

# *Nio*

## User Manual Nio Coffee Machine



**XKA Series  
CoEx XL<sup>®</sup> brewer**

5DUXKA20M EN V2.3

# Preface

## Copyright

J.M. de Jong Automatenfabriek B.V. © 2023.

The contents of this manual are copyrighted. Texts, images, and source files may only be used for professional purposes. No part of this guide may be reused, modified, or published without the prior written permission of the manufacturer. Printing pages is allowed only for professional use.

The English language version is the original version. All other language versions are translations of the original version.

## Disclaimer

Although this manual has been put together with the utmost care, J.M. de Jong Automatenfabriek B.V. accepts no liability for inaccuracies or omissions. No liability is accepted for the consequences arising from operation of the equipment in accordance with the information contained in these instructions. J.M. de Jong Automatenfabriek B.V. reserves the right to alter specifications at any time and without prior notification to the purchaser.

All rights reserved.

## Introduction

- Before using the coffee machine, please read the safety instructions and all of the information in this manual first.
- Keep this manual in a safe and accessible place for later reference.
- The machine serves hot drinks. Keep a distance from the outlet nozzles after selection, during dispense and when the drink is removed from the machine after dispense.
- Only properly trained service personnel may install, move, adjust and repair the machine.
- This machine can be used by children aged 8 years and older and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and they understand the hazards involved.
- All information for normal daily use is found in the paragraph [Using the coffee machine](#) (on page 33).

- The information in the other paragraphs is meant only for persons trained in the operation and maintenance of the machine.
- Solutions to simple issues or malfunctions that may occur are given in the back of the manual.
- The manual cannot be regarded as a replacement for the training and instruction, but must be seen as an addition to the training, and as a reference work.
- The user manual is valid for the machine supplied by the manufacturer, including the options installed by the manufacturer.
- The manufacturer accepts no liability for any damage resulting from incorrect or improper use of the machine, or resulting from modifications that have not been authorized by the manufacturer.
- Only use original parts from the manufacturer when the machine needs to be repaired.
- Contact the dealer / supplier of the coffee machine (see contact information in the next section) for maintenance or repairs not explained in this manual.

## Service and support

For service and support contact the dealer / supplier of the machine.

*Record dealer information in this box or use a dealer stamp.*

Telephone Service Number:

Internet:

Company name:

Address:

Area code - City:

Country:

Telephone:

E-mail:

*Record the serial number of the coffee machine in this box. Mention it when service is required.*

Serial number:

# Contents

<b>Preface</b> .....	<b>2</b>
Copyright.....	2
Disclaimer.....	2
Introduction.....	2
Service and support.....	3
<b>About this manual</b> .....	<b>8</b>
Audience.....	8
Scope.....	8
Conventions.....	8
Related documents.....	9
Availability of this manual.....	10
<b>1 Safety</b> .....	<b>11</b>
1.1 Safety and risk levels.....	11
1.2 Safety and warnings.....	12
1.3 Installation.....	14
1.4 Maintenance.....	14
1.5 Extended down time.....	14
<b>2 Description</b> .....	<b>15</b>
2.1 Overview.....	15
2.1.1 Front view.....	16
2.1.2 Inside view.....	17
2.1.3 Door interior.....	18
2.1.4 Inside view base cabinet — optional.....	19
<b>3 User interface</b> .....	<b>20</b>
3.1 Display layout.....	20
3.2 Main menu - Cup dispensing.....	21
3.2.1 Additional options submenu.....	23
3.2.2 Jug dispensing submenu.....	25
3.2.3 Number selection submenu.....	26
3.2.4 Dispense submenu.....	28
3.2.5 Ready submenu.....	29
3.2.6 Message submenu.....	30

3.2.7 Information submenu. . . . .	32
<b>4 Using the coffee machine. . . . .</b>	<b>33</b>
4.1 Before use. . . . .	33
4.2 Procedures. . . . .	34
4.2.1 Select a beverage. . . . .	34
4.2.1.1 Cup dispensing. . . . .	35
4.2.1.2 Cup dispensing by number — optional. . . . .	36
4.2.1.3 Jug dispensing. . . . .	37
4.2.2 Payment. . . . .	39
<b>5 Preventive maintenance. . . . .</b>	<b>40</b>
5.1 Food safety engagement. . . . .	40
5.2 Preventive maintenance schedule. . . . .	41
5.3 Daily maintenance. . . . .	42
5.4 Weekly maintenance. . . . .	43
5.5 Monthly maintenance. . . . .	44
5.6 Preventive maintenance procedures . . . . .	45
5.6.1 Switch on. . . . .	45
5.6.2 Open the door. . . . .	45
5.6.3 Close the door. . . . .	45
5.6.4 Switch off / Putting out of order. . . . .	47
5.6.5 Scheduled rinse. . . . .	48
5.6.6 Flush mixers and brewer. . . . .	49
5.6.7 Connect the fresh milk system — optional. . . . .	50
5.6.8 Clean the fresh milk system — optional. . . . .	54
5.6.9 Remove and clean the fresh milk parts — optional. . . . .	56
5.6.10 Clean waste bucket. . . . .	60
5.6.11 Clean the waste bin in the base cabinet. . . . .	62
5.6.12 Clean the drip tray. . . . .	63
5.6.13 Clean the mixing system and all hoses. . . . .	65
5.6.14 Remove and clean the brewer. . . . .	71
5.6.15 Clean brewer with cleaning tablet. . . . .	74
5.6.16 Unblock the grinder. . . . .	76
5.6.17 Clean the canisters. . . . .	81
5.6.18 Clean the cold water outlet nozzle — optional. . . . .	83
5.6.19 Deep clean the cold water outlet nozzle — optional. . . . .	84
5.6.20 Fill up the ingredient canisters. . . . .	86
5.6.21 Enter canister ingredient levels — optional. . . . .	87
5.6.22 Clean the outside of the machine. . . . .	88
5.6.23 Clean the touchscreen — optional. . . . .	89
5.6.24 The service key. . . . .	90
5.6.24.1 Insert the service key. . . . .	90

5.6.24.2 Remove the service key. . . . .	91
--	----

## 6 Troubleshooting. . . . . 92

6.1 Messages. . . . .	92
6.1.1 Message: Brewer is turning the wrong way, check the wiring. . . . .	92
6.1.2 Message: Brewer out of position. . . . .	92
6.1.3 Message: Clean screen. . . . .	92
6.1.4 Message: Clean the milk system. . . . .	92
6.1.5 Message: Communication error. . . . .	93
6.1.6 Message: Door open. . . . .	93
6.1.7 Message: Drip tray full. . . . .	93
6.1.8 Message: Empty waste bucket. . . . .	93
6.1.9 Message: Enough water?. . . . .	94
6.1.10 Message: Error occurred during recipe cycle. . . . .	94
6.1.11 Message: Filling boiler. . . . .	94
6.1.12 Message: General error. . . . .	94
6.1.13 Message: Grinder blocked. . . . .	95
6.1.14 Message: Heating boiler. . . . .	95
6.1.15 Message: Initialization failed, the brewer did not reach maximum movement. . . . .	95
6.1.16 Message: Install drip tray. . . . .	95
6.1.17 Message: Place the waste bucket in the machine . . . . .	95
6.1.18 Message: Insert coins. . . . .	96
6.1.19 Message: Mixer blocked. . . . .	96
6.1.20 Message: Machine Blocked. . . . .	96
6.1.21 Message: Machine is temporarily out of order. . . . .	96
6.1.22 Message: Not all ingredients available. . . . .	96
6.1.23 Message: No coffee detected in brewer. . . . .	97
6.1.24 Message: No water connected / No water in boiler. . . . .	97
6.1.25 Message: Piston blocked, dosage too high. . . . .	97
6.1.26 Message: Place coffee funnel in the machine. . . . .	98
6.1.27 Message: Place cup in center. . . . .	98
6.1.28 Message: Place cup left. . . . .	98
6.1.29 Message: Please load configuration. . . . .	98
6.1.30 Message: Please load the User Interface. . . . .	98
6.1.31 Message: Recipe error, contact tech. support. . . . .	99
6.1.32 Message: Replace water filter. . . . .	99
6.1.33 Message: Rinse brewer with tablet. . . . .	99
6.1.34 Message: Startup problem. . . . .	99
6.1.35 Message: Temp. sensor disconnected. . . . .	99
6.1.36 Message: Temperature boiler (too) high. . . . .	100
6.1.37 Message: The brewer blocked during recipe, did not reach position. . . . .	100
6.1.38 Message: Water level too low. . . . .	100
6.1.39 Message: Wait, Heating boiler. . . . .	100

6.1.40 Message: Waste bucket full / Empty waste bucket. . . . .	100
6.1.41 Message: Water filter installed?. . . . .	101
6.1.42 Message: Wrong brewer defined in the software. . . . .	101
6.1.43 Message: Ready, take your cup. . . . .	101
<b>7 Technical specifications. . . . .</b>	<b>102</b>
7.1 Standards and regulations. . . . .	102
7.2 Type plate. . . . .	103
7.3 Disassembly and recycling. . . . .	103
7.4 Technical specifications. . . . .	104
7.5 Cup and jug sizes. . . . .	105
7.6 Manufacturer contact information. . . . .	106
<b>8 Appendix. . . . .</b>	<b>107</b>
8.1 Appendix list. . . . .	107
8.2 CE - Declaration of conformity Nio. . . . .	108
8.3 UKCA - Declaration of conformity. . . . .	109

# About this manual

## Audience

This manual describes how to use and maintain the Nio coffee machine. Intended users are the end user and staff responsible for regular maintenance of the machine.

De **Jong** DUKE assumes that staff will:

- have sufficient technical knowledge and experience to carry out the tasks assigned to them,
- recognize and prevent possible hazards,
- read and understand this manual,
- follow the procedures described in this manual,
- ensure that the machine will not harm personnel and/or damage its environment.

If the responsible staff has permission to perform maintenance actions or to change parameters, De **Jong** DUKE expects that the operator is trained for these tasks.

## Scope

This manual contains essential information for proper operation and maintenance of the machine. Following the instructions contained in this manual should assure trouble-free, safe operation and maintenance of the machine.



### CAUTION

Before using or maintaining the machine read this manual carefully to become familiar with the functionality. Make sure that any operator or service engineer understands the correct operating and maintenance procedures and all safety precautions. If any (part of the) information in this manual is unclear contact the supplier.

Operators and service engineers must be adequately trained in the correct operation of the machine. Keep this manual in a pre-determined place near the machine.

## Conventions

This manual uses the following text conventions:

- Actions that you should perform in a specific sequence are numbered, for instance, e.g.:
  1. Open the door of the coffee machine.



- Black circled numbers (e.g. 1, 2, 3) and numbers between parentheses e.g. (1) in text refer to elements in a figure.
- Bold text is used for (sub)titles and for information that needs special attention: '**Read these instructions carefully**'.
- Menu names in the user interface are shown in bold, for example: return to the **Main menu**.
- Settings in the user interface are shown in italics; for example: *0.45*.
- Soft keys, keyboard buttons and hardware buttons are shown between brackets, for example: **[Start]**, **[Enter]**, **[2]**.
- Messages shown in the user interface are shown between quotation marks and in italics, e.g.:  
'*Place cup right*'.
- Cross-references to sections, tables, figures etc. are indicated as blue text or written as (see "....." on page ..). The main purpose is easy recognition in the paper and on-line (PDF) version of the manual. In the on-line version, the cross-references function as hyperlinks that can be used to navigate through the manual by clicking on them. Example: [Scope](#) (on page 8).
- The safety symbols indicate situations or actions that may endanger the operators and service engineers and are explained in detail in the safety section.
- One additional symbol is available to give the reader additional information:



#### **TIP**

Recommendations for the reader.

## Related documents

In addition to this manual, the following documentation is available:

- Technical manual  
containing all information about the functionality of all parts in the machine, procedures for servicing and configuring the recipes.
- Electrical drawings  
contains the electrical drawing/diagrams of the machine.
- Spare parts manual  
containing relevant information for identification of the spare parts.
- Third party documentation  
contains the available documentation of third-party machine parts.

## Availability of this manual

De **Jong** DUKE expects this manual to be available to all operators and service engineers. The original hard copy (paper) version should always be available near the machine.

If the operator has the permission to perform a number of maintenance actions or program activities, De **Jong** DUKE expects that the operator is trained according to the activities and that the appropriate documentation is available for the operator.

# Safety

## 1.1 Safety and risk levels

Four safety and risk levels are used in this manual.

The risk levels and explanations are:

**NOTE**

To show extra information that may help the reader.

**CAUTION**

Indicates a potentially hazardous situation that, if not avoided, can result in minor or moderate injury or damage to the machine or property.

**WARNING**

Indicates a potentially hazardous situation that, if not avoided can result in death, serious injury or machine damage. It includes hazards that are exposed when guards or security features are removed.

**DANGER**

Indicates a hazardous situation that, if not avoided, can result in death or serious injury.

## 1.2 Safety and warnings

The safety warnings in this section apply to the entire document.

The risk level associated with the explanation are:



### **DANGER**

All danger level warnings applicable to the entire document:

- Do not use water in or near the machine unless the instructions contain explicit directions to the contrary. Risk of electrocution when water comes in contact with internal electrical parts.
- Do not use a water jet to clean the coffee machine.
- HOT water! The water system (boiler, pipes, etc.) may contain hot water. Risk of burning when HOT water comes in contact with a person that can cause a scalding injury.
- Do not move, lift or tilt the machine. Risk of serious personal (hand and finger) injuries.
- Only qualified service personnel is allowed access to the internals of the machine.



### **WARNING**

All warning level warnings applicable to the entire document:

- Do not shake the machine while in use. Risk that machine can tip over and fall.
- Do not lean on the door when open. Risk that machine can tip over and fall. Risk of serious injury.



### **CAUTION**

All caution level warnings applicable to the entire document:

- Do not use aggressive cleaning products or abrasives to clean (parts of) the machine.
- Do not use a dish washer to clean parts.
- Do not use a damaged machine. Please contact your supplier.
- If a fault occurs disconnect the machine from the electrical and water supplies. Please contact your supplier immediately.



### **NOTE**

All note level warnings applicable to the entire document:

- Use the machine only in areas where trained personnel can monitor the operation.
- Water and electrical connections must conform to local regulations.
- Make sure a waterlock is used in the water connection.

- If the power cord is damaged it must be replaced by the manufacturer, the supplier or similar qualified persons.
- Do not use an extension cord.
- Do not use an external timing device to manage the availability of the machine.
- Damaged water connection hoses may only be repaired by trained personnel.
- Make sure to follow instructions on all safety labels on and in the coffee machine.
- Do not remove safety labels.

## 1.3 Installation

For instructions about transportation, unpacking, and installation of the machine, consult the Technical manual.

- Installation, transportation, and adjustment of the machine is specialized work, only properly trained service personnel is allowed to do this.
- The coffee machine is for indoor use only.
- Make sure the machine is placed on a level, flat and stable surface in a hygienic, dry room with a temperature between 5 and 35 °C.
- Make sure that the electricity and water supply connections comply to local regulations and remain easily accessible after installation.

## 1.4 Maintenance

Regular cleaning is needed to ensure hygienic operation of the machine. This manual explains all cleaning procedures to ensure a proper operation of the coffee machine.

## 1.5 Extended down time

- If the coffee machine will not be used for a longer period of time (more than one week) it is recommended to turn off the water supply and the electricity (if the power switch is not accessible pulling the main power plug from the wall socket is sufficient). This will also prevent unnecessary use of energy. If the coffee machine was used also check the cleaning procedures in section [Switch off / Putting out of order](#) (on page 47).
- In areas where the temperature can drop below freezing point, the boilers must be emptied. When freezing has occurred allow sufficient time for the machine to reach room temperature before switching on the machine. Contact your supplier (see [Service and support](#) on page 3) for more information.

# Description

## 2.1 Overview

The Nio coffee machine is a compact semi-automatic machine for the preparation and vending of hot (and optionally cold) drinks. The coffee machine is equipped with a paperless CoEx XL® brewer to make fresh coffee and, depending on the configuration, also espresso.

The coffee machine is operated using the touchscreen panel on the door. By tapping one of the buttons on the screen a product choice can be made. Before a beverage is dispensed a cup or jug must be placed under one of the outlets. More details are found in the sections:

- [Using the coffee machine](#) (on page 33) and
- [User interface](#) (on page 20) for information shown on the touchscreen.

The next sections contain drawings of the front, the inside and the optional base cabinet of the coffee machine. The drawings show the location and the name of the most important parts of the machine.

### **NOTE**

All pictures show a generic configuration. The actual model can be different. To improve clarity, colors in the pictures may be different from the actual colors.

More details are also found in the chapter [Technical specifications](#) (on page 102).

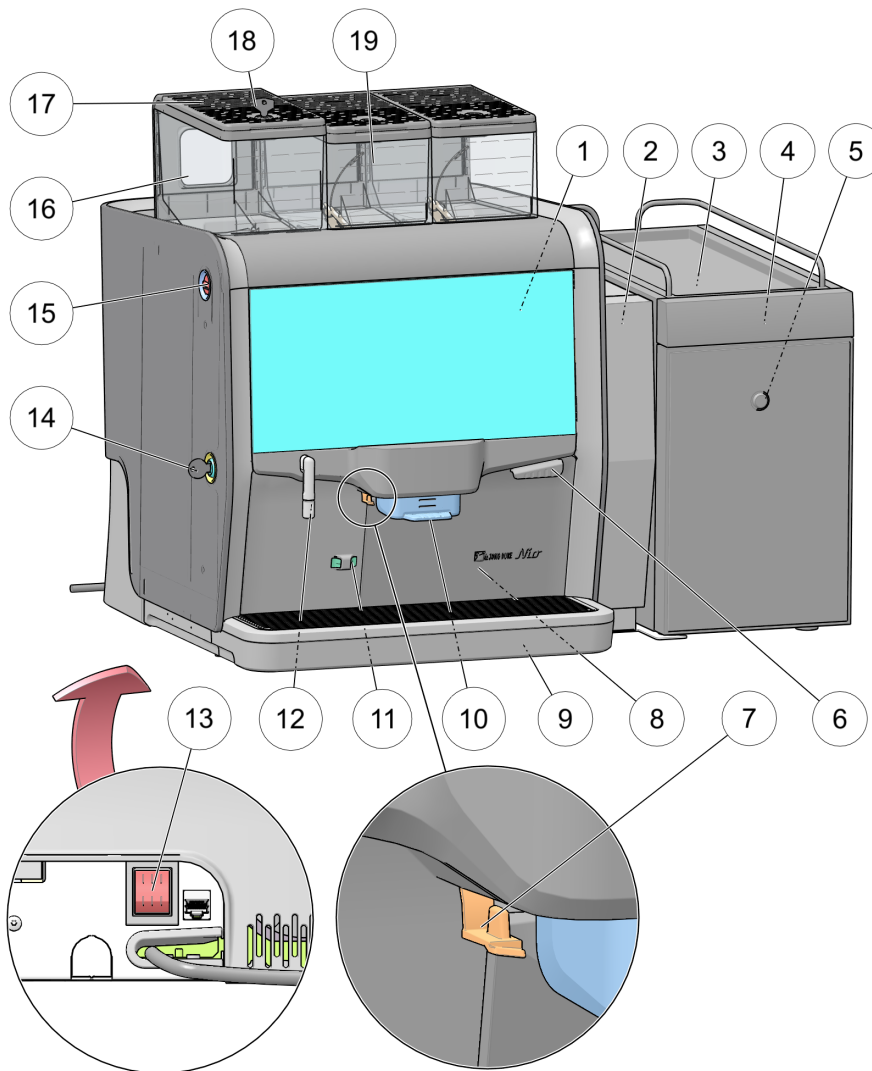
## 2.1.1 Front view

Front view Nio small model with optional Fresh Milk refrigerator



### NOTE

All pictures show a generic configuration. The actual model can be different. To improve clarity, colors in the pictures may be different from the actual colors.



1. Touchscreen
2. Fresh Milk Pump unit — optional
3. Cup warmer on refrigerator — optional
4. Refrigerator — optional
5. Refrigerator door lock
6. Waste bucket handle
7. USB port with cover
8. Waste bucket
9. Drip tray / Cup stand / Jug stand
10. Adjustable outlet
11. Cup sensors
12. Door handle - Hot water outlet (/ Cold water — optional)
13. On/Off power switch (on back side)
14. Door lock
15. Entrance for cleaning pill
16. Bean canister
17. Bean canister lid
18. Canister lock — optional
19. Ingredient canister(s)



## 2.1.2 Inside view

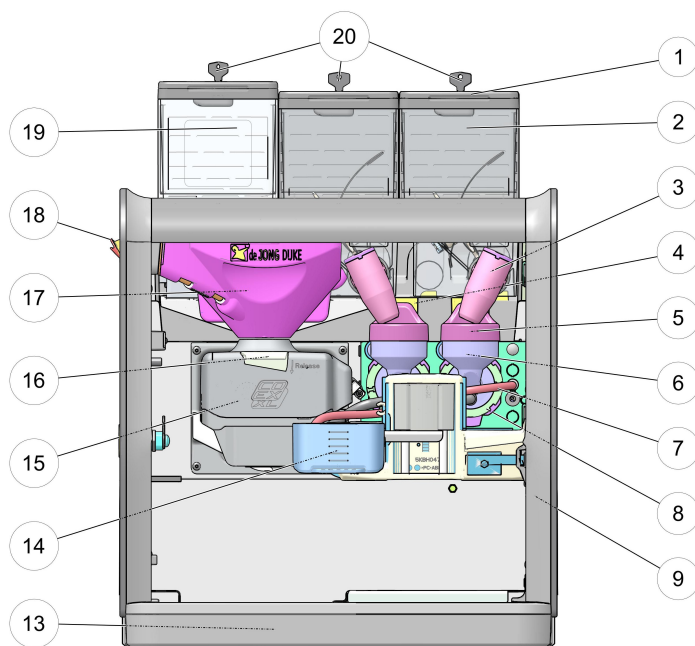
The inside view shows the location and names of the most important parts.



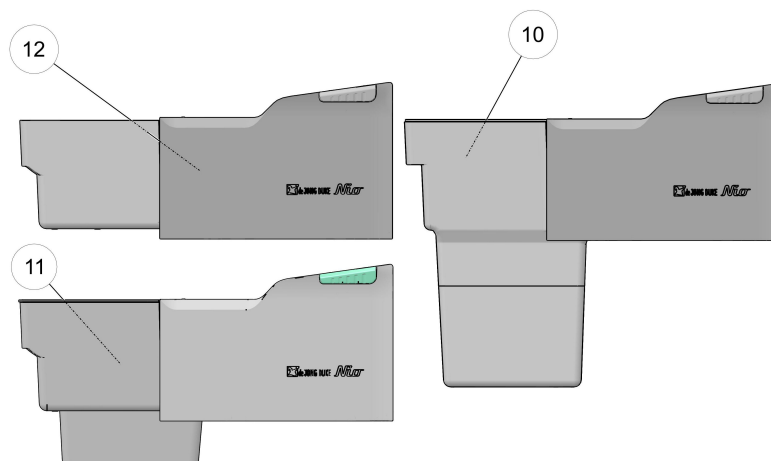
### NOTE

All pictures show a generic configuration. The actual model can be different. To improve clarity, colors in the pictures may be different from the actual colors.

*Inside view Nio CoEx XL model with one bean canister and 2 ingredient canisters / mixers (optional)*



1. Ingredient canister lid
2. Ingredient canister
3. Canister outlet nozzle
4. Exhaust filter drawer
5. Mixer suction trap
6. Mixer house
7. Steam hose (Fresh Milk only) — optional
8. Mixer bayonet catch
9. Cabinet
10. Extended waste bucket — optional
11. Waste guide to base cabinet — optional
12. Waste bucket (standard)
13. Drip tray / cup stand / jug stand
14. Adjustable outlet
15. CoEx XL brewer
16. Brewer locking grip
17. Coffee funnel
18. Cleaning pill entrance
19. Bean canister
20. Canister lid lock — optional



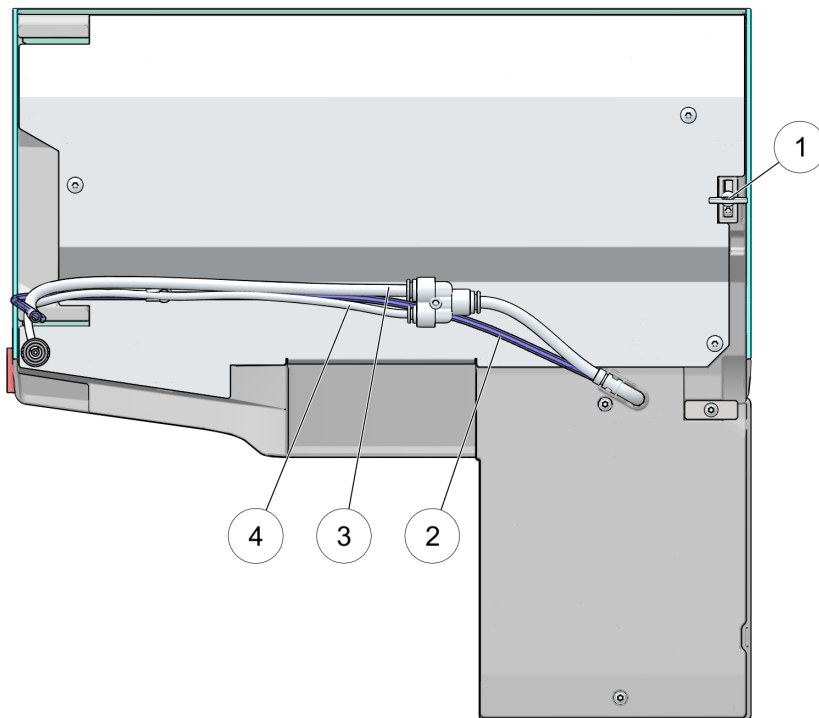
## 2.1.3 Door interior

*Door interior Nio model with optional (sparkling) cold water hose.*



### NOTE

All pictures show a generic configuration. The actual model can be different. To improve clarity, colors in the pictures may be different from the actual colors.



1. Service key
2. Hot water hose
3. Cold water hose - optional
4. Hot water hose (when combined with cold water hose)

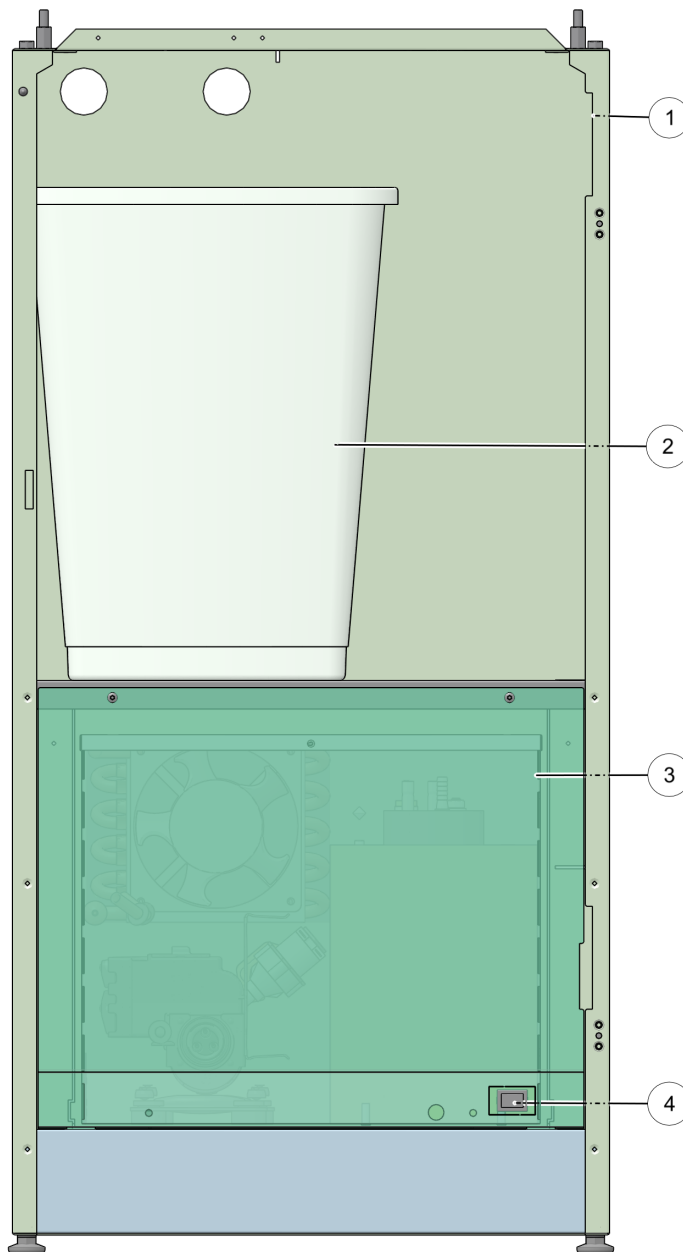
## 2.1.4 Inside view base cabinet — optional

*Inside view base cabinet (Nio model)*



### NOTE

All pictures show a generic configuration. The actual model can be different. To improve clarity, colors in the pictures may be different from the actual colors.



1. Base cabinet
2. Waste bin
3. Chiller sub cabinet -- optional
4. Chiller flush button CO<sup>2</sup>-- optional

## User interface

### 3.1 Display layout

The coffee machine is operated with a touchscreen on the door. All selections are made by tapping (a short press) on one of the buttons or menu tabs on the touchscreen.

*Main screen layout (example)*



#### **NOTE**

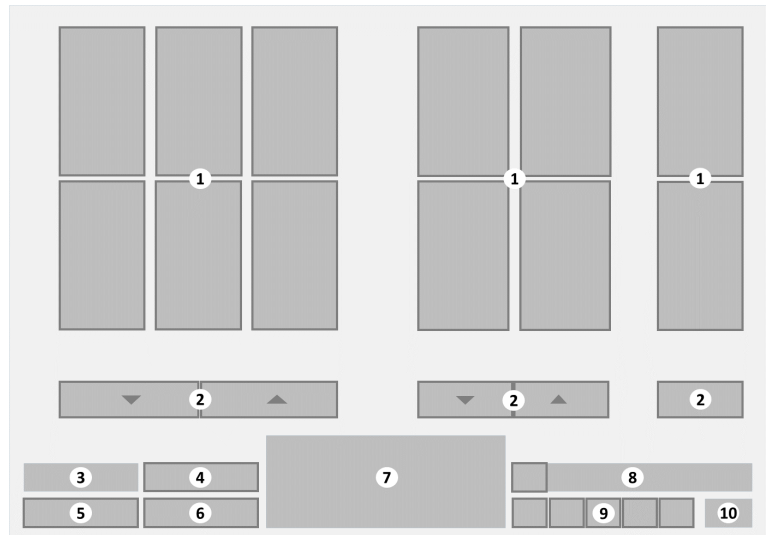
All drawings and screen images of the coffee machine are based on generic configurations. The actual model will be different but the functionality is similar.

All screens and menus are explained in detail in the next sections. Using the touchscreen to dispense a beverage is explained in the chapter [Using the coffee machine](#) (on page 33).

## 3.2 Main menu - Cup dispensing

The **Main** menu (or screen) is displayed when the machine is ready for use. It gives access to selections for cup dispensing and all other functions.

### *Main selection screen*



- |   |  |
|---|--|
| 1. <b>[Cup beverage selections]</b> buttons   | 6. <b>[Number selection]</b> button — optional |
| 2. <b>[Scroll up/down]</b> buttons — optional | 7. Logo — optional                             |
| 3. Credit amount — optional                   | 8. Message area                                |
| 4. <b>[Info]</b> — optional                   | 9. <b>Language menu</b> buttons — optional     |
| 5. <b>[Jug]</b> button — optional             | 10. Clock — optional                           |

### **Beverage selection**

The main screen shows a selection of the most popular beverages. The available beverages are logically grouped in blocks. When more selections are available than can be displayed in a block, a **[Scroll up/down]** button with an arrow is displayed. Tap this button to show the other available beverage selections. Each beverage button contains a small impression of the beverage, the name and, when payment mode is activated, the price of the beverage. Tap a button to select a beverage.

### **Lower part of the screen**

The lower part of the screen contains at least:

- Message area  
Relevant status information about the coffee machine is displayed in the message area. If more than one message must be displayed they are shown in sequence. Tap the **[!]** exclamation mark in front of the message to open the **Message submenu** (on page 30) to see all messages completely. Check the **Message submenu** (on page 30) for more details.
- Clock

Displays the current time (as set in the coffee machine).

**Optional** Depending on the model and configurations of the coffee machine the following options can be available:

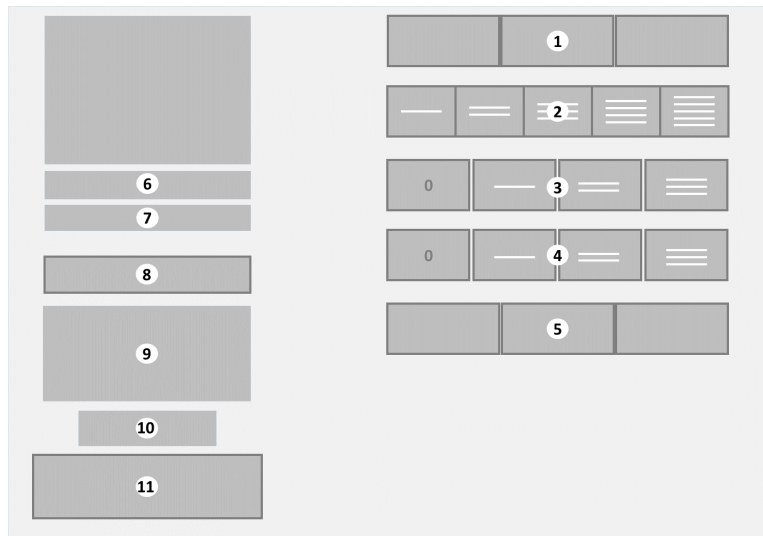
- **Credit amount** — optional  
When payment mode is activated, the credit value is displayed. It is the total amount of money already entered for payment of a beverage.
- **[Info]** — optional  
Tap the **[Info]** button to open the **Information submenu** (on page 32) with more details about ingredients.
- **[Jug]** — optional  
Tap this button to open the **Jug dispensing submenu** (see [Jug dispensing](#) on page 37) with selections to fill complete jugs.
- **[Number selection]** — optional  
Tap this button to open the **Number selection submenu** for quick dispense of a beverage.
- **Logo** — optional
- **Language** — optional  
If more languages are available the screen shows a selection of language buttons. Tap on the desired language button to change the text on the screen to the selected language.

### 3.2.1 Additional options submenu

The **Additional options submenu** is displayed after a beverage selection (cup or jug) is made on the **Main menu** (see [Main menu - Cup dispensing](#) on page 21).

- This submenu is not available if the (selected beverage on the) coffee machine is configured for **direct** dispense only.
- The options shown in the submenu depend on the selected beverage, some beverages will have no options at all.
- If a jug dispense is selected, the **[Start]** and **[Cancel]** buttons are available. If canister selection is possible this button bar is displayed.

#### *Additional options submenu*



- |   |                                |
|---|--------------------------------|
| 1. <b>[Canister selection]</b> button bar — optional    | 7. Currently selected beverage |
| 2. <b>[Strength]</b> button bar — optional              | 8. <b>[Cancel]</b> button      |
| 3. <b>[Add-on]</b> button bar — optional                | 9. Message area                |
| 4. <b>[2<sup>nd</sup> Add-on]</b> button bar — optional | 10. Credit amount — optional   |
| 5. <b>[Cup size]</b> button bar — optional              | 11. <b>[Start]</b> button      |
| 6. Price for this beverage — optional                   |                                |

Depending on the configuration additional options are displayed in the submenu. The following options are possible:

- *Canister selection bar*: to select an ingredient from a different canister after initial selection. For example, when coffee is selected, it is then possible to select the type of coffee from different canisters. The current selection is highlighted. Depending on configuration and availability of ingredients, a two or three options bar is shown. Tap the desired canister.
- *Strength selection bar*: to adjust the amount of coffee ingredient. The default strength is the middle button. The selected strength will be highlighted.

- tap a **[LINE]** button for the desired strength. More lines is more strength.
- *Add-on selection bar*: to add an extra ingredient, for example milk, to the selected coffee. The selected amount is highlighted. Tap the desired amount.
  - **[0]** is **no** added ingredient (default).
  - tap a **[LINE]** button for the desired amount of added ingredient. More lines is more ingredient.
- *2<sup>nd</sup> Add-on selection bar*: to add another extra ingredient, for example sugar, to the selected coffee.
- *Cup size bar*: to select different cup sizes, a two or three options bar can be displayed. The current cup size selection is highlighted. Tap the desired cup size.

The remaining information on the screen:

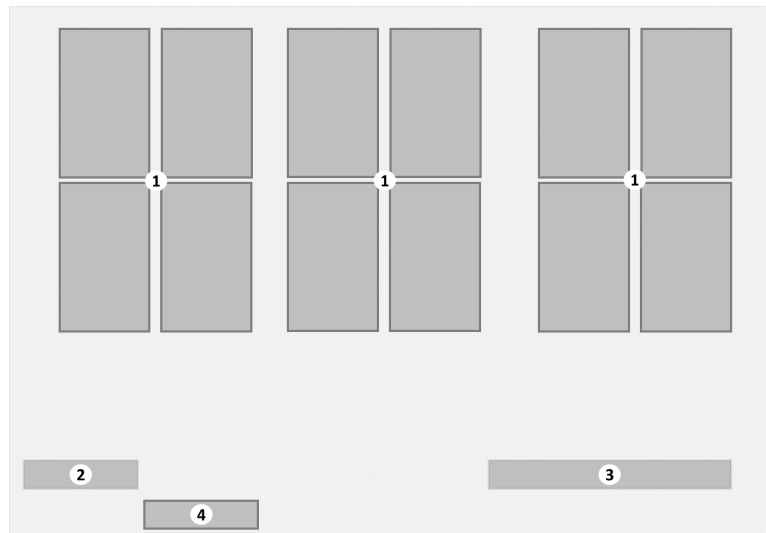
- Price for the selected beverage. Only visible if payment is activated for the machine.
- The currently selected beverage.
- The **[Cancel]** button. Tap to cancel the current selection and return to the Main menu.
- The Message area. Displays relevant messages of the coffee machine. Tap the **[!] exclamation mark** button to open the [Message submenu](#) (on page 30). Details of all messages and possible solutions to solve simple issues are listed in the section [Messages](#) (on page 92).
- Credit. Displays the amount already entered to pay for the selected beverage. Only visible if payment is activated for the machine.
- The **[Start]** button. Tap this button to start the preparation of the beverage. The button is disabled if no full payment is made or if another problem is found that prevents the dispense. Check the displayed message(s) in the message area.



### 3.2.2 Jug dispensing submenu

The **Jug dispensing** submenu is displayed after tapping the **[Jug]** button on the **Main** menu (see [Main menu - Cup dispensing](#) on page 21). On some models this menu is only available if the jug function is activated with a jug key or pin code.

#### *Jug dispensing menu*



1. **[Jug selection]** buttons
2. Credit amount — optional
3. Message area
4. **[Cup mode]** button

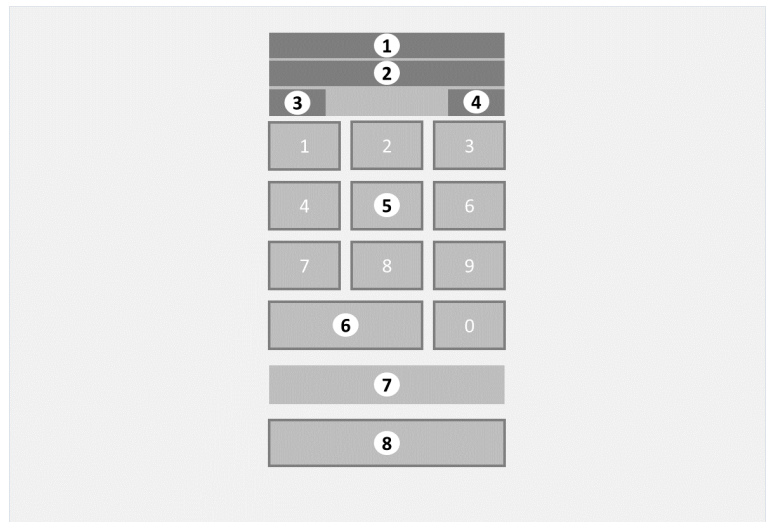
The menu shows the following information:

- The Jug dispensing submenu displays a number of selection buttons with beverages to fill (part of) a jug. Each button contains a small image with an impression of the beverage, the name and, when payment mode is activated, the price of the jug dispense. Tap a button to select a beverage.
- The Message area displays relevant messages of the coffee machine. Tap the **[!] exclamation mark** button to open the [Message submenu](#) (on page 30). Details of all messages and possible solutions to solve simple issues are listed in the section [Messages](#) (on page 92).
- The **[Cup mode]** button. Tap it to cancel the jug selection and return to the Main menu (see [Main menu - Cup dispensing](#) on page 21).

### 3.2.3 Number selection submenu

The **Number selection** submenu is displayed when the **[Number Selection]** button is tapped on the **Main** menu (see [Main menu - Cup dispensing](#) on page 21).

#### *Number selection menu*



1. Currently entered number selection
2. Actual beverage name
3. Beverage price in payment mode — optional
4. Credit in payment mode — optional
5. Numeric keypad with **[0...9]** buttons
6. **[Cancel]** button
7. Message area
8. **[Start]** button

The display shows the following information:

- The unique number entered for the selected beverage is visible in the small window.
- The actual name connected to the entered number.
- Use the keypad to tap in the **[number selection]** of the desired beverage.



#### **NOTE**

The unique number that must be entered here is shown on the **Dispense** menu (see [Dispense submenu](#) on page 28) screen when a beverage is prepared.

- Tap the **[Start]** button to start the preparation and dispense of the beverage.
- Tap the **[Cancel]** button to exit the number selection and return to the **Main** menu.

**NOTE**

If payment is activated for this beverage and the credit amount is smaller than the price of the beverage the **[Start]** button is disabled until full payment has been made. The price for the selected beverage is shown and the credit amount already entered.

- The Message area displays relevant messages of the coffee machine. Details of all messages and possible solutions to solve simple issues are listed in the section [Messages](#) (on page 92).

### 3.2.4 Dispense submenu

The **Dispense** submenu is shown during preparation and dispense of the beverage.

#### *Dispense submenu*



- 1 Progress indicator
2. Beverage name
3. Unique beverage code
4. **[Stop]** button

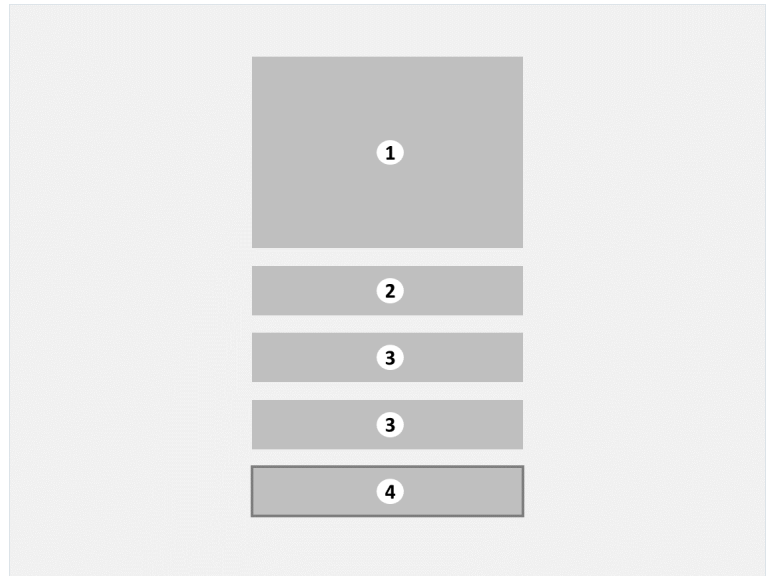
When the beverage is prepared / dispensed the display shows:

- An impression and/or the name of the beverage currently being prepared.
- An indicator showing the progress of the dispense of the beverage.
- The number displayed is the unique number for the beverage currently prepared. Use this number in the [Number selection submenu](#) (on page 26) — optional for quick dispense of the preferred beverage.
- The **[Stop]** button. Tap it to abort the current dispense and return to the **Main** menu (see [Main menu - Cup dispensing](#) on page 21).

### 3.2.5 Ready submenu

The **Ready** submenu is shown when the coffee machine is finished with the dispense.

#### *Ready submenu*



1. Progress indicator
2. Message when dispense is finished
3. Unique number of prepared beverage
4. **[Cancel]** button

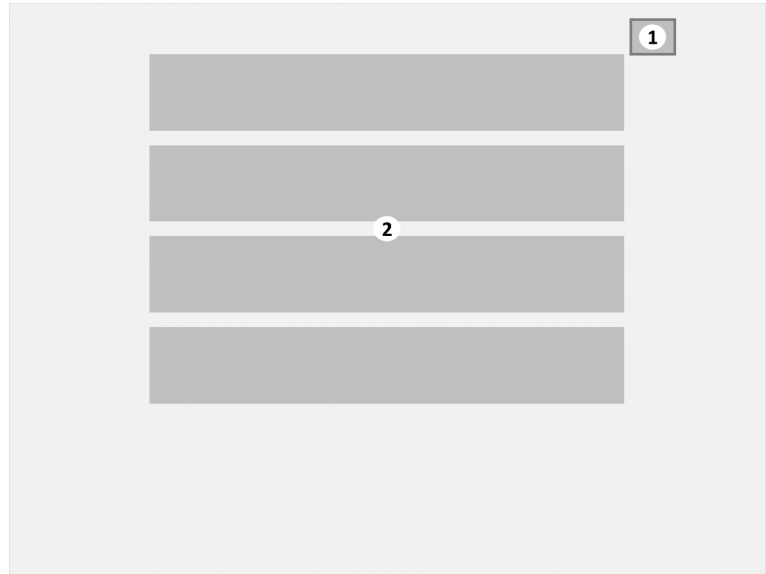
When the dispense is completed the display shows:

- A dispense progress indicator at 100% completed.
- the message 'Ready, take your cup' to indicate it is safe to remove the beverage (cup or jug).
- The unique number for the beverage that was prepared. Instead of using the selection and options screens to prepare the preferred beverage this unique number can be entered using the [Number selection submenu](#) (on page 26) – optional.
- The **[Cancel]** button. Tap it or remove the cup/jug to return to the **Main** menu (see [Main menu - Cup dispensing](#) on page 21).

### 3.2.6 Message submenu

The **Message** submenu shows all relevant messages for this coffee machine in one screen. Tap the **[!]** **exclamation mark** button on any screen to open this [Message submenu](#) (on page 30). Details of all messages and possible solutions to solve simple issues are listed in the section [Messages](#) (on page 92).

#### *Message submenu*



1. **[X]** close button
2. List of all active messages

The message screen displays all active messages from the coffee machine.

- Tap the **[X]** button or tap somewhere in the message area to return to the previous menu.

#### **There are three levels of messages**

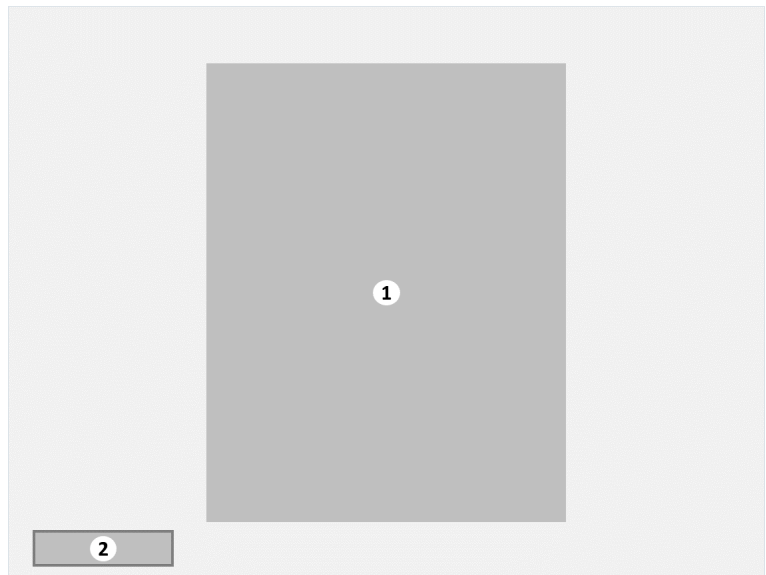
- display only messages, e.g. 'Install drip tray (see [Message: Install drip tray](#) on page 95)'. When this message is displayed the coffee machine continues to work, even without the drip tray.
- disable dispense messages, e.g. 'Insert coins (see [Message: Insert coins](#) on page 96)'. When this message is displayed the coffee machine is fully functional except for the dispense. In this case the **[Start]** button will be enabled after full payment is made.
- disable selections messages, e.g. 'Water level 2 too low'. When this message is displayed some or all beverage selection buttons are disabled. When the boilers are filled and the water level is correct the message is removed and the selection buttons are enabled.

Details of all messages and possible solutions to solve simple issues are listed in section [Messages](#) (on page 92).

### 3.2.7 Information submenu

The **Information** submenu is displayed after tapping the **[Info]** button on the **main menu** screen. It shows details about the ingredients or the coffee machine.

#### *Information submenu*



1. Customized information
2. **[Cancel]** button

The customized information image shows details about the beverage or coffee machine and is defined for every available language (for example: Food allergy warnings).

Tap the **[Cancel]** button to return to the **Main menu**.



# Using the coffee machine

## 4.1 Before use

Transportation, installation and adjustment of the machine is specialized work. Only properly trained service personnel should carry this out. Instructions about transportation, unpacking, and installation of the machine can be found in the Technical manual.

- |   |   |
|---|---|
| <b>Switch on the coffee machine</b>     | Perform the steps described in the procedure Switch on the machine (see <a href="#">Switch on</a> on page 45).  |
| <b>Fill up the ingredient canisters</b> | Perform the steps described in the procedure <a href="#">Fill up the ingredient canisters</a> (on page 86).   |
| <b>Connect the Fresh Milk system</b>    | Perform the steps described in the procedure Connect the Fresh Milk system (see <a href="#">Connect the fresh milk system – optional</a> on page 50). |

## 4.2 Procedures

### 4.2.1 Select a beverage



#### NOTE

If the **Main** menu (see [Main menu - Cup dispensing](#) on page 21) is not shown, tap on the screen somewhere or place a cup on the cup stand.



#### NOTE

If the button **[Place cup and press here]** is shown, first perform a rinse procedure. (see [Scheduled rinse](#) on page 48)

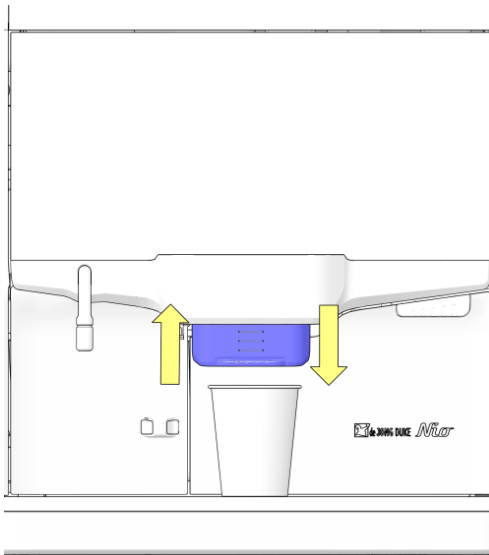
**Procedure** Perform the following steps:

1. Tap the desired **[language]** button on the screen (optional). The screen will change to the selected language.



#### TIP

The selected language will remain active until the beverage is dispensed.



2. Adjust the height of the coffee outlet to the size of the cup/ jug.
3. From the **Main** menu (see [Main menu - Cup dispensing](#) on page 21) select one of the following:
  - To fill a single cup using the selection menus continue with the procedure [Cup dispensing](#) (on page 35).
  - To (quickly) fill a single cup using pre-set ingredients continue with the procedure [Cup dispensing by number — optional](#) (on page 36).
  - To fill (part of) a jug continue with the procedure [Jug dispensing](#) (on page 37).

#### 4.2.1.1 Cup dispensing

**Procedure** Perform the following steps:

1. Tap the desired beverage button from the selections on the **Main** menu (see on page 21).
  - or first tap one of the **[Scroll Up/down]** buttons and then select the desired beverage.
2. The [Additional options submenu](#) (on page 23) with the selected beverage is shown.
3. When available and needed, tap one or more of the desired options to make additional changes.
4. Place a cup under the correct outlet.
  - For hot water, place the cup on the **left** side below the hot water outlet.
  - For all other dispenses, place the cup in the **middle**, below the main outlet.
5. Tap the **[Start]** button to prepare the beverage.
  - or tap **[Cancel]** to return to the **Main** menu (see on page 21).
  - when payment mode is activated, full payment is needed first to enable the **[Start]** button. Check the [payment](#) (on page 39) section for more details.
6. The **Dispense** submenu (see on page 28) is now shown and the beverage is prepared.
  - or tap the **[Stop]** button to interrupt and stop the dispense.
7. When the dispense is finished the [Ready submenu](#) (on page 29) is shown.
  - do not remove your cup before the message 'Ready, take your cup (see [Message: Ready, take your cup](#) on page 101)' is visible. The message will remain visible on the screen until the cup is removed.
  - To add an additional beverage to the same cup, do not remove the cup but tap the **[Cancel]** button and select the next beverage.
8. The prepared drink is ready.



**WARNING**

Hot liquid can leak from the outlet nozzle after the dispense is finished.

#### 4.2.1.2 Cup dispensing by number — optional

Each beverage with specific strength and/or added ingredients has its own code. Instead of entering all selections, this code can be used to dispense the beverage more quickly with required strength and additional ingredients.



#### NOTE

This procedure is optional and only available if the **[Number Selection]** button is available on the Main menu.

**Procedure** Perform the following steps:

1. Tap the unique **[number]** of the desired beverage on the keypad displayed on the screen.



#### NOTE

The actual number that needs to be entered here is shown on the **Dispense** menu (see [Dispense submenu](#) on page 28) screen when the beverage is prepared / during dispense.

2. Tap the **[Start]** button to prepare the beverage.
  - or tap **[Cancel]** to return to the **Main** menu (see on page 21).
  - when payment mode is activated, full payment is needed first to enable the **[Start]** button. Check the [payment](#) (on page 39) section for more details.
3. The **Dispense** submenu (see on page 28) is now shown and the beverage is prepared.
  - tap the **[Stop]** button to interrupt and stop the dispense.
4. When the dispense is finished the [Ready submenu](#) (on page 29) is shown.
  - do not remove your cup before the message 'Ready, take your cup (see [Message: Ready, take your cup](#) on page 101)' is visible. The message will remain visible on the screen until the cup is removed.
  - To add an additional beverage to the same cup, do not remove the cup but tap the **[Cancel]** button and select the next beverage.
5. The prepared drink is ready.



#### WARNING

Hot liquid can leak from the outlet nozzle after the dispense is finished.

### 4.2.1.3 Jug dispensing

**Purpose** When configured it is possible to fill complete jugs at once. On some models this option is available after activation with a jug key or pin code.

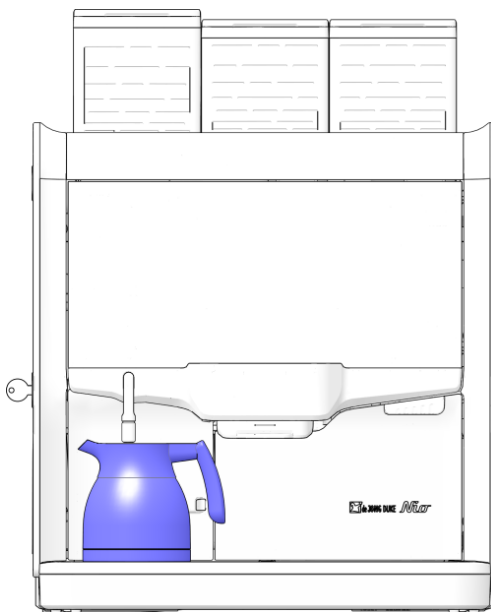
**Procedure** Perform the following steps:

**WARNING**

The outlet of the machine may occasionally drip hot liquid even when the machine is not in use.

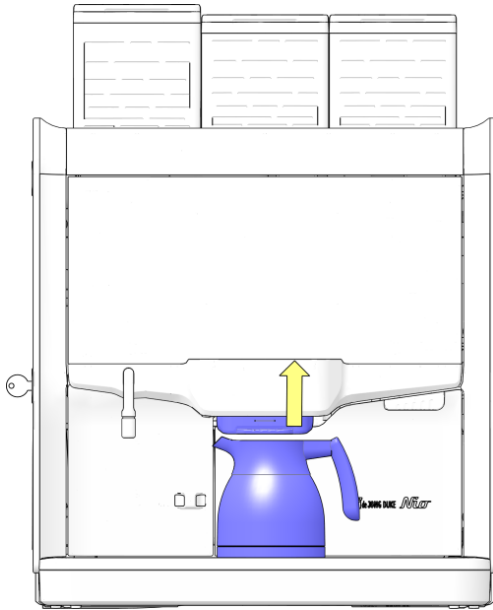
When hot liquid comes in contact with a person, this can lead to serious scalding injuries.

1. For hot water place the jug on the **left** side below the hot water outlet.



**WARNING**

If jugs are not correctly placed, the machine can spill hot liquid down the front. This can cause serious scalding injuries.



2. For all other dispenses place the jug in the **middle** below the main outlet.
3. If the jug submenu is not visible tap the **[Jug]** button from the main menu (see [Main menu - Cup dispensing](#) on page 21).
4. Tap the desired beverage and jug filling from the shown selection buttons.
  - or tap the **[Cup mode]** button to return to the **Main menu**
5. Tap the **[Start]** button to start the dispense.
  - tap the **[Cancel]** button to return to the **Main menu** (see [Main menu - Cup dispensing](#) on page 21).
  - when payment mode is activated, full payment is needed first to enable the **[Start]** button. Check the [payment](#) (on page 39) section for more details.
  - if the **[Start]** button is disabled check the Message area for more details.
6. The Dispense submenu (see [Dispense submenu](#) on page 28) is now displayed.
  - tap the **[Stop]** button to interrupt and stop the dispense.
7. When the dispense is finished the [Ready submenu](#) (on page 29) is shown.
  - do not remove your cup/jug until the message "*Ready, take your cup*" (see [Message: Ready, take your cup](#) on page 101) " is shown.
  - the message will remain visible on the screen until the cup/jug is removed.
  - to add an additional beverage to the **same** cup/jug tap the **[Cancel]** button.



CAUTION - Hot liquid can leak from the outlet nozzle after the dispense is finished.

8. The filled jug is ready.

## 4.2.2 Payment

**Purpose** If the coffee machine is activated for payment, the cup or jug dispense will only start after full payment is made.

**Procedure** Perform the following steps:

1. The *price* for the dispense of the selected cup / jug is shown on the screen.
2. Make the full payment.
  - The entered *credit* amount is calculated and shown on screen.



**NOTE**

The **[Start]** button will remain disabled until full payment is made.

## Preventive maintenance

### 5.1 Food safety engagement

Food safety and quality are important for both customer and those who work in the vending industry. Respecting a number of basic principles, such as personal hygiene, is essential. We therefore advise you to follow the advice given in "A hygiene guide for vending". This guide is published by the European Vending and Coffee Association and has been prepared to help ensure that a hygienic product is delivered to the customer on every occasion.



## 5.2 Preventive maintenance schedule



### NOTE

Skipping maintenance can affect the quality of the dispensed drink and may lead to malfunctioning of the machine. Clean the coffee machine at the end of the day and before the machine is switched off for a longer period.

The schedule below gives an overview of all procedures needed to maintain the coffee machine.

*Preventive maintenance schedule CoEx (XL) brewer (Nio model)*

Cleaning procedures for the coffee machine with intervals	D	W	M	H
<a href="#">Scheduled rinse</a> (on page 48)	X			
<a href="#">Flush mixers and brewer</a> (on page 49)	X			
<a href="#">Clean the fresh milk system – optional</a> (on page 54)	X			
<a href="#">Remove and clean the fresh milk parts – optional</a> (on page 56) <sup>(2)</sup>		X		
<a href="#">Clean the mixing system and all hoses</a> (on page 65)		X		
<a href="#">Remove and clean the brewer</a> (on page 71)		X		
<a href="#">Clean brewer with cleaning tablet</a> (on page 74)		X		
<a href="#">Clean waste bucket</a> (on page 60)	X			
<a href="#">Clean the drip tray</a> (on page 63)	X			
<a href="#">Clean the waste bin in the base cabinet</a> (on page 62)		X		
<a href="#">Clean the cold water outlet nozzle – optional</a> (on page 83)		X		
<a href="#">Deep clean the cold water outlet nozzle – optional</a> (on page 84)			X	
General Cleaning cold water system <sup>(1)</sup>				X
Sanitization cold water system <sup>(1)</sup>				X
<a href="#">Clean the canisters</a> (on page 81)			X	
<a href="#">Fill up the ingredient canisters</a> (on page 86)	X			
<a href="#">Enter canister ingredient levels – optional</a> (on page 87)	X			
<a href="#">Clean the outside of the machine</a> (on page 88)	X			
<a href="#">Clean the touchscreen – optional</a> (on page 89)	X			

(1) Cold water specific cleaning procedures must be performed by a certified dealer and are not explained in this end user manual.

(2) For Fresh Milk models only: we recommend to renew the milk frother and milk hose -from milk pump to milk container and frother- once a year.

Interval column codes				
Daily	D			
Weekly		W		
Monthly			M	
Every 6 months				H



### NOTE

Clean the brewer every other day, if the coffee machine dispenses more than 250 coffee related beverages every day.

## 5.3 Daily maintenance

**Purpose** Performing daily maintenance will ensure the quality of your beverages and a proper operation of the machine.

**Procedure** For daily maintenance follow these steps:

1. [Flush mixers and brewer](#) (on page 49).
2. [Clean the fresh milk system — optional](#) (on page 54).
3. [Clean waste bucket](#) (on page 60).
4. [Clean the drip tray](#) (on page 63).
5. [Clean the waste bin in the base cabinet](#) (on page 62).
6. [Fill up the ingredient canisters](#) (on page 86).
7. [Enter canister ingredient levels — optional](#) (on page 87).
8. [Clean the outside of the machine](#) (on page 88).
9. [Clean the touchscreen — optional](#) (on page 89).
10. Check correct functioning by taking a test beverage.

Each step is described in detail in the next sections.

## 5.4 Weekly maintenance

**Purpose** Performing weekly maintenance will ensure the quality of your beverages and a proper operation of the machine.



### **TIP**

A hygiene kit is delivered with the machine. Using the hygiene kit parts, the cleaning can be done after the machine has been put in operation again with the parts from the kit.

**Procedure** For weekly maintenance follow these steps:

1. [Open the door](#) (on page 45) of the machine.
2. [Clean the mixing system and all hoses](#) (on page 65).
3. [Clean the fresh milk system — optional](#) (on page 54).
4. [Remove and clean the fresh milk parts — optional](#) (on page 56).
5. [Remove and clean the brewer](#) (on page 71).
6. [Clean brewer with cleaning tablet](#) (on page 74).
7. [Clean waste bucket](#) (on page 60).
8. [Clean the drip tray](#) (on page 63).
9. [Clean the waste bin in the base cabinet](#) (on page 62).
10. [Clean the cold water outlet nozzle — optional](#) (on page 83).
11. [Fill up the ingredient canisters](#) (on page 86).
12. [Enter canister ingredient levels — optional](#) (on page 87).
13. [Close the door](#) (on page 45).
14. [Clean the outside of the machine](#) (on page 88).
15. [Clean the touchscreen — optional](#) (on page 89).
16. Check correct functioning by taking a test beverage.  
Each step is described in detail in the next sections.



### **NOTE**

Clean the brewer every other day, if the coffee machine dispenses more than 250 coffee related beverages every day.

## 5.5 Monthly maintenance

**Purpose** Performing monthly maintenance will ensure the quality of your beverages and a proper operation of the machine.

**Procedure** For monthly maintenance follow these steps:

1. [Open the door](#) (on page 45) of the machine.
2. [Clean the mixing system and all hoses](#) (on page 65).
3. [Clean the fresh milk system — optional](#) (on page 54).
4. [Remove and clean the fresh milk parts — optional](#) (on page 56).
5. [Remove and clean the brewer](#) (on page 71).
6. [Clean brewer with cleaning tablet](#) (on page 74).
7. [Clean waste bucket](#) (on page 60).
8. [Clean the drip tray](#) (on page 63).
9. [Clean the waste bin in the base cabinet](#) (on page 62).
10. [Deep clean the cold water outlet nozzle — optional](#) (on page 84).
11. [Clean the canisters](#) (on page 81).
12. [Fill up the ingredient canisters](#) (on page 86).
13. [Enter canister ingredient levels — optional](#) (on page 87).
14. [Close the door](#) (on page 45).
15. [Clean the outside of the machine](#) (on page 88).
16. [Clean the touchscreen — optional](#) (on page 89).
17. Check correct functioning by taking a test beverage.

Each step is described in detail in the next sections.



### **NOTE**

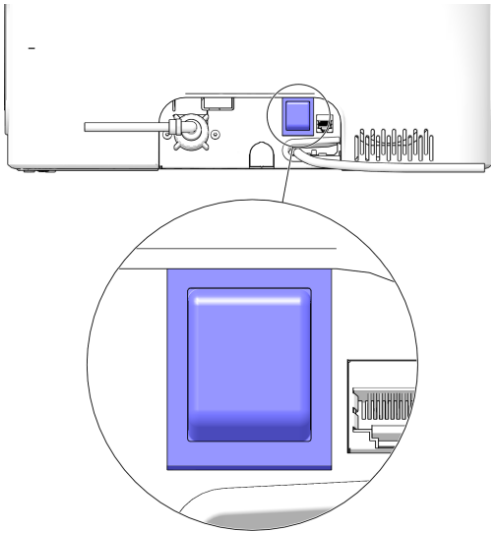
Clean the brewer every other day, if the coffee machine dispenses more than 250 coffee related beverages every day.

## 5.6 Preventive maintenance procedures

### 5.6.1 Switch on

**Procedure** Perform the following steps:

1. Turn on the water supply.
2. Connect the power cord to the power mains socket.
3. Switch the **[ON/OFF]** power switch, on the rear side of the machine, to the *ON* position.
4. The coffee machine will start up.
5. The main screen is displayed with the message 'filling boiler' and then 'heating boilers' in the message area (see on page 21) on the screen.
6. After a few minutes the message 'heating boilers' disappears and the machine is ready for use.



### 5.6.2 Open the door

**Procedure** Perform the following steps:

1. Insert the **key** in the lock of the door of the coffee machine.
2. Turn the **key** 90 degrees.
3. Open the door.
  - Use the hot water outlet to pull open the door.
  - The **Service** menu is displayed on the screen.



**NOTE**

Do not leave the door open unattended to prevent unauthorized access to the inside of the machine.

### 5.6.3 Close the door

**Procedure** Perform the following steps:

1. Insert the **key** in the lock of the door of the coffee machine.
2. Turn the **key** 90 degrees.

3. Close the door.
4. Turn the **key** 90 degrees to lock the door.
5. Remove the **key** and store it in a safe place.



**NOTE**

Always remove the key from the coffee machine to prevent unauthorized opening of the door.

6. (Optional) to leave the **Service** menu: Tap the **[Exit]** button and then the **[Close door and press here to quit service]** button to leave the **Service** menu.

## 5.6.4 Switch off / Putting out of order

**Procedure** Perform the following steps:

1. Switch the **[ON/OFF]** power switch, and the rear side of the machine, to the *OFF* position.
- If the coffee machine is not used for a longer period of time (more than one week) it is recommended to:
  - perform a daily (see [Daily maintenance](#) on page 42) maintenance cleaning procedure or, if the machine is not used for a longer time it is recommended to perform a monthly (see [Monthly maintenance](#) on page 44) maintenance procedure.
  - turn off the water supply.
  - switch off the power supply (pulling the plug from the wall socket is sufficient). This will also prevent unnecessary use of energy.

See also section: [Extended down time](#) (on page 14).

## 5.6.5 Scheduled rinse

**Purpose** Cleaning the coffee machine can be skipped or forgotten. The scheduled rinse is forced every day using a scheduler. When activated follow the procedure below to perform the rinse. Instead you can also run the [daily maintenance](#) (on page 42) or [weekly maintenance](#) (on page 43).

**Required** Use the following parts to perform the procedure:

- A rinsing tub or 1 liter jug

**Interval** Perform this procedure:

- Daily (see [Daily maintenance](#) on page 42), announced on screen.

**Procedure** Perform the following steps:

1. Place a rinsing tub or jug under the outlet nozzle to collect the rinse water.
1. Tap the button **[Place cup and press here]** on the screen.
  - Hot water from the boiler flows through mixers and brewer.
2. A progress screen is shown.
  - Wait until the rinse procedure is finished.
  - Total time to rinse is 1 to 2 minutes.
3. Remove the rinsing tub.
4. The machine returns to the **Main** menu (see [Main menu - Cup dispensing](#) on page 21) and is ready for use.



## 5.6.6 Flush mixers and brewer

**Purpose** The Rinse process flushes hot water through the mixers and the brewer to remove any residue.

**Required** Use the following parts to perform the procedure:

- Rinsing tub.

**Interval** Perform this procedure:

- At least Daily (see [Daily maintenance](#) on page 42), more if needed.

**Total time** • Total time needed to rinse is 1 to 2 minutes.

**Procedure** Perform the following steps:

1. Press and hold the **[logo]** at the bottom of the screen for about 5 seconds to enter the **Service menu**.
2. Place a rinsing tub underneath the outlet nozzle to collect the hot waste water.
3. Tap the **[Maintenance]** button and then the **[Daily Cleaning cycle]** button from the **Service menu**.
  - Hot water from the boiler flows through the mixers and brewer.
4. Repeat the previous step until clean water comes out of the machine.

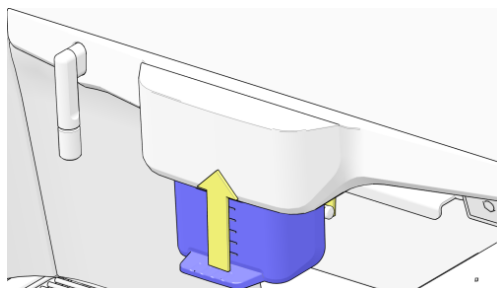
### 5.6.7 Connect the fresh milk system — optional

**Purpose** If your coffee machine is equipped with the fresh milk option, the fresh milk system needs to be connected before use.

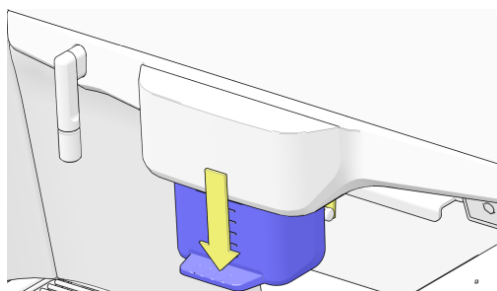
**Interval** Perform this procedure:

- Once, after installation of the coffee machine.

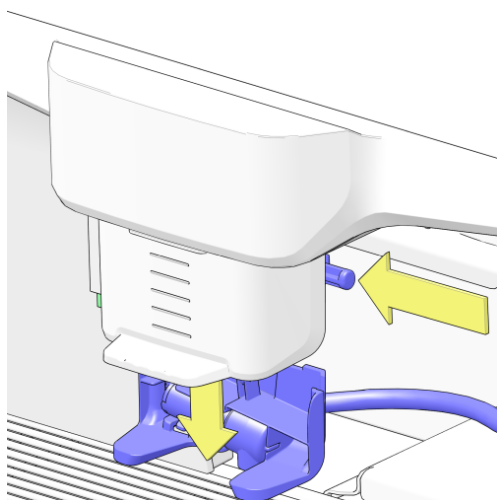
**Procedure** Perform the following steps:



1. Slide the adjustable outlet to the top position.
2. Remove the waste bucket / waste guide.
  - check the first steps in the section [Clean waste bucket](#) (on page 60) for more details.

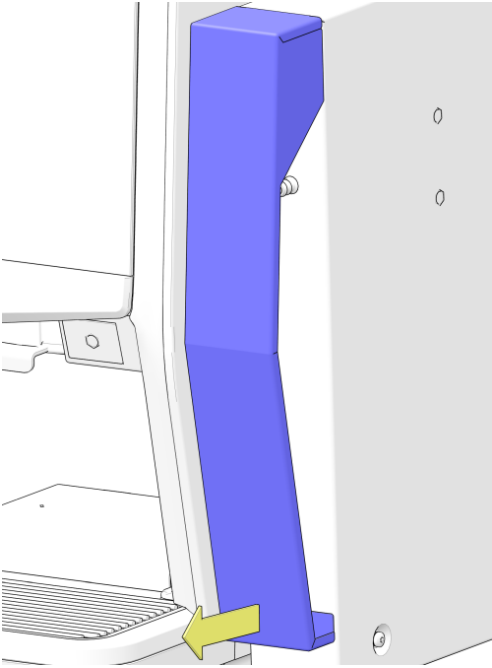


3. Slide the adjustable outlet down again.



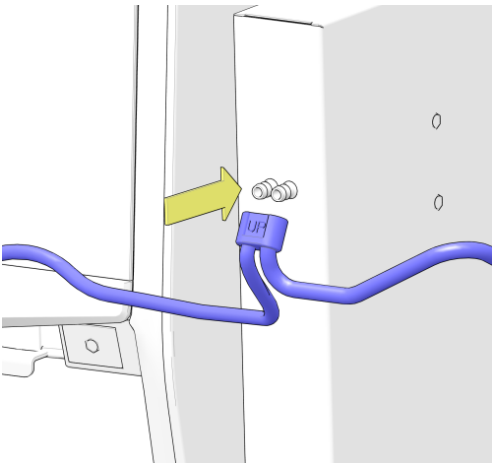
4. Push the lock pin on the right hand side of the adjustable outlet and catch the milk frother.

5. Remove the cover from the milk pump unit.

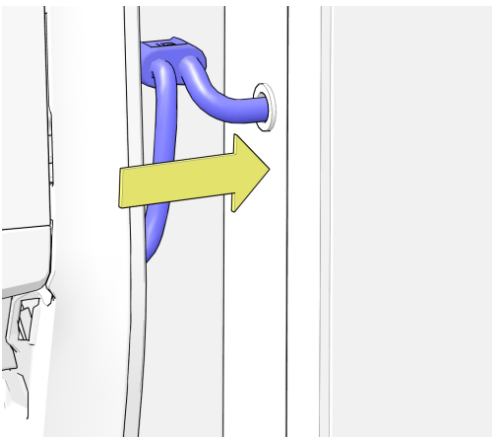


6. Connect the milk hose to the two pump connections.

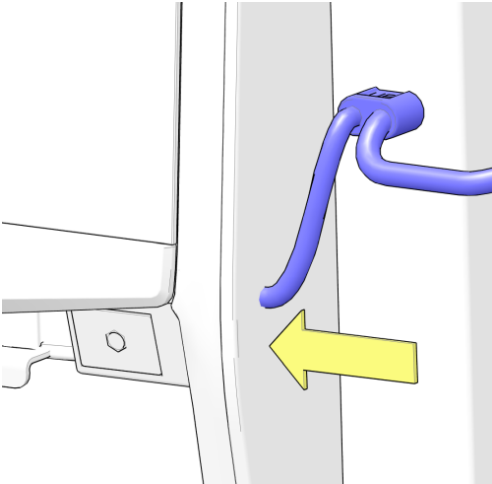
- Make sure the text 'UP' on the hose is visible from the top side.



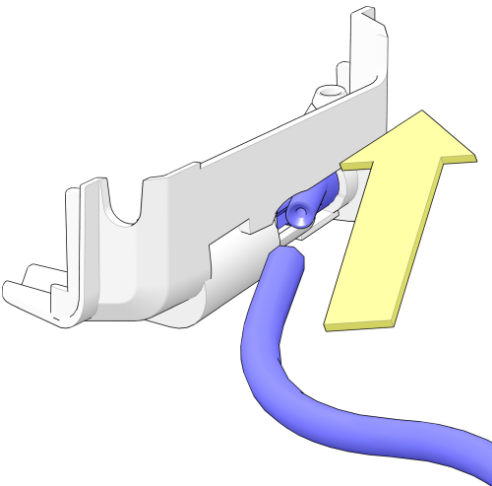
7. Route the inlet part of the hose through the hole in the refrigerator.



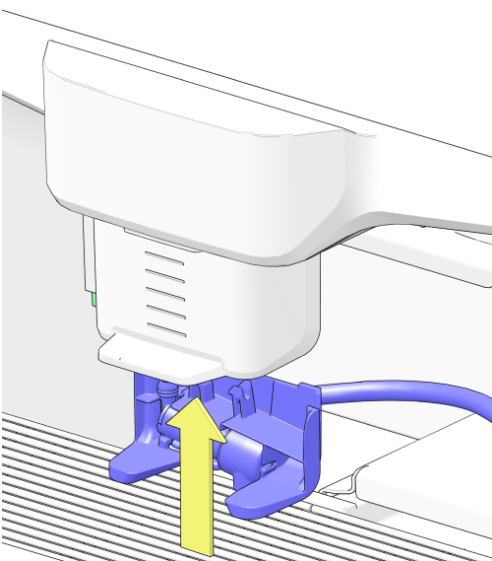
8. Route the outlet part through the hole in the right side of the coffee machine.

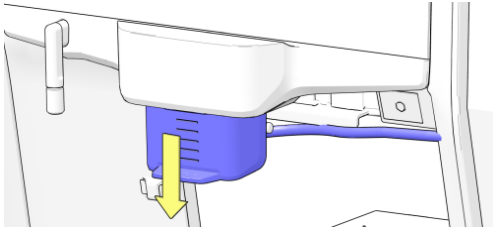


9. Connect the hose to the milk frother.

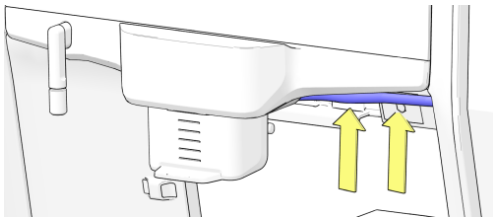


10. Mount the milk frother assembly by moving it upward in the locking mechanism of the adjustable outlet.





11. Slide the adjustable outlet down to the bottom position.



12. Gently pull the hose and route the milk hose into the slot at the bottom of the right hand part of the outlet bracket.

13. In the refrigerator, open the milk container and insert the milk hose in the container.

- Only use UHT (Ultra High Temperature = pasteurized) milk.

14. Close the refrigerator.

## 5.6.8 Clean the fresh milk system — optional

**Purpose** If your coffee machine is equipped with the fresh milk option, the milk system should be cleaned daily. For best results clean the milk system at the end of the day so that no milk will remain in the system over night or during the weekend.

**Required**

- Milk system cleaning liquid.
- A jug (minimum 0.6l).
- A rinsing tub.
- A soft damp cloth.

**Interval** Perform this procedure:

- Daily.



**NOTE**

For best results, clean the milk system at the end of the day so that no milk will remain in the system over night or during the weekend.

**Procedure** Perform the following steps:

1. Prepare a solution of 30ml milk system cleaner with half a liter cold water in a jug.
2. Open the refrigerator, take the milk tube from the milk container and place it in the jug with the cleaning solution.
3. Press and hold the **[logo]** at the bottom of the screen for about 5 seconds to enter the **Service menu**.



**TIP**

Another way to enter the Service menu is to open and close the door.

4. Tap the **[Maintenance]** button and then the **[Daily cleaning program milk system]** button on the screen and follow the instructions on the screen.
5. Place a rinsing tub under the outlet.
6. Tap the **[Press HERE to start the cleaning]** button on the screen.
  - The cleaning solution will be pumped through the milk system into the rinsing tub.
7. When instructed by the screen, clean the jug and fill it with clean cold water.
8. Place the milk tube in the jug again.
9. Tap the **[Press HERE to continue the cleaning]** button on the screen.

- The system will be rinsed out with clean water.
10. Wait until the service menu is shown again. Take the milk tube from the jug and place it in the milk container.
  11. Close the refrigerator.
  12. Tap the **[Exit]** and the **[Close door and press here to quit service]** button to return to the **main menu**.

## 5.6.9 Remove and clean the fresh milk parts — optional

**Purpose** If your coffee machine is equipped with the fresh milk option, in addition to the daily cleaning of the fresh milk system (described in the previous chapter), the fresh milk parts should be removed and cleaned weekly.

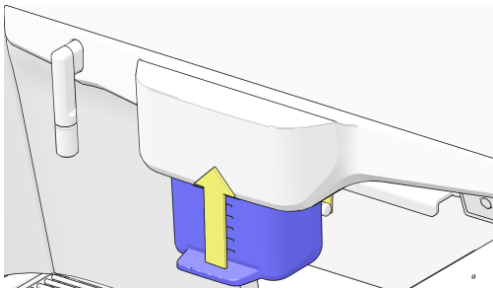
**Required**

- Hygiene kit with internal maintenance parts.
- Milk system cleaning liquid.
- A jug (minimum 0.6l).
- A rinsing tub.
- A soft damp cloth.
- A hose cleaning brush.

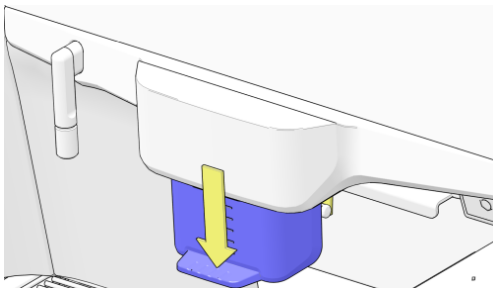
**Interval** Perform this procedure:

- Weekly.

**Procedure** Perform the following steps:



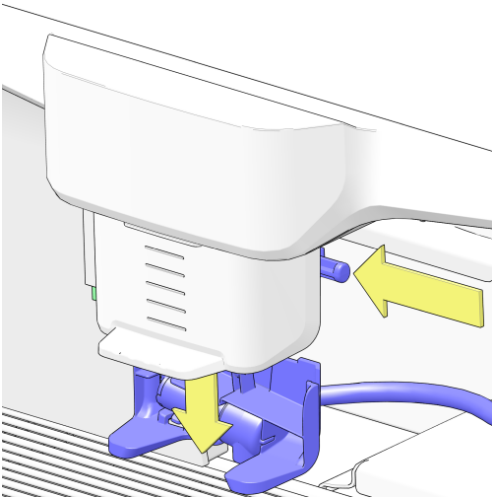
1. Slide the adjustable outlet to the top position.
2. Remove the waste bucket / waste guide.
  - check the first steps in the section [Clean waste bucket](#) (on page 60) for more details.



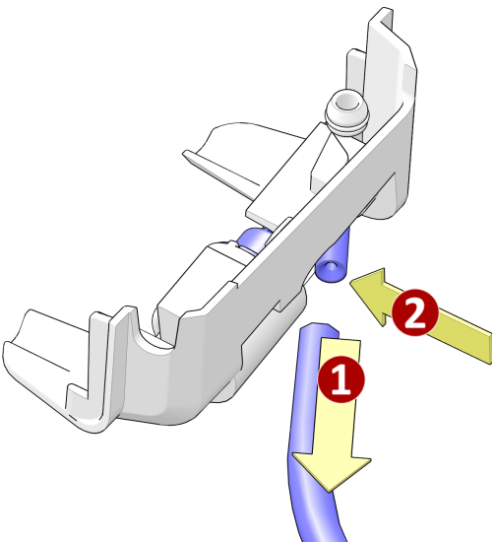
3. Slide the adjustable outlet down again.



4. Push the lock pin on the right hand side of the adjustable outlet and catch the milk frother.

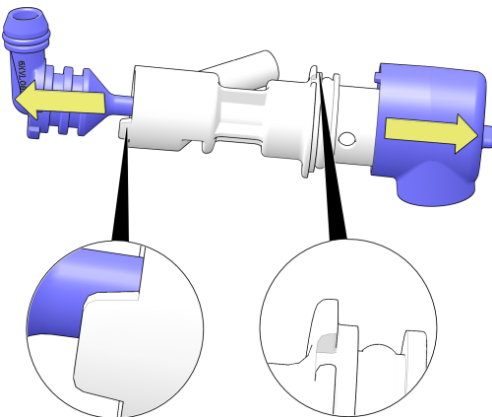


5. Pull the hose (1) from the milk frother and push (2) the milk frother out of the holder.



6. To clean, disassemble the milk frother:

- Pull the outlet part (right) from the middle part (pull before turning as it is locked with a small positioning tab).
- Pull the steam inlet (left) from the middle part (pull before turning as it is locked with a small positioning tab).



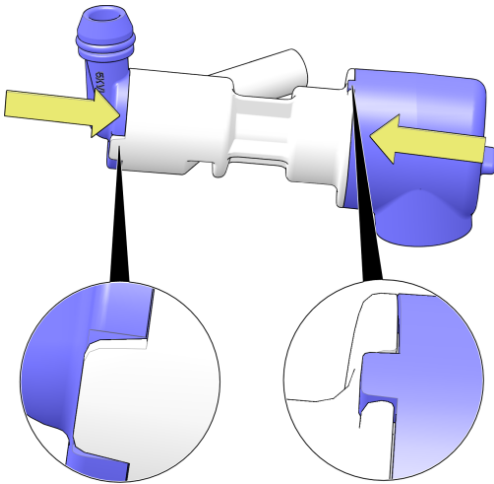
**TIP**

Using the hygiene kit parts the cleaning can be done after the machine has been put in operation again with the parts from the kit.

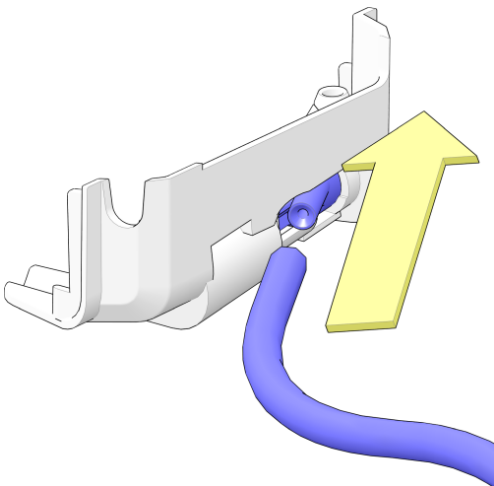
7. Prepare a solution of 30ml milk system cleaner with half a liter cold water in a jug and immerse all remove parts.
8. After 4 hours, clean all parts thoroughly with a brush and clean water.

- Make sure all residue is removed and clean the inside of the hoses with a hose cleaning brush and pay extra attention to the corners inside the hoses.

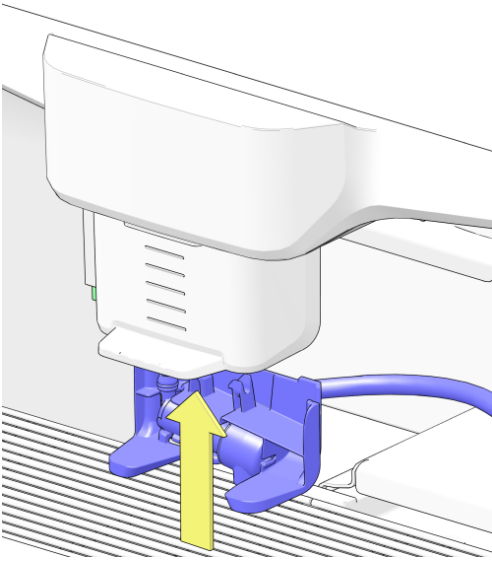
9. Assemble the milk frother in reverse order and make sure to position the small positioning tabs (see insets) into the corresponding openings.



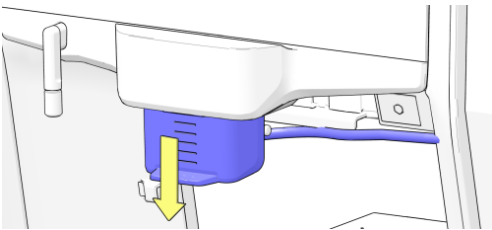
10. Place the milk frother in the holder and connect the hose to the milk frother.



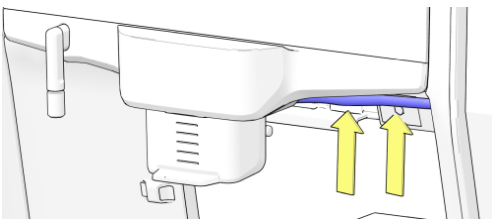
11. Mount the milk frother assembly by moving it upward into the locking mechanism of the adjustable outlet.



12. Slide the adjustable outlet down to the bottom position.



13. Gently pull the hose and route the milk hose into the slot at the bottom of the right hand part of the outlet bracket.
14. Place the waste bucket / waste guide.



## 5.6.10 Clean waste bucket

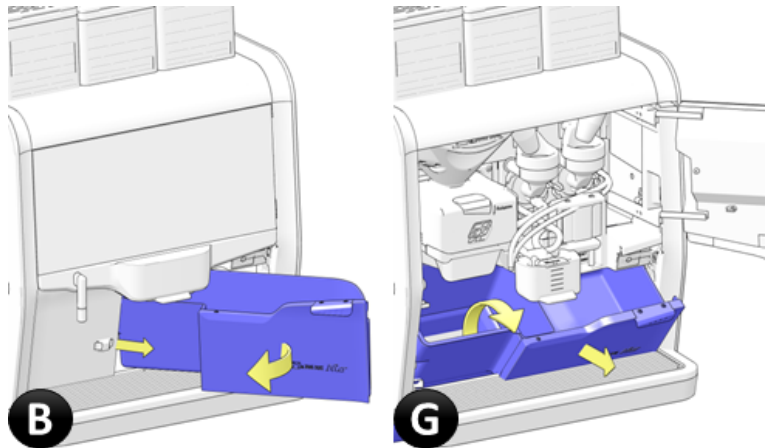
**Purpose** After every dispense, coffee residue, so called coffee cakes are moved into the waste bucket. Excess water from the brewer is also captured in the waste bucket. If an external waste bin is used, the waste bucket is replaced by a waste guide.

**Interval** Perform this procedure:

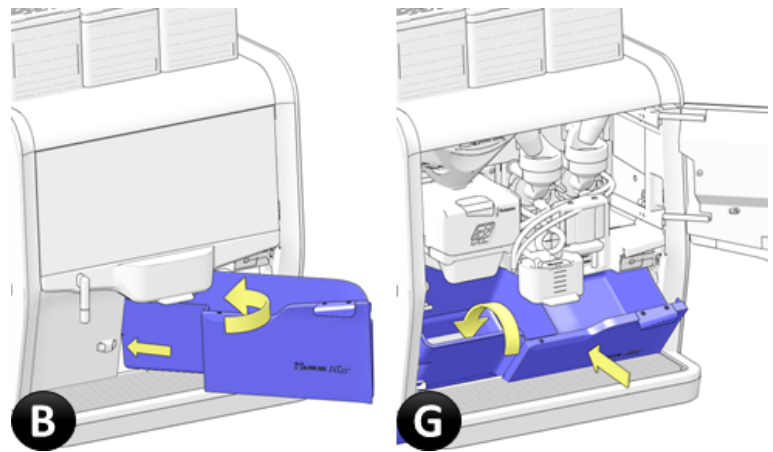
- Daily (see [Daily maintenance](#) on page 42).

**Procedure** Perform the following steps:

1. Slide the adjustable outlet to the top position.
2. Depending on the used bucket types:



- B) Remove the waste bucket from the machine, or
  - G) Open the door first and remove the waste guide from the machine.
3. Rinse the removed parts with clean warm water.
  4. Dry the parts completely.
  5. Install the waste bucket / waste guide:



- B) Slide the waste bucket into the machine, or
- G) Open the door first and place the waste guide inside the machine.

## 5.6.11 Clean the waste bin in the base cabinet

**Purpose** If the coffee machine is placed on a base cabinet (or other external cabinet), the internal waste buckets can be replaced by a waste guide and a fixed waste water connection. The waste bin in the external cabinet needs to be cleaned regularly.



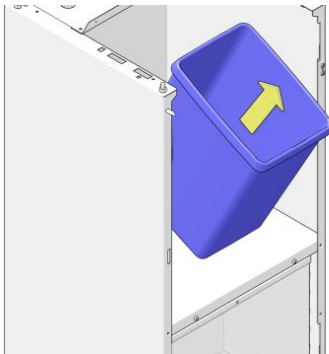
**NOTE**

If a fixed waste water connection is used, a waste water bin is not installed.

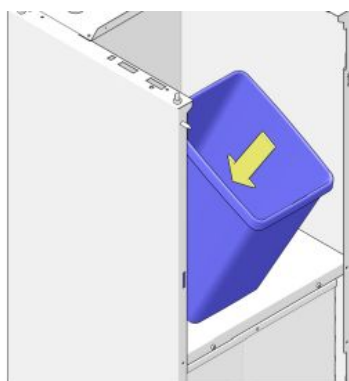
**Interval** Perform this procedure:

- Weekly (see [Preventive maintenance schedule](#) on page 41) or more if needed.

**Procedure** Perform the following steps:



1. Remove the waste bin from the base cabinet.
2. Rinse the removed bin with clean warm water.
3. Dry the bin completely.



4. Place the waste bin in the base cabinet, position it below the waste guide.
5. If the coffee machine displays the message '*Waste bucket full / Empty waste bucket*', tap the **[Maintenance]** button in the Service menu and then the **[Reset waste bin]** button to reset the counter and remove the message.

## 5.6.12 Clean the drip tray

**Purpose** The drip tray collects waste water from the coffee machine and waste water during the dispense of products and must be cleaned regularly.

**Interval** Perform this procedure:

- Daily (see [Daily maintenance](#) on page 42).

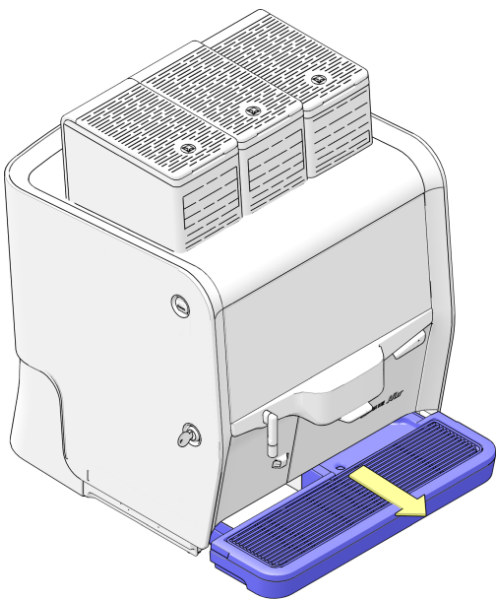


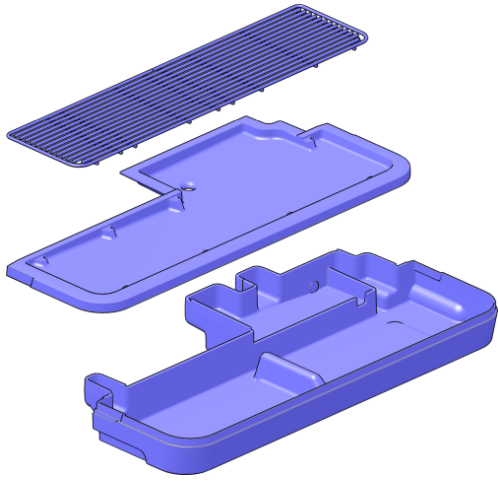
**NOTE**

If the drip tray is connected to a larger waste bin or directly to the main waste water disposal the cleaning interval can be lowered to once a week.

**Procedure** Perform the following steps:

1. Pull the drip tray, including drip grid, in the direction of the arrow and remove it from the machine.





2. Rinse the drip tray (separate the parts first) in warm water.
3. Install the drip tray and the grid.



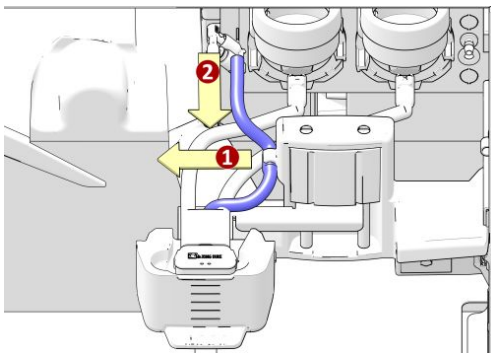
### 5.6.13 Clean the mixing system and all hoses

**Purpose** To prevent clogging of ingredients the mixers and all hoses must be removed from the coffee machine and cleaned.

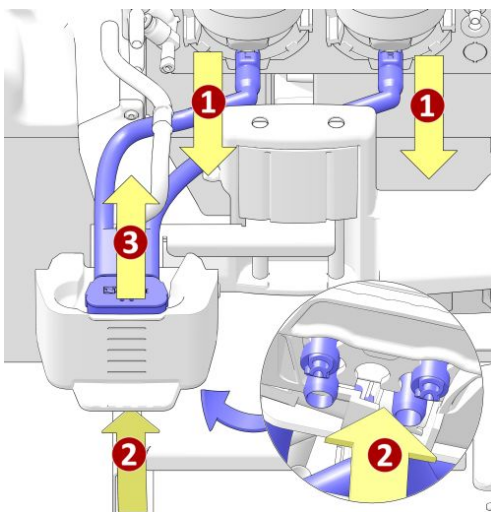
**Interval** Perform this procedure:

- At least once a week ([Weekly maintenance](#) (on page 43)).

**Procedure** Perform the following steps:



1. Release the coffee hose from the clip (1) and pull the coffee hose from the brewer connector (2).
2. If the machine does not contain mixers, continue with step 4.



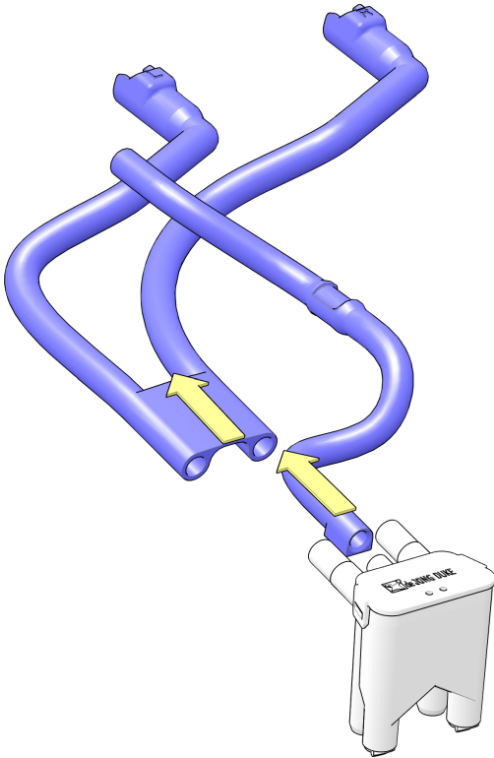
3. Pull the hoses from the mixers (1).
4. Push the dispense nozzle from below (2) and lift it from the adjustable outlet (3).

5. Separate the hose(s) from the nozzle.



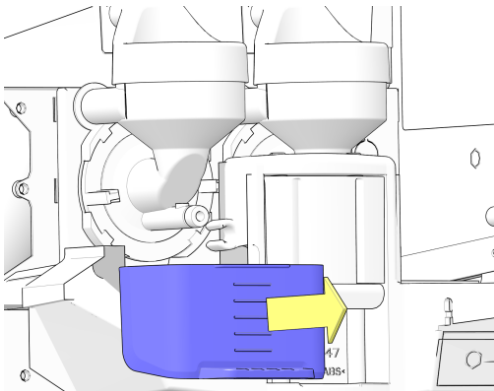
**NOTE**

In the picture, the machine contains two mixers.

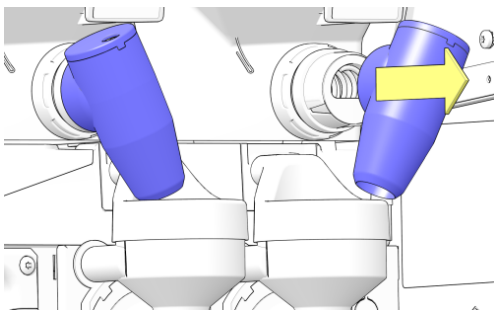


6. Remove the adjustable outlet.

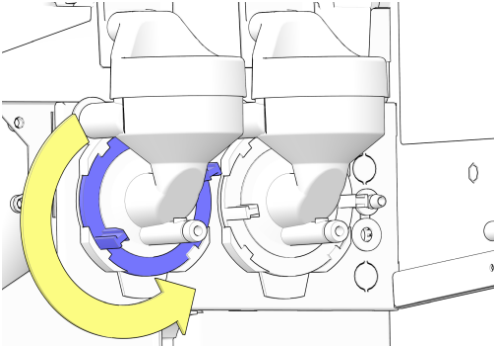
- If the machine does not contain mixers, continue with step 13.



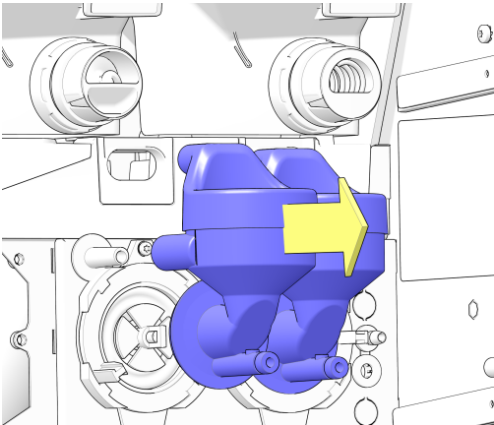
7. Remove the canister outlets from the canisters.



8. Turn the bayonet catches counterclockwise (approx. 10°).

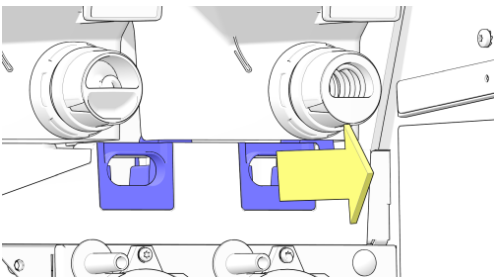


9. Pull the mixer houses in the direction of the arrow and remove them from the machine.



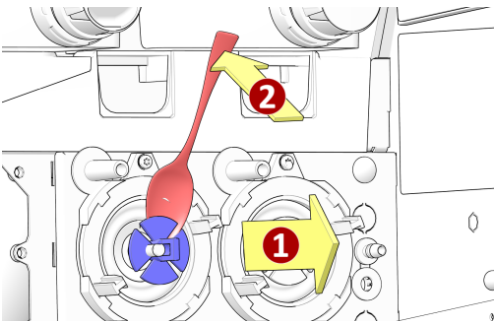
10. Remove the exhaust drawers.

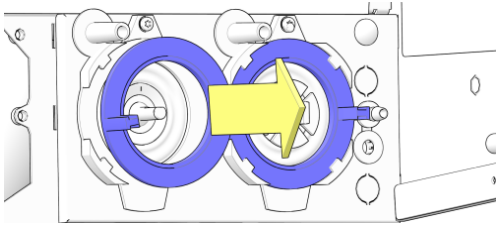
- Clean the area around the exhaust drawers from any residue with a dry brush.



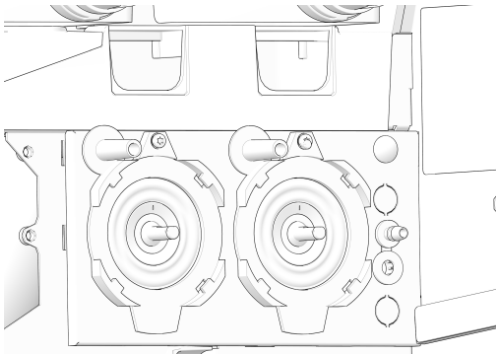
11. Pull the mixer propellers in the direction of the arrow (1) and away from the mixer shaft.

- Use a teaspoon (2) to loosen the propellers from the locking.





12. Remove the bayonet catches.
13. Rinse all removed items, including the hoses, in warm water.
  - Make sure to clean the inside of the hoses with a hose cleaning brush and pay extra attention to the corners inside the hoses.
14. If the coffee machine does not contain mixers, skip the next steps and continue with step 21.



15. Clean the parts of the mixing system that remain in the machine with a dry brush.



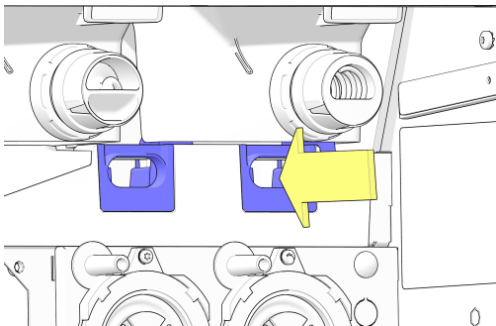
**NOTE**

Make sure **all** parts are dry before you continue with the installation of the mixing system.



**TIP**

When using the parts from the hygiene kit, this can be done immediately after the machine has been put in operation again.

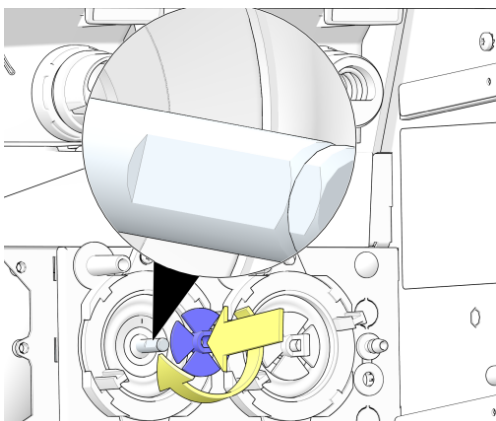


16. Install the exhaust drawers.



**CAUTION**

Make sure the exhaust drawer is completely dry before installing it.



17. Install the mixer propellers.

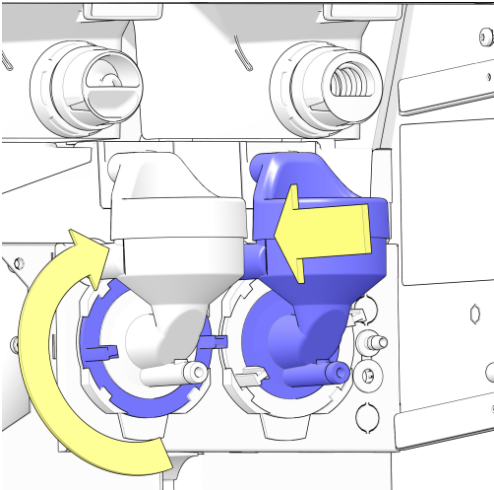


**TIP**

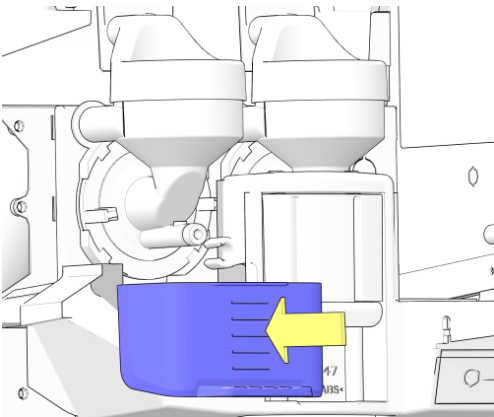
Turn the propeller around to 'find' the fit on the **flat** side in the mixer motor shaft and then push until the propeller locks.

18. Install the bayonet catches and turn them 10° clock wise.

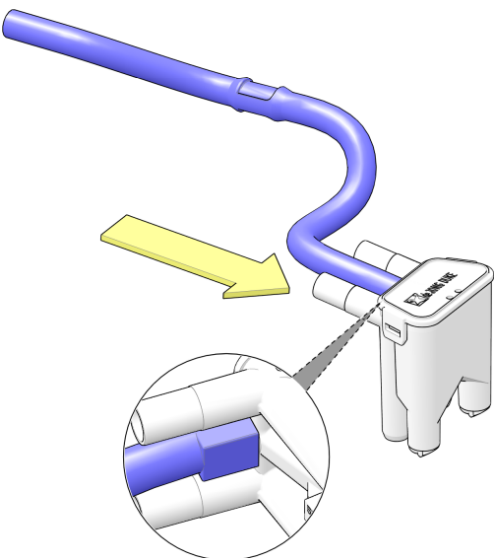
19. Place the mixer houses.
20. Turn the bayonet catches another 10° clock wise to lock the mixers.



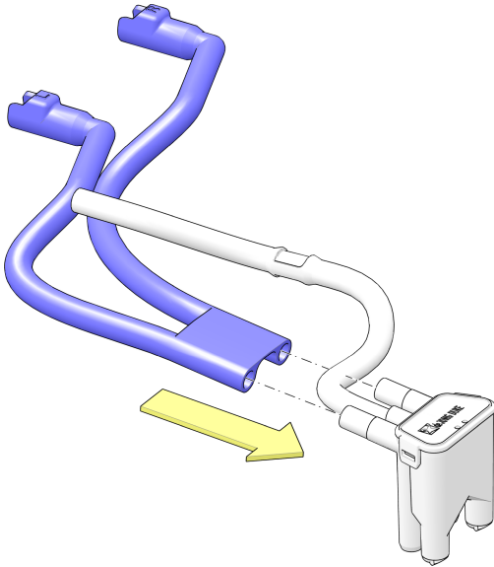
21. Place the adjustable outlet.



22. Connect the brewer hose with the flattened side to the **middle** inlet of the outlet nozzle.
23. If the machine does not contains mixers, continue with step 26.



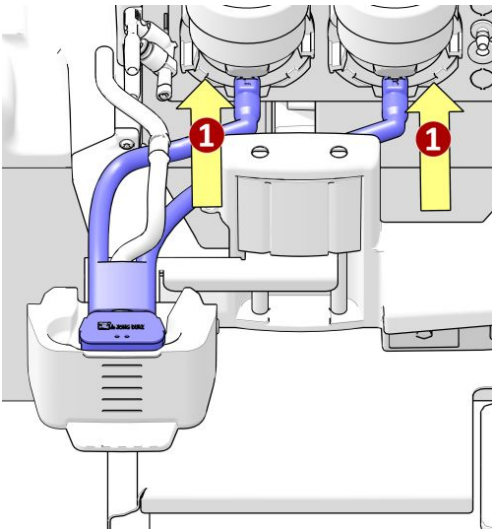
24. Connect the mixer hose to the outlet nozzle.



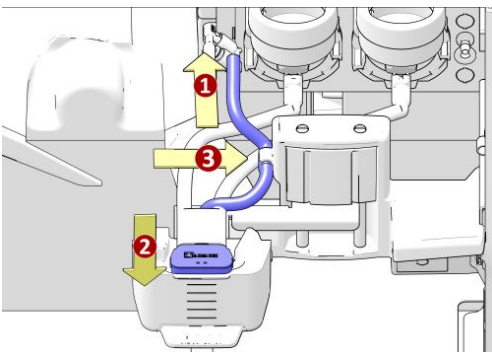
**NOTE**

In the picture, a hose for two mixers is shown.

25. Connect the hose ends, marked **L** and **R** to the left (1) and right mixer (2).



26. Connect the coffee hose to the brewer connector (1), place the outlet nozzle in the adjustable outlet (2) and secure the hose in the clip (3).



## 5.6.14 Remove and clean the brewer

**Purpose** For cleaning with water, the brewer must be removed from the coffee machine. The brewer mounting frame needs to be checked and cleaned to prevent malfunctioning of the brewer.



### **WARNING**

Do not take the brewer itself apart. Only properly trained personnel may work on the brewer itself. Instructions for performing work on the brewer itself is found in the technical manual.



### **NOTE**

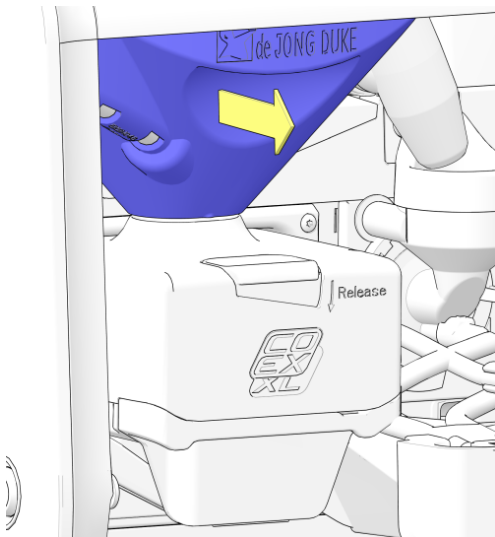
Even if the coffee machine does not contain a mixer, to make sure the brewer hoses and dispense nozzle are cleaned, always perform the cleaning procedure of the mixers (see [Clean the mixing system and all hoses](#) on page 65).

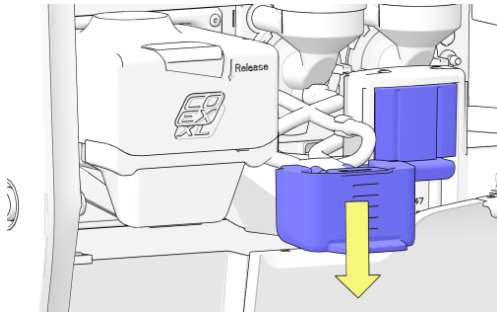
**Interval** Perform this procedure:

- At least once a week, increase the frequency if needed.

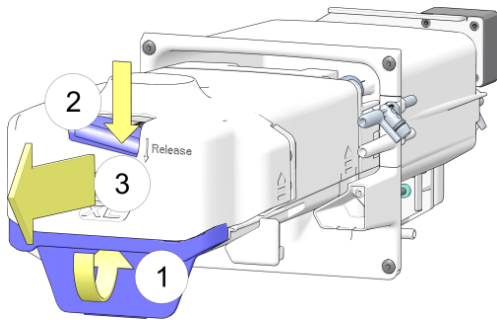
**Procedure** Perform the following steps:

1. Remove the coffee funnel.





2. Move the adjustable outlet to the lowest position so that the brewer can be taken out.

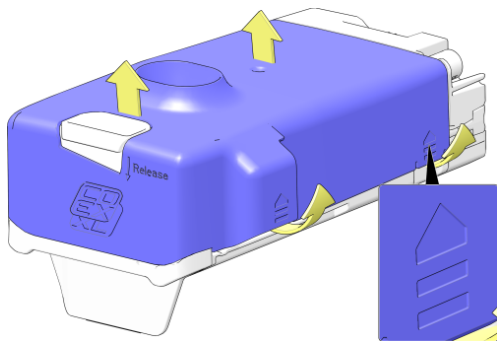


3. Remove the brewer from the coffee machine: place four fingers in the lower grip (1). With your thumb, push and hold down the locking grip (2) and pull the brewer from the mounting frame in the direction of the arrow (3).

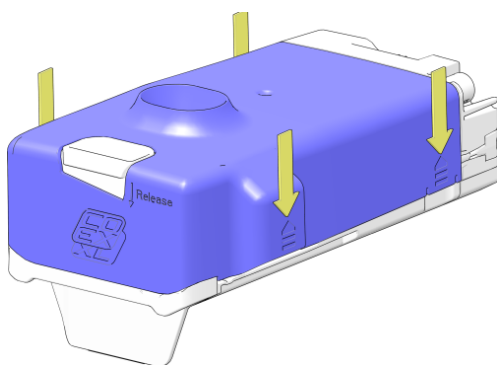


**CAUTION**

Water and ground coffee (residue) may fall out of the brewer.

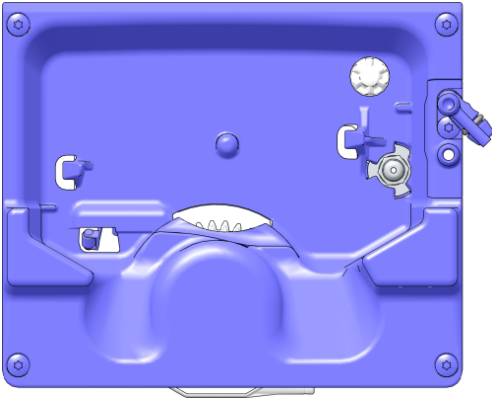


4. Place the brewer on a flat surface. Locate the cover release marks on the sides of the brewer cover (see inset). Pull the sides, near these release marks, a few millimeters away from the brewer and lift the cover from the brewer.
5. Clean the brewer with clean warm water (a mild detergent may be used).

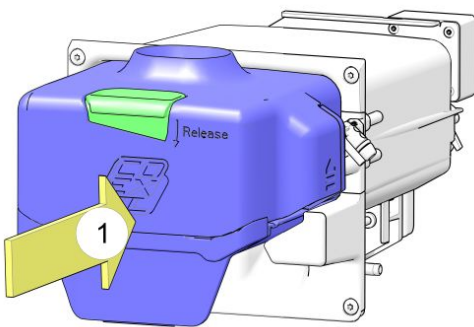


6. Place the cover on top of the brewer and push down. Make sure all sides lock.





7. Make sure the inside of the brewer mounting frame in the coffee machine is clean.



8. Insert the brewer into the mounting frame and push until it locks. Make sure the locking grip (shown in green in the picture) is not pushed in anymore.

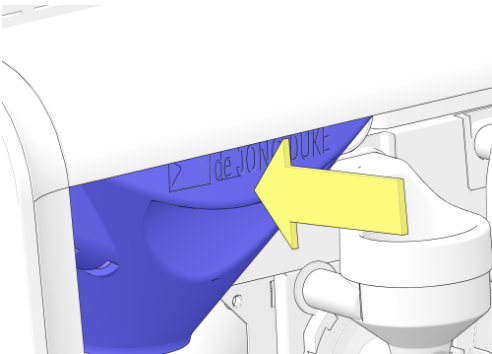


**CAUTION**

When the brewer is not installed correctly, the message 'Brewer out of position' is displayed and coffee based dispenses are disabled.

9. Clean the coffee funnel with warm water.
  - Make sure it is **completely** dry before placing it back in the machine.

10. Install the coffee funnel.



## 5.6.15 Clean brewer with cleaning tablet



### NOTE

Failure to clean the brewer with the recommended cleaning tablet, available from the manufacturer, will void the warranty on related parts. Not cleaning the brewer can cause the machine to malfunction! Our advice is to do this at least once a week.

**Purpose** Cleaning of the brewer with a cleaning tablet removes all coffee residue. The brewer remains in the coffee machine.

**Required** Use the following parts to perform the procedure:

- Cleaning tablet.
- Rinsing tub.
- Protective clothing, gloves and safety glasses.
- Green service key.

**Interval** Perform this procedure:

- At least once a week, increase the frequency if needed.



### NOTES

- Total time for the cleaning cycle is 8 minutes.
- A message is shown if the brewer is **not** cleaned after 7 days.
- A message is shown and coffee dispense is **disabled** if the brewer is not cleaned after 9 days.

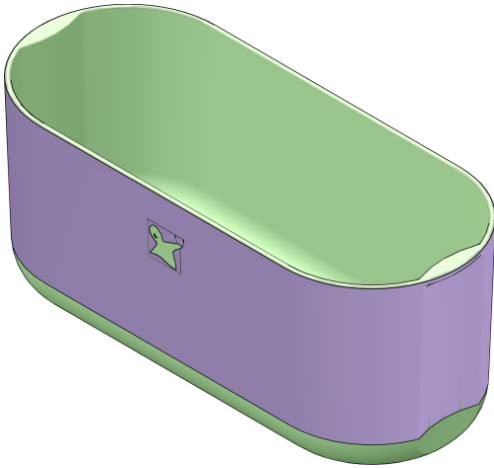
**Procedure** Perform the following steps:



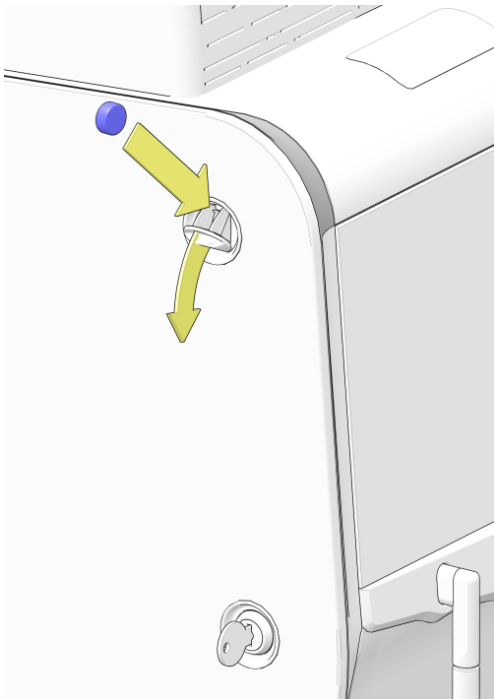
### WARNING

Do not enter the cleaning tablet unless requested on screen.

1. Press and hold the **[logo]** at the bottom of the screen for about 5 seconds to enter the **Service menu**.
2. In the **Service** menu, tap the **[Maintenance]** button and then the **[Brewer Cleaning Cycle]** button. A first submenu (step 1 of 3) is shown.
  - Follow the *Brewer Cleaning Cycle* instruction shown on-screen and described in the next steps.



3. Place a rinsing tub under the outlet.
4. Tap the **[Press here to run rinse cycle]** button.
  - The first part of the brewer cleaning procedure starts, wait until the rinse is finished.
5. When the second submenu (step 2 of 3) is shown, tap the **[Press HERE]** button to place the brewer in the HOME position.
6. Wait until the third submenu (step 3 or 3) is shown.



7. Open the pill entry (left side of the machine) and insert the cleaning tablet.



**WARNING**

Wear protective clothing, gloves and safety glasses when working with cleaning tablets.

8. Tap the **[Press here to run Brewer cleaning cycle]** button on the screen.
  - The final brewer cleaning cycle starts.
  - Wait until the cleaning cycle is **completely** finished (about 8 minutes) and the service menu is shown.



**WARNING**

Never cancel or interrupt the cleaning cycle. Repeat the **full** cleaning procedure if the cleaning cycle is not completely finished.

9. Remove and empty the rinsing tub.

## 5.6.16 Unblock the grinder

**Purpose** Occasionally small twigs or small rocks (known as foreign objects) are in between the fresh beans. The grinder will stop if these objects are blocking the grinder. A message '*Grinder blocked*' (see [Message: Grinder blocked](#) on page 95) is displayed in the warning message area.

**Procedure** To unblock the grinder perform the following steps:

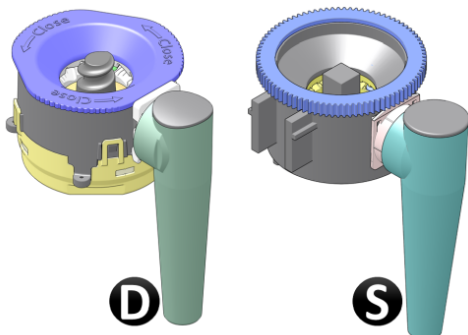
1. Locate the grinder that needs cleaning up.
2. Remove the canister to get access to the grinder.



### NOTE

Check the section Fill the bean canister for details about the removal of the canisters. When the canister is removed the grinder itself is visible.

**Grinder type** Determine the grinder type.



1. If the coffee machine contains a grinder, one of two grinder types are possible:

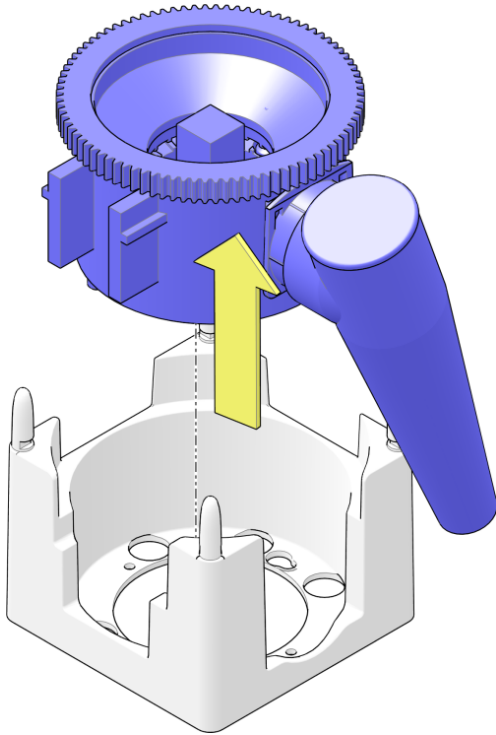
- D) the D-grinder, recognizable by the grinder top house that can be removed or
- S) the original Schaerer grinder, that contains a gear-like top.

If the machine contains a D-grinder continue the cleaning procedure with step 5. Cleaning the Schaerer grinder is described in the next steps.

2. To clean the Schaerer grinder, lift and remove the grinder from the grinder base.

**CAUTION**

The grinder is filled with beans and ground coffee. When the grinder house is turned upside down, coffee beans and ground coffee can fall out.



3. Keep the grinder upside down. Turn the squared top inside the geared wheel at the top side, or the shaft at the bottom side, back and forth repeatedly to loosen and remove the foreign objects.

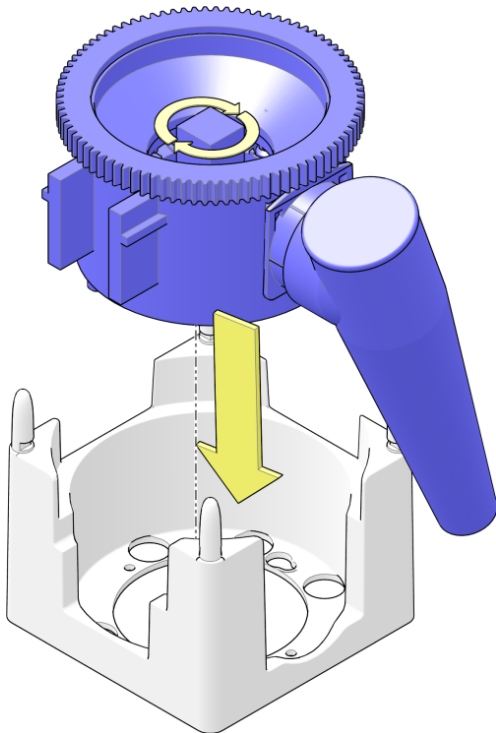
**NOTE**

The shaft should rotate easily if nothing is blocking the grinder.

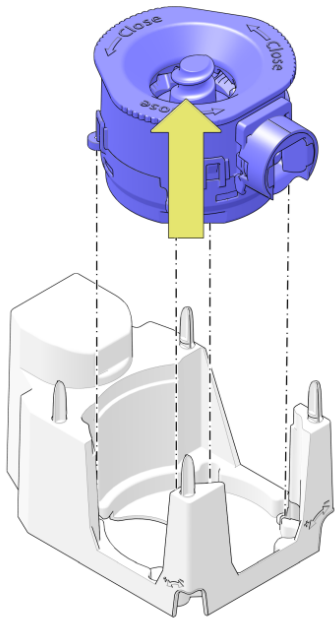
4. Place the grinder back into the grinder base and continue with step 12.

**TIP**

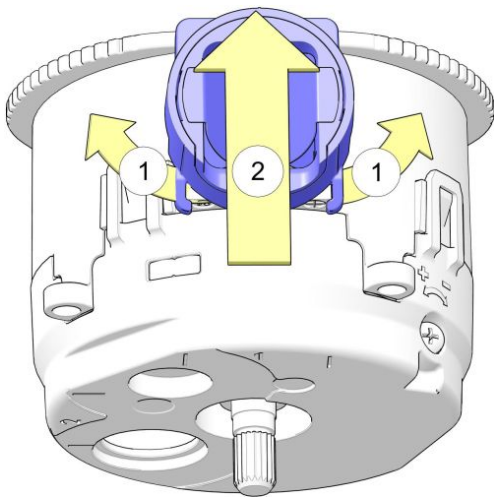
If needed, rotate the squared top a little to allow the ribbed shaft to fit the grinder motor and is fully lowered inside the grinder base.



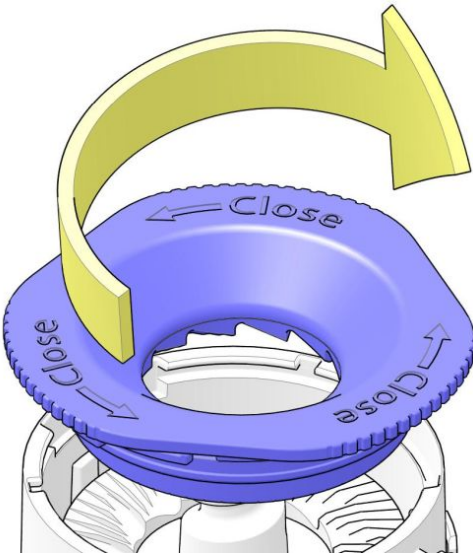
5. To clean the D-grinder, lift and remove the grinder from the base.



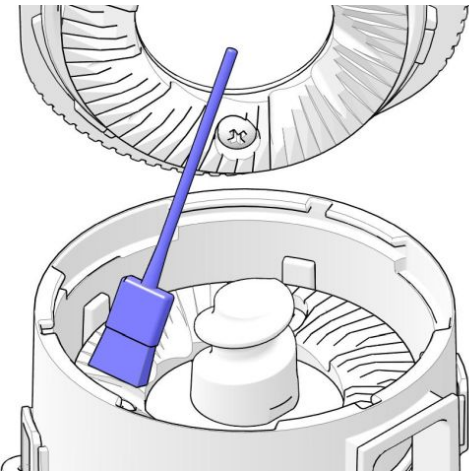
6. Pull out the clips of the grinder outlet (1), slide the outlet from the grinder house (2) and remove it from the grinder.



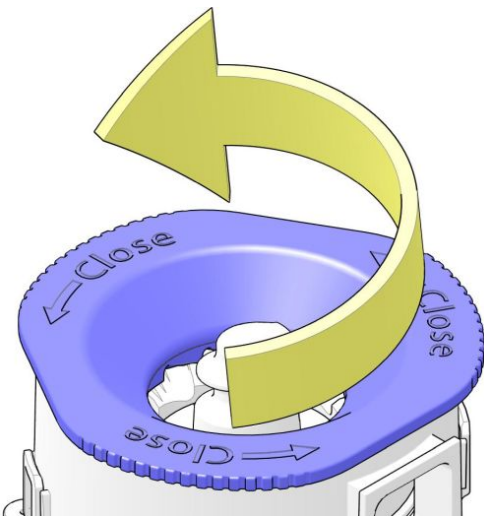
7. Loosen the bayonet locked grinder house top in the direction of the arrow and remove it from the grinder.

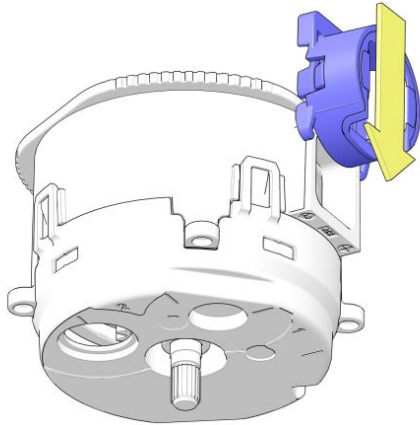


8. Clean both grinder discs and the inside of the grinder house.

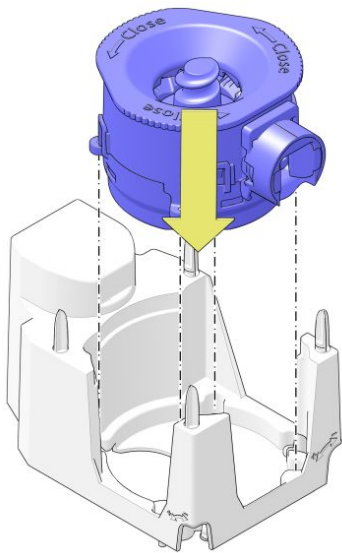


9. Place the grinder house top assembly, and turn it in the direction of the arrow to lock.





10. Slide the outlet on the grinder house in the direction of the arrow.
  - Make sure the clips lock properly.



11. Place the grinder back into the grinder base.
12. Place the canister back.

**i** **TIP**  
Check the last steps of section Fill the bean canister for more details.

13. Close the door and lock with the key.
14. Leave the **Service** menu.

**i** **TIP**  
Dispense two cups of coffee to fill up the grinder with fresh coffee and throw the contents of the cups away.

15. Check correct functioning by taking a test coffee.



## 5.6.17 Clean the canisters

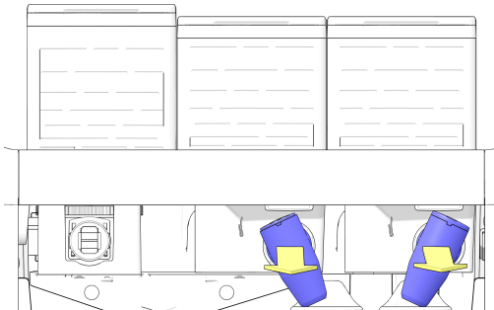
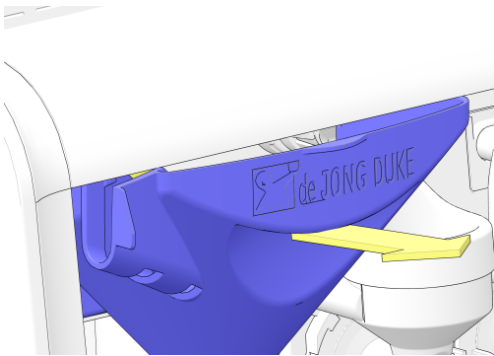
**Purpose** All ingredients leave residue inside the canister. To clean the canisters they need to be removed from the machine.

**Interval** Perform this procedure:

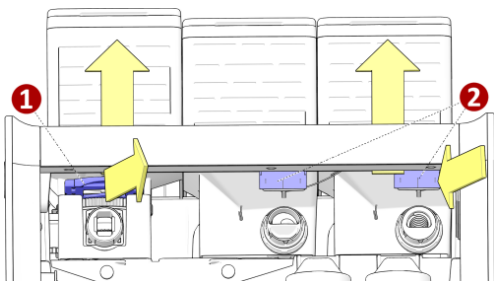
- at least once a month.

**Procedure** Perform the following steps:

1. [Open the door](#) (on page 45).
2. Remove the coffee funnel.



3. Pull the canister outlets of the ingredient canisters in the direction of the arrow and remove them from the machine.



4. Remove the canisters from the machine:

- Bean canisters: **pull** the sliding locking handle (1) towards you and lift the canisters out of the machine.
- Ingredient canisters: **push** the snap lock (2) of the ingredient canisters to unlock and lift the canisters out of the machine.

5. Unlock (optional) and remove the lids from the canisters.
6. Empty the canisters.
7. Clean the canisters with warm water.



### NOTE

Use a mild detergent if warm water only is not sufficient.

8. Dry the canisters thoroughly on the inside and outside.



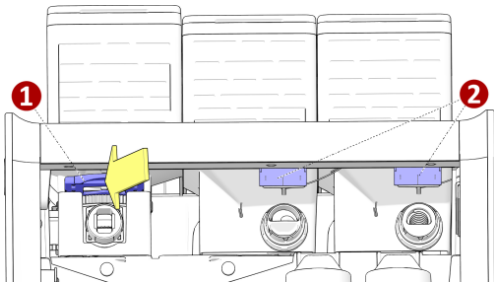
**WARNING**

Do not fill the canisters until they are completely dry. The product may form lumps which makes the system unusable.

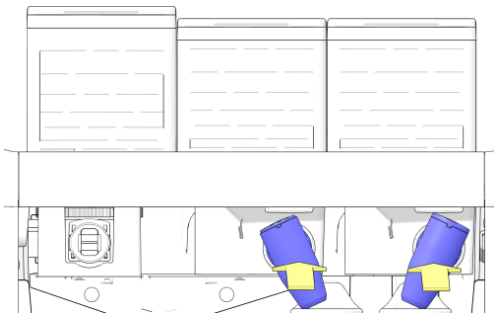
9. Fill the canisters with ingredients according to the text labels.

10. Place the canisters in the machine.

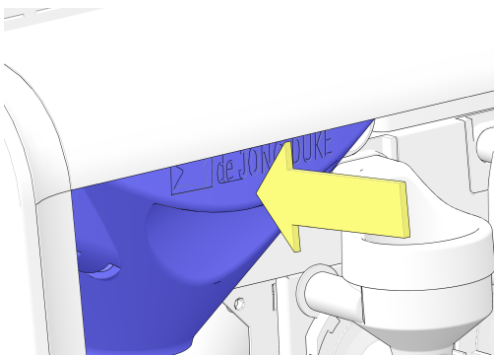
- Bean canister: place the canister and **push** (1) the locking slider to lock the canister onto the grinder base.
- Ingredient canister: place the ingredient canister in the correct location (marked on the text labels) and make sure the lock (2) snap into place.



11. Place the canister outlets on the ingredient canisters and point them towards the correct mixer bowl.



12. Install the coffee funnel.



## 5.6.18 Clean the cold water outlet nozzle — optional

**Purpose** The cold water outlet nozzle must be cleaned regularly to prevent bacteria growth.

**Required** Use the following parts to perform the procedure:

- Multi purpose, disposable cloth.
- Cleaning agent.
- Disposable paper towels.
- Rinsing tub or 1 liter jug.
- Protective clothing, gloves and safety glasses.



**NOTE**

Do not use aggressive cleaning products or abrasives to clean (parts of) the machine.

**Interval** Perform this procedure:

- Weekly (see [Weekly maintenance](#) on page 43), more if needed (depending on machine usage and environmental conditions).

**Procedure** Perform the following steps:



**WARNING**

Wear protective clothing, gloves and safety glasses when working with cleaning chemicals.

1. Use the cloth to apply the cleaning agent. Submerge a clean cloth into the cleaning agent (concentration recommended by cleaning agent manufacturer's instructions). Remove the cloth and remove excess water.
2. Clean the cold water outlet nozzle wiping the cloth over the entire area re-submerging the cloth as necessary.
3. Rinse the cloth in clean warm water and wipe off excess cleaning agent residue and soil.
4. Dry cold water nozzle using disposable paper towels.
5. Close the door of the coffee machine.
6. Place a rinse tub below the cold water outlet nozzle.
7. Leave the **Service** menu: Tap the **[Exit]** button and then the **[Close door and press here to quit service]** button to leave the **Service** menu.
8. Select a full jug of cold water and dispense at least 1 liter of cold water and ensure any cleaning residue is flushed out.

## 5.6.19 Deep clean the cold water outlet nozzle — optional

**Purpose** The cold water outlet nozzle must be cleaned and disinfected regularly to prevent bacteria growth.

**Required** Use the following parts to perform the procedure:

- Multi purpose, disposable cloth.
- Cleaning agent.
- Protective clothing, gloves and safety glasses.
- Disinfectant solution.
- Disposable paper towels.
- Rinsing tub or 1 liter jug.
- Brush.



**NOTE**

Do not use aggressive cleaning products or abrasives to clean (parts of) the machine.

**Interval** Perform this procedure:

- Monthly (see [Monthly maintenance](#) on page 44), more if needed (depending on machine usage and environmental conditions).

**Procedure** Perform the following steps:



**WARNING**

Wear protective clothing, gloves and safety glasses when working with cleaning chemicals.

1. Submerge a clean cloth in warm water. Pre clean the cold water outlet nozzle using the cloth.
2. Submerge a clean cloth into the cleaning agent (concentration recommended by cleaning agent manufacturer's instructions). Remove the cloth and remove excess water.
3. Clean the cold water outlet nozzle wiping the cloth over the entire area re-submerging the cloth as necessary.
4. Using a brush, brush around the cold water nozzle to dislodge any dried on soil. Remove the soil with a cloth.
5. Soak a clean disposable cloth in clean warm water and rinse the outlet nozzle until all soil and cleaning agent residues are removed.
6. Soak a clean disposable cloth in disinfectant solution, ensure that the whole area is wiped.
7. Leave for 10 minutes.

8. Rinse off disinfectant using disposable cloth in clean warm water.
9. Dry cold water nozzle with disposable paper towels.
10. Close the door of the coffee machine.
11. Place a rinse tub below the cold water outlet nozzle.
12. Leave the **Service** menu: Tap the **[Exit]** button and then the **[Close door and press here to quit service]** button to leave the **Service** menu.
13. Select a full jug of cold water and dispense at least 1 liter of cold water and ensure any cleaning residue is flushed out.

## 5.6.20 Fill up the ingredient canisters

Ingredient canisters can be filled without opening the door of the coffee machine. The canisters can remain in the machine during filling.



### NOTE

- Make sure that the canisters remain filled with a layer of at least 4 cm of product. Do not fill the canisters more than necessary for one or two days. This will keep the products fresh.
- Only use ingredients recommended by the supplier of the machine.
- Each canister is intended for a specific ingredient that is shown on a text label on the canister.

**Purpose** To prevent that the machine can no longer dispense drinks due to a lack of ingredients, the machine must be refilled in time.

**Required** • Ingredients.

**Procedure** Perform the following steps:

1. (Unlock -- optional) and remove the lid of the canister.
2. Fill the canister with the ingredient indicated on the canister.



### WARNING

- Do not reach inside ingredient canisters.
- Do not insert objects inside ingredient canisters.
- To reach the inside of an ingredient canister in a safe manner, first remove the canister from the machine.

3. Place the lid back on the canister (and lock -- optional).

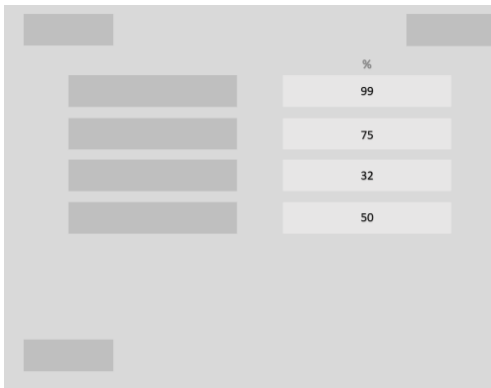
## 5.6.21 Enter canister ingredient levels — optional

**Purpose** When activated the coffee machine displays a message on the screen when the ingredient canisters are almost empty. Based on the number of beverages taken, the machine calculates the amount of ingredients left in the canisters. When the canisters are filled up the counters must be reset. Follow the steps in the procedure below to reset the counters.

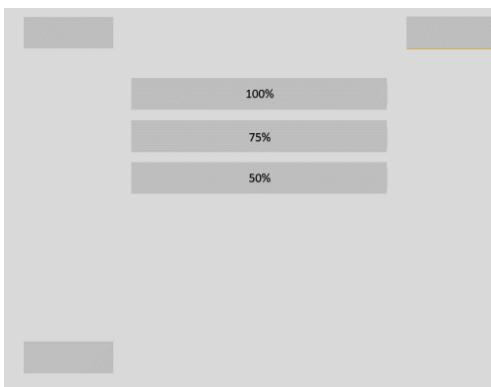
**Interval** Perform this procedure:

- When this option is active the *Enter ingredient level screen* is displayed when the **[Exit]** button is tapped in the **Service** menu to return to the **Main** menu (see [Main menu - Cup dispensing](#) on page 21).

**Procedure** Perform the following steps:



1. When the **[Exit]** button is tapped to leave the **Service** menu the *Enter ingredients levels screen* is displayed.
  - The current filling level of each canister is displayed (only the canisters activated for this option are shown).
2. To change a canister filling level tap one of the **ingredient** buttons in the left column.
  - or tap the **[Exit]** button to leave the **Service** menu.



3. Tap the correct **[filling level %]** button for the selected canister.



**NOTE**

A completely filled canister is filled 100 %. To keep ingredients fresh it is also possible to fill the canister for 50%.

4. Repeat the steps for each canister that is filled up (or where the shown value is not correct) or tap **[Exit]** to leave the **Service** menu.

## 5.6.22 Clean the outside of the machine

**Purpose** To clean all outside areas of the coffee machine that are not cleaned in any other procedure.

**Required** Use the following parts to perform the procedure:

- Soft damp cloth.

**Interval** Perform this procedure:

- Daily (see [Preventive maintenance schedule](#) on page 41),

**Procedure** Perform the following steps:

1. Clean the outside of the machine with a soft damp cloth.



**NOTE**

Do not use aggressive cleaning products or abrasives to clean (parts of) the machine.



## 5.6.23 Clean the touchscreen — optional

**Purpose** The touchscreen is the main interface between user and coffee machine. To ensure a hygienic and flawless use, the touchscreen must be cleaned regularly.

**Required** Use the following parts to perform the procedure:

- A clean soft cloth for disinfection purposes.
- (Isopropyl) alcohol.

**Interval** Perform this procedure:

- At least Daily (see [Daily maintenance](#) on page 42).
- When announced on screen, after a defined number of dispensed beverages.

**Procedure** Perform the following steps:

1. Tap one of the buttons with the message **[PRESS here to start cleaning]**. The screen will be switched off now.
  - or tap **[Cancel]** to return to the main *Menu*.



**TIP**

If the Clean Screen window is not shown, tap the on-screen clock first. (If no clock is displayed, check the section [Main menu - Cup dispensing](#) (on page 21) and tap on the location of the clock.

2. Clean the touchscreen with some (Isopropyl) alcohol on a clean soft cloth.



**CAUTION**

- Do not use any other (aggressive) chemicals to clean the surface of the touchscreen.
- Prevent dripping, do not use too much cleaning liquid on the cloth.

3. After some time, the touchscreen is switched on again. The machine returns to the *Main menu* and is ready for use.

## 5.6.24 The service key

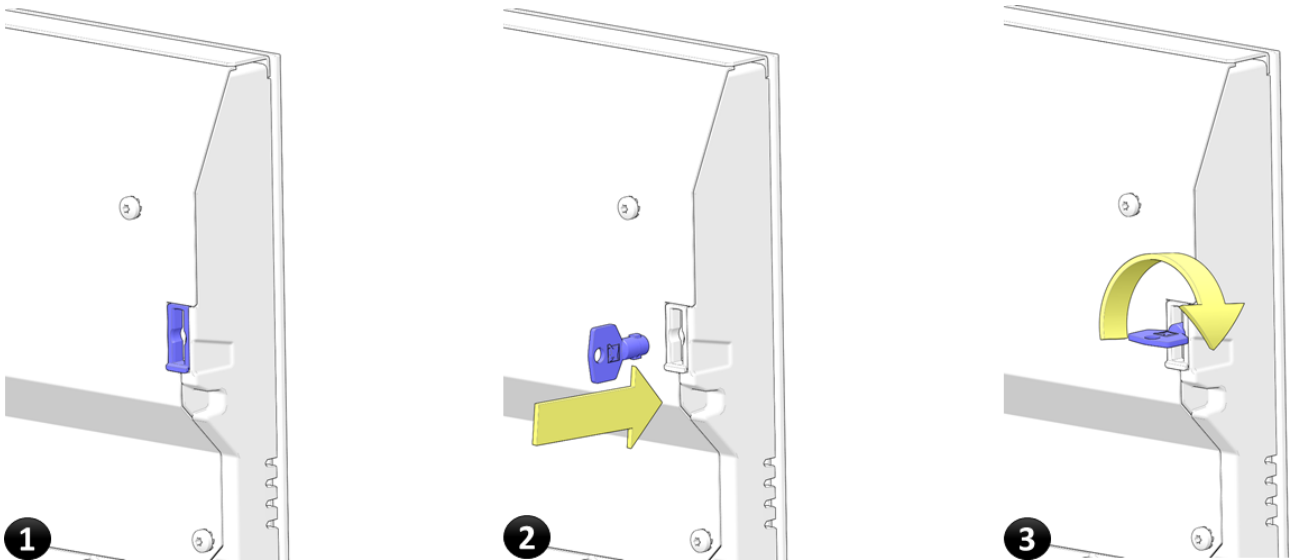
**Purpose** For safety reasons all dispense functions are disabled if the door of the machine is opened. Use the green service key to override this safety for maintenance procedures that need a fully functioning machine.

### 5.6.24.1 Insert the service key

**Required** Use the following parts to perform the procedure:

- Green service key.

**Procedure** Perform the following steps:



1. Locate the entry for the **Service key** on the inside of the door.
2. Insert the **Service key** in the service key entry.
3. Turn the **Service key** a quarter turn (90°).
  - The grey options in the **Service** menu change to *yellow/green*.
  - The coffee machine is now fully functional with an open door.
  - The key remains locked in the entry.



#### **WARNING**

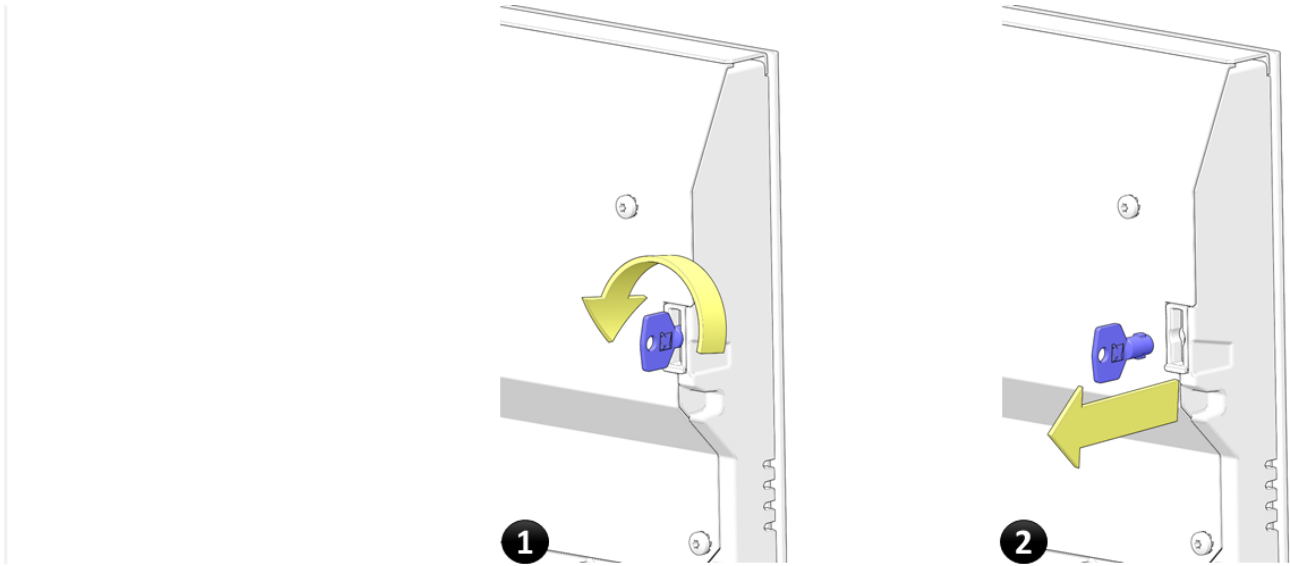
When the service key is inserted, the machine is powered up with open door. Parts in the machine can move and hot water can flow out. Only insert the service key when requested.

### 5.6.24.2 Remove the service key

**Required** Use the following parts to perform the procedure:

- Green service key.

**Procedure** Perform the following steps:



1. Turn the **Service key** a quarter turn (90°).
2. Remove the **Service key** from the door.

# Troubleshooting

## 6.1 Messages

Always check if a message is shown on the display. If no message is shown and the machine does not work correctly, you still may find the possible cause and solution in the following table. For failures not mentioned in this manual: Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.1 Message: Brewer is turning the wrong way, check the wiring

**Message** *Brewer is turning the wrong way, check the wiring.*

**Solution** Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.2 Message: Brewer out of position

**Message** *Brewer out of position.*

**Solution** Perform the following steps to solve the problem:

1. Remove the brewer from the coffee machine and insert it again. Make sure it locks properly.

If problem persists: Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.3 Message: Clean screen

**Message** *Clean Screen.*

**Cause** After a defined number of consumptions, the touchscreen needs to be cleaned.

**Solution** Perform the steps as explained in the section Clean the touchscreen (see [Clean the touchscreen — optional](#) on page 89).

### 6.1.4 Message: Clean the milk system

**Message**

*Clean the milk system*

**Cause**

The last time the milk system was cleaned was at least 20 hours ago.

**Solution**

Perform the following steps to solve the problem:

1. Clean the fresh milk system.

### 6.1.5 Message: Communication error

**Message**

*Communication error*

**Solution**

Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.6 Message: Door open

**Message**

*Door open*

**Solution**

Perform the following steps to solve the problem:

1. Close the door or install the green service key to activate the machine.

### 6.1.7 Message: Drip tray full

**Message**

*Drip tray full*

**Solution**

Perform the following steps to solve the problem:

1. [Clean the drip tray](#) (on page 63) in front of machine and/or clean the brewer drip tray (see [Clean waste bucket](#) on page 60) inside the waste bucket.
2. Make sure the water level sensors in the drip bucket / drip tray are dry.

See section [Daily maintenance](#) (on page 42).

### 6.1.8 Message: Empty waste bucket

**Message**

*Empty waste bucket*

**Solution** Check the [Message: Waste bucket full / Empty waste bucket](#) (on page 100) for more details.

### 6.1.9 Message: Enough water?

**Message** *Enough water?*

**Solution** Perform the following steps to solve the problem:

1. Connect and open the water supply and restart the machine.
2. [Clean brewer with cleaning tablet](#) (on page 74).
3. Check if the problem also occurs when a hot water dispense is made.
  - If problem persists: Consult the service engineer (see [Service and support](#) on page 3). Do not forget to mention the results.

### 6.1.10 Message: Error occurred during recipe cycle

**Message** *Error occurred during recipe cycle.*

**Solution** Perform the following steps to solve the problem:

1. Open and close the door of the coffee machine to initialize the brewer.
2. Check correct functioning by taking a coffee beverage. If problem persists: Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.11 Message: Filling boiler

**Message** *Filling boiler*

**Solution** Perform the following steps to solve the problem:

1. Wait until the boiler is filled.
2. If message is still shown after 10 minutes: Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.12 Message: General error

**Message** *General error*

**Cause** The coffee machine is still busy.

**Solution** Perform the following steps to solve the problem:

1. Wait until the machine is ready.

2. If message is still shown after 10 minutes: Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.13 Message: Grinder blocked

**Message** *Grinder blocked*

**Solution** Perform the following steps to solve the problem:

1. Clean the grinder. (see [Unblock the grinder](#) on page 76)

### 6.1.14 Message: Heating boiler

**Message** *Heating boiler*

**Solution** Perform the following steps to solve the problem:

1. Wait until boiler is heated.
2. If message is still shown after 10 minutes: Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.15 Message: Initialization failed, the brewer did not reach maximum movement

**Message** *Initialization failed, the brewer did not reach maximum movement.*

**Solution** Perform the following steps to solve the problem:

1. Open and close the door of the coffee machine to initialize the brewer.
2. Check correct functioning by taking a coffee beverage. If problem persists: Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.16 Message: Install drip tray

**Message** *Install drip tray*

**Solution** Perform the following steps to solve the problem:

1. Place the drip tray.  
See also section [Daily maintenance](#) (on page 42).

### 6.1.17 Message: Place the waste bucket in the machine

**Message** *Place the waste bucket in the machine*

**Solution** Perform the following steps to solve the problem:

1. Place the waste bucket.
2. Tap the correct button on the screen:
  - Waste bucket NOT empty.
  - Waste bucket empty.

### 6.1.18 Message: Insert coins

**Message** *Insert coins*

**Solution** Perform a full payment with coins, tokens or card.

### 6.1.19 Message: Mixer blocked

**Message** *Mixer blocked*

**Solution** Perform the following steps to solve the problem:

1. Clean the mixing system (see [Clean the mixing system and all hoses](#) on page 65).

### 6.1.20 Message: Machine Blocked

**Message** *Machine Blocked*

**Cause** The coffee machine is locked during this time by the scheduler and not available for use.

**Solution** Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.21 Message: Machine is temporarily out of order

**Message** *Machine is temporarily out of order*

**Cause** The message is set on purpose by the operator, for instance, because there are no ingredients available. The coffee machine can not be used.

**Solution** As soon as the issue is solved, the operator removes the message and the machine will be available again.

### 6.1.22 Message: Not all ingredients available



**Message**

*Not all ingredients available*

**Solution**

Perform the following steps to solve the problem:

1. One or more canisters must be refilled.  
See section Fill the ingredient canisters.

### 6.1.23 Message: No coffee detected in brewer

**Message**

*No coffee detected in brewer*

**Solution**

Perform the following steps to solve the problem:

1. Check if a canister must be refilled.  
See section Fill the ingredient canisters.
2. Check if the grinder runs to fill the brewer.

### 6.1.24 Message: No water connected / No water in boiler

**Message**

*No water connected / No water in boiler*

**Cause**

No water detected for more than 2 minutes.

**Solution**

Perform the following steps to solve the problem:

1. First check if the water supply is opened / connected.
2. Open the door of the coffee machine to display the **Service** menu, wait 2 seconds and close the door again to allow the coffee machine to re-activate itself.
  - If this does not help restart the coffee machine (Switch the coffee machine OFF, wait 5 seconds and then switch ON again).
  - If problem persists: Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.25 Message: Piston blocked, dosage too high

**Message**

*Piston blocked, dosage too high.*

**Solution**

Perform the following steps to solve the problem:

1. Open and close the door of the coffee machine to initialize the brewer.
2. Check correct functioning by taking a coffee beverage. If problem persists: Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.26 Message: Place coffee funnel in the machine

**Message** *Place coffee funnel in the machine*

**Solution**

1. Open the door.
2. Place the coffee funnel.
3. Close the door.
4. Leave the Service menu: tap the **[Exit]** button and then the **[Close door and press here to quit service]** button to return to the main menu.

### 6.1.27 Message: Place cup in center

**Message** *Place cup in center*

**Cause** Cup needs to be placed under the correct dispensing nozzle before the **[Start]** button is available.

**Solution** Perform the following steps to solve the problem:

1. If cup is placed in the correct position clean the cup sensor.

### 6.1.28 Message: Place cup left

**Message** *Place cup left*

**Cause** Cup needs to be placed under the water dispensing nozzle before the **[Start]** button is available.

**Solution** Perform the following steps to solve the problem:

1. If cup is placed in the correct position clean the cup sensor.

### 6.1.29 Message: Please load configuration

**Message** *Please load configuration*

**Solution** Perform the following steps to solve the problem:

Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.30 Message: Please load the User Interface

**Message** *Please load the User Interface*

**Solution** Perform the following steps to solve the problem:  
Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.31 Message: Recipe error, contact tech. support

**Message** *Recipe error, contact tech. support.*

**Solution** Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.32 Message: Replace water filter

**Message** *Replace water filter*

**Solution** Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.33 Message: Rinse brewer with tablet

**Message** *Rinse brewer with tablet*

**Solution** Perform the following steps to solve the problem:  
1. Clean the brewer with cleaning tablet (see [Clean brewer with cleaning tablet](#) on page 74) (again).  
See also [Weekly maintenance](#) (on page 43).

### 6.1.34 Message: Startup problem

**Message** *Startup problem*

**Solution** 1. Open/connect the water supply and restart the machine.  
If the problem persists: Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.35 Message: Temp. sensor disconnected

**Message** *Temp. sensor disconnected*

**Solution** Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.36 Message: Temperature boiler (too) high

**Message** *Temperature boiler (too) high*

- Solution**
1. Open the door of the coffee machine.
  2. Insert the service key.
  3. Perform the procedure [Flush mixers and brewer](#) (on page 49) several times.
  4. If message is still shown: Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.37 Message: The brewer blocked during recipe, did not reach position

**Message** *The brewer blocked during recipe, did not reach position.*

- Solution** Perform the following steps to solve the problem:
1. Open and close the door of the coffee machine to initialize the brewer.
  2. Check correct functioning by taking a coffee beverage. If problem persists: Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.38 Message: Water level too low

**Message** *Water level too low*

- Solution** Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.39 Message: Wait, Heating boiler

**Message** *Wait, Heating boiler*

- Solution** Perform the following steps to solve the problem:
1. Wait until boiler is heated.
  2. If message is still shown after 10 minutes: Consult the service engineer (see [Service and support](#) on page 3).

### 6.1.40 Message: Waste bucket full / Empty waste bucket

**Message** *Waste bucket full / Empty waste bucket*

- Solution** Perform the following steps to solve the problem:
1. Empty waste bucket (see [Clean waste bucket](#) on page 60).
    - If message is still shown, remove the waste bucket and wait 6 seconds before placing it back.
    - If message is still shown, check if the waste bucket detector switch is clean (check the [Inside view](#) (on page 17) drawing for the location).
  2. If a base cabinet is used, [Clean the waste bin in the base cabinet](#) (on page 62).
    - If the problem persists: Consult the service engineer.

#### 6.1.41 Message: Water filter installed?

**Message** *Water filter installed?*

**Solution** Consult the service engineer (see [Service and support](#) on page 3).

#### 6.1.42 Message: Wrong brewer defined in the software

**Message** *Wrong brewer defined in the software.*

**Solution** 1. Consult the service engineer (see [Service and support](#) on page 3).

#### 6.1.43 Message: Ready, take your cup

**Message** *Ready, take your cup*

**Cause** The dispense of the beverage is finished.

**Solution** Remove the cup or jug.

## Technical specifications

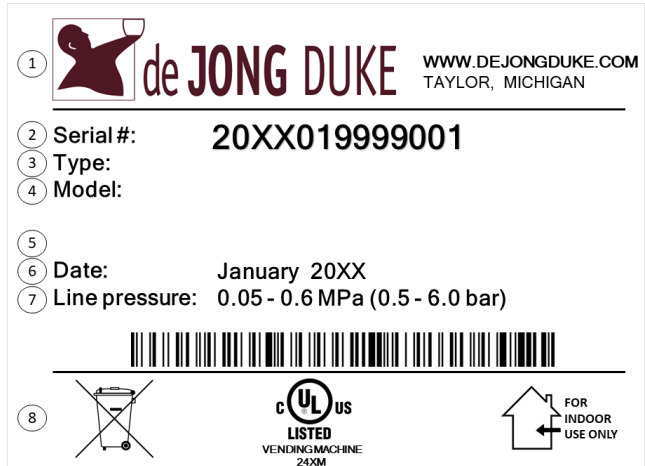
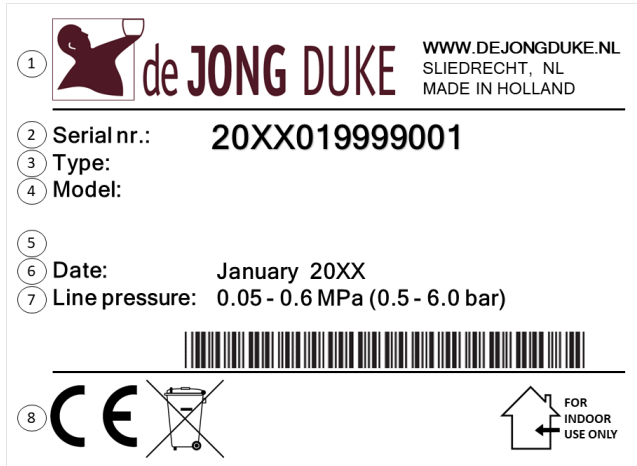
### 7.1 Standards and regulations

If the type plate inside the machine specifies any marking for conformity, standards or regulations, check the appendix for any additional information.

## 7.2 Type plate

The type plate is located inside the machine on the right side panel.

*Type plate layout examples*



- |                               |   |
|-------------------------------|---|
| 1. Manufacturer details       | 5. Mains power specifications   |
| 2. Serial number              | 6. Date of production   |
| 3. Model code                 | 7. Water connection specifications  |
| 4. Model name / configuration | 8. Markings for conformity, disposal and use. For details, check the <a href="#">Appendix list</a> (on page 107). |



### NOTE

Data shown in the picture is for illustration purposes only.

## 7.3 Disassembly and recycling



The coffee machine contains recyclable materials. Dispose of the coffee machine in conformity with local laws and regulations.

## 7.4 Technical specifications

*Machine dimensions ( $\pm 5$  mm) and weight specifications ( $\pm 10\%$ )  
Nio XKA Series*

Height (with bean canister)	599 mm
Height (with extended bean canister)	714 mm
Width	460 mm
Width with Fresh Milk option	745 mm
Depth	540 mm
Weight (empty)	35 kg
Weight with Fresh Milk option (empty) <sup>1</sup>	39 kg

<sup>1</sup>) weight does not include the refrigerator itself

*Machine electrical specifications*

Mains supply ( $\pm 10\%$ )	Refer to the <a href="#">type plate</a> (on page 103) inside the coffee machine for the correct values.
Frequency ( $\pm 2\%$ )	
Max. capacity	

*Machine water specification*

<b>Water pressure</b>	
Minimum pressure	90 kPa (0,9 bar)
Maximum pressure	600 kPa (6 bar)
Water connection	$\frac{3}{4}$ BSP connection
<b>Rated pressure</b>	
Water boiler	1,1 MPa (11 bar)
Steam boiler	0,5 MPa (5 bar)
<b>Quality of water</b>	
Hardness	5-7° dH (German standard) 8-12 fH (French standard)
pH Value	approx. 7
Temperature water	The incoming temperature may not be above 30°C
Main water connection	Between water tap and coffee machine an (electronic) waterlock needs to be connected

*Machine hot water pressure system*

<b>Pressure Systems Safety Regulations 2000 (PSSR)</b>	Steam vessel	Water vessel
Vessel category	SEP	SEP
Operating (rated) pressure	5 bar	11 bar
Maximum allowable pressure	24 bar	24 bar
Design temperature	135°C	135°C
Safety relief valve	5,5 bar	12 bar

*Machine ambient temperature specifications*

When in storage	+ 5 °C ~ + 50 °C
-----------------	------------------



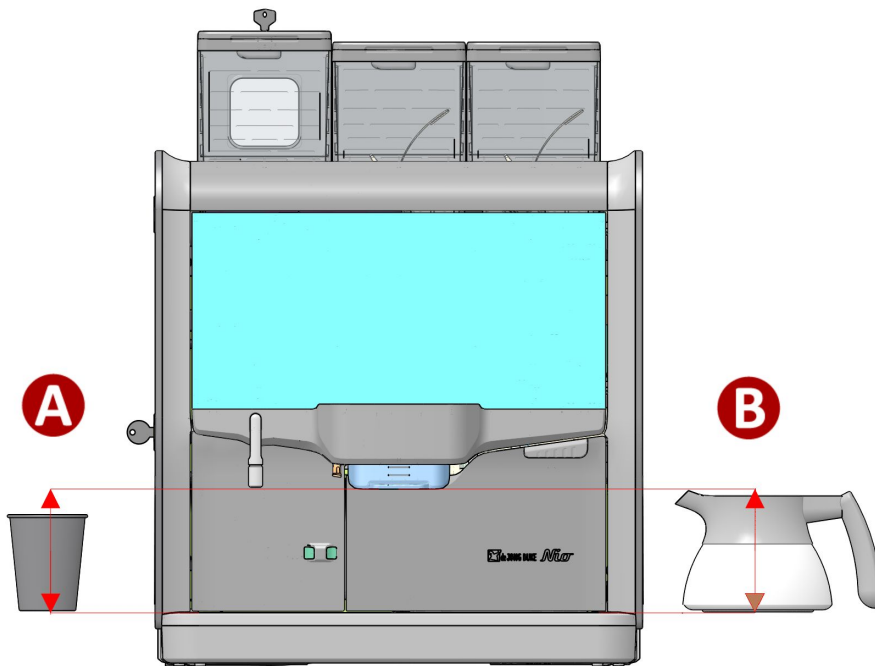
When in use	+ 5 °C ~ + 35 °C
-------------	------------------

*Machine sound pressure*

Standby	< 20 dB(A)
Grinder / Coffee	≤ 62.7 dB(A)

## 7.5 Cup and jug sizes

*Cup and jug dimensions Nio model*



<i>Cups (A)</i>	
Maximum cup height	110 mm
Maximum cup diameter	85 mm
<i>Jugs (B)</i>	
Maximum jug height	110 mm
Maximum jug diameter	135 mm

## 7.6 Manufacturer contact information



### **De Jong DUKE**

Postbus 190  
3360 AD SLIEDRECHT  
The Netherlands



+31 (0) 184 209 767

[www.dejongduke.nl](http://www.dejongduke.nl)



[support@dejongduke.nl](mailto:support@dejongduke.nl)



### **De Jong DUKE North America**

12680 Delta Street  
Taylor, MI, 48180  
U.S.A.



+1 734 403 1708

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



[support@dejongduke.com](mailto:support@dejongduke.com)

### Service and support

For questions, service and ingredients for this coffee machine: Consult the service engineer (see [Service and support](#) on page 3).

# Appendix

## 8.1 Appendix list

Information related to this document and the coffee machine are:

- CE - Declaration of conformity (see [CE - Declaration of conformity Nio](#) on page 108).
- UKCA - Declaration of conformity (see [UKCA - Declaration of conformity](#) on page 109).

## 8.2 CE - Declaration of conformity Nio



de Jong DUKE  
Postbus 190  
3360 AD Sliedrecht  
The Netherlands  
[www.dejongduke.com](http://www.dejongduke.com)

### EG Verklaring van Conformiteit

#### EC Declaration of Conformity

De firma: J.M. de Jong DUKE Automatenfabriek B.V.  
The company: Postbus 190  
3360 AD Sliedrecht  
The Netherlands

Verklaart geheel onder eigen verantwoordelijkheid dat de onderstaande machines:  
Declares under its own sole responsibility that the machines:

- Nio CoEx Series
- Nio CoEx Fresh Milk Series
- Nio CoEx XL Series
- Nio CoEx XL Fresh Milk Series

Met veiligheidslimieten: 135 °C/ 5.5 bar (steam vessel)  
With Safe Operating Limits: 135 °C/ 12 bar (water vessel)

In overeenstemming zijn met de volgende

EG-richtlijnen:  
Are in conformity with the following EC directives:

[2014/30/EU](#)  
[2014/35/EU](#)  
[2006/42/EC](#)  
[2009/125/EC](#)  
[2012/19/EU](#)  
[2011/65/EU](#)  
[1907/2006/EC](#)  
[2015/863/EU](#)  
[2019/1021/EU](#)  
[1935/2004/EC](#)  
[2014/68/EU](#)  
[PSSR2000](#)  
[1282/2011/EU](#)  
[2023/2006/EC](#)

Electromagnetic Compatibility Directive  
Low Voltage Directive  
Machinery Directive  
ECO Design  
WEEE Directive  
RoHS Directive  
REACH directive  
Delegated directive amending directive 2011/65/EU  
POPs regulation  
Food Safety Directive  
Pressure Equipment Directive  
UK regulation: Pressure Systems Safety Regulations  
Food contact plastics and articles  
Good manufacturing practice for materials and articles intended to come into contact with food

Voldoen aan de volgende geharmoniseerde Europese normen:  
Comply with the following harmonized European standards:

*Electromagnetic Compatibility:*

EN 55014 - 1  
EN 55014 - 2  
EN 61000 - 3 - 2  
EN 61000 - 3 - 3  
EN 62233

*Electric Safety:*

EN 60335 - 1  
EN 60335 - 2 - 75

*Technical documentation for assessment:*

IEC 63000:2016

Sliedrecht, April 6th 2021

M.J.C. de Jong - *Managing Director*

## 8.3 UKCA - Declaration of conformity



de Jong DUKE  
Marisstraat 2  
3364 AZ Sliedrecht  
The Netherlands

### UKCA Declaration of Conformity

**Declaration:**

J.M. de Jong DUKE Automatenfabriek B.V. declares that the products are conform relevant UK legislation.



**Products:** Commercial Coffee Machines

Series:	Edge	Virtu	V'Eco	Zia	LUA	BLU	Avy	Nio
---------	------	-------	-------	-----	-----	-----	-----	-----

**Applicable UK legislation:**

Electromagnetic Compatibility Regulation 2016
Electrical Equipment (Safety) Regulation 2016
Radio Equipment Regulation 2017
Pressure Equipment (Safety) Regulation (PED) 2016
Supply of Machinery (Safety) Regulations 2008
Ecodesign Directive 2009/125/EC (and Directive 92/42/EEC hot-water boilers): AMD 2010
The Restriction of the Use of Certain Hazardous Substances (RoHS) in Electrical and Electronic Equipment Regulations 2012
Audio, video and similar electronic apparatus - Safety requirements EN 60065:2002, EN 60065:2002/A12:2011
Information technology equipment - Safety - Part 1: General requirements EN 60950-1:2006, EN 60950-1:2006/A12:2011

**Date:**

Sliedrecht, 12-12-2022

**Signature:**

Managing Director – R. Bastinck

