MANUAL

ARCOBALENO®
PASTA MACHINES

MODEL AEX90 ETL
OPERATING, INSTALLATION & MAINTENANCE MANUAL



CE

C ETL LISTED US
Intertek 5029985

ETL SANITATION LISTED
Intertek 5029985

CONFORMS TO UL STD 763; NSF STANDARD 8
CERTIFIED TO CSA STD C22.2 No. 195

IMPORTANT SAFETY NOTICE

This manual contains important safety instructions which must be strictly followed when using this equipment.

FOR SERVICE, CONTACT ARCOBALENO

If you have any questions or issues regarding your machine, please contact us at: **717.394.1402** or **service@arcobalenollc.com**. When contacting us, please have your serial number and model number available so we can assist you based on your machine's individual specifications.

ARCOBALENO®

Arcobaleno Machine Certification

The following machine(s) have been inspected and tested by Arcobaleno prior to shipment to customer:

Model number(s): _____

Serial Number(s): _____

And found to meet the following requirements as certified by the undersigned.

☐ All safety switches and E-stops function properly
☐ Machine power connections are installed correctly and function properly
☐ All covers and guards are present and undamaged
☐ The machine has been run and tested to meet the required standards
☐ An operating manual has been included in the packaging
☐ Appropriate tools have been included in the packaging
☐ The machine has been packaged properly and is free of physical defects

Authorized Arcobaleno Representative Signature: _____

Date: _____

ARCOBALENO®
PASTA MACHINES

SAFETY NOTICE/WARRANTY
MODEL AEX90

IMPORTANT SAFETY NOTICE
To insure both safe and trouble-free performance, we stress that all personnel that will be involved with your new Arcobaleno Pasta Machine **must** read and understand these instructions **before** attempting to operate this unit.

LIMITED WARRANTY

Warranty Effective only when Certificate of Acceptance is received.
Please mail back with enclosed pre-paid envelope.
If not received within 14 days warranty is VOID.

ARCOBALENO, LLC. guarantees this device against defects in workmanship or material under use and service **for a period of twelve (12) months, which begins upon receipt of machine by the customer.** All obligations and liabilities under this guarantee are limited to repairing or replacing, at our option, F.O.B. our plant of such allegedly defective units as are returned and carrier charges prepaid. All repairs or replacements are made subject to factory inspection of returned parts at company plants. No liability is accepted for consequential damage which may include but is not limited to: damage or failure that has occurred due to misuse, acts of God, damage due to reinstallation labor or improper application. This warranty does not include electrical parts. Defects as defined in the above paragraph shall not include decomposition by chemical action (corrosion).

In the event that a defect in material or workmanship occurs during the first ninety (90) days of the warranty and if Arcobaleno determines that field service is required, Arcobaleno will provide the required service and parts free of charge. The buyer will be responsible for and invoiced for all out of pocket travel and living expenses incurred by such a service call. After the initial ninety (90) days of the warranty, Arcobaleno will service the equipment at the customer's facility at its prevailing labor rates plus expenses. A purchase order will be required for any parts or service ordered under this warranty.

Defects due to materials or manufacturing shall be examined at our expense but if the claim is unjustified, all repairs and replacement costs have to be borne by the customer. The guarantee does not cover accidental damage, negligence or inappropriate treatment, incorrect use or phenomena not depending on the regular functioning or use of this machine.

Guarantee on equipment and accessories furnished by outside manufacturers shall be limited to the guarantees of the respective equipment and/or accessory manufacturer for such units. This guarantee is null when the machine has been repaired by non-authorized personnel and/or when spare parts have been supplied that have not been approved by the manufacturer.

FOR WARRANTY SERVICE
Contact the Arcobaleno warranty service department at **(800) 875-7096** or **(717) 394-1402** to report warranty claims before arranging repair or attempting to return the unit to Arcobaleno, LLC.

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PASTA MACHINES

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1.1 GENERAL

This publication, hereinafter simply defined as the “manual”, includes any information regarding installation, use, and maintenance of the “AEX90” manufactured by Arcobaleno Pasta Machines, LLC.

The recipients of this publication, generally defined as “users”, include all individuals who, according to their relevant involvement, need and/or are required to provide instructions or to attend this machine operationally.

These individuals can be identified as follows:
√ Directors
√ Chief of Operations
√ Heads of Department
√ Machine operators who are directly involved in its transportation, storage, installation, use, and maintenance, starting from its market introduction until its service
√ Private direct users

This publication must be considered as being an integral part of the machine and, as such, it needs to be kept for future references until final dismantling and scrapping of the machine.

1.2 PURPOSE OF MANUAL

The purpose of this manual is to allow specific individuals to learn how to use this machine safely for a long period of time in order to perform any relevant tasks; provided that such individuals shall take any measure and arrange in advance any human resources and materials as necessary. This manual is written pursuant to Directives Machines 2006/42/CE. The machine’s intended use and configuration are the only ones approved by the manufacturer; users are advised to avoid usage of the machine in a way non-compliant with the instructions given. Every other use or configuration should be previously agreed with the manufacturer and, in such case, an Annex will be attached to this manual. The machine operator shall comply with any applicable labor law in force at the machine’s place of installation.

1.3 WHERE AND HOW TO KEEP THIS MANUAL

This manual should be kept in a safe and dry area where it is always available for consultation. It is advisable to make a copy which should be kept on file. In the event of exchanges of information taking place with the manufacturer, please refer to the rating plate and serial number. This manual should be kept for the entire life of the machine, and if needed, (for example damage that compromises its consultation, even if only partially, etc.), the user must purchase a new copy which should be requested to the manufacturer only.

1.4 MANUAL UPDATE

This manual forms an integral part of the machine and reflects its current status upon its market introduction. This publication complies with any law, directive, regulations in force at that time; it shall not be deemed unsuitable if updated at a later time.

Any changes, adjustments, etc. made on machines marketed afterwards shall cause the manual to be reviewed, however, any manual always represents the current condition of the machine associated with it.

Any additions to this manual that the manufacturer considers appropriate to send to every user should be kept in conjunction with its relative manual.

1.5 COOPERATION WITH THE USER

The manufacturer is available for any additional information its clients may have and for taking into consideration any suggestion as to improve its products and to make this manual more responsive to users needs. In case of equipment transfer, the equipment should be accompanied by this manual. In this regard, the principal user should send the address of the new user to the manufacturer, so that the manufacturer will be able to provide him/her with any necessary information and/or updates.

Arcobaleno Pasta Machines, LLC. reserves title to this publication and warns against any reproduction, in whole or in part, without its prior written consent.

1.6 MANUFACTURER'S WARRANTY

In order to benefit from the manufacturer's warranty, users should strictly comply with any provision set forth in this manual, in particular such as:

√ To operate the machine within its usage limits
√ To carry out regular and accurate maintenance
√ To select qualified personnel having the necessary skills and capabilities and being appropriately trained to use this machine

The manufacturer accepts no responsibility, direct or indirect, arising from:

√ Non-compliance with operating instructions and uses which differ from those provided in this manual
√ Usage from personnel unaware of any instructions and details included in this manual
√ Non-compliant usage with specific regulations in force in the installation country
√ Changes made on the machine without prior authorization
√ Unauthorized repairs
√ Use of unoriginal parts
√ Exceptional events

Any transfer of the machine to a second user shall take place in conjunction with its related manual; the lack of it shall automatically cause decline of any responsibility on the part of the manufacturer for any incorrect use of the machine.

If the machine is transferred to a second user residing in a country whose language differs from the country of the first user, such first user shall be responsible for providing the second user with a reliable translation of this manual in the language of the country where the machine is transferred to.

1.7 AFTER-SALE SERVICE

For any after-sale service please refer directly to the manufacturer at the following address:

Arcobaleno Pasta Machines, LLC.
160 Greenfield Road
Lancaster, PA 17601

Tel: 717.394.1402
Fax: 717.397.0258

service@arcobalenollc.com
www.arcobalenollc.com

AFTER HOURS TECH SUPPORT contact Antonio at 610.656.0391

SECTION 2

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2.1 COMPLIANCE OF RATING PLATES - LABELING

As shown in particular in A, the rating plate includes main data on the manufacturer and on the machine in addition to the EC labeling. The rating plate is secured with four rivets.

As shown in particular in B, C, D, and E other rating plates are added in order to display general warnings as to the correct use of the machine.

Readability and preservation of rating plates:

Rating plates should always be kept in readable form concerning all data included. For such purpose, they should be cleaned on a regular base. In case of degradation and/or illegibility of any one piece of information included, users should request another plate from the manufacturer. Upon such request, they should mention the details included in the original plate and arrange for its substitution.

WARNING: The below rating plates should not be removed or covered with others.



A



B



C



D



E

2.2 PACKING - HANDLING

Machines are delivered completely assembled so that packaging and/or special protections are not included in the delivery. In case of different agreements between the manufacturer and the user regarding packing of parts or the entire machine as well as handling, see any specific instructions attached to this publication.

Machines should be handled by using a fork lift truck or the appropriate material handling equipment and fabric slings (fabric/nylon) in conjunction with proper guards for sharp edges. For overall sizes, weights and features of the installation place, please see Sections 3 and 4.

2.3 STORAGE UPON RECEIPT

Storage can take place soon after delivery of the machine and is allowed for a maximum period of two years in sheltered areas with the following features:

- The storage area should be a sheltered place with a temperature of no less than 41° F / 5° C and not over 104° F / 40° C, with a humidity ratio not exceeding a value equal to 80%.
- Should the above mentioned values change in the course of storage, performing some preliminary checks shall be required before setting the machine at work (please consult with the manufacturer).
- Should the temperature within the storage area exceed or drop below the above mentioned values and the relative humidity goes over 80%, it shall be necessary to take proper measures such as using a bag barrier and hygroscopic salt.

WARNING: For storage periods longer than two years or under different environmental conditions, please request the relevant preservation procedures from the manufacturer.

2.4 MACHINE AND SUPPLY KIT INSPECTION

The machine and its relative supply kit (as agreed with the manufacturer) should be in perfect condition. Before shipping, each item is carefully checked and inspected, however, upon its receipt, it is always advisable to verify the completeness and working condition of the goods shipped.

In case of any defects and/or incompleteness, please inform the manufacturer immediately and comply with his instructions before proceeding with the installation of the machine.

Verify any possible damages to the frame, buckles, etc. cracks or tears of electrical conductors, etc... Take the machine's documentation and verify the absence or any discrepancy between what is stated in the shipping documents and the goods received.

Standard supply kit:
√ Machine Certification
√ Certificate of Acceptance - Please mail back with enclosed pre-paid envelope.
If not received with-in 14 days warranty is VOID.
√ Operator's manual - installation, usage, and maintenance

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3.1 GENERAL FEATURES AND OPERATING TIPS

The short pasta machine AEX90 model represents a new concept and exhibits a high productivity level. The following are its main features:

- Kneading and extruding capacity 22 lbs. / 10 kg. of dough
- Mechanical transmission chain group for the movement of the mixing arm
- Electric system and box pursuant to current regulations in force; motors and equipment 220V 60 HZ
- 2 Hp single-phase motor
- Stainless steel extrusion tube with water cooling system- alimentary bronze screw
- Horizontal extruding head complete with bronze die ring
- Electronic rotating knife or timer knife for cut of pasta
- Electric drying pasta fan

SEMOLINA FLOUR RECIPE FOR AEX90

22 lbs. of Semolina Flour
6.75 lbs. of Water

EGG PASTA RECIPE FOR AEX90

22 lbs. of Semolina flour
51-54 oz Whole Large Eggs*
8 oz of Water

Eggs + Water must be whisked together before adding to the flour.

**Note: 1 Large Egg = 1.75 - 2 oz*
This may vary upon egg size. Please adjust accordingly.



Note: The recipe may vary due to relative humidity (RH%) of the flour and kitchen environment. Please adjust accordingly. If your mix is too wet, try holding back 5 oz. of liquid to see how the mix is affected. It is easier to add liquid, not flour!

DIRECTIONS:

Put semolina flour in the hopper. Set desired mix time and press mix start button. Drizzle the liquid into the hopper while mixing. After 2-3 minutes, it should begin to resemble a coarse crumbly flour texture. Check the consistency by grabbing a handful of dough and open your palm. If you do not see a coarse crumbly flour texture, continue mixing for about 5 minutes or to desired time—then begin to extrude. Never extrude dry flour or dough that is not properly mixed.

3.2 TECHNICAL DATA

Model	AEX90
Hourly Production*	Up to 90 lbs/hr *Production varies by pasta shape
Mixer Capacity (flour)	22 lbs
Mixer Production (flour + liquid)	Up to 30 lbs/batch
Electrical Power	220V/1/60Hz 6 Amps
Nema Plug	L6-15
Cord Length	8 ft
Water/Drain Connection	1/2″ BARB (flexible hose suggested)
Water Cooling	Water line temp 45-60ºF
Water Supply Line Volume	1 gallon per minute - 70 psi max
Machine Dimensions	22″W x 42.75″D x 53.25″H (with knife)
Shipping Dimensions	25″W x 42″D x 58″H
Machine Weight	445 lbs
Shipping Weight	370 lbs
Shipping Class	85

3.3 MACHINE CONFIGURATION

All machines are exclusively marketed under the configurations set forth in this manual. Refer to Figure 3-1.

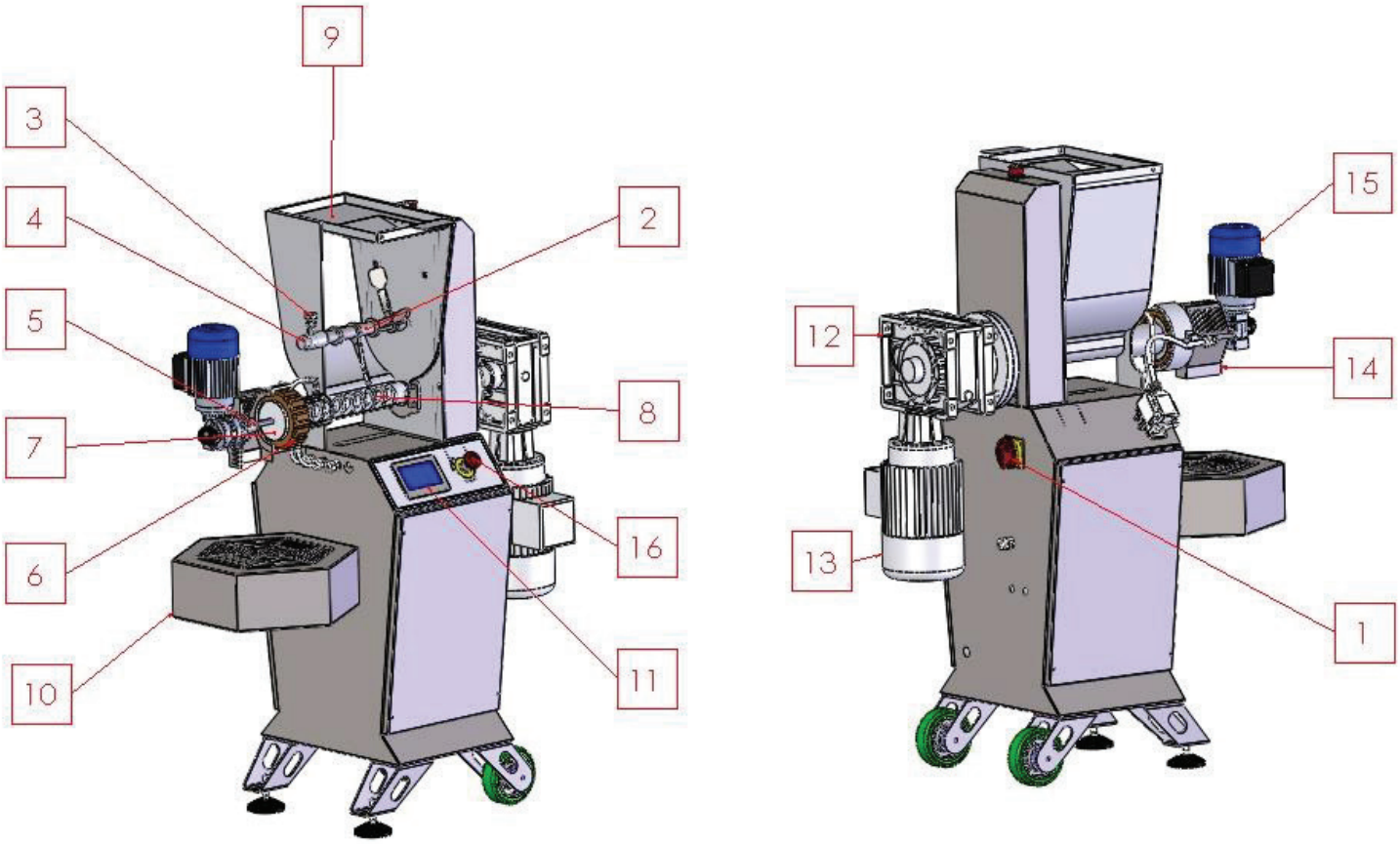
3.4 EXPECTED USE - INTENDED USE

This machine is intended for fresh pasta production. The dough is produced by the mixing arms in the mixing bowl. The shaping is obtained by the extrusion operation, the die mold and the cutting operation by the electronic rotating knife. The primary ingredients, the time of mixing operation, the extrusion velocity, the cutting velocity and the die mold determine the final product.

The use herein indicated is the only one recognized by the manufacturer. In the event that the manufacturer and the user agreed on specific operating conditions, these will be documented and enclosed as annexes to the machine manual, thus forming an integral part of it.

FIGURE 3-1

1. Main power switch
2. Mixing arm extrusion tank
3. Mixing arm catch extrusion tank
4. Mixing arm plug extrusion tank
5. Electronic rotating knife
6. Ring nut die holder
7. Pasta die
8. Extrusion auger
9. Extrusion tank safety lid
10. Fan
11. Touch screen
12. Extrusion gearbox
13. Extrusion engine
14. Knife gearbox
15. Knife engine
16. Emergency button



3.5 OPERATING ENVIRONMENT

The expected operating environment must have the following features:

- Temperature:
  Minimum: 41° F / 5° C
  Maximum: 104° F / 40° C
- Maximum relative humidity/dampness: 80%

The machine cannot be operated in open places, or in fire or explosion risk environments, or in such places where usage of explosion-proof components is required.

3.6 USERS

In selecting the most appropriate person (operator) to operate the machine, who will necessarily be someone fit for work in compliance with the regulations in force, the individual in charge of company security shall take into consideration the physical aspect (no impairment), the psychological aspect (mental balance, sense of responsibility), as well as the educational level, training, experience, and knowledge of rules, instructions, and measures designed for accident prevention.

Based on the dispositions and skills emphasized by the operator, the individual in charge of company security shall arrange for his/her training on the machine as to provide him/ her with a complete knowledge of this machine.

In addition the operator will learn the content of this manual as well as its attachments.

WARNING: Don't allow anyone to approach the area when the machine is working and forbid its usage to individuals unfamiliar with ongoing operations.

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CONTROLS AND INSTRUMENTS 19
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4.1 PRELIMINARY CHECKS

- Verify the integrity and perfect condition (no signs of rust, humidity, dent, etc.) of both the machine and of any anticipated accessories within the consignment.
- Assess the integrity of the electric installation wiring (no signs of cracks, squashes, etc.)
- Verify that the expected way to get to the installation place (machine handling) is free from any possible obstacles (things or persons). Foresee contingent protection barriers and get to the selected installation place.

4.2 INSTALLATION

Proceed with the machine setting in the area specifically designed pursuant to instructions given in Section 2 of this manual.

Operator

This machine requires only one operator for the installation.

During normal working order the operator must stay in its proximity, at “visual” distance in order to intervene in case of malfunction or loading/downloading operations, as the case may be.

Lighting System

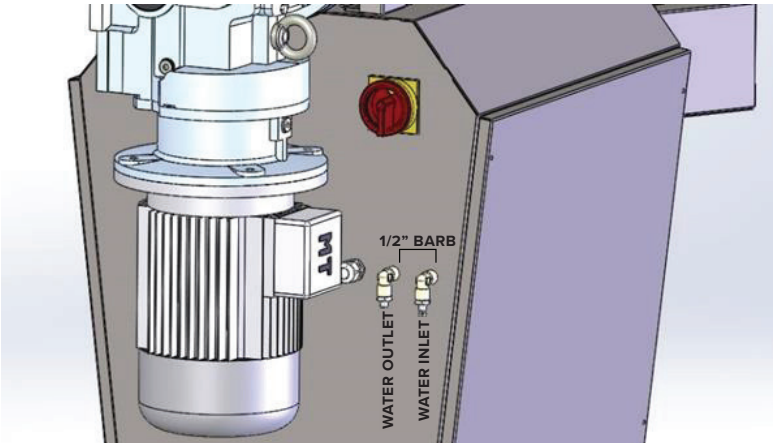
This machine is not equipped with an off-the-shelf lighting system. The lighting level of the environment should always avoid shadow areas and ensure that any operation is within the maximum levels of security in relation to its usage type.

Should servicing be necessary in parts where there is not enough lighting, it is mandatory to be equipped with portable lighting systems in order to avoid shadows that prevent or reduce visibility on the place of intervention or in its surroundings.

Water Cooling System Extrusion Tube Connection

- connect a water pipe to the hydraulic fitting (WATER INLET)
- connect a water pipe to the hydraulic fitting (WATER OUTLET) for water discharge

See Section 4.5 for more.



4.3 CONTROLS AND INSTRUMENTS

HOME PAGE

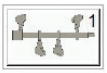
The home page allows access to the Mixing, Extrusion, Knife, Temperature, Set-Up, Recipe, and Alarms pages.



The active recipe is show in the lower center.

Pressing the STOP button stops the machine completely.

MIXING - Press 1 / Mixing



Mixing Speed:

- The mixing speed is controlled by the top value (20-100%).
- To increase or decrease the speed utilize the “+” or “-” button or select the value to enter a new value.
- To Mix, press the ▶ button.
- When active, the machine will show the ⏸ button. Press the ⏸ button to pause the mixing. (During the mixing, the extrusion cannot be started.)



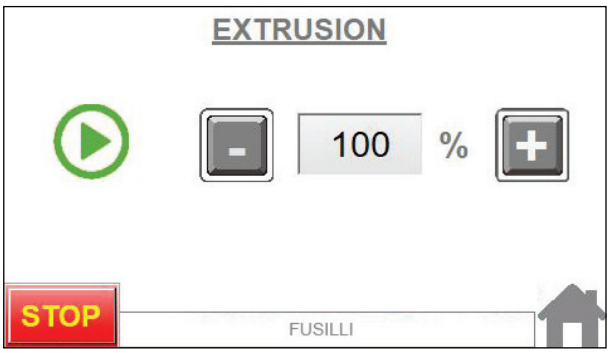
Mixing Timer:

- The lower value is the mixing timer displayed in minutes and seconds. (ex: 6 minutes . 00 seconds)
- To increase or decrease the time utilize the “+” or “-” button or select the value to enter a new value.
- After completing a full mixing cycle, timer defaults to its original value.
- If mixing is stopped mid cycle, it will pause the timer. When mixing is resumed, the timer will resume from the time it was paused.
- To reset the timer to the value saved in the active recipe, press RESET TIMER.

The 🏠 button allows you to return to the home page.

The STOP button stops the machine completely.

EXTRUSION - Press 2 / EXTRUSION



Extrusion Speed:

- The extruding speed is controlled by the value (20-100%)
- To increase or decrease the speed utilize "+" or "-" button or select the value to enter a new value.
- To Extrude, press the ▶ button.
- The Extrusion Confirmation page appears after the extruder ▶ button is pressed to start extrusion.

  The confirmation page asks the operator to confirm liquid has been added and thoroughly mixed. Extruding dry flour will damage the machine and void the warranty.

  - Pressing the blue ✓ will activate extrusion.
  - Pressing the red X will return to the previous page.



- When active, the machine will show the ⏸ button. Press the ⏸ button to pause the extrusion. (During the extrusion, the mixing cannot be started.)

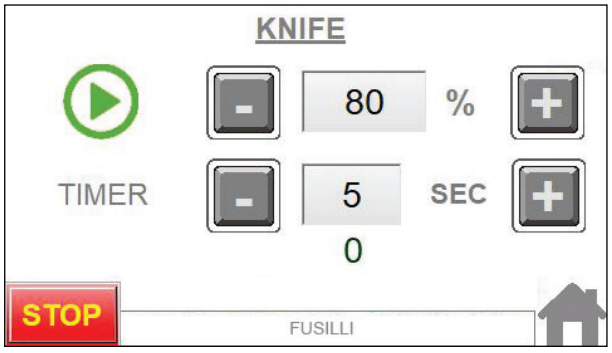
The 🏠 button allows you to return to the home page.

The STOP button stops the machine completely.

KNIFE - Press 3 / KNIFE

CONTINUOUS ROTATION

When the timer value is set to "0", the cutter attachment will rotate continuously at the selected speed.



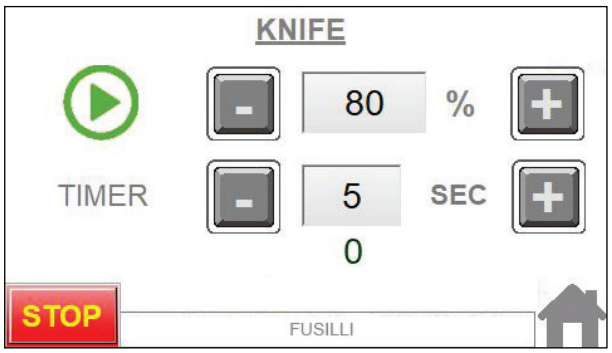
Knife Speed:

- To increase or decrease the knife speed utilize the "+" or "-" button or select the value to enter a new value.
- Faster speed will result in shorter cuts. Slower speed will result in longer cuts.
- Press the ▶ button to active the cutter.
- When active, the machine will show the ⏸ button. Press the ⏸ button to pause the knife.

Knife Timer:

- The timer must be set to "0" for continuous rotation.

KNIFE - Press 3 / KNIFE 



TIMER (DELAYED) ROTATION
When the timer value is set greater than “0”, the cutter attachment will complete one rotation per timed cycle.

See 5.5 Timer (Delayed) Rotation Operation Instructions on page 37.

SPEED:
- While the timer mode is active, the knife speed is locked at 80%

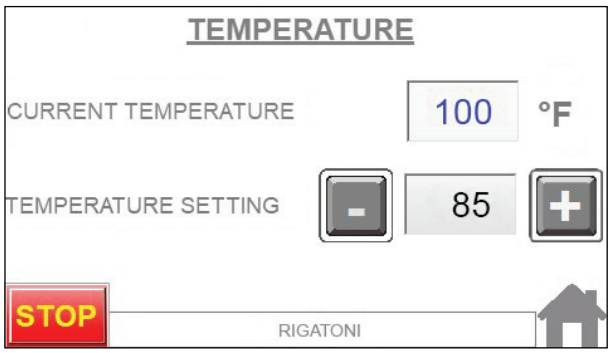
TIMER:
- To increase or decrease the timer duration utilize the “+ ” or “- ” button or select the value to enter a new value.
- Shorter times will result in shorter cuts. Longer times will result in longer cuts.
- Press the button to start or stop the knife.

NOTE: An Alert will be produced if the cutter is activated while the cutter attachment is not connected. To clear the alert, cycle emergency stop button or cycle power.

The button allows you to return to the home page.

The STOP button stops the machine completely.

TEMPERATURE - Press TEMPERATURE



Current Temperature:

- Displays the current temperature of the extrusion nozzle.

Temperature Setting:

- Set the desired extrusion nozzle temperature using the “+” or “-” button or select the value to enter a new value.

In order for the water cooling to activate:

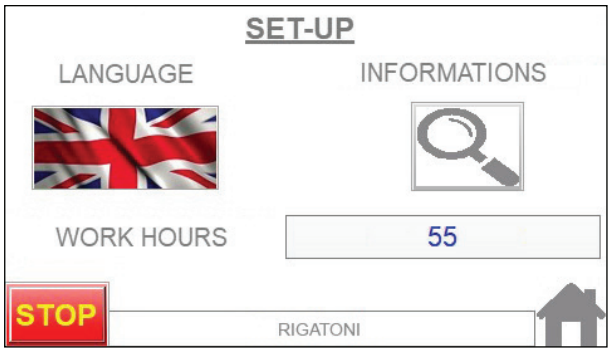
1. The current temperature must be greater than the temperature setting
2. The machine must be actively extruding

The button allows you to return to the home page.

The STOP button stops the machine completely.

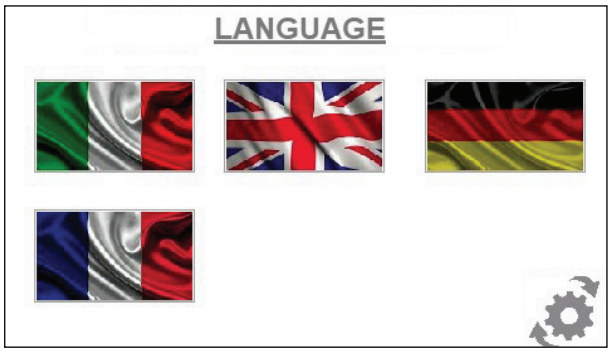
SET-UP - Press SET-UP

Allows for set-up of the machine & displays working hours.



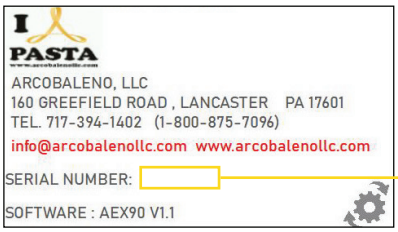
Language:

- Select the desired language by selecting a flag.
- Press button to return to Set-Up page.



Information:

- Displays machine information and Arcobaleno information.



Serial number of machine listed in program information

The button allows you to return to the home page.

The STOP button stops the machine completely.

RECIPES - Press RECIPES

The “RECIPE” page display allows you to load recipes, name and rename recipes, save recipes, and create recipes.



Recipes will be displayed in a list. Press a recipe name to select it. The selected recipe is highlighted in yellow. Use the arrows to navigate the recipe list pages. Each page displays 8 recipes (1-8, 9-16, 17-24, 25-32). The grey box at the top displays the loaded/active recipe.

LOADING A RECIPE:

- Select the desired recipe by pressing it. Use the arrows as needed to scroll through the pages.
- Load the recipe by pressing the “LOAD” button.
- The recipe is now loaded and displayed in the top box on the recipe page. The parameters will change to the set recipe.

SAVING/OVERRIDING AN EXISTING RECIPE:

- After loading a recipe, press the button to return to the home screen. Set all recipe parameters (mixing speed, mixing time, extrusion time, etc.) as desired for the recipe.
- Press the button to return to the Recipes page, then press the “SAVE” button. Enter password “123” and press “ENTER”. This will override the parameters that are currently set for this recipe.

CREATING A NEW RECIPE:

- Press the top grey box. Name the recipe and press “ENTER”.
- Select the desired recipe slot from the list. Selecting a blank slot will create a new recipe. Selecting and saving in an existing recipe slot will override that recipe and create a new recipe in that slot.
- Press “SAVE”. Enter password “123” and press “ENTER” to create your new recipe. Then proceed to set parameters and save the recipe.

The button allows you to return to the home page.

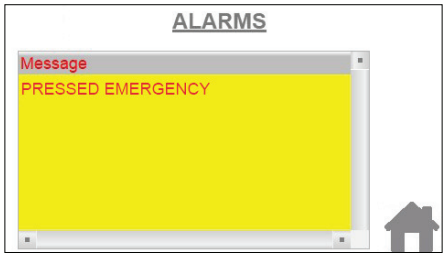
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INSTALLATION & START UP
MODEL AEX90

ALARMS - Press ALARM on Home Page

The alarms page displays all presently triggered alerts. When the alarm icon is flashing , a safety has been triggered and will prevent all machine functionality. The scrolling red text details the alarm. Pressing the alarm icon on the HOME screen will display all active alarms. See below table for alarms, causes, and solutions.





NOTE: If resolving the display issue does not clear the alert, cycle emergency stop button or cycle power. When cycling power, leave machine disconnected for 1 minute. If this does not work contact manufacturer.

The button allows you to return to the home page.

ALARMS	CAUSE	SOLUTION
PRESSED EMERGENCY	The main emergency button is pressed.	Once out of the emergency turn the emergency button clockwise to cycle it.
LID SAFETY OPEN	The safety lid is open. This will cause the machine to stop.*	Fully remove the lid, then reinstall onto the machine.
SWITCH-BOARD LID OPEN	The switch-board lid is open.	Close the door of the electric panel with the related key.
ALARM INVERTER	An inverter is in alarm.	Check the alarm code on the inverter display. Check the related manual for causes of the alarm. Only after determining and eliminating the reason for the alarm, turn off the machine to reset it. Wait for 1 minute before turning it on again.
UNDER DEVICE STOP	Stop of the entire line.	Check the machines on the down-side.
ATTENTION DRY FLOUR	Alarm occurs to prevent dry extrusion and prevent machine damage that is not covered under warranty.	See instructions on next page.

ATTENTION: If the alarm, the problems or the actions taken to correct them are not clear or sufficiently explained or in the event of any other problem, contact the manufacturer before restarting the machine, otherwise there can be serious damage to the machine itself or people.

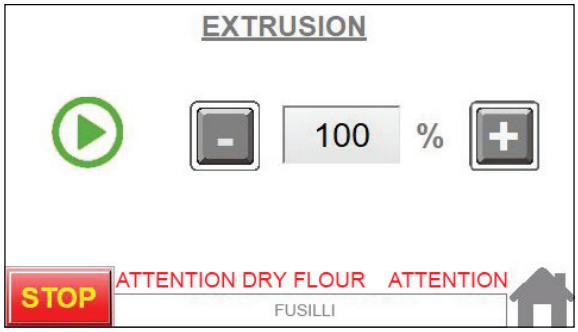
***WARNING:** If the machine does not stop when the lid is opened, stop operation and contact the manufacturer IMMEDIATELY. Continued use of the machine can result in serious injury.

ATTENTION DRY FLOUR ALARM

If you receive the ATTENTION DRY FLOUR alarm:

- **Remove the die from the machine immediately** and soak in water.
- Remove all ingredients from the machine.
- Reassemble with a clean pasta die.
- After cleaning and reassembling the machine, press the Stop button. The machine will reiterate the steps to take (empty all ingredients, remove die and die ring, clean all parts before starting over). After these steps have been completed, press the Home button to clear the alarm.
- Verify the recipe and start a new batch.
  The base recipe for AEX90 is 30-33% hydration.
  Running less than 30% hydration will result in ATTENTION DRY FLOUR ALARM.

Any questions, please contact Arcobaleno at 717-394-1402.





Tools needed to remove pasta die ring:

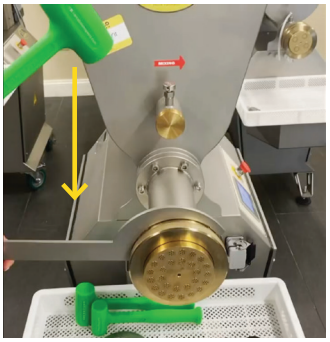


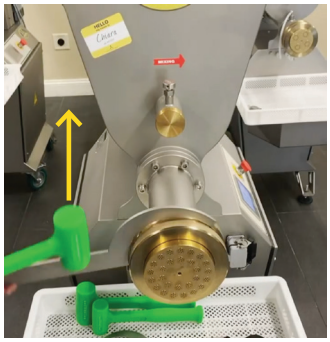
- spanner/die wrench



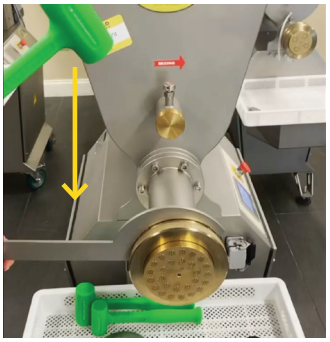
- hammer

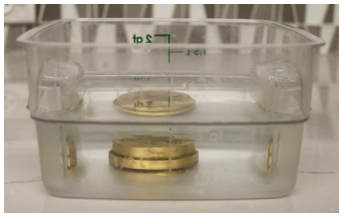
While holding the die wrench firmly, tap the arm of the die wrench with the hammer as shown. Use care when using the hammer to avoid damage to the user or the machine.





Example shown with AEX130.





Pasta die must be removed immediately and soaked in water!

4.4 CONNECTION TO THE ELECTRIC LINE

The operator is responsible for providing a suitable electronic system. The operator should arrange for connection to a proper power source equipped with wires of suitable sizes. The supply source should be suited to the machine and comply with any relevant regulations.

Any electrical equipment of the AEX90 meets the standards of CEI-EN 60204, therefore, supply should be within a 10% range based on the current value and within a 1% range continuously, as well as within a 2% range for a brief period of time based on the frequency value.

The electric system should be equipped with an automatic release system, having a differential thermal-magnetic switch, as well as with a ground system able to ensure the minimal parameters requested by regulations. It should also respect specific provisions of the law in force in the machine's installation country.

Prior to performing any connection, verify that the features of the electric line correspond to any technical information included in the electric system's diagram and in the plate located inside the box.

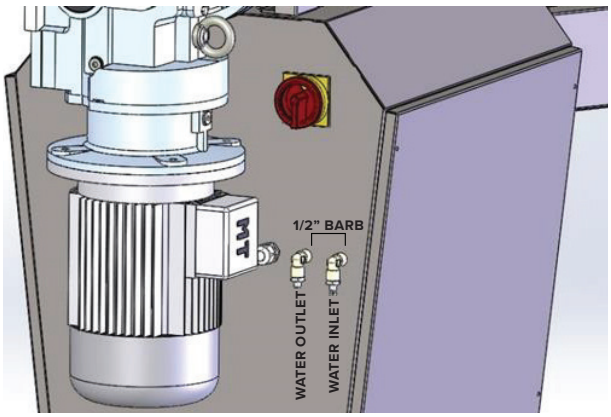
Any equipment connection to the electric system (when the manufacturer didn't already prearrange for a cable with a EC plug), should be carried out only by qualified and trained staff, directly to the terminal or the master switch through the relevant fairlead.

4.5 CONNECTION TO THE WATER LINE

The water pressure should not exceed 70 PSI / 4.8 bar. Recommended temperature is 45-55° F / 7.2-12.7° C. You can regulate the temperature of the extrusion with the tap. Machine Temperature should be between 95-105° F / 35-40.5° C.

Is chilled water detrimental to the machine? No, it's just going to cool the machine faster.

You will need a cold water connection and drain. Both input and output connection size is half-inch. Height of the water connection is 12" off the floor and located on the back of machine approximately in center of machine.



Equipment is to be installed with adequate back flow protection to comply with applicable federal, state and local codes.

Activating the Water Cooling Function

When setup in the standard configuration (plumbed to a water line and drain), to activate the water-cooling function two conditions must be met:

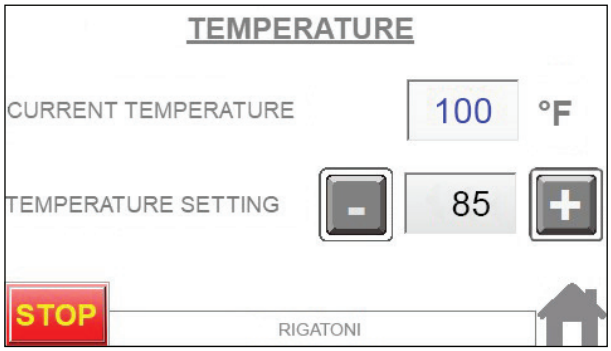


Condition #1: The extrusion mode must be active.

Condition #2: The observed temperature in the extrusion chamber must be greater than the setpoint temperature.

To alter the setpoint temperature:

1. Navigate to the "HOME" page
2. In the top right corner, navigate to "TEMPERATURE"
3. Set the desired extrusion temperature via the "+" or "-" button or select the value to enter a new value.



NOTE: The current extrusion temperature can be monitored on this page.

SECTION 5

CERTIFICATION 28
OPERATIVENESS 28
DIE CHANGING 29
DURING USAGE 30
UNAUTHORIZED USE 31
ADJUSTMENTS 32
STANDSTILL & EMERGENCY OPERATIONS 32
DEACTIVATION 32

5.1 CERTIFICATION

Before starting for the first time any operating activity, perform the checks provided for in Section 4

-Supply the electric box

-Activate any circuit by turning on the master switch

5.2 OPERATIVENESS

WARNING: A complete reading of this instruction manual and of any related attachments is necessary prior to starting any operating activity. The warranty according to the working order of the machine within safety conditions and absolute performance according to its expected use, is strictly dependent on accurate application of this instruction manual and of any related attachments.

Operator

He/she should be a person fit for work and able to attend to any needs regarding the machine operation (see Section 3). He/she should not allow any other person to approach the area when the machine is working and should forbid its use by staff unfamiliar with such activities. He/she should follow any directions provided in this manual in order to achieve maximum performance, minimum wear and tear, and greater security for both himself/herself and others.

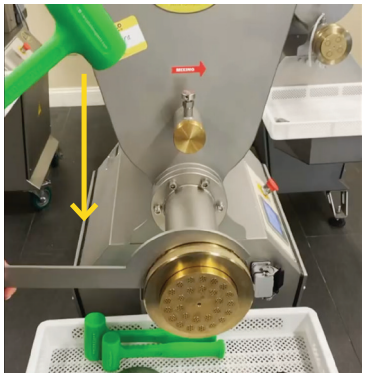
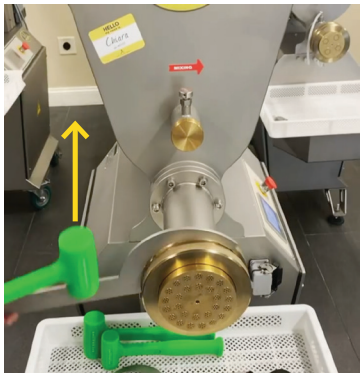
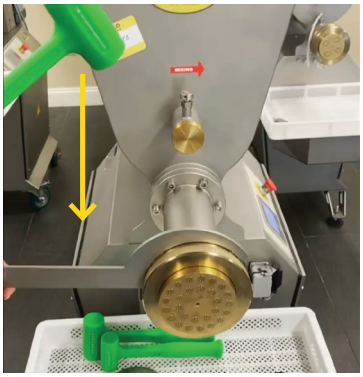
WARNING: If your machine is not functioning properly, don't perform any operations that might compromise the good working order of the whole installation. When in doubt, always request the help of a team of specialists authorized by the manufacturer.

√ ANY VIOLATION OR DAMAGE TO THE EQUIPMENT ON THE PART OF THE USER RELIEVES THE MANUFACTURER FROM ANY LIABILITY AND MAKES THE USER EXCLUSIVELY LIABLE FOR ACCIDENT PREVENTION TO THE COMPETENT AUTHORITY

WARNING: It is advisable to read any specific paragraph several times and, if in doubt, to consult the manufacturer indicating the passage whose construction seems unclear.

5.3 DIE CHANGING

- Stop the machine by pressing the proper stop button.
- Turn off and remove the cutting knife if in use.
- Use caution as the die and die ring may be hot from use.
- Unscrew the die ring with the provided die ring wrench, remove the die and replace with new die.
- **NOTE:** The supplied hammer can be used to aid in removal of the die ring with the die wrench. While holding the die wrench firmly, tap the arm of the die wrench with the hammer as shown. Use care when using the hammer to avoid damage to the user or the machine.

Example shown with AEX130.

- **WARNING:** Do not press the mixing start button once die ring is off of machine. Doing so will cause the auger to become stuck.
- **NOTE:** If the die is difficult to remove, press the EXTRUSION start button to run the machine for a few seconds to release pressure from the extrusion neck. Make sure to catch the die so that it is not damaged.
- Secure the new die by screwing the die ring back onto the extrusion neck. The die ring should turn smoothly. If it does not, the die ring holder grooves may have dough that needs to be removed.
- **NOTE:** To remove dough from the die ring, use the stainless steel tool provided in the cleaning kit. If the dough is not removed, it can damage the threads of the extruding head.
- Immerse the used die in water until it is needed again. Failure to do so will cause the dough inside of the die to become like cement.

Lasagna Die:
The lasagna die should be placed into the die ring so that the cutting slot (small pin) is situated at the 12 o'clock or 6 o'clock position. This aids the opening of the pasta tube.

- To get a thin sheet tighten the central screw (clockwise) to desired thickness
- To get a thick sheet loosen the central screw (counter-clockwise) to desired thickness

NOTE: Open the die BEFORE removing from the extruder to allow water flow through the die when submerged after use. To open the die, loosen the central screw (counter-clockwise) and run the machine for a few seconds so that the die is pushed out.

5.4 DURING USAGE

Expected use - precautionary standards and measures:
A correct use of the machine allows operators to fully benefit from its performance within complete safety conditions. Such potential is guaranteed only by compliance with the directions provided thereunder, therefore:

ALWAYS follow this manual's directions and instructions and, prior to start up production, verify the integrity of the machine parts.

ALWAYS observe any instructions and possible warnings marked on the machines; any warning sign displayed on the machine should always be readable.

ALWAYS assess the appropriateness of upkeep (cleaning, etc.) both of the machine and its main parts.

ALWAYS verify the suitability and working order of the electrical system; in particular check the connection and make sure there are no insecure or dangerous connections.

ALWAYS work under the best lighting conditions as to the whole installation and, in particular, in the application area.

Before leaving the work area, ALWAYS disconnect the machine's feeding line as necessary.

At any time during inspections, repairs, routine maintenance services of the machine, ALWAYS disconnect the machine and the electric box.

ALWAYS keep clean and dry the floor surrounding the machine.

At any time during operation, ALWAYS wear suitable work clothes (including individual safety devices) subject to work environment safety standards and warning signs displayed on the equipment designed to prevent possible accidents.

ALWAYS report any defect during running (suspected breakage, incorrect movements, excessive noise) to the department head and put the machine out of order by disconnecting the equipment.

Use proper signs to indicate that the machine or the whole production line is out of order.

ALWAYS use the machine in a sheltered area, within a suitable operating environment as specified in this manual.

ALWAYS use original replacement parts.

In case of servicing of the machine's electric system ALWAYS contact qualified and trained personnel.

In case of doubt as to the real construction of any operating procedures described in this manual, ALWAYS contact the manufacturer; don't perform any actions if the operating procedures seem unclear to you.

5.5 UNAUTHORIZED USE - UNEXPECTED USE - USE NOT RECOMMENDED - EXPECTED AND UNEXPECTED IMPROPER USE

Any machine usage for unauthorized operations, its improper use and lack of service can endanger personnel safety in addition to compromising functionality and security.

The measures provided hereunder, which obviously cannot cover the whole spectrum of improper usage possibilities, represent those more "reasonably" expected and, therefore, should be considered absolutely forbidden:

NEVER use the machine under unexpected environmental conditions.

NEVER use the machine with "temporary" connections, such as temporary cables which are not insulated.

NEVER allow any unfit person to use the machine.

NEVER use the machine without wearing suitable work clothes (including individual safety devices) subject to work environment safety standards and warning signs displayed on the equipment designed to prevent accidents.

NEVER change any safety devices, remove protection measures and/or damage the equipment.

NEVER leave the machine unattended when already qualified for operating activities.

NEVER use the machine to perform different tasks from the ones it was intended to.

NEVER change functional and performance features of the machine and/or of its components in order to increase production capacity.

NEVER allow personnel unfamiliar with ongoing operations to approach the area when the machine is working.

NEVER use or service the machine under inadequate or poor lighting/visibility.

NEVER use the machine if the content of this instruction manual was not fully understood.

NEVER carry out any routine maintenance activity, inspections or repairs without first deactivating the machine and the whole production line.

NEVER use any replacement parts not original or not recommended by the manufacturer.

NEVER have the machine serviced by inexperienced staff.

NEVER leave the machine unattended after any service without posting the appropriate warning sign and informing the department head.

5.6 ADJUSTMENTS
To obtain the length of the pasta desired, adjust the rpm (speed) of the knife using the control display.

5.7 STANDSTILL AND EMERGENCY OPERATIONS
To bring the machine to a temporary stop, press the proper push button. In case of emergency press the emergency push button (fig. 3-1, no. 16), so that the whole equipment shall be deactivated.

5.8 DEACTIVATION
To deactivate the machine at the end of the work shift, turn off the main switch and make sure that the light of the numbered switches on the control panel goes off.

Deactivate the department feeder line relative to the electric box.

Proceed with routine maintenance procedures expected daily at the end of production (see specific paragraph within Section 6).

WARNING: Whenever necessary, post a sign on the machine indicating any defects and/or adjustments which occurred during its use or usage of the equipment related to the entire production line.
Before leaving the work place, please inform the department head about the above.

SECTION 6

GENERAL.....34
ROUTINE MAINTENANCE 34
SCHEDULED MAINTENANCE.....34
CLEANING..... 35

6.1 GENERAL

The maintenance plan includes routine procedures, that is operations that should be performed daily and don't need any special instruments and/or equipment; and scheduled procedures, that is operations which may involve partial disassembly and removal of safety devices.

For scheduled maintenance procedures contact only competent and experienced department maintenance staff.

WARNING: Prior to carrying out any maintenance procedure make sure that the equipment is deactivated from the feeder line.

6.2 ROUTINE MAINTENANCE

Daily procedures before putting the machine into service:

Carry out a visual inspection by verifying the correct tightening/clamping of any component; perform a test on the idling machine in order to locate any faults/defects, creakings, abnormal noises, etc., and operate as deemed necessary.

WARNING: In case of abnormal conditions or failure of any equipment component first make sure that the instructions provided in the previous paragraphs have been followed correctly.

DON'T ever carry out rush or coarse repairs which might compromise the good working order of the machine and of any related equipment. Whenever in doubt, request servicing by specialized staff authorized by the manufacturer.

Daily procedures to be carried out once the work shift ends:

Open the lid and proceed with an accurate cleaning of the entire machine. Make sure to remove any product residual. Clean carefully by using the supplied dough scraper, brush, a shop vacuum, and/or cloths dampened with water and vinegar; don't use any type of detergent. NEVER pour water into the hopper. This can cause machine damage or failure. You must use a DAMP cloth or sponge.

6.3 SCHEDULED MAINTENANCE

Procedures carried out semi-annually:

Check the safe tightening/clamping of any element that makes up the equipment by requesting the assistance of skilled and experienced department maintenance personnel. Should any excessive wear and tear or breakage be found proceed with proper replacement.

Procedures carried out annually:

Check the conditions of any electric components and proceed with proper replacement as deemed necessary in case of fault or wear and tear; for any operation contact skilled and experienced maintenance personnel.

6.4 CLEANING

Clean the mixing hopper and the removable parts (auger, mixing arm, die ring) after use.

NEVER use corrosive or flammable cleaning products that contain substances harmful to human health. DO NOT clean the AEX90 Pasta Extruder with sodium hypochlorite based solutions or abrasive cleaners since this could damage the unit.

Cleaning the machine and individual parts:

1. Before cleaning the machine, turn the machine off and disconnect the power supply.
2. Open the lid.
3. Clean the hopper using the supplied dough scraper, brush, and/or a shop vacuum to remove flour and dough deposits. The hopper and lid can be cleaned using a damp cloth or sponge with water and disinfectant. **Never pour water into the hopper.**
4. Do not leave dough deposits attached to the side of the extrusion hopper. This could affect the next batch of dough.
5. Remove and clean the mixing arm, auger, and die ring. These can be washed in a sink with water and mild detergent that is “food safe”. Rinse and dry thoroughly.
6. Once cleaning is complete, reassemble the parts into the machine.
7. Accurately clean the work surface and all surrounding areas.
8. Clean external appliance surfaces with a damp cloth or sponge.

WARNING: DO NOT POUR WATER INTO THE HOPPER. Pouring water into the hopper can cause machine damage or failure. You must use a DAMP cloth or sponge.

To clean pasta dies, see instructions on next page.

CLEANING TOOLKIT INCLUDED

Toolkit bag, dough scraper, cleaning pick, brush, die wrench, and hammer (to aid in removal of die ring with die wrench)









Die Cleaning:
After extruding pasta, remove die and gently clean the back of the die with wooden skewer. Wash off any exterior dough. Remove as much external dough as possible.

Never use metal tools with pointed ends- that will damage the dies. Picking and poking at brass dies with brushes and scrubbies is also a bad idea. It can etch and scratch the dies and this will adversely affect the extruded pasta.

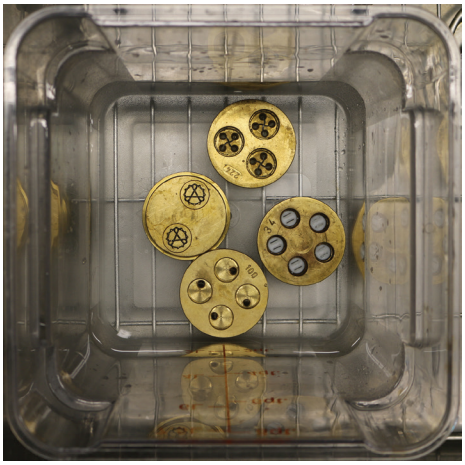
After removing external dough, soak the die in water until the next use. Store extruding dies in individual labeled storage containers. Cover the die with approved food safe sanitizer and water to the proper dilution.

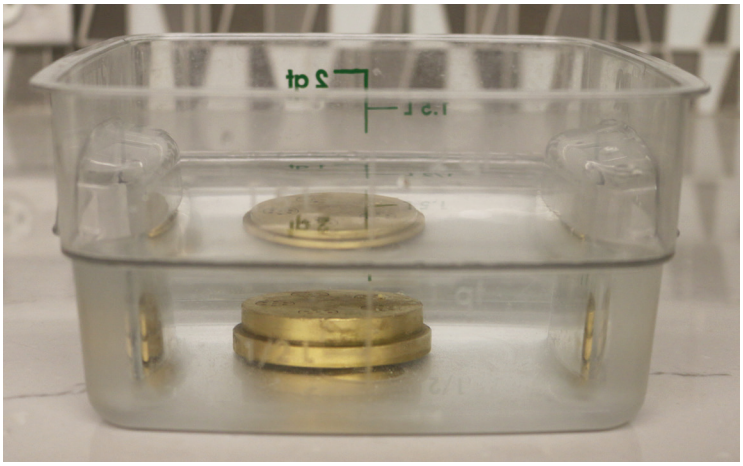
Soaking the used dies in water keeps the dough stuck in the nooks and crannies soft, so that the next time you use one the new dough pushes out the old. Discard the old dough and then keep going. This method won't affect the new batch of pasta or damage the die in any way.

When the die is being used again, rinse thoroughly with warm water. Place die into die ring and thread onto machine. Extrude pasta, discarding the first 18 inches of dough.

As you store the dies you certainly want to change the water as it turns cloudy and keep them in a relatively cool spot, but overall maintenance is simple – Just soak and go.

Dies can also be cleaned with a power washer/a strong jet of water. Dies can also be boiled in a pot of water. This will help to soften any dough trapped inside.





SECTION 7

SCRAPPING AND DISPOSAL 39
PARTS DIAGRAM 40
ELECTRICAL DIAGRAM 41

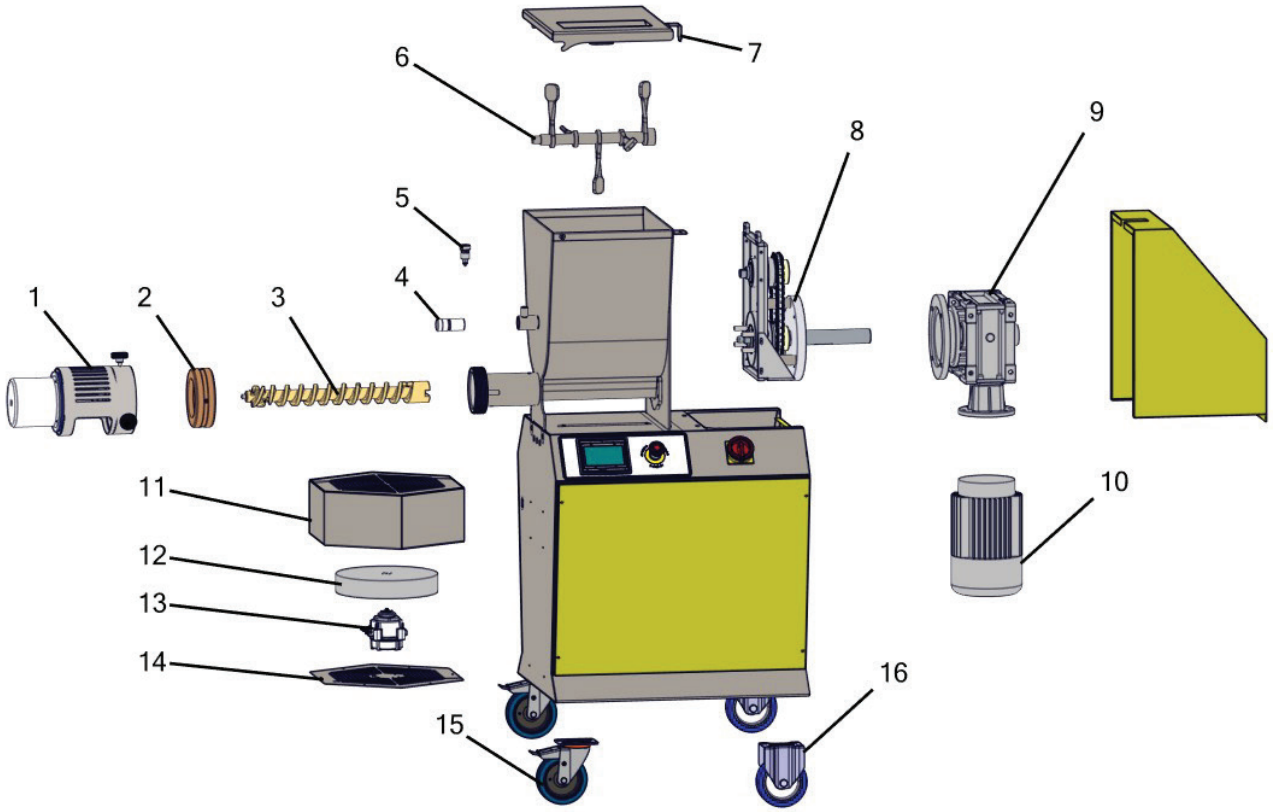
7.1 SCRAPPING AND DISPOSAL

Should the machine be scrapped, you need to arrange for disposal of its parts by taking into consideration their different nature. For the above purpose, it may be advisable to contact companies specialized in this field which, in any case, abide by the law in force in the machine installation country as to disposal of solid industrial wastes.

WARNING: Don't drop the machine in very busy areas as it might endanger persons lives, minors and animals in particular; the owner of the machine shall be held responsible for any claims arising in connection with the above.

7.2 PARTS DIAGRAMS

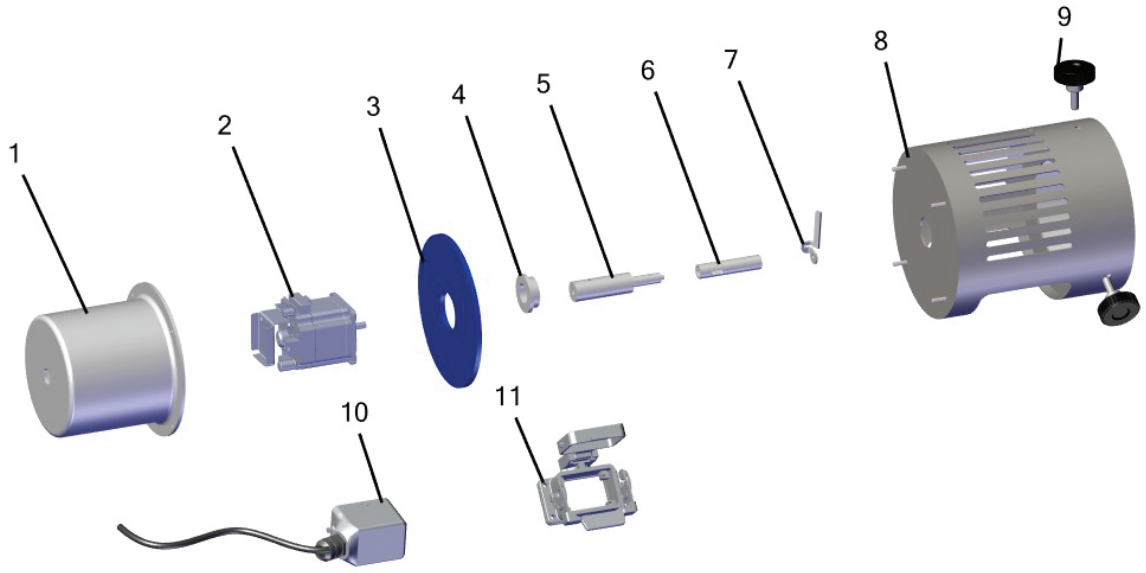
TABLE 1 - REMOVABLE PARTS



BOM ID	PART NO.	DESCRIPTION
1	APA20A00099	AEX90 ELECTRONIC CUTTING KNIFE ASSEMBLY
2	APA06M00009	DIE RING
3	APA20M00096	AUGER
4	APA18M00073	MIXING ARM BUSHING
5	APA18A00072	MIXER PLUG ASSEMBLY
6	APA20A00024	MIXING ARM
7	APA20C00085	LID
8	APA20A00028	DRIVETRAIN ASSEMBLY
9	ACARI000101	GEARBOX

BOM ID	PART NO.	DESCRIPTION
10	ACYAT000140	MOTOR
11	APA18C00063	FAN CASING TOP
12	ACYAT000101	FAN BLADE
13	ACYAT000209	FAN MOTOR
14	APA18C00062	FAN CASING BOTTOM
15	ACARU000029	FRONT CASTER
16	ACARU000034	REAR CASTER

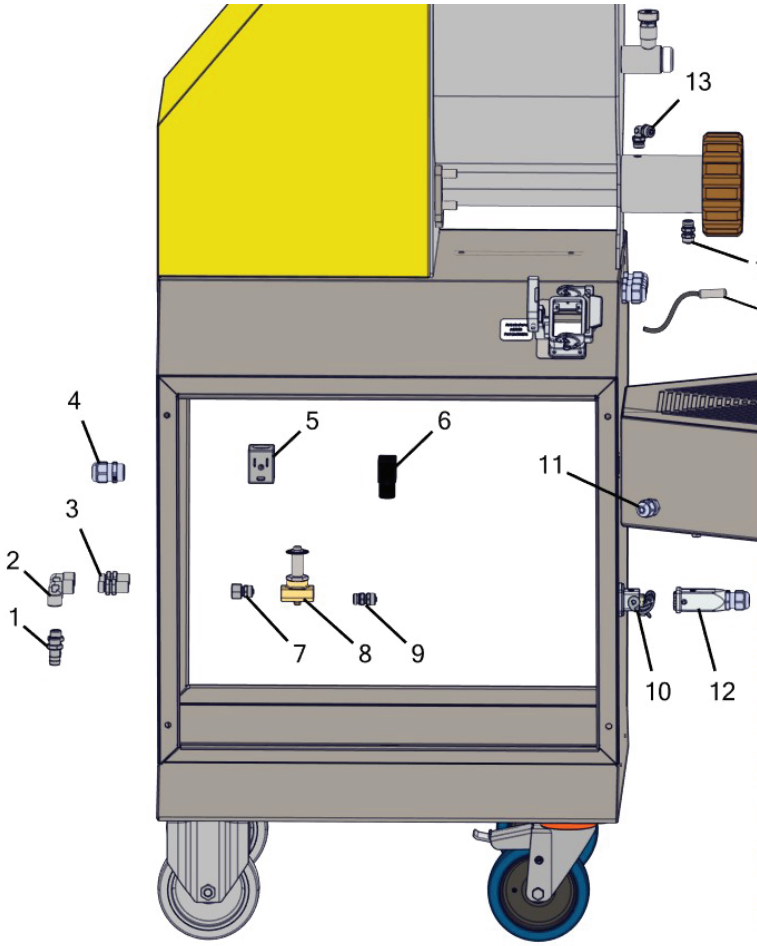
TABLE 3 - CUTTING KNIFE



BOM ID	PART NO.	DESCRIPTION
1	ASP30000040	CUTTER MOTOR CAP
2	ACYAT000215	CUTTER MOTOR
3	APA17C00157	CUTTER PLASTIC FLANGE
4	APA17M00161	CUTTER SHAFT BUSHING
5	F2126	CUTTER MOTOR SHAFT
6	F2124	CUTTER BLADE SHAFT

BOM ID	PART NO.	DESCRIPTION
7	F2127	AEX90 CUTTER BLADE
8	APA20A00100	CUTTER FRAME
9	ACAEL000045	CUTTER KNOB
10	ASAN000522	CUTTER CORD AND PLUG
11	ASAN000521	CUTTER OUTLET LATCH CONNECTOR

TABLE 4 - WATER AND ELECTRICAL CONNECTORS



BOM ID	PART NO.	DESCRIPTION
1	ACPRA000060	BARBED WATER FITTING
2	ACPRA000012	ELBOW WATER FITTING
3	ACPRA000055	MOUNTED WATER FITTING
4	ACYBM000031	STRAIN RELIEF PG13.5
5	ACYAT000105	PLUG 24 VDC
6	ACAXX000061	SQUARE CLAMP
7	ACPRA000052	WATER TUBE TO BSP ADAPTOR (FEMALE)
8	ACYAT000083	SOLENOID VALVE
9	ACPRA000028	WATER TUBE TO BSP ADAPTOR (MALE)
10	ACYBM000077	FAN LATCH CONNECTOR (FEMALE)
11	ACYBM000057	STRAIN RELIEF PG9
12	ACYBM000061	FAN LATCH CONNECTOR (MALE)
13	ACPRA000027	TOP WATER HOSE FITTING
14	ACPRA000028	BOTTOM WATER HOSE FITTING
15	ACYBM000194	TEMPERATURE PROBE

SCRAPPING & DISPOSAL, PARTS & ELECTRICAL DIAGRAMS

MODEL AEX90

7.3 ELECTRICAL DIAGRAM

ARCOBALENO PASTA MACHINES, LLC.
160 Greenfield Road
Lancaster, PA 17601

Phone: 717.394.1402
Fax : 717.397.0258
Web : www.arcobalenollc.com
E.Mail : info@arcobalenollc.com

MODEL	AEX90 ETL		
SERIAL	XXXXX		
YEAR	2025		
VOLTS	220	HZ	60
WATT	1100	PH	1
AMPS	6		

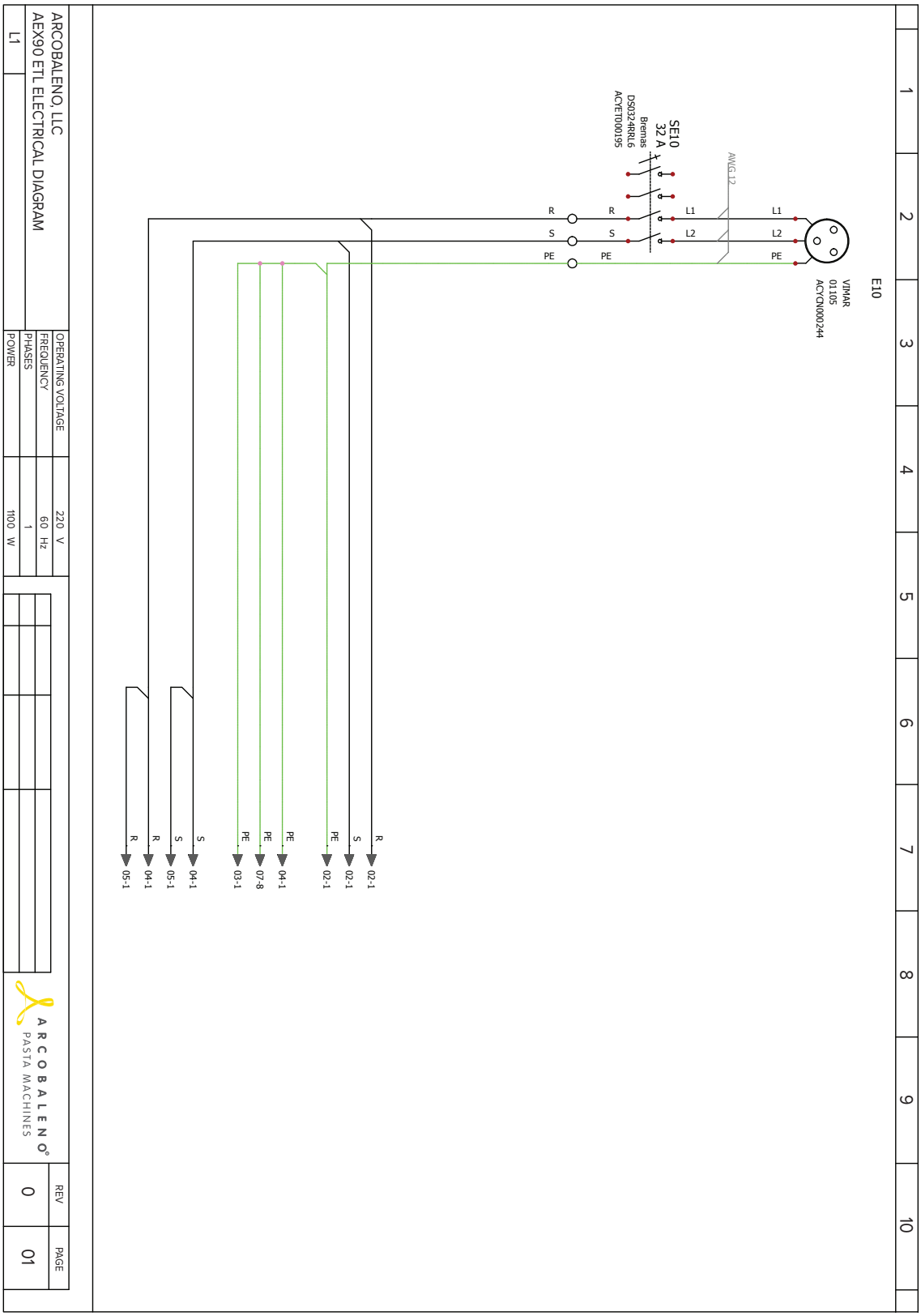
C ETL LISTED US
Intertek
5029985

ETL SANITATION LISTED
Intertek
5029985

CONFORMS TO UL STD 763; NSF STANDARD 8
CERTIFIED TO CSA STD C22.2 No. 195

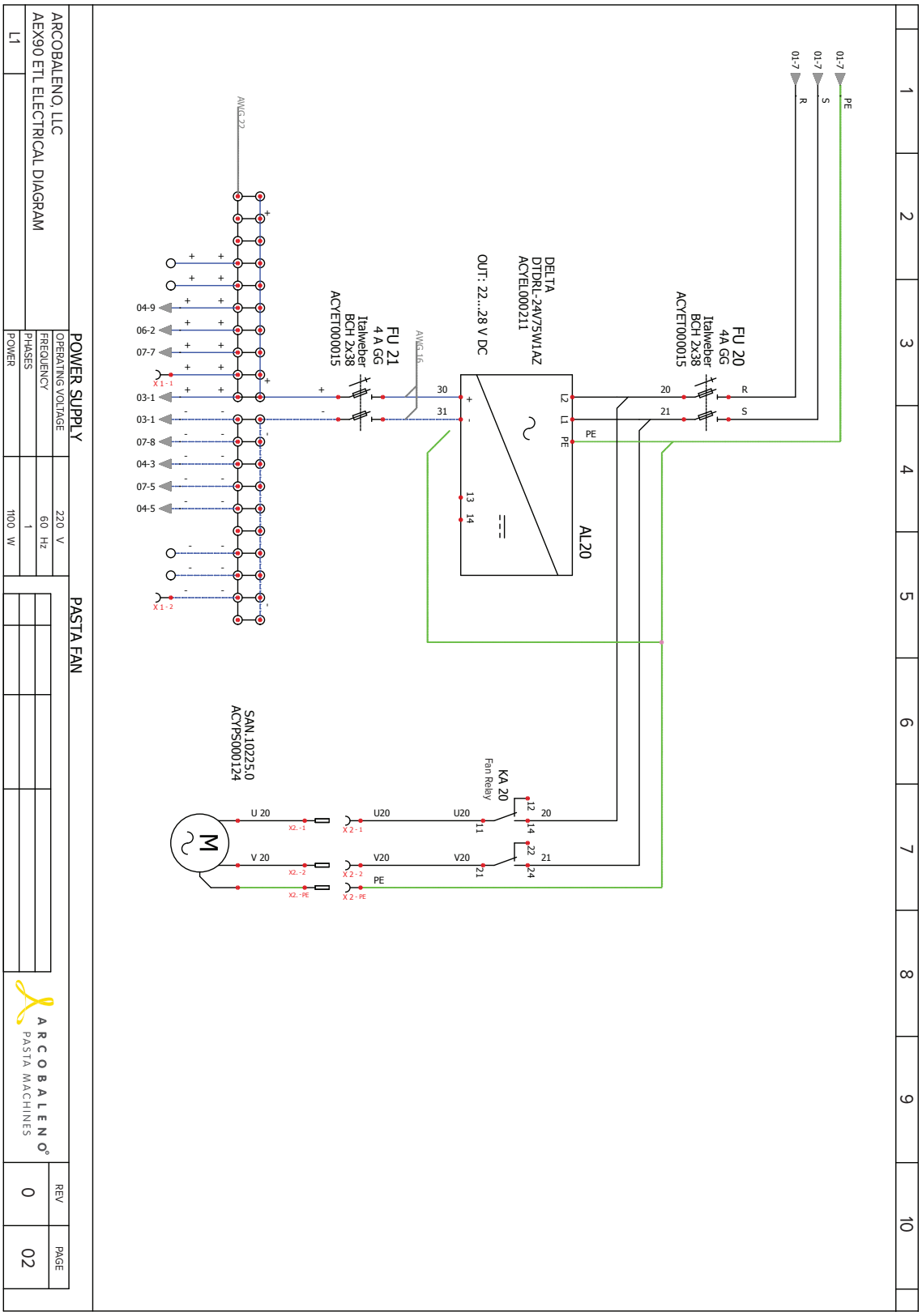
ARCOBALENO®
PASTA MACHINES

SCRAPPING & DISPOSAL, ELECTRICAL DIAGRAM
MODEL AEX90



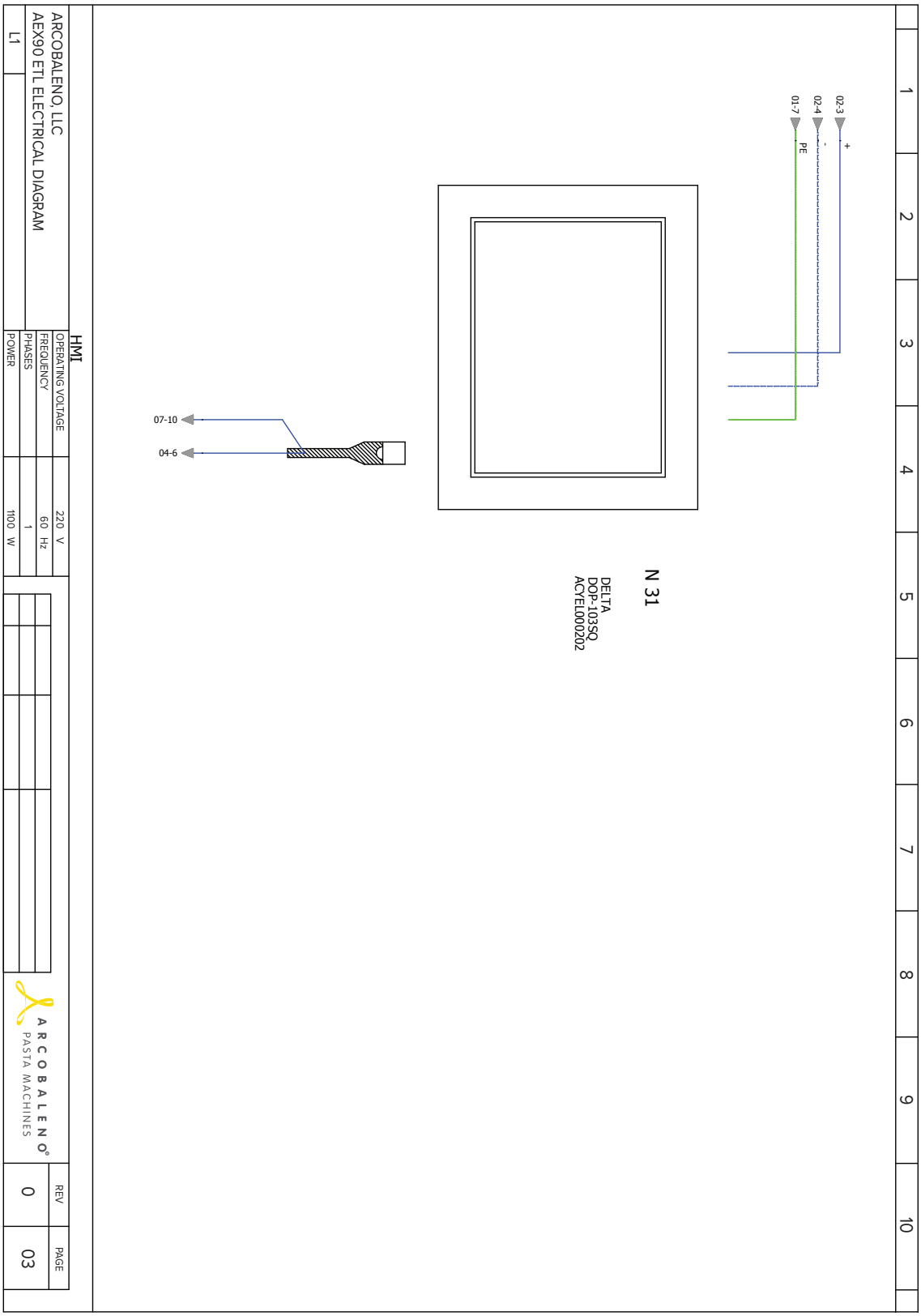
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SCRAPPING & DISPOSAL, ELECTRICAL DIAGRAM
MODEL AEX90



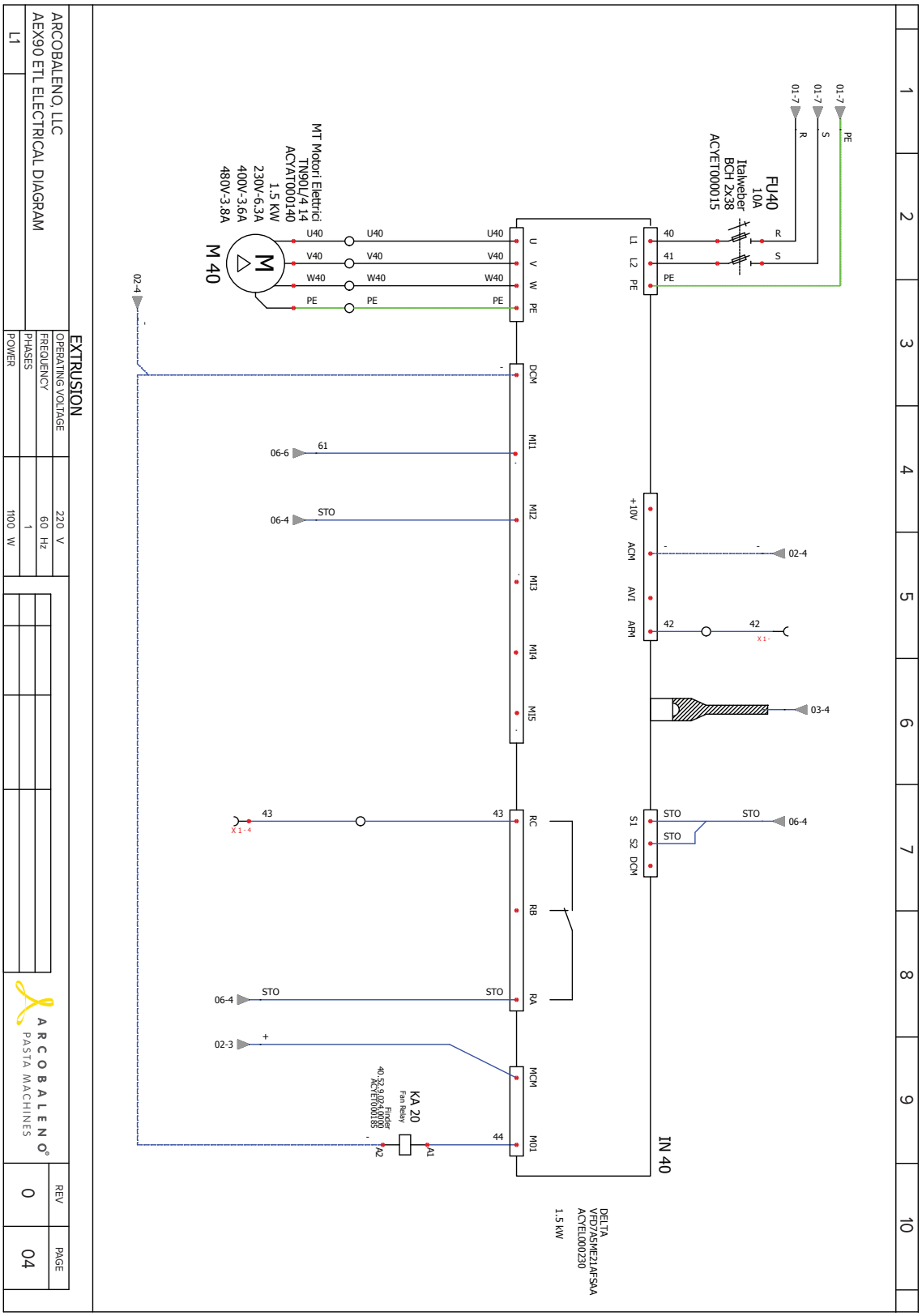
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SCRAPPING & DISPOSAL, ELECTRICAL DIAGRAM
MODEL AEX90



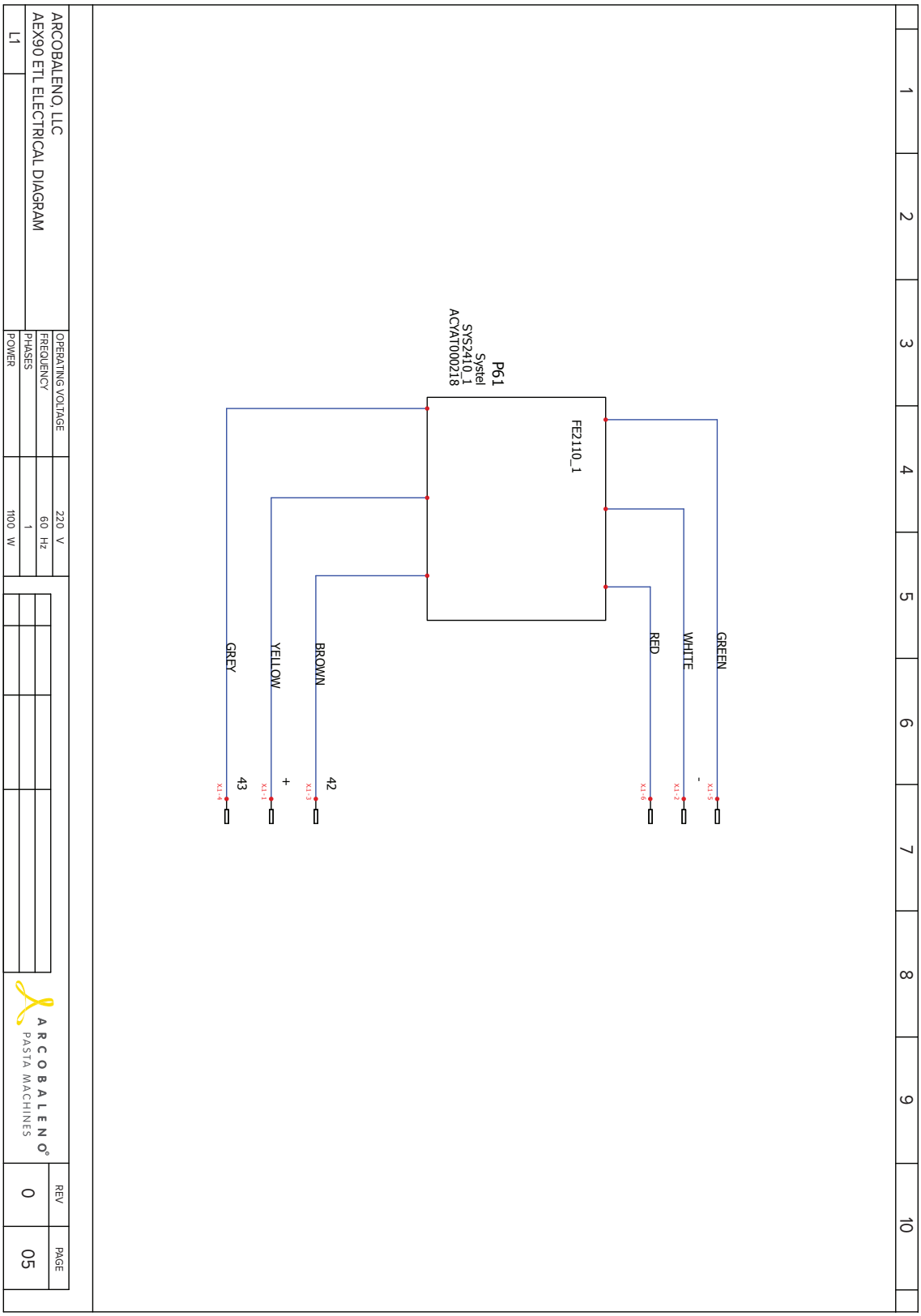
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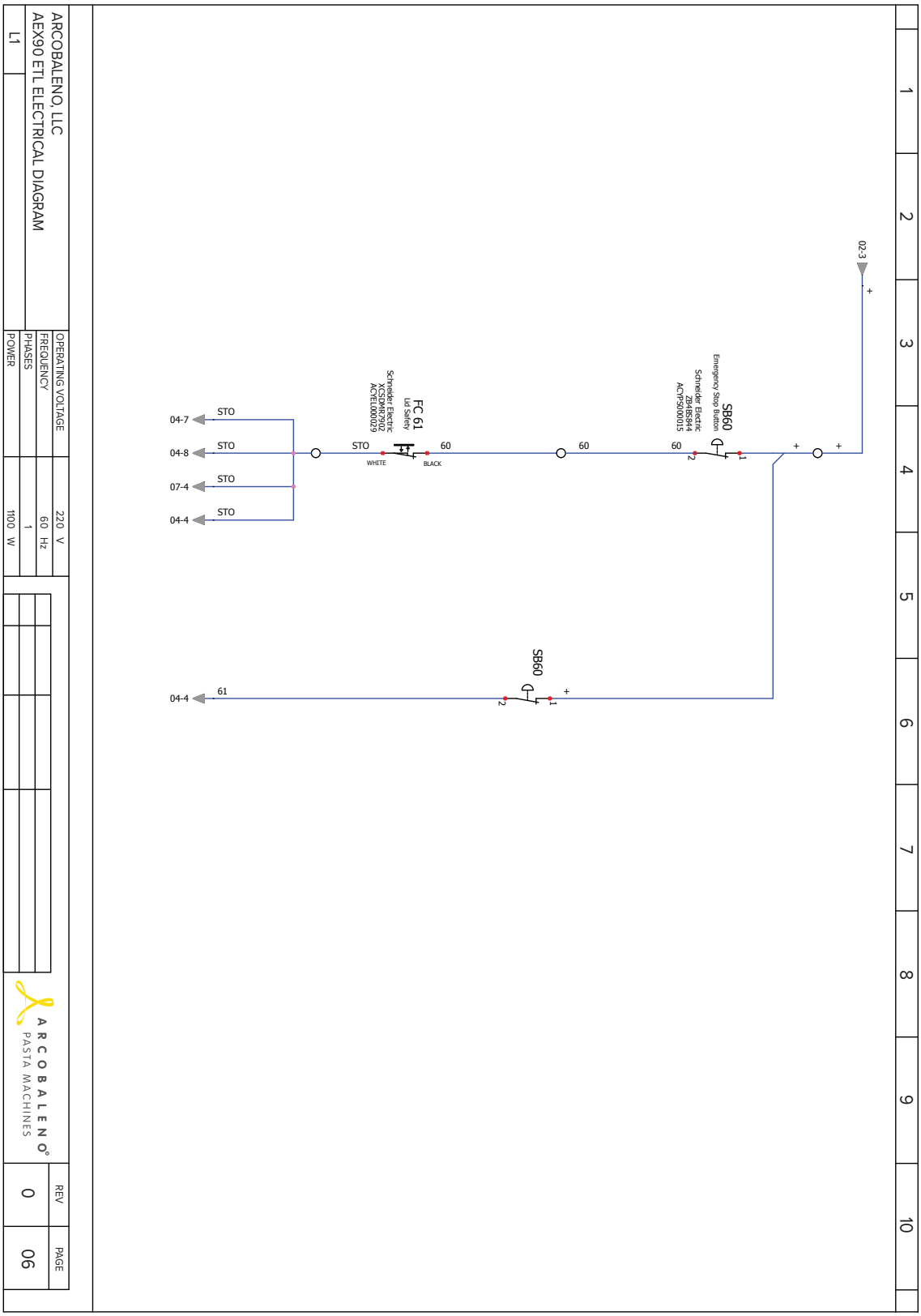
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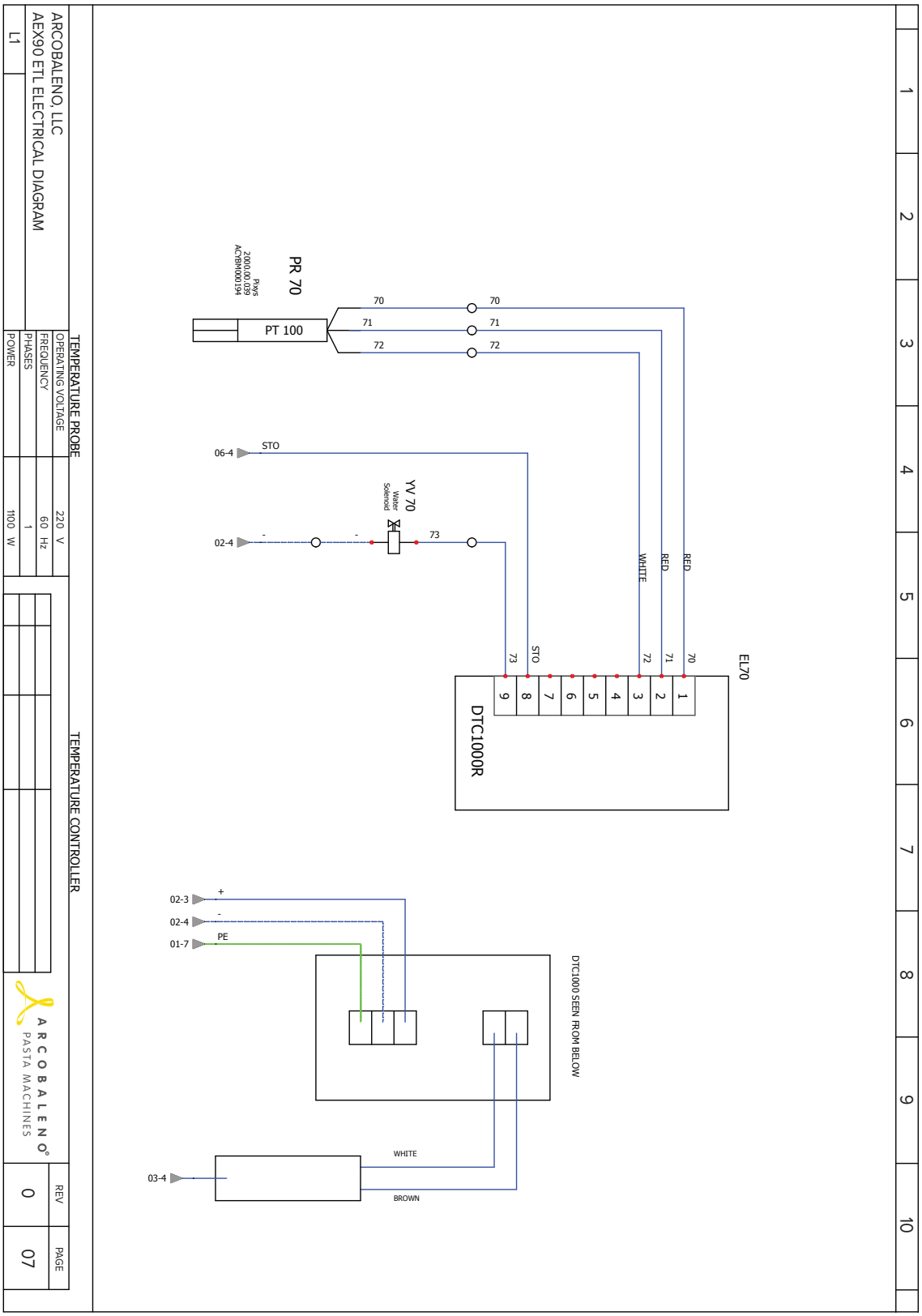
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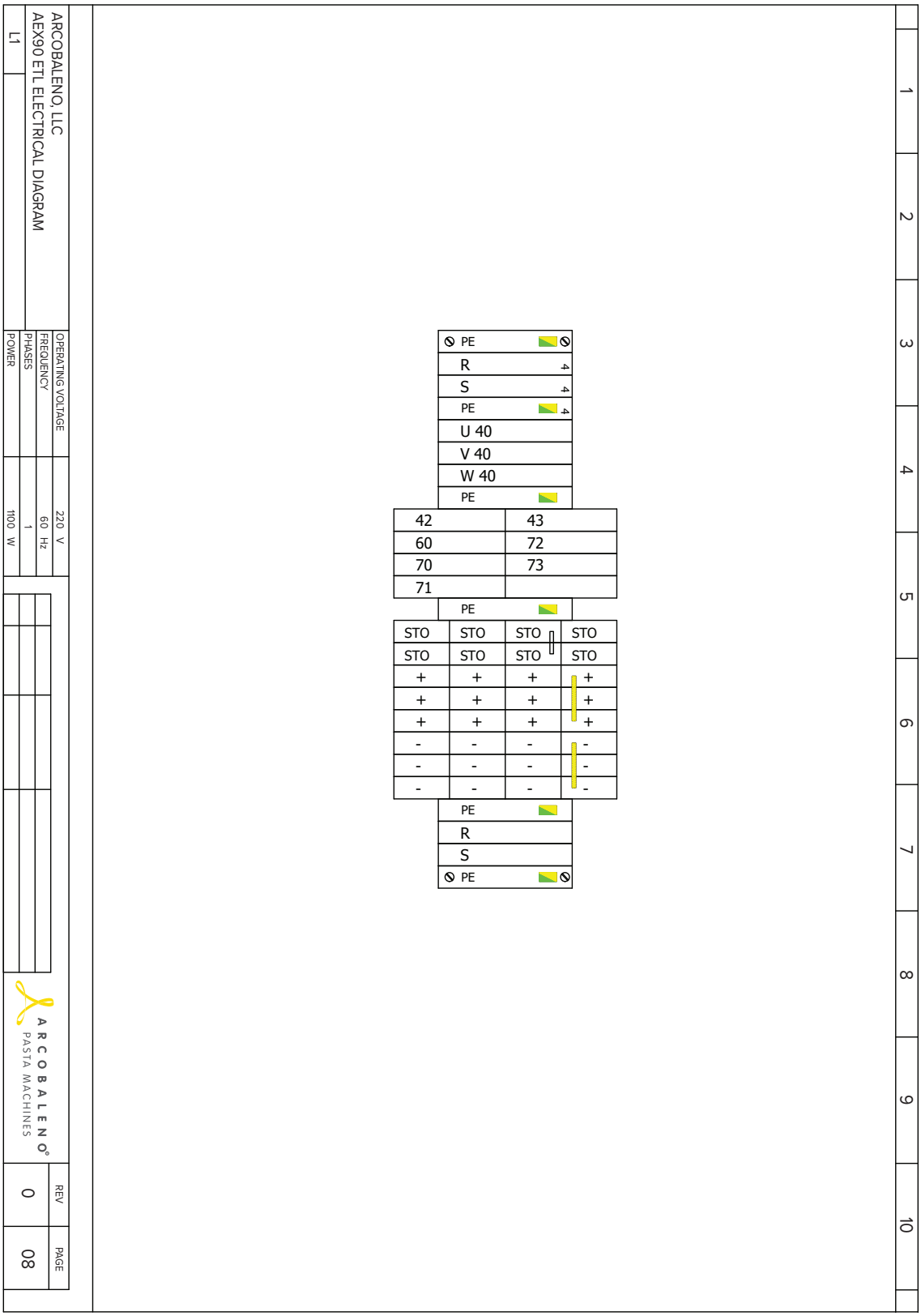
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