Model ERGO150 VL5

Varimixer

Model #:_____

Serial #:_____

Instruction Manual for Varimixer Mixers

ERGO VL5 Series: ERGO100-2IP53, ERGO150-2IP53, ERGO150-8IP53, ERGO100-2IP54, ERGO150-2IP54 & ERGO150-8IP54

For all after sales support, visit www.varimixerusa.com

- **Complete the Warranty Registration**
- **Find an Authorized Servicer**
- **View Parts Catalogs**

For additional Technical Support call Varimixer USA at 1-800-222-1138.

⚠WARNING

IMPORTANT: PERSONS WITH PACEMAKERS
Persons with pacemakers should stay at least 3 feet away from the mixer.
When using the mixer with the general public, a pacemaker notice should be posted near the equipment when in use.

- IMPORTANT SAFETY NOTICE -

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

Maintain and use this manual as a reference for training.

Version: PLC: 100224
HMI: 061925

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Attention Owners and Operators

Varimixer equipment is designed to provide safe and productive processing of food products as long as the equipment is used in accordance with the instructions in this manual and is properly maintained. Unless the operator is adequately trained and supervised there is a possibility of serious injury. Owners of this equipment bear the responsibility to make certain this equipment is used properly and safely, and to strictly follow all of the instructions contained in this manual and the requirements of local, state and/or federal law.

Owners should not permit anyone to touch this equipment unless they are 18 years of age or older, are adequately trained and supervised, and have read and understand this manual. Owners should also ensure no customers, visitors or other unauthorized personnel come in contact with this equipment. Please remember Varimixer cannot anticipate every circumstance or environment in which its equipment will be operated. It is the responsibility of the owner and the operator to remain alert to any hazards posed by the function of this equipment. If you are ever uncertain about a particular task or the proper method of operating this equipment, ask your supervisor.

This manual contains a number of precautions to follow to help promote safe use of this equipment. Throughout the manual you will see additional warnings to help alert you to potential hazards.

or

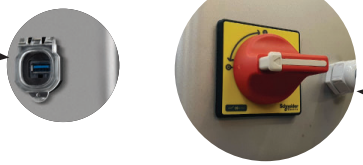
Warnings affecting your personal safety are indicated by:

Warnings related to possible damage to the equipment are indicated by:

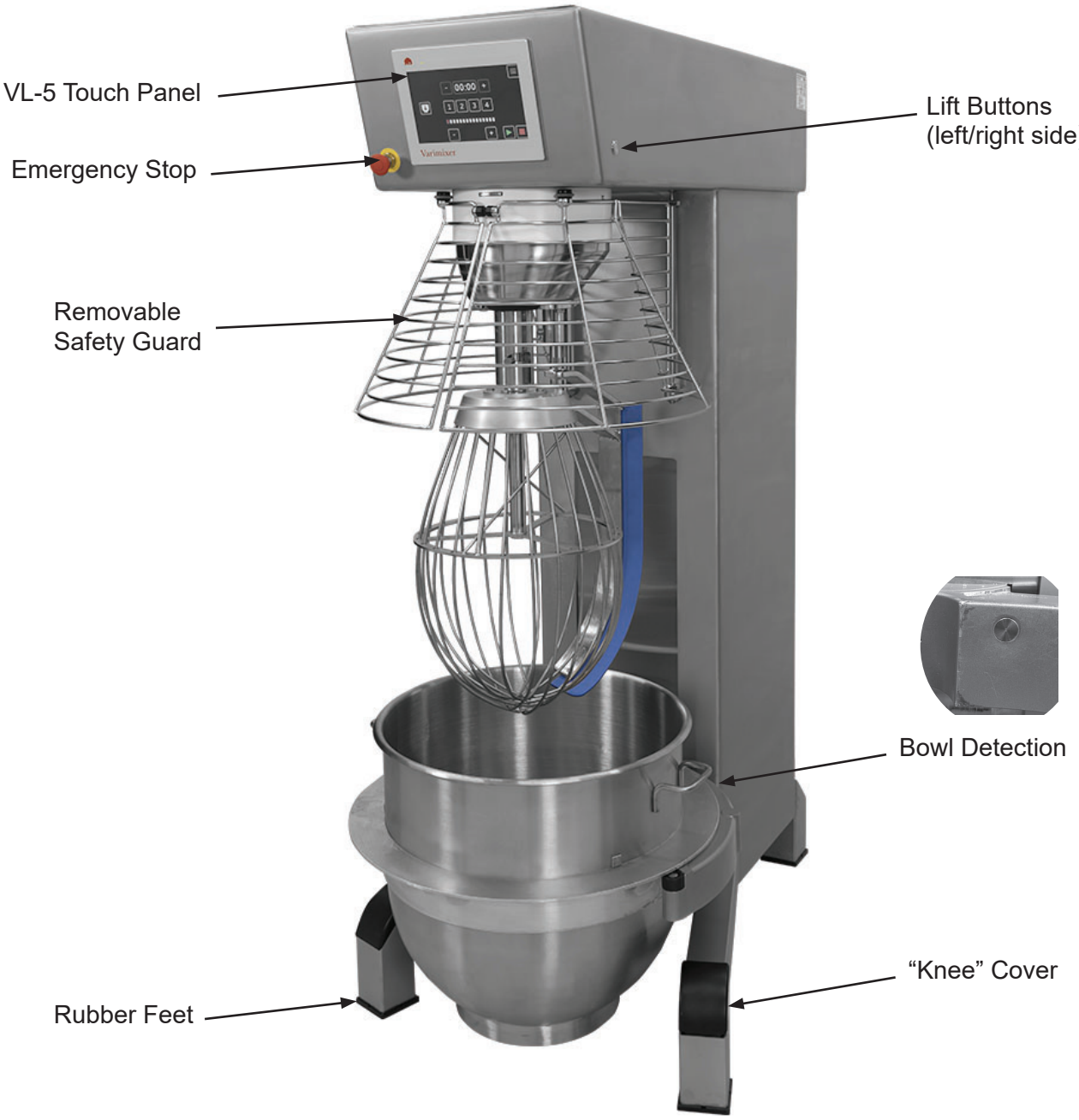
Varimixer has put several warning labels in English on its mixers (Refer to Operator Interface, Settings for other language options). French labels are also available and can replace the English labels at the owner's discretion. If the warning labels and/or manual are misplaced, damaged, or illegible, or if you require additional copies, please contact your nearest representative or contact Varimixer directly to request these items at no charge.

Please remember neither manual nor the warning labels replace the need to be alert, to properly train and supervise operators, and to use common sense when using this equipment.

Key Components of the Mixer



Back of Mixer



ERGO150, VL-5

Safety Instructions

TO AVOID SERIOUS PERSONAL INJURY:

⚠WARNING

- **DO NOT OPERATE MIXER BEFORE READING THE INSTRUCTION MANUAL FIRST.**
- **ALWAYS DISCONNECT OR UNPLUG ELECTRICAL POWER BEFORE CLEANING, SERVICING, OR ADJUSTING PARTS OR ATTACHMENTS.**
- **ALWAYS KEEP HANDS, HAIR AND CLOTHING AWAY FROM MOVING PARTS.**

IMPORTANT: PERSONS WITH PACEMAKERS
Persons with pacemakers should stay at least 3 feet away from the mixer. When using the mixer with the general public, a pacemaker notice should be posted near the equipment when in use. (Figure 6-1 & 6-2).

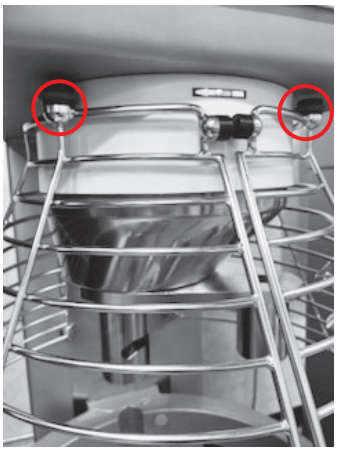


Figure 6-1

Figure 6-2

Installation

UNPACKING

Unpack the mixer immediately after receipt. If the machine is found to be damaged, immediately contact us at vna.techsupport@varimixerusa.com or call 1-800-222-1138. Please include your name, serial #, item that is damaged, explanation of the damage and photographs if possible. The damage must be reported to Varimixer within seven (7) days from the time of shipment.

⚠WARNING

TO AVOID SERIOUS PERSONAL INJURY:

- **ALWAYS** install equipment in work area with adequate light and space.
- **NEVER** bypass, alter, or modify this equipment in any way from its original condition. Doing so can create hazards and will void the warranty.
- **NEVER** operate mixer without all warnings attached.

INSTALLATION

1. Read this manual thoroughly before installation and operation. DO NOT proceed with installation and operation if you have questions or do not understand everything in this manual. Contact your local representative or Varimixer first.

⚠CAUTION

THE ERGO MIXER MUST BE SECURELY FASTENED TO THE FLOOR OF THE FACILITY WITH WEIGHT APPROPRIATE CONCRETE ANCHORS. THIS WILL ENSURE THE MIXER WILL PERFORM AT IT'S PEAK ABILITY BY PROVIDING A STABLE FOUNDATION FOR THE MIXER TO OPERATE.

NOTE: For service access, 20" of clearance from the top and back of the mixer is required.

2. Refer to the Installation Instruction Guide Section for instructions on how to setup the ERGO mixer at your location.
3. Inspect mixer to make sure all parts have been provided (i.e. safety guard, ingredient chute, rubber feet/spacers and bowl truck).
4. If selected during ordering, the bowl, whip, beater, hook, scraper with blade.

CONNECTING TO ELECTRICAL POWER

⚠WARNING

THE MIXER NEEDS TO BE HARD-WIRED, CONTACT A LICENSED ELECTRICIAN TO CONNECT THE MIXER TO THE POWER SUPPLY.

1. The electrical information can be found on the data plate located on the side of the machine. The incoming power must match the rating on the data plate.

	Voltage	Hertz	Phase	Amperage	Breaker	Connection
ERGO100-2 & ERGO100-2IP54	208-240VAC	60hz	3PH	16.5A	25A (Not included)	6ft Hard Wire (plug not included)
ERGO150-2 & ERGO150-2IP54	208-240VAC	60hz	3PH	28.5A	40A (Not included)	6ft Hard Wire (plug not included)
ERGO150-8 & ERGO150-8IP54	480VAC	60hz	3PH	14A	20A (Not included)	6ft Hard Wire (plug not included)

Installation

ABOUT THE REMOVABLE BOWL GUARD

The interlocking bowl guard is easy to remove and reattach for easy cleaning in a sink or dishwasher.

NOTE: When bowl guard is open or not properly installed, mixer will not operate.

NOTE: Open the bowl guard with two hands to attach agitators to mixer.

OPENING BOWL GUARD:

NOTE: Open the bowl guard to easily add ingredients and to properly remove the agitator and bowl from mixer.

1. Use two hands to open the bowl guard to the left and right of the mixer. (Figure. 8-1).

REMOVING AND ATTACHING THE BOWL GUARD:

NOTE: Before removing or attaching the bowl guard, make sure the bowl is in the down/lowered position.

1. To remove bowl guard for cleaning, use two hands to open the bowl guard and then lift the safety guard out of the hinges (Figure. 8-2).
2. To install the bowl guard, lift bowl guard gently into place and insert the bowl guard in the hinges. (Figure 8-3).

Figure 8-1

Figure 8-2

Figure 8-3

ATTACH AGITATOR TO MIXER (I.E., BEATER, HOOK, WHIP)

1. Open the bowl guard to the left and right of mixer so it rests in the open position (Figure 9-1).

CAUTION

USING EXCESSIVE FORCE TO OPEN AND CLOSE BOWL GUARD CAN DAMAGE THE SPRING LOCK AND BOWL GUARD MICROSWITCH AND WILL VOID THE WARRANTY.

2. Slide the agitator slowly upwards onto the planetary shaft, fitting the shaft pin through the slot in the agitator (Figure 9-2).
3. Rotate agitator clockwise to secure it onto the planetary shaft.

Figure 9-1

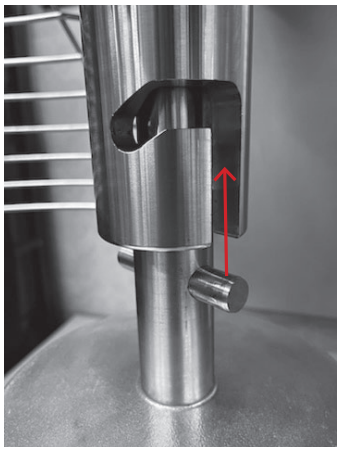


Figure 9-2

ATTACH BOWL TO MIXER

NOTE: Bowl for ERGO mixers must be rotated correctly. If the bowl is not in correct position, the bowl cannot be lifted and “03” will display on VL-5 touch panel. A short beep will sound when the bowl is installed in the correct position.

1. Use the bowl truck to install the bowl in the mixer under the planetary shaft between the bowl arms.
2. Push the bowl all the way back into the arms.
3. Close the bowl guard.

NOTE: When the bowl is approximatly 7-3/4” from the top position, the tool starts to rotate at low speed. The rotation of the tool and lifting of the bowl stops the bowl at its top position.

4. Press the two lifting buttons, located on each side of the upper part of the mixer, until the bowl stops at its top position. (Figure 9-3).

Figure 9-3

Touch Panel Features

Press minute and second digits to preset time. Time is displayed in a large frame after 10 seconds of operating

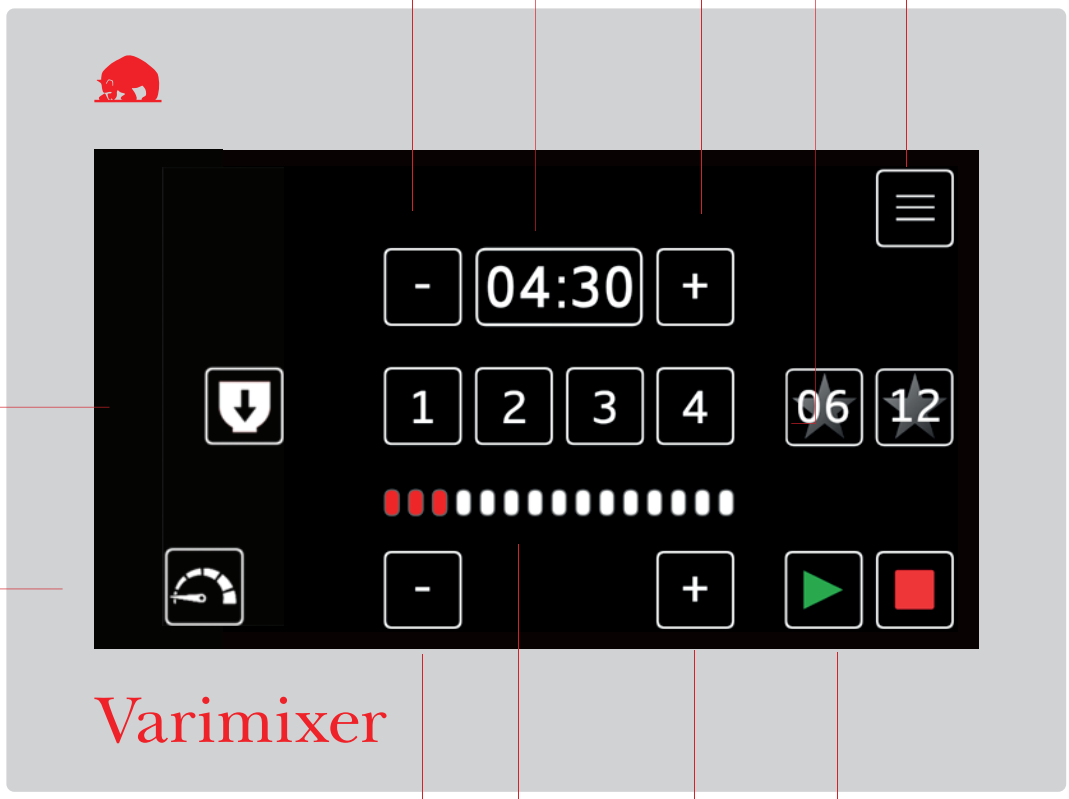
Buttons for selecting favorite recipe. Only visible when a favorite recipe has been assigned (Maximum of 2 display at a time)

Shortcut to favorite recipes

Decrease time

Increase time

Menu



Stir function slowly mixes ingredients (20 RPM)

Decrease speed

Increase speed

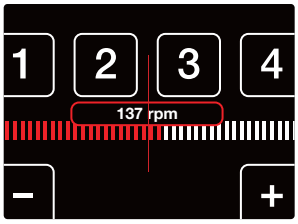
Stop
Double tap to reset time

Speed indicator

Start

Lower Bowl
Double tap for automatic bowl lowering

Value is shown while the RPM changes



Bowl up
Push both left / right side buttons at the same time

Bowl up
Push both left / right side buttons at the same time

OPERATING SCREEN

NOTE: The mixing time can be preset by selecting the minute or seconds.

1. Select the “-” or “+” symbols to decrease or increase the mixing time (Figure 11-1).

   NOTE: The mixer has four default speeds. Speed 1 (46 RPM), Speed 2 (137 RPM), Speed 3 (198 RPM) and Speed 4 (259 RPM).

2. Select one of the four default speeds (1-4) on the operating screen.

3. Select the green “start”symbol to begin mixing.

   CAUTION

   ALWAYS POSITION THE BOWL TRUCK UNDER THE BOWL LIFT BEFORE LOWERING THE BOWL TO PREVENT INJURY OR EQUIPMENT DAMAGE

   NOTE: To set the automatic lowering of the bowl once the mixing time has expired, double tap the “bowl down” symbol during mixing. “Bowl down” symbol will “flash” red.

4. During mixing, select the “-” symbol to decrease speed or the “+” symbol to increase speed by approximately 15 RPM increments.

   CAUTION

   DO NOT OPEN THE BOWL GUARD DURING MIXING. ALWAYS USE THE STOP BUTTON BEFORE OPENING BOWL GUARD. DAMAGE TO MIXER CAN OCCUR.

   NOTE: During mixing, when the red “stop” symbol is selected, the mixer will stop. The bowl guard can be opened and the “bowl down” symbol can be selected to lower the bowl to check ingredients.

5. Select the red “stop” symbol to stop the mixer at anytime during the mixing process. Speed setting will default back to 46 RPM. (Figure 11-2).

6. Select the red “stop” symbol two times to stop the mixer and reset the mixing time back to 0.

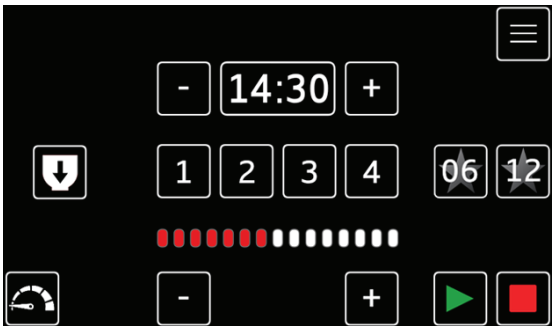


Figure 11-1.

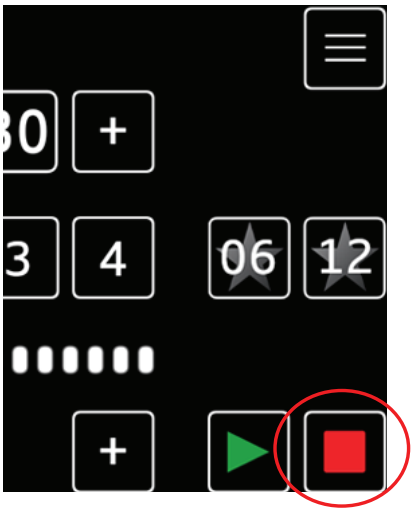


Figure 11-2.

MIXING INGREDIENTS

CAUTION

- **OVERLOADING OR NOT FOLLOWING THE CAPACITY CHART WILL DAMAGE THE MIXER AND VOID THE WARRANTY. REFER TO CAPACITY CHART SECTION.**
- **AGITATORS MUST ALWAYS ROTATE IN A COUNTERCLOCKWISE DIRECTION AROUND THE BOWL.**

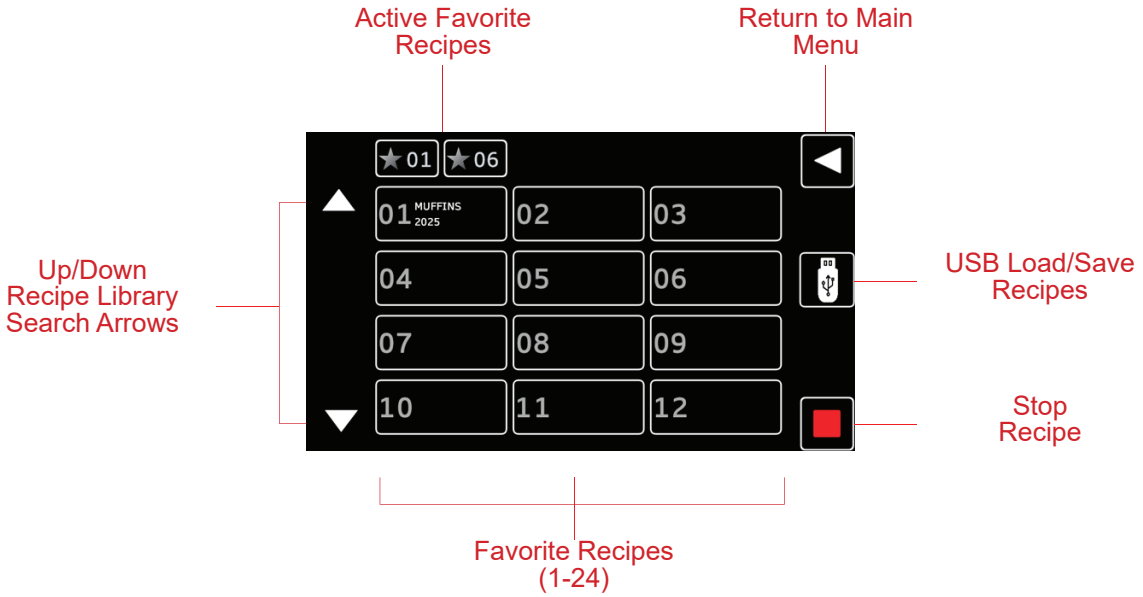
IMPORTANT: When mixing product always follow the recommended agitator and speed settings according to the Capacity Chart. Refer to Capacity Chart section.

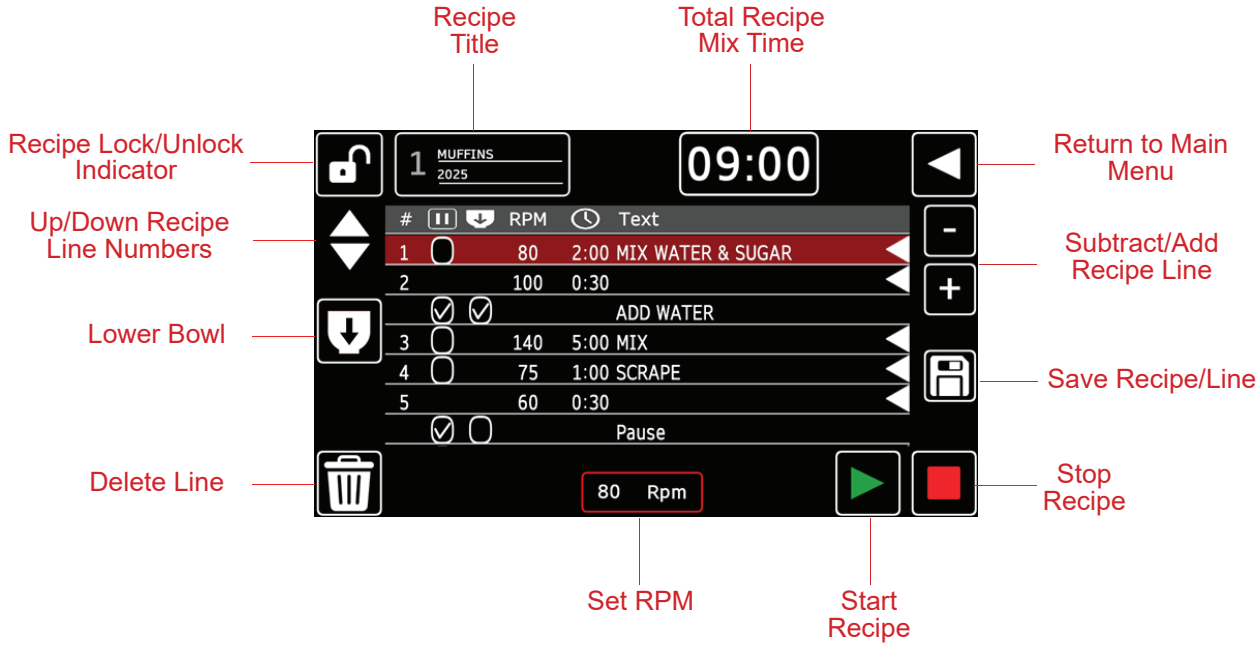
1. Add the appropriate amount of ingredients into the bowl. Refer to Capacity Chart section.
2. Close the bowl guard.

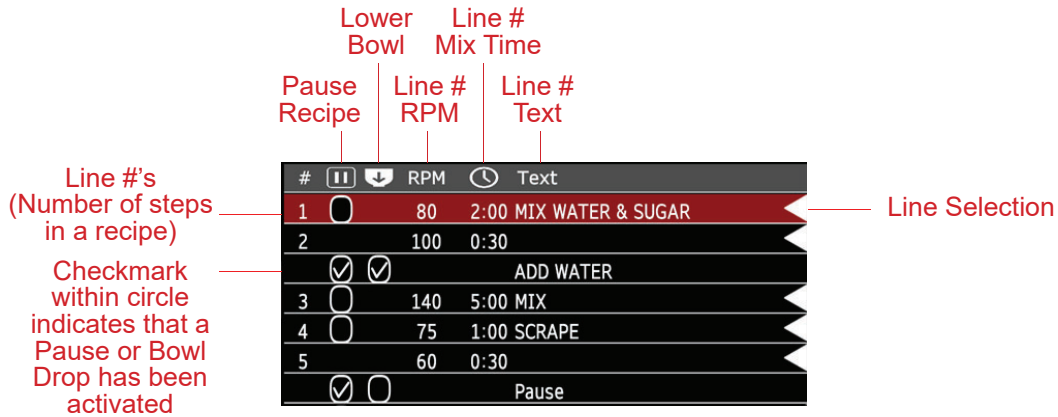
   NOTE: When the bowl is approximatly 7-3/4” from the top position, the tool starts to rotate at low speed. The rotation of the tool and lifting of the bowl stops the bowl at its top position.
3. Press the two lifting buttons, located on each side of the upper part of the mixer, until the bowl stops at its top position. (Figure 12-1)

Figure 12-1

Recipes Screen







Operator Interface

MAIN MENU

1. Select the main menu button in the top right corner of the display screen to access the recipes, operating log, settings or operating instructions. (Figure 14-1).
2. Select the white “back arrow” in the top right corner of the display screen to return to the operating screen. (Figure 14-2).

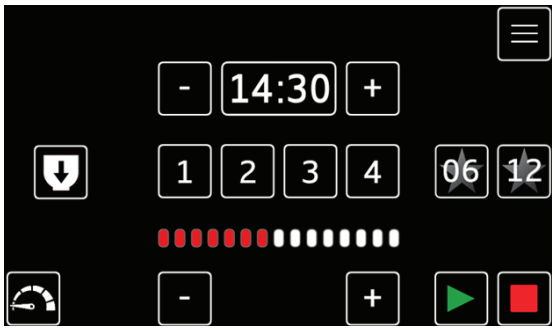


Figure 14-1.

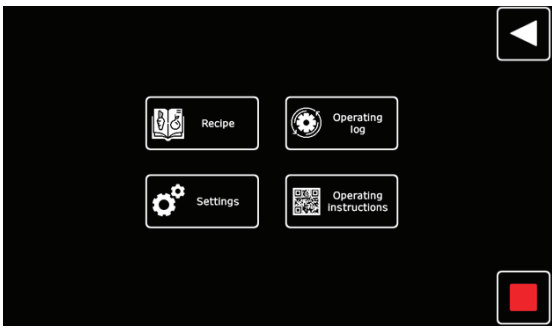


Figure 14-2.

HOW TO PROGRAM A RECIPE

1. Select the main menu button (Figure 14-1).
2. Select the “Recipe” button. (Figure 14-2).
3. Select an empty button to enter a recipe (1-24). (Figure 14-3).

   NOTE: The open/closed lock in the top left corner of the screen indicates if the recipe is locked or unlocked. A default factory PIN code is necessary to update the recipes.

4. Select the “lock” button and use the PIN code 2345 to unlock the recipe for updates.(Figure 14-4).

   NOTE: Two lines with 15 characters on each line are available for the name.

5. Select the title bar to open the name menu, edit or enter the recipe name.

   NOTE: A recipe can be made up of several line #’s. Each line # performs as a new step in the recipe.

   NOTE: It is recommended that you save the recipe after each step added to the recipe.

6. Select the “+” symbol to add a line # to a recipe (Figure 14-4).
7. Select the “save” symbol to save the line # added to the recipe.

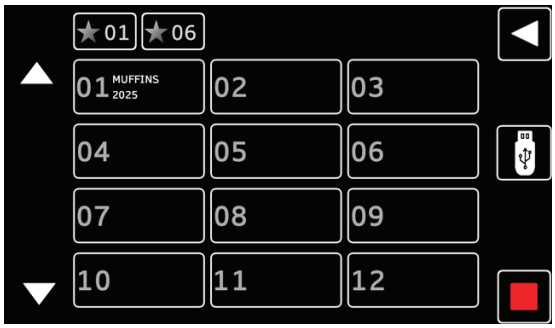


Figure 14-3.

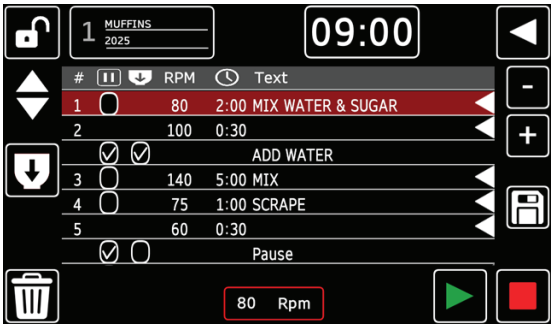


Figure 14-4.

HOW TO PROGRAM A RECIPE (CONT.)

CAUTION

ALWAYS POSITION THE BOWL TRUCK UNDER THE BOWL LIFT BEFORE STARTING OPERATION TO PREVENT INJURY OR EQUIPMENT DAMAGE

NOTE: A “bowl lowering” option can be added into the recipe program to allow the mixing bowl to automatically lower during operation. This allows users to add additional ingredients, scrape down the sides of the bowl, check the consistency of the mixture and prevent over mixing.

NOTE: The “Save” symbol will flash after each update to a recipe line as a reminder to select “Save” after edits.

8. Select the “bowl lowering” symbol (Figure 15-1).
9. Select the “save” symbol to save the “bowl lowering” option to the recipe.

   NOTE: A “pause” option can not be added to a single line recipe. Recipe must include a minimum of two lines before a “pause” feature can be added.

10. Select the “pause” symbol to add a pause in the recipe process.
11. Select the “save” symbol to save the pause option in the recipe.

    NOTE: The factory default RPM is set to 20 RPM.

12. Select the “RPM” field on the screen to enter the desired speed for each recipe line. Select Enter.
13. Edit the time field. Select the minutes and then select “Enter.”
14. Select the seconds and then select “Enter” to move to the next field, or select Esc to exit.
15. Select the “save” symbol to save the time field to the recipe.
16. Select the “Text” field on the screen to enter a description of the ingrediants for each recipe line.

    NOTE: To automatically lower the bowl at the end of the recipe or after a recipe line, a “bowl lowing” symbol can be added to the ingredient steps.

17. Select the “save” symbol to save the recipe.
18. Select the white “back arrow” in the top right corner of the display screen to return to the menu screen.

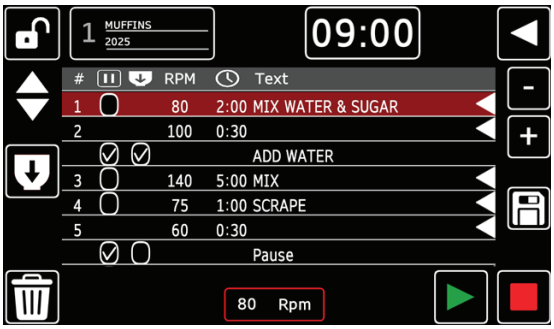


Figure 15-1.

HOW TO EDIT A RECIPE

1. Select the line number in the # field column. The edit line menu will display. (Figure 16-1).
2. Select the “trash can” symbol to delete a line from the recipe. (Figure 16-2).
3. Select the “+” symbol to insert a line in the recipe.
4. Select the green “checkmark” to confirm the update.
5. Select the red “X” to cancel the update.

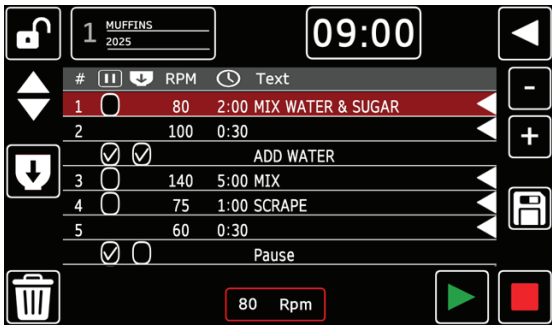


Figure 16-1.

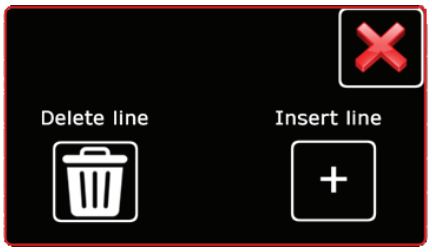


Figure 16-2.

START A RECIPE

CAUTION

EMERGENCY STOP BUTTON SHOULD ONLY BE USED IN THE CASE OF AN EMERGENCY. DAMAGE TO MIXER CAN OCCUR.

1. Select the main menu button in the top right corner of the display screen. (Figure 16-3).
2. Select the “Recipe” button. (Figure16-4).

   NOTE: The mixer can store up to 24 programmable recipes within the recipe book.

3. Select the recipe number you want to run. (Figure 16-5).

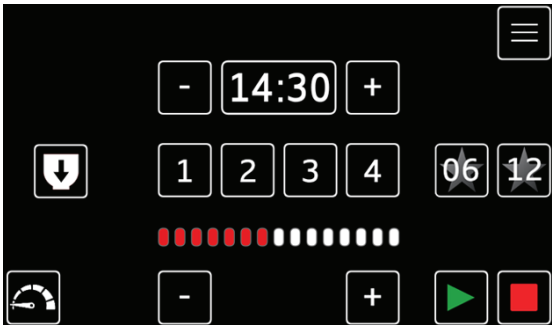


Figure 16-3.

CAUTION

DO NOT OPEN THE BOWL GUARD DURING MIXING. ALWORKS USE THE STOP BUTTON BEFORE OPENING BOWL GUARD. DAMAGE TO MIXER CAN OCCUR.

4. Select the green “play” button to start the recipe. (Figure 16-1).

CAUTION

DO NOT OPEN THE BOWL GUARD DURING MIXING. ALWORKS USE THE STOP BUTTON BEFORE OPENING BOWL GUARD. DAMAGE TO MIXER CAN OCCUR.

5. Select the red “stop” button to stop the recipe during mixing.

   NOTE: If the recipe is stopped during operation, the recipe will start at the recipe line where it was stopped.

6. Select the red “stop” button once to restart the recipe.
7. If necessary to restart the recipe from the beginning, select the red “stop” button two times to restart the recipe from line 1.

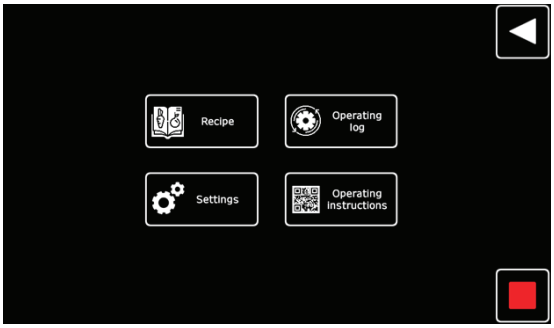


Figure 16-4.

Figure 16-5.

HOW TO ADD A RECIPE TO A FAVORITE BUTTON

NOTE: Only two programmed recipes can be used as a favoite recipe.

1. Select one of the two “star” buttons to add one of the programed recipes to a favorite button. (Figure 17-1).
2. Select one of the programmed recipes from the recipe list. The selected recipe will now appear as a “star” button.
3. To edt the favorite buttons, select a favorite button.
4. Select delete to delete the programmed recipe from the favorite button. Favorite button will now show “00.”

Figure 17-1.

HOW TO START RECIPE WITH PROGRAMMED FAVORITE BUTTON

1. Press the “star” button to select one of the programed favorite recipes. (Figure 17-2).
2. The selected favorite recipe will appear on the touch screen. (Figure 17-3).
3. Press the green “play” button to begin the recipe operation.

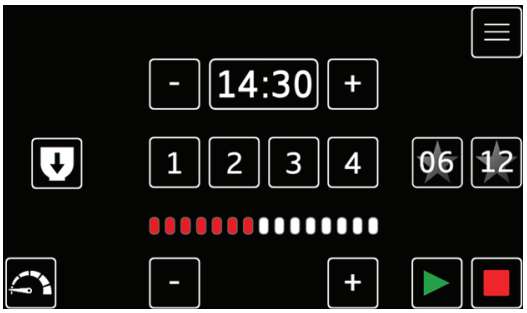


Figure 17-2.

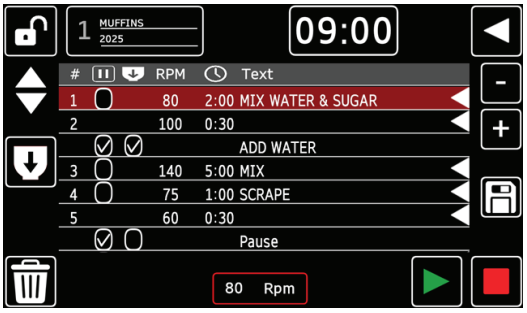


Figure 17-3.

USB LOAD/SAVE RECIPES

CAUTION

WHEN SAVING RECIPES FROM THE MIXER TO THE USB, ALL PREVIOUSLY SAVED USB FLASH DRIVE INFORMATION WILL BE OVERWRITTEN.

1. Insert a USB flash drive (FAT32) into the USB port on the back of the machine. USB symbol will turn green. (Figure 17-4).
2. Select the “Save” button to copy the recipes from the mixer to the USB flash drive.
3. Select the “Load” button to copy the recipes from the USB flash drive to the mixer.

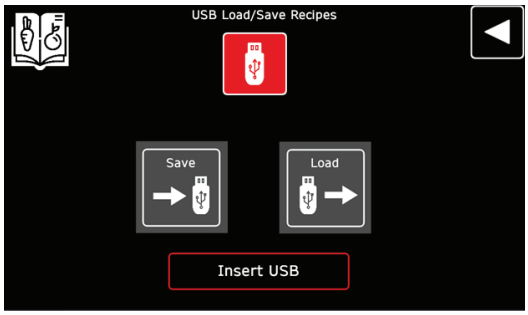


Figure 17-4.

OPERATING LOG

NOTE: The machine log, recipe log and operating data can be accessed through the operating log display.

1. Select the main menu button in the top right corner of the touch panel to access the operating log. (Figure 18-1).
2. Select the “Machine Log” button to access the mixers operating data. (Figure 18-2).
3. The “Machine Log” button displays:
   - Number of starts, number of times the machine has been started (Figure 18-3).
   - Operating time, number of hours the machine has been operating (0:00-23:59, data for current day, Mon-Sun, data for current week, Month data for current month and Total data from the machine’s first start)
   - Number of alarms, number of cases an alarm has been activated
   - Number of max. motor load, number of cases where the load of the motor has been loaded to max or overloaded
   - Number of max. temp. inverter, number of cases where the temperature of the frequency inverter has been too high
   - Max. motor current, maximum load on the frequency inverter, maximum readout is 180%
   - Max motor temp., maximum achieved motor temperature
4. The “Recipe Log” button displays:
   - Quantity, number of starts in the period Mon-Sun. (Figure 18-4).
   - Total number of starts
   - Max load.

   NOTE: The red “Insert USB” symbol will turn “green” to indicate that the USB flash drive has been installed correctly.
5. Install the USB flash drive into the back of the mixer. (Figure 18-5).
6. Select the “Download Operation Data to USB” button to download the information from the USB flash drive to the mixer.

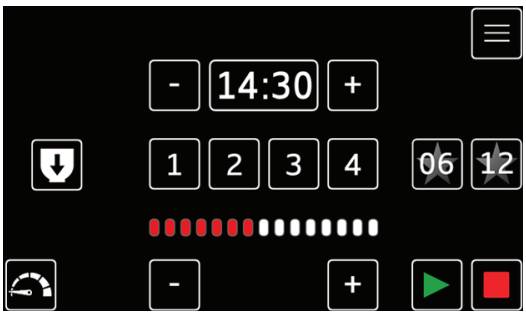


Figure 18-1.

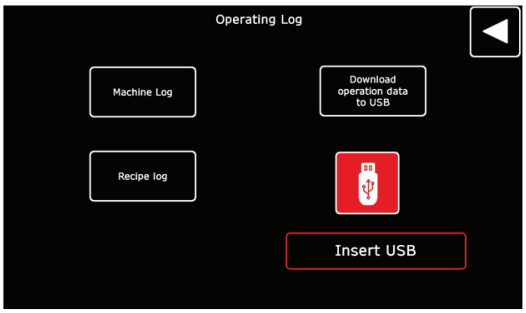


Figure 18-2.

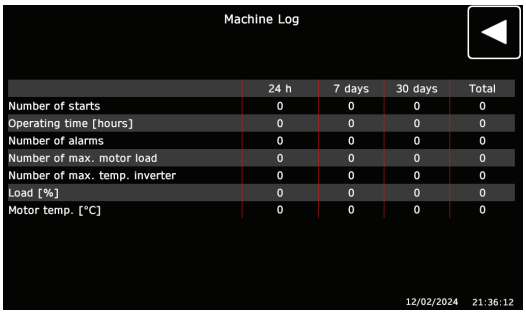


Figure 18-3.

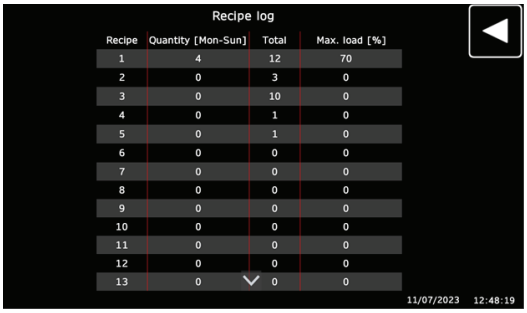


Figure 18-4.

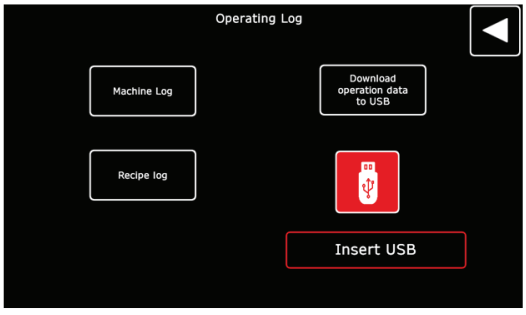


Figure 18-5.

Operator Interface

SETTINGS

NOTE: The Settings/Log, Set time, Set date, Alarms and Recipe PIN code can be accessed through the Settings button.

NOTE: PLC & HMI versions are displayed in the bottom left corner of the Settings screen. To update the PLC or HMI, contact vna.techsupport@varimixerusa.com or call 1-800-222-1138.

1. For the mixer language selection, select the applicable flag. (Figure 19-1). Factory default setting is set to US.
2. The “Settings/Log” button displays:
   - Time/Date (Figure 19-2).
   - Alarms (Error Codes Machine & Error Codes Frequency Converter)
   - Recipe PIN code
3. To change the date/time, select the “Set time” and “Set date.”
4. Select the “Alarms” button to display any operating errors that have prevented the mixer from starting and descriptions of machine error codes based on the code number. (Figure 19-3).
5. Select the “i” button to enable the speed, load, ampere, heatsink and voltage to display on the operator interface during mixing run time. (Figure 19-4).
6. Select the “Recipe PIN Code” button to disable the PIN code. (Figure 19-2).

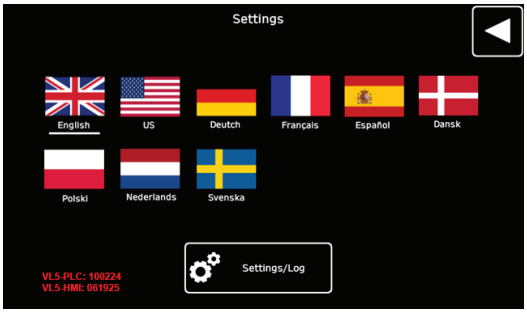


Figure 19-1.

Figure 19-2.

Figure 19-3.

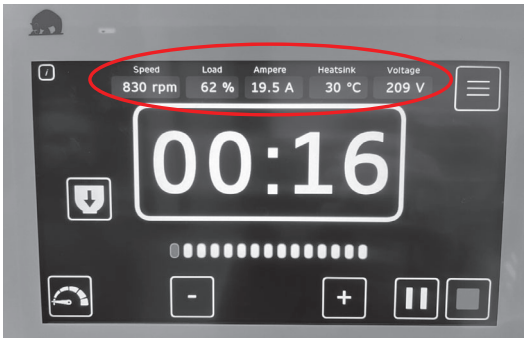


Figure 19-4.

OPERATING INSTRUCTIONS.

Use a phone or tablet’s camera app to scan the QR code to access the following infromation about your ERGO mixer:

- Operation Manual
- Spare Parts Catalog
- Register Your ERGO
- Videos
- Get Support

Cleaning Instructions

IP 53 rated mixers (Model Numbers ERGO100-2 and ERGO150-2), protect against limited dust ingress and water spray at an angle of up to 60º from vertical or lower, equivalent to moderate rain.

IP 54 rated mixers (Model Numbers ERGO100-2IP54 and ERGO100-21P54) offers improved protection against water splashes. The mixer can be cleaned at any angle using foam or by rinsing with thin streams of clean, drinking-quality water, similiar to normal rain.

⚠CAUTION

- **VERIFY IP RATING**, check the dataplate on the back of the mixer to verify the IP rating of the mixer.
- **BEFORE CLEANING**, always turn OFF and unplug power cord before cleaning.
- **NEVER** use a pressure washer to clean the mixer.
- **NEVER** use a scrubber pad, steel wool, or abrasive material to clean mixer.
- **NEVER** use bleach (sodium hypochlorite) or bleach-based cleaner.

As with all food contact surfaces, it is extremely important to properly ***sanitize*** the entire mixer and t**o closely follow the instructions on your quaternary sanitizer container to make sure proper sanitation is achieved to kill potentially harmful bacteria.**

IMPORTANT: If a chemical sanitizer other than chlorine, iodine or quaternary ammonium is used, it must be applied in accordance with the EPA-registered label use instructions. Excessive amounts of sanitizer and use of products not formulated for stainless steel or aluminum may VOID your warranty.

Sanitizer concentration must comply with section 4-501.114, Manual and Mechanical Warewashing Equipment, Chemical Sanitization - Temperature, pH, Concentration, and Hardness of the FDA Food Code.

For more information on proper kitchen and equipment sanitation, visit www.servsafe.com provided by the National Restaurant Association (NRA).

RECOMMENDED CLEANING

PART	REQUIRED ACTION	FREQUENCY
Bowl	Empty bowl and rinse with water. Put bowl in dishwasher or hand-wash with a soft sponge or brush.	Clean after each use.
Tools	Remove the stainless-steel part of the scraper blade before cleaning. Remove any food residue from tools. Hand wash aluminum tools using mild soap and water; rinse, dry and sanitize. Stainless steel tools can be washed in a dishwater using mild soap and water; rinse, dry and sanitize.	Clean after each use.
Safety Guard	Hand-wash or in a dishwasher using mild soap and water; rinse, dry and sanitize.	Clean after each use.
Bayonet Housing	Check the bayonet is clear of any food residue. A damp cloth or sponge can be inserted into the bayonet to loosen food residue.	Clean after each use.
Front Panel	Hand-wash using mild soap and water; rinse, dry and sanitize.	Daily
Mixer	Hand-wash using mild soap and water; rinse, dry and sanitize. Make sure to wash the bowl clamping system in open and closed position.	Daily

Cleaning Instructions

CLEANING

⚠WARNING

THE MIXER MUST BE DISASSEMBLED, CLEANED, AND SANITIZED A MINIMUM OF EVERY FOUR HOURS.

1. Power OFF the mixer by locating the switch on the back of the mixer and rotating it 90° counterclockwise to the power off position.
2. Remove the bowl, the mixing tool and scraper, and the stainless steel bowl guards.

⚠CAUTION

- **DO NOT TAP THE WHIP AGAINST THE BOWL, RIM OR OTHER OBJECTS. DAMAGE TO WHIP CAN OCCUR.**
- **ALUMINUM PARTS MUST BE WASHED BY HAND TO AVOID DISCOLORATION.**

NOTE: Stainless steel parts can be washed in a commercial dishwasher.

3. Remove the blue scraper blade from the scraper frame and clean in sink or dishwasher.
4. Wash the mixer with a cloth or soft bristled brush and a warm water and mild detergent solution.
5. Remove the knee covers and wash with warm water and mild detergent solution. (Figure 22-1).
6. Wash the bayonet to remove any food residue. A damp cloth or sponge can be inserted into the bayonet to loosen any food residue.

⚠CAUTION

- **NEVER ANGLE THE HOSE UPWARD INTO THE PLANETARY HEAD. DAMAGE TO MIXER CAN OCCUR.**
- **DO NOT HOSE DOWN THE MIXER WITH PRESSURIZED WATER. DAMAGE TO MIXER CAN OCCUR.**

7. Rinse all detergent and dry all parts of the mixer, including the bowl clamping system.
8. Reinstall the bowl mixing tools and bowl guards to sanitize the mixer.
9. Apply sanitizer solution with a saturated cloth or spray bottle to properly kill bacteria.
10. Allow the sanitizer to air dry on all parts.
11. For an instructional video on how to clean the mixer use a phone or tablet and scan the QR code to watch the Varimixer ERGO Cleaning Video IP 53. (Figure 22-2).

Figure 21-1.

Figure 21-2.

Capacity Chart

The following maximum capacities are intended as a guideline only. Varying factors such as the type of flour used, temperature of water used and other conditions may require the batch to be reduced.

THE MAXIMUM CAPACITY OF THE MIXER

Capacities per mix	Tool		100	150
Egg whites		qts	5	7
Whipped cream		qts	25	35
Buttercream frosting ✦☐	Whip	qts	45	63
Layer Cake Sponges		qts	57	81
Mayonnaise		qts	40	56
Mashed potatoes		lbs	119	168
Cakes (US Pound cake)		lbs	121	170
Icing, Fondant	Beater	lbs	89	124
Herb butter✦☐		lbs	77	108
Meatball mix/- vegan mix ✦		lbs	132	185
Pasta, noodles (50%AR) O		lbs	99	139
Dough, wheat 50%AR O		lbs	110	156
Dough, wheat 55%AR O		lbs	127	178
Dough, wheat 60%AR O	Hook	lbs	143	187
Dough, whole wheat 70%AR		lbs	143	187
Dough, rye bread O		lbs	176	247
Dough, sourdough bread		lbs	143	187
Dough, gluten free		lbs	104	146

AR = Absorption Ratio
(Liquid in % of solids)

Calculation **AR**

2.20lbs of solids and 1.32lbs of liquid:

$$AR = \frac{1.32 \times 100}{2.20} = 60\%$$

Calculation **Solids** and **Liquid**

200.6lbs Dough, 60% AR
(table, maximum capacity for mixer ERGO150)

$$Solid = \frac{Max.\ capacity \times 100}{AR + 100}$$

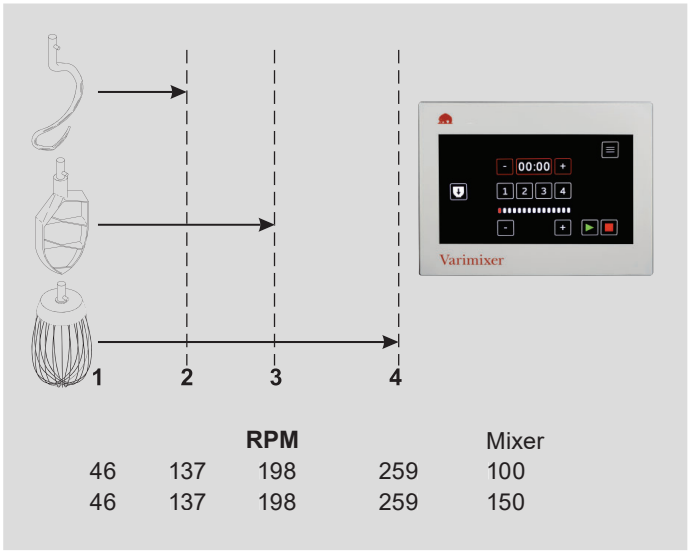
$$= \frac{200.6lbs \times 100}{60 + 100} = 125.38lbs$$

***Liquid** = 200.62lbs - 125.66lbs = 74.96lbs*

✦ = Apply scraper, for the best and most efficient result
☐ = Always make sure the ingredients are at room temperature/soft. If not, this can damage the tools
O = Low speed operation recommended
O = Medium speed operation recommended

Local variations in the characteristics of the ingredients can influence water absorption, volume and baking characteristics, etc.

RECOMMENDED MAXIMUM SPEEDS



RPM				Mixer
46	137	198	259	100
46	137	198	259	150

⚠CAUTION

When making mashed potatoes, the special wing whip or the whip with thicker wires should be used, alternatively use the beater and the whip.

Whips should not be struck against hard surfaces e.g. the edge of the bowl. This will reduce the tool's lifespan due to risk of deformity.

Maintenance

Part	Location	Lubricant	Explanation	Frequency
Bowl arms shaft	E	Molykote G-1502 FM	Remove the back cover. Lubricate the bowl arm shaft	30.000 start or 3 years
Lifting guide	D			
Mixer head	A		Only when repairing the mixer head, carried out by an authorized technician	Life time greased
Lifting actuator	C			

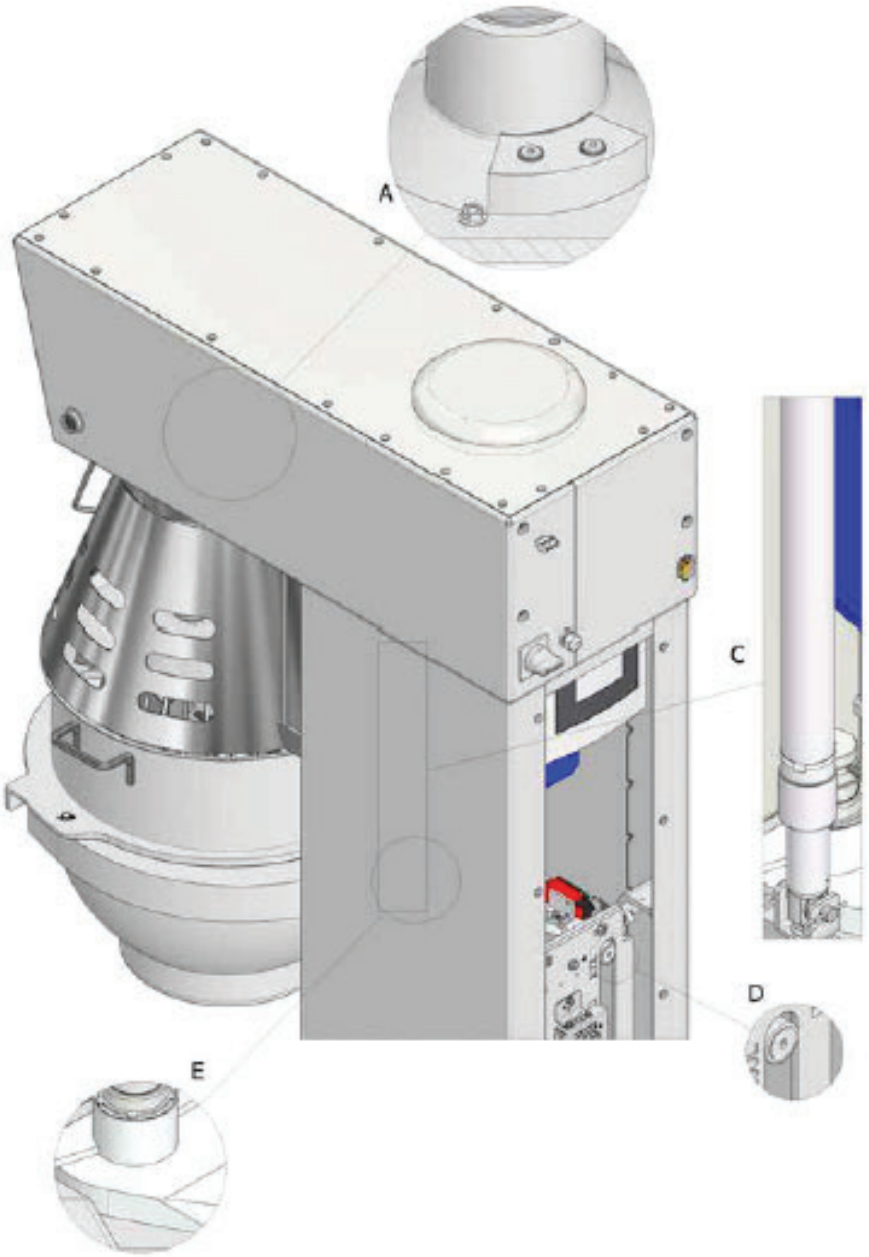


Figure 23-1.

Troubleshooting

ERROR CODE	CAUSE	SOLUTION
01	Start is selected without the bowl being raised to working height	Raise the bowl to working height
02	Start is selected without the safety guard fitted	Mount and close the safety guards. Press the “Red” stop button to reset alarm
03	Bowl not detected	Check if the bowl is positioned correctly - (It is possible to lower the bowl even if the error code is displayed).
		If/when the bowl is positioned correctly, it is pushed all the way back into the bowl arms, the sensor is thereby activated and the bowl can be lifted.
		If the contact between sensor and bowl is broken again, the error code is displayed.
		During the first 5 seconds when the error code is displayed, it is possible to continue lifting the bowl, after which the lifting movement stops. The bowl is pushed all the way back into the bowl arms so that the contact between bowl and sensor is re-established. The error code disappears and the bowl can be lifted again.
04	Motor thermal sensor	Read Error codes for Frequency Inverter for detailed error description.
		Wait with further operation until the motor temperature has dropped to a level where the machine can be restarted.
		Reduce the load and/or the machine’s ambient temperature.
05	Overload switch for lift motor	Wait with further operation until the motor temperature has dropped to a level where the machine can be restarted.
06	The control panel has lost connection to the frequency inverter	Use the main power on the wall to turn the mixer completely off.
		Turn the mixer on after 1 minute. If the error appears again, call a Technician.
07	Fault in the internal speed drive	Read Error codes for Frequency Inverter for detailed error description.
		Call a Technician.

Troubleshooting

08	Thermal sensor in internal speed drive	Read Error codes for Frequency Inverter for detailed error description.
		The fault disappears when the temperature has dropped.
		Reduce load, and/or machine's ambient temperature.
09	Voltage too low	Voltage must be checked by a Technician.
		Read Error codes for Frequency Inverter for detailed error description.
10	High supply voltage is periodically detected	Read Error codes for Frequency
		Inverter for detailed error description.
		Check power supply
		Call a Technician.
15	2-hand sync error	See Operating Instructions for guidance.
		Check control bowl lift buttons for dirt or mechanical failure.
		Call a Technician.
OL01	Continued overload	Read Error codes for Frequency Inverter for detailed error description. Procedure in case of overload: • Select the Emergency Stop button • Open the security screen • Reduce the content in the bowl • Close the safety guard and release the emergency stop. After a short time, the display switches back to normal mode and the machine can be started again.
OL02	Periodic overload	
OL03	Blocked - Less than 100 RPM and full torque	

If problem continues and the above solution does not remedy the issue, please call Technical Support at 1-800-222-1138.

ERGO Mixer Installation Instructions for Securing Units to Concrete Floors

As part of the installation process for the ERGO mixers, they must be securely fastened to the floor with weight appropriate concrete anchors. This ensures the mixer will preform at its peak ability by providing a stable foundation for the mixer to operate. The following instructions are based upon a 6 inch concrete slab.

TOOLS NEEDED

- **ROTARY HAMMER (SDS PLUS) – OWN OR FROM HOME DEPOT RENTAL**
- **SDS PLUS ROTARY HAMMER BIT 5/8” X 12” LONG (MILWAUKEE #48-20-7203) OR COMPARABLE SDS PLUS BIT**
- **ANCHOR BOLTS, RED HEAD (WS-5850) 5/8” X 5” LONG (5 EACH)**
- **SAFETY GLASSES**
- **SOCKET WRENCH**
- **15/16” DEEP WELL SOCKET TO TIGHTEN ANCHOR NUTS**
- **17 MM DEEP WELL SOCKET TO REMOVE BOLTS HOLDING MIXER TO SKID**
- **SOCKET EXTENSION BAR**
- **ELECTRICAL TAPE**
- **8” TO 10” LONG PUNCH**
- **HAMMER**
- **LEVEL**
- **VACUUM OR COMPRESSOR WITH NOZZLE (TO CLEAN OUT DRILLED HOLES)**

1) To remove the box, cut the two straps holding the box to the skid.
2) Slide the box upwards over unit.

3) Remove “knee” caps from mixer leg.
4) Set aside for future use.

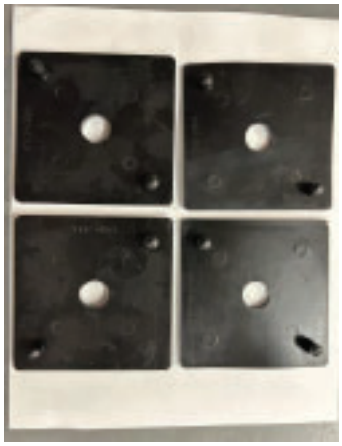
5) Remove four (4) bolts/nuts holding mixer to skid with 17 mm socket and extension bar or included removal tool.

6) Using a forklift, gently lift the mixer off the skid approximately 6” so that the skid can be removed from underneath mixer. Set the mixer back down on the floor.

Securing ERGO Mixer to Concrete Floors

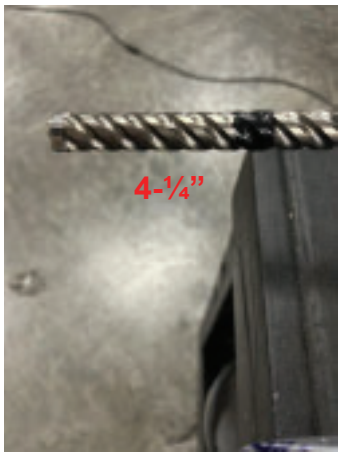
NOTE: For service access, 20” of clearance from the top and back of the mixer is required.

7) Relocate the mixer using a forklift or a proper weight rated pallet jack to the designated location.
Position the mixer and then lower the mixer to the floor.



8) The mixer comes with 4 shims (2 ea. 3mm & 2 ea. 6mm shims) to level the mixer, if need be. The shims are inside a plastic bag stapled to the skid top.

9) Place level on top of ERGO mixer to make sure the mixer is level.



10) The WS-5850 Anchor requires a minimum of 3” nominal embedment plus a ¼” deeper hole to proper seat. Additionally, there is approximately a 1” gap between the bottom of the foot plate and the floor.

Using a piece of electrical tape mark off 4-¼” from the drill tip to designate the depth.

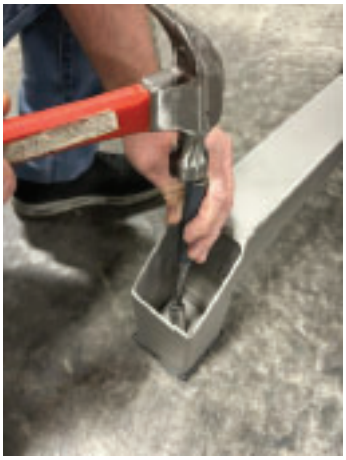
11) Using a SDS Plus Rotary Hammer Drill, attach the 5/8” x 12” drill bit to it.

12) After verifying that the mixer is in the correct position, place the rotary hammer bit into the mixer foot and through the bottom foot pad. Begin drilling the 5/8” hole. Stop when the tape reaches the food plate.

Securing ERGO Mixer to Concrete Floors

13) Using a vacuum or compressor clean out the hole to get the dust and debris out of the anchor hole.
Verify the correct depth has been reached.

14) Place the 5/8” anchor into the newly drilled hole through the foot plate and foot pad.



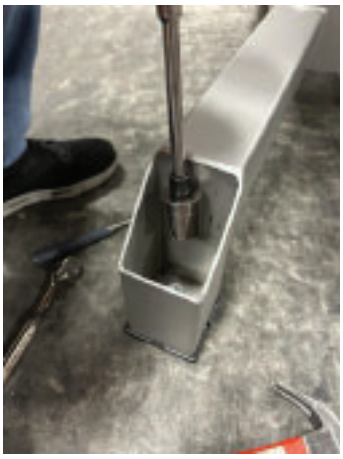
15) Using the punch and hammer, gently tap on the anchor to properly seat the anchor.

16) The anchor head should be sticking through the foot bottom plate so that the nut and washer can be attached to the anchor.

17) Attached the washer and nut and secure but DO NOT over tighten till the other three (3) anchors have been installed.

18) Repeat steps 12 – 17 to install three (3) remaining anchors.

Finally, using the extension bar and 15/16” deep well socket tighten all four (4) anchors securely to the. Installation Torque is 90 ft. lbs.



Reinsert the knees into the legs of the mixer. Tap down gently to seat