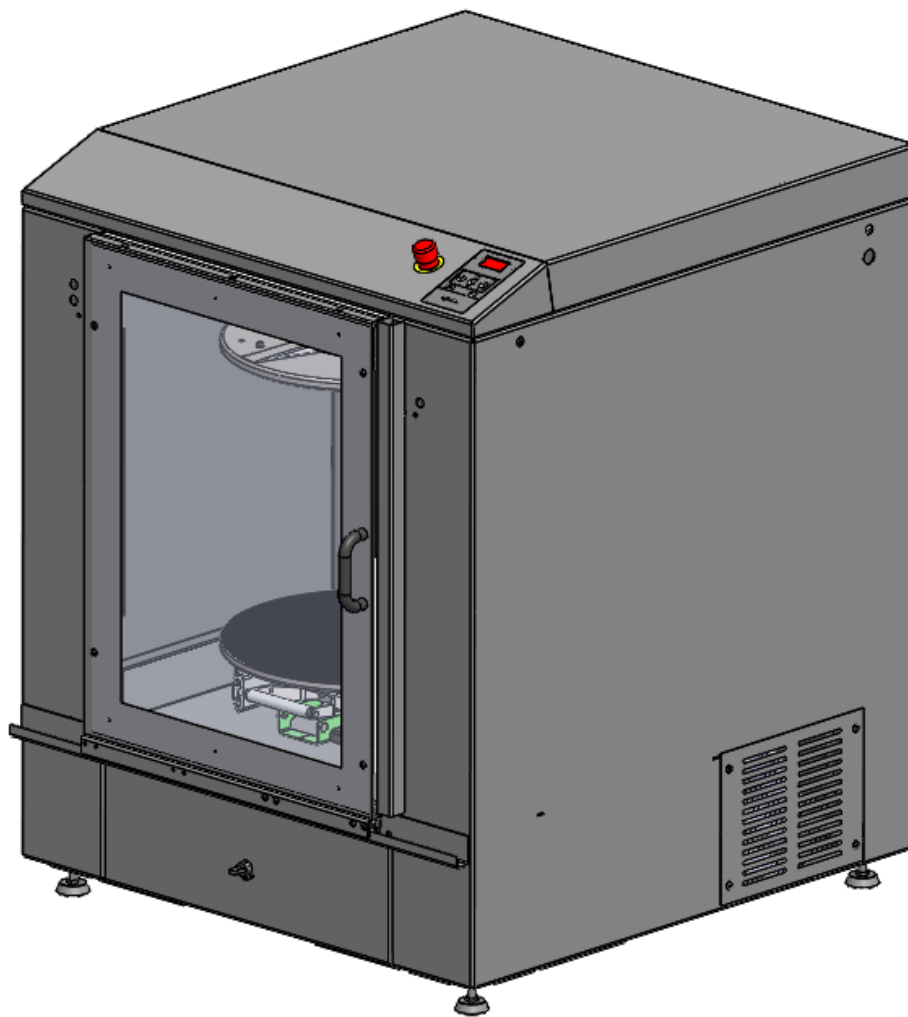


Manual GX300

AM Edition



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391 770, India

V 7.0 08-03-2023

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1 About this manual

The manual shows the information necessary to:

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

The GX300 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 chapter 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	PHS	SG	Dec 2020	First edition
2.0	PHS	SG	July 2020	Errors 38,39,47, Wiring Diagram with Transformer are updated
3.0	PHS	SG	Aug 2021	3.2.3, 3.2.8 are updated
4.0	PHS	SG	Dec 2021	Modified text 2.6, 3.2.5
5.0	PHS	SG	July 2022	2.6 Label is added
6.0	BKS	SG	Dec 2022	6.7(2) Added Wiring diagram for ECN20220401-I
7.0	PHS	SG	March 2023	6.7 wiring diagrams are updated, 5.3 Error table is updated
8.0	AKS	MM	Jan 2025	6.6 Leakage current updated

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

2.2.1 General liability

Connect the machine to a wall socket with proper grounding and protection of the electrical circuit according to the regulations in your country (16A fuse and/or RCD Type B).

Fast & Fluid Management India will not accept any responsibility in case of modifications to machines and/or accessories.

Fast & Fluid Management 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.
- Strictly obey the safety instructions in this manual.
- 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 or inadequately rated power cables.
- Make sure that the power cable is freely accessible.
- Do not place objects on top of the machine.
- Keep lids, panels, and covers closed and in place whenever possible.
- Do not use a damaged machine. When you have doubts, contact your supplier. See §5.2.
- Keep the machine in good condition.
 - Clean the machine at the intervals and when dirty.
 - Make sure that defective parts are immediately replaced.
- Remove spilled liquids immediately, and unplug the machine in case of large spillages (> 500mL).
- Replace parts only with original Fast & Fluid Management India spare parts.

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

2.2.2 Machine-specific liability

The machine cannot be used in an environment where explosive vapours may occur (ATEX zone). Colorants that contain flammable solvents can be mixed, as long as they are packed in a suitable UN approved container.

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 and (base) paint.
- 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 when you are a qualified service technician who is trained and certified by Fast & Fluid Management India.

2.4 CE Certification

The machine is CE certified. This means that the machine complies with 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

Upper shield instruction.

Switch ON the machine before opening the door

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

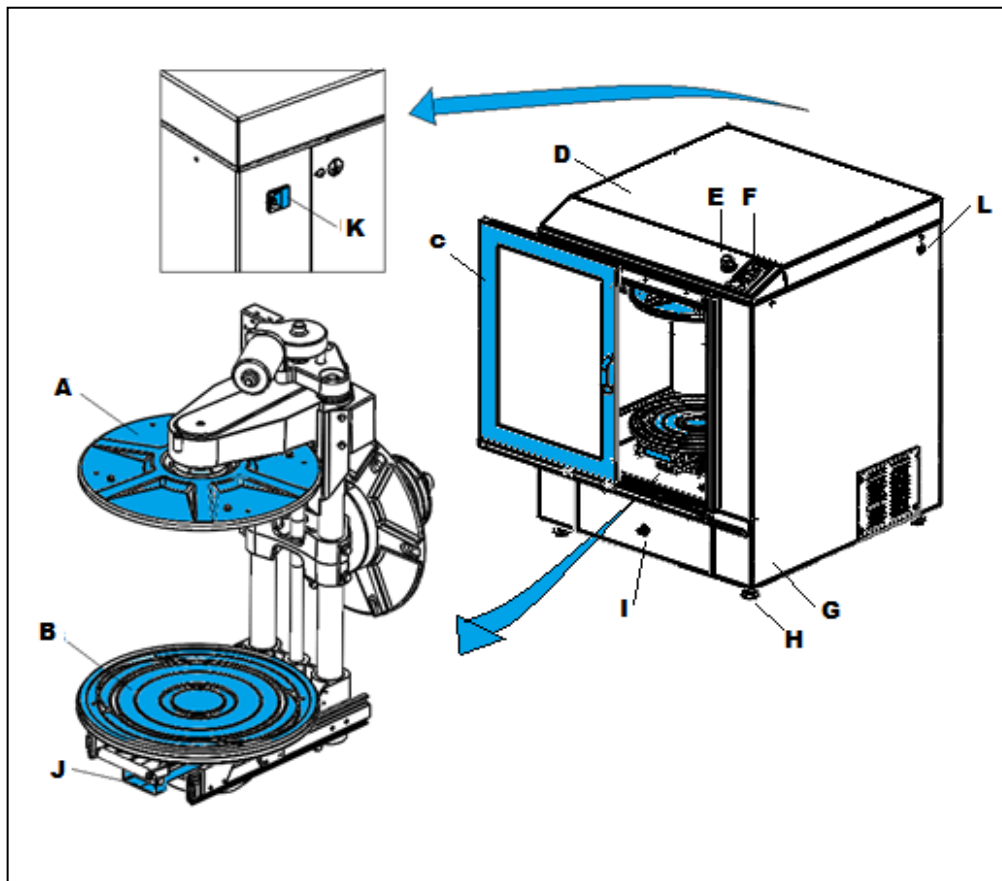
1. Sort the machine, the accessories and the packaging for environmentally friendly recycling.
2. Do not dispose of the machine into domestic waste. Dispose of the machine according to local regulations.



3 Operator manual

3.1 Description

3.1.1 Overview of the machine

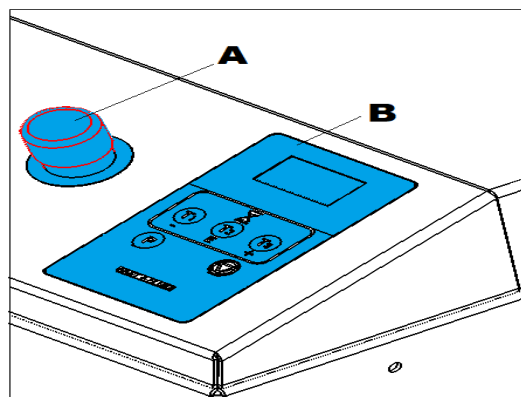


A: Can Plate (Top)
B: Can Plate (Bottom)
C: Door
D: Top Cover

E: Emergency Switch
F: Control Panel
G: Casing
H: Adjustable Foot

I: Drain Orifice
J: Can Table
K: Net Entry
L: On/Off Switch

3.1.2 Overview of the control panel



A: Emergency stop switch
B: Program keys.

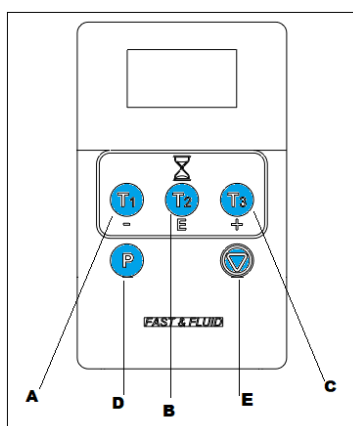
**Note**

The display shows the program menu with the multiple functions of the program keys.

3.1.3 Overview of the program keys

Ready for use

When the machine is ready for use, the display shows the available programs.



A: T1 key (mix time 1) D: Program key
B: T2 key (mix time 2) E: Stop key
C: T3 key (mix time 3)

**Note**

The function of the T1 to T3 keys changes when you adjust the default values of the machine.

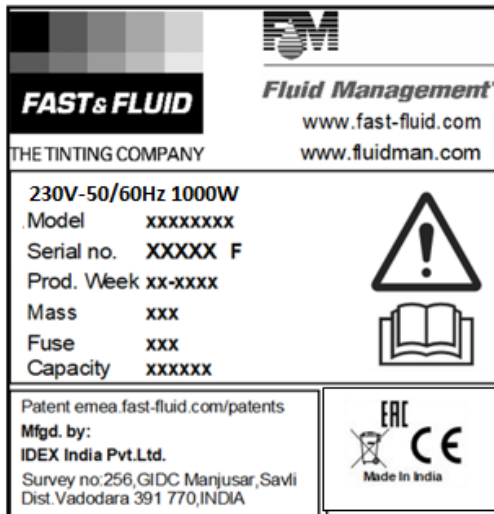
Choose the mix time

Key pushed	Mix time [s]
T1	60
T2	120
T3	180

**Note**

The table shows the default values.

3.1.4 Type plate: serial number



3.2 Operation

**WARNING**

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

3.2.1 Turning on the machine - if the cradle is in the correct position

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

3.2.2 Turning on the machine - if the cradle is not in the correct position

1. Connect the power cable to the grounded wall socket.
2. Make sure that the emergency stop switch is released.
3. Set the Main switch to 'ON'.
4. Press any key & let cradle come to its home position.
5. Remove the can. See § 3.2.7.
6. Push any key. *When the machine is operational, the display shows 'RDY'*

3.2.3 Turning on the machine when the machine is in hibernation

When the machine is in hibernation, the door is locked & display shown '.' (one dot).

1. Push any key to unlock the door. *When the machine is operational, the display shows 'RDY'.*

3.2.4 General mixing procedure

1. Place the can. See § 3.2.5.
2. Start the machine. See § 3.2.6.

**Note**

The machine starts automatically when you push the program key.

**Note**

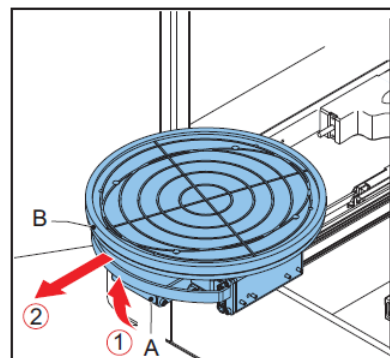
The door is unlocked after you hear a 'beep' and the display shows 'RDY'.

3. Remove the can. See § 3.2.7.

3.2.5 Placing the can

Pull out the can table

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



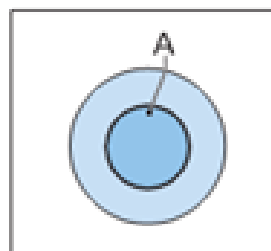
Place the can

1. Put the can(A) in the centre of the can table.



WARNING

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



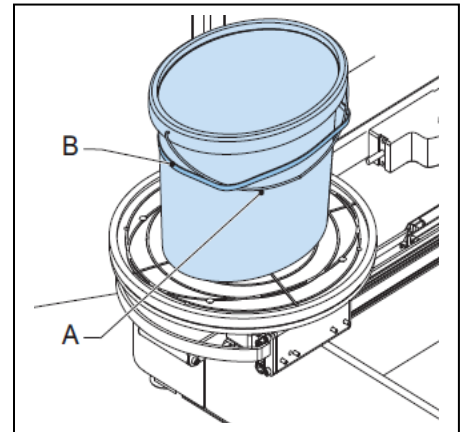
Note

When the diameter of the can is > 039 cm, remove the upper shield.

2. If the can plates are too close to each other, move the can plates manually. See § 3.2.8.

Retain the can handle

1. If you place one can, make sure that the can handle (A) cannot move. Use elastic band (B) or stick the can handle with strong glue tape.



Put back the can table

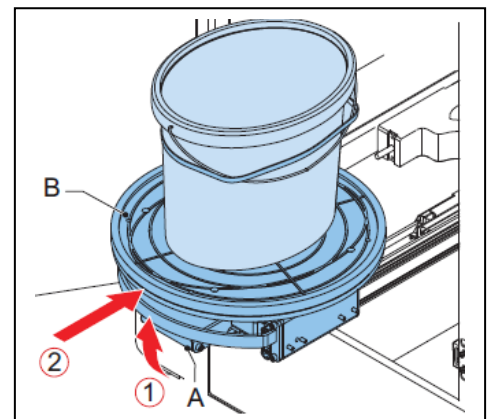
1. Pull up the handle (A) & release to unlock the can table.
2. Push the can table (B) inwards until you hear a 'click'. *The can table is locked.*



CAUTION

Make sure that you hear the click. Otherwise the can table is not locked, which can cause damage to the can.

3. Close the door.



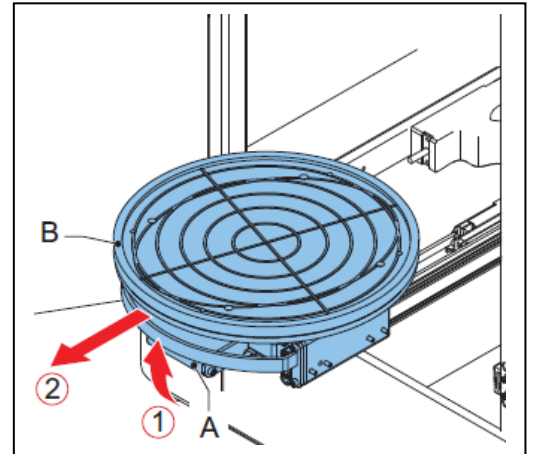
3.2.6

Start the machine

1. If necessary, adjust the mixing time, see § 3.2.9.
2. The mixing speed during operation, see § 3.2.10.
3. The machine starts automatically.

3.2.7 Remove the can

1. Wait until you hear a 'beep' and the display shows 'RDY!'
The door is unlocked.
2. Open the door.
3. Pull up the handle (A) & release to unlock the can table (B).
4. Pull out the can table until you hear a 'click'. *The can table is locked.*
5. Remove the can handle retainer.
6. Remove the can.



3.2.8 Move the can plates manually

Move the can plates manually when the door is closed

1. Examine how much space is needed between the can plates.
2. If 0-4 cm extra space is needed:
 - a. Push the stop/up key. *The can plates move 4 cm.*
3. If more than 4 cm is needed:
 - a. Push the stop/up key twice. *The can plates move to the initial position.*

3.2.9 Adjust the mixing time during operation



Note

During operation:

- The display shows the remaining mixing time.
- You can adjust the mixing time.

1. Use the T1, T2, T3 keys to increase (+) or decrease (-) the mixing time.

3.2.10 Mixing speed during operation

Speed:

15cm and lower can height = 230rpm

30cm and higher can height = 130rpm

3.2.11 Stop the operation manually

1. Push the Stop/Up key.
2. Wait until you hear a 'beep' and the display shows 'RDY !'
The door is unlocked.
3. If necessary, remove the can. See § 3.2.7.

3.2.12 Using the emergency stop switch

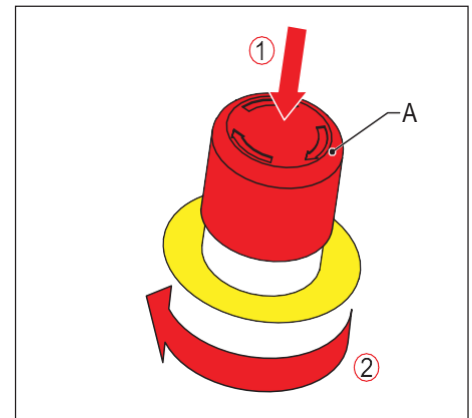
1. Push the emergency stop switch (A). The machine stops immediately.



CAUTION

Only push the emergency stop switch in 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.
3. Release the emergency stop switch by turning the emergency stop switch.
4. Turn on the machine. See § 3.2.3.



3.2.13 Restart the machine

1. Set the main switch to 'OFF'.
2. Wait 30 seconds.
3. Turn on the machine. See § 3.2.3.

3.3 Maintenance

3.3.1 General safety instructions for maintenance



WARNING

Check the MSDS of the colorants about personal protection measures required for handling the colorant.



CAUTION

Do not use cleaning agents based on organic solvents to clean the machine.

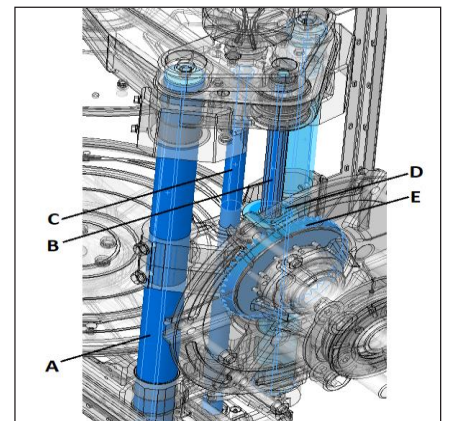
3.3.2 General cleaning: after every operation

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

3.3.3 Periodic maintenance: weekly

1. Remove all spilled paint from the machine. Refer to § 3.4.
2. Grease the **A.** Guide bars **B.** Spline shaft **C.** Lead Screw
D. Bevel gear **E.** Pinion gear.

Recommend to use thick grease like SKF VKG 9/0.5



3.3.4 Periodic maintenance: monthly

1. Remove all spilled paint from the machine. Refer to § 3.4.
2. Remove all dirty grease from the machine.
3. Add new grease.
4. Grease the axle and other sliding parts.

3.4 Remove spilled paint

Do this procedure when paint is spilled inside the machine.

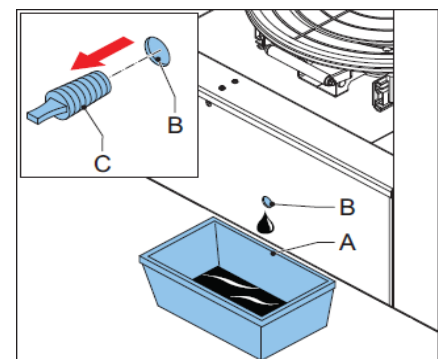
1. Make sure that the machine is stopped. See § 3.2.11.
2. Put a reservoir (A) below the drain orifice (B).



CAUTION

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

3. Remove the Cover (C). 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.

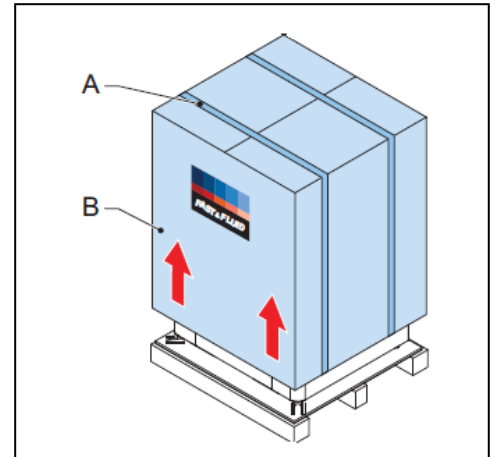


4 Installation

4.1 Unpack the machine

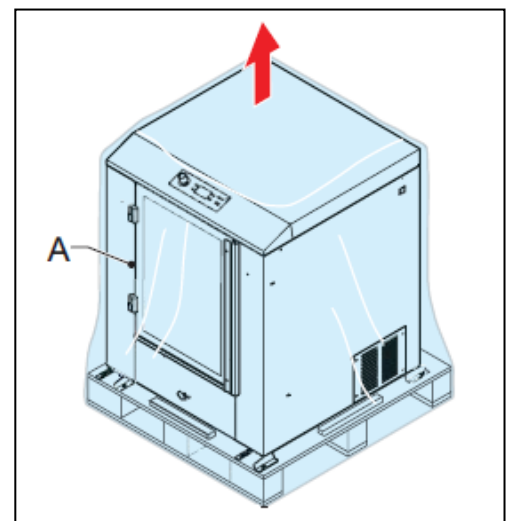
4.1.1 Remove the cardboard

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



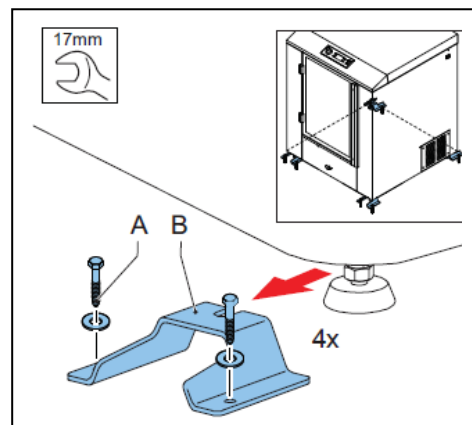
4.1.2 Remove the protection and foil

1. Remove the plastic foil (A).



4.1.3 Remove the transport brackets

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



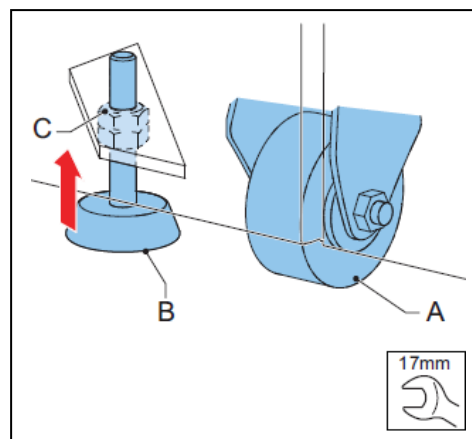
4.2 Put the machine in position



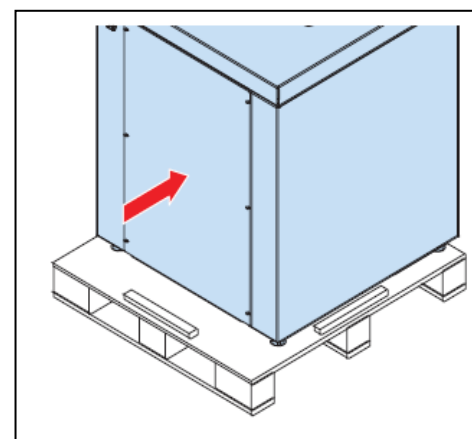
CAUTION
Do not use a fork-lift truck.

4.2.1 Put the machine in position

1. Loosen the nuts (C) of the adjustable feet(B).
2. Move up the adjustable feet until the wheels (A) are on the ground.
3. Tighten the nuts to lock the feet.

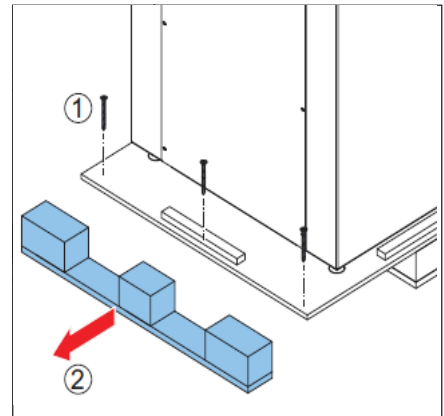


4. Move the machine to end stop beam.



4.2.2 **Make a ramp of the pallet**

1. Remove the screws.
2. Remove the pallet beam.



4.2.3 **Move the machine from the pallet**

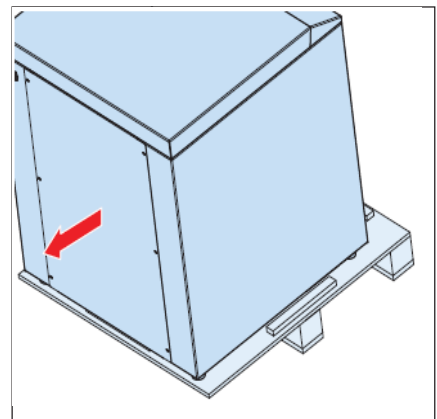


WARNING

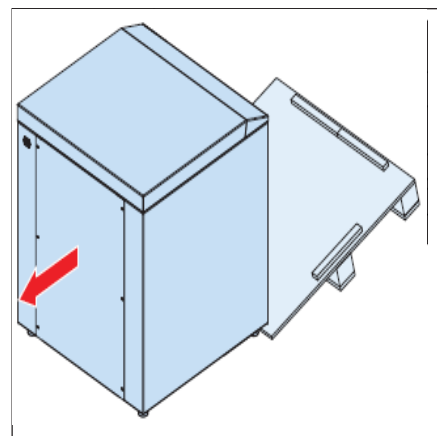
Crushing hazard

Use safety shoes. Take enough distance from the machine.

1. Move the machine



2. Roll the machine on the floor



4.3 Move the machine in position

4.3.1 Move the machine to the final location



WARNING

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



CAUTION

Do not use a fork-lift truck.



Note

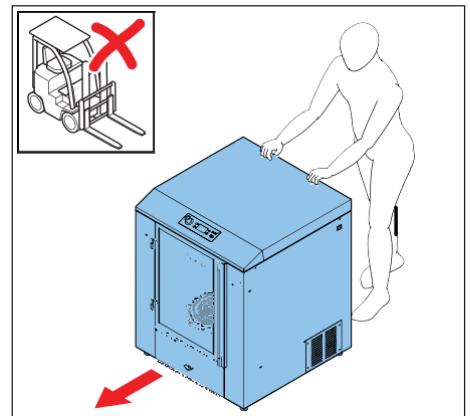
Make sure that the final location is well-lit and well-ventilated.



Note

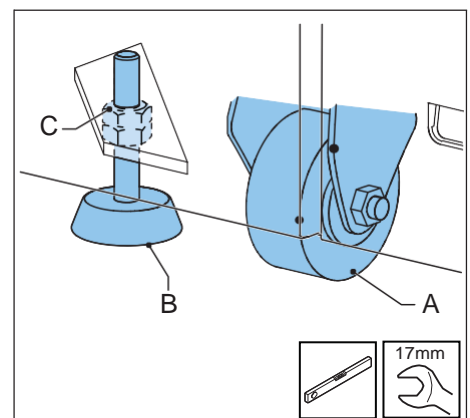
Make sure that the power cable and main switch are freely accessible.

1. Push the machine to the final location.
2. Connect the power cable to the net entry.
3. Connect the power cable to the wall socket.



4.3.2 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.



4.4 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 § 3.1.5.
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 Error messages and other faults



Note

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

5.3.1 Easy-to-solve errors

Problem	Possible cause	Possible solution
The display shows 'E01'	The door is open.	Close the door.
The display shows 'E05'	The cradle lock failed to release the cradle.	Restart the machine. See § 3.2.13.
The display shows 'E08'	Emergency stop switch is pushed during Idle/Running state.	Release the emergency stop switch. See § 3.2.12.
The display shows 'E48'	The mixer motor is blocked.	Push the Stop/Up key.
The display shows 'E38'	No Encoder is detected	Restart the machine. See § 3.2.13.
The display shows 'E39'	No Clamp Current	Restart the machine. See § 3.2.13.
The display shows 'E47'	Clamp plates sticking	Restart the machine. See § 3.2.13.
The display shows 'E45'	Lost Home	Remove loose can, Press any button after this error to initialize the machine to let it find its home position again.
The display shows 'E48'	Mixmotor blocked	Mechanically Cradle has to be checked for blockage

5.3.2 Clamp plate errors

Problem	Possible cause	Possible solution
The display shows 'E40'	Home sensor not found.	Restart the machine. See § 3.2.13.
The display shows 'E41'	Top of clamp plates is not reached in time.	Restart the machine. See § 3.2.13.
The display shows 'E42'	Clamp plate is sticking on can. Cradle lock is stuck.	Restart the machine. See § 3.2.13.
The display shows 'E43'	Clamp plate is stuck in up position. Cradle lock is stuck.	Restart the machine. See § 3.2.13.
The display shows 'E49'	Clamp time out	Check wiring of PCB/Clampmotor/PCB to Slipring/Slipring to clampmotor/ anything into clampplate
The display shows 'E42'	Error during unclamping	Check wiring of PCB/Clampmotor/PCB to Slipring/Slipring to clampmotor/ anything into clampplate

5.3.3 Inverter errors

Problem	Possible cause	Possible solution
The display shows 'E50'	Inverter is in error mode.	Restart the machine. See § 3.2.13.
The display shows 'E51'	Failed to initialize inverter.	Restart the machine. See § 3.2.13.
The display shows 'E54'	Failed to run the mixer motor forward	Restart the machine. See § 3.2.13.
The display shows 'E55'	Failed to run the mixer motor backward.	Restart the machine. See § 3.2.13.
The display shows 'E56'	Failed to stop the mixer motor.	Restart the machine. See § 3.2.13.
The display shows 'E57'	Failed to brake the mixer motor.	Restart the machine. See § 3.2.13.
The display shows 'E58'	Failed to stop braking the mixer motor.	Restart the machine. See § 3.2.13.
The display shows 'E60'	Failed to send parameter to inverter.	Restart the machine. See § 3.2.13.
The display shows 'E61'	Failed to send home command to inverter.	Restart the machine. See § 3.2.13.
The display shows 'E52'	Inverter Communication	The wiring of the inverter and between the inverter and PCB has to be checked

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.

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 dimensions [cm]	38
Can plate bottom seating diameter [cm]	36
Maximum can height [cm]	40
Minimum can height [cm]	8
Mix ratio [horizontal:vertical]	1:2
Speed [rpm]	80 - 230

6.2 Dimensions and mass

Parameter	Specification
Dimensions, height x width x depth [cm]	101 x 82 x 87
Dimensions for Installation, height x width x depth(cm)	101 x 82 x 84
Packed dimensions, height x width x depth [cm]	118 x 88 x 98
Net weight of the machine [kg]	215
Minimum requirement of the load capacity of the floor according to EN 61010-1:2010 [kg]	1020(mass of the machine+ 40 kg x 4)

6.3 Ambient conditions

Parameter	Specification
Temperature [0C], operational	+10 to +40
Temperature [0C], 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)]	< 78

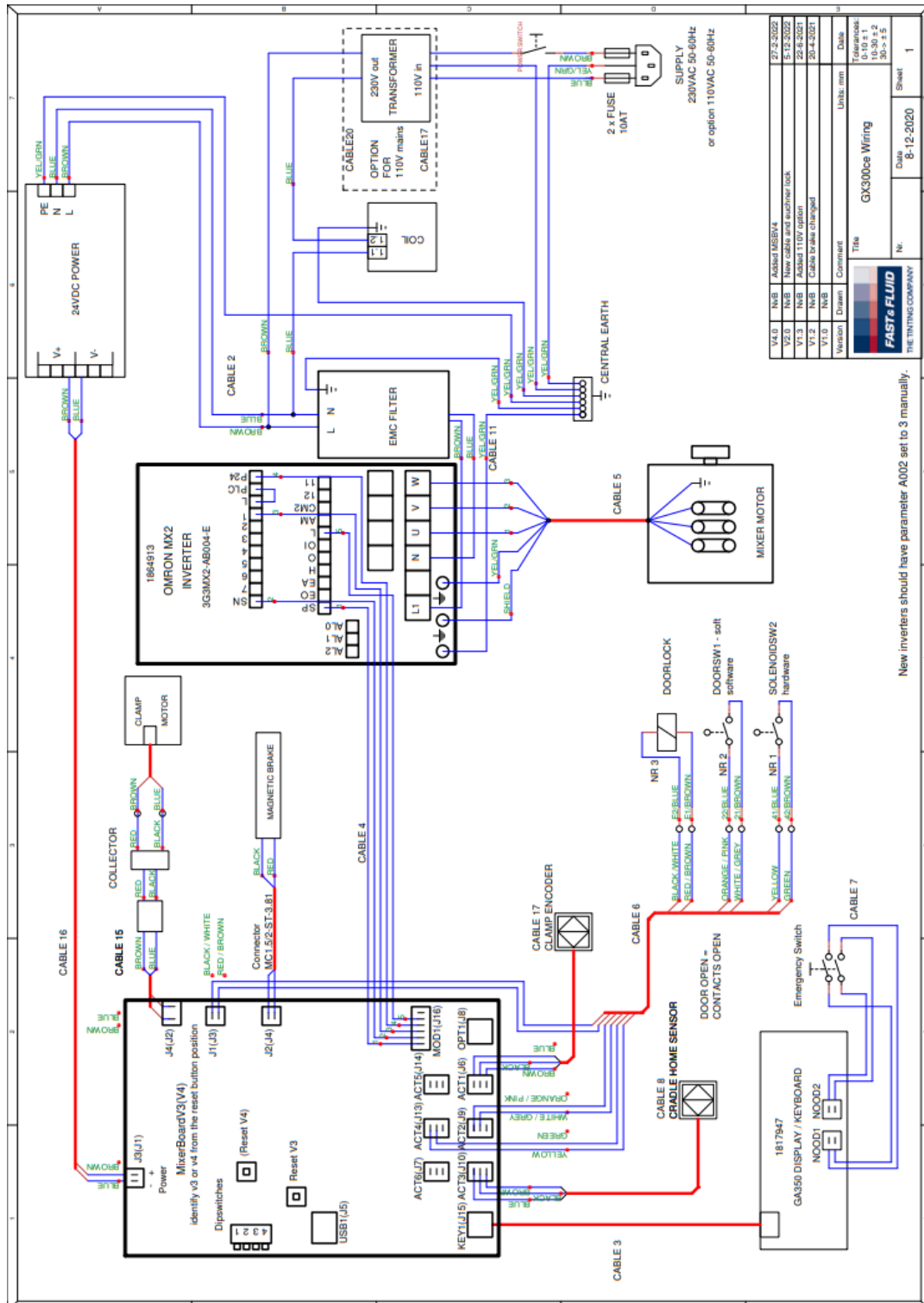
6.5 Safety classifications

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

6.6 Electrical specifications

Parameter	Specification
Power consumption, maximum [W]	1000
Maximum leakage current [mA]	3.5
Country specific net cables	Asia (others on request)
Voltage [V]	230 (/115 optional)
Speed [rpm]	80 - 230
Maximum mix time [s]	999
Frequency [Hz]	50/60
Fuse specifications [A]	10

6.7 1. Electrical Diagram(Omron inverter with Omron lock)



New inverters should have parameter A002 set to 3 manually.

6.7 2. Electrical Diagram(Nidec inverter with Euchner lock)

