

New sintered metal filter for ONH analysis

General Information

The production of dust is a common side effect of ONH analyses. Thanks to the closed overpressure system in the ONH-p series, the dust is no longer blown into the environment but is transported through the analytical system where it may contaminate all affected components. Therefore, ELTRA recommends putting glass wool into the dust trap. This usually binds most dust particles while letting through all gases.

Since some particles will always find their way through the glass wool, ELTRA has added a separate filter to the system to catch all particles that escape the wool. This filter is made from sintered metal. This piece of metal has pores which allow the gas to pass through but blocks the particles.

Cleaning the filter will take more time than exchanging the glass wool, therefore we recommend the following setup:



The gases from the furnace enter the dust trap from the right. The wool blocks most particles. Those particles which pass the wool are then blocked by the filter.

Serial production of this filter will start in the very near future.

The part numbers are:

27000-8002 – mounting tool and two sintered filters with O-rings

27000-2040 – sintered filter and two O-rings

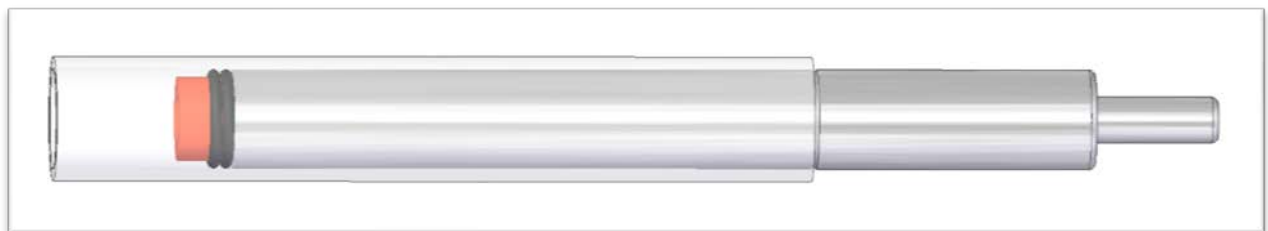
Installation of the filter

The sintered filter will be installed in the dust trap glass tube and kept in position with the help of two O-rings. To make the installation process as easy as possible, ELTRA has designed a special tool. The filter is inserted into one side of the tool. Then the two O-rings are pushed over the filter until they touch the tool.



If the tool is prepared as described, it can be used to push the filter into the glass tube until the marking is reached (A).

Attention: Slightly grease the outer surface of the O-rings first with our high vacuum grease!



Now the glass tube can be filled with the wool as usual.

Removal of the filter

First the wool needs to be removed. Then the filter can be pushed out of the tube by using the other side of the tool. The filter is removed by pushing it gently to avoid the filter falling off the tool.



Cleaning the filter

After the filter has been removed, the glass tube needs to be cleaned from grease residue. This is also a good time to check whether the glass tube is somehow damaged.

Cleaning the filter is done in two steps:

- First: Clean the filter with a paper towel to remove all particles not bound by the filter
- Second: Clean the filter in an ultrasonic bath

Attention: After removing the filter from the bath, let it fully dry in a drying oven or any other warm place. Reinserting a moist filter will affect the analytical results and will reduce the lifetime of the analyser reagents.

Attention: If any compressed gas is used to dry the filter, it must be clean. Typically, compressed air also carries moisture and oil, if no oil and moisture absorber is used. This will also affect analytical results in a negative way.

We recommend having at least two filters, one can be left to dry while the other is used.