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# User manual

## Labo-Series Equipment

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A catalogue is available on request. Choose from a wide range of courses to acquire the skills or knowledge that is required to match your production requirements and objectives.

Our training courses can be delivered at your site or in the training centre at our Meylan head office.

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The French version is deemed the official text and Sames will not be liable for the translations into other languages.

## Labo-Series

### Equipment

1. Safety Regulations - - - - -	4
2. Description - - - - -	5
2.1. <i>General presentation</i> . . . . .	5
3. Characteristics - - - - -	5
3.1. <i>General characteristics</i> . . . . .	5
3.2. <i>Pneumatic characteristics</i> . . . . .	5
4. Operation - - - - -	5
5. Tools - - - - -	5
6. Installation - - - - -	6
7. Maintenance - - - - -	6
8. Troubleshooting Guide - - - - -	6
9. Spare parts- - - - -	7
9.1. <i>Tank</i> . . . . .	8

## 1. Safety Regulations



**WARNING :** This document contains links to the following user manual:

- [see RT Nr 7079 S](#) for the MG 400 spray gun for the CGU 400 control module.

**Note:** This tank is designed to operate in zones classified as ATEX 21 if used with a MG 400 spray gun. This device may be dangerous if it is not used in compliance with the safety regulations specified in this manual.



**WARNING :** This tank is an optional fitting for the MG 400 spray gun. It is intended for powder-paint spraying only.

- This device must only be used by personnel trained and accredited by SAMES Technologies. Operating staff must first read the user manual and the user manuals for any peripheral electrical equipment present in the spraying area. The workshop manager must ensure this is the case.
- The tank must only be filled with powder in a ventilated area designed for the purpose.
- Ambient temperature must not exceed 40 °C (104°F).
- The spraying area must be kept clean and clear of any unnecessary items.
- The floor on which the operator works must be anti-static (bare concrete or metal duckboard). Never use an insulating floor covering.
- Powder spraying must be carried out in front of a ventilated booth designed for the purpose. Start-up of the CGU 400 control module must be interlocked with operation of the ventilation system.
- Skin-contact with or inhalation of products used with this equipment may be dangerous for personnel (cf.: Safety sheets for products used).
- The parts to be painted must have a resistance with respect to ground that is less than or equal to 1MΩ.
- All conductive structures such as floors, walls of powder-spraying booths, ceilings, barriers, parts to be painted, powder distribution tank, etc. that are near the work station, and the ground terminal on the electro-pneumatic control module, must be electrically connected to the ground system protecting the electrical power supply.
- Powder-spraying equipment must be maintained regularly according to the instructions laid out in this manual.
- Only Sames Technologies original spare parts guarantee the operating safety of the equipment.

## 2. Description

### 2.1. General presentation

The Labo-Series equipment is intended for coating of small quantities of powder thanks to the MG 400 manual spray gun equipped with a tank. With a capacity of 0,5 litre, the tank is equipped with a powder pump which allows the spray gun supply by simple action on the trigger.

#### Mains components of the Labo-Series equipment:

- A MG400 spray gun ([see RT Nr 7079 S](#)).
- "Mach Cup" tank, itself made up of the following components.
  - a connecting part which allows the connection of the tank under the gun.
  - a powder pump.
  - a connecting part connecting the tank to the powder pump.
  - a powder tank.
- A CGU 400 control module.

## 3. Characteristics

### 3.1. General characteristics

Overall size of tank	180 x 180 x 80 mm
Tank weight (empty)	0.3 kg.
Tank capacity	0.5 l

### 3.2. Pneumatic characteristics

Characteristics of the compressed-air supply according to standard NF ISO 8573-1:

Maximum dew point at 6 bar (87 psi)	class 4, i.e. + 3 °C (37 ° F)
Maximum particle size of solid contaminants	class 3, i.e. 5 µm.
Maximum oil concentration	class 1, i.e. 0.01 mg/m <sub>0</sub> <sup>3</sup> *
Maximum concentration of solid contaminants	5 mg / m <sub>0</sub> <sup>3</sup> *

\* : air flow-rate values are given for a temperature of 20°C (68°F) and an atmospheric pressure of 1013 mbar.

## 4. Operation

Powdered paint contained in the tank is transported by the powder pump to the spray gun.

## 5. Tools

No specific tools.

## 6. Installation

see [RT Nr 7079 S](#) for connections and settings of powder flow-rate.

- **Step 1:** connect the injection air tubing:
  - To the CGU 400 control module ([see RT Nr 7079 S](#)).
  - To the powder pump.
- **Step 2:** connect the air dilution tubing:
  - To the CGU 400 control module ([see RT Nr 7079 S](#)).
  - To the powder pump.
- **Step 3:** Open the tank and fill it.
- **Step 4:** Close the tank.
- **Step 5:** Fit the tank union on the powder supply fitting of the spray gun.
- **Step 6:** Secure the tank to the gun by using the fixing clamp and tighten the M3x10 screw.

## 7. Maintenance



**WARNING :** Cleaning operations must only be carried out using compressed air of maximum pressure 2.5 bar and a cloth. Water and solvents must not be used to clean the equipment.

The equipment must be cleaned at the end of each shift.

Part	Action	Frequency
Powder pump	Clean with compressed air	Once a day

The tank must be cleaned every time the colour is changed.

## 8. Troubleshooting Guide

Symptom	Likely cause	Remedy
The powder comes out unevenly	Blocked hole on the lid	Unclog the lid using air compressed
The powder does not come out	Stopped hole on the lid	Unclog and clean

## 9. Spare parts



Item	Part Number	Description	Qty	Sale Unit	Spare part Level (*)
	EU750160002S	Labo-Series ATEX version	1	1	3
	EU750160002SFM	Labo-Series FM version	1	1	3
1	EU73019002S	MG 400 spray gun, ATEX version (see RT Nr 7079 S)	1	1	3
	EU73019002SFM	MG 400 spray gun, FM version (see RT Nr 7079 S)	1	1	3
2	EU72095004	Tank (see § 9.1 page 8)	1	1	2
3	EU72024002S	CGU 400 control module ATEX version (see RT Nr 7079 S)	1	1	3
	EU72024002SFM	CGU 400 control module FM version (see RT Nr 7079 S)	1	1	3

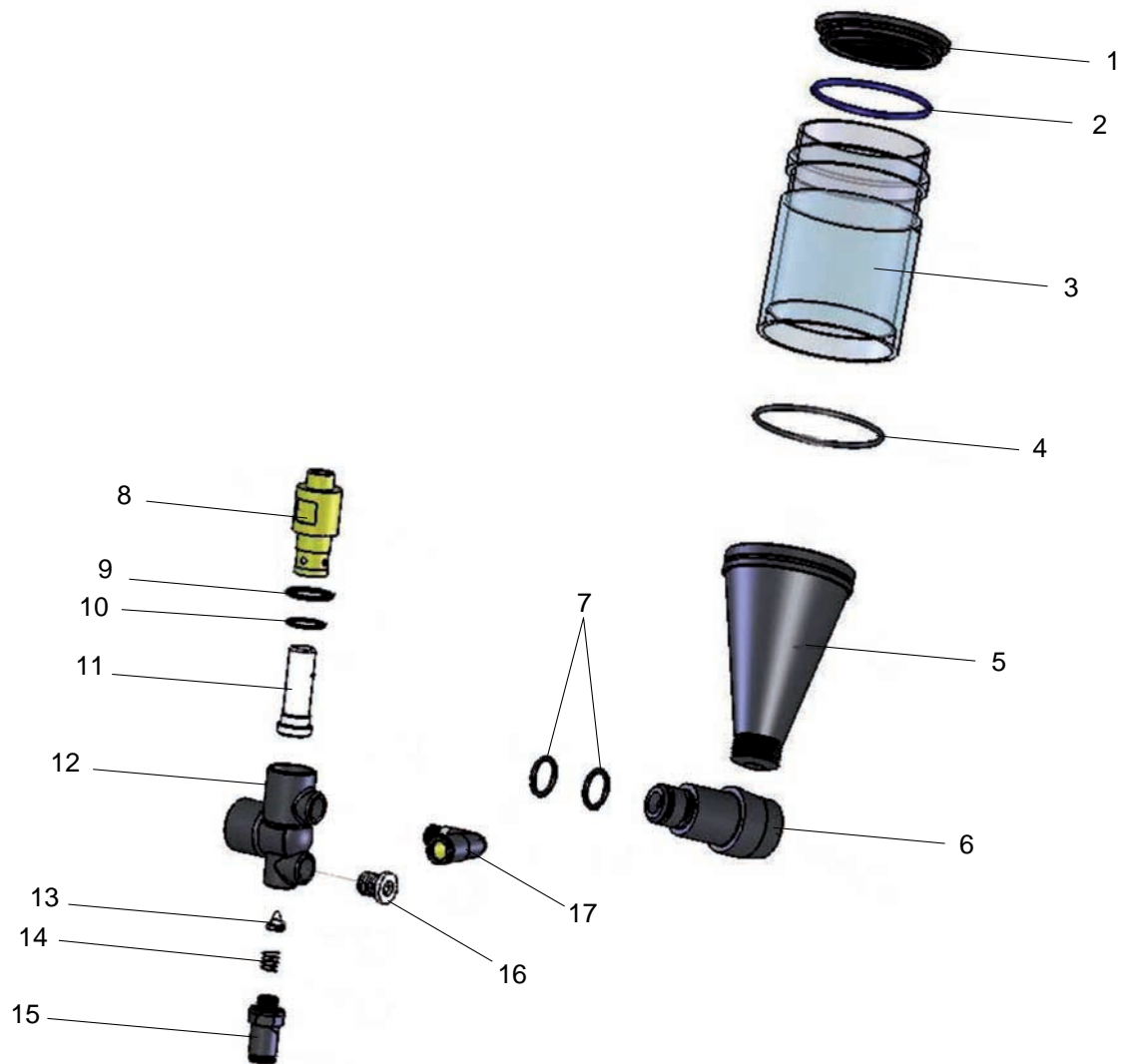
(\*)

Level 1: Standard preventive maintenance

Level 2: Corrective maintenance

Level 3: Exceptional maintenance

## 9.1. Tank





Item	Part Number	Description	Qty	Sale Unit	Spar part Level (*)
	<b>EU72095004</b>	<b>Tank</b>	<b>1</b>	<b>1</b>	<b>2</b>
1	EU2095032	Tank Lid	1	1	2
2	EU9001936	O-ring	1	1	1
3	EU2095030	Tank, upper part	1	1	3
4	EU9001935	O-ring	1	1	1
5	EU2095029	Tank, inner part (cone)	1	1	3
6	EU2095025	Pump fitting	1	1	3
7	EU9001863	O-ring	2	1	1
8	EU2095028	Pump body	1	1	3
9	EU2095027	Earthing disc	1	1	3
10	EU9001861	O-ring	1	1	1
11	EU2095026	Venturi Insert	1	1	1
12	EU2095010	Venturi body	1	1	3
13	EU2095031	Venturi injector	1	1	1
14	EU9001855	Spring, compression	1	1	2
15	EU9000041	Straight union 1/8" for tubing 6 mm	1	1	2
16	EU9001874	Plug, 1/8 bsp	1	1	3
17	EU9000031	Elbow union	1	1	2
<b>Not shown</b>					
	U1GRBW198	Red polyurethane tubing, 4x6 mm (injection)	3	m	2
	U1GLBT152	Blue polyurethane tubing, 4x6 mm (dilution)	3	m	2
	EU9000084	Black polyurethane tubing, 4x6 mm (spray gun air)	3	m	2

(\*)

**Level 1: Standard preventive maintenance**

**Level 2: Corrective Maintenance**

**Level 3: Exceptional Maintenance**