

Use and maintenance Guide

SOIL26

Oil mist vacuum cleaner



CE

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1. Foreword

1.1 Purpose of the manual

The "Use and Maintenance Manual" describes all the steps necessary for the correct installation and use of the machine with particular attention to safety and environmental protection.

This manual must be read with the utmost care before the machine is put into operation and kept near the machine itself for the use of the user or maintenance personnel.

The machine has been designed and built in compliance with the safety standards of the sector. As evidence of this, the "CE" mark has been affixed to the machine which ensures compliance with the Machinery Directive.

Any unauthorized tampering with the appliance and/or any intervention carried out by untrained personnel could compromise its proper functioning and also significantly alter its performance.

Additional information not contained in this manual can be requested directly from

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- Secureair® by Gamma Impianti™ S.R.L. declines all responsibility for any damage suffered by third parties due to incorrect installation, improper use, removal or deactivation of the installed safety devices.
- Under no circumstances will the company Secureair® by Gamma Impianti™ S.R.L. be held responsible for accidents or damage to the machine and its components, described in this document, if caused or resulting from the incorrect use of the information contained in the manual itself.
- Secureair® by Gamma Impianti™ S.R.L. assumes that the current occupational safety and hygiene regulations are observed in the systems where the machine has been intended.

1.2 Symbolism

The operator must pay attention to the symbolism in the table below.














OBLIGATION		PROHIBITION		DANGER	
	READ THE OPERATING INSTRUCTIONS		DO NOT REMOVE THE GUARDS		GENERAL HAZARD
	WEAR PROTECTIVE FOOTWEAR		DO NOT APPROACH		MOVING PARTS
	WEAR PROTECTIVE GLOVES		DO NOT PERFORM MAINTENANCE ON THE MOVE		CRUSHING
	WEAR PROTECTIVE GLOVES		DO NOT LOG IN IF YOU HAVE A PACEMAKER		ELECTRICAL VOLTAGE
					HIGH TEMPERATURES

Figure 1 - Manual signage

1.3 Confidentiality

The technical information contained in this manual is the property of Secureair® by Gamma Impianti™ S.R.L. and must be considered confidential: disclosure and reproduction, even partial, without the written permission of Secureair® by Gamma Impianti™ S.R.L. is therefore prohibited.

1.4 Regulatory references

The manufacturer has designed and built the filtration unit in such a way as to eliminate and limit the risks deriving from its use, in compliance with the following European directives: Machinery Directive 2006/42/EC, Directive 2014/35/EC, Directive 2014/30/EC and in particular:

EN 12100-1	Safety of machinery – Fundamental concepts, general principles of design – Part 1: Basic terminology, methodology
EN 12100-2	Safety of machinery – Fundamental concepts, general principles of design – Part 2: Technical principles.
EN 14121-1	Safety of machinery – Risk assessment – Part 1: Principles
EN 14121-2	Safety of machinery – Risk assessment – Part 2: Practical guidance and examples of methods
EN 13857	Machinery Safety – Safety distances to prevent upper and lower limbs from reaching dangerous areas
EN 14120	Safety of machinery – Guards – General requirements for the design and construction of fixed and movable guards
EN 1037	Machinery Safety – Prevention of Unexpected Starting
EN 60204-1	Safety of machinery – Electrical equipment of machines
EN 13849	Safety of machinery – Safety-related parts of control systems – Part 1: General principles for design
EN 7010	Graphic signs – Colors and safety signs – Registered safety signs
EN 4413	Hydraulics – General rules and safety requirements for systems and their components
EN 11200	Acoustics – Noise emitted by machines and equipment



The operator must be aware of the working environment and instructed in the use of safety devices

1.5 Error and discrepancy reports

In order to include the most up-to-date information in the manuals, our company carries out an analysis of the reports received. Operators are invited to report any inaccuracies by sending an e-mail to the following e-mail address: info@secureair.it

2. Safety and accident prevention regulations

2.1 General

This section contains some basic safety rules that operators and maintenance personnel must follow scrupulously to avoid injury to persons or even serious damage to the machine.

Secureair® by Gamma Impianti™ S.R.L. cannot foresee every situation that could create a potential danger during the use or maintenance of the system; For this reason, the safety messages included in the manual and/or shown on the plates of the equipment may not include all possible safety precautions.

The safety information contained in this manual must in any case be supplemented by the specific provisions of the law, and by the related regulations issued by the public bodies responsible for prevention.

2.2 General safety rules and instructions

- ❖ Carefully and scrupulously follow the safety instructions in this manual.
- ❖ It is recommended to use the personal protective equipment indicated by the relevant regulations.
- ❖ After unpacking the product, make sure that it is intact. In case of damage or in doubt, contact a professionally qualified person immediately.
- ❖ If the product has been subjected to a strong impact or has been dropped, check all its parts.
- ❖ If there are structural deformations, or operating anomalies occur, or any component is damaged, it is necessary to contact an Authorized Service Center.

- ❖ Do not install the apparatus in locations with an explosive or aggressive atmosphere, unless it is stated and constructed for such use.
- ❖ The machine and the surrounding area must be free of hazardous deposits and materials in general, if the environmental characteristics for which the machine is intended to operate are modified, the manufacturer is not responsible for any malfunctions or possible risks and damages that may occur.
- ❖ Before carrying out any cleaning and/or maintenance work, turn off the appliance switch. Make sure that the power supply has been interrupted and that the switch cannot be re-enabled accidentally.
- ❖ The use of any electrical appliance requires compliance with certain basic rules, including:
it must not be touched with damp or wet hands;
It must not be touched barefoot.
- ❖ Adhesive labels, which indicate a possible danger or recommendation for use, must not be removed.
- ❖ The machine should be checked periodically as indicated in the use and maintenance manual.
- ❖ The machine must only be used by authorized personnel who have been trained for the purpose; The same precaution also applies to people who need to carry out maintenance. When carrying out maintenance, adopt all possible safety rules, precautions and all the precautions and procedures indicated for individual operations; During maintenance, require that any persons present as employees take the necessary safety measures.
- ❖ The machine, or its components, must not be modified without the prior written authorization of Secureair® by Gamma Impianti™ S.R.L. If modifications are made to the machine and its components, without the prior written authorization of Secureair® by Gamma Impianti™ S.R.L., all forms of warranty will be void. Secureair® by Gamma Impianti™ S.R.L. is not responsible for any malfunctions of the machine, damage to property or people if unauthorized interventions are carried out.
- ❖ Secureair® by Gamma Impianti™ S.R.L. is not responsible for a use other than that for which the machine was designed. For the use of the machine in question in the manual, see the chapter "Intended use".
- ❖ At the end of the maintenance and/or repair operations, before reconnecting the machine to the power supply, the person in charge of the work must make sure that it repairs and the safety devices are correctly installed.
- ❖ Wear suitable clothing and personal protective equipment during cleaning and maintenance.
- ❖ Do not carry out operations on the machine when it is in operation and without checking that the machine is disconnected from the mains supply.
- ❖ Use approved type of equipment and tools.
- ❖ Check that the safety devices mounted on the machine, i.e. parts of it, are kept in perfect working order
- ❖ Use only suitable devices that comply with the law for handling the machine;
- ❖ Do not attach the machine to other foreign objects.
- ❖ Do not place any tools and/or objects on the machine.
- ❖ Do not introduce foreign or sharp objects of any kind that could cause damage or obstruction to the filtering section, nor smoke near the extraction hoods.
- ❖ The company safety manager must ensure that the personnel in charge of operating the machine have read and understood this manual in all its parts.
- ❖ It remains the responsibility of the company safety manager to verify the company's state of risk according to Legislative Decree 81/08.



CHECK THAT THE APPLIANCE IS INSTALLED AND USED IN COMPLIANCE WITH LOCAL LAWS AND REGULATIONS.

The company Secureair® by Gamma Impianti™ S.R.L. does not assume any responsibility in the event of accidents resulting from improper use of the PRODUCT IN QUESTION and in particular in the following conditions:

- REMOVAL or modification of safety devices;
- use of the appliance that does not comply with WHAT INDICATED by Secureair® by Gamma Impianti™ S.R.L.;
- modification of the device without PRIOR AUTHORIZATION from Secureair® by Gamma Impianti™ S.R.L.;
- use of accessories and spare parts not supplied by Secureair® by Gamma Impianti™ S.R.L. if not authorized;
- use of the appliance for purposes other than those for which it was intended.

3. Machine identification

The machine is identified by the CE plate fixed solidly with the structure.
 The plate shows the following data:

- ❖ Manufacturer's logo
- ❖ Machine Model
- ❖ Freshman
- ❖ Flow rate
- ❖ Year of construction
- ❖ Electrical voltage (V/Hz)
- ❖ Power (kW)
- ❖ Total weight (Kg)

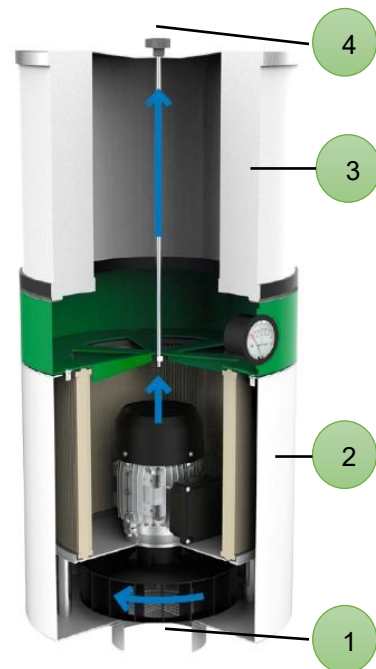
4. Intended Use

The SOIL26 filtration unit has been designed for the filtration of oil mists deriving from the machining processes. Therefore, it is FORBIDDEN to use the filtration unit in addition to the applications specified by the manufacturer in the operating instructions. The operator must be aware of the intended use and the correct intervention procedures on the filtration unit. The manufacturer is relieved of any liability if the use of the unit is incorrect or unexpected.

5. Operation

1	Input
2	Main filter
3	Final filter (optional)
4	Exit

1. The air contained inside the machine tool is conveyed to the inlet of the vacuum cleaner by a fan. The centrifugal effect facilitates the reaggregation of small oil particles.
2. The air passes through the filter element consisting of a special polyurethane sponge or, alternatively, a pleated cartridge complete with coalescing filter.
3. Proceeding upwards, the air passes through the last filtration stage consisting of an absolute HEPA filter, H13 classification.
4. The air, completely purified, is returned to the work environment.



6. Residual Risks

The manufacturer has taken all protective measures to eliminate the risks that may arise from the use of the machine. The operator must be informed of the precautions to be taken as indicated in the instructions for use. The operator is reminded to comply with the rules of conduct regarding safety and personal protection. **DO NOT** carry out maintenance operations with the unit in operation and **DO NOT** disperse processing residues into the environment.



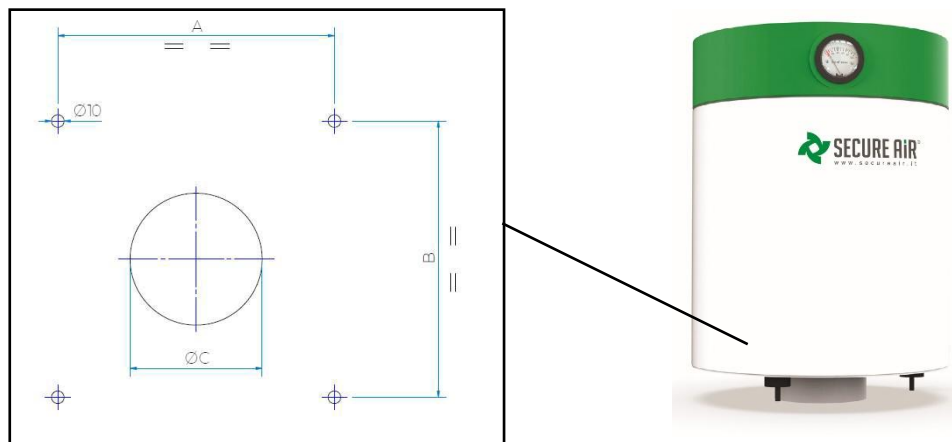
7. Installation

7.1 Installation on the roof of the machine tool

The installation of the vacuum cleaner on the roof of the power tool must only be carried out by qualified and qualified personnel. The chosen position must be perfectly level and have the minimum dimensions for safe access and all utilities subject to maintenance.

Follow the drilling pattern according to the model of the SOIL26 vacuum cleaner.

MODEL	A	B	C
SOIL 250/500	251	145	105
SOIL 1000/1500	260	150	155
SOIL 22000/2500	312	180	205

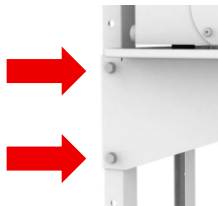


7.2 Pedestal installation

The installation of the vacuum cleaner on the Secureair® stand must be carried out exclusively by qualified and specialized personnel. The chosen location must be perfectly level and must have the minimum dimensions to safely access all utilities subject to maintenance. The posts must absolutely be dowelled to the ground using the 4 lower holes. The Secureair® floor stands are equipped with adjustment of the suction surface. The height of the hob must always be adjusted before installing the extractor.

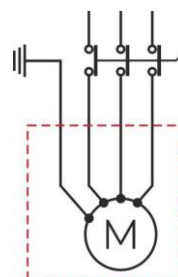


DO NOT ADJUST THE HEIGHT WITH THE VACUUM INSTALLED



7.3 Electrical connections

Operations concerning electrical connections must be carried out exclusively by qualified and specialized personnel, in compliance with safety regulations. Before carrying out any electrical operation, make sure that the machine is NOT live. Check that the mains voltage is the same as the data indicated on the rating plates. Connect the machine using the socket located on the bottom side.



7.4 Drainage pipe connections

Operations concerning the connections of the flexible hose for drainage must be carried out only by qualified and specialized personnel, in compliance with safety regulations. Use a 20mm internal diameter anti-oil and anti-cut hose to connect it to the rubber port fitting located at the rear of the SOIL vacuum cleaner. Also, use a metal tie to lock it.



8. Maintenance

It is advisable, before proceeding with the execution of maintenance operations, to scrupulously follow the following warnings:

- If major repairs are required, please contact the Secureair® Service Centre. The specialized staff, equipped with all the technological experience of construction, is available every day and is able to intervene with the utmost timeliness.
- Before starting all the control and maintenance operations, it is advisable to carefully remove all the dirt present in the station by vacuuming and with appropriate detergents, avoiding the use of compressed air jets that could create areas of dirt accumulation.
- It is important before starting any cleaning operation, to make sure that there is a special sign indicating the carrying out of the cleaning.
- Clean any trace of persistent dirt with dry, soft cloths that do not leave fraying, or with well-flexible bristle brushes.
- If the dirt is encrusted and difficult to remove with dry cloths or brushes, use a cleaning liquid that is normally used by the user.
- After each maintenance operation that involves the disassembly of fixed parts and moving parts, check their exact position.

8.1 Cleaning

Before carrying out any maintenance or cleaning operations, cut off the power supply to the machine. Periodically carry out external cleaning using appropriate routine cleaning tools such as cloths, non-aggressive detergents, suitable containers.

The personnel in charge must be equipped with personal protective equipment such as goggles and gloves.

8.2 Replacement of sponges/filtration cartridges basic version

To replace it, proceed as follows:

- Turn off the SOIL vacuum cleaner and unplug it;
- Unscrew the ring locking screws (fig.1);
- Remove the ring that locks the filter element (fig.2);
- Pull out the filter element (fig.3)
- Clean the filter seat with a cloth and non-aggressive detergent;
- Insert a new filter element;
- Close the filter element with the ring, then tighten the screws;
- Start the machine.

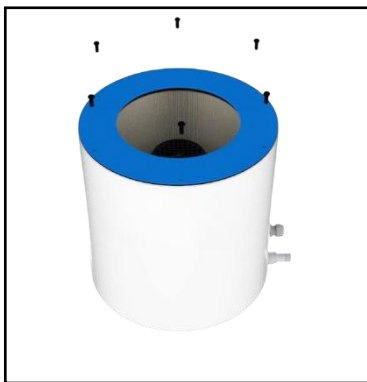


Fig.1



Fig.2



Fig.3



If the vacuum cleaner is equipped with post-filtration, to replace the filter cartridge, first follow the instructions in chapter 8.4

8.3 Replacement of filtration cartridges version with pressure gauge

To replace, proceed as follows:

- Turn off the SOIL vacuum cleaner and unplug it;
- Unscrew the ring locking screws (fig.1);
- Remove the ring (fig.2);
- Remove the filtration cartridge (fig.3);
- Clean the cartridge seat with a non-aggressive detergent cloth;
- Insert a new cartridge;
- Close the cartridge with the cartridge lock ring then tighten the screws;
- Start the machine.



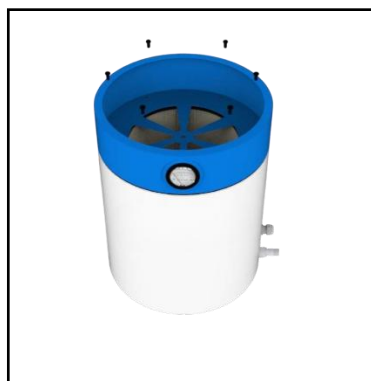


Fig.1



Fig.2



Fig.3



If the vacuum cleaner is equipped with post-filtration, to replace the filter cartridge, first follow the instructions in chapter 8.4

8.4 HEPA filter replacement

To replace, proceed as follows:

- Turn off the SOIL vacuum cleaner and unplug it;
- Unscrew the filter lock handwheel (fig.1);
- Remove the absolute filter (fig.2);
- Clean the support of the filters with a cloth and non-aggressive detergent;
- Enter a new absolute filter;
- Screw on the filter locking handwheel;
- Start the machine



Fig.1




Fig.2


9. Parts List

9.1 Filtration cartridge


The filter fabric is a cellulose made using an innovative process that aims to give high mechanical resistance and high durability. This manufacturing method allows for no variation in air permeability, allowing for better filtration efficiency and high stability. The maximum operating temperature in continuous operation is 60°C.

	Composition	-	100% CELLULOSE
	Weight	[g/m2]	213
	Thickness	[mm]	0.60
	Density	[g/cm3]	-
	Maximum transverse tensile strength	[N/5cm]	435
	Maximum longitudinal tensile strength	[N/5cm]	260
	Resin content	[%]	19
	Air permeability	[m3/m2h]	630 approx
	Pore volume	[%]	69
	IFA/BGIA Efficiency Certification	-	M
	Tint	-	YELLOW

9.2 Coalescing filter


	Composition	-	100% POLYESTER
	Weight	[g/m2]	300
	Thickness	[mm]	13
	Treatment	-	Thermoregulated Anti-peeling Wetting
	Flame behavior	-	Class F1- DIN 53438 teil 3
	Operating Temperature	[°C]	Up to 100 – Peak 120
	Pressure drop	[Pa]	Initial – 26@ 0.25 m/s Recommended final - 450
	Air permeability	[l/m2s]	2300
	Filtration class	-	ISO ePM10 50% (ISO 16890) M5 (EN 779)
	Tint	-	WHITE

9.3 Filter sponge

	Composition	-	Cross-linked polyurethane based on polyether
	Density	[Kg/m3]	20-24
	Color	-	Light blue
	Internal protection net	-	Galvanized steel
	Cell diameter	[µ]	2200-3400
	Tensile strength	[kPa]	70
	Filtration class	-	G3


9.4 HEPA filter (optional)

Absolute filters are composed of filter packs with small folds arranged in a V shape in a series of pockets that form a very large filter surface. They have a higher air flow rate than models of the same size and ensure a longer operating life and greater energy savings.

	Composition	-	Simple fiberglass Water-repellent Multi-layer reinforced construction
	Upper case back	-	Galvanized/closed steel
	Form	-	Cylindrical
	Protective net	-	Galvanized steel
	Maximum temperature	[°C]	80
	Maximum relative humidity	[%]	100
	Filtration class	-	E10/E12/H13

9.5 Differential pressure gauge

The machine is equipped with a pressure gauge thanks to which the state of clogging of the filters can be checked. When switched on, the pressure gauge needle will be positioned on the left side of the graduated scale which is the operating interval with new cartridges (note that this value may vary if the cartridges have not been fitted correctly). As the filters begin to clog, the instrument will indicate an increase in the pressure differential due to the progressive decrease in the flow rate of air sucked in: the needle will move towards the highest value of the scale, warning operators that it will be necessary to maintain and/or replace the filter elements. In the intermediate values of the scale, the filters are not completely clogged so immediate replacement is not required. The latter must take place when the amount of air sucked in is no longer sufficient for the expected needs.

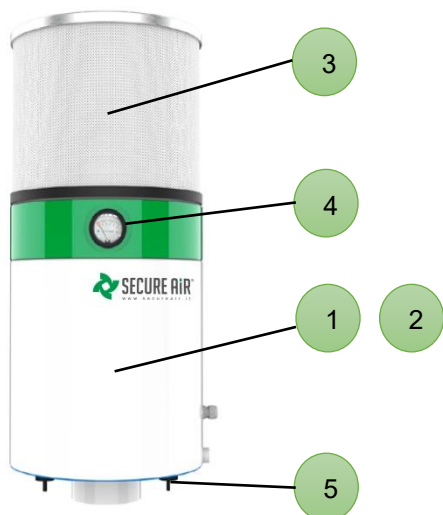
	Ambient temperature	[°C]	-7/60
	Static pressure range	[kPa]	345 kPa transient / 207 kPa
	Accuracy	[%]	±5@21#C
	Process connections	-	1/8" FNPT
	Approvals	-	EU 2011/65/EU (Rohs II)

10. Drawbacks and solutions

Symptom	Cause	Solution
Engine does not run	Power failure. Faulty engine.	Check electrical connection. Verify.
Impeller does not rotate	No connection between motor and impeller. Faulty motor	Engine disassembly and verification. Check engine.
Electrical protection intervention	Absorption outside the license plate. Engine overheating.	Verify.
Engine noise	Engine bearing wear.	Disassembly/check.
Vacuum Vibration	Unbalanced impeller. Tempting motor screws.	Disassembly/check. Check motor screws.

Low airflow rate	Clogged filters. Incorrect impeller rotation direction.	Check / replace. Reverse engine phases.
Pressure gauge not working	Air hose disconnected Air hose connected incorrectly. Pressure gauge faulty.	Check/replace.

11. Spare parts



1	Filtration cartridges
2	Filter sponge
3	H13 absolute filter (optional)
4	Pressure gauge
5	Anti-vibration feet



The manufacturer denies any liability for damage resulting from the use of non-original spare parts

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