



Prefilters for series SP®

Prefilters for Gas Sample Probes Series SP®

Version SP2000/V20.. with G 3/4"-connection,
SP2000/V12 with flange connection,
Version SP2000/20SS 150 with tube connection

Special Features

- For dust loading up to 2g/m³
- Point selective sampling
- Sampling after wet scrubber up to 90 °C
- Sampling temperature up to max. 1800°C
- Different lengths
- Great variety of materials
- Easy mounting

Application

The M&C-prefilters are used together with M&C gas sample probes series SP® for continuous gas sampling in processes with increased dust loading.

Description

The large active surface of the M&C prefilter guaranties a long moulding time. Even in case the flow rate of the sample gas is increased, there is only a small difference pressure on the filter matrix between clean gas and crude gas side. Therefore, the solid particles do not get into the filter's pore structure. They are deposited as filter cake on the filter's surface and cause a prolonged moulding time in its property as prefilter. The M&C-prefilters SP2000 / V20.. /V12.. /20SS are selected according to the specific application. The basis for selection are the process parameters, i.e. the gas compounds, dust loading, grain sizes, water vapure saturation, temperature, pressure and gas velocity.

The M&C prefilters /V20.. are equipped with a welded thread connector for moutage into the mounting flange of the M&C gas sample probe. For an optimal sampling position in the process, the prefilters /V20.. can be mounted to the sample probe via an extension tube /Vm... In case of a high velocity of the process gas, shape protection plates /AB.. are used in order to protect the prefilters /V20.. against abrasion.

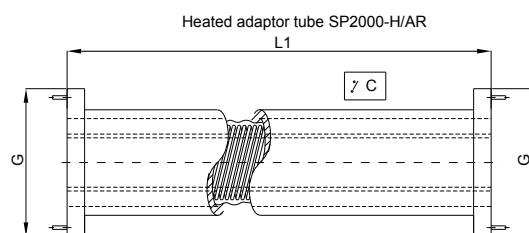
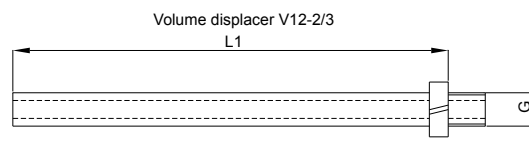
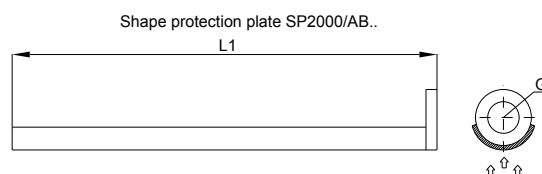
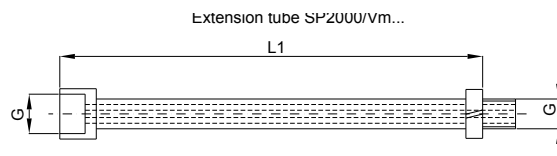
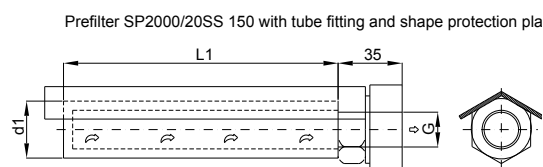
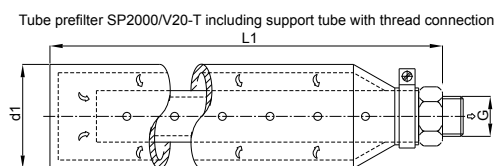
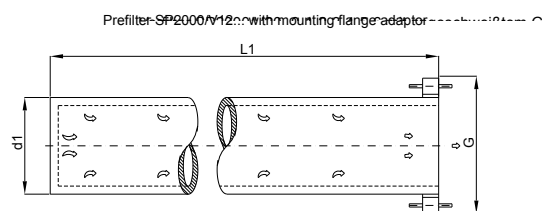
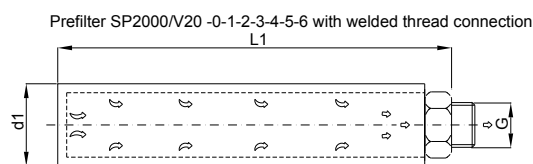
The prefilters /V12-... have got a mounting flange adapter of stainless steel, executed with 4 threaded bolts for easy mounting. The prefilter versions /V12-.. /SS, /V12-.. /IC are equipped with a welded protection tube of stainless steel or Incoloy on the mounting flange adaptor. The feeding of process gas is made via the three longitudinal slots distributed on 180° tube periphery. The special double-ply construction of the prefilter /V12-1, /V12-3 is granting a particularly high back purging efficiency.

Depending on fabrication, the prefilters /V20.., /V12.. are partially made of different material combinations. See table. For reduction of the delay time in case of a small sample gas flow, prefilters with volume displacer have to be used.

The M&C tube prefilter /V20-T of PTFE cloth with interweaved metal filaments for reduction of the surface resistance (in order to avoid frictional electricity) disposes over an excellent back purging quality. It is used for example in case of gas sampling out of coal bunkers with a high content of superfine dust.

The prefilter /20SS 150 is used for direct mounting on the M&C sample tubes SP2000/SS. It is supplied with a shape protection plate and a tube fitting with double cutting ring.

If there are problems eg. in case the depth for assembling is too small or the flow velocity is too high, or the dust content or the temperature are too high, then the electrical heated adapter tube /AR should be used. It is equipped with a flange connection at both sides and is to be mounted on the plant's connection flange.



Dimensions in mm

Technical Data

M&C Probe Prefilters Type	Part-No.	Temp. max. °C	Material Filter / Connection	Filter porosity micron	Dust content g/m ³	Inside volume displacer	Back-purging	Length „L1“ mm	Filter ø „d1“ mm	Connection „G“
SP2000/20SS 150	20S9160	600	stainl. steel 316/316Ti	20	2-10		yes	150	31	ø 25
SP2000/V20	20S9085	600	stainl. steel 316/316Ti	2	2-10		yes	220	46	G 3/4"a
SP2000/V20-0	20S9105	600	stainl. steel 316/316Ti	2	2-10	X	yes	220	46	G 3/4"a
SP2000/V20/HC	20S9095	900	Hastelloy-C	2	2-10		yes	220	46	G 3/4"a
SP2000/V20-0/HC	20S9115	900	Hastelloy-C	2	2-10	X	yes	220	46	G 3/4"a
SP2000/V20-T	20S9315	200	PTFE / stainl. steel 316Ti	3	> 10		yes ⁴⁾	400	65	G 3/4"a
SP2000/V20-2	20S9125	600	stainl. steel 316/316Ti	2	> 10		yes	520	60	G 3/4"a
SP2000/V20-1	20S9145	600	stainl. steel 316/316Ti	2	> 10	X	yes	520	60	G 3/4"a
SP2000/V20-2/HC	20S9135	900	Hastelloy-C	2	> 10		yes	520	60	G 3/4"a
SP2000/V20-1/HC	20S9155	900	Hastelloy-C	2	> 10	X	yes	520	60	G 3/4"a
SP2000/V20-4 ¹⁾	20S9290	600	stainl. steel 316/316Ti	2	2-10		yes	¹⁾ 300	31	G 3/4"a
SP2000/V20-3 ¹⁾	20S9300	600	stainl. steel 316/316Ti	2	2-10	X	yes	¹⁾ 300	31	G 3/4"a
SP2000/V20-5	20S9127	500	stainl. steel 316/316Ti	3	2-10		yes ⁴⁾	220	50	G 3/4"a
SP2000/V20-6	20S9128	500	stainl. steel 316/316Ti	3	> 10		yes ⁴⁾	520	60	G 3/4"a
SP2000/V12-1	20S9500	1000	ceramik ⁵⁾ /stainl. steel 316Ti	1	> 10		yes ⁴⁾	500	40	DN65 PN6
SP2000/V12-3	20S9510	1000	ceramik ⁵⁾ /stainl. steel 316Ti	1	> 10	optional	yes ⁴⁾	1000	60	DN65 PN6
SP2000/V12-2	20S9505	1000	ceramik ⁵⁾ /stainl. steel 316Ti	2	> 10	optional	yes	1000	60	DN65 PN6
SP2000/V12-1/SS ²⁾	20S9525	600	ceramik ⁵⁾ /stainl. steel 316Ti	1	> 10		yes ⁴⁾	500	40	DN65 PN6
SP2000/V12-3/SS ³⁾	20S9535	600	ceramik ⁵⁾ /stainl. steel 316Ti	1	> 10	optional	yes ⁴⁾	1000	60	DN100 PN6
SP2000/V12-2/SS ³⁾	20S9530	600	ceramik ⁵⁾ /stainl. steel 316Ti	2	> 10	optional	yes	1000	60	DN100 PN6
SP2000/V12-1/IC ²⁾	20S9540	1000	ceramik ⁵⁾ / Incoloy - 316Ti	1	> 10		yes ⁴⁾	500	40	DN65 PN6
SP2000/V12-3/IC ³⁾	20S9550	1000	ceramik ⁵⁾ / Incoloy - 316Ti	1	> 10	optional	yes ⁴⁾	1000	60	DN100 PN6
SP2000/V12-2/IC³⁾	20S9545	1000	ceramik⁵⁾ / Incoloy - 316Ti	2	> 10	optional	yes	1000	60	DN100 PN6

¹⁾ Prefilter V20-3, V20-4 optional up to 1000 mm length available.

²⁾ With protection tube V12-1.

³⁾ With protection tube V12-2/3.

⁴⁾ Prefilter with special construction for efficient back purge.

⁵⁾ Please pay attention to the characteristic feature of ceramic in case of high and changing temperatures!

Options

Type	Part-No.	Temperature max. °C	Material	Length „L1“ mm	Connection „G“
Extension tubes for /V20...					
SP2000/Vm 500 mm	20S9165	600	stainl. steel 316Ti	500	G 3/4"i/a
SP2000/Vm 1000 mm	20S9170	600	stainl. steel 316Ti	1000	G 3/4"i/a
SP2000/Vm 1500 mm	20S9175	600	stainl. steel 316Ti	1500	G 3/4"i/a
SP2000/Vm 2000 mm	20S9176	600	stainl. steel 316Ti	2000	G 3/4"i/a
SP2000/VmHC 500 mm	20S9180	900	Hastelloy-C	500	G 3/4"i/a
SP2000/VmHC 1000 mm	20S9185	900	Hastelloy-C	1000	G 3/4"i/a
SP2000/VmHC 1500 mm	20S9190	900	Hastelloy-C	1500	G 3/4"i/a
Shape protection plates for /V20(/HC), /V20-0(/HC), /V20-5:					
SP2000/AB-SS	20S9250	600	stainl. steel 316Ti	220	ø 3/4"i
SP2000/AB-HC	20S9260	900	Hastelloy-C	220	ø 3/4"i
Shapeprotection plates for /V20-1(/HC), /V20 -2(/HC), V20-6: (not for SP2500-H...)					
SP2000/AB1-SS	20S9255	600	stainl. steel 316Ti	520	ø 3/4"i
SP2000/AB1-HC	20S9265	900	Hastelloy-C	520	ø 3/4"i
Volume displacer for /V12-2(/IC), /V12-3(/IC):					
V12-2/3	20S9515	600	stainl. steel 316Ti	950	G 3/4"a
V12-2/3IC	20S9520	1000	Incoloy	950	G 3/4"a
Electrically heated adaptor tube for reception of /V12-1					
SP2000-H/AR-500-R 230V	20S9398	max. 200	stainl. steel 316Ti	500*	DN65 PN6
SP2000-H/AR-500-R 115V	20S9398a	max. 200	stainl. steel 316Ti	500*	DN65 PN6

Heated sampling tubes SP30, SP35 in case of decrease under dew point on process side, see data sheet 2-1.9.5.

Automatic back purging, other materials or executions on request.

Further technical information see sample probes SP 210/2100/2000.

* Others on request