

# BI-DIRECTIONAL MULTI DECK WEIGHBRIDGE

(MP-BI)

Heavy Duty BI-Directional High Frequency Axle Weighing

MPBI-24-01

SMART SUPPORT  
0861 422 134  
OR +27 83 680 0722  
E-mail: [info@sascoafrica.com](mailto:info@sascoafrica.com)  
Web: [www.sascoafrica.com](http://www.sascoafrica.com)  
24 hours, 7 Days a week

**SASCO** WEIGHING SYSTEMS

GROUP SUPPORT H/O  
2 Blackburn Street  
Apex Industrial | Benoni

Phone: +27 (0) 11 746 6000  
Fax: +27 (0) 11 746 6100

## Multi deck Weighbridge (MP-BI)

Discover the unparalleled range of truck weighing solutions offered by Sasco, from multi-deck to single deck and weigh-in-motion products.

When choosing the optimal truck weighing solution, factors such as budget considerations, the need for axle and total weights, available space, truck length, daily weight volume, required maximum axle loadings, deck strength, level of automation, and the possibility of unmanned weighbridges all come into play.

Sasco's extensive product line up ensures that the perfect solution, which are all powered by European manufactured weighing indicators, align seamlessly with specific requirements.

In terms of multi deck weighbridge solutions Sasco has four options: -

	MP-SB	MP-PT	MP -DI	MP-BI
<b>Total Accuracy</b>	±99.55%	±99.95%	±99.95%	±99.95%
Deck Type	WB 80 LP	SPT Portable	WB 120 T	WB 120 T
<b>Lengths</b>	22m	24m	<b>22m</b>	25m
<b>Width</b>	3m	3m	<b>3m</b>	3m
<b>Deck Construction</b>	Steel	Steel	<b>Steel</b>	Steel
<b>Deck Plate Thickness</b>	8mm	10mm	<b>12mm</b>	12mm
<b>Number of modules</b>	4	4	4	5
<b>Size of Modules</b>	3m,6m,7m,6m	3m,6m,7.6m,6m	<b>3m,6m,7m,6m</b>	3m, 6m,7m,6m,3m
<b>Total Capacity</b>	80T	80T	<b>120T</b>	150T
<b>Axle Loadings</b>	9T	10T	<b>25T</b>	25T
<b>Colour</b>	Yellow	Red	Red	Red
<b>Volume Daily Weighing's</b>	<=60 p.d.	<=120 p.d.	<b>No limit</b>	No limit
<b>Indicator</b>	DD1055	DD1055	<b>DD1055</b>	DD1055
<b>Load Cells</b>	Sasco S16	CPD	<b>S500 or CPD</b>	S500 or CPD
<b>Number Load Cells</b>	16	16	<b>16</b>	20
<b>System</b>	Analogue	Digital	<b>Digitised or Digital</b>	Digitised or Digital
<b>Temp. Comp</b>	No	Yes	<b>Yes</b>	Yes
<b>Software</b>	ProWeigh	ProWeigh	<b>ProWeigh</b>	ProWeigh
<b>Axle Weighing Functionality</b>	Yes, one direction	Yes, one direction	Yes, one direction	Both
<b>Lightning &amp; Surge Protection</b>	Yes	No	<b>Yes</b>	Yes
<b>Installation</b>	Pit or above ground	Portable	<b>Pit or above ground</b>	Pit or above ground

In addition to these four multi deck weighbridges Sasco has a range of six Single Deck Weighbridges and Weigh-in-Motion solutions.



## Product Overview

The MP-BI weighbridge likely represents the top-tier offering in a multi-deck weighbridge line up. Compared to other models by Sasco, the MP-BI has the most advanced features, highest capacity, and best performance metrics, suitable for the most demanding applications.

Here's how the MP-BI compares to the MP-DI and MP-SB on various factors:

- **Price:** The MP-BI is the most expensive multi deck in the Sasco range.
- **Deck Strength:** The MP BI has a 12mm thickness deck plate the same as the MP-DI and the MP-SB has 8mm.
- **Total Capacity:** The MP-BI has a total capacity of 150 tonnes, while the MP-SB has 80 tonnes and the MP-DI 120 tonnes. All three multi deck weighbridges can provide total weights for trucks approaching from either direction.
- **Axle Loadings:** The MP-DI axle loadings are up to 25 tonne, the same as the MP-BI but more than the MP-SB.
- **Load Cells:** As with the MP-BI, the MP-DI has the option of either digital CPD load cells or digitised S500 load cells.
- **Axle Weighing:** The MP-BI is truly bi-directional providing axle weighing functionality in both directions. The MP-SB and the MP-DI only provide axle weights in one direction.





# Sasco DD1055 Indicator



- Diagnostic system.
- Fully business network integration
- Automatic device management
- Dual core 1 GHZ Dual Processor
- 512 Mbyte RAM and 1 Gbyte
- Ethernet 10/100 MBps
- 4 USB ports
- 3 x RS232/RS422 plus option of 2 more - runs for scales
- Connect to 12 analogue load cells
- Connect to 24 digital load cells
- Run 4 digital or analogue scales
- Material AISI 304 stainless steel
- 10 .4 inch display
- OIML, CE and NTEP
- IP69K

The DD1055 weighing indicator, designed and manufactured in Europe, boasts not only OIML approval but also multiple additional European certifications.

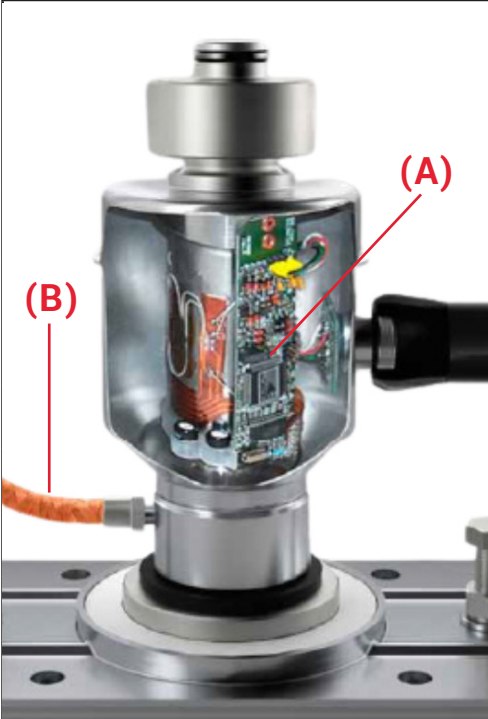
Setting it apart from other solutions on the market and proving pivotal for weighing applications in Africa, this indicator is equipped with comprehensive temperature compensation, ensuring the system maintains its accuracy even amidst significant temperature fluctuations and the ability to provide status diagnostics remotely.

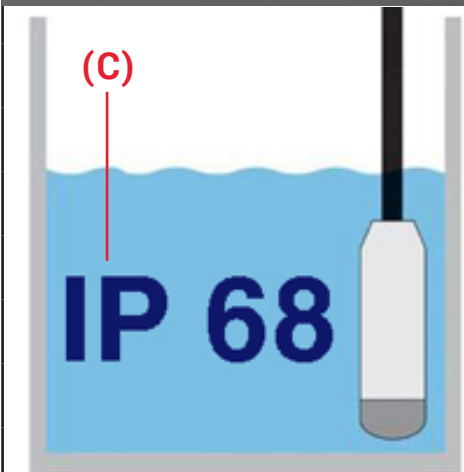


## Option I: Sasco CPD Load Cells

The Bilanciai CPD load cell has earned a reputation as one of the premier weighbridge load cells globally, owing to its unique and unparalleled features. Notably, it boasts the capability to be submerged, withstand side loads and inclinations without sustaining damage, and incorporates rodent protection cabling.

Crafted with A17-4PH Stainless Steel casing, it ensures durability and resilience. Additionally, the load cell is equipped with built-in lightning protection, continuous diagnostics, and the innovative ability to have calibration settings reverse-calibrated, minimizing downtime. These distinctive attributes collectively make the Bilanciai CPD load cell exceptionally reliable, robust, and precise, setting a standard for excellence in load cell technology.

The CPD load cells are characterized by the following specifications:		
	Accuracy Class	C3 (OIML R60)
	Rated Capacity	20t, 35t, 50t
	OIML R60 intervals	Max 6000
	Safe Overload	150% F.S.
	Safe Side Load	10%
	Ultimate Overload	200% F.S.
	Op. Temperature	-10~40 °C
	Ability To Incline	Yes to 5 degrees
	Transmission Protocol	RS485
	Supply Voltage	7~15 VDC
	Housing Material	A17-4PH Stainless Steel
	Rating	IP 68/ 69K
	Type	Digital
Continuous Diagnostics	(A) Yes	
In built lightning protection	(A) Yes	
Radio Interference Protection	(A) Yes	
Reverse calibration	(A) Yes	
Rodent protection cables	(B) Yes	
Submersible	(C) Yes	

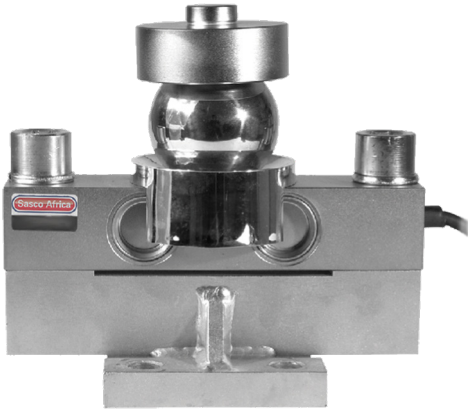


## Option II: Sasco S500 Load Cells

The S500 load cells, specifically the S500 model, boast several advantages that contribute to their accuracy and ease of use. Being a double shear load cell enhances its precision in measuring forces. The construction of the load cell incorporates a steel ball to apply force, effectively nullifying any side forces that could compromise accuracy.

Unlike canister-type load cells, the S500 load cell remains unaffected by issues such as tilting, expansion, contraction, or bending of the deck, ensuring consistent and reliable measurements. One notable convenience is the ease of installation, simplifying the process for users. Overall, the S500 load cells, with their double shear design and robust construction, stand out as accurate and user-friendly tools for weighbridge applications.

### The S500 load cells are characterized by the following specifications:

	<b>Accuracy Class</b>	C3 (OIML R60)
	<b>Rated Capacity</b>	30t
	<b>OIML R60 intervals</b>	3000
	<b>Safe Overload</b>	150% F.S.
	<b>Safe Side Load</b>	N/A
	<b>Ultimate Overload</b>	300% F.S.
	<b>Op. Temperature</b>	-35~65 °C
	<b>Ability To Incline</b>	N/A
	<b>Transmission Protocol</b>	RS485
	<b>Supply Voltage</b>	7~15 VDC
	<b>Housing Material</b>	Nickel Plated Alloy Steel
	<b>Rating</b>	IP 68
	<b>Type</b>	but Digitised via D-Link
	<b>Continuous Diagnostics</b>	No
	<b>In built lightning protection</b>	No
	<b>Radio Interference Protection</b>	No
	<b>Reverse calibration</b>	No
<b>Rodent protection cables</b>	No	
<b>Submersible</b>	No	

## Application Example

**Company B** is a steel yard operating in a confined space. They have approximately 100 inter link trucks to weigh per day. This is a standard fleet of known horses and trailers. Steel is transported out to customers and is received into the site from another facility owned by the group. Lightning is not a major issue at the site, nor is flooding as the yard is paved. CAPEX constraints are an issue.

Company B wants to ensure that both is arriving trucks and departing trucks are compliant with the Road Traffic Act and they want to use the weighbridge for trade weighing. All weighing data must directly interface with the groups ERP system.

The MP-BI combined with ProWeigh+ will be the optimal solution and would be configured as follows:

- One MP-BI weighbridges, with S500 load cells will be installed in the ground such that trucks can approach it from both directions, one direction in bound and the other direction out bound.
- QR code scanners will be mounted on poles at either end of the weighbridge at driver height.
- ProWeigh+ will be loaded on the PC's. The QR code scanning will be activated.
- The entire fleet information will be loaded on the ProWeigh+ Fleet Master database.
- All delivery and arrival documentation carried by the drivers will have the registration details of the horse and trailer printed, in the form of a QR code, on the corner of this documentation.
- The ERP interfacing functionality of ProWeigh+ will be activated and the weighbridge PC connected to the customer network.





# Technical Specifications

	CPD Load Cells	S500 Load Cells
<b>Total Accuracy</b>	+ - 99.95%	+ - 99.95%
<b>Axle Weighing Accuracy</b>	+ - 99.95%	+ - 99.95%
<b>Installation</b>	Above ground or pit	Above ground or pit
<b>Deck Width</b>	3m	3m
<b>Deck Length</b>	25m comprising, 5 modules	25m comprising, 5 modules
<b>Number of Modules</b>	Five - 3m, 6m, 7m, 6m, 3m	Five - 3m, 6m, 7m, 6m, 3m
<b>Indicator</b>	DD1055	DD1055
<b>Indicator IP Rating</b>	IP 48/69	IP 48/69
<b>Load Cells</b>	20 - CPD	20 - S500
<b>Load Cell IP Rating</b>	IP68	IP68
<b>Dlink Required</b>	No	Yes
<b>Maximum Total Weigh</b>	150 tons	150 tons
<b>Maximum Axle Weigh 200 W.P.D</b>	25 tons	25 tons
<b>Reverse Calibration</b>	Yes	Yes
<b>Temperature Compensation</b>	Yes	Yes
<b>Maximum Number of Axle Groups</b>	Four	Four
<b>Total Weight Generated</b>	Yes	Yes
<b>Axle Weights Generated</b>	Yes	Yes
<b>RTA Compliant Ticket</b>	Yes	Yes
<b>SOLAS Weighing</b>	Yes	Yes
<b>Double or Single Weighing</b>	Yes	Yes
<b>Manned or Unmanned</b>	Manned	Manned
<b>PC Required</b>	Yes	Yes
<b>Option of Automation</b>	Yes	Yes
<b>Option of Unmanned</b>	Yes	Yes
<b>Option of Centralization</b>	Yes	Yes
<b>Direct IT Systems Interfacing Possible</b>	Yes	Yes
<b>Cloud Interfacing Possible</b>	Yes	Yes
<b>Pre-Loading of Fleet Possible</b>	Yes	Yes
<b>Deck Warranty</b>	6 Years	6 Years
<b>Instrumentation Warranty</b>	12 months	12 months
<b>Trade Approval</b>	Yes	Yes

E-mail: [info@sascoafrica.com](mailto:info@sascoafrica.com)

Web: [www.sascoafrica.com](http://www.sascoafrica.com)

24 hours, 7 Days a week

This brochure contains a general guide of the product only and shall not form part of any contract unless specifically agreed by Sasco Africa in writing in each case on the Order Acknowledgement. The specification of the product described herein may vary from time to time and may be altered without notice.