



FILL-BY-WEIGHT AUGER FILLING MACHINES



Figure 1

Fill-To-Weight Auger Fillers are used when a specific, verified, weighed quantity of product is to be dispensed. Models include scales and loadcell components to determine an accurate weight reading before, during, and after each fill cycle. Accessories, such as Bag Clamps, Roller Conveyors, and Lifts are implemented according to specific requirements and constraints. Sophisticated feedback/feedforward controls allow for fill value adjustment, error correction, and accept/reject tolerance control.

PLC ACCURACY. TOUCHSCREEN EASE.

Our PLC-based control system computes all relevant parameters (such as RPM acceleration/deceleration) internally, so the operator does not have to make calculations or complex entries. An intuitive touchscreen puts essential functions at the user's fingertips. Test and calibration screens simplify maintenance. Set-ups for products/fill weights are easily stored and recalled.

WORLD CLASS SERVICE AND SUPPORT.

All-Fill uses quality off-the-shelf components so spares are readily available and costs are reduced. All programming is written and supported by in-house engineers.

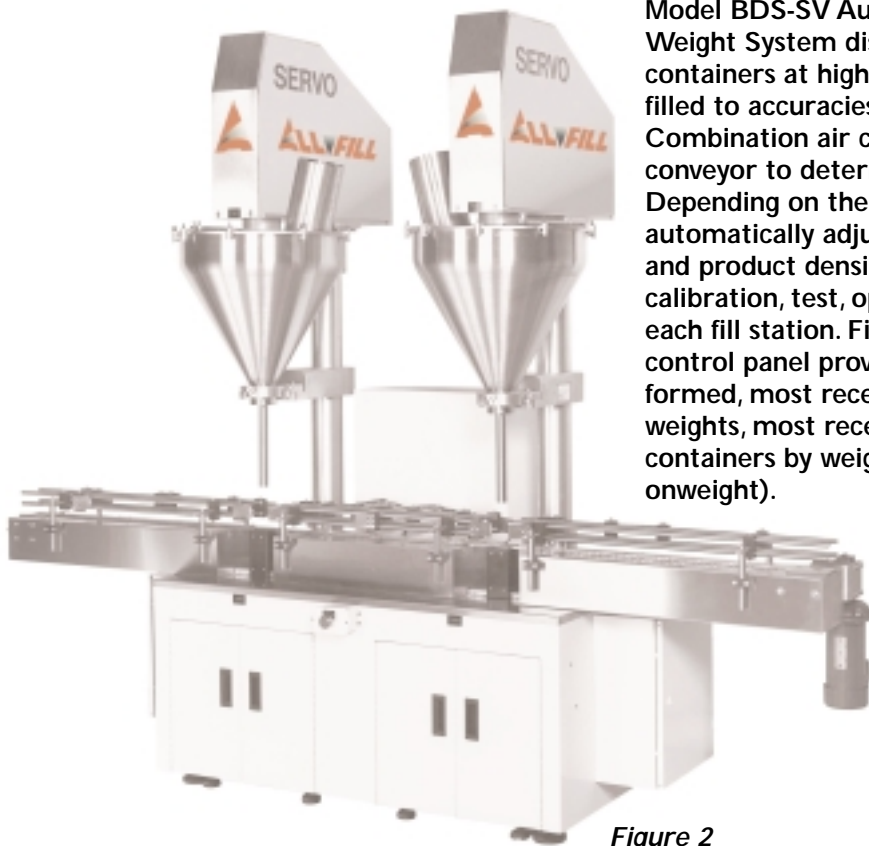


Figure 2

Model BDS-SV Automatic Dual Head/Dual Servomotor Fill-To-Weight System dispenses powder in multiple size and weight containers at high speeds and high accuracy levels. Product weight filled to accuracies of 0.1 to 0.25% of net or gross target weight. Combination air cylinder Lift/Loadcell raises containers from moving conveyor to determine tare, intermediate, and final fill weight. Depending on the weighing mode, direct drive Servo Fill Motors automatically adjust operating speeds to match desired fill weights and product density. PLC controls provide independent control, calibration, test, operating functions, and weight statistical data at each fill station. Filling Production Summary displays at the operator control panel provide online updating of: number of fill cycles performed, most recent fill weight, average and standard deviation fill weights, most recent motor speed, containers per minute, and containers by weight zone count (overweight, underweight and onweight).



Model DHAS-400 Automatic Dual Head/Dual Servomotor Fill-To-Weight System dispenses powder in multiple size and weight containers at high speeds and high accuracy levels. Product weight filled to accuracies of .25 to .5% of gross target weight. Automatic container tare weight/final weight calculations ensure an accurate fill. Feedback is automatically sent from the scale to the appropriate filling head to adjust auger revolutions for the next fill. Unique Servomotor driven cleated conveyor system allows accurate movement of empty and full containers throughout the system without container contact with the cleats during container weighing. Container lifting and correct positioning under each filling nozzle are automatically verified and confirmed by the system. A reject station will alienate any container whose weight is out of the specified limits. A blow-off tunnel will eliminate any dust or debris that accumulate on the containers. PLC based control system which monitors, tests and calibrates the appropriate components on the system.

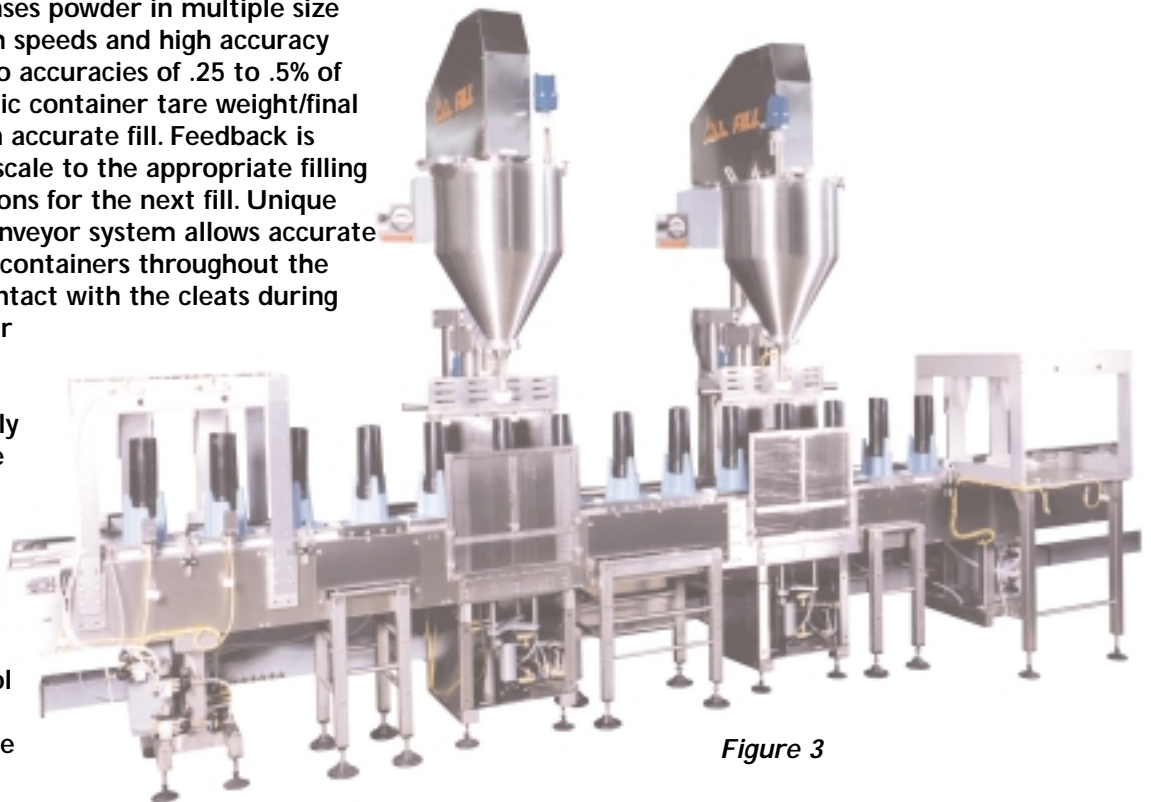


Figure 3

Short term and long term statistics are automatically kept in the system for tracking purposes. this includes tare weight, number of overweights, number of underweights, number of accepted weights, standard deviation, and the number of grams per revolution of the last fill. A user-friendly operator interface with various screens to allow easy access, testing and operation of the system.

Model BS-400 Drum Filling System fills 33" diameter drums with 110 pounds of powdered chemical product. A Horizontal Screwfeeder ensures consistent product flow to the filler. This is a "bulk and dribble" application. When the empty drum is in place, a tare weight is established. A pneumatic lift then lifts the empty drum from the scale to its bulk-fill position. A bottom-up fill occurs, ensuring that the amount of dust caused by product in motion will be minimized. As the bulk fill is in progress, the lift lowers to the scale at a slower speed. A bulk weight is taken at the scale. The lift then raises back up and the bottom-up dribble fill commences. The lift again lowers to the scale, and a final weight is taken. If it is under-weight, a second dribble fill occurs. The scale also has a "real-time" weight function to guarantee flexibility and accuracy.

PLC based controls and a user-friendly operator interface add the final touch to a simplistic system approach for a Fill-To-Weight application !!!



Figure 5



Figure 4

For faster and more accurate fills of any powdered, flaked or granular product, this popular Filler has established high performance standards in food and chemical packaging lines. It is recommended for filling drums, pails and other rigid containers in ranges from 10 to 1000 lbs. Its electronic platform scale may be equipped with either gravity or power-driven roller conveyor. Containers are automatically tared and high net weight accuracies are assured by the All-Fill Controls.



ACCESSORIES AND OPTIONS

Container Vibrator:

Adjustable speed, container jogger to settle and distribute product into containers.

Pneumatic or Hydraulic Container Lift:

Raises/lowers containers.

Product Cutoff:

For clean, no-drip control of product at conclusion of fill cycle. Flapper Gate, Piston Draw-Back, Plug Rod, Diaphragm, and other models available.

Container Clamp:

Secures container during filling.

Conveyors:

Stainless steel conveyor channel with dual strand, stainless steel block conveyor chain. Variable speed drive, adjustable guiderails, and indexing controls.

Parameters:

- a. Adjustable auger speeds from 0-1500 RPM
- b. Adjustable acceleration/deceleration
- c. Accepts feedback from checkweighers

Documentation: complete package supplied as standard

Interchangeable filling accessories can always be retrofitted to the machine as products and requirements change.

All-Fill maintains a complete test lab for conducting free evaluations.

PERFORMANCE

Accuracy:

Ranging from +/- 0.1% to +/- 0.5% maintained for most products.

Production:

Semi-automatic and Automatic speeds from 2-35 per minute (varies with products, fill weights, and containers).



Figure 6



Figure 7

Touchscreen control:

- a. 25 program selections
- b. Automatic alarm screens
- c. Automatic system status messages
- d. Auger, agitation, and cutoff setting options
- e. Intuitive maintenance screen - to display and check inputs and outputs



All-Fill: For All Your Filling Needs.

All-Fill, Inc. designs, manufactures, services, and supports a complete line of machinery for powder and liquid filling. Complementary equipment includes feeding and conveying of dry products for the food, pharmaceutical, and chemical industries, as well as high-speed checkweighing equipment sold under the Alpha Checkweighers brand.

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