



Accurately Weighing Africa



RAIL WEIGHBRIDGE

(RW-WB)

Reliable Durable Accuracy

SASCO WEIGHING SYSTEMS

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Trade approved Rail Weighbridges are an important product within Sasco's range of Rail Weighing solutions. Other products within Sasco's Rail Weighing range which offer similar solutions, include weigh-in-motion rail weighing and trade approved road rail weighbridges.

Under conditions of high volume and ultra-heavy truck loadings the RW-WB is the optimal solution for enabling highly accurate trade approved weighing.

The RW-WB, when installed with Sasco ProRail+ software, provides an array of operational functionality including RFID readers wagon identification, the total integration of weighing data generated with user IT systems and powerful cloud and networking data capabilities, and the use of wagon tare weights for the generation of net cargo weights.



A typical RW-WB installation.

Product Overview

The RW-WB is a highly accurate and highly robust trade approved modular rail weighing system. Sasco typically achieves accuracy levels of 99.95% on the system, with a maximum total loading of up to 120 tons. Key elements of the system are:

- The weighing system comprises two modules of 4.6m each in length. The deck warranty is 6 years.
- The decks have a low-profile design enabling them to be mounted at ground level, without all the civil costs associated with traditional full pit mounted weighbridges, while also allowing for load cells to be accessed from the sides of the deck.



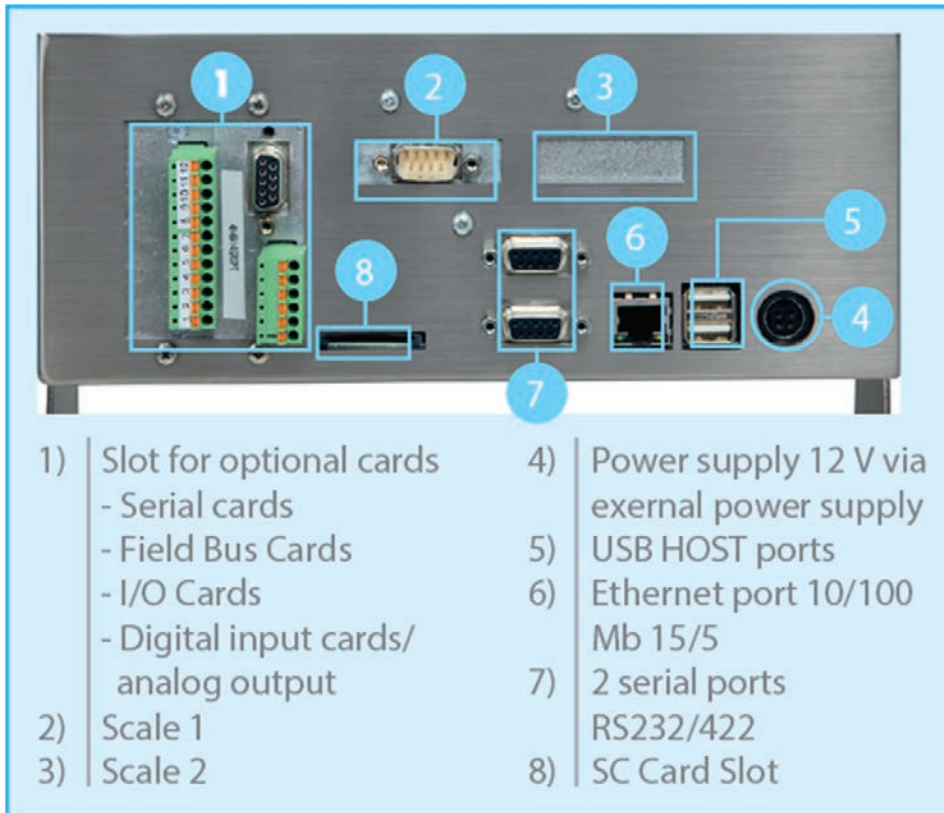
Vertical Load Receptors are bolted onto the existing track thus making installation simple and cost effective.

- The capacity of each module is 60T, with a combined capacity of 120 T and 120% maximum permissible overloading.
- The key instrumentation components are one DD1010 indicator and two modules with 4 S600 stainless steel IP67 load cells per module
- All weighbridge components are shot based, and cleaned of debris, greased and oiled. After assembly each scale is painted with a high-performance epoxy primer, followed by a finish of hard-coat, high-solids urethane primer and paint.
- Sasco ProRail + software is supplied as standard, which means the of adding on an array of weighbridge hardware options such as RFID readers is made easy.
- Sasco Rail+ also has the functionality to facilitate the integration of weighing data to a range of ERP systems whether directly or via the Cloud.

Indicator

The indicator used on the RW-WB is the DD1010, which is manufactured by Bilanciai in Italy. The reasons for deciding to specify the RW-WB with this indicator are as follows:

- Judged on reliability and functionality, Bilanciai is regarded as the leading manufacturer of weighing indicators globally.
- The DD1010 stores all the load cell calibrations, such that when load cells require replacing, the correct calibrations can be simply be down loaded from the indicator to the relevant load cell. This reduces down time.
- The DD1010 offers an array of interfacing terminal options, can form part of a total facilities network and can also, on a standalone basis, directly manage and control multiple hardware devices used in weighbridge automation.



Load Cells

The features of the S600 loadcells are:

- The accuracy of the S600 load cells are both very high and both have stainless steel casing.
- The S600 load cell are rated IP67 rated.
- The design of the load cells allows for up to 3 times more side load than on normal load cells which is key in rail weighing where the wagons due to their weight have such momentum on stopping.
- The continuing accuracy under conditions of extreme temperature changes, of S600 load cells, have been proven to be better particularly in environments of extreme heat.
- The S600 load cells come with inbuilt lightning protection in each load cell. This has proven invaluable when installations are in high lightning strike areas.



Software and Data Integration

The RW-WB runs on Sasco ProRail+ software and offers the functionality of seamless data integration, either directly or via the Sasco Cloud.

Application Example:

RW-WB

Company D is a state-owned electricity generation company, using coal powered generation stations. Coal is supplied to Company D by a number of coal mines all of whom own or lease their own coal wagons.

On arrival, coal is centrally discharged from each wagon onto conveyor belts which carries the coal into the generation plant.

The arrival procedure is that each wagon is to be weighed full, the load is then discharged, each wagon is then weighed empty, and finally a net cargo weight is determined. All wagons are RFID tagged and these tags included the wagon number and the coal mine supplier.

Company D requires a weighing system that will allow for the central discharging of the coal under these weighing procedures.



Central discharging coal wagon.

The optimal solution is the RW-WB system comprising with the following configuration and components:

- Two modules, installed at ground level, spaced the appropriate distance apart so that the double axles at each end of the wagon will be on each module.
- In between the two modules, the conveyor system will be mounted together with cross supports for the rail way sleepers.
- RFID reader mounted a few meters prior to the first module on the inbound side.
- In the operator cabin there will be a PC loaded with Sasco ProRail + software which will also be networked to the DD1010 indicator and Company D's ERP system.

Technical Specifications

	RW-WB
Module Capacity	60T
Number of Modules	2
Total Capacity	120T
Total Accuracy	+/- 99.95%
Installation	Ground Level
Deck Length	4.6m
Indicator	One - DD1010
Indicator IP Rating	IP 48
Load Cells per Module	Four - S600
Load Cell IP Rating	IP67
Maximum Total Weigh	120 tons
Maximum Axle Weigh	25 tons
Reverse Calibration	Yes
Temperature Compensation	Yes
Total Weight Generated	Yes
Double or Single Weighing	Yes
PC Required	Yes
Option of RFID Automation	Yes
Direct IT Systems Interfacing Possible	Yes
Cloud Interfacing Possible	Yes
Deck Warranty	6 Years
Instrumentation Warranty	12 months
OIML Approval	Yes
RSA Trade Approval	Pending

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