Methods of professional spray gun cleaning

Waterborne Paints

Please note:
- Use pH-neutral cleaning solutions only.

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

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 or SATA RPS

Using disposable cups or SATA RPS 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.

SATA clean RCS

During intermediate cleaning the spray gun can remain 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 multi clean 2

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 paint spray gun.

SATA blow gun

Dry-blowing of the cleaned spray gun prevents cleaning residues from contaminating the painting process which may cause painting flaws.

At the end of the day

At the end of a working day or whenever paint spray guns are extremely dirty, self-contained gun cleaning machines are the ideal solution. In combination with an integrated dry-blow device, these systems provide perfect cleaning results.

Please observe:
- After each cleaning, the paint 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 water and be thoroughly dry-blown afterwards to avoid corrosion.

Solvent-based Paints

Use either solvent-containing cleaning solution or clean thinner, respectively.

Please note: Please make sure to add clean thinner regularly if you use distillation systems as reclaimed fluids could otherwise become too aggressive causing surface damage.
Manual cleaning of paint spray guns

Disassembly of nozzle set

1. First remove paint needle.
2. Followed by the 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 - we recommend leaving the spray gun connected to the air line with the air flow rate reduced to the minimum!

Cleaning of the nozzle set

1. 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.
2. 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
- 5x Cleaning brushes, medium
- 5x Cleaning brushes, double-sided
- 12x Nozzle cleaning needles
- 1x High performance grease, 100 ml
**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 should not penetrate the air passages of the spray gun.

**Possible consequences:**
- Clogged air passages
- Incorrect pressure measuring → incorrect pressure is indicated!
- Faulty spray pattern and colour tone variations
- Digital pressure display turns black or fails
- Paint contamination

**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**
2. **Dry-blowing of paint spray gun**
3. **Colour change**

**Spray gun cleaning** - the paint spray gun remains connected to the air line; in the cleaning mode, the multi function switch automatically reduces the air pressure and activates the blow-off function. While the material passage is flushed with cleaning fluid, paint residues are removed from air cap and front part of the spray gun body by the brush.

**Tip:** In case the spray gun is heavily clogged with paint, the brush may also be employed to clean the material passage.

**Dry-blowing** - 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 dry-blown before each work break.

**Colour changes** - Within approx. 25-30 secs, a colour change is completed.

**Tip:** The RCS offers an ideal deposit area on top of the device for consecutive colours already prepared in disposable cups or RPS cups. The painter no longer has to leave the spray booth for colour changes.

**Cleaning in self-contained spray gun washers such as the SATA multi clean 2**

1. **Insert spray gun body**
2. **Connect air connection to air inlet**

**Important advice**
1. Connect blow air
2. Fix gun trigger

**Tip:** If the gun washer has no tension spring, please use air distribution insert removal tool (included in tool kit)

3. Fully open air micrometer - to ensure that air can stream through the gun and out of the air cap
4. **Correct position:** Gun suspension hook must be located in the lowest position

**Important advice**
1. No blow air connection
2. Gun trigger not fixed
3. Wrong position of spray gun → cleaning fluid may penetrate the air passages and cause clogging or complete blocking long-term
<table>
<thead>
<tr>
<th>Defect</th>
<th>Cause</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fluttering or spitting spray fan or air bubbles in cup</td>
<td>a) Fluid tip has not been properly tightened</td>
<td>a) Tighten fluid tip with universal spanner</td>
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<td></td>
<td>b) Air distribution ring is damaged or clogged.</td>
<td>b) Exchange air distribution insert; cleaning is not possible, since it will be</td>
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<td></td>
<td></td>
<td>damaged after disassembly</td>
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<tr>
<td>2. Spray pattern is too small, crooked, lop-sided or splitting</td>
<td>a) Drillings of air cap are clogged with paint or cleaning solution</td>
<td>a) Clean air cap with cleaning solution and a suitable cleaning brush. Blow dry</td>
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<tr>
<td></td>
<td>b) Damaged fluid tip (fluid tip aperture)</td>
<td>afterwards</td>
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<tr>
<td></td>
<td></td>
<td>b) Ensure that the fluid tip has not been damaged. If necessary, please exchange complete nozzle set</td>
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<tr>
<td>3. No function of round/flat fan control - adjustment knob can still</td>
<td>Air distribution insert has not been positioned in correct location</td>
<td>Exchange air distribution insert ensuring installation in correct position (fixation</td>
</tr>
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<td>be turned</td>
<td>(pin is not located in the drilling) or damaged</td>
<td>pin located in the drilling)</td>
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<td>4. No function of round/flat fan control - adjustment knob cannot be</td>
<td>Control knob has been turned counter clockwise into the limitation</td>
<td>Completely remove control knob with universal spanner in clockwise direction;</td>
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<tr>
<td>turned</td>
<td>probably causing the spindle to have loosened inside the spray gun</td>
<td>re-install control knob in spray gun body, seal thread with ‘Loctite’ and tighten</td>
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<td></td>
<td>thread</td>
<td>with universal spanner or exchange completely</td>
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<td>5. Spray gun does not shut-off air</td>
<td>Clogged air piston seat or worn air piston.</td>
<td>Clean air piston seat and/or exchange air piston and air piston packing</td>
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<td>6. Corrosion on the air cap thread, inside material passages (cup</td>
<td>a) Cleaning solution (water-based) has not been thoroughly rinsed off</td>
<td>a) After cleaning, unscrew the air cap and blow dry spray gun / air cap from</td>
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<td>connection) or on spray gun body</td>
<td>after cleaning and the zone around the air cap as well as where the</td>
<td>inside and outside</td>
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<td></td>
<td>b) Use pH-neutral cleaning solution (pH 6.0 - 8.0) and/or rinse thoroughly with</td>
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<td></td>
<td></td>
<td>neutral solution, dry blow spray gun / air cap from inside and outside. Please</td>
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<td>observe usage instructions of the cleaning solution.</td>
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<td></td>
<td>a) Use of inappropriate cleaning solutions, either not pH-neutral or</td>
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<td>applicable solvent which is chemically too aggressive</td>
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<td>7. Black digital display</td>
<td>a) Spray gun has been soaked in cleaning solution.</td>
<td>a) Do not soak spray gun in cleaning solution.</td>
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<td></td>
<td>b) Spray gun was left in spray gun washer for an extended period of</td>
<td>b) Take out the spray gun from the cleaning solution immediately after completion</td>
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<td>time, e.g. over night</td>
<td>of the cleaning process and dry blow thoroughly.</td>
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<td></td>
<td>c) Cleaning solution has been blown into spray gun, with spray gun</td>
<td>c) Manual cleaning: Please ensure that nozzle head points downwards when cleaning</td>
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<td>head pointing upwards and air cap removed at the same time</td>
<td>the spray gun. <strong>Spray Gun Washer:</strong> Spray gun must be flushed with air – ensuring</td>
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<td>that the spray gun suspension hook is located at the lowest point.</td>
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Assembly and Maintenance

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 paint 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.

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

For further tips and tricks concerning maintenance and service please pay us a visit at www.sata.com.
Should you have any questions, please contact us under +49 (0) 7154/811-200!