



# BPW PRODUCT BROCHURE



**TRANSPEC**  
ENGINEERED TO LAST

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The information and advice contained in this brochure including prices and specifications are current and correct as at 1 January 2016 but may be subject to change.

BPW Transpec shall not be liable for any changes that occur after that date. It is your responsibility to contact your BPW Transpec branch or representative to ensure that all information and advice is up to date before placing an order.

# BPW GROUP OF COMPANIES

BPW Transpec is a wholly owned subsidiary of BPW Bergische Achsen KG Germany and has sold and serviced the full range of BPW axles and trailer suspensions in Australia for nearly 60 years.

BPW's commitment to ongoing research and development, a policy of 'vertical integration' that sees the company manufacturing the major components for its products, and the teutonic drive for excellence have produced an outcome that sets BPW apart from the rest.

In order to achieve its 'world best' status, BPW produces all axle components to exacting standards so each component integrates perfectly with the next. Throughout the development of the axle many thousands of different ideas were explored to create entirely new features, unique to BPW – features that have today given BPW the leading edge in axle technology.

BPW makes sure trailers operate safely and economically anywhere in the world. It does not matter whether you are driving on rough outback terrain, on a multi-lane highway or through the desert or across ice, whether your priority is long distance or if you have to cope with difficult loads – BPW will always be the safest, lowest cost option.



BPW Transpec Melbourne



BPW Wiehl

# BPW TRANSPEC IN AUSTRALIA



All supplied BPW products and components are fully backed and serviced nationally through BPW Transpec branches and BPW authorised sales and service outlets.

BPW Transpec's engineers have also customised certain axle and air suspension components for superior performance under Australia's exacting and varied transport conditions, which are assembled at the company's Melbourne production facility.

Its Engineering Department, with the use of state-of-the-art CAD systems, provides expert technical solutions on the selection and fitment of all BPW products to ensure that all customers receive the best possible operational and payload results.

So, when considering your axle and air suspension choice, weigh up the support and real long-term operational savings you'll achieve by using the fully integrated BPW air suspension and axle system.



Suspension testing jig



# BPW AXLE RANGE FOR COMMERCIAL TRAILERS

The BPW axle has now shown in Australian operating conditions, operators can expect minimum downtime and be confident of the axle's performance throughout the life of the trailer. In short, BPW offers a more complete axle assembly that delivers unsurpassed performance.

The 1,000,000 kilometre / 3 year ECO Plus Hub Warranty for on-highway vehicles in Australia's tough operating conditions, with a fully serviceable hub, is testament to the design excellence and build quality of the BPW product.

BPW has a comprehensive range of trailer axles, ranging from axles for car trailers, up to 30 tonne capacity axles for off-road heavy haulage conditions.

With the 9 to 12 tonne per axle capacity range, which is popular with Australian transport operators, BPW offers square and round beam axles as well as high efficiency grease lubrication.

Hub options include spider and 10 stud to suit either European or American wheel fixing, or 8 stud for 19.5" tyres. Three standard S-cam mechanical brake configurations, and two disc brake configurations are offered to suit commercially available tyre sizes. Other brake sizes are also available to suit applications requiring axle capacities under 9 tonne and above 12 tonne. BPW also offers self-steering axles to suit a wide range of applications and tyre sizes, with axle capacities ranging up to 14 tonne.

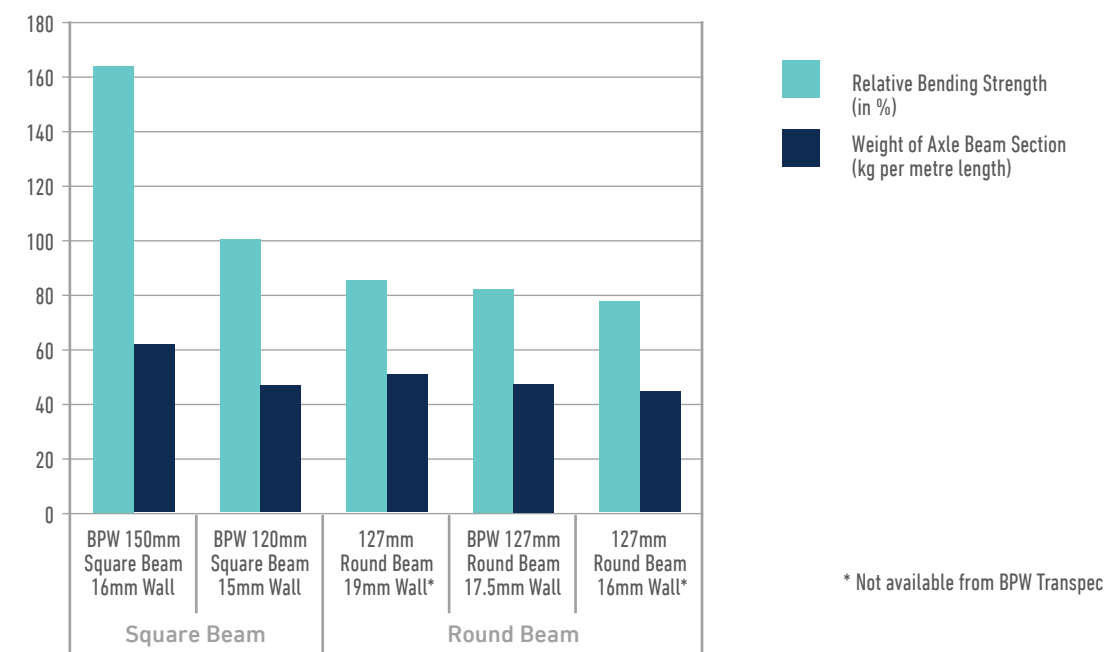
BPW TRAILER AXLES 9 to 12 tonne CAPACITY RANGE					AXLE BEAM OPTIONS			HUB OPTIONS				
					120mm Square	Ø127mm Round	150mm Square	Spider	10 stud 225mm pcd	8 stud 275mm pcd	10 stud 285mm pcd	10 stud 335mm pcd
BPW MODEL RANGE	TO SUIT TYRE SIZE	BRAKE MODEL	BRAKE TYPE	BRAKE SIZE								
H/R Series	20", 22.5"	SN4218	Drum	Ø420x180mm	•	•	•	•			•	•
KH Series	19.5"	SN3620	Drum	Ø360x200mm	•					•		
NH Series	15", 17.5"	SN3020	Drum	Ø300x200mm	•				•			
SH Series	20", 22.5"	TSB4309	Disc	Ø430mm	•						•	•
SKH Series	19.5"	TSB3709	Disc	Ø370mm	•					•		

# BPW SQUARE AXLE BEAM

BPW square axle beams give the strength you need in the face of tough operating conditions. Square, reliable and light, the BPW axle beam is the stable foundation for a long service life. The BPW square axle beam gives the best 'strength to weight ratio' for airbag suspension applications.

## FEATURES AND BENEFITS OF THE SQUARE AXLE BEAM INCLUDE:

- Being optimally adapted to the various forces acting on it, such as twisting and bending
- Offering low inherent weight combined with the highest possible stiffness for heavy payloads
- Joining the quenched and tempered axle stubs to the square axle beam using the 'flash butt' welding process ensures a uniquely strong connection, which produces the longest possible service life
- Being prepared for ABS retrofitting as standard
- Even tyre wear because the axle beam has positive camber and a narrow toe tolerance
- Easy installation/removal of the wheel hub, thanks to stepped bearing journals on the axle stub
- Long-lasting corrosion protection by cathophoretic dip-coating with zinc-phosphating, KTL



# BPW ECO PLUS HUB SYSTEM

\* Conditions apply. Refer to the BPW Operator's Manual for details.

With the BPW 10/12 tonne ECO Plus Hub Unit on most Australian-assembled BPW axles, BPW offers a warranty for on-highway vehicles that the wheel end lubrication will not need to be renewed for a period of three years in service, or 1,000,000 kilometres, whichever comes first.\*

The current ECO Plus Hub Unit is rated at 10 or 12 tonnes, depending on the axle beam, suspension type and spring centres, and incorporates both incremental and revolutionary advances to keep BPW ahead of the competition.

\* 3 year 1,000,000km Hub Unit Warranty

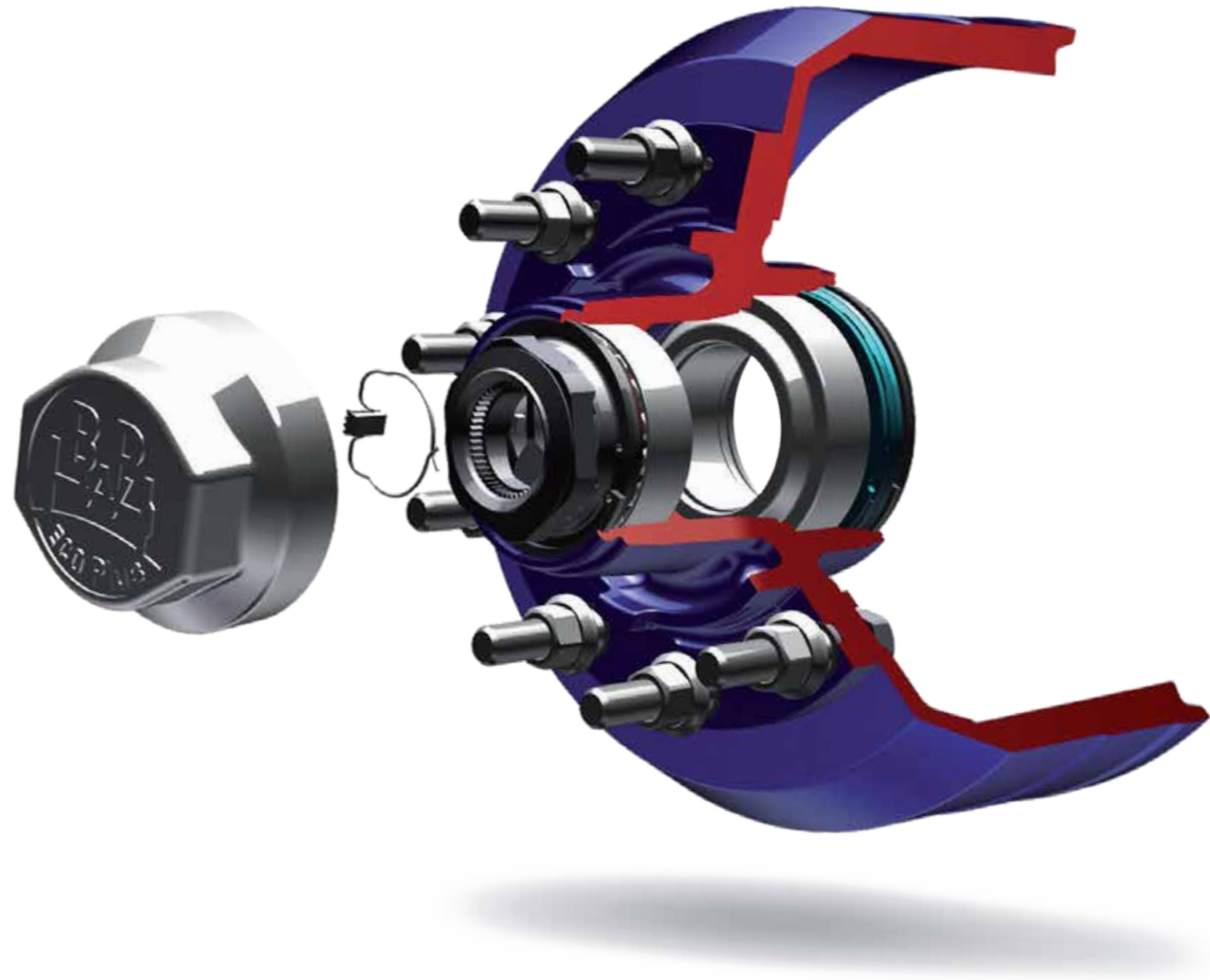
Over and above the standard BPW warranty of one year unlimited kilometres for all BPW axle and suspension components, the ECO Plus Hub Unit in 10-12 tonne rating is available with the extended warranty.\* BPW has long strived for extended maintenance period and has over the past few years introduced improvements in its Australian-assembled axles that keep it ahead of the rest.

## BPW ECO PLUS HUB SEALS

The hub seal is an important element in the wheel end system. The ECO Plus hub seal has been employed successfully in Australia for a number of years. The 'rotating seal' concept is ideal for minimising dirt ingress, and the integrated hardened washer for sacrificial wear against the inner bearing protects the axle beam. With top quality taper roller bearings and rotating hub seals to minimise dirt ingress, the ECO Plus hub unit is the culmination of many years of development and testing.

### DEFINITION OF HIGHWAY/OFF-ROAD

The term 'highway' refers to roads having a sealed and metallised surface. In other words with an asphalt or concrete surface. If the vehicle spends the overwhelming majority of its operating life travelling on such roads, and will travel on unmade roads incidentally for small distances and predominantly at low speeds, then for the purpose of the ECO Plus Hub Unit Warranty the vehicle is considered to be operating in 'highway' conditions. The term 'off-road' refers to vehicles that do not meet the 'highway' criteria, that is they will travel for some of their operating life on unsealed roads at high speeds. If in doubt, operators should obtain clarification from BPW regarding the classification, for their operating conditions.



## TORQUE PREVAILING AXLE NUT

Bearing adjustment is extremely important. For the seal to work properly, and for bearings and lubrication to give the maximum possible life, the bearing adjustment needs to be as close to perfect as it can be – too loose, the bearings suffer and the seal doesn't work properly; too tight, the bearings run hot, they can spin and wear the axle spindle, and the lubrication life suffers. BPW bearing adjustment procedures have always been simple, which if followed result in close to ideal adjustment. These procedures involve the use of a torque wrench to help establish the correct preload. With the ECO Plus hub unit, BPW has gone further and incorporated the torque limiter in to the axle nut. The bearing adjustment procedure on the ECO Plus hub unit is simple, and the bearings cannot be over-tightened. The unique torque prevailing axle nut results in correct and repeatable bearing adjustment, as it will not allow over tightening of the bearings, and has a very fine adjusting system.

## ECO-LI PLUS GREASE

BPW ECO Plus hub units utilise semi-synthetic BPW ECO-Li Plus bearing grease, which has been used on BPW axles worldwide with great success. This is the best grease current technology can provide and is specially designed to give low friction long life lubrication with excellent resistance to water ingress.

## BPW BEARINGS

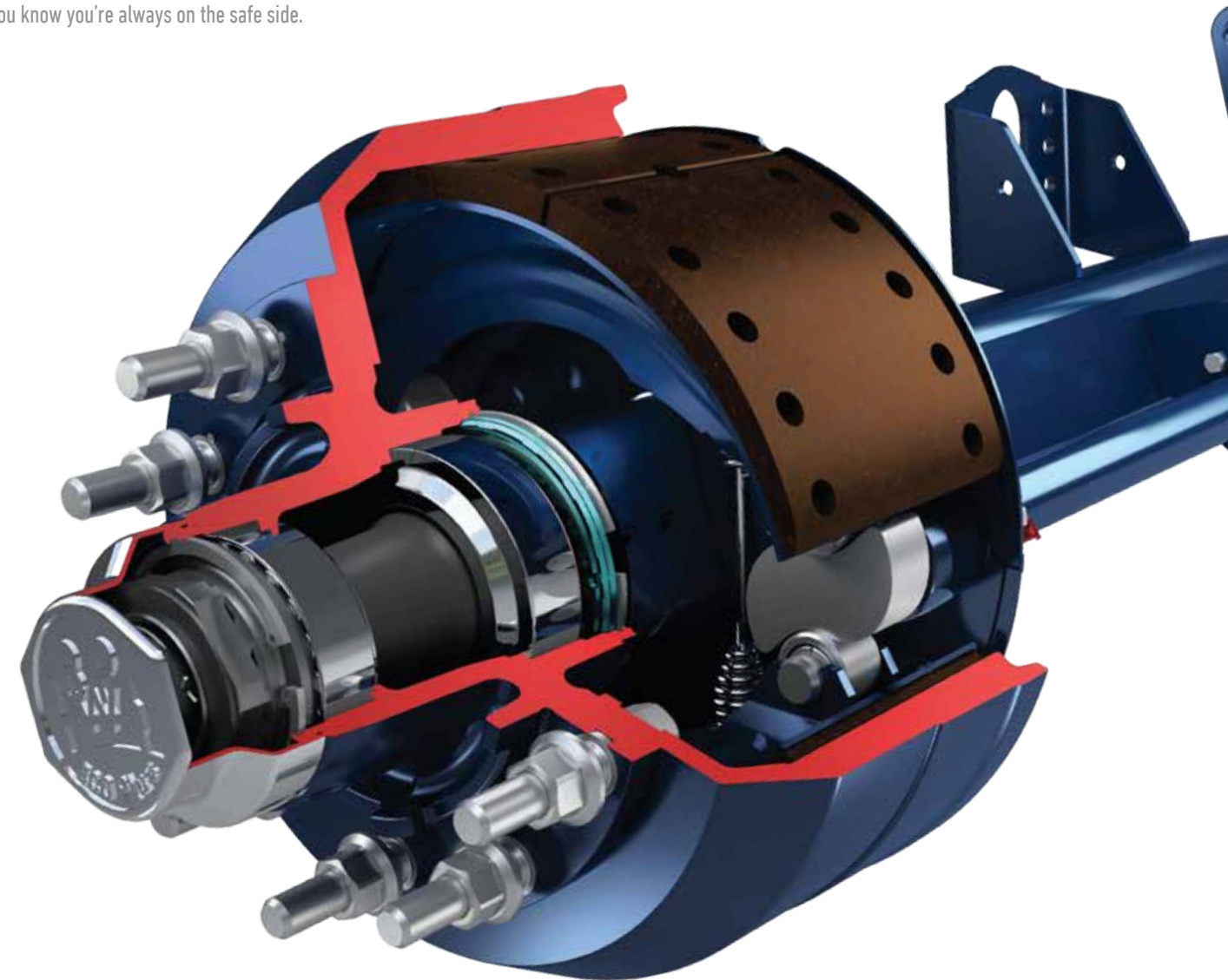
The BPW ECO-Li Plus grease was developed with the help of a wheel end test facility that BPW has established in its testing department. This facility has also been used to help improve the ISO tapered roller bearings used on BPW axles. To achieve longer service intervals on the wheel end system, bearing design and quality must be optimised. BPW has achieved a high level of competence in the tapered roller bearing field, specifying bearings to a high degree of detail, and subjecting production bearings from various suppliers to stringent testing regimes.

## SERVICEABILITY

A major advantage with the BPW ECO Plus hub unit is that it carries over the encapsulating circlip design from the ECO system. The axle nut, bearings and seal are held in the hub by circlips. The bearings and seal are not damaged when removing end refitting the hub to the axle, and the servicing of the hub is made easier. The BPW ECO Plus hub unit is fully serviceable, unlike some competitor wheel end systems. With the BPW system the wheel end can be easily inspected and service, so only worn components will need to be replaced, which will save money for the operator in the long run.

# BPW DRUM BRAKED AXLES

The proven technology and robust construction of BPW drum brakes makes them suitable for every application. They shrug off dirt and are extremely hard wearing, even under the harshest of operating conditions. And with the BPW ECO Plus Warranty, you know you're always on the safe side.





## FEATURES AND BENEFITS OF DRUM BRAKED AXLES INCLUDE:

- Universal applicability
- Lower operating and spare parts costs
- Quick and easy brake service, thanks to the patented ECO Plus principle
- Electronic trailer brake systems (EBS) suitability
- Constantly high braking effort throughout the entire service life of the brake lining
- Large amount of friction material
- Not susceptible to malfunctions thanks to a proven design principle coupled with high-quality components
- Enclosed construction enables use under the harshest conditions
- Compact in design
- Low-maintenance and low-wear camshafts/bearings and
- Low thermal load on surrounding parts.



Quick Change Brake Shoe

The sound basic design of the BPW foundation brake ensures minimal wear of the critical components and keeps both the brake linings and brake drum in constant repeatable contact with each other when the brakes are applied. This produces a significant contribution to the longevity of all brake components. Long lasting and safe braking is the result.

## NON-ASBESTOS LININGS

BPW axles are supplied with non-asbestos brake linings.

## CAM TUBES

BPW offers an option for closed camshafts for severe conditions.

## ANTI-SKID BRAKES

BPW axles are designed for the simple installation of anti-skid brake (ABS) hub hardware. The hubs are machined to accept pole rings and (in the case of square beams) the axle beam has the provision for installation of the sensor without the need for welding. Retro-fit of ABS hub hardware on BPW axles is a simple operation. BPW axles can also be supplied with factory-installed BPW ABS hub hardware.

## BPW AUTOMATIC SLACK ADJUSTERS

BPW ECO Master slack adjusters have been designed by BPW, specifically for BPW axles. This ensures optimum brake adjustment to provide constant braking performance and safety, while reducing maintenance requirements. BPW Automatic slack adjusters are available as an option on BPW axles.

## DUSTCOVERS THAT WORK

BPW has designed its foundation brake assembly to include a dust protection/dust exclusion feature. The BPW designed backing plates minimise the ingress of dust to the brake linings to further extend brake life. Inspection holes are included in these dust covers for quick and easy rake lining wear checks.

## EFFECTIVE CAMSHAFT BUSHES

BPW camshaft bushes include sintered metal high lubricant capacity spherical self-aligning inner bushes as well as outer brass bushes to ensure smooth brake application and low wear factors, for both the bushes and the camshaft.



Dust Cover



Automatic Slack Adjuster

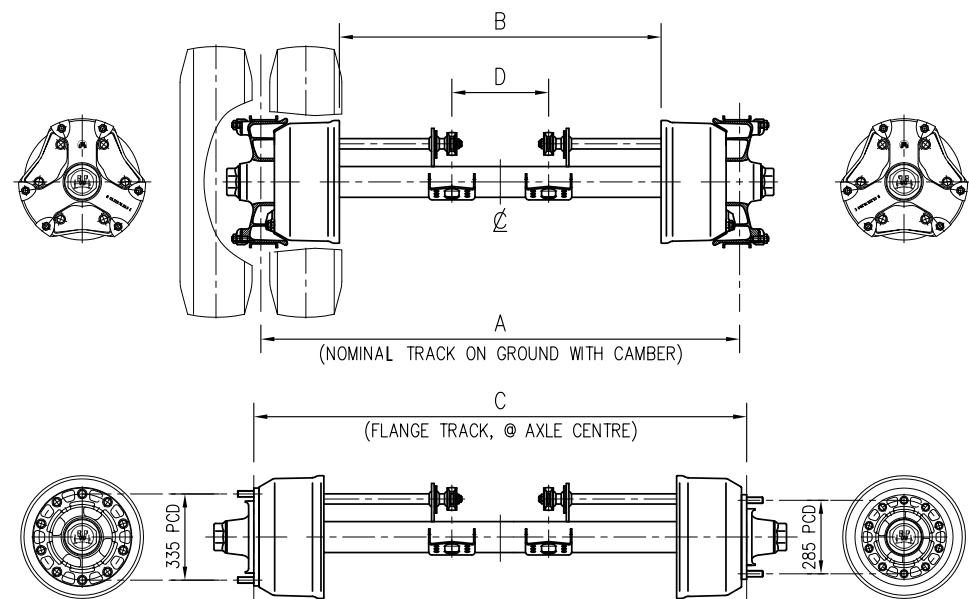


Cam tube



Camshaft

SPECIFICATIONS



	AXLE MODEL	HUB	AXLE BEAM	A Nominal Track on Ground (mm)	B Nominal b/w Drum (mm)	C Flange Track (mm)	D Slack Adjuster Centres	CRAMSHAFT LOCATION (Drawing no.)	AXLE CAPACITY 1,200mm Spring Centres (kg)	TARE WEIGHT per Axle Assembly (kg)
TO SUIT 20" SINGLE TYRES	HSM10110-15	Single 10 Stud 335 pcd ECO Plus Hub	120sq x 15mm	2,010 with steel wheels	1,462	2,007	461	BL-04	12,000	345
	HSM10010-16		150sq x 16mm					BL-06		367
	RSM10010		Ø127 x 17.5mm					BL-08		356
	HSA10110-15	Single 10 Stud 285 pcd ECO Plus Hub	120sq x 15mm	2,010 with steel wheels	1,462	2,007	461	BL-04	12,000	355
	HSA10010-16		150sq x 16mm					BL-06		377
	RSA10010		Ø127 x 17.5mm					BL-08		354

**Axle capacity:** Above figures are for vehicles travelling at 105 km/h, with axles mounted at 980mm spring centres on spring suspensions, and 950mm centres on BPW airbag suspensions.

**10 Stud Axles:** Are supplied with wheel nuts to suit ISO spigot aligned wheels.

**Lubrication:** ECO Li-Plus semi-synthetic long life bearing grease.

**Slack Adjuster:** BPW manual slack adjuster fitted as standard, BPW ECO-Master automatic slack adjusters optional.

**Tare Weights and Dimensions:** Are subject to normal manufacturing tolerances.

**Camshaft locations:** Note the standard booster locations listed above may not suit all suspension configurations. Other booster location options are available. Refer booster location chart in this brochure.

**Spider hubs:** not available for single tyres.

AXLE MODEL	HUB ECO Plus 10/12 Tonne	AXLE BEAM	A Nominal Track on Ground (mm)	B Nominal b/w Drum (mm)	C Flange Track (mm)	D Slack Adjuster Centres	CRAMSHAFT LOCATION (Drawing No.)	AXLE CAPACITY With spring suspension (kg)	AXLE CAPACITY With airbag suspension (kg)	TARE WEIGHT per Axle (kg)		
HXZ10100-15	Dual Spider	120sq x 15mm	1,840-1,850 depending on rim size	1,262	N/A	261	BL-04	12,000	10,000	384	TO SUIT 20" DUAL TYRES	
HXZ10000-16		150sq x 16mm					BL-06		12,000	402		
RXZ10000		Ø127 x 17.5mm		1,265		264	BL-08	11,000	N/A	384		
RXZH10000							BL-09	11,000				
HZM10110-15	Dual 10 Stud 335mm pcd	120sq x 15mm	1,820 with steel wheels 1,840 with aluminium wheels	1,262	1,807	261	BL-04	12,000	10,000	335		
HZM10010-16		150sq x 16mm					BL-06		12,000	353		
RZM10010		Ø127 x 17.5mm		1,265		1,810	264	BL-08	11,000	N/A		335
RZMH10010								BL-09	11,000			
HZA10110-15	Dual 10 Stud 285mm pcd	120sq x 15mm	1,820 with steel wheels 1,840 with aluminium wheels	1,262	1,807	261	BL-04	12,000	10,000	345		
HZA10010-16		150sq x 16mm					BL-06		12,000	363		
RZA10010		Ø127 x 17.5mm		1,265		1,810	264	BL-08	11,000	N/A	345	
RZAH10010								BL-09	11,000			
KHZM10108-15	Dual 8 Stud 275mm pcd	120sq x 15mm	1,825 with steel wheels	1,250	1,807	263	BL-11	11,500	10,000	325	TO SUIT 19.5" DUAL TYRES	
			1,845 with steel wheels									
NHZM10110-15	Dual ECO Plus 10/225mm pcd	120sq x 15mm	1,920 with steel wheels	1,270	1,900	279	BL-36	10,000	10,000	300	TO SUIT 15" DUAL TYRES	
			1,830 with steel wheels	1,180	1,810	259	BL-36	10,000	10,000	300		

**Axle capacity:** Above figures are for vehicles travelling at 105 km/h, with axles mounted at 980mm spring centres on spring suspensions, and 950mm centres on BPW airbag suspensions.

**10 Stud Axles:** Are supplied with wheel nuts to suit ISO spigot aligned wheels.

**Dual Spider Hubs:** 20" accept 4.25" spacer bands.

**Lubrication:** ECO Li-Plus semi-synthetic long life bearing grease.

**Slack Adjuster:** BPW manual slack adjuster fitted as standard, BPW

ECO-Master automatic slack adjusters optional.

**Tare Weights and Dimensions:** Are subject to normal manufacturing tolerances.

**Camshaft locations:** Note the standard booster locations listed above may not suit all suspension configurations. Other booster location options are available. Refer booster location chart in this brochure.

**Spider hubs:** not available for single tyres and not for 19.5" and 15".



CAMSHAFT AND BOOSTER LOCATIONS

<< Direction of Travel

BPW DISC BRAKED AXLES



120MM SQUARE AXLE BEAM SN4218 Brakes, for 20/22.5" tyres				
STANDARD	OPTIONAL			
BL-04	BL-01	BL-03	BL-05	BL-18

127MM ROUND AXLE BEAM SN4218 Brakes, for 20/22.5" tyres		150MM SQUARE AXLE BEAM SN4218 Brakes, for 20/22.5" tyres	
STANDARD OVERSLUNG	STANDARD UNDERSLUNG	STANDARD	OPTIONAL
BL-08	BL-09	BL-06	BL-07

120MM SQUARE AXLE BEAM SN3620 Brakes, for 19.5" tyres		
STANDARD	OPTIONAL	STANDARD
BL-11	BL-12	BL-36

**NOTE**  
The correct booster pushrod length is shown on these diagrams, and is measured from the mounting face of the brake chamber to the centre line of the clevis pin with the brakes released. Any other length will impair brake efficiency. The correct brake chamber size and slack adjuster lever arm length are determined by the trailer manufacturer, taking into consideration axle loads, tyre size, vehicle configuration and regulatory requirements. With the above diagrams, the booster size and slack adjuster mounting locations are shown for reference only. Dimensial drawings are available from BPW Transpec.

BPW's disc brake system, the ECODisc, was specially designed, engineered and tested for heavy commercial trailer use.

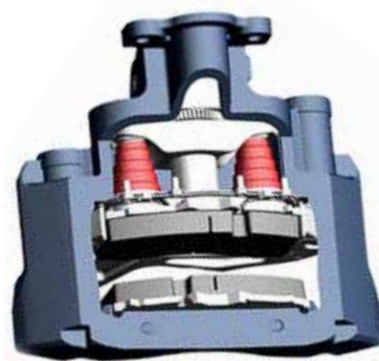
The ECODisc is compact in design, which enables the disc brake system to be fully integrated into the BPW running gear system. BPW has succeeded in connecting the brake directly to the axle beam providing the advantage of greater stability and less weight, resulting in improved efficiencies and higher payloads for the operator.

Another benefit of the ECODisc is that the bellows covering the guide pins have been moved inwards so they are better protected against external damage, to stop dirt and moisture from penetrating the braking system.

Yet another plus for the new BPW disc brake design is that the caliper adjustment mechanism uses a 'twin tappet' tensioning process, producing even more pad wear combined with a more controlled robust adjustment.

Serviceability is a key saving factor with the ECODisc, with record turnaround service times for pad and disc changes, the positioning of the adjustment tool is easier to access, and as it is recessed, is fully protected against external damage.

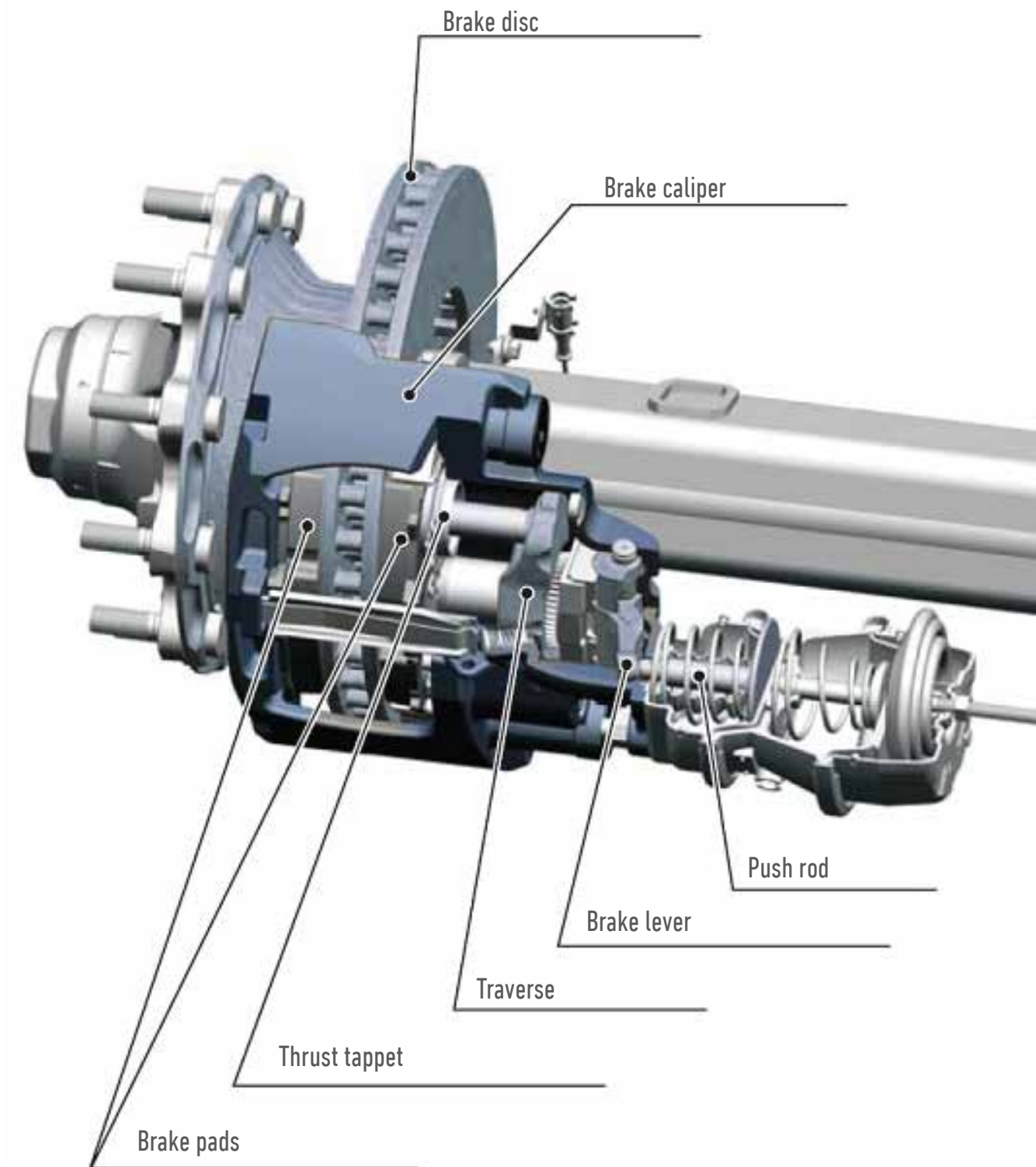
In addition to the technical superiority, a major advantage of the ECODisc is that it has been solely created by BPW for its axle and air suspension systems resulting in a totally integrated package, now obtainable from a single manufacturing source.



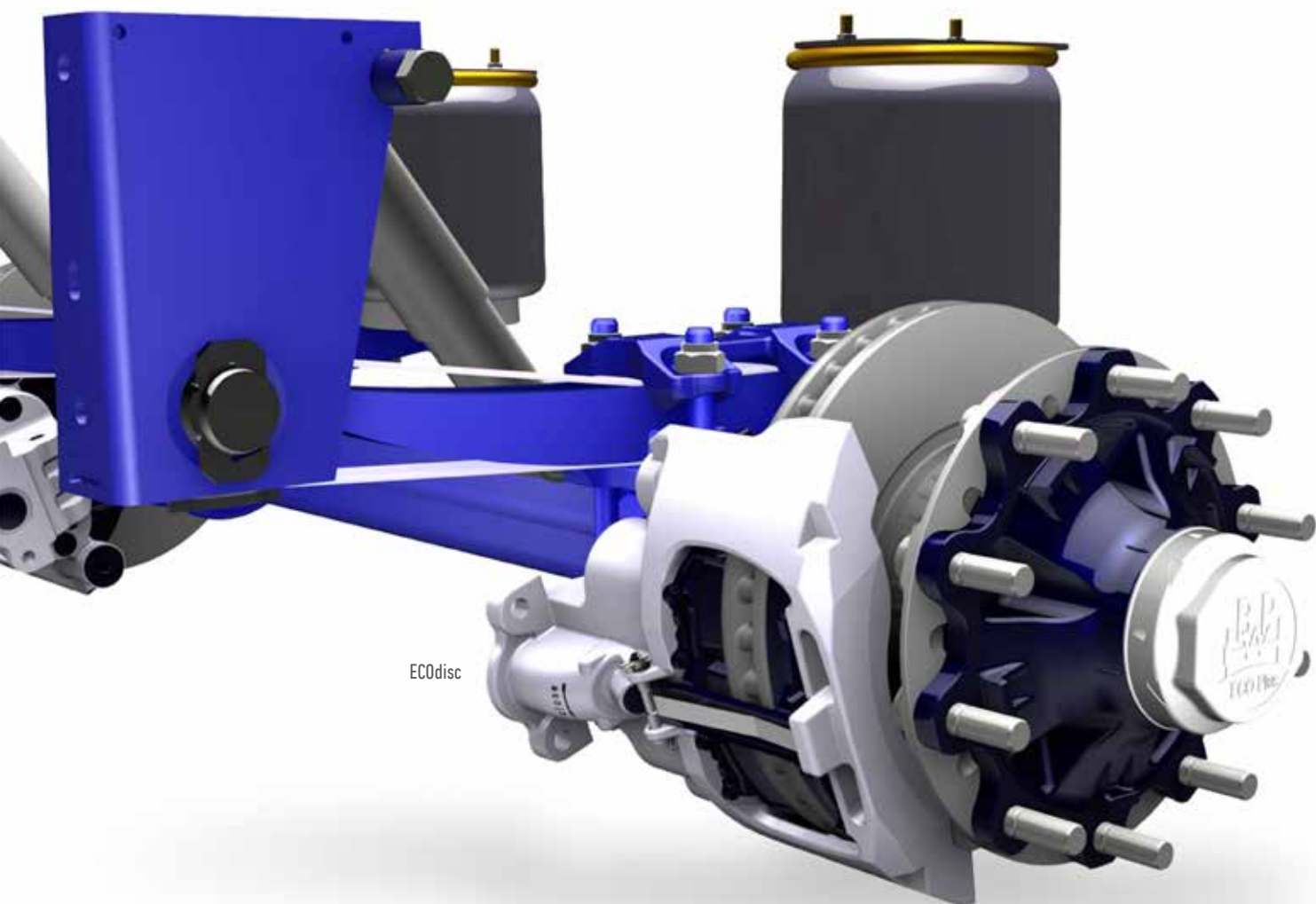
BPW ECODisc compact system



Adjuster mounted inboard for optimum protection





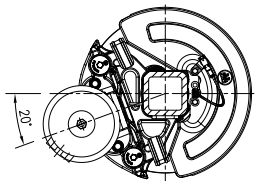
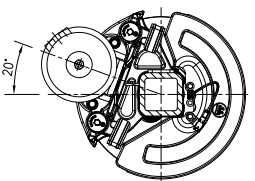


### FEATURES AND BENEFITS OF DISC BRAKED AXLES INCLUDE:

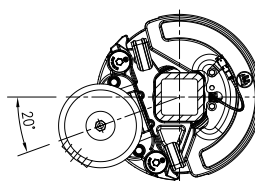
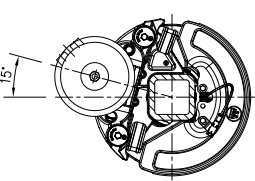
- Significant weight savings
- Superior brake performance
- Automatically adjusting brakes
- No grease points
- Easy to change pads
- Twin tappet brake caliper system for longer lasting even brake wear
- Designed to minimise wear and tear of the critical components
- The result of decades of in-field performance experience from all over the world

### BOOSTER LOCATIONS

<< Direction of Travel

120MM SQUARE AXLE BEAM TSB4309 BPW Eco Disc Brake	
STANDARD OVERSLUNG	STANDARD UNDERSLUNG
BL-28	BL-29
	
<<	<<

Main Guide Pin  
(i.e., Longer Pin) to  
be positioned  
to bottom

120MM SQUARE AXLE BEAM TSB3709 BPW Eco Disc Brake	
STANDARD OVERSLUNG	STANDARD UNDERSLUNG
BL-32	BL-33
	
<<	<<

Main Guide Pin  
(i.e., Longer Pin) to  
be positioned  
to bottom

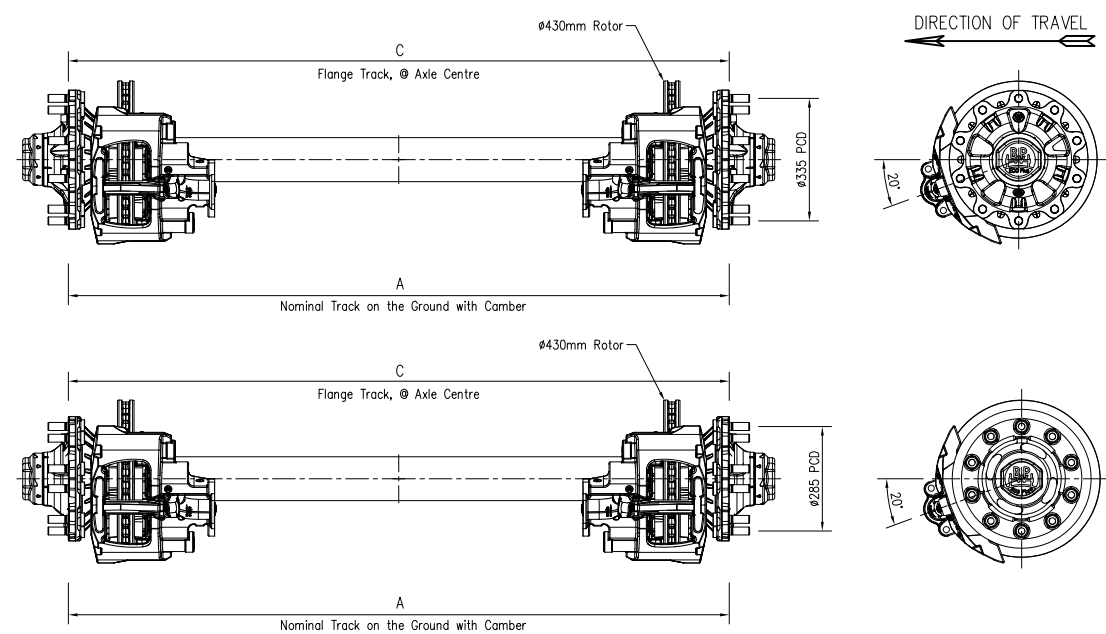
#### NOTE

The correct booster pushrod length is shown on these diagrams, and is measured from the mounting face of the brake chamber to the centre line of the clevis pin with the brakes released. Any other length will impair brake efficiency. The correct brake chamber size and slack adjuster lever arm length are determined by the

trailer manufacturer, taking into consideration axle loads, tyre size, vehicle configuration and regulatory requirements. With the above diagrams, the booster size and slack adjuster mounting locations are shown for reference only. Dimensional Drawings are available from BPW Transpec.



SPECIFICATIONS



**Axle capacity:** Above figures are for vehicles travelling at 105 km/h, with axles mounted at 980mm spring centres on spring suspensions, and 950mm centres on BPW airbag suspensions.  
**10 Stud Axles:** Are supplied with wheel nuts to suit ISO spigot aligned wheels.  
For 10 stud 285 dual alloys the standard wheel hole diameter 26mm is required.  
For 10 stud 335 dual alloys the wheel hole diameter of 32mm or 33mm and BPW sleeved axle nuts are required.

**Lubrication:** ECO Li-Plus semi-synthetic long life bearing grease.  
**Tare Weights and Dimensions:** Are subject to normal manufacturing tolerances.  
**Camshaft locations:** Note the standard booster locations listed above may not suit all suspension configurations. Other booster location options are available. Refer booster location chart in this brochure.  
**Spider hubs:** not available for disc brakes.

AXLE MODEL	HUB ECO Plus 10/12 Tonne	AXLE BEAM	A Nominal Track on Ground (mm)	C Flange Track (mm)	BOOSTER LOCATION (Drawing No.)	AXLE CAPACITY With spring sus- pension (kg)	AXLE CAPACITY With airbag sus- pension (kg)	TARE WEIGHT per Axle (kg)	TO SUIT 20" DUAL / SINGLE TYRES
SHZM10110-15	Dual 10 Stud 335mm pcd	120sq x 15mm	1,820 with steel wheels 1,840 with alum wheels	1,807	BL-28	12,000	10,000	317	
SHZA10110-15	Dual 10 Stud 285mm pcd	120sq x 15mm	1,820 with steel wheels 1,840 with alum wheels	1,807	BL-28	12,000	10,000	307	
SHSM10110 -15	Single 10 Stud 335mm pcd	120sq x 15mm	2,053 with steel wheels 2,063 with alum wheels	2,040	BL-29	12,000	10,000	328	
SHSA10110 -15	Single 10 Stud 285mm pcd	120sq x 15mm	2,053 with steel wheels 2,063 with alum wheels	2,040	BL-30 BL-31	12,000	10,000	317	TO SUIT 20" DUAL / SINGLE TYRES

AXLE MODEL	HUB	AXLE BEAM	A Nominal Track on Ground (mm)	B Nominal b/w Drum (mm)	C Flange Track (mm)	D Slack Adjuster Centres	CRAMSHAFT LOCATION (Drawing No.)	AXLE CAPACITY With spring sus- pension (kg)	AXLE CAPACITY With airbag sus- pension (kg)	TARE WEIGHT per Axle (kg)	TO SUIT 19.5" DUAL TYRES
KHZM10108-15	Dual 8 Stud 275mm pcd	120sq x 15mm	1,825 with steel wheels 1,825 with alum wheels	1,250	1,807	263	BL-11	11,500	10,000	325	

**Axle capacity:** Above figures are for vehicles travelling at 105 km/h, with axles mounted at 980mm spring centres on spring suspensions, and 950mm centres on BPW airbag suspensions.  
**10 Stud Axles:** Are supplied with wheel nuts to suit ISO spigot aligned wheels.  
**Lubrication:** ECO Li-Plus semi-synthetic long life bearing grease.  
**Slack Adjuster:** BPW manual slack adjuster fitted as standard, BPW ECO-Master automatic slack adjusters optional.

**Tare Weights and Dimensions:** Are subject to normal manufacturing tolerances.  
**Camshaft locations:** Note the standard booster locations listed above may not suit all suspension configurations. Other booster location options are available. Refer booster location chart in this brochure.  
**Spider hubs:** not available for single tyres and not for disc brakes.

# BPW SELF-STEERING AXLES

## CORNER SAFELY AND SMOOTHLY USING THE BPW SELF STEERING AXLE

The enormous advantages of the steering axle include better manoeuvrability, reduced wear on all tyres and less fuel consumption. As a result, the BPW self-steering axle is the right economical solution for delivery and distribution trailers, with operations chiefly consisting of journeys in congested metropolitan and city areas.

Conventional steering axle designs require steering stabilisers powered from an external source – this is not the case with the BPW self-steering axle. The axle beam and axle stub are connected with undulating thrust bearings via steering pivots. When driving straight ahead the undulations in the thrust washers help keep the wheels pointing straight ahead. The weight of the vehicle presses the undulating contours of the upper and lower thrust washers to keep the wheels on track. The wheels remain stable in the correct straight-ahead position.



Undulating pressure bearing in the 'straight ahead' position (left) and 'steering' position (right)

When the semi-trailer follows the prime mover unit into a curve, the wheel caster action ensures the wheels turn in accordance with the curve radius (the thrust washers slide over one another). The self centering force generated by the thrust washers increases with axle load, which is what is required. As a result, a steering angle (of 8 to 27 deg, depending on the axle type) is achieved according to the load, and is entirely controlled by mechanical means. The link connecting the wheels uses a steering lock to prevent the wheels from steering when the vehicle is reversing.

The BPW steering axle means that the trailer corners better and more closely follows the same track as the truck. The lateral tyre forces arising are optimally distributed between all the axles, especially with a tri-axle trailer. Every axle experiences significantly lower lateral tyre forces; as a result, it has been shown that the life of the tyres on the front axle and the rear axles increases dramatically on a tri-axle trailer when fitted with a steer axle.

The BPW-developed undulating pressure bearing system is both low maintenance and rugged due to its simplicity. The BPW self-steering axle is available with a range of BPW brake systems, and to suit single or dual tyres. Self-steering axles must be fitted in axle groups that have non-steering axles as well, a maximum of one self-steering axle can be fitted on a tandem or triaxle group, and up to two self-steering axles can be fitted on a quad axle group.



BPW SELF STEERING TRAILER AXLES 9 to 12 tonne AUSTRALIAN RANGE					AXLE BEAM OPTIONS		HUB OPTIONS				
BPW MODEL RANGE	TO SUIT TYRE SIZE	BRAKE MODEL	BRAKE TYPE	BRAKE SIZE	120mm Square Solid	150mm Square Hollow	Spider	10 stud 225mm pcd	8 stud 275mm pcd	10 stud 285mm pcd	10 stud 335mm pcd
HLL Series	20", 22.5"	SN4218	Drum	Ø420x180mm	•	•	•			•	•
KMLL Series	19.5"	SN3620	Drum	Ø360x200mm	•				•		
NMLL Series	15", 17.5"	SN3020	Drum	Ø300x200mm	•			•			
SMLL Series	20", 22.5"	TSB4309	Disc	Ø430mm	•					•	•
SKMLL Series	19.5"	TSB3709	Disc	Ø370mm	•				•		

Self Steering Trailer Axle





# ADDITIONAL INFORMATION AXLES

## AXLE LOAD CAPACITY

The axle load capacities given are for axles installed with conventional spring suspensions at the nominated spring centres and should be regarded as maximum figures at 105km/h.

The following increases are permissible at reduced speeds:

- Maximum speed 40km/h plus 10%
- Maximum speed 25km/h plus 25%
- Maximum speed 10km/h plus 40%

When the axle is installed with other suspension types, axle capacity may change. Axle capacity may also be affected by changing the spring centres.

## TRACK

Alternative Axle Tracks are available to special order.

## 8/10 STUD TYPE WHEEL FIXING

BPW axles with 8 Stud or 10 Stud Wheel fixing are offered as standard with ISO spigot alignment type wheel location. Stud alignment is available as an option on most BPW axles.

## AXLE BEAM CAMBER

BPW axles are supplied with positive camber. Round beam BPW axles have a top mark to ensure correct orientation.

## LUBRICATION

BPW axles are lubricated with long life semi-synthetic ECO-Li Plus grease.

## CAMSHAFT ROTATION

ALL BPW drum brake axles should be fitted with camshaft rotation to be in the same direction as the wheel rotation in forward motion.

## BPW ADR APPROVAL NUMBERS

BPW brakes conform to ADR38/04

BRAKE SIZE/MODEL	ADR APPROVAL NO.	APPLICATION
Ø420x180 Drum SN4218	6916	Axles for 20"/22.5" wheels up to 12 tonne capacity
Ø420x200 Drum SN4220	25474	Axles for 20"/22.5"/24" wheels over 12 tonne capacity
Ø300x200 Drum SN3020	16593	Axles for 15"/17.5" wheels
Ø360x200 Drum SN3620	10155	Axles for 19.5" wheels
Ø370 Disc TSB3709	25677	Axles for 19.5" tyres
Ø430 Disc TSB 4309	31666	Axles for 20"/22.5" tyres

# BPW AIRLIGHT II AIR SERIES SUSPENSIONS

BPW Airlight AL II Highway series suspensions have highly efficient monoleaf 70mm wide trailing arm springs, pressed hangers, webbing sling axle restraints (wrapped around the shock absorbers) and are supplied as standard with BPW Type 30 or 30K airbags. On most Airlight II models, cable catchstraps and Type 36 airbags are available as options.

## FEATURES AND BENEFITS OF BPW AIRLIGHT II AIR SUSPENSIONS:

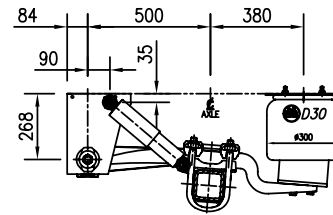
- Less tare weight yet stronger components
- Greater roll stiffness than previous Highway Series suspensions thanks to the new trailing arm
- Flexible trailing arm offers best possible wheel control, safer driving characteristics with reduced stress on the trailer chassis
- Highest driving comfort and sensitive 'soft-ride' handling of the cargo
- Easy to service - thanks to the modular design
- Easy to install - due to the narrow, straight hanger brackets
- Excellent stability characteristics and optimum roll resistance
- Reduced tyre wear due to the axle control of the steel-rubber-steel bushes
- Optimum axle load equalisation
- National off-the-shelf genuine spare parts for minimal downtime

(Available with either BPW drum or disc brake technology)



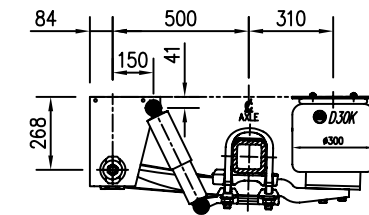


## AUSTRALIAN RANGE STANDARD OVERSLUNG

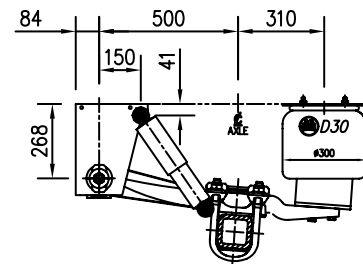


AM/-D30 BPW 120mm Square Axle beam			
RIDE HEIGHT (Range) (mm)	RIDE HEIGHT with Axle lift (mm)	HEIGHT WITHOUT AIR	
		LADEN (mm)	UNLADEN (mm)
375-395	395	290	305
CAPACITY (kg)	TARE WEIGHT/ AXLE MODULE (kg)		DRAWING NUMBER
9,000	165		AM-0003

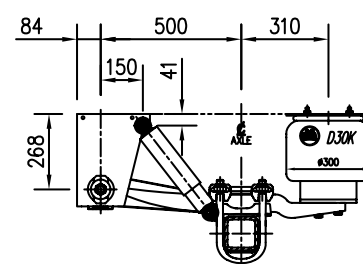
## AUSTRALIAN RANGE STANDARD UNDERSLUNG



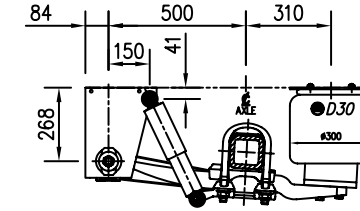
AU/-D30K BPW 120mm Square Axle beam			
RIDE HEIGHT (Range) (mm)	RIDE HEIGHT with Axle lift (mm)	HEIGHT WITHOUT AIR	
		LADEN (mm)	UNLADEN (mm)
210-250	245-250	130	145
CAPACITY (kg)	TARE WEIGHT/ AXLE MODULE (kg)		DRAWING NUMBER
9,000	160		AU-0004



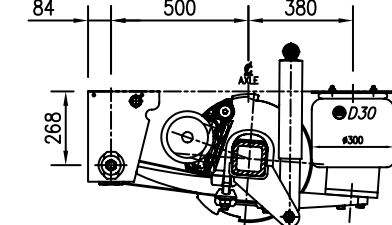
AO/-D30 BPW 120mm Square Axle beam			
RIDE HEIGHT (Range) (mm)	RIDE HEIGHT with Axle lift (mm)	HEIGHT WITHOUT AIR	
		LADEN (mm)	UNLADEN (mm)
460-480	480	375	390
CAPACITY (kg)	TARE WEIGHT/ AXLE MODULE (kg)		DRAWING NUMBER
9,000	158		AO-0004FA



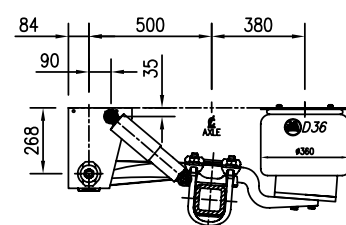
AO/-D30K BPW 120mm Square Axle beam			
RIDE HEIGHT (Range) (mm)	RIDE HEIGHT with Axle lift (mm)	HEIGHT WITHOUT AIR	
		LADEN (mm)	UNLADEN (mm)
425-455	455	345	360
CAPACITY (kg)	TARE WEIGHT/ AXLE MODULE (kg)		DRAWING NUMBER
9,000	156		AO-0005FD



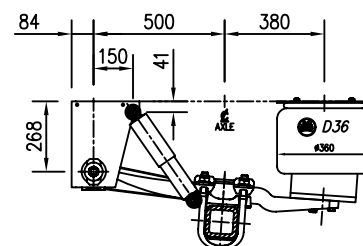
AU/-D30 BPW 120mm Square Axle beam			
RIDE HEIGHT (Range) (mm)	RIDE HEIGHT with Axle lift (mm)	HEIGHT WITHOUT AIR	
		LADEN (mm)	UNLADEN (mm)
245-265	265	160	175
CAPACITY (kg)	TARE WEIGHT/ AXLE MODULE (kg)		DRAWING NUMBER
9,000	162		AU-0011



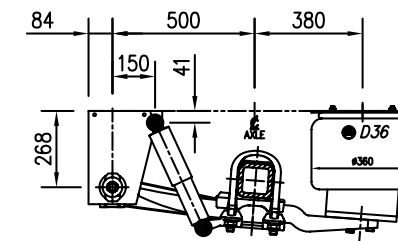
AU/-D30 BPW 120mm Square Axle beam and BPW Disc Brake			
RIDE HEIGHT (Range) (mm)	RIDE HEIGHT with Axle lift (mm)	HEIGHT WITHOUT AIR	
		LADEN (mm)	UNLADEN (mm)
245-265	265	160	175
CAPACITY (kg)	TARE WEIGHT/ AXLE MODULE (kg)		DRAWING NUMBER
9,000	184		AU-0002FA



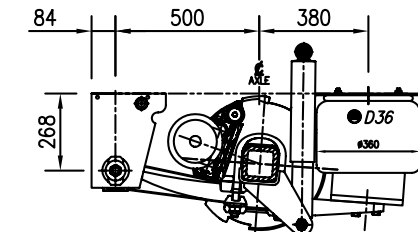
AM/-D36 BPW 120mm Square Axle beam			
RIDE HEIGHT (Range) (mm)	RIDE HEIGHT with Axle lift (mm)	HEIGHT WITHOUT AIR	
		LADEN (mm)	UNLADEN (mm)
375-395	395	290	305
CAPACITY (kg)	TARE WEIGHT/ AXLE MODULE (kg)		DRAWING NUMBER
9,000	174		AM-0005



AO/-D36 BPW 120mm Square Axle beam			
RIDE HEIGHT (Range) (mm)	RIDE HEIGHT with Axle lift (mm)	HEIGHT WITHOUT AIR	
		LADEN (mm)	UNLADEN (mm)
460-480	480	375	390
CAPACITY (kg)	TARE WEIGHT/ AXLE MODULE (kg)		DRAWING NUMBER
9,000	172		AO-0009

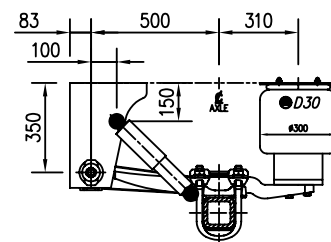


AU/-D36 BPW 120mm Square Axle beam			
RIDE HEIGHT (Range) (mm)	RIDE HEIGHT with Axle lift (mm)	HEIGHT WITHOUT AIR	
		LADEN (mm)	UNLADEN (mm)
245-265	265	160	175
CAPACITY (kg)	TARE WEIGHT/ AXLE MODULE (kg)		DRAWING NUMBER
9,000	177		AU-0013

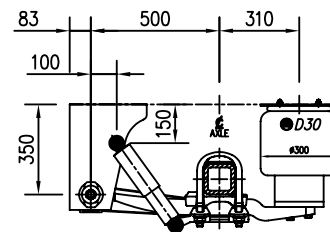


AU/-D36 BPW 120mm Square Axle beam and BPW Disc Brake			
RIDE HEIGHT (Range) (mm)	RIDE HEIGHT with Axle lift (mm)	HEIGHT WITHOUT AIR	
		LADEN (mm)	UNLADEN (mm)
245-265	265	160	175
CAPACITY (kg)	TARE WEIGHT/ AXLE MODULE (kg)		DRAWING NUMBER
9,000	195		AU-0017

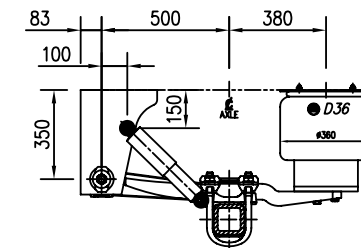
## SPECIAL CONFIGURATIONS



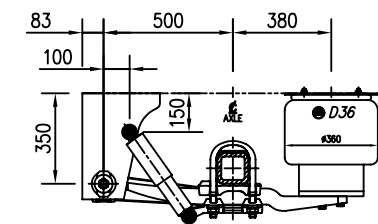
AO/-D30 BPW 120mm Square Axle beam			
RIDE HEIGHT (Range) (mm)	RIDE HEIGHT with Axle lift (mm)	HEIGHT WITHOUT AIR	
		LADEN (mm)	UNLADEN (mm)
500-550	520-550	405	420
CAPACATY (kg)	TARE WEIGHT/ AXLE MODULE (kg)	DRAWING NUMBER	
9,000	165	AO-0011	



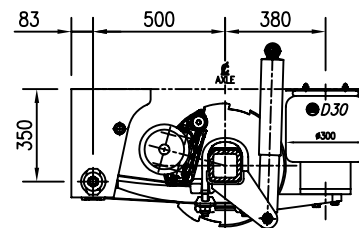
AU/-D30 BPW 120mm Square Axle beam			
RIDE HEIGHT (Range) (mm)	RIDE HEIGHT with Axle lift (mm)	HEIGHT WITHOUT AIR	
		LADEN (mm)	UNLADEN (mm)
280-335	305-335	190	205
CAPACITY (kg)	TARE WEIGHT/ AXLE MODULE (kg)	DRAWING NUMBER	
9,000	169	AU-0014	



<b>A0/-D36</b> <b>BPW 120mm Square Axle beam</b>			
<b>RIDE HEIGHT (Range) (mm)</b>	<b>RIDE HEIGHT with Axle lift (mm)</b>	<b>HEIGHT WITHOUT AIR</b>	
		<b>LADEN (mm)</b>	<b>UNLADEN (mm)</b>
500-550	530-550	415	430
<b>CAPACITY (kg)</b>	<b>TARE WEIGHT/ AXLE MODULE (kg)</b>	<b>DRAWING NUMBER</b>	
9,000	179	A0-0014	



AU/-D36 BPW 120mm Square Axle beam			
RIDE HEIGHT (Range) (mm)	RIDE HEIGHT with Axle lift (mm)	HEIGHT WITHOUT AIR	
		LADEN (mm)	UNLADEN (mm)
285-335	315-335	200	215
CAPACITY (kg)	TARE WEIGHT/ AXLE MODULE (kg)	DRAWING NUMBER	
9,000	184	AU-0018	



AU/-D30 BPW 120mm Square Axle beam			
RIDE HEIGHT (Range) (mm)	RIDE HEIGHT with Axle lift (mm)	HEIGHT WITHOUT AIR	
		LADEN (mm)	UNLADEN (mm)
285-335	315-335	200	215
CAPACATY (kg)	TARE WEIGHT/ AXLE MODULE (kg)	DRAWING NUMBER	
9.000	191	AU-0016FA	

### NOTE

**NOTE** The BPW Air Suspension Technical Specifications included in this brochure are correct at the time of publication. Changes to the BPW Air Suspension Technical Specifications herewith may occur in future in conjunction with ongoing BPW product development.

## TECHNICAL SPECIFICATIONS

**Tare weight** includes axle seats. Add 7kg per axle for catchstraps axle restraints. For piping kit with 60 litre airtank add 25kg per suspension group.

**Ride height** is measured from centre of the axle vertically up to the top of the hanger.

**Drawbar hangers** are available for most of the BPW Heavy Duty suspension range, which includes tapered bushes and pin to attach a hinged drawbar.

**Capacity** is given as kg per axle module for suspensions fitted at 950mm spring centres on BPW axles fitted with dual tyres.

**Axle restraints:** Cable catchstraps are supplied as standard on Heavy Duty suspensions.

**Axles** that are suitable for BPW Heavy Duty air suspensions are:  
BPW 120mm square beam axles; BPW 150mm square beam axles.

**Special configurations** of BPW air suspensions are available to suit specialised trailer needs. For more details please contact your nearest BPW Transpec office.

# BPW HEAVY DUTY AIR SUSPENSIONS

BPW offers a comprehensive range of trailer air suspensions designed to perform under various operating conditions, from low tare weight configurations for highway applications to heavy duty off-road models up to 14 tonne per axle capacity.

BPW air suspensions are ADR approved and have been customised to suit Australian conditions. BPW axle/air suspension systems are available to suit various tyre sizes, trailer lengths and widths.

BPW was first to introduce a fully integrated axle, air suspension and braking system – all designed and engineered by BPW to work in harmony with unsurpassed component compatibility and performance.

## BPW AIR SUSPENSION SYSTEMS - DESIGNED TO STAY ON THE ROAD

Making trailer running gear systems even safer, lighter and more maintenance-friendly continues to be the driving force behind the BPW design and development activities.

## TOUGH TESTING UNDER EXTREME CONDITIONS

BPW carries out testing in its test and development centre at company headquarters in Wiehl, where BPW has a 12-channel module test rig. On a real-time basis all possible sources of stress on complete running gear systems in road operation – such as vertical, shear and longitudinal forces or braking, steering and pitching moments – are perfectly simulated and analysed.

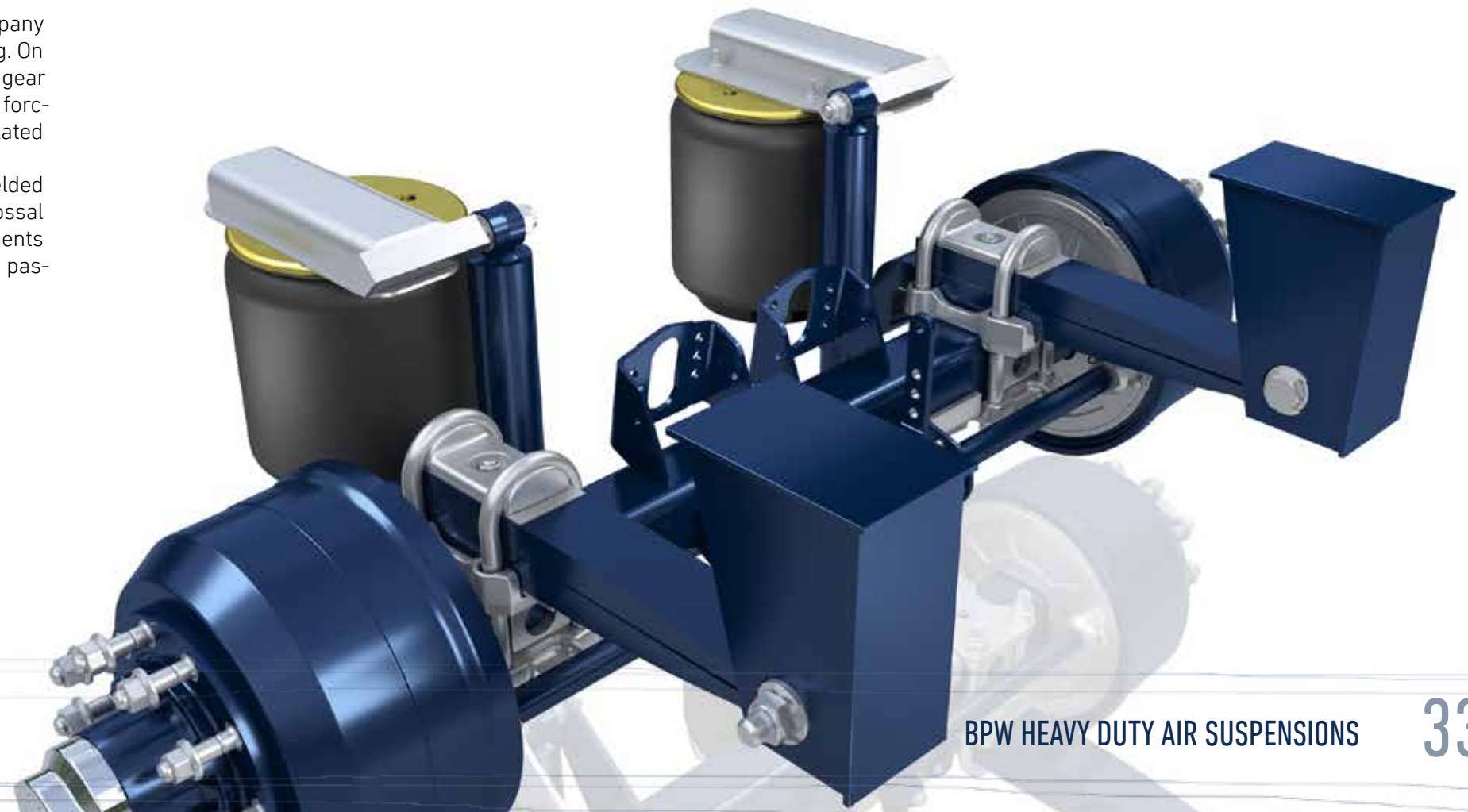
In the testing process, six massive clamping supports, made of welded steel plates, grip the trailer's suspension frame on all sides like colossal pincers. The machine puts the test object through up to 40 movements per second; until now this kind of testing has been applied only to passenger cars.

The BPW Heavy Duty airbag suspension range is well proven, and is recommended for on/off road conditions. For decades the BPW O, OM and OT models have been refined to an almost 'bullet-proof' status in extreme operating conditions both here and overseas. BPW Heavy Duty airbag suspensions are characterised by double-leaf 100mm wide trailing arm springs, heavy duty fabricated hangers, cable catch straps and the large BPW Type 36 airbags, all supplied as standard equipment.

## FEATURES AND BENEFITS OF BPW HEAVY DUTY AIR SUSPENSIONS:

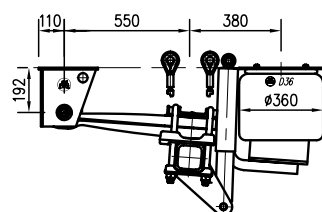
- Robust design
- Excellent stability characteristics and optimum roll resistance
- Flexible trailing arm offers best possible wheel control, safer driving characteristics with reduced stress on the trailer chassis
- Highest driving comfort and sensitive 'soft-ride' handling of the cargo
- Easy to service - thanks to modular design
- Easy to install
- Reduced tyre wear due to the axle control of the steel-rubber-steel bushes
- Optimum axle load equalisation
- National off-the-shelf genuine spare parts for minimal downtime

(Available with either BPW drum or disc brake technology).

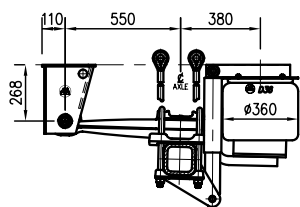




## AUSTRALIAN RANGE



OM/-D36 BPW 120mm Square Axle beam			
RIDE HEIGHT (Range) (mm)	RIDE HEIGHT with Axle lift (mm)	HEIGHT WITHOUT AIR	
		LADEN (mm)	UNLADEN (mm)
370-400	400	285	300
CAPACITY (kg)	TARE WEIGHT/ AXLE MODULE (kg)	DRAWING NUMBER	
10,000	247	OM-0004	



OM/-D36 BPW 150mm Square Axle beam			
RIDE HEIGHT (Range) (mm)	RIDE HEIGHT with Axle lift (mm)	HEIGHT WITHOUT AIR	
		LADEN (mm)	UNLADEN (mm)
450-480	480	365	380
CAPACITY (kg)	TARE WEIGHT/ AXLE MODULE (kg)	DRAWING NUMBER	
12,000	272	OM-0001FD	

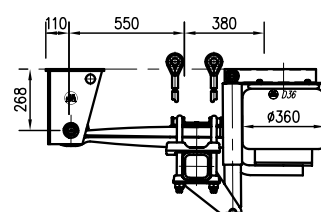
### NOTE

The BPW Air Suspension Technical Specifications included in this brochure are correct at the time of publication. Changes to the BPW Air Suspension Technical Specifications herewith may occur in future in conjunction with ongoing BPW product development.

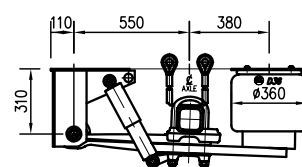
### TECHNICAL SPECIFICATIONS

**Tare weight** includes axle seats. Add 7kg per axle for catchstraps axle restraints. For piping kit with 60 litre airtank add 25kg per suspension group.

**Ride height** is measured from centre of the axle vertically up to the top of the hanger.



OM/-D36 BPW 120mm Square Axle beam			
RIDE HEIGHT (Range) (mm)	RIDE HEIGHT with Axle lift (mm)	HEIGHT WITHOUT AIR	
		LADEN (mm)	UNLADEN (mm)
425-465	465	350	365
CAPACITY (kg)	TARE WEIGHT/ AXLE MODULE (kg)	DRAWING NUMBER	
10,000	262	OM-0001	



OT/-D36 BPW 120mm Square Axle beam			
RIDE HEIGHT (Range) (mm)	RIDE HEIGHT with Axle lift (mm)	HEIGHT WITHOUT AIR	
		LADEN (mm)	UNLADEN (mm)
220-270	270	155	170
CAPACITY (kg)	TARE WEIGHT/ AXLE MODULE (kg)	DRAWING NUMBER	
10,000	237	OT-0003FO	

**Drawbar hangers** are available for most of the BPW Heavy Duty suspension range, which includes tapered bushes and pin to attach a hinged drawbar.

**Capacity** is given as kg per axle module for suspensions fitted at 950mm spring centres on BPW axles fitted with dual tyres.

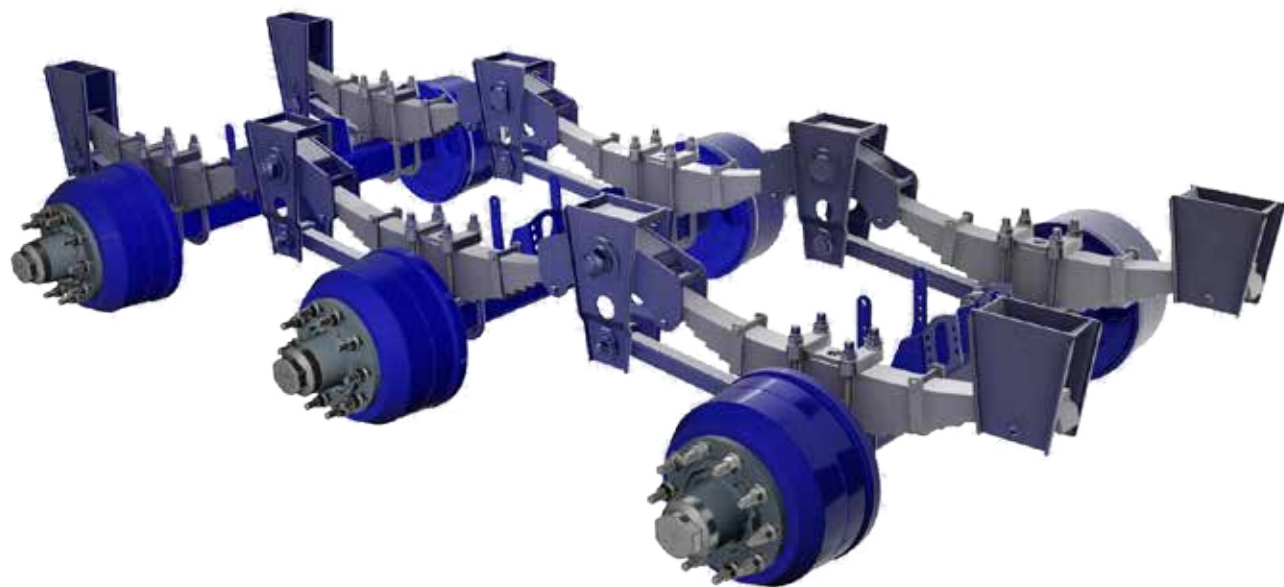
**Axle restraints:** Cable catchstraps are supplied as standard on Heavy Duty suspensions.

**Axles** that are suitable for BPW Heavy Duty air suspensions are: BPW 120mm square beam axles; BPW 150mm square beam axles.

**Special configurations** of BPW air suspensions are available to suit specialised trailer needs. For more details please contact your nearest BPW Transpec office.

# BPW MECHANICAL SUSPENSION

Wherever the conditions pose a challenge and the next workshop cannot be reached, BPW mechanical suspension comes into its own. This is because the VB suspension has been constructed in such a way that it can also cope with difficult road conditions and can be quickly and easily repaired, should this be required. Furthermore, the latest generation possesses an optimised bushing of the connecting rods and low-wear, long life wear plates. Assembly and, in particular, track setting have however also been made even easier by employing tried and tested technology from the high-volume BPW air suspension series. The precise track setting as well as optimum positioning of the connecting rods, after all, ensure less tyre wear and therefore even more cost-effectiveness.



WHEEL BASE (RS) (MM)		SPRING	RIDE HEIGHT (FH) (MM)		SUSPENSION WEIGHT <sup>2)</sup> (KG)		
			laden <sup>1)</sup>	unladen	single axle	2-axle	3-axle
1,360	9t	multi-leaf spring	367	409	494	1,015	1,536
	12t		390	432	584	1,194	1,805
	12t	parabolic spring	377	396	530	1,086	1,643

<sup>1)</sup> Take account of clearance for dynamic upward travel and equalizing route with suspension axles.

<sup>2)</sup> Weight without wheels and tyres; weight tolerances are within the permitted DIN tolerances for the respective production procedures.

# ADDITIONAL INFORMATION

## AIR SUSPENSIONS

BPW offers a range of airbag suspension models which are optimised to suit a large variety of operating conditions. The new BPW Airlight II range suits highway conditions and supersedes the AL and SL range. The Heavy Duty range of O, OM and OT models continue to cover more extreme road conditions and for axles loads up to 12 tonne. BPW also offers an extra heavy duty suspension with axle loads up to 14 tonne for mining operations.

### MODULAR SYSTEM

BPW airbag suspensions have been designed with the philosophy that equipment must have lowest possible whole-of-life costs. The similarities between BPW and other brand air suspensions are only superficial, the many differences are in the details of suspension component design and selection, and quality of workmanship, the small things that are all important when adding up the total cost of the running gear over the life of the vehicle.

### SOFT RIDE CHARACTERISTICS

Because the BPW airbags are fitted further behind the axle than with other suspensions, the ride characteristics of the BPW trailer air suspension delivers superior driver comfort and increased freight protection. The trailer's structural fatigue is reduced as well as lowering the stress on the road surface and the tyres.

### HEAVY DUTY SHOCK ABSORBERS

The BPW trailer suspension uses purpose-built, heavy duty, high efficiency shock absorbers, with high oil volumes keeping operating temperatures to a minimum, therefore maintaining dampening performance, extending service life and tyre life.

### TRAILING ARMS

The BPW trailing arms are highly flexible spring steel elements that are hot-rolled from one piece, after which they are shot-peened, zinc-phosphated and cathodically dipcoated. They absorb much of the flexural forces and reduce both the torsional forces into the axle beam and the stress on the trailer frame.

The rigid connection of the trailing arm springs to the axle beam forms a 'U'-type stabiliser to minimise lateral movement and give progressive roll stiffness. This offers greater confidence to the driver when cornering thereby improving safety and handling. Fabricated trailing arms rely on a large bush to deal with torsional stresses.

When these large bushes compress to their maximum yield point, remaining stresses are transferred into the trailer frame. Flexible trailing arms have a greater yield capacity.

### AIRBAGS

The outstanding ride characteristics of the BPW airbag suspension are due in most part to the airbags themselves. BPW uses rolling-lobe airbags because of their spring characteristics.

They roll neatly over the piston during compression. BPW airbags are firmly crimped into the top plate and are bonded onto the clamping plate at the bottom by vulcanization, which means they are guaranteed to be air-tight. The bump-stop, integrated onto the bottom plate, protects against damage when the bags are vented. The piston is made from a sturdy glass-fibre reinforced plastic with a steel support to give reduced weight and resistance to corrosion.

### STEEL-RUBBER-STEEL BUSHES

BPW long-life steel-rubber-steel bushes offer low maintenance mounting of the trailing arm. The axle is precisely located which improves handling and tracking and therefore both tyre wear and operating costs are reduced.

### HANGER BRACKETS

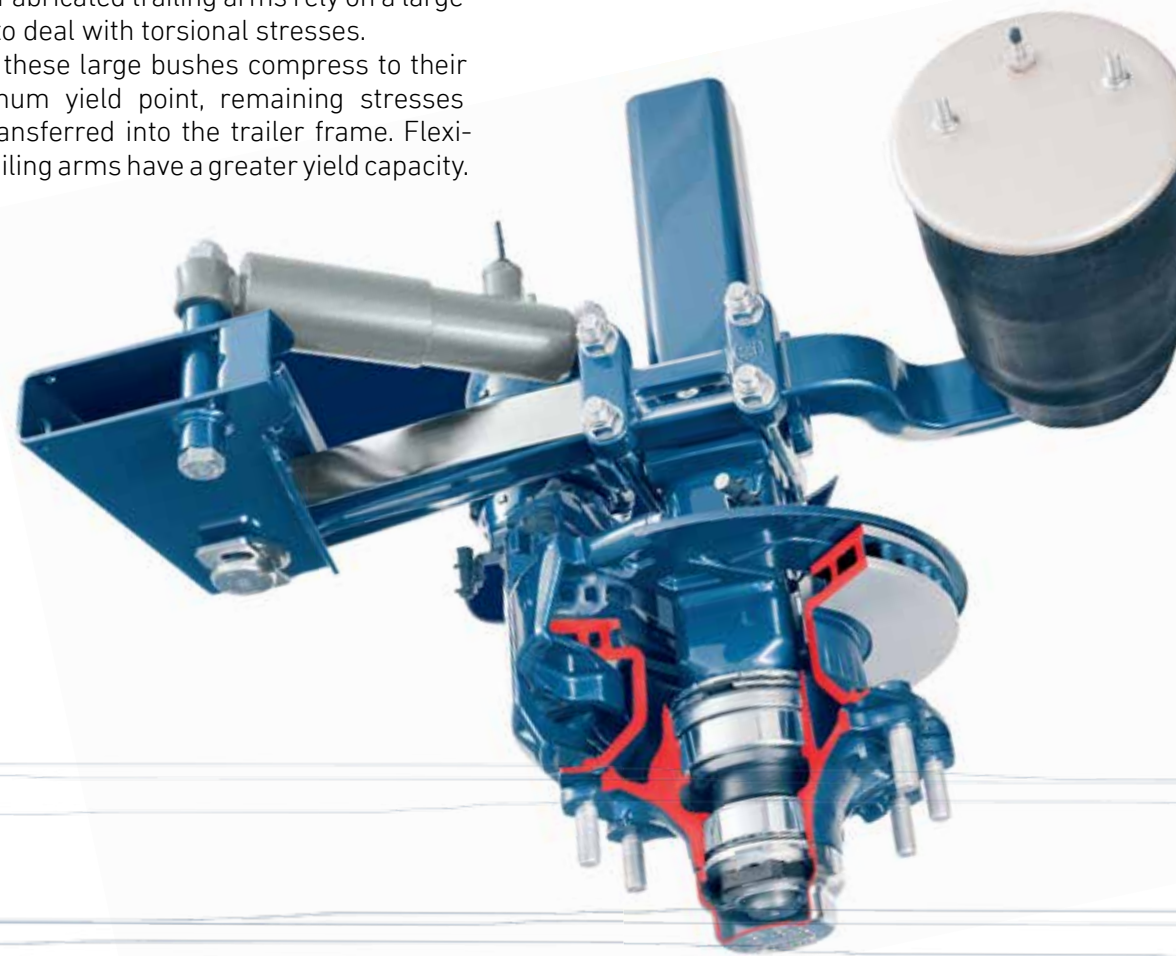
BPW air suspension hanger brackets transfer all control, braking and acceleration forces from the axle to the trailer frame. BPW air suspensions are offered with a variety of hanger options. Various heights are also available to give trailer designers the freedom to optimise their choice of designs. BPW hangers are offered in both alignable and non-alignable configurations depending on the suspension model.

### SERVICEABILITY

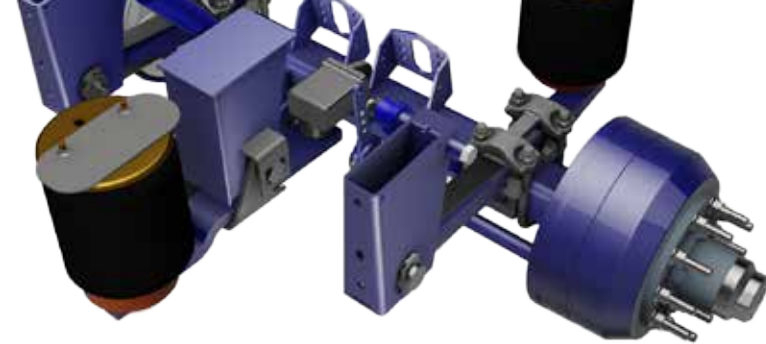
The BPW trailer air suspension has been designed to be service friendly with ease of access to all major components, as well as a high degree of parts interchangeability between suspension models. Reduced downtime and higher vehicle utilisation is the result.



Steel-Rubber-Steel Bushes







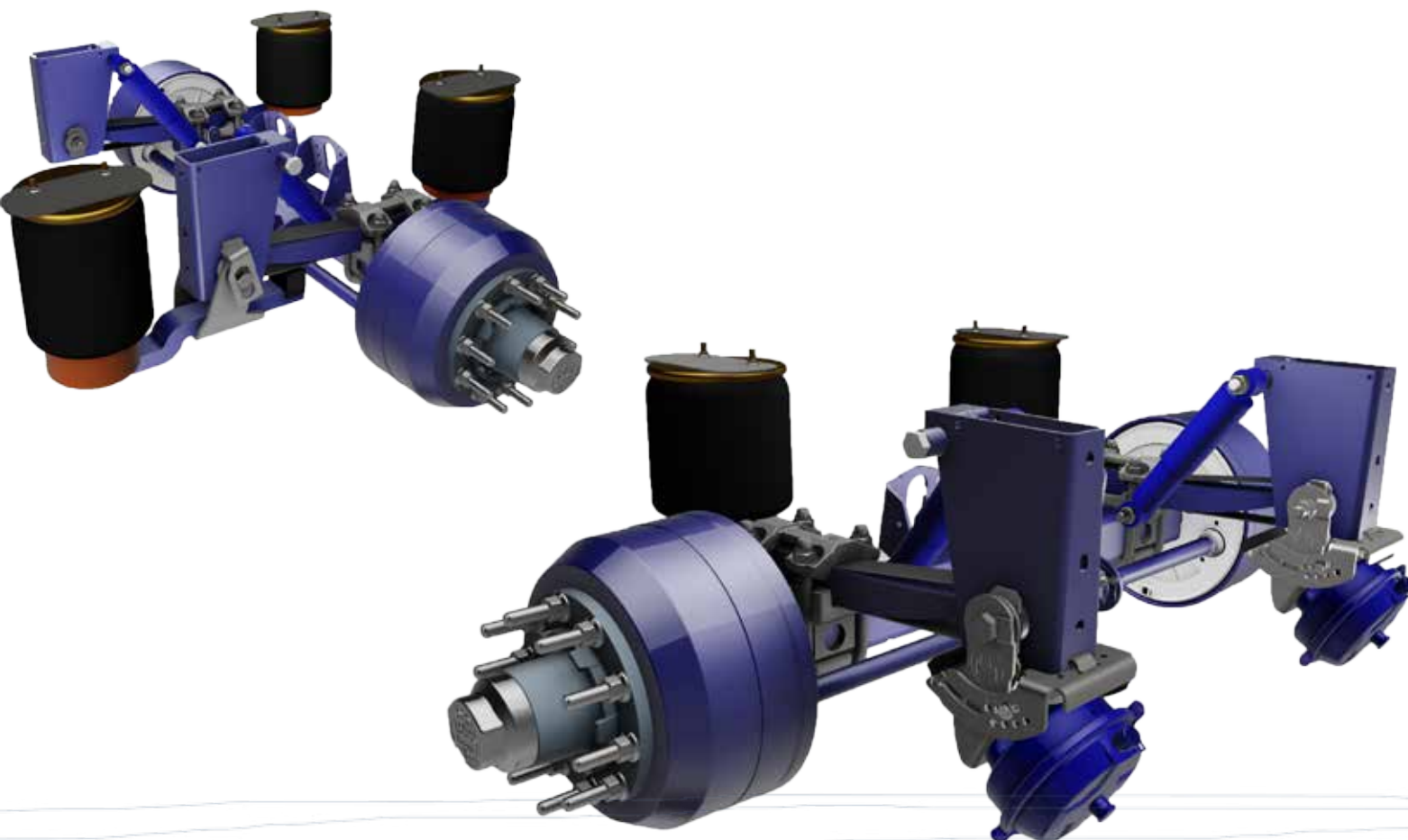
# BPW AXLE LIFT

## REDUCE YOUR OPERATIONAL COSTS WITH BPW AXLE LIFT

As an option, multi-axle trailers can be equipped with an axle lift. Operators have found that the benefits of the BPW Axle-Lift include reduced fuel consumption, improved brake balance when unladen and reduced tyre wear.

The Axle-Lift Systems are available with 'side-lift', 'centre-lift' or double booster-style side lift configurations, to suit the particular trailer application and can be installed on up to two axles of the tri-group. All BPW Axle-Lift Systems comply with current ADR requirements and are supplied as standard with fully automatic pneumatic controls which lifts and lowers the Lift Axle(s) at the legally prescribed axle loads. The system has an 'off' switch located in a lockable enclosure as stipulated by the ADRs.

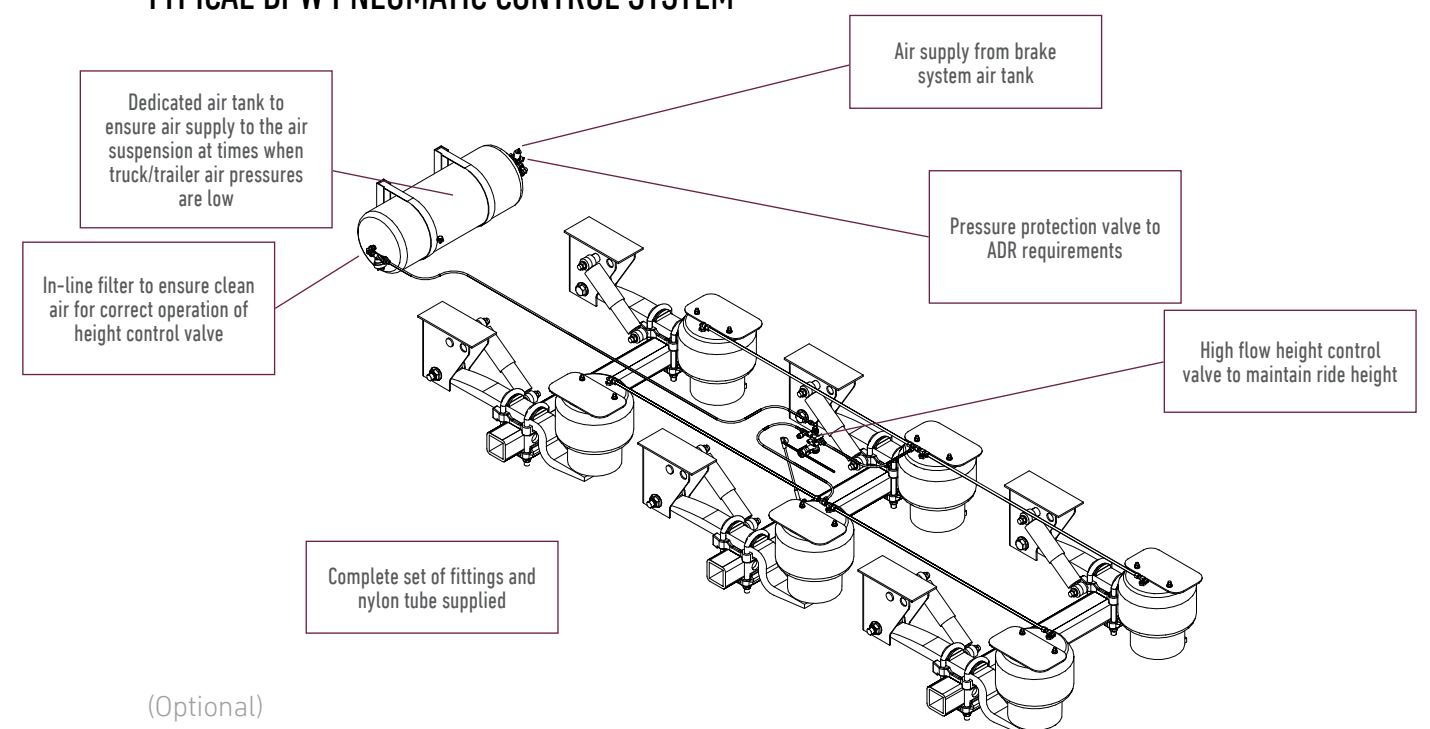
When fitted to a trailer with BPW EBS the Lift Axle(s) is/are controlled by the EBS and again is lifted and lowered automatically at the legally prescribed axle loads. An 'off' switch in a lockable enclosure is also provided. The BPW Axle-Lift System is simple to use and can be fitted to most BPW trailer airbag suspensions, in both the 'Highway Series' Airlight II range and the on/off road 'Heavy Duty' range.



# PNEUMATIC CONTROL KIT

The BPW Airbag Suspension pneumatic control system employs a single high flow height control valve to ensure pressure equalisation giving a constant ride height for all load conditions. BPW Air Suspensions are supplied with a complete pneumatic control kit.

## TYPICAL BPW PNEUMATIC CONTROL SYSTEM



## RAISE & LOWER SYSTEM

BPW offers a raise/lower valve system which enables the height of the trailer to be matched to various dock levels, saving costly loading/unloading times.

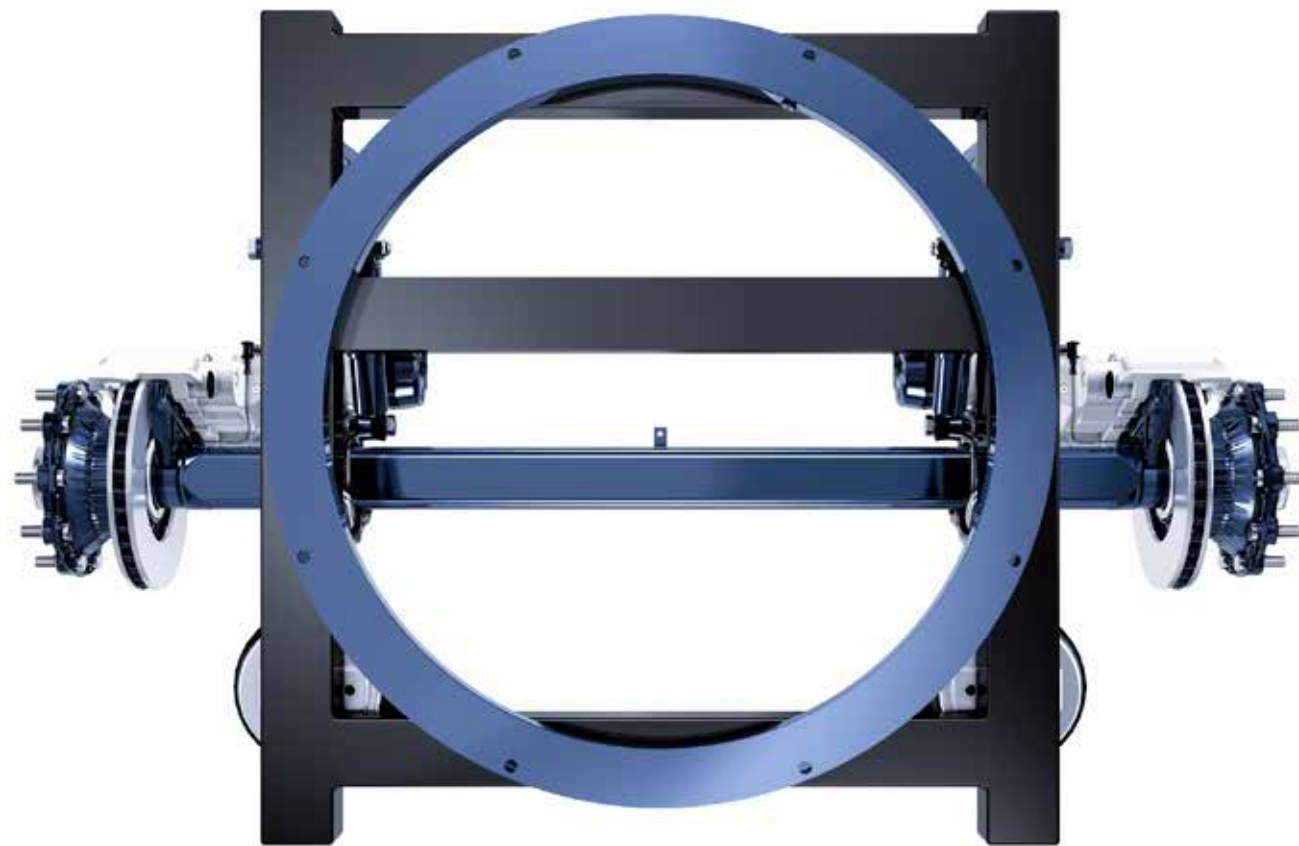
## RESET-TO-RIDE

BPW Transpec also offers an optional 'reset-to-ride' raise/lower system, which automatically resets to ride height once the trailer brakes are activated. This function can be incorporated into the Transpec EBS system when fitted.



# BPW TURNTABLES WITH DOUBLE BALLRACE

Compared to conventional, single-row systems, BPW turntables are characterised by the high-quality feature of a double ball race to guarantee optimum distribution of the axial and radial forces that arise. The rigid front axle of the drawbar trailer on turntable drawbar trailers is steered using a pivot mounting with a turntable and drawbar. The turntable establishes the connection between the vehicle subframe and the pivot mounting. BPW turntables generally have two rows of ball bearings. This special design ensures you are provided with better transmission and therefore longer operating times as well as being much more wear-resistant.



## THE BENEFITS OF BPW TURNTABLES:

### – Optimum force transmission

- BPW turntables have one axial and one radial ball race between the upper and lower rings.
- The vertical loads acting on the turntable are absorbed by the larger axial ball race.
- The\* horizontal forces are absorbed by the smaller radial ball race.
- The torque loadings arising from braking and centrifugal force are absorbed in the interplay between the two ball races.
- The radial ball race retains the upper and lower rings in place

### – Absolute functional reliability

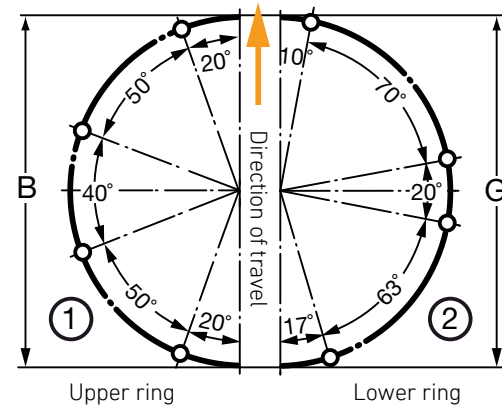
- The design principle guarantees the greatest possible safety, because the acting axial and radial forces are transmitted onto the two ball races separately.
- The special selection of material and production processes achieves the highest quality. The turntable sections made from high-strength steel are cold formed, butt welded and heat treated. Turntables can be used even under extreme conditions.

### – Economy through long service life

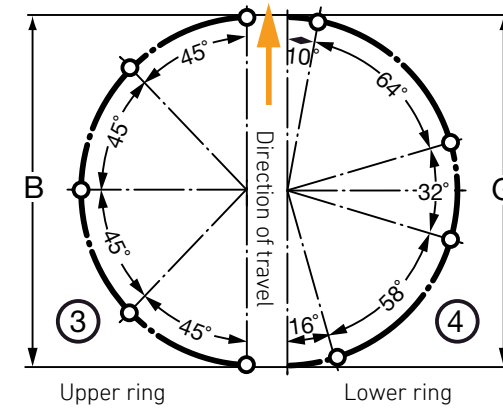
- BPW turntables guarantee a minimum of downtime due to their long service life.
- The ball race is secured under load by the axial ball race.
- The space inside the turntable is provided with long-lasting protection against dust and dirt by a labyrinth seal.
- The sum of all these advantages ensures reliability, freedom of movement and the highest possible service life.
- Reliable axial loading of 5 to 30 t
- Drilled or non-drilled options
- Optimum distribution of axial and radial forces occurring due to doubled row of all bearings
- Crown mouldings made of heat-formed, butt-welded, calibrated, high-strength steel
- Protection of the rim interior against dust and dirt through heat sealing
- Wear-resistant due to low roll depth of the load-carrying balls and increasing hardening of the ball track under stress
- Less sensitive to short-term overloading

## STANDARD PRODUCT RANGE

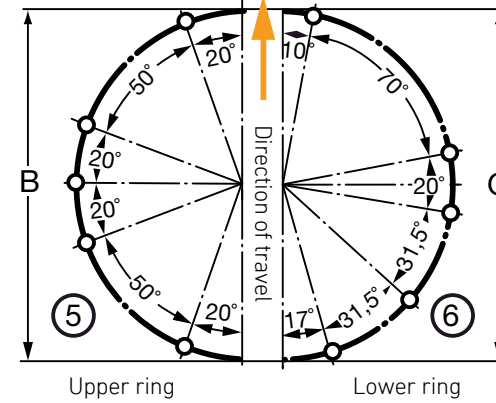
8-Hole  
only DK 80/8



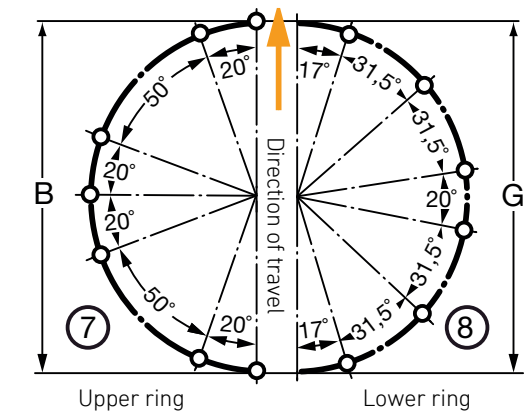
8-Hole



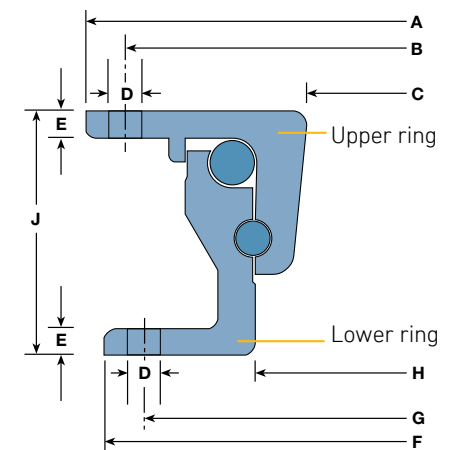
10-Hole  
only DK 80/16A



12-Hole



BPW TURNTABLE = DRILLED <sup>1) 2)</sup>		BPW TURNTABLE = UNDRILLED		UPPER RING									LOWER RING						BOLTS PER RING			
Type	BPW no.	Type	BPW no.	Perm. axial load in t <sup>4)</sup>	Perm. gross trailer weight in t	Exterior Ø Amm	Hole circle Ø Bmm	Hole pattern 0	Interior Ø Cmm	Bore Ø Dmm	Flange thickness Emm		Exterior Ø Fmm	Holes circle Ø Gmm	Hole pattern 0	Interior Ø Hmm	Bore Ø Dmm	Flange thickness Emm	Quantity	Thread o min.		
		DK 80/5	02.6415.01.00	5	25	664	(636)		519.5	(14)	9			(622)		554	(14)	9	8	(M 12)	80	38
DK 80/8	02.6415.10.00	DK 80/8	02.6415.11.00	8	40	984	866	①	749.5	16	9			852	②	784	16	9	8	M 14	80	49
DK 80/10	02.6415.13.00	DK 80/10	02.6415.14.00	10	50	1,108	1,074	③	959.5	16	9			1,060	④	994	16	9	8	M 14	80	64
DK 80/16 A <sup>3)</sup>	02.6415.17.00 <sup>3)</sup>	DK/80/16 A <sup>3)</sup>	02.6415.18.00 <sup>3)</sup>	16	50	984	866	⑤	749.5	16	9			852	⑥	784	16	9	10	M 14	80	49
DK 90/10/1208	02.6415.66.00			10	50	1,208	1,174	③	1,042.0	18	10			1,160	④	1,079	18	10	8	M 16	90	92
DK 90/10/1212	02.6415.70.00	DK 90/10/1200	02.6415.71.00	10	50	1,208	1,174	⑦	1,042.0	18	10			1,160	⑧	1,079	18	10	12	M 16	90	92
DK 90/12	02.6415.24.00	DK 90/12	02.6415.23.00	12	50	1,000	966	③	834.0	18	10			952	④	871	18	10	8	M 16	90	72
DK 90/13	02.6415.20.00	DK 90/13	02.6415.22.00	13	55	1,108	1,074	③	942.0	18	10			1,060	④	979	18	10	8	M 16	90	82
DK 90/13/1208	02.6415.67.00			13	55	1,208	1,174	③	1,042.0	18	10			1,160	④	1,079	18	10	8	M 16	90	92
DK 90/13/1212	02.6415.72.00	DK 90/13/1200	02.6415.73.00	13	55	1,208	1,174	⑦	1,042.0	18	10			1,160	⑧	1,079	18	10	12	M 16	90	92
DK 90/14	02.6415.34.00	DK 90/14	02.6415.33.00	14	55	1,000	966	③	834.0	18	10			952	④	871	18	10	8	M 16	90	72
DK 90/16	02.6415.30.00	DK 90/16	02.6415.31.00	16	60	1,108	1,074	③	942.0	18	10			1,060	④	979	18	10	8	M 16	90	82
DK 90/16/1212	02.6415.74.00	DK 90/16/1200	02.6415.75.00	16	60	1,208	1,174	⑦	1,042.0	18	10			1,160	⑧	1,079	18	10	12	M 16	90	95
DK 90/20	02.6415.41.00	DK 90/20	02.6415.40.00	20	60	1,108	1,074	③	942.0	18	10			1,060	④	979	18	10	8	M 16	90	82
DK 90/20/1212	02.6415.76.00	DK 90/20/1200	02.6415.77.00	20	60	1,208	1,174	⑦	1,042.0	18	10			1,160	⑧	1,079	18	10	12	M 16	90	95
DK 90/26/1212	02.6415.78.00	DK 90/26/1200	02.6415.79.00	26	70	1,208	1,174	⑦	1,042.0	18	10			1,160	⑧	1,079	18	10	12	M 16	90	96
DK 90/30/1212 SP	02.6415.80.00	DK 90/30/1200 SP	02.6415.81.00	30	70	1,208	1,174	⑦	1,042.0	18	10			1,160	⑧	1,079	18	10	12	M 16	90	96



<sup>1)</sup> Special versions on request.

<sup>2)</sup> See figures for hole patterns.

<sup>3)</sup> Only used for semi-trailer coupling.

<sup>4)</sup> Permitted axial load = static axial load over the steered axle which acts on the turntable. Subject to modifications!





# BPW GENUINE REPAIR PARTS

Arrive safely and reduce costs with genuine BPW parts. Genuine BPW parts undergo continuous development and offer you the security of knowing that they are designed exactly for your trailer chassis and suspension system.

As 'duty-of-care' and 'corporate compliance' become more important in the running of a business, genuine BPW parts offer peace of mind, with the knowledge that the ongoing safety and legislative compliance of the vehicle is maintained.

## BPW GENUINE SPARE PARTS:

- are produced in-house with tested OEM quality assurance.
- offer long service life
- offer shorter repair times due to spare parts availability throughout Australia
- are more economical in the long run.





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