Content [Original Version: German]

	**Read first!**
Read this manual thoroughly and carefully before commissioning and use. Observe the safety and hazard information!	

Always make sure that these operating instructions are kept with the product or keep them easily accessible for everyone at any time!

1. General information

The SATA air star C n, hereinafter referred to as the half mask, is part of the SATA breathing protection equipment. The breathing protection equipment serves to supply the wearer with clean breathing air. In addition, the breathing protection equipment is intended to protect the wearer from contaminated breathing air. The breathing protection equipment can be assembled from various components to form different breathing protection devices in different design levels.

Operating instructions SATA air star C n
This manual refers to the use of the product within a breathing protection apparatus and contains important product-specific information. This manual also contains important information about the breathing protection equipment.

1.1. Target group

These operating instructions are intended for

- Painting and varnishing professionals.
- Trained personnel for varnishing work in industrial and craftman's workshops.

1.2. Accident prevention

As a basic principle, the general and specific national accident prevention regulations must be heeded, together with corresponding workshop and industrial safety instructions. The suitability of workers using respirators must
be verified by medical examinations. Particularly
in Germany, this is subject to the "guidelines on the principles for preventive medical check-ups in the workplace, G 26: users of respirators for work and rescue". Furthermore, due consideration must be given to the pertinent regulations as per breathing protection leaflet DGUV rules 112-190.

1.3. Accessories, spare and wear parts

Only original accessories, spare and wear parts from
SATA should be used. Accessories that are not supplied by SATA have not been tested or approved. SATA assumes no liability for damage caused by the use of non-approved accessories, spare parts and wear parts.

1.4. Warranty and liability

Subject to SATA's General Terms and Conditions as well as
other possible contractual agreements and the corresponding valid laws.

SATA is not liable in case of

- Failure to observe the manual
- When the product is used in other than the intended ways of usage.
- When untrained staff is employed.
- Breathing air supply not in accordance with DIN EN 12021.
- When no personal protection equipment is worn.
- Failure to use original accessories, spare and wear parts
- Not adhering to the specifications regarding quality of air supplied to the breathing protection device
- When the product is manipulated, tampered with or technically modified.
- Natural wear and tear
- In case when the product has been exposed to untypical shockloads and impacts during usage.
- Assembly and disassembly

2. Safety Instructions

⚠ DANGER	**Warning!**
Warning – Adequate protection by the respirator is not provided in certain highly toxic atmospheres.	

Always read and heed all instructions given below. Failure to comply or incorrect compliance can result in malfunctions or cause serious and even fatal injuries. **Before**
Using the PPE breathing protection equipment, every **user** is obliged to check the capacity of the air supply system, possibly also in terms of the impact on other users of the system. It must be ensured that the capacity of the air supply system for each connected user is sufficient to always supply at least the minimum volume flow specified in this manual.
The code "H" on the compressed air feed tube indicates that the compressed air feed tube is heat-resistant.
The code "S" on the compressed air feed tube indicates that the compressed air feed tube is antistatic.
The code "F" on the compressed air feed tube indicates that the compressed air feed tube can be used in situations where flammability can pose a hazard. The flammability details only refer to the compressed air feed tube. All other components of the breathing protection equipment must not be used in situations where flammability can pose a hazard.
Before operation, the user must proceed with a risk assessment regarding possible harmful components in the workplace, e.g. nitrogen.
Appropriate hearing protection must be used. The user must
wear the PPE in strict compliance with the information provided by the manufacturer
.

NOTICE	**Attention!**
The user must note that in conditions of very high working intensity, the pressure in the breathing connection can become negative with maximum inhalation air flow.	

2.1. Requirements regarding personnel

The half mask may only be used by experienced specialists and trained personnel who have read and understood these operating instructions in full. Do not use the half mask if you are tired or under the influence of drugs, alcohol or medication.

2.2. Personal Protection Equipment

The half mask offers highly effective health protection during paint spraying work and associated jobs in environments that pose a health risk . The half mask is part of the personal protective equipment PPE in combination with protective boots, protective overalls,
protective gloves, and hearing protection if necessary.

2.3. Safety Instructions

- Use compressed air suitable for breathing purposes (only breathing air in accordance with EN 12021).
- **It must be ensured that** the safety compressed air hose cannot be connected to other media-bearing systems **and** that no connections **are possible** with couplings that are connected to line systems that carry gases other than breathing air
- The use of oxygen or oxygen-enriched air is not permitted.
- Never connect multiple compressed air supply hoses together.
- The breathing protection apparatus and all available modules are not designed to withstand storage at lower or higher temperatures than the storage temperatures stated under “Technical Data”.
- Remove breathing air impurities through compressor, e.g. oil vapour, with activated carbon adsorber.
- Avoid harmful gases, vapours and particles in the air sucked in by the compressor.
- Adhere to safety regulations.
- Heed the accident prevention regulations (e.g. DGUV rule 100 – 500).
- The device may not be used in situations in which flammability can be a hazard. The “F” label indicates that the compressed air supply tube can be used in situations in which flammability can be a hazard. The flammability information refers only to the compressed air feed tube. All other components of the breathing protection equipment must not be used in situations where flammability may be a hazard.
- The breathing protection apparatus is to be connected to a stationary compressed air supply system.
- The water content of the breathing air should be kept within the limits of

EN 12021 to avoid freezing of the devices.

2.4. Use in explosive atmospheres

	**Warning! Risk of explosion!**
Danger to life from explosion Use of the half mask in a potentially explosive atmosphere of ex-zone 0 may cause an explosion. → Never bring the half mask into potentially explosive atmospheres of ex-zone 0.	

3. Intended use

Intended Use

The breathing protection apparatus protects the user from inhaling harmful substances from the ambient atmosphere during spraying work or from a lack of oxygen.

Incorrect use

The half mask is not intended for use in ambient atmospheres subject to radiation or heat.

4. Description

The ventilated half mask supplies the user with clean breathing air and consists of the following main parts:

- Ventilated half mask
- Variant 1 - Belt unit with activated carbon adsorber, control valve, compressed air connection and flow rate indicator
- Variant 2 - Belt unit with control valve and compressed air connection
- Variant 3 - Belt unit with T-piece and control valve

The half mask is part of the breathing protection apparatus

5. Scope of Delivery

Version 1

- Ventilated half mask with head straps and bands
- Belt unit with mounted activated carbon adsorber, control valve and flow rate indicator
- Manual

Version 2

- Ventilated half mask with head straps and bands

- Belt unit with control valve and compressed air connection
- Manual

Variant 3

- Ventilated half mask with head straps and bands
- Belt unit with T-piece and control valve
- Manual

After unpacking, check:

- Half mask for signs of damage
- Complete scope of supply

6. Technical Design

6.1. Version 1

[1-1] Ventilated half mask SATA air star C n
[1-2] Breathing air tube
[1-3] Quick-action coupling for respiratory protection
[1-4] Gun compressed air hose
[1-5] Activated carbon adsorber
[1-6] Compressed air supply tube
[1-7] Air connection with shut-off valve
[1-8] 2x pressure gauge
[1-9] Filter unit control valve
[1-10] Air connection with shut-off valve
[1-11] Pressure gauge
[1-12] Control valve

[8-1] Closure
[8-2] Control valve
[8-3] Activated carbon adsorber
[8-4] Protective cage
[8-5] Date clock
[8-6] Air connection for compressed air supply hose
[8-7] Air connection for air hose
[8-8] Pressure gauge
[8-9] Air connection for gun compressed air hose

6.2. Version 2

[2-1] Ventilated half mask SATA air star C n
[2-2] Breathing air tube
[2-3] Quick-action coupling for respiratory protection
[2-4] Gun compressed air hose
[2-5] Compressed air supply tube
[2-6] 2x pressure gauge
[2-7] Air connection with cut-off valve for spray gun
[2-8] Air connection with cut-off valve for belt unit
[2-9] Control valve

[9-1] Closure
[9-2] Control valve

[9-3] Air connection for compressed air supply hose
[9-4] Air connection for breathing protection hose

6.3. Variant 3

[3-55] Ventilated half mask SATA air star C n
[3-56] Breathing air tube
[3-57] Quick-action coupling for respiratory protection
[3-58] Gun compressed air hose
[3-59] Compressed air supply tube
[3-60] 2x pressure gauge
[3-61] Air connection with shut-off valve
[3-62] Air connection with shut-off valve
[3-63] T-piece with control valve

[10-1] Closure
[10-2] Control valve
[10-3] Air connection for compressed air supply hose
[10-4] Air connection for air hose
[10-5] Air connection for gun compressed air hose

7. Technical Data

Description		
Required minimum volume flow	150 Nl/min	5,3 cfm
Maximum volume flow	335 Nl/min	11,8 cfm
Minimum working pressure	min. 4,0 bar	min. 58 psi
Maximum operating pressure	max. 4,5 bar	max. 65 psi
Operating temperature	4 °C – 60 °C	39 °F – 140 °F
Storage temperature	-20 °C – 60 °C	-4 °F – 140 °F
Weight half mask	180 g	6,3 oz.
Operating pressure of compressed air safety tube	max. 10,0 bar	max. 145 psi
Maximum length of the safety compressed air hose	max. 10 m	max. 393,7“

8. First Use

The half mask is supplied fully assembled and ready for operation.
Check after unpacking:
- Half mask for signs of damage.
- Scope of supply complete (see chapter 5).

The half mask must be fitted strictly in accordance with the fitting proce-

dure specified in this document.

8.1. Installation on air supply

	Note!
The service life of the activated carbon adsorber in the belt unit and the quality of the breathing air depend largely on the pre-cleaning of the supplied compressed air.	

NOTICE	**Attention!**
When using the belt section with T-piece in conjunction with a spray gun, ensure that the supply pressure is set to the maximum value of **4.5 bar** and that the control valve of the T-piece is always **fully open**. This only applies to a SATAjet X 5500 HVLP spray gun with an input pressure of 2.0 bar or a spray gun with the same and lower air consumption. Other spray guns with a higher air consumption must not be used with this version (belt part with T-piece).	

	Note!
To use the half mask, only use an approved compressed air supply tube (max. 10 m) with quick-action safety couplings.	

8.2. Assemble the half mask

	Note!
When assembling the half mask, do not press against the thin braces in the exhaling part.	

- Position the head straps and the lower straps.
- Fit the mask cap in the nose section of the mask body.
- Firmly press the mask cap onto the exhalation valve area until it completely locks into place. Head bands and lower bands may not be pushed aside during this.
- Check easy movement of the head straps and lower straps.

9. Normal Operation

NOTICE	Attention!
The breathing protection components (PPE) must be put on and operated according to the details given by the manufacturer in the operating instructions.	

Note!
Before each use, carry out a functionality test with the half mask. This comprises: ■ Check the rubber seal, head bands as well as lower bands (see chapter 10.3) ■ Check the expected useful life of the activated carbon adsorber /of the activated carbon filter (see chapter 9.1) ■ Check the inputs and outputs (see chapter 10.2) In addition, a leak test is to be carried out with the half mask (see chapter 9.4).

9.1. Checking the service life

Note!
Before each use, the expected useful life of the activated carbon adsorber /of the activated carbon filter is to be checked. If the expected useful life (max. 3 months) is exceeded, it must be replaced.

■ Check the duration for which the activated charcoal adsorber/of the activated charcoal filter has been used and replace if necessary.

9.2. Fitting the belt unit

The belt unit **[8] / [9] / [10]** can be adapted to the individual using the length-adjustable belt.

■ Adjust length/circumference of the belt unit accordingly.
■ Put on belt unit **[4-2]**.
■ Close belt unit using buckle **[8-1] / [9-1]/ [10-1]** .

9.3. Put the half mask on

⚠ DANGER	**Warning!**
Health risk from poisoning If the half mask does not fit tightly to your face, pollutants can penetrate from the outside. → Tighten both ends of the head strap until the half mask fits tightly to your face.	

- Check straps and rubber seal for signs of damage, replace if necessary (see chapter 10.3).
- Pull the head fixation loops **[4-1]** to the end of the head bands.
- Pull the lower straps **[4-3]** right through until the head fixation loops fit firmly on the mask cap.
- Pull the lower straps **[4-3]** over your head.
- Take the air hose **[5-1]** and **[5-2]** over your head.
- Set the half mask **[6-2]** over your mouth and nose.
- Position head fixation **[6-1]** at the back of your head and fit it along the top of your ears **[7-1]**.
- Pull both ends of the head straps **[7-2]** and **[7-4]** tight until the half mask fits tightly to your face.
- Balance the head bands as well as lower bands and re-adjust them until the half mask fits comfortably and firmly on the face.

9.4. Leak test of the half mask

- Inhale briskly to check for leaks.
- Hold breath briefly. It should be possible to feel a slight vacuum within the half mask.
- At no time may any air from outside get into the half mask in the area of the rubber seal.
- If the vacuum is compensated, the half mask needs to be adjusted.

Adjust the half mask

- Tighten both ends of the head band **[7-2]** and **[7-4]** until the half mask [**7-3]** is completely in contact with the face.

9.5. Putting into operation

- Connect spray gun compressed air tube **[1-4] / [2-4] / [3-4]** to the air connection of the spray gun.
- Connect spray gun compressed air tube to the air connection **[8-9] / [2-7] / [10-5]**.

- Connect the air hose **[1-2] / [2-2] / [3-2]** to the air connection **[8-7] / [9-4] / [10-4]** of the belt unit.
- Connect compressed air supply **[1-6] / [2-5] / [3-5]** to the air connection **[8-6] / [9-3] / [10-3]** of the belt unit.
- Open the cut-off valve of the air connections **[1-10] / [2-7]** and **[2-8] / [3-7]**.

	Note!
The air regulator must be connected to the compressed air supply system.	

- The input pressure must be adjusted depending on the consumers in the system at the air supply. The minimum operating pressure must never fall below 4 bar; the minimum operating pressure increases with additional consumers (observe the following warning).

	DANGER	**Warning!**
Drop in air flow If additional consumers are used, the air flow rate drops and may fall below the minimum flow rate.		

10. Maintenance and repairs

The following chapter describes the procedures for maintenance and service work to the half mask. Maintenance and service work may only be carried out by specialist personnel.

10.1. Replacing the activated charcoal absorber (variant 1)

	Note!
Once the activated charcoal adsorber has been used for max. 3months, it needs to be replaced. The current period of use can be read off the date clock **[8-5]** on the protective cage.	

- Close the air connection check valve [1-10].
- Disconnect the compressed air supply hose from the air connection **[8-6]**.
- Turn the protective cage **[8-4]** to the left and remove.
- Unscrew the transparent plastic bell.
- Remove the old activated carbon adsorber **[8-3]**.
- Remove the old date indicator **[8-5]** from the protective cage.
- Stick a new date clock to the protective basket.

- Insert a new activated charcoal absorber.
- Screw in the transparent plastic bell.
- Attach the protective cage **[8-4]** and tighten it by turning it clockwise.
- Adjust the air volume flow via control valve **[8-2]**. The pressure gauge **[8-8]** must be in the green range during the entire operation.

10.2. Check inhalation and exhalation membranes

	Note!
Exchange the inhalation and exhalation membranes at least every 2 years.	

Check inhalation membrane

- Carefully detach inhalation membrane on the tap and check visually for rips or other damage.
- Carefully re-attach inhalation membrane behind the tap.
- The inhaling membrane must lie evenly on the sealing surface inside.
- Ensure that the inhalation membrane is not stuck to the valve seat.

Check exhalation membrane

- Release mask cap from mask body.
- Hold exhaling membrane at the edge and pull out.
- Check valve seat for soiling and damage. Clean if necessary.
- Press exhaling membrane into the valve seat until it engages in position so that it lies smoothly and evenly.
- Ensure that the exhalation membrane is not stuck to the valve seat.

10.3. Check rubber seal and head straps together with lower straps

- Check the rubber seal **[11-1]** of the half mask **[11-4]** for cracks or other signs of damage.
- Check head straps **[11-2]** and lower straps **[11-3]** for cracks or other signs of damage.

11. Care and storage

Careful handling together with constant care of the product is necessary to ensure that the half mask functions properly.

11.1. Cleaning and Disinfection

NOTICE	Attention!

Damage from unsuitable cleaning agents
The use of aggressive cleaning agents can damage the half mask.
→ Do not use aggressive or abrasive cleaning agents.

Suitable cleaning equipment and disinfection agents can be found here:
www.sata.com

Clean the half-mask after each use, check its function and tightness, disinfect the half-mask if necessary.
For cleaning and/or disinfection, use a - with suitable cleaning agent or disinfectant moistened – Wipe all skin contact areas with a cloth. Visible soiling – especially on the inside of the half mask – must be completely removed. Then allow the cleaned surfaces to dry completely before using them again.
If the half mask is damaged, do not continue to use it under any circumstances. Please contact SATA customer service for repair or dispose of the damaged product properly.

11.2. Storage

NOTICE	Attention!

Physical damage from incorrect storage
Incorrect storage conditions can cause premature damage to the half mask.
→ Avoid exposure to direct sunshine.
→ Keep away from sources of heat.
→ Make sure the storage area is well ventilated.
→ Maintain a relative humidity of < 90 %.
→ Only store the half mask in dry state.

New and originally packed half masks can be kept for
6 years under the stated storage conditions (see chapter

7). Masks that are currently in use must be kept
in the provided hygiene boxes, in special storage cabinets
Or other suitable containers to protect them from dust and vapours.

12. Malfunctions

If any problems occur, contact your SATA dealer.

13. Disposal

Dispose of the half mask as recyclable material. To avoid damage to the environment, dispose of the half mask separately from the air filters in an appropriate manner. Comply with local regulations!

14. After Sale Service

Accessories, spare parts and technical support may be obtained from your SATA dealer.

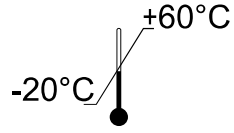
15. Accessories

Art. No.	Description	Num-ber
13870	Air tube 1.2 m	1 ea.
49080	Safety compressed air supply tube 9.5 mm x 5 mm, 6 m long	1 ea.

16. Spare Parts

www.sata.com/airstarc-spareparts

17. Marking on the PPE

	Temperature range during storage (- 20° C to + 60° C)
	ATTENTION! Observe this manual!
	Year of production

	Maximum moisture during storage < 90 %

18. EU Declaration of Conformity

The latest version of the Declaration of Conformity can be found at:

www.sata.com/downloads