



# 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.

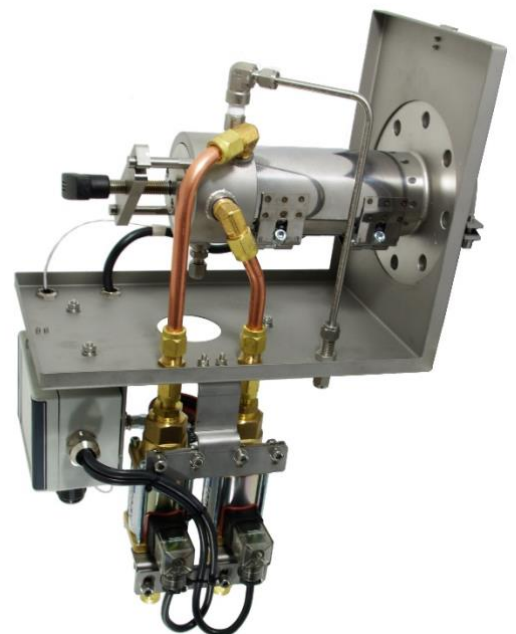
## Technology

The intelligent design with optimum gas guidance enables the filtration of sample gas at the outer filtration surface of 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 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/m<sup>3</sup> 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**



### Branch Frankfurt

AGT-PSG GmbH & Co. KG  
Industriestr. 8a  
61449 Steinbach/Taunus  
Germany



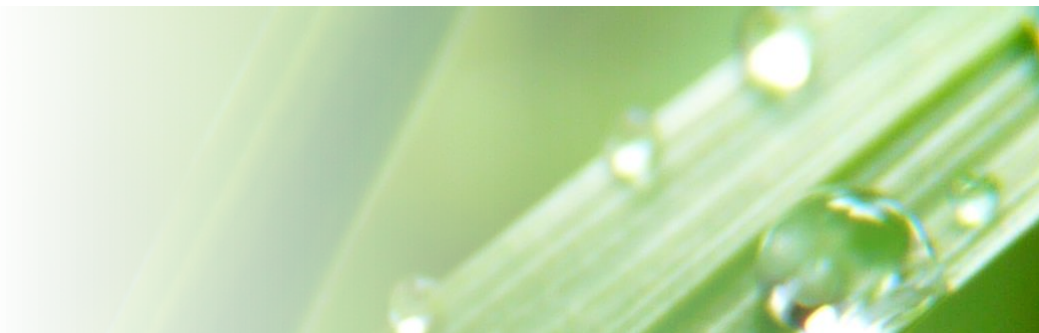
+49 (0) 6171 – 9750 – 0  
+49 (0) 6171 – 9750 – 30  
info.psg@agt-psg.de  
agt-psg.com

### Branch Erkelenz

AGT-PSG GmbH & Co. KG  
Richard-Lucas-Str. 6  
41812 Erkelenz  
Germany



+49 (0) 2431 – 9627 – 0  
+49 (0) 2431 – 9627 – 31  
info.agt@agt-psg.de  
agt-psg.com



## Technical Data

<b>Process gas sampling conditions PSG Plus DSBP</b>	Pressure	$p_{abs} = 50 \dots 600 \text{ kPa}$
	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 <sub>3</sub>
<b>Connections</b>	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
<b>Heating</b>	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
<b>Filter Properties PSG Plus DSBP</b>	Filter	Surface filter, ceramic coated
	Porosity	0,3 µm
	Tightness	10 <sup>-4</sup> hPa l/s
	Dead volume	ca. 280 ml
	Dimensions	50/20 x 135 mm
<b>Protective Housing</b>	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)
<b>Mounting</b>	Protection class connection box	IP67 EN 60529
	Flange	DN 65, PN 6, 8-hole, form B according to DIN 2527
<b>Materials in contact with sample gas</b>	Installation angle	10°-35° inclination to horizontal position (recommended)
	Housing, flange, gas connections	Stainless steel SS 316Ti
<b>Part Number</b>	Gaskets	FPM (FFKM as option)
	<b>53402004</b>	PSG Plus DSBP, 230V 50/60Hz, with PID-controller ST49 and solid state relais for DIN-rail mounting
	<b>53402011</b>	PSG Plus DSBP, 115V 50/60Hz, with PID-controller ST49 and solid state relais for DIN-rail mounting
	<b>53402006</b>	PSG Plus DSBP, 230V 50/60Hz, with thermostat controller in connection box
	<b>53402012</b>	PSG Plus DSBP, 115V 50/60Hz, with thermostat controller in connection box
	<b>53500057</b>	Extra charge for 2 Coax solenoid valves mounted at the probe and wired to connection box, voltage 24VDC
	<b>53500038</b>	Extra charge for additional insulation of protective housing for ambient temperatures -30°C
	<b>80060195</b>	Pressure reduction valve for sample gas outlet to prevent pressure peaks when back purging, 6mm tube connection
<b>53001192</b>	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	

### Branch Frankfurt

AGT-PSG GmbH & Co. KG  
Industriestr. 8a  
61449 Steinbach/Taunus  
Germany



+49 (0) 6171 – 9750 – 0  
+49 (0) 6171 – 9750 – 30  
info.psg@agt-psg.de  
agt-psg.de

### Branch Erkelenz

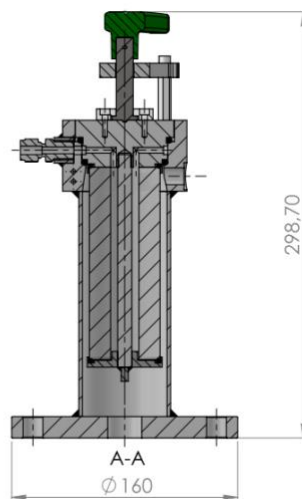
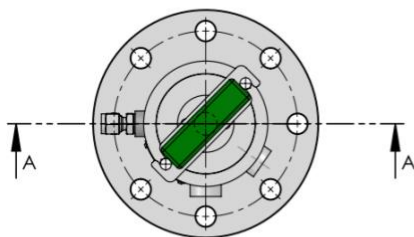
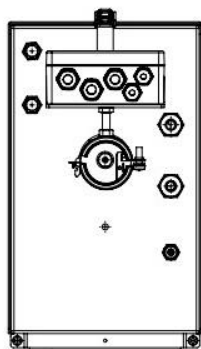
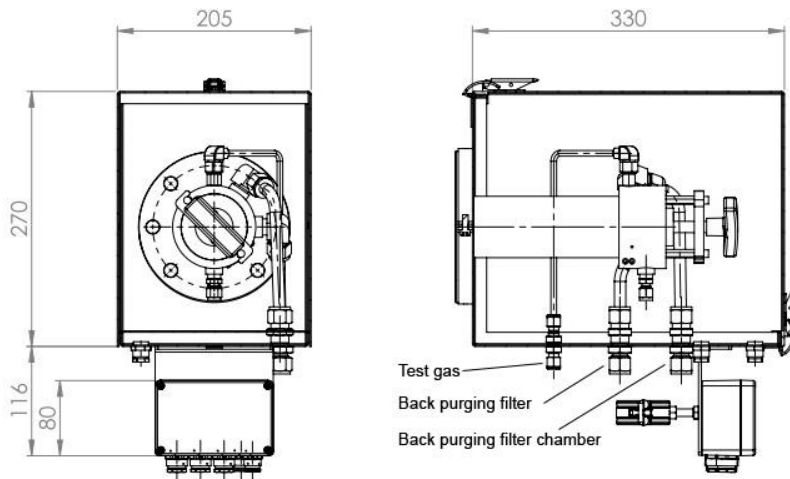
AGT-PSG GmbH & Co. KG  
Richard-Lucas-Str. 6  
41812 Erkelenz  
Germany



+49 (0) 2431 – 9627 – 0  
+49 (0) 2431 – 9627 – 31  
info.agt@agt-psg.de  
agt-psg.de



## Dimensions



Dimensions in mm

### Branch Frankfurt

AGT-PSG GmbH & Co. KG  
Industriestr. 8a  
61449 Steinbach/Taunus  
Germany



+49 (0) 6171 – 9750 – 0  
+49 (0) 6171 – 9750 – 30  
info.psg@agt-psg.de  
agt-psg.de

### Branch Erkelenz

AGT-PSG GmbH & Co. KG  
Richard-Lucas-Str. 6  
41812 Erkelenz  
Germany



+49 (0) 2431 – 9627 – 0  
+49 (0) 2431 – 9627 – 31  
info.agt@agt-psg.de  
agt-psg.de



**PSG**  
Perfect Sample Gas



**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**



**PSG Plus DSBP with Coax valves and 2l pressure accumulator**

**Branch Frankfurt**

AGT-PSG GmbH & Co. KG  
Industriestr. 8a  
61449 Steinbach/Taunus  
Germany



+49 (0) 6171 – 9750 – 0  
+49 (0) 6171 – 9750 – 30  
info.psg@agt-psg.de  
agt-psg.de

**Branch Erkelenz**

AGT-PSG GmbH & Co. KG  
Richard-Lucas-Str. 6  
41812 Erkelenz  
Germany



+49 (0) 2431 – 9627 – 0  
+49 (0) 2431 – 9627 – 31  
info.agt@agt-psg.de  
agt-psg.de