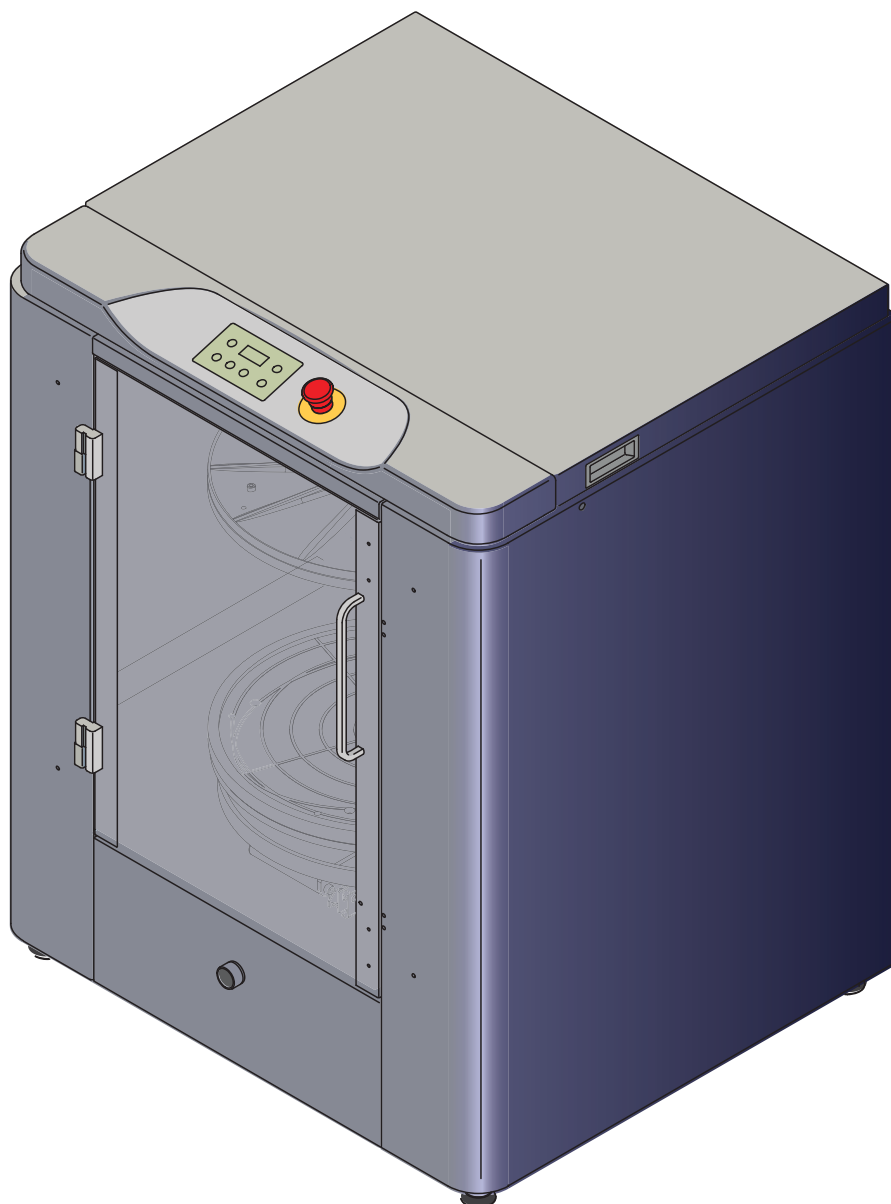


Manual GA450



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1 About this manual

The manual shows the information necessary to:

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

The GA450 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.

1.1 How to work with the manual

1. Familiarize yourself with the structure and content.
2. Read the safety chapter in detail and make sure you understand all the instructions. See § 2.
3. Carry out the actions completely and in the given sequence.

1.2 Record of changes

Edition	Editor	Check	Date	Description
1.0	TB	MV	07/2010	First edition
2.0	ET	TB	09/2012	Updated edition
2.2	ET	TB	07/2013	Updated 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 mix paint in a can. Any other use of the machine is strictly forbidden.

2.2 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:

- Do not use a damaged machine. When you have doubts, contact your supplier. See § 5.1.
- The machine is for indoors use only.
- Install and connect the machine according to the instructions in this manual.
- Observe all local safety regulations.
- Connect the machine to a grounded wall socket.
- Keep the machine in good condition. Make sure that defective parts are immediately replaced.
- This machine may only be used for commercial settings. The machine is not a household appliance.
- Make sure that the machine is installed as prescribed in this manual
- 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.

2.3 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



Read the manual.



Electrical hazard. Read the manual.



Central earthing point.



Pinch hazard.



Electrical hazard.



Rotating parts.



On-Off

2.6 Labels on the machine

When can diameter > Ø39 cm : remove shield

When can diameter > Ø40,2 cm and
height <28 cm : use adapters

Upper and lower shield instruction.

2.7 Safety symbols in the manual



WARNING
Can cause personal injury.



WARNING
Pinch hazard.



CAUTION
Can cause damage to the machine.



Note
Shows further information.

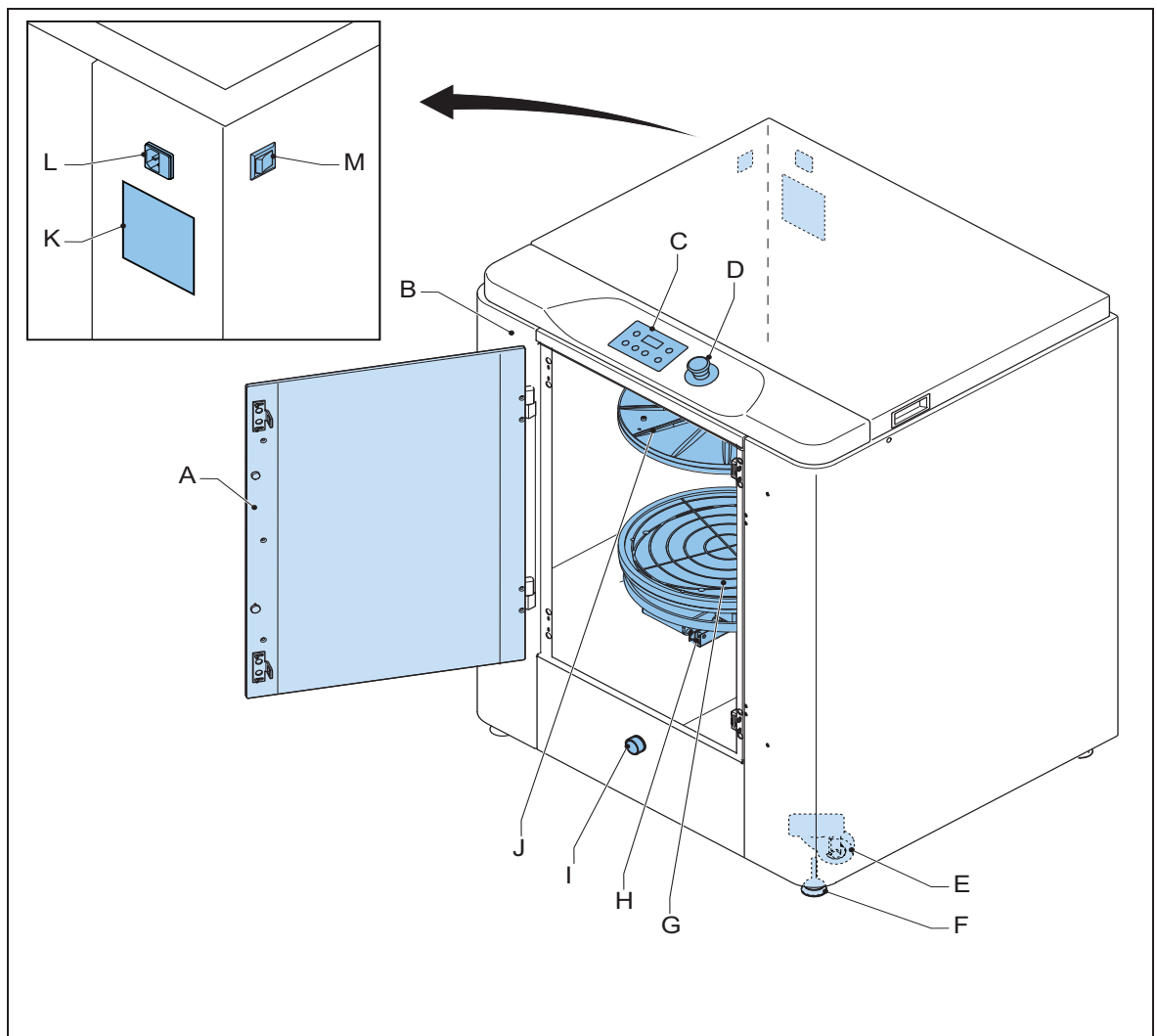
2.8 Disposal of the machine

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 Operator manual

3.1 Description

3.1.1 Overview of the machine



- A:** Door
- B:** Casing
- C:** Control panel. See also § 3.1.2.
- D:** Emergency stop
- E:** Wheel
- F:** Adjustable foot
- G:** Can plate (bottom)

- H:** Can table
- I:** Drain orifice
- J:** Can plate (top)
- K:** Type plate. See also § 3.1.4.
- L:** Net entry
- M:** Main switch

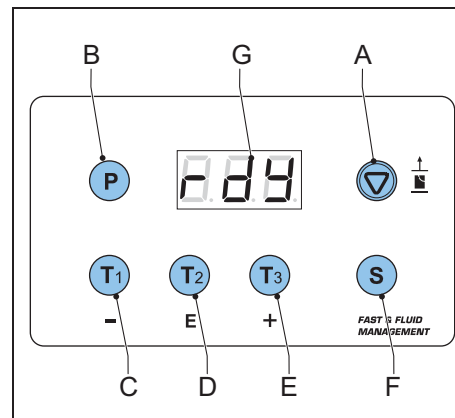
3.1.2 Overview of the control panel

- A:** Stop/Up key
B: Program key
C: T1 key (Time 1)
D: T2 key (Time 2)
E: T3 key (Time 3)
F: S-key (mix speed)
G: Display

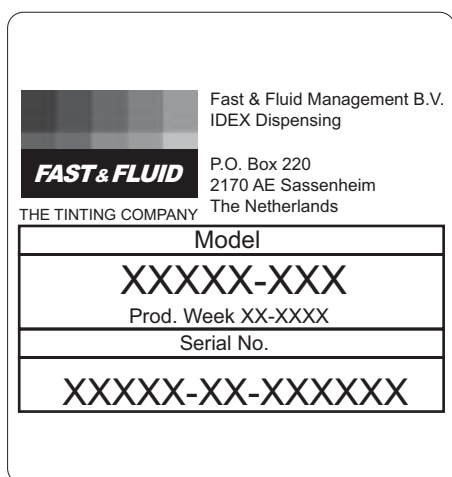


Note

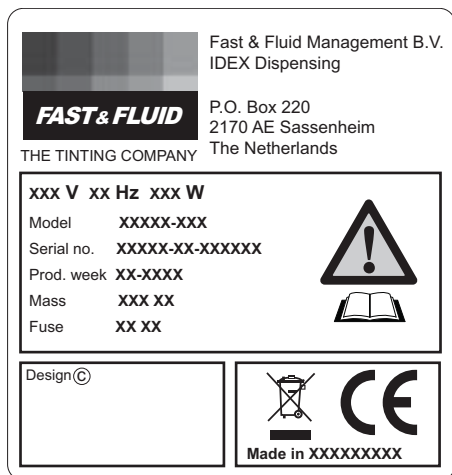
The function of the T1 to T3 keys changes when you adjust the default values of the machine. See also § 3.2.8 and § 3.2.9.



3.1.3 Type plate: serial number



3.1.4 Type plate: details



3.2 Operation



WARNING

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

3.2.1 Turning on the machine

1. Connect the power cable to the grounded wall socket.
2. Make sure that the emergency stop is released.
3. Set the Main switch to 'ON'. *When the machine is on, you hear two 'beeps' and the display shows '...'.*
4. Press the Stop/Up key. *When the machine is operational, the display shows 'rdY'.*

3.2.2 Turning on the machine when the machine is in hybernation

When the machine is in hybernation, the display shows '.'

1. Press the Stop/Up key. *When the machine is operational, the display shows 'rdY'.*

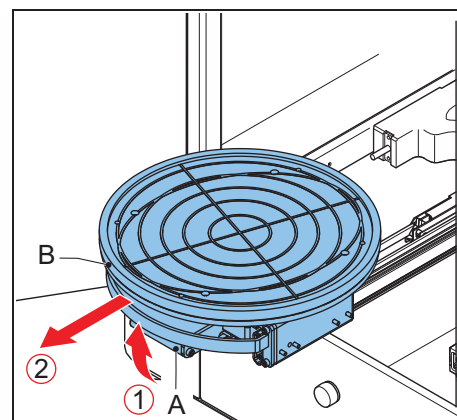
3.2.3 Normal mix procedure

1. Place the can. See § 3.2.4.
2. Adjust the default mix speed and time, if necessary. See § 3.2.8 and § 3.2.9.
3. Start the machine, See § 3.2.5.
4. Remove the can. See § 3.2.7.

3.2.4 Placing the can

Pull out the can table

1. Open the door.
2. Pull up the handle (A) to unlock the can table (B).
3. Pull out the can table until you hear a 'click'. *The can table is locked.*



Place the can

1. Put one or more cans (A) in the centre of the can table, or in a pattern that has its gravitational centre in the middle of the can table.



WARNING

It is possible that the can is heavy. Use the correct lifting tool when appropriate. Obey the local regulations.



CAUTION

Make sure that all cans have the same height. Do not stack cans upon each other.



Note

When the diameter of the can is $> \varnothing 39$ cm, remove the upper shield.



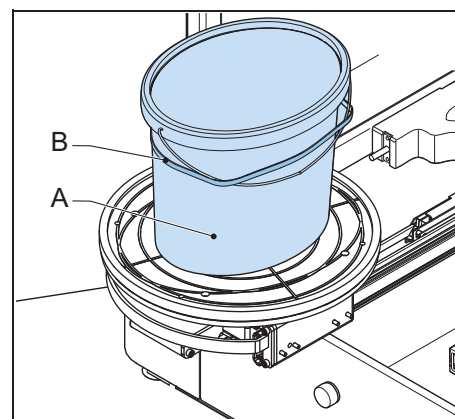
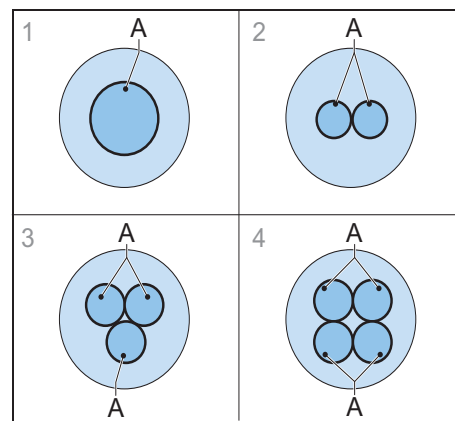
Note

When the diameter of the can is $> \varnothing 40.2$ cm and the height < 28 cm, use adapters.

2. If the can plates are too close to each other, press the Stop/Up key until you can place the can.
3. If you mix more than one can at the same time, make sure that the can handles can not move. Use self-adhesive tape, for example.

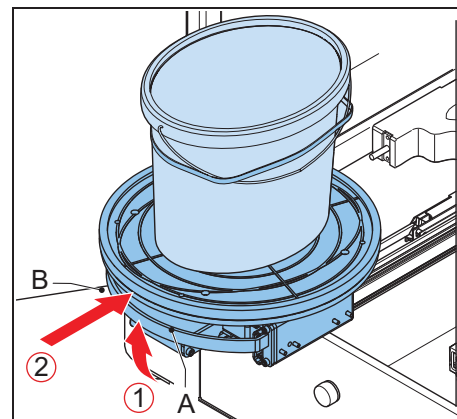
If you mix one can:

1. Retain the can handle with the provided elastic band.



Close the door

1. Pull up the handle (A) to unlock the can table.
2. Push the can table (B) inwards until you hear a 'click'. *The can table is locked.*
3. Close the door.

**3.2.5 Start the machine**

1. Push the T1, T2 or T3 key and select the mix time. See the table below. *The machine automatically clamps the can and operates for the chosen time. See § 3.2.8.*

**Note**

The display shows the time in seconds that remain before you can open the door.

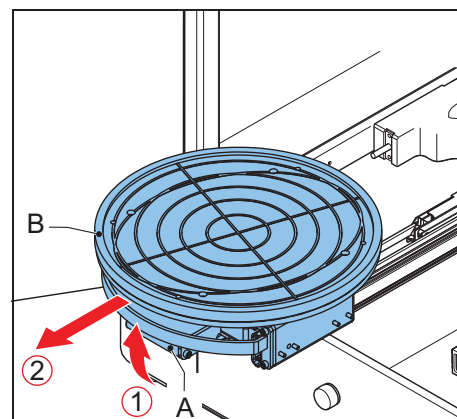
**Note**

While the machine operates, you can adjust the mix time with the + and - keys.

2. When the machine detects no can, the machine does not start to mix. In this case, stop the operation manually. See § 3.2.7.

3.2.6 Remove the can

1. Open the door.
2. Pull up the handle (A) to unlock the can table (B).
3. Pull out the can table until you hear a 'click'. *The can table is locked.*
4. Remove the elastic band.



3.2.7 Stop the operation manually

1. Push the Stop/Up key.
2. Wait until the can plates are open.
3. If necessary, remove the can. See § 3.2.6.

3.2.8 Adjust the mix speed

**Note**

The machine controls the mix speed based on the size of the can. For some cans it might be necessary to adjust the mix speed. Contact your paint supplier.

**Note**

You can adjust the mix speed when the display shows 'rdY'.

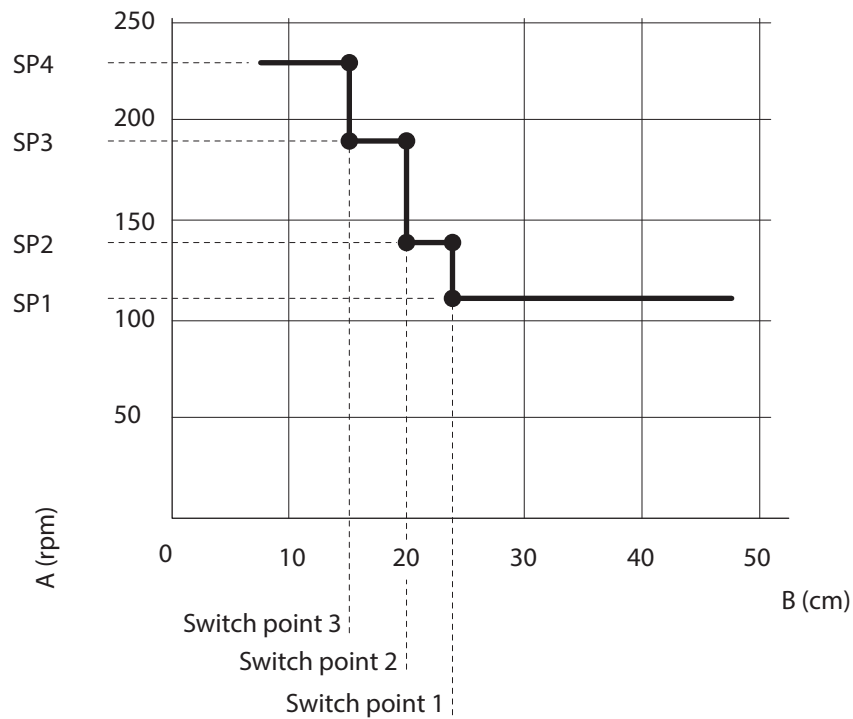
1. Push the S-key. *The display shows the last-chosen speed. This is the default mix speed.*
2. Push the S-key a number of times to select SP1, SP2, SP3 or SP4. *SP1 is the lowest mix speed, SP4 is the highest mix speed.*

**Note**

If the mix speed that you selected differs from the standard speed, the machine will remember the setting until a can of another size is placed on the can table.

**Note**

If the mix speed that you selected is too high for the can height, the machine automatically sets the speed to SP1, SP2 or SP4 according to the can height. Refer to the figure below.



A: Speed (rpm)

B: Can height (cm)



Note

The mix speed depends on the can height.

3.2.9 Adjust the mix time

Key pushed	Mix time [s]
T1	60
T2	120
T3	180
T1 + T2 at the same time	$60 + 120 = 180$
T1 + T3 at the same time	$60 + 180 = 240$
T2 + T3 at the same time	$120 + 180 = 300$

**Note**

The table shows the default values.

**Note**

You can adjust the default mix time when the display shows 'rdY'.

1. At the same time, push the Program key and the T1, 2 or 3 key.
2. Push the + or - key to adjust the mix time for T1, 2 or 3.
3. To save the new mix time, push the S-key.
4. If you do not want to save the new mix time, push the Stop/Up key.

3.3 General cleaning: after every operation

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

**CAUTION**

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

3.4 Periodic maintenance: weekly

1. Remove the paint. Refer to § 3.6.

**CAUTION**

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

2. Grease the spindles.

3.5 Periodic maintenance: monthly

1. Remove paint and dirty grease. Add new grease.

**CAUTION**

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

2. Grease the axle and other sliding parts.

3.6 Remove spilled paint

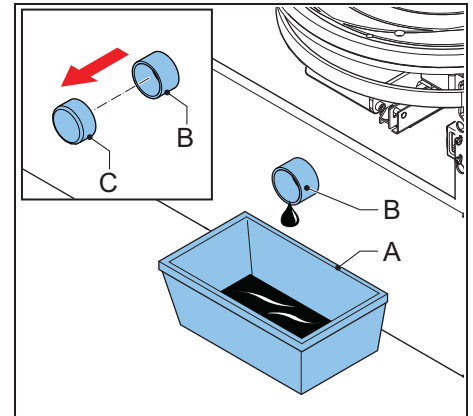
Do this procedure when paint is spilled inside the machine.

1. Make sure that the machine is stopped. See § 3.2.5 or § 3.2.7.
2. Put a reservoir (A) below the drain orifice (B).

**CAUTION**

Make sure that the reservoir is big enough to hold all the spilled paint.

3. Remove the cap (C) from the drain orifice. The spilled paint comes out of the machine.
4. Dispose of the spilled paint according to local regulations.
5. Install the cap to the drain orifice.
6. Clean the machine. See § 3.3.

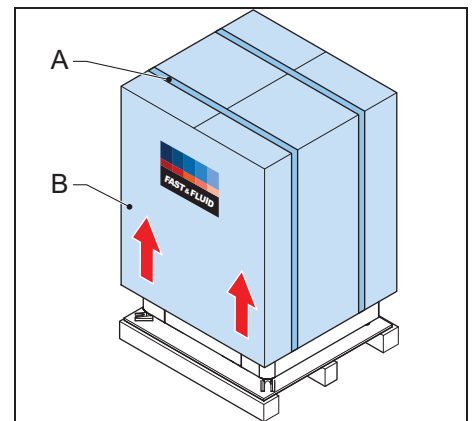


4 Installation

4.1 Unpack the machine

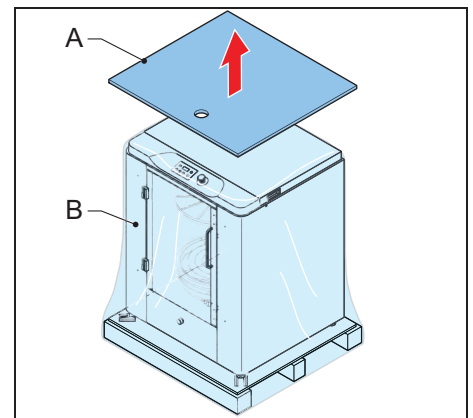
4.1.1 Remove the cardboard

1. Remove the tensioning straps (A).
2. Remove the cardboard (B).



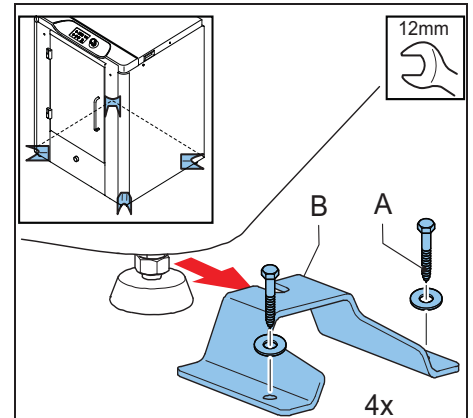
4.1.2 Remove the plastic protection and foil

1. Remove the plastic protection (A).
2. Remove the plastic foil (B).



4.1.3 Remove the transport brackets

1. Remove the screws (A).
2. Remove the transport brackets (B).



4.1.4 Dispose of the packaging material

1. Dispose of the packaging material in an environmentally friendly way, according to local regulations.

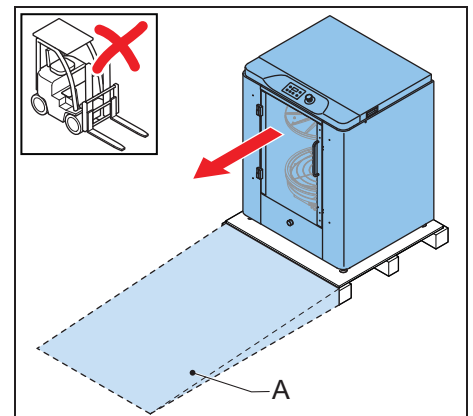
4.2 Put the machine in position

4.2.1 Move the machine from the pallet

1. Place the optional ramp (A).
2. Push the machine from the pallet on to the ground.

**CAUTION**

Do not use a fork-lift truck.



4.2.2 Move the machine to the final location

1. Push the machine to the final location.

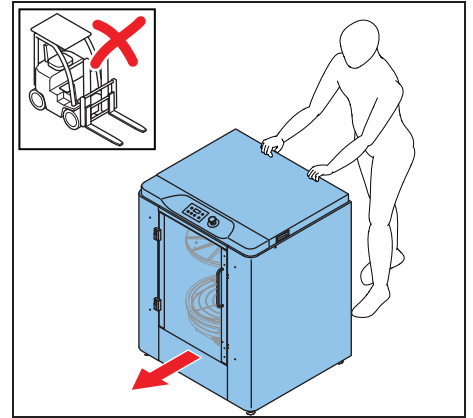
**CAUTION**

Do not use a fork-lift truck.

**Note**

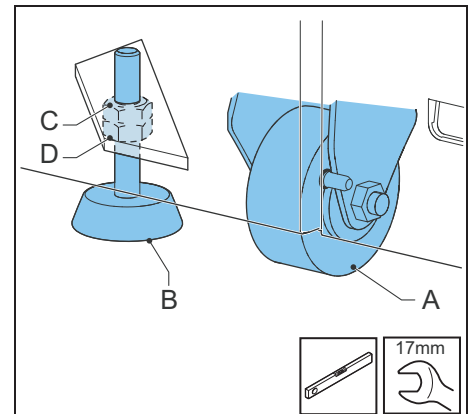
Make sure the final location is sufficiently illuminated.

2. Connect the power cable to the net entry.
3. Connect the power cable to the wall socket.



4.2.3 Level the machine

1. Move down the adjustable feet (B) until the wheels (A) are off the ground.
2. Adjust the height of the feet and make sure that the machine is leveled.
3. Tighten the nuts (C) to lock the feet.



4.3 Finish the installation

1. Turn on the machine. See § 3.2.1.

5 Troubleshooting

5.1 General troubleshooting procedure

1. Try to solve the problem with the information in this manual.
See § 5.3.1.
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 Troubleshooting guide

5.3.1 Easy-to-solve errors

Problem	Possible cause	Possible solution
The display shows 'E00'	Emergency stop is pressed during idle state.	Release the emergency stop. See § 5.4.
The display shows 'E01'	The door is open.	Close the door.
The display shows 'E05'	The cradle lock failed to release the cradle.	Reset the machine. See § 5.4. When the problem persists, contact service. See § 5.2.
The display shows 'E08'	Emergency stop is pressed during running state.	Release the emergency stop. See § 5.4.
The display shows 'E11'	No can found during clamping or can is too small.	Install a can. See § 3.2.4.

5.3.2 Clamp plate errors

Problem	Possible cause	Possible solution
The display shows 'E40'	Home sensor not found.	Reset the machine. See § 5.4. When the problem persists, contact service. See § 5.2.
The display shows 'E41'	Top of clamp plates is not reached in time.	Reset the machine. See § 5.4. When the problem persists, contact service. See § 5.2.
The display shows 'E42'	Clamp plate is sticking on can. Cradle lock is stuck.	Reset the machine. See § 5.4. When the problem persists, contact service. See § 5.2.
The display shows 'E43'	Clamp plate is stuck in up position. Cradle lock is stuck.	Reset the machine. See § 5.4. When the problem persists, contact service. See § 5.2.

5.3.3 Inverter errors

Problem	Possible cause	Possible solution
The display shows 'E50'	Inverter is in error mode.	Reset the machine. See § 5.4. When the problem persists, contact service. See § 5.2.
The display shows 'E51'	Failed to initialize inverter.	Reset the machine. See § 5.4. When the problem persists, contact service. See § 5.2.
The display shows 'E54'	Failed to run the mixer motor forward.	Reset the machine. See § 5.4. When the problem persists, contact service. See § 5.2.

Problem	Possible cause	Possible solution
The display shows 'E55'	Failed to run the mixer motor backward.	Reset the machine. See § 5.4. When the problem persists, contact service. See § 5.2.
The display shows 'E56'	Failed to stop the mixer motor.	Reset the machine. See § 5.4. When the problem persists, contact service. See § 5.2.
The display shows 'E57'	Failed to brake the mixer motor.	Reset the machine. See § 5.4. When the problem persists, contact service. See § 5.2.
The display shows 'E58'	Failed to stop braking the mixer motor.	Reset the machine. See § 5.4. When the problem persists, contact service. See § 5.2.
The display shows 'E60'	Failed to send parameter to inverter.	Reset the machine. See § 5.4. When the problem persists, contact service. See § 5.2.
The display shows 'E61'	Failed to send home command to inverter.	Reset the machine. See § 5.4. When the problem persists, contact service. See § 5.2.

5.3.4 Software errors

Problem	Possible cause	Possible solution
The display shows 'F00'	Parameter is not available.	Contact service. See § 5.2.
The display shows 'F54'	Invalid state value.	Contact service. See § 5.2.

5.4 Reset after an emergency stop



WARNING

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

1. Unlock the emergency stop.
2. Push the Stop/Up key. *When the machine is operational, the display shows 'rdY'.*

5.5 Start again after a power failure

1. Press the emergency stop button.
2. Reset the machine. See § 5.4.

5.6 Restart the machine

1. Set the main switch to 'OFF'.
2. Wait 30 seconds.
3. Turn on the machine. See § 3.2.1.



6 Technical data

6.1 General specifications

Parameter	Specification
Materials used are suitable for	Water-, universal- and solvent colorants
Maximum load weight [kg]	40
Can plate diameter [cm]	38
Can plate bottom seating diameter [cm]	36
Maximum can height [cm]	48
Minimum can height [cm]	7
Mix ratio [horizontal:vertical]	1:2

6.2 Dimensions and mass

Parameter	Specification
Main dimensions, height x width x depth [cm]	108x86x75
Detailed dimensions, height x width x depth [cm]	109.8x86.1x75
Packed dimensions, height x width x depth [cm]	126x97x90
Net mass [kg]	210
Packed mass [kg]	247

6.3 Ambient conditions

Parameter	Specification
Temperature [°C]	+5 to +40
Altitude above sea level [m], operational (Max.)	2000
Altitude above sea level [m], out of operation (Max.)	12000
Relative humidity, without condensation [%]	20 to 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

6.6 Electrical specifications

Parameter	Specification
Power consumption, maximum [W]	850
Voltage [V]	230 (/115 optional)
Frequency [Hz]	50/60
Speed [rpm]	100 to 230
Fuse specifications [A]	T10
Country specific net cables	European

6.7 Electrical diagram

