Introduction

Thompson Scale's 4693si Intermediate In-Motion Checkweigher is designed for institutional and packaged food manufacturing, produce, specialty chemical, and corrosive or caustic product industries. It weighs products from 1 lb to 50 lbs with conveyor speeds in excess of 160 feet per minute, and production rates up to 60 packages per minute.

The 4693si is available in painted mild or stainless steel, and is designed to meet the demanding production needs for an easy-to-clean, low maintenance yet highly accurate in-motion scale. For products that are within the 1 lb to 50 lbs range, the 4693si is the perfect choice.

Several weigh station conveyor lengths and widths are available to meet your specific application needs. Metering, pacing, reject, and material handling conveyors are available as well.

In-feed, Scale & Drop-Nose Reject System

Easy Integration

The 4693si Intermediate Checkweigher conveyor includes variable speed DC motor controls package with E-Stop and I/O interfaces for complete integration into your packaging line controls. A wide variety of date interfaces are available, including Ethernet IP, TCP/IP profibus, devicenet and others.

Detailed mechanical and electrical drawings are readily available. Many can be downloaded directly from our website. Thompson Scale's staff of Engineers can assist you directly with your integration and system needs, all at no additional cost, and as part of your equipment purchase.

Single Scale Conveyor

Checkweigher Controller

This checkweigher includes Thompson Scale's Model 4693 Checkweigher Controller, providing an extensive feature set with the highest possible accuracy for a load cell based scale. The controller provides easy to read menus with both English and Spanish in full sentences for better comprehension. On-board self-diagnostics display errors or problems onscreen. Options, such as our Statistical Process Reporting (STPR) package, print unit weights and summary production reports, and a full compliment of I/O allow for easy expansion to meet your future integration needs. The 4693si Checkweigher is a highly flexible and reliable solution to all your needs.

Quick Calibration

The 4693si requires a simple static calibration on an infrequent basis. Unlike other systems on the market, the 4693si utilizes a single calibration to provides 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 changes. Simply enter the new product parameters and go – it's that simple.

Calibration of the 4693si is digital and secure, with a variety of password and security options available. A single standard test weight is all that's required. Easy to follow onscreen instructions with description prompts guide you through calibration procedures with ease. A separate calibration check screen allows operates to verify calibration without having to access the calibration procedure.

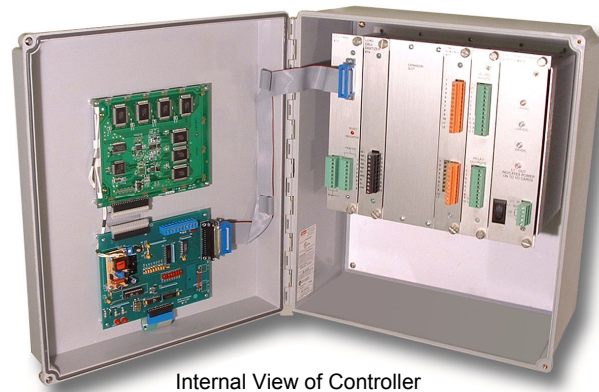# Specifications

Standard Construction

- UL, and ULc Approved electrical controls
- IP 66 (NEMA 4X) standard
- Painted Mild or Stainless Steel weigh station construction
- USDA/FDA Approved conveyor belts
- Sealed Bearings for extended life and minimal maintenance
- Motorized Head Pulley, rated IP65 for wet, corrosive environments
- Conveyor Lengths from 28" to 36" overall length, widths from 12" to 18"
- 2" Diameter Dynamically Balanced Head & Tail Rollers
- Variable Speed Controls included
- Adjustable Leveling Feet
- Wall or Frame-Mount Scale Control Enclosure for flexibility during installation

Performance Features

- Conveyor Speeds up to 160m per minute
- Production Rates to 60 units per minute
- Capacities from 1 lb (.45 kg) to 50 lbs (22.5kg)
- Embedded True-Multitasking Operating System
- High Load Cell Sample Rate and A/D conversion rate
- English and Spanish Menus in full sentences for better comprehension.
- 5 Pole Low-Pass Filter for smooth consistent samples
- Hardware and Program Adjustable Filtering
- Selectable Resolution
- Selectable Display Divisions
- Accuracy as great as ± 0.1% @ 2 Sigma*
- Repeatability as great as ± 0.05% @ 2 Sigma*
- Calibration Audit Trail for compliance requirements
- Fast-response Load Cells

Scale Controller Features

- 75-Product Recipe 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
    - Mean Unit Weight
- 5-Zone Weight Display with zone counters for each
- Direct interface to Eriez® Metal Detectors
- 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
- Trend Alarm with adjustable reject populations
- Modular Function-Specific Card Rack

Internal View of Controller

- 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,
- 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: 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.