



Accurately Weighing Africa



SASCO DD1015 Upgrade Solution

TRANSFORMATION SINGLE DECK WEIGHBRIDGE'S TO
DELIVER FULL AXLE WEIGHING FUNCTIONALITY

Accurate, Cost Effective, Advanced

UG15-24-01

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About Sasco

In everything we do, we believe in challenging the status quo. This is as true today as when Sasco opened for business over 100 years ago.

Our mission is to harness advances in weighing product reliability, accuracy, automation, data integration, systems connectivity, the broader technological revolution in cloud solutions and hardware interconnectivity and deliver these advances to customers across Sub-Saharan Africa. These solutions must be cost-effective.

Overloading regulations have been enacted across most African countries. The logistics providers must now ensure that trucks comply with overloading regulations, and this requirement relates to both total weight and axle weights.

Africa's existing installed weighbridge base comprises predominantly standard single deck weighbridges, which provide only total truck weight.

Sasco recognised this reality over a decade ago and set about developing a cost-effective solution that would enable weighbridge decks to be retained and, through only upgrading the instrumentation and software, transform the functionality to deliver both axle weights and total weight results.

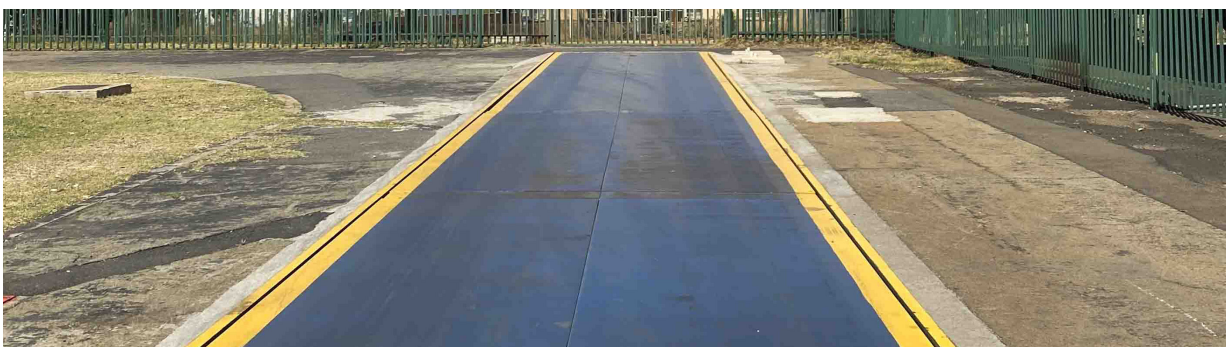
The Sasco DD1015 Upgrade is the perfected solution, delivering exceptional results combined with unparalleled connectivity.

Weighbridges Approved for Upgrade

The Sasco DD1015 is OIML and NTEP approved. Sasco has approved the DD1015 Upgrade Solution on over a hundred different weighbridge deck types, and these approvals are valid in all SADC countries.

Within the COMESA block, most national Weights and Measures Board accept OIML approvals, although in a limited number of cases, local registration of the Sasco DD1015 maybe also be required.

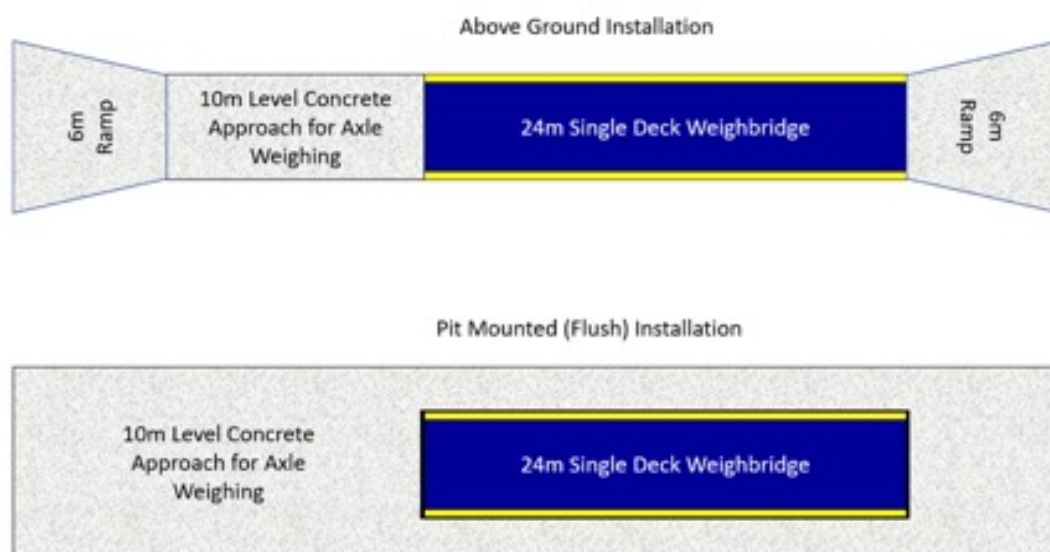
22-24M SINGLE DECK WEIGHBRIDGE SUITABLE FOR UPGRADE



The Upgrade Process

The base requirement is a sound weighbridge deck. After validating this, the upgrade process can proceed and comprises the following elements:

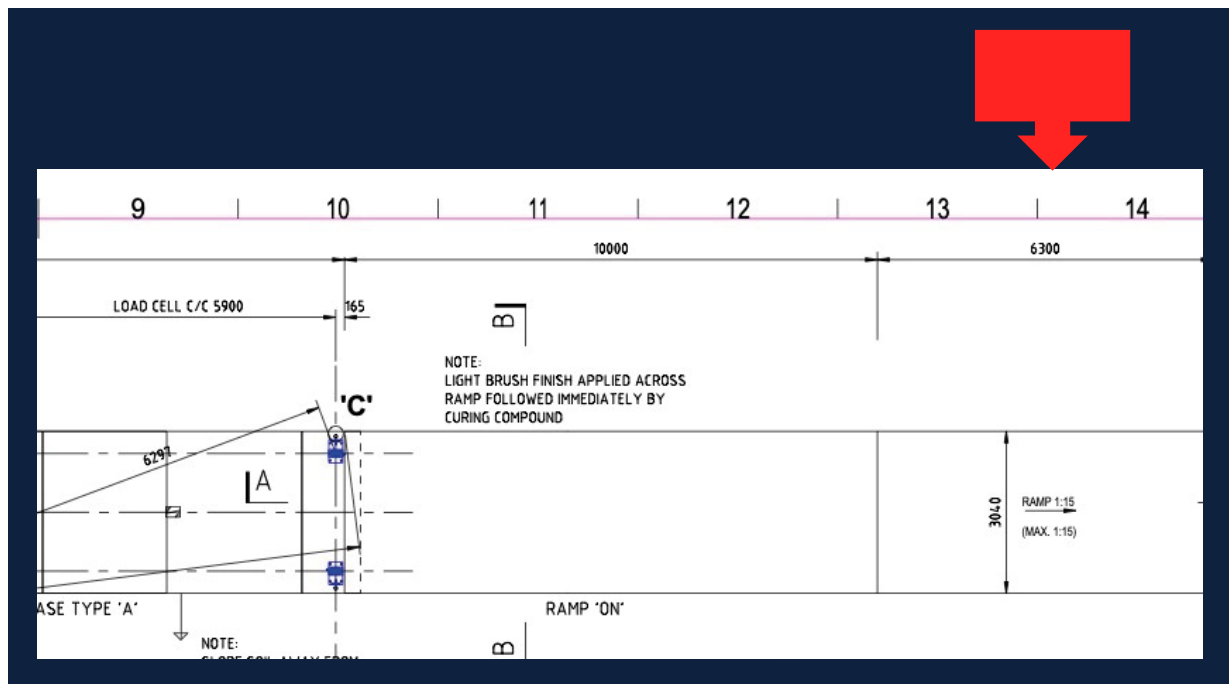
- **Civil Works:** If the weighbridge is installed in the ground, and the approaches are sound with at least a 10m level approach before the weighbridge, no civil works will be required. If the weighbridge is installed above ground, there must be enough space to extend the approach ramp on the out bound side so as to add 10m level at deck height.



- **Load Cells:** Depending on the type of load cells installed these can in most cases be retained provided they are analogue and of a sound quality.
 - **Indicator:** The existing indicator is removed and replaced with the Sasco DD1015.
 - **Junction:** The existing junction box is removed and replaced with the Sasco DLINK. The number of junction boxes required depends on whether the weighbridge has 10 or more load cells (this is not required if Sasco CPD load cells are going to be installed as part of the upgrade).
 - **PC Computer:** The PC computer can be retained provided the CPU is Intel Core 8th generation or newer or AMID Ryzen 5 with 8GB of RAM or higher.
 - **Software:** The Sasco DD1015 can either be directly integrated into an existing ERP system or ProWeigh+ can be loaded on the weighbridge site computer.
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EXCEPTIONAL TOTAL ACCURACY	YES	NO
Are the current deck plate thicknesses adequate		
Is there any visible bending in the deck		
Do any of the deck plates have cracks		
Are there any cracks in the welding		
Is there any deterioration due to rust		
Are all the bolts sound		
Are the stop assemblies still suitable and sufficient		
Are all the deck plates in good condition		
Are all cover plate bolts present		
Are all cover plate bolt threads still usable		
Are the load cells usable		
If not what are the current heights of the load cell		
If pit mounted is the drainage sufficient		
If pit mounted are the approaches sound		
If above ground, is there sufficient space for the additional 10m outbound level approach		

TOP DOWN - CIVIL DRAWING ON THE LEVEL APPROACH RAMP FOR ABOVE GROUND WEIGHBRIDGES



CROSS SECTION - CIVIL DRAWING ON THE LEVEL APPROACH RAMP FOR ABOVE GROUND WEIGHBRIDGES



Suitability Of The Load Cells

The table below sets out the suitability of the more common load cells for the axle weighing functionality upgrade:

MANUFACTURER	MODEL	APPROXIMATE LOAD CELL HEIGHT	SUITABLE	SASCO REPLACEMENT
Avery	8701	269 mm	Yes	DLINK Upgrade or Bilanciai CPD
Avery	Weighbar	355 mm	Yes	DLINK Upgrade or Bilanciai CPD
Avery	T302	255 mm	Yes	DLINK Upgrade or Bilanciai CPD
Avery	T301	273 mm	No	Bilanciai CPD
HBM	C16A	200 mm	Yes	DLINK Upgrade or Mix Match Sasco S16/C16
HBM	C16i	200 mm	No	Bilanciai CPD
Zemic	HM9B	256 mm	Yes	DLINK Upgrade or Sasco S500
Revere	CP	269 mm	Yes	DLINK Upgrade or Bilanciai CPD
Goldbell	BMLS	218 mm	Yes	DLINK or Sasco S500
Mettler	PDX	178 mm	No	Bilanciai CPD
Mettler	MTX	255 mm	No	Bilanciai CPD
LMI	YZC	218 mm	No	DLINK Upgrade or Sasco S500
Flintec	RC3D	200mm	No	Bilanciai CPD

SASCO REPLACEMENTS



CPD LOAD CELL



S500 LOAD CELL



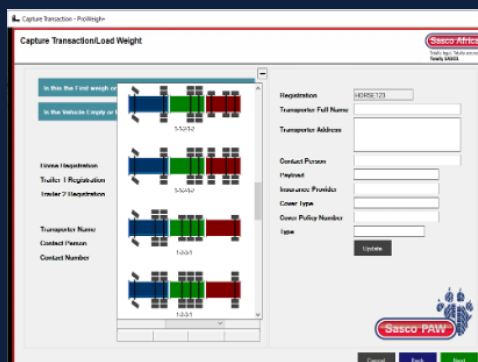
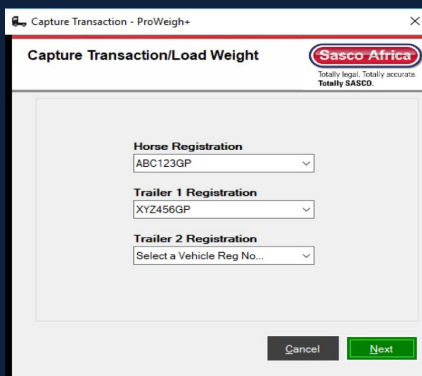
S16 LOAD CELL

SASCO DD1015 Indicator



- Diagnostic system.
- Automation device management.
- Dual core 1GHZ
- 512 Mbyte RAM and 1 GByte Flash
- Ethernet 10/100MBps
- 4 USB Ports
- 3 x RS232/RS422
- 2 x RS232/RS422 Optio Isolated
- Connect to 12 analogue load cells
- Connect to 16 digital load cells
- OIML and NTEP Approved

Proweigh + Software



- Wide range of definable fields.
- Purchasing and Product module.
- Fleet database module.
- Ticket emailing module.
- Axle weighing reporting module.
- Country specific overloading setup.
- SOLAS container module.
- Definable overloading % tolerances.
- Specific definable User rights.
- Full audit trail.
- Microsoft Sequel database.
- Online Accredited Operator Training.
- Option of ERP or Cloud interfacing.
- Option of adding automation hardware management module.
- Developed and supported by Sasco.

The Outstanding Solution

<p>EXCEPTIONAL TOTAL ACCURACY</p>	<p>Trade approved weighbridges are required to be 99.95% accurate (in South Africa). The expected accuracy level following the upgrade should be better than 99.88% or an error of no more than 10kg on 60,000kg (versus 30kg being trade approved value.)</p>
<p>ACCURATE AXLE WEIGHING</p>	<p>Government weighbridge enforcement facilities allow for 5% over loading on a given axle group.</p> <p>Provide the correct approach speed is driven by the truck driver, the maximum error on any axle group weight should be no more than 2.0%</p>
<p>ACCURACY RETAINED AT DIFFERENT EXTERNAL TEMPERATURES</p>	<p>Standard weighing instrumentation does not generally compensate for the effects of significant temperature changes on weighing accuracy which arise from prevailing temperatures being different from the temperature at the time of calibration.</p> <p>The DLINK DD1015 fully compensates for these temperature changes.</p>
<p>SIMPLIFIED FAULT FINDING THROUGH “INDIVIDUAL LOAD CELL VISIBILITY”</p>	<p>Load cells connected to the DD1015 indicator via the DLINK are each visible in the indicator calibration and fault-finding menus.</p> <p>The effect of this is that firstly calibrations are made easier with deck corner calibrations being automatic and secondly a fault load cell can be identified from the indicator fault finding menu without first having to carry out actual load cell testing.</p>
<p>OPTION OF SUBSEQUENTLY INSTALLING AUTOMATION HARDWARE</p>	<p>ProWeigh+ has a complete automation module which can be activated simply through upgrading the license and without the weighbridge operator requiring any additional training.</p>
<p>OPTION OF ERP INTERFACING OR CLOUD INTERFACING</p>	<p>ProWeigh+ has a business connector module which if activated enables all data included on the weighing ticket to be interfaced real time to most ERP systems or to a User’s Cloud.</p>

The Weighing Ticket

THIS DOCUMENTATION IS COMPLIANT WITH THE NATIONAL ROAD TRAFFIC AMENDMENT ACT, 64 OF 2008

WEIGHBRIDGE TICKET SLIP			
Horse Registration	VEHICLE		
Weighbridge Name	Road train weighbridge2		
Company Name	Assmang Blackrock Mine Operation		
Site Name	****		
Product	****		
*** COPY ***			

SASCO ProWeigh⁺ Version 4.6.2

TICKET NUMBER	SMS00000019	TICKET DATE	2022/09/02 13:47
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VEHICLE DETAILS			
Registration Number	VEHICLE	TRAILER123	TRAILER456
Type	****	****	****
Operator	Private	****	****
Contact Person	****	****	****
Insurance Provider	****	****	****
Cover Type	****	****	****
Policy Number	****	****	****

TRADE WEIGHING DETAILS					
<u>First Weigh Details</u>		<u>Second Weigh Details</u>		<u>Weigh Calculations</u>	
Weight (kg)	21,000	Weight (kg)	56,000	NETT Weight (kg)	35,000
Date Time	2022/09/02 13:43	Date Time	2022/09/02 13:46	Product NETT (kg)	35,000
Operator	sa	Operator	sa	Total Difference	35,000
				Total Cost	0.00

LOADING DETAILS				
Axle Groups	Actual (kg)	Permissible (kg)	Difference (kg)	
Group 1	7,600	7,700	-100	
Group 2	16,000	18,000	-2,000	
Group 3	16,000	18,000	-2,000	
Group 4	16,400	18,000	-1,600	
TOTALS	56,000	61,700	-5,700	Speed 0.00 km/h

CONSIGNEE DETAILS			
Consignee Code	Address		
Consignee Name			
Document Number	ROA0000000002	Contact Name	****
Document Type	Sales	Contact Number	****
Document Weight	0		

CONSIGNOR DETAILS			
Consignor Name	Assmang Blackrock Mine Operation	Contact Name	****
Address	****	Contact Number	****

SMART SUPPORT

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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.

LOCAL SUPPORT AGENT

