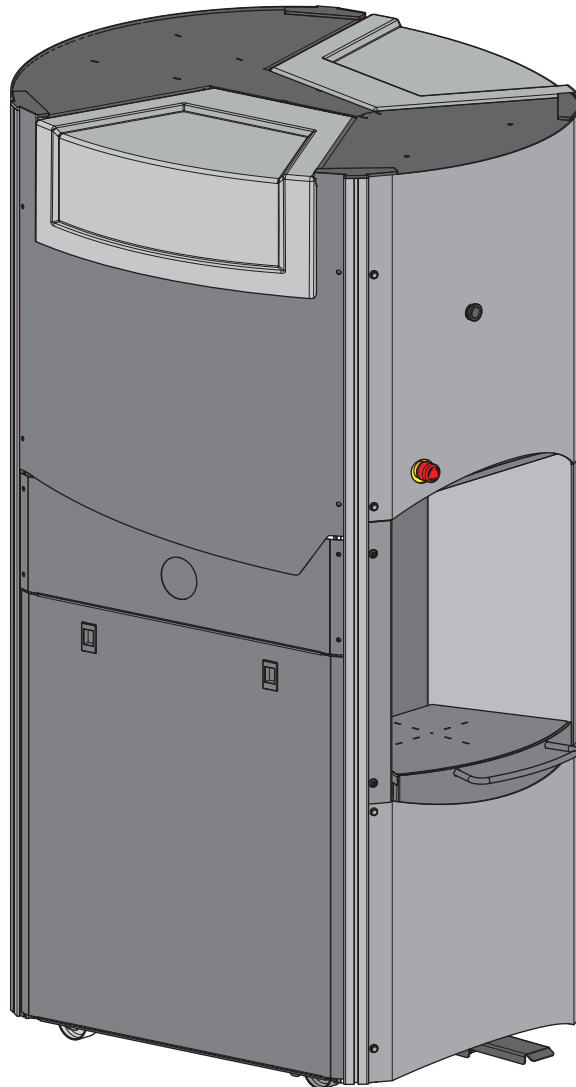


Manual Harbil HA150



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1 About this manual

The manual shows the information necessary to:

- install
- operate
- perform basic maintenance
- correct small problems.

The HA150 and all its versions are referred to in the manual as the 'machine'.

This manual contains the original instructions. The original language of the manual is English. All other language versions are translations of the original instructions.

1.1 How to work with the manual

For the safe use of the machine, it is important:

- 1 To familiarize yourself with the structure and content.
- 2 To read the safety chapter in detail and make sure you understand all the instructions. See § 2.
- 3 To carry out the actions completely and in the given sequence.

1.2 Record of changes

Edition	Editor	Check	Date	Description
1.0	RvS	TB	02/2015	First edition

2 Safety



WARNING

Read the manual before you install or use the machine. Failure to do so can result in personal injury, death or property damage.

2.1 Intended use

The machine is designed to dispense colorants into a can. Any other use of the machine is strictly forbidden.

2.2 Liability

2.2.1 General liability

Our machines and accessories are fully compliant with the CE regulations. Any modification can result in not fulfilling the CE safety requirements and is therefore not allowed. Fast & Fluid Management B.V. will not accept any responsibility in case of modifications to machines and/or accessories.

Fast & Fluid Management B.V. is not liable if you do not follow the rules below:

- The machine is for indoors use only.
- This machine may only be used for commercial settings. The machine is not a household appliance.
- Observe all local safety regulations.
- Mind the minimal requirement of the building structure of the load capacity of the floor.
- Place machine in a well-lit and well ventilated room.
- Install and connect the machine according to the instructions in this manual.
- Connect the machine to a grounded wall socket.
- Do not use extension cords.
- Do not place objects on top of the machine.
- Do not use a damaged machine. When you have doubts, contact your supplier. See § 5.2.
- Keep the machine in good condition. Make sure that defective parts are immediately replaced.
- Replace parts only with original Fast & Fluid Management B.V. spare parts.

All maintenance beyond the scope of this manual must be carried out by a qualified service technician that Fast & Fluid Management B.V. has trained and certified.

2.2.2 Machine-specific liability

This machine is designed to dispense colorants into a can in non-hazardous conditions.

Please consult the health & safety officer of your paint supplier and/or colorant supplier on how to avoid the emergence of hazardous situations like personal harm or the risk for fire and explosion.

- Personal harm should be avoided by strictly following the materials safety data sheets (MSDS) for colorants, (base) paint and brush liquid.
- Do not use flammable liquids in the brush container.
- The use of flammable colorants or colorants that diffuse potential explosive vapors may present fire and explosion risks.

2.3 User qualification for installation

Only install the machine if you have written permission from the supplier of the machine.

2.4 CE certification

The machine is CE certified. This means that the machine complies with the essential requirements concerning safety. The directives that have been taken into consideration in the design are available on www.fast-fluid.com.

2.5 Safety symbols on the machine



Rotating parts hazard



On/off



Central earthing point



Read the manual



Instruction



Rotating parts hazard
Read the manual



Refill canisters
Read the manual

2.6 Safety symbols in the manual



WARNING
Can cause personal injury.



Note
Shows further information.



CAUTION
Can cause damage to the machine.

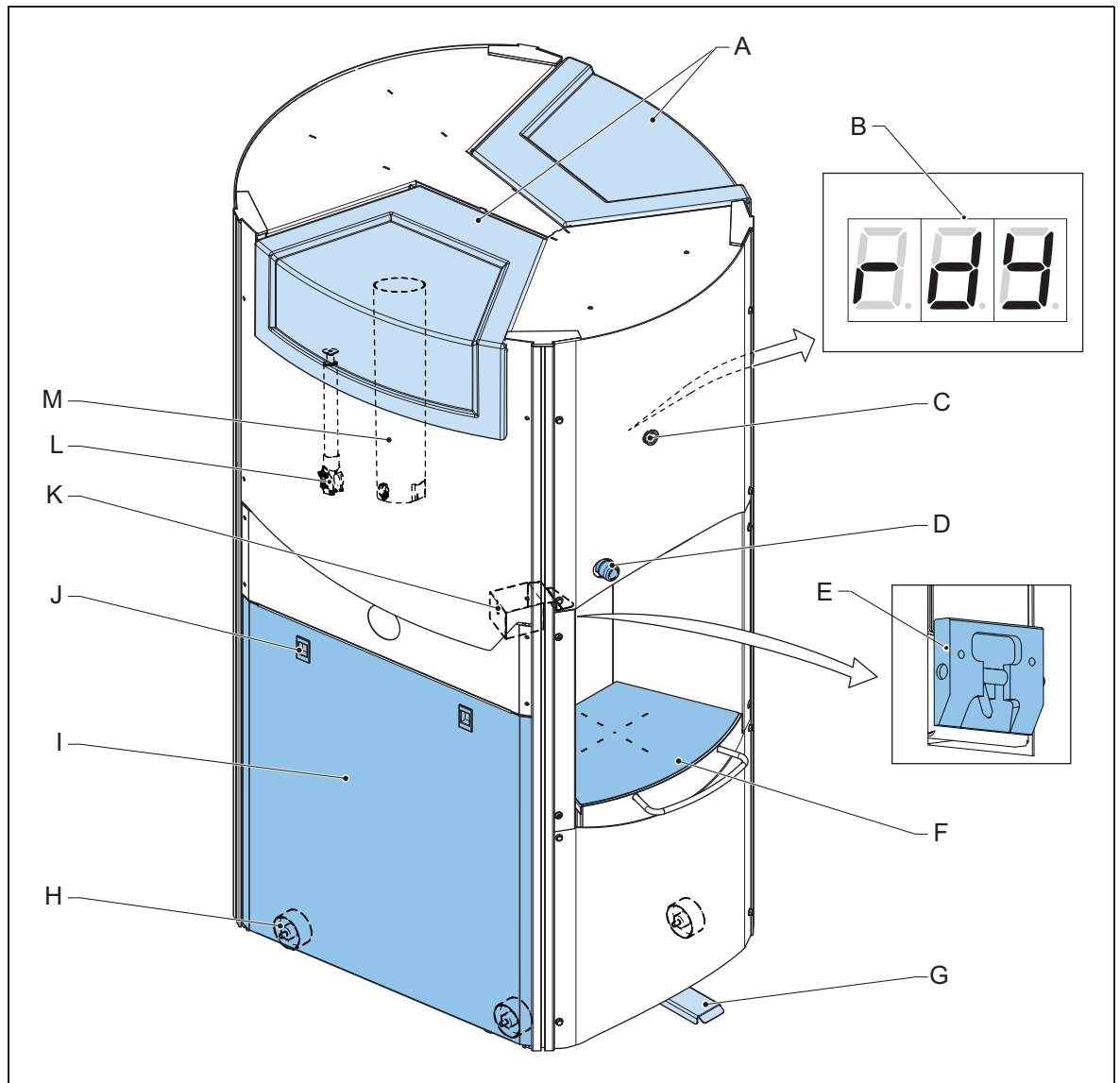
2.7 Disposal of the machine

1. Sort the machine, the accessories and the packaging for environmentally friendly recycling.
2. Do not dispose of the machine into domestic waste. Dispose of the machine according to local regulations.
3. Dispose of the canisters as chemical waste, according to the local regulations.

3 Operator manual

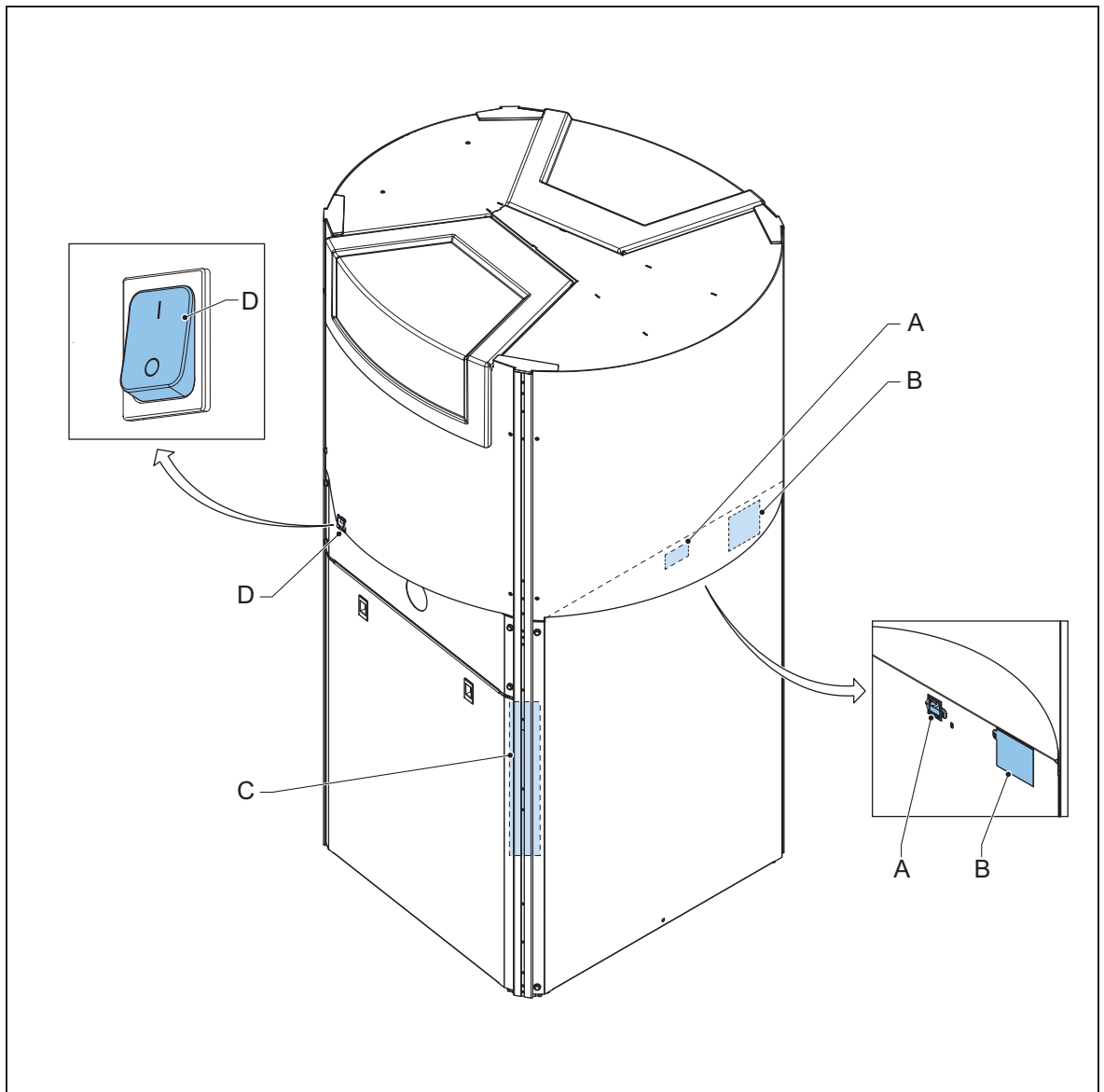
3.1 Description

3.1.1 Overview of the machine



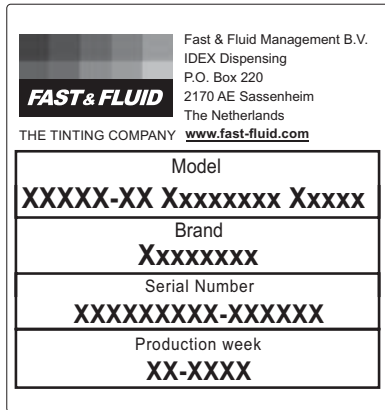
- | | |
|---------------------------------|----------------------------|
| A: Top cover | H: Wheels |
| B: Display | I: Side cover |
| C: Display window | J: Latch |
| D: Emergency stop switch | K: Brush container |
| E: Brush unit | L: Pump with nozzle |
| F: Can table | M: Canister |
| G: Foot pedal | |

3.1.2 Overview of the machine (back)

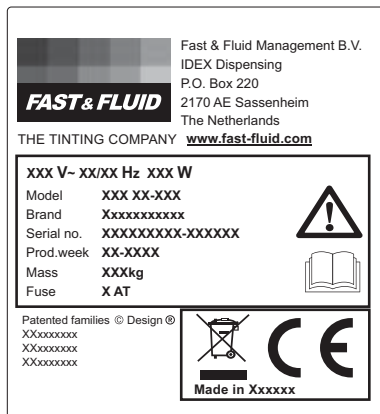


- A: Net entry
- B: Type plate
- C: 5-Way socket
- D: Computer switch

3.1.3 Type plate: serial number



3.1.4 Type plate: details



3.2 Operation

**WARNING**

Only push the emergency stop switch in the case of a safety emergency.

Make sure that the problem is solved before you reset the emergency stop switch.

When you reset the emergency stop switch, the machine restarts automatically. When the machine is operational, you hear 'beep beep'.

**CAUTION**

Do not remove the power from the machine. The machine must stir the colorants periodically.

**Note**

The computer switch only turns the computer on and off.

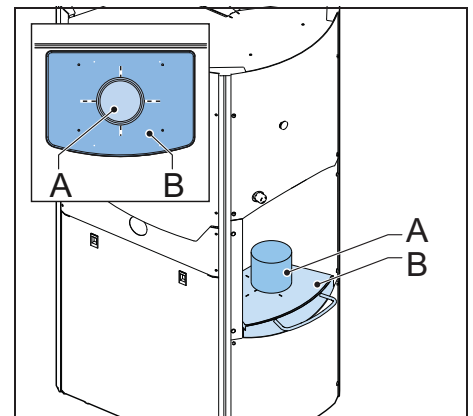
3.2.1 General dispensing procedure

For all the software instructions: see the software documentation.

1. Place the can. See § 3.2.2.
2. Move the can table up. See § 3.2.3.
3. Choose the recipe and dispense. See the software documentation.
4. Move the can table down. See § 3.2.4.
5. Remove the can.

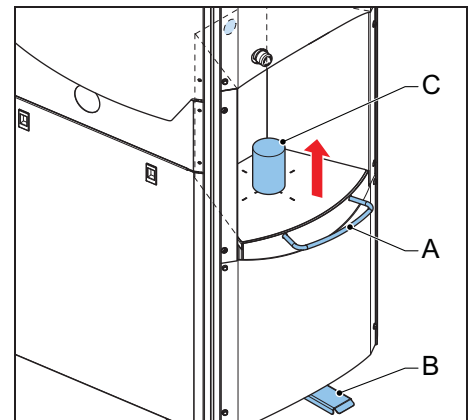
3.2.2 Place the can

1. Place the can (A) at the centre of the mark (B) on the can table.



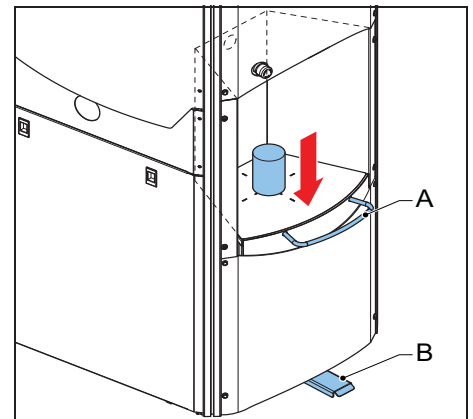
3.2.3 Move up the can table

1. Hold the handle (A) of the can table.
2. Push and hold the foot pedal (B) with your foot. *The can table is unlocked.*
3. Move up the can table until the can is in front of the sensor (C). *Use the handle.*
4. Remove your foot from the foot pedal. *The can table is locked.*



3.2.4 Move down the can table

1. Hold the handle (A) of the can table.
2. Push and hold the foot pedal (B) with your foot. *The can table is unlocked.*
3. Move down the can table. *Use the handle.*
4. Remove your foot from the foot pedal. *The can table is locked.*



3.3 Maintenance

3.3.1 General cleaning: after every dispensing operation

1. Clean the machine with a cloth and remove all spilled colorant or other liquid.



CAUTION

Do not use cleaning agents based on organic solvents to clean painted or plastic parts of the machine.

3.3.2 Cleaning of the brush container: daily

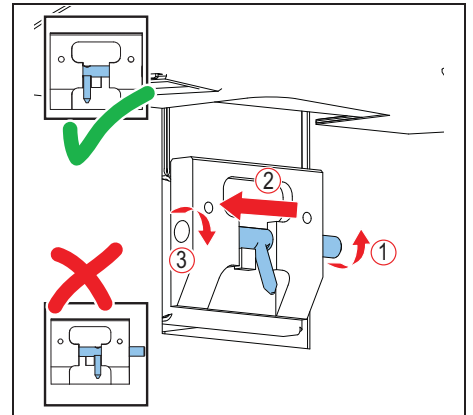


CAUTION

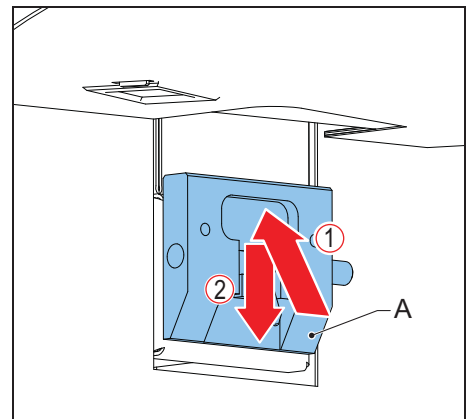
If you do not clean these items daily, severe pollution will occur.

Unlock the brush unit

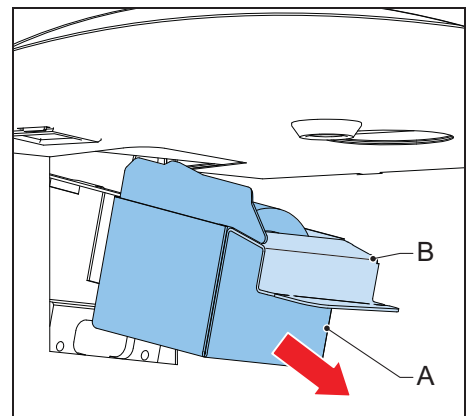
1. Move up the lever of the latch.
2. Move the latch to the left.
3. Move down the lever of the latch.

**Move down the brush unit**

1. Push the brush unit (A) up and to the rear until it is in the opening.
2. Move down the brush unit.

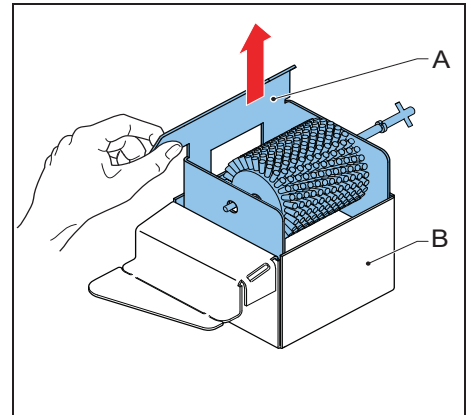
**Remove the brush container**

1. Remove the brush container (A). Use the handle (B).



Remove the brush holder

1. Remove the brush holder (A) from the brush container (B).

**Clean the brush container**

1. Remove the liquid from the brush container. For the disposal of the liquid, follow the local regulations.

Put back the brush holder

1. Put back the brush holder in the brush container.

Fill the brush container

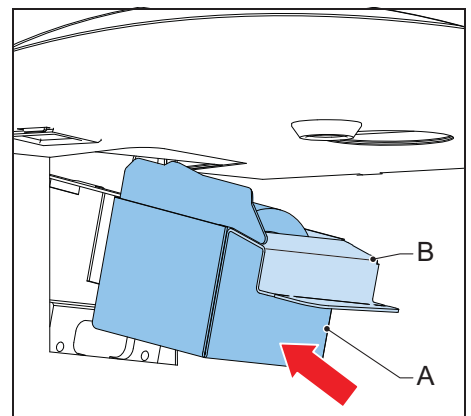
1. Fill the brush container until the brush rotates through the liquid. *Use the liquid that your paint supplier indicates.*

**WARNING**

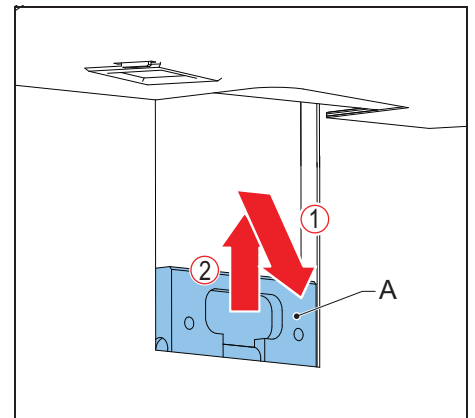
Do not put flammable liquids in the brush container.

Put back the brush container

1. Put back the brush container (A) in the machine. *Use the handle (B).*
2. Push the brush container to the back



3. Move up the brush unit.
4. Move down the brush unit.



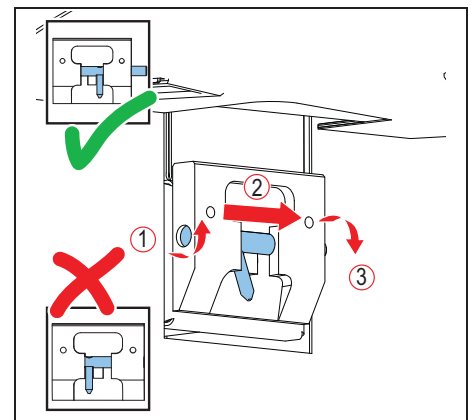
Lock the brush unit

1. Lock the brush unit. *Use the latch.*



Note

Make sure that the brush unit is locked correctly, otherwise the machine does not function properly.



3.3.3

Filling of a canister



WARNING

Check the material safety data sheet (MSDS) of the colorants for the personal protection measures that are required for handling the colorant.



CAUTION

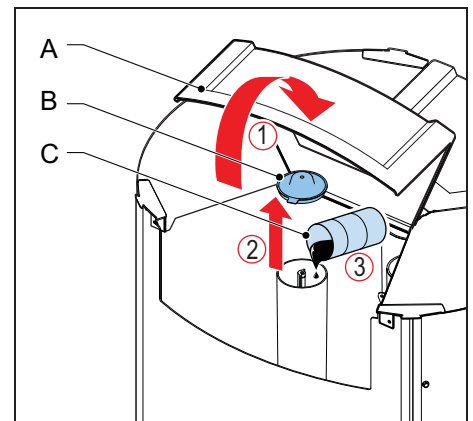
Make sure that the colorant level in the canister is correct. If a canister is empty, this can cause an inaccurate dispensing and/or a recipe fault.



Note

The software checks the level of colorant in each canister. The software on the machine shows when you need to refill a canister.

1. In the software, activate the fill canister option.
2. Open the top cover (A).
3. Remove the lid of the canister (B).
4. Add the colorant (C). Do not spill.



3.3.4 Using the emergency stop switch

1. Push the emergency stop switch (A). The machine stops immediately.



CAUTION

Only push the emergency stop switch in the case of a safety emergency. Do not use the emergency stop switch as an on/off function!

2. Solve the problem as quickly as possible.



CAUTION

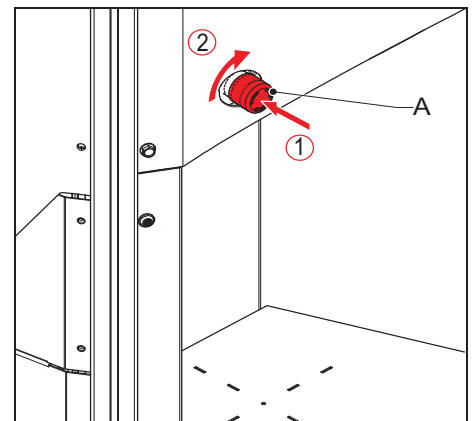
When the machine is shut down, the stirring mechanism, which is necessary to keep the colorant in optimal condition, is also shut down.

3. Reset the emergency stop switch by turning the emergency stop switch. The machine restarts automatically.



Note

After the reset, the machine is operational when you hear two 'beeps'.

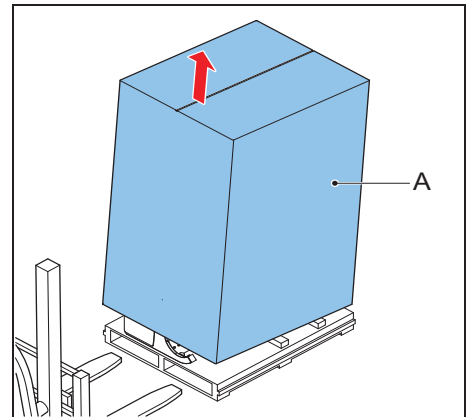


4 Installation

4.1 Unpack the machine

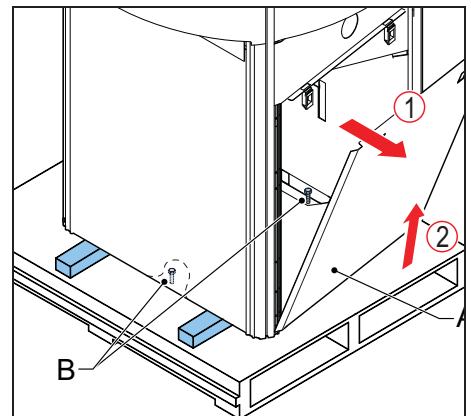
4.1.1 Remove the cardboard

1. Remove the cardboard (A) and the plastic from the outside of the machine.



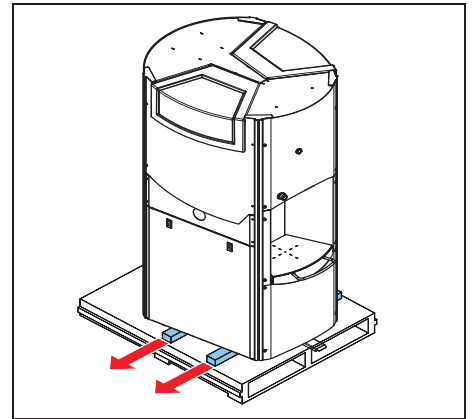
4.1.2 Remove the transport screws

1. Open the side cover (A). *Use the latches.*
2. Remove the side cover.
3. Remove the transport screws (B).
4. Put back the side cover.
5. Close the side cover. *Use the latches.*

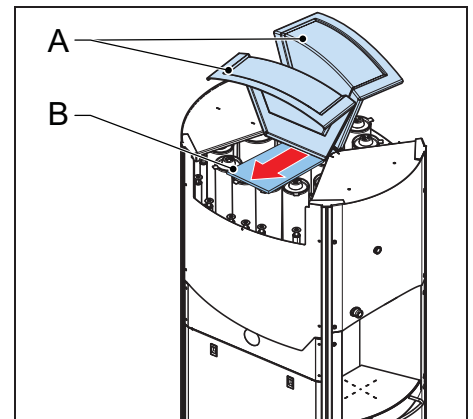


4.1.3 Remove the wooden beams

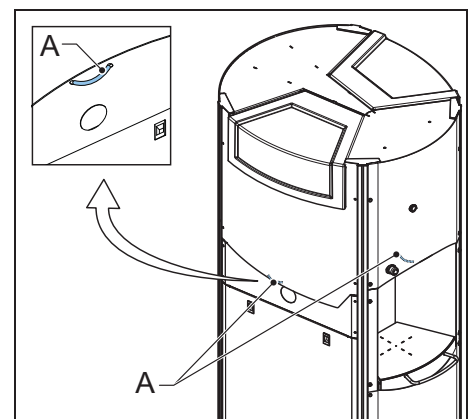
1. Remove the wooden beams.

**4.1.4 Remove the plastic protection on the canisters**

1. Open the top covers (A).
2. Remove the plastic protection (B).

**4.1.5 Remove the tie wraps**

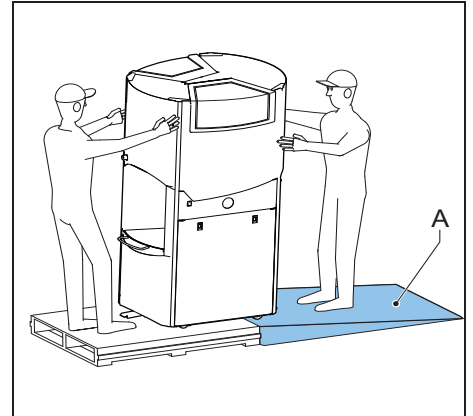
1. Remove the tie wraps (A).



4.2 Put the machine in position

4.2.1 Move the machine from the pallet

1. Optionally, place a ramp (A).
2. Move the machine from the pallet on to the ground.



4.2.2 Move the machine to the final location

**WARNING**

Mind the minimum requirement of the load capacity of the floor. See § 6.2.

**Note**

Make sure the final location is well-lit and well-ventilated.

1. Move the machine to the final location.
2. Connect the power cable to the net entry.

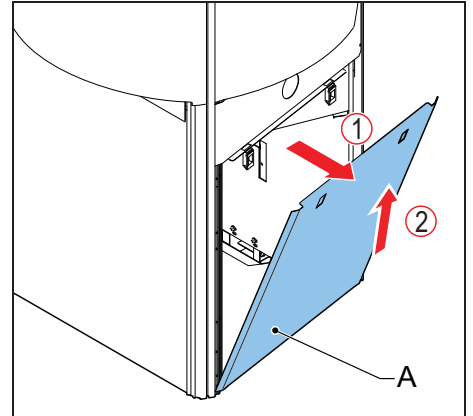
**CAUTION**

Do not connect the power cable to the wall socket.

4.3 Install the computer

4.3.1 Remove the side cover

1. Open the side cover (A). *Use the latches.*
2. Remove the side cover.



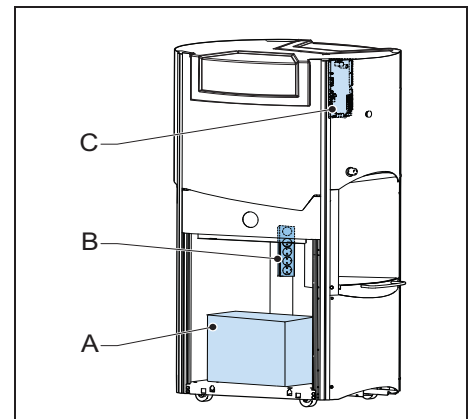
4.3.2 Install the computer



Note

Usually, the computer already has the correct software and drivers installed. If not, see the instructions in the installation manuals of your software provider.

1. Put the computer (A) in the machine.
2. Connect the power cables of the computer and the screen to the 5-way socket (B).
3. Connect an USB cable between the computer and the power board (C).
4. Connect the keyboard, the mouse and the screen to the computer.



4.3.3 Put back the side cover

1. Put back the side cover.
2. Close the side cover. *Use the latches.*

4.4 Turning on the machine

1. Connect the power cable to the wall socket. When the machine is operational, you hear two 'beeps'.
2. Make sure that the emergency stop switch is reset.
See § 3.3.4.
3. Set the computer switch to 'ON'.

4.5 First use

1. Fill the brush container. See § 3.3.2.
2. Fill the canisters. See § 3.3.3.
3. Purge the canister. Use the purge command in the software.
See the software documentation.
4. Do step 3 again for all canisters.

**Note**

First the air will come out of the nozzle. When the output is continuous, the tube is filled.

5 Troubleshooting

5.1 General troubleshooting procedure

1. Try to solve the problem with the information in this manual.
See § 5.3 and § 5.4.
2. If it is not possible to solve the problem with the information in this manual, contact service. See § 5.2.

5.2 Contact service

1. Find the type plate on the rear of the machine. See § 3.1.4.
2. Take a note of the model number and the serial number of the machine.
3. Contact your supplier or manufacturer.
See www.fast-fluid.com.

5.3 Audio signals



Note

See the column *Possible solution* to solve the problem. When the problem persists, contact service. See § 5.2.

Problem	Possible cause	Possible solution
••• --- ••• SOS signal beeps	The agitation motor is malfunctioning, a cable is broken or the power board is malfunctioning.	Contact service. See § 5.2.
----> 1 long interrupted beep (continuously 1 sec. on, 1 sec off)	Stirring function cannot start because a top cover is open.	Close the top cover.
••••• 5 short beeps	A valve timeout occurred.	Restart the machine.
•• 2 short beeps	The machine initializes.	-
-----> 1 long uninterrupted beep	The brush container is missing.	Put back the brush container. See § 3.3.2.
• 1 short beep	A top cover is open when the machine starts to dispense, or when the can table moves.	Close the top cover.

5.4 Error messages and other faults



Note

For all error messages on the computer: see the help topic in the dispense software.



Note

See the column *Possible solution* to solve the problem. When the problem persists, contact service. See § 5.2.

Problem	Possible cause	Possible solution
Main power supply is present but the machine does not work.	The emergency stop switch is active.	Reset the emergency stop switch. See § 3.3.4.
	A fuse is broken.	Contact service. See § 5.2.
Display shows E01	The machine is not initialized.	Restart the machine.
Display shows E02	The brush container is missing.	Put back the brush container. See § 3.3.2.
Display shows E43	The pump is blocked or a motor, cable, or sensor failure occurred.	Restart the machine.
Display shows E44	A pump (motor / cable) or sensor failure occurred.	Restart the machine.
Display shows E49	The can is missing.	Place the can. See § 3.2.2.
Display shows E72	A top cover is open.	Close the top cover.
All other E - errors	-	Restart the machine.

6 Technical data

6.1 General specifications

Parameter	Specification
Number of canisters (max.)	24
Dispensing	Sequential
Pump type	Harbil piston pump
Cleaning system	Automatic
Materials used are suitable for	Water, universal and solvent colorants
Canister sizes [L]	2.3, 4.5
Pump capacity [oz]	2
Maximal can height [cm]	46
Can table depth [cm]	27

6.2 Dimensions and mass

Parameter	Specification
Dimensions, height x width x depth [cm]	109 x 83 x 157
Packed dimensions (height x width x depth) [cm]	117 x 98 x 192
Mass incl. packaging [kg]	210
Mass filled machine [kg]	320
Minimum requirement of load capacity of the floor according to EN 61010-1:2010 [kg]	1280

6.3 Ambient conditions

Parameter	Specification
Temperature [°C], operational	+15 to +40
Temperature [°C], out of operation	-25 to +55
Altitude above sea level [m], operational	-10 to 2000
Altitude above sea level [m], out of operation	-10 to 12000
Maximum relative humidity [RH], without condensation [%]	90

6.4 Noise level

Parameter	Specification
Maximum noise level [dB(A)]	< 65

6.5 Safety classifications

Parameter	Specification
IP (Ingress Protection) classification	32
EMC (ElectroMagnetic Compliancy) classification	Class B
Overvoltage classification	Class II

6.6 Electrical specifications

Parameter	Specification
Power consumption, maximum [W]	500
Maximum leakage current [mA]	3.5
Country specific net cables	European
Voltage [V]	110 / 230 ± 10%
Frequency [Hz]	50 / 60
Fuse specifications [A]	10

6.7 Electrical diagram

