

# PSG Process Probe

## ATEX 150

### Application

The heated gas sampling probes series **PSG Process Probe ATEX 150** 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<sup>2</sup>, 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 aluminium heating element with one self-regulating heating cartridge ensures homogeneous heating of the entire **PSG Process Probe ATEX 150** to 150°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 150**. 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<sup>3</sup> resp. 280g/m<sup>3</sup> the **PSG Process Probe ATEX 150** 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

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- Temperature class: T3

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- Self-limiting heating to 150° C in an environment down to -40° C (optionally also down to -60° C possible)

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- No temperature limiter necessary

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- IP65 protection class

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- Largest active filter surface on the market

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- No cold spots

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- Comfortable filter change without tools

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- Single or dual stage back purging as option

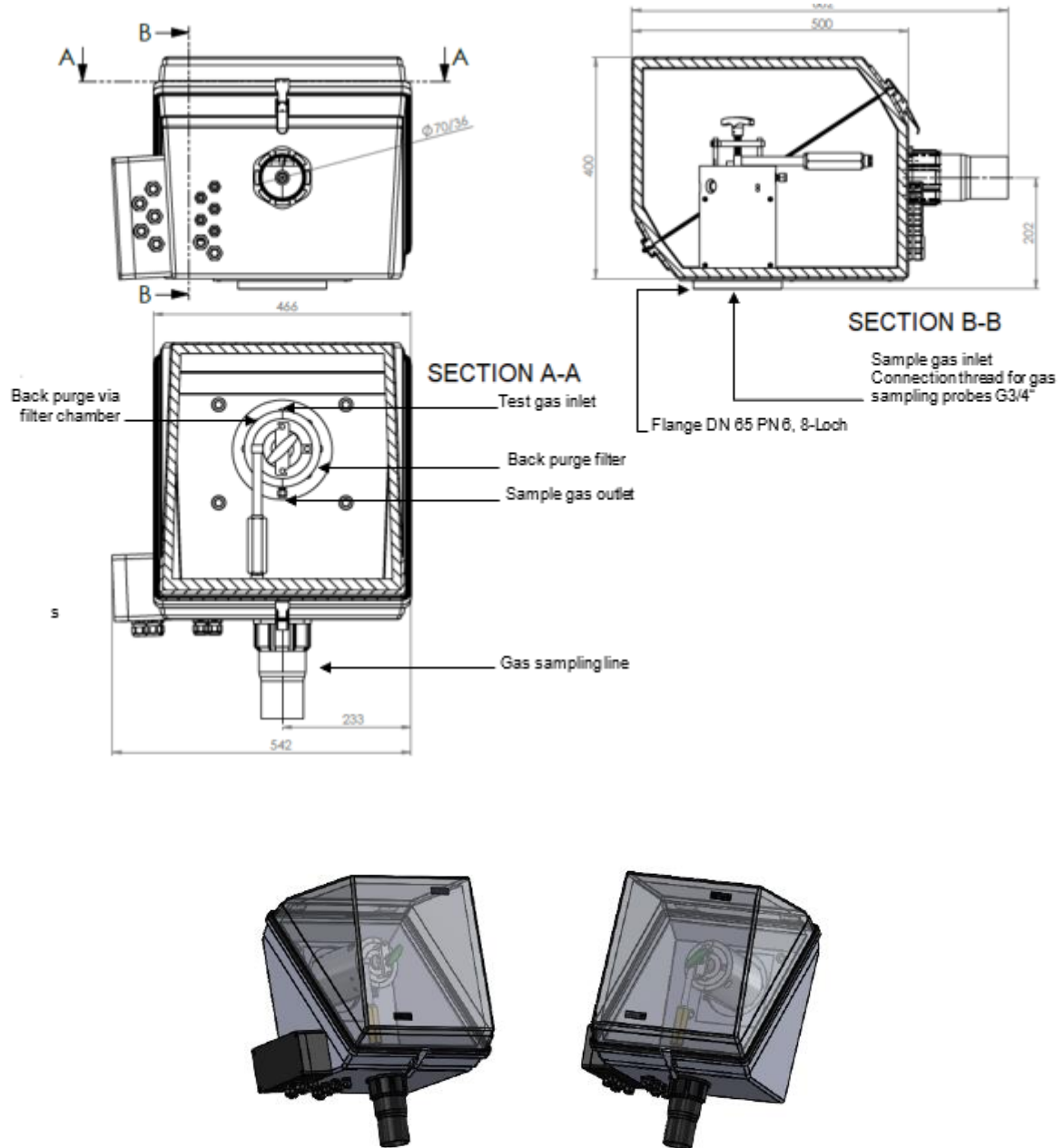
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- 120VAC version (option)

## Technical Data

Process gas sampling conditions PSG Process Probe ATEX 150			
Pressure	p <sub>abs</sub> = 50...600 kPa		80060699
Temperature	max. +200 °C at probe inlet		
Flow	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/m <sup>3</sup> w/o / 40g/m <sup>3</sup> single stage / 280 g/m <sup>3</sup> 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 heater Self-limiting	<ul style="list-style-type: none"> <li>240VAC 50 Hz / 1 x 265W</li> </ul> II 2G Ex d IIC T3	80040891
Isolation	PU as housing insulation		30061093
	Pyrogel insulation sleeve for heating element around filter unit (without back purte)		55500364
Temperature	150 °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			
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 109 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			
682 x 542 x 400 mm (L x B x T)	682 x 542 x 400 mm (L x B x T)		80060699
GRP with reduced surface resistance according to DIN EN IEC 60079-0, less than 109 Ohm	GRP with reduced surface resistance according to DIN EN IEC 60079-0, less than 109 Ohm		80060699
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/m <sup>3</sup>		Every 2 years
	< 1 g/m <sup>3</sup>		Twice a year
	< 3 g/m <sup>3</sup>		Every 3 months

## Dimensions



Dimensions in mm

State 07 / 2022 | Subject to change