

PENKO Engineering BV



The experts in weighing and dosing systems.
Your partner for fully-engineered factory solutions.



PENKO Products

FLEX™: The fastest and most accurate weighing controllers and indicators on the market

PENKO's FLEX instruments combine stunningly-simple touchscreen interfaces, a core of sophisticated weighing hardware, and a patent-pending calibration system (G-Cal) to produce a full range of the fastest, most-accurate weighing controllers on the market. FLEX controllers come



ready to work "out of the box", and save money by improving weighing and dosing performance with higher accuracy and speeds that are more than 10 times faster than our competitors' products.

FLEX controllers are physically-distinguished by their large, bright

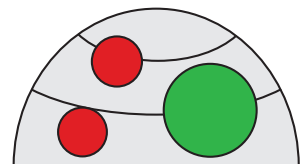
touchscreens that are easily-visible from a distance to provide critical live data at-a-glance, which greatly improves the likelihood that errors or variations in performance do not go unnoticed.

The controllers are pre-programmed into one of six standard "personalities" for dedicated operation in specific weighing applications, including belt weighing, filling, loss-in-weight and check-weighing. For complete descriptions and specifications on the entire FLEX line, visit penko.com/FLEX

G-Cal™ – Incredible accuracy with time-saving automation

For industrial applications that employ load cells as the means of measuring weight, instruments must be manually-adjusted for their height above sea level. This adjustment ensures measurements are accurate – but has traditionally involved a complex calibration process and the maneuvering of heavy test weights.

With a PENKO instrument equipped with patent-pending G-Cal precise gravity correction, load cell data and the location coordinates are all that is needed to ensure optimum accuracy (up to six-times more accurate than standard methods). Internal look-up tables for load cell data and G-Cal technology make all the corrections instantly. For a list of products available with G-Cal, go to penko.com/GCal



Complete weighing solutions and systems

PENKO engineers have all the tools to create and deliver fully-outfitted industrial weighing and dosing systems, and have a strong history of providing engineered solutions for clients who depend on continuous and batch control manufacturing processes. From PENKO's revolutionary FLEX controllers and indicators, to a range of load cells and accessories, amplifiers, weighing platforms and software, we offer the benefit of obtaining both the best in products and top engineering experience from one company. See descriptions and specifications of all our products at penko.com/products



Load cells and accessories capacity from 1g to 400 tons with an accuracy of 6000 divisions



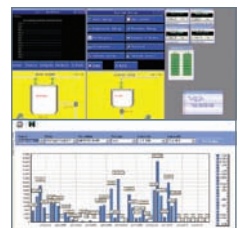
Technical Services



Controllers and Indicators



Engineered cabinets for systems



Software Batch reporting e-marking

PENKO Case Studies:

Weighing solutions from raw material to finished product



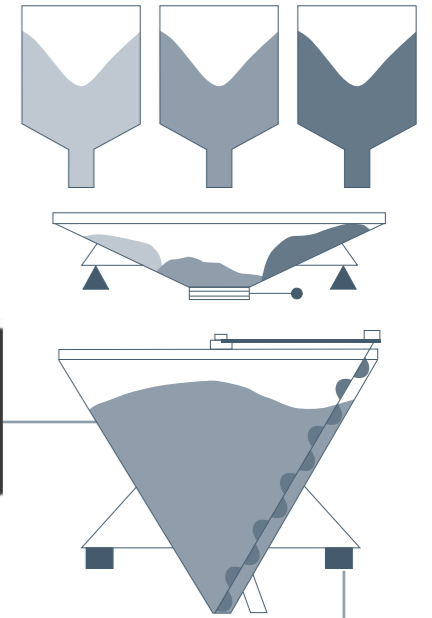
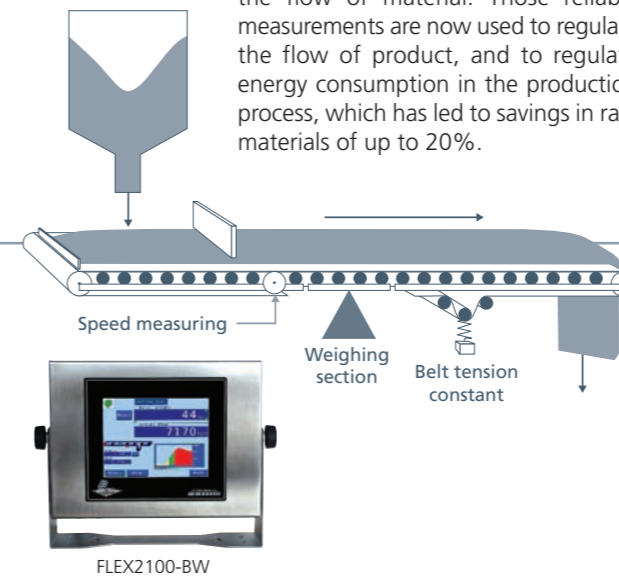
PENKO creates weighing and dosing solutions that serve our clients in all phases of a production process. We have a complete spectrum of components – including an industry-leading line of controllers – that can be used alone or in fully-engineered systems to reduce waste of raw materials, ensure product ingredients are dosed and mixed in proper proportion, and verify that finished product has hit a sale-ready weight. We are the experts in our field, and we have used our expertise to build weighing solutions that do all this – and save time and money in the process. These are just some examples. For more reasons to work with PENKO, visit penko.com

Belt Weighing –

Controlling input of raw materials reduces waste

A PENKO client that processes potatoes needed to improve the continuous flow of product through its plant. Inconsistent flow of product along the belt was causing problems in the boiling process, leaving potatoes mashed or under-cooked and resulting in wasted materials and energy.

PENKO provided a weighing section for an existing belt conveyor in the factory, along with a compact PENKO controller, that gives machine operators accurate data on the flow of material. Those reliable measurements are now used to regulate the flow of product, and to regulate energy consumption in the production process, which has led to savings in raw materials of up to 20%.



Blending and Dosing –

No more “reworking” of final product

A manufacturer of cookies and wafers sought a reliable system for controlling the automatic dosing of ingredients. In its current situation, the client was using “rework” as part of its recipe. The rework consisted of finished product that had been produced out-of-specification due to the unreliable dosing in the mixing process, and required extra processing just to be made into something useful.

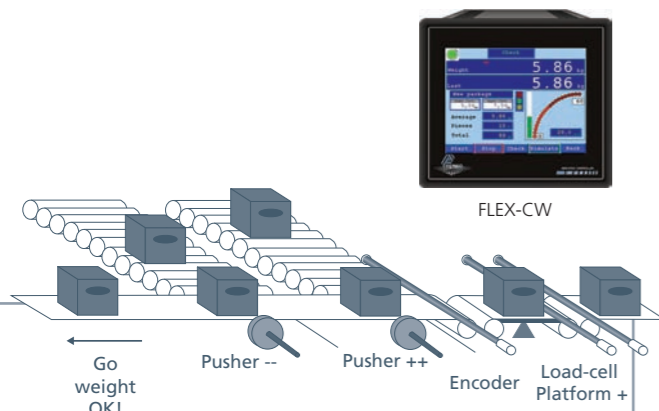
PENKO’s solution immediately solved the problem at the source. Ingredients were dosed and combined with greater precision, and all batches of cookies proved to be inside specification. Facing a shortage of rework – and no longer having a need for it – allowed the client to improve their recipe quality to consist of all-original ingredients, and to entirely eliminate the inefficient practice of milling finished product.

Filling –

Huge savings from speed and accuracy

Small inefficiencies and per-package overages in materials can really add up – negatively – over time. A new PENKO customer was using a weighing system from the leading PLC supplier that could not meet the desired production speed and accuracy. One out of every 15-20 boxes was passing through a machine without getting filled, and the others were overfilled by an average of 1,4 grams per box.

After a fast PENKO controller was installed with one of the customer’s existing dosing machines, production speed was increased by 20%. No boxes were left empty, and the average overfill was reduced 50% per box – saving five tons of material and €100,000 over the course of a year.

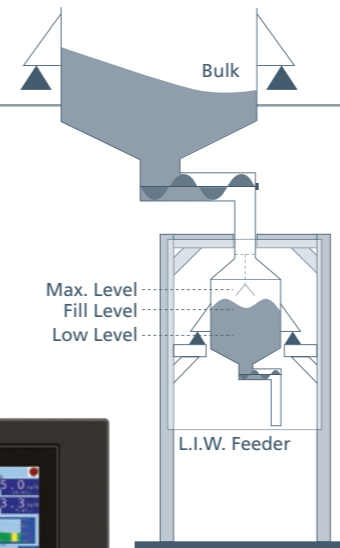
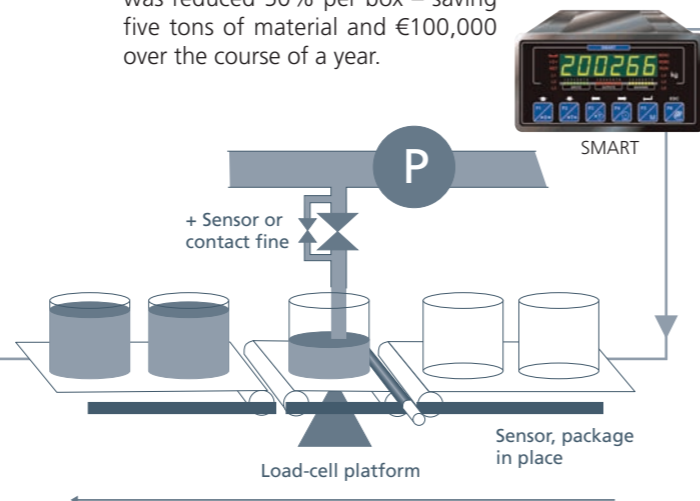


Check Weighing –

Verify finished goods before they ship

Making goods that are sold on both quantity and weight means measuring the finished product accurately becomes doubly-important. When a manufacturer of pre-packaged products was seeing too many ready-to-ship items being “pushed-out” of the final conveyor process even though they were within specification, they called on PENKO for a solution.

The combination of FLEX™ check-weighing controller and a standard weighing platform made all the difference. FLEX’s speed, accuracy and high-resolution display removed the uncertainty over which packages were outside specification – saving the client significantly in unnecessary handling and costs.



Loss-in-weight –

FLEX instrument cost recouped in a day

When one of PENKO Engineering’s clients ordered some of the newly-launched FLEX-LIW instruments for their potato chip production line, they quickly realized the benefits of the controllers’ clear, colorful data-display screens – and extreme weighing accuracy.

The PENKO products are used to regulate an even flow of paprika powder from a hopper onto potato chips as they pass through machinery. With FLEX, waste has been dramatically minimized, and the client confirmed the advantages of having industry-leading weighing accuracy, stating, “we estimated that the FLEX paid for itself in paprika powder saved in just one day’s production.”

Partner with PENKO

The experts in weighing and dosing systems

Our design expertise includes systems for manufacturing plants, bulk weighing, check weighing, force measuring and process control. For over 30 years, PENKO Engineering has been at the forefront of high-accuracy, high-speed weighing systems, and our solutions continue to help cut costs and drive profits for some of the biggest global brands, like Cargill, Sara Lee, Heinz, Kraft Foods and Unilever.

Superior support and service

PENKO is dedicated to ensuring every system is installed, tested, programmed, commissioned and operational to the clients' specification. Our engineers in our weighing center in Ede, Netherlands, and our distributors in major industrial countries, strive to solve most weighing-system issues within the same day.

We also offer free monthly training classes to anyone interested in exploring modern, high-speed weighing instruments and techniques. A schedule of sessions is available at penko.com/training



Recent PENKO Clients

| | |
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| ABB | Hills Pet Nutrition |
| Akrosil | Katoen Natie |
| AKZO Nobel | Kraft Foods |
| Avery Denison | LEAF |
| Barry Callebaut | Lever Fabergé (Unilever) |
| Van den Berg & Jurgens (Unilever) | Nestlé |
| Cadbury | Nutreco |
| Campina | Unimills (Unilever) |
| Cargill | Pepsico |
| Corus/Tata Steel | Philips |
| Degussa | Perfetti van Melle |
| Diosynth | Royal Netherlands Air Force |
| Dow | SAPPI |
| DSM | Sara Lee |
| Forbo | Shell |
| GB Plange | Siemens |
| Good Year | Sphinx |
| Heinz | Stork |
| Henkel | Vredestein |
| Hercules | Xerox |

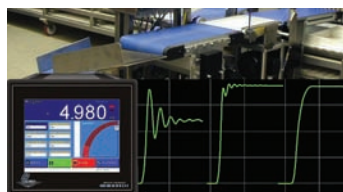
Testimonials

On PENKO products...

"Installing FLEX enabled our operators to improve the quality of the product, and reduce the amount of paprika we used to waste in the process. We estimated that the FLEX paid for itself in paprika powder saved in just one day's production."



"FLEX instruments have high-resolution, fast-response, and full-color bargraphs that make unacceptable variations in a machine's weighing performance clearly-



visible to operators – even from a distance – making sure those costly variations never go unnoticed."

"I have worked with PENKO products since 1997. During this time I have learned that their products are very exact and reliable. The technical support team is always very helpful and professional."

"PENKO products give me the option to make my own applications."

On working with PENKO...

"What makes PENKO unique in the market is their honest way to create a win-win situation for their customers by producing high quality state of the art solutions at a reasonable price."

"I chose PENKO and PENKO products because of the reliable people and the products. It is necessary to have good solutions for the process industry. There is no time for breakdowns and production stops."



The right weighing choice – PENKO



PENKO instruments are known for their quality worldwide. Based in the Netherlands, PENKO has over 30 years experience in developing and supplying the latest technologies for weighing and dosing. Through our sales network or our online store at www.penkoshop.com, we can provide you with a full spectrum of weighing components, and with our team of industry-certified and qualified staff, we excel in producing fully-engineered systems for our customers.

PENKO products are tested and certified by independent expert and government organisations to ensure they meet or exceed metrology industry guidelines – and our own high standards – for performance. A library of our testing certificates is available for reference at penko.com/publications



PENKO Dealers Worldwide: Australia, Brazil, Denmark, Egypt, Finland, France, Germany, India, Netherlands, Norway, Portugal, Slovakia, South Africa, Spain, Sweden, Switzerland, Syria, Turkey, United Kingdom

For a full list, please visit penko.com/dealers

