PENKO ENGINEERING B.V.

Optimising Precision Weighing



PENKO 1020 Series

PENKO
an ETC Company

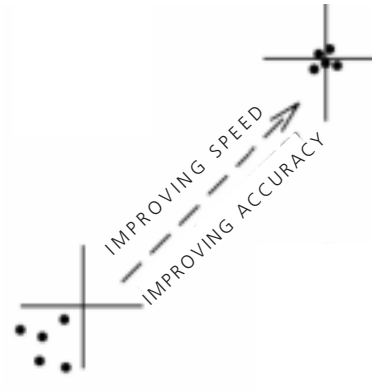


PENKO 1020

The 1020 high performance indicator is an innovative indicator adaptable to a wide range of weighing applications. Precise and fast measurement of platforms, silos, packing scales, check weighing scales and batching systems are easily achieved. The rapid and precise measurements help to avoid waste of recourses and increase production capability. Therefore the 1020 helps to save time and money.
A unique color display allows for easy and comfortable operation. The quickly obtained clean and stable weighing signal created by our fast revolutionary digital filters reduce the signal stable waiting time, improving the machine speed and therefore product capability and profitability.
The 1020 integrates smoothless into (existing) systems by the various industrial communication protocols available. With the 1020, users are able to build up sophisticated weighing systems within an overall PLC process control system. Penko indicators and controllers ensure precise measurement and quick responds time, bringing you one step closer to flawless production line which saves time and money.

All Penko indicators and controllers are designed, manufactured and inspected by Penko employees in our Netherlands facility to maintain best of class quality control, reliability and performance that is not possible for companies that rely on outsourced contract manufacturing facilities.

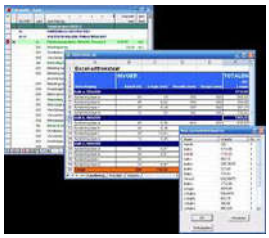
ADVANTAGE



The 1020 series are compact measuring devices designed to be user friendly. They measure at high speed (1600s/s) and have a high internal resolution (24bits), which makes it capable to do extremely accurate measurements. The wide range of available filter options helps to reduce the back ground noise to a minimum and stabilize the weighing signal. The very accurate and stable weighing results save product. The devices reaction time of milliseconds create increased production capability. Together, it results in an increase of your machine's profitability.



The broad variety in available communication protocols makes it easy to integrate the Penko instruments in a process control system. Protocols like Ethernet-IP, Modbus TCP/RTU, FINS, Profibus-DP slave, Profinet and ASCII are available. The Penko Web interface protocol gives the freedom to configure Penko instruments on any PC or mobile device available on the same network. The configuration is done via a web browser, making software installation on a fixed PC unnecessary.



Together with the Penko Data Reporter software, the measuring data can easily be transferred to Windows based programs like Access and Excel. This give you the opportunity to process the data arithmetical and/or integrate the data in standard forms or export to Excel readable ERP systems. Another option is to store the Data Reporters collected data in a MySQL or MSSQL database. The analyzer extension allows for an easy overview and thorough analyses of the collected data. A PC based scope software is available for graphically monitoring the measuring signal.



The 1020 has a clear, high contrast screen. This makes it readable from a distance, and helps with easily setting up all the parameters within the device.

PENKO 1020 Indicator

PENKO 1020 APPLICATION

www.penko.com/Products/Measuring-Instruments/Controllers



- Platforms
- Silo weighing
- Packing scales
- Batching systems
- Plug & play solution for filling weighing
- Plug & play solution for check weighing
- Plug & play solution for belt weighing
- Plug & play solution for force measurement

PENKO 1020 TECHNICAL HIGHLIGHTS

www.penko.com/Products/Measuring-Instruments/Controllers



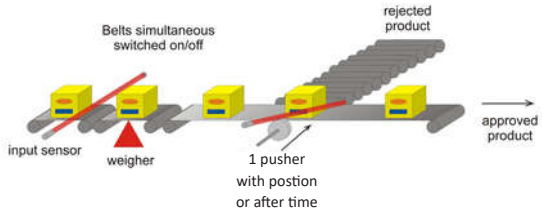
- More flexibility & functionality while saving space
- Ultra-clear visual information at your fingertips
- Fast and easy setup
- USB, communication options RS232, RS422, Ethernet, Profibus or Profinet, analog (4-20mA)

Type	Standard	RS232/RS422	Profibus	Profinet	Stainless steel
Wiring	With sense				
Type of sense	Passive				
Power supply	18-32 Vdc; 7,5 W max.				
Load cell power supply	5 Vdc				
Sensitivity	0,1 µV/d (non-certified)/ 0,4 µV/d (certified)				
Selectable ranges	1; 1,5; 2; 2,5; 3 mV/V				
Input voltage Unipolar @ 3mV/V	-1 mV to +16 mV				
Input voltage Bipolar @ 3mV/V	-16 mV to +16 mV				
A/D Conversion speed	1600/s				
Max. load cell impedance	1200 Ω				
Min. Load cell impedance	43,75 Ω				
Max. no. of load cells 350 Ω	8				
1000 Ω	22				
Max. number of d	10.000				
Display resolution	100.000				
Internal resolution	24 bits				
Display steps	1,2,5,10,20,50,100,200				
Display size	2,8"; 320 x 240 pixels				
Inputs, 3	18-28Vdc, PNP or NPN or count ≤2,5kHz				
Outputs, 4	Max. 35V/0,5A, PNP or NPN				
Analog output (optional)	0/4-20/24mA, 10.000d				
Communication RS232	No	Yes	No	No	No
RS422	No	Yes	No	No	No
Ethernet	Yes	Yes	Yes	Yes	Yes
USB	Yes	Yes	Yes	Yes	Yes
Profinet	No	No	No	Yes	No
Profibus	No	No	Yes	No	No
Operating temperature	-10 C to +40 C				
Storage temperature	-20 C to +60 C				
Relative Humidity	Max. 85% non-condensing				
Mono filling, fixed	Option				
Check weighing, fixed	Option				
Belt weighing, fixed	Option				
Force measurment, fixed	Option				
Protection class	IP45				
Protection class build in cabinet	IP65				
Weight	± 700g	± 700g	± 700g	± 700g	± 2.100g

PENKO 1020 APPLICATION SOFTWARE

PENKO1020 CHECKWEIGHING

www.penko.com/Products/Measuring-Instruments/Controllers

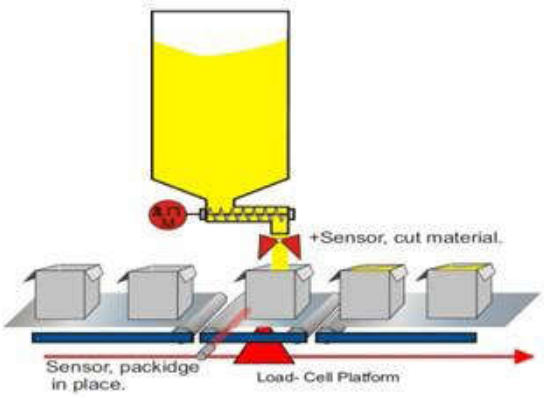


As the name suggests, checkweighers are used to check the weight of packaged goods. The automated systems check the products both for internal control and for foreign trade. Penko has developed a specialized solution that enable particularly quick and precise control in the industrial production process, helping to reduce product spillage and increase the production capability of the line.

For the 1020, Penko has developed software that checks of correct or incorrect weight, including the option for rejection.

PENKO1020 Filling

www.penko.com/Products/Measuring-Instruments/Controllers



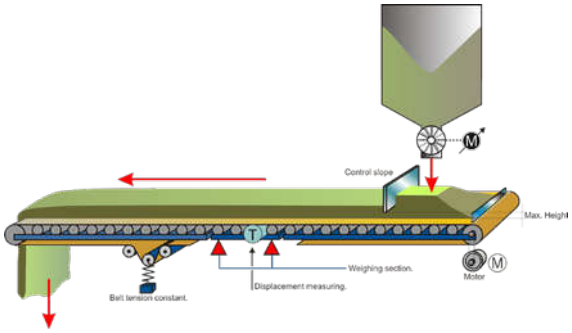
Filling of packages based on mass is applicable for solids, powders and granulates, as well as for thin and pasty liquids. Simply put, from a chemical point of view, mass is always correct. Every molecule has its own mass, so weighing means that we more or less count molecules, and is correct for all types of product.

Solids are sold on weight, and liquids are usually sold on volume. However, filling liquids on weight has the advantage of reducing a check weighing step in your production process, saving a significant amount of time. Filling on weight is also applicable for the more difficult liquids like adhesives, paints and syrups. The Penko filling solutions help in increasing the dosing percision and reducing the time spend on the filling line.

The filling program of the 1020 is developed to dose with great accuracy. This is reached by switching from coarse to fine dosing just before the setpoint is reached. This switching reduces over- and underfilling to a minimum

1020 BELT WEIGHING

www.penko.com/Products/Measuring-Instruments/Controllers



To control and regulate the continuous flow of bulk material, belt weighing systems are used. The Penko belt weighing approach detects every change in the mass flow enabling precise measurement, control and flow regulation. Penko solutions help in reducing product spillage and increasing the factory's efficiency by communication the most accurate flow.

Developed for the 1020 is a belt weighing software to control flow measurement and totalising, based on strain gauge load cells, where required in combination with a speed meter.



Source: Kelderman Bouw

Certifications

PENKO sets high standards for its products and product performance to ensure they meet - and even - exceed metrology industry guidelines. PENKO is ISO9001 certified, giving our long term quality work the official stamp of approval. Additional certificates are available on: http://www.penko.com/Support/Certificates

PENKO is a member of the Association of Dutch Suppliers of Weighing Equipment (VLW) and represented in he European Weighing Association (CECIP).



Find a PENKO Distributor

www.penko.com/Find-A-Dealer

PENKO Engineering B.V. ▪ Schutterweg 35, 6718XC Ede ▪ The Netherlands Tel +31 (0) 318525630 ▪ info@penko.com ▪ www.penko.com Copyright © 2015 ETC All rights reserved. 7600L1081-EN-R11