

6 Maintenance

- Damaged parts must be replaced immediately.
- Regularly check the function of the electrical protection.

During maintenance, remember:

- The equipment must be maintained by a professional familiar with the safety requirements and risks.
- Only perform maintenance work described in these operating and installation instructions.
- When performing maintenance of any type, observe the respective safety and operation regulations.

DANGER



Danger to life and explosion during installation and maintenance

The unit must not be worked on (assembly, installation, maintenance) in explosive atmospheres.

DANGER



Electrical voltage

Electrocution hazard.

- Disconnect the device from power supply.
- Make sure that the equipment cannot be reconnected to mains unintentionally.
- The device must be opened by trained staff only.
- Regard correct mains voltage.



DANGER



Toxic, corrosive gases

The measuring gas led through the equipment can be hazardous when breathing or touching it.

- Check tightness of the measuring system before putting it into operation.
- Take care that harmful gases are exhausted to a safe place.
- Before maintenance turn off the gas supply and make sure that it cannot be turned on unintentionally.
- Protect yourself during maintenance against toxic / corrosive gases. Use suitable protective equipment.



CAUTION



Hot surface

Risk of burns

Depending on the operating parameters, the housing temperature may reach over 100 °C during operation.

Allow the unit to cool down before performing maintenance.

CAUTION



Excess pressure

The unit mustn't be pressurised or energised when opened.

If necessary, close the gas supply and ensure a safe pressure on the process end before opening.

DANGER



Dangerous electrostatic charge (explosion hazard)

Incendive electrostatic charges may occur when cleaning plastic housing parts and decals (e.g. with a dry cloth or compressed air). The sparks this produces could ignite flammable, explosive atmospheres.

Always clean plastic housing parts and decals **with a damp cloth!**

6.1 Maintaining the filter element

The probes feature a particle filter which needs to be changed as it becomes dirty.

To do so, disconnect the voltage supply and if applicable close the shut-off valve to the process or switch off the process.

CAUTION! Do not damage the rear filter seat.

NOTICE



Ceramic filter elements are very brittle by nature. Handle them with care, don't let them fall.

Filter elements made out of sintered stainless steel can be cleaned in an ultrasonic bath and be used several times as long as both seals are still in proper conditions.

6.1.1 Replacing the downstream filter

- Unlock and lift up the weather hood.
- Turn the handle at the back end of the probe by 90° (handle must then be horizontal), pushing in slightly, and remove.
- Remove the dirty filter element and check the sealing surfaces.
- Before installing the new filter element, replace the seal on the handle plug (seal included with the filter element). When changing the seals in low temperatures the temperature limits must particularly be observed (see "Spare Parts and Accessories")
- Then carefully insert the handle with new filter, push in slightly and turn 90° (handle must then be vertical). Pull on the handle to verify the filter element is firmly seated.
- With the filter removed, if necessary also need clean the inside of the sampling tube by blowing it out or using a cleaning wand.

NOTICE



The weather hood can only be closed again when the handle is completely vertical. In order to do so, loosen the hood from the locking supports by lifting slightly and then fold down. Ensure that the hood lock clicks into place correctly.

6.2 Maintenance Schedule

NOTICE



When using the probe in explosive areas the maintenance schedule must be observed!

Maintenance schedule for normal ambient conditions:

Component	Interval in operating hours	Work to be performed	To be performed by
Entire probe	every 8000 h	– Check gas connections – Check safety devices and controllers – Check electrical protective measures – Proper function, dirt, visual inspection for dirt / damage. If damaged, replace or have repaired by Bühler.	Operator
Filter	every 8,000 h	– Check dirt level of filter.	Operator
Seals	every 8,000 h	– Replace O-rings. – Replace seals after every filter change.	Operator
Entire probe	after 20,000 h or 3 years	– Inspection by Bühler	Service technician / Bühler