



Optimum cleaning and maintenance

Methods of professional spray gun cleaning

In general: Please strictly observe the manufacturer's dosage instructions and product specifications!

Please note:
For **waterborne** materials, please use ph-neutral cleaning solutions only.

For **solvent-based** materials, use either solvent-based cleaning solution or clean thinner, respectively. **Please note:** Please make sure to add clean thinner regularly if you use distillation systems, as regenerated liquids could otherwise become too aggressive causing surface damage.

SATA RPS



With the use of the RPS cup system, consumption of cleaning solution as well as labour time can be significantly reduced.

During the day
when using disposable cups such as SATA RPS

Using SATA RPS disposable cups reduces the cleaning process to cleaning the material passage of the spray gun only. The RCS cleaning device can be installed inside or outside the spray booth. During the intermediate cleaning, the spray gun remains connected to the air line. Work interruption is reduced to a minimum. Intermediate cleaning of the spray gun and a complete colour change, respectively, can be conducted within 20-30 sec.

SATA clean RCS



At the end of the day

At the end of each day or whenever spray guns are extremely dirty, self-contained gun cleaning machines are the ideal solution. Integrated dry-blow devices protect the air passages of the spray gun from contamination during the cleaning process. Self-contained gun cleaning machines rely on an automated cleaning process and are therefore particularly cost-effective. A brush soaked with cleaning solution may be used to pre-clean the spray gun.

SATA multi clean 2



Important:
After each cleaning process, the spray gun, the inside of the air cap as well as the part of the spray gun body where the air distribution insert is located must be thoroughly rinsed with clean cleaning agent and be thoroughly dry-blown afterwards **to avoid corrosion.**

To avoid coating flaws caused by emerging cleaning agent residues, the spray gun, the inside of the air cap as well as the part of the gun body where the air distribution insert is located must be thoroughly rinsed with clean cleaning agent and be thoroughly dry-blown afterwards.

SATA blow gun



Manual cleaning of spray guns

Disassembly of nozzle set



1 First remove paint needle.



2 Followed by the air cap.



3 And finally, unscrew fluid tip with the ring spanner integrated in the universal spanner.

Cleaning and drying



1 Clean the material passage



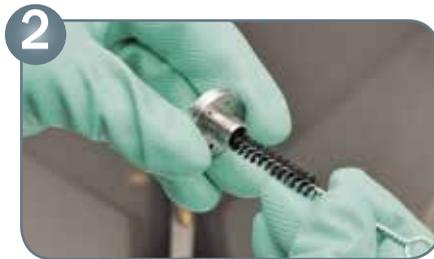
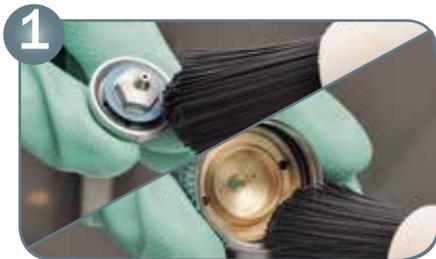
2 Clean the spray gun body



3 Dry with blow gun

When cleaning the spray gun manually, please ensure not to use brushes made of metal wires which could possibly damage the spray gun. Furthermore, please make sure that no cleaning fluid ends up in the air passages of the spray gun body.

Cleaning of the nozzle set



When cleaning the nozzle components, please make sure that metal parts of brushes do not damage the nozzle set. Ideally, please use specially designed SATA cleaning brushes and SATA nozzle cleaning needles to ensure optimum cleaning and maintenance of the nozzle set.

Intermediate cleaning

with SATA clean RCS

SATA clean RCS is a cleaning system for intermediate spray gun cleaning operated with compressed air. It optimises the painting process and thus increases the profitability of the bodyshop. The installation of SATA clean RCS in the spray booth allows one or more successive colour changes with extremely short cleaning intervals by avoiding unnecessary, additional trips in and out of the booth.



1. Cleaning of material passage and air cap

Fig. 1 **Gun cleaning** - The spray gun stays connected to the air supply; the multifunction switch automatically reduces air pressure during cleaning mode, thus avoiding overspray. Now paint channel cleaning takes place. Use brush to remove paint remainders from air cap and gun body. **Advice:** In case of persistent residue use brush for cleaning the paint channel, too.

Fig. 2 **Blow drying** - Remaining cleaning fluid is thoroughly removed in the drying compartment - it is essential that the **inside of the air cap and the zone around the air distribution insert is thoroughly blown dry** before each work break.

Fig. 3 **Colour change** - The complete colour change takes place within approx. 20 - 30 seconds. **Advice:** The RCS unit offers excellent space for holding RPS cups containing the prepared colour shades to follow. It is not necessary to leave the booth in order to effect colour change.



2. Blow drying of spray gun



3. Colour change



Cleaning

in self-contained cleaning machines such as SATA multi-clean 2

Important:

When using self-contained spray gun washers, please make sure that the spray gun is placed inside the spray gun washer in the correct position (please see below). Cleaning agent must never penetrate the air passages of the spray gun. Always dry-blow the spray gun after each cleaning process.

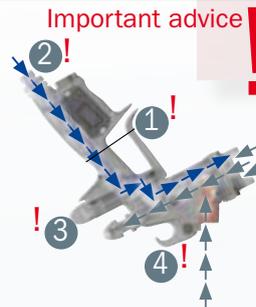
Possible consequences of non-compliance:

- Residues and corrosion in the air passages
 - Faulty spray pattern and colour tone variations
 - Faulty pressure measurement → incorrect pressure indication!
 - Paint contamination
 - No function of round/flat fan control
- Digital pressure display turns black or fails



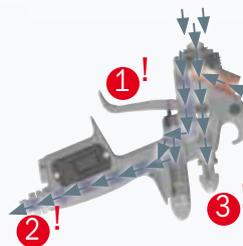
CORRECT

1. Fix trigger. Advice: In case of a missing tension spring, use air distribution insert extraction tool (contained in tool kit)
2. Connect blow air
3. Fully open air micrometer – air must be able to exhaust at nozzle head
4. **Correct position:** Gun suspension hook must be located in the lowest position



INCORRECT

1. Gun trigger not fixed
2. No blow air connection
3. Wrong gun position → **Cleaning agent enters into air passages, thus contaminating and blocking them, as the case may be with lasting effect**



1. Insert gun in correct position



2. Connect air connection to air inlet



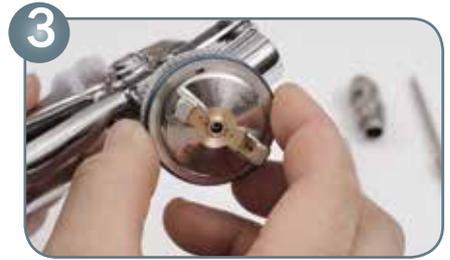
Assembly and Maintenance



Assembly of the fluid tip



Tighten fluid tip by hand using the universal spanner.



Assembly of the air cap

When installing the nozzle set, please ensure that the fluid tip is **hand-tightened** with the enclosed ring spanner of the universal tool to ensure a safely seated seal.

Each SATA spray gun and each replacement nozzle set are hand-adjusted and spray-tested. With a vertical spray fan, the air cap has to be positioned in a way that the laser-etched air cap marking can be read from the front. The marking on the outside of the air cap horn placed in the upper-most position instead indicates the correct orientation when spraying with a horizontal spray fan.



Grease paint needle around the needle packing area



Insert paint needle



Grease and insert paint needle spring

Over the years, the silicone-free SATA high performance spray gun grease which is compatible with paint has proven to be the perfect maintenance agent when thinly applied on all moving components as well as on all threads. This ensures free movement and perfect function of the components even after many years of use. **Illustration see above** - Art. No. 48173



Grease thread of material flow control screw



Install material flow control screw



Grease visible part of air piston rod

SATA care set - bag with tools for spray gun cleaning. Offers additional space for tools for spray gun maintenance and SATA repair kits.

Scope of supply:

- 1x Cleaning brush, large ①
- 5x Cleaning brushes, medium ②
- 5x Cleaning brushes, double-sided ③
- 12x Nozzle cleaning needles ④
- 1x high performance grease, 100 g ⑤



SATA high performance grease, silicone and acid-free
Art. No. 48173



Troubleshooting

Dirt or damage, especially on nozzle set components, can provoke faulty spray patterns. In most cases, dirt can be removed easily.



Defect	Possible cause	Corrective Action
① Spray pattern is not large enough	Air drillings and air passages are clogged	Clean the air cap with cleaning solution using a suitable cleaning brush; afterwards blow dry thoroughly
② Angular or S-shaped spray fan	Horn air drillings are clogged	Thoroughly clean the air cap with suitable cleaning utensils; replace the nozzle set, if necessary
③ Half-moon shaped spray fan	Horn drillings are contaminated on one side or front drillings are clogged	Clean the air cap with cleaning solution using a suitable cleaning brush; afterwards blow dry thoroughly
④ Lopsided spray fan	Fluid tip (fluid tip pin) and/or air cap damaged	Make sure that fluid tip and air cap are undamaged; replace nozzle set, if required
⑤ Splitting spray fan	The atomisation pressure is too high	Adjust the inlet pressure in line with the requirements of the paint material being used
	The material viscosity is too low	Properly adjust viscosity; use smaller nozzle size, if necessary
Corrosion on the air cap thread, inside material passages (cup connection) or on spray gun body	Cleaning solution (water-based) has not been thoroughly rinsed off after cleaning and the zone around the air cap as well as where the air distribution insert of the spray gun is located have not been thoroughly blown dry.	After cleaning, unscrew the air cap and blow dry spray gun / air cap from inside and outside
	Use of inappropriate cleaning solutions, either not pH-neutral or reclaimed solvent which is chemically too aggressive	Use pH-neutral cleaning solution (pH 6.0 - 8.0) and/or rinse thoroughly with neutral solution, dry blow spray gun / air cap from inside and outside. Please observe usage instructions of the cleaning solution.
Black digital display	Spray gun has been soaked in cleaning solution.	Do not soak spray gun in cleaning solution.
	Spray gun was left in spray gun washer for an extended period of time, e.g. over night	Take out the spray gun from the cleaning solution immediately after completion of the cleaning process and dry blow thoroughly.
	Cleaning solution has been blown into spray gun, with spray gun head pointing upwards and air cap removed at the same time	Manual cleaning: Please ensure that nozzle head points downwards when cleaning the spray gun. Spray Gun Washer: Spray gun must be flushed with air – ensuring that the spray gun suspension hook is located at the lowest point.
Fan control not functional - can be turned	Air distribution ring has not been positioned in correct location (pin is not located in the drilling) or damaged	Replace air distribution ring making sure it has been positioned correctly when inserting it
Fan control stuck	Control knob has been turned counter clockwise into the limitation with too much force; spindle has loosened inside the spray gun thread (does not apply to SATAjet 4000)	Remove regulation with universal spanner; rectify or replace completely
	Contamination/Corrosion caused by penetration of paint or cleaning agent due to non-compliance of cleaning instructions	
Spray gun does not shut-off air	Clogged air piston seat or worn air piston.	Clean air piston seat and/or replace air piston and packing

German Engineering – more than you expect

SATA spray guns are exclusively developed and manufactured in Germany.

State-of-the-art, highly efficient production facilities incorporating latest technology trends ensure highest precision during the manufacturing process of SATA spray guns. The continuous further improvement of products as well as manufacturing processes are essential elements of the company philosophy.



Quality Assurance: SATA spray guns are developed and manufactured in Germany exclusively. Every single production step is subject to strict quality controls.



Hand adjustment: Each nozzle set is separately manually "tuned" to optimise the spray fan.



Final assembly: The high precision components are assembled with ultimate care.



100% spray pattern check: This results in a perfect spray pattern meeting highest quality expectations.

Additional advice regarding maintenance and servicing can be found in the internet on www.sata.com/firstaid. In case of questions we will be glad to provide personal advice under the phone number (+49) 7154/811-200!



Your SATA dealer



SATA GmbH & Co. KG
Domertalstraße 20
70806 Kornwestheim
Germany
Tel. +49 7154 811-200
Fax +49 7154 811-190
E-Mail: export@sata.com
www.sata.com