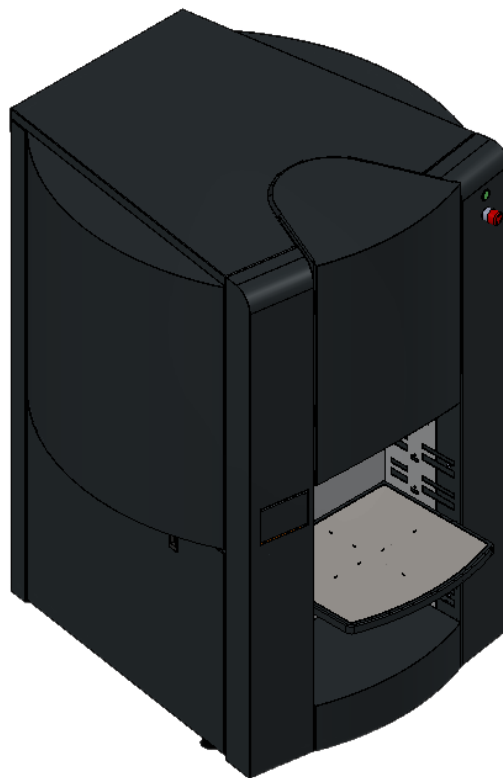




Operating and Safety Manual

TI Element 4



THE TINTING COMPANY
www.fast-fluid.com

1. Operating and Safety Manual TI ELEMENT 4®

2. © Fast & Fluid Management B.V.

3. About this manual

- 3.1. How to work with the manual
- 3.2. Record of changes

4. Safety

- 4.1. Intended use
- 4.2. Liability
 - 4.2.1. General liability
 - 4.2.2. Machine-specific liability
- 4.3. User qualification for installation
- 4.4. Certification
- 4.5. Safety symbols on the machine
- 4.6. Safety symbols in the manual
- 4.7. Disposal of the machine

5. Operator manual

- 5.1. Description
 - 5.1.1. Overview of the machine (front)
 - 5.1.2. Overview of the machine (back)
 - 5.1.3. Overview of the user interface (controls and indicators)
 - 5.1.4. Machine status LEDs
 - 5.1.5. On/Off light
 - 5.1.6. Type plate: serial number
 - 5.1.7. Type plate: details
- 5.2. Operation
 - 5.2.1. General dispensing procedure
 - 5.2.2. Placing a can
- 5.3. Maintenance
 - 5.3.1. General cleaning: after every dispensing operation
 - 5.3.2. Cleaning the brush container: daily
 - 5.3.3. Refilling of a canister
 - 5.3.4. Using the switch

6. Installation

- 6.1. Unpack the machine
- 6.2. Put the machine in position
- 6.3. Install the computer
- 6.4. Turning on the machine
- 6.5. First use

7. Troubleshooting

- 7.1. General troubleshooting procedure
- 7.2. Troubleshooting guide
- 7.3. Contact service

8. Technical data

- 8.1. General specifications
- 8.2. Dimensions and mass
- 8.3. Ambient conditions
- 8.4. Noise level
- 8.5. Ambient conditions
- 8.6. Safety classifications
- 8.7. Electrical specifications
- 8.8. Electrical diagram

2 | © Fast & Fluid Management B.V.

This manual or parts thereof may not be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, nor otherwise, without the prior written permission of Fast & Fluid Management B.V.

This manual could contain technical inaccuracies or typographical errors.

Fast & Fluid Management B.V. reserves the right to revise this manual from time to time in the contents thereof without the obligation of Fast & Fluid Management B.V. to notify any person of such revision or change.

Details and values given in this manual are average values and have been compiled with care. They are not binding, however, and Fast & Fluid Management B.V. disclaims any liability for damage or detriments suffered as a result of reliance on the information given herein or the use of products, processes or equipment to which this manual refers. No warranty is made that the use of the information or of the products, processes or equipment to which this manual refers will not infringe any third party's patents or rights. The information given does not release the user from making their own experiments and tests

3 | About this manual

The manual shows the information necessary to:

- ♦ install the machine
- ♦ operate the machine
- ♦ perform basic maintenance
- ♦ correct small problems.

The TI ELEMENT 4[®] 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.

3.1 | 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 [Safety](#).
3. To carry out the actions completely and in the given sequence.

3.2 | Record of changes

Edition	Editor	Check	Date	Description
1.0	DSahu	-	01/2025	First edition

4 | 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.

4.1 | Intended use

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

4.2 | Liability

4.2.1 | General liability

Our machines and accessories are compliant with their market specific safety requirements. For some markets machines need a certification to prove the machine complies with the essential requirements concerning safety. Any modification can result in not fulfilling the market-specific machine safety requirements and is therefore not allowed. Fast & Fluid Management B.V. or Fluid Management Inc. will not accept any responsibility in case of modifications to machines and/or accessories.

Fast & Fluid Management B.V. or Fluid Management Inc. are 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.
- The machine must be used by a single, trained, operator. Unauthorized people who could reach or touch the machine parts during operation must not be admitted in the nearby area.
- Mind the minimal requirement of the building structure of the load capacity of the floor.
- Place the machine in a well-lit and well-ventilated room.
- Place the machine on a flat, horizontal floor.
- Install and connect the machine according to the instructions in this manual.
- Connect the machine to a grounded wall socket with proper grounding and protection of the electrical circuit (fuse and RCD type and network).
- 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
- 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 B.V. or Fluid Management Inc. 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.

4.2.2 | Machine-specific liability



Note:

Liquids used in the machine such as colorant, (base) paint, spray and brush liquid, are hereafter referred to as 'liquids'

This machine is designed to dispense liquids into a can in non-hazardous conditions. Manufacturers of laser products shall provide (or see to the provision of) user instructions or an operation manual that contains all relevant safety information including adequate instructions for assembly, maintenance and safe use and description of the classification limitations, if appropriate.

In addition to following the instructions below, please consult the health & safety officer of your liquid supplier and review all applicable product information and safety data sheets to fully understand the risks associated with the use of their products, including how risks of fire and explosion may arise during use.



WARNING


- The use of flammable liquids or liquids that diffuse potential explosive vapours may present fire and explosion risks. The user is responsible for ensuring there is no build-up of explosive vapours both inside or around the machine.
- Liquids with a flash point equal to or below the Operating Temperature, must not be used in this machine without properly managing environmental temperatures or ventilation.
- Risk of fire and personal injury if the temperature inside the machine when in use ("Operating Temperature") exceeds the flashpoint of the liquid being used
- The user is responsible for ensuring that Operating Temperature never exceeds the flashpoint of the liquid in use, or, in the alternative, ensuring that there is no build-up of explosive vapors inside or around the machine.
- The Operating Temperature consists of the Ambient Temperature in the place of operation, plus an additional 15 °C / 27 °F generated by the machine when in use. The Ambient Temperature is determined by factors such as the temperature in the room or space where the machine is being operated, the amount of ventilation in and around the machine, or any other factors in your operating environment affecting temperature.
- In the event Operating Temperature exceeds the flashpoint of the liquid in use, you must take the following measures
- reduce the Operating Temperature by taking steps including but not limited to (A) operating the machine in a room or environment with a lower temperature , (B) increasing ventilation in and around the machine; and/or (c) taking any other steps to reduce the Ambient Temperature; and/or , (C)select a different liquid with a flashpoint higher than the likely Operating Temperature.
- An operational and environmental assessment is recommended before using flammable liquids in the machine, taking into account all local circumstances including ventilation around the machine, room and machine operating temperature and room size.
- This product is NOT ATEX certified and should not be used in ATEX zone

4.3 | User qualification for installation






Only install the machine when you are a qualified service technician who is trained and certified by Fast & Fluid Management B.V.

4.4 | Certification




For some markets machines need a certification to prove the machine complies with the essential requirements concerning safety. The directives that have been taken into consideration in the design are available on the website. If applicable to your market, the machine contains the logo of the certification either as a separate sticker or on the type plate.

Logo	Certification	Website
	CE	www.idexindia.in

4.5 | Safety symbols on the machine

	Read the manual
	Rotating parts hazard
	Electrical hazard
	Return this part to its original position.
	Do not use flammable liquids in the brush container.

4.6 | Safety symbols in the man

	CAUTION Can cause damage to the machine.
	WARNING Can cause personal injury .
	Note Shows further information.

4.7 | Disposal of the machine

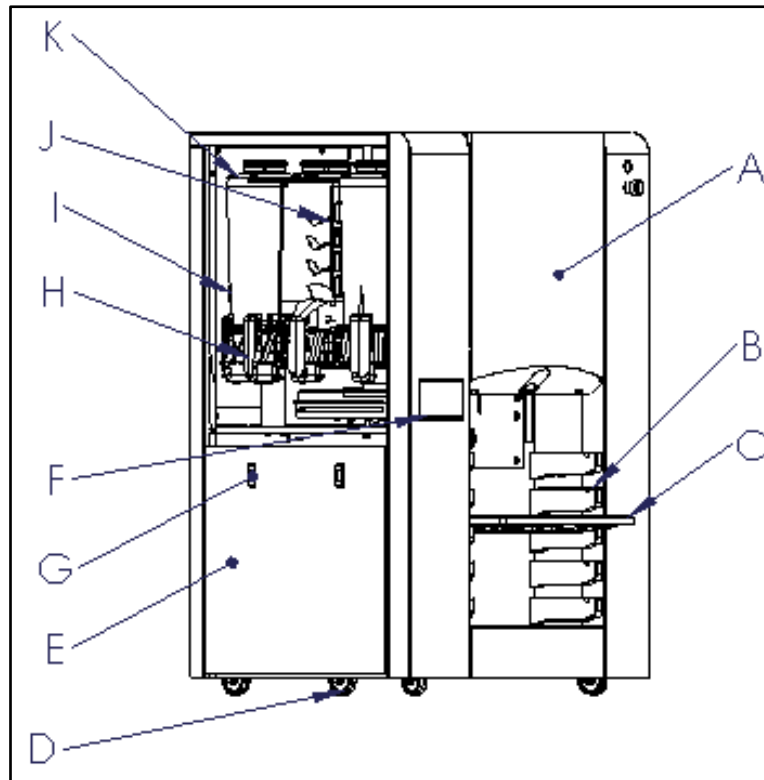
1. Sort the machine, the accessories and the packaging for environmentally friendly recycling.
2. Do not dispose of the machine into domestic waste. Dispose of the machine according to local regulations.
3. Dispose of the canisters as chemical waste, according to the local regulation



5 | Operator manual

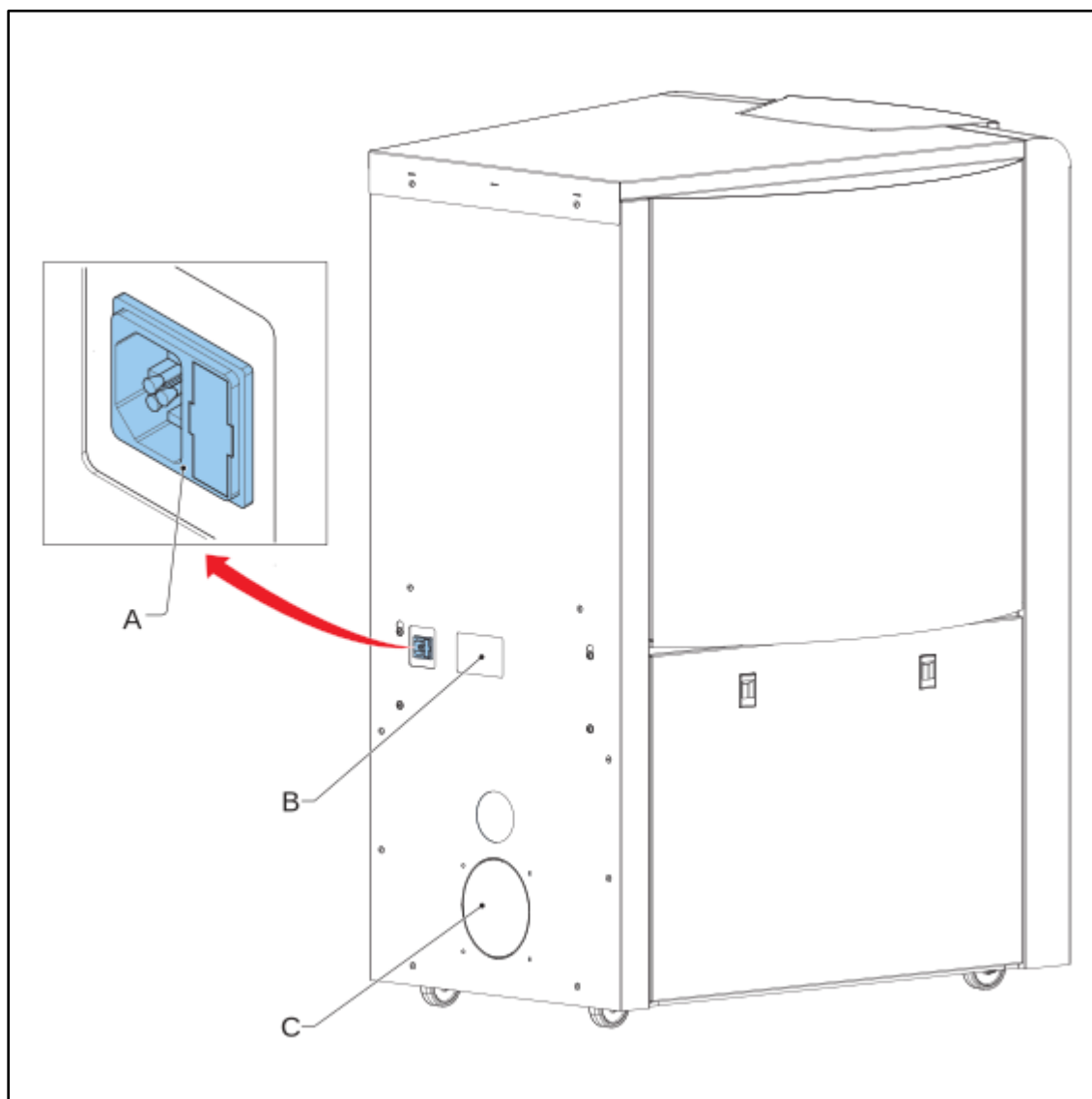
5.1 | Description

5.1.1 | Overview of the machine (front)



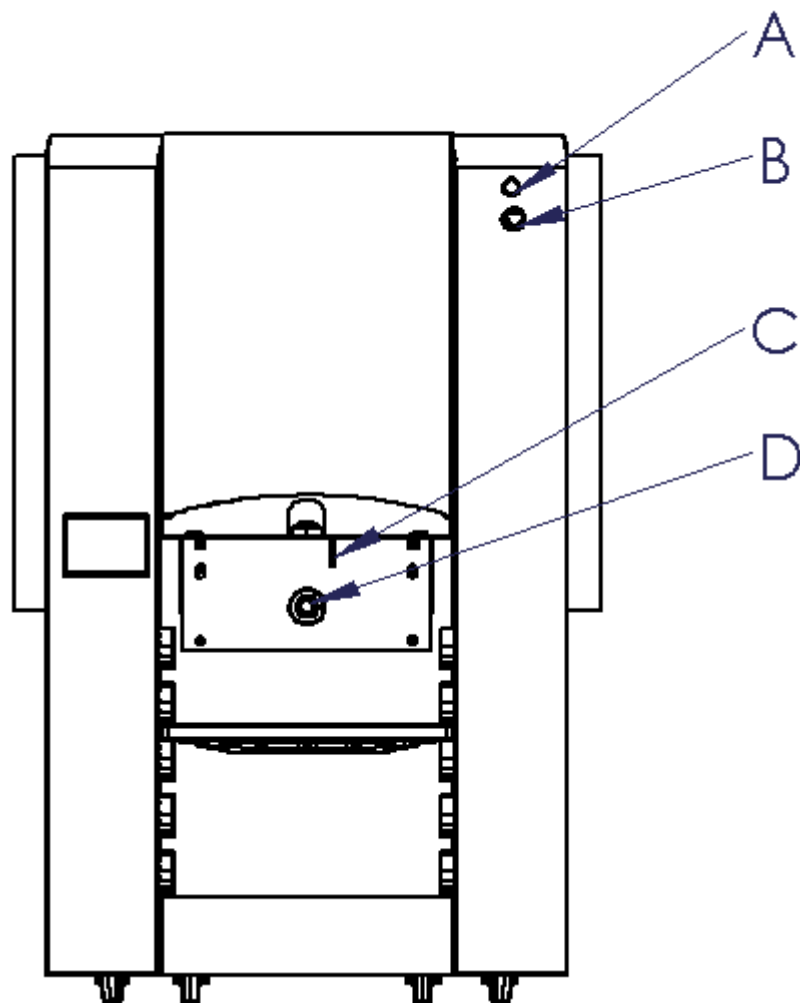
- A Front door
- B Shelf holder
- C Can table
- D Wheels
- E Side cover
- F Brush drawer with brush container
- G Latch
- H Pump with nozzle
- I Canister
- J Agitator
- K Lid

5.1.2 | Overview of the machine (back)



- A Net entry
- B Type plate
- C Knock-out plate for ventilation interface

5.1.3 | Overview of the user interface (controls and indicators)



A On/Off light

B Switch

C Machine status LEDs

D Can sensor

5.1.4 | Machine status LEDs (Details of C section LED's)

Item	LED color	Function
A	Red	Valve status
B	Blue	Turntable status
C	Green	Gripper status
D	RGB	Machine status

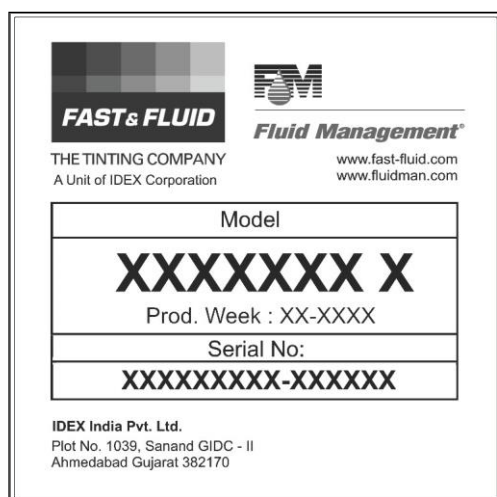
RGB LED

LED color	Function
Green	Machine connected to TINTELLIGENCE
Red	Machine not connected to TINTELLIGENCE

5.1.5 | On/Off light

Status	Indicates
On	Machine powered
Off	Machine not powered
Blinking	Switch pressed

5.1.6 | Type plate: serial number



5.1.7 | Type plate: details



5.2 | Operation



WARNING

Only push the switch in the case of stopping the turntable rotation.
Make sure that the problem is solved before you reset the switch.

When you reset the switch, the machine restarts automatically. When the machine is operational, you hear two beeps. The machine status LEDs will light up.



CAUTION

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

Turntable speed

Normal operation- 8 RPM

During dispensing – 0 RPM

Door opened condition– 5 RPM

5.2.1 | General dispensing procedure

For all the dispense software instructions: see the dispense software documentation.

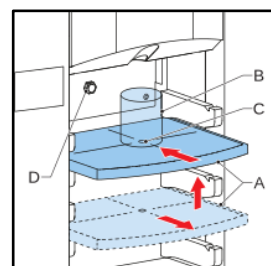
1. Place the can table in the correct slots for the correct height. See [Placing a can](#).
2. Place the can. See [Placing a can](#).
3. Choose the recipe and dispense. See the dispense software documentation.
4. Remove the can.

5.2.2 | Placing a can



The correct height of the can table depends on the height of the can.

1. Check the height of the can
2. Place the can table (A) between the correct shelf holders for the correct height.



CAUTION

Make sure that the can table is secure.

3. Place the can (B) at the center of the mark (C) on the can table.



CAUTION

Make sure that the can does not touch the turntable. Keep enough free space



Note Make sure that the can sensor (D) is able to detect the can.

5.3 | Maintenance



Note

All maintenance activities in this chapter can be executed by the operator. For other activities, see Contact service.

When the door is opened, the door switch lowers the speed of the turntable



CAUTION

In case of necessary maintenance, push the switch for a temporary shutdown of the machine.

5.3.1 | General cleaning: after every dispensing operation

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



WARNING

Do not clean the drip plate and the brush during a dispense job.



CAUTION

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

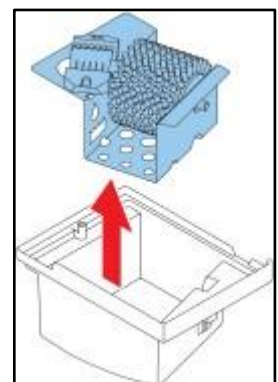
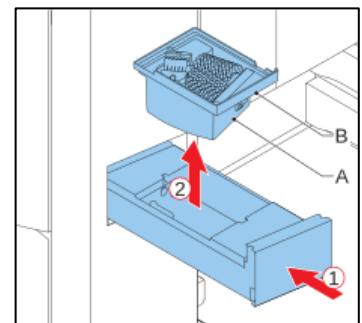
5.3.2 | Cleaning the brush container: daily



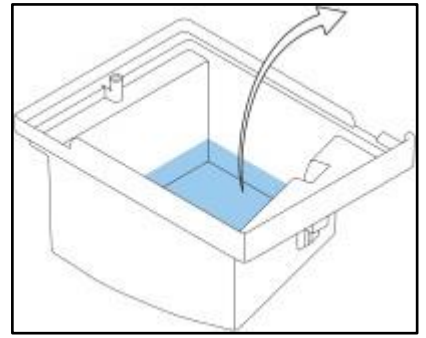
CAUTION

If you do not clean these items daily, color deviation may occur.

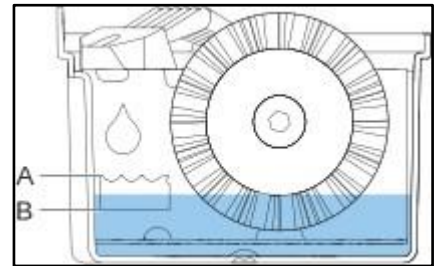
1. Remove the brush container.
 - a. Push the front side of the brush drawer, until the brush drawer is unlocked and comes out of the machine.
 - b. Remove the brush container (A). Use the handle (B).



2. Remove the brush from the brush container.



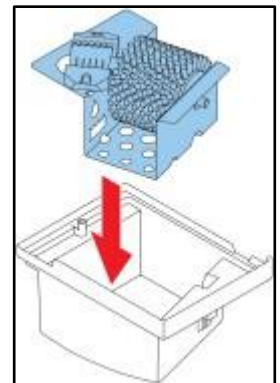
3. Remove the liquid from the brush container.
For the disposal of the liquid, follow the local regulations



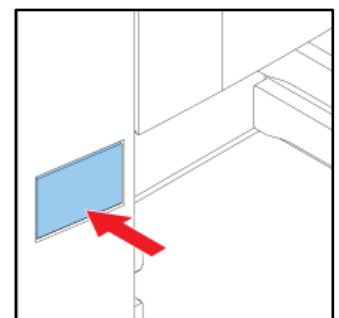
4. Fill the brush container with fluid.
The level of the fluid must be between level A and level B. *Use the liquid your paint supplier indicates*



See **Machine-specific liability** for liquids being used in the machine



5. Put back the brush into the brush container.



6. Put back the brush container in the brush drawer.
a. Put back the brush container in the brush drawer.
b. Push the brush drawer to the back, until it is locked.



Note

Make sure that the brush drawer is closed, otherwise the brush does not function properly

5.3.3 | Refilling 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, it can cause an inaccurate dispensing and/or a recipe fault.



Note

The dispense 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.



Note

The fill canister command of the dispense software controls the motor of the turntable. The turntable turns the empty canister to the front.

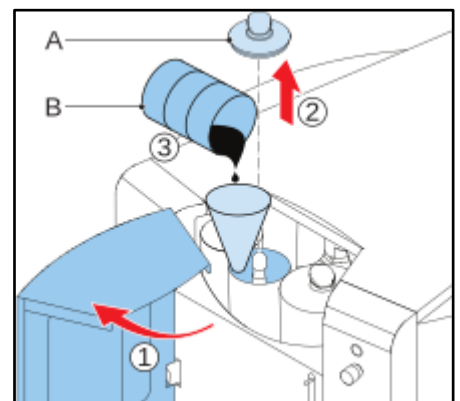
2. Open the front door.
3. Remove the lid (A) from the canister.
4. Add the colorant (B). Do not spill.



CAUTION

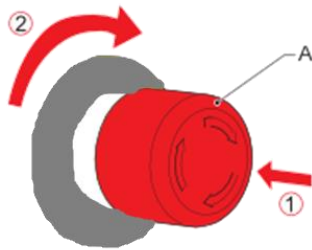
- Do not fill the canister to the brim. Leave at least 2.5 cm (1 inch) unfilled.
- Do not pour the colorant on the agitator

Before filling the colorant , please read the instruction in the colorant can



5. Put back the lid on the canister.
6. Close the front door.

5.3.4 | Using the switch



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



CAUTION

Only push the switch in the case of a stopping Turntable or agitation . Do not use the switch as an on/off function, all the operation will be done through the software

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 switch by turning the switch. The machine restarts automatically.

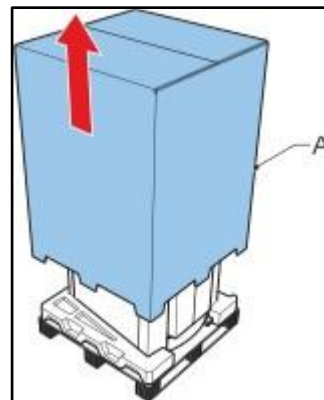


Note

After the reset of the switch, the machine is operational.

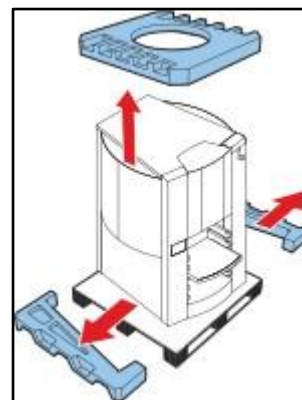
6 | Installation

6.1 | Unpack the machine

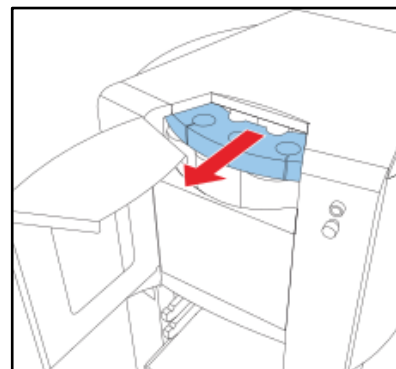


1. Remove the cardboard.
 - Remove the straps.
 - Remove the cardboard (A).

2. Remove the plastic transportation parts.
 - Remove the plastic wrap.
 - Remove the foam blocks.



3. Remove the plastic protection on the canisters.
 - Open the front door.
 - Remove the foam.
 - Close the front door.
4. Remove the plastic protection of the brush.
 - Open the brush drawer.
 - Remove the foam.
 - Close the brush drawer.



6.2 | Put the machine in position



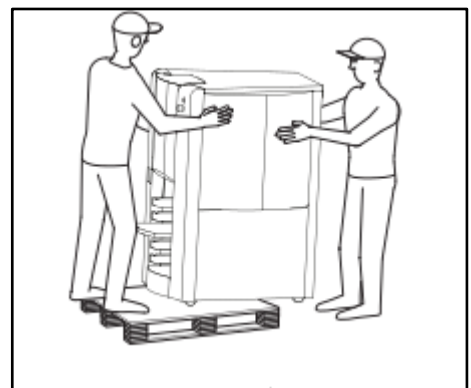
WARNING

- Mind the minimum requirement of the load capacity of the floor. See [Dimensions and mass](#).
- Do not use a forklift truck.



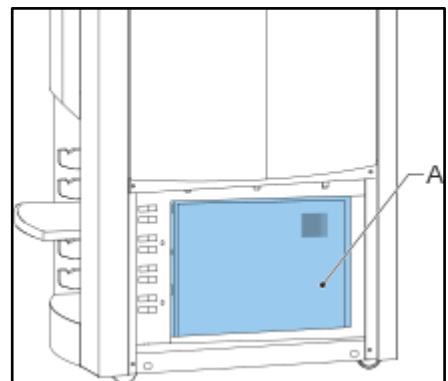
Note

- Make sure that the final location is well-lit and well-ventilated.
 - Make sure that the surface of the floor is horizontal
1. Move the machine backwards from the pallet on to the ground.
 2. Move the machine to the final location with the wheel.
 3. Once placed to the intended place , adjust the plastic foot height , so that only the 4 plastic foot will touch the ground but not the wheel for stability reason .



6.3 | Install the computer

1. Remove the side cover.
 - Open the side cover. *Use the latches.*
 - Remove the side cover.
2. Install the computer.
 - Allocate the USB cable of the power board. It should be on the floor.
 - Put the computer (A) in the compartment
 - Connect the USB cable to the computer.
 - Connect the dispenser and the computer to the wall socket.
3. Put back the side cover.
 - Put back the side cover.
 - Close the side cover. *Use the latches*



6.4 | Turning on the machine

To turn 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 switch is reset.
3. Make sure that the computer is on.
4. Run the dispense software.

6.5 | First use

1. Fill and place the brush unit. See [Cleaning the brush container: daily](#).
2. Fill the canisters correctly. See [Refilling of a canister](#).

7 | Troubleshooting

7.1 | General troubleshooting procedure

1. Try to solve the problem with the information in this manual. See [Troubleshooting guide](#).
2. If it is not possible to solve the problem with the information in this manual, contact service. See [Contact service](#).

7.2 | Troubleshooting guide

Problem	Possible cause	Possible solution
Main power supply is present but the machine does not work.	The switch is active.	Reset the switch. See Using the switch .
The machine has a failure and does not respond correctly to the request from the dispense software.	The failure could be mechanically or electronically.	Push the switch to reset the machine. Reset the switch. See Using the switch . If the machine still has a failure, contact service. See Contact service .
The turntable is turning slowly and the machine does not stir the colorants.	The front cover is open.	Close the front cover.

7.3 | Contact service

1. Find the type plate on the lower front side of the machine. See [Type plate: details](#).
2. Take a note of the model number and the serial number of the machine.
3. Contact your supplier or manufacturer. See www.idexcorp.com

8 Technical data

8.1 | General specifications

Parameter	Specification	
	Metric standard	Imperial standard
Model	Element 4	
Number of canisters	Up to 32	
Dispensing	Sequential	
Movement	Bi-directional	
Pump type	Piston pump	
Cleaning system	Motorized and Non-motorized brush	
Suitable for	Water and universal colorants	
Canister size [L - USgal]	1.3, 2.3, 4.6	0.343, 0.608, 1.215
Resolution [mL/step - fl oz/step]	0.003, 0.005, 0.007	± 0.0001, 0.00017, 0.000240
Maximum flow rate [L/min. - USgal/min.]	0.2, 0.3, 0.5	0.053, 0.079, 0.132
Minimum dispensing [mL - fl oz]	0.05, 0.04, 0.03	0.0017, 0.0014, 0.0010
Nozzle diameter [mm - in]	2, 5	0.079, 0.197

8.2 | Dimensions and mass

Parameter	Specification	
	Metric standard	Imperial standard
Dimensions, height x width x depth [cm - in]	123 x 82 x 87	48.42 x 32.28 x 34.25
Packed dimensions, height x width x depth [cm - in]	142 x 98 x 98	55.91 x 38.58 x 38.58
Mass incl. packaging [kg - lbs]	147	324
Mass filled machine (max.) [kg - lbs]	160	352
Filling height of the canister [cm - in]	120	47.24
Maximum can height [cm - in]	41 (50 cm no shelf)	16.1 (19.68)
Can table dimensions, width x depth [cm - in]	38 x 35	14.96 x 13.77

8.3 | Ambient conditions

Parameter	Specification	
	Metric standard	Imperial standard
Ambient temperature [°C - °F]	+10 to +35	+50 to +95
Altitude above sea level, operational [m - ft]	-10 to 2000	-33 to 6562
Altitude above sea level, out of operation [m - ft]	-10 to 12000	-33 to 39370
Maximum Relative Humidity, without condensation [RH]	90%	

8.4 | Noise level

Parameter	Specification
Maximum noise level [dB(A)]	< 70

8.5 | Safety classifications

Parameter	Specification
IP (Ingress Protection) classification	32
EMC (Electro Magnetic Compatibility) classification	Class B

8.6 | Electrical specifications

8.6.1 Power supply

Parameter	Specification
Maximum power consumption [W]	150
Voltage [V AC]	110~230 CE is applicable for 230V Only
Voltage [Hz]	50 / 60
Maximum leakage current [mA]	3.5
AC inlet	IEC320/C14
Required line and safety protection	<ul style="list-style-type: none">• 16A fuse• Network system TN, TT
Short circuit current rating [A]	1720

8.6.2 Machine

Parameter	Specification
Maximum power consumption [W]	75
Voltage [V DC]	36

8.7 | Electrical diagram

