

Application of BPW air suspensions

BPW Axles have introduced a new suspension beginning of April 2018. The new suspension, called AL II HD (Heavy Duty) has replaced the current SL suspension on □120 axle bodies and the standard AL II. Previously in South Africa, SL suspension was used on the □120x15mm and □150 axle body in a welded axle seat arrangement (see Figure 1). With the introduction of the new AL II HD suspension there will be a reduction in variations as shown in Figure 2. What this means is that there will be now three suspension types used for different applications.

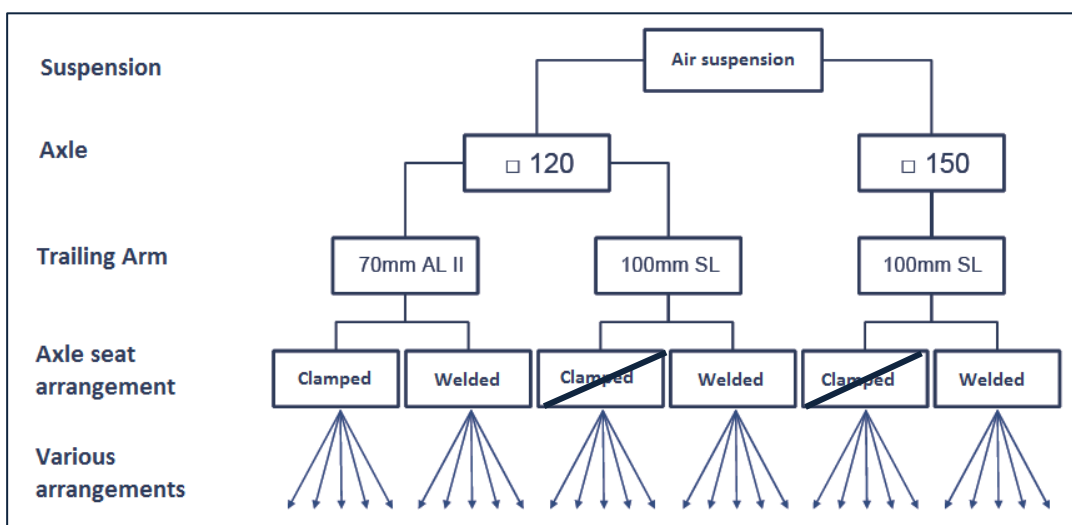


Figure 1: Current arrangements of air suspension on Axle bodies

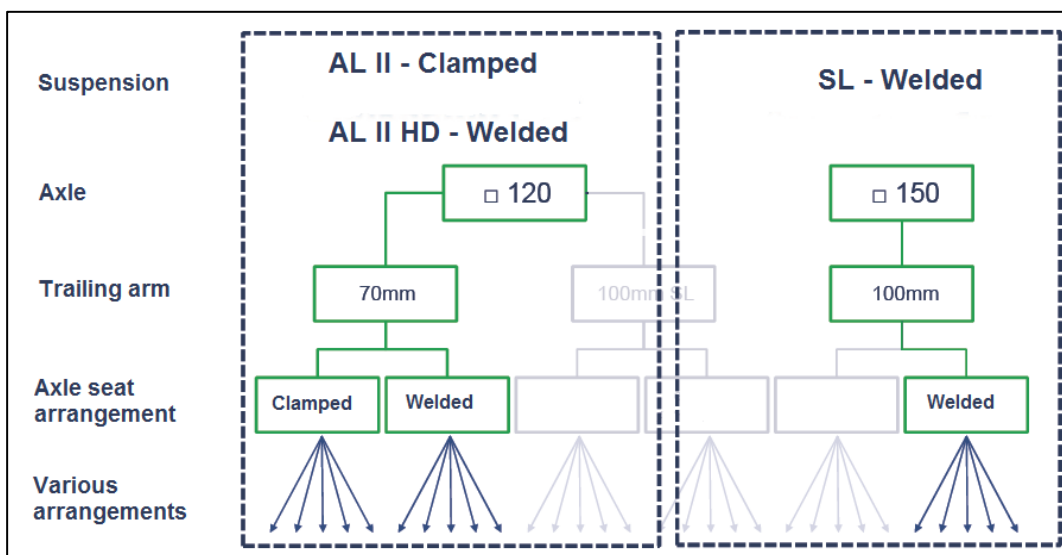


Figure 2: Arrangements of air suspension on Axle bodies as from 2018

we think transport

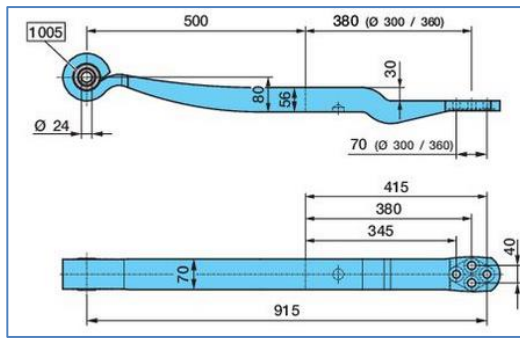
The three suspension types that will be used are as follows:

1. AL II - clamped axle seat arrangement
2. AL II HD - welded axle seat arrangement
3. SL - welded axle seat arrangement

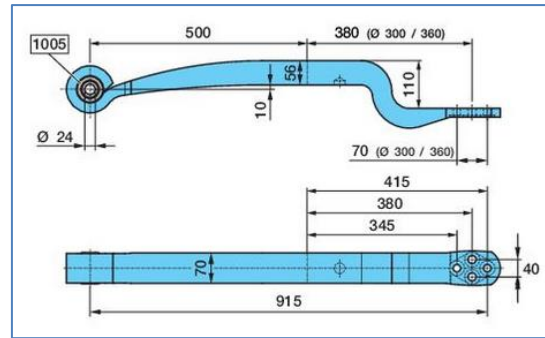
Table 1 shows a comparison of the current suspensions that BPW offers and in which field of application they are typically used.

	AL II – clamped axle seat arrangement	AL II HD – welded axle seat arrangement	SL – welded axle seat arrangement
Trailing arm	70mm wide and 56mm thick (see Figure 3)	70mm wide and 65mm thick (see Figure 4)	100mm wide and 57mm thick (see Figure 5)
Axle beam used	□120x10mm	□120x15mm	□150x16mm
Hub generation	ECO Plus 3	ECO Plus 1 and 3	ECO Plus 1
Wheel application	Single wheel	– Single wheel – Dual wheel	– Single wheel – Dual wheel
Carrying capacity per axle	8 tonnes	9 to 11.8 tonnes	12 – 14 tonnes
Brake used	Drum and Disk	Drum and Disk	Drum
Brake sizes - Drum	– 420x180	– 420x180 – 360x200 – 300x200 – 300x150	– 420x200
Brake sizes - Disk	– 4309	– 4309	N.A.
Weight saving	40kg per axle (going from welded to clamped suspension)	26kg per axle (going from SL on □120 to AL II HD)	N.A.
Airbag sizes	– Ø300mm	– Ø300mm – Ø360mm	– Ø360mm
Trailer application	– Fuel Tankers – Box Trailers (Reefers) – Curtain siders (single wheel) – Flat decks (single wheel)	– Side tippers – Milk Tankers – Food Silos – Walking floor trailers – Curtain siders – Flat decks	– Heavy off-road
Road condition	On-road and in South Africa only (no off-road driving permitted)	– On-road – Off-road – Cross-boarder	– Off-road – Cross-boarder

Table 1: Comparison of air suspensions

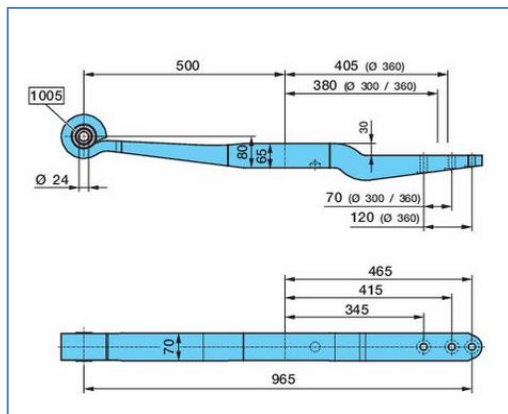


ALO and ALU

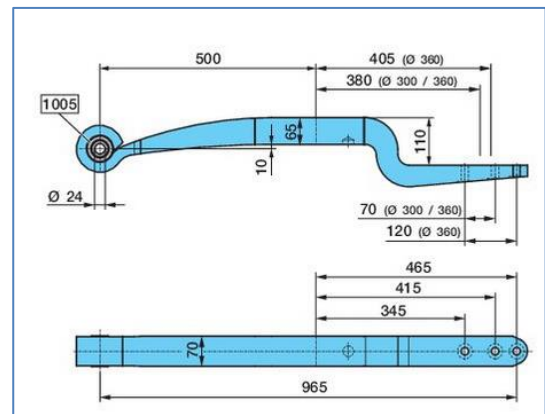


ALM

Figure 3: AL II – clamped axle seat arrangement

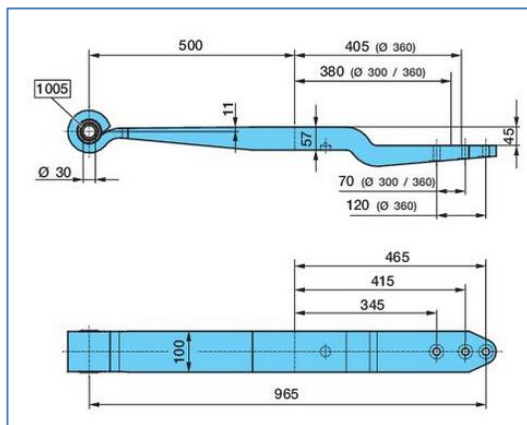


ALO and ALU

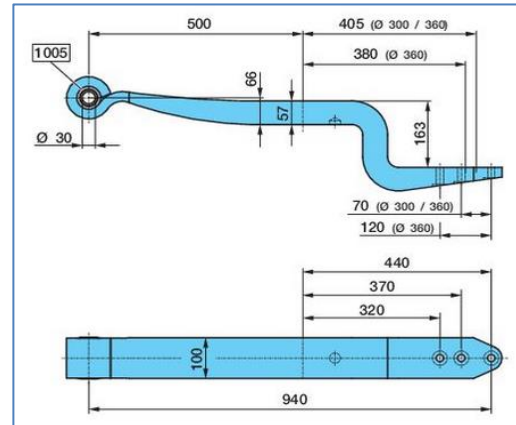


ALM

Figure 4: AL II HD – welded axle seat arrangement



SLO and SLU



SLM

Figure 5: SL – welded axle seat arrangement