



## Sample gas probe GAS 222.15-MA

The GAS 222.15-MA gas probe was designed specifically for sampling gas in maritime applications. It is certified for operation on ships and offshore units and is type approved by **DNV-GL** and **Lloyd's Register**. The special design features allow the GAS 222.15-MA to also be used in high vibration environments (e.g. on ships) up to an acceleration of 4 g.

Similar to large combustion plants, gas analysis in maritime applications also serves monitoring pollutant emissions as well as controlling the combustion process. However, maritime applications pose additional requirements with respect to components compared to stationary applications. The gas probe is therefore protected by a special silicone cover (type of protection IP66).

The GAS 222.15-MA probe is equipped with a self-regulating heater for approx. 180 °C including low temperature alarm (140 °C) and can even be operated in severe ambient conditions of -20 °C and 60 °C. Apart from additional requirements for operation on ships, the GAS 222.15-MA gas probe has the tried and tested advantage of toolless filter changes and a very compact size.

Heated probe with downstream filter

Type tested for use on ships according to **LR and DNV-GL**

Product Design Assessment of the American Bureau of Shipping (ABS)

Certified for high vibration environments up to 4 g

Safe for use in environments between -20 °C and 60 °C

Self-regulating heater to approx. 180 °C with low temperature alarm

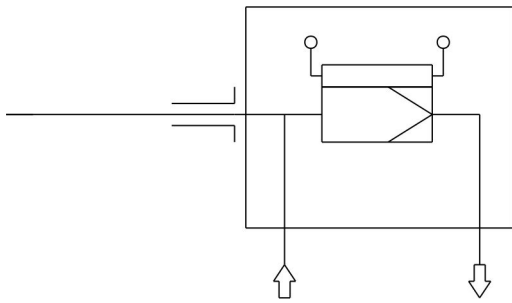
Type of protection IP66

The downstream filter can easily be removed by turning the handle 90°

For dust loads up to 2 g/m<sup>3</sup>



**Flow chart**



**Technical Data**

**Gas Probe**

Type tested:	<p><b>DNV GL</b> rules for classification Ships, offshore units, and high speed and light craft Certificate no.: TAA00002FW</p> <p><b>Lloyd's Register</b> Type Approval System, Test Specification Number 1 - March 2019 Certificate no.: LR2008137TA</p>
Product Design Assessment:	ABS
Ambient categories as per DNVGL-CG-0339:	<p>Temperature: D Humidity B Vibration B EMC B Housing: B (IP66)</p>
Environmental categories as per LR:	ENV1, ENV2
Probe gas inlet temperature:	max. 200 °C
Ambient temperature:	-20 to +60 °C
Self-regulating heater:	+180 °C
Low temperature alarm:	Switching current max. 4 A (switch-back point < 140 °C)
Electrical data:	115 V/230 V, 50/60 Hz, 400 W
Weight:	8.5 kg
IP rating:	IP66
Max. operating pressure:	6 bar
Materials in contact with media:	1.4571, graphite/1.4404 and see filter

**Ordering instructions**

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

<b>4622215MA</b>	<b>X</b>	<b>9</b>	<b>9</b>	<b>0</b>	<b>3</b>	<b>X</b>	<b>X</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>Product characteristic</b>	
											<b>Flange</b>	
											0	DIN DN65 PN6
											1	ANSI 3"- 150 lbs
												<b>Voltage</b>
											3	115/230 V
												<b>Calibration gas connection</b>
											0	without calibration gas connection
											1	6 mm
											2	6 mm with check valve
											3	1/4"
											4	1/4" with check valve
												<b>Low temperature alarm</b>
											1	opening contact (open at operating temperature)
											2	closing contact (closed at operating temperature)

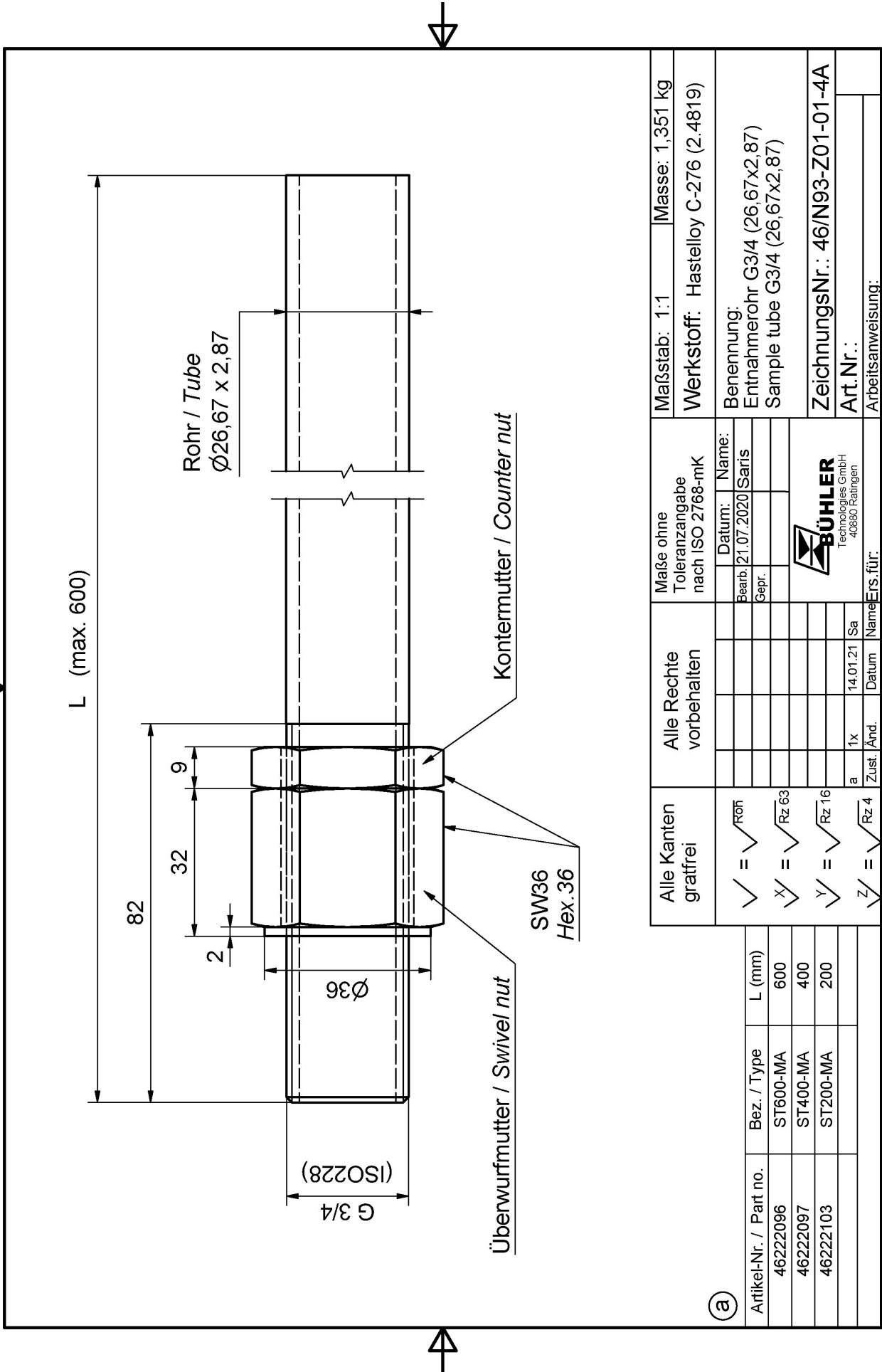
**Options**

The base unit can optionally be equipped with a sampling tube type ST...-MA. These are type approved by DNV-GL and available in 200, 400 and 600 mm lengths. You will find the dimensions on the last page.

<b>Type designation</b>	<b>ST200-MA</b>	<b>ST400-MA</b>	<b>ST600-MA</b>
Item no.	46222103	46222097	46222096
Length (mm)	200	400	600



Sampling tube dimensions



(a)	Artikel-Nr. / Part no. 46222096 46222097 46222103	Bez. / Type ST600-MA ST400-MA ST200-MA	L (mm) 600 400 200
	Alle Kanten gratfrei ✓ = $\checkmark$ R0ff X ✓ = $\checkmark$ Rz 63 Y ✓ = $\checkmark$ Rz 16 Z ✓ = $\checkmark$ Rz 4		
	Alle Rechte vorbehalten a 1x Zust./And.		
Maße ohne Toleranzangabe nach ISO 2768-mk Datum: 21.07.2020 Name: Saris Gepr.		Maßstab: 1:1 Masse: 1,351 kg Werkstoff: Hastelloy C-276 (2.4819)	
Benennung: Entnahmerohr G3/4 (26,67x2,87) Sample tube G3/4 (26,67x2,87)		ZeichnungsNr.: 46/N93-Z01-01-4A Art.Nr.:	
BÜHLER Technologies GmbH 40860 Ratingen		Arbeitsanweisung:	