ANKERSMID Sample probe

ASP 3xx/4xx/5xx Series

* Picture may vary

Application

The ASP gas sample probes are designed for continuous gas sampling in difficult processes with gases of high or low dust content, different temperatures and extreme humidity.
As the ASP is available in different lengths, it is suitable for applications with low to very high dust loads.
Depending on the acid dew point, the standard probe operates at 180°C or when necessary with a high temperature version at 320°C (f.e. Denox applications).

Description

Due to its modular design and various options, the Ankersmid heated sample probe filters cover the widest range of applications. With a choice of different lengths of heated filter body, a filter element of 150mm length, suitable for most applications up to 1g dust/m³ can be integrated. 180mm filters with a larger filter surface are used for applications up to 4g dust/m³; with the blow-back function dust loads of up to 10g/m³ can be handled.
The 500mm model filter of the ASP 500 has a capacity for dust up to 10g/m³. When this type is equipped with blow-back option, it handles up to 20g/m³. For even higher dust loads, a primary filter is positioned on top of the first filter.
A significant advantage is that all filters are replaceable without dismounting the probe without using any tools and in the shortest possible time. Cleaning and exchanging of unheated sample tubes or preliminary top-filters can be affected by extracting the filter from the probe.
The probe temperature is controlled by a microprocessor based PID-controller (optional with Modbus/RS485 communication). Alarm or fault contacts can be programmed and the temperature can be changed easily. The standard sensor is PT100, whereas a thermo-couple is standard for the high temperature version.
The following features are offered for all probes:
• Test gas can be injected directly into the probe according to EN14181 (regulation for calibration of emission monitoring systems) that enables calibration gas feeding via the filter element of the gas sample probe.
• Test gas can be injected into the probe through a check valve directly to the sample outlet so that no calibration gas is lost to the stack.
• An isolation valve with pneumatic control shuts off the sample outlet from the internal filter area in case of blow-back.
• Cleaning of filter and the sample tube through a high-flow inlet ports so less maintenance is necessary in high dust load applications. This inlet can be controlled by pneumatic or electric valves, and also in combination with a volume chamber for high pressure flow.

- **Retractable inner probe body for easy changement of pre-filter and/or (unheated) sample tube without dismounting the probe**
- **Back-flush/calibration optional**
- **Test gas connection according to EN14181 for calibration/test gas feeding via filter element optional**
- **Spun glass cartridge for diesel generators, diesel exhaust or similar sooty applications available**
- **Universal mounting clamp for heated line**
- **Very universal applicability**
- **Compact and modular design suited for most applications**
- **Universal support for heated sample line by pre-lasered cut-outs for M40-gland connection in the bottom plate and additional optional clamp**
- **Reduce operator exposure to safety risks**
- **Easy mounting**
- **Easy maintenance**
- **Digital communication**

ANKERSMID Sample probe

ASP 3xx/4xx/5xx Series

Technical data

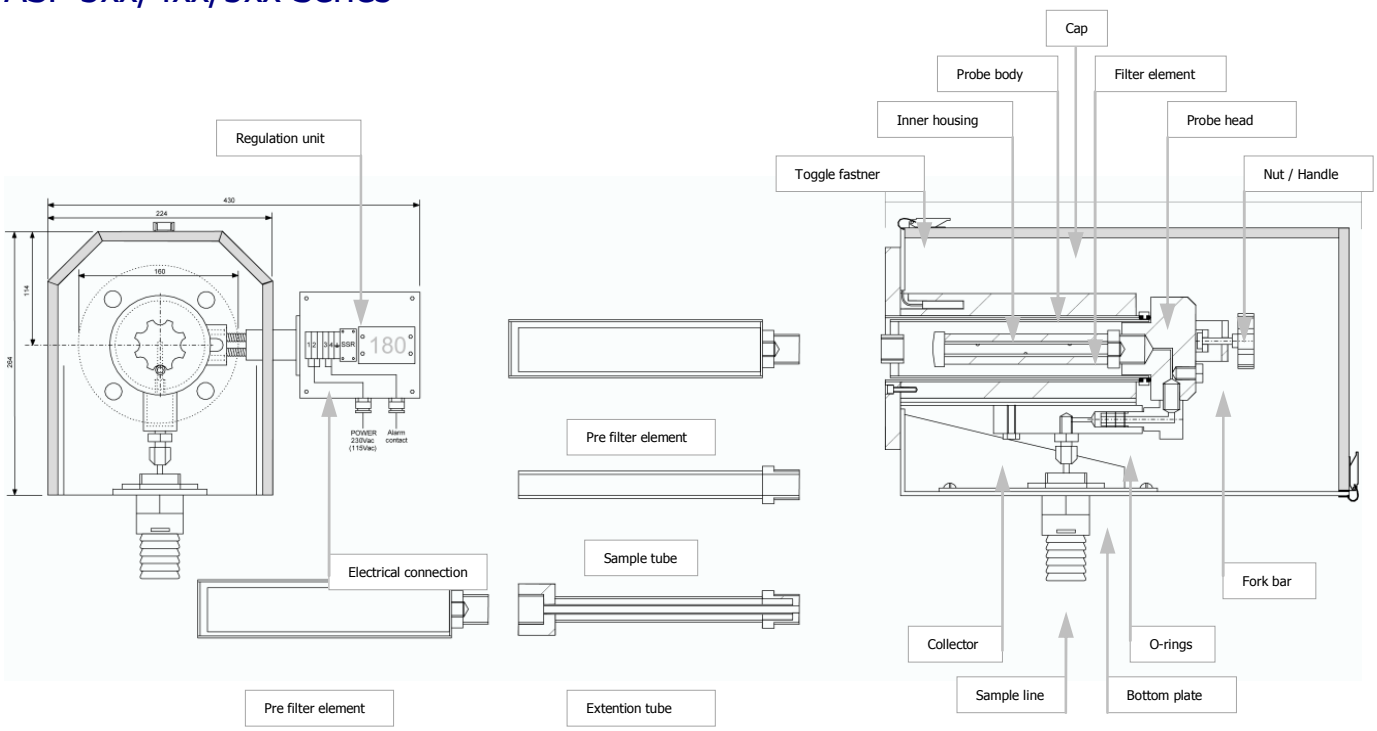
Version	ASP 30X	ASP 40X	ASP 50X
Integrated filter Length	150mm	180mm	500mm
Integrated back-flush	available	available	available
Protective cover	yes		
Degree of protection	IP55 EN60529		
Wet Materials	Stainless steel 316		
Sealing materials	FPM/ Viton® for 180°C and Kalrez®/Graphite for 320°C		
Insitu probe tube/pre-filter	Optional 200 or 500mm, stainless steel, 2µm or 20µm		
Sample pressure max.	0,5-6 bar abs.		
Ambient temperature	-20°C to +65°C		
Filter chamber volume	300cm3	300cm³	760cm³
Filter element, porosity	Ceramic, 2µm	stainless steel 316, 5 µm	stainless steel 316, 5µm
Temperature control	Standard 0-180°C with Pt 100; Option 0-320°C with thermo-couple		
Electronic Controller	Digital programmable PID-controller with optional RS485 Modbus		
temperature alarm contact	Free programmable contact, rating: 250V, 3A~, Factory set at alarm point: ΔT 20°C		
Sample gas outlet connection	1/4"f NPT		
Test gas/back-flush connection	1/4"f NPT		
Power supply	180°C		
	230VAC/800W 115VAC/800W		230VAC/1500W 115VAC/1500W
	320°C		
	230VAC/1200W 115VAC/1200W		230VAC/1500W 115VAC/1500W
Electrical connections	Terminals max. 4mm^2, 2x PG13,5 cable gland		
Electrical equipment standard	EN 61010, EN 60519-1		
Mounting flange	DN65 PN6b, SS316 other connections optional or on request		
Over all dimensions	430 x 264 x 436mm		430 x 264 x 636mm
Weight	16 kg	17 kg	24 kg

ΔP at flow of:	100	200	500	1000	1500	Nl/h
ΔP with new filter element 2µ, 150mm	0,009	0,013	0,025	0,055	0,090	bar
ΔP with new filter element 5µ, 180mm	0,005	0,010	0,018	0,030	0,050	bar
ΔP with new filter element 5µ, 500mm	0,002	0,004	0,010	0,015	0,025	bar

ANKERSMID Sample probe

ASP 3xx/4xx/5xx Series

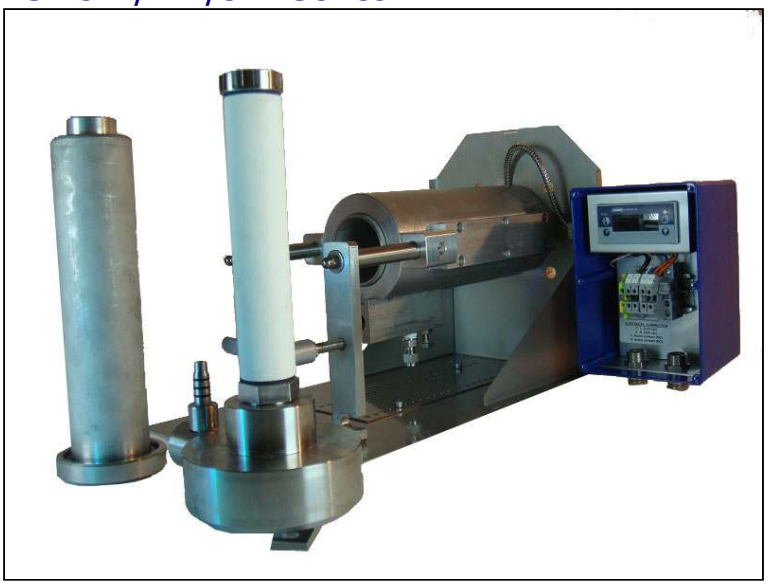
Dimensions



ANKERSMID Sample probe

ASP 3xx/4xx/5xx Series

Performance

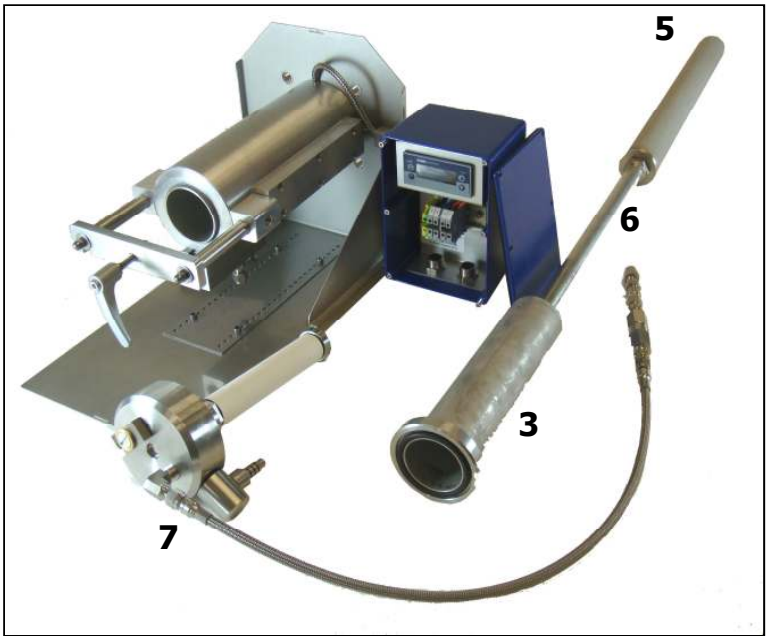


1 Sample Probe type ASP 300

2 Junction box with digital temperature controller

3 Retractable inner probe body (SS316)

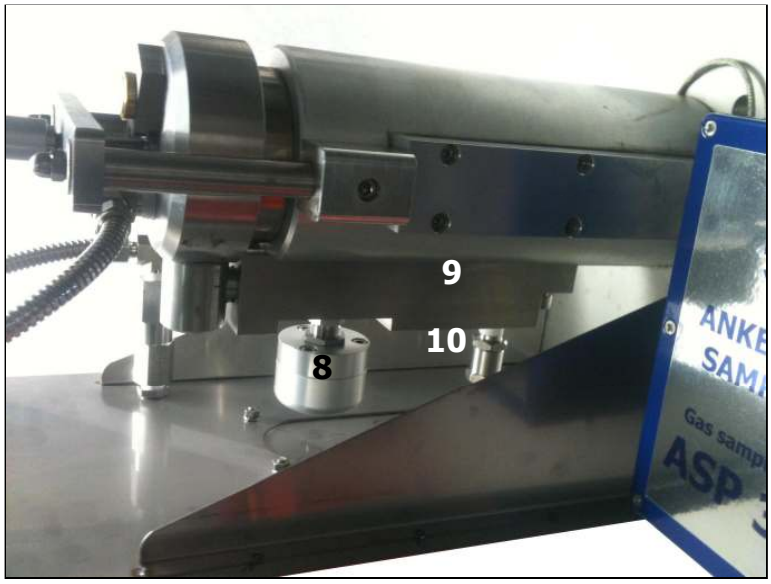
4 Probe lid with mounted external filter element type AUF 015 (150mm, 2µm, ceramics)



5 Pre-filter type ATF 050 (500mm, 2µm, SS316)

6 Extension tube type AET 050 (500mm, SS316)

7 Probe lid with optional back-flush valve type ASP 124 and connecting metal tube



8 Optional pneumatic isolation valve type ASP 122 to shut-off the sample gas outlet, integrated in the slide connector (9) below the probe

9 Slide connector

10 Calibration gas relief valve type ASP 070