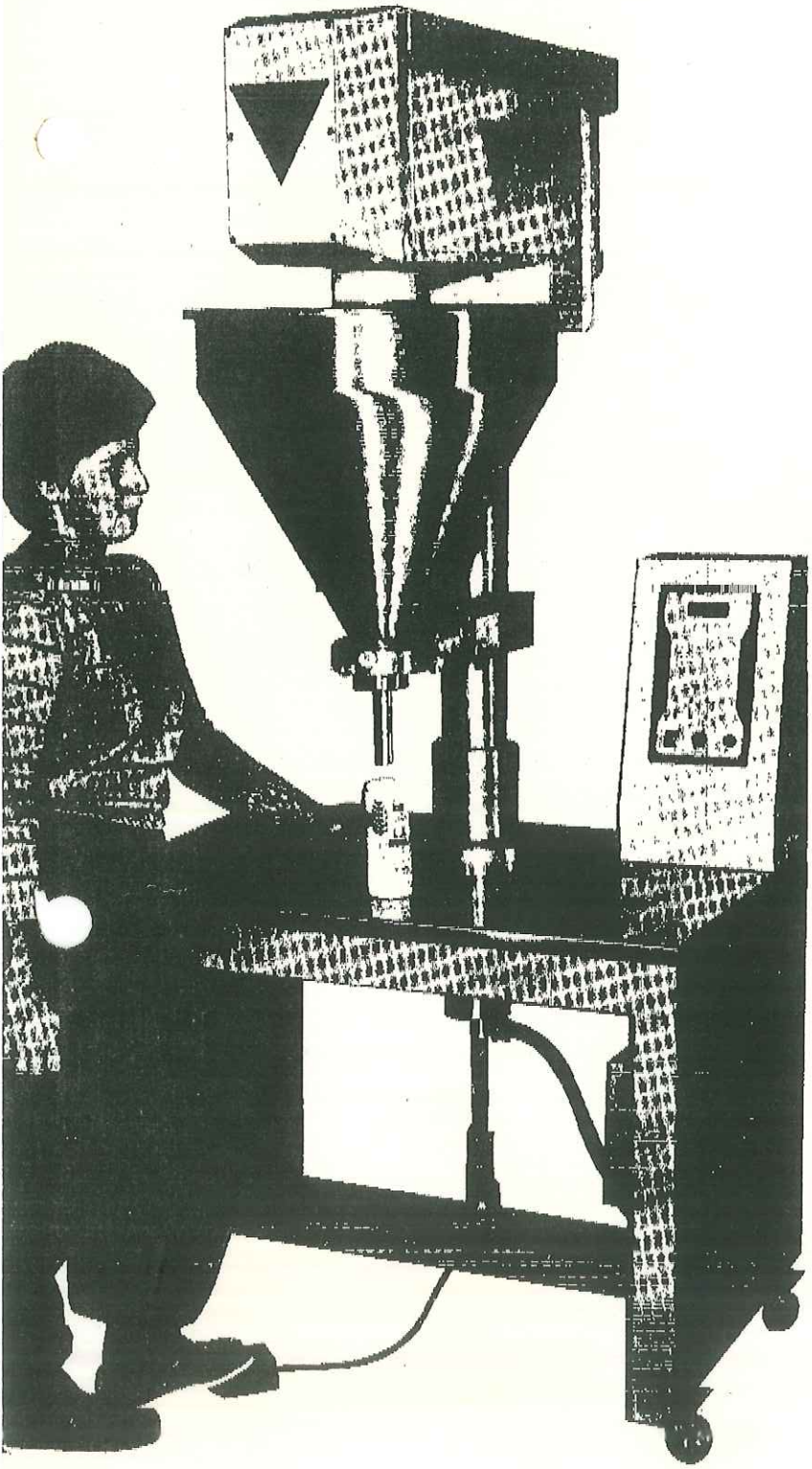


MODEL TM
Auger Filling Machine
Table-top Mounted

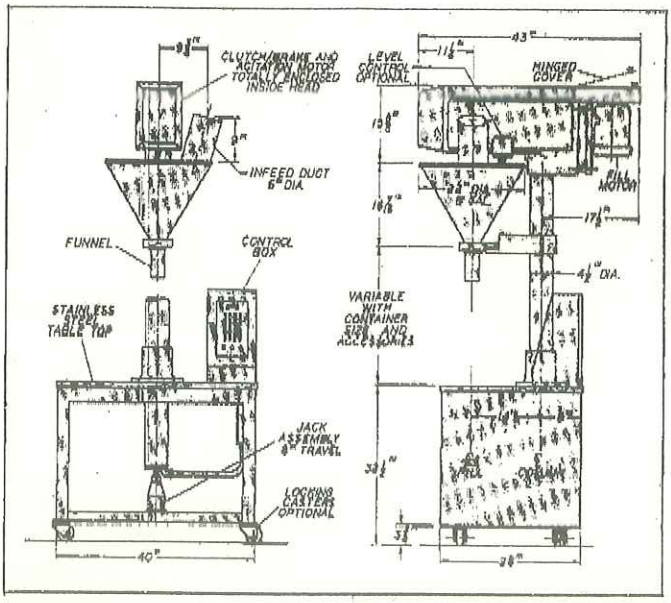
An all purpose, portable filler for any powdered, flaked, granular product with interchangeable tooling for liquids, gels, lotions and creams.

Stainless steel construction for Foods, Chemicals, Drugs, Cosmetics.

Height adjustment to fit any size container.

Easy digital electronic set-up to fill accurately from milligrams to 50 pounds or more.

Filling accuracy within ± 1% for most products; units available with optional electronic scale systems for accuracies to ± 0.1%. Machine cycling speeds up to 120 per minute. Send sample products and containers for free fill test and performance report.



ALL-FILL

NEW LOCATION
EFFECTIVE MAY 1, 1989
418 Creamery Way
Exton, PA 19341-2500

BULLETIN AF-535

Filling Machines

Powders, free-flowing & non free-flowing/Flakes/Granules/Pastes/Creams

MODEL B-300

Cerebus™ II

THE SUPERIOR COMPUTER CONTROLLED AUGER FILLING SYSTEM

ALL-FILL

NEW LOCATION
EFFECTIVE MAY 1, 1989
418 Creamery Way
Exton, PA 19341-2500

Fig. 1 Model B-300 Floor Stand Filler with Cerebus™ II Computer Controller

Fig. 2 Model B-300 Cerebus™ II Off-Line Scale Feedback

Scale Feedback speeds set-up time and automatically compensates for product density variations. With an off-line electronic scale linked to a Cerebus II-controlled filling machine, set-up time is fast and accurate with a simple 1-2-3 procedure: container weight is automatically tared and the precise number of auger revolutions for the desired fill weight is computed and set. Moreover, without interrupting operations, random sampling of filled containers will automatically maintain fill weights by adjusting auger turns required for any changes in product density. Resultant savings in product giveaway are dramatic.

Fig. 3

1 Cerebus™ II Computer Controller
A second generation achievement that reaches new horizons for auger filling machine performance!

2 Drive Belt
Completely enclosed.

3 Hinged Cover
For easy access to select any of three speeds of auger or pump to match product characteristics with container for perfect fills.

4 Drive Motor
Totally enclosed for heavy-duty industrial service.

5 Filling Head
Totally enclosed in rugged aluminum casting with gasket cover plates for unrestricted maintenance access. Baked polyurethane finish.

6 Dust-tight Hopper Cover
Stainless steel. Features swing-release fasteners for quick disassembly; access cover-plate and large diameter infeed duct for connection to product infeed lines.

7 Stainless Steel
Spun, one-piece seamless hopper. All parts in contact with product are stainless . . . ideal for foods, chemicals, cosmetics and drugs.

8 Quick-Release Hopper Support
Requires no tools and provides self-centering of auger drive when re-assembled after removal for clean-up or change of tooling.

9 Sturdy Cast Floor Base
Supplied with any length column.

10 Properly Sized Tooling
Selected for filling any product from milligrams to 50 lbs. or more; fill one at a time or multiples into any container . . . plastic, metal, glass, paper; bags, cans, canisters, pails, cartons, drums, bottles or jars.

Innovative Design

All-Fill continues to lead the state of the art in applying Hi-Tech science to its comprehensive line of auger filling machines. Introducing the first micro-tronics systems in 1979, All-Fill's team of in-house engineers have now combined the micro-computer with the proven mechanical excellence of the machine. Cerebus II is a unique industrial-rated computer system.

Closer Target Weights

Now target weights can be set and maintained more closely to minimize costly over-fills. Not only does an optical encoder develop 200 pulses per auger revolution; but also, Cerebus II, through its user-friendly CALibration mode, permits direct settings in ounces, pounds, grams, kilos and revolutions (it will even make the measurement conversions!). Also, its closed-loop feedback will develop on-line Trend Averaging and calculate Standard Deviation data.

100 Product Setups

The large storage capacity of Cerebus II allows 100 product SETUPS with 7-digit product codes. All commands to the machine are accommodated for the requirements of each product/container combination, including: fill weight, production count, agitation mode, vibration, cut-off, nozzle lowering, container clamp, lift for bottom-up filling, delay after fill, fill advancement time, etc. Setups are made easier and faster while lessening operator error—which means higher productivity on the packaging line.

Diagnostic Package

An inclusive Diagnostic package of Cerebus II monitors all operating functions of the machine, displaying Faults and automatically shutting off where critical limits are detected.

Dynamic Updating

In the SELECT mode any program may be called up and any desired menu changes may be entered while running another. This dynamic updating characteristic vividly contributes to efficiency improvement. Further, entries are simplified by avoiding one-direction menu scroll because Cerebus II can be either advanced or reversed to the specific display item for editing. There is no need to stop operations, call up the full menu, enter changes and then restart.

Ergonomic Design

The operator finds Cerebus II easy to use. The largest keypad is combined with audible and tactile feedback to him; and, the plain language display has backlighted 8.44mm characters on 2 lines x 24 character length. The control cabinet tilts to eye level and light intensity is adjustable.

● ***Request Bulletin AF-516 For Complete Data.***

ALL-FILL *The Basic Filling Machine for Unequalled Versatility*

Standard Interchangeable Tooling Dispenses All Products

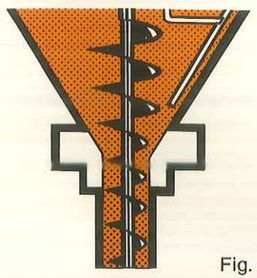


Fig. 4

POWDERS: Non Free-Flow

Self feeding auger with slow speed agitator for positive dispensing of powdered and high density products. Selected to meet the needs of the product and container, including: cut-off devices, bottom up filling, vibration for compaction, etc.

Flour **Grated Cheese** **Soup Base**
Putty **Bakery Mixes** **Adhesives**

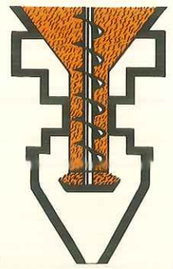


Fig. 5

POWDERS: Free-Flow

Hopper assembly for granular materials shows spinner plate and collector funnel arrangement. May be supplied with multiple cavity divider heads up to 12 divisions with X-Y axis adjustability for exact centering to assure equal product distribution.

Gelatin **Potato Granules** **Drink Mixes**
Epsom Salt **Bread Crumbs** **Bubble Bath**

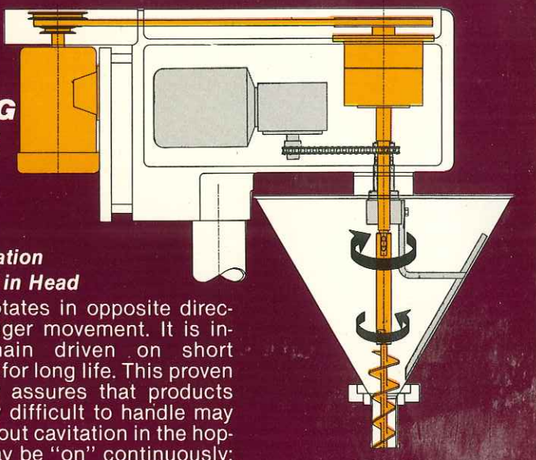
Fig. 6

LIQUIDS: Creams, Gels

Progressive cavity pump rotor and stator shown with high speed agitator. May be equipped with pump manifolds for dispensing through two or more nozzles; and, many types of cut-off devices to stop drip at end of fill are available.

Cake Icing **Grease** **Nail Polish**
Shave Cream **Cough Syrup** **Ink**

SIMPLE OPERATING PRINCIPLE



Slow Speed Agitation
Totally Enclosed in Head

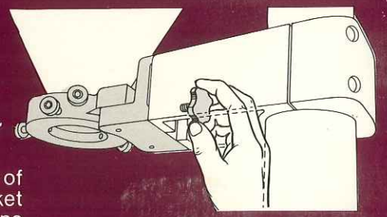
Agitator blade rotates in opposite direction from the auger movement. It is independently chain driven on short sprocket centers for long life. This proven principle reliably assures that products that are normally difficult to handle may be delivered without cavitation in the hopper. Agitation may be "on" continuously; "off"; or, may be run only during the fill cycle.

Fig. 7

Heavy-duty Electro-magnetic Clutch/Brake
Automatically Adjusts for Wear

Costly shut-downs and bothersome monitoring for clutch wear are eliminated. The signals from the control system's pre-sets are instantly responsive for engagement and disengagement of the auger drive. Machine cycling speeds up to 120 per minute are attainable.

SUPERIOR DESIGN



Fast Clean-up & Changeover
Without Tools

Loosen one knob for removal of hopper and support bracket which has dowel locating pins to assure perfect centering. Clean-up between product runs in 10 Minutes; change-over from powders to liquids in 15 Minutes.

Fig. 8

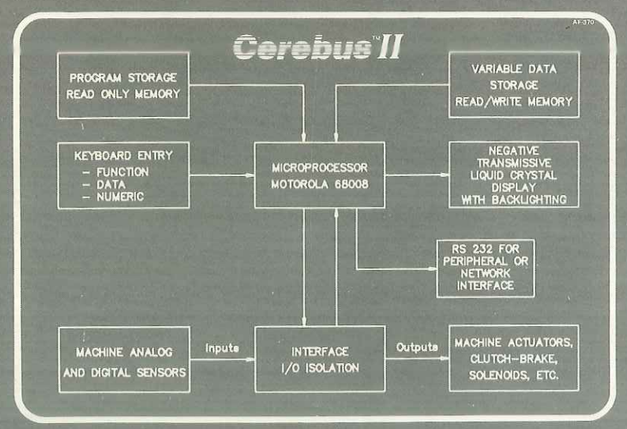


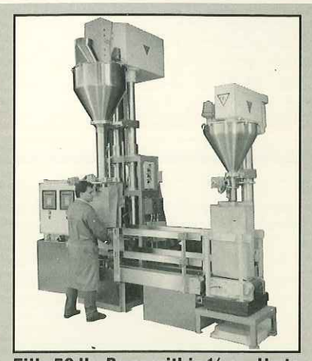
Fig. 9

Packaging's Most Complete Line of Models

Fill by Volume...
Fill by Weight...

A simple calculation permits most economic equipment investment based on value of product, maximized accuracy and production output.

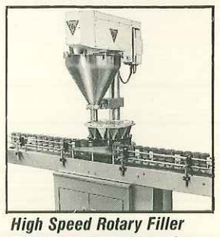
Single Head Automatic Filling System automatically indexes all rigid containers from 1" to 7" diam. @ 30-120/Min. Fills either from bottom-up or with vibration to settle product.



Fills 50 lb. Bags within ½ oz. Up to 600/Hr. Also handles 25 lb. and 100 lb. fills. Open mouth bags are manually hung, bottom-up filled and jogged during fill. Powered conveyor to top-off station. Dust collector shroud moves with bag lift.

Bulk Fill with Top-off by Weight
Fills 90% into container from bottom-up then tops-off at second station under electronic scale control.

2 Filling Heads: Automatic Conveyor
Higher line speeds are attained with this filler. Free-flow powders may be tooled to fill 4 to 8 containers.



High Speed Rotary Filler
Either indexing or continuous rotary models with 1 or 2 filling heads for speeds to 400/Min.

Automatic Bag Filling System for 3 to 5 lb. flat bottom bags @ 25 to 35/Min. System is designed for use with an automatic bag hanger and is in successful use with non free-flowing bakery pre-mixes.

Approved Models Available to Meet Sanitary Standards

3-A Dry Milk Products

and

USDA Meat & Poultry

DIMENSIONS
Model B 300

Do Not Use for Construction

WEIGHT:
325 lbs. (148 kg.) uncrated; add 50 lbs. (23 kg.) slow-speed agitation. 500 lbs. (230 kg.) domestic shipping including slow-speed agitation. Crate size: 48" H x 48" L x 96" W.

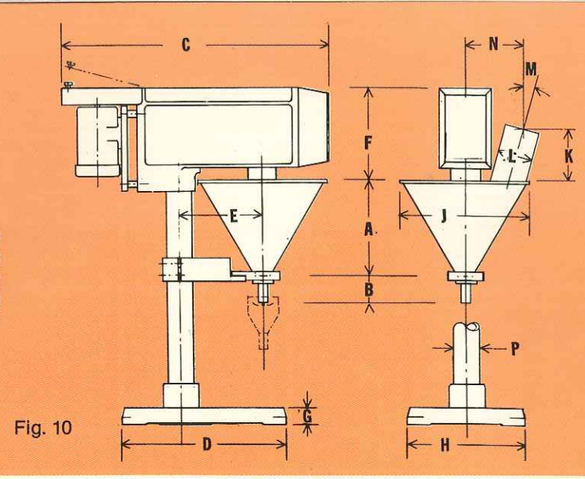


Fig. 10

A Hoppers
9 gals. (34 L.): 16.437" (418mm)
15 gals. (56.8 L.): 20.5" (521mm)
B Funnels
Short No. 4-34: 4.562" (116mm)
Short No. 36-52: 5.562" (141mm)
Long No. 4-52: 12.562" (319mm)
C 44" (1118 mm)
D 28" (711mm)
E 14" (356mm)
F 15.625" (397mm)
G 3" (76mm)
H 20" (508mm)
J 22"Diam. (559mm)
K 8.875" (225mm)
L 6" Diam. (152mm)
M 15 Deg.
N 9.75" (248mm)
P 4.5" Diam. (114mm)

Fig. 11

HOPPER LOADER Efficiently delivers powders and bulk solids to filling machine hopper. Portable; adjustable height; Polished stainless steel. Has optional slow speed agitator in hopper. Feed rates to 180 cu. ft. per hour. Request Bulletin AF-270.

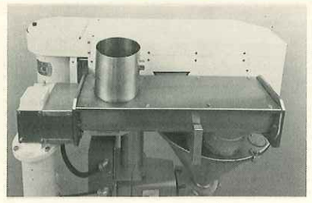


Fig. 12

HOPPER FEEDER Designed for integral saddle-mounting with filling machines for delivery of bulk supply to hopper. Stainless steel polished 5" diam. x 5" pitch screw powered with its own motor drive will feed @ rates to 180 cu. ft./hr. Request Bulletin AF-271.

Fig. 13 ***Fill Test Lab & Demonstration Facility***
Sample products and containers may be test run on a broad array of actual production machines. Fill one at a time either volumetrically or by weight; and, also run automatically at high speeds. The test lab is fully equipped to handle all products and measure physical properties and develop reports for determination of performance including accuracies and production speeds. THIS IS A FREE SERVICE TO ALL PACKAGERS. OUR ENGINEERS ARE ALWAYS READY TO SOLVE YOUR FILLING PROBLEMS.

SPECIFICATIONS

Auger Drive: 1½ H.P. totally enclosed motor (1200 rpm); 220 or 440 Volts/3-phase/60 Hz. (Other ratings available on application.)

Agitation Drive: ½ H.P. totally enclosed motor; 220 or 440 Volts/e-phase/60 Hz.

Clutch-Brake: Self-adjusting for wear, heavy-duty electro-magnetic.

Controls: 110 Volts, AC

Memory Capacity: 25 products standard; 100 optional.

Speed Adjustment: Belt and sheave adjusts for three auger speeds to best suit application.

Recycling Time: (Standard all models) Sets production rate by automatically recycling.

Feedback Control:
A built-in circuit for accepting signal inputs from checkweighers or other equipment to automatically adjust filling operation.

Materials of Construction: Stainless Steel (augers, funnels, pump rotors, agitator blade, hopper, hopper cover and infeed duct, aguer and pump shafts). Aluminum (floor base, column, brackets, head casting—baked polyurethane finish).

ACCESSORIES (Optional)

Automatic Lift: For bottom up filling.

Scales: Solid state electronic for either gross weight or net weight fills.

Vibration: Vibrators, joggers—electric, pneumatic or mechanical types—for compacting products into containers as required.

Cut-Off Devices: Valves, Piston Draw-backs, Diaphragm-type, Plug Rods, Knife Blade types as needed for clean product cut-off at end of fill.

Heated Hoppers: Electric and Water-jacketed complete with thermostatic controls.

Footswitch: For initiating the fill cycle.

Level Controls: Mounted in the hopper to signal infeed and control level of product.

Conveyors: Automatic indexing and adjustable for line speeds: belt, block chain or table-top.

Motor Starters: Magnetic starters, column-mounted, for auger and agitator motors.

SPEED & ACCURACY

Fills of ± ½ to 1% are maintained on most products. Machine cycling speeds up to 120/Min.

HAZARDOUS AREAS

Wash-down, remote control, explosion-proof and other hazardous or special environmental conditions can be met by available designs.

ALL-FILL

418 Creamery Way Exton, PA 19341 USA
(215) 524-7350 FAX (215) 524-7346 TLX 902-642

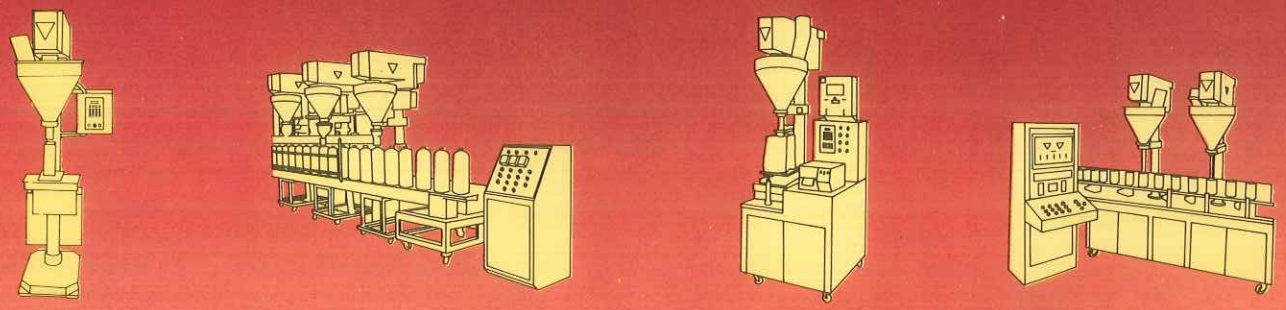
VP2M0488

BULLETIN AF-593

Fill-by-Weight Filling Machines

ALL-FILL

NEW LOCATION
EFFECTIVE MAY 1, 1989
418 Creamery Way
Exton, PA 19341-2500



PACKAGING SYSTEM CONCEPTS for BETTER PRODUCTIVITY and ACCURACY

Cerebus™ II Computer Controller

Fig. 1 Model BS-300 Semi-Automatic Net Weight Filler With Cerebus II Computer Controller

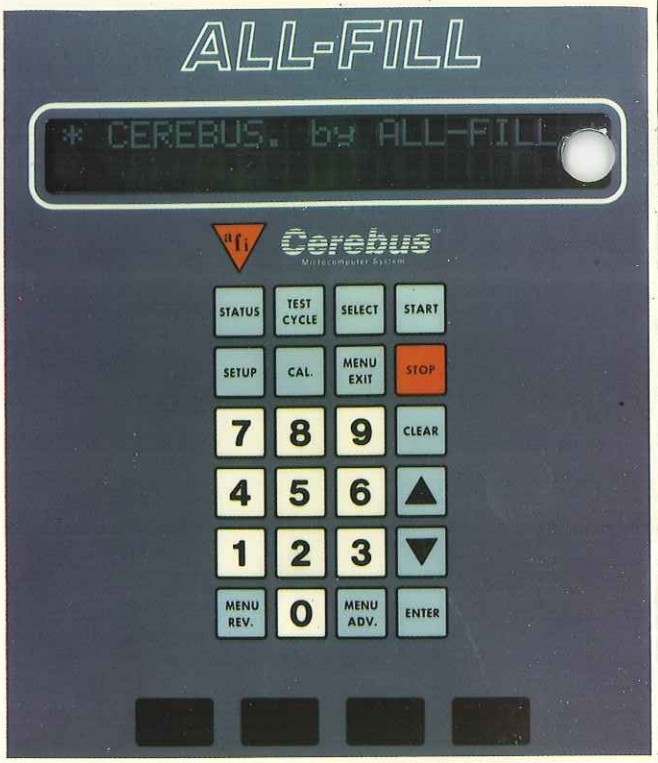


Fig. 2

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 Cerebus II Computer.

Innovative Design All-Fill continues to lead the state of the art in applying Hi-Tech science to its comprehensive line of auger filling machines. Its team of in-house engineers has now combined the micro-computer with the proven mechanical excellenc the machine.

Closer Target Weights Now target weights can be set and maintained more closely to minimize costly over-fills and assure regulatory compliance standards. Direct settings in ounces, pounds, grams and kilos are made on an ergonomically designed digital keypad with audible and tactile feed-back to minimize entry error. And, a plain language display has backlighted large characters on 2 lines x 24 character length.

Up to 100 Product Setups Storage capacity allows 25 product setups standard, 100 optional, with 7-digit product codes. The memory accommodates all commands to the machine for each product/container combination.

Computer Controlled Net Weights The electronic scale fill-platform is automatically zeroed before each fill to adjust for any debris build-up and each container is compensated for its tare weight. The machine's auger rapidly dispenses 90% to 95% of desired target weight (Bulk Fill Cycle) and under the command of the computer controller tops off the final fill (Dribble Fill Cycle) to accuracies usually within 0.1% to 0.5%. Each filled container is weighed and the weight is displayed. This dynamic capability thus assures not only automatic corrections for variations in prod density but also maintains desired production outp

In addition to an inclusive self diagnostic capability that monitors all operating functions of the machine, Cerebus II displays final and average weights plus standard deviation. Data may also be interfaced for printout to quality control and management.

Fig. 4

Fig. 3 Model BD-300 This automatic Bulk & Dribble Filler achieves fast line speeds with highest accuracy. A variety of container sizes and many powdered products are being filled within accuracies of 0.1% to 0.25% net weight. Containers are tared before bulk filling, which may be bottom-up filled or vibrated, followed by the final top-off as controlled by Cerebus II. All product/container combinations may be stored in the ample memory of the computer.

ALL-FILL

Fill-By-Weight Bulk & Dribble Filling Systems

Fig. 5

Fig. 6 Model BD-300 Automatic Bulk & Dribble Filler with a pedestal mounted Cerebus II Computer Controller for net weight filling dusty agricultural powders into flat bottom bags. Four bag sizes (Fig. 5) for 4 lb. to 15 lb. fills. Designed for accepting bags from an automatic bag loader, bags are filled at the bulk station with a lift up to 17″ for bottom up filling. Conveyor includes bag flatteners to aid in transporting; and, clam-shell cut-offs assure clean cut off of product.

Fig. 7 Model BD-300 Semi-automatic Bulk & Dribble Filler for filling large open mouth bags with a powdered food product. Designed for several bag sizes for net weights of 25 to 100 lbs., it is capable of producing 50 lb. bags within ½-ounce up to 600/Hr. Bags are manually hung, bottom up filled and jogged during the bulk fill cycle. A dust collecting shroud moves with the bag lift. A powered conveyor transports bags to the dribble fill station for exact top-off.

Fig. 8 Model BS-300 Semi-automatic Filler for Rigid Containers

Weigh platform has container centering fixture with support cage mounted on an adjustable lift column. The weighing system is isolated from the machine by an enclosed base mount.

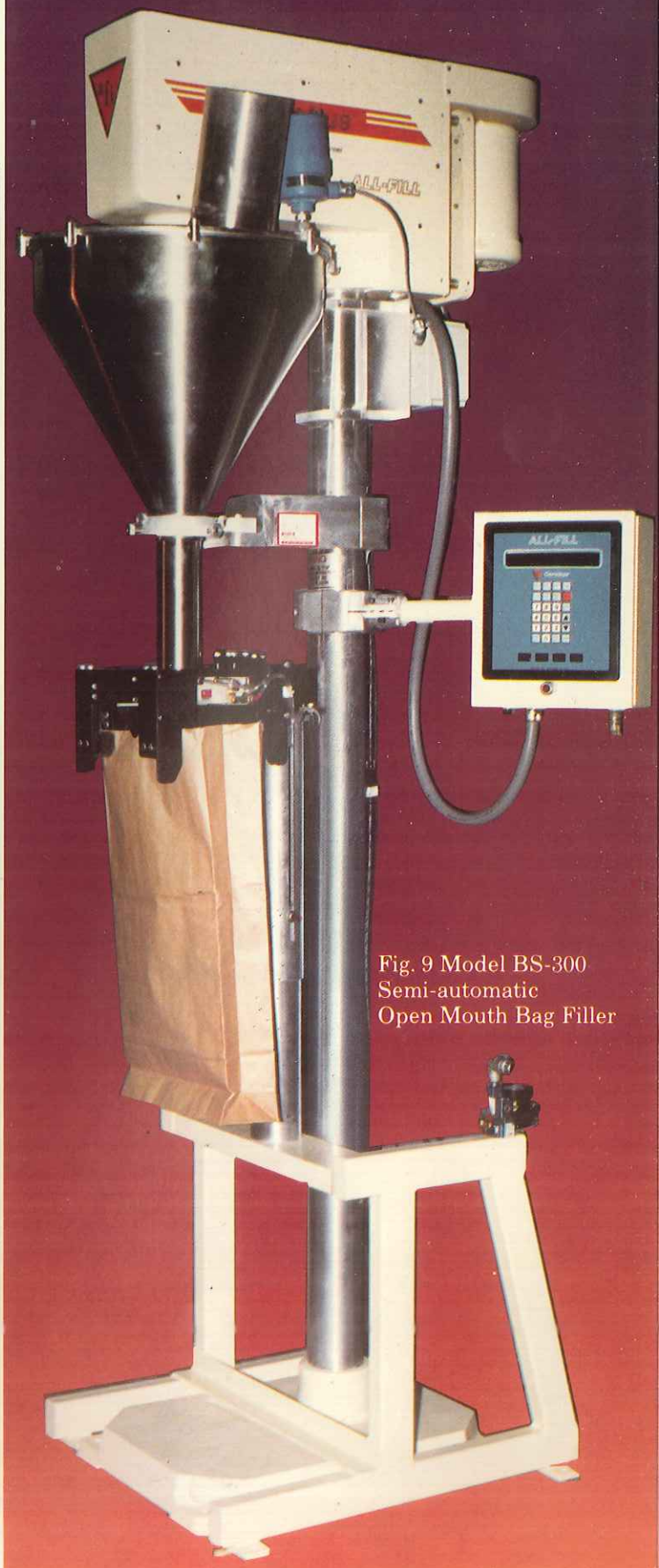


Fig. 9 Model BS-300 Semi-automatic Open Mouth Bag Filler

Popular semi-automatic net weight filler has weigh cell integral with rugged bag clamp assembly. The weighing system is isolated from the machine with a structural support frame to assure highest accuracy.

Fig. 10 Model BBD-300 Filling System for 2-ingredient Pharmaceutical Powder

System is designed to accept containers from a carton erector and discharge into a carton sealer. Cartons are tared, filled with a small amount of product No. 1, checkweighed before conveying to second station for bulk fill of Product No. 2 and then topped off at the third station. Final package is again checkweighed.

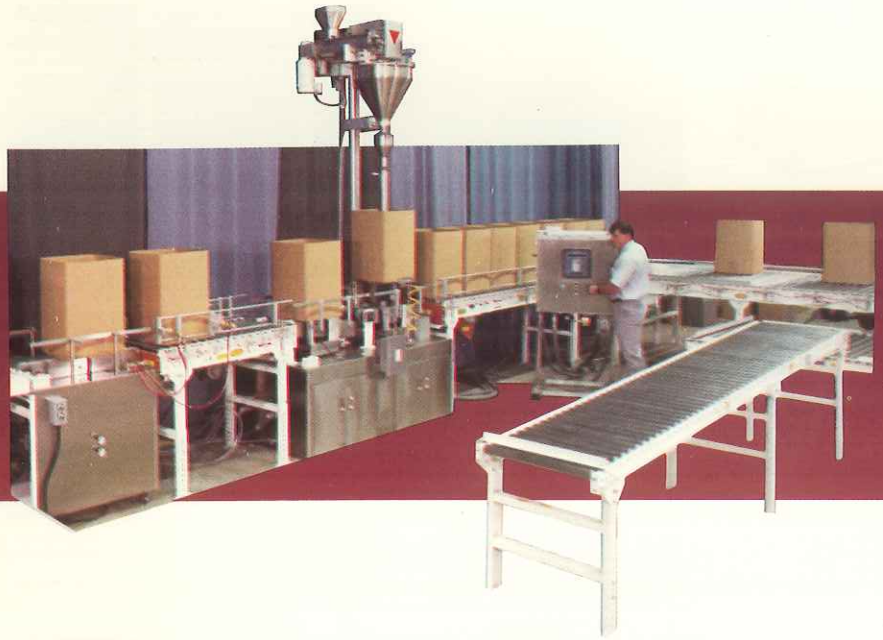


Fig. 11 Model SHAS-300 Filling System for Bag-in-Box Cartons

A costly fine granular food product required emphasis on accuracy and efficiency in the carton line. System includes loading area, indexing through the fill station, checkweighing and unloading for pallets. Cartons are tared, lifted for bottom up filling and topped off complete with Cerebus II monitoring all operations.

Fig. 12 A 2-lane conveyor, each lane centered with 3 filling heads, automatically indexes cartons for filling with a variety of construction industry powders (cements, plasters, grouts, etc.). A programmable control system handles 184 varied combinations of products, weights and sizes.

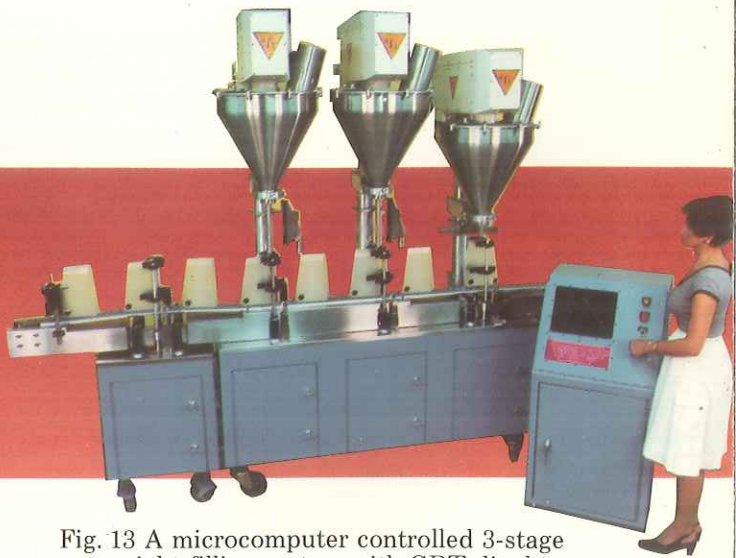
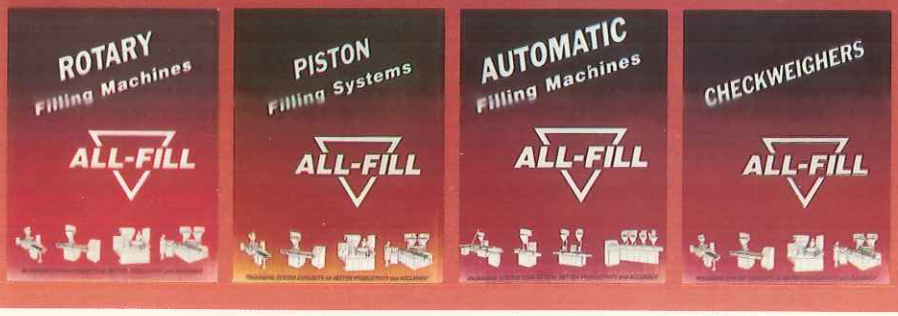


Fig. 13 A microcomputer controlled 3-stage net weight filling system with CRT display. Features a memory program to guide set-ups step by step. Provides maximum flexibility including signals for feed-back, feed-forward, data collection, etc.

Fig. 14 Versatile net weight filling system stores 100 different product/container combinations in Cerebus II memory. Fills chemical reagents from 1 to 1000 grams.

Other Packaging Equipment by ALL-FILL



ALL-FILL

418 Creamery Way Exton, PA 19341 USA
(215) 524-7350 FAX (215) 524-7346 TLX 902-642

3M/1088/VP

SPECIFICATIONS: Fill-By-Weight Machines

FILLING HEAD

Auger Drive: 1 ½ H.P., TEFC 1200 RPM Motor.

Slow Speed Agitation Drive: ½ H.P. totally enclosed, gear head motor. Includes selectable control on Cerebus II Panel for "Off"/"On With Fill"/"On Continuously".

Utility Requirements: Motor Controls: 230/460 Volts/3-[illegible]/60 Hz. Other ratings on application. Controls: 115 V., 50-[illegible]z. Compressed Air: 80psi @ 5cfm.

Clutch Brake: Electro-Magnetic heavy duty, modular, self adjusting.

Speed Adjustment: V-Belt with Multi-Step Pulley; totally enclosed belt drive with easy access cover for belt and sheave adjustment of auger speeds to best suit application.

Encoder: 200-Counts/Rev., precisely monitors auger rotations.

Hopper Coupling: Has quick disconnect feature and self-aligns when re-installing hopper after clean-up.

Hoppers: Spun Stainless Steel; 22″ diameter; 10 gallons or 16 gallons capacity.

Hopper Covers: Stainless Steel; either split-cover design; or, gasketed dust-tight cover with 6″ diameter infeed duct.

Materials of Construction: Stainless Steel product contact parts; aluminum (column, brackets, head casting—baked polyurethane finish.)

Mounting Base: Cast aluminum floor base.

CONTROLS: CEREBUS™ II Computer Controller

Enclosure: Dust-tight NEMA 12; NEMA 4 available; tilts to convenient eye-level.

Power Indicator Light: Green illumination when "On".

Keypad: Splashproof, dust tight membrane has tactile and audible feed-back.

Plain Language Display: Large 1″ x 7″ backlighted LCD Display. Light intensity adjusts for environmental conditions.

Status Reporting Display: Actual final weight, average weight, standard deviation.

Net Weight Control & Auto Zero: Standard.

Calibration: Settable in ozs., lbs., gms., kgs.

Communication Link (Optional): Via RS232C interface to p[illegible], computer, etc. Information available: Individual Weights, Standard Deviation, Batch Reporting, etc.

Fine Adjustments: Up and down-arrowed keys permit fine tuned adjustments to operating program during production.

Memory Capacity: 25 products standard; 100 optional.

Production Counter: Indicates total packages filled. Resettable.

Self-Diagnostics: Automatic trouble-shooting.

Automatic Coast Compensation: Monitors and adjusts clutch-brake operation.

Auger Jog/Hopper Empty Controls: Convenient for set up and clean up.

Programmable Container Index Timing: For transfer, advance fill, delay after fill.

Weight Cell/Load Cell: Mounted on independent frame to isolate from machine vibrations.

ACCESSORIES (Optional)

Automatic Lift: For bottom up filling.

Vibration: Vibrators, joggers—electric, pneumatic or mechanical types—for settling products into containers as required.

Cut-Off Devices: Valves, Piston Draw-backs, Diaphragm-type, Plug Rods, Knife Blade types as needed for clean cutoff.

Heated Hoppers: Electric and Water-jacketed complete with thermostatic controls.

Level Controls: Mounted in the hopper to signal infeed and control level of product.

Conveyors: Automatic indexing and adjustable for line speeds: belt, block chain or table-top.

Motor Starters: Magnetic starters, column-mounted, for au[illegible] and agitator motors.

Bag Clamps: For bags and pouches.

SPEED & ACCURACY: Accuracies of ±.1% to ±0.5% are maintained on most products. Speeds up to 35/Min. dependent upon product, fill weight and container.

HAZARDOUS AREAS: Wash-down, remote control, explosion-proof and special conditions can be met by available designs.

SANITARY STANDARDS: Approved models available to meet USDA & 3A requirements.