

PENKO ENGINEERING B.V.

Optimising Precision Weighing



PENKO 1020 Series





PENKO 1020

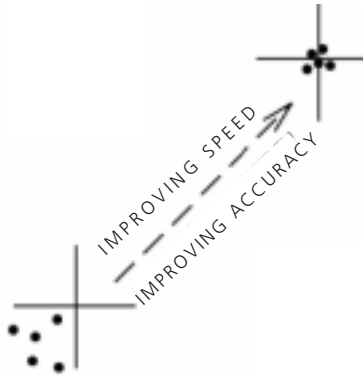
The 1020 high performance indicator is an innovative indicator adaptable to a wide range of weighing applications. Precise and fast measurement of platforms, silos, packing scales, check weighing scales and batching systems are easily achieved. The rapid and precise measurements help to avoid waste of resources 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 smoothly 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 response time, bringing you one step closer to a 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 the 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)

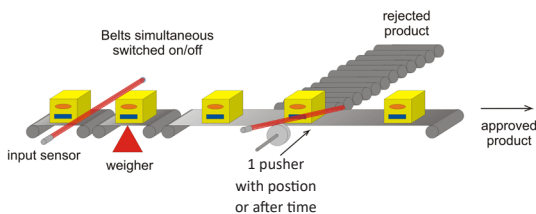
PENKO 1020 Indicator

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 μ V/d (non-certified)/ 0,4 μ V/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 \leq 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 measurement, fixed	Option					
Protection class	IP45					
Protection class build in cabinet	IP65					
Weight	\pm 700g	\pm 700g	\pm 700g	\pm 700g	\pm 2.100g	

PENKO 1020 APPLICATION SOFTWARE

PENKO1020 CHECKWEIGHING

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

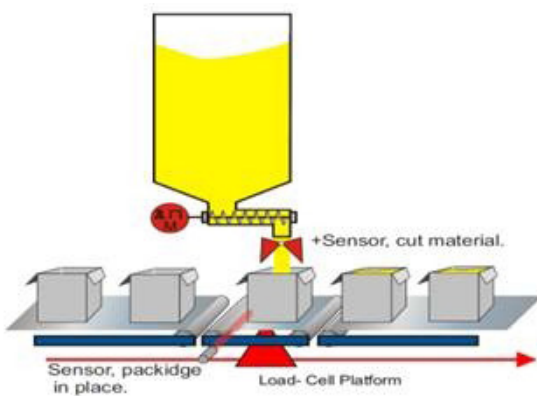


As the name suggests, checkweighers are used to check the weight of packaged goods. The automated systems check the products both for internal control and for foreign trade. Penko has developed a specialized solution that enable particularly quick and precise control in the industrial production process,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

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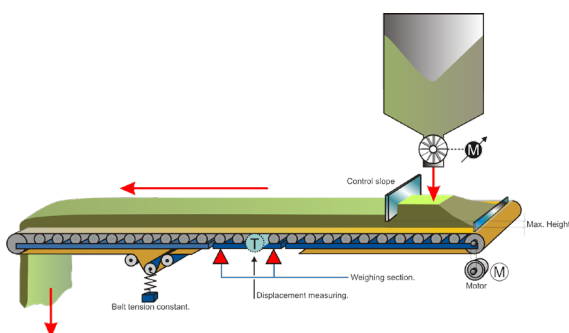
Filling of packages based on mass is applicable for solids, powders and granulates, as well as for thin and pasty liquids. Simply put, from a chemical point of view, mass is always correct. Every molecule has its own mass, so weighing means that we more or less count molecules, and is correct for all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



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 the European Weighing Association (CECIP).





Find a PENKO Distributor

www.penko.com/Find-A-Dealer



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