



Operating and Safety Manual

X-PROTINT[®] UL



© **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.

Contents

- 1 About this manual 5**
 - 1.1 How to work with the manual5
 - 1.2 Record of changes5

- 2 Safety. 6**
 - 2.1 Intended use6
 - 2.2 Liability6
 - 2.2.1 General liability6
 - 2.2.2 Machine-specific liability7
 - 2.3 User qualification for installation8
 - 2.4 Certification8
 - 2.5 Safety symbols on the machine8
 - 2.6 Safety symbols in the manual9
 - 2.7 Disposal of the machine9

- 3 Operator manual 10**
 - 3.1 Description 10
 - 3.1.1 Overview of the machine (front) 10
 - 3.1.2 Overview of the machine (back) 11
 - 3.1.3 Overview of the user interface (controls and indicators) 12
 - 3.1.4 Machine status LEDs 12
 - 3.1.5 Overview of the user interface (controls and indicators) 12
 - 3.1.6 Machine status LEDs 13
 - 3.1.7 On/Off light 14
 - 3.1.8 Type plate: serial number 14
 - 3.1.9 Type plate: details 14
 - 3.2 Operation 14
 - 3.2.1 General dispensing procedure 15
 - 3.2.2 Placing a can 15
 - 3.3 Maintenance 15
 - 3.3.1 General cleaning: after every dispensing operation 16
 - 3.3.2 Cleaning the brush container: daily 16
 - 3.3.3 Refilling of a canister 18
 - 3.3.4 Using the emergency stop switch 19

4	Installation	20
4.1	Unpack the machine.....	20
4.2	Put the machine in position	21
4.3	Grounding instructions	21
4.4	Install the computer	22
4.5	Turning on the machine	22
4.6	First use	22
5	Troubleshooting	23
5.1	General troubleshooting procedure.....	23
5.2	Troubleshooting guide.....	23
5.3	Contact service	23
6	Technical data	24
6.1	General specifications	24
6.2	Dimensions and mass.....	24
6.3	Ambient conditions	24
6.4	Noise level	25
6.5	Safety classifications	25
6.6	Electrical specifications	25
6.7	Electrical diagram	26
6.8	Electrical diagram	27

1 About this manual

The manual shows the information necessary to:

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

The X-PROTINT® 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	-	TB	04/2018	First edition
1.1	ET	TB	06/2018	Small corrections
2.0	JM	TB	10/2023	Small corrections
3.0	TB	PA	07/2024	Liability update

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 UL regulations. Any modification can result in not fulfilling the UL 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:

- To reduce the risk of electric shock or injury, 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 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 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 network system). See 6.6.
- Only connect the product to an outlet having the same configuration as the plug.
- Only use the power cord that is provided with the machine.
- This product is for use on a nominal 120-V circuit.
- Do not use extension cords or inadequately rated power cables.
- Do not use an adapter with this product.
- Make sure that the power cable is freely accessible.
- Do not place heavy 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 5.5.
- Keep the machine in good condition.
 - Clean the machine at the intervals and when dirty, see [3.3](#).
 - 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.
- To avoid risk of fire or injury, unplug power before servicing.

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

2.2.2 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.

- Personal harm should be avoided by strictly following the materials safety data sheets (MSDS) for liquids. Read and strictly comply with the safety data sheets for all liquids used in this machine.



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, the user 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
- 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.
- Product is NOT ATEX certified and should not be used in ATEX zone.

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 B.V. or Fluid Management Inc.


2.4 Certification

The machine is UL 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.fluidman.com and www.fast-fluid.com




Logo	Certification	Website
	UL	www.fast-fluid.com www.fluidman.com

2.5 Safety symbols on the machine

	Read the manual
	Rotating parts hazard
	Electrical hazard
 Return this part to its original position	Return this part to its original position

<p>WARNING  AVERTISSEMENT</p> <p>RISK OF FIRE OR EXPLOSION SEE OPERATING AND SAFETY MANUAL FOR PROPER UTILIZATION OF LIQUIDS IN DISPENSER</p> <p>RISQUE D'INCENDIE OU D'EXPLOSION CONSULTEZ LE MANUEL D'UTILISATION ET DE SÉCURITÉ POUR UNE UTILISATION APPROPRIÉE DES LIQUIDES DANS LE DISTRIBUTEUR</p>	<p>Warning for safe use</p>
---	-----------------------------

2.6 Safety symbols in the manual

	<p>WARNING Can cause personal injury.</p>
	<p>CAUTION Can cause damage to the machine.</p>
	<p>Note Shows further information.</p>

2.7 Disposal of the machine

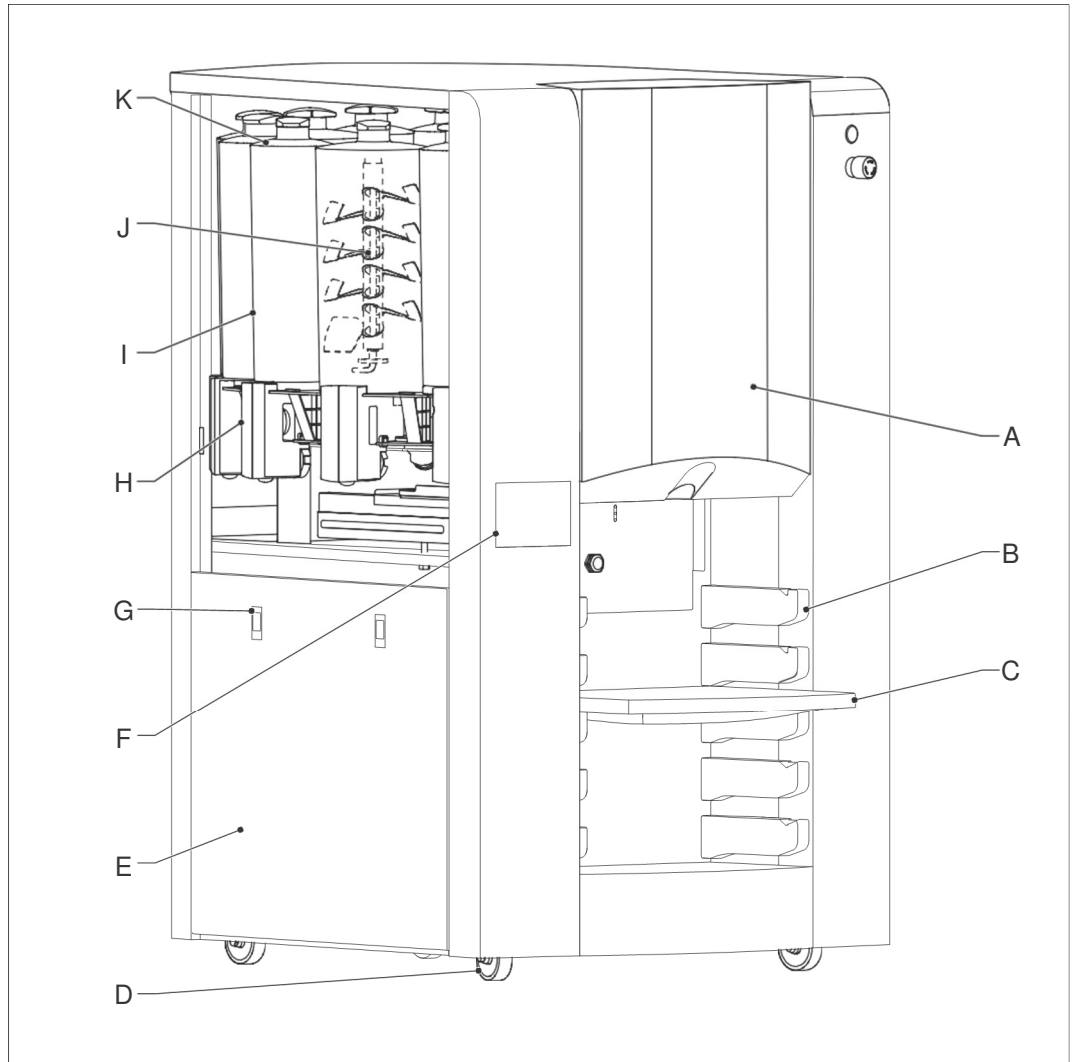
- Sort the accessory and the packaging for environmentally friendly recycling.
- Do not dispose of the accessory into domestic waste. Dispose of the machine according to local regulations.
- Dispose of the spray liquid as chemical waste, according to the local regulations.



3 Operator manual

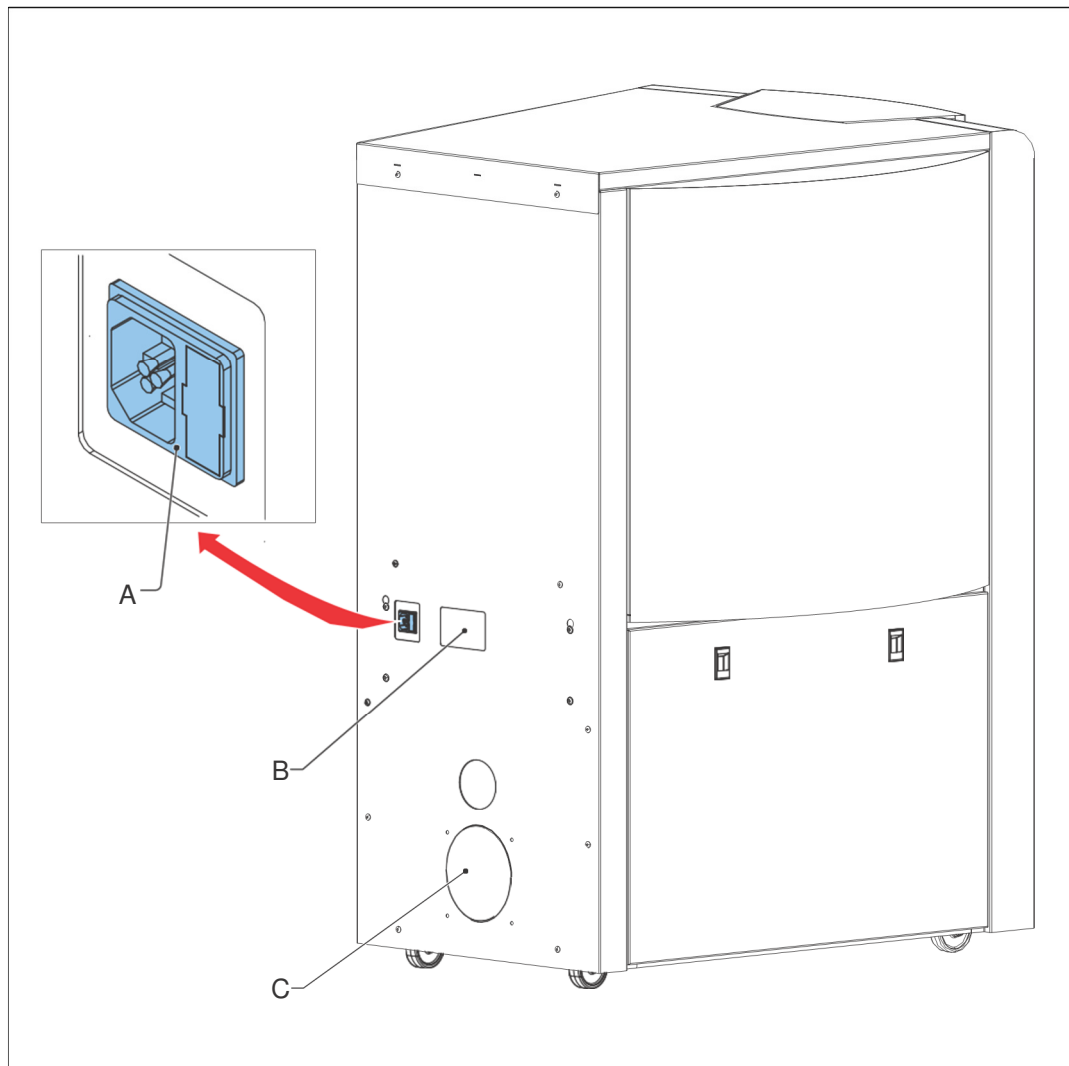
3.1 Description

3.1.1 Overview of the machine (front)



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

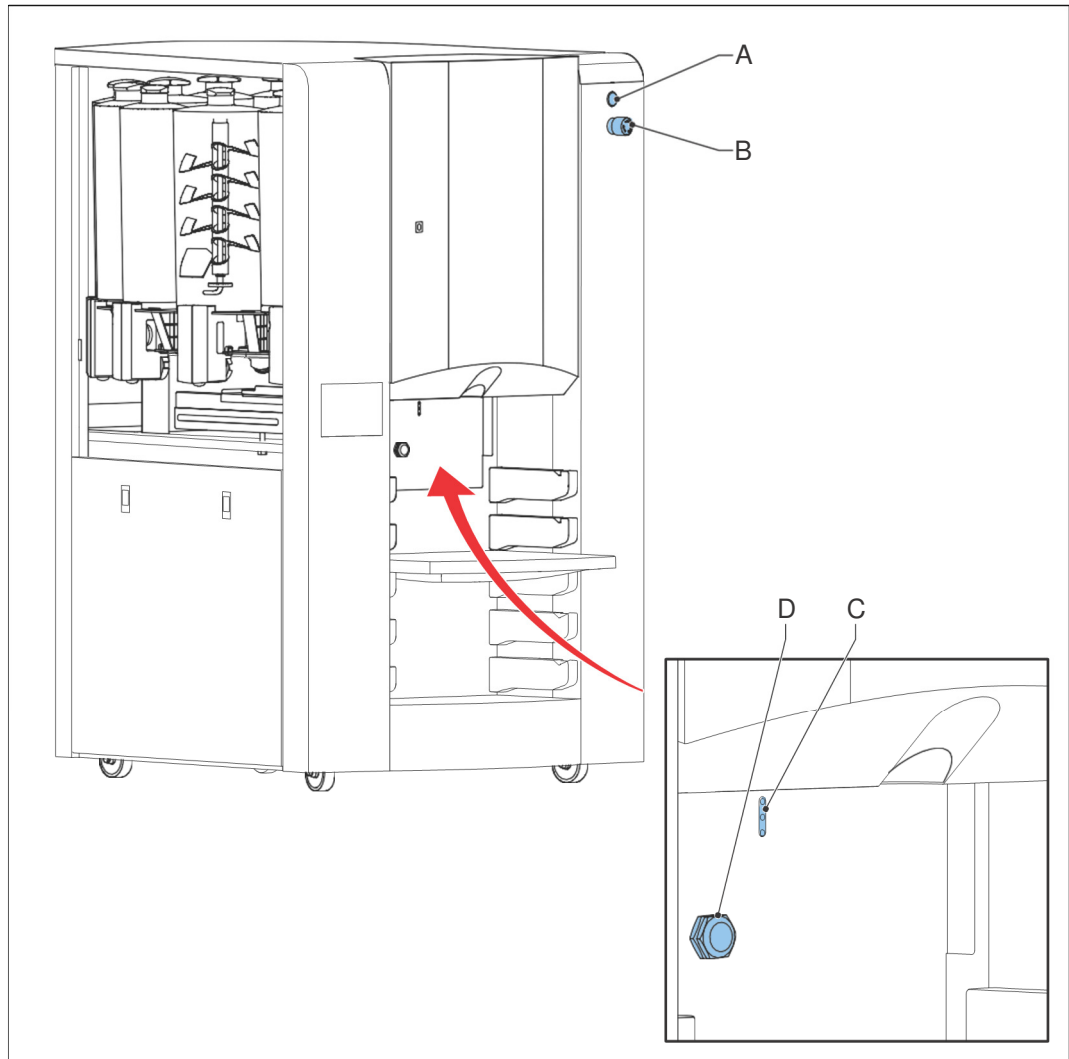
3.1.2 Overview of the machine (back)



A Net entry
B Type plate

C Knock-out plate for ventilation interface

3.1.3 Overview of the user interface (controls and indicators)



- A On/Off light
- B Emergency stop switch
- C Machine status LEDs
- D Can sensor

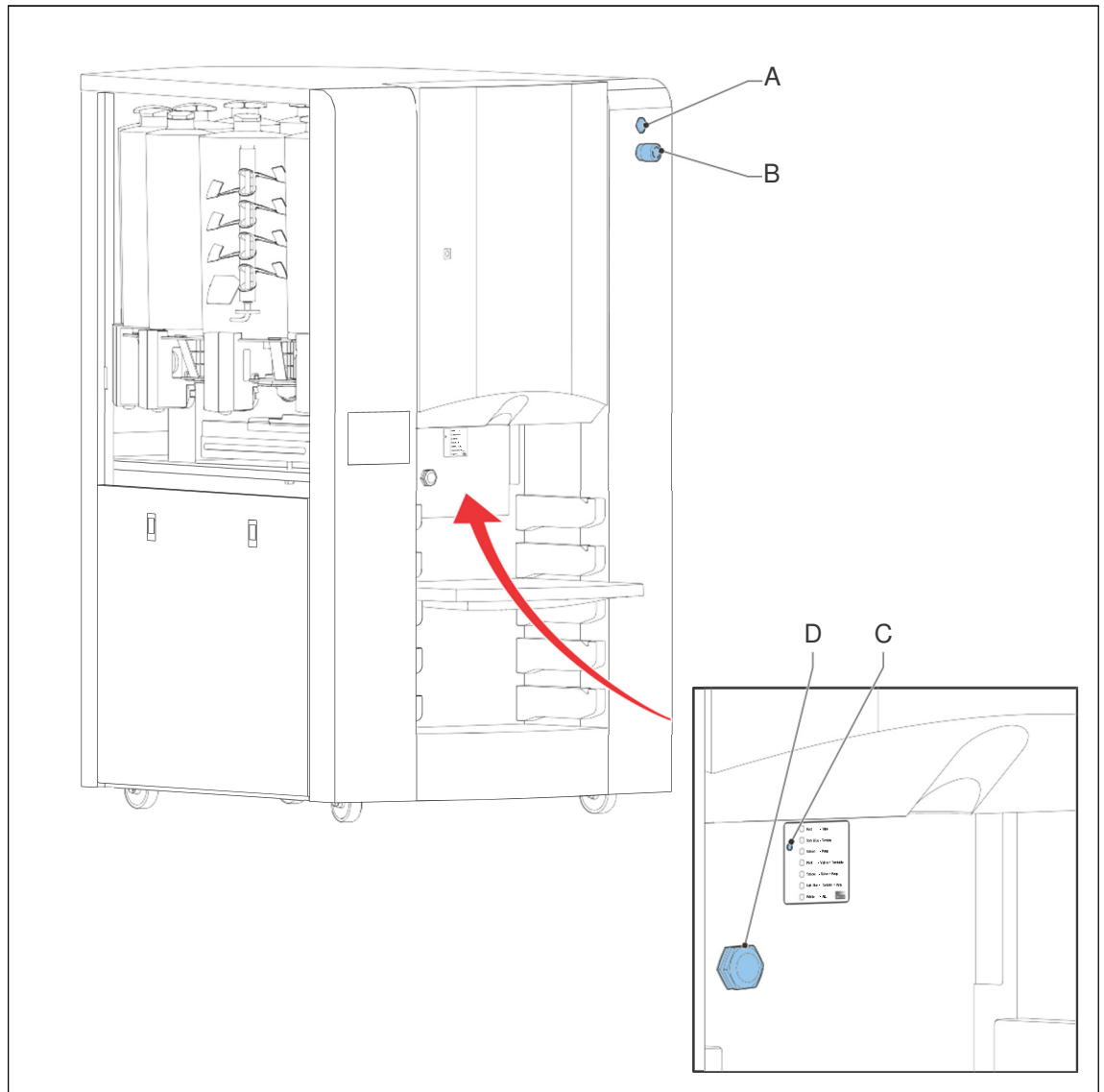
3.1.4 Machine status LEDs

LED color	Function
Red	Indicator Valve Sensor
Blue	Indicator Pump Sensor
Green	Indicator Piston Sensor

3.1.5 Overview of the user interface (controls and indicators)



Note:
This user interface applies from November 2021.



- A On/Off light
- B Emergency stop switch
- C Machine status LED
- D Can sensor

3.1.6 Machine status LEDs

LED color	Function
Red	Indicator Valve Sensor
Dark blue	Indicator Turntable Sensor
Green	Indicator Pump Sensor
Pink	Indicator Valve + Turntable Sensor
Yellow	Indicator Valve + Pump Sensor
Light blue	Indicator Turntable + Pump Sensor
White	Indicator Turntable + Pump + Valve Sensor



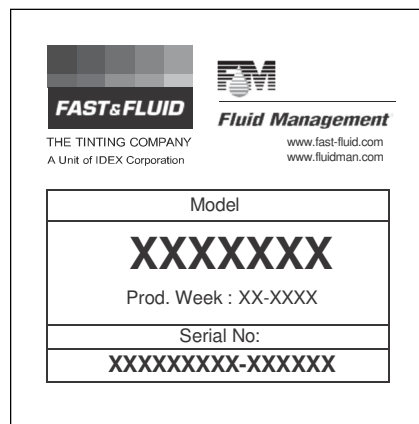
Note:

If an indicator is flashing, the related component is most likely in the incorrect position.

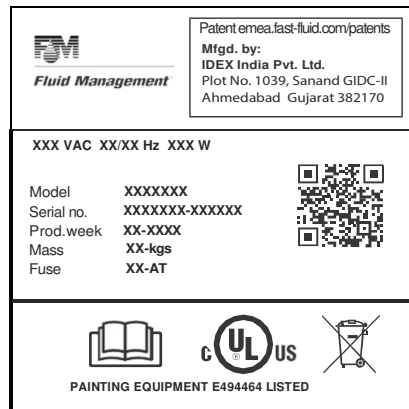
3.1.7 On/Off light

Status	Indicates
On	Machine powered
Off	Machine not powered
Blinking	Emergency switch pressed

3.1.8 Type plate: serial number



3.1.9 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 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.

3.2.1 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 [3.2.2](#).
2. Place the can. See [3.2.2](#).
3. Choose the recipe and dispense. See the dispense software documentation.
4. Remove the can.

3.2.2 Placing a can

1. Check the height of the can.

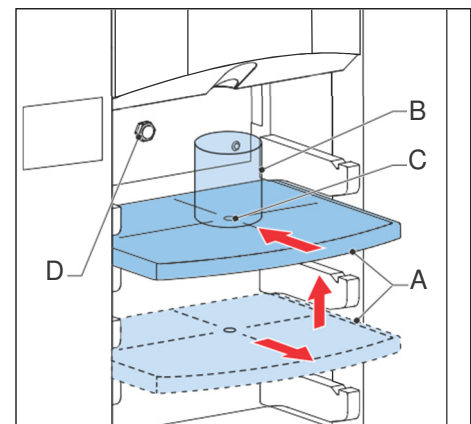
**Note:**

The correct height of the can table depends on 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.

3.3 Maintenance

**Note:**

- All maintenance activities in this chapter can be executed by the operator. For other activities, see [5.3](#).
- When the door is opened, the door switch lowers the speed of the turntable.

**CAUTION:**

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

3.3.1 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:**

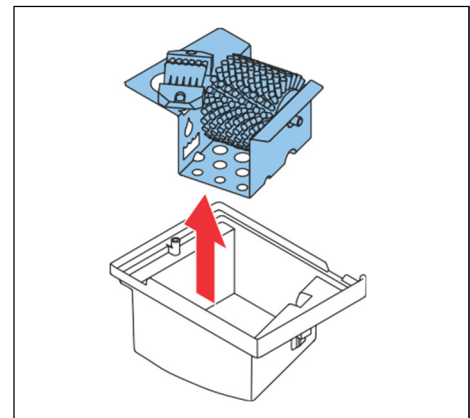
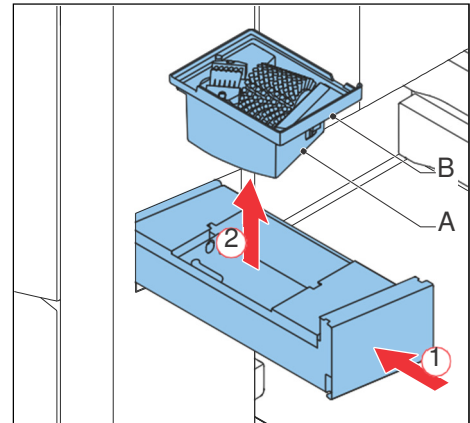
Do not use cleaning agents based on organic solvents to clean plastic or painted parts of the machine.

3.3.2 Cleaning the brush container: daily

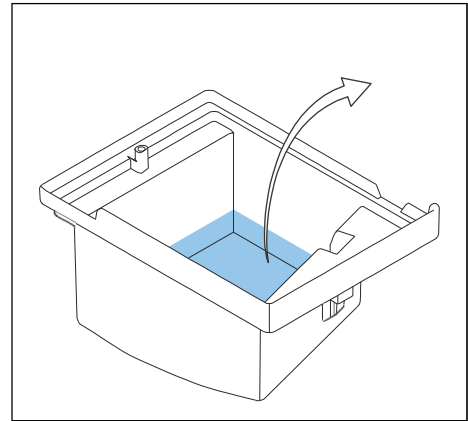
**CAUTION:**

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



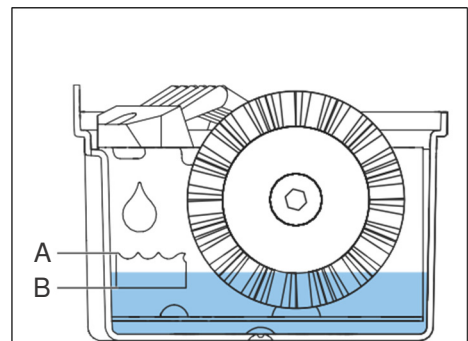
3. Remove the liquid from the brush container.
For the disposal of the liquid, follow the local regulations.



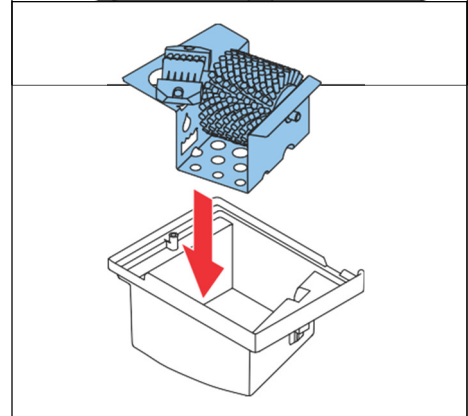
4. Fill the brush container with fluid.
The level of the fluid must be between level A and level B. Use the liquid your paint supplier indicates.



WARNING:
See 2.2.2 for liquids being used in the machine.



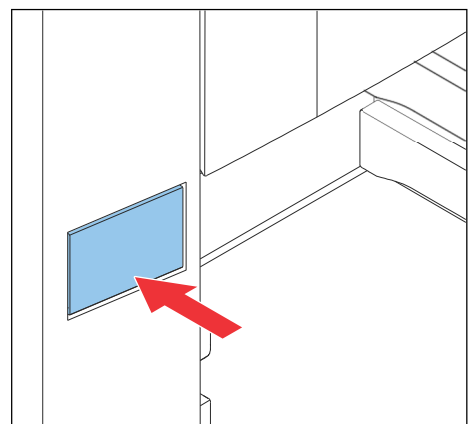
5. Put back the brush into the brush container.



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.



3.3.3 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.

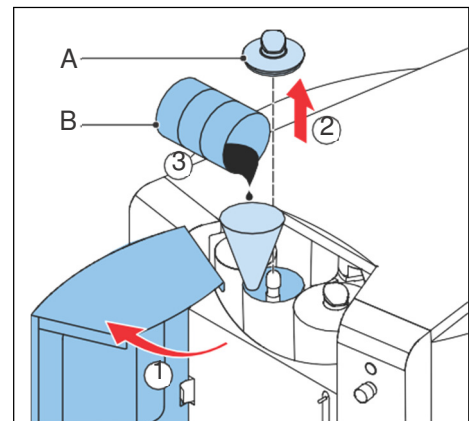
2. Open the front door.
3. Remove the lid (A) from the canister.
4. Add the colorant (B). Do not spill.



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.

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



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.

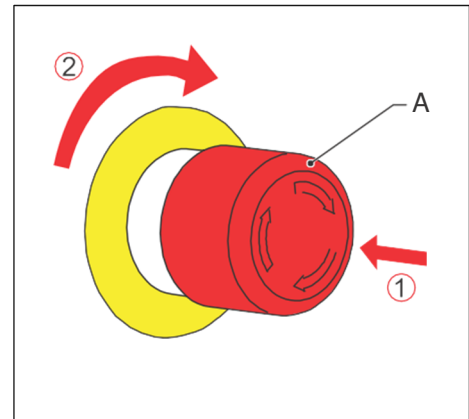
**CAUTION:**

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 of the emergency stop switch, the machine is operational.



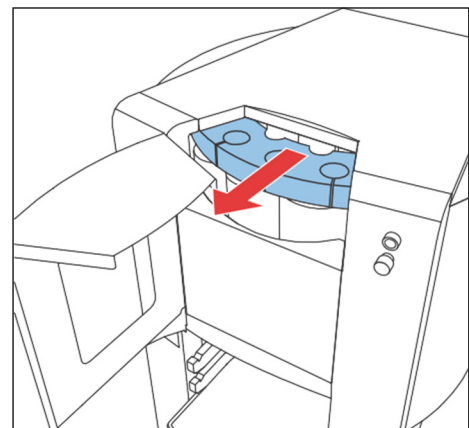
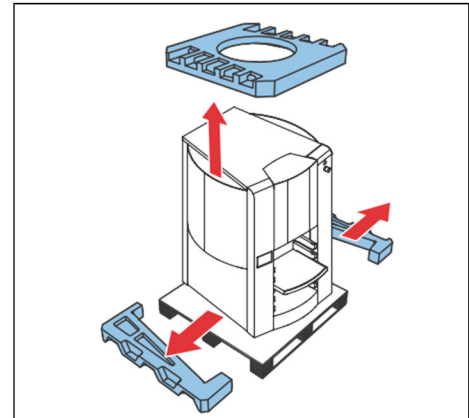
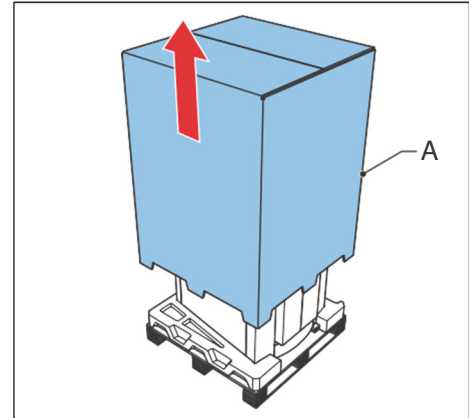
4 Installation

4.1 Unpack the machine

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

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

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



4.2 Put the machine in position



WARNING:

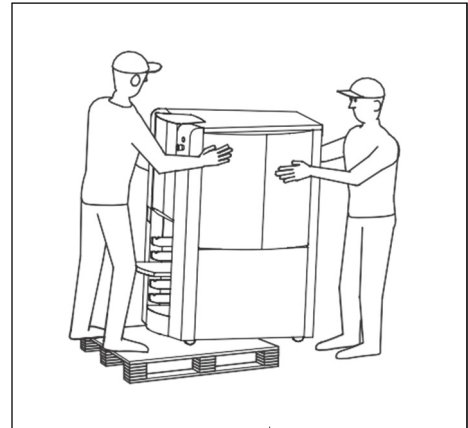
- Do not use a forklift truck.
- Mind the minimum requirement of the load capacity of the floor. See [6.2](#).



Note:

- Make sure that the surface of the floor is horizontal.
- Make sure that the final location is well-lit and well-ventilated.

1. Move the machine backwards from the pallet on to the ground.
2. Move the machine to the final location.



4.3 Grounding instructions

This product must be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This product is equipped with a cord having a grounding wire with an appropriate grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.



WARNING:

Improper installation of the grounding plug may result in a risk of electric shock. When repair or replacement of the cord or plug is required, do not connect the grounding wire to either flat blade terminal. The wire with insulation having an outer surface that is green with or without yellow stripes is the grounding wire.

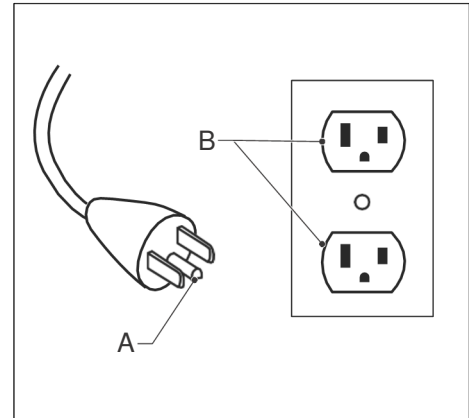
Check with a qualified electrician or serviceman when the grounding instructions are not completely understood, or when in doubt as to whether the product is properly grounded. Do not modify the plug provided; if it does not fit the outlet, have the proper outlet installed by a qualified electrician.



CAUTION:

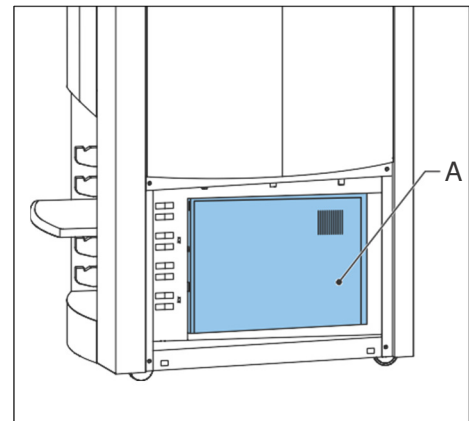
This product is for use on a nominal 120-V circuit and has a grounding plug similar to the plug illustrated in figure. Only connect the product to an outlet having the same configuration as the plug. Do not use an adapter with this product.

1. Connect the grounding plug (A) to the grounded wall socket (B).



4.4 Install the computer

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



4.5 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 emergency stop switch is reset.
3. Make sure that the computer is on.
4. Run the dispense software.

4.6 First use

1. Fill and place the brush unit. See [3.3.2](#).
2. Fill the canisters correctly. See [3.3.3](#).

5 Troubleshooting



Note:

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

5.1 General troubleshooting procedure

1. Try to solve the problem with the information in this manual. See [5.2](#).
2. If it is not possible to solve the problem with the information in this manual, contact service. See [5.3](#).

5.2 Troubleshooting guide

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 .
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 emergency stop switch to reset the machine. Reset the emergency stop switch. See 3.3.4 . If the machine still has a failure, contact service. See 3.3.4 .
The turntable is turning slowly and the machine does not stir the colorants.	The front cover is open.	Close the front cover.

5.3 Contact service

1. Find the type plate on the lower front side of the machine. See [3.1.9](#).
2. Take a note of the model number and the serial number of the machine.
3. Contact your supplier or manufacturer.
See www.fluidman.com (Fluid Management Inc., U.S.A.) or www.fast-fluid.com (Fast & Fluid Management B.V., EMEA)

6 Technical data

6.1 General specifications

Parameter	Specification	
	Metric standard	Imperial standard
Number of canisters	16	
Dispensing	Sequential	
Pump type	Piston pump	
Cleaning system	Rotary and static brush	
Suitable for	Water and universal colorants	
Canister size [L - USgal]	2.3 / 4.6	4.861 / 1.722
Pump speed [mL/min - fl oz/min]	500	16.907
Maximum can height [cm - in]	41	16.1
Can table dimensions, width x depth [cm - in]	23 x 37	9.1 x 14.6
Turntable	Bi-directional	

6.2 Dimensions and mass

Parameter	Specification	
	Metric standard	Imperial standard
Dimensions, height x width x depth [cm - in]	123 x 82 x 87	48.4 x 32.3 x 34.3
Packed dimensions, height x width x depth [cm - in]	141 x 98 x 98	55.5 x 38.6 x 38.6
Mass incl. packaging [kg - lbs]	165	364
Mass filled machine [kg - lbs]	220	485
Required load capacity of the floor [kg - lbs]	880	1940

6.3 Ambient conditions



WARNING:

Risk of fire and personal injury for failing to read and follow instructions in [2.2](#).



Note:

This machine must be used or stored within the ambient temperature, altitude, and humidity ranges listed in the table below.

Parameter	Specification	
	Metric standard	Imperial standard
Ambient Temperature [°C-°F], when in use ¹	+10 to +35 ²	+50 to +95 ²
Ambient Temperature [°C-°F], when not in use ¹	-25 to +55	-13 to +131
Altitude above sea level [m - ft], operational	-10 to 2000	-33 to 6562
Altitude above sea level [m - ft], out of operation	-10 to 12000	-33 to 39370
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 (Electro Magnetic Compliancy) classification	Class B
Overvoltage category	Class II

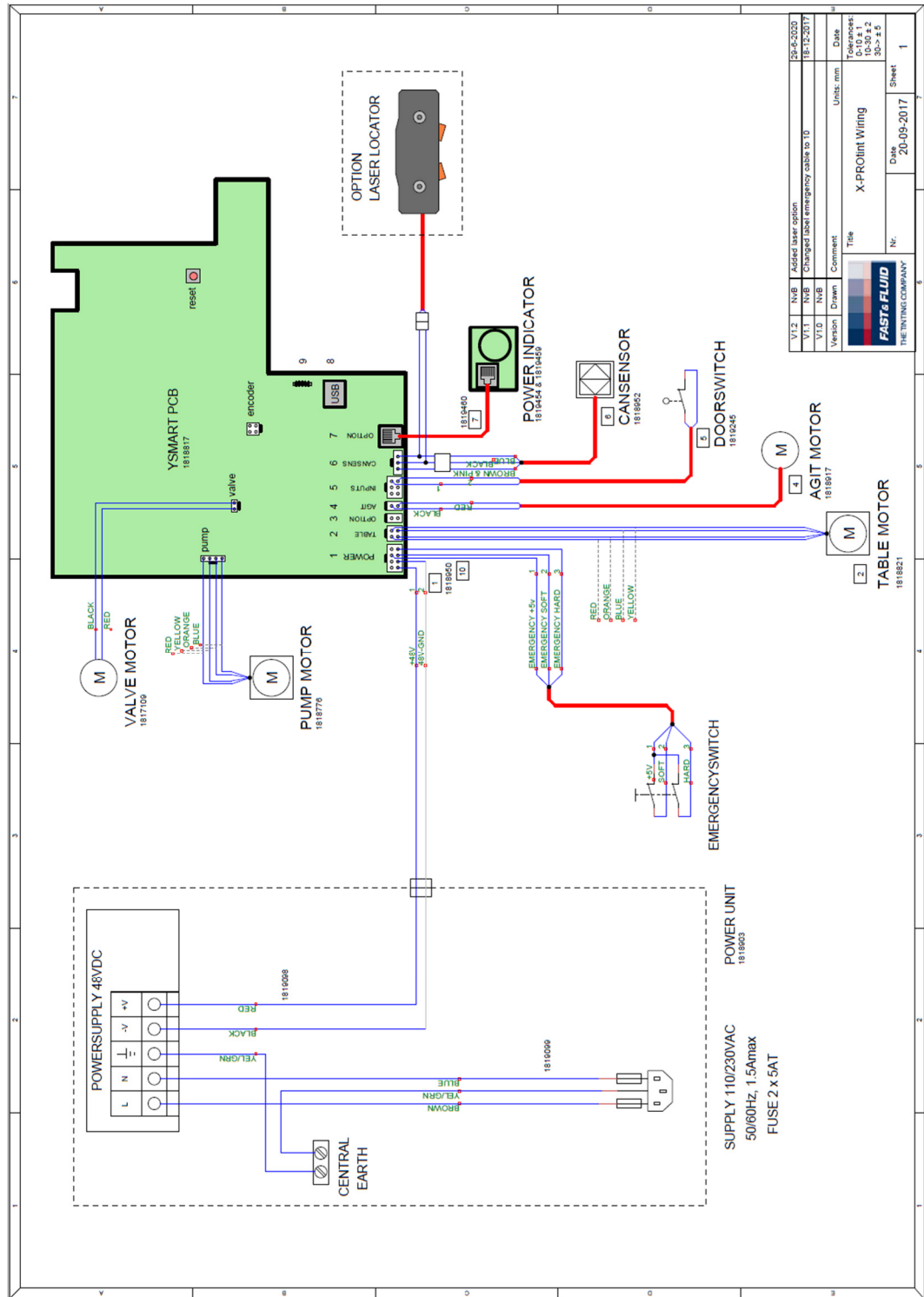
6.6 Electrical specifications

Parameter	Specification
Maximum power consumption of the manual [W]	75 / 100
Maximum leakage current [mA]	3.5
Voltage [V AC], region dependent (service engineer only)	110 ±10% 230 ±10%
Frequency [Hz]	50 / 60
Fuse [A]	5
Required line and safety protection	<ul style="list-style-type: none"> • 16A fuse • Network system TN,TT
Short circuit current rating [A]	1720

¹ As defined in [2.2.2](#).

² The maximum temperature must be at least 15 °C / 27 °F below the flash point of the colorant.

6.7 Electrical Diagram



6.8 Electrical Diagram



Note:

This electrical diagram applies from November 2021.

