

SATA

German Engineering

Compressed air filter 500/100 series

For flawless finishes





Compressed air preparation

Compressed air is one of the main sources of energy in paint shops. After being generated in the compressor, the air is fed into the compressed air circuit, whereby impurities such as tiny particles of compressor oil can be carried along right into the spray gun or breathing air. While such impurities are not particularly relevant for many industrial applications, they will inevitably cause coating flaws or pose a health risk in the paint application process. When working with waterborne paint systems, even the tiniest quantities of oil vapours can cause coating flaws, and consequently time-consuming, costly rework. Oil vapours or particles may also enter the respiratory system and cause health issues.

The SATA filter series provide particle-free, clean compressed air for professional coating. The SATA filter series for spray guns are available as one-stage sintered filters with a water and oil separator, as a two-stage combination filter with a sintered and fine filter, or as a three-stage filter unit with an additional sintered activated charcoal filter. With the SATA compressed air filters, coating flaws such as dust particle inclusions, condensate, silicone craters and thus possibly expensive rework can be avoided. The treated compressed air can be used for spraying and, when using a three-stage filter, it is also suitable for air-supplied respirator systems.

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Filter 500

Clean.

Silent.

Modular.





The SATA filter 500 enables a higher absorption of contaminations and enhanced durability due to the optimized position of the charcoal filter and is available with three different filter stages. Changing the filter is simple and straightforward and filter maintenance is only necessary every 6 months for all stages.

A well functioning compressed air circuit also includes regularly maintained compressed air filter units. To warrant troublefree operation, a filter unit should be fitted either immediately in front of or directly inside the spray booth. While the SATA filter 544 will be sufficient for solvent-based paints, the SATA filter 584 is required when applying waterborne paints.

The SATA filter series 500 is available either as a one-stage sintered filter with water and oil separator, as a two-stage combination filter with sintered and fine filter, or as a three-stage filter unit with additional sintered activated charcoal filter.

Every six months, all filter stages are maintained together in a procedure that takes just a few minutes without the need for tools, thanks to the **bayonet lock** and defined position of the filter

cartridges, which are replaced simply by inserting them.

Furthermore, a **flow-optimised cyclone separator** minimises pressure drop in the filter system and ensures a constant air flow of approx. 3,800 NI/min (with four connections).

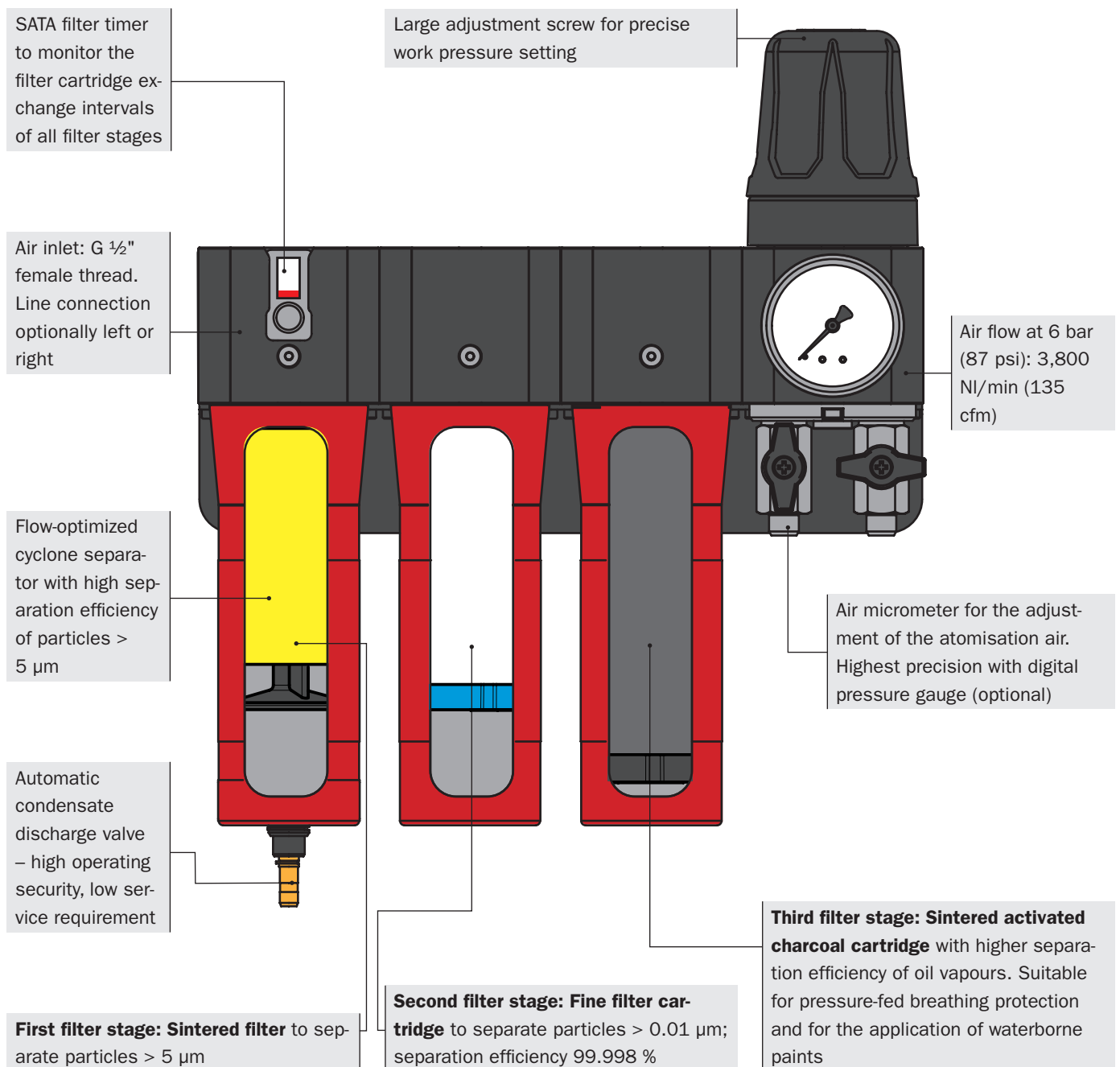
BENEFITS

- Air flow with 4 connections approx. 3,800 NI/min
 - SATA filter timer to monitor the exchange intervals of all filter cartridges
 - Synchronised maintenance: Filter maintenance only necessary every 6 months for all stages
 - Maintenance-free bayonet lock with haptic and acoustic feedback
 - The fine filter and activated charcoal filter cartridges fit perfectly by simply being inserted - no screw fittings or additional seals
 - CCS (Color Code System) colour coding of filter housing and filter cartridges for safe maintenance.
 - Upgrade of a SATA filter 544 to a 584 possible through a simple connector system
 - Maintenance-free sealing elements
 - Line connection optionally left or right
-



INFO
www.sata.com/filter500

SATA filter 500



In order to preserve its efficiency, the filter unit must be regularly maintained, thus avoiding coating flaws and other quality issues and eventually expensive rework.

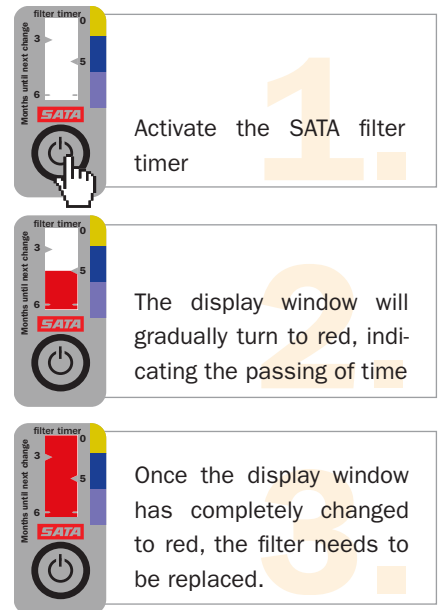
SATA equips all filter units with the SATA filter timers to remind users to regularly change the filter cartridges.

Handling the SATA filter timer is as easy as that:

- When a new filter regulator unit is installed, each filter timer must be activated by pressing the button.
- Once activated, the maintenance interval for the respective filters starts "running". The window gradually changes colour to red during the course of the interval (6 months), corresponding approximately to the saturation progress made during normal use.
- The filter cartridges must be replaced once the window changes colour to red.

Note: shorter filter change intervals may be necessary when there is a particularly high level of harmful substances in the compressed air.

All spare filter cartridges are also fitted with the corresponding SATA filter timer which is inserted in the provided holder and activated every time after the filter has been maintained.



First filter stage: Oil/water separator with sintered filter

- The sintered filter separates particles > 5 µm.
- Exchange interval: every 6 months
- **Not** sufficient for spraying or for breathing



Additional second filter stage: fine filter

- The fine filter separates particles > 0.01 µm; Separation efficiency: 99.998%.
- Exchange interval: every 6 months
- Compressed air suitable for solvent-based paints.



Additional third filter stage: activated charcoal filter

- Activated charcoal adsorbes oil vapours from the compressed air.
- Exchange interval: every 6 months
- Compressed air suitable for solvent-based and waterborne paints.
- Compressed air suitable for breathing air - without an additional activated charcoal cartridge on the belt unit.

SATA FILTER 484 + 584

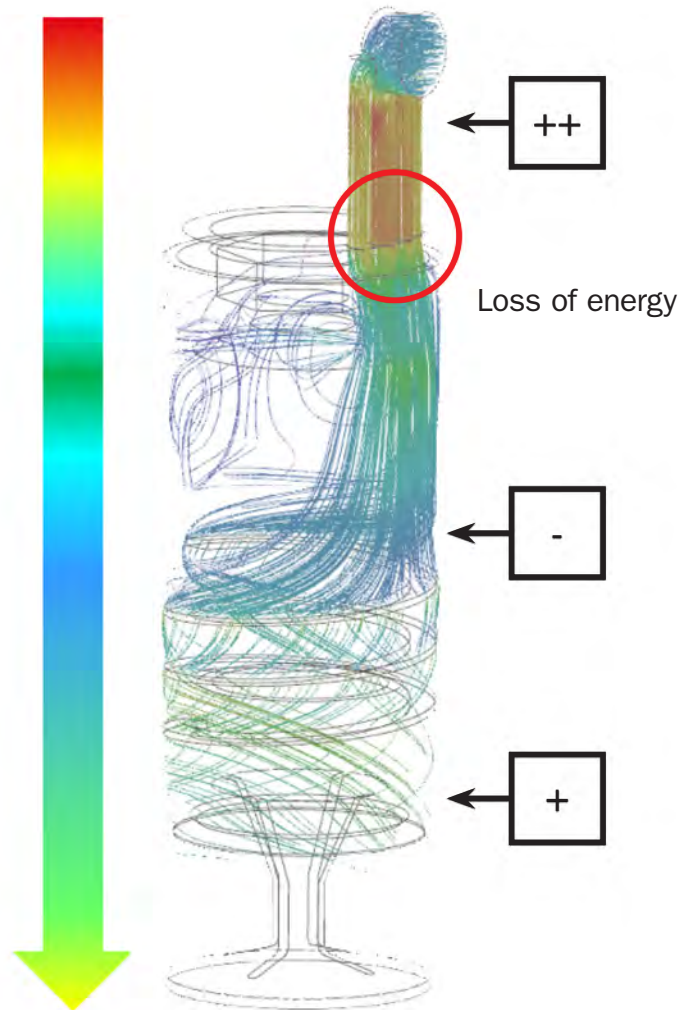
Flow-optimized cyclone separator

SATA FILTER 484

With the previous generation of filter units, the incoming compressed air enters the cyclone separator at high speed (undefined position) and is slowed down abruptly when hitting the cyclone separator (leading to loss of energy) before being accelerated again, thus reducing the efficiency to separate harmful particles.

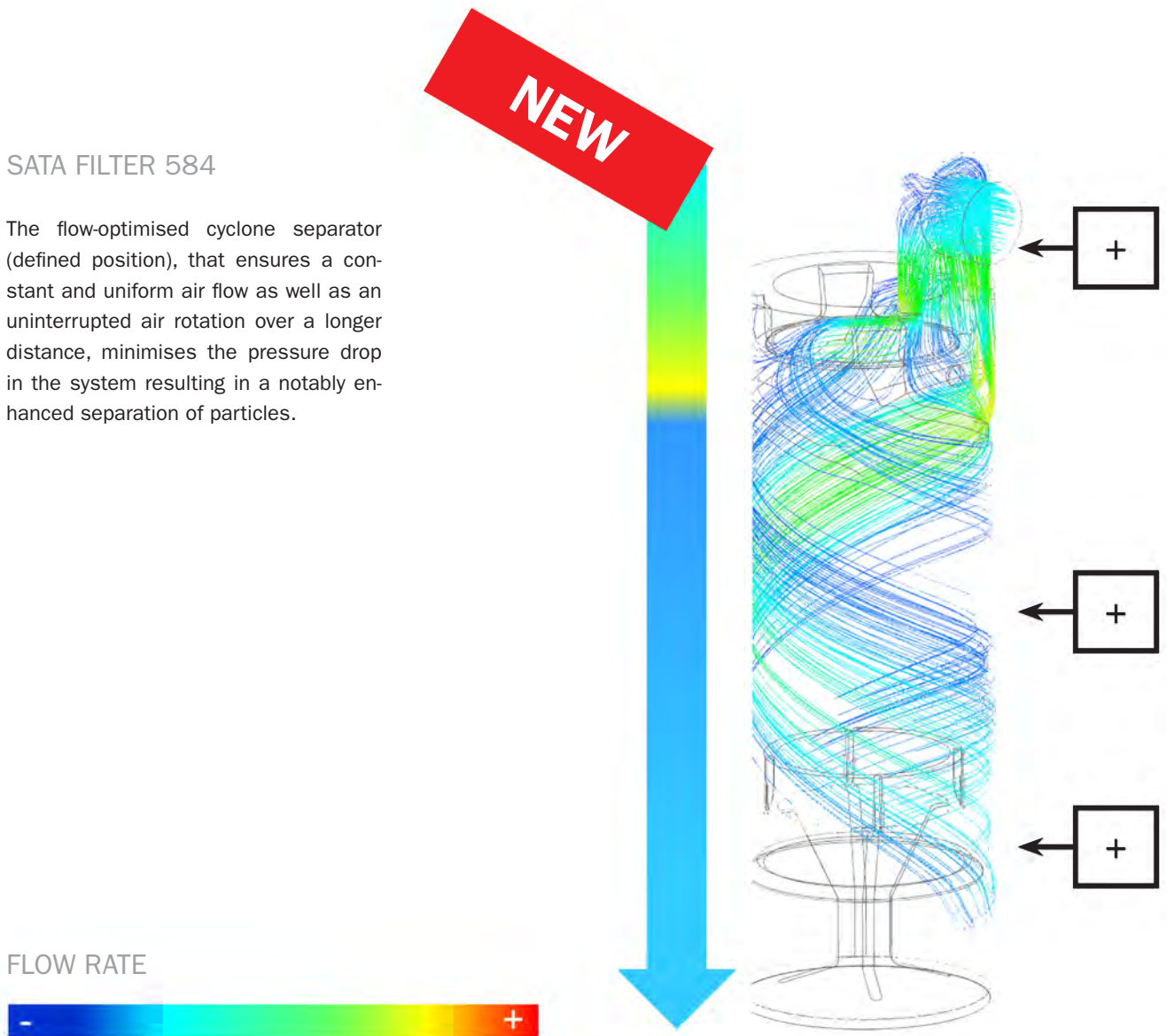
The oscillating air flow rate (fast – slow – fast) caused by the abrupt deceleration of the air flow leads to a pressure drop inside the filter stage and eventually in the whole system, preventing the best possible separation of unwanted particles.

FLOW RATE



SATA FILTER 584

The flow-optimised cyclone separator (defined position), that ensures a constant and uniform air flow as well as an uninterrupted air rotation over a longer distance, minimises the pressure drop in the system resulting in a notably enhanced separation of particles.



Filter 100

User-friendly.
Low maintenance.
For the preparation area.





Clear compressed air is also essential for the application of primer materials at the preparation area. The SATA filter 100 prep has been especially developed for this reason and meets the requirements of the prep deck.



SATA FILTER 103 PREP

- **Filter unit:** sintered filter 5 µm, fine filter 0.01 µm and activated charcoal filter: oil vapors
- **Air flow** at 6.0 bar: 800 NI/min
- **Ambient temperature:** 50°C
- **Connections:**
Air inlet: G 1/2" female thread
Air outlet: 1/4" female thread



SATA FILTER 100 PREP

- **Filter unit:** sintered filter 5 µm, fine filter 0.01 µm
- **Air flow** at 6.0 bar: 800 NI/min
- **Ambient temperature:** 50°C
- **Connections:**
Air inlet: G 1/2" female thread
Air outlet: 1/4" female thread



SATA FILTER 101 PREP

- **Filter unit:** Activated charcoal filter
- **Air flow** at 6.0 bar: 800 NI/min
- **Ambient temperature:** 50°C
- **Connections:**
Air inlet: G 1/2" female thread
Air outlet: 1/4" female thread

BENEFITS

- Finest particles are separated down to a size of 0.1 µm
- The first filter stage with large cyclone separator and sinter filter reliably removes oil droplets, condensate and suspended particles from the compressed air.
- The second filter stage, the microfiber fine filter, separates fine particles down to a size of 0.1 µm
- The third filter stage with activated charcoal provides the highest level of safety when processing waterborne primer materials.
- The automatic condensate drain of the first filter stage keeps the service effort low and increases the operational reliability
- Pressure regulator valve with gauge for precise adjustment of the outlet pressure
- Ideal for the work preparation area with temperatures < 50 °C
- Air flow rate 800 NI/min at 6 bar inlet pressure.



SATA

SATA GmbH & Co. KG
Domertalstrasse 20
70806 Kornwestheim
Germany
Tel.: +49 7154 811-200
Fax: +49 7154 811-194
E-Mail: export@sata.com
www.sata.com



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