

# FEMC®

INNOVATIVE  
PACKAGING MACHINERY

## PISTON FILLER

Dispenses viscous products

Capable of dispensing everything from water to cottage cheese, and adhesives to soap, with an incredible accuracy of 1/10<sup>th</sup> of 1% by volume. FEMC fillers maintain this level of accuracy with virtually no product distortion.

Built to last and designed to withstand water washdown, these USDA and/or 3-A Sanitary (dairy) approved fillers provide an unmatched level of accuracy and ease of use.



2-Out Piston Block Filler with Filler-Mounted X-Y Axis Traveling Head



6-Out Piston Filler with Automatic Tilt Blender-Hopper



## KEY BENEFITS

- Weight accuracy to 1/10<sup>th</sup> of 1%
- Five-minute, "tool-less" product changeover
- USDA and/or 3-A Sanitary (dairy) approved
- Maintains product integrity
- Multiple out configurations from 1–8 dispensing nozzles



# Piston Filler – options and accessories

## Piston Filler sizes

Piston Fillers are available in three (3) size configurations: Standard, Medium and Large-Out. The size of the filler that is appropriate for your application is determined by the viscosity and particulate qualities of your product and the desired weight range (see chart below). Custom-engineered fillers are available to accommodate volume sizes greater or less than those listed. Each filler comes standard with one (1) Volume Adaptor Kit, sized to produce fill weights within the minimum and maximum ranges indicated at the time of your order.

**Filler and bore sizes must be specified/determined at the time of order.** Volume Adaptor Kits, however, are easily changed-over and additional kits may be purchased to provide maximum flexibility for your filler.

### Piston Filler weight chart

Standard-Out Filler			
Bore Dia. (in)	Stroke (in)	Minimum Fill (oz)	Maximum Fill (oz)
1.0	4.0	0.4	1.7
1.125	4.0	0.5	2.2
1.5	4.0	1.0	3.9
2.0	4.0	1.7	6.9
2.5	4.0	2.7	10.8
3.0	4.0	3.9	15.6

Medium-Out Filler			
Bore Dia. (in)	Stroke (in)	Minimum Fill (oz)	Maximum Fill (oz)
1.5	4.0	1.0	3.9
2.0	4.0	1.7	6.9
2.5	4.0	2.7	10.8
3.0	4.0	3.9	15.6
3.5	4.0	5.3	21.3

Large-Out Filler			
Bore Dia. (in)	Stroke (in)	Minimum Fill (oz)	Maximum Fill (oz)
3.5	8.0	10.0	42.0
4.0	8.0	13.9	55.0
5.0	8.0	21.0	87.0
5.5	8.0	26.0	105.0
5.5	10.0	33.0	131.0
6.0	8.0	31.0	125.0
6.0	10.0	39.0	156.0

These charts are provided for illustrative purposes only utilizing water as the referenced material. Actual target weights, equipment settings and selection will be determined by product samples provided prior to quotation.

## Dispensing valve options

- Shaped orifice .....Adds decorative touch to product
- Spreader valves.....Distributes small volume over large area
- Cone valves.....Extra gentle product placement
- 3-stage valves .....Clears valve after every cycle
- Additional sizes.....Custom designed to your application



Weldment with tri-clamp and Volume Adapter Kit

## Volume adapter kits

With FEMC Piston Fillers, versatility is a “built in” not an “add on.” Porting from FEMC’s stainless steel block consists of a welded tri-clamp fitting which eliminates the need to remove the fitting each day for cleaning. In addition, this fitting allows for the quick removal of the Volume Adapter Kit and hose. Typical changeover on a 4-out Piston Filler from one size Volume Adapter Kit to another is 5 minutes or less, and is completely “tool-less.” And, because FEMC Piston Fillers are mounted on casters, a single filler can be used in multiple applications on multiple lines!

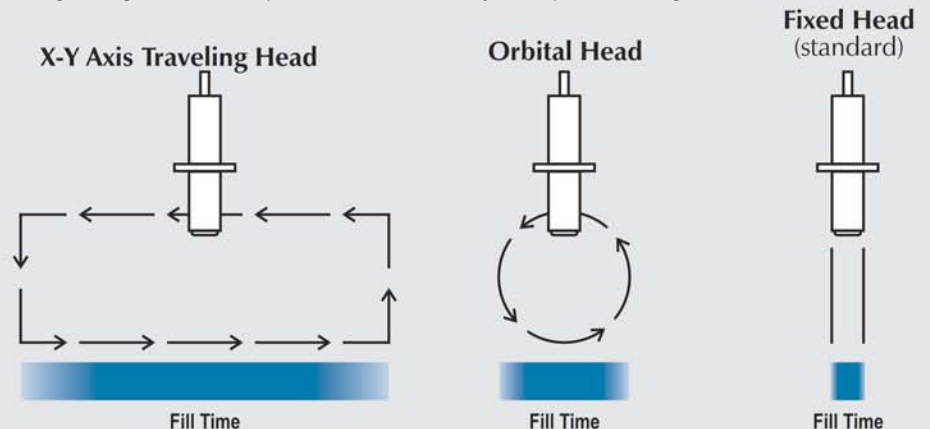
Volume Adapter Kits are custom manufactured to match your product and weight ranges. As long as the weight range you require is in the range supported by your size filler (see charts above), FEMC can manufacture a Volume Adapter Kit to exactly match your application.

## Traveling head options

Traveling head options are determined by the required target weight, containers per minute and viscosity of the product being filled.

The **X-Y Axis Traveling Head** provides the longest dwell time and is, therefore, utilized when larger product weights are desired. Its unique configuration allows the dispensing nozzle to travel with the container — maximizing the fill time while minimizing product splashing. In addition, the X-Y Axis Traveling Head’s motion is fully adjustable, allowing the operator to accurately target a specific area or pocket within the container.

Traveling heads may be either conveyor- or filler-mounted, providing the maximum flexibility when multiple products are run with the same equipment.



## Multiple-out and hopper configurations/options



Once the filler model and Volume Adapter Kit you require for your product has been determined, multiple-out configurations can be designed to meet your production speed requirements. For instance, if your product and fill weight indicates a 1-Out filler running at 30 filling cycles per minute, you would need a 4-Out filler to run at a production speed of 120 containers per minute.

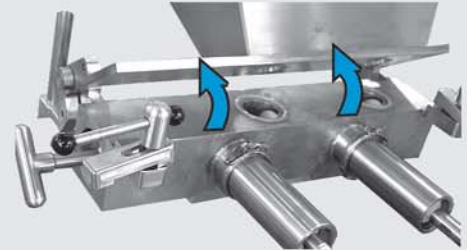
Naturally, higher speeds might require multiple lanes, or even multiple fillers, but whatever you require, FEMC can design and build a filling system to meet your production needs.

FEMC dispensing nozzles are designed to reduce the number of physical parts. This helps to keep our dispensing nozzles easy to clean and easy to maintain.



"Tool-less" hold down feature

FEMC Hoppers come standard with a "tool-less" tilt feature. This allows one operator to tip the hopper away from the block for cleaning and sanitation. Larger hoppers, like the 8-Out (above right), come with a power assisted tilt feature – the operator only needs to flip a switch to tip the hopper away from the block.



Hopper tilts away from block for ease of cleaning

## Hopper options

- Blender Hopper .....*Ribbon or paddle. Maintain product mix*
- Heated Hopper .....*Maintain product temperature*
- Jacketed Hopper .....*Thermal covering*
- Low-Level Indicator.....*Notifies operator of low product condition or calls for product from transfer pump (see right)*
- Transfer Pump.....*Remote product infeed*

**Transfer Pump specifications:**

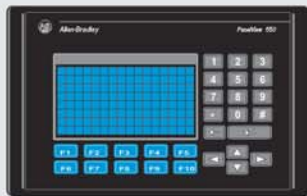
Model no:.....1280  
Capacity (max):.....50 gal/min  
Electrical: .....110V/220V/440V  
Air:.....80 psi

## HMI (Human to Machine Interface) options

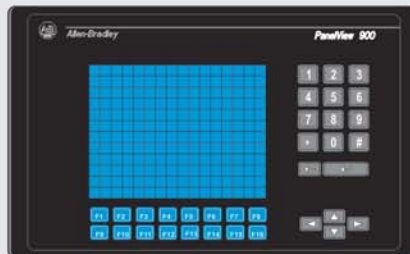
Standard FEMC Piston Fillers are controlled by a PLC (programmable logic controller) and one of the interfaces shown below. The standard interface is the PV-300. Fillers which are integrated into a packaging system may be controlled through a system-wide interface, such as the PV-550, color PV-600, PV-900 or the QuickPanel Touchscreen interface displayed below. Systems may also be controlled via laptop or a networked connection to a plant operations controller. For those applications where a non-electric solution is desired, pneumatically controlled units may be specified.



PV-300



PV-550  
PV-600 (color)



PV-900



QuickPanel or QuickPanel, Jr.  
Customized Touchscreen Interface

## Servo motors and automated product weight control

FEMC is pleased to announce the addition of **servo motor control** to our already innovative product designs. Used in conjunction with the PLC's and touchpad controls already offered on our Piston Fillers, these servo motors provide an ease of use and level of accuracy unsurpassed in the industry. Replacing the air cylinders which come standard on FEMC Piston Fillers, a servo-driven system "remembers" your important product settings. This allows a single operator to instantaneously alter product weight settings or perform the adjustments required for a product changeover with the touch of a button — a real time saver sure to positively affect your bottom line!

# FEMC Piston Filler

Piston fillers are designed to accurately dispense viscous products by means of a totally sealed, positive displacement spool. Unlike other manufacturer's piston fillers, FEMC Piston Fillers are totally sealed — drawing a complete vacuum. This results in incredible accuracy to 1/10<sup>th</sup> of 1% by volume. FEMC Piston Fillers are available with a variety of dispensing valves to match your particular products. Furthermore, they are fully adjustable and capable of supporting multiple products and weights with a single filler. Standard fillers are primarily designed for use with liquids. Medium and Large-Out fillers are designed for use with particulate products. Contact FEMC directly for more information concerning your specific product and application.

- 100% Type 304 stainless steel construction
- USDA approved/withstands water washdown
- 5" casters for mobility (2 locking)
- NEMA 4X enclosure
- Allen Bradley controllers standard (other controllers available upon request)



## General options and accessories

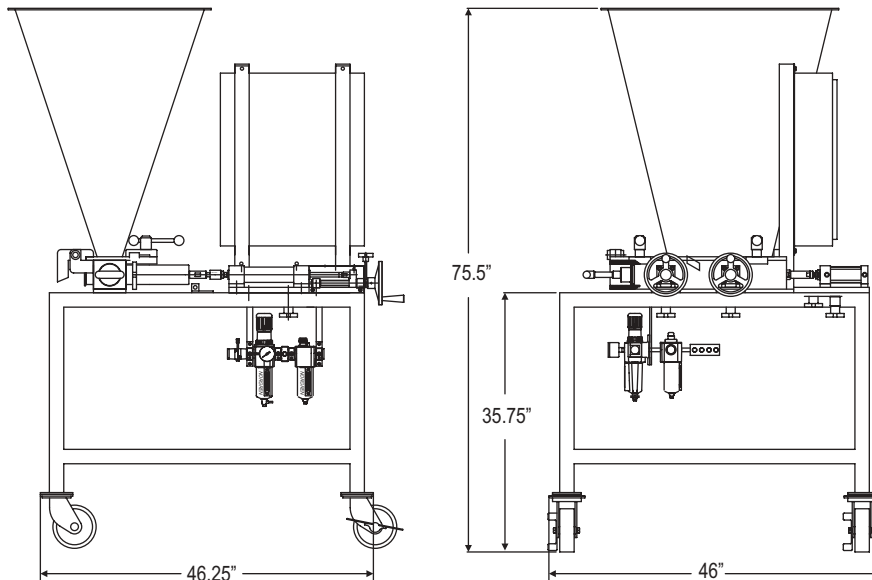
Type 316/316L Stainless Steel Construction .....For dairy and high acidity applications  
 No Container/No Fill Option.....Minimizes waste  
 Pneumatically Controlled Systems .....For non-electric environments  
 Additional Volume Adapter Kits.....(See inside chart)

## Specifications (for standard 1-Out Piston Block Filler)

**Model no:** ..... 1096  
**Speed:**.....60 CPM/nozzle\* (max)  
**Hopper capacity:**..... 1200 cu/in  
**Product dispense volume (max):**.....see weight chart  
**Approximate weight:** .....600 lbs.

**Requirements:** (electrical) ..... 120V/220V/480V  
 (air)..... 80 psi, 1½" N.P.T.

\* Product samples required prior to formal quotation



## Proven products and applications

- Water
- Juice
- Gelatin
- Pudding
- Cream Cheese
- Cottage Cheese
- Yogurt
- Cheese Dips
- Beef Stew
- Macaroni & Cheese
- Mashed Potatoes
- Creamed Spinach
- Salsa
- Spaghetti Sauce
- Gravy
- Butter
- Margarine
- Apple Sauce
- Fruit Cocktail
- Compote
- Pie Filling
- Mayonnaise
- Mustard
- Catsup
- Tartar Sauce
- Cookie Dough
- Cake Batter
- Frosting
- Soup
- Potato Salad
- Cole Slaw
- Sour Cream
- Cooked Oatmeal
- Ink
- Adhesives
- Lubricants/Grease
- Liquid Soaps

... and much more!



INNOVATIVE  
PACKAGING MACHINERY

22201 Aurora Road  
Bedford Heights, Ohio 44146

Tel: (216) 663-1208  
 Fax: (216) 663-9337  
 Website: www.femc.com