

Operating Manual

OKS Airspray System



This operating manual is valid for the accessories offered by the manual for use in combination with it. The use of the **OKS Airspray System** with other OKS products than those approved for use with the Airspray System is prohibited.

Neither this manual nor parts of it may be duplicated without the express permission of the manufacturer.

All the information in this documentation has been compiled with the utmost care. Nevertheless, deviations cannot be excluded. We reserve the right to made technical modifications to the product without prior notice. The manufacturer assumes no liability for any damage which may result from such a modification.

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1 Preface and general information

1.1 About this operating manual

- ◆ This operating manual serves the purpose of ensuring safe working with the OKS Airspray automatic filling unit in combination with the accessories provided for it by the manufacturer and the OKS products approved by OKS for it. It contains safety instructions for the unit's use that must be observed.
- ◆ Operating instructions must be available to all persons, who work on and with the OKS Airspray automatic filling unit while performing their work, and they must observe all information and references relevant for them.

1.1.1 Danger symbols



Warning! Danger!

This symbol warns you of dangers to the health of persons.

1.1.2 Information symbols



This symbol points out tips on use that will help you to carry out activities quickly and safely.

1.2 Delivery scope

- ◆ The OKS Airspray System is customised individually to the customer's requirements. Please check immediately following receipt of the delivery, whether it matches **your** order. The manufacturer and the OKS sales partner will assume no warranty for defects reported at a later time.
- ◆ Report:
 - Recognisable transport damage immediately to the deliverer.
 - Recognisable defects or incomplete deliveries immediately to the OKS sales partner.

1.3 OKS Airspray System

1.3.1 Marking

- ◆ The individual components of the OKS Airspray Systems and the OKS products are marked clearly by adhesive labels.
- ◆ **CE marking** on the OKS Airspray automatic filling unit
- ◆ Manufacturer:

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D – 35216 Biedenkopf-Wallau

Phone: +49 (0) 6461 9860 0
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Internet: www.vaupel-gmbh.de
E-mail: info@vaupel-gmbh.de

1.3.2 Proper use

- ◆ The OKS Airspray System is
 - intended for the spraying of the OKS products approved by OKS.
 - only to be used for the purposes confirmed by OKS.
 - only to be operated under the operating conditions and settings specified in this operating manual.

Any other use and setting shall be considered improper!

1.4 Legal regulations

1.4.1 Liability

- ◆ The information, data and instructions in the operating manual were up to date at the time of printing. No claims may be made on OKS Airspray systems already delivered based on information, illustrations and descriptions.
- ◆ The manufacturer shall assume no liability for injuries, damage and malfunctions resulting from:
 - Improper use;
 - Unauthorised modifications to the components of the OKS Airspray System;
 - Improper work performed on and with the OKS Airspray System;
 - Operating and setting errors;
 - Products not approved by OKS;
 - Failure to observe the operating manual.

1.4.2 Warranty

- ◆ The warranty conditions of the manufacturer apply.
- ◆ Report warranty claims immediately to your OKS sales partner after discovering the defect or fault.
- ◆ The warranty is voided in all cases in which no liability claims can be asserted.

2 Safety instructions

2.1 Persons responsible for safety

◆ Owner-operator

- The owner-operator is any natural or legal person who uses the OKS Airspray System or on order of whom the OKS Airspray System is used.
- The owner-operator or its safety representative must ensure
 - that all relevant regulations, information and laws are complied with;
 - that only qualified personnel work on and with the OKS Airspray System;
 - that the personnel has the operating manual of the OKS Airspray System and the current EC safety data sheets of the processed OKS product available at all the corresponding work and complies with it;
 - that unqualified personnel is prohibited from working on and with the OKS Airspray System;
 - that the necessary accident prevention regulations and safety regulations are complied with during installation of or while performing maintenance on the OKS Airspray System.

◆ Qualified personnel

Qualified personnel are persons who, due to their training, experience, instruction and knowledge of applicable standards and regulations, accident prevention regulations and operating conditions, have been authorised by the person responsible for the system's safety to carry out the respectively required activities, and can recognize and avoid possible dangers in the process.

2.2 General safety instructions

- ◆ No claim to completeness is made with these safety instructions. In case of application-specific questions and problems please speak with your OKS sales partner, the manufacturer or the Technical Service of OKS.
- ◆ The OKS Airspray System complies with state-of-the-art technology and is basically considered safe to operate at the time of delivery.
- ◆ The OKS Airspray System presents dangers to persons, the OKS Airspray System itself and other property of the operator if:
 - unqualified personnel work on and with the OKS Airspray System;
 - the OKS Airspray System is used improperly and for other than the specified purpose;
 - the OKS Airspray System is incorrectly adjusted or varied.

- ◆ The OKS Airspray System may only be operated with OKS products approved by OKS and has to be set so that it fulfils its function and does not cause any dangers to persons in fault-free operation when installed properly and used for the specified purpose.
- ◆ Ensure through suitable measures that no material damage occurs if the OKS Airspray System should fail.
- ◆ Only operate the OKS Airspray System in proper condition.
- ◆ Retrofitting, changes or modifications to the OKS Airspray System are always prohibited. They always require consultation with the manufacturer.

2.3 Safety instructions for the OKS Airspray System

2.3.1 Safety instructions for mounting and maintenance



- ◆ Make sure that all workplaces and traffic routes are clean and safely accessible!
- ◆ During mounting and maintenance work at workplaces with a danger of falling, the corresponding regulations and guidelines must be complied with.

2.3.2 Safety instructions when handling the OKS Airspray System



- ◆ Use the OKS Airspray System only with OKS products approved by OKS for this system.
- ◆ Do not process alkaline or acidic media with the OKS Airspray System.
- ◆ The current product information and the safety data sheet of the OKS product used must be available during processing (these documents are available on the OKS homepage www.oks-germany.com).
- ◆ Processing instructions of the corresponding OKS product are to be observed.
- ◆ Keep OKS Airspray System components inaccessible for children.
- ◆ Lubricants on traffic routes lead to an increased danger of slipping. Therefore, immediately clean the floor with appropriate means!
- ◆ Use only original OKS Airspray System components.
- ◆ Have damage to components of the OKS Airspray System eliminated only by the manufacturer.
- ◆ Changes to and modification of components of the OKS Airspray System are prohibited.
- ◆ Avoid breathing in spray mist.
- ◆ Never point the OKS Airspray can at yourself, other persons or animals.

3 Technical data OKS Airspray automatic filling unit

3.1 Design

The OKS Airspray automatic filling unit is a closed unit with internal double cylinder, control units and valves. The housing exterior contains one coloured tapping point for the product and compressed air and one only for compressed air. The housing of the OKS Airspray automatic filling unit is made of sheet steel and is powder-coated.

3.2 Dimensions, weight

- ◆ Width: 220 mm
- ◆ Depth: 250 mm (without connections)
- ◆ Height: 365 mm
- ◆ Weight: 7,5 kg

3.3 Operating pressure, maximum pressure, compressed air connection

The operating pressure should lie between 6 and 8 bars. The maximum permissible pressure amounts to 10 bars. The compressed air connection of the OKS Airspray automatic filling unit has a ¼" inner thread and is equipped as standard with a plug nipple for compressed-air quick connect coupling.

3.4 Connection to product container

The connection of the OKS Airspray automatic filling unit to the product container is effected through a 3 m long suction hose with drum or canister screwed connection complete with rising tube or hose in accordance with customer specification.

4 OKS Airspray System

4.1 OKS Airspray can

In principle the OKS Airspray can functions like a spray can. The can is pressurised. When the spray head is pressed, the OKS product is emitted. The OKS Airspray can also functions upside down. If the pressure in the OKS Airspray can is no longer sufficient, it can be topped up with compressed air by using the OKS Airspray compressed air filling valve, the OKS Airspray filling station or the compressed air filling valve in the OKS Airspray automatic filling unit.



Only OKS Airspray cans with smooth bottom valve (sold as of 2008) are suitable for automatic filling with the OKS Airspray automatic filling unit. Older cans with an external thread at the bottom valve damage the seals of the retainers of the Airspray automatic filling unit and are not suitable for use with the Airspray automatic filling unit.



Check the OKS Airspray can for possible defects before every use. Do not open the can with force and replace defective parts immediately.

4.1.1 Spray set for the OKS Airspray can

The OKS Airspray spray set contains 3 different spray heads which are optimised to specific application conditions in their spray pattern and their spray rate. In addition the spray set contains blank template labels for printing out a product label (see 4.1.2).

4.1.2 Marking of the OKS Airspray can



Before being used the corresponding product label has to be applied to the OKS Airspray can to identify it uniquely. This product label can be downloaded from the OKS website www.oks-germany.com. The corresponding blank template labels for printing the product label are enclosed with the OKS spray set.

4.1.3 Filling the OKS Airspray can

Please ensure that only fully emptied OKS Airspray cans are filled with the product and that the OKS Airspray can is only operated with the permissible operating pressure. The maximum permissible operating pressure amounts to 10 bars, the minimum operating pressure amounts to approx. 5 bars. If necessary, adapt the line pressure correspondingly. The compressed air must be clean, free of particles and dehumidified.

4.1.3.1 Manual filling with product and compressed air



1. Loosen the knurled union nut carefully approx. 2 - 3 rotations so that any existing pressure can escape from the can. The groove milled in the nut discharges any product rests towards the bottom of the Airspray can.
2. Subsequently screw off the knurled union nut completely. Remove the valve insert with spray head.
3. Fill the OKS Airspray can with approx. 400 ml (approx. 2/3 of the overall volume) with the OKS product. In order to fill without dripping, use suitable aids such as drain cocks.
4. Put on the valve insert with spray head and secure with the knurled union nut tightened hand-tight.
5. Fill compressed air into the OKS Airspray can via the bottom valve by means of the OKS Airspray filling valve or OKS Airspray filling station.

4.1.3.2 Automatic filling with product and compressed air

1. Check whether the knurled union nut is screwed tight and the OKS Airspray can is empty. Open the knurled union nut only to replace the OKS Airspray spray set.
2. Press the OKS Airspray can into the product/air filling point of the OKS Airspray automatic filling unit. Wait until the filling process is complete after approx. 10 seconds.

4.2 OKS Airspray filling station

The OKS Airspray filling station is used to fill compressed air into the OKS Airspray can. It disposes at the hose ends of a standardised compressed air connection and can thus be connected to the compressed air network with all the common quick-connect couplings. The retaining plate has drill holes to allow fixed mounting, for example directly at the workplace. The OKS Airspray can is placed in the retainer for filling with compressed air. The bottom valve is opened when the can is pressed down and compressed air is filled into the OKS Airspray can.



4.3 OKS Airspray automatic filling unit



The OKS Airspray automatic filling unit is used to fill OKS product and compressed air into the OKS Airspray can simultaneously. Only one OKS product can be processed with the OKS Airspray automatic filling unit.



Only OKS Airspray cans with smooth bottom valve (after middle 2008) are suitable for automatic filling with the OKS Airspray automatic filling unit. Older cans with an external thread at the bottom valve damage the seals of the retainers.

Ensure that the suction line for the OKS product and the compressed air hose are not bent and that they are not damaged.



The OKS Airspray automatic filling unit has two different filling valves: The valve on the left-hand side is for the OKS product and compressed air, the valve on the right-hand side is only for compressed air. During the first use of the OKS Airspray automatic filling unit the OKS Airspray can is not filled completely (usually only about half of the product). Only then is the dosing cylinder of the automatic filling unit filled completely with 400 ml OKS product.



4.3.1 Commissioning of the OKS Airspray automatic filling unit



Place the unit only on a horizontal surface with firm stand. Alternatively the OKS Airspray automatic unit can be mounted on suitable vertical surfaces by means of the wall mount kit.

The automatic filling unit may only be located in hazardous areas in Zone 1 or 2 in accordance with BGR 132. (Zone 1 encompasses areas in which the occasional occurrence of dangerous explosive atmospheres through gases, vapours or mist can be expected. (Zone 2 encompasses areas in which the occurrence of dangerous explosive atmospheres through gases, vapours or mist can be expected only seldom and only briefly.)

Operate the unit only with the permissible operating pressure (see Section 3.3). The maximum operating pressure amounts to 10 bars, the minimum operating pressure to approx. 5 bars. The current pressure is indicated at the integrated pressure gauge. Never use different products at the same time. Check the OKS Airspray automatic filling unit for defects before every use.



1. Place the unit securely on a horizontal surface or fasten the brackets for the wall mounting firmly.
2. Earthing of the automatic filling unit via the earthing screw provided at the rear.
3. Check the line pressure of the compressed air connection and if necessary adjust.
4. Mount the connection point for compressed air at the unit rear, connect the unit to the compressed air line.
5. Connect the product packaging by means of the corresponding suction line (canister / drum) to the automatic filling unit. Ensure that air can flow into the product container.



4.3.2 Special instructions for the use of the OKS Airspray automatic filling unit with solvent-based OKS products, e.g. OKS 2610 Universal Cleaner



Before commissioning the OKS Airspray automatic filling unit and the product packaging have to be earthed. The OKS Airspray automatic filling unit forms a closed system together with the OKS Airspray can.



When combustible OKS products are sprayed, their properties also change. Talk to your safety officer about a corresponding risk assessment.



Take the OKS Airspray automatic filling unit out of operation immediately if liquid escapes from the housing or any other leakage is noted. The escape of combustible liquids can result in gas-air mixtures which can ignite. Observe the information in the safety data sheet of the corresponding OKS product.



Open fire, smoke, etc. is not permitted in the surroundings of the OKS Airspray automatic filling unit.

4.3.3 Maintenance instructions for the OKS Airspray automatic filling unit

4.3.3.1 Filling valve seals



In order to avoid wear to the seals of the two filling valves these should be lubricated with a multipurpose grease at regular intervals. A grease press gun is available as an accessory to this purpose. Observe the corresponding information at the OKS Airspray automatic filling unit. In the case of a leak the product is emitted uncontrolled at the sides.

4.3.3.2 Dosing cylinder

A lubricating nipple is positioned between the two filling valves of the automatic filling unit. This lubricating nipple can be used to lubricate the material position in the dosing cylinder. The lubricant between the seals of the material piston in the dosing cylinder is washed out in particular when cleaners and solvent-based lubricants. This results in jerky movements of the piston and to an increased wear of the seals. To avoid this the automatic filling unit has to be lubricated once a month with 5 to 6 strokes with the optional press gun via this lubricating nipple.



If OKS oils without solvents are used, relubrication is normally not required.

4.3.3.3 Trigger valve

In the case of a humid compressed-air system (no refrigeration dryer) it is possible that the trigger valve no longer moves back to its initial position after some time. In order to prevent this we recommend removing the compressed-air connection from the unit once a month and dripping one drop of a low-viscosity oil into the plug nipple or onto the dirt filter of the compressed-air connection. Then reconnect the connection. The oil is distributed automatically during use.

5 Disposal



Contribute to environmental protection by recycling valuable raw materials and protecting resources. We further advise that you follow the disposal regulations applying locally.

What must be disposed of?	Material	How is it to be disposed of?
Transport materials	Pallets	Return to manufacturer or carrier
Packaging	Paper and cardboard	Paper recycling
	Plastics	Plastic recycling
	Excelsior	Reuse
Lubricants	Oil and grease	Waste containing oil and grease see EC safety data sheet

Components	Airspray automatic filling unit Airspray can Airspray spray set Other system components	Dispose of as scrap metal
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6 Accessories for OKS Airspray System



Accessories and spare parts must meet the technical requirements! This is always ensured with genuine spare parts from the manufacturer.

6.1 Accessories

- ◆ Spray set with 3 spray heads with different spray patterns and spray rates and blank template labels for the OKS Airspray can
- ◆ Drain cocks for 5 and 25 l PE canisters
- ◆ Suction lines for 25 l PE canister, 25 l tinplate canister, 25 l garage drum, 56 l garage drum and 200 l drum
- ◆ Grease press gun for lubricating the dosing piston of the OKS Airspray automatic filling unit
- ◆ Additional accessories on request

7 Guarantee and service

7.1 Guarantee

The manufacture provides a guarantee in accordance with the statutory provisions. Damage that is due to natural wear, excess load or improper handling remains excluded from the guarantee. Damage arising through material or manufacturer faults are eliminated free of charge within the scope of the guarantee through replacement or repair.

Note for automatic filling units: Complaints are only recognised if the unit is returned completely to the manufacturer.

7.2 Service processing during the guarantee

End customer contacts the manufacturer to clarify the service case. The guarantee claim is proven through the date of the invoice of delivery note. Defective accessory parts are replaced free of charge by the manufacturer. As a rule defective parts are not demanded back. However, the manufacturer reserves the right to require the return of the defective parts by the customer before sending the replacement parts.

A defective automatic filling unit is sent by the customer directly to the manufacturer for repairing after agreement with the manufacturer service. The manufacturer repairs the unit and returns it within 5 working days to the customer within the scope of the guarantee.
(Remark: Repair and shipping costs are borne by the manufacturer).

If in the course of the repair the fault is found to lie in the responsibility of the customer, the manufacturer informs the customer correspondingly. The repair is then carried out at the expense of the customer after agreement with the customer.

7.3 Repair processing outside the guarantee

The end customer contacts the manufacturer service to clarify the repair processing.

The defective automatic filling unit is sent by the customer directly to the manufacturer for repairing after agreement with the manufacturer service. The manufacturer repairs the unit and returns it within 5 working days to the customer at the cost of the customer.

(Remark: Repair, spare-part and shipping costs are charged to the customer by the manufacturer).

EC Declaration of Conformance to

- EC Machinery Directive 2006/42/EC

The company

Vaupel GmbH
Weifenbacher Weg 24
D – 35216 Biedenkopf-Wallau
Germany

declares that the following product

- OKS 5300 Airspray automatic filling unit

conforms to the above-mentioned EC directives.

The following standards and technical specifications were applied:

- DIN EN ISO 12100-1 Safety of machines: Terminology, methodology
- DIN EN ISO 12100-2 Safety of machines: Technical principles
- DIN EN ISO 14121-1 Safety of machines: Principles of risk assessment

Manufacturer's declaration

We herewith declare that the device designated below fulfils the specifications of the EC directive specified below.

If it is installed in a different machine, commissioning remains prohibited until it has been established that the machine into which the device is to be installed fulfils the requirements of the EC Machinery Directive 89/392/EEC, new 2006/42/EC with Annex.

Designation:

- Pneumatic special product

Type:

- OKS 5300 Airspray automatic filling unit

Product

numbers:

- Manufacturer Mat. No. 40043 (OKS Mat. No. 1042350000)

Considered directives:

- Machinery Directive 89/392/EEC, new: 2006/42/EC

Tests:

- Pressure tests

The device was tested for static charging on a voluntary basis by the TÜV Frankfurt. The test showed that static charging does not take place.

CE marking of OKS 5000 Airspray can 400 ml

The OKS Airspray can sold by us falls under the scope of validity of the Pressure Equipment Directive 97/23 EC. In the sense of this directive the OKS Airspray cans are devices as "vessels".

Article 3-1.1.a specifies limit values for them. In accordance with this article the OKS Airspray cans are evaluated in accordance with Annex II, Table 1. This evaluation results in a value of less than 25 (volume x max. permissible pressure).

The OKS Airspray can thus falls under Article 3, Section 3 that specifies the following with regard to the CE marking: "Such equipment and/or assemblies must not bear the CE marking referred to in Article 15".

Directive 87/404/EEC can also be cited in this context. Article 3 states here: Vessels in respect of which the product of PS x V is 50 bar x l or less must be manufactured in accordance with sound engineering practice ... It furthermore states correspondingly: The "CE" marking referred to in Article 16 is not applicable.

Accordingly the OKS Airspray cans may not be put on the market with the CE marking.

Vaupel GmbH
35216 Biedenkopf-Wallau
01.02.2016

Eva Riek
Owner