

Cleaning the BMT 965 AQ-LC Cuvette

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The OZONE-IN-CLEAN-WATER SENSOR BMT 965 AQ-LC for low concentration ozone dissolved in pure water has a cuvette made of stainless steel. Together with the UV lamp and UV detectors it builds a self-contained unit - the cuvette assembly - that can be taken out of the analyser for cleaning. For disassembly, please read the following instructions to make sure the correct screws are loosened.

Preparation

Before attempting to clean the cuvette remove any ozone and any water from the instrument and initiate zeroing (after warm-up) and note the resulting Cuvette Status level shown on the display. It is needed for comparison with the value after cleaning.

Unmounting the cuvette assembly

Caution: High voltage inside! Disconnect the analyser from mains power before opening the cover!

- remove the cover by loosening the four cover screws - watch the grounding wire attached to the cover
- remove any remaining water in the wetted path
- remove the two red and black wires from the pcb (high voltage to UV lamp)
- disconnect the white 4-pole connector **K** from the pcb (signals from detectors)

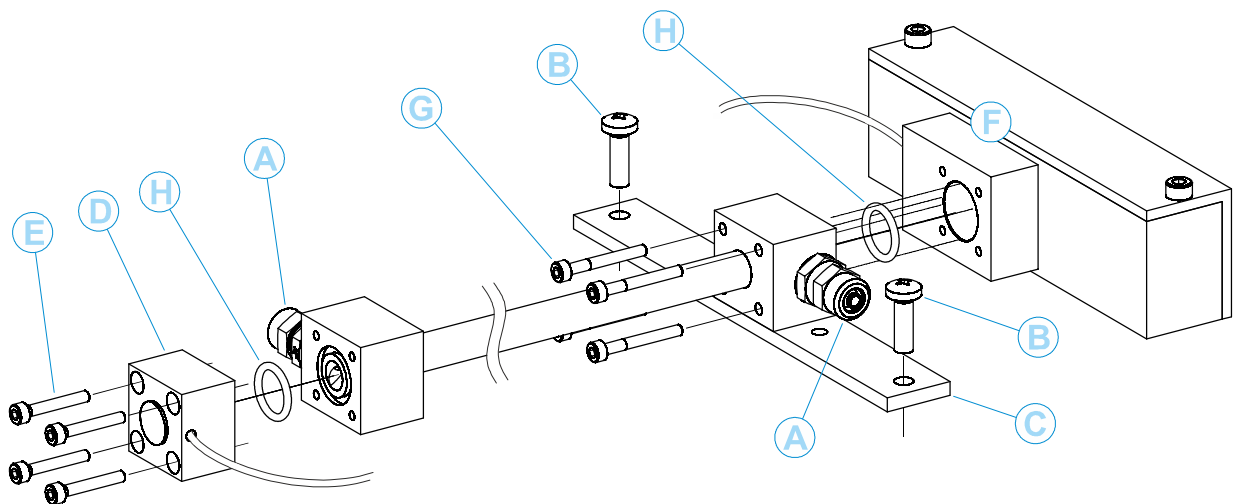


Fig. 1: complete cuvette assembly

- remove both PFA tubings from fittings **A** - handle these with care, they are designed to withstand high pressures
- unscrew the two screws **B** that are holding the cuvette assembly and take the whole unit out - leave the mounting bar **C** attached to the cuvette assembly

- note orientation of detector **D** and unmount the detector block by loosening four screws **E**. Note the O-ring **H** on the end of the SS tube (not to be removed)
- unmount the detector block and UV lamp assembly **F** by loosening four screws **G**. Do not loosen any other screws! Note the O-ring **H** on the end of the SS tube (not to be removed)

Cleaning cuvette windows and SS tube

The cuvette windows held by the anodised aluminum should be cleaned from the side of the wetted path, only, the other side is not exposed to any dirt and is not accessible by the user. Use lint-free cloth and deionised water or IPA (isopropyl alcohol). For the tube, a cylindrical nylon pipe brush with 15mm diameter should be used to clean the inner surface of the SS tube. The windows are made of quartz glass, the tube is stainless steel.

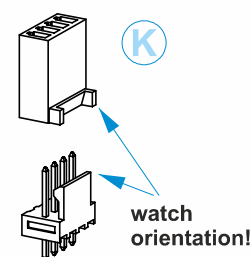
The O-rings **H** leave visible marks on the cuvette windows. Removing these marks improves sealing.

Reassembling

The whole process of assembly must be conducted in a clean, dry and dust-free environment. Particles on the O-ring and windows might prevent a good sealing and compromise measurement.

Assembly after cleaning is done in the reverse order. Some remarks:

- Tighten the four screws **G** holding the detector and the UV lamp assembly **F** hand-tight, only! The surfaces should fully touch each other.
- Cable: watch the orientation of the white 4-pole connector **K** (see graphics)
- Connecting PFA tubings: make sure to push the tubing fully onto the fittings **A** before tightening the nut!
- A pressure test of the whole wetted path with 16 bar gauge is mandatory, as well as a leakage test
- After reassembly and warm-up initiate zeroing and make note of the DIRTY level (“cuvette status”). Compare this with the reading taken before cleaning. Levels below 10% are considered clean.
Note: The DIRTY level will not be updated until a zeroing is performed!



In case of any problems do not hesitate to contact us:

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