



Portable sample probe

Baseline

Installation and Operation Instructions

Original instructions





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Read this instruction carefully prior to installation and/or use. Pay attention particularly to all advises and safety instructions to prevent injuries. Bühler Technologies can not be held responsible for misusing the product or unreliable function due to unauthorised modifications.

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Document information

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1 Introduction

1.1 Intended Use

The portable sample gas probe (probe) is intended for use in gas analysis systems in industrial applications. It is particularly suitable for use with mobile sample gas conditioning.

Portable sample gas probes are among the main components in a gas conditioning system.

- Therefore also note the related drawing in the appendix or in the data sheet on the CD.
- Before using the device, verify the listed technical data meet the application parameters.
- Further check if all contents are complete.

Please refer to the nameplate to identify your model. In addition to the job number it also contains the item number and model designation.

When connecting, please note the specific values of the device, and the correct version when ordering spare parts.

1.2 Contents

- 1 x Sample gas probe
- Connection- and mounting accessories per delivery note
- Product documentation

2 Safety instructions

2.1 Important advice

Operation of the device is only valid if:

- the product is used under the conditions described in the installation- and operation instruction, the intended application according to the type plate and the intended use. In case of unauthorized modifications done by the user Bühler Technologies GmbH can not be held responsible for any damage,
- when complying with the specifications and markings on the nameplates.
- the performance limits given in the datasheets and in the installation- and operation instruction are obeyed,
- monitoring devices and safety devices are installed properly,
- service and repair is carried out by Bühler Technologies GmbH,
- only original spare parts are used.

This manual is part of the equipment. The manufacturer keeps the right to modify specifications without advanced notice. Keep this manual for later use.

Signal words for warnings

DANGER

Signal word for an imminent danger with high risk, resulting in severe injuries or death if not avoided.

WARNING

Signal word for a hazardous situation with medium risk, possibly resulting in severe injuries or death if not avoided.

CAUTION

Signal word for a hazardous situation with low risk, resulting in damaged to the device or the property or minor or medium injuries if not avoided.

NOTICE

Signal word for important information to the product.

Warning signs

These instructions use the following warning signs:



Warns of a general hazard



General information



Warns not to inhale toxic gasses



Wear respiratory equipment



Warns of corrosive liquids



Wear a safety mask



Warns of hot surfaces



Wear gloves

2.2 General hazard warnings

Installation of the device shall be performed by trained staff only, familiar with the safety requirements and risks.

Check all relevant safety regulations and technical indications for the specific installation place. Prevent failures and protect persons against injuries and the device against damage.

The operator of the system must secure that:

- safety and operation instructions are accessible and followed,
- local safety regulations and standards are obeyed,
- performance data and installation specifications are regarded,
- safety devices are installed and recommended maintenance is performed,
- national regulations for disposal of electrical equipment are obeyed.

Maintenance, Repair

Please note during maintenance and repairs:

- Repairs to the unit must be performed by Bühler authorised personnel.
- Only perform conversion-, maintenance or installation work described in these operating and installation instructions.
- Always use genuine spare parts.

Always observe the applicable safety and operating regulations in the respective country of use when performing any type of maintenance.

DANGER



Toxic, corrosive gases

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

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



3 Transport and storage

The product should only be transported inside the original packaging or a suitable alternative.

When not in use, the equipment must be protected from moisture and heat. They must be stored in a covered, dry and dust-free room at a temperature between -20 °C and 50 °C.

4 Installation and connection

4.1 Installation site requirements

Portable sample gas probes are intended as temporary gas sampling. Optional assembly plug and flanges allow for safe and gas-tight installation.

- Installation site and installation position are determined based on requirements specific to the application.
- If necessary, the connection piece should be slightly tilted toward the centre of the channel.
- Also ensure adequate and safe access for installation. Particularly consider the available installation length for the built-in sampling tube and, if applicable, the intake filter.

If the probe is transported to the installation site in pieces, it will first need to be assembled.

4.2 Installation

WARNING

Gas leakage, condensate, hot surfaces

Burns and / or health hazards due to gas / condensate!



- The sample gas and/or condensate may be hazardous to the health.
- Parts near the sampling point may be hot.
- The probe may become very hot due to the process gasses.
 - ⇒ Close the gas supply, if necessary flush the probe with air, and allow the probe to cool down before beginning installation or maintenance.
 - ⇒ Wear safety gloves and goggles.



The portable probe can be installed in the site using the available mounting accessories such as cones, plugs, and flanges. Attach the suitable mounting element and, if applicable, the intake filter (optional) to the sampling tube for the probe.

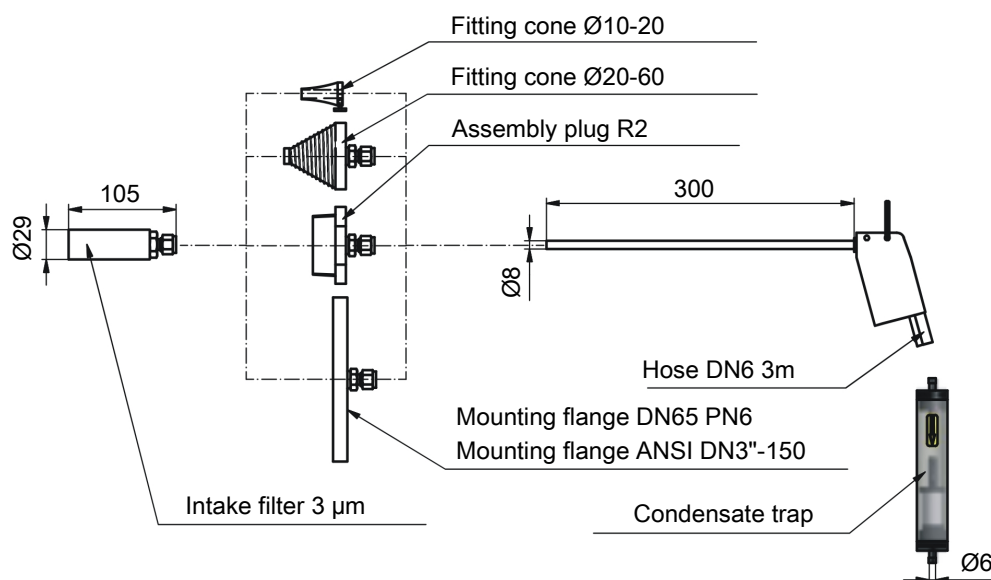


Fig. 1: Baseline installation

Then install the probe to the mating flange or the sampling point using the appropriate seal.

Condensate trap (optional)

When using a condensate trap, connect it to the probe hose. Please note the correct condensate trap position: The arrow must point in the direction of gas flow, away from the probe. This ensures the moist gas can first condense before reaching the filter element. The most upright condensate trap position possible allows maximum condensate absorption without it flowing into the chamber with the filter element.

4.3 Removal

WARNING**Gas leakage, condensate, hot surfaces****Burns and / or health hazards due to gas / condensate!**

- a) The sample gas and/or condensate may be hazardous to the health.
- b) Parts near the sampling point may be hot.
- c) The probe may become very hot due to the process gasses.
 - ⇒ Close the gas supply, if necessary flush the probe with air, and allow the probe to cool down before beginning installation or maintenance.
 - ⇒ Wear safety gloves and goggles.



- Empty the condensate trap as described in chapter [Maintenance](#) [> page 9] .
- Remove the probe from the sampling point. Rinse the probe with dry, clean air.
- Remove the mounting elements from the sampling tube.
- Inspect the filter and seals, and replace damaged or worn parts.
- Pack the probe in the transport packaging.

5 Operation and controls

NOTICE

The device must not be operated beyond its specifications.

Before starting the device, verify

- the hose connections are not damaged and correctly installed.
- no parts of the sample gas probe have been removed.
- ambient parameters are met.
- the technical specifications were followed!

Regularly check and empty the condensate trap throughout operation as described in chapter Assembly and disassembly . Ensure the condensate does not enter the filter chamber. The filter will otherwise be unusable.

6 Maintenance

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.

WARNING



Gas leakage, condensate, hot surfaces

Burns and / or health hazards due to gas / condensate!

- The sample gas and/or condensate may be hazardous to the health.
- Parts near the sampling point may be hot.
- The probe may become very hot due to the process gasses.
 - ⇒ Close the gas supply, if necessary flush the probe with air, and allow the probe to cool down before beginning installation or maintenance.
 - ⇒ Wear safety gloves and goggles.



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.

For probe removal and installation, please refer to chapter Assembly and disassembly .

6.1 Empty condensate trap

- Disconnect the gas flow through the probe.
- Remove the upper condensate trap connector with a slight back and forth motion.
- Properly dispose of the condensate according to local regulations.
- Dry the condensate trap and, if necessary, replace the filter element (see [Replace filter element](#) [> page 9]).
- Tightly attach the connector to the cylinder of the condensate trap.
- Connect the probe hose to the condensate trap.

6.2 Replace filter element

- Pull off the lower condensate trap connector with a slight back and forth motion.
- Replace the filter element.
- If necessary, replace the seal.
- Tightly reinsert the plug.

NOTICE! Please observe legal regulations when disposing of filter elements.

6.3 Replacing and cleaning the intake filter

- Loosen the swivel nut.
- The intake filter may be cleaned in an ultrasonic bath and reused.
- Check clamping collars and replace, if necessary.
- Screw in the clean filter.
- Tighten the swivel nut.

7 Service and repair

This chapter contains information on troubleshooting and correction should an error occur during operation.

Repairs to the unit must be performed by Bühler authorised personnel.

Please contact our Service Department with any questions:

Tel.: +49-(0)2102-498955 or your agent

If the equipment is not functioning properly after correcting any malfunctions and switching on the power, it must be inspected by the manufacturer. Please send the equipment inside suitable packaging to:

Bühler Technologies GmbH

- Reparatur/Service -

Harkortstraße 29

40880 Ratingen

Germany

Please also attached the completed and signed RMA decontamination statement to the packaging. We will otherwise be unable to process your repair order.

You will find the form in the appendix of these instructions, or simply request it by e-mail: service@buehler-technologies.com.

7.1 Troubleshooting

CAUTION



Risk due to defective device

Personal injury or damage to property

- a) Switch off the device and disconnect it from the mains.
- b) Repair the fault immediately. The device should not be turned on again before elimination of the failure.



Problem / malfunction	Possible cause	Action
No or reduced gas flow	– Intake filter plugged	– Clean or replace intake filter
	– Wet condensate trap / filter element	– Replace filter element, if possible install condensate trap upright, check condensate trap during operation, and empty, if necessary
	– Gas circuit clogged	– Clean sampling tube

Tab. 1: Troubleshooting

7.2 Spare parts and accessories

Please also specify the model and serial number when ordering parts.

Upgrade and expansion parts can be found in our catalog.

7.2.1 Spare parts and accessories

Item no.	Description
Probe and accessories	
46760100000	Probe Baseline
46760008	Mount 2 m chain and carabiner; Material: Galvanised steel
46760007	Condensate trap ø30x155; Tube: Plexiglass PMMA; Cover: PVC; Seal: NBR; Filter element: Fibreglass
Filter / filter elements	
46760020	Filter element for condensate trap; Material: Fibreglass
46760030	Filter element for condensate trap; Material: PTFE
46760006	Sintered metal intake filter 3 µm; Material: Stainless steel
Mounting accessories	
46760001	Tapered assembly plug ø10-20; Material: 11SMnPb30
46760002	Tapered assembly plug ø20-60; Material: 1.4571
46760003	Assembly plug R2; Material: 1.4571
46760004	Mounting flange DN65 PN6; Material: 1.4571/1.4401/PTFE
46760005	Mounting flange ANSI DN3"-150; Material: 1.4571/1.4401/PTFE

Special mounts on request!

8 Disposal

The applicable national laws must be observed when disposing of the products. Disposal must not result in a danger to health and environment.

The crossed out wheelie bin symbol on Bühler Technologies GmbH electrical and electronic products indicates special disposal notices within the European Union (EU).



The crossed out wheelie bin symbol indicates the electric and electronic products bearing the symbol must be disposed of separate from household waste. They must be properly disposed of as waste electrical and electronic equipment.

Bühler Technologies GmbH will gladly dispose of your device bearing this mark. Please send your device to the address below for this purpose.



We are obligated by law to protect our employees from hazards posed by contaminated devices. Therefore please understand that we can only dispose of your waste equipment if the device is free from any aggressive, corrosive or other operating fluids dangerous to health or environment. **Please complete the "RMA Form and Decontamination Statement", available on our website, for every waste electrical and electronic equipment. The form must be applied to the packaging so it is visible from the outside.**

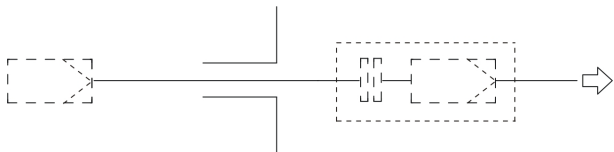
Please return waste electrical and electronic equipment to the following address:

Bühler Technologies GmbH
WEEE
Harkortstr. 29
40880 Ratingen
Germany

Please also observe data protection regulations and remember you are personally responsible for the returned waste equipment not bearing any personal data. Therefore please be sure to delete your personal data before returning your waste equipment.

9 Appendices

9.1 Flow chart



9.2 Technical Data

Technical Data Baseline

Weight:	350 g
Material	
tube:	stainless steel
handle:	polyamide
hose:	NBR
Temperature inside stack:	max. 600 °C
Pressure:	atmospheric
Dust load:	max. 2 g/m ³ when using intake filter
Fixed probe tube length:	300

10 Attached documents

- RMA - Decontamination Statement

RMA-Formular und Erklärung über Dekontaminierung

RMA-Form and explanation for decontamination



RMA-Nr./ RMA-No.

Die RMA-Nr. bekommen Sie von Ihrem Ansprechpartner im Vertrieb oder Service. Bei Rücksendung eines Altgeräts zur Entsorgung tragen Sie bitte in das Feld der RMA-Nr. "WEEE" ein./ You may obtain the RMA number from your sales or service representative. When returning an old appliance for disposal, please enter "WEEE" in the RMA number box.

Zu diesem Rücksendeschein gehört eine Dekontaminierungserklärung. Die gesetzlichen Vorschriften schreiben vor, dass Sie uns diese Dekontaminierungserklärung ausgefüllt und unterschrieben zurücksenden müssen. Bitte füllen Sie auch diese im Sinne der Gesundheit unserer Mitarbeiter vollständig aus./ This return form includes a decontamination statement. The law requires you to submit this completed and signed decontamination statement to us. Please complete the entire form, also in the interest of our employee health.

Firma/ Company

Firma/ Company

Straße/ Street

PLZ, Ort/ Zip, City

Land/ Country

Gerät/ Device

Anzahl/ Quantity

Auftragsnr./ Order No.

Ansprechpartner/ Person in charge

Name/ Name

Abt./ Dept.

Tel./ Phone

E-Mail

Serien-Nr./ Serial No.

Artikel-Nr./ Item No.

Grund der Rücksendung/ Reason for return

- ☐ Kalibrierung/ Calibration ☐ Modifikation/ Modification
☐ Reklamation/ Claim ☐ Reparatur/ Repair
☐ Elektroaltgerät/ Waste Electrical & Electronic Equipment (WEEE)
☐ andere/ other

bitte spezifizieren/ please specify

Ist das Gerät möglicherweise kontaminiert?/ Could the equipment be contaminated?

- ☐ Nein, da das Gerät nicht mit gesundheitsgefährdenden Stoffen betrieben wurde./ No, because the device was not operated with hazardous substances.
☐ Nein, da das Gerät ordnungsgemäß gereinigt und dekontaminiert wurde./ No, because the device has been properly cleaned and decontaminated.
☐ Ja, kontaminiert mit:/ Yes, contaminated with:



☐
explosiv/
explosive



☐
entzündlich/
flammable



☐
brandfördernd/
oxidizing



☐
komprimierte
Gase/
compressed
gases



☐
ätzend/
caustic



☐
giftig,
Lebensgefahr/
poisonous, risk
of death



☐
gesundheitsge-
fährdend/
harmful to
health



☐
gesund-
heitsschädlich/
health hazard



☐
umweltge-
fährdend/
environmental
hazard

Bitte Sicherheitsdatenblatt beilegen! / Please enclose safety data sheet!

Das Gerät wurde gespült mit:/ The equipment was purged with:

Diese Erklärung wurde korrekt und vollständig ausgefüllt und von einer dazu befugten Person unterschrieben. Der Versand der (dekontaminierten) Geräte und Komponenten erfolgt gemäß den gesetzlichen Bestimmungen.

This declaration has been filled out correctly and completely, and signed by an authorized person. The dispatch of the (decontaminated) devices and components takes place according to the legal regulations.

Falls die Ware nicht gereinigt, also kontaminiert bei uns eintrifft, muss die Firma Bühler sich vorbehalten, diese durch einen externen Dienstleister reinigen zu lassen und Ihnen dies in Rechnung zu stellen.

Should the goods not arrive clean, but contaminated, Bühler reserves the right, to commission an external service provider to clean the goods and invoice it to your account.

Firmenstempel/ Company Sign

Datum/ Date

rechtsverbindliche Unterschrift/ Legally binding signature



Vermeiden von Veränderung und Beschädigung der einzusendenden Baugruppe

Die Analyse defekter Baugruppen ist ein wesentlicher Bestandteil der Qualitätssicherung der Firma Bühler Technologies GmbH. Um eine aussagekräftige Analyse zu gewährleisten muss die Ware möglichst unverändert untersucht werden. Es dürfen keine Veränderungen oder weitere Beschädigungen auftreten, die Ursachen verdecken oder eine Analyse unmöglich machen.

Umgang mit elektrostatisch sensiblen Baugruppen

Bei elektronischen Baugruppen kann es sich um elektrostatisch sensible Baugruppen handeln. Es ist darauf zu achten, diese Baugruppen ESD-gerecht zu behandeln. Nach Möglichkeit sollten die Baugruppen an einem ESD-gerechten Arbeitsplatz getauscht werden. Ist dies nicht möglich sollten ESD-gerechte Maßnahmen beim Austausch getroffen werden. Der Transport darf nur in ESD-gerechten Behältnissen durchgeführt werden. Die Verpackung der Baugruppen muss ESD-konform sein. Verwenden Sie nach Möglichkeit die Verpackung des Ersatzteils oder wählen Sie selber eine ESD-gerechte Verpackung.

Einbau von Ersatzteilen

Beachten Sie beim Einbau des Ersatzteils die gleichen Vorgaben wie oben beschrieben. Achten Sie auf die ordnungsgemäße Montage des Bauteils und aller Komponenten. Versetzen Sie vor der Inbetriebnahme die Verkabelung wieder in den ursprünglichen Zustand. Fragen Sie im Zweifel beim Hersteller nach weiteren Informationen.

Einsenden von Elektroaltgeräten zur Entsorgung

Wollen Sie ein von Bühler Technologies GmbH stammendes Elektroprodukt zur fachgerechten Entsorgung einsenden, dann tragen Sie bitte in das Feld der RMA-Nr. „WEEE“ ein. Legen Sie dem Altgerät die vollständig ausgefüllte Dekontaminierungserklärung für den Transport von außen sichtbar bei. Weitere Informationen zur Entsorgung von Elektroaltgeräten finden Sie auf der Webseite unseres Unternehmens.

Avoiding alterations and damage to the components to be returned

Analysing defective assemblies is an essential part of quality assurance at Bühler Technologies GmbH. To ensure conclusive analysis the goods must be inspected unaltered, if possible. Modifications or other damages which may hide the cause or render it impossible to analyse are prohibited.

Handling electrostatically conductive components

Electronic assemblies may be sensitive to static electricity. Be sure to handle these assemblies in an ESD-safe manner. Where possible, the assemblies should be replaced in an ESD-safe location. If unable to do so, take ESD-safe precautions when replacing these. Must be transported in ESD-safe containers. The packaging of the assemblies must be ESD-safe. If possible, use the packaging of the spare part or use ESD-safe packaging.

Fitting of spare parts

Observe the above specifications when installing the spare part. Ensure the part and all components are properly installed. Return the cables to the original state before putting into service. When in doubt, contact the manufacturer for additional information.

Returning old electrical appliances for disposal

If you wish to return an electrical product from Bühler Technologies GmbH for proper disposal, please enter "WEEE" in the RMA number box. Please attach the fully completed decontamination declaration form for transport to the old appliance so that it is visible from the outside. You can find more information on the disposal of old electrical appliances on our company's website.

