

## 4 Storage and disposal

- The filter cartridge and the stainless steel housing should be stored in a dry, clean place and protected from heat. Do not expose to corrosive substances.
- Do not store the stainless steel housing in adhesive film.
- The used filter cartridge can be disposed of with domestic waste.
- Please dispose of stainless steel housing that is no longer being used in the metal recycling system.

### Please note:

Do not use the filter cartridge after its expiry date.

## 5 Technical data

### AS TUBE housing

Dimensions: Ø 60.3 mm x 157 mm  
Weight: 1070 g  
Material: Stainless steel AISI 304  
Connections: Inflow: G1/2" female thread with retainer nut  
Outflow: G1/2" male thread

### Cartridge MF5

Dimensions: Ø 49.5 mm x 100.2 mm  
Retention: LRV ≥ 7 (*B. diminuta*)  
Pore size: 0,2 µm microfiltration  
Flow volume\*(guide value): 13.000 l  
Chlorine resistance \*\*: ≤ 10ppm  
Max. Flow rate: 25 l/min  
Max. operating pressure: 5 bar  
Max. operating temperature\*\*\*: 60° C (at 70°C ≤ 10 min. over operating time)

\* The value is given as a guide. The user's water quality, the pressure and the required flow rate all affect the flow volume and the period of use of the filter.

\*\* Continual addition of ≤ 10ppm during the service life, or short-term (1h) high levels (400,000 ppm) for chemical disinfection.

\*\*\* Use at high temperatures only after prior consultation with Aqua free.

## 6 Manufacturer

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### Please note:

If the product deviates from the specifications please send it back to your Aqua free supplier with the defect report form available at [www.aqua-free.com](http://www.aqua-free.com).

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## Instructions for use

# AS TUBE and Cartridge MF5

To ensure the safe operation of your filter please read and follow these instructions carefully.

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## 1 Product

The in-line filter system comprises the **AS TUBE (1)** stainless steel housing and the **Cartridge MF5 (2)** filter. It ensures 7 log microbial retention (*Brevundimonas diminuta*), delivering effective protection from waterborne pathogens such as Legionella bacteria in the water system.

The Cartridge MF5 is a disposable product and should be disposed of at the end of its service life. A new Cartridge MF5 can then be inserted in the AS TUBE stainless steel housing.



## 2 Installation

**Caution:**  
Before installing the stainless steel housing or the filter cartridge please make sure that the AS TUBE housing itself is clean and all upstream and downstream pipework is disinfected or replaced with new pipework.

**Caution:**  
Do not use the stainless steel housing without a filter cartridge.

**Please note:**  
Before fitting the filter cartridge disinfect your hands and put on disposable gloves. Disinfect connecting parts with alcohol-based surface disinfectant. Only use the specified filter cartridges in their original packaging.

1. Turn off the water supply to the AS TUBE prior to installation. It is recommended to fit an isolation valve upstream of the AS TUBE for ease of filter cartridge change.
2. When installing the AS TUBE for the first time open the water supply pipe at the point where the stainless steel housing is to be fitted.

**Caution:**  
Remaining water will escape. If the water is contaminated with microbes please use appropriate personal protective equipment. Please ensure that unfiltered water does not come into contact with the outflow hose or pipe.

3. Remove the stainless steel housing from its packaging.
4. To fit the Cartridge MF5, unscrew the G $\frac{1}{2}$ " retainer nuts to remove the stainless steel housing from the water pipe.

**Caution:**  
Remaining water will escape. If the water is contaminated with microbes please use appropriate personal protective equipment. Please ensure that unfiltered water does not come into contact with the outflow hose or pipe.

5. Unscrew the two halves of the stainless steel housing to access the filter cartridge.

**Caution:**  
Remaining water will escape. If the water is contaminated with microbes please use appropriate personal protective equipment. Please avoid contact with the filter and the ends of the tube or hose.

6. Remove the used filter cartridge from the stainless steel housing.
7. Remove any remaining water from the stainless steel housing.
8. Dry the stainless steel housing with a lint-free cloth.
9. Disinfect the stainless steel housing inside, outside and in the connection area with alcohol-based surface disinfectant.

**Installation tip:**  
To make fitting the filter cartridge easier the O-rings should be moistened with alcohol-based disinfectant.



10. Remove the filter cartridge from its packaging. Do not allow the filter outflow to become contaminated.
11. For safety reasons the filter cartridge has a pre-filter on the inflow side. Please check that the pre-filter is correctly sited. If the pre-filter has slipped or fallen out in transit it must be replaced in the hollow on the inflow side of the filter cartridge.

**Caution:**  
If the pre-filter has slipped out of its groove, make sure when you replace it that the smooth side of the pre-filter points inwards - towards the filter cartridge.

12. Push the filter cartridge into the outflow half of the stainless steel housing (marked "out") making sure that the O-rings of the filter cartridge are properly seated and that the direction of flow is correct. The arrows on the filter cartridge and the stainless steel housing indicate the direction of flow.
13. Push the filter cartridge into the stainless steel housing as far as it will go, continuing past the initial resistance. You can see whether the filter cartridge has been pushed in completely by comparing the sizes in the two halves of the housing.
14. Close the AS TUBE by screwing the two halves of the stainless steel housing together.
15. Disinfect the inlet and outlet connections of the stainless steel housing and of the connecting pipes with alcohol-based surface disinfectant.
16. Screw the outflow of the stainless steel housing (marked "out") into the G $\frac{1}{2}$ " thread of the outflow pipe or hose. Make sure the seals are intact.
17. Screw the inflow of the stainless steel housing (marked "in") onto the connecting pipe or connecting hose with the G $\frac{1}{2}$ " retainer nut. Make sure the seals are intact.
18. Test the seals for leakage at all connections and check the water flow by turning on the water supply.

## 3 Operation

- If separate specifications are available on the application-specific service life, take note of these for the interval between changes of filter. Otherwise the filter cartridge should always be changed when the flow of water is reduced so much that it is no longer adequate for the application or 6 months after installation at the latest.
- The flow volumes given in the technical data section are for indication only and depend on user-related water consumption and water quality.
- To document changes of filter cartridge it is recommended to write the next change date on a sticker and secure it to the stainless steel housing in a clearly visible place.
- The stainless steel housing and the exterior plastic of the filter cartridge can be cleaned with standard alcohol-based disinfectant.
- While the device is in use check the seals regularly for leakage.
- Protect installed filters from frost.
- The maximum operating pressure and maximum water temperature are given in the Technical data table.
- Do not connect to low-pressure boilers.

**Caution:**  
The housing heats up when used at high temperatures There is a risk of injury due to high temperatures.

**Caution:**  
Exceeding the maximum stated flow rate will result in damage to the filter.