



Performance Based Standards

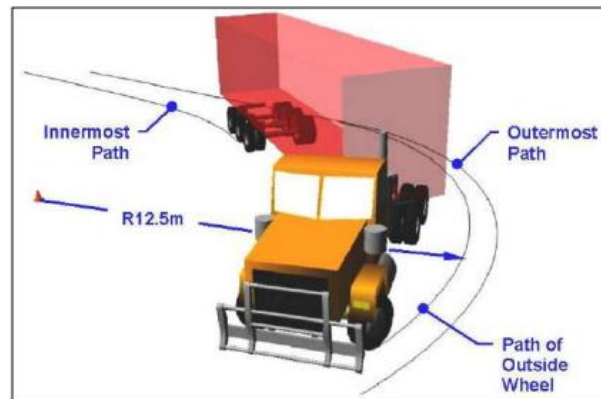
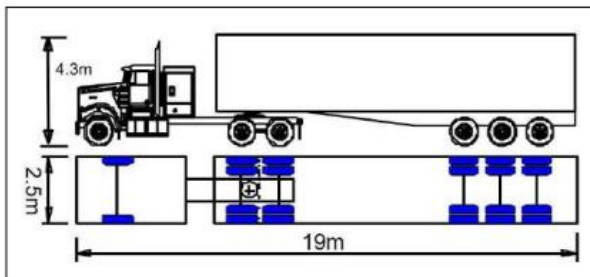
Introduction

BPW prides itself on having excellent pre-sales services and providing clients with the best solution for their fleets to increase safety, reliability while reducing operating costs. This is why BPW has expanded its expertise in the Performance Based Standards (PBS) pilot project. BPW can assist with the design of your PBS vehicles and assist with the PBS application process. BPW also offers suspension solutions that were developed specifically for the PBS project and as such provides the best performance. BPW also offers unique products such as self-steering axles that allow for innovative PBS designs that improve versatility and the usefulness of the vehicle. BPW can also assist in assessing the safety and maneuverability of any heavy vehicle design even if it does not form part of the PBS project.

PBS- What is and how it works

Performance Based Standards (PBS) is a heavy vehicle design methodology to improve the safety and productivity of heavy vehicles. Vehicle designs are not limited by their weights or dimensions but are governed by a set of high and low speed standards that ensure the vehicle combination is safe and will operate correctly in certain environments. This is in contrast to the current prescriptive standards that are concerned about enforcing heavy vehicle designs only based on weight, height, length and other dimensions. This difference is summarized below.

Prescriptive Standards	Performance-Based Standards
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<u>What the vehicle looks like</u>	<u>What the vehicle can do</u>
Governs mass and dimensions	Governs actual on-road performance
Constrains productivity	Allows heavier and/or larger vehicles
Constrains innovation	Promotes innovation

The PBS or Smart Truck Project has been operational as a pilot project in South Africa since 2007 and has grown substantially from the 2 initial vehicles to well over 1000 operational vehicles. The Smart Truck Pilot Project was adopted from the PBS project in Australia where there are currently more than 17 800 PBS combinations registered. A few examples of PBS vehicles in South Africa are shown below. The most popular PBS vehicle is the B-double side tipper which has two 3-axle side tippers that have a maximum allowed vehicle combination mass of 73.7 tonnes.



The PBS project has shown substantial benefits including:

- A reduction in crash rate of 32% compared to the baseline fleet.
- 18.5% fuel and emission saving.
- 36.9% reduction in the number of trips required.
- Road infrastructure savings, extending the life of road assets.

The project is still in a pilot phase, and the current process for operating PBS vehicles is shown below. It is currently mandatory for operators to be part of the RTMS (Road Transport Management System). RTMS is a voluntary self-regulation initiative in South Africa promoting safety and sustainability within the transport industry. RTMS requires regulatory compliance over and above those rules set by the Department of Transport and focusses on aspects such as:

- Overloading
- Driver training and wellness
- Vehicle maintenance and
- Speeding.

For more information on the process and contact people, please visit the CSIR monitoring portal <https://smartruckportal.csir.co.za/>.

Should have any questions or queries regarding the PBS project or regarding heavy vehicle safety and stability of other vehicles., please do not hesitate to contact our Engineering Manager, Anton Steenkamp (anton@bpw.co.za). We will be able to assist with your vehicle design, optimization and any other heavy vehicle dynamics related inquiries.

BPW offers axles and suspensions that were specifically designed for the PBS project and as such offer the lightest 10 tonne axle and suspension.

