

Heated Gas Sampling Probe

PSG Plus DSBP

Application

The heated gas sampling probes series **PSG Plus DSBP** are used for continuous extractive gas analysis. They enable trouble-free representative sampling of hot highly dust and water vapour loaded gases. Typical applications are e.g. process measurements in the cement industry.

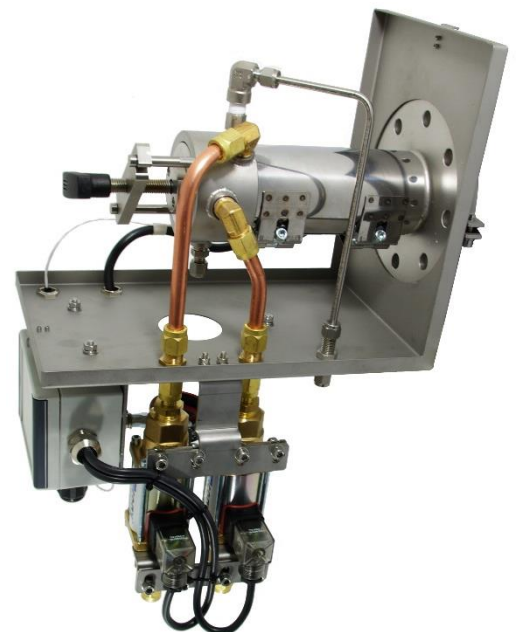
Technology

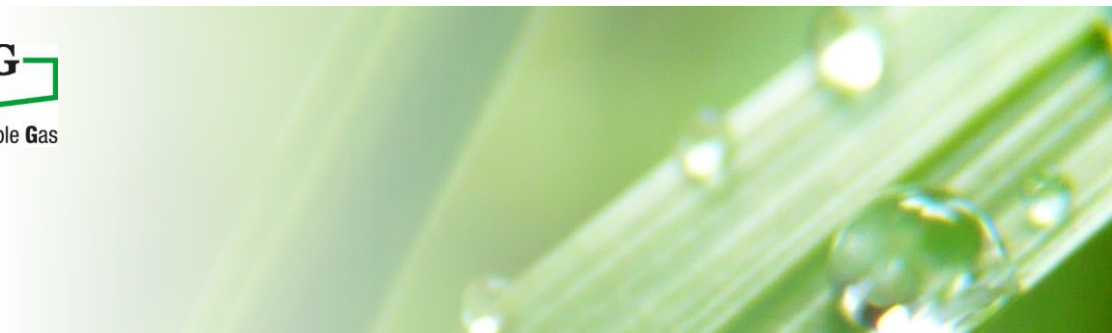
The intelligent design with optimum gas guidance enables the filtration of sample gas at the outer filtration surface of 212cm² (largest on the market) as well as comfortable and quick filter change without tools and dismounting of the heated sample line. Extremely simple maintenance of the **PSG Plus DSBP** 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 DSBP** to 180°C. The dual stage back purge with 12x1mm tubing is controlled by optional mounted Coax solenoid valves with 10mm passage.

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 DSBP** without condensation of water vapour and therefore without blocking of the filter. For elevated dust concentrations of up to 280g/m³ the **PSG Plus DSBP** is equipped with an ultimate effective double stage back purge with 10mm passage which is unique on the market. This way filter as well as filter chamber are purged thoroughly and dust is purged back almost completely into the process. The membrane coated ceramic filter with 0,3µm porosity is supporting additionally the great back purge effectivity.

- ✓ **Largest active filter surface on the market**
- ✓ **Dual stage back purging with 10mm passage**
- ✓ **Corrosion resistant made of stainless steel SS316Ti**
- ✓ **Controlled heating to 180°C**
- ✓ **No cold spots**
- ✓ **Comfortable filter change without tools**
- ✓ **Test gas connection as standard**
- ✓ **Protective housing for outdoor installation**
- ✓ **Temperature alarm contact**
- ✓ **8-hole flange for variable mounting**



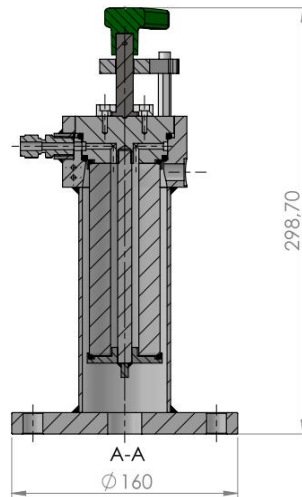
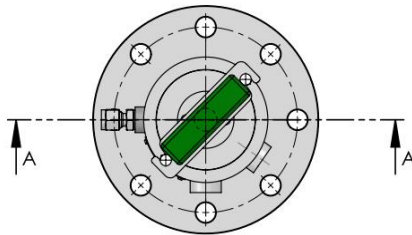
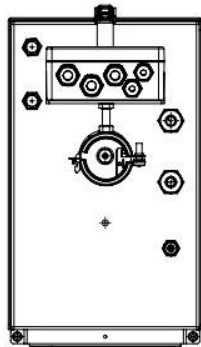
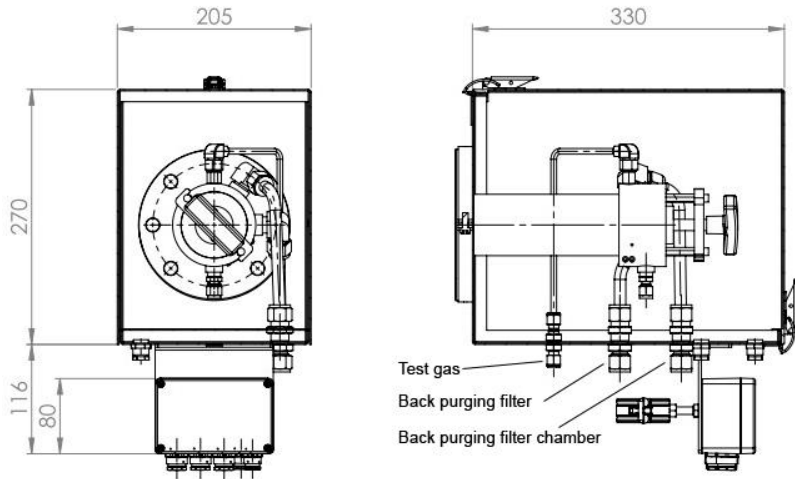


Technical Data

Process gas sampling conditions PSG Plus DSBP	Pressure	$p_{abs} = 50...600 \text{ kPa}$
	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 concentration	280g/m ³
Connections	Sample gas	G1/4" f (DIN ISO 228/1)
	Test gas / Tubing	G1/4" f (DIN ISO 228/1) / 6mm tube
	Back purge / Tubing	12x1mm tube
Heating	Type	Heating sleeve incl. PT100, 250W
	Isolation	Removable insulation jacket Additional insulation protective housing for ambient temperature -30°C as option
	Temperature	180 °C
	Temperature alarm	approx. 150 °C
	Temperature control	PID-controller ST49 incl. solid state relais for DIN-rail-mounting Thermostat control with controller in connection box
Filter Properties PSG Plus DSBP	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 W x D)
	Material	Stainless steel SS 304
	Ambient temperature	-20°C ... +45°C
	Weight	approx. 14 kg (complete probe)
Mounting	Flange	DN 65, PN 6, 8-hole, form B according to DIN 2527
	Installation angle	10°-35° inclination to horizontal position (recommended)
Materials in contact with sample gas	Housing, flange, gas connections	Stainless steel SS 316Ti
	Gaskets	FPM (FFKM as option)
Part Number	53402004	PSG Plus DSBP, 230V 50/60Hz, with PID-controller ST49 and solid state relais for DIN-rail mounting
	53402011	PSG Plus DSBP, 115V 50/60Hz, with PID-controller ST49 and solid state relais for DIN-rail mounting
	53402006	PSG Plus DSBP, 230V 50/60Hz, with thermostat controller in connection box
	53402012	PSG Plus DSBP, 115V 50/60Hz, with thermostat controller in connection box
	53500057	Extra charge for 2 Coax solenoid valves mounted at the probe and wired to connection box
	53500038	Extra charge for additional insulation of protective housing for ambient temperatures -30°C
	80060195	Pressure reduction valve for sample gas outlet to prevent pressure peaks when back purging, 6mm tube connection
	53001192	Pressure accumulator, 5L, material SS316, diameter 160mm, length 330mm, 12mm tube connection, max. operating pressure 16bar, with mounting bracket



Dimensions





Product details



Removable insulation jacket



PSG Plus DSBP with protective housing



PID-controller ST49 and solid state relays (25A) with heat sink for DIN-rail-mounting



Coax solenoid valve for back purge control



Pressure accumulator