



Accurately Weighing Africa



# IMPACT WEIGHER

SIMPLE ALTERNATIVE TO  
BELT WEIGHING



IW-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

SASCO IMPACT WEIGHER offer a low cost yet highly accurate method of measuring the mass flow of dry solids and powders for production and inventory control purpose. Impact Weighers are designed so that the impact can only move horizontally.

This means that from the total impact force only the horizontal component is measured. Other forces are ignored. This guarantees that changes in the weight of the sensing plate, due to material build-up or sensing plate wear will not affect the zero or accuracy of the system.

Impact Weighers can be used in those applications requiring a belt scale or can also be used where no conveyor is required such as in a continuous flow shoot.

## Sasco Impact Weigher

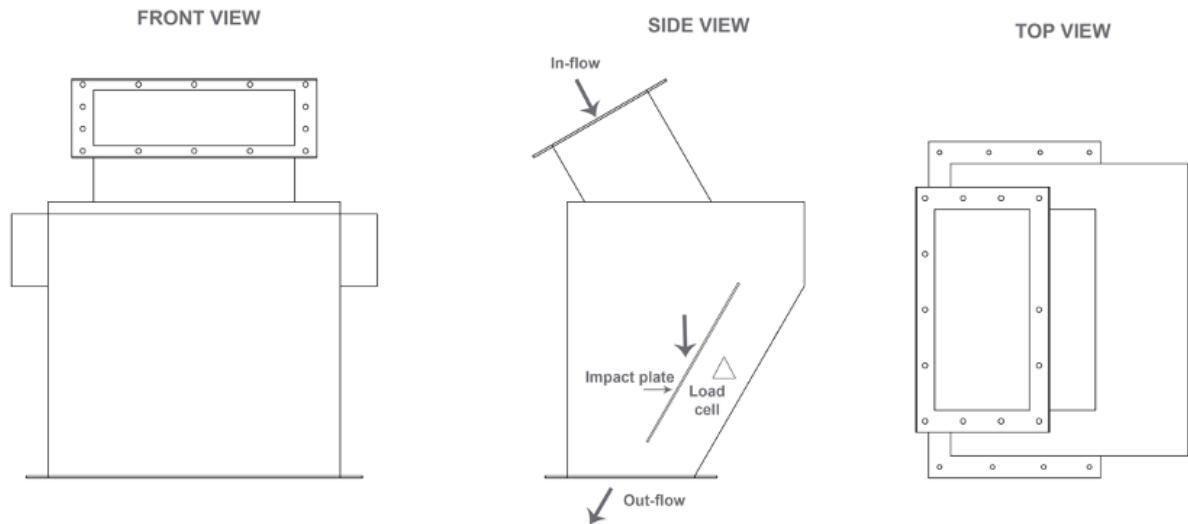
Sasco's IW Series of Impact Weighers are all highly robust and are of all steel housing construction with a stainless-steel impact plate and mounting, with the option of a full stainless-steel housing.



*Sasco IW Series Impact Weigher ready for installation at a sugar mill*

# Product Overview

SASCO IMPACT WEIGHERS have the following key components:



## Special Features

Sasco's SF Series of Impact Weighers have the following special features:

- In-line measurement.
- Engineered per application.
- Designed to fit the space available.
- Large footprint target area for material impact.
- Reliable linear and repeatability readings.
- Engineering allows for peak loading over engineered maximum.
- Sensors are integrated into impact plate and system housing.
- Reliable indication in pulsing or surging flow applications.
- High accuracy.
- Large range of flow rates.

## Standard Product

MODEL	IW 100	IW 200	IW 250
Applications	Process Weighing or Flow Rate Indication	Plant Inventory	Product Accounting or Stock Pile Accounting
Flow Capacities	10-100T p/h	100-250T p/h	>250T p/h
Housing Material	Standard: All steel housing painted; or Optional: full stainless-steel housing		
Impact Plate Material	Standard: Stainless Steel 304L; or Optional: Stainless Steel 316L		
Measuring Range	10 T p/h >250T p/h		
Operational Temperature Range	Standard: -10C- +65C Optional: -20C to +85C		
Material Temperature Range	10C to 100C		
Measurement Transducer	Force Transducer		
Approximate Weight Without Sensing Plate	50 – 100kg model dependent		
Dust Proofing	Sealed unit		
SW134 Integrator Specifications	Display: Flow rate, totalisation and force. Outputs: 4-20mA/O-10VDC analogue re transmission, dry contact totaliser pulse output, RS232, RS485, Modbus RTU/ASCII comms		



*Sasco IW Series Impact Weigher*

# Controller Features Comparison

The Sasco IW Series Impact Weigher uses the Sasco PW100 indicator.



	PW 100 Controller
Display	6-digit 7-segment LED + 8 LEDs + LCD
Display Type	7-segment + mono-colour Graphic LCD
Mounting	Wall
Key Pads	20-key Alphanumeric membrane keyboard
Built in Web Server	No
IP Rating	IP65 (according to LoadTec Docs)
Digital Filter	Moving average digital filter with programmable input step detection
Input Power	90-260 VAC or 10-30 VDC
Load Cells Operated	8 Loadcells
Scales Operated	1
Memory	SD memory stick
Configurable Set Points	Depend on the application
I/O Digital Channels	6 in & 6 out
Analog In/Out	One analog output as standard
Standard Comms	RS232
Communication Options	Optional RS232, RS485, USB, Ethernet, RF
Ticket Formats	Fixed
Approvals	No Approvals
Applications	Loadcell transmitter Loss-in-weight controller Through-put weigher Bag filling Batch weigher Dynamometer



# Application Example

## IMPACT WEIGHER

**Milling Company A** operates several mills in order to pulverise mineral ore to specific sizes prior to further processing.

A Conveyor Belt Scale feeds the ore into the ball mill at a specified feed rate and an air classifier is used to remove finer materials from the mill once pulverised and separate these into final product and oversize materials, the oversize materials are rejected and redirected back into the ball mill for further pulverisation.

### The plant needs a solution for the problems of:

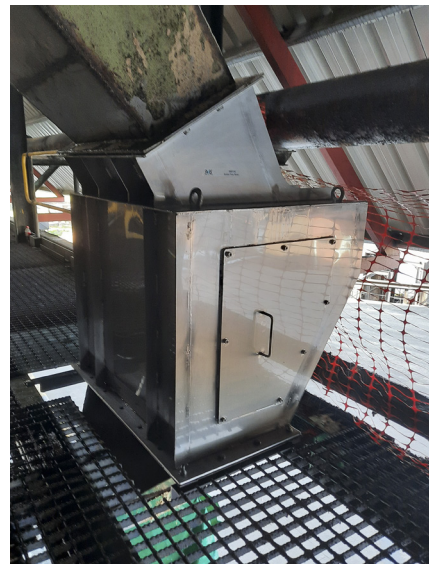
- Determining the quantity of oversized material being redirected from the air classifier back into the ball mill to be re-milled until the correct particle size is detained so that the raw material feed can be adjusted proportionately, and the mill not overfilled.
- Determining the ball mill grinding efficiency by knowing at any given time the amount of rejected oversize material generated.

Our customisable Impact Weighing systems provide a compact, built to fit means of measuring dry granular solids and powders continuous flow rates as well as totalisation of material flow.

Material flow rate and totalization thereof are indicated and retransmitted to plant PLC/DCS/SCADA and other indicating devices and control related devices.

### This information is then used for some of the following:

- Enables the process engineer to determine milling efficiency and thereby determine optimum instantaneous raw material feed rates.
- Allow for secondary control of mill feed raw material feed rates ensuring that the mill primary feed rate is controlled proportionately and does not cause overfeeding of the mill due to a high proportion of oversize material being returned from the air classifier and not being compensated for.



Impact Weigher measuring dry granular solids

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0861 422 134

OR +27 83 680 0722

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

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