



## Portable sample probe Smartline

# 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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# 1 Introduction

## 1.1 Intended Use

The portable sample gas 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.

- Before using the device, verify the listed technical data meet the application parameters.
- Therefore also note the related drawing in the data sheet in the appendix.
- 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.

When using the Smartline portable probe for a different purpose than originally intended, please consult our technical advisers to determine the suitability of the probe.

Unauthorised misappropriation is prohibited. Any modification of the portable probe will compromise operating safety and automatically void the manufacturer warranty.

## 1.2 Ordering instructions

The item number is a code for the configuration of your unit. Please use the following model key.

Item no.	Smartline						
<b>4677</b>	X	X	X	X	0	0	<b>Product Characteristics</b>
							<b>Voltage</b>
	1						115 V AC
	2						230 V AC
							<b>Length</b>
	3						3 m
	5						5 m
							<b>Temperature control</b>
	1						self-regulating (120 °C)
	2						regulated (max. 180 °C) <sup>1)</sup>
							<b>End termination</b>
	1						Ø6 mm tube
	2						Quick-Lock female (ideal for PCS.smart)

<sup>1)</sup> Temperature controller required.

Other lengths and styles available upon request!

Filter element required for operation (see notes under "Spare Parts and Accessories").

## 1.3 Scope of Delivery

- Portable probe model Smartline
- Product documentation

Attached and included accessories are listed separately in the order.

## 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

<b>DANGER</b>	Signal word for an imminent danger with high risk, resulting in severe injuries or death if not avoided.
<b>WARNING</b>	Signal word for a hazardous situation with medium risk, possibly resulting in severe injuries or death if not avoided.
<b>CAUTION</b>	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.
<b>NOTICE</b>	Signal word for important information to the product.

### Warning signs

In this manual, the following warning signs are used:

	Warning against hazardous situations		General notice
	Warning against electrical voltage		Disconnect from mains
	Warning against respiration of toxic gases		Wear respirator
	Warning against acid and corrosive substances		Wear eye/face protection
	Warning against potentially explosive atmospheres		Wear protection gloves
	Warning against hot surface		

## 2.2 General hazard warnings

The equipment must be installed by a professional familiar with the safety requirements and risks.

Be sure to observe the safety regulations and generally applicable rules of technology relevant for the installation site. Prevent malfunctions and avoid personal injuries and property damage.

### The operator of the system must ensure:

- Safety notices and operating instructions are available and observed,
- The respective national accident prevention regulations are observed,
- The permissible data and operational conditions are maintained,
- Safety guards are used and mandatory maintenance is performed,
- Legal regulations are observed during disposal,
- compliance with national installation regulations.

### 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.
- Do not install damaged or defective spare part. If necessary, visually inspect prior to installation to determine any obvious damage to the spare parts.

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

#### DANGER

#### Electrical voltage

Electrocution hazard.



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



#### 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.



#### DANGER

#### Potentially explosive atmosphere

Explosion hazard if used in hazardous areas.

The device is not suitable for operation in hazardous areas with potentially explosive atmospheres.

Do not expose the device to combustible or explosive gas mixtures.



## 3 Transport and storage

Only transport the product inside the original packaging or a suitable alternative.

The equipment must be protected from moisture and heat when not in use. They must be stored in a covered, dry and dust-free room at a temperature between -20 °C to 50 °C (-4 °F to 122 °F).

## 4 Installation and connection

### 4.1 Assembly Instructions

1. Check the type plate specifications prior to installation: Do the type, version, voltage, output and operating temperature meet your requirements?
2. Visually inspect: Does this version match the version you ordered? When in doubt, check the documents. Does the portable probe meet the requirements at the job site?
3. If the line is secured with brackets, pressing on it must not reduce the outside diameter by more than 10 %. Exceeding the 10 % limit may damage the heating conductor, control lines and sensor leads.
4. If there are control wires inside the heating tube, please note the electrical power rating of these wires. The standard cross-section is 0.75 mm<sup>2</sup>.
5. Always use suitable temperature control devices with non-self regulating lines. The controller output, sensor type and temperature range must match.
6. Be sure to connect the portable probe to a controller with the correct specifications. An inverted detector allows the probe to heat until it is destroyed.
7. When installed outdoors, the portable probe must be protected from the wind, as this could cool it and potentially prevent it from reaching the target temperature. It further should not be exposed to rain or direct sunlight for extended periods.
8. Do not pull the portable probe by the fittings. All fittings will withstand pressure but are susceptible to pulling.
9. Do not pull the portable probe by the connection cable.
10. Please note the specific requirements at the job site. Verify if the materials in contact with the medium are resistant to or withstand the mediums to be heated (> see technical data).
11. Check if objects, system components or other items lying about can damage or impair the function of the portable probe and clear or remove these.
12. Conductive, exposed parts must be included in potential equalisation.

We recommend using an  $I_{\text{r}} < 30$  mA residual-current-operated protective device RCD (ELCB).

#### NOTICE




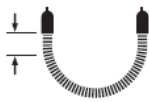
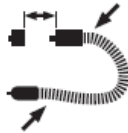
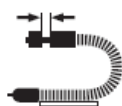




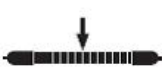



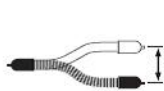







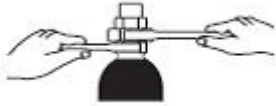
#### Minimum bend radii, operating temperature







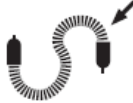






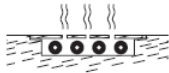


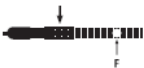
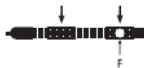


Depending on the length or nominal cross-section of the portable probe, suitable minimum bend radii are required. The max. operating temperatures are specified in the type plate and must never be exceeded in any area. Suitable control equipment must be used to regulate the temperature.

Generally: Minimum bend radius  $> 5 \times$  tube diameter. Other bend radii available upon request.



### 4.1.1 Connecting the portable probe

		Assembly drawing		Action
		Wrong	Correct	
1	If the heating tubes are too short, the heating tube may kink at the connecting ends.			Plan for a straight piece (5 x tube diameter) at the connecting ends. A higher bend radius will increase the life.
2	Unfavourable installation allows the heating tube to sag.			Supports or reels with counterweight.
3	On rolled heating tubes strain at the ends cause torsional stress and the bend radius will be below the minimum.			Unroll the heating tube ring, do not remove the heating tube. Observe minimum bend radii. (5 x tube diameter)
				
4	Compression along the centre line due to incorrect installation or movement reduces the pressure resistance. Expansion compensation with built-in tubes will destroy the tubes.			Bend at connections.
				
				
				
5	Torsion movement will destroy the heating tube. This is often due to incorrect installation, particularly twisting the tube during assembly.			Be sure the tube axes are parallel and movement is in one plane. Use a locking key during assembly to prevent the tube from twisting.
				
				

		Assembly drawing		Action
		Wrong	Correct	
6	Deflections are particularly dangerous due to the risk of kinking and bending stress.			Select the correct diameter saddle or pulley.
7	High bending stress after the connections is harmful.			Use an elbow
				
				
8	The risk of kinks is particularly high in manual devices.			Use an elbow or bend protection (e.g. wire spiral) suitable for the working position.
9	If e.g. powdery substances, adhesive or other thermally insulating materials are spilled on heating tubes, overheating will occur in these areas.			Constantly clean these materials off and eliminate the cause.
10	Installing heating tubes inside a closed channel or duct will cause heat to build up in these.			Tubes must not touch. Further ensure adequate ventilation.
11	Bundling or installation with the tubes touching will cause overheating at these contact points. Never operate tubes whilst rolled up, as this will cause overheating.			Install spaced apart; unroll heating tubes
12	Heat build-up with overheating is also caused by wrapping the heating tube with other materials. If the detector area is wrapped, the remaining tube will cool down.			
13	When using clamps or similar parts for installation, be sure the exterior structure will not be crushed.			

## 4.2 Connecting the gas line

Observe the following points with portable probes with respect to connecting the sample gas line ( $\varnothing 6$  mm) to prevent thermal bridges:

- Choose the shortest possible screw connection.

After connecting the sample gas line it must be braced and secured with a clamp.

### WARNING



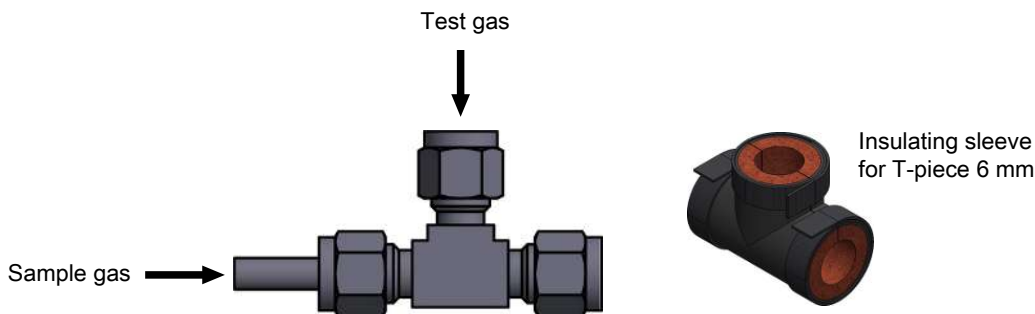
#### Gas emanation

**Sample gas can be harmful to the health!**

Check the lines for leaks.

## 4.3 Connecting the calibrating gas line (optional)

A T-piece  $\varnothing 6$  mm is required to connect the calibrating gas line. A suitable insulating sleeve is available for thermal insulation.



## 4.4 Electrical connections

### WARNING



#### Hazardous electrical voltage

The device must be installed by trained staff only.

### CAUTION



#### Wrong mains voltage

Wrong mains voltage may damage the device.  
Regard the correct mains voltage as given on the type plate.

The operator must install an external separator for the device which is clearly assigned to this device. A separator (main switch) suitable for the voltage and a fuse of max. 10 A suitable for the conductor cross-section must be installed at the site for this purpose. Perform a detailed root cause analysis.

### Electric strength test

(Repeat) tests of the electric strength must be performed at 1 kV for stationary systems, or 1.5 kV for mobile applications. The insulation resistance must be  $> 20$  M $\Omega$ .

### 4.4.1 Self-regulating models

These models feature a self-regulating heater and do not require a separate temperature controller. Please refer to the type plate for the supply voltage, 115 V AC 50/60 Hz or 230 V AC 50/60 Hz.

### 4.4.2 Regulated models

The models feature a regulated heater with Pt100 and require a separate temperature controller. Please refer to the type plate for the supply voltage, 115 V AC 50/60Hz or 230 V AC 50/60 Hz.

### 4.4.3 Connector pin assignment

#### Connection regulated, heated line

Connection	Pin	Assignment
	1	L 230/115 V
	2	N 230/115 V
	3	free
	4	free
	5	Pt100
	6	Pt100
	7	PE

#### Connection, self-regulating line

Connection	Pin	Assignment
	1	free
	2	free
	3	N 230/115 V
	4	L 230/115 V
	5	free
	6	free
	7	PE

### 4.4.4 Flange socket installation (optional)

If you do not wish to connect the probe to a Bühler conditioning system, the following panel cut-outs are required for the flange socket:

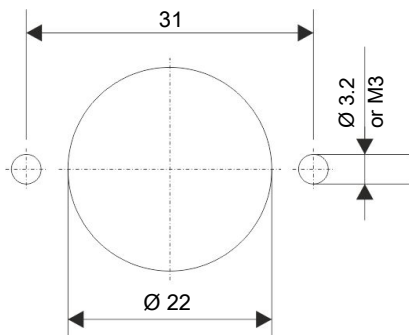


Fig. 1: Flange socket panel cut-out

## 4.5 Installing the outlet filter

**NOTICE**

**Outlet filter**



The outlet filter is included and must be installed prior to initial start-up.  
**Operating without outlet filter prohibited!**

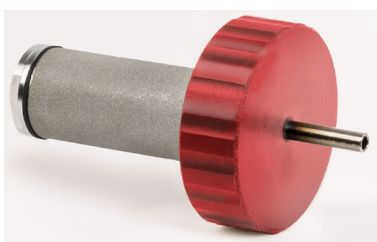


Fig. 2: Outlet filter

Install the filter as described in chapter [Replacing the outlet filter](#) [> page 13].

## 5 Operation and Control

**NOTICE**

The device must not be operated beyond its specifications.

### 5.1 Operating the portable probe

**NOTICE****Geometric arrangement during operation**

Never operate the portable probe rolled up or stacked. The outer sheath may otherwise be destroyed!

1. Closely monitor the initial heat-up phase to detect any faults early and take safeguards if necessary. Monitor further operation of the portable probe.
2. Be sure the medium at the entry or inlet point does not exceed the max. temperature of the portable probe. The probe may otherwise be damaged in these areas.
3. Avoid extreme shock or movement whilst operating the portable probe (shaking, vibration, etc.).
4. A fitting may clog due to the medium solidifying and only clear again after heating up for some time. Never attempt to reduce the period with external heating (e.g. with a torch, etc.). Doing so will damage the portable probe!
5. If you notice damage or abnormal function of the portable probe during operation, switch off and disconnect from the mains as quickly as possible.

## 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.

### 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

#### The gas inside the filter, condensate and used filter elements may be caustic or corrosive.

Sample gas can be harmful.



- Before maintenance turn off the gas supply and surge with air if necessary.
- Exhaust sample gas to a safe place.
- Protect yourself against toxic / corrosive gas during maintenance. Wear appropriate personal protection 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.



### 6.1 Heating tube maintenance

1. If the outside of the heating tube or the supply cable show defects, the heating tube must immediately be disconnected from the mains, removed, and sent to the factory for inspection. Never open the heating tube or its components yourself.
2. The heating tube should be regularly inspected or serviced, at least every 6 months, by an electrically skilled person using suitable measuring and testing equipment to ensure operational safety. The inspection intervals must be adapted to the operating conditions on site.
3. If a limiter permanently switches off, analyse the cause prior to restarting and take suitable measures to prevent future occurrences.
4. The life of the heating tube varies by the application conditions. With rough operation this is shorter than for occasional use under optimal conditions.

## 6.2 Maintaining the filter element

The portable probe features 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.

### NOTICE

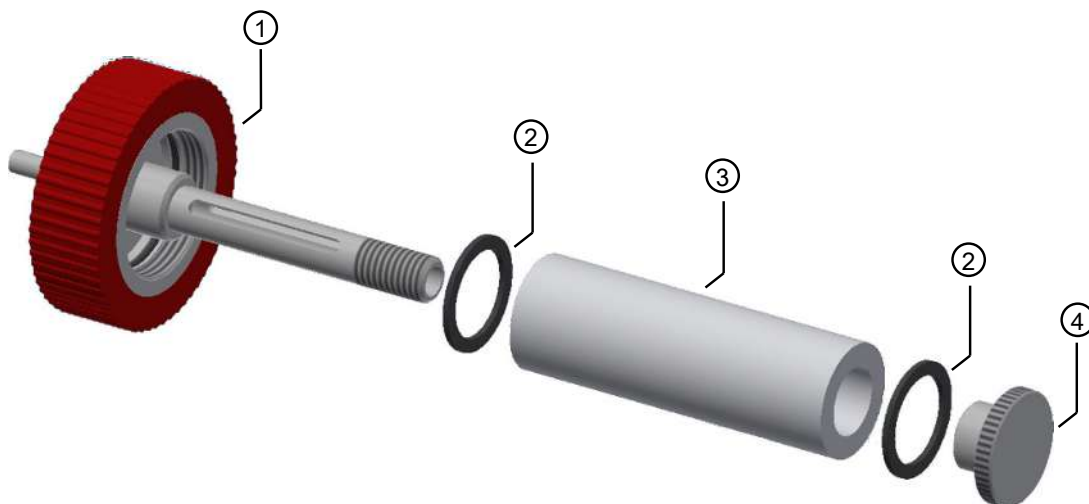


The **ceramic filter elements** are very fragile. Therefore handle the elements with care, do not drop.

The **stainless steel filter elements** can be cleaned with an ultrasonic bath and reused several times; in this case always use new filter seals.

## 6.3 Replacing the outlet filter

- Unscrew and remove the screw cap (1) at the back end of the probe.
- Unscrew the knurled nut (4).
- Remove the filter element (3) and seals (2).
- If necessary, clean the inside of the heating tube by blowing it out or using a cleaning wand.
- Replace the seals (2) before installing the new filter element (seals are included with the filter element).
- Assemble in the reverse order.
- Then screw in the screw cap (1) with the new filter element.



1 Screw cap	2 Seal
3 Filter element	4 Knurled 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 attach 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	– Filter element plugged	– Clean or replace filter element, clean sampling tube
	– Heated line connected incorrectly	– Connect per chapter <a href="#">Connecting the portable probe</a> [> page 7].
Temperature alarm	– Heat-up not yet completed	– Wait for heat-up to complete
	– Heater	– Send in probe for repair
No heat output	– No / incorrect voltage	– Power supply
Condensation forming	– Heater defective	– Send in probe for repair
	– Thermal bridges at the sampling point	– Insulate to eliminate thermal bridges

Tab. 1: Troubleshooting



## 7.2 Spare parts and accessories

Item no.	Description
46770070	Transport case
	<b>Filter elements</b>
46770020	Sintered metal filter element incl. seals; Material: 1.4404/Viton
46770030	Ceramic filter element incl. seals; Material: Ceramic/Viton
	<b>Sampling tubes</b>
467700030500	Tapered assembly plug ø20-60 with sampling tube; Material: 1.4571/1.4401; length 500 mm
467700060500	Tapered assembly plug ø20-60 with sampling tube; length 500 mm Material: Hastelloy/1.4571/1.4401
462220010500	Sampling tube length 500 mm, material: 1.4571, T <sub>max</sub> 600 °C
462220060500	Sampling tube length 500 mm, material: Hastelloy, T <sub>max</sub> 400 °C
462220040500	Sampling tube length 500 mm, material: Inconel, T <sub>max</sub> 1050 °C
	For more sampling tubes see accessory data sheet for sample gas probes DB461099
	<b>Mounting accessories</b>
46770004	Assembly plug R2; Material: 1.4571/1.4401
46770001	Mounting flange DN65 PN6; Material: 1.4571/1.4401
46770002	Mounting flange ANSI DN3"-150; Material: 1.4571/1.4401
46770005	Mounting bracket with 2 m chain; EPDM/galvanised steel
46770060	T-piece, 6 mm, stainless steel material for test gas
46770050	Insulating sleeve for T-piece
467700202	Seal kit, Viton material for FE sintered metal
467700302	Seal kit, Viton material for FE ceramic
9146100267	Flange socket 6-pin + PE
467707	Screw cap O-ring

## 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 wheellie bin symbol on Bühler Technologies GmbH electrical and electronic products indicates special disposal notices within the European Union (EU).



The crossed out wheellie 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 Technical Data

#### Smartline Technical Data

Warm up time at 25 °C	approx. 30 minutes
Ambient temperature	-20 °C to +40 °C
Max. operating temperature	Varies by heating tube type, see type plate
Heater	controllable with Pt100, 100 W/m, max. 180 °C self-regulating, 60 W/m, 120 °C
Dust load	max. 2 g/m <sup>3</sup>
Temperature inside stack	max. 400 °C – 1050 °C, varies by sampling tube, see spare parts and accessories
Pressure	max. 6 bar
Protection class	IP 54

#### Electrical specifications

##### Electric supply

Voltage (optional supply via portable conditioning PCS.smart)	230 V AC - 60 W/m or 100 W/m +/- 10% 115 V AC - 60 W/m or 100 W/m +/- 10%
Length	1 m

#### Mechanical specifications

Heating tube diameter	approx. 32 mm
Heating tube length	3 or 5 m
Weight	approx. 2.3 kg at 3 m length approx. 3.7 kg at 5 m length

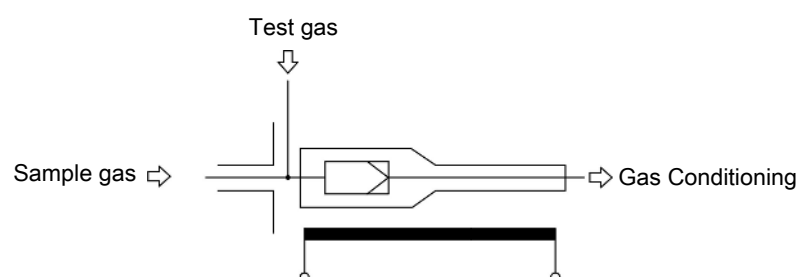
#### Materials

Material	Silicone, PTFE, stainless steel, polyamide
Parts in contact with mediums	Stainless steel 1.4571, 1.4404, 1.4305, PTFE
Bend radius	min. 140 mm
PTFE core	DN 4/6
End termination	Stainless steel, Ø6 mm

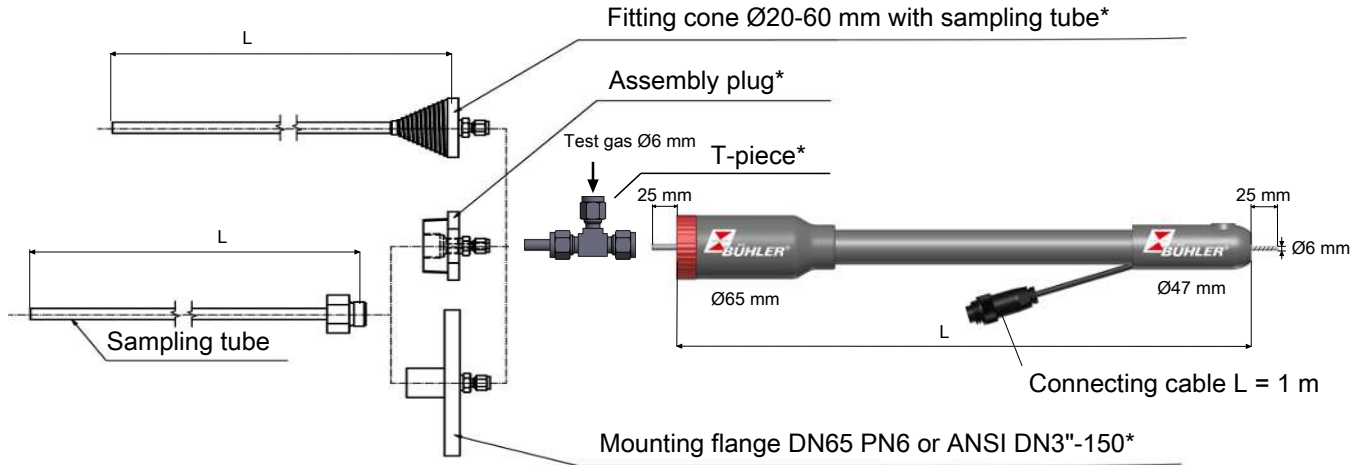
#### Transport case (accessory)

Outside dimensions	approx. 575 mm x 470 mm x 205 mm
with space for the following parts	Smartline 3 m/5 m, 3 x filter element, 2 x sampling tube, 2 x assembly plug, 2 x mounting flange, mounting bracket with chain, T-piece with insulation, 2 x compartment for small parts, operating instructions

### 9.2 Flow chart



### 9.3 Drawing



Mounting bracket with 2 m chain\*



Insulating sleeve for T-piece 6 mm\*



\*optional

## **10 Attached documents**

- Declaration of Conformity KX460024
- RMA - Decontamination Statement

**EU-Konformitätserklärung**  
**EU Declaration of Conformity**



Hiermit erklärt Bühler Technologies GmbH,  
dass die nachfolgenden Produkte den  
wesentlichen Anforderungen der Richtlinie

*Herewith declares Bühler Technologies GmbH  
that the following products correspond to the  
essential requirements of Directive*

**2014/35/EU**  
**(Niederspannungsrichtlinie / low voltage directive)**

in ihrer aktuellen Fassung entsprechen.

*in its actual version.*

Folgende Richtlinie wurde berücksichtigt:

*The following directive was regarded:*

**2014/30/EU (EMV/EMC)**

**Produkt / products:** Tragbare Entnahmesonde / *Portable sample probe*  
**Typ / type:** Smartline

Das Betriebsmittel dient zum Betrieb in Gasanalysensystemen, insbesondere für den Einsatz mit einer  
mobilen Messgasaufbereitung.

*The equipment is intended for conditioning of sample gas, especially for use with portable  
sample gas conditioning systems.*

Das oben beschriebene Produkt der Erklärung erfüllt die einschlägigen  
Harmonisierungsrechtsvorschriften der Union:

*The object of the declaration described above is in conformity with the relevant Union harmonisation  
legislation:*

**EN 60519-1:2015**

**EN 61010-1:2010/A1:2019/AC:2019-04**

Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller.  
*This declaration of conformity is issued under the sole responsibility of the manufacturer.*

Dokumentationsverantwortlicher für diese Konformitätserklärung ist Herr Stefan Eschweiler mit  
Anschrift am Firmensitz.

*The person authorized to compile the technical file is Mr. Stefan Eschweiler located at the company's  
address.*

Ratingen, den 17.02.2023

Stefan Eschweiler  
Geschäftsführer – *Managing Director*

Frank Pospiech  
Geschäftsführer – *Managing Director*

## UK Declaration of Conformity



The manufacturer Bühler Technologies GmbH declares, under the sole responsibility, that the product complies with the requirements of the following UK legislation:

### **Electrical Equipment Safety Regulations 2016**

The following legislation were regarded:

### **Electromagnetic Compatibility Regulations 2016**

**Product:** Portable sample probe  
**Type:** Smartline

The equipment is intended for conditioning of sample gas, especially for use with portable sample gas conditioning systems.

The object of the declaration described above is in conformity with the relevant designated standards:

**EN 61010-1:2010/A1:2019/AC:2019-04**

**EN 60519-1:2015**

Ratingen in Germany, 17.02.2023

A handwritten signature in blue ink, appearing to read 'Stefan Eschweiler'.

Stefan Eschweiler  
Managing Director

A handwritten signature in blue ink, appearing to read 'Frank Pospiech'.

Frank Pospiech  
Managing Director

# 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-  
heitsgefährlich/  
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.

