

User manual

DEHACO

De-Dust Pico Nebuliser



Specifications-Safety-Use-Maintenance



ATTENTION!

All persons involved in the initialisation, operation, maintenance and repair of this product should receive a copy of these instructions!

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Translation of "Original user manual"

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01-2010

1. Introduction

Many thanks for the purchase of the DEHACO PICO nebuliser. Consequently you own a state of the art unit that you, if used correctly, can operate for years without breakdowns.

The following symbols and attention texts are used in this manual:



WARNING!!!

This text provides information relating to safety! Non compliance can result directly in physical injury and/or damage tot the machine!!!



ATTENTION!


This text provides instructions, tips and information for optimal use!

This manual is intended to familiarize you with the operation, to give instructions for safe use and guidelines for regular maintenance.

The Dehaco PICO nebuliser has been delivered completely assembled and tested, ready to use. The delivery includes a) the machine, and b) this manual.

Check immediately at the delivery if the machine is complete and intact. If parts are missing or if there is transport damage, take directly contact with your supplier!!

This user manual, the name-plate and the stickers on the nebulisator contain important information and are as such part of the delivery.

Type	DeDust PICO
Serienr.	2009.DDR-PI.04.01
Gewicht	32 kg
Waterverbruik	3 ltr/uur - max. 3 bar
Luchtverbruik	92 ltr/min.- max. 6 bar
 Dehaco BV - Lissebroek Netherlands	

In case of damage or loss these should be replaced or obtained once again. All parts can be delivered subsequently by Dehaco BV.



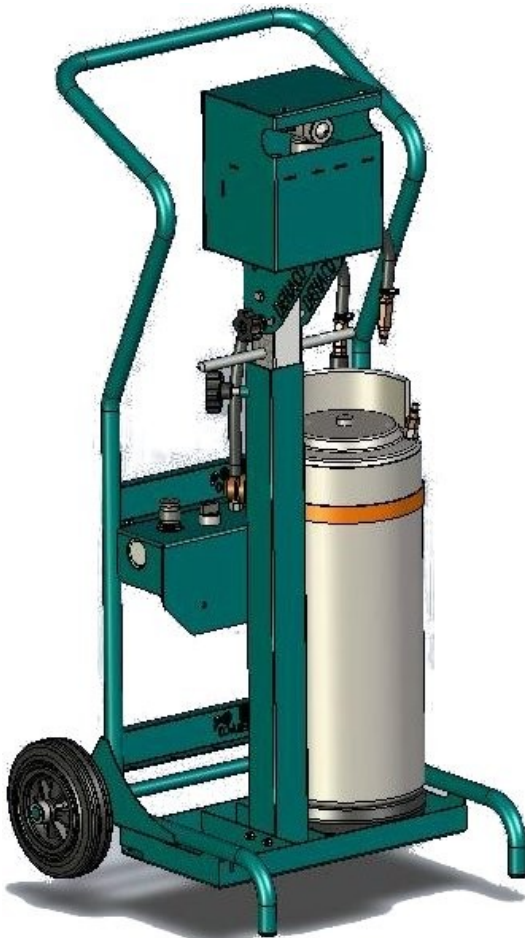
ATTENTION!

Make sure you know the content of this manual before starting the activities, so that you can use the machine optimal!

2. General description

Dehaco supplies various spray units for the control of dust and odours during demolition, renovation and building activities.

By producing a spray (mist) of water droplets smaller than 150 microns, dust particles are captured without making the surroundings wet. The De-Dust PICO is the smallest unit in the Dehaco range, used for dust control in indoor demolition and renovation projects.



The heart of the De-Dust PICO is a special nozzle that produces a very fine spray from a small amount of water and that continually sprays throughout 90° to disperse the spray.

The De-Dust PICO can be attached directly to the water supply (using a Gardena connector) but also includes a 20 litre tank.

Compressed air produces the pressure in the tank and drives the reversible motor, so that only a compressed air connection is required when using the supply tank.

The unit is mounted on a simple frame with wheels.

3. Intended use

Dehaco PICO spray units are designed to:

- a) minimise the amount of dust produced during indoor demolition, renovation and building activities;
- b) be used indoors to reduce the temperature by several degrees and to increase the humidity.



ATTENTION!

Dehaco is not responsible for use of the unit other than described above!

4. Technical specifications

	De-Dust PICO
Weight (empty)	32 kg
Air flow	approx. 92 ltr/min
Water flow rate	approx. 3 – 6 ltr/hr
Spray range	approx. 4 mtr
Effective working range*	200 - 300 m ³
Water connector	Gardena® 1/2"
Air connector	Orion 6 mm
Tank capacity	Approx. 19 ltr
Dimensions (lxwxh)	500x630x1300
Sound level	66 dB(A)

- The effective working range depends on the temperature, humidity and ventilation.

Environmental conditions:

- Appropriate temperature range +5°C to +40°C.

5. Safety



WARNING!!!

Almost all accidents are a result of:

***loss of concentration,
inattention, negligence,
and/or wrong estimations!***

Work calmly and concentrated!!!



ATTENTION !

You must under all occurring circumstances also follow up the safety instructions from the user manual end the local instructions!



WARNING!!!

There exists imminent danger of bodily injury and damage to the machine as a result of inexperienced, incompetent or careless use.

Keep bystanders at a safe distance when working!!!

- a) Ensure that your work area is clean and well lit. An untidy and/or poorly lit work area can result in accidents.
- b) Do not use the equipment in areas where there is a danger of explosion. Electrical equipment produces sparks which may ignite the dust or vapours.
- c) Keep children or other persons away from the area when the equipment is in use. You may lose control of the equipment if you are distracted.
- d) Do not use any equipment if you are tired or under the influence of drugs, alcohol or medication. A moment of inattentiveness when using the equipment can result in serious injury and/or damage to the equipment or surroundings.
- e) Wear suitable clothing. Do not wear any loose clothing or jewellery. Keep hair, clothing and gloves out of the way of moving parts. Loose clothing, long hair and jewellery may interfere with moving parts.
- f) Ensure damaged parts are repaired before use. Many accidents are due to poor maintenance.
- g) In addition to the general rules given above, you should also be aware of local working conditions and regulations.

6. Storage

The following actions should be taken if nebulisator is not to be used for a long time:

- Empty the supply tank.
- Switch the PICO on until no more spray is produced.
- Clean and dry the unit carefully.
- Store the unit in a clean, dry area.

7. Transport

The De-Dust PICO is -empty- light in weight and provided with wheels and grips.

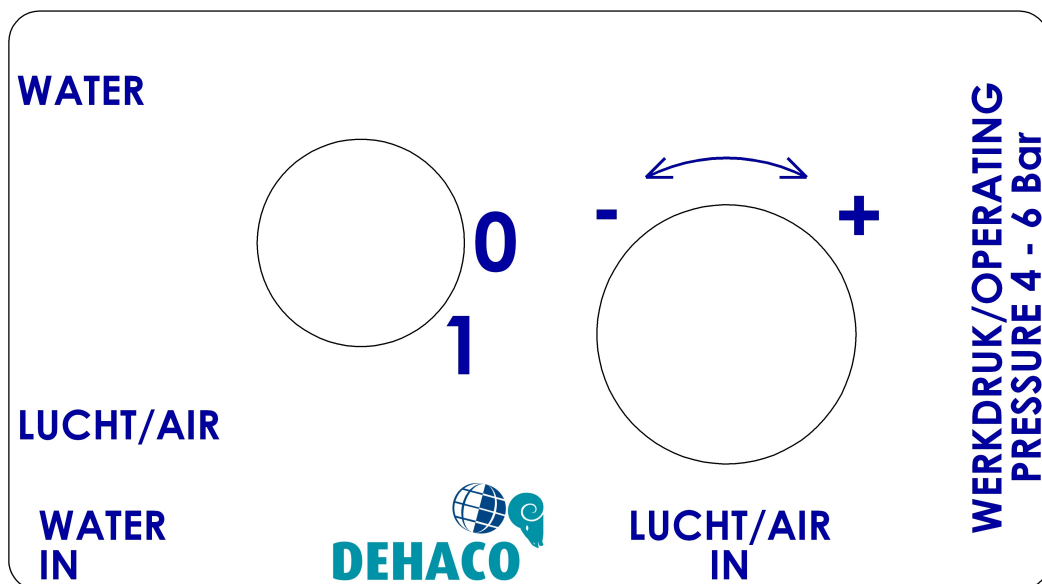


WARNING!!!

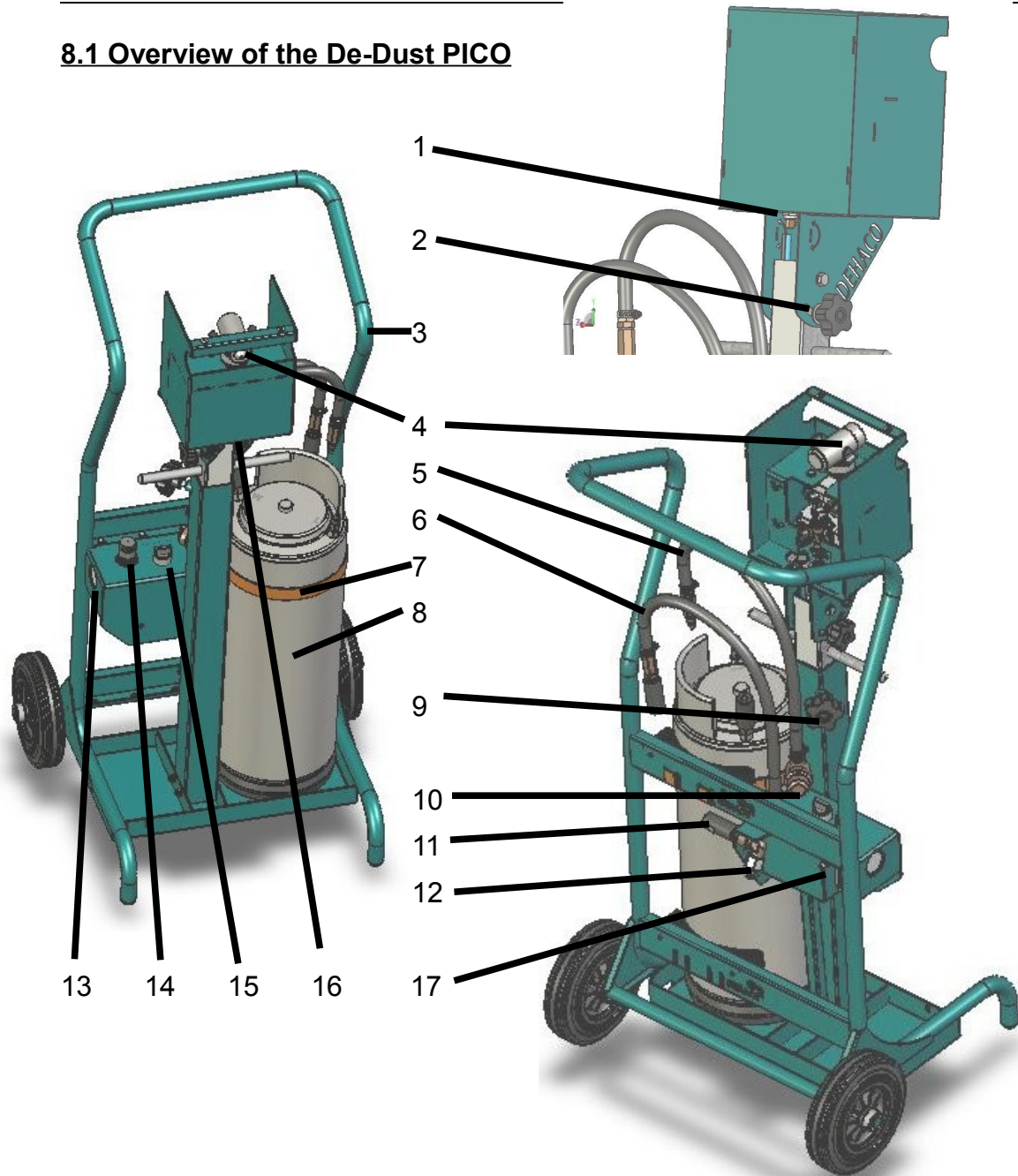
Prevent damages! Always be careful during the transportation of the Dehaco nebulisator.

During transport always fasten the nebulisator with sufficient bungee cords!

8. Operation



8.1 Overview of the De-Dust PICO



- | | | | |
|---|-------------------------------|----|-------------------------------|
| 1 | reversible motor on/off | 10 | water filter 50 micron |
| 2 | tilt adjustment | 11 | quick release water connector |
| 3 | frame | 12 | water connector (gardena) |
| 4 | spray | 13 | manometer |
| 5 | water hose with quick release | 14 | pressure reducer |
| 6 | air hose with quick release | 15 | on/off switch |
| 7 | supply tank bungee cord | 16 | water flow regulator |
| 8 | supply tank 19ltr | 17 | compressed air connector |
| 9 | height adjustment | | |

8.2 Operation of the De-Dust PICO with water supply system

8.2.1 Start

(numbers correspond to numbering in fig. 9.1)

→ Place the unit between 3 and 3.5 m from the working area.

→ Connect the compressed air hose (16).

→ Connect the water hose (12).

→ Insert hose 5 into quick release connector 11.

→ Set the pressure on the manometer (13) to 4-6 bars using the pressure reduction valve (14).

The De-Dust PICO is now ready for use.

→ Switch on the spray unit using the on/off switch (15).

→ The height and tilt of the spray unit can be adjusted by loosening the star knob (9, 2), adjusting the position and tightening the knob.

→ The water flow can be set to 3 or 6 litres/hour using the regulator (1b).

→ Automatic horizontal spraying can be turned on or off using the switch (1) under the spray unit casing.

→ As the nature and intensity of dust production varies, the optimum set-up will be different for each situation.

8.2.2 Stop

(numbers correspond to numbering in fig. 9.1)

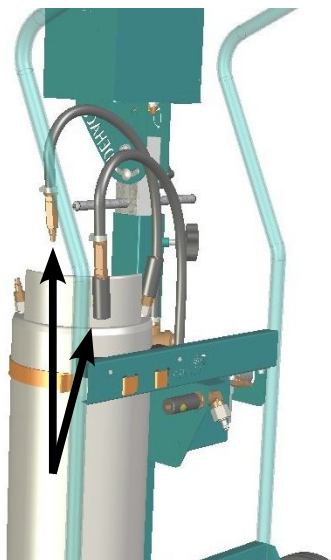
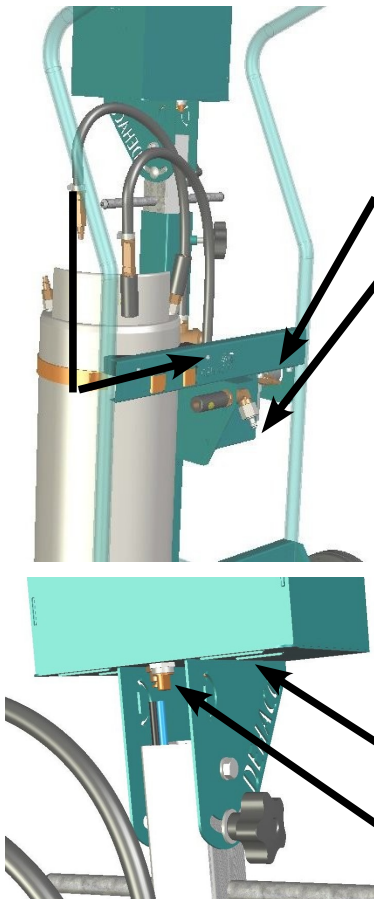
→ Disconnect the water hose.

→ Connect the hoses (5 and 6) on the PICO unit to each other.

→ Let the PICO produce spray until all the water is out of the system (this will take several minutes). At the same time, set switch 1b to 6 litres/hour.

→ Turn the PICO off using the on/off switch (15).

→ Disconnect the compressed air hose.



8.3 Operation of the De-Dust PICO with the supply tank



8.3.1 Start

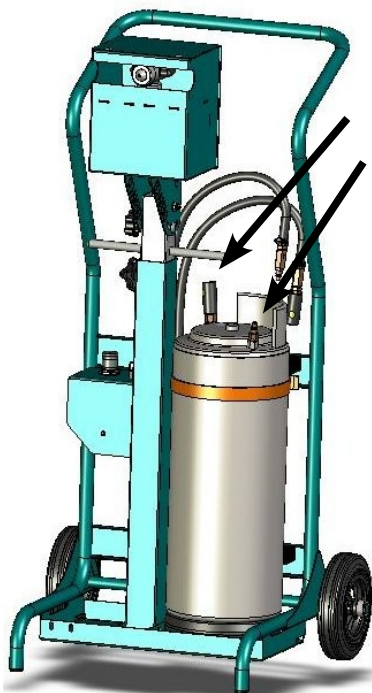
(numbers correspond to numbering in fig. 9.1)

- Place the unit between 3 and 3.5 m from the working area.
- Loosen the bungee cord around the supply tank.
- Remove the lid by lifting the lever and turning this and the lid through 90 degrees.
- Fill the tank with water and carefully replace the lid.
- Place the tank back on the frame and fasten it using the bungee cord (7).



ATTENTION!

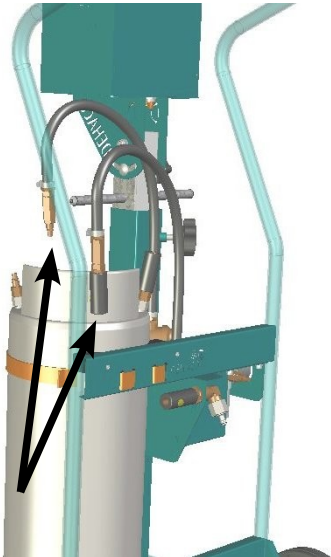
Regularly check the overpressure valve by allowing a little air to escape using the ring on the lid!



- Attach both hoses on the PICO to the quick release connectors on the tank.
- Connect the compressed air hose (16).
- Set the pressure on the manometer (13) to 4-6 bars using the pressure reduction valve (14). The De-Dust PICO is now ready for use.
- Switch on the spray unit using the on/off switch (15).
- The height and tilt of the spray unit can be adjusted by loosening the star knob (9, 2), adjusting the position and tightening the knob.
- Automatic horizontal spraying can be turned on or off using the switch (1) under the spray unit casing.
- As the nature and intensity of dust production varies, the optimum set up will be different for each situation.

8.3.2 Stop

(numbers correspond to numbering in fig. 9.1)



- Turn the unit off using the on/off switch (15).
- Disconnect both hoses from the supply tank and connect them to each other.
- Switch the spray unit on again and run the PICO until *all the water is out of the system* (this will take several minutes). When emptying the water out of the system, switch 1b should be set to 6 litres/hour.
- Disconnect the compressed air hose.



- Release any remaining pressure from the supply tank by pulling the ring until no more air comes out.
- Loosen the bungee cord and remove the supply tank from the frame. Open the lid and empty out any remaining water.
- Replace the lid and place the tank back on the frame.

9. Maintenance

The simplicity of the unit means that it is almost maintenance-free. Check the following points to ensure the continuing optimum performance of the De-Dust PICO:

- check regularly for damage to the hoses;
- check regularly for leaks;
- clean or replace the water filter every six months (10, Fig. 9.1);
- if the spray pattern changes, carefully unscrew the nozzle, clean and replace it.

Always solve any problems immediately to prevent larger problems occurring.

10. Legionella prevention

The De-Dust PICO supplied directly by Dehaco is free of Legionella bacteria. The following measures can be taken to prevent the growth of bacteria:

- use tap water;
- run the tap for a while before using the water to fill the tank or before connecting the hose;
- prevent water standing in the system - empty the system completely after work;
- in warm weather empty the tank every four hours and refill with new water.

(It is recommended to clean the De-Dust PICO supply tank regularly using BIOREMOVE, see appendix. The unit can also be returned to Dehaco for cleaning).



WARNING!!!

DEHACO has supplied a De-Dust PICO free of legionella bacteria. Legionella prevention during work is however YOUR responsibility!!!

To reduce the risk of Legionella, always ensure that hoses and tank are emptied after use according the instructions.



ATTENTION!

It is also possible to fit an extra water filter system consisting of a pre-filter and a 0,2 micron membrane filter to filter out legionella bacteria. However such fine filtration will regularly become clogged, reducing flow and requiring replacement.

Legionella beperkende maatregelen:

- **Gebruik altijd schoon leidingwater:**
Laat de kraan enige tijd doorstromen!
- **Voorkom stilstaand water:**
Maak dagelijks of na afloop van werk de leidingen en tank leeg!
- **Voorkom een watertemperatuur boven 20 °C:**
Plaats de tank niet in direct zonlicht!
- **Behandel de tank en leidingen regelmatig volgens de instructies!**
- **Lees de handleiding voor meer informatie!**

Legionella reducing facilities:

- **Always use clean tapwater:**
Run the tap a while before usage!
- **Avoid standing water:**
Empty tank and tubes daily or after finishing the job!
- **Avoid a watertemperature above 20 °C:**
Do not place the tank in direct sunlight!
- **Treat tank and tubes regularly conform the instructions!**
- **Read the manual for more information!**

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 2165 AJ Lissebroek NL
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www.dehaco.nl

Rotatie | Rotation



11. Trouble shooting

In the case of a fault, follow the instructions given in the table below. Please contact your supplier if this does not solve your problem.

Spray unit has been switched on but does not produce spray
1. Check the manometer is set at the correct supply pressure (4-6 bars).
2. Check that the quick release connectors are properly connected.
3. Is the water supply switched on? Is the tap open or has the supply tank been filled?
4. Check that the water filter (10) is not dirty.
5. The water restrictor is broken or there is a leak in the system. Contact Dehaco about the procedure to be taken.
The spray unit produces an unusual spray pattern or droplet size
1. Is the spray nozzle dirty? Carefully unscrew and clean it.
2. The supply tank empties quickly.
3. Water filter (10) is very dirty.
4. Check the supply pressure.
5. The water restrictor is broken or there is a leak in the system. Contact Dehaco about the procedure to be taken.
Nozzle sprays in one direction only
1. Check the switch (1).
2. Check the supply pressure.
3. There is a problem with the rotating cylinder or valves. Contact Dehaco about the procedure to be taken.
Nozzle drips
1. The valve in the nozzle is not working properly. Contact Dehaco about the procedure to be taken.



12. Warranty

Dehaco B.V. guarantees the De-Dust PICO for material and construction faults for 12 months following delivery. Dehaco B.V. accepts no responsibility for direct or indirect damage caused by the temporary breakdown of the De-Dust PICO but will do its best to limit the downtime as much as possible.

Dehaco is not liable for damage due to a Legionella infection or other water-borne bacteria with a detrimental effect on the health of people, animals or plants.

The guarantee on the supplied dust control system ceases to apply if:

- modifications are carried out without the written permission of Dehaco B.V.;
- the instructions given here are not followed;
- demonstrable incompetent use has taken place.

_ * _ * _ *

CE Declaration of conformity

ACCORDING TO ANNEX II.1.A OF THE MACHINE DIRECTIVE 2006/42/EG

We,

Dehaco B.V.,
Kruisbaak 25,
NL-2165 AJ Lissebroek

DECLARE ENTIRELY WITHIN THEIR OWN AREA OF RESPONSIBILITY THAT THE PRODUCT:

DEHACO Nebuliser De-Dust PICO

BRAND: Dehaco
MODEL: Nebuliser
Type: De-Dust PICO
Serial nr.: _____
Serial nr. supplytank: _____

TO WHICH THIS STATEMENT APPLIES, IS IN ACCORDANCE WITH THE PROVISIONS OF THE FOLLOWING DIRECTIVES:

Machine Directive 2006/42/EG

AND IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND/OR OTHER NORMATIVE DOCUMENTS:

NEN-EN 12100-1 Safety of machines, basics
NEN-EN 12100-2 Safety of machines, technical
NEN-EN 4413 Pneumatic, general principles
NEN-EN 5509 User manuals

DRAWN UP AT :

Lissebroek, date: _____

Dehaco B.V.
Ing. A. Doeswijk

Appendix 1. Label text BIOREMOVAL

THE BOARD FOR THE AUTHORISATION OF PLANT PROTECTION PRODUCTS AND BIOCIDES

APPENDIX I to the authorisation decision dated 20 April 2007 for the product BIOREMOVE, authorisation number 12917 N

A. STATUTORY INSTRUCTIONS FOR USE

This product may only be used to control:

1. bacteria (excluding mycobacteria and bacterial spores) and yeasts on surfaces in areas intended for use by humans;
2. bacteria (excluding mycobacteria and bacterial spores) and yeasts on surfaces that may come into contact with food and drink, smoking materials, cosmetic products and related raw materials, however with the exception of farm milking equipment;
3. bacteria (excluding bacterial spores), yeasts and fungi on internal surfaces of installations that come into contact with water (process water; drinking water abstraction, storage and distribution; drinking water installations);
4. bacteria (excluding bacterial spores), yeasts and fungi produced as a result of immersing or filling tools, equipment or pipe systems in the food, tobacco or cosmetic industries.

B. INSTRUCTIONS FOR USE

General

First thoroughly clean surfaces, equipment, tools and pipes. Rinse off the cleaning product used with clean water. Remove any excess water.

1a. General use:

Spray with a 14% solution (1 litre of the product in 6 litres of water, using a large droplet size only).

Use as much liquid as is required to keep the surface wet throughout the application time. Allow to work in for at least five minutes. Rinse thoroughly using clean tap water.

1b. Hospitals and other health care providers:

For use by hospitals and other health care providers, it is recommended the product is only used for the following purposes:

Use	Application time	Dosage	
Surfaces (walls, floors and furniture), except TB departments	5 minutes	14%	1 litre of product to 6 litres water
Kitchen surfaces and equipment	5 minutes	14%	1 litre of product to 6 litres water

2. Surfaces, equipment and tools that come into contact with food, drinks and raw materials

Spray with a 14% solution (1 litre of the product in 6 litres of water, using a large droplet size only).

Use as much liquid as is required to keep the surfaces wet throughout the application time. Allow to work in for at least five minutes. Rinse thoroughly with clean tap water.

3. Disinfection against bacteria, yeasts and fungi in installations that come into contact with water

Fill installation with a 6% solution (1 litre of product in 15 litres water).

Allow to work in for at least 30 minutes. Bleed the pipe system whilst disinfecting the installation. If used for drinking water systems rinse the system well following application to remove any loosened dirt (biofilm). Rinse the pipe system with clean tap water until no more hydrogen peroxide can be detected in the rinse water.

4a. Disinfection against bacteria, yeasts and fungi in pipe systems

Fill the system with a 6% solution (1 litre of product in 15 litres water).

Allow to work in for at least 30 minutes. Bleed the pipe system whilst disinfecting the installation. Rinse the pipe system with clean tap water until no more hydrogen peroxide can be detected in the rinse water.

4b. Disinfection against bacteria, yeasts and fungi on tools and equipment

Immerse the tools or equipment in a 10% solution (1 litre of product in 9 litres water).

Allow to work in for at least 15 minutes. Rinse tools or equipment that may come into contact with food stuffs following treatment with clean water.

General storage and usage

- Keep cool
- Do not use in a concentrated form
- Store wherever possible in original packaging and dose from original packaging
- Do not store or use in airtight systems
- Do not spray
- Avoid the concentrated product coming into contact with organic substances such as oil, fat, paper, wood, etc.

* _ * _ *

Appendix 2. Information about legionella

Additional information about Legionella is provided in this appendix. This is a very brief summary taken from *Arbo informatie – Legionella* (Health and Safety Information – Legionella; ISBN 90-12-09953-6). For more detailed information, please refer to this publication (in Dutch) or contact the supplier.

Legionella is a collective term for several Legionella bacteria that can cause Legionnaires' disease. Legionnaires' disease is caused by inhaling aerosols (a particle mixed with a gas, such as clouds, etc.). Drinking contaminated water therefore does not cause the disease. There are two forms of Legionnaires' disease: Legionella pneumonia and Pontiac fever.

Legionella pneumonia is a serious form of pneumonia. The time between infection and observance of the first symptoms is between 2 and 19 days. Symptoms are similar to those of severe influenza: tiredness, weakness, muscle ache, headache and a fever above 39° C, together with symptoms of pneumonia: chest pain, coughing and shortness of breath. It can be treated successfully using antibiotics, if detected in time.



WARNING!!!

If you have the symptoms described above and have used the De-Dust in the preceding three weeks, you may have become infected. Contact your general practitioner and inform him/her that you have used a water spray system.

Pontiac fever is a less severe form of influenza. The time between infection and observance of the first symptoms is between 24 and 48 hours. The symptoms are similar to severe influenza but there is no pneumonia. The illness will pass in a few days and treatment is not required.

Although Legionella is found in normal tap water, this is not dangerous. The bacteria grow under the following conditions:

- at a water temperature between 20 and 50° C;
- in water that has stood still for a long time;
- in the presence of a biofilm, a deposit in pipe systems.

Try to avoid such situations wherever possible.

Appendix 3. Parts list

DEHACO

Nebuliser



De-Dust PICO