



Agenda

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1. General Notes

The following instructions will detail the installation of filters in each individual filtering stage.

Note! Use jib cranes or other means to hoist the filters to the upper levels of the filter house to avoid any safety issues on site and damage to components.

All small parts (washers, nuts) will be shipped inside the filter boxes (if any) or attached to the pallets. Remove these items before assembly.

2. Prior to Filter Install

Prior to installing the new EMW filters, the filter house should be cleaned, inspected for leaks, pulse system tested and relevant site quality documentation signed off. If remedial works need to be carried out, this should be done while all filters have been removed.

2.1 Flat tube sheet check

Overall tube sheet flatness and individual tube sheet flatness needs to be ensured prior to installing the filters.

The overall recommended flatness is 10mm. The individual recommended flatness is 3mm. If there is discrepancy in the flat tube sheet it may lead to leaks to the clean air side.



Removal:

- Unlatch and open access doors to reach the filter elements.
- Open the nuts and remove the filter elements from the assigned place.
- Visually inspect that material is still intact even dP has risen over the limits.
- Recycle and throw the filter elements away.

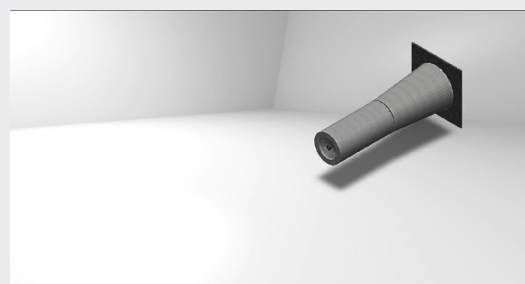
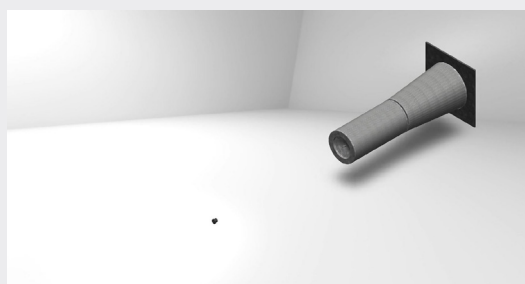
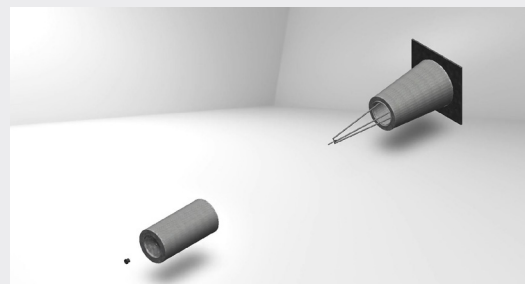
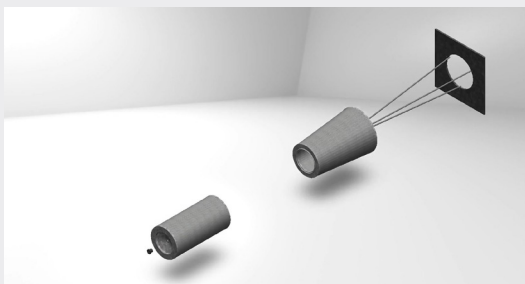
3. Filter Installation

Install filters on site as follows:

1. Cartridge filter installation
2. Filter (cone then cylinder or single cylinder)
3. Washer
4. Nut
5. Pre filter installation
6. If pre filter wraps are used, install on cone/cylinder prior to installation

3.1 Conical and cylindrical element installation

1. Remove the filters from its storage location.
2. Hoist the filter sets to the filter house levels.
3. Install the conical element first and cylindrical element secondary.
4. Place the washer and nut, tighten the filter between 15-20 Nm.
5. Check the tightness of the filters by trying to rotate it. Filter should not move around its axis.
6. Easy way to locate the loose filters is to check the protruding threaded rod and measure it.
7. Checking the yoke for correct alignment.



3.2 Pre filter installation (wrap)

Pre filters are fitted to the Conical and Cylindrical elements wrapped around the elements or as a separate stage. The design of pre filter is allows easy fit when done on the ground.

1. Remove pre filters from packing.
2. Place the filters to their named places inside the assignment filter storage.
3. Remove the main filters and wrap the pre filter around the elements.
4. Double check that the pre filtration alignment fits in to diameter and length of the cartridge.

3.3 Clean air side check

1. Check the gasket compression using spatula.
2. 0.9mm spatula should not go through between the flat tube sheet and gasket after torquing the filters

Check the alignment of the filter to see that gaskets are compressed properly and alignment of the filter is correct!

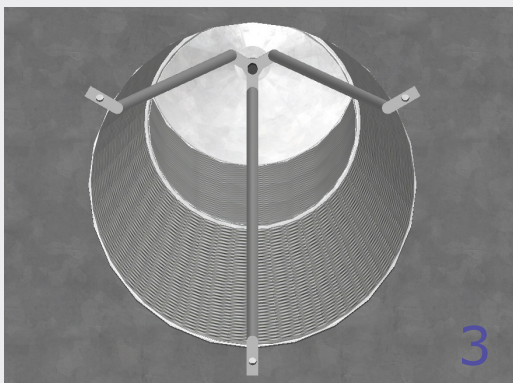


Figure 1: Filters installed before replacement

Figure 2: Top view on new filter with gasket

Figure 3: Newly installed filter, firmly attached on the filter wall, in order to avoid leakages

4. Maintenance

The EMW® air filters are extremely durable and will give trouble free operation. Under normal operation, only the filter elements require regular service. Service elements according to differential pressure gauge readings or at regular intervals establish by operating procedure.

While the turbine is shut down and no air flows through the air filter, open plenum access cover and look at the internal surfaces of the clean air section. Dust streaks indicate a leak or faulty filter element. Inspect joints and gaskets annually.

Proper filter element service procedures, made part of the regular preventive maintenance program, lower operational costs and ensure high efficiency filtration. Check filter elements regularly to ensure that they are maintaining structural integrity and are not passing any dust.

The filters are designed to provide high air flow capacity and strength, low restriction, service life and high efficiency.