

**SAGOLA**   
an Elcometer company

# SAGOLA 3000 ZEUS

Spray gun • 噴槍



instruction manual  
使用說明書

**SAGOL**

an Elcometer company



**Original version in Spanish**

**OPERATING AND MAINTENANCE INSTRUCTIONS  
FOR SPRAYING EQUIPMENT**

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## 01. Warning



Before starting the unit you must read, take into consideration and comply with all the indications described in this Manual.









This manual must be kept in a safe place, accessible to all users of the unit.

The unit must be started and handled exclusively by personnel instructed in its use and must be employed only for the purpose for which it was designed.

Likewise, accident prevention standards, regulations, work centre directives and current legislation and restrictions must be taken into consideration at all times.

The logotypes of SAGOLA and other SAGOLA products mentioned in this manual, are registered trademarks or brand names of the company **SAGOLA S.A.U.**

## 02. Meaning of the pictograms

			
Refer to the manual/ instruction leaflet	Important information	Danger (user)	Safety glasses is mandatory
			
Hearing protection	Mandatory respiratory protection	Gloves required	Sprayed product

## 03. Introduction

This unit belongs a the family of devices designed to spray products with compressed air with a spray gun, providing a high level of product transfer ( $T > 65\%$ ) and excellent quality finish, as well as low levels of contamination.



The equipment consists of the following:

- Spray gun
- Cleaning brush
- Case
- Accessory wrench
- Instruction manual Web

## 04. Technical details

Spraygun with **product-feed by gravity with Tip and Air Nozzle** of the type described in the packaging.

Product cups:

<p>Plastic cup with non-drip cap</p>  <p>650 ml</p>	<p>Metal cup with lid</p>  <p>1 litro</p>	<p>SAGOLA DPC disposable paint cups</p>  <p>100 ml 200 ml 400 ml 600 ml 800 ml</p>
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**SAGOLA 3000 ZEUS Technical details**

**SAGOLA 3000 ZEUS**

**3000  
ZEUS**

<b>Weight (without cup)</b>	<b>474,8 g.</b> <b>1.05 lb.</b>
<b>Weight (with cup)</b>	<b>662,4 g.</b> <b>1.46 lb.</b>
<b>Dimensions</b>	<b>182 x 19 x 178 mm.</b> <b>7.16 x 0.75 x 7.05 "</b>
<b>Air inlet</b>	BSP 1/4" M
<b>Temperature range</b>	from <b>0 to 60 °C</b> from <b>32 to 140 °F</b>
<b>Product inlet</b>	M12 x 1,5" F
<b>Maximum Air pressure</b>	<b>8 bar</b> <b>116 psi</b>
<b>Recommended air pressure</b>	from <b>1.4 to 2.2 bar</b> from <b>20.3 to 31.9 psi</b>
<b>Recommended air pressure HVLP</b>	<b>1.8 bar</b> <b>26 psi</b>
<b>Materials in contact with product</b>	Anodized aluminum, STAINLESS steel, PTFE, POM and Nylon
<b>Recommended EPA aircaps application distance</b>	from <b>15 to 20 cm.</b> from <b>5.9 to 7.9 inches</b>
<b>Recommended HVLP aircaps application distance</b>	from <b>12 to 15 cm.</b> from <b>4.7 to 6 inches</b>

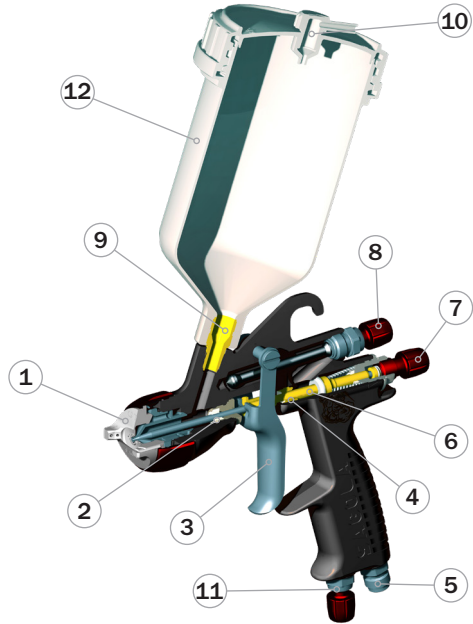
**ATEX Normative**

<b>Community Directive</b>	<b>2014/34/UE</b>
<b>NON Electric equipments</b>	<b>CE  II 2G T4 x (*)</b>

(\*) Non electric gun in explosion hazard areas (ATEX) must have the earthing connections and/or static-free feed hoses.

## 05. Components

- ① Air nozzle
- ② Head packing gland
- ③ Trigger
- ④ Valve packing gland
- ⑤ Air inlet
- ⑥ Air valve
- ⑦ Product regulator
- ⑧ Spray width regulator
- ⑨ Product filter
- ⑩ Non drip plug
- ⑪ Air flow regulator
- ⑫ Product Cup



## 06. Warnings

**Before putting the unit into operation**, and especially after each cleaning and/or repair operation, a check must be made that the gun **components** are **securely tightened** and that the air and/or product **hoses** are **airtight** (no air leaks). Faulty parts must be replaced or repaired as appropriate.

The gun is **easy to handle** thanks to its design and the simplicity of its mechanisms. **No special training** is required for handling the gun. Use the gun according to the **operating, maintenance and safety instructions** indicated in this manual and follow the **application methods** indicated to obtain the required quality of finish.

**Before putting the unit into operation**, we recommend you to **clean the gun** as this has been subjected to functional tests and before packaging it is treated internally with a protective coating, some of which may still remain. **Apply thinner** to eliminate this. Remove any residual grease applied during assembly.

**Ensure that the products to be applied are chemically compatible with the components these come into contact with** (Anodised Aluminium, stainless steel, PTFE, POM and Nylon).

**Do not use corrosive or abrasive products.**

**The gun has been designed for long service** and can be used with the majority of the products available on the market. **Its use with highly aggressive products will quickly increase the need for maintenance and spares.** If you need to apply special products, please contact **SAGOLA S.A.U.**

Read and apply all the **information, instructions and safety measures** indicated by the **manufacturer of the products to be applied** (thinners, etc.) as these may **provoke chemical reactions, fires and/or explosions, or be toxic, irritant or harmful** and in all cases **dangerous for the health and personal safety of the user and of other persons nearby** (see chapter on Safety and Health).

**Mix, prepare and filter the product to be applied** in accordance with the manufacturer's instructions, ensuring that any foreign bodies are prevented from spoiling the quality of finish and application. Should there be any doubt relating to the purity of the product, its composition, etc., please contact your supplier.

Control the **viscosity of the product** to be applied with the SAGOLA Viscosimeter - Código 56418001



## 07. Useful tips

### 07.1.- General advice

You are recommended to **use the gun with the product regulator open (without removing it completely from its housing)** in order to minimise wear to the fluid tip and needle and to ensure maximum amplitude.



**Use the lowest spray pressure in the nozzle that allows you to obtain the required finish. Not all products require the maximum pressure for correct spraying. With a lower pressure, less air is consumed and there is an additional increase in product transfer.**

**The gun leaves the factory ready to spray products correctly with the air nozzle corresponding to each application. It is adjusted to an air inlet pressure of 2 bar to ensure maximum performance.**

Pay special **attention to the application speed**. The thickness of the film deposited may be greater than planned if the application speed is low, and the opposite is also true..

**If the thickness of the layer is very thin**, this is due to the fact that the **air pressure is excessive** for the amount of product being applied. **Reduce the air pressure** in the gun in order to ensure that the solvent in the paint does not evaporate during spraying and that this is not dry when it reaches the surface to be painted. **Increase the amount of product, correct its viscosity or use a larger fluid tip in the gun.**

**If the film is thick**, this is due to the fact that the air pressure is excessive for the amount of product to be applied. **Decrease the amount of product, reduce its viscosity** or use a smaller fluid tip in the gun.

**If sagging occurs**, this is due to the fact that the amount of product to be applied is excessive for the air pressure used, that the viscosity is not correct or the application speed is not adequate. **Decrease the amount of product, adjust its viscosity or increase the application speed** until the required finish is obtained.

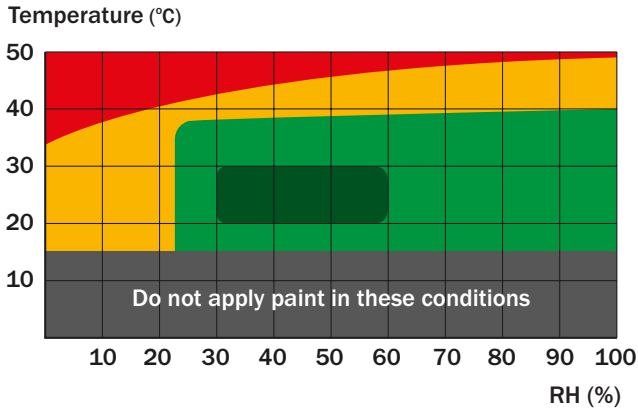
The **spraying width** (spraying pattern) obtained will depend on the **air nozzle used**. **If nozzles are required for other applications, contact the Technical Service of SAGOLA S.A.U.**

The **size or amplitude** of the spraying pattern **can be modified with the spray width regulator**, by turning the control anticlockwise to increase this or clockwise to reduce this.



**07.2.- Tips for application in different climatic zones**

Paint application, especially waterborne paints.



Extreme climate fan pattern

- **Extreme climate conditions:** The use of additives in the paint may be required (see paint manufacturer specifications).

- **Recommendations:**

- Increase the peak size from 0.1 to 0.2 mm. compared to the one used in normal conditions.
- Reduce the size of the fan by making it more rounded and with a central core more loaded with product.

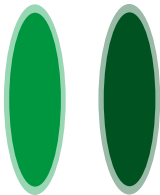


Critical climate fan pattern

- **Critical climate conditions:** The use of additives in the paint may be required (see paint manufacturer specifications). Reduction of the fan and increase of the spray core in a critical climate.

- **Recommendations:**

- Reduce the dynamic pressure between 0.2 and 0.5 bar compared to that used in normal conditions.
- Increase the size of the peak from 0.1 to 0.2 compared to that used in normal conditions.
- Increase the product load in the central core of the fan.



Standard fan pattern    Optimum fan pattern

- **Non-critical climate conditions:** The use of additives in the paint may be required (see paint manufacturer specifications).

- **Recommendations:** Standard fan pattern.

- **Optimum climate conditions:**

- **Recommendations:** Optimum fan pattern.



## 08. Functional Description of the Equipment

The **SAGOLA** gun model **3000 ZEUS** can be used for applying appropriately diluted products (paints, lacquers, varnishes, adhesives, etc.), used widely in the **automotive industry, timber industry, plastics, etc.**

**Compressed air** for spraying is connected to the **air input connector** under the gun grip.

The **product** to be applied is placed in the **cup** provided for this purpose, from which it flows by **gravity** to the **fluid tip** and is then mixed with spraying air in a way that can be controlled from outside the air nozzle.

**When the trigger is pulled back** to the first position, it engages the air valve stem, opening this and allowing **air to flow through**.

**When the trigger is pulled back fully**, the product needle is retracted, **allowing the product to flow out**. This is then sprayed in the form of a fan.

**When the trigger is released**, the needle returns to its **initial position**, first closing off the product outlet and then the air valve and **application stops**.

## 09. Tips and Needles Kits

**SAGOLA** supplies **Nozzle Kits and Tip and Needle Kits** of different sizes for a variety of different applications. In order to replace these, proceed as follows:

**With the gun fully depressurised, remove the air nozzle.**

**Remove the Product Regulator** with the **spring** and the **spring stop** and **extract the needle** to be replaced. **Remove the tip** with the wrench supplied.

**Fit the new tip and tighten.** Now **fit**, in this order, the **new needle**, the **spring** and **spring stop** and the **product regulator**. Lastly, **fit** the appropriate **air nozzle**.

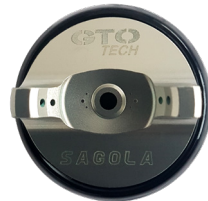
There are **Tip + needle Kits** for this model of **Ø 1.20, 1.30 and 1.40**.



## 10. Air Nozzle Kits

Air Nozzle Kits: **GTO TECH**.

	<b>GTO TECH</b>
<b>Air consumption</b> <i>L/min</i>	<b>285 L/min</b>
<b>Pressure</b> <i>Bar</i>	<b>2 Bar</b>



## 11. Start-up

**Before each start-up** and especially after cleaning or repairing the unit, a check must be made that all its **elements are securely tightened**.

**If maintenance or repair work is to be carried out**, the **gun must be depressurised** before work begins (**without air pressure**). Should this **safety measure not be observed**, this may lead to **malfunctions, personal injury and accidents, which may prove to be fatal**. **SAGOLA S.A.U.** does not accept any responsibility for the consequences of any non-compliance with these safety regulations.



**Fig.01**



**Fig.02**

**Open the spray width and product regulators** completely (without removing these from their housing) by turning these anticlockwise. (See Fig.01 and Fig.02)

Place the pistol on a support so that the axis of the tank is vertical. Pour the product to apply into the tank. Until the level is a maximum of 20-25 mm below the edge of the tank.

**Tighten the filler cap firmly**. In the version with the non-drip cap, tip it forward (paint up) or back (paint down) as necessary.

**Connect the gun to the compressed air network.**

**Adjust the air pressure in the network regulator** in order to compensate for any pressure drop in the network (estimated at 0.6 bar for each 10 m. of hose).

**Adjust the air pressure in the air nozzle by operating the flow regulator** until the required quality of finish is obtained (better finishes are not obtained with higher spraying pressures and these lead to lower performance and worse product transfer).

**Position the air nozzle spraying orifices appropriately** (when an imaginary line is drawn through the 2 lugs, this must be parallel or perpendicular to the floor) (Fig.04). Fully close the product regulator by turning it clockwise; and perform the desired application test, adjusting the product regulators and range as follows:



**Fig.04**

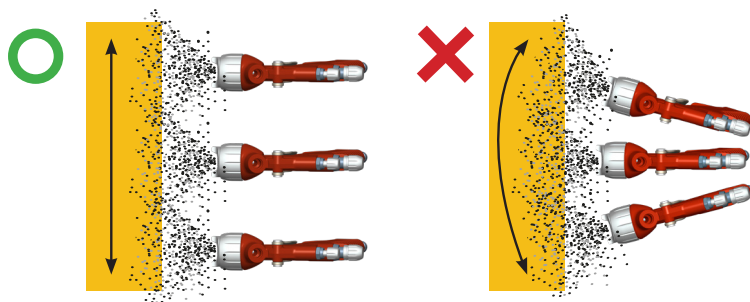


**Fig.05**



**Fig.06**

**Open the product regulator** until the appropriate amount of product comes out. Now you have the maximum spraying width (spraying pattern). You can reduce this according to your needs by closing the spray width regulator. (see Fig.05 and 06)



Please be sure that you put the spray gun properly by keeping its perpendicularity to the piece to be painted in order to achieve the maximum transfer of the sprayed product and obtain the best finishing quality

### 11.1.- Clean Air

The air used for spraying must reach the gun free of impurities, aerosols, oil, silicone and solid particles. To do this you must eliminate these with coalescent filter units.

The use of air treatment equipment with built-in pressure regulators is recommended (SAGOLA 5200X, 5300X or 5300X Plus models).

### 11.2. Sufficient volume of air

A sufficient volume of air can be supplied to the gun by means of an air compressor of adequate power (1HP equals 110 L/min approximately), a good compressed air network and by avoiding pressure drops through the use of antistatic, silicon-free air hoses with a minimum inside diameter of 8 mm. and resistant to the spraying air pressure (minimum 20 bar) and to the aggressive effects of paint solvents. Before assembling the air network, you must check on the air tightness of the hose.



Use antistatic air hoses. Should an antistatic air hose not be available, you must attach the unit to a ground connection in order to eliminate any static electricity.

The total derivative resistance must be <1 million Ohms.

### 11.3. Adjusting Air Pressure



The gun leaves the factory with the internal flow regulator fully open. In order to adjust this to the required pressure, turn the regulator clockwise to reduce the inlet pressure and anticlockwise to increase this.

#### 11.4. Amount of Product to be applied



Once the product to be applied has been adequately **diluted**, turn the **Product Regulator** clockwise to reduce the amount of product and anticlockwise to increase this.

During application, **the amount of product** applicable in areas that are small or difficult to access **can be reduced by reducing the pressure applied with one's finger**.

#### 11.5. Application distance



**Adjust the distance between the air nozzle and the object to cover to between 10 and 20 cm.**, depending on the application, in accordance with this, the product to be applied and working conditions, in order to increase transfer and obtain a reduction in the amount of mist in accordance with the air nozzle used in each case.

### 12. Maintenance

In order to carry out maintenance, repairs or cleaning, first **disconnect the unit from the compressed air distribution network**.

**Do not apply excessive force or inadequate tools for maintaining and cleaning the unit. Some repairs must be done with special tools on some occasions.**

In these cases, you must contact the **Customer Service of SAGOLA**. Any handling of this product by non-authorized personnel would render the warranty null and void.

**The unit must be overhauled on a periodic basis** to check the status of its components and replace these when they are not in perfect condition.

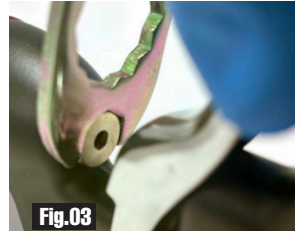
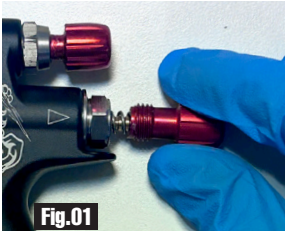


**In order to obtain the best possible results, always use ORIGINAL SPARES. ensure total interchangeability, safety and operation.**

#### 12.1. Changing the self-adjusting Packing gland

The **needle gaskets** (packing gland) that form part of the packing gland are gun components that should be **replaced when malfunctions occur or when there is a loss of air tightness**.

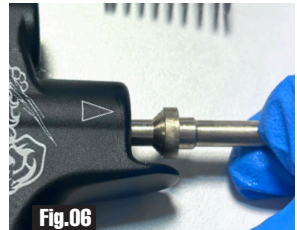
• **Gun head packing gland:** In order to replace the packing gland, remove the product regulator (No.20) (see Fig.01), and extract the product needle and spring fitted with its stop (see Fig.02). With a 13 mm. fixed wrench, remove the packing gland to be replaced. Replace the packing gland and reassemble in the reverse order (see Fig.03).



• **Changing seat valve:** For removal of the valve seat; remove the product regulator and extract the product needle and spring fitted with its stop. (See Fig.01 and 02). With a 9 mm Allen wrench, remove the guide box, extracting the valve spring and the valve (see Fig.04 , 05 and Fig.06).

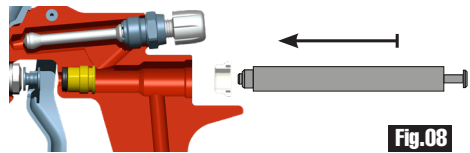
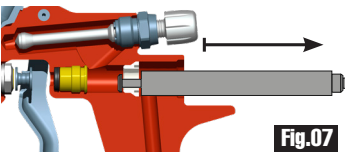
After take the key assembly supplied with the gun and proceed to remove the valve seat with hook key. (See Fig.07 and 08)

For **assembly**, follow the **reserve procedure**. (see Fig.08)



• **Packing gland of the air valve:** Remove the product regulator and extract the product needle and spring fitted with its stop (see Fig.01 and 02). With a 9 mm. Allen wrench, remove the guide box, extracting the valve spring and the valve (see Fig.03, 04, 05 and 06).

Them with a 6 mm. Allen wrench, remove the packing gland and extract the gasket (see Fig.09 and 10). Replace the packing gland and the washing support gasket (supplied in the specific kit) and follow the reverse procedure.



## 12.2. Cleaning or replacement of the product filter

If there is any cleaning liquid or product remaining in the tank, return it to its corresponding containers. To avoid any spillage, **keep the pistol in a vertical position** and clean as thoroughly as possible.

Holding the pistol firmly by the handle, **disassemble the tank by unscrewing it from the body of the pistol**.

**Extract the product filter** and if there is any cleaning liquid or product remaining in the body of the pistol, return it to its corresponding container.

**Clean or replace the product filter** as needed, taking into account that the impurities will cause defects in the finish and/or obstructions.



**Assemble the product filter again, inserting it all the way into the hole in the input connector.**

**Fit the tank by screwing it firmly onto the body of the pistol**, to avoid product leaks.

**Tighten the filler cap firmly.**

In the version with the non-drip cap, tip it forward (paint up) or back (paint down) as necessary.

**Check there are no leaks.**



### 13. Parts list

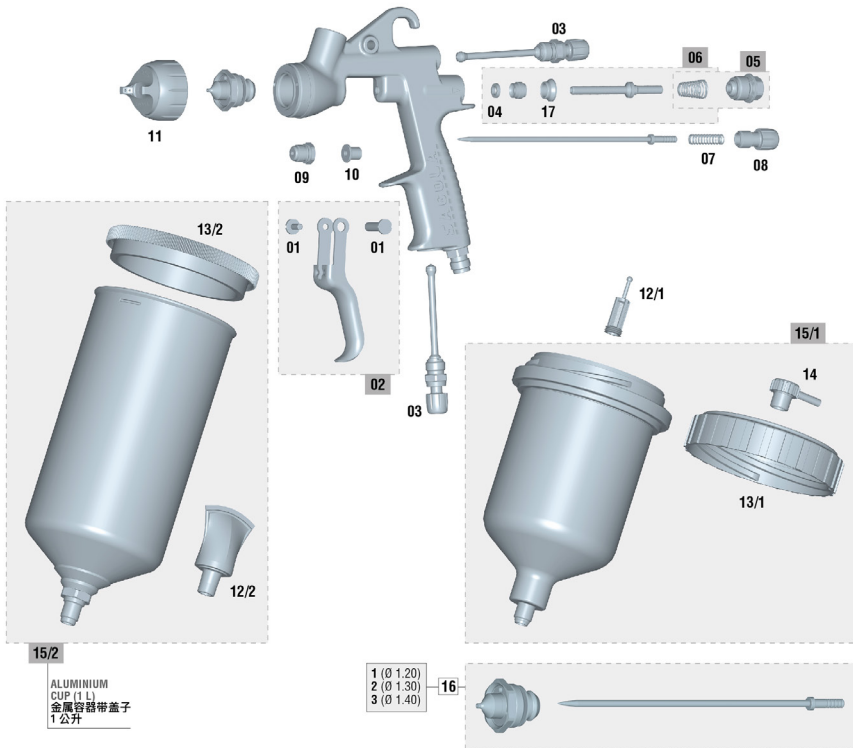
This drawing is not the bill of materials.

SAGOLA®  
an Elcometer company

Gravity spraygun • 重力噴槍

# SAGOLA 3000 ZEUS

edition / 版 00



(\*) min. 5 u.

No.	Code	U.	N°	Código	Ud.	N°	Código	Ud.	N°	Código	Ud.	N°	Código	Ud.
不。	法典	單位	不。	法典	單位	不。	法典	單位	不。	法典	單位	不。	法典	單位
01	56418429	1	06	56418669	1	11	56411166	1	14	55712157	1	16/3	10011181	1
02	56418637	1	07	56410072	1	12/1	56418438	1	15/1	56418085	1	17	54110012	1
03	56415265	2	08	57810355	1	12/2	56418003	1	15/2	56418082	1			
04	56418494	1	09	57212211	1	13/1	57111508	1	16/1	10011180	1			
05	56418701	1	10	51910608	1	13/2	57111513	1	16/2	10011191	1			

## 14. Cleaning

When work has been completed, both the gun and the product cup must be cleaned with the appropriate thinner, in order to remove any remaining product.

Empty the product cup and pour in the thinner, fit and close the cup cover.

Operate the mechanisms and spray the thinner until the application is clean. Repeat the operation as many times as may be necessary. Remove any remains of product from the gun and cup with a cloth soaked in thinner.

Keep air gasket areas free of accretions and foreign bodies.

The air nozzle is a precision component. Any deformation, especially in the air outlet orifices, may cause malfunctions in its operation and incorrect or deficient quality spraying. If necessary, dip the air nozzle in thinner in order to soften the remains of product or dirt. Once softened, blow the nozzle with compressed air until any remains of product and thinner are eliminated.

Should it be necessary to remove the air nozzle, do this with an appropriate, soft object, with great care and avoiding any marking or scratching.

Release the elastic ring that holds its components together.

Once disassembled, clean with thinner, using the cleaning brush supplied.



**DO NOT USE any hard or metallic object. The blocked orifices of the nozzle must not be cleaned with a sharp or hard object under any circumstances.**

Assemble the nozzle.

For automatic cleaning of the gun, tools and accessories used in the mixing and preparation of the product to be applied, we recommend the use of SAGOLA washing machines.

The gun can be cleaned with thinners or detergents in a gun washing machine. If you opt for this cleaning system, we advise you to remember the following considerations, which, if not applied, may damage the gun and render the warranty null and void:



- Do not submerge the gun in solvent or detergents longer than the time required for cleaning.
- Do not use the gun immediately after cleaning has been completed.
- Ensure that there is no thinner or detergent inside and that it is completely free of these substances. Other cleaning systems can be used (ultrasound).



## 15. Lubrication

The original lubrication of the gun is eliminated through use and cleaning. In order to guarantee perfect operation, **it is necessary to grease the regulating or fastening threads, friction areas, etc.**, on a periodic basis, especially after each cleaning session and with greater care if the gun has been cleaned in a machine. **Moving parts must be lubricated lightly after cleaning has been completed.**

**We recommend you to use a light SAE 10 oil or natural grease or vasoline.**

It is important to **check that the lubricant used does not contain components that might impair the spraying quality** (Silicones, etc.).



## 16. Health and Safety

In order to carry out maintenance, repairs or cleaning, **first disconnect the unit from the compressed air distribution network.**

- **Safe disconnection from the compressed air network:**

If there is any cleaning liquid or product remaining in the tank, return it to its corresponding container. If the pneumatic connector is fitted in the air inlet, disconnect the hose from the pistol. If it is not, depressurise the air hose properly and, using a spanner, unscrew the end of the hose from the air inlet connector, holding the pistol firmly.

- **Safe connection to the compressed air network:**

If the pneumatic connector is fitted in the air inlet, connect the hose to the pistol. If it is not, hold the pistol firmly and, using a spanner, screw the end of the hose into the air inlet connector. Check there are no leaks.

- **Safe disconnection of the product tank:**

Carry out the cleaning according to point 15. Disconnect the tank by unscrewing the product inlet connector, holding the body of the pistol firmly.

- **Safe connection of the product tank:**

Connect the tank by screwing on the product inlet connector, holding the body of the pistol firmly. Check there are no leaks.



**Never point the unit towards yourself, others or animals.** The thinners and dilution media used can cause serious injury.

**We recommend using this unit in premises with forced ventilation** and in accordance with the current standards and provisions on the matter.

**Near the unit,** only keep the amount of **product and thinner required** for the work being done at that time. After work has been completed, thinners and the product to be applied must be returned to their corresponding storage location.

**Keep the working area clean and free of potentially dangerous waste** (thinners, rags, etc...).



**While work is in progress, there must not be any source of ignition** (naked flames, lighted cigarettes, etc.) in the working area as these might generate easily flammable gases. Likewise, the approved protective means must be used (breathing, hearing, etc.) in accordance with the regulations established in this regard.

**If the unit is used in an inadequate manner or its components are altered in any way severe material damage** may occur and bodily harm may be caused to the operator, other personnel and/or animals and may even cause death. **SAGOLA S.A.U.** accepts no responsibility in for any damage caused through the incorrect use of the unit.

**The battery must not be replaced in hazardous areas.** See Atex regulations about explosion risk areas.

**The battery housing and the pressure measurements sight glass must not be opened in a location where there is any danger of explosion.** (UNE EN 60079-11:2013 standard. Do not change batteries in a dangerous location Ex).



**Always use approved breathing units** in accordance with current Standards and Regulations in order to protect yourself from emissions produced during application.

**Never exceed the maximum air inlet pressure (8 bar).** Excessive pressure will cause greater environmental contamination. To provide the hose with compressed air for the pistol, fit a pressure regulator and a safety valve.



As a general, preventive measure we advise you to **wear goggles** in accordance with the specific environmental regulations and characteristics for the work centre.



**Wear gloves** when handling the product (see the manufacturer's recommendations) and clean the gun.



If, when the gun is in use, the ambient noise level exceeds 85 dB (A) **the use of approved ear protectors is required.**

**The gun in itself does not precipitate any mechanical risk of perforations, impact or pinching,** except those deriving from incorrect installations and handling.

**While work is in progress, no vibrations are transmitted from the gun** to any part of the body of the operator and reaction forces are minimal.



**Use SAGOLA ANTISTATIC HOSES** to eliminate possible electrical discharges that might create the risk of fire or explosion.

**Pay adequate attention when handling the gun** in order to prevent any damage that might lead to dangerous situations for the user or personnel standing near the unit, as a consequence of leaks, breakages, etc. Do not use it if your mental capacity, perceptions and reactions are altered due to substances such as alcohol, drugs, medicines, etc., or by tiredness or for any other reason.

**The gun has been designed for use at ambient temperature.** Its maximum service temperature is 60°C. Although the air temperature of the compressed air or product is higher, this must not exceed the maximum average temperature in the body of the gun. If the temperature exceeds 43°C, it is necessary to use personal protective equipment, such as gloves to thermally insulate your hands from the unit.



The use of solvents and/or detergents that contain halogenated hydrocarbons (trichloroethane, methyl chloride, etc.), may cause chemical reactions in the unit as well as in its zinc-coated components (trichloroethane mixed with small amounts of water produces hydrochloric acid). For this reason, these components may rust and in extreme cases the chemical reaction caused may be explosive. We recommend you to use products that do not contain the aforementioned components. Do not use acids, soda (alkalis or pickling substances, etc.) for cleaning under any circumstances.

In general, precautions must be taken whenever the gun is handled, in order to prevent any damage to this.

**Connectors must be securely tightened and in good condition. If pneumatic connectors are fitted, they must comply with the standard ISO 4414:2010.**

**Safety standards must be understood and applied.**

Any non-compliance with the indications set out in this manual may lead to incidents affecting the physical integrity of the user or other personnel or animals.

Respect and comply with indications relating to the conservation of the environment.

Always keep the safety sheets for the products to apply and the cleaning liquids to hand in case you need to consult them.

## 17. Observations

By following the instructions set out in this manual you will ensure good spraying and quality of finish. Should you have any doubt, please contact the **Technical Service of SAGOLA**.

## 18. Warranty Conditions

This device has been manufactured with great precision and has been subjected to a large number of controls before leaving the factory.

**The WARRANTY is valid for 3 years**, counted as of the date of purchase, which will be indicated by the seller in the place provided for this purpose, together with his stamp. Once the unit has been received, please complete the warranty and send this to the manufacturer for validation

**This WARRANTY covers any manufacturing defect**, which will be repaired without charge. However, any malfunction resulting from the incorrect use of the unit, such as inadequate connections, breakage due to dropping, or similar, the normal wear of components and in general any deficiency not attributable to the manufacturer of the device, are expressly excluded. Likewise, **the WARRANTY shall be rendered null and void when it is evident that the unit has been handled by persons other than our Technical Assistance Service.**

This **WARRANTY** does not support any undertaking made by anyone outside our Technical Service.

In the case of any breakdown during the guarantee period, please attach the completed warranty certificate to the unit and deliver this to the nearest Technical Assistance Service or get in touch with the factory.

Any demand of greater importance against the supplier, in particular compensation for damages, is excluded. This is also applicable to any damages that might arise during counselling, while acquiring practice and during demonstration.

Consequently, the services rendered under guarantee do not involve an extension of the warranty period.

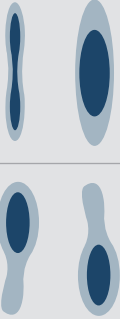

The manufacturer reserves the right to make technical modifications.




## 19. Disposal



**For complete and correct disposal of the gun**, when it has reached **the end of its useful life**, it must be completely dismantled so it can be **recycled**, separating the metal and the plastic components.

## 20. Troubleshooting

ANOMALIES	CAUSES	REMEDY
<b>Bubbles in the product cup</b>	Loose fluid tip	Tighten
	Tip-gun body seat and dirty or damaged	Clean or replace
<b>Spray width regulator does not operate</b>	Tip-gun body seat and dirty or damaged	Clean or replace
	Loose spray nozzle	Tighten the nozzle
	Damaged spray width regulator	Replace
	Tip-Nozzle joint dirty or damaged	Clean or replace
<b>The unit does not spray</b>	No product	Check and correct
	No air pressure or insufficient	Check and correct
	Product too dense	Dilute
	Product regulator closed	Adjust
	Clogged fluid conductor	Clean
<b>Intermittent spraying</b>	Insufficient amount of product	Fill adequately
	Product not filtrated (impurities)	Filter
	Loose fluid tip	Tighten
	Cracked fluid tip	Replace
	Worn packing gland in head	Replace
<b>Faulty spray width</b> 	Loose spray nozzle	Tighten nozzle
	Worn spray width regulator	Replace
	Dirty or damaged Tip - Nozzle joint	Clean or replace
	Blockages or dents in the air nozzle or fluid tip	Turn the nozzle. If it turns check the nozzle. If not, check the fluid tip

ANOMALIES	CAUSES	REMEDY
<p><b>Incorrect spraying</b></p> 	<p>Dirty air nozzle</p>	<p>Clean the nozzle</p>
	<p>Inadequate air pressure</p>	<p>Adjust the pressure</p>
	<p>Inadequate amount of product</p>	<p>Adjust the amount of product</p>
	<p>Inadequate viscosity</p>	<p>Adjust the viscosity</p>
	<p>Spray width opening</p>	<p>Adjust</p>
<p><b>The fluid needle does not close</b></p>	<p>Foreign bodies in fluid tip</p>	<p>Eliminate particles and clean</p>
	<p>Dirty packing gland in head</p>	<p>Clean and/or lubricate</p>
	<p>Inadequate Tip + needle combination</p>	<p>Replace</p>
	<p>Product regulator excessively open</p>	<p>Adjust adequately</p>
	<p>Needle spring worn or not fitted to gun</p>	<p>Replace or fit</p>
	<p>Product with foreign bodies</p>	<p>Filter</p>

## 21. Conformity Declaration

**Manufacturer:** SAGOLA, S.A.U.

**Address:** Urarte, 6 • 01010 VITORIA-GASTEIZ (Álava) SPAIN  
**Hereby declares that the product:** AEROGRAPHIC SPRAY GUN

**Brand:** SAGOLA

**Range:** 3000

**Versions:** Sagola 3000 ZEUS



### UE Conformity declaration

In accordance with the Essential Security Provisions on the **Annex of the Directive 2014/34/UE** and it can be used in potentially explosive atmospheres (ATEX).

The product conforms with the standards:

- **Directive of machines (2006/42/CE)** and the corresponding transposition into national law 1644/2008.
- **EN 1953:2013** - Atomising and spraying equipment for coating materials. Security requirements.
- **UNE EN-1127-1:2020**
  - Prevention and protection against explosion. Part 1: Basic concepts and methodology.

These also meets the following Directive and Regulations:

**ATEX Directive (Directive 2014/34/UE)**    **CE** **Ex** **II 2G T4 x**

Protection Level II 2G Suitable for use in Zones 1 and 2

"X" marking. The equipment must be connected to ground. All static electricity is discharged through air pipes. The air hoses must be "**STATIC-FREE**"

• **UNE EN ISO 80079-36:2017 / AC:2020**

- Non electrical equipment used for potentially explosive atmospheres.

Full technical documentation and service instructions are available for 10 years.

In Vitoria-Gasteiz on 01/01/2024

Signed:



Enrique Sánchez Uriondo  
Technical Manager

指數

## 西班牙語原始版本 表面塗裝設備使用及維護說明

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## 01. 注意



在启动设备之前，您必须阅读、注意并完全遵守本手册中描述的所有指示。

您必须将其放在安全且对设备所有用户可访问的地方。

设备只应由受过培训并专门用于预期目的的人员操作和使用。

同样，您必须考虑事故预防标准、工作中心的法规和指令，以及现行的法律和限制。

本手册中提到的SAGOLA标志和其他SAGOLA产品的商标均为SAGOLA S.A.U.的注册商标或商标

## 02. 象形圖的意思



阅读操作手册



重要信息



危险



安全眼镜



耳部保护



呼吸防护



手套



喷雾产品

## 03. 简介

您手头的设备属于通过枪形喷嘴利用压缩空气喷雾产品的设备系列之一，使用这些设备可获得高产品转移率 ( $T > 65\%$ )，优质的涂装效果以及低污染水平。

由以下组件组成的设备：

- 喷枪
- 辅助钥匙
- 清洁刷
- 说明书下载页面
- 容器



## 04. 技术参数

重力供料枪，喷嘴和空气嘴由容器上所述。

产品储存器：







## 技术参数 SAGOLA 3000 ZEUS

### SAGOLA 3000 ZEUS

# 3000 ZEUS

重量 (不包括容器)	474,8 克 1,05 磅
重量 (包括容器)	662,4 克 1,46 磅
尺寸	182 x 19 x 178 毫米 7,16 x 0,75 x 7,05 英寸
空气进口	BSP 1/4" M
工作温度	0 至 60 攝氏度 32 至 140 華氏度
產品錄入	M12 x 1,5" F
最高气压	8 bar 116 psi
推荐工作压力	1,4 至 2,2 bar 20,3 至 31,9 psi
HVLP 推荐工作压力	1.8 bar 26 psi
与产品接触的材料	陽極氧化鋁、不銹鋼、PTFE、POM 和尼龍
EPA 喷嘴推荐喷涂距离	15 至 20 公分 5,9 至 7,9 英寸
HVLP 喷嘴推荐喷涂距离	12 至 15 公分 4,7 至 6 英寸

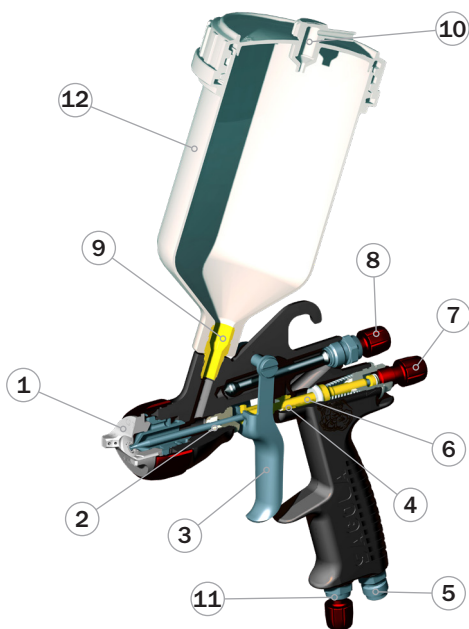
### ATEX 规范

社群指令	2014/34/UE
非电气设备	CE  II 2G T4 x (*)

(\*) 在爆炸危险区域 (ATEX)，连接必须接地，和/或供应软管必须具有防静电特性。

## 05. 组件

- ① 气嘴
- ② 头部套管
- ③ 扳机
- ④ 阀门套管
- ⑤ 进气口
- ⑥ 气阀
- ⑦ 产品调节器
- ⑧ 风扇调节器
- ⑨ 产品过滤器
- ⑩ 防滴塞子
- ⑪ 气流调节器
- ⑫ 产品容器



## 06. 警告

在启动前，特别是在每次清洁和/或维修后，您应该检查喷枪的组件是否紧固，并且空气和/或产品的软管是否密封（无漏气）。任何损坏的零件应及时更换或适当修理。

由于其设计和机制的简单性，这款喷枪易于操作。使用喷枪无需特定的培训。请按照本手册中的使用、维护和安全说明进行操作，并进行必要的应用实践以获得所需的涂装质量。

在投入使用之前，建议清洁喷枪，因为它经过了操作测试，并且在包装之前，内部会进行防护处理，可能会有残留物。使用稀释剂进行清洁以去除它。清除安装过程中残留的油脂。

请确保要涂覆的产品与设备的组件在化学上是相容的（陽極氧化鋁、不銹鋼、PTFE、POM和尼龍）。

不要使用腐蚀性或磨蚀性产品。

该喷枪经过长期使用的设计，并可与市场上大多数产品一起使用。但是，如果使用高度侵蚀性的产品，将会迅速增加维护和零部件更换的需求。如果需要使用特殊产品，请联系 **SAGOLA S.A.U.**

请仔细阅读和遵守产品制造商提供的所有数据、说明和安全措施，包括但不限于所使用的产品（要涂覆的产品、稀释剂等）。这些产品可能产生化学反应、引发火灾和/或爆炸，或者具有毒性、刺激性或有害性，无论如何对用户和其周围人员（请参阅第16部分《安全与健康》）的健康和安全都构成危险。

根据制造商的说明，混合、准备和过滤将要应用的产品，确保没有任何杂质影响涂装质量和应用效果。如果对产品的纯度、成分等存有疑问，请咨询您的供应商。

福特四個號



通过 SAGOLA 粘度计套件 - 代码 56418001 来控制要应用产品的粘度

## 07. 有用的提示

### 07.1.- 般建议

建议您使用枪时，产品调节器处于打开状态（不完全拔出），以减少液体喷嘴和针的磨损，并确保最大振幅。



使用喷嘴中允许您获得所需涂装效果的最低喷涂压力。并非所有产品都需要最大压力进行正确喷涂。降低压力可减少气体消耗，并增加产品转移量。

该喷枪出厂时已调整好，可正确喷涂各种产品，配备与每种应用相对应的空气喷嘴。其调整到2巴的空气进口压力以确保最佳性能

特别注意涂覆速度。如果涂覆速度较慢，沉积的膜厚可能会比计划的更厚，反之亦然。

如果涂层非常薄，这可能是由于空气压力过大与所施加的产品量不匹配所致。减少喷枪的空气压力，以确保喷漆中的溶剂在喷涂过程中不会挥发，确保其在到达要涂覆的表面时不会变干。增加产品量，调整其粘度，或者使用喷枪中的较大流体喷嘴。

如果涂膜较厚，这可能是由于空气压力过大与所需施加的产品量不匹配所致。减少产品量，降低其粘度或者在喷枪中使用较小的流体喷嘴。

如果出现下垂现象，可能是由于所需施加的产品量过多，与所使用的空气压力不匹配，粘度不正确或施工速度不适当所致。减少产品量，调整其粘度，或者增加施工速度，直到达到所需的涂覆效果。

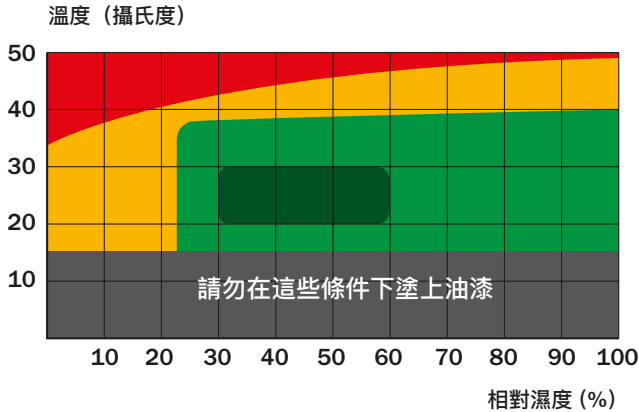
喷涂宽度（喷涂图案）的宽窄取决于所使用的空气喷嘴。如果需要其他应用的喷嘴，请联系 SAGOLA S.A.U. 的技术服务部门。

喷雾宽度或振幅可以通过喷雾宽度调节器进行修改，逆时针旋转以增加宽度，顺时针旋转以减小宽度。



## 07.2.- 不同气候区应用的技巧

涂漆应用，特别是水性漆。



極端氣候扇形圖案

• **极端气候条件:**  
可能需要在涂料中使用添加剂 (请参阅涂料制造商的规格)。

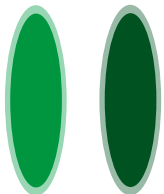
- **建议:**
  - 将喷嘴尺寸从正常情况下使用的0.1毫米增加到0.2毫米。
  - 通过使喷雾形状更圆润，中心核心更加充满产品来减小扇形喷头的大小。



臨界氣候扇形類型

• **关键气候条件:**  
可能需要在涂料中使用添加剂 (请参阅涂料制造商的规格)。在关键气候下，减小扇形喷头的大小并增加喷雾中心。

- **建议:**
  - 将动态压力降低到比正常条件下使用的压力低0.2到0.5巴之间。
  - 将峰值尺寸增加到比正常条件下使用的尺寸高0.1到0.2。
  - 增加喷头中心核心的产品负荷。



標準扇形圖案 最佳風扇圖案

• **非关键气候条件:**  
可能需要在涂料中使用添加剂 (请参阅涂料制造商的规格)。

• **建议:**  
标准扇形喷头。

• **最佳气候条件**

• **建议:** 最佳扇形喷头。

## 08. 设备的功能描述

**SAGOLA 3000 ZEUS** 喷枪可用于涂覆适当稀释的产品（如汽车工业、木材工业、塑料等广泛使用的油漆、清漆、防护涂料、胶粘剂等）。

压缩空气用于喷涂，连接到喷枪手柄下方的气体输入连接器。

待涂覆的产品放置在专门的杯子中，通过重力流向流体喷嘴，然后与喷射空气混合，可以通过外部空气喷嘴进行控制。

当扳机拉到第一档位时，会启动气阀杆，打开气阀，使空气流过。

当扳机完全拉到时，产品针会退回，允许产品流出。然后以风扇形式喷射出来。

松开扳机时，针会返回初始位置，首先关闭产品出口，然后关闭气阀，应用停止。

## 09. 喷嘴和针头套件

**SAGOLA** 提供不同尺寸的喷嘴套件和喷嘴与针头套件，适用于各种不同的应用。为了更换这些部件，请按照以下步骤进行：



确保枪已完全减压，取下空气喷嘴。

取下带有弹簧和弹簧止动器的产品调节器，并取出需要更换的针头。使用提供的扳手取下喷嘴。

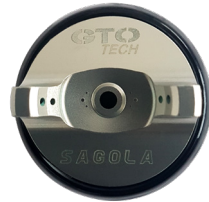
安装新的喷嘴并拧紧。现在按照以下顺序安装新的针头、弹簧和弹簧止动器以及产品调节器。最后安装合适的空气喷嘴。

这个型号有直径为  $\varnothing$  1.20, 1.30 和 1.40 的喷嘴和针头套件。

## 10. 空气喷嘴套件

空气喷嘴套件包括 **GTO TECH**.

	<b>GTO TECH</b>
<b>空气消耗量</b> 升/分钟	<b>285 L/min</b>
<b>压力</b> Bar	<b>2 Bar</b>



## 11. 调试

在每次启动前，特别是在清洁或修理单位之后，必须检查所有元素是否牢固拧紧。

如果需要维护或修理工作，在开始工作之前必须将枪解压（无气压）。如果不遵守这项安全措施，可能导致故障、人身伤害和事故，这可能是致命的。SAGOLA S.A.U. 不对不遵守这些安全规定的任何后果承担责任。



圖 01



圖 02

打开喷雾宽度和产品调节器，将其逆时针完全打开（无需将其从固定位置取下）。（见图1和图2）

将待涂抹的产品倒入罐子中，直到液面高度最多低于罐子边缘20–25毫米。

紧紧拧紧加料口盖。对于带有防滴盖的版本，根据需要将其向前（涂料向上）或向后（涂料向下）倾斜。

将枪连接到压缩空气网络上。（见图3）

调整网络调节器中的空气压力，以弥补网络中的压力下降（每10米软管估计为0.6巴）。

通过操作流量调节器（见图4），调整空气喷嘴的气压，直到获得所需的涂装质量（更高的喷涂压力并不会带来更好的涂装效果，反而会降低性能并影响产品的传递）。

适当地调整空气喷嘴出口的位置（当通过两个耳朵绘制一条虚拟线（见图4）时，此线必须与地板平行或垂直）。

将产品调节器顺时针旋转完全关闭（见图6）。

转动产品调节器直到“0”与箭头重合（见图7）；进行所需的应用测试，按照以下方式调整产品调节器（见图8）和范围：



圖 04

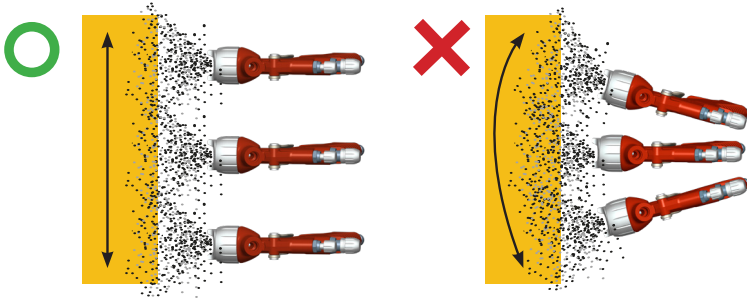


圖 05



圖 06

打开产品调节器，直到适量的产品喷出。现在您有了最大的喷雾宽度（喷雾图案）。您可以通过关闭喷雾宽度调节器根据需要将其减小。



请确保正确放置喷枪，使其垂直于要喷涂的工件，以实现喷涂产品的最大传递，并获得最佳的涂装质量。

### 11.1. 清洁空气

用于喷涂的空气必须不含杂质、气溶胶、油、硅油和固体颗粒。为此，您必须使用凝聚过滤器单元来消除这些物质。

建议使用带有内置压力调节器的空气处理设备（SAGOLA 5200X、5300X或5300X Plus型号）。

### 11.2. 足够的空气体积

足够的空气体积可以通过功率足够的空气压缩机（1马力约等于110升/分钟）、良好的压缩空气网络以及通过使用防静电、无硅气体软管来避免压力降（内径最小为8毫米）来供给喷枪所需的空气，而且这些软管要耐喷涂空气的压力（最小20巴）以及涂料溶剂的侵蚀作用。在组装气路之前，必须检查软管的气密性。



使用防静电气压软管。如果没有防静电气压软管，则必须将设备连接到接地端，以消除任何静电。

总导电电阻必须小于1百万欧姆。

### 11.3. 调整空气压力



枪出厂时内部流量调节器完全打开。为了调整到所需的压力，请顺时针旋转调节器以减小入口压力，逆时针旋转以增加压力。

## 11.4. 待应用的产品量



一旦产品已充分稀释，顺时针旋转产品调节器可减少产品量，逆时针旋转可增加产品量。

在应用过程中，可以通过减小手指施加的压力来减少小区域或难以到达的区域的产品量。

## 11.5. 施工距离



根据应用情况、待涂抹的产品和工作条件，调整气嘴与覆盖物之间的距离在10到20厘米之间，以增加传输并根据每种情况下使用的气嘴减少雾化量。

## 12. 维护

为了进行维护、修理或清洁，请首先将设备从压缩空气分配网络中断开。

不要对设备进行过度施加力量或使用不合适的工具进行维护和清洁。某些情况下需要使用专用工具进行修理。

在这些情况下，您必须联系 **SAGOLA** 的客户服务。任何未经授权人员擅自处理该产品将使保修无效。

该设备必须定期进行检修，以检查其各部件的状态，并在发现不完好的部件时进行更换。



为了获得最佳效果，请始终使用原厂备件。确保完全的可互换性、安全性和操作性。

### 12.1. 更换自调节填料腺体

填料腺体中的针头垫片是枪支组件的一部分，当发生故障或空气泄漏时应更换。

- **枪头填料腺体：**要更换填料腺体，先移除产品调节器（参见图01），取出带有止动装置的产品针和弹簧（参见图02）。用13毫米固定扳手取下需要更换的填料腺体。更换填料腺体，然后按相反顺序重新组装（参见图03）。



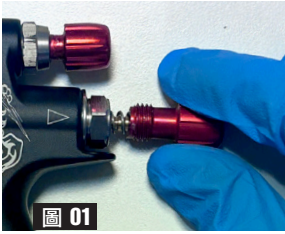


圖 01



圖 02

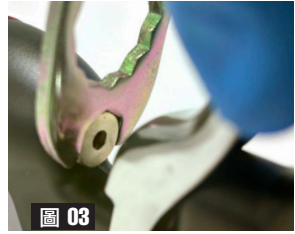


圖 03

- **更换阀座：**要取下阀座；移除产品调节器，取出带有止动装置的产品针和弹簧（参见图01和图02）。使用9毫米内六角扳手，取下导向箱，取出阀弹簧和阀门（参见图04和图05-06）。

在取下带有挂钩钥匙的键组件 之后，用挂钩钥匙取下阀座。（参见图07-08）。

在组装时，请按照相反的步骤进行。（参见图08）。



圖 04



圖 05

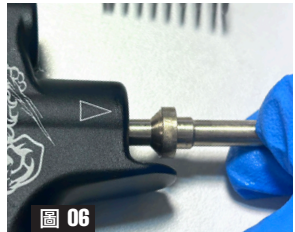


圖 06

- **空气阀的填料腺：**拆下产品调节器并取出安装了止动销的产品针和弹簧（见图01和02）。使用9毫米内六角扳手，拆下导向箱，取出阀弹簧和阀门（见图03、04、05和06）。

然后使用6毫米内六角扳手，拆下填料腺并取出垫圈（见图09和10）。更换填料腺和清洗支撑垫圈（特定套件中提供），然后按照相反的步骤进行安装

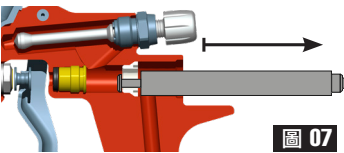


圖 07

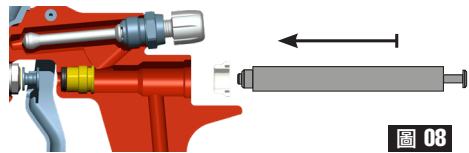


圖 08



圖 09



圖 10

## 12.2. 清洁或更换产品过滤器

如果槽中有任何清洁液或产品残留，请将其倒回相应的容器中。为了避免溢出，保持喷枪垂直位置并尽可能彻底地清洁。

稳稳地握住喷枪把手，通过旋转将槽从喷枪本体上拆下。

取出产品过滤器（编号29），如果喷枪本体中有任何清洁液或产品残留，请将其倒回相应的容器中。

根据需要清洁或更换产品过滤器，考虑到杂质会导致表面缺陷和/或堵塞。

重新安装产品过滤器，将其完全插入输入连接器的孔中。

通过牢固旋紧槽，将其固定在喷枪本体上，以避免产品泄漏。

牢固旋紧填料盖。

对于防滴漏盖版本，请根据需要将其向前倾斜（上油漆）或向后倾斜（下油漆）。

检查是否有泄漏情况。



### 13. 备件

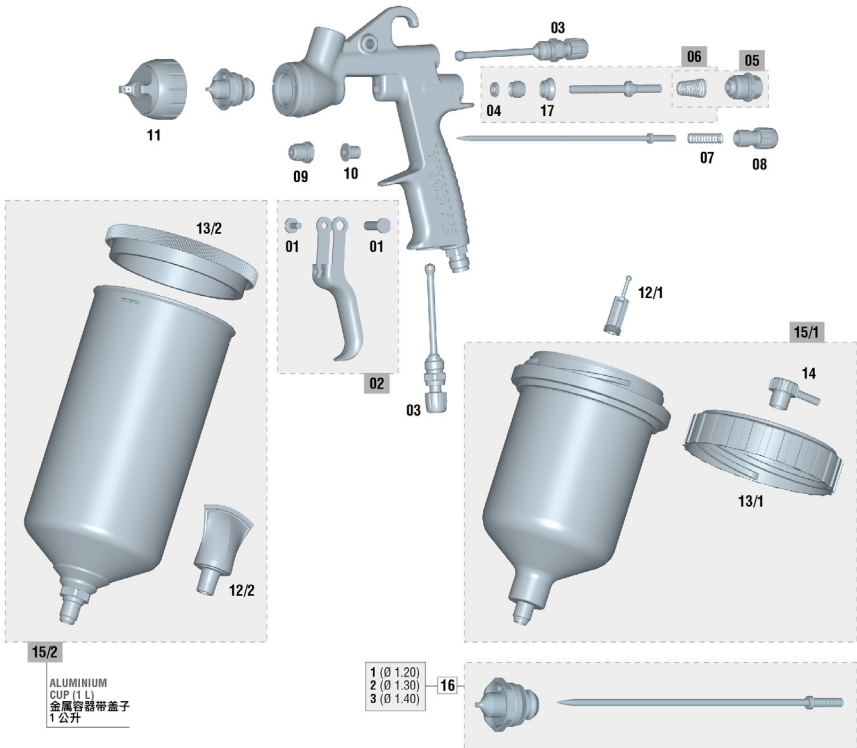
这个图纸不是物料清单。

SAGOLA<sup>®</sup>  
an Elcometer company

Gravity spraygun • 重力噴槍

# SAGOLA 3000 ZEUS

edition / 版 00



15/2  
ALUMINIUM  
CUP (1 L)  
金屬容器帶蓋子  
1 公升

1 (Ø 1.20)  
2 (Ø 1.30)  
3 (Ø 1.40)

(\*) min. 5 u.

No.	Code	U.
不。	法典	單位
01	56418429	1
02	56418637	1
03	56415265	2
04	56418494	1
05	56418701	1

N°	Código	Ud.
不。	法典	單位
06	56418669	1
07	56410072	1
08	57810355	1
09	57212211	1
10	51910608	1

N°	Código	Ud.
不。	法典	單位
11	56411166	1
12/1	56418438	1
12/2	56418003	1
13/1	57111508	1
13/2	57111513	1

N°	Código	Ud.
不。	法典	單位
14	55712157	1
15/1	56418085	1
15/2	56418082	1
16/1	10011180	1
16/2	10011191	1

N°	Código	Ud.
不。	法典	單位
16/3	10011181	1
17	54110012	1

## 14. 喷漆枪的清洁

工作完成后，必须使用适当的稀释剂清洁喷枪和产品杯，以清除任何残留的产品。

倒出产品杯中的产品并倒入稀释剂，安装并关闭杯盖。

操作机制，喷洒稀释剂直到应用干净。必要时重复操作多次。用浸有稀释剂的布将喷枪和杯子中的任何残留产品清除。

保持气嘴密封区域清除凝积物和异物。

气嘴是精密组件。任何变形，特别是在气体出口孔内，都可能导致其运行故障和喷涂质量不正确或不足。如果有必要，将气嘴浸入稀释剂中以软化残留的产品或污垢。一旦软化，用压缩空气吹洗气嘴，直到产品和稀释剂的残留物完全清除。

如果需要移除气嘴，请使用适当的软物体进行，小心操作，避免划伤或划痕。

释放将其组件固定在一起的弹性环。

拆卸后，请使用提供的清洁刷，用稀释剂进行清洁。



**切勿使用任何硬质或金属物体。尤其不能使用锋利或硬质物品清洁喷嘴的堵塞孔。**

装配喷嘴。

为了自动清洁喷枪、工具和准备要应用产品的配件，我们建议使用 **SAGOLA** 洗涤机。

喷枪可以使用稀释剂或清洁剂在喷枪清洗机中清洗。如果您选择使用这种清洁系统，我们建议您记住以下注意事项，如果不遵循可能会损坏喷枪并使保修失效：



- 不要将喷枪浸泡在溶剂或清洁剂中超过清洁所需的时间。
- 不要在清洁完成后立即使用喷枪。
- 确保内部没有稀释剂或清洁剂，并且完全没有这些物质。也可以使用其他清洁系统（超声波）。

## 15. 喷漆枪的

枪械的原始润滑会因使用和清洗而消失。为了保证完美的操作，有必要定期给调节或固定螺纹、摩擦区等部位涂抹润滑剂，特别是在每次清洗后，如果使用清洗机清洗了枪械，则需要更加小心。在清洗完成后，移动部件必须轻微润滑。

我们建议您使用SAE 10级轻型油、天然润滑脂或凡士林。

重要的是要检查所使用的润滑剂不含可能影响喷涂质量的成分（例如硅等）。



## 16. 健康与安全

为了进行维护、修理或清洁，首先将设备从压缩空气分配网络中断开连接。

### • 安全断开压缩空气网络：

如果储罐中有任何清洁液或产品残留，请将其放回相应的容器中。如果气动连接器安装在空气进气口上，请将软管从枪上拆下。如果没有安装气动连接器，请妥善释放气管中的气压，并使用扳手将软管末端从空气进气口拧下，同时稳固地握住枪身。

### • 安全连接压缩空气网络：

如果气动连接器安装在空气进气口上，请将软管连接到喷枪上。如果没有安装气动连接器，请稳固地握住喷枪，使用扳手将软管末端拧入空气进气口。检查是否有漏气现象。

### • 安全断开产品储罐：

按照第14点的指示进行清洁。稳固地握住喷枪身体，通过拧下产品进气口连接器来拆下储罐。

### • 产品储罐的安全连接：

稳固地握住喷枪身体，通过拧上产品进气口连接器来连接储罐。检查是否有漏气现象。



切勿将枪口对准自己、他人或动物。使用的稀释剂和溶剂可能造成严重伤害。

我们建议在强制通风的场所使用此设备，并根据当前的标准和规定使用。

在设备附近，只保留所需工作时的产品和稀释剂。工作完成后，稀释剂和待涂抹的产品必须放回其对应的存储位置。

保持工作区清洁，不要有潜在危险的废弃物（如稀释剂、抹布等）。



工作进行期间，工作区域内不得存在任何可能引发易燃气体的火源（裸火、点燃的香烟等）。同样，必须按照相关规定使用经过批准的防护措施（呼吸器、听力保护等）。

如果单位使用方式不当或其组件以任何方式被改变，可能会造成严重的物质损失，并对操作人员、其他人员和/或动物造成身体伤害，甚至可能导致死亡。SAGOLA S.A.U. 不对因单位的不正确使用而造成的任何损害负责。

电池不得在危险区域更换。请查阅关于爆炸风险区域的防爆法规。

电池仓和压力测量视窗不得在有爆炸危险的地方打开。（UNE EN 60079-11:2013标准。不要在危险的区域更换电池Ex）。



始终使用符合当前标准和法规的认可呼吸装置，以保护自己免受应用期间产生的排放物的影响。

永远不要超过最大的空气进口压力（8巴）。过高的压力会导致更严重的环境污染。为了为喷枪提供压缩空气，安装压力调节器和安全阀。



作为一项普遍的预防措施，建议您根据工作中心的具体环境法规和特性佩戴护目镜。



在处理产品时应佩戴手套（请参阅制造商的建议）并清洁喷枪。



如果在使用喷枪时，环境噪音水平超过85分贝（A），则需要使用经批准的耳塞。

枪本身不会产生机械刺穿、冲击或夹伤等风险，除非由于不正确的安装和操作所导致。

在工作进行时，枪不会向操作者身体的任何部位传递振动，并且反作用力极小



**使用 SAGOLA 防静电软管以消除可能引发火灾或爆炸风险的电放电。**

使用枪时要特别注意，防止任何可能导致用户或附近人员陷入危险情况的损坏，如泄漏、损坏等。如果您的精神状态、感知或反应因饮酒、药物、药品等物质影响，或因疲劳或其他原因而受到影响，请勿使用。

此枪是设计用于室温下。其最高使用温度为60°C。尽管压缩空气或产品的温度可能更高，但这不能超过枪体的最高平均温度。如果温度超过43°C，需要使用个人防护装备，如手套，以隔热手部与设备接触。



**使用含有卤代烃（三氯乙烷、甲基氯等）的溶剂和/或洗涤剂，可能会在设备及其镀锌部件中引起化学反应（三氯乙烷与少量水混合会产生盐酸）。因此，这些部件可能会生锈，并且在极端情况下，引起的化学反应可能是爆炸性的。我们建议您使用不含上述成分的产品。切勿在清洁时使用酸、苏打（碱性物质或腌制物质等）。**

一般情况下，在处理喷枪时必须采取预防措施，以防止任何损坏。

连接器必须牢固拧紧并处于良好状态。如果安装了气动连接器，它们必须符合ISO 4414:2010标准。

必须了解并遵守安全标准。

任何不遵守本手册中规定的指示可能导致影响使用者或其他人员或动物的身体完整性的事故。

尊重并遵守与环境保护相关的指示。

始终随身携带要应用的产品和清洁液的安全说明书，以备查阅。

## 17. 注意事项

通过遵循本手册中的说明，您将确保喷涂良好，并获得高质量的表面涂层。如果有任何疑问，请联系 SAGOLA 的技术服务部门。

## 18. 保修条款

这个设备经过精密制造，并在出厂前经过了大量的检验。  
保修期为3年，自购买日期起计算，购买日期将由销售商在指定位置注明，并加盖其印章。  
收到设备后，请填写完整保修信息，并发送给制造商进行验证。

本保修涵盖任何制造缺陷，将免费修复。但任何由于不正确使用设备导致的故障，如不当连接、掉落造成的损坏等，零部件的正常磨损以及总体上不归于设备制造商的任何缺陷都被明确排除在外。同样，当明显出现非我们技术服务人员处理设备的情况时，保修将失效。

本保修不支持我们技术服务以外的任何承诺。

在保修期内发生任何故障的情况下，请填写完整的保修证书附在设备上，并将其送至最近的技术服务部门或与工厂联系。

任何对供应商的重大索赔，特别是损害赔偿，均被排除在外。这也适用于在咨询过程中、实践过程中以及演示过程中可能发生的任何损害。

因此，保修期内提供的服务不会延长保修期。

制造商保留进行技术修改的权利。

## 19. 废物处理



当喷枪达到使用寿命的末期时，为了进行完整和正确的处置，必须完全拆解它，以便进行回收，分离金属部件和塑料部件。

## 20. 排除故障

故障	原因	解决办法
自流壶中有气泡	喷枪的流体喷嘴松动	拧紧
	喷嘴座-喷枪本体脏污或损坏	清洁或更换
喷枪的扇形调节器不起作用	喷嘴座-喷枪本体脏污或损坏	清洁或更换
	空气喷嘴松动	用手拧紧空气喷嘴
	喷枪扇形调节器已损坏	替换
	喷嘴和枪嘴连接处脏污或受损	清洁或更换
喷漆枪不喷雾	枪的容器中没有产品	
	枪上没有空气压力或压力不足	检查和纠正
	要喷雾的产品太浓稠	
	喷枪的产品调节器关闭了	稀释产品
	喷枪的液体管道被堵塞了	调整
间歇喷涂	产品数量不足	清洁
	产品未经过滤（杂质）	适当填充产品
	流体嘴松动	过滤
	破损的喷液嘴	替换
	头部密封腺圈磨损	替换
喷枪的喷雾效果有问题	空气喷嘴松动	用手拧紧空气喷嘴
	喷枪扇形调节器已经损坏	替换
	喷嘴接头脏或损坏	清洁或更换
	喷枪的气嘴或液嘴被堵塞或损坏了	转动喷嘴。如果可以转动，请检查喷嘴。如果不能，请检查液嘴



故障	原因	解决办法
<b>喷射不正确</b> 	喷枪的气嘴脏了	清洁喷嘴
	空气压力不足	调整压力
	产品量不足	调整产品量
	粘度不足	调整粘度
	喷雾宽度开口	调整
<b>流体针不关闭</b>	液嘴中有异物	清除颗粒并清洁
	头部填料密封腺脏了	清洁和/或润滑
	不当的喷嘴 + 针组合	替换
	产品调节器过度开放	适当调整
	针弹簧损坏或未安装在喷枪上	更换或安装
	有异物的产品	过滤

## 21. 欧共同体符合性声明

制造商: SAGOLA, S.A.U.  
地址: Calle Urartea, 6 • 01010 VITORIA-GASTEIZ (Álava) 西班牙  
这里宣称该产品为: 喷涂枪  
品牌: SAGOLA  
系列: 3000  
产品线: Sagola 3000 ZEUS



### 欧共同体符合性声明

根据 2014/34/UE 指令附件的基本安全规定, 并且可以用于潜在爆炸环境 (ATEX) 。

该产品符合以下标准:

- 欧盟机器指令2006/42/CE
- EN 1953:2013 – 用于涂料材料的雾化和喷涂设备。安全要求。
- UNE EN-1127-1:2020
  - 防止和保护爆炸。
  - 第1部分: 基本概念和方法。

这些还符合以下指令和法规:

ATEX指令 (指令2014/34/UE) **CE** **Ex** II 2G T4 x  
保护等级II 2G 适用于1区和2区 "X"标记。设备必须接地。  
所有静电都通过气管放电 (气管必须是“无静电的”)。

- UNE EN ISO 80079-36:2017 / AC:2020
  - 用于潜在爆炸性气氛的非电气设备。

完整的技术文件和服务说明可供10年使用。

Vitoria-Gasteiz, 2024年01月01日

签名:

Enrique Sánchez Uriondo  
技術總監

**SAGOL**  
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