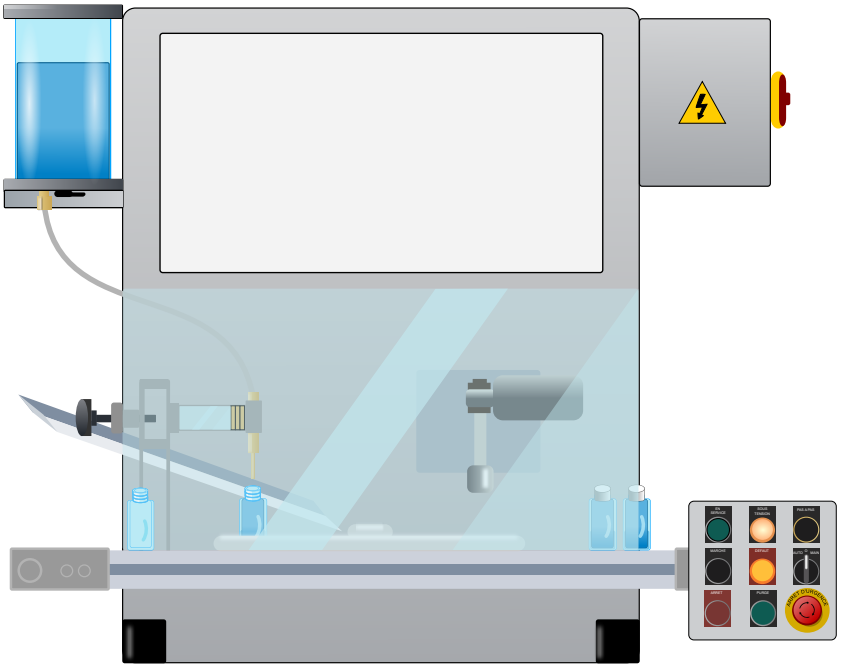
English (UK) version
(Translated from French)

V1 - 13/03/26
Emilien PAPIN

MINIDOSA

Perfume packaging system

1. User manual



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CE

MINIDOSA

1. User manual

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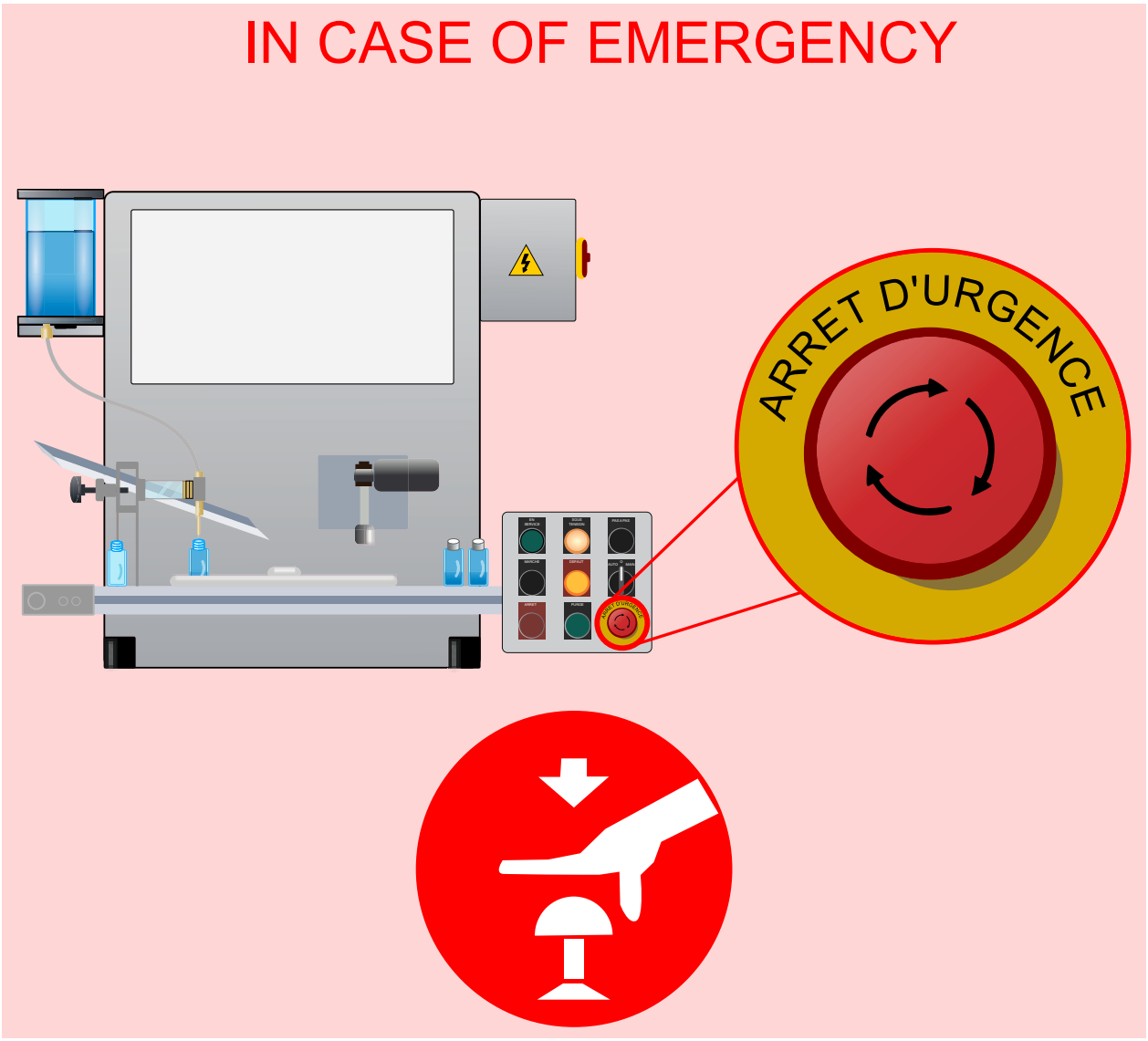
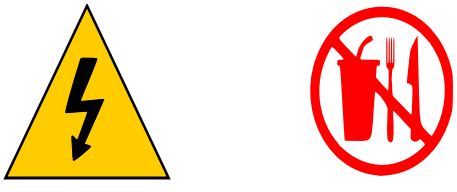
1. General warnings





Do not eat or drink near the machine.
Do not work on the electrical system of the machine without the appropriate qualification.
Respect the equipment and use it responsibly.

2. Declaration of Conformity

The manufacturer **Ravoux Automatismes**

located at Rue de l'Industrie, 03300 Creuzier-Le-Vieux, France

declares under its sole responsibility that the machine **MINIDOSA - Perfume packaging system**

(serial number: MINIDOSA-1992-72685), manufactured in 1992,

is in conformity with the provisions of:

Regulation (EU) 2023/1230 of the European Parliament and of the Council of 14 June 2023 on machinery,

repealing Directive 2006/42/EC.

Applied harmonised standards:

EN ISO 12100:2010 – Safety of machinery – General principles for design,

EN 60204-1:2018 – Safety of machinery – Electrical equipment of machines,

NF X 60-200 - Nomenclature and general drafting principles,

FD X 60-212 - Maintenance instructions framework,

NF X 60-210 - Rules for presentation and drafting of spare parts catalogues.

Name: Émilien PAPIN

Place: Limoges

Date: 13/03/2026

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3. Foreword

Documentation Overview

This documentation is divided into two volumes. Its purpose is to document the installation, use, and maintenance operations of the MINIDOSA perfume packaging system.

First volume: MINIDOSA - 1. User Manual

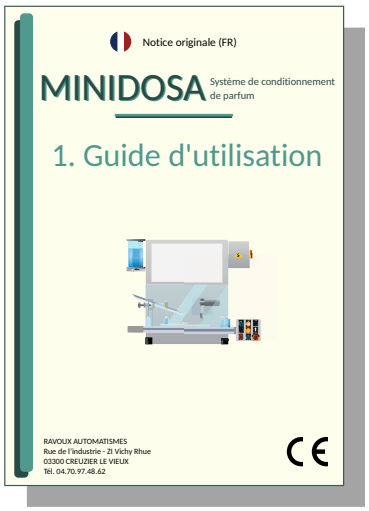
The first volume is dedicated to operations performed by users. It describes the stages of commissioning, adjustment, use, and shutdown of the machine, as well as essential safety instructions. The objective is to provide clear, structured, and directly applicable documentation to ensure:

- a quick and efficient start-up of the system;

- the compliance of packaging operations;

- user safety;

- the preservation of equipment integrity.

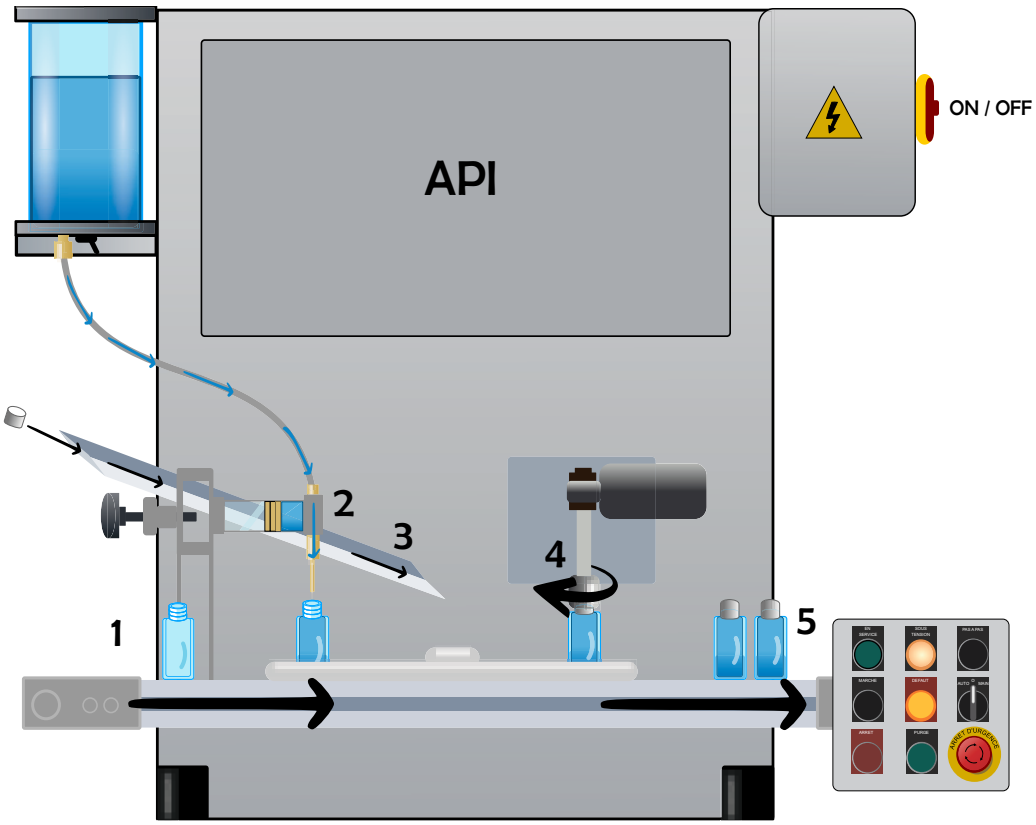


Second volume: MINIDOSA - 2. Maintenance Manual, Spare Parts Catalogue and Appendices

The second volume is dedicated to maintenance operations reserved for qualified personnel and the identification of spare parts.

4. Description of the MINIDOSA machine

4.1. General operation



The MINIDOSA machine is used for bottling. The bottles enter empty and emerge filled with perfume and closed with a screwed-on cap. The machine has five main functions.

1. **Conveying** of the bottles.

2. **Filling** of the bottles with liquid.

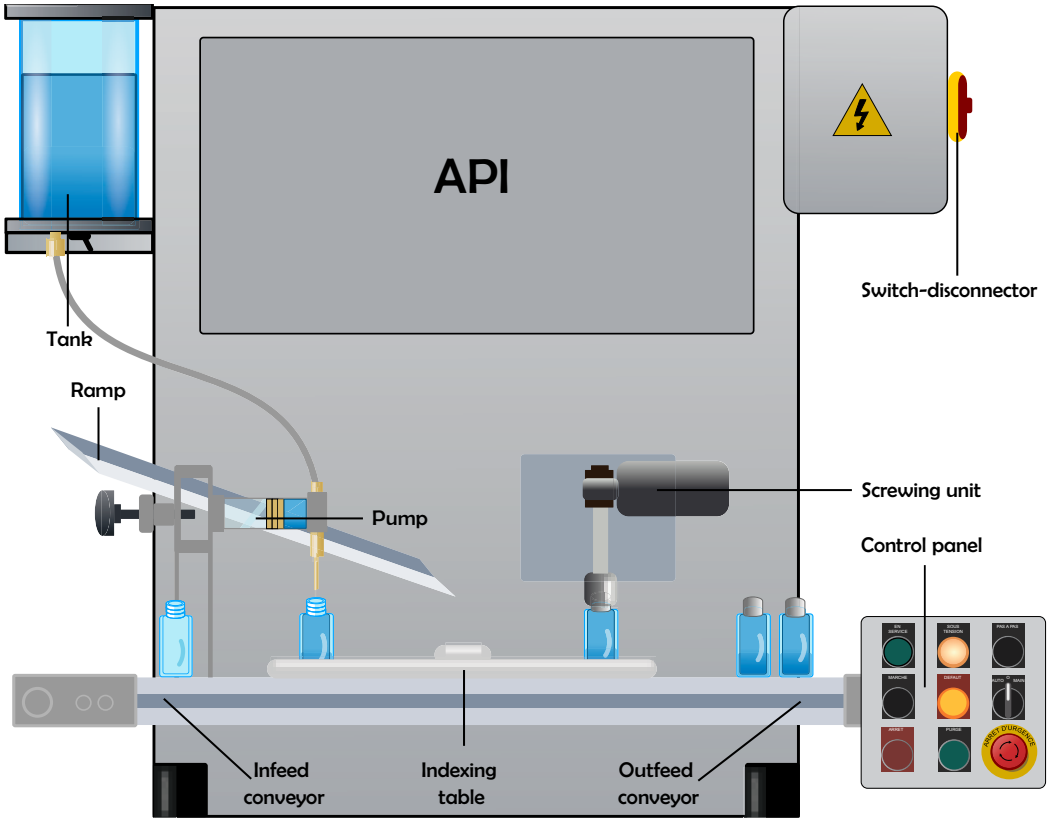
3. **Distribution** of the caps.

4. **Screwing** of the caps onto the bottles.

5. **Evacuation** of the filled bottles, closed with a screwed-on cap.

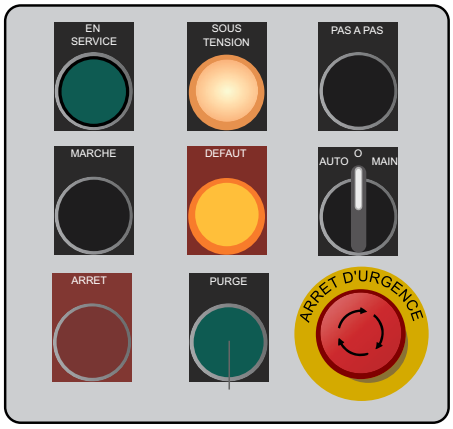
4.2. Composants de la machine

4.2.1. Overview



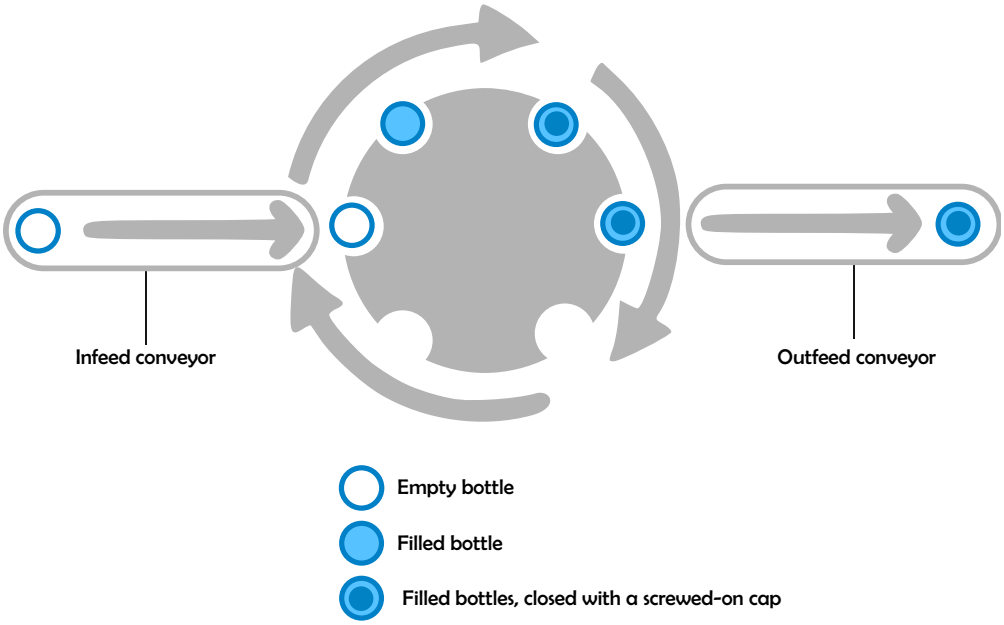
Empty bottles enter via the **infeed conveyor** and emerge filled and closed with a screwed-on cap via the **outfeed conveyor**. Between the two conveyors, the **indexing table** distributes the bottles to the **pump**, which fills them with liquid, then to the **ramp**, where they receive a cap, and finally to the **screwing unit** which secures the cap to the bottle. The **control panel** allows the user to control the machine.

4.2.2. Control panel details



EN SERVICE: RUNNING
SOUS TENSION: POWER ON
PAS A PAS: STEP-BY-STEP
MARCHE: START
ARRET: STOP
ARRET D'URGENCE: EMERGENCY STOP

4.2.3. Indexing table and conveyors details



The infeed conveyor can hold a maximum of eleven bottles. The outfeed conveyor is considered jammed when it contains six bottles.

4.3. Machine technical specifications

Equipment weight : 80 kg without support feet - 110 kg with support feet

Dimensions : 1,15m x 0,75m x 0,85m

Nominal operating pneumatic pressure : 6 bars

Nominal air consumption in continuous use : 7 litres/minute

Supply voltage : 230 V AC - 50Hz

Nominal power : 0.9 kW

Noise : 70 dB

Safety components :

- fixed guards

- movable guard with safety sensor

- emergency stop

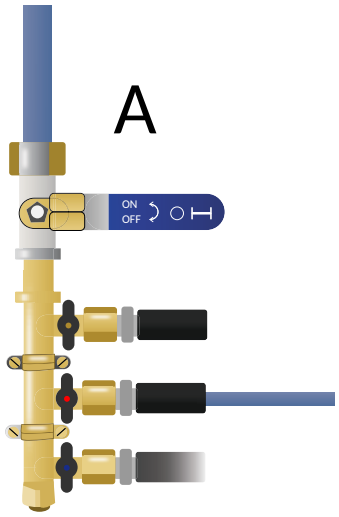
- safety control module

Programmable Logic Controller : Telemecanique TSX micro 37-10 PLC

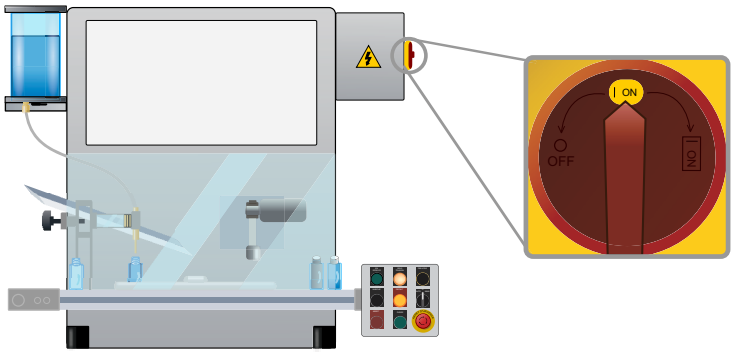
5. Preparing the machine before production

5.1. Supplying the machine with air and electricity

- Open the air valve (A).
- Turn the fuse carrier switch-disconnector to the "ON" position.

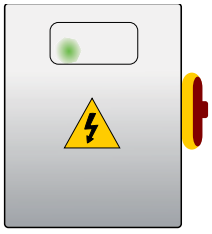


Valve in 'OPEN' position

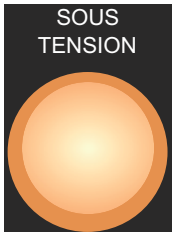


Switch-disconnector in 'ON' position

When the machine is live, two indicator lights come on: one on the control panel, the other on the power supply box.



Power supply box indicator light



Control panel indicator light

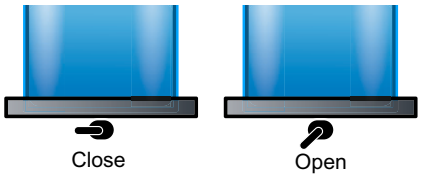
5.2. Supplying the machine with raw materials

5.2.1. Supplying the tank with liquid

To guarantee production quality, do not mix liquids.

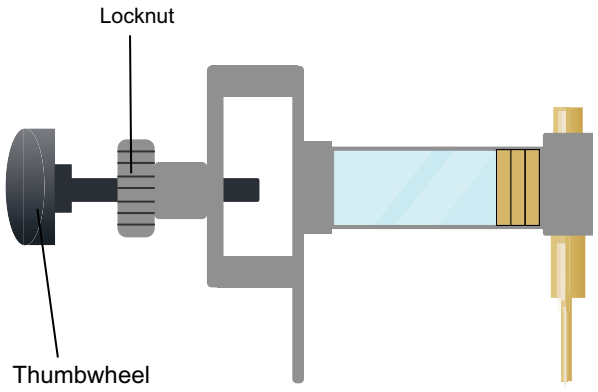
- Lift the tank lid.
- Fill the tank with liquid.
- Replace the tank lid.

For the liquid to flow to the pump, it is necessary to open the valve located under the tank.



5.2.2. Dosing the volume of liquid injected into the bottles

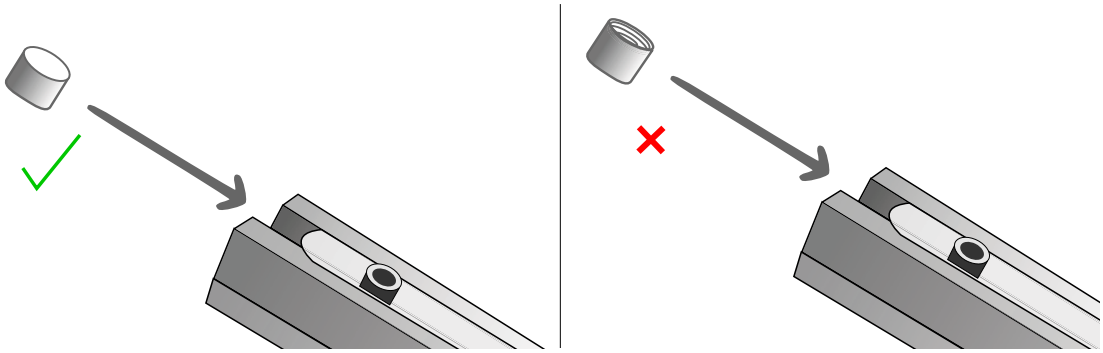
- Unscrew the locknut to adjust the thumbwheel.
- Turn the thumbwheel clockwise to increase the quantity of liquid; turn the thumbwheel anticlockwise to reduce the quantity of liquid.
- Screw the locknut to lock the setting.



To find the appropriate dosage for the bottles, several trials may be necessary.

5.2.3. Supplying the ramp with caps

- Insert the caps into the ramp, positioning the screwable part downwards.



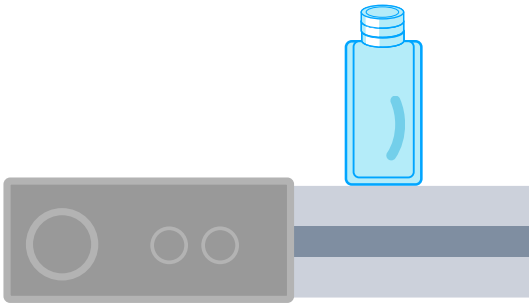
Incorrect positioning of the caps may result in them being ejected from the ramp. The machine operates even in the absence of caps.

The ramp must contain a sufficient number of caps.

5.2.4. Supplying the bottles

- Place the bottles on the infeed conveyor.

CAUTION: The infeed conveyor can hold a maximum of 11 bottles. Exceeding this limit presents a risk of bottle breakage and damage to the machine.



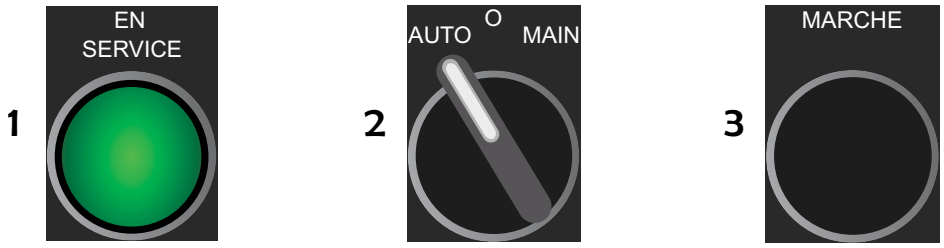
6. Packaging perfume bottles

6.1. Packaging perfume bottles in continuous mode

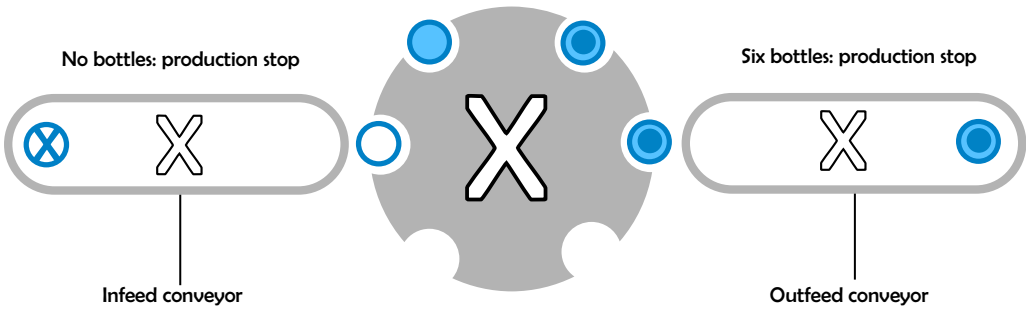
The machine must be supplied with power and raw materials. ("Preparing the machine before production", page 9).

The protective cover must be closed.

- Press the "EN SERVICE" indicator button on the control panel. The indicator button must be lit. If the indicator button is already lit, this action is not necessary.
- Set the "AUTO / 0 / MAIN" selector on the control panel to "AUTO".
- Press the "MARCHE" button.



The machine stops if there is no bottle on the infeed conveyor. It also stops as soon as the outfeed conveyor is obstructed by six bottles.



Supply the infeed conveyor and clear the outfeed conveyor whenever necessary.

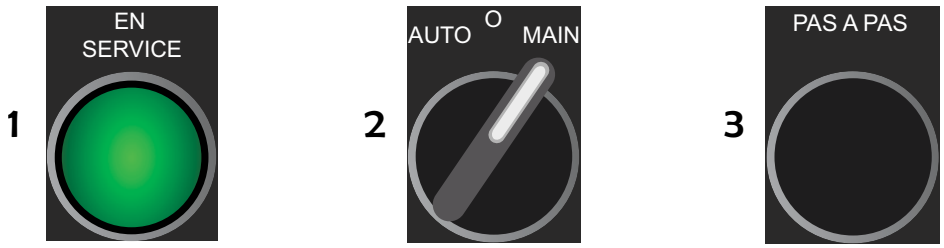
6.2. Packaging perfume bottles individually

The machine must be supplied with power and raw materials. ("Preparing the machine before production", page 9).

The protective cover must be closed.

In individual production, it is necessary to press the "PAS À PAS" button at each stage of the machine.

- Press the "EN SERVICE" indicator button on the control panel. The indicator button must be lit. If the indicator button is already lit, this action is not necessary.
- Set the "AUTO / 0 / MAIN" selector on the control panel to "MAIN".
- Press the "PAS À PAS" button until one perfume bottle has been packaged.



During individual production, the machine stops when the outfeed conveyor is obstructed by six bottles. Clear the outfeed conveyor whenever necessary.

7. Stopping the machine

7.1. Stopping the packaging of perfume bottles

- Press the "ARRÊT" button.

Setting the "AUTO / 0 / MAIN" selector to "0" also stops the machine.

The "ARRÊT" button does not cut the power to the machine: the "EN SERVICE" indicator button remains lit.

7.2. Stopping the machine in an emergency

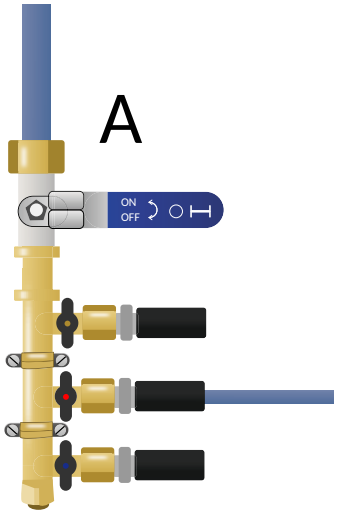
- Press the emergency stop button or lift the protective cover.

The "EN SERVICE" indicator button goes out.

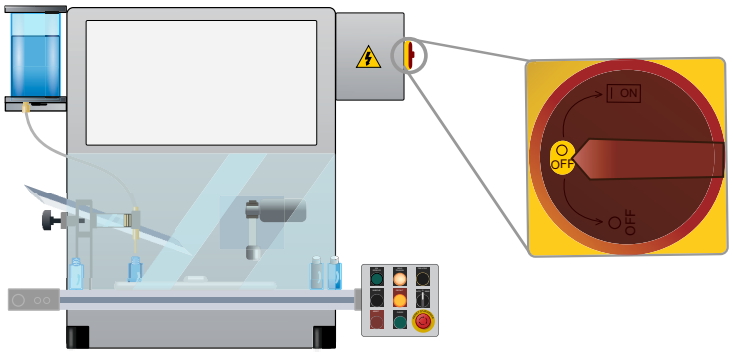
Turn the emergency stop button to the right to release it.

7.3. Stopping the machine at the end of the cycle

- Lift the protective cover.
- Close the air valve (A).
- Turn the fuse carrier switch-disconnector to the "OFF" position.



Valve in 'CLOSE' position



Switch-disconnector in 'OFF' position

In the event of a prolonged shutdown, completely empty the liquid from the tank to prevent scale build-up (see the second volume of the documentation: "MINIDOSA: 2. Maintenance Manual - Chapter: Draining the tank").

8. Carrying out level 1 maintenance

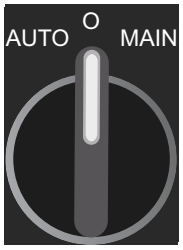
Level 1 maintenance operations can be carried out by the user. For operations reserved for qualified personnel, see the second volume of the documentation: "MINIDOSA: 2. Maintenance Manual").

8.1. Draining the pump

It is possible to use the bottles as containers when using the "PURGE" function. The "PURGE" function allows the liquid contained in the pipe to be emptied.

- Place a suitable container under the pump.
- Set the "AUTO / 0 / MAIN" selector on the control panel to "0".
- Press the "PURGE" button on the control panel as many times as necessary.

1



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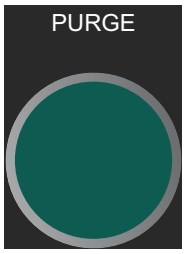

8.2. Indexing the indexing table

During production, the table may sometimes become misaligned.

- Hold the capper head bit upwards.
- Turn the indexing table clockwise until it is correctly indexed.
- Release the capper head bit.

8.3. Cleaning the machine's operating area

- Open the protective cover to stop the machine and access the operating area.
- Clean any traces of liquid, spilled caps and fallen bottles.

Some sensors are optical. Cleaning them prevents any obstruction by dust, thus ensuring detection reliability.

8.4. Replacing a control panel bulb

- Unscrew the two plastic covers.
- Unscrew the worn bulb by turning it a quarter turn.
- Screw in the new bulb by turning it a quarter turn (Ref: AB-1870).
- Screw the two plastic covers back on.

Caution: the covers can be fragile. For the bulb reference, see the second volume of the documentation: "MINIDOSA: 2. Maintenance Manual").

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