

PSG Plus Probe Probe

Application

The heated gas sampling probes series **PSG Plus Probe** 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 optimization.

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 Probe** 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 Probe** 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 Probe** 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 Probe** 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 Probe** within emission measuring systems according to 13. and 17. BImSchV (EU-regulations 2000/76/EG and 2001/80/EG).

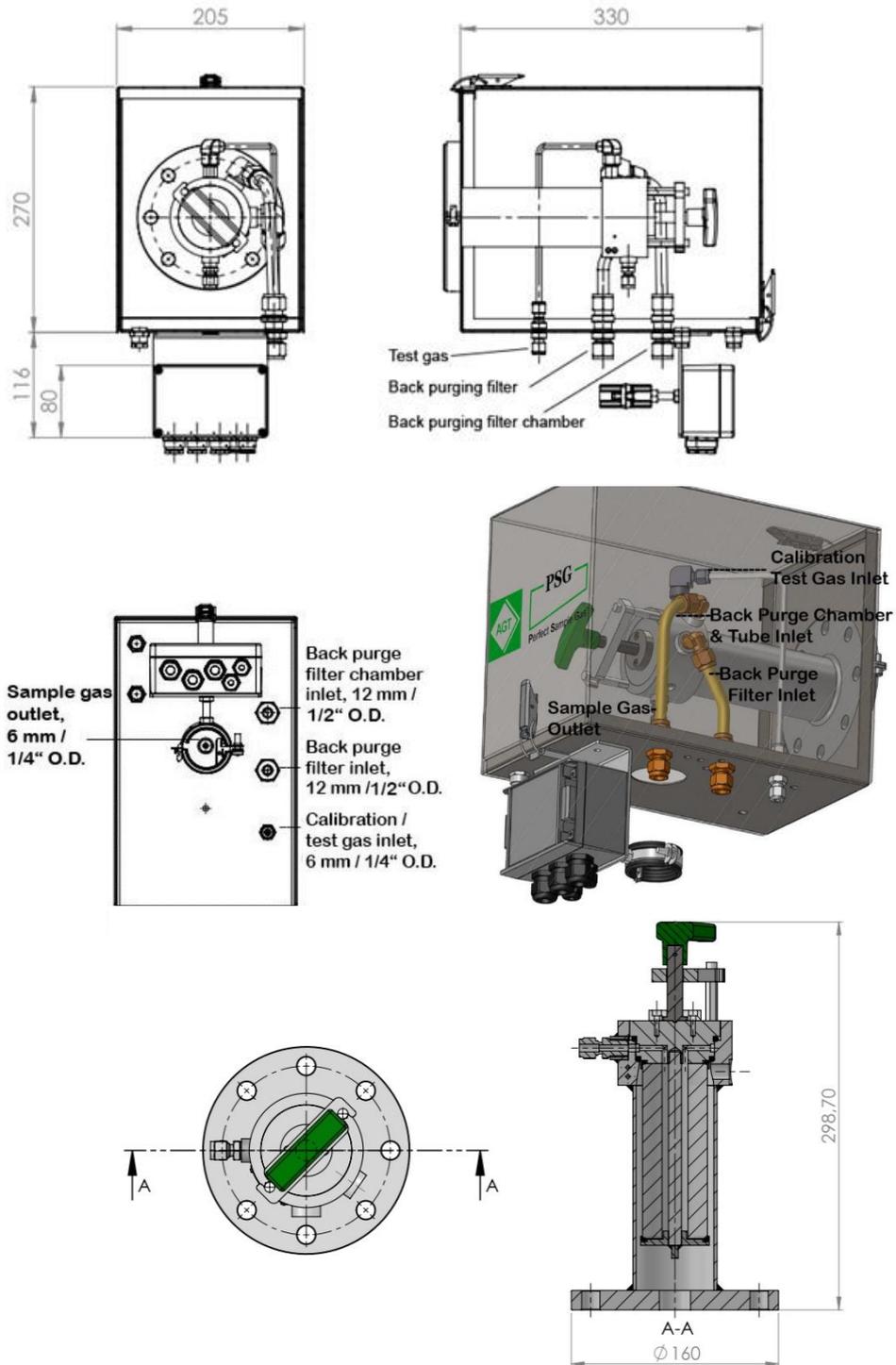


- ✓ Largest active filter surface on the market
- ✓ Corrosion resistant made of stainless steel SS316Ti
- ✓ Controlled or self-regulated heating to 180°C
- ✓ No cold spots
- ✓ Comfortable filter change without tools
- ✓ Single or dual stage back purging as option
- ✓ Test gas connection as standard
-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

Technical Data

Process gas sampling conditions PSG Plus Probe			
Pressure	p _{abs} = 50...600 kPa		80060528
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 & 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)		80060528
Test gas (standard) / Tubing (option)	G1/4" f (DIN ISO 228/1) / 6mm tube		53500062
Back purge (standard)	Tubing (option)	2 x G3/8" f (DIN ISO 228/1)	53500037
			53500044
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 relay 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 Probe			
Filter	Surface filter, ceramic coated		80060528
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)		53500008
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		53500031
Protection class connection box	IP67 EN 60529		
Mounting			
Flange	DN 65, PN 6, 8-hole, form B according to DIN 2527		80060528
Installation angle	10°-35° inclination to horizontal position		
Materials in contact with sample gas			
Housing, flange, gas connections	Stainless steel SS 316Ti		80060528
Gaskets	FPM		
	FFKM instead of FPM for heating to 315°C or corrosion resistant version (with back purging)		80060638
	FFKM instead of FPM for heating to 315°C or corrosion resistant version (without back purging)		80060953
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

Dimensions



Dimension in mm

State 07 / 2022 | 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 relay (25A) with heat sink for DIN-rail-mounting (only heating sleeve), Part No. 50078850