

# User Manual

## Lens Dust Filtering System

RFS-20 / RDS-20



# RODEK

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## **I . Foreword**

Thank you for purchasing this Lens Dust Filtering System (RFS-20 and RDS-20).

Please read this user manual carefully in order to use this device safely and efficiently.

## **II. Summary**

This device, in conjunction with a lens edger, is used for filtering microplastics and odors that occur when edging eyeglass lenses.

## **III. Features**

- The device can be connected to various lens edgers.
- Compact design: it can be installed in small spaces.
- Simple structure for easy maintenance.
- Removes the odor generated by the edging of lenses using activated carbon and antifoaming agent.
- Wastewater treatment using pressurized circulation.

## IV. Basic Orientation



- |                               |  |
|-------------------------------|--|
| ① Filtering equipment         | ⑥ Air pocket to filtering equipment hose |
| ② Wastewater Tank             | ⑦ Filtering pump to air pocket hose      |
| ③ Air deodorization equipment | ⑧ Wastewater tank air outlet             |
| ④ Power supply box            | ⑨ Filtering equipment base               |
| ⑤ Air pocket                  | ⑩ Wastewater inlet                       |

## **V. Installation**

### **1. Wastewater tank installation**

1) Place the filtering equipment base in the desired location.

2) Install the wastewater tank as follows:

2-1) Place the wastewater tank on the filter base and fill it with water up to the marker.

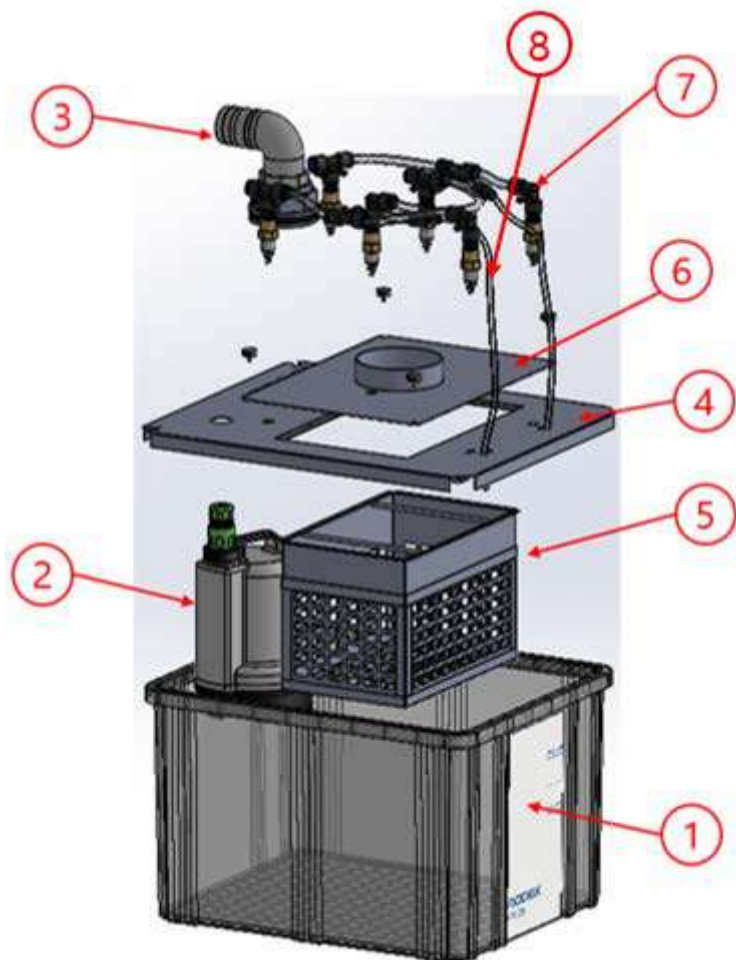
2-2) Assemble the Air deodorization equipment hose connector on the filtration tank cover.

2-3) Assemble the filtering pump.

2-4) Assemble the rest of the parts as follows:

2-4-1) Secure the wastewater tank mesh filter to the wastewater tank cover top panel. Do this by aligning the bolts on the wastewater tank filter to the corresponding holes on the wastewater tank cover top panel. Secure using the provided nuts.

2-4-2) Bolt the wastewater inlet port onto the filtration tank cover top panel.



① Wastewater tank

⑤ Mesh filter

② Filtering pump

⑥ Wastewater tank cover top panel

③ Wastewater tank air outlet

⑦ Wastewater inlet

④ Wastewater tank cover

⑧ Diffuser

## **2. Filtering equipment installation**

1) Place the stainless-steel wire mesh filter at the bottom of the inside of the filtering equipment.

2) Check the dimensions of the plastic mesh filter and place it inside the filtering equipment as shown in the figure.

2-1) The plastic mesh filter is an isosceles trapezoid. The longer of the two parallel sides should be the top side during insertion.

3) Place the filter (RFS-20F) inside the filtering equipment. See to it that the filter closely conforms with the inside of the filtering equipment.

4) Lock the filter in place by inserting the locking ring inside the filter as shown in figure 4.

5) When you insert the locking ring, do not block the wastewater inlet located at the top of the filtering equipment. Fold the portion of the filter that is above the locking ring downward into the inside of the filter.

6) When you insert the filter, the bottom of the filter should reach the stainless-steel wire mesh filter that you placed in step 1 above.

7) Close the lid of filtering equipment and tighten the locking mechanism clockwise.



<1>



<2>



upper  
direction

lower  
direction

<2-1>



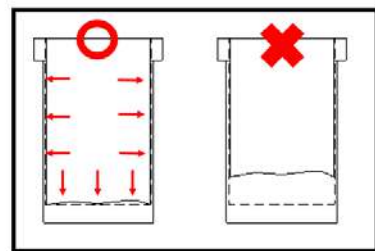
<3>



<4>



<5>



<6>

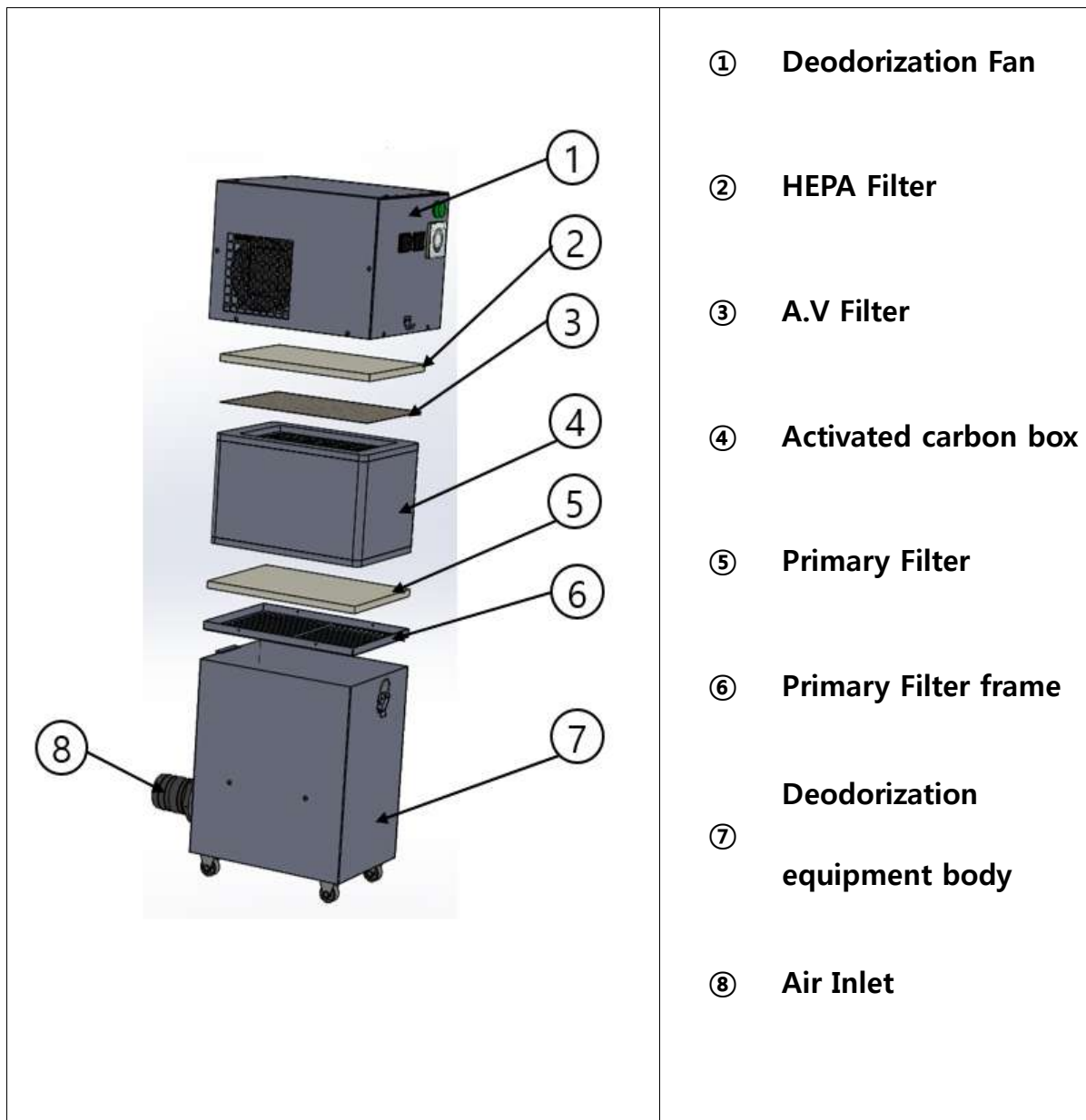


<7>



### 3. Components of Air deodorization equipment and its installation

- 1) Install the Air deodorization equipment as shown in the following picture. Place the Primary Filter → Activated carbon box → A.V Filter → HEPA Filter on top of the deodorization filter assembly support inside the deodorization equipment.



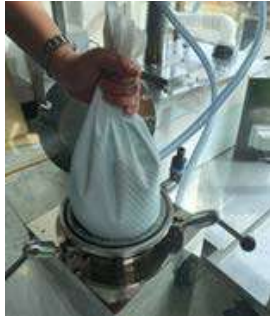
## VI. How to use the coagulant the and antifoaming agent

1. Coagulant (AP-20): The coagulant absorbs the remaining moisture in the sludge, thus making the sludge easier to handle and dispose of.

To use the coagulant:

- 1) Turn off the filtering pump and loosen (turn counterclockwise) the locking mechanism of the lid of the filtering equipment.
- 2) Remove the locking ring. See Chapter 2 for locking ring details.
- 3) Remove the filter from the filtering equipment and move it to a prepared container.
- 4) Put 2~3 spoons of the coagulant (AP-20) into the container. Mix the coagulant with the sludge and wastewater thoroughly in order to speed up coagulation.
- 6) Dispose of the solidified sludge in a standard plastic garbage bag.





<3>



<4>



<5>



**2. Antifoaming Agent (AF-20)** The antifoaming agent inhibits the formation of bubbles and deodorizes the wastewater. The antifoaming agent, in addition to using the Air deodorization equipment (RDS-20), enhances the deodorization effectiveness of the lens dust filtering system.

- Before or during lens processing, put 2 cups of AF-20 into the Lens edger and wastewater tank to reduce bubble generation.





**before using the antifoaming agent**



**after using the antifoaming agent**

► If you use AF-20 : The sludge will settle at the bottom of the wastewater tank and will be transferred to the filtering equipment by the filtering pump.

If you don't use AF-20, the microplastics will stick to the bubbles in the wastewater and will not settle at the bottom of the wastewater tank.

※ To reduce wastewater odor, put 2 cups of the antifoaming agent into the wastewater tank.

## **VII. Parts**

The following parts are included during purchase of the Lens Dust Filtering System:

- 1) Activated carbon cartridge 1ea
- 2) A.V filter 5ea
- 3) HEPA filter 1ea
- 4) Filter 5ea
- 5) Fuse (3A) 4ea
- 6) Power cord (earthing terminal included) 2ea
- 7) User manual 1ea

## VIII. Consumables

Part Name	Part No.	Picture
Antifoaming agent	AF-20	
Coagulant	AP-20	
Filter	RFS-20F	
A.V filter	RDS-20AF	
HEPA filter	RDS-20HF	
Activated carbon cartridge	RDS-20CT	

## **IX. Specifications**

**1. Filtration method: Circulation & Pressure type**

**2. Deodorization method : Carbon filter type (carbon filter is  
separately sold)**

**3. Korean Design Patent Application Number : ① 30-2020-0012868**

**② 30-2020-0012869**

**4. Korean Patent Application Number : ① 10-2020-0039648**

**5. External Dimensions : ① 668(L) x 504(W) x 540(H) (RFS-20)**

**② 225(L) x 270(W) x 490(H) (RDS-20)**

**6. Weight : RFS-20: 34kg ± 5kg; RDS-20: 13kg ± 2kg**

**7. Rated voltage : AC 220V, 60Hz**

**8. Power consumption : 260 VA**



## **X. Precautions**

**Please check one more time before using this product.**

**To maintain the performance of this product, please take note of the following.**

<b>Precautions</b>	<b>If you fail to follow the precautions:</b>
<b>Be sure to install the A.V filter and HEPA filter.</b>	<b>Without the A.V. and HEPA filters, the RDS-20 cannot remove odors, and the lifespan of the activated carbon could be substantially shortened.</b>
<b>Replace the Activated carbon cartridge annually or after edging approximately 10,000 lenses.</b>	<b>If the Activated carbon is blocked, the deodorization performance could be substantially reduced.  The activated carbon cartridge replacement time could vary depending on the type of lens processed.</b>
<b>Be sure to connect the air deodorization equipment hose properly.</b>	<b>If there is a breach in the connection between the wastewater tank and the air deodorization equipment, odor may leak out of the system.</b>

<b>Don't damage the deodorization hose.</b>	<b>A damaged hose will cause odor leaks.</b>
<b>Use only the antifoaming agent supplied by Rodek.</b>	<b>If you use anything other than the specified anti foaming agent, excessive bubbles may form which may cause device problems.</b>
<b>Please do not put coagulant into this dust filtering system.</b>	<b>If coagulant is put into the system, it may cause pump or filter failure.</b>
<b>Please maintain the temperature around this product over 0°C.</b>	<b>If the temperature around the product in winter is below 0°C, the water in the product may freeze and it may cause device failure.</b>
<b>Please check the water level in the wastewater tank.</b>	<p><b>If the water level in the wastewater tank is too high, bubbles can be circulated in the system in large quantities, blocking the wastewater filter and activated carbon air filter.</b></p> <p><b>If the water level of the wastewater tank is too low, the wastewater temperature can rise, causing water vapor generation and blockage in the wastewater filter and activated carbon air filter.</b></p>

#### About This Document

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#### Copyright

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#### EU Directives

The Lens Dust Filtering System (RFS-20, RDS-20) complies with the requirements of the following directives and carries the CE Mark accordingly:

- EMC Directive 2014/30/EU
- LVD Directive 2014/35/EU
- RoHS Directive 2011/65/EU

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