



Controlled Heated Shortenable Sample Lines

PSG Extruded Hybrid

Gefördert durch:



aufgrund eines Beschlusses
des Deutschen Bundestages

Application

The controlled heated sample lines series **PSG Extruded Hybrid** are used for continuous extractive gas analysis. They serve primarily for transport of the humid sample gas stream from sample point to analyser house. The holding temperature of the line thereby has to be above water vapour resp. acid dew point of the sample gas. In this way uncontrolled condensation of water vapour on the way to the analyser and therefore washing out of gas components in condensate is prevented. Additionally all electrical and pneumatic lines for operation of a heated gas sampling probe can be integrated. These are back purge and test gas lines enabling pre-heated gas feeding thus preventing cooling down resp. condensation in the probe as well as electrical supply and temperature sensor lines. This way the complete installation work for all lines is eliminated and the probe can be operated and controlled directly from the analyser house.

Technology

The robust lines with thick-walled extruded flame resistant and extremely weather resistant TPU, PE or PVC outer jacket are equipped with high quality PSG-Plus parallel heating cable. Insulation is done with a thermal or glass fibre fleece. PTFE, PFA, stainless steel or special alloy tubes as internal line and also interchangeable internal tubes are available.

Functions

The lines are available up to 300m at a stretch e.g. on cable drum and then can be adapted on-site and shortened every 0,6m. Furthermore they are available ready for operation ex works. Control of the lines to max. 200°C is done by an external temperature controller (e.g. PSG ST49 or PSG DC10) via the integrated temperature sensor to max. 200°C.

- ✓ Internal tube made of PTFE, PFA, stainless steel or special alloy
- ✓ Internal PTFE tube DN10/12 for pre-heated back purge gas and DN4/6 for pre-heated test gas
- ✓ Looped through lines for gas sampling probe operation and back purge control from analyser house without additional installation effort
- ✓ Operation with external temperature controller
- ✓ PSG-Plus high quality parallel heating cable
- ✓ Max. 200°C control temperature
- ✓ Up to 300m at a stretch
- ✓ Every 0,6m shortenable for assembly on-site (video tutorial on [YouTube](#)) or ready-made ex works
- ✓ Robust design with thick-walled extruded, flame resistant, extremely weather resistant PVC, PE or TPU outer jacket
- ✓ Interchangeable sample line as option



Branch Frankfurt

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



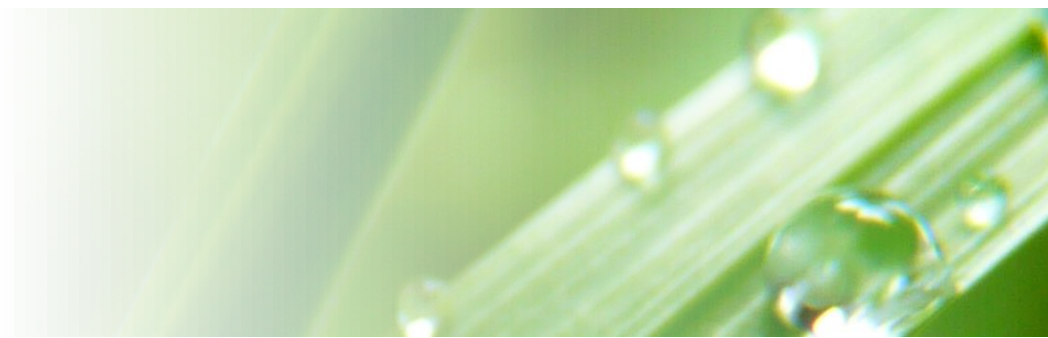
+49 (0) 6171 – 9750 – 0
+49 (0) 6171 – 9750 – 30
info.psg@agt-psg.de
agt-psg.de

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



Technical data and order numbers

Construction data		
Max. operating temperature	°C	200 (230V) resp. 160°C (115V)
Heat insulation / weight	kg/m	thermal or glass fibre fleece / 1,5
Insulation thickness	mm	20
Heating cable type		parallel heating cable PSG-Plus
Outer jacket		2mm PVC, PE or TPU extruded
Outer diameter	mm	60 with full equipment
Min. bending radius	mm	8 - 10 x outer diameter
Ambient temperature	°C	-20 to +65
Max. operating pressure abs. PTFE line	bar	DN4/6: 5,6 / DN6/8: 4,5 at 180°C
Max. operating pressure abs. SS316L line	bar	400
Protection class		IP64 (EN60529)
Max. length heating circuit	m	64
Electrical data		
Power	W/m	60
Electrical connection (included in assembly)		3m silicone connection cable, open ends
Power supply		230V 50/60Hz or optional 120V 50/60Hz
Order numbers for 1m line 230V 50/60Hz		
Hybrid Basic: 1 x PTFE internal tube 6mm, power and temperature sensor line	1m	54003629
Hybrid Plus: like Hybrid Basic incl. back purge line DN10/12	1m	54003630
Hybrid Extra: like Hybrid Plus incl. test gas line DN4/6	1m	54003049
Hybrid All: like Hybrid Extra incl. connection line for 1 or 2 back purge valves	1m	54003631
Order numbers for assembly ex works		
Shrink cap ending		50085077
Shrink cap with electr. connection		50085078
Order numbers for assembly on-site		
Shrink cap ending		50085075
Shrink cap with electr. connection		50085076
Order numbers for integrated temperature sensor		
PT100, position 350mm from electr. connection, supply cable led out on the face, L = 3,0 m		50061200
Thermoelement type K, position 350mm from electr. connection, supply cable led out on the face, L = 3,0 m		50061151
Thermoelement type J, position 350mm from electr. connection, supply cable led out on the face, L = 3,0 m		50061152

Assembly



Polyolefin shrink cap

Temperature controller



PSG ST49 with 25A SSR
Part. No. 50078850, 230V 50/60Hz
Part. No. 50078851, 115V 50/60Hz



PSG DC10 with 10A for thermocouple type J and K, 110V-230VAC 50...60Hz
Part. No. 50078820

Options

- Interchangeable internal line up to 30m line length
- Power supply 115V 50/60Hz
- Cable gland M80 x 2 (clamping range 56-63mm), brass, for cabinet wall mounting, IP68, mounted or separately

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