

SLIDE-FILL PORTION FILLERS



1/4/6-PAK Models

**Accurate,
Gentle, and
Versatile Filling**



CARRUTHERS

CARRUTHERS SLIDE-FILL PORTION FILLING TECHNOLOGY

Carruthers' slide-fill basin technology enables the gathering of product pieces or random, irregular sized products for consistent portioning into a broad variety of container formats. Engineered for gentle handling, our slide-fill fillers preserve your product's integrity, resulting in excellent product appearance.

Designed to synchronize with low to high speed continuous packaging lines, our 1-, 4- and 6-PAK models are capable of filling entrée and ready meal portions. From trays, bowls, cans, jars and cups to thermoformed packages and vertical pre-made pouches or bags, Carruthers' slide-fill portion fillers are designed for single, multi-lane and vertical formats.

Reaching speeds up to 150 containers per minute with fill weights up to 5-lbs. per portion, our fillers feature one, four, or six fill stations respectively. Known for handling tough filling challenges, Carruthers' fillers accurately portion product at high volumes – products that are often referred to as "hand fill only".

BENEFITS / FEATURES

Maximizes product yields and minimizes waste.

- Target fill sonic sensor assures fill weight accuracy ($\pm 2\%$) is achieved within each fill station
- Slide-fill technology minimizes fines and reduces product damage, preserving product integrity and appearance
- Accurate product placement and no seal contamination as a result of tightly formed portions that are easily conveyed and transferred into container

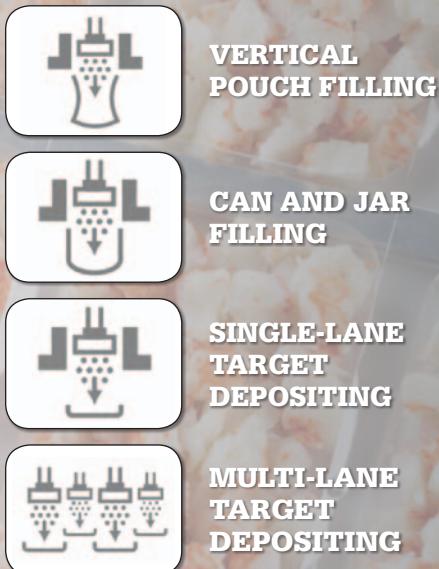
Enables versatile, flexible filling.

- Quick and easy 'on the fly' adjustments to fill weights
- Designed to enable indexing between containers for labeling, weighing, and rejects
- Filler synchronized with moving containers such as trays, bowls, cups or thermoformed packages
- Cantilevered design requires no hardware or attachment to packaging machine

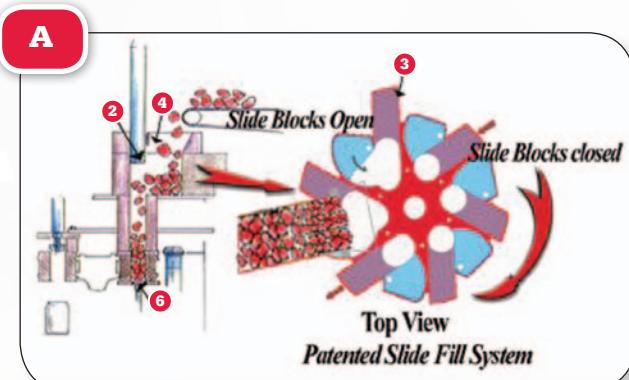
Quick product changeovers.

- Regardless of varying containers or portion sizes, Carruthers' fillers are designed for quick product changeovers and can be easily adjusted for product portion shape, height, or weight

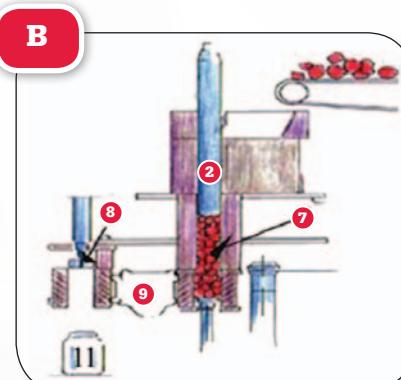
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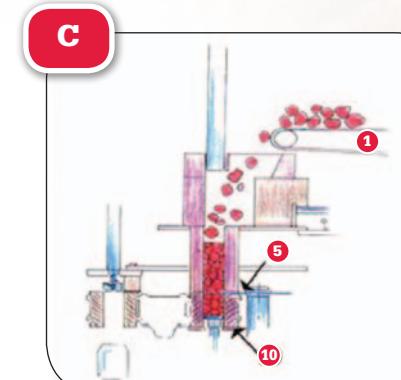
METHOD OF OPERATION



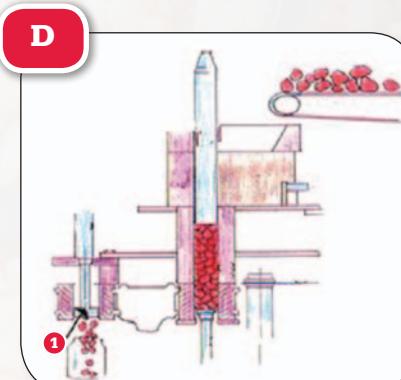
Product transported to the filling basin (4) by a variable speed conveyor regulated by the control system. The conveyor speed is adjusted to maintain a constant level in the filling basin. Filling basin slide blocks slide in around product column. Product in filling column is compressed between upper plunger (2) and lower plunger (6).



Adjusting the stroke of the lower plunger determines the target fill weight. Fill weight variances are eliminated through product compression provided by adjustable pressure from the upper plunger (2). Product in the filling column represents several container portions. Compression levels are adjustable over a wide range to allow for varying products.



The shuttle pocket (10) is located at the bottom of the filling column during the compression phase of the filling cycle. The pocket, now full of compressed product of normalized density, is portioned by a knife (5) which cuts the column of product level with the top of the shuttle pocket.



The lower plunger descends and the turret rotates the shuttle pocket and its portioned product outward to the position over the container. The portioned product is placed in the container with a downward stroke of the tamper (8). Machine repeats cycle.



LEGEND

- ① PRODUCT CONVEYOR
- ② UPPER PLUNGER HEAD
- ③ SLIDE BLOCK
- ④ FILLING BASIN
- ⑤ KNIFE
- ⑥ LOWER PLUNGER HEAD
- ⑦ FILLING COLUMN
- ⑧ HEAD TAMPER
- ⑨ TURRET
- ⑩ SHUTTLE POCKET
- ⑪ CONTAINER

FILLER APPLICATIONS:

PRODUCT	PRODUCT STATE	PRODUCT	PRODUCT STATE
Artichoke Hearts	Fresh or cooked	Kim Chi	Various vegetables
Bacon	Bits	Ham	Diced, cooked
Beef Stew Ingredients	Diced, cooked / raw	Mixed Vegetables	Fresh or IQF
Beef/Pork	Diced or strips, cooked / raw / IQF	Pasta	Cooked
Chicken	Diced or strips, cooked / raw / IQF	Philly Cheesesteak	Slicked cooked beef with peppers / onions
Collard Greens / Spinach	Cooked or blanched	Rice	Cooked
Corned Beef	Shredded or minced	Salad Varieties	Pasta salad, carrot salad, beet root (all with small amount of sauce)
Couscous / Tabbouleh	Cooked	Salmon	Chunked, cooked / raw
Fruit	Diced	Tobacco	Snuff
Herring	Chunked, cooked / raw	Tuna	Chunked or flaked, cooked

TECHNICAL SPECIFICATIONS:

FEATURE	1-PAK	4-PAK	6-PAK
Electrical requirements	208/240 VAC; 440/480 VAC ± 10%, 3-Phase, 15 KVA	208/240 VAC; 440/480 VAC ± 10%, 380/415V AC, 15 KVA	208/240 VAC; 440/480 VAC ± 10%, 3-Phase, 15 KVA
	50/60 Hz	50/60 Hz	50/60 Hz
Electric Motor	400W Servo	3-hp, 3-ph	3-hp, 3-ph
Compressed Air	100 psi	100 psi	100 psi
Controls	PLC Touch Screen	PLC Touch Screen	PLC Touch Screen

CAPACITIES:

MODEL	QTY FILL STATIONS	PPM	MAXIMUM PORTION DIAMETER	MAXIMUM PORTION HEIGHT	MAXIMUM PORTION WEIGHT
1-PAK	1	25	5.875 in. (149mm)	8 in. (203mm)	5 lbs. (2.3 kg)
4-PAK	4	120	4 in. x 4 in. (101.6mm x 101.6mm)	5 in. (127mm)	2.5 lbs. (1.13 kg)
6-PAK	6	150	3.875 in. (98.4mm)	5 in. (127mm)	1.5 lbs. (.68 kg)



CARRUTHERS



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