

# Heated Sampling Tube

## PSG HT 250

### Application

The heated gas sampling tubes series **PSG HT 250** 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 emission measurement, process monitoring and process optimization.

### Technology

The intelligent design of the double jacket tube with homogeneous controlled heating to 180°C over the entire tube length enables a trouble-free extraction of sample gas without condensate formation. The mounting flange with stud bolts on both sides (DN65PN6) enables a seamless adaption to the gas sampling probes **PSG Basic Probe** und **PSG Plus Probe** as well as to the process flange DN65PN6. For other process flange dimensions adapter flange connectors are available. Apart from the standard PT100 temperature sensor, thermocouples of type J (Fe-CuNi) or K (NiCr-Ni) are also possible.

### Functions

Due to homogeneous heating to 180°C, zones are bridged where temperature is possibly falling below the dew point resp. acid dew point of the sample gas on its way from sampling point to gas sampling probe. Thus, condensate formation and therefore blocking and damaging of the tube as well as washing out of water-soluble sample gas components like SO<sub>2</sub> is prevented. With optional G3/4"-internal thread at the tube end the heated gas sampling tube **PSG HT 250** can be extended with all unheated sampling tubes and pre-filters from the **PSG** product range.

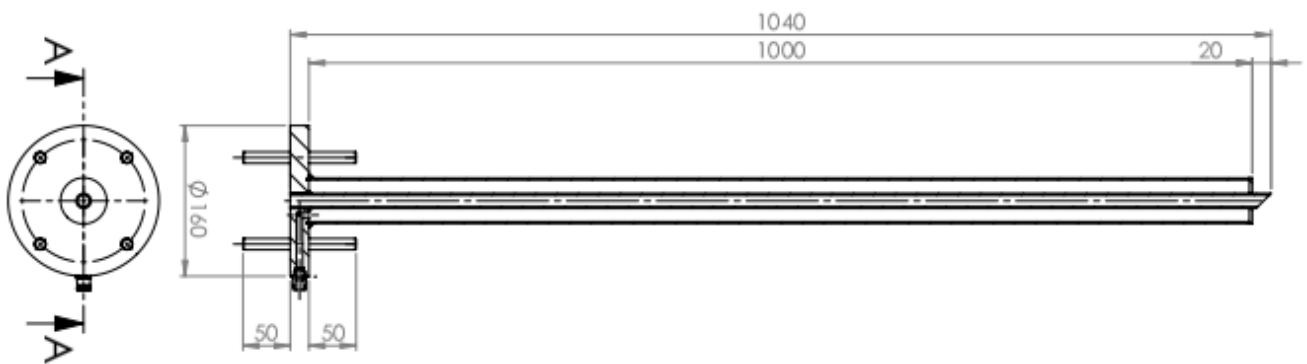


- ✓ Homogeneous heating over entire tube length
- ✓ Corrosion resistant out of SS316Ti
- ✓ Controlled heated to 180°C
- ✓ No cold spots
- ✓ In four lengths up to 2m available
- ✓ Internal tube diameter 12-20mm available
- ✓ With PT100 temperature sensor
- ✓ With cable for electrical connection via connection box of PSG Basic and PSG Plus
- ✓ Protection class IP68
- ✓ Low dead volume
- ✓ Tube end with G3/4"female thread as option for extension with optional unheated tube or pre-filter

## Technical Data

Process gas sampling conditions PSG HT 250		Part No.
Pressure	p <sub>abs</sub> = 50...600 kPa	
Temperature	max. 250 °C	
Flow	30...1500 l/h, referred to 100 kPa and 0 °C	
Max. dust concentration	3 g/m <sup>3</sup>	
<b>Connections</b>		
Extension tube / pre-filter	G3/4" i (DIN ISO 228/1) optional	80060674
<b>Heating</b>		
Type	Fixed resistance heater	
Temperature	180 °C	
Temperature alarm	150 °C (adjusted at optional temperature controller)	
Temperature control (optional)	PID-controller ST49 incl. solid state relay for DIN-rail-mounting 230V 50/60Hz	50078850
	PID-controller ST49 incl. solid state relay for DIN-rail-mounting 115V 50/60Hz	50078851
Temperature sensor	Standard: PT100 Optional: Fe-CuNi / NiCr-Ni	
<b>Design</b>		
Standard lengths (other lengths on request)	0,5m	80060670
	1m	80060671
	1,5m	80060672
	2,0m	80060673
Material	Stainless steel SS316Ti	
Ambient temperature	-20°C ... +180°C	
Weight	ca.9 kg (1m)	
Diameter	external: 48,3mm, internal: 12mm (up to 20mm possible)	
Dead volume	113 ml/m (12mm internal diameter)	
Protection class	IP68 EN 60529	
<b>Electrics</b>		
Heat capacity	130 W/m	
Voltage	230VAC 50...60Hz (115V on request)	
Electrical connection	3 x 1,5mm <sup>2</sup> and 2 x PT100 wires in glass-yarn-silicone tube, length: 3m	
Electrical standard	EN 61010, EN 60519-1	
<b>Mounting</b>		
Flange	Stud bolts on both sides M12 x 40mm corresponding to DN65PN6 form B according to DIN 2527	
Material	Flange gasket Klingersil DN65PN6, 4 x nut M12, 4 x spring washers and washers	
Einbauwinkel	10°-35° Neigung zur Waagerechten (empfohlen)	
<b>Materials in contact with sample gas</b>		
Tube, flange, connections	Stainless steel SS316Ti	

## Dimensions



Dimensions in mm