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

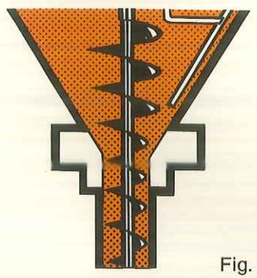


Fig. 4

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**

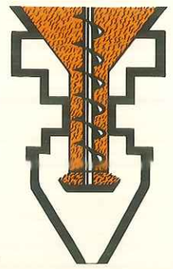


Fig. 5

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**



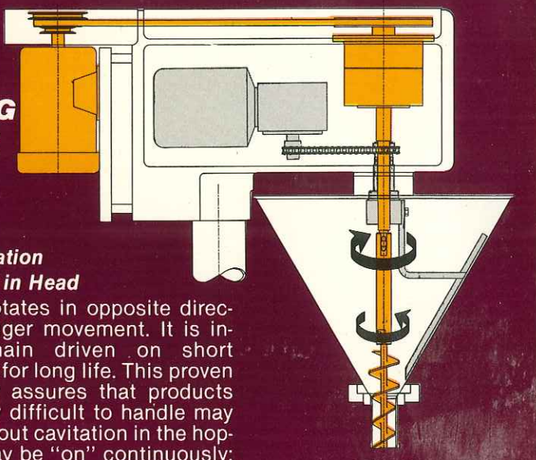
Fig. 6

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

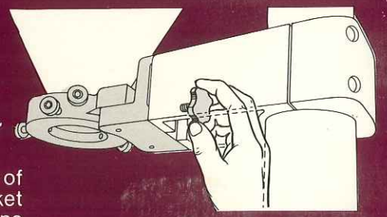
Agitator blade rotates in opposite direction from the auger movement. It is independently chain driven on short sprocket centers for long life. This proven principle reliably assures that products that are normally difficult to handle may be delivered without cavitation in the hopper. Agitation may be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

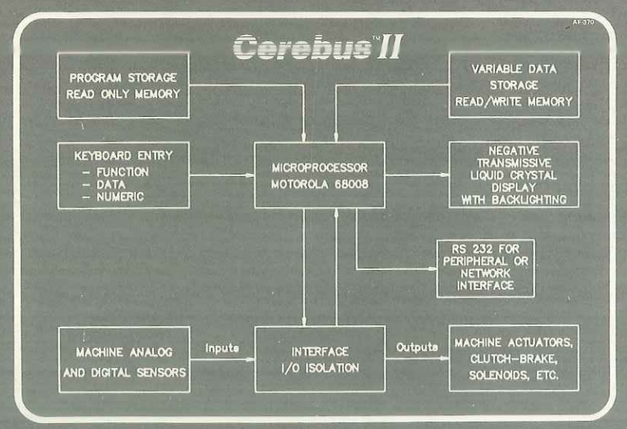


Fig. 9

Packaging's Most Complete Line of Models

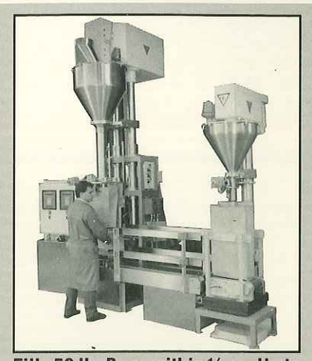


Fill by Volume...
Fill by Weight...

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.



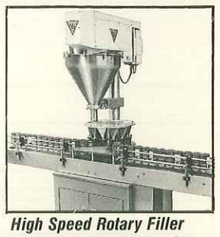
Fills 50 lb. Bags within ½ oz. Up to 600/Hr. Also handles 25 lb. and 100 lb. fills. Open mouth bags are manually hung, bottom-up filled and jogged during fill. Powered conveyor to top-off station. Dust collector shroud moves with bag lift.



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.

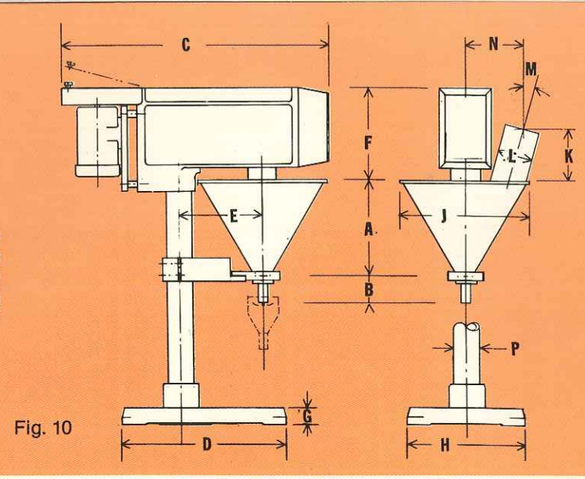


Fig. 10

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.

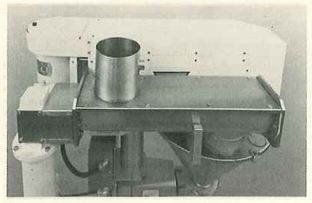


Fig. 12

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

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