



SP30-H1.1

Electrically heated sample probe tube series SP®

Version SP30-H..., SP30-H1.1-V, SP35-H...
for gas sample probe SP2000-H...

Special Features

- **Completely heated sample tube**
- **Different lengths**
- **Unheated pre-filters or extensions possible**
- **Simultaneously heated pre-filter possible**
- **Easy mounting**
- **Two temperature sensor versions**

Application

The electrically heated M&C sample probe tube SP30/35-H... is used in extractive sampling systems to avoid cooling and condensation of the sample in the insitu tube from the sample point to the heated sample probe SP2000-H.

To avoid a premature damage by cooling and condensation in dust loaded processes, we recommend a heated tube type SP30-H1.1-V, including an insitu pre-filter V20-2/30, heated up with the tube.

Description

The electrically heated M&C sample tube SP30-H... is available in 0,6 m, 1,0 m, 1,5 m and 2,0 m length and the SP35-H... in 0,175 m length. The standard lengths for the pre-filter version SP30-H1.1-V are 0,6 m and 1,0 m. The tube version SP30-H..., SP35-H... has an internal diameter of 22 mm. The internal diameter of the version SP30-H1.1-V is reduced to 6 mm to optimise the tube dead volume.

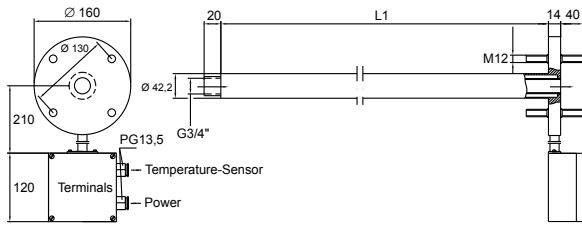
With a mounting flange with 4 welded screws the heated sample tube SP30-H.../V, SP35-H... can be easily fixed both to the flange at the sample point and the probe head SP2000-H. The heated sample tube SP30-H.../SP35-H... is equipped with a G3/4" thread connector at the tube end. This enables fixing a standard non heated sample tube or pre-filter to the heated insitu tube.

The electrical cartridge heater is located inside a double tube system, completely separated from the process. At the version SP30-H1.1-V the included large pre-filter V20-2/30 is heated up with the sample tube. The temperature of the heated tube has to be adjusted in relation to the process temperature and corresponding to the max. admissible sampling temperature.

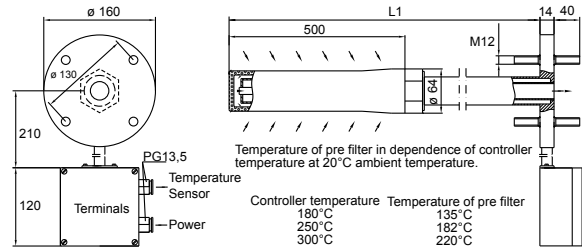
Depending on the operating temperature the sample tubes are equipped either with a thermocouple (max. 320 °C) or a PT100 temperature sensor (max. 200 °C).

Dimensions

Probe tube SP30-H1.1/H2, SP35-H1.1/H2



Probe tube with pre-filter SP30-H1.1-V



Dimensions in mm

Technical Data

Series SP [*] Type	Version SP35-		Version SP30-		
	H1.1	H2	H1.1	H2	H1.1-V
Temperature sensor	Fe-CuNi	PT100 2	Fe-CuNi	PT100 2	Fe-CuNi
Temperature controller	optional, external				
Probe tube length L1	175 mm		max. 2 m		max. 1 m
Sample temperature max.	550 °C				
Operating temperature max.	320 °C	200 °C	320 °C	200 °C	320 °C
Pre-filter length 520 mm, ø 60 mm, filter porosity 2µm, integrated and heated					V20-2/30
Sample gas inlet connection	G3/4"i DIN ISO 228/1				pre-filter with G1 1/2"i DIN ISO 228/1
Dust loading	max. 2 g/m ³				>2 g/m ³
Probe tube volume	380 ml/m				420 ml
Sample pressure max.	5 bar g				
Ambient temperature	-20 °C to +80 °C				
Storage temperature	-30 °C to +90 °C				
Ready for operation	2 h				
Power supply	230V AC, (115V optional)		230/115V AC - switchable,		
Heating capacity	200W		0,6m: 600W, 1m: 800W, 1,5m: 1200W, 2m: 1200W		
Electrical connections	terminals, max. 2,5 mm ² ; 2x PG13,5 cable gland				
Electrical standard	EN 61010, EN60519-1				
Degree of protection	IP54 EN 60529				
Mounting flange	DN65 PN6, Form B with 4 welded screws on both sides M 12x 40 mm				
Material of parts in contact with the sample	stainless steel SS316Ti, Version SP30-H1.1/HC: Hastelloy C				1.4539, SS316Ti/SS316

Pressure difference and T90-time

ΔP and T_{90} at flow:	100	200	500	1000	NI/h
ΔP Pressure loss SP30-H... length 1m	< 1	< 1	< 1	< 1	mbar
ΔP pressure loss SP30-H...-V length 1m with new pre-filter V20-2/30	< 1	< 1	1,5	4	mbar
T_{90} - time	14	7	< 3	< 2	sec

Part number and weight

	Version SP35-...	Version SP30- ...				execution:
length „L1“	175 mm	0,6 m	1,0 m	1,5 m	2,0 m	
Part number	20S9320	02S9023	02S9025	02S9026	02S9024	H1.1
		02S9026	02S9092	02S9093	02S9094	H1.1/HC
	20S9322	02S9023p	02S9025p	02S9026p	02S9024p	H2
Weight	4,8 kg	6,4 kg	8,0 kg	9,8 kg	11,6 kg	
Part number		02S9037	02S9038			H1.1-V
Weight		9,0 kg	10,6 kg			
	+ 02S9036	Standard, switchable				115V AC

The corresponding temperature controller has to be ordered and mounted separately. See leaflet 2-5.1.