



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 dismounting 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



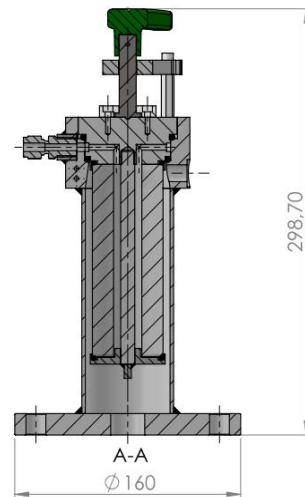
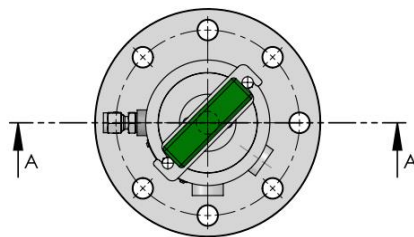
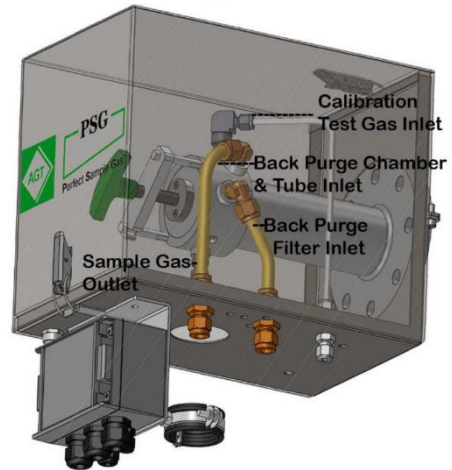
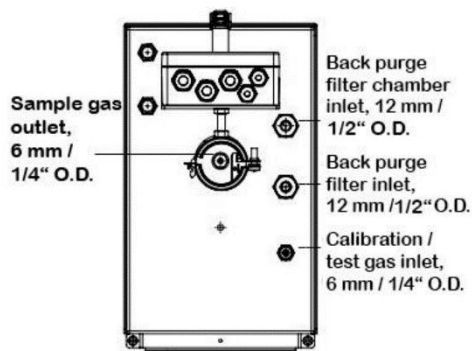
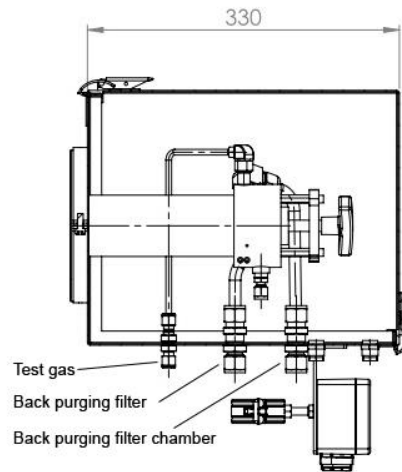
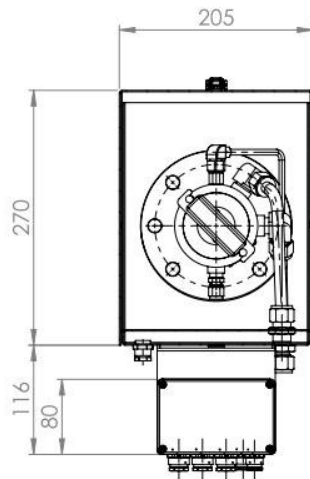


Technical Data

				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)	2 x G3/8" f (DIN ISO 228/1)	Single stage 12mm tube Dual stage 12mm tube
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)		
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	FFKM instead of FPM for heating to 315°C or corrosion resistant version (without back purging)		80060953	
	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		



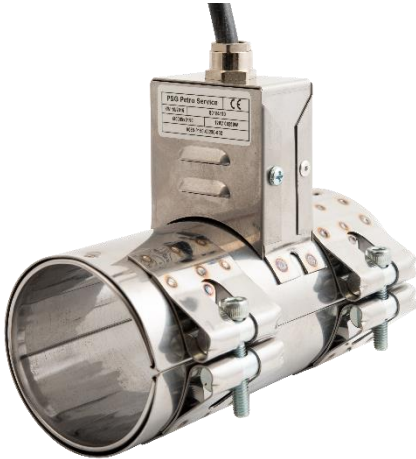
Dimensions



Dimensions in mm



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