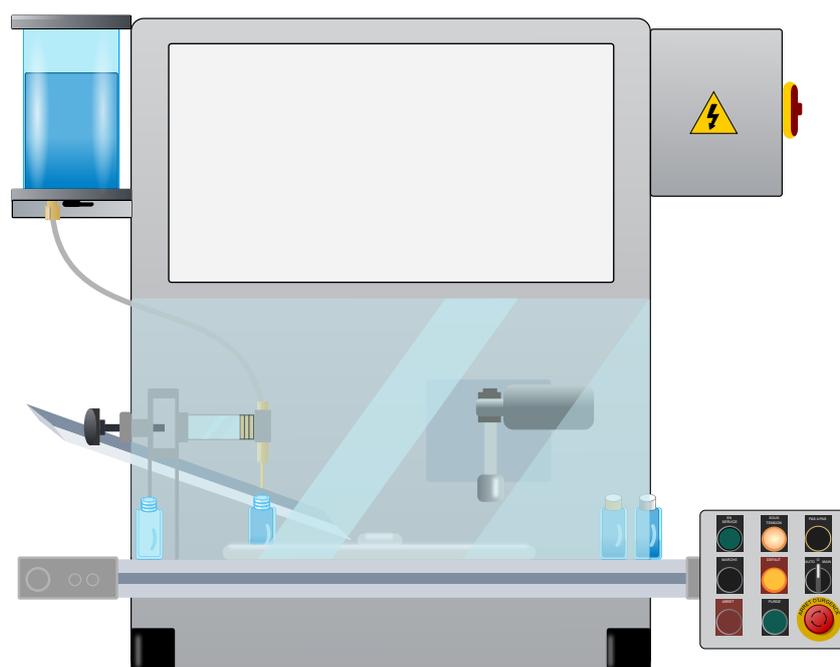


MINIDOSA

Perfume packaging system

2. Maintenance manual



MINIDOSA

2. Maintenance manual

Table of contents

1. General warnings	3
2. Declaration of Conformity	4
3. Foreword	5
4. Description of the MINIDOSA machine	6
5. Installing the MINIDOSA machine	7
5.1. Install the machine	7
5.2. Connecting the machine to power sources	8
5.3. Adjusting the pressure	8
6. Maintenance operations	9
6.1. Level 2 maintenance	9
6.1.1. Draining the tank	9
6.1.2. Replacing the ramp	9
6.2. Level 3 maintenance	10
6.2.1. Replacing the indexing plate cylinder	10
6.2.2. Replacing a motor	11
7. Spare Parts Catalogue	12
7.1. Actuators	12
7.1.1. Motors	12
7.1.2. Cylinders	12
7.2. Capteurs	13
7.3. Control panel	13
7.4. Consumables	14
8. Appendices	15
8.1. Diagrams	15
8.1.1. Pneumatic system	15
8.1.2. Electrical system 1/3	16
8.1.3. Electrical system 2/3	17
8.1.4. Electrical system 3/3	18
8.2. SFCs	19
8.2.1. Transfer task	19
8.2.2. Filling task	20
8.2.3. Screwing task	21
8.2.4. Purge cycle	22

MINIDOSA - Maintenance Manual

1. General warnings



Installation

The machine must be installed on a flat and stable surface.

The machine must be connected to compliant electrical and pneumatic outlets.

Using damaged equipment can be dangerous for the user and the machine. If you have received damaged equipment, contact the manufacturer.

A safety clearance of 0.5 m around the machine is required.

Do not install the machine near a radiator or a window.

Heavy product, handle with care.

The machine is equipped with optical sensors and therefore requires sufficient light to operate.

Install the machine in a frost-free location (4°C to 5°C minimum).

Electrical Connection

The electrical installation must include an all-pole disconnection device (fuse holders, circuit breaker), in accordance with local installation regulations in force.

It is recommended to use the cables provided with the machine.

Earthing is mandatory.

Maintenance

Maintenance operations are reserved for qualified personnel only.

Unplug the machine before performing any maintenance operation.

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

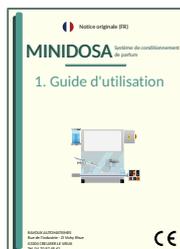
Date: 13/03/2026



3. Foreword

Documentation Overview

This documentation is divided into two volumes. Its purpose is to document the installation, operation, and maintenance procedures for the MINIDOSA perfume packaging system.



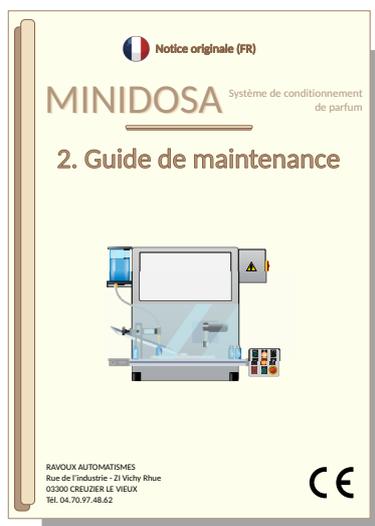
First volume: MINIDOSA - 1. User Manual

The first volume is dedicated to operations performed by users. It describes the stages of commissioning, adjustment, operation, and shutdown of the machine, as well as essential safety instructions.

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

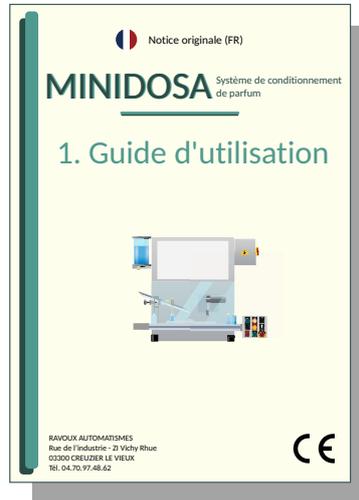
The second volume is dedicated to the installation of the MINIDOSA machine, advanced technical interventions, and the identification of spare parts. The objective is to provide clear, structured, and directly applicable documentation to ensure:

- compliant installation of the system;
- conformity of packaging operations;
- user safety;
- preservation of equipment integrity.

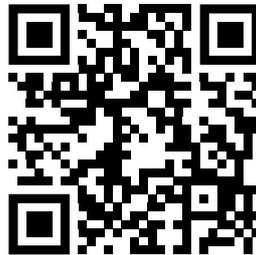


4. Description of the MINIDOSA machine

The machine description is available in the first volume of the documentation: "MINIDOSA: 1. User Manual".



You can also access the online version of the documentation via the following QR Code (epworks.me/minidosa):



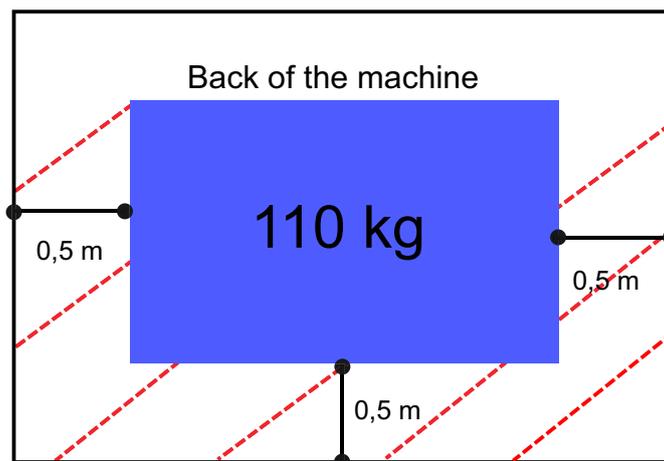
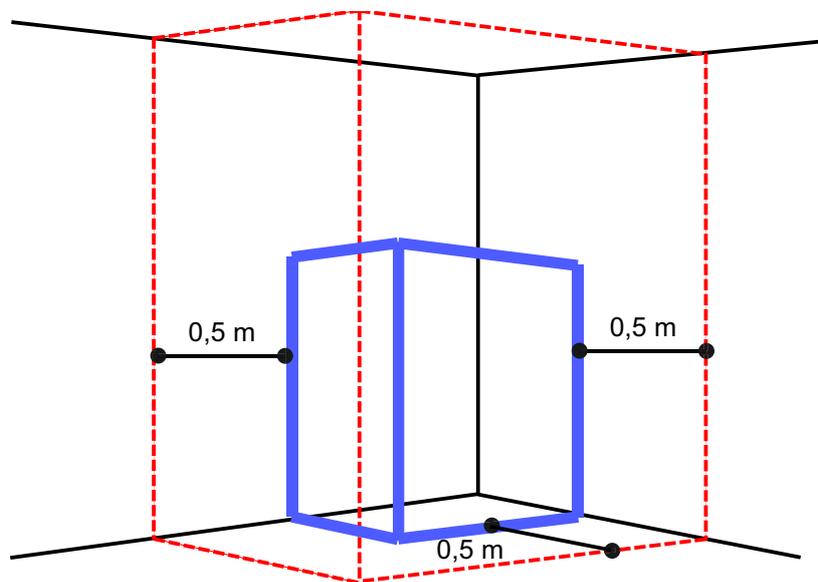
5. Installing the MINIDOSA machine

5.1. Install the machine



The surface intended to accommodate the machine must be level and stable. The use of an inclinometer is recommended. The surface must be able to support 110 kg.

- Position the machine.
- Secure the machine to its support.



5.2. Connecting the machine to power sources

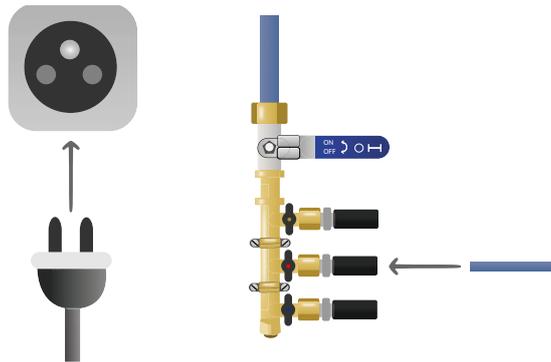


A 230 V earthed male electrical socket and a 6-bar compressed air supply are required.



Use the cables provided with the machine. They must be in good condition. The provided power cable is 1.5 m long.

- Connect the power cable to the electrical socket.
- Connect the supply hose to the compressed air outlet.



5.3. Adjusting the pressure

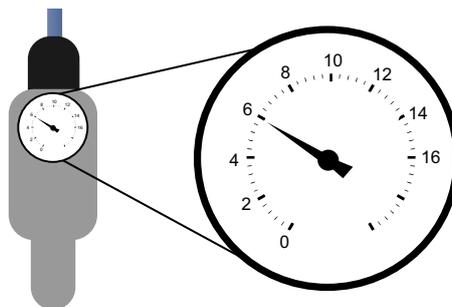


The machine must be electrically and pneumatically connected.



The air valve must be open (for more information, consult the first volume of this documentation: "MINIDOSA: 1. User Manual - Chapter 5.1. Supplying the machine with air and electricity").

- Pull the pressure regulator knob to unlock it.
- Turn the knob to adjust the pressure between 4 and 6 bars.
- Push the pressure regulator knob to lock it.



6. Maintenance operations

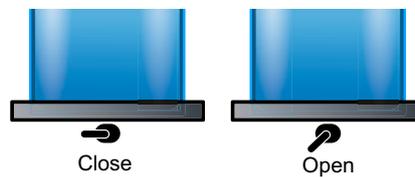
6.1. Level 2 maintenance



Level 2 maintenance is reserved for qualified personnel only.

6.1.1. Draining the tank

- Close the valve located under the tank.
- Unscrew the nut connecting the tank to the hose.
- Place a container under the tank.
- Open the valve under the tank.



6.1.2. Replacing the ramp



The electrical and pneumatic supplies must be switched off.

- Unscrew the eight screws holding the ramp.
- Remove the old ramp.
- Position the ramp by aligning the holes intended to accommodate the screws.
- Rescrew the eight screws.

6.2. Level 3 maintenance



Level 3 maintenance is reserved for qualified personnel only and requires specific tools.

6.2.1. Replacing the indexing plate cylinder



The electrical and pneumatic supplies must be switched off.



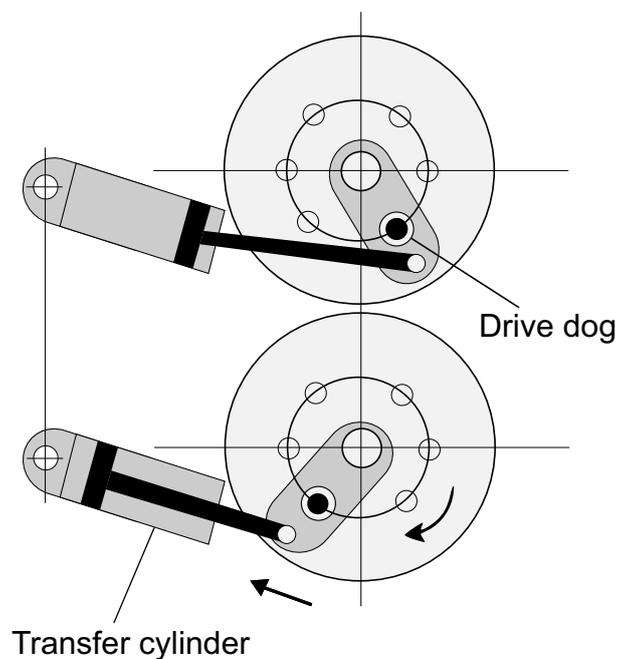
If the cylinder has failed prematurely, check: pressure, mechanical stop, alignment.

- Loosen the hose clamp holding the pneumatic fitting on the cylinder.
- Disconnect the pneumatic fitting from the cylinder.
- Unscrew the ten screws of the cylinder.
- Remove the cylinder.
- Install the cylinder by aligning the pivoting arm.
- Rescrew the ten screws of the cylinder.
- Reconnect the pneumatic fitting to the cylinder.
- Retighten the pneumatic fitting hose clamp.
- Test the cylinder by performing a single unit production.



For more information, consult the first volume of this documentation: "MINIDOSA: 1. User Manual - 6.2. Packaging perfume bottles individually".

- Check the proper drive of the indexing table.



6.2.2. Replacing a motor



The electrical and pneumatic supplies must be switched off.



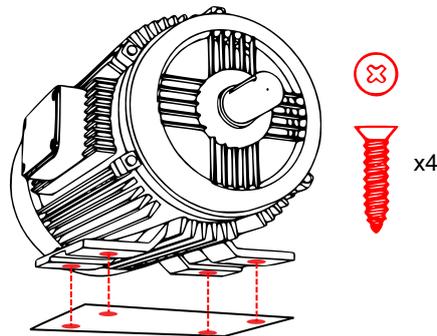
Use an appropriate replacement motor ("Spare Parts Catalogue", page 12).

- Detach the power cable retaining clip.
- Disconnect the power cable from the motor.
- Unscrew the four motor screws.
- Remove the old motor.
- Position the new motor by aligning the holes intended to accommodate the screws.
- Rescrew the four motor screws.
- Reconnect the power cable to the motor.
- Attach the power cable retaining clip.
- Test the motor by performing a single unit production.



For more information, consult the first volume of this documentation: "MINIDOSA: 1. User Manual - 6.2. Packaging perfume bottles individually".

- Measure the vibration rate and sound pressure.



7. Spare Parts Catalogue

7.1. Actuators

7.1.1. Motors

Overview	Name	Reference	Supplier
	Motor, 250 V AC - 50Hz - 45W	AZ-6592	SNT
	Motor, 24 V DC - 45W	NX-0606	BOSCH

7.1.2. Cylinders

Overview	Name	Reference	Supplier
	Double-acting pneumatic cylinder, 10A	F65-8214	RAVOUX
	Double-acting pneumatic cylinder, 11A	F85-8658	RAVOUX
	Triple-acting pneumatic cylinder, 12A	T800-C137	RAVOUX

7.2. Capteurs

Overview	Name	Reference	Supplier
	Detection arch, 24V DC - 10W	F95-4050	RAVOUX
	Inductive sensor, 24V DC - 10W	ZE-2023	RAVOUX
	Optical sensor, 24V DC - 10W	UI72-7898	RAVOUX

7.3. Control panel

Overview	Name	Reference	Supplier
	Incandescent bulb, 24V DC - 2W	AB-1870	MOTION TWIN
	Plastic cover for indicator light	IO-3000	MOTION TWIN

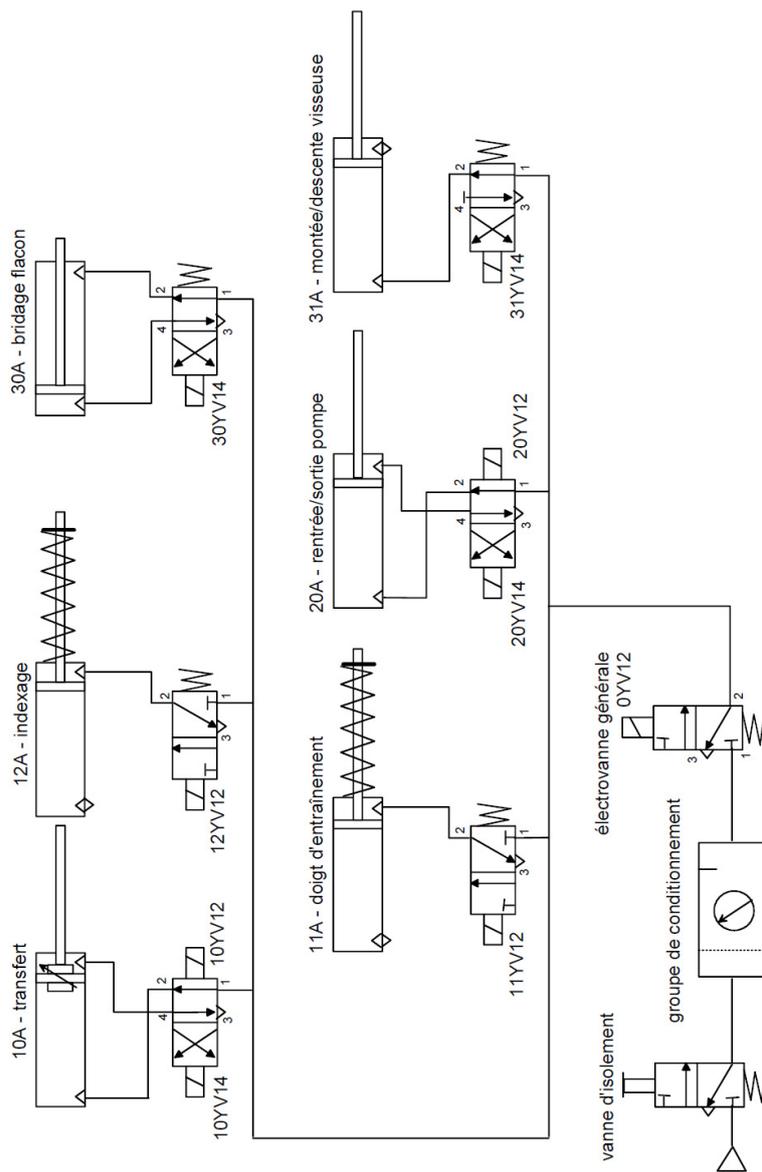
7.4. Consumables

Overview	Name	Reference	Supplier
	Bottle	FN-300	E.P. Works
	Cap	BN-301	E.P. Works
	Cleaning Liquid	LN-302	E. P. Works
	Perfume Liquid "Geranium's Ultimate Winter"	PUB-3001	E. P. Works
	Perfume Liquid "Winds from the Dunes"	PUB-3003	E. P. Works
	Perfume Liquid "DeLorean's Quantum Essence"	PUB-3005	E. P. Works

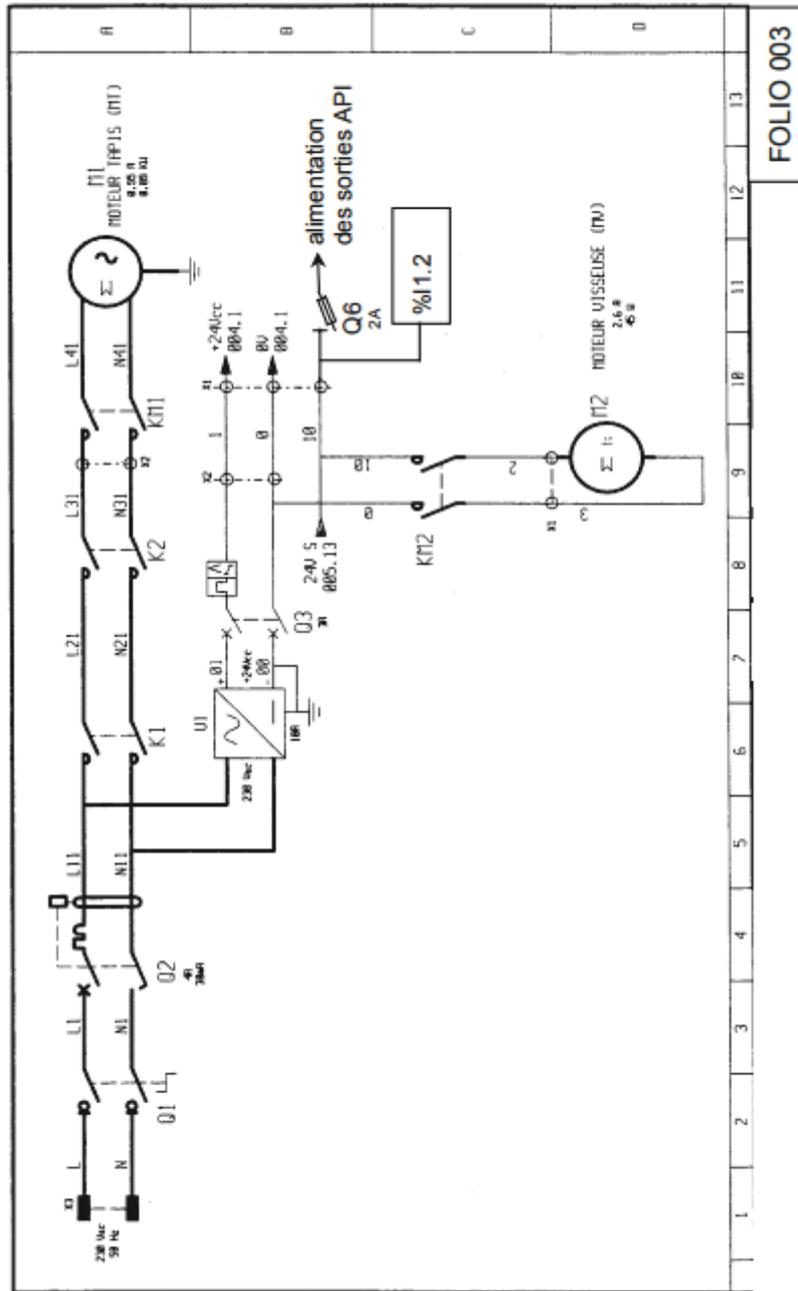
8. Appendices

8.1. Diagrams

8.1.1. Pneumatic system



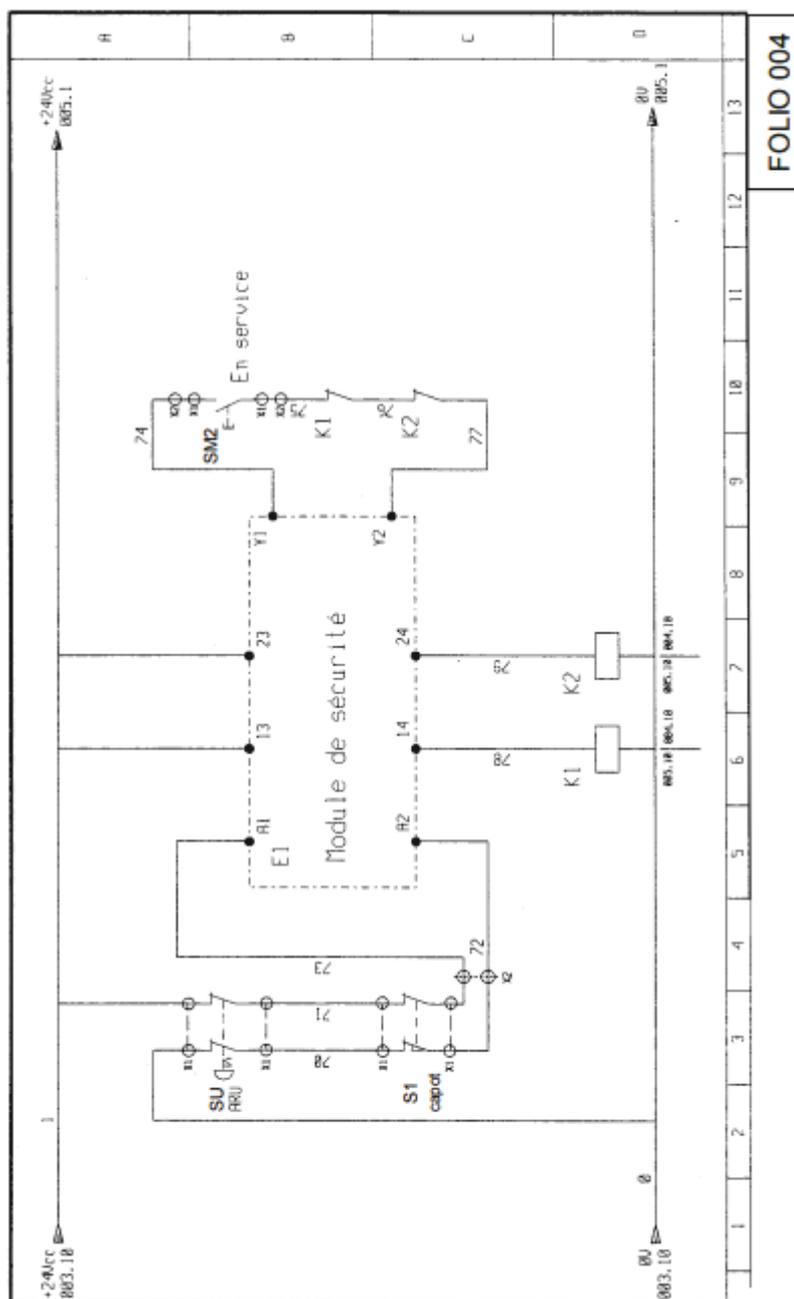
8.1.2. Electrical system 1/3



FOLIO 003

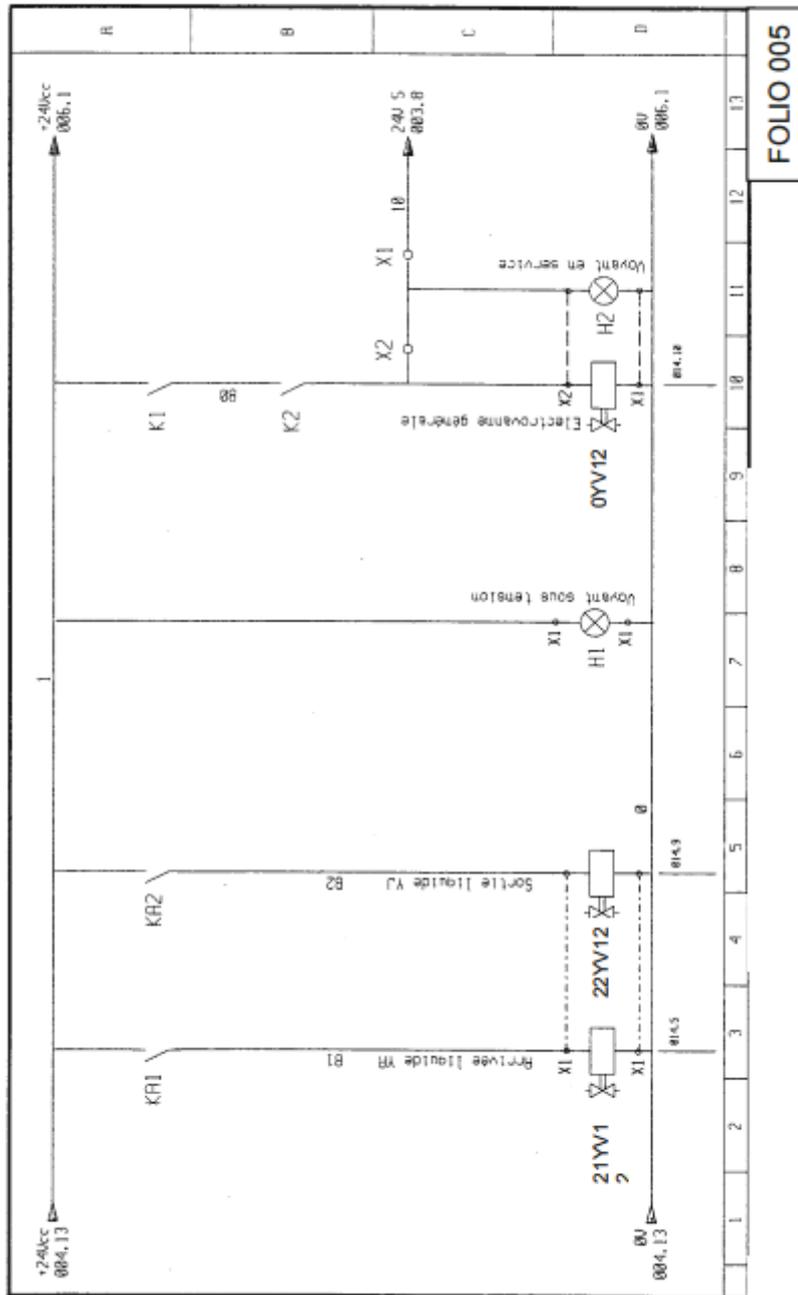
FOLIO 003 modifié de la documentation RAVOUX automatismes

8.1.3. Electrical system 2/3



FOLIO 004 modifié de la documentation RAVOUX automatismes

8.1.4. Electrical system 3/3

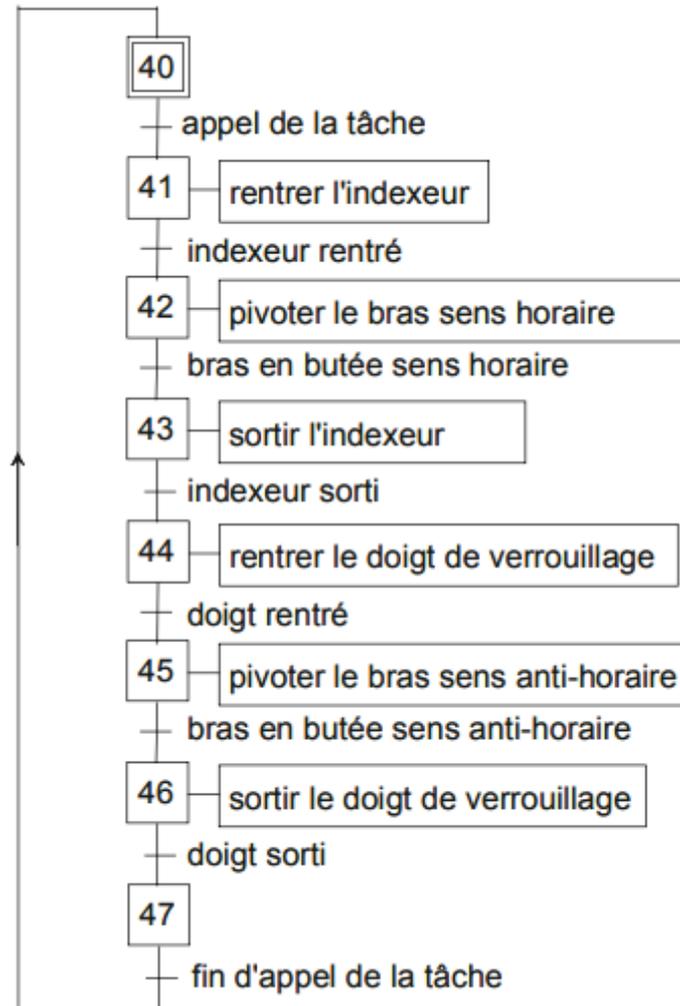


FOLIO 005

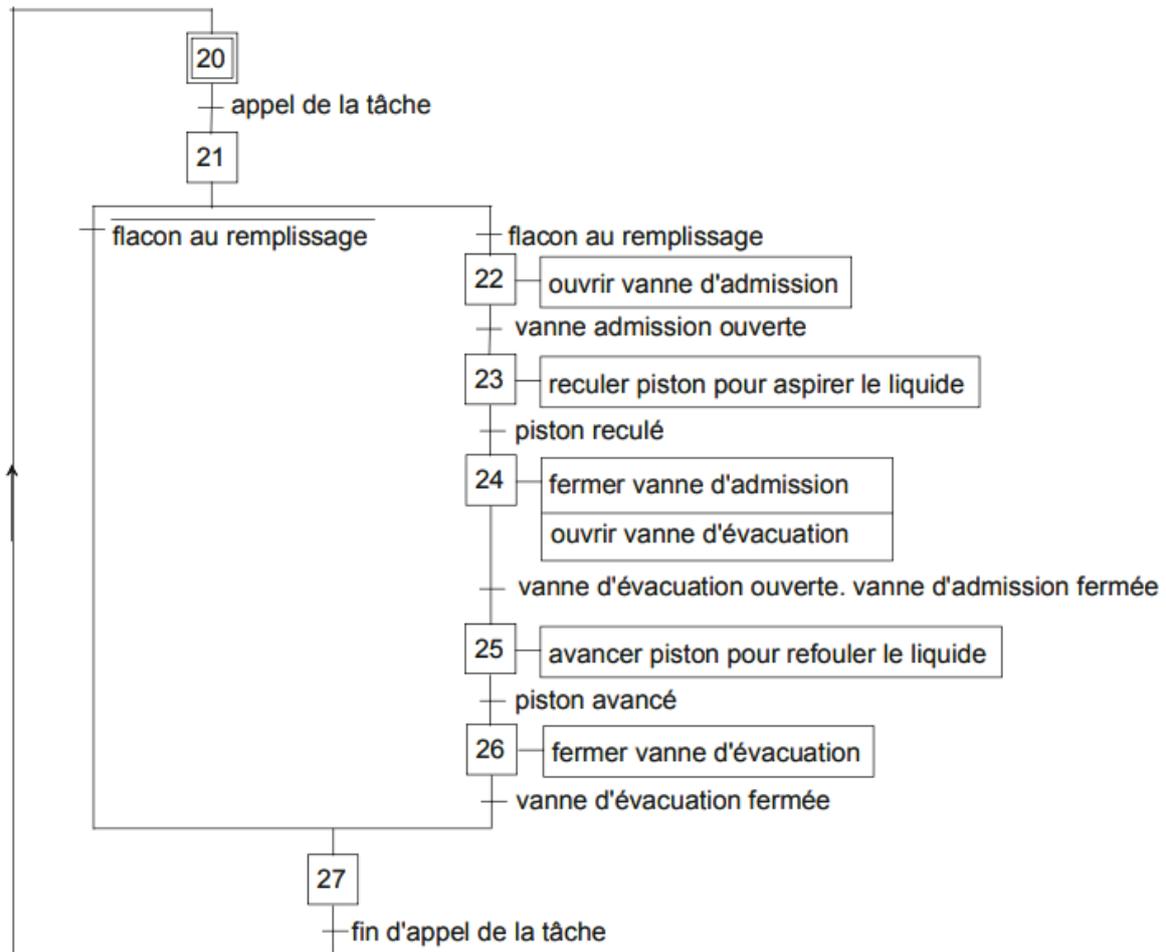
FOLIO 005 modifié de la documentation RAVOUX

8.2. SFCs

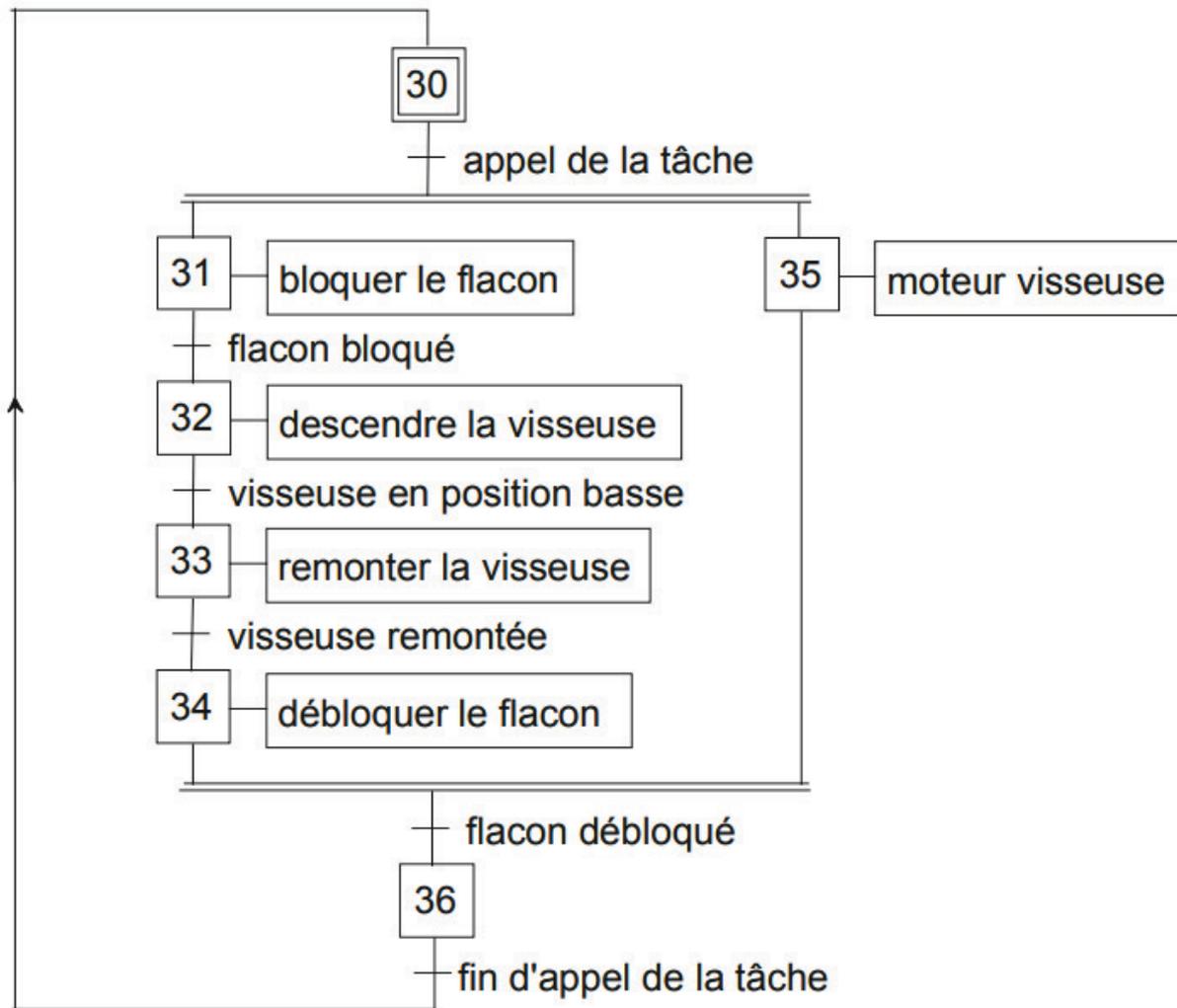
8.2.1. Transfer task



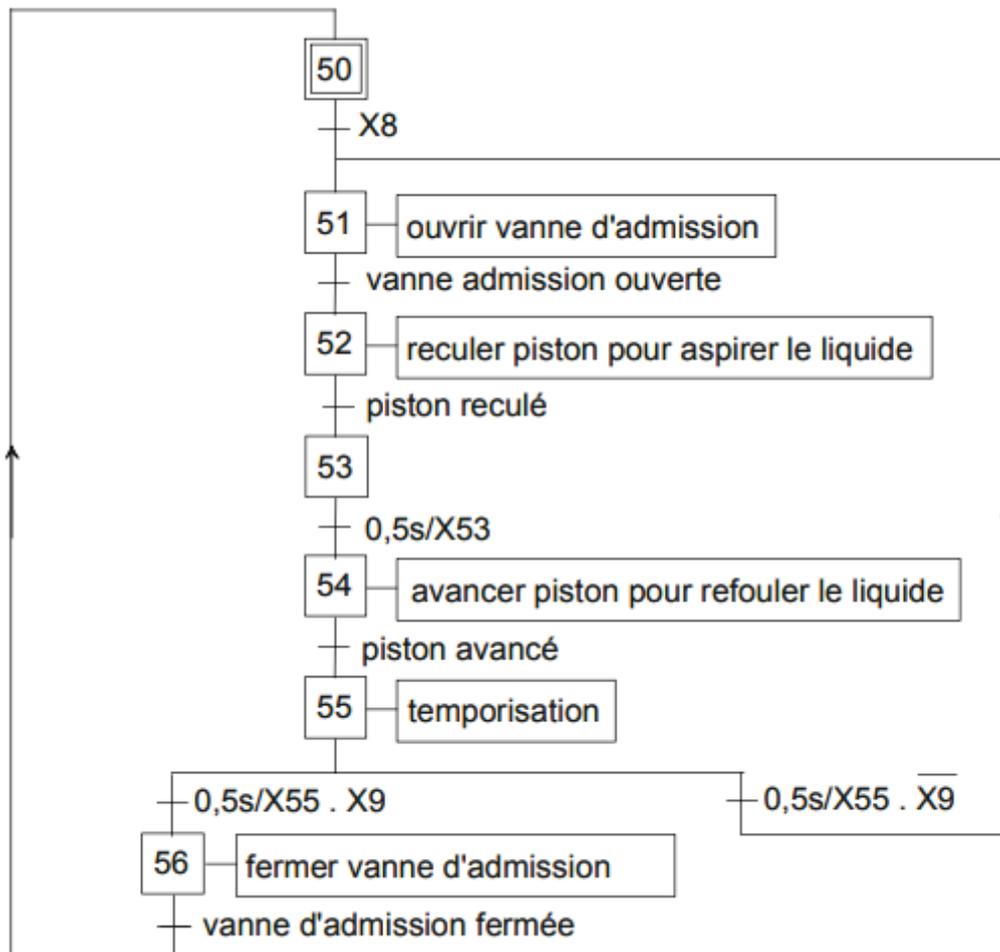
8.2.2. Filling task



8.2.3. Screwing task



8.2.4. Purge cycle



Index

C

Cylinder 10

H

Hose 9

M

Machine 7
Motor 11

R

Ramp 9

T

Tank 9

Scan the QR Code
to obtain
the e-manual:

