OPERATOR MANUAL

NA 9438 POWER PRO COMBI TOUCH XL

WITH EASE
DELICIOUS SOFT SERVE
FROM A NISSEI

Win Equipment B.V.
De Kronkels 31
3752 LM Bunschoten

www.nissei.nl
info@nissei.nl
033 299 22 55

‘translation of the original instructions’

Contents

1 Introduction

1.1 Purpose

The purpose of this Operator Manual is to provide the operator with information relating to the use and maintenance of the NA9438 Power Combi Touch XL and for de only ice configuration.

Read this Operator Manual carefully before using the machine.

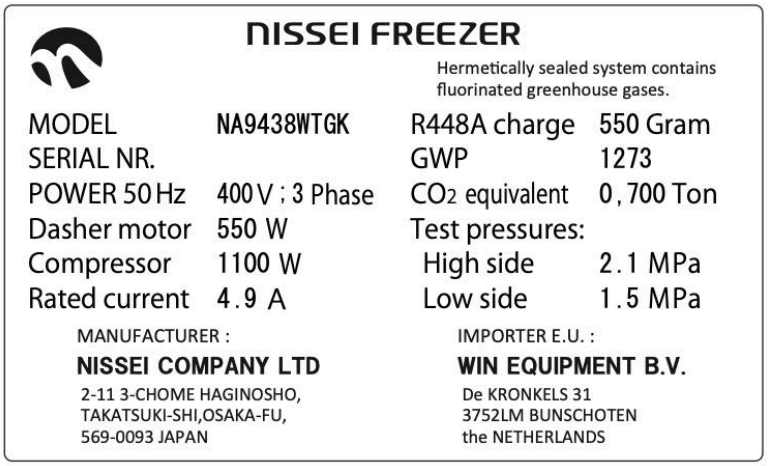
1.2 Manufacturer

Win Equipment B.V.
De Kronkels 31
3752 LM Bunschoten
The Netherlands

Dealer mark

1.3 Machine identification

The machine plate is affixed to the rear of the machine. This plate carries the CE mark. This means that the machine meets the basic health and safety requirements of the European Union.



NISSEI FREEZER

Hermetically sealed system contains fluorinated greenhouse gases.

MODEL	NA9438WTGK	R448A charge	550 Gram
SERIAL NR.		GWP	1273
POWER 50 Hz	400 V : 3 Phase	CO_2 equivalent	0,700 Ton
Dasher motor	550 W	Test pressures:	
Compressor	1100 W	High side	2.1 MPa
Rated current	4.9 A	Low side	1.5 MPa

MANUFACTURER :
NISSEI COMPANY LTD
2-11 3-CHOME HAGINOSHO,
TAKATSUKI-SHI,OSAKA-FU,
569-0093 JAPAN

IMPORTER E.U. :
WIN EQUIPMENT B.V.
De KRONKELS 31
3752LM BUNSCHOTEN
the NETHERLANDS

This machine contains fluorinated greenhouse gases in a hermetically sealed system with the values as specified in the label.

1.4 Warranty

The dealer offers on new machines a 5-year warranty on expensive parts and a 12-month warranty on non-wearing parts and repair costs. This is in accordance with the conditions specified in the order confirmation.

1.5 Accessories

The following items are supplied with the machine:

- Operator manual
- Pasteurizing plug (Combi)
- O ring remover
- Allen bolt screwdrivers (2x) (Combi)
- Piston puller (XL)
- Cleaning brush, narrow and wide
- Tube of lubricant (Petrogel)
- O ring replacement set
- Set of fuses
- Set of nozzles

1.6 Liability

The dealer is not liable for any unsafe situations, accidents and/or damage resulting from any of the following points:

- Failure to observe warnings or instructions as displayed on the machine or in this Operator Manual.
- Use of the machine for applications or under conditions other than those specified in this Operator Manual.
- Changes of kind made to the machine. This also includes the use of different replacement parts.
- Inadequate maintenance.

The dealer is not liable for any consequential damage due to machine faults, such as damage to products, business interruptions, production loss etc.

1.7 Copyright

2 Safety

2.1 Symbols used in this manual.

Below you will find an explanation of the symbols that may be used in this manual to draw the attention of the reader to particular situations.

Caution needed:
- an accident may occur or
- damage may occur to the machine
Do not do this!!!

Suggestion to make tasks or actions easier to carry out.

It is important to read the information provided.

Wait before continuing with the next action.

2.2 Emergency stop

The emergency stop button must be pressed immediately if people or machinery are at risk.

The entire machine stops immediately and the power is turned off. The emergency circuit is now in operation.

The operation of the emergency stop is described in chapter 5.5 - 'Emergency stop'.

Use the emergency stop button immediately if people or machinery are at risk.

People who operate the machine must be informed about the operation and location of the emergency stop button.

2.3 Safety symbols on the machine

The following safety symbols have been affixed to the machine:

Location of emergency stop.
This symbol is affixed to the left front side of the machine above the emergency stop button.

Risk of trapping hand.
This symbol is affixed to the top of the machine next to the mix tank.

Do not spray with water.
This symbol is affixed to the rear of the machine next to the ventilation slots.

Danger: electricity.
This symbol is affixed inside the housing.

2.4 Safety instructions

The machine meets the basic health and safety requirements of the relevant directives of the European Union.

Improper or careless use can lead to dangerous situations. Please observe the following general safety instructions:

- Connect the machine in accordance with the basic health and safety requirements of the relevant European directives.
- Exercise caution with loose hair and clothing.
- Keep your hands away from dangerous zones.
- Never power up the machine if people are in contact with it.
- Pull the plug out of the socket before carrying out maintenance work on the machine.
- Faulty safety equipment must be replaced before the machine is used in production.
- The machine must be maintained in accordance with the instructions found in chapter 7 - 'Maintenance' on page 34.
- Changes to the machine must not be implemented without the prior consent of the manufacturer.
- The safety equipment of the machine must be checked weekly for correct operation.
- Never remove the machine's plating. There are no parts that you can replace or adjust yourself.
- Do not remove or cover any labels on the machine.

The safety instructions specified in this document must be observed. Deviating from the instructions can cause unacceptable risks.

2.5 Operation and maintenance

The machine may only be operated, maintained and cleaned by trained staff. The end user determines the basis on which staff are authorized for this purpose.

2.6 Hygiene

Good hygiene is very important. Please adhere to the following rules:

- **Clean** and **disinfect** the machine at least according to the hygiene code ice making but at least once every 6 weeks
- **Decalcify** the machine every 2nd till 4th cleaning, depending on the pollution, but at least twice a year.
- **Use** the recommended cleaning, disinfecting and decalcify agents to ensure an optimum result.
- **Use** prescribed lubricants only.

Good hygiene ensures better ice cream and satisfied customers.

The operator always remains responsible for good hygiene.

2.7 Storage

To prevent the machine being damage due to frost the machine must always be stored by a temperature between 4°C and 50°C when it is not used.

Prevent damage by frost. Store the machine when it is not used by a temperature between 4°C and 50 °C.

3 Installation

Read this chapter carefully before installing the machine. This is the only way to ensure maximum safety.

3.1 Introduction

The dealer carries out the initial installation. When moving the machine you are advised to contact the dealer.

The machine may only be installed by qualified personnel.

3.2 Installation site

- DO NOT place the machine outside.
- Place the machine on a firm, flat surface (to prevent noise and vibration).
- Keep 10 cm free at the rear and 2 cm at the sides for ventilation.
- Do not place the machine in direct sunlight (not even behind glass) or near to a heat source (e.g. radiator or deep fryer).
- Place the machine in a room with a temperature between +5°C and +35°C.

3.3 Electrical connection

- Connect the plug of the machine to a high-voltage power supply (400 volts, 3 x 16 amps + N + PE).

When setting up the machine, make sure it is not positioned on the connection cable. This can damage the insulation and lead to a short-circuit.

3.4 Connection of cooling water

This paragraph only applies to water-cooled machines.

- Connect the supply hose to a washing machine tap (3/4'' water tap with ventilation). The water pressure must be a minimum of 1,6 bar and a maximum of 3 bar.
- Connect the discharge hose to the discharge pipe.

When connecting, please observe the local water board connection conditions.
The machine has a check valve. This valve along with aerated faucet prevents the backflow of water into the water supply.

When setting up or moving the machine, make sure that the water supply and discharge hoses cannot bend or otherwise become blocked.

Make sure that no water can enter the machine. If water encounters electrical parts, this can cause damage and/or danger.

3.5 Adjusting castors

(Mounted only under the Power PRO)

The castors under the machine can be adjusted in height.

Make sure that the machine does not topple over when adjusting the castors.

1. **Tighten** all castors as far as possible.
2. Now **adjust** the castors so that the machine leans slightly forward (this allows rinsing and washing water to flow to the draining aperture at the front of the machine).

Do not unscrew the castors by more than 5 to 8 mm.

3. **Place** the front castors on the brake.

Make sure that the brake of the two front castors is secured after adjusting.

4 Machine Description

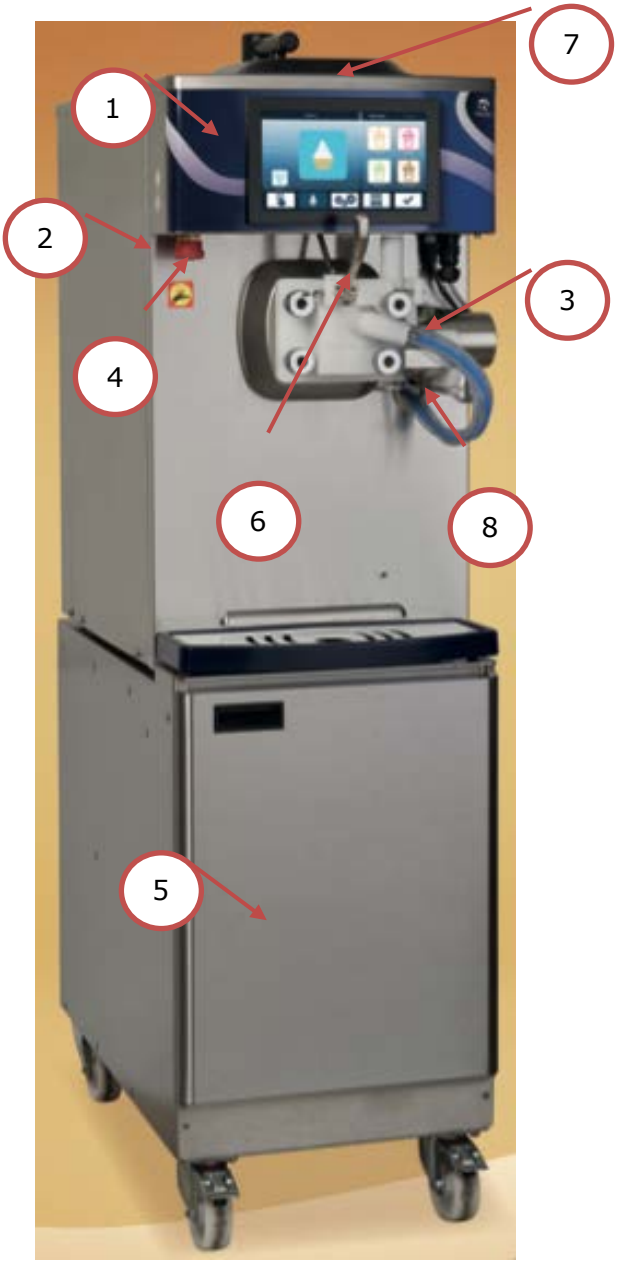
4.1 Function and products

The machine is only suitable for the commercial preparation of soft ice cream and milkshakes using water, ice cream mix and flavoured syrups as ingredients.

4.2 Machine overview

1. Operating panel
2. Emergency stop
3. Ice-head
4. USB connector
5. Syrup compartment (PRO)
6. Ice cream dispensing
7. Mix tank
8. Milkshake cup holder (Combi)

NA9438 Power Ice



NA9438 Power Pro Combi

4.3 Touch Control

Display (Home-screen)

- **Run**
  Put the machine in Run mode. Ice can be tapped with the foot pedal and milkshake tapped with the buttons in the 'Run' screen.

- **Standby**
  Put the machine in standby mode. The mix in the cylinder and mix tank remains cooled at approximately 5ºC.

- **Stop**
  Pressing turns off the machine, the screen remains on.

- **Pasteurizing**
  Put the machine in pasteurization. The ice mix in the cylinder and mixing tank are pasteurized, then machine switches to standby mode.

- **Cleaning**
  In 'Cleaning', the syrup hoses can be flushed as well as the Shake piston can be opened, and the Dasher can be operated.

- **Dry Fill (optional)**
  Enables the Dry-fill program and asks for 'Single or 'Double'. Then mix the ice cream powder in the tank.

- **Taskbar (at the bottom of the screen)**
  - The taskbar allows navigating through multiple screens
    - The first button is for going back to the Home screen
    - The second is for active mode
    - The third button is to go to the settings
    - The fourth button is to go to the log files
    - The fifth button displays the active messages and defects

Before the machine switches mode, the machine first goes past 'Stop' in the background.

Control Panel (Run-Screen)

- **Het ice-icon**
  Indicates the course of the viscosity.

- **Twister-button (Optional)**
  To make a 'Twister' use the 'Thyphone' button at the bottom left.

- **Milkshake flavours (Only on Combi machines)**
  To make milkshakes, use the flavor buttons numbered 1 through 4 on the right side of the screen.

- **Huzzle (Optional)**
  To switch between milkshake and Huzzle, press 'Huzzle' above the flavour buttons.

- **Alerts**
  At the location of the red shaded rectangle, alerts are displayed if the ice cream mix level is too low and/or if the temperature of the ice cream mix is too high.

Control panel (Cleaning-screen)

- **Water to tank button**
  To fill the tank with water, press the 'Water Tank' button. As a result, the faucet on top of the machine opens for a set time.

- **Dasher-button**
  To run the Dasher / Agitator cylinder for a set time use the yellow 'Dasher' button. Pressing again stops the Dasher.

- **Flavour buttons** (Only on Combi machines)
  To flush the syrup hoses, use the numbered syrup buttons on the right side of the screen.

- **Shake Piston button** (Only on Combi machines)
  To open the shake piston, use the green 'Shake Piston button. When the button is still grey, the pressure is still too high in the cylinder.

Control Panel (Setting-screen)

- **Dry-Fill**

At this setting, the amount of water for a powder mix bag can be set.

- **Viscosity**

At this setting, the appropriate viscosity of the ice in the cylinder can be set.

- **Milkshake flavours (Only on Combi machines)**

To change the milkshake flavors, click on the white text box and then type in the name of the flavor. (The numbers 1 to 4 represent the syrup pumps in the syrup compartment.)

- **Percentages water and syrup (Only on Combi machines)**

The amount of water and syrup can be adjusted per milkshake flavor, this also applies to the different flavors of Huzzles.

- **Auto Portion Mode (APM) (Only on Combi machines)**

Use the APM button to turn Auto Portion Mode on or off.

In this screen it is possible to change the ice cream flavor name at the top of the screen by clicking on it and typing in a new text.

Control Panel (Log-screen)

- **Pasteurizing**
  Provides the information about the previous pasteurization cycles.

- **Counters**
  Displays the number of ice creams and milkshakes tapped.

- **Settings** (Under development)
  In this 'log' the made setting changes are displayed in an overview.

- **Historical Alarms**
  In this 'log' the old and active errors are displayed in an overview.

- **Manuals** (Under development)
  Below this button are the user manuals.

- **Languages**
  Under this button, the language can be set.

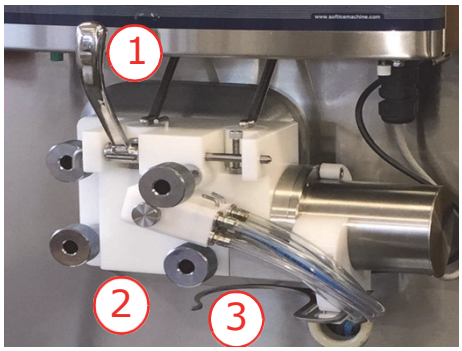
- **Nissei Service** (Under development)
  This is a button intended for the Service Employee of the dealer.

- **Data & Time**
  Under this button, the date and time can be set.

Ice-head

On the underside of the ice-head are the:

1. Soft Ice cream handle
2. Soft ice cream dispensing spout
3. Milkshake dispensing spout (Combi)

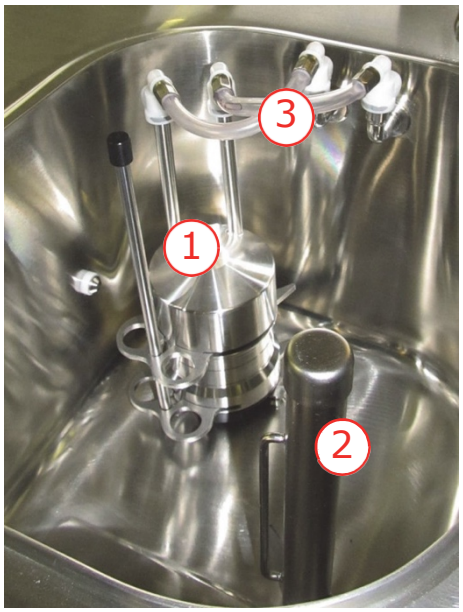


Syrup compartment (Combi)

For each of the four milkshake flavours, the following components can be found in the syrup compartment:

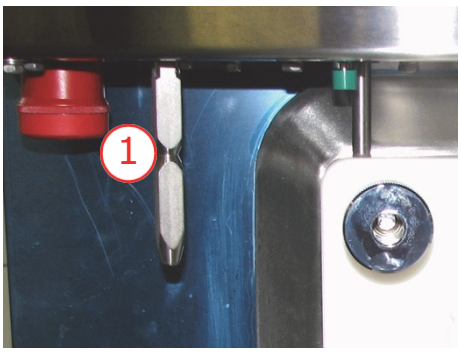
1. Syrup pump
2. Syrup tank lid
3. Syrup tank

Mix tank



1. XL pump
2. Mix tank agitator
3. Air hoses

Ice twister (optional)

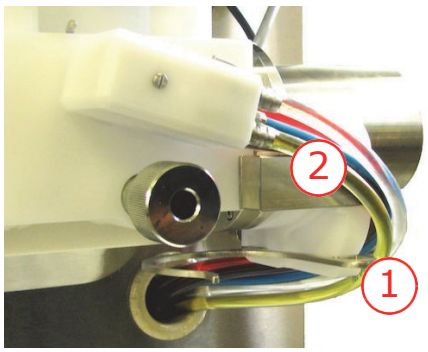


With the ice twister you can mix ingredients, like nuts or toppings, through the ice cream.

1. Spoon holder

Auto Portion Milkshake (Combi)

With the Auto Portion Milkshake you are able to fill a milkshake cup automatically.



1. Cup holder (stainless steel)
2. APM sensor

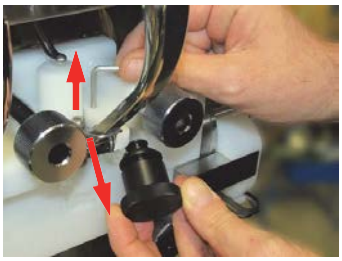
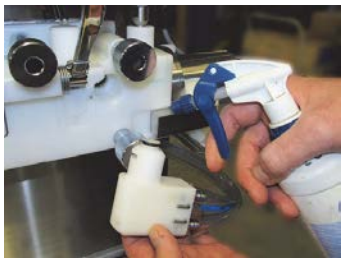
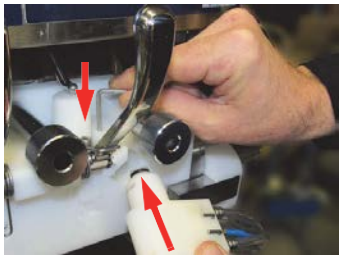
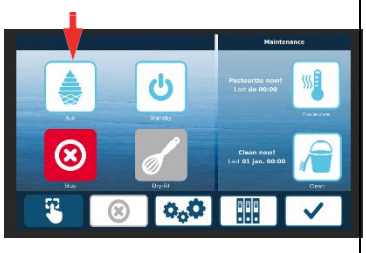
5 Operation

5.1 Start up (start of working day)

First check whether the machine is in 'STANDBY' mode. If this is not the case, measure the temperature of the mix in the mix tank.

If the temperature is higher than 7°C, empty, clean and disinfect the machine (see chapter 7 - 'Maintenance' on page 34)

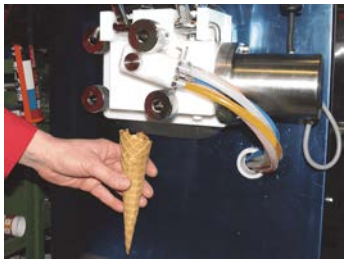
If the temperature is lower than 7°C, first pasteurize the machine before use.

		
1. Check whether the machine is in 'STANDBY' mode. If this is not the case, measure the temperature of the mix in the mix tank. If the temperature is higher than 7°C, empty, clean and disinfect the machine (see chapter 7 - 'Maintenance' on page 34). If the temperature is lower than 7°C, first pasteurise the machine before use.	**2. Remove** the pasteurizing plug. Green background colour is only for machines with Milkshake (Combi)	**3. Clean** the syrup head and the opening in the combi-head with 80% alcohol spray.
		
4. Insert the syrup head in the combi-head.	**5. Press** 'Run' and wait for finishing 'Pre-Run'	**6. Wait** until ice icon is completely white.

		
7. Dispense one or two ice creams, taste them and throw them away.	**8. Dispense** one milk shake, taste it and throw it away.	The machine is now ready for use.

Starting the machine after cleaning is described in chapter 7 - 'Maintenance' on page 34.

5.2 Dispensing ice cream

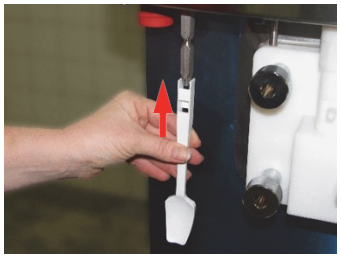
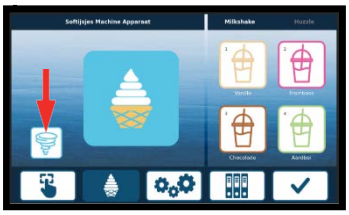
		
1. Hold an ice cream cup or cone under the ice cream dispensing spout.	**2. Depress** the ice cream handle fully. The ice cream is now dispensed.	**3. Push** the ice cream handle fully back.

Tips

Here are a few tips for dispensing soft ice cream properly:

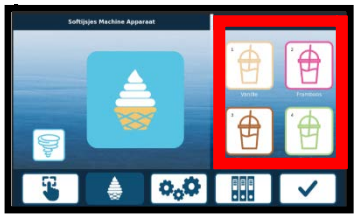
- If no ice cream or milkshake has been dispensed for some minutes, briefly press the 'refresh button' first before dispensing ice cream.
- A good balance between air and ice cream mix in the cylinder improves the quality of the soft ice cream.
- Dispense soft ice cream carefully at a steady, constant dispensing rate.
- Do not dispense large amounts of soft ice cream in succession.
- Give the machine the opportunity in good time to bring the viscosity of the soft ice cream up to the required level again.

Ice twister (option)

		
1. Slide a spoon onto the spoon holder.	**2. Hold** a cup under the ice twister	**3. Press** and hold the operating button to mix the ice cream.

Release the operating button to stop the ice twister.

5.3 Milkshake

		
1. Place a cup in the dispensing holder.	**2. Select** the required flavour. De cup will fill automatically	

If you want to stop the automatic dispensing press one of the flavour selection buttons.

Tips

Here are a few tips for dispensing milkshake properly:

- The syrup tanks must be well-filled.
- Do not dispense several milkshakes in quick succession. First fit the lid and straw and then dispense the next milkshake.
- Dispense milkshakes carefully!
- A good milkshake is dependent on good soft ice cream.

5.4 Switching off (end of working day)

The machine is not switched off in the same way each day. A choice can be made between switching off & standby and switching off & pasteurizing.

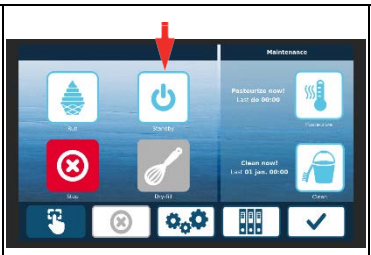
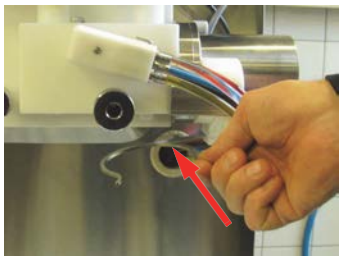
Instructions for pasteurizing

The Dutch hygiene code gives the following guidelines for pasteurizing:

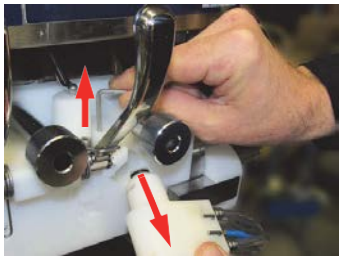
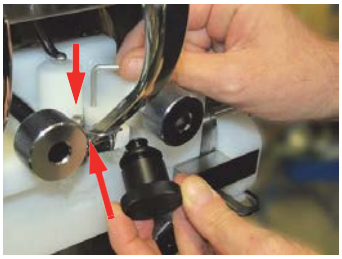
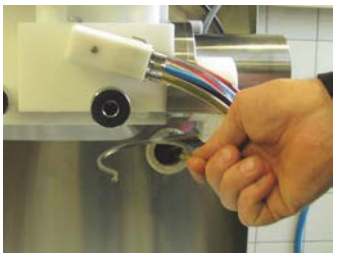
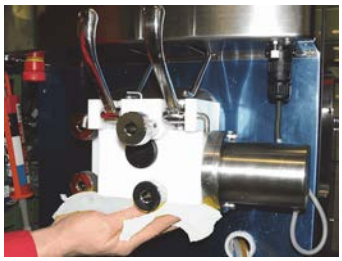
- Pasteurizing takes place after the mix has been topped up.
- Always allow the machine to pasteurize at the end of the day (with a low turnover rate, pasteurize at least every two days).
- Before starting work, check that pasteurization has been performed correctly.
- Do not keep pasteurized mix for longer than 72 hours.
- Store mix at a temperature of 7ºC or lower; preferably 4ºC or lower.

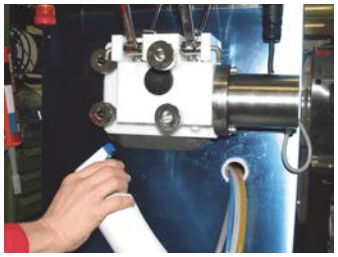
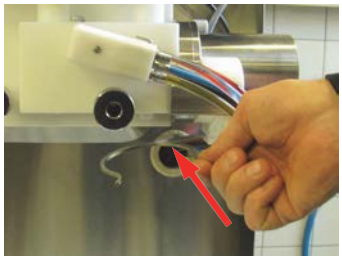
The dealer advises you to follow the above guidelines.

5.4.1 Switching to standby

		
	2. Press 'STANDBY'.	**3. Remove** the cup holder.
		
4. Clean the combi-head and machine with a clean cloth. (preferably with paper)	**5. Disinfect** the combi-head with 80% alcohol spray.	**6. Clean** the cup holder.
		
7. Place the cup holder.		

5.4.2 Switching to pasteurizing

		
1. Pull the syrup head out of the combi-head.	**2. Clean** the syrupi-head with a clean cloth. (preferably with paper)	**3. Disinfect** the syrup-head with 80% alcohol spray.
		
4. Insert the pasteurising plug in the combi-head.	**5. Insert** the pasteurising plug in the combi-head.	**6. Press** 'Pasteurizing'.
		
7. Press 'OK' The ice mix will be pasteurized and after switch to Standby mode.	**8. Remove** the cup holder.	**9. Clean** the combi-head and machine with a clean cloth. (preferably with paper)

		
10. Disinfect the combi-head with 80% alcohol spray.	**11. Clean** the cup holder.	**12. Place** the cup holder.

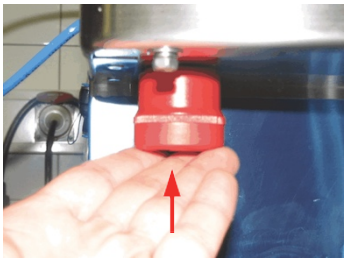
The milkshake motor becomes very hot during pasteurizing.

If the milkshake motor does not heat up, please contact the dealer

5.5 Emergency stop

The machine must be switched off immediately if people or machinery are at risk:

- **Press** the emergency stop button.
  The entire machine stops immediately and the power is turned off. The emergency circuit is now in operation.



Press the emergency stop button immediately if people or machinery are at risk.

Resetting

Resetting the emergency stop button:

- **Rotate** the emergency stop button a quarter turn.
  The machine can now be started up again.

First check why the emergency stop button was pressed and remedy the problem.

5.6 Switching on/off

The machine does not have an on/off button. To switch off the machine completely:

1. **Press** the emergency stop button.
2. **Pull** the plug out of the socket.

To switch on the machine:

1. **Insert** the plug in the socket.
2. **Reset** the emergency stop feature.

Do not switch off the machine at the end of the day; set it to 'PASTEURISING' or 'STANDBY'.

5.7 Dry fill (optional)

To fill or top up the machine with ice cream mix using ice cream powder:

1. **Remove** the lid from the mix tank.
2. **Press** 'Dry Fill' and choose single/2,25 or double/4,50. The chosen amount of water now flows into the mixing tank.
3. **Wait** until the agitator rotates more quickly.
4. **Add** the powder steadily in a controlled manner.
5. **Replace** the lid on the mix tank.

Add the powder steadily to prevent lumps from forming.

Wait at least 10 minutes after refilling before dispensing ice cream.

5.7.1 Start up an empty machine with Dry fill

To start up an empty machine:

1. **Prepare** enough (at least 4 bags) ice cream mix in a clean, disinfected bucket.
2. **Start** up the machine with the prepared mix according to paragraph 7.3.15.

5.8 Changing the settings

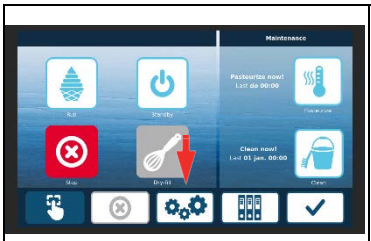
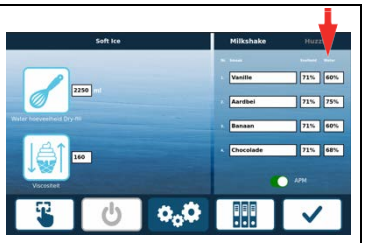
5.8.1 Adjusting the viscosity

The viscosity can be adjusted in the setting screen.

	
1. Press Setting button.	**2.** Press on the number and increase or decrease the viscosity.

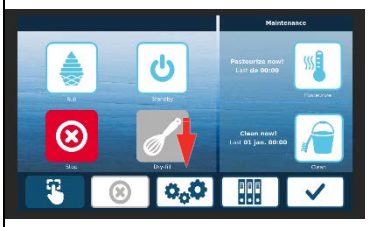
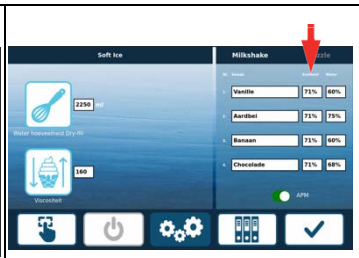
5.8.2 Adjusting milkshake thickness

The amount of water in the milkshake can be adjusted in the setting screen

	
1. Press Setting button.	**2. Press** the white number box behind 'Water' to change the amount of water per flavour.

5.8.3 Adjusting syrup quantity

The syrup quantity can be adjusted in the setting screen.

	
1. Press Setting button.	**2. Press** the white number box behind "Syrup" to change the amount of syrup per flavour.

6 Faults

6.1 Introduction

You will probably be able to resolve some of the faults yourself without difficulty. First try to remedy faults yourself using the instructions in this manual before contacting the dealer.

6.2 Messages on display

The following messages can appear on the display:

Message	Problem
E02	Overloading of the cooling compressor.
E03	Machine is not receiving cooling water or cooling water is not being drained away.
E04	Overloading of the dashing motor.
E05	Temperature does not rise during pasteurizing.
E06	Temperature in the cylinder is too high during pasteurizing.
E07	Temperature in the mix tank is too high during pasteurizing.
E08	Temperature in the cylinder is too high during defrosting.
E09	Overheating of the cooling compressor.
E10	Faulty foot pedal microswitch.
E11	Measurement error of temperature sensor H in cylinder.
E12	Measurement error of temperature sensor F in cylinder.
E13	Measurement error of temperature sensor G.

If the error message remains, please contact the dealer.

6.3 How can I get the best yield from the machine

The machine must be running at a stable speed with a constant air/mix balance in order to achieve the best yield. If this air/mix balance is not constant, your ice cream will be soft or wet or your machine will make a rasping sound, you will experience a popping from the tap opening or the machine's display will show the indication LO. If one of these situations occurs, you should first check that the XL pump is still functioning properly before changing any of the machine's settings.

6.3.1 How can I check whether the XL pump is not causing a malfunction

The proper functioning of the XL pump is easy to check by then carrying out the following two actions:

1. Place a drop of water on the nozzle and draw off a tiny piece of ice cream. The drop of water should now be drawn into the nozzle valve.
2. Draw off a normal ice cream. The pump should stop within two-to-three strokes.

If this is not so in one or both of these cases, you should first remove the XL pump from the machine and clean it in accordance with paragraph 7.3.14.

After replacing the XL pump in the machine, you should first draw off 20-to-25 ice creams before you can judge the result.

6.3.2 What should I do with a soft or wet and watery ice cream

A soft or wet and watery ice cream is normally caused by too little air in the ice cream. In some cases, too high a temperature of the ice cream, above -5° C can also make the ice cream soft or wet and watery. You should then carry out the following steps in order to make your ice cream a little drier and firmer:

1. Measure the temperature of your ice cream. If it is over -5° C, you should increase the viscosity by half a point (see paragraph 5.8.1).
2. If the temperature of the ice cream is below -5° C, check first if the hole in the nozzle on the nozzle valve is blocked. If this is the case, clean the nozzle thoroughly and replace the nozzle on the nozzle valve. The air/mix balance will then be restored and drawing off 20-to-25 ice creams will improve the quality of the ice cream.

If the soft or wet and watery ice cream was not caused by point 1 or 2, you should place a nozzle with a larger hole onto the nozzle valve.

The nozzles in your spare part box go up in steps of 5. You should place the nozzle with the next higher number onto the nozzle valve. If for example, you use nozzle 70, you should fit nozzle 75.

The air/mix balance will then be improved automatically and drawing off 20-to-25 ice creams will improve the quality of the ice cream. If you do not see any improvement after drawing off 20-to-25 ice creams, place the next higher nozzle and repeat this process until you are able to draw off a dry and firm ice cream.

6.3.3 What should I do in case of rasping, popping or if the machine displays LO

Rasping, popping or LO in the display is almost always due to too much air in the cylinder. This leads to free air bubbles in the cylinder that pop out of the ice cream machine when drawing off an ice cream. You can solve this by placing a nozzle with a smaller hole onto the nozzle valve.

The nozzles in your spare part box go down in steps of 5. You should place the nozzle with the next lower number from your spare part box onto the nozzle valve. If for example, you use nozzle 80, you should fit nozzle 75.

The air/mix balance will then automatically improve and the rasping, popping or the LO in the display will be reduced or stop after drawing off 20-to-25 ice creams. If you do not see any improvement after drawing off 20-to-25 ice creams, place the next lower nozzle and repeat this process until there is no more rasping, popping or LO in the display.

6.4 Faults table

Problem	Cause	Remedy
LO appears in the right-hand display.	Too much air in the cylinder.	See chapter 6.3.3 'What should I do in case of rasping, popping or if the machine displays LO'.
Machine is not responding and no lights are lit up.	The emergency stop button has been pressed.	Reset the emergency stop feature.
	Fuse(s) in meter box is (are) faulty.	Replace fuse(s) in the meter box.
	Phase fault protection relay is energized.	Incorrect phase connection in the meter box.
Scraping and popping.	Too much air in the cylinder.	See chapter 6.3.3 'What should I do in case of rasping, popping or if the machine displays LO'.
The ice cream is too soft (not caused by excessive sales).	Not much air in the ice cream (not caused by few sales over a long period).	See chapter 6.3.2 'What should I do with a soft or wet and watery ice cream'.
The machine is vibrating abnormally.	The power supply is disrupted or drive belt(s) is (are) faulty.	Please contact the dealer.
Ice cream is leaking through behind the combi head.	The components have not been fitted correctly (cap nuts are loose).	Fit the components properly. Check whether the nozzle and nozzle tube are clean.
	Gasket is worn	Check and replace if necessary.

Problem	Cause	Remedy
Milkshake is not being mixed.	The black plug is mounted in the wrong way.	Check the plug. Feel the casing of the motor to check if the motor is running.
	The fuse of the milkshake motor is broken.	Please contact the dealer.
Sirup pumps are not running.	Broken fuse, broken wiring or other defect.	Please contact the dealer.
The machine is after Pasteurization not in 'Standby' mode.	Mix tank agitator not working (error meassage EO5).	Check whether agitator is turning (it should turn on every 3-to-4 minutes). If not, please contact the dealer.
	Mix tank lid does not close properly (heat loss) (error meassage EO5).	Fit mix tank lid properly.
	The 'OFF' light is lit. There was a power failure that turned off the whole machine.	In case yes, empty the machine completly and clean and disinfect the whole machine. In cas no, pasteurise the machine before use.
Dirt is dripping from the little hole at the bottom of the shaker motor.	The seal in the milkshake motor is worn.	Please contact the dealer as soon as possible. The milkshake motor may become irreparably damaged if you continue to dispense milkshakes!

If dirt is dripping from the milkshake motor, please contact the dealer as soon as possible. The milkshake motor may become irreparably damaged if you continue to dispense milkshakes!

7 Maintenance

7.1 Safety instructions

- **Do not use** a water hose or high-pressure cleaner to spray the machine clean.
- **Clean** and **disinfect** the machine at least once every six weeks with the recommended cleaning and disinfecting agents.
- **Decalcify** the machine every 2nd till 4th cleaning, depending of the polution, but at least twice a year.
- **Use** prescribed lubricants only.

Maintenance work may only be carried out by trained staff.

Regular maintenance ensures good-quality ice cream and a properly functioning machine.

7.2 General instructions

The machine must be cleaned and disinfected at least once every six weeks. Between 2 to 2.5 hours are needed for this. Below are a number of general instructions for how to clean and disinfect the machine correctly.

7.2.1 Requirements

The following items are needed when cleaning the machine:

- Buckets & brushes
- Tea towel or kitchen roll
- Cleaning agent (recommended: Nissei Cip Clean)
- Disinfecting agent (recommended: Nissei Algides)
- O ring remover and piston puller
- 80% alcohol spray
- Lubricant (Petrogel)

The amount of Petrogel on the saucer is enough to lubrucate all the parts of the machine.

Every 2nd till 4th cleaning depending on the pollution, but at least twice a year:

- Decalcify agent (recommended: Nissei Discaler).

7.2.2 Preventive maintenance

Preventive maintenance can be carried out by the operator when cleaning the machine.

The following parts must be checked:

- Rubbers and O rings of the XL pump and combi head.
  We advise you to replace these twice a year.
- Scraper blades of the cylinder beater. These must be sharp enough to scrape the ice from the cylinder wall.
  We advise you to replace these once a year.

Contact the dealer to order spare parts.

Always replace all O rings together.

The O rings can only be order in a complete set. See annex 2 - 'Spare Parts' on page 62 for the product number.

7.2.3 Cleaning and disinfecting

We advice to use to use cleaning agent and disinfecting agent mentioned below:

- Cleaning agent: Nissei Cip Clean
- Disinfecting agent: Nissei Algides

When cleaning and disinfecting all components:

- **Rinse** away as much ice cream mix as possible with cold water.
- **Clean** further with brush and cleaning solution and allow the components to stand in the cleaning solution for 5 minutes.
- **Rinse** thoroughly with lukewarm water. (2x)
- **Place** the components in the disinfecting solution for 5 minutes.
- **Rinse** thoroughly with cold water. (2x)

Clean an disinfect your hands thoroughly with alcohol 80% before touch disinfected parts.

- **Dry** the components as much as possible with a clean towel (preferably paper).
- **Place** the parts on a clean tea towel or sheet of kitchen paper.

Cleaning solution

- **Make** a solution of 100 ml. Nissei Cip Clean and 10 liters of warm water in a clean bucket.

During cleaning, regularly change the cleaning solution.

Disinfecting solution

- **Make** a solution of 125 ml. Nissei Algides Combi and 10 liters of cold water in a clean bucket.

During disinfecting, regularly change the disinfecting solution.

7.2.4 Decalcify

The machine, the cylinder beater and all cleaned stainless steel parts of the mix pump must be decalcified every 2nd till 4th cleaning, depending on the pollution, but at least twice a year. We advice to use to use the decalcify agent mentioned below:

- Decalcify agent: Nissei Descaler

Decalcify the machine, the cylinder beater and all cleaned stainless steel parts of the mix pump 2nd till 4th cleaning, depending on the pollution, but at least twice a year.

Decalcify solution

- **Make** a solution of 100 ml Nissei Descaler and 10 liters of cold water.

7.3 (Dis)assembling, cleaning and disinfecting the machine

Please read the general instructions on cleaning and disinfecting before starting.

7.3.1 Procedure

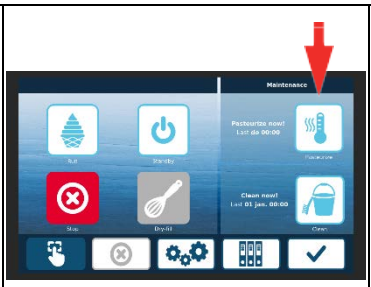
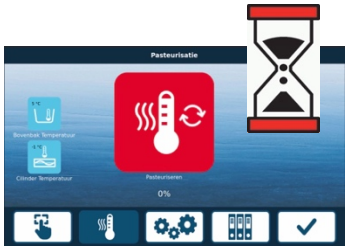
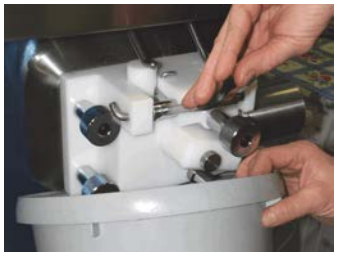
(Dis)assembling, cleaning and disinfecting the machine is an intensive task.
The following sequence is recommended for an effective procedure:

1. Defrost and drain cylinder.
2. Remove XL pump and mix tank agitator.
3. Drain mix tank.
4. Clean mix tank and cylinder.
5. Decalcify the machine **(**every 2nd till 4th cleaning, depending on the pollution, but at least twice a year.)
6. Remove combi-head.
7. (Dis)assemble, clean and disinfect combi-head.
8. (Dis)assemble milkshake motor.
9. (Dis)assemble, clean and disinfect cylinder beater and cream seal.
10. Fit combi-head.
11. Disinfect machine.
12. Clean, rinse and disinfect XL pump parts.
13. Startup machine.
14. Clean and rinse syrup head and hoses.

For optimum hygiene, it is recommended that you start the machine up with new ice cream mix. Do not use old ice cream mix.

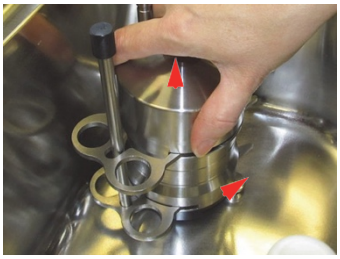
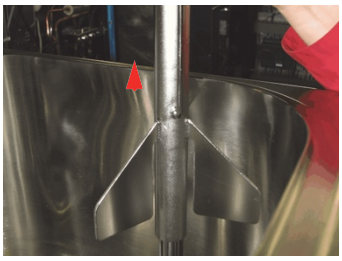
7.3.2 Defrosting and draining cylinder

Throw away the old ice cream mix. Do NOT re-use.

		
1. Press on 'Stop'.	**2. Press** on 'Pasteurizing'.	**3. Press OK**
		
4. Wait 10 Minutes.	**5**. **Wait** several minutes until machine is in Stop mode.	**6. Draw** the ice cream mix out of the cylinder. Continue drawing product until there is no more pressure behind the ice cream mix.

7.3.3 Removing XL pump and mix tank agitator

Make sure there is no more pressure in the cylinder before removing the XL pump from the mix tank.

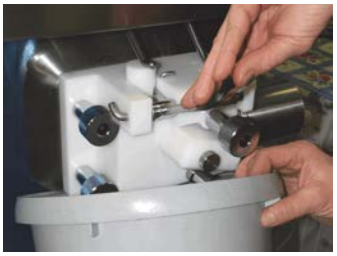
		
1. Disconnect the air hoses.	**2. Remove** the XL pump. Click the pump loose by rotating it anti-clockwise and then pull it straight upwards.	**3. Place** an air hose over the two air tubes.
		
4. Remove the agitator cap.	**5. Remove** the agitator.	

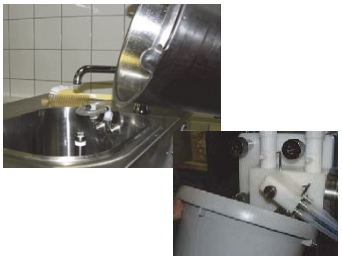
7.3.4 Draining the mix tank.

		
1. Press on Cleaning screen on Dasher	**2. Drain** all ice cream mix from the machine.	

Throw away the old ice cream mix. Do NOT re-use.

7.3.5 Cleaning the mix tank and cylinder

		
1. Fill the mix tank completely with cold water.	**2. Press** on Cleaning screen on Dasher	**3. Clean** the mix tank.
		
	5. Drain all the water out of the machine.	**6. Fill** the mix tank completely with a cleaning solution and clean the mixtank.
		 **5 min**
7. Clean the mix tank.	**8. Press** on Cleaning screen on Dasher	**9. Wait** 5 minutes.
		
	11. Drain all cleaning solution out of the machine.	**12. Fill** the mix tank with clean lukewarm water.

	 **5 min**	
13. Press on Cleaning screen on Dasher	**14. Wait** 5 minutes.	
		
16. Drain all the water out of the machine.	**17. Repeat** steps 12 to 16.	

Do not return the XL pump to the mix tank yet.
This is done during start up.

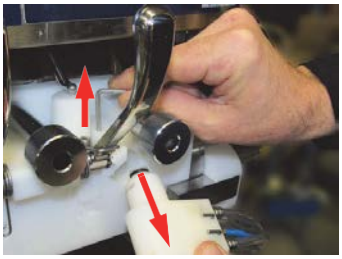
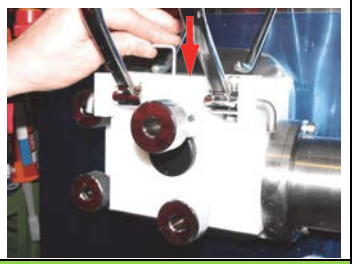
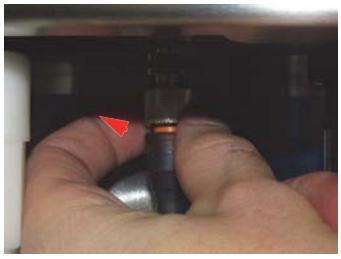
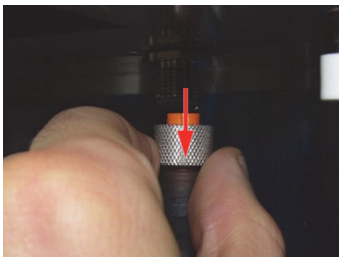
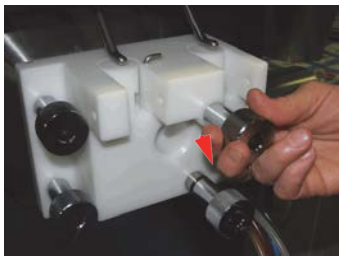
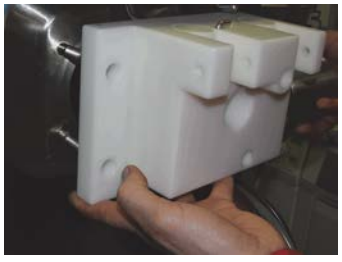
7.3.6 Decalcify the machine

Decalcify the machine every 2nd till 4th cleaning, depending on the pollution, but at least twice a year.

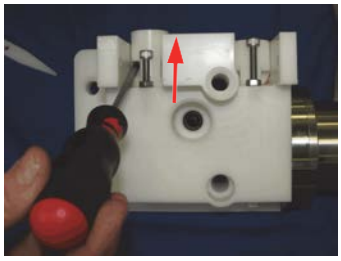
Place all the cleaned stainless-steel parts of the mix pump in the mix tank so these are decalcified too.

	 10 min	
1. Fill the mix tank completely with decalcify solution.	**2. Wait** for at least 10 minutes.	**3. Drain** all the decalcify solution out of the machine.
		
4. Fill the mix tank completely with cold water.	**5. Drain** all the water out of the machine.	**6. Repeat** steps 4 to 5.

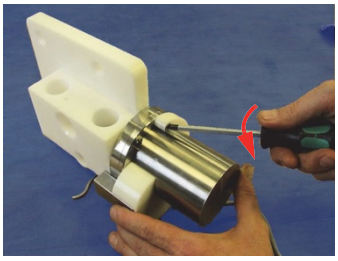
7.3.7 Removing the combi-head.

		
1. Press Stop	**2. Pull** the syrup head out of the combi-head.	**3.** Place the locking pin back in the combi-head.
		
4. Loosen the APM plug. **5.**	**6. Pull** the APM plug straight downwards and out.	**7. Loosen** the shake motor gland nut .
		
8. Pull the shake motor plug straight downwards and out.	**9. Dismantle** the handle	**10. Loosen** the four bolts.
		
11. Remove the combi-head from the machine.		

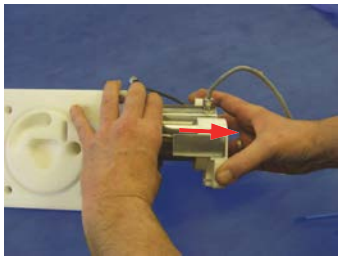
7.3.8 Disassembling, cleaning and disinfecting the combi-head



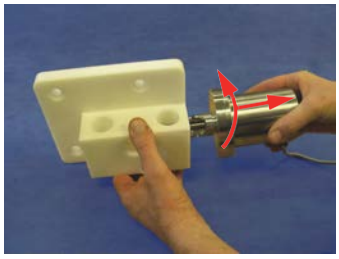
1. **Remove** the two pistons out of the combi-head.



2. **Loosen** the allen bolts.

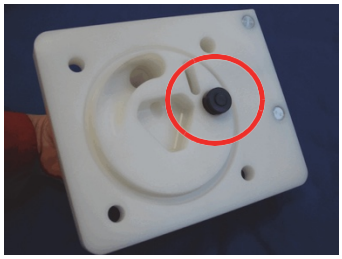


3. **Remove** the APM unit from the milkshake motor.

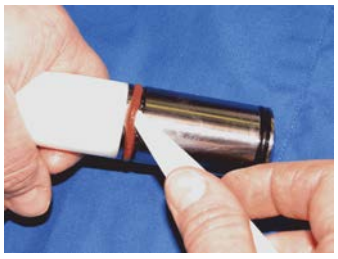


4. **Pull** the milkshake motor from the combi-head with a rotating movement.

5. **Remove** the gasket on the back of the combi-head.



6. **Push** the non-return valve backwards and out of the combi-head.



7. **Remove** the two O rings of both pistons.

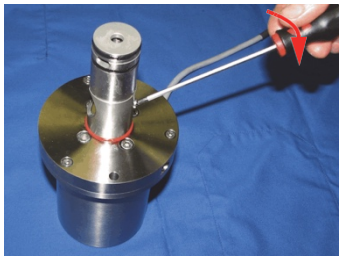
8. **Remove** the valve hose from the non-return valve.

9. **Remove** the two O rings from the non-return valve.

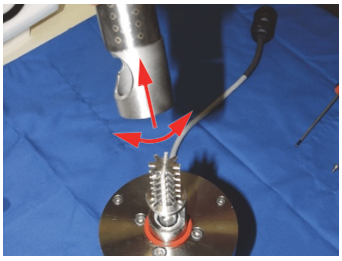
10. **Clean** and disinfect all components and dry them carefully with a clean towel(preferably paper)

Do not submerge the APM unit in water, but clean it with a brush and (moist) cloth. Otherwise it will be seriously damaged!

7.3.9 (Dis)assembling, cleaning and disinfecting the milkshake motor



1. Remove the locking screw.



2. Carefully pull the brush housing from the milkshake motor.

3. Remove the O rings from the brush housing.

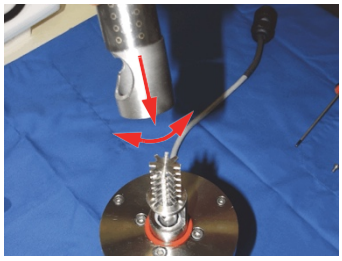
4. Remove the O ring from the milkshake motor.

5. Clean and disinfect all components and dry them carefully with a clean towel (preferably paper). (see paragraph 7.2.3)

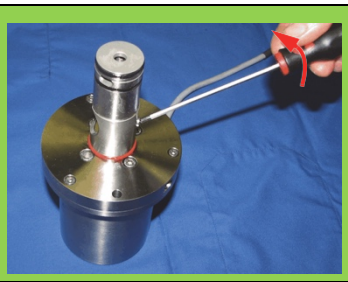
6. Lubricate the O rings.

7. Fit the O rings to the brush housing.

8. Fit the O ring to the milkshake motor.



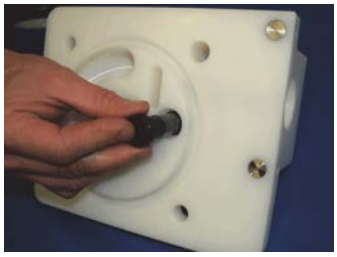
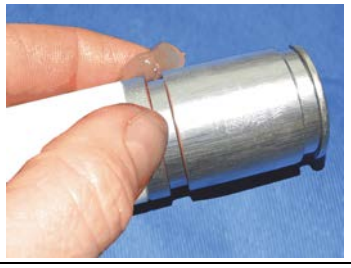
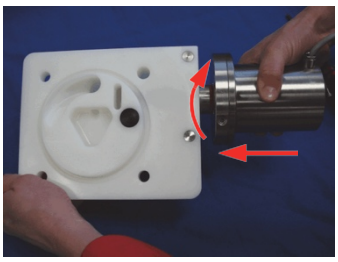
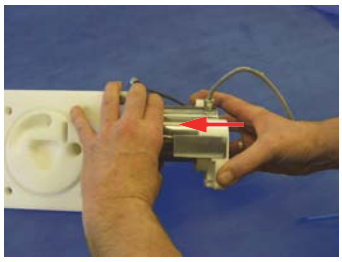
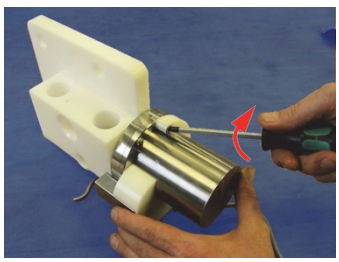
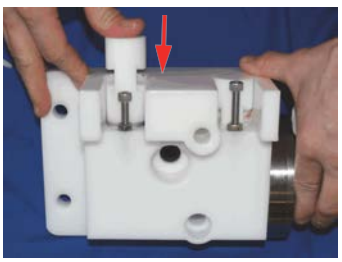
9. Carefully fit the brush housing to the milkshake motor.



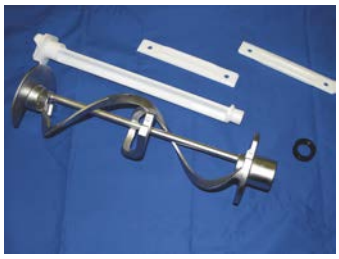
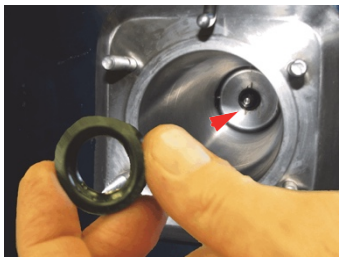
10. Fit the locking screw.

Do not submerge the milkshake motor in water, otherwise it will be seriously damaged!

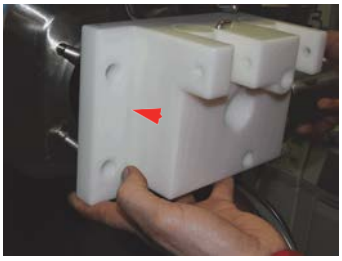
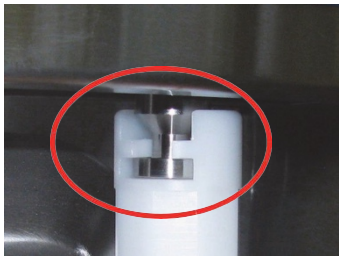
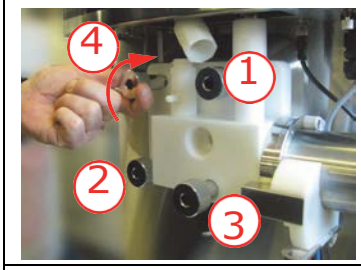
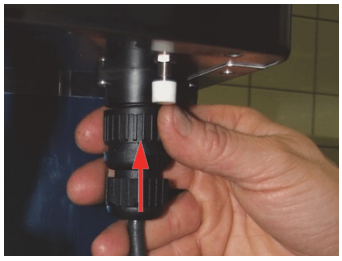
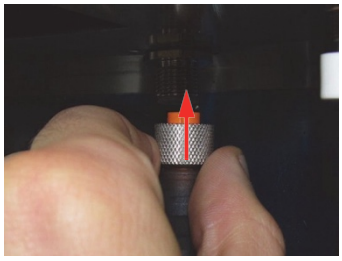
7.3.10 Fitting the combi-head

		
1. Fit the valve hose to the non-return valve. This must **NOT** be lubricated!	**2. Fit** the two O rings to the non-return valve. These must **NOT** be lubricated!	**3. Insert** the non-return valve in the combi-head.
		
4. Lubricate the O rings for the pistons.	**5. Lubricate** the grooves for the O-rings.	**6. Fit** the two O rings on both pistons.
		
7. Follow the correct fitting sequence.	**8. Insert** the milkshake motor into the combi-head with a rotating movement.	**9. Place** the APM unit at the milkshake motor.
		
10. Tighten the allen bolts.	**11. Fit** both pistons in the combi-head.	**12. Insert** the locking pin back in the syrup head.

7.3.11 (Dis)assembling, cleaning and disinfecting the cylinder beater

		
1. Remove the beater from the cylinder. (**Be careful** not to drop the scraper blades onto the ground.)	**2. Remove** the cream seal from the drive shaft at the back of the cylinder.	**3. Clean** the (outside of) the cylinder.
		
4. Disassemble the beater.	**5. Clean** and disinfect all components and dry them carefully with a clean towel (preferably paper). (see paragraph 7.2.3)	**6. Lubricate** the cream seal.
		
7. Fit the cream seal to the drive shaft.	**8. Assemble** the beater.	**9. Insert** the beater in the cylinder.

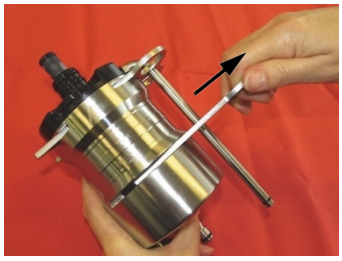
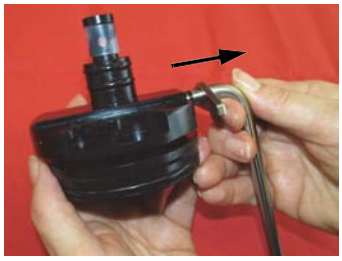
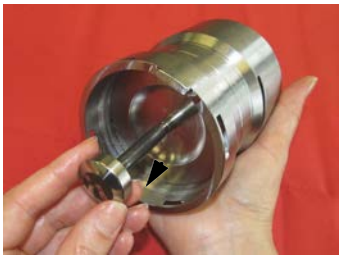
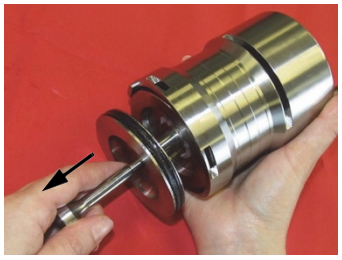
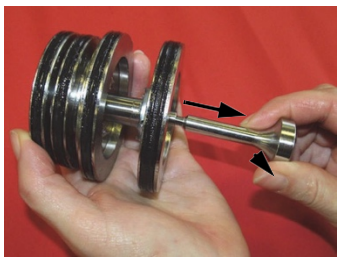
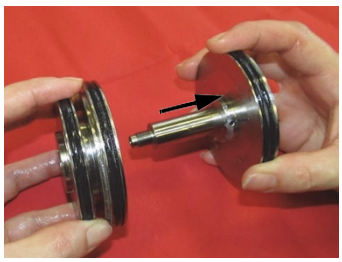
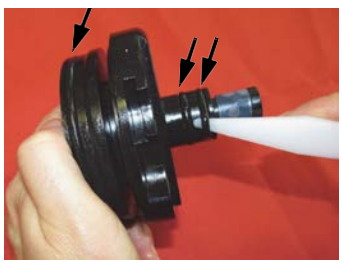
7.3.12 Fitting the combi-head

		
1. Attach the gasket to the back of the combi-head. **DO NOT** lubricate it!	**2. Place** the combi-head on the machine. (**Be careful!** The pin for the headprotection must be pressed upwards. Place the combi-head in front of the cylinder correctly.)	**3. Make** sure the milk shake dispensing piston fits the joint correctly.
		
4. Loosely **tighten** the four bolts in the sequence shown. Then tighten firmly by hand following the same sequence.	**5. Place** the locking pin of the syrup head.	
		
7. Place the plug of the milkshake motor.	**8. Tighten** the plug of the milkshake motor.	**9. Place** the plug of the APM.
		
10. Tighten the plug of the APM.		

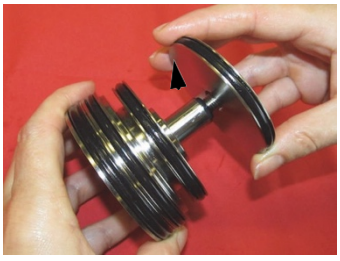
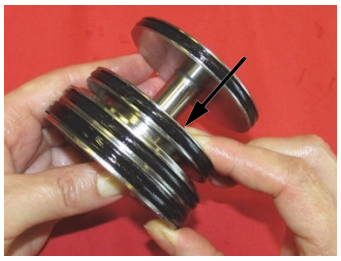
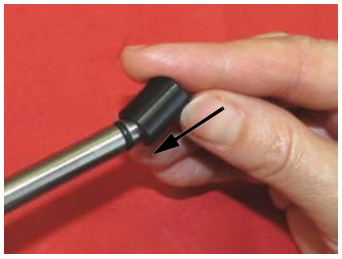
7.3.13 Disinfecting the machine

	 5 min	
1. Fill the mix tank completely with disinfecting solution.	**2. Wait** at least 5 minutes.	**3. Drain** all the disinfecting solution out of the machine.
		
4. Fill the mix tank completely with cold water.	**5. Drain** all the water out of the machine.	**6. Repeat** steps 4 to 5.

7.3.14 (Dis)assembling, cleaning and disinfecting the XL pump

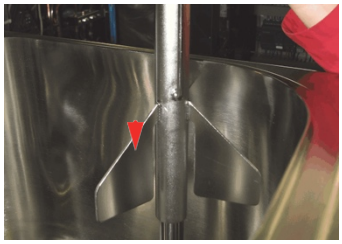
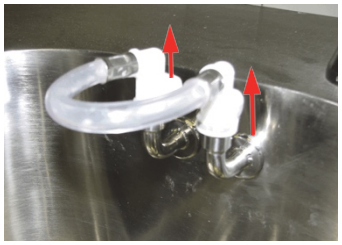
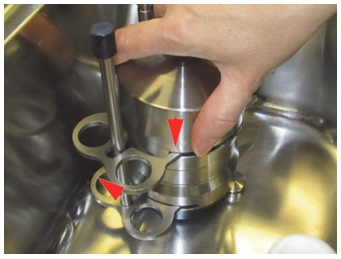
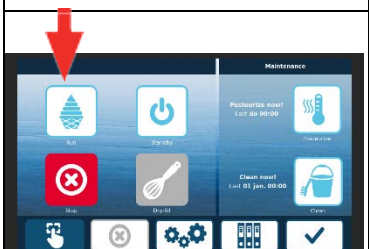
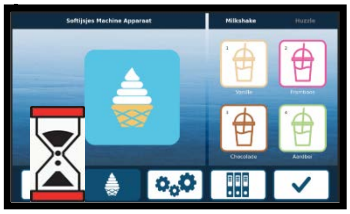
		
1. Pull the locking pins out of the pump.	**2. Remove** the pump foot from the pump.	**3. Remove** the nozzle tube.
		
4. Remove the nozzle from the tube.	**5. Turn** the piston puller in the piston.	**6. Pull** the piston out of the pump housing.
		
7. Remove the piston puller.	**8. Loosen** the top disc from the shaft.	**9. Slide** the middle disc from the shaft.
		
10. Remove the O rings from the outside of the discs.	**11. Remove** the O ring from the shaft.	**12. Remove** the two O rings on the inside of the middle disc.
		

13. Remove the three O rings from the pump foot.	**14. Remove** the valve hose from the pump foot.	**15. Remove** the mix valve from the pump foot.
		
16. Clean and disinfect all components and dry them carefully with a clean towel (preferably paper). (see paragraph 7.2.3)	**17. Fit** the valve hose to the pump foot. **DO NOT** lubricate it!	**18. Fit** the mix valve to the pump foot. **DO NOT** lubricate it!
		
19. Fit the 3 O rings to the pump foot. **DO NOT** lubricate it!	**20. Lubricate** all O rings with Petrogel.	**21. Fit** the thick O ring to the bottom disc.
		
22. Fit the O rings to the outside of the top disc.	**23. Fit** the two O rings to the outside of the middle disc.	**24. Fit** the O rings to the inside of the middle disc.
		
25. Fit the O ring to the shaft.	**26. Lubricate** the shaft.	**27. Lubricate** the inner O rings of the middle disc.

		
28. Slide the middle disc over the shaft. Attention, the big ring of the middle disc too the bottomside.	**29. Turn** the top disc onto the shaft.	**30. Lubricate** the O rings of the bottom and upper disc well once more.
		
31. Slide the middle disc against the bottom disc.	**32. Fit** the piston package into the pump housing. Push the piston package into the housing as far as it will go.	**33. Fit** the nozzle tube.
		
34. Attach the pump foot to the pump. Ensure a proper alignment of the nozzle behind the ridge.	**35. Insert** the locking pins through the pump housing.	**36. Attach** the nozzle to the tube.

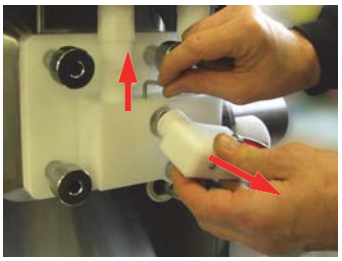
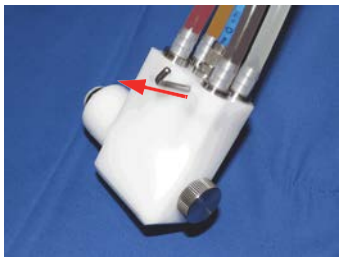
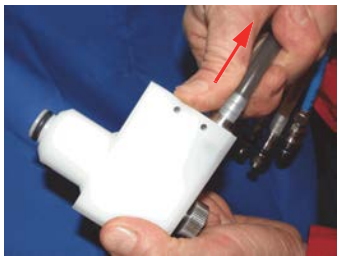
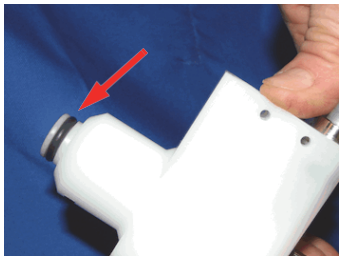
Do not return the mixpump to the mix tank yet.
This is done during start up.

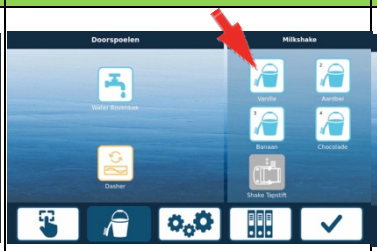
7.3.15 Starting up the machine

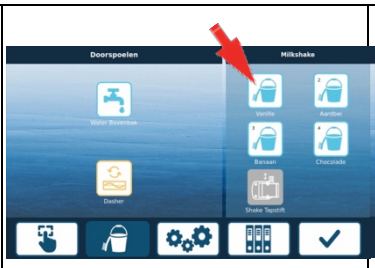
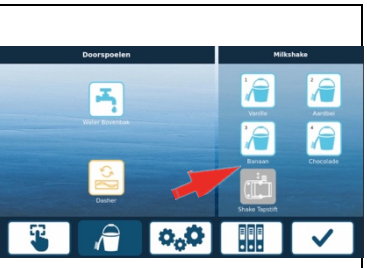
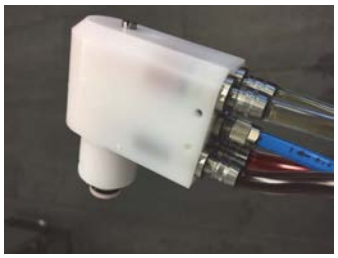
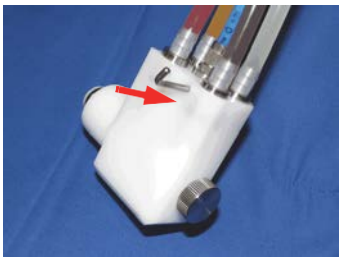
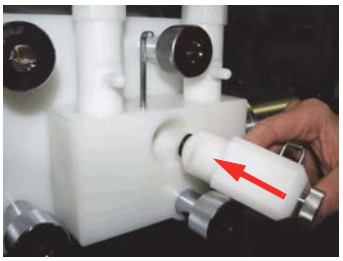
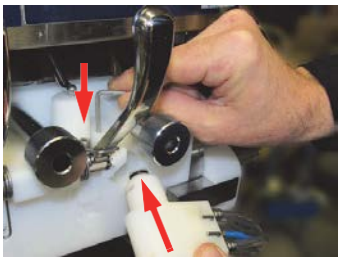
		
	2. Press 'Stop'.	**3. Fit** the agitator.
		
4. Fit the agitator cap.	**5. Fill** the mixtank with 1,7 liter of ice cream mix.	**6. Remove** the air hose.
		
7. Install the XL pump in the mix tank.	**8. Connect** the air hoses.	**9. Fill** the mix tank with ice cream mix.
		
10. Press 'Run' and wait for "Pre-Run" is finished	**11. Wait** until ice icon is complete.	**12. Depress** one or two ice cream and milkshake. Try them, are they ok the machine is ready.

7.3.16 Clean and rinse syrup head and hoses

These operations must be carried out once every three months (once every two cleanings).

		
1. Press 'Stop'.	**2. Remove** the syrup head from the combi-head.	**3. Pull** the two locking pins from the syrup head.
		
4. Disconnect the syrup hoses and the water hose.	**5. Remove** the O ring from the syrup block.	
		
7. Clean and disinfect all components and dry them carefully with a clean towel (preferably paper). (see paragraph 7.2.3)		**9. Fit** the O ring to the syrup block. **DO NOT** lubricate it!

		
10. Hang all the syrup hoses in an empty bucket.	**11. Unscrew** all the lids from the syrup tanks.	**12. Hang** all the tubes from the lids in a bucket of hot water.
		
13. Press on 'Cleaning'	**14. Press** on icon 1 until it stopped automatically.	**15. Repeat** steps 13 and 14 for the other flavours.
	 **5 min**	
16. Repeat steps 12 to 15 with cleaning solution.	**17. Wait** at least 5 minutes.	**18. Repeat** steps 12 to 15 twice with lukewarm water.
		
19. Remove the syrup pipes from the bucket.		

		
	21. Press on icon 1 until syrup is in the hole tube.	**22. Repeat** stepo 21 also for the other flavours.
		
28. Connect the syrup hoses to the syrup head such that the darkest colors are closed to the combi-head.	**29. Insert** the two locking pins in the syrup head. The water hose must be placed in the middle.	**30. Clean** the syrup head with alcoholspray 80%.
		
31. Pull up the locking pin.	**32. Insert** the syrup head in the combi-head.	**33. Push down** the locking pin.

8 Transportation and Storage

Check that all connections have been disconnected before moving the machine.

8.1 Transportation

The following rules must be observed during transportation:

- Always transport the machine upright.
- Use suitable lifting gear. Do not lift the machine manually.

If necessary, have the machine transported by a specialist company. They have suitable lifting gear and transportation means.

8.2 Storage

The following rules must be observed during storage:

- First clean the machine thoroughly.
- Store the combi-head and XL pump disassembled.
- The storage area must be dry with an air humidity level of 45-75%.
- The ambient temperature must be between 4°C and 50°C.
- The storage area must be free of dust, or the machine and parts must be covered with plastic film.

9 Discarding

9.1 Environmental factors

The following must be observed:

When discharging the machine, it must be handed in to an authorized waste collection point for electrical equipment.

Here the machine is disposed of in an environmentally friendly manner and materials are reused.

It must be considered that refrigerant gasses are present in the machine.

Annex 1 Specifications

Machine dimensions	
Height Including tap	820 mm Power; 1500 mm Power Pro 920 mm Power; 1600 mm Power Pro
Width	460 mm
Depth	760 mm
Weight	circa 135 kg Power; 170 kg Power pro

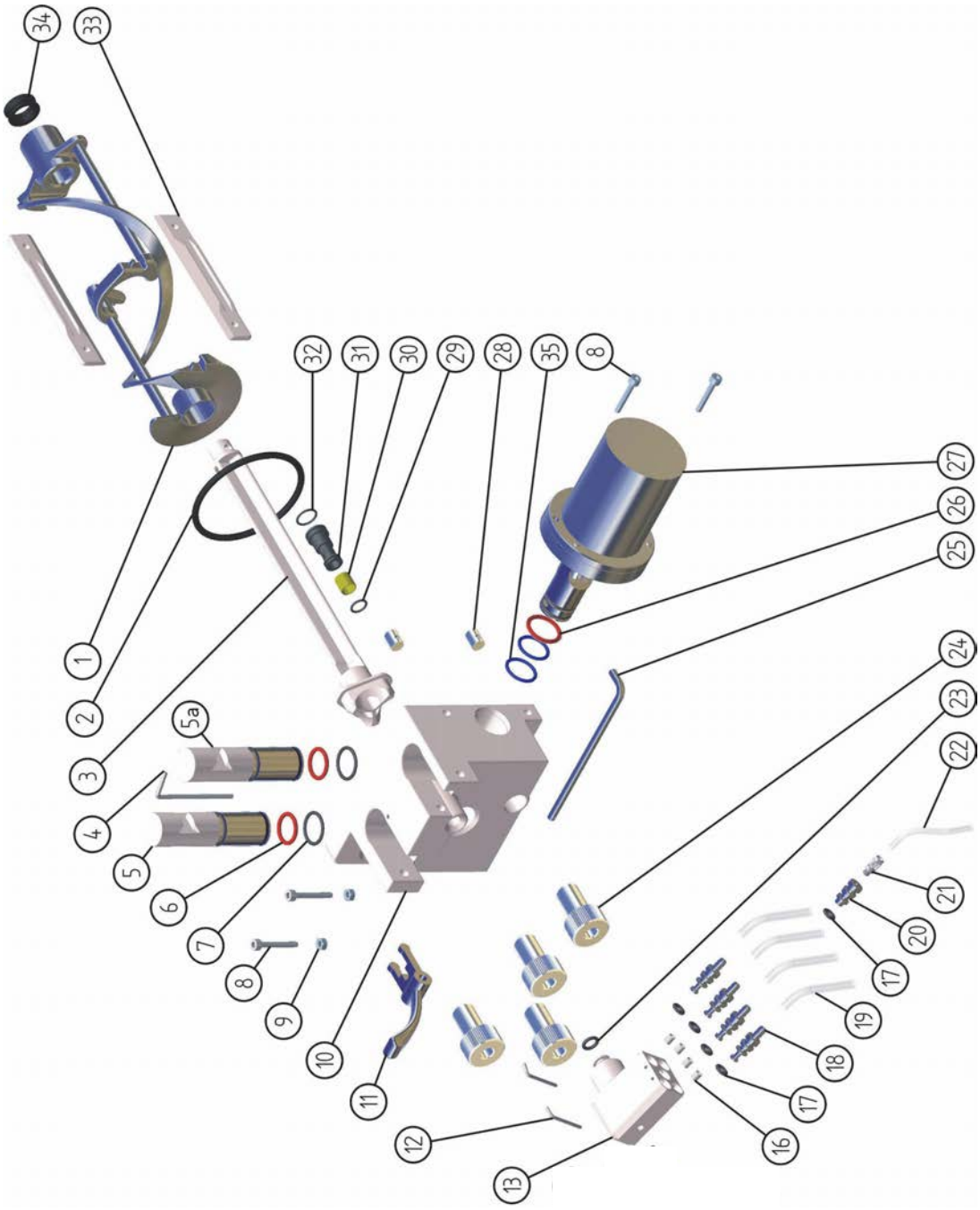
Connection details	
Electrical	400 V 3 x 16 amp + N + PE
Water pressure	Min. 1,6 bar/max. 3 bar
Ambient temperature	+5°C to +35°C

Consumption details	
Electrical	3 kWh
Cooling water	± 70 m^3/year

Specifications	
Dispensing capacity	Approx. 55 liters/hour
Soft ice cream flavours	1
Milkshake flavours	4 (Combi)
Cylinder capacity	2,5 liters
Mix tank capacity	20 liters

Annex 2 Spare Parts

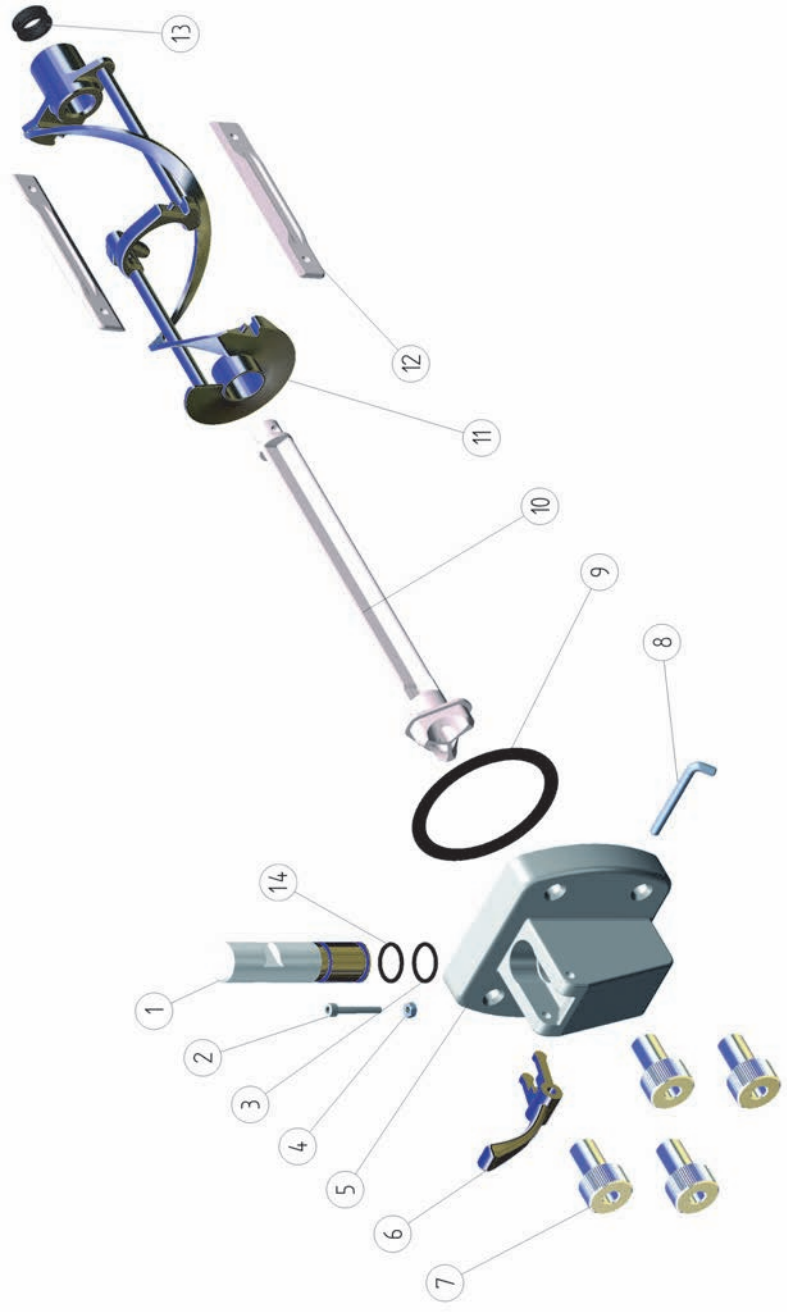
A2.1 Combi-head, syrup block and beater



Item no.	Name	Quantity	Product no.	Item no.	Name	Quantity	Product no.
1	Cylinder beater ø 95	1	30053	21	Coupling piece M6-6mm water hose	1	31591
2	Gasket ø 95	1	138042				
3	Center bar	1	30117	22	Water hose (blue)	1.20 m	36212
4	Syrup block locking pin	1	0800048	23	O ring 10 x 3	1	35008
5	Piston ice Touch	1	230855	24	Head bolt, stainless steel	4	138044
5a	Piston milkshake APM	1	30022	25	Dispensing handle locking pin 145	1	31023
6	O ring 21.82 x 3.53 (orange)	2	35034	26	O ring 26.58 x 3.53 (orange)	1	35001
7	O ring 23,55 x 3,2	2	35006	27	Milkshake motor	1	31010
8	Allen bolt, stainless steel M6 x 40	4		28	Bush for Allen bolt	2	30032
9	Nut, stainless steel M6	2		29	O ring 12 x 2	1	35012
10	Combi-head	1	0730060	30	Valve hose 14 mm	1	33475
11	Dispensing handle	1	31026	31	Non-return valve	1	30068
12	Syrup hoses locking pin	2	0830019	32	O ring 16 x 2	1	35014
13	Syrup block	1	31640	33	Scraper blade double	2	30091
				34	Cream seal	1	35000
				35	O ring 24 x 3,5 (blue)	1	35025
16	Valve hose 6 mm	4	33471		O ring set Combi-head ø 95	1	33105
17	O ring 7 x 3	5	35009				
18	Syrup valve	4	31592				
19	Syrup hose	4x 1.20 m	31605				
20	Water valve	1	31590				

Annex 2 Spare Parts

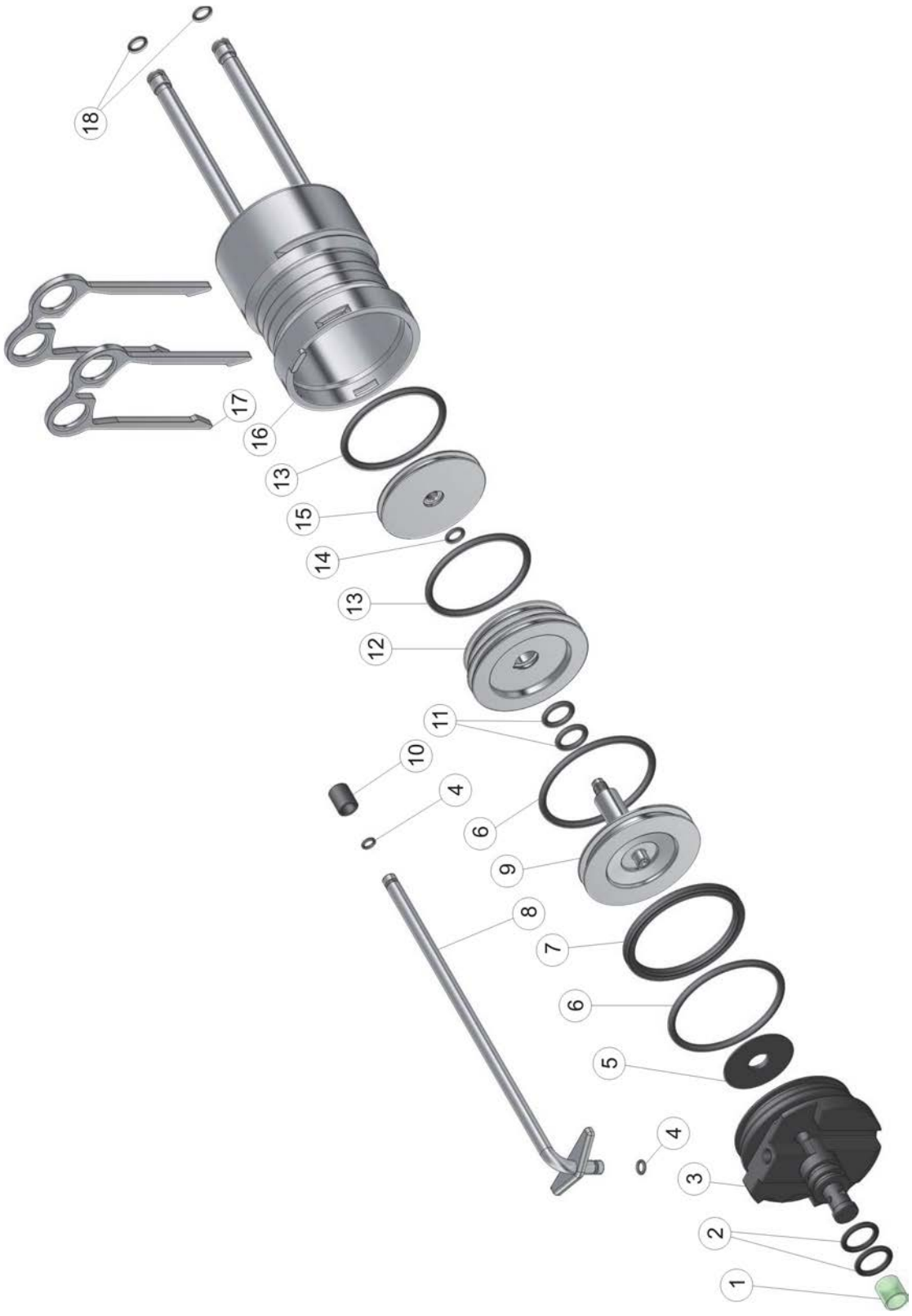
A2.1 Ice cream head and beater



A2.1 IJskop

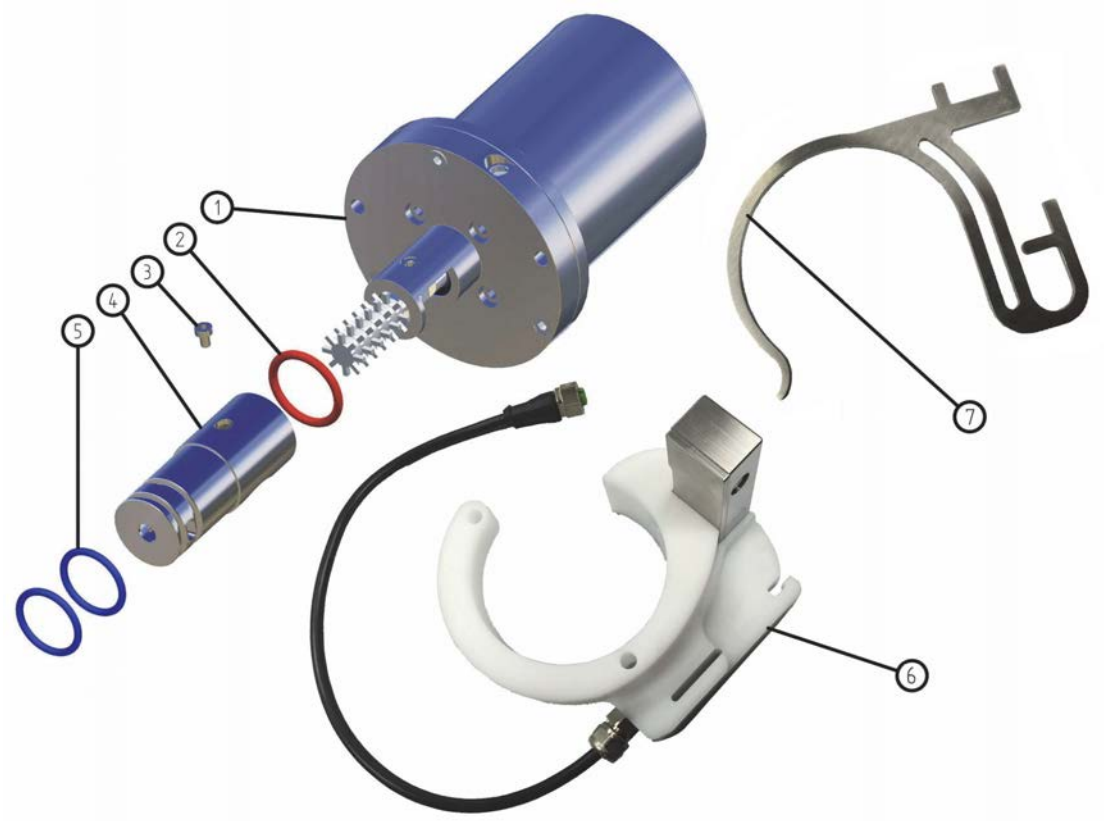
Item no.	Name	Quantity	Product no.
1	Piston	1	30009
2	Allen bolt, stainless steel M6 x 40	1	
3	O ring 23,55 x 3,2	1	35006
4	Nut, stainless steel M6	1	
5	Ice cream head	1	137664
6	Dispensing handle	1	137629
7	Head bolt, stainless steel	4	138044
8	Locking pin dispensing handle	1	31022
9	Gasket ø 95	1	138042
10	Center bar	1	30117
11	Cylinder beater ø 95	1	30053
12	Scraper blade double	2	30091
13	Cream seal	1	35000
14	O ring 23,55 x 3,2	1	35006
	O ring set NA 9328 Prof gravity	1	33208

A2.2 XL pump



Item no.	Name	Quantity	Product no.
1	Valve hose 14mm	1	33475
2	O ring 17 x 3	2	35013
3	Pump foot	1	085046
4	O ring 5,1 x 1,6	2	35029
5	Mix pump valve	1	33409
6	O ring 64 x 4	2	35017
7	O ring 59.69 x 5.33	1	35016
8	Nozzle tube	1	33493
9	Bottom piston	1	085039
10	Nozzle	1	400...(+size)
11	O ring 14 x 3	2	35021
12	Middle piston	1	085042
13	O ring 57 x 4	2	35015
14	O ring 8 x 2	1	97010
15	Top piston	1	085040
16	Pump housing	1	085045
17	Locking pin	2	085044
18	O ring 8 x 2	2	97010
	O ring set XL pump	1	33111

A2.3 Milkshake motor



Item no.	Name	Quantity	Product no.
1	Shake Motor	1	31010
2	O ring 26.58 x 3.53 (orange)	1	35001
3	Allen bolt (flat head) M4 x 6	1	
4	Brush housing	1	31002
5	O ring 24 x 3.5 (blue)	2	35025
6	APM sensor	1	34007
7	Cup holder	1	31032

Annex 3 EC Declaration

EC Declaration of Conformity of the Machinery Directive 2006/42/EC, Appendix II, under 1.A

Manufacturer,

Win Equipment B.V.
De Kronkels 31
3752 LM Bunschoten
The Netherlands

hereby declares that the following machine:

Name:	Nissei soft ice cream machine
type:	NA9438 Power Combi Touch XL
type:	NA9438 Power Pro Combi Touch XL
type:	NA9438 Power Touch XL
type:	NA9438 Power Pro Touch XL

is in conformance with the following EC directive:

- the Machinery Directive 2006/42/EC

and the following harmonized European standards:

- NEN-EN-ISO 12100-1
- NEN-EN-IEC 60204-1

Bunschoten, December 1st 2022
Name: M. Jocker
Position: Manager Operations