

# 5297 EL Heavy-Duty Checkweigher

## Introduction

The 5297 EL Heavy-Duty In-Motion Checkweigher is an excellent choice for either low cost or entry-level 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 400 lbs and production rates in excess of 50 units per minute are handled with ease.

The 5297 EL 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 can also rely on the 5297 EL Heavy-Duty Checkweigher for their quality control by weight.

A variety of options, accessories, and environmental options are available for the 5297 EL 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 5297 Controller to provide a 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. Its modular design and the fact that it is easily expandable to interface with virtually any line or management tools, make the 5297 Checkweigher and Controller a highly flexible and reliable solution.

A major benefit of these controllers is that the system can be easily upgraded if needed. Users can simply order a 4693 Controller upgrade consisting of additional controller cards to receive the full functionality.



## 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.

## Calibration

No special tools, training or factory technicians are required to set up the model 5297. Unlike other systems on the market, the 5297 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

- Painted 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)
- Regreasable 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
- Mountable Controller (14" wide x 16" high) for flexibility during installation

### Performance Features

- Capacities from 1 lb to 400 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.
- High Load Cell Sample Rate and A/D conversion rate
- 5 Pole Low-Pass Filter
- Hardware and Program Adjustable Filtering
- Selectable Resolution and Display Divisions
- Easy to Install and Maintain
- Calibration Audit Trail for compliance requirements

### Scale Controller Features

- One Product Memory Storage
- Three Weight Zones per product
  - Displays:
    - Last Unit Weight
    - Gross/Net
    - Weight Conversion (lb, kg, oz, g)
    - Target Weight
    - Total Accumulated Weight
    - Total Accumulated Units
    - Units Per Minute
    - Mean Unit Weight
- 3-Zone Weight Display with zone counters for each
- Adjustable Reject Delay and Duration
- Retentive Reject Timers for up to 8 units
- 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

### Flexible 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)
- Universal Summary Report Option
- Variety of Support Stand Heights available.

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

Thompson Scale and 5297 EL Heavy-Duty Checkweigher are trademarks of Thompson Scale Company. All other trademarks mentioned herein are the sole property of their respective owners.

©2005 Thompson Scale Company Rev.1 (8/22/05)

