

Metering Filling Station Model MFS

Quick Reference and Start Up Guide

(September 2020)

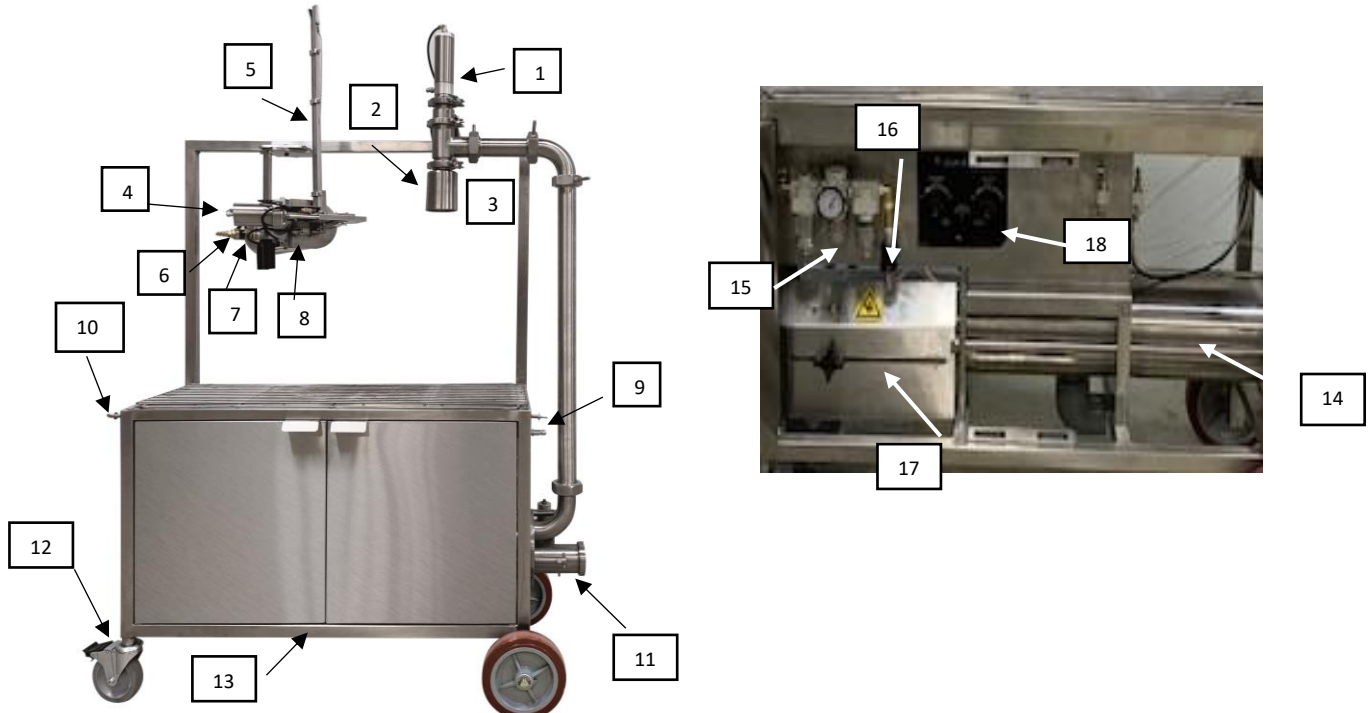


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Refer to Model MFS Installation, Operation and Maintenance manual KE004016-A for detailed instructions and safety requirements

FOOD PUMP MODEL MFS: COMPONET IDENTIFICATION



- | | | |
|-----|------------------------------|---|
| 1. | Discharge Valve Plunger | Opens and closes Discharge Nozzle |
| 2. | Discharge Nozzle | Holds Bags to be filled with food |
| 3. | Discharge Trigger Lever | Located Behind Discharge Nozzle, Opens/Closes Plunger to allow bag filling |
| 4. | Clipper | Clips (Heavy Duty Staples) and Cuts Bags after fillings |
| 5. | Clip Holder | Holds Clips |
| 6. | Safety Shut Off | Clipper Air Supply Safety Shut Off |
| 7. | Cutter Shut Off | Clipper Bag Cutter Shut Off |
| 8. | Clip Adjustment Knob | Blue Knob to adjust speed for Clipping and Cutting |
| 9. | Air connection for MFS | Incoming Air Supply for MFS Food Pump (Large Hose) |
| 10. | Air Connection to Clipper | Air Supply from Food Pump to Clipper (small hose) |
| 11. | Food Hose Connection | 3" Diameter incoming Food Hose connection |
| 12. | Locking Caster | |
| 13. | Drain Pan Discharge | |
| 14. | Piston Cylinder | Piston Cylinder holds Product Piston Valve |
| 15. | Air Pressure Regulator | Oil Bowl, Air Regulator Dial, Air Filter |
| 16. | Air Pressure Safety Shut Off | Black Control slides Up/Down to turn Air Off |
| 17. | Stroke Volume Adjustment | Adjusts Piston Stroke to 20 – 128 oz per stroke |
| 18. | Control Panel | Control for Discharge, Suction Speed, OFF, Single and Constant Stroke Setting |

UNPACKING – PARTS & ACCESSORIES



Spare Parts Accessory Kit (T40520)

Contains (2) Wrenches, Gaskets Kit, Clipper Mounting Bolt, Label Dispenser Bracket, (2) Air Hoses, Food Grade Grease, 3” Elbow, 2” Vertical Pipe and Elbow for Pan Filler/transfer pump, Mineral Oil for Air Pressure Regulator.



Label Reel Dispenser

Mounts to top bar on MFS for product labels. May come already installed on MFS



Hoses

3” Gray Food Grade Hose, two 3-foot section, used for pumping from Mixer Kettle
2” Green Cleaning Hose, attaches Discharge Valve Bottom (remove discharge valve first)

UNPACKING - CONTINUED



Air Pressure Regulator, Oiler and Hose

The Air Pressure Regulator and Air Hose is packed with the Tipper Tie Casing Clipper and is not needed. Do not use. Small plastic bag with orange bags, blue clips was used for testing the clipper, do not use. The Cleveland model MFS already includes an Air Pressure Regulator, Oiler and Air Hoses included.



Brush Kit for Kettles, Mixer Kettles and Food Pump:

Cleaning Brush Kit for MFS Food Pump and Mixer Kettle



Waste Containers:

Two waste containers with mounting bracket to MFS. One container (right side) to store new unused Bags, second container used for Clipped Bag waste (left side)

FOOD PUMP MODEL MFS: MAJOR COMPONENTS



CONTROL PANEL

Discharge Speed: Adjusts the speed of the product exiting the pump to discharge nozzle.

Suction Speed: Adjust speed of the product being pulled from the kettle into the MFS food pump, thicker foods may need LESS suction speed

Single Stroke: Single stroke of product exiting pump into discharge nozzle

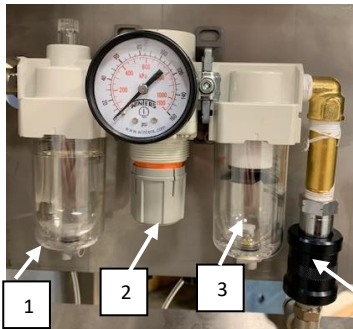
Constant Pumping: Continuous pumping of product exiting the pump, must use trigger lever to start/stop pumping into bag from discharge nozzle



STROKE VOLUME ADJUSTMENT

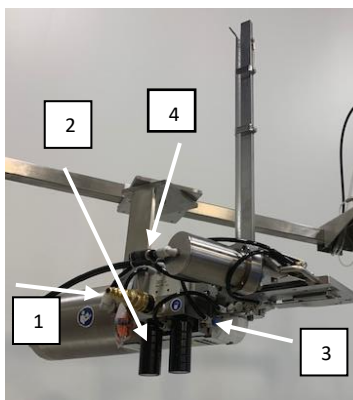
Adjusts the Piston Pump from 20 ounces, far left setting, to 128 ounces, far right setting, per stroke.

Loosen black knob to slide left or right, tighten when desired setting is reached.



AIR PRESSURE REGULATOR

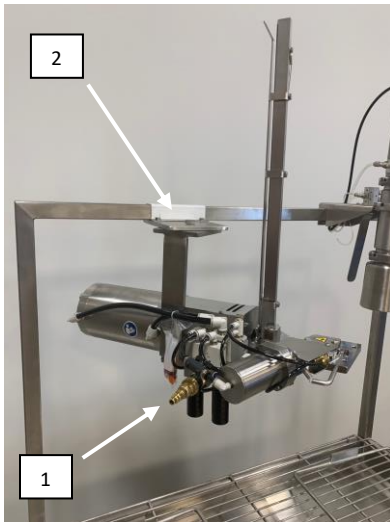
1. Oil Bowl – for lubrication
2. Air Regulator Dial: Adjust Air Pressure, needs to be between 90-100 psi for proper operation.
3. Air Filter: Filters out dirt and condensate from Air Supply
4. Air Pressure Safety Valve: Slide down to stop and vent air from system



MODEL SZ4135L CLIPPER

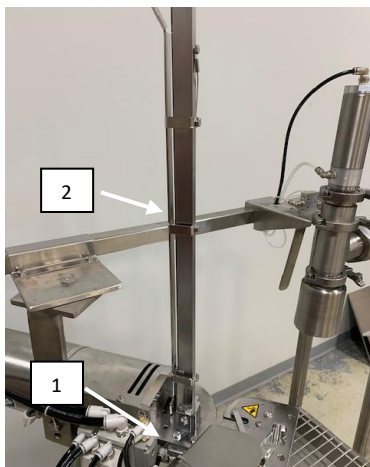
1. Air Pressure Shut Off: Slide to turn OFF/ON air pressure to Clipper. Make sure this OFF when working on the clipper
2. Mufflers (two): Should be hand tightened
3. Clip Speed Adjustment (Blue Knob): Pull knob out and turn to increase or decrease clip (staple) and cutting speed. Needs to Clip first, cut bag second
4. Clipper Cutter Shut Off Valve. Turns ON/OFF Bag Cutter. Turn Valve OFF when servicing the Clipper.

FOOD PUMP MODEL MFS: INSTALLING & SETTING UP THE CLIPPER



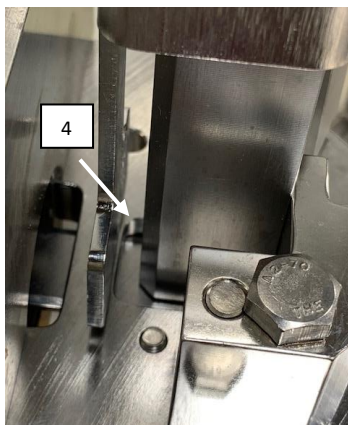
INSTALLING THE CLIPPER

1. Use FA95100 Hex Head Mounting Bolt (with accessory kit) to attached to Clipper Bracket to center hole.
2. Loosen Hex Bolt on top of Mounting Bracket to move bracket so it's comfortable for the operator
3. Make sure Clipper is positioned over drain grate to support the weight of the bag when filling.
4. Take Off Lock that is located on the Clipper Air Connection, it is not needed.

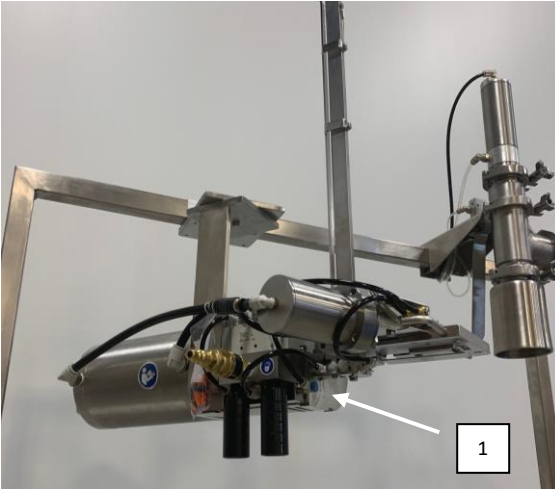


INSTALLING AND ADJUSTING CLIP HOLDER.

1. Mount Clip Holder using Hex Bolt included, align with clip slot on bottom.
2. Make sure Clips slide freely up and down the clip holder.
3. Use Clip weight to secure clips
4. Clips should fall directly into slot at bottom of the Clip Holder Bar



ADJUSTING THE CLIPPER TIMING FOR PROPER CLIPPING AND CUTTING



ADJUSTING CLIP AND CUTTING TIMING

- 1 Find Blue Knob under Clipper.
Clipper must Clip First, Cut bag second
- 2 Pull knob out the turn left or right to adjust clip and bag cutting timing.
- 3 Practice with bags and adjust blue knob until bag clips and cuts properly

START UP AND OPERATION

1. Make sure air pressure is from 90-100 PSI (pounds per square inch - dynamic pressure), the MFS requires 25 CFM (cubic feet per minute) for proper operation.
2. Adjust Air Pressure Regulator, check lubricator and Collector bowl.
3. Check Air Compressor. Make sure it has a refrigerated air dryer, moisture in the air will cause service issues in the Food Pump.
4. Connect the two air pressure hoses. Short hose goes from Food Pump to Casing Clipper, long hose goes from Mixer Kettle to the Food Pump if it comes with a 3" Air Piston Valve. If kettle or mixer comes with a Tangent Draw Off or Butterfly Valve, the Air hose for the food pump must connect directly to Air Compressor.
5. Lock the wheels of the MFS once in place.
6. Check Clip Holder to assure Clips are loading into Clipper properly, adjust as needed
7. Check Clipper operation without Clips, check Clip forming and cut off timing. Make adjustments with Blue knob as needed, then check with Clips.
8. Set "Stroke Selection" to Single Stroke on Control Panel.
9. Setting Stroke Volume, Suction Speed, Discharge Speed.
 - a. For Stroke Selection, recommended setting when first beginning is all the way to the right, 128 oz (1 gallon) per stroke
 - b. Suction Speed, the speed at which the Food Pump pulls from the mixer kettle. Thicker foods may require more suction speed.
 - c. Set Discharge Speed, the speed at which the Food Pump pumps through the Discharge Nozzle.
 - d. Suction and Discharge Speed selection will depend on viscosity of the product.
 - e. Practice test the Food Pump Settings (Discharge and Suction Speed, Casing Clipper Timing and Stroke Volume with water and adjust as needed.

CLEANING

Depending on the leveling of cleaning required, either between recipes or at the end of the day, the mixer and food pump requires proper cleaning to prevent food contamination.

It is recommended that the Mixer Kettle and Food Pump be cleaned with a mild detergent and then rinsed with 180°F hot water.

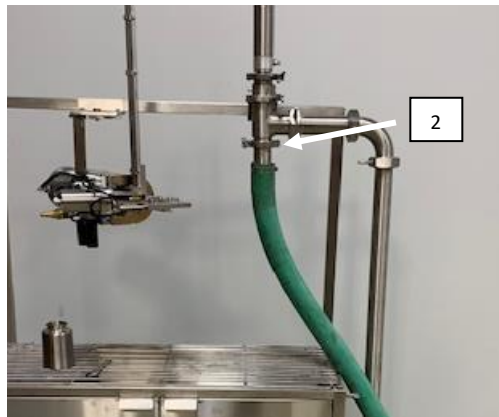
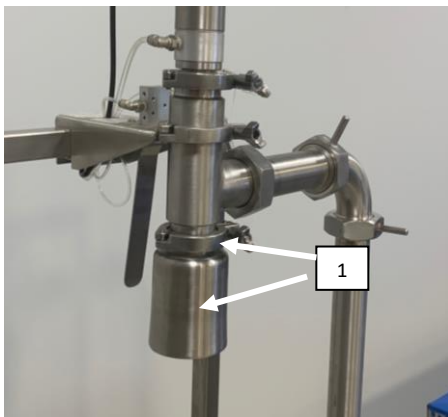
Fill Kettle or Mixer Kettle with water and add a mild detergent. Use Kettle Brush Kit to clean inside of mixer, scraper blades and springs. Pump from the Mixer Kettle through the Food Pump.

To Rinse, heat clean water to at least 180°F, then pump hot water from the mixer kettle through the Food Pump using the Green Cleaning Hose.

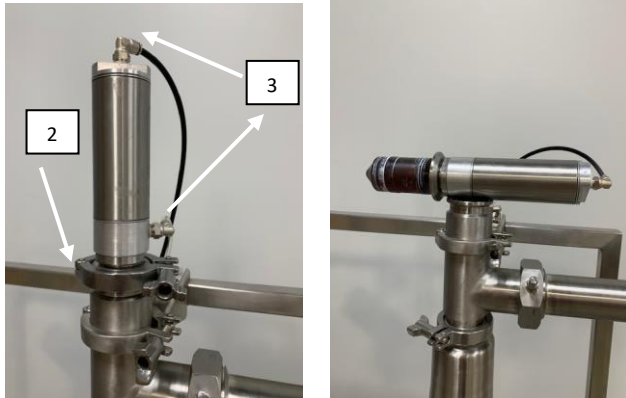
FOOD PUMP SETUP FOR CLEANING: Make sure Green Cleaning Hose is attached to the Discharge Valve and run to floor drain

Always disconnect the Air Hose when cleaning the MFS Food Pump

1. Loosen Sani Clamp to remove Discharge Nozzle
2. Attach Green Cleaning Hose using same Sani Clamp. May require two people.
3. Turn Switch on Control Panel to Constant Pumping. Make sure Air Piston Valve on Mixer kettle is open
4. Hold down Discharge Trigger Lever to pump through to floor drain.
5. Remove Cleaning Hose and attach Discharge Nozzle when completed.

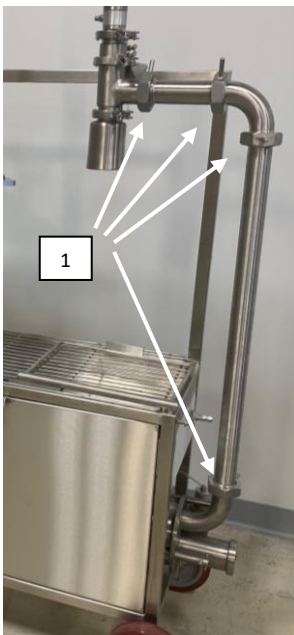


CLEANING DISCHARGE VALVE PLUNGER



1. Make Sure Air Supply is Disconnected and purged from Food Pump.
2. Loosen Sani Clamp to remove Plunger. Lift our Plunger by pushing down for clearance. Do not submerge the Plunger in water.
3. Disconnect Air Hoses by pushing down on-Air Connector and pulling out air hose.
4. Carefully remove O Ring gasket.
5. Clean plunger and O Ring with mild detergent and rinse thoroughly.
6. Grease Plunger and O Ring with Food Grade Grease from Accessory Kit.
7. Re-assembly Plunger and tighten Sani Clamp.

CLEANING 2" STAINLESS PIPING



1. Disconnect 2" Stainless Piping using 2" Wrench from Accessory Kit. Each connection has a gasket.
2. Clean 2" Piping and gasket using mild detergent with Brush Kit from Accessory Kit. Rinse thoroughly with Hot Water.
3. Re assembly Piping and gasket. Tighten with 2" wrench making sure there are no air leaks.

CLEANING PISTON CYLINDER

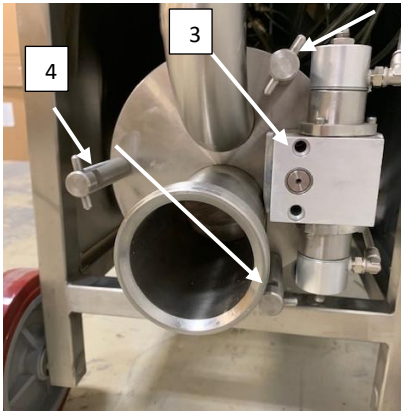


Figure 1

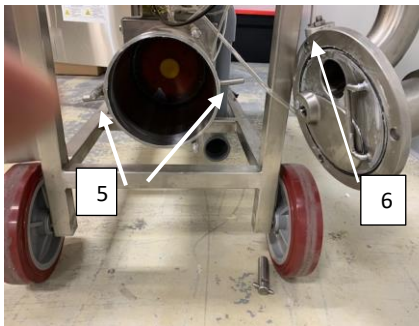


Figure 2

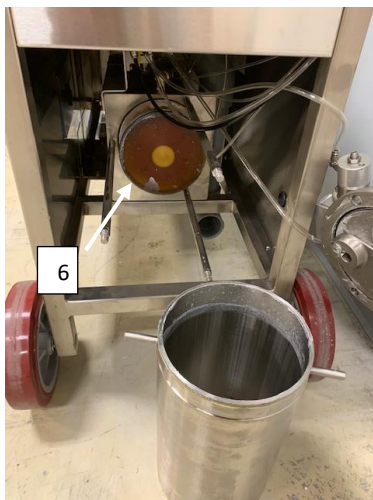
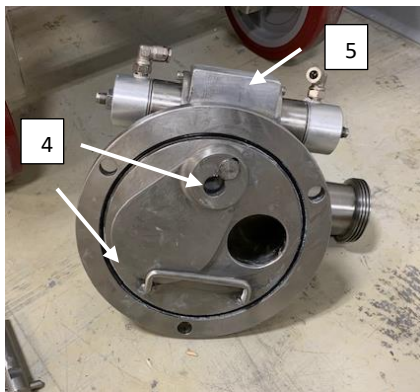
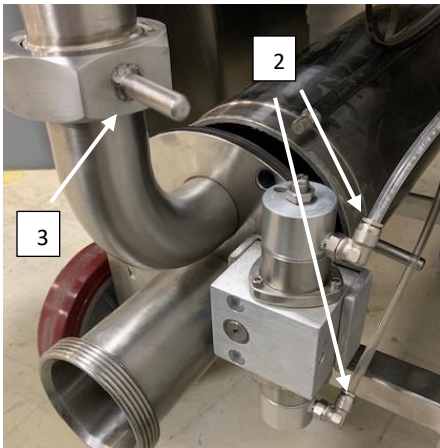
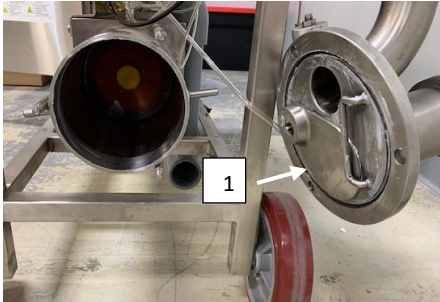


Figure 3

1. Make sure Air Supply is turned OFF or disconnected and purged from Food Pump
2. Locate the Piston Cylinder on right side of Food Pump.
3. Do not submerge Piston Solenoid Valve in Water.
4. Remove the 3 large lug nuts to remove Piston Cylinder Cover, tool provided.
5. With the two handles on each side of the Piston Cylinder, turn and remove Piston Cylinder (see figure 3)
6. Remove two O-Ring gaskets from Piston Solenoid Valve and Product Piston and clean each O Ring, O Ring holder and covers with mild detergent and rinse. Careful when removing O Ring, do not tear or stretch gasket.
7. Clean inside of Piston Cylinder with mild detergent.
8. Check O Ring for wear or loose and clean thoroughly, use Food Grade Grease for inside Piston Cylinder, Piston Cover, O Ring, Product Piston and Gasket.
9. Re-attach Piston Cylinder, close Piston Cover and re-attach the three large lug nuts to seal, test for air leaks.

CLEANING PISTON SOLENOID VALVE AND FLAPPER



1. Removing Poston Solenoid Valve by;
2. Disconnect the two air hoses by pushing down on-air hose connector and pulling out the Air Hose
3. Remove 2" Bolt and remove Stainless Pipe.
4. Remove Flapper by pushing up so shaft moves to lower hole, remove flapper
5. Do not submerse Pump Solenoid Valve in water
6. Clean Cover, Flapper and O Ring Gasket with mild detergent and rinse with hot water. Use care when removing gasket so it's doesn't break or stretch.
7. Use Food grade grease for gasket, flapper and inside cover.
8. Re-assemble Flapper, O Ring Gasket, Air Hoses, 2" Stainless Pipe and tighten back Lug Nuts.
9. Check for Air Leaks.

