ERGO

Operating Instructions

ERGO60, ERGO100,
ERGO140, AR200
VL-5

Varimixer

EN

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General

This manual should be seen as an integral part of the machine and should be kept by the machine throughout its working life.

Before the machine is commissioned, it is important to read these instructions thoroughly, particularly the section on user safety.

The manufacturer may update the product manual without updating this copy of the manual.

The manufacturer will not be liable for faults caused by:

- Careless, improper or incorrect use of the machine
- Non-standard use (not for the purposes described in the manual)
- Incorrect installation
- Incorrect power supply to the machine
- Failure to comply with maintenance instructions
- Modifications to the machine
- Spare parts and accessories that are not original or specified for this model.
- Failure to comply with instructions in this manual

In case of faults with the machine, please contact the supplier.

The guarantee does not cover damage caused by misuse, overloading or the user's failure to comply with the maintenance instructions.

Unpacking

The machine should be unpacked and the packaging disposed of according to regulations applicable in the country concerned.

Before the machine is removed from the pallet, check that all parts are present with the machine:

- Safety guard, Filling chute, Bowl.
- Rubber feet and Spacers for height adjustment.
- Bowl trolley, whip, beater, hook, scraper with blade and attachment drive, if these were selected with the order.

The machine is mounted onto the pallet with four bolts. To release the machine from the pallet, unscrew the 4 nuts with the supplied tool and hammer out the bolts.

Safety

The mixer may only be used, cleaned and maintained by trained personnel over 14 years of age. Always observe local laws and regulations, paying particular attention to the operator's age, and physical and mental condition.

The constant noise level of the workplace of the operator is lower then 70 dB (A).

The mixer is designed for commercial use in kitchens, catering outlets and bakeries.

The mixer must not be used in an explosive atmosphere.

The mixer may only be used as specified in this manual.

The mixer is designed for manufacture of products which do not during processing cause reactions or emit substances which may be detrimental to the user.

Putting your fingers in the bowl while the mixer is running may cause injuries.

The electrical connection must only be carried out by a certified electrician.

Lifting equipment should always be used to move the mixer.

When the mixer is moved, it should be in an upright position at all times.

Powdery ingredients:

Do not pour powdery ingredients into the bowl from a great height.

Bags of e.g. flour should be opened at the bottom, down into the bowl.

Do not increase to maximum speed too quickly.

Warning for users with implants (e.g. pacemakers, defibrillators, etc.)

Mixer and safety guard are equipped with strong magnets.

Area on safety guard with magnets.

Installation of the mixer

Install the machine to insure there is enough workspace for normal use and maintenance.

The work floor where the machine is installed must be firm, even and level.

The mixer must be mounted with rubber feet, to eliminate both shaking and rusting. If the floor is not completely even, spacers can be inserted under the mixer's feet to ensure the machine is level.

The machine is placed directly on the floor.

THE MACHINE MUST BE BOLTED TO THE FLOOR

Load per leg not to exceed

ERGO60	2500 N
ERGO100	3200 N
ERGO140	4000 N
AR200	4500 N

The ambient temperature around the machine must not exceed 45ºC.

Connection to power

Before the mixer is connected to power, check that the voltage printed on the machine label are correct in relation to the installation site. The machine label is located on the top right side of the mixer.

The mixer is supplied with a 3 m long power cable.

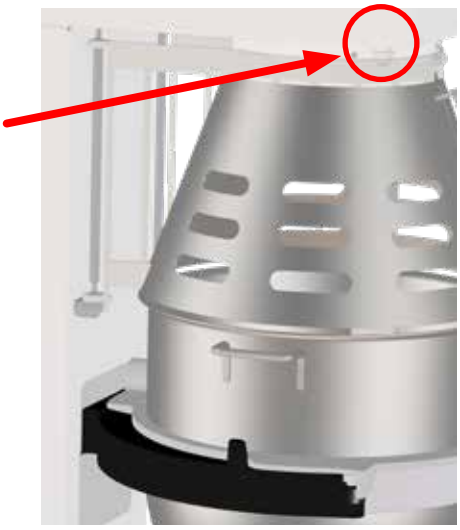
Commissioning

The machine, bowl, tools safety guard and filling chute must be cleaned before use – see section on Cleaning, page 6.

Net weight of the machine

ERGO60	330 kg
ERGO100	450 kg
ERGO140	500 kg
AR200	510 kg

Area on machine with magnets



Construction of the Mixer

Power switch

Safe disconnection of the machine during cleaning, maintenance and when not in use.

USB service port

For fast and secure software upgrades, recipe downloads, workload data history.

VL-5 Touch panel

See page 8 for explanation of the touch panel.

Emergency stop

Lift buttons

Push both left / right side buttons at the same time.

Removable safety guard

The safety guard must be closed for the tool to rotate.

Bowl can be raised with the guard open, but tools rotate (jog) only when the guard is closed and with the two-handed operation function.

Bowl lift and “JOG” function

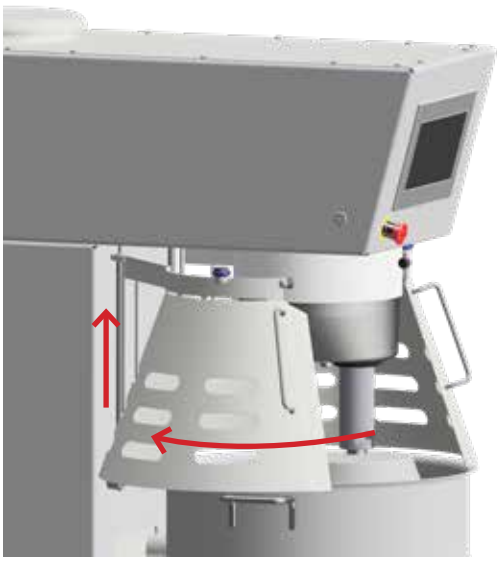
The mixer is provided with a “JOG” function.

Before the bowl reaches its top position, the tool starts rotating to dig its way into the ingredients.

The bowl lift requires two-hands operation for safety reasons.

Bowl detection with non-contact sensor

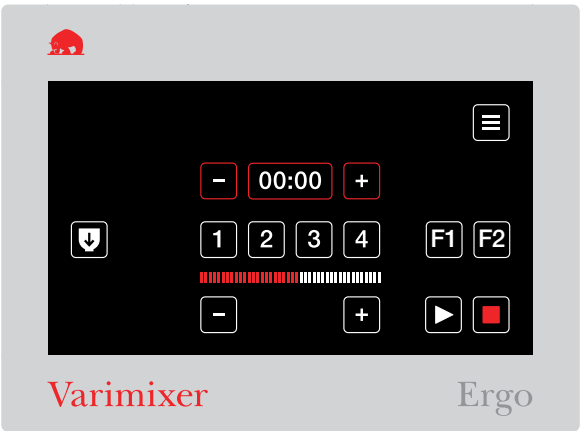
The non-contact sensor for the bowl detection is located on the back of the bowl arms.



Dismantling the safety guard

The safety guard is dismantled by opening and then lifting the safety guard out of the hinges. The safety guard can then be machine washed.

Operating the mixer



Before starting the mixer:

Mount the required tool in the bayonet shaft. Place the bowl in the bowl arms and close the safety guard.

To lift the bowl, simultaneously activate the two lifting buttons, located on each side of the upper part of the machine, until the bowl has reached its upper position.

Incorrect placement and attempted lift trigger the display to show EE03. Correct the bowl placement when EE03 is displayed

“JOG” function: When the bowl is approx. 20 cm 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.

Start mixer:

Press ▶ to start the mixer. Press + to increase speed. Press − to reduce speed.

Four fixed speeds:

1 Lowest speed
2 30% speed
3 60% speed
4 Maximum speed

Reading of operating time:

When the machine is started, the clock counts up.
After 5 seconds the digits are magnified.
When the display is activated, the enlarged digits disappear.

Indication of operating time:

When the time is set and the machine is started, the time counts down.

After 5 seconds the digits are magnified.

Operating time can be set up or down by pressing + or −.

The desired operation can be preset by pressing the minute digit or second digit.

The desired operating time is entered on the keyboard that appears.

Automatic lowering of the bowl:

The bowl can be lowered automatically after the timer expires.

The bowl button is pressed twice for activation (press twice again for deactivation).

When the function is activated, the bowl button flashes.

Inspection of the ingredients during operation:

If the machine has to stopped without changing the operating time, press ■. The machine slows down and then stops, while the operating time stops. The safety guard can be opened/closed and the bowl lowered/raised without the time being set to 0. If desired set the time to 0 by pressing the stop button twice.

Bowl lowering:

When the ingredients in the bowl have been mixed, the machine stops when ■ is pressed. The bowl is lowered by pressing on ⇩. When the bowl has reached its bottom position, the safety guard can be opened.

Operating the mixer

Positioning the bowl

When the bowl is placed in the mixer, the bowl arms must be lowered to the lowest position, the bowl is pushed all the way back into the arms, and if correctly positioned, a short beep will sound.

NOTE. Bowl for ERGO60 and ERGO100 must be rotated correctly.

If there is no signal for correct positioning, the bowl cannot be lifted and . EE03 appears in the display.

Overload:

The mixer must not be overloaded. Tough and heavy doughs can overload the mixer. The overload is further increased if the speed of the stirring tool is increased above the recommended speed or the wrong stirring tool is used. Larger lumps of fat or chilled ingredients must be crushed before they are placed in the bowl.

Prolonged overload will interrupt the machine.

An error code appears in the display.

Procedure in case of overload:

- Press emergency stop
- Open the safety guard
- Reduce the content in the bowl
- Close the safety guard and release the emergency stop

If the emergency stop has been activated while working with a full bowl, it may be necessary to lower the bowl to empty it:

- Release the emergency stop to connect the power to the machine.
- The bowl is lowered and emptied
- The mixer can now be operated normally again

Instructions for stopping the machine:

If the mixer is stopped by opening the safety guard, pressing ■ twice cancels the error message.

The mixer should only be stopped by pressing the emergency stop when an emergency situation has occurred.

Filling chute

When ingredients are to be added while the machine is working, use the supplied filling chute made of stainless steel.

Cleaning

Cleaning may only be performed by trained personnel and must be over 14 years of age.

Before any cleaning, turn off the machine's power switch on the back of the machine.

To assist in the preparation of customer-specific cleaning plans, Varimixer A/S has, based on current legislation, prepared detailed cleaning instructions, included at the end of this manual and the latest version can be found at varimixer.com

THE MAXIMUM CAPACITY OF THE MIXER

Capacities per mix	Tool		60	100	140	200
Egg whites	Whip	L	3	5	7	10
Whipped cream		L	12	25	35	50
Buttercream frosting ✦☐		L	24	45	63	90
Layer Cake Sponges		Kg	16	26	37	-
Mayonnaise		L	24	40	56	-
Mashed potatoes	Beater	Kg	32	54	76	107
Cakes (US Pound cake)		Kg	30	55	77	110
Icing, Fondant		Kg	24	40	56	80
Herb butter✦☐		Kg	18	35	49	70
Meatball mix/- vegan mix ✦		Kg	36	60	84	120
Pasta, noodles (50%AR) ⓪	Hook	Kg	24	45	63	
Dough, wheat 50%AR ⓪		Kg	34	50	70	
Dough, wheat 55%AR ⓪		Kg	35	58	81	
Dough, wheat 60%AR ○		Kg	40	65	91	
Dough, whole wheat 70%AR		Kg	36	65	85	
Dough, rye bread ○		Kg	42	80	112	
Dough, sourdough bread		Kg	36	65	85	
Dough, gluten free		Kg	28	47	66	

AR = Absorption Ratio
(Liquid in % of solids)

Calculation **AR**

1 kg of solids and 0.6 kg of liquid:

$$AR = \frac{0.6 \times 100}{1} = 60\%$$

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

91 kg Dough, 60% AR
(table, maximum capacity for mixer ERGO140)

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

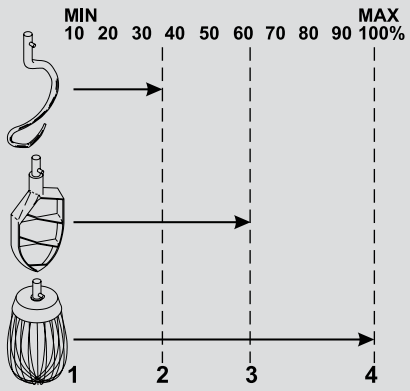
$$= \frac{91\ kg \times 100}{60 + 100} = 57\ kg$$

***Liquid** = 91 kg - 57 kg = 34 kg*

✦ = 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
⓪ = Low speed operation recommended
○ = 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
53	155	224	286	60
47	137	183	257	100
47	137	183	257	140/200

Correct use of tools
Korrekte Benutzung der Werkzeuge:

When making mashed potatoes, the special wing whip of 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.

Für die Herstellung von Kartoffelpüree den speziellen Rührbesen oder einen Besen mit dickeren Drähten benutzen. Alternativ kann der Rührer und dann ein Standardbesen benutzt werden.

Besen dürfen nicht gegen harte Gegenstände, wie z. B. den Kesselrand, geschlagen werden. Dies verkürzt wegen zunehmender Verformung die Lebensdauer des Werkzeugs.

TOUCH PANEL

Press minute and second digits to preset time. Time is displayed in a large frame after 5 seconds of operating

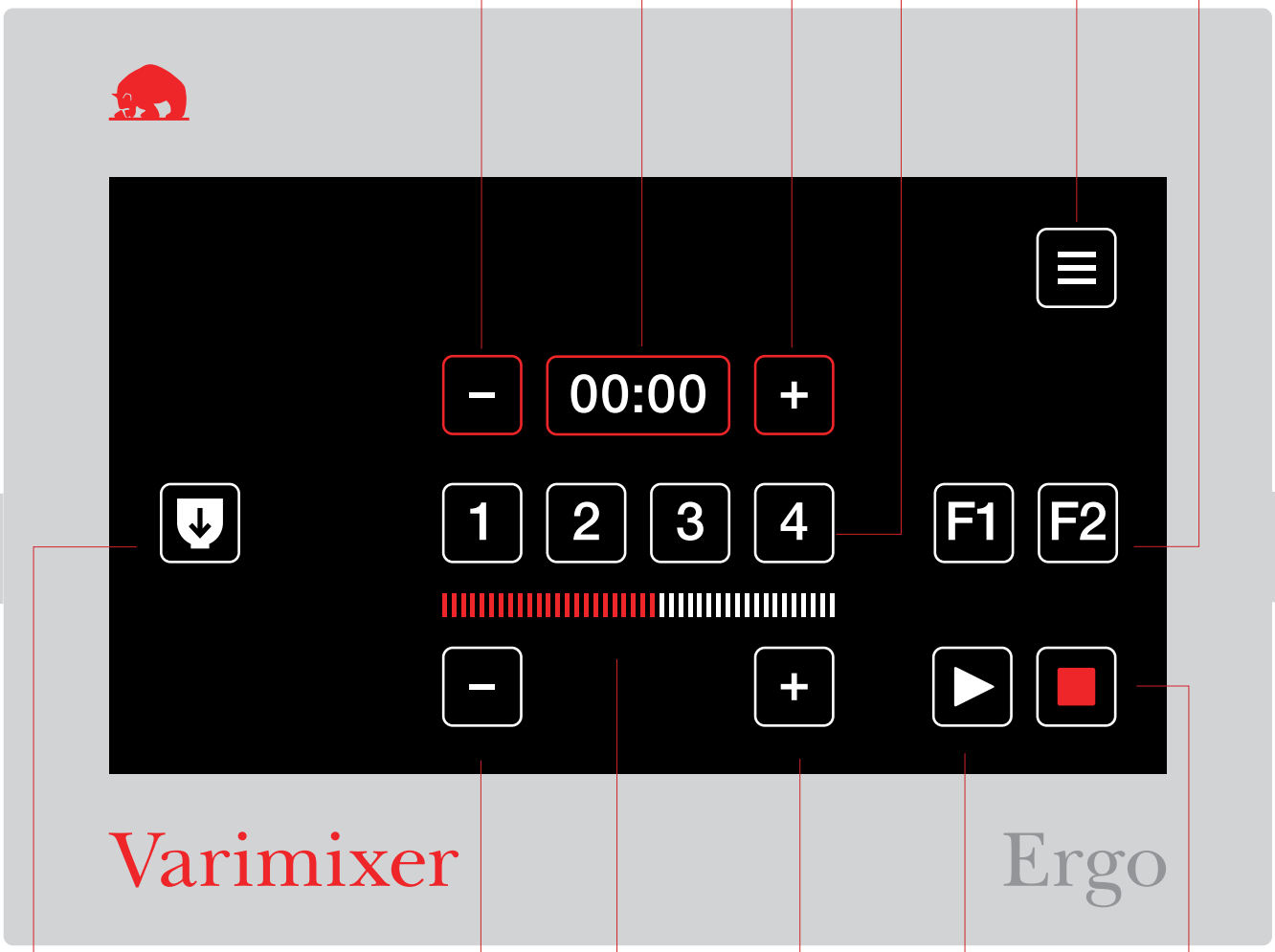
Buttons for selecting favourite recipe. Only visible when selecting a favourite recipe

Shortcut to fixed speed settings

Decrease time

Increase time

Menu



Bowl down
Double tap for automatic bowl lowering

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

Decrease speed

Increase speed

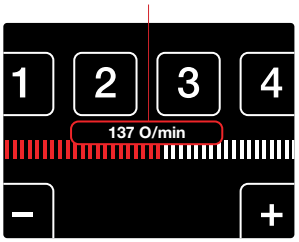
Speed indicator

Value is shown while the RPM changes

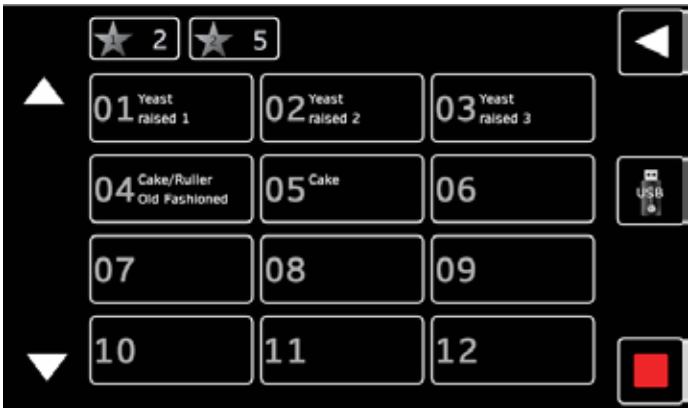
Start

Stop
Double tap for reset time

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



How to execute a recipe



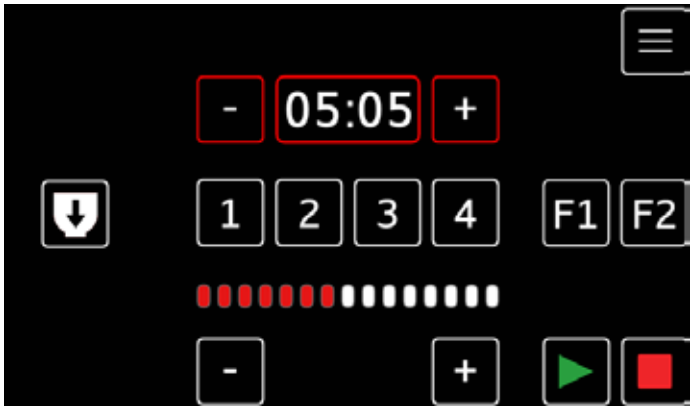
START OF RECIPE

Press ☰ .
Press Recipe.
Press for the desired pre-programmed recipe.
Press ▶ to execute the recipe.
Press ■ to stop recipe.

- When restarting the selected recipe, execution starts at the recipe line where it was stopped
- If the safety guard is opened during the execution of a recipe, the machine stops and the screen informs, EE02 is displayed on the screen. Close safety guard
- Error message is reset by double pressing ■

EDIT RECIPE

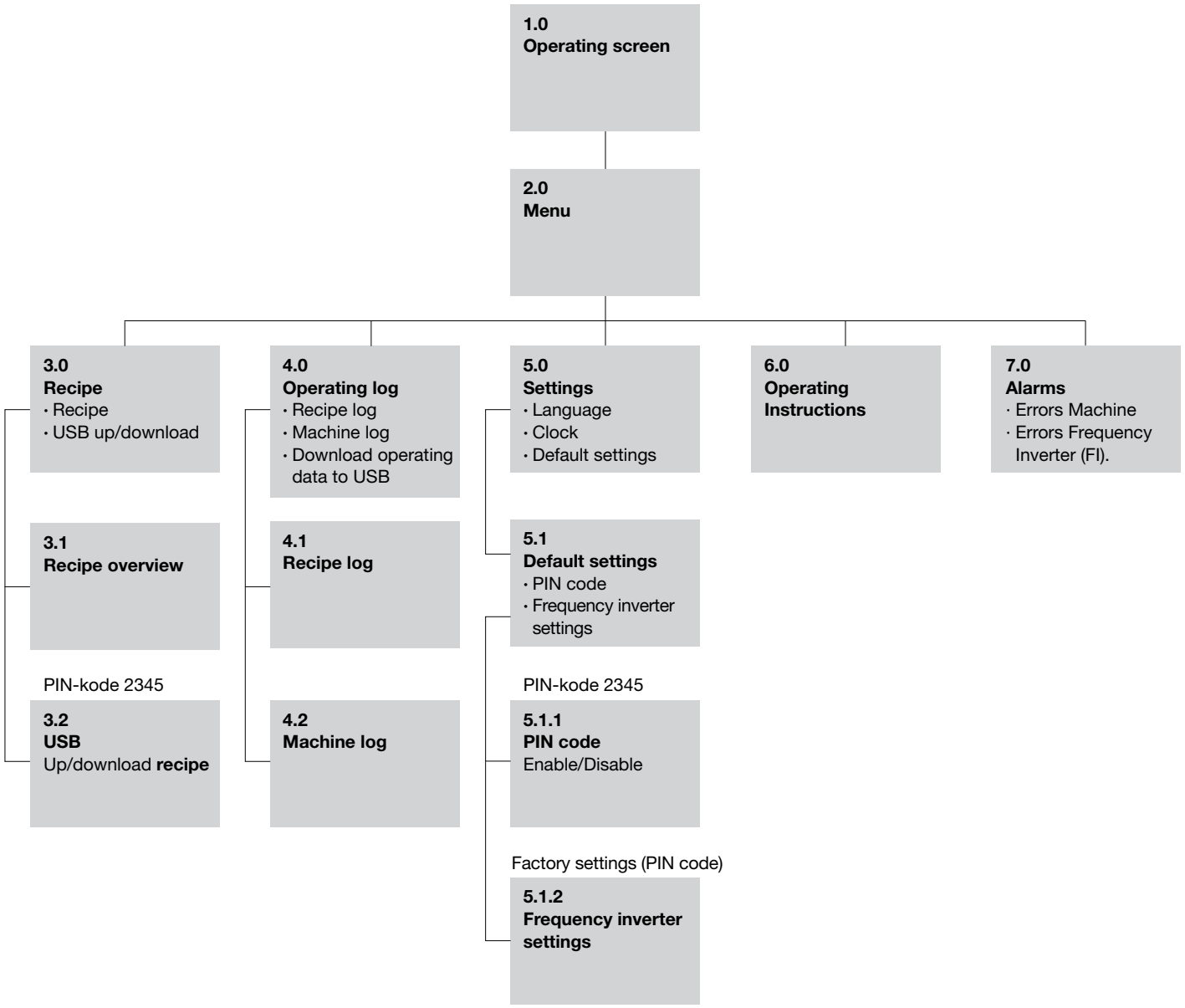
- If the PIN code is activated, press 🔒 and access is opened with PIN code **2345**
- Press ☰
- Press 📖
- Press the button for the desired recipe number.
- Tap the title bar to enter the name of the recipe. Two lines are possible
- Press ■ to pause the recipe process. Text for the pause can be entered in the pause field
- Press digit for RPM to enter desired RPM for each recipe line
- Press the digits for minutes and seconds to enter the desired time for each recipe line
- Tap the text line next to each recipe line to enter the desired text
- ⬇ is inserted in the last recipe line for automatic bowl lowering after the recipe is finished



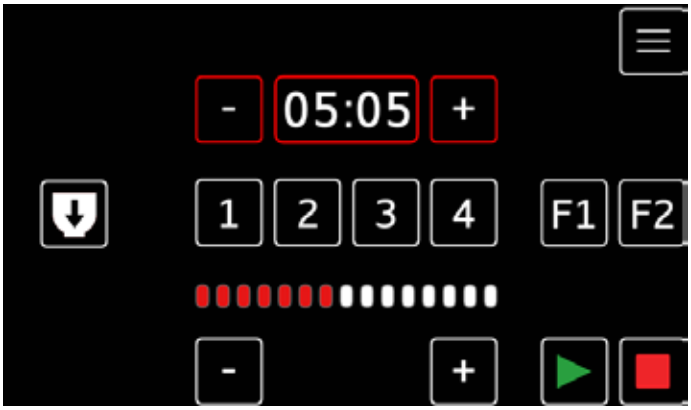
START OF RECIPE WHEN A FAVOURITE BUTTON IS PROGRAMMED

Press F1 or F2 for the desired favourite program.
The selected recipe appears on the screen.
The recipe can now be started by pressing ▶ .

MENU OVERVIEW

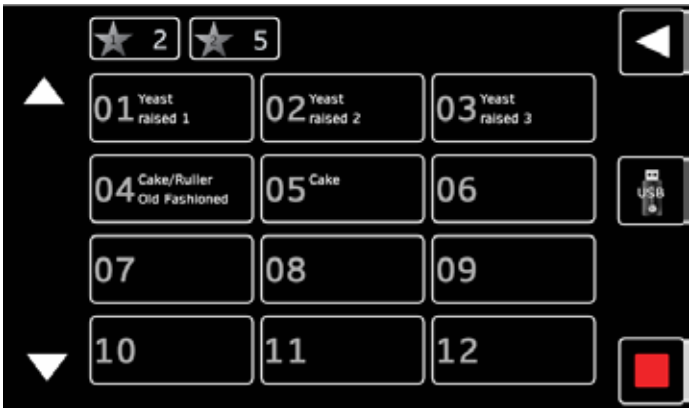


MENU OVERVIEW



1.0 OPERATING SCREEN

- Start and stop press ▶ / ■
  On restart, the timer continues
- Double press ■ to reset timer
- Press ⬇ to lower bowl
- Double tap ⬇ automatic bowl lowering
- Press ☰ for menu overview
- Press F1 F2 (Favourite button) to select a recipe
  (favourite must be activated)

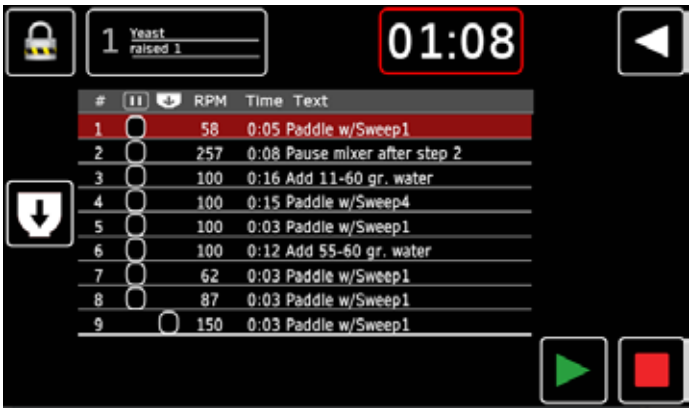


3.0 RECIPE OVERVIEW

- Press desired recipe for operation
- Press empty button to enter recipe
- Select the favourite button followed by the desired recipe, for favourite button programming
- Press ◀ to return to the menu

2.0 MENU

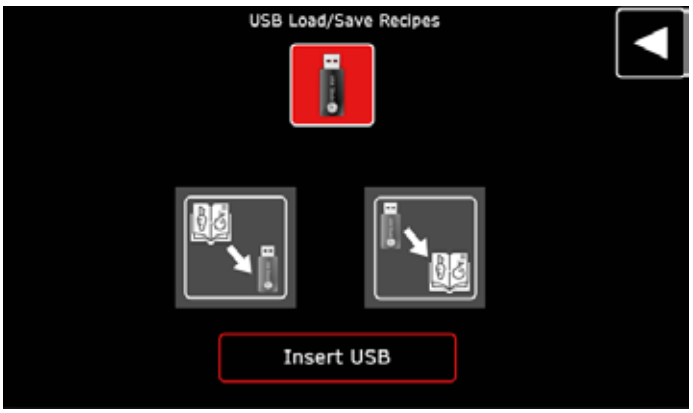
- Press ☰ for desired action
  - Recipe
  - Operating log
  - Settings
  - Operating Instructions
  - Alarms
- Press ◀ to return to the operating screen



3.1 RECIPE

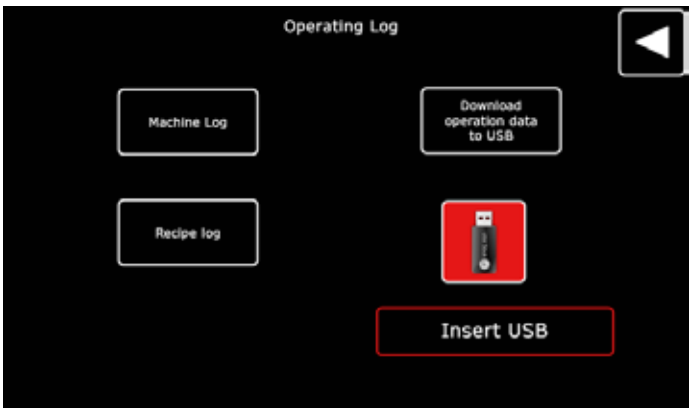
- Press ▶ to start the selected recipe
- Press ■ for stop the selected recipe
- Press ⬇ to lower bowl
- Press ◀ to return to the recipe menu
- Press 🔒 for access to recipe programming
  PIN code 2345
- Press the value or text you want to change or enter or press 🗑 to delete a recipe
- Press 💾 to save changes
- Press empty button to enter a new recipe
- Press ◀ to return to overview
- See page 18 instructions in the Varimixer Recipe Manager for detailed instructions to modify the recipe on the computer

MENU OVERVIEW



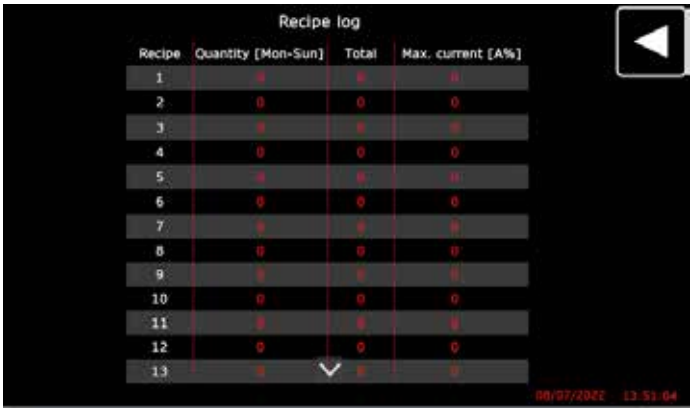
3.2 USB DOWNLOAD/SAVE RECIPE

• Insert an empty USB flash drive (FAT32) into the USB port on the back of the machine to download or save recipes
• Press [Recipe -> USB] to copy recipes from the mixer to USB flash drive
• Press [USB -> Recipe] to copy recipes from USB flash drive to mixer



4.0 OPERATING LOG

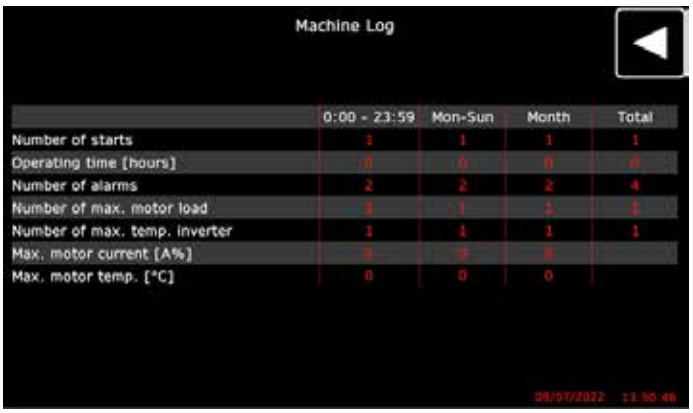
• Press the Machine Log button to display the machine's log operating log
• Press Recipe Log to display the machine's recipe log
• Operating data is downloaded to a USB flash drive by inserting the key into the back of the machine and then pressing the download button
• Green USB button indicates that the USB flash drive is inserted
• The icon is displayed for started and completed downloads



4.1 RECIPE LOG

Next to each recipe number is read:
• Number of started recipes in the period Mon-Sun
• Total number of recipe starts in machine time
• Max load for prescription no. measured in A[%]. Maximum readout is 180%

MENU OVERVIEW



4.2 MACHINE LOG

Horizontal -

- Read operating data in the selected time interval

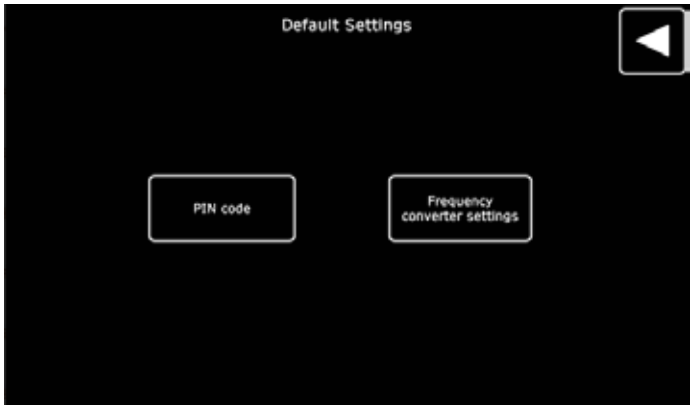
- Log data is read in intervals:
- 0:00-23:59 shows data for the current day
- Mon-Sun shows data for the current week
- Month shows data for the current month
- Total shows data from the machine's first start

Vertical -

- Number of starts shows the number of times the machine has been started
- Operating time shows the number of hours the machine has been operating
- Number of alarms shows the number of cases an alarm has been activated
- Number of maximum engine loads shows the number of cases where the load of the motor has been loaded to max or overloaded
- Number of maximum temperature frequency inverter, is the number of cases where the temperature of the frequency inverter has been too high
- Max motor current shows the maximum load on the frequency inverter in %. Max value is 180%
- Max engine temperature shows the maximum temperature the engine has achieved measured in °C

5.0 LANGUAGE

- Press the desired flag for language selection
- Press Default settings to access PIN code, setup, and mixer basic settings.



5.1 DEFAULT SETTINGS

- Press PIN code for off/on PIN code protection when changing recipes

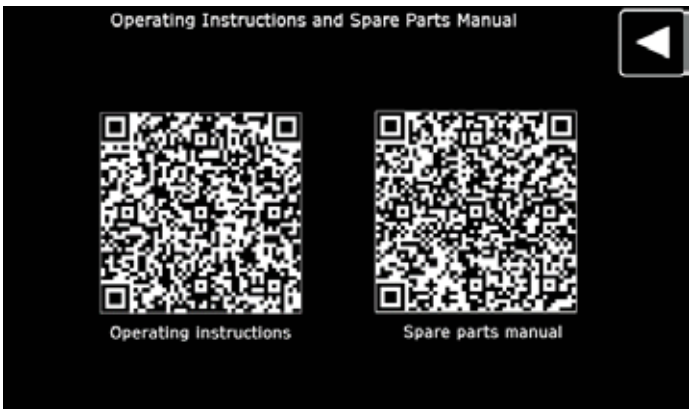
- for changing the PIN code, the code is: 2345

- Access to Basic Settings requires the factory PIN code.

In Basic settings, set up e.g. frequency inverter parameters and screen settings.

- Setting the time and date. Press time/date to open panel for changing time and date.

Menu overview



6.0 OPERATING INSTRUCTIONS AND SPARE PARTS MANUAL

• QR code, link for access to the desired manual. Alternatively, the manual is available at varimixer.com

7.0 Alarms

• Error codes Machine:

- Operating errors that have prevented starting the machine are registered in the table with code description and time.

• Error codes Frequency inverter:

- Error codes reported by the frequency inverter are noted in the table with code description and time.

• Descriptions of error codes based on the code no. found elsewhere in the guide.

ERROR CODES MACHINE

	Error description	Action
EE01	Start is pressed without the bowl being raised to working height	Raise the bowl to working height
EE02	Start is pressed without the safety guard fitted	Mount and close the safety guards. Double press ■ to reset alarm
EE03	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.
EE04	Motor thermal sensor	Read Error codes for FI for detailed error description. Wait with further operation until the engine temperature has dropped to a level where the machine can be restarted. Check main engine external ventilation is working properly. Reduce the load and/or the machine's ambient temperature.
EE05	Overload switch for lift motor	Check whether the lifting actuator has moved past switch and hits the fixed end stop. Detach lift actuator from bowl arms. Check friction between bowl arms and shaft is OK. Check lifting actuator without it fitted to bowl arms.
EE06	The control panel has lost connection to the frequency inverter	Call a technician. The cause may be a fault in the wiring, control panel or frequency inverter.
EE07	Fault in the internal speed drive	Call a technician. Read Error codes for FI for detailed error description.
EE08	Thermal sensor in internal speed drive	Read Error codes for FI for detailed error description. The fault disappears when the temperature has dropped. Reduce load, and/or machine's ambient temperature.
EE09	Too low voltage	Voltage must be checked by a technician. Read Error codes for FI for detailed error description.
EE10	High supply voltage is periodically detected	Read Error codes for FI for detailed error description. Call a technician. Check power supply
EE15	2-hand sync error	See operating instructions for guidance. Call a technician. Error on the buttons for bowl lift
OL01	Continuous overload	Read Error codes for FI for detailed error description. Procedure in case of overload • Press emergency stop • 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	

ELECTRICAL DOCUMENTATION

Contact the dealer if electrical documentation is required.

Error codes Frequency inverter

For detailed information see also manufacture manual NORDAC FLEX ”bu 0200 - en”			
HMI code	**Error description**	**Cause**	**Action**
E0010	Inverter overtemperature	FI heatsink is too hot	Check cooling fan/Reduce mixer load
E0011	Internal FI overtemperature	FI is internally too hot	
E0020	Overtemperature motor thermistor	Motor is too hot	
E0021	Motor overtemperature I^2t		
E0022	Overtemperature of external brake resistor		
E0030	I2t overcurrent limit	FI current higher than permitted	Reduce the mixer load
E0031	Chopper overtemperature I2t	Current level measured in brake resistors too high	Call a technician
E0032	IGBT overcurrent - 125% monitoring	FI current higher than permitted	Reduce the mixer load
E0033	IGBT overcurrent fast - 150% monitoring	FI current higher than permitted	
E0040	Overcurrent module	FI measures the current level internally	Call a technician
E0041	Overcurrent measurement		
E0050	Overvoltage UZW	Braking resistor may be faulty	
E0051	Mains overvoltage	Supply voltage is too high	
E0060	Charging error	Supply voltage is too high	
E0061	Mains undervoltage		
E0070	Mains phase error	A phase in supply is faulty	
E0080	Parameter loss - maximum EEPROM value exceeded	FI has lost the parameters	
E0081	Inverter type incorrect	Error in EEPROM	
E0083	EEPROM KSE error		
E0084	Internal EEPROM error		
E0087	EEPR copy not the same		
E0100	Bus Timeout	BUS communication error	
E0102	Bus Timeout Option		
E0104	Init error Option		
E0101	System error option - See manual		
E0103	System error option - See manual		
E0105	System error option - See manual	I/O error	
E0106	System error option - See manual		
E0107	System error option - See manual		
E0109	Module missing / P120	Error in parameter	
E0110	Error in analog-digital converter	EMC error	
E0120	External watchdog	Monitoring has detected an error	
E0121	EDrive switch-off limit	FI overloaded	Reduce the mixer load
E0122	Generator switch-off limit		
E0123	Torque limit	The torque/current limit has been exceeded	Call a technician
E0124	Current limit		
E0125	Load monitor	FI overloaded	Reduce the mixer load
E0128	Analogue In minimum	Signal error	Call a technician
E0129	Analogue In maximum		
E0130	Encoder error		
E0131	Speed slip error	Motor cannot achieve the expected speed	
E0132	Shut-down monitoring		
E0160	Motor phase error	The motor is missing a phase	
E0161	Magnetisation current monitoring	Error in supply voltage	
E0180	Error in Safe Pulse Block	Pulse error	
E0190	Parameter identification	Motor control	
E0191	Star/Delta circuit incorrect		

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Varimixer Recipe Manager (VRM) User manual

VRM is a tool that makes it possible to write new or edit existing recipes on a computer.
The finished recipe is saved on a USB Flash drive, which is then connected to the machine for transfer using the control panel on the mixer.
VRM program is downloaded from varimixer.com.

1. Transfer from mixer to USB Flash drive
When a new recipe for the mixer is written or an existing recipe needs to be adapted, start by transferring the recipe file from the mixer to a USB Flash drive.

1.1 Connect the USB Flash drive to the post located on the back of the machine.
1.2 Select on the machine's control panel:
- 1.2.1 Menu
- 1.2.2 Recipe
- 1.2.3 USB (PIN code 2345)
  USB button on control panel lights up green)
- 1.2.4 Recipe -> USB

see also 3.2.

PIN code protection can be selected or unselected, see menu 5.1.

2. Work with recipe file in Varimixer Recipe Manager (VRM)
2.1 Open recipe file from USB Flash drive in VRM
- 2.1.1 Open the Varimixer Recipe Manager in Excel, see 3 enable macros
- 2.1.2 Press Import file to transfer recipe file from USB Flash drive to VRM. File name is 00003_Recipelist
- 2.1.3 Mark mixer size in the checkbox. 60 or 100/140
- 2.1.4 To correct the transferred recipe file, press Edit recipe. User interface for changing recipe steps opens.
- 2.1.5 After the recipe change is completed, the recipe is transferred to the USB Flash drive by pressing Export file

2.2 Editing the transferred recipe file.
- 2.2.1 Editing a recipe line is started by double-click on the recipe line, alternatively highlight the line and press Edit.
- 2.2.2 Other editing functions can be read in Figure 1
- 2.2.3 After finishing editing, press the Save button and then Close
- 2.2.4 The edited recipe file is now ready for transfer to the USB Flash drive

2.3 Transferring recipe from USB Flash drive to mixer
- 2.3.1 After finished editing recipe file, transfer the file to USB Flash drive, and then to the machine
- 2.3.2 Insert the USB Flash drive into the PC's USB port
- 2.3.3 Press Export file in VRM. Accept overwriting of the the existing file. The edited recipe file is now saved on USB Flash drive
- 2.3.4 Insert USB Flash drive into the port located at the back of the mixer.
- 2.3.5 Select on the mixer's control panel:
  - 2.3.5.1 Menu
  - 2.3.5.2 Recipe
  - 2.3.5.3 USB (PIN code 2345)
    USB button on control panel lights up green)
  - 2.3.5.5 Press recipe -> USB for transfer
  - 2.3.5.6 Receipt shows that the recipe file has been transferred

The new recipes can now be checked in the recipe overview on the machine. See Menu overview 3.0 in operating instructions.

3. Enable Excel to work with macros
Excel must be set to work with macros to enable the Varimixer Recipe Manager.

1. File
2. Options
3. Trust centre
4. Trust centre settings
5. Macro settings
6. Enable trust VBA projects

4. Handle more than one recipe file
The Varimixer Project Manager can handle one recipe file.
This file is always named 00003_Recipelist.
If more recipe files are needed, different recipe files with the same name (00003_Recipelist) are saved in different folders, where the different folders have different names.

VARIMIXER RECIPE MANAGER (VRM) USER INTERFACE

A Recipe No.
24 individual recipe programs can be selected

B Step No.
Each recipe can contain up to 9 recipe lines

C Active
Active describes whether the current recipe line is included in the recipe with a green tick, or is de-selected with a red cross

D Pause
By ticking the Pause field, a pause is activated after the recipe line is executed. Explanatory text can be written in the Pause text field

E Auto bowl down
With a tick in Auto bowl down, the bowl is lowered automatically after the recipe line has been executed

F Tool speed
The speed of the tool is entered.
60l: 58-288 rpm. 100/140l: 47-257 rpm

G Min/Sec
Run time for the specific recipe line is entered in minutes and seconds

H Recipe step text
Text is written for the step

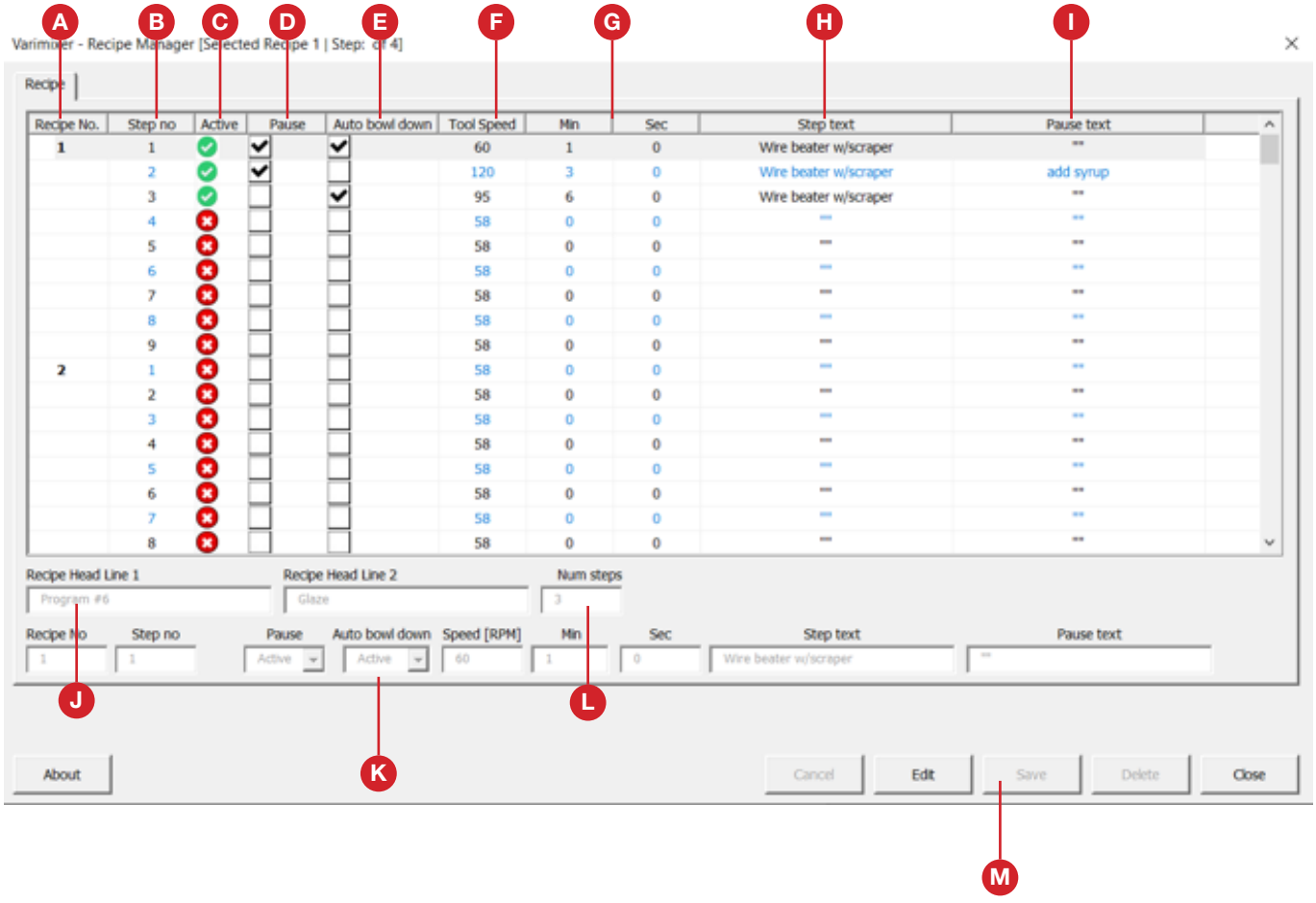
I Recipe pause text
Text is written for the pause

J Recipe headline
Recipe heading is written on 1 or 2 lines

K Enter data
Data for each recipe line is entered in the work field

L Num steps
Number of lines in the recipe is entered

M Entries are **Edit/Save/Delete**.
The Recipe Manager is closed by pressing **Close**



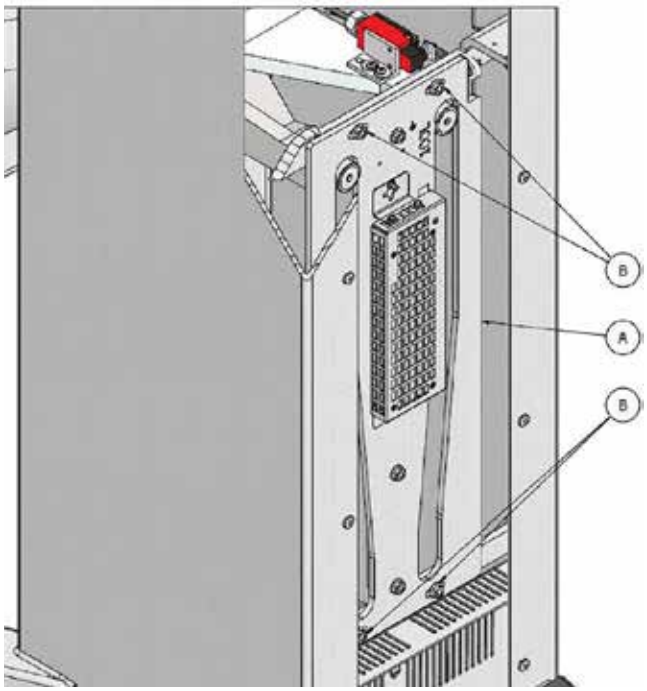
Adjustment of bowl centering

First find the present bowl centering:

1. Mount the beater and the bowl, then raise the bowl arms up to normal working position.
2. Turn off the power to the machine at the switch on the back of the machine.
3. Open safety guard, rotate the beater by hand and measure the distance between the beater and the bowl.

Adjustment:

4. To access the bowl arm guide plate (A), remove the rear cover.
5. Loosen the screws (B) and move the bowl arm guide plate in the required direction. Again turn the beater and measure the distance between beater and bowl.
6. When the bowl has been centred, fasten the bowl arm guide plate in the new position and screw on the rear cover.



Replacement of Lifting Actuator

Bowl arms not loaded are moved to the upper position.

Bowl arms are moved down to a suitable relief support established approx. midway.

ATTENTION HIGH WEIGHT! The bowl arms must be safely unloaded before the lifting actuator is dismantled.

- Turn off the power to the machine at the switch on the back of the machine
- Dismantle the three connectors for the switches on the lift actuator
- Dismantle the cable for lifting actuator
- The lifting actuator is dismantled from the bowl arms by removing the pin bolts
- Lift the actuator out of the machine
- Install the new actuator, if the lower actuator bracket is replaced, use Loctite 638 to lock the bracket
- Power on the machine
- Then follow the section “Fine adjustment actuator switches”

Replacement of actuator switches

There are 3 switches on the lift actuator which control the position of the bowl. In case of a defective switch, mark the position of the switch and replace with a new one in the same place, pay attention to connection and wiring fig. 3.

Follow the instructions below to ensure the correct position of the switch.

Fine adjustment actuator switches

- Check that the location of the contacts corresponds to the dimensions in fig. 3
- Connect the contacts with the corresponding cables
- Adjustment of the three contacts must take place in the following order:

1 Adjustment of upper contact (Top position of the bowl)

- The switch must be positioned in accordance with the target fig. 5
- The bowl is moved upwards to a location that matches with the target X, fig. 5
- The upper switch is adjusted upwards until the LED on the switch lights up

2 Adjustment of lift switch

- See opposite page fig. 4.

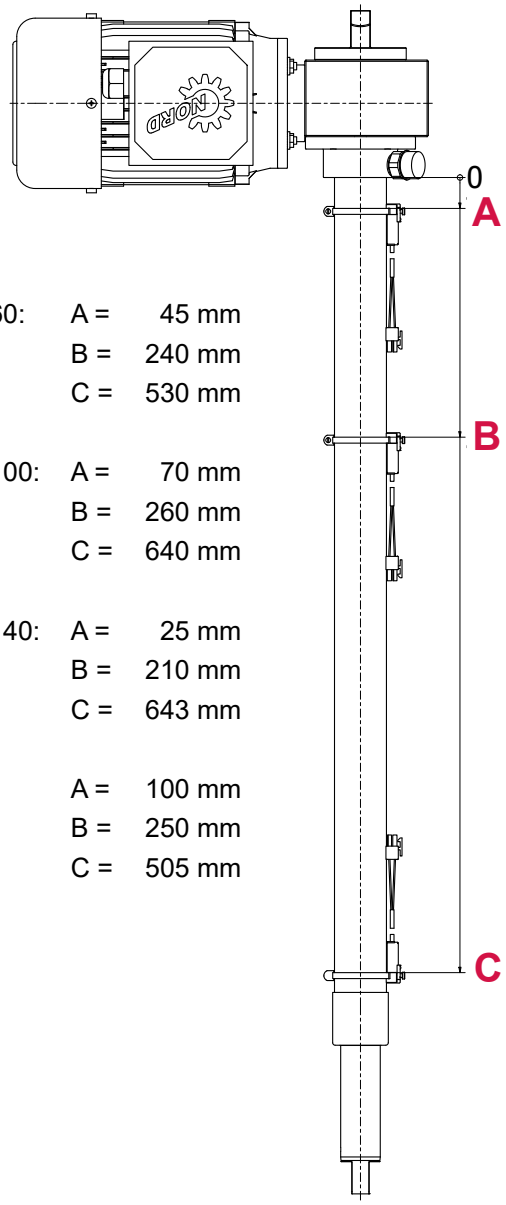
3 Adjusting the actuator switch for the JOG movement

- This switch B, fig. 3, is decisive for when the machine’s JOG movement starts, see also the section “Bowl lift and JOG function”, page 4
- The switch must be positioned in accordance with fig. **3** and does not need further adjustment

4 Adjustment of lower actuator switch

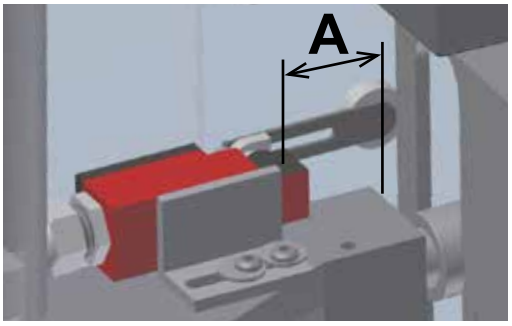
- This contact C, fig. 3, determines the bottom position of the bowl
- The switch must be positioned in accordance with the measurement in fig. 3
- The bowl is moved downwards to a position that corresponds to the measure Y, fig. 5
- The lower actuator switch is adjusted downwards until the LED on the switch lights up

Fig. 3 Location of actuator switches



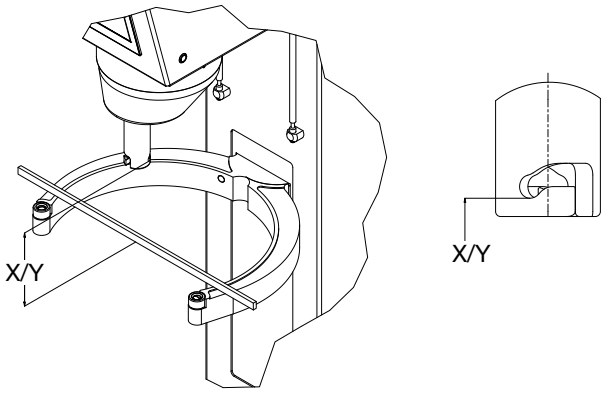
ERGO60:	A =	45 mm
	B =	240 mm
	C =	530 mm
ERGO100:	A =	70 mm
	B =	260 mm
	C =	640 mm
ERGO140:	A =	25 mm
	B =	210 mm
	C =	643 mm
AR200:	A =	100 mm
	B =	250 mm
	C =	505 mm

Fig. 4 Adjustment of lifting switch



ERGO60, ERGO100: A = 38 mm
ERGO140, AR200: A = 28 mm

Fig. 5 Measuring of bowl height



X = top position
Y = bottom position

The distance (X/Y) is measured from the bottom side of the bayonet hole to the surface on the bowl arms on which the bowl rests (Fig. 5).

ERGO60	X = 178 mm	Y = 663 mm
ERGO100	X = 244 mm	Y = 807 mm
ERGO140	X = 303 mm	Y = 919 mm
AR200	X = 378 mm	Y = 780 mm

To replace a belt

Remove the belt by loosening the belt tensioner.

Installing a new belt:

1. Place the belt in the wheel groove
2. Tighten the belt using the belt tightener
3. Tighten the belt until the belt can be bent approximately 9 mm **(dL)** at a pressure of approx. 9 kg **(F)**, see **Fig. 2**
4. Run the machine with a regular production load for approximately 10 min.
5. Check the belt tension by measuring its elasticity. If the elasticity has changed, retighten as described in step 3

The belt tension should be checked every 6 months.

Too little belt tension = The belt wears out quickly

Too high belt tension = Heavy wear on bearings

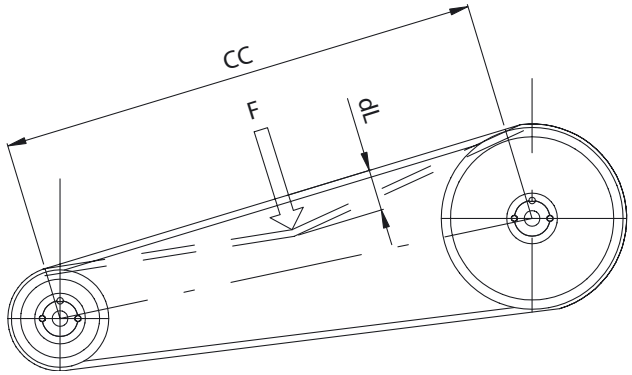


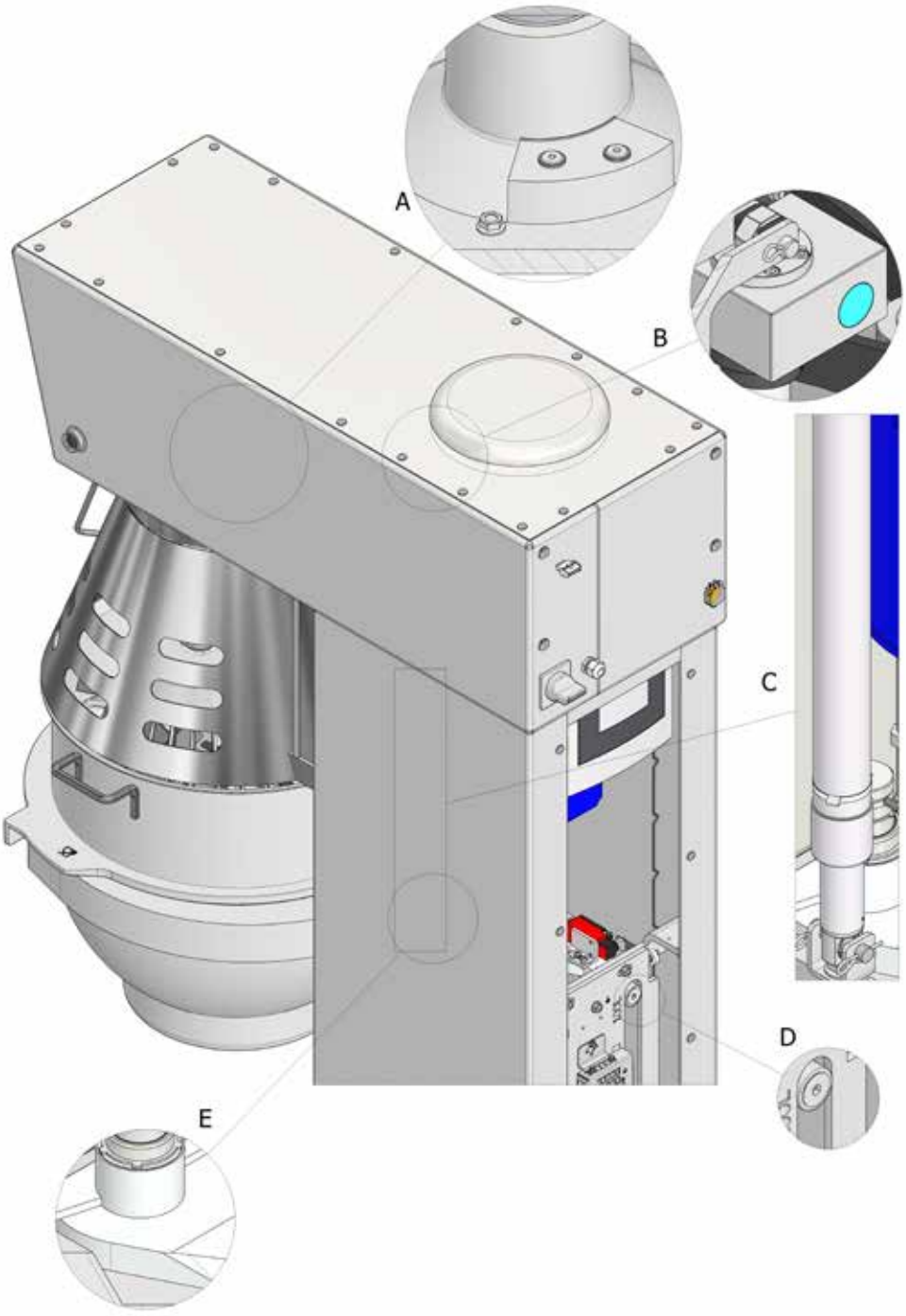
Fig. 2. Belt tension

List of mechanical errors and solution

Mechanical component error	Solution
The tool hits the sides of the bowl	Check adjustment of bowl centering Check tool
The tool hits the bottom of the bowl	Check adjustment of bowl height
Abnormal noise from the lifting actuator	Call a technician

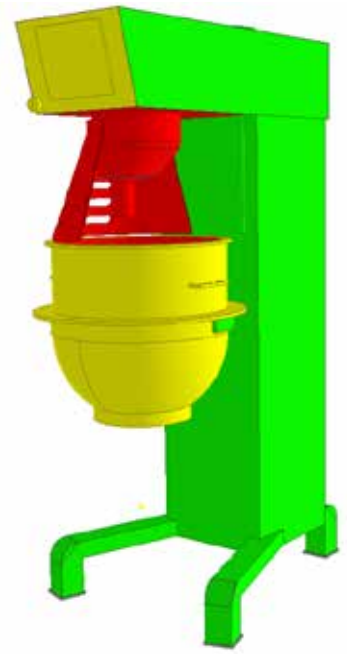
LUBRICATION OVERVIEW

Part	Location	Varimixer no.	Lubricant	Explanation	Frequency
Bowl arms shaft	E	SM713	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 authorised technician	Life time greased
Lifting actuator	C				



Cleaning guide for Varimixer ERGO60, ERGO100, ERGO140, AR200.

A risk assessment must always be used for all cleaning processes involved in food production.
Based on current legislation, Varimixer A/S[1] has compiled the table below as an aid to devising customer-specific cleaning plans. The importance of cleaning in individual zones of the mixer is illustrated using colours. *



The mixer's parts mainly consist of stainless steel EN1.4301 (AISI 304). To avoid the steel corroding, the following guidelines must be followed:

- Chloride (Cl^-) content under 50 ppm at temperatures up to 80°C.
- Never use hard steel wool/sponges or other hard objects that can scratch the steel surface.
- After using chemicals, the mixer must always be washed off with clean water of drinking-water quality.

The bowl ring and certain tools are made of aluminium:

- When washing aluminium, the pH value must always be between 5.0 and 8.0.

Before starting to clean, remove all the mixer's safety guards and tools.

* **Non-food contact zone.** = Low risk.

Splash zone. = Moderate risk.

Direct food contact zone. = High risk.

Cleaning step-by-step		
Bowl.		Empty the bowl and rinse with water. Put bowl in the dishwasher, or wash by hand with a soft sponge or brush. **NB: The bowl ring is aluminium.**
Tools.		Remove any food residue from tools, and rinse with water. **NB: Never tap the whip against the bowl lip or other objects.** Wash tools by hand or in a dishwasher. Always remove the stainless steel part of the scraper blade before cleaning. **NB: Some tools can be aluminium.**
Safety guards.		Wash safety guards by hand or in a dishwasher.
Bayonet housing.		Always check the bayonet where tools are attached for food residues. A damp cloth or sponge can be inserted into the bayonet to loosen food residues.
Front panel.		The front panel can be washed off with foam when washing the mixer/stand. Alternatively, it can be wiped off with a lightly-wrung cloth. Remember the emergency stop.
Mixer/stand.		Always wash the mixer with the bowl clamping system in open and closed position.

[1] **DS/EN 454: 2014, DS/EN 1672-2:2020, etc.**

	The mixer is classified to IP53. The mixer can tolerate being washed with foam. **NB: Never allow foam to remain on the mixer's steel surfaces**, apart from the recommended working time for the detergent. Rinse the mixer off with unpressurised clean water of drinking-water quality applied at an angle of less than 60°, equivalent to moderate rain. **NB: Never rinse off with pressurised water.**
Bowl clamping system.	Always wash the bowl clamping system in open and closed position. Wash the bowl clamp system as for washing the mixer/stand. Dry the rollers for the bowl catch to remove water and cleaning chemicals.
Storage.	The bowl can be fitted on the mixer after cleaning. If the bowl is stored on the mixer, we recommend covering it. **NB: To avoid steel corrosion, never store foods with high concentrations of acid or salt in the bowl.**

Disinfection

Disinfection requires strong chemicals. Always perform an assessment of whether disinfecting the mixer will make any difference to food safety for the end product.
NB: Always obtain the recommendations from the supplier/manufacturer of cleaning/disinfection products before use.

If water is left from cleaning and disinfection to evaporate on the mixer surface, the concentration of chlorides and other chemicals will be higher than during the cleaning process.
Always rinse and wipe off the mixer with clean water of drinking-water quality after using chemicals.

All oxidising chemical disinfectants require rinsing off with clean water of drinking-water quality.
Without access to clean water of drinking-water quality, disinfection using hot water, steam and disinfecting using IPA ethanol and ethanol can be used.
NB: Always obtain a written declaration from the supplier/manufacturer of the disinfectant that it is safe and can be used without rinsing off using clean water of drinking-water quality.

Incorrect use of disinfectants can damage the mixer.

Acid-proof stainless steel

When producing strongly acidic and/or products with a high salt content, and when cleaning using strong chemicals, we recommend buying the mixer bowl and tools in acid-proof stainless steel EN 1.4401 (AISI 316).

Acid-proof stainless steel is more corrosion-resistant, and by way of comparison tolerates chloride (Cl^-) concentrations below 50 ppm at temperatures up to 100°C.

IP-54

We recommend buying a mixer with IP class 54 if rinsing off using clean, drinking-quality water is required, from all angles and for frequent cleaning using water from a hose, shower head or steam.

For more details on cleaning Varimixer A/S mixers, refer to our website: https://varimixer.com/

Indhold af Overensstemmelseserklæring for maskinen, (Maskindirektivet, 2006/42/EC, Bilag II, del A) **DK**
Contents of the Declaration of conformity for machinery, (Machinery Directive 2006/42/EC, Annex II, Part A) **EN**
Inhalt der Konformitätserklärung für Maschinen, (Richtlinie 2006/42/EG, Anhang II, Teil A) **DE**
Contenu de la Déclaration de conformité d'une machine, (Directive Machine 2006/42/CE, Annexe II, partie A) **FR**
Inhoud van de verklaring van overeenstemming voor machines, (Richtlijn 2006/42/EC, Bijlage II, deel A) **NL**
Contenido de la declaración de conformidad sobre máquinas, (Directiva 2006/42/EC, Anexo II, parte A) **ES**

Fabrikant; Manufacturer; Hersteller; Fabricant; Fabrikant; Fabricante: Varimixer A/S

Adresse; Address; Adresse; Adresse; Adres; Dirección: Elementfabrikken 9, DK-2605 Brøndby, Denmark

Navn og adresse på den person, som er bemyndiget til at udarbejde teknisk dossier
Name and address of the person authorised to compile the technical file
Name und Anschrift der Person, die bevollmächtigt ist, die technischen Unterlagen zusammenzustellen
Nom et adresse de la personne autorisée à constituer le dossier technique
naam en adres van degene die gemachtigd is het technisch dossier samen te stellen
nombre y dirección de la persona facultada para elaborar el expediente técnico

Navn; Name; Name; Nom; Naam; Nombre: Kim Jensen

Adresse; Address; Adresse; Adresse; Adres; Dirección: Elementfabrikken 9, DK-2605 Brøndby, Denmark

Sted, dato; Place, date; Ort, Datum; Lieu, date; Plaats, datum; Place, Fecha: Brøndby, 15-03-2022

Erklærer hermed at denne røremaskine
Herewith we declare that this planetary mixer
Erklärt hiermit, dass diese Rührmaschine
Déclare que le batteur-mélangeur ci-dessous
Verklaart hiermede dat Menger
Declaramos que el producto batidora

- er i overensstemmelse med relevante bestemmelser i Maskindirektivet (Direktiv 2006/42/EC)
  is in conformity with the relevant provisions of the Machinery Directive (2006/42/EC)
  konform ist mit den Bestimmungen der EG-Maschinenrichtlinie (Direktiv 2006/42/EG)
  Satisfait à l'ensemble des dispositions pertinentes de la Directive Machines (2006/42/CE)
  voldoet aan de bepalingen van de Machinerichtlijn (Richtlijn 2006/42/EC)
  corresponde a las exigencias básicas de la Directiva sobre Máquinas (Directiva 2006/42/EC)

- er i overensstemmelse med følgende andre CE-direktiver
  is in conformity with the provisions of the following other EC-Directives
  konform ist mit den Bestimmungen folgender weiterer EG-Richtlinien
  Est conforme aux dispositions des Directives Européennes suivantes
  voldoet aan de bepalingen van de volgende andere EG-richtlijnen
  está en conformidad con las exigencias de las siguientes directivas de la CE

  2014/30/EU; 1935/2004; 10/2011; 2023/2006; RoHS 2011/65/EU

Endvidere erklæres det
And furthermore, we declare that
Und dass
Et déclare par ailleurs que
En dat
Además declaramos que

- at de følgende (dele af) harmoniserede standarder, er blevet anvendt
  the following (parts/clauses of) European harmonised standards have been used
  folgende harmonisierte Normen (oder Teile/Klauseln hieraus) zur Anwendung gelangten
  Les (parties/articles des) normes européennes harmonisées suivantes ont été utilisées
  de volgende (onderdelen/bepalingen van) geharmoniseerde normen/nationale normen zijn toegepast
  las siguientes normas armonizadas y normas nacionales (o partes de ellas) fueron aplicadas

  EN 454:2014; EN 60204-1:2018; EN ISO 12100-2011
  EN IEC 61000-6-1:2019; EN IEC 61000-6-3:2021
  EN 1672-2 :2020

DoC for Food Contact Materials, please go to www.varimixer.com/Special downloads (dealers only) or contact your supplier

Innehåll i försäkran om maskinens överensstämmelse, (Maskindirektivet 2006/42/EG, Bilaga II, Avsnitt A) **SV**
Contenuto della dichiarazione di conformità per macchine, (Direttiva 2006/42/CE, Allegato II, parte A) **IT**
Sisukord masina vastavusdeklaratsioon, (Masinadirektiiv 2006/42/EÜ, II lisa A-osa) **ET**
Treść Deklaracja zgodności dla maszyn, (Dyrektywa maszynowa 2006/42/WE, Załącznik II, część A) **PL**
Sisältö vaatimustenmukaisuusvakuutus koneesta, (Konedirektiivi 2006/42/EY, Liite II, A osa) **FI**
Vsebina izjave o skladnosti strojev, (Direktiva 2006/42/ES, priloga II, del A) **SL**

Tillverkare; Fabbricante; Tootja; Producent; Valmistaja: Proizvajalec: Varimixer A/S

Adress; Indirizzo; Aadress; Adres; Osoite: Naslov: Elementfabrikken 9, DK-2605 Brøndby, Denmark

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Henkilön nimi ja osoite, joka on valtuutettu kokoamaan teknisen tiedoston
Ime in naslov osebe, pooblaščene za sestavo tehnične dokumentacije

Namn; Nome e cognome; Nimi; Imię i nazwisko; Nimi; Ime : Kim Jensen

Adress; Indirizzo; Aadress; Adres; Osoite; Naslov: Elementfabrikken 9, DK-2605 Brøndby, Denmark

Ort och datum; Luogo e data; Koht, kuupäev; Miejscowość, data; Paikka, aika; Kraj, datum: Brøndby, 15-03-2022

Försäkrar härmed att denna blandningsmaskin
Con la presente si dichiara che questo mixer planetaria
Deklareerime käesolevaga, et Planetaarmikseri
Niniejszym oświadczamy, że mikser planetarny
vakuuttaa, että tämä mikseri tyyppi
S tem dokumentom izjavljamo, da je ta mešalnik

- överensstämmer med tillämpliga bestämmelser i maskindirektivet (2006/42/EG)
  is è conforme alle disposizioni della Direttiva Macchine (Direttiva 2006/42/CE)
  vastab kehtivatele masinadirektiivi (2006/42/EÜ) nõuetele
  spełnia wymagania odpowiednich przepisów dyrektywy maszynowej (2006/42/WE)
  on konedirektiivin (2006/42/EY) asiaankuuluvien säännösten mukainen
  v skladu z določbami Direktive o strojih ES (Direktiva 2006/42/ES)

- överensstämmer med bestämmelser i följande andra EG-direktiv
  è conforme alle disposizioni delle seguenti altre direttive CE
  vastab järgmiste EÜ direktiivide nõuetele
  spełnia wymagania przepisów innych dyrektyw WE
  on seuraavien muiden EY-direktiivien säännösten mukainen
  in v skladu z določili naslednjih dodatnih direktiv ES

  2014/30/EU; 1935/2004; 10/2011; 2023/2006; RoHS 2011/65/EU

Vi försäkrar dessutom att
e che
Lisaks ülaltoodule deklareerime, et
Ponadto oświadczamy, że
ja lisäksi vakuuttaa, että
in da

- följande (delar/paragrafer av) europeiska harmoniserade standarder har använts
  sono state applicate le seguenti (parti/clausole di) norme armonizzate
  kasutatud on järgmisi Euroopa harmoniseeritud standardeid (või nende osi/nõudeid)
  zastosowano następujące części/klauzule zharmonizowanych norm europejskich
  seuraavia eurooppalaisia yhdenmukaistettuja standardeja (tai niiden osia/kohtia) on sovellettu
  veljajo naslednji usklajeni standardi (ali deli/klavzule teh standardov)

  EN 454:2014; EN 60204-1:2018; EN ISO 12100-2011
  EN IEC 61000-6-1:2019; EN IEC 61000-6-3:2021
  EN 1672-2 :2020

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