

Sonic 350 Checkweigher

Introduction

The Sonic 350 Small Package In-Motion Checkweigher is designed for institutional and packaged food manufacturing, specialty chemical, and corrosive or caustic product industries. This checkweigher weighs products from 10 g to 10 kg with conveyor speeds in excess of 250 feet per minute, and production rates up to 200 units per minute.

The Sonic 350 is designed for flexible products, and is the only checkweigher on the market that does not require the use of photo-eyes to detect the presence of a package crossing the scale – even at high production rates. Its all stainless steel conveyor and frame are designed to meet the demanding production needs for an easy-to-clean, low maintenance, yet highly accurate in-motion scale.

A wide variety of weigh station conveyor lengths and widths are available to meet your specific application needs. Metering, pacing, reject, and material handling conveyors are available. Its standard I/O will interface to your new or existing metal detector, offering control of up to three reject devices for low/high/metal reject outputs. For products that are within the 10 g to 10 kg range, the Sonic 350 is the perfect choice.

The Sonic 350 Checkweigher's design allows for disassembly without the use of tools. Additional features include digital speed controls, a single standard load cell, and servo motors, while each unit comes with Thompson Scale's dependable long-term service. The Sonic 350 is built tough enough to handle virtually every product in any environment, yet it is responsive in both accuracy and performance.



Shown with optional Eriez DSP metal detector



Easy Configuration

The Sonic 350 features endless food-grade belts that are available in a wide variety of widths and lengths. The conveyors are driven by servo motors and food-grade rated drive components. Small 1" diameter conveyor rollers provide the smoothest possible transition of product across the scale. The conveyors are interchangeable, and include many commonly available parts. A single commonly available load cell, housed in a stainless steel labyrinth sealed enclosure provides a highly accurate and reliable weight each and every time.

The Sonic 350 offers wash-down rated bearings, belt and drive components, and a unique conveyor belt quick-release system that facilitates toolless belt removal. This allows operators to remove the belt, wash down or clean the equipment, and quickly replace it without worries of belt alignment or extended downtime while re-lacing or adjusting the belt tension. This feature also allows the conveyor to be removed and disassembled for quick inspection and easy maintenance.

Quick Calibration

The Sonic 350 Checkweigher only requires a single static calibration. Unlike other systems on the market, the Sonic 350 utilizes a single calibration to provide accurate and repeatable weights over the range of the scale's capacity. There is no need for multi-pass dynamic calibrations every time product sizes or weights are changed. Simply enter the new product parameters and go – it's that simple. Calibration is digital, with no pots to turn, and uses a single standard test weight.

Checkweigher Controller

The Sonic 350 Checkweigher employs Thompson Scale's Model 4693 Checkweigher Controller to provide an extensive feature set with the highest possible accuracy. This advanced controller offers many beneficial features such as a 75-product memory storage, adjustable five weight zones per product, and up to three reject outputs. It also provides easy to read menus with both English and Spanish in full sentences for better comprehension. The controls are housed in a rugged NEMA 4x/IP67 stainless steel enclosure.

The modular card rack allows for easy expandability and can interface with virtually any line or management tools. This makes the Sonic 350 Checkweigher and Controller a highly flexible and reliable solution to your checkweighing needs.

Specifications

Standard Construction

- UL and ULc Approved electrical controls
- IP 66 (NEMA 4X) standard
- All Stainless Steel construction
- USDA/FDA Approved conveyor belts
- Regreasable Bearings for extended life and minimal maintenance
- NEMA 17 Frame Servo Motors, rated IP66 for wet, corrosive environments
- Conveyor Lengths from 12" - 24" overall length, widths from 6" - 24"
- 1" Diameter Precision Balanced Head and Tail Rollers
- Single 110 VAC, 60 Hz Power Source
- Adjustable Leveling Feet
- Free-standing Scale Control Cabinet for flexibility during installation

Performance Features

- English and Spanish Menus in full sentences for better comprehension. French available soon
- Conveyor Speeds up to 250 ft (76 m) per minute
- Production Rates up to 200 units per minute
- Capacities from 10 g to 10 kg
- Embedded True-Multitasking Operating System
- High Load Cell Sample Rate and A/D conversion rate
- 5 Pole Low-Pass Filter
- Hardware and Program Adjustable Filtering
- Selectable Resolution
- Selectable Display Divisions
- Accuracy as great as $\pm 0.1\%$ @ 2 Sigma*
- Repeatability as great as $\pm 0.05\%$ @ 2 Sigma*
- Calibration Audit Trail for compliance requirements
- Single-point fast-response load cell

Scale Controller Features

- 75-Product Memory Storage
- Direct interface to Eriez Metal Detectors
- Up to Three Reject Outputs: High, Low, Metal
- Reject Outputs can be configured in any combination
- Adjustable Reject Delay and Duration
- Retentive Reject Timers for up to 8 units



Internal View of Controller

- Adjustable Five Weight Zones per product Displays:
 - Last Unit Weight
 - Gross/Net
 - Weight Conversion (lb, kg, oz, g)
 - Product Name
 - Target Weight
 - Product Number
 - Total Accumulated Weight
 - Total Accumulated Units
 - Units Per Minute
 - Mean Unit Weight
 - 5 Zone Boxes with Zone Count
- Trend Alarm with adjustable reject populations
- Modular Function-Specific Card Rack
- Complete Self-Diagnostics with errors described onscreen
- 20 mA Current Loop Serial Port transmits weight data in either of 2 modes

Powerful Statistical Options

- True SPC Closed-Loop Feedback Programs; Servo, Serial or Counter feedback available
- Established Interfaces to a variety of filling systems
- Software-Activated Statistical Analysis production reporting port
- Quad-Port Serial Card with RS-485, RS-422, RS-232, 20 mA active or passive
- STPR Statistical Production Reporting Package prints unit weights and reports on standard 8½" x 11" paper
- Trend Alarm with adjustable High/Low reject parameters and sample populations

Flexible Hardware Options

- Peripheral Conveyors: in-feed and out-feed, metering, accumulation tables, and reject bins
- Reject Options: air blow-off, side-pusher, diverter, or drop gate, three or five-zone classifiers
- Reject Bins and accumulation conveyors
- Full System Electrical Controls, turn-key, PLC, and conveyor layout capabilities

*Product dependent. Contact factory for specific product accuracy.

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