

Model 4693 Filler Upgrade

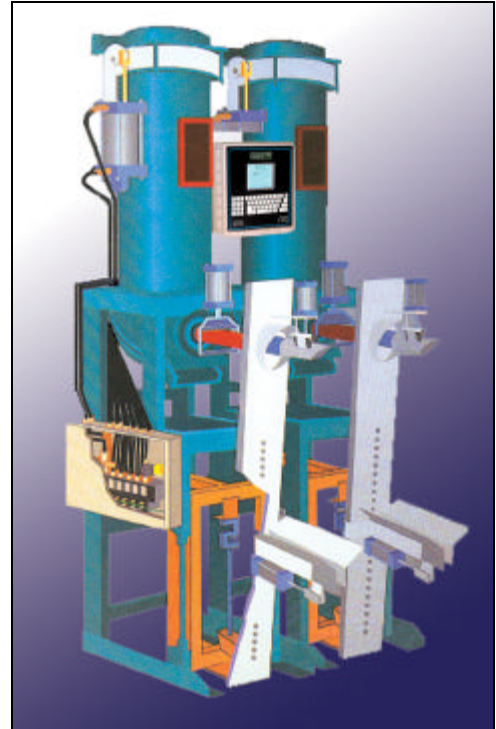
Introduction

Thompson Scale has provided improvements to existing packaging machinery controls for almost 20 years. Whether it is putting product in bags, boxes, tubs, totes, drums, or bulk bags, we provide highly integrated yet simple to use fill controls to improve the operation and accuracy of mechanical packaging machinery.

TSC is the only company to offer filler controls specifically designed to operate packaging machinery. Virtually all other controls are just basic weigh meters, which require an additional PLC or other type of programming.

Many valve bag filling machines are still in their original all-mechanical condition. Others have either been purchased with some form of controls, or have been modified to provide electronic control, but still lack the accuracy and performance that most companies require.

The cost of a filler upgrade can quickly be recovered with the amount of improvement the upgrade makes to overall production and product weight accuracy.



Filler Upgrade Controller

Each filler upgrade employs Thompson Scale's Model 4693 Controller to provide the most extensive feature set with the highest possible accuracy. The controller 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 Filler Upgrade and 4693 Controller a flexible and reliable solution to your packaging needs.

Upgrade Benefits

Mechanical or old electronic packers take at least four to five bags on each scale to "line-out" the filler and achieve acceptable weights when changing from one product or weight to another. The Thompson Model 4693 hits **Target weight on the first bag or second bag**. This dramatically reduces product changeover time and reduces waste.

No more flipping trim weights around. Many older mechanical packers require the operator to pay close attention to changes in bulk density and final weights, adjusting the packer many times during production. The 4693 Filler Upgrade eliminates this time-consuming process since the controls automatically track changes in bulk density and flow rates. A final check weigh is also performed on every bag to confirm proper weight. All of this can be done without sacrificing production rates.

All existing mechanical fillers require someone to periodically check the weight of bags to ensure they stay within spec. The Model 4693 displays each final fill weight, and automatically tracks changes in bulk density and flow rates. Typically, the upgrade reduces rejects from the industry average of 5 - 8% to **less than 2%**.

Mechanical fillers require near-constant maintenance to remain accurate. The Model 4693 eliminates virtually all moving scale parts and **requires little to no maintenance**. Calibration is usually only required once a month.

4693 Filler Upgrade Features

- Microprocessor Controlled
- Exclusive Compact Load Cell Flexure Assembly
- Eliminates all Knife Edges and Counterweights
- Complete Control of all Filler Equipment I/O, no PLC required
- Interfaces to Virtually Any Placer, Hanger, or Robot
- Requires Only the Target Weight to be Set, the controller handles the rest
- Bulk, Dribble, and Preact Settings are Automatically Calculated Internally. Manual mode is also available for more control
- Modular Design Allows for Easy Trouble Shooting and Service
- Single 4693 Controller is Capable of Operating Two Adjacent Spouts Simultaneously, yet completely independently. This provides simple system integration and lower equipment cost
- Use of Thompson Scale's unique Traffic Control Feature allows up to four spouts on a common production line to be operated by two 4693 controllers. Controls are "networked" via the Traffic Control card, and allow complete control of bag drops, increasing production rates and eliminating bag jams
- Password Protected for Added Security to protect calibration and configuration settings
- Automatic Compensation for Changes in Product Bulk Density
- Auto-Start for All Spouts
- Stop and Stop/Abort Push Buttons can terminate fills in case of blown bags or operator problems
- Full Diagnostics, Automatic Flow Rate Tracking, and Auto-Correction for changes in flow rates or bulk density
- Elimination of all Mechanical Scale Assemblies. All scale beams and pivots are replaced with state-of-the-art load cell flexures
- Elimination of all Pneumatic Control Devices. All air operated devices are driven by a new electrically controlled solenoid valve assembly housed and pre-piped in a NEMA 4X enclosure
- Auto Start and Discharge is Standard (power chairs not provided)
- Minimum Downtime is Required for Filler Modification



Internal View of Controller

Upgrade Equipment Types

Thompson Scale has installed our filler upgrades to many different types of packaging equipment. Here is a sample list of just a few:

- Air Packers
- Impeller Packers
- Auger Packers
- Auger Packers with Open-Mouth Attachments
- Simplex and Duplex Net Weigh Scales
- Open-Mouth Gross Fillers
- Bulk Bag (IBC) Fillers
- Box Fillers (Gaylord or other brand)
- Bag-In-Box Fillers
- Liquid Fillers; Drum, Tote, and Pail

Thompson Scale is also well versed in hazardous area applications, and can improve your production quality in areas up to Class I, Division 1, Groups B, C, or D.

Equipment Modifications

1. Removal and replacement of existing mechanical counterweights and levers, replacing them with rigid and accurate flexure load cell frames.
2. Removal and replacement of existing pneumatic controls, replacing them with electrically controlled solenoid valves and new piping.
3. Installation of electronic filler controls.
4. Complete start-up and training is provided.

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