Weight-optimised chassis in the 9t range thanks to laser-machined axle mounting and round axle beam cross-section.
- Welded axle bindings and reinforced trailing arms available for higher tonnages.
- Proven ECO Plus bearing technology with 5 + 3 year warranty.

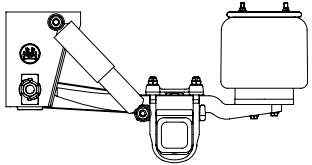
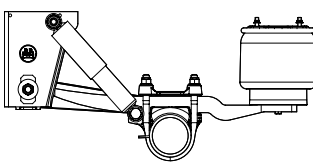


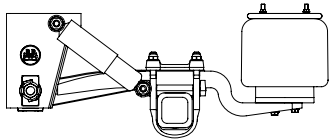
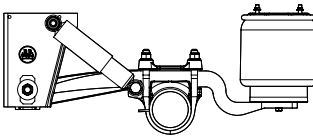
**MORE INFORMATION ABOUT  
ACTIVE REVERSE CONTROL (ARC)**

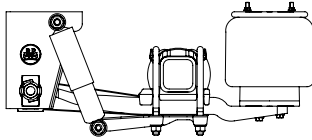


# Technical data

## AIR-SPRUNG AXLES AND AXLE ASSEMBLIES

Series		
<b>ALO</b>		
LL self-steering axle with laterally offset and straight trailing arms		Axle load 9 t with clamped axle integration: Version with round axle beam
Two-sided axle lift		

Series		
<b>ALM / ALMT</b>		
LL self-steering axle with laterally offset and straight trailing arms		Axle load 9 t with clamped axle integration: Version with round axle beam
Two-sided axle lift		

Series	
<b>ALU</b>	
LL self-steering axle with straight trailing arms	
One-sided, two-sided and central axle lift	

Trailing arm brackets 70 mm	Air suspension hanger and channel cross member
Single leaf	Height
1 x 56	184
1 x 62	268
1 x 65	350

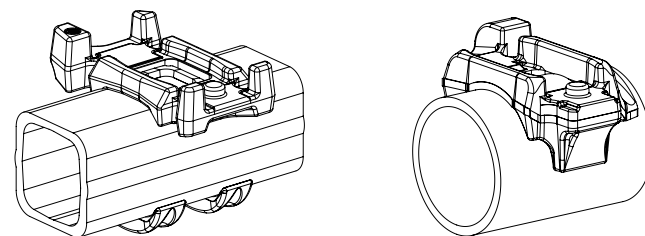
Trailing arm brackets 70 mm	Air suspension hanger and channel cross member
Single leaf	Height
1 x 56	184
1 x 62	268
1 x 65	350

Trailing arm brackets 70 mm	Air suspension hanger and channel cross member
Single leaf	Height
1 x 56	184
1 x 62	268
1 x 65	350
Double leaf	
2 x 56	

### SPRING SEAT ARRANGEMENTS

#### Clamped spring seat arrangement (Airlight II)

The Airlight II spring seat arrangement is tightened with a torque/angle process controlled by the tensile yield strength and therefore requires no maintenance in on-road use.



## DRUM BRAKE

Axle type	Airbag	Ride height (RH mm)
HSF..	30 / 30 K	390-565
HZF..	36 / 36 K	
	36-1	
HSFH..LL	30 / 30 K	430-565
MSFH..LL	36 / 36 K	
	36-1	
x		

HSF..	30 / 30 K	245-420
HZF..	36 / 36 K	
	36-1	

HSFH..LL	30 / 30 K	255-420
MSFH..LL	36 / 36 K	
	36-1	

HSF..	30 / 30 K	175-300
HZF..	36 / 36 K	
NHZF..	36-1	
KHSF..		
KHZF..		

HSFH..LL	30 / 30 K	215-300
NHZF..LL	36 / 36 K	
NMZF..LL	36-1	
KMZF..LL		

x

## DISC BRAKE TS2 3709

Axle type	Airbag	Ride height (RH mm)
SKHSF..	30 / 30 K	390-565
SKHBF..	36 / 36 K	
SKHZF..	36-1	
SKHBFH..LL	30 / 30 K	430-565
SKHSFH..LL	36 / 36 K	
	36-1	
x		

SKHSF..	30 / 30 K	245-420
SKHBF..	36 / 36 K	
SKHZF..	36-1	

SKHBFH..LL	30 / 30 K	255-420
SKHSFH..LL	36 / 36 K	
	36-1	

SKHSF..	30 / 30 K	205-350
SKHBF..	36 / 36 K	
SKHZF..	36-1	

SKHBFH..LL	30 / 30 K	215-300
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x

## DISC BRAKE TS2 4309

Axle type	Airbag	Ride height (RH mm)
SHSF..	30 / 30 K	390-565
SHBF..	36 / 36 K	
SHZF..	36-1	
SHBFH..LL	30 / 30 K	430-565
SHSFH..LL	36 / 36 K	
	36-1	
x		

SHSF..	30 / 30 K	245-420
SHBF..	36 / 36 K	
SHZF..	36-1	

SHBFH..LL	30 / 30 K	255-420
SHSFH..LL	36 / 36 K	
	36-1	

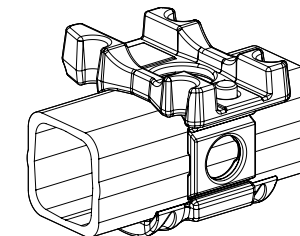
SHSF..	30 / 30 K	235-300
SHBF..	36 / 36 K	
SHZF..	36-1	

SHBFH..LL	30 / 30 K	245-300
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x

### Welded spring seat arrangement (Airlight II and SL air suspension)

The Airlight II and SL running gear can be fitted with a welded spring seat arrangement for the toughest load situations, in particular for high axle loads and off-road applications.

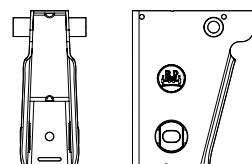




# Technical data

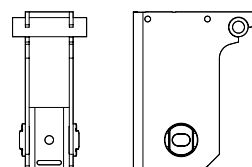
## AL II AIR SUSPENSION HANGER BRACKETS

**Steel air suspension hanger brackets** for single-leaf arms



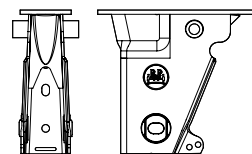
**Welded**  
Easy to connect to the vehicle frame. Extremely high torsional rigidity, which enables light cross-bracing.

**Steel air suspension hanger brackets** for double-leaf trailing arms



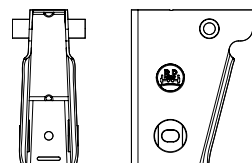
**Welded**

**Steel air suspension hanger brackets**



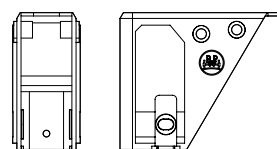
**Bolted**  
Simply bolted to the vehicle frame with the cover plate.

**Special steel air suspension hanger brackets**



**Welded**  
For vehicles with special steel vehicle frame, simply welded on.

**Alloy air suspension hanger brackets**



**Welded**  
For vehicles with alloy vehicle frame, simply welded on.

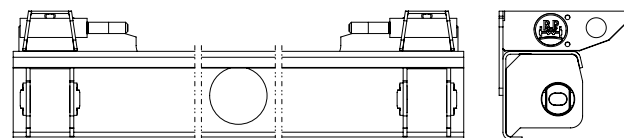
Type of air suspension hanger brackets	Available heights (mm)				
Steel	184	268	278	350	430
Special steel	184	268			
Alloy	184	268			

### FEATURES AND BENEFITS

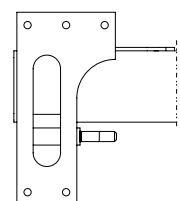
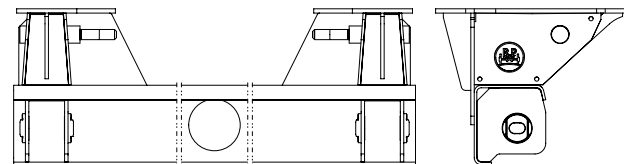
- With standard track adjustment.
- For 70 mm wide trailing arms.
- Axle load of 9–12 t, depending on version.
- Spring bolts with M 24 thread.

## CHANNEL CROSS MEMBER

**Steel channel cross member** **Welded**



**Steel channel cross member** **Bolted**



Channel cross members from BPW replace the air suspension hanger brackets and provide additional bracing. Channel cross members can simply be bolted or welded to the frame.

Channel cross member wall thickness	Available heights (mm)			
6 mm	184	194	268	278
8 mm	186	196	270	280

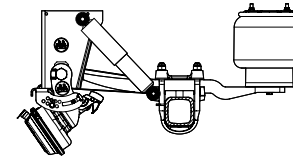
Channel cross member spring centres (FM)	Available heights (mm)			
	980	1100	1200	1300 1400

### FEATURES AND BENEFITS

- Integrated track adjustment as standard.
- For 70 mm wide single-leaf trailing arms.
- Axle load up to 10 t.
- Spring bolts with M 24 thread.

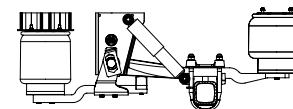
## AXLE LIFT DEVICES

**Two side**



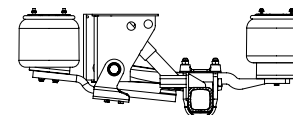
The compact two-side axle lift is simple to assemble on the air suspension hanger brackets. It has a low weight and enables a large ground clearance.

**One side**



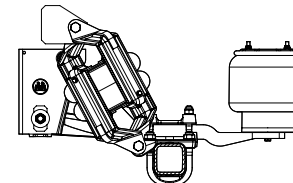
The one-side lift device is fitted on the air suspension hanger bracket and can be used to lift the front axle of the unit.

**Central**



The central lift device is fitted in the centre of the vehicle using an additional lift bracket. It can be used to lift the central or rear axle of the unit.

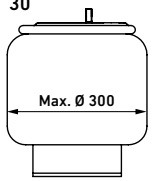
**Central axle lift**



The central axle lift is fitted in the centre of the vehicle when there is limited space and can be used to lift the central and rear axle of the unit.

## AIR BAG VERSIONS

BPW supplies air bags with various features for every application scenario:

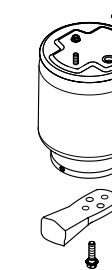
30	Air bag	Spring deflection
	BPW 30	220 mm
	BPW 30 K	190 mm

36	Air bag	Spring deflection
	BPW 36	220 mm
	BPW 36 K	190 mm
	BPW 36-1	260 mm

## AIR BAG SCREWED JOINTS



Air bag	Bolted bag plate in the air spring piston
BPW 36-1	The bag is connected with the trailing arm with two fixing screws.
BPW 36 K	
BPW 36	
BPW 30 K	
BPW 30	



Air bag	Central bolt
BPW 30 K	The air bag is connected with the trailing arm with one fixing screw.
BPW 30	

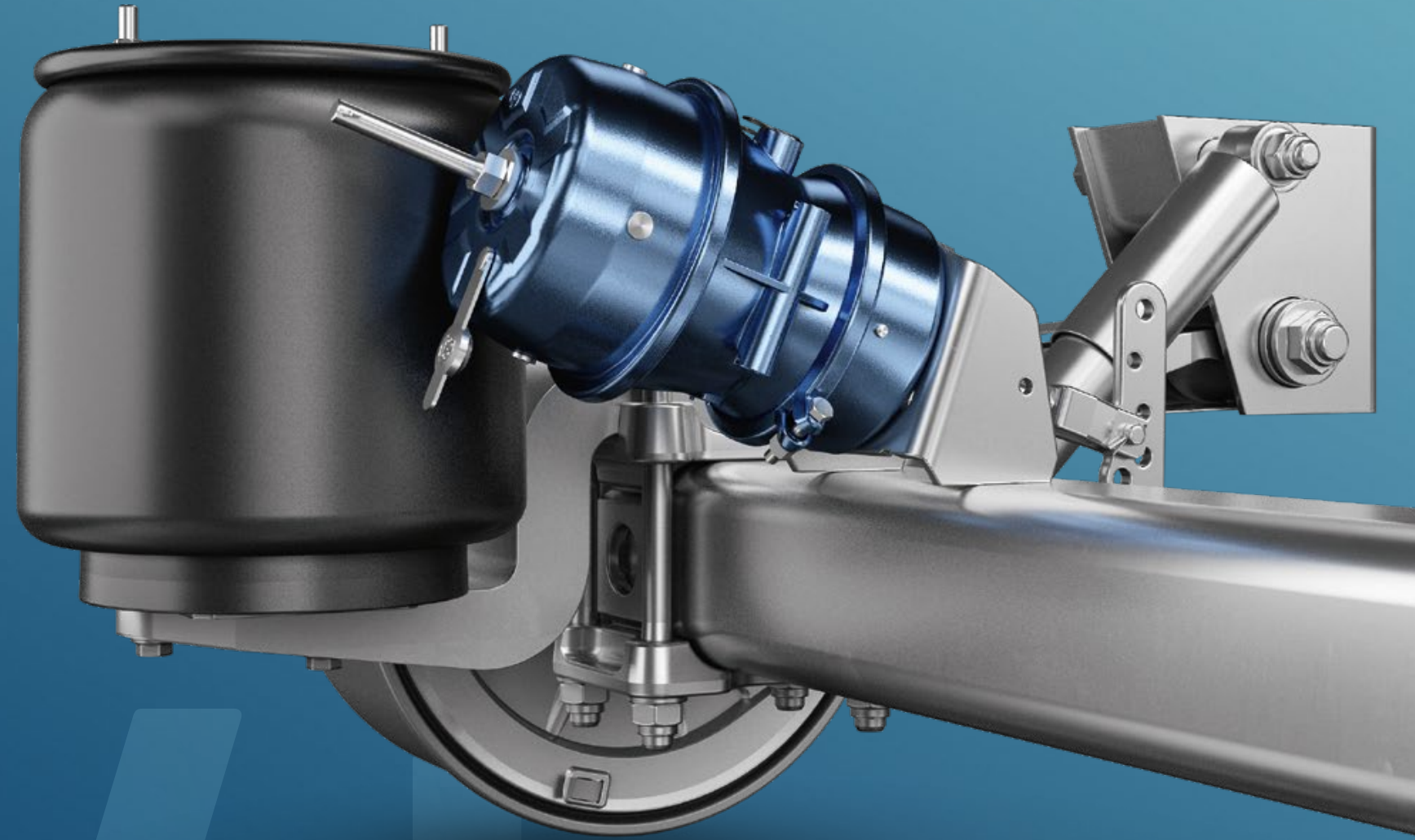


**FURTHER DETAILS ON THE COMPONENTS MENTIONED CAN BE FOUND IN THE INSTALLATION INSTRUCTIONS FOR AIR SUSPENSION SYSTEMS**



# SL FOR WHEN THINGS GET TOUGH.

Heavy-duty tippers  
Heavy-duty wood transporters



# 12-14t



# SL

## 12-14 TONS

Heavy-duty tippers  
Heavy-duty wood transporters

## At home in harsh environments.

With the SL air suspension for the toughest off-road applications, you can rely on proven technology and air suspension with a long life expectancy and outstanding reliability. The modular design ensures that it is extremely easy to maintain, and if you do need to visit a garage, you can be sure that the vehicle won't be there for long, thanks to the excellent spare parts availability.

### FEATURES AND BENEFITS FOR MANUFACTURERS

- For axle loads of 12–14 t.
- Ride heights from 230–600 mm are possible.
- 100 mm wide trailing arm.
- 150 mm square axle beam as standard.
- Air suspension hanger brackets with 8 mm wall thickness.

### FEATURES AND BENEFITS FOR VEHICLE OPERATORS

- Single- and double-leaf trailing arms available.
- Welded spring seat arrangement as standard.
- Robust and easy to service.

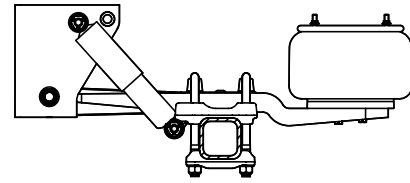


# Technical data

## AIR-SPRUNG AXLES AND AXLE ASSEMBLIES

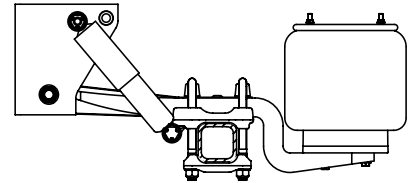
### Series

#### SLO



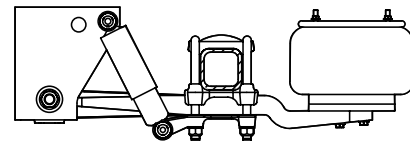
LL self-steering axle  
with straight trailing arms

#### SLM



LL self-steering axle  
with straight trailing arms

#### SLU



### Trailing arm hanger brackets 100 mm

Single leaf  
1 × 57  
Double leaf  
2 × 43

### Air suspension Height

184  
268  
350

## DRUM BRAKE SN 4220

### Axle type

### Ride height

HSF..  
HZF..

mm

HSFH..LL 425–560

HSF..  
HZF..

320–500

HSFH..LL 330–500

HSF..  
HZF..

235–335

## DISC BRAKE TSB 4312

### Axle type

### Ride height

### mm

SHSF..  
SHSZF..

415–585

SHSF..  
SHZF..

345–500

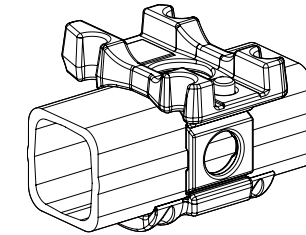
On request

## SPRING SEAT ARRANGEMENTS

### Welded spring seat arrangement

The SL running gear features a welded spring seat arrangement as standard.

This interface with the axle beam makes the most of its advantages in applications around the world in the harshest conditions, off-road use and with high tonnages.



THE INSTALLATION  
INSTRUCTIONS  
FOR SL AIR SUSPENSION

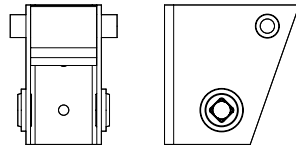
# Technical data

## SL AIR SUSPENSION HANGER BRACKETS

### Steel air suspension hanger brackets

Welded

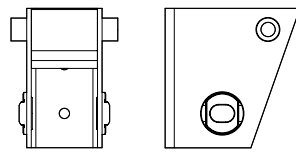
Type E



### Steel air suspension hanger brackets

Welded

Type EV



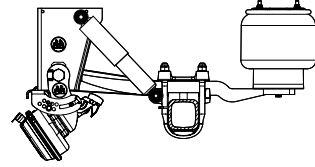
Type of air suspension hanger bracket	Available heights (mm)			
Steel	184	268	350	430

### FEATURES AND BENEFITS

- With and without track adjustment.
- For 100 mm wide trailing arms.
- Spring bolts with M 30 thread.
- Top shock absorber attachment with screw and lock nut.
- Rigid and adjustable air suspension hanger brackets available.

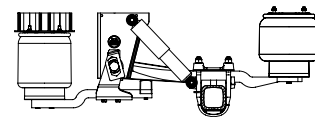
## AXLE LIFT DEVICES

### Two side



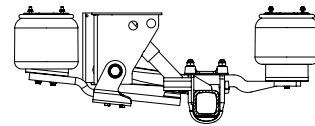
The compact two-side axle lift is simple to assemble on the air suspension hanger brackets. It has a low weight and enables a large ground clearance.

### One side



The one-side lift device is fitted on the air suspension hanger bracket and can be used to lift the front axle of the unit.

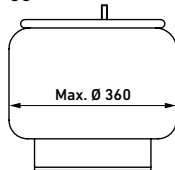
### Central



The central lift device is fitted in the centre of the vehicle using an additional lift bracket. It can be used to lift the central or rear axle of the unit.

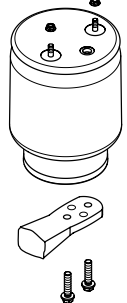
BPW supplies air bags with various features for every application scenario:

## AIR BAG VERSIONS

36	Air bag	Spring deflection
	BPW 36	220 mm
	BPW 36 K	190 mm

## AIR BAG SCREWED JOINTS

Air bag	Bolted bag plate in the air spring piston
BPW 36	The bag is connected with the trailing arm with two fixing screws.
BPW 36 K	




THE INSTALLATION INSTRUCTIONS  
FOR SL AIR SUSPENSION CAN  
BE FOUND HERE



The brands of the BPW Group:



BPW Air Suspensions 18922101 e **reaze GmbH**

**BPW Bergische Achsen Kommanditgesellschaft**

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info@bpw.de · [www.bpw.de](http://www.bpw.de)