



**AMERICAN EAGLE**®

**FOOD MACHINERY, INC.**

*"The Value Leader in Commercial Bakery and Restaurant Equipment!"*

773-376-0800 (P) • 773-376-2010 (F) • 3131 S. Canal St. Chicago, IL 60616

Visit us online for more product information:

[www.americaneaglemachine.com](http://www.americaneaglemachine.com)

*Mixers, Dough Sheeters, Dough Dividers, Meat Slicers, and more!*

## **SPIRAL MIXER OPERATION MANUAL**

### **AE-1220 / AE-3050 / AE-4065 / AE-5080**



#### **WARRANTY REGISTRATION**

GO TO: [WWW.AMERICANEAGLEMACHINE.COM](http://WWW.AMERICANEAGLEMACHINE.COM) OR  
MAIL THE ENCLOSED WARRANTY REGISTRATION CARD  
*WARRANTY NOT VALID UNLESS REGISTERED!*

**REGISTRATION MUST BE COMPLETED WITHIN 30 DAYS OF  
PURCHASE AND INCLUDE A COPY OF INVOICE OR RECEIPT**

**SAVE THIS MANUAL FOR FUTURE REFERENCE**

Proud Member of:  
  
North American Association of  
Food Equipment Manufacturers

**Quality • Value • Reliability**



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**AE-1220 / AE-3050 /  
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FOR FUTURE REFERENCE, PLEASE RECORD THE FOLLOWING INFORMATION:

MODEL: \_\_\_\_\_ DATE OF PURCHASE: \_\_\_\_\_

SERIAL: \_\_\_\_\_ PURCHASED FROM: \_\_\_\_\_

PURCHASED BY: \_\_\_\_\_ INVOICE / RECEIPT #: \_\_\_\_\_

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## Introduction and Notice to User

Thank you for choosing to purchase an American Eagle machine! American Eagle Food Machinery, Inc. has been manufacturing and distributing restaurant and bakery equipment for over 30 years. Our machines are designed for heavy duty, commercial use, and are ETL certified to NSF No. 8, CSA, and CE standards. As long as the equipment is properly maintained and used in accordance with this manual, you will enjoy years of productive service. **You are responsible for understanding safe and proper use of the machine.**

To prevent illness, sickness or death caused by food-borne pathogens, the machine and machine parts should be cleaned in accordance with state and local health department regulations. While cleaning and before operating, visually inspect the machine and parts for any damage. **Do not use the machine if anything is damaged!**

**NOTE:** Unpack the machine as soon as possible. If the machine is damaged, contact the carrier within fifteen (15) days of delivery. Immediately contact American Eagle about the machine. **After fifteen (15) days there will be no options to remedy any shipping damage.**

**NOTE:** You should receive: the spiral mixer, warranty card, and a manual.

*If you are missing anything, need assistance, need service/repairs, or want to order accessories, **contact American Eagle at 773.376.0800 or 800.836.5756.** See next page for key components, specifications, included accessories and optional accessories.*



This Caution Sign will be used in the manual to warn you against injury or potential injury to the **Operator**



This Warning Sign will be used in the manual to warn you against damage or potential damage to the **Machine**

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## Key Components and Specifications



### Specifications




Model	Capacity	Motor	Voltage V/HZ/PH	Amps	Agitator Speeds	Transmission	Ship Weight	Net Weight
AE-1220	40 Quarts Max 26 lbs flour Max 44 lbs dough	1.5 HP Agitator  0.5 HP Bowl	220/60/3	7 / 4	Low: 142  High 284	Belt Driven	450 lbs	331 lbs
AE-3050	80 Quarts Max 66 lbs flour Max 110 lbs dough	3 HP Agitator  1 HP Bowl	220/60/3	10 / 3.6	Low: 138  High: 276	Belt Driven	1058 lbs	880 lbs
AE-4065	100 Quarts Max 88 lbs flour Max 154 lbs dough	5 HP Agitator  2 HP Bowl	220/60/3	18 / 15	Low: 138  High: 276	Belt Driven	1124 lbs	993 lbs
AE-5080	125 Quarts Max 100 lbs flour Max 176 lbs dough	7 HP Agitator  3 HP Bowl	220/60/3	24.2 / 16.3	Low: 122  High: 243	Belt Driven	1250 lbs	1147 lbs

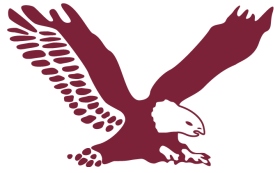


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## IMPORTANT SAFETY RULES

- **ONLY** install equipment on a clean, level, non-skid surface and in a well-lit area.
-  • **ALWAYS** make sure that your outlet meets the electrical specifications of the machine. Check the name plate for the correct specifications. **Using the wrong electrical specifications may create hazards and will void the warranty.**
- **DO NOT** bypass safety features on this equipment, alter, or modify any component from its original condition. Doing so may create hazards and will void the warranty.
-  • **DO NOT** use this machine for any applications other than food processing.
- **DO NOT** leave the machine in operation unattended.
- Observe maintenance and safety inspection schedules.
- **DO NOT OPERATE** outdoors without shelter from rain, snow, dirt and dust.
- **DO NOT OPERATE** the spiral mixer in extremely hot or cold air temperatures. Only operate the mixer between 45°F and 95°F (7.2°C to 35°C).
-  • Keep hand, clothing & rigid objects **away** from bowl and agitator when machine in operation.
- **ALWAYS UNPLUG BEFORE CLEANING, SERVICING, OR REMOVING PARTS.**



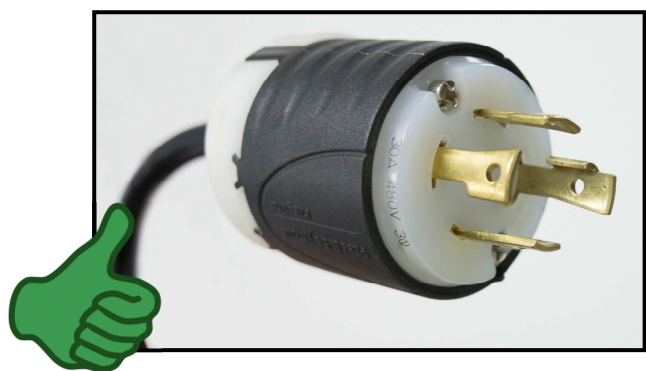
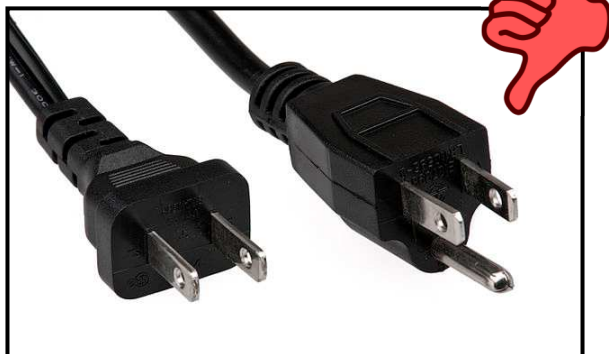
## Installation Instructions

### INSTALLATION:

1. The machine shipped fully assembled, and ready for installation. It must be installed on a level floor. It should be placed in a location that is convenient for both operation and maintenance. The machine's safety features make it possible to stand close to the machine during operation.
2. Thoroughly clean the machine before using. Refer to Cleaning Procedures section.
3. Contact American Eagle if you have any questions or problems with the installation or operation of this mixer. **Do not return to retailer or dealer!**

### MOVING THE MIXER:

1. **Do not** push or drag the machine on the floor.
2. Adjust the machines stabilizing feet so they are raised from the floor. The spiral mixer has castors underneath the frame that will allow you to roll the mixer safely across a smooth floor. Once the mixer is in the desired position, adjust the machine's stabilizing feet, so that the machine is level on the floor with the castors suspended from the surface.



**THIS MACHINE IS DESIGNED FOR USE WITH A THREE PHASE PLUG FOR PROPER GROUNDING. THE OUTLET USED WITH THE PLUG MUST BE PROPERLY GROUNDED. CONTACT AN ELECTRICIAN TO FIX YOUR OUTLET IF IT IS NOT THE PROPER TYPE BEFORE OPERATING THE MACHINE. DO NOT REMOVE OR CUT OFF THE GROUND PRONG OR USE AN ADAPTER PLUG.**



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## Cleaning Procedures

### TO AVOID SERIOUS INJURY AND DAMAGE TO MACHINE:



- **BEFORE CLEANING, SERVICING, OR REMOVING COMPONENTS**, always unplug the machine.



- **DO NOT** attempt to clean while the mixer is in operation.
- **DO NOT** immerse the unit in water.



- **DO NOT PRESSURE WASH, SPRAY DOWN, OR POUR WATER** onto the mixer.
- **DO NOT** use products that contain sodium hypochlorite (bleach) on the mixer.



- **DO NOT** use **ABRASIVE MATERIAL** such as **SCRUBBER PAD**, or **STEEL WOOL** to clean the machine. This will scratch the polished surface of the stainless steel.

- **ALWAYS FOLLOW** the directions on the sanitizer container or those provided by the vendor. Allow the mixer to air dry, or wipe dry before use.
- To prevent illness or death caused by food-borne disease, bacteria, and pathogens, it is important to clean and sanitize the mixer bowl and agitator on a regular basis as any component of the mixer can get contaminated during use. **You are responsible for adhering to all guidelines and laws established by local municipal and/or state health departments to prevent contamination of the machine and the processed food.**



It is critical to properly **CLEAN THE ENTIRE MACHINE** and follow the instructions very carefully on your sanitizer container to properly kill harmful bacteria and pathogens. **Chlorine, iodine or quaternary ammonium are common sanitizers safe to use.**



**IMPORTANT:** Use of cleaning solutions **NOT DESIGNATED** for stainless steel or using excessive amounts of sanitizer will cause damage to machine not covered by warranty. To understand proper sanitizer concentration, thoroughly read the FDA FOOD CODE: section 4-501.114, Manual and Mechanical Ware Washing Equipment, Chemical Sanitization - Temperature, pH, Concentration, and Hardness.

Visit [www.servsafe.com](http://www.servsafe.com) for information on kitchen and equipment sanitation procedures.

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## Cleaning Procedures

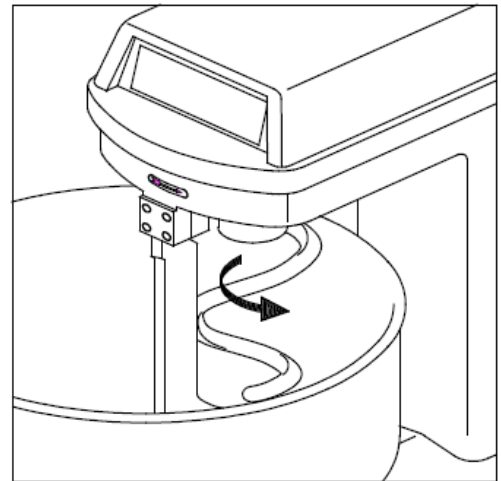
### **SPIRAL MIXER CLEANING & SANITIZING:**

1. Make sure the unit is turned off and disconnected from the power outlet.
2. After each day's use, wash the mixer bowl and agitator thoroughly with hot water and a mild soap solution and rinse with either a mild soda or vinegar solution.
3. Rinse thoroughly with clear water and wipe dry with a soft clean cloth.
4. Wipe exterior of machine with a clean damp cloth.
5. Clean under machine occasionally: disconnect power cord, raise stabilizing feet, and move machine.

### **ELECTRICAL CONNECTIONS:**

**WARNING:** BEFORE CONNECTING YOUR MACHINE TO ANY SOURCE OF ELECTRICAL POWER, READ THE SPECIFICATIONS ON THE MACHINE'S NAMEPLATE CAREFULLY. BE SURE THEY COINCIDE WITH THOSE OF YOUR POWER SOURCE.

- Electrical connection should be carried out by a qualified person and should comply with all relevant safety rules and regulations.
- Appropriate fuses must be installed to provide adequate protection in case of a short circuit.
- Special attention should be given for 3 Phase power to making the correct electrical connection regarding the direction of rotation of the spiral agitators. **The correct direction of agitator rotation is indicated by an arrow on the front of the mixer.**



**NOTE:** INCORRECT INSTALLATION AND WIRING WILL VOID WARRANTY. PLEASE ENSURE AFTER WIRING THAT THE AGITATOR IS ROTATING IN THE CORRECT DIRECTION. RE-WIRE THE POWER PLUG IF THE AGITATOR IS ROTATING IN THE WRONG DIRECTION.





## Panel and Mixing Operation

### MAXIMUM MIXING CAPACITY

The moisture content of heavy dough is a critical factor when selecting proper mixing speed. To determine the **Absorption Ratio (AR)** of a product, **water weight divided by flour weight**.

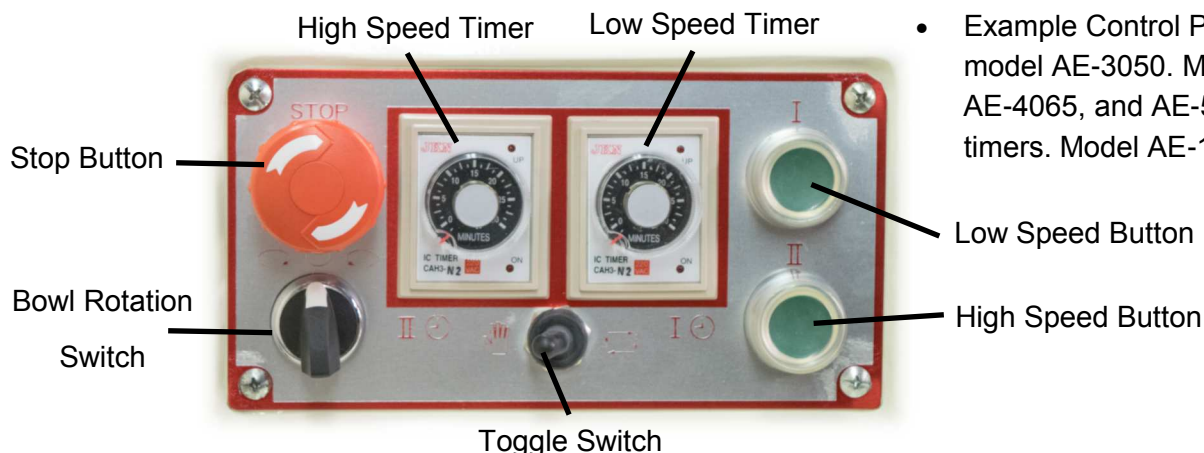
**Example:** Calculate the Absorption Ratio of a mixture containing 5 lbs. of water and 10 lbs. of flour.  $5 \div 10 = 0.50 = 50 \% = AR$

Product	Maximum Capacity
Bread dough, 50%AR	94 lbs.
Bread dough, 55%AR	100 lbs.
Bread dough, 60%AR	110 lbs.
Whole wheat, 70%AR	110 lbs.
Pasta dough	37 lbs.
Pizza dough (thin), 40% AR	47 lbs.
Pizza dough, 45% AR	62 lbs.
Pizza dough (med), 50% AR	94 lbs.
Pizza dough (thick), 60% AR	110 lbs.

#### NOTES:

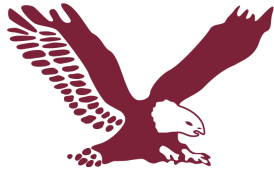
- All Examples given are for model **AE-3050**. Separate Capacity and AR calculations should be made for different models.
- The capacity chart should only be used as a guideline.
- If high gluten flour is used, reduce the dough batch size by 10 %
- If ice water is used, reduce the amount by 10%
- 1 gallon of water weighs 8.33 lbs

### CONTROL PANEL OPERATION



#### NOTES:

- Example Control Panel is that of model AE-3050. Models AE-3050, AE-4065, and AE-5080 have dual timers. Model AE-1220 does not.



## Panel Operation

Function Desired	Do This	Result
Manual (Continuous) Mixing	Turn <b>TOGGLE SWITCH</b> to <b>MANUAL</b>	Manual control
	Press <b>LOW SPEED BUTTON</b>	Starts low speeding mixing.
	Press <b>HIGH SPEED BUTTON</b>	Starts high speed mixing.
	Press <b>STOP</b>	Mixing pause. To continue mixing, press <b>HIGH SPEED</b> or <b>LOW SPEED BUTTON</b> .
Timed Mixing at Low Speed	Turn <b>TOGGLE SWITCH</b> to <b>AUTOMATIC</b>	Automatic control
	Set Timer ( <b>LOW SPEED</b> ) to desired time and set Timer ( <b>HIGH SPEED</b> ) to <b>ZERO</b>	Time is set.
	Press <b>LOW SPEED BUTTON</b>	Starts low speed mixing. Mixer stops automatically according to timer.
	Press <b>STOP</b>	Mixing pauses. To continue mixing reset time and press start.
Timed Mixing at High Speed	Turn <b>TOGGLE SWITCH</b> to <b>AUTOMATIC</b>	Automatic control
	Set Timer ( <b>HIGH SPEED</b> ) to desired time and set Timer ( <b>LOW SPEED</b> ) to <b>ZERO</b>	Time is set.
	Press <b>HIGH SPEED BUTTON</b>	Starts high speed mixing. Mixer stops automatically according to timer.
	Press <b>STOP</b>	Mixing pauses. To continue mixing reset time and press start.
Timed Mixing at Two Speeds	Turn <b>TOGGLE SWITCH</b> to <b>AUTOMATIC</b>	Automatic control
	Set both <b>HIGH SPEED</b> and <b>LOW SPEED</b> timers to desired time	Two timers are set.
	Press <b>LOW SPEED BUTTON</b>	Starts low speed mixing. When mixing time for low speed expires, control automatically switches to high speed. When mixing time for high speed expires, mixer stops.
	Press <b>STOP</b>	Mixing pauses. To continue mixing reset time and press start.



## Troubleshooting

Issue	Possible Cause
Mixer will not start.	Check to see that the bowl guard is in lower position.
	Check electric cord to see if it is plugged into receptacle.
	Check electrical supply at breaker (fuse) box.
	Check electrical box.
	Check that the Emergency STOP button is reset by twisting knob clockwise.
Mixer bowl and/or hook run in the opposite direction than what is indicated on the control panel.	The polarities on the electrical plug are reversed. Have an electrician match the correct wires with the correct contact point on the 3 phase plug.
There is a rhythmic, loud clicking or hitting noise while the mixer is in operation.	There may be a broken ball bearing—most likely a ball bearing meant to provide smooth operation of the rotating bowl.



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## Limited Warranty Statement

### Parts: 1 Year • Labor: 1 Year

All equipment, which is sold under American Eagle Food Machinery, Inc. (AEFM) trademark and used for commercial purposes, is warranted against defects in materials and workmanship for a period of one year parts and 90 days labor, except as specifically defined below. The warranty period begins from the date of original purchase as evidenced by original retail purchase receipt or invoice. This warranty is given solely to the original owner/user of the product from a retail store or dealer. No warranty is given to subsequent transferees.

#### **WARRANTY EXCLUSIONS (Items not covered under warranty):**

Any expendable supply items subject to normal wear-and-tear. Belts, agitators, bowls, safety guards, and other adjustments required due to installation, setup, or normal wear of machine.

#### **WARRANTY PROCEDURE: Contact customer service for an RMA (Return Merchandise Authorization) number.**

**NO WARRANTY SERVICE WILL BE PROVIDED UNLESS EXPLICITLY AUTHORIZED BY AEFM.** AEFM will repair or, at its option, replace the defective product or part. Any replacement item will be refurbished and warranted with the balance of original warranty period or 90 days, whichever expires last.

- To obtain warranty service, the owner/end user will be responsible for the costs of returning all items to AEFM's warehouse. SAVE ALL ORIGINAL PACKAGING or use comparable packaging. Any damage caused during a return process will void the warranty.
- No warranty will be available for motors or parts damaged by changing directions or gears improperly (i.e. not allowing motor to stop completely before switching between forward and reverse, or switching speeds without stopping), overloading equipment, or using improper electrical service, as determined by AEFM, or an AEFM Authorized Service Technician
- AEFM may at its option, authorize an Advance RMA and ship a replacement product or part prior to receiving a defective item. Such cases will require credit card authorization on file. The MSRP cost will be charged for any items not returned within fifteen (15) days of receiving the replacement.
- AEFM may at its option, authorize a third party service agency to perform on-site repairs for items greater than 100 lbs.

#### • **Any Factory Refurbished Equipment carries a warranty period of 90 days parts, 45 days labor**

**THIS WARRANTY IS ONLY VALID IF A PROPERLY COMPLETED WARRANTY REGISTRATION FORM AND COPY OF PURCHASE RECEIPT OR INVOICE HAS BEEN RECEIVED BY AEFM, INC. WITHIN THIRTY (30) DAYS FROM PURCHASE DATE.** Any defects in materials or workmanship must be reported within thirty (30) days of occurrence and said occurrence being within warranted time period.

**REGISTER WARRANTY ONLINE: [WWW.AMERICANEAGLEMACHINE.COM](http://WWW.AMERICANEAGLEMACHINE.COM) OR REFER TO WARRANTY CARD.**

This warranty is void if damage occurs because of freight or shipping damage, accident, carelessness, abuse, improper installation, lack of proper maintenance and cleaning, acts of God or Nature, or if the equipment is installed or operated in any manner contrary to installation and operating instructions. In those cases, repairs will be made at the owner's request and authorization, at a reasonable cost. Work performed by unauthorized personnel or unauthorized service agencies voids this warranty.

**LIMITATION OF LIABILITY:** The liability of AEFM is expressly limited to repairing or replacing equipment that proves to be defective in materials or workmanship within the warranty period. AEFM expressly excludes liability for incidental or consequential damages to purchaser/owner or any third party, including but not limited to and without limitation, damages arising from personal injuries, lost profits, loss of business opportunity, loss of property, economic losses or statutory or exemplary damages whether through negligence, strict liability or otherwise.

**OTHER WARRANTIES:** This warranty is in lieu of all other warranties, express or implied. AEFM expressly disclaims any implied warranty of merchantability or expressed or implied warranty of fitness for a particular purpose. This is the sole Warranty Agreement between AEFM, Inc. and the owner/end user. No other agreement is implied, authorized or assumed, whether by AEFM or any third party.

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