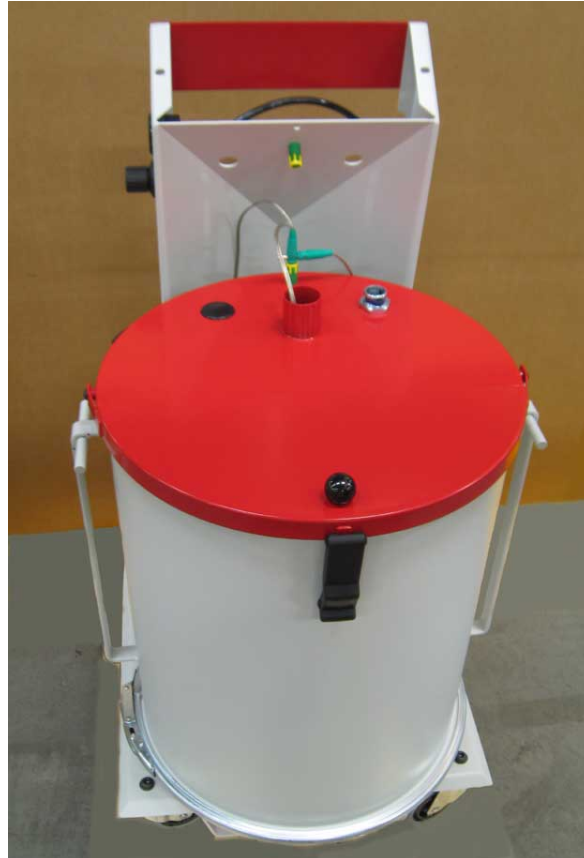




From February 1st, 2017 SAMES Technologies SAS becomes SAMES KREMLIN SAS  
A partir du 1/02/17, SAMES Technologies SAS devient SAMES KREMLIN SAS



# User manual

## E-SERIES Cart with tank

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# E-SERIES

## Cart with tank

1. Health and safety instructions- - - - -	4
2. Description - - - - -	5
2.1. <i>General presentation</i> . . . . .	5
2.1.1. <i>Tank</i> . . . . .	5
2.1.2. <i>Control panel</i> . . . . .	5
3. Characteristics - - - - -	6
3.1. <i>General characteristics</i> . . . . .	6
3.2. <i>Pneumatic characteristics</i> . . . . .	6
4. Operation - - - - -	6
5. Tools - - - - -	6
6. Installation - - - - -	7
6.1. <i>Set up procedure</i> . . . . .	8
7. Troubleshootings - - - - -	8
8. Spare parts- - - - -	9
8.1. <i>Cart with tank</i> . . . . .	9
8.2. <i>Tank</i> . . . . .	11

## 1. Health and safety instructions



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

- [see RT Nr 7079 S](#) for MG 400-AG 400 spray guns and CGU 400 control module.

**Note:** This device complies with the ATEX directive. It may be dangerous if it is not used in compliance with the safety regulations specified in this manual.



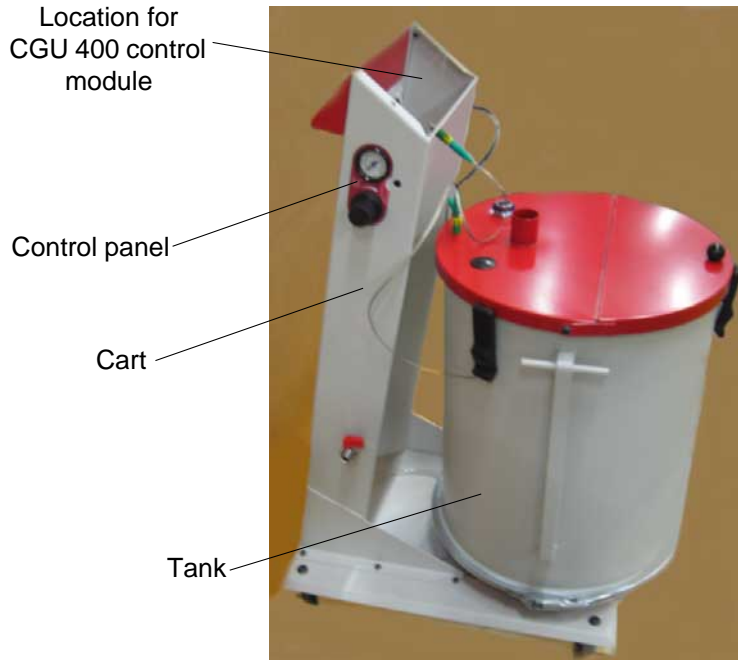
**WARNING :** This cart is intended for use with powder-paint spraying apparatus only (MG 400 manual spray gun and AG 400 automatic spray gun).

- 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 cart must always be installed and used in areas where there is no risk of explosion.
- It is essential to connect the bonding strip under the tank and to connect the CGU 400 control module to the ground to guarantee the safety of operators and correct operation of the powder-coating equipment.
- When a tank is used, it is imperative to evacuate fumes in a zone where air charged with powder is filtered.
- The tank must be filled in a ventilated area designed for the purpose and under no circumstances anywhere near the cart.
- Under no circumstances may the cart be used to carry or transport loads other than the powder tank with a maximum weight of 25kg. The tank normally is used installed on the lower part of the cart. It is imperative electrically to connect the tank to the ground with the provided ground cable.
- 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.
- Powder-spraying equipment must be maintained regularly according to the instructions laid out in this manual.
- Only genuine Sames Technologies spare parts can guarantee operating safety for the equipment.
- Genuine SAMES hoses must be used to connect the powder pump.

## 2. Description

### 2.1. General presentation

The convenient, compact size of the cart makes it easy to manoeuvre and move, with four freely-steerable wheels. The MG 400 manual spray gun is fixed to the cart by a hook. The cart also includes the CGU 400 control module.



#### 2.1.1. Tank

It is designed to supply powder to one or two powder spray guns  
Its maximum capacity is 50l useful or 25kg of powder.

It is fitted on the cart at a slight angle, in order to ensure the powder is fully taken up, even from the bottom of the box.

The powder pumps are spring clip mounted for quick release allowing the suction tube and the powder pump itself to be cleaned if a colour change is required.

#### 2.1.2. Control panel

Item	Function
1	Fluidisation air flow-rate adjustment (plunger tube)



### 3. Characteristics

#### 3.1. General characteristics

Because of the structure of the cart:

- a box with a weight of approximately 30 kg (66 lb) and with maxi. dimensions of 430 x 430 x 430 of powder can be placed on a vibrating table.

Cart dimensions (h x w x d)	1080 x 450 x 620 mm
Approximate weight (without powder)	40 kg.
Operating temperature	from 0°C to 40°C (32°F to 104°F).

#### 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 <sup>3</sup> *
Maximum concentration of solid contaminants	5 mg / m <sup>3</sup> *

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

Cart air supply pressure	7 bar max (101.5 psi)
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Powder maximum flow-rate: variable until 500g/min

"Fluidisation" air: until 4 bar (58,8 psi) max.

### 4. Operation

Powder contained in the tank is fluidized by means of an ascending current, distributed in a homogeneous way from the porous plate located at the bottom of the tank. The fluidisation may be adjusted to provide the most effective fluidity relative to powder level.

The powdered paint, fluidised in this way, is then carried by an air jet from the powder pump to the spray gun to which it is connected by a powder-carrying hose.

### 5. Tools

No specific tools.

## 6. Installation



**WARNING :** This equipment must be imperatively connected to the ground.



- Carefully remove units and components from packaging, and check contents against packing list.
- Install the cart in a secure manner and placed at least 1,5 m of any opening of the booth ([see RT Nr 7079 S](#)). Secure the CGU 400 control module on the cart using the two M6 x 10 screws and the two locking washers with a 5mm allen wrench.
- Connect the airlines to the outlet ports of the rear panel of the Gun Control Unit as follows : ([see RT Nr 7079 S](#) for the rear panel illustration and key to symbols).
  - 1 Red airline from Venturi Jet to the 'Powder Delivery Air Supply Output'.
  - 2 Blue airline from Venturi Dilution Port to the 'Powder Dilution Air Supply Output'.
  - 3 Black airline from the Guns to the 'Gun Air Supply Output'.

**Equipment with tank**, connect the colorless airline from the tank regulator (monted on the side of the cart) to the "Tank Air supply output " at the bottom right hand corner of the control module.

NOTE: The powder pump is identified by a Red washer & the Dilution Port by a Blue washer.

- Connect the black airline (Dia: 8mm) to the centre right hand air fitting on the rear of the gun control module ([see RT Nr 7079 S](#)).
- Insert the suction tube through the lid of the fluidised tank until it latches into position.
- Fit the powder pump to the top of the suction tube and connect the airlines as follow:
  - 1 Red airline to "Powder delivery" air fitting at the top rear of the powder pump (the sealing washer of this fitting is red).
  - 2 Blue airline to "Powder dilution" air fitting at the top centre of the powder pump (the sealing washer of this fitting is blue).
- Secure the gun hook to the side of the gun control module using the M 6x 50 socket cap head screw.
- Connect the powder hose to the powder pump.
- Connect an air supply hose to the ball valve mounted on the side of the cart.

## 6.1. Set up procedure

- **Step 1:** Ensure that all switches are in the OFF position and that all pressure regulators are closed, (the knobs should be turned fully anti-clockwise). The knob of the pressure regulators are unlocked by pulling outwards and locked by pressing inwards.
- **Step 2:** Place powder in the fluidised tank, but do not overfill as the non-fluidised powder may rise by as much as 100% in some instances.
- **Step 3:** Open the ball valve on the left hand of the cart and adjust the pressure regulator on the left hand side of the cart until approximately 0,35 - 0,68 bars (5 -10psi) is indicated on the pressure gauge. When air bubbles are evenly distributed over the surface of the powder, turn the pressure down to the minimum level which will maintain a gentle "simmering" with small evenly distributed bubbles over the surface of the powder.
- **Step 4:** Turn on the "Mains Electrical" (third on the right) switch of the control module to the position marked  The numerical display of set value and the mode indicator lights.  
  
High voltage is enabled.
- **Step 5:** In the spraying booth, press the trigger of the spray gun. A red LED lights next to the "T" symbol on the display.  
To set up the spraying: [see RT Nr 7079 S](#).

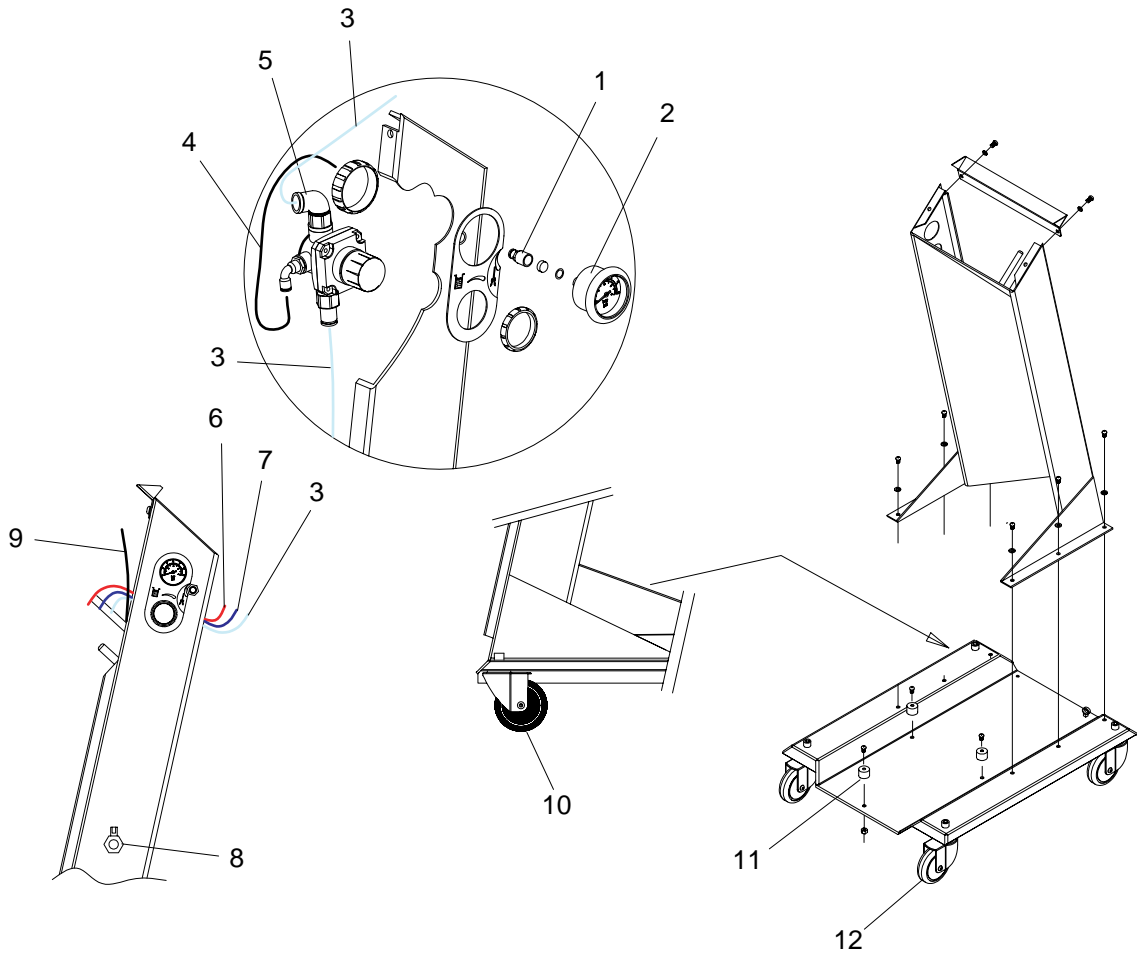
## 7. Troubleshootings

[see RT Nr 7079 S](#)



## 8. Spare parts

### 8.1. Cart with tank



Item	Part Number	Description	Qty	Sale Unit	Spare Part Level (*)
	<b>EU75008004S</b>	<b>E-Series Cart with tank</b>	<b>1</b>	<b>1</b>	<b>3</b>
1	EU9000052	Female straight union 1/8 Dia: 4	1	1	3
2	EU9001879	Pressure gauge (4 bars)	1	1	3
3	EU9000170	Colorless polyurethane 4x6 hose	1,5	m	3
4	EU9000203	Black polyurethane 2.5x4 hose	0,25	m	3
5	EU75009007	Regulator 4 bar	1	1	3
6	U1GRBW198	Red polyurethane 4x6 hose	1	m	3
7	U1GLBT152	Blue polyurethane 4x6 hose	1	m	3
8	EU9001892	1/4 ball valve	1	1	3
9	EU9000171	Black polyurethane 5.5x8 hose	0,75	m	3
10	EU9000064	Conductive rubber pivoting roller Dia:75	1	1	3
11	EU9001915	Damper	3	1	3
12	EU9000065	Rubber pivoting roller - Dia:75	3	1	3

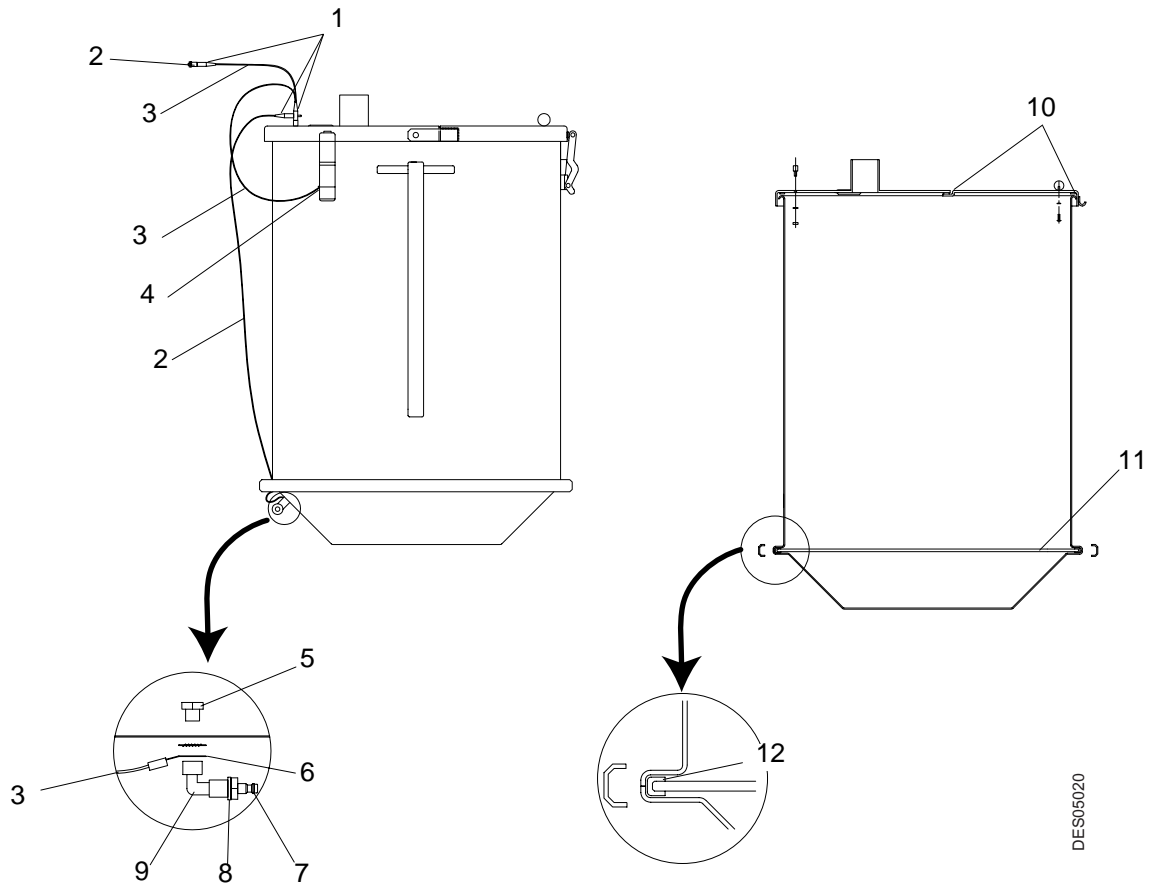
(\*)

**Level 1: Standard preventive maintenance**

**Level 2: Corrective maintenance**

**Level 3: Exceptional maintenance**

## 8.2. Tank



DES05020

Item	Part Number	Description	Qty	Sale Unit	Spare Part Level (*)
	<b>EU75008003S</b>	<b>Tank</b>	<b>1</b>	<b>1</b>	<b>3</b>
1	EU9000114	Green banana plug, Dia.: 4mm	3	1	3
2	EU9000113	Ground terminal	2	1	3
3	EU9001064	Bonding strip - 30A	1,5	m	3
4	E4CSPR080	Blue lug	1	1	3
5	130000818	Male/ female reducer fitting	1	1	3
6	110001253	Yellow round lug	1	1	3
7	EU9001083	Quick release fitting 1/8	1	1	3
8	EU9000852	White washer 1/8	1	1	2
9	EU9000189	Elbow fitting 1/8 BSP	1	m	3
10	EU9001838	Seal strip self adhesive 15x 5mm	1,7	m	1
11	EU75000006	Porous plate	1	1	1
12	EU75000033	Fluidisation seal	1	1	1

(\*)

**Level 1: Standard preventive maintenance**

**Level 2: Corrective maintenance**

**Level 3: Exceptional maintenance**