UNIFILLER® SYSTEMS INC

DEPOSITORS AND AUTOMATED CAKE PRODUCTION SYSTEMS

Multi Depositor

Operation and Spare Parts Manual

Serial No: M8CS - 66061

MU4/MU6/MU8

Please state Serial No. when ordering spare parts

Part # 04437-00-07
Revision: D
20th March 2008

Unifiller Systems Inc., 7621 Macdonald Road, Delta, B.C., Canada, V4G 1N3 | Tel (604) 940-2233 | Fax (604) 677-5844

Table of Contents

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IMPORTANT SAFETY INFORMATION

These safety instructions must be read before operating the depositor

All machines have a risk of personal injury wherever moving parts are involved in their operation. Unifiller Systems has taken all possible precautions to reduce and wherever possible eliminate the dangers associated with moving parts. Having all operators of this equipment read and abide by the instructions in this manual will further reduce the risk of personal injury.

- **Disconnect** the air supply and electrical supply line before attempting to clean, dismantle, or service the machine.
- Do not try to service the Air regulator / Water filter with the air supply line connected.
- Keep fingers and hands away from all mechanical moving parts including the hopper inlet and deposit nozzle outlets.
- For servicing or technical support please contact UNIFILLER directly or one of its authorized suppliers or dealers.
- Do not run product or water, with temperatures exceeding 150 deg F (65.5 Deg C), through the machine.
- Operating Air pressure should be adjusted not to exceed 80 P.S.I. (551 kPa /5.52 Bar) on the Air regulator / Water filter pressure gauge.
- Always wash out the machine after use, dismantle and lubricate all the seals (As per cleaning instructions in this manual).
- Follow the enclosed instructions carefully before operating the machine for the first time.

IMPORTANT:

All Stainless Steel parts are coated with a protective coating at the factory and therefore any Stainless Steel parts that may come into contact with product must first be washed in hot water and detergent.

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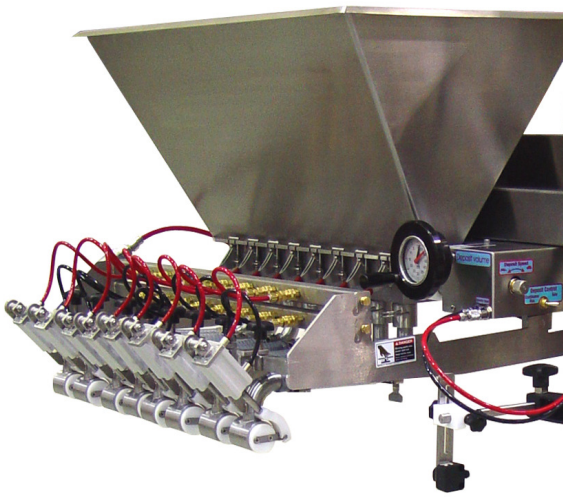
Introduction

Thank you for purchasing a Multi Depositor from Unifiller Systems Inc. We strive to manufacture the world's best cake automation equipment, using the latest technology and components available, and are sure you will get years of trouble free use, and excellent productivity from your new investment.

Please take a few minutes to read this manual and familiarize your self with the layout of the controls, and the set up and operating procedure.

Please do not hesitate to contact us if you have any questions regarding the setting up or operation of your machine.

You can contact us from 7:00 a.m. to 4:.00 p.m. Pacific standard time at the following numbers,



7621 MACDONALD ROAD
RIVERPOINTE BUSINESS PARK
DELTA, BC
V4G 1N3

604-940-2233

or

1-877-272-1233 (Direct Parts & Service)

Fax: 604-940-2241

Installation

Unpacking and cleaning

Carefully remove all packaging and shipping materials from the machine and its parts. Place the spare parts in a safe storage area close by the machine for easy access.

Power Requirements

Air Requirements

Optimum performance is achieved by insuring the air pressure gauge on the machine reads **80 P.S.I.** at rest, and at least **70 P.S.I**. while cycling. If not, check that the air supply to the machine is set to the correct pressure and not restricted by undersized fittings or hoses. A minimum **1/2" I.D** hose is required. Otherwise the deposit speed will be reduced.

Typical compressor requirements: Minimum 4 horsepower, capable of 8 C.F.M. @ 100 P.S.I.

Connect your supply air hose which comes from your compressor (not supplied) to the UNIFILLER quick connector which is located on the Multi Depositor stand ahead of the Air regulator / Water filter.

Electrical Requirements

If a control system is used then a 120Volt 15A 60Hz or a 220V 10A 50Hz supply is required.

Optional Solenoids and Feedback Sensors may require 24V DC.

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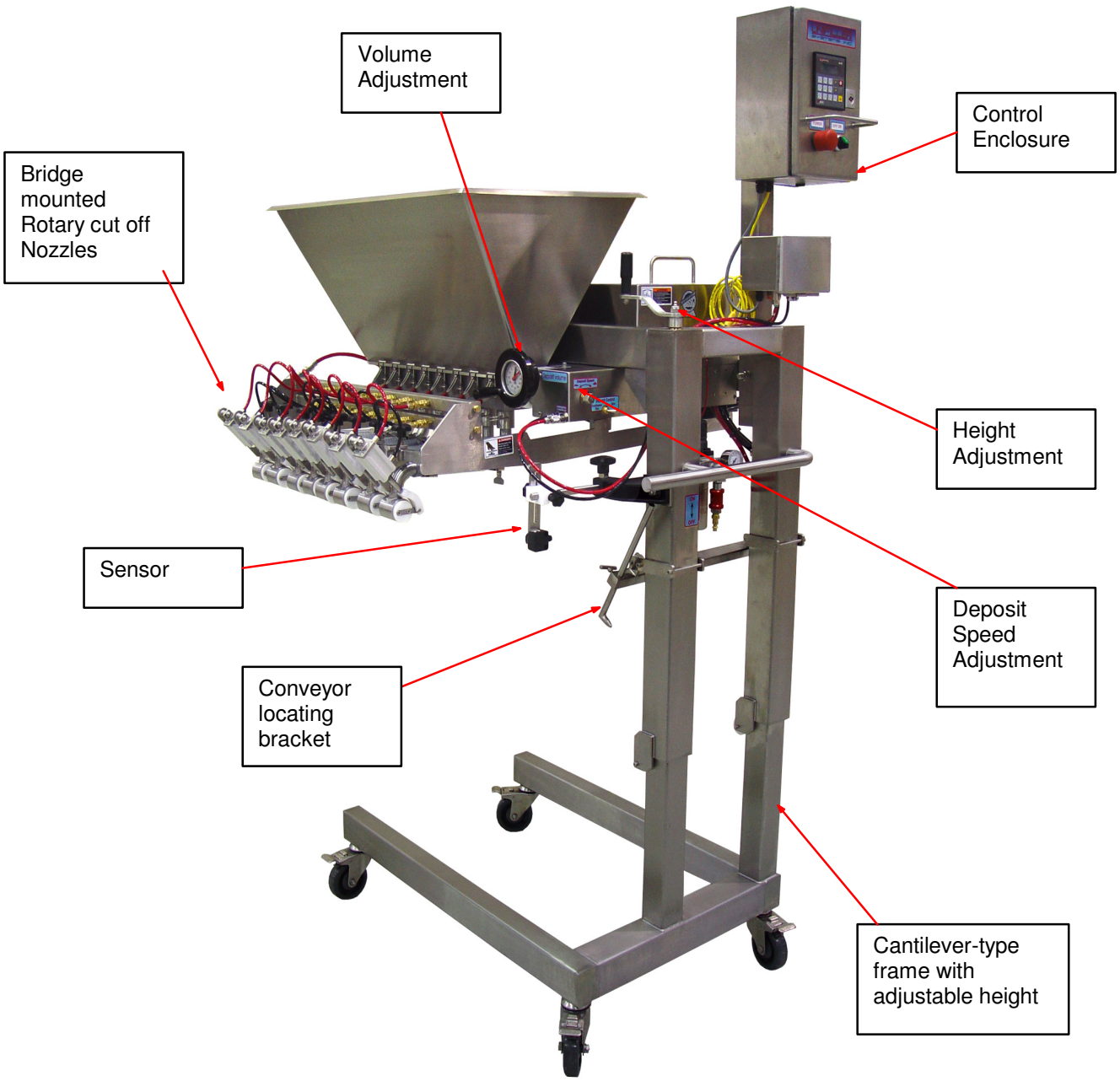
Multi Depositor Main Components



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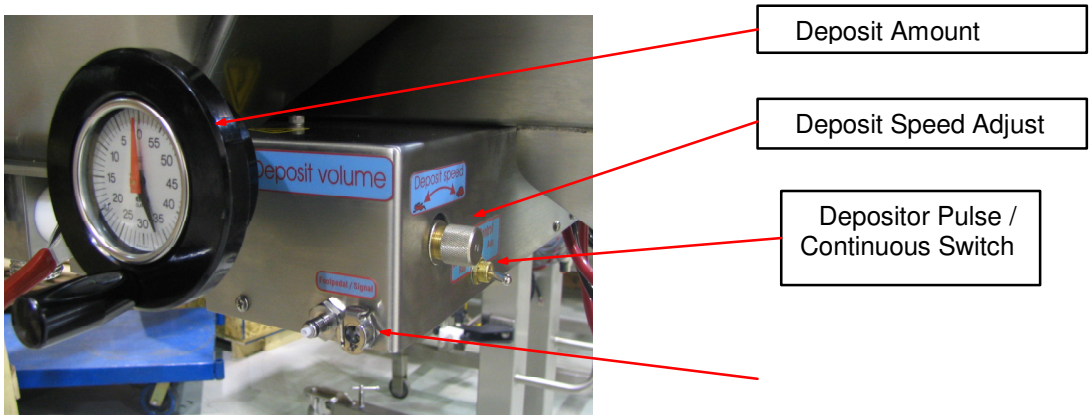
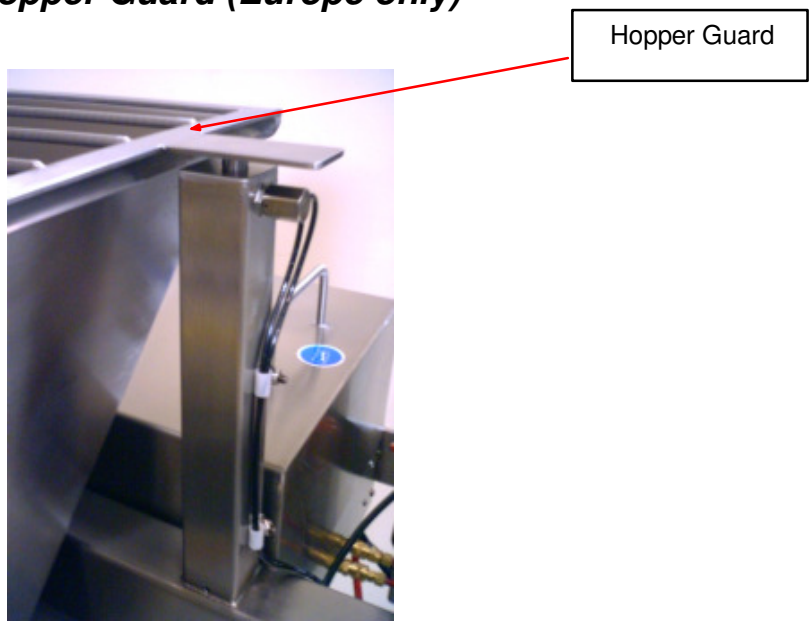


Hopper Guard (Europe only)



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Adjusting the Multi Depositor

The multi depositor has the following adjustments:

Adjustment	Where	Comments
Height adjustment	Hand wheel on top of the Multi stand	Turn the handle clockwise to lower the depositor, or counter-clockwise to raise it.
Depositor Pulse / Continuous toggle switch	At the side of the depositor	**Continuous:** In this mode, the depositor will continuously cycle. Use this setting for priming the depositor before production. **Pulse:** In this mode, the depositor is controlled by the computer to give the amount of deposits at the intervals that you have set.
Deposit amount	Hand wheel with indicator gauge at the front of the depositor.	Turn the adjustment wheel clockwise to reduce the amount of batter or filling to be deposited (or counter-clockwise to increase the amount). The dial indicator located inside the hand wheel can be used as a reference setting the correct amount. The dial starts at zero and increases as the deposit is increased.
Deposit speed	Adjustment knob at the side of the depositor	Turn the silver adjustment knob clockwise to reduce the deposit speed (or vice-versa). Use the knurled nut ring to lock the adjustment at the correct setting.
Nozzle adjustments	Telescopic sleeve and pivot adjustment on nozzles	The nozzles can be adjusted in or out by about 2” by sliding them to the desired position on the telescopic sleeves. The nozzles can also be pivoted to the desired spacing on the locking nuts. Please ensure that you tighten the nuts securely after setting up the nozzles to prevent sucking air into the product cylinder (which would cause inconsistent deposit amounts).

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Product Suckback	Flow control adjustment beneath the hinged back cover	Suckback prevents product from dripping out of the product nozzles after a deposit cycle. The more suckback that is applied, the slower the rotary valve closes as the machine is recharging with product. Keep in mind, that suckback also reduces the maximum volume of product that can be deposited. If you are unable to get the desired deposit amount, reduce the suckback. Unifiller can supply alternate drip-free nozzles that eliminate the need for suckback if the product cannot be stopped from dripping.

Product Cylinder Size Options

Product Cylinder Diameter	Block Part #	Piston Part #	Sleeve Part #	Deposit Volume at a SG of 1.0	Notes
1.750”	2243-01	2241-00		7 ounces 196 grams	This is the standard multi setup unless specified otherwise
1.125” Sleeved	2243-01	2242-00	2253-00	Dual - same as above and below	Dual purpose for customers that need large deposit size range. This allows a customer to operate either on 1.75” without sleeves or on 1.125”
1.125” Dedicated	2245-01	2242-00		2.8 ounces 81 grams	
0.750” Sleeved	2243-01	2251-00	2352-00	1.2 ounces 36 grams	
2.125”	2269-01	2252-00		10.2 ounces 290 grams	Should only be used with an M4 and soft products since the swing arm power is limited.

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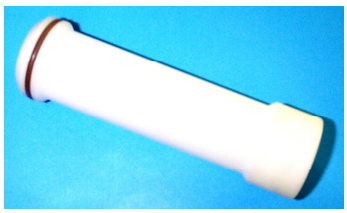
Depositing Small Portions

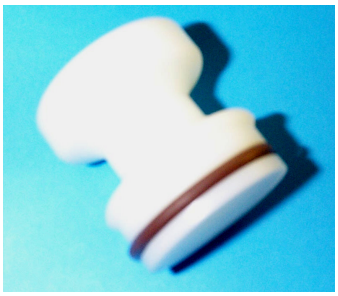


Unifiller offers bore reducers as an option on the Multi Depositor to accomplish deposit accuracy with small deposits.
The bore reducers reduce the cylinder bore from 1.75” to 1.25” and can be easily inserted and removed without the use of tools.

Please Note: If you use cylinder sleeves, you must remove and clean them daily after production to remove any product buildup. To ensure this, the sleeves are designed in such a way that they must be removed with the product piston for cleaning.

Plugging off depositor ports

Unifiller also offer, upon request, Hopper Plugs for use with your multi depositor. The plugs are designed to fit into the product valve to close off any of the ports. More than one port can be plugged off if desired.



Please Note: If you plug off a port, you must also remove the product piston for that port. The reason for this is that it will prevent the building up of a vacuum in the plugged port, which would cause inconsistent deposits.

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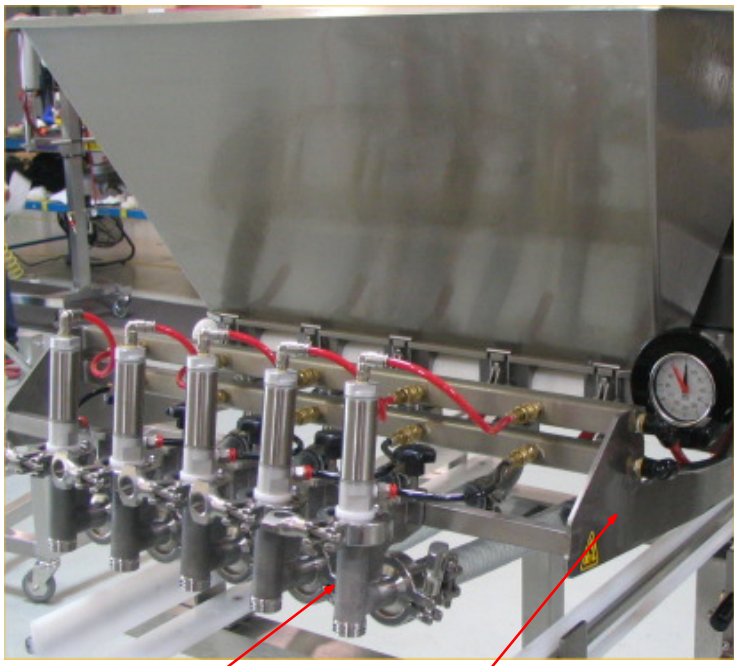
Multi Depositor Attachments and Nozzles

Various nozzles can be attached to the Multi Depositor.

Drip free nozzle with Bridge



Bridge mounted 1”
Drip Free Nozzle
Pt#05260-00

Nozzle Bridge
Diving Pt# 05230-00
Fixed Pt#05240-00

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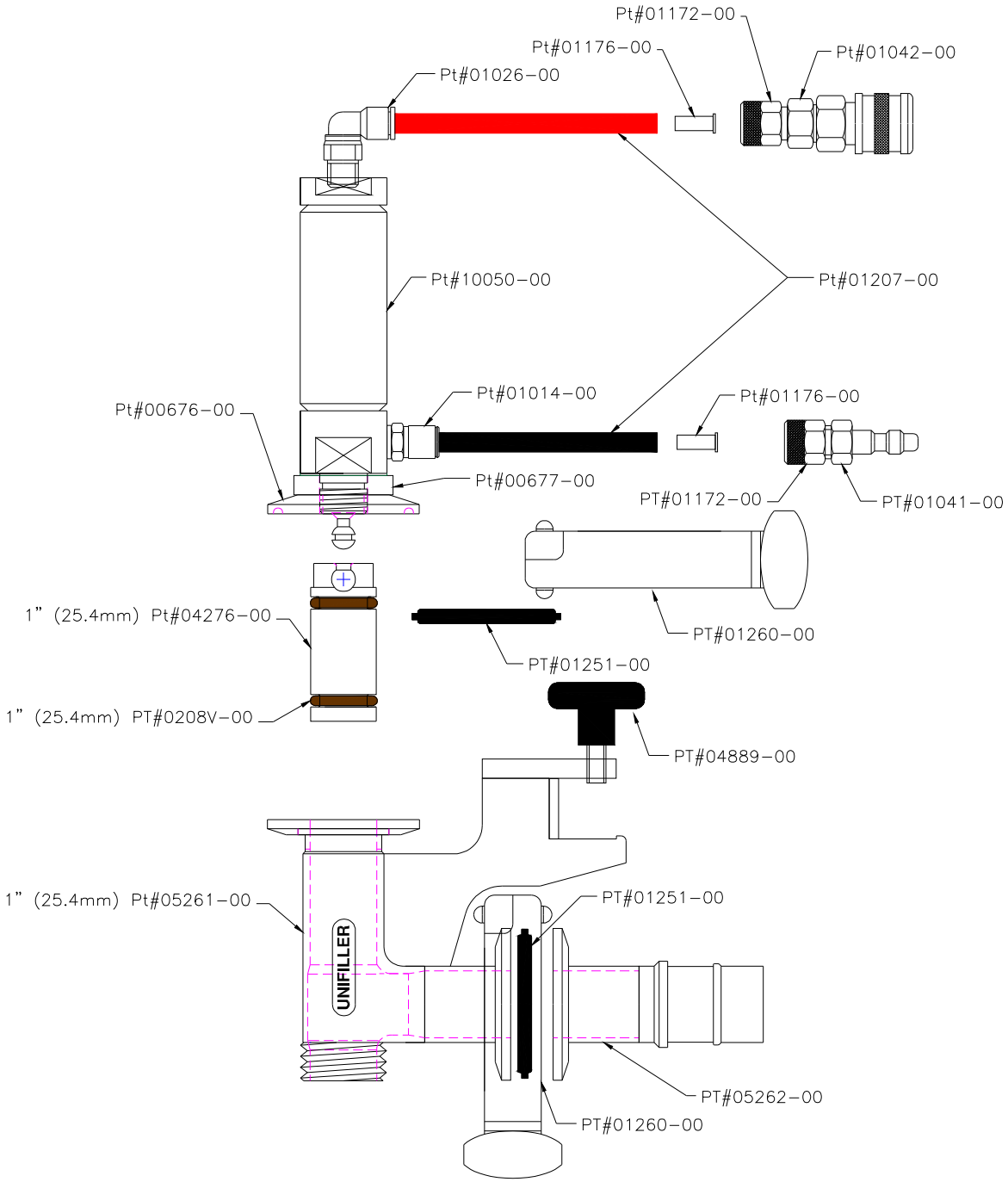
Bridge Mounted Drip Free Parts



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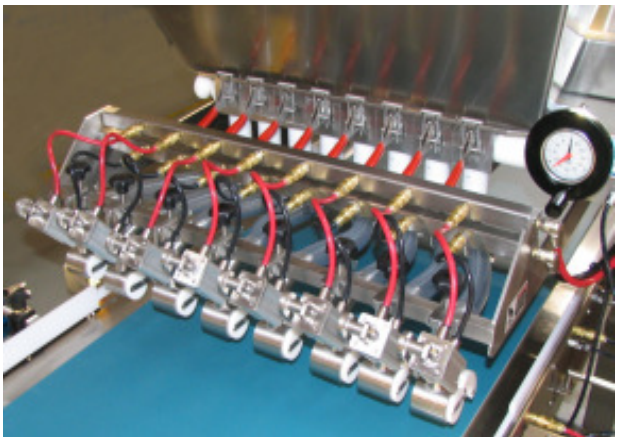
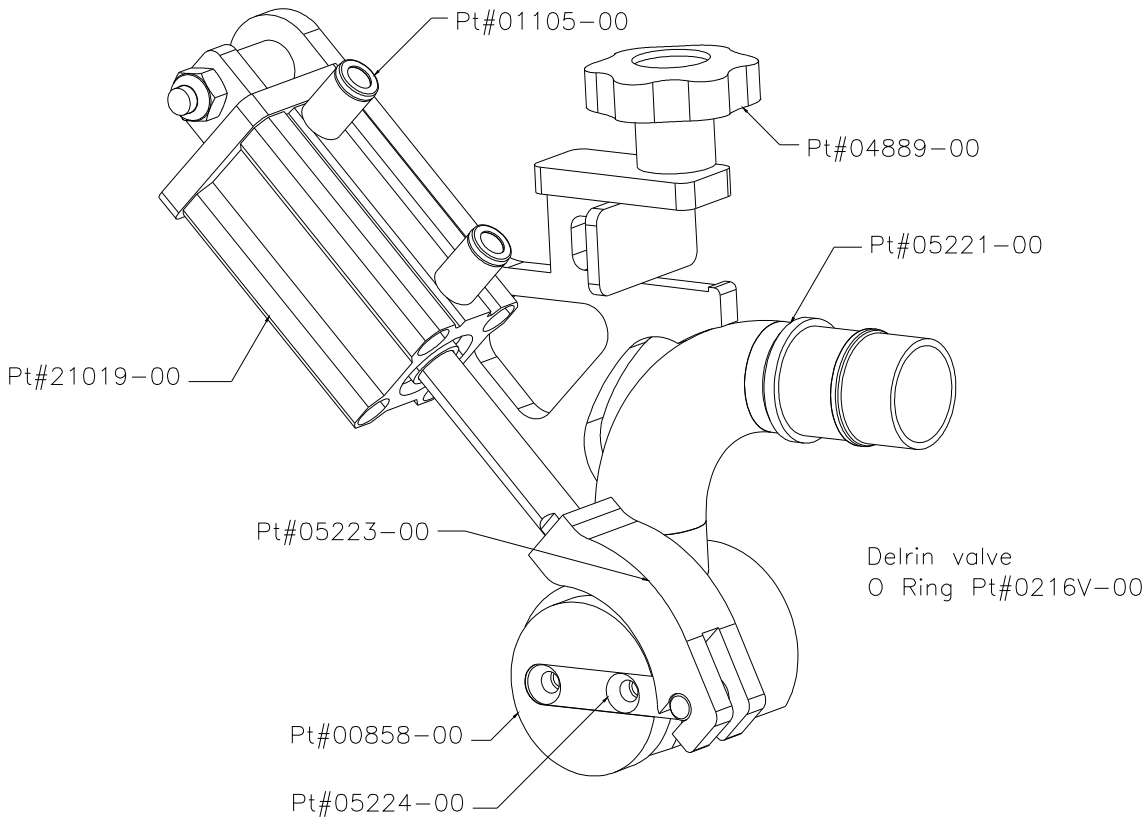
Rotary Cut off Nozzles

Mounted to a Fixed or a Diving Bridge.



Bridge Mounted Rotary cut Off Nozzle Parts



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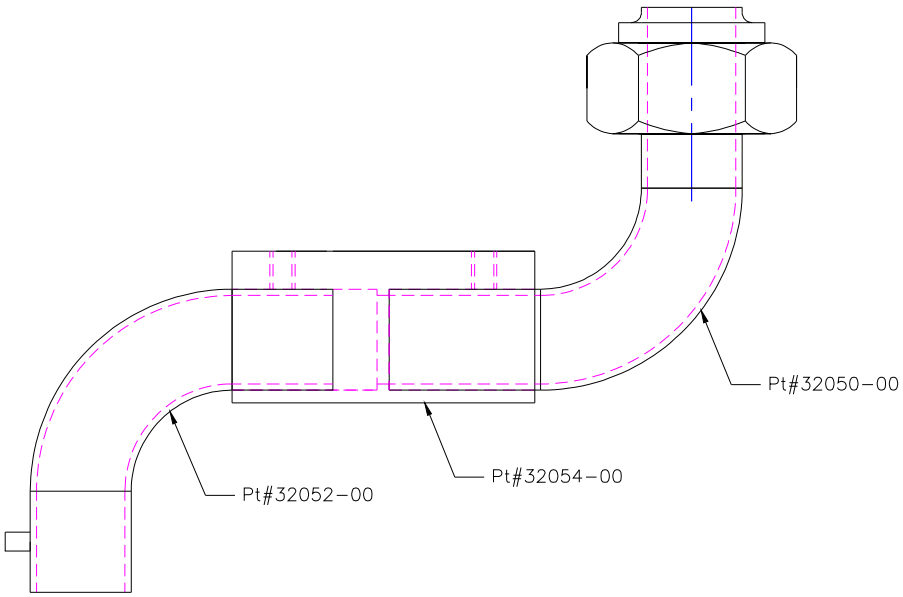
Rope Nozzle



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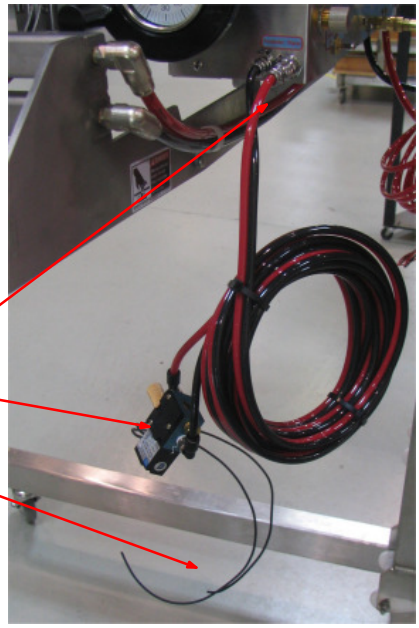
Optional Control Kits

Deposit Start Signal Kit (Part # 82022-00)



The Multi Depositor may be supplied with an electric solenoid that can be connected in the same way as a standard foot pedal.

The air line supplied with this valve is 2 meter long for mounting the valve near or on an electric enclosure close to the depositor.

To install and commission this solenoid valve:

1. Connect the valve to the foot pedal ports on the Multi Depositor.
2. Install the valve in a protected area outside the control box where the electric deposit signal is generated.
3. Connect the two solenoid wires to 24V DC (ensure that the polarity is correct)
4. Program you control system to send an electric pulse with a length of 0.5 second for each deposit cycle.

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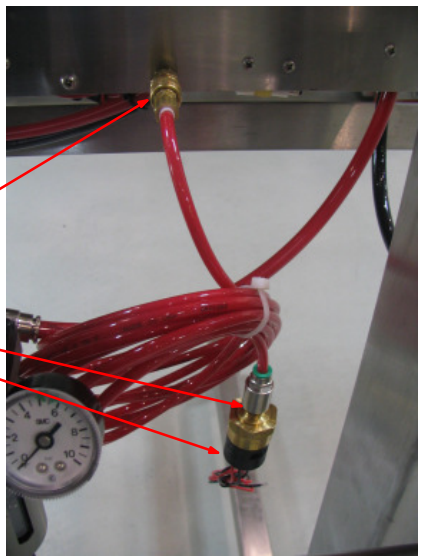
Deposit Done Feedback Signal Kit (Part # 82023-00)

The Multi Depositor may be supplied with an electric pressure sensor that can be used to send a signal to the control system when the deposit cycle is completed.

The sensor is supplied with a 2 meter long air hose to allow installation of the sensor at a nearby control system.

To install and commission this sensor:

1. Connect the pneumatic sensor line to the Multi Depositor
2. Install the sensor in the control system enclosure
3. Connect the dry contacts (red and black wire) to your control system.
4. Program your control system to integrate the function of this sensor.



Sensor Dry Contacts Operation:	
During Deposit Cycle	Contacts Open
While Depositor is Re-charging or at rest	Contacts Closed

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Depositor Cycle Control System Kit (Part # 82020-00)

All Multi Depositors can be fitted with an optional electronic control system for depositing multiple rows of deposits accurately into containers.

This kit can be used in conjunction with a conveyor. It turns a simple pneumatic Depositor into a computer-controlled unit that can also control the motion of a conveyor.

This kit is not required for muffin pans, where the photo sensor can detect each row in a pan individually and the trays do not have to stop during the deposit cycle.

If, however, the pan has solid sides, and is impossible to sense the individual rows or the cavities to deposit into but require a high amount of accuracy, this kit will be the best available solution.

Kit Contents

This kit includes an electronic NEMA 4X control panel mounted on a post and fitted with a PLC electronic controller and an operator screen. It also includes a photo sensor with a mounting bracket and a “Deposit Done” feedback sensor inside the control panel.

Basic Functional Description

- The photo sensor will detect a pan on a conveyor.
- The control system will trigger the depositor multiple times at regular intervals to place rows of deposits into pans.

- In addition: The conveyor can be stopped at each deposit (useful for accurate depositing, particularly if paper liners are placed into the pans before depositing).

Encoder Option

The basic control system triggers the depositor based on set time intervals. An additional Encoder Kit (Part # 85177-00) allows the deposits to be placed based on distance, rather than time.
The table below highlights the differences between the basic option and the Encoder Option.

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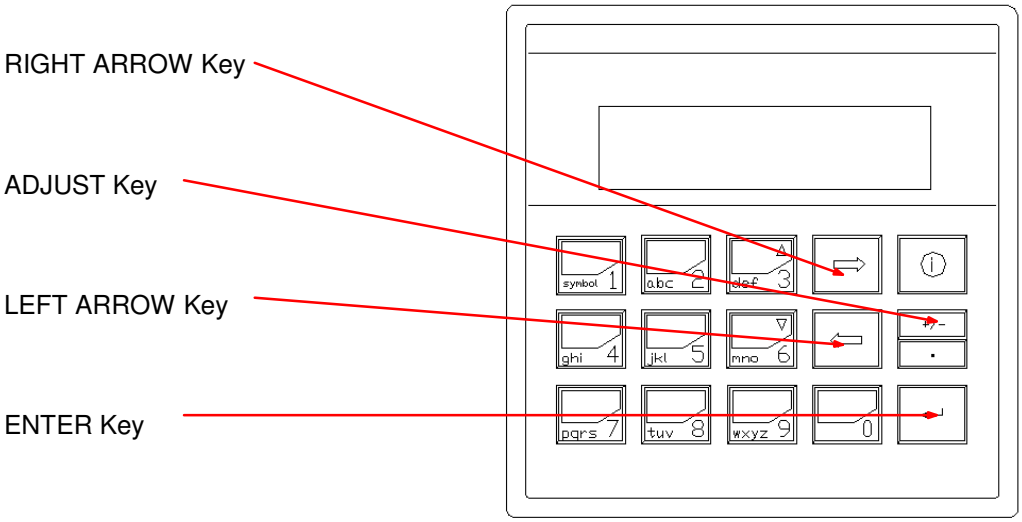
	Basic Option	Encoder Option
Deposits triggered by	Time	Distance
Accuracy in continuous running conveyor mode	Very Good	Very Good
Accuracy if conveyor is stopped during depositing (Indexing)	Fair	Very Good
Complexity	Simple	Requires installation and maintenance of the Encoder
Reliability	Very Reliable	Back-up Encoder recommended
What happens if conveyor is stopped in the middle of a deposit cycle	All remaining deposits for the current pan are deposited on top of each other and may make a mess	Depositing will stop immediately. Remaining deposits for the pan will continue to be placed accurately into the pan upon restarting the conveyor
What happens if you change the conveyor speed	All parameter in saved recipes have to adjusted	No parameter adjustments required.

Operator Control Panel Description

Once the power is plugged in and red push-button is pulled out, the Operator screen will turn on, showing a current recipe number and values of the three parameters.

The Operator Interface contains the following important keys:



Recipe Adjustments

To change from the current recipe press the corresponding numerical key on the keypad. The new recipe is loaded immediately. There are 6 programmable recipes available in the control system.

To edit the current recipe or to create a new one press the ADJUST Key (**+/-** sign).

To change recipe parameters, place the cursor on it and modify it by pressing a numerical key for the value of the first digit of the parameter. The cursor will move to the next digit and so on. Once all three digits are entered press “Enter”.

The cursor will sequentially move through all three parameters. At each parameter, enter a new value (as above) or if you want to keep the existing value just press “Enter”.

Please Note: Always finish editing all three parameters so there is no blinking cursor on the screen. Otherwise you will not be able to change the recipe number.

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Recipe Parameters

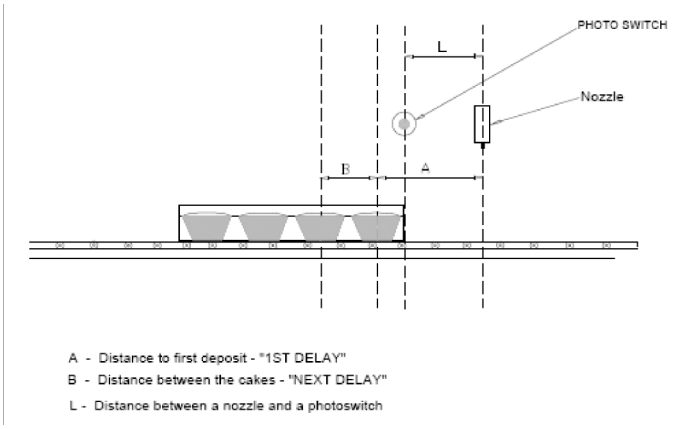
Screen Label	Parameter Name	Description
REC	Recipe Number	This is the number of the currently selected Recipe
1ST	Time or Distance to first Deposit	Time or Distance from the edge of the pan to the first deposit row
DEP	Number or Rows	Enter the amount of deposit rows in the pan
NEXT	Time or Distance between Rows	Time or Distance that is repeated between each row in the pan

Please Note: That the parameters for 1ST and NEXT are always shown as X.XX and relate as follows:

If no Encoder is used, the value represents seconds. The range is from 0 – 9.99 seconds

If the Encoder is used, the value represents Encoder revolutions. The range is from 0 – 9.99 revolutions.

Unifiller recommends that you create a backup, hardcopy document of your recipes as shown below including all parameters stored in the control system as well as the Conveyor speed, Deposit speed and Deposit volume set on the Multi Depositor.



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Parameter	Brownie Bites	Madeleines	Sheet Cake
RECIPE #	1	2	3
1ST DELAY	3.65 sec	4.90 sec	4.50 sec
NEXT DELAY	2.10 sec	2.60 sec	3.30 sec
NUMBER OF DEPOSITS	5	4	3
CONVEYOR SPEED	7 ft / min	7 ft / min	7 ft / min
INDEX	ON	OFF	OFF
ENCODER	ON	OFF	OFF
DEPOSIT VOLUME	26 – 33	35 - 20	45 – 0
DEPOSIT SPEED	3.5	2.25	1.75

The edited parameter will be automatically saved when the “ENTER” key is pressed.

Disconnecting the machine will not affect the saved recipes.

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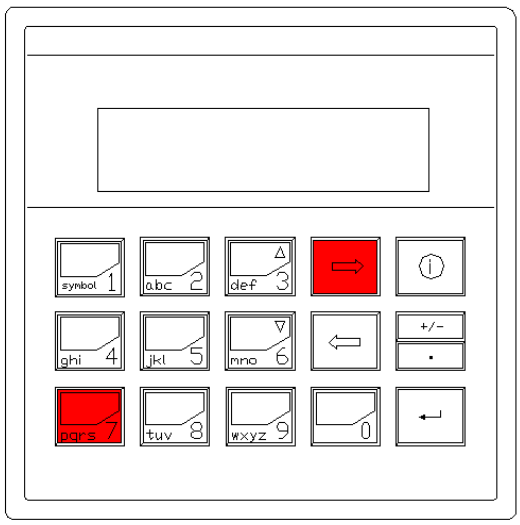
Setup Adjustments 1

Press the # 7 key and the RIGHT ARROW key simultaneously to access the setup screen #1



In this setup screen, you can set the following system parameters:

Screen Label	Parameter Name	Description	Toggle
PULSE LEN	Deposit Pulse Length	This is the length of the pneumatic signal pulse sent to the Depositor. It is typically set at 0.4 seconds and does not require adjusting in most cases.	Use the ADJUST Key
FDBCK IS	Deposit Done Feedback Signal	If this signal is turned on, the control system detects when the deposit cycles are completed to restart the conveyor. This must always be turned on if this control system starts and stops the conveyor.	Use the ENTER Key

Press the LEFT ARROW Key to exit from the Setup Screen

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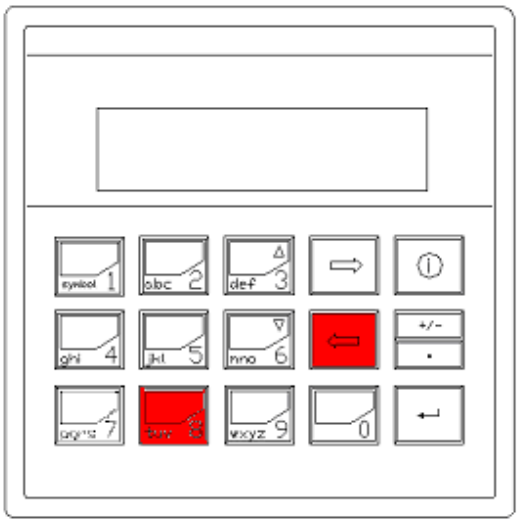
Setup Adjustments 2

Press the # 8 key and the LEFT ARROW key simultaneously to access the setup screen #2



In this setup screen, you can set the following system parameters:

Screen Label	Parameter Name	Description	Toggle
INDEX IS	Indexing is On/ Off	If Indexing is turned on and the conveyor is controlled from the Multi control system, the conveyor will stop while depositing.	Use the ADJUST Key
ENCOD IS	Encoder is On/Off	If the Encoder is on, the recipe parameters will be in Encoder revolutions. If the Encoder is off, the recipe parameters will be in seconds.	Use the ENTER Key

Press the LEFT ARROW Key to exit from the Setup Screen

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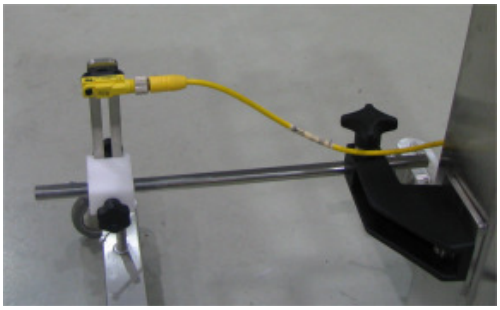
Photo Sensor Adjustment

The photo sensor has a sight distance range of 0.25” to 5”.

The photo sensor can be adjusted to the required height and position to detect the pan on the conveyor.



Encoder Mounting

The Encoder is a delicate, optical sensor. It is intended to be driven from the Drive or Driven belt pulley of the conveyor.

The Encoder may be supplied with a plastic test wheel as shown in the picture beside. This allows the technician to hold the Encoder onto the conveyor belt to test the function. Please remove this wheel before installing the Encoder on the conveyor.

Please Note: Ensure that the encoder is installed and set up according to the manufacturers directions.

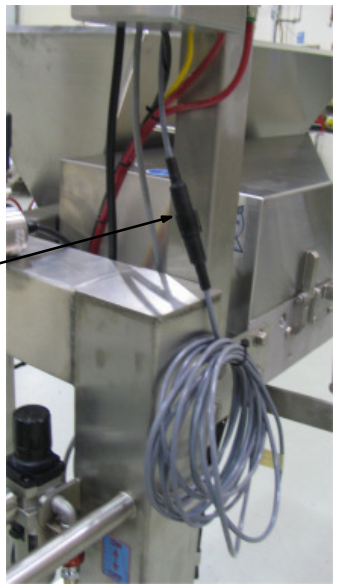
Conveyor Index Control

The Multi Depositor Control System is capable of stopping the conveyor while depositing. A set of dry contacts from the PLC are supplied through a plug on the outside of the control box.

A matching cable with plug is supplied. The end of the supplied cable is intended to be connected to the low voltage RUN or ENABLE contacts of any VFD (Variable Frequency Drive) on the conveyor.

The non-locking plug is designed to pull apart if the machine operator does not disconnect the cable before removing the depositor from the conveyor.

If the conveyor does not restart after a deposit cycle, ensure that the “Deposit Done” feedback sensor is connected and that it is operating correctly.



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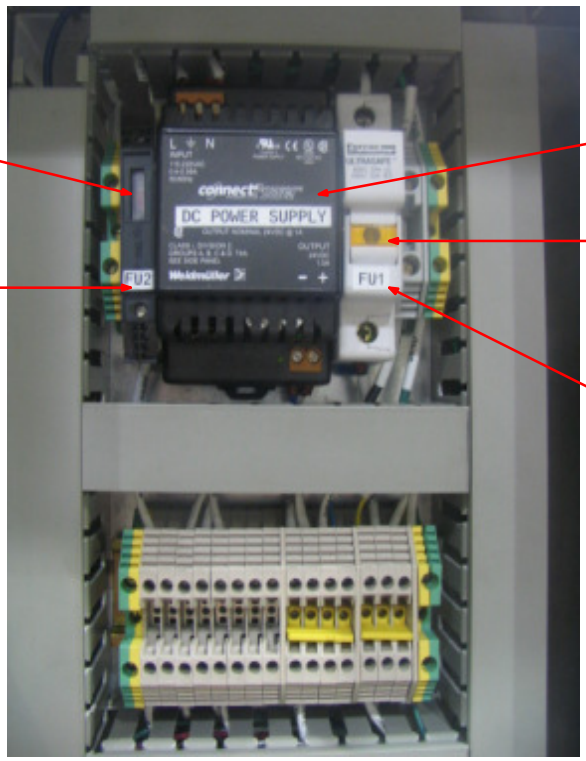
Control Enclosure Parts and Layout



Fuse Holder
Pt#81290-00

Fuse
Pt#81283-00

Power Supply
Pt#80400-00

Fuse Holder
Pt#81252-00

Fuse
Pt#81470

Deposit Done Feedback Sensor located in the bottom right corner of the control box

PLC Pt#80823-00

Stop Button
Pt#80532-00 Button
Pt#80527-00 Contact

Power switch
Pt#80523-00 Button
Pt#80523-00 LED Element

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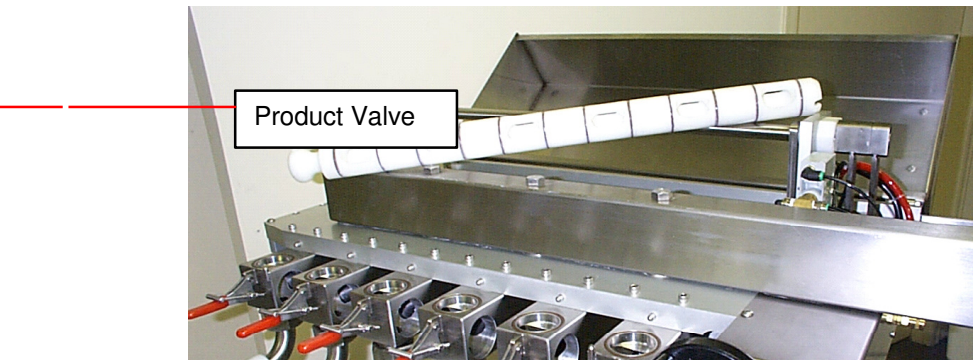
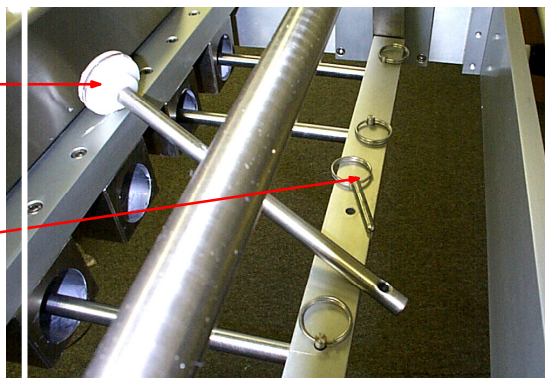
Cleaning

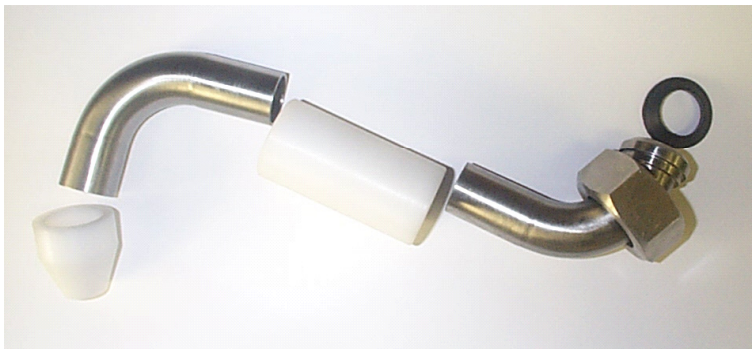
To clean the Multi Depositor, follow the procedure below:

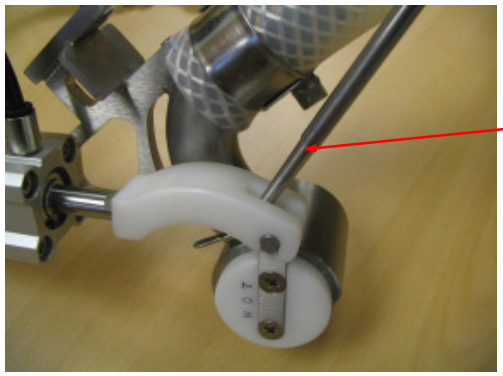
1. Unplug the signal air lines from the conveyor to the Multi Depositor.
2. Unhook the Multi Depositor from the conveyor and wheel it to the cleaning area.
3. Turn the Volume adjustment to the maximum stroke length.
4. Connect the air supply to the machine and turn the slide valve ON.
5. Wash out the hopper with a water hose.
6. Turn the toggle switch to “Continuous” and let the machine cycle for several minutes while continuing to spray it with water.
7. Turn the toggle switch off and disconnect the air supply to the machine.
8. Remove the hopper by loosening all six clamps and maneuvering the hopper out of its locating pins.
9. Open the back cover of the depositor.
10. Remove all product pistons by removing the drop pins and then pulling the pistons from the cylinders
11. Remove all nozzles, disassemble them and clean.
12. Remove the Rotary Product Valve by pulling firmly on the end.
13. Clean all parts and replace and worn O-rings.
14. Lubricate all moving parts (rotary valve, cylinder bores and pistons) with the supplied food grade lubricant
15. Reassemble all components in reverse order.



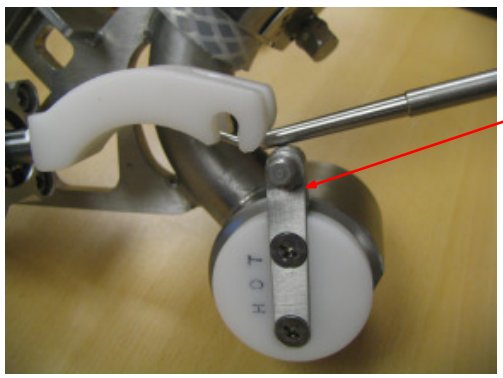


Disassembled Product Nozzles





To clean the Rotary Cut-Off Nozzles, you must first remove the clevis by prying gently up using the O-ring Pick Tool.



The clevis will snap off easily. Now you can remove the Nozzle Insert by sliding it out from one side. Reassemble in reverse order.

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Preventative Maintenance

General

The UNIFILLER equipment has been manufactured to the highest standard and using some of the most advanced technology available, and your line is virtually maintenance free by design.
The most vital part on the entire machine to be maintained are the **product contact piston seals and O-rings**. These seals are inexpensive and should be replaced frequently. All seals should be high quality 'food grade' **VITON** seals as supplied by Unifiller Systems, or your authorized Unifiller dealer.

Please Note: Perform all maintenance tasks with the air supply turned off or disconnected.

Daily Maintenance

- Lubricate all seals and moving parts with food grade grease or shortening after parts have been cleaned to prevent seals and surfaces from wearing prematurely.

Weekly Maintenance

- Replace all O-rings (Piston, Hopper Flange, Rotary Valves).
- Replace worn nozzle bevel seals.
- Check and repair all air leaks on the Multi Depositor.

Monthly Maintenance

- Lubricate the castors on the Multi Depositor.

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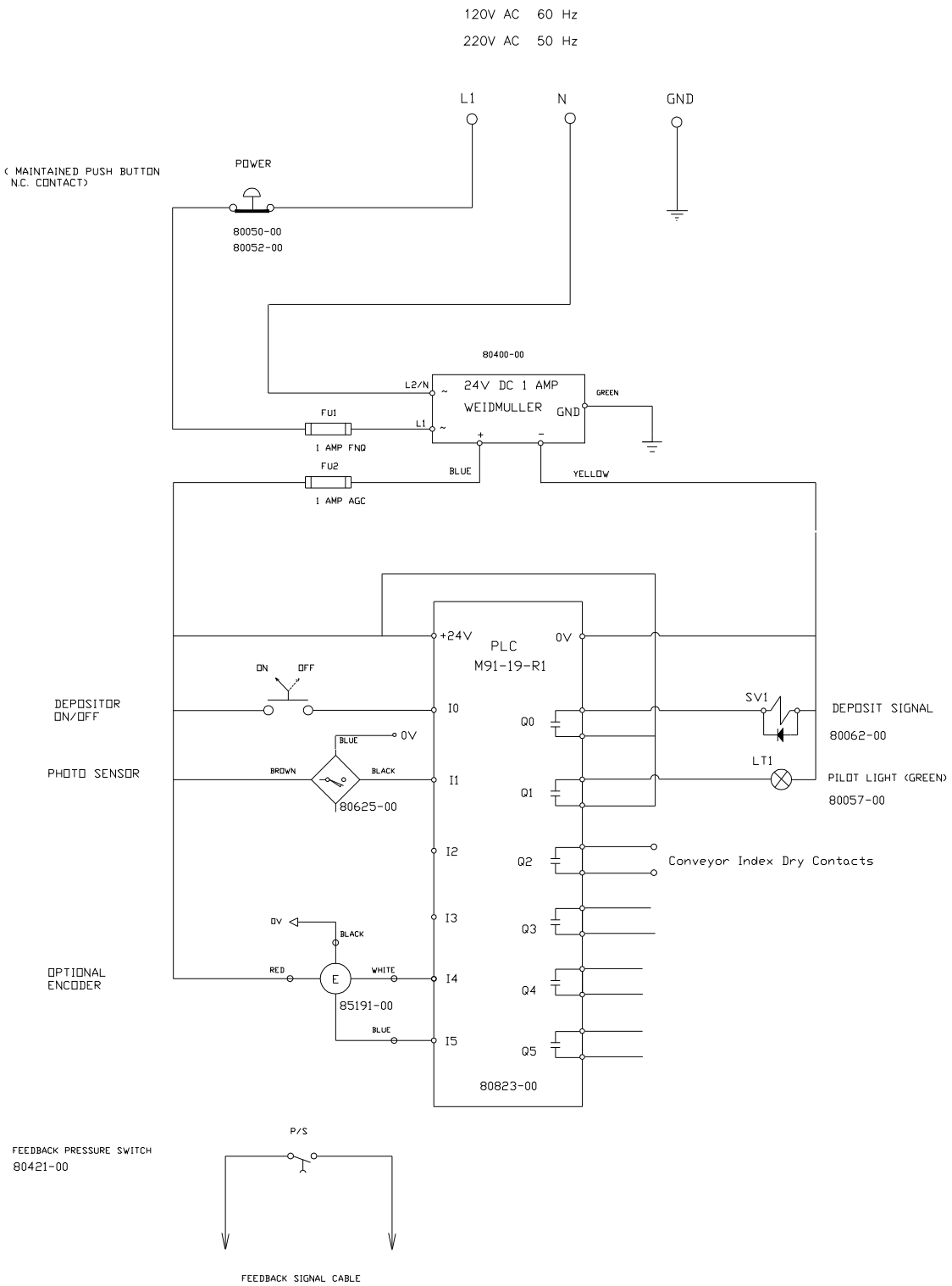
Electrical Schematic



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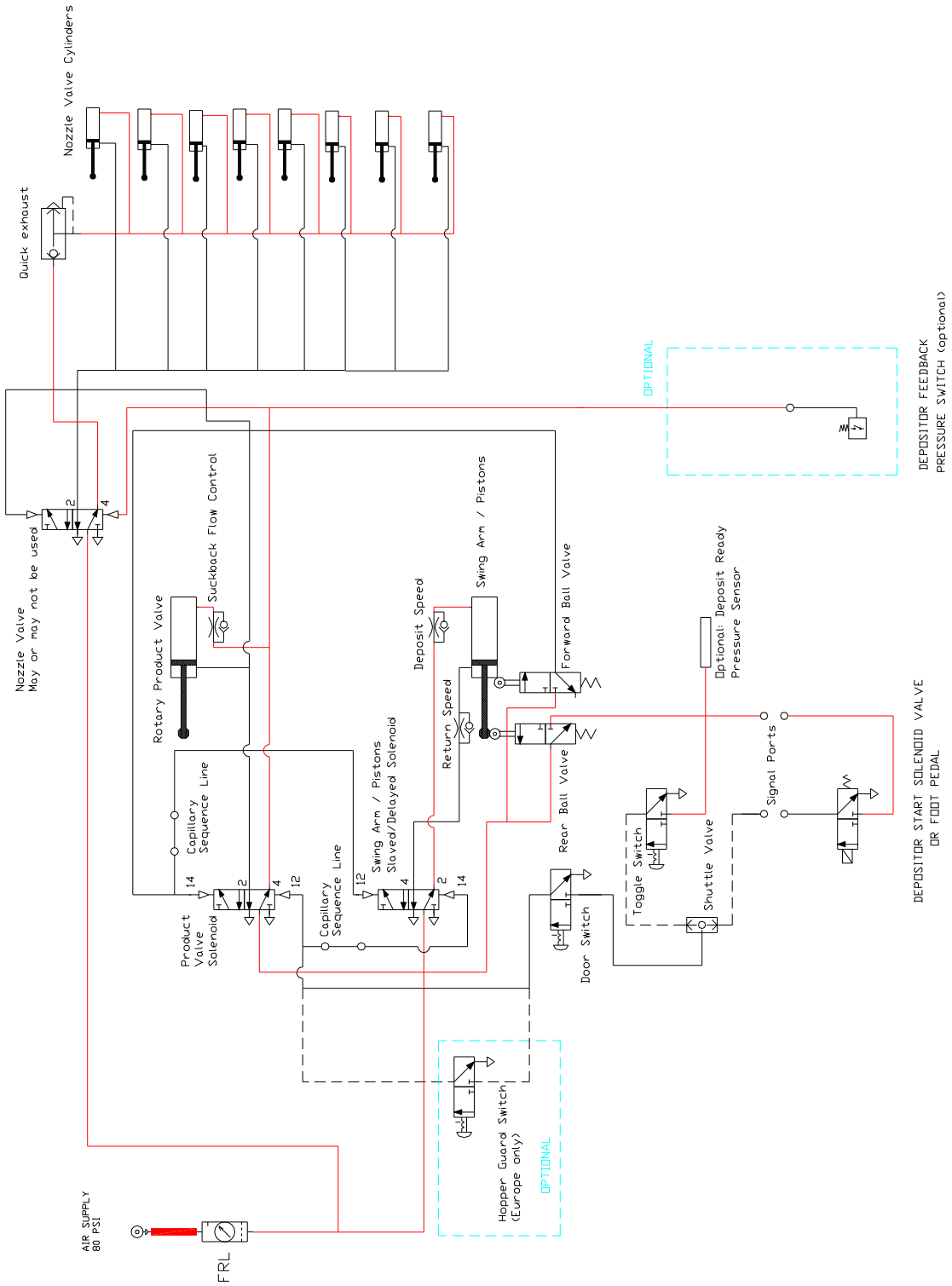
Pneumatic Schematic



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Troubleshooting

Problem	Cause	Remedy
Inconsistent deposits	Air leakage past product piston seal, possibly worn or damaged	Replace O-rings
	Air leakage past the nozzle adapter seals	Ensure that all nozzles are fitted with seals and that they are properly tightened.
	Air leakage past the rotary valve seals	Replace O-rings
	Air leakage past the hopper flange	Ensure that the hopper is clamped tightly to the divider. Replace O-rings on the hopper flange
	Hopper almost empty and sucking air	Fill hopper or scrape down.
	Deposit speed set too high	Reduce deposit speed
	Fluctuating air pressure	Check setting of air regulator.
	Water build up in air lines and valves	Drain air compressor regularly to remove buildup of water
	Thick product	Reduce deposit piston speed.
	Pistons left in place while hopper plugs are being used	Ensure that all pistons are removed from ports that have hopper plugs installed
Depositor will not cycle	Air pressure is turned off	Ensure that air pressure is available. Plug in air line and slide the valve on the depositor into the “open” position.
	Multi Divider back cover is open	Close cover properly to ensure that the safety switch is activated.
	Hopper guard not in position (european machines only)	Check hopper guard pin is located in switch post

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Spare Parts Details

Contact Details

Unifiller Systems Inc.
7621 Macdonald Road
Riverpointe Business Park
DELTA, BC
V4G 1N3

Local Calls (greater Vancouver area): 604-940-2233

or

Customer Service Toll Free: (1-877)-272-1233 (Direct Parts & Service)

Fax: (604) 940-2241

O-Ring Replacement

Good O-rings contribute significantly to the satisfactory operation of your depositor line. Worn O-rings can cause air bubbles in icing, inconsistent deposit amounts and other problems. Unifiller recommends strongly that you replace all O-rings on a regular, scheduled interval (usually about one week for any O-rings that move on wear surfaces) bases.

O-rings are some of the least expensive parts (they cost only pennies), but they are the most important parts to be replaced regularly!!!

Unifiller recommends that you find the most economical replacement frequency for each O-ring on your line through testing and observing in your facility. It will be based on the types of icings used, amount of shifts that the equipment is used as well as your cleaning and lubricating practices.

Once the replacement frequencies are established, we suggest that you establish an “O-Ring Board” with sets of O-rings in small Zip-Lock bags and labeled with the dates for replacement. This will allow your cleaning crews to simply pull the proper bag of O-rings at the correct dates for installation. At the same time, it allows management to monitor easily that O-rings are replaced as scheduled.

We suggest that you purchase O-rings in bulk either from Unifiller Systems or a local industrial supplier. Please make sure when you order O-rings that you specify VITON as the material.

Following is a table listing the O-rings and sizes, along with suggested initial replacement frequencies, for your depositing line:

O-Ring Size	Where Used	Amount Used	Suggested Initial Replacement Frequency
0008V	Drip Free Nozzle Air cylinder	1	12 weeks
0208V	Drip Free nozzle	1	1 week
0222V	Rotary Valve	12	1 week
0222V	Product Piston 1.75”	6	1 week
0113V	Product Piston 0.75”	6	1 week
0222V	Piston Sleeve	6	6 weeks
0224V	Hopper Flange	6	6 weeks
0210V	Rotary Nozzle	6	1 week
0216V-00	Bridge mounted Rotary cut off	1	1week

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Spare Parts List

Part	Component installed on	Function	Manufacturer	Part Number	Amount used
O-Ring	Rotary Valve	Seals valve compartments	Unifiller	Pt#0221V-00	12
O-Ring	Piston 1.75”	Piston Seal	Unifiller	Pt#0221V-00	4 - 8
O-Ring	Piston 0.75”	Piston Seal	Unifiller	Pt#0113V-00	4 - 8
O-Ring	Hopper Flange	Sealing of product hopper to valves	Unifiller	Pt#0224V-00	4 - 8
O-Ring	Piston Block Side (M8 only)	Sealing between piston blocks	Unifiller	Pt#0134V-00	7
O-Ring	Piston Block outlet adapters (M8 only)	Sealing of nozzle outlet	Unifiller	Pt#0117V-00	8
Bevel Gasket	Nozzle Adapters	Sealing of nozzles to valves 	Unifiller	Pt#01265-00	6
Nozzle Tip	Product Nozzle	Outlet Tip 	Unifiller	3/8” Opening Pt # 32056-00 ½” Opening Pt # 32058-00	4 - 8
Air Cylinder	Rotary Valve Actuator	Opens and closes product valve	Unifiller	Pt#32019-00	1
Air Cylinder	Product Piston	Product piston stroke	Unifiller	Pt#10023-00	1
5-Way Valve	Control Box	Main control valve	Numatics	Pt#01057-00	2
Threshold Sensor	Control Box	Sequencing 5-way valves	Legris	Pt#01062-00	2
Ball valve 3-way	Swing arm forward and backward stop valves and door safety valve	End of stroke sensors and safety valve	Pneumadyne	Pt#01056-00	3
Pressure Switch	Control Box (optional item)	Sensor to signal end-of cylce	SMC	Pt#80104-00	1
Hopper Plug	Hopper bottom holes	Plug off hopper ports 	Unifiller	Pt#02267-00	4 – 8

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Nozzle Plug	Product Outlet (M8 only)	Plug to close off unused outlets 	Unifiller	Pt # 33055-00	4 - 8
Nozzle holder clip	Product Outlet (M8 only)	Spring clip used to hold nozzle 	Unifiller	Pt#00606-00	8
Piston lock pin	Product Piston	Pin with ring used to hold piston in actuator bar 	Unifiller	Pt#02248-00	4 - 8
Cylinder Sleeve	Product Cylinder	Sleeve used for small deposit amounts 	Unifiller	Pt#02253-00	4 - 8

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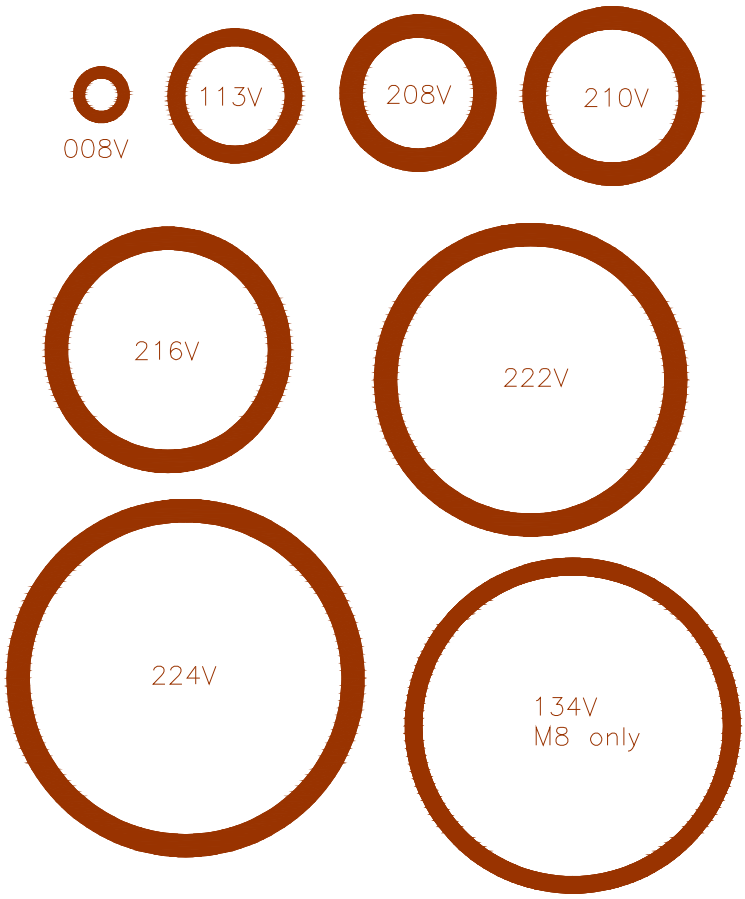
O-RING SIZING TEMPLATE



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