PSG Process Probe

ATEX 180

Application

The heated gas sampling probes series **PSG Process Probe ATEX 180** 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 measurements and monitoring in explosive plant components.

Technology

The intelligent design with optimum gas guidance enables the filtration of sample gas at the outer filtration surface of 212cm^2, allowing service periods of up to 2 years (depending on the dust concentration). If it is necessary to change the filter, the arrowed corkscrew mechanism allows this to be done quickly and conveniently in just a few steps without tools and without disassembling the connected heated sample gas line. The full-surface tight-fitting aluminum heating element with the two self-regulating heating cartridges ensures homogeneous heating of the entire **PSG Process Probe ATEX 180** to 180°C even at the lowest ambient temperatures.

Functions

Due to the largest filtration surface dust will always be separated reliably in the **PSG Process Probe ATEX 180**. The heating concept prevents water vapour condensation in order to reliably prevent blocking of the filter. For elevated dust concentrations of up to 40g/m^3 resp. 280g/m^3 the **PSG Process Probe ATEX 180** can be equipped with an ultimate effective single or dual stage back purging with tubing of 12mm outer diameter. In this way filter chamber (single stage) as well as filter element are back purged thoroughly and low-maintenance operation is ensured.

- For operation in Ex zone 1 and 2
- Temperature class: T3
- Self-limiting heating to 180° C in an environment down to -40° C (optionally also down to -60° C possible)
- No temperature limiter necessary
- IP65 protection class
- Largest active filter surface on the market
- No cold spots
- Comfortable filter change without tools
- Single or dual stage back purging as option
- 120VAC version (option)

State 07 / 2022 | Subject to change

AGT-PSG GmbH & Co.KG | Weißkirchener Str. 3 | D-61449 Steinbach
Phone +49 (0) 6171 9750-0 | Fax +49 (0) 6171 9750-30 | info@perfectsamplegas.de

PSG Perfect Sample Gas

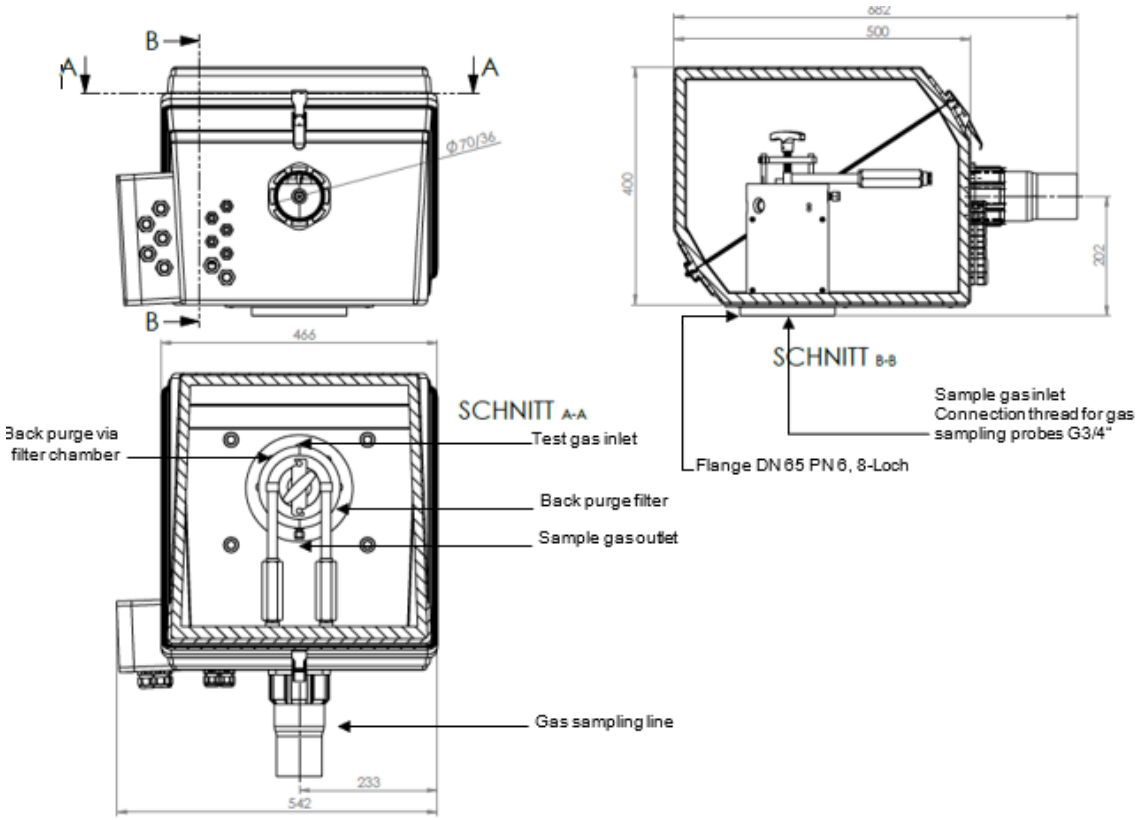
Technical Data

Process gas sampling conditions PSG Process Probe ATEX 180				Artikelnr.
Pressure		p_{abs} = 50…600 kPa		80060699
Temperature		max. +200 °C at probe inlet		
Flowrate		30…1500 l/h, 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/m3 w/o / 40g/m3 single stage / 280 g/m3 dual stage		
Connections				
Sample gas		G1/4" f (DIN ISO 228/1)		80060699
Test gas (blanking valve as standard) / Tubing (option)		G1/4" f (DIN ISO 228/1) / 6mm tube		53500062
Back purge (blanking valve as standard)	Tubing (option)	2 x G3/8" f (DIN ISO 228/1)	Single stage (Filter chamber) 12mm tube	On request
			Dual stage 12mm tube	On request
Heating				
Type		Cartridge heaters Self-limiting	240VAC 50 Hz / 2 x 265W II 2G Ex d IIC T3 IECEx	80040891
			120V option on request	
Isolation		PU as housing insulation		30061093
		Pyrogel insulation sleeve for heating element around filter unit (without back purte)		55500364
Temperature		180 °C at -40°C Ambient temperature (-60°C version with support heating option		
Temperature control		Not necessary because it is self-limiting		
Filter Properties PSG Process Probe ATEX				
Filter		Surface filter, ceramic coated		80060699
Porosity		0,3 µm		
Tightness		10^{-4} hPa l/s		
Dead volume		ca. 280 ml		
Dimensions		50/20 x 135 mm		
Protective Housing				
Dimensions		682 x 542 x 400 mm (L x B x T)		30061093
Material		GRP with reduced surface resistance according to DIN EN IEC 60079-0, less than 10^9 Ohm		
Ambient temperature		-40°C … +50°C (-60°C with support heating possible		
Weight		approx.30 kg (Probe incl. protective housing)		
Protection class terminal box and protective housing		IP65 EN 60529		
Mounting				
Flange		DN 65, PN 6, 8-hole, Form B acc. to DIN 2527		80060699
Installation angle		+ 10°bis +35° inclination to horizontal position		
Materials in contact with sample gas				
Flange, gas connections		Stainless steel SS 316Ti		80060699
Gaskets		FPM		
		FFKM instead of FPM for process temperatures of up to 315°C or corrosion resistant version (with back purging)		80060638
		FFKM instead of FPM for process temperatures of up to 315°C or corrosion resistant version (without back purging)		80060953
Low to medium dust loading				
Extremely long maintenance interval		Dust load:		Maintenance
		< 100 mg/m³		Every 2 years
		< 1 g/m³		Twice a year
		< 3 g/m³		Every 3 months

State 07 / 2022 | Subject to change

PSG Perfect Sample Gas

Dimensions



Dimensions in mm

AGT-PSG GmbH & Co.KG | Weißkirchener Str. 3 | D-61449 Steinbach
Phone +49 (0) 6171 9750-0 | Fax +49 (0) 6171 9750-30 | info@perfectsamplegas.de