



SP10-H

Gas Sample Probe Series SP®

Versions SP10 and SP10-H with internal process filter

Special Features

- **Sampling of process gases with high dust levels**
- **Fast response time**
- **Easy installation and maintenance**
- **Electrically heated with integrated thermostat unit**
- **Various materials and lengths for extension tubes, large-surface filters**
- **Special versions possible**

Application

The M&C gas sample probe version SP10 is used for continuous sampling of high dust-loaded gases as well as for high-flow gas sampling. Due to its compact design, it requires only limited space. The probe is to be mounted at a weather-proof location.

Description

The M&C gas sample probe version SP10 consists of a heat-resistant tube adapter with a 1" thread, to which the stainless steel sintered filter element type V10 is screwed on. The sinter filters V10-/0... with 325 cm² large filter surface or optionally the sinter filters V10-1/2... with 960 cm², on request with internal volume reduction for faster response times, protrude directly into the sampling chamber.

The total probe length can be extended from 270 mm to 2 m with a screw-on extension tube. A V-shaped deflector plate is available to protect the filter against possible abrasion. For sample temperatures up to 900 °C [1652 °F], sintered filters and extension tubes made out of Hastelloy®C are available.

The sample probe SP10-H has an electric high-performance heating rod for heating the flange and the outer probe area to prevent the temperature from falling below the dew point in these areas. The temperature is controlled by a capillary sensor thermostat. For outdoor mounting, the weather protection cover 130 must be installed.

Probe Series SP*	Non-Heated Basic Version SP10	Heated Basic Version SP10-H
Part Number	01S1000	01S2000
Dust content	Max. 10 g/m ³ * optional >10 g/m ³	
Sampling pressure	0.4 to 6 bar abs*	
Ambient temperature	-20 to +60 °C** [-4 to 140 °F]**	
Length of the sample probe	270 mm [≈ 10.6"]*, optional with extension tube up to 2000 mm [≈ 78.7"]	
Sampling temperature	V10 max. 600 °C* [1112°F)*, optional HC max. 900 °C [1652 °F]	
Mounting flange	DN 65 PN 6, Form B, SS 316Ti	
Sample gas outlet connection	1/8" NPT inside, for tube connectors max. ø 10 mm	
Filter element without volume displacer	V10, filter porosity: 2 µm, SS 316 -ø 46 x 225 mm	
Material of sample-contacting parts	SS 316, SS 316Ti, Novapress**	
Ready for operation	After 1 h	
Heater temperature adjustable	+100 to +200 °C * [212 to 392 °F], optional PT100 with PT100 sensor, without thermostat	
Power supply	230 V/50 Hz, 240 V/60 Hz, 315 W, optional 115 V/60 Hz/300 W	
Electrical connection	Terminals max 4 mm ² , 1 x PG13.5 cable gland	
Degree of protection/electrical equipment standard	IP54, EN 60529/EN 61010, EN 60519-1	
Weight	4 kg [≈ 2.2 lbs]	

* Standard

** For higher ambient temperatures, use option PT100 (Part No. 20S9025) or thermocouple Fe-CuNi and Ni-CrNi, respectively (Part No. 20S9027 or 20S9028) instead of the thermostat controller. Then, an additional electronic temperature controller (see data sheet "Microprocessor-Controlled Temperature Controller Type 70304") is necessary. Novapress® is a registered trademark for elastomer-bonded gasket material used by Frenzelt GmbH, Germany.

Available Options:	Type	Part No.
SS316 filter without volume displacer ø 46 x 225 mm, max. 600 °C [1112 °F], up to 10 g/m ³ dust content	-V10	Standard
SS316 filter with volume displacer ø 46 x 225 mm, max. 600 °C [1112 °F], up to 10 g/m ³ dust content	-V10-0	On request
Hastelloy®C filter without volume displacer ø 46 x 225 mm, max. 900 °C [1652 °F], up to 10 g/m ³ dust content	-V10/HC	01S9500
Hastelloy®C filter with volume displacer ø 46 x 225 mm, max. 900 °C [1652 °F], up to 10 g/m ³ dust content	-V10-0/HC	01S9520
SS316 filter without volume displacer ø 60 x 550 mm, max. 600 °C [1112 °F], above 10 g/m ³ dust content	-V10-2	01S9405
SS316 filter with volume displacer ø 60 x 550 mm, max. 600 °C [1112 °F], above 10 g/m ³ dust content	-V10-1	01S9400
Hastelloy®C filter without volume displacer ø 60 x 550 mm, max. 900 °C [1652 °F], above 10 g/m ³ dust content	-V10-2/HC	On request
Hastelloy®C filter with volume displacer ø 60 x 550 mm, max. 900 °C [1652 °F], above 10 g/m ³ dust content	-V10-1/HC	On request
SS316Ti extension tube without volume displacer, 500 mm [≈19.7"]	-Vo	01S9000
Additional 500 mm [≈19.7"] SS 316Ti extension tube without volume displacer, for an overall length up to 2 m [≈ 78.7"]	-Vo+	01S9005
SS316Ti extension tube with volume displacer, 500 mm	-Vm	01S9010
Additional 500 mm [≈19.7"] SS 316Ti extension tube with volume displacer, for an overall length up to 2 m [≈ 78.7"]	-Vm+	01S9015
Hastelloy®C extension tube without volume displacer, 500 mm [≈19.7"]	-VoHC	01S9510
Additional 500 mm [≈19.7"] Hastelloy®C extension tube without volume displacer, or an overall length up to 1.5 m [≈ 59.1"]	-VoHC+	01S9515
Hastelloy®C extension tube with volume displacer additional 500 mm [≈19.7"]	-VmHC	01S9525
Additional 500 mm [≈19.7"] Hastelloy®C extension tube with volume displacer, for an overall length up to 1.5 m [≈ 59.1"]	-VmHC+	01S9530
Contact hazard and weather protection cover out of stainless steel for probe SP10 with standard flange DN 65	-130	01S9200
Shape protection plate, for filter elements V10 and V10-0, SS 316Ti	-AB-SS	01S9100
Shape protection plate, for filter elements V10-1 and V10-2, SS 316Ti	-AB1-SS	01S9105
Mounting flange in alternative formats: DN... PN... or ANSI... lbs...	-So	On request
Power: 115 V/60 Hz	-115V	02S9035
Low-temperature alarm, from 100 to 180 °C [212 to 356 °F] adjustable	-TA -	On request
High-temperature protection with reset key, setpoint at 220 °C [428 °F]	-TA +	On request
> 5 bar g operating pressure version	-P	On request

Hastelloy® is a registered trademark used by Haynes International, USA.

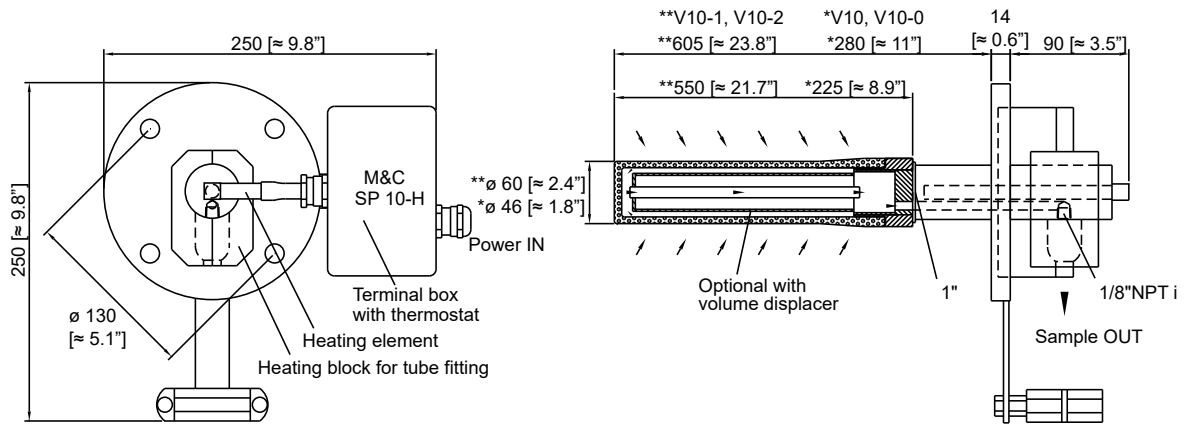
ΔP at a flow rate of:	100 NI/h	200 NI/h	500 NI/h	1000 NI/h	2000 NI/h
ΔP pressure loss with new filter element ø 46 x 225 mm - V10, V10-0, V10/HC, V10-0/HC	< 3 mbar	< 5 mbar	< 20 mbar	< 30 mbar	< 40 mbar
ΔP pressure loss with new filter element ø 60 x 550 mm - V10-1, V10-2, V10-1/HC, V10-2/HC	< 1 mbar	< 1 mbar	< 2 mbar	< 10 mbar	< 20 mbar

Please note: NI/h and NI/min refer to the German standard DIN 1343 and are based on these standard conditions: 0 °C [32 °F], 1013 mbar.

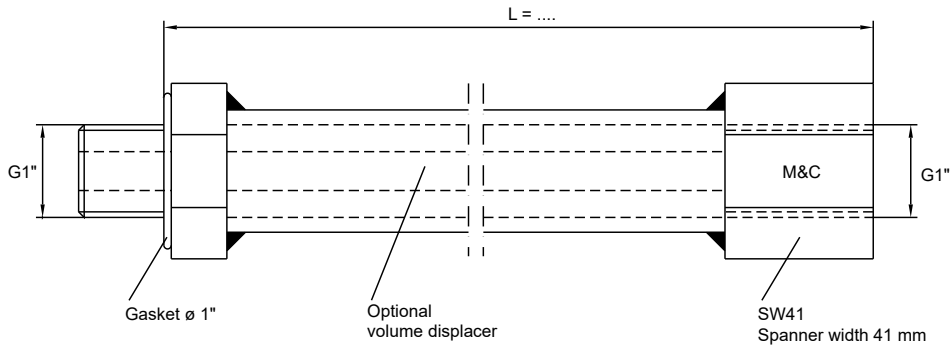
Order example:

M&C sample probe SP 10-H with stainless steel large-surface filter incl. internal volume displacer and extension tube incl. internal volume displacer, overall length: 1 meter, with high-temperature protection and low-temperature alarm and weather protection shield.

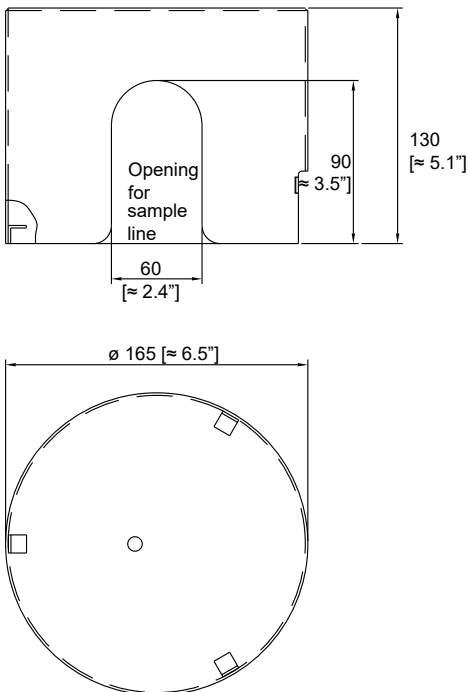
SP 10-H (Part No. 01S2000); V10-1 (Part No. 01S9400); extension tube Vm 500 mm (Part No. 01S9010) for a total probe length of 1 m; TA +; TA -; weather protection cover 130 (Part No. 01S9200).



Extension Tube Vo/Vm



Protective Cover 130



Dimensions in mm [inch]