Procon Engineering

INFLO BELT WEIGHERS

….proven high accuracy, repeatability & reliability

Our Pedigree

Procon Engineering is a leading manufacturer and supplier of turnkey solutions for **Weighing & Process Control Systems**. The company incorporates the well-established names of ***Defiant, Negretti, Inflo Belt Weighers*** and ***Lintvalve Boiler Leak Detection Systems.***

We are an **ISO 9001:2008** accredited company and have Quality and Health and Safety approvals from institutions including **Lloyds Register**, **National Measurement Office** & **National Britannia**, together with industry relevant Passport Schemes.

Our skill set includes:

- **System Feasibility Studies and Design**
- **Project Management**
- **Process Evaluation and System Optimisation**
- **Mechanical and Electrical Engineering**
- **Panel Building**
- **Digital and Analogue Electronics**
- **Application and System Software**
- **Hazardous Area Systems**
- **Service and System Maintenance**

Our **Inflo Resometric Belt Weighers** have established an enviable reputation for precision, repeatability and reliability, working in the harshest of environments around the world. We have experience across a broad spectrum of industries, especially in **mining, quarrying, nuclear, power generation, food & beverage, pharmaceutical, chemical, general engineering** and **building materials.**

Features

- **Unique Resonant Frequency- all Digital Force Transducer**
- **Virtually No-motion Mechanical Force Collection System**
- **Latest Technology Weighing Electronics – EP50 MK11 Controller**. *The EP50 MK11 features a 114mm x 64mm backlit graphics and text display, which can be customized to suit customers' requirements. This can include* ***live weight, flow rate*** *and* ***totalized values****. Twin programmable serial interfaces include the Modbus protocol; Ethernet IP & Profibus DP options are also available.*

Benefits

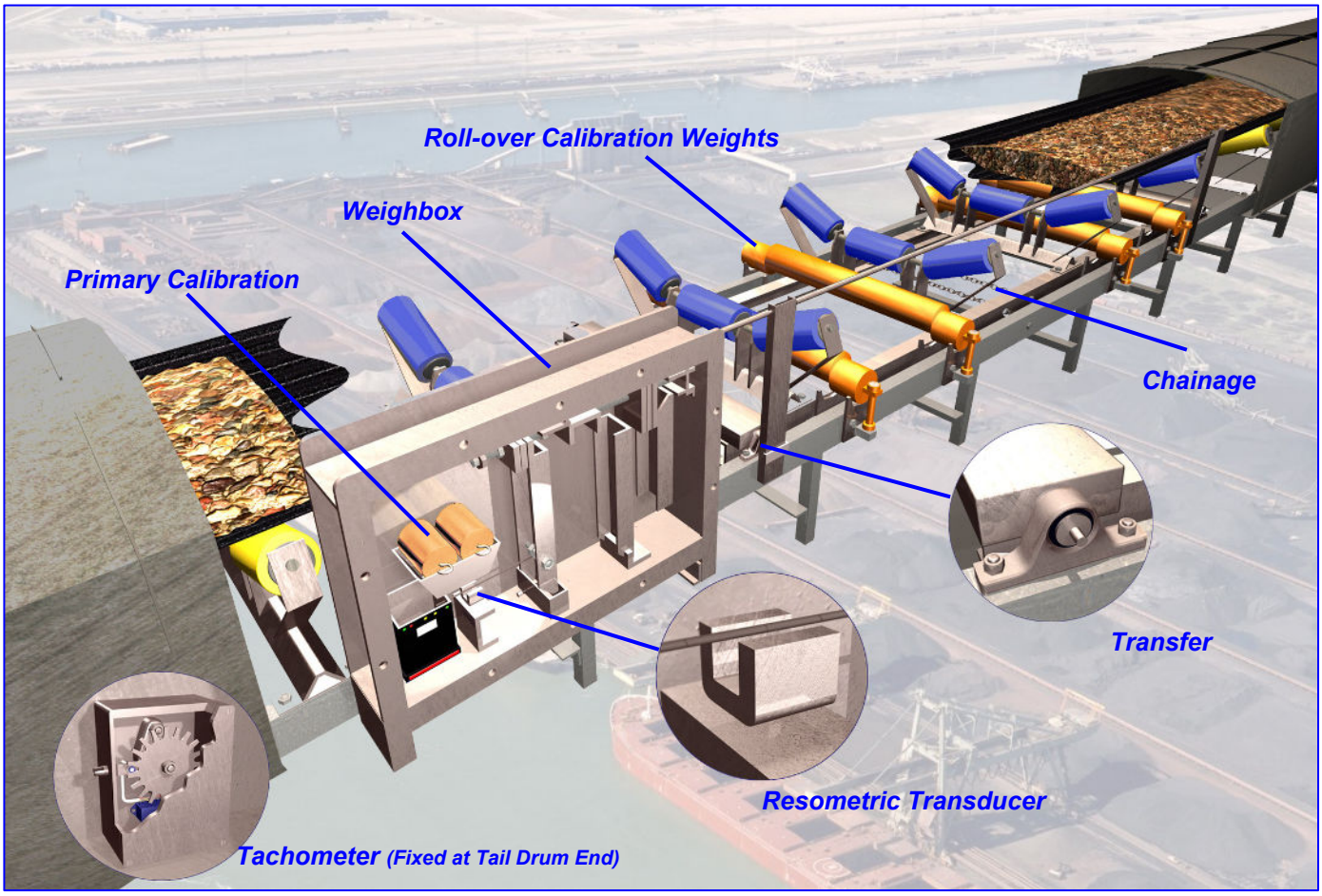
- **Proven High Accuracy and Performance Longevity in the most hostile environments**
- **Performance Capabilities better than OIML Class 0.25**
- **Worldwide Product Endorsement -** *see our Comprehensive Installation Reference List for details.*
- **Minimized Material Loss (giveaway) -** *see table below*

Table showing cost of annual material giveaway per +0.25% scale inaccuracy, based on 40 hour operational week

Cost/tonne	@50 TPH	@200 TPH	@500 TPH	@1000 TPH	@5000TPH
$20	$5200	$20,800	$52,000	$104,000	$520,000
$40	$10,400	$41,600	$104,000	$208,000	$1,040,000
$60	$15,600	$62,400	$156,000	$312,000	$1,560,000
$80	$20,800	$83,200	$208,000	$416,000	$2,080,000
$100	$26,000	$104,000	$260,000	$520,000	$2,600,000

Proven Technology

The **Inflo Resometric Belt Weigher** provides a unique combination of features that ensure the key factors influencing belt scale performance are maintained in service over long periods of time. At the heart of the scale is the Digital Resometric Force Transducer or Resonator which provides unequalled levels of measurement performance that are repeatable for many years. The Resonator has no moving parts and is pre-loaded to a standard level by the applied force from the weigh carriage. The resonant frequency changes in proportion to applied load passing over the carriage rollers. This change in frequency is processed by the electronics and combined with the belt travel speed (as measured by the Tachometer) to provide an accurate weight reading per unit time.



Simple Calibration

Periodic calibration checks can be carried out simply and expediently by utilising the roll-over calibration weights. These dead weights are normally 'parked' across the conveyor stringers and then lowered by the cam mechanism to carry out calibration.

Chainage

Lateral chains are fitted between the weigh carriage and the rigid conveyor to prevent any unwanted side forces being introduced by factors such as poor belt tracking or material asymmetry. As a result, once the weigh carriage is installed and aligned, it only sees the vertical forces produced by the material being weighed.

Astatic Compensation System

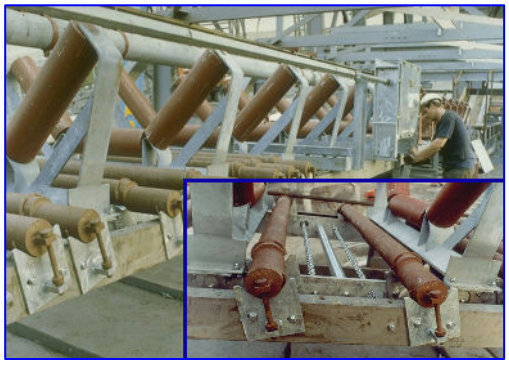
Inflo Belt Weighers are used extensively on mobile equipment such as ship unloaders and stacker/reclaimers. In these applications, the belt weighers are subjected to constantly changing angles of operation which would normally introduce significant cosine weighing errors due to the apparent change in the suspended weigh carriage mass. To automatically compensate for the changing angles of operation, Procon have developed their proprietary Astatic Mass Zero Compensation system.

Project Management

We understand how important it is to work closely with our clients from the outset of any project and as a result, **Procon Engineering** is organised specifically to provide highly effective project management. As part of this process we establish the functional design specification with our customers and provide detailed project plans, milestones and reviews - all under the umbrella of our ISO 9001:2008 accreditation. We take full responsibility for your system providing you with one point of contact. In many applications we work in conjunction with clients' engineering departments to ensure smooth implementation within required time frames.

Service and Support

Procon Engineering places great emphasis on after-sales service and support. We operate a comprehensive service, support, installation and commissioning facility throughout the **UK and the Rest of the World - 24 hours a day, 7 days per week**. Our contract maintenance schemes ensure your plant performance is maintained at peak potential. We support and cover our own and most other manufacturers' products and systems.



- **7-day, 24 hour Service and Support**
- **Service Contract Agreements**
- **Cost-effective Calibration Techniques**
- **Installation and Commissioning**
- **Repair, Refurbishment and Upgrades**
- **Remote Modem Diagnostic Support**

We also offer comprehensive training, both in-house and on site, so that you can get the best from your belt weighing system and process.

Procon Inflo Belt Weighers are in use throughout the world and our customers include:
VOEST ALPINE, EMO, KAZZINC, HONG KONG ELECTRIC, POWERGEN, EON, SSAB Sweden, LKAB Sweden, BRITISH SUGAR, ALCAN, BAOSHAN PRC, TEXAS UTILITIES, ESKOM South Africa, LA FARGE, CORUS, SCOTTISH POWER, UK COAL and TATE & LYLE.

Other brochures are available on request pertaining to our capabilities in:
Process Control, Process Weighing, Hazardous Area Weighing, Boiler Leak Detection *and* ***Service & Support***

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