

## PSG Plus Probe Double Back Purge

### Application

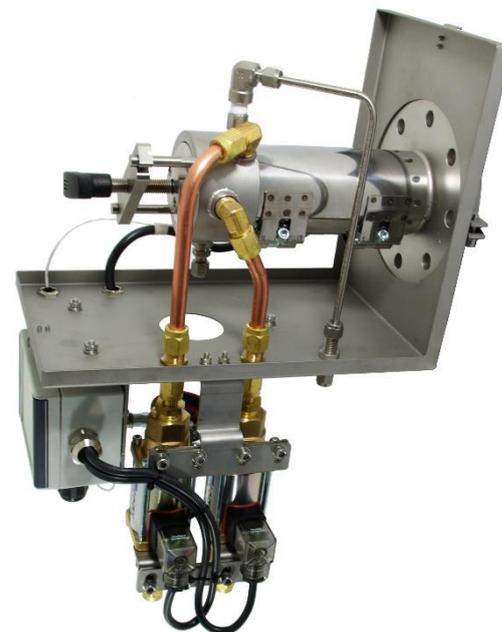
The heated gas sampling probes series **PSG Plus Probe Double Back Purge** are used for continuous extractive gas analysis. They enable trouble-free representative sampling of hot highly dust and water vapour loaded gases. Typical applications are e.g. process measurements in the cement industry.

### Technology

The intelligent design with optimum gas guidance enables the filtration of sample gas at the outer filtration surface of 212cm<sup>2</sup> (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 Double Back Purge** 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 Double Back Purge** to 180°C. The dual stage back purge with 12x1mm tubing is controlled by optional mounted Coax solenoid valves with 10mm passage.

### Functions

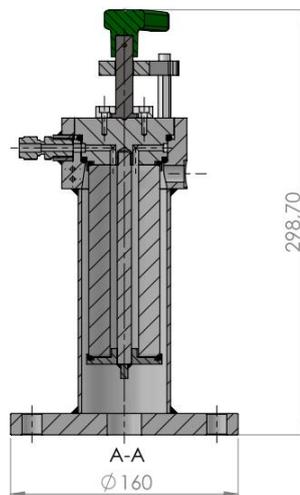
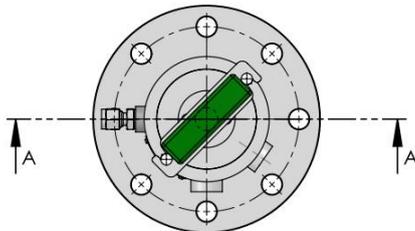
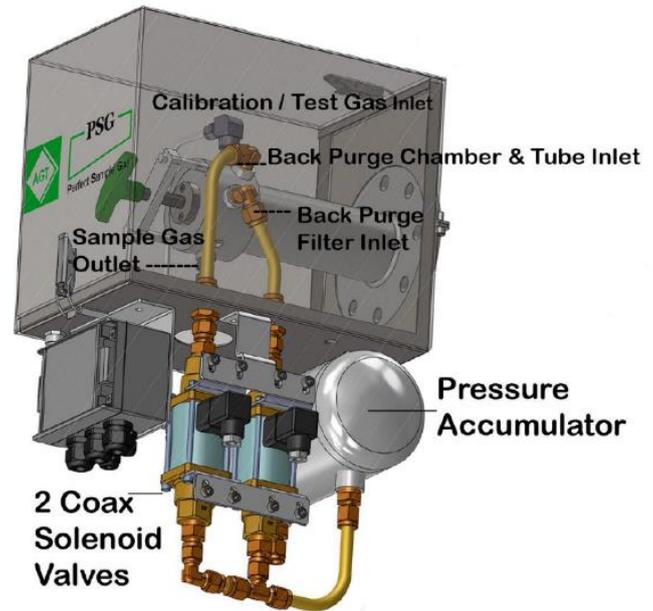
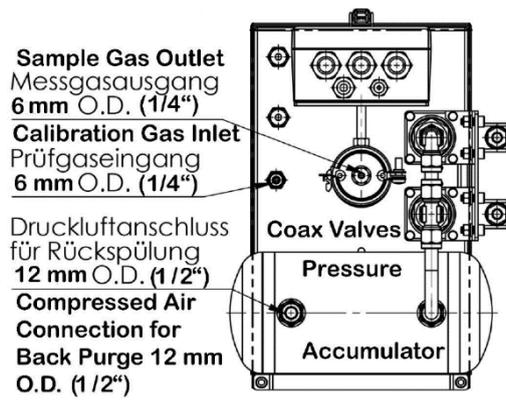
Due to the largest filtration surface on the market in combination with the homogeneous heating dust will always be separated reliably in the **PSG Plus Probe Double Back Purge** without condensation of water vapour and therefore without blocking of the filter. For elevated dust concentrations of up to 280g/m<sup>3</sup> the **PSG Plus Probe Double Back Purge** 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

Process gas sampling conditions PSG Plus Probe Double Back Purge	
Pressure	pabs = 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 concentration	280g/m <sup>3</sup>
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
Temperatur	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
Filter Properties PSG Plus Probe Double Back Purge	
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 ... +60°C
Weight	approx.14 kg (complete probe)
Protection class connection box	IP67 EN 60529
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)
	FFKM instead of FPM for heating to 315°C or corrosion resistant version (with back purging), Art. 80060638
Part Number	
53402004	PSG Plus Probe Double Back Purge, 230V 50/60Hz, with PID-controller ST49 and solid state relais for DIN-rail mounting
53402011	PSG Plus Probe Double Back Purge, 115V 50/60Hz, with PID-controller ST49 and solid state relais for DIN-rail mounting
53402006	PSG Plus Probe Double Back Purge, 230V 50/60Hz, with thermostat controller in connection box
53402012	PSG Plus Probe Double Back Purge, 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, voltage 24VDC
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 2L, material stainless steel, mounted at probe connected with 12mm tube at Coax valves, max. operating pressure 7bar, pressure air connection 12mm tube

## Dimensions



Dimmenssions in mm

Product details



Removable insulation jacket



PSG Plus Probe Double Back Purge with protective housing



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



Coax solenoid valve for back purge control



PSG Plus Probe Double Back Purge with Coax valves and 2l pressure accumulator

State 07 / 2022 | Subject to change