PSG Process

Extruded Flex

Application

The self-regulating heated sample lines series **PSG Process Extruded Flex** 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 analyzer 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 analyzer 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 plastic spring wire and thick-walled extruded flame resistant and extremely weather resistant TPU, PE or PVC outer jacket are equipped with high quality self-regulating Raychem® heating cable. Insulation is done with a thermal or glass fibre fleece. 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. As standard holding temperatures of 30°C, 100°C and 120°C are offered. Up to 12 PTFE, PFA, stainless steel or special alloy tubes as internal line and 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.

- ✔ Very small bending radius (≈ 200mm)
- ✔ 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, PE 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

State 05 / 2021 | Subject to change

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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		
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	5 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)		
Max. heating circuit (32A fuse protection)	m	160	135	105
Electrical data				
Max. power (ta = +10°C)	W/m	16	38	47
Electrical connection		3m silicone connection cable**, open ends (included in assembly)		
Power supply		230V 50/60Hz or optional 120V 50/60Hz		
Order numbers for line 230V 50/60Hz				
1 x PTFE internal tube 6mm	1m	50010500	50010540	50010580
1 x Stainless steel internal tube 6mm	1m	50010510	50010550	50010590
1 x PTFE internal tube 8mm	1m	50010520	50010560	50010600
1 x Stainless steel internal tube 8mm	1m	50010530	50010570	50010610
Order numbers for assembly ex works				
Silicone cap ending		50084005		
Silicone cap with electr. connection		50085004		
PTFE cap ending		50085003		
PTFE cap with electr. connection		50085002		
Hard cap ending		50084011		-
Hard cap electr. connection		50084010		-
POM cap ending		50085001		-
POM cap with electr. connection		50085000		-
Order numbers for assembly on-site				
Silicone cap ending		50084007		
Silicone cap with electr. connection		50050470		
PTFE cap ending		50084003		
PTFE cap with electr. connection		50084002		
Hard cap ending		50084009		-
Hard cap electr. connection		50084008		-
POM cap ending		50084001		-
POM cap with electr. connection		50084000		-

* 150°C on request ** to lead frontal or backwards through the cap

Konfektionierung

PTFE-cap

Silikon cap

Hard cap

Options

- ✔ **Up to 12 internal lines made of PTFE and/or PFA and/or stainless steel 316L and/or special alloys with dimensions DN4/6, DN6/8, DN8/10, DN10/12 or inch**

- ✔ Interchangeable internal line / Power supply 115V 50/60Hz
- ✔ Cable gland M63 x 1,5 (clamping range 36-48mm), PA, for cabinet wall mounting, IP68, mounted or separately

State 07 / 2022 | Subject to change

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