

# 4693 Heavy-Duty Checkweigher

## Introduction

The 4693 Heavy-Duty In-Motion Checkweigher is an excellent choice for packaging lines or manufacturing and parcel weighing. Weigh station conveyors run at speeds up to 220 feet per minute and range from 28" long up to 5' long. Scale capacities go up to 500 lbs and production rates in excess of 50 units per minute are handled with ease.

The 4693 Heavy-Duty Checkweigher is extremely accurate and dependable, yet is specifically designed for harsh, abusive, dirty environments commonly found in the cement, concrete, soil, bark, and carbon black products industries. Users in the chemical, starch, flour, and salt industries have also come to rely on the 4693 Heavy-Duty Checkweigher for their quality control by weight.

A wide variety of options, accessories, and environmental options are available for the 4693 Heavy-Duty Checkweigher. Metering and pacing conveyors, reject conveyors, accumulation systems, motor controls and more are available to fit your exact application needs.



## Checkweigher Controller

This checkweigher employs Thompson Scale's Model 4693 Controller to provide the most extensive feature set with the highest possible accuracy. It provides easy to read menus with both English and Spanish in full sentences for better comprehension. It even runs a complete self-diagnostics with errors described onscreen. Also, the Statistical Process Reporting (STPR) package can print unit weights and reports on standard size paper for analysis. Its modular design and the fact that it is easily expandable to interface with virtually any line or management tools, make the 4693 Checkweigher and Controller a highly flexible and reliable solution.



36" Weigh Station Conveyor & Scale on Optional Support Stand

## Easy Configuration

The checkweigher uses a single trouble-free "S-Type" load cell in an extremely accurate flexure scale base residing below the conveyor. The epoxy powder coated flexure scale base provides a highly accurate and reliable weight each and every time. This checkweigher also offers commonly available drive components and bearings.

Each package entering the scale is detected without using photo-eyes or other sensors, eliminating problems caused by dirty or misaligned sensors. Although, the system can use photo-eyes as an option to increase production or to shorten spacing between bags.

## Quick Calibration

No special tools, training or factory technicians are required to set up the model 4693. Unlike other systems on the market, the 4693 only requires a single static calibration. This calibration covers all weight ranges and provides extremely accurate and repeatable weights.

Procedures guide the operator through a few simple steps. If needed, a calibration check allows the operator to confirm system accuracy without a full recalibration.

Product recipes are very easy to enter. There is no need for multi-pass dynamic calibrations every time product sizes or weights are changed. Simply select the new product parameters and go.

## Specifications

### Standard Construction

- Coated Steel Construction (special coatings and stainless steel available)
- Rugged, Single Load Cell Design
- Heavy-Duty Slider Bed Construction
- Stainless Steel Flexures
- UL and ULc Approved electrical controls
- IP 66 (NEMA 4X) standard (controller only)
- Regreaseable Bearings for extended life and minimal maintenance
- Conveyor Lengths from 28" to 5' overall length, widths from 12" to 36"
- 4" Diameter Dynamically Balanced Head and Tail Rollers
- Adjustable Leveling Feet
- Mountable Controller (14" wide x 16" high) for flexibility during installation

### Performance Features

- Capacities from 1 lb to 500 lbs
- Conveyor Speeds up to 220 ft (76 m) per minute
- Production Rates up to 50 units per minute
- Accuracy as great as  $\pm 0.05$  lb (0.03 kg) @ 2 Sigma\*
- Repeatability as great as  $\pm 0.03$  lb @ 2 Sigma\*
- Embedded True-Multitasking Operating System
- English and Spanish Menus in full sentences for better comprehension. French available soon
- High Load Cell Sample Rate and A/D conversion rate
- 5 Pole Low-Pass Filter
- Hardware and Program Adjustable Filtering
- Selectable Resolution Display Divisions
- Easy to Install and Maintain
- Calibration Audit Trail for compliance requirements

### Scale Controller Features

- 75-Product Memory Storage
- 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 Weight Display with zone counters for each
- Direct interface to Eriez<sup>®</sup> Metal Detectors
- Three Reject Outputs: High, Low, Metal
- Reject Outputs can be configured in any combination



Internal View of Controller

- Adjustable Reject Delay and Duration
- Retentive Reject Timers for up to 8 units
- 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
- 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/out-feed, and pacing
- Reject Options: side-pusher, diverter, or drop gate, three or five-zone classifiers
- Reject accumulation conveyors
- Full System Electrical Controls, turn-key, PLC, and conveyor layout capabilities
- Hazardous Area Protection up to Class I Division 1, Groups C, & D (Zone 1)

\*Product dependent. Contact factory for specific product accuracy.

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