



Heated Gas Sampling Probe PSG Plus

Application

The heated gas sampling probes series **PSG Plus** are used for continuous extractive gas analysis. They enable trouble-free representative sampling of hot predominantly dust and water vapour loaded gases. Typical applications are emission measurement, process monitoring and process optimisation.

Technology

The intelligent design with optimum gas guidance enables the filtration of sample gas at the outer filtration surface of 212cm² (largest on the market) as well as comfortable and quick filter change without tools and dismantling of the heated sample line. Extremely simple maintenance of the **PSG Plus** is enabled due to a sophisticated corkscrew mechanism, which allows opening without effort also at sticking filter housing lid. The holohedral tight high performance ring heater in combination with the tight thick-walled glass fibre insulation jacket ensures a homogeneous heating of the complete **PSG Plus** to 180°C.

Functions

Due to the largest filtration surface on the market in combination with the homogeneous heating dust will always be separated reliably in the **PSG Plus** without condensation of water vapour and therefore without blocking of the filter. For elevated dust concentrations of up to 40g/m³ resp. 280g/m³ the **PSG Plus** can be equipped with an ultimate effective single or dual stage back purging with tubing of 12mm outer diameter which is unique on the market. This way filter chamber (single stage) as well as filter are purged thoroughly. The standard calibration resp. test gas connection enables the use of the **PSG Plus** within emission measuring systems according to 13. and 17. BImSchV (EU-regulations 2000/76/EG and 2001/80/EG).

- ✓ **Largest active filter surface on the market**
- ✓ **Corrosion resistant made of stainless steel SS316Ti**
- ✓ **Controlled or self-regulated heating to 180°C**
- ✓ **No cold spots**
- ✓ **Comfortable filter change without tools**
- ✓ **Single or dual stage back purging as option**
- ✓ **Test gas connection as standard**
- ✓ **Protective housing for outdoor installation**
- ✓ **Temperature alarm contact**
- ✓ **8-hole flange for variable mounting**
- ✓ **Upgradeable as option**



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Perfect Sample Gas



Technical Data

			Part No.	
Process gas sampling conditions PSG Plus	Pressure	p _{abs} = 50...600 kPa		
	Temperature	max. 200 °C at probe inlet		
	Flow	30...1500 l/hr, referred to 100 kPa and 0 °C		
	Pressure drop	approx. 0,6 hPa at 100 l/hr		
	Max. dust content without and with back purging	3 g/m ³ / 40g/m ³ single stage / 280g/m ³ dual stage		
Connections	Sample gas	G1/4" f (DIN ISO 228/1)		
	Test gas (standard) / Tubing (option)	G1/4" f (DIN ISO 228/1) / 6mm tube		
	Back purge (standard)	Tubing (option)	53500062	
Heating	Type	Heating sleeve incl. PT100	115V AC, 50...60 Hz, 250 W	53500017
			230V AC, 50...60 Hz, 250 W	53500018
		Ring heater self regulating	115V AC, 2x100W, 48...62 Hz,	53500016
			230V AC, 2x100W, 48...62 Hz,	53500019
	Isolation	Removable insulation jacket (only heating sleeve)		80060593
		Additional insulation protective housing (only heating sleeve) for ambient temperature -30°C		53500038
	Temperature	180 °C		
	Temperature alarm	approx. 150 °C		
	Temperature control	PID-controller ST49 incl. solid state relays for DIN-rail-mounting (only heating sleeve)		50078850
		Thermostat control with controller in connection box (only heating sleeve)		53500041
Temperature sensor	PT100 (only heating sleeve)		53500066	
Filter Properties PSG Plus	Filter	Surface filter, ceramic coated		
	Porosity	0,3 µm		
	Tightness	10 ⁻⁴ hPa l/s		
	Dead volume	ca. 280 ml		
	Dimensions	50/20 x 135 mm		
Protective Housing	Dimensions	330 x 205 x 270 mm (L x B x T)		
	Material	Stainless steel SS 304		
	Ambient temperature	-20°C ... +60°C		
	Weight	approx.14 kg (complete probe)		
	For heating with thermostat control	With adapted connection box		
Mounting	Protection class connection box	IP67 EN 60529		
	Flange	DN 65, PN 6, 8-hole, form B according to DIN 2527		
	Installation angle	10°-35° inclination to horizontal position		
Materials in contact with sample gas	Housing, flange, gas connections	Stainless steel SS 316Ti		
	Gaskets	FPM		
		FFKM instead of FPM for heating to 315°C or corrosion resistant version (with back purging)	80060638	
Pre-configured examples	with protective housing, heating sleeve, PT100 and insulation jacket		53402001	
	with protective housing, heating sleeve, PT100, insulation jacket , test gas tubing and dual stage back purge tubing		53402002	
	with protective housing, heating sleeve, PT100, insulation jacket and temperature controller ST49		53402003	
	with protective housing, heating sleeve, PT100, insulation jacket , test gas tubing, dual stage back purge tubing and temperature controller ST49		53402004	
	with protective housing, heating sleeve, insulation jacket and thermostat controller		53402005	
	with protective housing, heating sleeve, insulation jacket , test gas tubing, dual stage back purge tubing and thermostat controller		53402006	

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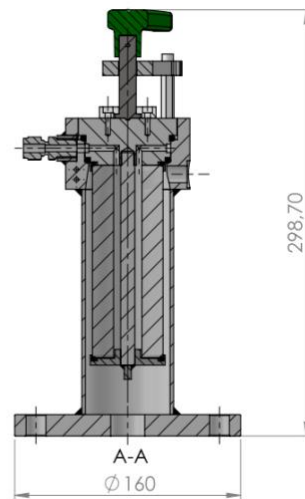
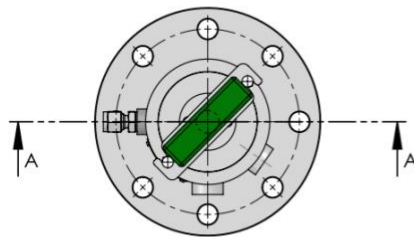
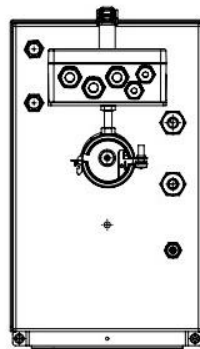
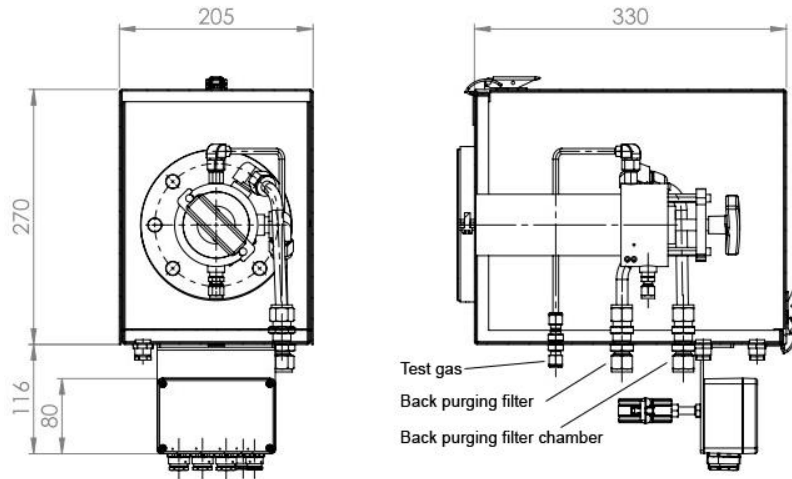
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Dimensions



Dimensions in mm

State 05 / 2018 | Subject to change



Options



Heating sleeve incl. PT100, Part No. 53500017 resp. 53500018



Removable insulation jacket, Part No. 80060593



Ring heater self regulating, Part No. 53500016 resp. 53500019



PID-controller ST49 and solid state relays (25A) with heat sink for DIN-rail-mounting (only heating sleeve), Part No. 50078850

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