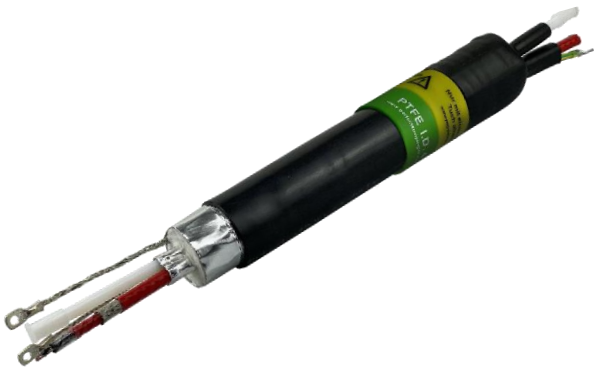
PSG Process

Extruded ATEX²



Application

The self regulating heated sample lines series **PSG Process Extruded ATEX²** are used for continuous extractive gas analysis. They serve primarily for the transport of the humid sample gas stream from the sample point to the 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. Also, failure of the measurement by a freezing line at ambient temperatures below 0°C is avoided.

Technology

The robust lines with thick-walled extruded flame resistant and extremely weather resistant TPU or PVC outer jacket are equipped with high quality self-regulating Raychem® heating cable. Insulation is done with a thermal or glass fibre fleece. For prevention of electrostatic charging the **patented Ex²-technology** is used. Depending on the used heating cable holding temperatures of up to 150°C at -20°C ambient temperature can be reached. Solutions down to -52°C are also possible. Up to 12 PTFE, PFA, stainless steel or special alloy tubes as internal line and also interchangeable internal tubes are available.

Functions

Because of the self-regulating heating cable for operation an additional temperature controller is not necessary. The heating cable consists of two parallel arranged supply conductors connected with an electrically conductive polymer plastic. During operation conductivity of the plastic is decreasing with increasing temperature due to molecular expansion until the heating cable specific maximum temperature is reached. When the heating cable temperature now drops the process reverses.

- For use in Ex-zone 1 and 2
- Patented Ex2-technology for prevention of electrostatic chargings
- No temperature controller necessary
- Raychem® heating cables
- 30 / 100 / 120 / 150°C holding temperature at -20°C ambient temperature
- Up to 300m at a stretch
- Arbitrary cut to length 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 or TPU outer jacket
- Internal tube made of PTFE, PFA, stainless steel or special alloy
- Up to 12 internal lines as option
- Interchangeable internal lines as option

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PSG Perfect Sample Gas

Technical data

Construction data				
Holding temperature*	°C	30	100	120
Heat insulation / weight	kg/m	thermal- or glass fibre fleece / 1,1		
Insulation thickness	mm	10	10	14
Heating cable type		5BTV	12XTV	15XTV
Outer jacket		2mm PVC, PE or TPU extruded		
Outer diameter	mm	40		44
Min. bending radius	mm	8 - 10 x outer diameter		
Ambient temperature	°C	-20 to +65		
Max. operating pressure abs. PTFE line	bar	DN4/6:10 / DN6/8: 7,8	DN4/6: 8 / DN6/8: 6	DN4/6: 6 / DN6/8: 4,7
Max. operating pressure abs. SS316L line	bar	400		
Protection class		IP64 (EN60529)		
Ex-protection heating cable		Ex e IIC T6 Gb Ex tD A21 IP66 T80°C II 2G Ex e II T6 II 2D Ex tD A21 IP66 T80°C	Ex e IIC T3 Gb Ex tD A21 IP66 T200°C II 2G Ex e II T3 II 2D Ex tD A21 IP66 T200°C	
Temperature class		T6	T3	T3
Protection against electrostatic chargings		patented Ex2-technology		
Max. heating circuit (32A fuse protection)	m	160	135	105
Electrical data				
Max. Power (ta = +10°C)	W/m	16	38	47
Electrical connection		with 0,5m protruded heating cable		
Power supply		230V 50/60Hz or optional 120V 50/60Hz		
Order numbers for line 230V 50/60Hz				
1 x PTFE internal tube 6mm	1m	54002978	54002983	54002576
1 x Stainless steel internal tube 6mm	1m	54002979	54002447	54002981
1 x PTFE internal tube 8mm	1m	54002708	54002984	54004545
1 x Stainless steel internal tube 8mm	1m	54002980	54002982	54004546
Order number for assembly ex works				
PTFE-Ex-cap ending		50085503		
PTFE-Ex-cap with electr. connection		50085502		
Order number for asembly on-site				
PTFE-Ex- cap ending		50084503		
PTFE-Ex- cap with electr. connection		50084502		

* 150°C on request

Assembly	Patented Ex²-Technology	
		
PTFE-Ex-cap	Integrated aluminium layer for reliable discharging of static charging at the outer jacket	… because safety comes first!

Options

- ✔ Up to 12 internal PTFE and/or PFA and/or stainless steel and/or special alloy tubes with dimensions DN4/6, DN6/8, DN8/10, DN10/12 or inch
- ✔ Interchangeable internal lines
- ✔ Power supply 115V 50/60Hz
- ✔ Cable gland M63 x 1,5 (clamping range 36-48mm), PA, for cabinet wall mounting, IP68, mounted or separately

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