

# ROTARY FILLING SYSTEMS



ALL-FILL Rotary Fillers provide high throughput and speeds for even the most demanding production environments. Rotary filling systems operate continuously with product dispensed into funnels traveling on a circular, multi-position turret. Containers are transported to the turret by an integral infeed conveyor. Timing screw and starwheel components space and position containers into the turret. Variable speed auger drives operate continuously to dispense product accurately.

Product weight easily adjusted by the operator or from checkweigher feedback. Production rates (c.p.m.) adjusted by varying turret speed.



**Single Head 12 Station**



**Twin Head 45 Station**



**All-Fill: For All Your Filling Needs.**

**418 Creamery Way • Exton, PA 19341 USA**

**1-866-ALL-FILL • Fax: (610) 524-7346 • [www.all-fill.com](http://www.all-fill.com)**



# DESIGN FEATURES

## Removable Container Handling Parts



Modular Transfer Funnels, Starwheels, and other parts removable for different containers, easy clean up, and product changes. Segmented, interlocking parts and assemblies guarantee correct installation and replacement without tools or additional manpower.

## Timing Screw & Starwheel Container Transport



Containers are transported to the Rotary Turret by customized timing screw and starwheel arrangement for smooth, controlled movement even at production speeds. Timing screws profiled to exactly match container type and size. And can be easily exchanged in the field at a minimum of downtime.

## Missing Container Detection Prevents Product Waste



Combination of photoelectric and proximity switch equipment locates and identifies missing containers before filling occurs. Internal logic of controls momentarily halts the auger at indicated position to avoid expensive products spills and mis-filled containers.

Environments and installations in hazardous locations can be accommodated through use of intrinsically safe electrical barrier circuits and air-purged enclosures. Rotary filling equipment destined for use in such environments are fully designed and built to strict Electrical Classifications (i.e., Class I, Div. 2) for use in hazardous locations.

## Hazardous Location Design



## Container and Product Vibration



Products and materials that require vibration to fill and settle can be matched with exclusive “Square-Wave” vibration of a rail beneath containers and turret. Vibration stroke and duration easily adjusted according to product, container, or environmental factors.



Air cylinder operated “Funnel Dinger” dislodges any accumulated product for thorough emptying of funnel contents.

## Adjustable Turret and Container Sealing

Proper filling at production speeds require positive sealing between tops of containers and Transfer Funnels. Adjustable turret can be raised or lowered for different container heights. Custom-designed seals provide leak-proof barrier during fill cycle.



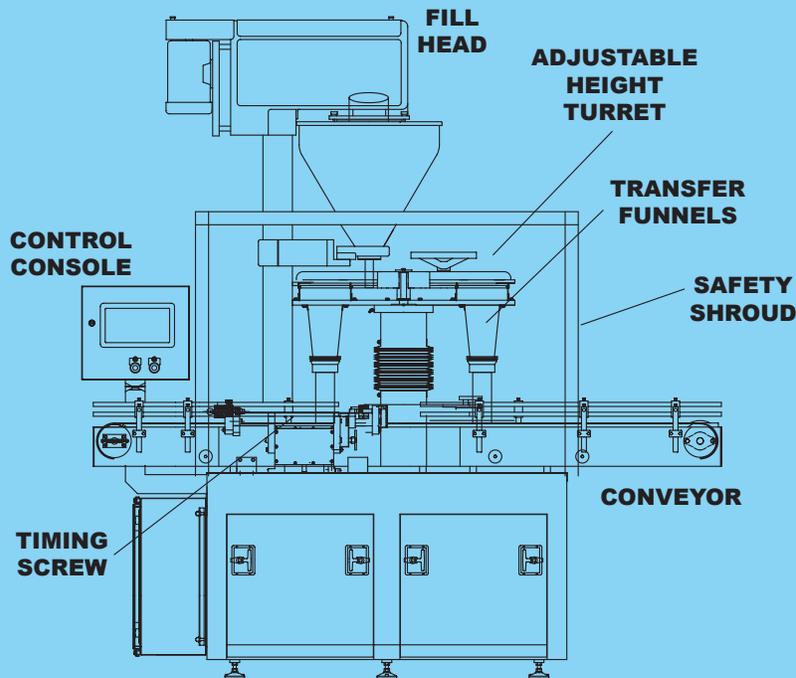
## Powerful PLC Controls and Touch Screen Interface



All machine control and operating functions are performed by the latest Programmable Logic Controller (PLC) component of the control panel. All software development is performed in-house by All-Fill’s experienced team of programmers and analysts. Operating functions are provided by a large, color, touch screen interface panel. No complicated machine settings to remember – all functions are selected using a few, simple keystrokes.



# COMPONENTS



## Rotary Filling System Specification Summary

### Fill Drive System

Single or twin drive motors with variable speed motor and heavy-duty clutch/brake per head. Drive system components contained in rugged, cast metal head.

**Servo Fill Motor:** Adjustable speed, brushless Servo fill motors also available in 100/165/252 in/lb. torque ratings.

### Container Sizes & Stations

| Stations   | Turret         | Container Size |
|------------|----------------|----------------|
| 12 Station | 14" pitch dia. | 3-3/16" dia.   |
| 12 Station | 24" pitch dia. | 5-1/2" dia.    |
| 12 Station | 30" pitch dia. | 6-1/2" dia.    |
| 18 Station | 36" pitch dia. | 5-1/2" dia.    |
| 18 Station | 40" pitch dia. | 6-1/4" dia.    |
| 18 Station | 42" pitch dia. | 6-1/2" dia.    |
| 24 Station | 38" pitch dia. | 4-1/4" dia.    |
| 24 Station | 42" pitch dia. | 5-1/8" dia.    |
| 30 Station | 38" pitch dia. | 2-3/4" dia.    |
| 36 Station | 48" pitch dia. | 3-3/4" dia.    |
| 42 Station | 54" pitch dia. | 3-3/4" dia.    |

Other Station/Container Size configurations available for custom applications

### Base

Fully enclosed, painted, mild steel base cabinet with removable access doors, stainless steel top, and mechanical jack to raise/lower fill head.

### Conveyor

Stainless steel (Type 304) Conveyor Channel with acetyl flat top chain and variable speed dc drive motor with reducing gearbox, chain sprocketing, and drive components.

### Turret

12-42 Position fixed Turret Assembly with Turret & Funnel Carriage with Divider Plate, Transition Flanges, and Transfer Funnels with corresponding mounting clamps at each fill position. Includes variable speed dc motor, turret jam protection vacuum take-off ports at each fill position, turret safety shroud assembly with front access panels, and safety interlock switches.

### Container Handling

Systems include one complete set of container handling parts supplied, including:

- Infeed & Outfeed Starwheels
- Removable Main Starwheel Segments
- Outer Guide Rails
- Timing Screw & Adapter
- Infeed Guide Rails
- Intermediate Guide

### Container Positioning

Infeed Timing screw positions container at infeed. Removable starwheel moves containers to Turret positions.

### Vibration

Variable frequency/amplitude square wave vibration to settle and distribute product into container during filling.



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