RICE LAKE
Checkweighers and metal Detection Systems

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Contents

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Specifications:

- **Product Name**: Checkweigher
- **Manufacturer**: www.ricelake.com
- **Applications**: Food and beverage packaging, pharmaceuticals, cosmetics, logistics

Product Usage Instructions

Checkweigher Basics:
Checkweighers are used in various industries like food and beverage packaging, pharmaceuticals, cosmetics, and logistics. They are typically placed at the end of a production line to weigh products.

In-Motion Checkweighing:
In-motion check weighers automatically weigh products as they move along the production line. They reject or accept products based on preset weight zones, providing a 100% inspection rate and reducing human errors.

Static Checkweighing:
Static check weighers verify product weight within a preset range but require an operator to move products on and off the platform. They have lower maintenance requirements and initial costs compared to in-motion checkweighers.

Components of an In-motion Checkweigher:

- Conveyor Belts: Move products through the check weigher and along the production line.
- Weight Indicator: Displays weight data and controls the operation and calibration.
- Options: Offer various accessories like reject devices and alarms for efficiency.

Components of a Static Checkweigher:

- **Platform:** Comes in different types for easy material transfer and cleaning.
- **Weight Indicator**: Displays weight data with alert lights for different weight zones.
- **Options**: Include stack lights and mobile carts for flexibility.

Before You Buy:
Assess your business needs before investing in a check weigher to ensure you choose the right weighing solution for your production line.

Choosing Your Scale Supplier:
Consider factors like reliability, customer support, and compatibility with your existing systems when selecting a scale supplier.

Checkweigher Basics

Checkweighers are used in a wide range of industries, such as food and beverage packaging, pharmaceuticals, cosmetics and logistics. Most often, checkweighers are used at the end of a production line, but their uses go beyond simply weighing products.

Checkweigher uses include both typical and statistical applications:

- Checking for under- and/or overweight products
- Classifying products into weight zones
- Monitoring product line efficiency
- Ensuring product compliance with federal regulations and standards
- Checking for missing package components, including caps, lids, labels or product
- Providing feedback reports for process analysis and adjustment

Benefits of Adding a Checkweigher

Product inspection ensures quality control throughout all stages of the manufacturing process. Checkweighers, whether in motion or static, create an inspection point to verify weight, but they can also help optimize manufacturing processes and reduce overall costs. Checkweighing benefits include:

- Maintaining legal standards
- Reducing product giveaway
- Eliminating human error
- Capturing process data
- Improving customer satisfaction and company reputation

In-Motion/Static Overview

In-motion checkweighers automatically weigh products as they move along a production line, while static checkweighers require operators to move products on and off the scale.

In-motion Checkweighing

An in-motion (dynamic) checkweigher weighs products, then rejects or accepts them based on preset weight zones. In-motion checkweighers automate processes, increasing speed and pro-ductivity while decreasing operator intervention. These systems provide a 100% inspection rate and reduce human errors.

Components of an In-motion Checkweigher

- **Conveyor Belts**
  Infeed and outfeed conveyor belts move products through the checkweigher and along the production line.
- **Weight Indicator**
  The indicator, or controller, displays weight data and serves as the command center for the operation and calibration of the checkweigher.
- **Options**
  From reject devices and stack lights to alarms and fieldbus protocols, in-motion checkweighers offer a variety of accessories to make your production line more manageable and efficient.

Static Checkweighing

A static checkweigher is designed to verify product weight to be within a preset range or target, but it requires an operator to move product on and off the platform. A static checkweigher requires very little maintenance and there is no process control to service. This type of checkweigher also has a lower initial cost.

Components of a Static Checkweigher

- **Platform**
  The checkweigher platform can be a flat top, roller top or ball top so operators can easily transfer material on and off the scale. The platform should be easy to clean and some are specifically designed for environments requiring heavy washdowns.
- **Weight Indicator**
  The indicator displays weight data and typically includes alert lights for over, under and target weight zones. It may be mounted to a column above the weighing platform or as a standalone device.
- **Options**
  Stack lights indicate over- and underweight measurements, and a column can attach the indicator to the platform, keeping it at eye-level. Mobile carts allow static checkweighers to be moved throughout production as needed.

Before You Buy

Implementing a checkweigher into your production line can transform operations, but specific business needs should be assessed before investing in checkweighers to ensure you select the right weighing solution.

Choosing Your Scale Supplier
Research scale distributors in your area before deciding who you want to work with. Your scale distributor should be an expert with checkweighing systems, accessories and scale services. They will review your unique business needs to ensure they recommend the best solution for your process. In-motion checkweighers are specialized systems that not every scale technician is familiar with, so it’s essential to find a distributor who has experience with in-motion checkweighing if that’s the type of checkweigher you need.

Your scale distributor may be able to provide in-house checkweigher demonstrations or show you a non-competitor business currently using a checkweigher you're interested in. Seeing a checkweigher in use can help you choose a system that will simplify processes and be easy for operators to use.

Factors to Consider When Choosing a Checkweigher

- **Type of Product Being Weighed**
  The type of product being weighed will determine the design, capacity and accessories of your checkweigher.
- **Environment**
  Temperature fluctuations, humidity levels, air currents, debris and dust are all environmental factors that can affect the checkweighing process.
- **Vibration**
  To minimize vibrations and errors, install checkweighers away from other machines, moving parts or conveyors.
- **Standards, Regulations and Specifications**
- Any checkweighers you use must ensure compliance to relevant legal standards, such as maintaining Legal for Trade certification or meeting HACCP safety and sanitation requirements.
  Checkweigher Accuracy
  Accuracy measures how close weight values are to a known test value. In checkweighing, accuracy is demonstrated by how close the product is to the preset target weight. Because checkweighers are used across many different industries that must adhere to strict regulations, accuracy is vital. The accuracy of a scale is composed of two main factors: linearity and repeatability. Linearity refers to how close to the actual weight of a test package the checkweigher measures each time the test package is weighed. Repeatability is measured using standard deviation and describes the weight variance calculated from weighing a specific test mass several times. An accurate checkweigher is both highly linear and repeatable.

Checkweighing Software Integration

In addition to selecting the right type of checkweigher for your application, you also need to carefully consider the software that will integrate with your scale data. Rice Lake Weighing Systems' Myrias® modular software captures, monitors and reports all process data so you can make strategic production decisions. Myrias generates reports in real-time, both locally and remotely for easy data access from multiple locations. Easily integrate Myrias with third-party ERP and MRP systems or export data to spreadsheet programs such as Microsoft Excel® for digital recordkeeping and analysis.

- **In-motion Checkweighing Module**
  Record all packs from checkweighers with real-time charting and receive immediate warnings of low weights and expensive give-aways with Myrias. Comprehensive records help operators analyze pack weights and diagnose filling faults. Operators can also manage a product database from one PC to control settings for all of the in-motion checkweighers at your facility. Myrias also provides optional reporting capabilities for integrated metal detectors.
- **Static Checkweighing Module**
  Myrias adds efficiency to manufacturing, sorting and food-processing applications by continuously monitoring packs as operators place them on static checkweighers to ensure packs are within preset ranges. Control filling with checkweighing lights that notify operators of weight status and automatically record each weighment based on operator, product or other key data you determine.

Rice Lake Weighing Systems' In-motion Checkweighers

ELS SERIES: ELEVATED LOAD CELL STANDS

ELS Series elevated load cell stands can replace existing legs on a conveyor to convert it into a scale. ELS Series weigh stands integrate into pre-existing systems to fit the exact height and width of conveyors from a wide range of manufacturers.

MotoWeigh: CASCADE SCALE

The MotoWeigh Cascade Scale in-motion gravity drop checkweigher offers increased efficiency and consistency in a compact package. Ideal for weigh-ing small part kits, it can ensure all necessary components are present before shipment.

MotoWeigh®

IMW IN-MOTION CHECKWEIGHERS AND CONVEYOR SCALES

MotoWeigh® helps producers tighten target weights, increase profit margins, and improve quality and customer satisfaction with options like bar code readers and metal detection systems. These are just a few of the benefits you'll discover when MotoWeigh gives your business an edge over the competition.

Rice Lake Weighing Systems' Static Checkweighers

CW-90: OVER/UNDER CHECKWEIGHER

This bench checkweigher helps accelerate weighing processes and reduce production downtime. The CW-90's straightforward operation can help error-proof your production process and is as simple as watching for the over/under lights to appear on the indicator.

CW-90X: OVER/UNDER WASHDOWN CHECKWEIGHER

The CW-90X has all the great, user-friendly features of the CW-90 but is designed to meet HACCP requirements and withstand heavy washdown and cleaning routines. The CW-90X features a tough piezo keypad made to withstand sharp knife-point contacts as well as contaminants and liquids.

CW-90

CW-90X

RT-M: 36×100 ROLLER TOP SCALE

This roller top checkweigher is designed to easily integrate into existing production lines with custom sizes and capacities available.

CUSTOMIZABLE: CHECKWEIGHING SYSTEMS

Rice Lake offers an extensive line of platform scales and indicators that can be combined to create a checkweighing system specifically for your operations.

Learn more about Rice Lake's checkweighing solutions at www.ricelake.com/checkweighing

HEADQUARTERS

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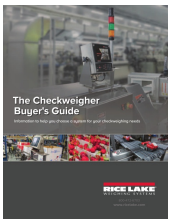
FAQ

Q: What are the benefits of using a check weigher?

A: Checkweighers ensure quality control, optimize manufacturing processes, reduce costs, and provide inspection points for product weight verification.

Q: What industries commonly use check weighers?
A: Industries such as food and beverage packaging, pharmaceuticals, cosmetics, and logistics frequently utilize checkweighers.

Documents / Resources

	**RICE LAKE Checkweighers and metal Detection Systems** [pdf] User Guide Checkweighers and metal Detection Systems, Checkweighers, and metal Detection Systems, metal Detection Systems, Detection Systems, Systems

References

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- **What Is A Checkweigher | Rice Lake Weighing Systems**
- **User Manual**